

Civil Exhibits



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HANOVER 8TH STREET
WASHINGTON, DC # 2014-0339

CONSOLIDATED PUD SUBMISSION
OCTOBER 30, 2018

ZONING COMMISSION
District of Columbia
CASE NO.18-21
EXHIBIT NO.3A10

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STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET
(NOT TO SCALE)

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE	EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	ONSITE PROPERTY LINE / R.O.W. LINE			OVERHEAD WIRE	
	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE			UNDERGROUND TELEPHONE LINE	
	EASEMENT LINE			UNDERGROUND CABLE LINE	
	SETBACK LINE			STORM SEWER	
				SANITARY SEWER MAIN	
	CONCRETE CURB & GUTTER			HYDRANT	
				SANITARY MANHOLE	
				STORM MANHOLE	
	UTILITY POLE WITH LIGHT			WATER METER	
	POLE LIGHT			WATER VALVE	
	TRAFFIC LIGHT			GAS VALVE	
	UTILITY POLE			GAS METER	
	TYPICAL LIGHT			TYPICAL END SECTION	
	ACORN LIGHT			HEADWALL OR ENDWALL	
	TYPICAL SIGN			YARD INLET	
	PARKING COUNTS			CURB INLET	
	CONTOUR LINE			CLEAN OUT	
	SPOT ELEVATIONS			ELECTRIC MANHOLE	
	SANITARY LABEL			TELEPHONE MANHOLE	
	STORM LABEL			ELECTRIC BOX	
	SANITARY SEWER LATERAL			ELECTRIC PEDESTAL	
	UNDERGROUND WATER LINE			MONITORING WELL	
	UNDERGROUND ELECTRIC LINE			TEST PIT	
	UNDERGROUND GAS LINE			BENCHMARK	
				BORING	

GENERAL NOTES:

1. THE PLAN IS BASED ON THE FOLLOWING DOCUMENTS AND INFORMATION
 - A. ENTITLED: "ALTA/ACSM LAND TITLE SURVEY, THE HANOVER COMPANY, LOT 15, SQUARE 3382 AND A&T LOT 804, SQUARE 3835, 3201 & 3135 8TH STREET NE, DISTRICT OF COLUMBIA", PREPARED BY: BOHLER ENGINEERING, PROJECT NUMBER: SRW182079, DATED: 08/19/18
 - B. DIGITAL ARCHITECTURAL PLANS: ENTITLED: "180430 BROOKLAND - RESIDENTIAL APARTMENTS -SP1_2018 v22.DWG" PREPARED BY: KGT ARCHITECTS, DATE RECEIVED: 10/12/18
2. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON UTILITY MARK OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARK OUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE, AND TYPE BY THE PROPER UTILITY COMPANIES.

SHEET INDEX

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DEVELOPER

THE HANOVER COMPANY
CORPORATE OFFICE
5847 SAN FELIPE, SUITE 3600
HOUSTON, TX 77057

GENERAL NOTES AND LEGEND

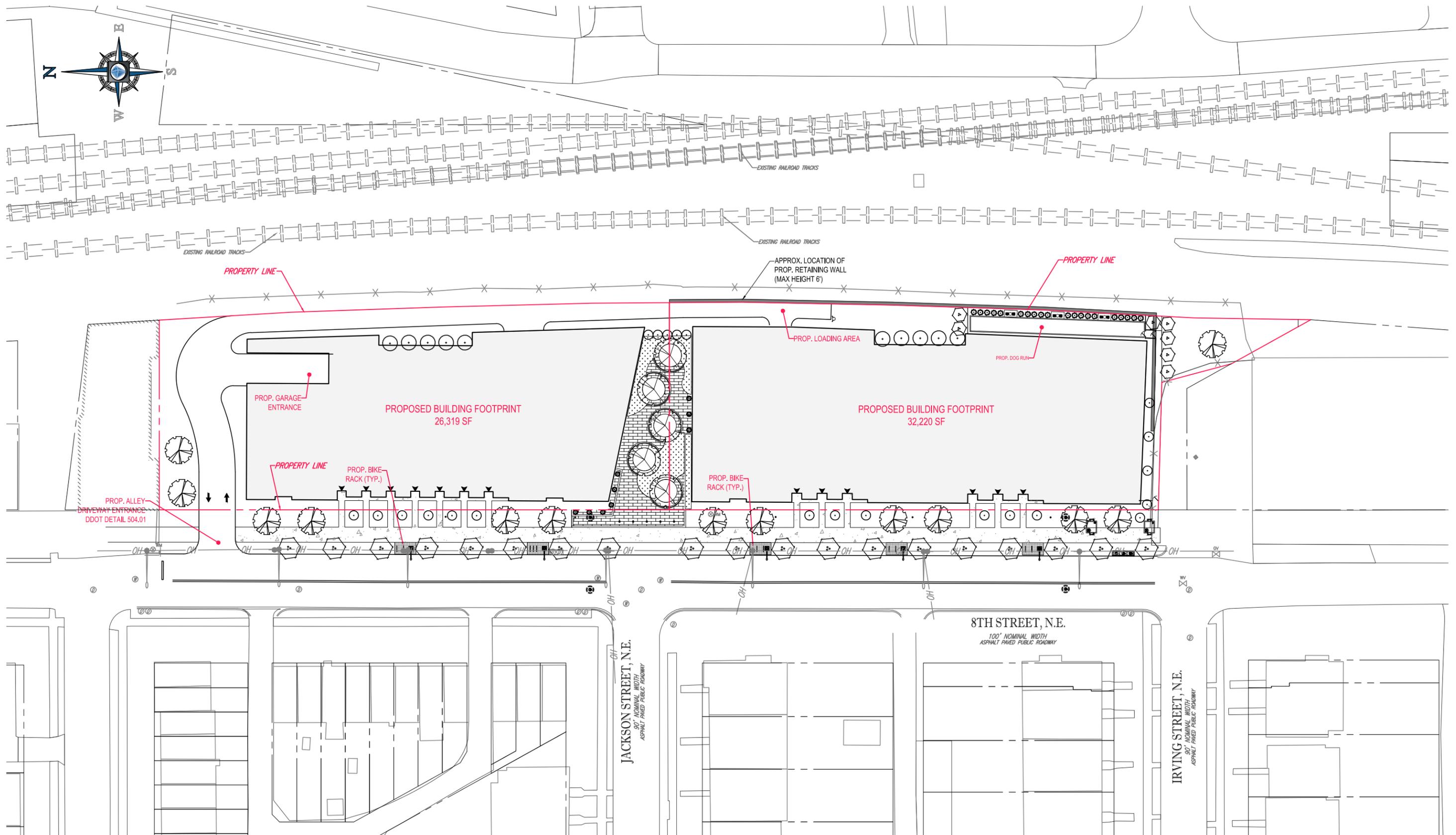


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C-101



SITE PLAN

SCALE: 1" = 60'

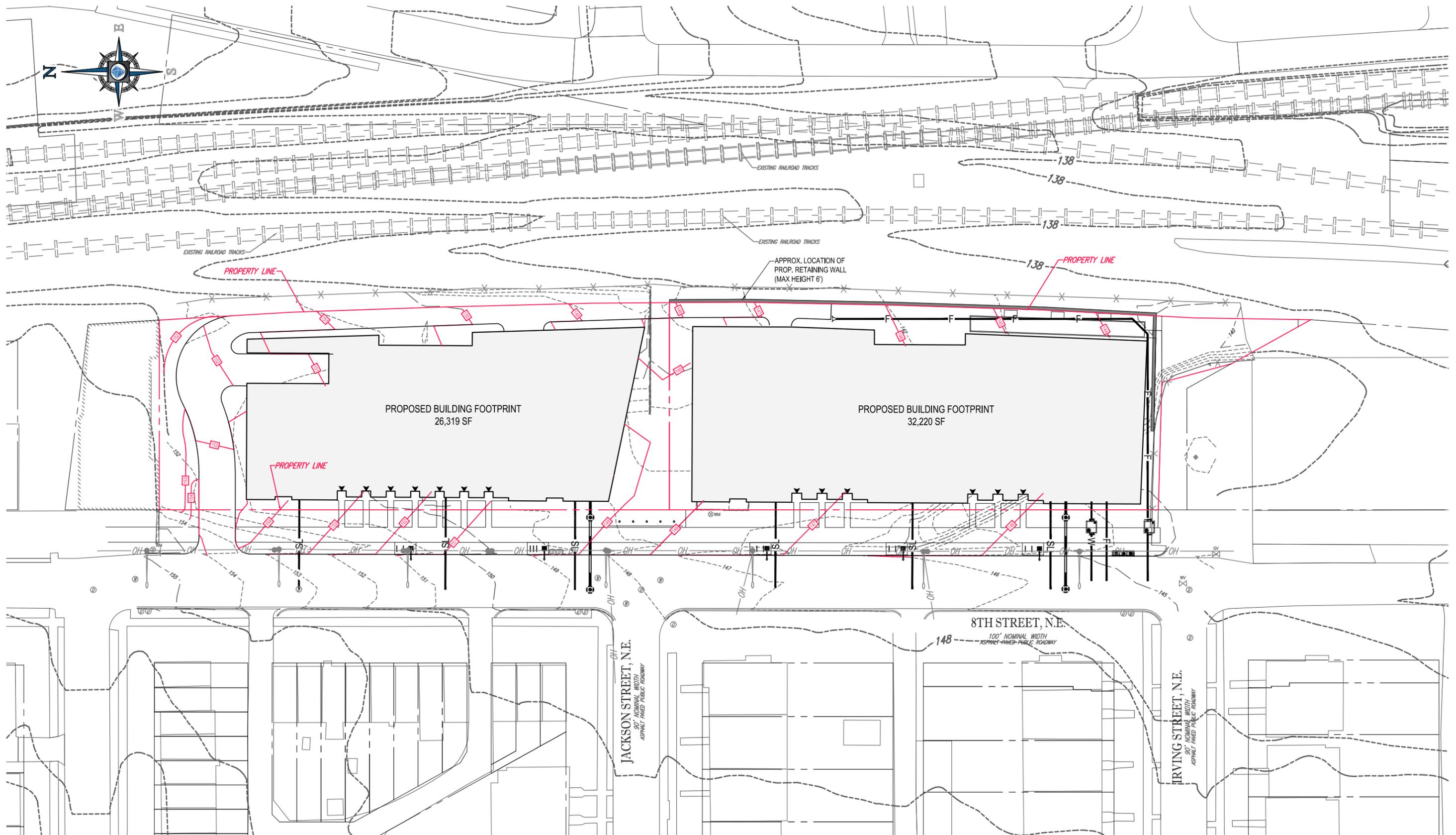


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C-301



GRADING PLAN

SCALE: 1" = 60'

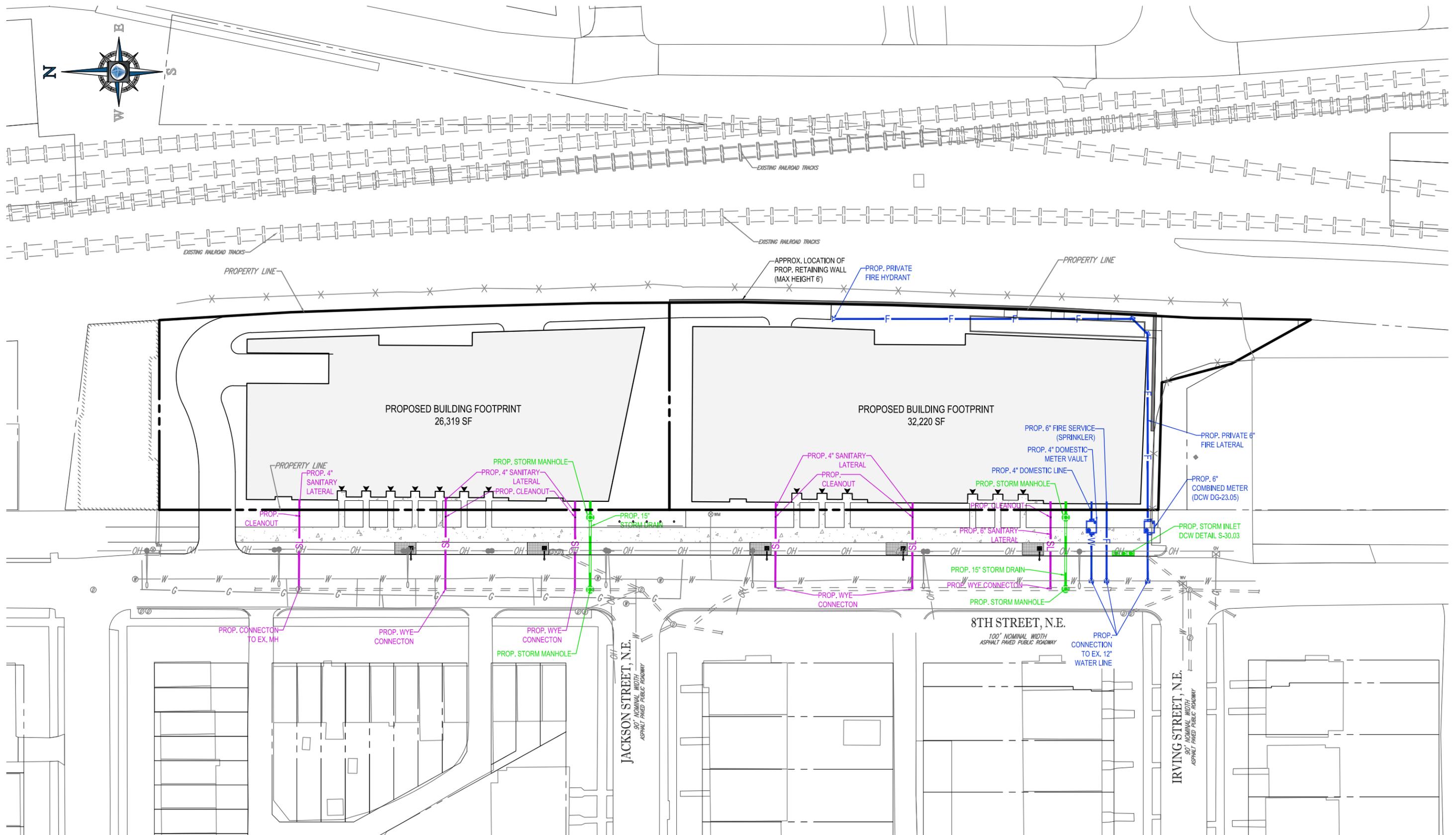


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C-401



UTILITY PLAN

SCALE: 1" = 60'

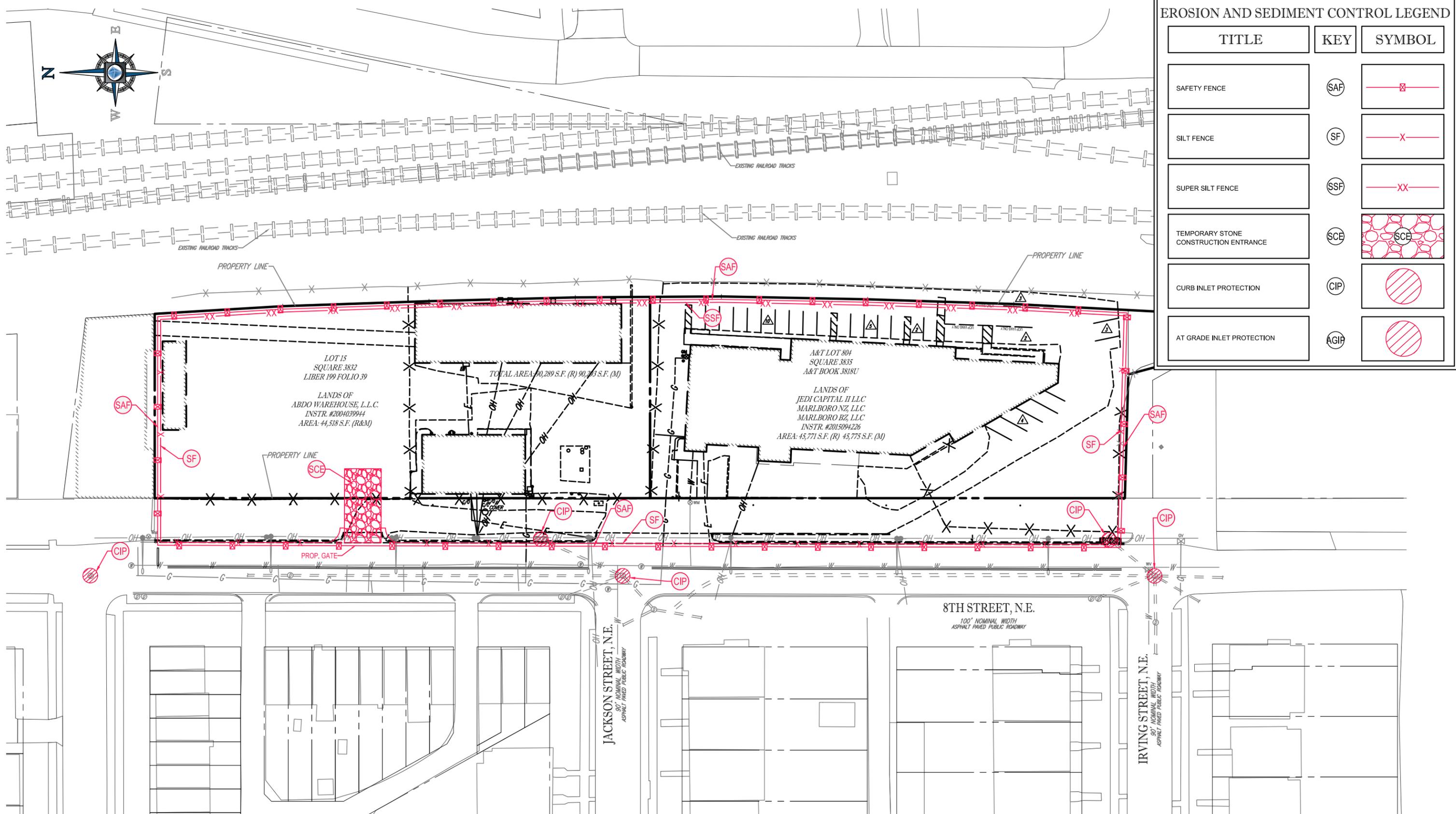


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C-501



TITLE	KEY	SYMBOL
SAFETY FENCE	(SAF)	— X —
SILT FENCE	(SF)	— X —
SUPER SILT FENCE	(SSF)	— XX —
TEMPORARY STONE CONSTRUCTION ENTRANCE	(SCE)	(SCE) [Stone Pattern]
CURB INLET PROTECTION	(CIP)	[Diagonal Lines]
AT GRADE INLET PROTECTION	(AGIP)	[Diagonal Lines]

EROSION AND SEDIMENT CONTROL PLAN

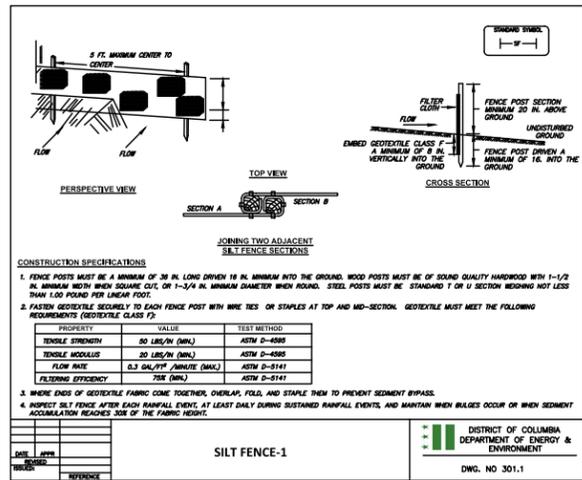
SCALE: 1" = 60'



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C-601



SILT FENCE DESIGN CRITERIA

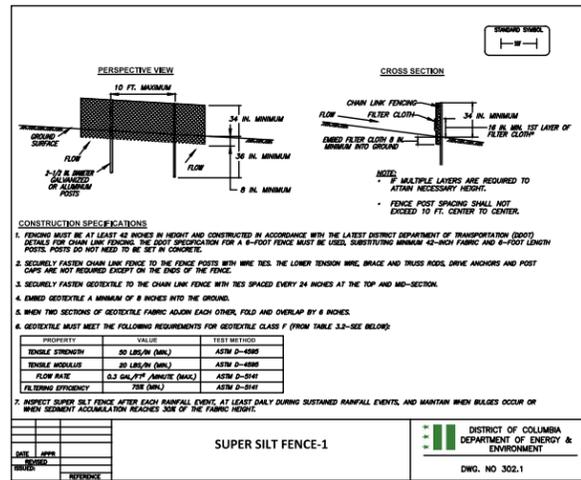
TABLE 3.1: SILT FENCE SLOPE LENGTH AND FENCE LENGTH CONSTRAINTS

SLOPE STEEPNESS	SLOPE LENGTH (MAXIMUM) (FEET)	SILT FENCE LENGTH (MAXIMUM) (FEET)
FLATTER THAN 50:1 (20%)	UNLIMITED	UNLIMITED
> 50:1 TO 10:1 (20% to 10%)	125	1,000
> 10:1 TO 5:1 (10% to 20%)	100	750
> 5:1 TO 3:1 (20% to 33%)	60	500
> 3:1 TO 2:1 (33% to 50%)	40	250
> 2:1 (> 50%)	20	125

NOTE:

- IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA GENERAL CLASSIFICATION SYSTEM SOIL CLASS A) MAXIMUM SLOPE LENGTH AND SILT FENCE LENGTH WILL BE DETERMINED BY THESE AREAS A SILT FENCE MAY BE THE ONLY PERIMETER CONTROL REQUIRED.
- TO AVOID CIRCUMVENTION, EXTEND THE ENDS OF THE SILT FENCE UPSLOPE TO PREVENT WATER AND SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.

DISTRICT OF COLUMBIA
DEPARTMENT OF ENERGY & ENVIRONMENT
DWG. NO 301.2



SUPER SILT FENCE DESIGN CRITERIA

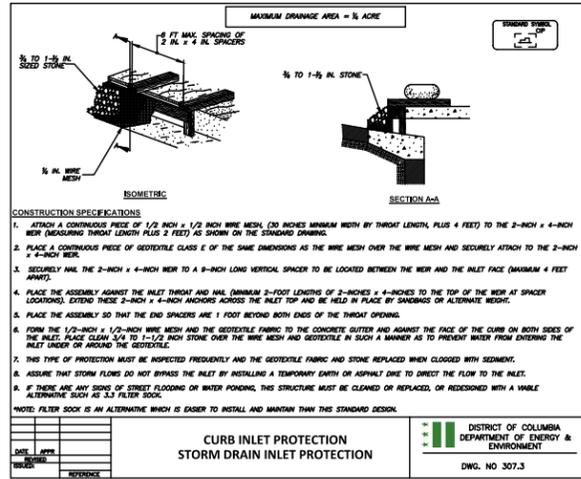
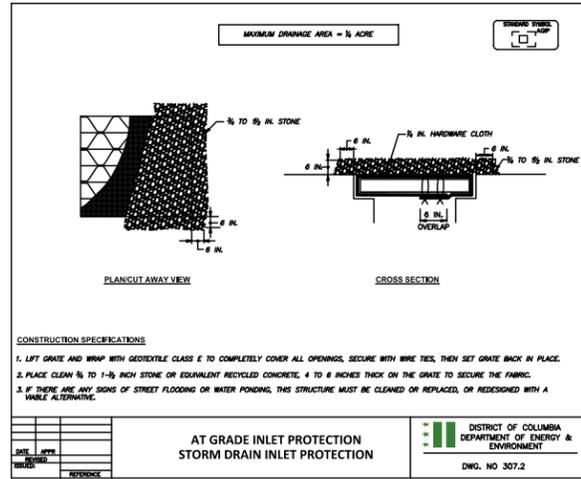
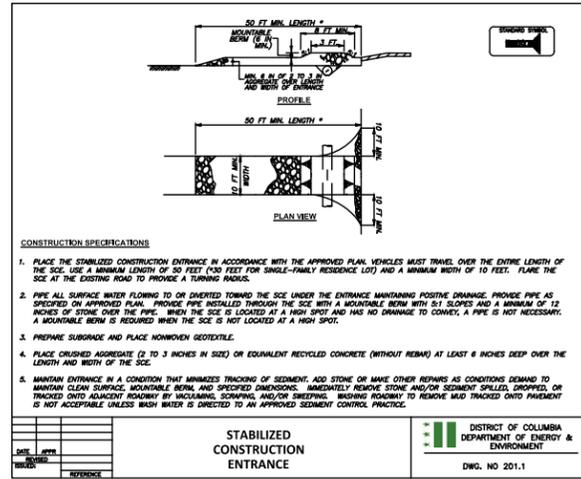
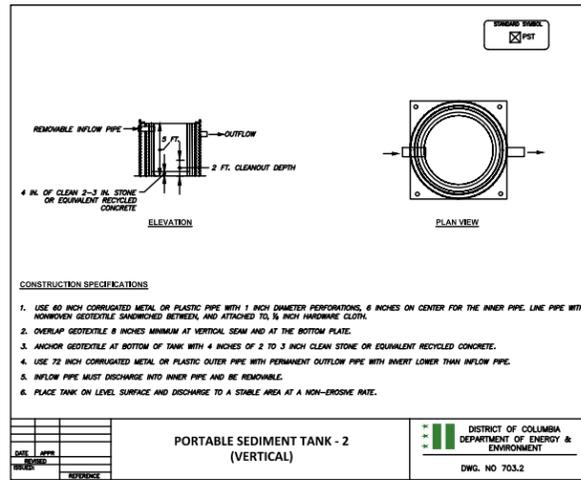
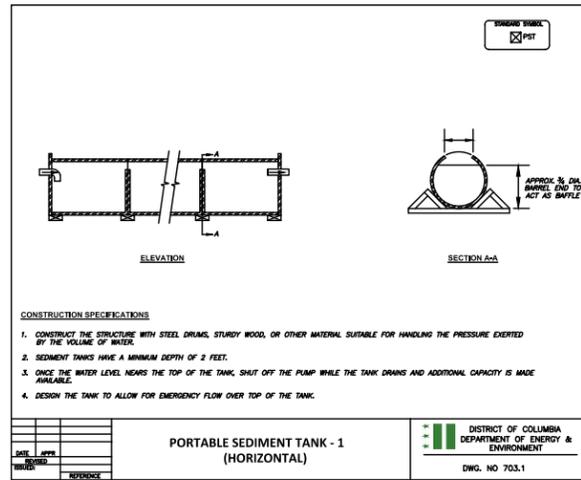
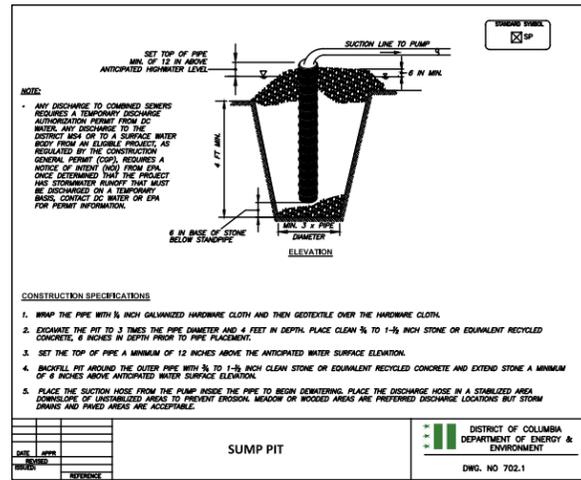
TABLE 3.2: SUPER SILT FENCE SLOPE LENGTH AND FENCE LENGTH CONSTRAINTS

SLOPE	SLOPE STEEPNESS	SLOPE LENGTH (MAXIMUM) (FEET)	SUPER SILT FENCE LENGTH (MAXIMUM) (FEET)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200	1,500
20 - 33%	5:1 - 3:1	150	1,000
33 - 50%	3:1 - 2:1	100	500
> 50%	> 2:1	50	250

NOTE:

- TO AVOID CIRCUMVENTION, EXTEND THE ENDS OF THE SILT FENCE 5 HORIZONTAL FEET UPSLOPE AT 45-DEGREE ANGLES RELATIVE TO THE MAIN FENCE ALIGNMENT TO PREVENT SEDIMENT ACCUMULATION.

DISTRICT OF COLUMBIA
DEPARTMENT OF ENERGY & ENVIRONMENT
DWG. NO 302.2



EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

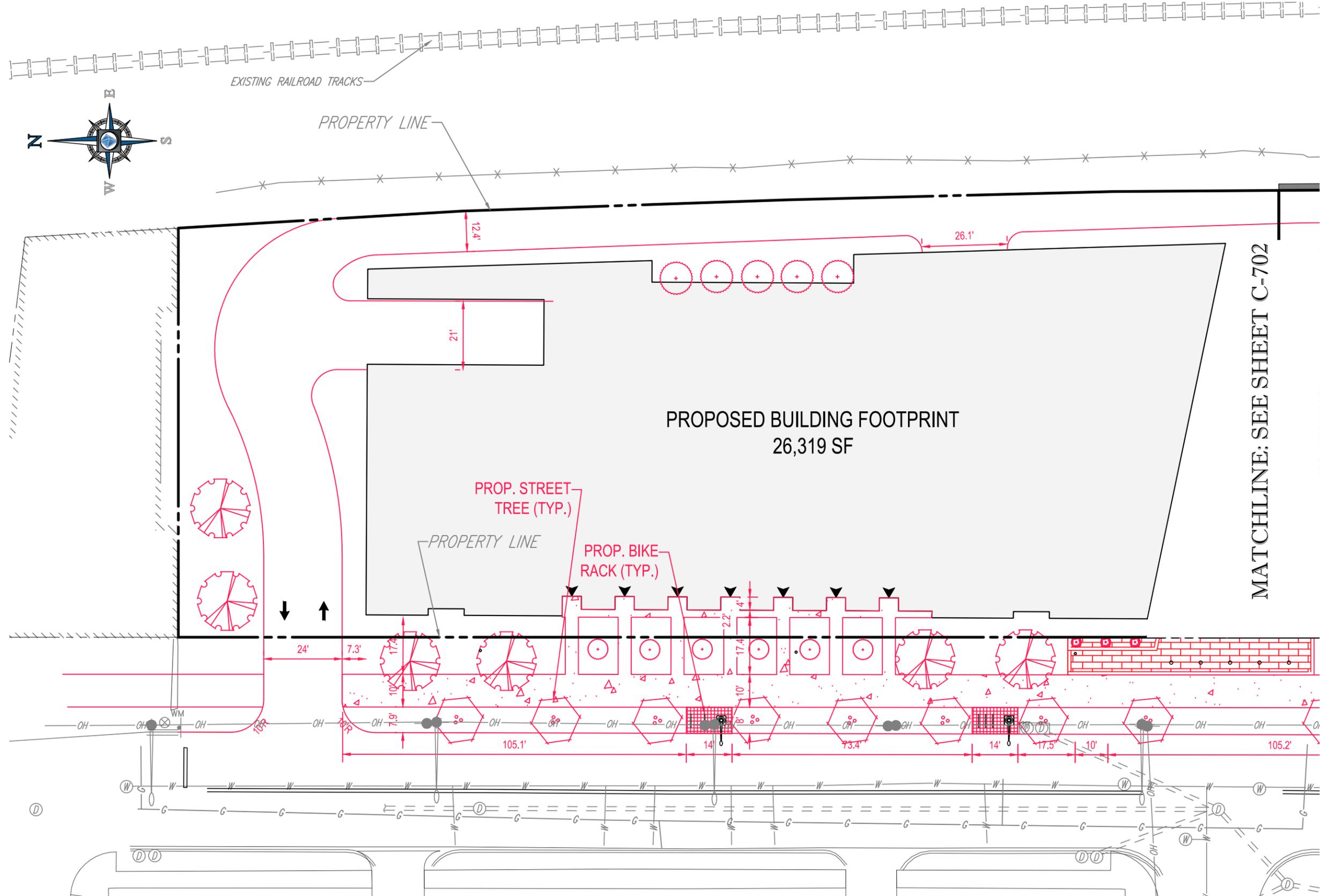


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C-602



PUBLIC SPACE PLAN

SCALE: 1" = 30"

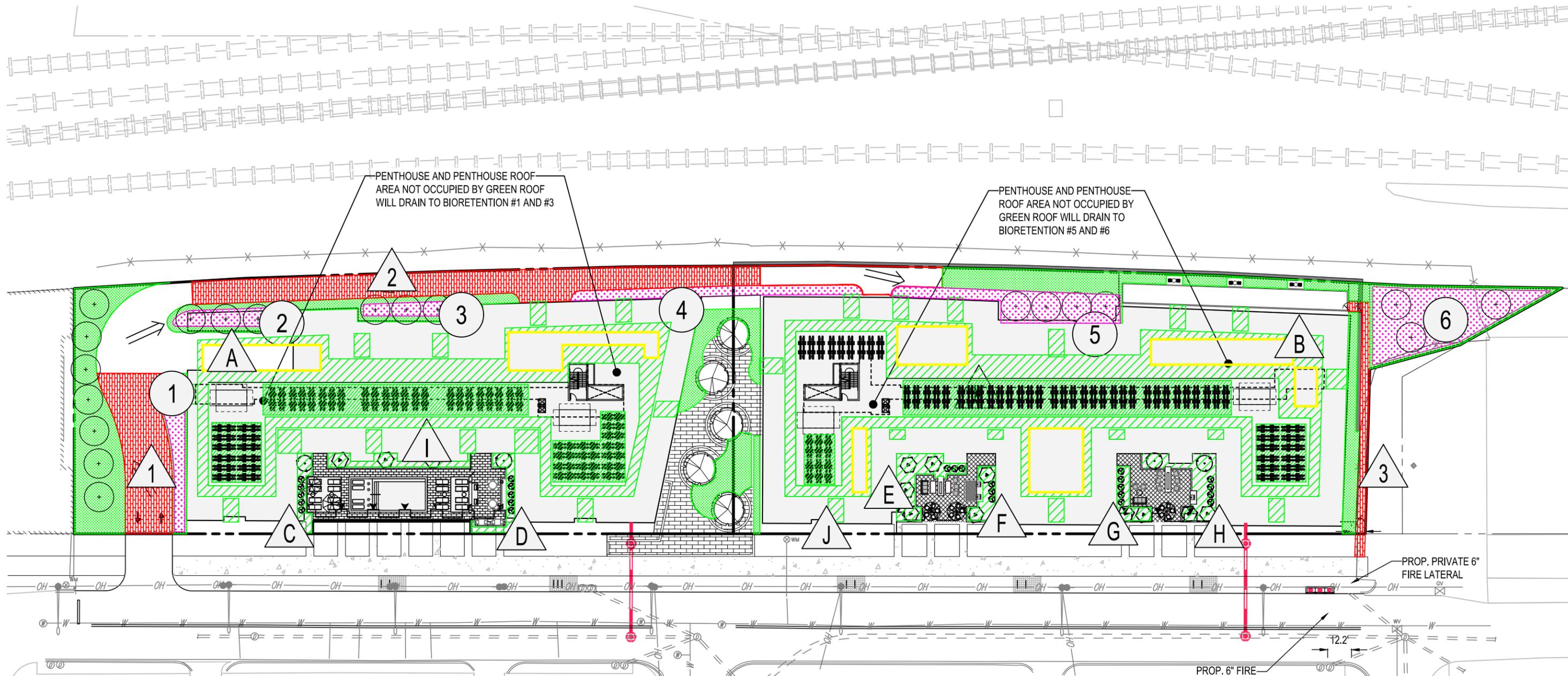


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HANOVER - PUD APPLICATION



C-701



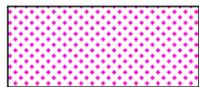
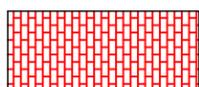
STORMWATER MANAGEMENT SUMMARY

THE VOLUME REQUIRED TO BE RETAINED ON-SITE (SWR_v) IS 8,007 CUBIC FEET. THE VOLUME REQUIREMENT FOR THE PUBLIC RIGHT OF WAY WILL BE DETERMINED ONCE STREETScape IMPROVEMENTS HAVE BEEN FINALIZED.

GREEN ROOF AREAS LOCATED ON VARIOUS LEVELS OF THE PROPOSED BUILDINGS AS WELL AS BIORETENTION, PERMEABLE PAVEMENT, AND TREE PLANTING ON THE GROUND FLOOR. SEE STORMWATER MANAGEMENT NARRATIVE ON SHEET CIV902 FOR ADDITIONAL INFORMATION AND CALCULATIONS.

THE SIZE AND DEPTH OF THE GREEN ROOF, PERMEABLE PAVEMENT, AND BIORETENTION AREAS WILL BE DETERMINED WITH FINAL CONSTRUCTION DOCUMENTS.

LEGEND

	8" GREEN ROOF		COMPACTED COVER AREA (8,149 SF ON-SITE)		DRAINAGE AREA FLOW PATTERN
	3" GREEN ROOF (BELOW HVAC EQUIPMENT)		SOLAR PANEL AREA ABOVE HVAC EQUIPMENT (4,728 SF TOTAL)		DENOTES PERMEABLE PAVEMENT
	BIORETENTION (TOTAL SECTION DEPTH = 3.67')		BIORETENTION CONTRIBUTING DRAINAGE AREA		DENOTES GREEN ROOF AREA
	PERMEABLE PAVEMENT (8" RESERVOIR LAYER ASSUMED)				DENOTES BIORETENTION AREA
					PROPOSED TREE (MATURE SPREAD GREATER THAN 35')

STORMWATER MANAGEMENT PLAN

SCALE: 1" = 60'



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HANOVER - PUD APPLICATION



C-901

GREEN ROOF TABLE:

GREEN ROOF#	SURFACE AREA (SF)	TOTAL CDA (SF)	PROP. IMP (SF)	MEDIA DEPTH (in.)	DRAINAGE LAYER DEPTH (IN)	LOCATION	STORAGE PROVIDED	Max SWRv	SWRv PROVIDED	NOTES	
A	5,175	5,175	5,175	8	1		1617	696	696		
B	6,248	6,248	6,248	8	1		1953	841	841		
C	240	240	240	8	1		75	32	32		
D	278	278	278	8	1		87	37	37		
E	561	561	561	8	1		175	76	76		
F	255	255	255	8	1		80	34	34		
G	248	248	248	8	1		78	33	33		
H	569	569	569	8	1		178	77	77		
I	363	363	363	8	1		113	49	49		
J	2,607	2,607	2,607	8	1		815	351	351	COMBO PENTHOUSE GR	
K	7,952	7,952	7,952	3	1		994	1070	994	COMBO HVAC GR	
TOTAL							6,164	3,297	3,221		
MEDIA RETENTION VALUE										0.45	
DRAINAGE LAYER RETENTION VALUE										0.15	

PRELIMINARY GAR SCORECARD:

Green Area Ratio Scoresheet					
Address: 3135 8th Street, NE	Square	Lot	Zone District		
	3832, 3835	15, 804	MU-4		
Other: _____	Lot area (sf)	Minimum Score	Multiplier	GAR Score	
Lot size (enter this value first) *	90,293	0.3		score: 0.303	
Landscape Elements					
		Square Feet	Factor	Total	
A Landscaped areas (select one of the following for each area)					
1	Landscaped areas with a soil depth < 24"	<input type="text" value="0"/>	0.30	-	
2	Landscaped areas with a soil depth ≥ 24"	<input type="text" value="0"/>	0.60	-	
3	Bioretention facilities	<input type="text" value="5,650"/>	0.40	2,260.0	
B Plantings (credit for plants in landscaped areas from Section A)					
1	Groundcovers, or other plants < 2' height	<input type="text" value="8,149"/>	0.20	<input type="text" value="0"/>	1,629.8
2	Plants ≥ 2' height at maturity - calculated at 9-sf per plant	<input type="text" value="0"/>	0.30	<input type="text" value="0"/>	-
3	New trees with less than 40-foot canopy spread - calculated at 50 sq ft per tree	<input type="text" value="25"/>	0.50	<input type="text" value="0"/>	625.0
4	New trees with 40-foot or greater canopy spread - calculated at 250 sq ft per tree	<input type="text" value="0"/>	0.60	<input type="text" value="0"/>	-
5	Preservation of existing tree 6" to 12" DBH - calculated at 250 sq ft per tree	<input type="text" value="0"/>	0.70	<input type="text" value="0"/>	-
6	Preservation of existing tree 12" to 18" DBH - calculated at 600 sq ft per tree	<input type="text" value="0"/>	0.70	<input type="text" value="0"/>	-
7	Preservation of existing trees 18" to 24" DBH - calculated at 1300 sq ft per tree	<input type="text" value="0"/>	0.70	<input type="text" value="0"/>	-
8	Preservation of existing trees 24" DBH or greater - calculated at 2000 sq ft per tree	<input type="text" value="0"/>	0.80	<input type="text" value="0"/>	-
9	Vegetated wall, plantings on a vertical surface	<input type="text" value="0"/>	0.60	<input type="text" value="0"/>	-
C Vegetated or "green" roofs					
1	Over at least 2" and less than 8" of growth medium	<input type="text" value="7,952"/>	0.60	<input type="text" value="0"/>	4,771.2
2	Over at least 8" of growth medium	<input type="text" value="16,544"/>	0.80	<input type="text" value="0"/>	13,235.2
D Permeable Paving***					
1	Permeable paving over 6" to 24" of soil or gravel	<input type="text" value="6,181"/>	0.40	<input type="text" value="0"/>	2,472.4
2	Permeable paving over at least 24" of soil or gravel	<input type="text" value="0"/>	0.50	<input type="text" value="0"/>	-
E Other					
1	Enhanced tree growth systems***	<input type="text" value="0"/>	0.40	<input type="text" value="0"/>	-
2	Renewable energy generation	<input type="text" value="4,728"/>	0.50	<input type="text" value="0"/>	2,364.0
3	Approved water features	<input type="text" value="0"/>	0.20	<input type="text" value="0"/>	-
		sub-total of sq ft =	50,454		
F Bonuses					
1	Native plant species	<input type="text" value="0"/>	0.10	<input type="text" value="0"/>	-
2	Landscaping in food cultivation	<input type="text" value="0"/>	0.10	<input type="text" value="0"/>	-
3	Harvested stormwater irrigation	<input type="text" value="0"/>	0.10	<input type="text" value="0"/>	-
		Green Area Ratio numerator =	27,358		
*** Permeable paving and structural soil together may not qualify for more than one third of the Green Area Ratio score.					
		Total square footage of all permeable paving and enhanced tree growth.		2,472	

PERMEABLE PAVEMENT TABLE:

FACILITY	SA (SF)	SWRv (CF)	Storage (CF)	Gravel D(ft)
1	2,051	92	481	0.67
2	3,509	158	823	0.67
3	621	28	146	0.67
Total	6,181	278	1450	

BIORETENTION TABLE:

FACILITY	SURFACE AREA, BOT. (SF)	SURFACE AREA, TOP (SF)	TOTAL CDA (SF)	PROP. IMP (SF)	PROP. PERV (SF)	FREEBOARD (FT)	PONDING DEPTH (FT)	MEDIA DEPTH (FT)	GRAVEL DEPTH (FT)	STORAGE PROVIDED	SWRv (CF)	Max SWRv	SWRv PROVIDED
1	642	642	8,346	7,523	181	0.25	0.5	1.5	1	819	491	1,105	491
2	523	523	3,999	2,921	555	0.25	0.5	1.5	1	667	400	483	400
3	406	406	8,484	7,523	555	0.25	0.5	1.5	1	518	311	1,087	311
4	735	735	5,866	3,523	1,608	0.25	0.5	1.5	1	937	562	630	562
5	1,247	1,247	9,851	8,604	0	0.25	0.5	1.5	1	1,590	954	1,326	954
6	2,097	2,097	18,169	11,398	4,674	0.25	0.5	1.5	1	2,674	1,604	1,982	1,604
TOTAL										7,204	4,322	6,613	4,322

TREE PLANTING TABLE:

Activity	Trees	SWRv (CF)	Storage
tree planting (evergreen screening)	25	250	0

SUMMARY

SWRv REQUIRED = 8,007 CF
SWRv PROVIDED = 8,070 CF

STORAGE REQUIRED = 13,789 CF
STORAGE PROVIDED = 14,817 CF

GAR REQUIRED = 0.3
GAR PROVIDED = 0.303

STORMWATER MANAGEMENT CALCULATIONS AND DETAILS

SCALE: 1" = 60'



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HANOVER - PUD APPLICATION



C-902