

4131 CHAIN BRIDGE ROAD DAVIES PROPERTY REZONING GENERAL DEVELOPMENT PLAN CITY OF FAIRFAX, VIRGINIA

APRIL 15th - 2025 - REVISED

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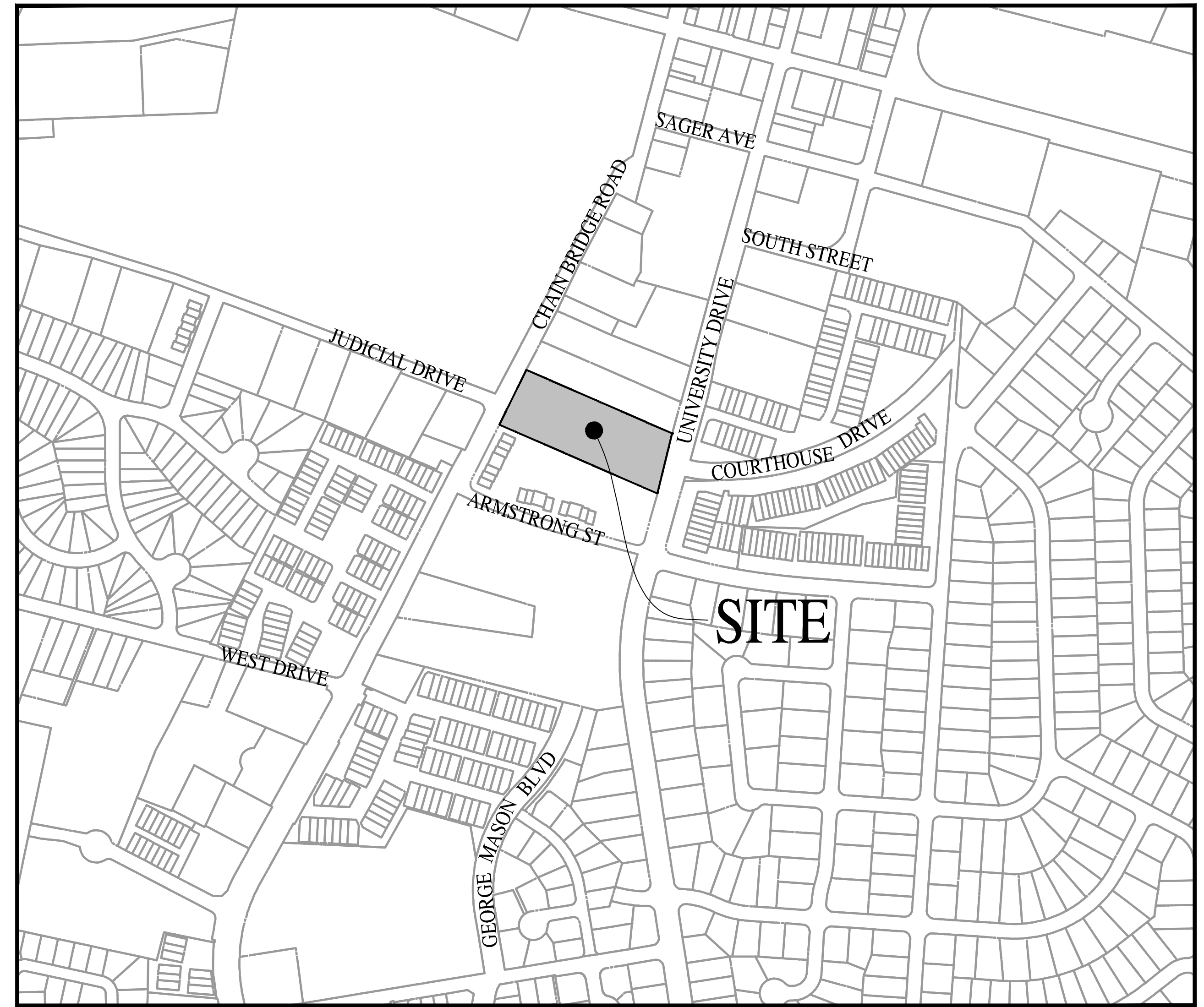
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VICINITY MAP
SCALE: 1"=300'

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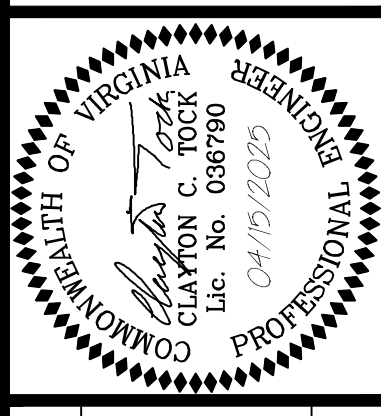
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PLAN DATE	No.	DATE	DESCRIPTION	REVISIONS
05-04-2016				
05-05-2016				
06-11-2024				
09-03-2024				
12-02-2024				
04-15-2025				

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

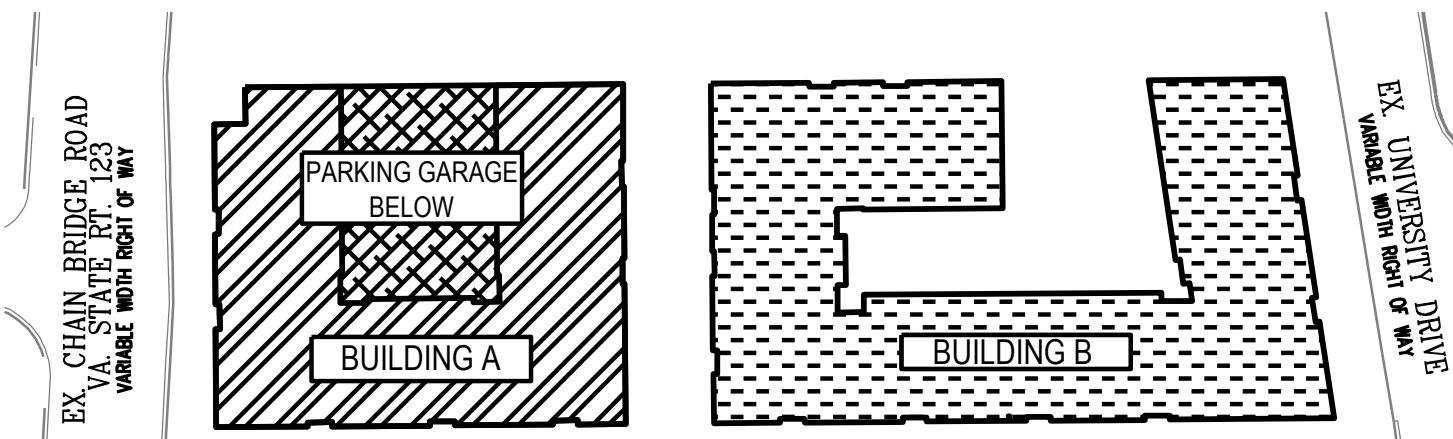
SCALE: AS NOTED CI.1-N/A DATE: DEC., 2024

SHEET
01
OF
39
FILE No.
RZ-12787

Urban, Ltd. - J:\085\4131 Chain Bridge Rd\Rezoning\12787-01-Cover.dwg [COVER] April 17, 2025 - 3:29pm carnsberg

BUILDING DATA

BUILDING DATA	
RESIDENTIAL-1 Chain Bridge Rd.	RESIDENTIAL-2 University Dr.
Gross Area 117,569 SF	Gross Area 164,571 SF
GARAGE	
Gross Area 166,511 SF	



ZONING STANDARDS

SEC. 3.6.2: PROPOSED REQUIREMENTS PER CU DISTRICT

MIN. LOT AREA (AC)	30,000 SF
BLDG. HEIGHT (FT)	REQUIRED PROVIDED 60' OR 5 STORIES 62'-1" OR 5 STORIES
PARKING HEIGHT (FT)	PROVIDED 24'-0"
REQUIRED YARDS	FRONT/SIDE STREET 15' MAX / 0' MIN SIDE (NOT ADJ. TO RES.) 0' REAR (ADJ. TO RES.) 25' REAR (NOT ADJ. TO RES.) 0'
BUILDING COVERAGE:	MAXIMUM PROVIDED 80% ± 52.33%
LOT COVERAGE:	MAXIMUM PROVIDED 100% ± 92.94%
DENSITY:	MAXIMUM 20 (GENERAL) / 24 (AFFORDABLE DWELLING UNIT) PROVIDED 102.68 UNITS/GROSS ACRE (276 UNITS TOTAL)
FLOOR AREA RATIO:	REQUIRED N/A PROVIDED 0.526
FLOODPLAIN AREA:	0.00 SF

SEC. 3.7: REQUIREMENTS PER OLD TOWN TRANSITION OVERLAY DISTRICT

MIN. LOT AREA (AC)	NONE
MIN. LOT WIDTH (FT)	NONE
BLDG. HEIGHT (FT)	REQUIRED PROVIDED 48' 62'-1"
MIN. YARD REQUIREMENTS:	FRONT 10' SIDE NONE REAR NONE
LOT COVERAGE:	MAXIMUM PROVIDED 100% ± 92.94%
BUILDING COVERAGE:	MAXIMUM PROVIDED 90% ± 52.33%

SEC. 4.2: OFF-STREET PARKING AND LOADING (ENTIRE SITE)

4131 CHAIN BRIDGE ROAD PARKING TABULATIONS

PARKING							
276 UNITS							
UNIT TYPE	MIX %	# UNITS	PS RATIO	PS	CU REDUCTION (10%)	TOD REDUCTION (50% EXCEPT FOR 1.5 MINIMUM PER DU)	PS AFTER REDUCTION
STUDIO	10	28	1.25	35	32	N/A	32
1BR	58	160	1.5	240	216	N/A	216
2BR	32	88	2	176	158	79	79
TOTAL		276					327
COMMERCIAL PARKING REQUIRED							
RETAIL 1 PS/ 200 SF		6,808		33		15	15
OFFICE 1 PS/ 300 SF		4,188		14		6	7
TOTAL PARKING REQUIRED							22
TOTAL PARKING PROVIDED							349
RESIDENTIAL PARKING PROVIDED							389
COMMERCIAL PARKING PROVIDED							25
ON-STREET PARKING PROVIDED							9
TOTAL PARKING PROVIDED							427
TOTAL BICYCLE PARKING REQUIRED							20
TOTAL BICYCLE PARKING PROVIDED							46
TOTAL LOADING REQUIRED							2
TOTAL LOADING PROVIDED							2

*20 EV PARKING SPACES ARE INCLUDED IN THE TOTAL PARKING PROVIDED. SEE ARCHITECTURAL SHEETS FOR LOCATIONS

GENERAL NOTES

- THE PROPERTY DELINEATED HEREON IS LOCATED IN THE CITY OF FAIRFAX TAX MAP #57-4-02-040, WITHIN THE OLD TOWN HISTORIC TRANSITION DISTRICT.
- THE PROPERTY IS CURRENTLY ZONED R-M (RESIDENTIAL). IT IS ALSO SUBJECT TO THE OLD TOWN TRANSITION DISTRICT REGULATION.
- BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY URBAN, LTD.
- THE SITE IS PRESENTLY SERVED BY FAIRFAX WATER.
- 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.
- 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.
- UTILITY PLANS SHOWN IN THIS GDP ARE CONCEPTUAL IN NATURE. FINAL UTILITY PLANS AND PROFILES WILL BE SUBMITTED WITH THE FINAL SITE PLAN.
- 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.
- THERE ARE NO KNOWN BURIAL SITES OR ARCHEOLOGICAL FEATURES ON THIS SITE.
- EXISTING STRUCTURES TO REMAIN ARE SHOWN SHADED ON THE REZONING & CONCEPTUAL DEVELOPMENT PLAN.
- THERE IS NO CITY, COUNTY, OR FEMA FLOODPLAIN ON THE PROPERTY.
- THE SUBJECT PROPERTY LIES IN ZONE "X" PER FIRM MAP COMMUNITY PANEL NUMBER 515524005D.
- 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 GENERAL DEVELOPMENT PLAN.
- 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 - ZONING ORDINANCE

- A MODIFICATION OF SECTION 3.5.1.D TO PERMIT LESS THAN 75% GROUND FLOOR NONRESIDENTIAL USE IN A MIXED USE BUILDING.
- A MODIFICATION OF SECTION 3.6.2 TO PERMIT MORE THAN 24 DWELLING UNITS PER ACRE.
- A MODIFICATION OF SECTION 3.7.3.C.2 TO PERMIT HEIGHT GREATER THAN FORTY-EIGHT (48) FEET.
- A MODIFICATION OF SECTION 3.7.3.E TO ELIMINATE THE REQUIREMENT FOR A LANDSCAPE STRIP AND STREET TREES ALONG THE ACCESS DRIVE.
- A WAIVER OF SECTION 4.3.3.B TO ELIMINATE THE REQUIREMENT TO PROVIDE VEHICULAR ACCESS TO ABUTTING NON-RESIDENTIAL PROPERTIES.
- 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.
- 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.

LIST OF SPECIAL EXCEPTIONS - PUBLIC FACILITY MANUAL

- A MODIFICATION TO PFM DETAIL 401.01 TO DECREASE THE WIDTH OF THE ACCESS DRIVE TO 26' (FACE OF CURB-TO-FACE OF CURB), WHICH IS THE MINIMUM REQUIREMENT FOR FIRE ACCESS.
- A MODIFICATION TO PFM DETAIL 404.06 TO DECREASE THE MINIMUM CORNER CLEARANCE FROM THE DRIVEWAY ON THE PARCEL TO THE NORTH FROM 50' TO 23' DUE TO SITE CONSTRAINTS AND BUILDING LOCATION.
- A MODIFICATION TO PFM DETAIL 404.06 TO DECREASE THE MINIMUM SEPARATION BETWEEN THE ACCESS DRIVE AND THE NORTHERN PROPERTY LINE FROM 12 FEET TO 1 FOOT DUE TO SITE CONSTRAINTS AND BUILDING LOCATION.

UNIT MIX CALCULATIONS

TOTAL UNIT MIX		
UNIT TYPE	MIX %	# UNITS
STUDIO	10	28
1 BR	58	160
2 BR	32	88
TOTAL	100	276

TOTAL ADU MIX*		
UNIT TYPE	MIX %	# UNITS
STUDIO	6	2
1 BR	6	10
2 BR	6	5
TOTAL	6	17

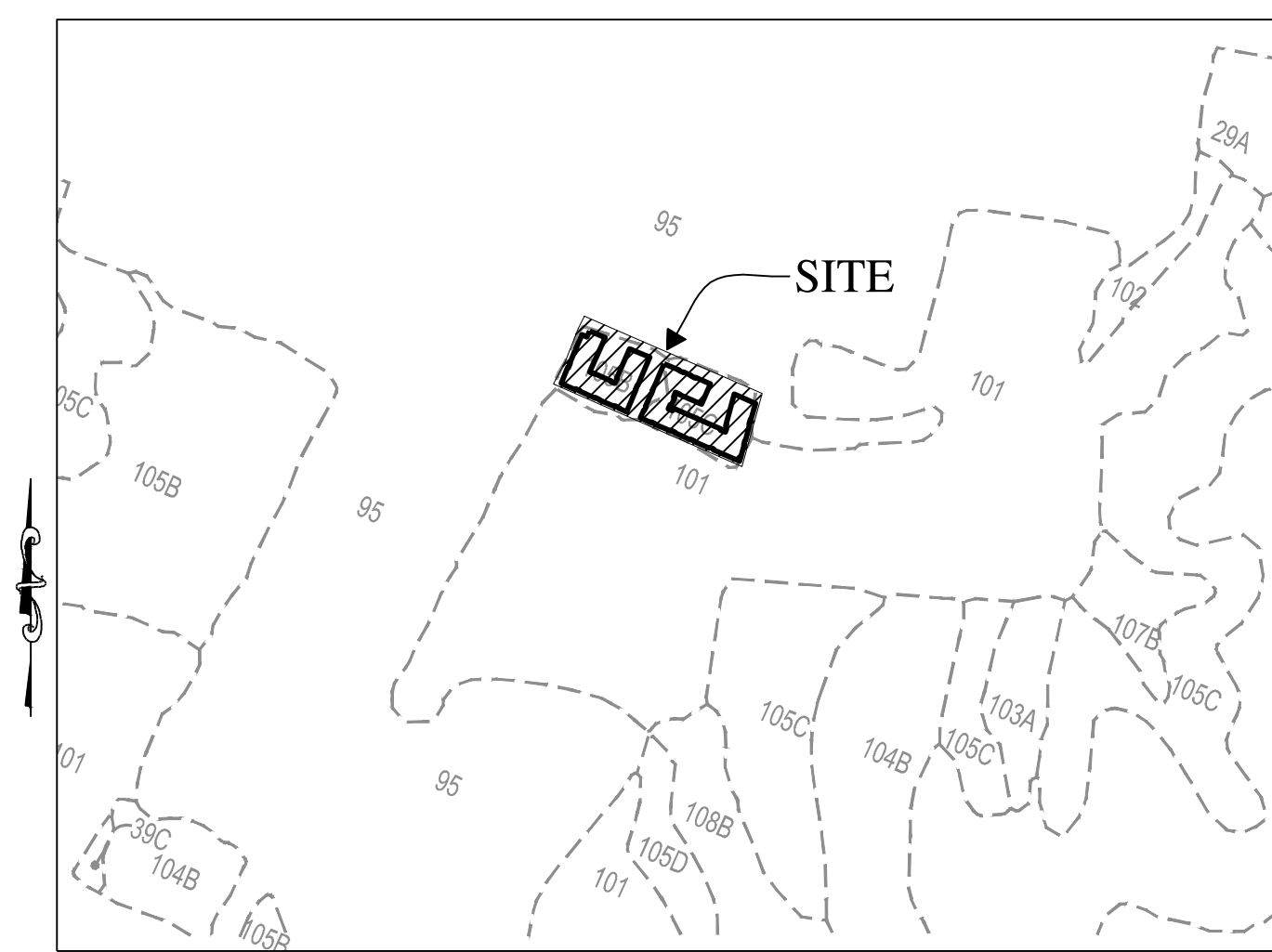
*6% OF TOTAL UNITS ARE REQUIRED TO BE ADU'S. THE 6% IS TAKEN FROM EACH UNIT TYPE TO REACH THE 17 UNITS REQUIRED

VICINITY MAP



SCALE: 1" = 1000'

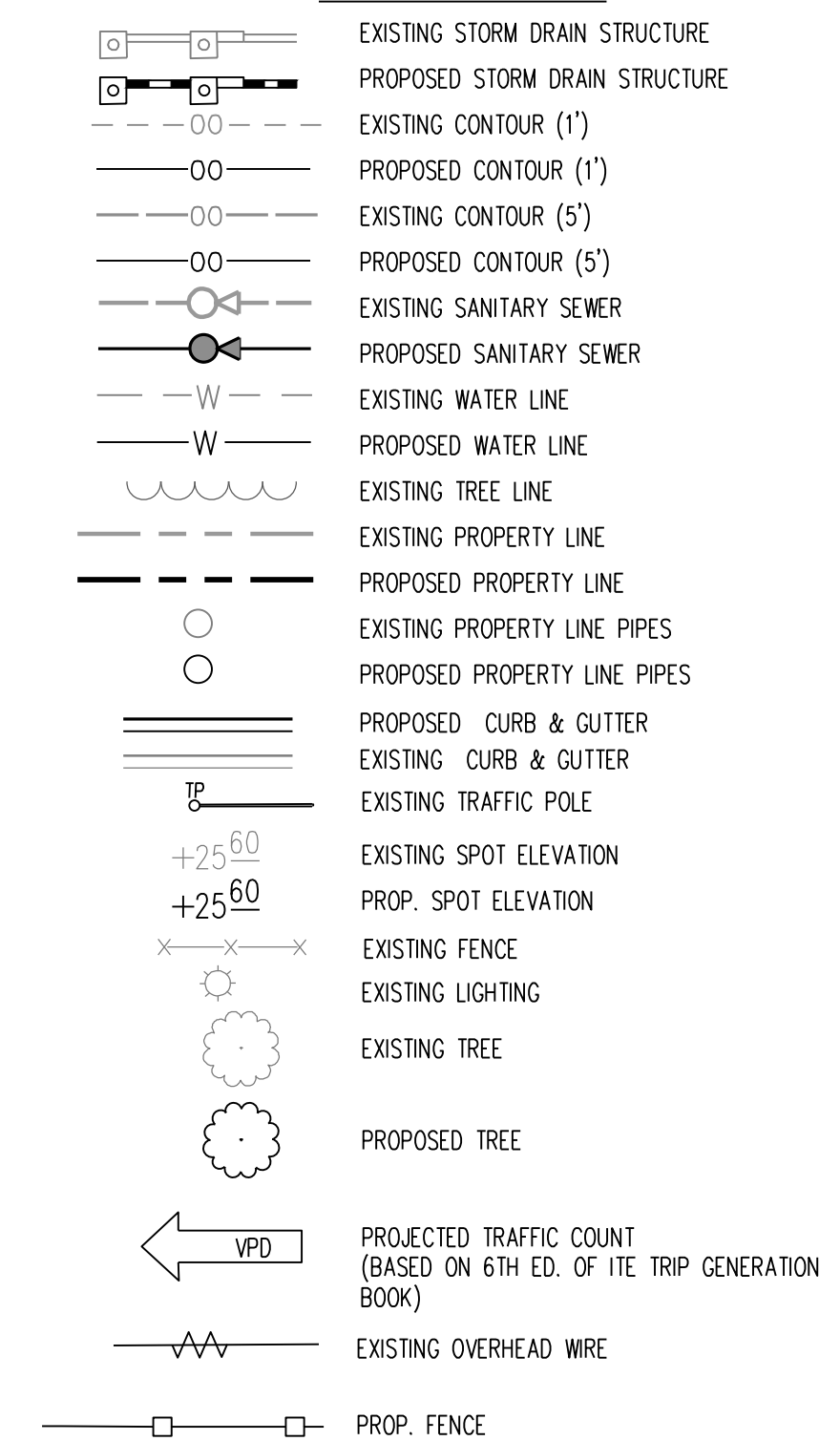
SOILS MAP



SCALE: 1" = 500'

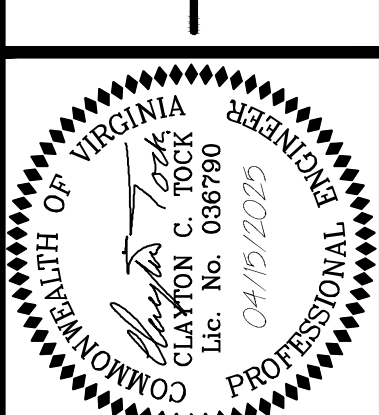
SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL
105B	WHEATON GLENELG COMPLEX 2-7% SLOPES	GOOD	GOOD	HIGH
105C	WHEATON GLENELG COMPLEX 7-15% SLOPES	GOOD	GOOD	HIGH
101	URBAN LAND - GLENELD COMPLEX 2-7%	GOOD	FAIR	HIGH
95	URBAN LAND	N/A	N/A	N/A

LEGEND:



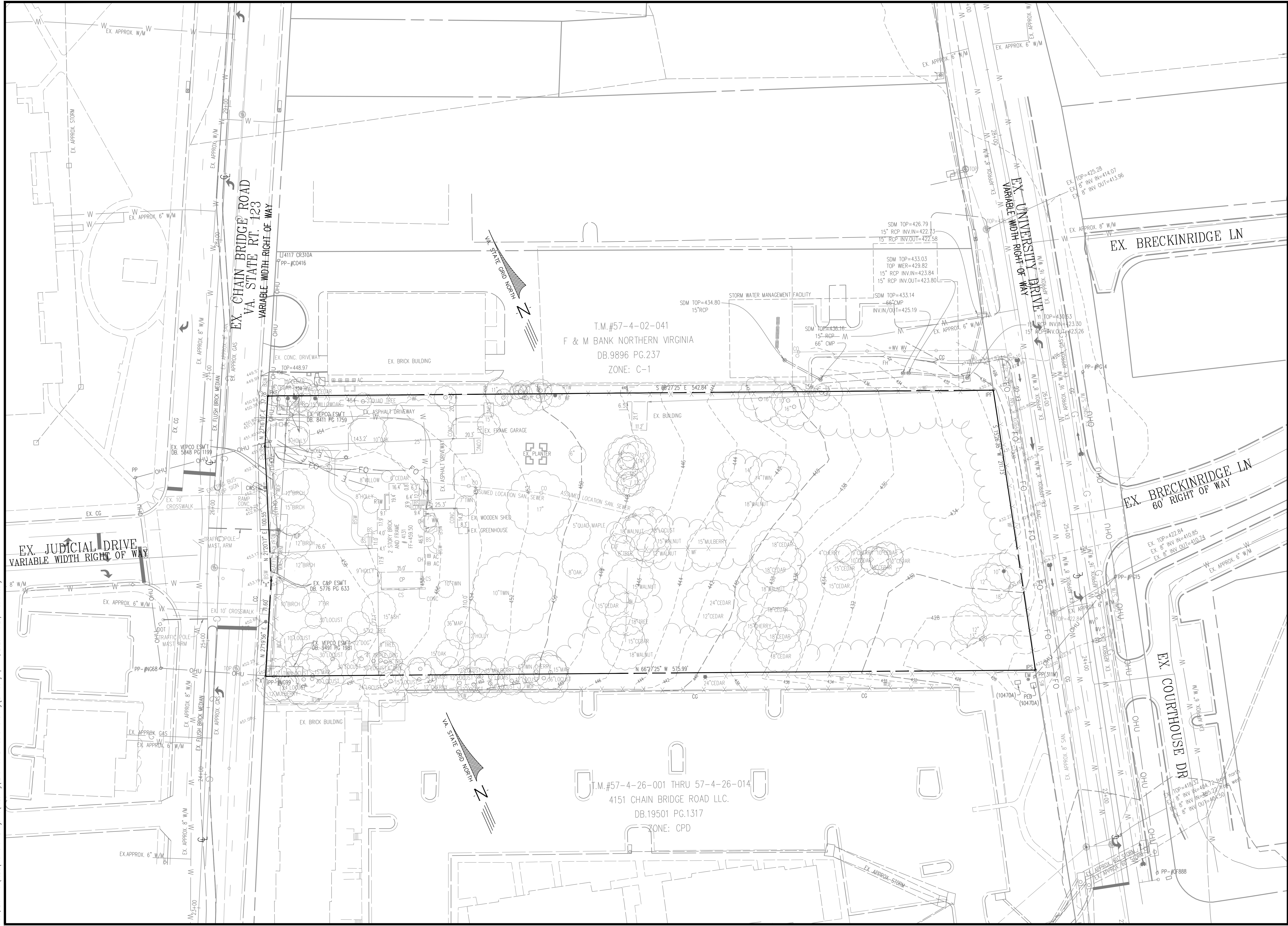
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GENERAL NOTES & DETAILS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
SCALE: AS NOTED
DATE: DEC. 2024
SHEET 02 OF 39
FILE No. RZ-12787

Urban, Ltd. - J. Vobes\131 Chain Bridge Rd\Re zoning\12787-06-EX-CONDITIONS.dwg [EX. CON] April 17, 2025 - 3:29pm corenberg

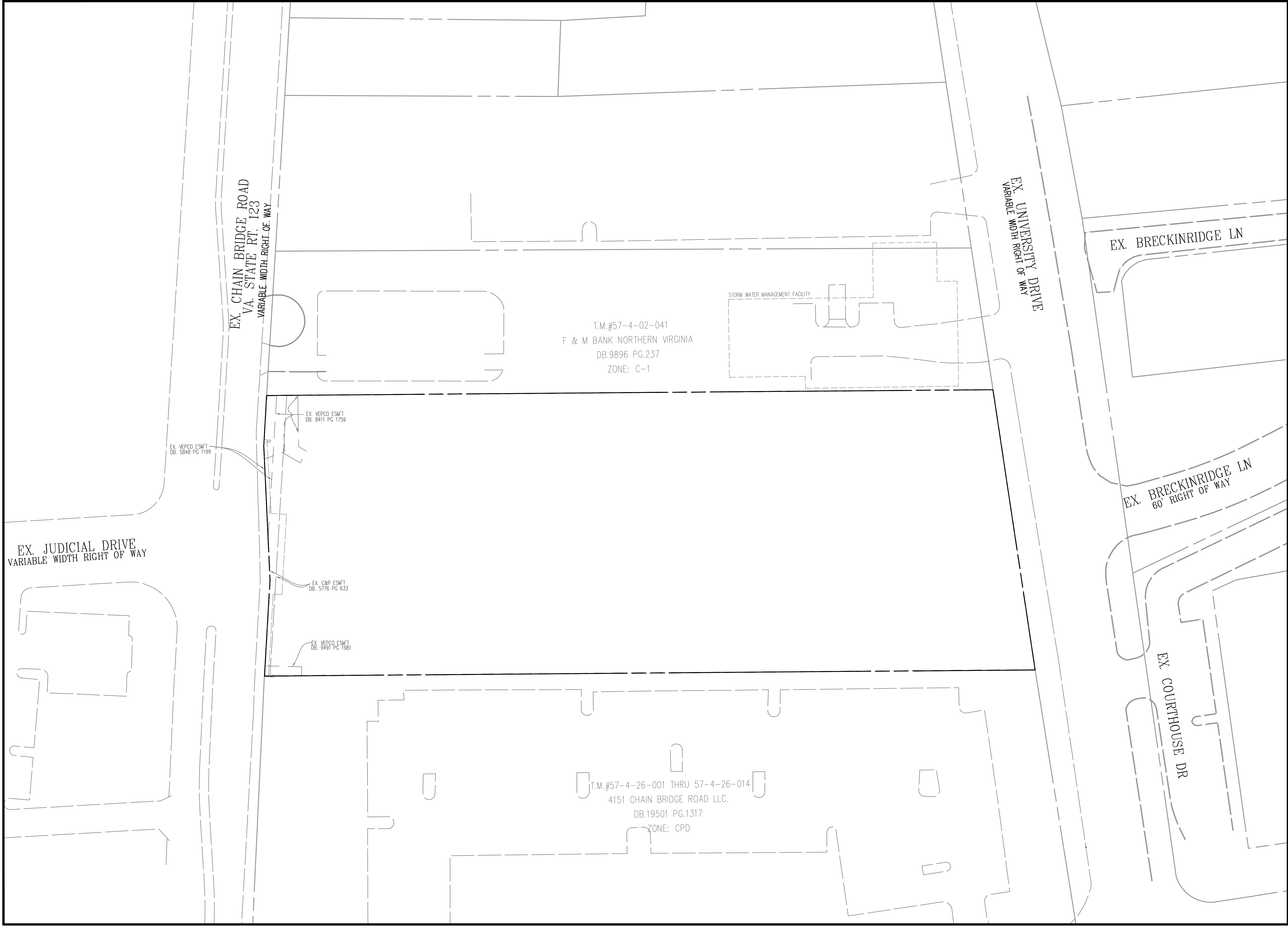


T.M.#57-4-02-041
F & M BANK NORTHERN VIRGINIA
DB.9896 PG.237
ZONE: C-1

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

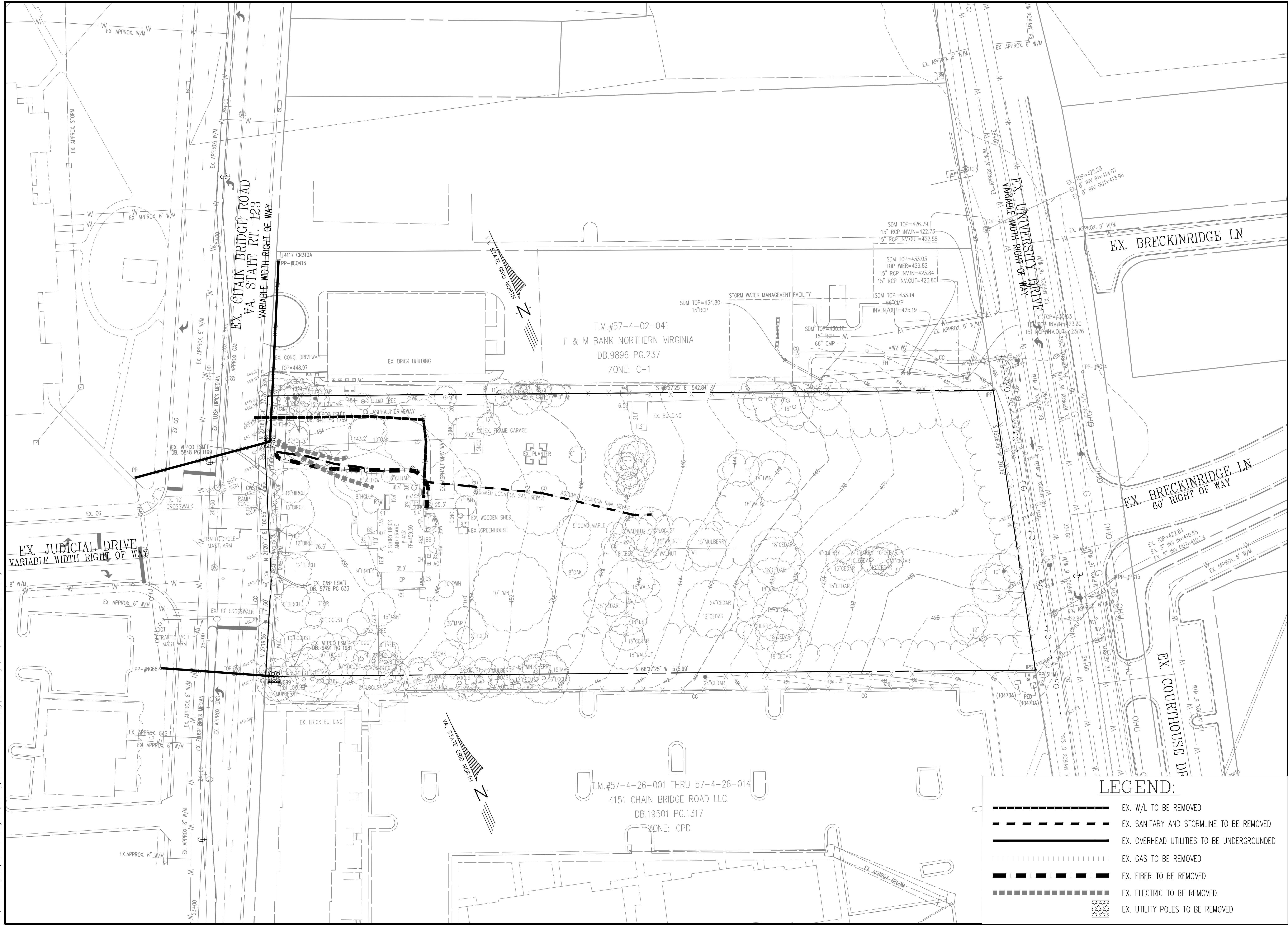
<p>urban Planners/Engineers/Landscape Architects/Land Services</p>	
<p>Urban, Ltd. 4000 TECHNOLOGY CT. CHANTILLY, VA. 20151 TEL. 703.642.2306 FAX. 703.678.1888 www.urban-lltd.com</p>	<p>PLAN DATE 05-04-2016 04-22-2019 06-11-2024 09-03-2024 12-02-2024 04-15-2025</p>
<p>COMMONWEALTH OF VIRGINIA CLAYTON C. TOOK Lic. No. 068790 04/19/2025 REGISTERED PROFESSIONAL ENGINEER</p>	<p>REVISIONS No. DATE DESCRIPTION</p>
<p>EXISTING CONDITIONS PLAN 4131 CHAIN BRIDGE ROAD REZONING CDP-GDP CITY OF FAIRFAX, VIRGINIA</p>	
<p>SCALE: 1"=30' C.I.= 2'</p>	<p>DATE: DEC., 2024</p>
<p>SHEET 03 OF 39</p>	<p>FILE No. RZ-12787</p>

Urban, Ltd. - J:\085\4131 Chain Bridge Rd\Rezoning\12787-06-Ex. CONDITIONS.dwg [EASEMENT EXHIBIT] April 17, 2025 - 3:29pm oerensberg



EASEMENT EXHIBIT		DATE: DEC., 2024	
4131 CHAIN BRIDGE ROAD		SCALE: 1"=30'	
REZONING CDP-GDP		C.I.= 2'	
CITY OF FAIRFAX, VIRGINIA		DATE: DEC., 2024	
FILE No.	RZ-12787	SHEET	04
		OF	39
Urban, Ltd. 4000 TECHNOLOGY CT. CHANTILLY, VA. 20151 TEL. 703.642.2306 FAX. 703.678.1888 www.urban-llc.com		PLAN DATE 05-04-2016 04-22-2019 06-11-2024 09-03-2024 12-02-2024 04-15-2025	
No.	DATE	DESCRIPTION	
		REVISIONS	

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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
- EX. UTILITY POLES TO BE REMOVED

T.M.#57-4-02-041
 F & M BANK NORTHERN VIRGINIA
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T.M.#57-4-26-001 THRU 57-4-26-014
 4151 CHAIN BRIDGE ROAD LLC.
 DB.19501 PG.1317
 ZONE: CPD

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

DATE: DEC., 2024
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LEGEND:

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- EX. ELECTRIC TO BE REMOVED
- EX. UTILITY POLES TO BE REMOVED

REVISIONS

No.	DATE	DESCRIPTION
05	04-2016	
06	02-2019	
07	02-2020	
08	11-2021	
09	03-2024	
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04	15-2025	

PLAN DATE
 05-04-2016
 04-12-2019
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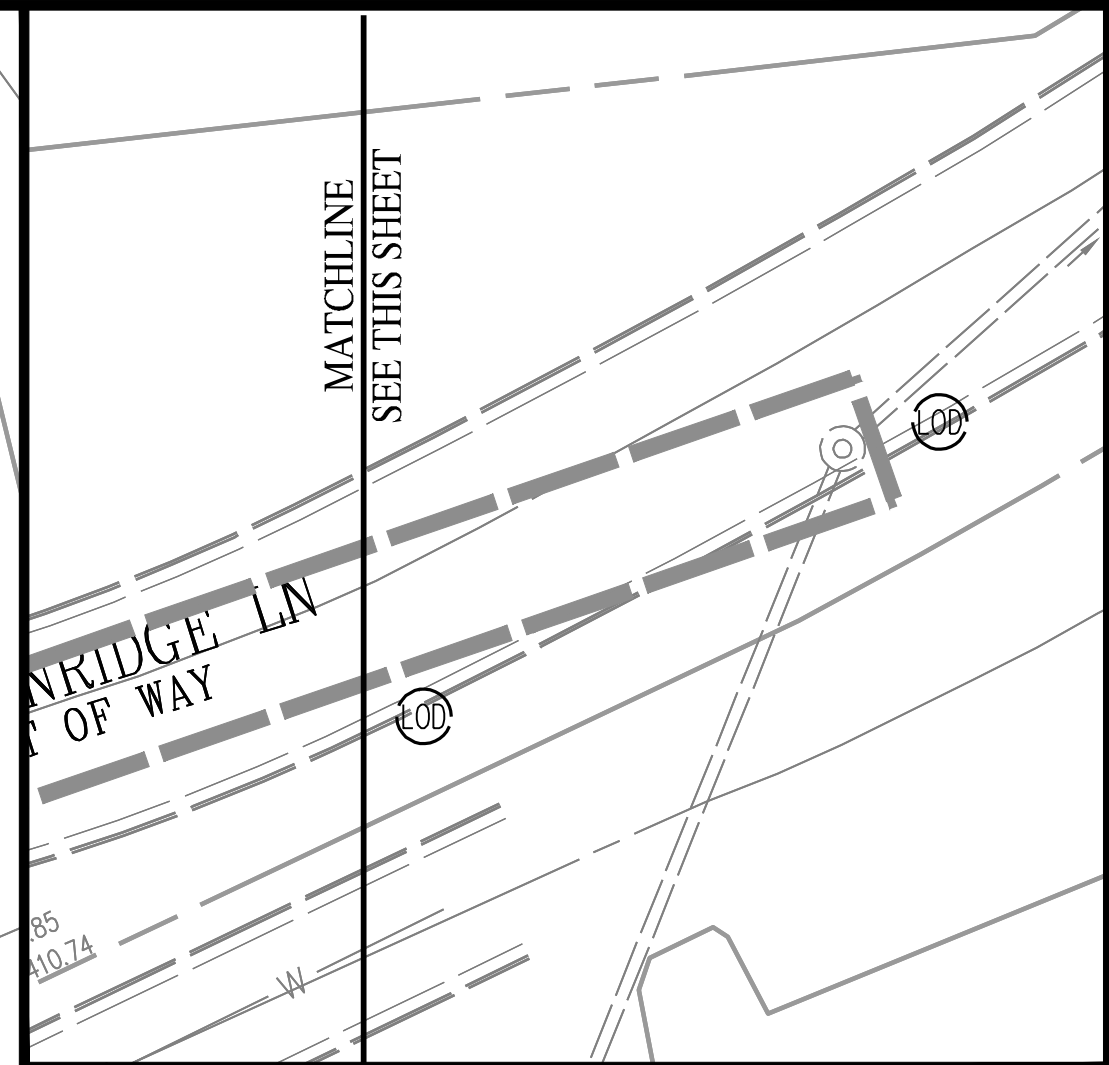
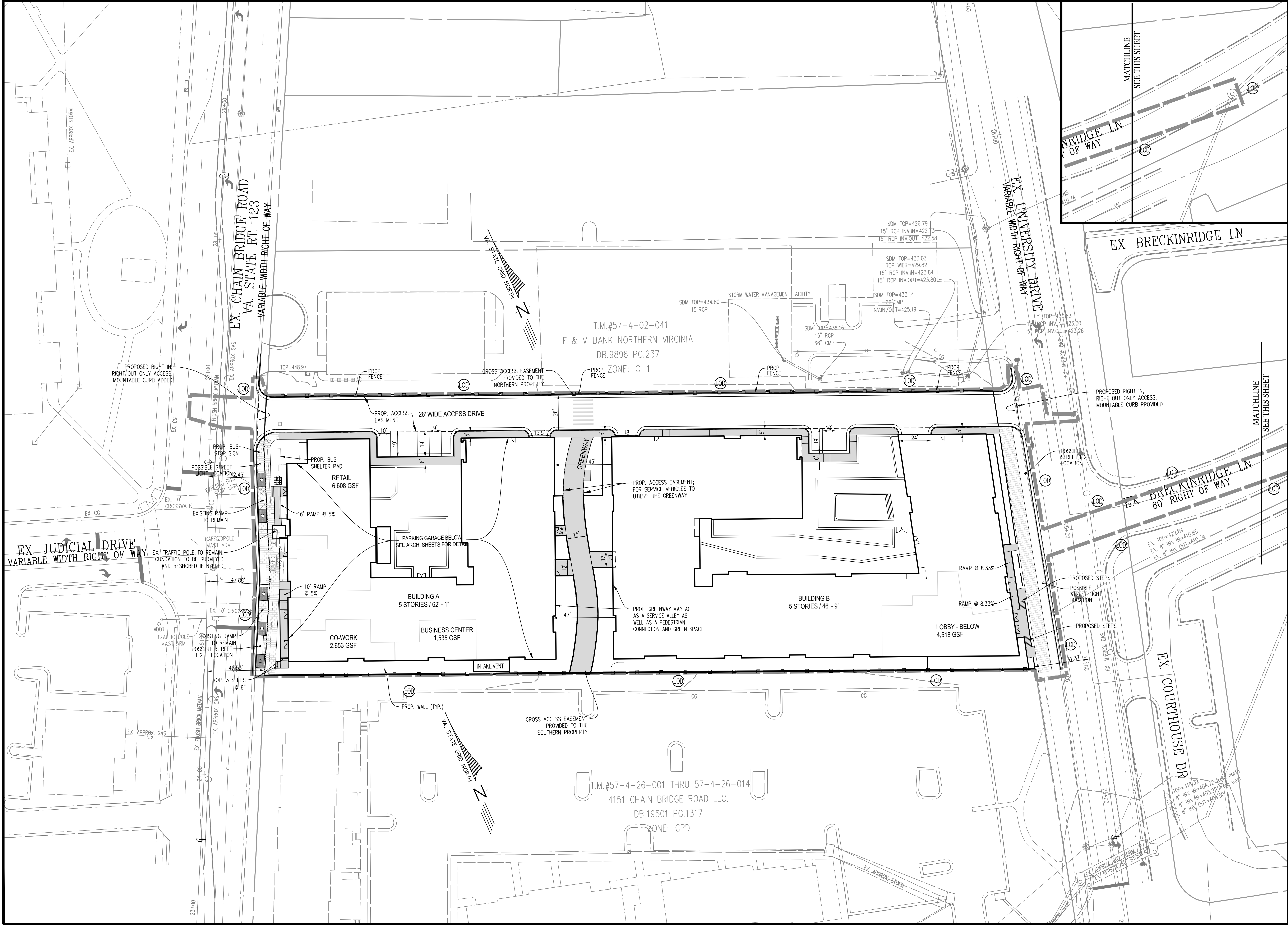
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 CLAYTON C. ROCK
 Lic. No. 036790
 04/19/2025
 PROFESSIONAL ENGINEER

SHEET
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 OF
 39

FILE No.
 RZ-12787

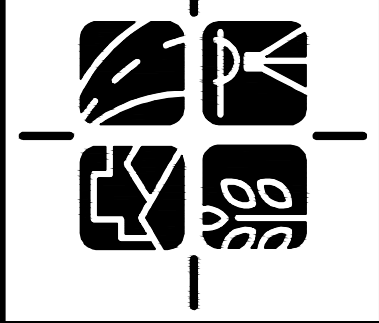
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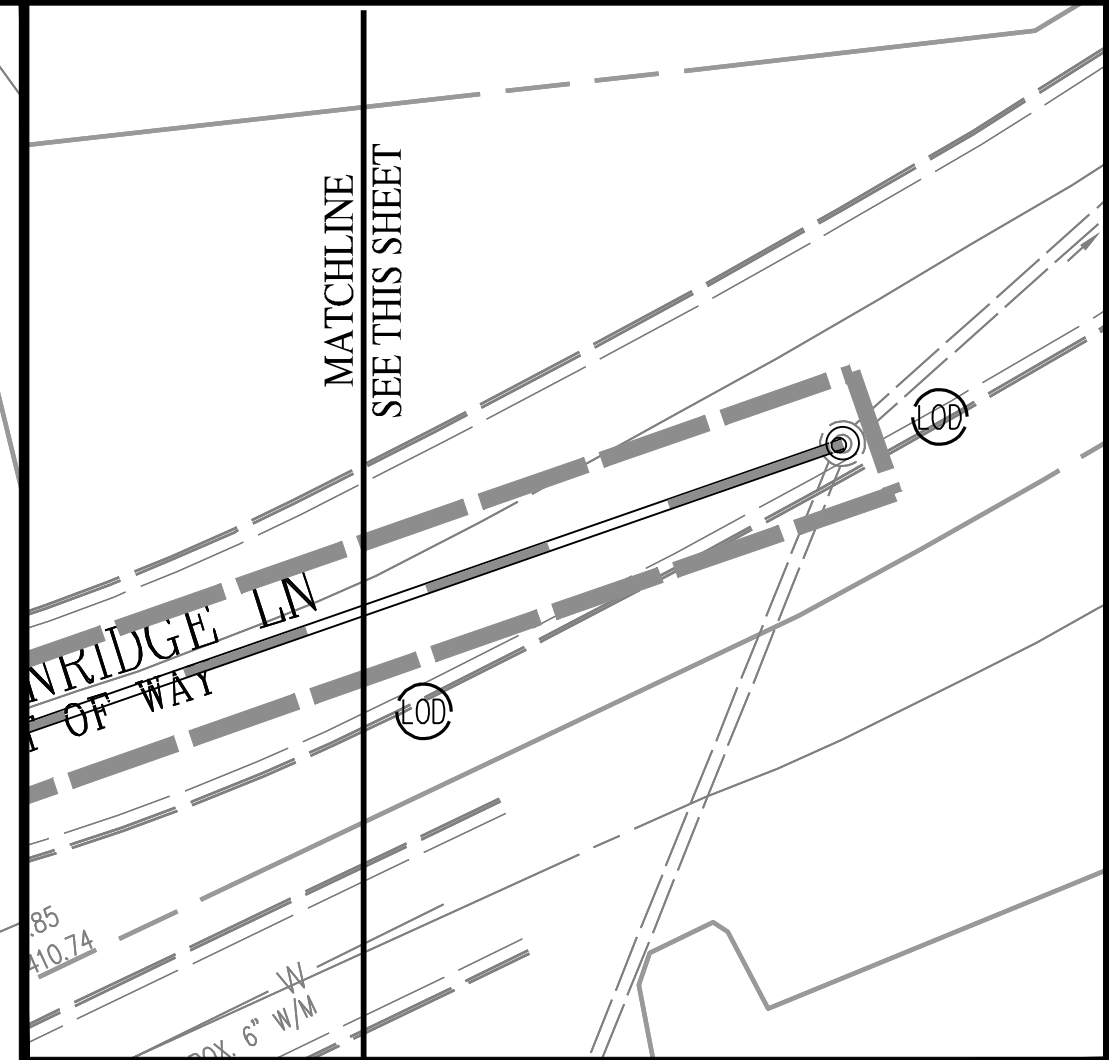
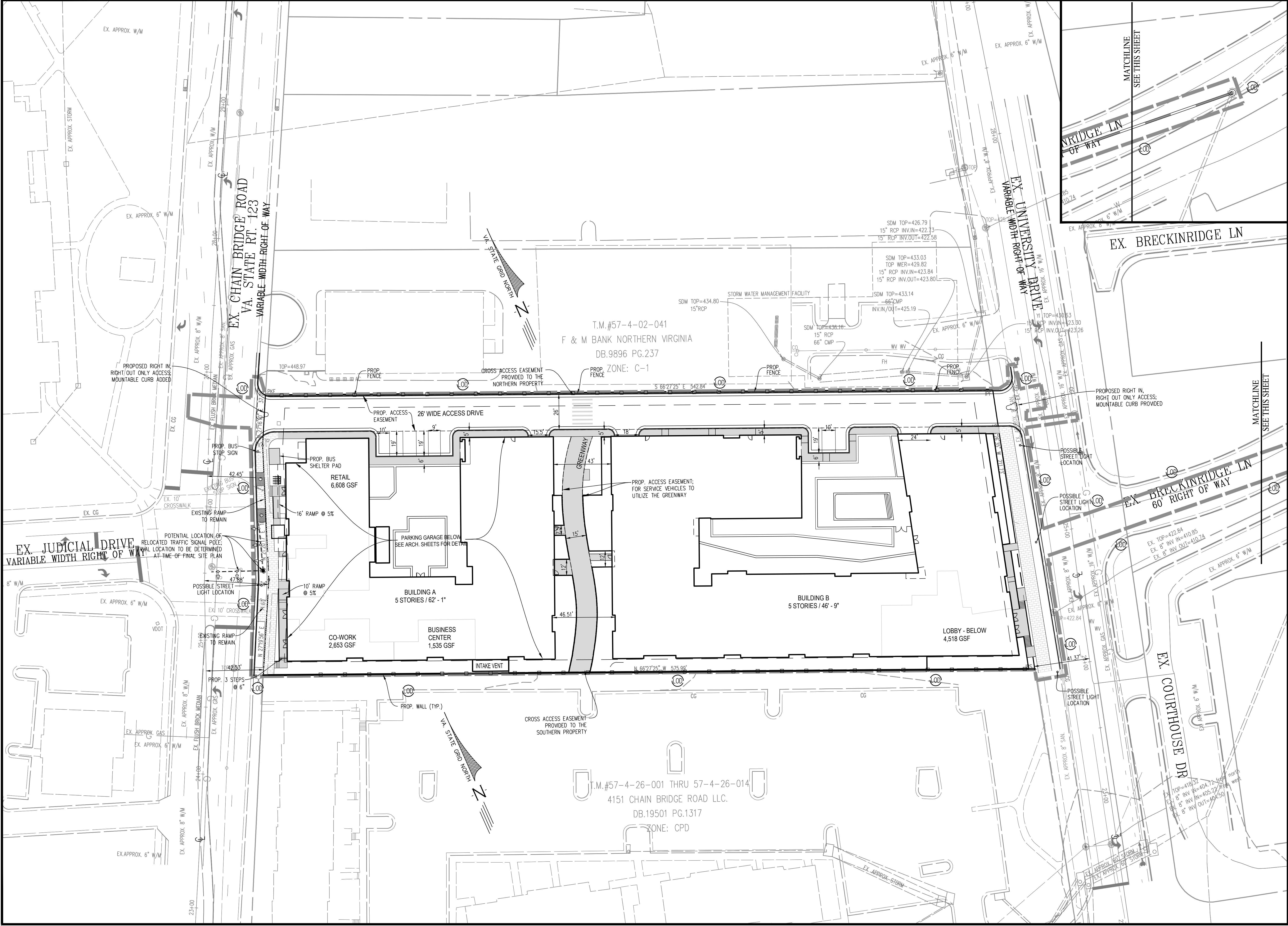
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GENERAL DEVELOPMENT PLAN
 4131 CHAIN BRIDGE ROAD
 REZONING CDP-GDP
 CITY OF FAIRFAX, VIRGINIA
 DATE: DEC., 2024
 SCALE: 1"=30'
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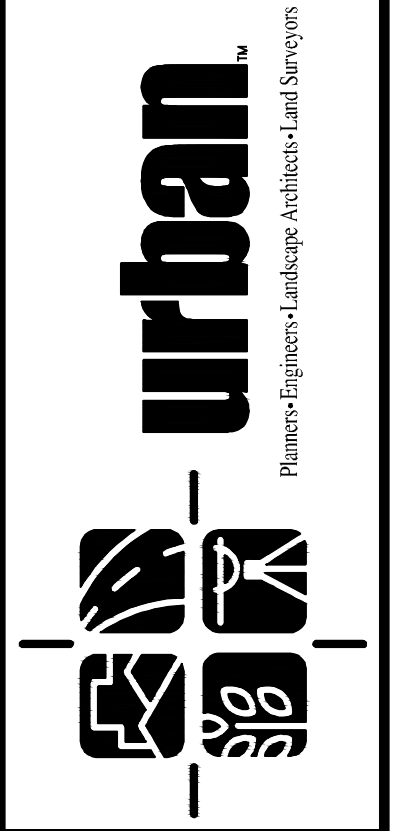
SHEET 06 OF 39
FILE No. RZ-12787

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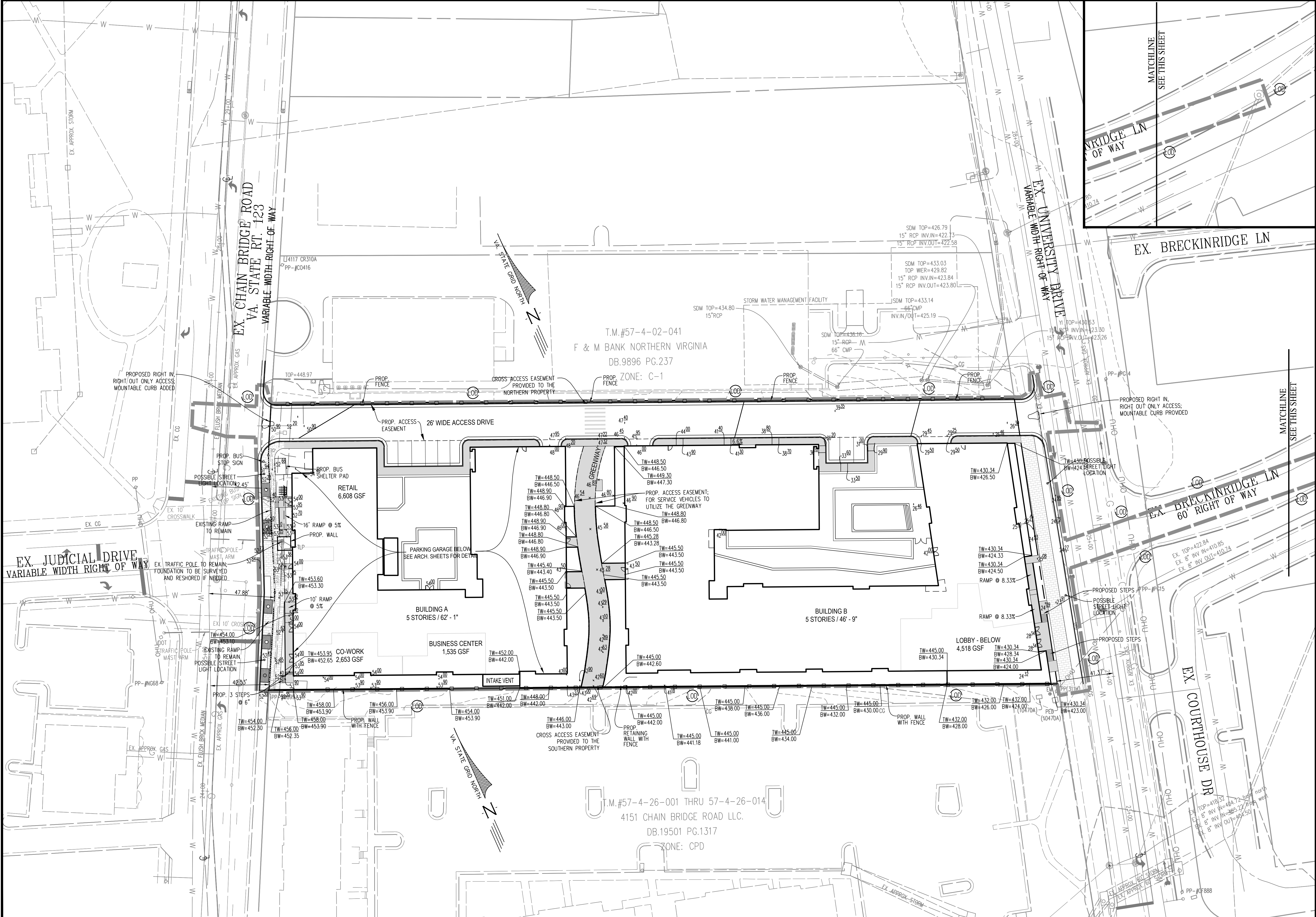
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COMMONWEALTH OF VIRGINIA
CLAYTON C. COOK
Lic. No. 098790
04/19/2025
PROFESSIONAL ENGINEER

GDP - ALTERNATE TRAFFIC POLE LOCATION
4131 CHAIN BRIDGE ROAD
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SHEET
06A
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Urban, Ltd. - J. VOBES\4131 Chain Bridge Rd\Grading\12787-07-CDP.dwg [Grading Plan] April 17, 2025 - 3:30pm aorensberg

PLAN DATE		05-04-2016	DESCRIPTION
04-22-2019		06-11-2024	REVISIONS
09-03-2024		12-02-2024	
04-15-2025			
No.	DATE		

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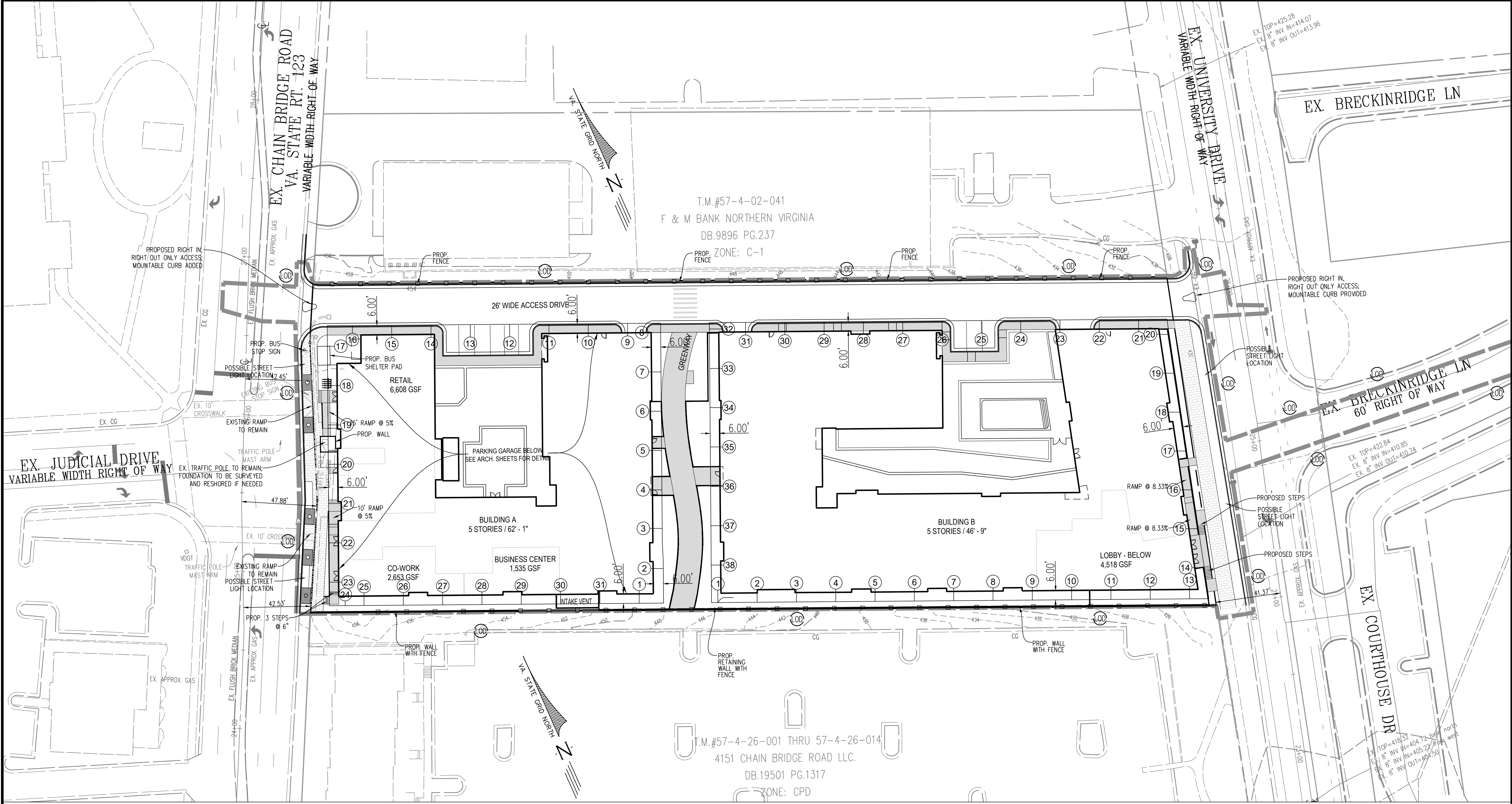
COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
Lic. No. 068790
04/19/2025
PROFESSIONAL

GRADING PLAN
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
SCALE: 1"=30'
DATE: DEC., 2024
C.I.= 2

SHEET
07
OF
39

FILE No.
RZ-12787

Urban, Ltd. - J. VOBES\131 Chain Bridge Rd\Rezoning\12787-07-CDP.dwg [AVERAGE GRADE EXHIBIT] April 17, 2025 - 3:30pm aernsberg



AVERAGE GRADE - BUILDING 1

Spot #	Proposed	16	450.15
1	448.00	17	452.15
2	445.50	18	452.40
3	445.50	19	453.15
4	443.40	20	453.04
5	449.00	21	453.35
6	448.80	22	453.90
7	446.86	23	453.85
8	447.60	24	454.00
9	448.00	25	454.00
10	448.31	26	454.00
11	448.62	27	454.00
12	448.93	28	454.00
13	449.25	29	453.95
14	449.56	30	452.82
15	449.87	31	451.00
	AVERAGE		450.55

AVERAGE GRADE - BUILDING 2

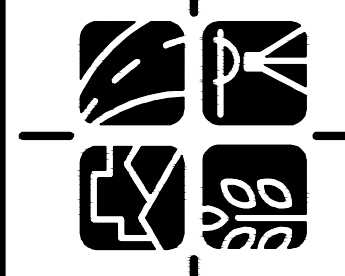
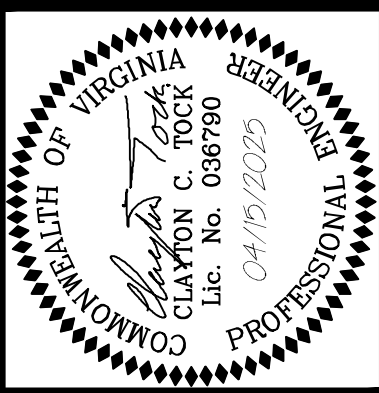
Spot #	Proposed	20	430.34
1	445.00	21	427.60
2	445.00	22	428.84
3	445.00	23	429.67
4	445.00	24	431.79
5	445.00	25	433.38
6	445.00	26	435.56
7	445.00	27	437.80
8	445.00	28	440.10
9	445.00	29	442.16
10	445.00	30	444.00
11	432.00	31	445.31
12	432.00	32	446.43
13	430.34	33	449.30
14	430.34	34	448.80
15	424.37	35	445.28
16	425.80	36	445.50
17	430.34	37	445.00
18	430.34	38	445.00
19	430.34	AVERAGE	438.62

AVERAGE GRADE EXHIBIT
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA
SCALE: 1"=30'
C.I.= 2'

DATE: DEC., 2024

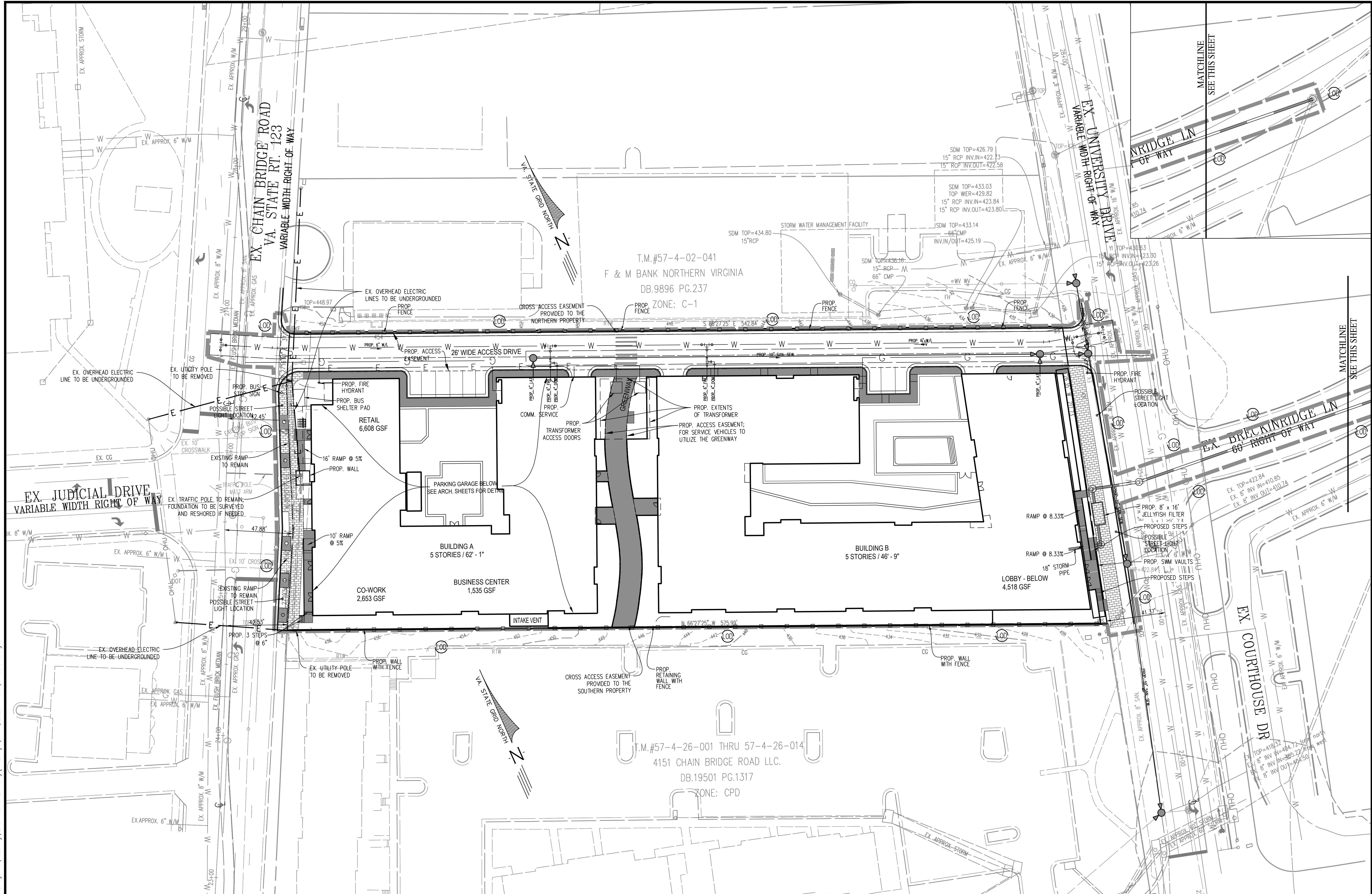
SHEET
09
OF
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FILE No.
RZ-12787



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PLAN DATE	DESCRIPTION
05-04-2016	
04-22-2019	
06-11-2024	
09-03-2024	
12-02-2024	
04-15-2025	

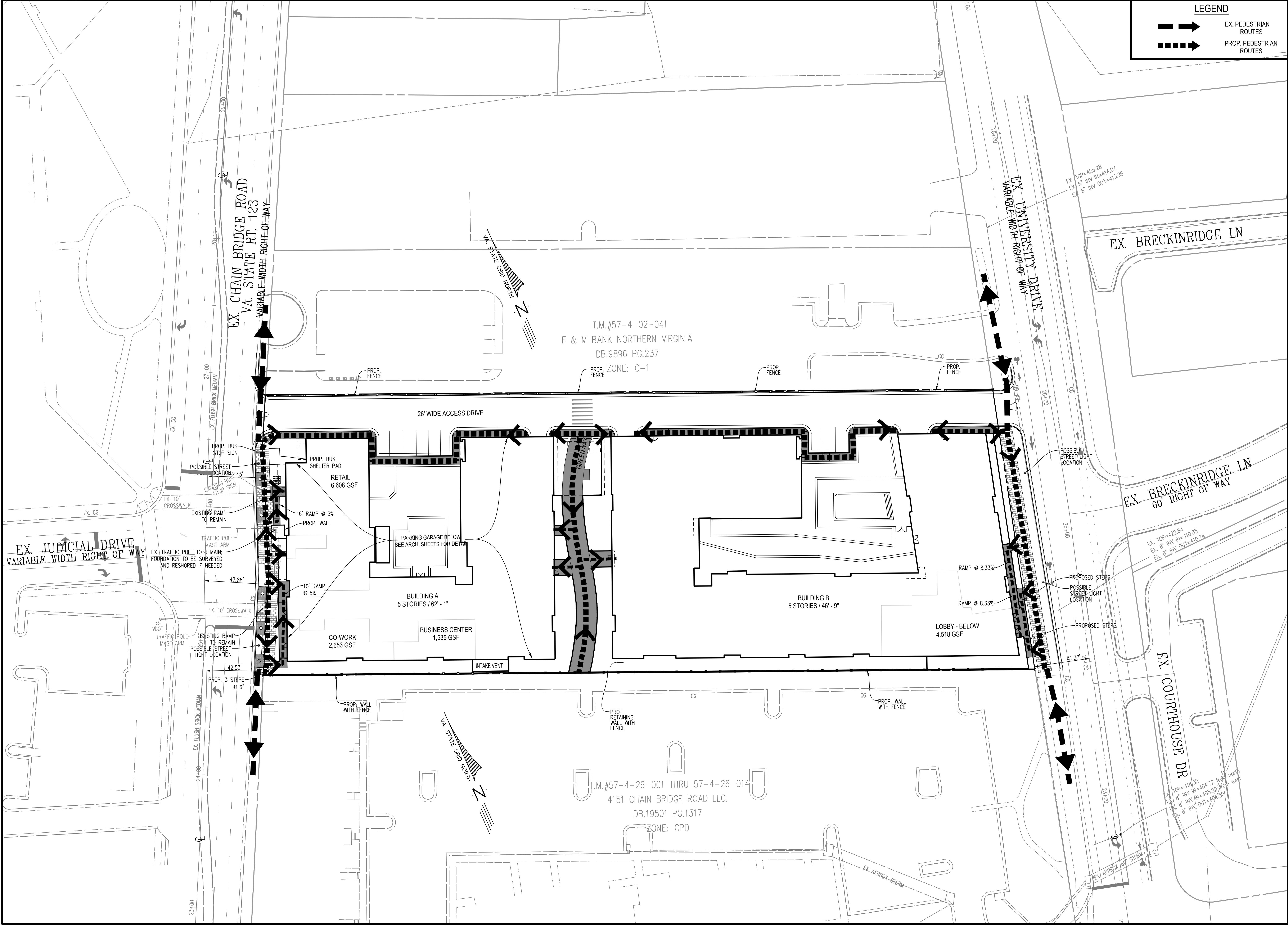
No.	DATE	REVISIONS



- 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.
- 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.

<p>PLAN DATE</p> <p>05-04-2016 04-22-2019 06-11-2024 09-03-2024 12-02-2024 04-15-2025</p>		<p>DESCRIPTION</p> <p>REVISIONS</p>	
<p>Urban, Ltd. 4000 D TECHNOLOGY CT. CHANTILLY, VA. 20151 TEL. 703.642.2306 FAX. 703.983.9888 www.urban-lltd.com</p>		<p>DATE: DEC. 2024</p>	
<p>urban Planners Engineers Landscape Architects Land Services</p>		<p>CONCEPTUAL UTILITY PLAN</p> <p>4131 CHAIN BRIDGE ROAD</p> <p>REZONING CDP-GDP</p> <p>CITY OF FAIRFAX, VIRGINIA</p>	
<p>COMMONWEALTH OF VIRGINIA CLAYTON C. ROCK Lic. No. 036790 04/19/2025 PROFESSIONAL ENGINEER</p>		<p>SCALE: 1"=30'</p> <p>C.I.=N/A</p>	
<p>SHEET</p> <p>10</p> <p>OF</p> <p>39</p>		<p>FILE No.</p> <p>RZ-12787</p>	

Urban, Ltd. - J:\085\131 Chain Bridge Rd\Rezoning\12787-08-UTILITY.dwg [UTILITY] April 17, 2025 - 3:31pm aorenberg

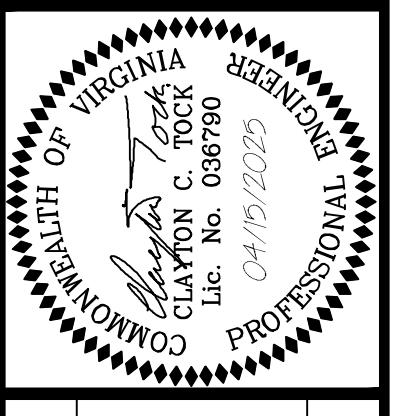
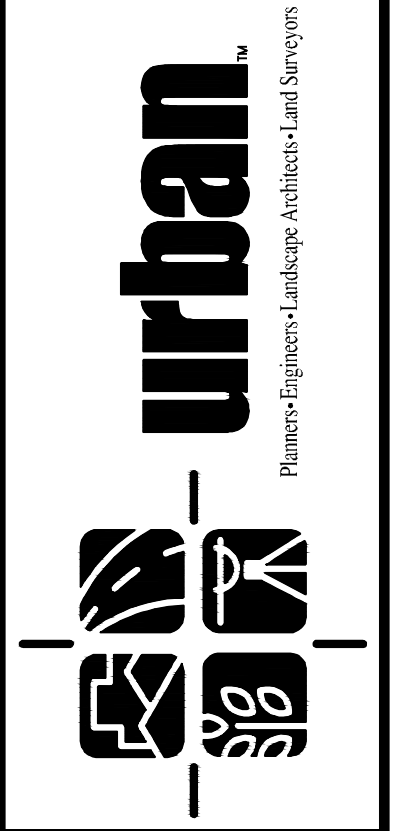


LEGEND

EX. PEDESTRIAN ROUTES
 PROP. PEDESTRIAN ROUTES

PLAN DATE	NO.	DATE	DESCRIPTION
05-04-2016	1		
04-22-2019	2		
06-11-2024	3		
09-03-2024	4		
12-02-2024	5		
04-15-2025	6		

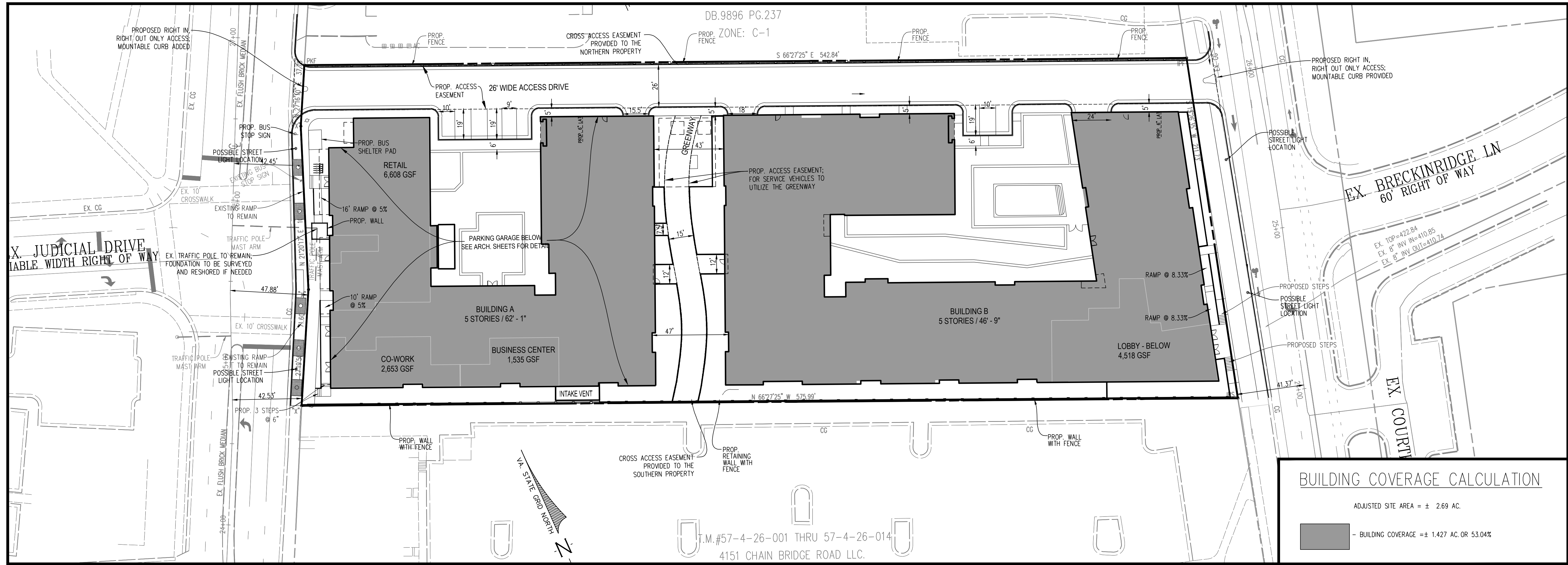
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 4000 TECHNOLOGY CT.
 CHANTILLY, VA. 20151
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PEDESTRIAN CIRCULATION PLAN
 4131 CHAIN BRIDGE ROAD
 REZONING CDP-GDP
 CITY OF FAIRFAX, VIRGINIA
 DATE: DEC., 2024
 SCALE: 1"=30'
 C.I.= N/A

SHEET
 11
 OF
 39
 FILE No.
 RZ-12787

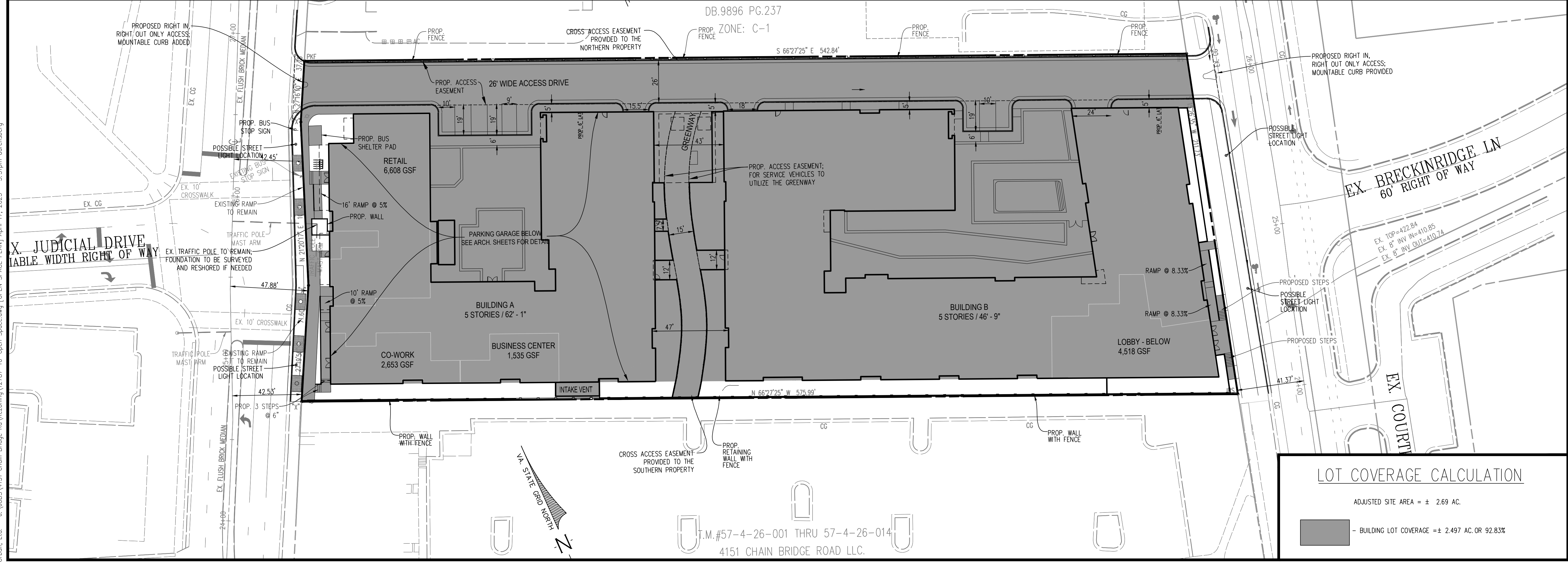
Urban, Ltd. - J. VOBES\4131 Chain Bridge Rd\Rezoning\12787-33-RED-CIRC.dwg [PED-CIRC] April 17, 2025 - 3:31pm orensberg



BUILDING COVERAGE CALCULATION

ADJUSTED SITE AREA = ± 2.69 AC.

■ - BUILDING COVERAGE = ± 1.427 AC. OR 53.04%



LOT COVERAGE CALCULATION

ADJUSTED SITE AREA = ± 2.69 AC.

■ - BUILDING LOT COVERAGE = ± 2.497 AC. OR 92.83%

PLN DATE	NO.	DATE	DESCRIPTION
05-04-2016	1		
04-22-2019	2		
06-11-2024	3		
09-03-2024	4		
12-02-2024	5		
04-15-2025	6		

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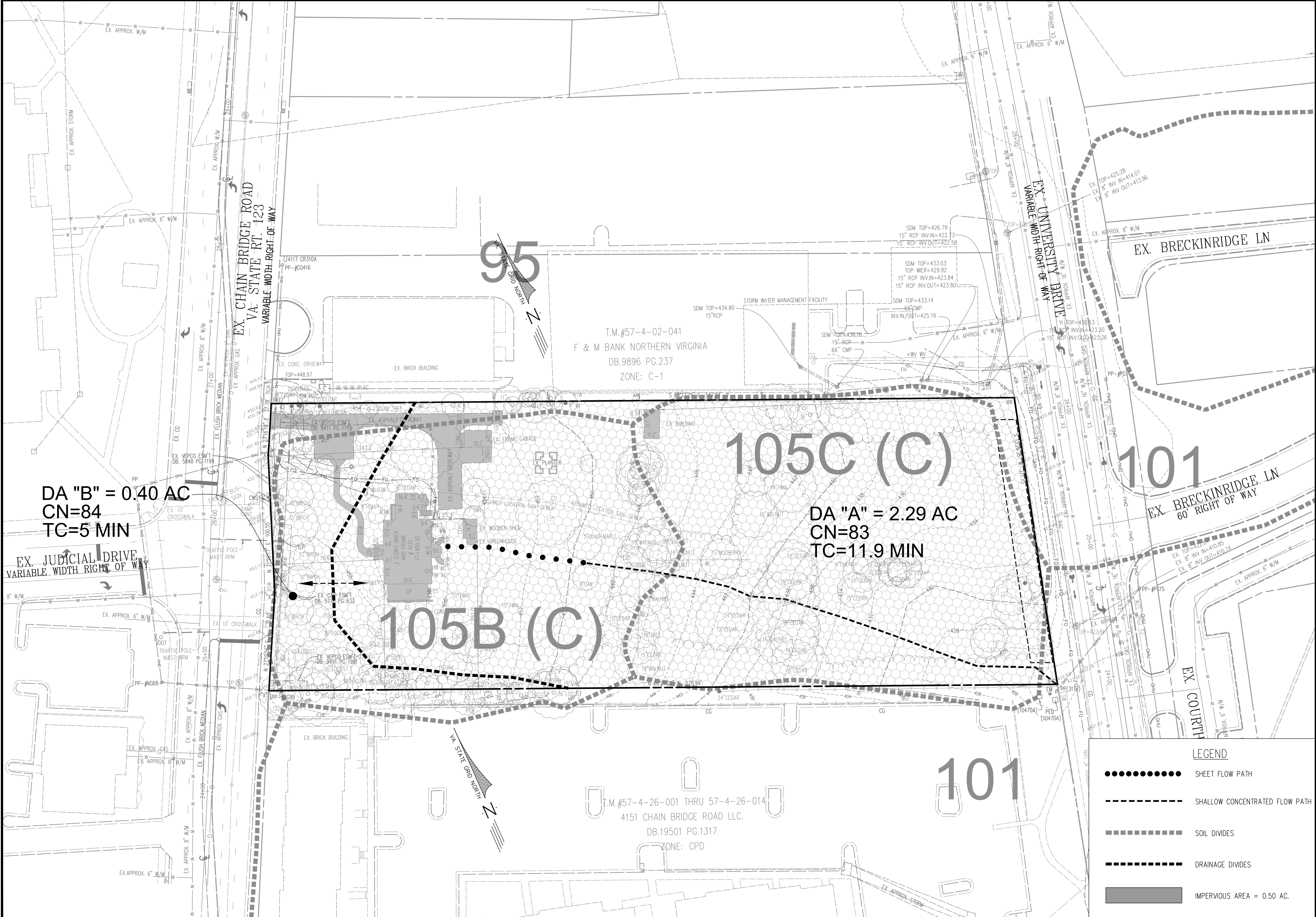
COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
Lic. No. 098790
04/19/2025
REGISTERED PROFESSIONAL ENGINEER

BUILDING AND LOT COVERAGE
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

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

SHEET 12 OF 39
FILE No. RZ-12787

Urban, Ltd. - J. VOBS\4131 Chain Bridge Rd\Rezoning\12787-10-Open_Space.dwg [OPEN SPACE PLAN] April 17, 2025 - 3:31pm corensberg



DA "B" = 0.40 AC
 CN=84
 TC=5 MIN

DA "A" = 2.29 AC
 CN=83
 TC=11.9 MIN

105B (C)

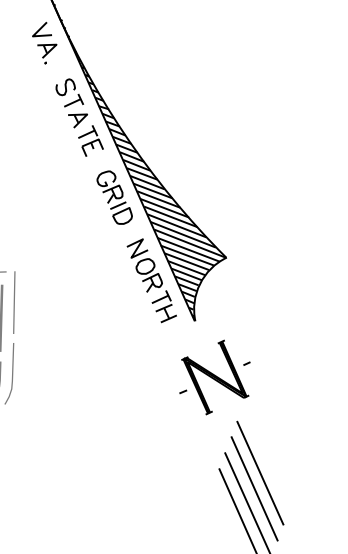
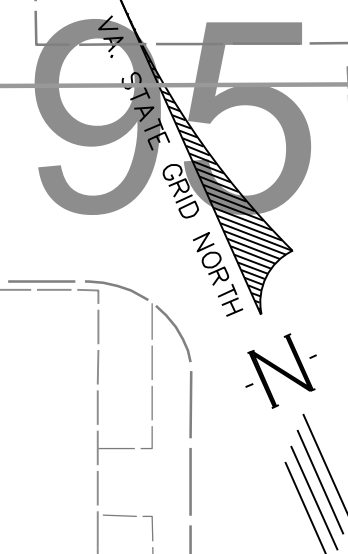
105C (C)

101

101

LEGEND

- SHEET FLOW PATH
- SHALLOW CONCENTRATED FLOW PATH
- SOIL DIVIDES
- DRAINAGE DIVIDES
- IMPERVIOUS AREA = 0.50 AC.
- PERVIOUS AREA = 2.19 AC.



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

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<p>urban Planners/Engineers/Landscape Architects/Lead Services</p>	
<p>COMMONWEALTH OF VIRGINIA CLAYTON C. TOOK Lic. No. 036790 04/19/2025 PROFESSIONAL</p>	
<p>STORMWATER MANAGEMENT PRE-DEVELOPMENT 4131 CHAIN BRIDGE ROAD REZONING CDP-GDP</p>	
<p>CITY OF FAIRFAX, VIRGINIA</p>	<p>DATE: DEC., 2024</p>
<p>SCALE: 1"=30'</p>	<p>C.I.= 2</p>
<p>SHEET 13 OF 39</p>	<p>FILE No. RZ-12787</p>
<p>PLAN DATE 05-04-2016 04-22-2019 06-11-2024 09-03-2024 12-02-2024 04-15-2025</p>	<p>REVISIONS No. DATE DESCRIPTION</p>

Urban, Ltd. - J:\085\131 Chain Bridge Rd\Rezoning\12787-21-swmm-bmp-pre.dwg [1] April 17, 2025 - 3:31pm aorensberg

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

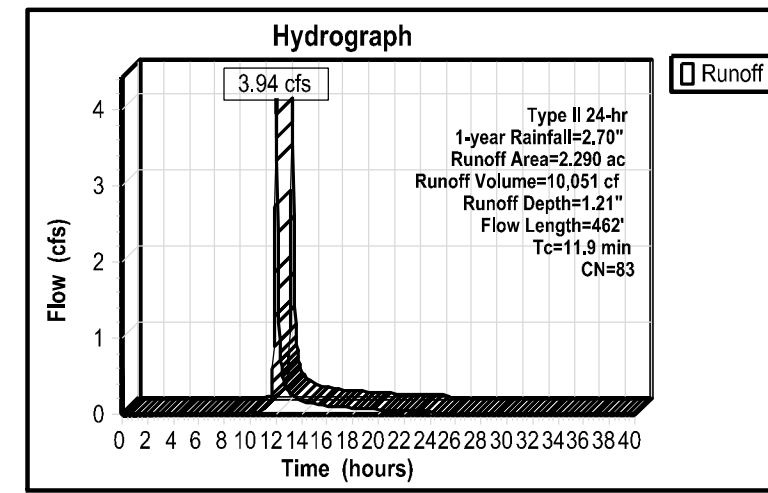
Time of Concentration Calculations

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"

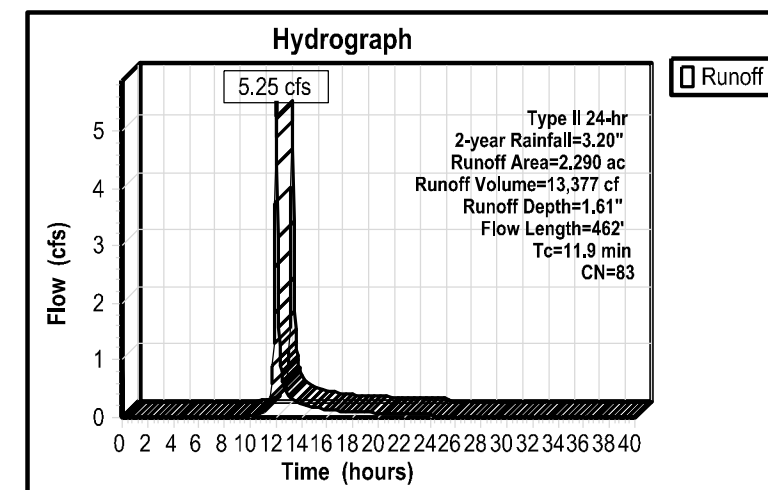
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.70"



2 Year Flow Calculations

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

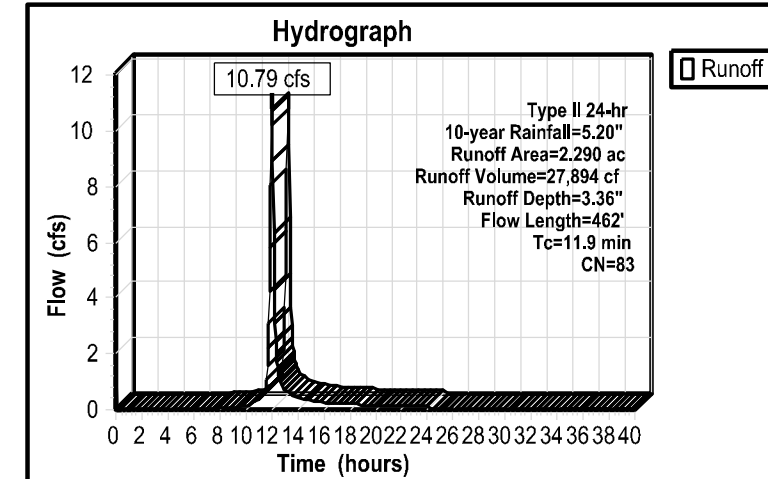
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.20"



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

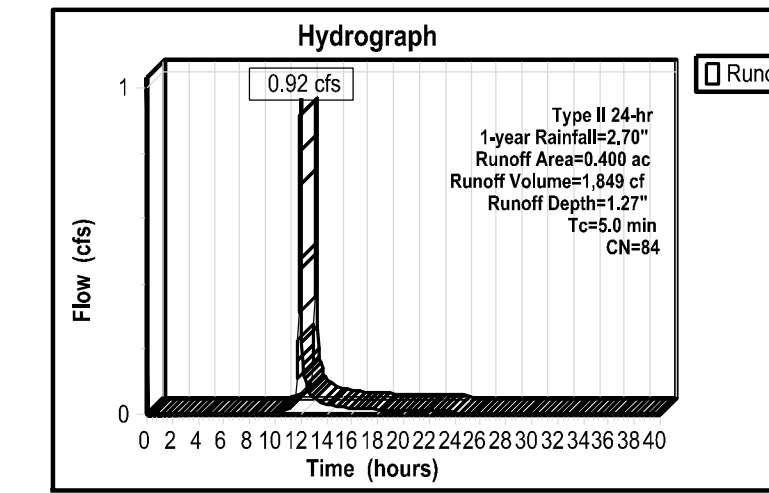
Time of Concentration Calculations

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"

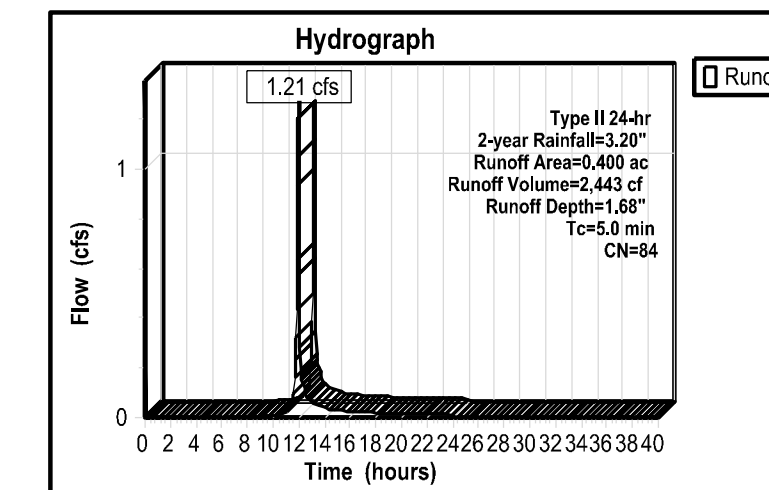
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.70"



2 Year Flow Calculations

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

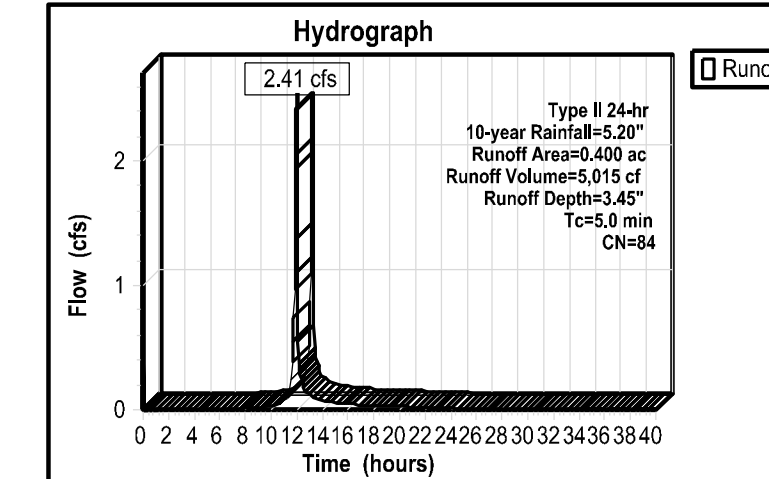
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.20"



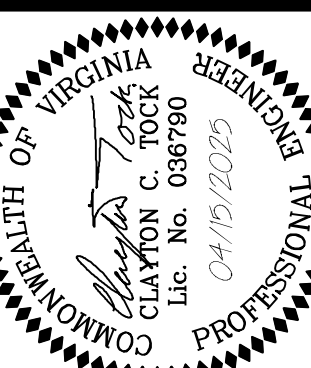
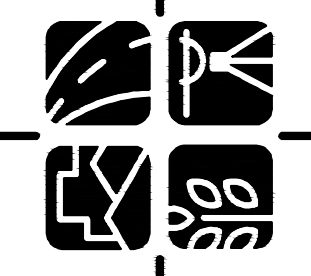
10 Year Flow Calculations

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

SCALE: N/A
DATE: DEC., 2024

SHEET
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FILE No.
RZ-12787

REVISIONS
No. DATE DESCRIPTION

STORMWATER MANAGEMENT NARRATIVE:

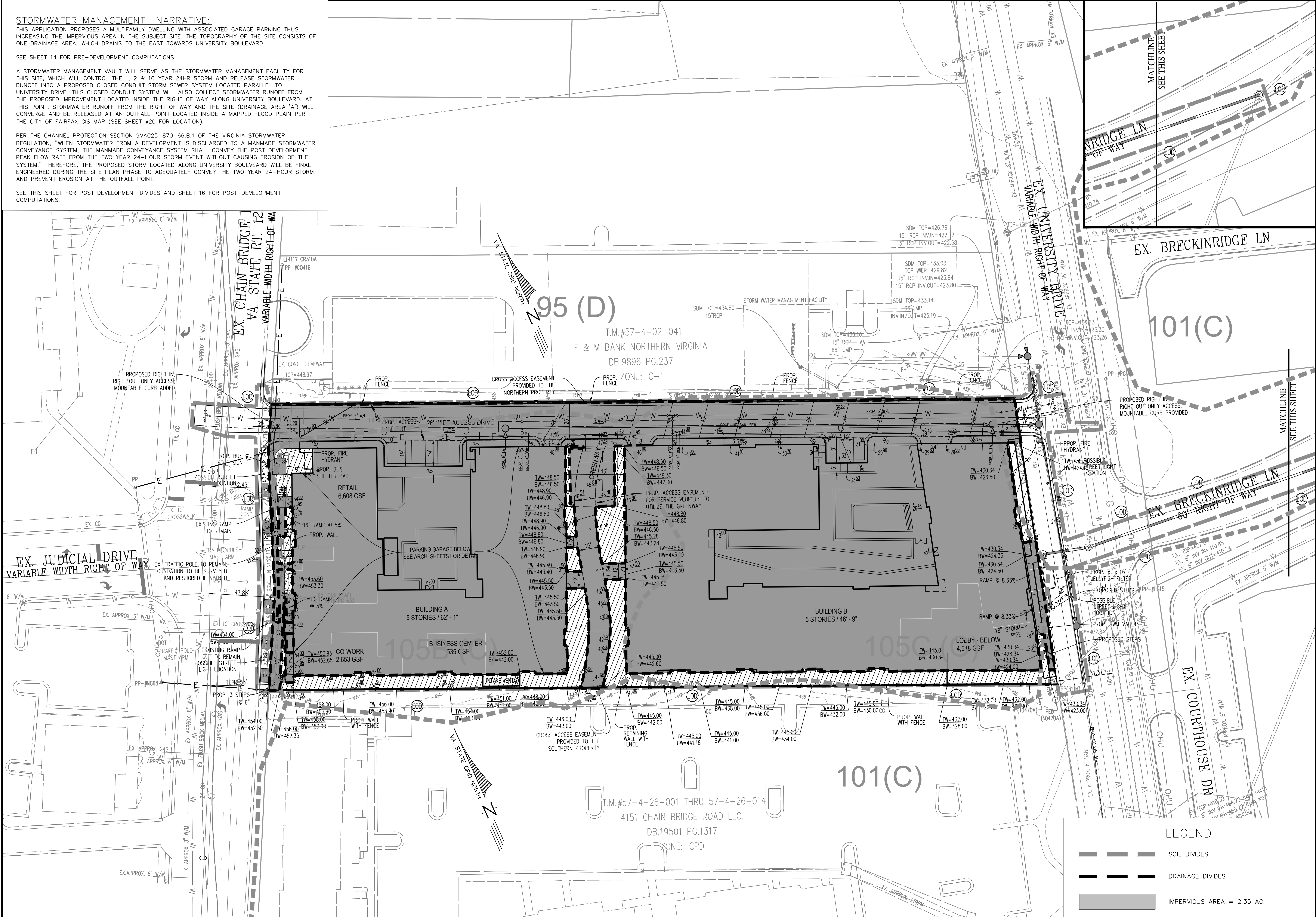
THIS APPLICATION PROPOSES A MULTIFAMILY DWELLING WITH ASSOCIATED GARAGE PARKING THUS INCREASING THE IMPERVIOUS AREA IN THE SUBJECT SITE. THE TOPOGRAPHY OF THE SITE CONSISTS OF ONE DRAINAGE AREA, WHICH DRAINS TO THE EAST TOWARDS UNIVERSITY BOULEVARD.

SEE SHEET 14 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 #20 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 24-HOUR STORM EVENT WITHOUT CAUSING EROSION OF THE SYSTEM." THEREFORE, THE PROPOSED STORM LOCATED ALONG UNIVERSITY BOULEVARD 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 16 FOR POST-DEVELOPMENT COMPUTATIONS.



LEGEND

	SOIL DIVIDES
	DRAINAGE DIVIDES
	IMPERVIOUS AREA = 2.35 AC.
	PERVIOUS AREA = 0.34 AC.

<p>PLAN DATE: 05-04-2016, 04-22-2019, 06-11-2024, 09-03-2024, 12-02-2024, 04-15-2025</p> <p>Urban Ltd. 4000 TECHNOLOGY CT. CHANTILLY, VA. 20151 TEL: 703.642.2306 FAX: 703.878.9888 www.urban-ltd.com</p> <p>urban Planners/Engineers/Landscape Architects/Lead Services</p> <p>COMMONWEALTH OF VIRGINIA CLAYTON C. TOOK Lic. No. 036790 04/19/2025 REGISTERED PROFESSIONAL</p> <p>SWM POST-DEVELOPMENT PLAN 4131 CHAIN BRIDGE ROAD REZONING CDP-GDP CITY OF FAIRFAX, VIRGINIA</p> <p>SCALE: 1"=30'</p> <p>SHEET 15 OF 39 FILE No. RZ-12787</p>	<p>DATE: DEC., 2024 C.I.= 2</p> <p>REVISIONS</p> <table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	DATE	DESCRIPTION			
No.	DATE	DESCRIPTION					

Urban, Ltd. - J. VOBES\131 Chain Bridge Rd\Rezoning\12787-21-sw-m bmp POST.dwg [post dev swm plan] April 17, 2025 - 3:32pm carnsberg

Urban, Ltd. - J:\085\131 Chain Bridge Rd\Rezoning\12787-21-swmm-bmp-POST.dwg [post dev swm comp] April 17, 2025 - 3:32pm orensberg

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
0.240	79	50-75% Grass cover, Fair, HSG C
0.040	84	50-75% Grass cover, Fair, HSG D
2.280	98	Paved parking, HSG C
0.130	98	Paved parking, HSG D
2.690	96	Weighted Average
0.280		10.41% Pervious Area
2.410		89.59% 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
0.240	79	50-75% Grass cover, Fair, HSG C
0.040	84	50-75% Grass cover, Fair, HSG D
2.280	98	Paved parking, HSG C
0.130	98	Paved parking, HSG D
2.690	96	Weighted Average
0.280		10.41% Pervious Area
2.410		89.59% 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
0.240	79	50-75% Grass cover, Fair, HSG C
0.040	84	50-75% Grass cover, Fair, HSG D
2.280	98	Paved parking, HSG C
0.130	98	Paved parking, HSG D
2.690	96	Weighted Average
0.280		10.41% Pervious Area
2.410		89.59% Impervious Area

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

Summary for Pond 28P: Vault A

Inflow Area = 117,176 sf 89.59% 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= 6.0' @ 12.11 hrs Surf.Area= 1,684 sStorage= 10,119 cf

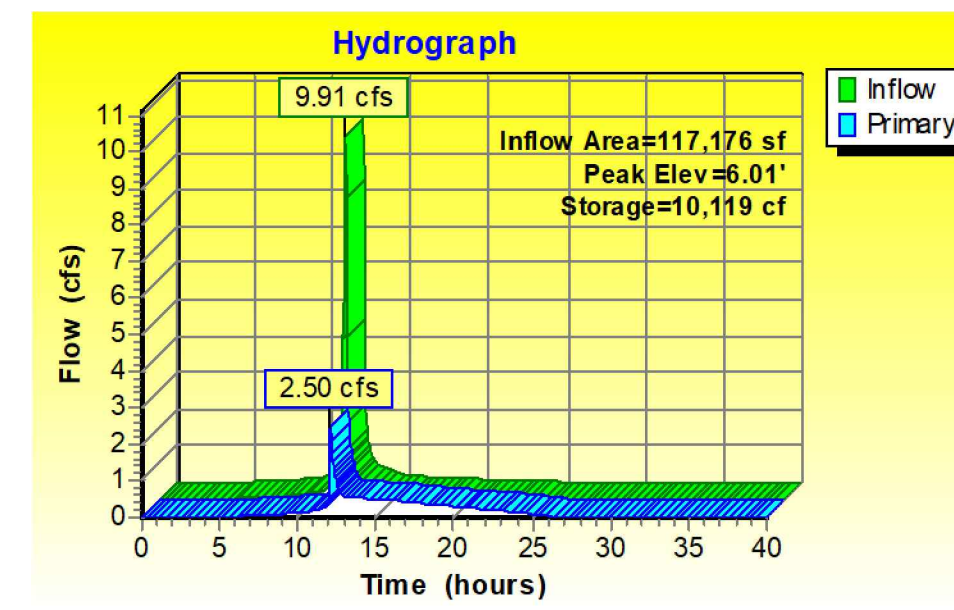
Plug-Flow detention time=84.3 min calculated for 22,041 cf (100% of inflow)
 Center-of-Mass det. time=84.1 min (958.8 - 774.7)

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 cf@ 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 Pond 28P: Vault A

Inflow Area = 117,176 sf 89.59% 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= 6.7' @ 12.06 hrs Surf.Area= 1,684 sStorage= 11,300 cf

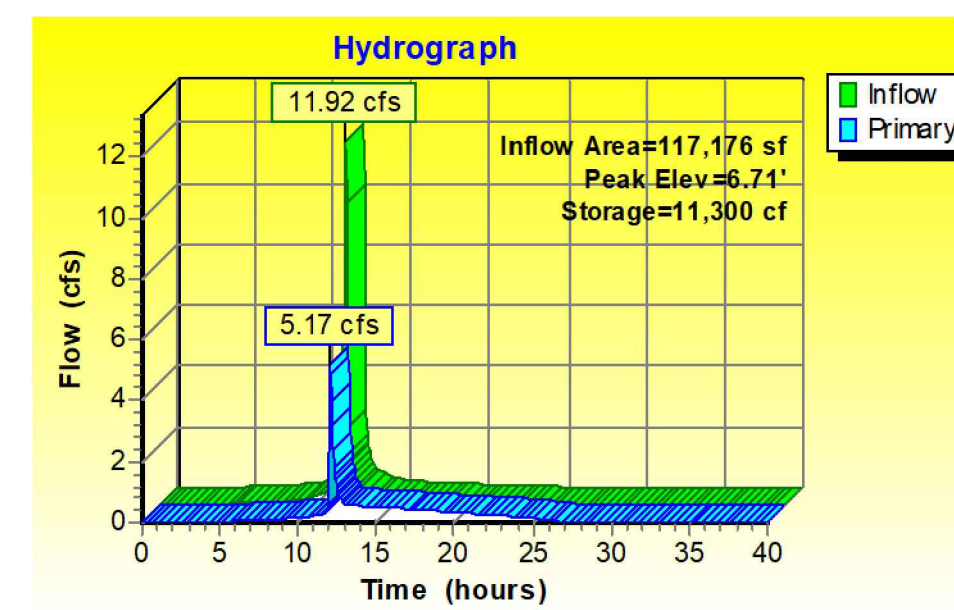
Plug-Flow detention time=67.8 min calculated for 26,844 cf (100% of inflow)
 Center-of-Mass det. time=67.6 min (937.2 - 769.6)

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 cf@ 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 Pond 28P: Vault A

Inflow Area = 117,176 sf 89.59% 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= 9.7' @ 12.05 hrs Surf.Area= 1,684 sStorage= 16,356 cf

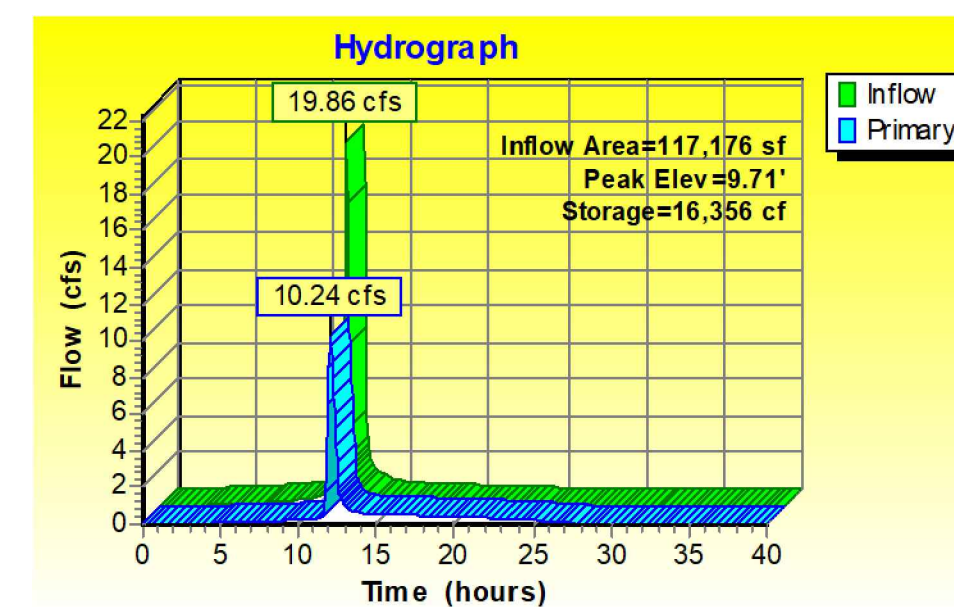
Plug-Flow detention time=35.4 min calculated for 46,199 cf (100% of inflow)
 Center-of-Mass det. time=35.2 min (892.0 - 756.8)

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 cf@ 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 89.59% Impervious Inflow Depth =2.26" for 1-year event
 Inflow = 9.91 cfs@ 11.95 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 89.59% Impervious Inflow Depth =2.75" for 2-year event
 Inflow = 11.92 cfs@ 11.95 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 89.59% Impervious Inflow Depth =4.73" for 10-year event
 Inflow = 19.86 cfs@ 11.95 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

PLAN DATE	REVISIONS	DATE	DESCRIPTION
05-04-2016			
04-22-2016			
04-22-2016			
06-11-2024			
09-03-2024			
12-02-2024			
04-15-2025			

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Planners, Engineers, Landscape Architects, Land Surveyors

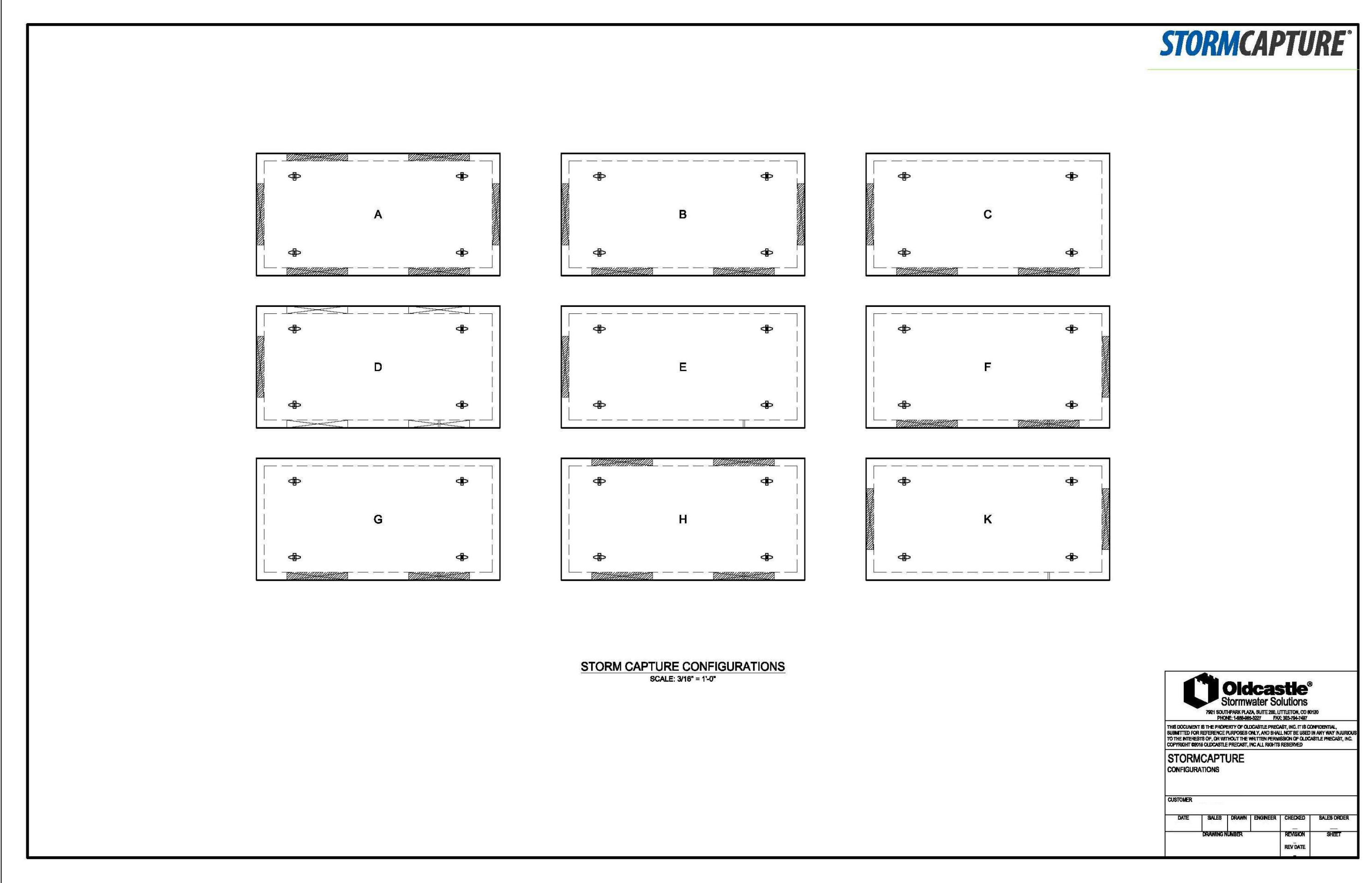
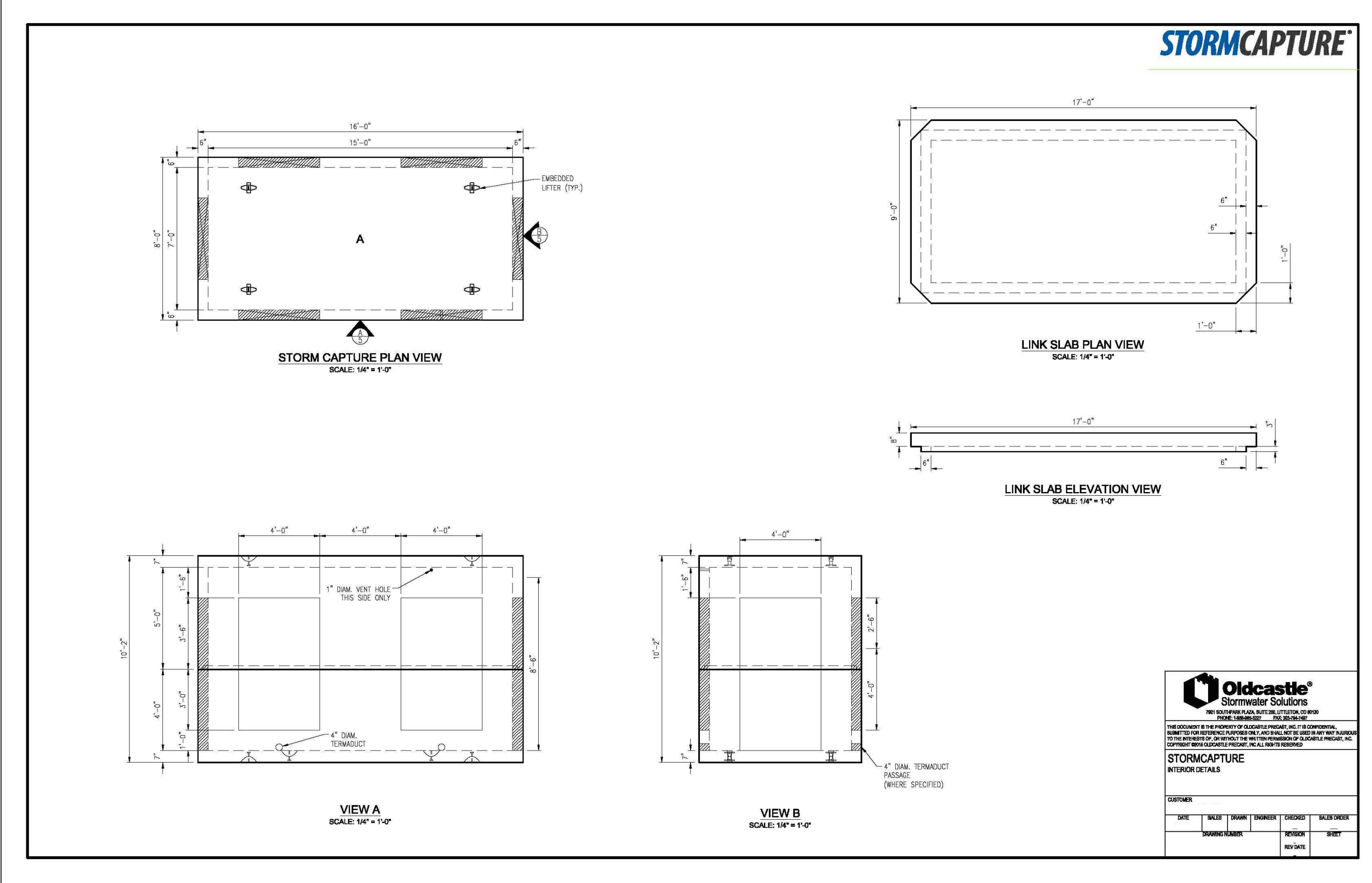
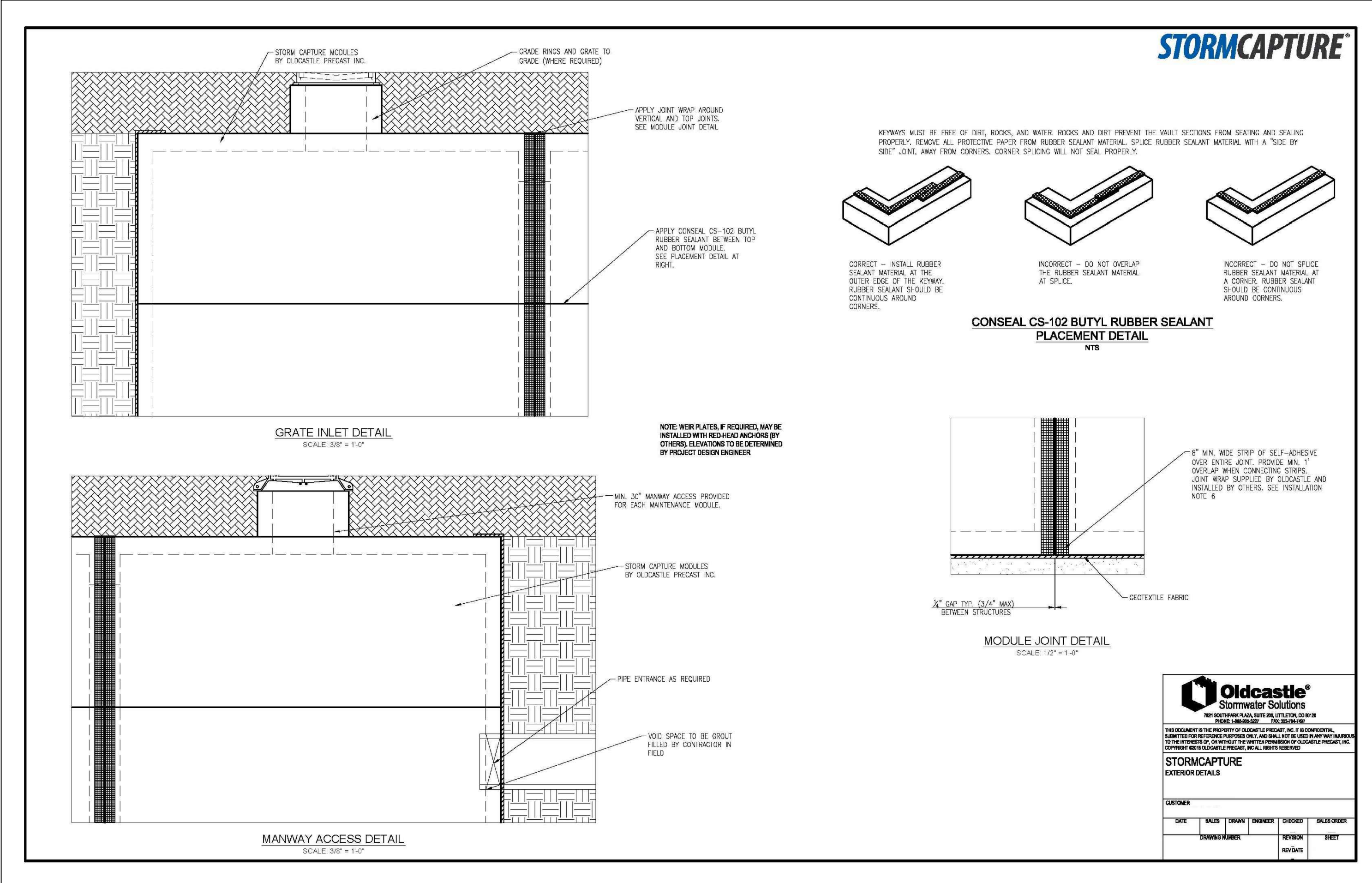
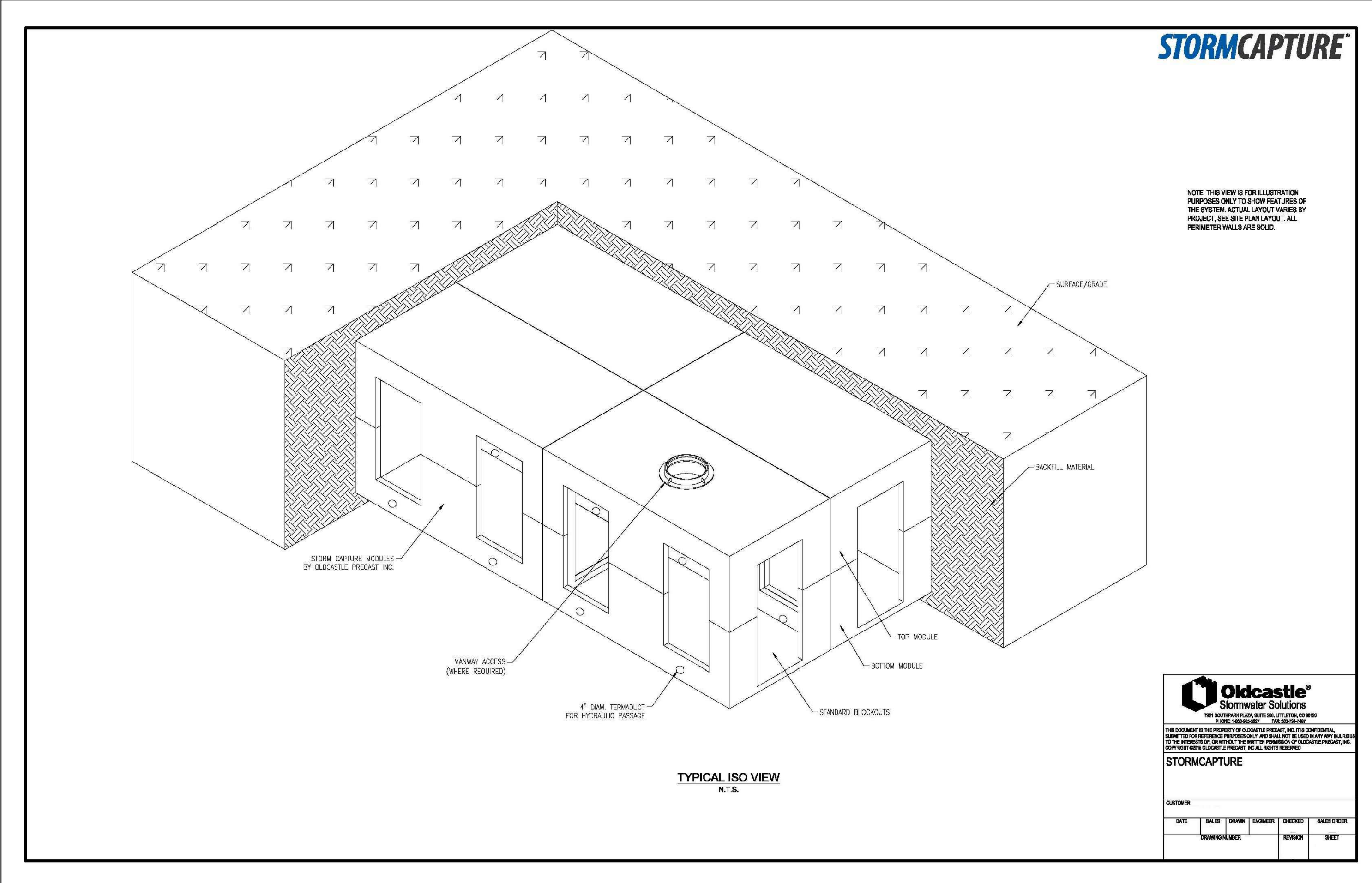
SWM POST-DEVELOPMENT COMPS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
 CITY OF FAIRFAX, VIRGINIA

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

SHEET
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OF
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FILE No.
RZ-12787

POSSIBLE SWM VAULT STANDARD DETAILS (OR APPROVED EQUAL)



NOTE:
ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SELECTED & FINAL ENGINEERED 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.

Urban, Ltd. - J:\085\131 Chain Bridge Rd\Rezoning\12787-21-sw dev bmp POST.dwg [post dev swm details] April 17, 2025 - 3:32pm orensberg

PLAN DATE	05-04-2016	REVISION	
	04-22-2019		
	06-11-2024		
	09-03-2024		
	12-02-2024		
	04-15-2025		

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urban
Planners/Engineers/Landscape Architects/Land Surveyors

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 0367990
04/19/2025
PROFESSIONAL ENGINEER

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

SHEET
17
OF
39
FILE No.
RZ-12787

Project Name: **4131 Chain Bridge Road**
 Date: **Mar-25**
 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**

Check:
 BMP Design Specifications List: 2011 Stds & Specs
 Linear project? **No**
 Land cover areas entered correctly? **✓**
 Total disturbed area entered? **✓**

Maximum reduction required: **20%**
 The site's net increase in impervious cover (acres) is: **1.88**
 Post-Development TP Load Reduction for Site (lb/yr): **3.56**

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	2.08	0.08	2.16
Impervious Cover (acres)	0.00	0.00	0.44	0.09	0.53
					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	0.24	0.04	0.28
Impervious Cover (acres)	0.00	0.00	2.28	0.13	2.41
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	Listed	Adjusted ¹
Pre-ReDevelopment		
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	2.16	0.28
Weighted Rv(turf)	0.22	0.22
% Managed Turf	80%	35%
Impervious Cover (acres)	0.53	0.53
Rv(impervious)	0.95	0.95
% Impervious	20%	65%
Total Site Area (acres)	2.69	0.81
Site Rv	0.36	0.70

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)	Post-ReDevelopment	Post-Development New Impervious
Post ReDev. & New Impervious		
Forest/Open Space Cover (acres)	0.00	
Weighted Rv(forest)	0.00	
% Forest	0%	
Managed Turf Cover (acres)	0.28	
Weighted Rv (turf)	0.22	
% Managed Turf	10%	
Impervious Cover (acres)	2.41	1.88
Rv(impervious)	0.95	0.95
% Impervious	90%	
Final Site Area (acres)	2.69	
Final Post Dev Site Rv	0.87	

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	Post-ReDevelopment Treatment Volume (acre-ft)	Post-Development Treatment Volume (acre-ft)
0.1960	0.0472	0.1488
8,539	2,056	6,483
5.36	1.29	4.07
1.99	1.59	
0.26	20%	
0.26		3.30

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	Pre-ReDevelopment Treatment Volume (cubic feet)	Pre-ReDevelopment TP Load (lb/yr)	Pre-ReDevelopment TP Load per acre (lb/acre/yr)
0.0818	3,561	2.24	0.83
0.0472	2,056	1.29	1.59
0.33			

Baseline TP Load (lb/yr)

(0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)

0.33

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

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	3.56
------------------------------------	------

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	16.01	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	38.38
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Drainage Area A

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.00	0.00	0.24	0.04	0.28	0.22
Impervious Cover (acres)	0.00	0.00	2.28	0.13	2.41	0.95
Total					2.69	

Total Phosphorus Available for Removal in D.A. A (lb/yr) **5.36**
 Post Development Treatment Volume in D.A. A (ft³) **8,539**

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)													
14a. Manufactured Treatment Device-Hydrodynamic	0	0.28	2.41	0	0	8,539	8,539	50	0.00	5.36	2.68	2.68	14.b. MTD - Filtering

TOTAL IMPERVIOUS COVER TREATED (ac)

2.41 AREA CHECK: OK

TOTAL MANAGED TURF AREA TREATED (ac)

0.28 AREA CHECK: OK

TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr)

3.56

TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr)

5.36

TOTAL PHOSPHORUS REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)

3.75

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)

3.75

TOTAL PHOSPHORUS REMAINING AFTER APPLYING BMP LOAD REDUCTIONS IN D.A. A (lb/yr)

1.61

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)	2.41	0.00	0.00	0.00	0.00	OK
IMPERVIOUS COVER TREATED (ac)	2.41	0.00	0.00	0.00	0.00	OK
MANAGED TURF AREA (ac)	0.28	0.00	0.00	0.00	0.00	OK
MANAGED TURF AREA TREATED (ac)	0.28	0.00	0.00	0.00	0.00	OK
AREA CHECK	OK	OK	OK	OK	OK	

Site Treatment Volume (ft³)

8,539

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)	5.36	0.00	0.00	0.00	0.00	5.36
TP LOAD REDUCTION ACHIEVED (lb/yr)	3.75	0.00	0.00	0.00	0.00	3.75
TP LOAD REMAINING (lb/yr)	1.61	0.00	0.00	0.00	0.00	1.61
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)	5.36
TP LOAD REDUCTION REQUIRED (lb/yr)	3.56
TP LOAD REDUCTION ACHIEVED (lb/yr)	3.75
TP LOAD REMAINING (lb/yr)	1.61
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00 **
** TARGET TP REDUCTION EXCEEDED BY 0.19 LB/YEAR **	

Total Nitrogen (For Informational Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	38.38
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	38.38

NOTE:
 ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SELECTED & FINAL ENGINEERED 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 PHOSPHOROUS 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.

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PLAN DATE: 05-04-2016
 0-0-2016
 0-0-2016
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COMMONWEALTH OF VIRGINIA
 CLAYTON C. TOOK
 Lic. No. 036790
 04/19/2025
 PROFESSIONAL

BMP POST-DEVELOPMENT COMPS
 4131 CHAIN BRIDGE ROAD
 REZONING CDP-GDP
 CITY OF FAIRFAX, VIRGINIA

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

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FILE No.
 RZ-12787

REVISIONS
 No. DATE DESCRIPTION

POSSIBLE JELLYFISH FILTER STANDARD DETAIL (OR APPROVED EQUAL)

POSSIBLE STORM FILTER STANDARD DETAIL (OR APPROVED EQUAL)

PLAN VIEW

SECTION A-A

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN. 80# 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	24"	40"	24"	18"
CARTRIDGE DEPTH	6"0"	9"3"	4"2"	3"2"
OUTLET INVERT TO STRUCTURE INVERT (A)	0.18 / 0.06	0.13 / 0.065	0.09 / 0.045	0.05 / 0.025
FLOW RATE HIGH-FLO / DRAINDOWN (cfs) (per csm)				
MAX. CARTS. HIGH-FLO / DRAINDOWN	10 / 2			

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WATER QUALITY FLOW RATE (cfs)	PEAK FLOW RATE (cfs)	RETENTION PERIOD OF PEAK FLOW (MINS)	# OF CARTRIDGES REQUIRED (P/F / DD)	CARTRIDGE SIZE

PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE #1			
INLET PIPE #2			
OUTLET PIPE			

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

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

GENERAL NOTES:

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE: www.contechES.com
- 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.
- STRUCTURE SHALL MEET ASHITO HS-25 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. CARTRIDGES SHALL MEET ASHITO M2000 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
- STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-479 AND ASHITO LOAD FACTOR DESIGN METHOD.
- NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED TO DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES:

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED MATERIALS OR FLEXIBLE JOINT).
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
- 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) 740-3316.

CONTECH ENGINEERED SOLUTIONS LLC
 www.contechES.com
 8025 Central Express Dr., Suite 400, West Chester, OH 43080
 800-338-1122 513-946-7000 513-946-7983 FAX

JELLYFISH JFB STANDARD DETAIL OFFLINE CONFIGURATION

PLAN VIEW

SECTION A-A

STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY 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 (23), INLET BAY/OUTLET BAY (27), OUTLET BAY (44), INLET BAY/FULL HEIGHT BAFFLE (23), FULL HEIGHT BAFFLE WALL (26). STORMFILTER 6X16 PEAK HYDRAULIC CAPACITY IS 1.5 CFS. IF THE SITE CONDITIONS EXCEED 1.5 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION	22"	16"	LOW DROP
CARTRIDGE HEIGHT	3.00"	2.25"	1.5"
RECOMMENDED HYDRAULIC DROP (H)	2.00"	1.50"	1.00"
SPECIFIC FLOW RATE (gpm/ft²)	2.00	1.50	1.00
CARTRIDGE FLOW RATE (gpm)	22.5	11.25	5.6

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WATER QUALITY FLOW RATE (cfs)	PEAK FLOW RATE (cfs)	RETENTION PERIOD OF PEAK FLOW (MINS)	# 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			

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

GENERAL NOTES:

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE: www.contechES.com
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET ASHITO M2000 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET ASHITO M2000 AND BE CAST WITH THE CONTECH LOGO.
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF-CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 30 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

INSTALLATION NOTES:

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER VAULT (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL VAULT SECTIONS AND ASSEMBLY VAULT.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

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 8025 Central Express Dr., Suite 400, West Chester, OH 43080
 800-338-1122 513-946-7000 513-946-7983 FAX

SF0816 STORMFILTER STANDARD DETAIL

NOTE:
 ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SELECTED & FINAL ENGINEERED 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.

NOTE:
 FINAL SIZING OF BMP STRUCTURES SHALL BE DETERMINED AT THE TIME OF SITE PLAN.

REVISIONS	DESCRIPTION	DATE	BY	CHECKED	DATE	BY	CHECKED

PLAN DATE: 05-04-2016
 04-22-2016
 06-11-2024
 09-03-2024
 12-02-2024
 04-15-2025

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 4300 D TECHNOLOGY CT.
 CHANTILLY, VA, 20151
 TEL: 703.642.2306
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 www.urban-lltd.com

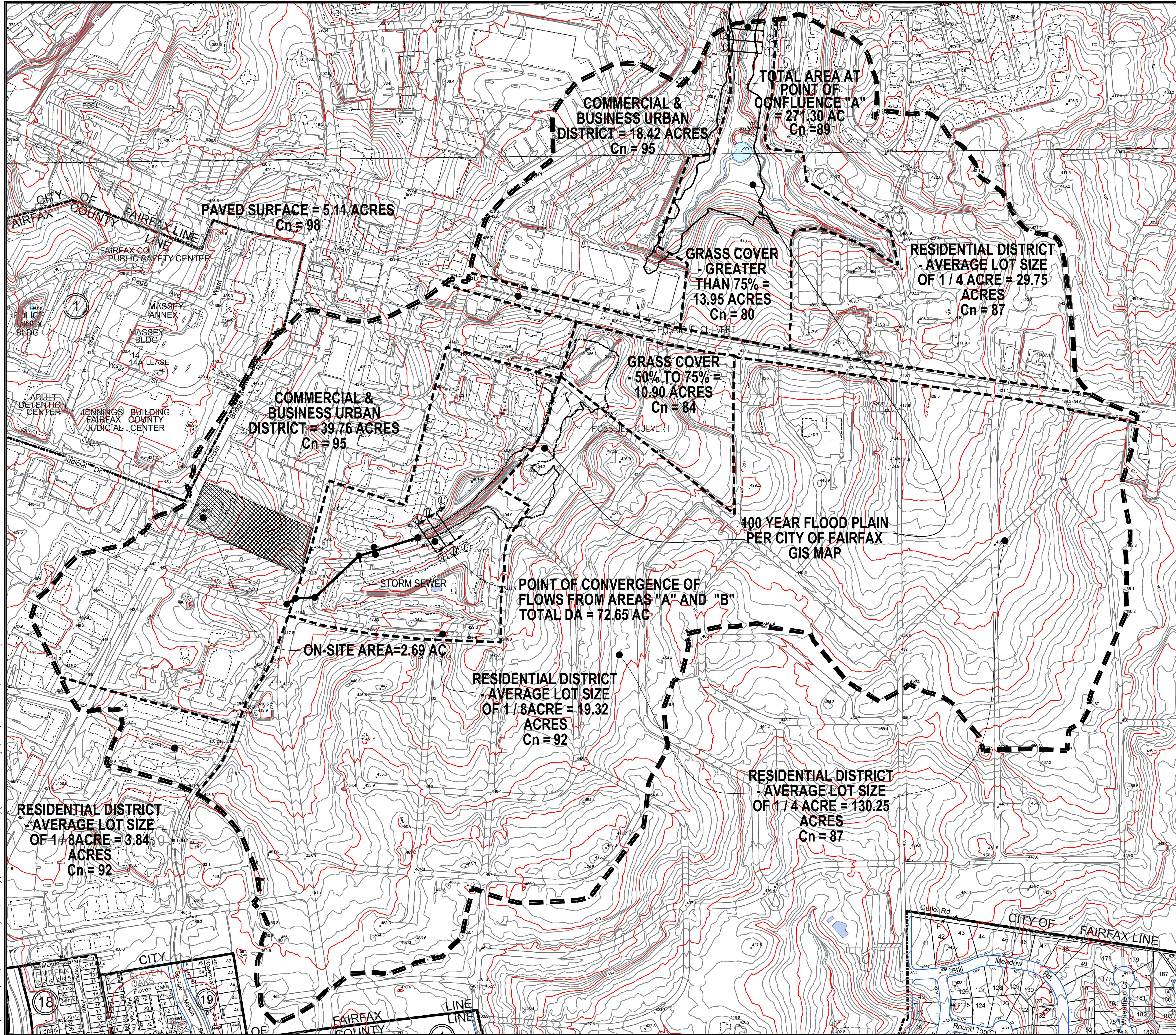
urban
 Planning Engineers, Landscape Architects, Land Services

COMMONWEALTH OF VIRGINIA REGISTERED PROFESSIONAL ENGINEER
 CLAYTON C. TOOK
 Lic. No. 036790
 04/19/2025

BMP 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 19 OF 39
 FILE No. RZ-12787



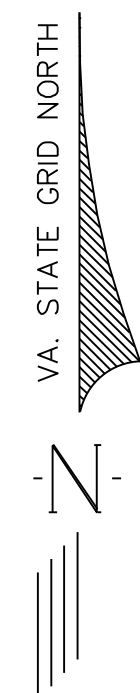
ADEQUATE OUTFALL ANALYSIS NARRATIVE:
THE SUBJECT SITE IS LOCATED BETWEEN CHAIN BRIDGE ROAD AND UNIVERSITY BOULEVARD. THE TOPOGRAPHY OF THE SITE CONSISTS OF ONE DRAINAGE AREA, WHICH DRAINS TO THE EAST TOWARDS UNIVERSITY BOULEVARD. STORMWATER RUNOFF IS COLLECTED BY STORM SEWER INLETS AND CONVEYED VIA AN 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, 2 YR AND 10 YR 24-HR STORM FOR BOTH DRAINAGE AREAS. IN ACCORDANCE WITH SECTION 9VAC25-870-66.B.4 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 C. Tock
URBAN ENGINEERING & ASSOCIATES, INC. DATE: 04/15/2025
CLAYTON C. TOCK, P.E., SR. ASSOCIATE



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

NOTES:
PROPOSED DEVELOPMENT SHALL BE DESIGNED TO ENSURE THAT NO SURROUNDING STRUCTURES WILL BE NEGATIVELY IMPACTED BY 100-YEAR FLOW.

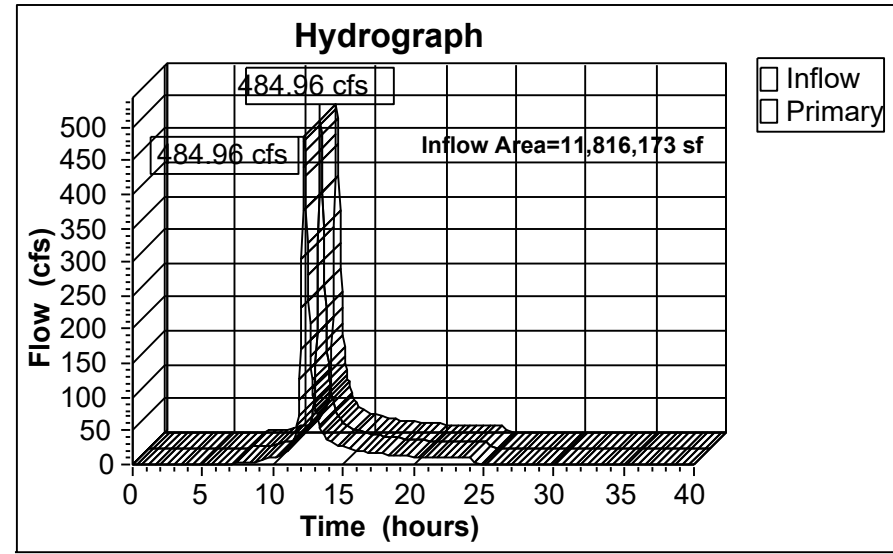
OUTFALL ANALYSIS		DATE: DEC. 2024	
4131 CHAIN BRIDGE ROAD		CITY OF FAIRFAX, VIRGINIA	
REZONING CDP-GDP		SCALE: 1"=200'	
SHEET 20 OF 39		C.I. = 2	
FILE No. RZ-12787		REVISIONS	
PLAN DATE	05-04-2016	NO.	
	04-29-2019	DATE	
	06-11-2024		
	09-03-2024		
	12-02-2024		
	04-15-2025		

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Planners, Engineers, Landscape Architects, and Surveyors

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
04/15/2025
PROFESSIONAL ENGINEER

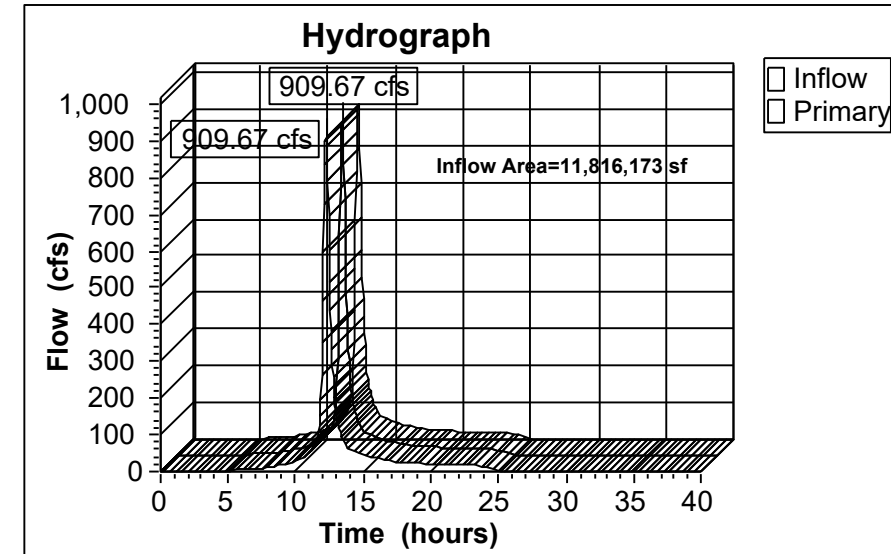
Urban, Ltd. - J. VOBES\4131 Chain Bridge Rd\Rezoning\12787-23- Outfall.dwg [OUTFALL ANALYSIS] April 17, 2025 - 3:32pm aorenberg



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

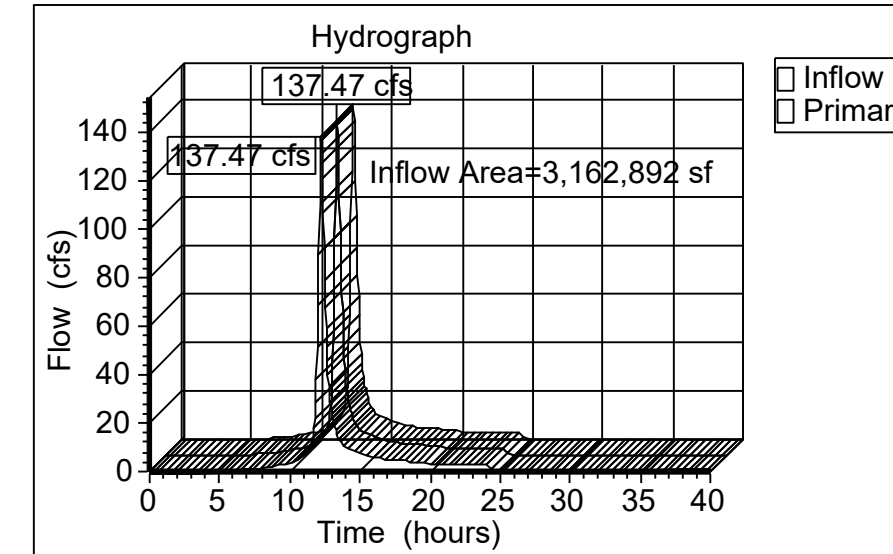
Primary outflow = Inflow, Time Span = 0.00-40.00 hrs, dt = 0.05 hrs



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

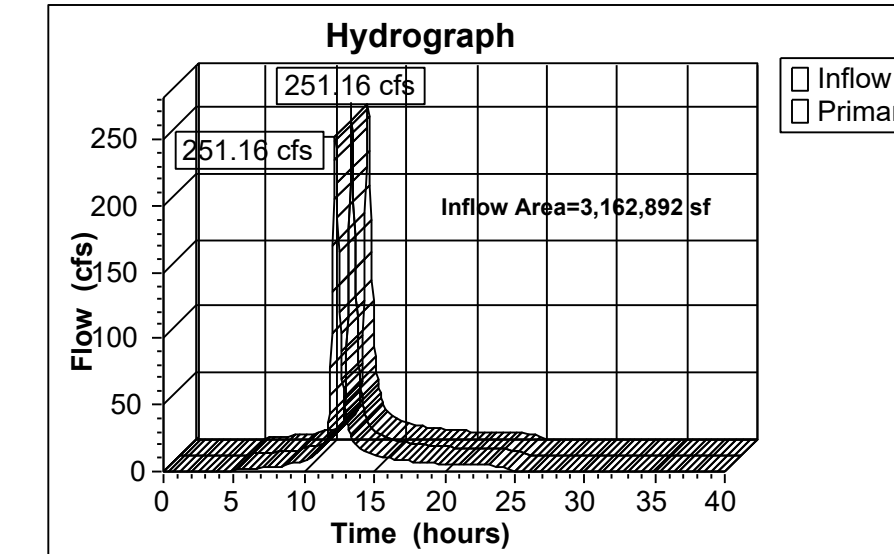
Primary outflow = Inflow, Time Span = 0.00-40.00 hrs, dt = 0.05 hrs



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

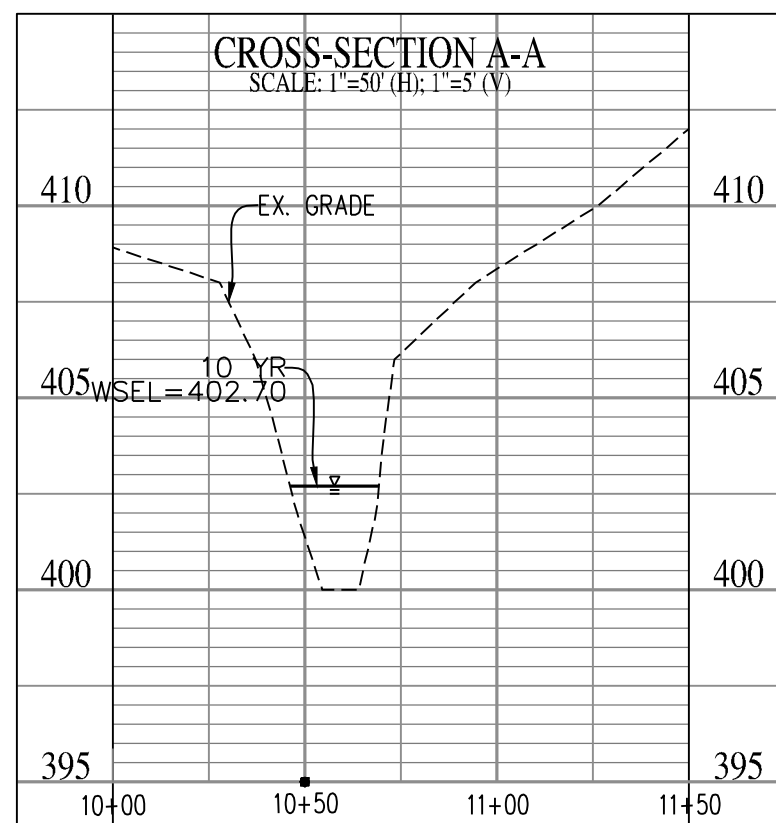


Summary for Link 31L: Point of confluence

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

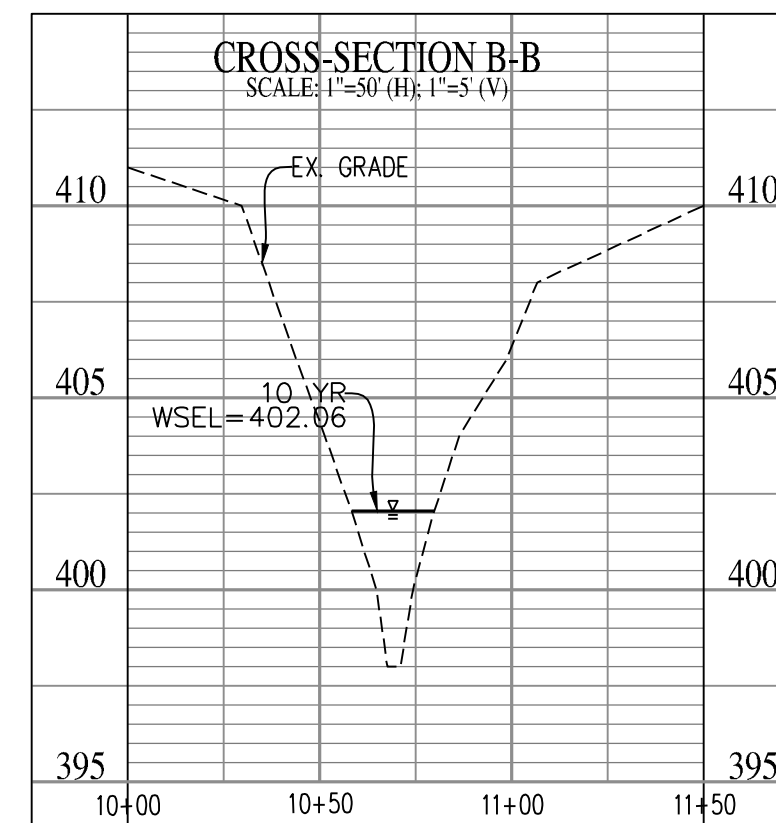


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE: CROSS SECTION A-A

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.

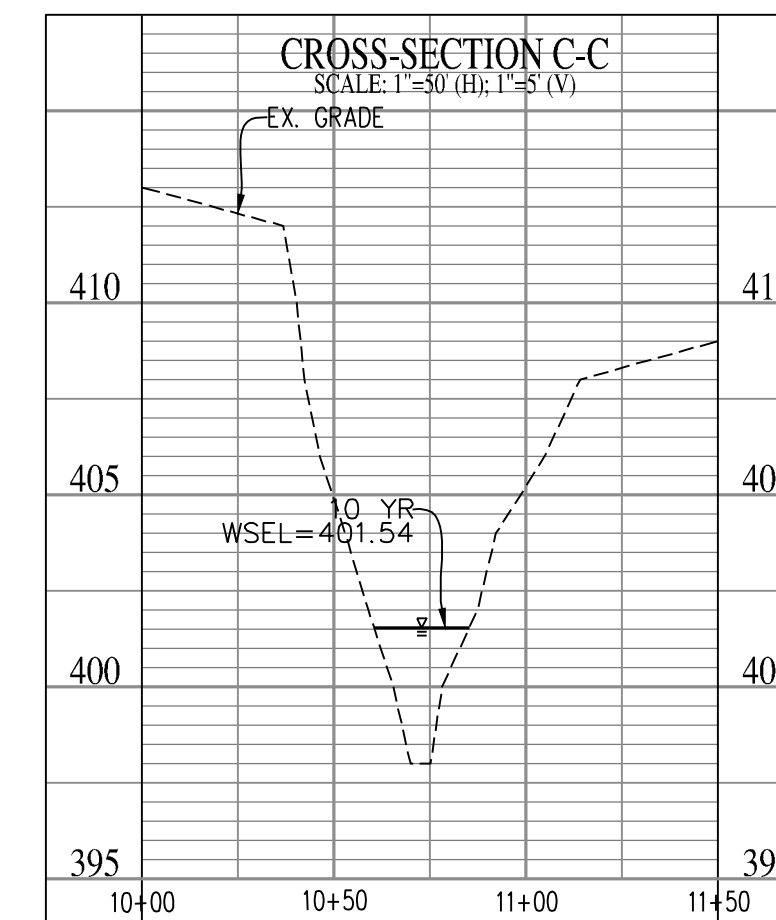


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE: CROSS SECTION B-B

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.



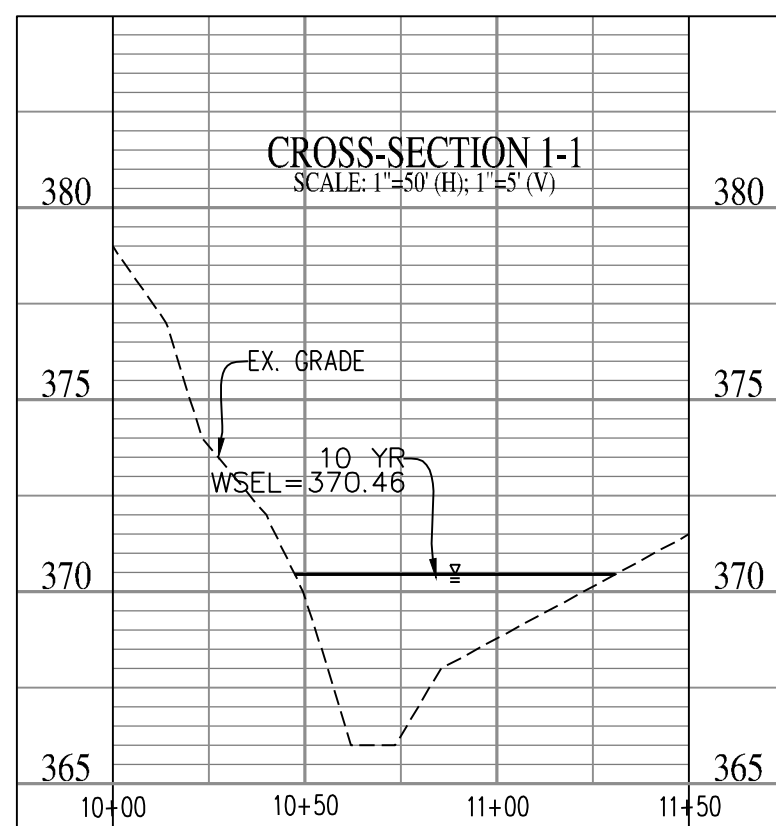
POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE: CROSS SECTION C-C

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"

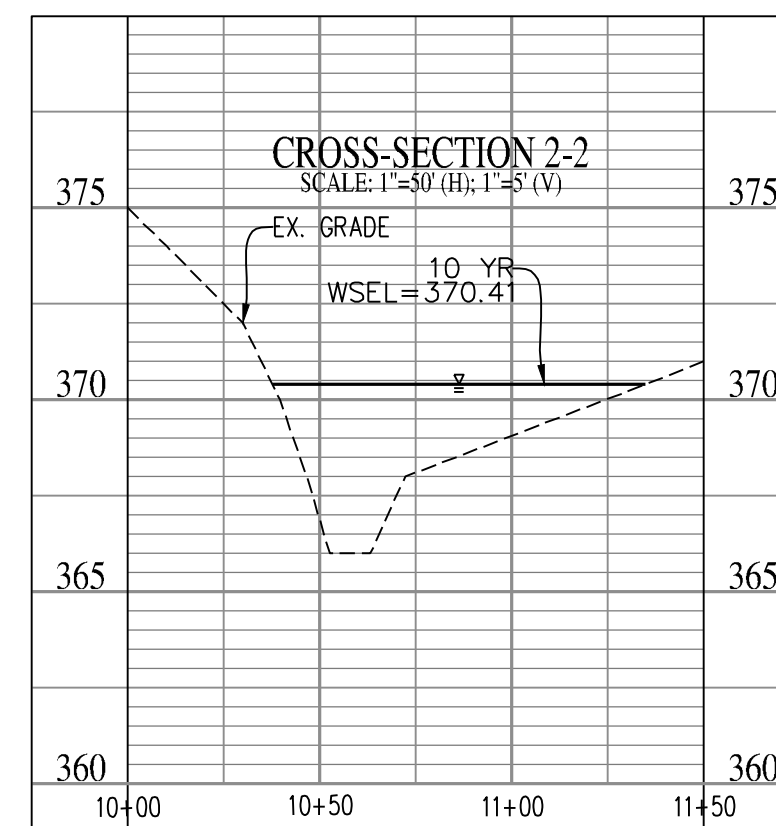


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE: CROSS SECTION 1-1

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.

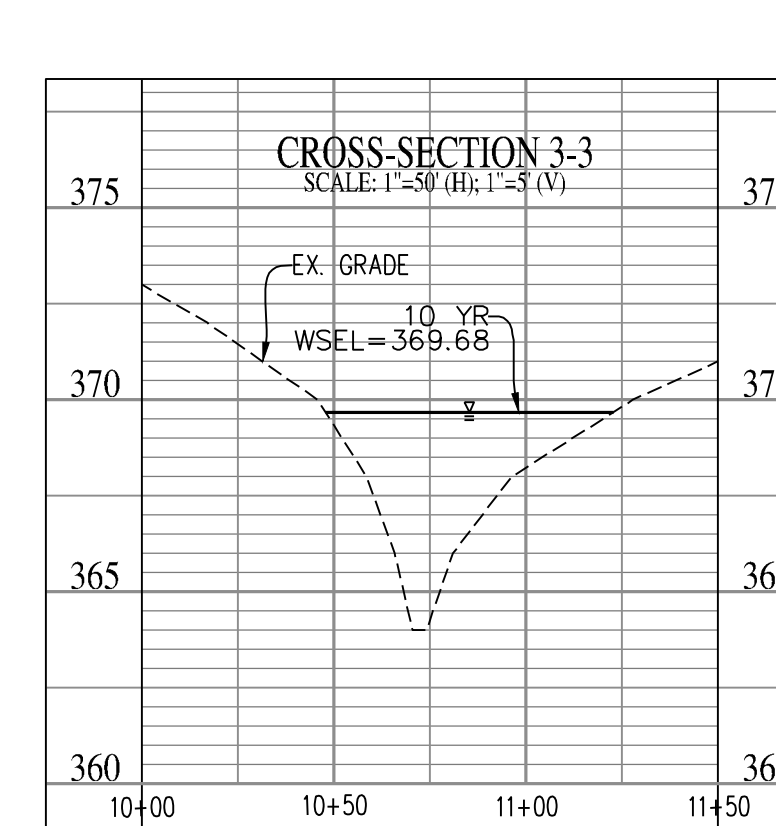


POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE: CROSS SECTION 2-2

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 3-3

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.

Urban, Ltd. - J:\085\131 Chain Bridge Rd\Rezoning\12787-23- Outfall.dwg [OUTFALL ANALYSIS (3)] April 17, 2025 - 3:32pm corensberg

PLAN DATE	05-04-2016	REVISIONS	
	04-22-2019		
	04-22-2019		
	06-11-2024		
	09-03-2024		
	12-02-2024		
	04-15-2025		

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 CLAYTON C. TOOK
 Lic. No. 068790
 04/10/2025
 PROFESSIONAL ENGINEER

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

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

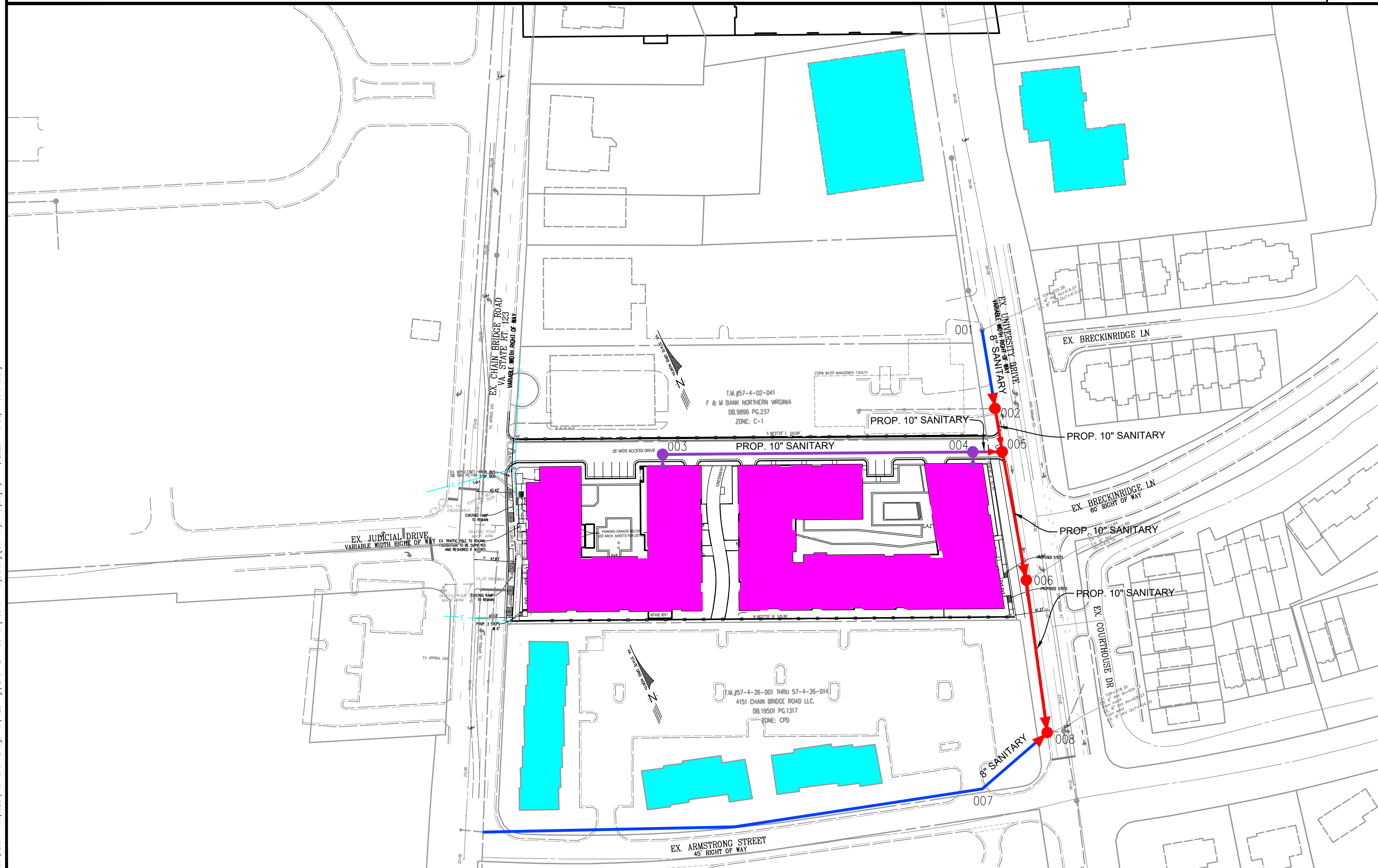
SHEET
 21
 OF
 39

FILE No.
 RZ-12787

4131 Chain Bridge Road Sanitary Analysis

Pipe Characteristics					Flow Characteristics					Total Flow			Capacity Information			NOTES					
Upstream MH	Downstream MH	Diameter (inches)	Slope %	Length (ft)	Number of Residential Units	Average flow for units (280 gpd / unit)	Nonresidential space	Average flow for Nonresidential (0.046 gpd/SF)	SF of Office Space	Average Flow for office (0.20 gpd/SF)	Average Flow for Retail (0.046 gpd/SF)	Additional Known Peak Flow (MGD)	Known Cumulative 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)
TRIBUTARY 1:																					
1	2	8	1.05	91.33		0		0	28126	5625.2		0	0	5625.2	5625.2	10.03804586	0.056466016	0.866936756	7%	2.17	yes
2	5	10	0.88	50.25		0		0	0	0	0	0	0	0	5625.2	10.03804586	0.056466016	1.439000034	4%	1.98	yes
3	4	10	5.00	355.97	140	39200		0	4188	837.6	6381	1020.96	0	41058.56	46683.76	6.757576422	0.315469076	3.430081745	9%	6.09	yes
4	5	10	5.00	33.18	136	38080		0	0	0	0	0	0	38080	84763.76	6.044350855	0.512341905	3.430081745	15%	7.01	yes
5	6	10	1.01	149.98		0		0	0	0	0	0	0	0	84763.76	6.044350855	0.512341905	1.541630007	33%	3.94	yes
6	8	10	3.41	176.56		0		0	0	0	0	0	0	0	84763.76	6.044350855	0.512341905	2.832674399	18%	6.11	yes
7	8	8	7.04	98.85		0		0	19599	3919.8		0	0	3919.8	88683.56	5.993469678	0.531522228	2.244807457	24%	8.17	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 98,010 GPD. THE PROPOSED 10" SEWER LINE WILL CONNECT TO THE EXISTING SANITARY SEWER NETWORK UPSTREAM OF EXISTING MANHOLE 001 AND CONTINUE DOWNSTREAM TO MANHOLE 005 WHICH IS THE FINAL ANALYSIS POINT OF THIS CAPACITY STUDY. THE PROPOSED FLOW INCREASES THE CAPACITY OF THE EXISTING SEWER AT MANHOLE 005 TO 27% AS SHOWN IN THE COMPUTATIONS ABOVE.

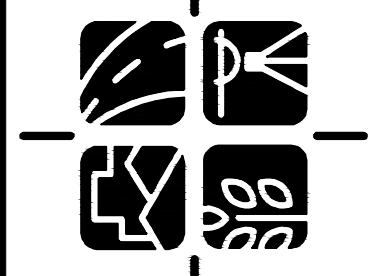
THE SANITARY CAPACITY FLOW CALCULATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE UPON RECEIVING ADDITIONAL INFORMATION AND FINAL ENGINEERING.

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

No.	DATE	DESCRIPTION

PLAN DATE
05-04-2016
06-11-2016
06-11-2016
06-11-2024
09-03-2024
12-02-2024
04-15-2025

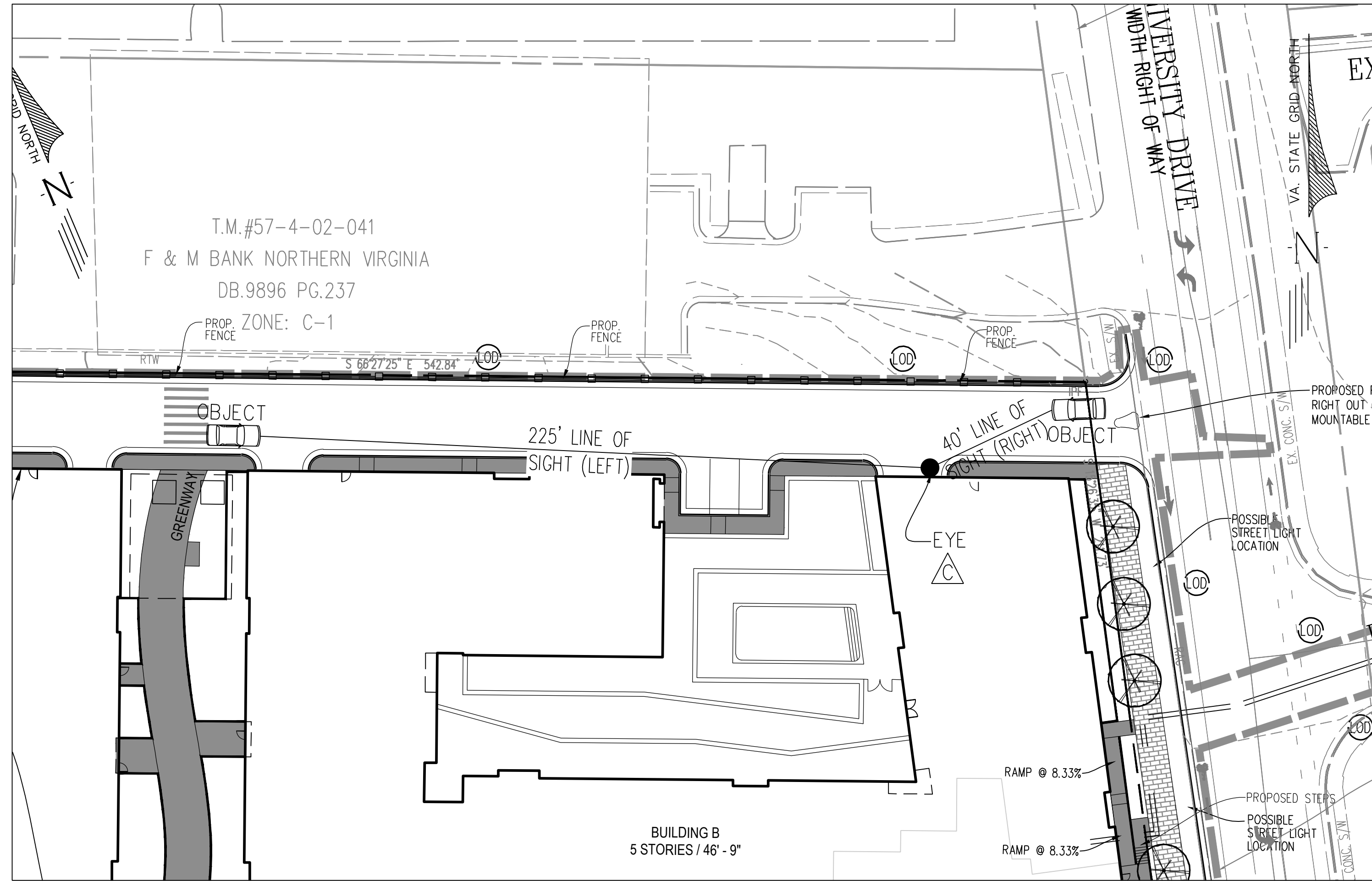
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CHANTILLY, VA, 20151
TEL: 703.642.2306
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SANITARY ANALYSIS
**4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP**
CITY OF FAIRFAX, VIRGINIA
SCALE: 1"=60'
DATE: DEC, 2024
C.I.= 2'

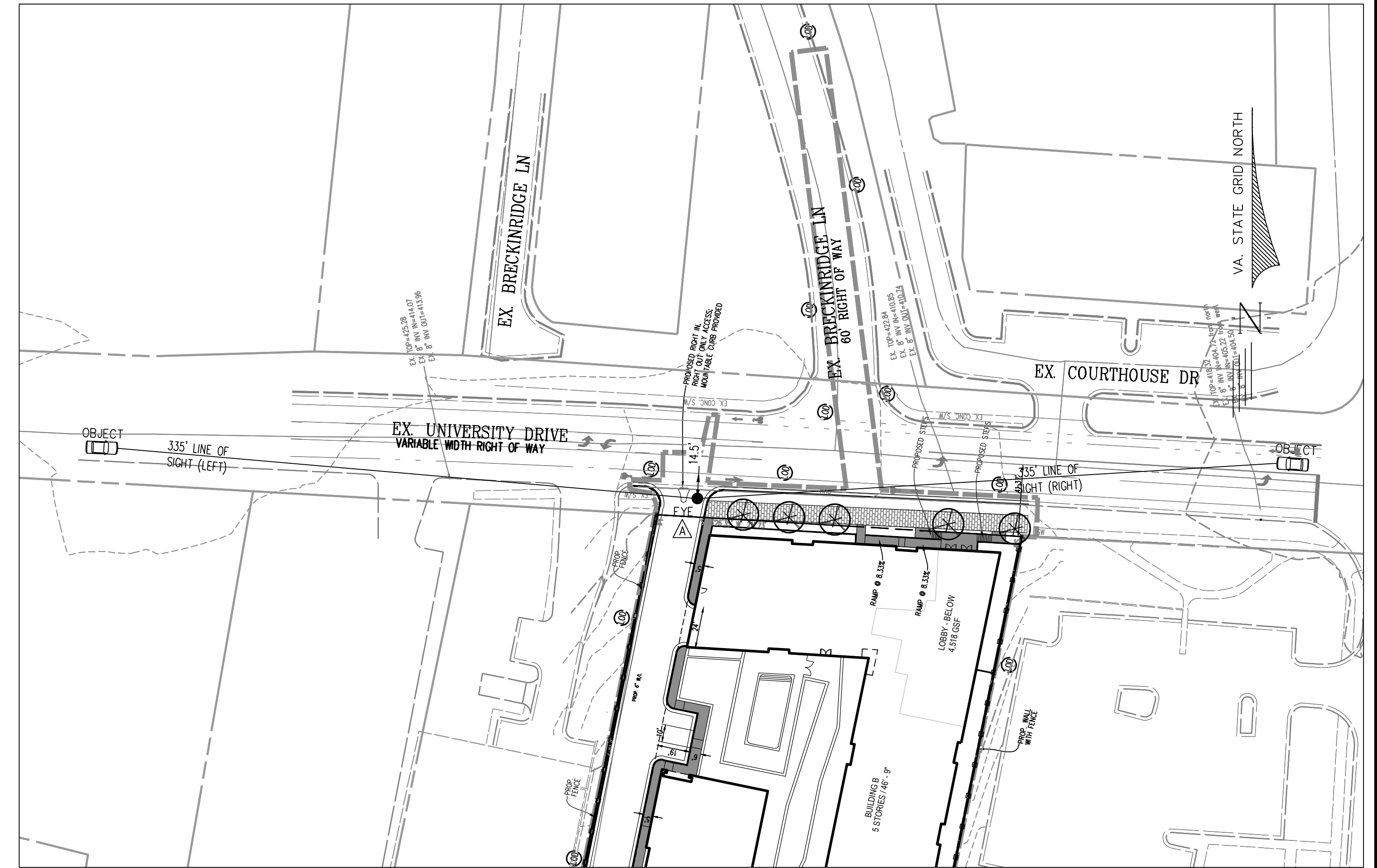
SHEET
22
OF
39
FILE No.
RZ-12787

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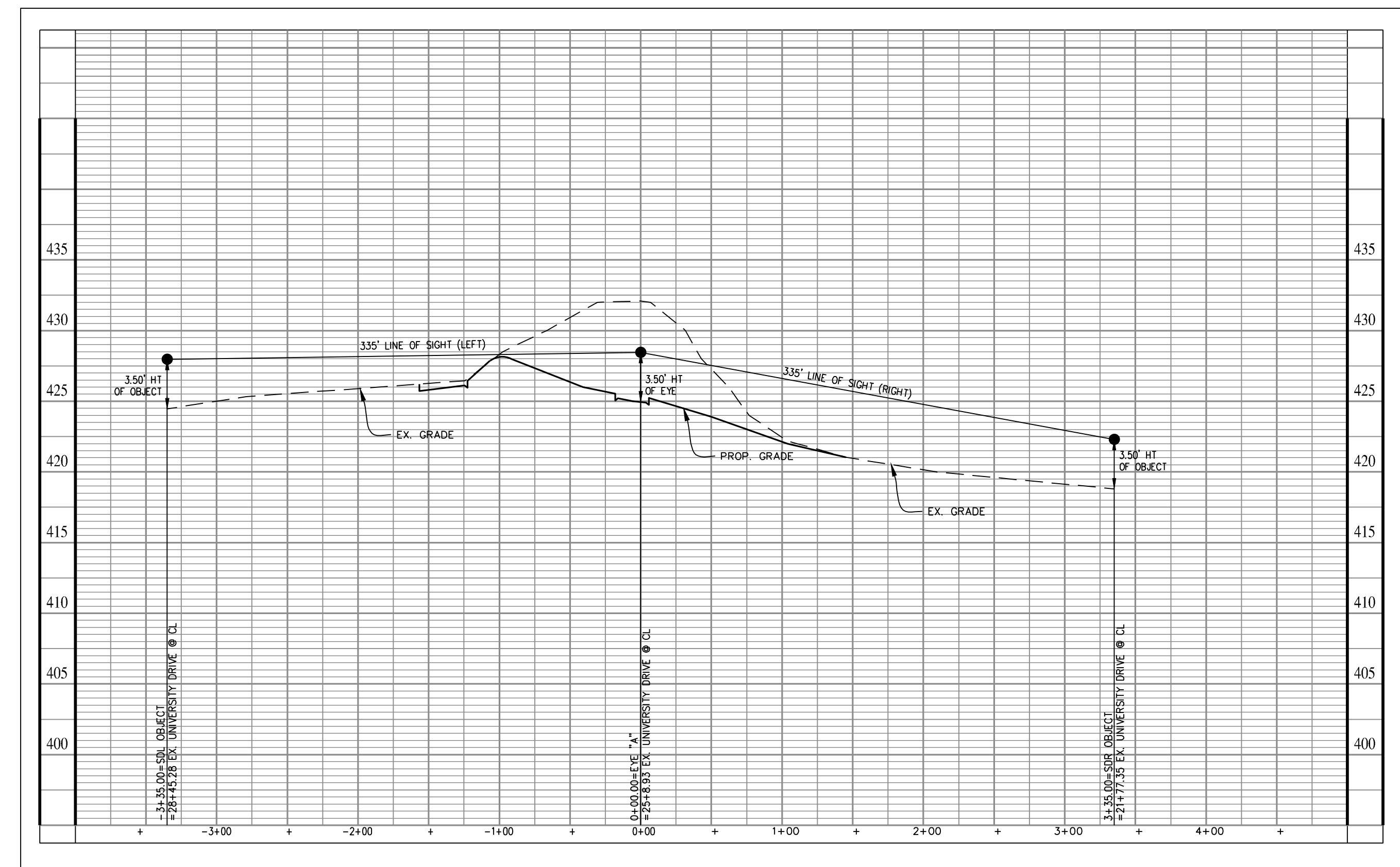
PLAN VIEW
SCALE: 1"=30'

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



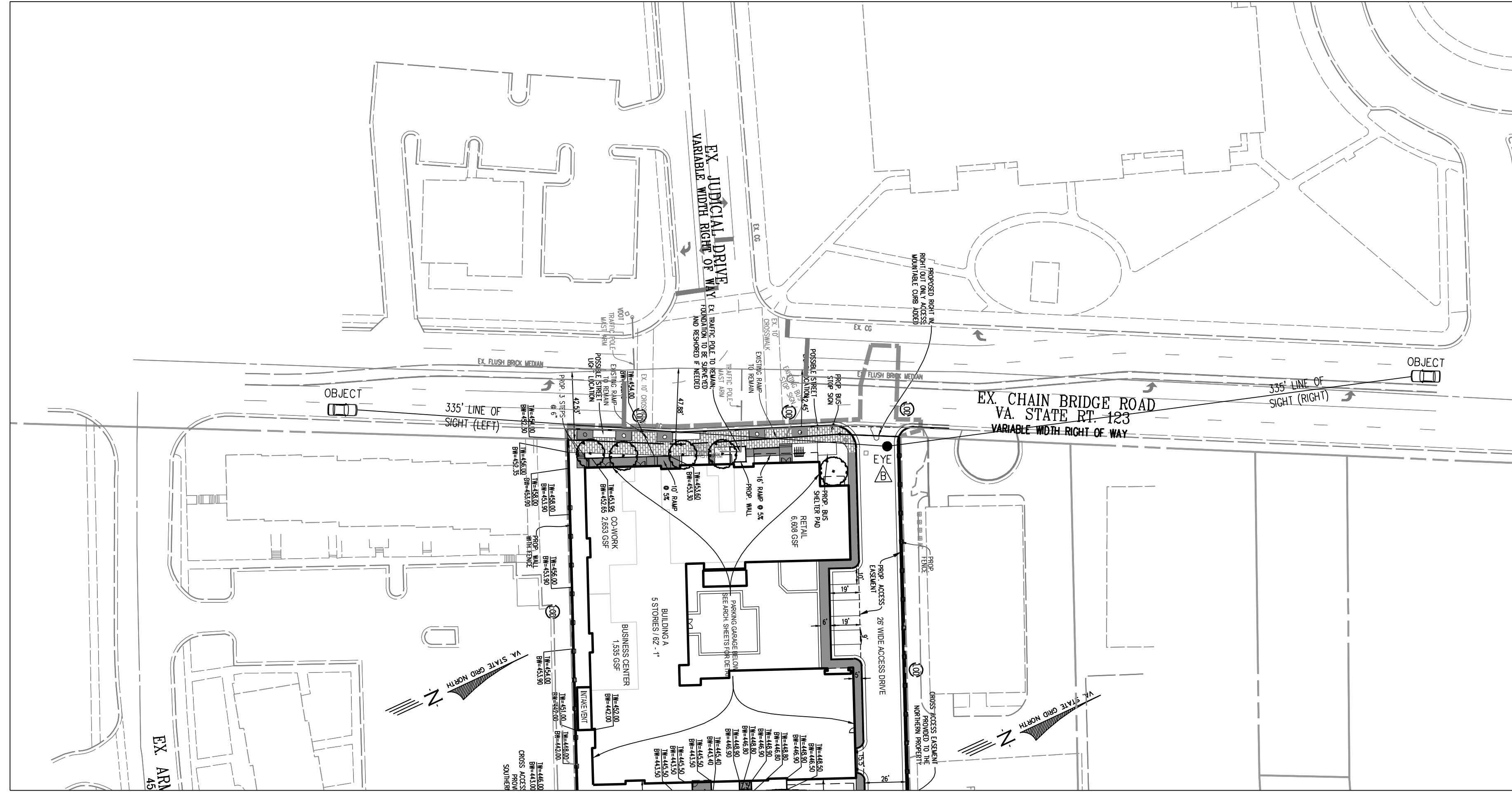
PLAN VIEW
SCALE: 1"=50'

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



Urban, Ltd. - J:\085\4131 Chain Bridge Rd\Rezoning\12787-31-SIGHT Dwg [SIGHT D-B.dwg] April 17, 2025 - 3:33pm aorenstberg

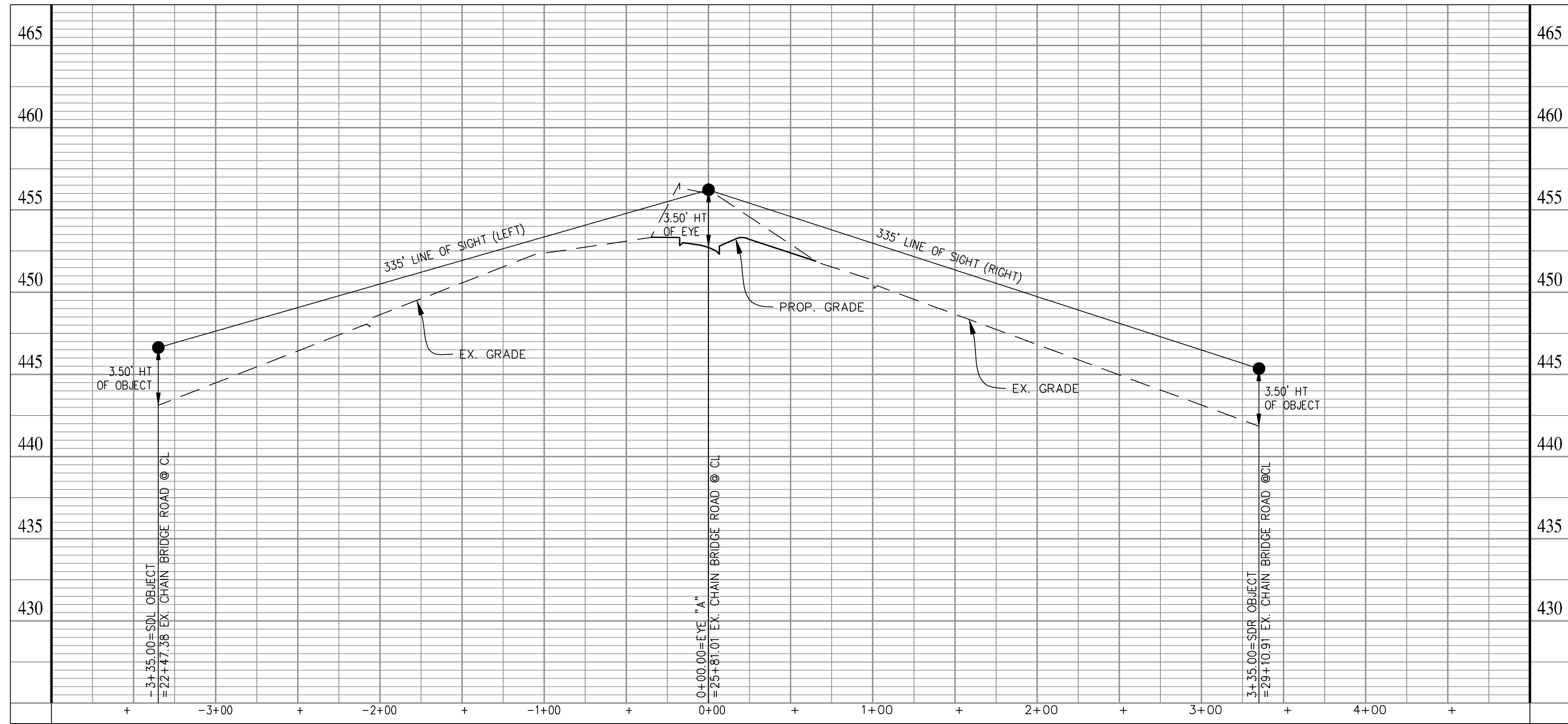
<p>Urban, Ltd. 4000 TECHNOLOGY CT. CHANTILLY, VA. 20151 TEL. 703.642.2306 FAX. 703.783.8888 www.urban-lltd.com</p> <p style="text-align: center;">urban Planners/Engineers/Landscape Architects/Lead Surveyors</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">No.</th> <th style="width: 10%;">DATE</th> <th style="width: 80%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	DATE	DESCRIPTION												
No.	DATE	DESCRIPTION														
<p>PLAN DATE: 05-04-2016 04-22-2019 04-22-2020 06-11-2024 09-03-2024 12-02-2024 04-15-2025</p>																
<p>COMMONWEALTH OF VIRGINIA CLAYTON C. TOOK Lic. No. 098790 04/19/2025 PROFESSIONAL ENGINEER</p>																
<p>SIGHT DISTANCE PROFILES 4131 CHAIN BRIDGE ROAD REZONING CDP-GDP CITY OF FAIRFAX, VIRGINIA</p>																
<p>SCALE: 1"=50' (H); 1"=50' (V) C.I.= 2' DATE: DEC., 2024</p>																
<p>SHEET 23 OF 39</p>																
<p>FILE No. RZ-12787</p>																



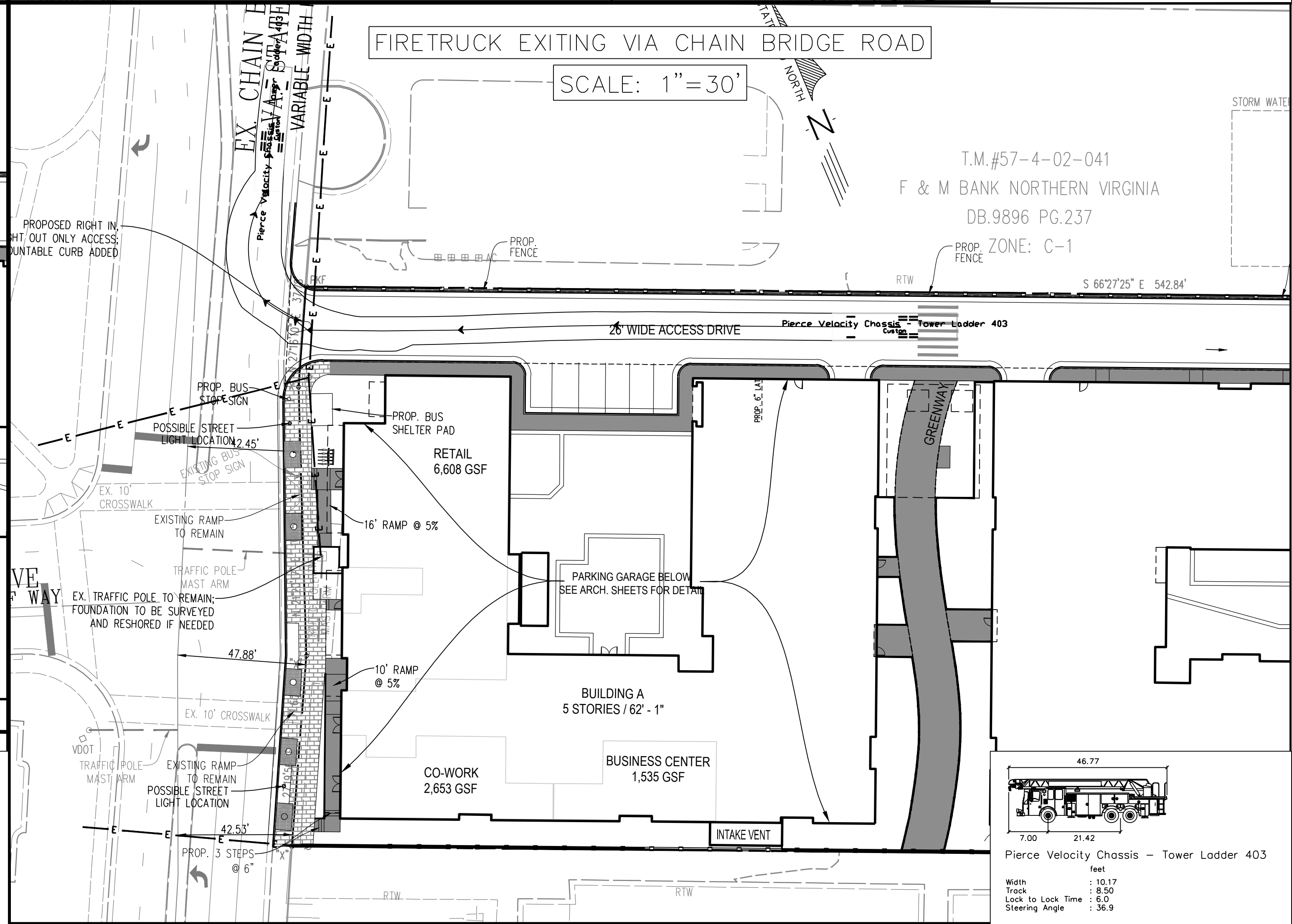
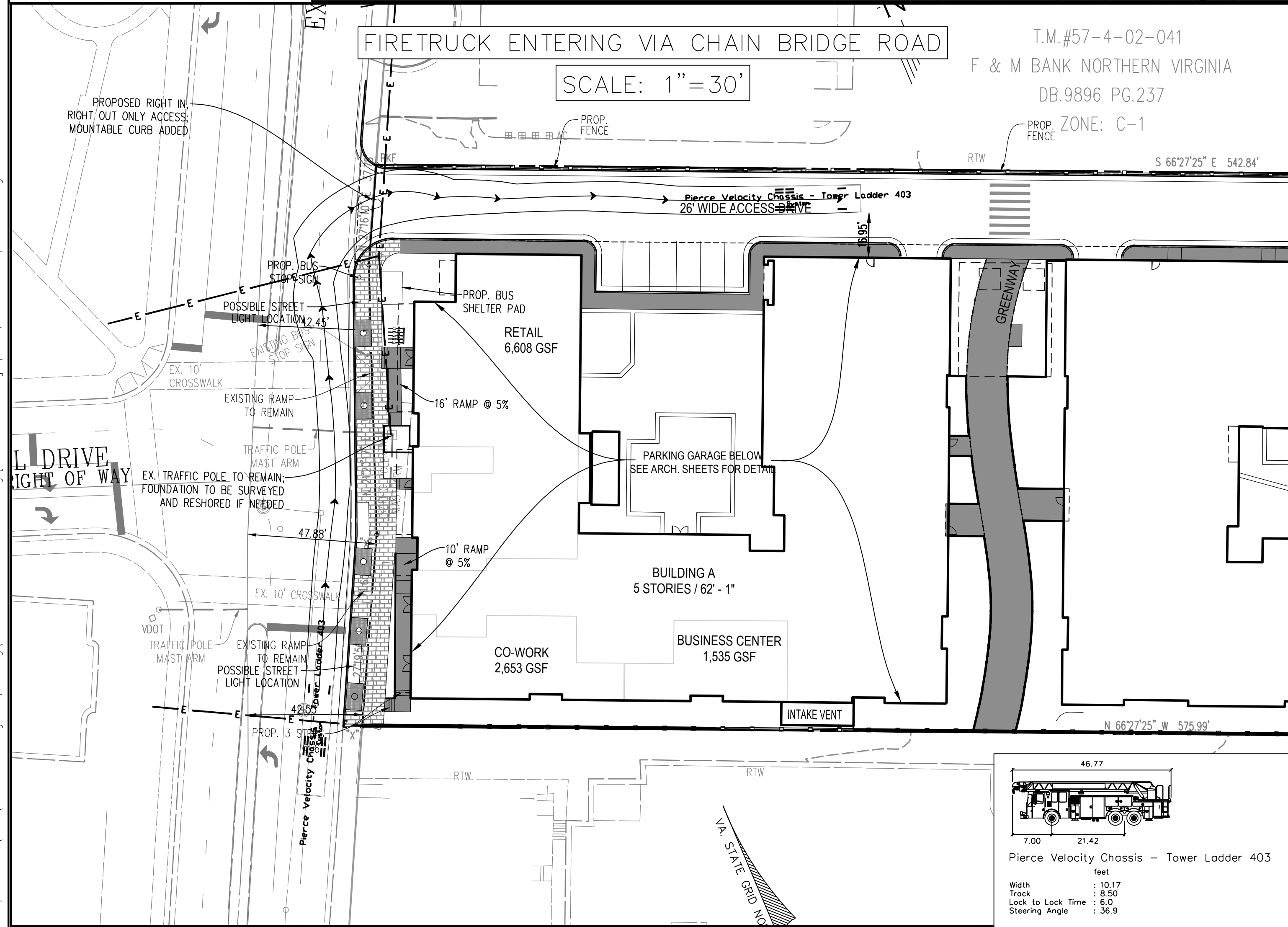
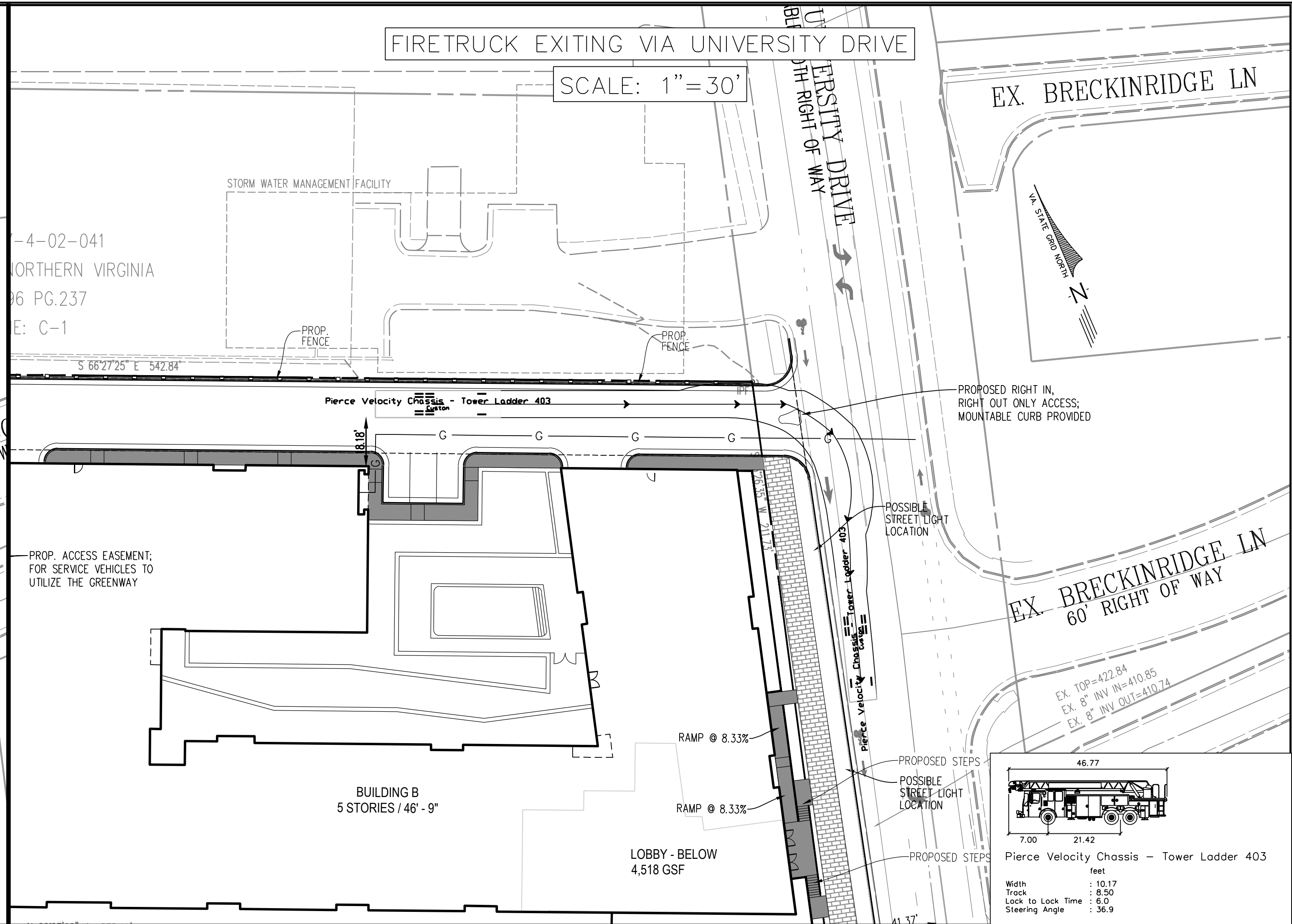
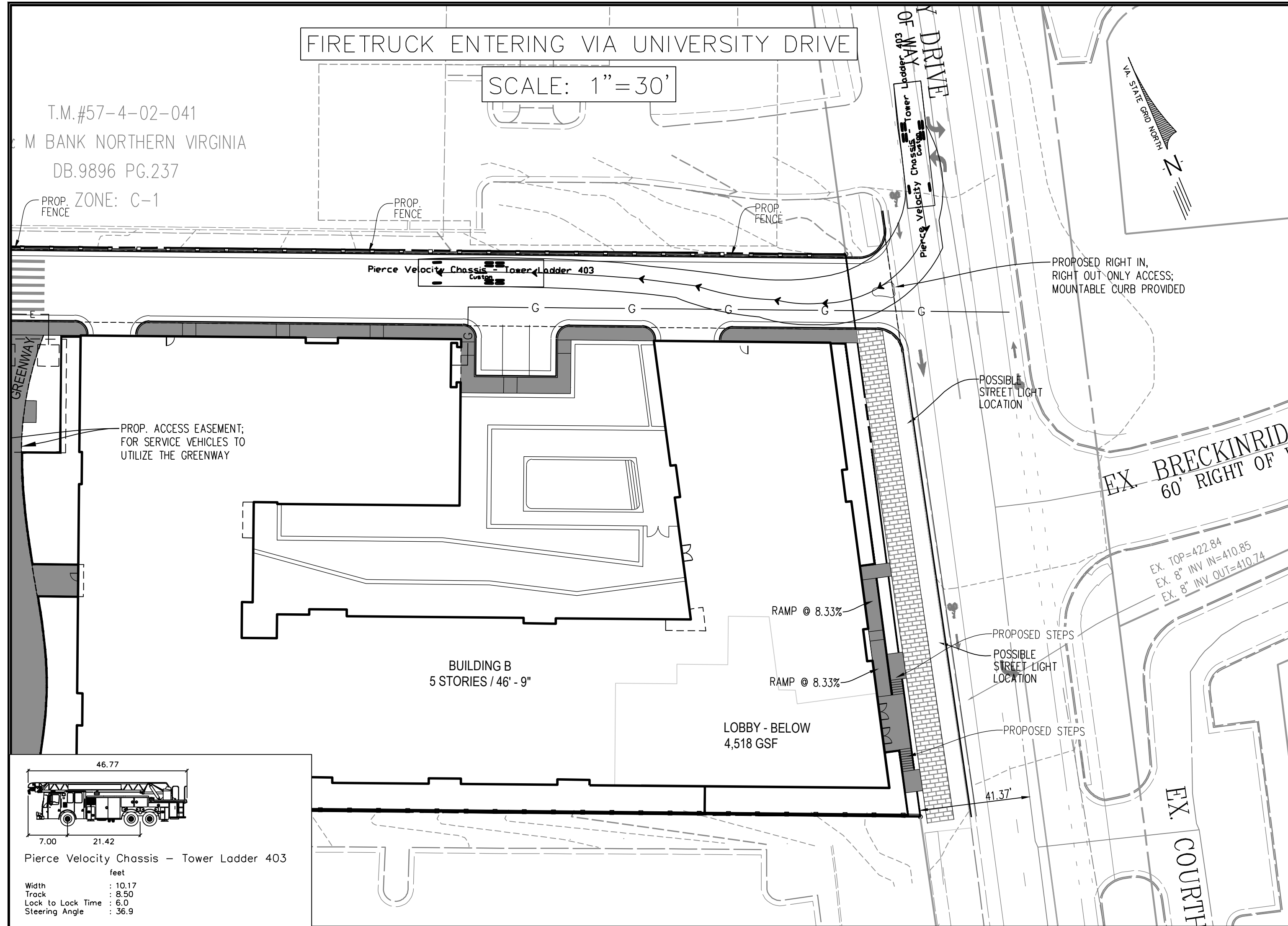
PLAN VIEW
SCALE: 1"=50'

SIGHT DISTANCE PROFILE
MAIN ENTRANCE ON CHAIN BRIDGE ROAD

EYE "B"
POSTED SPEED = 25 MPH
DESIGN SPEED = 30 MPH



SIGHT DISTANCE PROFILES		DATE: DEC., 2024		
4131 CHAIN BRIDGE ROAD		CITY OF FAIRFAX, VIRGINIA		
REZONING CDP-GDP		SCALE: 1"=50' (H); 1"=50' (V) C.I.= 2'		
FILE No. RZ-12787	SHEET 24 OF 39	REVISIONS		
Urban, Ltd. 4000 TECHNOLOGY CT. CHANTILLY, VA, 20151 TEL. 703.642.2306 FAX. 703.642.2308 www.urban-lltd.com		Planners+Engineers+Landscape Architects+Land Services		
PLAN DATE	05-04-2016	NO.	DATE	DESCRIPTION
	04-22-2019			
	06-11-2024			
	09-03-2024			
	12-02-2024			
	04-15-2025			



Urban, Ltd. - J. VOBES\131 Chain Bridge Rd\Rezoning\12787-33-Auto Turn Exhibit.dwg [Firetruck Autoturn] April 17, 2025 - 3:33pm sorenberg

PLAN DATE	NO.	DATE	REVISIONS
05-04-2016	1		
04-22-2019	2		
04-22-2019	3		
06-11-2024	4		
09-03-2024	5		
12-02-2024	6		
04-15-2025	7		

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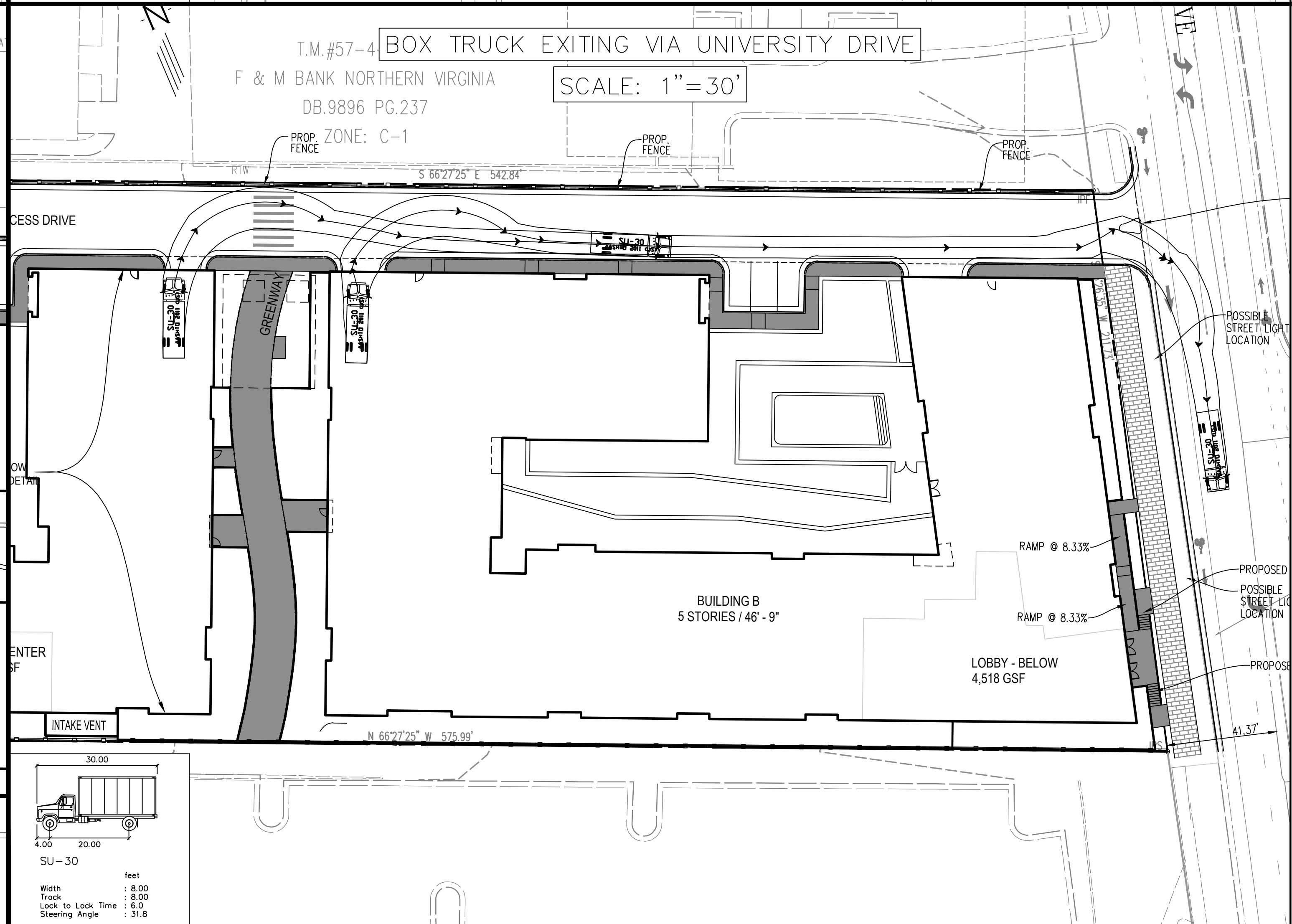
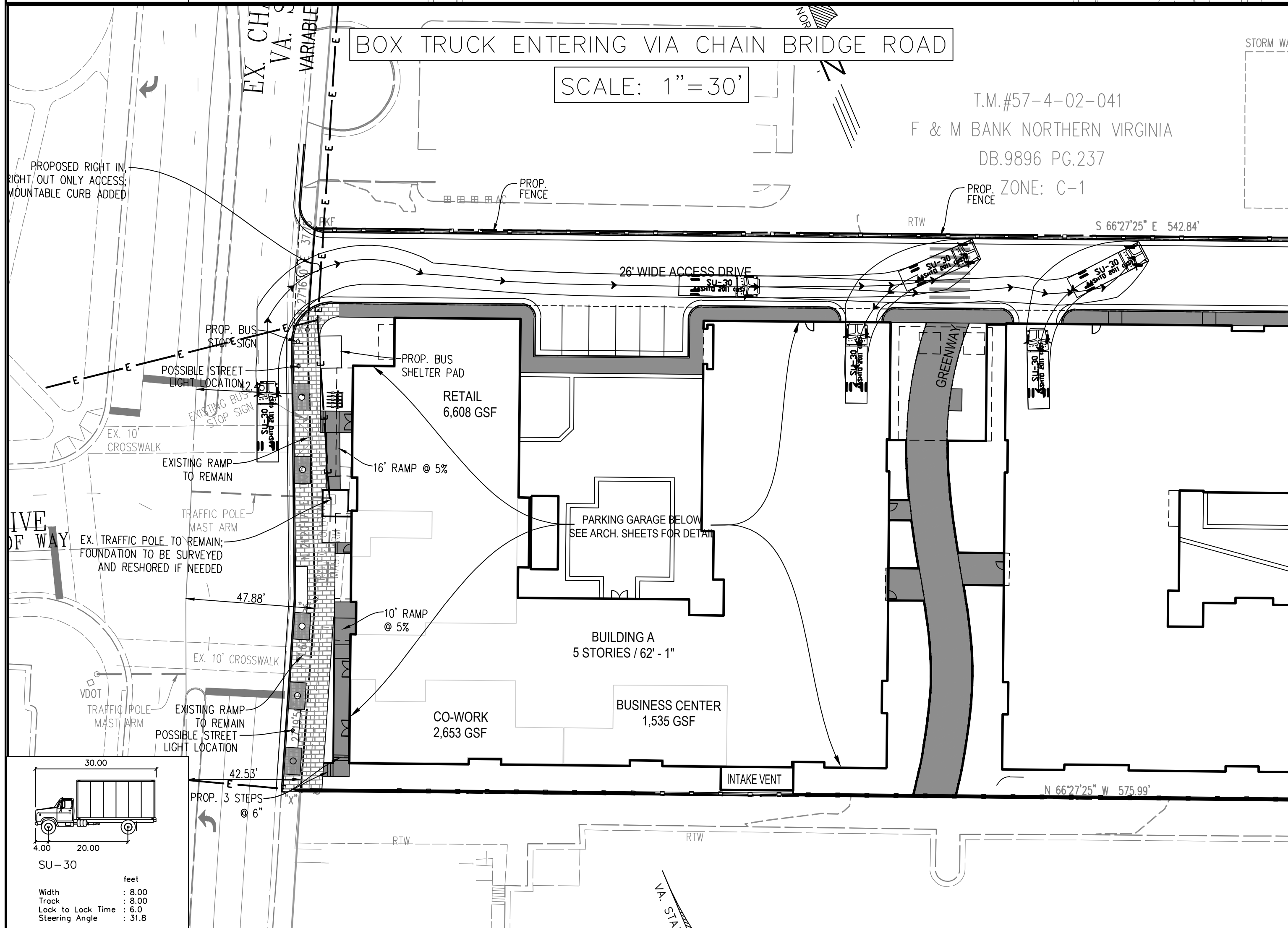
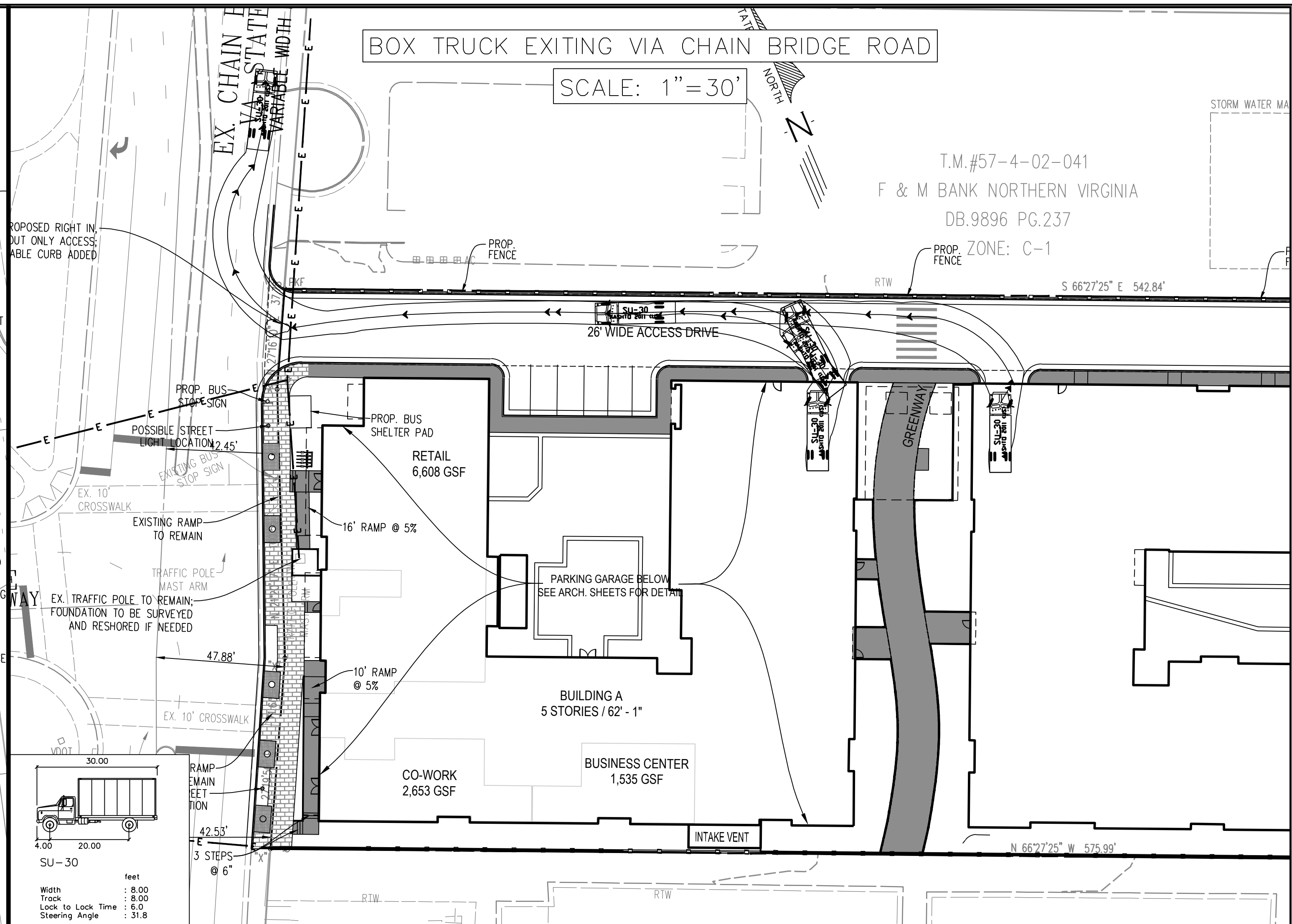
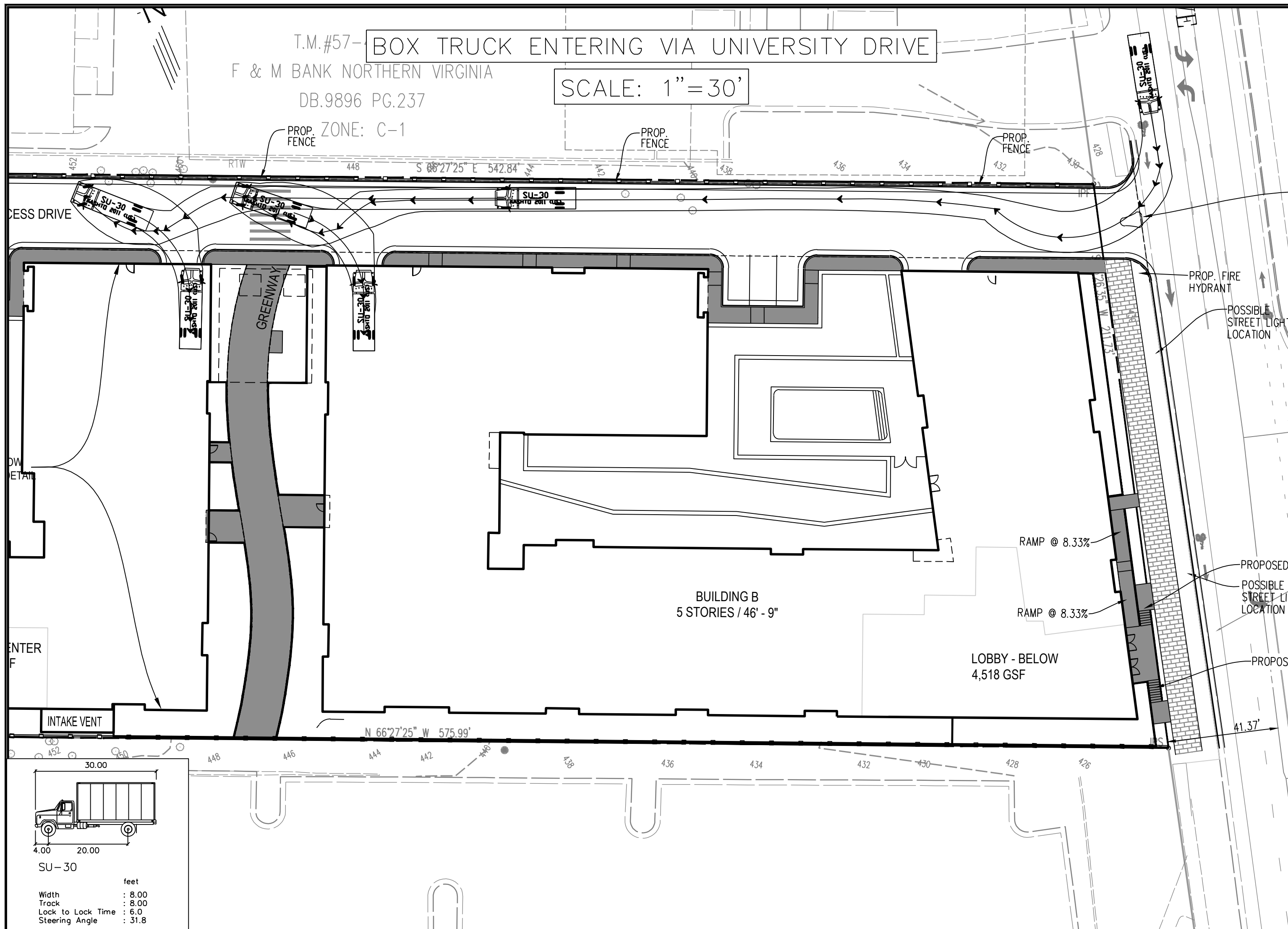
COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
Lic. No. 038790
04/19/2025
PROFESSIONAL ENGINEER

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

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

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FILE NO.
RZ-12787



Urban, Ltd. - J:\085\131.Chain Bridge Rd\Rezoning\12787-33-Auto-Turn Exhibit.dwg [SU-30 AutoTurn] April 17, 2025 - 3:33pm arensberg

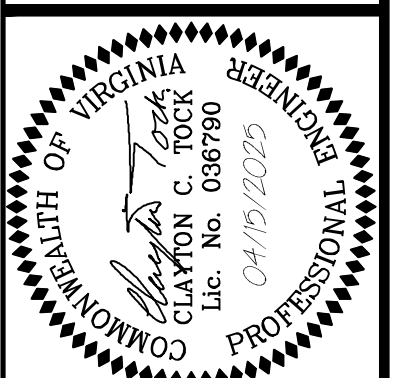
SU-30
 feet
 Width : 8.00
 Track : 8.00
 Lock to Lock Time : 6.0
 Steering Angle : 31.8

SU-30
 feet
 Width : 8.00
 Track : 8.00
 Lock to Lock Time : 6.0
 Steering Angle : 31.8

No.	DATE	DESCRIPTION

PLAN DATE	DESCRIPTION
05-04-2016	
04-22-2019	
06-11-2024	
09-03-2024	
12-02-2024	
04-15-2025	

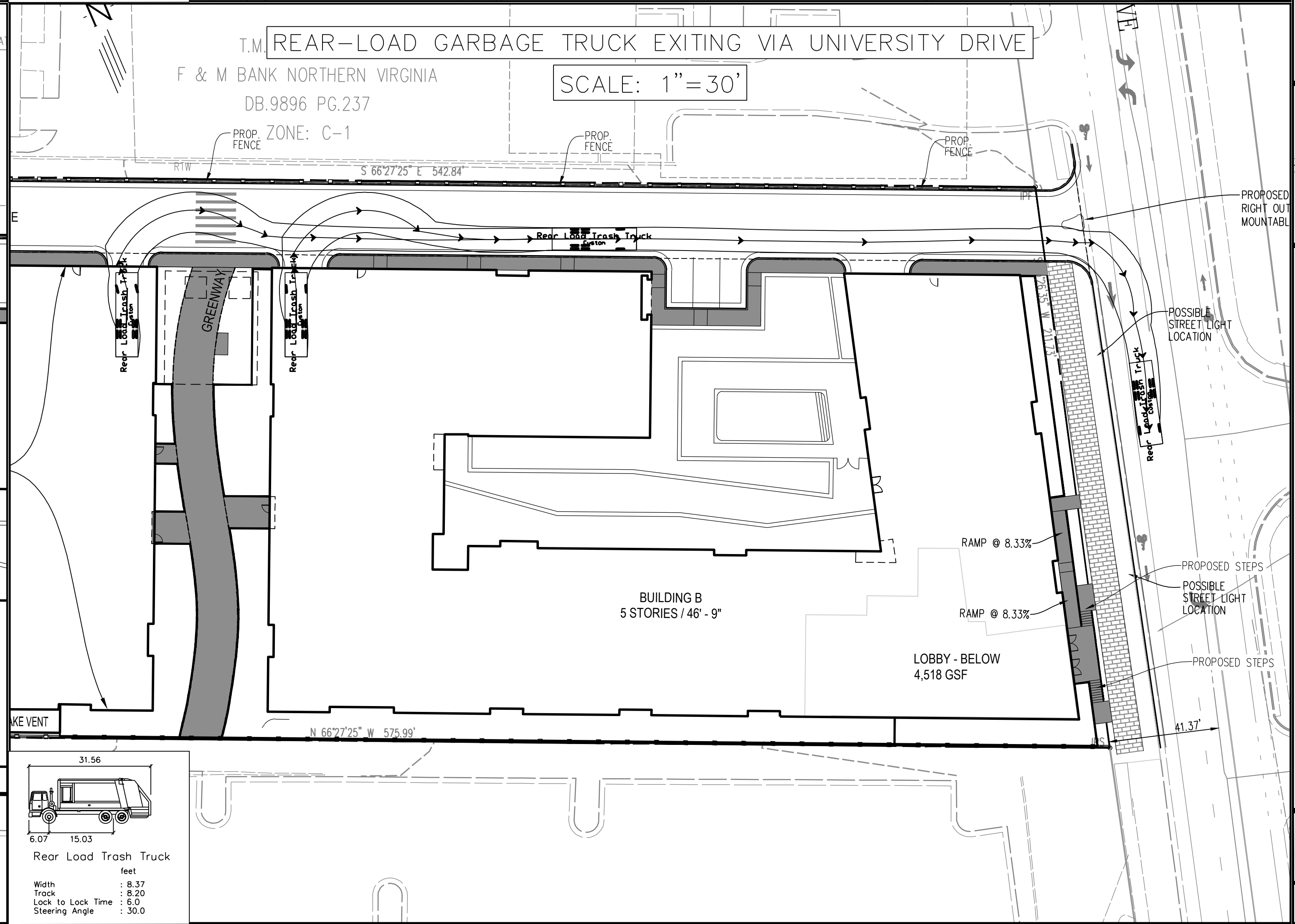
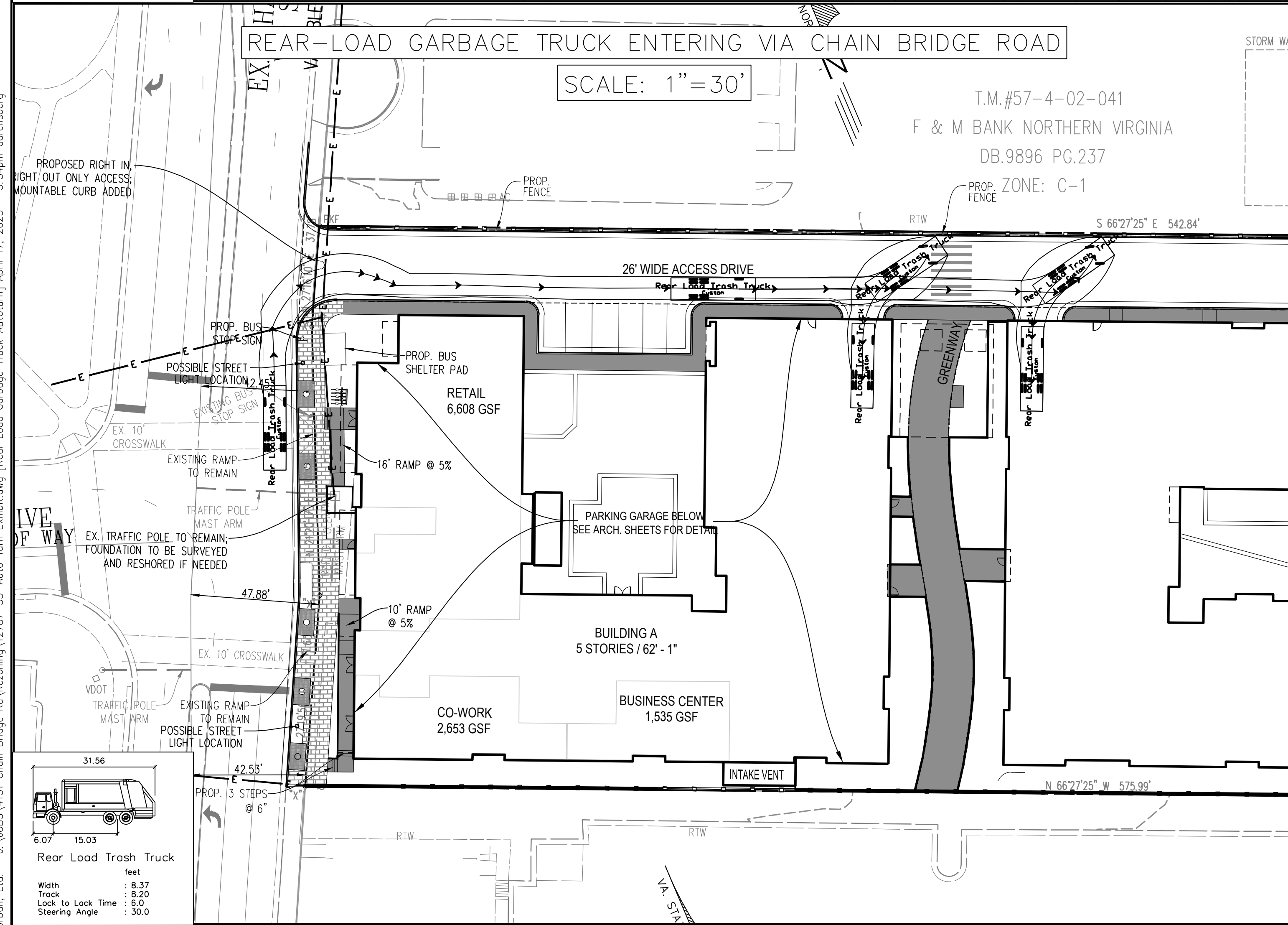
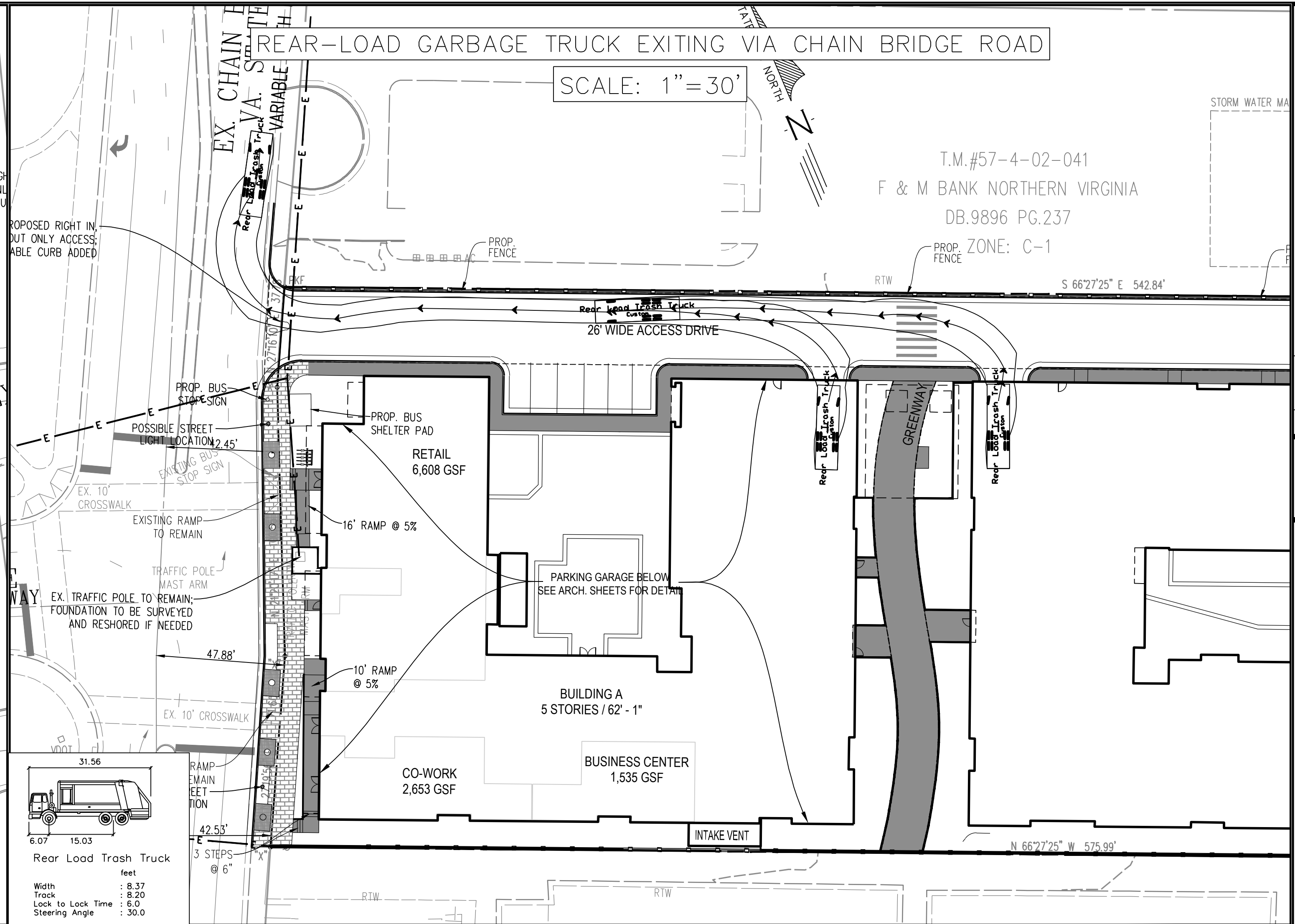
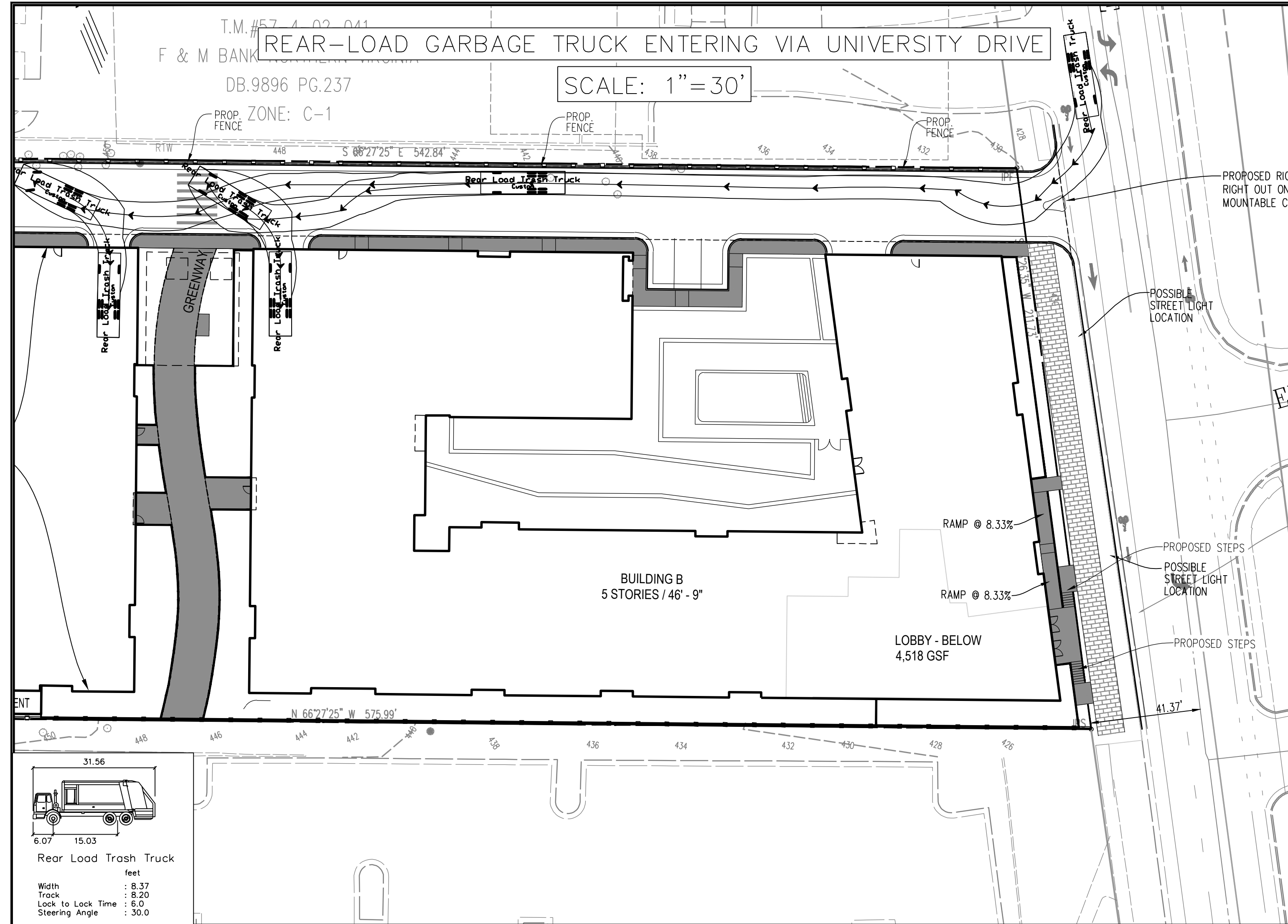
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 CHANTILLY, VA 20151
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 FAX: 703.782.8888
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BOX TRUCK AUTOTURN ANALYSIS
 4131 CHAIN BRIDGE ROAD
 REZONING CDP-GDP
 CITY OF FAIRFAX, VIRGINIA

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

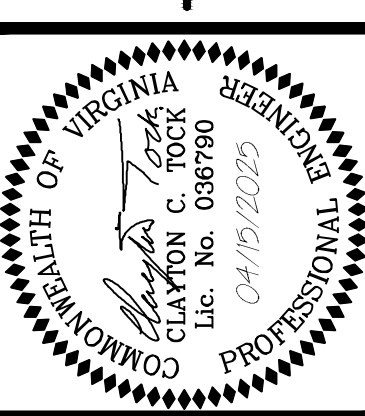
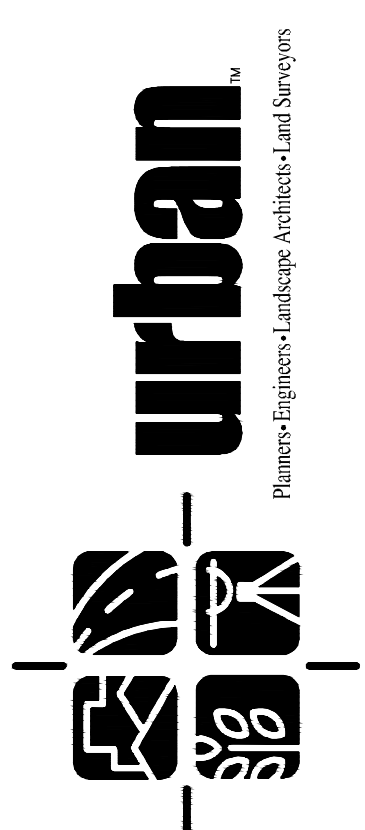
SHEET 26 OF 39
 FILE No. RZ-12787



NO.	DATE	DESCRIPTION

PLAN DATE
05-04-2016
04-22-2019
06-11-2024
09-03-2024
12-02-2024
04-15-2025

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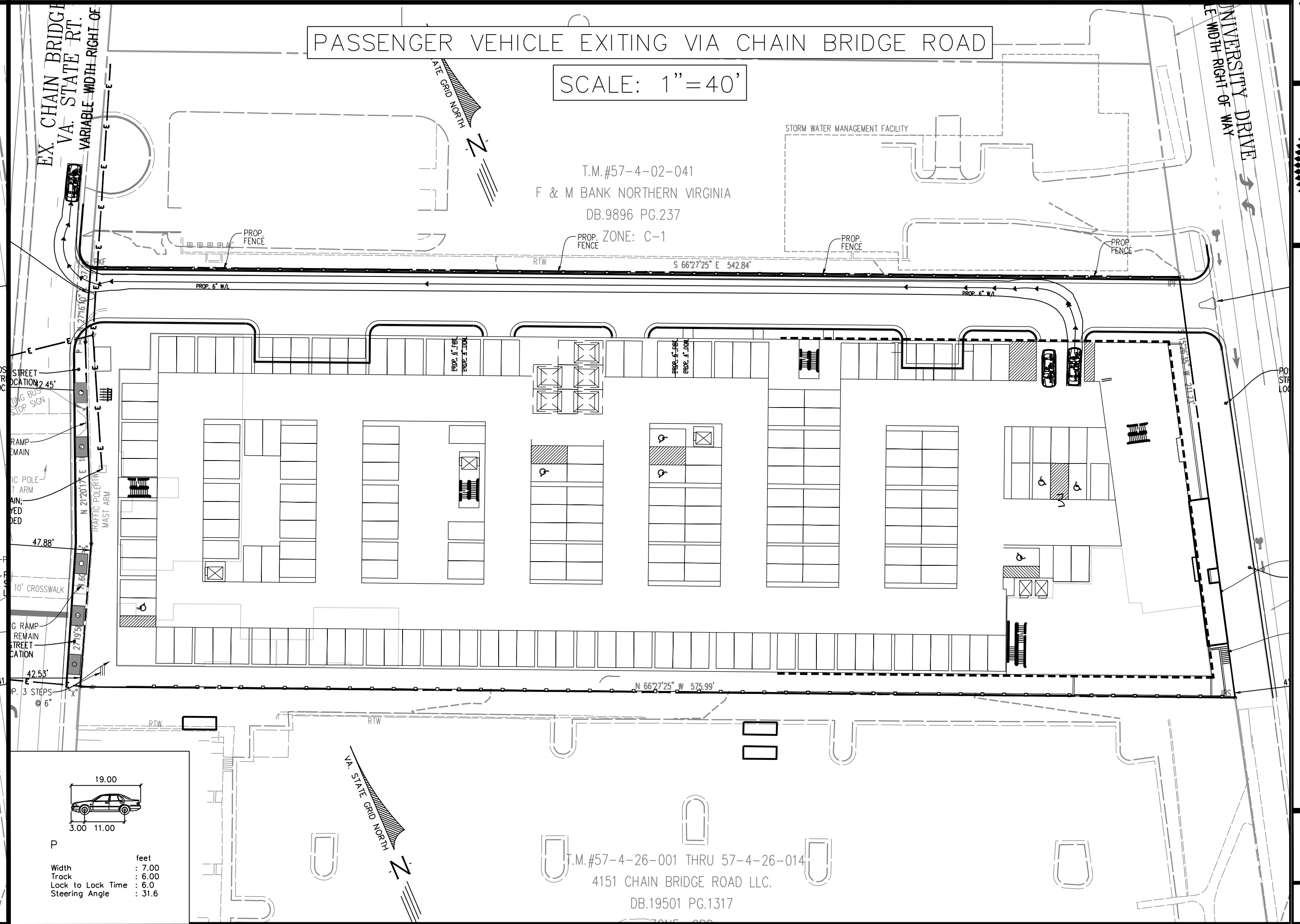
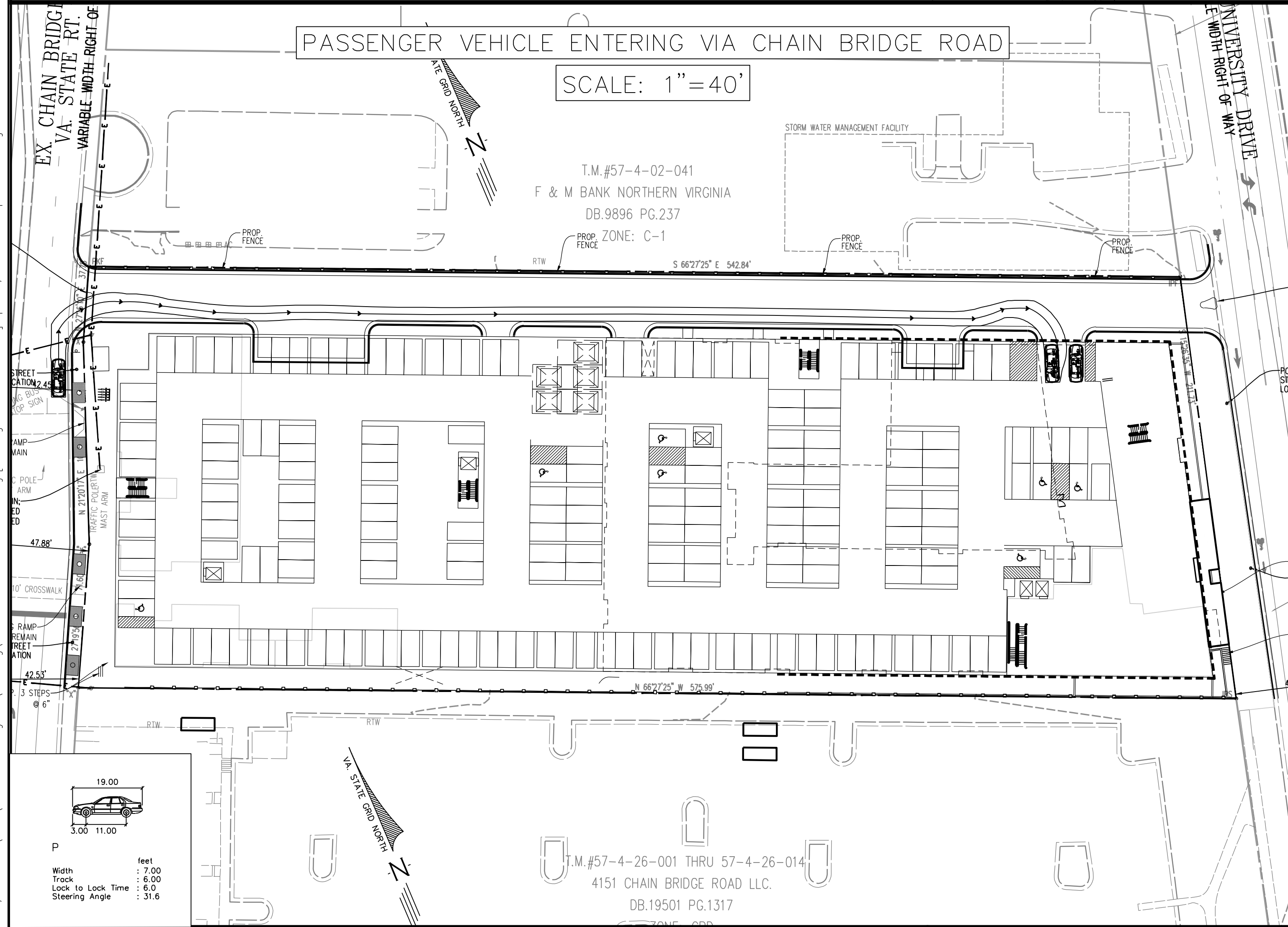
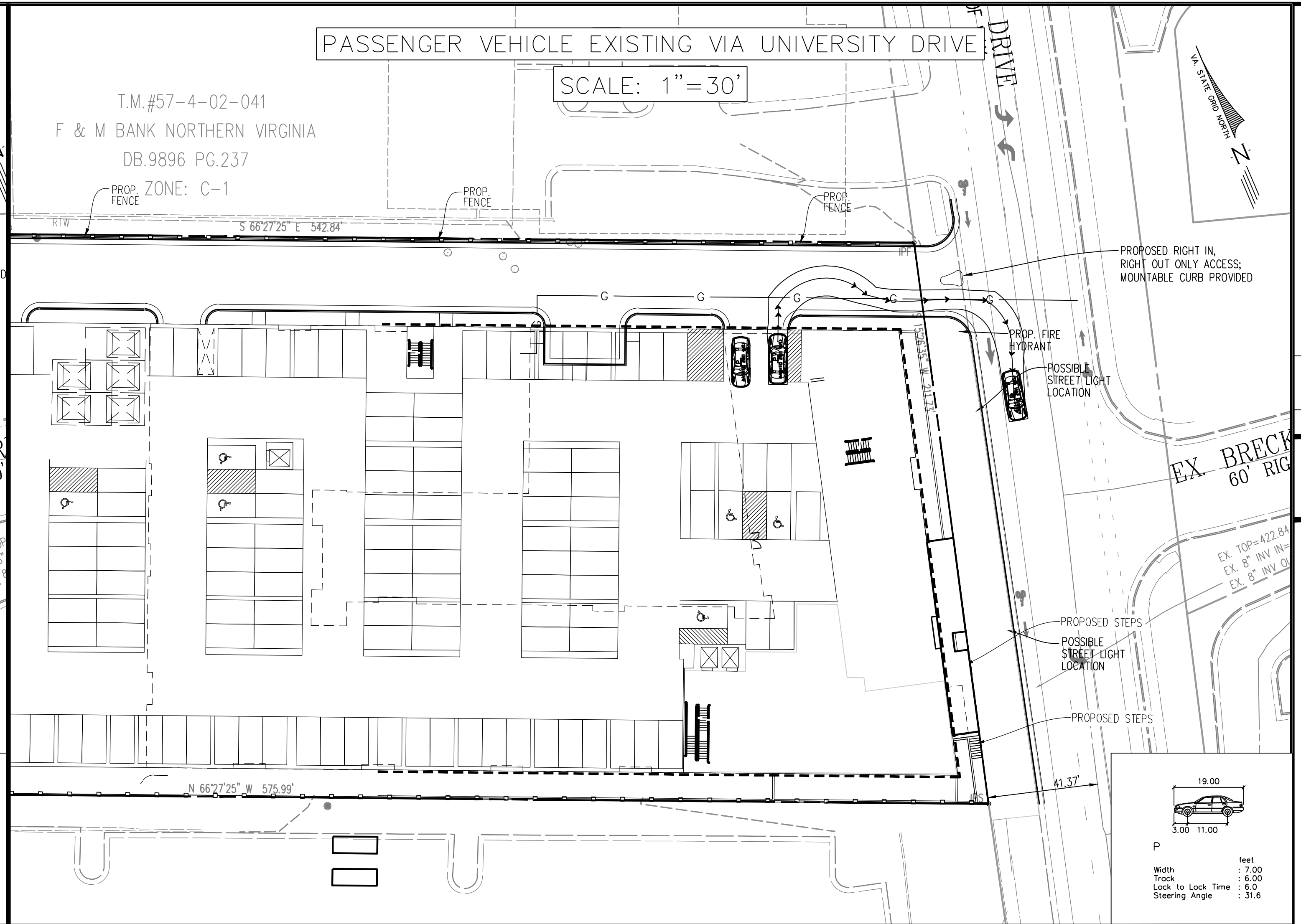
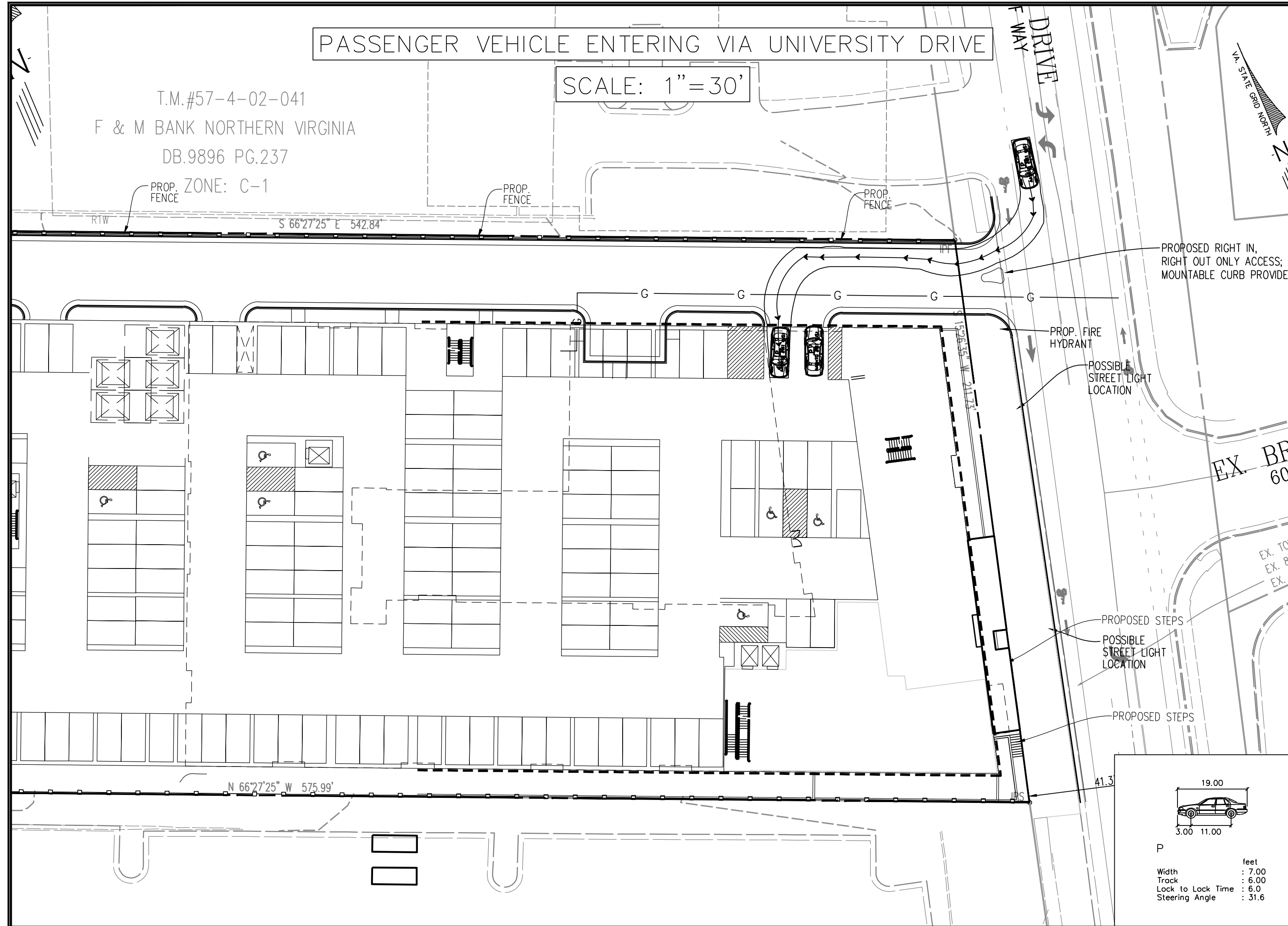


REAR LOAD GARBAGE TRUCK AUTOTURN ANALYSIS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
SCALE: AS NOTED
DATE: DEC., 2024
C.I.= N/A

FILE No.
RZ-12787

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Urban, Ltd. - J. VOBS\4131 Chain Bridge Rd\Rezoning\12787-33-Auto-Turn Exhibit.dwg [Rear Load Garbage Truck Autoturn] April 17, 2025 - 3:34pm aaronsberg



Urban, Ltd. - J:\085\131 Chain Bridge Rd\Rezoning\12787-33-Auto Turn Exhibit.dwg [Passenger Vehicle Autoturn] April 17, 2025 - 3:34pm arensberg

PLAN DATE	DESCRIPTION
05-04-2016	
04-22-2019	
06-11-2024	
09-03-2024	
12-02-2024	
04-15-2025	

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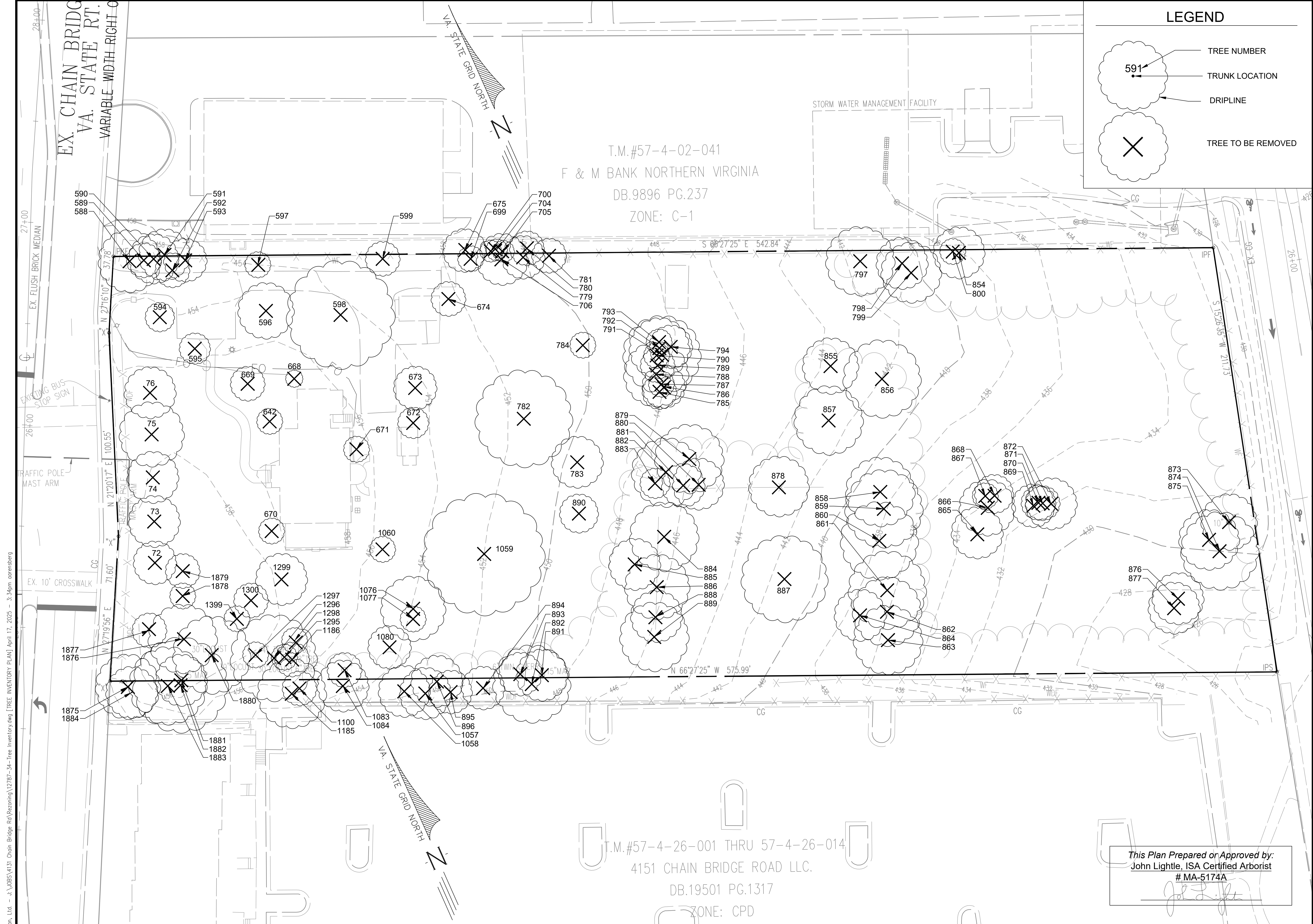
COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
Lic. No. 038790
04/19/2025
PROFESSIONAL ENGINEER

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

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

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FILE No.
RZ-12787



LEGEND

- 591 (cloud shape) TREE NUMBER
- 591 (dot) TRUNK LOCATION
- 591 (cloud shape) DRIPLINE
- X (cloud shape) TREE TO BE REMOVED

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

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

PLAN DATE	10-16-2019	DESCRIPTION	
	04-22-2020		
	06-11-2024		
	09-03-2024		
	12-02-2024		
	04-15-2025		

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COMMONWEALTH OF VIRGINIA
 John Lightle
 Lic. No. 1957
 07/15/2025
 LANDSCAPE ARCHITECT

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

SCALE: N/A
 DATE: DEC. 2024

SHEET
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 OF
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FILE No.
 RZ-12787

Urban, Ltd. - J:\085\4131 Chain Bridge Rd\Rezoning\12787-34-Tree Inventory.dwg [TREE INVENTORY PLAN] April 17, 2025 - 3:34pm corensberg

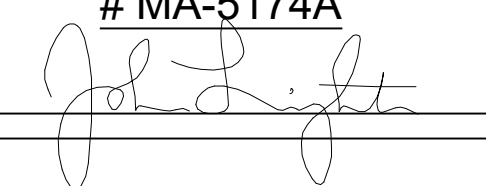
Urban, Ltd. - J:\085\4131 Chain Bridge Rd\Rezoning\12787-34-Tree Inventory.dwg [TREE INVENTORY PLAN 2] April 17, 2025 - 3:34pm aorenberg

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'	18.75			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	Eastern 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 triacanthos var. inermis	Thornless Honeylocust	18"	16'	18'	53.13			Remove	Trusted 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'	0.00	Yes	Co-Owned	Remove	Dead
892	Juglans nigra	Black Walnut	36"	18'	36'	6.25	Yes	Offsite	Remove	Heavy Ivy; Decay; Near Dead
893	Juglans nigra	Black Walnut	6"	10'	6'	34.38	Yes		Remove	Ivy; Decay; Co-dominant
894	Juglans nigra	Black Walnut	12"	10'	12'	31.25	Yes	Offsite	Remove	Heavy Ivy; Decay
895	Morus rubra	Red Mulberry	12"	10'	12'	28.13	Yes	Offsite	Remove	Heavy Ivy; Decay; Leaning; Trunk wound
896	Prunus serotina	Black Cherry	15"	12'	15'	12.50	Yes	Co-Owned	Remove	Heavy Ivy; Decay; Co-dominant
1057	Robinia pseudoacacia	Black Locust	12"	12'	12'	37.50	Yes	Offsite	Remove	Decay; Co-dominant; Heavy Ivy; Reduced canopy
1058	Robinia pseudoacacia	Black Locust	12"	12'	12'	34.38	Yes	Offsite	Remove	Decay; Co-dominant; Heavy Ivy; Reduced canopy
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'	40.63	Yes		Remove	Decay
1084	Prunus serotina	Black Cherry	12"	12'	12'	40.63	Yes	Offsite	Remove	Decay; Heavy Ivy

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'	31.25	Yes	Offsite	Remove	Decay; Heavy Ivy; Multi-leader
1185	Robinia pseudoacacia	Black Locust	24"	16'	24'	37.50	Yes	Offsite	Remove	Decay; Heavy 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	
1675	Robinia pseudoacacia	Black Locust	12"	15'	12'	28.13	Yes	Offsite	Remove	Heavy Ivy; Decay; Co-dominant; Leaning on guy wires
1676	Robinia pseudoacacia	Black Locust	30"	16'	30'	46.88			Remove	Ivy
1677	Robinia pseudoacacia	Black Locust	10"	8'	10'	62.50			Remove	
1678	Robinia pseudoacacia	Black Locust	30"	6'	30'	12.50	Yes		Remove	Broken in half
1679	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'	21.88	Yes	Co-Owned	Remove	Decay; Heavy Ivy; Reduced canopy
1883	Robinia pseudoacacia	Black Locust	24"	18'	24'	9.38	Yes	Offsite	Remove	Decay; Near Dead; Open trunk wound
1884	Morus rubra	Red Mulberry	12"	12'	12'	53.13		Offsite	Preserve	


NOTES:

- TREE INVENTORY DATA COLLECTED ON DECEMBER 8, 2017 BY JOHN LIGHTLE, ISA-CA #MA-5174A, WITH OFFSITE TREES RE-EVALUATED AND UPDATED ON JANUARY 17, 2025 BY JOHN LIGHTLE, ISA-CA #MA-5174A.
- 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.
- ALL OFFSITE TREE REMOVAL SHALL REQUIRE REPLACEMENT IN ACCORDANCE WITH CODE SECTION 6.10 AND 4.5.9.


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


PLAN DATE: 10-20-2019, 04-22-2020, 06-11-2024, 09-03-2024, 12-02-2024, 04-15-2025
REVISIONS

Urban, Ltd.
4000 TECHNOLOGY CT.
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www.urban-ltd.com



Urban
Planners/Engineers/Landscape Architects/Lead Surveyors

COMMONWEALTH OF VIRGINIA

 Lic. No. 1957
 08/15/2025
 LANDSCAPE ARCHITECT

TREE INVENTORY
DATE: DEC. 2024

4131 CHAIN BRIDGE ROAD
 REZONING CDP-GDP

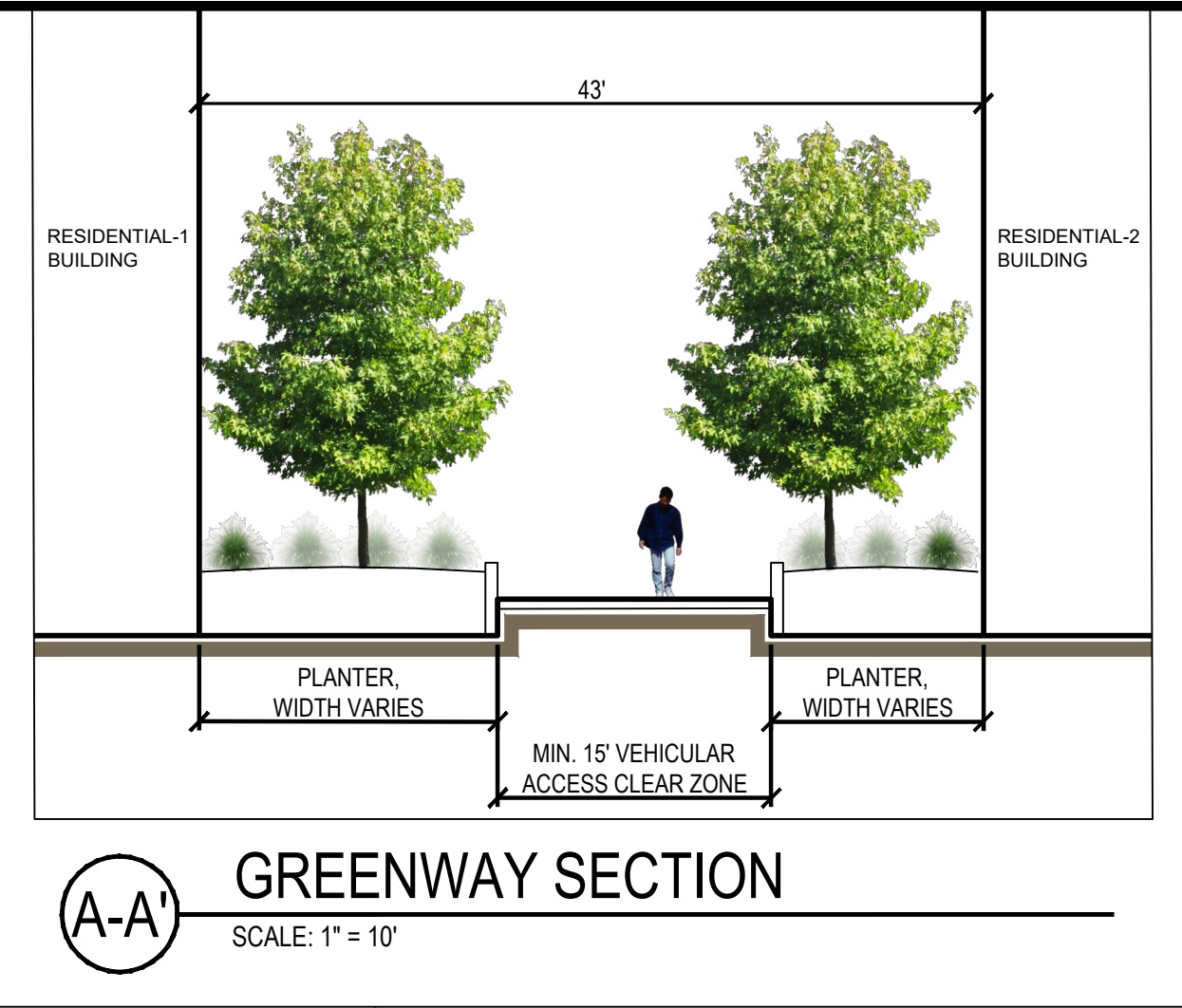
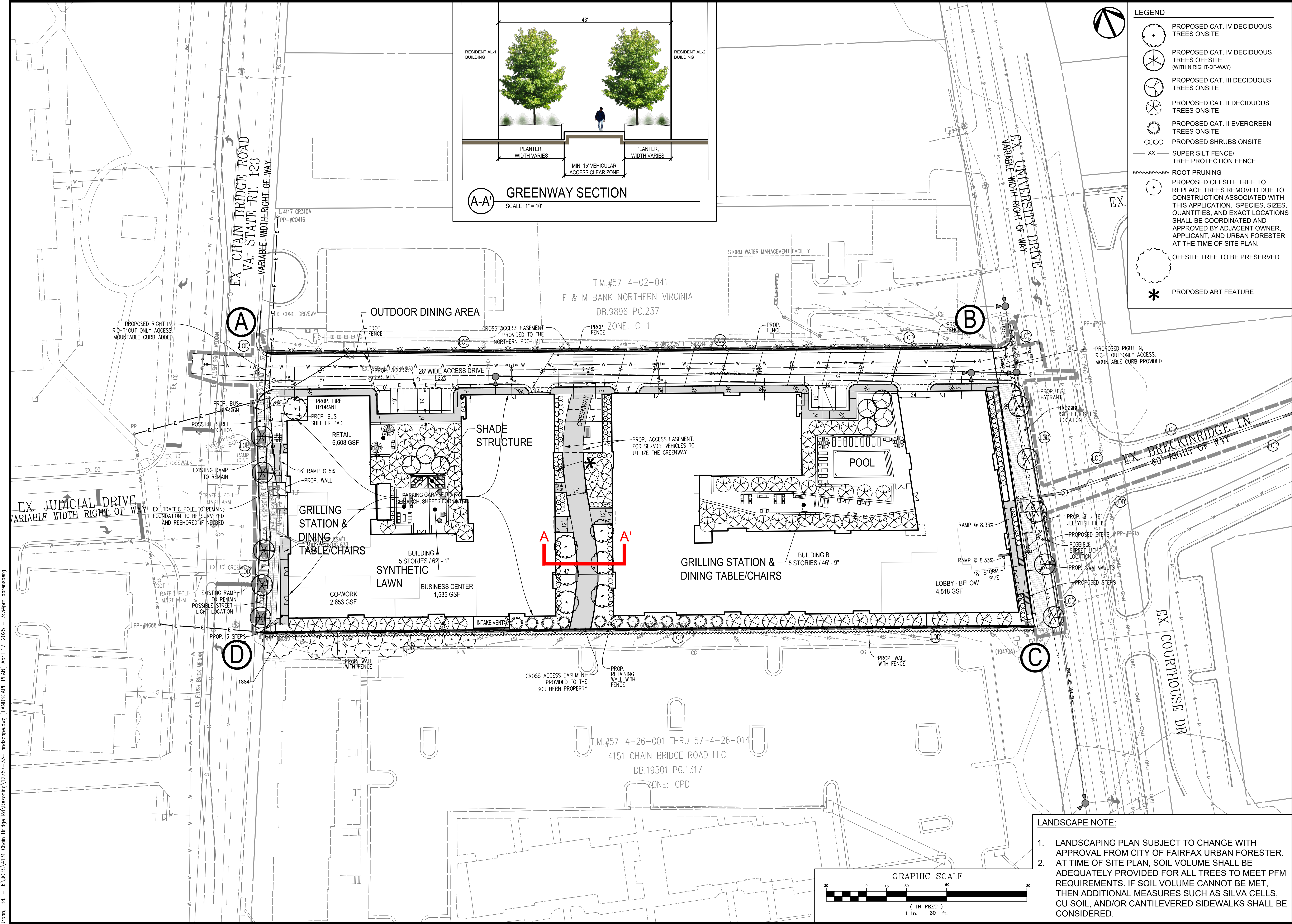
CITY OF FAIRFAX, VIRGINIA

SCALE: N/A

CI.= N/A

SHEET 31 OF 39
FILE No. RZ-12787

Urban, Ltd. - J:\085\4131 Chain Bridge RA\Resoning\1787-33-Landscape.dwg [LANDSCAPE PLAN] April 17, 2025 - 3:34pm adrensberg



LEGEND

- PROPOSED CAT. IV DECIDUOUS TREES ONSITE
- PROPOSED CAT. IV DECIDUOUS TREES OFFSITE (WITHIN RIGHT-OF-WAY)
- PROPOSED CAT. III DECIDUOUS TREES ONSITE
- PROPOSED CAT. II DECIDUOUS TREES ONSITE
- PROPOSED CAT. II EVERGREEN TREES ONSITE
- PROPOSED SHRUBS ONSITE
- SUPER SILT FENCE/TREE PROTECTION FENCE
- ROOT PRUNING
- PROPOSED OFFSITE TREE TO BE REMOVED DUE TO CONSTRUCTION ASSOCIATED WITH THIS APPLICATION. SPECIES, SIZES, QUANTITIES, AND EXACT LOCATIONS SHALL BE COORDINATED AND APPROVED BY ADJACENT OWNER, APPLICANT, AND URBAN FORESTER AT THE TIME OF SITE PLAN.
- OFFSITE TREE TO BE PRESERVED
- PROPOSED ART FEATURE

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

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

FILE No. RZ-12787

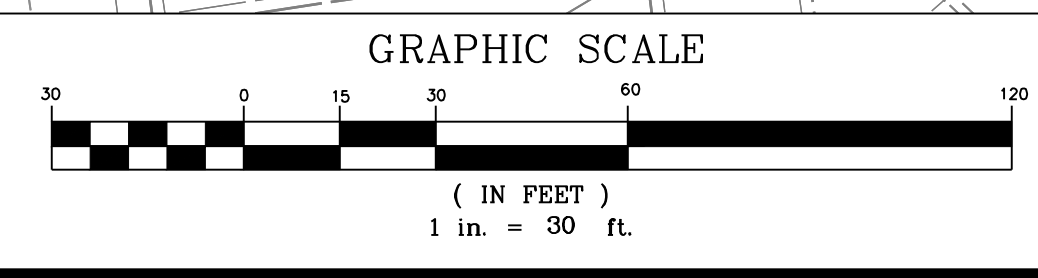
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Professional Engineer/ Landscape Architect/ Land Surveyor

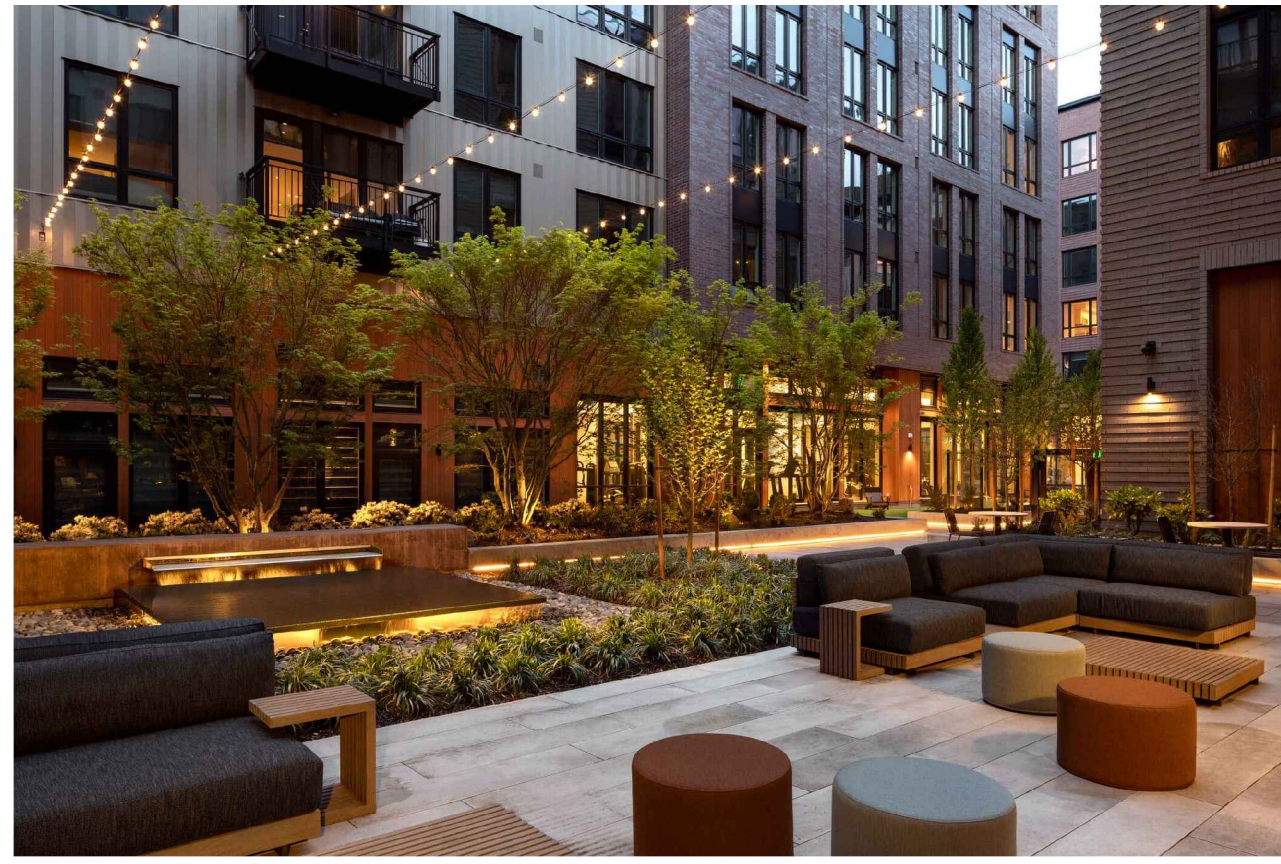
John Igitale
 Lic. No. 1967
 LANDSCAPE ARCHITECT

PLAN DATE	DESCRIPTION	DATE	REVISIONS
05-04-2016			
05-05-2016			
05-09-2016			
06-11-2024			
09-03-2024			
12-02-2024			
04-15-2025			

- LANDSCAPE NOTE:**
- LANDSCAPING PLAN SUBJECT TO CHANGE WITH APPROVAL FROM CITY OF FAIRFAX URBAN FORESTER. 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.



FOR ILLUSTRATIVE PURPOSES ONLY



OUTDOOR LOUNGE AREA



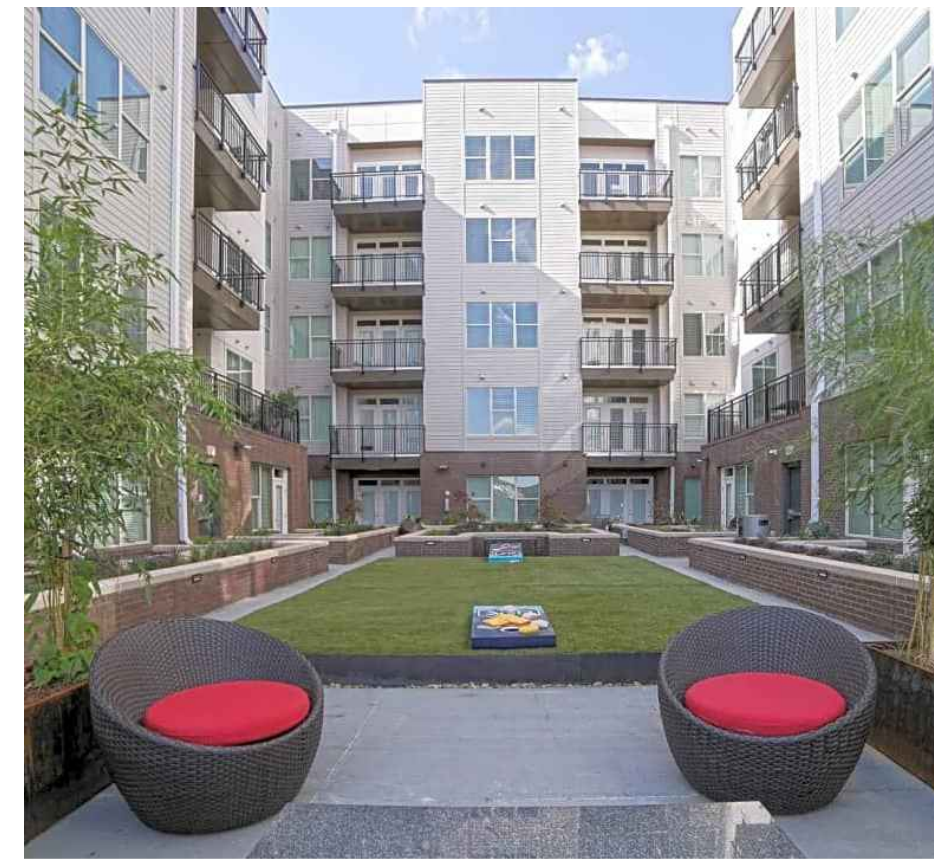
POOL



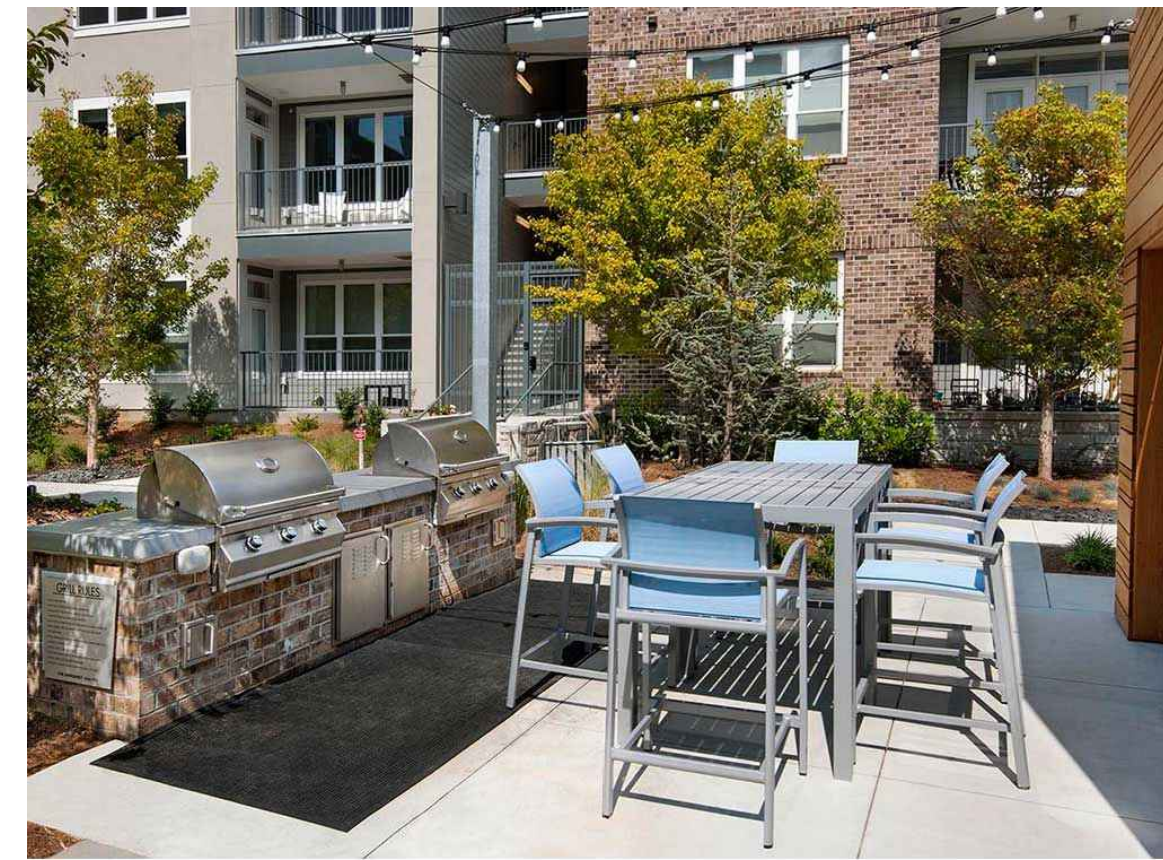
ART FEATURE



SHADE STRUCTURE



SYNTHETIC LAWN



GRILLING STATIONS & DINING TABLES / CHAIRS

10-YEAR TREE CANOPY REQUIREMENT CALCULATIONS	
Net Site Area (s.f.)	117,082
Zone: [CU]	Use: [Multifamily]
Tree Canopy Required (s.f.)	11,708
10-YEAR TREE CANOPY PROVIDED	
Total Canopy Area Provided Through Tree Preservation (s.f.)	0
Total Proposed Canopy Area Provided (s.f.)	13,950
DEDUCTION: Canopy Area Provided in Right-Of-Way	-2,000
Total Tree Canopy Provided (s.f.)	11,950
	10.21%

TRANSITIONAL YARD CALCULATIONS												
Onsite Zoning District: CU (Multifamily)	Adjacent Zoning District	REQUIRED						PROVIDED				
		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 TYPE	Shrubs
Buffer A-B: CO: COMMERCIAL OFFICE	TY1	6' Fence or Wall	7.5	543	543	0	22	0	6' Fence	0	0 Large Deciduous Trees 0 Small Deciduous Trees	0
	Street Trees per Z.O. 3.7.3.E	N/A	210	172	5	0	0	N/A	N/A	5 Large Deciduous Trees	N/A	
Buffer B-C: UNIVERSITY DRIVE	TY3	6' Fence or Wall	15	576	576	23	23	23	6' Fence	11	0 Large Deciduous Trees 25 Small Deciduous Trees 12 Evergreen Trees	0
	Street Trees per Z.O. 3.7.3.E	N/A	212	178	5	0	0	N/A	N/A	5 Large 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 Large Deciduous Trees 25 Small Deciduous Trees 12 Evergreen Trees	0
	Street Trees per Z.O. 3.7.3.E	N/A	212	178	5	0	0	N/A	N/A	5 Large Deciduous Trees	N/A	
Buffer D-A: CHAIN BRIDGE ROAD	TY3	6' Fence or Wall	15	576	576	23	23	23	6' Fence	11	0 Large Deciduous Trees 25 Small Deciduous Trees 12 Evergreen Trees	0
	Street Trees per Z.O. 3.7.3.E	N/A	212	178	5	0	0	N/A	N/A	5 Large Deciduous Trees	N/A	

SAMPLE PLANT SCHEDULE							
QTY	Symbol	Botanical Name	Common Name	Size	Type	Remarks	Total Canopy Coverage (SF)
Cat. IV Deciduous Trees							
7	[Symbol]	Celtis occidentalis	Common Hackberry	2" Cal.	B & B	Uniform branching pattern	1,400
		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	
Cat. IV Deciduous Trees (Offsite: in R.O.W.) See Note 1							
10	[Symbol]	Platanus acerifolia	London Planetree	2" Cal.	B & B	Uniform branching pattern	2,000
		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	
Cat. III Deciduous Trees							
7	[Symbol]	Aesculus fava	Yellow Buckeye	2" Cal.	B & B	Uniform branching pattern	1,050
		Cladrastis kentukea	Yellowwood	2" Cal.	B & B	Uniform branching pattern	
		Prunus serotina	Black Cherry	2" Cal.	B & B	Uniform branching pattern	
Cat. II Deciduous Trees							
83	[Symbol]	Cercis canadensis	Eastern Redbud	2" Cal.	B & B	Uniform branching pattern	8,300
		Comus florida	Flowering Dogwood	2" Cal.	B & B	Uniform branching pattern	
		Magnolia virginiana	Sweetbay Magnolia	2" Cal.	B & B	Uniform branching pattern	
Cat. II Evergreen Trees							
12	[Symbol]	Chamaecyparis thyoides	Atlantic Whitecedar	6" Ht.	B & B	Uniform branching pattern	1,200
		Ilex opaca	American Holly	6" Ht.	B & B	Uniform branching pattern	
		Juniperus virginiana	Eastern Redcedar	6" Ht.	B & B	Uniform branching pattern	
Shrubs							
148	[Symbol]	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:							13,950

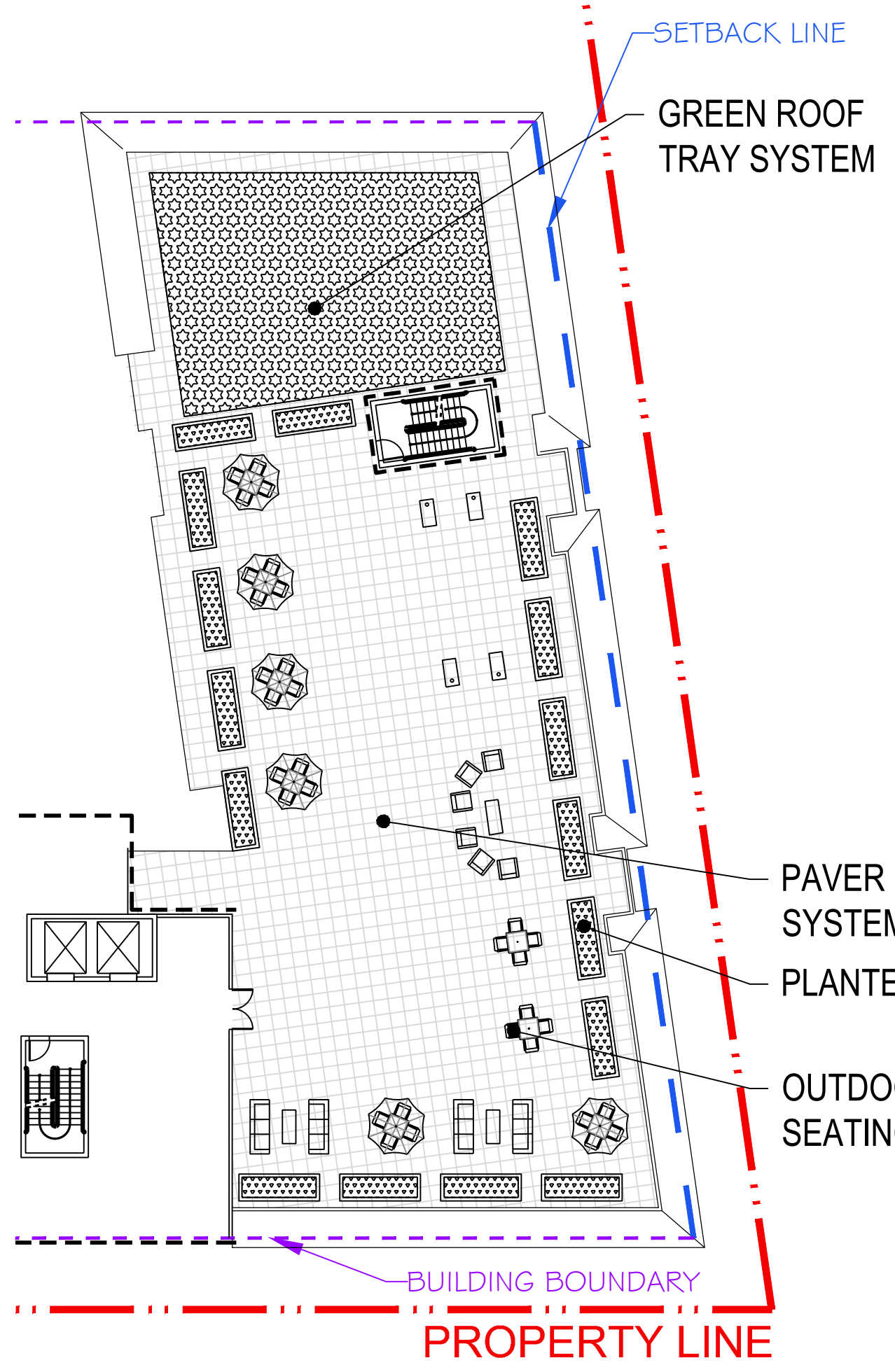
Note:
1. Tree Canopy Provided in R.O.W. is NOT counted towards 10-Year Tree Canopy Requirement.

MODIFICATIONS/WAIVERS REQUESTED

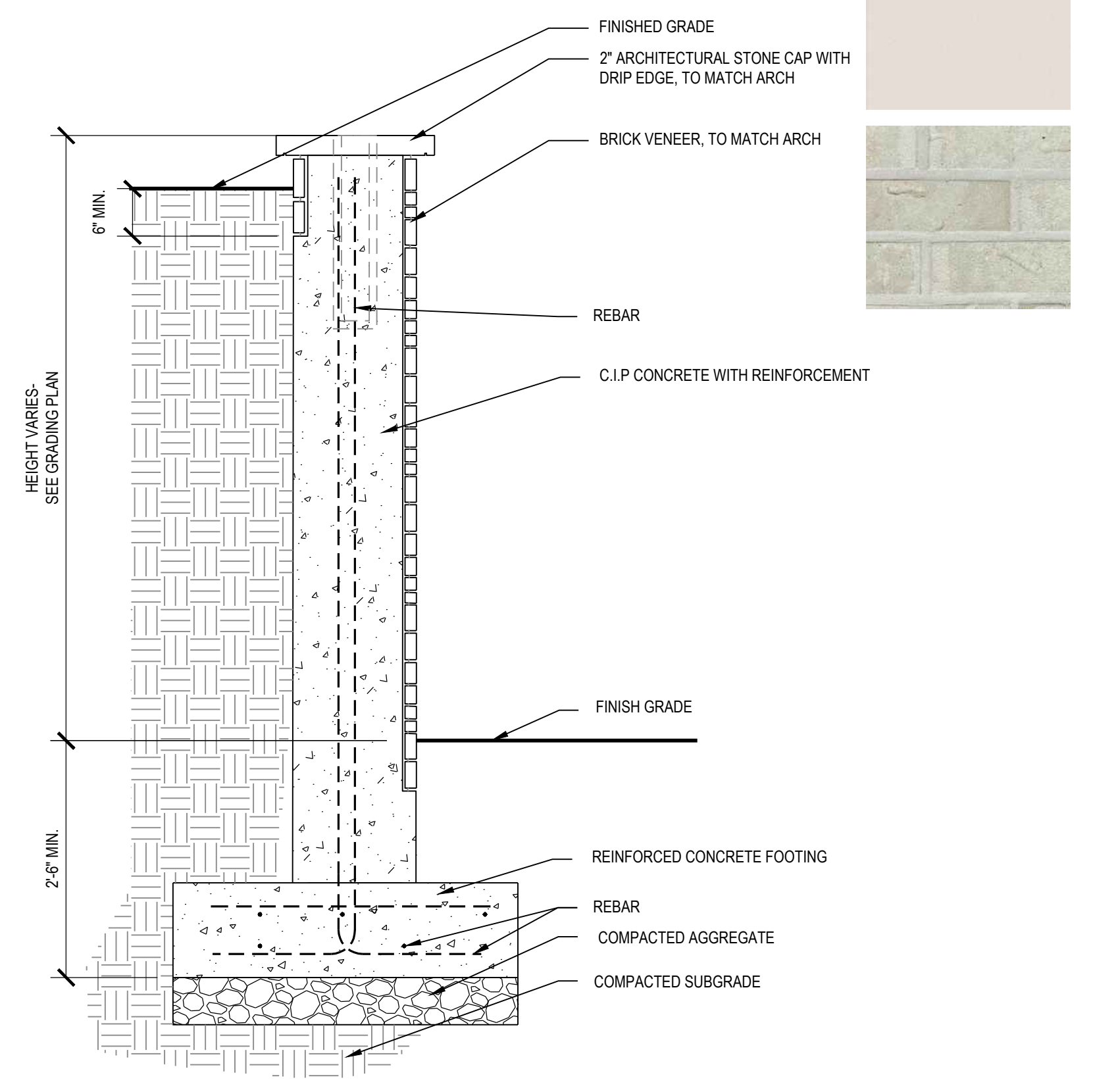
● A MODIFICATION TO TRANSITIONAL YARD REQUIRED (Z.O. SECTION 4.5.5) FOR BUFFER A-B AND C-D IS HEREBY REQUESTED TO BE REVISED AS INDICATED IN THE "TRANSITIONAL YARD CALCULATIONS" TABLE ABOVE.

LANDSCAPE NOTES:

- 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.
- 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.
- LANDSCAPING PLAN SUBJECT TO CHANGE WITH APPROVAL FROM CITY OF FAIRFAX URBAN FORESTER.



1 ROOF TERRACE LAYOUT
SCALE: 1" = 20'



2 BRICK RETAINING WALL
Scale: 3/4" = 1'-0"

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CHANTILLY, VA, 20151
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PLAN DATE: 05-04-2016, 05-09-2016, 06-11-2024, 09-03-2024, 12-02-2024, 04-15-2025

DESCRIPTION: REVISIONS

DATE: No.

urban
Landscape Architecture

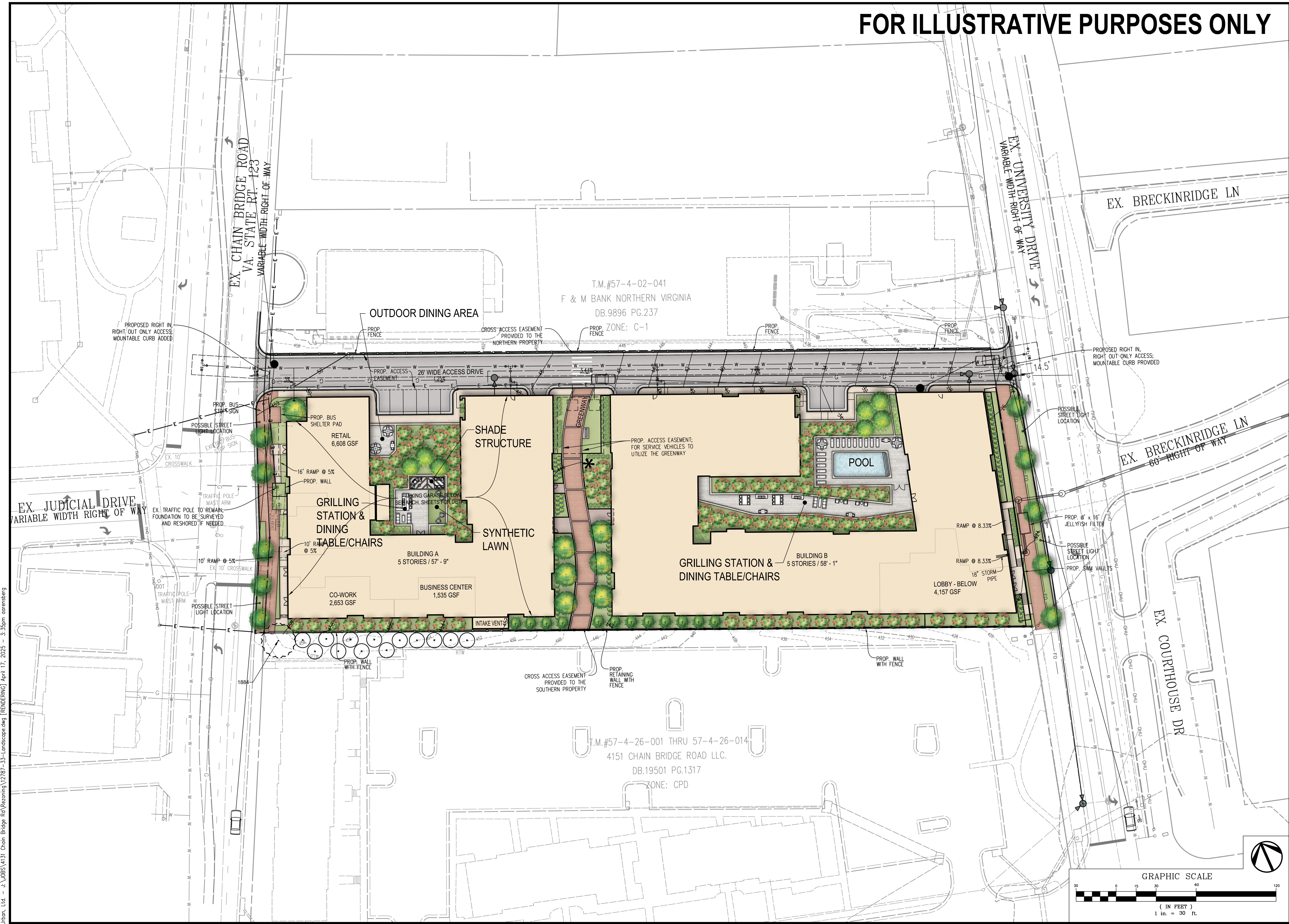
COMMONWEALTH OF VIRGINIA
John Lightle
Lic. No. 1967
LANDSCAPE ARCHITECT

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

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

SHEET 33 OF 39
FILE No. RZ-12787

FOR ILLUSTRATIVE PURPOSES ONLY



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ILLUSTRATIVE PLAN

DATE: DEC., 2024

4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP

CITY OF FAIRFAX, VIRGINIA

SCALE: 1"=30'

C.I.=2

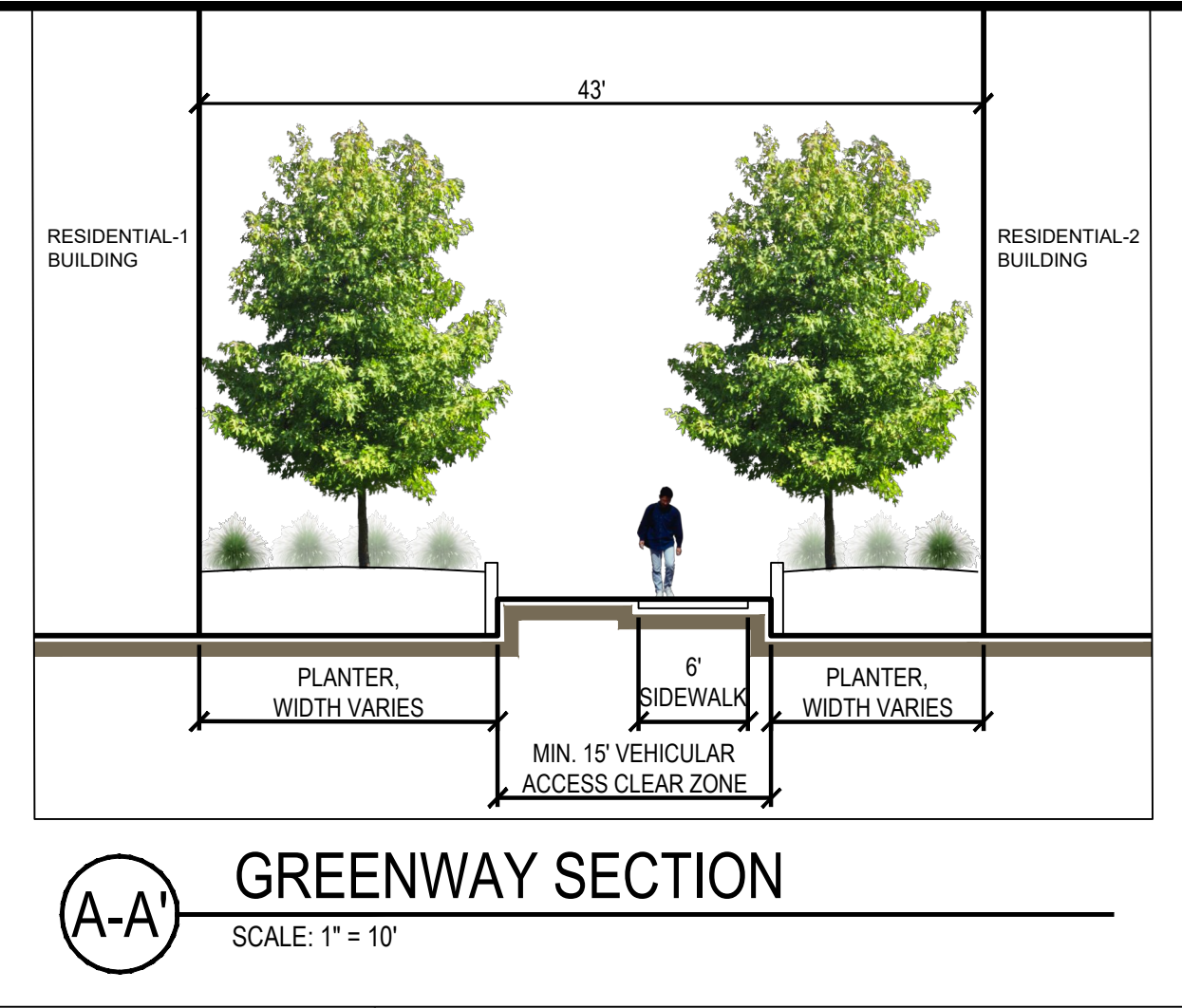
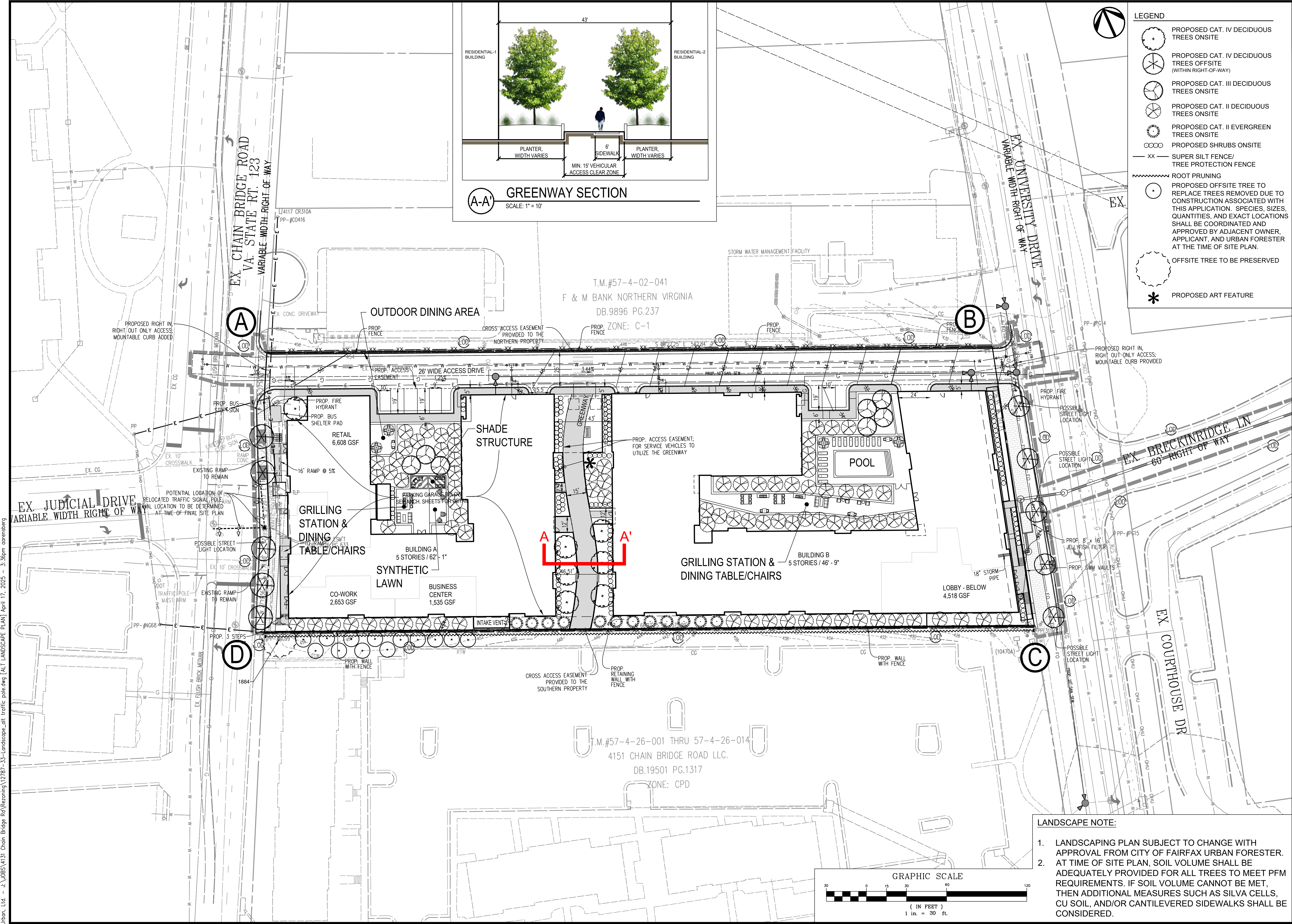
SHEET
33A
OF
39

FILE No.
RZ-12787

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CHANTILLY, VA, 20151
TEL: 703.642.2306
FAX: 703.678.3888
www.urban-llc.com

PLAN DATE	DATE	DESCRIPTION
05-04-2016	-	-
09-19-2016	-	-
08-11-2024	-	-
09-03-2024	-	-
12-02-2024	-	-
04-15-2025	-	-

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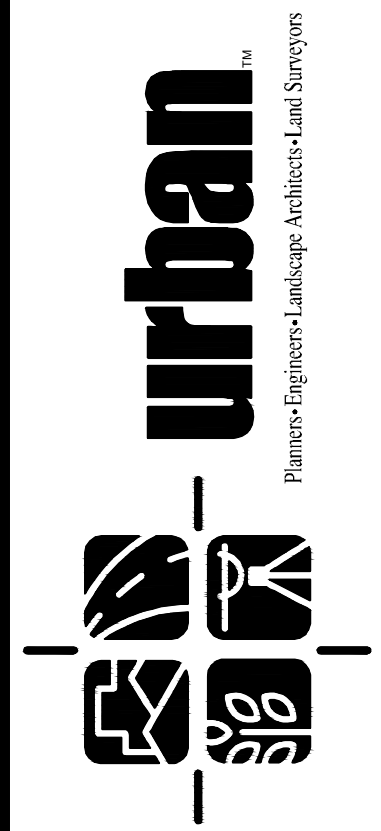


LEGEND

- PROPOSED CAT. IV DECIDUOUS TREES ONSITE
- PROPOSED CAT. IV DECIDUOUS TREES OFFSITE (WITHIN RIGHT-OF-WAY)
- PROPOSED CAT. III DECIDUOUS TREES ONSITE
- PROPOSED CAT. II DECIDUOUS TREES ONSITE
- PROPOSED CAT. II EVERGREEN TREES ONSITE
- PROPOSED SHRUBS ONSITE
- SUPER SILT FENCE/TREE PROTECTION FENCE
- ROOT PRUNING
- PROPOSED OFFSITE TREE TO REPLACE TREES REMOVED DUE TO CONSTRUCTION ASSOCIATED WITH THIS APPLICATION. SPECIES, SIZES, QUANTITIES, AND EXACT LOCATIONS SHALL BE COORDINATED AND APPROVED BY ADJACENT OWNER, APPLICANT, AND URBAN FORESTER AT THE TIME OF SITE PLAN.
- OFFSITE TREE TO BE PRESERVED
- PROPOSED ART FEATURE

PLAN DATE	DESCRIPTION	DATE
05-04-2016		
09-05-2016		
02-09-2024		
06-11-2024		
09-03-2024		
12-02-2024		
04-15-2025		

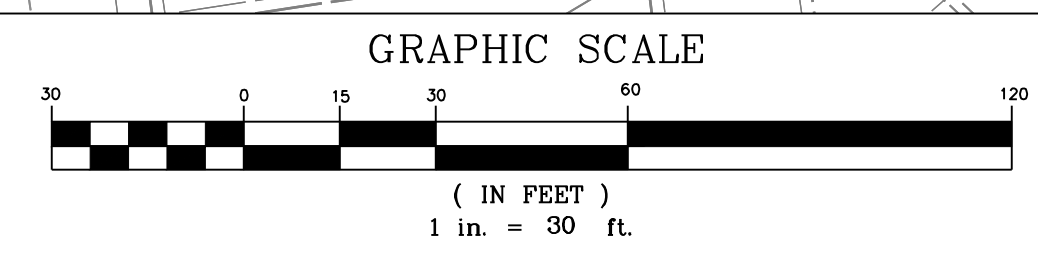
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CHANTILLY, VA, 20151
TEL: 703.642.2366
FAX: 703.783.7888
www.urban-llc.com



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

DATE: DEC., 2024
SCALE: 1"=30'
SHEET 33B OF 39
FILE No. RZ-12787

- LANDSCAPE NOTE:**
- LANDSCAPING PLAN SUBJECT TO CHANGE WITH APPROVAL FROM CITY OF FAIRFAX URBAN FORESTER. 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.



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

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

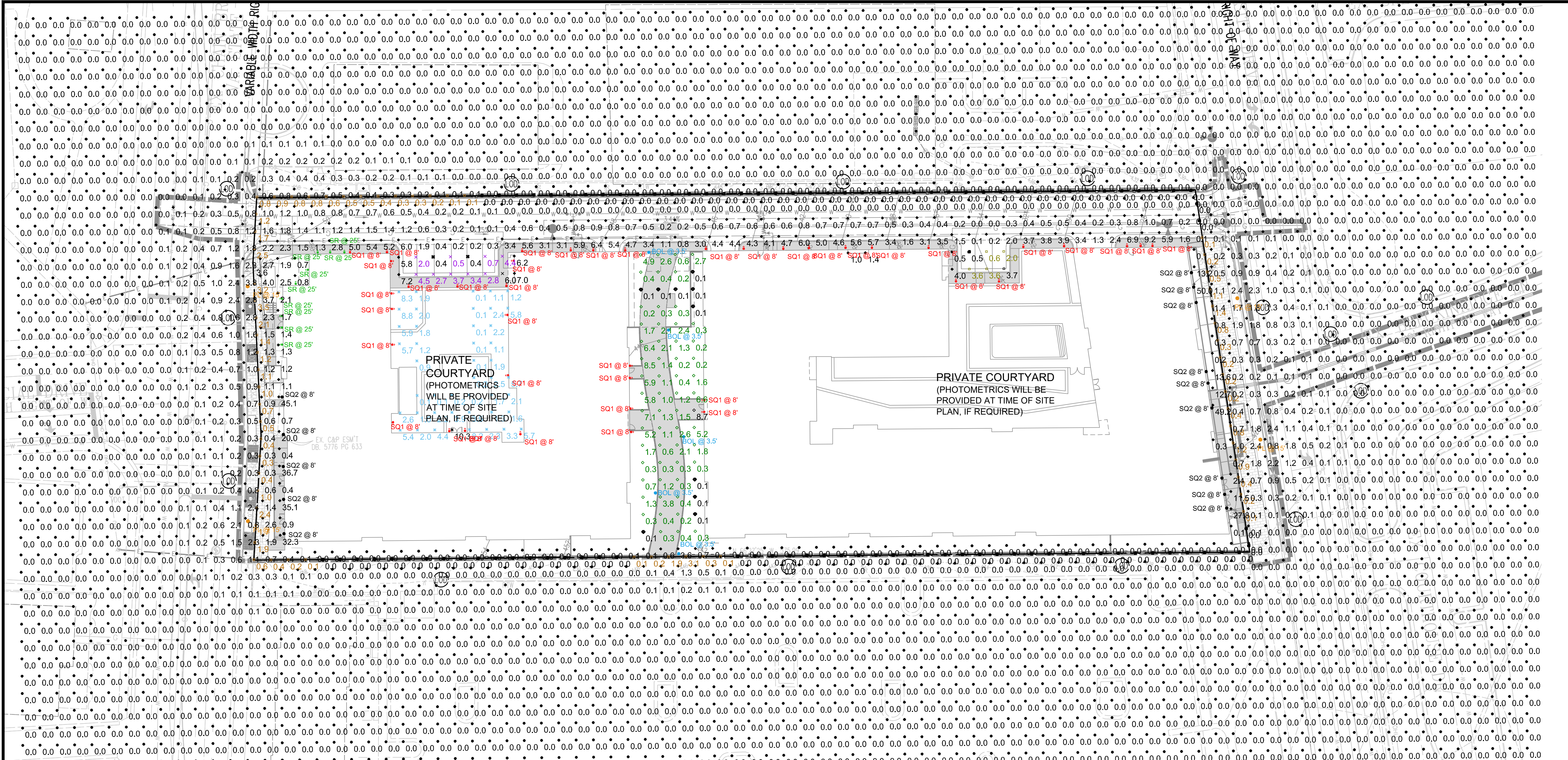
EX. CHAIN BRIDGE ROAD
VA. STATE RT. 123
VARIABLE WIDTH RIGHT-OF-WAY

EX. UNIVERSITY DRIVE
VARIABLE WIDTH RIGHT-OF-WAY

EX. BRECKINRIDGE LN
60' RIGHT-OF-WAY

EX. COURTHOUSE DR

EX. JUDICIAL DRIVE
VARIABLE WIDTH RIGHT-OF-WAY



HOLOPHANE

WFCL P20 30K
xxxx FCS FRGL

50W 3000 series CCT Type 5
distribution zero upright 10% Frosted
tempered glass lens No HSS

LUMINIS

SQP602-L1L25-LD3-30K

SQP602 LD3 30K

LUMINIS

SR136-L1L25-LD2-30K

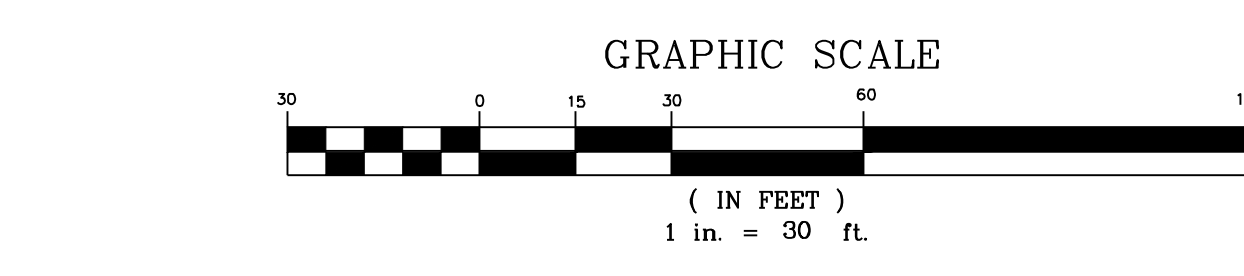
SCIROCCO SR136 30K

DISCLAIMER

This application design is not a professional engineering drawing, and the design, including reported data and calculated results, is provided for informational purposes only, without any warranty as to accuracy, completeness, safety or otherwise. The design is the result of calculations made using Visual lighting applications software, photometric/radiometric data measured in a laboratory, and certain computational and modeling assumptions. Far-field photometric/radiometric data may have been used to perform one or more calculations. Photometric/radiometric data is typically collected under far-field measurement conditions; far-field data is not generally representative of near-field geometric conditions. When using far-field photometric/radiometric data, the Visual software applies certain generalizing assumptions to approximate near-field performance. These approximations may result in significant inaccuracies in individual calculated luminous and/or radiant power quantities in areas where a source is in close proximity to a particular surface or point. The modeling of radiant flux exchange used in the Visual software requires a uniform exitance across each reflecting surface. The Visual software approximates the uniform surface exitance condition by adaptively subdividing surfaces with non-uniform exitances into subsurfaces with sufficiently uniform exitance gradients. Practical restrictions, due to computer hardware limitations, may prevent the subdivision procedure from subdividing surfaces with high exitance gradients into subsurfaces with sufficiently uniform exitance gradients, introducing potential discretization error into calculated values. Calculations performed by the Visual software assume that all reflected flux is reflected in a perfectly diffuse (Lambertian) and spectrally uniform manner across the spectral range being analyzed. If actual reflectance characteristics differ from these assumptions, observed luminous and/or radiant power quantities may differ from predicted quantities. As a result of the computational limitations and simplifying modeling assumptions described above, and/or variations in actual product performance from tested product samples, the accuracy of calculated output values identifying expected radiometric quantities and any resulting derived radiation dose calculations may be adversely affected. In addition, the accuracy of the application design may be adversely affected if information about the physical space provided to Acuity Brands Lighting is incomplete, inaccurate, outdated or not in the required format (including but not limited to floor plans, space layout, reflected ceiling plans, physical structures, electrical data or specifications). If incorrect assumptions are made because of such deficiencies in the information provided, or if typical assumptions made about the depicted physical space are not appropriate for the space. Furthermore, actual field performance may differ from performance calculated using laboratory measurements as the result of miscalculations related to deficiencies in the information provided about the physical space, degradation factors in the end-user environment (including, but not limited to, voltage variation and dirt accumulation), or other possible variations in field conditions. Finally, lamp lumen depreciation and/or depreciation in lamp radiant intensity may result in performance over time that differs from performance calculated using a new lamp. Light loss factors may have been used in the application design to estimate such depreciation, but flaws in these estimates may also result in performance over time that differs from calculated performance. It is the obligation of the end-user to consult with appropriately qualified Professional Engineer(s) to determine whether this application design meets the applicable requirements for performance, code compliance, safety, suitability and effectiveness for use in a particular application. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this application design.

- General Notes - Exteriors**
- Readings shown are based on a total LLF of 0.89 as shown at grade. Data references the extrapolated performance projections in a 25c ambient based on 10,000 hrs of LED testing (per IESNA LM-80-08 and projected per IESNA TM-21-11).
 - Please refer to the fixture labels for product type and mounting height.
 - Product information can be obtained at <https://www.acuitybrands.com/> or through your local agency.

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Fixture Lumens	Intensity Multiplier	LLF	Input Watts	Distribution
BOL		5	LUMINIS	LQ613-L4L26-30K	LumiQUAD 6in TYPE V 30K	2719	0.94	0.89	25.7	TYPE VS, BUG RATING: B1 - U5 - G2
PL		4	Holophane	WFCL P20 30K xxxx FCS FRGL	Washington LED Post-Top Full Cutoff Lantern 50W 3000 series CCT Type 5 distribution zero upright 10% Frosted tempered glass lens No HSS	3641	1	0.89	48.18	TYPE VS, BUG RATING: B2 - U0 - G1
SQ1		40	LUMINIS	SQP602-L1L25-LD3-30K	SQP602 LD3 30K	2520	0.94	0.89	19	DIRECT, SC-0=2.22, SC-90=2.36
SQ2		14	LUMINIS	SQP602-L1L20-FLD	SQP602 FLD 30K	2239	0.94	0.89	21	DIRECT, SC-0=0.52, SC-90=0.52
SR		9	LUMINIS	SR136-L1L25-LD2-30K	SCIROCCO SR136 30K	2619	0.94	0.89	18.5	DIRECT, SC-0=2.78, SC-90=3.98

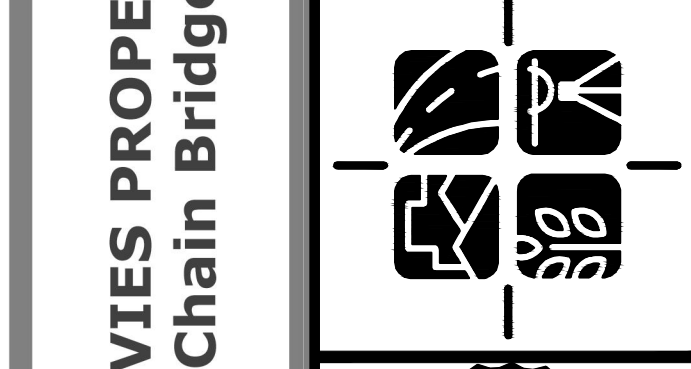
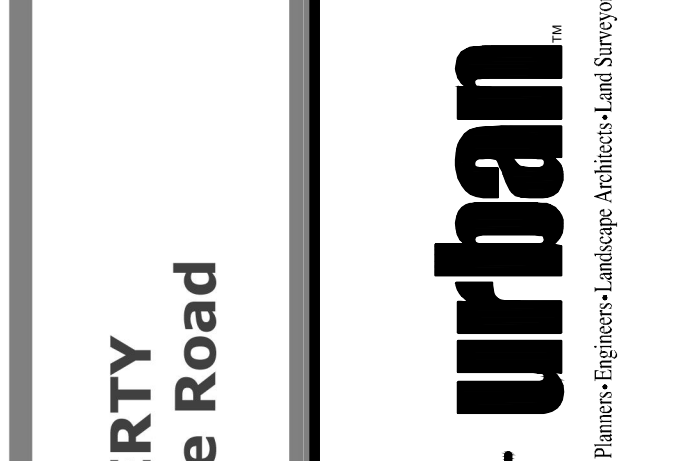


Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Base Grid	+	0.3 fc	50.0 fc	0.0 fc	N/A	N/A
Between Buildings		1.7 fc	8.7 fc	0.1 fc	87.0:1	17.0:1
East Parking		2.3 fc	3.7 fc	0.5 fc	7.4:1	4.6:1
Property Line		0.4 fc	3.6 fc	0.0 fc	N/A	N/A
West Courtyard	X	1.9 fc	10.3 fc	0.0 fc	N/A	N/A
West Parking	X	2.6 fc	6.0 fc	0.4 fc	15.0:1	6.5:1



PLAN DATE	DESCRIPTION	DATE	REVISIONS
05-04-2016			
09-19-2016			
06-11-2024			
09-03-2024			
12-02-2024			
04-15-2025			

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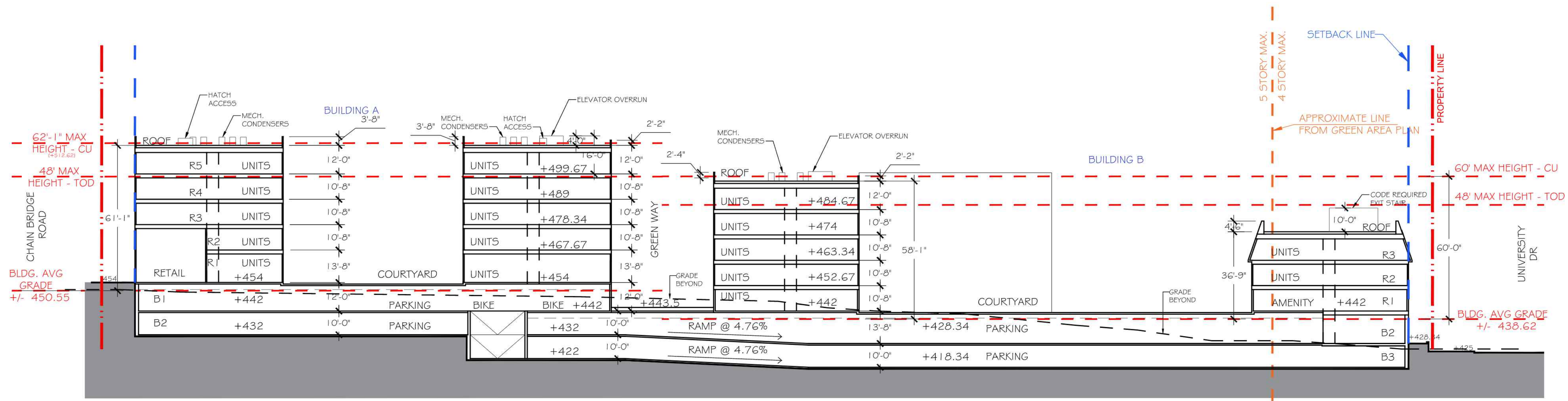


PHOTOMETRIC PLAN & DETAILS
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA

Revised by: SB
Date: 03/24/2025
Scale: As Shown
Drawing No.: 291254-1 A1
Summary

DATE: DEC., 2024
SCALE: 1" = 30'
SHEET 34 OF 39
FILE No. RZ-12787
1 of 1

Urban, Ltd. - J:\085\131 Chain Bridge Rd\Rezoning\12787-25- BUILDING SECTIONS.dwg [building section] April 17, 2025 - 3:37pm corrensberg



BUILDING SECTION - 1

*NOTE: REFER TO CIVIL FOR AVERAGE GRADE.

lessard
DESIGN

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

BUILDING SECTION

4131 CHAIN BRIDGE ROAD
CITY OF FAIRFAX, VA
PARADIGM DEVELOPMENT

CHAIN BRIDGE ROAD

KEY PLAN

BUILDING-A BUILDING-B UNIVERSITY DR

APR. 15, 2025
PDM.015

A.23

SCALE: 1" = 20' (@ 22"x34")

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No.	DATE	DESCRIPTION	REVISIONS

PLAN DATE	
05-04-2016	
06-11-2019	
06-11-2024	
09-03-2024	
12-02-2024	
04-15-2025	

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Planners/Engineers/Landscape Architects/Lead Surveyors

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 048790
04/19/2025
PROFESSIONAL ENGINEER

BUILDING SECTION
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
CITY OF FAIRFAX, VIRGINIA
DATE: DEC., 2024
SCALE: 1" = C.I. = 2'

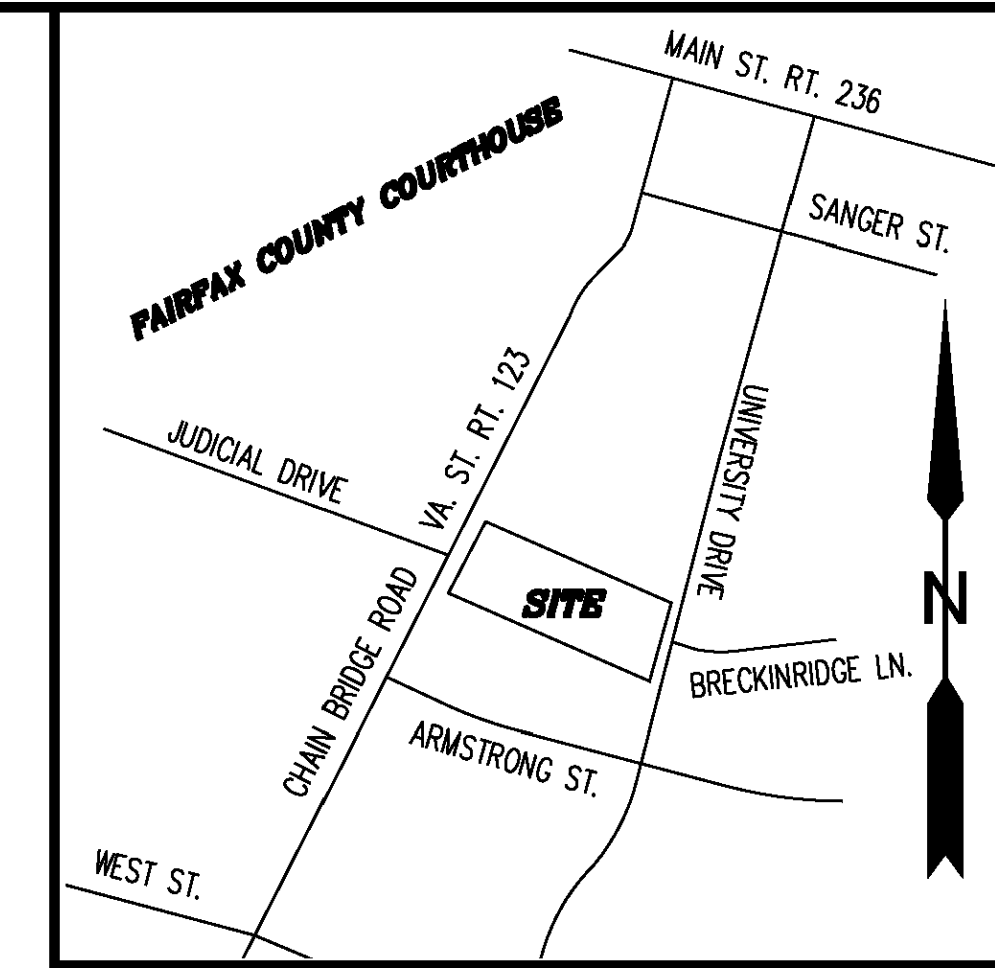
SHEET
35
OF
39
FILE No.
RZ-12787

NOTES

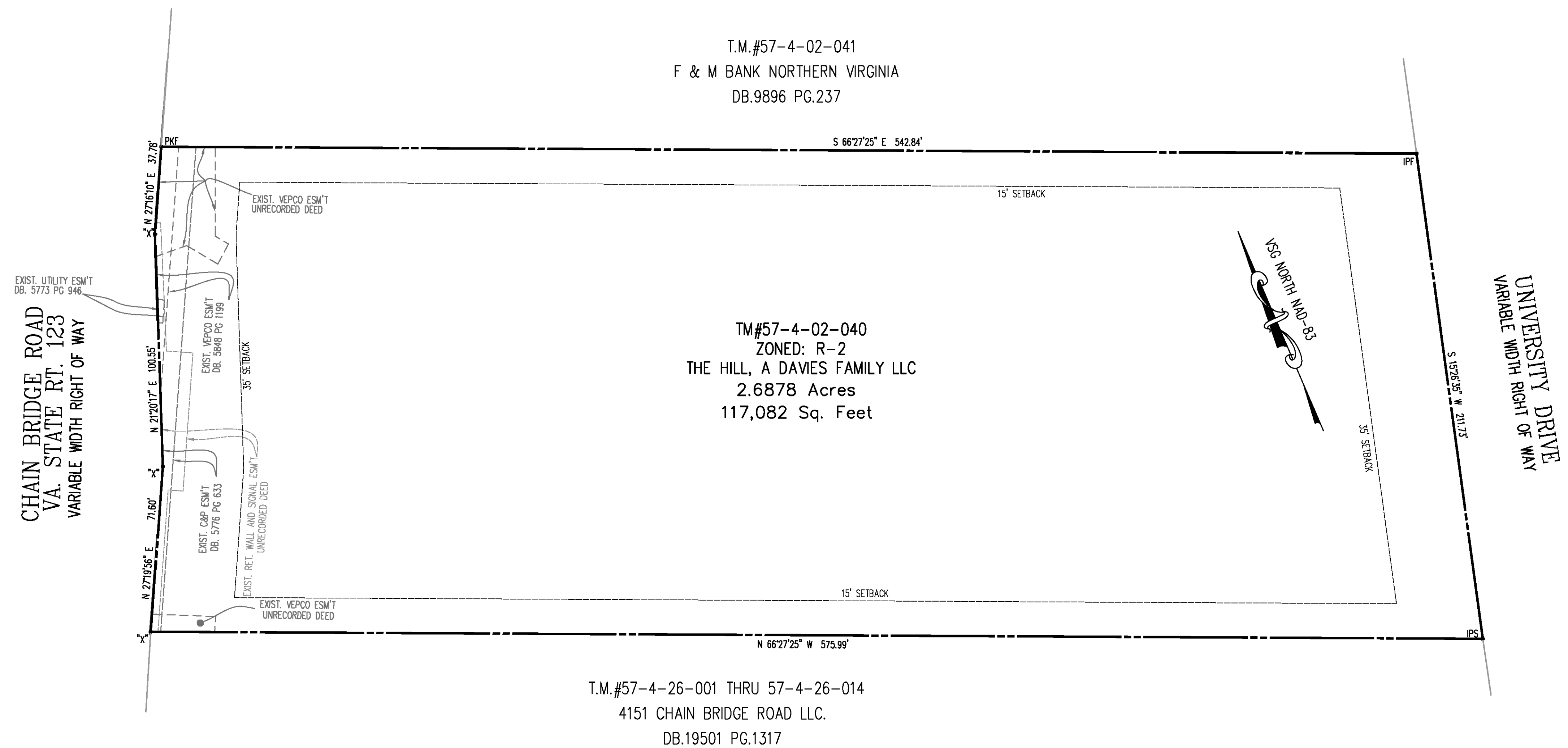
1. THE PROPERTY SHOWN HEREON IS LOCATED IN THE CITY OF FAIRFAX, VIRGINIA AND HAS MAP NUMBER 57-0-02-0401
2. NO SUBSURFACE INVESTIGATION HAS BEEN PERFORMED.
3. NO OBSERVABLE EVIDENCE OF CEMETERIES WAS NOTED ON THE SUBJECT PROPERTY.
4. THE SUBJECT PROPERTY HAS DIRECT ACCESS TO CHAIN BRIDGE ROAD VA. RTE 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 DAVES FAMILY LLC.

LEGEND

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



VICINITY MAP
SCALE 1"=500'



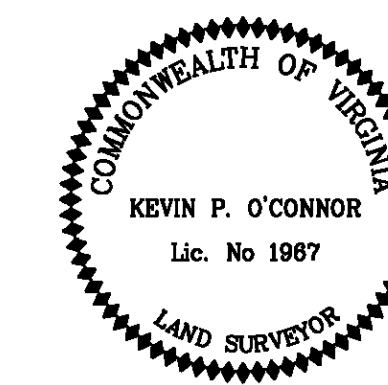
METES AND BOUNDS DESCRIPTION

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

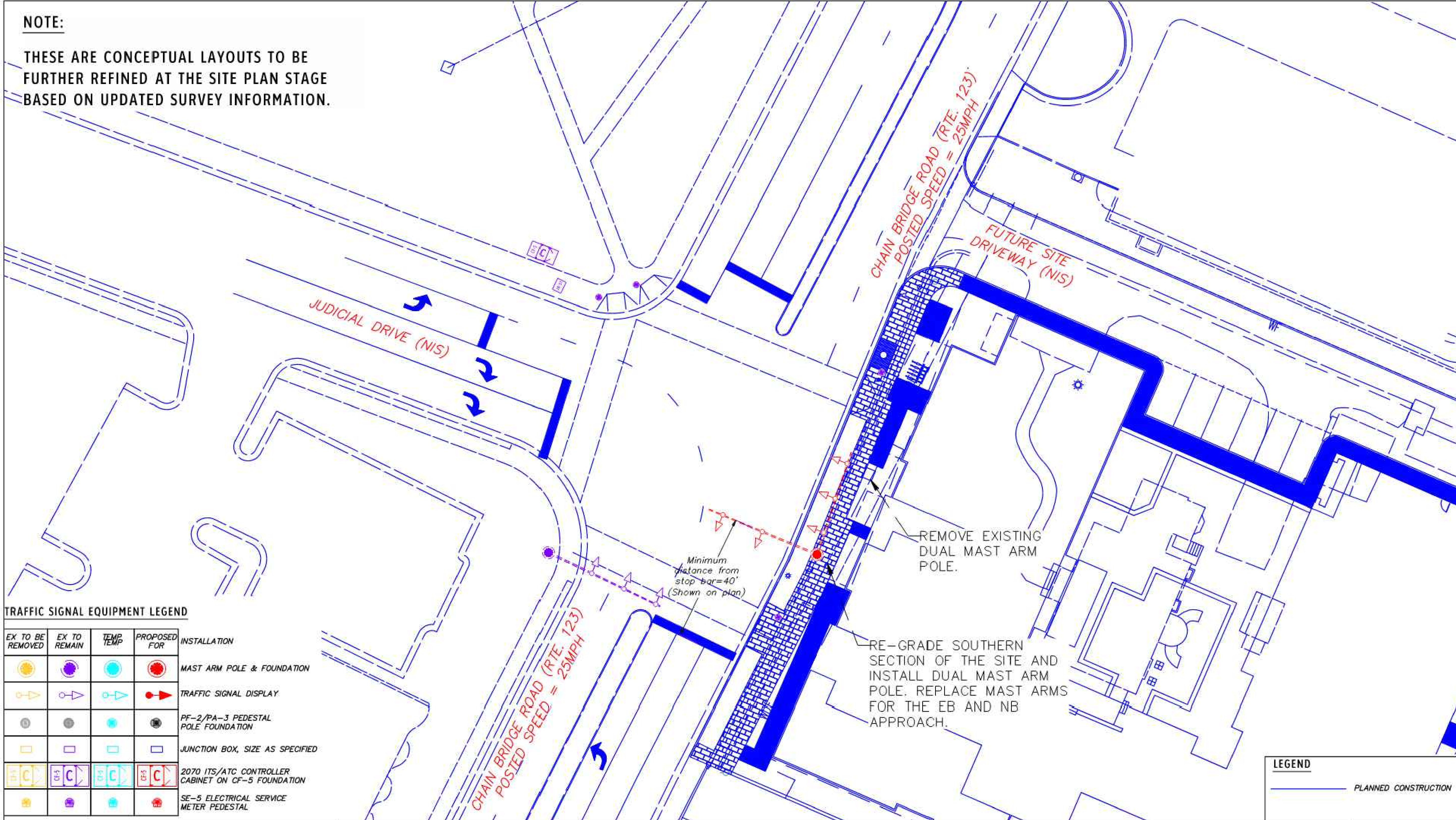
BEING THE SAME PROPERTY DESCRIBED IN THAT CERTAIN DEED DATED AUGUST 9, 2015, MADE BY HOPE DAVES HUNTINGTON, VERA DAVES LICHTENSTEIN AND BANKHEAD THORNTON DAVES, GRANTORS, TO THE HILL, A DAVES FAMILY LLC, GRANTEE, AS RECORDED IN THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA ON SEPTEMBER 3, 2015, IN DEED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

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

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



NOTE:
 THESE ARE CONCEPTUAL LAYOUTS TO BE
 FURTHER REFINED AT THE SITE PLAN STAGE
 BASED ON UPDATED SURVEY INFORMATION.



TRAFFIC SIGNAL EQUIPMENT LEGEND

EX TO BE REMOVED	EX TO REMAIN	TEMP	PROPOSED FOR	INSTALLATION
				MAST ARM POLE & FOUNDATION
				TRAFFIC SIGNAL DISPLAY
				PF-2/PA-3 PEDESTAL POLE FOUNDATION
				JUNCTION BOX, SIZE AS SPECIFIED
				2070 ITS/ATC CONTROLLER CABINET ON CF-5 FOUNDATION
				SE-5 ELECTRICAL SERVICE METER PEDESTAL

LEGEND
 PLANNED CONSTRUCTION

GOROVE SLADE
 Transportation Planners and Engineers

Signal Modification Concept 2: Chain Bridge Rd (Rte. 123) at Judicial Drive (NIS)
Signal Relocation Options
 NOT FOR CONSTRUCTION

City of Fairfax, VA
 March 31, 2025



Urban, Ltd. - J:\095\4131 Chain Bridge Rd\Rezoning\17287-38-PRELIMINARY SIGNAL CONCEPT.dwg [ALT SIGNAL LOCATION] April 17, 2025 - 3:37pm orensberg

ALTERNATE SIGNAL LOCATION
4131 CHAIN BRIDGE ROAD
REZONING CDP-GDP
 CITY OF FAIRFAX, VIRGINIA

SCALE: N/A
 DATE: DEC., 2024

CL: N/A

SHEET 38 OF 39
 FILE No. RZ-12787

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Planner-Engineers, Landscape Architects and Surveyors

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COMMONWEALTH OF VIRGINIA
 CLAYTON C. TOCKA
 Lic. No. 056790
 04/19/2025
 PROFESSIONAL ENGINEER

PLAN DATE	No.	DATE	DESCRIPTION	REVISIONS
05-04-2016				
06-09-2016				
06-11-2024				
09-03-2024				
12-02-2024				
04-15-2025				

FIRE LANE REQUIRED SIGNS - SEE IMAGE BELOW

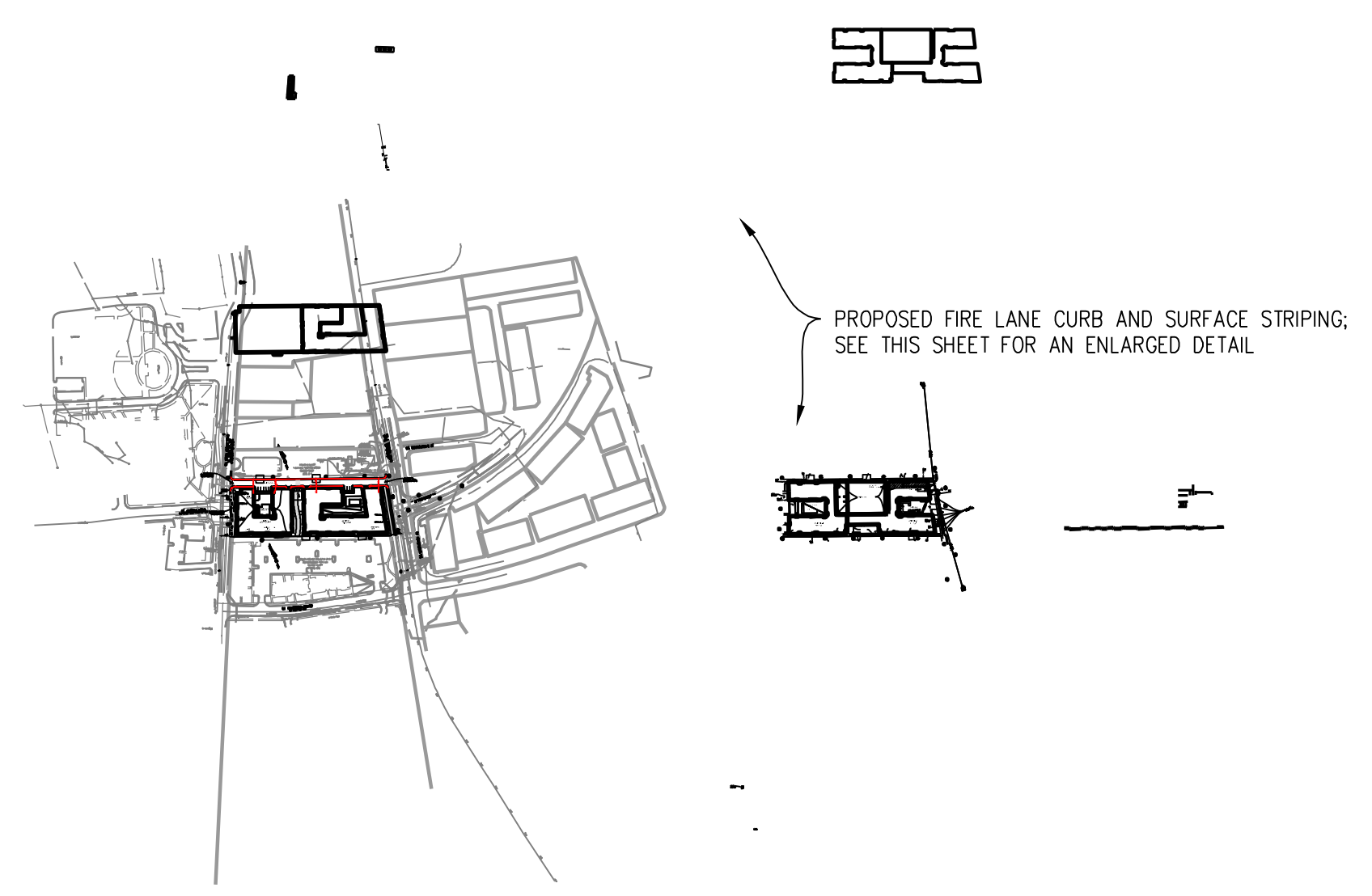
- "NO PARKING" - 2 INCHES
- "OR" - 1 INCH
- "STANDING" - 2 INCHES
- "FIRE LANE" - 2 1/2 INCHES
- ARROWS 1-INCH SOLID RED
- *SPACING BETWEEN WORDS TO BE UNIFORM



← NO PARKING FIRE LANE →

4-INCH WHITE LETTERING WITH 3/4-INCH STROKE STATING "NO PARKING FIRE LANE"; LETTERING TO BE SPACED EVERY 50 FEET

6-INCH RED TRAFFIC PAINT STRIPE; TO BE PAINTED ON FACE OF CURB AND BACK OF CURB



FIRE LANE MARKING DETAIL
SCALE = 1:3

50.00' LETTERING SPACING

← NO PARKING FIRE LANE →

Urban, Ltd. 4000 TECHNOLOGY CT. CHANTILLY, VA. 20151 TEL. 703.642.2306 FAX. 703.783.7888 www.urban-lltd.com		<p>Planners • Engineers • Landscape Architects • Land Services</p>		FIRE LANE MARKINGS EXHIBIT 4131 CHAIN BRIDGE ROAD REZONING CDP-GDP CITY OF FAIRFAX, VIRGINIA		SCALE: 1" =	DATE: DEC., 2024
PLAN DATE 05-04-2016 07-02-2016 08-11-2016 09-03-2024 12-02-2024 04-15-2025				SHEET 39 OF 39	FILE No. RZ-12787	REVISIONS	