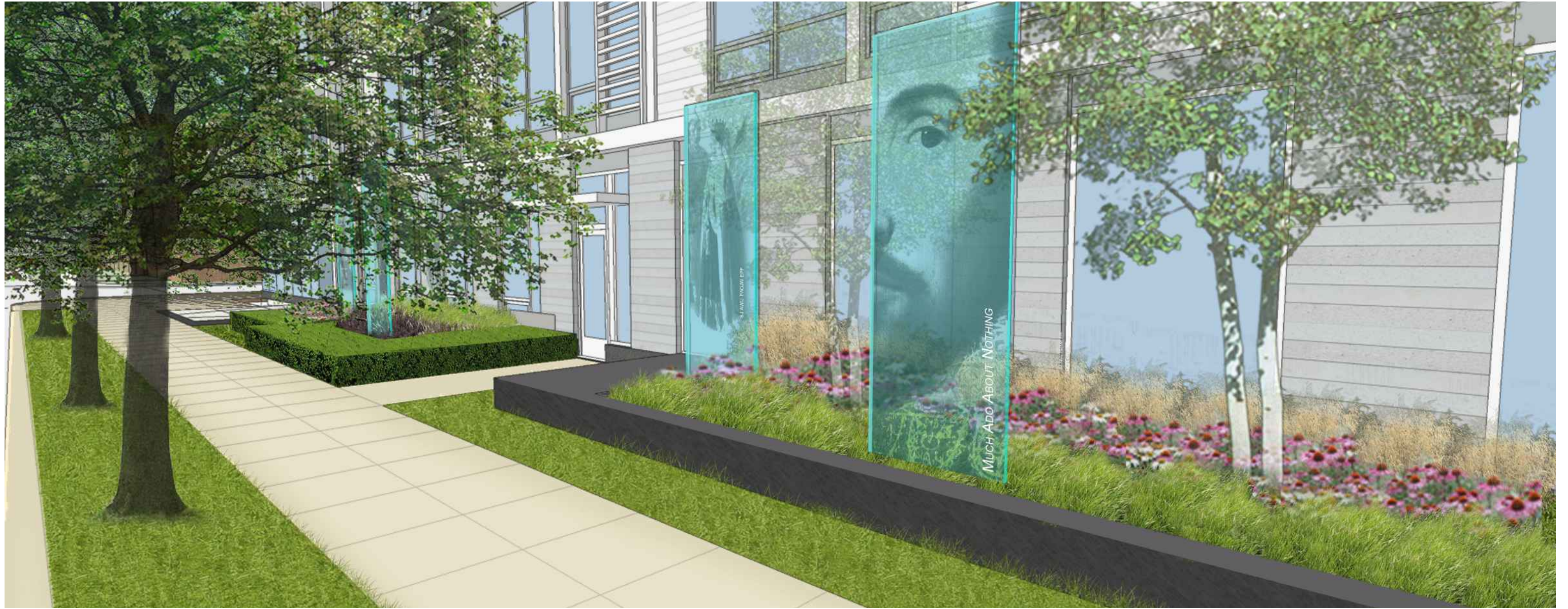




EYE STREET LANDSCAPE

THE BARD REDEVELOPMENT

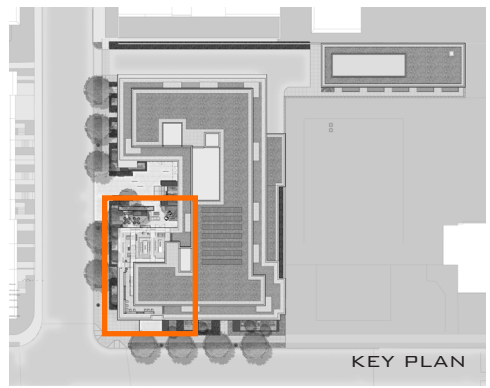
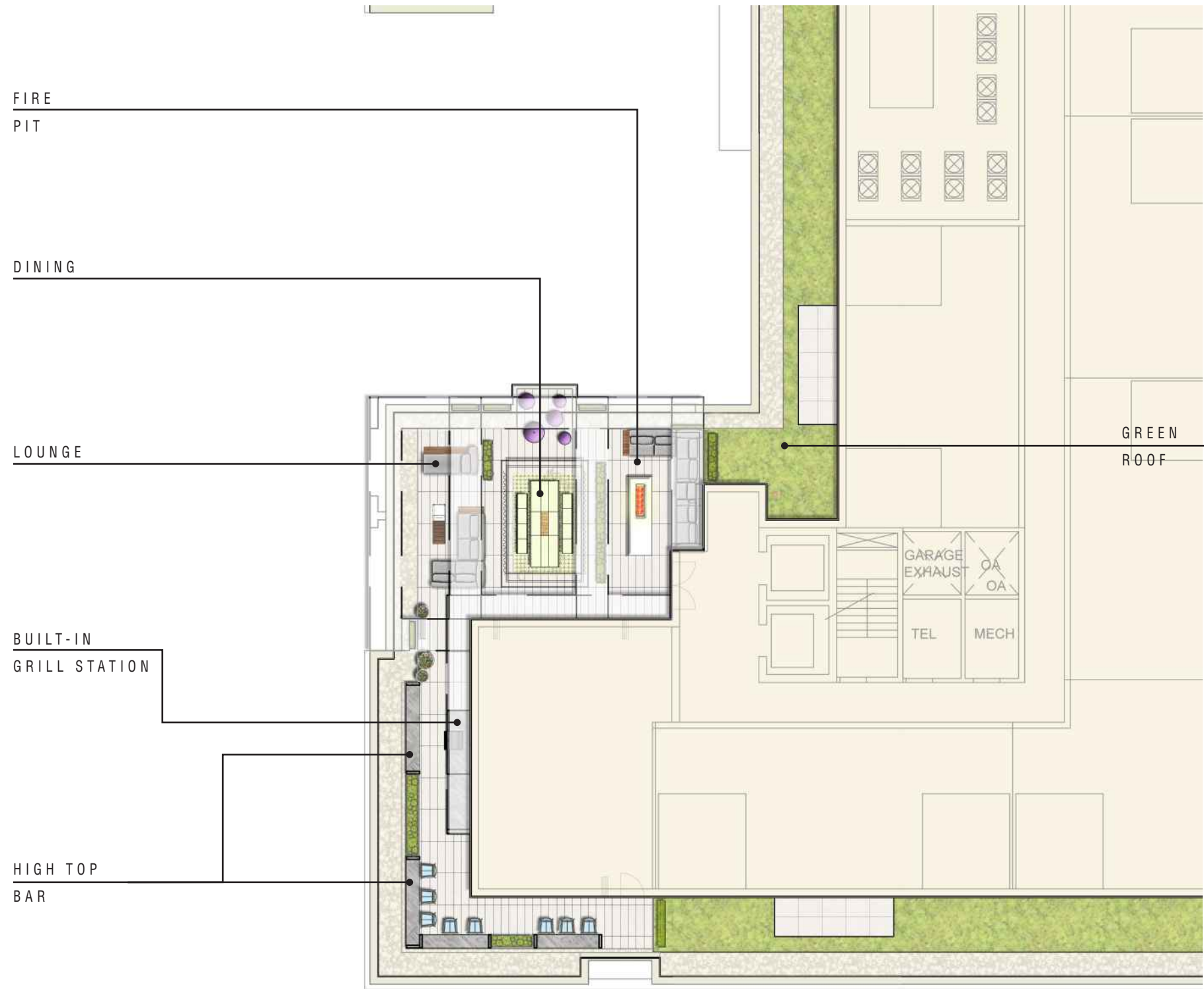


NOTES:
 1. Flexibility is requested to vary the final selection of art panel materials, imagery and quotations within the general material types proposed.



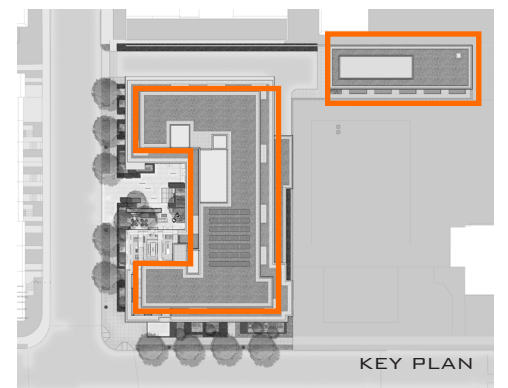
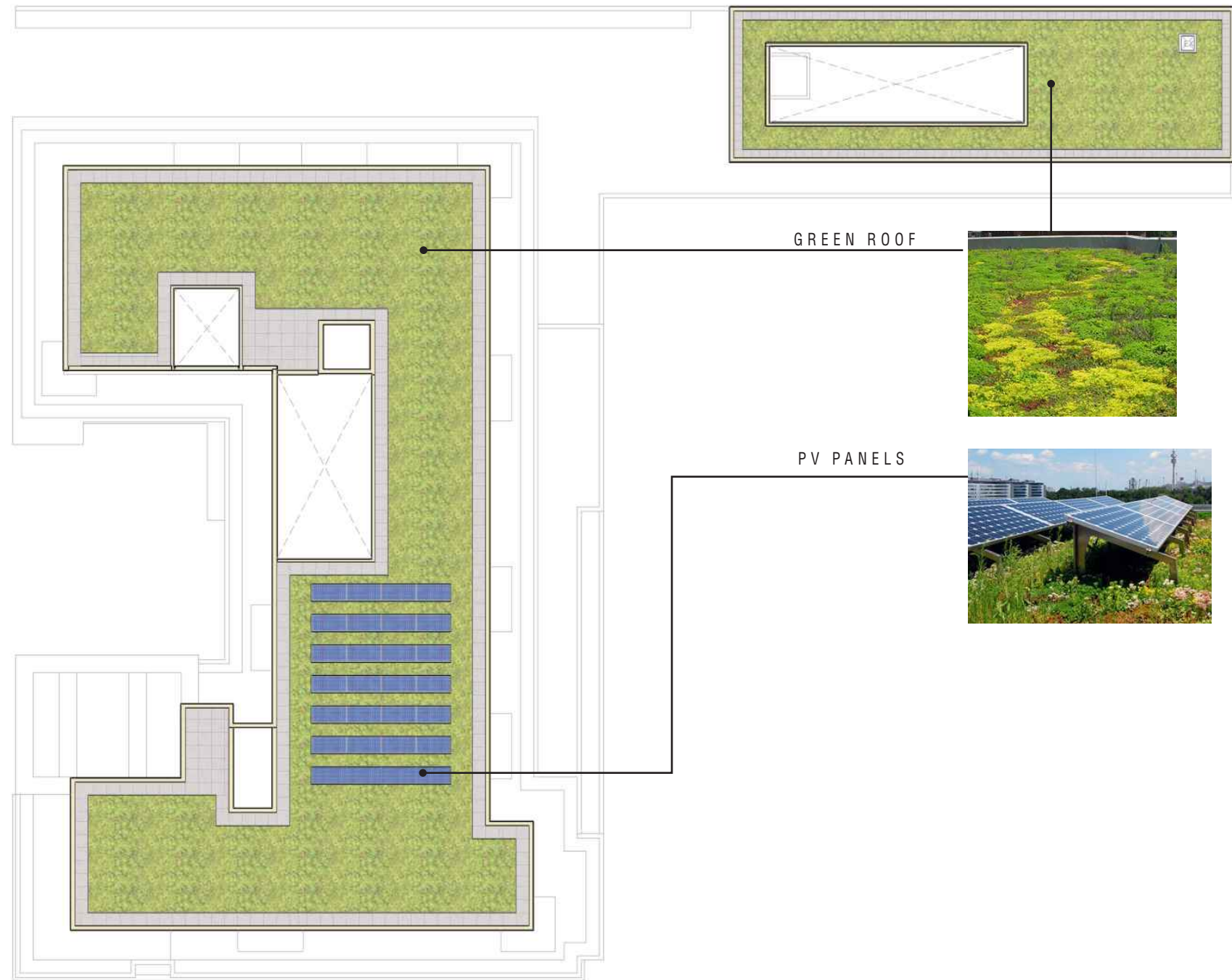
THE BARD REDEVELOPMENT

EYE STREET ART PANELS



LEVEL 4 ROOF PLAN

THE BARD REDEVELOPMENT



Green Area Ratio Scoresheet

Address:

Ward: Lot: Square: Zoning District:

Other / BZA Order:

enter sq ft of lot: multipli:

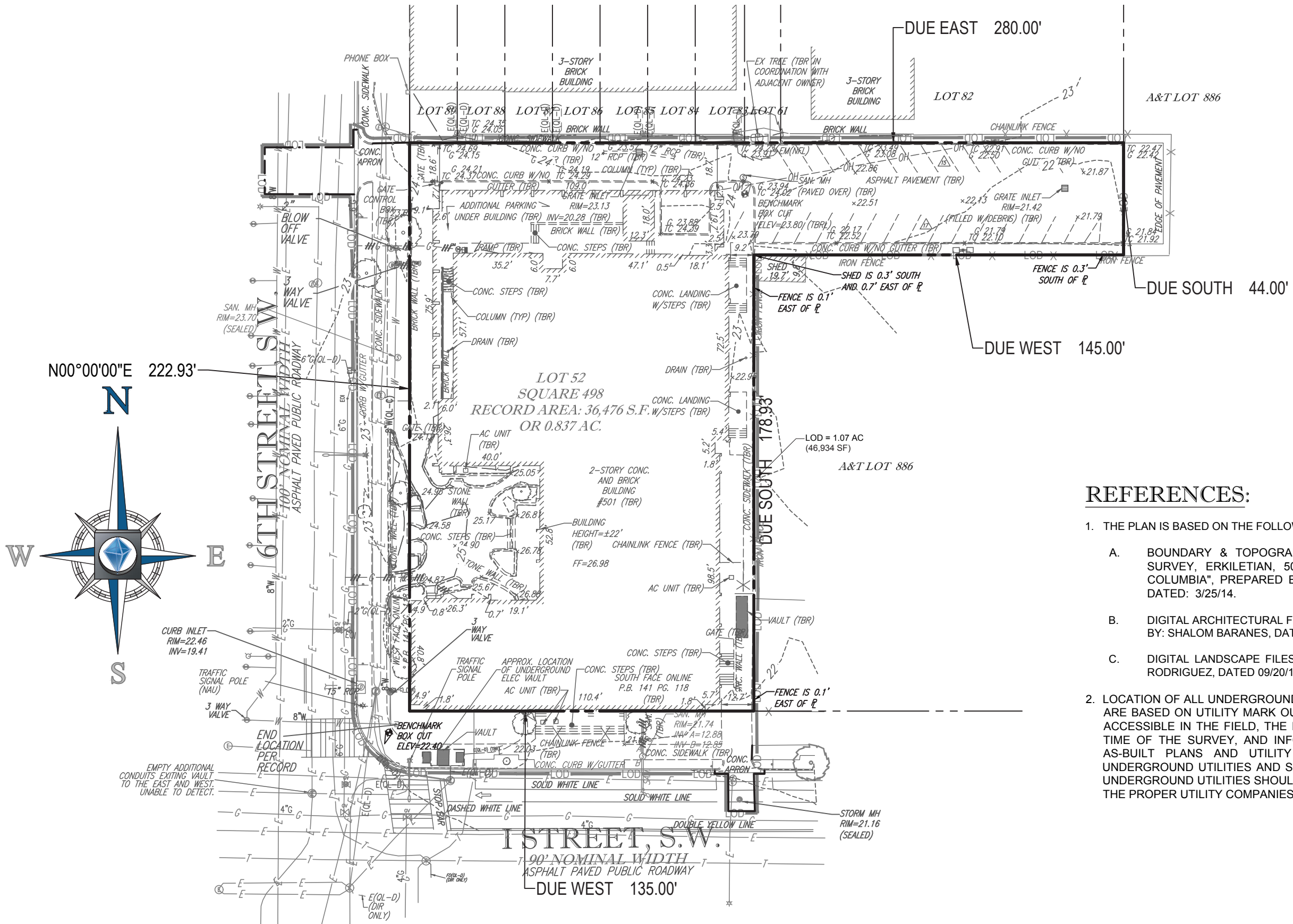
SCORE: **0.330**

Landscape Elements		Square Ft.	Factor	Total	
A Landscaped areas (select one of the following for each area)					
1	Landscaped areas with a soil depth of less than 24"	<input type="text" value="0"/>	0.3	-	
2	Landscaped areas with a soil depth of 24" or greater	<input type="text" value="541"/>	0.6	324.6	
3	Bioretention facilities	<input type="text"/>	0.4	-	
B Plantings (credit for plants in landscaped areas from Section A)					
1	Groundcovers, or other plants less than 2' tall at maturity	<input type="text" value="0"/>	0.2	-	
2	Plants, not including grasses, 2' or taller at maturity - calculated at 9 sq ft per plant (typically planted no closer than 18" on center)	<input type="text" value="75"/>	675	0.3	202.5
3	Tree canopy for all new trees 2.5" to 6" diameter or equivalent - calculated at 50 sq ft per tree	<input type="text" value="3"/>	150	0.5	75.0
4	Tree canopy for new trees 6" diameter or larger or equivalent - calculated at 250 sq ft per tree	<input type="text" value="0"/>	0	0.6	-
5	Tree canopy for preservation of existing tree 6" to 12" diameter or larger or equivalent - calculated at 250 sq ft per tree	<input type="text" value="0"/>	0	0.7	-
6	Tree canopy for preservation of existing tree 12" to 18" diameter or larger or equivalent - calculated at 600 sq ft per tree	<input type="text" value="0"/>	0	0.7	-
7	Tree canopy for preservation of all existing trees 18" to 24" dia. or equivalent - calculated at 1300 sq ft per tree	<input type="text" value="0"/>	0	0.7	-
8	Tree canopy for preservation of all existing trees 24" diameter or larger or equivalent - calculated at 2000 sq ft per tree	<input type="text" value="0"/>	0	0.8	-
9	Vegetated wall, plantings on a vertical surface	<input type="text" value="0"/>	0.6	-	

C Vegetated or "green" roofs				
1	Over at least 2" and less than 8" of growth medium	<input type="text" value="26"/>	0.6	15.6
2	Over at least 8" of growth medium	<input type="text" value="14,265"/>	0.8	11,412.0
D Permeable Paving***				
1	Permeable paving over at least 6" and less than 24" of soil or gravel	<input type="text" value="0"/>	0.4	-
2	Permeable paving over at least 24" of soil or gravel	<input type="text"/>	0.5	-
E Other				
1	Enhanced tree growth systems***	<input type="text" value="0"/>	0.4	-
2	Renewable energy generation	<input type="text" value="0"/>	0.5	-
3	Approved water features	<input type="text" value="0"/>	0.2	-
		sub-total of sq ft = 15,657		
H Bonuses				
1	Native plant species	<input type="text" value="0"/>	0.1	-
2	Landscaping in food cultivation	<input type="text"/>	0.1	-
3	Harvested stormwater irrigation	<input type="text" value="0"/>	0.1	-
		Green Area Ratio numerator = 12,030		
*** 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 -		

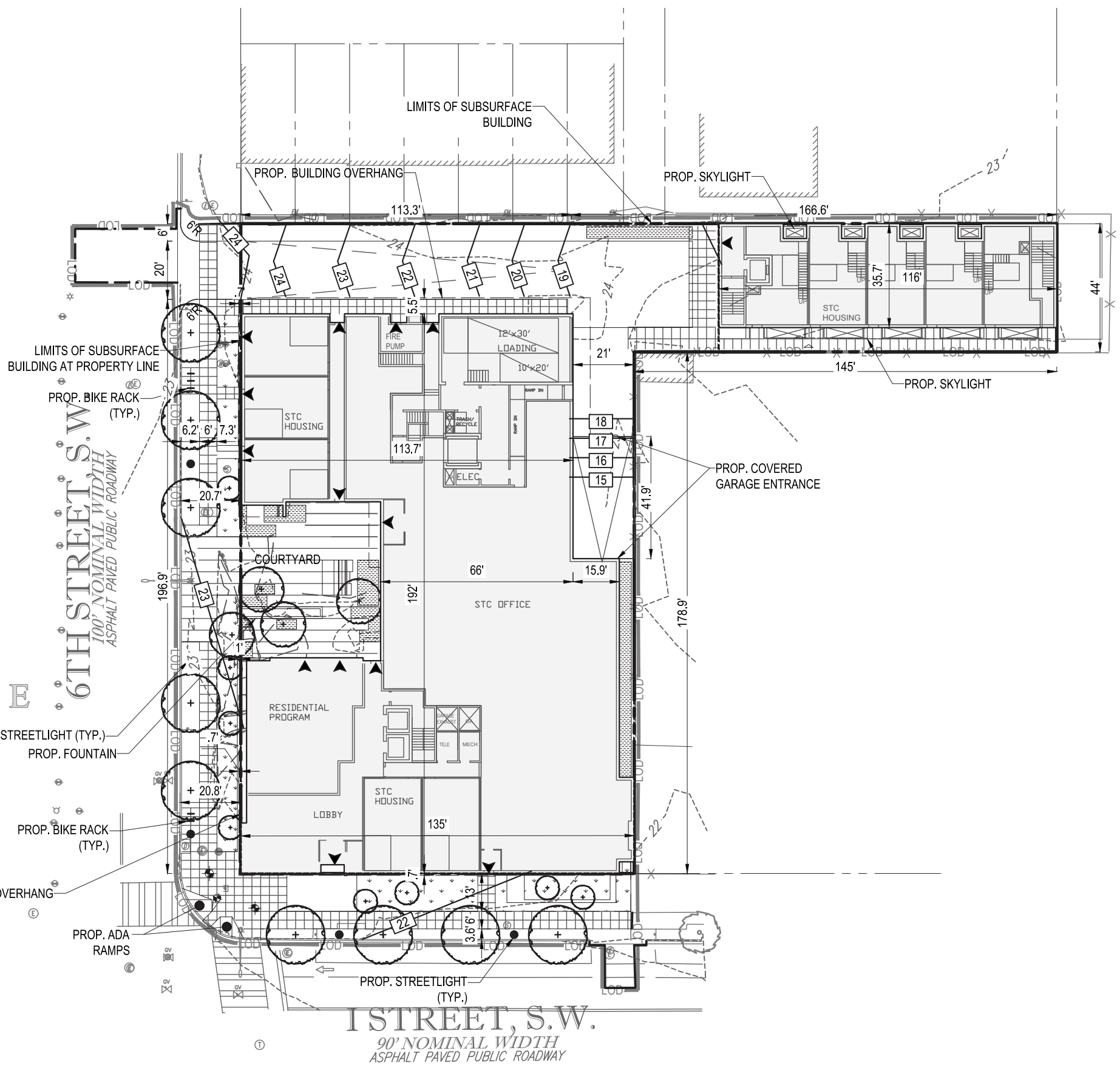
DDOE/WPD 06/2014





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: "20171012-THE BARD-Update.DWG", PREPARED BY: SHALOM BARANES, DATED: 10/12/17.
 - C. DIGITAL LANDSCAPE FILES: ENTITLED: "PRI-Base Ground.DWG", PREPARED BY: PARKER RODRIGUEZ, DATED 09/20/17.
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.



PROJECT NARRATIVE:

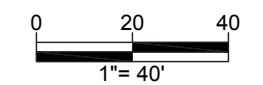
THE PROJECT INCLUDES THE CONSTRUCTION OF A NON PROFIT OFFICE/EDUCATIONAL/ART-USE/RESIDENTIAL BUILDING WITH UNDERGROUND PARKING AND SITE AMENITIES. THE UTILITY IMPROVEMENTS INCLUDE DOMESTIC WATER, FIRE, SANITARY SEWER, AND STORM DRAIN CONNECTIONS TO EXISTING UTILITY MAINS LOCATED WITHIN THE 6TH STREET,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

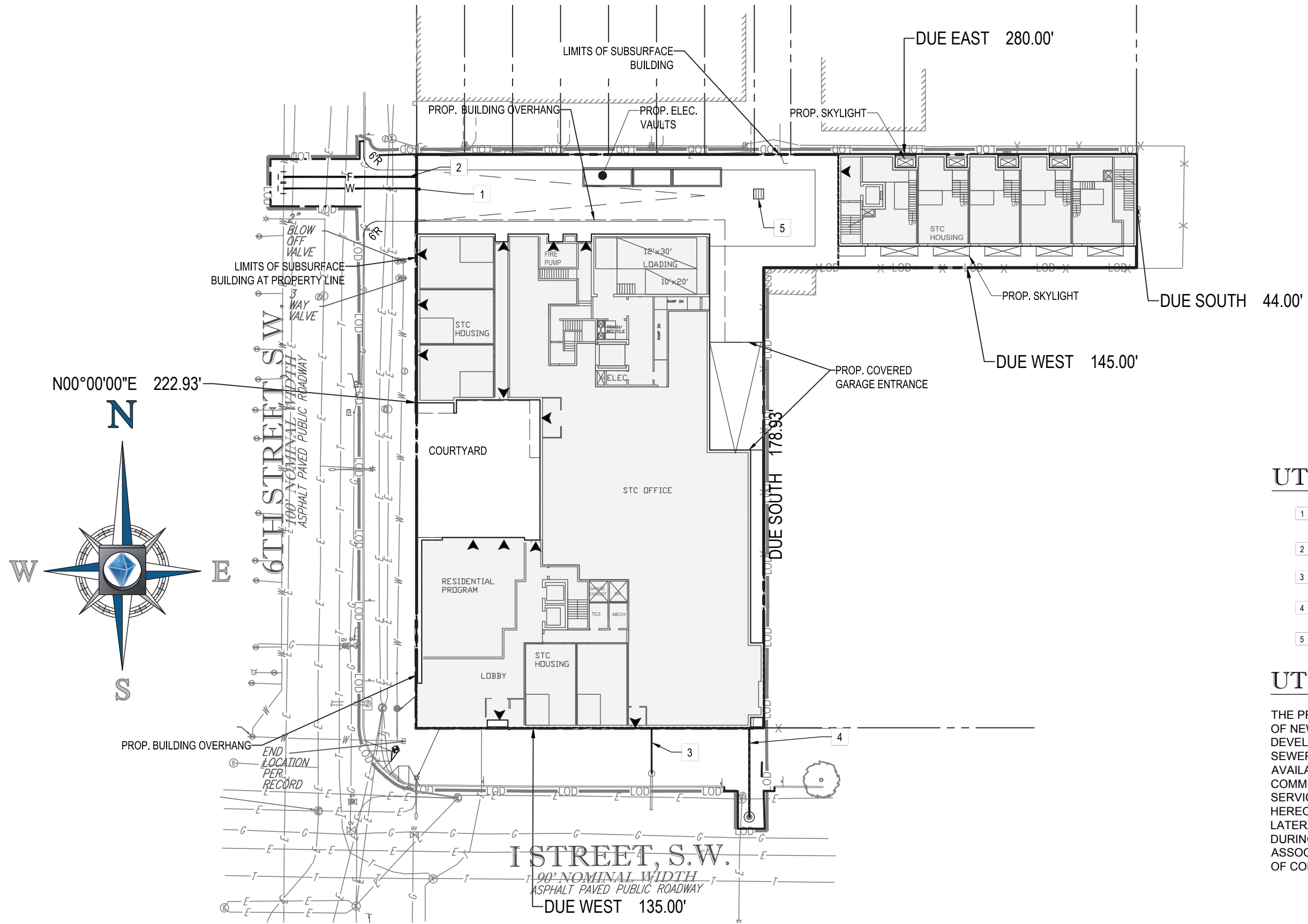
GRADING NARRATIVE:

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	
ACCENT PAVEMENT (COURTYARD)	
PROP. CONTOUR	
EX. CONTOUR	
PROP. STREETScape PLANTING	
PROP. COURTYARD PLANTING	



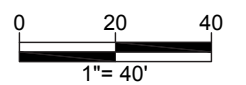


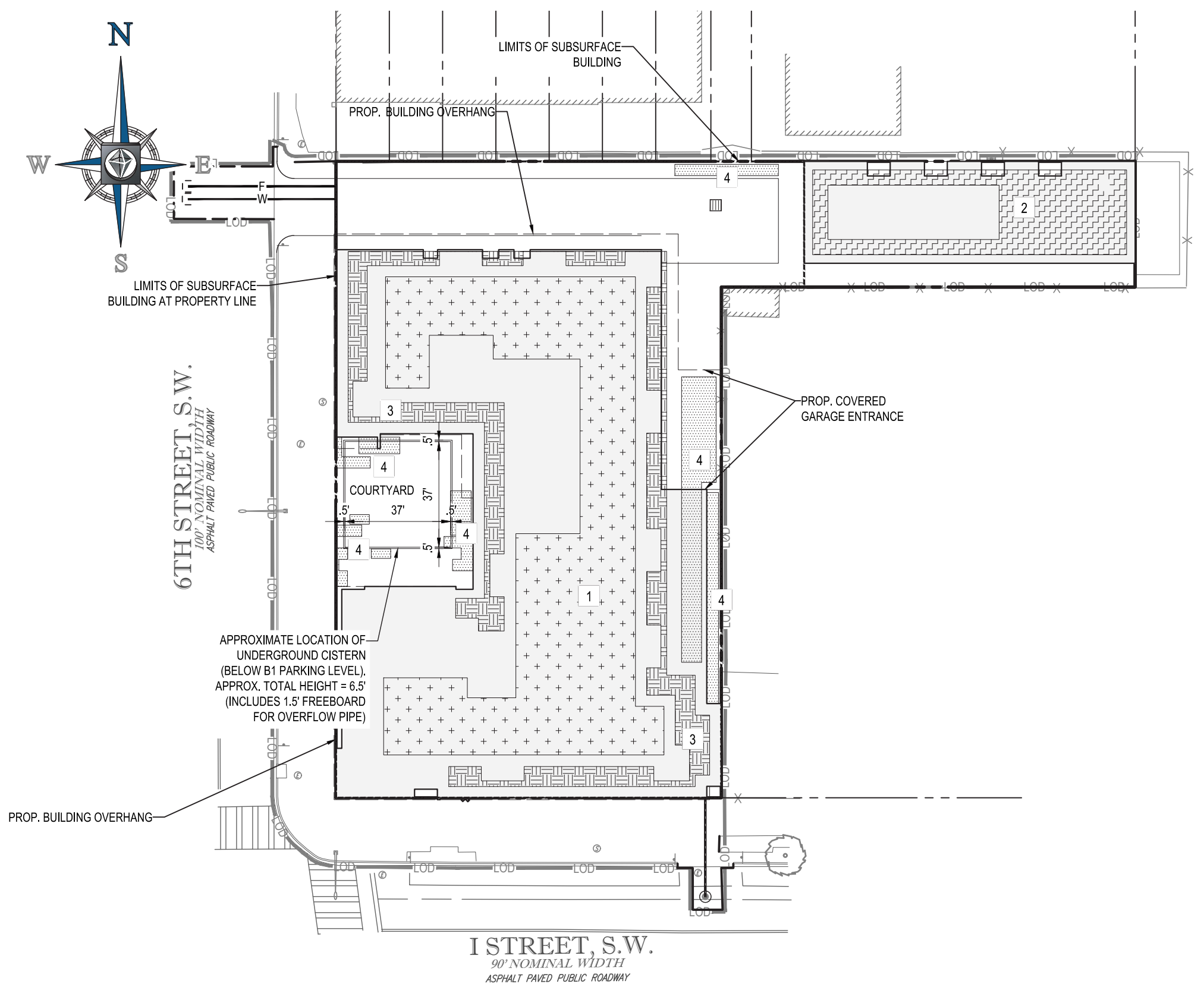
UTILITY KEYNOTES

- 1 PROP. WATER SERVICE (WATER METER TO BE LOCATED WITHIN GARAGE)
- 2 PROP. FIRE SERVICE
- 3 PROP. SANITARY SERVICE
- 4 PROP. STORM LATERAL
- 5 PROP. STORM INLET (INTERIOR BLDG CONNECTION)

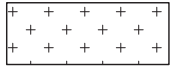
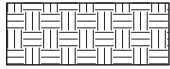
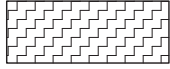


UTILITY NARRATIVE

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.





LEGEND

-  DENOTES MAIN ROOF GREEN ROOF
-  DENOTES PENTHOUSE GREEN ROOF
-  DENOTES SIDE ROOF GREEN ROOF
-  DENOTES LOWER ROOF / COURTYARD GREEN ROOF
-  DENOTES CORRESPONDING GREEN ROOF TABULATION IN GREEN ROOF TABLE (SHEET C5)

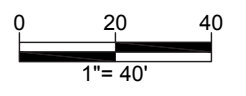
NOTE: REMAINING ROOF AREA AND COURTYARD AREA (NOT INCLUDING GREEN ROOF ITSELF OR AREA DRAINING TO THE GREEN ROOF), AS WELL AS THE DRIVEWAY AREA, WILL DRAIN TO THE CISTERN.

STORMWATER MANAGEMENT SUMMARY

THE VOLUME REQUIRED TO BE RETAINED ON-SITE (SWRV) IS EQUAL TO APPROXIMATELY 3,465 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 (3,465 CF).



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 36,476 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:

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

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

SWRV REQUIRED = 3,465 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:

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

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

GREEN ROOF SWRV = 1,923 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 AND ONSITE PLANTING (15,807 SF). IRRIGATION WEATHER SENSORS WILL BE PROVIDED TO ENSURE WATERING OCCURES DURING DROUGHT CONDITIONS. PER DOEE SIZING PROCEDURE, AN APPROXIMATE 50,000 GALLON CISTERN WILL COLLECT RUNOFF FROM AN APPROXIMATE 15,000 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 = 1,700 CF *

TOTAL SITE SWRV PROVIDED: 3,623 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 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.

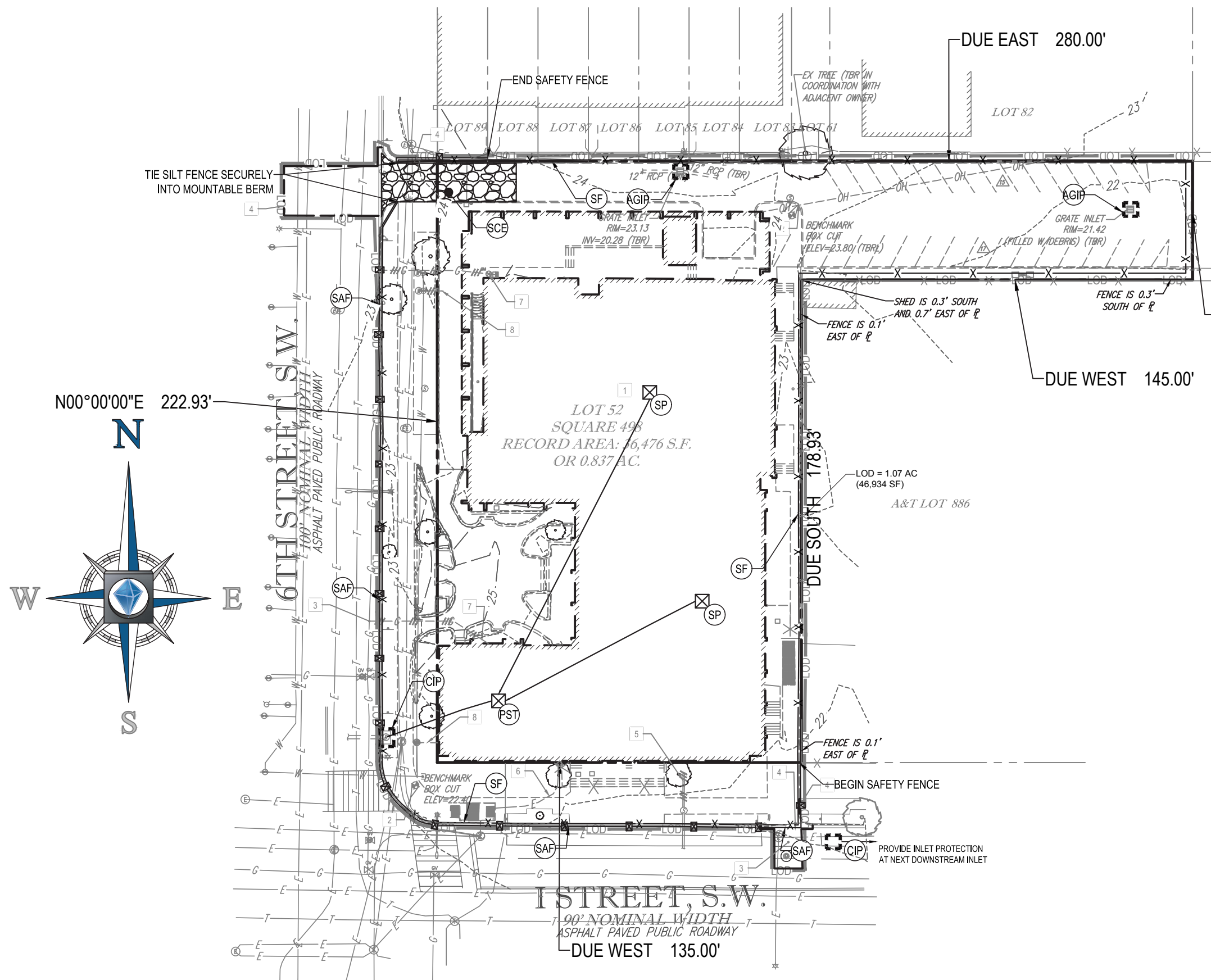
GREEN ROOF TABLE:

GREEN ROOF#	SURFACE AREA (SF)	TOTAL CDA (SF)	MEDIA DEPTH (in.)	DRAINAGE LAYER DEPTH (IN)	LOCATION	STORAGE PROVIDED	Max SWRV	SWRV PROVIDED	NOTES	
1	8,020	8,020	8		1 Main Roof	2239	1079	1079		
2	2,123	2,123	8		1 Side Roof	593	286	286		
3	3,024	3,024	8		1 Penthouse	844	407	407		
3	26	26	3		1 Penthouse	3	3	3		
4	1,098	1,098	8		1 Lower Roof	307	148	148		
TOTAL	14,291	14,291				3,985		1,923		
MEDIA RETENTION VALUE						0.4				
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													Cistern Volume (gallons)	Available Storage Volume (Sv) (cubic feet)
STORM EVENT														
Storm Event (inches)												1.7		
CONTRIBUTING DRAINAGE AREA (CDA)														
How big is the impervious CDA (SF)?												15,000		
IRRIGATION														
How big is the area to irrigate? (SF)												15,807		
Does the irrigation system have smart controls (e.g. soil moisture sensor shutoff)? If no, leave unchecked. <input checked="" type="checkbox"/> Yes														
Enter the average weekly irrigation application rate in inches/week for each month throughout the year (inches/week)														
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec			
0.01	0.02	0.11	0.30	0.54	0.77	0.91	0.81	0.57	0.30	0.12	0.03			

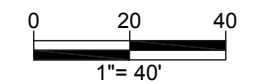


EROSION AND SEDIMENT CONTROL LEGEND		
TITLE	KEY	SYMBOL
SAFETY FENCE	SAF	
SILT FENCE	SF	
CURB INLET PROTECTION	CIP	
AT-GRADE INLET PROTECTION	AGIP	
TEMPORARY STONE CONSTRUCTION ENTRANCE	SCE	
LIMIT OF DISTURBANCE	LOD	
SUMP PIT	SP	
PORTABLE SEDIMENT TANK	PST	

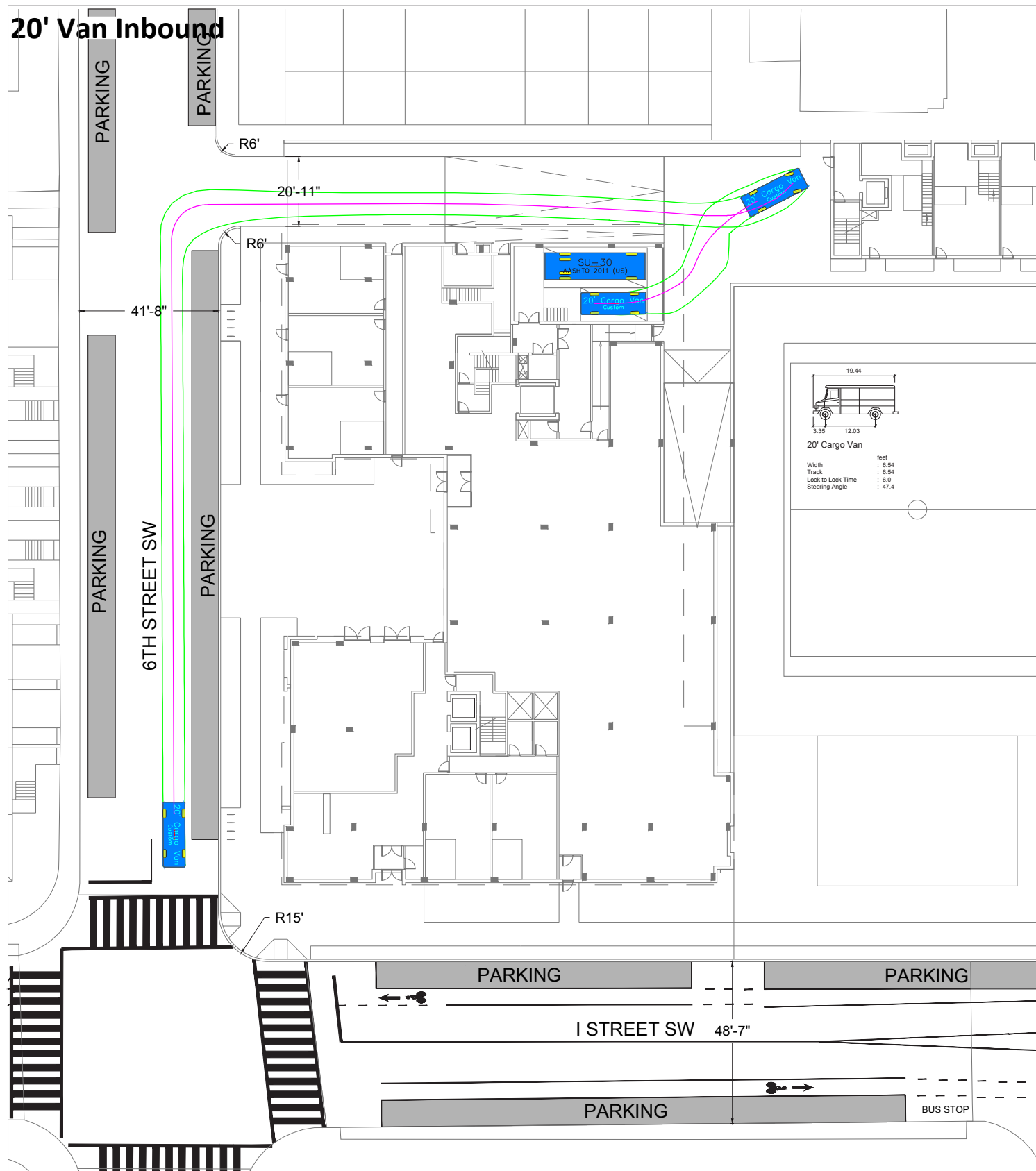
NOTE: SPOIL MATERIAL SHALL BE DISCARDED AT A SITE WITH AN ACTIVE GRADING PERMIT AND APPROVED SEDIMENT CONTROL PLAN. BORROW MATERIAL SHALL BE OBTAINED FROM AN APPROVED SITE WITH AN ACTIVE GRADING PERMIT AND AN APPROVED SEDIMENT CONTROL PLAN.

SITE TABULATION

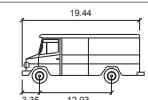
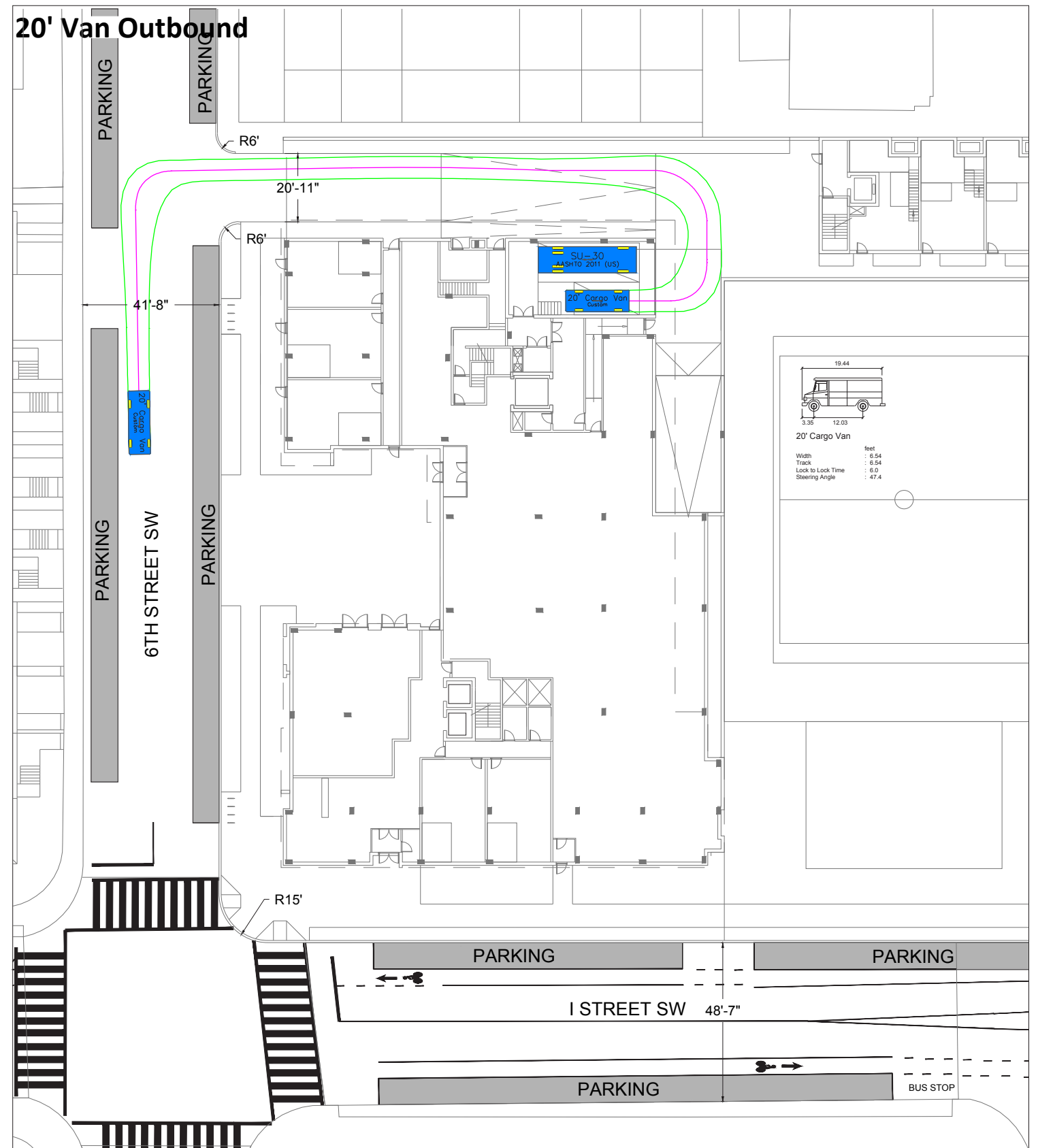
LOT AREA = 36,476 SF
 DISTURBED AREA = 46,934 SF
 CUT VOLUME = TBD
 FINAL VOLUME = TBD



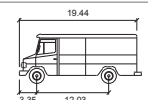
20' Van Inbound



20' Van Outbound



20' Cargo Van
 Width : 6.54
 Track : 6.54
 Lock to Lock Time : 6.0
 Steering Angle : 47.4



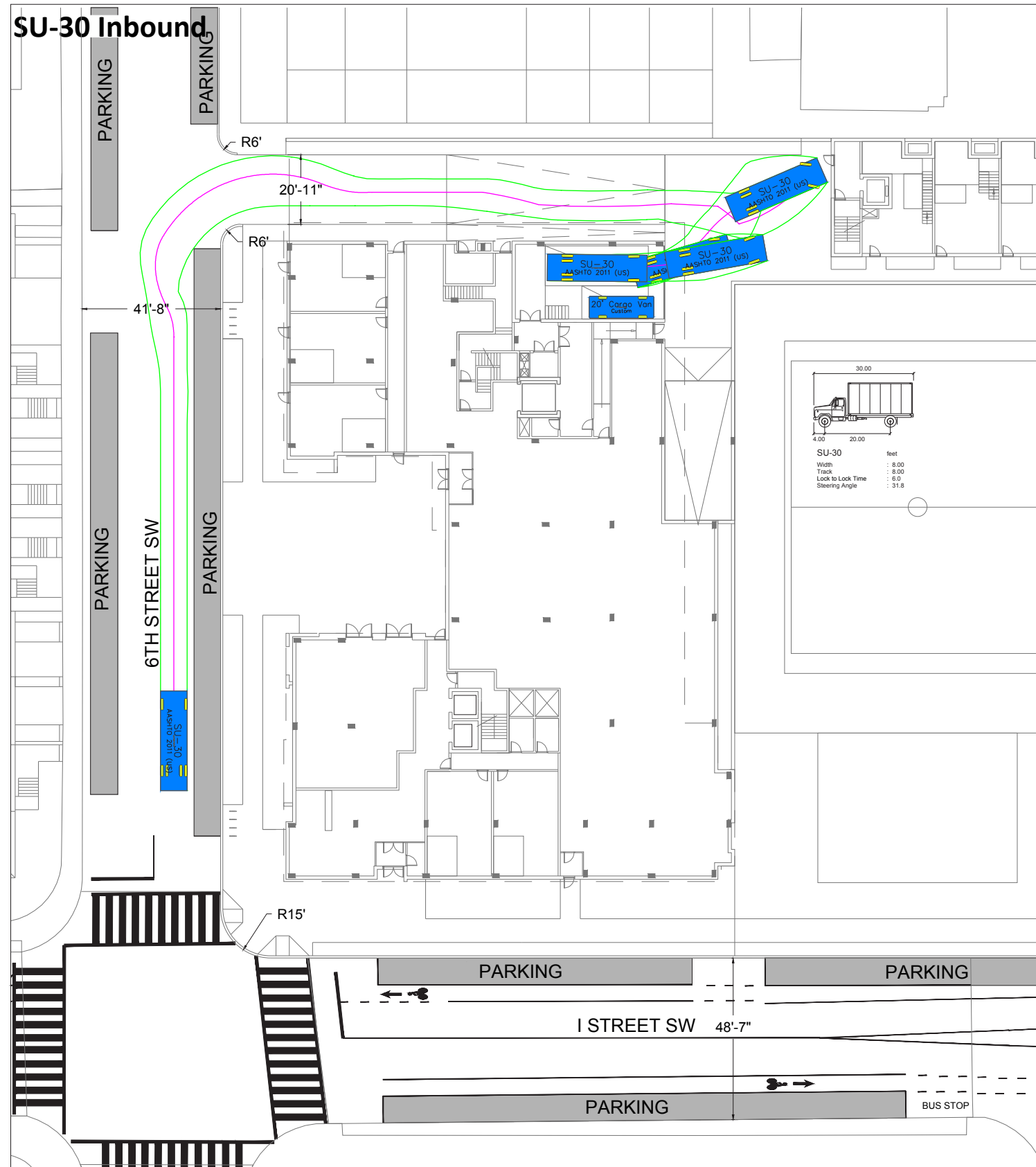
20' Cargo Van
 Width : 6.54
 Track : 6.54
 Lock to Lock Time : 6.0
 Steering Angle : 47.4

GOROVE / SLADE
 Transportation Planners and Engineers

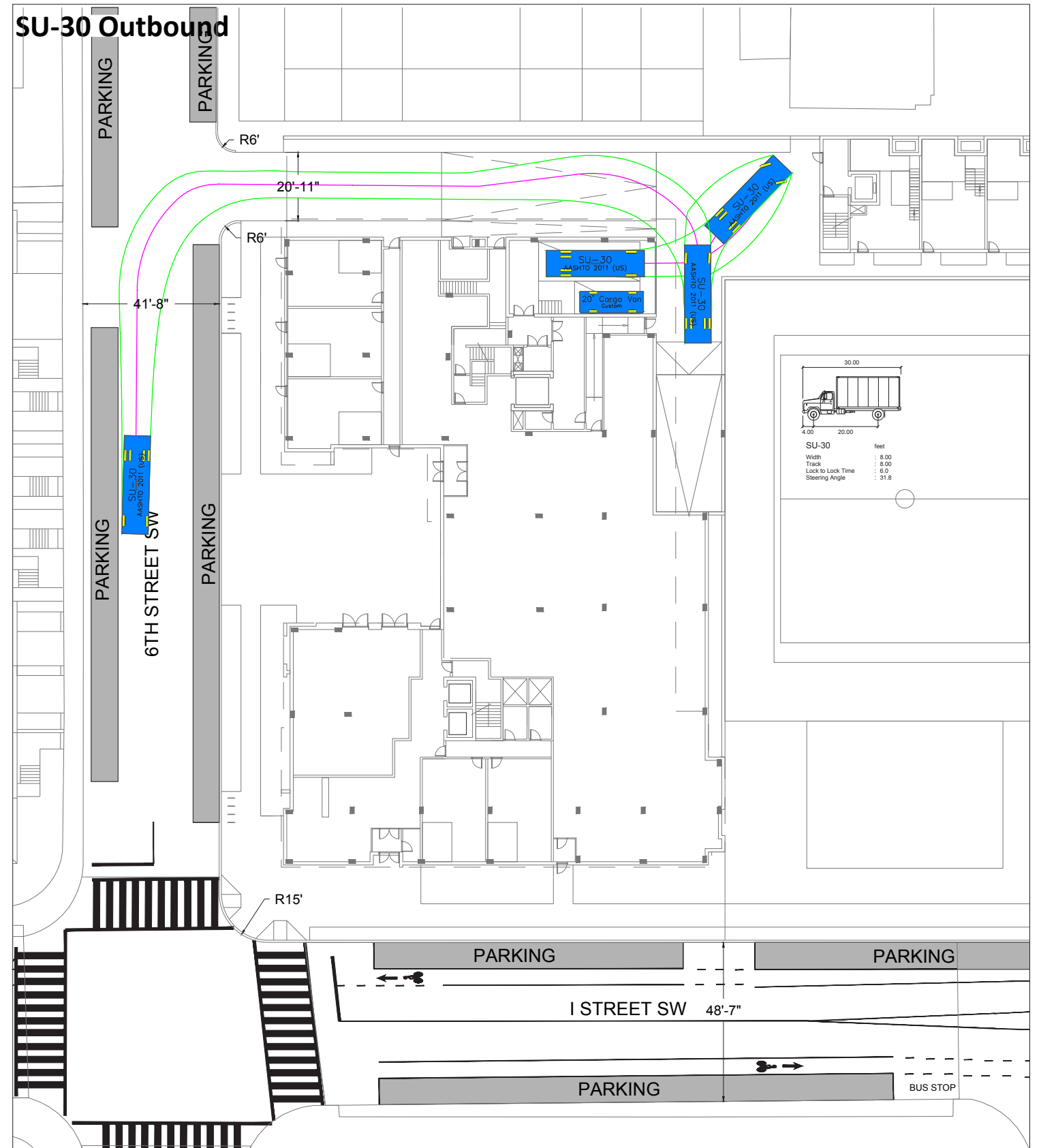
501 Eye Street SW: AutoTURN Maneuvers
 Custom 20' Van
 October 19, 2017



SU-30 Inbound



SU-30 Outbound



501 Eye Street SW: AutoTURN Maneuvers
 AASHTO SU-30
 October 19, 2017

