

2025 FAIRFAX DRIVE

ARLINGTON COUNTY, VIRGINIA

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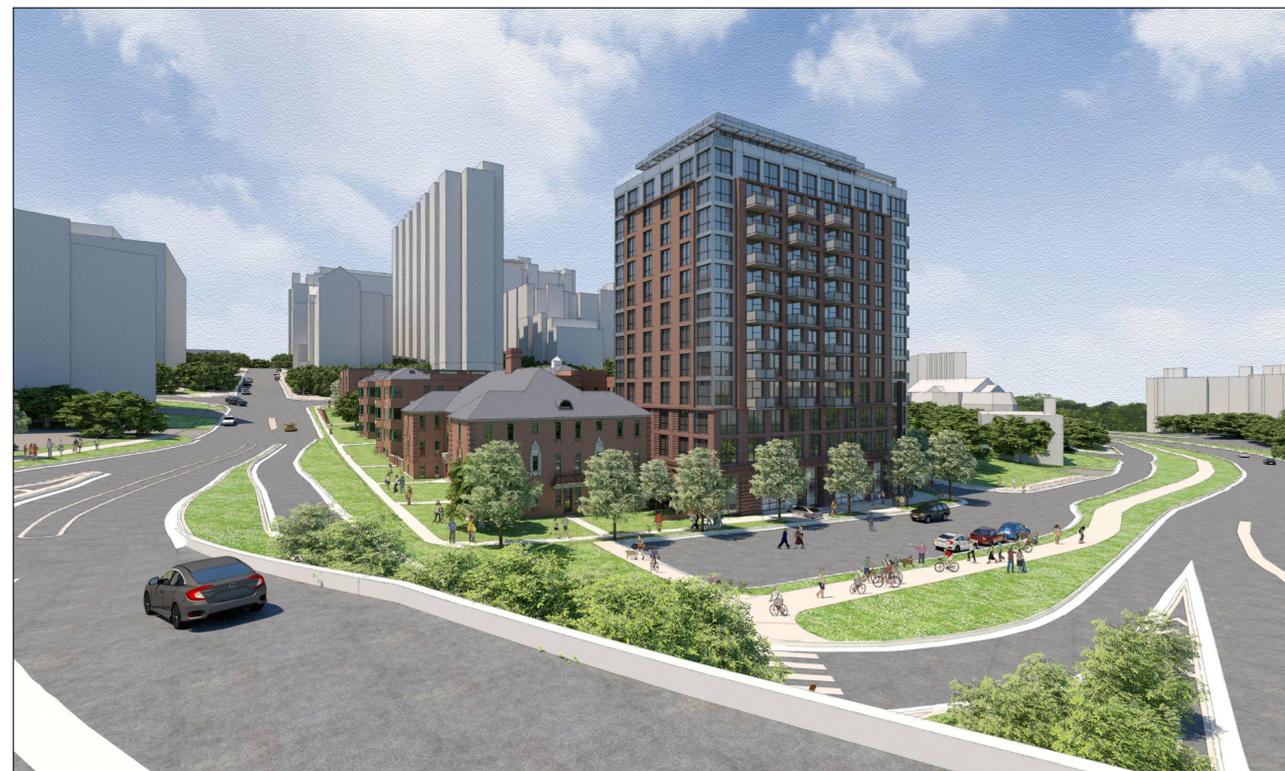
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4.1 MAJOR SITE PLAN AMENDMENT - AUGUST 5, 2022



CONCEPT RENDERING

OWNER / DEVELOPER

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1300 19TH STREET NW, SUITE #725
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(202)-558-7579
CONTACT: MATT BUNCH

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CONTACT: HENRY MAHNS

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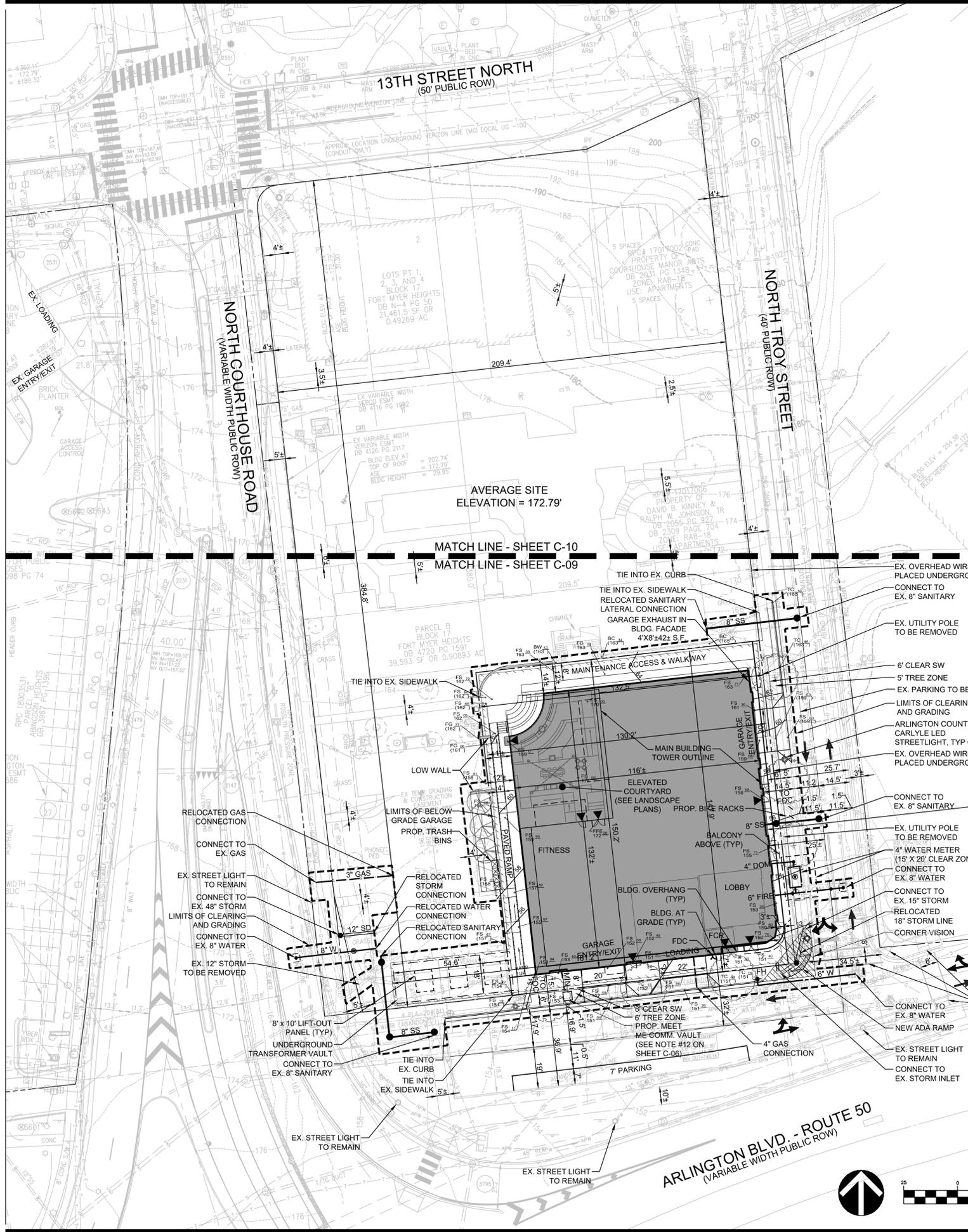
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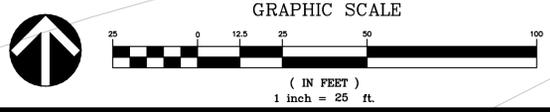
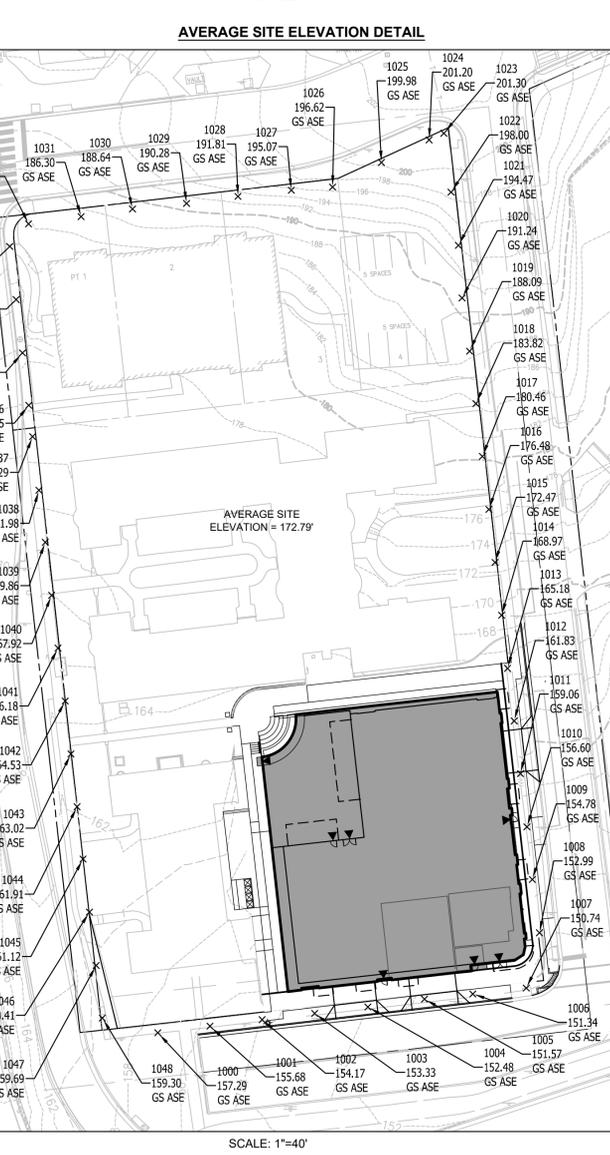
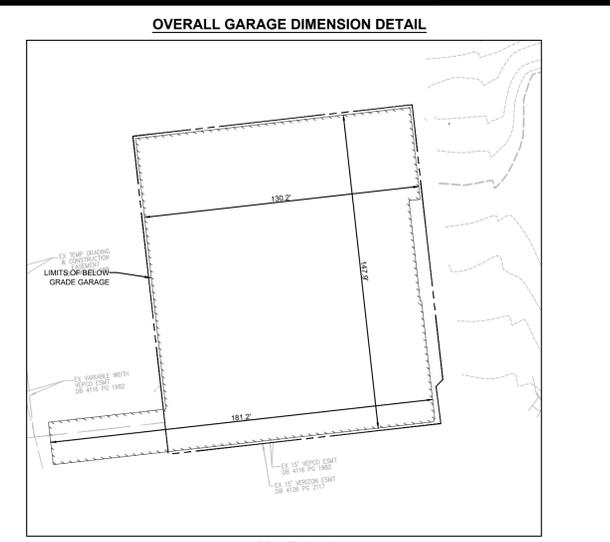
TRAFFIC CONSULTANT

GOROVE-SLADE ASSOCIATES INC.
1140 CONNECTICUT AVENUE NW, SUITE #600
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(202)-540-1924
CONTACT: DAN VANPELT





- NOTES:**
1. THE SUBJECT PROPERTY IS IDENTIFIED ON ARLINGTON COUNTY TAX MAP #054-02 AS REAL PROPERTY CODE (RPC) #17017005 AND IS ZONED RA8-18.
 2. THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP (FIRM) NUMBER 5101300081C, COMMUNITY PANEL 515520 0039 C, FOR ARLINGTON COUNTY, VIRGINIA, DATED AUGUST 19, 2013. ZONE "X" IS NOT IDENTIFIED AS A SPECIAL FLOOD HAZARD ZONE AREA.
 3. THE SUBJECT PROPERTY HAS DIRECT VEHICULAR ACCESS TO AND FROM A PUBLIC STREET, FAIRFAX DRIVE AND NORTH TROY STREET, AS SHOWN HEREON.
 4. THERE IS NO OBSERVED EVIDENCE OF WETLANDS FIELD DELINEATION ON THE SUBJECT PROPERTY.
 5. THE SUBJECT PROPERTY IS NOT LOCATED WITHIN A RESOURCE PROTECTION AREA (RPA) PER ARLINGTON COUNTY STREAMS, WATERSHEDS AND RESOURCE PROTECTION AREAS MAP DATED 2007.
 6. THE SUBJECT PROPERTY IS NOT LOCATED IN A HISTORIC DISTRICT PER ARLINGTON COUNTY LOCAL HISTORIC SITES AND DISTRICTS MAP DATED AUGUST 9, 2021. HOWEVER, ADJACENT GARDEN APARTMENTS ARE LISTED AS HISTORIC AND "ESSENTIAL" BY ARLINGTON COUNTY.
 7. THE AVERAGE SITE ELEVATION TAKEN AT THE PERIMETER IS 172.79'.
 8. PROPOSED GRADING AND UTILITIES SHOWN HEREON ARE SUBJECT TO CHANGE WITH FINAL ENGINEERED SITE PLAN.
 9. PROPOSED BUILDINGS, DOOR LOCATIONS, FINISHED FLOOR ELEVATIONS AND ELEVATOR LOCATIONS ARE SUBJECT TO CHANGE WITH FINAL ENGINEERED SITE PLAN.
 10. THERE WILL BE UTILITY EASEMENTS THAT WILL REQUIRE VACATION WITH THIS APPLICATION.
 11. SEE SHEET C-01A FOR ENCROACHMENT INFORMATION.
 12. BELOW GRADE MEET ME TELECOMMUNICATION VAULTS WILL BE PROVIDED FOR FUTURE CONNECTIONS. TELECOMMUNICATION SERVICES WILL BE DETERMINED BY THE OWNER AT FINAL ENGINEERED SITE PLAN. LOCATIONS SHOWN ON THIS APPLICATION ARE APPROXIMATE AND ARE SUBJECT TO CHANGE AT FINAL ENGINEERED SITE PLAN.
- SITE TABULATIONS:**
- | ZONE | NET AREA | COVERAGE% |
|--------|-------------|-----------------|
| RA8-18 | 19,846 S.F. | 14,863 S.F. 90% |
- LEGEND**
- PROPOSED BUILDING
 - PROPOSED BUILDING OVERHANG ABOVE
 - PROPOSED BALCONY ABOVE
 - PROPOSED LIMITS OF UNDERGROUND GARAGE
 - PROPOSED PEDESTRIAN ENTRANCE



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Our Site Set on the Future.

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PLAN STATUS	DATE
1ST 4.1 SUBMISSION	02/15/2022
2ND 4.1 SUBMISSION	08/05/2022

PROFESSIONAL SEAL

2025 FAIRFAX DRIVE
 4.1 MAJOR SITE PLAN AMENDMENT

ARLINGTON COUNTY, VIRGINIA

OVERALL PLOT & LOCATION PLAN

DRAWN BY: VIKA
 DESIGNED BY: VIKA
 DATE ISSUED: 2/15/2022

DWG. SCALE: AS NOTED
 VIKA NO.: 7263F
 SHEET NO.: C-06

FILE: Q:\Projects\2681768\FAD\PLANNING\PLANNING DRAWINGS\W7263F_PLOT & LOCATION PLAN.dwg USER: JKREPS DATE: September 9, 2022 TIME: 4:11:47 PM LAYOUT: C-06 OVERALL PLOT AND LOCATION PLAN

Project Name: **Wakefield Manor**
 Date: **2/3/2022**
 Linear Development Project? **No**

CLEAR ALL (Ctrl+Shift+A)
 data input cells
 constant values
 calculation cells
 final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → **0.6800**

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

Maximum reduction required: **10%**
 The site's net increase in impervious cover (acres) is: **0.1400**
 Post-Development TP Load Reduction for Site (lb/yr): **0.3470**

Pre-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, protected forest/open space or reforested					0.0000
Managed Turf (acres) – disturbed, graded for yards or other turf to be				0.2400	0.2400
Impervious Cover (acres)				0.4400	0.4400
Totals					0.6800

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					0.0000
Managed Turf (acres) – disturbed, graded for yards or other turf to be				0.1000	0.1000
Impervious Cover (acres)				0.5800	0.5800
Totals					0.6800

Area Check OK OK OK OK

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-DEVELOPMENT

Pre-Development	Listed	Adjusted ¹
Forest/Open Space (acres)	0.0000	0.0000
Weighted Rv (forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.2400	0.1000
Weighted Rv (turf)	0.2500	0.2500
% Managed Turf	35%	19%
Impervious Cover (acres)	0.4400	0.4400
Rv (impervious)	0.9500	0.9500
% Impervious	65%	81%
Total Site Area (acres)	0.6800	0.5400
Site Rv	0.7029	0.8204

LAND COVER SUMMARY – POST DEVELOPMENT

Post-Development	Listed	Adjusted ¹
Forest/Open Space (acres)	0.0000	0.0000
Weighted Rv (forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.1000	0.1000
Weighted Rv (turf)	0.2500	0.2500
% Managed Turf	15%	19%
Impervious Cover (acres)	0.5800	0.4400
Rv (impervious)	0.9500	0.9500
% Impervious	85%	81%
Final Site Area (acres)	0.6800	0.5400
Final Post-Dev Site Rv	0.8471	0.8204

Treatment Volume and Nutrient Load

Pre-Development	Post-Development	
Pre-Development Treatment Volume (acre-ft)	0.0298	0.0269
Pre-Development Treatment Volume (cubic feet)	1,735,1400	1,608,0900
Pre-Development TP Load (lb/yr)	1.0902	1.0104
Pre-Development TP Load per acre (lb/acre/yr)	1.6000	1.8700
Baseline TP Load (lb/yr) (0.41 lb/acre/yr applied to pre-redevelopment area excluding previous land proposed for new impervious cover)		0.2214

Treatment Volume and Nutrient Load

Post-Development	Post-Development	Post-Development
Post-Development Treatment Volume (acre-ft)	0.0480	0.0369
Post-Development Treatment Volume (cubic feet)	2,090,8800	1,608,0900
Post-Development TP Load (lb/yr)	1.3137	1.0104
Post-Development TP Load per acre (lb/acre/yr)	1.9300	1.8700
Max. Reduction Required (Below Pre-Development Load)		0.1000
TP Load Reduction Required for Redeveloped Area (lb/yr)		0.1010
TP Load Reduction Required for New Impervious Area (lb/yr)		0.2459

¹ Adjusted Land Cover Summary: Pre-Development land cover minus previous land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

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

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

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr) **0.3470**

Nitrogen Loads (Informational Purposes Only)

Pre-Development TN Load (lb/yr)	7,7990	Final Post-Development TN Load (Post-Development & New Impervious) (lb/yr)	9,3980
---------------------------------	--------	--	--------

TOTAL IMPERVIOUS COVER TREATED (ac) 0.2900 **AREA CHECK: OK.**
TOTAL MANAGED TURF AREA TREATED (ac) 0.0000 **AREA CHECK: OK.**
TOTAL RUNOFF REDUCTION IN D.A. A (ft³) 420,7170

TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr) 1.3137
TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.3484
TOTAL PHOSPHORUS REMAINING AFTER APPLYING RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.9653

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

LEVEL I STORMWATER PLANTER SIZING COMPUTATIONS FOR URBAN PLANTERS

URBAN BIORETENTION	IMPERVIOUS DA (SF)	PERMEABLE DA (SF)	DA BYPASS RECEIVED (ROAD ONLY)	SURFACE AREA	Rv	Tv	SURFACE AREA REQ'D	EQUIVALENT STORAGE DEPTH (FT)	PONDING	SOIL	GRAVEL	PONDING	SOIL	GRAVEL	Tv
#	(SF.)	(SF.)	(SF.)	PROV'D (SF.)	REQ'D (CFT)	(SF)	DEPTH (INCH)	DEPTH (FT)	DEPTH (FT)	Vr	Vr	Vr	PROV'D (CFT)		
1	10000	0	0	500	0.95	792	480	1.65	6	3	1	1	0.25	0.4	825
2	1500	0	0	325	0.95	319	72	1.65	6	3	1	1	0.25	0.4	206
3	0	0	0	0	0.95	0	0	1.65	6	3	1	1	0.25	0.4	0
4	0	0	0	0	0.95	0	0	1.65	6	3	1	1	0.25	0.4	0
TOTALS =	11500			825		910	552								1031

Extensive Green Roof Sizing Chart

GREEN ROOF ID	DA (VEGETATIVE AREA) (ACRES)	Rv	Tv	SURFACE AREA (SQ FT)	SOIL DEPTH (IN)	MEDIA POROSITY	Tv (CFT)
GREEN ROOF 1	0.0300	0.95	103	1,300	4	0.25	108
GREEN ROOF 2	0.0000	0.95	0	0	4	0.25	0
GREEN ROOF 3	0.0000	0.95	0	0	4	0.25	0
TOTALS =	0.03		103	1,300			108

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)					0.0000	0.0000
Managed Turf (acres)				0.1000	0.1000	0.2500
Impervious Cover (acres)				0.5800	0.5800	0.9500
Total					0.6800	

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr) **1.3137**
 Post Development Treatment Volume in D.A. A (ft³) **2,090.8800**

Stormwater Best Management Practices (RR = Runoff Reduction)

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft ³)	Runoff Reduction (ft ³)	Remaining Runoff Volume (ft ³)	Total BMP Treatment Volume (ft ³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed by Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
1. Vegetated Roof (RR)													
1.a. Vegetated Roof #1 (Spec #5)	45			0.0000	0.0000	0.0000	0.0000	0		0.0000	0.0000	0.0000	
1.b. Vegetated Roof #2 (Spec #5)	60		0.0300	62.0730	41.3820	103.4550		0		0.0649	0.0390	0.0260	None
2. Rooftop Disconnection (RR)													
2.a. Simple Disconnection to A/B Soils (Spec #1)	50			0.0000	0.0000	0.0000	0.0000	0	0.0000	0.0000	0.0000	0.0000	
2.b. Simple Disconnection to C/D Soils (Spec #1)	25			0.0000	0.0000	0.0000	0.0000	0	0.0000	0.0000	0.0000	0.0000	
2.c. To Soil Amended Filter Path as per specifications (existing C/D soils) (Spec #4)	50			0.0000	0.0000	0.0000	0.0000	0	0.0000	0.0000	0.0000	0.0000	
2.d. To Dry Well or French Drain #1, Micro-Infiltration #1 (Spec #8)	50			0.0000	0.0000	0.0000	0.0000	25	0.0000	0.0000	0.0000	0.0000	
2.e. To Dry Well or French Drain #2, Micro-Infiltration #2 (Spec #8)	90			0.0000	0.0000	0.0000	0.0000	25	0.0000	0.0000	0.0000	0.0000	
2.f. To Rain Garden #1, Micro-Bioretenion #1 (Spec #9)	40			0.0000	0.0000	0.0000	0.0000	25	0.0000	0.0000	0.0000	0.0000	
2.g. To Rain Garden #2, Micro-Bioretenion #2 (Spec #9)	80			0.0000	0.0000	0.0000	0.0000	50	0.0000	0.0000	0.0000	0.0000	
2.h. To Rainwater Harvesting (Spec #6)	0			0.0000	0.0000	0.0000	0.0000	0	0.0000	0.0000	0.0000	0.0000	
2.i. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)	40		0.2600	0.0000	358.6440	537.9660	896.6100	25	0.0000	0.5627	0.3095	0.2532	

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)	0.0000	0.0000	0.0000	0.0000	0.0000	OK
IMPERVIOUS COVER (ac)	0.5800	0.0000	0.0000	0.0000	0.0000	OK
IMPERVIOUS COVER TREATED (ac)	0.2900	0.0000	0.0000	0.0000	0.0000	OK
MANAGED TURF AREA (ac)	0.1000	0.0000	0.0000	0.0000	0.0000	OK
MANAGED TURF AREA TREATED (ac)	0.0000	0.0000	0.0000	0.0000	0.0000	OK
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft³) 2,090.8800

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)	420,7170	0.0000	0.0000	0.0000	0.0000	420,7170
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	1.3137	0.0000	0.0000	0.0000	0.0000	1.3137
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.3484	0.0000	0.0000	0.0000	0.0000	0.3484
TP LOAD REMAINING (lb/yr)	0.9653	0.0000	0.0000	0.0000	0.0000	0.9653

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 2.8550

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	1.3137
TP LOAD REDUCTION REQUIRED (lb/yr)	0.3470
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.3484
TP LOAD REMAINING (lb/yr)	0.9653
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.0000 **
**No further TP load reduction required	

Total Nitrogen (For Informational Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	9.3980
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.8550
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	6.5430

RUNOFF DEPTH REDUCTION COMPUTATIONS

DRAINAGE AREA	0.68	A.C.	1-year storm	2-year storm	10-year storm
Storm Depth (in)	2.69	3.2	2.69	3.2	4.84
Rv (developed) (ft) with no Runoff Reduction	2.15	2.64	2.15	2.64	4.26
Rv (developed) (ft) with Storage Provided	1.98	2.48	1.98	2.48	4.09
CN adjusted	93	93	93	93	93

DA to BMP (SF) 11500 **1-year RV (CFT)** 2449 **2-year RV (CFT)** 2913 **10-year RV (CFT)** 4406 **Storage Volume (CFT)** 1,031 **RR Credit** 40% **Runoff Reduction (1-year)** 412 **Runoff Reduction (2-year)** 412 **Runoff Reduction (10-year)** 412

SWM Planters Quantity Energy Balance Worksheet

SITE AREA (acre)	0.68	1 year	10 year
PRE	2.69	2.69	4.84
POST (adjusted)	2.69	2.69	4.84
P	92	92	92
CN	92	92	92
S=100/(CN-10)	0.87	0.75	0.87
RV=I-P-0.2S ² /(P-0.2S)+S	1.87	1.96	3.93

QPost Development <= I.F.* (Qpre-development* Rvpre-development)/RVdeveloped

I.F.	CHANNEL PROTECTION	FLOOD CONTROL
Qpre-development	1.59	3.32
QPost Development	1.65	3.37
RVPost Development (with runoff reduction)	1.98	4.09
Qallowable	1.35	3.19
Qallowable/QPost Development	0.82	0.95
Vs/Rv	0.28	0.14
Storage required (cf)	683	1414

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths (RV developed) are computed with and without reduction practices.

Drainage Area A	A Soils	B Soils	C Soils	D Soils	Total Area (acres):
Forest/Open Space – undisturbed, protected forest/open space or reforested land	Area (acres)	30	55	70	77
Managed Turf – disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.1000
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	0.5800
Runoff Reduction	Volume (ft³):	420,7170			
RV developed (watershed-inch) with no Runoff Reduction*	2.1475	2.6449	4.2611		
RV developed (watershed-inch) with Runoff Reduction*	1.9770	2.4745	4.0906		
Adjusted CN*	93	93	93		

LEVEL I STORMWATER PLANTER SIZING COMPUTATIONS FOR URBAN PLANTERS

URBAN BIORETENTION	IMPERVIOUS DA (SF)	PERMEABLE DA (SF)	DA BYPASS RECEIVED (ROAD ONLY)	SURFACE AREA	Rv	Tv	SURFACE AREA REQ'D	EQUIVALENT STORAGE DEPTH (FT)	PONDING	SOIL	GRAVEL	PONDING	SOIL	GRAVEL	Tv
#	(SF.)	(SF.)	(SF.)	PROV'D (SF.)	REQ'D (CFT)	(SF)	DEPTH (INCH)	DEPTH (FT)	DEPTH (FT)	Vr	Vr	Vr	PROV'D (CFT)		
1	10000	0	0	500	0.95	792	480	1.65	6	3	1	1	0.25	0.4	825

