4131 CHAIN BRIDGE ROAD
DAVIES PROPERTY
REZONING
GENERAL DEVELOPMENT PLAN

CITY OF FAIRFAX, VIRGINIA

DECEMBER 2nd - 2024 - REVISED

PROPERTY OWNER / APPLICANT

THE HILL, A DAVIES FAMILY LLC
C/O DAVIES & DAVIES
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ARLINGTON, VA 22207

DEVELOPER

PARADIGM DEVELOPMENT COMPANY
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CONTACT: DAVID HOUSTON

ARCHITECT/PLANNER

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ENGINEER

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CONTACT: CLAYTON TOCK

LANDSCAPE ARCHITECT

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TRAFFIC ENGINEER

GOROVE SLADE ASSOCIATES
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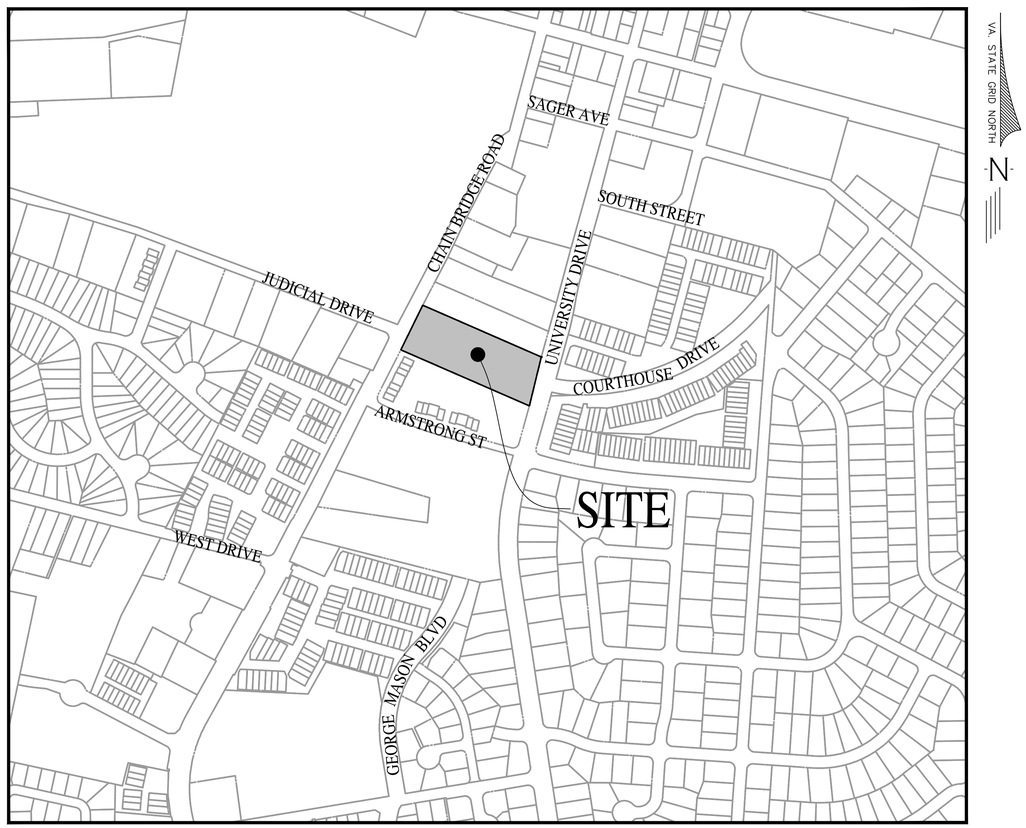
CONTACT: SASHA REDMON



VICINITY MAP
SCALE: 1"=300'

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No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
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-
-
-

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
No. 038790
PROFESSIONAL ENGINEER
12/02/2024

COVER SHEET
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: AS NOTED
C.I.= N/A
DATE: DEC., 2024

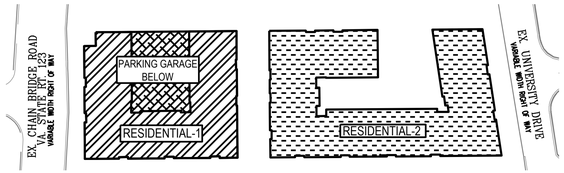
SHEET 01 OF 38

FILE No.
RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-01-Cover.dwg [COVER] December 03, 2024 - 10:53am aarensberg

BUILDING DATA

BUILDING DATA			
RESIDENTIAL-1 *Chain Bridge Rd.*		RESIDENTIAL-2 *University Dr.*	
Gross Area	117,455 SF	Gross Area	169,976 SF
Amenities		*Amenities*	
Gross Area	7,320 SF	Gross Area	6,724 SF
GARAGE			
Gross Area			172,271 SF



ZONING STANDARDS

SEC. 110-671: PROPOSED ZONING BULK AND LOT AREA REQUIREMENTS PER CU DISTRICT

MIN. LOT AREA (AC)		30,000 SF
BLDG. HEIGHT (FT)	REQUIRED PROVIDED	60' OR 5 STORIES 60'-0" OR 5 STORIES
PARKING. HEIGHT (FT)	PROVIDED	24'-0"
REQUIRED YARDS	FRONT/SIDE STREET SIDE (ADJ. TO RES.) SIDE (NOT ADJ. TO RES.) REAR (ADJ. TO RES.) REAR (NOT ADJ. TO RES.)	15' MAX / 0' MIN 25' 0' 25' 0'
BUILDING AREA COVERAGE:	ALLOWED PROVIDED	80% MAX ± 52.30%
LOT AREA COVERAGE:	ALLOWED PROVIDED	100% ± 85.85%
DENSITY:	MAXIMUM PROVIDED	20 (GENERAL) / 24 (AFFORDABLE DWELLING UNIT) 102.68 UNITS/GROSS ACRE (276 UNITS TOTAL)
FLOOR AREA RATIO:	REQUIRED PROVIDED	N/A 0.526
FLOODPLAIN AREA:		0.00 SF

SEC. 110-1046: ZONING BULK AND LOT AREA REQUIREMENTS PER OLD TOWN TRANSITION OVERLAY DISTRICT

MIN. LOT AREA (AC)		NONE
MIN. LOT WIDTH (FT)		NONE
BLDG. HEIGHT (FT)	REQUIRED PROVIDED	48' 60'-0"
MIN. YARD REQUIREMENTS:	FRONT SIDE REAR	10' NONE NONE
LOT COVERAGE:	MAXIMUM PROVIDED	90% 85.85%
BUILDING COVERAGE:	MAXIMUM PROVIDED	80% 52.30%

SITE DATA

ZONING:	EXISTING..... PROPOSED.....	R-M COMMERCIAL URBAN (CU)
USE:	EXISTING..... PROPOSED.....	RESIDENTIAL MULTIFAMILY DWELLING
LOT AREA (SQUARE-FEET):	117,082 (2.69 ACRES)	

SEC. 110-255, 258, 259: LANDSCAPING & SCREENING

MIN. TREE COVER :		*
	EXISTING PROPOSED	R-M COMMERCIAL URBAN (CU)
TOTAL CANOPY REQUIRED (INCLUDING PLANTING)		10%
SCREENING REQUIRED:	NORTH SOUTH EAST WEST	NONE * IN CONTEXT OF CDP/GDP * *
PERIMETER	PARKING LOT LANDSCAPING	N/A

*SEE ZONING MODIFICATION REQUEST TO BE APPROVED BY CITY COUNCIL

SEC. 110-155, 156: OFF-STREET PARKING AND LOADING (ENTIRE SITE)

4131 CHAIN BRIDGE ROAD PARKING TABULATIONS

PARKING

276 UNITS							
RESIDENTIAL PARKING REQUIRED							
UNIT TYPE	MIX%	# UNITS	PS RATIO	PS	CU REDUCTION (10%)	TOD REDUCTION (50% EXCEPT FOR 1.5 MINIMUM PER DU)	PS AFTER REDUCTION
STUDIO	11	31	1.25	38	35	N/A	35
1 BR	58	155	1.5	236	210	N/A	210
2 BR	9	90	2	178	162	135	135
		276					380
COMMERCIAL PARKING REQUIRED							
RETAIL 1 PS/ 200 SF		6,381		32	29	16	16
OFFICE 1 PS/ 300 SF		4,188		14	13	7	7
							23
TOTAL PARKING REQUIRED							
403							
RESIDENTIAL PARKING PROVIDED							
401							
RETAIL PARKING PROVIDED							
23							
TOTAL PARKING PROVIDED							
424							
TOTAL BICYCLE PARKING REQUIRED							
20							
TOTAL BICYCLE PARKING PROVIDED							
46							
TOTAL LOADING REQUIRED							
1							
TOTAL LOADING PROVIDED							
2							

GENERAL NOTES

1. THE PROPERTY DELINEATED HEREON IS LOCATED IN THE CITY OF FAIRFAX TAX MAP #57-4-02-040, WITHIN THE OLD TOWN HISTORIC TRANSITION DISTRICT.
2. THE PROPERTY IS CURRENTLY ZONED R-M (RESIDENTIAL). IT IS ALSO SUBJECT TO THE OLD TOWN TRANSITION DISTRICT REGULATION.
3. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY URBAN, LTD.
4. THE SITE IS PRESENTLY SERVED BY FAIRFAX WATER.
5. THE PROPOSED IMPROVEMENTS RESULT IN AN INCREASE OF IMPERVIOUS AREA IN THE SUBJECT PROPERTY – PER THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) REDEVELOPMENT REQUIREMENTS A COMBINATION OF PROPOSED BMP REQUIREMENTS SHALL PROVIDE A MINIMUM OF 20% REDUCTION IN TOTAL PHOSPHOROUS RUNOFF.
6. 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.
7. INDIVIDUAL UTILITY PLANS AND PROFILES WILL BE SUBMITTED WITH THE FINAL SITE PLAN.
8. 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.
9. THERE ARE NO KNOWN BURIAL SITES OR ARCHEOLOGICAL FEATURES ON THIS SITE.
10. EXISTING STRUCTURES TO REMAIN ARE SHOWN SHADED ON THE REZONING & CONCEPTUAL DEVELOPMENT PLAN.
11. THERE IS NO CITY, COUNTY, OR FEMA FLOODPLAIN ON THE PROPERTY.
12. THE SUBJECT PROPERTY LIES IN ZONE "X" PER FIRM MAP COMMUNITY PANEL NUMBER 515524005D.
13. 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 CONCEPTUAL DEVELOPMENT PLAN.
14. THIS APPLICATION PROPOSES REZONING FROM RM RESIDENTIAL MEDIUM TO CU COMMERCIAL URBAN IN THE OLD TOWN FAIRFAX TRANSITION OVERLAY DISTRICT. THE SITE IS ALSO LOCATED IN THE ACTIVITY CENTER PLACE TYPE AND OLD TOWN SMALL AREA PLAN.

THIS APPLICATION REQUIRES THE FOLLOWING ZONING MODIFICATIONS FROM THE CITY COUNCIL:

110-225,258,259 SEE LANDSCAPE SHEET FOR MODIFICATION REQUESTS FOR LANDSCAPE AND SCREENING.

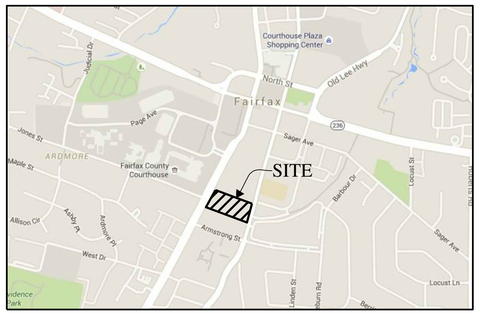
FIRE MARSHALL NARRATIVE

THE PROPOSED BUILDING SHALL BE 5 STORIES. CONSTRUCTION TYPE FOR THE RESIDENTIAL PORTION FROM 2ND TO 5TH FLOOR SHALL BE 3A AND THE RESIDENTIAL 1ST FLOOR SHALL BE 1A. CONSTRUCTION TYPE FOR THE GARAGE SHALL BE 1A. THE EXTERIOR FINISH OF THE BUILDING SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS. THE SPRINKLER SYSTEM FOR THE PROPOSED BUILDING SHALL BE NFPA-13.

LIST OF SPECIAL EXCEPTIONS

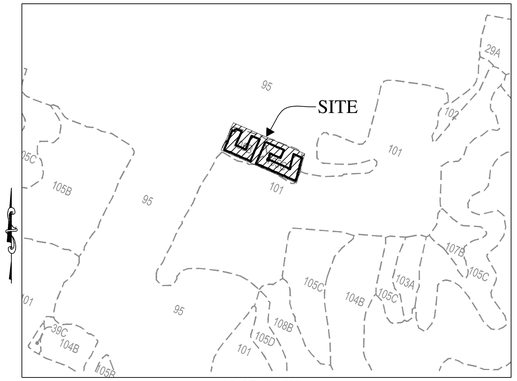
1. A MODIFICATION OF SECTION 3.5.1.D TO PERMIT LESS THAN 75% GROUND FLOOR NONRESIDENTIAL USE IN A MIXED USE BUILDING.
2. A MODIFICATION OF SECTION 3.6.2 TO PERMIT MORE THAN 24 DWELLING UNITS PER ACRE.
3. A MODIFICATION OF SECTION 3.7.3.C.2 TO PERMIT HEIGHT GREATER THAN FORTY-EIGHT (48) FEET.
4. A MODIFICATION OF SECTION 3.7.3.E TO ELIMINATE THE REQUIREMENT FOR A LANDSCAPE STRIP AND STREET TREES ALONG THE ACCESS DRIVE.
5. A WAIVER OF SECTION 4.3.3.B TO ELIMINATE THE REQUIREMENT TO PROVIDE VEHICULAR ACCESS TO ABUTTING NON-RESIDENTIAL PROPERTIES.
6. A MODIFICATION OF SECTION 4.4.4 TO ELIMINATE THE REQUIREMENT FOR A SIDEWALK ON THE NORTHERN SIDE OF THE PROPOSED ACCESS DRIVE WHILE PROVIDING IT ON THE SOUTHERN SIDE.
7. A MODIFICATION OF SECTION 4.4.5.C.1 TO ELIMINATE THE REQUIREMENT FOR A TRANSITIONAL YARD 2 BETWEEN THE EXISTING CL ZONED PROPERTY TO THE NORTH OF THE PROPERTY.
8. A MODIFICATION TO OVERALL CANOPY COVERAGE REQUIRED (Z.O. SECTION 4.5.6) IS HEREBY REQUESTED TO BE REVISED FROM 10% TO 5.64%.
9. A MODIFICATION TO TRANSITIONAL YARD REQUIRED (Z.O. SECTION 4.5.5) FOR BUFFER A-B AND C-D IS HEREBY REQUESTED TO BE REVISED AS INDICATED IN THE "TRANSITIONAL YARD CALCULATIONS" TABLE ON SHEET 33.
10. A MODIFICATION TO STREETSCAPE STANDARD ALONG CHAIN BRIDGE ROAD AND UNIVERSITY DRIVE REQUIRED (SMALL AREA PLAN) IS HEREBY REQUESTED TO BE REVISED AS SHOWN ON SHEET 32.

VICINITY MAP



SCALE: 1" = 1000'

SOILS MAP



SCALE: 1" = 500'

SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL
105B	WHEATON GLENELG COMPLEX 2-7 % SLOPES	GOOD	GOOD	HIGH
105C	WHEATON GLENELG COMPLEX 7-15 % SLOPES	GOOD	GOOD	HIGH
101	URBAN LAND - GLENELD COMPLEX 2-7%	GOOD	FAIR	HIGH
95	URBAN LAND	N/A	N/A	N/A

LEGEND:

- EXISTING STORM DRAIN STRUCTURE
- PROPOSED STORM DRAIN STRUCTURE
- EXISTING CONTOUR (1')
- PROPOSED CONTOUR (1')
- EXISTING CONTOUR (5')
- PROPOSED CONTOUR (5')
- 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
- EXISTING TREE
- PROPOSED TREE
- PROJECTED TRAFFIC COUNT (BASED ON 6TH ED. OF ITE TRIP GENERATION BOOK)
- EXISTING OVERHEAD WIRE
- PROP. FENCE

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
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09-03-2024
12-02-2024

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Clayton T. Tacik
Lic. No. 036790
12/02/2024
ENGINEER PROFESSIONAL SEAL

GENERAL NOTES & DETAILS

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: AS NOTED C.I.= N/A DATE: DEC., 2024

SHEET 02 OF 38

FILE No. RZ-12787

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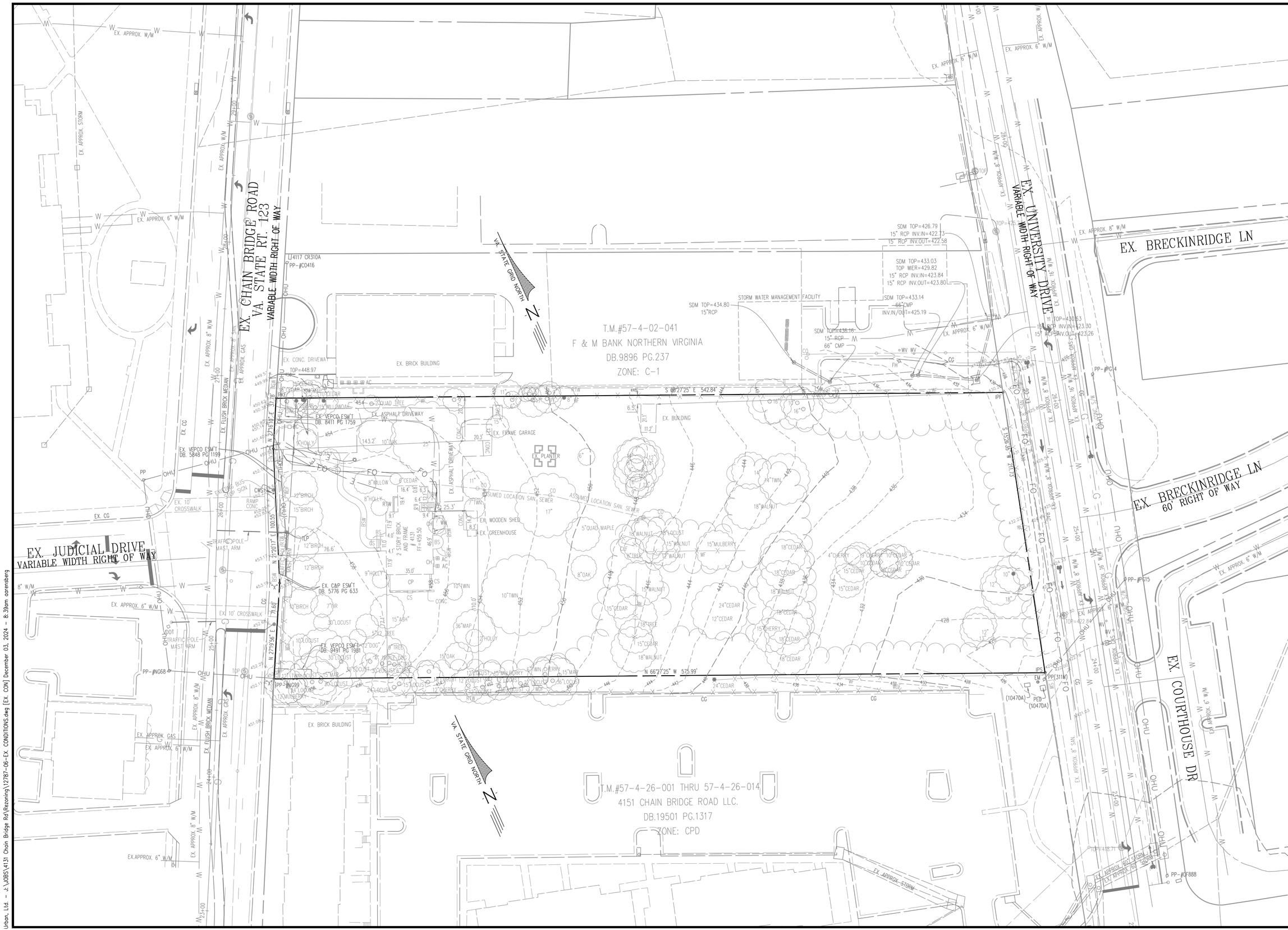

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PROFESSIONAL ENGINEER

EXISTING CONDITIONS PLAN

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

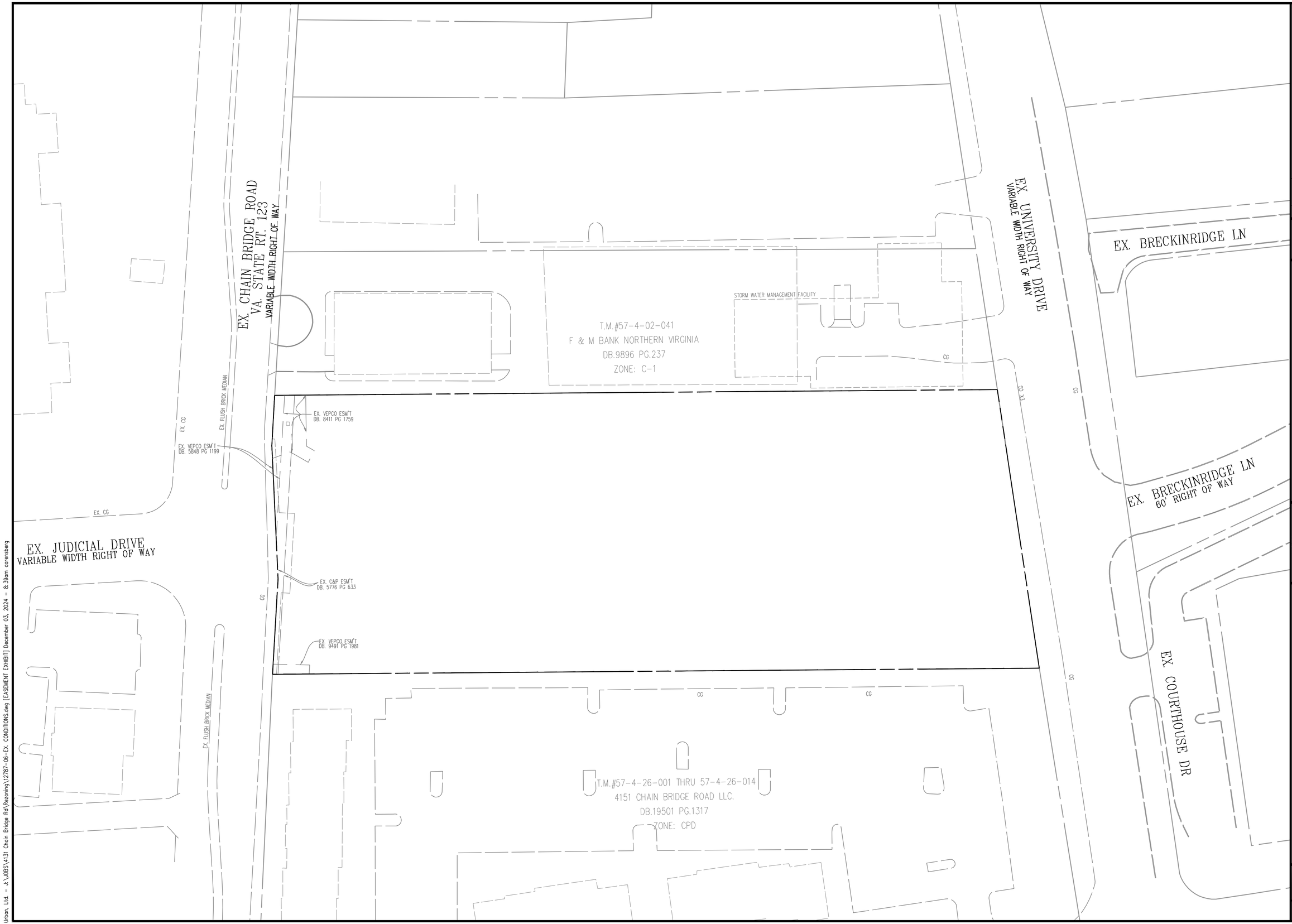
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.=2' DATE: DEC., 2024

SHEET 03 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-06-EX. CONDITIONS.dwg [EX. CON] December 03, 2024 - 8:39am oprensberg



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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOPPA
LIC. No. 036790
12.02.2024
PROFESSIONAL ENGINEER

EASEMENT EXHIBIT

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

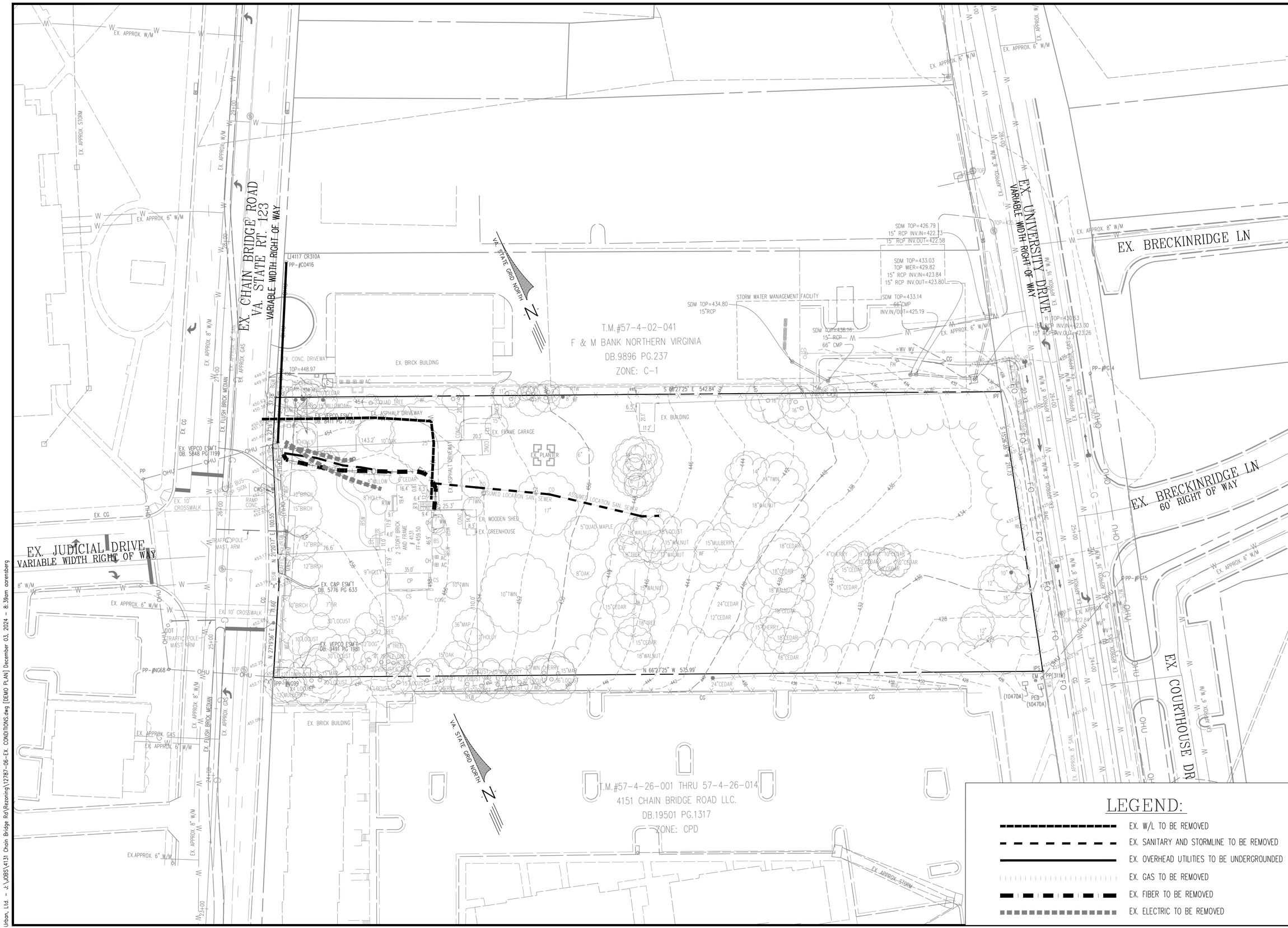
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.= 2' DATE: DEC., 2024

SHEET 04 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-06-EX. CONDITIONS.dwg [EASEMENT EXHIBIT] December 03, 2024 - 8:39am ccrensberg



LEGEND:

- EX. W/L TO BE REMOVED
- EX. SANITARY AND STORMLINE TO BE REMOVED
- EX. OVERHEAD UTILITIES TO BE UNDERGROUNDED
- EX. GAS TO BE REMOVED
- EX. FIBER TO BE REMOVED
- EX. ELECTRIC TO BE REMOVED

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Craig A. Cook
LICENSE No. 036790
12/02/2024
PROFESSIONAL ENGINEER

DEMOLITION PLAN
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.=2' DATE: DEC., 2024

SHEET 05 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-06-EX. CONDITIONS.dwg [DEMO PLAN] December 03, 2024 - 8:39am aprensberg

EX. CHAIN BRIDGE ROAD
VA. STATE RT. 123
VARIABLE WIDTH RIGHT OF WAY

EX. UNIVERSITY DRIVE
VARIABLE WIDTH RIGHT OF WAY

EX. BRECKINRIDGE LN

EX. BRECKINRIDGE LN
60' RIGHT OF WAY

EX. JUDICIAL DRIVE
VARIABLE WIDTH RIGHT OF WAY

EX. COURTHOUSE DR

MATCHLINE
SEE THIS SHEET

VA. STATE GRID NORTH

T.M.#57-4-02-041
F & M BANK NORTHERN VIRGINIA
DB.9896 PG.237
ZONE: C-1

T.M.#57-4-26-001 THRU 57-4-26-014
4151 CHAIN BRIDGE ROAD LLC.
DB.19501 PG.1317
ZONE: CPD

26' WIDE ACCESS DRIVE

PROPOSED RIGHT IN, RIGHT OUT ONLY ACCESS

PROPOSED RIGHT IN, RIGHT OUT ONLY ACCESS; MOUNTABLE CURB PROVIDED

CROSS ACCESS EASEMENT PROVIDED TO THE NORTHERN PROPERTY

CROSS ACCESS EASEMENT PROVIDED TO THE SOUTHERN PROPERTY

PROP. ACCESS EASEMENT

PROP. FENCE

PROP. BUS STOP SIGN

PROP. BUS SHELTER PAD

EXISTING RAMP TO REMAIN

16' RAMP @ 5%

PROP. WALL

PARKING GARAGE BELOW SEE ARCH. SHEETS FOR DETAIL

POSSIBLE STREET LIGHT LOCATION

10' RAMP @ 5%

PROP. TRASH TRUCK LOADING AREA

PROP. GREENWAY MAY ACT AS A SERVICE ALLEY AS WELL AS A PEDESTRIAN CONNECTION AND GREEN SPACE

PROP. WALL (TYP.)

INTAKE VENT

STORM WATER MANAGEMENT FACILITY

RETAIL
6,381 GSF

COURTYARD

GREENWAY

POOL

RESIDENTIAL-1
(BLDG A)

CO-WORK
2,653 GSF

BUSINESS CENTER
1,535 GSF

RESIDENTIAL-2
(BLDG B)

LOBBY - BELOW
4,157 GSF

S 66°27'25" E 542.84'

N 66°27'25" W 575.99'

N 27°19'56" E 100.05'

N 27°20'17" E 100.05'

N 27°19'56" E 60.00'

No.	DATE	DESCRIPTION
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10-18-2016
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COMMONWEALTH OF VIRGINIA
CLAYTON A. PARK
LIC. No. 036790
12/02/2024
PROFESSIONAL ENGINEER

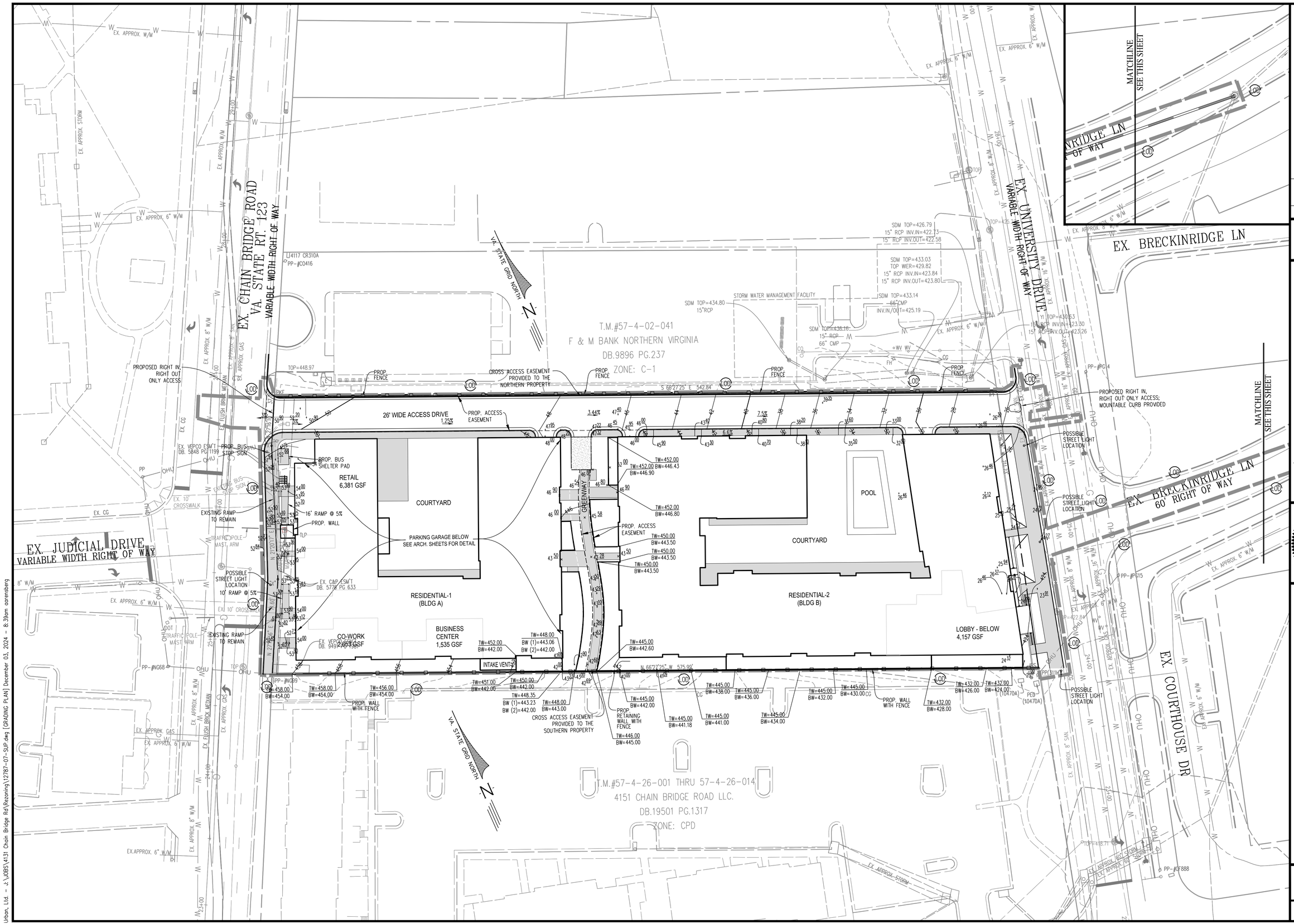
GENERAL DEVELOPMENT PLAN
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' | C.I.= 2' | DATE: DEC., 2024

SHEET 06 OF 38

FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-07-SUP.dwg [SUP] December 03, 2024 – 8:39am aprensberg



No.	DATE	DESCRIPTION
		REVISIONS

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LIC. No. 036790
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PROFESSIONAL ENGINEER

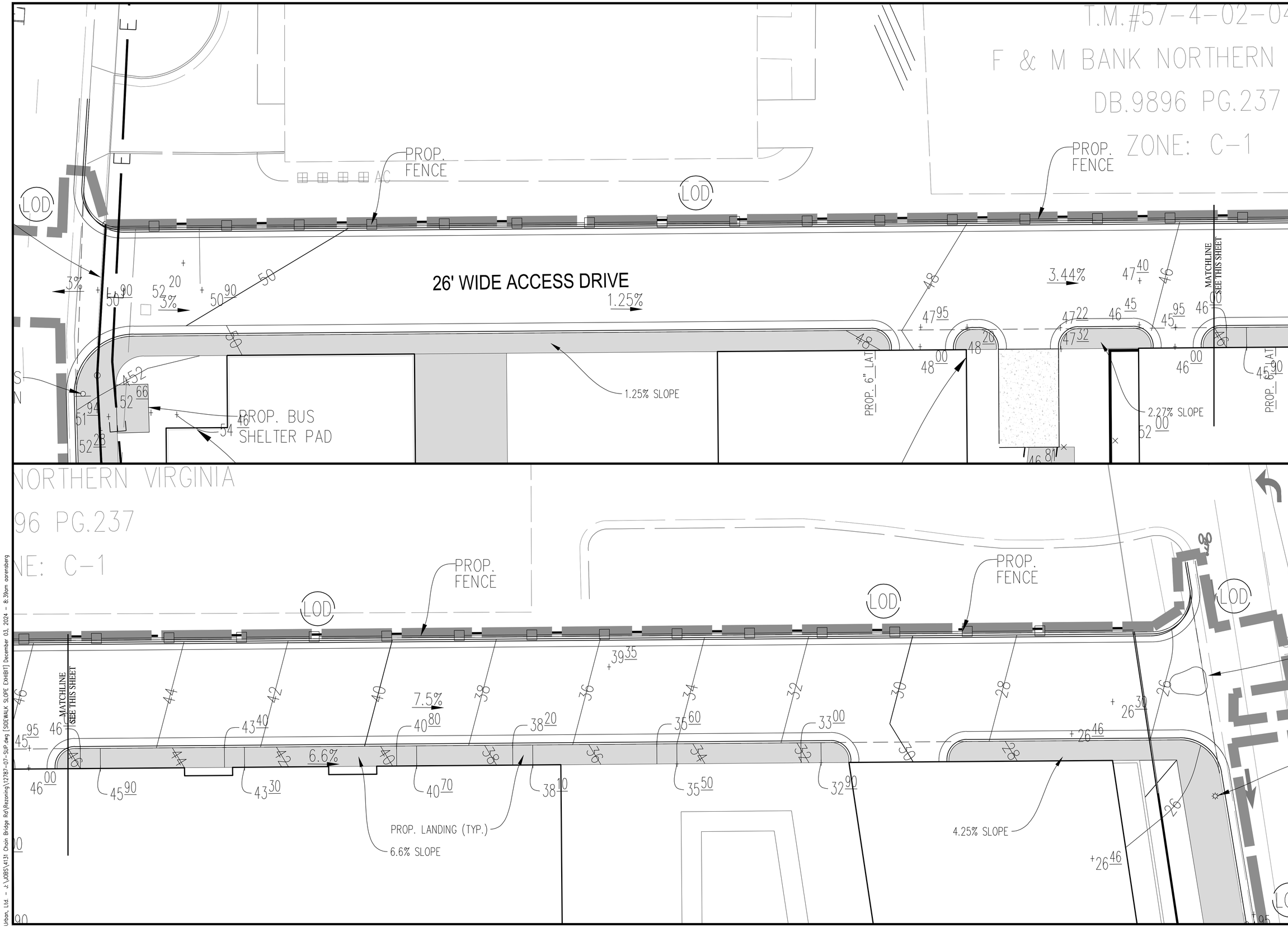
GRADING PLAN
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' | C.I.= 2' | DATE: DEC., 2024

SHEET 07 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-07-SUP.dwg [GRADING PLAN] December 03, 2024 - 8:39am ccrensberg



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SIDEWALK SLOPE EXHIBIT

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.=2' DATE: DEC., 2024

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FILE No. RZ-12787

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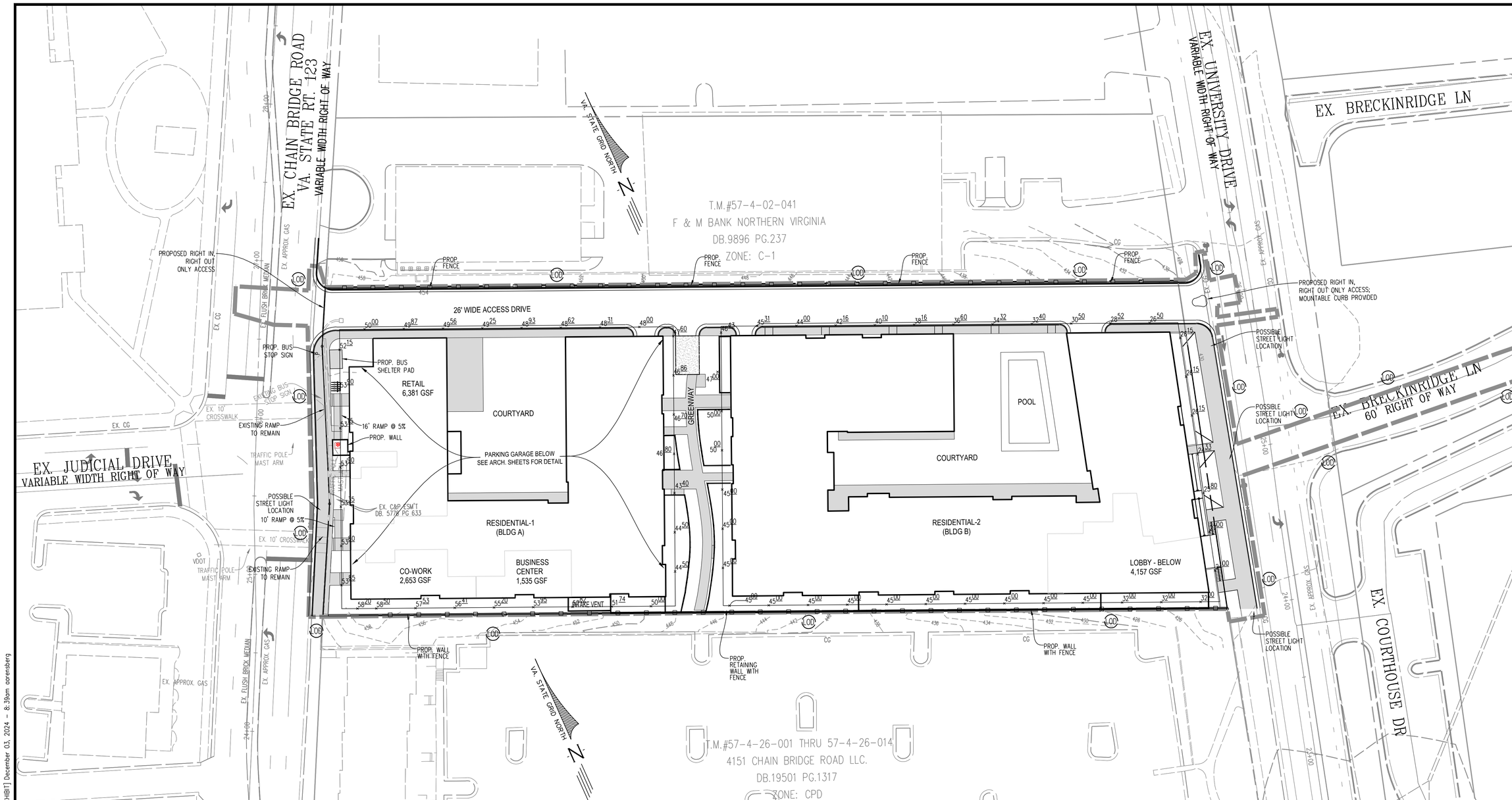

AVERAGE GRADE - BUILDING 1

Spot #	Proposed		
1	450.00	17	452.15
2	444.50	18	453.90
3	444.50	19	453.15
4	443.40	20	453.90
5	446.80	21	453.35
6	446.70	22	453.80
7	446.86	23	453.85
8	447.60	24	458.20
9	448.00	25	458.50
10	448.31	26	457.53
11	448.62	27	453.41
12	448.93	28	455.20
13	449.25	29	453.95
14	449.56	30	452.82
15	449.87	31	451.74
16	450.00	32	450.00
		AVERAGE	450.89

AVERAGE GRADE - BUILDING 2

Spot #	Proposed		
1	450.00	20	424.33
2	450.00	21	426.15
3	450.00	22	426.15
4	450.00	23	426.15
5	450.00	24	426.50
6	450.00	25	428.52
7	450.00	26	430.50
8	450.00	27	432.40
9	450.00	28	434.32
10	450.00	29	436.60
11	450.00	30	438.16
12	450.00	31	440.10
13	450.00	32	442.16
14	432.00	33	444.00
15	432.00	34	445.31
16	432.00	35	446.43
17	424.00	36	447.00
18	427.00	37	450.00
19	425.80	38	450.00
		AVERAGE	439.94

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AVERAGE GRADE EXHIBIT

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.= 2' DATE: DEC., 2024

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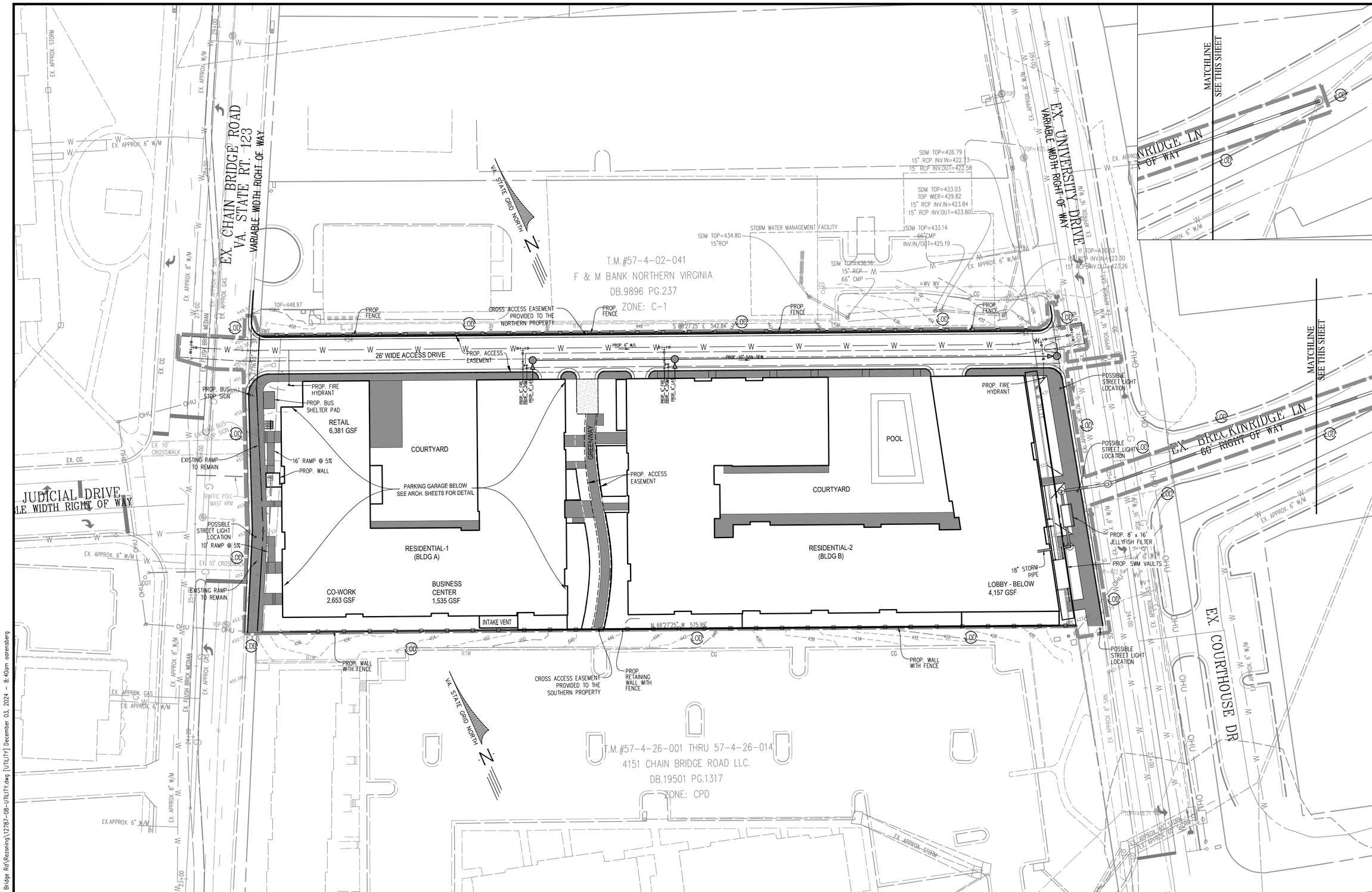
FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-07-SUP.dwg [AVERAGE GRADE EXHIBIT] December 03, 2024 – 8:39am agrensberg



FIRE NOTES:

3. HYDRANT LOCATION IS CONCEPTUAL. FINAL LOCATION TO BE DETERMINED AT TIME OF FINAL SITE PLAN.
4. TWO FDC'S SHALL BE PROVIDED, ONE ON THE EAST SIDE AND ONE ON THE WEST. FINAL LOCATION TO BE DETERMINED AT TIME OF FINAL SITE PLAN.

STORM SEWER NOTES:

1. PROPOSED STORM SEWER TO CONNECT TO EXISTING STORM SEWER MANHOLE LOCATED ON EX. BRECKINRIDGE LN.

SANITARY SEWER NOTES:

1. SANITARY LATERAL TO CONNECT INTO EXISTING SANITARY SEWER MAIN THAT RUNS ALONG UNIVERSITY DRIVE. FINAL LOCATION AND ALIGNMENT WILL BE PROVIDED AT THE TIME OF SITE PLAN.
2. SANITARY FLOWS AND DEMAND WILL BE PROVIDED AT THE TIME OF SITE PLAN. A CAPACITY ANALYSIS SHALL BE PERFORMED AT THE TIME OF FINAL SITE PLAN TO VERIFY THE ADEQUACY OF THE EXISTING DOWNSTREAM SANITARY SYSTEM.

WATER MAIN NOTES:

1. WATER MAIN TO CONNECT INTO EXISTING WATER LINE THAT RUNS ALONG UNIVERSITY DRIVE. FINAL LOCATION AND ALIGNMENT WILL BE PROVIDED AT THE TIME OF SITE PLAN.
2. A HYDRAULIC ANALYSIS WILL BE DONE AT THE TIME OF SITE PLAN WHICH WILL VERIFY THE ADEQUACY OF THE EXISTING WATER MAIN AND PROPOSED WATER METER SIZE.

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UTILITY PLAN

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

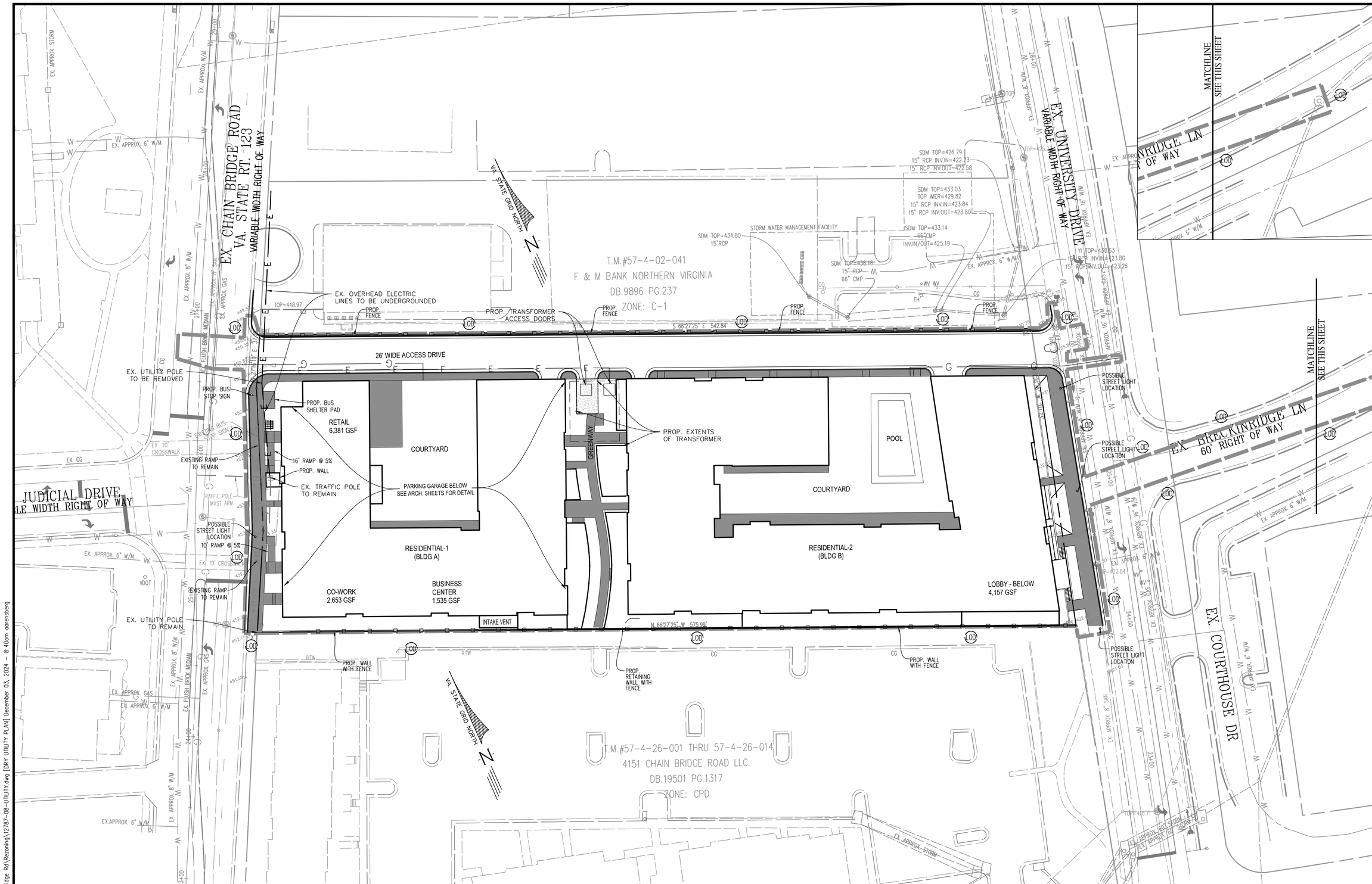
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' | C.I.= N/A | DATE: DEC., 2024

SHEET 10 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-08-UTILITY.dwg [UTILITY] December 03, 2024 - 8:40am agrensberg



LEGEND:

- PROP. ELECTRIC LINE
- EXISTING ELECTRIC LINES TO BE UNDERGROUNDED
- PROP. GAS LINE

DRY UTILITY NOTES:

1. DRY UTILITY ALIGNMENT SHOWN IS CONCEPTUAL IN NATURE AND IS SUBJECT TO CHANGE WITH FINAL ENGINEERING. FINAL DESIGN WILL BE DETERMINED AT TIME OF FINAL SITE PLAN.
2. UNDERGROUNDING OF EXISTING OVERHEAD CABLES SHOWN ON PLAN IS CONCEPTUAL IN NATURE AND FINAL DESIGN SHALL BE DETERMINED AT TIME OF FINAL SITE PLAN.

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DRY UTILITY PLAN

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30'

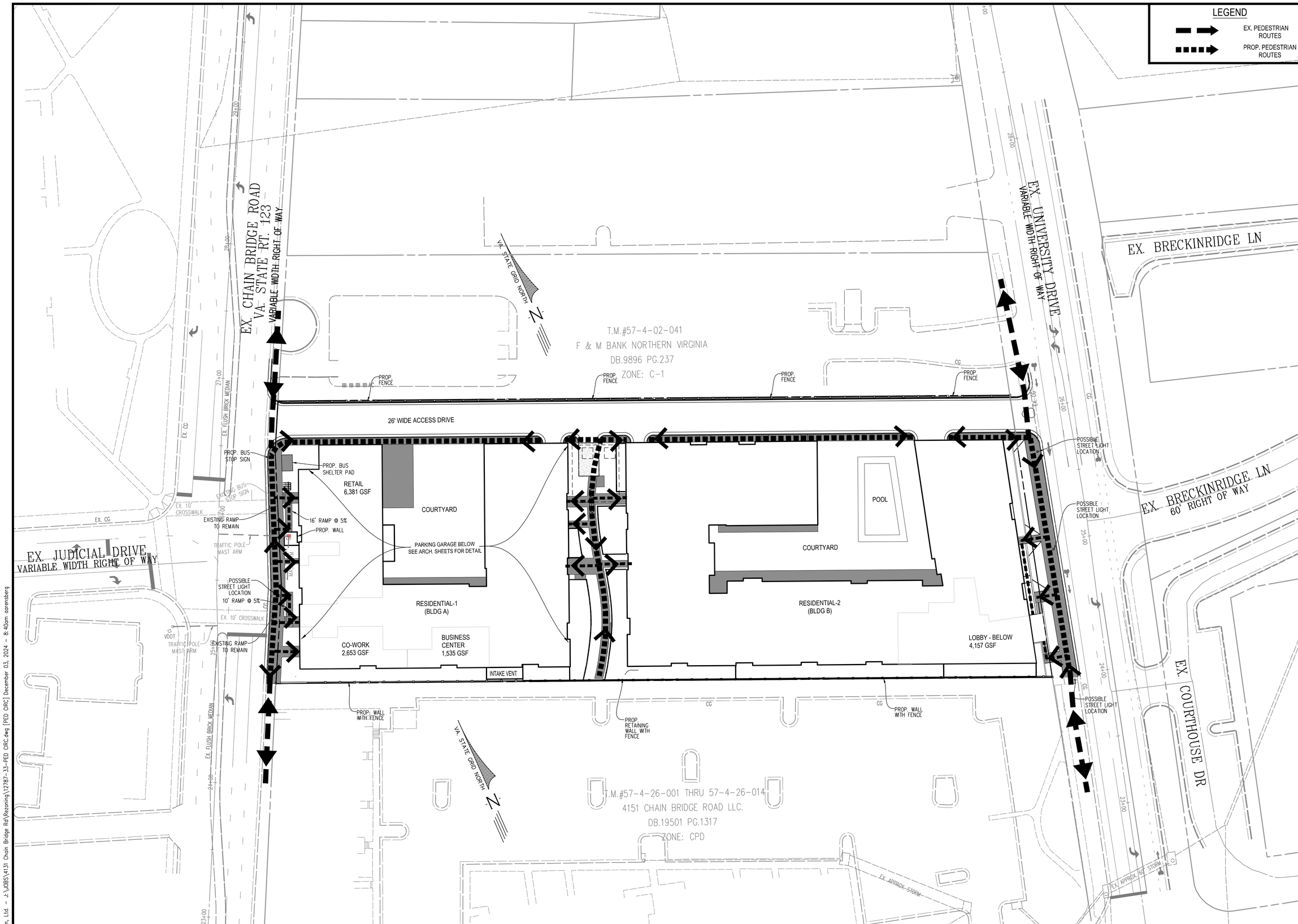
C.I.= N/A

DATE: DEC., 2024

SHEET 11 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-08-UTILITY.dwg [DRY UTILITY PLAN] december 03, 2024 - 8:40am agrensberg



No.	DATE	DESCRIPTION

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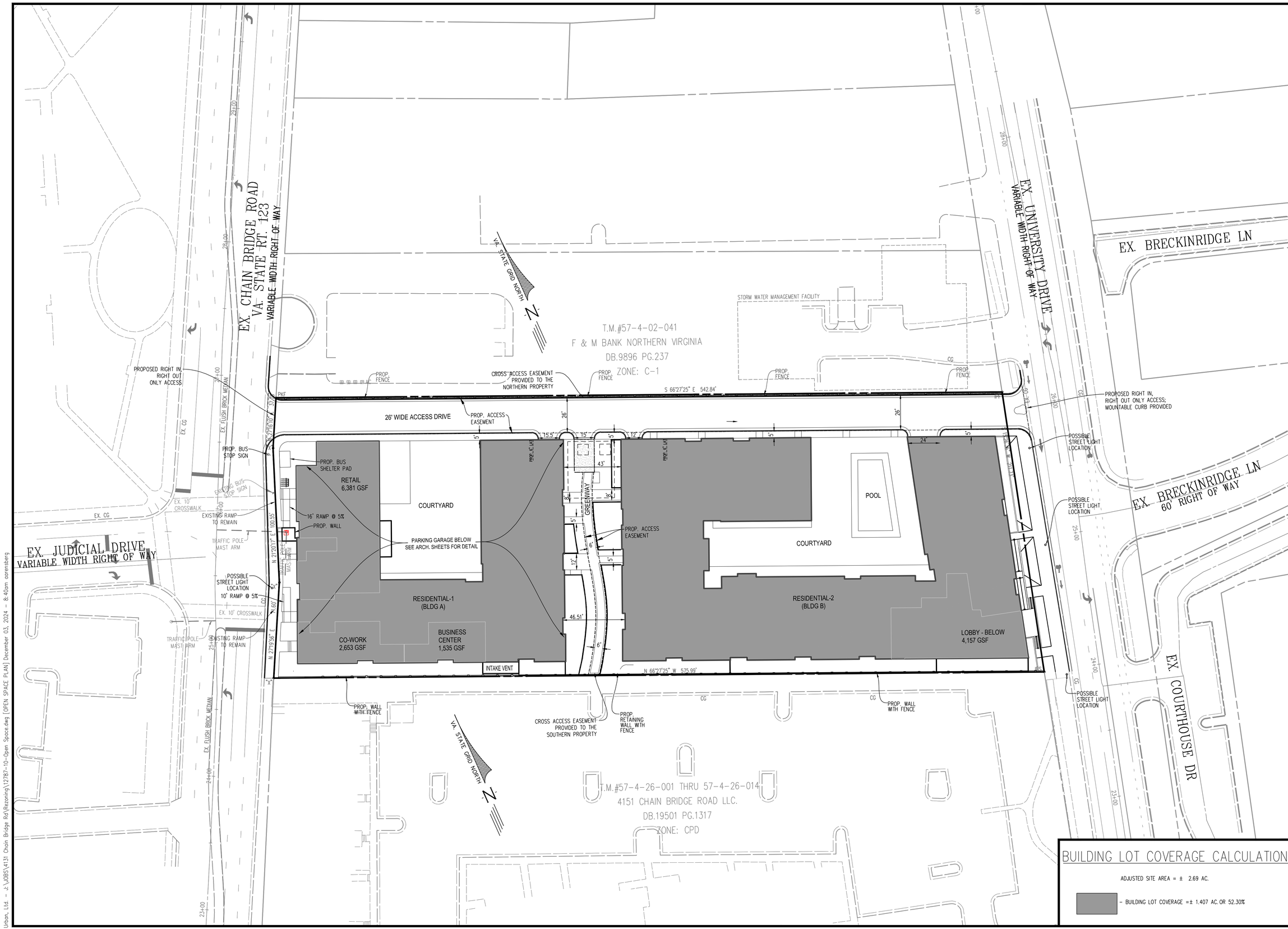
PEDESTRIAN CIRCULATION PLAN
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' | C.I.=N/A | DATE: DEC., 2024

SHEET 12 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-33-PED CIRC.dwg [PED CIRC] December 03, 2024 - 8:40am agrensberg



BUILDING LOT COVERAGE CALCULATION

ADJUSTED SITE AREA = ± 2.69 AC.

– BUILDING LOT COVERAGE =± 1.407 AC. OR 52.30%

No.	DATE	DESCRIPTION

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BUILDING LOT COVERAGE

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30'

C.I.= N/A

DATE: DEC., 2024

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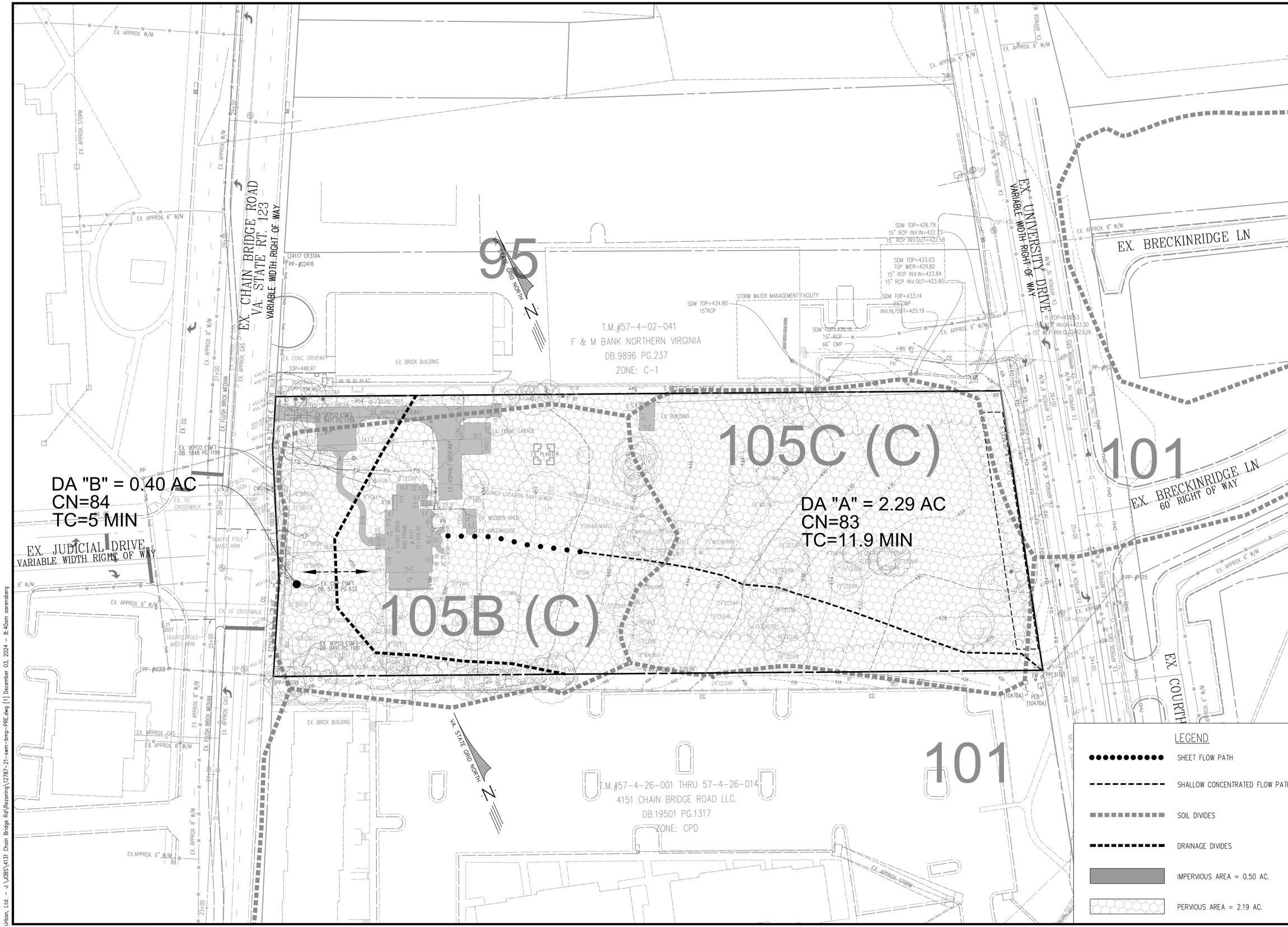
FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-10-Open Space.dwg [OPEN SPACE PLAN] December 03, 2024 – 8:40am aprensberg



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STORMWATER MANAGEMENT PRE-DEVELOPMENT

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.=2' DATE: DEC., 2024

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FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-21-swm-bmp-PRE.dwg [1] December 03, 2024 - 8:40am aarensberg

DRAINAGE AREA A

Curve Number Calculations

	Area (ac)	CN	Description
	1.824	79	50-75% Grass cover, Fair, HSG C
*	0.370	98	Paved HSG C
	0.043	84	50-75% Grass cover, Fair, HSG D
*	0.053	98	Paved HSG D
	2.290	83	Weighted Average
	1.867		81.53% Pervious Area
	0.423		18.47% Impervious Area

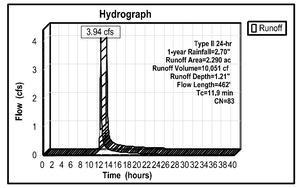
Time of Concentration Calculations

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0667	0.18		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.05"
2.9	362	0.0888	2.09		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.9	462	Total			

1 Year Flow Calculations

Runoff = 3.94 cfs @ 12.04 hrs , Volume= 10,051 cf , Depth= 1.21"

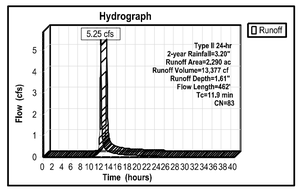
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.70"



2 Year Flow Calculations

Runoff = 5.25 cfs @ 12.04 hrs , Volume= 13,377 cf , Depth= 1.61"

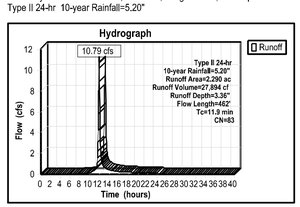
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.20"



10 Year Flow Calculations

Runoff = 10.79 cfs @ 12.04 hrs , Volume= 27,894 cf , Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=5.20"



DRAINAGE AREA B

Curve Number Calculations

	Area (ac)	CN	Description
	0.256	79	50-75% Grass cover, Fair, HSG C
*	0.070	98	Paved HSG C
	0.041	84	50-75% Grass cover, Fair, HSG D
*	0.033	98	Paved HSG D
	0.400	84	Weighted Average
	0.297		74.25% Pervious Area
	0.103		25.75% Impervious Area

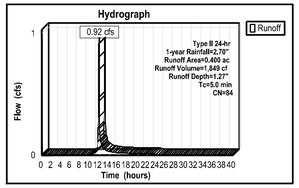
Time of Concentration Calculations

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

1 Year Flow Calculations

Runoff = 0.92 cfs @ 11.96 hrs , Volume= 1,849 cf , Depth= 1.27"

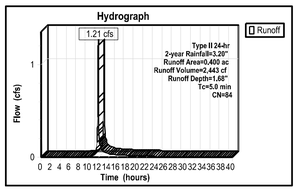
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.70"



2 Year Flow Calculations

Runoff = 1.21 cfs @ 11.96 hrs , Volume= 2,443 cf , Depth= 1.68"

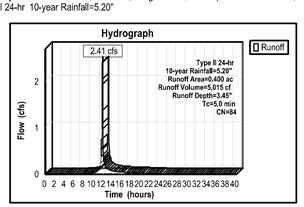
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.20"



10 Year Flow Calculations

Runoff = 2.41 cfs @ 11.95 hrs , Volume= 5,015 cf , Depth= 3.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=5.20"



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PROFESSIONAL ENGINEER

PRE-DEVELOPMENT COMPUTATIONS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: N/A
C.I.= N/A
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FILE No.
RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-21-swm-bmp-PRE.dwg [2] December 03, 2024 - 8:40am carensberg

STORMWATER MANAGEMENT NARRATIVE:

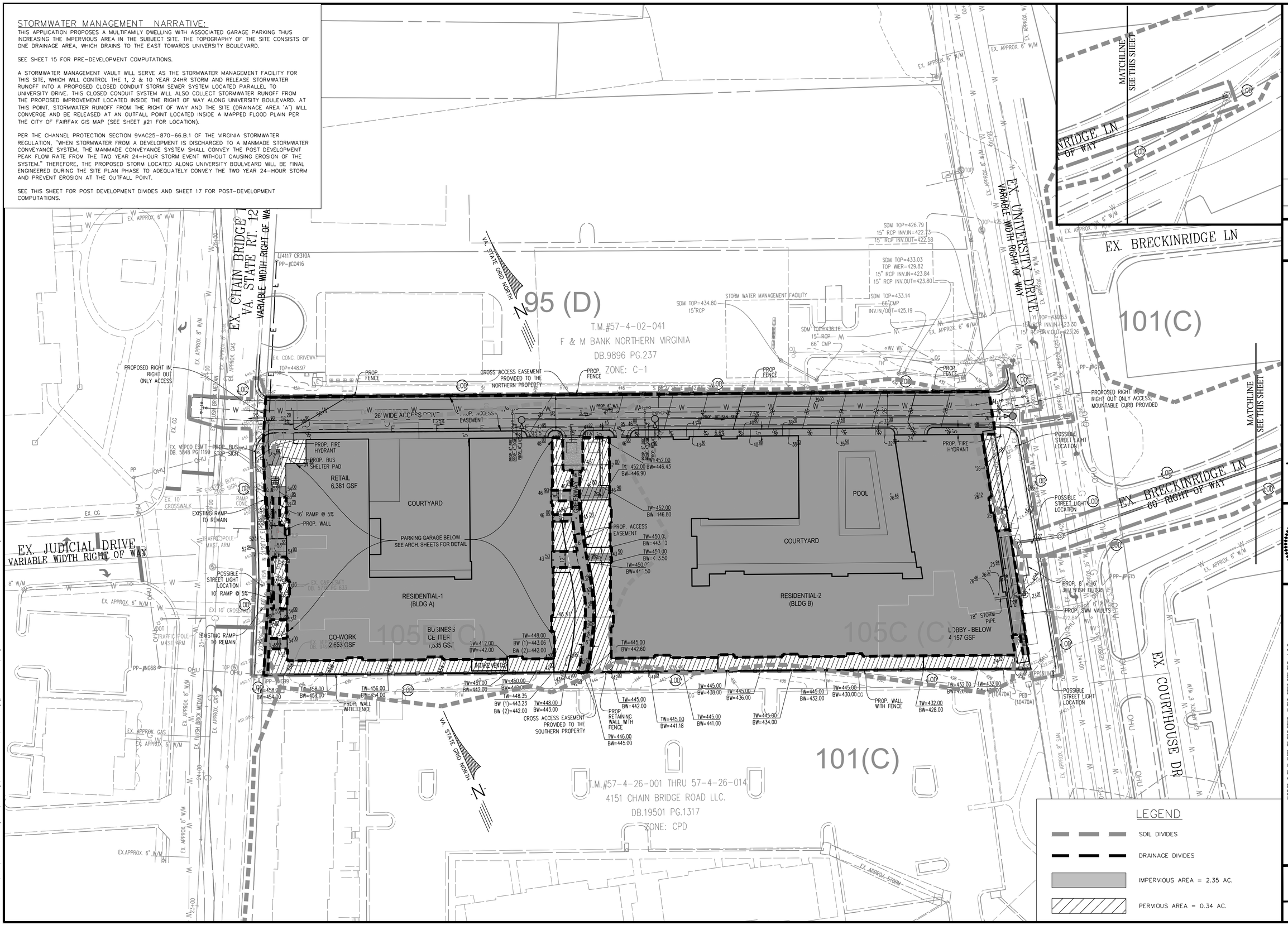
THIS APPLICATION PROPOSES A MULTIFAMILY DWELLING WITH ASSOCIATED GARAGE PARKING THUS INCREASING THE IMPERVIOUS AREA IN THE SUBJECT SITE. THE TOPOGRAPHY OF THE SITE CONSISTS OF ONE DRAINAGE AREA, WHICH DRAINS TO THE EAST TOWARDS UNIVERSITY BOULEVARD.

SEE SHEET 15 FOR PRE-DEVELOPMENT COMPUTATIONS.

A STORMWATER MANAGEMENT VAULT WILL SERVE AS THE STORMWATER MANAGEMENT FACILITY FOR THIS SITE, WHICH WILL CONTROL THE 1, 2 & 10 YEAR 24HR STORM AND RELEASE STORMWATER RUNOFF INTO A PROPOSED CLOSED CONDUIT STORM SEWER SYSTEM LOCATED PARALLEL TO UNIVERSITY DRIVE. THIS CLOSED CONDUIT SYSTEM WILL ALSO COLLECT STORMWATER RUNOFF FROM THE PROPOSED IMPROVEMENT LOCATED INSIDE THE RIGHT OF WAY ALONG UNIVERSITY BOULEVARD. AT THIS POINT, STORMWATER RUNOFF FROM THE RIGHT OF WAY AND THE SITE (DRAINAGE AREA "A") WILL CONVERGE AND BE RELEASED AT AN OUTFALL POINT LOCATED INSIDE A MAPPED FLOOD PLAIN PER THE CITY OF FAIRFAX GIS MAP (SEE SHEET #21 FOR LOCATION).

PER THE CHANNEL PROTECTION SECTION 9VAC25-870-66.B.1 OF THE VIRGINIA STORMWATER REGULATION, "WHEN STORMWATER FROM A DEVELOPMENT IS DISCHARGED TO A MANMADE STORMWATER CONVEYANCE SYSTEM, THE MANMADE CONVEYANCE SYSTEM SHALL CONVEY THE POST DEVELOPMENT PEAK FLOW RATE FROM THE TWO YEAR STORM EVENT WITHOUT CAUSING EROSION OF THE SYSTEM." THEREFORE, THE PROPOSED STORM LOCATED ALONG UNIVERSITY BOULVEARD WILL BE FINAL ENGINEERED DURING THE SITE PLAN PHASE TO ADEQUATELY CONVEY THE TWO YEAR 24-HOUR STORM AND PREVENT EROSION AT THE OUTFALL POINT.

SEE THIS SHEET FOR POST DEVELOPMENT DIVIDES AND SHEET 17 FOR POST-DEVELOPMENT COMPUTATIONS.



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COMMONWEALTH OF VIRGINIA
LARRY E. TOOK
LICENSE No. 036790
12/02/2024
PROFESSIONAL ENGINEER

SWM POST-DEVELOPMENT PLAN

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' | C.I.= 2' | DATE: DEC., 2024

SHEET 16 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-21-swm bmp POST.dwg [post dev swm plan] December 03, 2024 - 8:41am aarensberg

Summary for 1-Year Post-Development Area

[49] Hint: Tc<2dt may require smaller dt

Runoff = 9.91 cfs@ 11.95 hrs, Volume= 22,041 cf, Depth=2.26"
Routed to Pond 28P : Vault A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.70"

Area (ac)	CN	Description
0.340	79	50-75% Grass cover, Fair, HSG C
2.350	98	Paved parking, HSG C
2.690	96	Weighted Average
0.340		12.64% Pervious Area
2.350		87.36% Impervious Area

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

Summary for 2-Year Post-Development Area

[49] Hint: Tc<2dt may require smaller dt

Runoff = 11.92 cfs@ 11.95 hrs, Volume= 26,844 cf, Depth=2.75"
Routed to Pond 28P : Vault A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.20"

Area (ac)	CN	Description
0.340	79	50-75% Grass cover, Fair, HSG C
2.350	98	Paved parking, HSG C
2.690	96	Weighted Average
0.340		12.64% Pervious Area
2.350		87.36% Impervious Area

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

Summary for 10-Year Post-Development Area

[49] Hint: Tc<2dt may require smaller dt

Runoff = 19.86 cfs @ 11.95 hrs, Volume= 46,200 cf, Depth=4.73"
Routed to Pond 28P : Vault A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=5.20"

Area (ac)	CN	Description
0.340	79	50-75% Grass cover, Fair, HSG C
2.350	98	Paved parking, HSG C
2.690	96	Weighted Average
0.340		12.64% Pervious Area
2.350		87.36% Impervious Area

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

Summary for 1-Year Outflow to Vault

Inflow Area = 117,176 sf, 87.36% Impervious, Inflow Depth =2.26" for 1-year event
Inflow = 9.91 cfs@ 11.95 hrs, Volume= 22,041 cf
Outflow = 2.50 cfs@ 12.11 hrs, Volume= 22,041 cf, Atten= 75%, Lag= 9.5 min
Primary = 2.50 cfs@ 12.11 hrs, Volume= 22,041 cf
Routed to Link 5L : Outfall A

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 6.01' @ 12.11 hrs Surf.Area= 1,684 sf Storage= 10,119 cf

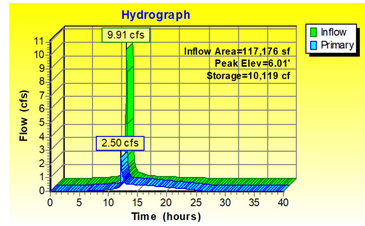
Plug-Flow detention time= 184.3 min calculated for 22,041 cf (100% of inflow)
Center-of-Mass det. time= 184.1 min (958.8 - 774.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	16,840 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	1,684	0	0
10.00	1,684	16,840	16,840

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	5.56'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.42 cfs @ 12.11 hrs HW=6.00' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.57 cfs @ 11.67 fps)
└**2=Orifice/Grate** (Orifice Controls 1.84 cfs @ 2.12 fps)



Summary for 2-Year Outflow to Vault

Inflow Area = 117,176 sf, 87.36% Impervious, Inflow Depth =2.75" for 2-year event
Inflow = 11.92 cfs@ 11.95 hrs Volume= 26,844 cf
Outflow = 5.17 cfs@ 12.06 hrs Volume= 26,844 cf, Atten= 57%, Lag= 6.7 min
Primary = 5.17 cfs@ 12.06 hrs Volume= 26,844 cf
Routed to Link 5L : Outfall A

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 6.71' @ 12.06 hrs Surf.Area= 1,684 sf Storage= 11,300 cf

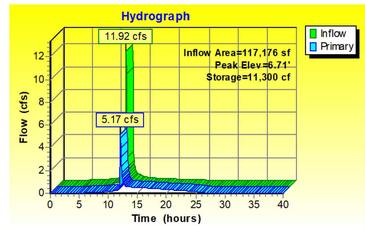
Plug-Flow detention time= 167.8 min calculated for 26,844 cf (100% of inflow)
Center-of-Mass det. time= 167.6 min (937.2 - 769.6)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	16,840 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	1,684	0	0
10.00	1,684	16,840	16,840

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	5.56'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.05 cfs @ 12.06 hrs HW=6.67' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.60 cfs @ 12.32 fps)
└**2=Orifice/Grate** (Orifice Controls 4.45 cfs @ 4.45 fps)



Summary for 10-Year Outflow to Vault

Inflow Area = 117,176 sf, 87.36% Impervious, Inflow Depth =4.73" for 10-year event
Inflow = 19.86 cfs @ 11.95 hrs, Volume= 46,200 cf
Outflow = 10.24 cfs @ 12.05 hrs, Volume= 46,199 cf, Atten= 48%, Lag= 5.8 min
Primary = 10.24 cfs @ 12.05 hrs, Volume= 46,199 cf
Routed to Link 5L : Outfall A

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Peak Elev= 9.71' @ 12.05 hrs Surf.Area= 1,684 sf Storage= 16,356 cf

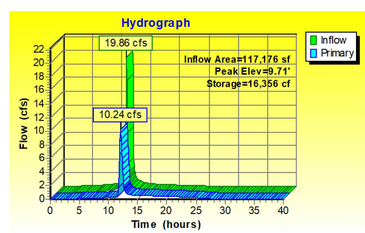
Plug-Flow detention time= 135.4 min calculated for 46,199 cf (100% of inflow)
Center-of-Mass det. time= 135.2 min (892.0 - 756.8)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	16,840 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	1,684	0	0
10.00	1,684	16,840	16,840

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	5.56'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

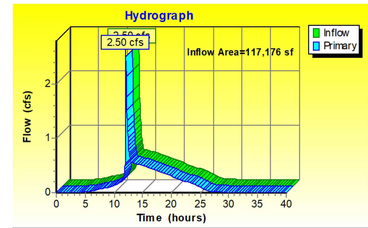
Primary OutFlow Max=10.22 cfs @ 12.05 hrs HW=9.69' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.73 cfs @ 14.89 fps)
└**2=Orifice/Grate** (Orifice Controls 9.48 cfs @ 9.48 fps)



1-Year Study Point Summary

Inflow Area = 117,176 sf, 87.36% Impervious, Inflow Depth =2.26" for 1-year event
Inflow = 2.50 cfs@ 12.11 hrs Volume= 22,041 cf
Primary = 2.50 cfs@ 12.11 hrs Volume= 22,041 cf, Atten= 0%, Lag= 0.0 min

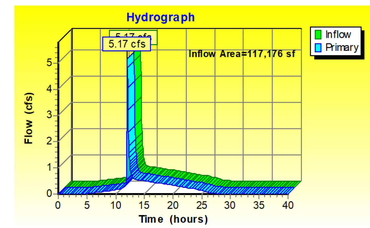
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs



2-Year Study Point Summary

Inflow Area = 117,176 sf, 87.36% Impervious, Inflow Depth =2.45" for 2-year event
Inflow = 5.17 cfs@ 12.06 hrs, Volume= 26,844 cf
Primary = 5.17 cfs@ 12.06 hrs, Volume= 26,844 cf, Atten= 0%, Lag= 0.0 min

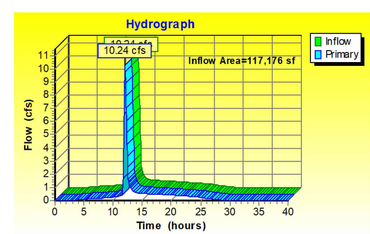
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs



10-Year Study Point Summary

Inflow Area = 117,176 sf, 87.36% Impervious, Inflow Depth =4.39" for 10-year event
Inflow = 10.24 cfs@ 12.05 hrs, Volume= 46,199 cf
Primary = 10.24 cfs@ 12.05 hrs, Volume= 46,199 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs



No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024
- - - -

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COMMONWEALTH OF VIRGINIA
Lic. No. 036790
12/02/2024
PROFESSIONAL ENGINEER

SWM POST-DEVELOPMENT COMPS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
SCALE: N/A
C.I.= N/A
DATE: DEC., 2024

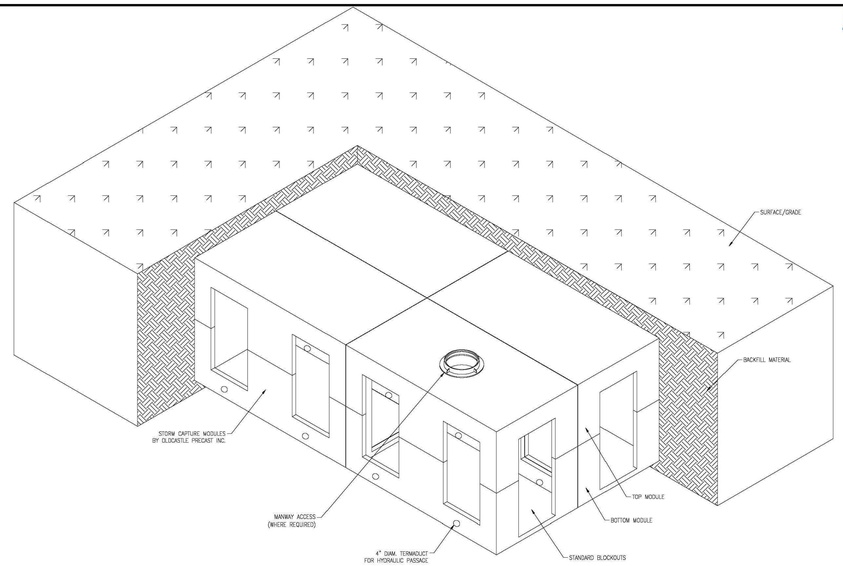
SHEET 17 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-21-swm bmp POST.dwg [post dev swm comps] December 03, 2024 - 8:41am aarensberg

POSSIBLE SWM VAULT STANDARD DETAILS (OR APPROVED EQUAL)

STORMCAPTURE™



NOTE: THIS VIEW IS FOR ILLUSTRATION PURPOSES ONLY TO SHOW FEATURES OF THE SYSTEM. ACTUAL LAYOUT VARIES BY PROJECT. SEE SITE PLAN LAYOUT. ALL PERIMETER WALLS ARE BOLD.

TYPICAL ISO VIEW
N.T.S.

Oldcastle® Stormwater Solutions
1501 SOUTHGATE PLAZA, SUITE 200, LITITZ, PA 17543
PHONE: 1.800.579.3207 FAX: 305.594.1567

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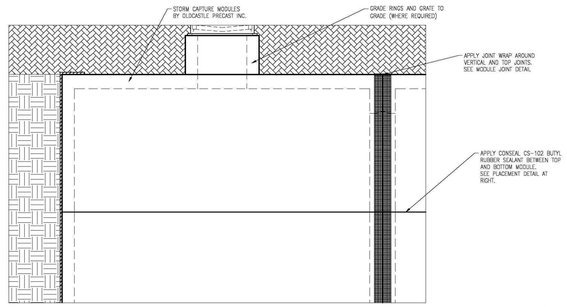
STORMCAPTURE

CUSTOMER:

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER

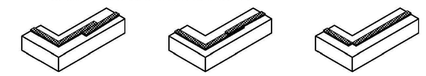
DRAWING NUMBER: REVISION: SHEET:

STORMCAPTURE™



GRATE INLET DETAIL
SCALE: 3/8" = 1'-0"

KEYWAYS MUST BE FREE OF DIRT, ROCKS, AND WATER. ROCKS AND DIRT PREVENT THE VAULT SECTIONS FROM SEATING AND SEALING PROPERLY. REMOVE ALL PROTECTIVE PAPER FROM RUBBER SEALANT MATERIAL. SPLICE RUBBER SEALANT MATERIAL WITH A "SOIC BY SOIL" JOINT, AWAY FROM CORNERS. CORNER SPLICING WILL NOT SEAL PROPERLY.



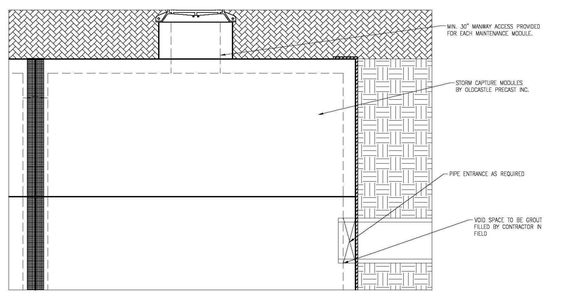
CORRECT – INSTALL RUBBER SEALANT MATERIAL AT THE OUTER EDGE OF THE KEYWAY. RUBBER SEALANT SHOULD BE CONTINUOUS AROUND CORNERS.

INCORRECT – DO NOT OVERLAP THE RUBBER SEALANT MATERIAL AT SPLICE.

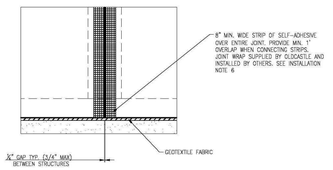
INCORRECT – DO NOT SPLICE RUBBER SEALANT MATERIAL AT A CORNER. RUBBER SEALANT SHOULD BE CONTINUOUS AROUND CORNERS.

CONSEAL CS-102 BUTYL RUBBER SEALANT PLACEMENT DETAIL
NTS

NOTE: WEIR PLATES, IF REQUIRED, MAY BE INSTALLED WITH RED-HEAD ANCHORS (BY OTHERS). ELEVATIONS TO BE DETERMINED BY PROJECT DESIGN ENGINEER



MANWAY ACCESS DETAIL
SCALE: 3/8" = 1'-0"



MODULE JOINT DETAIL
SCALE: 1/2" = 1'-0"

Oldcastle® Stormwater Solutions
1501 SOUTHGATE PLAZA, SUITE 200, LITITZ, PA 17543
PHONE: 1.800.579.3207 FAX: 305.594.1567

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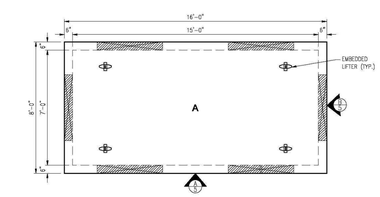
STORMCAPTURE
EXTERIOR DETAILS

CUSTOMER:

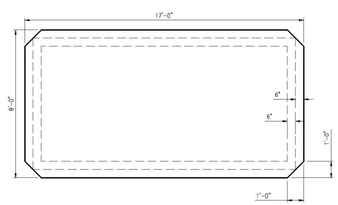
DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER

DRAWING NUMBER: REVISION: SHEET:
REV DATE:

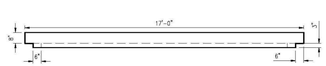
STORMCAPTURE™



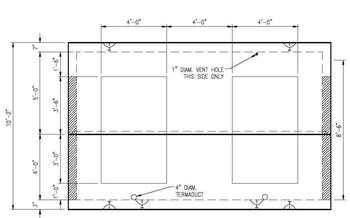
STORM CAPTURE PLAN VIEW
SCALE: 1/4" = 1'-0"



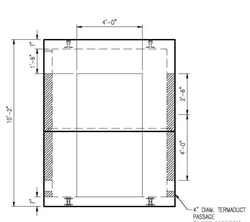
LINK SLAB PLAN VIEW
SCALE: 1/4" = 1'-0"



LINK SLAB ELEVATION VIEW
SCALE: 1/4" = 1'-0"



VIEW A
SCALE: 1/4" = 1'-0"



VIEW B
SCALE: 1/4" = 1'-0"

Oldcastle® Stormwater Solutions
1501 SOUTHGATE PLAZA, SUITE 200, LITITZ, PA 17543
PHONE: 1.800.579.3207 FAX: 305.594.1567

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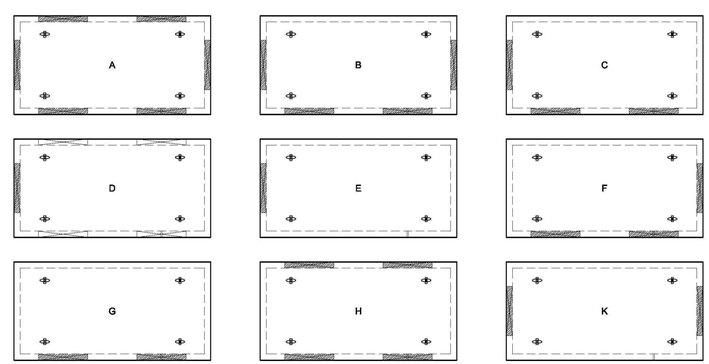
STORMCAPTURE
INTERIOR DETAILS

CUSTOMER:

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER

DRAWING NUMBER: REVISION: SHEET:
REV DATE:

STORMCAPTURE™



STORM CAPTURE CONFIGURATIONS
SCALE: 3/16" = 1'-0"

Oldcastle® Stormwater Solutions
1501 SOUTHGATE PLAZA, SUITE 200, LITITZ, PA 17543
PHONE: 1.800.579.3207 FAX: 305.594.1567

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STORMCAPTURE
CONFIGURATIONS

CUSTOMER:

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER

DRAWING NUMBER: REVISION: SHEET:
REV DATE:

NOTE:
ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SELECTED & FINAL ENGINEEERED AT TIME OF FINAL SITE PLAN. APPLICANT RESERVES THE RIGHT TO SELECT ALTERNATE FACILITY TYPES EQUIVALENT TO THE DETAILS PROVIDED ON THIS SHEET.

NOTE:
FINAL DETAILS OF VAULT GEOMETRY, SIZE AND CONTROL STRUCTURES SHALL BE DETERMINED AT THE TIME OF SITE PLAN.

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-03-2024
09-03-2024
12-02-2024
- - - -

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
LIC. No. 036790
12/02/2024
PROFESSIONAL ENGINEER

SWM POST-DEVELOPMENT DETAILS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: AS NOTED C.I.= N/A DATE: DEC., 2024

SHEET 18 OF 38

FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-21-swm bmp POST.dwg [post dev swm details] December 03, 2024 – 8:41am aarensberg

Project Name:	4131 Chain Bridge Road
Date:	Nov-24
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)* → 2.69

Maximum reduction required:	*20%*
The site's net increase in impervious cover (acres) is:	*1.85*
Post-Development TP Load Reduction for Site (lb/yr):	*3.50*

Check:
BMP Design Specifications List: 2011 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, 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	2.11	0.08	2.19
Impervious Cover (acres)	0.00	0.00	0.46	0.04	0.50
					2.69

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	0.33	0.01	0.34
Impervious Cover (acres)	0.00	0.00	2.24	0.11	2.35
Area Check	**OK.**	**OK.**	**OK.**	**OK.**	2.69

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)	2.19	0.34
Weighted Rv(turf)	0.22	0.22
% Managed Turf	81%	40%
Impervious Cover (acres)	0.50	0.50
Rv(impervious)	0.95	0.95
% Impervious	19%	60%
Total Site Area (acres)	**2.69**	**0.84**
Site Rv	**0.36**	**0.65**

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0799	0.0458
Pre-ReDevelopment Treatment Volume (cubic feet)	3,482	1,997
Pre-ReDevelopment TP Load (lb/yr)	**2.19**	**1.25**
Pre-ReDevelopment TP load per acre (lb/acre/yr)	0.81	1.49
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.34*

[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)	0.34
Weighted Rv (turf)	0.22
% Managed Turf	13%
Impervious Cover (acres)	2.35
Rv(impervious)	0.95
% Impervious	87%
Final Site Area (acres)	**2.69**
Final Post Dev Site Rv	**0.86**

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.34
Weighted Rv (turf)	0.22
% Managed Turf	40%
ReDev. Impervious Cover (acres)	0.50
Rv(impervious)	0.95
% Impervious	60%
Total ReDev. Site Area (acres)	**0.84**
ReDev Site Rv	**0.65**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	1.85
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.1923
Final Post-Development Treatment Volume (cubic feet)	8,377
Final Post-Development TP Load (lb/yr)	**5.26**
Final Post-Development TP Load per acre (lb/acre/yr)	1.96

Post-ReDevelopment Treatment Volume (acre-ft)	0.0458
Post-ReDevelopment Treatment Volume (cubic feet)	1,997
Post-ReDevelopment Load (TP) (lb/yr)*	**1.25**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.49
Max. Reduction Required (Below Pre-ReDevelopment Load)	**20%**
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.25**

Post-Development Treatment Volume (acre-ft)	0.1465
Post-Development Treatment Volume (cubic feet)	6,380
Post-Development TP Load (lb/yr)	**4.01**
TP Load Reduction Required for New Impervious Area (lb/yr)	**3.25**

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**3.50**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	15.65
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	37.65

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	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.00	0.00	0.33	0.01	0.34	0.22
Impervious Cover (acres)	0.00	0.00	2.24	0.11	2.35	0.95
				Total	2.69	

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr)	5.26
Post Development Treatment Volume in D.A. A (ft^3)	8,377

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

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
14. Manufactured Treatment Devices (no RR)													
14.a. Manufactured Treatment Device-Hydrodynamic	0	0.34	2.35	0	0	8,377	8,377	50	0.00	5.26	2.63	2.63	14.b. MTD - Filtering

TOTAL IMPERVIOUS COVER TREATED (ac)	2.35	AREA CHECK: OK.
TOTAL MANAGED TURF AREA TREATED (ac)	0.34	AREA CHECK: OK.

TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr)	3.50
TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr)	5.26
TOTAL PHOSPHORUS REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)	3.68
TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)	0.00
TOTAL PHOSPHORUS LOAD REDUCTION ACHIEVED IN D.A. A (lb/yr)	3.68
TOTAL PHOSPHORUS REMAINING AFTER APPLYING BMP LOAD REDUCTIONS IN D.A. A (lb/yr)	1.58

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

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

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)	2.35	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	2.35	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.34	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.34	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 8,377

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)	0	0	0	0	0	0
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	5.26	0.00	0.00	0.00	0.00	5.26
TP LOAD REDUCTION ACHIEVED (lb/yr)	3.68	0.00	0.00	0.00	0.00	3.68
TP LOAD REMAINING (lb/yr)	1.58	0.00	0.00	0.00	0.00	1.58
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	5.26
TP LOAD REDUCTION REQUIRED (lb/yr)	3.50
TP LOAD REDUCTION ACHIEVED (lb/yr)	3.68
TP LOAD REMAINING (lb/yr):	1.58
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00 **

** TARGET TP REDUCTION EXCEEDED BY 0.18 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	37.65
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	37.65

NOTE:
ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SELECTED & FINAL ENGINEEERED AT TIME OF FINAL SITE PLAN. APPLICANT RESERVES THE RIGHT TO SELECT ALTERNATE FACILITY TYPES EQUIVALENT TO THE DETAILS PROVIDED ON THIS SHEET.

NOTE:
FINAL DETAILS OF VAULT GEOMETRY, SIZE AND CONTROL STRUCTURES SHALL BE DETERMINED AT THE TIME OF SITE PLAN.

BMP NARRATIVE:
THIS PLAN PROPOSES A MULTIFAMILY DWELLING WITH AN ASSOCIATED GARAGE PARKING. THE RESULT OF THE IMPROVEMENTS IS AN INCREASE OF APPROXIMATELY 1.85 AC OF IMPERVIOUS AREA WITHIN THE SUBJECT PROPERTY. 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 REQUIREMENTS FOR THIS SITE MAY INCLUDE BUT ARE NOT LIMITED TO: BELOW GRADE STORM FILTERS AND JELLYFISH FILTERS. PLEASE SEE THIS SHEET FOR THE PRELIMINARY COMPUTATIONS WHICH SHOW THAT, BY TREATING ± 2.05 ACRES OF IMPERVIOUS AREA WITH VARIOUS TREATMENT METHODS, THE REQUIRED PHOSPHORUS REMOVAL CAN BE ACHIEVED.

THE PROPOSED BMP FACILITIES SHALL BE PRIVATELY MAINTAINED BY THE PROPERTY OWNER. VIRGINIA'S STORMWATER MANAGEMENT REGULATIONS REQUIRE INSPECTIONS TWICE A YEAR, AND AFTER ANY STORM EVENT THAT EXCEEDS THE CAPACITY OF THE FACILITY TO ENSURE THAT THE FACILITIES REMAIN OPERATIONAL. A DETAILED INSPECTION SHALL BE PERFORMED ANNUALLY BY A QUALIFIED PROFESSIONAL IN ORDER TO ENSURE THAT THE FACILITIES ARE OPERATIONAL AS DESIGNED, AND TO PROVIDE AN OPPORTUNITY TO SCHEDULE ANY MAINTENANCE THAT THE FACILITIES MAY REQUIRE.

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05--04--2016
10--18--2016
04--22--2024
06--11--2024
09--03--2024
12--02--2024

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COMMONWEALTH OF VIRGINIA
LARRY D. TACK
LICENSE NO. 036790
12/02/2024
PROFESSIONAL ENGINEER

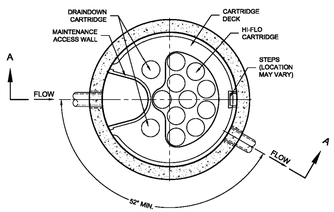
BMP POST-DEVELOPMENT COMPS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
C.I.= N/A
SCALE: N/A
DATE: DEC., 2024

SHEET 19 OF 38

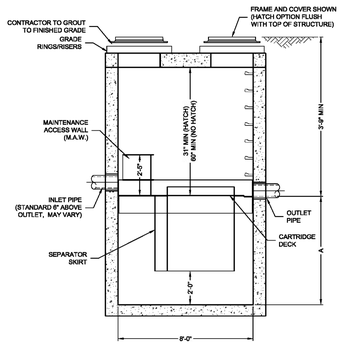
FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-21-swm bmp POST.dwg [post bmp comps and details 1] December 03, 2024 – 8:41am agreensberg

POSSIBLE JELLYFISH FILTER STANDARD DETAIL (OR APPROVED EQUAL)



PLAN VIEW



SECTION A-A

Jellyfish® Filter

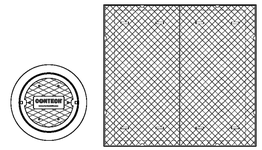
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NOS. 9,867,738; 9,237,419 & US 9,525,930; CT-RIS INTERNATIONAL PATENTS PENDING

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN. 2590" MANHOLE JELLYFISH PEAK TREATMENT CAPACITY IS 1.96 CFS. IF THE SITE CONDITIONS EXCEED 1.96 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE DEPTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-5"	5'-3"	4'-0"	3'-2"
FLOW RATE HIGH-FLO / DRAINDOWN (cfs) (per cart)	0.18 / 0.09	0.13 / 0.065	0.09 / 0.045	0.05 / 0.025
MAX. CARTS HIGH-FLO / DRAINDOWN	10 / 2			



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

HATCH
(72" x 72" CAST INTO SLAB)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			*
WATER QUALITY FLOW RATE (cfs)			*
PEAK FLOW RATE (cfs)			*
RETURN PERIOD OF PEAK FLOW (yrs)			*
# OF CARTRIDGES REQUIRED (H* / DD)			* / *
CARTRIDGE SIZE			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	*	*	*
INLET PIPE #2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*
NOTES/SPECIAL REQUIREMENTS:			

* PER ENGINEER OF RECORD

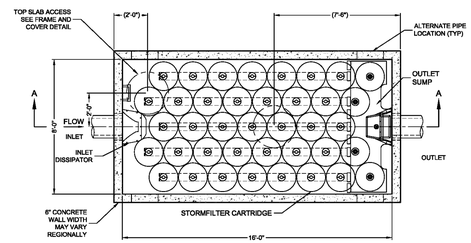
GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 3', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740-3318.

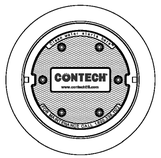
CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JF8
STANDARD DETAIL
OFFLINE CONFIGURATION

POSSIBLE STORM FILTER STANDARD DETAIL (OR APPROVED EQUAL)



PLAN VIEW
VAULT STYLE: OUTLET SUMP (NB)



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

STORMFILTER DESIGN NOTES

STORMFILTER TREATMENTCAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD VAULT STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (36). VAULT STYLE OPTIONS INCLUDE INLET BAY (32), INLET BAYXOUTLET BAY (27), OUTLET BAY (34), INLET BAYFULL HEIGHT BAFFLE (23), FULL HEIGHT BAFFLE WALL (30).
STORMFILTER 6X16 PEAK HYDRAULIC CAPACITY IS 1.8 CFS. IF THE SITE CONDITIONS EXCEED 1.8 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

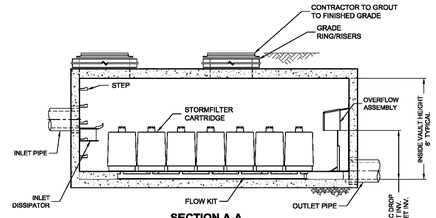
CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27"		18"		LOW DROP	
RECOMMENDED HYDRAULIC DROP (H)	3.08'		2.3'		1.8'	
SPECIFIC FLOW RATE (gpm/ft²)	2 gpm/ft²	1 gpm/ft²	2 gpm/ft²	1 gpm/ft²	2 gpm/ft²	1 gpm/ft²
CARTRIDGE FLOW RATE (gpm)	22.5	11.25	15	7.5	10	5

SITE SPECIFIC DATA REQUIREMENTS

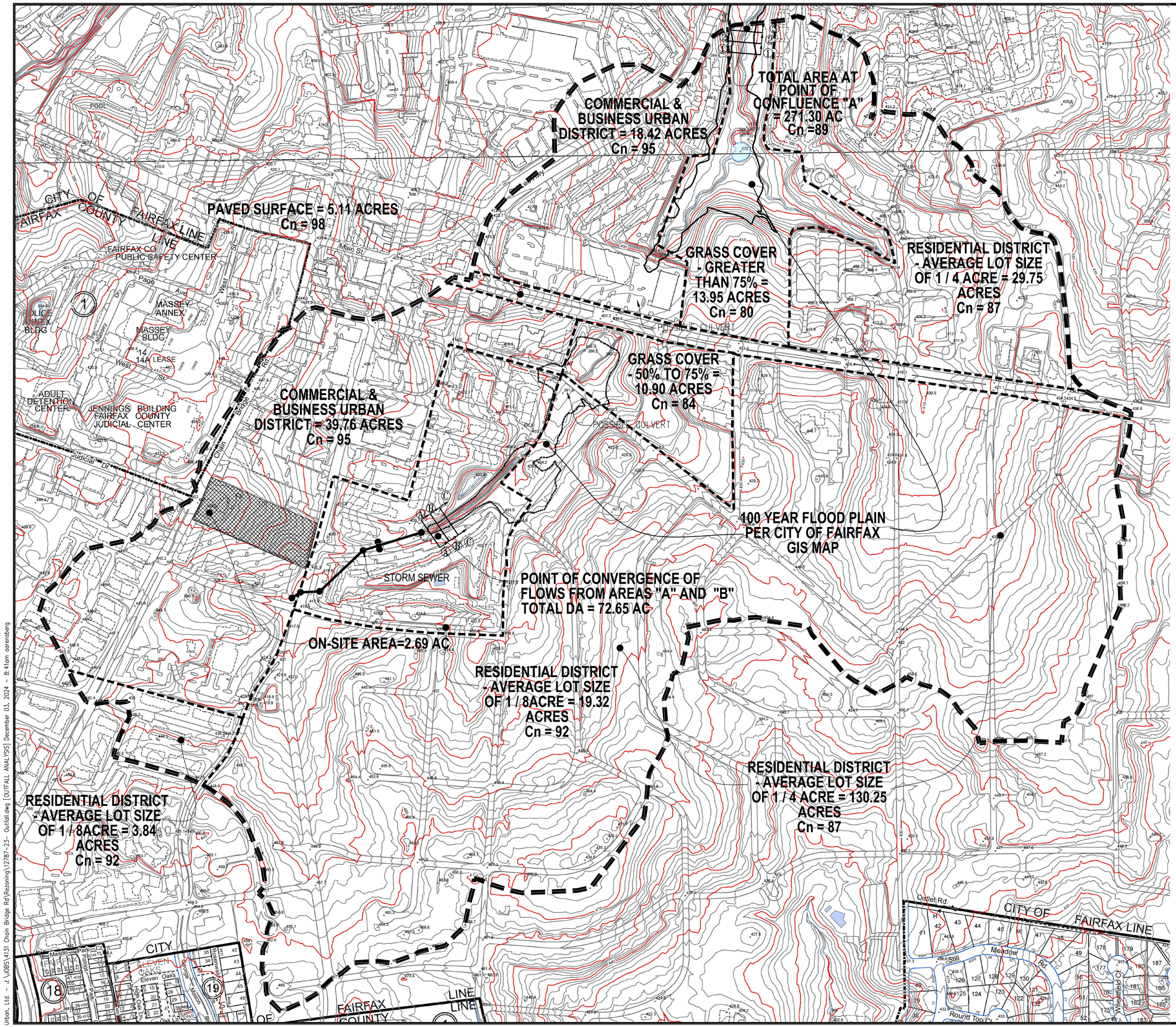
STRUCTURE ID			*
WATER QUALITY FLOW RATE (cfs)			*
PEAK FLOW RATE (cfs)			*
RETURN PERIOD OF PEAK FLOW (yrs)			*
# OF CARTRIDGES REQUIRED			*
CARTRIDGE FLOW RATE			*
MEDIA TYPE (CSF, PERLITE, ZPG, GAC, PHS)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	*	*	*
INLET PIPE #2	*	*	*
OUTLET PIPE	*	*	*
UPSTREAM RIM ELEVATION			*
DOWNSTREAM RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*
NOTES/SPECIAL REQUIREMENTS:			

* PER ENGINEER OF RECORD



SECTION A-A

The Innovative Management StormFilter® CONTECH ENGINEERED SOLUTIONS LLC
THE STORMFILTER IS PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENTS 6,277,267; 6,517,707; 6,613,223; 6,662,441; 6,821,447; 7,291,267; 7,297,247; 7,300,233; 7,300,234; 7,300,235; 7,300,236; 7,300,237; 7,300,238; 7,300,239; 7,300,240; 7,300,241; 7,300,242; 7,300,243; 7,300,244; 7,300,245; 7,300,246; 7,300,247; 7,300,248; 7,300,249; 7,300,250; 7,300,251; 7,300,252; 7,300,253; 7,300,254; 7,300,255; 7,300,256; 7,300,257; 7,300,258; 7,300,259; 7,300,260; 7,300,261; 7,300,262; 7,300,263; 7,300,264; 7,300,265; 7,300,266; 7,300,267; 7,300,268; 7,300,269; 7,300,270; 7,300,271; 7,300,272;



ADEQUATE OUTFALL ANALYSIS NARRATIVE:

THE SUBJECT SITE IS LOCATED BETWEEN CHAIN BRIDGE ROAD AND UNIVERSITY BOULEVARD. THE TOPOGRAPHY OF THE SITE CONSISTS OF ONE DRAINAGE AREA, WHICH DRAINS TO THE EAST TOWARDS UNIVERSITY BOULEVARD. STORMWATER RUNOFF IS COLLECTED BY STORM SEWER INLETS AND CONVEYED VIA AN UNDERGROUND STORM SEWER SYSTEM TO THE POINT OF CONVERGENCE, WHICH IS LOCATED INSIDE A 100 YEAR FLOOD PLAIN PER THE CITY OF FAIRFAX GIS MAP(SEE THIS SHEET FOR LOCATION).

AS SHOWN ON THE SWM ANALYSIS SHEETS, THE SITE HAS BEEN ENGINEERED TO REDUCE THE POST-DEVELOPMENT PEAK FLOWS FOR THE 1 YR , 2YR AND 10 YR 24-HR STORM FOR BOTH DRAINAGE AREAS. IN ACCORDANCE WITH SECTION 9VAC25-870-66.B.4o OF THE STORMWATER REGULATIONS "STORM CONVEYANCE SYSTEM SHALL BE ANALYZED FOR COMPLIANCE WITH CHANNEL PROTECTION CRITERIA TO A POINT WHERE BASED ON LAND AREA, THE SITE'S CONTRIBUTING DRAINAGE AREA IS LESS THAN OR EQUAL TO 1.0% OF THE TOTAL WATERSHED AREA". POINT OF CONFLUENCE "A" HAS BEEN DETERMINED TO SHOW COMPLIANCE WITH THIS SECTION SINCE THIS POINT RECEIVES A TOTAL OF 271.01 AC OF STORMWATER RUNOFF. THREE CROSS SECTIONS HAVE BEEN PROVIDED AT EVERY 50 FEET ON THIS SHEET AND VERIFIED THAT EXISTING CHANNEL WILL ADEQUATELY CONVEYED THE 2-YEAR VELOCITY AT THE POINT OF CONFLUENCE.

FURTHERMORE COMPLIANCE WITH FLOOD PROTECTION IS BASED ON SECTION 9VAC25-870-66.C WHERE "THE DOWNSTREAM LIMITS OF ANALYSIS SHALL BE ANALYZED TO A POINT WHERE STORMWATER CONVEYANCE SYSTEM ENTERS A MAPPED FLOODPLAIN OR OTHER FLOOD PRONE AREA, ADOPTED BY ORDINANCE, OF ANY LOCALITY". POINT OF CONFLUENCE "A" IS LOCATED INSIDE A MAPPED FLOOD PLAIN PER THE CITY OF FAIRFAX GIS MAP. THE THREE CROSS SECTIONS PROVIDED AT THIS POINT VERIFY THAT THE 10 YEAR WATER SURFACE ELEVATION WILL OVERTOP THE EMBANKMENT.

AS A PROFESSIONAL ENGINEER, IT IS THE OPINION OF URBAN ENGINEERING & ASSOCIATES, INC THAT AN ADEQUATE OUTFALL EXISTS FOR THIS SITE:

Clayton Tock 12/02/2024

URBAN ENGINEERING & ASSOCIATES, INC. DATE
CLAYTON C TOCK, P.E., SR. ASSOCIATE

LEGEND

- 100 YEAR FLOOD PLAIN
- DIVIDE BETWEEN DISTRICTS
- DRAINAGE DIVIDE TO POINT OF CONFLUENCE
- SITE = 2.69AC

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024

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www.urban-ltd.com
Planners•Engineers•Landscape Architects•Land Surveyors

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
LICENSE No. 036700
12/02/2024
PROFESSIONAL ENGINEER

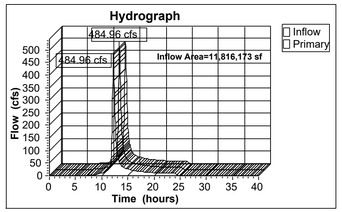
OUTFALL ANALYSIS
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=200' C.I.=2' DATE: DEC., 2024

SHEET 21 OF 38

FILE No. RZ-12787

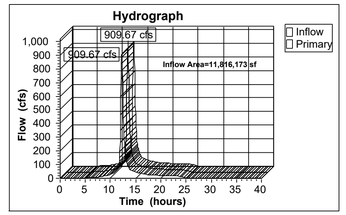
Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-23- Outfall.dwg [OUTFALL ANALYSIS] December 03, 2024 - 8:41am aarensberg



Summary for Link 25L: Point of confluence

Inflow Area = 11,816,173 sf 48.03%Impervious Inflow Depth =2.09" for 2-year event
Inflow = 484.96 cfs@ 12.24 hrs, Volume= 2,055,025 cf
Primary = 484.96 cfs@ 12.24 hrs, Volume= 2,055,025 cf, Atten= 0%, Lag= 0.0 min

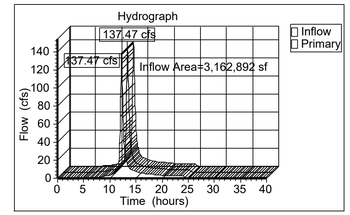
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs



Summary for Link 25L: Point of confluence

Inflow Area = 11,816,173 sf 48.03%Impervious Inflow Depth =3.97" for 10-year event
Inflow = 909.67 cfs@ 12.23 hrs, Volume= 3,908,967 cf
Primary = 909.67 cfs@ 12.23 hrs, Volume= 3,908,967 cf, Atten= 0%, Lag= 0.0 min

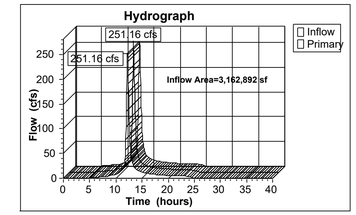
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs



Summary for Link 31L: Point of confluence

Inflow Area = 3,162,892 sf 63.88%Impervious Inflow Depth =2.27" for 2-year event
Inflow = 137.47 cfs@ 12.24 hrs, Volume= 598,891 cf
Primary = 137.47 cfs@ 12.24 hrs, Volume= 598,891 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs

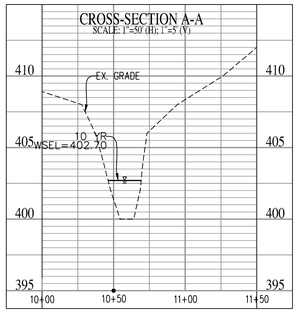


Summary for Link 31L: Point of confluence

Inflow Area = 3,162,892 sf 63.88%Impervious Inflow Depth =4.19" for 10-year event
Inflow = 251.16 cfs@ 12.23 hrs, Volume= 1,104,758 cf
Primary = 251.16 cfs@ 12.23 hrs, Volume= 1,104,758 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs

OUTFALL ANALYSIS CROSS SECTIONS AT POINT OF CONVERGENCE

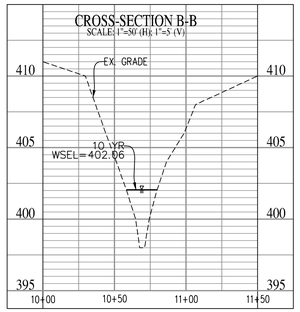


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION A -A

DA	=	72.65 AC.
'Cn'	=	92
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	137.47 CFS
Q10	=	251.16 CFS
CHANNEL SLOPE	=	1.5 %
'n' FACTOR	=	0.05 (NATURAL STONY STREAM)

V2 = 4.57 FPS
D10 = 2.70 FT.

**PERMISSIBLE VELOCITY 5 FT/SEC (EROSION POTENTIAL LOW) PER TABLE 3.18A FROM THE VIRGINIA E&S HANDBOOK.*

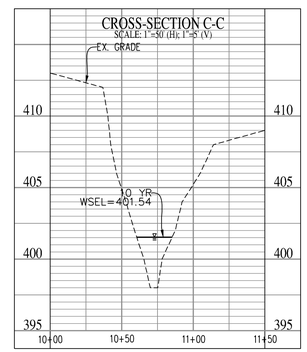


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION B -B

DA	=	72.65 AC.
'Cn'	=	92
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	137.47 CFS
Q10	=	251.16 CFS
CHANNEL SLOPE	=	1.5 %
'n' FACTOR	=	0.05 (NATURAL STONY STREAM)

V2 = 4.90 FPS
D10 = 4.06 FT.

**PERMISSIBLE VELOCITY 5 FT/SEC (EROSION POTENTIAL LOW) PER TABLE 3.18A FROM THE VIRGINIA E&S HANDBOOK.*



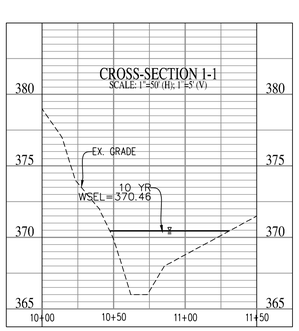
POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION B -B

DA	=	72.65 AC.
'Cn'	=	92
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	137.47 CFS
Q10	=	251.16 CFS
CHANNEL SLOPE	=	1.5 %
'n' FACTOR	=	0.05 (NATURAL STONY STREAM)

V2 = 4.74 FPS
D10 = 3.54 FT.

**PERMISSIBLE VELOCITY 5 FT/SEC (EROSION POTENTIAL LOW) PER TABLE 3.18A FROM THE VIRGINIA E&S HANDBOOK.*

OUTFALL ANALYSIS CROSS SECTIONS AT POINT OF CONFLUENCE "A"

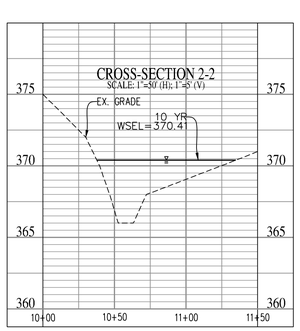


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION 1 - 1

DA	=	271.30 AC.
'Cn'	=	89
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	484.96 CFS
Q10	=	909.67 CFS
CHANNEL SLOPE	=	1.20%
'n' FACTOR	=	0.05 (NATURAL STONY STREAM)

V2 = 4.60 FPS
D10 = 4.46 FT.

**PERMISSIBLE VELOCITY 5 FT/SEC (EROSION POTENTIAL LOW) PER TABLE 3.18A FROM THE VIRGINIA E&S HANDBOOK.*

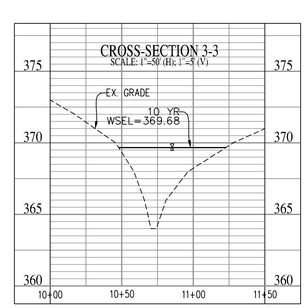


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION 2 - 2

DA	=	271.30 AC.
'Cn'	=	89
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	484.96 CFS
Q10	=	909.67 CFS
CHANNEL SLOPE	=	1.20 %
'n' FACTOR	=	0.05 (NATURAL STONY STREAM)

V2 = 4.35 FPS
D10 = 4.41 FT.

**PERMISSIBLE VELOCITY 5 FT/SEC (EROSION POTENTIAL LOW) PER TABLE 3.18A FROM THE VIRGINIA E&S HANDBOOK.*



POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION 2 - 2

DA	=	271.30 AC.
'Cn'	=	89
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	484.96 CFS
Q10	=	909.67 CFS
CHANNEL SLOPE	=	1.20 %
'n' FACTOR	=	0.05 (NATURAL STONY STREAM)

V2 = 4.96 FPS
D10 = 5.68 FT.

**PERMISSIBLE VELOCITY 5 FT/SEC (EROSION POTENTIAL LOW) PER TABLE 3.18A FROM THE VIRGINIA E&S HANDBOOK.*

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024
- - -
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CLAY POX C. POX
LIC. NO. 036790
12/02/2024
PROFESSIONAL ENGINEER

OUTFALL ANALYSIS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.= 2' DATE: DEC., 2024

SHEET 22 OF 38

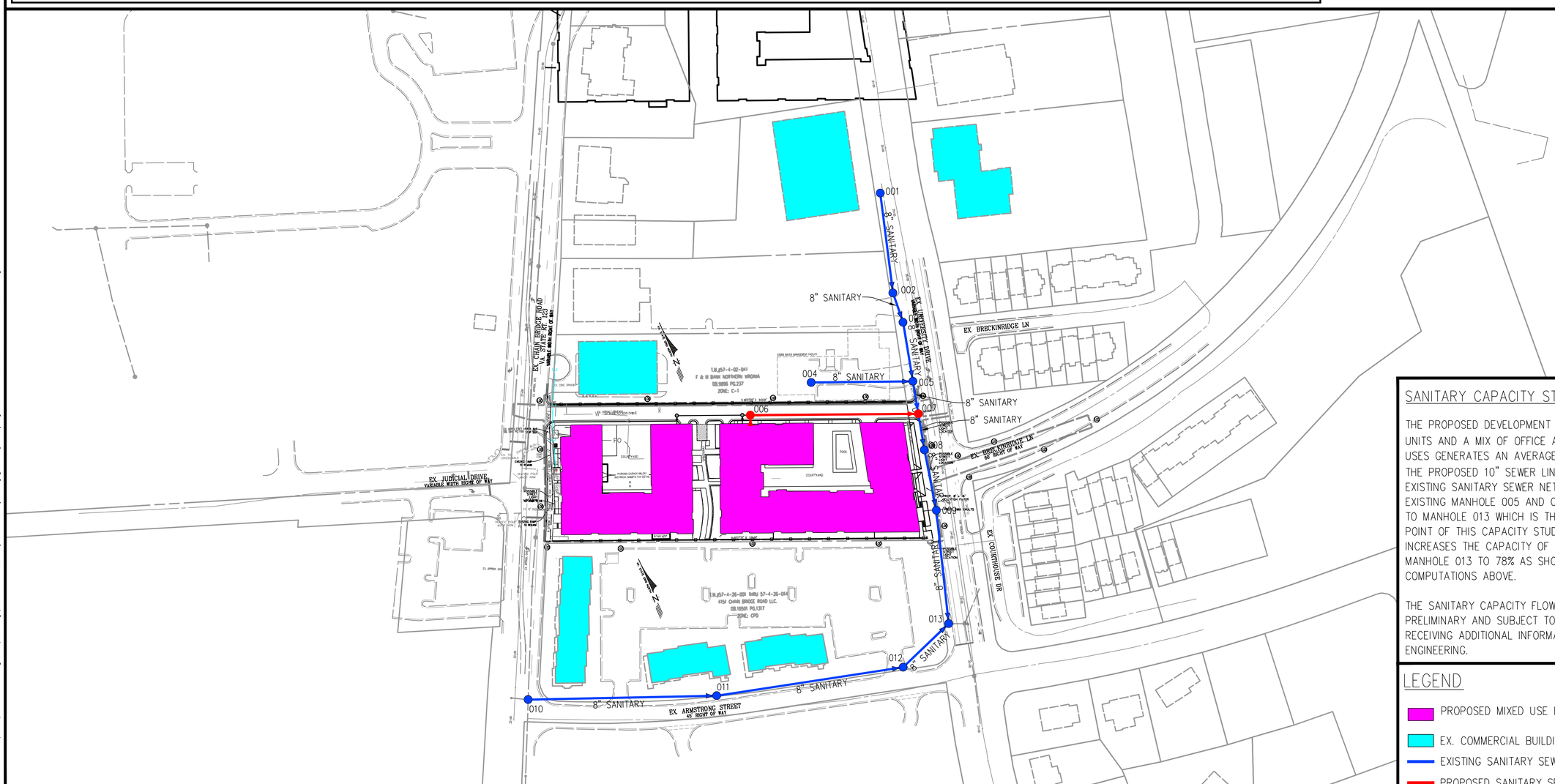
FILE No. RZ-12787

Urban, Ltd - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-23- Outfall.dwg [OUTFALL ANALYSIS (3)] December 03, 2024 - 8:41am rorensberg

4131 Chain Bridge Road Sanitary Analysis

Pipe Characteristics					Flow Characteristics										Total Flow				Capacity Information				
Upstream MH	Downstream MH	Diameter (inches)	Slope %	Length (ft)	Number of Residential Units	Average flow for units (130 gpd / unit)	Nonresidential space	Average flow for Nonresidential (0.046 gpd/SF)	SF of Office Space	Average Flow for retail (0.20 gpd/SF)	SF of Retail Space	Average Flow for Retail (0.046 gpd/SF)	Additional Known Peak Flow (MGD)	KnownCumulative Peak Flow (MGD)	Total Incremental flow (gpd)	Total Cumulative Flow (gpd)	Peak Flow Factor	Peak Hour Flow (MGD)	Full Capacity of Pipe (MGD)	% full	Velocity in pipe (fps)	velocity OK?	NOTES
TRIBUTARY 1:																							
1	2	8	0.1	398.3		0		0	28126	5625.2		0		0	5625.2	5625.2	10.03804586	0.056466016	0.305707182	18%	1.04	no	
2	3	8	0.2	402.8		0		0		0		0		0	0	5625.2	10.03804586	0.056466016	0.362625637	16%	1.17	no	
3	4	8	0.1	152.6		0		0		0		0		0	0	5625.2	10.03804586	0.056466016	0.265288275	21%	0.94	no	
4	5	8	0.7	151.5		0		0	9699	902.01		0		0	902.007	6527.207	9.762722716	0.063723312	0.690768945	9%	1.92	yes	
5	6	8	0.5	301.8		0		0		0		0		0	0	6527.207	9.762722716	0.063723312	0.617939685	10%	1.77	yes	
6	7	10	1.3	270	276	96600		0	4188	389.48	6319	290.674		0	97280.158	103807.37	5.819562121	0.604113409	1.768824766	34%	4.56	yes	
7	8	8	0.6	197.7		0		0		0		0		0	0	103807.37	5.819562121	0.604113409	0.628238648	96%	3.18	yes	
8	9	8	0.3	286		0		0		0		0		0	0	103807.37	5.819562121	0.604113409	0.455797118	133%	2.03	no	
9	10	8	0.8	199.7		0		0		0		0		0	0	103807.37	5.819562121	0.604113409	0.750215761	81%	3.71	yes	
10	11	8	4.6	89.32		0		0	8756	814.31		0		0	814.308	104621.67	5.811064891	0.607963331	1.817050584	33%	7.27	yes	
11	12	8	0.3	253.1		0		0	10842	1008.3		0		0	1008.306	105629.98	5.800651452	0.612722691	0.490332272	125%	2.18	no	
12	13	8	0.9	227.2		0		0		0		0		0	0	105629.98	5.800651452	0.612722691	0.787775739	78%	3.87	yes	

n = 0.012



SANITARY CAPACITY STUDY NARRATIVE:

THE PROPOSED DEVELOPMENT OF 276 RESIDENTIAL UNITS AND A MIX OF OFFICE AND RETAIL/RESTAURANT USES GENERATES AN AVERAGE FLOW OF 97,280 GPD. THE PROPOSED 10" SEWER LINE WILL CONNECT TO THE EXISTING SANITARY SEWER NETWORK UPSTREAM OF EXISTING MANHOLE 005 AND CONTINUE DOWNSTREAM TO MANHOLE 013 WHICH IS THE FINAL ANALYSIS POINT OF THIS CAPACITY STUDY. THE PROPOSED FLOW INCREASES THE CAPACITY OF THE EXISTING SEWER AT MANHOLE 013 TO 78% AS SHOWN IN THE COMPUTATIONS ABOVE.

THE SANITARY CAPACITY FLOW CALCULATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE UPON RECEIVING ADDITIONAL INFORMATION AND FINAL ENGINEERING.

LEGEND

- PROPOSED MIXED USE BUILDING
- EX. COMMERCIAL BUILDING
- EXISTING SANITARY SEWER NETWORK
- PROPOSED SANITARY SEWER NETWORK

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024
-
-
-

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CLAYTON C. TOOK
LIC. No. 036700
12.02.2024
PROFESSIONAL ENGINEER

SANITARY ANALYSIS

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

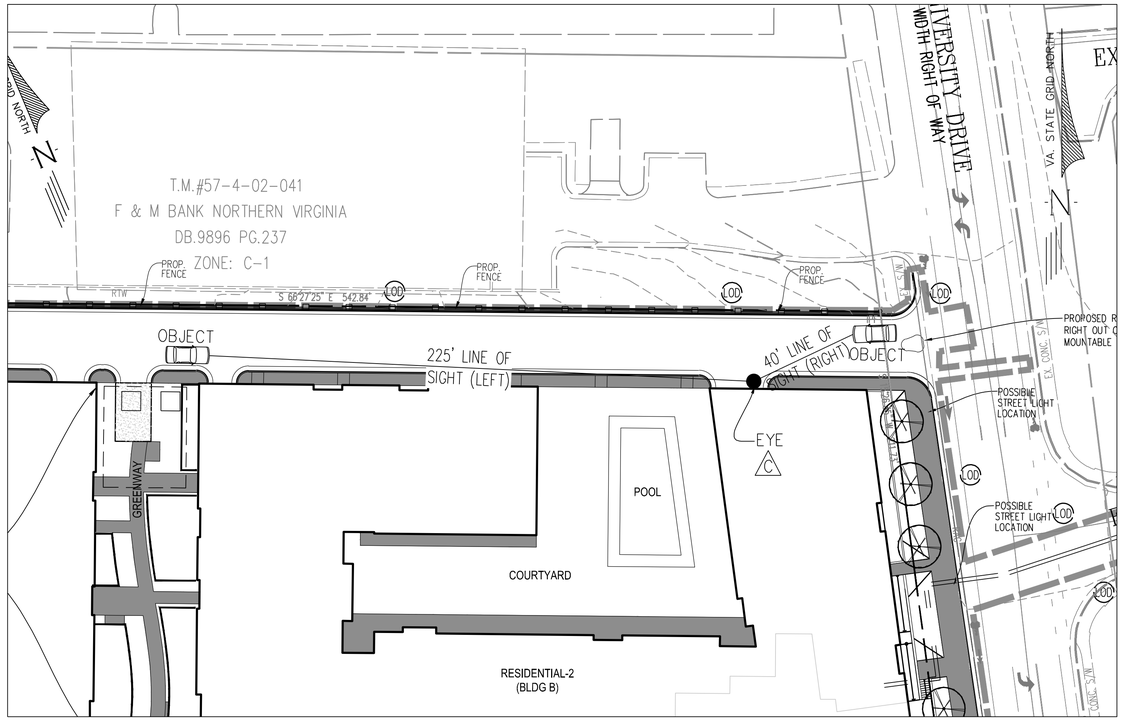
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=100' C.I.= 2' DATE: DEC., 2024

SHEET 23 OF 38

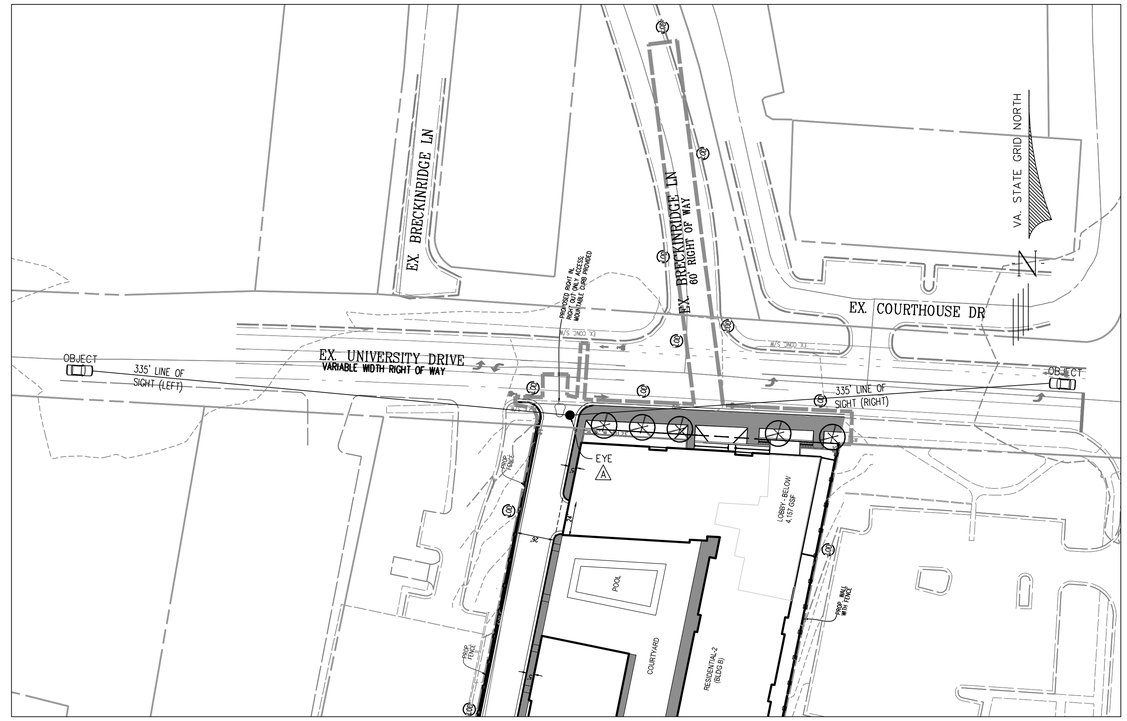
FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-24- Sanitary Sewer Analysis.dwg [Sanitary Analysis] December 03, 2024 - 8:42am aarensberg



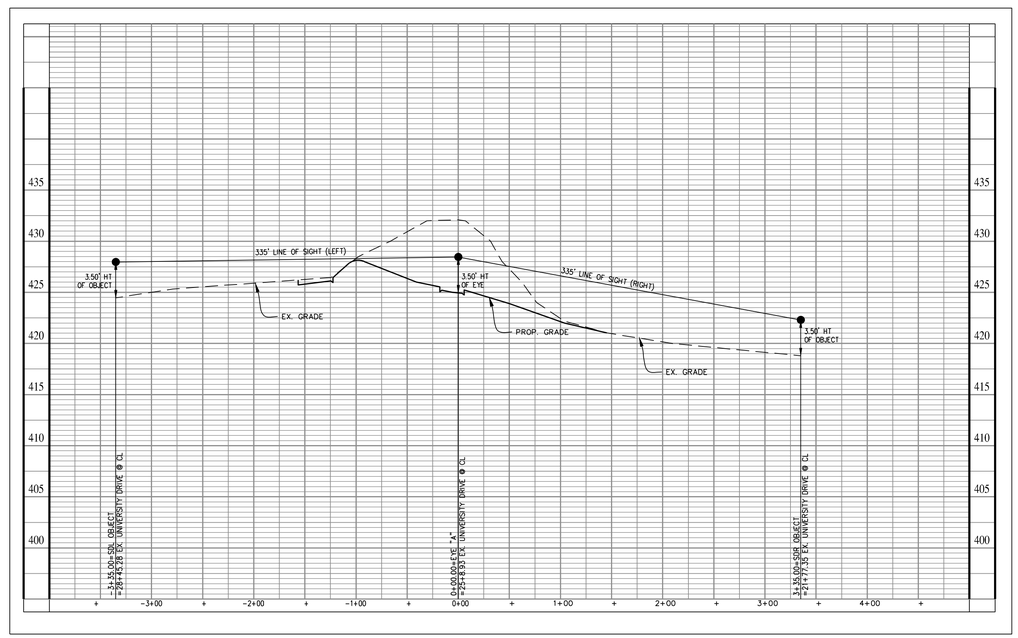
PLAN VIEW
SCALE: 1"=30'

GARAGE ENTRANCE ON ACCESS DRIVE
EYE "C"
DESIGN SPEED = 25 MPH



PLAN VIEW
SCALE: 1"=50'

SIGHT DISTANCE PROFILE
MAIN ENTRANCE ON UNIVERSITY DRIVE
EYE "A"
POSTED SPEED = 25 MPH
DESIGN SPEED = 30 MPH



No.	DATE	DESCRIPTION
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PROFESSIONAL ENGINEER

SIGHT DISTANCE PROFILES
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
SCALE: 1"=50' (H); 1"=50' (V) C.I.= 2'
DATE: DEC., 2024

SHEET
24
OF
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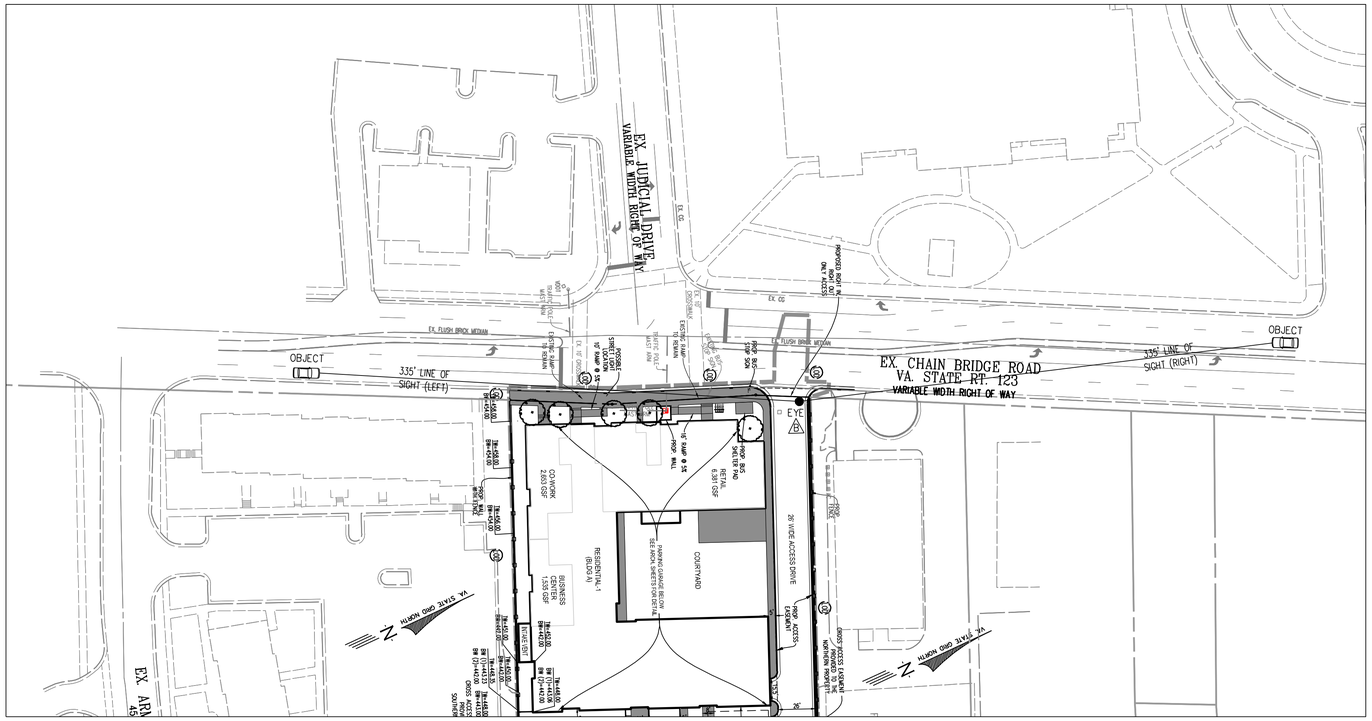
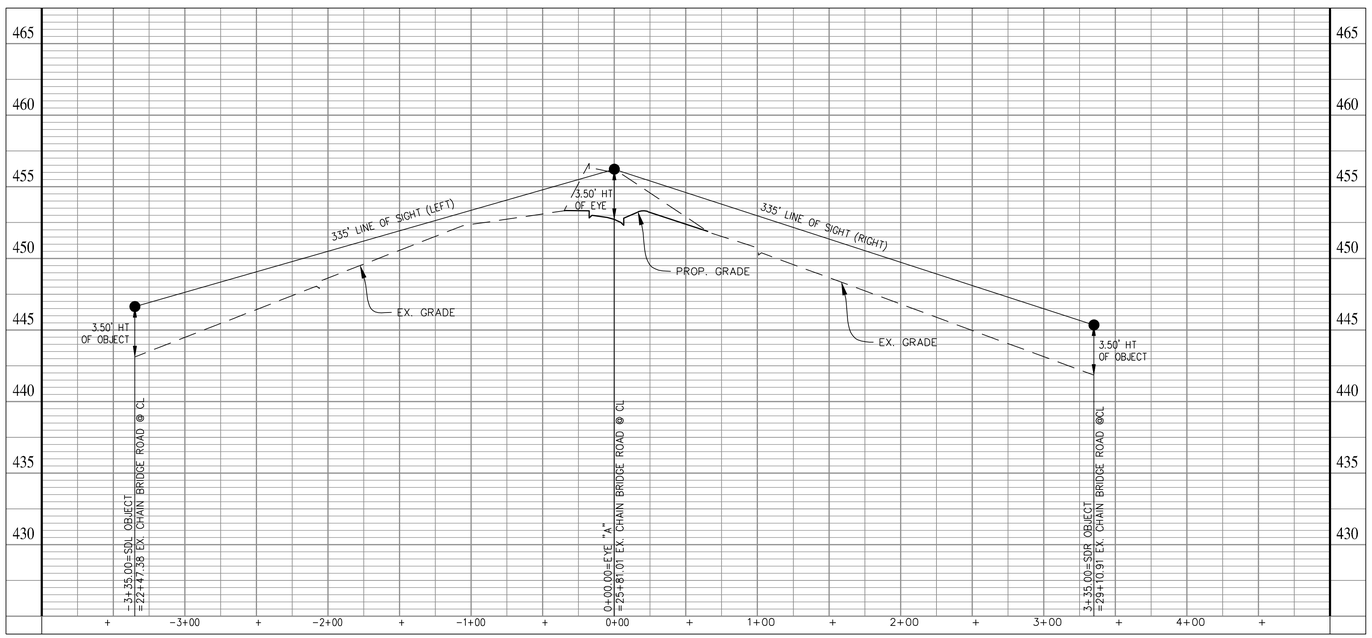
FILE No.
RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-31-SIGHT D.dwg [SIGHT D-B &C] December 03, 2024 – 8:42am ozrensberg



PLAN VIEW
SCALE: 1"=50'

SIGHT DISTANCE PROFILE
MAIN ENTRANCE ON CHAIN BRIDGE ROAD
EYE "B"
POSTED SPEED = 25 MPH
DESIGN SPEED = 30 MPH



No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024

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12/02/2024
PROFESSIONAL ENGINEER

SIGHT DISTANCE PROFILES
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
SCALE: 1"=50' (H); 1"=50' (V) C.I.= 2'
DATE: DEC., 2024

SHEET
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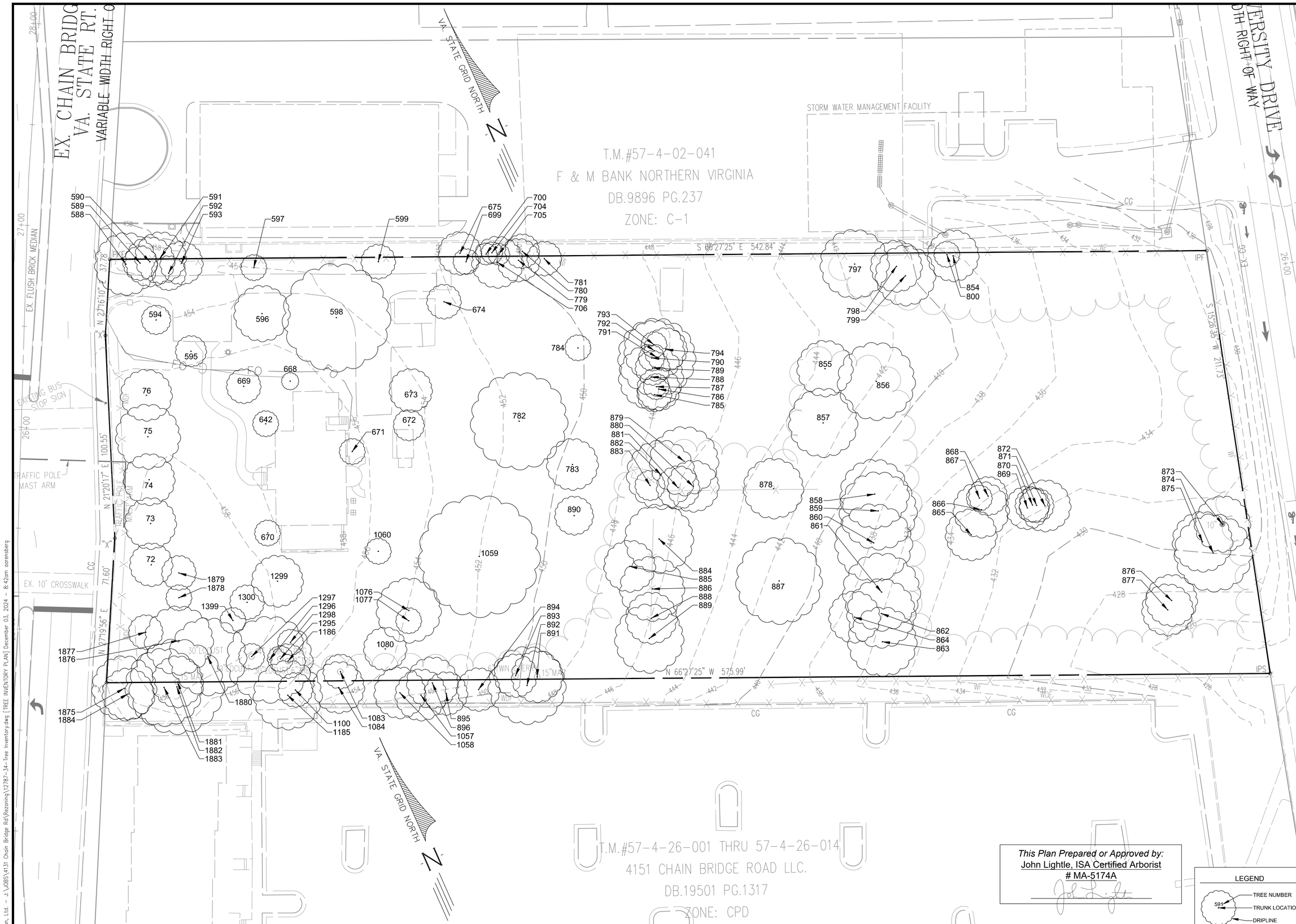
OF
38

FILE No.
RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-31-SIGHT D.dwg [SIGHT D CHAIN BRIDGE RD] December 03, 2024 – 8:42am agrensberg



This Plan Prepared or Approved by:
John Lightle, ISA Certified Arborist
MA-5174A

LEGEND
591 — TREE NUMBER
TRUNK LOCATION
DRIPLINE

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
10-18-2016
04-22-2024
06-21-2024
09-03-2024
12-02-2024

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COMMONWEALTH OF VIRGINIA
John Lightle
Lic. No. 1957
12/02/2024
LANDSCAPE ARCHITECT

TREE INVENTORY
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: N/A | C.I.= N/A | DATE: DEC., 2024

SHEET 26 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-34-Tree Inventory.dwg [TREE INVENTORY PLAN] December 03, 2024 - 8:42am parensberg

TREE NO.	BOTANICAL NAME	COMMON NAME	SIZE	CANOPY	CRZ	CONDITION RATING	POOR CONDITION?	CO-OWNED/ OFFSITE	STATUS	COMMENTS
			(in)	R (ft.)	R (ft.)	%			(Remove or Preserve)	
72	Zelkova serrata	Japanese Zelkova	10"	10'	10'	87.50			Remove	
73	Zelkova serrata	Japanese Zelkova	12"	12'	12'	87.50			Remove	
74	Zelkova serrata	Japanese Zelkova	12"	12'	12'	87.50			Remove	
75	Zelkova serrata	Japanese Zelkova	15"	15'	15'	87.50			Remove	
76	Zelkova serrata	Japanese Zelkova	12"	12'	12'	87.50			Remove	
588	*Quercus falcata*	Southern Red Oak	12"	15'	12'	18.75	Yes		Remove	Leader removed
589	*Juniperus virginiana*	Eastern Redcedar	8"	8'	8'	37.50	Yes		Remove	
590	*Juniperus virginiana*	Eastern Redcedar	23"	12'	23'	37.50	Yes	Co-Owned	Remove	Multi-stem
591	*Acer rubrum*	Red Maple	24"	12'	24'	50.00		Co-Owned	Remove	Ivy
592	*Quercus phellos*	Willow Oak	15"	8'	15'	65.63			Remove	
593	*Juniperus virginiana*	Eastern Redcedar	10"	10'	10'	37.50	Yes		Remove	Ivy
594	*Ilex opaca*	American Holly	9"	7'	9'	18.75	Yes		Remove	Ivy; dying
595	*Ilex opaca*	American Holly	9"	7'	9'	78.13			Remove	
596	*Quercus falcata*	Southern Red Oak	10"	13'	10'	59.38			Remove	Ivy
597	*Lagerstroemia indica*	Crape Myrtle	8"	6'	8'	81.25			Remove	
598	*Ulmus americana*	American Elm	25"	25'	25'	56.25			Remove	Ivy
599	*Juglans nigra*	Black Walnut	9"	8'	9'	15.63	Yes		Remove	Ivy; dying
642	*Ilex opaca*	American Holly	8"	6'	8'	53.13			Remove	
668	*Thuja occidentalis*	Arborvitae	6"	4'	6'	68.75			Remove	Multi-stem
669	*Prunus subhirtella*	Weeping Cherry	8"	8'	8'	68.75			Remove	
670	*Ilex opaca*	American Holly	9"	6'	9'	75.00			Remove	
671	*Ilex opaca*	American Holly	7"	6'	7'	65.63			Remove	
672	*Ulmus americana*	American Elm	7"	7'	7'	56.25			Remove	Co-dominant
673	*Juglans nigra*	Black Walnut	11"	10'	11'	68.75			Remove	
674	*Juglans nigra*	Black Walnut	15"	8'	15'	71.88			Remove	
675	*Unknown*	Unknown	11"	10'	11'	0.00	Yes	Co-Owned	Remove	Dead
699	*Unknown*	Unknown	6"	6'	6'	18.75	Yes		Remove	Dying
700	*Unknown*	Unknown	7"	5'	7'	0.00	Yes	Co-Owned	Remove	Dead
704	*Unknown*	Unknown	7"	5'	7'	0.00	Yes	Offsite	Remove	Dead
705	*Acer rubrum*	Red Maple	9"	5'	9'	0.00	Yes	Co-Owned	Remove	Dead
706	*Ulmus americana*	American Elm	17"	12'	17'	71.88			Remove	
779	*Robinia pseudoacacia*	Black Locust	11"	10'	11'	0.00	Yes		Remove	Dead
780	*Juglans nigra*	Black Walnut	9"	8'	9'	25.00	Yes	Co-Owned	Remove	Dying
781	*Juniperus virginiana*	Eastern Redcedar	8"	8'	8'	75.00		Co-Owned	Remove	
782	*Juglans nigra*	Black Walnut	17"	23'	17'	62.50			Remove	Co-dominant
783	*Acer platanoides*	Norway Maple	20"	12'	20'	68.75			Remove	Multi-stem
784	*Carya glabra*	Pignut Hickory	6"	6'	6'	59.38			Remove	
785	*Juniperus virginiana*	Easter Redcedar	9"	8'	9'	43.75			Remove	Ivy
786	*Juglans nigra*	Black Walnut	12"	10'	12'	53.13			Remove	
787	*Ulmus americana*	American Elm	6"	6'	6'	34.38	Yes		Remove	
788	*Morus rubra*	Mulberry	17"	15'	17'	37.50	Yes		Remove	Trunk decay
789	*Celtis Occidentalis*	Hackberry	9"	8'	9'	46.88			Remove	Ivy
790	Celtis Occidentalis	Hackberry	6"	6'	6'	62.50			Remove	
791	Juniperus virginiana	Eastern Redcedar	22"	18'	22'	43.75			Remove	Co-dominant; ivy
792	Juniperus virginiana	Eastern Redcedar	14"	14'	14'	46.88			Remove	Ivy
793	Morus rubra	Mulberry	7"	6'	7'	18.75	Yes		Remove	Diseased
794	Morus rubra	Mulberry	12"	10'	12'	12.50	Yes		Remove	Dying
797	Juglans nigra	Black Walnut	16"	16'	16'	62.50			Remove	
798	Morus rubra	Mulberry	10"	12'	10'	37.50	Yes		Remove	Co-dominant; trunk wound
799	Morus rubra	Mulberry	16"	14'	16'	40.63			Remove	Co-dominant; leaning
800	Unknown	Unknown	7"	6'	7'	0.00	Yes	Co-Owned	Remove	Dead
854	Prunus serotina	Black Cherry	13"	12'	13'	53.13		Co-Owned	Remove	
855	Ulmus americana	American Elm	14"	13'	14'	62.50			Remove	Co-dominant
856	Juniperus virginiana	Eastern Redcedar	28"	18'	28'	68.75			Remove	Co-dominant
857	Juglans nigra	Black Walnut	18"	16'	18'	53.13			Remove	Co-dominant
858	Juniperus virginiana	Eastern Redcedar	18"	16'	18'	46.88			Remove	Co-dominant; ivy
859	Juniperus virginiana	Eastern Redcedar	18"	18'	18'	43.75			Remove	Ivy
860	Juglans nigra	Black Walnut	18"	18'	18'	0.00	Yes		Remove	Dead
861	Juniperus virginiana	Eastern Redcedar	18"	18'	18'	40.63			Remove	Co-dominant
862	Juniperus virginiana	Eastern Redcedar	18"	16'	18'	43.75			Remove	Ivy
863	Juniperus virginiana	Eastern Redcedar	18"	16'	18'	34.38	Yes		Remove	Co-dominant; 1 broken
864	Prunus serotina	Black Cherry	15"	12'	15'	56.25			Remove	Multi-leader
865	Juniperus virginiana	Eastern Redcedar	15"	12'	15'	37.50	Yes		Remove	Ivy; broken branches
866	Juniperus virginiana	Eastern Redcedar	15"	13'	15'	37.50	Yes		Remove	Ivy; broken branches
867	Prunus serotina	Black Cherry	4"	6'	4'	46.88			Remove	Multi-leader
868	Prunus serotina	Black Cherry	9"	9'	9'	53.13			Remove	Multi-leader; ivy
869	Juniperus virginiana	Eastern Redcedar	10"	10'	10'	56.25			Remove	
870	Juniperus virginiana	Eastern Redcedar	10"	8'	10'	53.13			Remove	
871	Juniperus virginiana	Eastern Redcedar	10"	8'	10'	46.88			Remove	
872	Juniperus virginiana	Eastern Redcedar	12"	12'	12'	53.13			Remove	Co-dominant
873	Juniperus virginiana	Eastern Redcedar	10"	13'	10'	71.88			Remove	
874	Juniperus virginiana	Eastern Redcedar	12"	18'	12'	68.75			Remove	Co-dominant
875	Juniperus virginiana	Eastern Redcedar	18"	14'	18'	65.63			Remove	
876	Juniperus virginiana	Eastern Redcedar	12"	12'	12'	68.75			Remove	
877	Juniperus virginiana	Eastern Redcedar	13"	12'	13'	68.75			Remove	
878	Morus rubra	Mulberry	15"	14'	15'	46.88			Remove	
879	Gleditsia triavanthos var. inermis	Thornless Honeylocust	18"	16'	18'	53.13			Remove	Tristed Leader
880	Juglans nigra	Black Walnut	12"	12'	12'	46.88			Remove	Curved
881	Juglans nigra	Black Walnut	15"	10'	15'	56.25			Remove	Multi-leader
882	Juglans nigra	Black Walnut	18"	16'	18'	75.00			Remove	
883	Celtis Occidentalis	Hackberry	8"	7'	8'	65.63			Remove	
884	Juglans nigra	Black Walnut	15"	16'	15'	53.13			Remove	
885	Juniperus virginiana	Eastern Redcedar	15"	12'	15'	65.63			Remove	
886	Ulmus americana	American Elm	18"	15'	18'	78.13			Remove	
887	Juniperus virginiana	Eastern Redcedar	36"	20'	36'	53.13			Remove	
888	Juniperus virginiana	Eastern Redcedar	15"	12'	15'	46.88			Remove	Ivy
889	Juglans nigra	Black Walnut	18"	16'	18'	59.38			Remove	
890	Quercus palustris	Pin Oak	8"	9'	8'	81.25			Remove	
891	Acer platanoides	Norway Maple	15"	12'	15'	68.75		Co-Owned	Remove	
892	Juglans nigra	Black Walnut	36"	18'	36'	37.50	Yes	Offsite	Remove	Ivy
893	Juglans nigra	Black Walnut	6"	10'	6'	34.38	Yes		Remove	Ivy; co-dominant
894	Juglans nigra	Black Walnut	12"	10'	12'	37.50	Yes	Offsite	Remove	Ivy
895	Morus rubra	Mulberry	12"	10'	12'	28.13	Yes	Offsite	Remove	Leaning; trunk wound
896	Prunus serotina	Black Cherry	15"	12'	15'	53.13		Co-Owned	Remove	Co-dominant
1057	Robinia pseudoacacia	Black Locust	12"	12'	12'	37.50	Yes	Offsite	Remove	Co-dominant; ivy
1058	Robinia pseudoacacia	Black Locust	12"	12'	12'	37.50	Yes	Offsite	Remove	Ivy
1059	Tilia americana	American Linden	42"	28'	42'	68.75			Remove	
1060	Ulmus americana	American Elm	10"	6'	10'	0.00	Yes		Remove	Dead
1076	Acer rubrum	Red Maple	36"	15'	36'	43.75			Remove	Leader broken off
1077	Ilex opaca	American Holly	12"	6'	12'	62.50			Remove	
1080	Quercus palustris	Pin Oak	15"	10'	15'	84.38			Remove	
1083	Robinia pseudoacacia	Black Locust	10"	6'	10'	56.25			Remove	
1084	Prunus serotina	Black Cherry	12"	12'	12'	56.25		Offsite	Preserve	Curved trunk

TREE NO.	BOTANICAL NAME	COMMON NAME	SIZE	CANOPY	CRZ	CONDITION RATING	POOR CONDITION?	CO-OWNED/ OFFSITE	STATUS	COMMENTS
			(in)	R (ft.)	R (ft.)	%			(Remove or Preserve)	
1100	Robinia pseudoacacia	Black Locust	15"	6'	15'	53.13		Offsite	Preserve	Multi-leader
1185	Robinia pseudoacacia	Black Locust	24"	16'	24'	37.50	Yes		Remove	Ivy
1186	Cornus florida	Flowering Dogwood	8"	8'	8'	65.63			Remove	
1295	Cornus florida	Flowering Dogwood	6"	6'	6'	68.75			Remove	
1296	Robinia pseudoacacia	Black Locust	30"	20'	30'	59.38			Remove	Ivy; large trunk wound
1296	Cornus florida	Flowering Dogwood	4"	6'	4'	75.00			Remove	Multi-stem
1298	Ligustrum ovalifolium	Privet	9"	6'	9'	46.88			Remove	Co-dominant; 1 dying
1299	Prunus serotina	Black Cherry	15"	12'	15'	59.38			Remove	Trunk decay
1300	Betula papyrifera	Paper Birch	10"	8'	10'	43.75			Remove	Co-dominant
1399	Cornus florida	Flowering Dogwood	12"	6'	12'	68.75			Remove	
1875	Robinia pseudoacacia	Black Locust	12"	15'	12'	43.75		Offsite	Remove	Co-dominant; ivy
1876	Robinia pseudoacacia	Black Locust	30"	16'	30'	46.88			Remove	Ivy
1877	Robinia pseudoacacia	Black Locust	10"	8'	10'	62.50			Remove	
1878	Robinia pseudoacacia	Black Locust	30"	6'	30'	12.50	Yes		Remove	Broken in half
1879	Tsuga canadensis	Canadian Hemlock	7"	8'	7'	71.88			Remove	
1880	Robinia pseudoacacia	Black Locust	30"	18'	30'	46.88			Remove	Ivy
1881	Acer platanoides	Norway Maple	15"	12'	15'	68.75		Co-Owned	Remove	Multi-stem
1882	Robinia pseudoacacia	Black Locust	30"	22'	30'	46.88		Co-Owned	Remove	Ivy
1883	Robinia pseudoacacia	Black Locust	24"	18'	24'	31.25	Yes	Offsite	Remove	Open trunk wound
1884	Morus rubra	Mulberry	12"	12'	12'	53.13		Offsite	Remove	

NOTES:

1. TREE INVENTORY DATA COLLECTED ON DECEMBER 08, 2017, BY JOHN LIGHTLE, ISA-CA #MA-5174A.
2. ALL OFFSITE AND CO-OWNED TREES PROPOSED TO BE REMOVED AT TIME OF SITE PLAN SHALL HAVE APPROVAL LETTERS FOR REMOVAL, SIGNED BY THE OFFSITE OWNERS, AND RECEIVED BY THE CITY'S URBAN FORESTER PRIOR TO APPROVAL OF THE SITE PLAN.

This Plan Prepared or Approved by:
John Lightle, ISA Certified Arborist
MA-5174A

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
– – 10–18–2016
– – 04–22–2024
– – 06–11–2024
– – 09–03–2024
– – 12–02–2024

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COMMONWEALTH OF VIRGINIA
John Lightle
Lic. No. 1957
12/02/2024
LANDSCAPE ARCHITECT

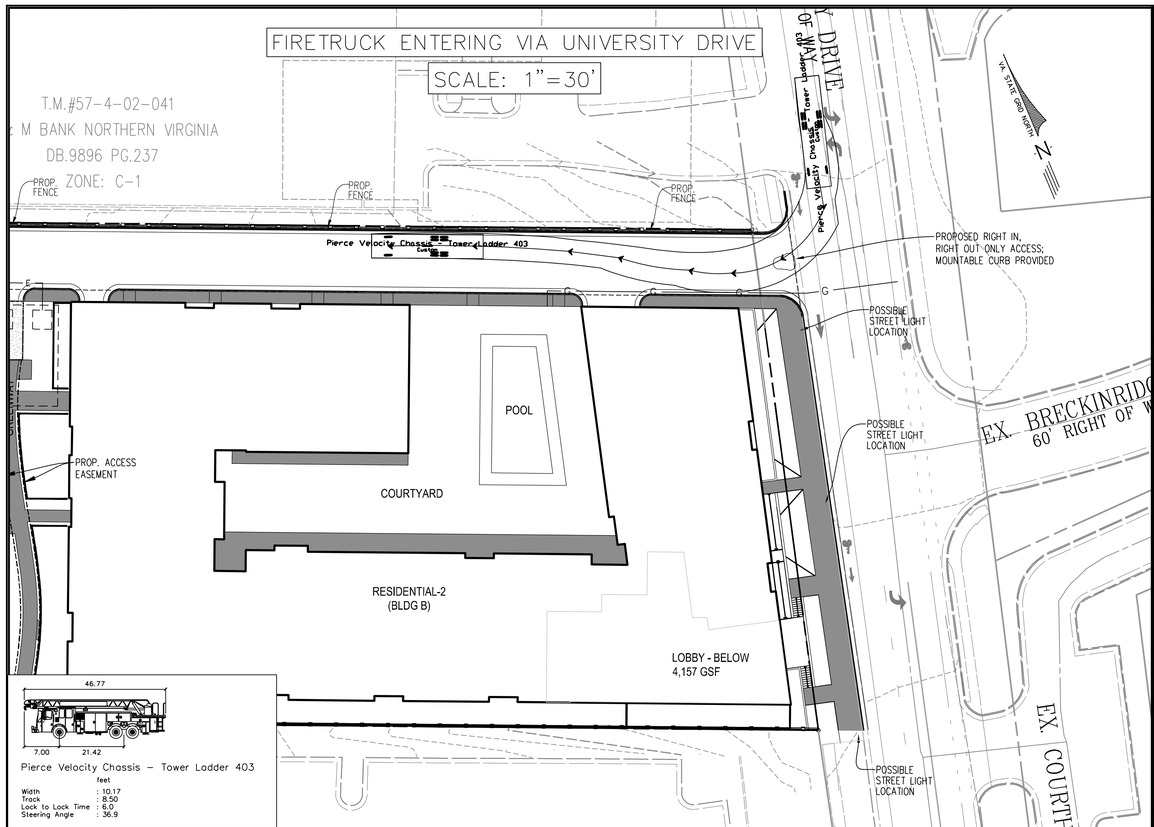
TREE INVENTORY
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

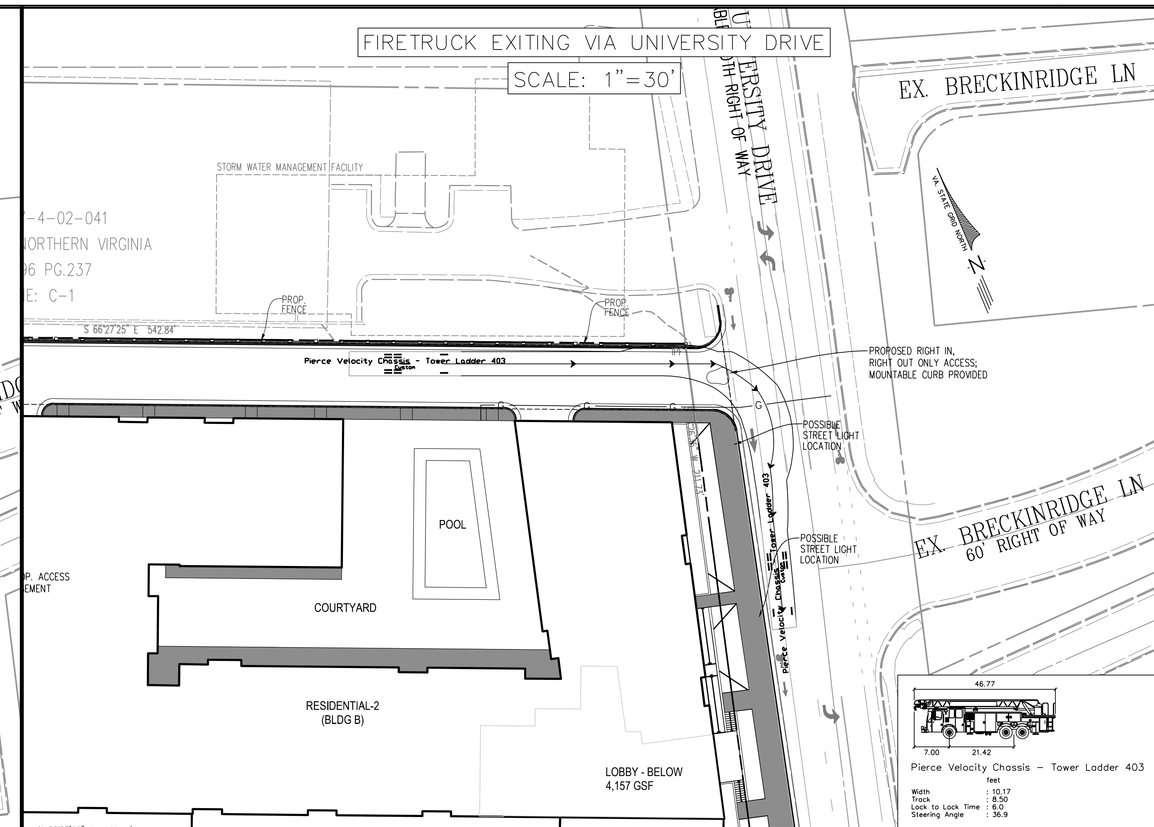
SCALE: N/A
C.I.= N/A
DATE: DEC., 2024

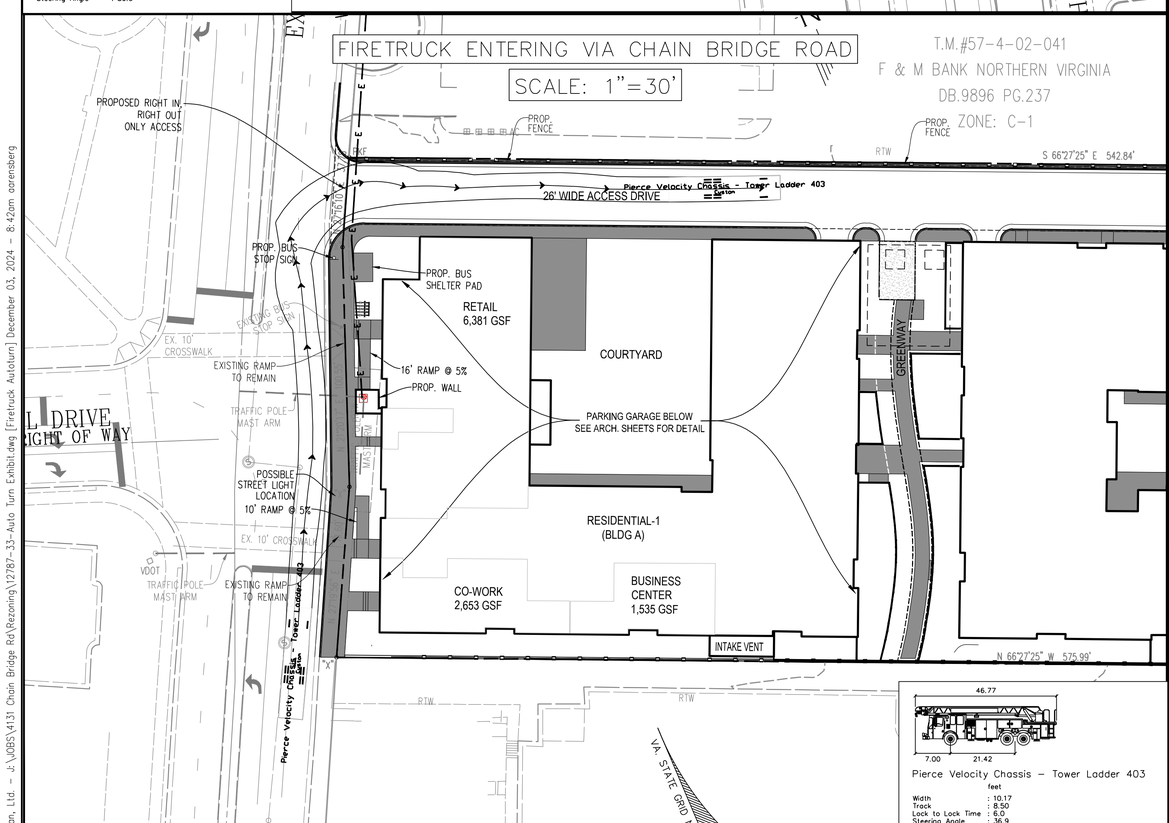
SHEET 27 OF 38

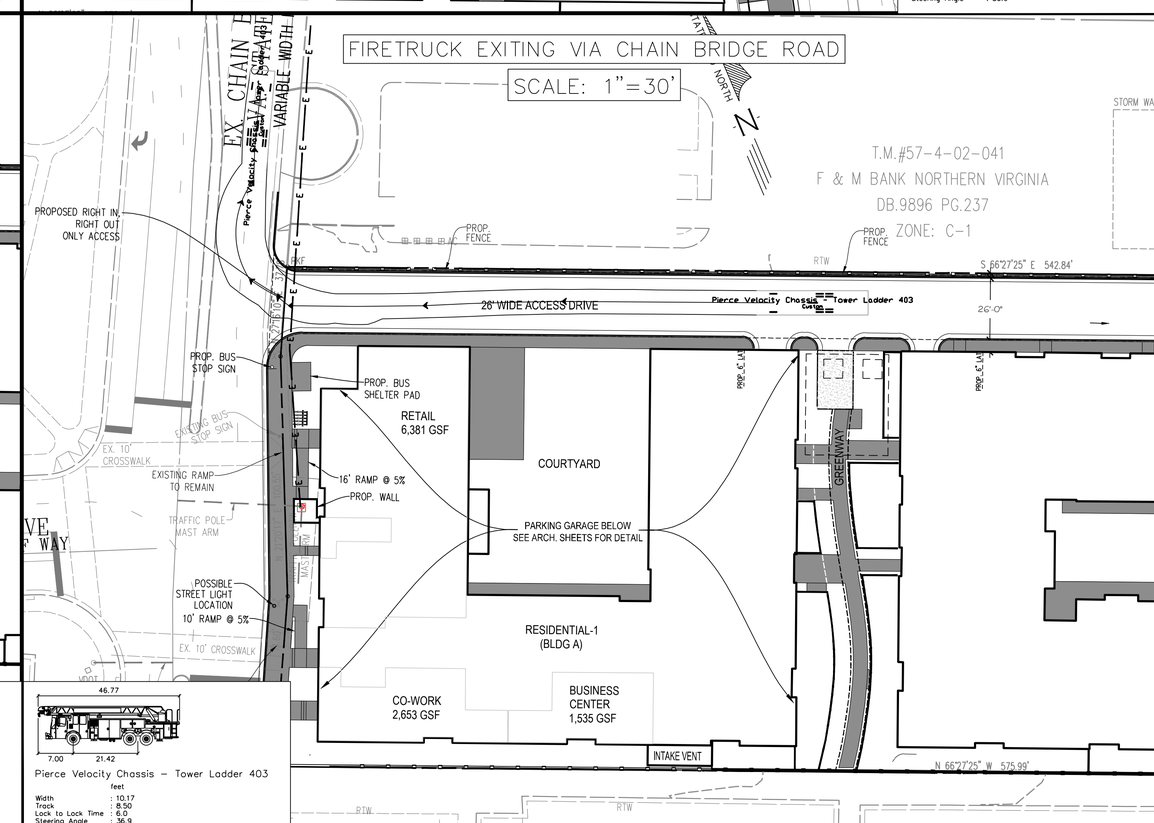
FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-34- Tree Inventory.dwg [TREE INVENTORY PLAN 2] December 03, 2024 – 8:42am agrensberg









No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024

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COMMONWEALTH OF VIRGINIA
LARRY E. FOCK
LICENSE NO. 036790
12/02/2024
PROFESSIONAL ENGINEER

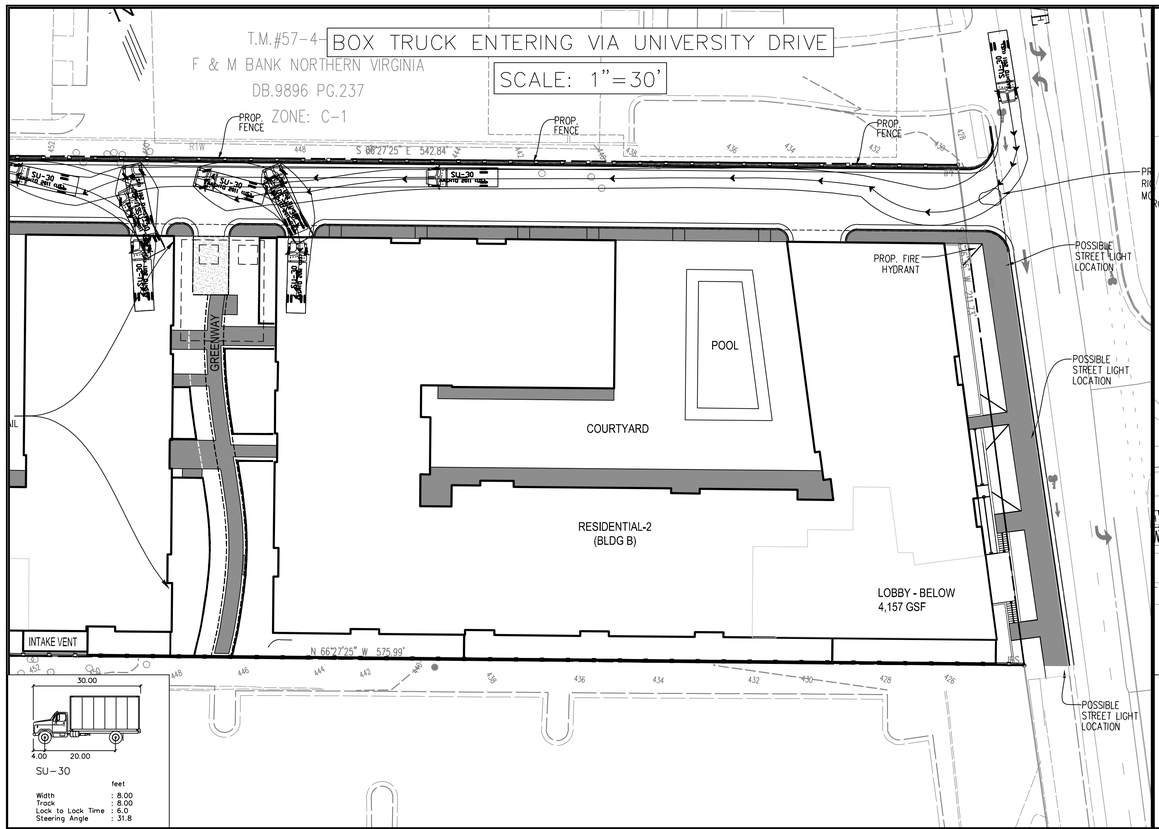
FIRETRUCK AUTOTURN ANALYSIS
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

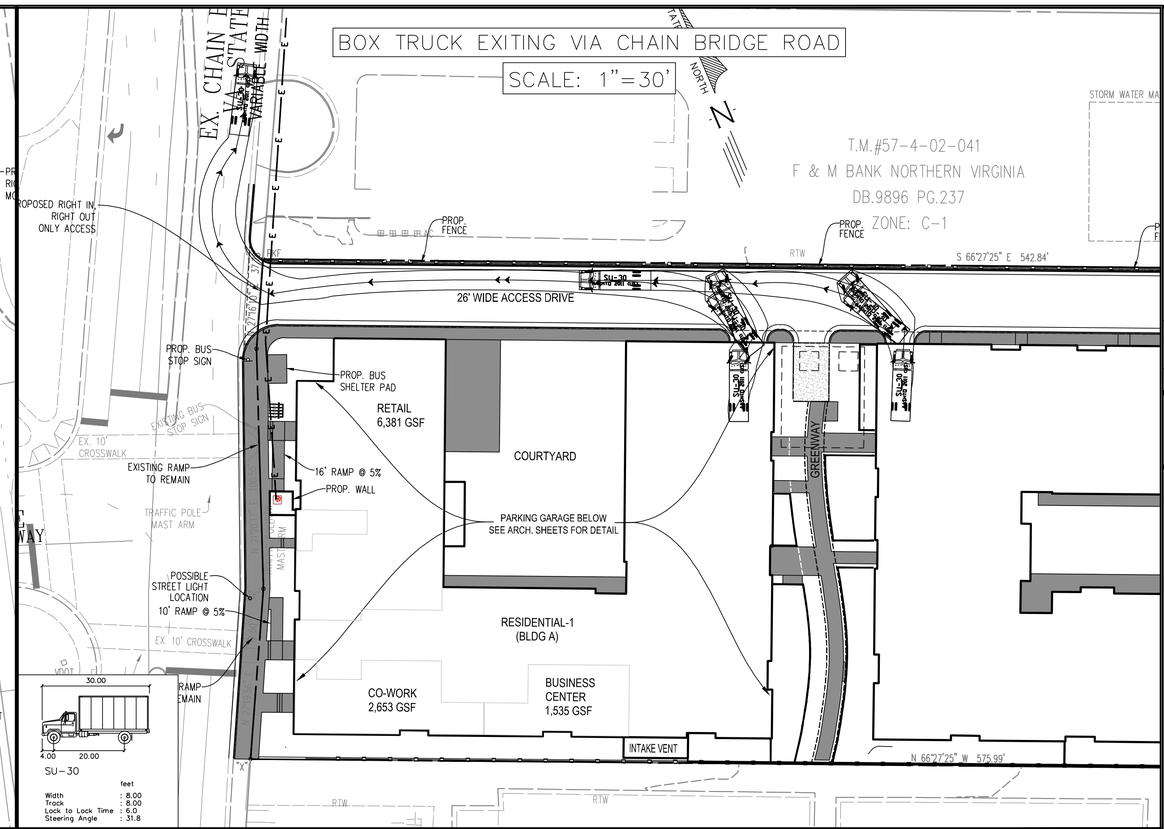
SCALE: AS NOTED
C.I.= N/A
DATE: DEC., 2024

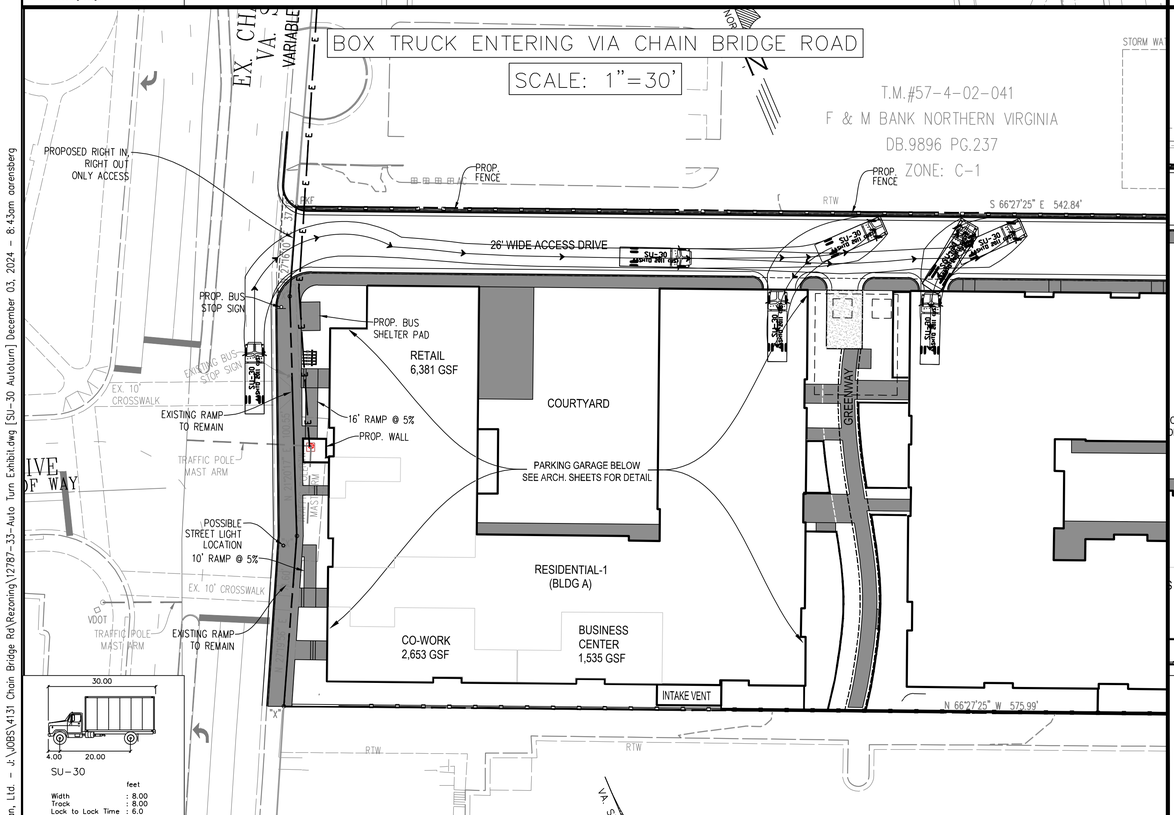
SHEET 28 OF 38

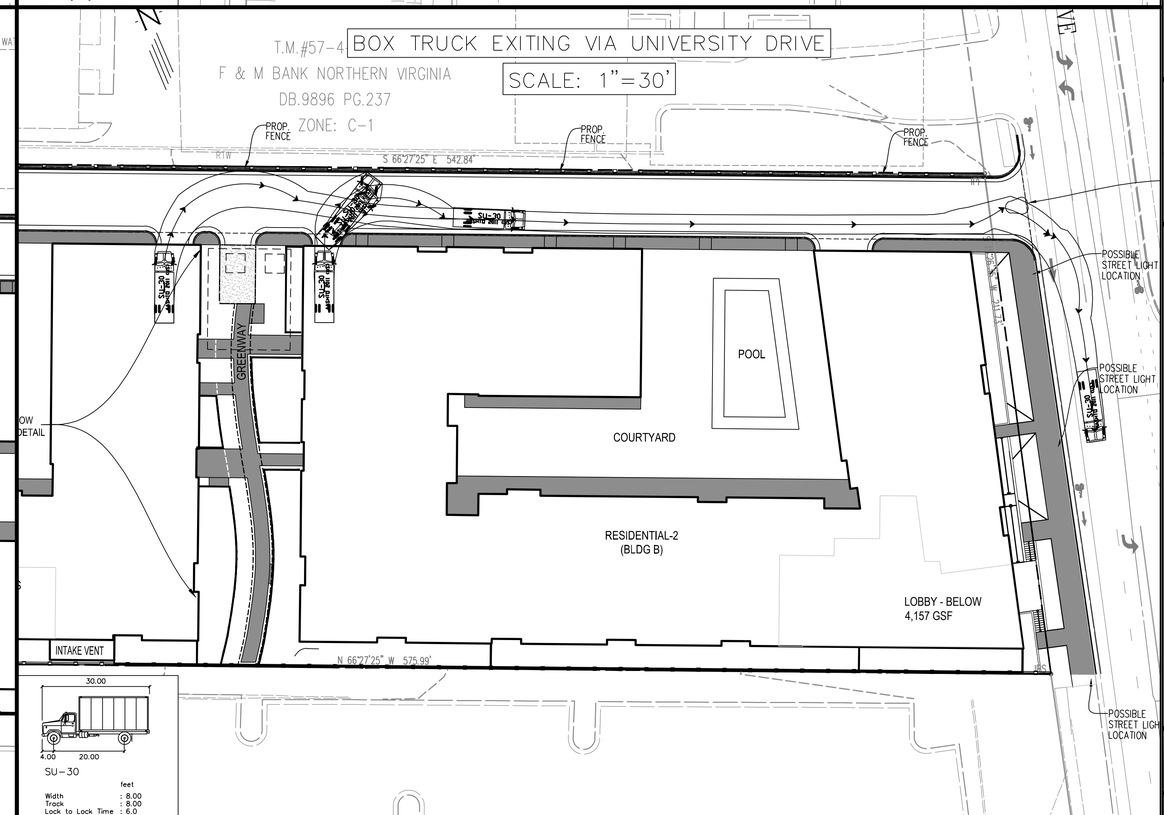
FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-33-Auto Turn Exhibit.dwg [Firetruck Autoturn] December 03, 2024 – 8:42am agrensberg









No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024

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COMMONWEALTH OF VIRGINIA
Elizabeth C. Fock
LICENSE No. 036790
12/02/2024
PROFESSIONAL ENGINEER

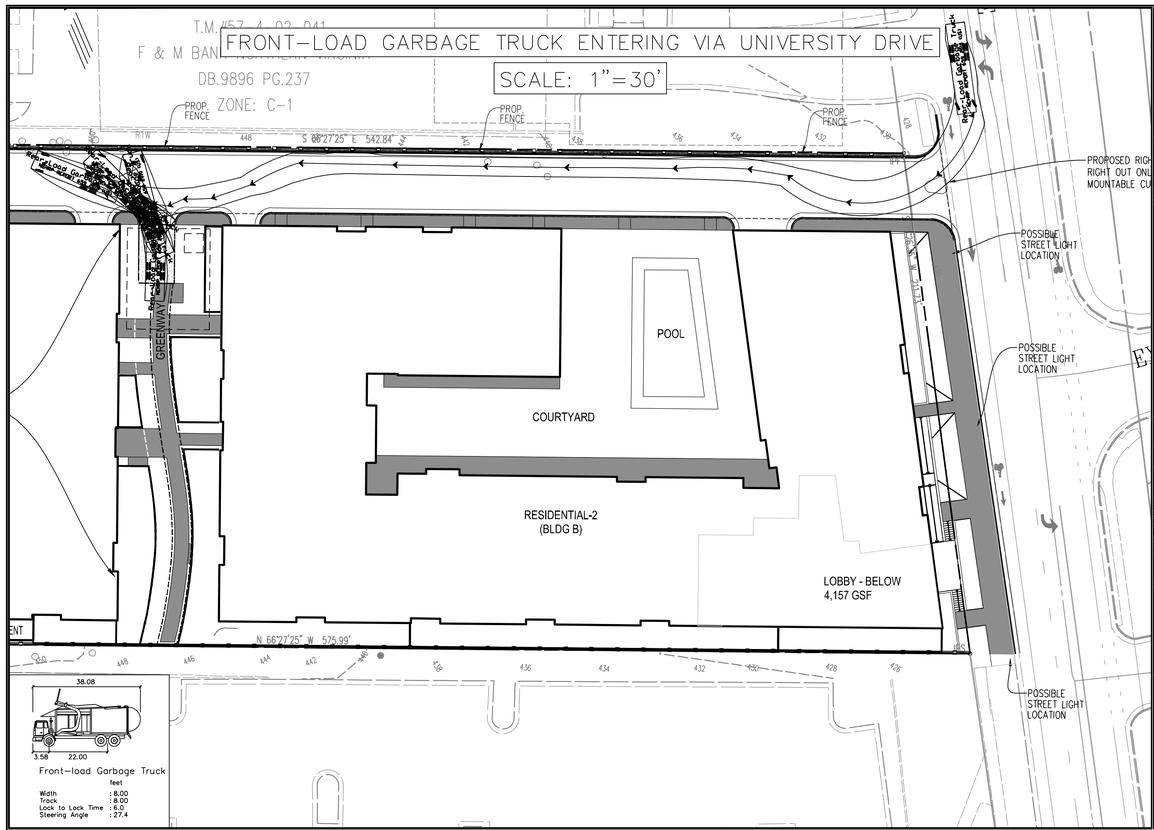
BOX TRUCK AUTOTURN ANALYSIS
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

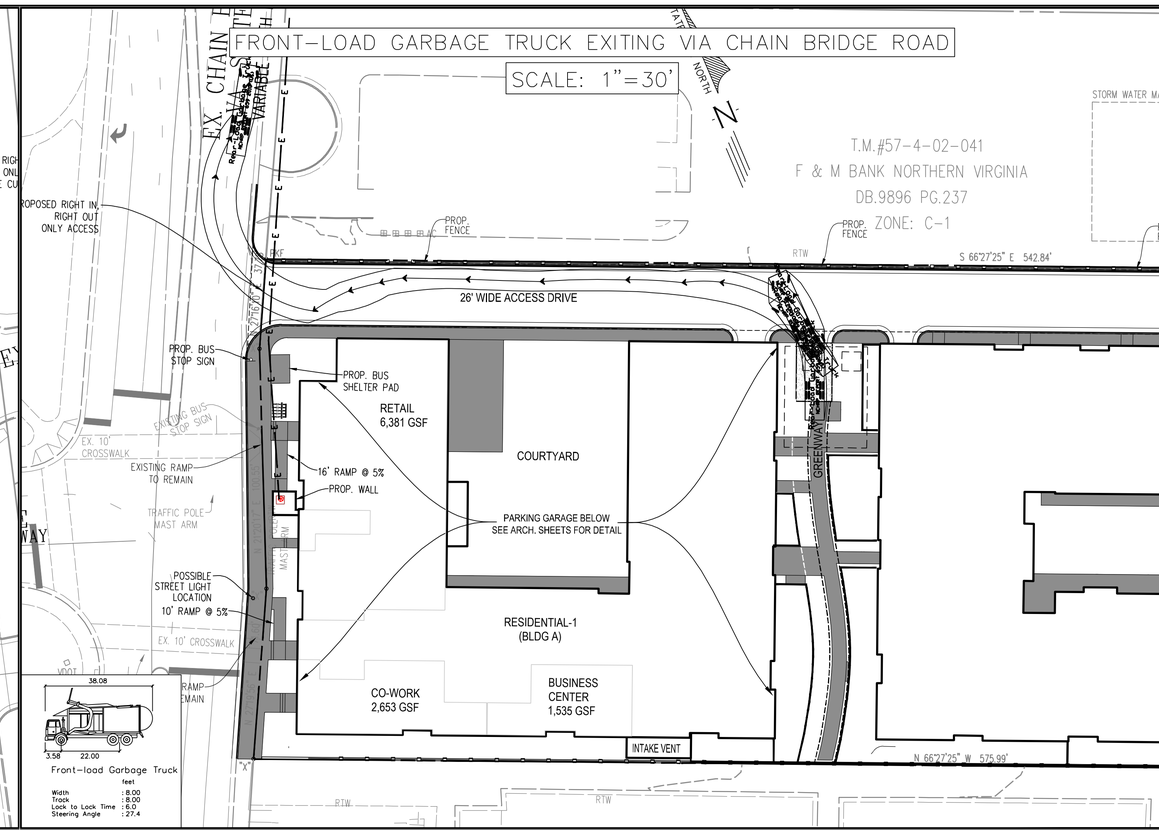
SCALE: AS NOTED
C.I.= N/A
DATE: DEC., 2024

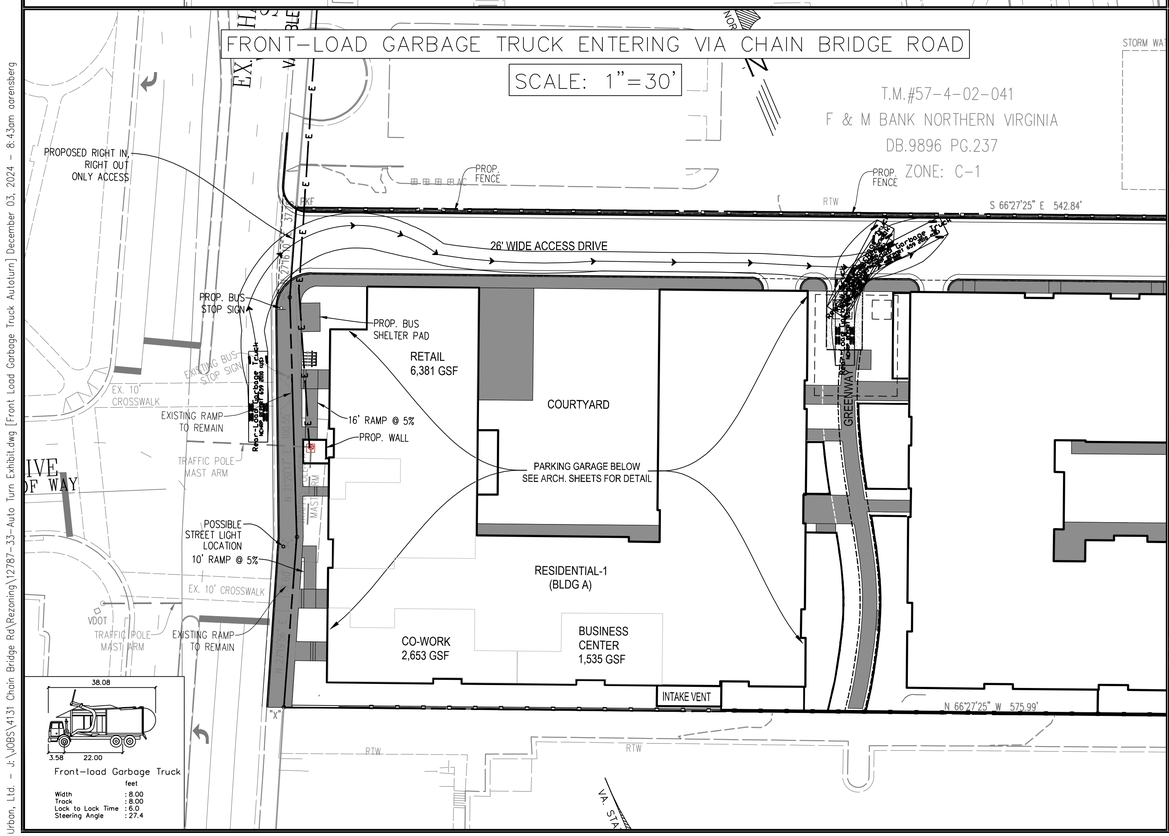
SHEET 29 OF 38

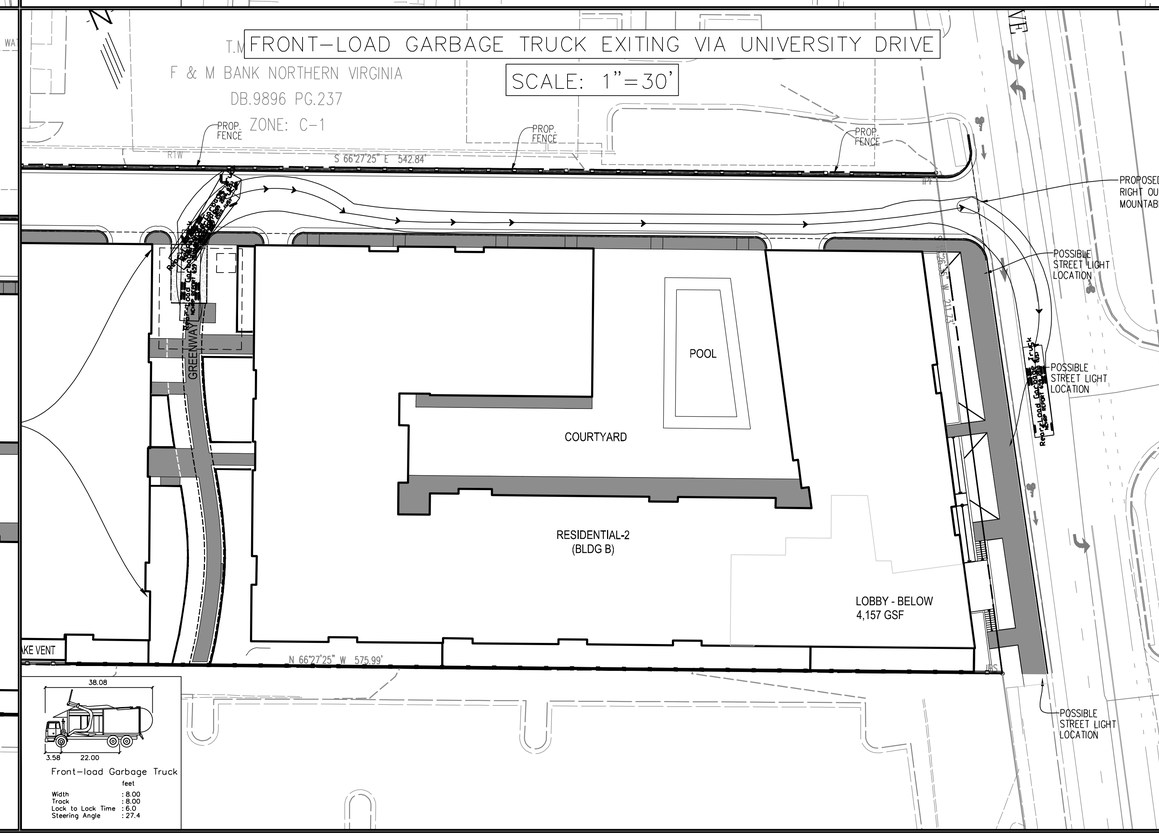
FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-33-Auto Turn Exhibit.dwg [SU-30 Autoturn] December 03, 2024 – 8:43am aarensberg









No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024

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ENGINEER
PROFESSIONAL SEAL
Clay Pope
Lic. No. 036790
12/02/2024

FRONT LOAD GARBAGE TRUCK

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: AS NOTED

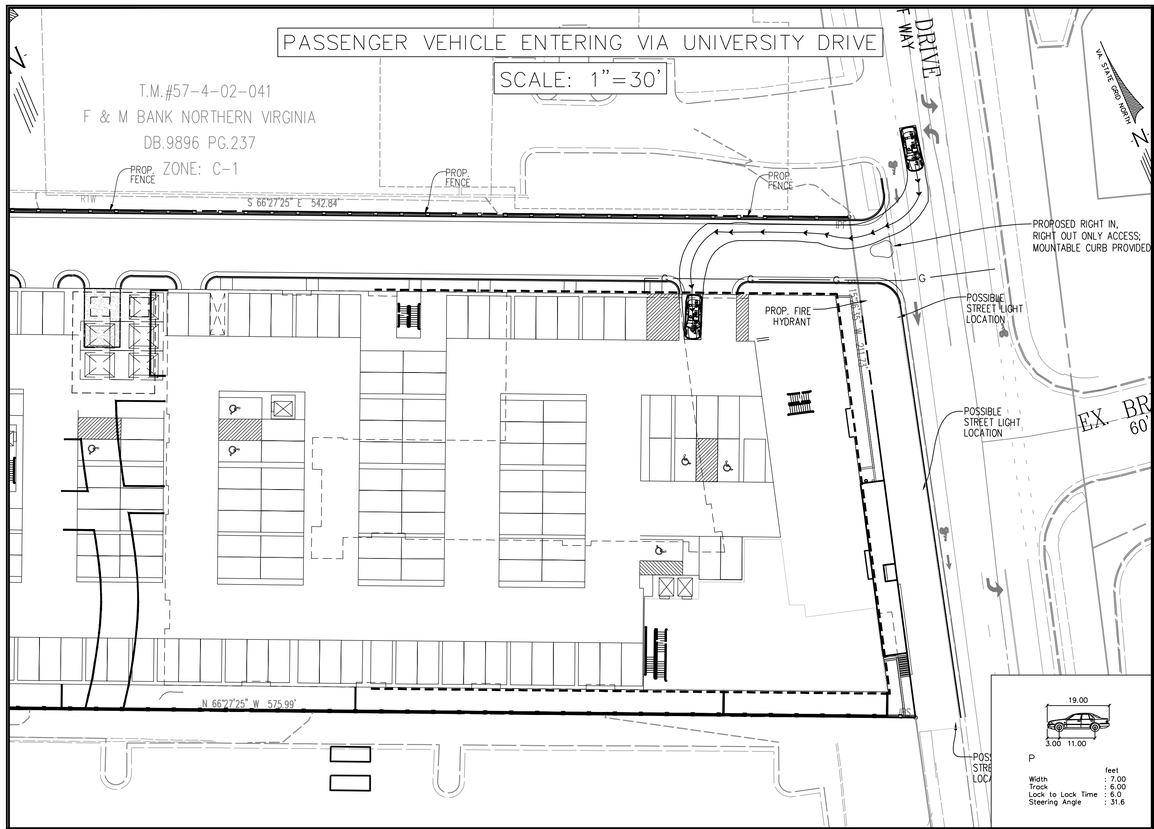
C.I.= N/A

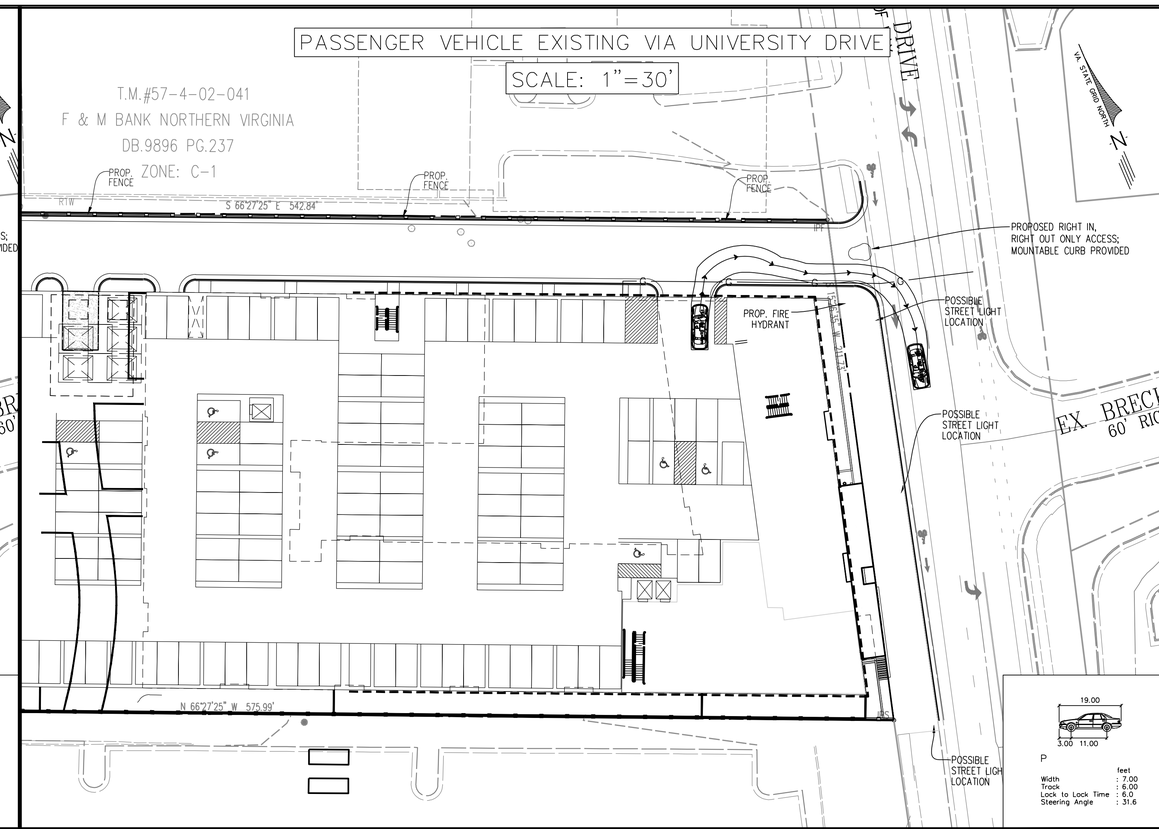
DATE: DEC., 2024

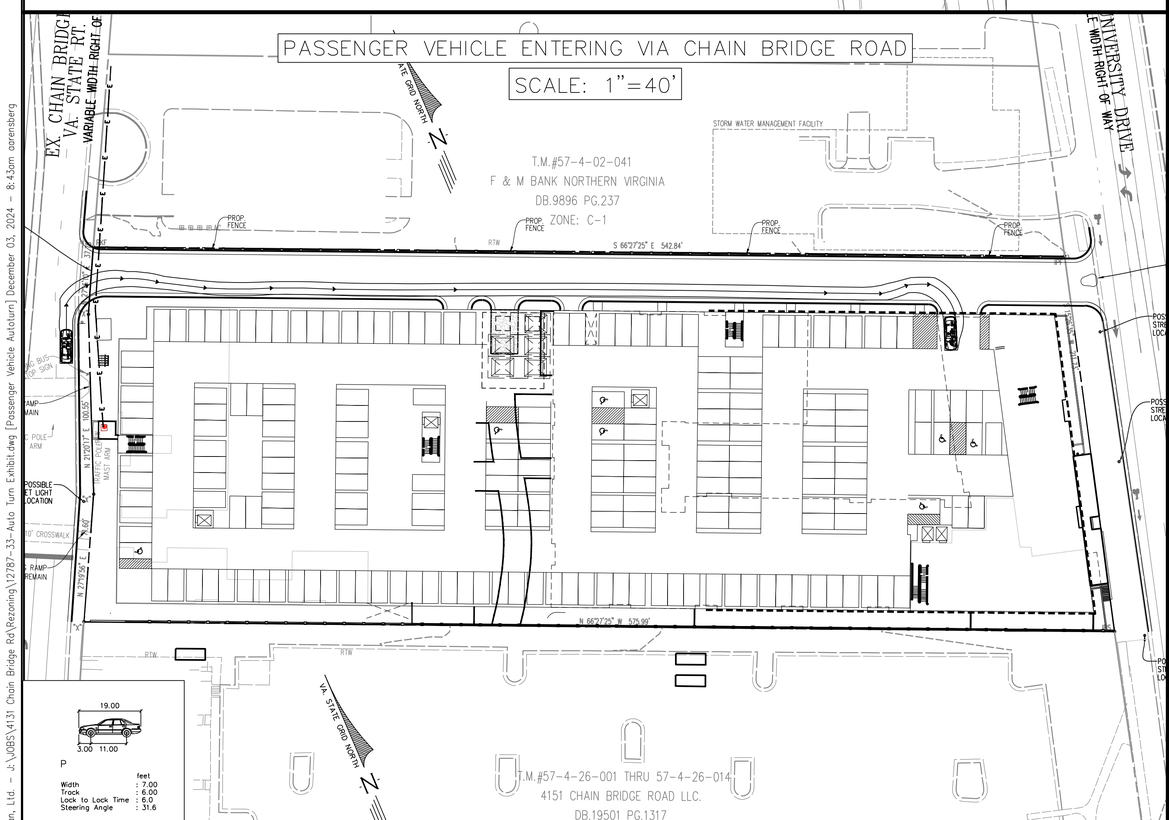
SHEET 30 OF 38

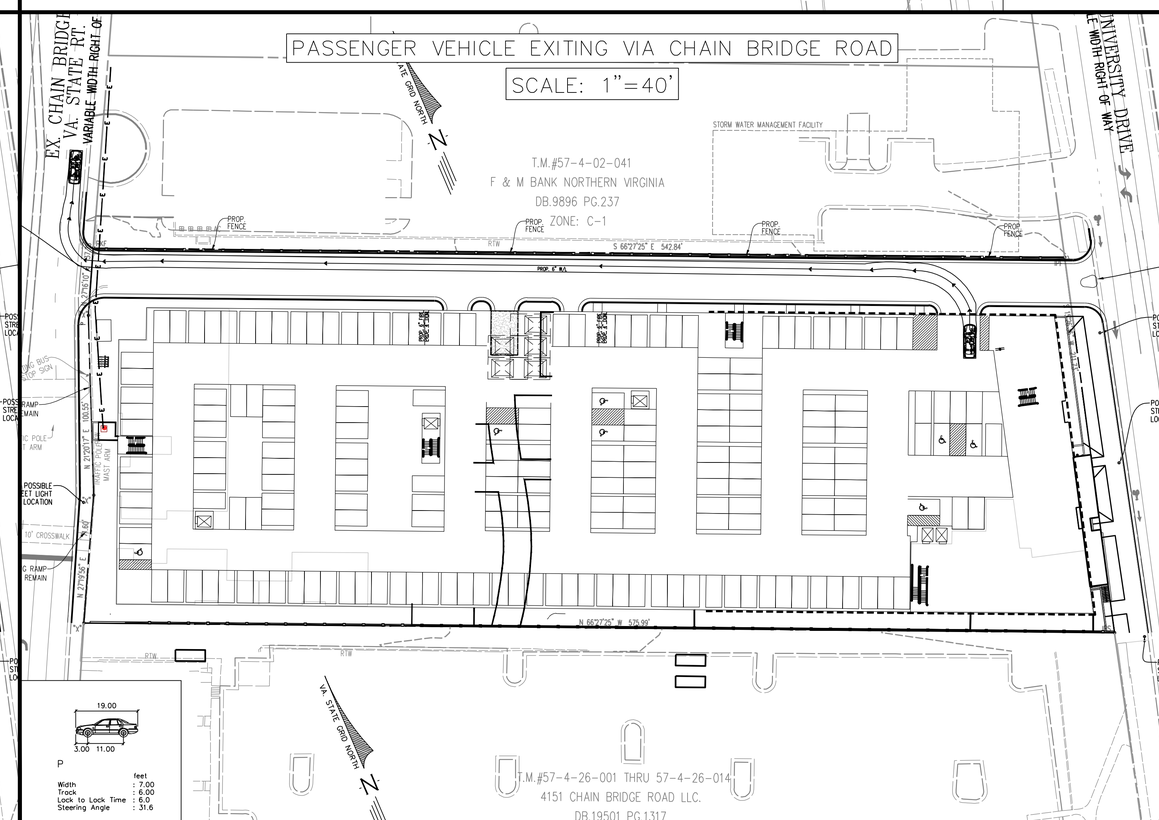
FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-33-Auto Turn Exhibit.dwg [Front Load Garbage Truck Autoturn] December 03, 2024 - 8:43am aprensberg









No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024

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12/02/2024
PROFESSIONAL ENGINEER

PASSENGER VEHICLE AUTOTURN ANALYSIS

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

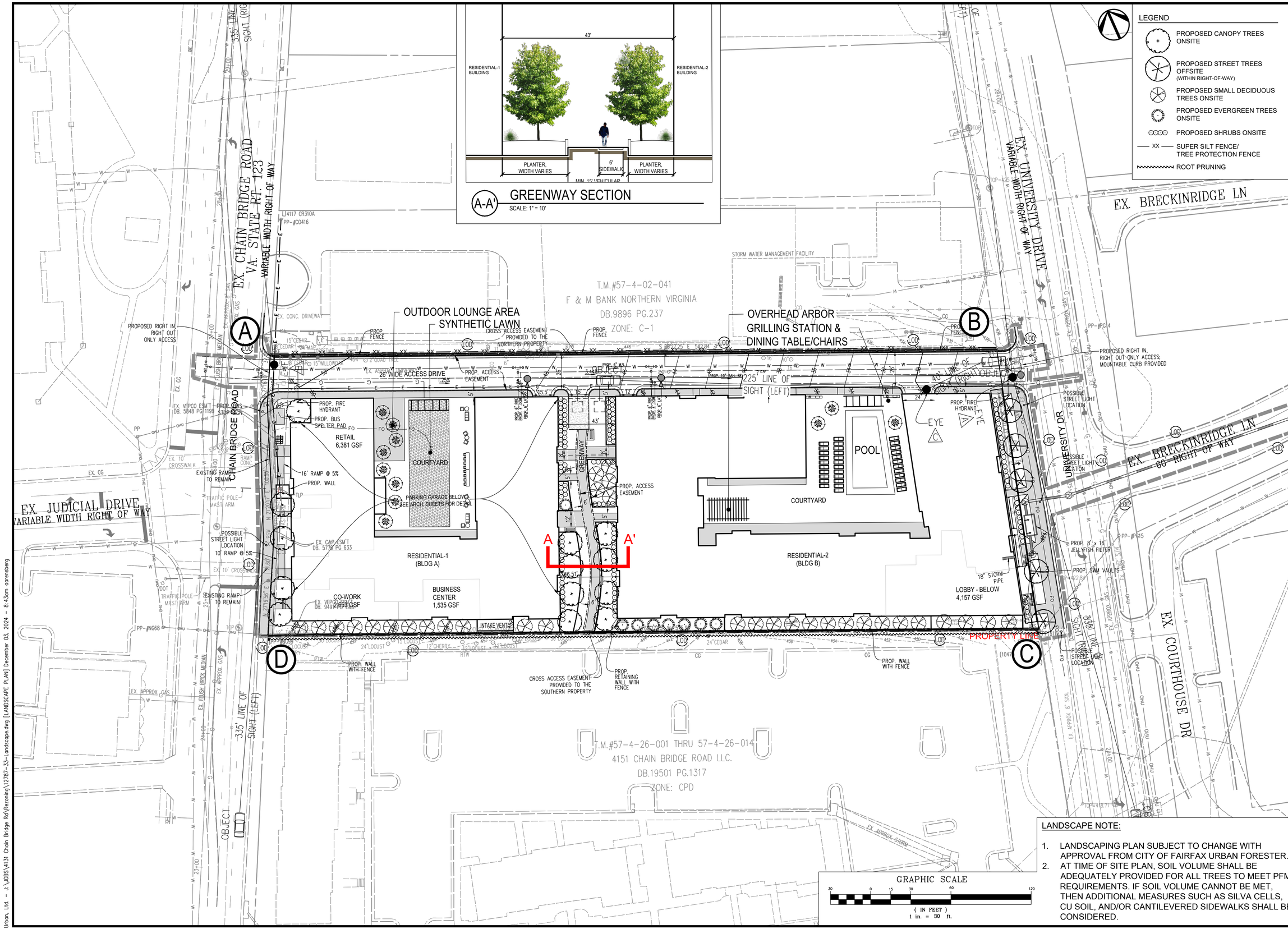
CITY OF FAIRFAX, VIRGINIA

SCALE: AS NOTED | C.I.= N/A | DATE: DEC., 2024

SHEET 31 OF 38

FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-33-Auto Turn Exhibit.dwg [Passenger Vehicle Autoturn] December 03, 2024 – 8:43am aarensberg



LANDSCAPE NOTE:

1. LANDSCAPING PLAN SUBJECT TO CHANGE WITH APPROVAL FROM CITY OF FAIRFAX URBAN FORESTER.
2. AT TIME OF SITE PLAN, SOIL VOLUME SHALL BE ADEQUATELY PROVIDED FOR ALL TREES TO MEET PFM REQUIREMENTS. IF SOIL VOLUME CANNOT BE MET, THEN ADDITIONAL MEASURES SUCH AS SILVA CELLS, CU SOIL, AND/OR CANTILEVERED SIDEWALKS SHALL BE CONSIDERED.

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-05-2024
09-03-2024
12-02-2024

Urban, Ltd.
4200 DEVONSHIRE TECHNOLOGY CT.
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COMMONWEALTH OF VIRGINIA
John Ligatto
Lic. No. 1957
12/02/2024
LANDSCAPE ARCHITECT

LANDSCAPE PLAN
4131 CHAIN BRIDGE ROAD REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

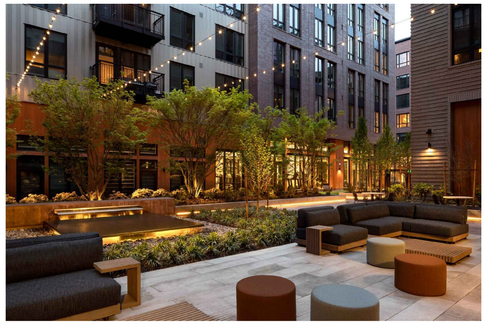
SCALE: 1"=30'
C.I.=2'
DATE: DEC., 2024

SHEET 32 OF 38

FILE No. RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-33-Landscape.dwg [LANDSCAPE PLAN] December 03, 2024 – 8:43am norensberg

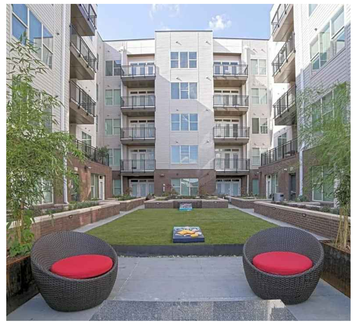
FOR ILLUSTRATIVE PURPOSES ONLY



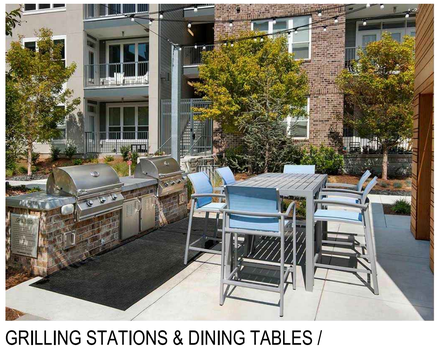
OUTDOOR LOUNGE AREA

POOL

OVERHEAD ARBOR



SYNTHETIC LAWN



GRILLING STATIONS & DINING TABLES / CHAIRS

NOTE: THIS PLAN REFLECTS THE GENERAL CHARACTER AND INTENT OF THE PROPOSED DEVELOPMENT BASED ON PRELIMINARY ENGINEERING, ARCHITECTURAL, AND LANDSCAPE ARCHITECTURAL DESIGN. MINOR VARIATIONS IN PLANT SELECTIONS, TREE QUANTITIES, USE OF BONUS MULTIPLIERS AS ALLOWED BY THE PUBLIC FACILITIES MANUAL FOR CANOPY COVERAGE CREDIT SUCH AS FOR WILDLIFE BENEFITS, NATIVE TREES, AND IMPROVED CULTIVARS MULTIPLIERS , AND VARIATION IN INSTALLED SIZES OF TREES TO INCLUDE MINIMUM 2" CALIPER DECIDUOUS TREES AND MINIMUM 8' HEIGHT EVERGREEN TREES. PLANTS TO IMPROVE SURVIVABILITY, MAY OCCUR WITH THE FINAL BUILDING DESIGN AND SUBDIVISION PLAN. THE GENERAL DENSITY OF TREES SHOWN AND MINIMUM CANOPY COVERAGE REQUIREMENTS SPECIFIED IN THE PUBLIC FACILITIES MANUAL WILL BE PROVIDED.

10-YEAR TREE CANOPY REQUIREMENT CALCULATIONS		
Net Site Area (s.f.)		117,082
Zone: [CU]	Use: [Multifamily]	
Tree Canopy Required (s.f.)	10%	11,708
10-YEAR TREE CANOPY PROVIDED		
Total Canopy Area Provided Through Tree Preservation (s.f.)		0
Total Proposed Canopy Area Provided (s.f.)		7,600
DEDUCTION: Canopy Area Provided in Right-Of-Way		-1,000
Total Tree Canopy Provided (s.f.)	5.64%	6,600

TRANSITIONAL YARD CALCULATIONS

Onsite Zoning District: CU (Multifamily)	REQUIRED							PROVIDED				
Adjacent Zoning District	Transitional Yard Minimum Fence or Wall	Width (l.f.)	Total Length (l.f.)	Net Length (l.f.)	CANOPY	UNDERSTORY	SHRUBS	Minimum Fence or Wall	Width (l.f.)	TREES QTY	TREES TYPE	Shrubs
Buffer A-B: CO: COMMERCIAL OFFICE	TY1 6' Fence or Wall	7.5	543	543	0	22	0	6' Fence	0	0 0	Large Deciduous Trees Small Deciduous Trees	0
Buffer B-C: UNIVERSITY DRIVE	None per Z.O. 3.7.3.E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	Large Deciduous Trees Small Deciduous Trees	N/A
Buffer C-D: PD-C: PLANNED DEVELOPMENT COMMERCIAL	TY3 6' Fence or Wall	15	576	576	23	23	23	6' Fence	11	0 27 7	Large Deciduous Trees Small Deciduous Trees Evergreen Trees	0
Buffer D-A: CHAIN BRIDGE ROAD	None per Z.O. 3.7.3.E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A	Large Deciduous Trees Small Deciduous Trees	N/A

SAMPLE PLANT SCHEDULE

QTY	Symbol	Botanical Name	Common Name	Size	Type	Remarks	Total Canopy Coverage (SF)
		Canopy Trees					
13		Celtis occidentalis	Common Hackberry	2" Cal.	B & B	Uniform branching pattern	2,600
		Tilia americana	American Linden	2" Cal.	B & B	Uniform branching pattern	
		Quercus shumardii	Shumard Oak	2" Cal.	B & B	Uniform branching pattern	
		Zelkova serrata	Japanese Zelkova	2" Cal.	B & B	Uniform branching pattern	
		Canopy Trees (Offsite: in R.O.W.), See Note 1					
5		Platanus acerifolia	London Planetree	2" Cal.	B & B	Uniform branching pattern	1,000
		Ulmus americana 'Valley Forge'	Valley Forge Elm	2" Cal.	B & B	Uniform branching pattern	
		Quercus phellos	Willow Oak	2" Cal.	B & B	Uniform branching pattern	
		Small Deciduous Trees					
32		Cercis canadensis	Eastern Redbud	2" Cal.	B & B	Uniform branching pattern	3,200
		Cornus florida	Flowering Dogwood	2" Cal.	B & B	Uniform branching pattern	
		Magnolia virginiana	Sweetbay Magnolia	2" Cal.	B & B	Uniform branching pattern	
		Evergreen Trees					
8		Chamaecyparis thyoides	Atlantic Whitecedar	6' Ht.	B & B	Uniform branching pattern	800
		Ilex opaca	American Holly	6' Ht.	B & B	Uniform branching pattern	
		Juniperus virginiana	Eastern Redcedar	6' Ht.	B & B	Uniform branching pattern	
		Shrubs					
138		Clethra alnifolia	Summersweet	24" Ht.	As Shown	Cont.	0
		Ilex verticillata	Winterberry	24" Ht.	As Shown	Cont.	
		Itea virginica	Virginia Sweetspire	24" Ht.	As Shown	Cont.	
		Fothergilla gardenii	Dwarf Fothergilla	24" Ht.	As Shown	Cont.	
						TOTAL:	7,600

Note:
1. Tree Canopy Provided in R.O.W. is NOT counted towards 10-Year Tree Canopy Requirement.

MODIFICATIONS/WAIVERS REQUESTED

- A MODIFICATION TO OVERALL CANOPY COVERAGE REQUIRED (Z.O. SECTION 4.5.6) IS HEREBY REQUESTED TO BE REVISED FROM 10% TO 5.64%.
- A MODIFICATION TO TRANSITIONAL YARD REQUIRED (Z.O. SECTION 4.5.5) FOR BUFFER A-B AND C-D IS HEREBY REQUESTED TO BE REVISED AS INDICATED IN THE "TRANSITIONAL YARD CALCULATIONS" TABLE ABOVE.
- A MODIFICATION TO STREETSCAPE STANDARD ALONG CHAIN BRIDGE ROAD AND UNIVERSITY DRIVE REQUIRED (SMALL AREA PLAN) IS HEREBY REQUESTED TO BE REVISED AS SHOWN ON SHEET 32.

LANDSCAPE NOTES:

1. THIS PLAN IS SCHEMATIC AND REFLECTS THE GENERAL CHARACTER AND INTENT OF THE PROPOSED DEVELOPMENT BASED ON PRELIMINARY ENGINEERING, ARCHITECTURE, AND LANDSCAPE ARCHITECTURE DESIGN. MODIFICATIONS AND VARIATIONS MAY OCCUR WITH FINAL BUILDING DESIGN AND SITE PLAN.
2. TREE LOCATION, TREE QUANTITY, AND TREE SPECIES ARE SUBJECT TO CHANGE BASED ON CHANGES THAT MAY OCCUR WITH FINAL BUILDING DESIGN AND SITE PLAN. SPECIES DIVERSITY SHALL BE MET AND DEMONSTRATED AS SUCH AT TIME OF SITE PLAN. MODIFICATIONS TO THE LANDSCAPE PLAN ARE SUBJECT TO APPROVAL OF THE CITY'S URBAN FORESTER.
3. LANDSCAPING PLAN SUBJECT TO CHANGE WITH APPROVAL FROM CITY OF FAIRFAX URBAN FORESTER.

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
05-15-2024
09-03-2024
12-02-2024

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COMMONWEALTH OF VIRGINIA
John Laghlin
Lic. No. 1957
LANDSCAPE ARCHITECT

LANDSCAPE COMPUTATIONS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' C.I.= 2' DATE: DEC., 2024

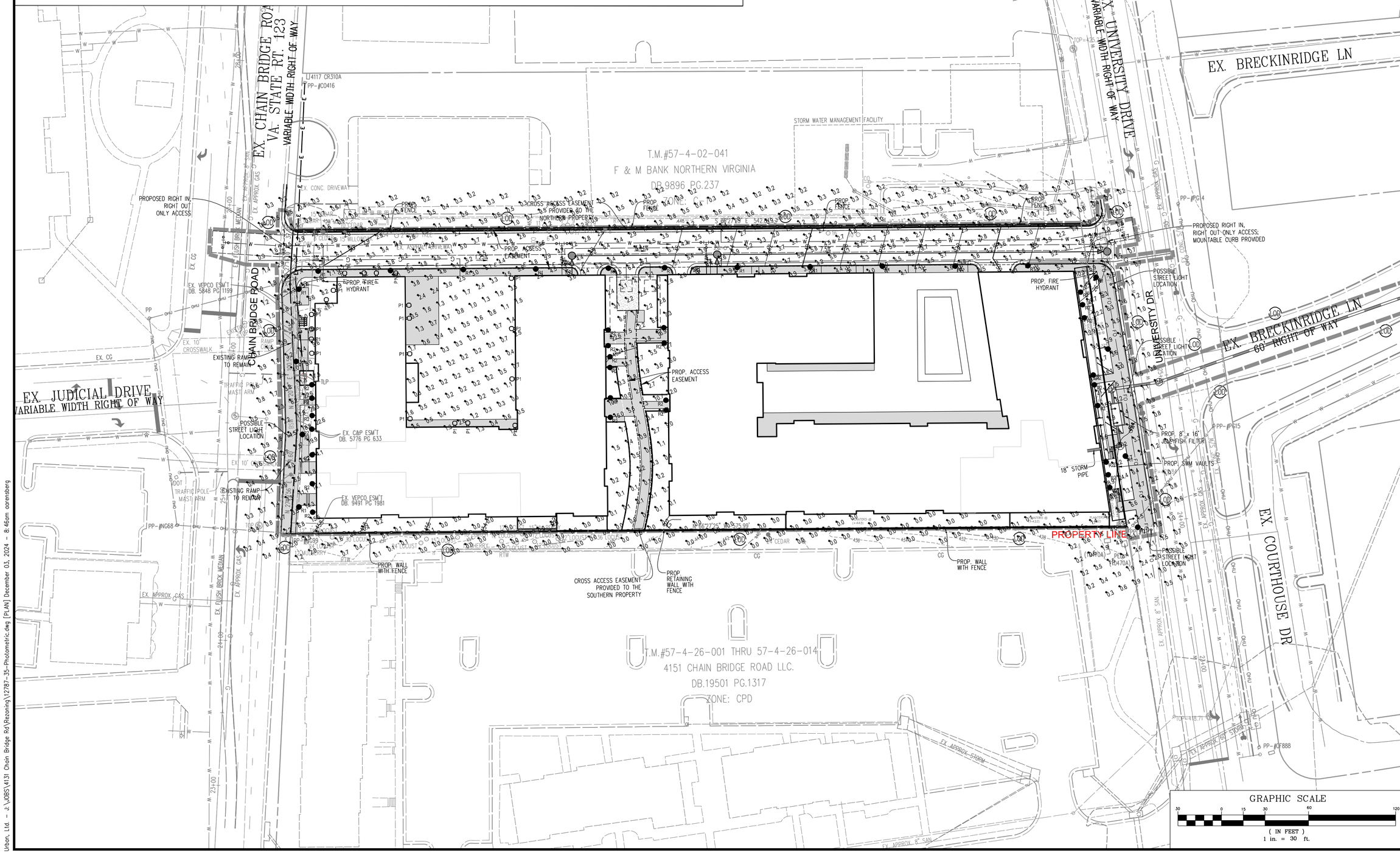
SHEET 33 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-33-LANDSCAPE.dwg [LANDSCAPE COMPS] December 03, 2024 - 8:44am agreensberg

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	20	P1	Single	PS1408GV-15L35K-FJ2 - Nom_ 14_ Diam x 10_4_ H, Nautical Series RLM luminaire		0.900	784	10	200
	19	R1	Single	RADIANT 105W 4K TYPE 3 GLOBE		0.900	13194	101.9	1936.1
	26	R2	Single	RADIANT 50W 4K TYPE 3 GLOBE		0.900	6283	51	1326

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
LOT	Illuminance	Fc	2.87	28.7	0.0	N.A.	N.A.



No.	DATE	DESCRIPTION

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COMMONWEALTH OF VIRGINIA
John Lighthe
Lic. No. 1957
09/27/2024
LANDSCAPE ARCHITECT

PHOTOMETRIC PLAN

4131 CHAIN BRIDGE ROAD REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30' | C.I.= 2' | DATE: DEC., 2024

SHEET 34 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-35-Photometric.dwg [PLAN] December 03, 2024 - 8:46am aarensberg

THIS PHOTOMETRIC PLAN HAS BEEN PREPARED BY:

Ambiance LIGHTING

JOHN DALZIEL
AMBIANCE LIGHTING, INC.
5021 HOWERTON WAY
SUITE A-B
BOWIE, MD 20715
(301) 627-2000

NOTES:
ALL SITE LIGHTING SHALL CONFORM TO THE CITY OF FAIRFAX ZONING ORDINANCE.

ALL LIGHTING FEATURES AND SPECIFICATIONS ARE FULLY CUT-OFF, DOWNWARDLY SHIELDED FIXTURES.

SEE LUMINAIRE SCHEDULE FOR INDIVIDUAL DESCRIPTIONS.

RLM CLASSICS

PIER LIGHT SHORT STRAIGHT
DAMP / WET LOCATION
TIERS

PROJECT:
QUANTITY: TYPE:

PSN14080V
SF - Burgandy

PSN14080V
MB - Matte Black

PSN14080V
SF - Sea Foam

PSN14080V
MW - Matte White

SERIES	LUMENS[1]	CCT		DRIVER / DIMMING[2]	ACCESSORIES	MOUNTING[3]		FINISH[4]	WET KIT
		80 CRI				WALL MOUNT			
PSN14080V **PSN16090V** **PSN20110V**	**15L** **27L** **37L** **45L**	1500 Lm 2700 Lm 3700 Lm 4500 Lm	**27K** **30K** **35K** **40K**	2700K 3000K 3500K 4000K	**EX**[7] **DOD2L** **DSDWT**[7] **DLTE**[7] **DL3EX**	Electronic Driver, 120V/277V 1%, 0-10V, 120V/277V Eco1MLV, 120V Lutron® 2-Wire Forward Phase (MLV), 120V 1%, Lutron® EcoSystem®, Fades to Black, 120V/277V	**FJ2**[8] **MFT**	4" Frosted Tall 2" Frosted Mini	**MW**[6] **MB**[6] **PT**[6] **CC**	Matte White Matte Black Platinum Silver Custom Color	**WLKA**	Wet Location Kit
		90 CRI						See Page 5 for Full Range of Color Options (85-90083)	
			27KK **30KK** **35KK** **40KK**	2700K 3000K 3500K 4000K					

EXAMPLE: PSN14080V15L30KEXFJ2/CP104SP16CO

NOTES:
1 Nominal Source Lumens at 35K **2** Contact Factory for Additional Options **3** 37L Max with CP104 **4** 37L Max with CP104, 45L Max with CP106
5 Standard Enclosure **6** See Mounting Page for Details on Components and Finishes **7** See Mounting Page for Available Arm Options
8 See Color Page for More Options/Consult Factory for Special Finishes **9** Standard Finishes

Spectrum Lighting

SPECLIGHT.COM • 994 JEFFERSON ST. FALL RIVER, MA 02721 • 508.678.2303

ILLUMINATING WHAT'S POSSIBLE.

Dimensions and values shown are nominal. Spectrum Lighting continually works to improve products and reserves the right to make changes which may alter the performance or appearance of products.

83-50119_RC

PEMCO Est. 1882 LIGHTING PRODUCTS
A QSSI COMPANY

BUILD AMERICA BUY AMERICA

LEXINGTON

LED POST TOP LUMINAIRES

Fitter section slips over 3" or 2½" pole or tenon

LEX with C1 Capital, PA Lens, A1 Cage, T3 Top Spinning and No Finial

LEX Open with C1 Capital, A1 Cage, T3 Spinning, No Finial & No Secondary Lens

LEX with RCA Globe, C9 Capital, No Cage, No Spinning, No Finial

Specifications and Features:

Radiant™ LED
- Conformal Coating LED light engine
- CCT: Standard-3000K, 4000K, & 5000K
- 2700K, Amber, LPS (1800K) Offered for Some Wattages - Consult Factory
- Static Colors Available - Consult Factory

Distribution
- Types I* II, III, IV, V (Type I Available in 70w & Higher Only)
- Full Cutoff

Electrical
- Electronic Driver, 120-277V, 50/60Hz or 347/480V, 50/60Hz
- 0-10V Dimmable Driver
- Standard Surge Protection Included (6kV Line-Line; 10kV Line-Earth)

Controls (Optional)
- Button Eye Photo Control (PC)
- 7-Pin Twist-Lock Receptacle (PCR7, C8, C10 & C12 Capitals Only)
- 3-Pin Twist-Lock Receptacle (PCR3, C8, C10 & C12 Capitals Only)

Housing
- Choice of Multiple Cast Decorative Housings with 3" Slip Fit.

Finish
- Super Durable Polyester Powder Coat Finish. Custom Finishes Available, Including Patinas and All RAL Colors.

Listings & Ratings
- ETL Listed to UL 1598 Standard for Wet Location.

Warranty
- 5 Year Limited Warranty

EPA: 2.2
Weight: 32 lbs (Max.)

Order Information Example: LEXNLC560W4KU3A1T1PCFBK

LEX

Model	Globe/Lens	Capital	Wattage	CCT	Voltage	Optics	Bands & Cages	Spinning	Options	Finial	Finish
LEX=Lexington Radiant™ Pier Top	**NL**=No Secondary Lens* **RCA**=Ribbed Clear Acrylic **RFA**=Ribbed Frosted Acrylic **PA**=Prismatic Acrylic** **SA**=Stippled Acrylic** **SP**=Stippled Polycarbonate** ***Must only be ordered with Top Spinning and Cage ****Must only be ordered with Top Spinning	**C1**=PLC1 **C2**=PLC2 **C3**=PLC3 **C4**=PLC4 **C5**=PLC5 **C6**=PLC6 **C7**=PLC7 **C8**=PLC8 **C9**=PLC9 **C10**=PLC10 **C11**=PLC11 **C12**=PLC12	**40W**=40w **50W**=50w **60W**=60w **70W**=70w **80W**=80w **90W**=90w **105W**=105w **120W**=120w **135W**=135w **150W**=150w	**3K**=3000K **4K**=4000K **5K**=5000K	**U**=120-277V **H**=347/480V	**1**=Type I* **2**=Type II **3**=Type III **4**=Type IV **5**=Type V *70W & Above Only	**A1**=DECA1 **A2**=DECA2* **A3**=DECA3 **A5**=Perforated Band w/Cage **A7**=Flat Band w/Cage **N**=None ***Not available with NL Globe**	**T1**=T101 **T3**=T103 **T4**=T104 **N**=None	**PC**=Button Eye Photo Control **PCR3**=3 Pin Twist Lock Receptable• **PCR7**=7 Pin Twist Lock Receptable• **N**=None ***C8, C10, & C12 Capitals Only** **•Photo Cell Not Included**	**E**=GF5* **B**=GF2 **C**=GF3 **D**=GF4 **F**=GF6 **H**=GF8 **I**=GF9 **J**=GF10 **K**=GF12 **O**=GF17 **P**=GF18 **V**=GF24 **N**=None ***Standard Finial**	**STANDARD FINISHES** **BK**=Black **BZ**=Bronze **DBZ**=Dark Bronze **WH**=White **GR**=Green **SM**=Silver Metallic **GY**=Light Gray **TBK**=Textured Black **CC**=Custom Color (Consult Factory)

PEMCO Lighting Products Visit us at www.pemcolighting.com • Phone: 302.892.9000

LEX

Specifications subject to change without notice. Rev. 110424

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
05-11-2024
09-03-2024
12-02-2024
- - -

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COMMONWEALTH OF VIRGINIA
John Lighile
Lic. No. 1957
12/02/2024
LANDSCAPE ARCHITECT

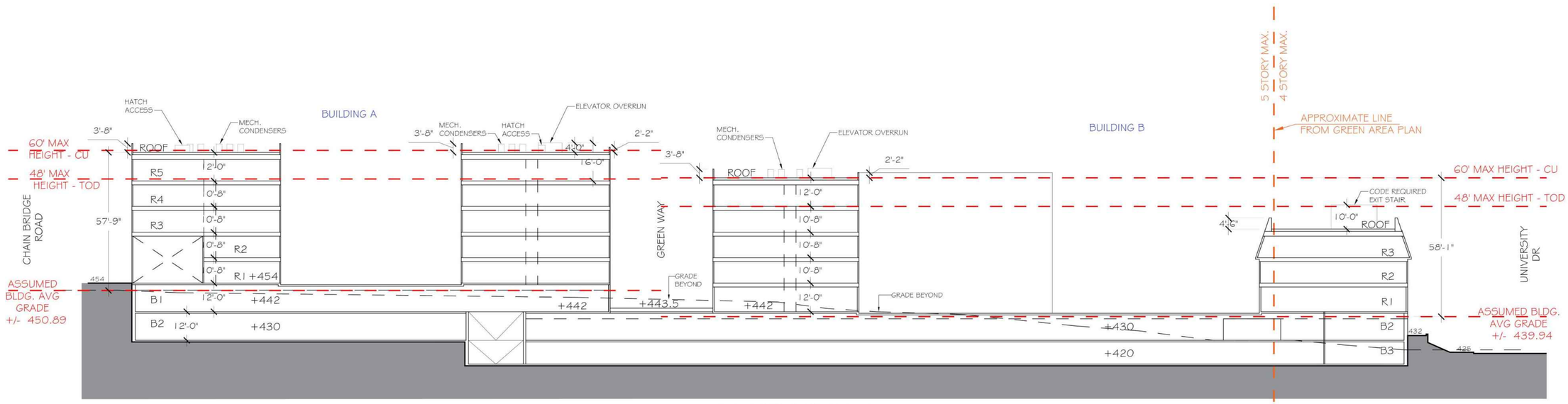
PHOTOMETRIC DETAILS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30'
C.I.= 2'
DATE: DEC., 2024

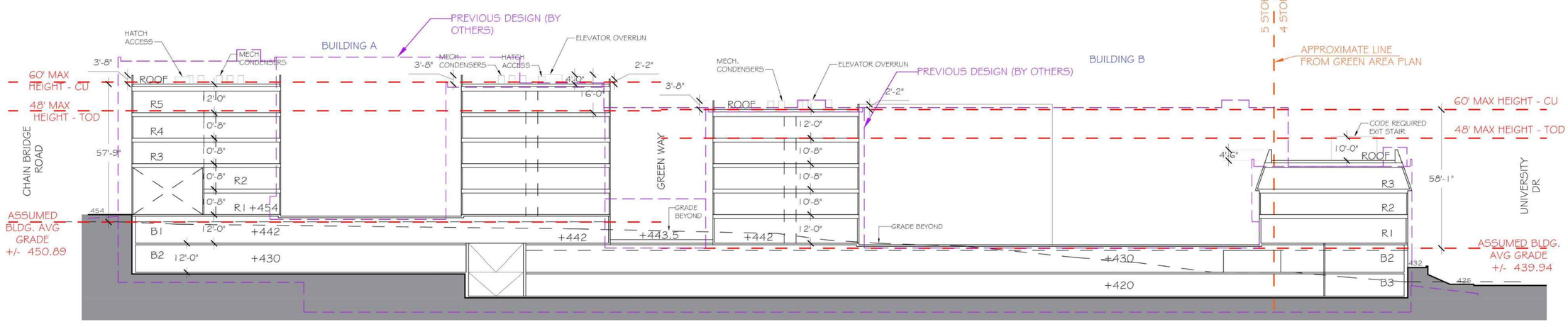
SHEET
35
OF
38

FILE No.
RZ-12787

Urban, Ltd. – J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-35-Photometric.dwg [COMPS] December 03, 2024 – 8:46am aprensberg



BUILDING SECTION -1



BUILDING SECTION -1 - CURRENT VS PREVIOUS DESIGN (BY OTHERS)

KEY PLAN

lessard DESIGN
8521 LEESBURG PIKE, SEVENTH FLOOR, VIENNA, VA 22182
P:571.830.1800 | F:571.830.1801 | WWW.LESSARDDESIGN.COM

BUILDING SECTIONS

4131 CHAIN BRIDGE ROAD
CITY OF FAIRFAX ,VA
PARADIGM DEVELOPMENT

DEC. 04, 2024
PDM.015

A.22

0' 10' 20' 40'
SCALE: 1" = 20' (@ 22"X34")

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No.	DATE	DESCRIPTION

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10-18-2016
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COMMONWEALTH OF VIRGINIA
CLAYTON C. TODD
Lic. No. 038790
12.02.2024
PROFESSIONAL ENGINEER

BUILDING SECTION
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"= C.I.= 2"
DATE: DEC., 2024

SHEET 36 OF 38

FILE No. RZ-12787

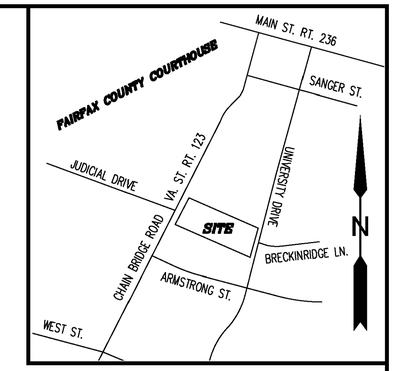
Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-25- BUILDING SECTIONS.dwg [building section] December 03, 2024 - 8:46am aprensberg

NOTES

1. THE PROPERTY SHOWN HEREON IS LOCATED IN THE CITY OF FAIRFAX, VIRGINIA AND HAS MAP NUMBER 57-0-02-0401
2. NO SUBSURFACE INVESTIGATION HAS BEEN PERFORMED.
3.. NO OBSERVABLE EVIDENCE OF CEMETERIES WAS NOTED ON THE SUBJECT PROPERTY.
4. THE SUBJECT PROPERTY HAS DIRECT ACCESS TO CHAIN BRIDGE ROAD VA. RTE 123 A PUBLICLY DEDICATED RIGHT-OF-WAY.
5. NO ATTEMPT HAS BEEN MADE AS A PART OF THIS SURVEY TO OBTAIN OR SHOW DATA CONCERNING EXISTENCE, SIZE DEPTH, CONDITION, CAPACITY OR LOCATION OF ANY UTILITIES OR MUNICIPAL/PUBLIC SERVICE FACILITY. FOR INFORMATION REGARDING THESE UTILITIES OR FACILITIES CONTACT "MISS UTILITY" 1 (800) 257 -7777.
6. SUBJECT PROPERTY LIES IN ZONE "X" PER FIRM MAP COMMUNITY PANEL NUMBER 515524005D, DATED JUNE 06, 2006.
7. THE SUBJECT PROPERTY IS ZONED R-2
8. THE PROPERTY IS IN THE NAME OF THE HILL, A DAVIES FAMILY LLC.

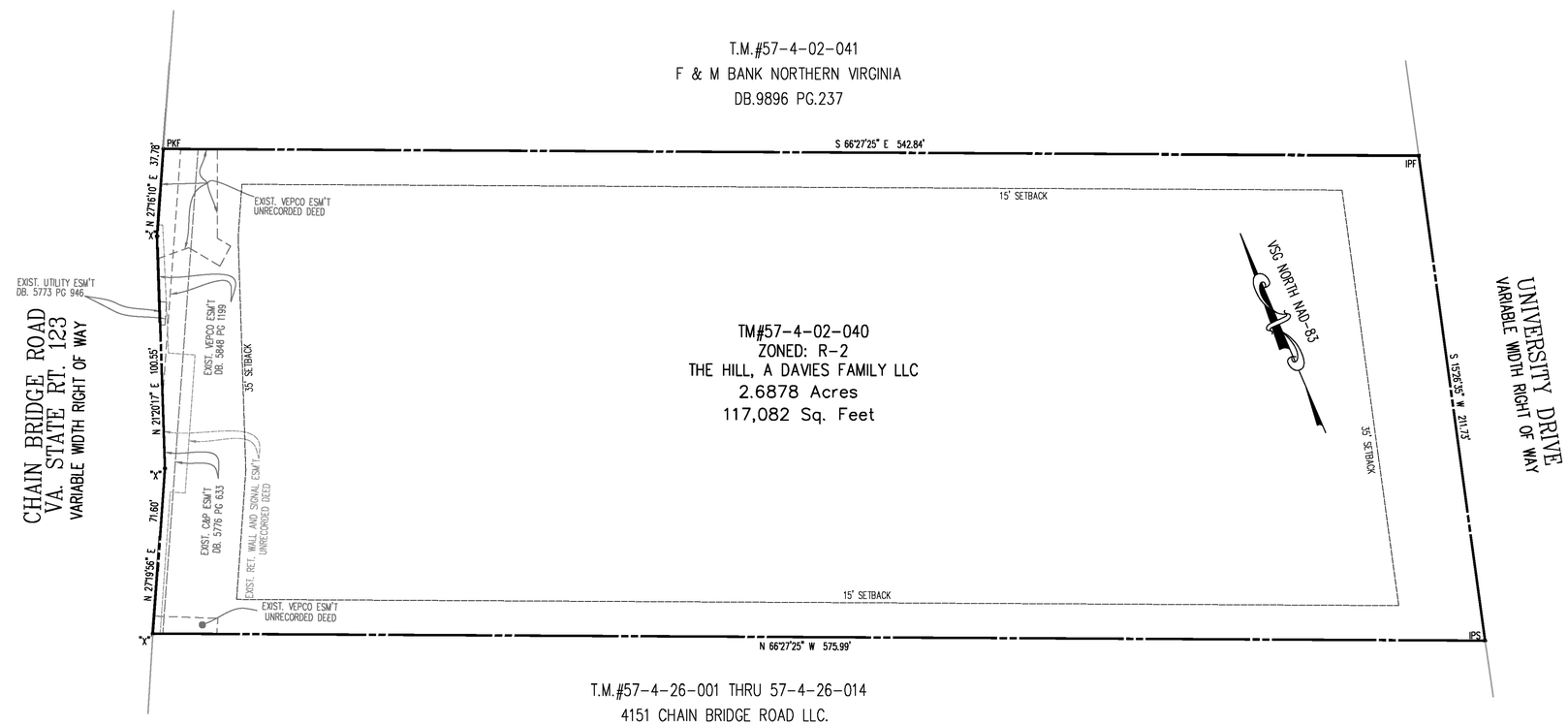
LEGEND

PKF	PK NAIL FOUND
IPF	IRON PIPE FOUND
IPS	IRON PIPE SET
"x"	X MARK SET



VICINITY MAP

SCALE 1"=500'



METES AND BOUNDS DESCRIPTION

BEGINNING AT A BEGINNING AT A POINT ON THE EASTERLY RIGHT OF WAY LINE OF CHAIN BRIDGE ROAD, VIRGINIA ROUTE 123; SAID POINT ALSO BEING THE SOUTH WEST CORNER OF THE LAND OF F&M BANK NORTHERN VIRGINIA AS RECORDED IN DEED 9896 AT PAGE 237 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA; THENCE DEPARTING THE EASTERLY RIGHT OF WAY LINE OF SAID CHAIN BRIDGE ROAD RUNNING WITH THE SOUTHERLY LINE OF SAID F&M BANK NORTHERN VIRGINIA

S 66°27'25" E A DISTANCE OF 542.84 FEET TO A POINT; SAID POINT BEING ON THE WESTERLY RIGHT OF WAY LINE OF UNIVERSITY DRIVE, THENCE RUNNING WITH THE WESTERLY RIGHT OF WAY LINE OF SAID UNIVERSITY DRIVE S 15°26'35" W A DISTANCE OF 211.73 FEET TO POINT; SAID POINT ALSO BEING THE NORTH EAST CORNER TO THE LAND OF 4151 CHAIN BRIDGE ROAD, LLC AS RECORDED IN DEED BOOK 19501 AT PAGE 1317 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA; THENCE RUNNING WITH THE NORTHERLY LINE OF SAID 4151 CHAIN BRIDGE ROAD, LLC N 66°27'25" W A DISTANCE OF 575.99 FEET TO A POINT; SAID POINT BEING ON THE AFOREMENTIONED EASTERLY RIGHT OF WAY LINE OF CHAIN BRIDGE ROAD; THENCE RUNNING WITH EASTERLY RIGHT OF WAY LINE OF SAID CHAIN BRIDGE ROAD THE FOLLOWING COURSES AND DISTANCES;

N 27°19'56" E A DISTANCE OF 71.60 FEET TO POINT;

N 21°20'17" E A DISTANCE OF 100.55 FEET TO A POINT;

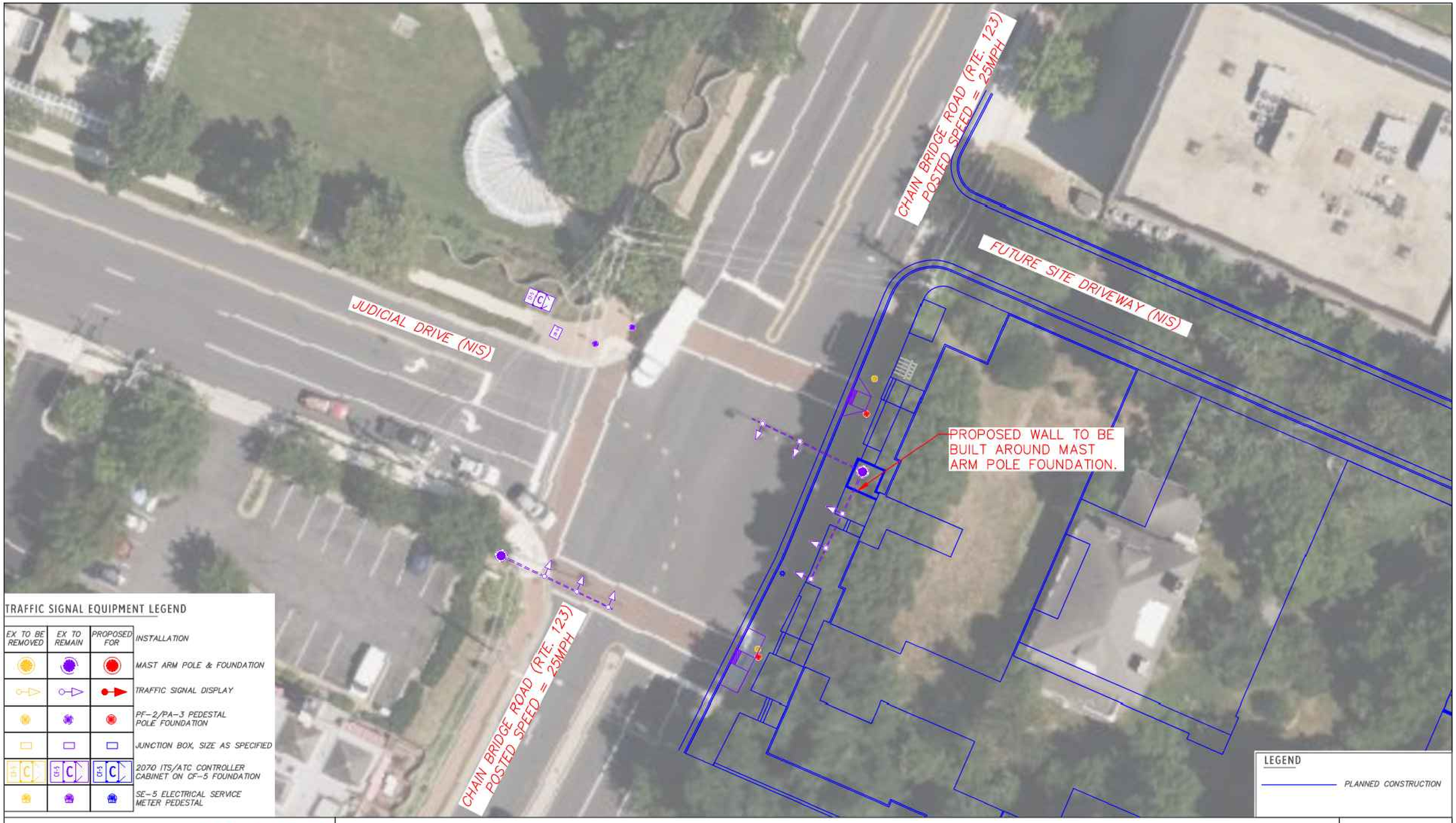
N 27°16'10" E A DISTANCE OF 37.78 TO THE POINT OF BEGINNING, HAVING AN AREA OF 117,082 SQUARE FEET, OR 2.6878 ACRES MORE OR LESS.

BEING THE SAME PROPERTY DESCRIBED IN THAT CERTAIN DEED DATED AUGUST 9, 2015, MADE BY HOPE DAVIES HUNTINGTON, VERA DAVIES LICHTENSTEIN AND BANKHEAD THORTON DAVIES, GRANTORS, TO THE HILL, A DAVIES FAMILY LLC, GRANTEE, AS REFORDED IN THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA ON SEPTEMBER 3, 2015, IN DEED BOOK 24278 PAGE 1095.

COMMONWEALTH OF VIRGINIA
KEVIN P. O'CONNOR
Lic. No 1987
LAND SURVEYOR

CERTIFIED PLAT
OF THE PROPERTY OF
THE HILL, A DAVIES FAMILY LLC
DB. 24278 PG. 1095
CITY OF FAIRFAX
FAIRFAX COUNTY, VIRGINIA
SCALE: 1" = 30' DATE: MARCH 25, 2016

urban
Urban, Ltd.
4200 D Technology Court
Chantilly, Virginia 20151
Tel. 703.642.2306
www.urban-ltd.com
Planners-Engineers-Landscape Architects-Land Surveyors



GOROVE SLADE
Transportation Planners and Engineers

Preliminary Signal Design Concept: Chain Bridge Rd (Rte. 123) at Judicial Drive (NIS)

Preliminary Signal Design Concept

NOT FOR CONSTRUCTION

City of Fairfax, VA
12/02/2024

1"=30'

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
05-04-2016
10-18-2016
04-22-2024
06-11-2024
09-03-2024
12-02-2024
-
-
-

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Planners•Engineers•Landscape Architects•Land Surveyors

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOZER
Lic. No. 036790
12/02/2024
PROFESSIONAL ENGINEER

PRELIMINARY SIGNAL CONCEPT
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

SCALE: 1"= C.I.= 2' DATE: DEC., 2024

SHEET 38 OF 38

FILE No. RZ-12787

Urban, Ltd. - J:\JOBS\4131 Chain Bridge Rd\Rezoning\12787-38-PRELIMINARY SIGNAL CONCEPT.dwg [PRELIMINARY SIGNAL CONCEPT] December 03, 2024 - 8:46am aarensberg