GBD

19TH + OVERTON

Design Review Hearing / January 22, 2015

APPENDIX B: DESIGN DRAWINGS + DETAILS

APPENDIX B: DESIGN DRAWINGS + DETAILS

B: 2	Drawing Index
B: 3	City-wide Context
B: 4	Vicinity Plan
B: 5	Site Plan
B: 6	Site Utility Plan
B: 7	3D Views
B: 11	Architectural Floor Plans
B: 15	Landscape Plans and Details
B: 17	Building Section
B: 18	Building Elevations
B: 22	Wall Section - Keyplan
B: 23	Wall Section + Enlarged Elevation Sheets
B: 29	Ground Floor Unit Detail

CITY-WIDE CONTEXT

View looking northwest from the corner of 19th + Overton

View looking west / southwest from 19th Ave. mid-block between Overton & Pettygrove

NEIGHBORHOOD FEATURES

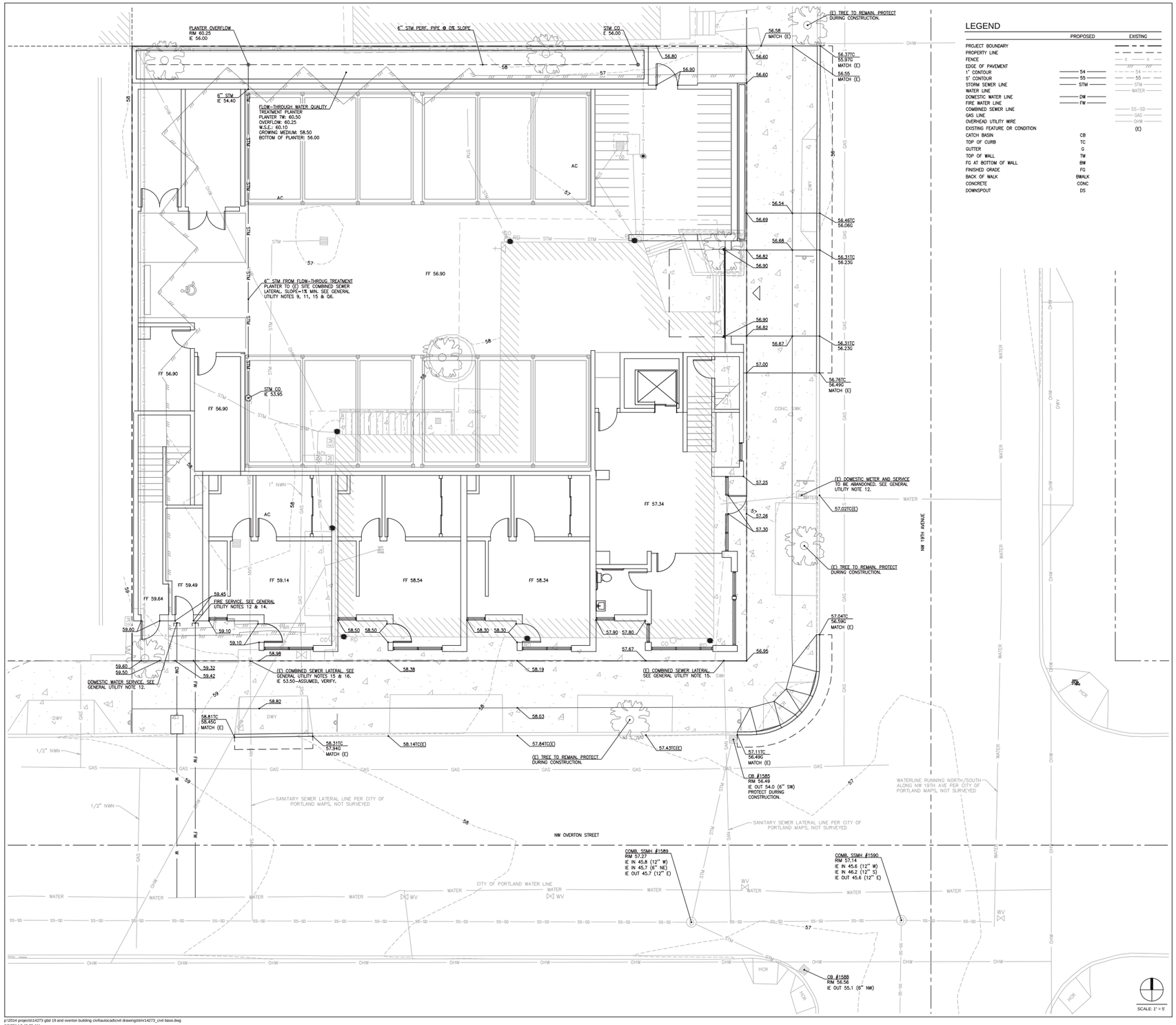
1. STREETCAR STOP @ BOKE BOWL
2. BODYVOX DANCE STUDIO
3. LUCKY LAB BEER HALL
4. PALEY'S PLACE
5. "20 PETTYGROVE" APARTMENTS
6. CAFE NELL
7. FUTURE LOCATION OF NEW SEASONS
8. KEY BANK
9. LA FITNESS
10. BRIDGEPORT BREWERY
11. SAFEWAY
12. DOVE LEWIS
13. FILM EXCHANGE BUILDING
14. LEGACY CAREUNIT HOSPITAL
15. PARR LUMBER
16. LES SCHWAB TIRES
17. LEGACY GOOD SAMARITAN MEDICAL CENTER

VICINITY PLAN

PROJECT SUMMARY

SITE AREA	10,000 SF
MAX FAR	6 : 1
MAX BUILT AREA	60,000 SF
MAX HEIGHT	75'-0"
ACTUAL FAR	5.19 : 1
ACTUAL BUILT AREA	51,829 SF
ACTUAL HEIGHT	73'-9"
% OF SITE BUILT AREA	89%
% OF SITE OPEN	11%

SITE PLAN



p:\2014 projects\14273 gbd 19 and overton building civil\autocad\civil drawings\dsm\14273_civil base.dwg
8/8/2014 9:49:23 AM

UTILITY PLAN

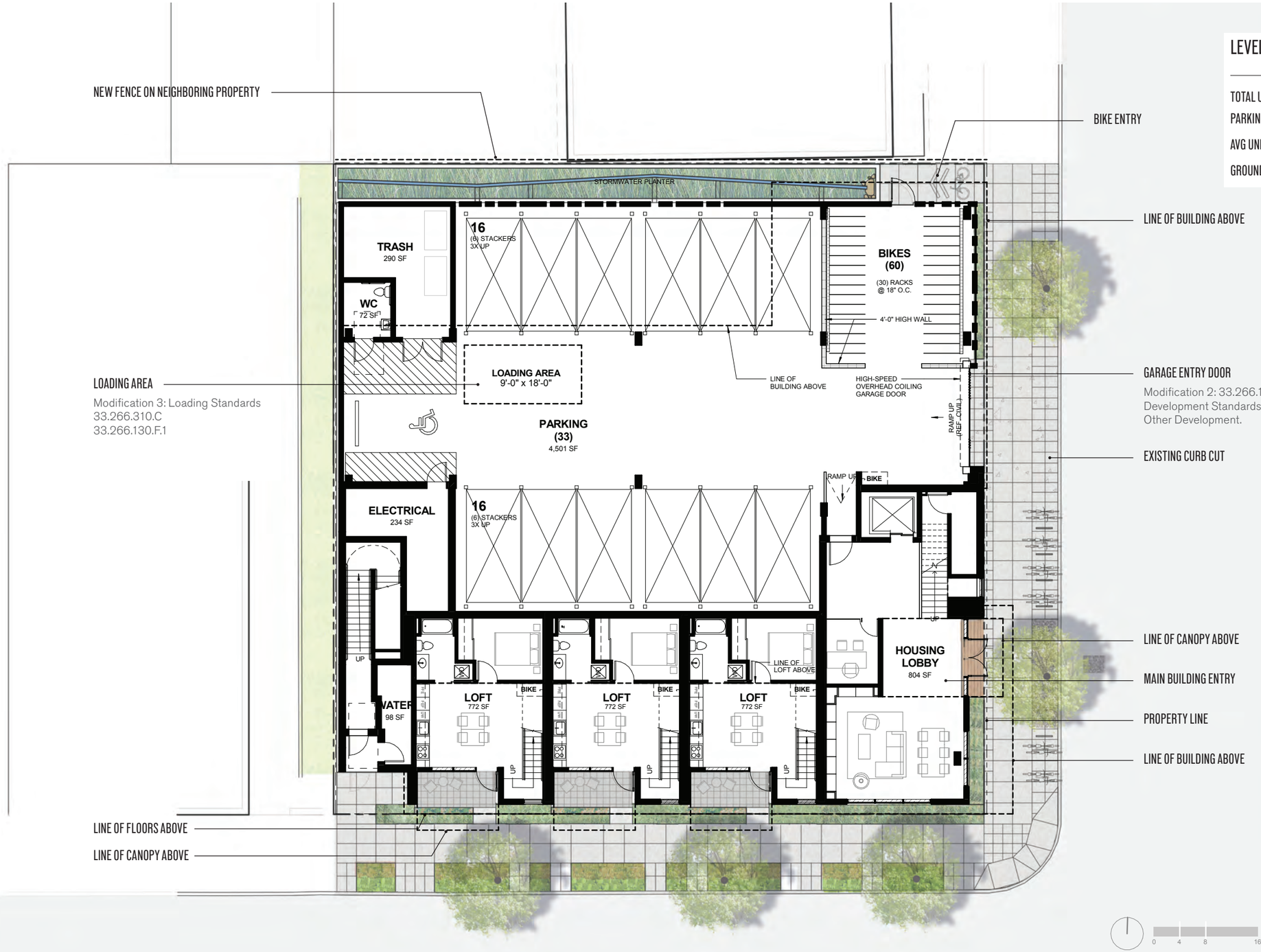
APPENDIX B: 6

MATERIAL STUDY LOOKING SOUTHWEST FROM MIDBLOCK 19TH AVE


VIEW LOOKING NORTHWEST FROM 19TH + OVERTON
1215


NIGHT TIME VIEW LOOKING NORTHWEST FROM 19TH + OVERTON
1215

GROUND-LEVEL VIEW FROM MID-BLOCK ON NW OVERTON ST.



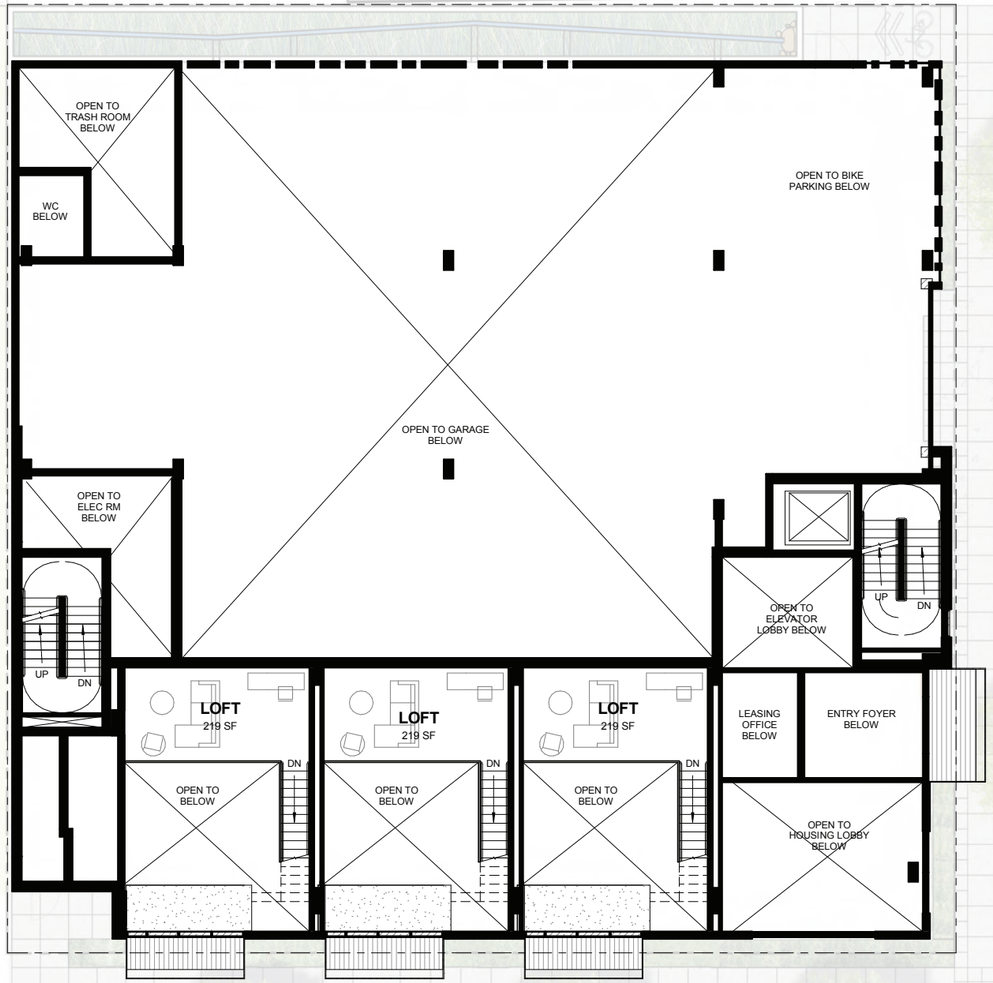
LEVEL SUMMARY

TOTAL UNITS IN BUILDING	58
PARKING STALLS	33
AVG UNIT SIZE	654 SF
GROUND FLOOR AREA	8,806 GSF

FP01 - GROUND FLOOR PLAN

LEVEL SUMMARY

MEZZANINE LEVEL AREA	648 GSF

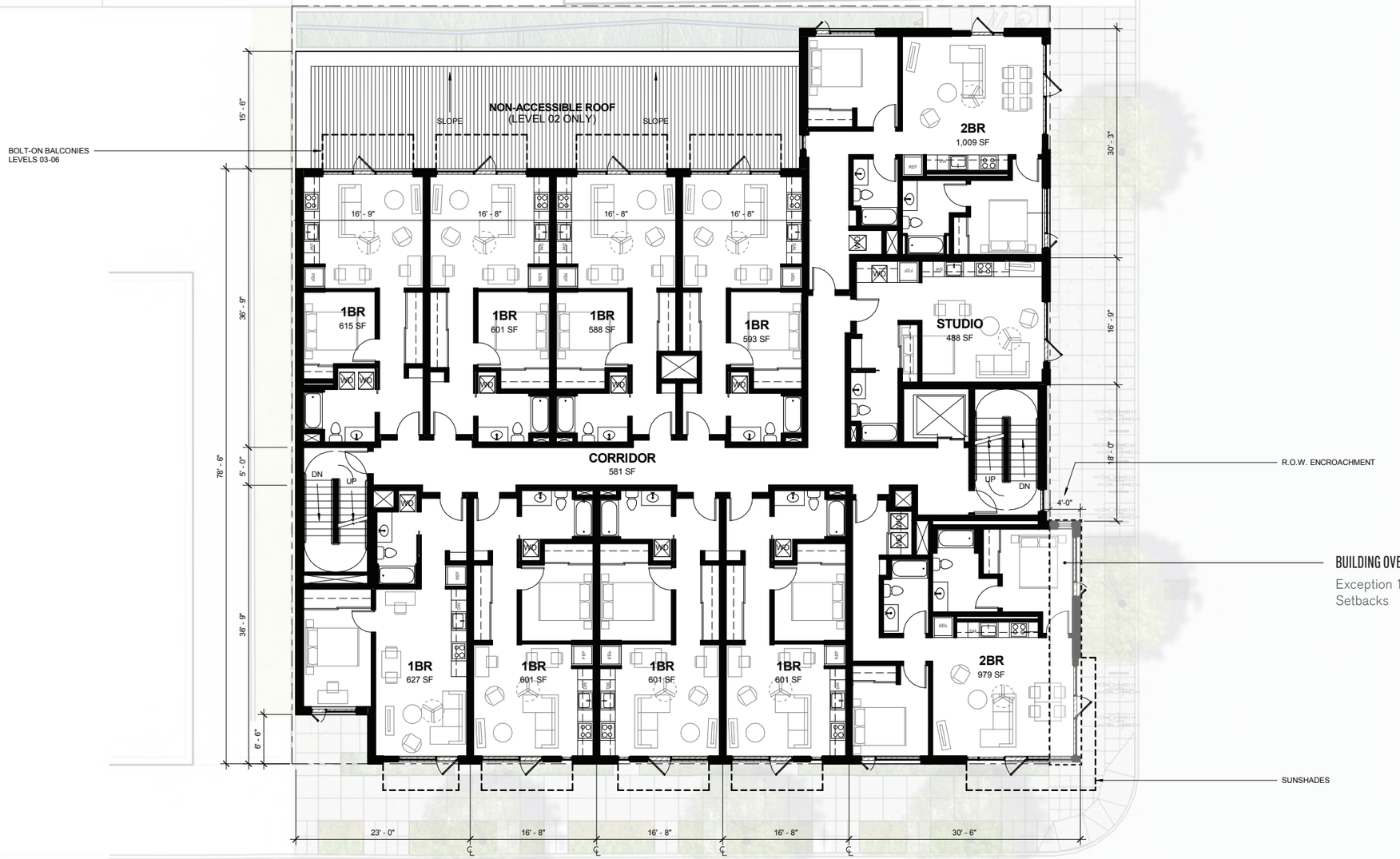


0 4 8 16

FP01M - GROUND FLOOR MEZZ PLAN

LEVEL SUMMARY

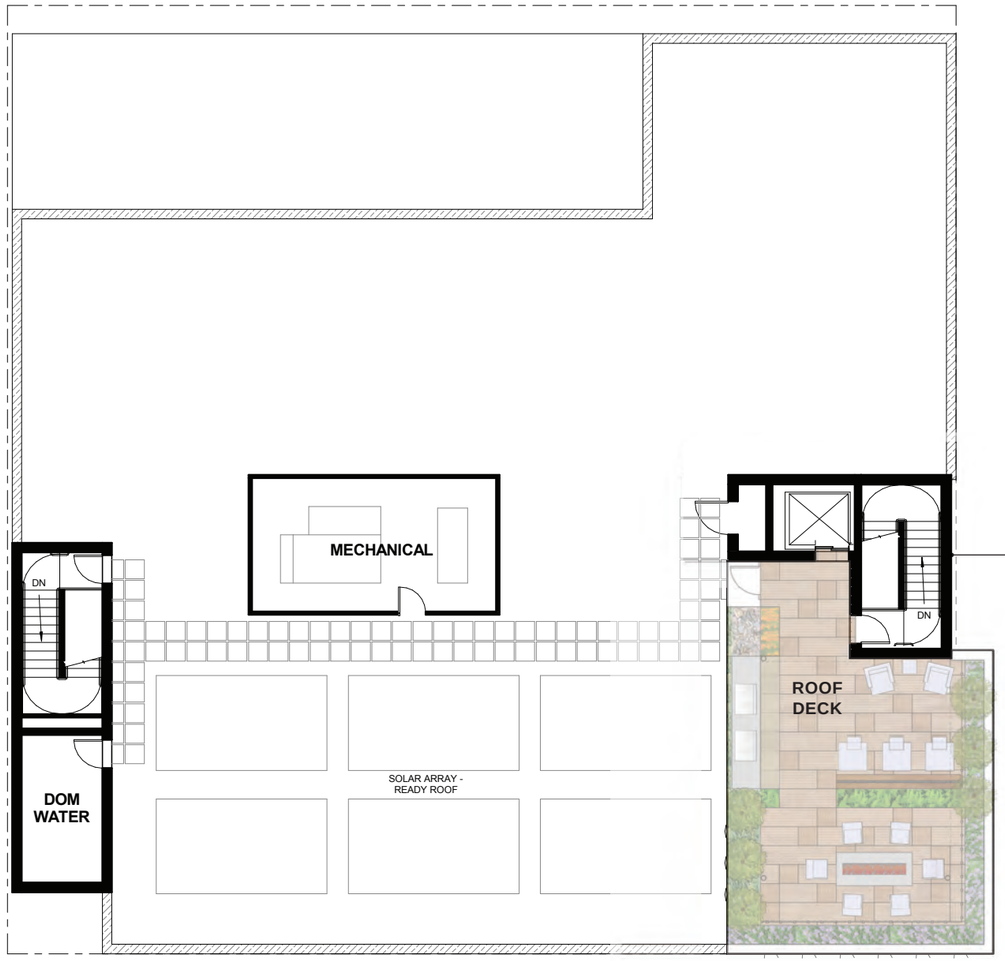
UNITS PER FLOOR	11
TYPICAL FLOOR AREA	8,475 GSF



FP02-06 - TYPICAL FLOOR PLAN

LEVEL SUMMARY

ROOF LEVEL OCCUPIABLE AREA	698 GSF



STAIR ENCLOSURE

Modification 4: 33.140.210.B.2
Rooftop access and mech equipment

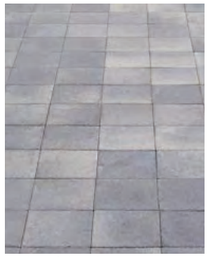
FP07 - ROOF PLAN

STREETSCAPE MATERIALS


A. 3.5" Caliper Autumn Applause Ash


B. 3.5" Caliper City Sprite Zelkova


C. Bike Rack


D. Sand-Set Concrete Pavers


Dwarf Fountian Grass


Miscanthus Grass


Euphorbia

E. SITE PLANTING

Rose

Hellebors

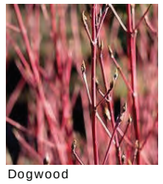
Ferns

Pachysandra

Salvia

F. STORMWATER PLANTING


Rush

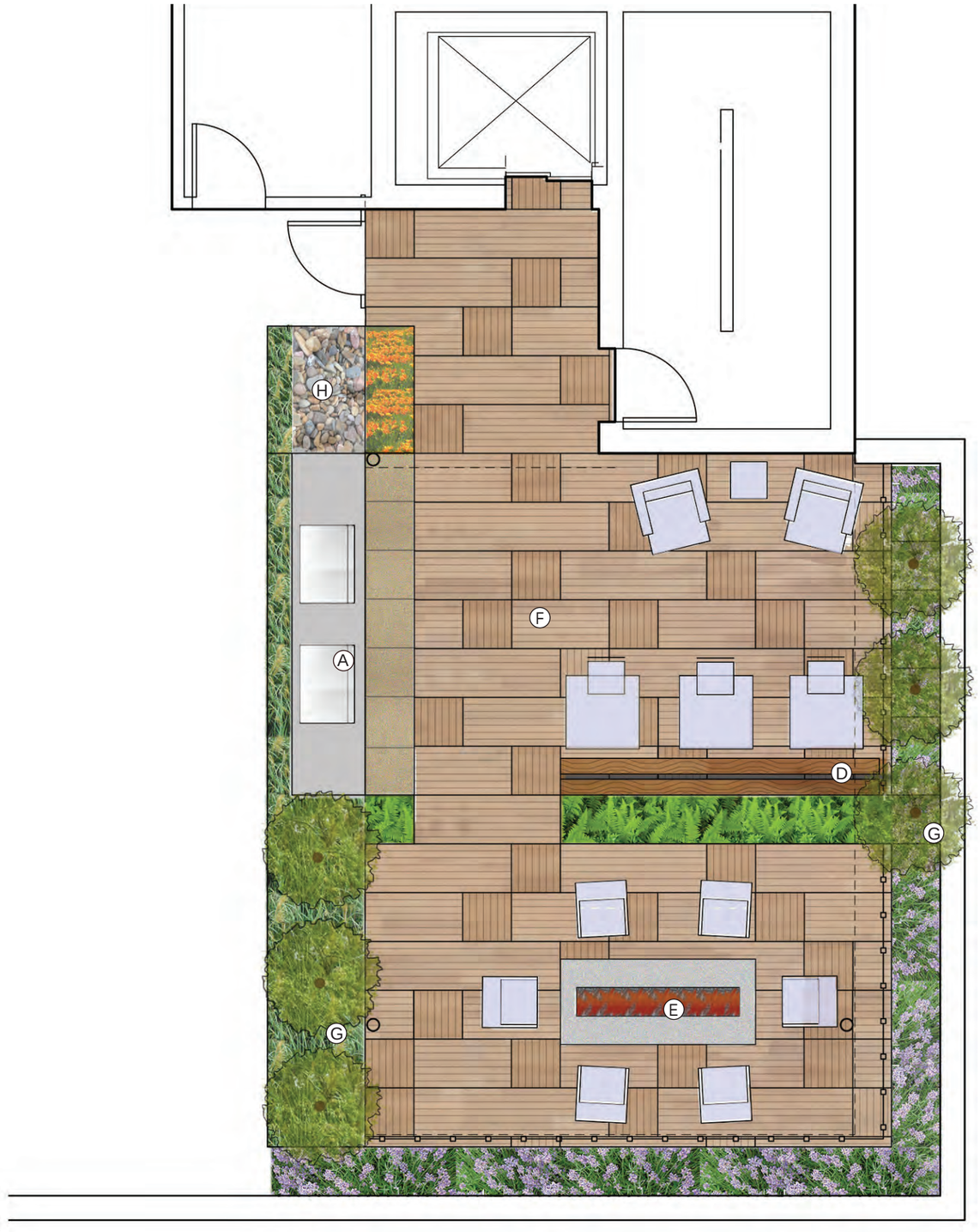

Dogwood


Vine Maple


Iris


Spiraea

LANDSCAPE - STREETSCAPE



MATERIALS LEGEND

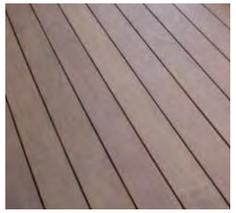

A. Outdoor Kitchen


B. Moveable Furniture


C. Paver color: Desert Sand


D. Wood Bench with Steel Inlay


E. Firepit


F. IPE Deck Tiles


G. Corten Steel Planter


H. River Rock


I. Moss Ball Garden

PLANT PALETTE


Lavender


Rosemary


Thyme


Sage

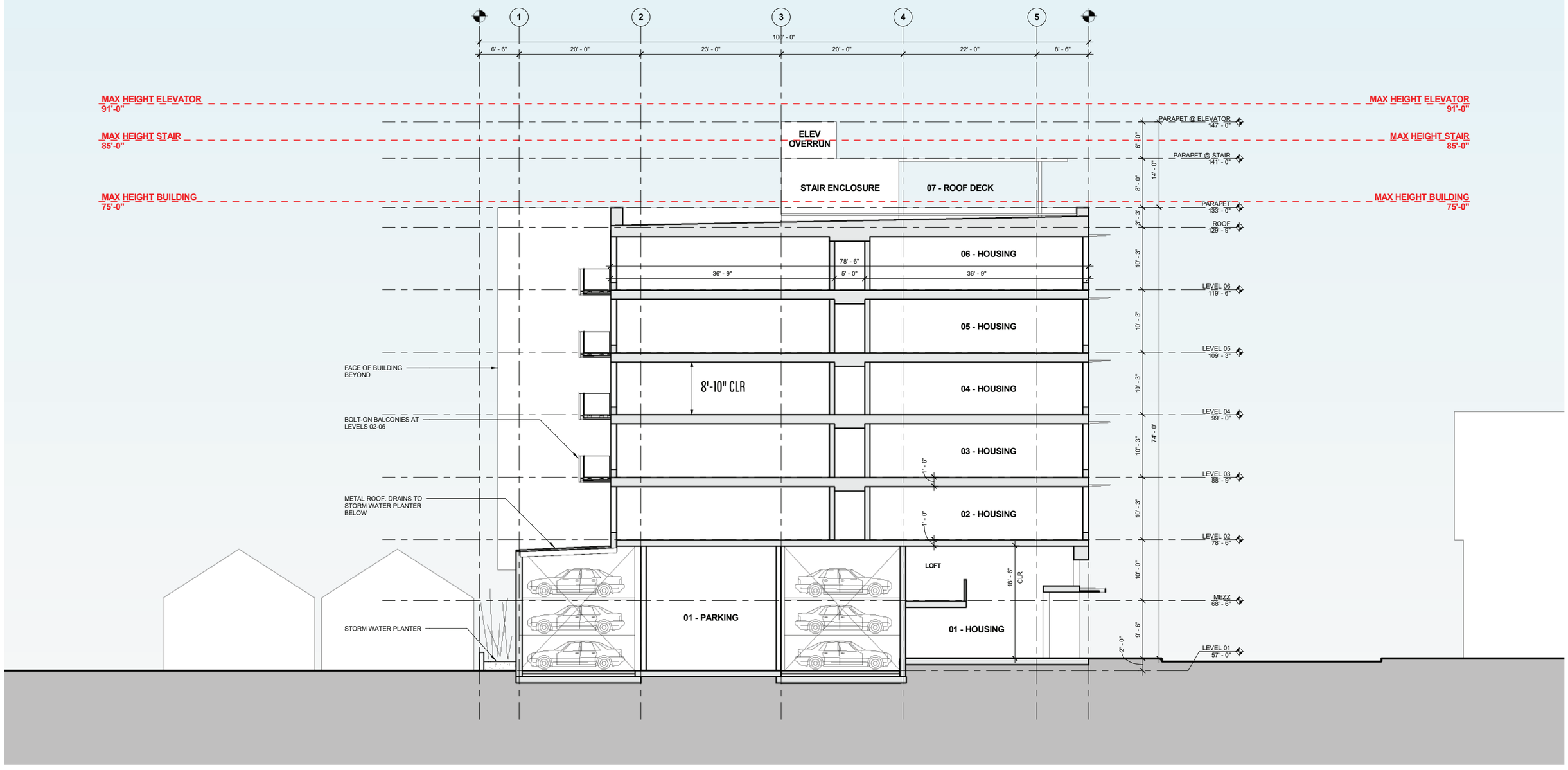

Dwarf Fountian Grass


Staghorn Sumac


Miscanthus Grass


Ferns

LANDSCAPE - ROOF DECK

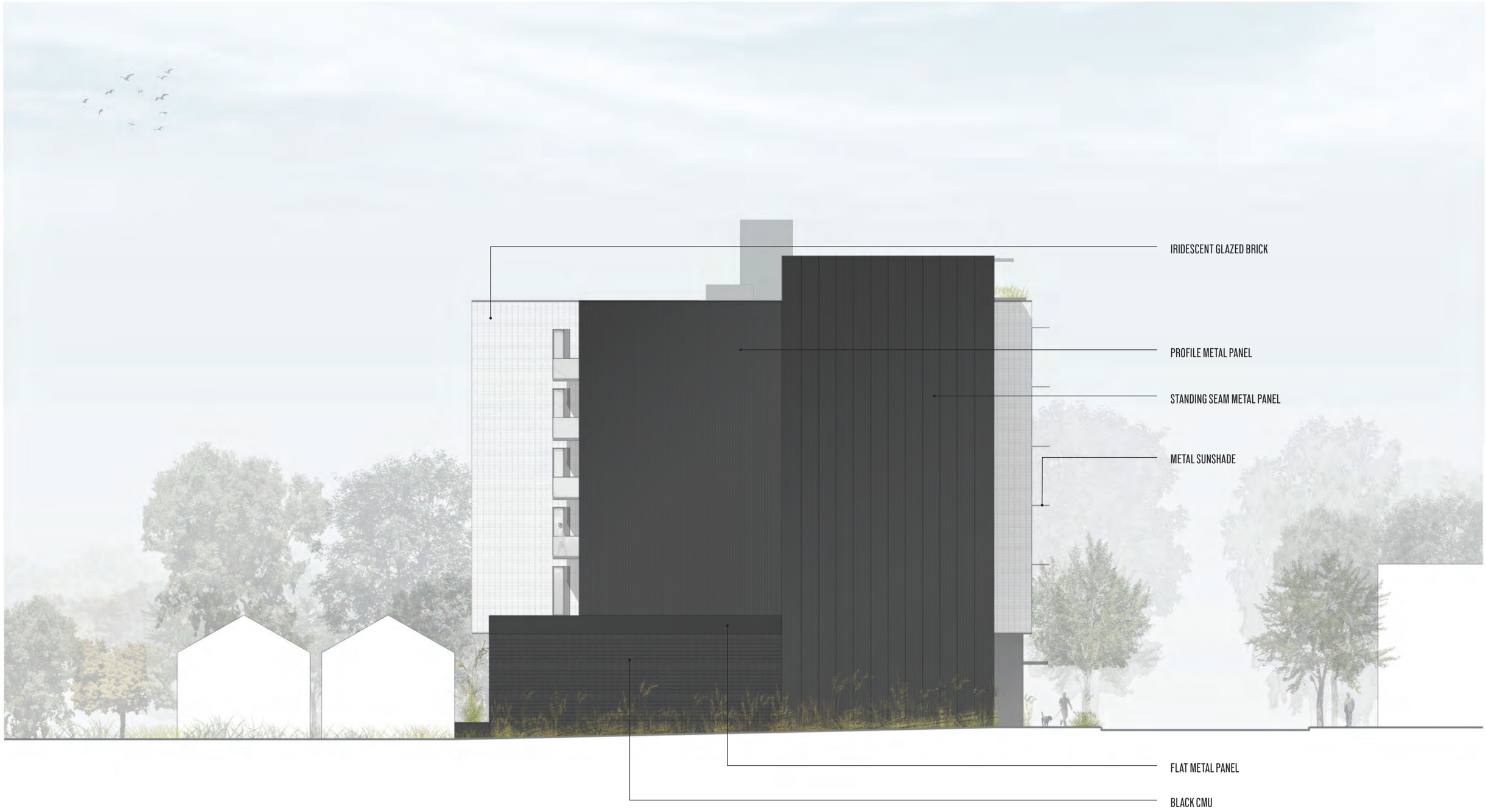


BUILDING SECTION - LOOKING EAST

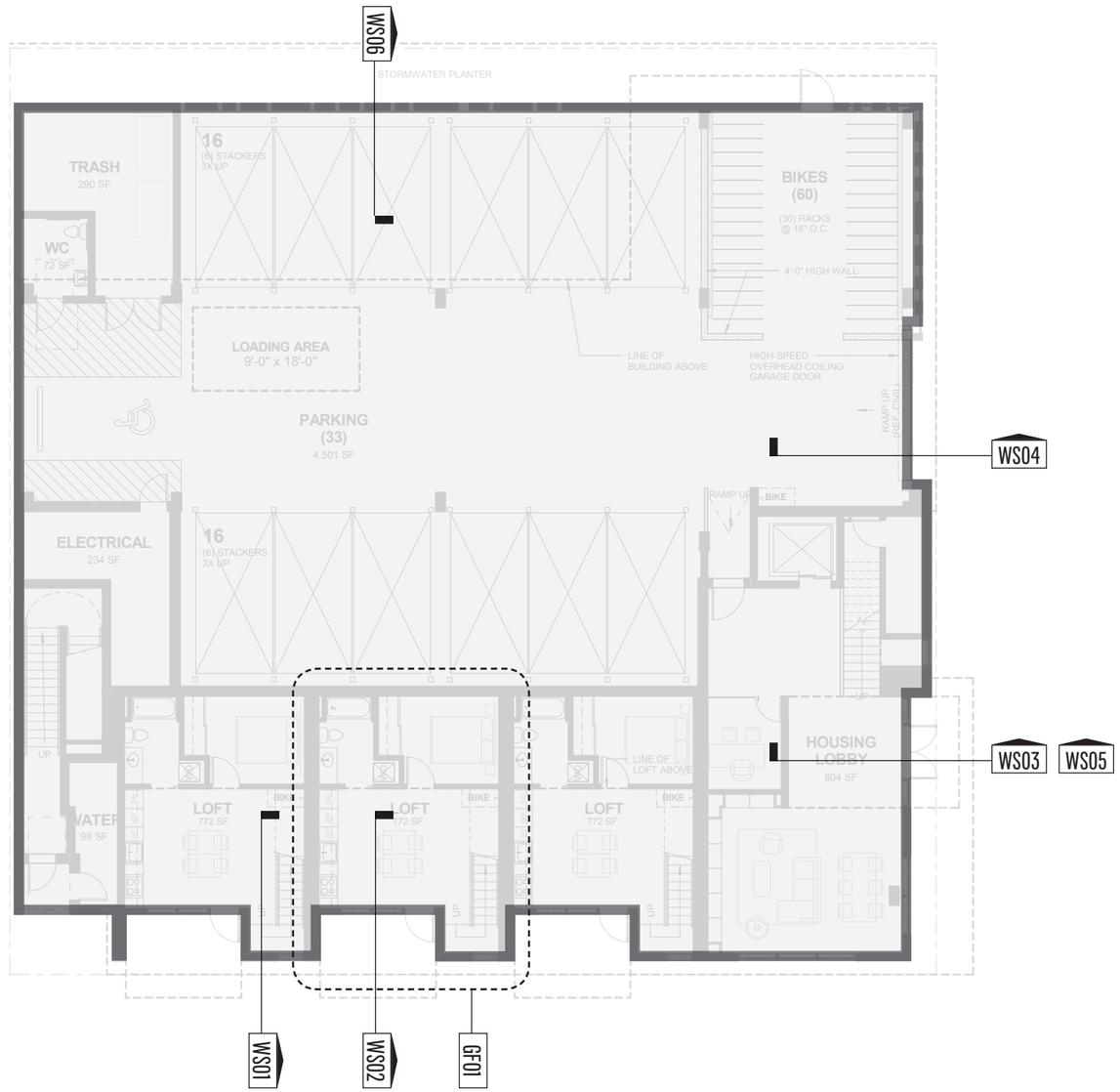
SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION

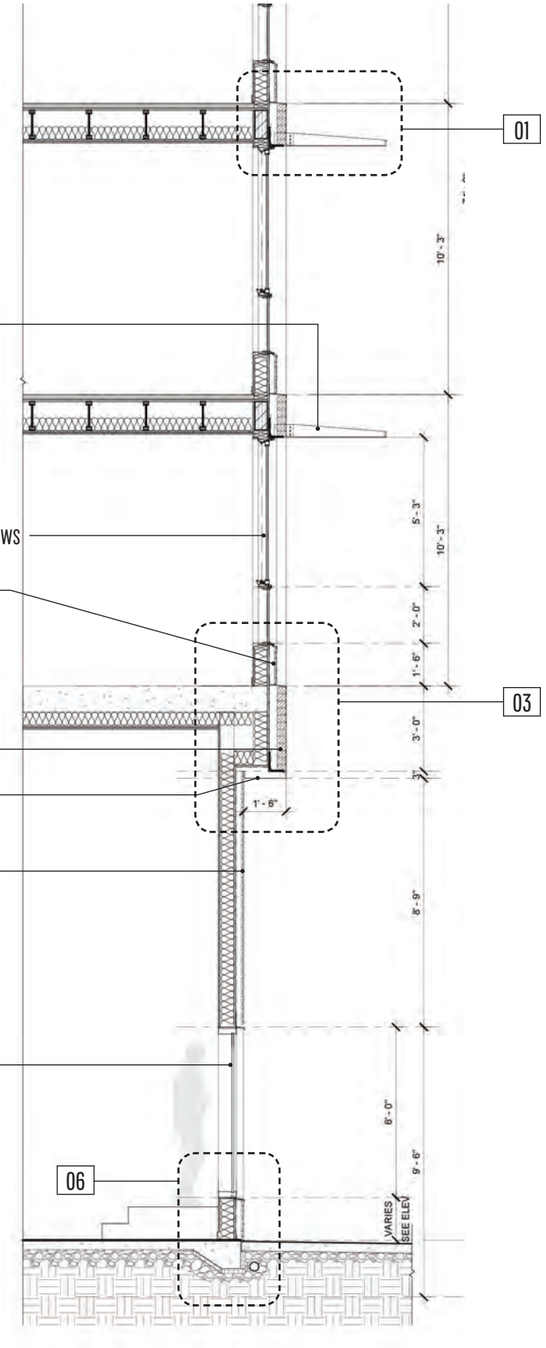


WEST ELEVATION

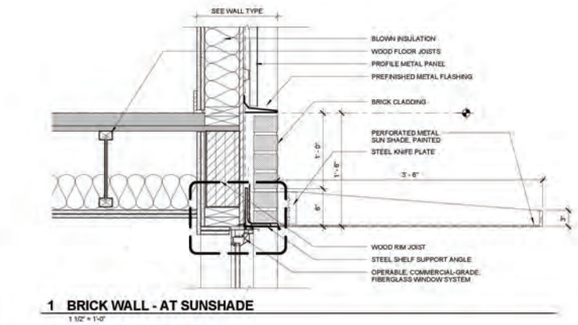


WALL SECTIONS - KEY PLAN

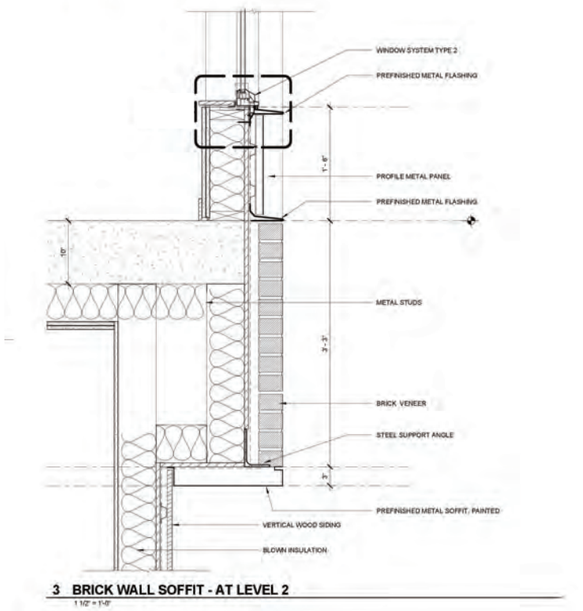
ENLARGED ELEVATION @ SOUTH FACADE - GROUND FLOOR UNIT



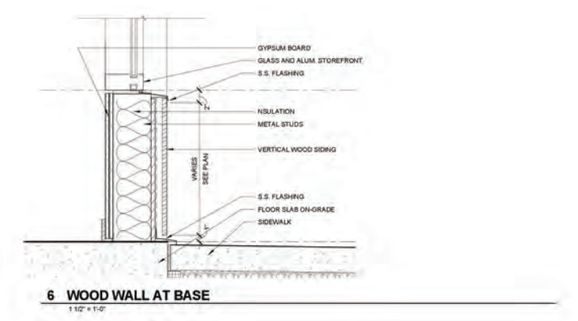
WALL SECTION @ SOUTH FACADE - GROUND FLOOR UNIT



1 BRICK WALL - AT SUNSHADE
1 1/2" = 1'-0"

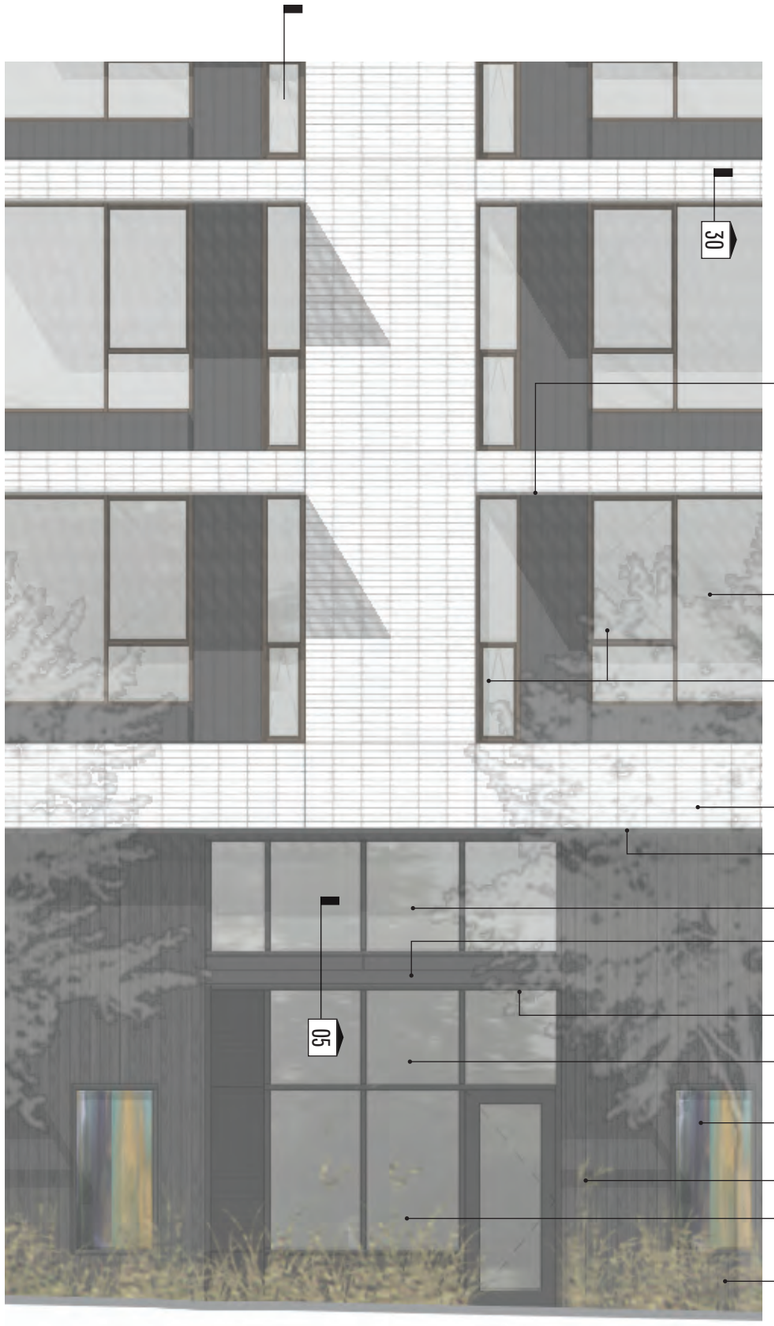


3 BRICK WALL SOFFIT - AT LEVEL 2
1 1/2" = 1'-0"

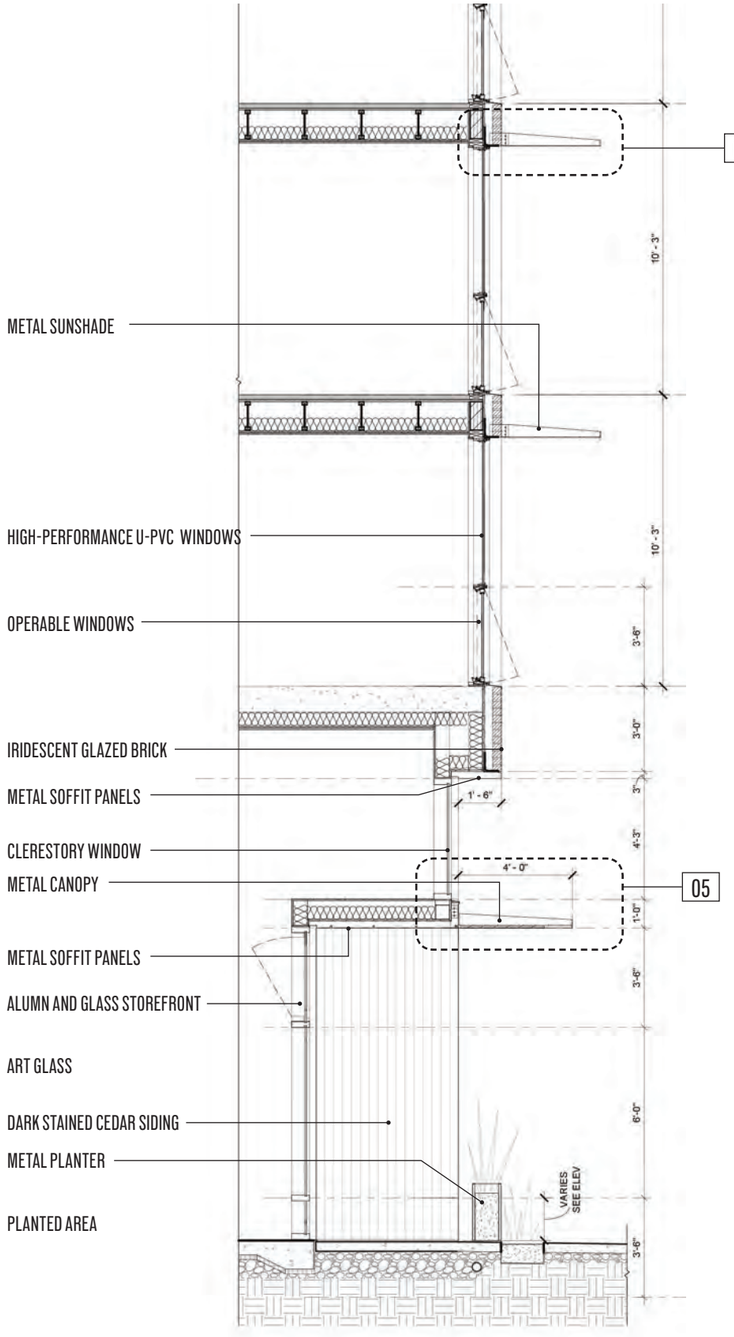


6 WOOD WALL AT BASE
1 1/2" = 1'-0"

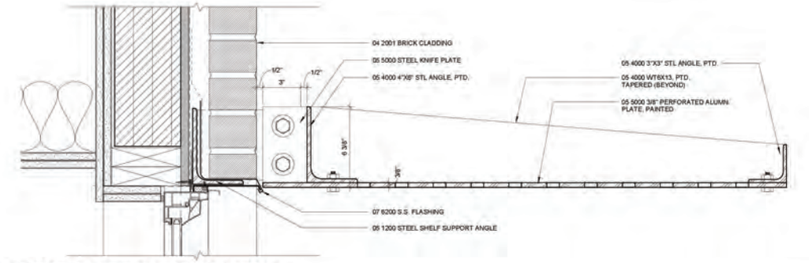
WS01 - WALL SECTION 01



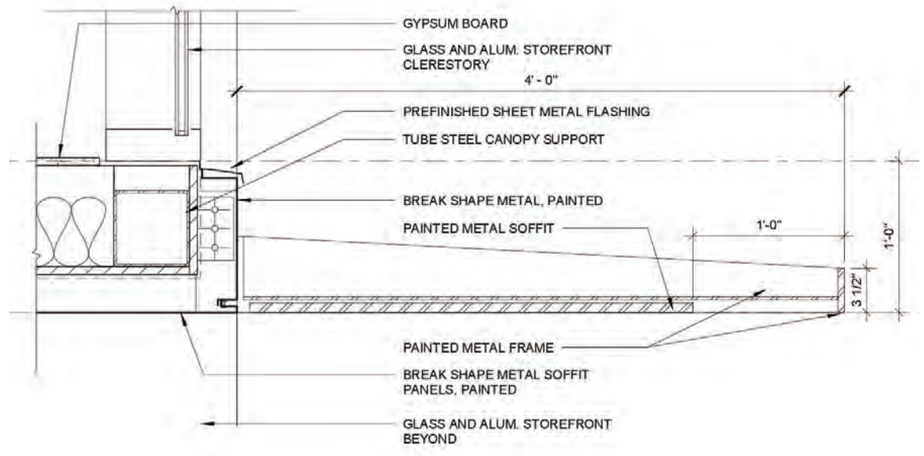
ENLARGED ELEVATION @ SOUTH FACADE - UNIT ENTRY



WALL SECTION @ SOUTH FACADE - UNIT ENTRY

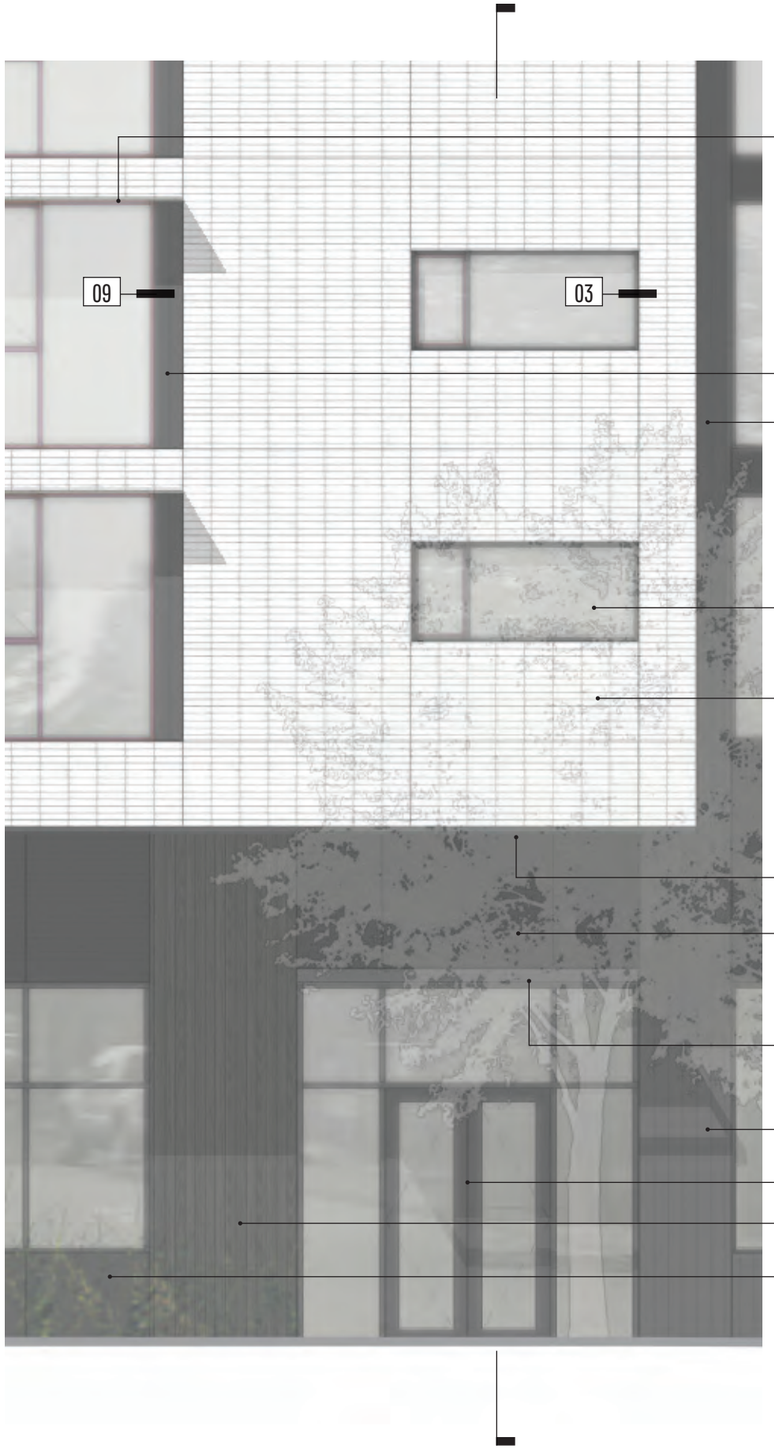


30 TYPICAL SUNSHADE SECTION DETAIL

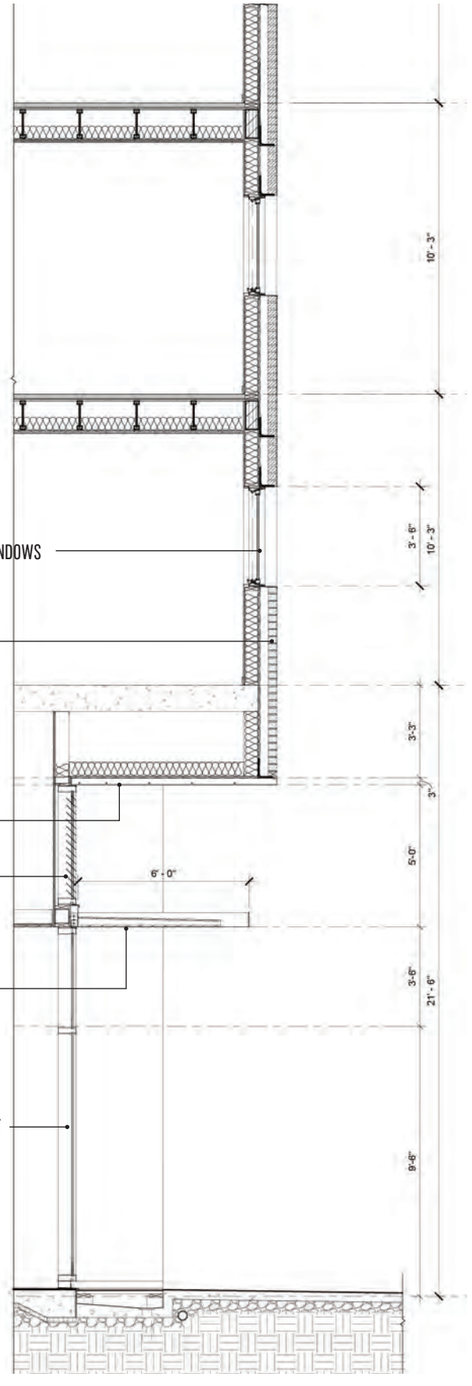


5 CANOPY AT UNIT ENTRY

WS02 - WALL SECTION 02

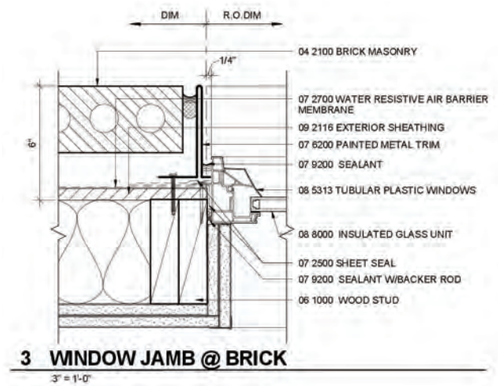


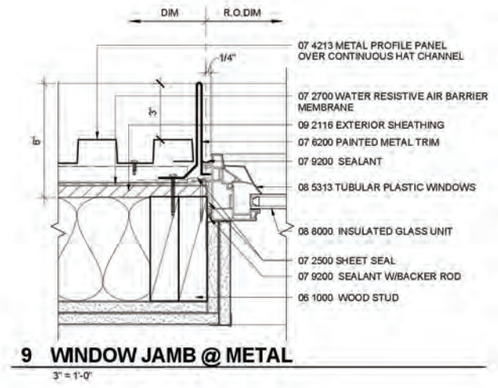
ENLARGED ELEVATION @ EAST FACADE - BUILDING ENTRY



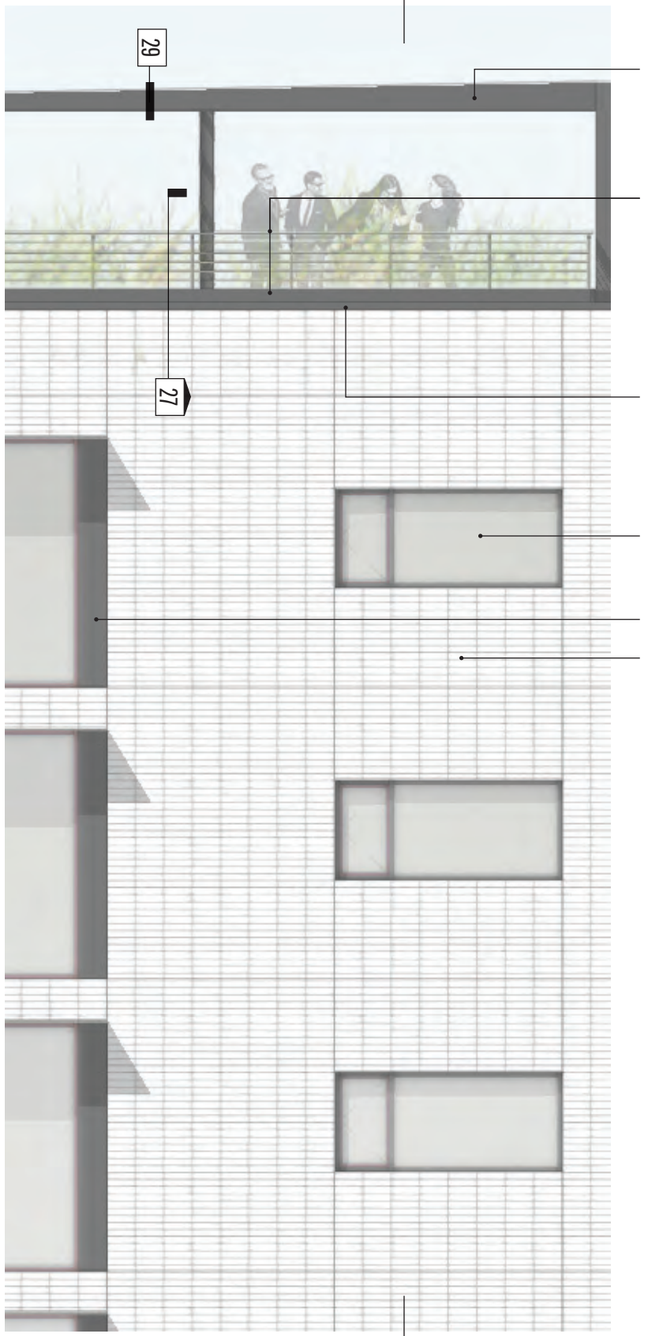
WALL SECTION @ EAST FACADE - BUILDING ENTRY

REPRESENTATIVE IMAGE OF ENTRY METAL ENTRY CANOPY WITH WOOD SOFFIT

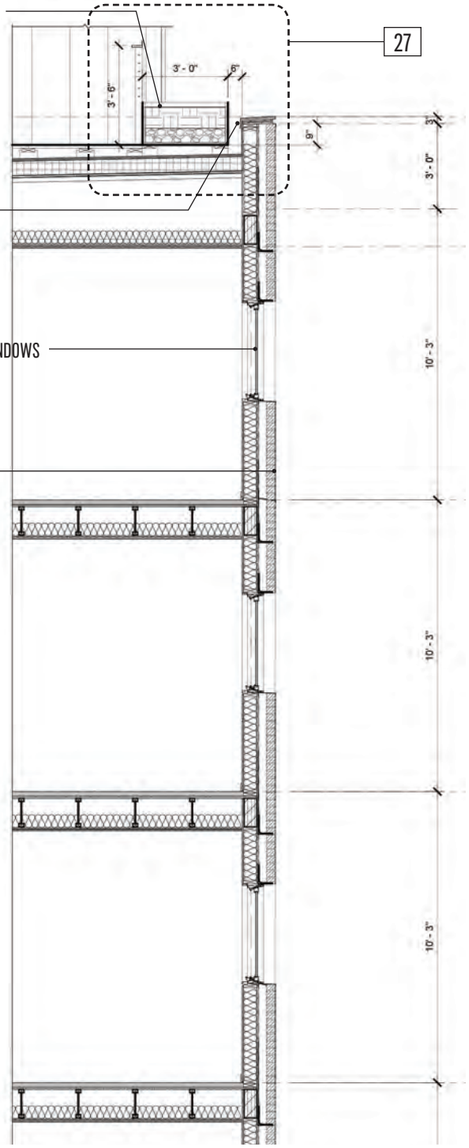




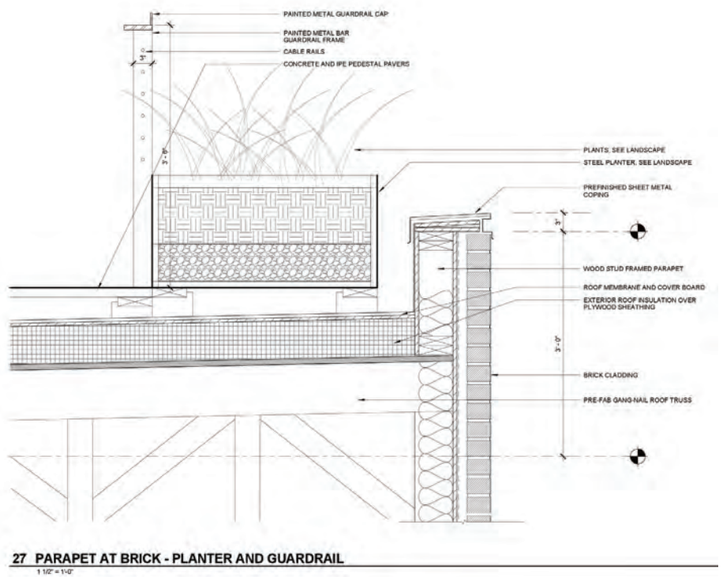
WS03 - WALL SECTION 03



ENLARGED ELEVATION @ EAST FACADE - PARAPET + ROOF DECK

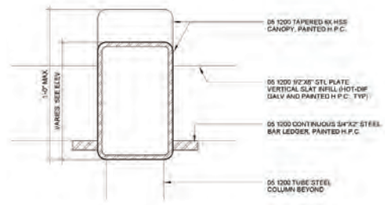


WALL SECTION @ EAST FACADE - PARAPET + ROOF DECK



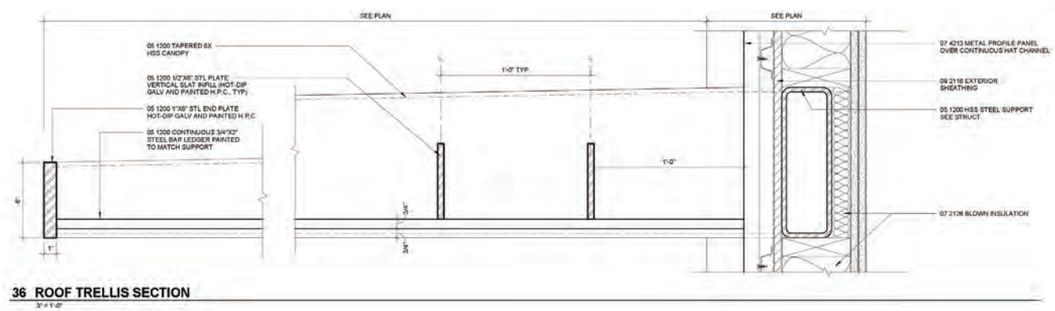
27 PARAPET AT BRICK - PLANTER AND GUARDRAIL

1 1/2" = 1'-0"



29 ROOF TRELLIS SUPPORT SECTION

3" = 1'-0"

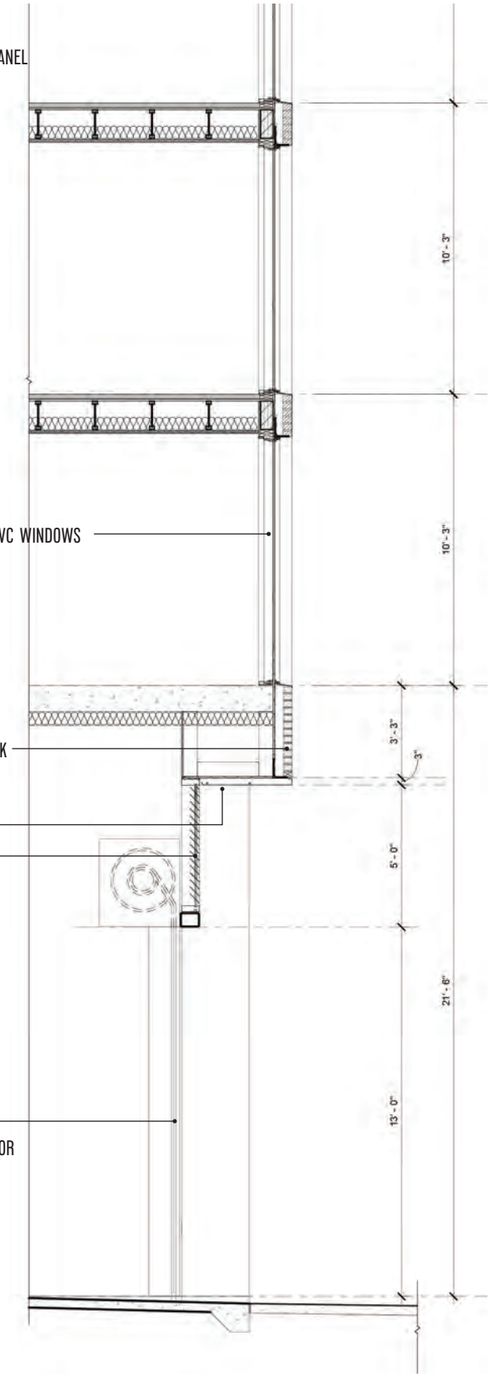


36 ROOF TRELLIS SECTION

3" = 1'-0"

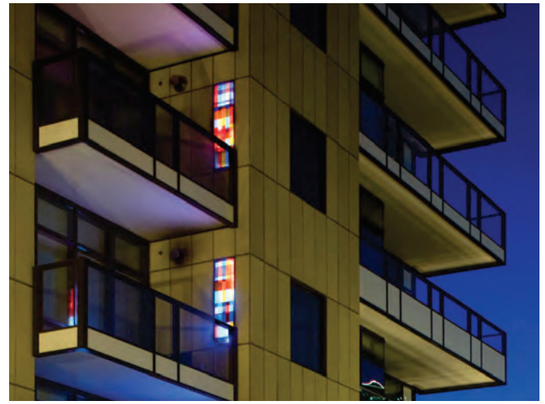
WS04 - WALL SECTION 04

ENLARGED ELEVATION @ EAST FACADE - GARAGE ENTRY + ART GLASS WALL

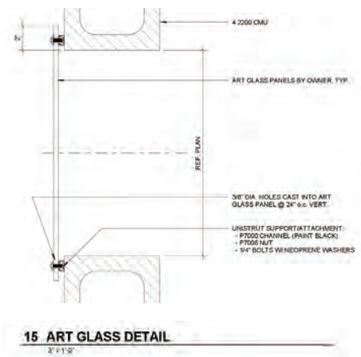


WALL SECTION @ EAST FACADE - GARAGE ENTRY

REPRESENTATIVE IMAGE OF TRANSPARENT COILING GLASS GARAGE DOOR.

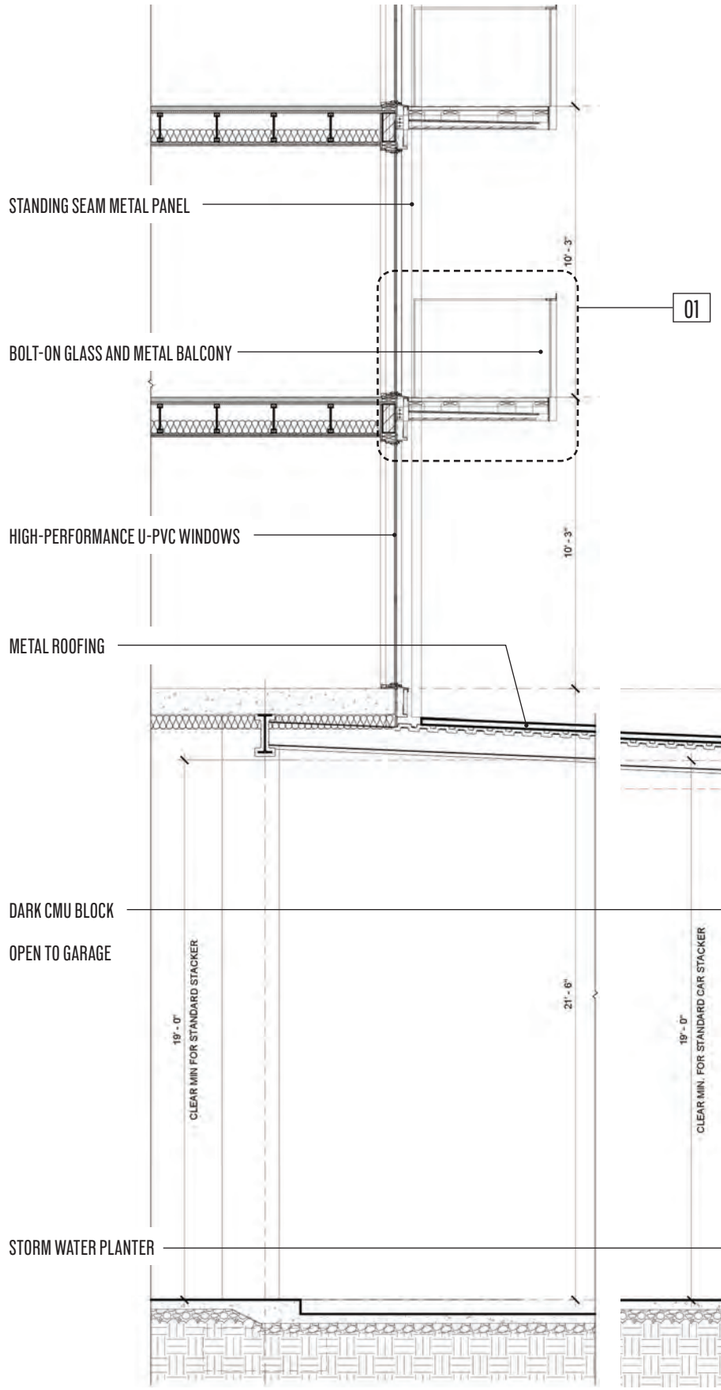


REPRESENTATIVE IMAGE OF ART GLASS INTEGRATED INTO FACADE.

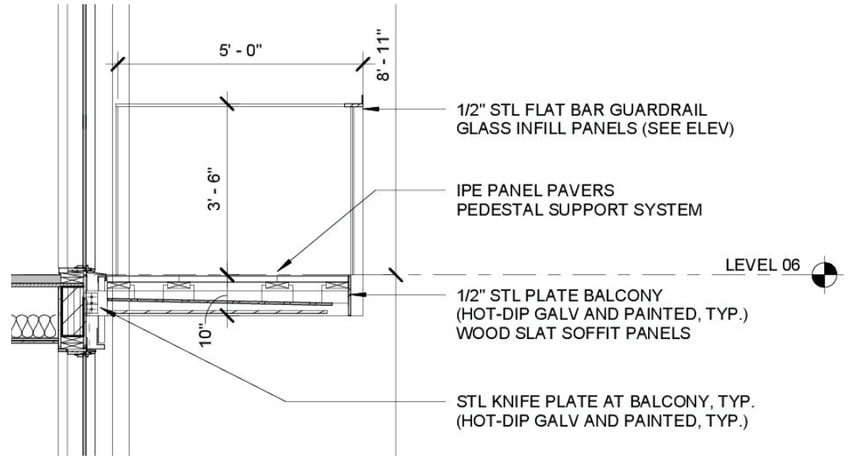


WS05 - WALL SECTION 05

ENLARGED ELEVATION @ EAST FACADE - GARAGE ENTRY + ART GLASS WALL

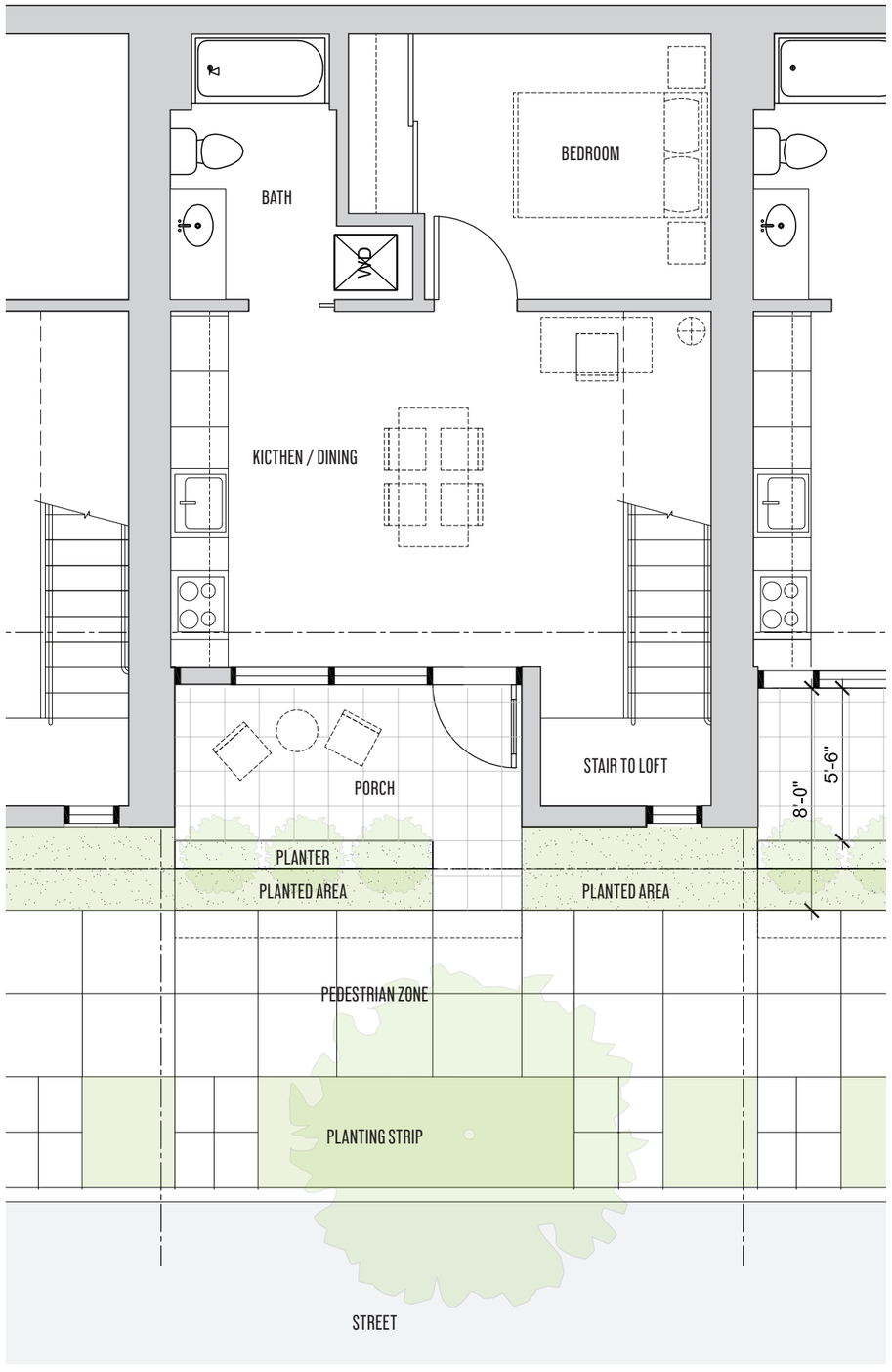


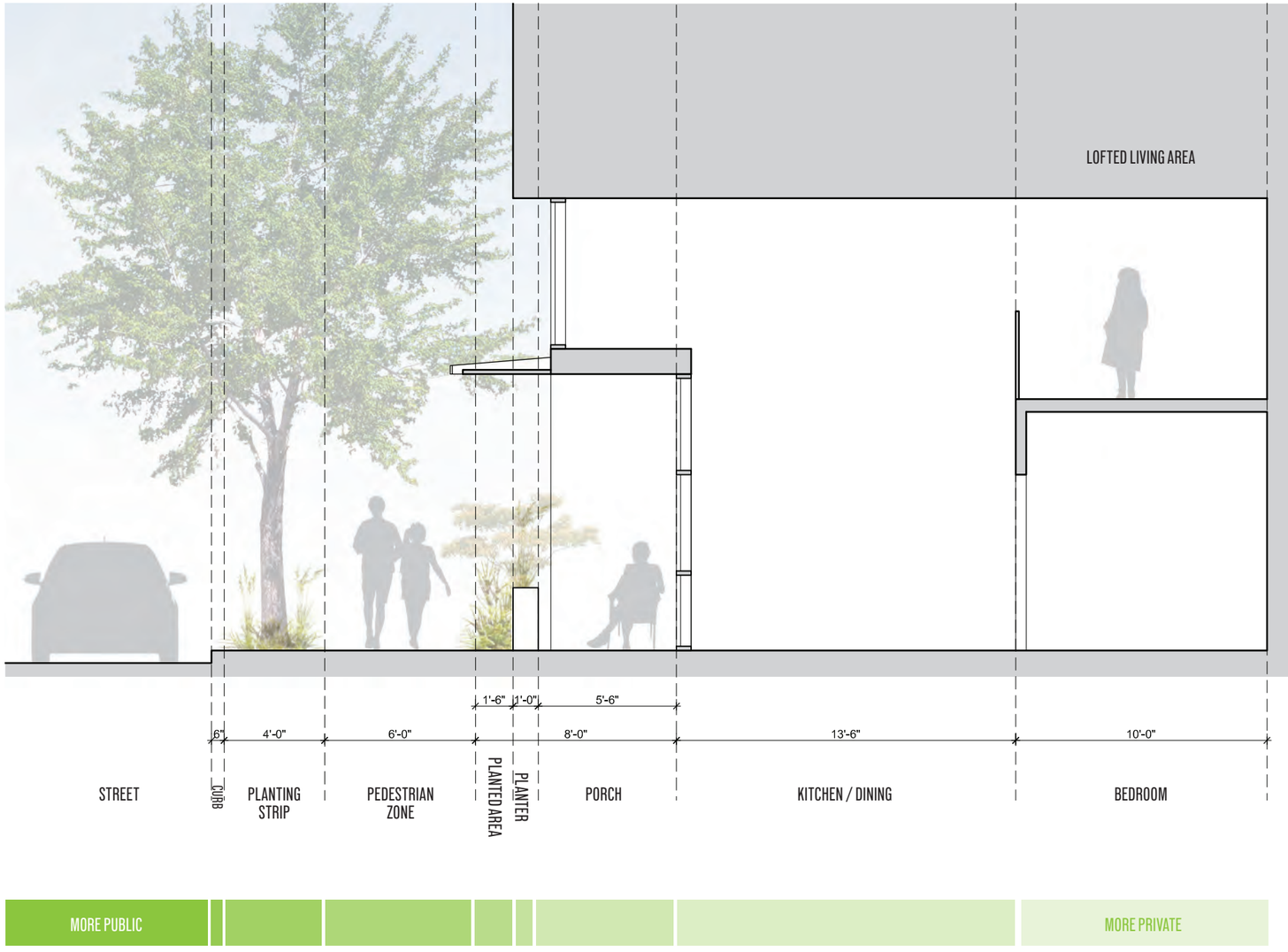
WALL SECTION @ EAST FACADE - GARAGE ENTRY



01 BALCONY DETAIL

WS06 - WALL SECTION 06





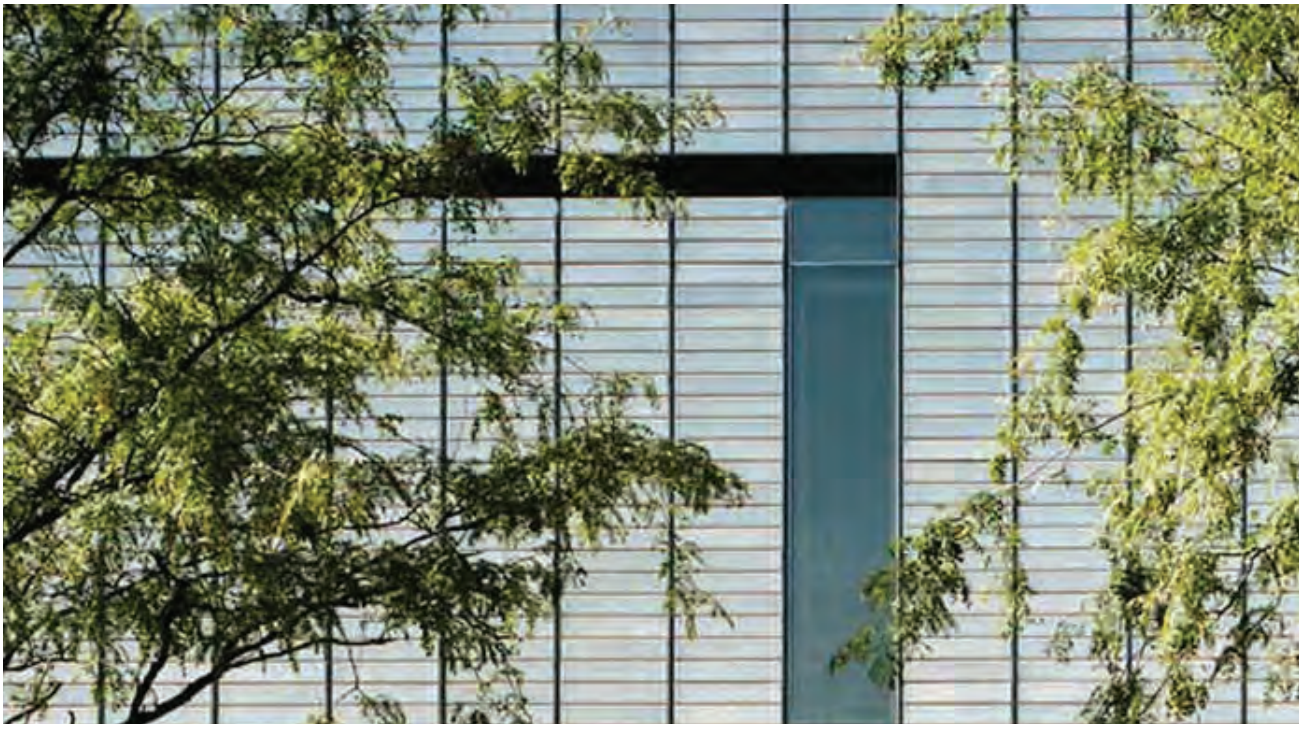
GF01 - GROUND FLOOR UNIT DETAIL

19TH + OVERTON

Design Review Hearing / January 22, 2015

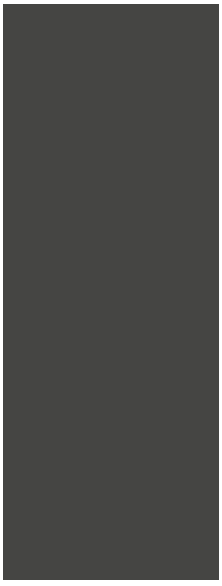
APPENDIX A: MATERIALS + PHOTOS

Building materials
Site photos
Context photos

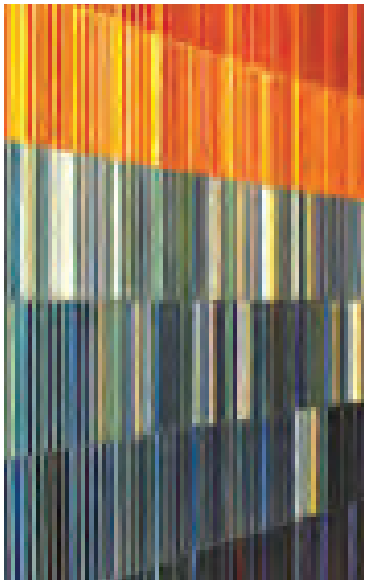


White brick with iridescent ceramic glaze (representative image)

Brick mortar



Dark metal color:
Standing metal seam
Canopy & sunshades
Window Mullions

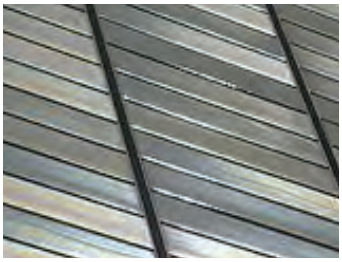


Art glass

Dark stained cedar

Profile metal panel

EXTERIOR MATERIAL PALETTE

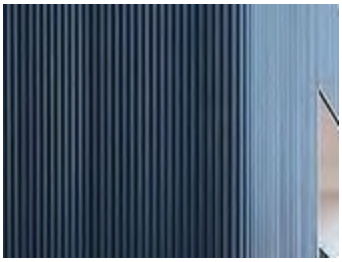



IRIDESCENT GLAZED BRICK

Norman white brick
3"H x 12"W x 4"D
Custom iridescent glaze
Stack bond


STANDING SEAM METAL PANEL

Non-structural batten seam system
16" panel width
Concealed fastner system
Painted with Custom "Crystal Face 2WC"

PROFILE METAL PANEL

2" box rib corrugated profile
Thru-fasteners
Painted with Custom "Crystal Face 2WC"


DARK-STAINED CEDAR

Tongue and Groove cedar siding:
Flat western red cedar, B clear grade,
4" nominal wide X 1" thick with ½" lap.
Stain cedar siding with OSMO Ebony


RESIDENTIAL WINDOWS

Intus triple-glazed U-PVC windows
Operable casement and tilt
Commercial grade exterior finish
Color: Graphite exterior


ALUMINUM AND GLASS STOREFRONT

Standard aluminum and glass system
2" x 6" profile
Front-set glazing
Color: Graphite exterior

EXTERIOR MATERIAL INFORMATION

GERDING THEATER AT THE ARMORY

Building design by GBD Architects
Completed 2006

Art glass panels suspended two floors along concrete wall and back-lit

THE CASEY - EXTERIOR

Building design by GBD Architects
Completed 2008

Art glass integrated into pre-cast concrete facade panels and back-lit

THE CASEY - LOBBY

Building design by GBD Architects
Completed 2008

Art glass integrated into painted gypsum lobby wall and back-lit

ART GLASS EXAMPLES

Looking southeast towards downtown

SITE PHOTOS

Looking north towards the Willamette River

SITE PHOTOS

Looking northwest towards the West Hills

SITE PHOTOS

Two 1884 homes on the adjacent property to the north.

Panoramic view of site from NW 19th Avenue looking west.

SITE PHOTOS

CONTEXT PHOTOS

GBD

19TH + OVERTON

Design Review Hearing / January 22, 2015

APPENDIX C: SUPPORTING ATTACHMENTS

APPENDIX C: SUPPORTING ATTACHMENTS

C: 2 Drawing Index

C: 3 Product information - residential windows

C: 4 Product information - aluminum and glass storefronts

C: 5 Product information - rooftop equipment

C: 6 Product information - bike parking system

C: 7 Product information - high speed coiling garage door

C: 8 Product information - metal wall panels

C: 9 Code Guide analysis for building overhang

C: 10 Loading and trash narrative for comparable building type

C: 11 Memo: "Vehicle Queuing Analysis for Garage Entrance"

C: 14 Memo: "Adjustment to Loading Standards" (sight distance study)

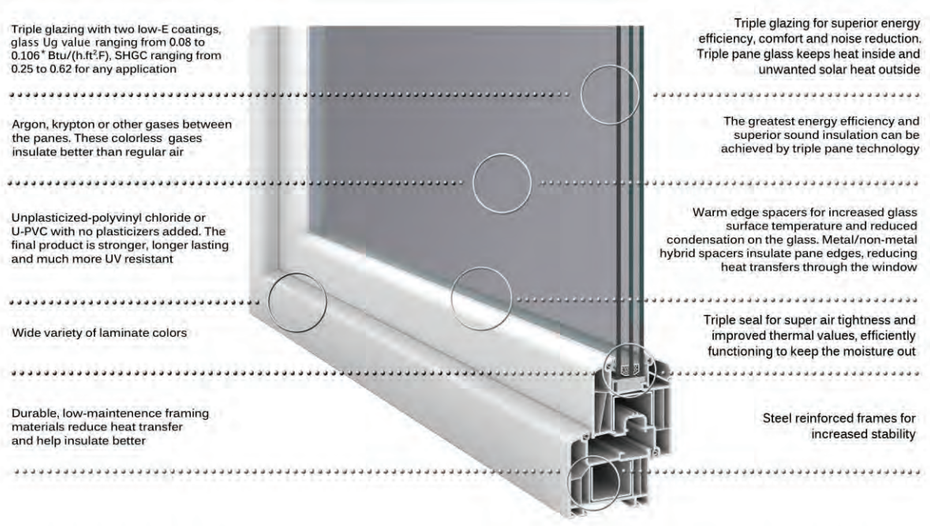
ARCADE WINDOW SYSTEM

Arcade Classic

Features & Benefits

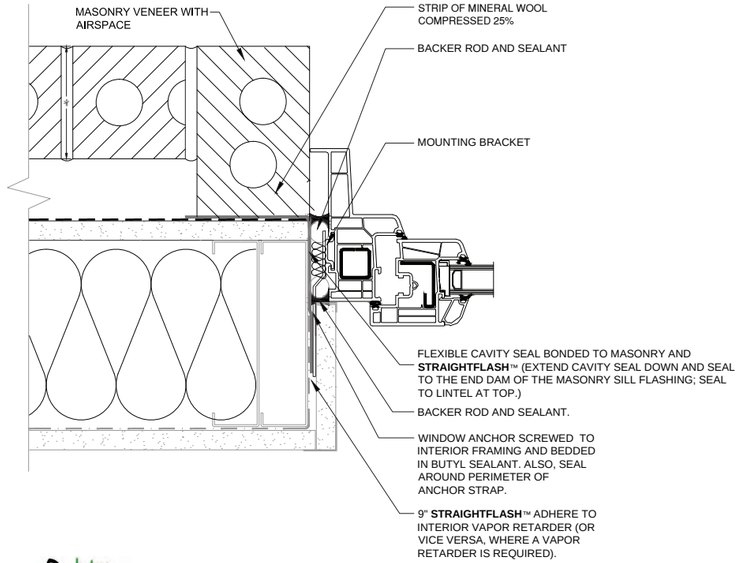
- Thermal performance
  R = 6.3*, Uw = 0.1 6 Btu/ (h.ft².F)
- Triple glazing with two low-E coatings, SHGC ranging from 0.11 to 0.49 (center of glass)
- Durable, low-maintenance framing materials reduce heat transfer and help insulate better
- Double seal for superior air tightness and improved thermal values while efficiently keeping moisture out
- Many colors, decorative grills, handle and hinge options will allow fulfilling any design desire

*for fixed window



REPRESENTATIVE INTERIOR IMAGE OF INTUS U-PVC WINDOWS

REPRESENTATIVE EXTERIOR IMAGE OF INTUS U-PVC WINDOWS



PRODUCT INFO - INTUS WINDOWS+DOORS

Trifab™ VersaGlaze™ 451/451T Framing System

- 2" (50.8mm) sightline
- 4-1/2" (114.3mm) depth
- High thermal performance
- Center, back, front, multi-plane glazed options
- Hurricane resistance
- Structural silicone glazed (SSG) options

Product Features

Trifab® VG (VersaGlaze®) is built on the proven and successful Trifab platform – with all the versatility its name implies. Trifab set the standard and Trifab® VG improves upon it.

There are enough fabrication, design and performance choices to please the most discerning building owner, architect and installer. Plus the confidence a tried and true framing system instills.

Select from four glazing applications, four fabrication methods and multiple infill choices.

Consider thermal options and performance, SSG and Weatherseal alternatives and your project takes an almost custom shape whether your architecture is traditional or modern and the building is new or retrofitted.

Key Features Include:

- Hurricane Impact tested on Shutter Application Only
- Trifab® VG 451/451T is 4-1/2" (114.3) deep with a 2" (50.8) sightline
- Front, Center, Back or Multi-Plane glass applications
- Flush glazed from either the inside or outside
- Screw Spline, Shear Block, Stick or Type-B fabrication
- SSG / Weatherseal option
- Isolock® lanced and debridged thermal break option with Trifab® VG 451T
- Infill options up to 1-1/8" (28.6) thickness
- Permanodic® anodized finishes in 7 choices
- Painted finishes in standard and custom choices

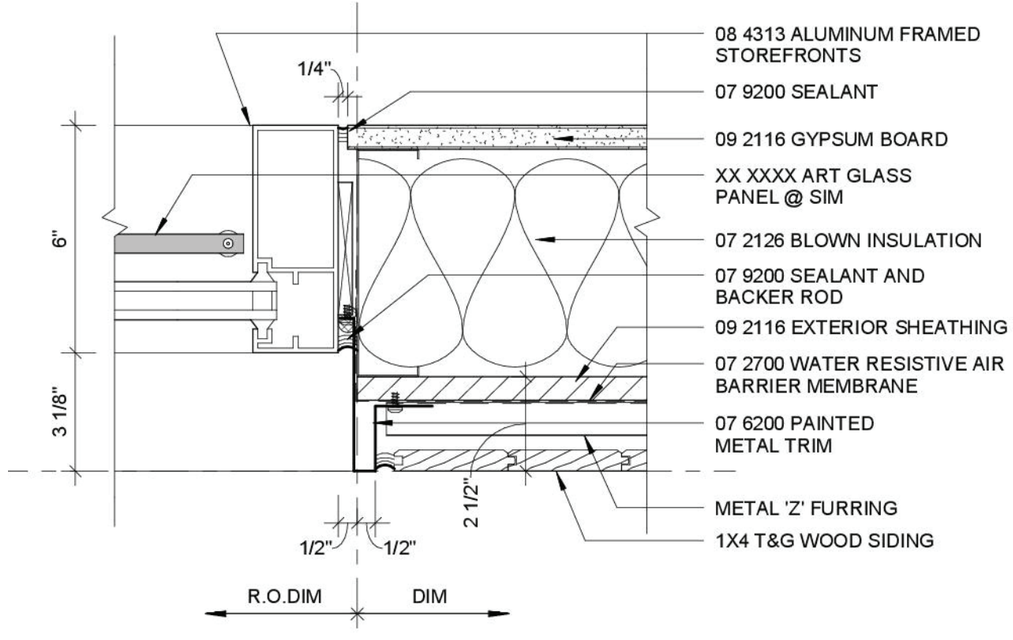
Optional Features:

- High performance interlocking flashing
- Acoustical rating per AAMA 1801 and ASTM E 1425
- Project specific U-factors (See Thermal Charts)

Product Applications:

- Storefront, Ribbon Window or Punched Openings
- Single-span
- Integrated entrance framing allowing Kawneer standard entrances or other specialty entrances to be incorporated
- Kawneer Sealair® windows or GLASSvent™ are easily incorporated

REPRESENTATIVE EXTERIOR IMAGES OF ALUMINUM STOREFRONT



PRODUCT INFO - STOREFRONT

Rebel™ Packaged Rooftop System

DAIKIN

Job Information	Technical Data Sheet
Job Name	19th & Overton
Date	11/21/2014
Submitted By	Oregon Air Reps
Software Version	03.10
Unit Tag	DOAS-1 REV A 4750 CFM

Unit Overview

Model Number	Voltage V/Hz/Phase	Design Cooling Capacity Btu/hr	AHRI360 Standad Efficiency		ASHRAE 90.1
			EER	IEER	
DPS010A	208/60/3	129225	12.3	19.2	2010 Compliant

Unit

Model Number:	DPS010A
Model Type:	Cooling
Heat Type:	Gas
Hot Gas Reheat:	Modulating Hot Gas Reheat
Energy Recovery:	Energy Recovery Wheel - 7 thru 15 Ton
Application:	Variable Air Volume, Single Zone
Outside Air:	100% Outside Air
Altitude:	0 ft
Approval	cETLus

Physical

Dimensions and Weight			
Length	Height	Width	Weight
111.0 in	55.8 in	96.5 in	2635 lb
Corner Weights			
L1	L2	L3	L4
406 lb	445 lb	933 lb	851 lb

Construction			
Exterior	Insulation and Liners	Air Opening Location	
		Return	Supply
Painted Galvanized Steel	1" Injected Foam, R-7, Galvanized Steel Liner	Bottom	Bottom

Electrical

MCA	MROPD	SCCR
60.3 A	70 A	5 kAIC

Return/Outside/Exhaust Air

Outside Air Option		
Type	Damper Pressure Drop	Exhaust Air Type
None	0.27 inH_2O	Powered, Modulating with Building Pressure Control

BACK-UP GENERATOR

CATERPILLAR OLYMPIAN G35LG2

THREE-PHASE, FOUR WIRE, 60HZ

NATURAL GAS FUELED ENGINE GENERATOR

Standby Power Rating

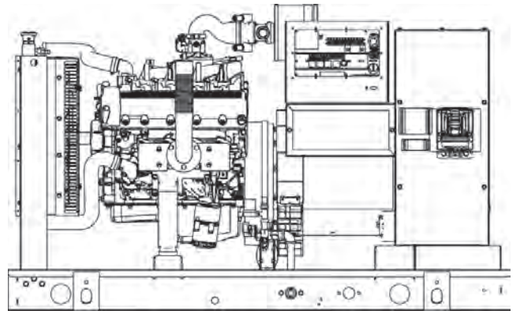
35 kW 44 kVA 60 Hz

Prime Power Rating*

32 kW 39 kVA 60 Hz

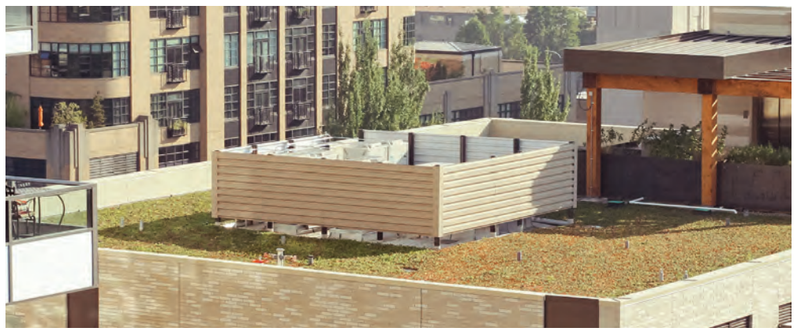
ISO 9001:2008

USA ENGINEERED & BUILT



*EPA Certified Prime ratings are not available in the U.S. or its Territories

Image used for illustration purposes only

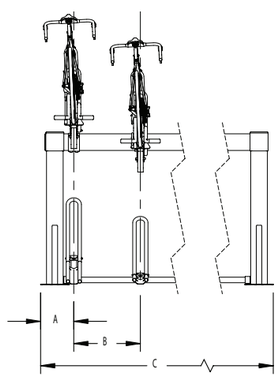


REPRESENTATIVE IMAGE OF ROOFTOP MECHANICAL SCREENING

CYCLE RACKS
SARIS

Stack Rack

The customizable Stack Rack combines industrial design and strength with two-tier spacing for added capacity and maximum density. And, the lift assist mechanism eases any bike lifting required by the user, making it easier to load and unload. Flexibility in bike spacing, rack configuration and the modular design make this product unique to each installation.

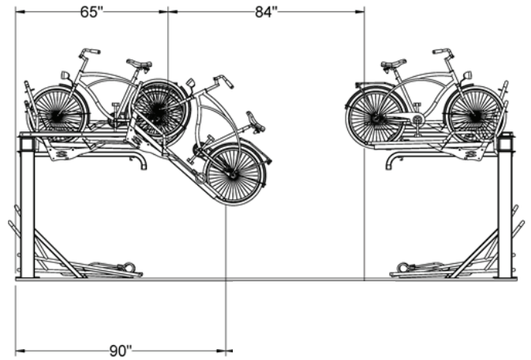


Specifications			
# Bikes	Starting Dim. (A)	Bike Spacing (B)	Overall Length (C)
16	12"	18"	150"
16	12"	20"	164"
16	12"	24"	192"

Saris Bicycle Parking & Storage Solutions 800.783.7257 x174 www.sarisparking.com

Stack Rack

Recommended Spacing



Product Details

- Can be built as single sided or double sided unit
- Flexibility in bike spacing during planning or installation
- Few moving parts to minimize maintenance
- Security locking cable is 3/4" structural steel cable, sheathed in vinyl coating
- Requires 108" ceiling clearance (low ceiling height model can be provided if needed for ceiling height of 100"

Note: Saris Parking Systems representatives can assist with custom layout and spacing to meet your room dimensions and desired bike capacity.

Saris Stack Rack is a commercial grade rack with few moving parts and customized bike spacing

16 bike maximum per section. Can be designed in sections of 4, 6, 8, 10, 12, 16 bikes

Uprights: 6" square upper frame
Lower Frame: 2" square steel

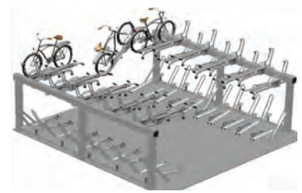
Hot dipped galvanized finish

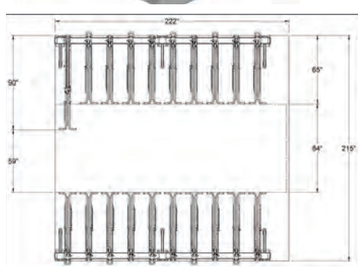
Flange Mount

84" aisle way recommended to allow for loading and unloading

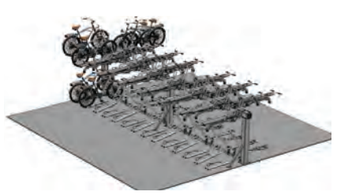
Lift assist mechanism is spring loaded top tray

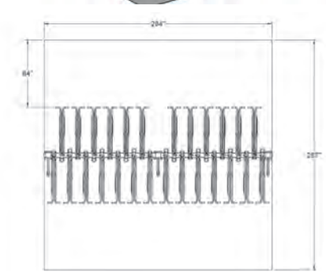
Single-Sided Layout





Double-Sided Layout





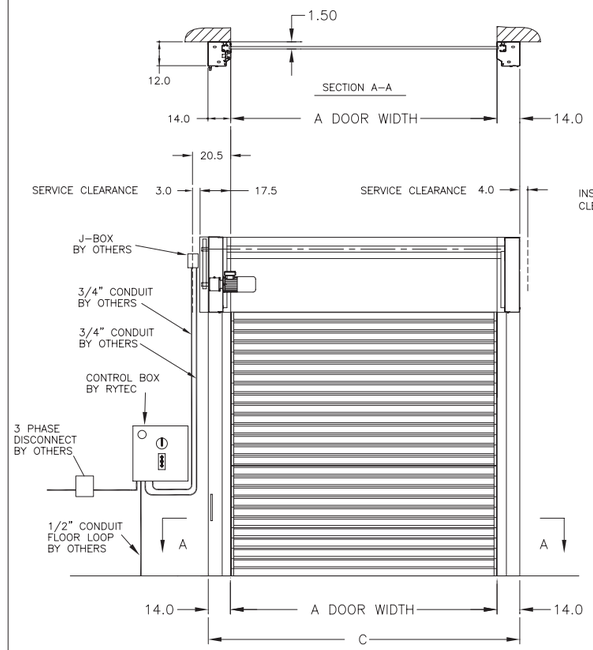
Saris Bicycle Parking & Storage Solutions 800.783.7257 x174 www.sarisparking.com

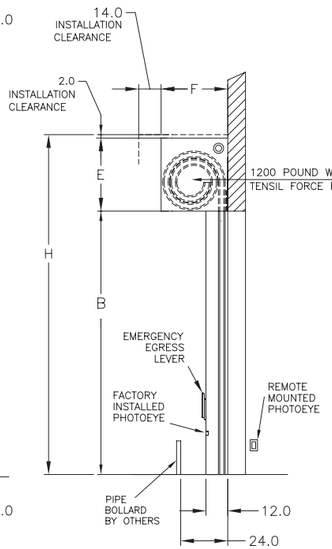
VEHICULAR ENTRY DOOR FROM EXTERIOR

VEHICULAR ENTRY DOOR FROM INTERIOR

DRAWING NOT TO SCALE, ALL DIMENSIONS IN INCHES

DOOR NO.	A	B	C	E	F	VOLTAGE	PHASE	H.P.	H
							3	2	





DOOR HEIGHT	E	F
<= 153"	33	29
>153" <= 197"	35	32
>197" <= 236"	37	35

NOTES:

1. ONE PHOTO EYES IN SIDE COLUMN – FACTORY INSTALLED
2. ONE PHOTOEYE FOR FIELD INSTALLATION.
3. VARIABLE DOOR OPENING SPEED UP TO 87" PER SECOND
4. DOOR CLOSING SPEED OF 30" PER SECOND
5. PROGRAMABLE UPPER AND LOWER LIMIT SWITCHES
6. CONTROL BOX WITH 2 HP AC VARIABLE SPEED DRIVE
7. BRAKE RELEASE LEVER ON SIDE COLUMN
8. ELECTRIC FAIL SAFE REVERSING EDGE
8. FULL WIDTH AND HEIGHT CLEAR PLASTIC PANELS

ACTIVATORS	QTY.	ACTIVATORS	QTY.
☐ PHOTOEYE		☐ PUSHBUTTON	
☐ PULLCORDS		☐ FLOOR LOOP CONTROLLER	
☐ MOTION DETECTOR		☐ OTHERS (DESCRIBE IN NOTES)	
☐ RADIO CONTROL W/2 TRANSMITTERS			
☐ ADDITIONAL TRANSMITTERS			

OPTIONS

☐ BUCK BOOSTER TRANSFORMER REQ'D FOR 575V APPLICATIONS

☐ 230 VOLT – REQUIRES SINGLE PHASE POWER SUPPLY

RYTEC CORPORATION
ONE CEDAR PARKWAY, JACKSON, WI 53037–0403

APPROVAL DRAWING

SPIRAL MODEL HS (STT-S)

FOR DOOR WIDTH UP TO 19'-8", HEIGHT UP TO 19'-8"

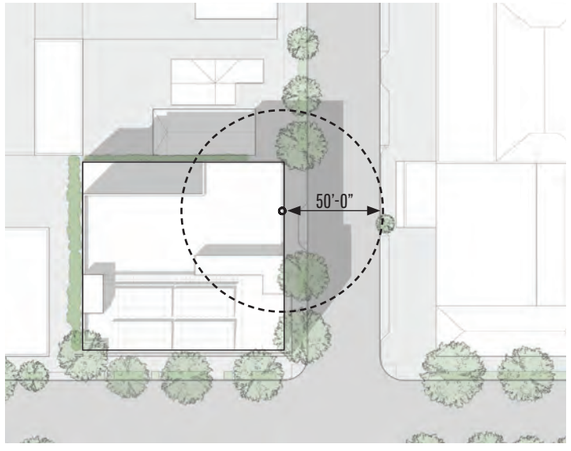
CUSTOMER:

LOCATION:

DATE: | DEALER: | APPV'D BY:

DRAWING NO.: 9B192TEMP | REV.: A

VEHICULAR ENTRY DOOR CUTSHEET



REMOTE-CONTROL DOOR OPERATOR RANGE - 50'-0"

INDIVIDUAL TRANSMITTER OPENS DOOR, TIMER CLOSES THE DOOR.

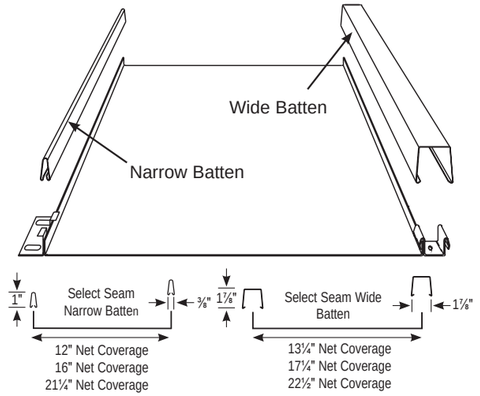
PRODUCT INFO - GARAGE DOOR

Select Seam®

AEP SPAN

Select Seam is a concealed fastener, non-structural, batten seam metal roof system.

Select Seam's wide pan appearance offers a clean, classic architectural effect ideal for institutional and commercial work, such as educational facilities, commercial office buildings, hotels, fire stations and retrofit applications.



Section Properties								
Gage	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft²)	I+ (in⁴/ft)	S+ (in³/ft)	I- (in⁴/ft)	S- (in³/ft)
12" Select Seam (13¾" Wide Batten)								
24	0.0232	50	65	1.49	0.0039	0.0032	0.0063	0.0073
22	0.0294	50	65	1.86	0.0039	0.0032	0.0063	0.0096
16" Select Seam (17¼" Wide Batten)								
24	0.0232	50	65	1.36	0.0029	0.0024	0.0047	0.0055
22	0.0294	50	65	1.71	0.0029	0.0024	0.0047	0.0072
21¼" Select Seam (22½" Wide Batten)								
24	0.0232	50	65	1.25	0.0021	0.0019	0.0036	0.0042
22	0.0294	50	65	1.57	0.0021	0.0019	0.0036	0.0054

NOTES: The moments of inertia, I⁺ and I⁻, presented for determining deflection are: $(2I_{Effective} + I_{Gross})/3$

standard features

- Available Batten width options:
  Narrow Batten: 12", 16" and 21¼"
  Wide Batten: 13¼", 17¼" and 22½"
- Available in 24ga and 22ga in standard finishes – refer to AEP Span Color Charts for full range of color options and paint systems.
- Custom manufactured sheet lengths from 5'-0" to 45'-0."
- Recommended minimum slope of 3:12
- Performance testing (ratings based on specific assemblies):
  Wind uplift – Meets UL 580- Class 90 wind uplift requirements (24 ga minimum). Per ASTM E1592: 12", 16" Narrow Batten, 17¼" Wide Batten.

  Air & water infiltration per ASTM E283 and ASTM E331: Narrow Batten only with sealant.
- Code compliance evaluation report - IAPMO-UES #ER-0309

optional features

- Short cut sheets from 5'-0" to 1'-0". Additional fees and lead times may apply.
- Longer lengths available up to 60'-0" Additional fees and lead times may apply.
- Subtle striations available between ribs to reduce the appearance of oil canning
- Stucco embossed – Subject to 500 lf minimum. Additional fees and lead times may apply.
- Available tapered for unique architectural applications.
- Factory applied butyl sealant for ease of installation and weathertightness.
- Narrow Batten panels can be field curved for radius applications.

Tacoma, WA & Fontana, CA Phone: 800-733-4955 Fax: 253-272-0791 www.aepspan.com

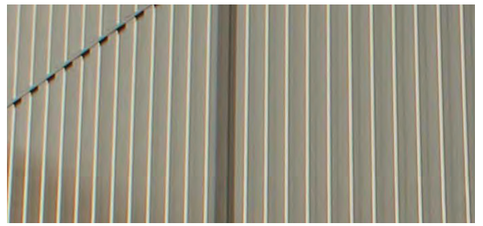
AEP SPAN

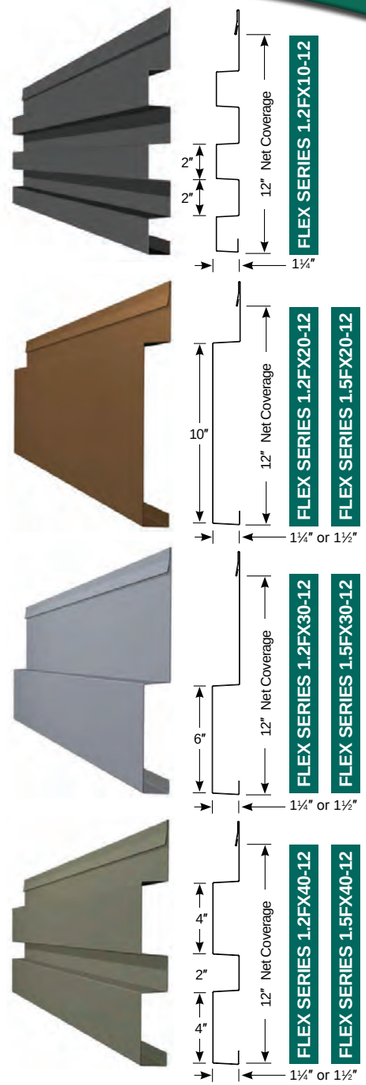
Flex Series

Flex Series is a concealed fastener metal wall collection designed to give you flexibility for your next project. This series of panels can be used in vertical and horizontal wall, fascia, and equipment screen applications.

FEATURES AND BENEFITS

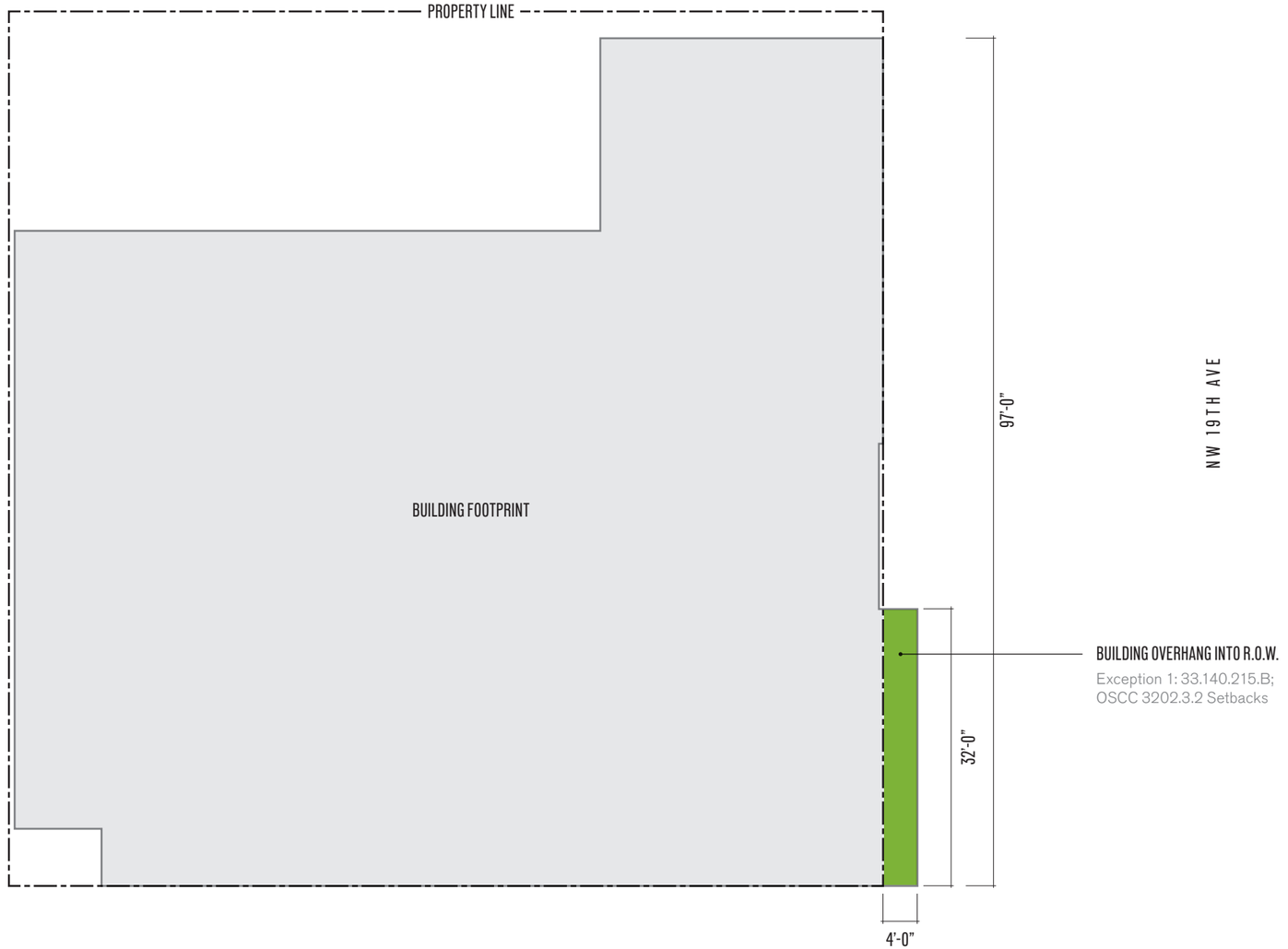
- Combine different panels to create striking patterns.
- Custom manufactured lengths from 5'-0" to 20'-0".
- With a 12" coverage, panels are available in 24ga and 22ga in standard colors. Also available in 20ga.
- Panels available in a wide variety of Dura Tech® *5000* and Dura Tech® *mx* colors and specialty finishes.
- Warranties for chalk, fade, and film integrity are available in durations of up to 30 years.





Oil Canning : All flat metal surfaces can display waviness commonly referred to as "oil canning". "Oil canning" is an inherent characteristic of steel products, not a defect, and therefore is not a cause for panel rejection.

Call Toll Free at
800-733-4955
Visit our Website at
www.aepspan.com



CODE GUIDE ANALYSIS

WINDOW PROJECTIONS INTO PUBLIC RIGHT-OF-WAY - IBC/32/#1

REVISED JUNE 1, 2005

SUMMARY

Bureau of Development Services code guide from June 1, 2005 outlines requirements for projections into the right-of-way, including standards for all encroachments and review process for projections that exceed the standards.

STANDARDS

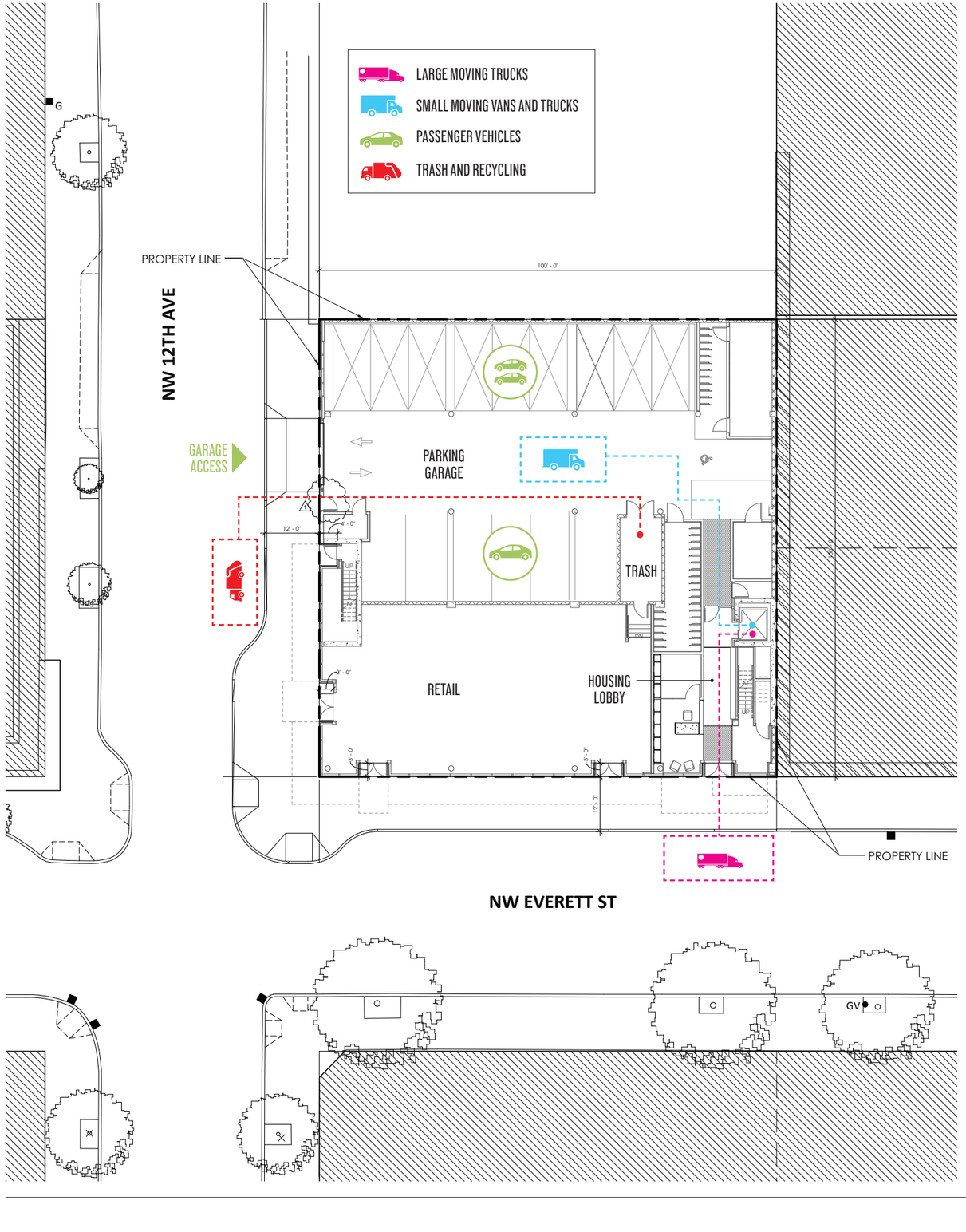
The following standards are outlined in the code guide:

Standard	Meets?
A. Projection Max 4ft into ROW	Yes
B. Clearance Min 8ft from grade	Yes
C. Area Max 40% of the wall's area	Yes
D. Length Max 50% of building wall length	Yes
E. Window Area Min 10% window @ side, 30% window @ face	Yes
F. Width Max 12ft for each element	**No.** **Width is 32 ft**
G. Separation Min 12 ft separation from other projections	Yes

All standards in the code guide are met, except for "Standard F: Width." The standard outlines that:

"...the width may vary provided the area of all windows on a wall which project into public right of way does not exceed 40% of the wall's area and the width of any single projecting window element does not exceed 50% of its building wall's length."

If wider than 12ft	Max	Proposed
Area of all windows	40%	36%
Width of projection	50%	33%



THE JANEY APARTMENTS

NW 12TH + EVERETT

BUILDING PROGRAM SUMMARY

- (5) LEVELS OF HOUSING OVER (1) LEVEL OF PARKING AND RETAIL
- 50 APARTMENTS
- SMALL GROUND-FLOOR LOBBY
- BLEND OF MECHANICAL AND SURFACE PARKING STALLS IN ENCLOSED GARAGE

LOADING OPERATIONS

- LOADING AND UN-LOADING FOR TENANTS OCCURS ONLY DURING BUSINESS HOURS.
- SMALL MOVING TRUCKS AND VANS (UP TO 14 FT. HIGH) LOAD AND UNLOAD INSIDE GARAGE.
- LARGE AND OVERSIZED MOVING VEHICLES PARK ON THE STREET DIRECTLY IN FRONT OF FRONT DOOR IN A CITY-DESIGNATED LOADING ZONE.
- MULTIPLE-DAY MOVES (SUCH AS PODS) REQUIRE A RESERVATION AND PERMIT THROUGH P-BOT IN ORDER TO USE ON-STREET LOADING ZONE.

TRASH / RECYCLING OPERATIONS

- TRASH AND RECYCLING TRUCKS PARK ON STREET NEXT TO GARAGE ENTRY DOOR.
- RECYCLING BINS SERVICED 4 TIMES PER WEEK.
- COMPOST + TRASH BINS SERVICED 2 TIMES PER WEEK
- ALL PICK-UP TIMES SCHEDULED AFTER 7AM TO REDUCE NOISE ISSUES.

LOADING + TRASH NARRATIVE

Loading and trash service will be managed at 19th and Overton in a manner similar to The Janey Apartments, located at NW 12th and Everett in Portland's Pearl District.

As opposed to The Janey, there is no retail use at 19th and Overton, so there will be retail loading needs.

Trash service will occur multiple times per week during early morning hours. Trash and recycling trucks will park on the street while bins are wheeled out to the curb from the trash room which is located inside of the garage.

Loading and unloading for tenant moves will happen during business hours when a building manager is available to supervise. Loading for large trucks will occur curb-side.

Use of the internal parking garage by building residents for loading and unloading purposes will be limited to only small single unit trucks and vans. While vans will be able to turn around independently within the garage, single unit trucks will need to back out onto NW 19th Avenue. To ensure the safety of the public, the Applicant is willing to accept a condition of approval requiring the building manager to be present to assist with all back-out maneuvers involving single-unit trucks from the parking garage.

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

October 29, 2014 Project #: 18302.0

Jennifer Tower and Fabio de Freitas
Portland Bureau of Transportation
1900 SW 4th Ave, Suite 5000
Portland, OR 97201

RE: Vehicle Queuing Analysis for Garage Entrance to 19th & Overton Apartment Project - Portland, OR (File No. EA 14-197851 PC)

Dear Jennifer and Fabio,

Pursuant to your request, Kittelson & Associates, Inc. has assessed potential vehicle queuing associated with the apartment project proposed at 1313 NW 19th Avenue in Portland. This assessment focuses on the proposed parking garage entrance and security gate operation along NW 19th Avenue, just north of NW Overton Street. As proposed, no vehicular access to the apartments will be provided via NW Overton Street.

DEVELOPMENT DESCRIPTION

The Applicant, NW 19th, LLC, is proposing to construct 58 apartments on the northwest corner of the NW 19th Avenue/NW Overton Street intersection. *A conceptual site plan for the project is provided in Attachment "A".*

The current site contains a small office building used by the Portland Police Bureau. The office building has a small L-shaped asphalt parking lot with accesses on both NW 19th Avenue and NW Overton Street. As part of site redevelopment, access to NW Overton Street will be removed and only access to NW 19th Avenue will be provided. Three loft-living units will be provided on the ground floor with the remaining 55 units located in the 5 stories above. The proposed apartment structure will house an internal parking garage on the ground floor. The parking area will include mechanized parking for 32 vehicles, plus an accessible ADA space.

Access to the parking garage will be provided by a 23-foot wide driveway along NW 19th Avenue, approximately 74 feet north of the extended curb line on NW Overton Street. The entrance will include a spiral "roll-down" security gate located 15.5 feet from the finished curb line and inset 3.5 feet from the property line.

All truck loading and unloading activities (including garbage services) will occur within the parking structure, per City of Portland Development Code requirements.

FILENAME: H:\PROJFILE\18302 - 19TH AND OVERTON APARTMENTS\REPORT\FINAL\18302 QUEUING LETTER.DOCX

VEHICLE QUEUING ANALYSIS METHODOLOGY

To ensure that the parking garage access on NW 19th Avenue will operate in a safe and efficient manner without creating queuing conflicts with other on-street vehicles or pedestrians on the adjacent sidewalk, a queuing analysis was conducted using a methodology outlined in the *ITE Traffic Engineering Handbook 6th Edition* (Reference 1). The analysis is based on the physical characteristics of the driveway to the parking garage, expected traffic demand, and security gate performance specifications. This analysis considers the arrival rate of vehicles (using a Poisson distribution to account for random arrivals and departures) and the rate that vehicles can be served. Finally, the analysis calculates expected probabilities of vehicle queues lengths.

Parking Garage Traffic Demand

The estimated traffic demand associated with the proposed parking garage is directly related to the 58 apartment units within the development structure. Using suburban trip rates published in the *ITE Trip Generation Manual, 9th Edition* (Reference 2) for Land Use Code 220 (Apartment), traffic demand was estimated for the parking garage access during the critical weekday a.m. and p.m. peak hours. The results are shown below in Table 1.

Table 1 – Estimated Trip Generation for Parking Garage Access

Land Use			Weekday AM Peak Hour				Weekday PM Peak Hour			
	Data Source	Size	Rate	Total	In	Out	Rate	Total	In	Out
Apartment	ITE Land Use Code 220	58 Dwelling Units	0.51 per Unit	30	6	24	0.62 per Unit	36	23	13

As shown in Table 1, the apartments are estimated to generate 30 weekday a.m. peak hour and 36 weekday p.m. peak hour trips. The queuing analysis assumes that the vehicle trips will all occur within the garage. Per the information in Table 1, the highest volume of entering trips is 23 vehicles per hour whereas the highest outbound volume is 24 vehicles per hour per the ITE rates. These maximum inbound and outbound values were used as the inputs for the vehicle queue analysis to produce a conservative result.

Parking Garage Security Gate and Driveway Operations

The proposed security gate to the parking garage will be a "spiral" roll-down door operated remotely by a transponder. KAI reviewed the typical operations for this type of gate and determined that although opening speeds can be set to as fast as 2 seconds, a more conservative frequency of 7 seconds was assumed for the vehicle queuing analysis to fully raise or lower this type of gate. An additional 5 seconds was added to this time to account for the possibility of pedestrians passing by in front of an open gate resulting in a final opening service time of 12 seconds, which is very conservative.

From an access and circulation standpoint, drivers will enter the parking garage by making a right-turn from NW 19th Avenue, which is a one-way street in the southbound direction. After pausing for any bicyclists in the bike lane on 19th Avenue and any pedestrians on the sidewalk, drivers will enter the parking garage and proceed to one of two mechanized parking stackers, each having 16 portals to park a car. When leaving the garage, drivers will make a right-turn onto NW 19th Avenue after pausing for any pedestrians and bicyclists. It is also important to emphasize that exiting drivers will not be hindered by other drivers entering the garage from the north.

Parking Garage Security Gate Location

From a spatial standpoint, the proposed security gate will be located 15.5 feet from the edge of the curb line of NW 19th Avenue. Of this distance, 12 feet is the effective sidewalk width within the public right-of-way; the remaining 3.5 feet represents the inset distance from the building face. It should also be emphasized that there is an 8-foot wide on-street parking area on the west side of NW 19th Avenue. Therefore, the potential storage space for a vehicle to exit the travel lane on NW 19th Avenue and stop in front of a closed security gate is 23.5 feet; a distance that can adequately accommodate a passenger car or SUV.

The internal parking garage area will provide for 21.5 feet of stacking distance for exiting vehicles. This is the distance between the security gate and the beginning of the first internal mechanized parking space.

Vehicle Queueing Analysis Results

Table 2 summarizes the results of the queuing analysis for the proposed parking garage access onto NW 19th Avenue. *Attachment B provides the queuing calculation worksheet.*

Table 2 –Vehicle Queue Analysis Results for Parking Garage Access

Queue Length	Cumulative Probability of Queue	
	Right Turn Entering from NW 19th Avenue	Right Turn Exiting from Parking Garage
0 Vehicles	92%	92%
1 vehicle or less	99%	99%
2 vehicles or less	100%	100%

Based on the results in the above table, the entering and exiting queues are estimated to reach only 1 vehicle or less 99% of the time during the critical a.m. and p.m. peak hours of a weekday. More specifically, the estimated 95th percentile queue for either the inbound or outbound movement would be just under one vehicle and would not extend back into the through travel lane or bicycle lane on the public street (inbound queue) or into the mechanized parking area of the garage (outbound queue). Based on these findings, the proposed security gate to the parking garage access along NW 19th Avenue should adequately accommodate site traffic demand entering and exiting the garage.

Mechanized Parking Operation

As stated earlier, the project will include two separate mechanized parking stackers within the parking garage. Each parking stacker will have 16 portals to park a car, totaling 32 spaces. The stackers have up to 3 vertical levels. Based on correspondence with a mechanized parking machine contractor, drivers needing to place or retrieve their vehicles in a portal will experience an average processing time of 1.5-2 minutes. With two mechanized stackers, this means an average processing time of 45 seconds to 1 minute. This equates to a service rate of 60-80 cars in an hour. With only 30-36 vehicles projected to enter and leave the garage in the peak hours, the mechanized parking stackers have more than enough processing capacity to meet peak parking demand.

CONCLUSIONS

Based on the transportation assessment of the proposed 19th/Overton apartment project, we have determined that the parking garage and security gate facility to NW 19th Avenue can operate in a safe and efficient manner based on the following findings and recommendations.

Findings

- Based on ITE trip generation rates, the proposed apartments could 30 total weekday a.m. peak hour trips and 36 total weekday p.m. peak hour trips.
- The maximum number of exiting trips is estimated to reach 24 vehicles during the critical weekday a.m. peak hour and the maximum number of entering trips is estimated to be 23 vehicles during the critical weekday p.m. peak hour.

- Using conservative values for security gate operations, inbound and outbound vehicle queues are estimated to reach just under one vehicle 95 percent of the time during the weekday a.m. and p.m. peak hours. These results indicate queues would not extend back into the adjacent through travel lane or bicycle lane on the public street (inbound queue) or into the mechanized parking area of the garage (outbound queue).
- The proposed mechanized parking stackers within the parking garage have more processing capacity than the projected peak parking demand needs.

Recommendations

- The security gate installed at the parking garage of this apartment project should timed to fully open and close in 7 seconds or less to ensure safe and efficient vehicle operation and to minimize conflicts with pedestrians walking along the NW 19th Avenue sidewalk.

We trust this transportation assessment letter adequately addresses operations and safety of the proposed parking garage access for this project. Please let us know if you have any additional questions regarding this analysis.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Brian J. Dunn, P.E.,
Associate Engineer

Cc: Julia Kuhn, P.E. Kittelson & Associates, Inc.

Attachments: A – Conceptual Site Plan
B - Queuing Analysis Worksheet

References: 1 – Institute of Transportations Engineering, *Traffic Engineering Handbook*, 6th Ed., 2009.
2 – Institute of Transportations Engineering, *Trip Generation Manual, 9th Ed., 2012.*

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

December 31, 2014 Project #: 18302.0

Jennifer Tower
Portland Bureau of Transportation
1900 SW 4th Ave, Suite 5000
Portland, OR 97201

RE: Adjustment to Loading Standards for 19th & Overton Apartment Project - Portland, OR
(File No. LU-14-229920-000-00 / EA 14-197851 PC)

Dear Jennifer,

Kittelson & Associates, Inc. (KAI) has prepared this letter summarizing the results of a sight distance analysis for the proposed 19th/Overton Apartment project in Portland. The purpose of this letter is to support the Applicant's proposed adjustment to the City's Loading Standards, which require loading facilities to be designed so that vehicles can enter and exit the site in a forward motion. Per the proposed site plan, all single-unit trucks utilizing the loading facilities within the parking garage of this project cannot turn around and must back out of the site access driveway onto NW 19th Avenue.

Based on the findings documented herein, there is sufficient stopping sight distance available for drivers traveling southbound on NW 19th Avenue to stop before reaching a single-unit truck backing out from the proposed site access driveway. In addition, drivers of single-unit trucks will have sufficient clearance from the sidewalk area to see if vehicles or bicyclists are present along NW 19th Avenue before attempting a backing maneuver onto the adjacent roadway. Under these conditions, the proposed adjustment to allow for backing maneuvers by single-unit trucks should not negatively affect traffic safety of drivers or bicyclists. The following sections of this letter present the results and findings of this sight distance analysis.

PROJECT BACKGROUND

This sight distance assessment focuses on the proposed loading facility within the parking garage area of the project and use of the site access to NW 19th Avenue. Although normal passenger cars and vans using the loading facility will be able to turn around within the garage area, space is limited such that single-unit trucks will not be able to turn around. As such, all single-unit trucks will be required to back out onto the adjacent street.

BASIS FOR REQUESTED ADJUSTMENT

As indicated in PBOT's November 12, 2014 response letter for completeness review, the Applicant is required to seek PBOT approval of an adjustment to the City's Loading Standards to allow trucks to back out of the site loading facility. The applicable code section is Chapter 33.266.310.F of the City's Zoning Code, which states the following in regards to loading facilities:

> *"F. FORWARD MOTION. 1. Outside the Central City plan district. Outside the Central City plan district, loading facilities must be designed so that vehicles enter and exit the site in a forward motion."*

STOPPING SIGHT DISTANCE ANALYSIS

An analysis of stopping sight distance was conducted to ensure drivers traveling at design speed southbound on NW 19th Avenue have sufficient distance to stop before reaching a single-unit truck backing out of the proposed site access. For the analysis, measurements of stopping sight distance were obtained from aerial photography and a field visit, and then compared against design parameters from *A Policy on Geometric Design of Highways and Streets (*AASHTO, Reference 1).

One of the primary inputs in determining the minimum amount of stopping sight distance according to AASHTO guidelines is the design speed of the respective roadway. NW 19th Avenue has a posted speed limit of 25 mph, which we believe is representative of the design speed for this roadway given the urban setting, the presence of bicycle lanes, on-street parking, and local access driveways on one or both sides of the street, and with intersecting public streets every 250 feet. This assumption is further supported by the fact that the NW 19th Avenue/NW Northrup Street intersection, one block south of the proposed development site, is an all-way stop. Based on the assumed design speed of 25 mph, AASHTO recommends a minimum stopping sight distance of 155 feet for NW 19th Avenue.

Aerial photography shows that NW 19th Avenue is a straight and flat roadway. Field observations confirmed this as well. In addition, measurements taken in the field indicate drivers heading southbound on NW 19th Avenue are able to continuously see more than 2 blocks ahead, or more than 500 feet. These results demonstrate that available stopping sight distance far exceeds the minimum AASHTO design standard. Therefore, drivers have sufficient room to see and avoid a truck backing out of the proposed site access.

VISUAL CLEARANCE FOR TRUCK BACKING MANUEVER

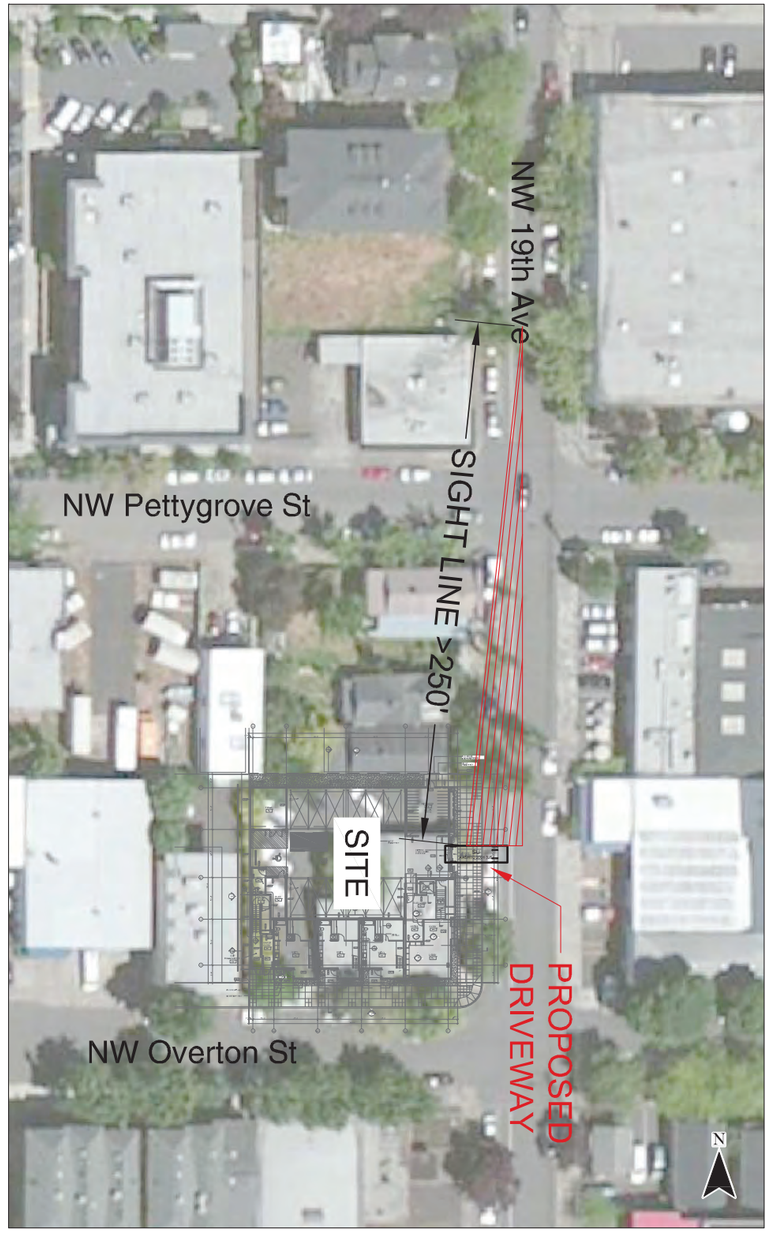
Although it has been demonstrated that adequate stopping sight distance exists along NW 19th Avenue for drivers to stop before reaching a truck backing out of the proposed site access, PBOT staff have requested additional evidence describing a truck driver's ability to see and respond to vehicles and bicyclists traveling southbound on NW 19th Avenue before attempting to back out of the site driveway.

Figure 1 illustrates a single-unit truck backing out of the proposed driveway to NW 19th Avenue. As shown, when the truck cab reaches the external building face, the truck driver will have a sight line in excess of 250 feet when looking out of the right-side of the cab to the north.

H:\projfile\18302 - 19th and Overton Apartments\cIwgs\figs\18302_FIGURE_001.dwg Dec 31, 2014 - 1:00pm - bcullimore Layout Tab: Site Distance

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

19th and Overton Apartments



SIGHT LINE EXHIBIT
PORLTAND, OREGON

Figure 1

December 2014

19th Overton Apartments – Portland, OR
December 31, 2014

Project #: 18302
Page: 4

The following Exhibit 1 shows the existing viewpoint of a potential truck driver looking north along NW 19th Avenue from the location of the proposed site access. The picture was taken 7.6 feet above the ground, which represents the elevation of a truck driver's eye, per AASHTO criteria. The picture also represents the driver's viewpoint right as it clears the proposed external building face; a location that is 3.0 feet behind the back edge of the sidewalk, 15 feet from the back edge of curb, and 23 feet from the edge of the bicycle lane (accounting for the 8-foot on-street parking area).

Exhibit 1: View Northbound Along NW 19th Avenue at Site Access Location

As shown in the exhibit above, 5 deciduous trees line the planter strip between the sidewalk and street, north of the proposed site access. Also shown is a single parked vehicle in an unrestricted parking zone. There are 2 additional unrestricted parking spaces in this area plus 2 more 30-minute parking spaces further north before reaching the next public intersection at NW Pettygrove Street.

As demonstrated by the exhibit above, truck drivers emerging from the proposed parking garage will be able to see approaching traffic and bicyclists on NW 19th Avenue to the north. Although the trees and parked vehicles may limit views to some degree, these features are typical for the surrounding urban environment and should not be removed or restricted.

TRUCK DESIGN VEHICLE

The proposed loading facility in the parking garage of this project is a 9'X18' space designed for use by apartment residents only. As such, the appropriate design vehicle for the loading facility should be consistent with resident needs. In most cases, residents will use their own passenger car or rental van to meet their loading needs. Using these types of vehicles, they will be able to easily turn around before exiting the garage . However, any residents using a single-unit truck will need to back out onto NW 19th Avenue.

Research was conducted into the typical lengths of single unit trucks available for rent from major commercial dealers in the Portland area. UHaul recommends their "10-, 12-, and 14-foot" options for people moving into apartments up to 2-3 bedrooms in size. These particular truck options reach total vehicle lengths of 20 feet, 22 feet, and 24 feet. Penske recommends their "12- and 16-foot" options with total vehicle lengths of 20 feet and 24 feet. Ryder also offers single-unit trucks from 22 feet to 26 feet in length. Using trucks that are between 20 and 26 feet in length, and accounting for the 5-6 feet of distance between the driver's seat and front end of the truck, drivers will have sufficient room to back out of the proposed parking garage and see traffic on NW 19th Avenue before the rear end of the truck reaches the bicycle lane on the roadway.

Although UHaul and Penske do offer larger single-unit trucks for public rental, with their largest trucks reaching 33-34 feet in total length, they are only recommended for moving into households with 4+ bedrooms. Although it is unlikely that residents of this apartment complex will rent trucks of this size, they would still be able to pull out of the parking garage and be able to see traffic on NW 19th Avenue just as the rear end of these larger vehicles cross into the bike lane.

It should be emphasized again, that the proposed loading facility within the parking garage of this project will be used by residents only. All trucks associated with garbage and recycling and deliveries by FedEx, UPS, and USPS will be handled on the adjacent streets. This includes the use of any self-storage devices such as "PODS" for moving.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this letter, there is sufficient stopping sight distance available for drivers traveling southbound on NW 19th Avenue to stop before reaching a single-unit truck backing out from the proposed site access driveway. In addition, drivers of single-unit trucks (26 feet in length or less) will be able to see if vehicles or bicyclists are present along NW 19th Avenue before attempting a backing maneuver onto the adjacent roadway. Under these conditions, it is our conclusion that backing maneuvers by single-unit trucks will not negatively affect traffic safety of drivers or bicyclists.

We trust this letter adequately addresses the approval criteria for seeking an adjustment to the City's Loading Standards. Please let us know if you have any additional questions regarding this analysis.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Brian J. Dunn, P.E.
Associate Engineer