

# GENERAL DEVELOPMENT PLAN/ SPECIAL USE PERMIT PLAT FOR CITY CENTRE WEST CITY OF FAIRFAX, VIRGINIA

**APPLICANT  
OX HILL REALTY**

10523 MAIN STREET  
SUITE 200  
FAIRFAX, VA 22030  
(703)946-5590  
CONTACT: CHRISTOPHER SMITH  
CSMITH@OXHILL.CO.COM

**ATTORNEY**

**WALSH, COLUCCI, LUBELEY & WALSH PC**

2200 CLARENDON BLVD.  
SUITE 1800  
ARLINGTON, VA 22201  
(703) 528-4700  
CONTACT: ROBERT BRANT  
RBRANT@THELANDLAWYERS.COM

**ARCHITECT  
DCS DESIGN**

8614 WESTWOOD CENTER DR  
SUITE 800  
TYSONS, VA 22182  
(703) 556-9275  
CONTACT: THOMAS DINNEY  
TDINNEY@DCSDESIGN.COM

**DESIGNER**

**THOMAS JUUL-HANSEN, LLC**

137 GRAND STREET  
7TH FLOOR  
NEW YORK, NY 10013  
(212) 929-7109  
CONTACT: THOMAS JUUL HANSEN  
THOMAS@THOMASJUULHANSEN.COM

**CIVIL ENGINEER**

**URBAN, LTD.**

4200 D TECHNOLOGY CT.  
CHANTILLY, VA 20151  
(703) 642-2306  
CONTACT: CLAYTON TOCK, P.E.  
CTOCK@URBAN-LTD.COM

**LANDSCAPE ARCHITECT**

**URBAN, LTD.**

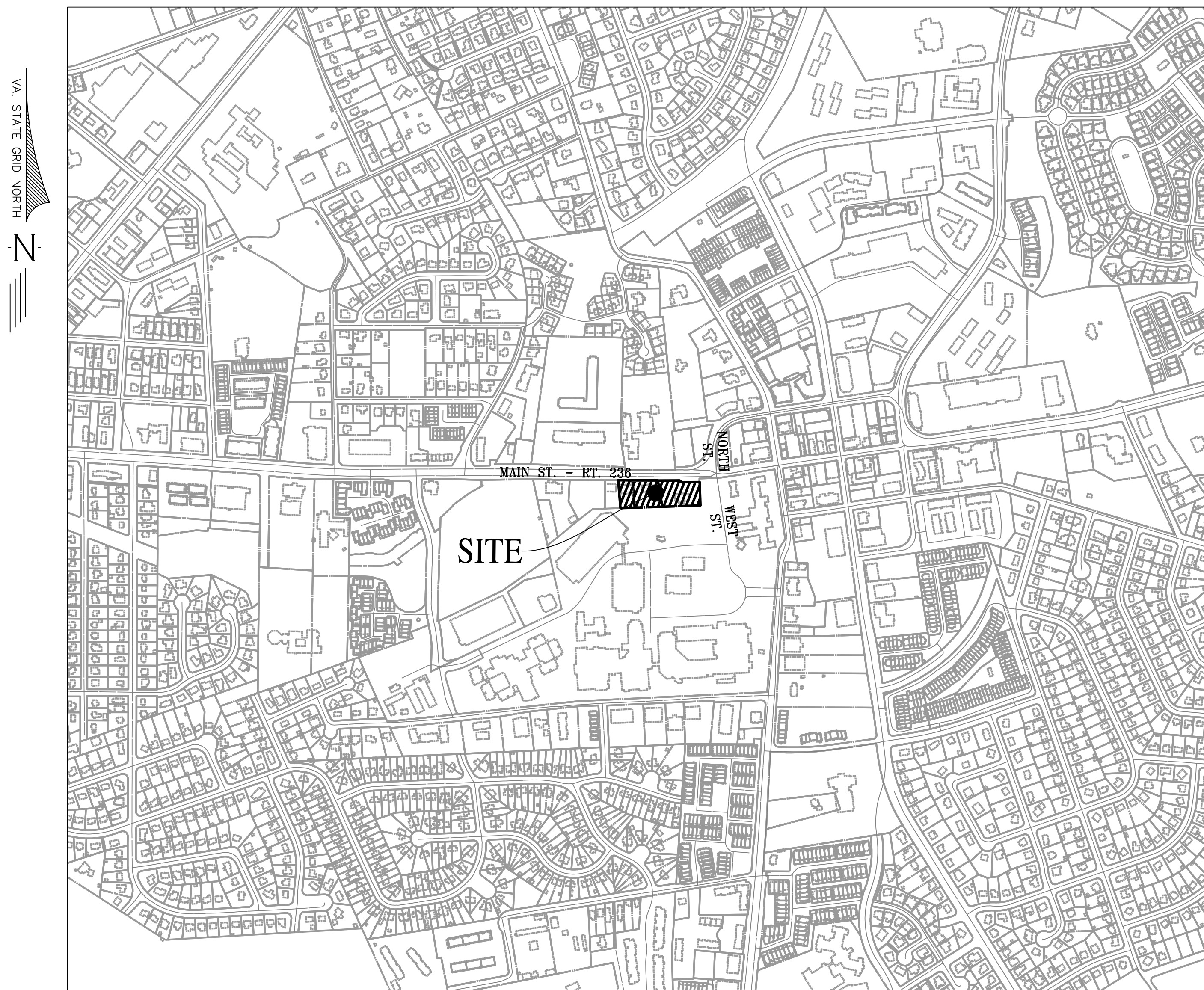
4200 D TECHNOLOGY CT.  
CHANTILLY, VA 20151  
(703) 642-2306  
CONTACT: JOHN LIGHTLE  
JLIGHTLE@URBAN-LTD.COM

**TRAFFIC ENGINEER**

**GOROVE-SLADE ASSOCIATES INC**

3914 CENTREVILLE RD.  
SUITE 300  
CHANTILLY, VA 20151  
(703) 787-9915  
CONTACT: MARIA LASHINGER  
MARIA.LASHINGER@GOROVESLADE.COM

**VICINITY MAP**  
SCALE: 1" = 500'

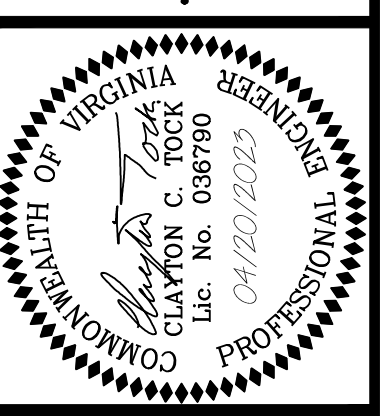
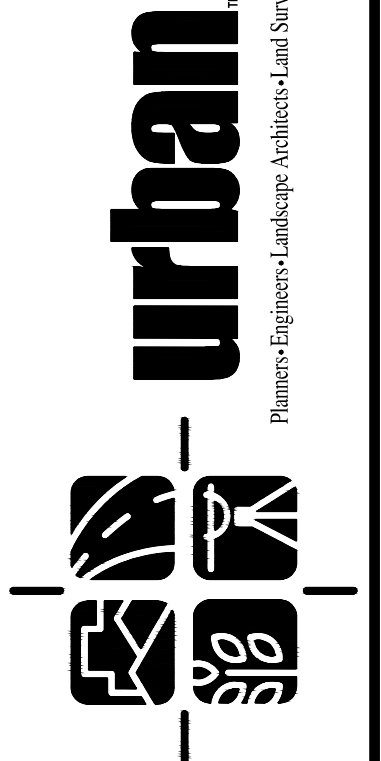


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NOTE: TOTAL 50 SHEETS

PLAN DATE	No.	DATE	DESCRIPTION
01-18-22			
08-30-22			
04-20-23			

Urban, Ltd.  
4200 D TECHNOLOGY CT.  
CHANTILLY, VA 20151  
PHONE: 703.642.2306  
FAX: 703.642.2306  
www.urban-ltd.com



COVER SHEET  
**CITY CENTRE WEST  
GENERAL DEVELOPMENT PLAN  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA**  
SCALE: AS NOTED  
DATE: JAN., 2022  
C.I.= N/A

SHEET  
01  
OF  
50  
FILE No.  
RZ-13007

GENERAL NOTES

1. THE PROPERTY DELINEATED HEREON IS LOCATED IN THE CITY OF FAIRFAX TAX MAP #57-04-02-071, #57-04-02-072, #57-04-02076
2. THE PROPERTY IS CURRENTLY ZONED CR (COMMERCIAL RETAIL) & CG (COMMERCIAL GENERAL). IT IS ALSO SUBJECT TO THE TRANSITION OVERLAY DISTRICT REGULATION.
3. THIS APPLICATION PROPOSES A REZONING OF THE PROPERTY TO THE COMMERCIAL URBAN DISTRICT.
4. PORTION OF IMPROVEMENTS ON THIS APPLICATION ARE ON PROPERTY OWNED BY FAIRFAX COUNTY (TAX MAP#57-04-01-014). ALL OFFSITE IMPROVEMENTS ARE SUBJECT TO ISSUANCE OF ALL NECESSARY APPROVALS, PERMISSIONS, EASEMENTS, AND AGREEMENTS BY FAIRFAX COUNTY.
5. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY URBAN, LTD.
6. THE SITE IS PRESENTLY SERVED BY CITY OF FAIRFAX PUBLIC WATER AND SEWER.
7. THE PROPOSED IMPROVEMENTS RESULT IN AN INCREASED OF IMPERVIOUS AREA IN THE SUBJECT PROPERTY.
8. UNDERGROUND PRIVATE UTILITY LOCATIONS ARE APPROXIMATE AND THOSE SHOWN HAVE NOT BEEN SURVEYED. EASEMENTS CONTAINED WITHIN OWNERS TITLE REPORT HAVE BEEN PLOTTED ON THE SURVEY BASE.
9. INDIVIDUAL UTILITY PLANS AND PROFILES WILL BE SUBMITTED WITH THE FINAL SITE PLAN.
10. THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES ON THIS SITE. IF ANY SUBSTANCES ARE FOUND, THE METHODS FOR DISPOSAL SHALL ADHERE TO CITY, COUNTY, STATE, AND FEDERAL LAW.
11. THERE ARE NO KNOWN BURIAL SITES OR ARCHEOLOGICAL FEATURES ON THIS SITE.
12. EXISTING OFF-SITE STRUCTURES TO REMAIN ARE SHOWN SHADED ON THE REZONING & MASTER DEVELOPMENT PLAN.
13. THERE IS NO CITY, COUNTY, OR FEMA FLOODPLAIN ON THE PROPERTY.
14. DIMENSIONS AND SIZES AS SCALED ARE APPROXIMATE AND MAY VARY DEPENDING ON THE FINAL USE AND ARCHITECTURAL/ENGINEERING DESIGN. THE FINAL DESIGN SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE MASTER DEVELOPMENT PLAN.
15. THE PROPOSED BUILDING FOOTPRINTS SHOWN ON THIS GDP/SUP PLAT ARE PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL ENGINEERING AT THE TIME OF SITE PLAN PROVIDED THAT SUCH MODIFICATIONS ARE SUBSTANTIALLY CONSISTENT WITH THE APPROVED GDP/SUP PLAT.
16. THE CITY STANDARD STREET LIGHTS ARE SUBJECT TO APPROVAL BY THE DEPARTMENT OF PUBLIC WORKS.
17. SITE LIGHTING IS TO BE DETERMINED AT THE TIME OF SITE PLAN AND WILL BE IN CONFORMANCE WITH SECTION 4.8 OF THE ZONING ORDINANCE AND THE PUBLIC FACILITIES MANUAL.

ZONING STANDARDS

SITE DATA

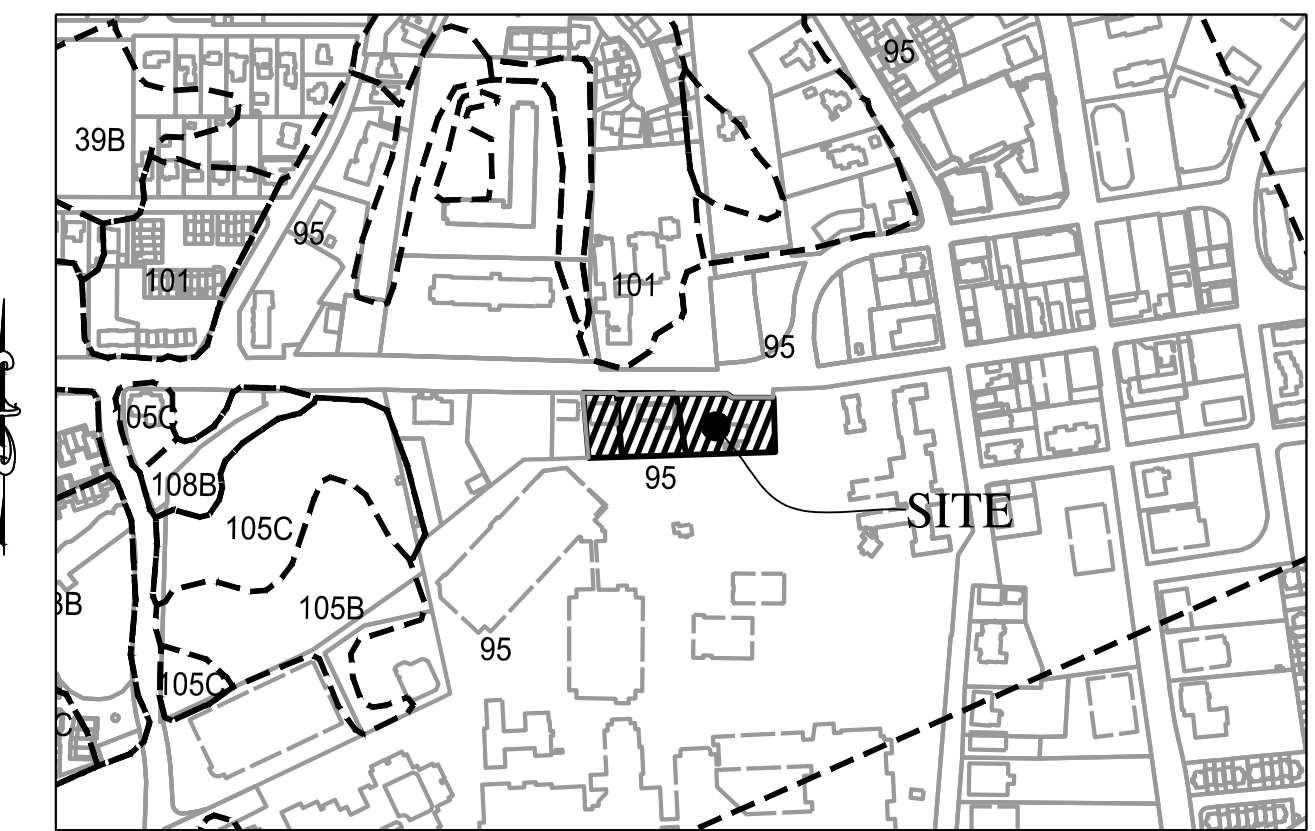
ZONING:	EXISTING..... CR & CG, TO DISTRICT PROPOSED..... COMMERCIAL URBAN (CU), TO DISTRICT
USE:	EXISTING..... OFFICE RETAIL, RESTAURANT PROPOSED..... UPPER STORY RESIDENTIAL/ MIXED USE, RETAIL, RESTAURANT, OFFICE GENERAL, OFFICE MEDICAL
SITE AREA:	77,683 SF (1.78 ACRES)
ROW DEDICATION:	2,998 SF (0.068 ACRES)
TOTAL SITE AREA:	74,685 SF (1.71 ACRES)

SEC. 3.6.2 AND 3.7.3: BULK AND LOT AREA REQUIREMENTS PER CG AND TO DISTRICT REGULATIONS

	REQUIRED		PROVIDED
	COMMERCIAL URBAN (SEC. 3.6.2)	TRANSITION OVERLAY* (SEC. 3.7.3)	
MIN. LOT AREA (SF)	30,000	N/A	77,683
**REQUIRED YARDS (FT.)			
FRONT AND SIDE (STREET)	N/A	10' MAX	±17
SIDE (INTERIOR)	N/A	N/A	45
REAR	N/A	N/A	±17
BUILD-TO LINE, (PERCENT)	50	50	
LOT WIDTH (FT.)	N/A	N/A	49'
HEIGHT, MAX. (STORIES/FEET)	5 STORIES/60	48 FT*	8 STORIES/94'
BUILDING COVERAGE, MAX. (%)	80	80	66
LOT COVERAGE, MAX. (%)	100	90	90
DENSITY, MAX	24 UNITS/ACRE	N/A	46.1 UNITS/ACRE*

\*SEE THIS SHEET FOR ZONING MODIFICATION REQUESTS  
\*\*PROPERTY IS NOT ADJACENT TO A RESIDENTIAL DISTRICT OUTSIDE THE TRANSITION OVERLAY DISTRICT BOUNDARIES

SOILS MAP



SCALE: 1" = 500'

SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL	HYDROLOGIC SOIL GROUP
105B	WHEATON GLENELG COMPLEX 2-7% SLOPES	GOOD	GOOD	HIGH	D
105C	WHEATON GLENELG COMPLEX 7-15% SLOPES	GOOD	GOOD	HIGH	D
101	URBAN LAND - GLENELG COMPLEX 2-7%	GOOD	FAIR	HIGH	D
95	URBAN LAND	N/A	N/A	N/A	NA
108B	WHEATON-SUMERDUCK COMPLEX	MARGINAL-W.B	POOR-W.S	MEDIUM	D
39B	GLENELG SILT LOAM	GOOD	GOOD	HIGH	B

REQUESTED SPECIAL USE PERMITS, SPECIAL EXCEPTIONS, WAIVERS AND MODIFICATIONS

REQUIREMENT	WAIVER/MODIFICATION
SPECIAL EXCEPTION	SE OF ZONING ORDINANCE SECTION 3.7.3.C.2 TO ALLOW INCREASE IN 48' MAX. BLDG HEIGHT IN TO DISTRICT
SPECIAL EXCEPTION	SE OF ZONING ORDINANCE SECTION 4.3.3 TO ALLOW A WAIVER OF THE REQUIREMENT TO PROVIDE VEHICULAR ACCESS TO TAX MAP 57-04-02-070
SPECIAL EXCEPTION	SE OF ZONING ORDINANCE SECTION 3.7.3.C.3 TO ALLOW A MODIFICATION FOR REQUIRED YARDS IN THE TO DISTRICT
SPECIAL EXCEPTION	SE OF ZONING ORDINANCE SECTION 3.6.2 TO ALLOW A MODIFICATION OF THE MAXIMUM PERMITTED DENSITY
SPECIAL EXCEPTION	SE OF ZONING ORDINANCE SECTION 4.4.4.1 TO MODIFY REQUIREMENT FOR SIDEWALKS ON BOTH SIDES OF A STREET
SPECIAL USE PERMIT	SUP OF ZONING ORDINANCE SECTION 3.3.1.B TO ALLOW A DRIVE-THROUGH FINANCIAL INSTITUTION

DEVELOPMENT PROGRAM

PROPOSED BUILDING DATA

MULTIFAMILY RESIDENTIAL:	210,472 GSF
BANK:	15,062 GSF
GENERAL OFFICE:	2,738 GSF
RETAIL/RESTAURANT:	10,024 GSF
MEDICAL OFFICE:	18,032 GSF

UNIT COUNT: UP TO 79 UNITS

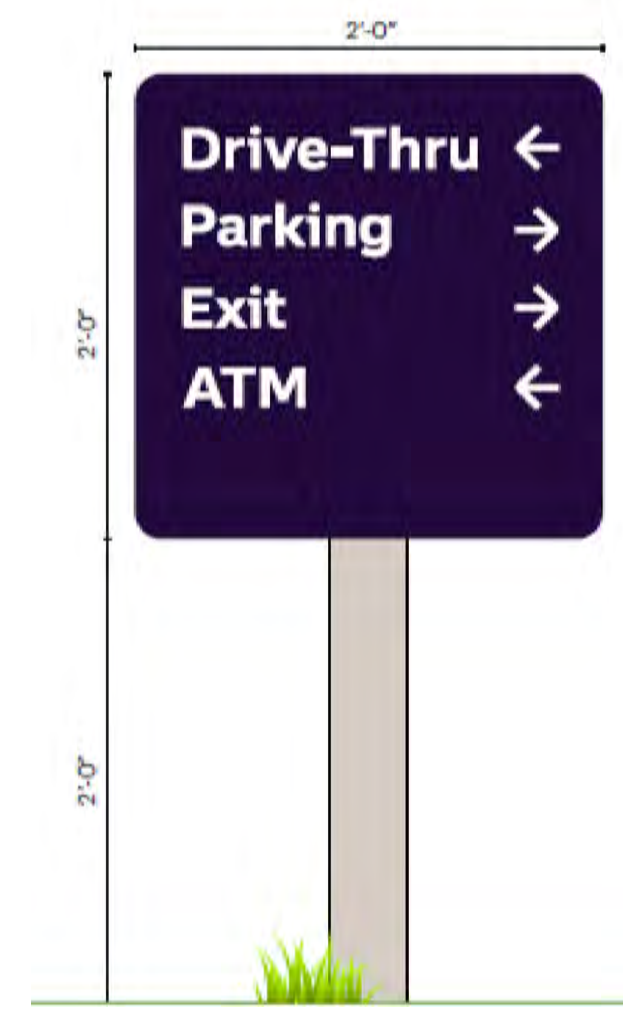
SEC. 4.2.3E: OFF-STREET PARKING AND LOADING (ENTIRE SITE)

OFF-STREET PARKING AND LOADING REQUIREMENTS PER CITY OF FAIRFAX ZONING ORDINANCE (SEC. 4.2.3E)

PARKING USE	RATE	REQUIRED	TO DISTRICT 50% PARKING REDUCTION FOR ALL USES	REQUIRED AFTER REDUCTIONS
RETAIL/RESTAURANT	1 SPACE/200 SF	50	25	25
GENERAL OFFICE (BANK)	2 SPACE/300 SF	119	60	60
MEDICAL OFFICE	1 SPACE/200 SF	90	45	45
UPPER STORY RESIDENTIAL/MIXED USE	1.5 SPACES/UNIT	119	-	119
<b>TOTAL PARKING REQUIRED</b>				<b>249</b>

LOADING USE	RATE	REQUIRED
UPPER STORY RESIDENTIAL/MIXED USE (4+ STORIES)	50+ UNITS	1
<b>TOTAL LOADING SPACES REQUIRED</b>		<b>1</b>



BANK WAYFINDING SIGN

POSSIBLE GREEN ROOF AMENITIES

GREEN ROOF AMENITY AREAS DELINEATED ON LEVELS 3 AND 7 MAY INCLUDE USEABLE AMENITY SPACE WITH HARDSCAPES, OUTDOOR FURNITURE, SHADE STRUCTURES, MOVEABLE PLANTERS, AND SIMILAR ENTITIES. THESE SPACES MAY ALSO CONTAIN VEGETATED AREAS WITH VARIOUS SOIL DEPTHS FOR EXTENSIVE, INTENSIVE, SEMI-INTENSIVE, OR A COMBINATION OF THESE VEGETATED AREA TYPES. ADDITIONALLY, THE ROOF ON LEVEL 7 MAY CONTAIN EXTENSIVE VEGETATED AREAS WITH SHALLOW SOIL SYSTEMS (i.e. SEDUM TRAYS).

ALL VEGETATED AREAS ON ANY LEVEL MAY BE USED TO TREAT STORMWATER, BUT SHALL NOT BE A REQUIRED COMPONENT OF THE STORMWATER MANAGEMENT SYSTEM AT TIME OF FINAL ENGINEERING.

THE GREEN ROOF AMENITY AREAS SHALL BE GENERALLY PROVIDED AS SHOWN HEREON, BUT LOCATIONS AND MINOR ADJUSTMENTS TO SIZES MAY BE REVISED AT TIME OF FINAL ENGINEERING.

LEGAL DESCRIPTION

**Overall Description of The Properties of Infinite Equity, LLC**  
Deed Book 23432 at Page 1808  
George and Georgia Volklin, Trustees  
Deed Book 20986 at Page 1676  
And  
Dana Ellen Smith, Trustee  
Deed Book 25158 at Page 906  
City of Fairfax, Virginia

Beginning at an iron pipe set on the southernmost corner of the land of 10533 Main Street LLC, as recorded in Deed Book 19552 at Page 485 among the land records of Fairfax County, Virginia. Said point also being in the line of the land of Fairfax County Board of Supervisors, as recorded in Deed Book 1631 at Page 196 among the land records of Fairfax County, Virginia; Thence departing the land of said Fairfax County Board of Supervisors and running with the land of said 10533 Main Street LLC;

North 18°29'39" East a distance of 170.49 feet to a drill hole set in the southerly right-of-way line of Main Street, Virginia State Route 236, a variable width right-of-way. Thence departing the land of said 10533 Main Street LLC and running with the southerly right-of-way line of said Main Street;

South 65°57'21" East a distance of 86.99 feet to an iron pipe set;

North 18°25'39" East a distance of 0.49 feet to a drill hole set;

123.36 feet along the arc of a curve to the right having a radius of 22875.00 feet and subtended by a chord bearing South 66°38'37" East a distance of 123.36 feet to a drill hole set;

South 66°29'21" East a distance of 31.35 feet to a drill hole set;

South 13°37'09" West a distance of 1.22 feet to an iron pipe set;

South 66°48'21" East a distance of 131.62 feet to an iron pipe set;

South 33°52'38" East a distance of 18.41 feet to an iron pipe found;

South 66°48'21" East a distance of 107.00 feet to an iron pipe found on a line of the land of the aforementioned Fairfax County Board of Supervisors; Thence departing the

southerly right-of-way line of said Main Street and running with the land of said Fairfax County Board of Supervisors;

South 21°21'39" West a distance of 141.88 feet to an iron pipe found;

North 68°30'21" West a distance of 486.74 feet to the point of beginning and containing an area of 77,683 square feet or 1.7833 acres, more or less.

Urban, Ltd. 4200-D Technology Court, Chantilly, Virginia 20151 PH 703.642.2306 FX 703.378.7888 www.urban-ld.com  
Arlundale, VA Chantilly, VA Winchester, VA Wilmington, NC

LEGEND:

- EXISTING STORM DRAIN STRUCTURE
- PROPOSED STORM DRAIN STRUCTURE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING TREE LINE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE PIPES
- PROPOSED PROPERTY LINE PIPES
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- EXISTING TRAFFIC POLE
- EXISTING SPOT ELEVATION
- PROP. SPOT ELEVATION
- EXISTING FENCE
- EXISTING LIGHTING
- PROPOSED LIGHTING
- EXISTING TREE
- PROPOSED TREE
- PROJECTED TRAFFIC COUNT (BASED ON 6TH ED. OF ITE TRIP GENERATION BOOK)
- EXISTING OVERHEAD WIRE
- PROP. FENCE

REVISIONS

No.	DATE	DESCRIPTION
01-18-22		
08-30-22		
04-20-23		

PLAN DATE: 01-18-22  
08-30-22  
04-20-23

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CHANTILLY, VA 20151  
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FX 703.378.7888  
www.urban-ld.com

Planner-Engineer-Landscape Architect-Land Surveyor

COMMONWEALTH OF VIRGINIA  
CLAYTON C. COOK  
Lic. No. 058790  
01/20/2025  
PROFESSIONAL ENGINEER

GENERAL NOTES & DETAILS  
CITY CENTRE WEST  
GENERAL DEVELOPMENT PLAN  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022  
SCALE: AS SHOWN  
CI: N/A

SHEET  
02  
OF  
50  
FILE No.  
RZ-13007

Urban, Ltd. - J:\JOBS\10523 Main Street\B-Engineering\Entitlement\CDP-FDP-SPEX\3007-02-02-NOTES.dwg [NOTES] April 20, 2023 - 1:02pm olim

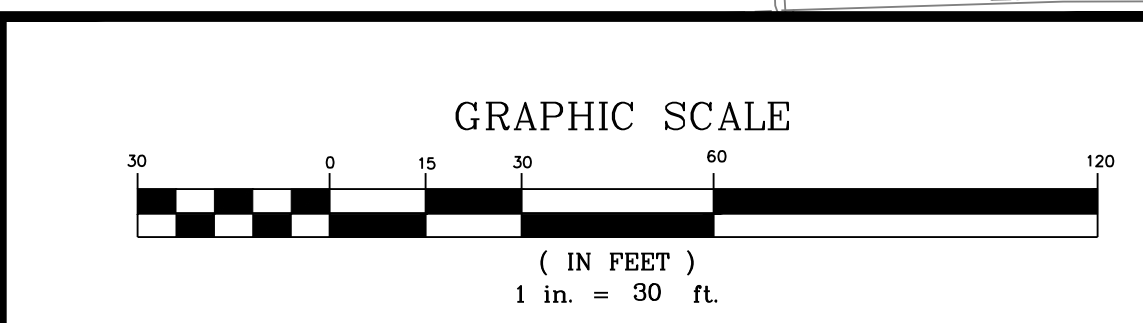
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**LEGEND:**  
 LIMITS OF CONSOLIDATED LOT

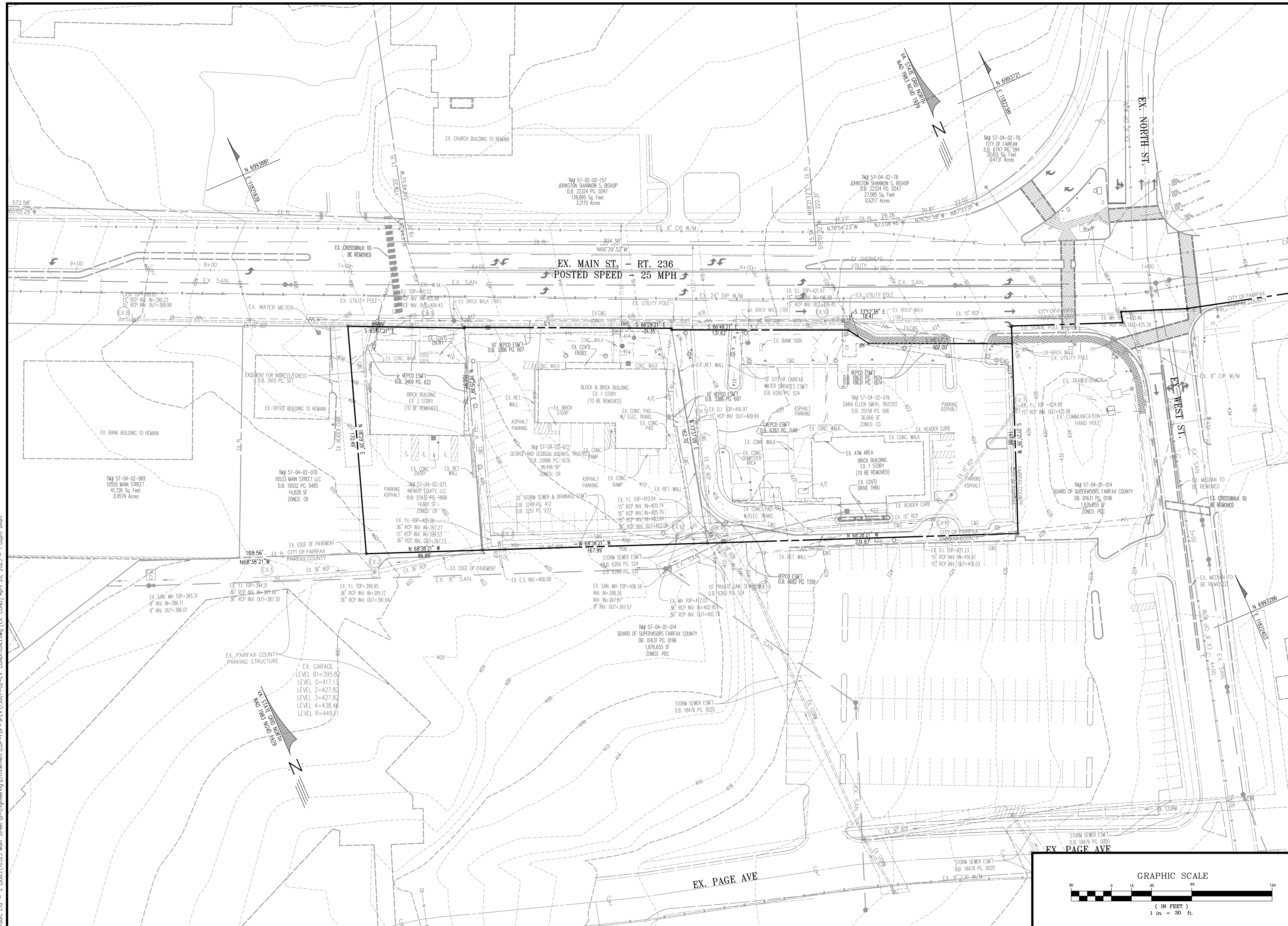
**PARCEL AREA SUMMARY:**

- 057-4-02-071 (CITY OF FAIRFAX)  
14,601 SQ.FT 0.34 ACRES
- 057-4-02-072 (CITY OF FAIRFAX)  
26,416 SQ.FT (OR 0.60 ACRES)
- 057-4-02-072 (CITY OF FAIRFAX)  
36,666 SQ.FT (OR 0.84 ACRES)

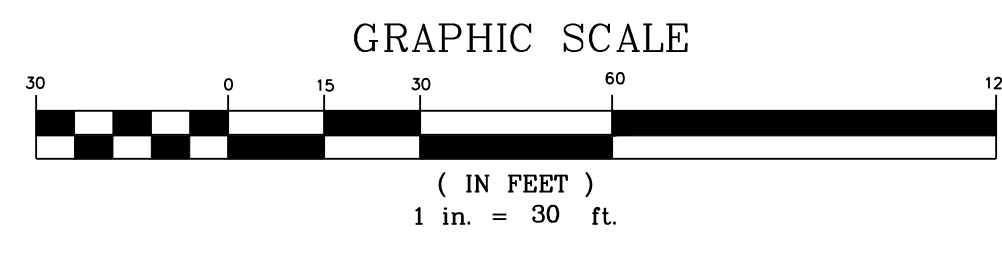


<p>PLAN DATE 01-18-22 08-30-23 04-20-23</p>		<p>DESCRIPTION REVISIONS</p>
<p>Urban, Ltd. 4900 D TECHNOLOGY CT. CHANTILLY, VA, 20151 PH: 703.528.8800 FAX: 703.528.8888 www.urban-lltd.com</p>		<p>No. DATE</p>
<p><b>urban</b> Planners-Engineers-Landscape Architects-Land Surveyors</p>		
<p>COMMONWEALTH OF VIRGINIA CLAYTON C. LOCK Lic. No. 086790 01/20/2025 PROFESSIONAL ENGINEER</p>		
<p><b>PROPERTY EXHIBIT</b> <b>CITY CENTRE WEST</b> <b>GENERAL DEVELOPMENT PLAN</b> SPECIAL USE PERMIT PLAT CITY OF FAIRFAX, VIRGINIA</p>		<p>DATE: JAN., 2022</p>
<p>SCALE: 1"=30'</p>		<p>C.I.=N/A</p>
<p>SHEET 03 OF 50</p>		
<p>FILE No. RZ-13007</p>		

Urban, Ltd. - J:\JOBS\10523 Main Street\B-Engineering\Entitlement\CDD-FDP-SPEX\3007-02-EX-CONDITIONS.dwg [EX. COND] April 20, 2023 - 1:02pm. aliam



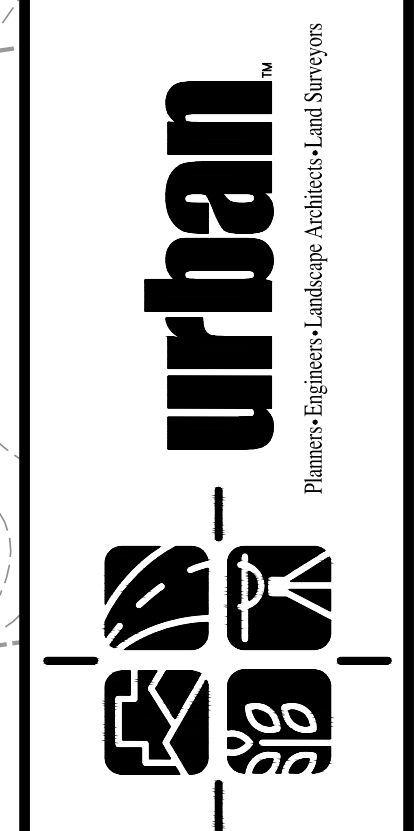
EX. MAIN ST. - RT. 236  
POSTED SPEED 25 MPH



No.	DATE	DESCRIPTION
01-18-22		
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PLAN DATE

Urban, Ltd.  
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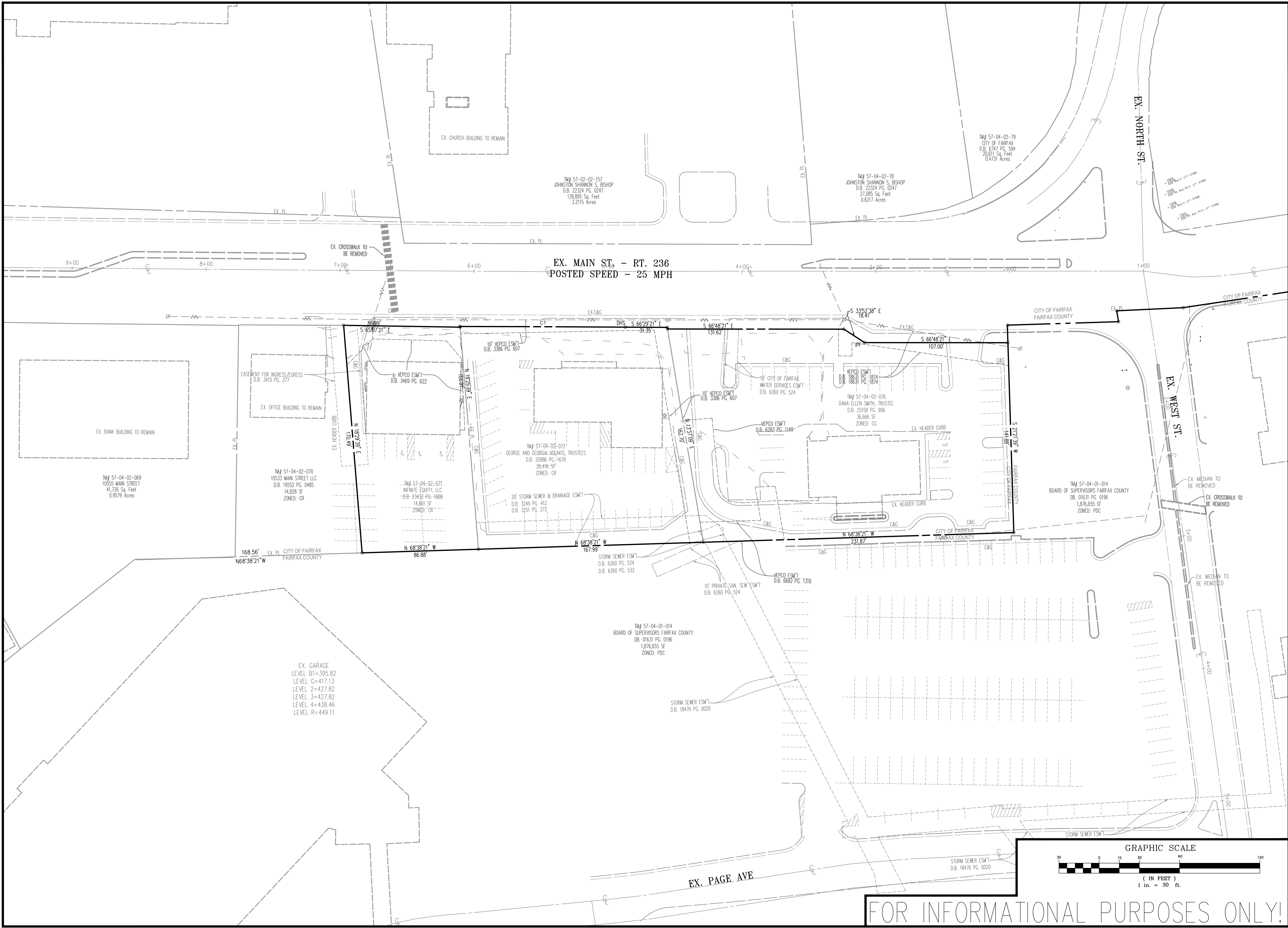


EXISTING CONDITIONS  
CITY CENTRE WEST  
GENERAL DEVELOPMENT PLAN  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA

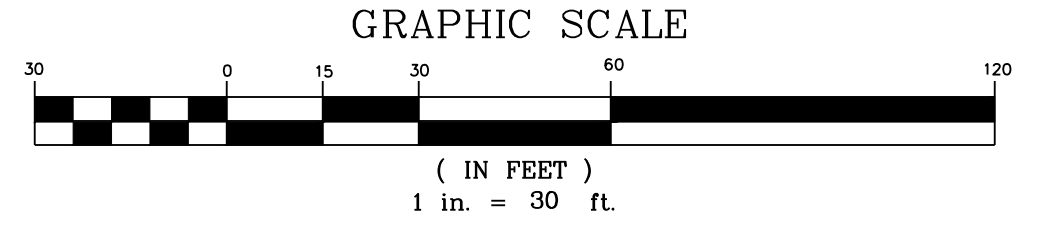
DATE: JAN., 2022  
SCALE: 1"=30'  
C.I.=2'

SHEET 04 OF 50  
FILE No. RZ-13007

Urban, Ltd. - J:\JOBS\10523 Main Street\B-Engineering\Entitlement\CDP-FDP-SPEX\3007-02-EX-CONDITIONS.dwg [EX. COND (2)] April 20, 2023 - 1:03pm aliam



EX. MAIN ST. - RT. 236  
POSTED SPEED - 25 MPH

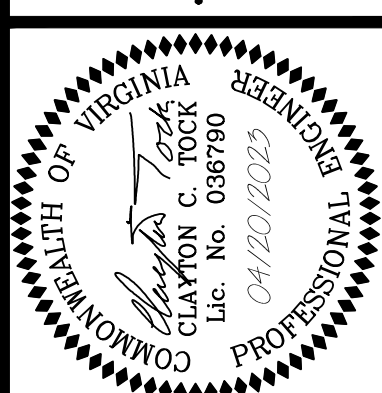
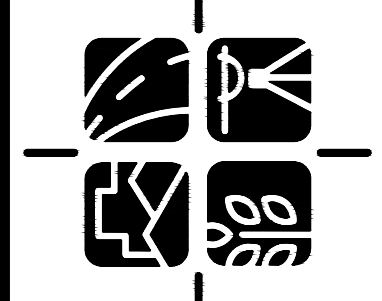


FOR INFORMATIONAL PURPOSES ONLY!

No.	DATE	DESCRIPTION

PLAN DATE
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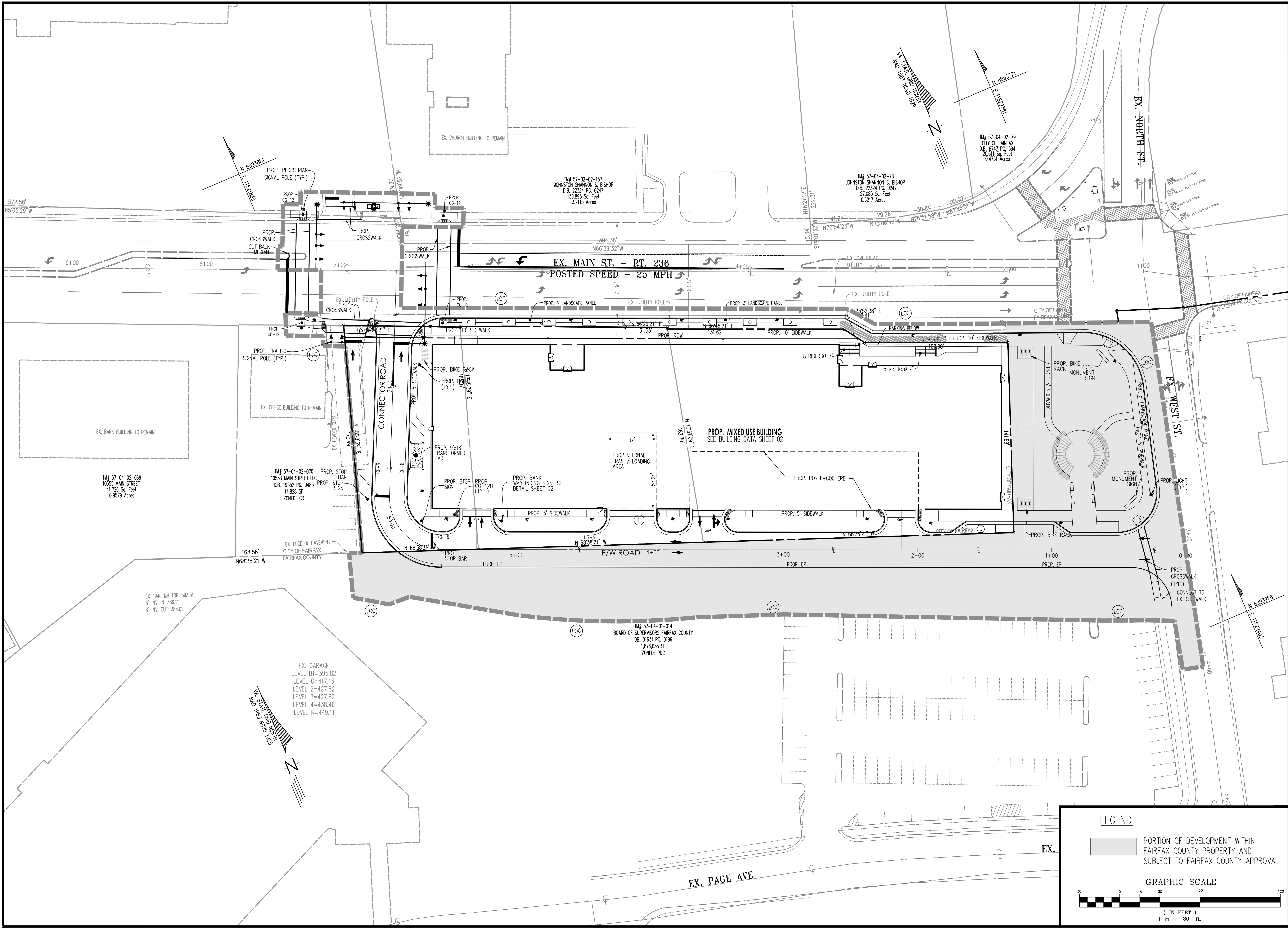


EXISTING CONDITIONS  
CITY CENTRE WEST  
GENERAL DEVELOPMENT PLAN  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA

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SHEET  
05  
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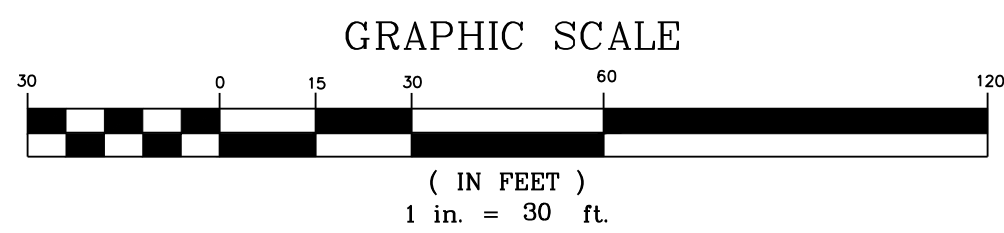
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EX. GARAGE  
LEVEL B1=395.82  
LEVEL G=417.13  
LEVEL 2=427.82  
LEVEL 3=427.82  
LEVEL 4=438.46  
LEVEL R=449.11

LEGEND

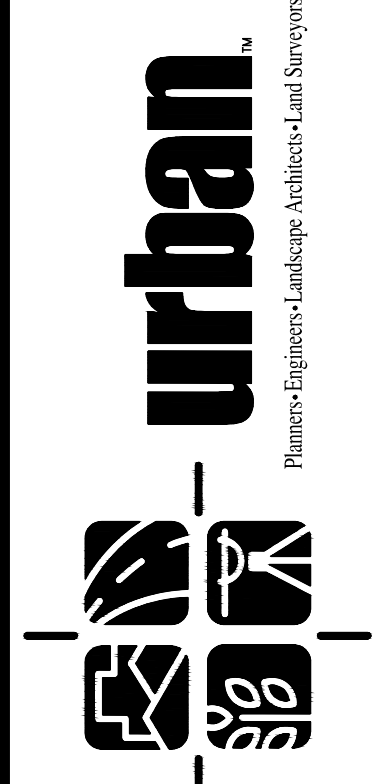
PORTION OF DEVELOPMENT WITHIN  
FAIRFAX COUNTY PROPERTY AND  
SUBJECT TO FAIRFAX COUNTY APPROVAL



No.	DATE	DESCRIPTION

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01-18-22
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04-20-23

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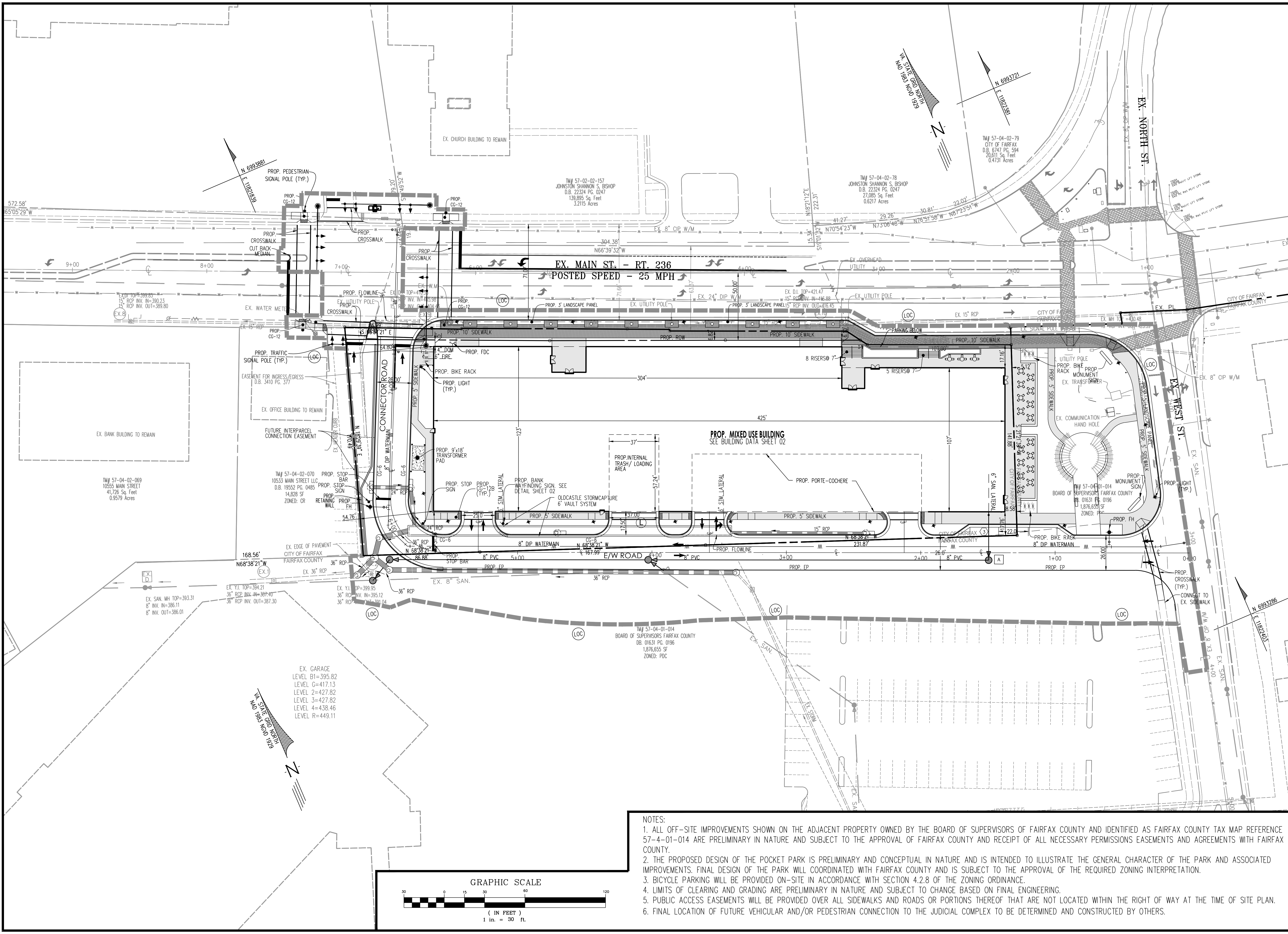


APPLICATION BOUNDARY EXHIBIT  
CITY CENTRE WEST  
GENERAL DEVELOPMENT PLAN  
SPECIAL USE PERMIT PLAN  
CITY OF FAIRFAX, VIRGINIA

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

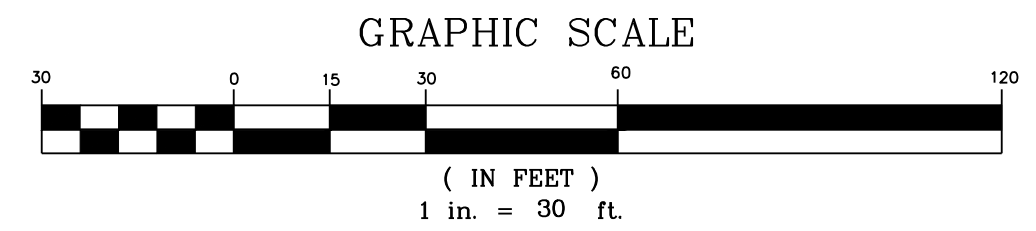
SHEET 06 OF 50  
FILE No. RZ-13007

Urban, Ltd. - J:\085\10523 Main Street\B-Engineering\Entitlement\CDP-FDP-SPEX\3007-03-GEOMETRY.dwg [Layout] April 20, 2023 - 1:03pm allom



EX. GARAGE  
LEVEL B1=395.82  
LEVEL G=417.13  
LEVEL 2=427.82  
LEVEL 3=427.82  
LEVEL 4=438.46  
LEVEL R=449.11

NOTES:  
1. ALL OFF-SITE IMPROVEMENTS SHOWN ON THE ADJACENT PROPERTY OWNED BY THE BOARD OF SUPERVISORS OF FAIRFAX COUNTY AND IDENTIFIED AS FAIRFAX COUNTY TAX MAP REFERENCE 57-4-01-014 ARE PRELIMINARY IN NATURE AND SUBJECT TO THE APPROVAL OF FAIRFAX COUNTY AND RECEIPT OF ALL NECESSARY PERMISSIONS EASEMENTS AND AGREEMENTS WITH FAIRFAX COUNTY.  
2. THE PROPOSED DESIGN OF THE POCKET PARK IS PRELIMINARY AND CONCEPTUAL IN NATURE AND IS INTENDED TO ILLUSTRATE THE GENERAL CHARACTER OF THE PARK AND ASSOCIATED IMPROVEMENTS. FINAL DESIGN OF THE PARK WILL COORDINATED WITH FAIRFAX COUNTY AND IS SUBJECT TO THE APPROVAL OF THE REQUIRED ZONING INTERPRETATION.  
3. BICYCLE PARKING WILL BE PROVIDED ON-SITE IN ACCORDANCE WITH SECTION 4.2.8 OF THE ZONING ORDINANCE.  
4. LIMITS OF CLEARING AND GRADING ARE PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL ENGINEERING.  
5. PUBLIC ACCESS EASEMENTS WILL BE PROVIDED OVER ALL SIDEWALKS AND ROADS OR PORTIONS THEREOF THAT ARE NOT LOCATED WITHIN THE RIGHT OF WAY AT THE TIME OF SITE PLAN.  
6. FINAL LOCATION OF FUTURE VEHICULAR AND/OR PEDESTRIAN CONNECTION TO THE JUDICIAL COMPLEX TO BE DETERMINED AND CONSTRUCTED BY OTHERS.



GENERAL DEVELOPMENT PLAN - SUP. PLAN  
**CITY CENTRE WEST**  
**GENERAL DEVELOPMENT PLAN**  
 SPECIAL USE PERMIT PLAN  
 CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022  
 SCALE: 1"=30'  
 C.I.=N/A

Urban, Ltd.  
 4900 D TECHNOLOGY CT.  
 CHANTILLY, VA, 20151  
 TEL: 703.528.8800  
 FAX: 703.528.8888  
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Planners-Engineers-Landscape Architects-Land Surveyors

COMMISSION OF THE COMMONWEALTH OF VIRGINIA  
 CLAYTON C. LOCK  
 Lic. No. 086790  
 01/20/2025  
 PROFESSIONAL ENGINEER

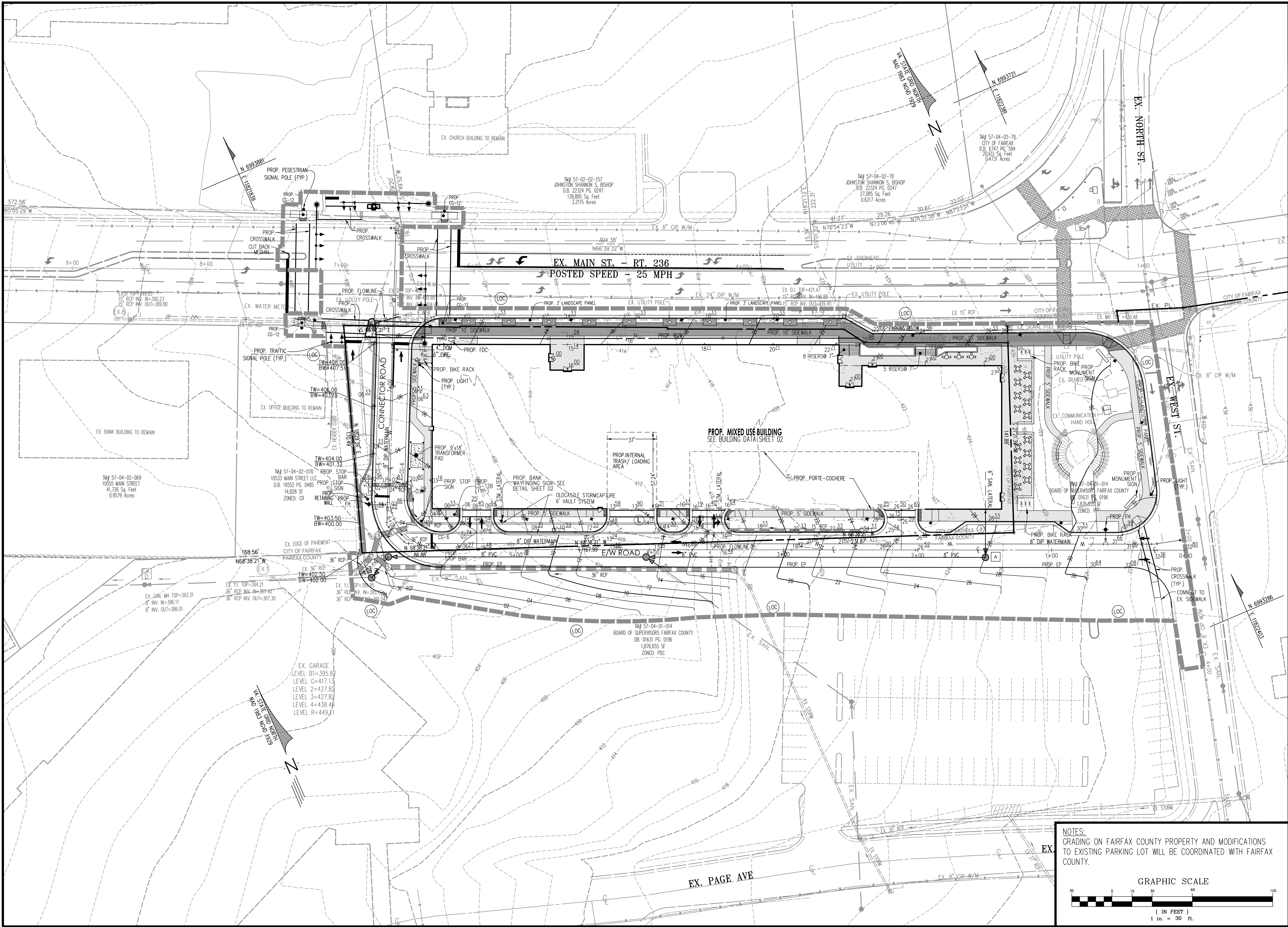
PLN DATE	DESCRIPTION
01-18-22	
08-30-22	
04-20-23	

No.	DATE	DESCRIPTION

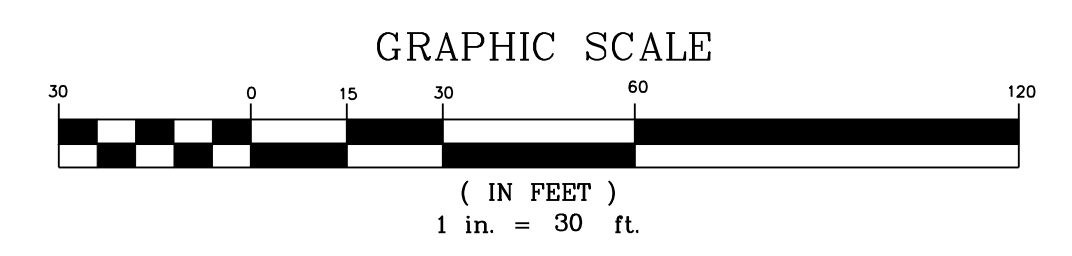
REVISIONS

SHEET  
 07  
 OF  
 50  
 FILE No.  
 RZ-13007

Urban, Ltd. - J:\085\10523 Main Street\B-Engineering\Entitlement\CDP-FDP-SPEX\3007-03-CRADING.dwg [Layout] April 20, 2023 - 1:04pm aliam



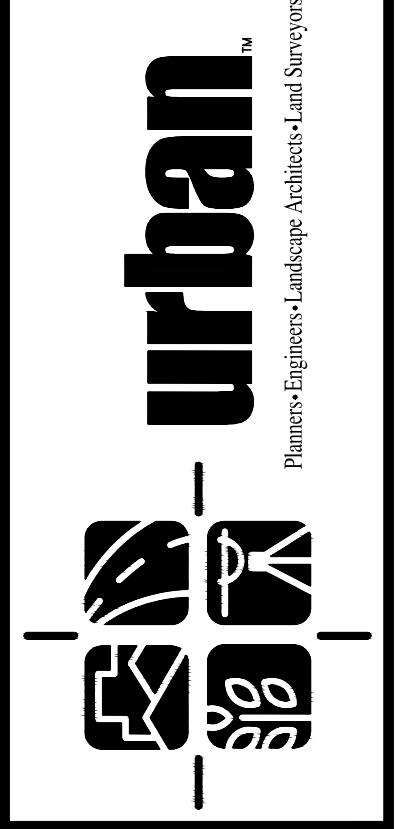
NOTES:  
GRADING ON FAIRFAX COUNTY PROPERTY AND MODIFICATIONS TO EXISTING PARKING LOT WILL BE COORDINATED WITH FAIRFAX COUNTY.



NO.	DATE	DESCRIPTION

PLAN DATE	01-18-22
	08-30-23
	04-20-23

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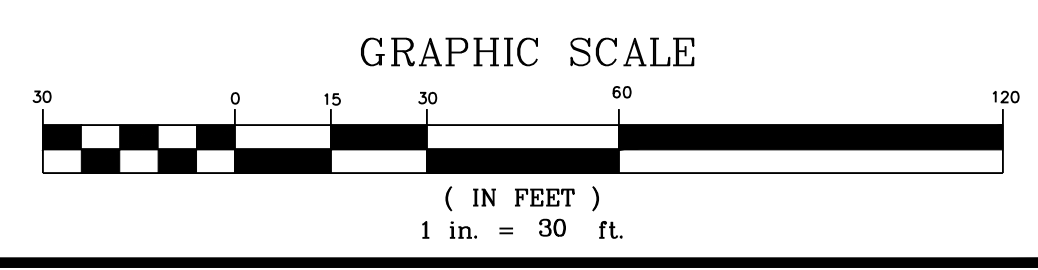
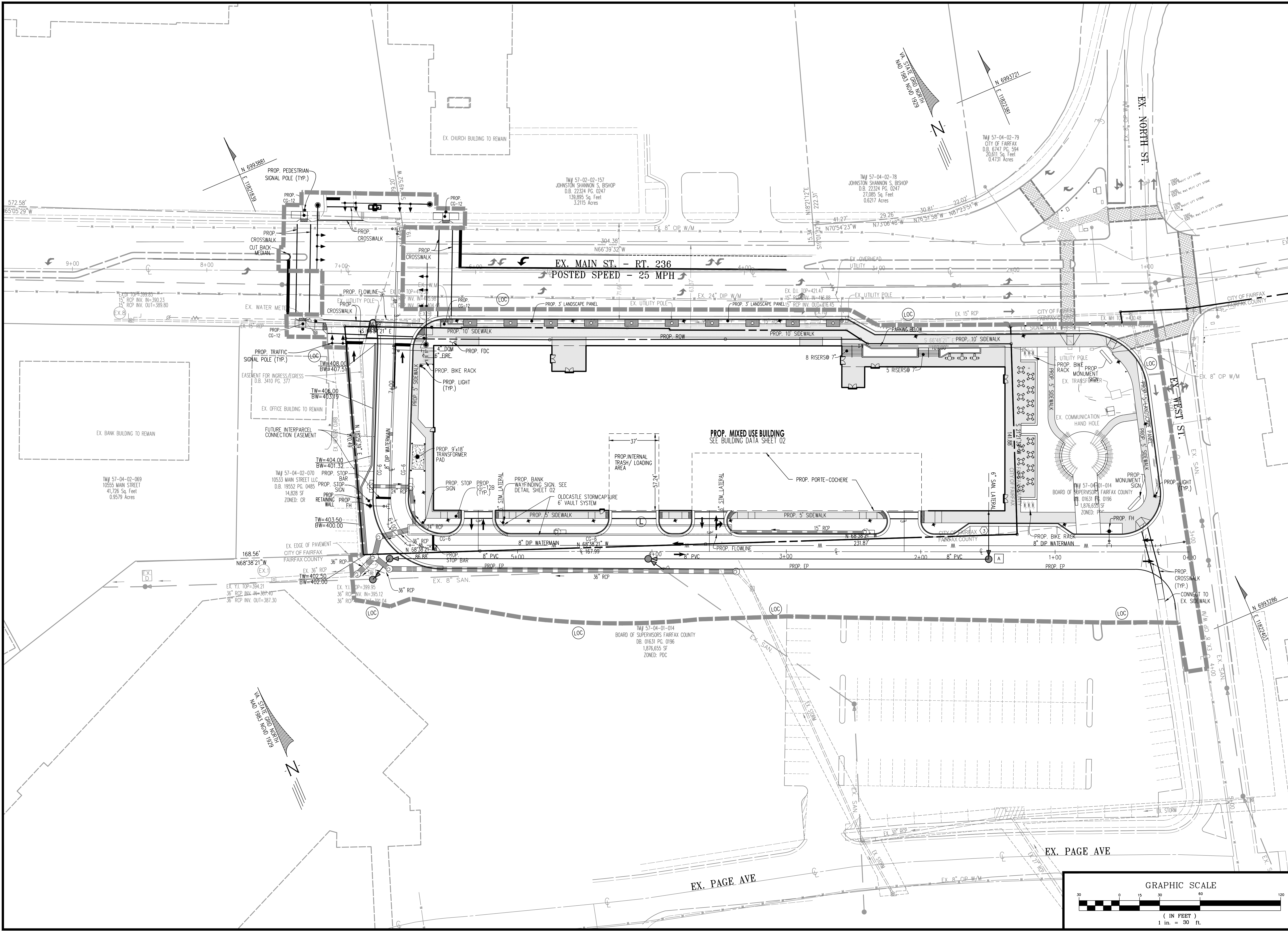
COMMONWEALTH OF VIRGINIA  
CLAYTON C. LOCKE  
Lic. No. 068790  
04/20/2025  
PROFESSIONAL ENGINEER

GRADING PLAN  
**CITY CENTRE WEST**  
**GENERAL DEVELOPMENT PLAN**  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA  
DATE: JAN., 2022  
SCALE: 1"=30'  
C.I.= 2'

SHEET 08 OF 50  
FILE No. RZ-13007



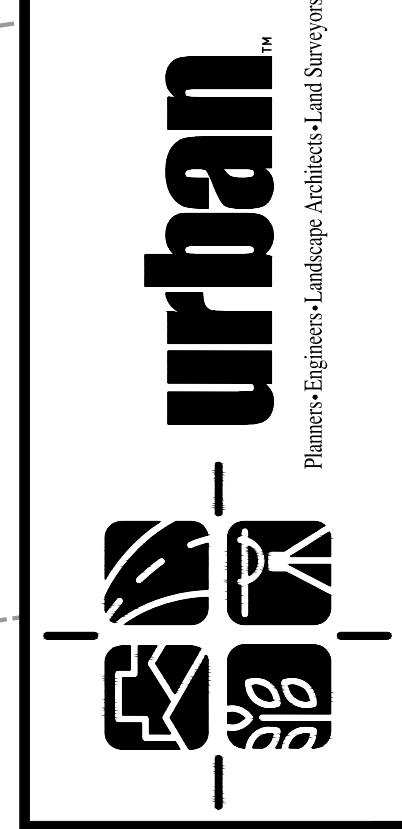
Urban, Ltd. - J:\JOBS\10523 Main Street\B-Engineering\Entitlement\CDP-FDP-SPEX\3007-08-UTILITY.dwg [UTILITY] April 20, 2023 - 1:04pm aliam



No.	DATE	DESCRIPTION

PLAN DATE
01-18-22
08-30-23
04-20-23

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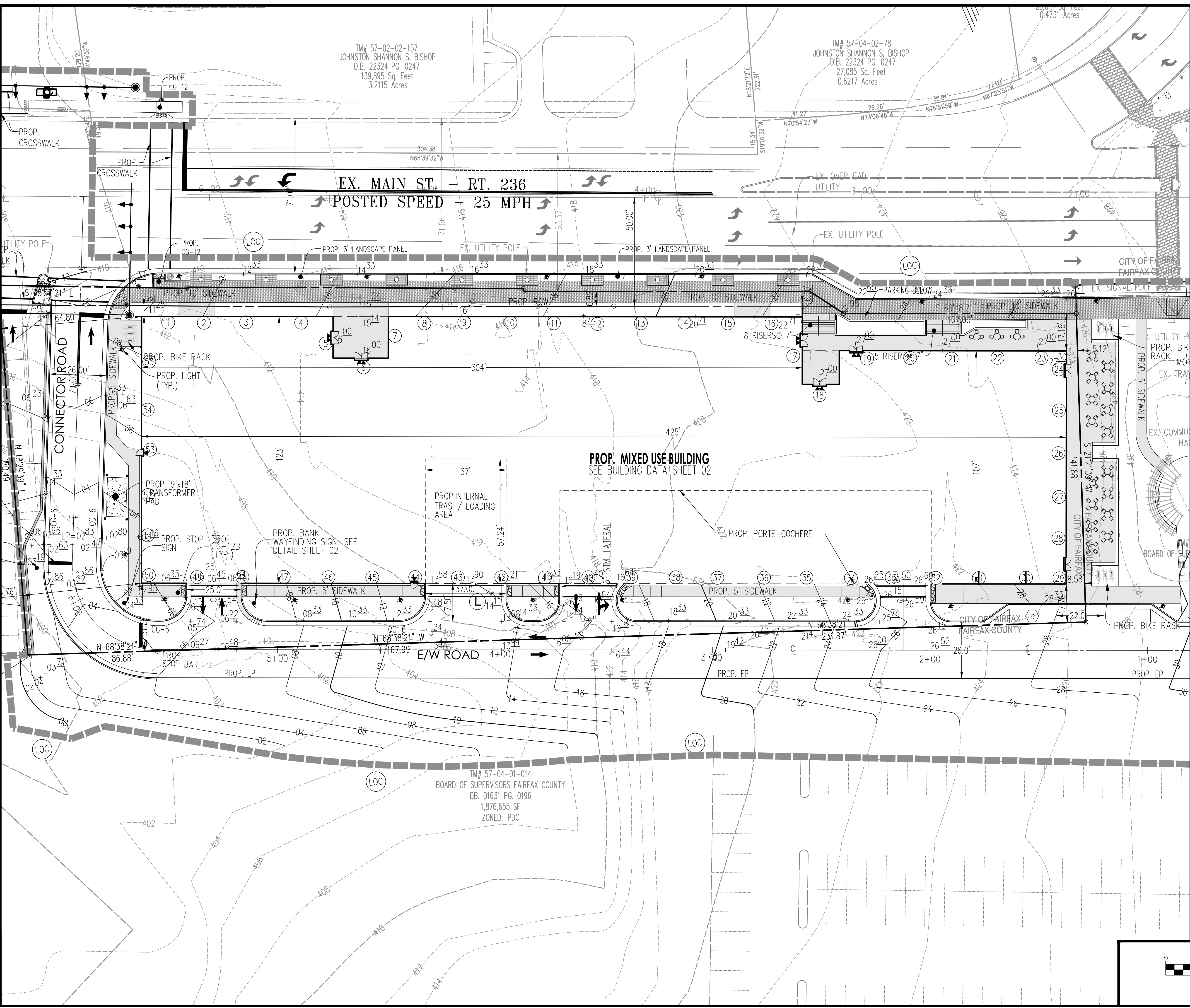


CONCEPTUAL UTILITY PLAN  
CITY CENTRE WEST  
GENERAL DEVELOPMENT PLAN  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022  
C.I. = N/A

SCALE: 1"=30'  
SHEET 09 OF 50  
FILE No. RZ-13007

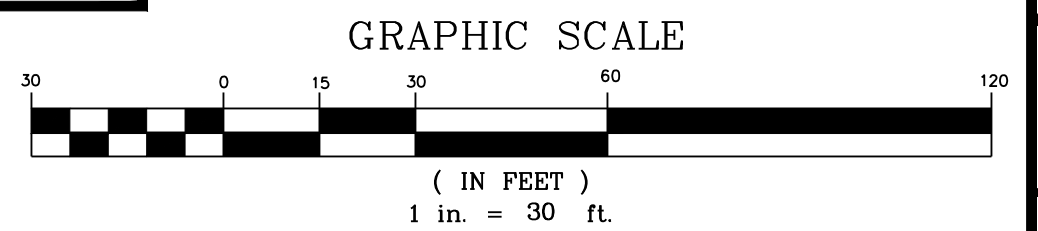
Urban, Ltd. - J:\0523 Main Street\B-Engineering\Entitlement\COP-FDP-SPEX\13007-42-AVERAGE GRADE.dwg [Average Exhibit] April 20, 2023 - 1:04pm ailm



AVERAGE GRADE CALCULATION

SPOT #	City Center West	
	Existing ELEVATION (ft)	Proposed ELEVATION (ft)
1	412.00	411.09
2	412.00	412.00
3	412.27	412.78
4	412.82	413.74
5	414.00	416.00
6	414.00	416.00
7	414.00	416.00
8	414.00	416.13
9	414.00	416.76
10	414.00	417.49
11	417.46	418.19
12	419.12	418.96
13	420.00	419.75
14	420.78	420.54
15	421.50	421.34
16	422.00	422.18
17	422.00	425.39
18	422.00	427.00
19	422.46	427.00
20	423.12	427.00
21	423.76	427.00
22	424.49	427.00
23	425.20	427.00
24	425.35	427.38
25	425.20	427.55
26	425.06	427.71
27	424.95	427.89
28	424.82	428.07
29	424.64	428.23
30	423.63	428.06
31	422.11	427.29
32	422.00	426.43
33	422.00	425.56
34	422.00	424.73
35	422.00	423.70
36	422.00	422.17
37	420.95	420.58
38	420.00	419.20
39	418.70	417.86
40	418.00	417.08
41	411.90	416.31
42	411.34	415.00
43	410.78	413.65
44	410.22	412.79
45	409.43	411.83
46	408.48	409.87
47	407.23	407.93
48	406.00	406.79
49	404.11	406.25
50	402.00	405.19
51	402.69	403.16
52	403.31	404.56
53	404.00	405.68
54	406.90	406.66
55	409.99	407.82
AVERAGE	416.52	418.35

NOTE: AVERAGE GRADE TAKEN EVERY 20 FEET AROUND THE BUILDING STARTING AT POINT ①.



REVISIONS

NO.	DATE	DESCRIPTION

PLAN DATE: 01-18-22  
08-19-22  
09-20-23

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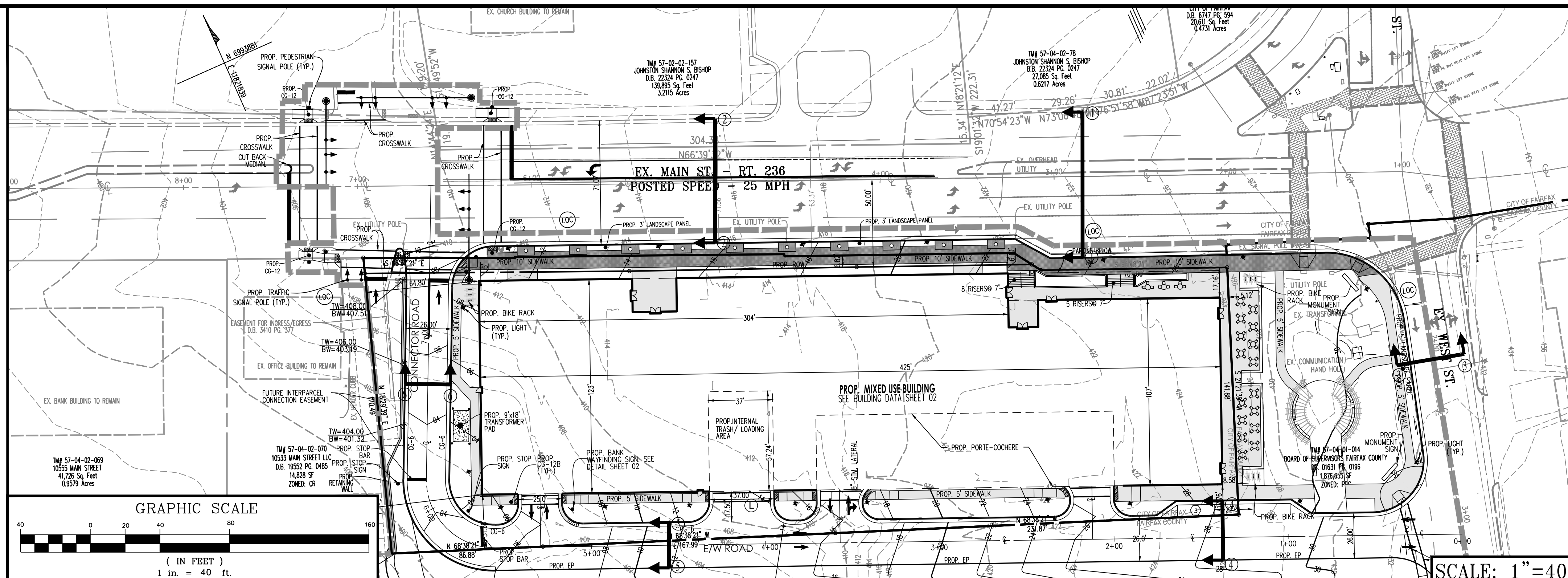
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**AVERAGE GRADE EXHIBIT**  
**CITY CENTRE WEST**  
**GENERAL DEVELOPMENT PLAN**  
 SPECIAL USE PERMIT PLAN  
 CITY OF FAIRFAX, VIRGINIA

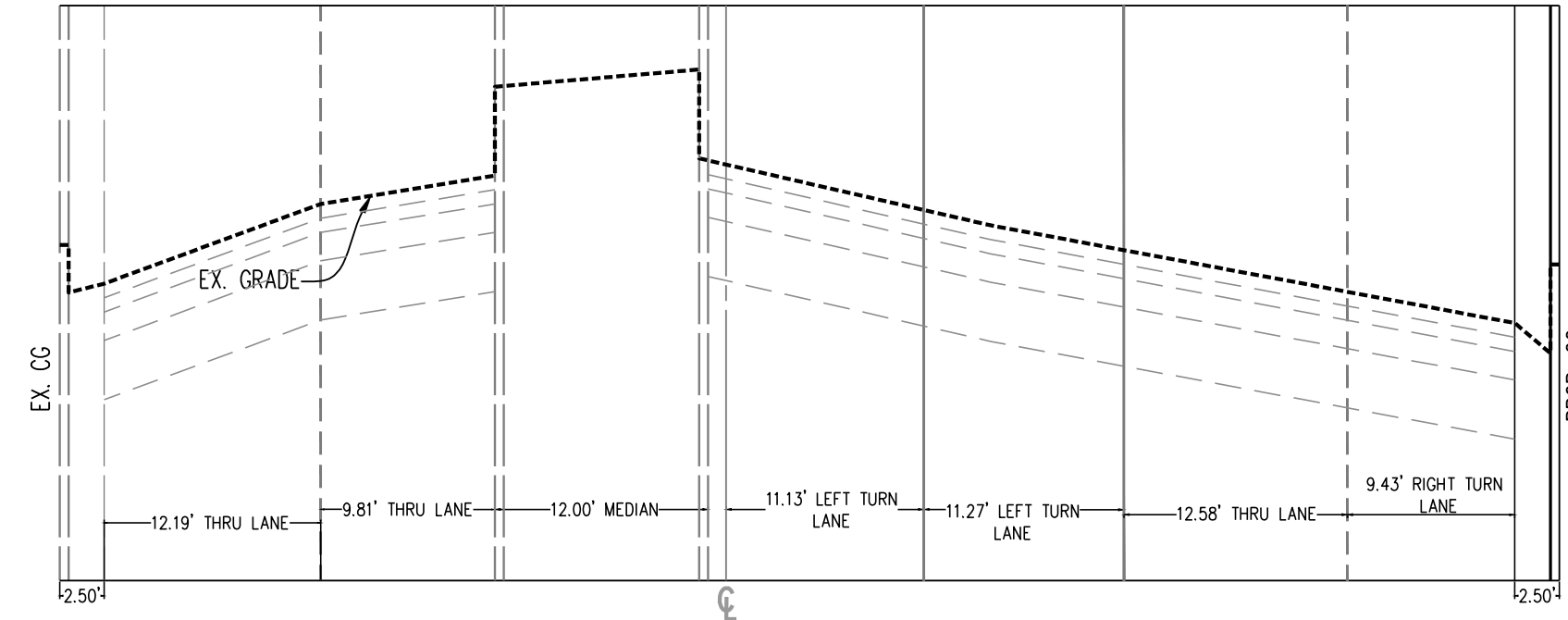
DATE: JAN., 2022  
SCALE: 1"=20'  
C.I.=2'

SHEET  
10  
OF  
50

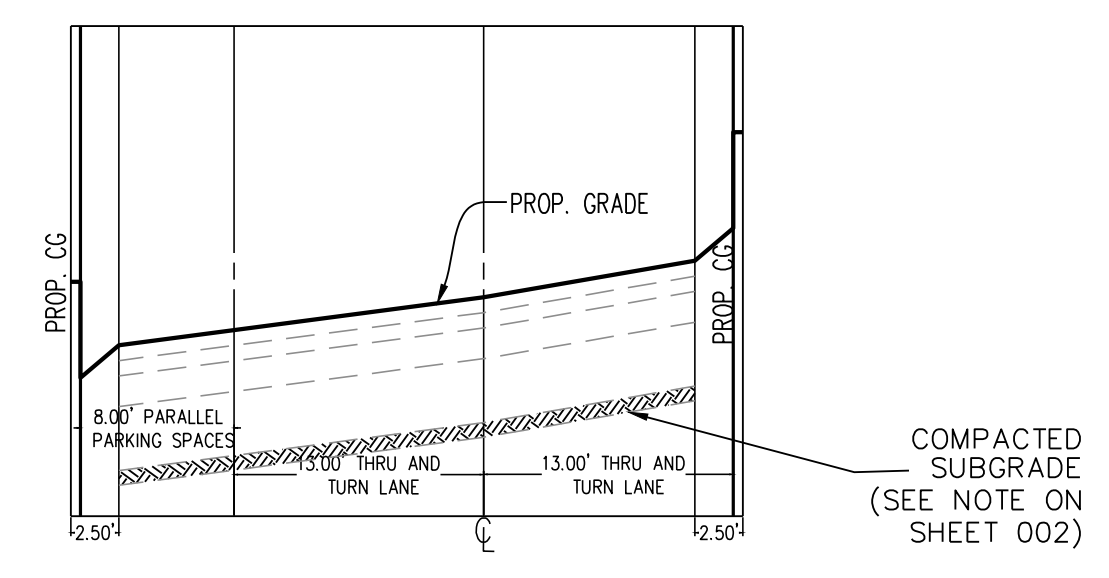
FILE No.  
RZ-13007



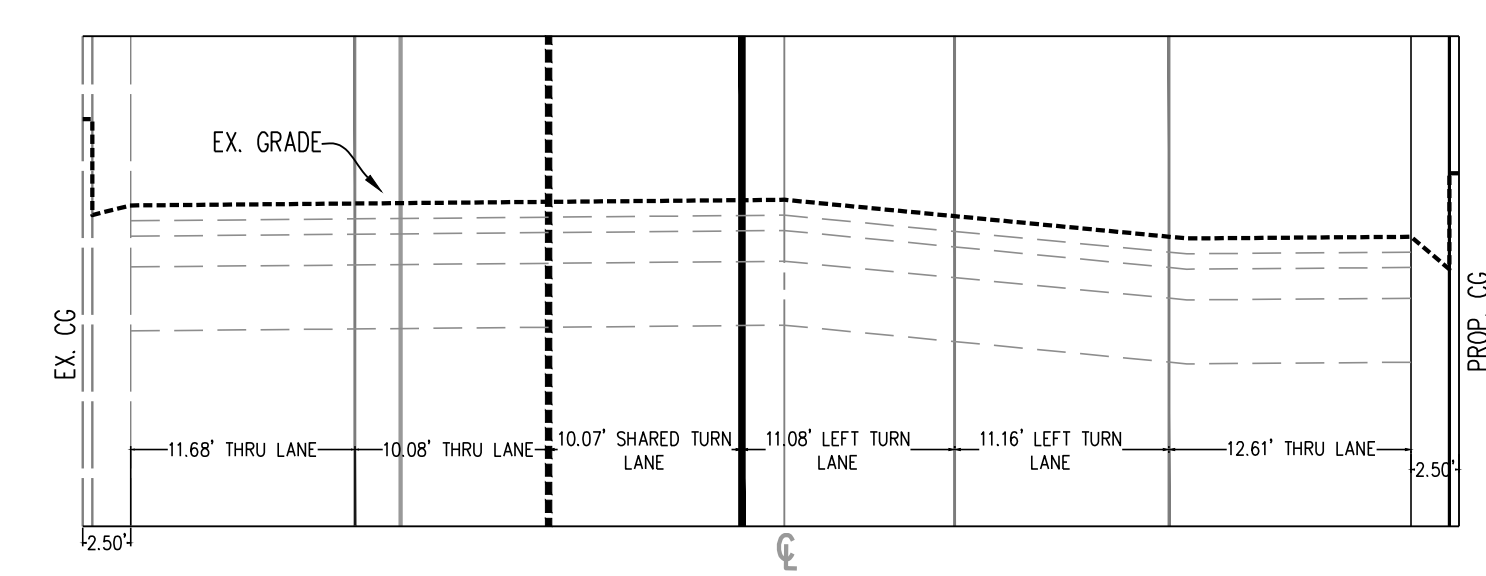
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EX. MAIN STREET ROUTE 236  
(STA 1+20.91 TO STA 3+24.25)  
N.T.S.



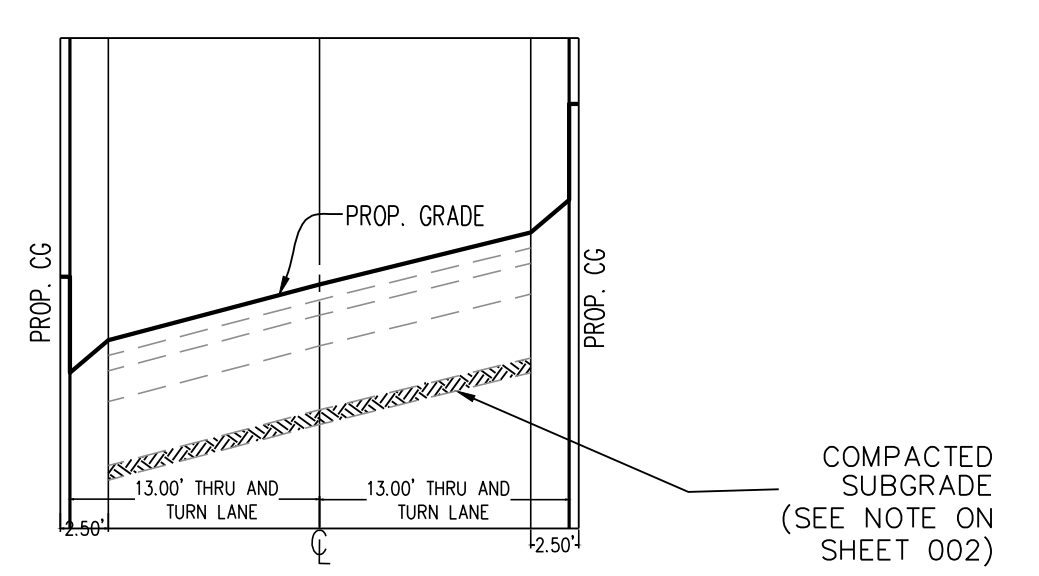
TYPICAL SECTION 4  
PROP. E/W ROAD  
(STA 0+27.45 TO STA 3+6.02)  
N.T.S.



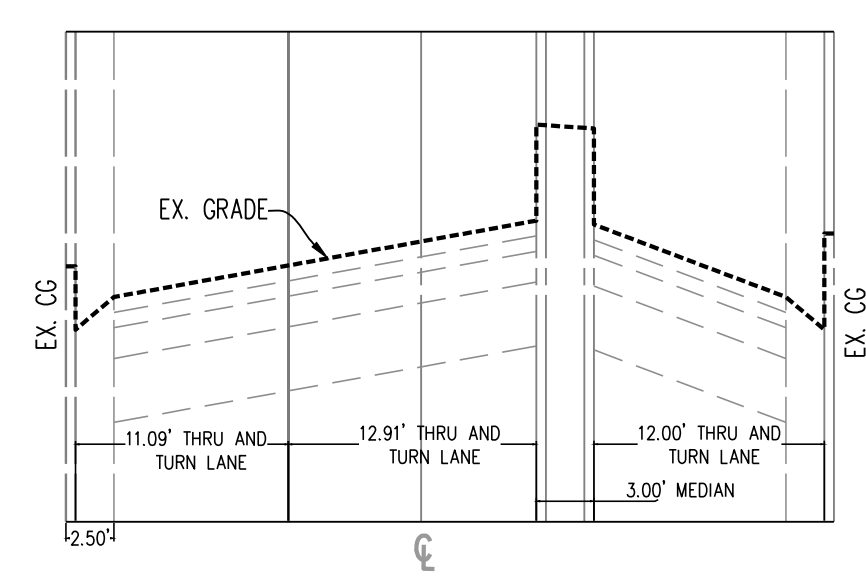
TYPICAL SECTION 2  
EX. MAIN STREET ROUTE 236  
(STA 3+24.25 TO STA 6+57.96)  
N.T.S.



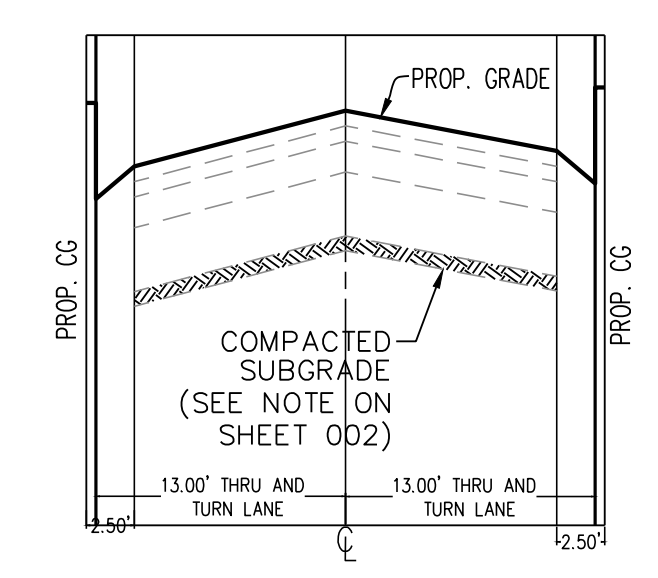
TYPICAL SECTION 5  
PROP. E/W ROAD  
(STA 3+6.02 TO STA 5+95.55)  
N.T.S.



TYPICAL SECTION 3  
EX. WEST STREET  
(STA 1+39.47 TO STA 5+00)  
N.T.S.



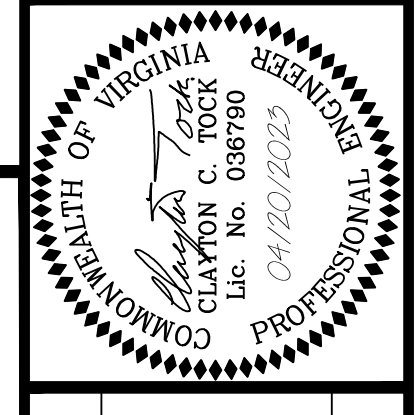
TYPICAL SECTION 6  
PROP. CONNECTOR ROAD  
(STA 5+95.55 TO STA 7+70.26)  
N.T.S.



PLAN DATE	DESCRIPTION
01-18-22	
08-30-22	
04-20-23	

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ROAD TYPICAL SECTIONS

**CITY CENTRE WEST**

**GENERAL DEVELOPMENT PLAN**

SPECIAL USE PERMIT PLAT

CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022

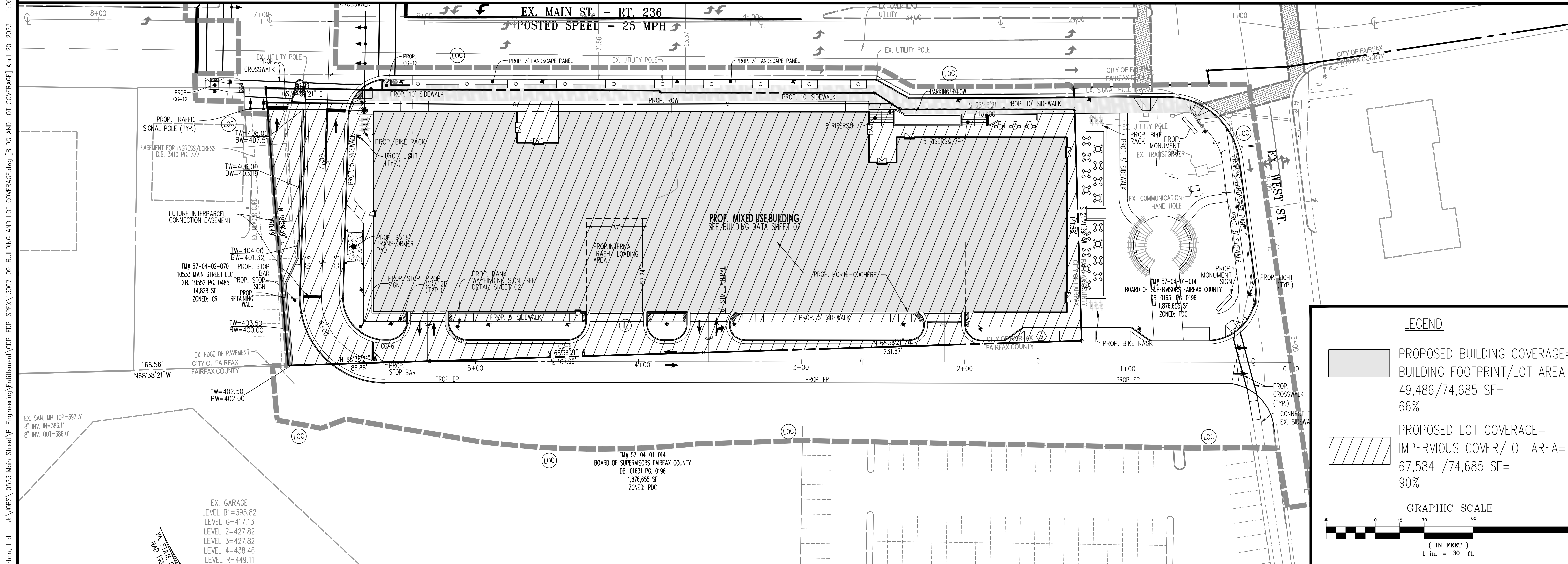
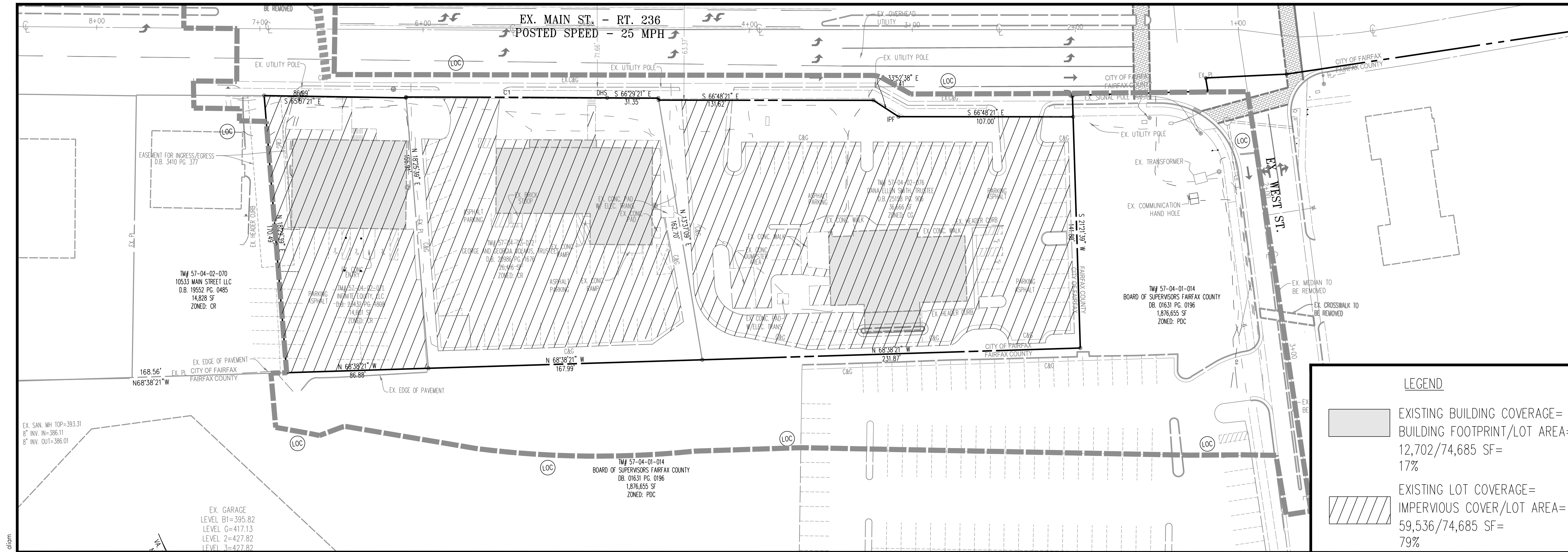
SCALE: AS NOTED

CI.= N/A

SHEET 11 OF 50

FILE No. RZ-13007

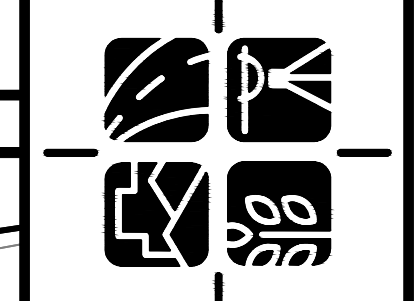
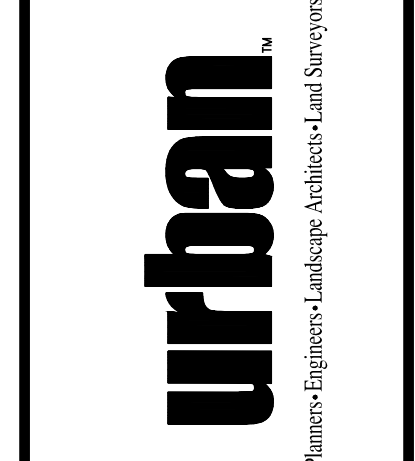
Urban, Ltd. - J:\085\10523 Main Street\B-Engineering\Entitlement\CDP-FDP-SPEX\13007-09-BUILDING AND LOT COVERAGE.dwg [BLDC AND LOT COVERAGE] April 20, 2023 - 1:05pm aliam



No.	DATE	DESCRIPTION

PLAN DATE  
01-18-22  
08-30-23  
04-20-23

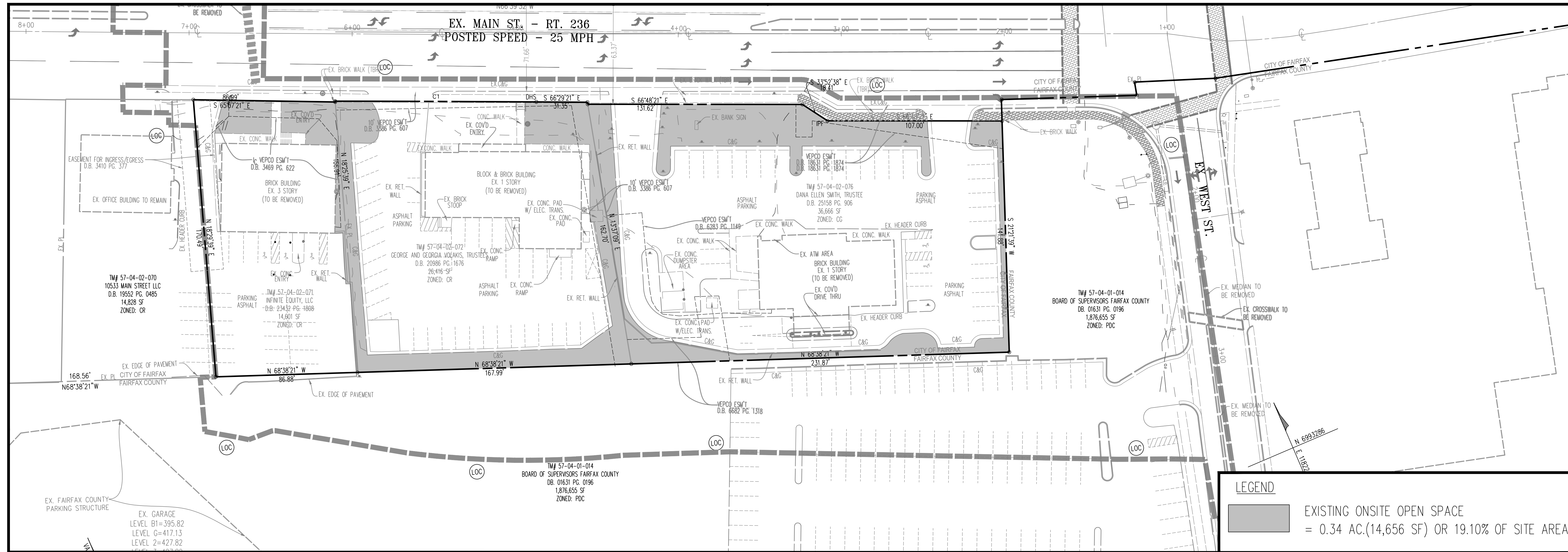
Urban, Ltd.  
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CHANTILLY, VA 20151  
TEL: 703.578.8800  
FAX: 703.578.8888  
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COMMONWEALTH OF VIRGINIA  
CLAYTON C. TOOKER  
Lic. No. 086790  
04/20/2023  
PROFESSIONAL ENGINEER

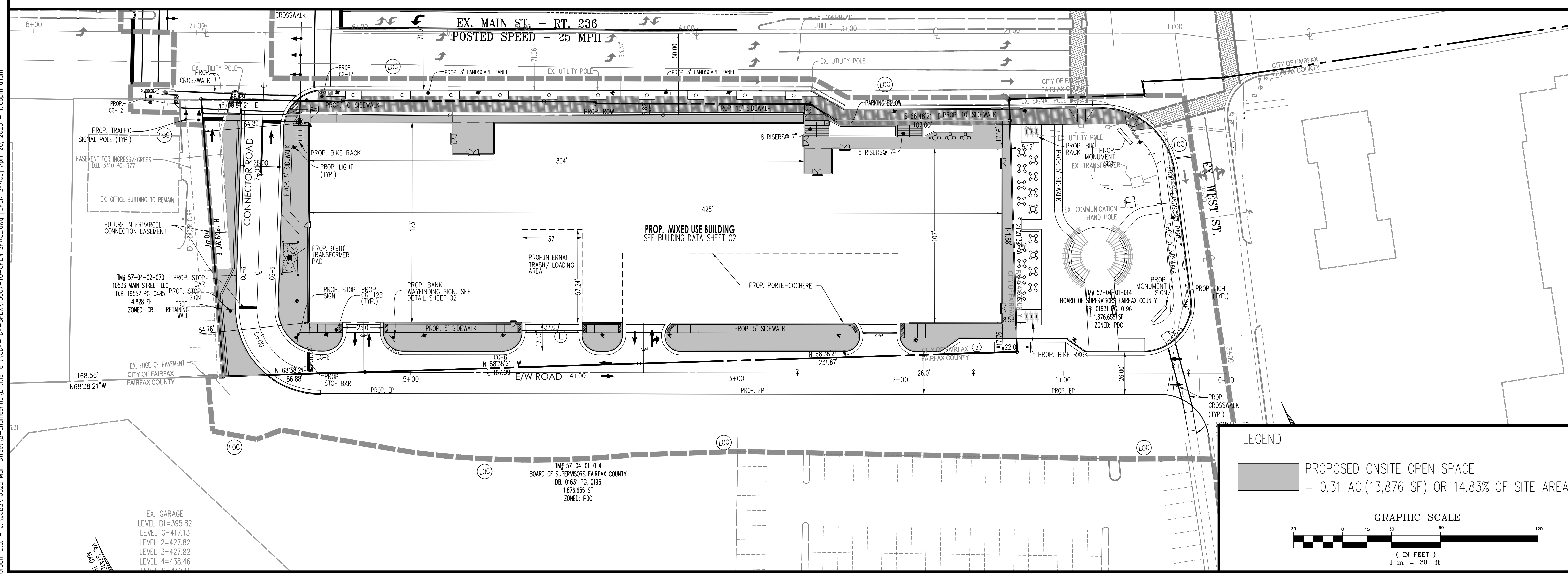
**BUILDING AND LOT COVERAGE EXHIBIT**  
**CITY CENTRE WEST**  
**GENERAL DEVELOPMENT PLAN**  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA  
DATE: JAN., 2022  
SCALE: 1"=30'  
C.I.=N/A

SHEET  
12  
OF  
50  
FILE No.  
RZ-13007



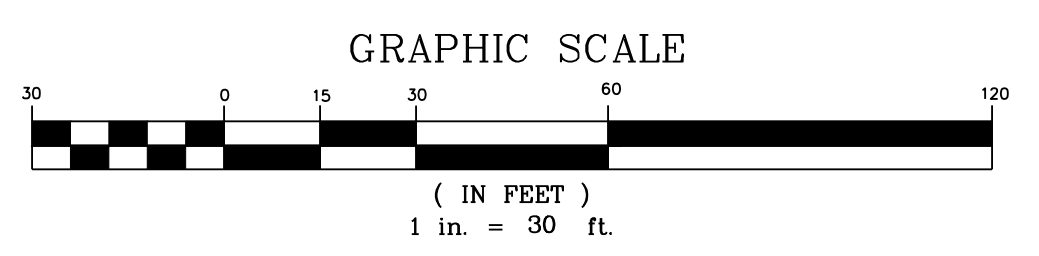
**LEGEND**

EXISTING ONSITE OPEN SPACE  
= 0.34 AC.(14,656 SF) OR 19.10% OF SITE AREA



**LEGEND**

PROPOSED ONSITE OPEN SPACE  
= 0.31 AC.(13,876 SF) OR 14.83% OF SITE AREA

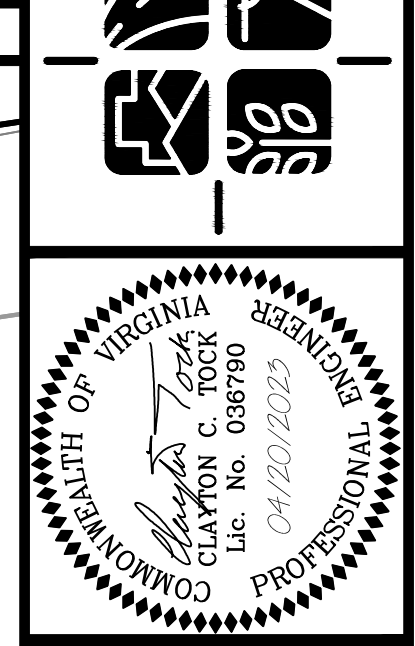


No.	DATE	DESCRIPTION
01-18-22		
08-30-23		
04-20-23		

PLAN DATE

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OPEN SPACE PLAN

**CITY CENTRE WEST**

**GENERAL DEVELOPMENT PLAN**

SPECIAL USE PERMIT PLAT

CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022

SCALE: 1"=30'

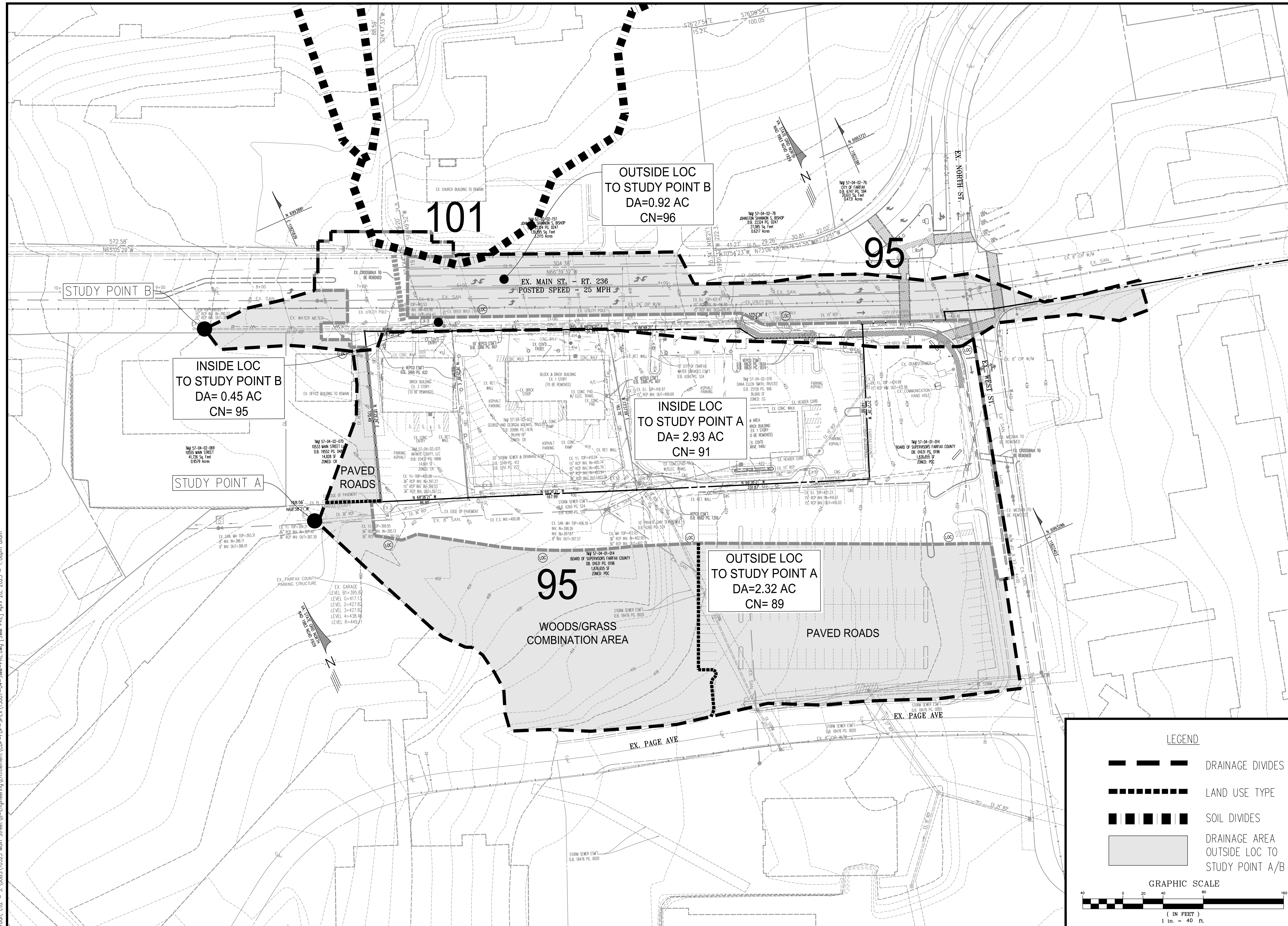
CI-L-N/A

SHEET 13 OF 50

FILE No. RZ-13007

Urban, Ltd. - J:\055\10523 Main Street\05-Engineering\Entitlement\CDP-FDP-SPEX\13007-10-OPEN SPACE.dwg [OPEN SPACE] April 20, 2023 - 1:06pm aliam

Urban, Ltd. - J:\JOBS\10523 Main Street\B-Engineering\Entitlement\CDD-FDP-SPEX\3007-04-SWM-PRE.dwg [SWM PRE] April 20, 2023 - 1:06pm aliam



**LEGEND**

- DRAINAGE DIVIDES
- LAND USE TYPE
- SOIL DIVIDES
- DRAINAGE AREA OUTSIDE LOC TO STUDY POINT A/B

**GRAPHIC SCALE**

( IN FEET )  
1 in. = 40 ft.

<p>Urban, Ltd. 4900 D TECHNOLOGY CT. CHANTILLY, VA 20151 TEL: 703.528.8888 FAX: 703.528.8888 www.urban-lltd.com</p> <p><b>urban</b> Planners-Engineers-Landscape Architects-Land Surveyors</p>	<p>PLAN DATE 01-18-22 08-30-22 04-20-23</p> <p>Urban, Ltd. 4900 D TECHNOLOGY CT. CHANTILLY, VA 20151 TEL: 703.528.8888 FAX: 703.528.8888 www.urban-lltd.com</p> <p><b>urban</b> Planners-Engineers-Landscape Architects-Land Surveyors</p> <p>COMMITTEE OF VIRGINIA Landscape Architects Lic. No. 016790 01/20/2025</p> <p><b>CITY CENTRE WEST GENERAL DEVELOPMENT PLAN SPECIAL USE PERMIT PLAT</b> CITY OF FAIRFAX, VIRGINIA</p> <p>DATE: JAN., 2022</p> <p>SCALE: 1"=40' C.I.=2'</p> <p>SHEET 14 OF 50</p> <p>FILE No. RZ-13007</p>
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STUDY POINT A  
PRE DEVELOPMENT WITHIN LOC CURVE NUMBERS

Area (ac)	CN	Description
1.850	98	Paved parking, HSG D
1.080	80	>75% Grass cover, Good, HSG D
2.930	91	Weighted Average
1.080		36.86% Pervious Area
1.850		63.14% Impervious Area

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

PRE DEVELOPMENT OUTSIDE LOC CURVE NUMBERS

Area (ac)	CN	Description
1.190	98	Paved parking, HSG D
1.130	79	Woods/grass comb., Good, HSG D
2.320	89	Weighted Average
1.130		48.71% Pervious Area
1.190		51.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	100	0.0100	1.03		Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 3.15"
4.5	551	0.0100	2.03		Shallow Concentrated Flow, Shallow Concentrated Flow Paved Kv= 20.3 fps
6.1	651	Total			

PRECIPITATION DATA FOR 24-HOUR STORM  
(BASED ON NOAA ATLAS 14 POINT  
PRECIPITATION FREQUENCY ESTIMATES)

1-YEAR	2.59 INCHES
2-YEAR	3.13 INCHES
10-YEAR	4.81 INCHES

PRE DEVELOPMENT PEAK FLOW SUMMARIES TO STUDY POINT A

1-YEAR FLOW SUMMARY

Inflow Area = 228,690 sf, 57.90% Impervious, Inflow Depth = 1.62" for 1-Year event  
 Inflow = 10.70 cfs @ 12.13 hrs, Volume= 30,917 cf  
 Primary = 10.70 cfs @ 12.13 hrs, Volume= 30,917 cf Atten= 0% Lag= 0.0 min  
 Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

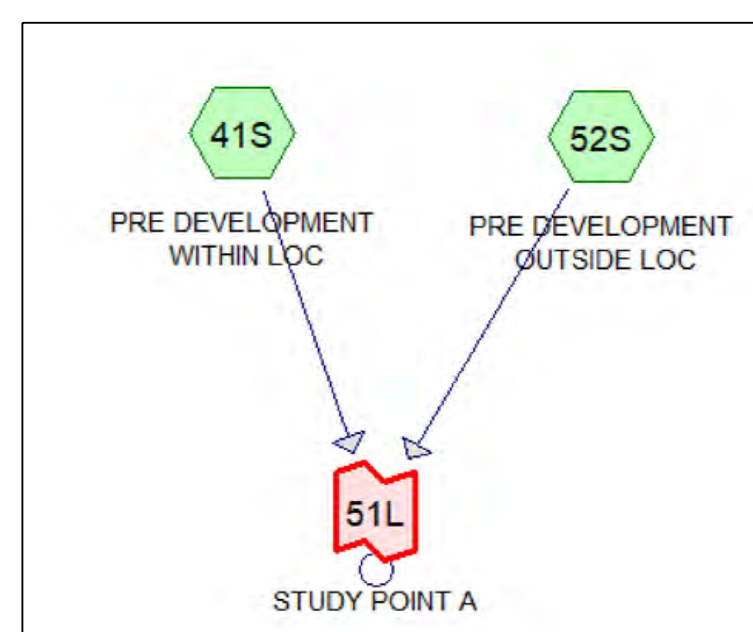
2-YEAR FLOW SUMMARY

Inflow Area = 228,690 sf, 57.90% Impervious, Inflow Depth = 2.12" for 2-Year event  
 Inflow = 13.79 cfs @ 12.13 hrs, Volume= 40,313 cf  
 Primary = 13.79 cfs @ 12.13 hrs, Volume= 40,313 cf Atten= 0% Lag= 0.0 min  
 Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

10-YEAR FLOW SUMMARY

Inflow Area = 228,690 sf, 57.90% Impervious, Inflow Depth = 3.71" for 10-Year event  
 Inflow = 23.43 cfs @ 12.13 hrs, Volume= 70,629 cf  
 Primary = 23.43 cfs @ 12.13 hrs, Volume= 70,629 cf Atten= 0% Lag= 0.0 min  
 Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

PRE DEVELOPMENT HYDROCAD NODES



STUDY POINT B  
PRE DEVELOPMENT WITHIN LOC CURVE NUMBERS

Area (ac)	CN	Description
0.380	98	Paved parking, HSG D
0.070	80	>75% Grass cover, Good, HSG D
0.450	95	Weighted Average
0.070		15.56% Pervious Area
0.380		84.44% Impervious Area

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

PRE DEVELOPMENT OUTSIDE LOC CURVE NUMBERS

Area (ac)	CN	Description
0.110	80	>75% Grass cover, Good, HSG D
0.800	98	Paved parking, HSG D
0.910	96	Weighted Average
0.110		12.09% Pervious Area
0.800		87.91% Impervious Area

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

PRE DEVELOPMENT PEAK FLOW SUMMARIES TO STUDY POINT B

1-YEAR FLOW SUMMARY

Inflow Area = 59,242 sf, 86.76% Impervious, Inflow Depth = 2.12" for 1-Year event  
 Inflow = 3.40 cfs @ 12.13 hrs, Volume= 10,449 cf  
 Primary = 3.40 cfs @ 12.13 hrs, Volume= 10,449 cf Atten= 0% Lag= 0.0 min  
 Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

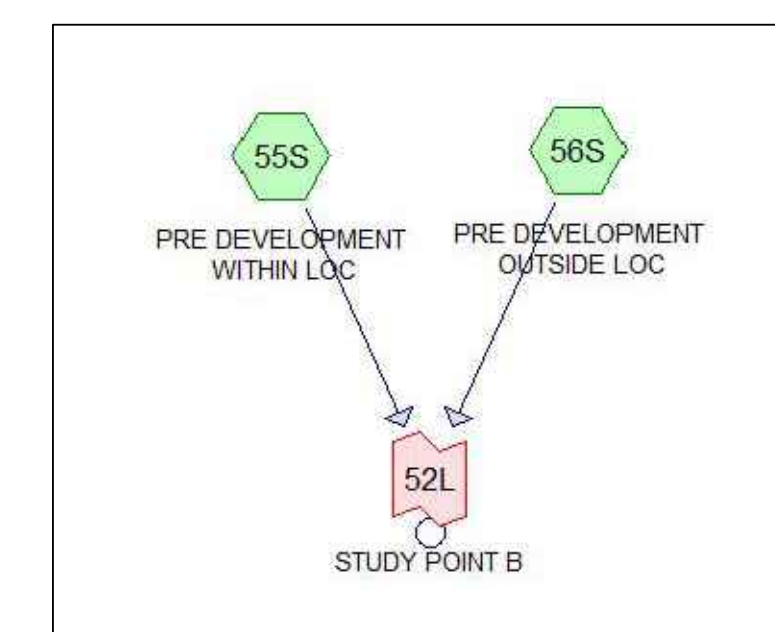
2-YEAR FLOW SUMMARY

Inflow Area = 59,242 sf, 86.76% Impervious, Inflow Depth = 2.65" for 2-Year event  
 Inflow = 4.19 cfs @ 12.13 hrs, Volume= 13,062 cf  
 Primary = 4.19 cfs @ 12.13 hrs, Volume= 13,062 cf Atten= 0% Lag= 0.0 min  
 Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

10-YEAR FLOW SUMMARY

Inflow Area = 59,242 sf, 86.76% Impervious, Inflow Depth = 4.31" for 10-Year event  
 Inflow = 6.62 cfs @ 12.13 hrs, Volume= 21,261 cf  
 Primary = 6.62 cfs @ 12.13 hrs, Volume= 21,261 cf Atten= 0% Lag= 0.0 min  
 Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

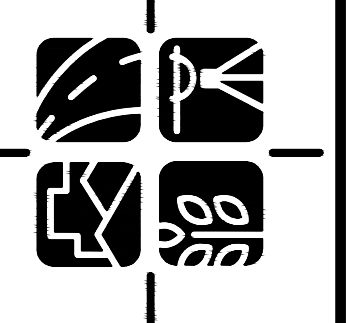
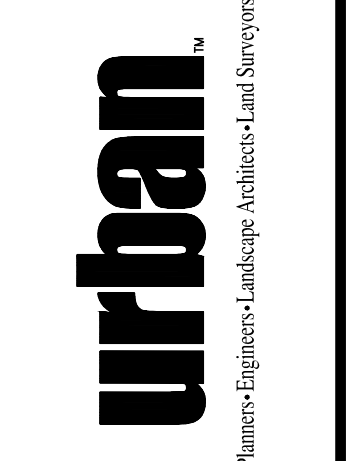
PRE DEVELOPMENT HYDROCAD NODES



No.	DATE	DESCRIPTION

PLAN DATE
01-18-22
08-30-22
04-20-23

Urban, Ltd.  
490 D TECHNOLOGY CT.  
CHARLOTTE, VA, 20151  
PHONE: 703.528.8800  
FAX: 703.528.8888  
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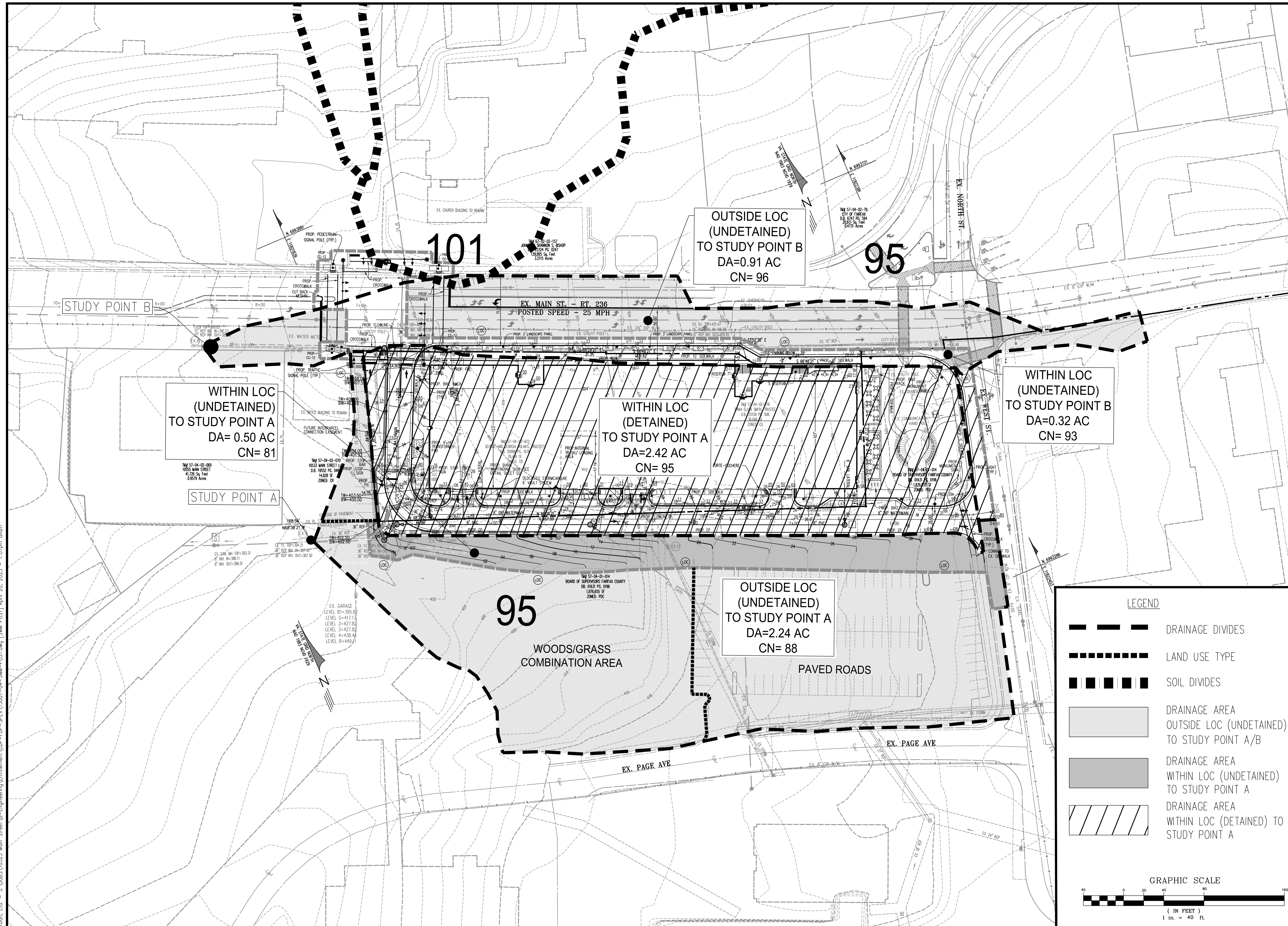


SWM PRE-DEVELOPMENT COMPUTATIONS  
CITY CENTRE WEST  
GENERAL DEVELOPMENT PLAN  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022  
SCALE: N/A  
C.I.= N/A

SHEET  
15  
OF  
50  
FILE No.  
RZ-13007

Urban, Ltd. - J:\005\10523 Main Street\B-Engineering\Entitlement\CDD-FDP-SPEX\3007-04-SWM-POST.dwg [SWM-POST] April 20, 2023 - 1:07pm olim



**LEGEND**

- DRAINAGE DIVIDES
- LAND USE TYPE
- SOIL DIVIDES
- DRAINAGE AREA OUTSIDE LOC (UNDETAINED) TO STUDY POINT A/B
- DRAINAGE AREA WITHIN LOC (UNDETAINED) TO STUDY POINT A
- DRAINAGE AREA WITHIN LOC (DETAINED) TO STUDY POINT A

**GRAPHIC SCALE**

( IN FEET )  
1 in. = 40 ft.

<p>PLAN DATE 01-18-22 08-30-22 04-20-23</p>	
<p>Urban, Ltd. 4900 D TECHNOLOGY CT. CHANTILLY, VA, 20151 TEL: 703.528.8888 FAX: 703.528.8888 www.urban-ld.com</p>	
<p><b>urban</b> Planners-Engineers-Landscape Architects-Land Surveyors</p>	
<p>COMMONWEALTH OF VIRGINIA CLAYTON C. LOCK Lic. No. 016790 01/20/2025 PROFESSIONAL</p>	
<p>SWM-POST-DEVELOPMENT <b>CITY CENTRE WEST GENERAL DEVELOPMENT PLAN</b> SPECIAL USE PERMIT PLAN CITY OF FAIRFAX, VIRGINIA</p>	
<p>DATE: JAN., 2022</p>	<p>SCALE: 1"=40' C.I.=2'</p>
<p>SHEET 16 OF 50</p>	<p>FILE No. RZ-13007</p>
<p>No. DATE DESCRIPTION REVISIONS</p>	



# STUDY POINT A

## POST DEVELOPMENT WITHIN LOC DETAINED CURVE NUMBERS

Area (ac)	CN	Description
2.020	98	Paved parking, HSG D
0.400	80	>75% Grass cover, Good, HSG D
2.420	95	Weighted Average
0.400		16.53% Pervious Area
2.020		83.47% Impervious Area

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

## POST DEVELOPMENT WITHIN LOC UNDETAINED CURVE NUMBERS

Area (ac)	CN	Description
2.020	98	Paved parking, HSG D
0.400	80	>75% Grass cover, Good, HSG D
2.420	95	Weighted Average
0.400		16.53% Pervious Area
2.020		83.47% Impervious Area

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

## POST DEVELOPMENT OUTSIDE LOC UNDETAINED CURVE NUMBERS

Area (ac)	CN	Description
2.020	98	Paved parking, HSG D
0.400	80	>75% Grass cover, Good, HSG D
2.420	95	Weighted Average
0.400		16.53% Pervious Area
2.020		83.47% Impervious Area

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

## Vault Computations

Volume	Invert	Avail. Storage	Storage Description
#1A	387.00'	0 cf	8.00'W x 240.00'L x 8.17'H Field A
#2A	387.00'	11,333 cf	15,680 cf Overall - 15,680 cf Embedded = 0 cf x 40.0% Voids Oldcastle StormCapture SC2 7" x 15 Inside #1 Inside= 84.0'W x 84.0'H => 49.56 sf x 16.00'L = 793.0 cf Outside= 96.0'W x 98.0'H => 65.33 sf x 16.00'L = 1,045.3 cf 1 Rows adjusted for 562.5 cf perimeter wall
		11,333 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	387.00'	36.0" Round Culvert L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 387.00' / 386.00' S= 0.0500 ' / Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 7.07 sf
#2	Device 1	387.50'	8.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	391.00'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

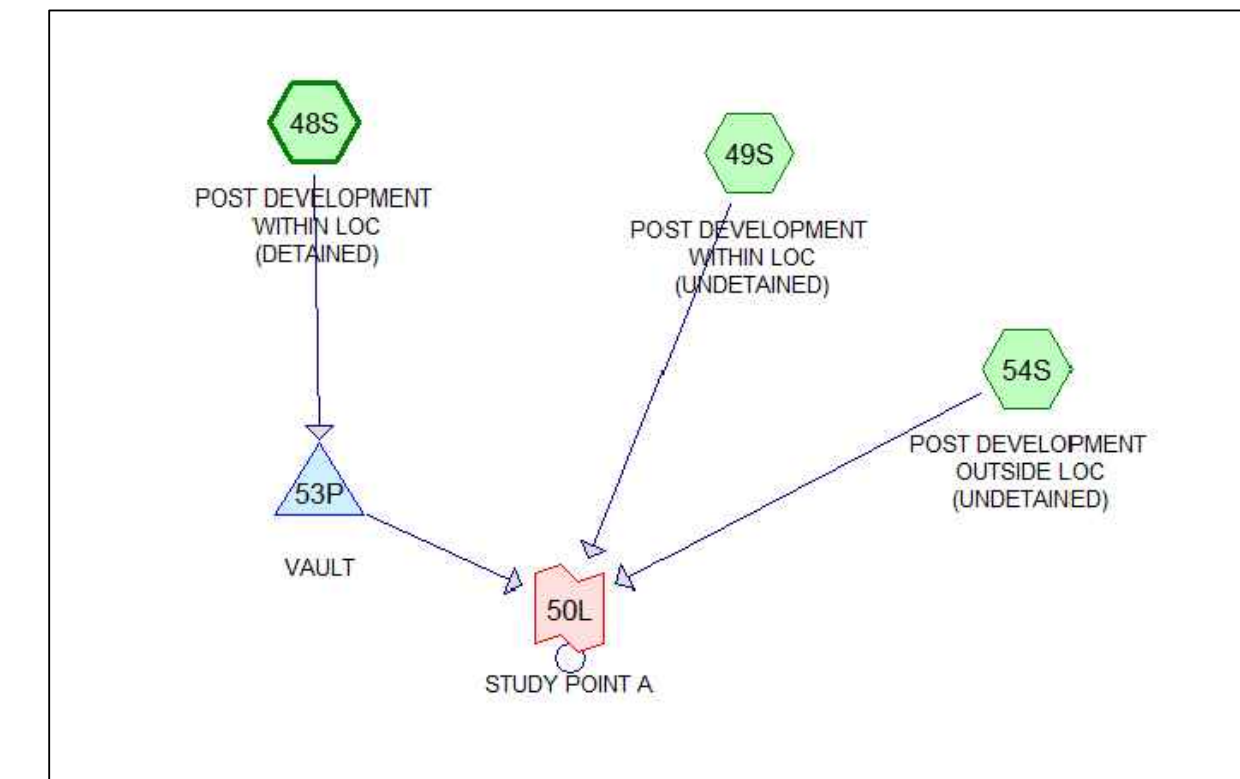
Primary OutFlow Max=2.40 cfs @ 12.27 hrs HW=389.86' (Free Discharge)  
 1=Culvert (Passes 2.40 cfs of 35.36 cfs potential flow)  
 2=Orifice/Grate (Orifice Controls 2.40 cfs @ 6.86 fps)  
 3=Orifice/Grate (Controls 0.00 cfs)

## PRECIPITATION DATA FOR 24-HOUR STORM (BASED ON NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES)

1-YEAR	2.59 INCHES
2-YEAR	3.13 INCHES
10-YEAR	4.81 INCHES

STORM SEWER DESIGN COMPUTATIONS														<input type="checkbox"/> Lag time			
Project: 10523 MAIN STREET																	
From Point	To Point	Drainage Area	C Factor	C x A Increment	Cumm.	Inlet Time Min.	Rain Fall In/Hr	Runoff Q C.F.S.	Invert Elevation Upper End	Lower End	Length FT.	Slope %	Dia. IN.	Capacity Q C.F.S.	VEL. F.P.S.	Flow Time MIN.	Remarks
EX 11	EX 10	0.48	0.75	0.36	0.36	5.00	6.77	2.44	425.39	416.88	240.85	3.53%	15	12.18	7.74	0.52	
EX 10	EX 9	0.45	0.82	0.37	0.73	5.00	6.77	4.94	418.45	405.98	296.04	3.54%	15	12.18	9.40	0.53	
EX 9	EX 8	0.42	0.79	0.33	1.06	5.00	6.77	7.18	404.43	390.23	207.34	6.85%	15	16.95	13.24	0.26	
PROP. MH	EX 1	5.18	0.82	4.25	4.25	5.00	6.77	28.76	390.50	387.40	62.26	4.98%	36	149.24	16.31	0.06	

## POST DEVELOPMENT HYDROCAD NODES



## FLOW SUMMARY AND ENERGY BALANCE

FLOW SUMMARY			
	1 YR	2 YR	10 YR
Pre Development Flows at Study Point 'A' (cfs)	10.70	13.79	23.43
Allowable Flow At Study Point 'A' (cfs)	8.35*	13.79	23.43
Post-Development Flows at Study Point 'A' (cfs)	6.92	8.81	16.65

\* Per the Energy Balance Equation

### ENERGY BALANCE METHOD TO STUDY POINT A

Q(Developed)=	6.92 cfs
Q(pre-Developed)=	10.70 cfs
RV(pre-Developed)=	30917.00 cf
RV(Developed)=	31703.00 cf
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	6.92	≤	I.F x (Q Pre-Developed x RV pre-Developed) / RV Developed	8.35
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\*Under no condition must:

$$Q(\text{Developed}) > Q(\text{Pre-Developed})$$

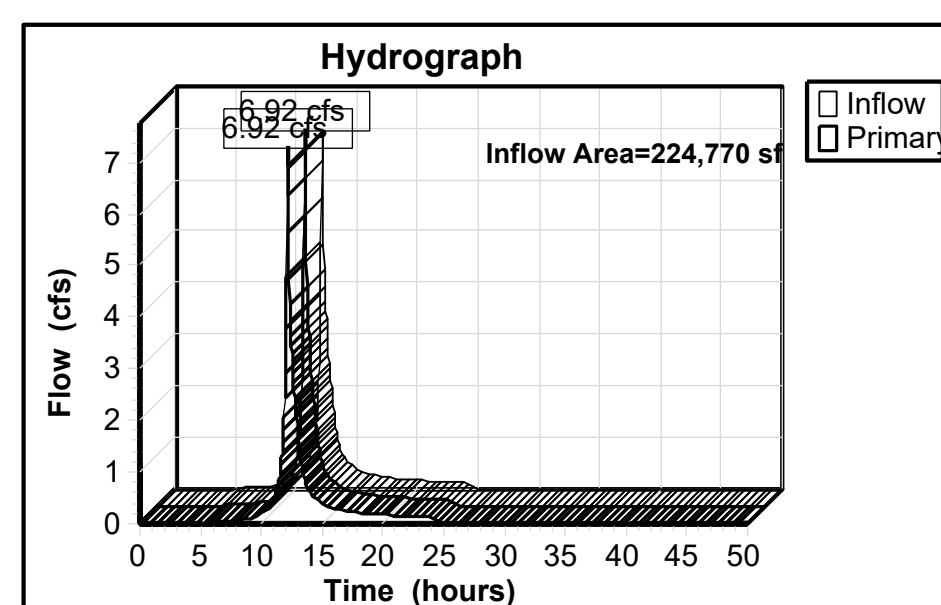
$$Q(\text{Developed}) \text{ must be required to less than } (Q(\text{Forest} * RV(\text{Forest}) / RV(\text{Developed}))$$

## PEAK FLOW SUMMARY

### 1-YEAR STORM EVENT

Inflow Area = 224,770 sf , 61.24% Impervious , Inflow Depth = 1.69" for 1-Year event  
 Inflow = 6.92 cfs @ 12.14 hrs , Volume= 31,703 cf  
 Primary = 6.92 cfs @ 12.14 hrs , Volume= 31,703 cf , Atten= 0% , Lag= 0.0 min

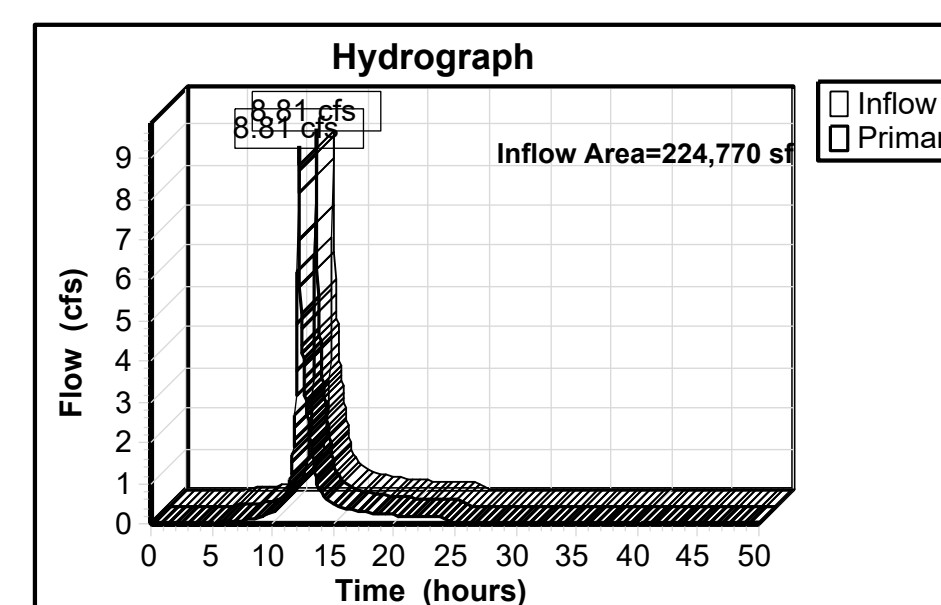
Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs



### 2-YEAR STORM EVENT

Inflow Area = 224,770 sf , 61.24% Impervious , Inflow Depth = 2.19" for 2-Year event  
 Inflow = 8.81 cfs @ 12.14 hrs , Volume= 40,927 cf  
 Primary = 8.81 cfs @ 12.14 hrs , Volume= 40,927 cf , Atten= 0% , Lag= 0.0 min

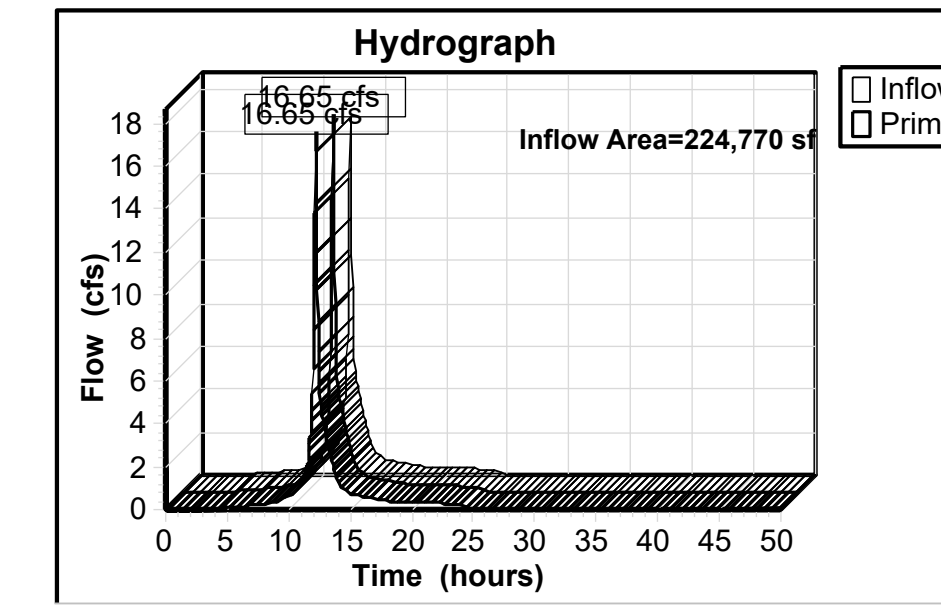
Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs



### 10-YEAR STORM EVENT

Inflow Area = 224,770 sf , 61.24% Impervious , Inflow Depth = 3.77" for 10-Year event  
 Inflow = 16.65 cfs @ 12.15 hrs , Volume= 70,654 cf  
 Primary = 16.65 cfs @ 12.15 hrs , Volume= 70,654 cf , Atten= 0% , Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs



PLANNING DATE	DESCRIPTION
01-18-22	
08-30-22	
04-20-23	

No.	DATE	REVISIONS

Urban, Ltd.  
 4900 D TECHNOLOGY CT.  
 CHANTILLY, VA, 20151  
 TEL: 703.528.8800  
 FAX: 703.528.8888  
 www.urban-ld.com

Professional Engineer - Landscape Architects - Land Surveyors



SWM POST-DEVELOPMENT COMPUTATIONS

CITY CENTRE WEST  
 GENERAL DEVELOPMENT PLAN  
 SPECIAL USE PERMIT PLAT  
 CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022

SCALE: 1"=40'

Urban, Ltd. - J:\085\10523 Main Street\B-Engineering\Entitlement\CDP-FDP-SPEX\3007-04-SWM-POST.dwg [POST COMP] April 20, 2023 - 1:07pm aliam

# STUDY POINT B

## POST DEVELOPMENT WITHIN LOC UNDETAINED CURVE NUMBERS

Area (ac)	CN	Description
0.240	98	Paved parking, HSG D
0.080	80	>75% Grass cover, Good, HSG D
0.320	93	Weighted Average
0.080		25.00% Pervious Area
0.240		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, Direct Entry</b>
7.5	100	0.0400	0.22		<b>Sheet Flow, Sheet Flow</b> Grass: Short n=0.150 P2= 3.15"
13.5	100	Total			

## POST DEVELOPMENT OUTSIDE LOC UNDETAINED CURVE NUMBERS

Area (ac)	CN	Description
0.800	98	Paved parking, HSG D
0.110	80	>75% Grass cover, Good, HSG D
0.910	96	Weighted Average
0.110		12.09% Pervious Area
0.800		87.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, Direct Entry</b>

## FLOW SUMMARY AND ENERGY BALANCE

FLOW SUMMARY			
	1 YR	2 YR	10 YR
Pre Development Flows at Study Point 'B' (cfs)	3.40	4.19	6.62
Allowable Flow At Study Point 'B' (cfs)	2.53*	4.19	6.62
Post-Development Flows at Study Point 'B' (cfs)	2.77	3.42	5.43

\* Per the Energy Balance Equation

### ENERGY BALANCE METHOD TO STUDY POINT B

Q(Developed)=	2.77 cfs
Q(Pre-Developed)=	3.40 cfs
RV(Pre-Developed)=	10443.00 cf
RV(Developed)=	9266.00 cf
I.F. =	0.8 (0.8 for sites greater than one acre) (0.9 for sites less than or equal to one)

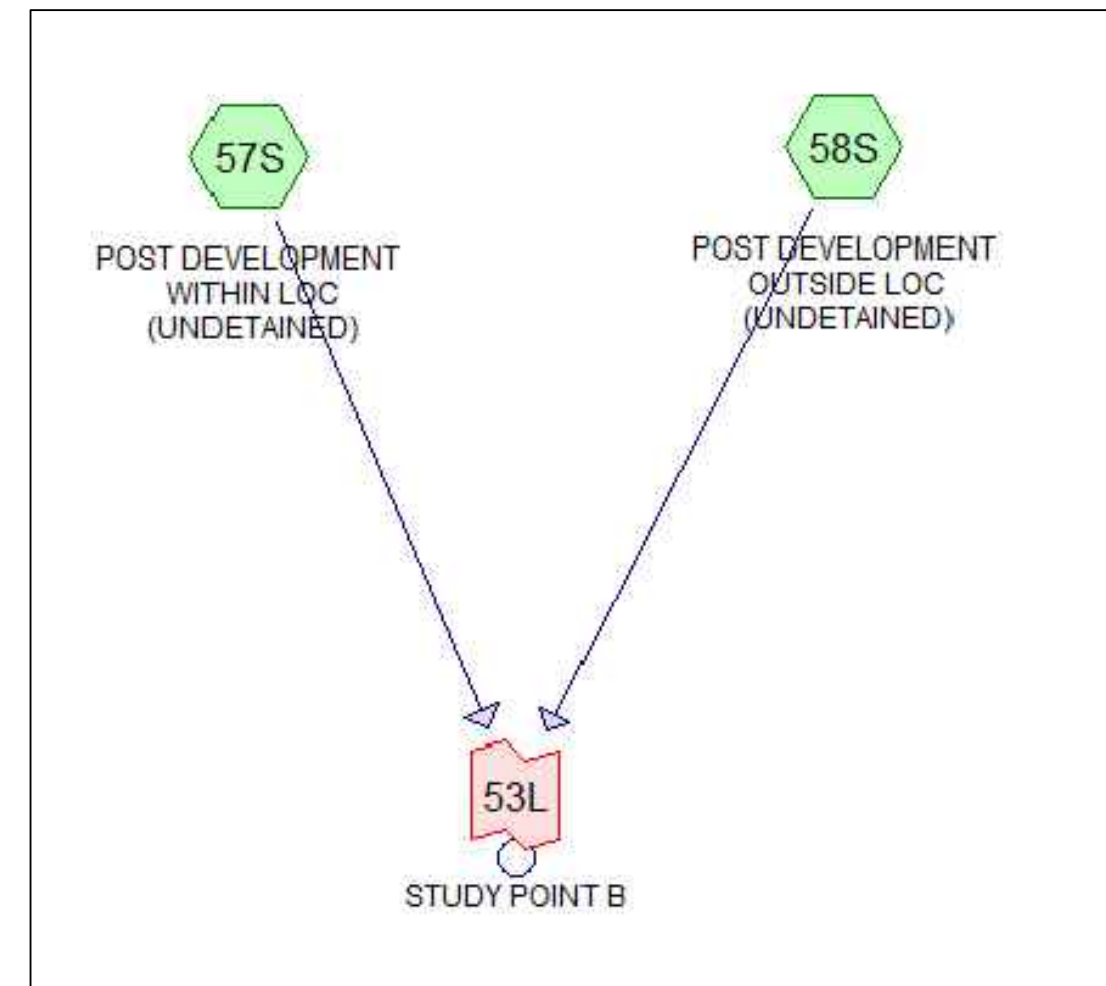
Q Developed	≤	I.F. x (Q(Pre-Developed) x RV(Pre-Developed) / RV(Developed))
2.77	≤	3.07

\*Under no condition must:

$$Q(\text{Developed}) > Q(\text{Pre-Developed})$$

$$Q(\text{Developed}) \text{ must be required to less than } (Q(\text{Forest} \cdot RV(\text{Forest})) / RV(\text{Developed}))$$

## POST DEVELOPMENT HYDROCAD NODES



## PRECIPITATION DATA FOR 24-HOUR STORM (BASED ON NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES)

1-YEAR	2.59 INCHES
2-YEAR	3.13 INCHES
10-YEAR	4.81 INCHES

## STORM SEWER DESIGN COMPUTATIONS

Project: 10523 MAIN STREET  Lag time

From Point	To Point	Drainage Area	C Factor	C x A		Inlet Time Min.	Rain Fall In/Hr	Runoff Q C.F.S.	Invert Elevation		Length FT.	Slope %	Dia. IN.	Capacity Q C.F.S.	VEL. F.P.S.	Flow Time MIN.	Remarks
				Increment	Cumm.				Upper End	Lower End							
EX 11	EX 10	0.48	0.75	0.36	0.36	5.00	6.77	2.44	425.39	416.88	240.85	3.53%	15	12.18	7.74	0.52	
EX 10	EX 9	0.45	0.82	0.37	0.73	5.00	6.77	4.94	416.45	405.98	296.04	3.54%	15	12.18	9.40	0.53	
EX 9	EX 8	0.42	0.79	0.33	1.06	5.00	6.77	7.18	404.43	390.23	207.34	6.85%	15	16.95	13.24	0.26	
PROP. MH	EX 1	5.18	0.82	4.25	4.25	5.00	6.77	28.76	390.50	387.40	62.26	4.98%	36	149.24	16.31	0.06	

## SWM NARRATIVE

THIS APPLICATION PROPOSES TO REZONE THE EXISTING COMMERCIAL RETAIL (CR) AND COMMERCIAL GENERAL (CG) PARCELS TO CONSOLIDATED COMMERCIAL URBAN (CU) PARCEL TO ALLOW FOR A MIXED USE BUILDING WITH RESIDENTIAL AND COMMERCIAL USES.

THE EXISTING SITE CURRENTLY DRAINS IN TWO DIRECTIONS. MAJORITY OF EXISTING SITE DRAINS SOUTHWEST THROUGH AN EXISTING STORM SYSTEM WHICH LEAVES THE SITE AT EXISTING STR. 1 AND CONTINUES DOWNSTREAM THROUGH A CLOSED CONDUIT SYSTEM. REST OF THE SITE DRAINS NORTH THROUGH AN EXISTING STORM SYSTEM WHICH LEAVES THE SITE AT EXISTING STR. 8. EXISTING STRUCTURES 1 AND 8 ARE ESTABLISHED AS STUDY POINT "A" AND "B", RESPECTIVELY FOR THE SWM ANALYSIS.

### STUDY POINT A:

MAJORITY OF THE SITE WILL BE SERVED BY ONE DETENTION FACILITY IN THE FORM OF AN UNDERGROUND STORMCAPTURE SC2 VAULT SYSTEM BY OLDCASTLE. THE FACILITY WILL PROVIDE DETENTION FOR MAJORITY OF THE SITE WHILE MAINTAINING PEAK FLOWS, NOT TO EXCEED PRE-DEVELOPMENT CONDITIONS FOR THE 1, 2, AND 10 YEAR STORM EVENTS AS COMPUTED ON SHEET 15, 17, AND 18. IN ADDITION, THE 1-YEAR DESIGN PEAK FLOW WILL NOT EXCEED THE ALLOWABLE RATE COMPUTED BY THE 1-YEAR ENERGY BALANCE EQUATION AS COMPUTED ON SHEET 17 FOR STUDY POINT "A". THE FACILITY WILL OUTFALL INTO THE PROPOSED ONSITE STORM SYSTEM AND CONTINUE DOWNSTREAM WHERE THE RUNOFF LEAVES THE SITE AT EXISTING STRUCTURE 1. THE EXISTING STORM SYSTEM CAPACITY WAS VERIFIED FOR THE PROPOSED IMPROVEMENTS DRAINING TO STUDY POINT "A" AT EXISTING STRUCTURE 1. THE EXISTING SYSTEM REMAINS ADEQUATE AS SHOWN ON STORM COMPUTATIONS ON THIS SHEET.

### STUDY POINT B:

FOR STUDY POINT B, EXISTING STORM SYSTEM CAPACITY WAS VERIFIED FOR THE PROPOSED IMPROVEMENTS. THE EXISTING STORM SYSTEM REMAINS ADEQUATE AS SHOWN ON THE STORM COMPUTATIONS ON THIS SHEET. IN ADDITION, THE 1-YEAR DESIGN PEAK FLOW ENERGY BALANCE WAS ANALYZED FOR STUDY POINT B. THE COMPUTATIONS SHOWN ON THIS SHEET SHOWS THE 1-YEAR DESIGN PEAK FLOW EXCEEDS THE ALLOWABLE RATE COMPUTED BY ENERGY BALANCE; HOWEVER, 1, 2, AND 10 YEAR POST DEVELOPMENT PEAK FLOWS REMAINS BELOW THE 1, 2, AND 10 YEAR PRE DEVELOPMENT PEAK FLOWS. THE TOTAL DRAINAGE AREA AND IMPERVIOUS AREA TO STUDY POINT B DECREASES AS WELL FROM PRE-DEVELOPMENT TO POST-DEVELOPMENT. SEE COMPUTATIONS ON SHEETS 15 AND 18 FOR STUDY POINT B VERIFYING THE EXISTING STORM SYSTEM REMAINS ADEQUATE FOR THE PROPOSED IMPROVEMENTS.

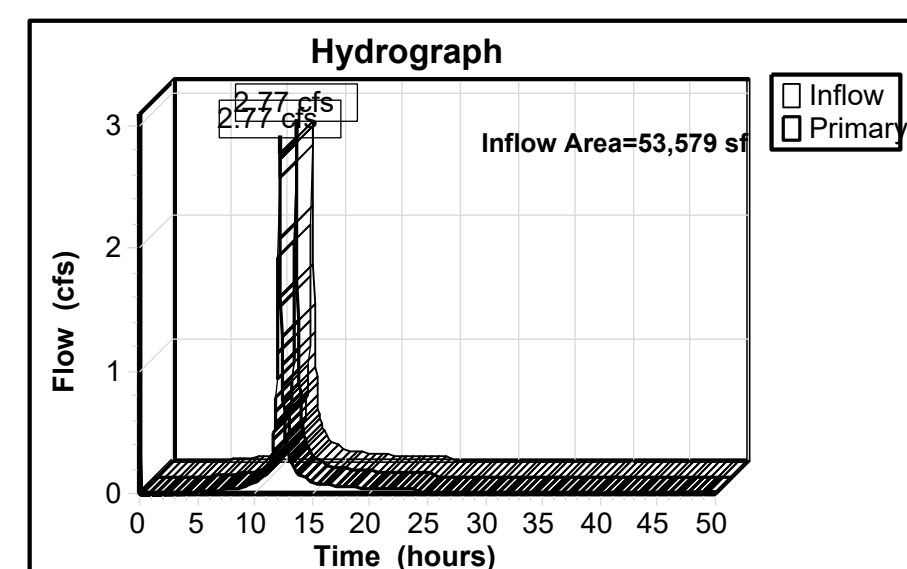
ALL BMP/SWM COMPUTATIONS SHOWN ON THIS APPLICATION ARE PRELIMINARY AND ARE SUBJECT TO CHANGE UPON RETRIEVAL OF NEW INFORMATION AND/OR IDENTIFICATION OF ADDITIONAL SITE CONSTRAINTS. THEREFORE, THE APPLICANT RESERVES THE RIGHT TO CHANGE AND/OR MODIFY THE PROPOSED BMP/SWM DEVICES AT THE TIME OF FINAL SITE PLAN TO MEET REQUIREMENTS.

## PEAK FLOW SUMMARY

### 1-YEAR STORM EVENT

Inflow Area = 53,579 sf, 84.55% Impervious, Inflow Depth = 2.08" for 1-Year event  
 Inflow = 2.77 cfs @ 12.13 hrs, Volume= 9,266 cf  
 Primary = 2.77 cfs @ 12.13 hrs, Volume= 9,266 cf, Atten= 0%, Lag= 0.0 min

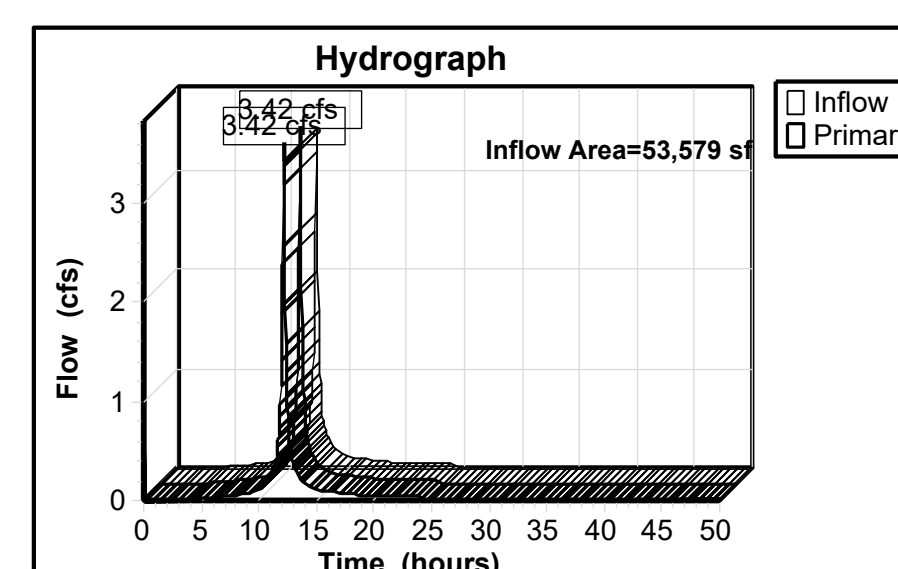
Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs



### 2-YEAR STORM EVENT

Inflow Area = 53,579 sf, 84.55% Impervious, Inflow Depth = 2.60" for 2-Year event  
 Inflow = 3.42 cfs @ 12.13 hrs, Volume= 11,616 cf  
 Primary = 3.42 cfs @ 12.13 hrs, Volume= 11,616 cf, Atten= 0%, Lag= 0.0 min

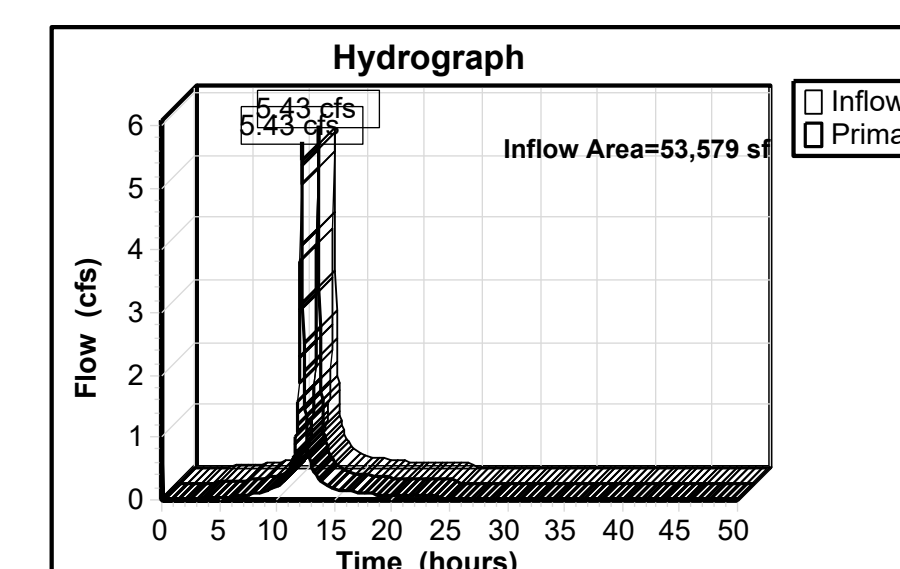
Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs



### 10-YEAR STORM EVENT

Inflow Area = 53,579 sf, 84.55% Impervious, Inflow Depth = 4.26" for 10-Year event  
 Inflow = 5.43 cfs @ 12.13 hrs, Volume= 19,008 cf  
 Primary = 5.43 cfs @ 12.13 hrs, Volume= 19,008 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs



PLAN DATE  
01-18-22  
08-30-22  
04-20-23

Urban, Ltd.  
4900 D TECHNOLOGY CT.  
CHANTILLY, VA 20151  
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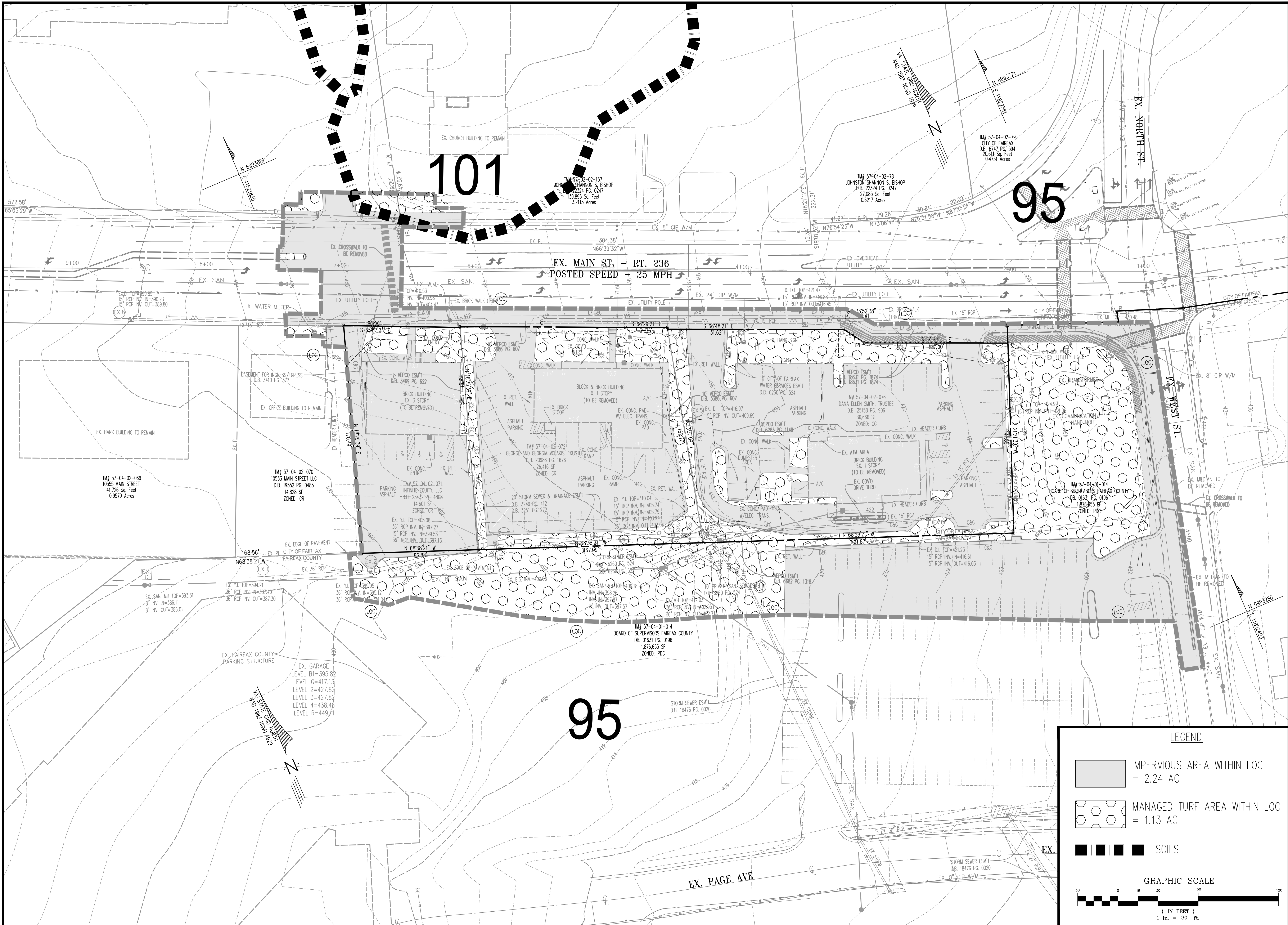
**urban**  
Planners-Engineers-Landscape Architects-Land Surveyors



SWM POST DEVELOPMENT COMPUTATIONS  
 CITY CENTRE WEST  
 GENERAL DEVELOPMENT PLAN  
 SPECIAL USE PERMIT PLAT  
 CITY OF FAIRFAX, VIRGINIA  
 DATE: JAN., 2022  
 SCALE: 1"=40'  
 C.I.= N/A

SHEET  
18  
OF  
50  
FILE No.  
RZ-13007

Urban, Ltd. - J:\05\10523 Main Street\B-Engineering\Entitlement\CDD-FDP-SPEX\3007-05-BMP-PRE.dwg [BMP PRE] April 20, 2023 - 1:07pm alom



**LEGEND**

- IMPERVIOUS AREA WITHIN LOC = 2.24 AC
- MANAGED TURF AREA WITHIN LOC = 1.13 AC
- SOILS

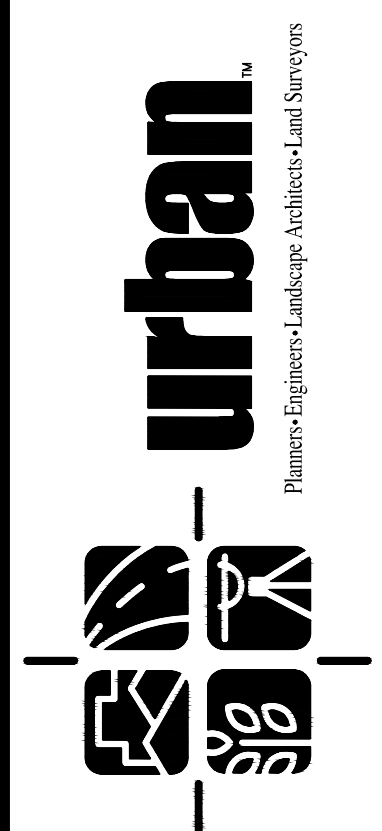
**GRAPHIC SCALE**

( IN FEET )  
1 in. = 30 ft.

No.	DATE	DESCRIPTION

PLAN DATE
01-18-22
08-30-23
04-20-23

Urban, Ltd.  
4900 D TECHNOLOGY CT.  
CHANTILLY, VA 20151  
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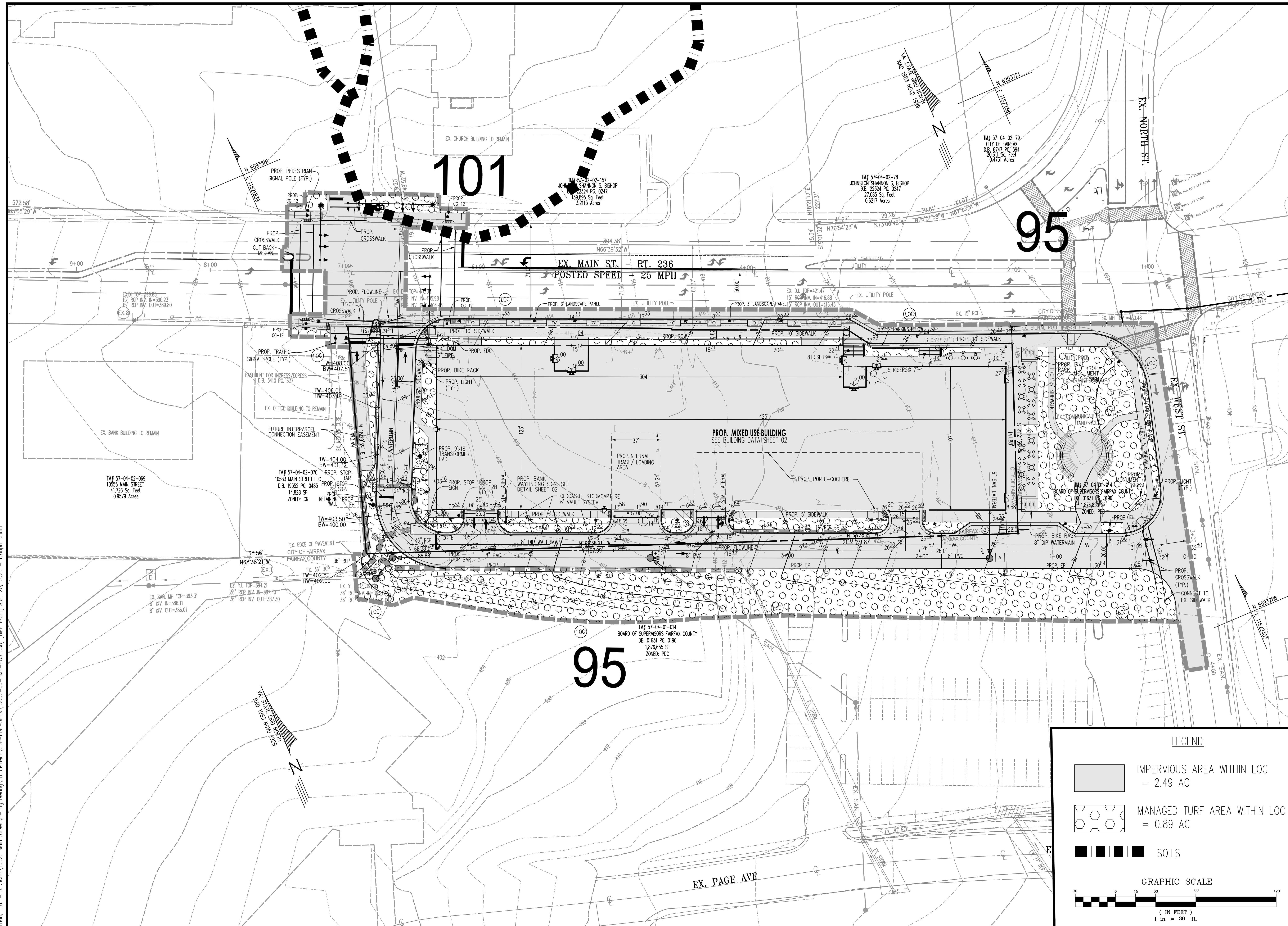


**BMP PRE-DEVELOPMENT**  
**CITY CENTRE WEST**  
**GENERAL DEVELOPMENT PLAN**  
SPECIAL USE PERMIT PLAT  
CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022  
SCALE: 1" = 30'  
C.I. = 2'

SHEET  
19  
OF  
50  
FILE No.  
RZ-13007

Urban, Ltd. - J:\JOBS\10523 Main Street\B-Engineering\Entitlement\CDD-FDP-SPEX\3007-06-BMP-POST.dwg [BMP-POST] April 20, 2023 - 1:08pm aloom



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**LEGEND**

- IMPERVIOUS AREA WITHIN LOC = 2.49 AC
- MANAGED TURF AREA WITHIN LOC = 0.89 AC
- SOILS

**GRAPHIC SCALE**

( IN FEET )  
1 in. = 30 ft.

**BMP POST-DEVELOPMENT**

**CITY CENTRE WEST GENERAL DEVELOPMENT PLAN**

**SPECIAL USE PERMIT PLAT**

CITY OF FAIRFAX, VIRGINIA

DATE: JAN., 2022

SCALE: 1"=30'

SHEET 20 OF 50

FILE No. RZ-13007

Urban, Ltd.  
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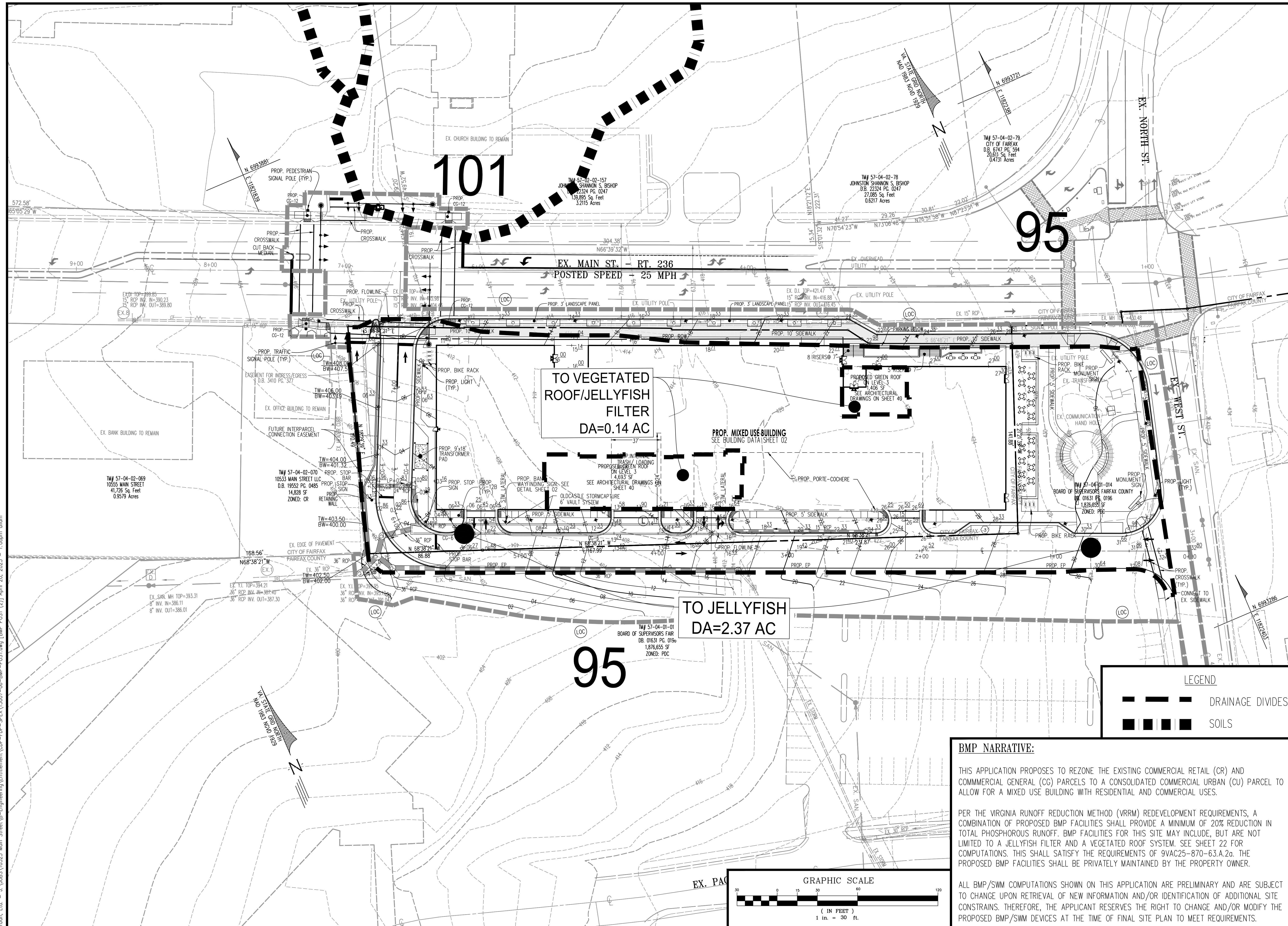
**urban.**

PLANNING ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS

PLAN DATE	NO.	DATE	DESCRIPTION
01-18-22			
08-30-22			
04-20-23			

COMMUNITY OF VIRGINIA  
CLAYTON C. LOCK  
Lic. No. 016790  
01/20/2025  
PROFESSIONAL

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EX. MAIN ST. - RT. 236  
POSTED SPEED = 25 MPH

TO VEGETATED  
ROOF/JELLYFISH  
FILTER  
DA=0.14 AC

TO JELLYFISH  
DA=2.37 AC

95

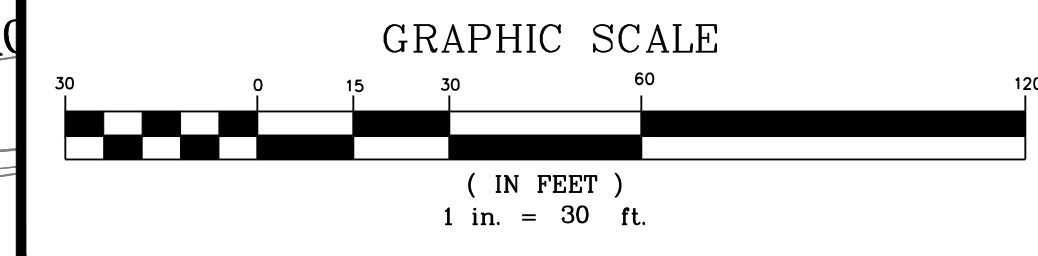
**LEGEND**

- DRAINAGE DIVIDES
- SOILS

**BMP NARRATIVE:**

THIS APPLICATION PROPOSES TO REZONE THE EXISTING COMMERCIAL RETAIL (CR) AND COMMERCIAL GENERAL (CG) PARCELS TO A CONSOLIDATED COMMERCIAL URBAN (CU) PARCEL TO ALLOW FOR A MIXED USE BUILDING WITH RESIDENTIAL AND COMMERCIAL USES.

PER THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) REDEVELOPMENT REQUIREMENTS, A COMBINATION OF PROPOSED BMP FACILITIES SHALL PROVIDE A MINIMUM OF 20% REDUCTION IN TOTAL PHOSPHOROUS RUNOFF. BMP FACILITIES FOR THIS SITE MAY INCLUDE, BUT ARE NOT LIMITED TO A JELLYFISH FILTER AND A VEGETATED ROOF SYSTEM. SEE SHEET 22 FOR COMPUTATIONS. THIS SHALL SATISFY THE REQUIREMENTS OF 9VAC25-870-6.3.A.2a. THE PROPOSED BMP FACILITIES SHALL BE PRIVATELY MAINTAINED BY THE PROPERTY OWNER.



ALL BMP/SWM COMPUTATIONS SHOWN ON THIS APPLICATION ARE PRELIMINARY AND ARE SUBJECT TO CHANGE UPON RETRIEVAL OF NEW INFORMATION AND/OR IDENTIFICATION OF ADDITIONAL SITE CONSTRAINTS. THEREFORE, THE APPLICANT RESERVES THE RIGHT TO CHANGE AND/OR MODIFY THE PROPOSED BMP/SWM DEVICES AT THE TIME OF FINAL SITE PLAN TO MEET REQUIREMENTS.

<p>Urban, Ltd. 4900 D TECHNOLOGY CT. CHANTILLY, VA, 20151 TEL: 703.528.8800 FAX: 703.528.8888 www.urban-ld.com</p>	
<p>PLAN DATE 01-18-22 08-30-23 04-20-23</p>	<p>DESCRIPTION REVISIONS</p>
<p>Urban, Ltd. 4900 D TECHNOLOGY CT. CHANTILLY, VA, 20151 TEL: 703.528.8800 FAX: 703.528.8888 www.urban-ld.com</p>	
<p><b>urban</b> Planners-Engineers-Landscape Architects-Land Surveyors</p>	
<p>COMMUNITY OF VIRGINIA CLAYTON C. LOCK Lic. No. 016790 01/20/2025 PROFESSIONAL</p>	
<p><b>BMP POST-DEVELOPMENT</b> <b>CITY CENTRE WEST</b> <b>GENERAL DEVELOPMENT PLAN</b> SPECIAL USE PERMIT PLAN CITY OF FAIRFAX, VIRGINIA</p>	
<p>DATE: JAN., 2022</p>	<p>SCALE: 1"=30'</p>
<p>SHEET 21 OF 50</p>	<p>FILE No. RZ-13007</p>

Project Name: FAIRFAX CITY CENTER WEST  
 Date: 4/12/2023  
 Linear Development Project? No

CLEAR ALL  
 (Ctrl+Shift+R)

data input cells  
 constant values  
 calculation cells  
 final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → 3.38

Maximum reduction required: 20%  
 The site's net increase in impervious cover (acres) is: 0.24  
 Post-Development TP Load Reduction for Site (lb/yr): 1.50

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	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.00	0.00	0.00	1.13	1.13
Impervious Cover (acres)	0.00	0.00	0.00	2.25	2.25
<b>Totals</b>					<b>3.38</b>

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	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.00	0.00	0.00	0.89	0.89
Impervious Cover (acres)	0.00	0.00	0.00	2.49	2.49
<b>Area Check</b>	<b>OK.</b>	<b>OK.</b>	<b>OK.</b>	<b>OK.</b>	<b>3.38</b>

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 <sup>1</sup>
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	1.13	0.89
Weighted Rv(turf)	0.25	0.25
% Managed Turf	33%	28%
Impervious Cover (acres)	2.25	2.25
Rv(impervious)	0.95	0.95
% Impervious	67%	72%
<b>Total Site Area (acres)</b>	<b>3.38</b>	<b>3.14</b>
<b>Site Rv</b>	<b>0.72</b>	<b>0.75</b>

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)		Land Cover Summary-Post (Post-ReDevelopment & New Impervious)		Land Cover Summary-Post (Post-Development New Impervious)	
Forest/Open Space Cover (acres)	0.00	Forest/Open Space Cover (acres)	0.00		
Weighted Rv(forest)	0.00	Weighted Rv(forest)	0.00		
% Forest	0%	% Forest	0%		
Managed Turf Cover (acres)	0.89	Managed Turf Cover (acres)	0.89		
Weighted Rv (turf)	0.25	Weighted Rv (turf)	0.25		
% Managed Turf	26%	% Managed Turf	28%		
Impervious Cover (acres)	2.49	ReDev. Impervious Cover (acres)	2.25	New Impervious Cover (acres)	0.24
Rv(impervious)	0.95	Rv(impervious)	0.95	Rv(impervious)	0.95
% Impervious	74%	% Impervious	72%		
<b>Final Site Area (acres)</b>	<b>3.38</b>	<b>Total ReDev. Site Area (acres)</b>	<b>3.14</b>		
<b>Final Post Dev Site Rv</b>	<b>0.77</b>	<b>ReDev Site Rv</b>	<b>0.75</b>		

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.2017	0.1967
Pre-ReDevelopment Treatment Volume (cubic feet)	8,785	8,567
Pre-ReDevelopment TP Load (lb/yr)	5.52	5.38
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.63	1.71
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		1.29

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.2157	Post-ReDevelopment Treatment Volume (acre-ft)	0.1967	Post-Development Treatment Volume (acre-ft)	0.0190
Final Post-Development Treatment Volume (cubic feet)	9,394	Post-ReDevelopment Treatment Volume (cubic feet)	8,567	Post-Development Treatment Volume (cubic feet)	828
Final Post-Development TP Load (lb/yr)	5.90	Post-ReDevelopment TP Load (lb/yr)*	5.38	Post-Development TP Load (lb/yr)	0.52
Final Post-Development TP Load per acre (lb/acre/yr)	1.75	Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.71		
		Max. Reduction Required (Below Pre-Development Load)	28%		

TP Load Reduction Required for Redeveloped Area (lb/yr)	1.08	TP Load Reduction Required for New Impervious Area (lb/yr)	0.42
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Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr) 1.50

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	39.48	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	42.23
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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	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.00	0.00	0.00	0.40	0.40	0.25
Impervious Cover (acres)	0.00	0.00	0.00	1.97	1.97	0.95
<b>Total</b>					<b>2.37</b>	

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr) 4.50  
 Post Development Treatment Volume in D.A. A (ft<sup>3</sup>) 7,157

Stormwater Best Management Practices (RR = Runoff Reduction)

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft <sup>3</sup> )	Runoff Reduction (ft <sup>3</sup> )	Remaining Runoff Volume (ft <sup>3</sup> )	Total BMP Treatment Volume (ft <sup>3</sup> )	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
<b>1. Vegetated Roof (RR)</b>													
1.a. Vegetated Roof #1 (Spec #5)	45		0.14		217	266	483	0		0.30	0.14	0.17	14.b. MTD - Filtering
<b>14. Manufactured Treatment Devices (no RR)</b>													
14.a. Manufactured Treatment Device-Hydrodynamic	0			0	0	0	0	0	0.00	0.00	0.00	0.00	
14.b. Manufactured Treatment Device-Filtering	0	0.40	1.83	266	0	6,939	6,939	65	0.17	4.19	2.83	1.52	
14.c. Manufactured Treatment Device-Generic	0			0	0	0	0	0	0.00	0.00	0.00	0.00	

TOTAL IMPERVIOUS COVER TREATED (ac) 1.97 AREA CHECK: OK.  
 TOTAL MANAGED TURF AREA TREATED (ac) 0.40 AREA CHECK: OK.

TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr) 1.49

TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr) 4.50  
 TOTAL PHOSPHORUS REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 2.83  
 TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.14  
 TOTAL PHOSPHORUS LOAD REDUCTION ACHIEVED IN D.A. A (lb/yr) 2.97  
 TOTAL PHOSPHORUS REMAINING AFTER APPLYING BMP LOAD REDUCTIONS IN D.A. A (lb/yr) 1.53

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

NITROGEN REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.98  
 NITROGEN REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.00  
 TOTAL NITROGEN REMOVED IN D.A. A (lb/yr) 0.98

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)	1.97	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	1.97	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.40	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.40	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft<sup>3</sup>) 9,394

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 <sup>3</sup> )	217	0	0	0	0	217
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	4.50	0.00	0.00	0.00	0.00	4.50
TP LOAD REDUCTION ACHIEVED (lb/yr)	2.97	0.00	0.00	0.00	0.00	2.97
TP LOAD REMAINING (lb/yr)	1.53	0.00	0.00	0.00	0.00	1.53
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.98	0.00	0.00	0.00	0.00	0.98

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr) 5.90  
 TP LOAD REDUCTION REQUIRED (lb/yr) 1.50  
 TP LOAD REDUCTION ACHIEVED (lb/yr) 2.97  
 TP LOAD REMAINING (lb/yr): 2.94  
 REMAINING TP LOAD REDUCTION REQUIRED (lb/yr): 0.00 \*\*  
 \*\* TARGET TP REDUCTION EXCEEDED BY 1.47 LB/YEAR \*\*

Total Nitrogen (For Informational Purposes)

POST-DEVELOPMENT LOAD (lb/yr) 42.23  
 NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 0.98  
 REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr) 41.25

<sup>1</sup> Adjusted Land Cover Summary:  
 Pre-Development 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-Development acreage (minus acreage of new impervious cover).

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