LEFT BLANK INTENTIONALLY

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		OH	OVERHEAD WIRE	OH
	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE		T	UNDERGROUND TELEPHONE LINE	T
	EASEMENT LINE		C	UNDERGROUND CABLE LINE	C
	SETBACK LINE			STORM SEWER	
			S	SANITARY SEWER MAIN	S
	CONCRETE CURB & GUTTER	CURB AND GUTTER; SPILL CURB / TRANSITION CURB; DEPRESSED CURB AND GUTTER		HYDRANT	
			S	SANITARY MANHOLE	
			D	STORM MANHOLE	
	UTILITY POLE WITH LIGHT		WM	WATER METER	
	POLE LIGHT		WV	WATER VALVE	
	TRAFFIC LIGHT			GAS VALVE	
	UTILITY POLE			GAS METER	
	TYPICAL LIGHT			TYPICAL END SECTION	
	ACORN LIGHT			HEADWALL OR ENDWALL	
	TYPICAL SIGN			YARD INLET	
X	PARKING COUNTS	X		CURB INLET	
				CLEAN OUT	
170 / 169	CONTOUR LINE	190 / 187	E	ELECTRIC MANHOLE	E
TC 516.4 OR 516.4	SPOT ELEVATIONS	TC 516.00 / TC 516.00 BC 515.55	T	TELEPHONE MANHOLE	T
			EB	ELECTRIC BOX	EB
			EP	ELECTRIC PEDESTAL	EP
SAN #	SANITARY LABEL	SAN #		MONITORING WELL	
X #	STORM LABEL	X #		TEST PIT	
SL	SANITARY SEWER LATERAL	SL		BENCHMARK	
W	UNDERGROUND WATER LINE	W		BORING	
E	UNDERGROUND ELECTRIC LINE	E			
G	UNDERGROUND GAS LINE	G			

PROJECT NARRATIVE:

THE SITE IS AN EXISTING 2-STORY CONCRETE AND BRICK INSTITUTIONAL BUILDING (501 I STREET, SW). THE PROPOSED PROJECT INCLUDES THE DEMOLITION OF THE EXISTING BUILDING, SITE-RELATED FEATURES, AND UTILITIES. THE PROJECT ALSO INCLUDES THE CONSTRUCTION OF A NON PROFIT OFFICE/EDUCATIONAL/ART-USE/RESIDENTIAL BUILDING WITH UNDERGROUND PARKING AND SITE AMENITIES. THE UTILITY IMPROVEMENTS INCLUDE DOMESTIC WATER, FIRE, SANITARY SEWER, AND STORM DRAIN CONNECTIONS TO EXISTING UTILITY MAINS LOCATED WITHIN THE 6TH STREET, SW, AND I STREET, SW, PUBLIC RIGHT-OF-WAY. THE PROJECT PROPOSES THE USE OF A CISTERN AND 8" GREEN ROOF TO MEET THE STORMWATER RETENTION VOLUME (SWRv) REQUIREMENTS AND THE GREEN AREA RATIO (GAR) REQUIREMENTS.

REFERENCES:

1. THE PLAN IS BASED ON THE FOLLOWING DOCUMENTS AND INFORMATION

   A. BOUNDARY & TOPOGRAPHIC SURVEY: ENTITLED: "BOUNDARY & TOPOGRAPHIC SURVEY, ERKILETIAN, 501 I STREET, S.W. LOT 52 SQUARE 498, DISTRICT OF COLUMBIA", PREPARED BY: BOHLER ENGINEERING, PROJECT NUMBER: DC132204, DATED: 3/25/14.

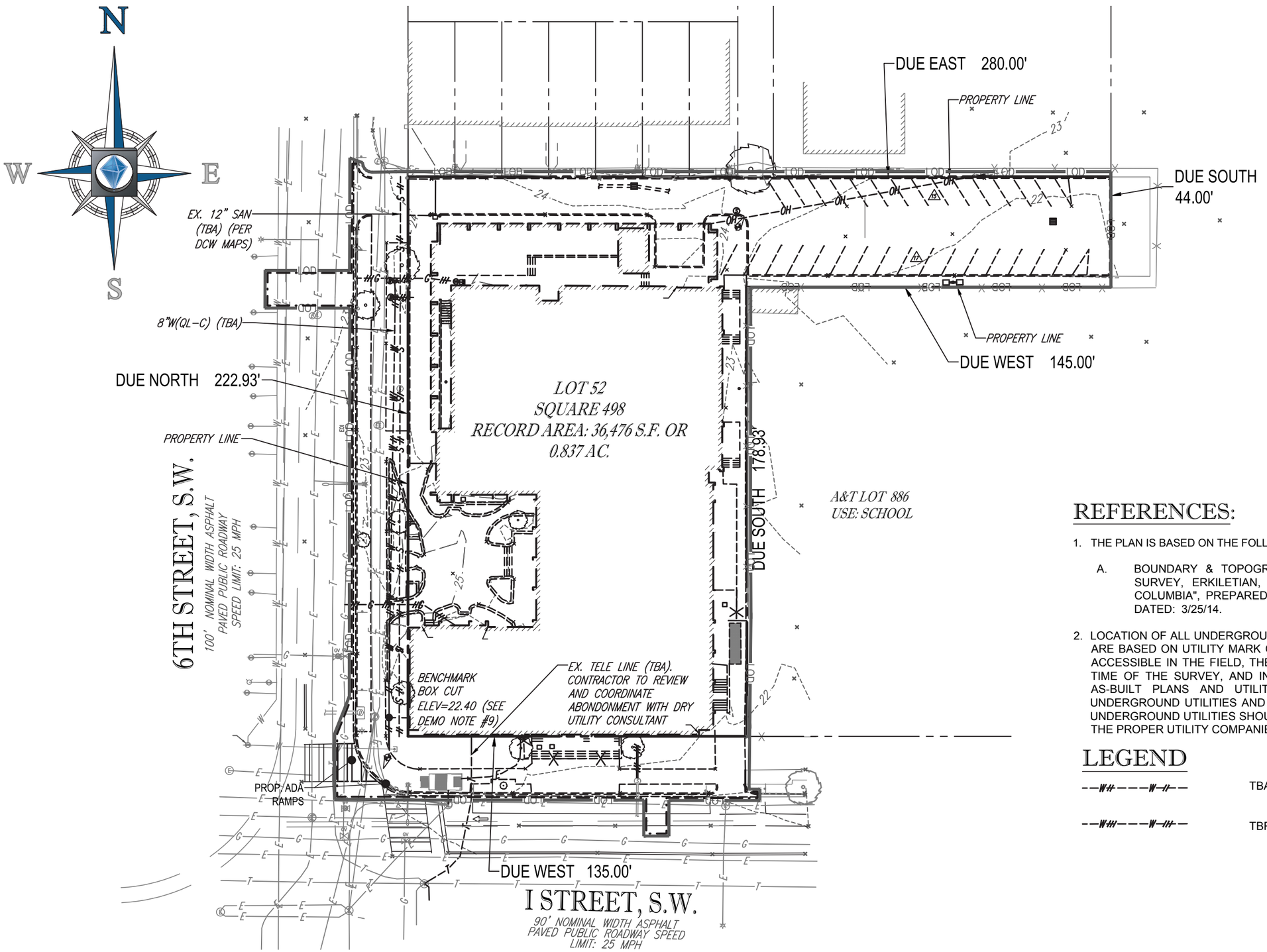
   B. DIGITAL ARCHITECTURAL FILES: ENTITLED: "20190301 - THE BARD - PUD - ALTERNATE.DWG", PREPARED BY: SHALOM BARANES, DATED: 03/01/19.

   C. DIGITAL LANDSCAPE FILES: ENTITLED: "PRI-Base Ground.DWG", PREPARED BY: PARKER RODRIGUEZ, DATED 03/07/19.

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, THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY, AND INFORMATION FROM DC WATER COUNTERMAPS. 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.

DEVELOPER

ERKILETIAN
2009 14TH STREET, N, SUITE ONE
ARLINGTON, VA 22201
(703) 671-4400
C/O: BILL DENTON



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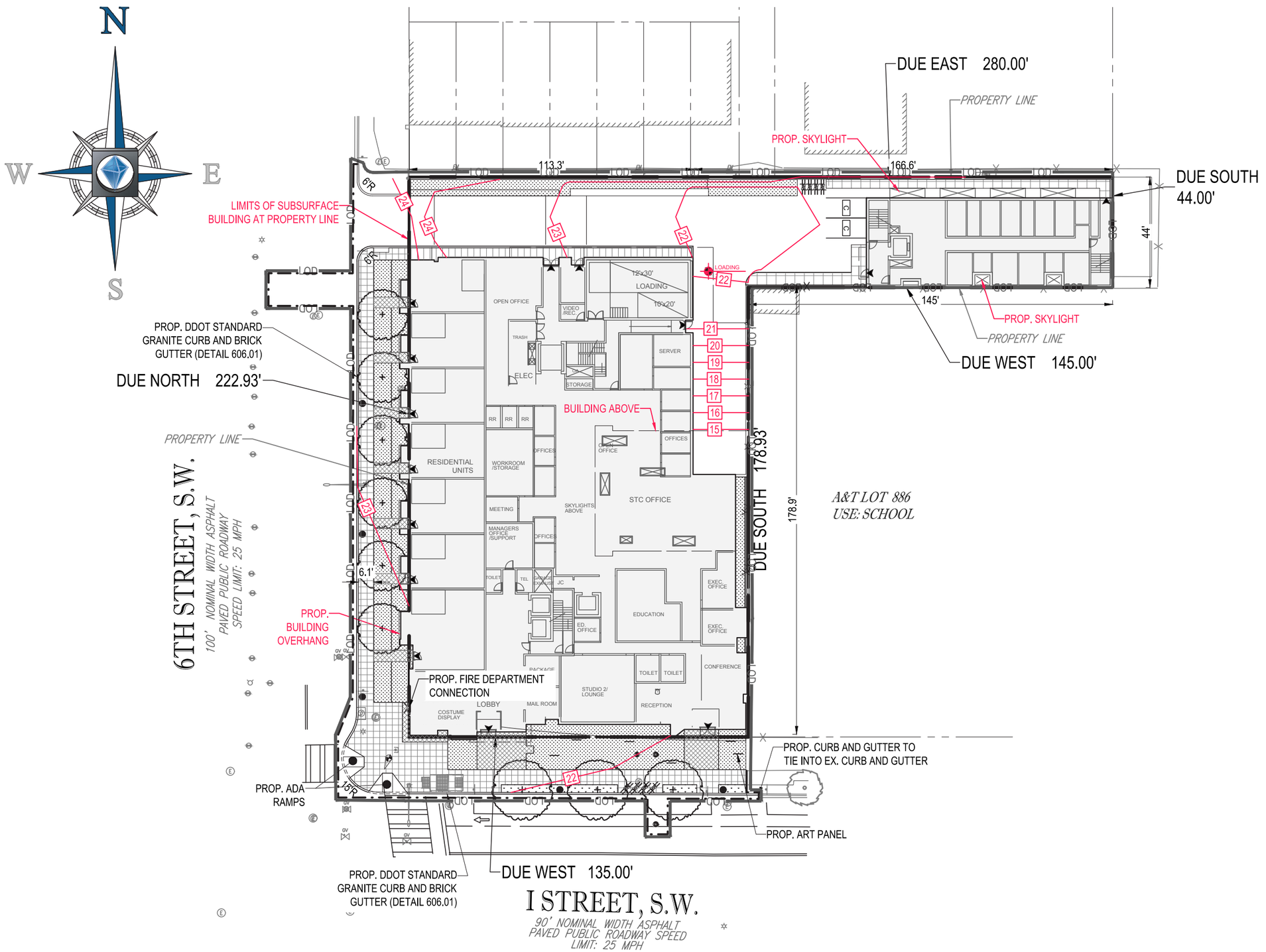
LEGEND

TBA EXISTING UTILITIES

TBR EXISTING UTILITIES

0 20 40
1"= 40'



PROJECT NARRATIVE:

THE PROJECT INCLUDES THE CONSTRUCTION OF A NON PROFIT OFFICE/EDUCATIONAL/ART-USE/RESIDENTIAL BUILDING WITH UNDERGROUND PARKING AND SITE AMENITIES. THE UTILITY IMPROVEMENTS INCLUDE DOMESTIC WATER, FIRE, SANITARY SEWER, AND STORM DRAIN CONNECTIONS TO EXISTING UTILITY MAINS LOCATED WITHIN THE 6TH STREET, SW, AND I STREET, SW, PUBLIC RIGHT-OF-WAY. THE PROJECT PROPOSES THE USE OF A CISTERN AND 8" GREEN ROOF TO MEET THE STORMWATER RETENTION VOLUME (SWRv) REQUIREMENTS AND THE GREEN AREA RATIO (GAR) REQUIREMENTS.

GRADING NARRATIVE:

THE PROPOSED GRADING WILL HONOR THE EXISTING DRAINAGE PATTERNS. INLETS WILL BE USED TO SAFELY CONVEY RUNOFF. EXACT SIZE AND LOCATION OF THESE STRUCTURES WILL BE DETERMINED WITH FINAL SITE DESIGN. THE PROJECT WILL TIE INTO THE EXISTING GRADES WITHIN THE LIMITS OF DISTURBANCE BASED ON FINAL ARCHITECTURE. FINISHED FLOOR ELEVATIONS HAVE NOT BEEN ESTABLISHED AT THIS TIME.

LEGEND

- PROP. TREE
- DDOT STANDARD CONCRETE PAVEMENT
- PROP. CONTOUR (XX)
- EX. CONTOUR (XX)
- PROP. COMPACTED COVER
- PROP. LAND COVER
- PROP. SPECIALTY PAVING

0 20 40
1"= 40'

THE BARD REDEVELOPMENT

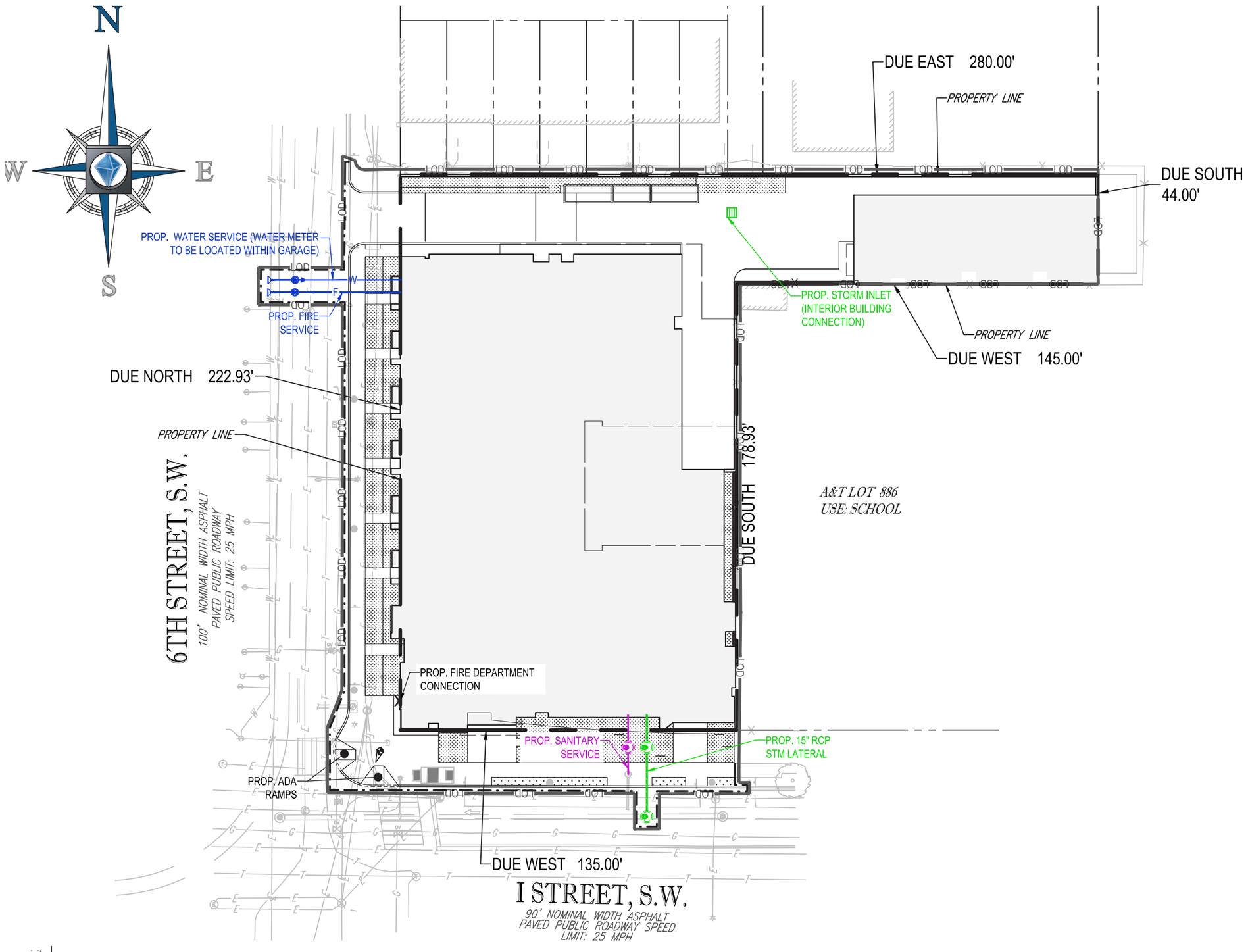
Southwest Washington, D.C.

SITE/GRADING PLAN

March 8, 2019 sba project# 14105

BOLHER DC civil engineers

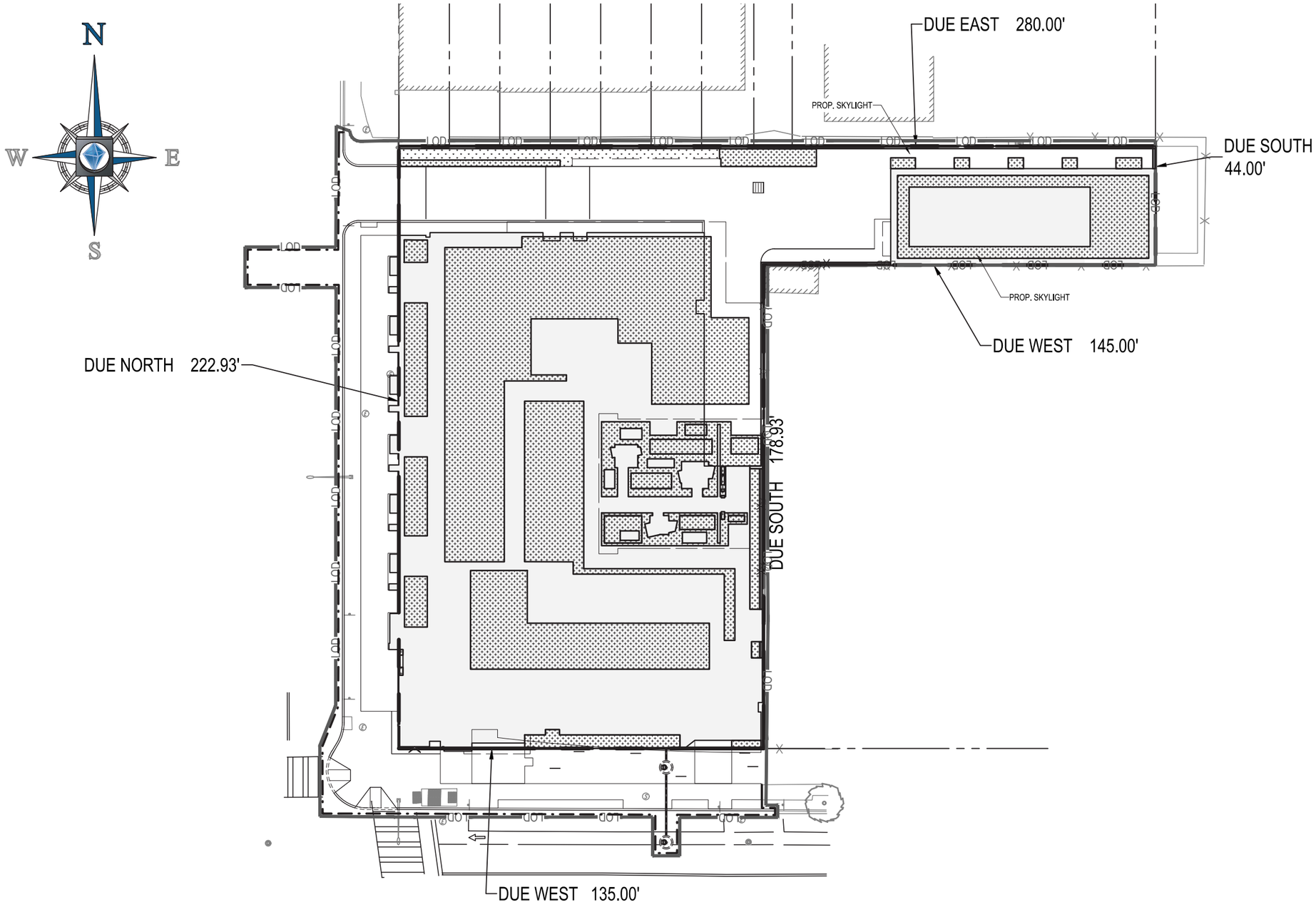
PUD SUBMISSION 5.3



UTILITY NARRATIVE

THE PROPOSED PROJECT INCLUDES CONSTRUCTION OF NEW UTILITY INFRASTRUCTURE TO SERVICE THE DEVELOPMENT. EXISTING WATER MAINS, SANITARY SEWER MAINS, AND STORM SEWER MAINS ARE AVAILABLE TO SERVE THE SITE AS WELL AS COMMUNICATION LINES, GAS MAINS, AND ELECTRIC SERVICE. PROPOSED UTILITY LATERALS SHOWN HEREON ARE APPROXIMATE. FINAL LOCATIONS OF LATERALS AND CONNECTIONS WILL BE DETERMINED DURING THE FINAL DESIGN OF THE BUILDING, ASSOCIATED UTILITY ROOM LOCATIONS, AND POINTS OF CONNECTION.
EXISTING 8" DEAD END WATER LINE WITHIN 6TH STREET SIDEWALK TO BE ABANDONED. EXISTING 12" DEAD END SANITARY LINE WITHIN 6TH STREET SIDEWALK TO BE ABANDONED. CONFIRM TOWNHOUSE TO THE NORTH DOES NOT TIE IN TO 12" DEAD END SYSTEM PRIOR TO ABANDONING; IF TOWNHOUSE TIES IN THEN THE TOWNHOUSE LINE WILL BE RECONNECTED TO THE EXISTING 10" SANITARY ON THE WEST SIDE OF 6TH STREET.

0 20 40
1"= 40'



LEGEND

8" GREEN ROOF

DENOTES PLANTING AREAS W/ SOIL DEPTH GREATER THAN 24"

NOTE: REMAINING ROOF AREA AND COURTYARD AREA (NOT INCLUDING GREEN ROOF ITSELF OR AREA DRAINING TO THE GREEN ROOF), AS WELL AS THE DRIVEWAY AREA, WILL DRAIN TO THE CISTERN.

STORMWATER MANAGEMENT SUMMARY

THE VOLUME REQUIRED TO BE RETAINED ON-SITE (SWRV) IS EQUAL TO APPROXIMATELY 3,432 CUBIC FEET. THE VOLUME REQUIREMENT FOR THE PROW WILL BE DETERMINED ONCE STREETSCAPE IMPROVEMENTS HAVE BEEN FINALIZED.

GREEN ROOF AREAS LOCATED ON VARIOUS LEVELS OF THE PROPOSED BUILDINGS AS WELL AS A RAINWATER HARVESTING CISTERN WILL BE USED TO SATISFY THE ON-SITE RETENTION VOLUME. SEE STORMWATER MANAGEMENT NARRATIVE ON SHEET C5 FOR ADDITIONAL INFORMATION AND CALCULATIONS.

THE SIZE AND DEPTH OF THE GREEN ROOF AREAS WILL BE DETERMINED WITH FINAL CONSTRUCTION DOCUMENTS, HOWEVER THE FINAL DESIGN WILL MEET THE REQUIRED STORMWATER RETENTION VOLUME (3,432 CF).

0 20 40
1"= 40'

SWM NARRATIVE

I. SITE DESCRIPTION:

THE SUBJECT SITE IS LOCATED AT THE CORNER OF 6TH STREET AND I STREET SOUTHWEST AND HAS A TOTAL AREA OF 36,475 SF. THIS PROJECT WILL DISTURB APPROXIMATELY 47,000 SQUARE FEET (1.07 AC).

II. STORMWATER RETENTION VOLUME REQUIREMENTS:

THE PRIVATE STORMWATER RETENTION VOLUME (SWRv) CALCULATIONS ARE SHOWN BELOW:

$$SWRv: \quad \frac{[P \times [(RvI \times \%I) + (RvC \times \%C) + (RvN \times \%N) \times SA]}{12}$$

$$SWRv = \frac{[1.2 \times [(0.95 \times 0.97) + (0.25 \times 0.03) \times 36{,}476]}{12}$$

SWRv REQUIRED = 3,432 CF
STORAGE REQUIRED = N/A (SEE STORM CONTROL NARRATIVE, THIS SHEET)

PUBLIC RIGHT-OF-WAY REQUIREMENTS WILL BE CALCULATED ONCE STREETSCAPE DESIGN IS FINALIZED. THIS REQUIREMENT WILL BE TREATED TO THE MAXIMUM EXTENT PRACTICABLE.

III. STORMWATER RETENTION VOLUME PROVIDED:

PRIVATE/ON-SITE STORMWATER RETENTION WILL BE PROVIDED THROUGH THE IMPLEMENTATION OF MULTIPLE GREEN ROOFS AND A CISTERN. THE FOLLOWING CALCULATIONS WERE USED TO DETERMINE THE PROVIDED STORAGE AND MAXIMUM SWRv

FOR EACH GREEN ROOF AREA:

$$Sv = SWRv\ MAX = \frac{[1.7 \times [(0.95 \times 1.0) + (0.25 \times 0.0) \times SA]}{12}$$

$$SV = SA \times \frac{[(d \times n1) + (DL \times n2)]}{12}$$

GREEN ROOF SWRv = 1,817 CF *

SEE GREEN ROOF TABLE ON THIS SHEET FOR CALCULATIONS FOR INDIVIDUAL GREEN ROOF AREAS.

A CISTERN IS PROPOSED TO COLLECT RUNOFF TO BE REUSED ON SITE FOR IRRIGATION PURPOSES. THE AREA TO IRRIGATE IS EQUAL TO THE GREEN ROOF AREA (13,500 SF). IRRIGATION WEATHER SENSORS WILL BE PROVIDED TO ENSURE WATERING OCCURES DURING DROUGHT CONDITIONS. PER DOEE SIZING PROCEDURE, AN APPROXIMATE 30,000 GALLON CISTERN WILL COLLECT RUNOFF FROM AN APPROXIMATE 16,595 SF DRAINAGE AREA (AS DESCRIBED ON SHEET C4). NOTE THAT THE CISTERN SIZE AND DRAINAGE AREA ARE SUBJECT TO CHANGE. DETAILED CISTERN INPUT AND OUTPUT RESULTS, AS WELL AS FINAL SIZING, WILL BE PROVIDED ONCE FINAL IRRIGATION DEMAND MAKEUP HAS BEEN PROVIDED FOR THE SITE.

CISTERN SWRv = 1,648 CF *

TOTAL SITE SWRv PROVIDED: 3,465 CF *

*** NOTE: STORAGE VALUES ARE SUBJECT TO CHANGE BASED ON FINAL GREEN ROOF SPECIFICATIONS AND FINAL CISTERN DEMAND INPUT. ADDITIONAL STORAGE BEYOND THE REQUIREMENT IS PROVIDED TO MEET BOTH SWRV AND LEED CREDITS.**

VI. ON-SITE STORM SEWER NETWORK:

THE PROPOSED STORM SEWER SYSTEM CONVEYS AND FILTERS ONSITE STORMWATER THROUGH THE GREEN ROOF. STORMWATER FLOWS ABOVE THE 1.2" STORM EVENT WILL DISCHARGE TO A STORM LATERAL THAT CONNECTS TO THE PUBLIC STORM SEWER LINE WITHIN I STREET SW. CISTERN OVERFLOW DRAINS WILL CONNECT TO THE INTERIOR PLUMBING SYSTEM AND BE PUMPED OUT TO THE SAME CONNECTION POINT AS THE GREEN ROOF OVERFLOW.

VII. SUMMARY:

ON-SITE RUNOFF NOT ABLE TO BE STORED ON-SITE WILL BE CONVEYED TO A PROPOSED STORM SEWER LATERAL WHICH CONNECTS INTO THE EXISTING PUBLIC STORM SEWER WITHIN THE I STREET SW RIGHT-OF-WAY. THE TOTAL PROPOSED STORMWATER STRATEGY OUTLINED IN THIS NARRATIVE PROVIDES A TOTAL SWRv GREATER THAN THE REQUIRED SWRv. PUBLIC RIGHT-OF-WAY SWRv REQUIREMENTS WILL BE DETERMINED ONCE STREETSCAPE DESIGN IS FINALIZED. THIS REQUIREMENT WILL BE TREATED TO THE MAXIMUM EXTENT PRACTICABLE.

STORM CONTROL NARRATIVE

BASED ON CHAPTER 2 OF THE DOEE STORMWATER MANAGEMENT GUIDEBOOK, THIS PROJECT IS EXEMPT FROM THE DETENTION STORM CONTROL REQUIREMENT FOR THE TWO-YEAR STORM BECAUSE IT SATISFIES THE FOLLOWING THREE CRITERIA:

(1) SITE DISCHARGES FLOW DIRECTLY TO, OR THROUGH THE SEPARATE SEWER SYSTEM, INTO THE MAIN STEM OF THE TIDAL POTOMAC OR ANACOSTIA RIVERS, THE WASHINGTON CHANNEL, OR THE CHESAPEAKE AND OHIO CANAL;
(2) SITE DISCHARGES DO NOT FLOW INTO OR THROUGH A TRIBUTARY TO THOSE WATERBODIES THAT RUN ABOVE GROUND OR THAT THE DISTRICT DEPARTMENT OF THE ENVIRONMENT (DDOE) EXPECTS TO BE DAYLIGHTED TO RUN ABOVE GROUND;
(3) SITE DISCHARGES WILL NOT CAUSE EROSION OF LAND OR TRANSPORT OF SEDIMENT.

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	Irrigated? Apply 50% storage	50% STORAGE	**SWRv PROVIDED**
Ground Floor	1,057	1,057	1,057	8	1	Ground Floor	330	142	yes	165	142
Second Floor	1,463	1,463	1,463	8	1	Second Floor	457	197	yes	229	197
Fourth Floor	807	807	807	8	1	Fourth Floor	252	109	yes	126	109
Penthouse	8,261	8,261	8,261	8	1	Penthous	2582	1112	yes	1291	1112
Roof	1,912	1,912	1,912	8	1	Roof	598	257	yes	299	257
						TOTAL	4,219	1,817			**1,817**

13,500

MEDIA RETENTION VALUE	0.45
DRAINAGE LAYER RETENTION VALUE	0.15

CISTERN INPUT AND OUTPUT

(NOTE: DETAILED CISTERN INPUT AND OUTPUT RESULTS, AS WELL AS FINAL SIZING, WILL BE CONFIRMED ONCE FINAL IRRIGATION DEMAND MAKEUP HAS BEEN PROVIDED FOR THE SITE AS THE DESIGN PROGRESSES.)

Input

STORM EVENT

Storm Event (inches)	1.7

CONTRIBUTING DRAINAGE AREA (CDA)

How big is the impervious CDA (SF)?	16,595

IRRIGATION

How big is the area to irrigate? (SF)	13,500
Does the irrigation system have smart controls (e.g. soil moisture sensor shutoff)? If no, leave unchecked.	☑

Enter the average weekly irrigation application rate in inches/week for each monnth throughout the year (inches/week)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
0.00	0.00	0.00	1.00	1.10	1.20	1.25	1.20	1.10	1.00	0.00	0.00

Cistern Volume (gallons)	Available Storage Volume (Sv) (cubic feet)
5,000	295
10,000	565
15,000	834
20,000	1106
25,000	1381
30,000	1648
35,000	1908
50,000	2658
65,000	3335
90,000	4388

GAR SCORESHEET

Green Area Ratio Scoresheet

Address: 501 Eye Street

Other

Square	Lot	Zone District
498	52	MU-4

Lot size (enter this value first) *	Lot area (sf)	Minimum Score	Multiplier	GAR Score
	36,476	0.3	SCORE:	0.310

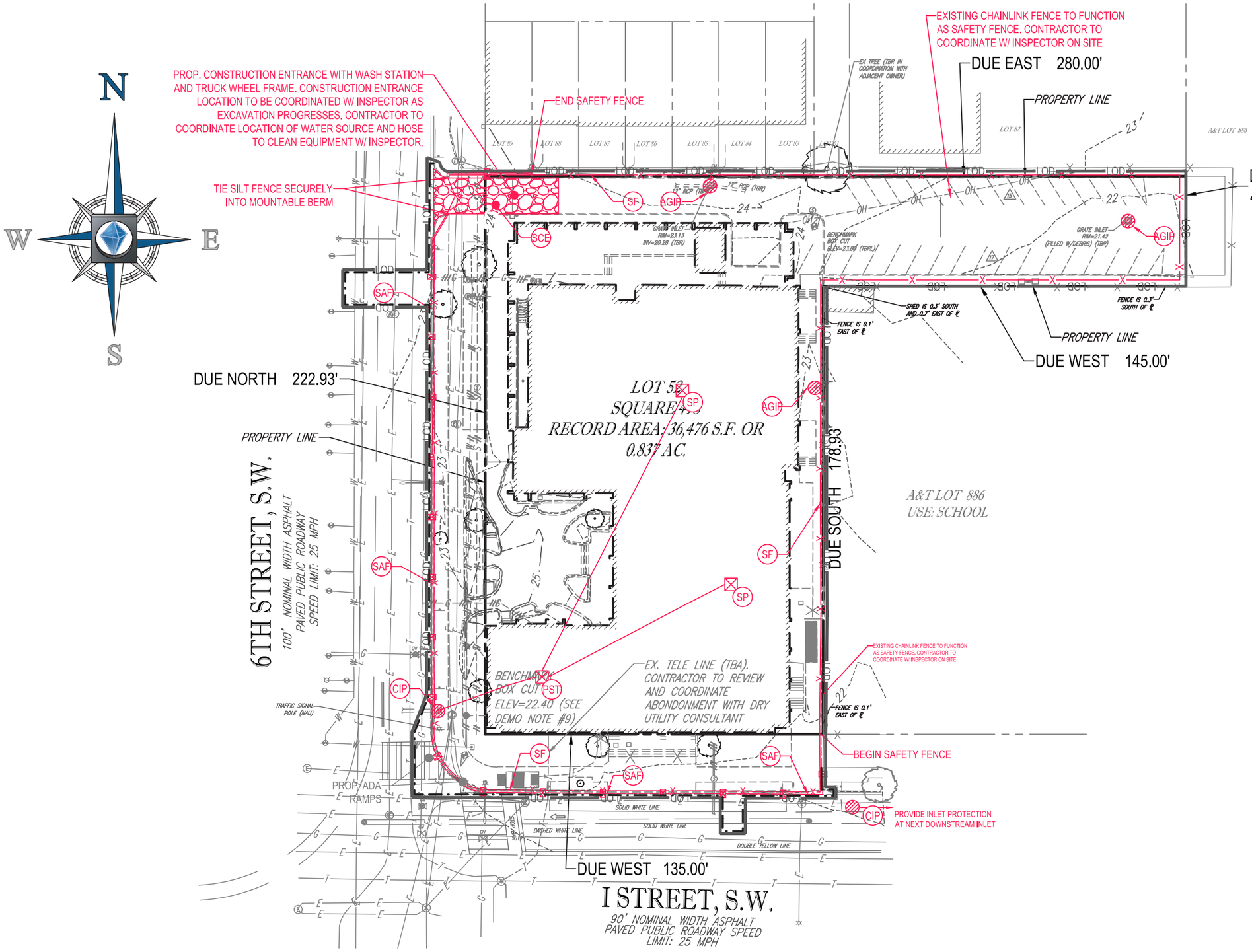
	Landscape Elements		Square Feet	Factor		Total
A	**Landscaped areas (select one of the following for each area)**					
1	Landscaped areas with a soil depth < 24"		square feet 0	0.30		-
2	Landscaped areas with a soil depth ≥ 24"		square feet 477	0.60		286.2
3	Bioretention facilities		square feet 0	0.40		-
B	**Plantings (credit for plants in landscaped areas from Section A)**				*Native Bonus*	
1	Groundcovers, or other plants < 2' height		square feet 0	0.20	square feet	-
2	Plants ≥ 2' height at maturity - calculated at 9-sf per plant	# of plants 80	720	0.30	# of plants	216.0
3	New trees with less than 40-foot canopy spread - calculated at 50 sq ft per tree	# of trees 0	0	0.50	# of trees	-
4	New trees with 40-foot or greater canopy spread - calculated at 250 sq ft per tree	# of trees 0	0	0.60	# of trees	-
5	Preservation of existing tree 6" to 12" DBH - calculated at 250 sq ft per tree	# of trees 0	0	0.70	# of trees	-
6	Preservation of existing tree 12" to 18" DBH - calculated at 600 sq ft per tree	# of trees 0	0	0.70	# of trees	-
7	Preservation of existing trees 18" to 24" DBH - calculated at 1300 sq ft per tree	# of trees 0	0	0.70	# of trees	-
8	Preservation of existing trees 24" DBH or greater - calculated at 2000 sq ft per tree	# of trees 0	0	0.80	# of trees	-
9	Vegetated wall, plantings on a vertical surface		square feet 0	0.60	square feet	-
C	**Vegetated or "green" roofs**					
1	Over at least 2" and less than 8" of growth medium		square feet 0	0.60	square feet	-
2	Over at least 8" of growth medium		square feet 13,500	0.80	square feet	10,800.0
D	**Permeable Paving*** **					
1	Permeable paving over 6" to 24" of soil or gravel		square feet 0	0.40		-
2	Permeable paving over at least 24" of soil or grave		square feet 0	0.50		-
E	**Other**					
1	Enhanced tree growth systems***		square feet 0	0.40		-
2	Renewable energy generation		square feet 0	0.50		-
3	Approved water features		square feet 0	0.20		-
		sub-total of sq ft =	*14,697*			
F	**Bonuses**					
1	Native plant species		square feet 0	0.10		-
2	Landscaping in food cultivation		square feet 0	0.10		-
3	Harvested stormwater irrigation		square feet 0	0.10		-
			Green Area Ratio numerator =			*11,302*

*** 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. -

GREEN AREA RATIO SUMMARY

THE GAR REQUIREMENT FOR A SITE WITHIN THE SP-1 OR SP-2 ZONE IS 0.30. TO SATISFY THE GAR REQUIREMENT, THE CURRENT DESIGN INCLUDES INTENSIVE GREEN ROOF (8"), AND THE PLANTING OF GROUNDCOVERS, SHRUBS AND TREES. THIS RESULTS IN A PROPOSED GAR OF 0.310 (SEE DETAILED CALCULATIONS, THIS SHEET).

THE SIZE AND DEPTH OF THE GREEN ROOF AREAS ALONG WITH PLANT SPECIES WILL BE DETERMINED WITH FINAL CONSTRUCTION DOCUMENTS, HOWEVER THE FINAL DESIGN WILL MEET THE REQUIRED GREEN AREA RATIO (0.30).



EROSION AND SEDIMENT CONTROL LEGEND

TITLE	KEY	SYMBOL
SAFETY FENCE	SAF	
SILT FENCE	SF	
CURB INLET PROTECTION	CIP	
AT-GRADE INLET PROTECTION	AGIP	
TEMPORARY STONE CONSTRUCTION ENTRANCE	SCE	
LIMIT OF DISTURBANCE		LOD
SUMP PIT	SP	
PORTABLE SEDIMENT TANK	PST	

NOTE:

SPOIL MATERIAL SHALL BE DISCARDED AT A SITE WITH AN ACTIVE GRADING PERMIT AND APPROVED SEDIMENT CONTROL PLAN. BORROW MATERIAL SHALL BE OBTAINED FROM AN APPROVED SITE WITH AN ACTIVE GRADING PERMIT AND AN APPROVED SEDIMENT CONTROL PLAN.

SITE TABULATION

LOT AREA = 36,476 SF

DISTURBED AREA = 47,281 SF

CUT VOLUME = TBD

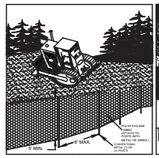
FINAL VOLUME = TBD

0 20 40
1"= 40'

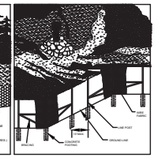
sba project# 14105 March 8, 2019

SAFETY FENCE

PERSPECTIVE VIEW

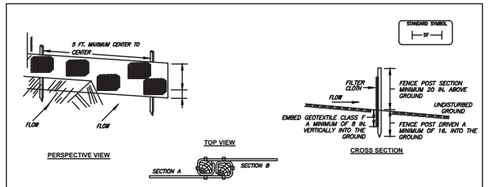


PERSPECTIVE VIEW
PLASTIC FENCE



PERSPECTIVE VIEW
METAL FENCE

STANDARD SYMBOL



PERSPECTIVE VIEW

CROSS SECTION

TOP VIEW

JOINING TWO ADJACENT SILT FENCE SECTIONS

CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS MUST BE A MINIMUM OF 36 IN. LONG DRIVEN 16 IN. MINIMUM INTO THE GROUND. WOOD POSTS MUST BE OF SOUND QUALITY HARDWOOD WITH 1-1/2 IN. MINIMUM WIDTH WHEN SQUARE CUT, OR 1-3/4 IN. MINIMUM DIAMETER WHEN ROUND. STEEL POSTS MUST BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
2. FASTEN GEOTEXTILE SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION. GEOTEXTILE MUST MEET THE FOLLOWING REQUIREMENTS (GEOTEXTILE CLASS F):

PROPERTY	VALUE	TEST METHOD
TENSILE STRENGTH	50 LBS/IN (MIN.)	ASTM D-4595
TENSILE MODULUS	20 LBS/IN (MIN.)	ASTM D-4595
FLOW RATE	0.3 GAL/FT²/MINUTE (MAX.)	ASTM D-5141
FILTERING EFFICIENCY	75% (MIN.)	ASTM D-5141

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, OVERLAP, FOLD, AND STAPLE THEM TO PREVENT SEDIMENT BYPASS.
4. INSPECT SILT FENCE AFTER EACH RAINFALL EVENT, AT LEAST DAILY DURING SUSTAINED RAINFALL EVENTS, AND MAINTAIN WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHES 50% OF THE FABRIC HEIGHT.

DATE	APPR.
REVISED	
ISSUED	
REFERENCE	

SILT FENCE-1

DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 301.1

SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATIONS

SILT FENCE DESIGN CRITERIA:

TABLE 1.1: SILT FENCE SLOPE LENGTH AND FENCE LENGTH CONSTRAINTS

SLOPE STEEPNESS	SLOPE LENGTH (MAXIMUM) (FEET)	SILT FENCE LENGTH (MAXIMUM) (FEET)
FLATTER THAN 50:1 (2%)	UNLIMITED	UNLIMITED
> 50:1 TO 10:1 (2% 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 UNLIMITED. IN 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.

DATE	APPR.
REVISED	
ISSUED	
REFERENCE	

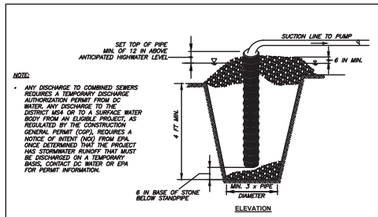
SILT FENCE-2

DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 301.2

SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATIONS

STANDARD SYMBOL



NOTE:
- ANY DISCHARGE TO COMBINED SEWERS REQUIRES A TEMPORARY DISCHARGE AUTHORIZATION PERMIT FROM DC WATER. ANY DISCHARGE TO THE DISTRICT MS4 OR TO A SURFACE WATER BODY FROM AN ELIGIBLE PROJECT, AS DEFINED BY THE DISTRICT'S 2017 GENERAL PERMIT, REQUIRES A NOTICE OF INTENT (NOI) FROM EPA. ONCE DETERMINED THAT THE PROJECT HAS STORMWATER RUNOFF THAT MUST BE DISCHARGED ON A TEMPORARY BASIS, CONTACT DC WATER OR EPA FOR PERMIT INFORMATION.

ELEVATION

CONSTRUCTION SPECIFICATIONS

1. WRAP THE PIPE WITH ½ INCH GALVANIZED HARDWARE CLOTH AND THEN GEOTEXTILE OVER THE HARDWARE CLOTH.
2. EXCAVATE THE PIT TO 3 TIMES THE PIPE DIAMETER AND 4 FEET IN DEPTH. PLACE CLEAN ¾ TO 1-½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
3. SET THE TOP OF PIPE A MINIMUM OF 12 INCHES ABOVE THE ANTICIPATED WATER SURFACE ELEVATION.
4. BACKFILL PIT AROUND THE OUTER PIPE WITH ¾ TO 1-½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
5. PLACE THE SUCTION HOSE FROM THE PUMP INSIDE THE PIPE TO BEGIN DEWATERING. PLACE THE DISCHARGE HOSE IN A STABILIZED AREA DOWNSLOPE OF UNSTABILIZED AREAS TO PREVENT EROSION. MEADOW OR WOODED AREAS ARE PREFERRED DISCHARGE LOCATIONS BUT STORM DRAINS AND PAVED AREAS ARE ACCEPTABLE.

DATE	APPR.
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ISSUED	
REFERENCE	

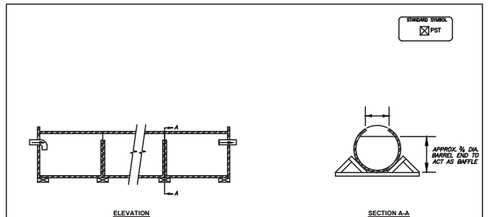
SUMP PIT

DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 702.1

SOURCE: 2011 MARYLAND STANDARDS AND SPECIFICATIONS

STANDARD SYMBOL



ELEVATION

SECTION A-A

CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT THE STRUCTURE WITH STEEL DRUMS, STURDY WOOD, OR OTHER MATERIAL SUITABLE FOR HANDLING THE PRESSURE EXERTED BY THE VOLUME OF WATER.
2. SEDIMENT TANKS HAVE A MINIMUM DEPTH OF 2 FEET.
3. ONCE THE WATER LEVEL NEARS THE TOP OF THE TANK, SHUT OFF THE PUMP WHILE THE TANK DRAINS AND ADDITIONAL CAPACITY IS MADE AVAILABLE.
4. DESIGN THE TANK TO ALLOW FOR EMERGENCY FLOW OVER TOP OF THE TANK.

DATE	APPR.
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REFERENCE	

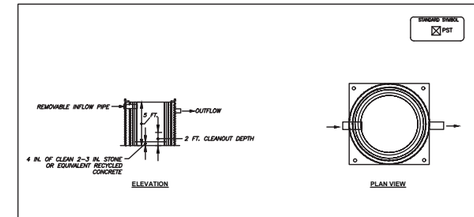
PORTABLE SEDIMENT TANK - 1 (HORIZONTAL)

DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 703.1

SOURCE: DISTRICT DEPARTMENT OF ENERGY & ENVIRONMENT

STANDARD SYMBOL



ELEVATION

PLAN VIEW

CONSTRUCTION SPECIFICATIONS

1. USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE SANDWICHED BETWEEN, AND ATTACHED TO, ¼ INCH HARDWARE CLOTH.
2. OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
3. ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
4. USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE.
5. INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
6. PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NON-EROSIVE RATE.

DATE	APPR.
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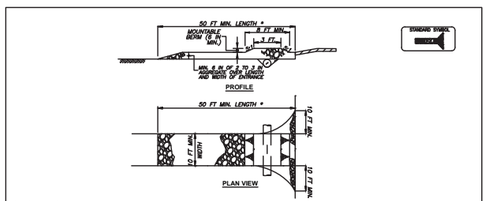
PORTABLE SEDIMENT TANK - 2 (VERTICAL)

DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 703.2

SOURCE: DISTRICT DEPARTMENT OF ENERGY & ENVIRONMENT

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. PLACE THE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE A MINIMUM LENGTH OF 50 FEET (*20 FEET FOR SINGLE-FAMILY RESIDENCE LOT) AND A MINIMUM WIDTH OF 10 FEET. FLARE THE SCE AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE MAINTAINING POSITIVE DRAINAGE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. PROVIDE PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN THE SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

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STABILIZED CONSTRUCTION ENTRANCE

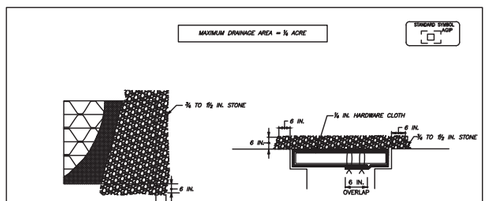
DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 201.1

SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATIONS

MAXIMUM DRAINAGE AREA = ½ ACRE

STANDARD SYMBOL



PLAN CUT AWAY VIEW

CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, SECURE WITH WIRE TIES, THEN SET GRATE BACK IN PLACE.
2. PLACE CLEAN ¾ TO 1-½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 4 TO 6 INCHES THICK ON THE GRATE TO SECURE THE FABRIC.
3. IF THERE ARE ANY SIGNS OF STREET FLOODING OR WATER PONDING, THIS STRUCTURE MUST BE CLEANED OR REPLACED, OR REDESIGNED WITH A VIABLE ALTERNATIVE.

DATE	APPR.
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AT GRADE INLET PROTECTION STORM DRAIN INLET PROTECTION

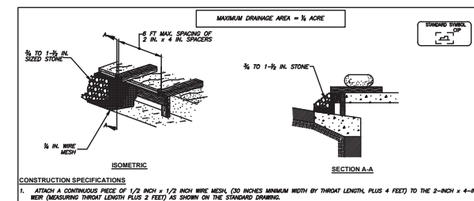
DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 307.2

SOURCE: 2011 MARYLAND STANDARDS AND SPECIFICATIONS

MAXIMUM DRAINAGE AREA = ½ ACRE

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINUOUS PIECE OF 1/2 INCH x 1/2 INCH WIRE MESH, (30 INCHES MINIMUM WIDTH BY THROAT LENGTH, PLUS 4 FEET) TO THE 2-INCH x 4-INCH WEIR (MEASURING THROAT LENGTH PLUS 2 FEET) AS SHOWN ON THE STANDARD DRAWING.
2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2-INCH x 4-INCH WEIR.
3. SECURELY NAIL THE 2-INCH x 4-INCH WEIR TO A 9-INCH LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAXIMUM 4 FEET APART).
4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2-FOOT LENGTHS OF 2-INCHES x 4-INCHES TO THE TOP OF THE WEIR AT SPACER LOCATIONS), EXTEND THESE 2-INCH x 4-INCH ANCHORS ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
5. PLACE THE ASSEMBLY SO THAT THE END SPACERS ARE 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE 1.73-INCH x 1.73-INCH WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾ TO 1-½ INCH STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE GEOTEXTILE FABRIC AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOWS DO NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW TO THE INLET.
9. IF THERE ARE ANY SIGNS OF STREET FLOODING OR WATER PONDING, THIS STRUCTURE MUST BE CLEANED OR REPLACED, OR REDESIGNED WITH A VIABLE ALTERNATIVE SUCH AS 3.3 FILTER SOCK.

*NOTE: FILTER SOCK IS AN ALTERNATIVE WHICH IS EASIER TO INSTALL AND MAINTAIN THAN THIS STANDARD DESIGN.

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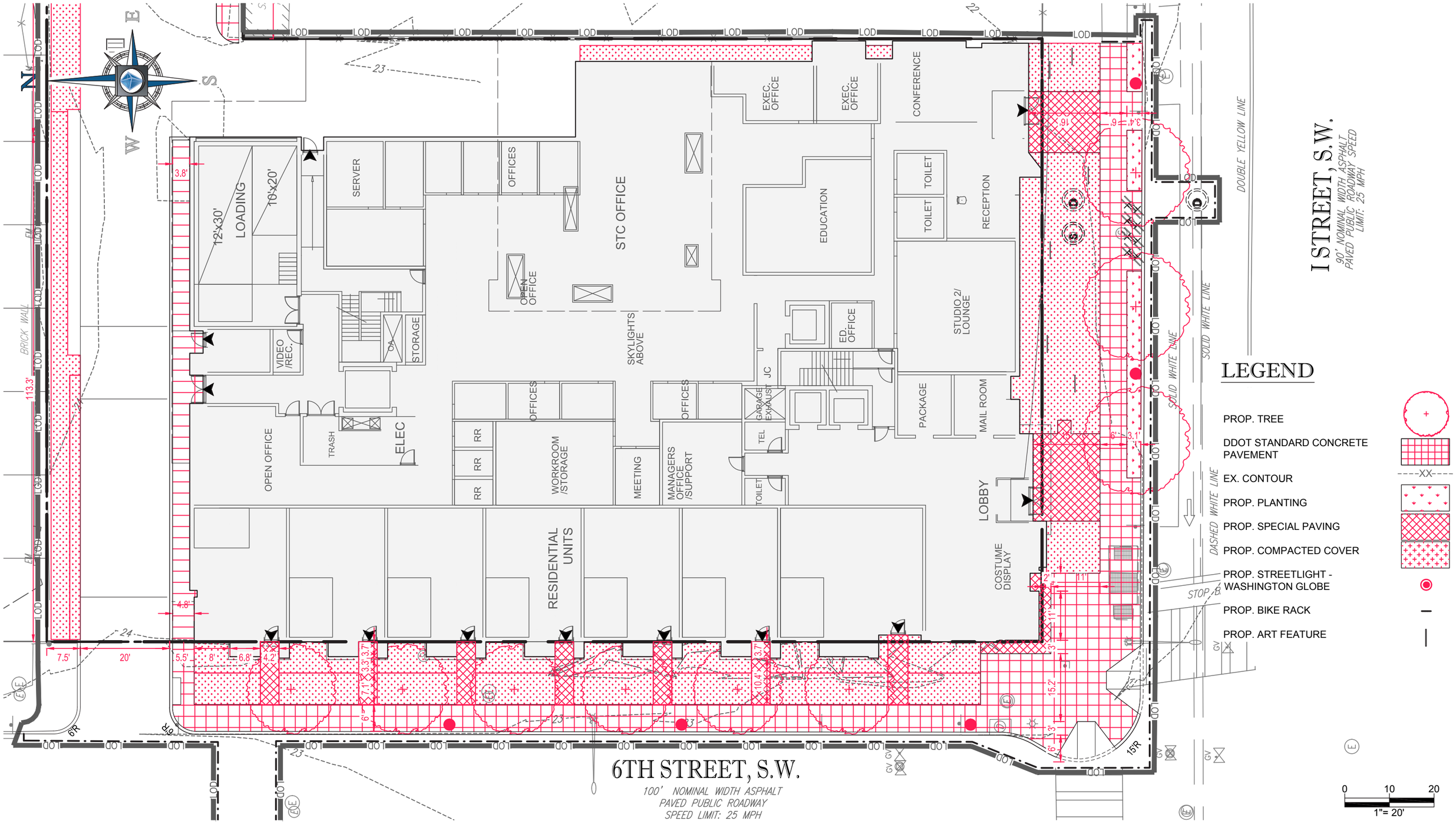
REFERENCE	

CURB INLET PROTECTION STORM DRAIN INLET PROTECTION

DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY & ENVIRONMENT

DWG. NO 307.3

SOURCE: 2011 MARYLAND STANDARDS AND SPECIFICATIONS



LEGEND

- PROP. TREE
- DDOT STANDARD CONCRETE PAVEMENT
- EX. CONTOUR
- PROP. PLANTING
- PROP. SPECIAL PAVING
- PROP. COMPACTED COVER
- PROP. STREETLIGHT - WASHINGTON GLOBE
- PROP. BIKE RACK
- PROP. ART FEATURE

0 10 20
1"= 20'

civil engineers | BOLHER DC

5.10 | PUD SUBMISSION

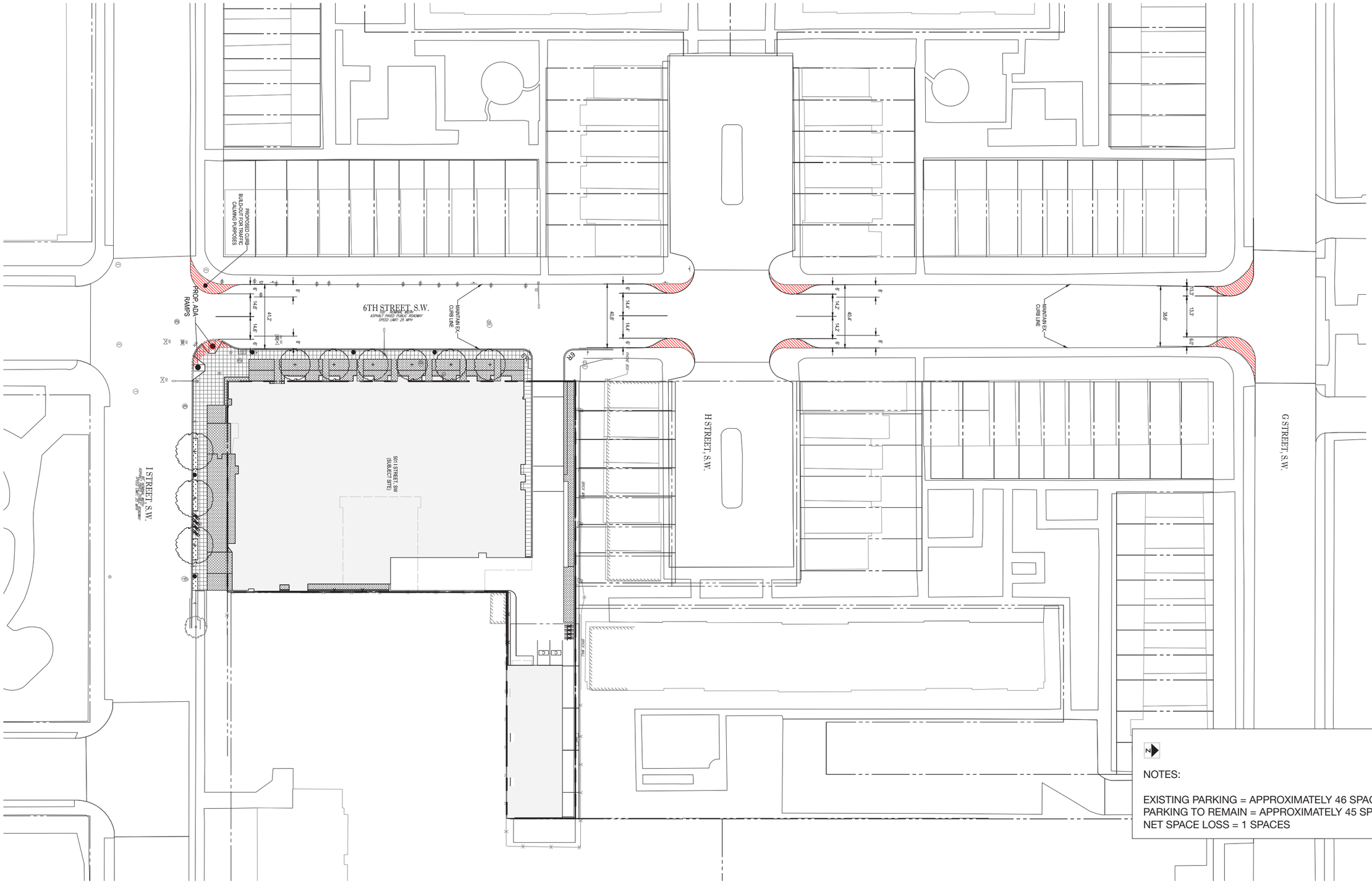
PUBLIC SPACE PLAN

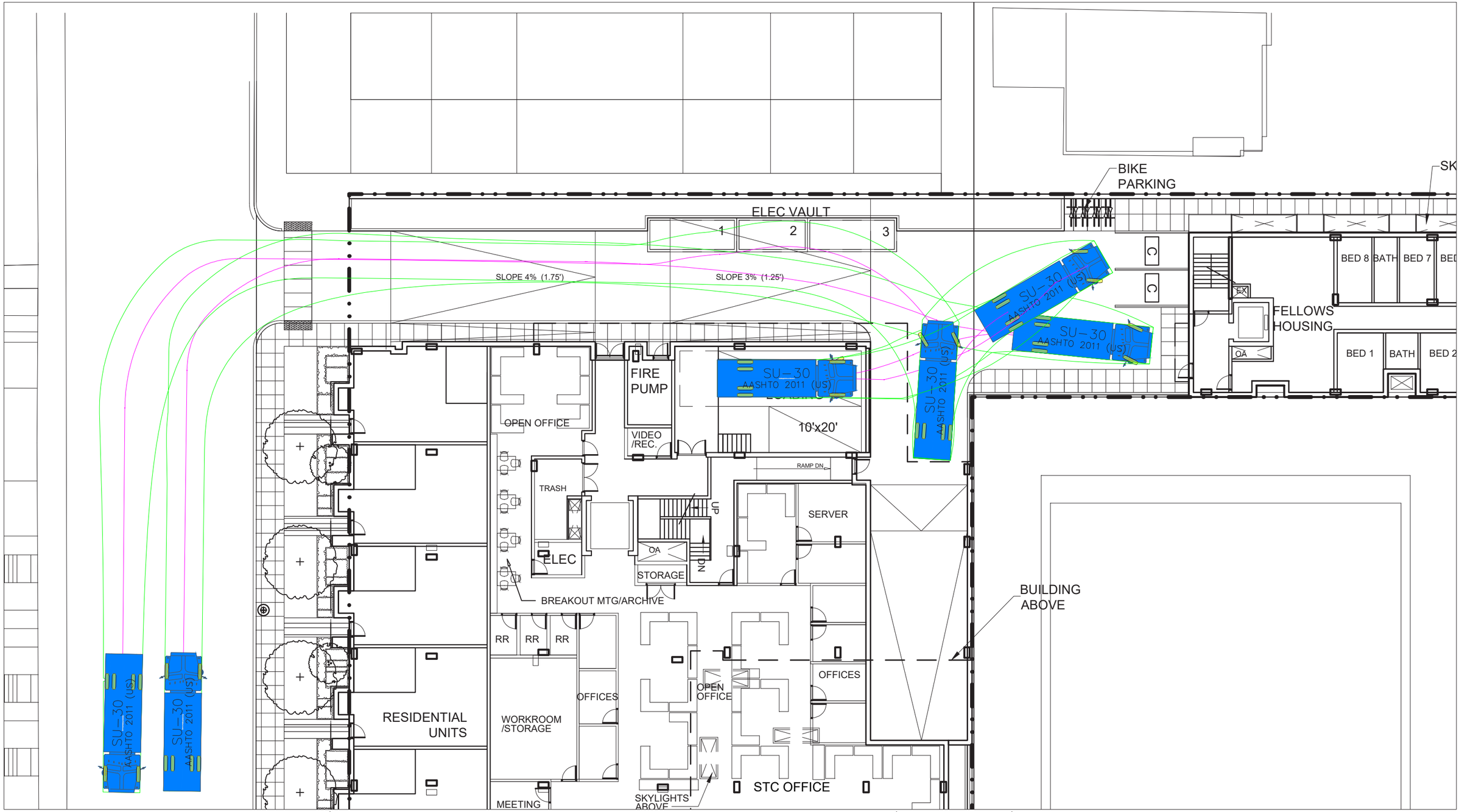
THE BARD REDEVELOPMENT

Southwest Washington, D.C.

sba project# 14105

March 8, 2019





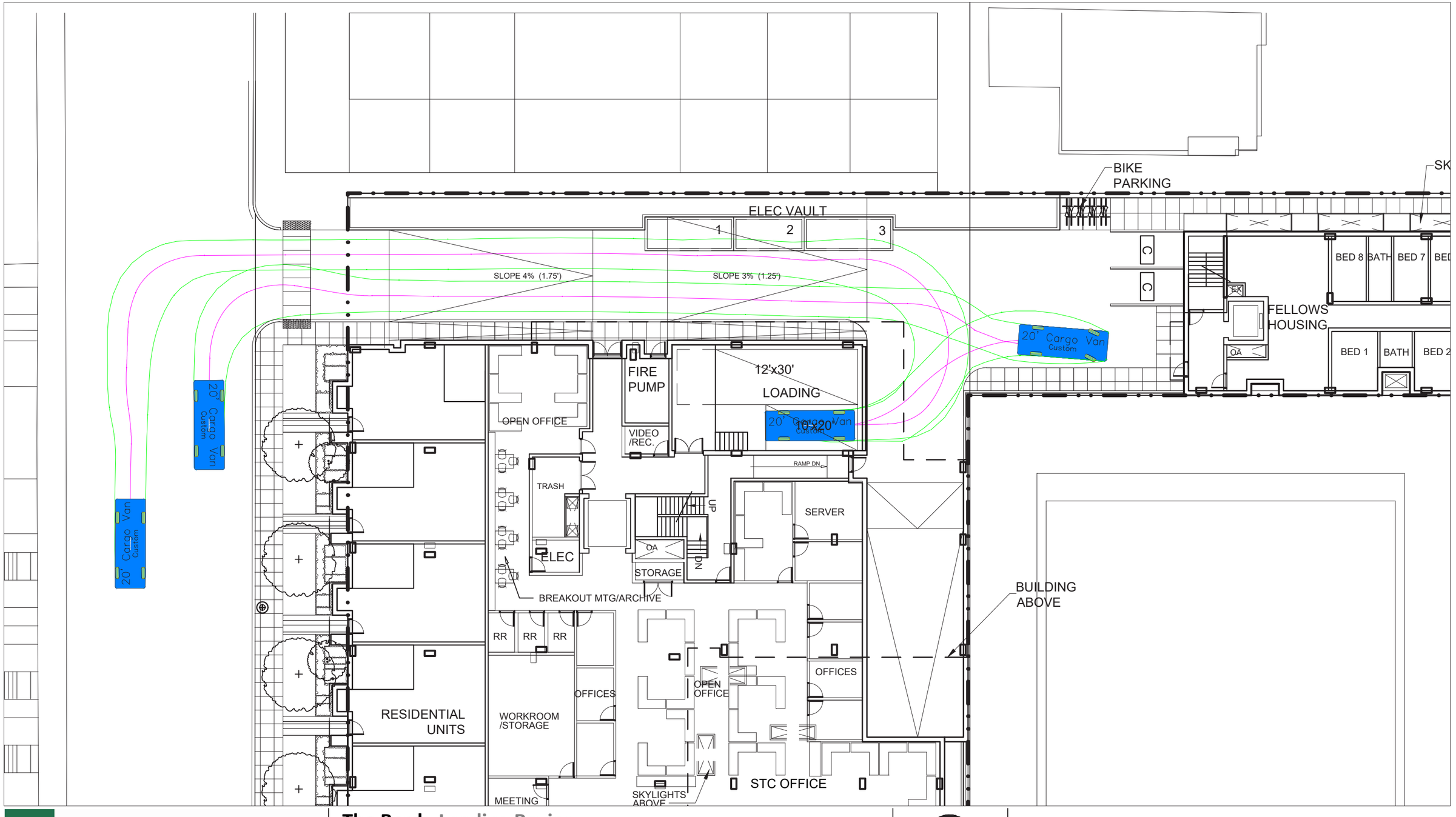
GOROVE / SLADE

Transportation Planners and Engineers

The Bard: Loading Review

March 6, 2019

Design Vehicle: 30' Single-Unit Truck



GOROVE / SLADE

Transportation Planners and Engineers

The Bard: Loading Review

March 6, 2019

Design Vehicle: Cargo Van

N

1" = 20'

LEFT BLANK INTENTIONALLY

GOROVE / SLADE
Transportation Planners and Engineers

The Bard: Cargo Van Circulation
September 14, 2018

N
1" = 20'