APPLICATION

DEVELOPMENT SPECIAL USE PERMIT with SITE PLAN

DSUP # _____ **Project Name:** West End, Block D

PROPERTY LOCATION: 6025 Duke Street

TAX MAP REFERENCE: 047.02-03-12 **ZONE:** CDD #29

APPLICANT:

Name: Landmark Land Holdings LLC

Address: [redacted]

PROPERTY OWNER:

Name: Same as Applicant

Address: _____

SUMMARY OF PROPOSAL Applicant requests a DSUP approval of a 275-unit work force housing multifamily building

MODIFICATIONS REQUESTED Provide 20% crown coverage instead of the required 25% (ZO Section 11-410)

SUP's REQUESTED Parking reduction

☑ **THE UNDERSIGNED** hereby applies for Development Site Plan with Special Use Permit approval in accordance with the provisions of Section 11-400 of the Zoning Ordinance of the City of Alexandria, Virginia.

☑ **THE UNDERSIGNED**, having obtained permission from the property owner, hereby grants permission to the City of Alexandria to post placard notice on the property for which this application is requested, pursuant to Article XI, Section 11-301 (B) of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

☑ **THE UNDERSIGNED** also attests that all of the information herein provided and specifically including all surveys, drawings, etc., required of the applicant are true, correct and accurate to the best of his/her knowledge and belief.

Kenneth W. Wire & Megan C. Rappolt, Wire Gill LLP, Agents
Print Name of Applicant or Agent

[redacted]
Mailing/Street Address

[redacted]
City and State Zip Code

[signature]
Signature

[redacted] _____
Telephone # Fax #

[redacted]
Email address

June 27, 2025
Date

DO NOT WRITE IN THIS SPACE - OFFICE USE ONLY

Application Received: _____ Received Plans for Completeness: _____
Fee Paid and Date: _____ Received Plans for Preliminary: _____

ACTION - PLANNING COMMISSION: _____

ACTION - CITY COUNCIL: _____

Development SUP # _____

ALL APPLICANTS MUST COMPLETE THIS FORM.

Supplemental forms are required for child care facilities, restaurants, automobile oriented uses and freestanding signs requiring special use permit approval.

1. The applicant is: (check one)

◉ The Owner ○ Contract Purchaser ○ Lessee or ○ Other: _____ of the subject property.

State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership in which case identify each owner of more than three percent.

See Attached.

If property owner or applicant is being represented by an authorized agent, such as an attorney, realtor, or other person for which there is some form of compensation, does this agent or the business in which the agent is employed have a business license to operate in the City of Alexandria, Virginia?

X○ **Yes.** Provide proof of current City business license.

○ **No.** The agent shall obtain a business license prior to filing application, if required by the City Code.

OWNERSHIP AND DISCLOSURE STATEMENT

Use additional sheets if necessary

1. Applicant. State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. See Attached		
2.		
3.		

2. Property. State the name, address and percent of ownership of any person or entity owning an interest in the property located at 5801 Duke Street (address), unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. See Attached		
2.		
3.		

3. BusinessorFinancialRelationships. Each person or entity listed above (1 and 2), with an ownership interest in the applicant or in the subject property is required to disclose any business or financial relationship, as defined by Section 11-350 of the Zoning Ordinance, existing at the time of this application, or within the12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review.

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1. See Attached	None	None
2.		
3.		

NOTE: Business or financial relationships of the type described in Sec. 11-350 that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings.

As the applicant or the applicant's authorized agent, I hereby attest to the best of my ability that the information provided above is true and correct.

June 27, 2025	Kenneth W. Wire, Megan Rappolt Wire Gill LLP	
Date	Printed Name	Signature

West End Block D
Development Special Use Permit
Disclosure Attachment

Applicant and Owner:

Landmark Land Holdings LLC
[redacted]

The following individuals own more than a 3% interest in the Applicant/Owner entity:

Bryan F. Foulger
Clayton F. Foulger
Brent K. Pratt

Entities with Ownership interest in Applicant and Owner:

1) Foulger-Pratt
[redacted]

2) Landmark Mall LLC
Landmark Mall LLC is wholly owned by the Howard Research and Development Corporation. The Howard Research and Development Corporation is wholly owned by Howard Hughes Corporation, a publicly traded corporation listed on the New York Stock Exchange.

3) Seritage SRC Finance LLC
Seritage SRC Finance LLC is wholly owned by Seritage SRC Mezzanine Finance LLC. Seritage SRC Mezzanine Finance LLC is wholly owned by Seritage Growth Properties, L. P. which is a publicly traded real estate investment trust company traded on the New York Stock Exchange.

Development SUP # _____

2. Narrative description. The applicant shall describe below the nature of the request **in detail** so that the Planning Commission and City Council can understand the nature of the operation and the use, including such items as the nature of the activity, the number and type of patrons, the number of employees, the hours, how parking is to be provided for employees and patrons, and whether the use will generate any noise. If not appropriate to the request, delete pages 6-9. (Attach additional sheets if necessary.)

The Applicant requests approval of a Development Special Use Permit to construct an work force housing multifamily residential building with 275 units on the property known as West End Block D. The Applicant agrees to provide 80% of the units between 80% and 120% AMI. All the unit will be income restricted. Workforce housing is called for in the Landmark Van Dorn SAP and development agreement as part of the redevelopment of Landmark Mall. The Applicant's proposal is consistent with this plan guidance and development agreement.

Development SUP # _____

3. How many patrons, clients, pupils and other such users do you expect?
Specify time period (i.e., day, hour, or shift).

Typical number of residents for a 275 multifamily building

4. How many employees, staff and other personnel do you expect?
Specify time period (i.e. day, hour, or shift).

N/A

5. Describe the proposed hours and days of operation of the proposed use:

Day	Hours	Day	Hours
24 hour residential			

6. Describe any potential noise emanating from the proposed use:

A. Describe the noise levels anticipated from all mechanical equipment and patrons.

Typical for a 275-unit multifamily building

B. How will the noise from patrons be controlled?

Property management

7. Describe any potential odors emanating from the proposed use and plans to control them:

None anticipated

Development SUP # _____

8. Provide information regarding trash and litter generated by the use:

A. What type of trash and garbage will be generated by the use?

Typical for a 275-unit multifamily building

B. How much trash and garbage will be generated by the use?

Typical for a 275-unit multifamily building

C. How often will trash be collected?

As needed; one to two times per week.

D. How will you prevent littering on the property, streets and nearby properties?

Property management.

9. Will any hazardous materials, as defined by the state or federal government, be handled, stored, or generated on the property?

☐ Yes. ☑ No.

If yes, provide the name, monthly quantity, and specific disposal method below:

10. Will any organic compounds (for example: paint, ink, lacquer thinner, or cleaning or degreasing solvent) be handled, stored, or generated on the property?

☑ Yes. ☐ No.

If yes, provide the name, monthly quantity, and specific disposal method below:

Typical retail and residential cleaning and building maintenance supplies.

Development SUP # _____

11. What methods are proposed o e sure the safety of reside s, employees and patrons?

Property management.

ALCOHOL SALES

12. Will the proposed use include the sale of beer, wine or mixed drinks?

☐ **Yes.** ☑ **No.**

If yes, describe alcohol sales below, including if the ABC license will include on-premises and/or off-premises sales. Existing uses must describe their existing alcohol sales and/or service and identify any proposed changes in that aspect of the operation.

PARKING AND ACCESS REQUIREMENTS

13. Provide information regarding the availability of off-street parking:

A. How many parking spaces are required for the proposed use pursuant to section 8-200 (A) of the zoning ordinance?

327

B. How many parking spaces of each type are provided for the proposed use:

124 Standard spaces
81 Compact spaces
5 Handicapped accessible spaces
_____ Other

Development SUP # _____

C. Where is required parking located? (check one) ☑ **on-site** ☐ **off-site**

If the required parking will be located off-site, where will it be located?

_____

Pursuant to section 8-200 (C) of the zoning ordinance, commercial and industrial uses may provide off-site parking within 500 feet of the proposed use, provided that the off-site parking is located on land zoned for commercial or industrial uses. All other uses must provide parking on-site, except that off-street parking may be provided within 300 feet of the use with a special use permit.

D. If a reduction in the required parking is requested, pursuant to section 8-100 (A) (4) or (5) of the zoning ordinance, complete the **Parking Reduction Supplemental Application.** ***Parking reduction supplemental application filed under separate cover***

14. Provide information regarding loading and unloading facilities for the use:

A. How many loading spaces are required for the use, per section 8-200 (B) of the zoning ordinance? 0

B. How many loading spaces are available for the use? 2

C. Where are off-street loading facilities located? On ground floor of building

D. During what hours of the day do you expect loading/unloading operations to occur?

As permitted by noise ordinance

E. How frequently are loading/unloading operations expected to occur, per day or per week, as appropriate?

After initial lease up, the loading space use will be infrequent

15. Is street access to the subject property adequate or are any street improvements, such as a new turning lane, necessary to minimize impacts on traffic flow?

Site access determined as adequate in CDD approval

SUP # _____

APPLICATION - SUPPLEMENTAL

PARKING REDUCTION

Supplemental information to be completed by applicants requesting special use permit approval of a reduction in the required parking pursuant to section 8-100(A)(4) or (5).

1. Describe the requested parking reduction. (e.g. number of spaces, stacked parking, size, off-site location)

The Applicant requests a parking reduction in order to provide 210 parking spaces where 327 are required. See DSUP Plans.

2. Provide a statement of justification for the proposed parking reduction.

The Applicant requests a parking reduction of approximately 117 residential parking spaces. The Applicant is not able to build underground parking due to the small size of the site and requirements of the approved CDD. The Applicant also seeks to right-size parking in consideration of the future West End Transitway BRT and the urban/walkable nature of the CDD development. If the West End Transitway were operational, 292 parking spaces would ~~be required. Additionally, there is adequate street parking and a shared commercial parking garage at Blocks E/C.~~

3. Why is it not feasible to provide the required parking?

The Applicant cannot build an additional level of underground parking due to development and site constraints.

4. Will the proposed reduction reduce the number of available parking spaces below the number of existing parking spaces?

_____ Yes. ____✔____ No.

5. If the requested reduction is for more than five parking spaces, the applicant must submit a ***Parking Management Plan*** which identifies the location and number of parking spaces both on-site and off-site, the availability of on-street parking, any proposed methods of mitigating negative affects of the parking reduction.

6. The applicant must also demonstrate that the reduction in parking will not have a negative impact on the surrounding neighborhood.

WEST END

PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JUNE 26, 2025

PROJECT TEAM

APPLICANT/OWNER
LANDMARK LAND HOLDINGS LLC
12435 PARK POTOMAC AVE
SUITE 200
POTOMAC, MD
TEL. 240-750-6881
CONTACT: RUDY KNOTT

ATTORNEY
WIRE GILL LLP
700 NORTH FAIRFAX STREET
SUITE 600
ALEXANDRIA, VA 22314
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CONTACT: KENNETH WIRE

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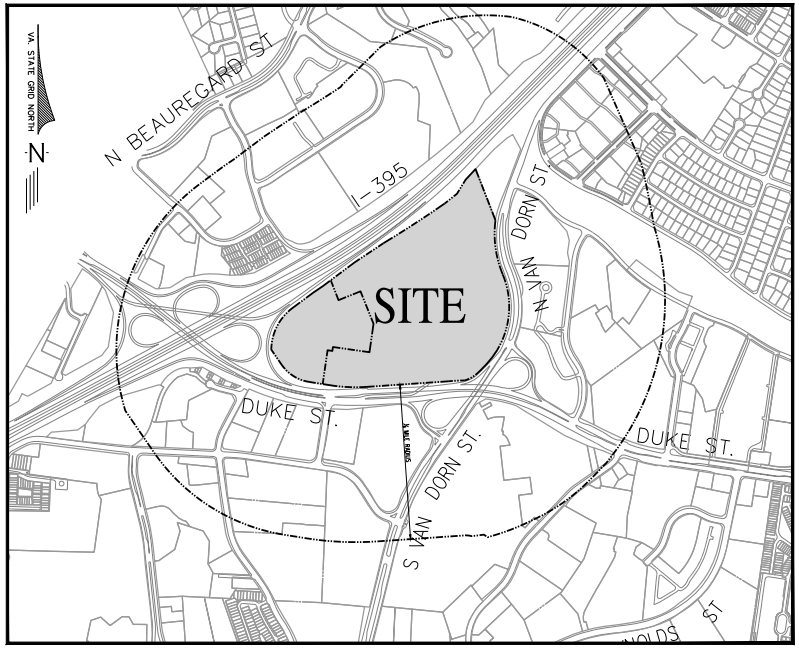
URBAN, LTD.
4200D TECHNOLOGY COURT
CHANTILLY, VA 20151
TEL. 703-376-4221
CONTACT: CLAYTON TOCK, P.E.

ARCHITECT
PARKFOWLER PLUS
625 W ADAMS ST, 19TH FLOOR
CHICAGO, IL 60661
(312)374-2060
CONTACT: BRAD FOWLER

TRAFFIC ENGINEER
GOROVE SLADE
225 REINEKERS LANE
SUITE 750
ALEXANDRIA, VA 22314
TEL. 202-540-1926
CONTACT: ROBERT SCHIESEL, P.E.

UTILITY ENGINEER
DAVIS UTILITY CONSULTING, LLC
3975 FAIR RIDGE DRIVE
SUITE 125-SOUTH
FAIRFAX, VA 22033
TEL. 703-945-9606
CONTACT: DAVID GRAHAM

LANDSCAPE ARCHITECT
CGLA
1025 CONNECTICUT AVENUE, NW SUITE 1000
WASHINGTON, D.C. 20036
TEL. 202-857-9720
CONTACT: BRUNO P. CARVALHO, ASLA, AICP



VICINITY MAP
SCALE: 1"=500'

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LT06-LT07	SITE - LUMINAIRE SCHEDULE & SPECIFICATIONS

PROJECT NARRATIVE:

DESCRIPTION OF DEVELOPMENT:
THE BLOCK D PARCEL IS BORDERED TO THE NORTH BY HECHT AVE. (PUBLIC), JULIA JOHNS PL. (PUBLIC) TO THE WEST, TUCKER ST. (PUBLIC) TO THE EAST, AND BY DUKE ST. (PUBLIC) TO THE SOUTH.
THE PURPOSE OF THE DSUP DEVELOPMENT FOR BLOCK D IS TO ALLOW FOR RESIDENTIAL USES ON THE SITE WHICH MAY BE IMPLEMENTED ANYWHERE ON THE SITE, SUBJECT TO CAPACITY OF INFRASTRUCTURE.

ADJACENT PROPERTIES:
OVERALL, ANY ADJACENT PROPERTIES ARE SEPARATED FROM THE SITE BY MAJOR ROADWAYS, AND IN COMBINATION WITH STEPS PROPOSED BELOW, THE APPLICANT DOES NOT ANTICIPATE ADVERSE EFFECTS FOR THOSE PROPERTIES AS A RESULT OF THE PROPOSED DEVELOPMENT.
ADJACENT PROPERTIES SHALL BE PROTECTED FROM ADVERSE EFFECTS VIA STANDARD EROSION AND SEDIMENT CONTROL MEASURES, ALONGSIDE EFFORTS TO REDUCE THE OVERALL RUNOFF FROM THE SITE. IN ADDITION, BOTH ON AND OFFSITE IMPROVEMENTS MITIGATING THE IMPACT OF ADDITIONAL TRAFFIC SHALL BE PROVIDED AS PART OF THE APPROPRIATE DSUP PHASES OF DEVELOPMENT, AND AS DETERMINED BY TRIGGERS PROVIDED IN THE TRAFFIC STUDY.
PRIMARY ACCESS TO THE SITE WILL BE FROM SIGNALIZED INTERSECTIONS ON DUKE AND VAN DORN STREETS.

SPECIAL AMENITIES:
AS PART OF THE OVERALL PROPOSED LANDMARK DEVELOPMENT FOR THE SITE, THE APPLICANT PROPOSES TO PROVIDE SPECIAL AMENITIES INCLUDING A MINIMUM OF 3.5 ACRES OF OPEN SPACE NETWORK TO INCLUDE A CENTRAL PARK, PASEO, AND TERRACE AS WELL AS NEIGHBORHOOD PARKS, COLLECTIVELY, THESE PARKS WILL PROVIDE A MIX OF ACTIVE AND PASSIVE USES, AS WELL AS A COMBINATION OF LANDSCAPE AND HARDSCAPE AREAS, FOR RESIDENTS AND VISITORS ALIKE.

IN ADDITION TO THE PARKS, THE SITE SHALL ALSO FEATURE A FIRE STATION AND A CENTRALLY LOCATED TRANSIT HUB TO PROVIDE BUS TRANSIT SERVICES TO BOTH RESIDENTS AND THE SURROUNDING COMMUNITY.

THE CDD CONDITIONS OUTLINED THE AMENITIES REQUIRED WITH THE INFRASTRUCTURE PLAN.

LIST OF EXISTING APPROVALS:

- CDD2020-00007
- SUB2021-00003
- DSP2021-00012
- SUB2022-00005
- GRD #2022-00012

GREEN BUILDING NARRATIVE:

THIS APPLICATION WILL COMPLY WITH THE CITY'S GREEN BUILDING POLICY. PLEASE SEE GREEN BUILDING NARRATIVE AND SCORECARD PROVIDED ON SHEET 02C.

MODIFICATIONS REQUESTED:

1) MODIFICATION TO REDUCE CROWN COVER REQUIREMENTS FROM 25% TO 20%

BUILDING CODE ANALYSIS:

SEE SHEET A001 FOR BUILDING CODE ANALYSIS.

AREA TABULATIONS:

BLOCK D (LOT 702) LOT AREA = 1.45 AC. 63,315 SF.
TOTAL DEVELOPMENT AREA = 1.45 AC. 63,315 SF.
TOTAL DISTURBED AREA = 1.59 AC. 69,243 SF.

ZONING TABULATIONS:

ON-SITE LOCATIONS / ADDRESSES:	T.M. #047.02-03-12 / 5801 DUKE ST. ALEXANDRIA, VA 22304
TOTAL SITE/LOT AREAS:	63,315 SF OR 1.45 ACRES
EXISTING ZONE:	CDD #29 (COORDINATED DEVELOPMENT DISTRICT #29)
PROPOSED ZONE:	CDD #29 (COORDINATED DEVELOPMENT DISTRICT #29)
OPEN SPACE REQUIREMENTS:	15,829 SF (25% OF DEVELOPMENT AREA AT OR ABOVE-GRADE)
OPEN SPACE PROVIDED:	15,833 SF (25% OF DEVELOPMENT AREA AT-GRADE)
EXISTING USE:	VACANT/DEMOLISHED
PROPOSED USE:	MULTIFAMILY
DENSITY:	
BLOCK M:	275 UNITS
PROPOSED DENSITY:	275 UNITS/ 1.45 AC = 189.65.
GROSS FLOOR AREA:	362,254 GSF
NET FLOOR AREA:	315,601 SF
BUILDING HEIGHT PERMITTED:	70 FT. MIN., 180' MAX.
BUILDING HEIGHT PROPOSED:	82 FT.
AVERAGE FINISHED GRADE:	209.84
FRONTAGE REQUIRED:	N/A
FRONTAGE PROVIDED:	N/A

PARKING TABULATIONS:

PARKING TABULATIONS	
REQUIRED*	PROPOSED
0.95 SP/2BR (207) = 197 SPACES	210 SPACES
0.95 SP/1BR (136) = 130 SPACES	(124 STANDARD, 81 COMPACT,
TOTAL REQUIRED: 327 SPACES	1 H/C VAN, 4 H/C)
*SEE PARKING REQUIREMENTS TABLE ON SHEET 02C	
LOADING TABULATIONS	
REQUIRED	PROPOSED
N/A	2 SPACES

BICYCLE PARKING TABULATIONS	
REQUIRED	PROPOSED
LONG-TERM(3 SP/10 UNITS) = 83 SPACES SHORT-TERM (1 SP/50 UNITS) = 6 SPACES TOTAL REQUIRED: 89 SPACES	89 SPACES (83 LONG-TERM, 6 SHORT-TERM

TRIP GENERATION:

BLOCK D

Land Use	ITE Code	Size		Weekday AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily Total
Proposed Development Program										
Residential										
Multifamily Housing (Mid-Rise) (Apartments, Townhomes, Condo; max 10 floors)	221	275	DU	24	68	92	71	46	117	1,497
Total Residential w/o Reductions				24	68	92	71	46	117	1,497
Internal Trip Capture Reduction				-1	-3	-5	-13	-9	-22	-299
Total Residential w/ Internal Capture Reductions				*23*	*65*	*87*	*58*	*37*	*95*	*1,198*
Non-Auto Mode Share Reduction			50%	-11	-32	-44	-29	-18	-48	-599
Subtotal (Residential Trips with Internal Capture and Non-Auto Mode Share Reduction)				*11*	*32*	*43*	*29*	*18*	*48*	*599*
Total External Residential Trips				**11**	**32**	**43**	**29**	**18**	**48**	**599**
OVERALL NON-AUTO MODE TRIPS				**-11**	**-32**	**-44**	**-29**	**-18**	**-48**	**-599**
OVERALL DEVELOPMENT TRIPS				**11**	**32**	**43**	**29**	**18**	**48**	**599**

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

PLAN DATE	REVISION
01/13/2025	1ST SUBMISSION
04/18/2025	CONCEPT II
-	-
-	-
-	-

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING
DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR _____ DATE _____
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____

urban
Planners/Engineers/Landscape Architects/Land Surveyors
Urban, Ltd.
4200 D TECHNOLOGY CT.
CHANTILLY, VA. 20151
TEL. 703.642.2306
FAX 703.378.7888
www.urban-ltd.com

BLOCK D SITE TABULATIONS

DEVELOPMENT SUMMARY

Use	Floor Area	Residential Units	Hotel Keys	Block D Floor Area	Block D Units
Hospital	464,467			-	-
Office	-			-	-
Medical Office	596,406			315,601	275
Multifamily	1,118,397	1,072 units		-	-
Affordable Multifamily	12,250	45 units		-	-
Senior Housing (AL/IL)	-	0 units		-	-
2-over-2 Townhomes	-	0 units		-	-
Traditional Townhomes	300,458	110 units		-	-
Condo Flats	-	0 units		-	-
Hotel	-		0 keys	-	-
Retail	236,146			-	-
Grocer	-			-	-
Firestation	-			-	-
Garage / Loading / Service				-	-
Total	**2,728,124**	**1,227 units**	**0 keys**	**315,601**	**275**
FAR over Gross Land Area	**1.2161**				

PARKING TABULATIONS

Parking Requirement	Parking Ratio	Block D REQUIRED	Block D PROPOSED
PARKING RATES			
Hospital	1/ 2 BEDS	-	-
Office	1.5/ 1000 GSF	-	-
Medical Office	1.5/ 1000 GSF		
Multifamily	1/ BEDROOM	327	210
Affordable Multifamily	0.8/ UNIT	-	-
Senior Housing (AL/IL)	0.7/ UNIT	-	-
2-over-2 Townhomes	2.0/ UNIT	-	-
Traditional Townhomes	2.0/ UNIT	-	-
Condo Flats	1.3/ UNIT	-	-
Hotel	0.7/ KEY	-	-
Retail	3.0/ 1000 GSF	-	-
Grocer	50 spaces	-	-
Firestation		-	-
VEHICLE PARKING			
STANDARD PARKING SPACES		-	124
COMPACT PARKING SPACES		-	81
ON-STREET PARKING SPACES			
HANDICAP PARKING SPACES (NON-VAN)		-	4
HANDICAP PARKING SPACES (VAN)		-	1
		-	210
PARKING PROVIDED IN EXISTING GARAGE		-	-
PARKING PROVIDED IN PROPOSED GARAGE		-	210
LOADING SPACES			
BICYCLE PARKING			
Residential		-	83
Visitor		-	6
Retail			
Office		-	-

ZONING TABULATIONS

Zoning Requirement	Block D REQUIRED	Block D PROPOSED
LOT AREA (SQ. FT.)	-	63,315
LOT WIDTH (FT.)	-	-
FRONT YARD (FT.)	-	-
SIDE YARD (FT.)	-	-
REAR YARD (FT.)	-	-
FLOOR AREA (SQ. FT.)	-	315,601
OPEN SPACE (SF / %)	25.00%	25.00%
GROUND FLOOR	-	10,843
ABOVE GROUND	-	4,990
TOTAL OPEN SPACE	15,829	15,833
AVERAGE FINISHED GRADE (FT.)	-	209.84
MAX. BUILDING HEIGHT (FT.)	-	82
CROWN COVERAGE (SQ. FT.)	-	14,210
MAX. RESI DENTISTY (UNITS/AC.)	-	-
Dwelling Unit Summary (ADU)	-	275
STUDIO UNITS (ADU)	-	41
JR ONE BEDROOM UNITS (ADU)		22
ONE BEDROOM UNITS (ADU)	-	109
ONE BEDROOM DEN UNITS (ADU)	-	35
TWO BEDROOM UNITS (ADU)	-	63
TWO BEDROOM DEN UNITS (ADU)	-	5
THREE BEDROOM UNITS (ADU)	-	-
LOADING SPACES	-	2
TRIP GENERATION (ADT)	-	599

SITEWIDE CANOPY COVERAGE TABULATION

DSUP	Block	Area SF	Area AC	Canopy Coverage (SF) Required	Canopy Coverage (SF) Provided
	Private Streets	146,984 SF	3.37 AC	-	106,250 SF
CDSP-2025-00012	Block D	63,315 SF	1.45 AC	-	14,210 SF
DSUP 2022-10017	Block E	108,575 SF	2.49 AC	-	14,750 SF
	Block F	22,739 SF	0.52 AC	-	41,000 SF
DSUP 2022-10017	Block G	62,083 SF	1.43 AC	-	13,500 SF
	Block H	89,320 SF	2.05 AC	-	-
DSUP 2022-10015	Block I	107,644 SF	2.47 AC	-	22,062 SF
	Block J	80,597 SF	1.85 AC	-	-
DSUP 2022-10016	Block K	98,964 SF	2.27 AC	-	19,019 SF
	Block L	133,629 SF	3.07 AC	-	-
	Block M	120,815 SF	2.77 AC	-	-
	Block N	17,699 SF	0.41 AC	-	30,750 SF
				-	-
	Block Q	14,581 SF	0.33 AC	-	-
	Block R	10,179 SF	0.23 AC	-	16,750 SF
	Total Site	**1,077,124 SF**	**24.73 AC**	**295,813 SF**	**278,291 SF**

NOTE:
1) SITEWIDE CANOPY COVERAGE CALCULATION EXCLUDES PUBLIC STREET TREES, THE HOSPITAL CAMPUS, EXISTING PARKING GARAGE (BLOCK S), TERRACE PARK (BLOCK P), AND PUBLIC RIGHTS-OF-WAY.

2) SITEWIDE CANOPY COVERAGE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. PLEASE REFER TO DSP#2021-00012 FOR FUTURE UPDATES TO SITEWIDE CANOPY COVERAGE CALCULATIONS .

UNIT MIX TABLE

Dwelling Unit Summary (ADU)	-	
STUDIO UNITS (ADU)	41	15%
JR ONE BEDROOM UNITS (ADU)	22	8%
ONE BEDROOM UNITS (ADU)	109	39%
ONE BEDROOM DEN UNITS (ADU)	35	13%
TWO BEDROOM UNITS (ADU)	63	23%
TWO BEDROOM DEN UNITS (ADU)	5	2%
THREE BEDROOM UNITS (ADU)	-	
	TOTAL: 275 UNITS	

LEGEND:

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EX. FIRE HYDRANT
- PROP. FIRE HYDRANT
- EXISTING WATER METER
- PROPOSED WATER METER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER DIRECTION OF FLOW
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING GAS VALVE
- PROPOSED GAS VALVE
- EXISTING OVERHEAD WIRE
- EXISTING LIGHTING
- PROPOSED LIGHTING
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING TREE LINE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED PHASE LINE
- PROPOSED LIMITS OF CLEARING & GRADING
- EXISTING WETLANDS
- PROP. RET. WALL
- EX. RET. WALL
- PROP. POST LIGHT
- PROP. BUILDING MAIN ENTRANCE
- PROP. BUILDING ENTRANCE
- PROP. UNDERGROUND GARAGE
- BLOCK E&G BOUNDARY
- LOADING SPACE
- INTERSECTION VISIBILITY TRIANGLE
- BRICK PAVE AREA (TO MATCH EXISTING PLAZA)
- PROP. CONCRETE SIDEWALK
- PARKING SPACE COUNT
- EXISTING TELEPHONE LINE
- PROP. TELEPHONE LINE
- EXISTING VDOT ELECTRIC LINE
- EXISTING ELECTRIC LINE
- PROP. ELECTRIC LINE
- PROP. VERIZON FIBER
- PROP. COMCAST FIBER
- PROPOSED PRIVATE FIBER
- PROPOSED ACF FIBER
- PROPOSED ELECTRIC MANHOLE
- PROPOSED FIBER HANDHOLE
- EXISTING CABLE TV LINE
- ROAD SIGN
- EX. POWER POLE
- EXISTING SPOT ELEVATION
- PROP. SPOT ELEVATION
- SPILL AND TRANSITION CURB AND GUTTER
- PROPOSED CURB
- EX. STREET LIGHTS
- PROP. STREET LIGHTS
- PROPOSED CG-12
- EXISTING TREE
- PROPOSED TREE
- WATER FITTING IDENTIFIER
- LOADING AREA
- BENCHMARK
- TEST PIT REQUIRED
- PROJECTED TRAFFIC COUNT
- OVERLAND RELIEF

PROP.	PROPOSED
EX.	EXISTING
SF	SQUARE FEET
GSF	GROSS SQUARE FEET
NSF	NET SQUARE FEET
T.B.R.	TO BE REMOVED
FF	FINISHED FLOOR
V	VISITOR PARKING SPACE
S, C, HC	STANDARD, COMPACT, AND HANDICAP PARKING SPACE DESIGNATOR
(COA)	CITY OF ALEXANDRIA
(AW)	AMERICAN WATER
(CSW)	CONC. SIDEWALK
(ASW)	ASPHALT SIDEWALK

- PROP. PERVIOUS AREA
- PROP. PARKING SPACE

APPROVED
SPECIAL USE PERMIT NO. ________
DEPARTMENT OF PLANNING & ZONING
DIRECTOR ________ DATE ________
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________
DIRECTOR ________ DATE ________
CHAIRMAN, PLANNING COMMISSION ________ DATE ________
DATE RECORDED ________
INSTRUMENT NO. ________ DEED BOOK NO. ________ PAGE NO. ________

REVISIONS
No. | DATE | DESCRIPTION

PLAN DATE
01/13/2025
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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
PROFESSIONAL ENGINEER

GENERAL NOTES & DETAILS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
C.I.= N/A
SCALE: N/A

SHEET 02 OF 32

FILE No. RZ-13127

Urban, Ltd. - \\mars-101\j drive\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\13234-01A-GNOTES.dwg [GNOTES 3] June 27, 2025 - 2:16pm lhuynh

WESTEND DEVELOPMENT TABULATIONS:

DEVELOPMENT SUMMARY

INOVA HOSPITAL CAMPUS (Building A, Building B, Building C)

Use	Floor Area	Residential Units	Hotel Keys	Building A Floor Area	Building A Units	Building B Floor Area	Building B Units	Building C Floor Area	Building C Units	Block D Floor Area	Block D Units	Block E Floor Area	Block E Units
Hospital	464,467			464,467	-	-	-	-	-	-	-	-	-
Office	-			-	-	-	-	-	-	-	-	-	-
Medical Office	596,406			-	-	94,212	-	76,357	-	315,601	275	110,236	-
Multifamily	1,118,397	1,072 units		-	-	-	-	-	-	-	-	150,697	140
Affordable Multifamily	12,250	45 units		-	-	-	-	-	-	-	-	5,500	6
Senior Housing (AL/IL)	-	0 units		-	-	-	-	-	-	-	-	-	-
2-over-2 Townhomes	-	0 units		-	-	-	-	-	-	-	-	-	-
Traditional Townhomes	300,458	110 units		-	-	-	-	-	-	-	-	-	-
Condo Flats	-	0 units		-	-	-	-	-	-	-	-	-	-
Hotel	-		0 keys	-	-	-	-	-	-	-	-	-	-
Retail	236,146			-	-	-	-	-	-	-	-	89,971	-
Grocer	-			-	-	-	-	-	-	-	-	-	-
Firestation	-			-	-	-	-	-	-	-	-	-	-
Garage / Loading / Service				298,250 (TOTAL GARAGE)	-	-	-	-	-	-	-	-	-
Total	**2,728,124**	**1,227 units**	**0 keys**	**762,717**	**-**	**94,212**	**-**	**76,357**	**-**	**315,601**	**275**	**356,404**	**146**
FAR over Gross Land Area	**1.2161**												

Use	Block G Floor Area	Block G Units	Block H Floor Area	Block H Units	Block I Floor Area	Block I Units	Block F Floor Area	Block F Units	Block N Floor Area	Block N Units	Block J Floor Area	Block J Units	Block K Floor Area	Block K Units	Block L Floor Area	Block L Units	Blocks M Floor Area	Blocks M Units
Hospital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medical Office	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multifamily	193,847	234	-	-	413,853	375	-	-	-	-	-	-	360,000	323	-	-	-	-
Affordable Multifamily	6,750	10	-	-	-	15	-	-	-	-	-	-	-	14	-	-	-	-
Senior Housing (AL/IL)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-over-2 Townhomes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Traditional Townhomes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	119,932	44	180,526	66
Condo Flats	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hotel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retail	23,888	-	-	-	90,287	-	7,279	-	4,064	-	-	-	32,000	-	-	-	-	-
Grocer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Firestation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Garage / Loading / Service	-	-	-	-	-	-	-	-	-	-	-	-	80,000	-	-	-	-	-
Total	**224,485**	**244**	**-**	**-**	**504,140**	**390**	**7,279**	**-**	**4,064**	**-**	**-**	**-**	**472,000**	**337**	**119,932**	**44**	**180,526**	**66**

PARKING TABULATIONS

INOVA HOSPITAL CAMPUS (Building A, Building B, Building C)

Parking Requirement	Parking Ratio	Totals	Building A REQUIRED	Building A PROPOSED	Building B REQUIRED	Building B PROPOSED	Building C REQUIRED	Building C PROPOSED	Block D REQUIRED	Block D PROPOSED	Block E REQUIRED	Block E PROPOSED
PARKING RATES												
Hospital	1/ 2 BEDS		TBD	(SEE BELOW)	-	-	-	-	-	-	-	-
Office	1.5/ 1000 GSF		-	-	-	-	-	-	-	-	-	-
Medical Office	1.5/ 1000 GSF		-	-	408	(SEE BELOW)	335	(SEE BELOW)			180	403
Multifamily	1/ BEDROOM		-	-	-	-	-	-	327	210	213	229
Affordable Multifamily	0.8/ UNIT		-	-	-	-	-	-	-	-	-	-
Senior Housing (AL/IL)	0.7/ UNIT		-	-	-	-	-	-	-	-	-	-
2-over-2 Townhomes	2.0/ UNIT		-	-	-	-	-	-	-	-	-	-
Traditional Townhomes	2.0/ UNIT		-	-	-	-	-	-	-	-	-	-
Condo Flats	1.3/ UNIT		-	-	-	-	-	-	-	-	-	-
Hotel	0.7/ KEY		-	-	-	-	-	-	-	-	-	-
Retail	3.0/ 1000 GSF		-	-	-	-	-	-	-	-	270	202
Grocer	50 spaces		-	-	-	-	-	-	-	-	-	-
Firestation			-	-	-	-	-	-	-	-	-	-
VEHICLE PARKING												
STANDARD PARKING SPACES			-	TBD	-	TBD	-	TBD	-	124	-	382
COMPACT PARKING SPACES			-	TBD	-	TBD	-	TBD	-	81	-	429
ON-STREET PARKING SPACES												15
HANDICAP PARKING SPACES (NON-VAN)			-	TBD	-	TBD	-	TBD	-	4	-	18
HANDICAP PARKING SPACES (VAN)			-	TBD	-	TBD	-	TBD	-	1	-	5
TOTAL PARKING PROVIDED:		4,372	1,510						-	210	663	849
PARKING PROVIDED IN EXISTING GARAGE			550 (EXISTING GARAGE)						-	-	-	834
PARKING PROVIDED IN PROPOSED GARAGE			960 (ABOVE GRADE GARAGE + BELOW GRADE GARAGE)						-	210	-	-
LOADING SPACES											5	4
BICYCLE PARKING												
Residential									-	83	44	45
Visitor									-	6	9	9
Retail											18	18
Office									-	-	16	16

Parking Requirement	Block G REQUIRED	Block G PROPOSED	Block H REQUIRED	Block H PROPOSED	Block I REQUIRED	Block I PROPOSED	BLOCK F REQUIRED	BLOCK F PROPOSED	BLOCK N REQUIRED	BLOCK N PROPOSED	Block J REQUIRED	Block J PROPOSED	Block K REQUIRED	Block K PROPOSED	Block L REQUIRED	Block L PROPOSED	Blocks M REQUIRED	Blocks M PROPOSED
Hospital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medical Office																		
Multifamily	285	285	-	-	-	483	-	-	-	-	-	-	312	298	-	-	-	-
Affordable Multifamily	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-
Senior Housing (AL/IL)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-over-2 Townhomes		-	-	-		-		-		-	-	-	-	-	-	-	-	-
Traditional Townhomes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	-	132
Condo Flats	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hotel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retail	72	95	-	-	-	375	2**	0	2**	0	-	-	8	63 (SEE SHEET 03A)	-	-	-	-
Grocer	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
Firestation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VEHICLE PARKING																		
STANDARD PARKING SPACES	-	117	-	-	-	154	-	-	-	-	-	-	-	114	-	88	-	132
COMPACT PARKING SPACES	-	248	-	-	-	683	-	-	-	-	-	-	-	186	-	-	-	-
ON-STREET PARKING SPACES		15												20				
HANDICAP PARKING SPACES (NON-VAN)	-	11	-	-	-	12	-	-	-	-	-	-	-	8	-	-	-	-
HANDICAP PARKING SPACES (VAN)	-	4	-	-	-	9	-	-	-	-	-	-	-	2	-	-	-	-
TOTAL PARKING PROVIDED:	357	395	-	-	-	858	-	-	-	-	-	-	320	330	-	88	-	132
PARKING PROVIDED IN EXISTING GARAGE	-	380	-	-	-	858	-	0	-	0	-	-	-	63 (SEE SHEET 03A)	-	-	-	-
PARKING PROVIDED IN PROPOSED GARAGE	-	-	-	-	-	-	-		-		-	-	-	310	-	-	-	-
LOADING SPACES	1	3			6	3								2				
BICYCLE PARKING																		
Residential	74	75	-	-	-	129	-	-	-	-	-	-	102	116				
Visitor	5	5	-	-	-	8	-	15	-	6	-	-	7	7	1	2	2	2
Retail	6	6				28		3		2			9	11				
Office	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ZONING TABULATIONS

INOVA HOSPITAL CAMPUS (Building A, Building B, Building C)

Zoning Requirement	Building A PROPOSED	Building B PROPOSED	Building C PROPOSED	Block D REQUIRED	Block D PROPOSED	Block E REQUIRED	Block E PROPOSED
LOT AREA (SQ. FT.)	452,343 (COMBINED INOVA HOSPITAL CAMPUS AREA)			-	63,315	-	108,575
LOT WIDTH (FT.)	-			-	-	-	-
FRONT YARD (FT.)	-			-	-	-	-
SIDE YARD (FT.)	-			-	-	-	-
REAR YARD (FT.)	-			-	-	-	-
FLOOR AREA (SQ. FT.)	933,286 (COMBINED FLOOR AREA FOR BUILDINGS A,B,C)			-	315,601	-	356,404
OPEN SPACE (SF / %)	15%			25.00%	25.00%	25.00%	25.00%
GROUND FLOOR	53,530			-	10,843	-	10,303
ABOVE GROUND	10,000			-	4,990	-	16,840
TOTAL OPEN SPACE	62,530			15,829	15,833	27,143	27,143
AVERAGE FINISHED GRADE (FT.)	216.34 (PROPOSED)	209.86 (PROPOSED)	212.07 (PROPOSED)	-	209.84	-	200.11
MAX. BUILDING HEIGHT (FT.)	159	52	60	-	82	-	91.90/80
CROWN COVERAGE (SQ. FT.)	-	-	-	-	14,210	-	14750 (13.6%)
MAX. RESI DENTISTY (UNITS/AC.)	-	-	-	-	-	-	-
Dwelling Unit Summary (ADU)	-	-	-	-	275	-	146
STUDIO UNITS (ADU)	-	-	-	-	41	-	1
JR ONE BEDROOM UNITS (ADU)					22		
ONE BEDROOM UNITS (ADU)	-	-	-	-	109	-	64
ONE BEDROOM DEN UNITS (ADU)	-	-	-	-	35	-	14
TWO BEDROOM UNITS (ADU)	-	-	-	-	63	-	46
TWO BEDROOM DEN UNITS (ADU)	-	-	-	-	5	-	6
THREE BEDROOM UNITS (ADU)	-	-	-	-	-	-	15
LOADING SPACES	1	1	1	-	2	5	4
TRIP GENERATION (ADT)	5,774	910	3,317	-	599	-	6,587

Zoning Requirement	Block G REQUIRED	Block G PROPOSED	Block H REQUIRED	Block H PROPOSED	Block I REQUIRED	Block I PROPOSED	Block F REQUIRED	Block F PROPOSED	Block N REQUIRED	Block N PROPOSED	Block J REQUIRED	Block J PROPOSED	Block K REQUIRED	Block K PROPOSED	Block L REQUIRED	Block L PROPOSED	Blocks M REQUIRED	Blocks M PROPOSED
LOT AREA (SQ. FT.)	-	62,083	-	-	-	107,845	-	31,872	-	22,509	-	-	-	98,964	-	77,919	-	122,172
LOT WIDTH (FT.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FRONT YARD (FT.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SIDE YARD (FT.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REAR YARD (FT.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLOOR AREA (SQ. FT.)	-	224,485	-	-	-	485,460		7,279	-	4,064	-	-	-	392,578	-	119,932	-	180,526
OPEN SPACE (SF / %)	25.00%	25.00%	-	-	-	28.26%	25%	80.75%	25%	87.73%	-	-	25%	25.66%	25%	25%	25%	32.33%
GROUND FLOOR	-	14,056	-	-	-	1,364	7,968	25,738	5,627	19,748	-	-	24,741	7,248	19,480	19,480	30,543	30,543
ABOVE GROUND	-	1,464	-	-	-	29,115	-	-	-	-	-	-	-	18,142	-	-	-	-
TOTAL OPEN SPACE	15,520	15,520	-	-	-	30,479	7,968	25,738	5,627	19,748	-	-	24,741	25,390	-	19,480	-	30,543
AVERAGE FINISHED GRADE (FT.)	-	198.35	-	-	-	193.00		208.90	-	201.625	-	-	-	199.21	-	195.8	-	195.8
MAX. BUILDING HEIGHT (FT.)	-	85	-	-	-	85	-	38'-0"	-	33'-0"	-	-	-	85	-	50	-	50
CROWN COVERAGE (SQ. FT.)	-	13500 (21.7%)	-	-	-	-	7,968	38250 (120%)	5,627	28500 (126%)	-	-	24,741	19019 (19.22%)	-	19,800 (25.4%)	-	31,690 (25.9%)
MAX. RESI DENTISTY (UNITS/AC.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.58 D.U/AC	-	23.57 DU.AC
Dwelling Unit Summary (ADU)	-	244	-	-	-	390	-	-	-	-	-	-	-	337 (14)	-	44	-	66
STUDIO UNITS (ADU)	-	37	-	-	-	58	-	-	-	-	-	-	-	4 (1)	-	-	-	-
JR ONE BEDROOM UNITS (ADU)		17												125				-
ONE BEDROOM UNITS (ADU)	-	143	-	-	-	189	-	-	-	-	-	-	-	119 (10)	-	-	-	-
ONE BEDROOM DEN UNITS (ADU)	-	6	-	-	-	50	-	-	-	-	-	-	-	5	-	-	-	-
TWO BEDROOM UNITS (ADU)	-	36	-	-	-	68	-	-	-	-	-	-	-	77 (2)	-	-	-	-
TWO BEDROOM DEN UNITS (ADU)	-	5	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-
THREE BEDROOM UNITS (ADU)	-	-	-	-	-	12	-	-	-	-	-	-	-	7 (1)	-	-	-	-
LOADING SPACES	1	3	-	-	6	3	-	-	-	-	-	-	-	2	-	-	-	-
TRIP GENERATION (ADT)	-	1,605	-	-	-	5,173	-	-	-	-	-	-	-	1,981	-	93	-	180

APPROVED
SPECIAL USE PERMIT NO. ________
DEPARTMENT OF PLANNING & ZONING
________ DIRECTOR ________ DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________
________ DIRECTOR ________ DATE
________ CHAIRMAN, PLANNING COMMISSION ________ DATE
DATE RECORDED ________
INSTRUMENT NO. ________ DEED BOOK NO. ________ PAGE NO. ________

REVISIONS
No.	DATE	DESCRIPTION

PLAN DATE
01/13/2025
04/18/2025

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 038790
PROFESSIONAL ENGINEER

GENERAL NOTES & DETAILS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
SCALE: N/A
C.I.= N/A

SHEET
02A
OF
32

FILE No.
RZ-13127

Urban, Ltd. - \\mars-101\J_DRIVE\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\13234-01A-GNOTES.dwg [GNOTES] June 27, 2025 - 2:52pm awdlo

GENERAL NOTES

1. THE SUBJECT SITE IS LOCATED ON THE FOLLOWING CITY OF ALEXANDRIA ASSESSMENT MAP NO.s: LOT 702 2ND LANDMARK MALL REDEVELOPMENT R/S: 047.02-03-12, AND IS ZONED CDD.
2. OWNER: LANDMARK LAND HOLDINGS, LLC C/O FOULGER-PRATT DEVELOPMENT, LLC
3. ADDRESS: 12435 PARK POTOMAC AVE, SUITE 200, POTOMAC, MD, 20854
4. THE NATURAL SOILS AT THE SITE CONSIST OF KINGSTOWNE SANDY CLAY LOAM AND URBAN LAND PER THE USDA SOIL MAP.
5. THE SITE IS LOCATED IN THE HOLMES RUN WATERSHED.
6. CONSTRUCTION PERMITS ARE REQUIRED FOR THIS PROJECT. THE APPROVED SITE PLAN MUST BE ATTACHED TO THE PERMIT APPLICATION THAT FULLY DETAILS THE CONSTRUCTION AS WELL AS LAYOUTS AND SCHEMATICS OF THE MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.
7. ALL PUBLIC AND PRIVATE EASEMENTS OR ALL KNOWN PUBLIC AND PRIVATE EASEMENTS, INCLUDING ALL UTILITY, EGRESS, AND CONSERVATION RESTRICTIONS ARE SHOWN. THE APPLICANT SHALL NOT CONSTRUCT ANY PERMANENT STRUCTURES OVER ANY EXISTING OR PROPOSED PUBLIC EASEMENTS UNLESS OTHERWISE APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
8. PLAT SUBJECT TO RESTRICTIONS OF RECORD.
9. BUILDING HEIGHT SHALL NOT EXCEED THE ALLOWABLE LIMIT BY CITY OF ALEXANDRIA ZONING ORDINANCE OR AS APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
10. ALL NEW CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND TO THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC).
11. FLOOR AREA CALCULATIONS WITH ALLOWABLE LIMITS, AS APPROVED BY PLANNING COMMISSION AND CITY COUNCIL, ARE DEMONSTRATED HEREIN..
12. PRIOR TO COMMENCING NEW WORK, THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING ADJACENT AREAS. IF CITY'S EXISTING PUBLIC INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, STREETS, ALLEYWAYS, DRIVEWAY APRONS, SANITARY AND STORM SEWERS, STREET LIGHTING, TRAFFIC AND PEDESTRIAN SIGNALS, SIDEWALKS, CURB AND GUTTER, AND STORM WATER DROP INLET STRUCTURES ARE DAMAGED BY THE CONTRACTOR OR BY ACTIVITIES RELATING TO THE SITE CONSTRUCTION THEN THE APPLICANT SHALL REPAIR THE SAME TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). A PRE-CONSTRUCTION WALK/SURVEY OF THE SITE SHALL OCCUR WITH CONSTRUCTION AND INSPECTION STAFF TO DOCUMENT EXISTING CONDITIONS PRIOR TO ANY LAND DISTURBING ACTIVITY.
13. ALL IMPROVEMENTS TO THE CITY'S RIGHT-OF-WAY SUCH AS CURB, GUTTER, SIDEWALK, AND DRIVEWAY APRONS, ETC., ARE DESIGNED PER THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
14. ALL STREET CUT AND PATCH WORK LOCATED IN PUBLIC RIGHT-OF-WAYS, REQUIRED FOR ANY UTILITY INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES).
15. CONTRACTOR MUST ENSURE THAT THERE IS NO DISTURBANCE ON ADJACENT PROPERTIES WITHOUT RECORDED EASEMENT OR NOTARIZED LETTER OF PERMISSION FROM THE ADJACENT PROPERTY OWNERS.
16. ALL REQUIRED STATE AND FEDERAL PERMITS, WHICH COULD INCLUDE PERMITS FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (VDCRI, VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ), VIRGINIA DEPARTMENT OF HISTORIC RESOURCES (VDHR), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA), ARMY CORPS OF ENGINEERS AND VIRGINIA MARINE RESOURCES, MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN. THIS INCLUDES THE STATE REQUIREMENT FOR A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES FOR LAND DISTURBING ACTIVITIES GREATER THAN 2,500. INFORMATION REGARDING THE VSMP GENERAL PERMIT CAN BE FOUND ONLINE AT: http://www.dcr.virginia.gov/soil_and_water/vsmp.shtml.
17. PERMITS FROM THE CITY OF ALEXANDRIA OFFICE OF ENVIRONMENTAL QUALITY (OEQ), TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES), AND BUILDING AND FIRE CODE ADMINISTRATION SHALL BE OBTAINED BY THE APPLICANT, AS REQUIRED AND DOCUMENTED HEREIN. THE CONTRACTOR CAN CONTACT ALEXANDRIA FIRE AND CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
18. ANY WORK IN THE PUBLIC RIGHT OF WAY SHALL REQUIRE A SEPARATE PERMIT FROM THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE CONTRACTOR CAN CONTACT THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES AT (703) 746-4035 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
19. THE PROPERTY ADDRESS MUST BE CLEARLY MARKED IN THE FRONT AND BACK OF THE PROPOSED DEVELOPMENT SITE DURING CONSTRUCTION FOR EMERGENCY RESPONSE PURPOSES IN CONTRASTING COLORS FOR EASY IDENTIFICATION.
20. THE APPLICANT SHALL CONTACT THE CRIME PREVENTION UNIT OF THE ALEXANDRIA POLICE DEPARTMENT AT 703-746-1920 REGARDING SECURITY HARDWARE FOR NEW CONSTRUCTION. THIS SHALL BE COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMIT.
21. ROOF DRAINAGE SYSTEM, SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEM MUST BE INSTALLED SO AS NEITHER TO ADVERSELY IMPACT UPON, NOR CAUSE EROSION DAMAGE TO ADJACENT PROPERTIES OR THE PUBLIC RIGHT-OF-WAY.
22. THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE OCCURS ON SITE TO PREVENT PONDING OR DRAINAGE PROBLEMS ON ADJACENT PROPERTIES.
23. IN THE EVENT, THE PROPOSED ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.
24. PER THE REQUIREMENTS OF SECTION 8-1-12 OF THE CITY CHARTER AND CODE; WHEN THE BUILDING FOOTING HAS BEEN PLACED AND THE WALLS HAVE BEEN RAISED TO THE FIRST JOIST BEARING OR STORY HEIGHT ABOVE GRADE, A PLOT PLAN SHOWING THE EXACT LOCATION OF THE WALLS SHALL BE PREPARED BY A LICENSED, CERTIFIED PUBLIC LAND SURVEYOR OR PROFESSIONAL ENGINEER AND FILED WITH THE BUILDING OFFICIAL FOR APPROVAL BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.
25. A SEPARATE DESIGN IS REQUIRED FOR ALL WALLS 24" AND OVER IN HEIGHT FROM THE GRADE AND SUBJECT TO SEPARATE PERMITS TO BE OBTAINED BY THE OWNERS. GEOTECHNICAL AND STRUCTURAL DESIGN IS TO BE COMPLETED BY OTHERS. THIS FINAL SITE PLAN SHOWS LOCATION, PROPOSED GRADING, AND DESIGN OF ALL THE WALLS.
26. SUBMIT A SURVEY, CONSISTENT WITH THE REQUIREMENTS FOR CERTIFICATE OF OCCUPANCY CHECKLIST, TO THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO REQUESTING AN INSPECTION FOR A CERTIFICATE OF OCCUPANCY.
27. ALL SANITARY LATERALS AND/OR SEWERS NOT SHOWN IN THE EASEMENTS SHALL BE OWNED AND MAINTAINED PRIVATELY.
28. ALL STORM DRAINS NOT SHOWN WITHIN AN EASEMENT OR IN A PUBLIC RIGHT-OF-WAY SHALL BE OWNED AND MAINTAINED PRIVATELY.
29. ALL WATER FACILITY CONSTRUCTIONS SHALL CONFORM TO VIRGINIA AMERICAN WATER (VAW) STANDARDS AND SPECIFICATIONS. NO WORK CAN BE COMPLETED ON EXISTING AND PROPOSED WATER FACILITIES UNTIL ALL EASEMENTS AND AGREEMENTS WITH VAW ARE FINALIZED, EXECUTED AND RECORDED. DEVELOPER OR CONTRACTOR SHALL CONTACT VAW AT 703-706-3889 TO OBTAIN AN APPROVED PROPOSAL AND PAY ALL REQUIRED FEES, PRIOR TO THE START OF CONSTRUCTION, DEMOLITION AND INSPECTION OF WATER FACILITIES, INCLUDING, BUT NOT LIMITED TO, WATER MAINS, FIRE HYDRANTS, DOMESTIC AND FIRE SERVICE LINES. ALL THE PROPOSED WET TAPS ON AN EXISTING WATER MAIN SHALL BE CONSTRUCTED BY VAW.
30. THE SIDEWALKS SHALL REMAIN OPENED DURING CONSTRUCTION OR PEDESTRIAN ACCESS SHALL BE MAINTAINED TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
31. PRIOR TO THE RELEASE OF THE FINAL SITE PLAN, A TRAFFIC CONTROL PLAN FOR CONSTRUCTION DETAILING PROPOSED CONTROLS TO TRAFFIC MOVEMENT, LANE CLOSURES, CONSTRUCTION ENTRANCES, HAUL ROUTES, AND STORAGE AND STAGING SHALL BE PROVIDED FOR INFORMATION PURPOSES; HOWEVER, AN AMENDED TRAFFIC CONTROL PLAN, IF REQUIRED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES SHALL BE SUBMITTED TO THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES ALONG WITH THE BUILDING PERMIT APPLICATION. THE FINAL SITE PLAN SHALL INCLUDE A STATEMENT "FOR INFORMATION ONLY" ON THE TRAFFIC CONTROL PLAN SHEETS.
32. THIS SITE IS NOT LOCATED WITHIN A COMBINED SEWER AREA.
33. THE APPLICANT SHALL BE RESPONSIBLE TO DELIVER THE SOLID WASTE, AS DEFINED BY THE CITY CHARTER AND CODE OF THE CITY OF ALEXANDRIA TO THE CONVANTA ENERGY WASTE FACILITY LOCATED AT 5301 EISENHOWER AVENUE. THE DEVELEOPER FURTHER AGREES TO STIPULATE IN ANY FUTURE LEASE OR PROPERTY SALES AGREEMENT THAT ALL TENANTS AND/OR PROPERTY OWNERS SHALL ALSO COMPLY WITH THIS REQUIREMENT.
34. THE SITE CONTAINS EXISTING STORM SEWER, SANITARY SEWER, WATERLINES, ELECTRIC, AND OVERHEAD UTILITY. THE SUBJECT PLAN PROPOSES THE ADDITION OF STORM SEWER, SANITARY SEWER, WATERLINES, ELECTRIC, AND TELECOMMUNICATION CONNECTIONS. CONTRACTOR SHALL COORDINATE REMOVAL OF ANY HYDRANTS WITH CITY OF ALEXANDRIA AND AMERICAN WATER.
35. FIRE HYDRANTS SHALL REMAIN IN-SERVICE AND UNOBSTRUCTED DURING CONSTRUCTION, UNLESS THEY ARE BEING REMOVED. NO HYDRANTS SHALL BE REMOVED FROM SERVICE UNTIL THE REMOVAL HAS BEEN COORDINATED WITH AMERICAN WATER AND THE CITY OF ALEXANDRIA FIRE MARSHALL OFFICE.
36. THE APPLICANT IS RESPONSIBLE FOR THE MAINTENANCE OF ALL SPECIAL PAVING MATERIAL INSTALLED WITHIN THE PUBLIC RIGHT OF WAY PER DEVELOPMENT CONDITION 2G.

TRAFFIC MAINTENANCE

ALL EXISTING ROADS ADJACENT TO THE SUBJECT SITE WILL REMAIN OPEN FOR USE DURING CONSTRUCTION PHASES.

EXISTING CONDITIONS SURVEY NOTES

1. HORIZONTAL DATUM* NORTH AMERICAN DATUM OF 1983, NAD83
   VERTICAL DATUM* NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88*
2. UTILITY INFORMATION, AS SHOWN ON THIS PLAN, IS TAKEN FROM THE RECORDS AND/OR FIELD SURVEY COMPLETED BY URBAN LTD., DATED 05/10/2012; AND CANNOT BE GUARANTEED. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777 AND 811 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION. THE CONSTRUCTION WORKERS AND CONTRACTOR(S) ARE ENCOURAGED TO VISIT DOMINION VIRGINIA POWER WEB SITE AT WWW.DOM.COM (KEYWORD SAFETY) FOR ADDITIONAL SAFETY INSTRUCTIONS.
3. LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR/ENGINEER SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO VERIFY EXACT LOCATION.
4. THE BOUNDARY INFORMATION FOR THE SUBJECT SITE IS BASED ON A CURRENT FIELD SURVEY PREPARED BY URBAN LTD., DATED 02/01/2012 IN ACCORDANCE WITH THE REQUIREMENTS OF VIRGINIA ASSOCIATION OF LAND SURVEYORS.

* PER MEMORANDUM TO INDUSTRY, JULY 20, 2005; THE PLAN SHALL BE PREPARED USING VIRGINIA STATE PLANE (NORTHZONE) COORDINATES BASED ON NAD83 AND NAVD88; HOWEVER, IF THE CURRENT DRAWINGS ARE PREPARED USING NORTH AMERICAN DATUM OF 1927 (NAD27) AND NORTHGEODETIC VERTICAL DATUM OF 1929 (NGVD29) THEN THE AS-BUILT DRAWINGS SHALL PROVIDE A CONVERSION TABLE OF SANITARY AND STORM SEWER DATA IN THE NAD83 AND NAVD88 DATUMS.

ENVIRONMENTAL SITE ASSESSMENT

1. THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, OFFICE OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS, AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
2. ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-746-4996.
3. UNLESS APPROVED BY THE DIRECTOR OF TRANSPORTATION & ENVIRONMENTAL SERVICES (T&ES) ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR
   BETWEEN THE FOLLOWING HOURS:
   MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
   SATURDAYS FROM 9 AM TO 6 PM.
   NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.
   PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:
   MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND
   SATURDAYS FROM 10 AM TO 4 PM.

SANITARY FLOW COMPUTATIONS

TOTAL FLOW FROM BUILDING D=
300 GPD/UNIT * 275 UNITS = 82,500 GPD
PEAK FACTOR FLOW FROM BUILDING = 82,500 GPD * 4.0 = 330,000 OR 0.33 MGD

THE TOTAL ESTIMATED FLOW EXCEEDS 10,000 GPD AND IS THEREFORE SUBJECT MEMORANDUM TO INDUSTRY NO. 06-14, WHICH STATES THAT AT THE TIME OF THE FINAL SITE PLAN,

1. THE APPLICANT SHALL PROVIDE ADEQUATE SANITARY SEWER OUTFALL ANALYSIS, AS GENERALLY DESCRIBED BELOW, SUFFICIENT TO DETERMINE EXISTING AND FUTURE FLOWS IN THE CITY-OWNED SEWERS THAT ARE USED BY THE DEVELOPMENT/REDEVELOPMENT PROJECT. THE SANITARY SEWER ADEQUATE OUTFALL ANALYSIS SHALL BE COMPLETED UP TO THE TRUNK SEWER DOWNSTREAM WITH A MINIMUM DIAMETER OF 24" OR TO A POINT AS DIRECTED BY T&ES STAFF.
2. THE APPLICANT SHALL PROVIDE AN ESTIMATE OF THE AVERAGE DAY AND PEAK WASTEWATER FLOW DISCHARGED UPSTREAM AND DOWNSTREAM OF THE DEVELOPMENT SITE UNDER EXISTING CONDITIONS AND THE CONTRIBUTION OF SANITARY FLOW FROM THE PROPOSED DEVELOPMENT SITE TO THE TRUNK SEWER USING THE FACTORS DESCRIBED BELOW:

A. AVERAGE DESIGN FLOWS:

I.	SINGLE FAMILY HOME/TOWNHOUSE	350 GPD/UNIT
II.	MULTI-FAMILY (CONDO, APARTMENT)	300 GPD/UNIT
III.	OFFICE/RETAIL	200 GPD/1000 S.F.
IV.	HOTEL	130 GPD/ROOM

B. THE SANITARY SEWERS SHALL BE DESIGNED FOR PEAK FLOW USING A PEAKING FACTOR OF 4 APPLIED TO THE AVERAGE FLOW.
C. AT THE DISCRETION OF T&ES STAFF, EXISTING CONDITIONS PEAK FLOWS, BASED ON LONG-TERM MONITORING AND/OR SEWER MODELING, MAY BE AVAILABLE TO THE APPLICANT FOR USE IN DETERMINING SANITARY SEWER CAPACITY.
D. SHORT-TERM TEMPORARY FLOW MONITORING OR WATER METER DATA MAY NOT BE USED IN LIEU OF COMPUTING EXISTING FLOWS. LONG-TERM MONITORING MAY BE USED SUBJECT TO THE APPROVAL OF THE DIRECTOR OF T&ES.

3. IN LIEU OF THE ESTIMATION OF THE AVERAGE DAY AND PEAK HOUR WASTEWATER FLOW, THE DIRECTOR OF T&ES AT HIS DISCRETION MAY REQUEST THE APPLICANT TO MEASURE THE SANITARY FLOW UPSTREAM AND DOWNSTREAM OF THE PROPOSED DEVELOPMENT SITE TO DETERMINE THE CURRENT SANITARY FLOW DISCHARGED INTO THE TRUNK SEWER UPSTREAM OF THE DEVELOPMENT SITE AND THE CURRENT CONTRIBUTION OF THE SANITARY FLOW TO THE TRUNK SEWER FROM THE DEVELOPMENT SITE UNDER EXISTING CONDITIONS.
4. THE APPLICANT SHALL ESTIMATE ADDITIONAL AVERAGE DAY AND PEAK HOUR WASTEWATER FLOW TO BE DISCHARGED INTO THE TRUNK SEWER FROM THE PROPOSED DEVELOPMENT SITE UNDER PROPOSED CONDITIONS USING THE FACTORS DESCRIBED ABOVE.
5. THE SANITARY SEWER ADEQUATE OUTFALL ANALYSIS SHALL ACCOUNT FOR THE EXISTING AND FUTURE NEEDS.
6. THE CITY OF ALEXANDRIA, AT ITS DISCRETION, WILL PROVIDE THE APPLICANT WITH ANY READILY AVAILABLE DATA TO ASSIST IN COMPLETION OF THE ADEQUATE OUTFALL ANALYSIS. THE ADDITIONAL PARAMETERS REQUIRED TO COMPLETE THE ANALYSIS SHALL BE FIELD MEASURED (I.E., LENGTH, PIPE DIAMETER, MATERIAL OF CONSTRUCTION, AND SLOPE, ETC.) AND/OR ESTIMATED (I.E., MANNING'S ROUGHNESS COEFFICIENT) BY THE APPLICANT. THE APPLICANT SHALL USE THE CRITERIA ESTABLISHED BY THE ENGINEERS AND SURVEYORS (ESI) INSTITUTE, AS SHOWN ON THE ESI CHECK LIST, WHERE APPLICABLE.
7. THE APPLICANT SHALL PROVIDE ALL THE MEASURED AND/OR ESTIMATED DATA AND CALCULATIONS ON THE ADEQUATE SANITARY SEWER OUTFALL ANALYSIS ON THE PLANS FOR REVIEW BY THE CITY STAFF.
8. THE INCREASED PEAK FLOW WILL BE PLACED IN THE CITY OF ALEXANDRIA WASTEWATER FLOW CAPACITY REGISTRY TO DETERMINE THAT THE CITY HAS SUFFICIENT TREATMENT CAPACITY AVAILABLE IN THE ALEXANDRIA SANITATION AUTHORITY (ASA) ADVANCED WASTEWATER TREATMENT PLANT (A WWTP) AND IN VARIOUS INTERCEPTOR SEWERS IN THE CITY OF ALEXANDRIA.
9. SANITARY SEWER SYSTEMS THAT SERVE OVER 400 PEOPLE REQUIRE THE APPROVAL OF THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ). THEREFORE, THE APPLICANT SHALL COMPLY WITH ALL THE REGULATORY REQUIREMENTS OF THE STATE OF VIRGINIA.
10. THE INSTALLATION OF PLUMBING FIXTURES THROUGHOUT THE CITY SHALL BE GOVERNED BY LOCATION. IN THE AREAS A AND B SHOWN IN THE ATTACHED MAP, THE SANITARY SEWER PLUMBING FIXTURES AND DRAINS LOCATED BELOW THE FIRST FLOOR (INCLUDING PARKING STRUCTURES) SHALL HAVE IN-STRUCTURE OR ON-SITE PLUNPED DISCHARGE TO THE CITY'S GRAVITY COLLECTION SYSTEM.
11. THE PUMPED FACILITIES SHALL BE PROVIDED WITH A STANDBY SOURCE OF POWER (I.E., BATTELY OR GENERATOR).
12. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE PERPETUAL OWNERSHIP, CAPITAL, AND MAINTENANCE AND OPERATION OF THE PUMPS AND APPURTENANCES.
13. NO FOUNDATION DRAIN, BASEMENT DRAIN, OR STAIRWELL BASEMENT ACCESS DRAIN SHALL BE CONNECTED TO THE CITY OR ASA SANITARY SEWER.

ADDITIONAL NOTES

1. CONTRACTOR SHALL ENSURE ALL DISCHARGES ARE IN ACCORDANCE WITH CITY OF ALEXANDRIA CODE TITLE 5, CHAPTER 6, ARTICLE B.
2. DEWATERING AND OTHER CONSTRUCTION RELATED DISCHARGE LIMITS TO THE SEWER SYSTEM ARE REGULATED BY ALEXRENEW PRETREATMENT. CONTRACTOR IS REQUIRED TO CONTACT ALEXRENEW'S PRETREATMENT COORDINATOR AT 703-721-3500 X2020.

DEMOLITION

1. A SEPARATE PERMIT IS REQUIRED FOR DEMOLITION; HOWEVER, NO DEMOLITION SHALL BEGIN UNTIL ALL EROSION AND SEDIMENT AND TREE PROTECTION CONTROLS ARE IN PLACE AND ARE APPROVED BY AN EROSION AND SEDIMENT CONTROL INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.
2. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE MOST CURRENT APPLICABLE FEDERAL, STATE , AND LOCAL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED, TO ENVIRONMENTAL PROTECTION AGENCY (EPA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), VIRGINIA OCCUPATIONAL AND SAFETY HEALTH COMPLIANCE PROGRAM (VOSH ENFORCEMENT), VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT, NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), AND NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK WITH REPRESENTATIVE UTILITY COMPANIES AND FOR THE IMPLEMENTATION OF REQUIRED UTILITY-RELATED WORK.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY HAZARDOUS MATERIALS DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DOCUMENT SAME TO THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
5. DISCONNECTION OF SERVICES AND SYSTEMS SUPPLYING UTILITIES TO BE ABANDONED OR DEMOLISHED SHALL BE COMPLETED PRIOR TO OTHER SITE DEMOLITION IN FULL COMPLIANCE WITH APPLICABLE CODES, REGULATIONS, AND THE REQUIREMENTS OF UTILITY PURVEYORS HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY PURVEYORS, PAYMENT OF ASSOCIATED FEES AND PROCUREMENT OF ALL NECESSARY PERMITS.
6. PRIOR TO REMOVAL OF MATERIALS OVER EXISTING UTILITY SYSTEMS, THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS AND, IF AT VARIANCE WITH CONDITIONS AS REPRESENTED ON THE PLANS, NOTIFY THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTIONS AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
7. THE CONTRACTOR SHALL BACKFILL EXCAVATED AREAS WITH APPROVED MATERIALS/CLEAN FILL AS PER THE REQUIREMENTS OF VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT).
8. THE CONTRACTOR SHALL PROTECT AND PREVENT DAMAGE TO EXISTING ON-SITE UTILITY DISTRIBUTION FACILITIES THAT ARE TO REMAIN. ACTIVE UTILITY DISTRIBUTION FACILITIES ENCOUNTERED DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES SHALL BE SHUT OFF AT THE SERVICE MAIN WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
9. DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY EXISTING UTILITIES AND/OR UTILITY SYSTEM STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL DOCUMENT THE SAME AND FORWARD THE INFORMATION TO THE RESIDENT ENGINEER/OWNER'S REPRESENTATIVE, AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
10. THE CONTRACTOR OR APPLICANT SHALL WORK WITH THE CITY STAFF TO REUSE THE EXISTING, LEFTOVER, UNUSED, AND/OR DISCARDED BUILDING MATERIALS AS PART OF THE DEMOLITION PROCESS OR THE CONSTRUCTION DEBRIS MUST BE REMOVED TO AN APPROVED LANDFILL WITH ADEQUATE FREQUENCY IN ACCORDANCE WITH THE VIRGINIA STATE LINER CONTROL ACT.

SIGN CONSTRUCTION

A SEPARATE PERMIT IS REQUIRED FOR SIGN CONSTRUCTION.

CEMETERY AND/OR BURIAL GROUNDS

THERE IS NO OBSERVABLE, HISTORICAL, OR ARCHAEOLOGICAL EVIDENCE OF CEMETERIES OR BURIAL GROUNDS ON THIS PROPERTY. FURTHERMORE, IT IS ILLEGAL TO DISTURB HUMAN REMAINS WITHOUT OBTAINING APPROPRIATE LEGAL AUTHORIZATION. IF BURIALS ARE FOUND DURING THE ARCHAELOGICAL INVESTIGATION AND NEED TO BE MOVED PRIOR TO DEVELOPMENT, THE APPLICANT SHALL BE RESPONSIBLE FOR THE ARCHAEOLOGICAL REMOVAL AND FOR OBTAINING THE NECESSARY LEGAL DOCUMENTS, INCLUDING A PERMIT FROM THE VIRGINIA DEPARTMENT OF HISTORIC RESOURCES FOR THE ARCHAELOGICAL REMOVAL OF BURIALS.

RODENT ABATEMENT NOTE

PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT, A RODENT ABATEMENT PLAN SHALL BE SUBMITTED TO THE CITY OF ALEXANDRIA DEPARTMENT OF CODE ADMINISTRATION THAT WILL OUTLINE WHAT STEPS HAVE AND WILL BE TAKEN TO PREVENT THE SPREAD OF RODENTS FROM THE CONSTRUCTION SITE TO THE SURROUNDING COMMUNITY AND SEWERS. THE CONTRACTOR CAN CONTACT THE ALEXANDRIA DEPARTMENT OF CODE ADMINISTRATION AT 703-746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION. PLEASE BE ADVISED ONCE ANY DEMOLITION HAS BEEN COMPLETED ANY ABOVE GROUND BAIT BOXES MUST BE RELOCATED TO WITHIN 50 FEET OF A STRUCTURE IN KEEPING WITH EPA REGULATIONS. IF THIS IS NOT POSSIBLE, THEY SHALL BE REMOVED AND REGULAR INSPECTIONS OF THE SITE CONDUCTED BY A VIRGINIA LICENSED PEST EXTERMINATOR TO ENSURE THE SITE REMAINS RODENT FREE.

MARINE CLAY STATEMENT

NO MARINE CLAYS EXISTS ON SITE FOR BLOCK D.

AIR POLLUTION

1. IF FIREPLACES ARE UTILIZED IN THE DEVELOPMENT, THE APPLICANT IS REQUIRED TO INSTALL GAS FIREPLACES TO REDUCE AIR POLLUTION AND ODORS. ANIMAL SCREENS MUST BE INSTALLED ON CHIMNEYS.
2. NO MATERIAL MAY BE DISPOSED OF BY VENTING INTO THE ATMOSPHERE.
3. CONTROL ODORS AND ANY OTHER AIR POLLUTION SOURCES RESULTING FROM OPERATIONS AT THE SITE AND PREVENT THEM FROM LEAVING THE PROPERTY OR BECOMING A NUISANCE TO NEIGHBORING PROPERTIES, AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

SOLID WASTE MANAGEMENT

1. SINCE THE APPLICANT IS NOT REQUIRED, BY SECTION 5-1-31 OF THE CITY CHARTER AND CODE TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES, TO USE THE CITY OF ALEXANDRIA'S COLLECTION AND DISPOSAL SERVICES; SOLID WASTE COLLECTION AND DISPOSAL SERVICES SHALL BE PROVIDED BY THE APPLICANT / PRIVATE COLLECTORS AND SHALL BE PASSED ON TO THE NEW OWNER IN CASE OF A SALE OF THE PROPERTY SUBSEQUENT TO THE DEVELOPMENT.

SITE ACCESSIBILITY NOTES

1. ALL BUILDINGS WITHIN THE BOUNDARY OF THIS SITE SHALL HAVE AT LEAST ONE "ACCESSIBLE ROUTE" THAT CONFORMS TO "ADA"-"ACCESSIBLE ROUTE" STANDARDS. THESE STANDARDS INCLUDE, BUT ARE NOT LIMITED TO: MAXIMUM WALK SLOPE=1:20 AND MAXIMUM RAMP SLOPE=1:12. ALL WALKS WILL BE BROOM-FINISHED CONCRETE UNLESS OTHERWISE SPECIFIED ON THESE DRAWINGS AND/OR THE ARCHITECTURAL PLANS.
2. ALL "ACCESSIBLE" PARKING SPACES SHALL BE DESIGNATED WITH APPROPRIATE SIGNAGE.
3. THE PAVEMENT SLOPE WITHIN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION.

ARCHAEOLOGY NOTES

1. ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED PRIOR TO GROUND-DISTURBING ACTIVITIES (SUCH AS CORING, GRADING, FILLING, VEGETATION REMOVAL, UNDERGROUNDING UTILITIES , PILE DRIVING, LANDSCAPING AND OTHER EXCAVATIONS AS DEFINED IN SECTION 2-151 OF THE ZONING ORDINANCE) OR A RESOURCE MANAGEMENT PLAN MUST BE IN PLACE TO PRESERVE AND/OR RECOVER SIGNIFICANT RESOURCES IN CONCERT WITH CONSTRUCTION ACTIVITIES. TO CONFIRM, CALL ALEXANDRIA ARCHAEOLOGY AT (703) 838-4399.
2. CALL ALEXANDRIA ARCHAEOLOGY (703-746-4399) TWO WEEKS BEFORE THE STARTING DATE OF ANY GROUND DISTURBANCE SO THAT AN INSPECTION OR MONITORING SCHEDULE FOR CITY ARCHAEOLOGISTS CAN BE ARRANGED.
3. THE APPLICANT/DEVELOPER SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-746-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ECT.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.
4. THE APPLICANT/DEVELOPER SHALL NOT ALLOW ANY METAL DETECTION AND/OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAYS.
5. ALL REQUIRED ARCHAEOLOGICAL MEASURES SHALL BE COMPLETED IN COMPLIANCE WITH SECTION 11-411 OF THE ZONING ORDINANCE.

DISCHARGE NOTES

A. CONTRACTOR SHALL ENSURE ALL DISCHARGES ARE IN ACCORDANCE WITH CITY OF ALEXANDRIA CODE TITLE 5, CHAPTER 6, ARTICLE B.
B. DEWATERING AND OTHER CONSTRUCTION RELATED DISCHARGE LIMITS TO THE SEWER SYSTEM ARE REGULATED BY ALEXRENEW PRETREATMENT. CONTRACTOR IS REQUIRED TO CONTACT ALEXRENEW'S PRETREATMENT COORDINATOR AT 703-549-3381 X2020.

EXISTING CONDITIONS NOTE

EXISTING CONDITIONS REFLECTED IN THIS SET ARE BASED ON THE DSP WORK AS PROPOSED ON DSP#2022-00012.

CONSTRUCTION NOTES

1. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREIN ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY ACTION AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUATION OF SERVICE.
2. THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED FOLLOWING NOTIFICATION AND MARKING OF ALL EXISTING UTILITIES TO VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES TEST HOLES TO BE PERFORMED AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE OWNER AND ENGINEER. REDESIGN AND APPROVAL BY REVIEWING AGENCIES SHALL BE OBTAINED, IF REQUIRED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.
4. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
5. THE CONTRACTOR SHALL CLEAR THE SITE OF ALL TREES, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SPECIFIED, AND SHALL BE RESPONSIBLE FOR ENSURING THAT EXISTING UTILITIES ARE DISCONNECTED.
6. THE DEVELOPER SHALL PROVIDE OVER-LOT GRADING TO PROVIDE POSITIVE DRAINAGE AND PRECLUDE PONDING OF WATER.
7. ALL AREAS, ON OR OFFSITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. THE MINIMUM ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS, SEED MIXTURE TO BE AS RECOMMENDED BY THE CITY AGENT. ALL SLOPES 3:1 AND GREATER SHALL BE SODDED AND PEGGED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY OF ALEXANDRIA.
8. EXISTING SEPTIC FIELDS, IF APPLICABLE, SHALL BE ABANDONED IN ACCORDANCE WITH VIRGINIA HEALTH DEPARTMENT STANDARDS AND SPECIFICATIONS.
9. ALL ABOVE GROUND UTILITIES SERVING THE SITE SHALL BE RELOCATED AS REQUIRED BY THE OWNING UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.
10. PRIOR TO BEGINNING OF CONSTRUCTION, CONTRACTOR SHALL VERIFY FROM THE ARCHITECTURAL DRAWINGS ALL DIMENSIONS, DETAILS, AND TREATMENTS FOR THE PROPOSED BUILDINGS, WALKWAYS, AND OTHER PROPOSED CONSTRUCTION WHERE INDICATED ON THE PLANS.
11. THE CONTRACTOR IS TO VERIFY INVERT, SIZE, AND LOCATION OF BUILDING UTILITY CONNECTIONS WITH THE MECHANICAL PLANS PRIOR TO PLACEMENT OF UNDERGROUND UTILITIES.
12. EXISTING BUILDINGS, FENCES AND OTHER EXISTING PHYSICAL FEATURES ARE TO BE REMOVED AS REQUIRED BY THE CONSTRUCTION.
13. EXISTING STRUCTURES TO BE PARTIALLY DEMOLISHED SHALL BE REMOVED TO NEAREST JOINT. NEW CONSTRUCTION SHALL BE PROVIDED AS SHOWN AND ANY DAMAGED AREA SHALL BE REPAIRED TO MATCH CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.
14. ALL PRIVATE BUILDING CONNECTIONS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
15. TOPS OF EXISTING STRUCTURES WHICH REMAIN IN USE ARE TO BE ADJUSTED IN ACCORDANCE WITH THE GRADING PLAN. ALL PROPOSED STRUCTURE TOP ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR WITH THE SITE GRADING PLANS. IN CASE OF CONFLICT, THE GRADING PLAN SHALL SUPERSEDE PROFILE ELEVATIONS. MINOR ADJUSTMENTS TO MEET FINISHED GRADE ELEVATIONS, IF REQUIRED, SHALL BE MADE IN THE FIELD WITH THE APPROVAL OF SITE INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.
16. THE DESIGN, CONSTRUCTION, FIELD PRACTICES, AND METHODS SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY THE CITY OF ALEXANDRIA ZONING ORDINANCE AND DESIGN AND CONSTRUCTION STANDARDS MANUAL. FAILURE TO COMPLY WITH THE CODE, APPLICABLE MANUALS, AND PROVISIONS OF THE CONSTRUCTION AND ESCROW AGREEMENTS OR THE PERMITS SHALL BE DEEMED A VIOLATION.
17. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER/DEVELOPER OR HIS AGENT OF ANY LEGAL RESPONSIBILITIES WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE CITY OF ALEXANDRIA.
18. CONSTRUCTION STAKEOUT SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA.
19. THE CONTRACTOR IS REFERRED TO STRUCTURAL, GEOTECHNICAL, MECHANICAL, AND ARCHITECTURAL PLANS FOR FOUNDATION TREATMENT INCLUDING, BUT NOT LIMITED TO, SHEETING AND SHORING FOR BUILDING EXCAVATION, WATERPROOFING FOR FILL AGAINST BUILDINGS, LOCATION OF MECHANICAL EQUIPMENT, AND CONNECTIONS AT THE FACES OF BUILDINGS.
20. SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED ENTRANCE AND/OR CURB & GUTTER TO PRECLUDE THE FORMING OF FALSE GUTIER AND/OR PONDING OF WATER ON THE ROADWAY.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A SMOOTH TRANSITION TO EXISTING CURB AND SIDEWALKS, IF APPLICABLE.
22. THE CALIFORNIA BEARING RATIO (CBR) VALUES OF IN-SITU MATERIALS SHALL BE DETERMINED BY FIELD AND/OR LABORATORY TESTS FOR ACTUAL DETERMINATION OF REQUIRED THICKNESSES OF SURFACE, BASE, SUB-BASE, AND SUB GRADE MATERIALS. THE PAVEMENT SECTION SHALL BE DESIGNED BY A GEOTECHNICAL/LICENSED PROFESSIONAL ENGINEER TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING. IN THE CASE OF PAVEMENT PATCHES, PAVEMENT SECTION MUST MEET OR EXCEED EXISTING SECTION.
23. THE THICKNESSES OF SUB-BASE, BASE, AND WEARING COURSE SHALL BE DESIGNED USING "CALIFORNIA METHOD" AS SET FORTH ON PAGE 3-76 OF THE SECOND EDITION OF A BOOK ENTITLED, "DATABOOK FOR CIVIL ENGINEERS, VOLUME ONE, DESIGN" WRITTEN BY ELWYN E. SEELYE. AN ALTERNATE PAVEMENT SECTION DESIGNED TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING BASED ON CBR AND VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) METHOD (VASWANI METHOD) AND STANDARD MATERIAL SPECIFICATIONS SHALL BE ACCEPTABLE.
24. AMERICAN WITH DISABILITY (ADA) ACCESSIBLE PARKING SPACES MUST BE DELINEATED WITH PAVEMENT MARKINGS PER THE CITY OF ALEXANDRIA STANDARD SIGNAGE AND AMERICAN WITH DISABILITIES (ADA) REQUIREMENTS.
25. EMERGENCY VEHICLE EASEMENT (EVE) SHALL NOT BE PAINTED, RATHER DELINEATED WITH THE PAVERS ON THE WEST EDGE OF THE EVE & SIGNAGE ON THE EAST EDGE OF THE GRASSPAVE. ALL ACCESSIBLE PARKING SPACES MUST BE DELINEATED WITH THE CITY OF ALEXANDRIA STANDARD SIGNAGE.
26. ALL STRIPING SHALL MEET THE REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS (LATEST EDITION) AND SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.
27. ALL EARTHWORK OPERATIONS ARE TO BE PERFORMED UNDER THE FULL TIME, ON-SITE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER WITH GEOTECHNICAL TESTING IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS AND GEOTECHNICAL REPORT REQUIREMENTS.
28. THE CONTRACTORS SHALL NOT CAUSE OR PERMIT VEHICLES TO IDLE FOR MORE THAN 10 MINUTES WHEN PARKED.
29. UNLESS OTHERWISE APPROVED THE CONTRACTOR SHALL PROVIDE THERMOPLASTIC LADDER STYLE / STANDARD PEDESTRIAN CROSS WALKS AT ALL CROSSINGS AT THE PROPOSED DEVELOPMENT, WHICH MUST BE DESIGNED TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE DESIGN OF LADDER STYLE OR STANDARD PEDESTRIAN CROSS WALK SHALL BE EVALUATED ON A CASE BY CASE BASIS AND SHALL COMPLY WITH THE REQUIREMENTS OF POLICY MANUAL SECTION 30.18, PEDESTRIAN CROSSWALKS, JULY 13,2006. A COPY OF THE POLICY MANUAL CAN BE OBTAINED FROM YON LAMBERT, BICYCLE AND PEDESTRIAN COORDINATOR / TRANSPORTATION PLANNER, TELEPHONE (703) 746-4081.

STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT

THE APPLICANT SHALL SUBMIT TO THE CITY OF ALEXANDRIA A STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT WITH FINAL SUBMISSION. THE MAINTENANCE AGREEMENT SHALL BE REGISTERED WITH ALEXANDRIA LAND RECORDS.

FLOODPLAIN NOTES

THE SITE DOES NOT LIE WITHIN 100-YEAR FLOOD PLAIN WATER SURFACE ELEVATION (WSE) PER THE DEMARCATION OF THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) PUBLISHED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

RESOURCE PROTECTION AREA NOTES

THE SUBJECT PROPERTY DOES NOT LIE WITHIN THE CITY OF ALEXANDRIA RESOURCE PROTECTION AREA (RPA).

CONTAMINATED SOILS

ALL CONTAMINATED SOILS SHALL BE HANDLED IN ACCORDANCE WITH THE HASP FOR THE SUBJECT SITE. PER THE LANDMARK MALL REDEVELOPMENT RISK ASSESSMENT PREPARED BY ECS MID-ATLANTIC DATE 02/24/2022, SOIL BORING SAMPLES DO NOT INDICATE ANY SOIL OR GROUNDWATER CONTAMINATION PRESENT ON THE SUBJECT SITE.

E&S NOTE

SEE SHEET ## FOR E&S NOTES

WELLS

THERE ARE NO KNOWN WELLS ON SITE.

AFFORDABLE HOUSING

AFFORDABLE HOUSING IS TO BE PROVIDED WITH THIS PLAN.

UTILITY WORKS

A. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING MINIMUM STANDARDS DESCRIBED IN SECTION 4VAC50-30-40 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND ADDITIONAL APPLICABLE PRACTICES FOLLOWED BY THE CITY OF ALEXANDRIA:
B. ALL PRIVATE UTILITIES SHALL BE LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY AND PUBLIC UTILITY EASEMENTS UNLESS THE UTILITY OWNERS HAVE FRANCHISE AGREEMENT WITH THE CITY OF ALEXANDRIA; HOWEVER, NO ELECTRIC TRANSFORMERS AND SWITCH GEARS / CONTROL BOXES SHALL BE PLACED IN THE PUBLIC RIGHT OF WAY.
C. ALL THE EXISTING AND PROPOSED PUBLIC AND PRIVATE UTILITIES AND EASEMENTS SHALL BE SHOWN AND A DESCRIPTIVE NARRATION OF VARIOUS UTILITIES SHALL BE PROVIDED ON THE PLAN.
D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN UTILITY SERVICES AT ALL TIMES DURING CONNECTION AND/OR CONSTRUCTION.
E. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
F. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
G. 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.
H. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
I. SHOULD UTILITY CONSTRUCTION BE PERFORMED AFTER COMPLETING EARTHWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1551) COMPACTION IN ALL TRENCH BACKFILL.
J. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
K. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
L. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION, AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, CITY OF ALEXANDRIA.
M. NO CONTAIMINATION HAS BEEN FOUND ONSITE.
N. UTILITY CORRIDORS IN CONTAMINATED SOIL SHALL BE OVER EXCAVATED BY 2 FEET AND BACKFILLED WITH "CLEAN" SOIL.
O. GRADING CAN BE PERFORMED ON INSTALLATION OF UTILITIES.
P. ALL NEW INSTALLATIONS AND/OR REINSTALLATIONS OF UTILITIES SUCH AS ELECTRICAL LINES, GAS PIPES, COMMUNICATION CABLES INCLUDING WATER AND SEWER LATERAL BOTH ON PRIVATE PROPERTY AND IN THE PUBLIC RIGHT OF WAY IN THE CITY OF ALEXANDRIA SHALL BE PROVIDED WITH 3" AND 6" WIDE 5 MIL OVERALL THICKNESS DETECTABLE UNDERGROUND WARNING TAPES (DUWT). THE 3" DUWT SHALL BE INSTALLED AT DEPTHS OF 12" TO 18" AND 6" WIDE AT A DEPTH OF 24" SO AS TO MAKE UNDERGROUND INSTALLATIONS EASY TO FIND USING A NON-FERROUS LOCATOR. THE DUWT SHALL BE WITH ALUMINUM BACKING OR SOLID ALUMINUM CORE LAMINATED WITH A PROTECTIVE CLEAR FILM ON BOTH SIDES, SEALING AND PROTECTING THE GRAPHICS FROM UNDERGROUND MOISTURE, ACIDS, ALKALIS, AND OTHER SOIL SUBSTANCES. ALL DUWT TAPES SHALL BE PRINTED IN BLACK INK ON AMERICAN PUBLIC WORKS ASSOCIATION (APWA) APPROVED COLORS TO MEET OR EXCEED INDUSTRY STANDARDS. THE FOLLOWING ARE THE APWA COLOR CODES:
Q. EX. FIRE HYDRANT SHALL REMAIN IN SERVICE AND UNOBSTRUCTED DURING CONSTRUCTION. OR AS MAY BE APPROVED BY THE DIRECTOR OF T&ES.

UTILITY COLOR CODES

COLOR	CODES
RED	CAUTION BURIED ELECTRIC POWER LINES, CABLES, CONDUITS, AND LIGHTING CABLES
YELLOW	CAUTION GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	CAUTION COMMUNICATIONS, ALARM OR SIGNAL LINES, CABLES, OR CONDUITS
BLUE	CAUTION POTABLE WATER
PURPLE	CAUTION RECLAIMED WATER, IRRIGATION AMD SLURRY LINES
GREEN	CAUTION SEWER, DRAIN LINES, AND FORCE MAIN

EMERGENCY VEHICLE EASEMENTS NOTE

ALL EMERGENCY VEHICLE EASEMENTS ARE TO BE PROVIDED UNDER A SEPARATE APPLICATION WITH THE FINAL SITE PLAN. ALL EASEMENTS ARE TO BE RECORDED WITH ALEXANDRIA LAND RECORDS.

MOSQUITO CONTROL NOTES

1. SINCE STORM WATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICE (BMP) SYSTEMS THAT HOLD WATER FOR MORE THAN 5 DAYS BETWEEN THE MONTHS OF MAY - OCTOBER HAVE THE POTENTIAL TO CAUSE MOSQUITO BREEDING HABITATS SUCH BMPs SHALL BE TREATED WITH A REGISTERED MOSQUITO LARVAL CONTROL PRODUCT. ALL LABELS SHOULD BE FOLLOWED FOR APPLICATION RATES AND AMOUNTS.
2. CONTACT THE CITY OF ALEXANDRIA ENVIRONMENTAL HEALTH VECTOR BORNE ILLNESS PROGRAM (703-746-4910) FOR QUESTIONS OR TREATMENT ASSISTANCE.

NOISE

1. THE NOISE STUDY AND NOISE COMMITMENT LETTER FOR THE RESIDENTIAL BUILDING SHALL BE SUBMITTED AND APPROVED PRIOR TO FINAL SITE PLAN RELEASE.
2. ALL EXTERIOR BUILDING-MOUNTED LOUDSPEAKERS SHALL BE PROHIBITED AND NO AMPLIFIED SOUND SHALL BE AUDIBLE AT THE PROPERTY LINE.
3. SUPPLY DELIVERIES, LOADING, AND UNLOADING ACTIVITIES SHALL NOT OCCUR BETWEEN THE HOURS OF 11:00 PM AND 7:00 AM.

CONSTRUCTION LIASON:

ROBERT ABT WITH FOULGER-PRATT
240-499-9609

UTILITY CONTACTS:

WASHINGTON GAS MIKE GOFFUS 6801 INDUSTRIAL ROAD SPRINGFIELD, VA 22151 (703) 750-4881	VERIZON TONY ASHBY 4242 DUKE STREET ALEXANDRIA, VA 22304 703-212-5292
DOMINION VIRGINIA POWER DAN KOCIOLA 3072 CENTREVILLE RD, HERNDON, VA 20171 571-203-5278	VIRGINIA AMERICAN WATER COMPANY STEVEN CHEN 2225 DUKE STREET ALEXANDRIA, VA 22314 (703) 706-3863
COMCAST CABLE MELVIN YERBY 3900 WHEELER AVE, ALEXANDRIA, VA 22304 804-221-8492	CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES 301 KING STREET, ROOM 4100 ALEXANDRIA, VA 22314 (703) 746-4025

APPROVED
SPECIAL USE PERMIT NO. ____________

DEPARTMENT OF PLANNING & ZONING

DIRECTOR	DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ____________

DIRECTOR	DATE

CHAIRMAN, PLANNING COMMISSION	DATE

DATE RECORDED ____________

INSTRUMENT NO.	DEED BOOK NO.	PAGE NO.

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/13/2025
04/18/2025

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Planners•Engineers•Landscape Architects•Land Surveyors

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

GENERAL NOTES & DETAILS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
C.I.= N/A
SCALE: N/A

SHEET
02B
OF
32

FILE No.
RZ-13127

Urban, Ltd. - \\mars-101\J DRIVE\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\13234-01A-GNOTES.dwg [GNOTES2] June 27, 2025 - 2:16pm lhuynh

GREEN BUILDING NARRATIVE:

Sustainable Building Partners
2701 Prosperity Avenue, Suite 100
Fairfax, VA 22031

Date: June 3, 2025
Project: West End Block D
Purpose: DSUP Concept 2 Comments - Green Building Narrative

General Approach

The West End Block D project is pursuing LEED Multifamily Midrise v4 certification at the Silver level. The project will comply with the Alexandria Green Building Policy in effect at the time of the DSUP, which requires LEED certification.

The LEED Multifamily Mid-rise rating system is a testing and verification-based rating system. The LEED Green Rater will conduct pre-drywall and final inspections to verify that the prerequisites and targeted credits have been implemented on the project. This includes duct leakage testing, blower door testing, exhaust airflow testing, and commissioning. The project must compartmentalize each unit such that air leakage does not exceed 0.30 cfm50 and ducts must be sealed to not exceed 6% overall.

LEED Certification Process

To achieve LEED Certification under the Multifamily Mid-rise Rating system, projects are required to develop a Certification Packet at the end of construction that includes documentation related to both Design and Construction credits. The LEED Multifamily Midrise program differs from LEED BD+C in that it does not use LEED Online to submit the documentation. Instead, the LEED Green Rater will verify all documentation and submit the Certification Packet directly to the Green Building Certification Inc (GBCI) for final review. It is required that the Certification packet is submitted within 30-60 days of substantial completion. Fundamental MEP commissioning will also be included as part of the LEED requirements.

The Verification Team for this project is as follows:
Homes Provider: Green Dinosaur
Green Rater: Scott Atkinson, Sustainable Building Partners
Energy Rater: Justin Aruck, Sustainable Building Partners
Commissioning Agent: John French, Sustainable Building Partners

Energy

Sustainable Building Partners is hired to perform whole building energy modeling for the project and is committed to achieving the 14% energy cost savings as required by the Green Building Policy. The project team will implement an on-going performance optimization process through whole-building energy modeling and integrated design discussions, that will work to find an effective balance of all building systems with the overall goal of improving energy performance.

The project will also commit to achieving 2 points under the Renewable Energy Production LEED credit through Green-E certified off-site green power and/or carbon offsets and will prioritize reducing embodied carbon through conducting a Life Cycle Analysis and reviewing concrete reductions strategies with the design team.

Lighting: Interior lighting will play an integral role in the performance of this facility. The project will position for the use of high-efficacy LED fixtures (>60 lm/W) throughout with an additional focus on minimizing decorative lighting and avoiding the use of linear-strip LED fixtures which often inflate overall lighting power. Lighting controls will be implemented in accordance with the local energy code but the energy model will be used to evaluate opportunities to exceed code requirements.

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Massing/ Orientation: Typical mid- to high-rise multifamily facilities are not heavily sensitive to massing and/or orientation but opportunities will be evaluated as part of the overall building-level performance optimization efforts. Thermal mass implications will be considered but the enclosure will likely use standard light-weight assemblies in order to effectively balance the high cooling and heating loads within this mixed climate.

Enclosure: The building enclosure plays a small role in the overall load profile of a mid- to high-rise multifamily building, but the energy modeling analysis will be used to perform a sensitivity exercise to determine the inflection point and the most effective enclosure strategy that balances performance, budget, and constructability. This effort will include the evaluation of insulation levels, thermal bridging mitigation, and thermal mass.

Plug/ Process loads: The plug and process loads are largely unregulated under the provisions of the local energy code and LEED program so a large portion of these systems present very little opportunity for optimization. That aside, the team will work to incorporate EnergyStar appliances, high-efficacy LED lighting in the dwelling units, a high efficiency elevator system, and premium efficiency motors where applicable.

Metering: The metering strategy will include individual utility metering for all units and with house-level utility metering to monitor all central loads.

Water

In accordance with the City of Alexandria 2019 Green Building Policy, the design will demonstrate an achievement of least a 50% potable outdoor water reduction from the peak watering month. Strategies targeted include selection of native and adaptive plantings and a high-efficiency irrigation system using drip irrigation, moisture meters, and controllers where necessary to ensure plantings survive and thrive.

Low flow plumbing fixtures and ENERGY STAR appliances will be used to reduce potable water use reduction. A 40% water use reduction, at minimum, will be achieved for plumbing fixtures as required by the Green Building Policy. All tank water closets, lavatory faucets, and showerheads will be WaterSense labeled ensuring high-quality fixtures. In early design our team will perform an integrative analysis of the indoor flow fixture demands so we can maximize the potable water reduction and achieve our reduction target of 40%.

The project is considering the following flow rates to achieve our targeted threshold.

- WC: 0.8/1.28 gpf (dual flush)
- Lav Faucet: 1.0 gpm
- Showerhead: 1.75 gpm
- Kitchen faucet: 1.5 gpm

Indoor Environmental Quality

Construction IAQ: During construction the contractor will be required to implement an Indoor Air Quality Plan to support the SMACNA measures that minimize indoor air contamination and promote clean indoor air. These requirements have been incorporated into specification section "018113 Sustainable Design Requirements".

Thermal Comfort & IAQ: To further support occupant health and comfort, the project will target low-emitting interior materials to cover the categories of flooring, paints and coatings, insulation, and ceiling systems. To be compliant, products will have an emissions evaluation in accordance with California Department of Public Health version 1.1, 2010 (CDPH v1.1 2010) or later. This will be

Sustainable Building Partners
West End Block D

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managed and confirmed by reviewing product information and ensuring it carries a GreenGuard Gold label (or equivalent), which is a third-party label that confirms volatile organic compounds levels are below prescribed thresholds. Additionally, outdoor air will be provided directly from the outdoors into the units and all outdoor air systems will be equipped with a minimum MERV 8 filter.

The design will also enable users to have thermal controllability of their spaces through user-activated thermal control devices in the residential units as well as communal amenity spaces. This level of controllability supports occupant comfort but can also promote energy awareness.

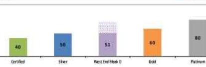
Daylight: Design of the occupied spaces will aim to maximize daylight whenever possible. The design will also support the intent to maximizing on views to build upon a design biophilic principle of interior connection to the outdoors.

Sustainable Building Partners
West End Block D

LEED v4 BD+C: Multifamily Midrise
West End Block D
June 3, 2025

Y	?	N	Type	Item	Points
2	0	0		**Integrative Process**	Possible Points: 2
2			Credit	Integrative Process	
15	0	0		**Location and Transportation**	Possible Points: 15
Y			Prereq	Floodplain Avoidance	Required
15			Credit	Neighborhood Development	15
		8	Credit	Site Selection	8
		3	Credit	Compact Development	3
		2	Credit	Community Resources	2
		2	Credit	Access to Transit	2
1	5	1		**Sustainable Sites**	Possible Points: 7
Y			Prereq	Construction Activity Pollution Prevention	Required
Y			Prereq	No Invasive Plants	Required
	1	1	Credit	Heat Island Reduction	2
	3		Credit	Rainwater Management (v4.1)	3
1	1		Credit	Non-Toxic Pest Control	2
5	2	5		**Water Efficiency**	Possible Points: 12
Y			Prereq	Water Metering	Required
5	2	5	Credit	Total Water Use	12
16	6	15		**Energy and Atmosphere**	Possible Points: 37
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Energy Metering	Required
Y			Prereq	Education of the Homeowner, Tenant or Building Manager	Required
16	6	8	Credit	Annual Energy Use	30
		5	Credit	Efficient Hot Water Distribution	5
		2	Credit	Advanced Utility Tracking	2
2.0	2	5.5		**Materials and Resources**	Possible Points: 9
Y			Prereq	Certified Tropical Wood	Required
Y			Prereq	Durability Management	Required
1			Credit	Durability Management Verification	1
	0.5	4.5	Credit	Environmentally Preferable Products	5
1	1	1	Credit	Construction Waste Management (NC v4)	3

Y	?	N	Type	Item	Points
4	8.5	5.5		**Indoor Environmental Quality**	Possible Points: 18
Y			Prereq	Ventilation	Required
Y			Prereq	Combustion Venting	Required
Y			Prereq	Garage Pollutant Protection	Required
Y			Prereq	Radon-Resistant Construction	Required
Y			Prereq	Air Filtering	Required
Y			Prereq	Environmental Tobacco Smoke	Required
Y			Prereq	Compartmentalization	Required
	3		Credit	Enhanced Ventilation	3
	0.5	1.5	Credit	Contaminant Control	2
	1	2	Credit	Balancing of Heating and Cooling Distribution Systems	3
	1	2	Credit	Enhanced Compartmentalization	3
	2		Credit	Enhanced Combustion Venting	2
	1		Credit	Enhanced Garage Pollutant Protection	1
3			Credit	Low Emitting Products	3
1			Credit	No Environmental Tobacco Smoke	1
6	0	0		**Innovation**	Possible Points: 6
5			Credit	Innovation	5
1			Credit	LEED AP Homes	1
0	0	4		**Regional Priority Credits**	Possible Points: 4
		1	Credit	Access to Transit (2 pts)	1
		1	Credit	Community Resources (2 pts)	1
		1	Credit	Rainwater Management, Outdoor Water Use	1
		1	Credit	Site Selection (8 pts), Construction Waste (3 pts), Total Water Use	1
51	23	36			Possible Points: 110



Note:
- min 8 points total in LT and EA required
- min 3 points in WE required
- min 3 points in EQ required

MINIMUM/MAXIMUM PARKING REQUIREMENTS:

City of Alexandria's Parking Requirements

Zoning Requirements Based on Residential Performance-Based City Standards **(Minimums)**

	Baseline Zoning Ratio[1]	Total Credits	Final Zoning Ratio		Development Size	Bedrooms		Minimum Spaces
Residential Rates								
1 Bedroom	1.00 /bdrm	5%	0.95 /bdrm	x	207 units	207 bdrms	=	197
2+ Bedroom[2]	1.00 /bdrm	5%	0.95 /bdrm	x	68 units	136 bdrms	=	130
Residential Subtotal					**275 units**			**327**
Allowable Residential Credits (Voluntary):								
Four or more bus routes stop within 0.25 mile of development entrance (5% applied in Final Zoning Ratio)								5%
Total with Zoning Requirements								**327**

Notes:
1. Residential performance-based ratios based on the Guiding Document for Parking Standards for Multi-Family Residential Development Projects dated February 24, 2016.
2. Units with 2 bedrooms or more are counted as 2-bedroom units.

Zoning Requirements Based on Residential Performance-Based City Standards **(Maximums)**

	Baseline Zoning Ratio[1]	Total Credits	Final Zoning Ratio		Development Size	Bedrooms		Maximum Spaces
Residential								
1 Bedroom	1.00 /bdrm	0%	1.00 /bdrm	x	207 units	207 bdrms	=	207
2+ Bedroom[2]	1.00 /bdrm	0%	1.00 /bdrm	x	68 units	136 bdrms	=	136
Residential Subtotal					**275 units**			**343**
Total with Zoning Requirements								**343**

Notes:
1. Residential performance-based ratios based on the Guiding Document for Parking Standards for Multi-Family Residential Development Projects dated February 24, 2016.
2.Units with 2 bedrooms or more are counted as 2-bedroom units.

LEGEND:

EXISTING WATER LINE
PROPOSED WATER LINE
EX. FIRE HYDRANT
PROP. FIRE HYDRANT
EXISTING WATER METER
PROPOSED WATER METER
EXISTING WATER VALVE
PROPOSED WATER VALVE
EXISTING STORM DRAIN
PROPOSED STORM DRAIN
EXISTING SANITARY SEWER
PROPOSED SANITARY SEWER DIRECTION OF FLOW
EXISTING GAS LINE
PROPOSED GAS LINE
EXISTING GAS VALVE
PROPOSED GAS VALVE
EXISTING OVERHEAD WIRE
EXISTING LIGHTING
PROPOSED LIGHTING
EXISTING FENCE
PROPOSED FENCE
EXISTING TREE LINE
EXISTING CONTOURS
PROPOSED CONTOURS
PROPOSED PHASE LINE
PROPOSED LIMITS OF CLEARING & GRADING
EXISTING WETLANDS
PROP. RET. WALL
EX. RET. WALL
PROP. POST LIGHT
PROP. BUILDING MAIN ENTRANCE
PROP. BUILDING ENTRANCE
PROP. UNDERGROUND GARAGE
PROPERTY LINE
LOADING SPACE
INTERSECTION VISIBILITY TRIANGLE
BRICK PAVE AREA (TO MATCH EXISTING PLAZA)
PROP. CONCRETE SIDEWALK
PARKING SPACE COUNT
(COA) CITY OF ALEXANDRIA
(AW) AMERICAN WATER
(CSW) CONC. SIDEWALK
(ASW) ASPHALT SIDEWALK

EXISTING TELEPHONE LINE
PROP. TELEPHONE LINE
EXISTING VDOT ELECTRIC LINE
EXISTING ELECTRIC LINE
EX. VERIZON FIBER
EX. COMCAST FIBER
EX. PRIVATE FIBER
EX. ACF FIBER
EX. ELECTRIC MANHOLE
EX. FIBER HANDHOLE
PROP. ELECTRIC LINE
PROP. VERIZON FIBER
PROP. COMCAST FIBER
PROPOSED PRIVATE FIBER
PROPOSED ACF FIBER
PROPOSED ELECTRIC MANHOLE
PROPOSED FIBER HANDHOLE
EXISTING CABLE TV LINE
ROAD SIGN
EX. POWER POLE
EXISTING SPOT ELEVATION
PROP. SPOT ELEVATION
SPILL AND TRANSITION CURB AND GUTTER
PROPOSED CURB
EX. STREET LIGHTS
PROP. STREET LIGHTS
PROPOSED CG-12
EXISTING TREE
PROPOSED TREE
WATER FITTING IDENTIFIER
LOADING AREA
BENCHMARK
TEST PIT REQUIRED
PROJECTED TRAFFIC COUNT
OVERLAND RELIEF
PROP. PROPOSED
EX. EXISTING
SF SQUARE FEET
GSF GROSS SQUARE FEET
NSF NET SQUARE FEET
T.B.R. TO BE REMOVED
FF FINISHED FLOOR
V VISITOR PARKING SPACE
S, C, HC STANDARD, COMPACT, AND HANDICAP PARKING SPACE DESIGNATOR
PROP. PERVIOUS AREA
PROP. PARKING SPACE
EX. TRASH AND RECYCLING.

APPROVED
DEVELOPMENT SITE PLAN NO. ________
DEPARTMENT OF PLANNING & ZONING
________ DIRECTOR ________ DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________
________ DIRECTOR ________ DATE
________ CHAIRMAN, PLANNING COMMISSION ________ DATE
DATE RECORDED ________
INSTRUMENT NO. ________ DEED BOOK NO. ________ PAGE NO. ________

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/13/2025
04/18/2025

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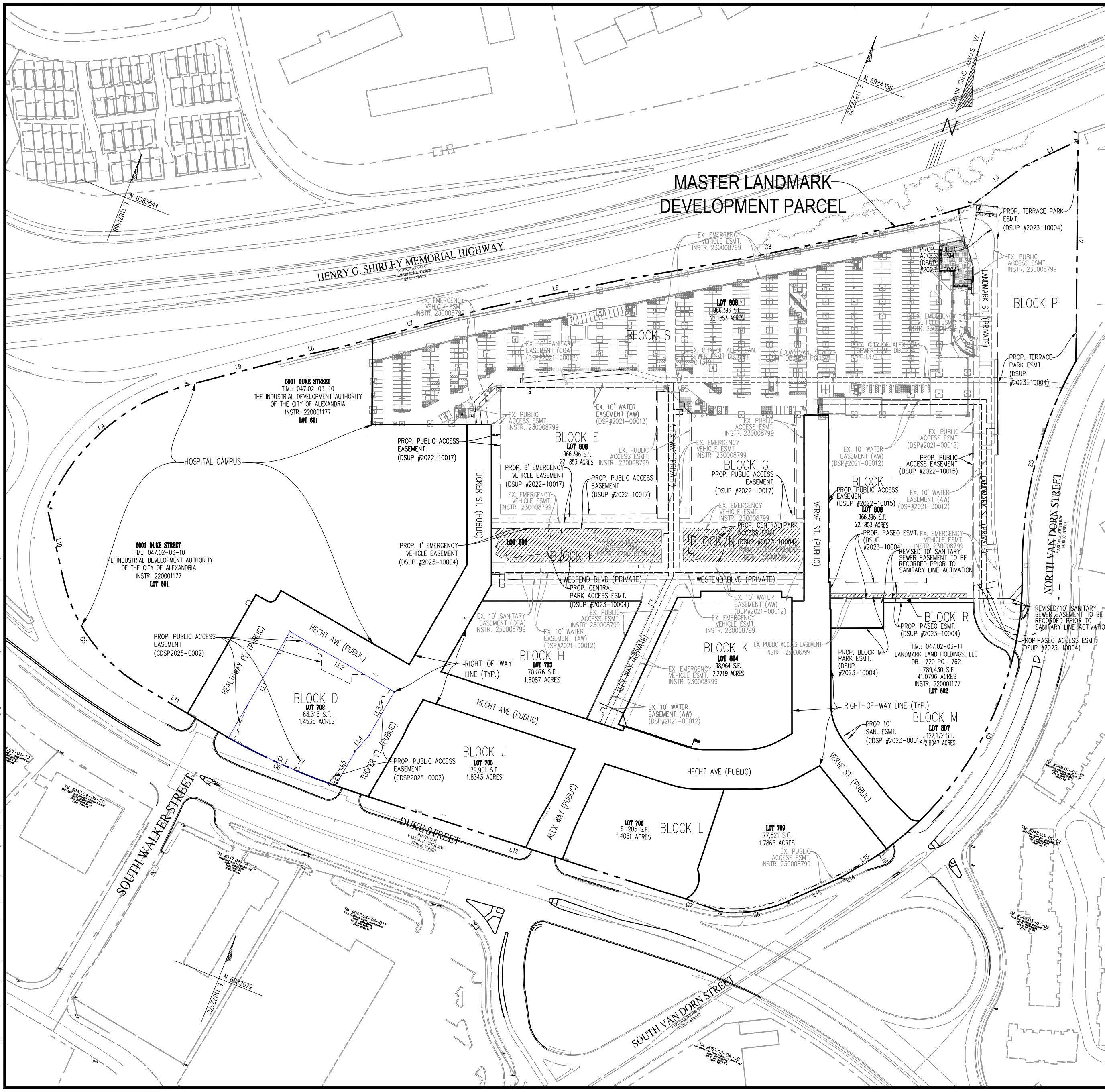
COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

GENERAL NOTES & DETAILS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
SCALE: N/A
C.I.= N/A

SHEET 02C OF 32
FILE No. RZ-13127

Urban, Ltd. - \\mars-101\j_drive\JOBS\andmarkmall\DSUP\Block D\preliminary site plan\13234-01A-GNOTES.dwg [Green Building Approach] June 27, 2025 - 2:16pm lhuynh



EX. EASEMENT LEGEND:

EX. PUBLIC ACCESS EASEMENT INSTR. 230008799 - HATCHED PORTION HEREBY VACATED (44,981 S.F.)

LINE AND CURVE TABLE FOR MASTER LANDMARK PARCEL

LINE	BEARING	DISTANCE
L1	N 22°31'14" W	4.34'
L2	N 21°18'19" W	467.89'
L3	S 43°10'11" W	124.06'
L4	S 31°28'43" W	140.72'
L5	S 51°36'25" W	133.19'
L6	S 56°26'03" W	294.13'
L7	S 53°09'18" W	338.60'
L8	S 56°03'08" W	95.82'
L9	S 53°28'53" W	221.61'
L10	S 34°28'32" E	154.97'
L11	S 80°55'52" E	180.07'
L12	N 86°05'08" E	694.45'
L13	N 44°09'27" E	119.69'
L14	N 37°04'34" E	27.45'
L15	N 37°04'34" E	62.71'
L16	S 54°49'53" E	0.01'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH	TANGENT
C1	699.67'	714.22'	56°07'44"	N 05°32'41" E	672.03'	380.79'
C2	468.83'	898.89'	29°53'01"	N 07°34'42" W	463.54'	239.88'
C3	622.78'	10000.00'	3°34'06"	S 57°02'00" W	622.68'	311.49'
C4	413.23'	450.00'	52°36'49"	S 27°10'28" W	398.86'	222.47'
C5	283.79'	350.00'	46°27'26"	S 57°42'15" E	276.08'	150.22'
C6	317.24'	1400.00'	12°58'59"	S 87°25'22" E	316.56'	159.30'
C7	141.68'	1512.69'	5°21'59"	N 87°02'47" E	141.63'	70.89'
C8	144.40'	291.56'	28°22'37"	N 58°20'45" E	142.93'	73.71'

LINE AND CURVE TABLE FOR BLOCK K

LINE TABLE

LINE	BEARING	DISTANCE
LL1	S08°08'38"W	260.28'
LL2	N81°51'22"W	256.00'
LL3	N08°08'38"E	107.29'
LL4	N19°20'38"E	43.77'
LL5	N08°08'43"E	78.93'

CURVE TABLE

CURVE	ARC	RADIUS	DELTA ANGLE	TANGENT	CHORD	BEARING
CC1	247.76'	1400.00'	10°08'23"	124.20'	247.43'	S87°38'11"E
CC2	6.38'	15.06'	24°16'42"	3.24'	6.33'	N20°11'22"E

LOT AREAS

BLOCK D : 63,315 S.F. OR 1.45 ACRES

LEGEND

BLOCK D BOUNDARY

NOTES:

1. LOT NUMBERS IN THE 800 SERIES REFLECT SUBDIVISION APPLICATION SUB2023-00003, NOT YET RECORDED. LOT NUMBERS IN THE 700 SERIES WERE CREATED VIA DEED OF SUBDIVISION RECORDED IN INSTRUMENT 230002110 AND RE-RECORDED IN INSTRUMENT 230002712.

APPROVED
SPECIAL USE PERMIT NO. ____________

DEPARTMENT OF PLANNING & ZONING

____________ DIRECTOR ____________ DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ____________

____________ DIRECTOR ____________ DATE

____________ CHAIRMAN, PLANNING COMMISSION ____________ DATE

DATE RECORDED ____________

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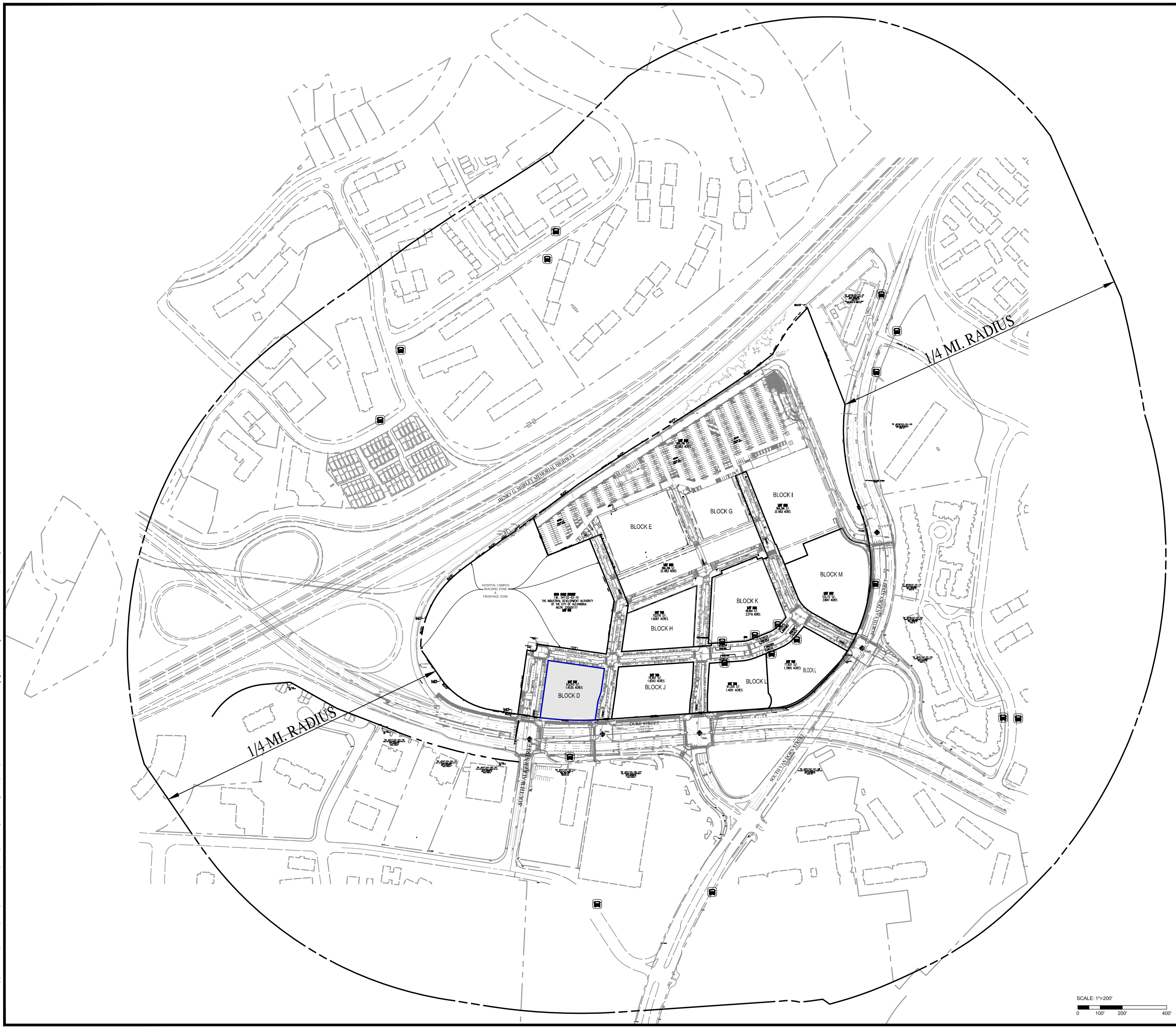
PROPERTY EXHIBIT
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN. 2025
SCALE: 1"=100'
C.I.=N/A

SHEET 03 OF 32

FILE No. RZ-13127

Urban, Ltd. - \\mars-101\J DRIVE\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\13234-18-PROPERTY EXHIBIT.dwg [PROPERTY EXHIBIT] June 27, 2025 - 2:18pm lhuynh



LEGEND

- BLOCK D BOUNDARY
- TRANSIT STOP
- PROPOSED PROJECT SITE

APPROVED

DEVELOPMENT SITE PLAN NO. ____________

DEPARTMENT OF PLANNING & ZONING

____________ DIRECTOR ____________ DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ____________

____________ DIRECTOR ____________ DATE

____________ CHAIRMAN, PLANNING COMMISSION ____________ DATE

DATE RECORDED ____________

INSTRUMENT NO. ____________ DEED BOOK NO. ____________ PAGE NO. ____________

CONTEXTUAL PLAN

WEST END

PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

SCALE: 1"=200' C.I.= N/A DATE: JAN, 2025

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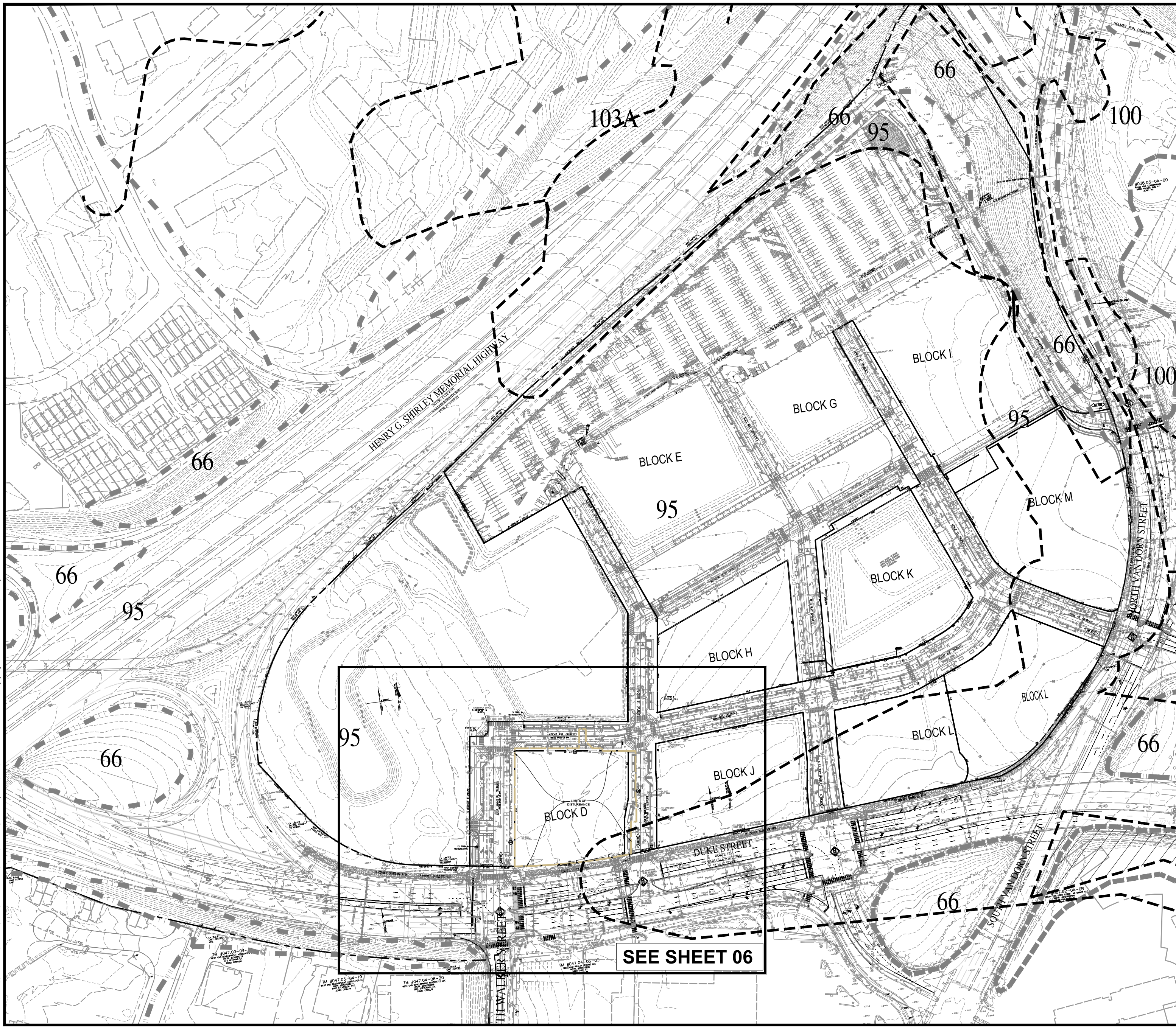
		REVISIONS

SHEET 04 OF 32

FILE No. RZ-13127

Urban, Ltd. - \\mars-101\J DRIVE\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\13234-05-CONTEXT PLAN.dwg [CONT PLAN] June 27, 2025 - 2:19pm lhuynh



NOTES

1. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO KNOWN CONTAMINATED SOIL AND/OR GROUNDWATER FOR BLOCK D
2. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO MARINE CLAY SOILS ONSITE FOR BLOCK D.
3. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.

LEGEND

LIMITS OF DISTURBANCE

SCALE: 1"=100'

0 50' 100' 200'

SOIL INFORMATION

		CLASS	HYDRIC SOILS	HYDROLOGIC CLASS	SOIL DRAINED
95	URBAN LAND	IVB N/A	N/A	N/A	N/A
66	KINGSTOWNE SANDY CLAY LOAM	IVB D	NO	D	FAIR

SOILS LEGEND

SOIL LINES

MARINE CLAY OUTLINE

OVER 25% SLOPE

APPROVED

SPECIAL USE PERMIT NO. ______

DEPARTMENT OF PLANNING & ZONING

______ DIRECTOR ______ DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. ______

______ DIRECTOR ______ DATE

______ CHAIRMAN, PLANNING COMMISSION ______ DATE

DATE RECORDED ______

INSTRUMENT NO. ______ DEED BOOK NO. ______ PAGE NO. ______

OVERALL EXISTING CONDITIONS

WEST END

PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JAN, 2025

SCALE: 1"=100'

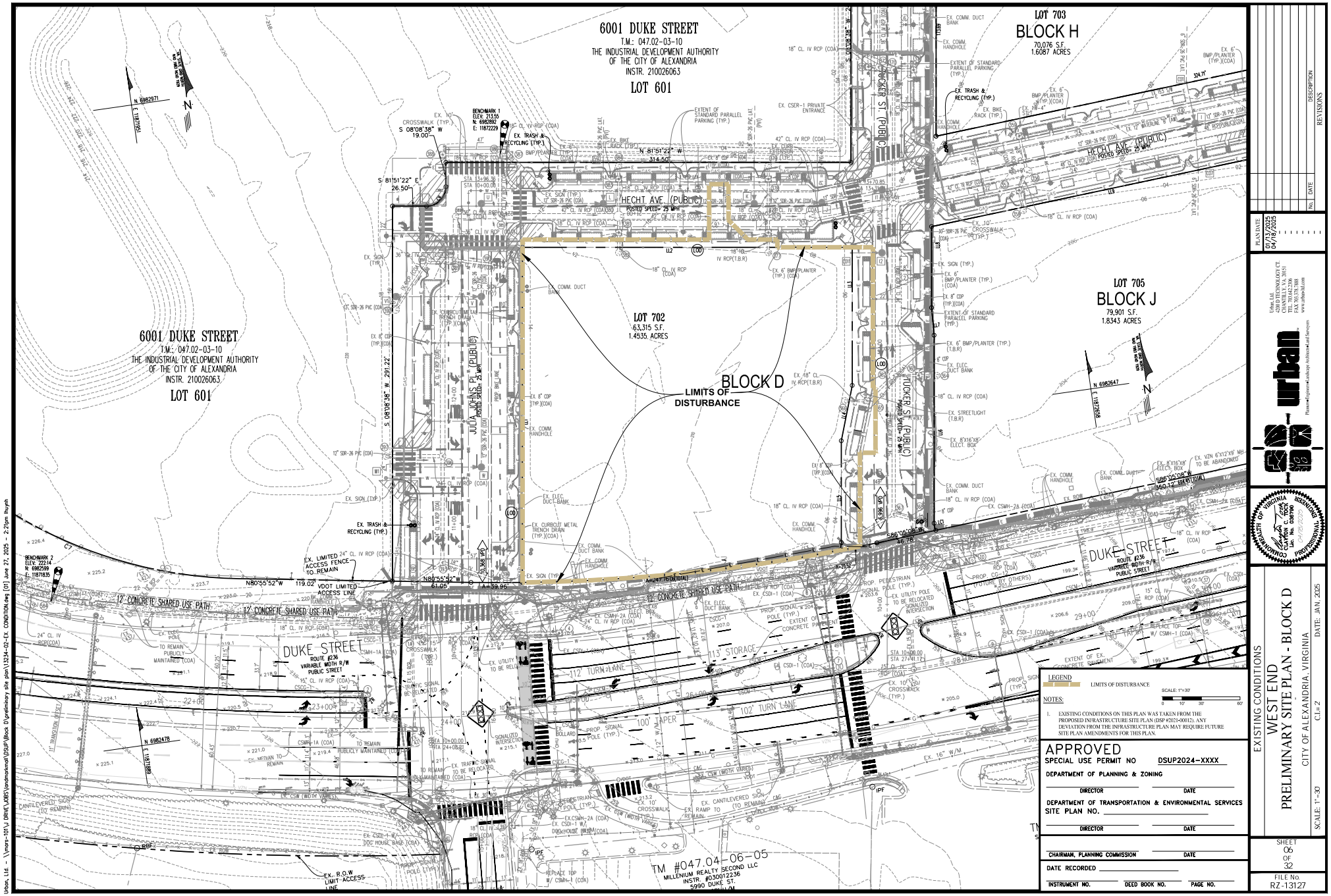
C.I.=2'

SHEET 05 OF 32

FILE No. RZ-13127

PLAN DATE 01/13/2025 04/18/2025

No. DATE DESCRIPTION REVISIONS


6001 DUKE STREET
T.M.: 047.02-03-10
THE INDUSTRIAL DEVELOPMENT AUTHORITY
OF THE CITY OF ALEXANDRIA
INSTR. 210026063
LOT 601
LOT 703
BLOCK H
70,076 S.F.
1.6087 ACRES
LOT 705
BLOCK J
79,901 S.F.
1.8343 ACRES
LOT 702
63,315 S.F.
1.4535 ACRES
BLOCK D
LIMITS OF DISTURBANCE
HECHT AVE. (PUBLIC)
POSTED SPEED= 25 MPH
FUCKER ST. (PUBLIC)
JUCA JOHNS PL. (PUBLIC)
DUKE STREET
ROUTE #236
VARIABLE WIDTH R/W
PUBLIC STREET
12' CONCRETE SHARED USE PATH
TM #047.04-06-05
MILLENNIUM REALTY SECOND LLC
INSTR. #030012236
5990 DUKE ST.
EXISTING CONDITIONS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=30'
DATE: JAN. 2025
C1-2
LEGEND
LIMITS OF DISTURBANCE
SCALE: 1"=30'
NOTES:
1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.
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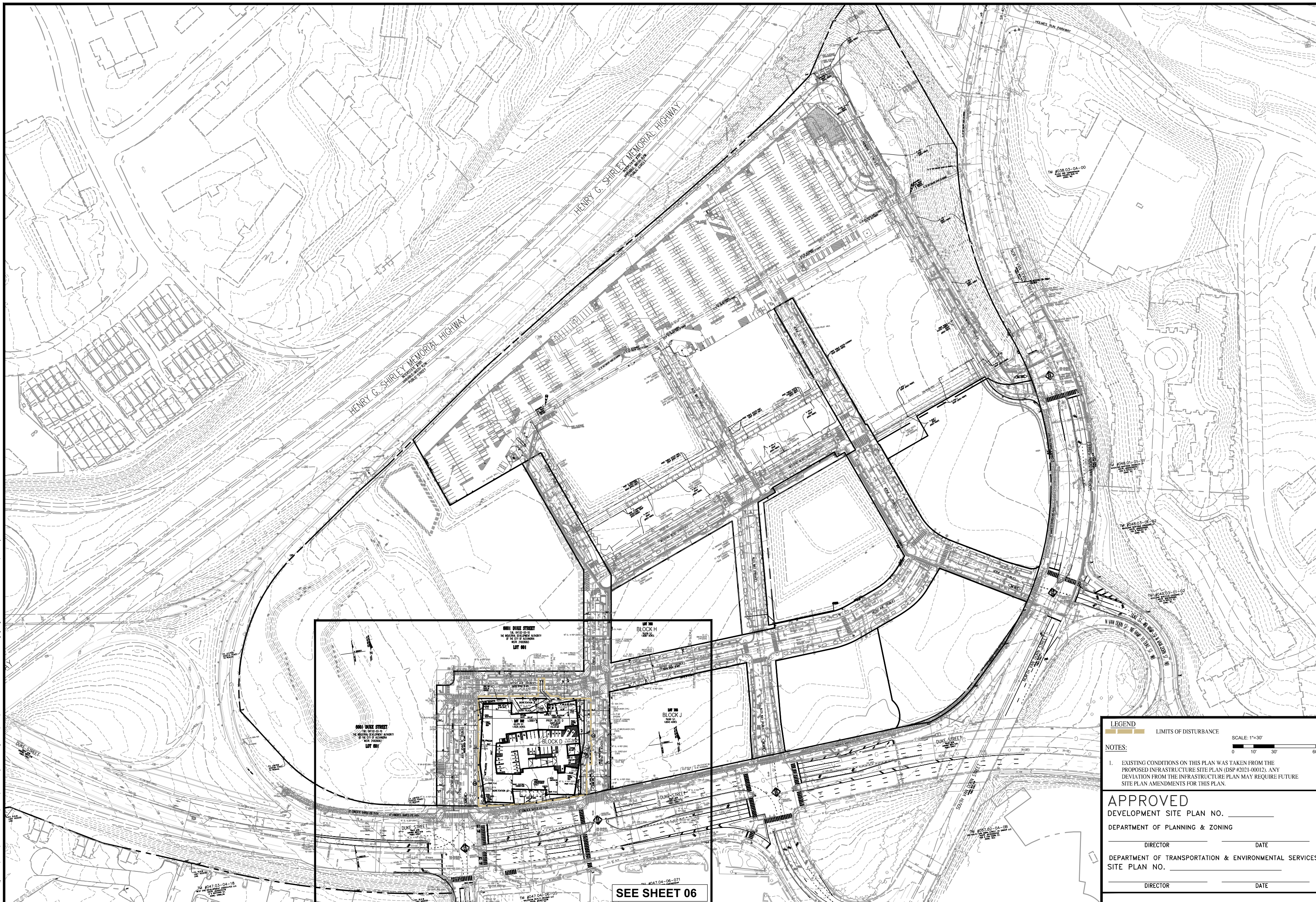
SPECIAL USE PERMIT NO DSUP2024-XXXX
DEPARTMENT OF PLANNING & ZONING
DIRECTOR
DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO.
DIRECTOR
DATE
CHAIRMAN, PLANNING COMMISSION
DATE
DATE RECORDED
INSTRUMENT NO.
DEED BOOK NO.
PAGE NO.
PLAN DATE: 01/13/2025 04/18/2025
No. DATE DESCRIPTION
REVISIONS
SHEET 06 OF 32
FILE No. RZ-13127



NOTE:
- THE VPD SHOWN HEREIN IS FOR THE ENTIRE WESTEND REDEVELOPMENT.
- SEE LANDSCAPE SHEETS L0101–L0103 FOR MATERIALS.
- BMP PLANTERS IN PRIVATE STREETS ARE PRIVATELY MAINTAINED.

LEGEND

LIMITS OF DISTURBANCE

SCALE: 1"=30'

0 10' 30' 60'

NOTES:

1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.

APPROVED

DEVELOPMENT SITE PLAN NO. ____________

DEPARTMENT OF PLANNING & ZONING

DIRECTOR ____________ DATE ____________

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. ____________

DIRECTOR ____________ DATE ____________

CHAIRMAN, PLANNING COMMISSION ____________ DATE ____________

DATE RECORDED ____________

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04/18/2025
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OVERVIEW PLAN

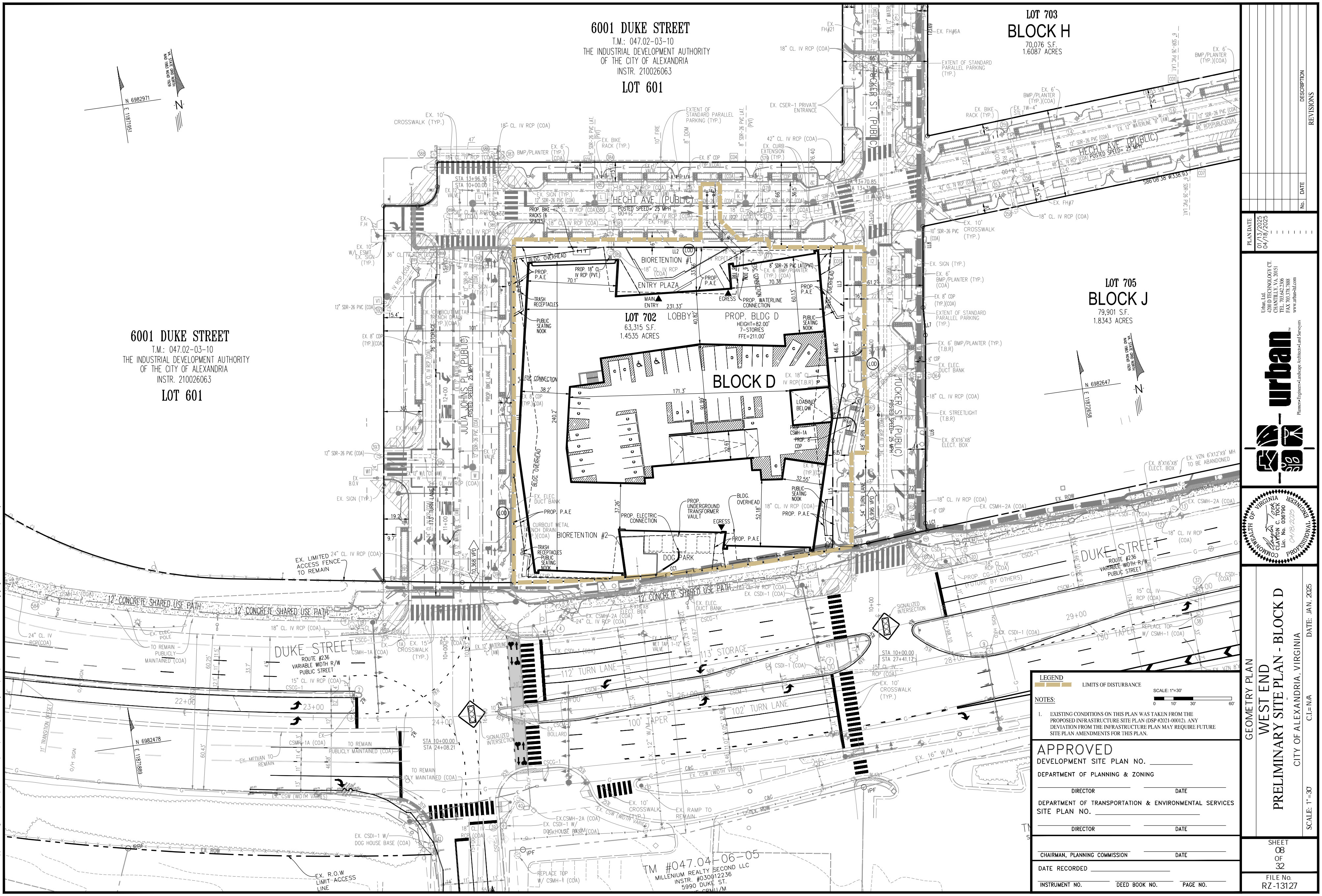
WEST END
PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

SCALE: 1"=100' C.I.=N/A DATE: JAN, 2025

SHEET 07 OF 32

FILE No. RZ-13127



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T.M.: 047.02-03-10
THE INDUSTRIAL DEVELOPMENT AUTHORITY
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INSTR. 210026063
LOT 601
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LOT 705
BLOCK J
79,901 S.F.
1.8343 ACRES
LOT 702
63,315 S.F.
1.4535 ACRES
BLOCK D
PROP. BLDG D
HEIGHT=82.00'
7-STORIES
FFE=211.00'
LOBBY
ENTRY PLAZA
BIORETENTION #1
BIORETENTION #2
DOG PARK
HECHT AVE (PUBLIC)
POSTED SPEED= 25 MPH
TUCKER ST (PUBLIC)
JULIA JOHNS PL (PUBLIC)
DUKE STREET
ROUTE #236
VARIABLE WIDTH R/W
PUBLIC STREET
12' CONCRETE SHARED USE PATH
112' TURN LANE
113' STORAGE
102' TURN LANE
100' TAPER
190' TAPER
SIGNALIZED INTERSECTION
TM #047.04-06-05
MILLENIUM REALTY SECOND LLC
INSTR. #030012236
5990 DUKE ST.
LEGEND
LIMITS OF DISTURBANCE
NOTES:
1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.
SCALE: 1"=30'
APPROVED
DEVELOPMENT SITE PLAN NO.
DEPARTMENT OF PLANNING & ZONING
DIRECTOR
DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO.
DIRECTOR
DATE
CHAIRMAN, PLANNING COMMISSION
DATE
DATE RECORDED
INSTRUMENT NO.
DEED BOOK NO.
PAGE NO.
GEOMETRY PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
SCALE: 1"=30'
C.I.=N/A
SHEET
08
OF
32
FILE No.
RZ-13127
PLAN DATE
01/13/2025
04/18/2025
REVISIONS
No.
DATE
DESCRIPTION
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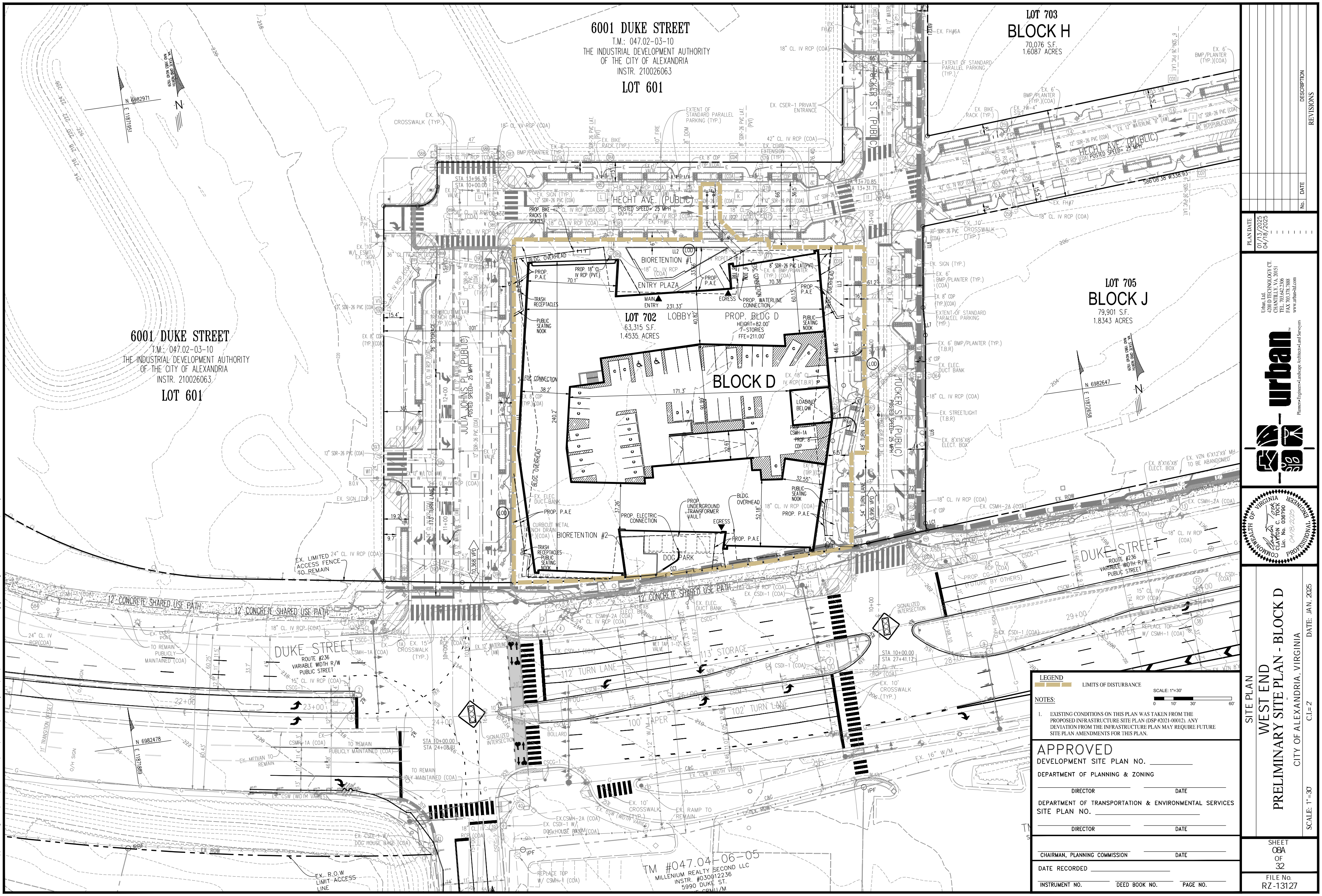
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FFE=211.00'
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ENTRY PLAZA
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BIORETENTION #2
DOG PARK
LOADING BELOW
HECHT AVE. (PUBLIC)
POSTED SPEED= 25 MPH
TUCKER ST. (PUBLIC)
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DUKE STREET
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VARIABLE WIDTH R/W
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TM #047.04-06-05
MILLENIUM REALTY SECOND LLC
INSTR. #030012236
5990 DUKE ST.
LEGEND
LIMITS OF DISTURBANCE
SCALE: 1"=30'
NOTES:
1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.
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DIRECTOR DATE
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SITE PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
C.I.=2
DATE: JAN. 2025
SCALE: 1"=30'
SHEET
08A
OF
32
FILE No.
RZ-13127
PLAN DATE
01/13/2025
04/18/2025
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Lic. No. 036790
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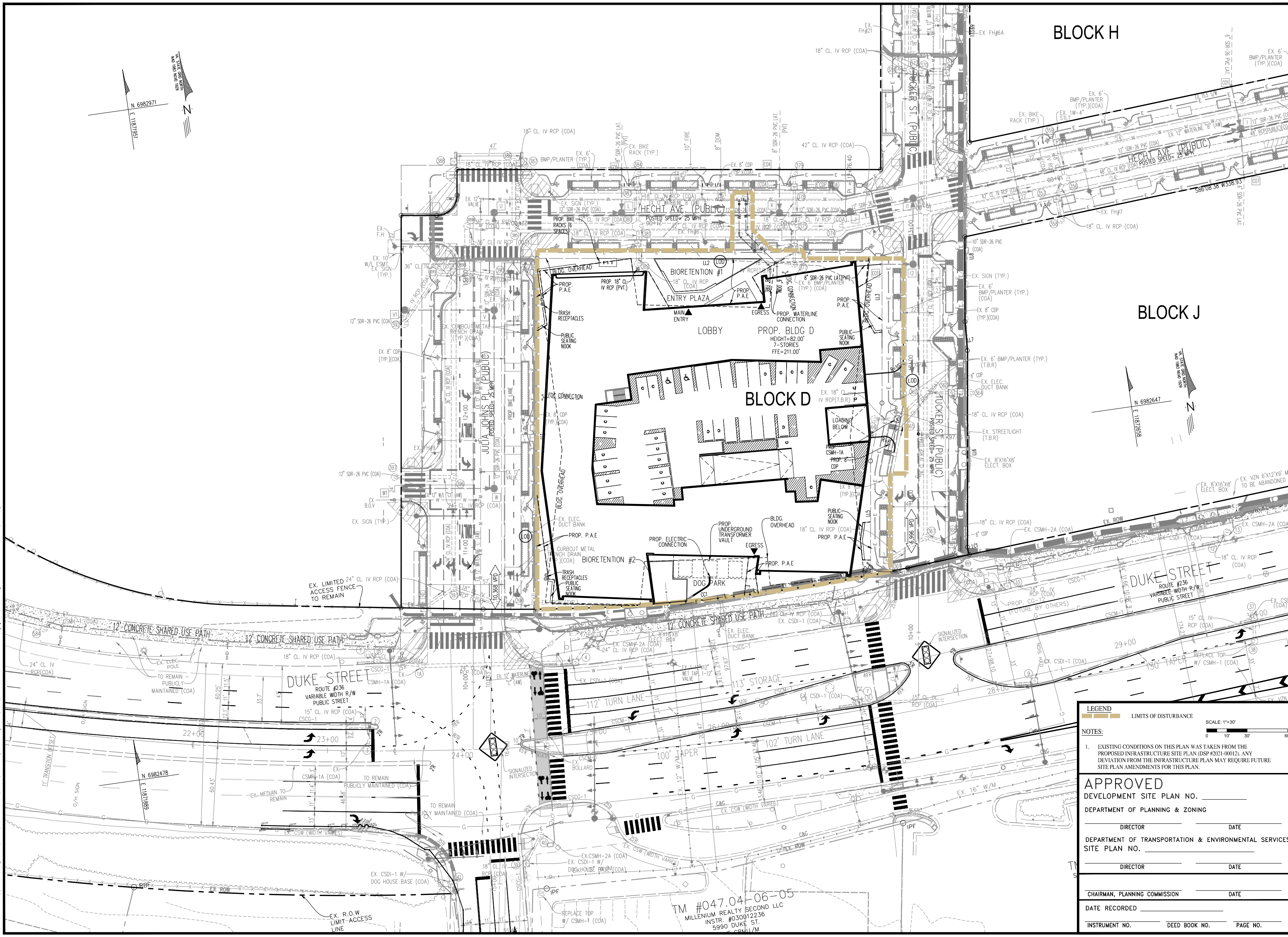

LEGEND

LIMITS OF DISTURBANCE

SCALE: 1"=30'

0 10' 30' 60'

NOTES:

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UTILITY PLAN

WEST END

PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JAN, 2025

SCALE: 1"=30'

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SHEET 09 OF 32

FILE No. RZ-13127

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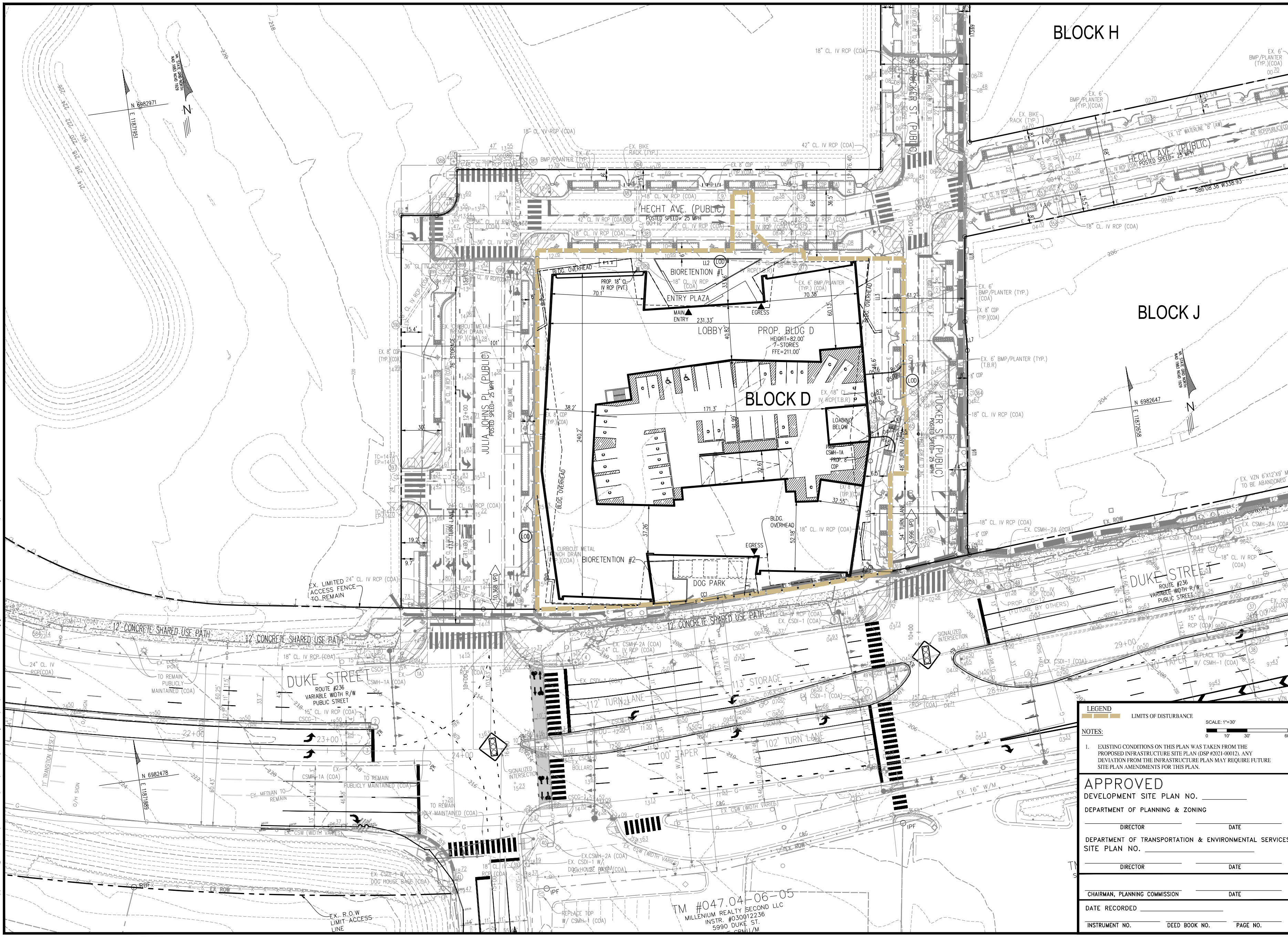

LEGEND

LIMITS OF DISTURBANCE

SCALE: 1"=30'

NOTES:

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GRADING PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA

SCALE: 1"=30'
DATE: JAN, 2025
C.I.=N/A

SHEET 10 OF 32

FILE No. RZ-13127

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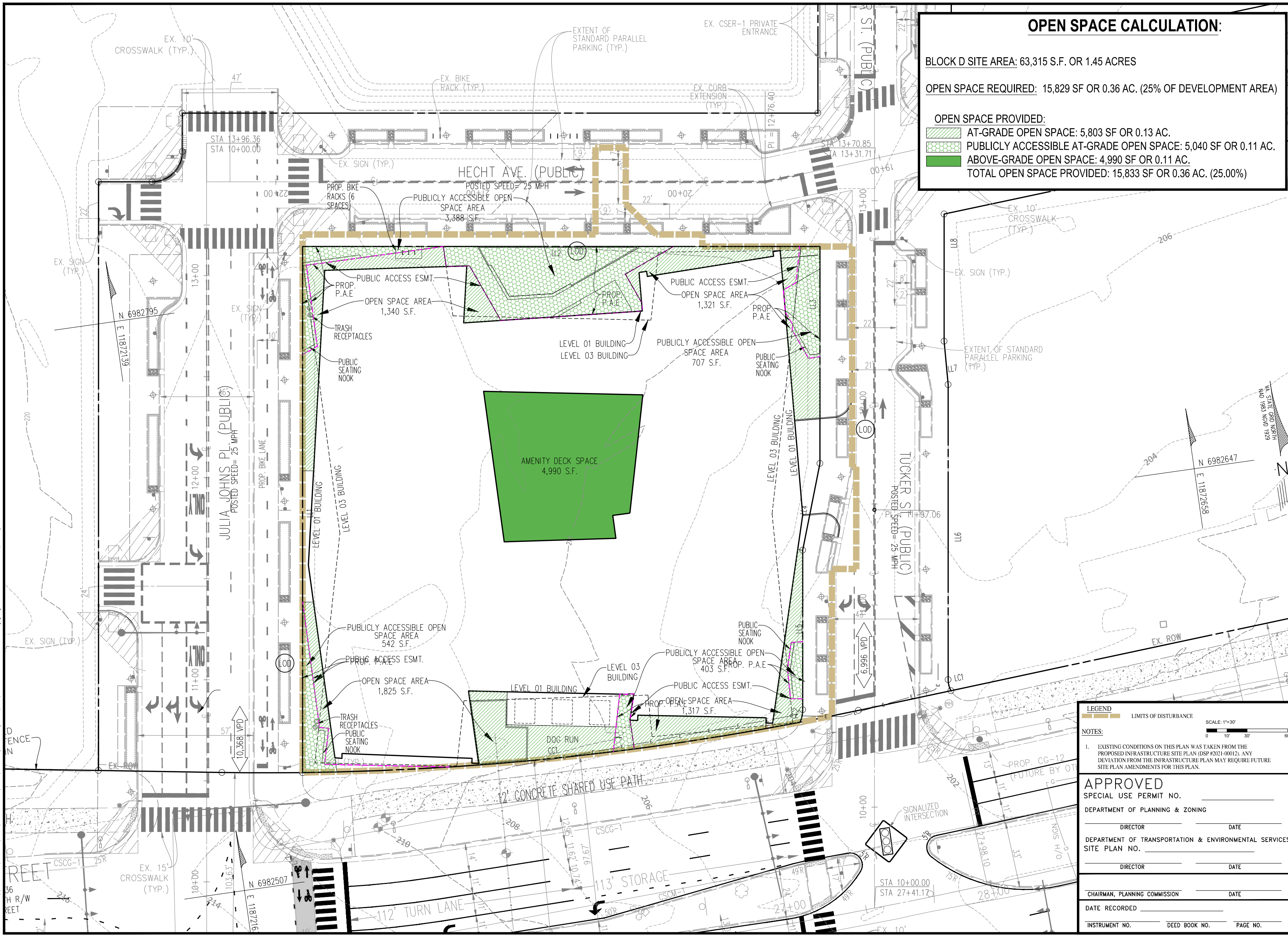

OPEN SPACE CALCULATION:

BLOCK D SITE AREA: 63,315 S.F. OR 1.45 ACRES

OPEN SPACE REQUIRED: 15,829 SF OR 0.36 AC. (25% OF DEVELOPMENT AREA)

OPEN SPACE PROVIDED:
- AT-GRADE OPEN SPACE: 5,803 SF OR 0.13 AC.
- PUBLICLY ACCESSIBLE AT-GRADE OPEN SPACE: 5,040 SF OR 0.11 AC.
- ABOVE-GRADE OPEN SPACE: 4,990 SF OR 0.11 AC.
- TOTAL OPEN SPACE PROVIDED: 15,833 SF OR 0.36 AC. (25.00%)

LEGEND

LIMITS OF DISTURBANCE

SCALE: 1"=30'

NOTES:

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OPEN SPACE PLAN
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DATE: JAN, 2025
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SCALE: 1"=20'

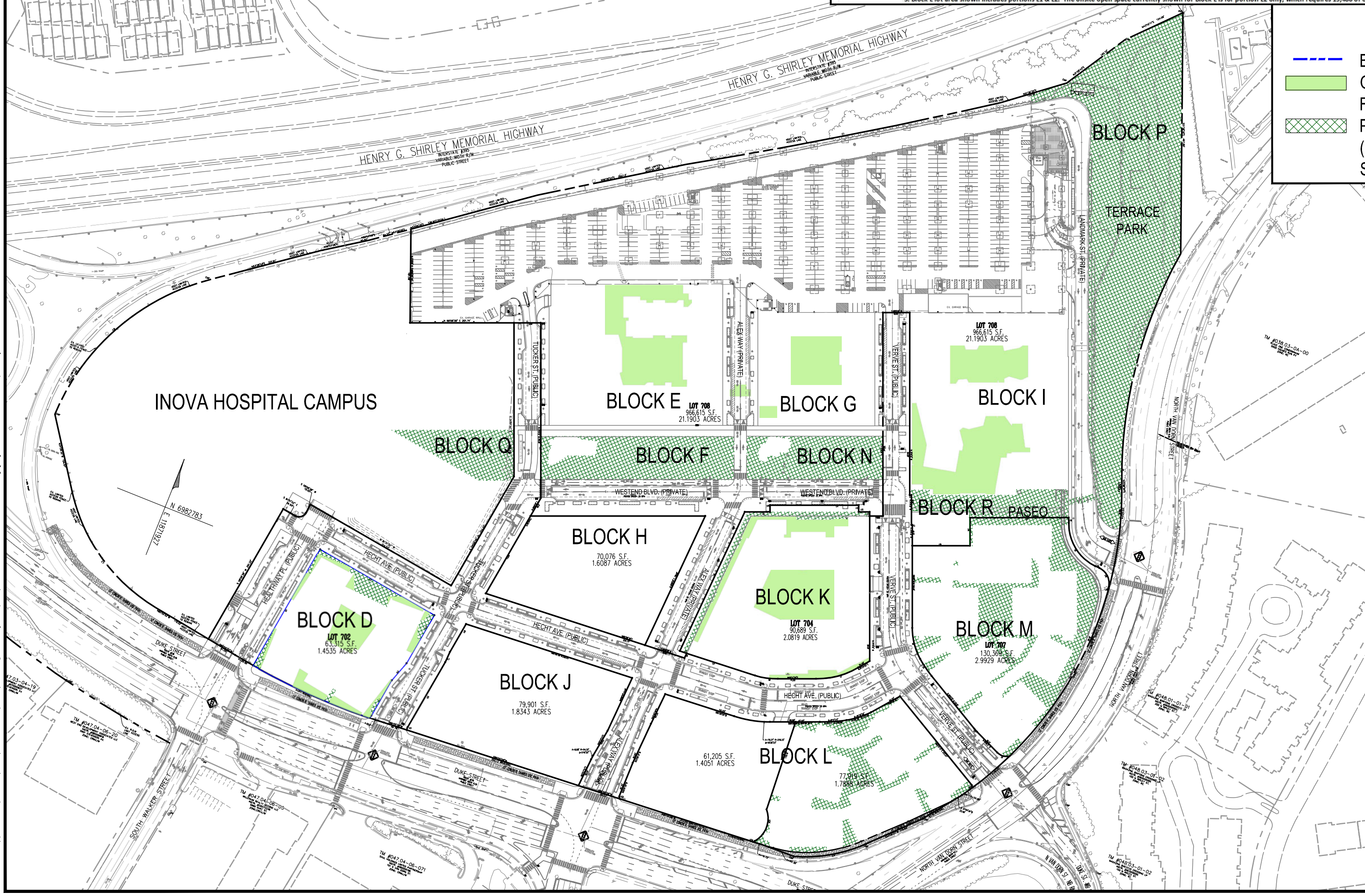
SHEET 11 OF 32

FILE No. RZ-13127

LANDMARK MASTER OPEN SPACE CALCULATIONS

DSUP	Block	Lot Area		Publicly Accessible	Onsite								Sitewide Open Space		Notes
		SF	AC		At Grade	Above Grade	Transferred Block Open Space (1)	Mandatory Open Space Blocks	Transferred Mandatory Open Space (SF)	Remaining Mandatory Open Space (AC.)	Total	Percent OS/Block	SF	AC	
CDSP 2022-00011	Hospital Campus (A,B,C)	416,577 SF	9.56 AC	No	62,500 SF	10,000 SF	0 SF	0 SF	0 SF	1.66	72,500 SF	17.40%	72,500 SF	1.66 AC	
CDSP-2025-00002	Block D	63,315 SF	1.45 AC	No	10,843 SF	4,990 SF	-	-	0 SF	0.36	15,833 SF	25.01%	15,833 SF	0.36 AC	
DSUP 2022-10017	Block E	108,575 SF	2.49 AC	No		16,840 SF	-	-	10,303 SF	0.15	27,143 SF	25.00%	27,143 SF	0.62 AC	10,303 SF Transfer from Block P
DSUP-2023-10004	Block F	31,872 SF	0.73 AC	Yes	25,885 SF	0 SF	-	-	0 SF	0.59	25,885 SF	81.21%	25,885 SF	0.59 AC	
DSUP 2022-10017	Block G	62,083 SF	1.43 AC	No	10,805 SF	1,464 SF	-	-	3,251 SF	0.21	15,520 SF	25.00%	15,520 SF	0.36 AC	3,251 SF Transfer from Block P
	Block H	89,320 SF	2.05 AC	No			-	-	0 SF	0.00	0 SF	0.00%	0 SF	0.00 AC	
DSUP 2022-10015	Block I	107,845 SF	2.48 AC	No	1,364 SF	29,115 SF	-	-	0 SF	0.70	30,479 SF	28.26%	30,479 SF	0.70 AC	
	Block J	80,597 SF	1.85 AC	No			-	-	0 SF	0.00	0 SF	0.00%	0 SF	0.00 AC	
DSUP 2022-10016	Block K	98,964 SF	2.27 AC	No	7,248 SF	18,142 SF	-	-	0 SF	0.58	25,390 SF	25.66%	25,390 SF	0.58 AC	
DSUP-2024-10006	Block L	139,124 SF	3.19 AC	Yes	15,304 SF	0 SF	-	-	4,176 SF	0.26	19,480 SF	14.00%	19,480 SF	0.45 AC	4,176 SF Transfer from Block R to L2
DSUP-2024-10006	Block M	122,172 SF	2.80 AC	Yes	28,705 SF	0 SF	-	-	1,863 SF	0.62	30,543 SF	25.00%	30,543 SF	0.70 AC	1,863 SF Transfer from Block R
DSUP-2023-10004	Block N	22,509 SF	0.52 AC	Yes	20,181 SF	0 SF	-	-	0 SF	0.46	20,181 SF	89.66%	20,181 SF	0.46 AC	
DSUP-2023-10004	Block P	128,715 SF	2.95 AC	Yes	126,291 SF	0 SF	-	-	(13,544)	2.59	112,747 SF	87.59%	112,747 SF	2.59 AC	13,544 SF Transfer to Block E&G
	Block Q	14,581 SF	0.33 AC	Yes	14,581 SF	0 SF	-	-	0 SF	0.33	14,581 SF	100.00%	14,581 SF	0.33 AC	
DSUP-2023-10004	Block R	21,009 SF	0.48 AC	Yes	11,763 SF	0 SF	-	-	(6,039)	0.41	5,724 SF	27.25%	5,724 SF	0.13 AC	6,039 SF Transfer to Block L2 & M
	Road 7 Bridge	-	-	Yes	662 SF	0 SF	-	-	0 SF	0.02	662 SF	100.00%	662 SF	0.02 AC	
									TOTAL	8.94			416,668 SF	9.57 AC	

1. See sheet L002 of DSUP-2023-10004 for Block Parks Public and Private open space locations.
2. See "Notes" column for explanation of where open space was transferred from or to.
3. Per condition 69 of CDD 2020-00007, if development Blocks D, E, G, H, I, J, K, L and M cannot meet their individual open space requirements, then the unmet portion may be accommodated as publicly accessible ground-level open space on adjacent blocks within the CDD Plan Area. Area in excess of the required 3.5 acres of publicly accessible open spaces provided on Blocks F, N, P, Q, and R may contribute towards the unmet portions of development blocks outside the Hospital Campus, as determined through the DSUP process.
4. Mandatory OS AC. cannot fall below 3.5 Acres.
5. Block L lot area shown includes portions L1 & L2. The onsite open space currently shown for Block L is for portion L2 only, which requires 19,480 of open space (25% of L2 site area). See Open Space Plan per DSUP-2024-10006.



LEGEND

- BLOCK D BOUNDARY
- OPEN SPACE PROVIDED FOR RESPECTIVE BLOCKS
- PUBLICLY ACCESSIBLE OPEN SPACE (BLOCK Q TO BE PROVIDED UNDER SEPARATE DSUP)

SCALE: 1"=100'

0 50' 100' 200'

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MASTER OPEN SPACE PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=100' C.I.=N/A DATE: JAN, 2025

SHEET 12 OF 32

FILE No. RZ-13127

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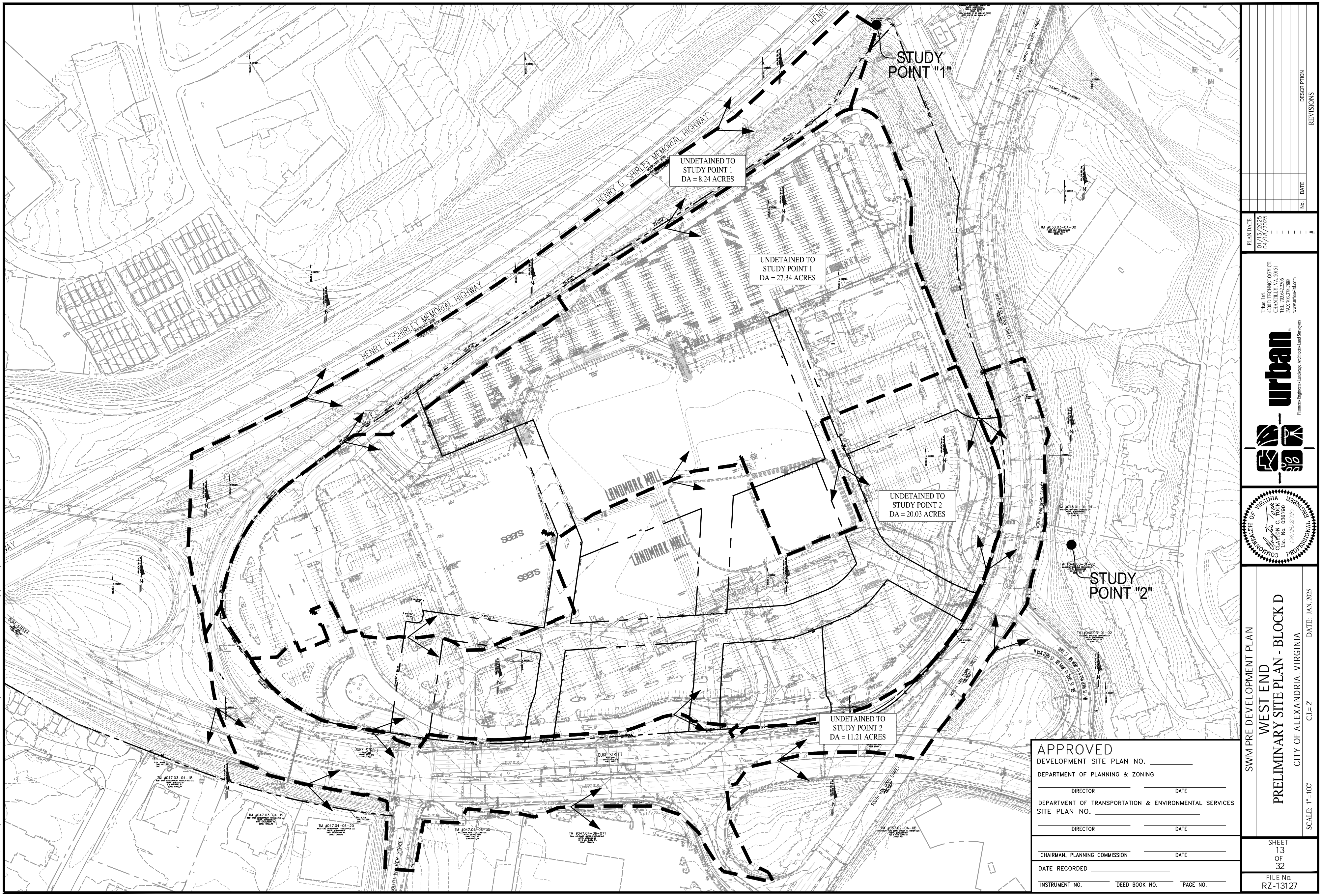
STUDY POINT "1"
STUDY POINT "2"
UNDETAINED TO STUDY POINT 1 DA = 8.24 ACRES
UNDETAINED TO STUDY POINT 1 DA = 27.34 ACRES
UNDETAINED TO STUDY POINT 2 DA = 20.03 ACRES
UNDETAINED TO STUDY POINT 2 DA = 11.21 ACRES
HENRY G. SHIRLEY MEMORIAL HIGHWAY
LANDMARK MALL
sears
DUKE STREET
NORTH VAN DORN STREET
SOUTH VAN DORN STREET
SOUTH WALKER STREET
HOLMES RUN PARKWAY
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SWM PRE DEVELOPMENT PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=100'
C.I.= 2
DATE: JAN, 2025
SHEET 13 OF 32
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STORMWATER/OUTFALL NARRATIVE

THE SUBJECT SITE IS A PART OF THE LANDMARK MASTER SWM PLAN.

OVERALL, THE EXISTING TOPOGRAPHY OF THE PARCEL HAS TWO DISTINCT OUTFALLS, RESULTING IN TWO STUDY POINTS. STUDY POINT #1 OUTFALLS TO THE NORTHEAST CORNER OF THE PROPERTY. STUDY POINT #2 OUTFALLS TO THE EAST OF THE SITE, IMMEDIATELY NORTH OF THE DUKE STREET RAMP CONNECTION TO VAN DORN STREET. A TOTAL DRAINAGE AREA OF 32.86 ACRES DRAINS TO STUDY POINT 1, WHEREAS A TOTAL OF 31.94 ACRES DRAINS TO STUDY POINT 2.

SPECIFIC TO THE SUBJECT SITE, BLOCK D'S STORM SYSTEM DRAINS TO VAULT #3 THEN DISCHARGE TO AN EXISTING CHANNEL LOCATED ON THE SOUTHEAST SIDE OF THE LANDMARK DEVELOPMENT. STORMWATER MANAGEMENT IS TO BE PROVIDED IN VAULT 3 WHICH IS LOCATED BETWEEN BLOCKS I AND M AND HAS A TOTAL DRAINAGE AREA OF 20.73 ACRES WHICH ENCOMPASSES BLOCKS D, J, L, M AND PART OF THE INOVA SITE. IN ACCORDANCE WITH THE ARTICLE XIII SECTION 13-109 OF THE ALEXANDRIA ZONING ORDINANCE, AND UTILIZING THE VIRGINIA RUNOFF REDUCTION METHODOLOGY, THE TREATMENT VOLUME IS REDUCED VIA THE UNDERGROUND SWM FACILITY.

THE ALLOWABLE RELEASE RATE FOR EACH STUDY POINT HAS BEEN CALCULATED IN ACOORDANCE WITH ARTICLE XIII SECTION 13-109(F) OF THE ALEXANDRIA ZONING ORDINANCE. FOR THE CHANNEL PROTECTION AND FLOOD PROTECTION WHEN STORMWATER FROM A DEVELOPMENT IS DISCHARGED TO A NATURAL STORMWATER CONVEYANCE SYSTEM, THE MAXIMUM PEAK FLOW RATE FROM THE 1-YEAR 24-HOUR STORM FOLLOWING THE LAND-DISTURBING ACTIVITY SHALL BE CALCULATED WHERE:

$$Q_{dev} \leq I.F. * (Q_{pre} * RV_{pre})/RV_{dev}$$

AND THE PEAK FLOW RATE FOR THE 10-YEAR 24-HOUR STORM EVENT IS LESS THAN THE PRE-DEVELOPMENT PEAK FLOW RATE FROM THE 10-YEAR 24-HOUR STORM EVENT. AS SHOWN IN THE FLOW SUMMARY TABLE ON THIS SHEET. THE PROPOSED FLOW TO THE STUDY POINTS ARE LESS THAN THE ALLOWABLE RUNOFF.

IT IS THEREFORE THE OPINION OF URBAN, LTD. THAT THE PROPOSED SWM DESIGN MEETS THE REQUIRED SWM REQUIREMENTS OF THE ALEXANDRIA ORDINANCE.

Clayton Tock

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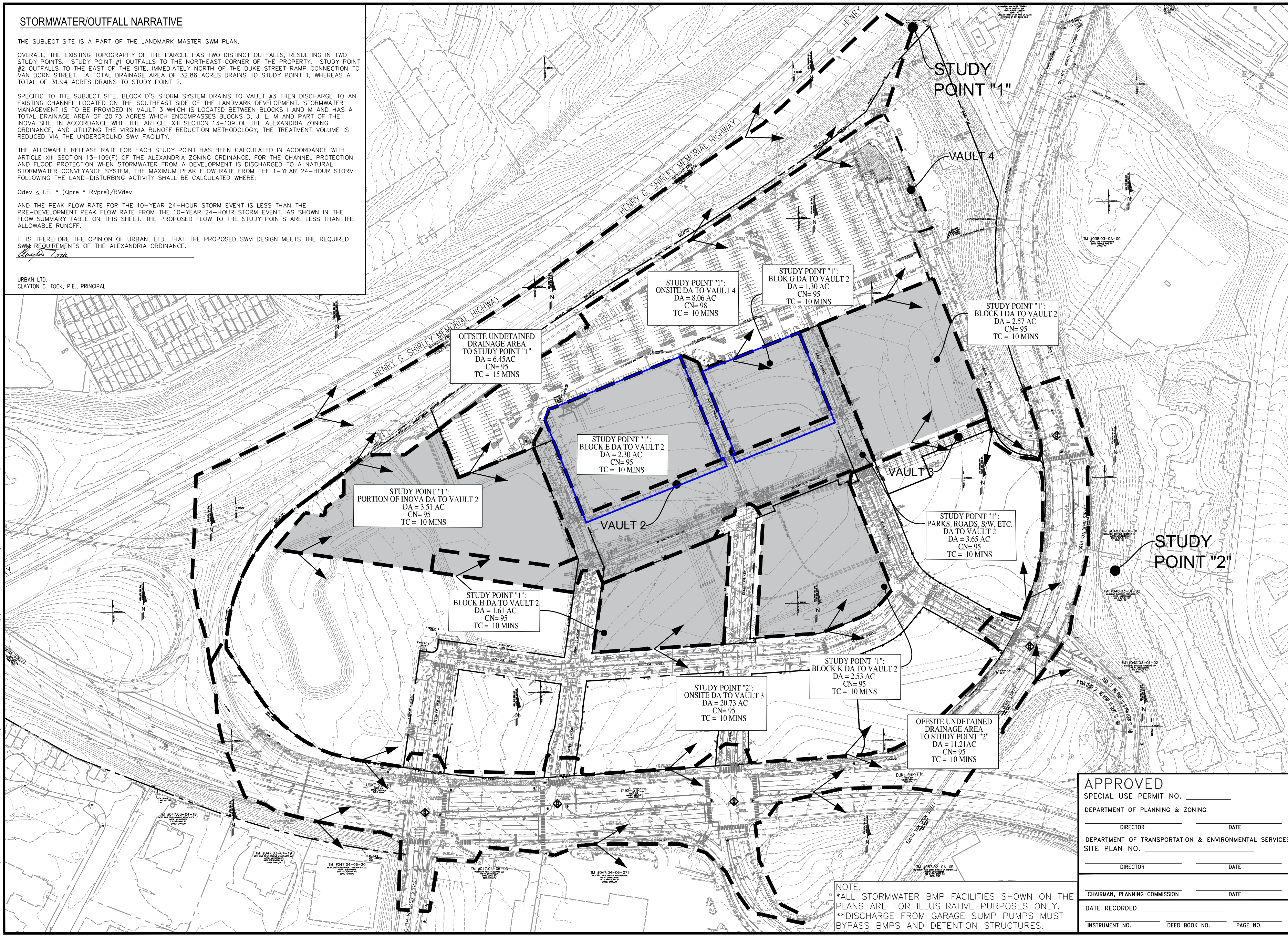
CLAYTON C. TOCK, P.E., PRINCIPAL



NOTE:
*ALL STORMWATER BMP FACILITIES SHOWN ON THE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY.
**DISCHARGE FROM GARAGE SUMP PUMPS MUST BYPASS BMPS AND DETENTION STRUCTURES.

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SWM POST DEVELOPMENT PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=100' C.I.=2 DATE: JAN. 2025

SHEET 13A OF 32
FILE No. RZ-13127

SWM PRE - Study Point "2"

SWM PRE OFFSITE Undetained Runoff Calculations

Curve Number Calculations

Area (ac)	CN	Description
11.210	98	Urban commercial, 85% imp, HSG D
1.682		15.00% Pervious Area
9.529		85.00% Impervious Area

Time of Concentration Calculations

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

1 Year Flow Calculations

= 33.04 cfs@ 12.08 hrs, Volume= 95,334 cf, Depth> 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 1-yr Rainfall=2.70"

2 Year Flow Calculations

Runoff = 39.16 cfs@ 12.08 hrs, Volume= 114,673 cf, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 2-yr Rainfall=3.20"

10 Year Flow Calculations

Runoff = 56.97 cfs@ 12.08 hrs, Volume= 191,351 cf, Depth> 4.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 10-yr Rainfall=5.20"

SWM PRE ONSITE Undetained Runoff Calculations

Curve Number Calculations

Area (ac)	CN	Description
8.210	98	Paved parking, HSG D
11.820	80	>75% Grass cover, Good, HSG D
20.030	87	Weighted Average
11.820		59.01% Pervious Area
8.210		40.99% Impervious Area

Time of Concentration Calculations

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

1 Year Flow Calculations

Runoff = 48.77 cfs@ 12.03 hrs, Volume= 99,926 cf, Depth> 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 1-yr Rainfall=2.70"

2 Year Flow Calculations

Runoff = 62.66 cfs@ 12.03 hrs, Volume= 129,838 cf, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 2-yr Rainfall=3.20"

10 Year Flow Calculations

Runoff = 106.06 cfs@ 12.03 hrs, Volume= 255,599 cf, Depth> 3.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 10-yr Rainfall=5.20"

STUDY POINT 2 SWM PRE FLOWS

1 Year Flow Calculations

Inflow Area = 1,360,814 sf, 56.78% Impervious, Inflow Depth > 1.72" for 1-yr event
Inflow = 76.56 cfs@ 12.04 hrs, Volume= 195,259 cf
Primary = 76.56 cfs@ 12.04 hrs, Volume= 195,259 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

2 Year Flow Calculations

Inflow Area = 1,360,814 sf, 56.78% Impervious, Inflow Depth > 2.16" for 2-yr event
Inflow = 95.46 cfs@ 12.04 hrs, Volume= 244,511 cf
Primary = 95.46 cfs@ 12.04 hrs, Volume= 244,511 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

10 Year Flow Calculations

Inflow Area = 1,360,814 sf, 56.78% Impervious, Inflow Depth > 3.94" for 10-yr event
Inflow = 153.75 cfs@ 12.04 hrs, Volume= 446,950 cf
Primary = 153.75 cfs@ 12.04 hrs, Volume= 446,950 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

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SWM COMPS & NARRATIVE
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
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SHEET 14 OF 32
FILE No. RZ-13127

Urban, Ltd. – \\mars-101\j drive\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\13234-12-SWM COMPS & NARRATIVE.dwg [PRE-DEV] June 27, 2025 – 2:31pm lhuynh

SWM POST - Study Point "2"

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Primary (cfs)
167.90	7,254	0	0.00
168.20	7,254	2,176	0.44
168.50	7,254	4,352	1.24
168.80	7,254	6,529	2.24
169.10	7,254	8,705	2.92
169.40	7,254	10,881	3.46
169.70	7,254	13,057	3.92
170.00	7,254	15,233	4.33
170.30	7,254	17,410	4.70
170.60	7,254	19,586	5.05
170.90	7,254	21,762	5.37
171.20	7,254	23,938	5.67
171.50	7,254	26,114	5.96
171.80	7,254	28,291	6.24
172.10	7,254	30,467	6.50
172.40	7,254	32,643	6.75
172.70	7,254	34,819	7.00
173.00	7,254	36,995	7.23
173.30	7,254	39,172	7.46
173.60	7,254	41,348	7.68
173.90	7,254	43,524	7.90
174.20	7,254	45,700	8.11
174.50	7,254	47,876	8.31
174.80	7,254	50,053	8.51
175.10	7,254	52,229	8.71
175.40	7,254	54,405	8.90
175.70	7,254	56,581	9.08
176.00	7,254	58,757	9.27
176.30	7,254	60,934	9.45
176.60	7,254	63,110	9.62
176.90	7,254	65,286	9.80
177.20	7,254	67,462	9.97
177.50	7,254	69,638	11.46
177.80	7,254	71,815	15.11
178.10	7,254	73,991	19.99
178.40	7,254	76,167	26.86
178.70	7,254	78,343	37.51
179.00	7,254	80,519	50.53
179.30	7,254	82,696	65.19
179.60	7,254	84,872	76.27
179.90	7,254	87,048	85.28

Volume	Invert	Avail.Storage	Storage Description
#1	167.90'	87,048 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
167.90	7,254	0	0
179.90	7,254	87,048	87,048

Device	Routing	Invert	Outlet Devices
#1	Primary	167.90'	36.0" Round Culvert L= 46.8' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert=167.90' / 166.49' S= 0.0301 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area=7.07 sf
#2	Device 1	167.90'	10.0" W x 10.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	177.28'	48.0" W x 24.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	178.24'	60.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

SWM POST OFFSITE Undetained Runoff Calculations

Curve Number Calculations

Area (ac)	CN	Description
11.210	95	Urban commercial, 85% imp, HSG D
1.682		15.00% Pervious Area
9.529		85.00% Impervious Area

Time of Concentration Calculations

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

1 Year Flow Calculations

Runoff = 30.45 cfs@ 12.08 hrs, Volume= 82,745 cf, Depth>2.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 1-yr Rainfall=2.70"

2 Year Flow Calculations

Runoff = 36.77 cfs@ 12.08 hrs, Volume= 101,658 cf, Depth>2.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 2-yr Rainfall=3.20"

10 Year Flow Calculations

Runoff = 55.39 cfs@ 12.08 hrs, Volume= 177,387 cf, Depth>4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 10-yr Rainfall=5.20"

SWM POST Onsite DETAINED Runoff Calculations

Area (ac)	CN	Description
20.730	95	
20.730		

Time of Concentration Calculations

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

1 Year Flow Calculations

Runoff = 56.31 cfs @ 12.08 hrs, Volume= 153,015 cf, Depth> 2.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 1-yr Rainfall=2.70"

2 Year Flow Calculations

Runoff = 68.00 cfs @ 12.08 hrs, Volume= 187,991 cf, Depth> 2.50"

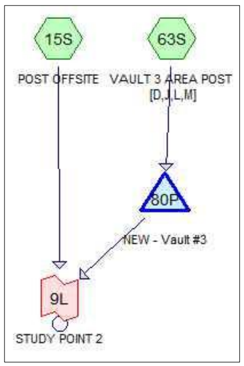
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 2-yr Rainfall=3.20"

10 Year Flow Calculations

Runoff = 102.42 cfs @ 12.08 hrs, Volume= 328,031 cf, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Landmark Mall 24-hr S1 10-yr Rainfall=5.20"

POST DEVELOPMENT ROUTING SCHEMATIC STUDY POINT '2'

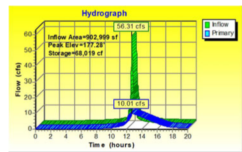


VAULT #3

1 YEAR EVENT SUMMARY

Inflow Area = 902,999 sf, 0.00% Impervious, Inflow Depth > 2.03" for 1-yr event
Inflow = 56.31 cfs @ 12.08 hrs, Volume= 153,015 cf
Outflow = 10.01 cfs @ 12.63 hrs, Volume= 149,754 cf, Atten= 82%, Lag= 32.8 min
Primary = 10.01 cfs @ 12.63 hrs, Volume= 149,754 cf
Routed to Link 9L : STUDY POINT 2
Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Peak Elev= 177.28' @ 12.63 hrs Surf.Area= 7,254 sf Storage= 68,019 cf

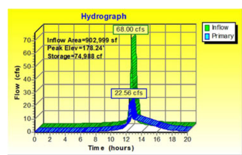
Plug-Flow detention time= 81.3 min calculated for 149,679 cf (98% of inflow)
Center-of-Mass det. time= 72.4 min (828.9 - 756.5)
Primary OutFlow Max=10.01 cfs @ 12.63 hrs HW=177.28' (Free Discharge)
1=Culvert (Passes 10.01 cfs of 119.40 cfs potential flow)
2=Orifice/Grate (Orifice Controls 10.01 cfs @ 14.41 fps)
3=Orifice/Grate (Controls 0.00 cfs)
4=Orifice/Grate (Controls 0.00 cfs)



2 YEAR EVENT SUMMARY

Inflow Area = 902,999 sf, 0.00% Impervious, Inflow Depth > 2.50" for 2-yr event
Inflow = 68.00 cfs @ 12.08 hrs, Volume= 187,991 cf
Outflow = 22.56 cfs @ 12.39 hrs, Volume= 184,345 cf, Atten= 67%, Lag= 18.6 min
Primary = 22.56 cfs @ 12.39 hrs, Volume= 184,345 cf
Routed to Link 9L : STUDY POINT 2
Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Peak Elev= 178.24' @ 12.39 hrs Surf.Area= 7,254 sf Storage= 74,988 cf

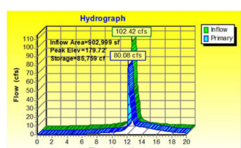
Plug-Flow detention time= 75.7 min calculated for 184,253 cf (98% of inflow)
Center-of-Mass det. time= 67.5 min (819.3 - 751.8)
Primary OutFlow Max=22.55 cfs @ 12.39 hrs HW=178.24' (Free Discharge)
1=Culvert (Passes 22.55 cfs of 126.47 cfs potential flow)
2=Orifice/Grate (Orifice Controls 10.53 cfs @ 15.16 fps)
3=Orifice/Grate (Orifice Controls 12.02 cfs @ 3.14 fps)
4=Orifice/Grate (Controls 0.00 cfs)



10 YEAR EVENT SUMMARY

Inflow Area = 902,999 sf, 0.00% Impervious, Inflow Depth > 4.36" for 10-yr event
Inflow = 102.42 cfs @ 12.08 hrs, Volume= 328,031 cf
Outflow = 80.08 cfs @ 12.17 hrs, Volume= 322,649 cf, Atten= 22%, Lag= 5.0 min
Primary = 80.08 cfs @ 12.17 hrs, Volume= 322,649 cf
Routed to Link 9L : STUDY POINT 2
Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs
Peak Elev= 179.72' @ 12.17 hrs Surf.Area= 7,254 sf Storage= 85,759 cf

Plug-Flow detention time= 60.3 min calculated for 322,649 cf (98% of inflow)
Center-of-Mass det. time= 53.0 min (791.7 - 738.7)
Primary OutFlow Max=80.07 cfs @ 12.17 hrs HW=179.72' (Free Discharge)
1=Culvert (Passes 80.07 cfs of 136.68 cfs potential flow)
2=Orifice/Grate (Orifice Controls 11.29 cfs @ 16.26 fps)
3=Orifice/Grate (Orifice Controls 45.20 cfs @ 5.65 fps)
4=Orifice/Grate (Orifice Controls 23.57 cfs @ 4.71 fps)



STUDY POINT 2 SWM POST FLOWS

1 Year Flow Calculations

Inflow Area = 1,391,306 sf, 29.83% Impervious, Inflow Depth > 2.01" for 1-yr event
Inflow = 37.59 cfs @ 12.09 hrs, Volume= 232,499 cf
Primary = 37.59 cfs @ 12.09 hrs, Volume= 232,499 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

2 Year Flow Calculations

Inflow Area = 1,391,306 sf, 29.83% Impervious, Inflow Depth > 2.47" for 2-yr event
Inflow = 44.82 cfs @ 12.09 hrs, Volume= 286,003 cf
Primary = 44.82 cfs @ 12.09 hrs, Volume= 286,003 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

10 Year Flow Calculations

Inflow Area = 1,391,306 sf, 29.83% Impervious, Inflow Depth > 4.31" for 10-yr event
Inflow = 126.23 cfs @ 12.14 hrs, Volume= 500,036 cf
Primary = 126.23 cfs @ 12.14 hrs, Volume= 500,036 cf, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

ENERGY BALANCE METHOD TO STUDY POINT "2"

Q(Developed)=	37.59	cfs
Q(Pre-Developed)=	76.56	cfs
RV(Pre-Developed)=	4.48	ac-ft
RV(Developed)=	5.34	ac-ft
I.F. =	0.8	(0.8 for sites greater than one acre) (0.9 for sites less than or equal to one acre)

Q Developed		I.F x (Q Pre-Developed x RV Pre-Developed)/RV Developed
37.59	≤	51.42

APPROVED
SPECIAL USE PERMIT NO. ________
DEPARTMENT OF PLANNING & ZONING
DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________
DIRECTOR DATE
CHAIRMAN, PLANNING COMMISSION DATE
DATE RECORDED ________
INSTRUMENT NO. DEED BOOK NO. PAGE NO.

REVISIONS
No. DATE DESCRIPTION

PLAN DATE
01/13/2025
04/18/2025

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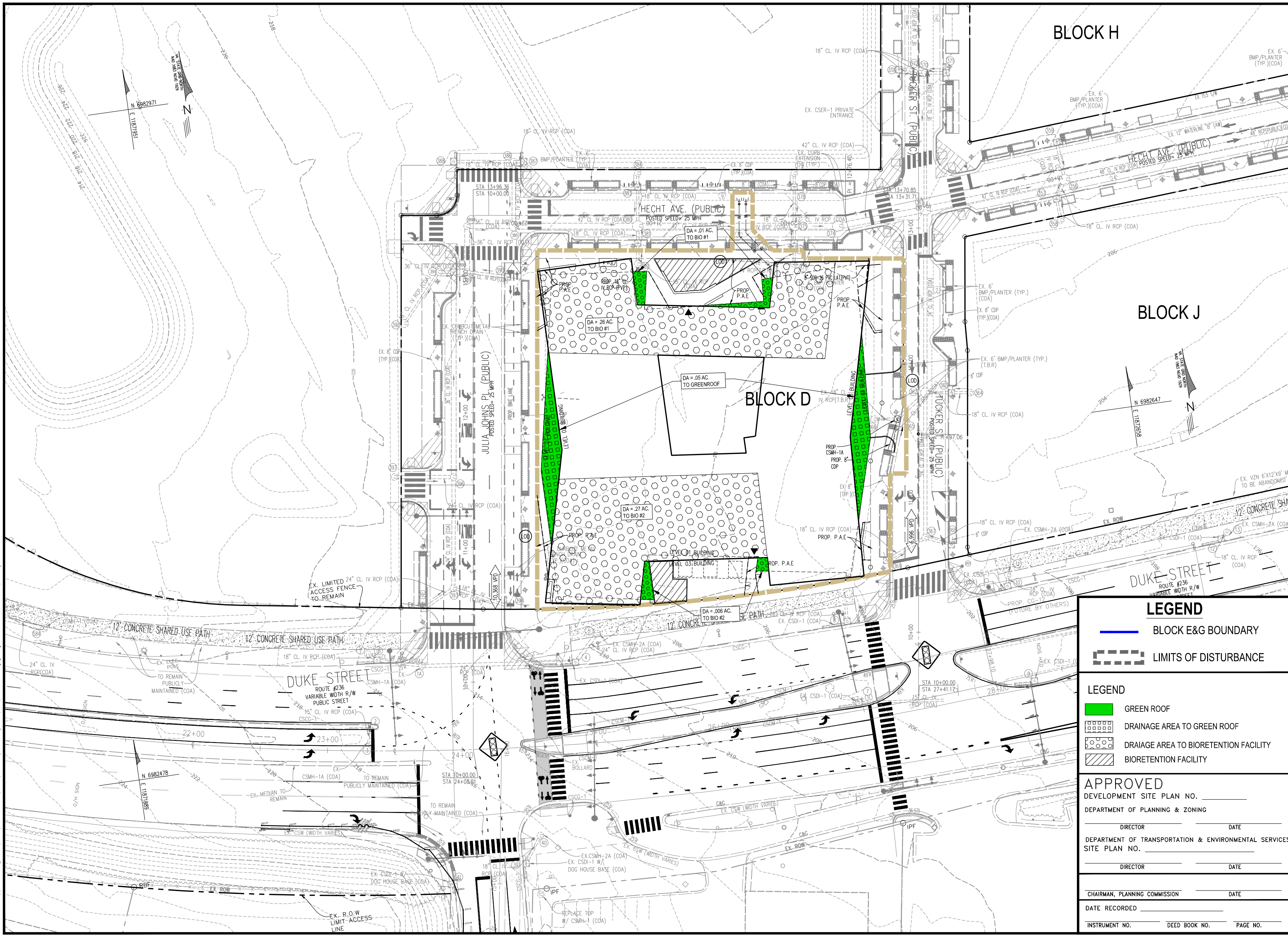
COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
PROFESSIONAL ENGINEER

SWM COMPS & NARRATIVE
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
SCALE: N/A
C.I.= N/A

SHEET 15 OF 32
FILE No. RZ-13127

Urban, Ltd. – \\mars-101\j drive\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\13234-12-SWM COMPS & NARRATIVE.dwg [POST-DEV] June 27, 2025 – 2:31pm lhuynh



LEGEND

BLOCK E&G BOUNDARY

LIMITS OF DISTURBANCE

LEGEND

GREEN ROOF

DRAINAGE AREA TO GREEN ROOF

DRAIAGE AREA TO BIORETENTION FACILITY

BIORETENTION FACILITY

APPROVED

DEVELOPMENT SITE PLAN NO. ________

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. ________

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

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PROFESSIONAL ENGINEER

BMP PLAN

WEST END PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JAN. 2025

SCALE: 1"=30'

C.I.=N/A

SHEET 16 OF 32

FILE No. RZ-13127

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 1.59

Maximum reduction required:	*20%*
The site's net increase in impervious cover (acres) is:	*0*
Post-Development TP Load Reduction for Site (lb/yr):	~~*0.69*~~ 1.10

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? No
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be					0.00
Impervious Cover (acres)				1.59	1.59
					1.59

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be					0.00
Impervious Cover (acres)				1.59	1.59
Area Check	OK.	OK.	OK.	OK.	1.59

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY – PRE-REDEVELOPMENT

Land Cover Summary-Pre

Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.00	0.00
Weighted Rv(turf)	0.00	0.00
% Managed Turf	0%	0%
Impervious Cover (acres)	1.59	1.59
Rv(impervious)	0.95	0.95
% Impervious	100%	100%
Total Site Area (acres)	**1.59**	**1.59**
Site Rv	**0.95**	**0.95**

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.1259	0.1259
Pre-ReDevelopment Treatment Volume (cubic feet)	5,483	5,483
Pre-ReDevelopment TP Load (lb/yr)	**3.45**	**3.45**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	2.17	2.17
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.65*

[1] *Adjusted Land Cover Summary:*
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requriement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

LAND COVER SUMMARY – POST DEVELOPMENT

Land Cover Summary-Post (Final)

Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.00
Weighted Rv (turf)	0.00
% Managed Turf	0%
Impervious Cover (acres)	1.59
Rv(impervious)	0.95
% Impervious	100%
Final Site Area (acres)	**1.59**
Final Post Dev Site Rv	**0.95**
Final Post-Development Treatment Volume (acre-ft)	0.1259
Final Post-Development Treatment Volume (cubic feet)	5,483
Final Post-Development TP Load (lb/yr)	**3.45**
Final Post-Development TP Load per acre (lb/acre/yr)	2.17

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.00
Weighted Rv (turf)	0.00
% Managed Turf	0%
ReDev. Impervious Cover (acres)	1.59
Rv(impervious)	0.95
% Impervious	100%
Total ReDev. Site Area (acres)	**1.59**
ReDev Site Rv	**0.95**
Post-ReDevelopment Treatment Volume (acre-ft)	0.1259
Post-ReDevelopment Treatment Volume (cubic feet)	5,483
Post-ReDevelopment Load (TP) (lb/yr)*	3.45
Post-ReDevelopment TP Load per acre (lb/acre/yr)	2.17
Max. Reduction Required (Below Pre-ReDevelopment Load)	20%
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.69**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	0.00
Rv(impervious)	--
Post-Development Treatment Volume (acre-ft)	--
Post-Development Treatment Volume (cubic feet)	--
Post-Development TP Load (lb/yr)	--
TP Load Reduction Required for New Impervious Area (lb/yr)	**0**

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	~~0.69~~ 1.10

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	24.65	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	24.65

Drainage Area A

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)					0.00	0.00
Managed Turf (acres)					0.00	0.00
Impervious Cover (acres)				1.59	1.59	0.95
				Total	1.59	

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
1. Vegetated Roof (RR)													
1.b. Vegetated Roof #2 (Spec #5)	60		0.02		41	28	69	0		0.04	0.03	0.02	6.b. Bioretention #2
6. Bioretention (RR)													
6.b. Bioretention #2 or Micro-Bioretention #2 (Spec #9)	80		0.52	28	1,457	364	1,821	50	0.02	1.13	1.03	0.11	

*0.05 AC BLOCK D GREEN ROOF NOT ROUTED TO BIORETENTION.
*0.06 LB/YR TP REMOVAL FROM GREEN ROOF ROUTED.

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	2.61	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	1.07	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.00	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 9,001

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	2,381	0	0	0	0	2,381
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	5.66	0.00	0.00	0.00	0.00	5.66
TP LOAD REDUCTION ACHIEVED (lb/yr)	1.55	0.00	0.00	0.00	0.00	1.55
TP LOAD REMAINING (lb/yr)	4.10	0.00	0.00	0.00	0.00	4.10
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	11.20	0.00	0.00	0.00	0.00	11.20

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	5.66	
TP LOAD REDUCTION REQUIRED (lb/yr)	~~1.13~~	REQUIRED REDUCTION PER APPROVED (DSP #2021-00017)= 1.10 LB/YR
TP LOAD REDUCTION ACHIEVED (lb/yr)	~~1.55~~	PROPOSED TP REMOVAL: 1.03+0.03+0.06 = 1.12 LB/YR
TP LOAD REMAINING (lb/yr):	4.10	TP REMOVAL PER APPROVED (DSP #2021-00017) = 2.11 LB/YR
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00	**

** TARGET TP REDUCTION EXCEEDED BY 0.42 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	40.46
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	11.20
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	29.26

BMP NARRATIVE

STORMWATER BEST MANAGEMENT PRACTICE FOR THE SUBJECT SITE IS BEING PROVIDED IN ACCORDANCE WITH VA DEQ AND CITY OF ALEXANDRIA STANDARDS BY USING THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) TO MEET THE WATER QUALITY CRITERIA

THE PHOSPHOROUS LOAD REDUCTION REQUIRED BY THE VRRM WILL BE SATISFIED WITH THE UTILIZATION OF TWO (2) STORMWATER BEST MANAGEMENT PRACTICE (BMP) FACILITIES IN CONFORMANCE WITH THE STORMWATER BMP CLEARINGHOUSE WEBSITE. THE TWO (2) BMP FACILITIES PROPOSED ARE:

- VEGETATED ROOF (LEVEL 2)
- URBAN BIORETENTION – BIORETENTION FACILITY (LEVEL 2)

BASED ON THE SUBJECT SITE'S PROPOSED LAND COVER, AND THE OVERALL SITE ANALYSIS AS OUTLINED IN THE MASTER SWM PLAN (SWM#2021-00017) THE TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED TO BE REMOVED IS 1.78 LBS/YEAR. THE TOTAL PHOSPHOROUS LOAD REDUCTION ACHIEVED IS 2.11 LBS/YEAR, THEREFORE THE TOTAL PHOSPHOROUS LOAD REDUCTION IS EXCEEDED BY 0.33 LBS/YEAR.

BMP/SWM FACILITIES GEOGRAPHIC COORDINATES:

	DECIMAL DEGREE LATITUDE	DECIMAL DEGREES LONGITUDE
BIORETENTION #1	38.8151	-77.1332
BIORETENTION #2	38.8145	-77.1334
GREEN ROOF #1	38.8151	-77.1333
GREEN ROOF #2	38.8150	-77.1330
GREEN ROOF #3	38.8147	-77.1328
GREEN ROOF #4	38.8145	-77.1334
GREEN ROOF #5	38.8145	-77.1334
GREEN ROOF #6	38.8148	-77.1336

NOTE:
ALL STORMWATER BMP FACILITIES AND COMPUTATIONS SHOWN ON THE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY.

APPROVED
SPECIAL USE PERMIT NO. ________
DEPARTMENT OF PLANNING & ZONING
________ DIRECTOR ________ DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________
________ DIRECTOR ________ DATE
________ CHAIRMAN, PLANNING COMMISSION ________ DATE
DATE RECORDED ________
INSTRUMENT NO. ________ DEED BOOK NO. ________ PAGE NO. ________

REVISIONS
No. | DATE | DESCRIPTION

PLAN DATE
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04/18/2025

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CHANTILLY, VA. 20151
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www.urban-ltd.com

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

BMP COMPS & NARRATIVE
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
SCALE: N/A
C.I.= N/A

SHEET 17 OF 32
FILE No. RZ-13127

Urban, Ltd. – \\mars-101\j drive\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\WQVD BMP DATA BLOCKS.dwg [Proposed E] June 27, 2025 – 2:33pm lhuynh

PROPOSED BMP COMPUTATIONS FOR BLOCK D

Project Description

Development or **Redevelopment** (selected)

Drainage Area	Impervious	Pervious	Total
Site Area	1.59 ACRES	0 ACRES	1.59 ACRES
On-Site Treated	0.59 ACRES	0 ACRES	0.59 ACRES
Off-Site Treated	0 ACRES	0 ACRES	0 ACRES
Total Treated	0.59 ACRES		
Any On-Site Disconnected by a Vegetated Buffer (25 ft)	0 ACRES		
Total On-Site Treated or Disconnected			0.59 ACRES

Water Treatment on site

BMP Type	*Area treated by BMP (acres)*	*Impervious area treated by BMP (acres)*	*BMP efficiency (%)*
BIORETENTION	0.52 ACRES		50 %
GREEN ROOF	0.07 ACRES		60 %

Miscellaneous

Total WQV treated: yes (selected) no
Detention on site: yes (selected) no

Project is within which watershed? HOLMES RUN WATERSHED

Project discharges to which body of water? HOLMES RUN

PROPOSED WQV TREATMENT:

TOTAL SITE IMPERVIOUS AREA = 1.59 AC OR 69,243 SF

SITE WQV REQUIRED = 1.10 TP REMOVAL PER YEAR REQUIRED (PER MASTER SWM PLAN #2021-00017) = 1,897 CF (BIORETENTION LEVEL 2)

SITE WQV PROPOSED = 69 CF + 1,821 CF + 172 CF = 2,062 CF (SEE SHEET 16 FOR TOTAL BMP TREATMENT VOLUME VALUES)

NOTE:
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DATE RECORDED ________
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CLAYTON C. TOCK
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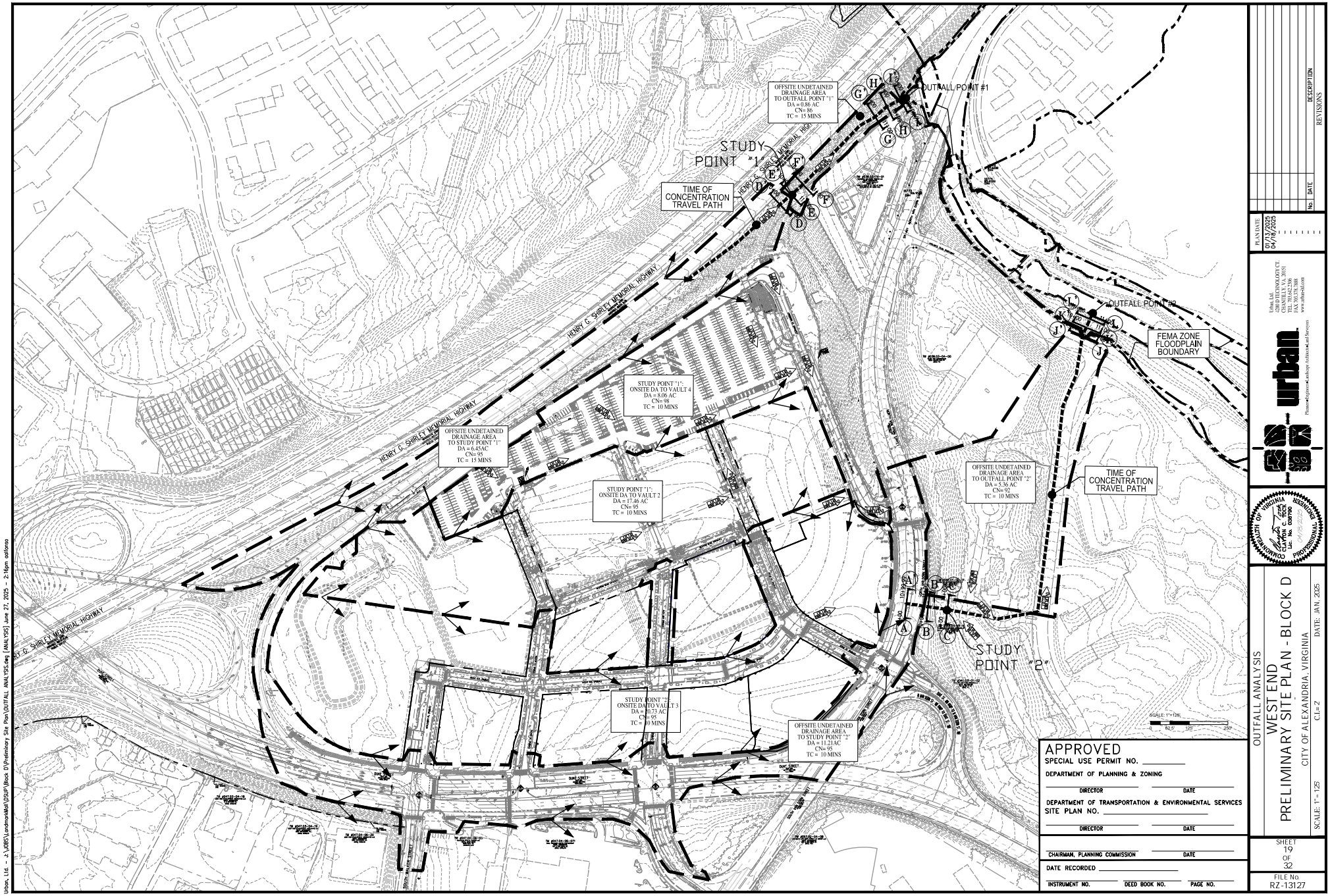
04/18/2025
PROFESSIONAL ENGINEER

WQVD BMP DATA BLOCKS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN. 2025
SCALE: N/A
C.I.= N/A

SHEET 18 OF 32

FILE No. RZ-13127

Urban, Ltd. -- \\mars-101\j drive\JOBS\landmarkmall\DSUP\Block D\preliminary site plan\WQVD BMP DATA BLOCKS.dwg [WQVD E] June 27, 2025 - 2:44pm lhuynh

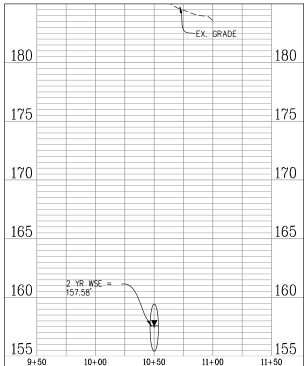


Urban, Ltd. - z:\JOBS\LandmarkMall\USGP\Block D\Preliminary Site Plan\OUTFALL ANALYSIS.dwg [ANALYSIS] June 27, 2025 - 2:16pm colfonso

CROSS SECTION A-A': 2 YEAR STORM EVENT

Discharge: 44.83 cfs
Flow Area: 7.0 ft²
Wetted Perimeter: 6.6 ft
Hydraulic Radius: 12.6 in
Top Width: 3.98 ft
Normal Depth: 26.1 in
Critical Depth: 24.0 in
Critical Slope: 0.013 ft/ft
Velocity: 6.41 ft/s
Velocity Head: 0.64 ft
Specific Energy: 2.82 ft
Froude Number: 0.853
Maximum Discharge: 83.69 cfs
Discharge Full: 77.80 cfs
Slope Full: 0.003 ft/ft
Flow Type: Subcritical

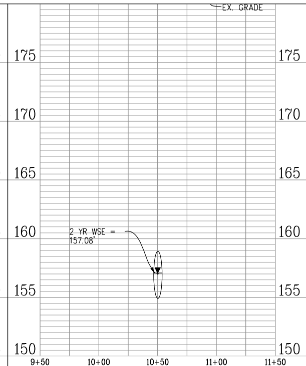
V2ALLOW=15 FPS



CROSS SECTION B-B': 2 YEAR STORM EVENT

Discharge: 44.83 cfs
Flow Area: 7.0 ft²
Wetted Perimeter: 6.6 ft
Hydraulic Radius: 12.6 in
Top Width: 3.98 ft
Normal Depth: 26.1 in
Critical Depth: 24.0 in
Critical Slope: 0.013 ft/ft
Velocity: 6.41 ft/s
Velocity Head: 0.64 ft
Specific Energy: 2.82 ft
Froude Number: 0.853
Maximum Discharge: 83.69 cfs
Discharge Full: 77.80 cfs
Slope Full: 0.003 ft/ft
Flow Type: Subcritical

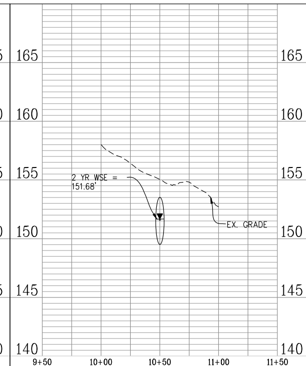
V2ALLOW=15 FPS



CROSS SECTION C-C': 2 YEAR STORM EVENT

Discharge: 44.83 cfs
Flow Area: 7.0 ft²
Wetted Perimeter: 6.6 ft
Hydraulic Radius: 12.6 in
Top Width: 3.98 ft
Normal Depth: 26.1 in
Critical Depth: 24.0 in
Critical Slope: 0.013 ft/ft
Velocity: 6.41 ft/s
Velocity Head: 0.64 ft
Specific Energy: 2.82 ft
Froude Number: 0.853
Maximum Discharge: 83.69 cfs
Discharge Full: 77.80 cfs
Slope Full: 0.003 ft/ft
Flow Type: Subcritical

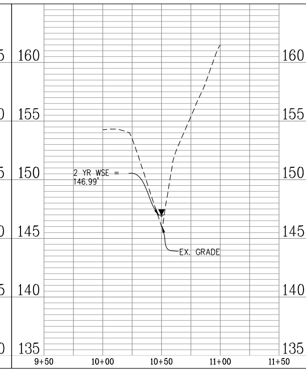
V2ALLOW=15 FPS



CROSS SECTION D-D': 2 YEAR STORM EVENT

Discharge: 52.77 cfs
Flow Area: 2.5 ft²
Wetted Perimeter: 5.5 ft
Hydraulic Radius: 5.5 in
Top Width: 5.07 ft
Normal Depth: 11.8 in
Critical Depth: 23.0 in
Critical Slope: 0.003 ft/ft
Velocity: 21.26 ft/s*
Velocity Head: 7.02 ft
Specific Energy: 8.00 ft
Froude Number: 5.355
Flow Type: Supercritical

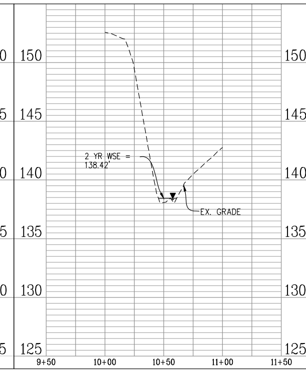
*MANMADE CHANNEL LINED WITH CONCRETE. PER TABLE 7-1 OF THE VDOT DRAINAGE MANUAL, THE MAXIMUM ALLOWABLE VELOCITY IS NOT APPLICABLE.



CROSS SECTION E-E': 2 YEAR STORM EVENT

Discharge: 52.77 cfs
Flow Area: 3.3 ft²
Wetted Perimeter: 14.5 ft
Hydraulic Radius: 2.7 in
Top Width: 14.30 ft
Normal Depth: 4.8 in
Critical Depth: 10.9 in
Critical Slope: 0.003 ft/ft
Velocity: 16.10 ft/s*
Velocity Head: 4.03 ft
Specific Energy: 4.42 ft
Froude Number: 5.927
Flow Type: Supercritical

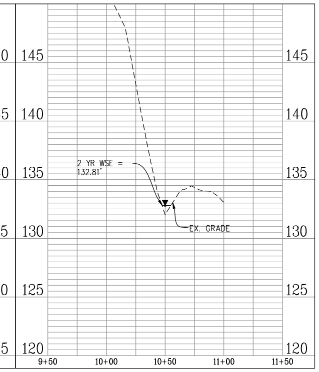
*MANMADE CHANNEL LINED WITH CONCRETE. PER TABLE 7-1 OF THE VDOT DRAINAGE MANUAL, THE MAXIMUM ALLOWABLE VELOCITY IS NOT APPLICABLE.



CROSS SECTION F-F': 2 YEAR STORM EVENT

Discharge: 52.77 cfs
Flow Area: 3.1 ft²
Wetted Perimeter: 7.9 ft
Hydraulic Radius: 4.8 in
Top Width: 7.71 ft
Normal Depth: 9.7 in
Critical Depth: 18.0 in
Critical Slope: 0.003 ft/ft
Velocity: 16.86 ft/s*
Velocity Head: 4.42 ft
Specific Energy: 5.23 ft
Froude Number: 4.665
Flow Type: Supercritical

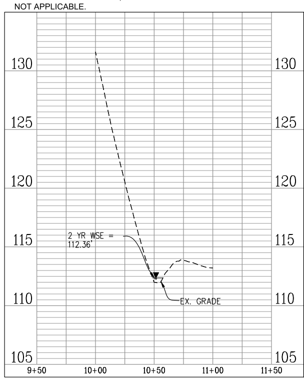
*MANMADE CHANNEL LINED WITH CONCRETE. PER TABLE 7-1 OF THE VDOT DRAINAGE MANUAL, THE MAXIMUM ALLOWABLE VELOCITY IS NOT APPLICABLE.



CROSS SECTION G-G': 2 YEAR STORM EVENT

Discharge: 54.39 cfs
Flow Area: 2.7 ft²
Wetted Perimeter: 8.8 ft
Hydraulic Radius: 3.7 in
Top Width: 8.69 ft
Normal Depth: 5.1 in
Critical Depth: 13.8 in
Critical Slope: 0.003 ft/ft
Velocity: 20.25 ft/s*
Velocity Head: 6.37 ft
Specific Energy: 6.80 ft
Froude Number: 6.421
Flow Type: Supercritical

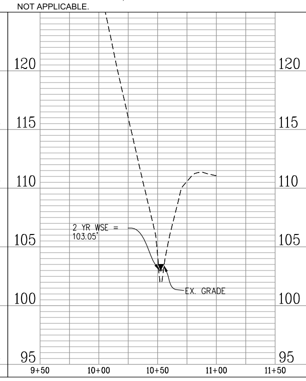
*MANMADE CHANNEL LINED WITH CONCRETE. PER TABLE 7-1 OF THE VDOT DRAINAGE MANUAL, THE MAXIMUM ALLOWABLE VELOCITY IS NOT APPLICABLE.



CROSS SECTION H-H': 2 YEAR STORM EVENT

Discharge: 54.39 cfs
Flow Area: 1.7 ft²
Wetted Perimeter: 3.9 ft
Hydraulic Radius: 5.3 in
Top Width: 3.16 ft
Normal Depth: 12.9 in
Critical Depth: 29.2 in
Critical Slope: 0.003 ft/ft
Velocity: 31.88 ft/s*
Velocity Head: 15.80 ft
Specific Energy: 16.88 ft
Froude Number: 7.653
Flow Type: Supercritical

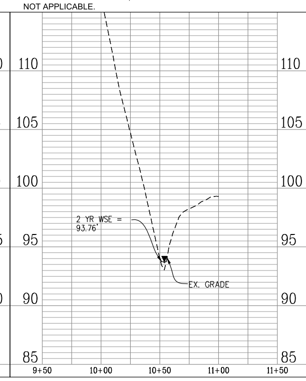
*MANMADE CHANNEL LINED WITH CONCRETE. PER TABLE 7-1 OF THE VDOT DRAINAGE MANUAL, THE MAXIMUM ALLOWABLE VELOCITY IS NOT APPLICABLE.



CROSS SECTION I-I': 2 YEAR STORM EVENT

Discharge: 54.39 cfs
Flow Area: 1.9 ft²
Wetted Perimeter: 5.0 ft
Hydraulic Radius: 4.7 in
Top Width: 4.69 ft
Normal Depth: 8.6 in
Critical Depth: 21.6 in
Critical Slope: 0.003 ft/ft
Velocity: 28.15 ft/s*
Velocity Head: 12.32 ft
Specific Energy: 13.03 ft
Froude Number: 7.737
Flow Type: Supercritical

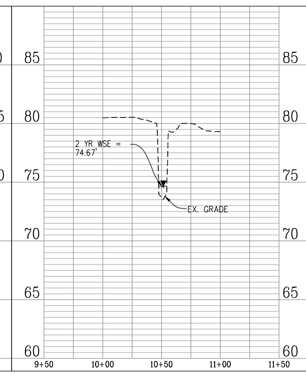
*MANMADE CHANNEL LINED WITH CONCRETE. PER TABLE 7-1 OF THE VDOT DRAINAGE MANUAL, THE MAXIMUM ALLOWABLE VELOCITY IS NOT APPLICABLE.



CROSS SECTION J-J': 2 YEAR STORM EVENT

Discharge: 60.84 cfs
Flow Area: 6.1 ft²
Wetted Perimeter: 8.1 ft
Hydraulic Radius: 9.0 in
Top Width: 7.00 ft
Normal Depth: 13.6 in
Critical Depth: 19.1 in
Critical Slope: 0.036 ft/ft
Velocity: 9.96 ft/s
Velocity Head: 1.54 ft
Specific Energy: 2.67 ft
Froude Number: 1.880
Flow Type: Supercritical

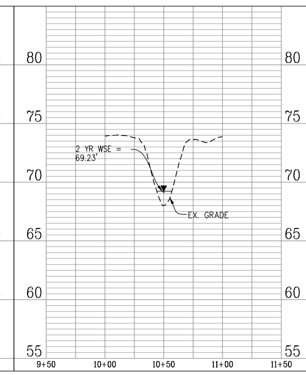
V2ALLOW= 13 FPS



CROSS SECTION K-K': 2 YEAR STORM EVENT

Discharge: 60.84 cfs
Flow Area: 6.8 ft²
Wetted Perimeter: 11.0 ft
Hydraulic Radius: 7.4 in
Top Width: 10.69 ft
Normal Depth: 14.7 in
Critical Depth: 19.5 in
Critical Slope: 0.032 ft/ft
Velocity: 9.01 ft/s
Velocity Head: 1.26 ft
Specific Energy: 2.49 ft
Froude Number: 1.999
Flow Type: Supercritical

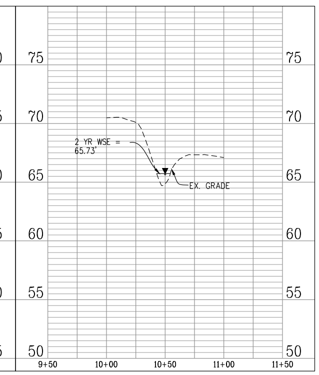
V2ALLOW= 13 FPS



CROSS SECTION L-L': 2 YEAR STORM EVENT

Discharge: 60.84 cfs
Flow Area: 7.5 ft²
Wetted Perimeter: 12.8 ft
Hydraulic Radius: 7.1 in
Top Width: 12.57 ft
Normal Depth: 12.2 in
Critical Depth: 16.2 in
Critical Slope: 0.033 ft/ft
Velocity: 8.06 ft/s
Velocity Head: 1.01 ft
Specific Energy: 2.03 ft
Froude Number: 1.835
Flow Type: Supercritical

V2ALLOW= 13 FPS



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DEPARTMENT OF PLANNING & ZONING

DIRECTOR — DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ___________

DIRECTOR — DATE

CHAIRMAN, PLANNING COMMISSION — DATE

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

OUTFALL ANALYSIS
WEST END PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

SCALE: H:1"=40'; V:1"=5' C.I.=N.A. DATE: JAN, 2025

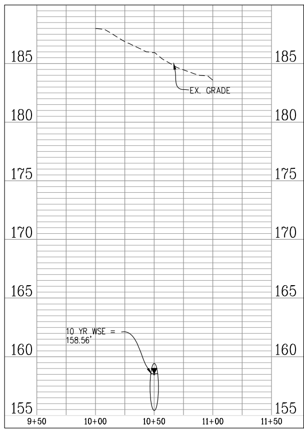
SHEET 20 OF 32

FILE No. RZ-13127

Urban, Ltd. – J:\JOBS\LandmarkMall\DSUP\Block D\Preliminary Site Plan\OUTFALL ANALYSIS.dwg [2 years] June 27, 2025 – 2:17pm aalfonso

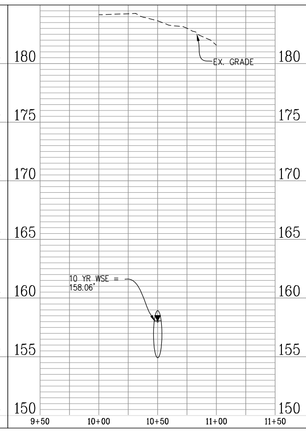
CROSS SECTION A-A': 10 YEAR STORM EVENT

Discharge: 126.27 cfs
Flow Area: 10.6 ft²
Wetted Perimeter: 8.7 ft
Hydraulic Radius: 14.6 in
Top Width: 3.26 ft
Normal Depth: 37.9 in
Critical Depth: 31.5 in
Critical Slope: 0.016 ft/ft
Velocity: 7.05 ft/s
Velocity Head: 0.77 ft
Specific Energy: 3.93 ft
Froude Number: 0.689
Maximum Discharge: 83.69 cfs
Discharge Full: 77.80 cfs
Slope Full: 0.009 ft/ft
Flow Type: Subcritical



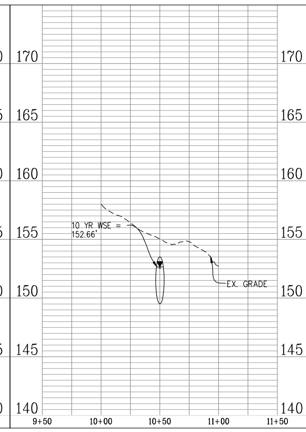
CROSS SECTION B-B': 10 YEAR STORM EVENT

Discharge: 126.27 cfs
Flow Area: 10.6 ft²
Wetted Perimeter: 8.7 ft
Hydraulic Radius: 14.6 in
Top Width: 3.26 ft
Normal Depth: 37.9 in
Critical Depth: 31.5 in
Critical Slope: 0.016 ft/ft
Velocity: 7.05 ft/s
Velocity Head: 0.77 ft
Specific Energy: 3.93 ft
Froude Number: 0.689
Maximum Discharge: 83.69 cfs
Discharge Full: 77.80 cfs
Slope Full: 0.009 ft/ft
Flow Type: Subcritical



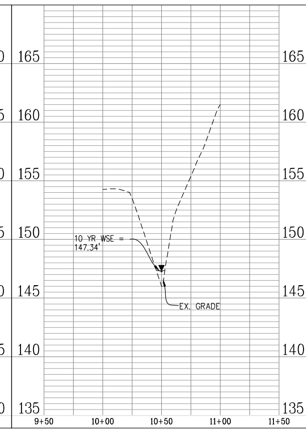
CROSS SECTION C-C': 10 YEAR STORM EVENT

Discharge: 126.27 cfs
Flow Area: 10.6 ft²
Wetted Perimeter: 8.7 ft
Hydraulic Radius: 14.6 in
Top Width: 3.26 ft
Normal Depth: 37.9 in
Critical Depth: 31.5 in
Critical Slope: 0.016 ft/ft
Velocity: 7.05 ft/s
Velocity Head: 0.77 ft
Specific Energy: 3.93 ft
Froude Number: 0.689
Maximum Discharge: 83.69 cfs
Discharge Full: 77.80 cfs
Slope Full: 0.009 ft/ft
Flow Type: Subcritical



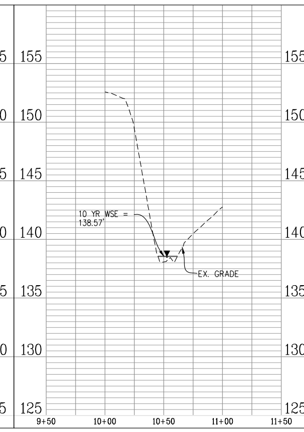
CROSS SECTION D-D': 10 YEAR STORM EVENT

Discharge: 118.46 cfs
Flow Area: 4.6 ft²
Wetted Perimeter: 7.4 ft
Hydraulic Radius: 7.4 in
Top Width: 6.86 ft
Normal Depth: 15.9 in
Critical Depth: 31.8 in
Critical Slope: 0.002 ft/ft
Velocity: 26.03 ft/s
Velocity Head: 10.53 ft
Specific Energy: 11.85 ft
Froude Number: 5.635
Flow Type: Supercritical



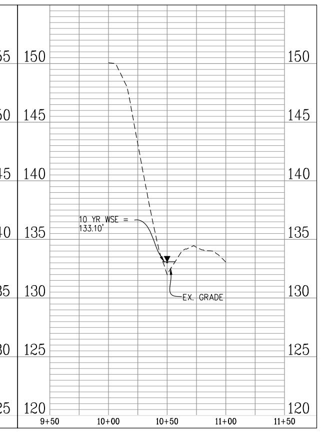
CROSS SECTION E-E': 10 YEAR STORM EVENT

Discharge: 118.46 cfs
Flow Area: 5.5 ft²
Wetted Perimeter: 15.6 ft
Hydraulic Radius: 4.2 in
Top Width: 15.42 ft
Normal Depth: 6.5 in
Critical Depth: 16.7 in
Critical Slope: 0.003 ft/ft
Velocity: 21.56 ft/s
Velocity Head: 7.22 ft
Specific Energy: 7.77 ft
Froude Number: 6.366
Flow Type: Supercritical



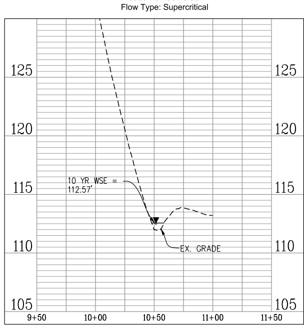
CROSS SECTION F-F': 10 YEAR STORM EVENT

Discharge: 118.46 cfs
Flow Area: 5.7 ft²
Wetted Perimeter: 10.7 ft
Hydraulic Radius: 6.4 in
Top Width: 10.44 ft
Normal Depth: 13.2 in
Critical Depth: 26.0 in
Critical Slope: 0.003 ft/ft
Velocity: 20.64 ft/s
Velocity Head: 6.62 ft
Specific Energy: 7.72 ft
Froude Number: 4.908
Flow Type: Supercritical



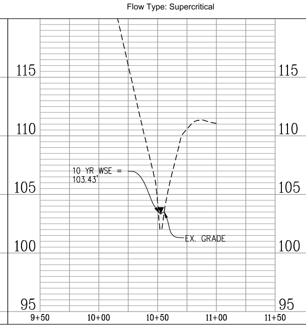
CROSS SECTION G-G': 10 YEAR STORM EVENT

Discharge: 121.50 cfs
Flow Area: 4.7 ft²
Wetted Perimeter: 10.5 ft
Hydraulic Radius: 5.3 in
Top Width: 10.39 ft
Normal Depth: 7.6 in
Critical Depth: 20.3 in
Critical Slope: 0.003 ft/ft
Velocity: 25.97 ft/s
Velocity Head: 10.48 ft
Specific Energy: 11.11 ft
Froude Number: 6.821
Flow Type: Supercritical



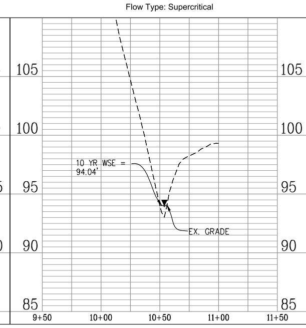
CROSS SECTION H-H': 10 YEAR STORM EVENT

Discharge: 121.50 cfs
Flow Area: 3.1 ft²
Wetted Perimeter: 5.2 ft
Hydraulic Radius: 7.2 in
Top Width: 4.27 ft
Normal Depth: 17.5 in
Critical Depth: 40.4 in
Critical Slope: 0.003 ft/ft
Velocity: 38.98 ft/s
Velocity Head: 23.61 ft
Specific Energy: 25.07 ft
Froude Number: 8.047
Flow Type: Supercritical



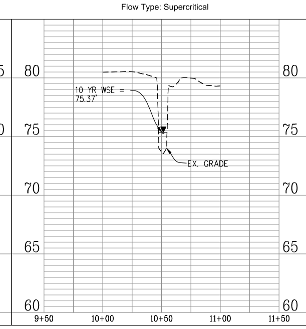
CROSS SECTION I-I': 10 YEAR STORM EVENT

Discharge: 121.50 cfs
Flow Area: 3.5 ft²
Wetted Perimeter: 6.3 ft
Hydraulic Radius: 6.5 in
Top Width: 5.96 ft
Normal Depth: 12.0 in
Critical Depth: 30.6 in
Critical Slope: 0.002 ft/ft
Velocity: 35.18 ft/s
Velocity Head: 19.23 ft
Specific Energy: 20.23 ft
Froude Number: 8.145
Flow Type: Supercritical



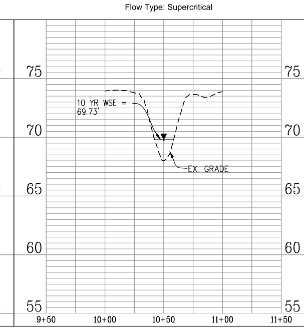
CROSS SECTION J-J': 10 YEAR STORM EVENT

Discharge: 148.84 cfs
Flow Area: 11.2 ft²
Wetted Perimeter: 9.6 ft
Hydraulic Radius: 14.0 in
Top Width: 7.37 ft
Normal Depth: 22.0 in
Critical Depth: 32.1 in
Critical Slope: 0.037 ft/ft
Velocity: 13.33 ft/s
Velocity Head: 2.76 ft
Specific Energy: 4.60 ft
Froude Number: 1.910
Flow Type: Supercritical



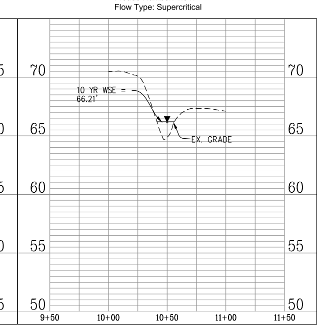
CROSS SECTION K-K': 10 YEAR STORM EVENT

Discharge: 148.84 cfs
Flow Area: 13.0 ft²
Wetted Perimeter: 14.8 ft
Hydraulic Radius: 10.6 in
Top Width: 14.37 ft
Normal Depth: 20.7 in
Critical Depth: 28.3 in
Critical Slope: 0.029 ft/ft
Velocity: 11.44 ft/s
Velocity Head: 2.03 ft
Specific Energy: 3.76 ft
Froude Number: 2.120
Flow Type: Supercritical



CROSS SECTION L-L': 10 YEAR STORM EVENT

Discharge: 148.84 cfs
Flow Area: 14.5 ft²
Wetted Perimeter: 17.0 ft
Hydraulic Radius: 10.2 in
Top Width: 16.67 ft
Normal Depth: 17.9 in
Critical Depth: 24.2 in
Critical Slope: 0.029 ft/ft
Velocity: 10.29 ft/s
Velocity Head: 1.64 ft
Specific Energy: 3.14 ft
Froude Number: 1.947
Flow Type: Supercritical



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No. DATE DESCRIPTION

PLAN DATE
01/13/2025
04/18/2025

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

OUTFALL ANALYSIS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN. 2025
SCALE: H:1"=40' V:1"=5' C.I.= N.A.

SHEET 21 OF 32

FILE No. RZ-13127

Urban, Ltd. - J:\JOBS\LandmarkMall\DSUP\Block D\Preliminary Site Plan\OUTFALL ANALYSIS.dwg [10 years] June 27, 2025 - 2:17pm aalfonso

SWM ADEQUATE OUTFALL NARRATIVE:

THE EXISTING TOPOGRAPHY OF THE PARCEL HAS TWO DISTINCT OUTFALLS, RESULTING IN TWO STUDY POINTS. STUDY POINT #1 OUTFALLS TO THE NORTHEAST CORNER OF THE PROPERTY. STUDY POINT #2 OUTFALLS TO THE EAST OF THE SITE, IMMEDIATELY NORTH OF THE DUKE STREET RAMP CONNECTION TO VAN DORN STREET. A TOTAL PRE-DEVELOPMENT DRAINAGE AREA OF 35.58 ACRES DRAINS TO STUDY POINT 1, WHILE A TOTAL PRE-DEVELOPMENT DRAINAGE AREA OF 31.24 ACRES DRAINS TO STUDY POINT 2.

STORMWATER MANAGEMENT IS TO BE PROVIDED IN THREE SEPARATE STORMWATER MANAGEMENT VAULTS; VAULT 2, 3, AND 4. VAULT 2 IS LOCATED IMMEDIATELY SOUTH OF BLOCKS E&G AND HAS A DRAINAGE AREA OF 17.46 ACRES. VAULT 3 IS LOCATED SOUTH OF BLOCK I AND HAS A DRAINAGE AREA OF 20.73 ACRES. VAULT 4 IS LOCATED EACH OF THE EXISTING PARKING STRUCTURE AND HAS A DRAINAGE AREA OF 8.06 ACRES. IN ACCORDANCE WITH THE ARTICLE XIII SECTION 13-109 OF THE ALEXANDRIA ZONING ORDINANCE, AND UTILIZING THE VIRGINIA RUNOFF REDUCTION METHODOLOGY, THE TREATMENT VOLUME IS REDUCED VIA THE UNDERGROUND SWM FACILITIES.

THE ALLOWABLE RELEASE RATE FOR EACH STUDY POINT HAS BEEN CALCULATED IN ACCORDANCE WITH ARTICLE XIII SECTION 13-109(F) OF THE ALEXANDRIA ZONING ORDINANCE. FOR THE CHANNEL PROTECTION AND FLOOD PROTECTION WHEN STORMWATER FROM A DEVELOPMENT IS DISCHARGED TO A NATURAL STORMWATER CONVEYANCE SYSTEM, THE MAXIMUM PEAK FLOW RATE FROM THE 1-YEAR 24-HOUR STORM FOLLOWING THE LAND-DISTURBING ACTIVITY SHALL BE CALCULATED WHERE:

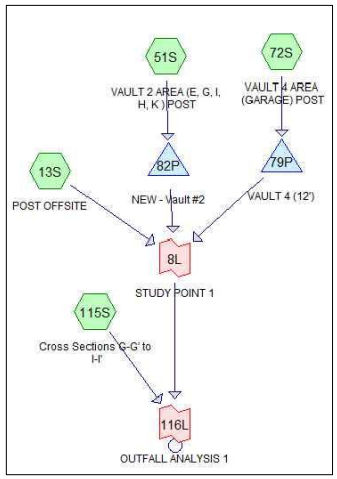
$Qdev \leq I.F. * (Qpre * RVpre)/RVdev$

AND THE PEAK FLOW RATE FOR THE 10-YEAR 24-HOUR STORM EVENT IS LESS THAN THE PRE-DEVELOPMENT PEAK FLOW RATE FROM THE 10-YEAR 24-HOUR STORM EVENT. AS SHOWN IN THE FLOW SUMMARY TABLE ON INFRASTRUCTURE SITE PLAN (DSP#2021-00012) SHEET 123. THE PROPOSED FLOW TO THE STUDY POINTS ARE LESS THAN THE ALLOWABLE RUNOFF.

IT IS THEREFORE THE OPINION OF URBAN, LTD. THAT THE PROPOSED SWM DESIGN MEETS THE REQUIRED SWM REQUIREMENTS OF THE ALEXANDRIA ORDINANCE.

URBAN LTD.
CLAYTON C. TOCK, P.E., PRINCIPLE

POST-DEVELOPMENT NODE SUMMARIES FOR OUTFALL POINT #1



POST-DEVELOPMENT 2-YEAR OUTFALL POINT #1

Inflow Area = 1,429,944 sf , 41.25% Impervious , Inflow Depth > 2.53" for 2-yr event
Inflow = 54.39 cfs @ 12.20 hrs , Volume= 301,425 cf
Primary = 54.39 cfs @ 12.20 hrs , Volume= 301,425 cf , Atten= 0%, Lag= 0.0 min

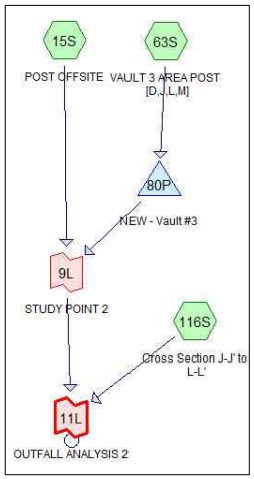
Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

POST-DEVELOPMENT 10-YEAR OUTFALL POINT #1

Inflow Area = 1,429,944 sf , 41.25% Impervious , Inflow Depth > 4.37" for 10-yr event
Inflow = 121.50 cfs @ 12.15 hrs , Volume= 520,368 cf
Primary = 121.50 cfs @ 12.15 hrs , Volume= 520,368 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

POST-DEVELOPMENT NODE SUMMARIES FOR OUTFALL POINT #2



POST-DEVELOPMENT 2-YEAR OUTFALL POINT #2

Inflow Area = 1,624,676 sf , 34.88% Impervious , Inflow Depth > 2.46" for 2-yr event
Inflow = 60.84 cfs @ 12.09 hrs , Volume= 332,597 cf
Primary = 60.84 cfs @ 12.09 hrs , Volume= 332,597 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

POST-DEVELOPMENT 10-YEAR OUTFALL POINT #2

Inflow Area = 1,624,676 sf , 34.88% Impervious , Inflow Depth > 4.30" for 10-yr event
Inflow = 148.84 cfs @ 12.13 hrs , Volume= 582,638 cf
Primary = 148.84 cfs @ 12.13 hrs , Volume= 582,638 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.01 hrs

OUTFALL ANALYSIS COMPUTATION SUMMARY

CROSS SECTIONS	SWALE TYPE DESCRIPTION:	AVG. CHANNEL SLOPE (%):	DRAINAGE AREA (AC):	CN FACTOR:	Tc (MIN):	ROUGHNESS COEFFICIENT:	2 YEAR FLOW (CFS):	2 YEAR VELOCITY (FPS):	2 YEAR NORMAL DEPTH (FT):	10 YEAR FLOW (CFS):	10 YEAR VELOCITY (FPS):	10 YEAR NORMAL DEPTH (FT):	CHANNEL LINING:
D-D'	EXISTING MANMADE CHANNEL-OFFSITE	0.10%	31.97	96	10*	0.013	52.77	21.26	0.98	118.46	26.03	1.33	EX. CONCRETE LINING
E-E'	EXISTING MANMADE CHANNEL-OFFSITE	0.14%	31.97	96	10*	0.013	52.77	16.10	0.40	118.46	21.56	0.54	EX. CONCRETE LINING
F-F'	EXISTING MANMADE CHANNEL-OFFSITE	0.08%	31.97	96	10*	0.013	52.77	16.86	0.81	118.46	20.64	1.10	EX. CONCRETE LINING
G-G'	EXISTING MANMADE CHANNEL-OFFSITE	0.15%	32.83	86	15*	0.013	54.39	20.25	0.43	121.50	25.97	0.63	EX. CONCRETE LINING
H-H'	EXISTING MANMADE CHANNEL-OFFSITE	0.23%	32.83	86	15*	0.013	54.39	31.88	1.08	121.50	38.98	1.46	EX. CONCRETE LINING
I-I'	EXISTING MANMADE CHANNEL-OFFSITE	0.21%	32.83	86	15*	0.013	54.39	28.15	0.72	121.50	35.18	1.00	EX. CONCRETE LINING
J-J'	EXISTING MANMADE CHANNEL-OFFSITE	0.13%	37.30	92	10*	0.045	60.84	9.96	1.13	148.84	13.33	1.83	EX. RIP RAP LINING
K-K'	EXISTING MANMADE CHANNEL-OFFSITE	0.14%	37.30	92	10*	0.045	60.84	9.01	1.23	148.84	11.44	1.73	EX. RIP RAP LINING
L-L'	EXISTING MANMADE CHANNEL-OFFSITE	0.12%	37.30	92	10*	0.045	60.84	8.06	1.02	148.84	10.29	1.49	EX. RIP RAP LINING

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COMMONWEALTH OF VIRGINIA — CLAYTON C. TOCK — Lic. No. 026790 — PROFESSIONAL ENGINEER — 04/18/2025

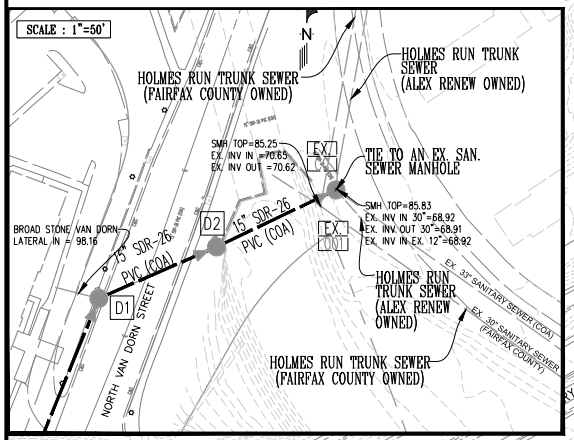
OUTFALL ANALYSIS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: N.A. C.I.=N.A. DATE: JAN. 2025

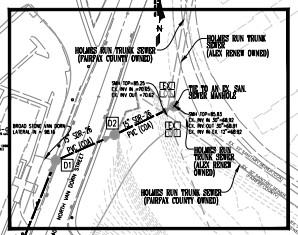
SHEET 22 OF 32
FILE No. RZ-13127

Urban, Ltd. - X:\JOBS\LandmarkMall\QSUP\Block D\Preliminary Site Plan\OUTFALL ANALYSIS.dwg [NARR] June 27, 2025 - 2:17pm calfonso

NOTES

1. RESIDENTIAL AREA SANITARY FLOW IS COMPUTED AT THE RATE OF 200 GPD PER UNIT
2. EACH RESIDENTIAL UNIT IS BASED ON A 1,000 G.S.F. FLOOR PLATE
3. RETAIL AND OFFICE AREA SANITARY FLOW IS COMPUTED AT THE RATE OF 200 GPD PER 1,000 S.F. OF NET FLOOR AREA
4. ALL PIPE DATA HAS BEEN OBTAINED BY FIELD SURVEY PERFORMED BY URBAN, LTD.
5. CONTRACTOR SHALL ENSURE ALL DISCHARGES ARE IN ACCORDANCE WITH CITY OF ALEXANDRIA CODE TITLE 5, CHAPTER 6, ARTICLE B.
6. DEWATERING AND OTHER CONSTRUCTION RELATED DISCHARGE LIMITS TO THE SEWER SYSTEM ARE REGULATED BY ALEXRENEW PRETREATMENT. CONTRACTOR IS REQUIRED TO CONTACT ALEXRENEW'S PRETREATMENT COORDINATOR AT 703-721-3500 X3020.
7. THE APPLICANT SHALL PROVIDE A PRE- AND POST-CCTV INSPECTION OF MANHOLE CONNECTION BY A NASSCO NACP CERTIFIED TECHNICIAN.
8. INSUFFICIENT PIPE CAPACITIES OF EXISTING SANITARY SEWER ARE SHOWN ON SHEET 13. THOSE PIPES ARE SHOWN TO BE REMOVED AND REPLACED WITH APPROPRIATELY SIZED PIPES ON SHEET 13.
9. HGL ANALYSIS WILL BE PROVIDED WITH THE FINAL INFRASTRUCTURE SITE PLAN.
10. THE PROJECT SITE IS LOCATED WITHIN THE HOLMES RUN TRUNK SEWER SHED. THE PROJECT SITE IS NOT LOCATED IN THE COMBINED SEWER SYSTEM AREA.





HENRY G. SHIRLEY MEMORIAL HIGHWAY

BLOCK M
LOT 607

BLOCK L2
LOT 709

BLOCK A/B/C

BLOCK Q

BLOCK F

BLOCK H

BLOCK J

BLOCK D

NORTH VAN DORN STREET

DUKE STREET

HOOFF AVE (PUBLIC)

SCALE: 1"=100'

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COMMONWEALTH OF VIRGINIA — CLAYTON C. ROSE — Lic. No. 036790 — PROFESSIONAL ENGINEER

SANITARY SEWER PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=100' C1-2 DATE: JAN. 2025

SHEET 23 OF 32
FILE No. RZ-13127

Urban, Ltd. - z:\JOBS\...\Block D\Preliminary Site Plan\SANITARY SEWER COMPUTATIONS.dwg [SAND] June 27, 2025 - 2:19pm ostlonso

PROPOSED SANITARY SEWER FLOW COMPUTATIONS

Project: West End

From Point	To Point	RESIDENTIAL 300 GPD/UNIT	OFFICE/RETAIL 200 GPD/ 1000 SF	SFA/SFD DWELLINGS 350 GPD/UNIT	HOTEL 130 GPD/UNIT	PEAK FACTOR	INCR q MGD	FLOW q MGD	FLOW q C.F.S.	Invert Elevation Upper End	Invert Elevation Lower End	Length FT.	Slope %	Dia. IN.	Capacity Q MGD	VEL. F.P.S.	Capacity q/Q %	Pipe Coefficient	Pipe Material	BLOCKS TO STR	Remarks
L6	L5		190396			4.0	0.15	0.15	0.24	190.24	190.18	13.00	0.50%	10	1.30	2.42	11.72	0.010	PVC		33.34% Flow from Block A
L5	L4					4.0	0.00	0.15	0.24	190.08	189.84	47.79	0.50%	10	1.31	2.42	11.67	0.010	PVC		
L4	L3					4.0	0.00	0.15	0.24	189.74	189.26	96.24	0.50%	10	1.31	2.42	11.67	0.010	PVC		
L3	L2					4.0	0.00	0.15	0.24	189.16	189.07	17.58	0.50%	10	1.31	2.42	11.67	0.010	PVC		
L2	N1					4.0	0.00	0.15	0.24	188.97	188.53	87.06	0.50%	10	1.31	2.42	11.67	0.010	PVC		
N1	EX.NN					4.0	0.00	0.15	0.24	188.43	188.02	82.58	0.50%	10	1.31	2.42	11.67	0.010	PVC		
EX.NN	EX.MM					4.0	0.10	0.25	0.38	187.92	186.84	223.82	0.46%	10	0.83	2.08	29.71	0.015	RCP		100% Flow from Block E1 (MOB)
EX.MM	EX.LL					4.0	0.25	0.50	0.77	186.81	185.94	74.55	1.17%	10	1.33	3.48	37.20	0.015	RCP		100% Flow from Block E (Res.)
EX.LL	EX.KK					4.0	0.00	0.50	0.77	185.71	185.14	122.64	0.46%	10	0.83	2.47	59.32	0.015	RCP		
EX.KK	L1					4.0	0.00	0.50	0.77	185.10	184.27	145.48	0.57%	10	0.93	2.68	53.29	0.015	RCP		
L1	EX.JJ					4.0	0.31	0.81	1.25	184.27	184.09	31.95	0.57%	10	0.93	1.70	86.86	0.015	RCP		100% Flow from Block G
EX.JJ	EX. II					4.0	0.00	0.81	1.25	184.01	181.16	259.55	1.10%	10	1.29	3.85	62.53	0.015	RCP		
EX.II	EX.HH					4.0	0.30	1.11	1.71	180.86	160.37	165.68	12.37%	10	4.33	10.29	25.60	0.015	RCP		Flow from Block I and Ex. Garage Restroom
EX.HH	EX. GG					4.0	0.00	1.11	1.71	160.03	134.41	111.27	23.02%	10	5.91	12.87	18.76	0.015	RCP		
EX. GG	EX. FF					4.0	0.00	1.11	1.71	134.24	132.08	28.12	7.68%	12	5.55	8.54	19.98	0.015	RCP		
EX. FF	EX. EE					4.0	2.73	3.84	5.93	129.77	119.03	222.04	4.84%	12	4.40	5.61	87.11	0.015	RCP		100% Flow from Landmark Mall
EX. EE	EX.DD					4.0	0.00	3.84	5.93	118.81	97.75	299.39	7.03%	12	5.31	6.76	72.28	0.015	RCP		
EX.DD	D2	184				4.0	0.22	4.06	6.27	97.45	88.15	63.22	14.71%	12	7.68	15.33	52.84	0.015	RCP		100% Flow from Broadstone Appt
D2	D3					4.0	0.00	4.06	6.27	88.15	87.44	112.52	0.63%	15	4.32	3.52	93.88	0.010	PVC		
D3	D4					4.0	0.00	4.06	6.27	87.44	87.01	68.52	0.63%	15	4.32	3.52	93.88	0.010	PVC		
D4	EX.CC					4.0	0.00	4.06	6.27	76.29	74.96	66.40	2.00%	15	7.70	9.83	52.69	0.010	PVC		
W1	W		190339			4.0	0.15	0.15	0.24	195.87	195.04	66.50	1.25%	12	3.36	3.30	4.54	0.010	PVC		33.33% Flow from Block A
W	V					4.0	0.00	0.15	0.24	194.94	193.28	132.42	1.25%	12	3.36	3.30	4.53	0.010	PVC		
V	U		-			4.0	0.15	0.30	0.47	186.77	186.41	72.26	0.50%	12	2.12	2.97	14.35	0.010	PVC		
U	L					4.0	0.00	0.30	0.47	186.31	185.84	94.64	0.50%	12	2.12	2.97	14.35	0.010	PVC		
L	K		-			4.0	0.02	0.33	0.50	185.74	185.15	117.14	0.50%	12	2.12	3.05	15.38	0.010	PVC		Flow from Block C
K	J		-			4.0	0.02	0.35	0.54	185.05	184.79	52.56	0.50%	12	2.12	3.09	16.41	0.010	PVC		Flow from Block C
J	I1					4.0	0.00	0.35	0.54	184.69	184.45	47.70	0.50%	12	2.12	3.09	16.41	0.010	PVC		
I1	I					4.0	0.33	0.68	1.05	184.35	183.11	248.57	0.50%	12	2.12	3.72	31.95	0.010	PVC		Flow from Block D
I	H1					4.0	0.55	1.23	1.90	183.01	181.17	302.66	0.61%	12	2.34	4.66	52.58	0.010	PVC		Flow from Block J 50% Flow from Block H
H1	H					4.0	0.22	1.44	2.23	181.07	180.34	59.20	1.25%	12	3.35	6.35	43.12	0.010	PVC		Flow from Block K
H	GA					4.0	0.00	1.44	2.23	180.24	179.73	59.82	0.85%	12	2.77	5.52	52.18	0.010	PVC		
GA	G					4.0	0.33	1.77	2.74	179.63	178.68	111.03	0.85%	12	2.77	5.79	64.09	0.010	PVC		Flow from Block L
G	F					4.0	0.00	1.77	2.74	178.58	177.72	102.02	0.85%	12	2.77	5.79	64.09	0.010	PVC		
F	E					4.0	0.09	1.87	2.89	177.62	176.23	163.39	0.85%	12	2.77	3.52	67.43	0.010	PVC		Flow from Block M
E	D					4.0	0.21	2.08	3.22	176.13	173.94	145.68	1.50%	12	3.68	7.46	56.59	0.010	PVC		Flow from Block K
D	C2					4.0	0.00	2.08	3.22	171.13	170.44	45.86	1.50%	12	3.68	7.46	56.59	0.010	PVC		
C2	C1					4.0	0.65	2.73	4.22	169.79	164.21	279.42	2.00%	12	4.24	8.88	64.27	0.010	PVC		Flows from SSMH C & D
C1	B					4.0	0.00	2.73	4.22	163.69	161.16	101.26	2.50%	12	4.75	9.66	57.46	0.010	PVC		
B	A3					4.0	0.00	2.73	4.22	157.93	156.19	69.56	2.50%	12	4.75	9.66	57.46	0.010	PVC		
A3	A2					4.0	0.00	2.73	4.22	151.41	148.65	110.30	2.50%	12	4.75	9.66	57.46	0.010	PVC		
A2	A1					4.0	0.00	2.73	4.22	144.65	141.91	109.92	2.50%	12	4.75	9.66	57.46	0.010	PVC		
A1	A					4.0	0.00	2.73	4.22	138.91	135.45	138.24	2.50%	12	4.75	9.66	57.46	0.010	PVC		
A	EX. FF					4.0	0.00	2.73	4.22	133.45	132.08	54.80	2.50%	12	4.75	9.66	57.46	0.010	PVC		
R	R1					4.0	0.09	0.09	0.14	189.17	188.15	40.91	2.50%	10	2.92	3.60	2.99	0.010	PVC		Flow from Block B
R1	Q					4.0	0.01	0.09	0.14	187.99	186.73	142.21	0.88%	12	2.82	2.66	3.31	0.010	PVC		Flow from Pav. 1
Q	P					4.0	0.02	0.12	0.18	186.63	185.95	91.68	0.75%	12	2.60	2.56	4.45	0.010	PVC		Flow from Block C
P	O					4.0	0.00	0.12	0.18	185.85	184.77	143.07	0.75%	12	2.60	2.56	4.45	0.010	PVC		
O	N					4.0	0.23	0.35	0.53	184.67	178.40	375.50	1.67%	12	3.88	4.74	8.91	0.010	PVC		50% Flow from Block H Flow from Pav.2
N	M					4.0	0.00	0.35	0.53	178.30	175.93	118.87	2.00%	12	4.25	5.09	8.14	0.010	PVC		
M	C					4.0	0.30	0.65	1.00	175.83	175.43	19.86	2.00%	12	4.25	6.04	15.23	0.010	PVC		Flow from Block I
C	C2					5.0	0.00	0.65	1.00	170.62	169.89	36.41	2.00%	12	4.25	6.04	15.23	0.010	PVC		Flow to C2
CO1	I	175	21000			4.0	0.23	0.23	0.35	186.00	185.17	33.00	2.50%	6	0.75	5.22	30.34	0.010	PVC		50% Flow from Block H
CO2	Q		28164			4.0	0.02	0.02	0.03	200.86	191.24	25.09	2.50%	6	0.75	2.99	3.01	0.010	PVC		34% Flow from Block C
CO3	O	175	21000			4.0	0.23	0.23	0.35	187.68	186.41	51.00	2.50%	10	2.92	4.96	7.77	0.010	PVC		50% Flow from Block H
CO4	K		27336			4.0	0.02	0.02	0.03	185.98	185.15	33.00	2.50%	8	1.61	2.68	1.36	0.010	PVC		33% Flow from Block C
CO5	L		27336			4.0	0.02	0.02	0.03	187.00	186.17	33.00	2.50%	8	1.61	2.68	1.36	0.010	PVC		33% Flow from Block C
BLDG K	CO6	168	16000			4.0	0.21	0.21	0.33	177.48	176.90	23.00	2.50%	10	2.92	4.83	7.35	0.010	PVC		50% Flow from Block K
CO6	E					4.0	0.00	0.21	0.33	176.80	176.40	16.24	2.50%	10	2.92	4.83	7.35	0.010	PVC		
CO7	I	235	52000			4.0	0.32	0.32	0.50	186.09	185.17	36.86	2.50%	10	2.92	5.46	11.09	0.010	PVC		100% Flow from Block J
BLDG K	CO35	169	16000			4.0	0.22	0.22	0.33	183.08	182.83	10.00	2.50%	10	2.92	4.86	7.39	0.010	PVC		50% Flow from Block K
CO35	H1					4.0	0.00	0.22	0.33	182.73	181.34	55.56	2.50%	10	2.92	4.86	7.39	0.010	PVC		
GB	GA	216	11000	44		4.0	0.33	0.33	0.51	180.16	179.90	51.65	0.50%	10	1.31	3.07	25.25	0.010	PVC		100% Flow from Block L1 & L2
FB	FA			66		4.0	0.09	0.09	0.14	178.41	178.08	66.33	0.50%	10	1.31	2.15	7.08	0.010	PVC		100% Flow from Block M
FA	F					4.0	0.00	0.09	0.14	177.98	177.82	31.68	0.50%	10	1.31	2.15	7.08	0.010	PVC		100% Flow from Block M
CO10	R		109206			4.0	0.09	0.09	0.14	189.91	189.27	25.44	2.50%	8	1.61	3.74	5.42	0.010	PVC		100% Flow from Block B
CO11	I2	275				4.0	0.33	0.33	0.51	190.07	189.47	24.00	2.50%	8	1.61	5.62	20.50	0.010	PVC		100% Flow from Block D
I2	I1					4.0	0.00	0.33	0.51	189.30	188.08	48.93	2.50%	10	2.92	5.50	11.31	0.010	PVC		
BLDG E (RES)	CO12	73	44986			4.0	0.12	0.12	0.19	188.31	187.83	18.96	2.50%	10	2.00	4.09	6.18	0.010	PVC		50% Flow from Block E (Res.)
CO12	M1					4.0	0.00	0.12	0.19	187.73	187.34	15.71	2.50%	10	2.00	4.09	6.18	0.010	PVC		
M1	EX.MM					4.0	0.00	0.25	0.38	187.24	186.94	12.00	2.50%	10	2.00	5.09	12.36	0.010	PVC		100% Flow from Block E (Res.)
BLDG E (RES)	CO21	73	44986			4.0	0.12	0.12	0.19	188.23	187.75	19.01	2.50%	10	2.00	4.09	6.18	0.010	PVC		50% Flow from Block E (Res.)
CO21	M1					4.0	0.00	0.12	0.19	187.65	187.34	12.40	2.50%	10	2.00	4.09	6.18	0.010	PVC		
BLDG G	CO13	122	11944			4.0	0.16	0.16	0.24	186.48	186.10	15.00	2.50%	10	2.00	4.43	7.80	0.010	PVC		50% Flow from Block G
CO13	L3					4.0	0.00	0.16	0.24	186.00	185.58	16.76	2.50%	10	2.00	4.43	7.80	0.010	PVC		
L3	L1					4.0	0.00	0.31	0.48	185.48	184.37	44.50	2.50%	10	2.00	5.40	15.60	0.010	PVC		100% Flow from Block G
BLDG G	CO31A	122	11944			4.0	0.16	0.16	0.24	186.53	186.28	10.00	2.50%	10	2.00	4.43	7.80	0.010	PVC		50% Flow from Block G
CO31A	CO31					4.0	0.00	0.16	0.24	0.37	0.10	10.70	2.50%	10	2.00	4.43	7.80	0.010	PVC		
CO31	L7					4.0	0.00	0.16	0.24	186.18	185.58	23.71	2.50%	10	2.00	4.43	7.80	0.010	PVC		
BLDG I	CO45	195	83517			4.0	0.30	0.30	0.47	176.64	176.52	5.00	2.50%	10	2.92	5.27	10.31	0.010	PVC		50% Flow from Block I
CO45	M					4.0	0.00	0.30	0.47	176.42	176.10	12.78	2.50%	10	2.92	5.27	10.30	0.010	PVC		
BLDG I	CO14	195	83517			4.0	0.30	0.30	0.47	183.25	182.18	42.81	2.50%	10	2.92	5.27	10.31	0.010	PVC		50% Flow from Block I
CO14	EX.II					4.0	0.00	0.30	0.47	182.08	181.26	32.65	2.50%	10	2.92	5.27	10.31	0.010	PVC		
BLDG E1 (MOB)	CO16		119630			4.0	0.10	0.10	0.15	190.66	190.41	10.00	2.50%	6	0.75	4.03	12.80	0.010	PVC		100% Flow from Block E1 (MOB)
CO16	EX.NN					4.0	0.00	0.10	0.15	190.31	188.60	68.32	2.50%	6	0.75	4.03	12.80	0.010	PVC		
EX. GAR. Restroom	CO17		100			4.0	0.00	0.00	0.00	189.54	189.27	10.64	2.50%	6	0.75	0.00	0.01	0.010	PVC		100% Flow from Ex. Garage Restroom
CO17	EX.II					4.0	0.00	0.00	0.00	189.27	184.78	179.47	2.50%	6	0.75	0.00	0.01	0.010	PVC		
V1	V		190339			4.0	0.15	0.15	0.24	187.54	186.87	66.50	1.00%	12	3.00	3.06	5.08	0.010	PVC		33.33% Flow from Block A
PAV.1	CO40		7279			4.0	0.01	0.006	0.01	189.74	189.53	8.47	2.50%	4	0.25	1.43	2.30	0.010	PVC		100% Flow from Pavilion 1 Block F
CO40	Q		0			4.0	0.00	0.006	0.01	189.36	188.54	32.71	2.50%	6	0.75	1.76	0.78	0.010	PVC		100% Flow from Pavilion 1 Block F
PAV.2	CO41		4064			4.0	0.00	0.003	0.01	183.28	182.96	12.92	2.50%	4	0.25	0.80	1.28	0.010	PVC		100% Flow from Pavilion 2 Block N
CO41	O		0			4.0	0.00	0.003	0.01	182.79	181.51	51.15	2.50%	6	0.75	0.98	0.43	0.010	PVC		100% Flow from Pavilion 2 Block N

BLOCK D)

ADEQUATE OUTFALL ANALYSIS

Blocks		Office Sanitary Flow	Office G.S.F	Retail Sanitary Flow	Retail G.S.F	MFH Sanitary Flow	MFH Units	SFA Units	Total Proposed Sanitary Flow (GPD)
HOSPITAL CAMPUS	A	200GPD/1,000 S.F.	571,074	200GPD/1,000 S.F.		300GPD/UNIT	-	-	114,215
	B	200GPD/1,000 S.F.	109,206	200GPD/1,000 S.F.	-	300GPD/UNIT	-	-	21,841
	C	200GPD/1,000 S.F.	82,835	200GPD/1,000 S.F.	-	300GPD/UNIT	-	-	16,567
Total			763,115		-		-	-	152,623
				TOTAL FLOW FROM HOSPITAL CAMPUS (MGD)					0.61
LANDMARK	D	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	-	300GPD/UNIT	275		82,500
	E (MOB & RES.)	200GPD/1,000 S.F.	119,630	200GPD/1,000 S.F.	89,971	300GPD/UNIT	146		85,720
	G	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	23,888	300GPD/UNIT	244		77,978
	H	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	42,000	300GPD/UNIT	350		113,400
	I	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	167,033	300GPD/UNIT	390		150,407
	J	200GPD/1,000 S.F.	52000			300GPD/UNIT	235		80,900
	K	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	32,000	300GPD/UNIT	337		107,500
	L	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	11,000	300GPD/UNIT	216	44	82,400
	M	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	-	350GPD/UNIT	0	66	23,100
	F	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	7,279	300GPD/UNIT	0		1,456
	N	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	4,064	300GPD/UNIT	0		813
	Ex. Garage Restroom	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	100	300GPD/UNIT	0		20
Total			171,630		377,335		2,193		806,193
				TOTAL FLOW FROM LANDMARK MALL BLOCKS (MGD)					3.23
EX. BUILDING	MULTI-FAMILY USE	200GPD/1,000 S.F.	-	200GPD/1,000 S.F.	-	300GPD/UNIT	184		55,200.00
				TOTAL FLOW FROM BROADSTONE APPT					0.22
				TOTAL FLOW GOING TO EX. CC (MGD)					4.06

Landmark Mall Breakdown by Manhole

	Block	Lateral #	Lateral Tie In Location	% of Block Flow	MH Flow Enters in
HOSPITAL	A	1	SMH W1	33.33%	W
		2	SMH V1	33.33%	V
		3	CO15	33.34%	L2
	B	1	CO10	36.09%	R
		2	CO15	63.91%	L2
	C	1	CO5	33.00%	L
		2	CO4	33.00%	K
	(Garage)	3	CO2	34.00%	Q
LANDMARK	D	1	CO11	100%	I2
	E	1	CO16	100%	EX. MM
		2	CO12	100%	EX. MM
	G	1	CO13	100%	EX. JJ
	H	1	CO1	50%	I
		2	CO3	50%	O
	I	1	CO14	100%	EX. II
	J	1	CO7	100%	I
	K	1	CO6	100%	D
	L	1	CO8	100%	H1
	M	1	CO9	100%	E

SANITARY SEWER ADEQUATE OUTFALL NARRATIVE:

THE PROPOSED BUILDING D 6" LATERAL CONNECT TO EXISTING MANHOLES I2. THE OVERALL DEVELOPMENT CONNECTS TO AN EXISTING M.H. "HH" THEN TIES TO AN EXISTING M.H. CC AT HOLMES RUN TRUNK. APPROXIMATELY 2971 FEET FROM THE PROPOSED CONNECTION OF BUILDING D MARKS THE END OF THE ANALYSIS IN ACCORDANCE WITH SECTION MEMORANDUM TO INDUSTRY NO. 06-14 AS THE LINE THEN CONNECTS WITH AN EXISTING 33" LINE. THE PROPOSED SITE, BLOCK D, WILL UTILIZE EXISTING SMH I2 AS A CONNECTION POINT TO THE SANITARY SYSTEM AS SHOWN ON SHEET 26. A TOTAL OF 275 UNITS HAVE BEEN INCLUDED.

NOTE: WHERE VELOCITIES IN SANITARY SEWER PIPES EXCEED THE MAXIMUM ALLOWABLE VELOCITY OF 10 FT/S, SPECIAL PROVISIONS SHALL BE MADE TO RESTRAIN THE PIPE TO PROTECT AGAINST DISPLACEMENT BY EROSION.

APPROVED
SPECIAL USE PERMIT NO. ____________
DEPARTMENT OF PLANNING & ZONING
DIRECTOR ____ DATE ____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ____________
DIRECTOR ____ DATE ____
CHAIRMAN, PLANNING COMMISSION ____ DATE ____
DATE RECORDED ____________
INSTRUMENT NO. ____ DEED BOOK NO. ____ PAGE NO. ____

REVISIONS — No. | DATE | DESCRIPTION

PLAN DATE: 01/13/2025, 04/18/2025

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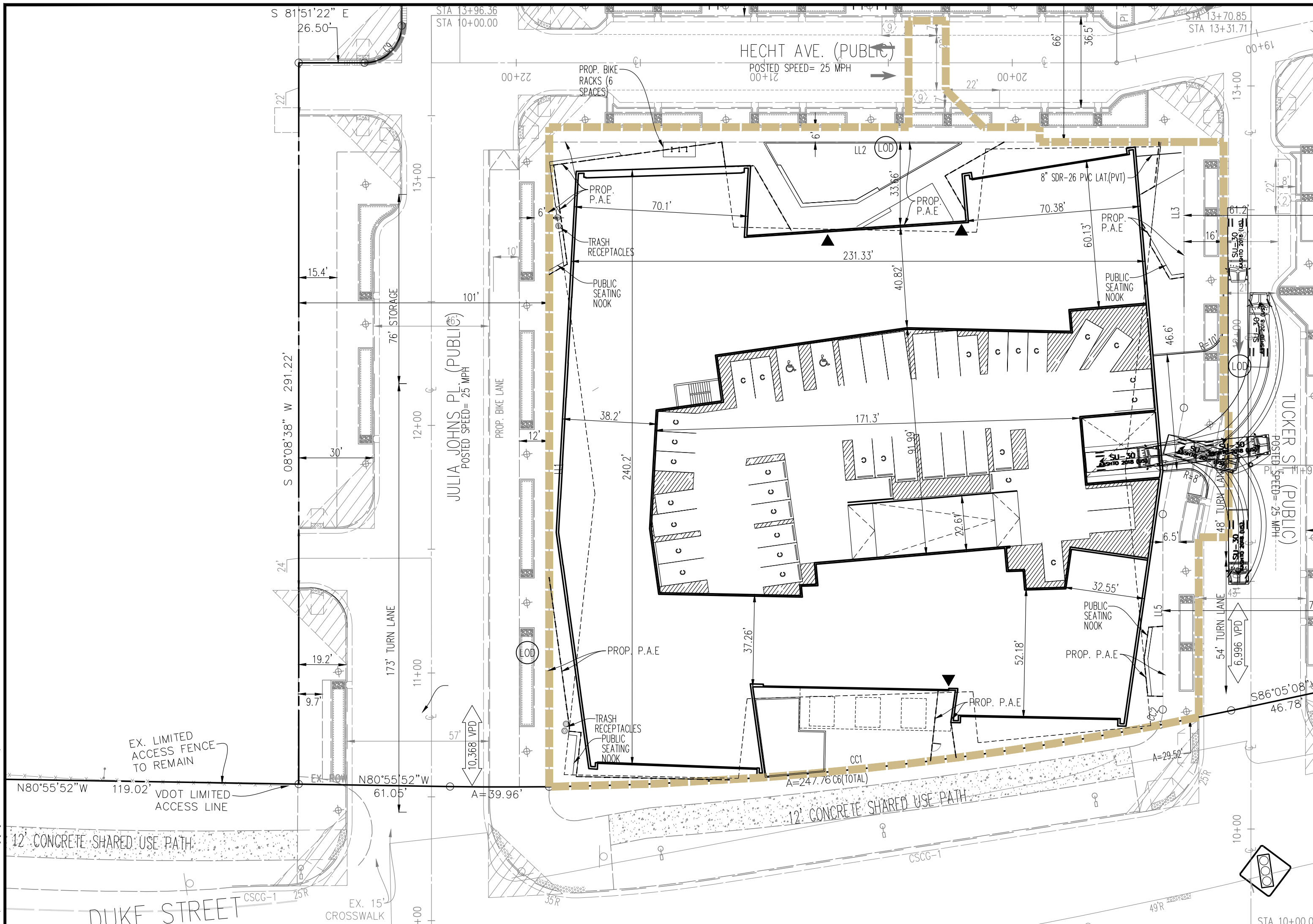
SANITARY SEWER COMPUTATIONS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
C.I.= N/A
SCALE: N/A

SHEET 24 OF 32

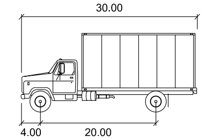
FILE No. RZ-13127

Urban, Ltd. - J:\JOBS\LandmarkMall\DSUP\Block D\Preliminary Site Plan\SANITARY SEWER COMPUTATIONS.dwg [Comps] June 27, 2025 - 2:19pm adfonso



LINE TABLE		
LINE	BEARING	DISTANCE
LL1	S08°08'38"W	260.28'
LL2	N81°51'22"W	256.00'
LL3	N08°08'38"E	107.29'
LL4	N19°20'38"E	43.77'
LL5	N08°08'43"E	78.93'

CURVE TABLE						
CURVE	ARC	RADIUS	DELTA ANGLE	TANGENT	CHORD	BEARING
CC1	247.76'	1400.00'	10°08'23"	124.20'	247.43'	S87°38'11"E
CC2	6.38'	15.06'	24°16'42"	3.24'	6.33'	N20°11'22"E



SU-30

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

SCALE: 1"=30'

NOTES:

1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.
2. ALL ADJACENT STREETS WILL REMAIN OPEN DURING ALL CONSTRUCTION.

APPROVED

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DEPARTMENT OF PLANNING & ZONING

DIRECTOR ______ DATE ______

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. ______

DIRECTOR ______ DATE ______

CHAIRMAN, PLANNING COMMISSION ______ DATE ______

DATE RECORDED ______

INSTRUMENT NO. ______ DEED BOOK NO. ______ PAGE NO. ______

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AUTOTURN EXHIBIT

WEST END
PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JAN. 2025

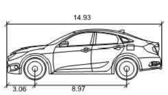
C.I.=N/A

SCALE: 1"=30'

SHEET 25 OF 32

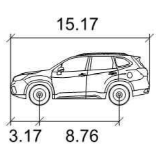
FILE No. RZ-13127

Urban, Ltd. - J:\JOBS\LandmarkMall\DSUP\Block D\Preliminary Site Plan\AUTOTURN EXHIBIT.dwg [01] June 27, 2025 - 2:20pm aafonso



Honda Civic 2022 feet

Width	: 5.91
Track	: 5.20
Lock to Lock Time	: 6.0
Steering Angle	34.7



Subaru Forester 2019

	feet
Width	: 5.95
Track	: 5.89
Lock to Lock Time	: 6.0
Steering Angle	: 35.1

SCALE: 1"=30'

0 10' 30' 60'

NOTES:

1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.
2. ALL ADJACENT STREETS WILL REMAIN OPEN DURING ALL CONSTRUCTION.

APPROVED

SPECIAL USE PERMIT NO. ____________

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. ____________

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED ____________

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE

01/13/2025

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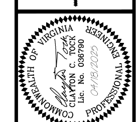


AUTOTURN EXHIBIT

WEST END

PRELIMINARY SITE PLAN - BLOCK D

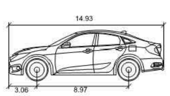
CITY OF ALEXANDRIA, VIRGINIA

SCALE: 1"=30' C.I.= N/A DATE: JAN. 2025

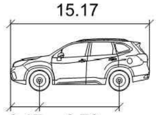
SHEET 26 OF 32

FILE No. RZ-13127

Urban, Ltd. - J:\JOBS\LandmarkMall\DSUP\Block D\Preliminary Site Plan\AUTOTURN EXHIBIT.dwg [02] June 27, 2025 - 2:20pm aalfonso



Honda Civic 2022 feet
Width : 5.91
Track : 5.20
Lock to Lock Time : 6.0
Steering Angle 34.7



Subaru Forester 2019

	feet
Width	: 5.95
Track	: 5.89
Lock to Lock Time	: 6.0
Steering Angle	: 35.1

SCALE: 1"=30'

NOTES:

1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.
2. ALL ADJACENT STREETS WILL REMAIN OPEN DURING ALL CONSTRUCTION.

APPROVED
SPECIAL USE PERMIT NO. ____________
DEPARTMENT OF PLANNING & ZONING
DIRECTOR ____________ DATE ____________
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ____________
DIRECTOR ____________ DATE ____________
CHAIRMAN, PLANNING COMMISSION ____________ DATE ____________
DATE RECORDED ____________
INSTRUMENT NO. ____ DEED BOOK NO. ____ PAGE NO. ____

AUTOTURN EXHIBIT
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=30' C.I.= N/A DATE: JAN, 2025

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

urban
Planners•Engineers•Landscape Architects•Land Surveyors
Urban, Ltd.
4200 D TECHNOLOGY CT.
CHANTILLY, VA. 20151
TEL. 703.642.2306
FAX 703.378.7888
www.urban-ltd.com

PLAN DATE
01/13/2025
04/18/2025

REVISIONS

No.	DATE	DESCRIPTION

SHEET 27 OF 32
FILE No. RZ-13127

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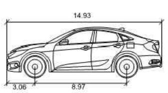
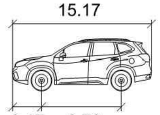


Honda Civic 2022

	feet
Width	: 5.91
Track	: 5.20
Lock to Lock Time	: 6.0
Steering Angle	34.7



Subaru Forester 2019

	feet
Width	: 5.95
Track	: 5.89
Lock to Lock Time	: 6.0
Steering Angle	: 35.1

SCALE: 1"=30'

0 10' 30' 60'

NOTES:

1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.
2. ALL ADJACENT STREETS WILL REMAIN OPEN DURING ALL CONSTRUCTION.

APPROVED
SPECIAL USE PERMIT NO. ________

DEPARTMENT OF PLANNING & ZONING

________ DIRECTOR ________ DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________

________ DIRECTOR ________ DATE

________ CHAIRMAN, PLANNING COMMISSION ________ DATE

DATE RECORDED ________

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/13/2025
04/18/2025

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CLAYTON C. TOCK
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AUTOTURN EXHIBIT
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA

SCALE: 1"=30' C.I.= N/A DATE: JAN. 2025

SHEET 28 OF 32

FILE No. RZ-13127

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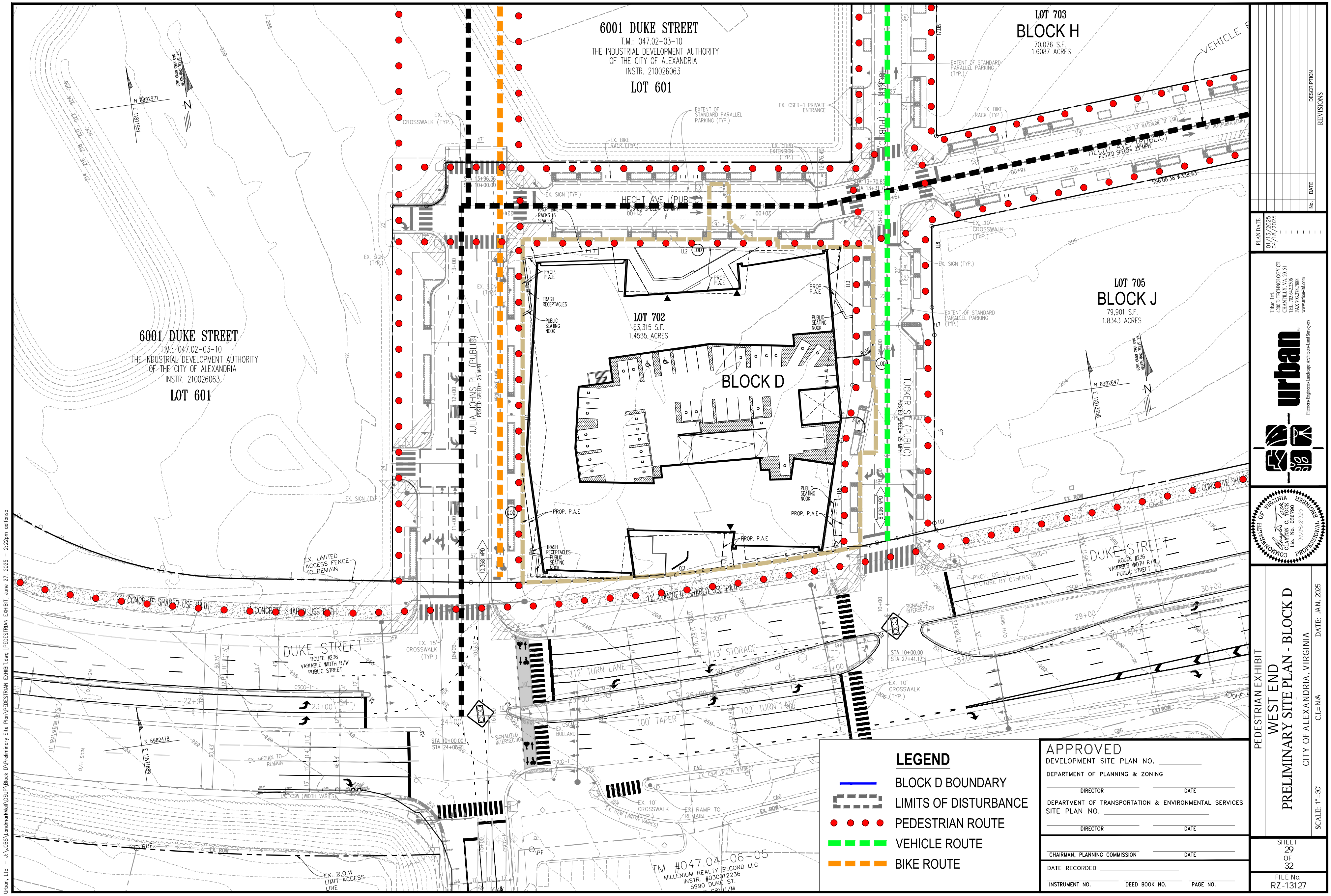
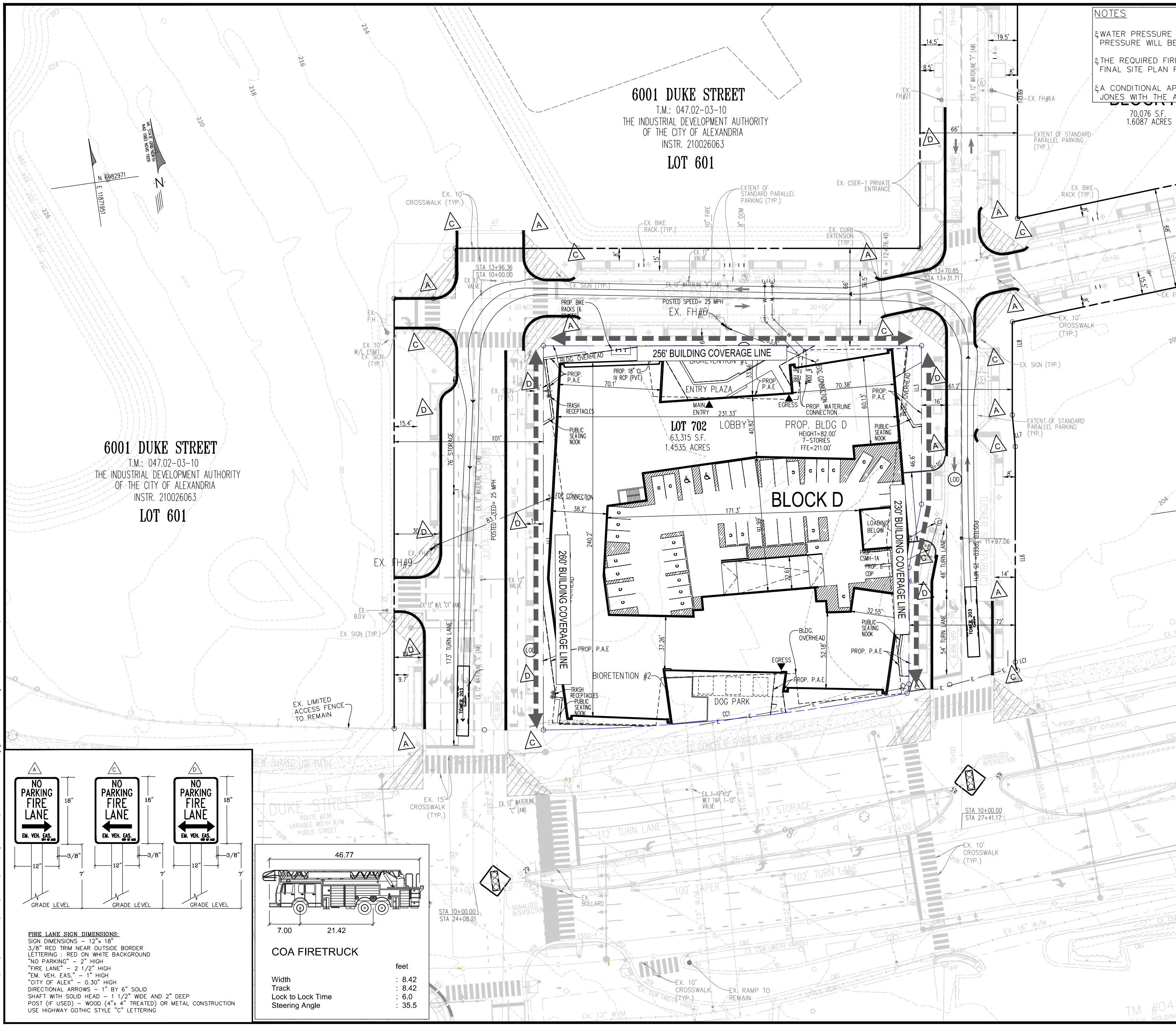

6001 DUKE STREET
T.M.: 047.02-03-10
THE INDUSTRIAL DEVELOPMENT AUTHORITY
OF THE CITY OF ALEXANDRIA
INSTR. 210026063
LOT 601
LOT 703
BLOCK H
70,076 S.F.
1.6087 ACRES
LOT 702
63,315 S.F.
1.4535 ACRES
BLOCK D
LOT 705
BLOCK J
79,901 S.F.
1.8343 ACRES
HECHT AVE (PUBLIC)
JULIA JOHNS PL (PUBLIC)
TUCKER ST (PUBLIC)
DUKE STREET
ROUTE #236
VARIABLE WIDTH R/W
PUBLIC STREET
12' CONCRETE SHARED USE PATH
112' TURN LANE
113' STORAGE
102' TURN LANE
100' TAPER
130' TAPER
SIGNALIZED INTERSECTION
EX. LIMITED ACCESS FENCE TO REMAIN
TM #047.04-06-05
MILLENIUM REALTY SECOND LLC
INSTR. #030012236
5990 DUKE ST.
LEGEND
BLOCK D BOUNDARY
LIMITS OF DISTURBANCE
PEDESTRIAN ROUTE
VEHICLE ROUTE
BIKE ROUTE
APPROVED
DEVELOPMENT SITE PLAN NO.
DEPARTMENT OF PLANNING & ZONING
DIRECTOR
DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO.
CHAIRMAN, PLANNING COMMISSION
DATE RECORDED
INSTRUMENT NO.
DEED BOOK NO.
PAGE NO.
PEDESTRIAN EXHIBIT
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
DATE: JAN, 2025
SCALE: 1"=30'
C.I.=N/A
PLAN DATE
01/13/2025
04/18/2025
REVISIONS
urban
SHEET
29
OF
32
FILE No.
RZ-13127



NOTES

1. WATER PRESSURE AND FLOW CAPABILITY, STATIC PRESSURE, RESIDUAL PRESSURE WILL BE PROVIDED WITHIN FINAL SITE PLAN FUTURE SUBMISSION.
2. THE REQUIRED FIRE FLOW FOR THE SUBJECT SITE WILL BE PROVIDED WITHIN FINAL SITE PLAN FUTURE SUBMISSION.
3. A CONDITIONAL APPROVAL WAS RECEIVED ON 02/18/2023 FROM MAURICE JONES WITH THE ALEXANDRIA FIRE DEPARTMENT.

TOTAL BUILDING K RESIDENTIAL PERIMETER = 746 FT.

BUILDING PERIMETER COVERAGE = 260 FT. (34.85%) FROM PUBLIC ROAD 2
BUILDING PERIMETER COVERED = 256 FT. (34.31%) FROM PUBLIC ROAD 3
BUILDING PERIMETER COVERAGE = 230 FT. (30.83%) FROM PUBLIC ROAD 1

TOTAL BUILDING D RESI. COVERAGE = 764 FT. (99.99%)

GROUP CLASSIFICATION: A2/A3/B/M/R2/S2

LEGEND

- BLOCK D BOUNDARY
- FIRE SERVICE ACCESS

NO PARKING FIRE LANE EM. VEH. EAS. (signs A, C, D)

FIRE LANE SIGN DIMENSIONS:
SIGN DIMENSIONS – 12"x 18"
3/8" RED TRIM NEAR OUTSIDE BORDER
LETTERING : RED ON WHITE BACKGROUND
"NO PARKING" – 2" HIGH
"FIRE LANE" – 2 1/2" HIGH
"EM. VEH. EAS." – 1" HIGH
"CITY OF ALEX" – 0.30" HIGH
DIRECTIONAL ARROWS – 1" BY 6" SOLID
SHAFT WITH SOLID HEAD – 1 1/2" WIDE AND 2" DEEP
POST (IF USED) – WOOD (4"x 4" TREATED) OR METAL CONSTRUCTION
USE HIGHWAY GOTHIC STYLE "C" LETTERING

COA FIRETRUCK

	feet
Width	8.42
Track	8.42
Lock to Lock Time	6.0
Steering Angle	35.5

APPROVED
DEVELOPMENT SITE PLAN NO. ________
DEPARTMENT OF PLANNING & ZONING
DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________
DIRECTOR DATE
CHAIRMAN, PLANNING COMMISSION DATE
DATE RECORDED ________
INSTRUMENT NO. DEED BOOK NO. PAGE NO.

FIRE SERVICE PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=30' C.I.=N/A DATE: JAN, 2025

SHEET 30 OF 32
FILE No. RZ-13127

PLAN DATE 01/13/2025 04/18/2025

REVISIONS: NO. DATE DESCRIPTION

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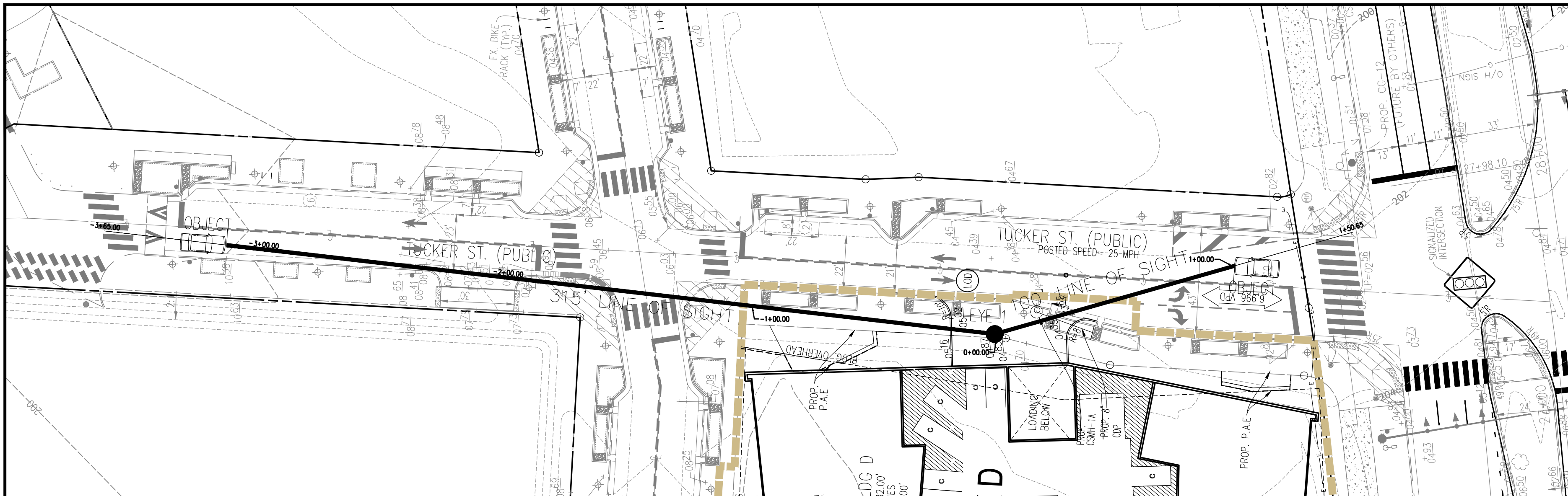
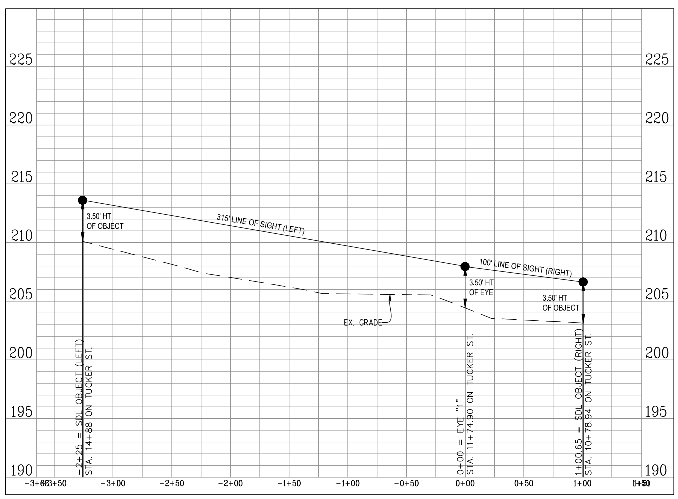


PLAN VIEW
SCALE: 1"=50'

SIGHT DISTANCE PROFILE
INTERSECTION OF SITE ENTRANCE & TUCKER ST.
EYE "1"
POSTED SPEED = 25 MPH
DESIGN SPEED = 25 MPH



LEGEND
LIMITS OF DISTURBANCE

NOTES:

1. EXISTING CONDITIONS ON THIS PLAN WAS TAKEN FROM THE PROPOSED INFRASTRUCTURE SITE PLAN (DSP #2021-00012). ANY DEVIATION FROM THE INFRASTRUCTURE PLAN MAY REQUIRE FUTURE SITE PLAN AMENDMENTS FOR THIS PLAN.

APPROVED
DEVELOPMENT SITE PLAN NO. ________
DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ________

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED ________

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

SIGHT DISTANCE PROFILES
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1"=30'
C.I.= N/A
DATE: JAN. 2025

SHEET 31 OF 32

FILE No. RZ-13127

No.	DATE	DESCRIPTION

REVISIONS

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01/13/2025
04/18/2025

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CLAYTON C. TOCK
Lic. No. 036790
PROFESSIONAL ENGINEER

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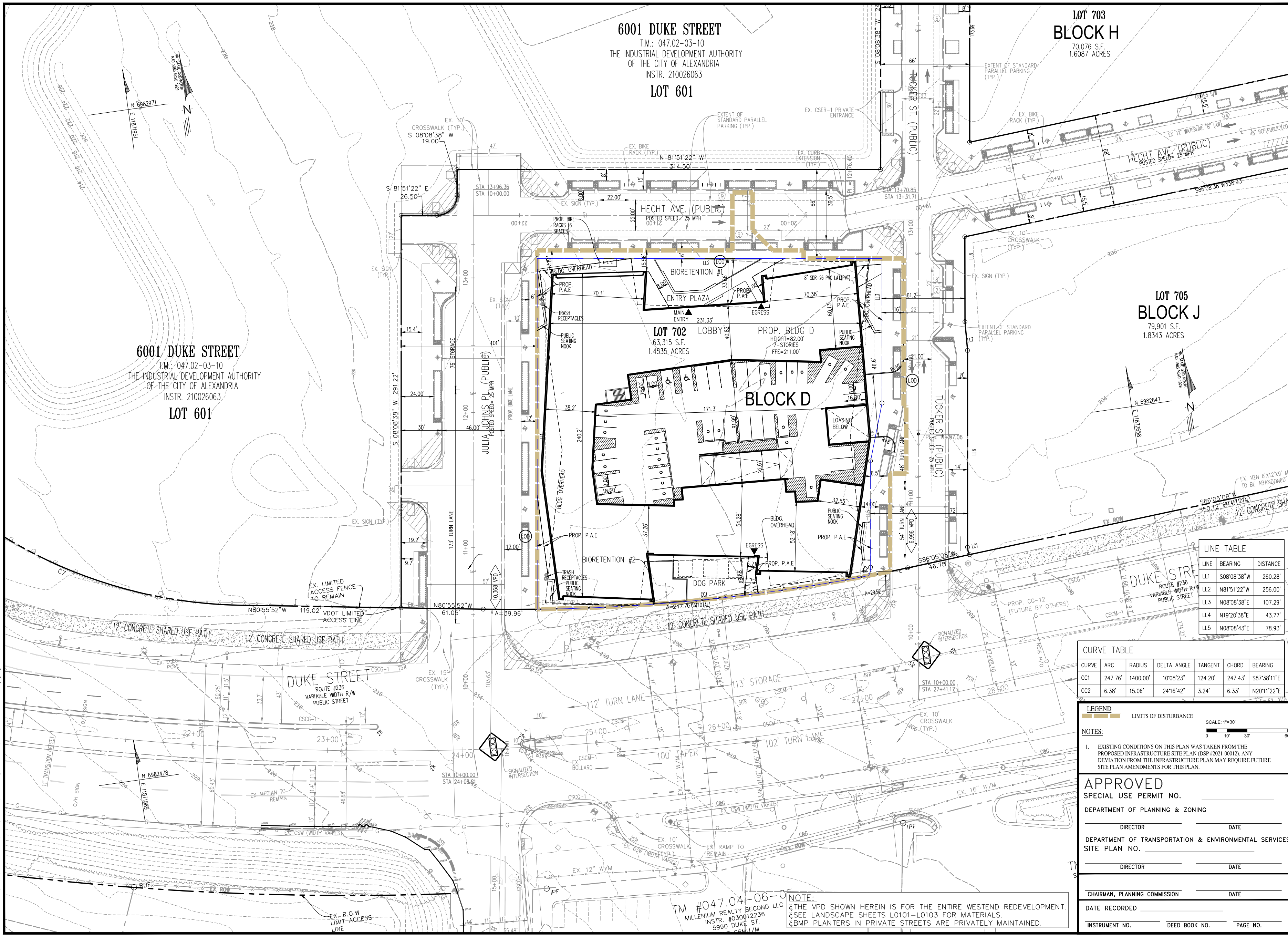

NOTE:
1. THE VPD SHOWN HEREIN IS FOR THE ENTIRE WESTEND REDEVELOPMENT.
2. SEE LANDSCAPE SHEETS L0101–L0103 FOR MATERIALS.
3. BMP PLANTERS IN PRIVATE STREETS ARE PRIVATELY MAINTAINED.

LINE TABLE

LINE	BEARING	DISTANCE
LL1	S08°08'38"W	260.28'
LL2	N81°51'22"W	256.00'
LL3	N08°08'38"E	107.29'
LL4	N19°20'38"E	43.77'
LL5	N08°08'43"E	78.93'

CURVE TABLE

CURVE	ARC	RADIUS	DELTA ANGLE	TANGENT	CHORD	BEARING
CC1	247.76'	1400.00'	10°08'23"	124.20'	247.43'	S87°38'11"E
CC2	6.38'	15.06'	24°16'42"	3.24'	6.33'	N20°11'22"E

LEGEND

LIMITS OF DISTURBANCE

SCALE: 1"=30'

0 10' 30' 60'

NOTES:

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APPROVED

SPECIAL USE PERMIT NO. ____________

DEPARTMENT OF PLANNING & ZONING

DIRECTOR ____________ DATE ____________

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. ____________

DIRECTOR ____________ DATE ____________

CHAIRMAN, PLANNING COMMISSION ____________ DATE ____________

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CLAYTON C. TOCK
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04/18/2025
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GIS DIMENSION PLAN
WEST END
PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JAN, 2025

C.I.= N/A

SCALE: 1"=30'

SHEET 32 OF 32

FILE No. RZ-13127

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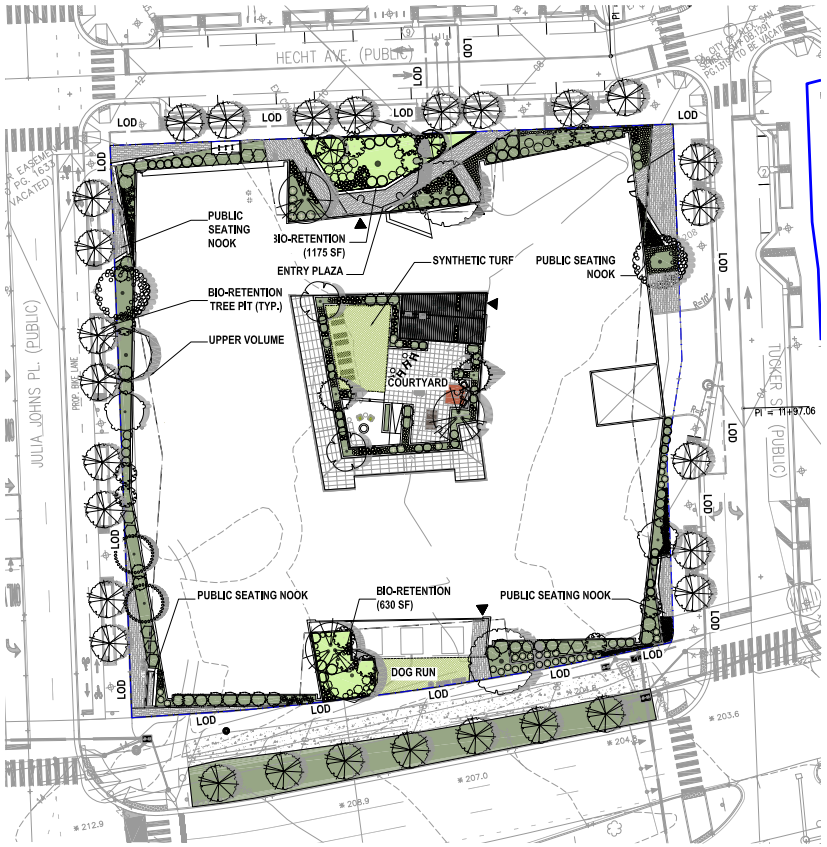
LEGEND:

- LOT LINES
- PROPOSED CANOPY TREES (CATEGORY III AND IV)
- PROPOSED ORNAMENTAL TREES (CATEGORY I AND II)
- BIO-RETENTION AREAS
- PLANTING AREAS
- PAVING AREAS



A) STANDARD LANDSCAPE PLAN NOTES FOR ALL PLANS REQUIRING APPROVAL:

THE FOLLOWING NOTES SHALL BE PROVIDED ON LANDSCAPE PLAN SUBMISSIONS FOR ALL PROJECTS THAT REQUIRE APPROVAL BY THE CITY AS OUTLINED IN CHAPTER 3 OF THE CITY'S 2019 LANDSCAPE GUIDELINES:

1) THE PROPERTY OWNER AND/OR APPLICANT, SPECIFIER, CONTRACTOR AND INSTALLER OF PLANT MATERIAL ARE RESPONSIBLE FOR UNDERSTANDING AND ADHERING TO THE STANDARDS SET FORTH IN THE MOST RECENT VERSION OF THE CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND APPLICABLE CONDITIONS OF APPROVAL. ALL QUESTIONS REGARDING APPLICATION OF, OR ADHERENCE TO, THE STANDARDS AND/OR CONDITIONS OF APPROVAL SHALL BE DIRECTED TO THE CITY PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBING ACTIVITY.

2) THE CITY-APPROVED LANDSCAPE PLAN SUBMISSION, INCLUDING PLANT SCHEDULE, NOTES AND DETAILS SHALL BE THE DOCUMENT USED FOR INSTALLATION PURPOSES AND ALL PROCEDURES SET FORTH IN THE LANDSCAPE GUIDELINES MUST BE FOLLOWED.

3) THE CONTRACTOR SHALL NOT INTERFERE WITH ANY TREE PROTECTION MEASURES OR IMPACT ANY EXISTING VEGETATION IDENTIFIED TO BE PRESERVED PER THE APPROVED TREE AND VEGETATION PROTECTION PLAN.

4) ANY CHANGES, ALTERATIONS OR MODIFICATIONS TO THE SITE CONDITIONS THAT AFFECT VEGETATION PROTECTION ZONES WILL REQUIRE AN AMENDMENT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND/OR DETAILS.

5) INSTALLATION OF PLANT MATERIAL MAY ONLY OCCUR DURING THE PLANTING SEASONS IDENTIFIED IN THE LANDSCAPE GUIDELINES.

6) IN LIEU OF MORE STRENUOUS SPECIFICATIONS, ALL LANDSCAPE RELATED WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION (AT TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA; GAITHERSBURG, MARYLAND.

7) SUBSTITUTIONS TO THE APPROVED PLANT MATERIAL SHALL NOT OCCUR UNTIL WRITTEN APPROVAL IS PROVIDED BY THE CITY.

8) MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED BY THE OWNER, APPLICANT, SUCCESSOR(S) AND/OR ASSIGN(S) IN PERPETUITY AND IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND AS CONDITIONED BY PROJECT APPROVAL, AS APPLICABLE.

B) STANDARD LANDSCAPE PLAN NOTES FOR DEVELOPMENT SITE PLANS:

IN ADDITION TO THE NOTES PROVIDED ABOVE, THE FOLLOWING NOTES SHALL BE PROVIDED ON LANDSCAPE PLAN SUBMISSIONS FOR ALL DSP/DSUP PROJECTS:

1) THE APPROVED METHOD(S) OF PROTECTION MUST BE IN PLACE FOR ALL VEGETATION TO BE PRESERVED ON-SITE AND ADJACENT TO THE PROJECT SITE PURSUANT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND DETAILS PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBANCE. THE APPLICANT SHALL NOTIFY THE PLANNING & ZONING (P&Z) PROJECT MANAGER ONCE THE TREE PROTECTION METHODS ARE IN PLACE. NO DEMOLITION, CONSTRUCTION, OR LAND DISTURBANCE MAY OCCUR UNTIL AN INSPECTION IS PERFORMED BY THE CITY AND WRITTEN CONFIRMATION IS PROVIDED BY THE CITY WHICH VERIFIES CORRECT INSTALLATION OF THE TREE PROTECTION MEASURES.

2) THE APPLICANT MUST CONTACT THE P&Z PROJECT MANAGER PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATION TO SCHEDULE A PRE-INSTALLATION MEETING. THE MEETING SHOULD BE HELD BETWEEN THE APPLICANT'S GENERAL CONTRACTOR, LANDSCAPE CONTRACTOR, LANDSCAPE ARCHITECT, THE P&Z PROJECT MANAGER AND THE CITY ARBORIST (AS APPLICABLE) TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES DURING AND AFTER INSTALLATION.

3) THE FOLLOWING INFORMATION SHALL BE PROVIDED TO THE P&Z PROJECT MANAGER AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO THE LANDSCAPE PRE-INSTALLATION MEETING: 1) A LETTER THAT CERTIFIES THAT THE PROJECT LANDSCAPE ARCHITECT PERFORMED PRE-SELECTION TAGGING FOR ALL TREES PROPOSED WITHIN THE PUBLIC RIGHT OF WAY AND ON PUBLIC LAND PRIOR TO INSTALLATION. THIS LETTER MUST BE SIGNED AND SEALED BY THE PROJECT LANDSCAPE ARCHITECT; AND 2) A COPY OF THE SOIL BULK DENSITY TEST REPORT VERIFYING THAT MAXIMUM COMPRESSION RATES ARE MET.

4) ALL CONSTRUCTION WASTE SHALL BE REMOVED PRIOR TO PLANTING.

5) AS-BUILT DRAWINGS FOR THIS LANDSCAPE AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES, THE CITY CODE OF ORDINANCES, AND ALL APPLICABLE PLAN PREPARATION CHECKLISTS. AS-BUILT DRAWINGS SHALL INCLUDE CLEAR IDENTIFICATION OF ALL VARIATION(S) AND CHANGES FROM APPROVED DRAWINGS INCLUDING LOCATION, QUANTITY AND SPECIFICATION OF ALL PROJECT ELEMENTS.

6) AREAS OF BARE SOIL WILL NOT BE ACCEPTED. MULCHED AREAS AND PLANTING AREAS SHALL BE WEED FREE UPON ACCEPTANCE OF THE PROJECT BY THE CITY.

A STANDARD LANDSCAPE PLAN NOTES
NOT TO SCALE

OF UPDATES: 01 LAST UPDATED: 12/20/2019

CITY OF ALEXANDRIA, VIRGINIA
STANDARD LANDSCAPE DETAILS
CITY OF ALEXANDRIA, VIRGINIA

NOTE:
THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENTED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OR CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: City of Alexandria
Approved by: COA
Date drawn: 01/00/19

STANDARD LANDSCAPE PLAN NOTES

1 OF 1 | LD 016

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917 674 1996
625 West Adams, Floor 19
Chicago, Illinois 60661

LANDSCAPE ARCHITECT:
CGLA landscape architecture planning, urban design
202 857 9720
1025 Connecticut Avenue, NW Suite 1000
Washington, DC, 20036

COMMONWEALTH OF VIRGINIA
BRUNO R CARVALHO
Cert. No. 001374
LANDSCAPE ARCHITECT

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SITE PLAN NO. _____
DIRECTOR _____ DATE _____
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____

LANDMARK - BLOCK D
Landmark Land Holdings, LLC
24009
5801 Duke Street, Block D
Alexandria, Virginia 22304

LANDSCAPE PLAN

SCALE: 1"=20'

L1.0

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Chicago, Illinois 60661

LANDSCAPE ARCHITECT:
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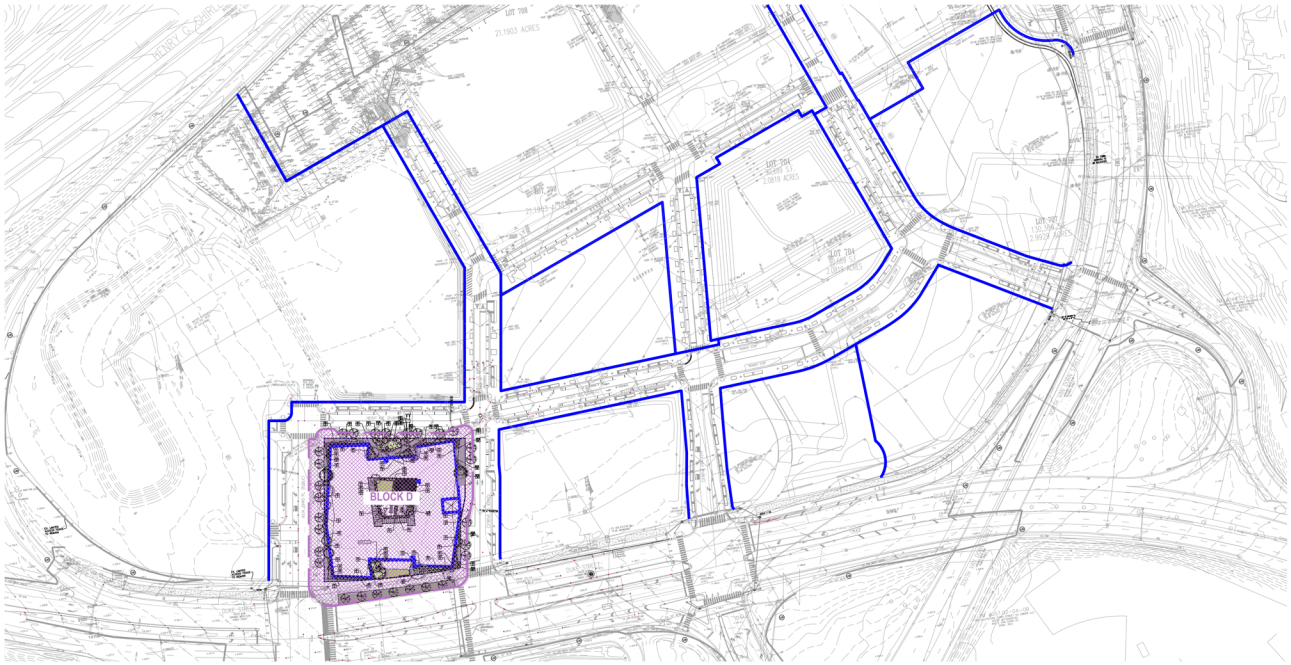
LANDSCAPE ARCHITECT



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DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR _____ DATE _____
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____

SCALE: 1"=80'

LANDMARK - BLOCK D
Landmark Land Holdings, LLC
24009
5801 Duke Street, Block D
Alexandira, Virginia 22304

REFERENCE PLAN

L1.1

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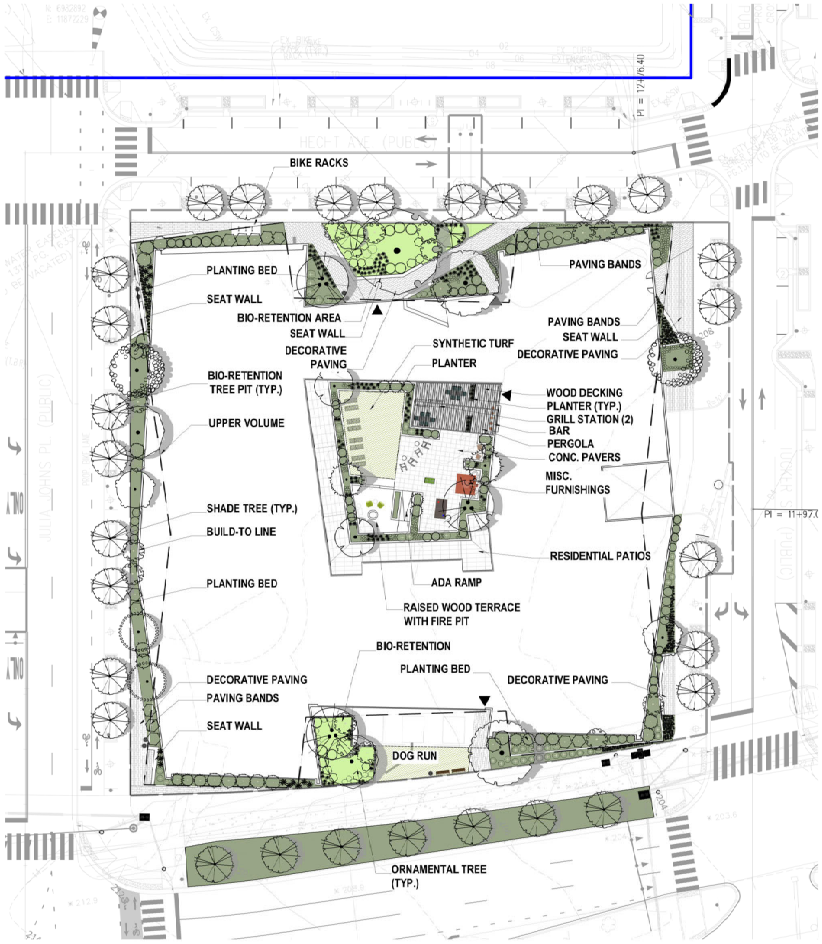

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Washington, DC 20036

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SPECIAL USE PERMIT NO. _____
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DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR DATE
CHAIRMAN, PLANNING COMMISSION DATE
DATE RECORDED: _____
INSTRUMENT NO. DEED BOOK NO. PAGE NO.

LANDMARK - BLOCK D
Landmark Land Holdings, LLC
24009
5801 Duke Street, Block D
Alexandria, Virginia 22304

HARDSCAPE PLAN

SCALE: 1"=20'

L1.2

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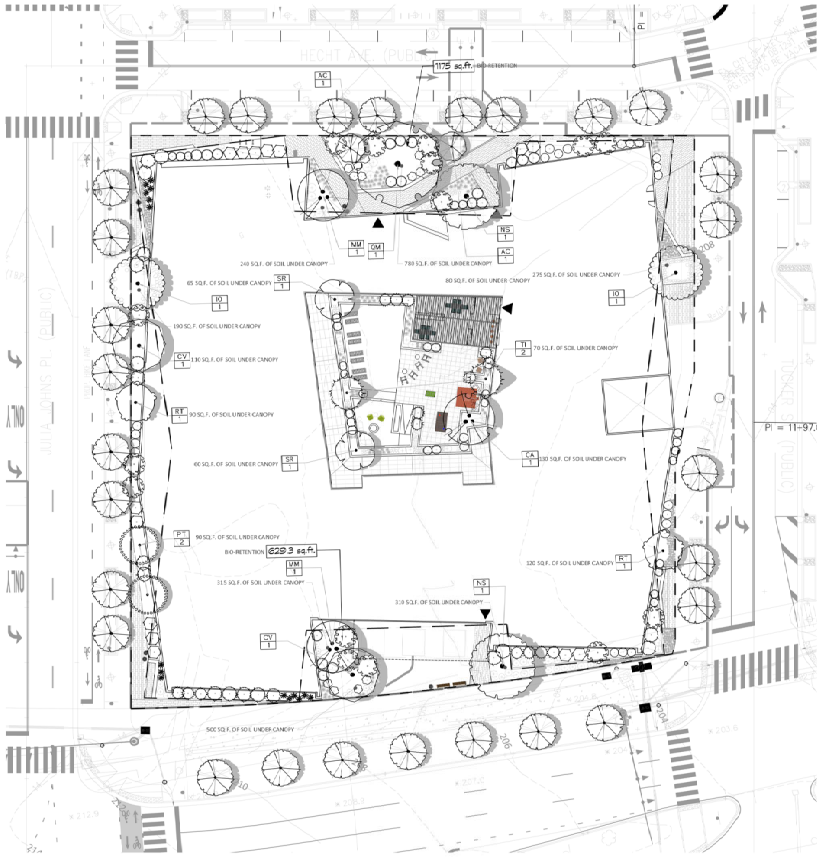

NOTE: SEE SHEET L1.4 FOR TREE PLANTING SCHEDULE AND TABULATIONS

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LANDSCAPE ARCHITECT

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LANDMARK - BLOCK D
Landmark Land Holdings, LLC
24009
5801 Duke Street, Block D
Alexandria, Virginia 22304

TREE PLANTING PLAN

SCALE: 1"=20'

L1.3

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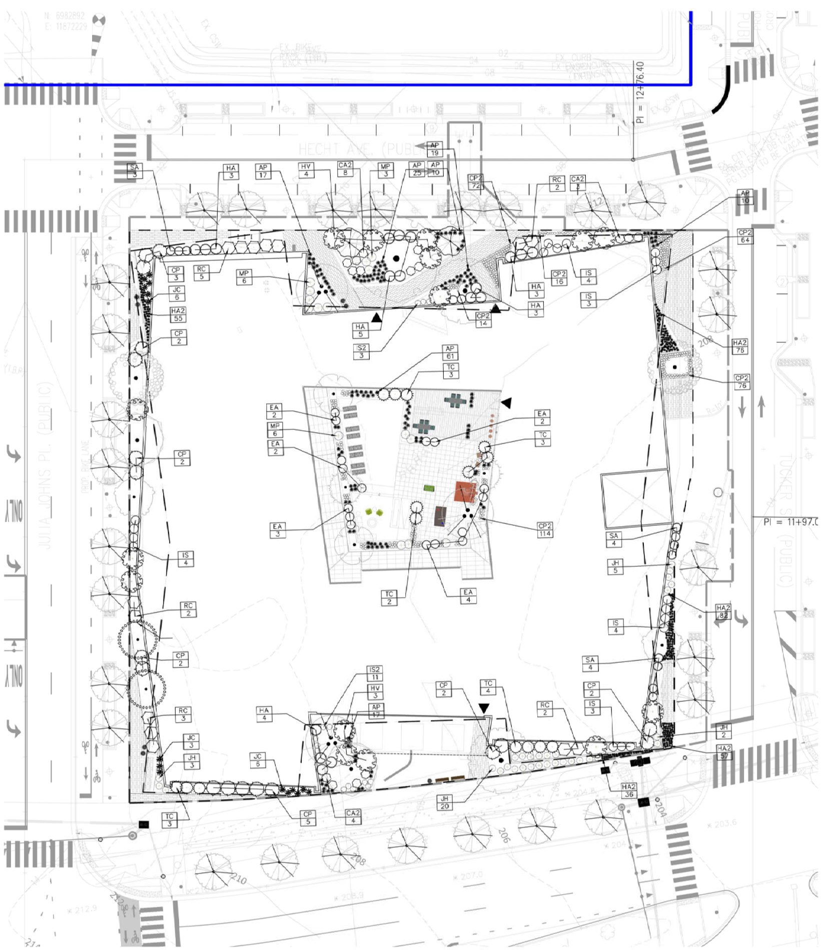
PLANT SCHEDULE June 27, 2025

PLANT TYPE	PLAN INFORMATION		BOTANIC/COMMON NAME				SIZE	NOTES	CROWN COVER ALLOWANCE (CCA)		NATIVE PLANTS PROVIDED		
URBAN TREES	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	CALIPER/HEIGHT		CCA PER TREE (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
	MM	1	Magnolia	macrophylla		BigLeaf magnolia	2"-3" cal./12-14 ft. ht.	B&B; multistem; full branching	500	500	1	1	1
	IO	1	Ilex	opaca	Jersey knight'	American Holly	2"-3" cal./12-14 ft. ht.	B&B; symmetrical, single leader	500	500	1	1	1
	CA	1	Cornus	alternifolia		Pagoda dogwood	2"-3" cal./12-14 ft. ht.	B&B; multistem; full branching	500	500	1	1	1
	SR	2	Syringa	reticulata		Japanese tree lilac	1.5" cal./6-8 ft. ht.	B&B; multistem; full branching	250	500	0	0	0
	RT	2	Rhus	typhina		Staghorn Sumac	1.5" cal./6-8 ft. ht.	B&B; symmetrical, single leader	250	500	2	2	2
	CV	1	Chionanthus	virginicus		White fringetree	1.5" cal./6-8 ft. ht.	B&B; multistem; full branching	500	1,000	1	1	1
	PT	2	Ptelea	trifoliata		Common Hoptree	1.5" cal./6-8 ft. ht.	B&B; symmetrical, single leader	250	500	2	2	2
	TI	2	Thuja	occidentalis	Polar Gold'	Arborvitae	1.5" cal./6-8 ft. ht.	B&B; symmetrical, single leader	250	500	2	2	2
	NS	2	Nyssa	sylvatica		Black Tupelo	2"-3" cal./12-14 ft. ht.	B&B; symmetrical, single leader	750	1,500	2	2	2
	TOTALS	14							URBAN TREE CCA:	6,000	12	12	12
											85.7%	85.7%	85.7%
STANDARD TREES	PLAN KEY	QUANTITY	GENUS	SPECIES		COMMON NAME	CALIPER/HEIGHT		CCA PER TREE (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
	QM	1	Quercus	michauxii		Swamp Chestnut Oak	2"-3" cal./12-14 ft. ht.	B&B; symmetrical, single leader	1,250	1,250	1	1	1
	IO	1	Ilex	opaca	Jersey knight'	American Holly	2"-3" cal./12-14 ft. ht.	B&B; symmetrical, single leader	500	500	1	1	1
	CV	1	Chionanthus	virginicus		White fringetree	1.5" cal./6-8 ft. ht.	B&B; multistem; full branching	500	1,000	1	1	1
	MM	1	Magnolia	macrophylla		BigLeaf magnolia	2"-3" cal./12-14 ft. ht.	B&B; multistem; full branching	500	500	1	1	1
	AC	2	Amalanchier	canadensis		Canadian Serviceberry	2"-3" cal./12-14 ft. ht.	B&B; symmetrical, single leader	500	1,000	2	2	2
	TOTALS	6							STANDARD TREE CCA:	4,250	6	6	6
											100.0%	100.0%	100.0%
EVERGREEN SHRUBS	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	HEIGHT		CCA PER SHRUB (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
	TC	15	Taxus	canadensis		Canada yew	6'		25	375	15	15	15
	IS2	14	Itea	virginica	Sprich'	Little Henry Sweetspire	2.5'		10	140	14	14	14
	IS	18	Ilex	vomitoria	Schillings'	Shillings Yaupon Holly	3'		25	450	18	18	18
	CP	18	Castanea	pumila		Chinkapin	4'		50	900	18	18	18
	JC	15	Juniperus	communis	Compressa'	Pyramidal Juniper	4'		10	150	15	15	15
	EA	16	Euonymus	americanus		Strawberry bush	3'		10	160	16	16	16
	TOTALS	96							EVERGREEN SHRUB CCA:	2,025	96	96	96
											100.0%	100.0%	100.0%
DECIDUOUS SHRUBS	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	HEIGHT		CCA PER SHRUB (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
	HV	15	Hamamelis	virginiana		Common Witch Hazel	6'		50	750	15	15	15
	MP	15	Myrica	pensylvanica		Northern Bayberry	3'		25	375	15	15	15
	CA2	15	Clethra	alternifolia		Sweet Pepperbush	3'		10	150	15	15	15
	SA	13	Symphoricarpos	albus		Common Snowberry	3'		10	130	13	13	13
	RC	14	Rhododendron	canescens		Mountain Azalea	4'		25	350	14	14	14
	HA	18	Hydrangea	arborescens	Annabelle'	Annabelle Hydrangea	5'		10	180	18	18	18
	TOTALS	90							DECIDUOUS SHRUB CCA:	1,935	75	75	75
											100.0%	100.0%	100.0%
									TOTAL PROPOSED CCA (SF):	14,210			
GROUNDCOVERS	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	SIZE/CONT.		N/A		LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
	JH	31	Juniperus	horizontalis		Creeping Juniper	1 gal.				31	31	31
	CP2	363	Carex	pensylvanica		Pennsylvania sedge	1 qt.				363	363	363
	TOTALS	#									394	394	394
											100.0%	100.0%	100.0%
PERENNIALS, FERNS, ORNAMENTAL GRASSES	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	SIZE/CONT.		N/A		LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
	AP	165	Adiantum	pedatum		Northern Maidenhair Fern	1 gal.				165	165	165
	HA2	309	Hepatica	americana		Hepatica	1 qt.				309	309	309
	TOTALS	309									474	474	474
											100.0%	100.0%	100.0%
VINES	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	SIZE/CONT.		N/A		LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
	TOTALS	#									#		#
											%		%



URBAN TREE TABULATIONS

PLAN KEY	QUANTITY	PLAN LOCATION	PROJECTED 20 YR. CANOPY* (PER TREE)	IMPERVIOUS AREA UNDER CANOPY (PER TREE)	IMPERVIOUS AREA GREATER THAN 50% OF PROJECTED 20 YR. CANOPY? (Y/N)
AC	2	BIO-RETENTION	500	500	N
QM	1	BIO-RETENTION	1,250	780	N
MM	1	BIO-RETENTION	500	315	N
MM	1	SITE	500	240	Y
IO	1	SITE	500	275	N
IO	1	SITE	500	190	Y
NS	2	SITE	750	310	Y
CA	1	COURTYARD	500	115	Y
SR	2	COURTYARD	250	80	Y
RT	2	SITE	250	110	Y
TI	2	COURTYARD,SITE	250	80	Y
PT	2	SITE	250	90	y
CV	1	SITE	500	110	Y
CV	1	BIO-RETENTION	500	500	N
TOTAL URBAN TREES					
19					

*Refer to Landscape Guidelines Chapter 3 Canopy Coverage

NATIVE PLANT TABULATIONS

PLANT TYPE	QUANTITY	NATIVE TYPE	MARCH 2, 2019 – JANUARY 1, 2020 REQUIRED	MARCH 2, 2019 – JANUARY 1, 2020 PROVIDED		JANUARY 2, 2020 – JANUARY 1, 2024 REQUIRED	JANUARY 2, 2020 – JANUARY 1, 2024 PROVIDED		BEGINNING JANUARY 2, 2024 REQUIRED	BEGINNING JANUARY 2, 2024 PROVIDED	
			%	QTY.	%	%	QTY.	%	%	%	QTY
Urban Trees	14	Regional/Local	10%	12	85.7%	15%			20%	86%	12
		Total Natives	25%	12	85.7%	25%			50%	86%	12
Standard Trees	6	Regional/Local	15%	6	100.0%	25%			40%	100%	6
		Total Natives	40%	6	100.0%	60%			80%	100%	6
Evergreen Shrubs	96	Regional/Local	5%			8%			10%	100%	96
		Total Natives	20%			30%			40%	100%	96
Deciduous Shrubs	90	Regional/Local	10%			15%			20%	100%	90
		Total Natives	40%			60%			80%	100%	90
Groundcovers	394	Regional/Local	5%			10%			10%	100%	394
		Total Natives	10%			20%			20%	100%	
Perennials, Ferns, Ornamental Grasses	309	Regional/Local	10%			15%			25% (perennials) 30% (ferns & grasses)	100%	309
		Total Natives	25%			40%			60% (perennials) 80% (ferns & grasses)	100%	309
Vines		Total Natives	80%			100%			100%		

TOTALS

TOTAL PLANTS SPECIFIED	TOTAL SUM OF REGIONAL/LOCAL NATIVE PLANTS	TOTAL SUM OF NATIVE PLANTS
909	18	18
	2.0%	2.0%

NOTES:

1) Percentages apply to the total quantity of each plant type specifed on Completeness/Preliminary Plans and Final #1 Grading Plans submitted during the listed time frames.
2) Total Natives is the sum of Eastern U.S. Native, Regionally Native, and Locally Native vegetation specifed on the plans for each plant type.
3) Non-native vegetation for the purposes of providing edible fruits, seeds, or nuts may be planted and shall not be calculated in the above-stated requirements for native species regardless of plant type.

CROWN COVER TABULATIONS

TOTAL SITE AREA (SF)	63,315
25% CROWN COVER REQUIRED (SF)	15,829
EXISTING CROWN COVER (SF)	0
REMOVED CROWN COVER (SF)	0
PRESERVED CROWN COVER (SF)	
Crown Cover from Preserved Trees	0
Crown Cover from Preserved Shrubs	0
PROPOSED CROWN COVER (SF)	
Crown Cover from Proposed Trees	10,250
Crown Cover from Proposed Shrubs	1430
TOTAL CROWN COVER PROVIDED (%)	22.4%
TOTAL CROWN COVER PROVIDED (SF)	14,210

BIODIVERSITY TABULATIONS

TREES (URBAN AND STANDARD)
TOTAL NUMBER OF TREES PROPOSED:18

GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
Magnolia	2	9.5%	33%	macrophylla	2	9.5%	10%
Ilex	2	9.5%	33%	opaca	2	9.5%	10%
Cornus	1	4.8%	33%	alternifolia	1	4.8%	10%
Syringa	2	9.5%	33%	reticulata	2	9.5%	10%
Rhus	2	9.5%	33%	typinha	2	9.5%	10%
Thuja	2	9.5%	33%	occidentalis	2	9.5%	10%
Nyssa	2	9.5%	33%	sylvatica	2	9.5%	10%
Quercus	1	4.8%	33%	michauxii	1	4.8%	10%
Amalanchier	2	9.5%	33%	canadensis	2	9.5%	10%
Ptelea	2	9.5%	33%	trifolata	2	9.5%	10%
Chionanthus	2	9.5%	33%	virginicus	2	9.5%	10%

SHRUBS
TOTAL NUMBER OF SHRUBS PROPOSED: 186

GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
Taxus	15	8.10%	33%	canadensis	15	8.10%	10%
Clethra	15	8.10%	33%	alternifolia	15	8.10%	10%
Itea	14	7.56%	33%	virginica	14	7.56%	10%
Ilex	18	9.70%	33%	vomitoria	18	9.70%	10%
Castanea	18	9.70%	33%	Chinkapin	18	9.70%	10%
Rhododendron	14	7.56%	33%	canescens	14	7.56%	10%
Euonymus	16	8.64%	33%	americanus	16	8.64%	10%
Hamamelis	15	8.10%	33%	virginiana	15	8.10%	10%
Symphoricarpos	13	7.02%	33%	albus	13	7.02%	10%
Juniperus	15	8.10%	33%	communis	15	8.10%	10%
Myrica	15	8.10%	33%	pensylvanica	15	8.10%	10%
Hydrangea	18	9.70%	33%	arborescens	18	9.70%	10%

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SCALE: 1"=20'

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SHRUBS AND GROUNDCOVERS PLANTING PLAN

L1.4

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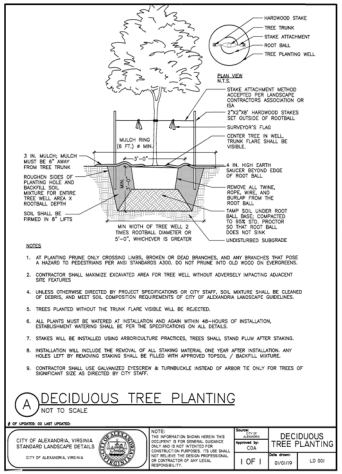
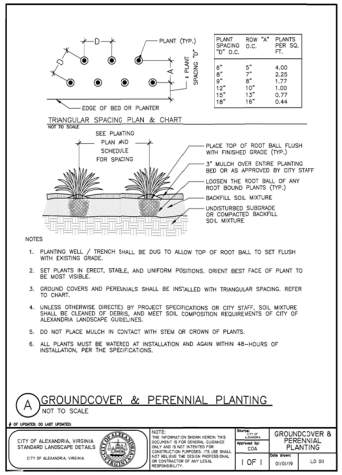
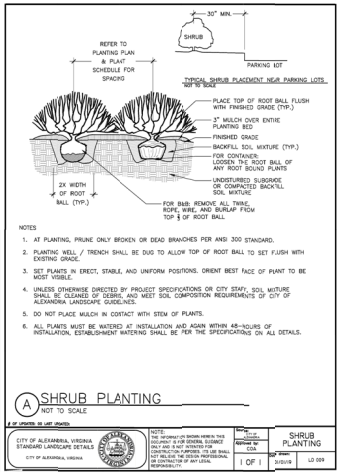


A DECIDUOUS TREE PLANTING
NOT TO SCALE



A GROUNDCOVER & PERENNIAL PLANTING
NOT TO SCALE



A SHRUB PLANTING
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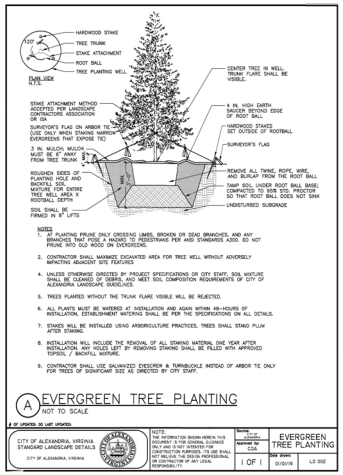
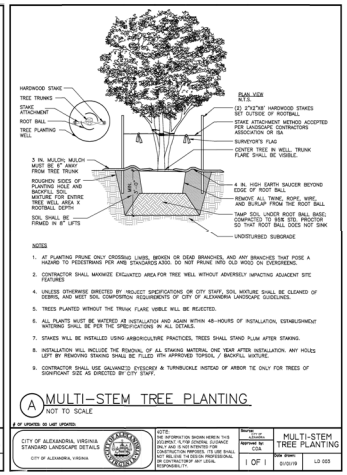


A EVERGREEN TREE PLANTING
NOT TO SCALE



A MULTI-STEM TREE PLANTING
NOT TO SCALE

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PLANTING DETAILS

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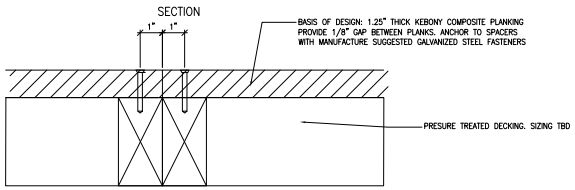
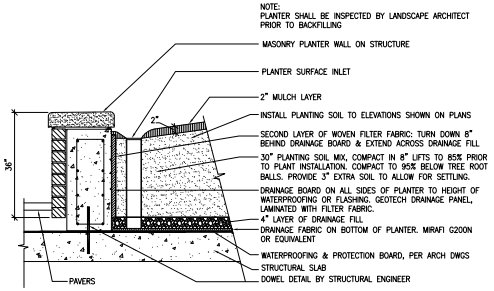


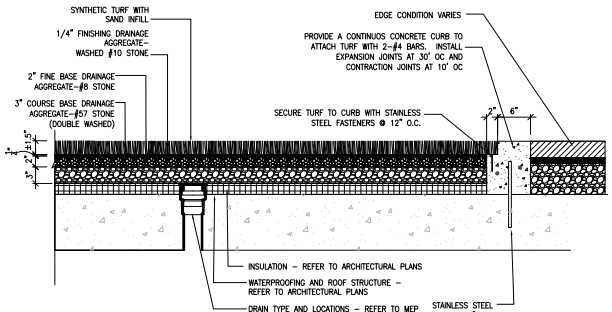
6 COMPOSITE WOOD DECK

SCALE: 6" = 1'-0" (WOOD-DECKING01B)



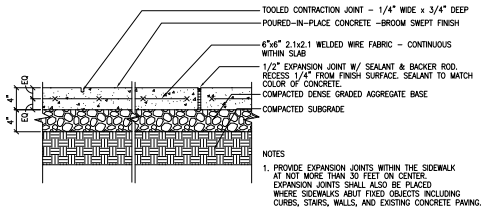
7 PLANTING ON STRUCTURE (TYPICAL)

SCALE: 1" = 1'-0" (PLANTER WALL ON STRUCTURE 03E)



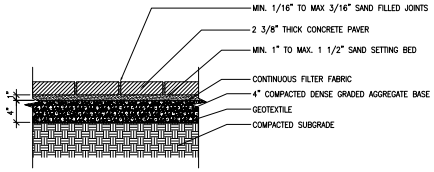
8 SYNTHETIC TURF ON STRUCTURE

SCALE: 1-1/2" = 1'-0" (synthetic turf on structure01D.dwg)



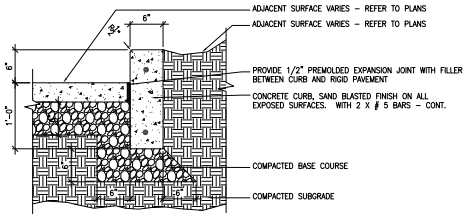
1 CONCRETE WALKWAY

SCALE: 1 1/2" = 1'-0" (pave01D)



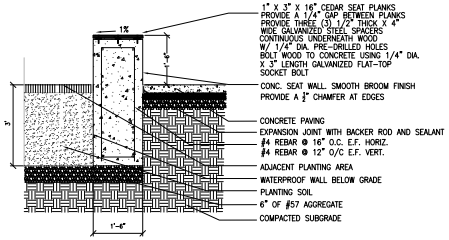
2 CONCRETE PAVER SIDEWALK

SCALE: 1 1/2" = 1'-0" (pave02D)



3 6" CONCRETE CURB

SCALE: 1 1/2" = 1'-0" (curb02D)



4 CONCRETE BENCH

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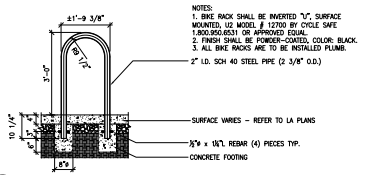

5 BIKE RACK

SCALE: 3/4" = 1'-0" (BIKE02F)

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HARDSCAPE DETAILS

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Furnishings

Zephyr Presrv 24" Bevarage Cooler

American Outdoor Grill 'L' Series 36" 3-burner built-in Natural Gas Grill

American Outdoor Grill 'L' Series 36" 3-burner built-in Natural Gas Grill

Zephyr Presrv 24" Bevarage Cooler

Grill Island Cabinets
Material: Stainless Steel
Finish: "Chromica Baltic"
Manufacturer: Danver

Grill Island Countertops
Material: Fabricated Stone
Finish: "Benton"
Thickness: 12mm (.47")
Manufacturer: Neolyth

Litter receptacles by Landscape forms

Cornhole by Ledge Loungers

Foosball by Kettler

Bar stools by Litfad

'MALIBU' Seating by Pottery barn

Adirondack chairs by Poliform

'TRAVIRA' dining set by Oxford gardens

Pool table by Hathaway

Ping Pong table by Cornilleau

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L2.2

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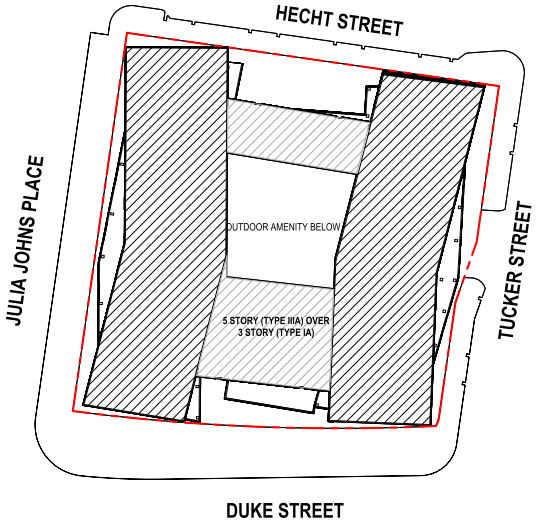


1 BUILDING CODE DIAGRAM
1" = 40'-0"

BUILDING CODE ANALYSIS

APPLICABLE CODES (CITY OF ALEXANDRIA)

2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (2021 International Code Council Family of Codes w/ incorporated USBC ammendments)

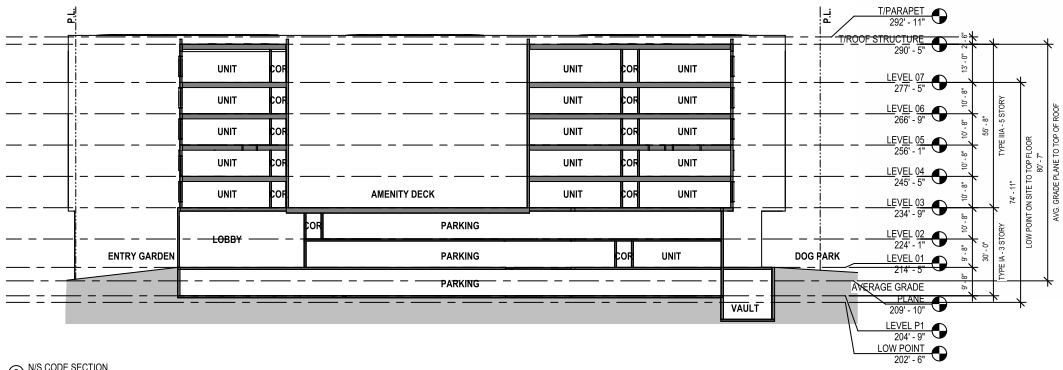
FLOOR	Area (SF)	Use Group	Type(s) of Construction	Allowable No. of Stories	Allowable Height (FT)	Allowable Area per Floor (SF)**	Fire Protection
LEVEL 7	43,741	R2	IIIA	5*	85'	72,000	NFPA 13
LEVEL 6	43,741	R2	IIIA	5*	85'	72,000	NFPA 13
LEVEL 5	43,741	R2	IIIA	5*	85'	72,000	NFPA 13
LEVEL 4	43,741	R2	IIIA	5*	85'	72,000	NFPA 13
LEVEL 3	43,741	R2	IIIA	5*	85'	72,000	NFPA 13
HORIZONTAL BUILDING SEPARATION (3 HOUR RATED)							
LEVEL 2	45,059	R2/S2	IA	UL	UL	UL	NFPA 13
LEVEL 1	50,040	R2/S2/A3/B	IA	UL	UL	UL	NFPA 13
LEVEL P1	50,779	R2/S2	IA	UL	UL	UL	NFPA 13

*ALLOWABLE HEIGHT IS INCREASED BY 20 FEET AND THE NUMBER OF STORIES INCREASES BY 1 FOR A BUILDING EQUIPPED WITH A NFPA13 SPRINKLER SYSTEM
** ALLOWABLE AREA INCREASE OF 200% PER USE OF NFPA 13 SPRINKLER SYSTEM

BUILDING USE AND OCCUPANCY	
Separated Mixed Uses	
A3	Assembly
B	Business
R2	Residential
S2	Storage (Loading)
Non-Separated Mixed Uses	
S2	Storage (Parking Garage Uses)

APPLICABLE BUILDING CODES:

2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL RESIDENTIAL CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2021 INTERNATIOANAL ENERGY CONSERVATION CODE
2021 INTERNATIONAL FUEL AND GAS CODE
2021 NATIONAL ELECTRIC CODE
FAIR HOUSING GUIDELINES
2010 ICC/ANSI A117.1 FOR ACCESSIBILITY STANDARDS



2 N/S CODE SECTION
1" = 20'-0"

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DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

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06/27/25 WESTEND BLOCK D - PRELIMINARY SITE PLAN

LANDMARK - BLOCK D

Landmark Land Holdings, LLC
Project Number: 24009

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CODE ANALYSIS

A001

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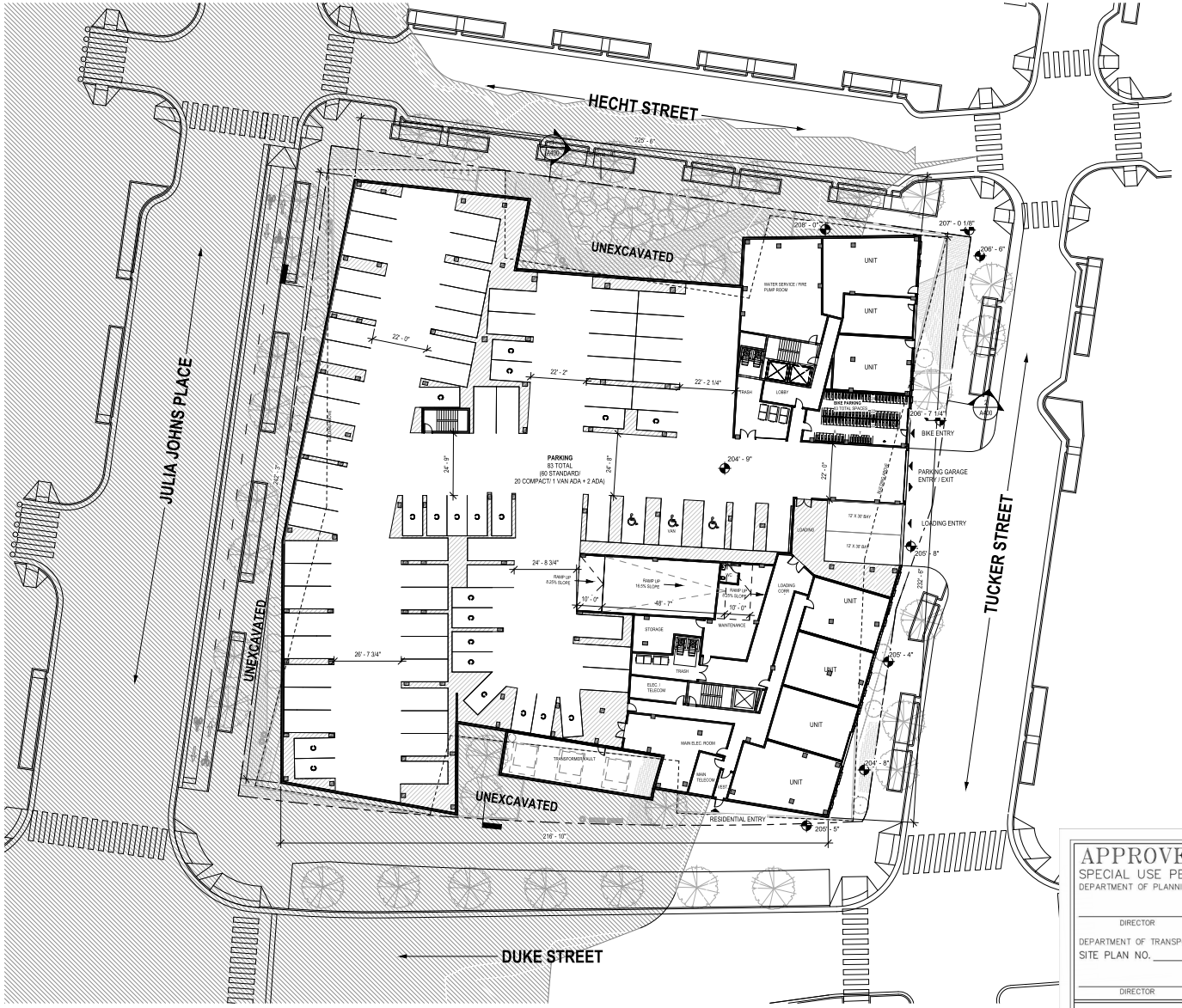
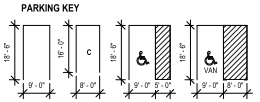


1 LEVEL P1 - PLAN
1" = 20'-0"

PARKING KEY



PARKING SPACE DIMENSIONS PER CITY OF ALEXANDRIA ZONING ORDINANCE ARTICLE VIII SECTION 8-200 (D)

AREA OF PAINTED FLOOR STRIPING

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LEVEL P1 FLOOR PLAN

A100

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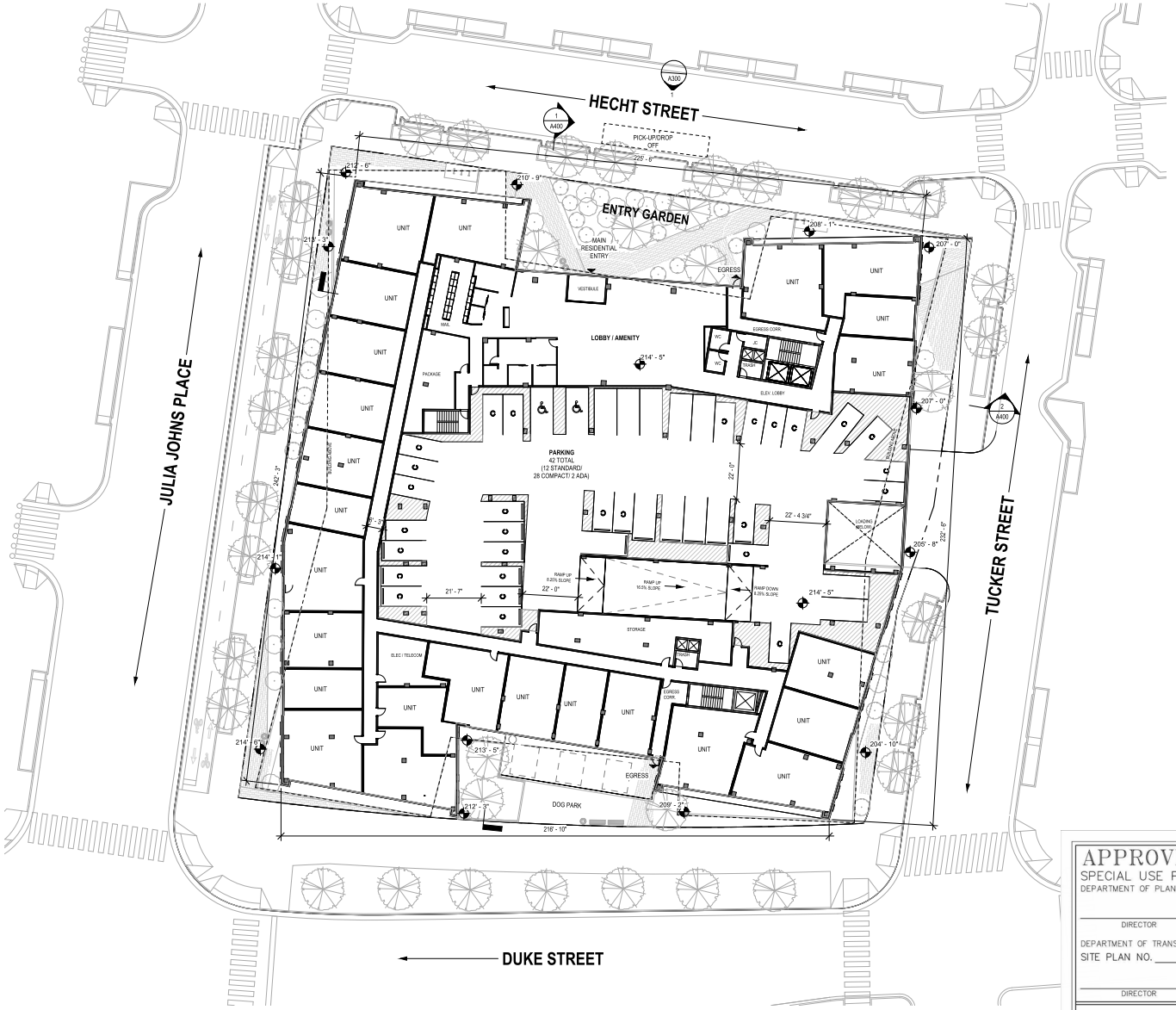

1 LEVEL 01 PLAN
1" = 20'-0"

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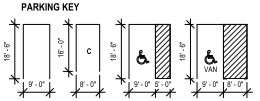
PARKING KEY



PARKING SPACE DIMENSIONS PER CITY OF ALEXANDRIA ZONING ORDINANCE ARTICLE VIII SECTION 8-200 (D)

AREA OF PAINTED FLOOR STRIPING

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LEVEL 01 FLOOR PLAN

A101

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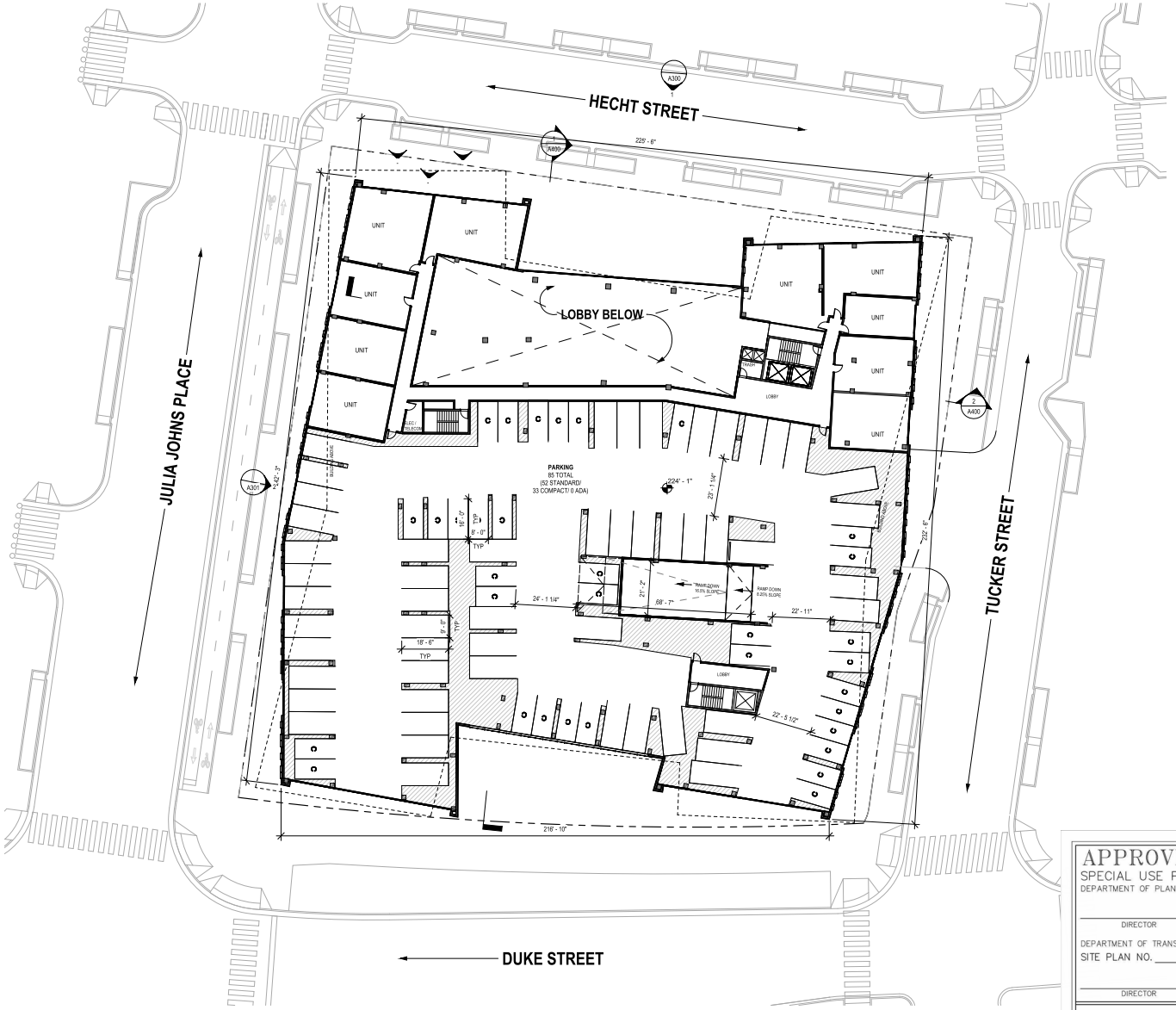

1 LEVEL 02 PLAN
1" = 20'-0"

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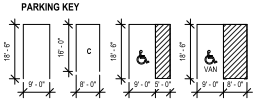
PARKING KEY



PARKING SPACE DIMENSIONS PER CITY OF ALEXANDRIA ZONING ORDINANCE ARTICLE VIII SECTION 8-200 (D)

AREA OF PAINTED FLOOR STRIPING

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LEVEL 02 FLOOR PLAN

A102

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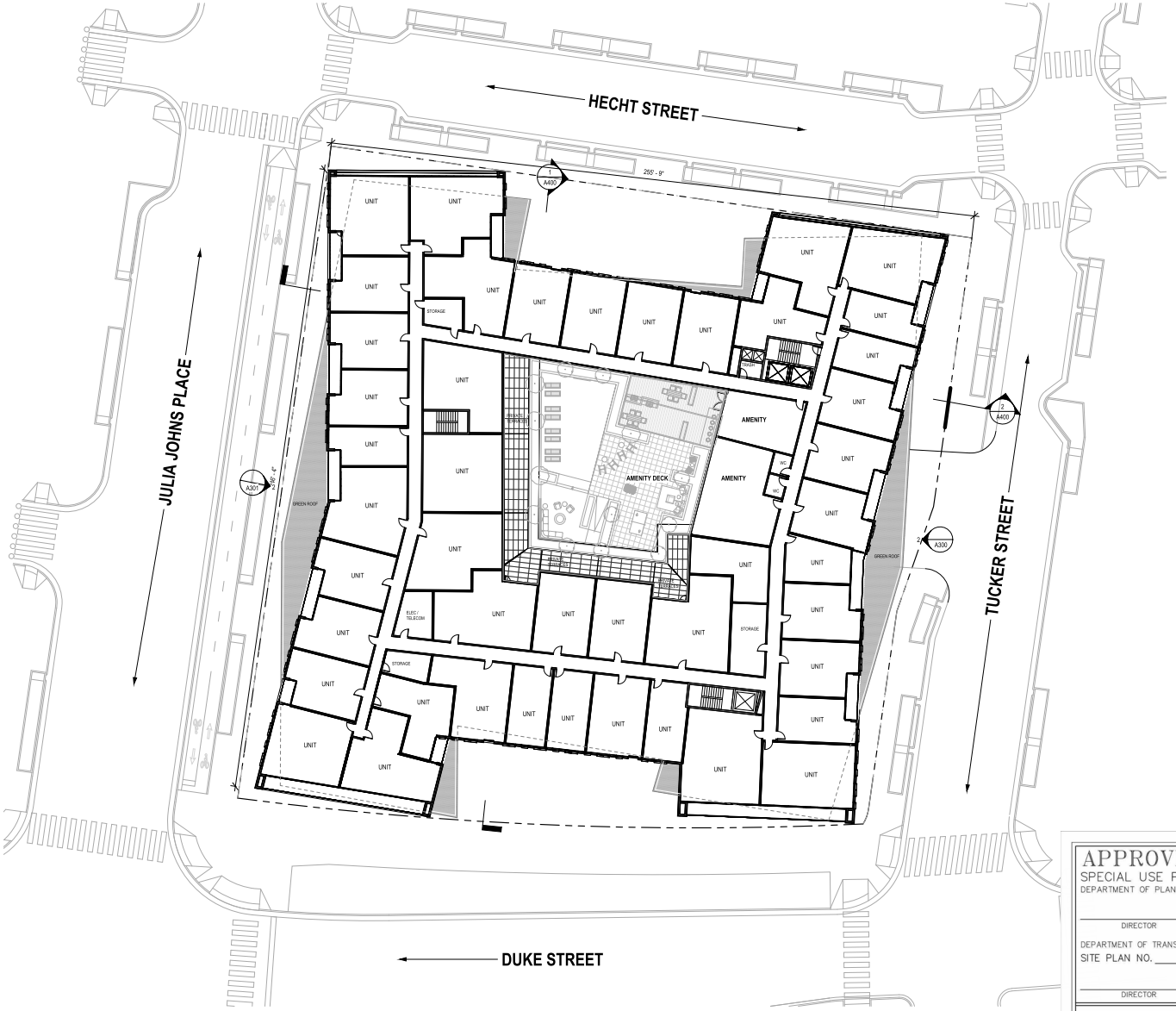

1 LEVEL 03 PLAN
1" = 20'-0"

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LEVEL 03 FLOOR PLAN

A103

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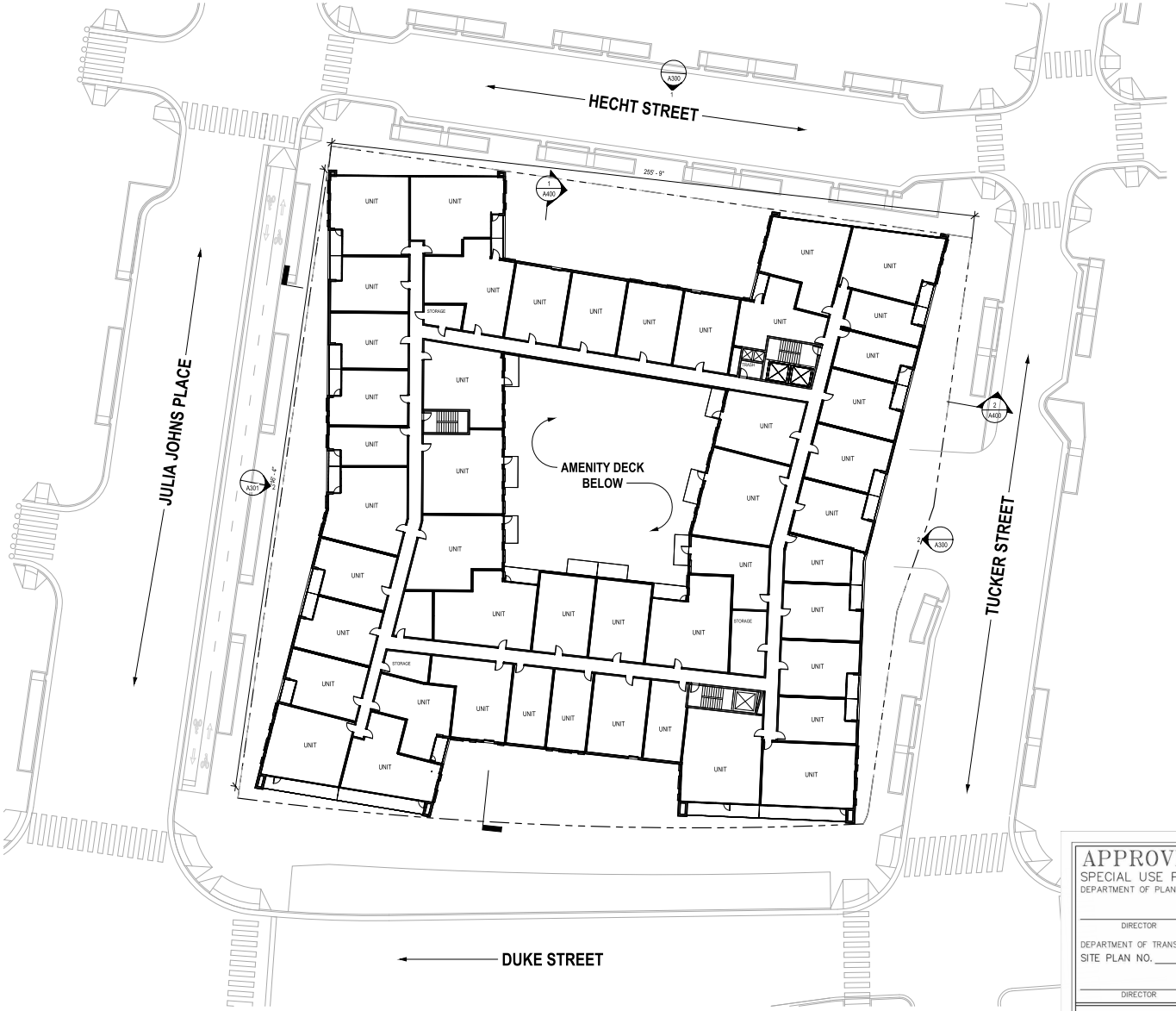

1 TYPICAL FLOOR PLAN (LEVELS 04-07)
1" = 20'-0"

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TYPICAL FLOOR PLAN (04-07)

A104

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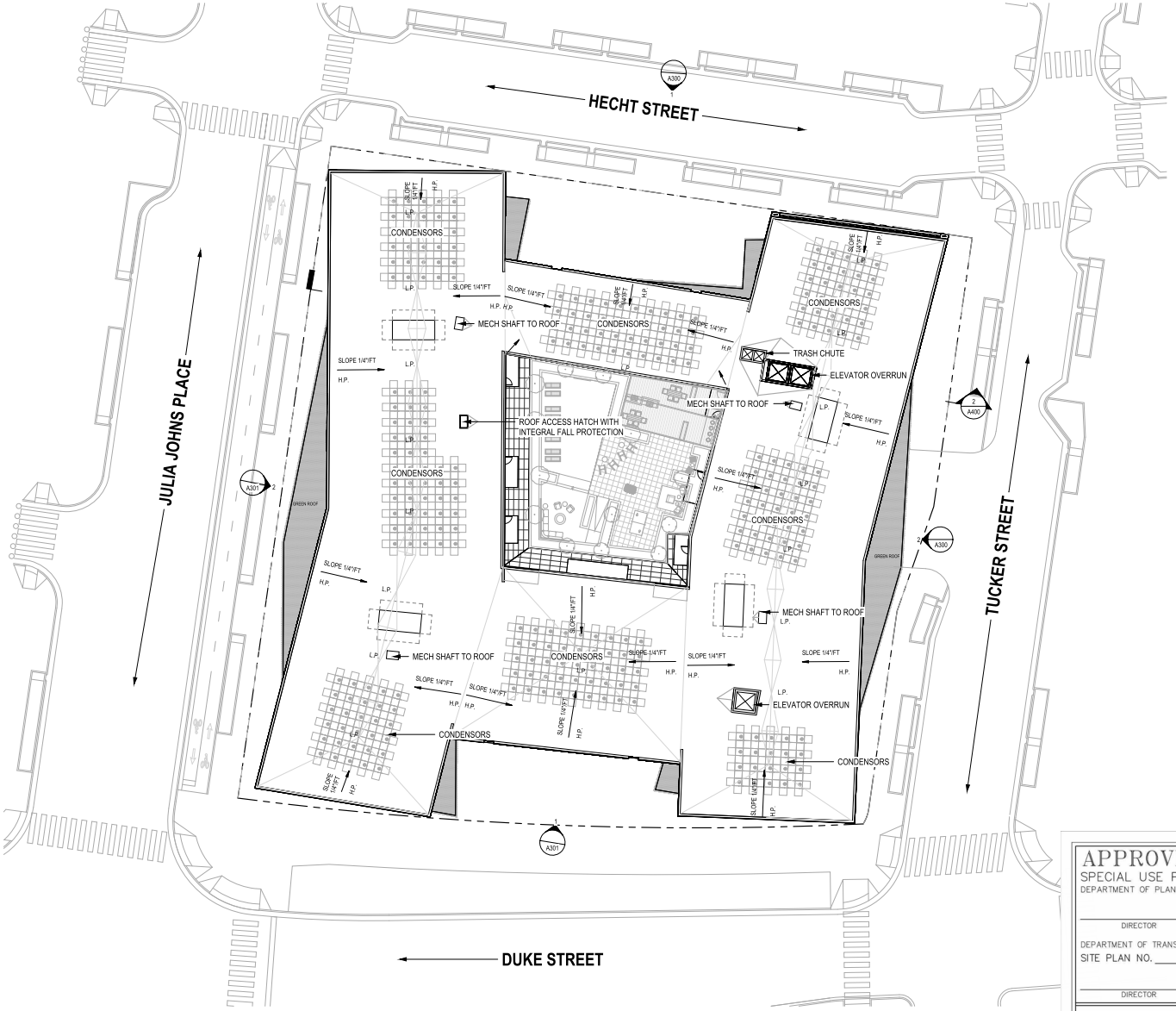

1 ROOF PLAN
1" = 20'-0"

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ROOF PLAN

A105

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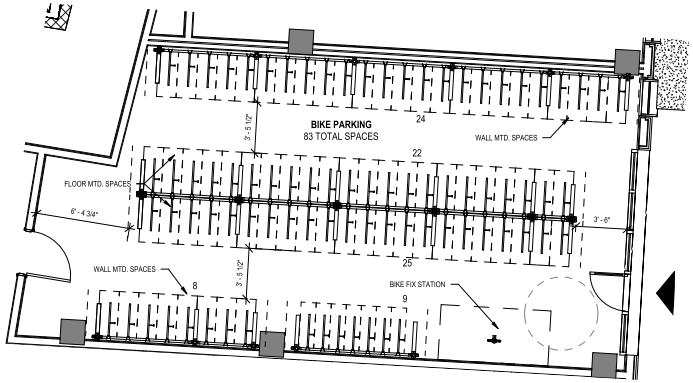
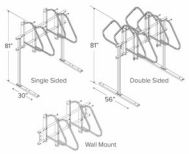
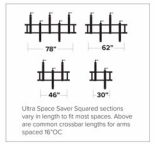


1 LEVEL P1 - PLAN
1/4" = 1'-0"

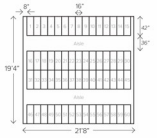
DERO | Ultra Space Saver® Squared — Submittal Sheet



(Examples above show 62" long crossbar sections)



Ultra Space Saver Squared sections vary in length to fit most spaces. Above are common crossbar lengths for arms spaced 16"OC



As a general guideline, the above space can fit approximately 60 bicycles.

The Ultra Space Saver Squared parks one bike every 16" with a typical bike extending out 42" from the wall.

CAPACITY Modular construction
1 bike per arm

MATERIALS **Hanger:** 1" square tube with steel slider head with tamperproof locking bolts.
Upright: 2" square tube.
Feet: AISI C3 x 41 galvanized steel channel.
Crossbeams: 1.25" sched. 40 galvanized pipe.

FINISHES ☐ **Powder Coat** *(Feet are galvanized)*
Our powder coat finish assures a high level of adhesion and durability for indoor use by following these steps:
1. Epoxy primer electrostatically applied
2. Final thick TGIC polyester powder coat

MOUNT OPTIONS
☐ **Floor mount**
Ultra Space Saver Squared have steel channel feet (30" for single sided and 56" for double sided units) which must be anchored to the floor.
☐ **Wall mount**
A wall mounted unit which contains special brackets is also available for CMU or solid concrete walls. Cannot be used on sheetrock without additional support.

WHEEL STOPS ☐ **Include wheel stops**
Optional wheel stops are available for both floor and wall mounted racks for an additional cost.

CANE STOPS ☐ **Include cane stops**
Optional cane-detectable stops are available for both floor and wall mounted racks for an additional cost

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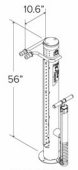
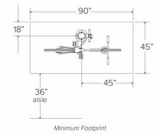
DERO | Fixit® Plus — Submittal Sheet



Fixit with Air Kit Prime

Fixit with Air Kit 4

Hanger height in upper and lower positions



Minimum Footprint

An optional wheel catch is available to hold bikes with no kick stands

CAPACITY ☐ **1 Bike** (One set of hanger arms)
☐ **2 Bikes** (Two sets of hanger arms)

MATERIALS **Main body:** 6" x 12g tube
Bike Hanger: 1" solid round bar
Foot: 10" dia. x .25" plate
Tool tethers: 3/16" stainless steel cable
Manual air pump
Hand tools:
Philips and flat head screwdrivers
2.5, 3, 4, 5, 6, 8mm Allen wrenches
T25 Torx wrench
32mm Headset wrench
15mm Pedal wrench
8, 9, 10, 11mm box wrenches
Tire levers (2)

FINISHES ☐ **Galvanized**
An after fabrication hot dipped galvanized finish is our standard option.
☐ **Powder Coat**
Our powder coat finish assures a high level of adhesion and durability by following these steps:
1. Sandblast
2. Epoxy primer electrostatically applied
3. Final thick TGIC polyester powder coat

MOUNT OPTIONS **Surface only**
Fixit has 10" diameter x.25" foot with four anchors per foot. Tamper-resistant fasteners are included.

PUMP OPTIONS
☐ **No Pump**
☐ **Air Kit Prime**
☐ Attached to Fixit
☐ Separate
☐ **Air Kit 4**

CANE STOP ☐ **Add Cane Stop** (Galvanized only)

A cane-detectable attachment beneath the hanger arms is available for improved safety. (Additional cost)

©2023 Patents US 9,498,880 and 9,505,124. Additional patent pending

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LANDMARK - BLOCK D

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BIKE STORAGE LAYOUT

A106

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1 AREA DIAGRAM_LEVEL P1
1/32" = 1'-0"

2 AREA DIAGRAM_LEVEL 1
1/32" = 1'-0"

3 AREA DIAGRAM_LEVEL 2
1/32" = 1'-0"

AREA DIAGRAM

AREA	LEVEL	CIRCULATION/ MECH	BALCONY	LAVATORY	LOADING	TOTAL EXCLUDED	GROSS TOTAL	REMAINING
	P1	5360	0	426	1490	7276	50810	**43534**
	LEVEL 1	1659	0	1706	0	3365	49395	**46030**
	LEVEL 2	1141	0	606	0	1747	44389	**42642**
	LEVEL 3	1833	1782	3094	0	6709	43552	**36843**
	LEVEL 4	2025	1782	3107	0	6914	43552	**36638**
	LEVEL 5	2025	1782	3107	0	6914	43552	**36638**
	LEVEL 6	2025	1782	3107	0	6914	43552	**36638**
	LEVEL 7	2025	1782	3107	0	6914	43552	**36638**
	TOTAL	18093	8910	18260	1490	46753	362354	**315601**

BALCONY: Area Exclusions per City of Alexandria Zoning Ordinance 2-145

CIRCULATION - SHAFT - MECHANICAL ROOMS: Area Exclusions per City of Alexandria Zoning Ordinance 2-145

LAVATORY: Area Exclusions per City of Alexandria Zoning Ordinance 2-145 (50 SF max. of area excluded per lavatory)

LOADING DOCK: Area Exclusions per City of Alexandria Zoning Ordinance 2-145 (850 SF of area excluded per required space)

REMAINING NET FLOOR AREA: Per City of Alexandria Zoning Ordinance 2-145

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AREA PLANS

A107

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1 AREA DIAGRAM, LEVEL 3
1/32" = 1'-0"

2 AREA DIAGRAM, LEVEL 4-7
1/32" = 1'-0"

AREA DIAGRAM

AREA	LEVEL	CIRCULATION/ MECH	BALCONY	LAVATORY	LOADING	TOTAL EXCLUDED	GROSS TOTAL	REMAINING
	P1	5360	0	426	1490	7276	50810	**43534**
	LEVEL 1	1659	0	1706	0	3365	49395	**46030**
	LEVEL 2	1141	0	606	0	1747	44389	**42642**
	LEVEL 3	1833	1782	3094	0	6709	43552	**36843**
	LEVEL 4	2025	1782	3107	0	6914	43552	**36638**
	LEVEL 5	2025	1782	3107	0	6914	43552	**36638**
	LEVEL 6	2025	1782	3107	0	6914	43552	**36638**
	LEVEL 7	2025	1782	3107	0	6914	43552	**36638**
	TOTAL	18093	8910	18260	1490	46753	362354	**315601**

BALCONY: Area Exclusions per City of Alexandria Zoning Ordinance 2-145

CIRCULATION - SHAFT - MECHANICAL ROOMS: Area Exclusions per City of Alexandria Zoning Ordinance 2-145

LAVATORY: Area Exclusions per City of Alexandria Zoning Ordinance 2-145 (50 SF max. of area excluded per lavatory)

LOADING DOCK: Area Exclusions per City of Alexandria Zoning Ordinance 2-145 (850 SF of area excluded per required space)

REMAINING NET FLOOR AREA: Per City of Alexandria Zoning Ordinance 2-145

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AREA PLANS

A108

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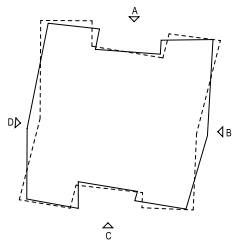
1 Elevation A - North
1/16" = 1'-0"

2 Elevation B - East
1/16" = 1'-0"

MATERIAL PERCENTAGE BY ELEVATION						
	MATERIAL					
ELEVATION		A	B	C	D	TOTAL %
	RED PLANK	21%	35%	22%	36%	28%
	GRAY PLANK	9%	15%	9%	11%	11%
	GLASS	40%	44%	36%	47%	41%
	LARGE FORMAT	31%	5%	32%	6%	20%
	TOTAL					100%

GRAY CEMENTITIOUS PLANKS
RED CEMENTITIOUS PLANKS
LARGE FORMAT CEMENTITIOUS PLANKS
GLASS



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BUILDING ELEVATIONS

A300

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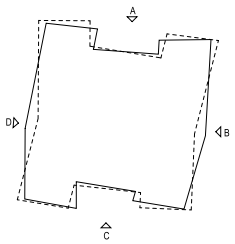
1 Elevation C - South
1/16" = 1'-0" REF:A105

2 Elevation D - West
1/16" = 1'-0"

MATERIAL PERCENTAGE BY ELEVATION

ELEVATION	MATERIAL	A	B	C	D	TOTAL %
	RED PLANK	21%	35%	22%	36%	28%
	GRAY PLANK	9%	15%	9%	11%	11%
	GLASS	40%	44%	36%	47%	41%
	LARGE FORMAT	31%	5%	32%	6%	20%
	TOTAL					100%

GRAY CEMENTITIOUS PLANKS
RED CEMENTITIOUS PLANKS
LARGE FORMAT CEMENTITIOUS PLANKS
GLASS



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06/27/25 WESTEND BLOCK D - PRELIMINARY SITE PLAN

LANDMARK - BLOCK D

Landmark Land Holdings, LLC
Project Number: 24009

12435 Park Potomac Ave, Suite #200
Potomac, Maryland 20854

BUILDING ELEVATIONS

A301

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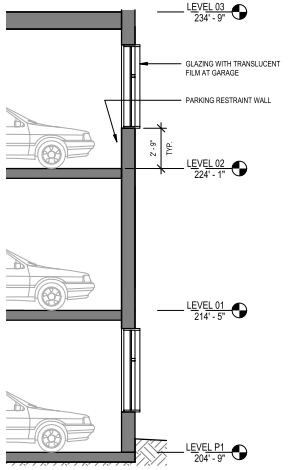
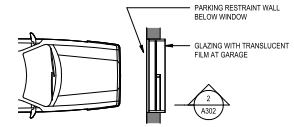
1 GARAGE ELEVATION
1/4" = 1'-0"



2 GARAGE WALL SECTION
1/4" = 1'-0"



3 GARAGE WALL PLAN DETAIL
1/4" = 1'-0"

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06/27/25 WESTEND BLOCK D - PRELIMINARY SITE PLAN

LANDMARK - BLOCK D

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GARAGE SCREENING EXHIBIT

A302

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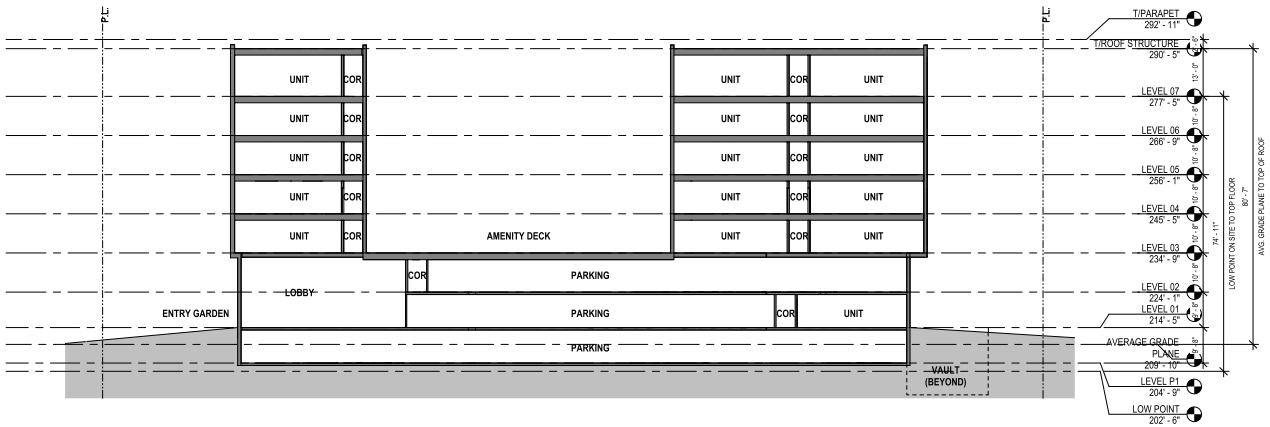
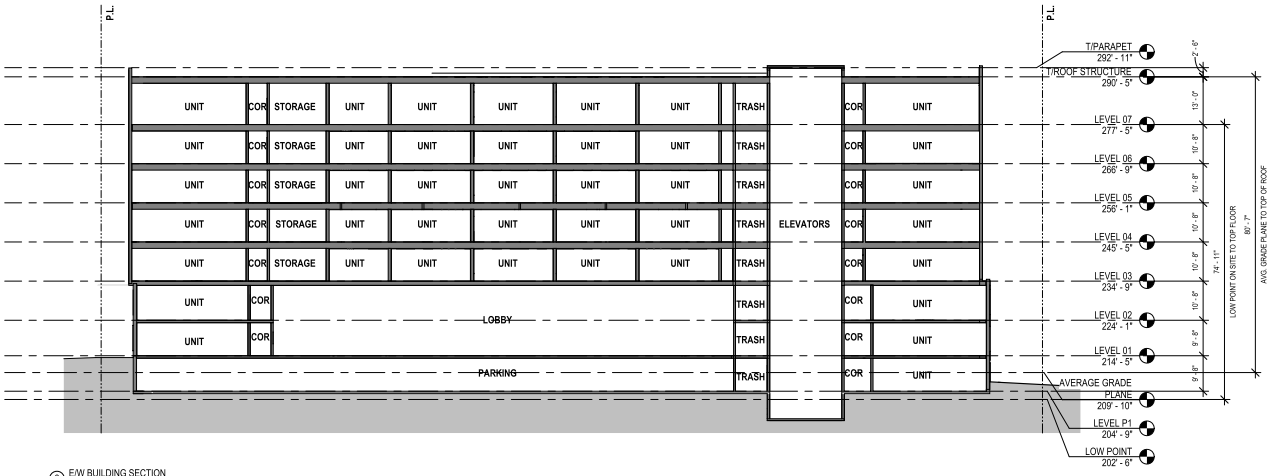


1 N/S BUILDING SECTION 4
1/16" = 1'-0"



2 E/W BUILDING SECTION
1/16" = 1'-0"

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LANDMARK - BLOCK D

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BUILDING SECTIONS

A400

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PERSPECTIVE - NORTHEAST CORNER

PERSPECTIVE - NORTHWEST CORNER

PERSPECTIVE - SOUTHEAST CORNER

PERSPECTIVE - SOUTHWEST CORNER

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PERSPECTIVES

A500

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GENERAL LIGHTING NOTES:

1. LIGHTING LAYOUTS ARE FOR COORDINATION AND REFERENCE ONLY.
2. NOT FOR CONSTRUCTION.
3. MOUNTING HEIGHTS ARE MEASURED AT FINISHED GROUND.
4. REFER TO LUMINAIRE SCHEDULE FOR LUMINAIRE DESCRIPTION.

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
PROFESSIONAL ENGINEER

AMENITY DECK-LIGHTING LAYOUT

WEST END
PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JAN, 2025

SCALE: 1"=20'

C.I.=NA

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LT 01
OF

FILE No.
RZ-13127

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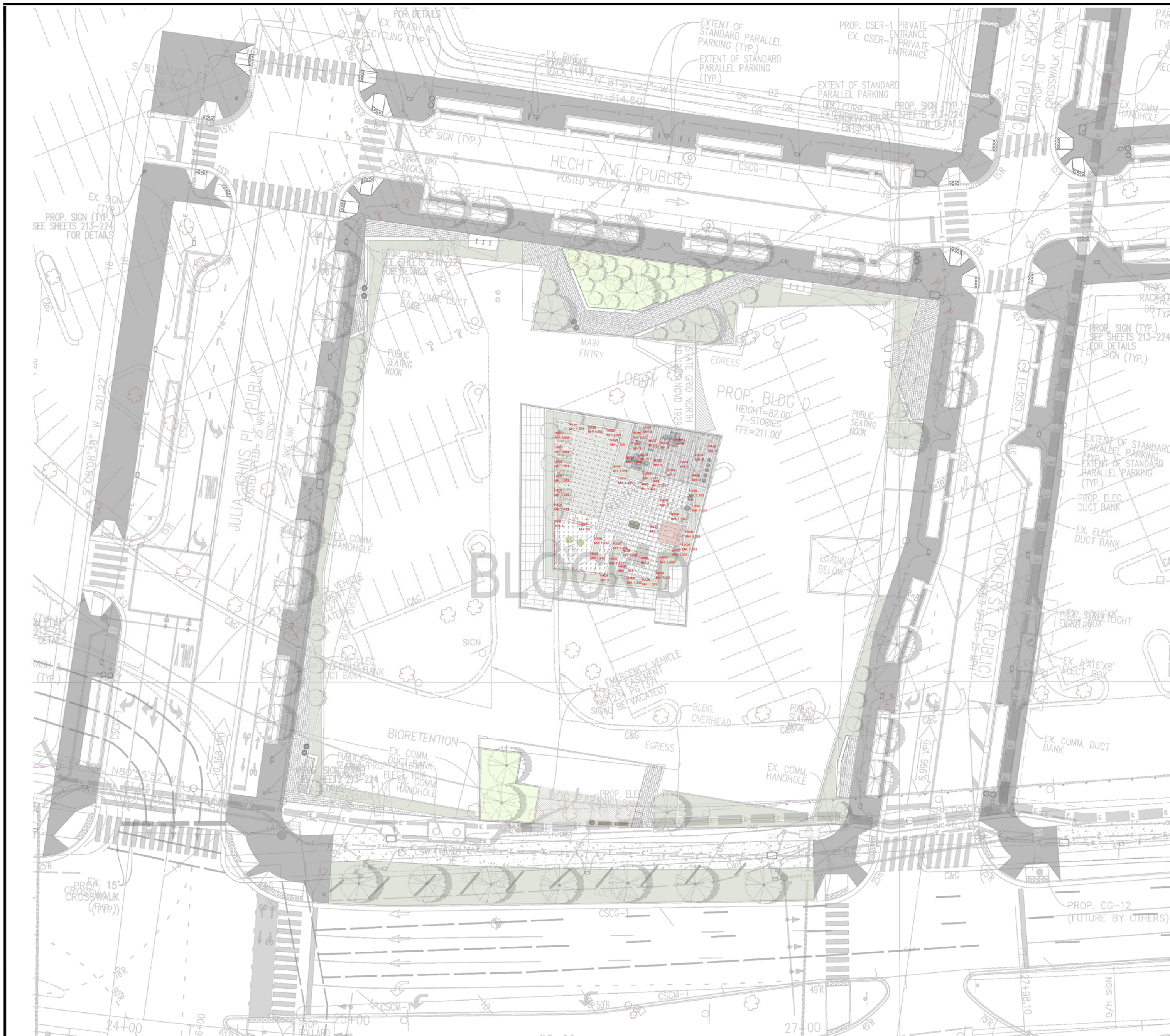

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AMENITY DECK-PHOTOMETRICS

WEST END

PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

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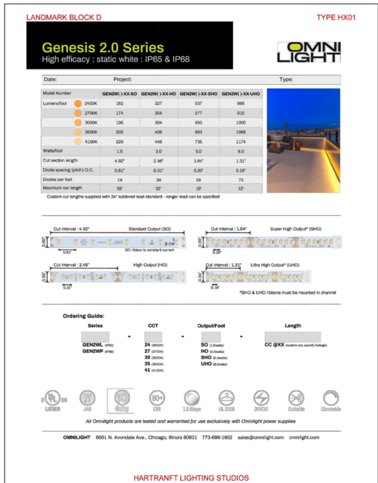
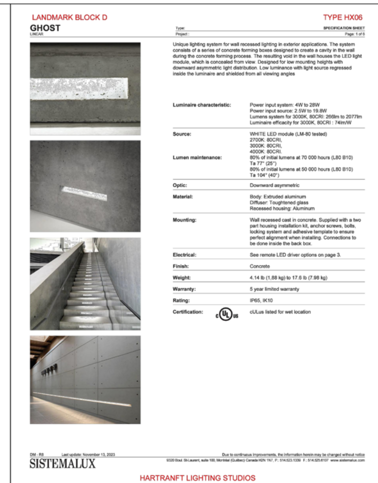
Luminaire Schedule

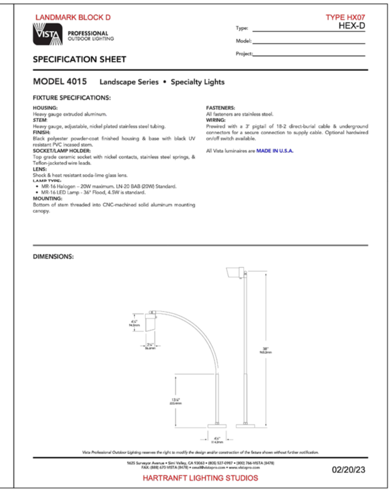
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	57 FT	HX01 GROUP	GROUP	EXTERIOR RATED LED TAPE IN CHANNEL, SURFACE MOUNT	HX01	0.850	196/LF	1.5/LF	85.5
	26	HX03_ZXL11	Single	COMPACT DIRECTIONAL ACCENT LIGHT	HX03	0.850	632	5	130
	33	HX06_ZEL41FWFEL330	Single	ZEL41FWFEL330	HX06	0.850	203	9.1	300.3
	2	HX07_MR16 LED	Single	COUNTER MOUNT GRILL LIGHT	HX07	0.850	389	4.5	9
	3	HX08_DZXXX-30-SO-30K-WF-NLV- CLR	Single	DZXXX-30-SO-30K-WF-NLV- CLR	HX08	0.850	2471	20.72	62.16
	10	HX09_PT-1D20-930-BW-XX-04-WH-U-DIM	Single	PT-1D20-930-BW-XX-04-WH-U-DIM	HX09	0.850	1567	19.6	196

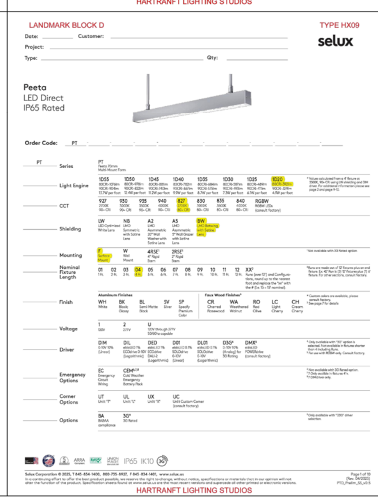
Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Grill Area	Illuminance	Fc	12.78	54.7	5.9	2.17	9.27
Seating and Game Area	Illuminance	Fc	7.72	46.1	0.2	38.60	230.50
Soft Lounge	Illuminance	Fc	11.98	138.7	0.2	59.90	693.50
Turf Area	Illuminance	Fc	2.29	41.5	0.2	11.45	207.50









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COMMONWEALTH OF VIRGINIA — CLAYTON C. TOCK — Lic. No. 036790 — PROFESSIONAL ENGINEER

AMENITY DECK-LUMINAIRE SCHEDULE & SPECIFICATIONS

WEST END PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

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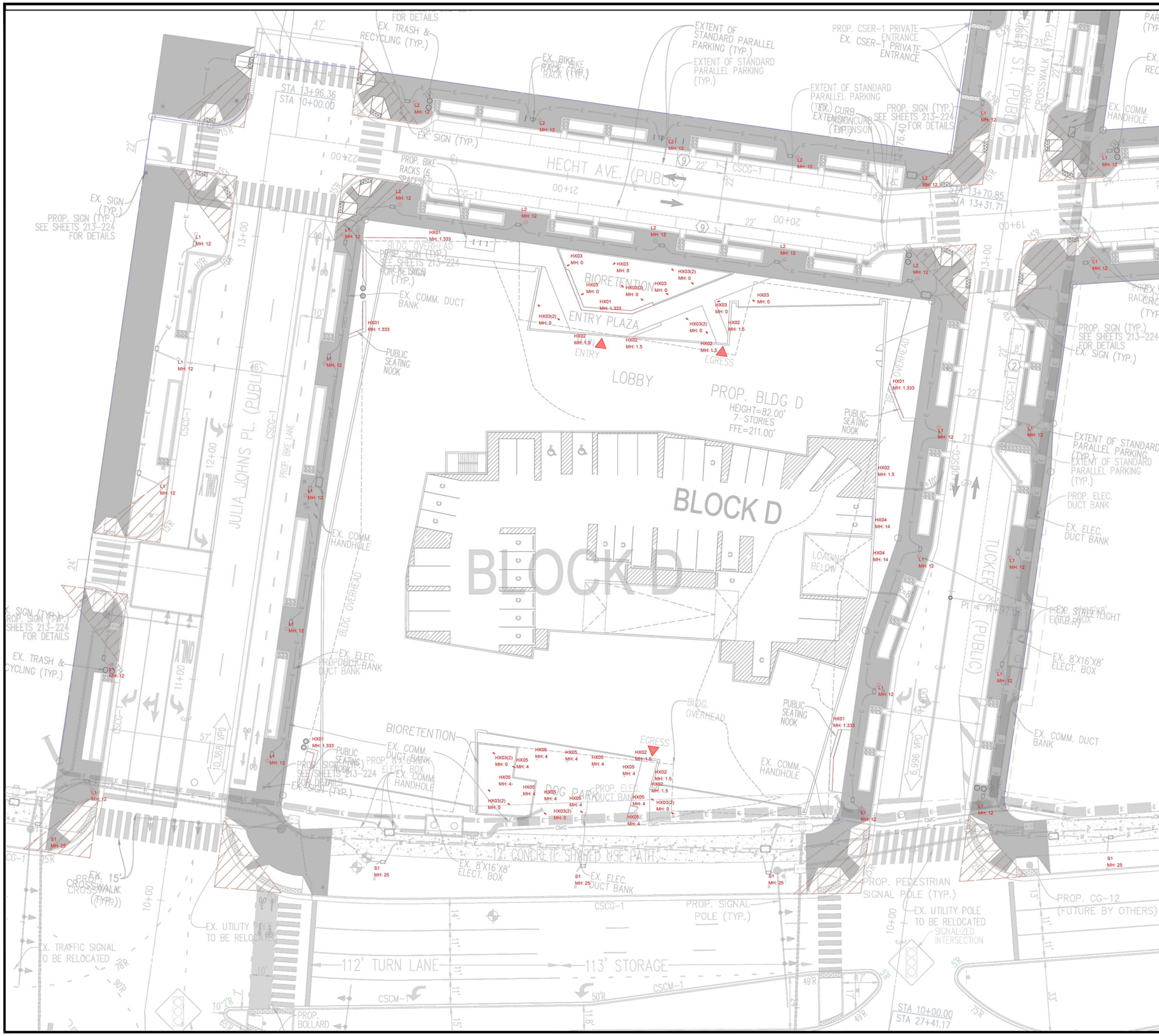

GENERAL LIGHTING NOTES:

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PROFESSIONAL ENGINEER

SITE LIGHTING LAYOUT
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA

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SCALE: 1"=20'
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FILE No.
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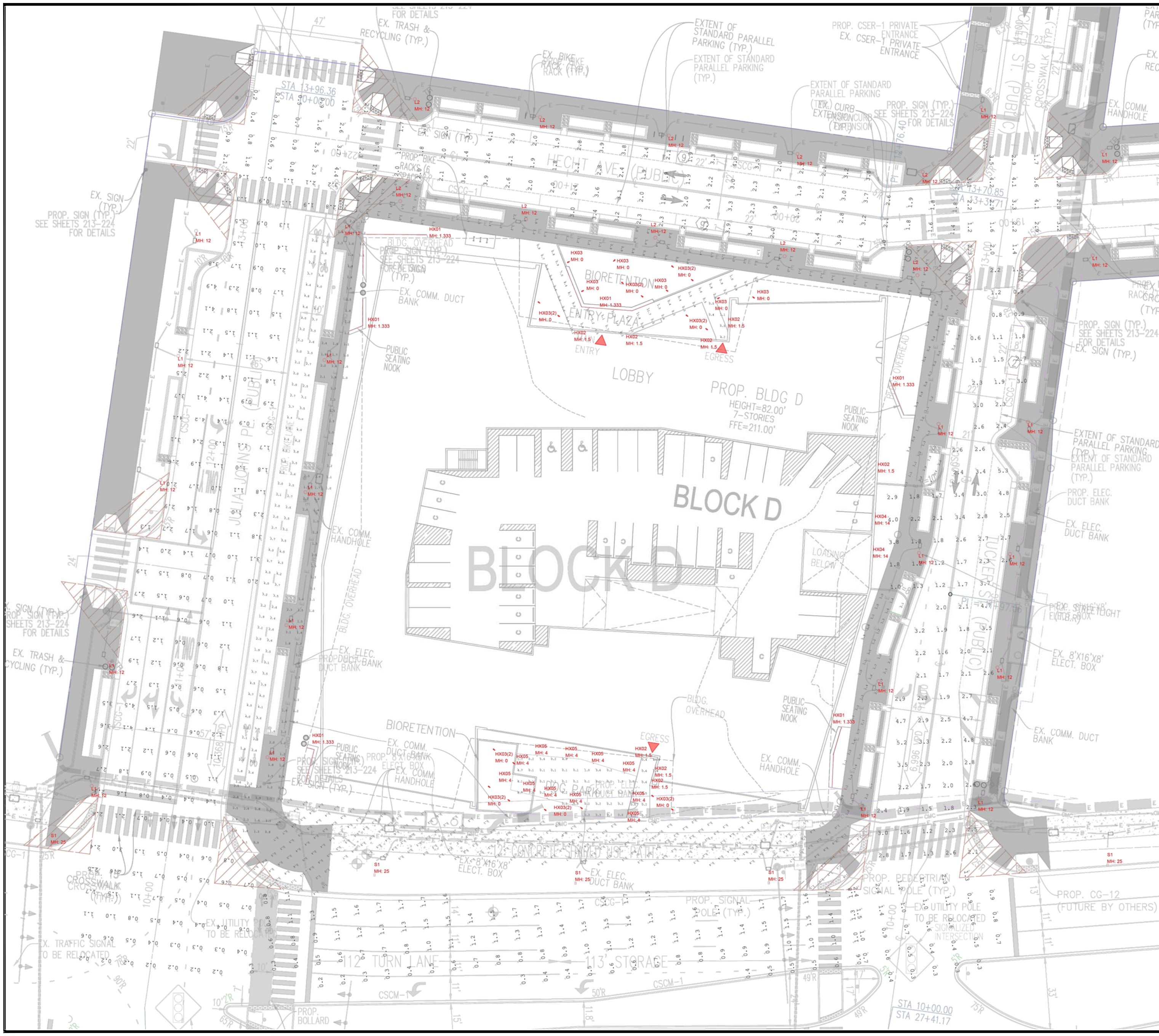

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PROFESSIONAL ENGINEER

SITE LIGHTING LAYOUT

WEST END

PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

DATE: JAN, 2025

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FILE No. RZ-13127

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	20	L1_42329987 LUMNR 3000K CRLYL P40 3K AS 3 N	Single	DOMINION ENERGY CARLYLE ACORN	L1	0.850	8691	81	1620
	10	L2_42329985 LUMNR 3000K LED CAR	Single	CRLYL P30 3K AS 3 N	L2	0.850	6913	60	600
	5	S1_42323695 LUMNR 3000K LED SHBX	Single	ATB0 P203 R3 3K 60W	S1	0.850	8145	60	300
	175.5 FT	HX01 GROUP	GROUP	EXTERIOR RATED LED TAPE IN CHANNEL, SURFACE MOUNT	HX01	0.850	196/LF	1.5/LF	263.25
	1	HX02_ZESHORPFWWTL13024	Single	ZESHORPFWWTL13024	HX02	0.850	176	3.9	3.9
	22	HX03_ZXL11	Single	COMPACT DIRECTIONAL ACCENT LIGHT	HX03	0.850	632	5	110
	2	HX04_PIL_MIMIK_30_FLAT_M_830_07000	Single	070001	HX04	0.850	1505	20	40

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Bike Lane	Illuminance	Fc	3.14	4.8	1.6	1.96	3.00
Dog Park	Illuminance	Fc	1.22	6.9	0.1	12.20	69.00
Egress_N	Illuminance	Fc	1.34	4.2	0.4	3.35	10.50
Egress_S	Illuminance	Fc	5.90	49.4	0.2	29.50	247.00
Main Entry	Illuminance	Fc	4.53	52.9	0.3	15.10	176.33
Road Intersection_NE	Illuminance	Fc	2.78	4.2	1.2	2.32	3.50
Road Intersection_NW	Illuminance	Fc	1.57	4.4	0.2	7.85	22.00
Road Intersection_SE	Illuminance	Fc	0.93	2.4	0.3	3.10	8.00
Road Intersection_SW	Illuminance	Fc	0.78	3.0	0.2	3.90	15.00
Road_Duke St	Illuminance	Fc	1.08	1.8	0.2	5.40	9.00
Road_Hecht St	Illuminance	Fc	2.52	4.1	1.4	1.80	2.93
Road_Julia Johns Place	Illuminance	Fc	1.64	4.9	0.4	4.10	12.25
Road_Tucker St	Illuminance	Fc	2.38	5.3	0.6	3.97	8.83
Sidewalk_Duke Street	Illuminance	Fc	0.48	2.3	0.1	4.80	23.00
Sidewalk_Hecht St	Illuminance	Fc	1.46	2.6	0.8	1.83	3.25
Sidewalk_Julia Johns Place	Illuminance	Fc	1.54	2.8	0.8	1.93	3.50
Sidewalk_Tucker St	Illuminance	Fc	1.26	2.7	0.4	3.15	6.75

LANDMARK BLOCK D

TYPE L1, L2

Carlyle Acorn

The Carlyle Acorn style luminaire is frequently used in urban streetscape and pedestrian lighting applications where greater vertical illumination and a moderate amount uplight is desired.

	Comparable HID Wattage	Finish Color	Initial Lamp Lumens	Lighting Pattern	Correlated Color Temperature (CCT)	Input Wattage	Input Amps	Billing Tier	EPA	B-U-G Rating	Recommended Mounting Height (ft.)	Luminaire Stock #	WMIS CU Code
	70	Black	3878	Type III	3000K	22	0.21	1	2.19	1-4-2	10 - 12	42316016	LEDACCA0333BXXX
	70	Green	3878	Type III	3000K	22	0.21	1	2.19	1-4-2	10 - 12	42329981	LEDACCA0333MXXX
	70	Black	3950	Type III	4000K	22	0.21	1	2.19	1-4-2	10 - 12	42329982	LEDACCA0334BXXX
	70	Green	3950	Type III	4000K	22	0.21	1	2.19	1-4-2	10 - 12	42316039	LEDACCA0334MXXX
	100	Black	6001	Type III	3000K	33	0.32	2	2.19	2-4-2	12 - 16	42316014	LEDACCA0533BXXX
	100	Green	6001	Type III	3000K	33	0.32	2	2.19	2-4-2	12 - 16	42329983	LEDACCA0533MXXX
	100	Black	6113	Type III	4000K	33	0.32	2	2.19	2-4-2	12 - 16	42329984	LEDACCA0534BXXX
	100	Green	6113	Type III	4000K	33	0.32	2	2.19	2-4-2	12 - 16	42316037	LEDACCA0534MXXX
L2	150	Black	7562	Type III	3000K	46	0.45	2	2.19	2-5-3	12 - 16	42316015	LEDACCA0733BXXX
	150	Green	7562	Type III	3000K	46	0.45	2	2.19	2-5-3	12 - 16	42329985	LEDACCA0733MXXX
	150	Black	7702	Type III	4000K	46	0.45	2	2.19	2-5-3	12 - 16	42329986	LEDACCA0734BXXX
	150	Green	7702	Type III	4000K	46	0.45	2	2.19	2-5-3	12 - 16	42316038	LEDACCA0734MXXX
L1	250	Black	9472	Type III	3000K	61	0.59	3	2.19	3-5-3	12 - 16	42329987	LEDACCA0933BXXX
	250	Green	9472	Type III	3000K	61	0.59	3	2.19	3-5-3	12 - 16	42329988	LEDACCA0933MXXX
	250	Black	9647	Type III	4000K	61	0.59	3	2.19	3-5-3	12 - 16	42329989	LEDACCA0934BXXX
	250	Green	9647	Type III	4000K	61	0.59	3	2.19	3-5-3	12 - 16	42329990	LEDACCA0934MXXX

HARTRANFT LIGHTING STUDIOS

LANDMARK BLOCK D

TYPE S1

Shoebox (150W – 250W EQ)

The Shoebox luminaire provides a full cut-off distribution for lighting roadways and parking areas.

Comparable HID Wattage	Finish Color	Initial Lamp Lumens	Lighting Pattern	Correlated Color Temperature (CCT)	Input Wattage	Input Amps	Billing Tier	EPA	B-U-G Rating	Recommended Mounting Height (ft.)	Luminaire Stock #	WMIS CU Code
150	Black	8643	Type II	3000K	60	0.58	3	0.76	2-0-2	25 - 30	42341567	LEDSBBA0823BXXX
150	Gray	8643	Type II	3000K	60	0.58	3	0.76	2-0-2	25 - 30	42341566	LEDSBBA0823GXXX
150	Black	8729	Type II	4000K	60	0.58	3	0.76	2-0-2	25 - 30	42341568	LEDSBBA0824BXXX
150	Gray	8729	Type II	4000K	60	0.58	3	0.76	2-0-2	25 - 30	42339747	LEDSBBA0824GXXX
150	Black	8145	Type III	3000K	60	0.58	3	0.76	2-0-2	25 - 30	42323697	LEDSBBA0833BXXX
150	Gray	8145	Type III	3000K	60	0.58	3	0.76	2-0-2	25 - 30	42323695	LEDSBBA0833GXXX
150	Black	8823	Type III	4000K	60	0.58	3	0.76	2-0-2	25 - 30	42315811	LEDSBBA0834BXXX
150	Gray	8823	Type III	4000K	60	0.58	3	0.76	2-0-2	25 - 30	42315783	LEDSBBA0834GXXX
150	Black	8318	Type IV	3000K	60	0.58	3	0.76	2-0-2	25 - 30	42323698	LEDSBBA0843BXXX
150	Gray	8318	Type IV	3000K	60	0.58	3	0.76	2-0-2	25 - 30	42323696	LEDSBBA0843GXXX
150	Black	8651	Type IV	4000K	60	0.58	3	0.76	2-0-2	25 - 30	42315632	LEDSBBA0844BXXX
150	Gray	8651	Type IV	4000K	60	0.58	3	0.76	2-0-2	25 - 30	42315784	LEDSBBA0844GXXX
200	Black	11490	Type III	3000K	88	0.86	3	0.76	3-0-3	30 - 35	42332134	LEDSBBA1233GXXX
250	Black	15230	Type III	3000K	106	1.03	4	0.76	3-0-3	30 - 35	42337108	LEDSBBA1533BXXX
250	Gray	15230	Type III	3000K	106	1.03	4	0.76	3-0-3	30 - 35	42329991	LEDSBBA1533GXXX
250	Black	15720	Type IV	3000K	106	1.03	4	0.76	3-0-3	30 - 35	42337109	LEDSBBA1543BXXX
250	Gray	15720	Type IV	3000K	106	1.03	4	0.76	3-0-3	30 - 35	42329992	LEDSBBA1543GXXX
250	Black	15950	Type III	4000K	106	1.03	4	0.76	3-0-3	30 - 35	42342703	LEDSBBA1534BXXX
250	Gray	15950	Type III	4000K	106	1.03	4	0.76	3-0-3	30 - 35	42315785	LEDSBBA1534GXXX
250	Black	15380	Type IV	4000K	106	1.03	4	0.76	3-0-3	30 - 35	42342704	LEDSBBA1544BXXX
250	Gray	15380	Type IV	4000K	106	1.03	4	0.76	3-0-3	30 - 35	42315786	LEDSBBA1544GXXX

HARTRANFT LIGHTING STUDIOS

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/18/2025
PROFESSIONAL ENGINEER

SITE-LUMINAIRE SCHEDULE & SPECIFICATIONS
WEST END
PRELIMINARY SITE PLAN - BLOCK D
CITY OF ALEXANDRIA, VIRGINIA
SCALE: NA C.I.=NA DATE: JAN, 2025

SHEET
LT 06
OF

FILE No.
RZ-13127

Urban, Ltd. - J:\JOBS\LandmarkMall\DSUP\Block D\Preliminary Site Plan\AMENITY DECK-LIGHTING LAYOUT.dwg [LT 06] June 27, 2025 - 2:28pm aalfonso

LANDMARK BLOCK D TYPE HX01

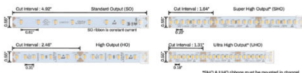
Genesis 2.0 Series
High efficacy : static white : IP65 & IP68

OMNI LIGHT

Date: Project: Type:

Model Number		GEN2W( )-XX-SO	GEN2W( )-XX-HO	GEN2W( )-XX-SHO	GEN2W( )-XX-UHO
Lumens/foot	2400K	162	327	537	866
	2700K	174	354	577	915
	3000K	196	394	650	1000
	3500K	205	406	693	1068
	4100K	226	449	735	1174
Watts/foot		1.5	3.0	5.0	8.0
Cut section length		4.92"	2.46"	1.64"	1.31"
Diode spacing (pitch) O.C.		0.61"	0.31"	0.20"	0.16"
Diodes per foot		19	39	58	73
Maximum run length		35'	32'	19'	12'

Custom cut lengths supplied with 24" soldered lead standard - longer lead can be specified



*SHO & UHO ribbons must be mounted in channel

Ordering Guide:

Series	CCT	Output/Foot	Length
GEN2WL (IP65)	24 (2400K)	SO (1.5watts)	CC @XX (custom cut, specify footage)
GEN2WP (IP68)	27 (2700K)	HO (3.0watts)	
	30 (3000K)	SHO (5.0watts)	
	35 (3500K)	UHO (8.0watts)	
	41 (4100K)		

cUL us LISTED · JA8 · IP65 IP68 · 90+ CRI · 1.5 Steps · UL 2108 · 24VDC · Cuttable · Dimmable

All Omnilight products are tested and warrantied for use exclusively with Omnilight power supplies

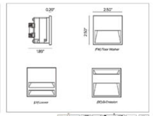
OMNILIGHT 6501 N. Avondale Ave., Chicago, Illinois 60631 773-696-1602 sales@omnilight.com omnilight.com

HARTRANFT LIGHTING STUDIOS

LANDMARK BLOCK D TYPE HX02

TARGETTI

ZEDGE MINI
Miniature LED Steplight



Left to right, shown in Louver faceplate shown in Deep Black finish, Bi-Emission faceplate shown in Ferrite Dark Grey finish, Floor Washer faceplate shown in Sandstone Grey finish

JA8 · CS · Dark Sky · Marine · IP66 · Class 2

CONCEPT
Recessed LED steplight for indoor and outdoor applications.
Designed in collaboration with Gensler as Product Design Consultant.

MECHANICAL CHARACTERISTICS

Housing	2.5"W x 2.5"H x 1.89"D
Materials	Die-cast anodized aluminum body fitted with a spring fixing system. Powder coated die-cast anodized aluminum external frame. Aesthetically pleasing with no visible hardware.
Finish	Textured finish. Ferrite Dark Grey, Heritage Brown, Bronze, Black, White, Sandstone Grey
Power Connection	Pre-cabled with 3' Belden 18ga 2 conductor direct burial cable (no conduit required).
Mounting	To be completed with installation back box. Fixture secured with stainless steel spring system for semi-flush installation only. Recommended mounting height is <18" A.F.F.
BUG	B0-U0-G0 / B0-U1-G0 BE Emission only
Weight	0.35lbs
Protection	IP66
Impact	IK10

CERTIFICATIONS
cULus Class 2 Wet Location Listed E479873.
Tested in accordance with LM-79-08.
Compliant for California installations.
RoHS3 EU 215/863
* CEC T24 JA8-2016-E certified, ZEDGE MINI HO version only in conjunction with DML8601242UO driver.

WARRANTY
5 year limited warranty

SUSTAINABILITY
Luminaire designed for disposal/recycling at end of life. Replaceable LED light source and control gear by a Targetti technician.

ELECTRICAL CHARACTERISTICS

Power Supply	Remote Class 2, 120V-277VAC power supply required, see available options. Flicker free dimming achieved through driver.
Wattage	4W
Voltage	24V DC
Ambient Temp.	-25°C / +35°C (95°F)

SOURCE
High Efficiency LED Board.

TM30	CCT (Nominal)	CRI	Rf	Rg	SDCM
ZEDGE MINI version	2700K	90	83	97.3	2
	3000K	90	82.9	97	2
	3500K	90	83.6	96.5	2
	4000K	90	82.6	95.7	2
ZEDGE MINI HO version	2700K	90	90.9	100.1	2
	3000K	90	90.3	100.4	2
	3500K	90	83.6	96.5	2
	4000K	90	89.8	98.7	2

OPTIC
Uniform optical distribution and excellent visual comfort. Optical system is dependent version. FW / LV / BE versions are comprised of polycarbonate opal lens. HOFW version is comprised of polycarbonate clear lens. LV version comprised of a high reflectance anodized aluminum reflector.

Beam		FW 56°X94°	LV 49°X102°	BE 48°X79°	HO FW 27°X63°
Delivered Lumens	2700K	68Lm	29Lm	95Lm	171Lm
	3000K	72Lm	31Lm	101Lm	181Lm
	3500K	74Lm	34Lm	104Lm	186Lm
	4000K	74Lm	32Lm	104Lm	187Lm
Efficacy		48Lm/W max. Refer to photometric graphs for specific values.			
Lifetime		L80/B10 56,000hrs at max TA +25°C			
Photobiological Classification		Low risk photobiological safety RG1			

Targetti USA 3F Filippi | Targetti Group Company 750-A W. 17th St. Costa Mesa, CA 92627 (714) 513-1991 targettiusa.com rev. 12.04.24 pg. 1 of 9

HARTRANFT LIGHTING STUDIOS

LANDMARK BLOCK D TYPE HX03

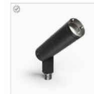
HK LIGHTING

Project Name
Fixture Type

ZXL11
(Includes former ZXL11 & ZXL11-NF models)

ACCENT & LANDSCAPE | ZX11 Series | 1.65"
5 - 7W (450 - 675lm) | 12V | HK LED, RGB, Amber

ETL · IP67



Standard Low Voltage Round Accent: ZXL11-0R15A-ABL

Finned Low Voltage Round Accent: ZXL11-0R15FA-AAC

FEATURES

- Compact yet powerful round, directional 12V LED modern accent light for architectural outdoor and landscape lighting environments.
- 5W, 7W integrated HK LED delivering 450 to 675 lumens. 2200-4000K CCT, including specialty Amber and RGB options.
- Wet Location Listed, IP67 Standard.
- Machined from solid aircraft grade (6061-T6), corrosion-resistant aluminum, then anodized and powder coated to create a highly durable, marine grade finish. Also available in solid brass or stainless steel.
- 240° vertical and 360° horizontal adjustment via locking swivel stem design.
- Modular components, field changeable LED optical beams, and lenses.
- Available with adjustable Angled, Long, and Short Glare Shields and ground, surface, and canopy mounting options.
- Every fixture tested end of line for water tightness and light quality.
- Readymade eligible configurations ship in 2 to 4 weeks, complete with selected accessories installed.

SPECIFICATIONS

Materials
Machined from billet 6061-T6 corrosion resistant aluminum with 304 stainless steel hardware. Available in 304/316 stainless steel or 360 brass upon request.

Finish
Aluminum materials are first anodized and then powder coated for a robust, marine grade finish. Stainless steel and brass models are provided with brushed surface.

Hood and Glare Shield
Weeping and Non-weeping Hood Styles. Set screw or threaded Angled, Short, or Long Glare Shields. *(See page 4 for details).*

Voltages
12V AC/DC. Requires remote step down transformer.

Wattage
5 or 7W HK LED delivers 450 to 675 lumens.

Light Engine
Innovative HK LED Light module operates like a lamp and can be easily changed in the field. CRI 90 Standard. Available in CRI 80 or CRI 95 upon request. Standard CCT options are 2700K, 3000K, 3500K, 4000K. Specialty 2200K, 2400K, 2500K, Amber, and RGB options available. Consult factory for specialty LED specification details.

Dimming
MLV or ELV Phase Control dimming.

Optics
Narrow (29°), Medium (40°), Wide (57°) beam spread options available. Accepts up to 3 optical accessories (hexcel louver, optical lenses, dichroic color filters, etc.) Secured place with metal snap ring.

Mounting
Mounts using 1/2"-14 NPS male fitting compatible with all HK Lighting Group mounting devices. *(See page 4 for details).*

Listings
ETL Listed for Wet Location, IP67 Standard. RoHS Compliant.

HK LIGHTING • 2151 Anchor Ct, Thousand Oaks, CA 91320 • TEL 805.480.4881 • sales@hklighting.com 04.30.25 1

HARTRANFT LIGHTING STUDIOS

LANDMARK BLOCK D TYPE HX04

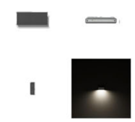
PERFORMANCE iN LIGHTING | powered by GEWISS

PRODUCT CODE 070001
PROJECT
TYPE

MIMIK 30 FLAT M

IP65 · WET · 0/10V · cULus LISTED · ADA

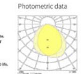
Part number	070001
Lampholder:	LED
Wattage:	20 W
Finishing:	AN-96 / Iron gray / Textured
Degree of protection:	IP65
CRI:	80
Kelvin:	3000
IESNA Type:	Type II
BUG Rating:	B1-U0-G0
Luminaire lumen output [lm]:	1506 lm
L:	L80
B:	B10
Lifetime:	60000 h
cULus:	
Voltage:	120/277 V
Min. ambient temperature [°C]:	-30
Max. ambient temperature [°C]:	25



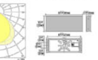
Description

Wall- and post- mount series. Fixtures consist of:
- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free (<1%) precision die-cast aluminum housing and mounting plate.
- Micro-prismatic patterned, tempered, silk-screened, flat glass diffuser (FLAT versions).
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Custom MCPCB utilized to maximize heat dissipation and promote long LED life.
- Type II light distribution (FLAT).
- Input voltage: 120-277 V (50 / 60 Hz), integral 0-10 V dimming driver.
- Customizing facade faceplate available for various versions (ordered separately).
- The luminaire may be configured with numerous options and multiple standard finishes. Not all options are available in all configurations. Consult factory for more information about specification sheet details to build your light.
- Product meets Buy American Act (BAA) requirements within ARRA.
- 5-year warranty.

Photometric data



Technical drawings



HARTRANFT LIGHTING STUDIOS

LANDMARK BLOCK D TYPE HX05

PERFORMANCE iN LIGHTING | powered by GEWISS

PRODUCT CODE 070351
PROJECT
TYPE

QUASAR 10 1WB

PRONTO · IP44 · WET · cULus LISTED

Part number	070351
Lampholder:	LED
Wattage:	5 W
Finishing:	AN-96 / Iron gray / Textured
Degree of protection:	IP44
CRI:	70
Kelvin:	3000
Optic:	Surface effects
Luminaire lumen output [lm]:	220 lm
L:	L80
B:	B10
Lifetime:	60000 h
cULus:	
Voltage:	120/277 V
Min. ambient temperature [°C]:	-20
Max. ambient temperature [°C]:	40

Description

Wall effect series. Fixtures consist of:
- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free (<1%) precision die-cast aluminum housing and mounting plate.
- Extra-clear, tempered, silk-screened, flat glass diffuser.
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Custom MCPCB utilized to maximize heat dissipation and promote long LED life.
- Surface effects light emission.
- Input voltage: 120-277 V (50 / 60 Hz), integral driver.
- Junction box mounting plate included (for 4" octagon box only, provided by others).
- The luminaire may be configured with numerous options and multiple standard finishes. Not all options are available in all configurations. Consult factory for more information about specification sheet details to build your light.
- Product meets Buy American Act (BAA) requirements within ARRA.
- 5-year warranty.

Photometric data

Technical drawings

HARTRANFT LIGHTING STUDIOS

APPROVED

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO.

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/13/2025
04/18/2025

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SITE-LUMINAIRE SCHEDULE & SPECIFICATIONS

WEST END
PRELIMINARY SITE PLAN - BLOCK D

CITY OF ALEXANDRIA, VIRGINIA

SCALE: NA C.I.=NA DATE: JAN, 2025

SHEET
LT 07
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FILE No.
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