

**The George Washington University
Square 103 - Phase 1 Design
Garage Base Building**

**FOGGY BOTTOM CAMPUS PLAN PUD
SECOND STAGE APPROVAL**

AUGUST 16, 2010

OWNER / DEVELOPER:

ARCHITECT:

LAND USE COUNSEL:

CIVIL ENGINEER:

LANDSCAPE ARCHITECT:

THE GEORGE WASHINGTON UNIVERSITY

PERKINS + WILL; SHALOM BARANES ASSOCIATES

GOULSTON & STORRS

WILES MENSCH CORPORATION-DC

OCULUS



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AERIAL VIEW LOOKING SOUTH

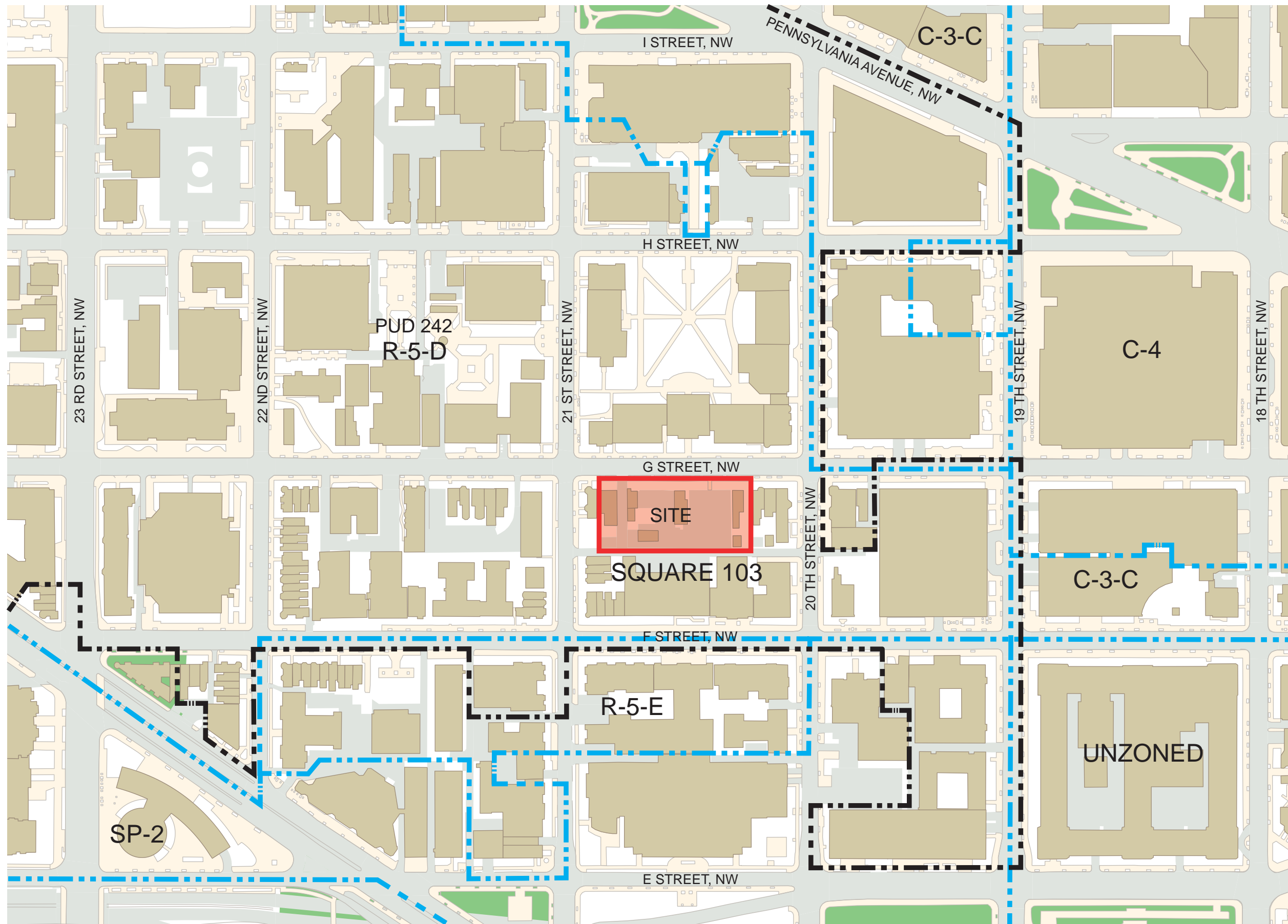
ZONING TABULATIONS

SQUARE: 103
 LOTS: 13, 14, 18, 809, 812-814, 819-820
 ZONE: R-5-D PUD
 SITE AREA: 38,328 SF (Measured)

DCMR, TITLE 11	R-5-D DEVELOPMENT STANDARDS	DEVELOPMENT STANDARDS APPROVED UNDER CAMPUS PLAN PUD (Note 2)	PROPOSED DEVELOPMENT
FAR	3.5	4.85	0.194 TOTAL
GROSS FLOOR AREA (NOTE 1)	133,504 SF (MAX)	185,983 SF (MAX)	7,430 SF TOTAL
LOT OCCUPANCY	75.0%	90.0%	19.4%
BUILDING HEIGHT	90'-0"	80'-0"	27'-9" (TRELLIS)
PENTHOUSE HEIGHT	18'-6"	--	NONE PROVIDED
PENTHOUSE AREA	0.37 FAR	--	NONE PROVIDED
REAR YARD	4 IN/FT; 15'-0" MIN	--	12'-8" RELIEF REQUESTED
SIDE YARD	NONE REQUIRED 3 IN/FT OF HT, 8 FT MIN IF PROVIDED	--	NONE PROVIDED
COURTS NON-RESIDENTIAL	WIDTH = 3 IN/FT OF HT; 10 FT MIN (OPEN) WIDTH = 4 IN/FT OF HT; 15 FT MIN AREA = 2 X WIDTH SQUARED; 350 SF MIN (CLOSED)	-- --	MULTIPLE
PARKING	<u>SCHOOL:</u> 2 PER EACH 3 TEACHERS; + 1 PER 10 CLASSROOM SEATS 1 PER 12 STADIUM SEATS <u>OR</u> 1 PER 10 AUDITORIUM SEATS (WHICHEVER IS GREATER)	PER CAMPUS PLAN	450 SPACES (NOTE 3)
LOADING	<u>SCHOOL</u> <u>(OTHER USE LESS THAN 100,000 SF):</u> 1 BERTH @ 30 FT DEEP 1 PLATFORM @ 100 SF 1 SERVICE @ 20 FT DEEP	PER CAMPUS PLAN	1 BERTH @ 30 FT DEEP 1 PLATFORM @ 100 SF 8 SERVICE @ 20 FT DEEP

NOTES:

- Gross Floor Area includes a deduction for mechanical shafts, but does not include areas for (1) bays projecting over the property line, (2) parking access ramps, and (3) spaces with structural clearance less than 6'-6".
- PUD development standards per Campus Plan, Zoning Commission Order No. 06-11/06-12.
- Includes 35 tandem spaces. Relief already granted per previously approved campus plan.



- KEY**
- SITE BOUNDARY
 - - - CAMPUS BOUNDARY
 - · - · - ZONE BOUNDARY



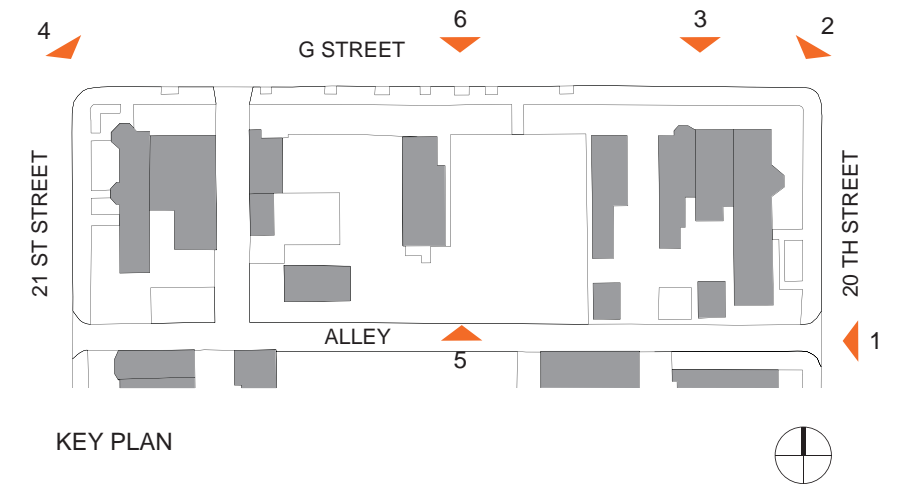
ZONE BOUNDARY SITE PLAN



1. VIEW OF ALLEY LOOKING WEST FROM 20TH STREET



2. VIEW OF ADJACENT ROW STRUCTURES AT G AND 20TH STREETS LOOKING SW



3. VIEW OF ADJACENT ROW STRUCTURES FROM G STREET



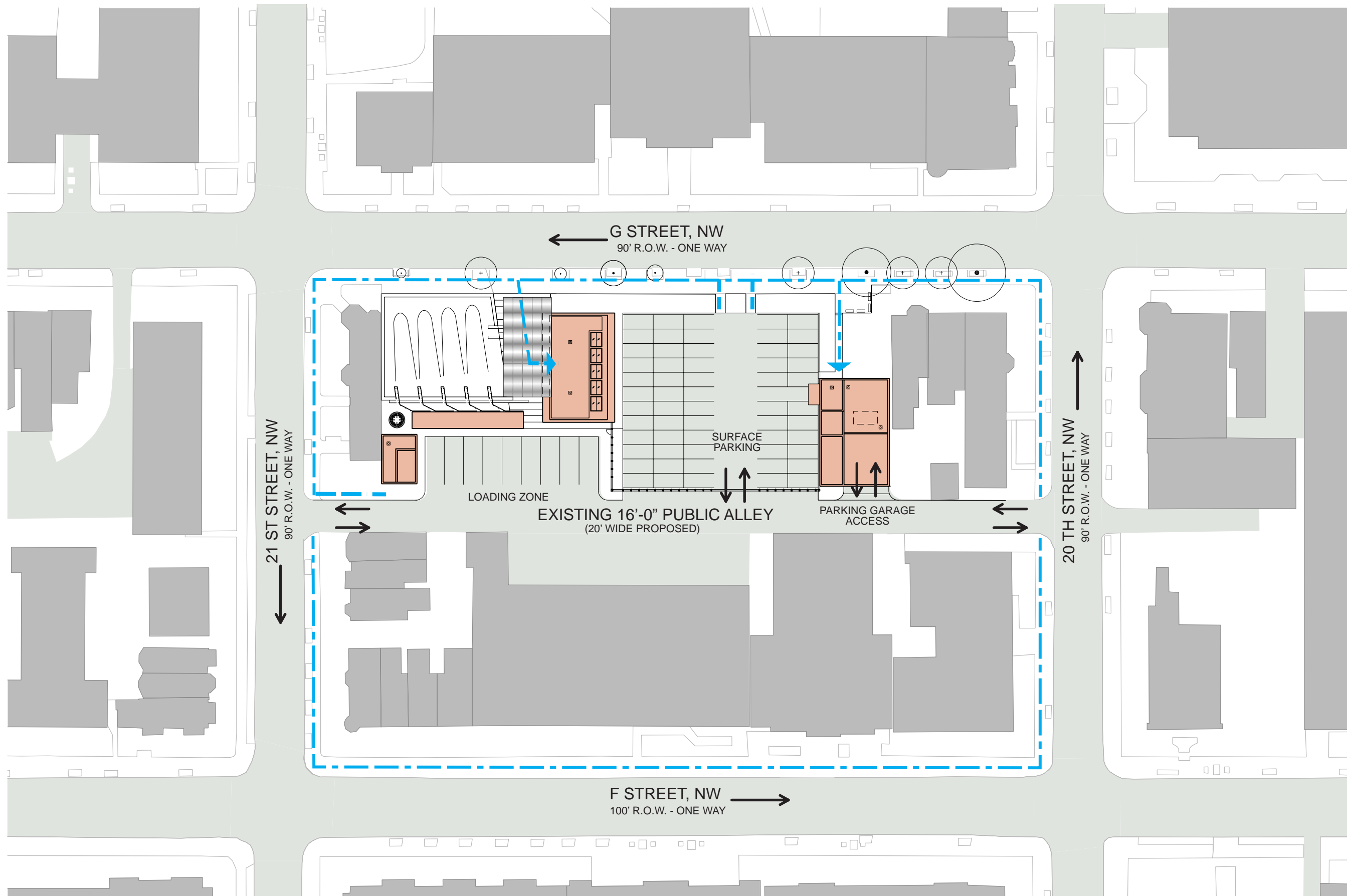
4. VIEW OF ADJACENT STRUCTURES AT G AND 21ST STREETS LOOKING SE



5. VIEW OF SITE FROM ALLEY, MID-BLOCK, LOOKING NORTH

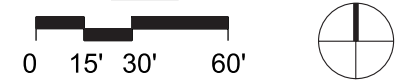


6. VIEW OF SITE FROM G STREET, MID-BLOCK, LOOKING SOUTH

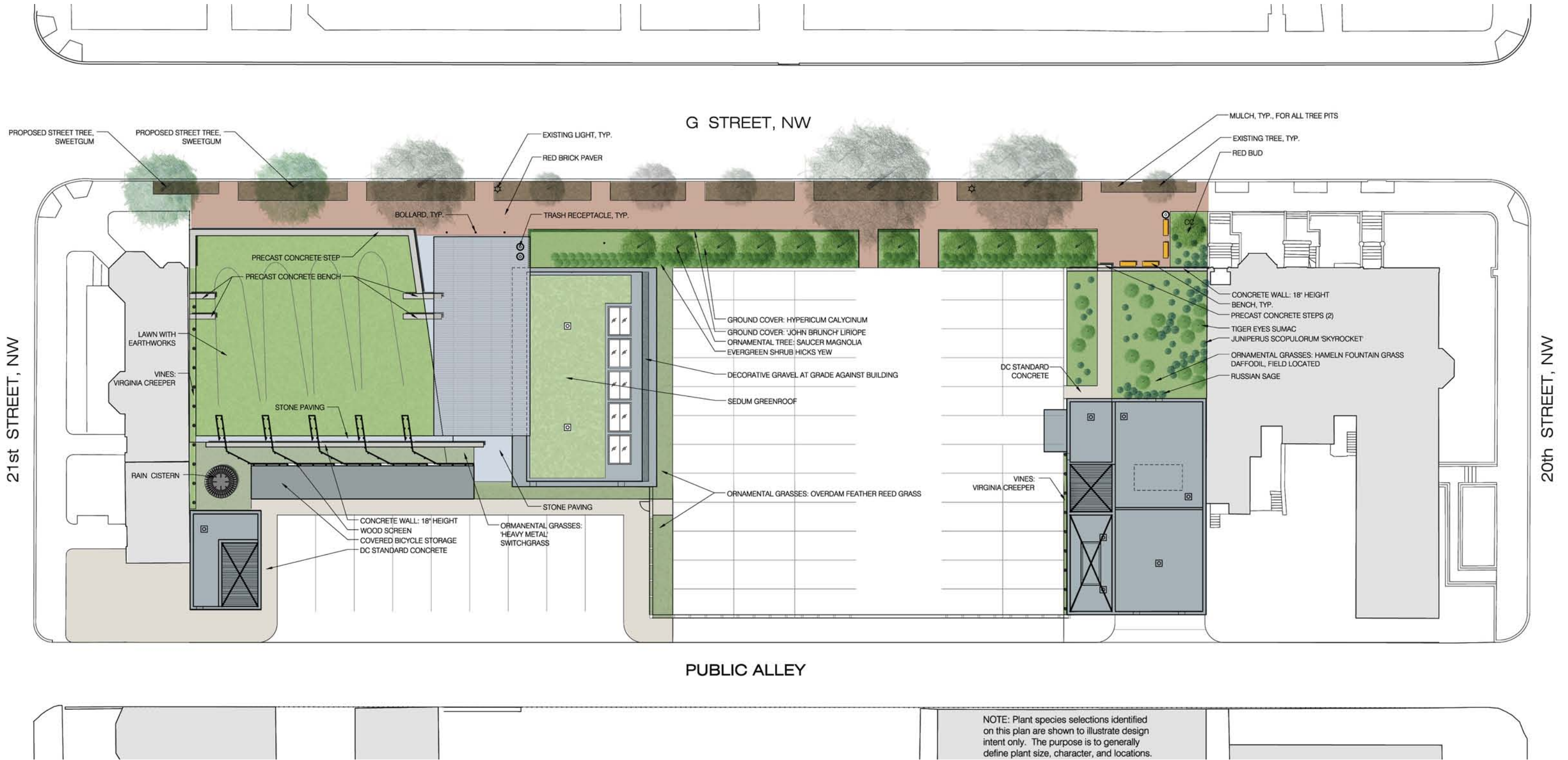


KEY
 - - - - -
 PEDESTRIAN PATH
 OF TRAVEL

SITE CIRCULATION DIAGRAM



S3



LANDSCAPE PLAN





SWEETGUM



SAUCER MAGNOLIA



RED BUD



HICKS YEW



SKYROCKET JUNIPER



TIGER EYES SUMAC



HYPERICUM CALYGINUM



RUSSIAN SAGE



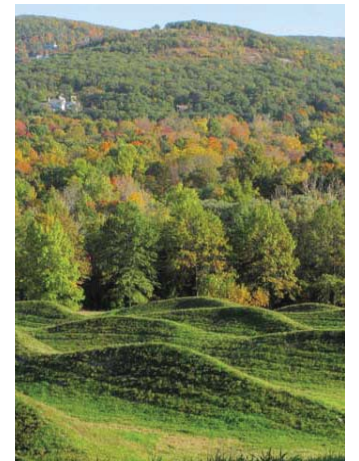
HAMELN FOUNTAIN GRASS



OVERDAM FEATHER REED GRASS



NORTHWIND SWITCHGRASS



LAWN WITH EARTHWORKS



'JOHN BURCH' LIRIOPE



VIRGINIA CREEPER



DAFFODIL



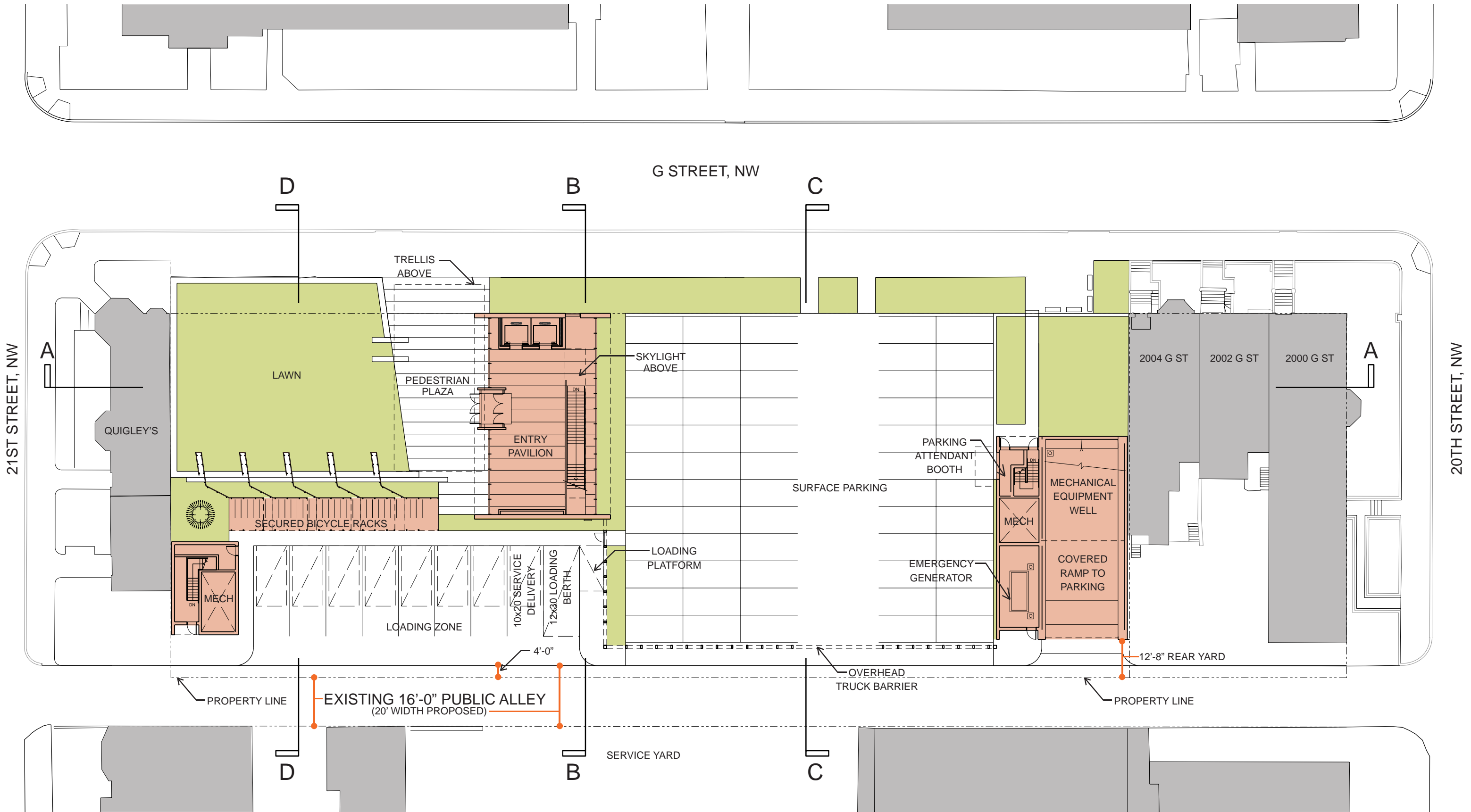
SEDUM GREEN ROOF



BENCH



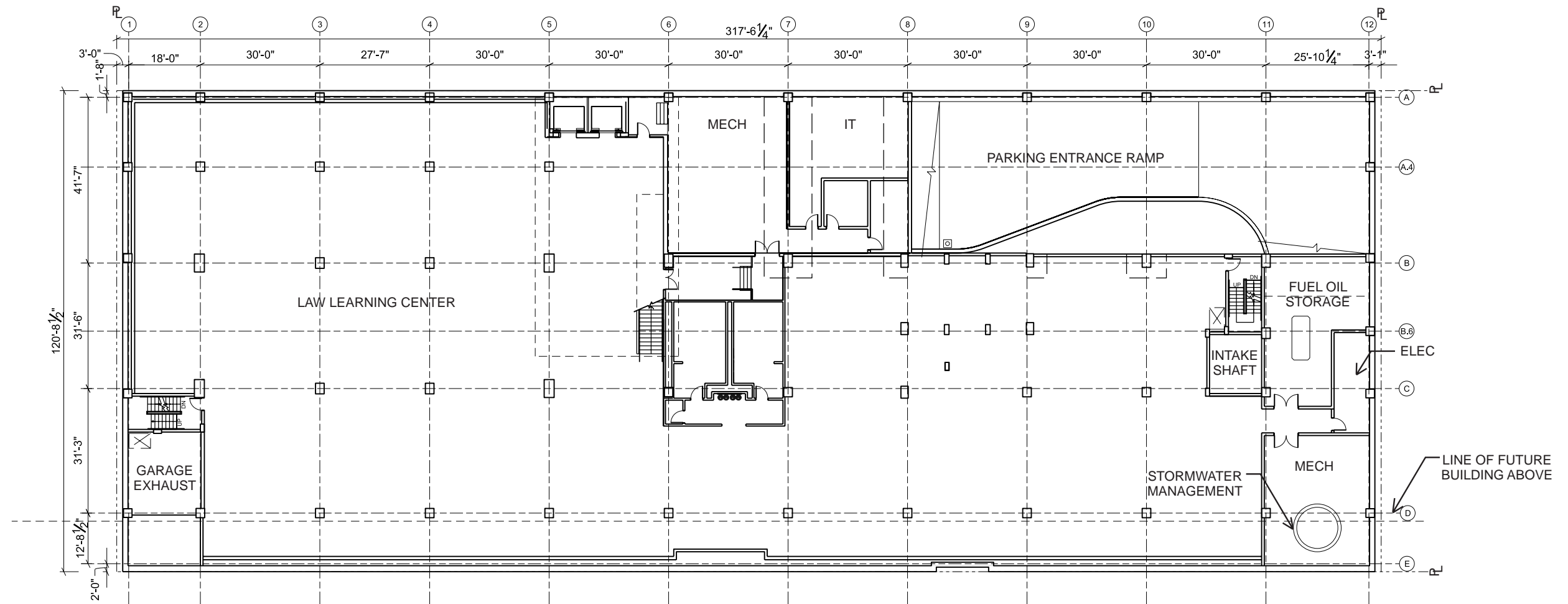
BOLLARD



NOTE: INTERIOR DESIGN IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL DESIGN MAY VARY.

PLAZA LEVEL PLAN

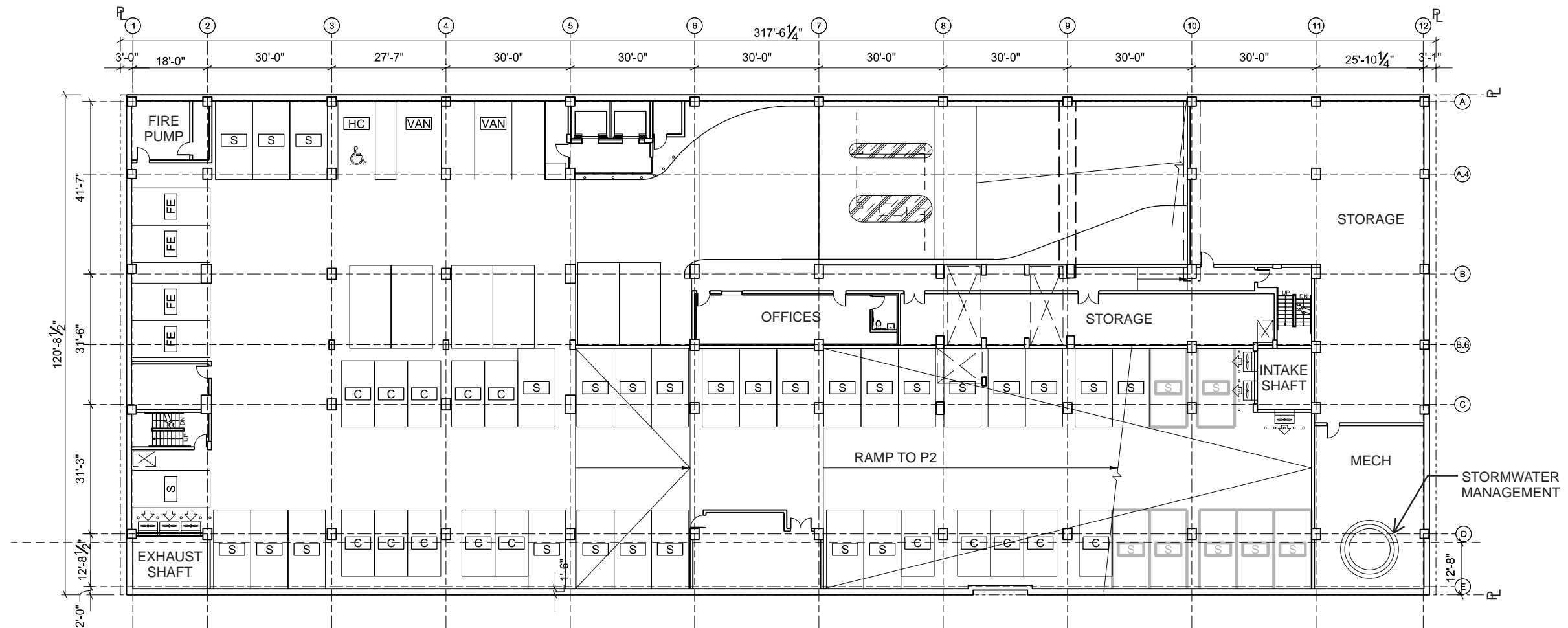




NOTE: INTERIOR DESIGN IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL DESIGN MAY VARY.

LOWER LEVEL PLAN

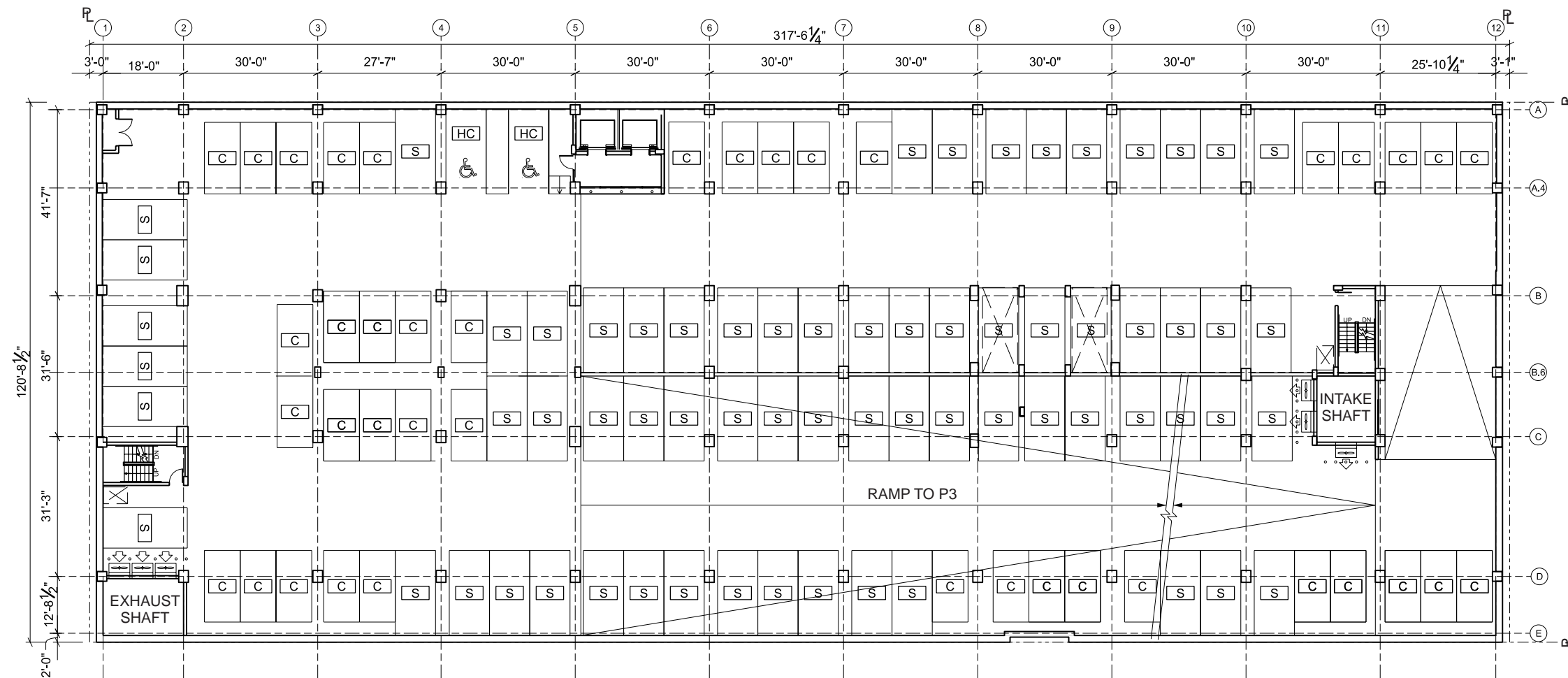




NOTE: INTERIOR DESIGN AND PARKING LAYOUT ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL DESIGN MAY VARY.

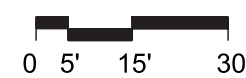
P1 LEVEL PLAN



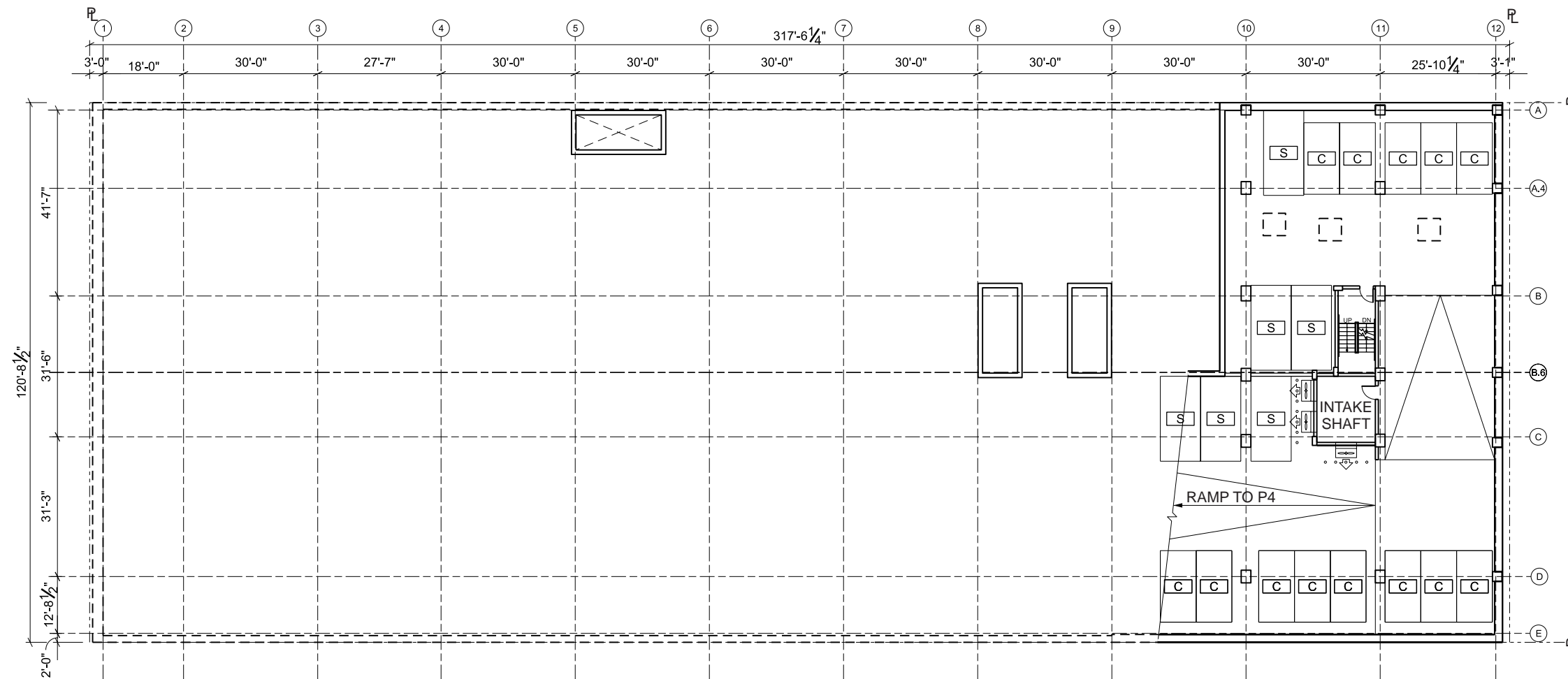


NOTE: INTERIOR DESIGN AND PARKING LAYOUT ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL DESIGN MAY VARY.

P2 LEVEL PLAN (TYPICAL)



A4



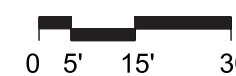
PARKING SUMMARY

LEVEL	HANDICAP (HC)	COMPACT (C) 8'X16'	STANDARD (S) 9'X19'	FUEL EFFICIENT VEHICLES (FE)	TANDEM (T)	10' X 20'	TOTAL
GROUND LEVEL			23		35		58
P1 LEVEL	3 (Includes 2 HC Van Spaces)	15	35	4		6	63
P2 LEVEL	2	38	58				98
P3 LEVEL	2	36	68				106
P4 LEVEL	2	36	68				106
P5 LEVEL		13	6				19
TOTAL	9	138	258	4	35	6	450

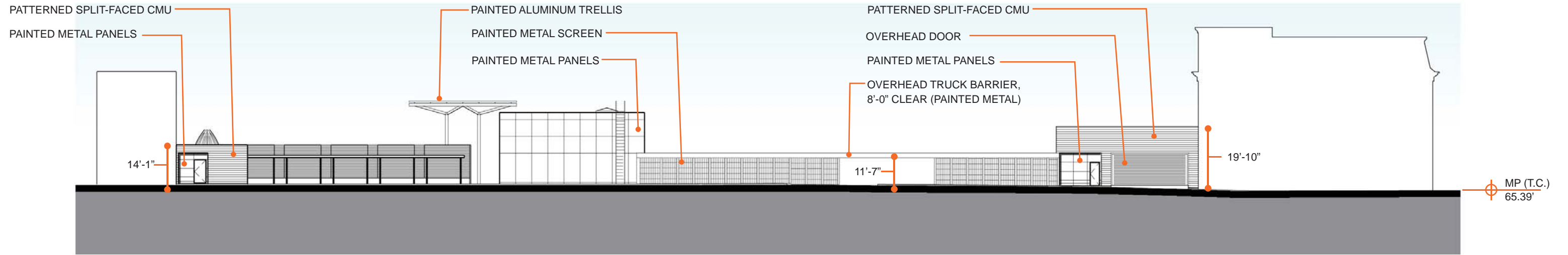
Parking relief for use of tandem/valet spaces already granted per previously approved campus plan. In accordance with this approval, the University may modify the parking garage operation further to add or remove tandem/valet spaces to accommodate parking demand needs.

NOTE: INTERIOR DESIGN AND PARKING LAYOUT ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL DESIGN MAY VARY.

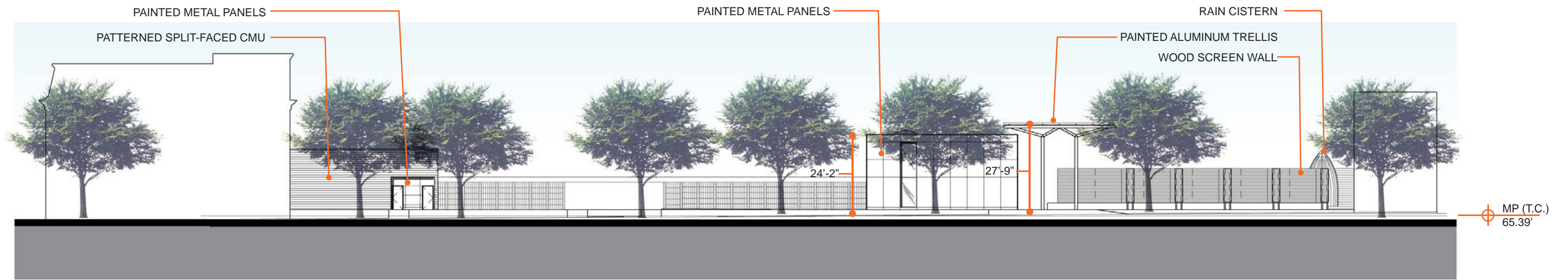
P5 LEVEL PLAN



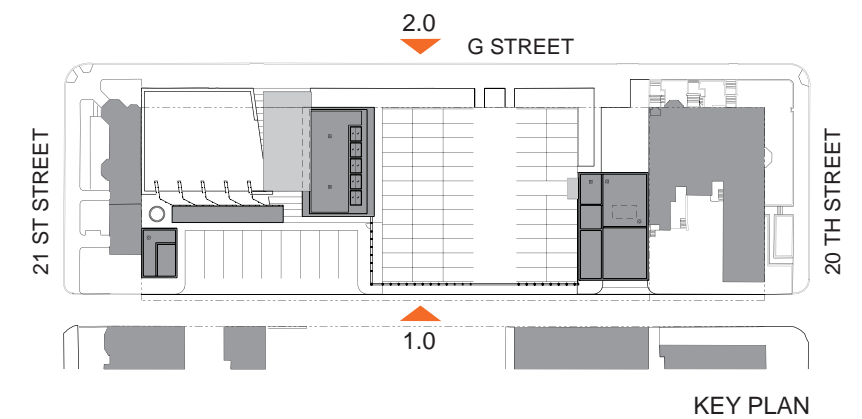
A5



ELEVATION 1.0 SOUTH SITE AT ALLEY



ELEVATION 2.0 NORTH SITE AT G STREET

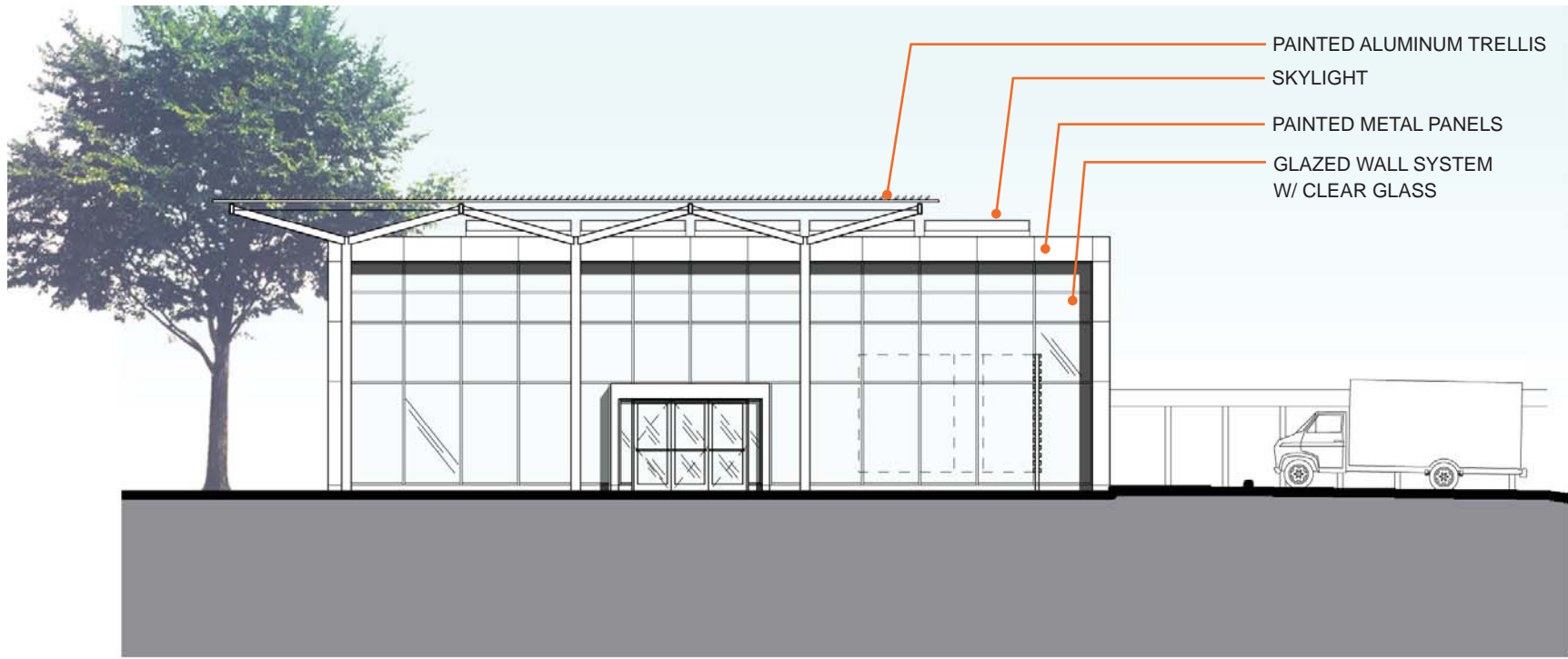


KEY PLAN

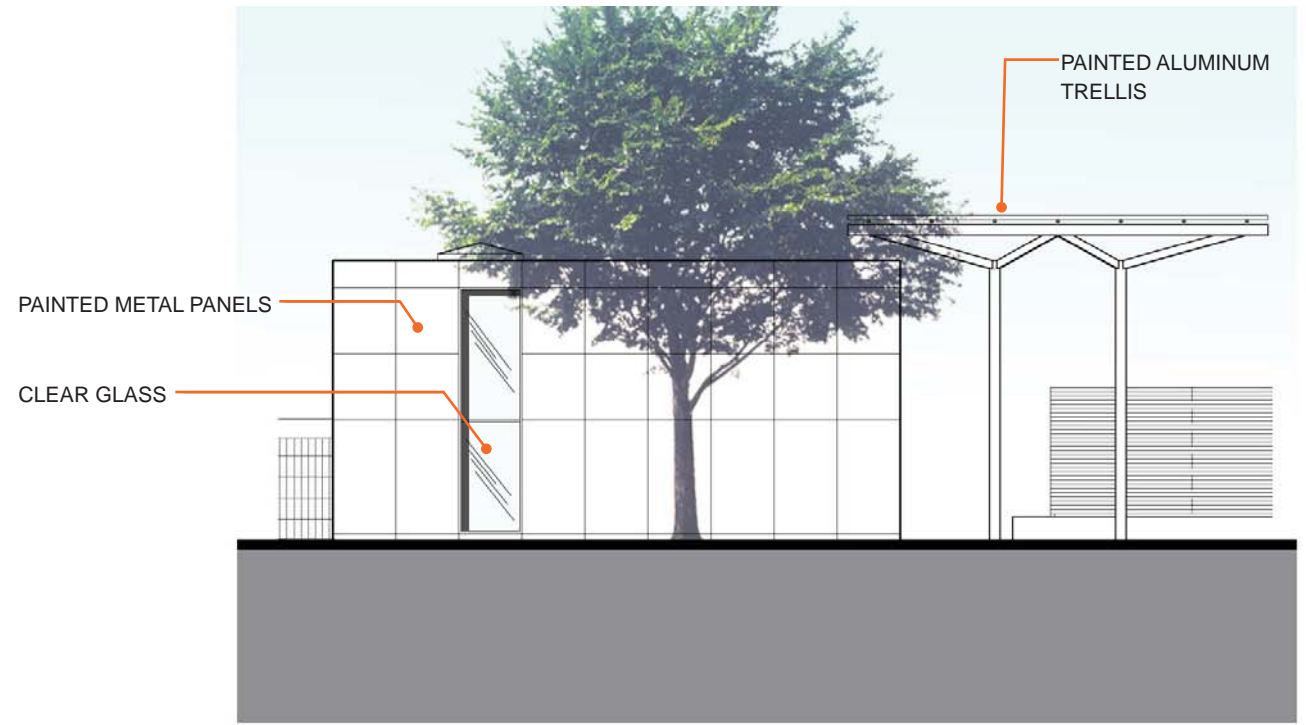
NOTE: BUILDING HEIGHTS ARE TAKEN FROM MEASURING POINT: 65.39' (T.C. AT G STREET).

SITE ELEVATIONS

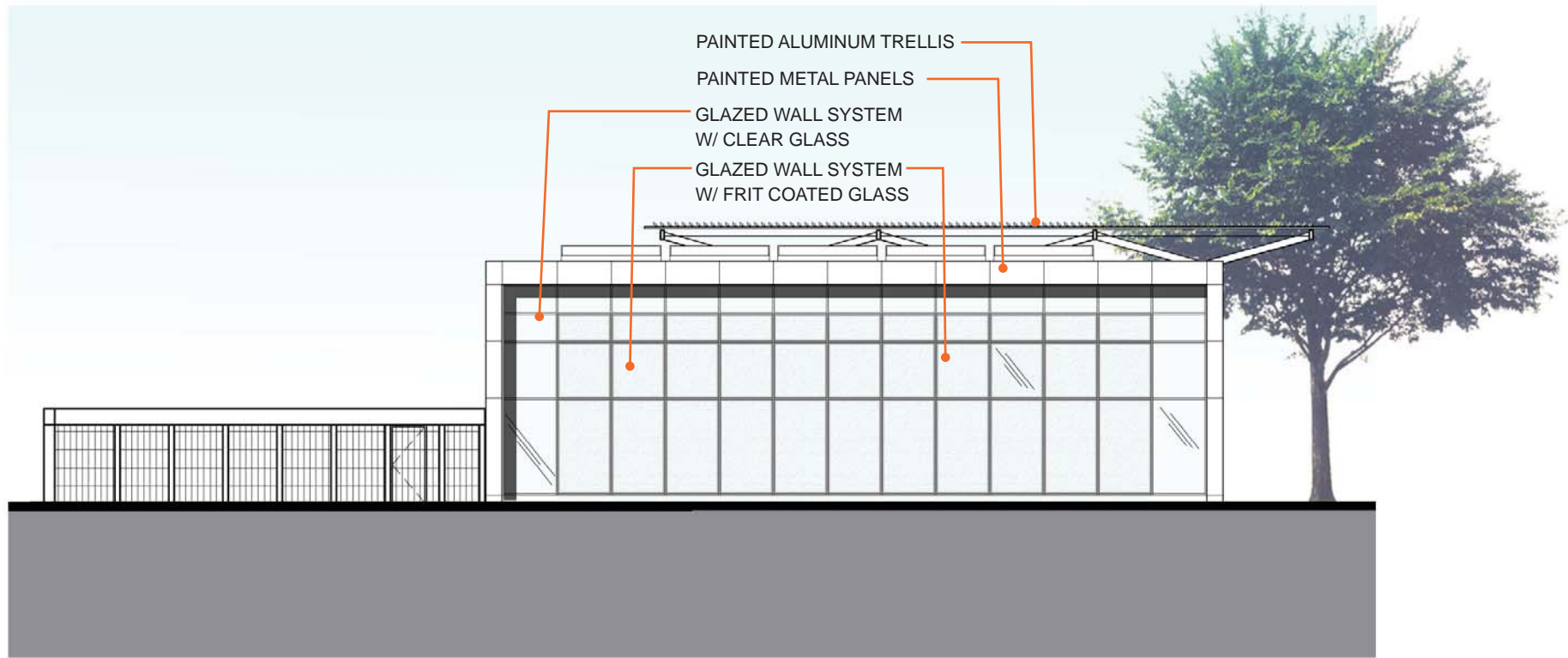




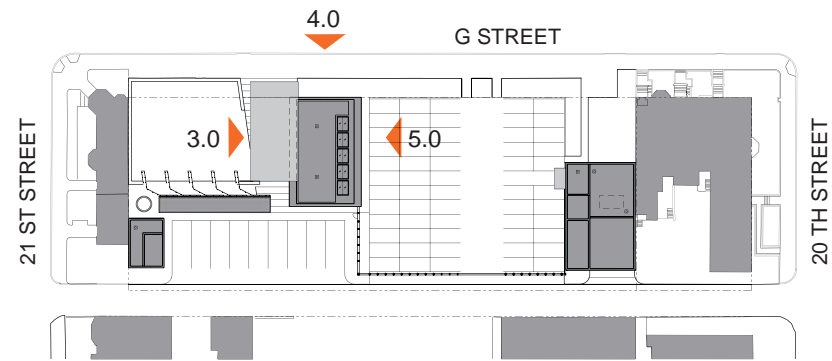
ELEVATION 3.0 ENTRY PAVILION - WEST ELEVATION



ELEVATION 4.0 ENTRY PAVILION - NORTH ELEVATION



ELEVATION 5.0 ENTRY PAVILION - EAST ELEVATION



KEY PLAN



ENTRY PAVILION ELEVATIONS



TEXTURED CONCRETE MASONRY



GLAZED WALL SYSTEM



PAINTED METAL PANELS



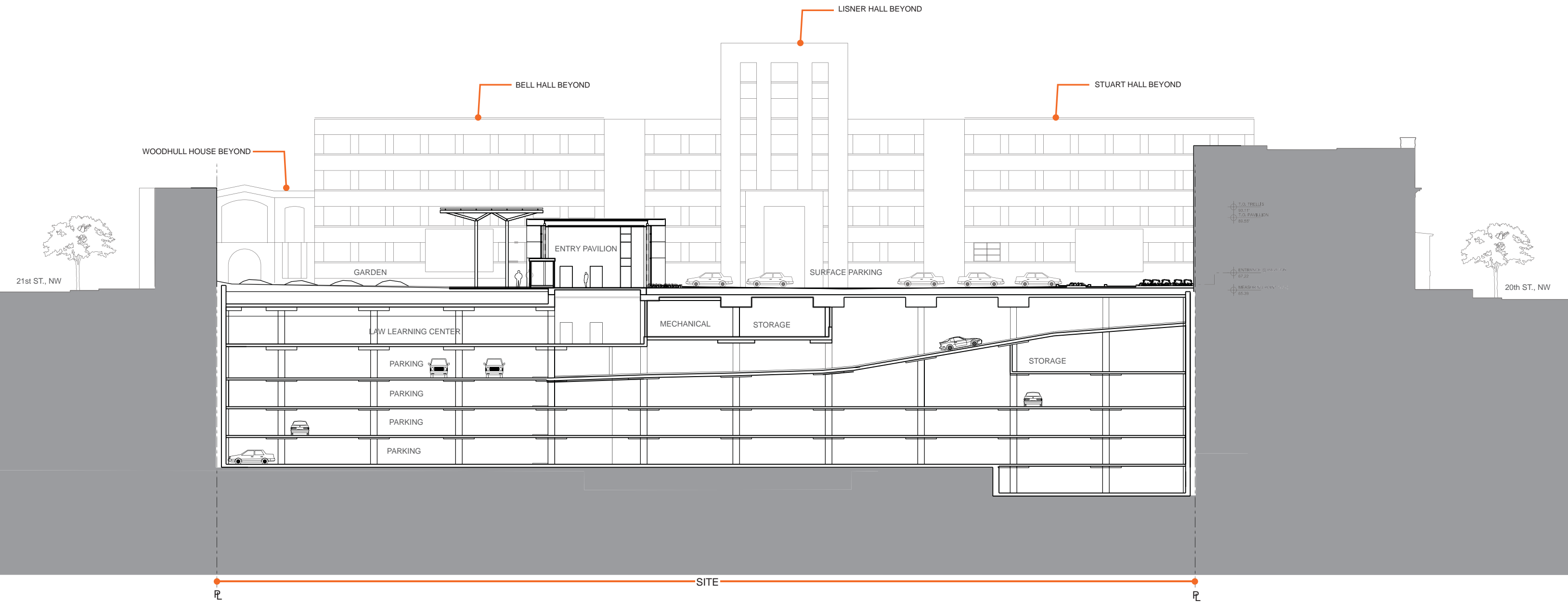
WOOD SCREEN



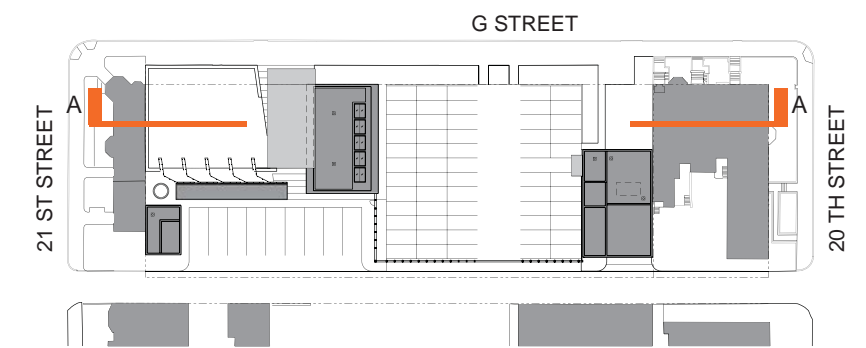
GLAZED WALL SYSTEM



ALUMINUM TRELLIS



SECTION A-A: EAST-WEST SECTION LOOKING NORTH



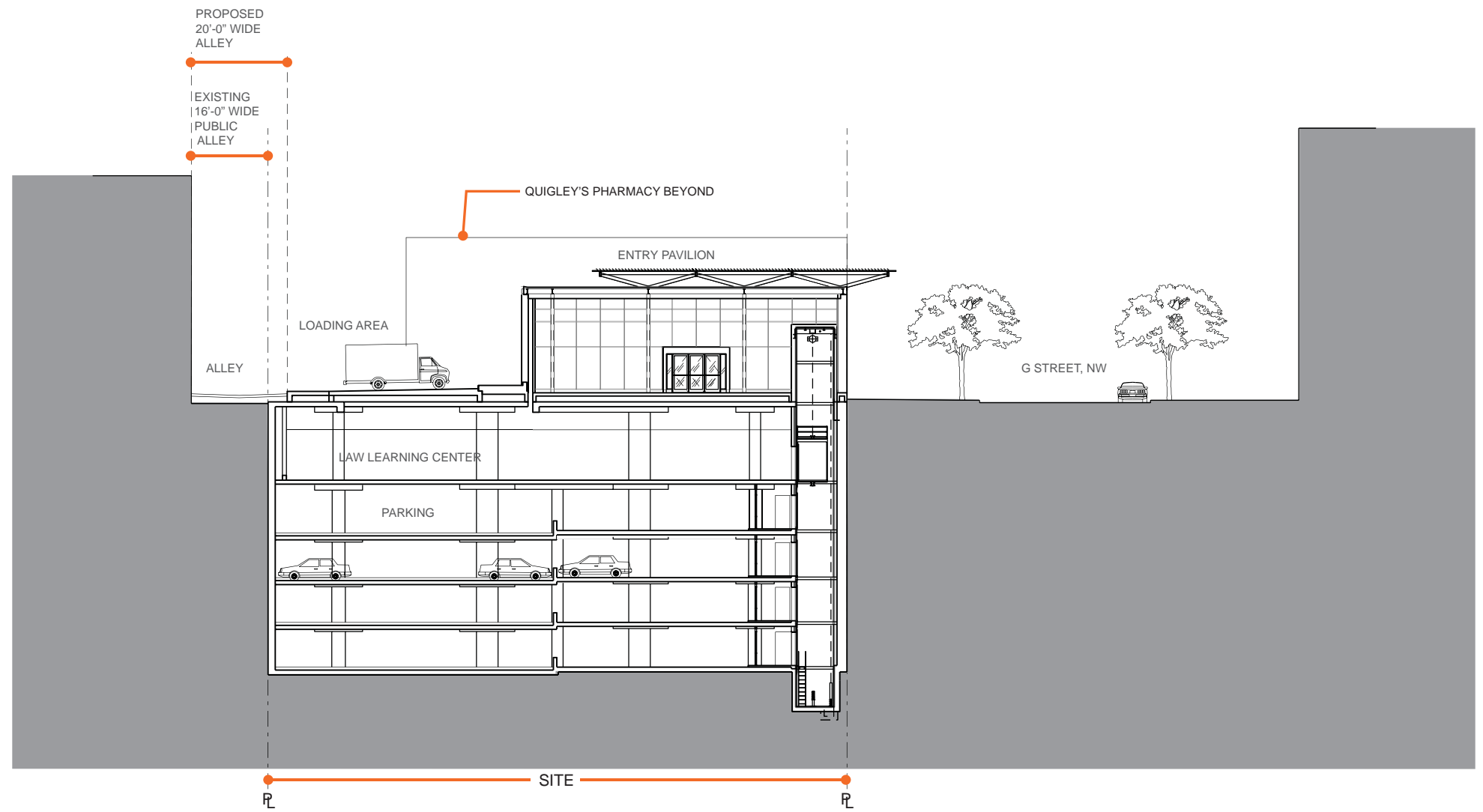
KEY PLAN

NOTE: INTERIOR DESIGN IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL DESIGN MAY VARY.

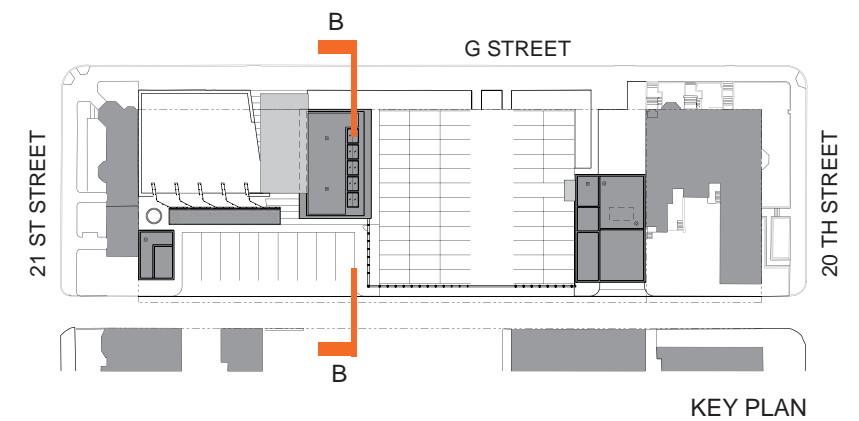
BUILDING SECTION A-A



A9



SECTION B-B: NORTH-SOUTH SECTION LOOKING WEST

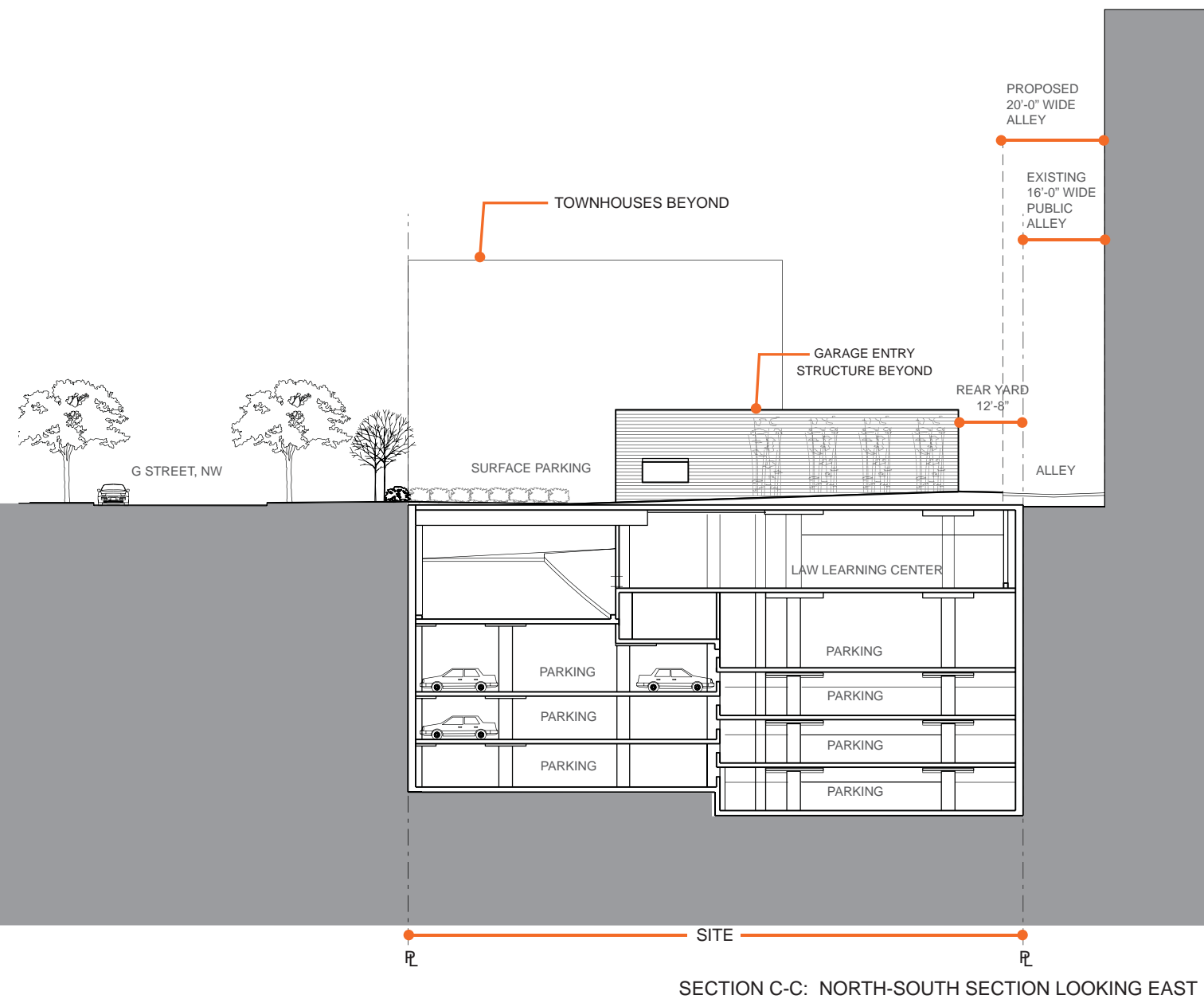


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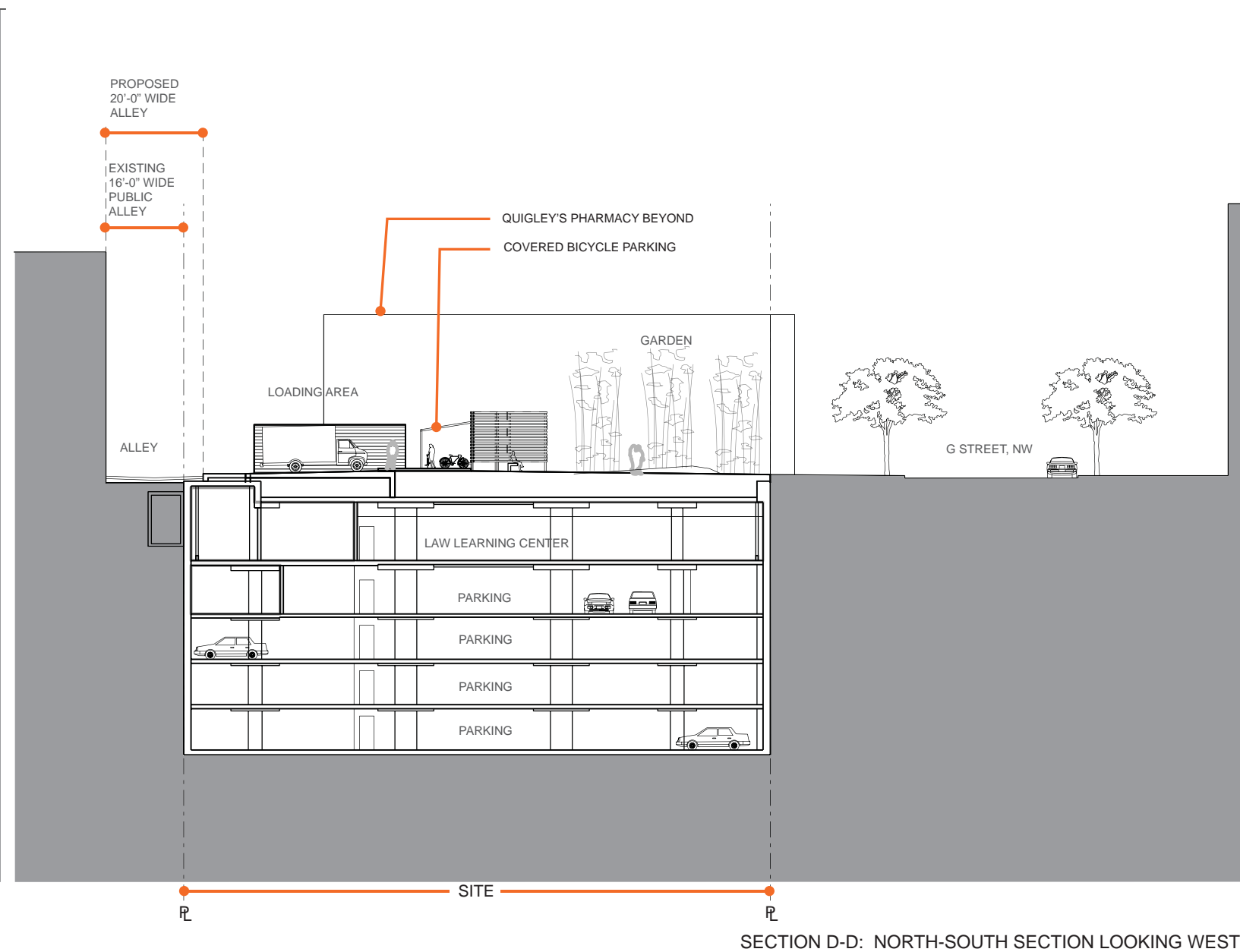
BUILDING SECTION B-B



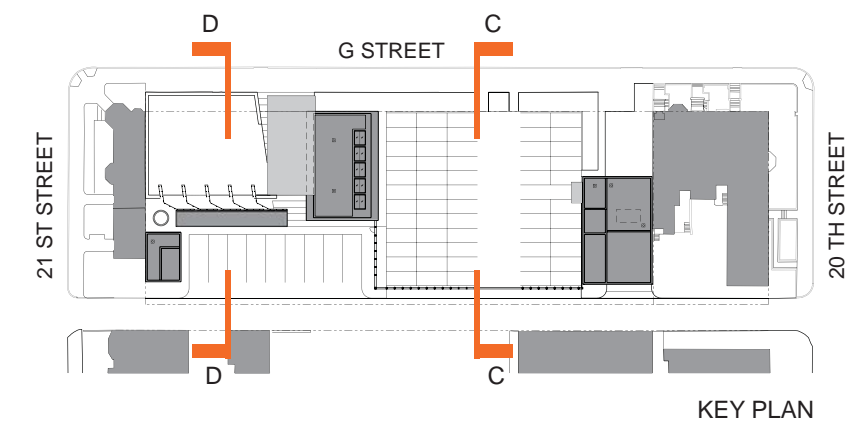
A10



SECTION C-C: NORTH-SOUTH SECTION LOOKING EAST



SECTION D-D: NORTH-SOUTH SECTION LOOKING WEST



KEY PLAN

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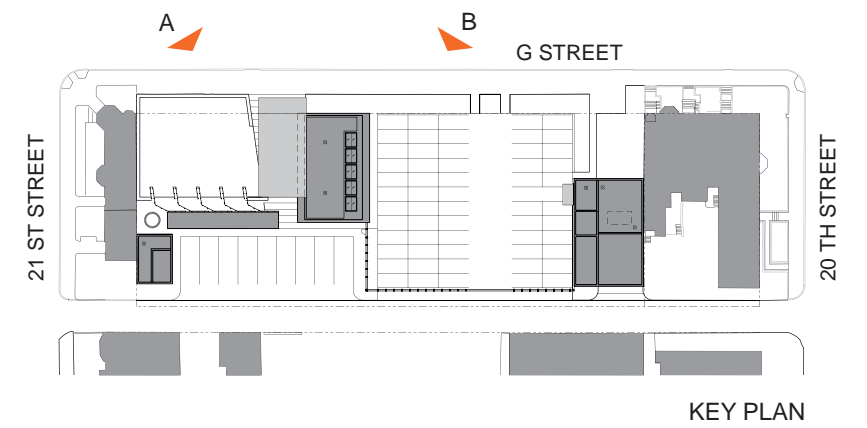
BUILDING SECTIONS C-C & D-D



VIEW A GARDEN AND ENTRY PAVILION FROM G STREET - LOOKING SOUTH



VIEW B ENTRY PAVILION FROM G STREET - LOOKING WEST

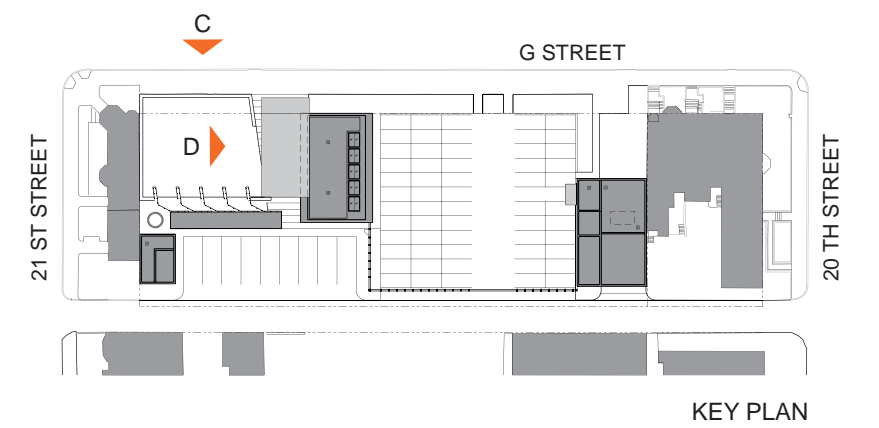


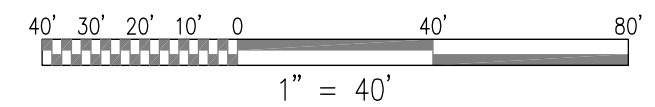
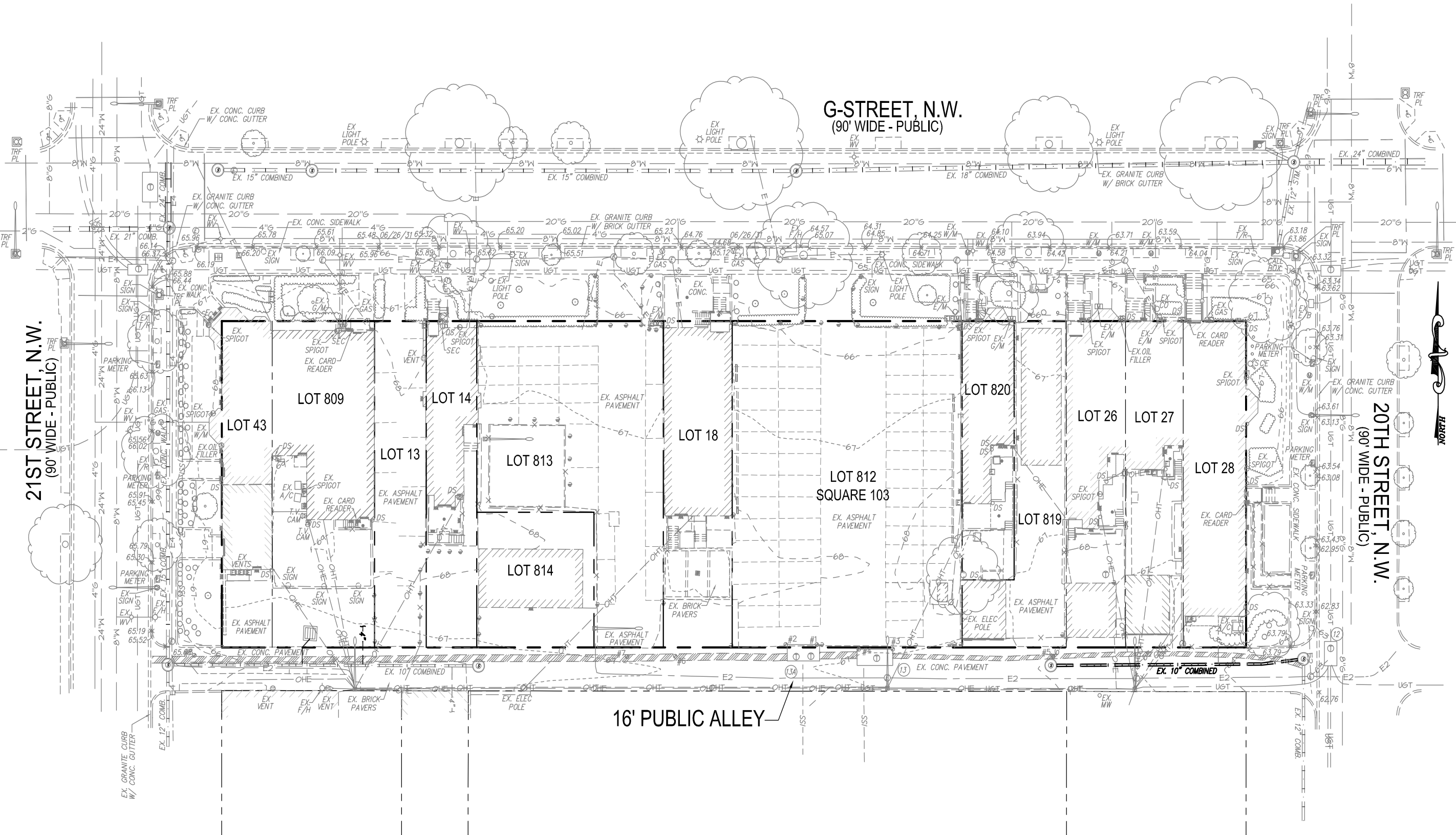


VIEW C GARDEN AND ENTRY PAVILION FROM G STREET - LOOKING SOUTH



VIEW D ENTRY PAVILION FROM GARDEN - LOOKING EAST

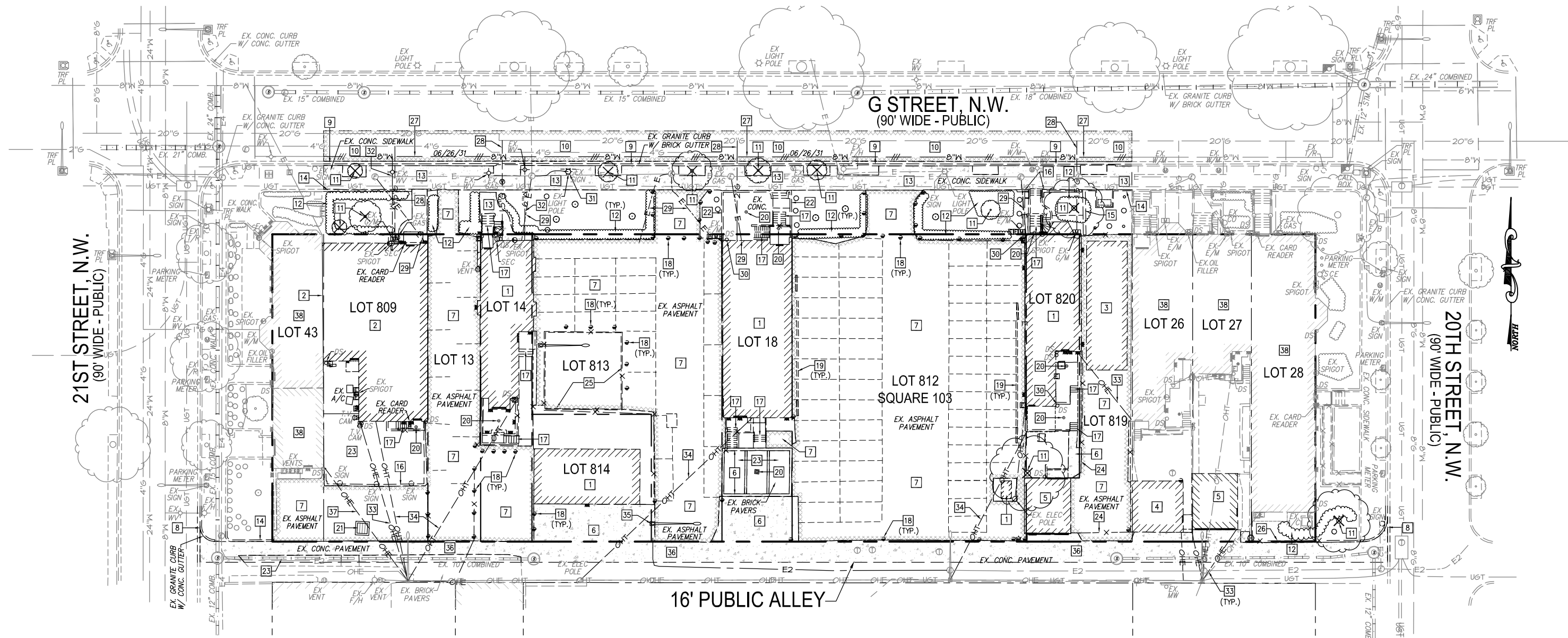




**WILES
MENSCH
CORPORATION**

EXISTING CONDITIONS SURVEY

C1



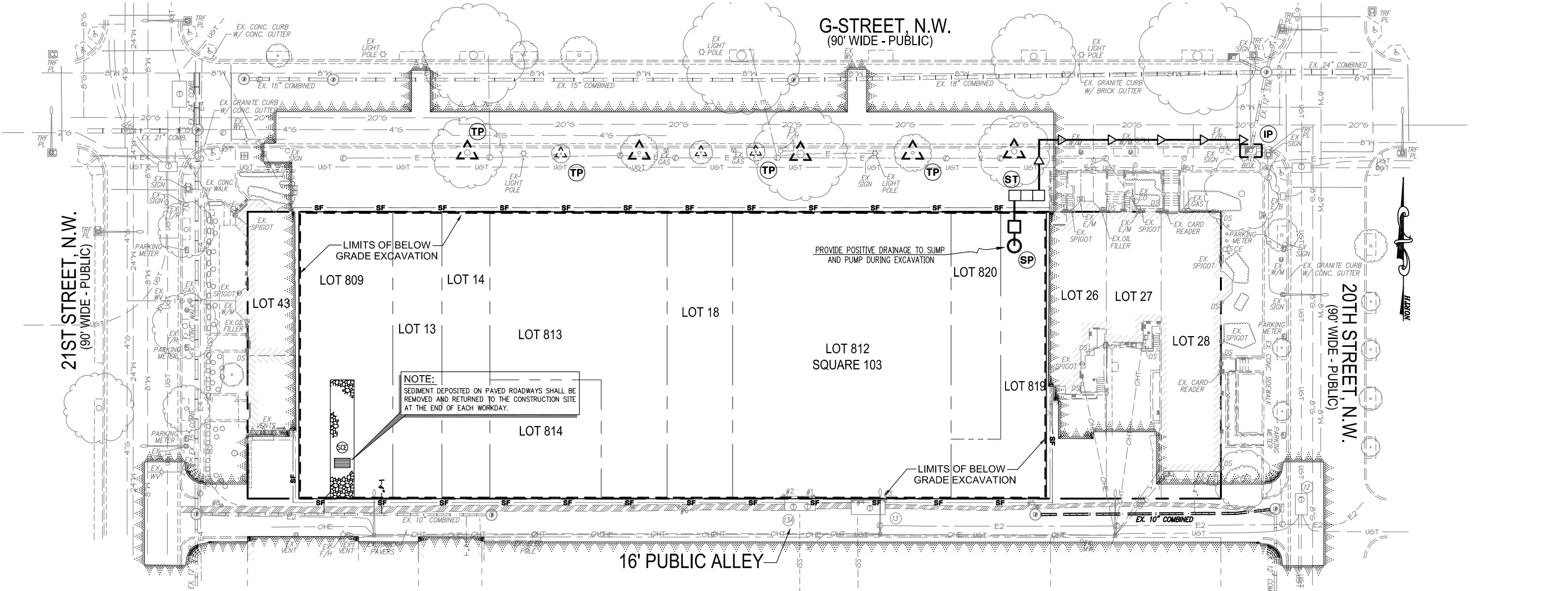
DEMOLITION KEYNOTES:

- 1 EXISTING BUILDING TO BE REMOVED.
- 2 EXISTING BUILDING TO BE REMOVED TO THE EXTENT OF PARTY WALL.
- 3 EXISTING COVERED STRUCTURE TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 4 EXISTING STRUCTURE REMAINS TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 5 EXISTING GARAGE/STORAGE STRUCTURE TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 6 EXISTING CONCRETE PAVEMENT TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 7 EXISTING ASPHALT PAVEMENT TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 8 EXISTING GRANITE CURB AND CONCRETE GUTTER TO BE REMOVED ON 20TH AND 21ST STREET, N.W. TO FACILITATE NEW CURB CUT PER DC/DDOT STANDARDS AND SPECIFICATIONS.
- 9 EXISTING GRANITE CURB AND BRICK GUTTER ON G-STREET, NW. TO BE REMOVED TO FACILITATE NEW CONSTRUCTION PER DC/DDOT STANDARDS AND SPECIFICATIONS.
- 10 EXISTING ASPHALT SURFACE COURSE TO BE REMOVED ON CURB LANE (12' WIDE) PER DC/DDOT STANDARDS AND SPECIFICATIONS.
- 11 EXISTING TREE TO BE REMOVED. COORDINATE REQUIREMENTS WITH DC/DDOT URBAN FORESTRY.
- 12 EXISTING SHRUBS TO BE REMOVED.
- 13 EXISTING CONCRETE SIDEWALK TO BE REMOVED TO FACILITATE NEW CONSTRUCTION PER DC/DDOT STANDARDS AND SPECIFICATIONS.
- 14 EXISTING BRICK PLANTER TO BE REMOVED.

- 15 EXISTING STONE RETAINING WALL AND FOOTINGS TO BE REMOVED.
- 16 EXISTING WOODEN RETAINING WALL AND RELATED APPURTENANCES TO BE REMOVED.
- 17 EXISTING STEPS AND RELATED APPURTENANCES TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 18 EXISTING BOLLARDS TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 19 EXISTING CONCRETE WHEEL STOPS TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 20 EXISTING DRAIN INLET AND RELATED APPURTENANCES TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 21 EXISTING AREA DRAIN AND RELATED APPURTENANCES TO BE REMOVED IF NOT REQUIRED FOR FUTURE SERVICE TO FACILITATE NEW CONSTRUCTION.
- 22 EXISTING BRICK RETAINING WALL AND FOOTINGS TO BE REMOVED.
- 23 EXISTING BRICK PAVERS TO BE REMOVED.
- 24 EXISTING 10' CHAIN LINK FENCE TO BE REMOVED.
- 25 EXISTING CHAIN LINK FENCE AND ASPHALT BASKETBALL COURT TO BE REMOVED.
- 26 EXISTING 4' ORNAMENTAL FENCE TO BE REMOVED.
- 27 EXISTING 8" WATER MAIN TO BE REMOVED PER DC/WASA'S REPLACEMENT POLICY OF REPLACING ANY WATER MAIN THAT WAS BUILT 50 YEARS OR MORE AGO. DISCONNECT ANY EXISTING WATER SERVICE LATERAL FROM THE MAIN PER DC/WASA STANDARDS AND SPECIFICATIONS.

- 28 EXISTING GAS SERVICE LATERAL NOT REQUIRED FOR FUTURE SERVICE TO BE REMOVED TO EXTENT NECESSARY TO FACILITATE NEW CONSTRUCTION. COORDINATE REQUIREMENTS WITH WASHINGTON GAS FOR PERMANENT DISCONNECTION AT THE MAIN.
- 29 EXISTING ELECTRIC SERVICE NOT REQUIRED FOR FUTURE SERVICE TO BE REMOVED TO EXTENT NECESSARY TO FACILITATE NEW CONSTRUCTION. COORDINATE REQUIREMENTS WITH PEPCO PRIOR TO REMOVAL.
- 30 EXISTING DOWNSPOUT TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- 31 EXISTING STREET LIGHT TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. COORDINATE REQUIREMENTS WITH DC STREETLIGHT DIVISION.
- 32 EXISTING WATER SERVICE LATERAL TO BE REMOVED TO EXTENT NECESSARY TO FACILITATE NEW CONSTRUCTION. REMAINDER OF LINE TO BE ABANDONED. TEES AND VALVES TO BE REMOVED AT THE MAIN PER DC/WASA STANDARDS AND SPECIFICATIONS.
- 33 EXISTING OVERHEAD ELECTRIC WIRES TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. COORDINATE REQUIREMENTS WITH PEPCO PRIOR TO REMOVAL.
- 34 EXISTING OVERHEAD TELEPHONE WIRES TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. COORDINATE REQUIREMENTS WITH VERIZON PRIOR TO REMOVAL.
- 35 EXISTING LIGHT POLE AND APPURTENANCES TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. COORDINATE REQUIREMENTS WITH PEPCO PRIOR TO REMOVAL.
- 36 EXISTING CONCRETE PAVEMENT AT THE CENTERLINE OF THE ALLEY TO BE REMOVED PER DC/DDOT STANDARDS AND SPECIFICATIONS.
- 37 EXISTING OVERHEAD ELECTRIC TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. PROVIDE NEW SERVICE PRIOR TO REMOVAL. COORDINATE REQUIREMENTS WITH PEPCO.
- 38 EXISTING BUILDING TO REMAIN.

DEMOLITION PLAN



DUST CONTROL NOTES:

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL AND OTHER DELETERIOUS MATERIAL TO BE USED FOR ON-SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON-SITE. THESE CONTROL MEASURES WILL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, PUMP WITH DISCHARGE PRESSURE GAUGE;
 - B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER;
 - C. DISPERSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI (137.8 K PA) MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GAUGE, HOSES AND MIST NOZZLES;
 - B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
 - C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND SITE BOUNDARIES.

CONSTRUCTION AND STABILIZATION SEQUENCE:

1. INSTALL SEDIMENT AND EROSION CONTROL MEASURES INCLUDING STABILIZED TREE PROTECTION, AND SILT FENCE AS INDICATED ON SHEET C1.03. SEE SHEET C1.08 FOR SEDIMENTATION AND EROSION CONTROL DETAILS.
2. SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND APPROVED BY THE INSPECTOR PRIOR TO COMMENCING ANY OTHER LAND DISTURBING ACTIVITIES.
3. REMOVE ITEMS AS INDICATED ON DEMOLITION PLAN.
4. INSTALL SITE IMPROVEMENTS AS INDICATED ON CONSTRUCTION DOCUMENTS FOR THE PROPOSED BUILDING.
5. AT THE COMPLETION OF CONSTRUCTION AND AFTER THE INSPECTOR'S APPROVAL, ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED.

SEDIMENTATION EROSION CONTROL NOTE:

THE APPLICANT MUST NOTIFY THE DEPARTMENT OF HEALTH BY PHONE (202-535-2240) AT LEAST 24 HOURS PRIOR TO THE START OF GRADING ACTIVITY AND WITHIN (2) WEEKS AFTER COMPLETION OF PROJECT TO REQUEST INSPECTION. IF THERE IS NEED TO MAKE CHANGES OR MODIFICATIONS IN THE APPROVED DESIGN, DEPARTMENT OF HEALTH MUST BE NOTIFIED IMMEDIATELY.

SCHEDULE AND HOLD PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY. CALL 202-535-2977 FOR APPOINTMENT.

NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF SHEETING AND SHORING AND SUPPORT OF EXISTING UTILITIES AND ADJACENT STRUCTURES. SHORING, BRACING, AND UNDERPINNING DESIGNED BY THE CONTRACTOR'S STRUCTURAL ENGINEER LICENSED IN THE DISTRICT OF COLUMBIA SHALL BE PROVIDED AS NECESSARY TO ENSURE THEIR SUPPORT.
2. PROVIDE SILT FENCE AT PERIMETER OF EXCAVATION AREA TO REMAIN IN PLACE UNTIL BELOW GRADE EXCAVATION HAS BEGUN UNLESS OTHERWISE APPROVED BY THE INSPECTOR.
3. CONTRACTOR TO PROVIDE ON SITE APPROVED STAMPED AND SIGNED SEDIMENTATION AND EROSION CONTROL DRAWINGS BY DEPARTMENT OF HEALTH, WATERSHED PROTECTION DIVISION.

CONSTRUCTION DATES:

- * THE PROPOSED DEMOLITION WORK DUE TO COMMENCE IN FALL 2010 AND IS ANTICIPATED TO TAKE APPROXIMATELY 24 MONTHS.
- * EXACT BEGINNING AND END OF CONSTRUCTION IS TO BE ESTABLISHED BY THE OWNER.

TOTAL AREA OF DISTURBANCE:

TOTAL AREA OF DISTURBANCE: 39,956 SQUARE FEET OR 0.92 AC

TOTAL VOLUME OF CUT/FILL UTILITIES:

TOTAL AREA OF EXCAVATION: 2,470 SF
 VOLUME OF CUT = 2,470 SQ.FT. (AREA) x 7 (DEPTH) = 640 CY
 27
 TOTAL VOLUME CUT/FILL UTILITIES= 640 CY +/-

TOTAL VOLUME OF CUT OF BELOW GRADE EXCAVATION:

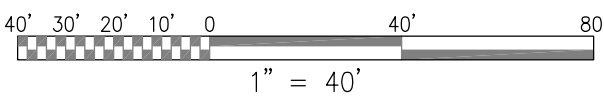
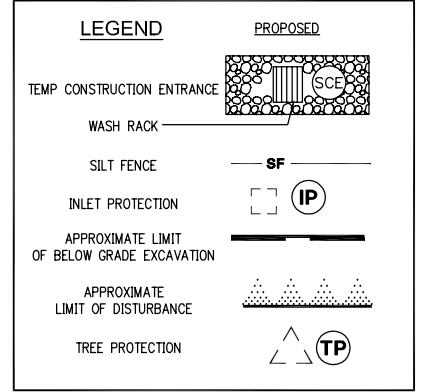
TOTAL AREA OF EXCAVATION: 39,888 SF
 VOLUME OF CUT = 39,888 SQ.FT. (AREA) x 23 (DEPTH) = 33,979 CY
 27
 TOTAL VOLUME CUT OF BELOW GRADE EXCAVATION= 33,979 CY +/-

SEDIMENT CONTROL APPROVAL:

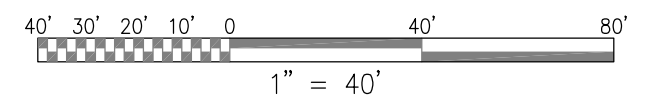
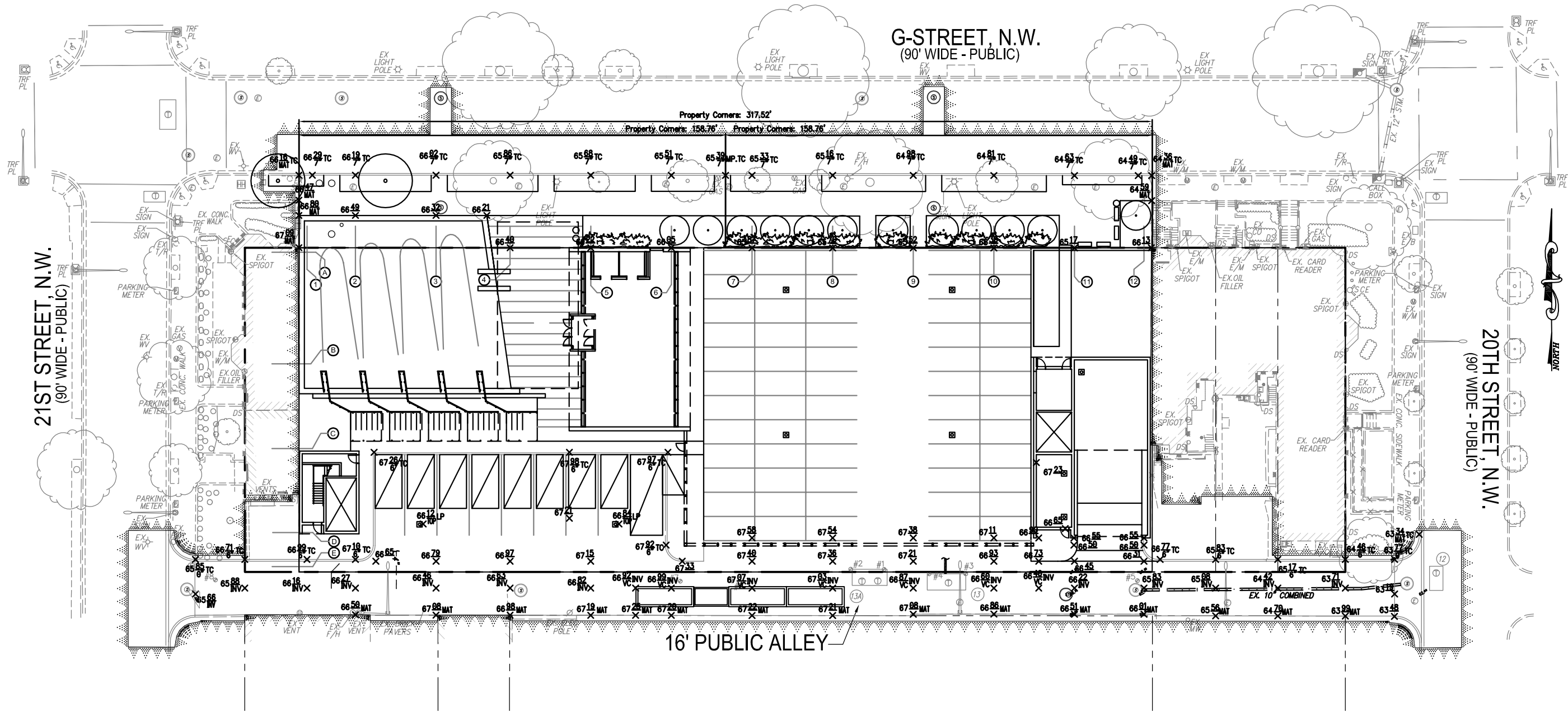
PLAN NUMBER:
 THIS APPROVAL IS FOR GRADING AND SEDIMENT CONTROL ONLY. PERMITTEE/ CONTRACTOR IS REQUIRED TO CONSTRUCT DESIGN FEATURE SHOWN HEREON. HE SHALL NOTIFY THIS OFFICE AT NUMBER LISTED BELOW AT LEAST 24 HOURS BEFORE START OF GRADING ACTIVITY, AND WITHIN TWO WEEKS AFTER COMPLETION OF PROJECT FOR FINAL INSPECTION.

DATE _____ EROSION AND SEDIMENT CONTROL BRANCH

FOR FURTHER INFORMATION, PLEASE CALL:
 GOVERNMENT OF THE DISTRICT OF COLUMBIA
 DEPARTMENT OF HEALTH
 ENVIRONMENTAL HEALTH ADMINISTRATION
 WATERSHED PROTECTION DIVISION
 51 N. STREET, N.E., 5TH FLOOR
 WASHINGTON, D.C. 20002
 TEL NO. (202) 535-2240
 FAX NO. (202) 535-1364

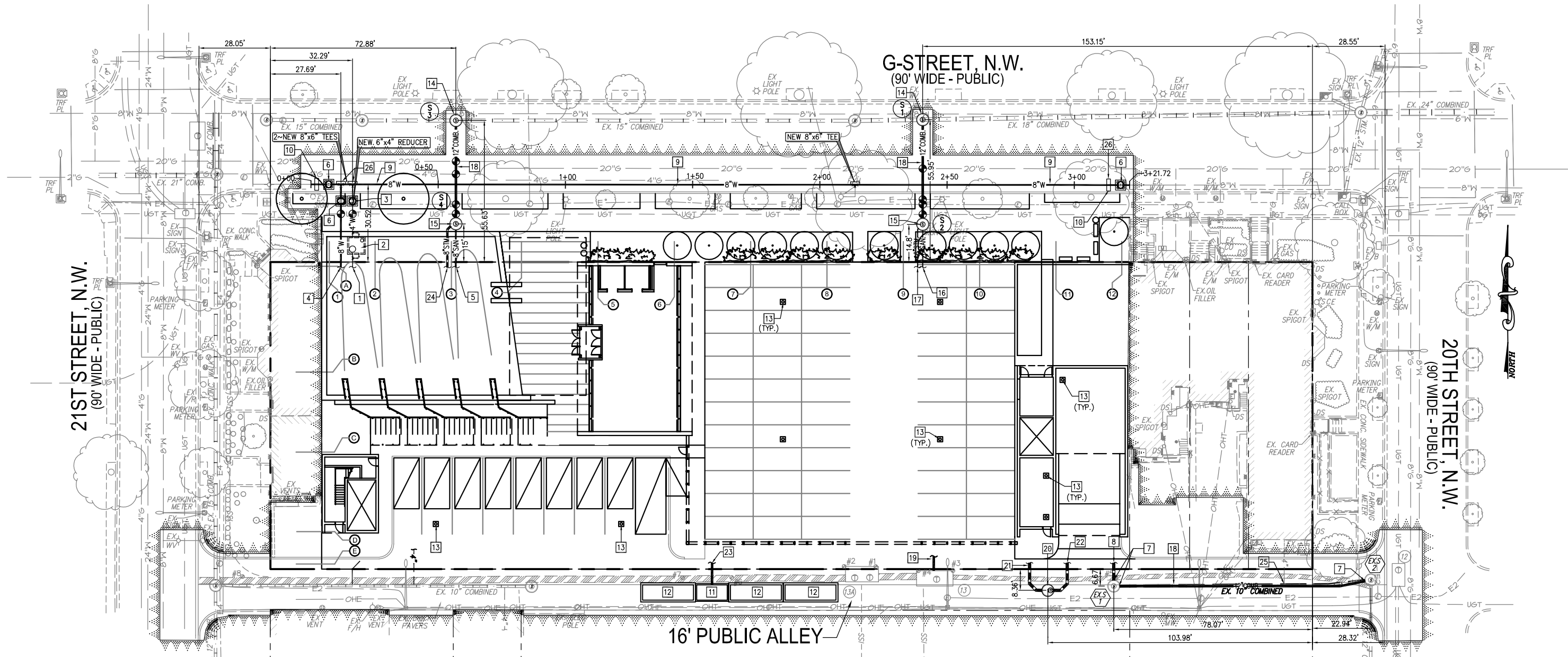


THIS SHEET IS TO BE USED FOR SEDIMENTATION AND EROSION CONTROL PURPOSES ONLY !!



SITE GRADING PLAN

C4

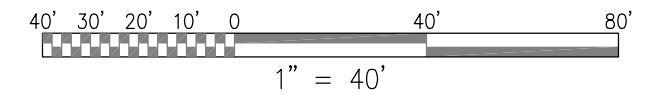


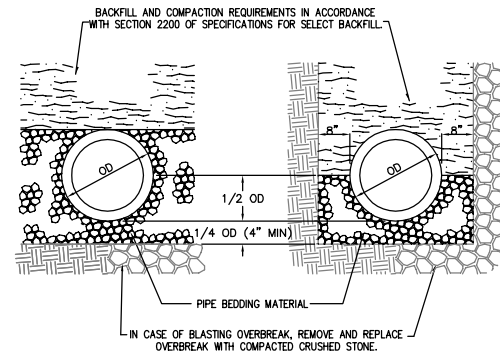
UTILITY KEYNOTES:

- 1 NEW 4" DIP CLASS 52 DOMESTIC WATER SERVICE LATERAL. BACKFLOW PREVENTER VALVE TO MEET ASSE-1015.
- 2 NEW 72"x72"x72" I.D. METER VAULT PER DC/WATER STANDARDS AND SPECIFICATIONS. REFER TO DC/WATER STANDARD DRAWING DG-23.01.
- 3 NEW 6" WATER VALVE WITH 4.0' CASING PER DC/WATER STANDARDS AND SPECIFICATIONS. REFER TO DC/WATER STANDARD DRAWING W-20.01.
- 4 NEW 8" DIP CLASS 52 FIRE SERVICE LATERAL. BACKFLOW PREVENTER VALVE TO MEET ASSE-1048.
- 5 NEW 8" PVC SCH-40 SANITARY SEWER LATERAL.
- 6 NEW 8" WATER VALVE WITH 4.0' CASING PER DC/WATER STANDARDS AND SPECIFICATIONS. REFER TO DC/WATER STANDARD DRAWING W-20.01.
- 7 NEW CONNECTION TO EXISTING MANHOLE PER DC/WATER STANDARDS AND SPECIFICATIONS.
- 8 NEW 12" PVC SCH 40 STORM SEWER LATERAL OVERFLOW PIPE.
- 9 NEW 8" DIP CLASS 52 MECHANICAL JOINT PIPE WATER MAIN ON G-STREET, NW PER DC/WATER STANDARDS AND SPECIFICATIONS. RE-CONNECT ANY EXISTING WATER SERVICE TO THE NEW MAIN PER DC/WATER STANDARDS AND SPECIFICATIONS.

- 10 NEW IN-LINE THRUST BLOCK PER DC/WATER STANDARDS AND SPECIFICATIONS. REFER TO DC/WATER STANDARD DRAWING W-40.02.
- 11 NEW 6'x12' I.D. BUS HOLE VAULT. COORDINATE REQUIREMENTS WITH PEPCO. REFER TO ELECTRICAL AND RICHTER AND ASSOCIATES DRAWINGS FOR DETAILS.
- 12 NEW 6'x20' I.D. TRANSFORMER VAULT. COORDINATE REQUIREMENTS WITH PEPCO. REFER TO ELECTRICAL AND RICHTER AND ASSOCIATES DRAWINGS FOR DETAILS.
- 13 NEW AREA DRAINS. SEE PLUMBING DRAWINGS FOR DETAILS.
- 14 NEW 4.0' DIAMETER MANHOLE WITH DOGHOUSE BASE PER DC/WATER STANDARDS AND SPECIFICATIONS. REFER TO DC/WATER STANDARD DRAWING S-20.11.
- 15 NEW 4.0' DIAMETER CLEANOUT MANHOLE PER DC/WATER STANDARDS AND SPECIFICATIONS. REFER TO DC/WATER STANDARD DRAWING S-20.01.
- 16 NEW 6" PVC SCH-40 SANITARY SEWER LATERAL.
- 17 NEW 6" PVC SCH-40 STORM SEWER LATERAL.
- 18 NEW 12" PVC SCH-40 COMBINED SEWER.
- 19 NEW 3~4" TELEPHONE CONDUIT TO EXISTING STRUCTURE 13 ISS MANHOLE.
- 20 NEW STC 450i PRECAST CONCRETE STORMCEPTOR. REFER TO SHEET C1.11 STORMWATER MANAGEMENT PLAN FOR DETAILS.

- 21 NEW 12" PVC-SCH 40 STORM LATERAL OUTFLOW PIPE TO STORMCEPTOR.
- 22 NEW 12" PVC-SCH 40 STORM LATERAL INFLOW PIPE TO CISTERN. REFER TO PLUMBING DRAWING FOR DETAILS OF CISTERN INSIDE THE BUILDING.
- 23 NEW ELECTRICAL DUCTBANK TO ELECTRICAL ROOM. REFER TO ELECTRICAL AND RICHTER AND ASSOCIATES DRAWINGS FOR DETAILS.
- 24 NEW 8" PVC-SCH 40 STORM SEWER LATERAL.
- 25 RE-CONNECT EXISTING 4" LATERAL FROM THE EXISTING TOWNHOUSE PER DC/WATER STANDARDS AND SPECIFICATIONS.
- 26 NEW CONCRETE THRUST BLOCK PER DC/WASA STANDARDS AND SPECIFICATIONS. REFER TO DC/WASA STANDARD DRAWING W-40.01.



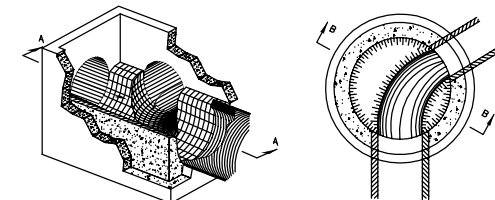
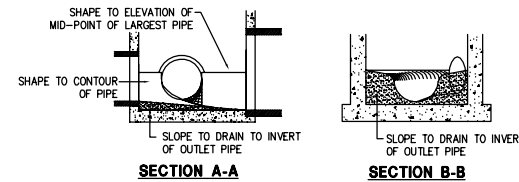


BACKFILL AT CROWN
(PIPE BEDDING FOR TRENCH WIDTH EXCEEDING WIDTH SPECIFIED)

BACKFILL AT SPRINGLINE
(PIPE BEDDING FOR TRENCH WIDTH WITHIN WIDTH SPECIFIED)

TRENCHING METHODS MUST BE IN COMPLIANCE WITH OSHA REQUIREMENTS. THE PIPE SHALL BE BEDDED IN CAREFULLY COMPACTED PIPE BEDDING MATERIAL PLACED ON A FLAT TRENCH BOTTOM. THE PIPE BEDDING MATERIAL SHALL HAVE A MINIMUM HORIZONTAL THICKNESS OF ONE-FOURTH THE OUTSIDE PIPE DIAMETER (8" MINIMUM) AND SHALL EXTEND VERTICALLY IN ACCORDANCE WITH SECTION SHOWN. IF THE MAXIMUM WIDTH OF THE TRENCH AT THE TOP OF THE PIPE EXCEEDS THOSE SPECIFIED, PIPE BEDDING MATERIAL WILL BE BROUGHT TO THE TOP OF THE PIPE FOR THE FULL WIDTH OF THE TRENCH. THE REMAINDER OF THE SIDE FILLS AND OVER THE TOP OF THE PIPE SHALL BE FILLED WITH SELECT BACKFILL MATERIAL. SHOULD THE CONTRACTOR ELECT TO USE LARGER STONE TO CARRY THE WATER, THE LARGER STONE IS TO BE PLACED BENEATH THE SPECIFIED AMOUNT OF PIPE BEDDING MATERIAL. THE LARGER STONE IS NOT IN ANY WAY TO AFFECT THE AMOUNT OF PIPE BEDDING TO BE USED.

TYPICAL TRENCH SECTIONS
(NOT TO SCALE)



TRANSITION BETWEEN PIPE DIAMETERS WHEN DIFFERENT SIZES OF PIPE ARE ENCOUNTERED.

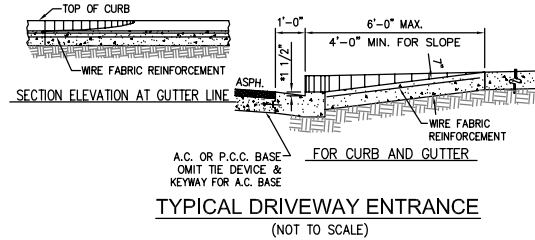
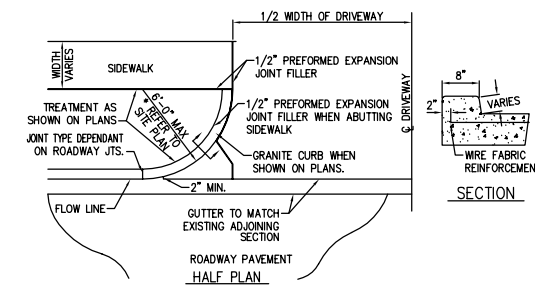
NOTES:

SHAPING OF MANHOLES AND INLET INVERTS IN ACCORDANCE WITH THIS DRAWING IS TO APPLY TO THOSE STRUCTURES SPECIFIED ON PLANS OR WHERE INVERT OF PIPE IS ABOVE INVERT OF STRUCTURE.

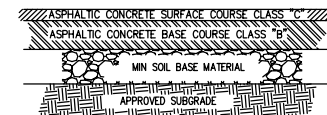
MANHOLE OR DROP INLET IS TO BE FORMED AND CONSTRUCTED IN ACCORDANCE WITH APPLICABLE STANDARD OR SPECIAL DRAWING. THE INVERT SHAPING AS DETAILED HEREON IS TO CONSIST OF A PORTLAND CEMENT CONCRETE MIX CONFORMING TO CLASS A3 OR CLASS C1, EXCEPT THAT 25% OF COARSE AGGREGATE MAY BE UP TO 4" DIAMETER AND CONSIST OF STONE, BROKEN BRICK, BROKEN CONCRETE, OR BROKEN CONCRETE BLOCK. THE SURFACE SHALL BE LEFT SMOOTH BY MEANS OF HAND TROWELLING. NONE OF THE COARSE AGGREGATE SHALL REMAIN EXPOSED.

DETAILS OF INVERT SHAPING AS SHOWN HEREON ARE FOR EXAMPLE PURPOSES ONLY. EACH MANHOLE OR DROP INLET IS TO BE SHAPED INDIVIDUALLY TO BEST FIT THE PARTICULAR INLET AND OUTLET CONFIGURATION AND FLOW LINES.

MANHOLE SHAPING METHOD
(NOT TO SCALE)



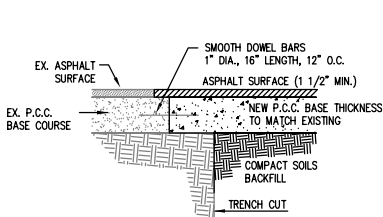
TYPICAL DRIVEWAY ENTRANCE
(NOT TO SCALE)



NOTE:
ASPHALT AND SOIL BASE MATERIALS SHALL CONFORM TO THE REFERENCED PARAGRAPHS AND TABLES OF THE DC DEPARTMENT OF HIGHWAYS AND TRAFFIC STANDARDS AND SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES LATEST EDITION AND SUPPLEMENTS.

RECOMMENDED PAVEMENT SECTIONS	
RECOMMENDED PAVEMENT SECTIONS	
BITUMINOUS CONCRETE SURFACE COURSE	1.5
BITUMINOUS CONCRETE BASE COURSE	2.5
SOIL BASE MATERIALS	8.0

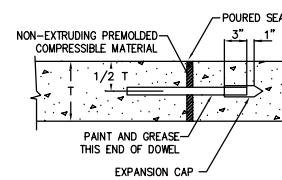
NEW ASPHALT PAVEMENT
(NOT TO SCALE)



NOTE:

* NEW SURFACE, BASE AND SUBBASE COURSES TO MATCH EXISTING.
* ASPHALT PAVEMENT MATERIALS SHALL CONFORM TO THE REFERENCED PARAGRAPHS & TABLES OF THE DC DEPARTMENT OF HIGHWAYS AND TRAFFIC STANDARDS & SPECIFICATIONS FOR HIGHWAYS & STRUCTURES LATEST EDITION & SUPPLEMENTS.

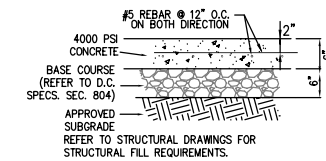
PAVEMENT REPAIR
(NOT TO SCALE)



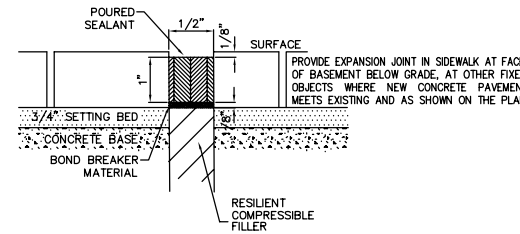
NOTE:
1. ALL FORMED JOINTS SHALL BE FINISHED WITH 1/4" RADIUS.
2. SIZE AND SPACING OF DOWELS IN TRANSITION SECTION SHALL BE GOVERNED BY THICKEST EDGE.

THICKNESS OF SLAB	DOWELS		
	DIAMETER	LENGTH	SPACING
1"	16"	12"	

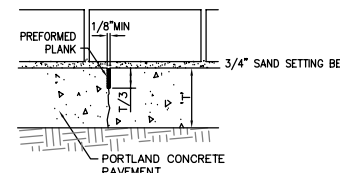
DOWELED TRANSVERSE EXPANSION JOINT FOR CONCRETE DRIVEWAY APRON AND ALLEY PAVEMENT
(NOT TO SCALE)



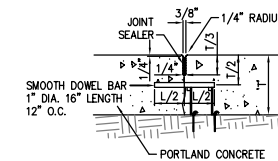
TYPICAL CONCRETE PAVEMENT DETAIL FOR DRIVEWAY ENTRANCE AND ALLEY PAVEMENT
(NOT TO SCALE)



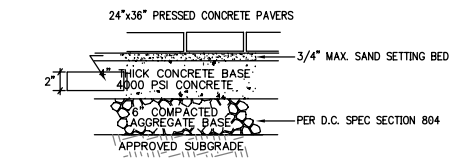
SIDEWALK EXPANSION JOINT DETAIL
(NOT TO SCALE)



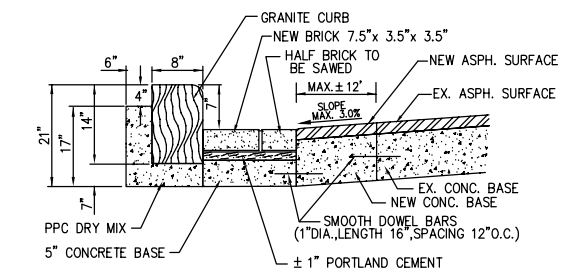
SIDEWALK CONTRACTION JOINT
(NOT TO SCALE)



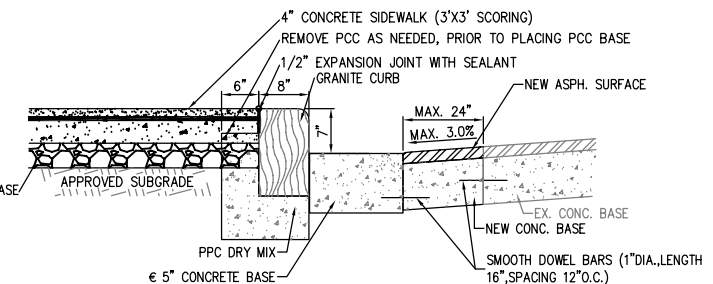
CONTRACTION JOINT WITH LOAD TRANSFER FOR CONCRETE DRIVEWAY APRON AND ALLEY PAVEMENT
(NOT TO SCALE)



CONCRETE PAVERS ON SUBGRADE MATERIAL
(NOT TO SCALE)



GRANITE CURB & BRICK GUTTER DETAIL
(NOT TO SCALE)



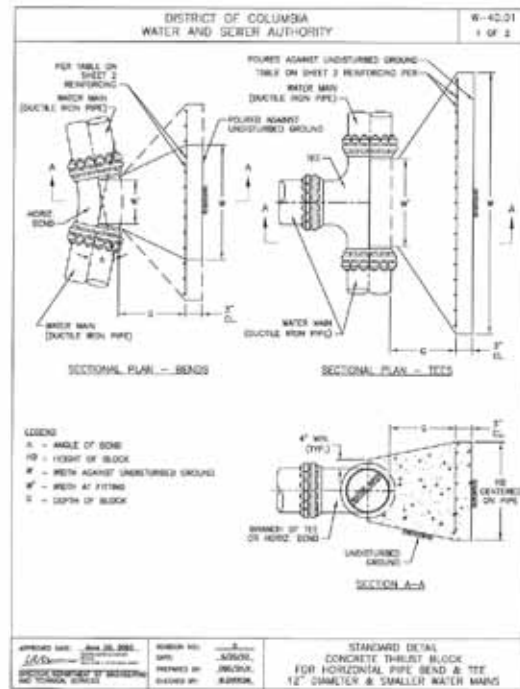
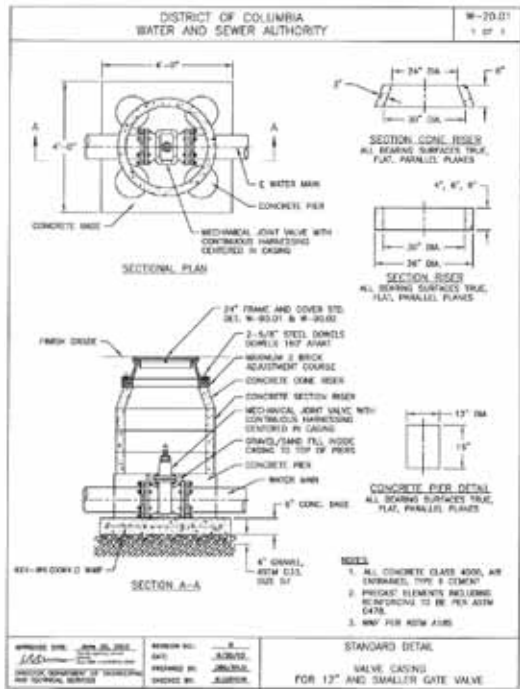
NOTE:

GRANITE CURB:
1. CONDITIONS AT BACK OF CURB VARY AND ARE AS SHOWN ON THE CONTRACT PLANS.
2. PPC DRY MIX SHALL BE PER DDOT STANDARD SPECIFICATIONS, SECTION 801. IT SHALL MAINTAIN THE SAME TIME LIMITS AS PCC AND SHALL BE WATERED DOWN AFTER SETTING OF GRANITE CURB.
3. THE MINIMUM DEPTH TO CONCAVE SURFACE ON ROUGH FINISH SHALL BE 10 IN.
4. GRANITE CURBS ARE SHOWN WITH A COMPOSITE PAVEMENT SECTION.
5. *LOW SIDE - 1 IN. PER FT. TOWARD CURB
*HIGH SIDE - 5/8 IN. PER FT. AWAY FROM CURB
6. A 6 IN. MIN. LAYER OF GRADED AGGREGATE BASE SHALL BE PLACED BENEATH THE ROADWAY AND CURB AND GUTTER AND IS NOT SHOWN FOR CLARITY.

PAVER SIDEWALK:

1. USE TRI-SECTIONED PATTERN, STARTING PERPENDICULAR AT CURB AND WORKING TOWARD BUILDING LINE.
2. PAVING BLOCKS SHALL BE CUT TO FIT AROUND MANHOLES, VAULTS, CATCH BASINS, CURBS, RAMPS, LIGHT POLES, KIOSKS AND FLAG POLES.
3. Poured concrete square or rectangular collars around sidewalk interruptions, using aggregate size and color per the manufacturer of the pressed concrete paving blocks. MAY BE USED SUBJECT TO APPROVAL BY THE ENGINEER.
4. USE PERPENDICULAR INTERSECTING PAVING PATTERN AT CORNERS.
5. PEPCO WILL FURNISH NEW STEEL VAULT COVERS IN LIEU OF THE EXISTING COVERS FILLED WITH CONCRETE. ONLY REMOVABLE TYPE VAULT COVERS WILL BE REPLACED. CONTRACTOR WILL INLAY PRESSED CONCRETE BLOCK PAVERS ON EPOXY MORTAR BED. JOINTS SHALL BE CONTINUOUS WITH SURROUNDING SIDEWALK PAVERS AS MUCH AS PRACTICABLE. LEVEL OF PAVERS SHALL BE FLUSH WITH ADJACENT GRADE.
6. CONTRACTOR SHALL NOTIFY PEPCO 3 WEEKS IN ADVANCE BEFORE PEPCO VAULT COVERS ARE READY TO BE REPLACED AND PAVED. ONLY PEPCO WILL REMOVE AND INSTALL THE STEEL AND VAULT COVERS.

GRANITE CURB & CONCRETE GUTTER DETAIL
(NOT TO SCALE)



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY W-42-01 2 OF 2

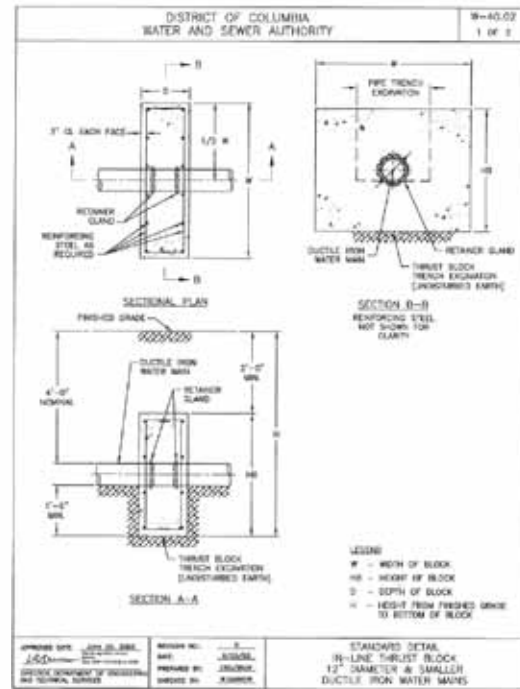
DIAMETER OF PIPE OR MANHOLE	MINIMUM WALL THICKNESS	MINIMUM HEIGHT	MINIMUM WIDTH	MINIMUM DEPTH	MINIMUM WEIGHT	MINIMUM STRENGTH (PSI)
6"	1.125"	12"	12"	12"	11.0	4000
8"	1.375"	12"	12"	12"	15.0	4000
10"	1.625"	12"	12"	12"	21.0	4000
12"	1.875"	12"	12"	12"	28.0	4000
14"	2.125"	12"	12"	12"	36.0	4000
16"	2.375"	12"	12"	12"	45.0	4000
18"	2.625"	12"	12"	12"	55.0	4000
20"	2.875"	12"	12"	12"	66.0	4000
24"	3.375"	12"	12"	12"	90.0	4000
30"	4.125"	12"	12"	12"	135.0	4000
36"	4.875"	12"	12"	12"	198.0	4000
42"	5.625"	12"	12"	12"	279.0	4000
48"	6.375"	12"	12"	12"	387.0	4000
54"	7.125"	12"	12"	12"	522.0	4000
60"	7.875"	12"	12"	12"	684.0	4000
66"	8.625"	12"	12"	12"	927.0	4000
72"	9.375"	12"	12"	12"	1254.0	4000
78"	10.125"	12"	12"	12"	1677.0	4000
84"	10.875"	12"	12"	12"	2214.0	4000
90"	11.625"	12"	12"	12"	2907.0	4000
96"	12.375"	12"	12"	12"	3780.0	4000
102"	13.125"	12"	12"	12"	4977.0	4000
108"	13.875"	12"	12"	12"	6554.0	4000
114"	14.625"	12"	12"	12"	8673.0	4000
120"	15.375"	12"	12"	12"	11502.0	4000

NOTES:

1. ALL CONCRETE TO BE CLASS 4000, AIR ENTRAINED, TYPE 3 CONCRETE
2. REINFORCING STEEL SHALL CONFORM TO ASTM A618, GRADE 60
3. NOMINAL DEPTH OF COVER ON WATER MAIN IS FOUR FEET
4. UNIFORM WEIGHT OF SOIL, 120 PCF
5. DESIGN BASED ON $\phi = 0.9$ AND TEST PRESSURE = 150 PSI
6. H₀ - HEIGHT OF BLOCK, W' - WIDTH AT FITTING AND W - WIDTH AGAINST UNDISTURBED GROUND SHOULD BE CENTERED ON PIPE AND FITTING
7. FOR PVC SIZE GREATER THAN 12", BLOCKS BESEEN IN THIS DRAWING SHALL BE USED, OR FOR MAIN WITH A TEST PRESSURE GREATER THAN 150 PSI, THE THRUST BLOCK MUST BE SPECIFICALLY DESIGNED FOR EACH APPLICATION

STANDARD DETAIL CONCRETE THRUST BLOCK FOR HORIZONTAL PIPE BEND & TEE 12" DIAMETER & SMALLER WATER MAINS

APPROVED DATE: JUN 20, 2001 DESIGNER: J. J. JACOBSON CHECKED BY: J. JACOBSON



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY W-40-02 2 OF 2

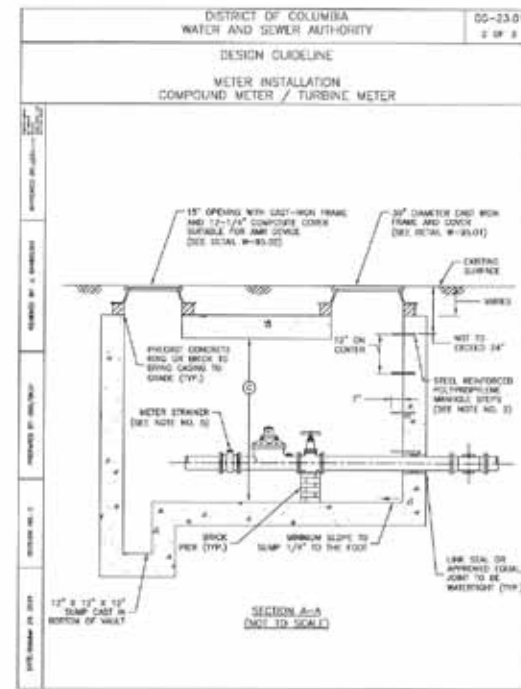
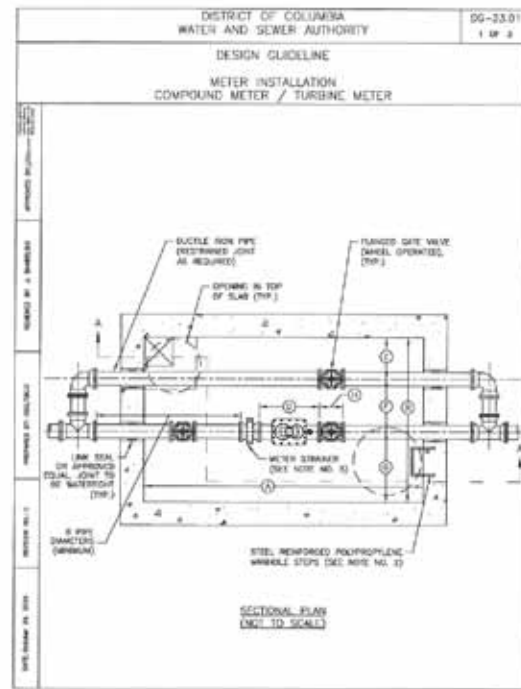
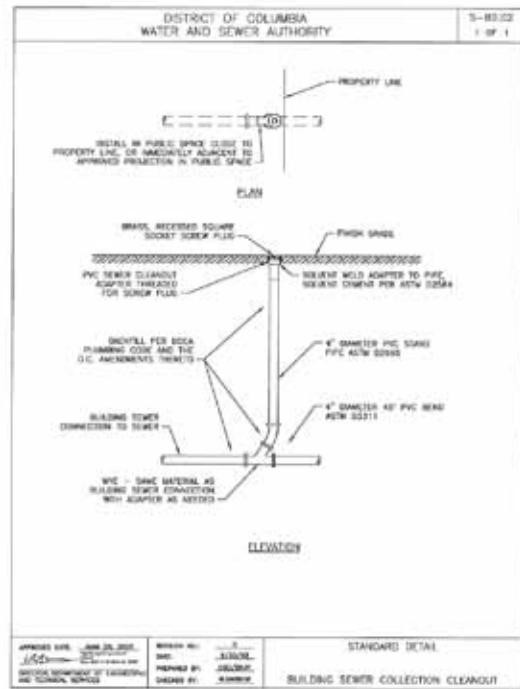
PIPE SIZE	W	D	H ₀	H	WEIGHT (LBS/FT)
PIPE	6"	6" - 0"	1' - 0"	2' - 0"	64.0
	8"	8" - 0"	1' - 0"	2' - 0"	84.0
	10"	10" - 0"	2' - 0"	2' - 0"	110.0
REDUCER	8" x 6"	8" - 0"	1' - 0"	2' - 0"	64.0
	10" x 8"	10" - 0"	1' - 0"	2' - 0"	84.0
	12" x 8"	12" - 0"	1' - 0"	2' - 0"	110.0

NOTES:

1. RETAINING SLABS WITH DUCTILE IRON WELDS IN COMBINATION WITH SPECIAL HEAT TREATED SET SCREWS, SINGLE PER MANUFACTURER SPECIFICATIONS
2. ALL CONCRETE TO BE CLASS 4000, AIR ENTRAINED, TYPE 3 CONCRETE
3. REINFORCING STEEL SHALL CONFORM TO ASTM A618, GRADE 60
4. EXCAVATION DETAILS, PER SPECIFICATIONS COVERED
5. UNIFORM WEIGHT OF SOIL, 120 PCF
6. NOMINAL DEPTH OF COVER ON WATER MAIN IS FOUR FEET
7. DESIGN BASED ON $\phi = 0.9$, AND TEST PRESSURE = 150 PSI
8. FOR PVC SIZE LARGER THAN 12", BLOCKS BESEEN IN THIS DRAWING SHALL BE USED, OR FOR MAIN WITH A TEST PRESSURE GREATER THAN 150 PSI, THE THRUST BLOCK MUST BE SPECIFICALLY DESIGNED FOR EACH APPLICATION

STANDARD DETAIL 12" DIAMETER & SMALLER DUCTILE IRON WATER MAINS

APPROVED DATE: JUN 20, 2001 DESIGNER: J. J. JACOBSON CHECKED BY: J. JACOBSON



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY DG-23-01 3 OF 3

SIZE	COMPOUND METER					
	A	B	C	D	E	F
2"	7 1/2"	7 1/2"	7 1/2"	7 1/2"	18"	24"
4"	7 1/2"	7 1/2"	7 1/2"	7 1/2"	18"	24"
6"	9 1/2"	7 1/2"	7 1/2"	7 1/2"	18"	24"
8"	9 1/2"	7 1/2"	7 1/2"	7 1/2"	18"	24"

SIZE	DISC METER		
	A	B	C
2"	7 1/2"	7 1/2"	7 1/2"
4"	7 1/2"	7 1/2"	7 1/2"
6"	9 1/2"	7 1/2"	7 1/2"
8"	9 1/2"	7 1/2"	7 1/2"

NOTES:

1. RELEVANT STRUCTURAL, COMPENSATION AND REINFORCING DETAILS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATING
2. MINIMUM STEPS TO BE 8" A.I.A. REINFORCED MASONRY, PER 100-PCF ON APPROXIMATE EQUAL, EAST WEIRTS IN WALL 12" ON CENTER
3. CONCRETE TO BE CLASS 4000, TYPE 3 CONCRETE
4. DUCTILE IRON PIPE JOINTS WITHIN WALL SHALL BE FLANGED
5. COMPOUND METERS REQUIRE THE INSTALLATION OF METER BENCHING - HORIZONTAL, 18" FROM THE TOP OF THE METER TO THE TOP OF THE METER BENCHING. THE METER BENCHING SHALL BE INSTALLED BETWEEN THE METER AND THE METER BENCHING ON THE STREET SIDE OF THE METER AND SHALL BE FULLY SUPPORTED (HORIZONTAL) BETWEEN THE METER BENCHING AND METER FITTING
6. THIS DRAWING SUPERSEDES DRAWING G-808 DATED 2-01-1992

DESIGN GUIDELINE METER INSTALLATION COMPOUND METER / TURBINE METER

APPROVED DATE: JUN 20, 2001 DESIGNER: J. J. JACOBSON CHECKED BY: J. JACOBSON