



PEARL BUILDING EAST

LU 16-153002 HRM AD

TYPE III REVIEW SUBMITTAL

EXHIBIT B

For more information please contact:

MACKENZIE.

Paul Kisling, AIA, NCARB
Principal of Architecture | Architect
pkisling@mcknze.com

503.224.9560 ■ mcknze.com
Portland, OR ■ Vancouver, WA ■ Seattle, WA

© 2016 Mackenzie Engineering Inc. Unless noted, all text, video recordings, photos, drawings, computer generated images and/or statements are owned by Mackenzie and protected by copyright and/or other intellectual property laws. No part of these pages, either text or image may be reproduced, modified, stored in a retrieval system or retransmitted, in any form or by any means, electronic, mechanical or otherwise without prior written permission. Mackenzie®, and M.™ and all corresponding logos and designs are service marks and/or registered service marks of Mackenzie Engineering Inc . All rights reserved.

CONTENTS

ZONING OVERVIEW

- 7 F.A.R. / ZONING SUMMARY
- 8 DAR SUMMARY

CONTEXT

- 10 CONTEXT MAPS
- 12 VICINITY AERIALS
- 14 CONTEXT IMAGES

SITE AND PROGRAM

- 16 SITE PLAN
- 18 FLOOR PLANS
- 20 SECTIONS

BUILDING DESIGN

- 23 ELEVATION PROGRESSION DIAGRAMS
- 24 ELEVATIONS
- 27 ENLARGED NW 13TH AVENUE ELEVATION
- 28 ENLARGED NW GLISAN STREET ELEVATION -
MODIFICATION FOR GROUND FLOOR WINDOWS
- 30 INITIAL DESIGN CHARACTER STUDY
- 31 WALL SECTIONS
- 32 DETAILS
- 33 SIGHT LINE STUDY AND EXTERIOR MATERIALS

NW GLISAN STREET ELEVATION

- 35 DESIGN BEFORE AND AFTER DAR
- 36 GLISAN STREET MATERIAL OPTIONS AND PRECEDENTS
- 37 RENDERED VIEW

PENTHOUSE/ROOFDECK DESIGN

- 39 ENLARGED ELEVATIONS AT PENTHOUSE/ROOFDECK
- 41 PENTHOUSE/ROOFDECK MATERIALS AND DETAILS
- 43 LOCAL PENTHOUSE/ROOFDECK PRECEDENTS
- 45 PENTHOUSE MASSING STUDY
- 46 SOLAR STUDIES

- 47 RENDERED STREET VIEW

APPENDIX A: STORMWATER REPORT

APPENDIX B: MATERIALS AND CUTSHEETS

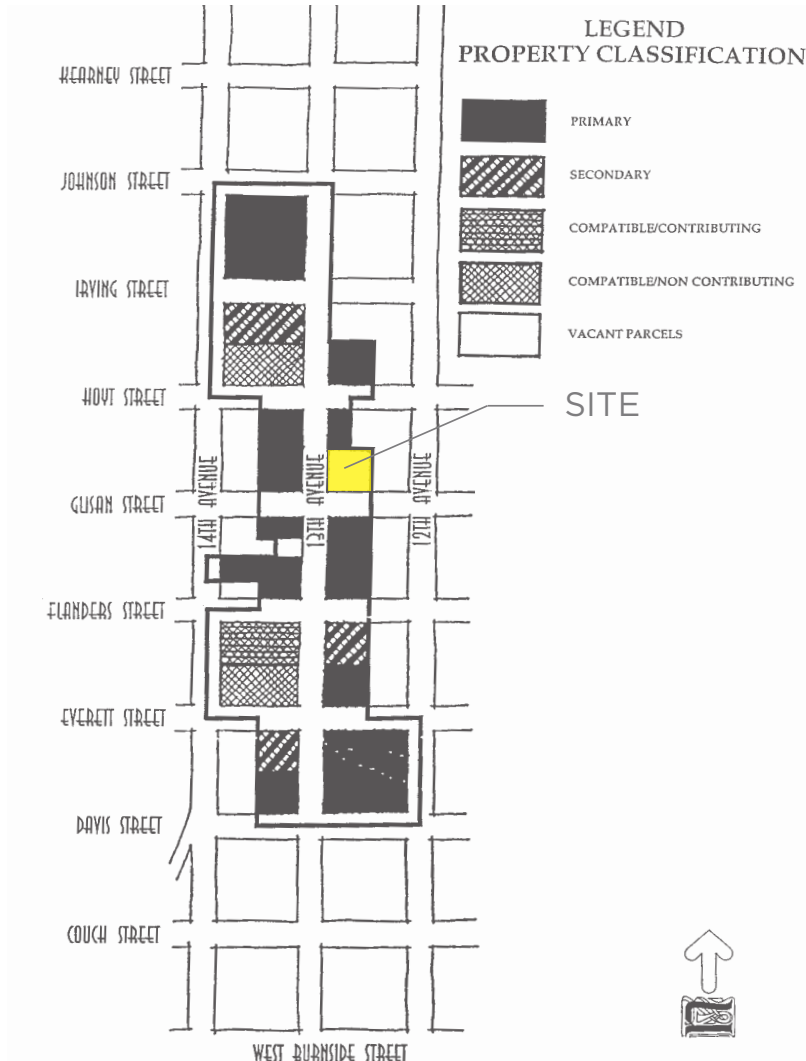
APPENDIX C: RESPONSE TO DAR MEMO



CURRENT SITE: PEARL BUILDING EAST
NW 13TH AND GLISAN

A large, light gray, stylized number '4' is positioned on the left side of the slide, extending from the bottom left towards the top right. It serves as a background element for the title.

ZONING OVERVIEW



NW 13TH AVENUE HISTORIC DISTRICT



NEW BUILDINGS IN THE HISTORIC DISTRICT

NW 13th Avenue Historic District Design Guidelines (FEB. 1996)

1. SITING

Required Building Lines (both 13th and Glisan):
 - Building must extend to street lot line along 75% of lot line *OR*
 - Extend within 12' of street lot line for 75% of lot line if the space between the building and the street lot line is designated a sidewalk extension for active uses such as sidewalk cafes, vendor stands, or developed as stopping places.

2. HEIGHT AND BULK

New construction should be at least equivalent to two stories in height and not exceed maximum height requirements designated by the Zoning Code.

3. COMPOSITION

New construction should respect and reflect the tripartite nature of the existing buildings in the district with a clear base, middle, and top.

4. SCALE AND PROPORTION

The size and relationships of openings and architectural elements should be of a scale and proportion compatible with the historical architectural patterns. Blank walls should be avoided on street elevations, especially at the ground floor.

5. MATERIALS, COLORS, AND TEXTURES

Materiality of new buildings should be compatible with materials, colors, and textures in the District. Implementation of masonry and stuccoes masonry as a major material is encouraged. (Careful attention must be paid to color/texture/size of brick, width of brick joints, and color/profile of joints in new brick work)

6. REAR/SIDE WALLS AND ROOFS

Non-street elevations should be simple, masonry clad with or without windows. Effort should be made to obscure views of roof top mechanical units and electrical equipment.

7. SPECIAL FEATURES (I.E. LOADING DOCK, ENTRY CANOPIES, CAST-STONE LINTELS/SILLS/CORNICES, WATER TOWERS)

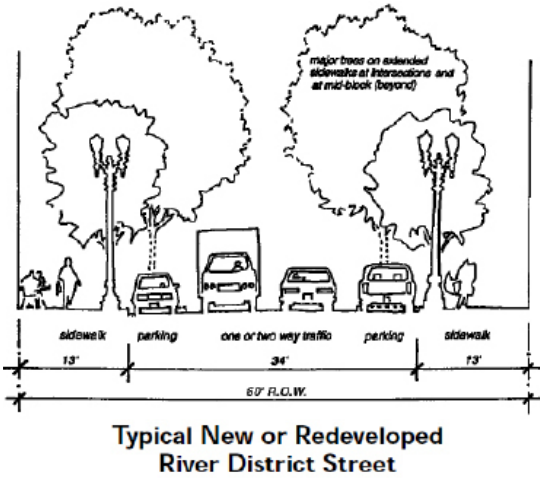
Effort should be made to incorporate special features, though they should not dominate or distract from integrity of design.

8. SIGNAGE

Signage of principal (street) elevations should not be a dominate facade feature. Lettering painted on windows, or interior signage does not require review. Indirectly lit lettering mounted above storefront permitted. Contemporary plastic, backlit signage is discouraged.

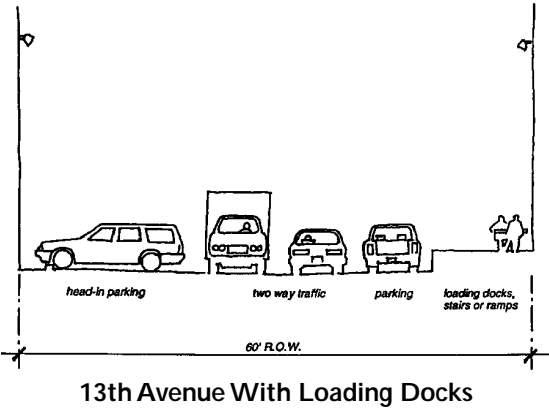
River District Right-of-Way Standards (revised AUG. 2012):

NW GLISAN STREET



Right-of-Way: 60 feet
Roadway: 36 feet
Sidewalks: 12 feet both sides
Curbline: May be extended at corners
Circulation: One or two-way, two lanes
Parking: Allowed both sides
Street Trees: Uniform plantings, upright street trees
Street Lighting: Twin Ornamental Lights
Parking Access: Driveway for vehicular access to off-street parking should preferably be located near mid-block, away from intersections. Design should emphasize that vehicles are crossing a pedestrian zone (garage ramps perpendicular to the street direction are encouraged, ramps parallel to the street direction are discouraged)

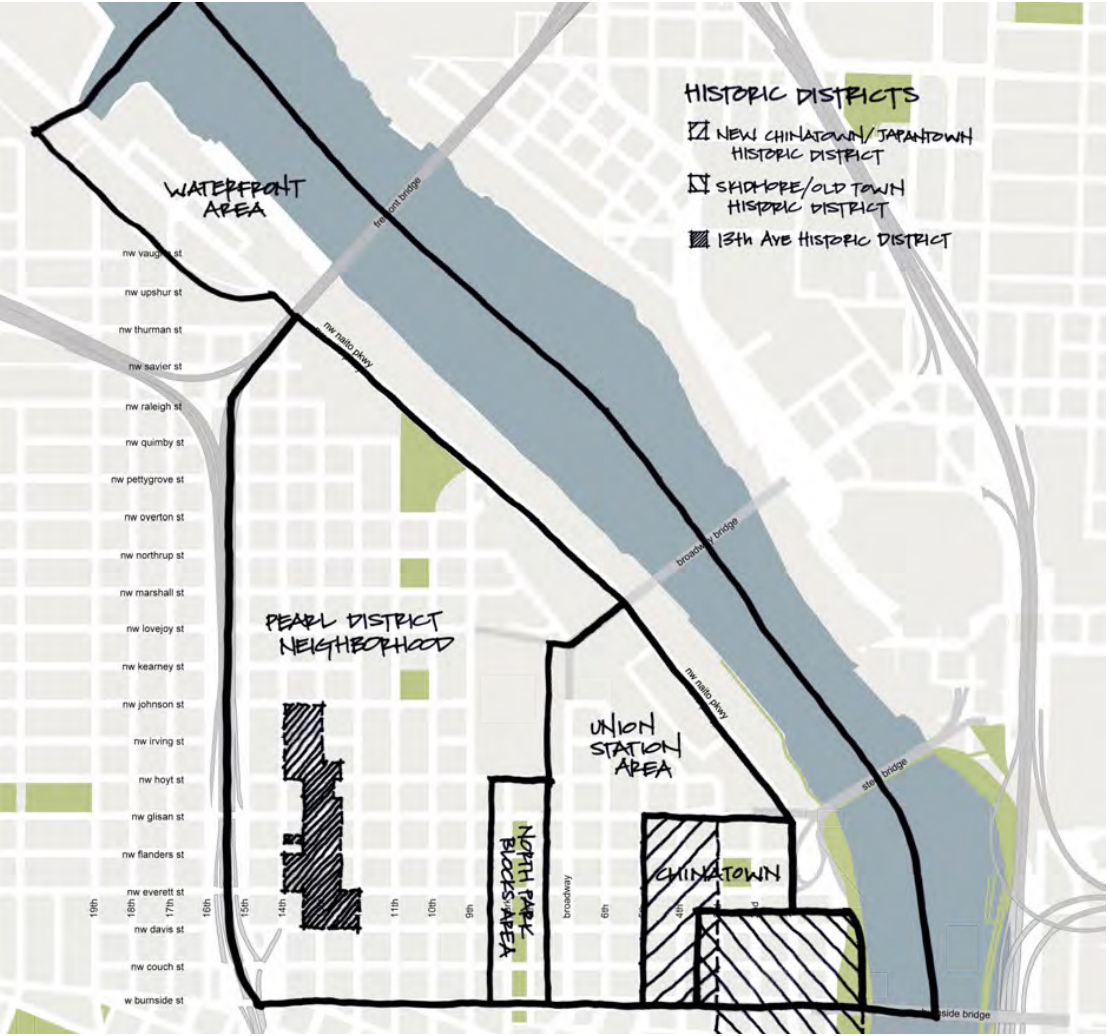
NW 13TH AVENUE



Right-of-Way: 60 feet
Roadway: 22 feet travel lane
Sidewalks: None. Loading docks, pedestrian stairways and ramps allowed in lieu of sidewalks (maximum 11' projection).
Curbline: None
Circulation: Two-way, two lanes
Parking: Parallel to docks, head-in parking at locations without docks.
Street Trees: None.
Street Lighting: Cobra Lights
Parking Access: Driveway access to off street parking not permitted on 13th Avenue (requires adjustment).

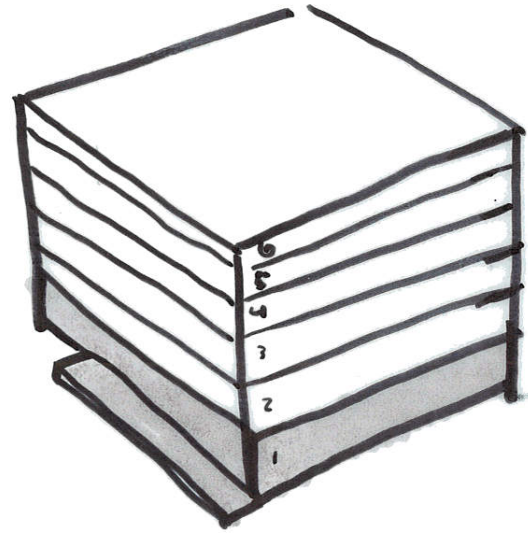
River District Design Guidelines (revised NOV. 2012):

SPECIAL AREAS WITHIN THE RIVER DISTRICT



RIVER DISTRICT DESIGN GUIDELINES | 2008

“River District Design Guidelines will not be applied to design review within historic districts if the historic district contains its own set of design guidelines”



BASE ZONE: CENTRAL CITY - 6:1

Height Limit: 100 feet

Land Use Classification: Central Employment (EX)

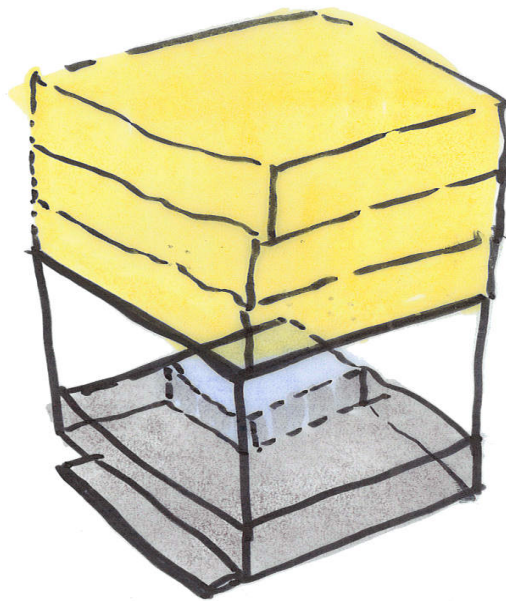
Plan District: Central City Plan District

District: NW 13th Ave. Historic Design District (d), use River Distric Design Guidelines

BONUS OPTIONS AVAILABLE:

Eligible for bonuses, but max increase of 3:1, 75 feet through bonuses. Total potential FAR for site is 9:1, 175 feet with bonuses.

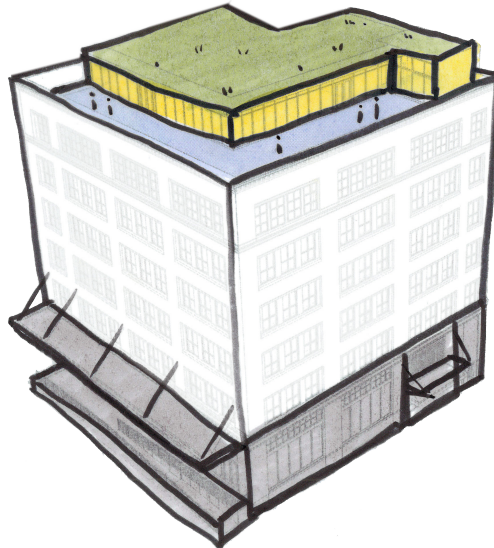
- If FAR bonus of over 1:1 and less than 2:1 is earned, bonus 15' height.
- If FAR bonus over 2:1 and less than 3:1 is earned, bonus 30' height.
- If FAR bonus of 3:1 is earned, bonus 45' height.
- Housing height bonus of up to 75' (subject to review).



BONUS: LOCKER ROOM

For each square foot of area committed to locker room facilities, 40 square feet of additional floor area is earned.

- To qualify for the bonus:**
- a. must include showers, dressing area, and lockers
 - b. all building tenants must have access
 - c. At least 110% of required long-term bicycle parking for the site must be provided and must meet the standards of 33.266.220.B., Long-term Bicycle Parking.



PROJECT FAR SUMMARY

Lot Size:	10,000 SF
First Floor:	9,600 GSF
- (Retail:	3,600 GSF)
Second Floor:	9,834 GSF
Third Floor:	9,834 GSF
Fourth Floor:	9,834 GSF
Fifth Floor:	9,834 GSF
Sixth Floor:	9,834 GSF
Penthouse:	4,475 GSF

FAR: 6.32 (63,245/10,000)

LOCKER ROOM BONUS EARNED:

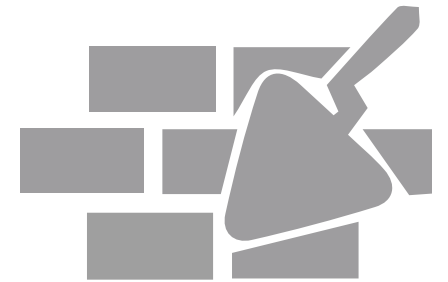
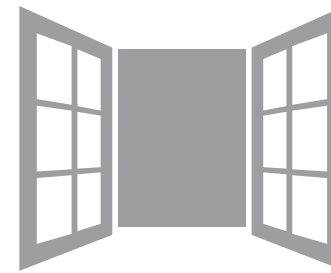
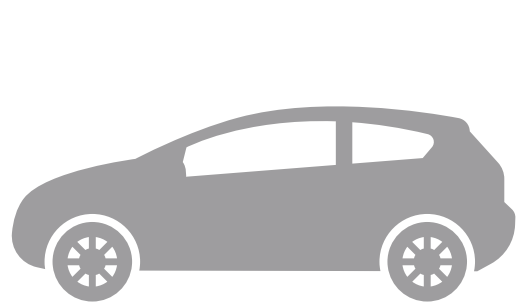
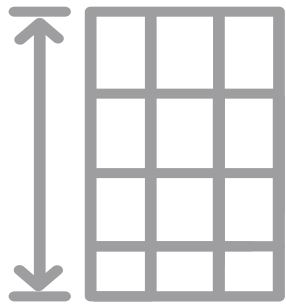
Locker Room 1:	297 SF
Locker Room 2:	282 SF
Total:	579 SF

40 sf per Locker Room = 23,160 Floor Area Earned
FAR Earned = 2.16 (23,160 SF/10,000 SF)
Total Allowable FAR for Site and Program = 8.16:1

PARKING AREAS

Parking level 1: 7,650 SF
Parking level 2: 8,325 SF
Parking level 3: 7,325 SF

Total: 23,300 SF
Total Parking Count: 45 spaces



1. SCALE + MASSING

Commission Comments:

- A. 6 stories with a set-back penthouse is approvable and appropriate.
- B. Penthouse elements should not cause the building to appear as a 7-story building.

Project Response:

- A. The project is proposed as 6 stories with a set-back penthouse.
- B. Project proposes that penthouse elements are set back and disconnected from the planes of all major facades.

2. STREET FRONTAGE

Commission Comments:

- A. Consider decreasing the scale of the opening at the Glisan Street garage door.
- B. Consider decreasing the scale of the concrete base at Glisan Street.

Project Response:

- A. Project proposes a canopy over the garage entrance to visually break up the scale of the opening, especially at the pedestrian scale.
- B. Project proposes boardform concrete at the base to provide scale and texture. Metal louvers with integrated benches, as seen on neighboring buildings, are also proposed to break scale of the base and enliven the human experience on Glisan Street.

3. ROOFTOP LEVEL

Commission Comments:

- A. Consider simple, industrial style for penthouse materials that do not distract from main brick mass of the building.
- B. Penthouse elements should not cause the building to appear as a 7-story building.

Project Response:

- A. Proposed materials are light colored to blend into sky and not distract from the bulk of the building.
- B. Project proposes that penthouse elements are set-back and disconnected from the planes of major facades. The parapet acts as a natural guardrail so no additional guardrail element is needed. The deep cornice reduces sightlines of the penthouse from the street.

4. WINDOWS

Commission Comments:

- A. The proportions of windows and divisions of mullions are appropriate.
- B. Consider reducing size of metal spandrel panel in the ground level storefront system.

Project Response:

- A. Additional detailing of windows are shown in the package to demonstrate window depth.
- B. Project proposes a reduced spandrel panel at a size that accommodates concealing the structural support for the storefront system.

5. MATERIALS + DETAILS

Commission Comments:

- A. Proposed materials of blended brick, concrete, dark painted steel, and limited wood is appropriate. Consider less detailed treatment of “end” walls at North and East.
- B. Proposed continuation of windows onto North facade is acceptable. Consider extending line of brick.

Project Response:

- A. Project proposes simple stuccoed or painted masonry units at East facade.
- B. Pending agreement with neighboring building, project proposes extending brick line up to 70 feet on the North facade, with stuccoed or painted masonry adjacent to this brick.



CONTEXT

LEGEND

Pearl Building East Site

NW 13th Ave Historic District

Bus Route

Streetcar

Bus Stop

Streetcar Stop

Retail / Service / Office

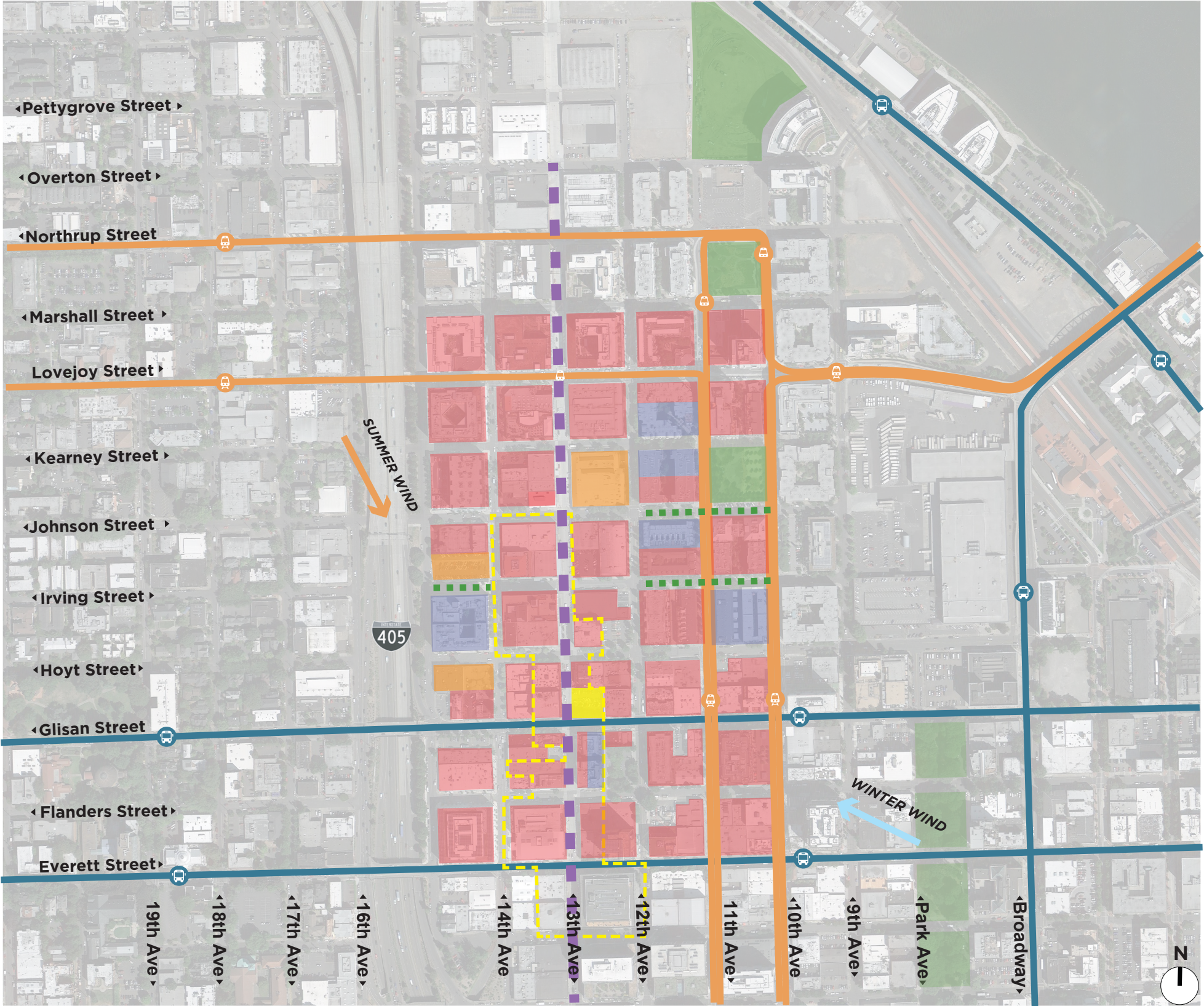
Residential

Parks

New Development

Pedestrians Only

Shared Roadway
(Cars + Pedestrians)



LEGEND

- 1 Site, Mixed Uses - Office, Retail, Residential
- 2 Mixed Uses - Office and Retail
- 3 Mixed Uses - Office and Retail
- 4 Mixed Uses - Office, Retail, Residential
- 5 Mixed Uses - Office and Retail
- 6 Mixed Uses - Office and Retail
- 7 Mixed Uses - Office and Retail
- 8 Mixed Uses - Office and Retail
- 9 Mixed Uses - Office and Retail



VICINITY AERIAL - BUILDING HEIGHTS

The Avenue Lofts: 105 ft. / 92 ft.
Irving Street Lofts: 117 ft / 105 ft.

Keen: 72 ft.
Modern Confectionary Lofts: 47 ft.

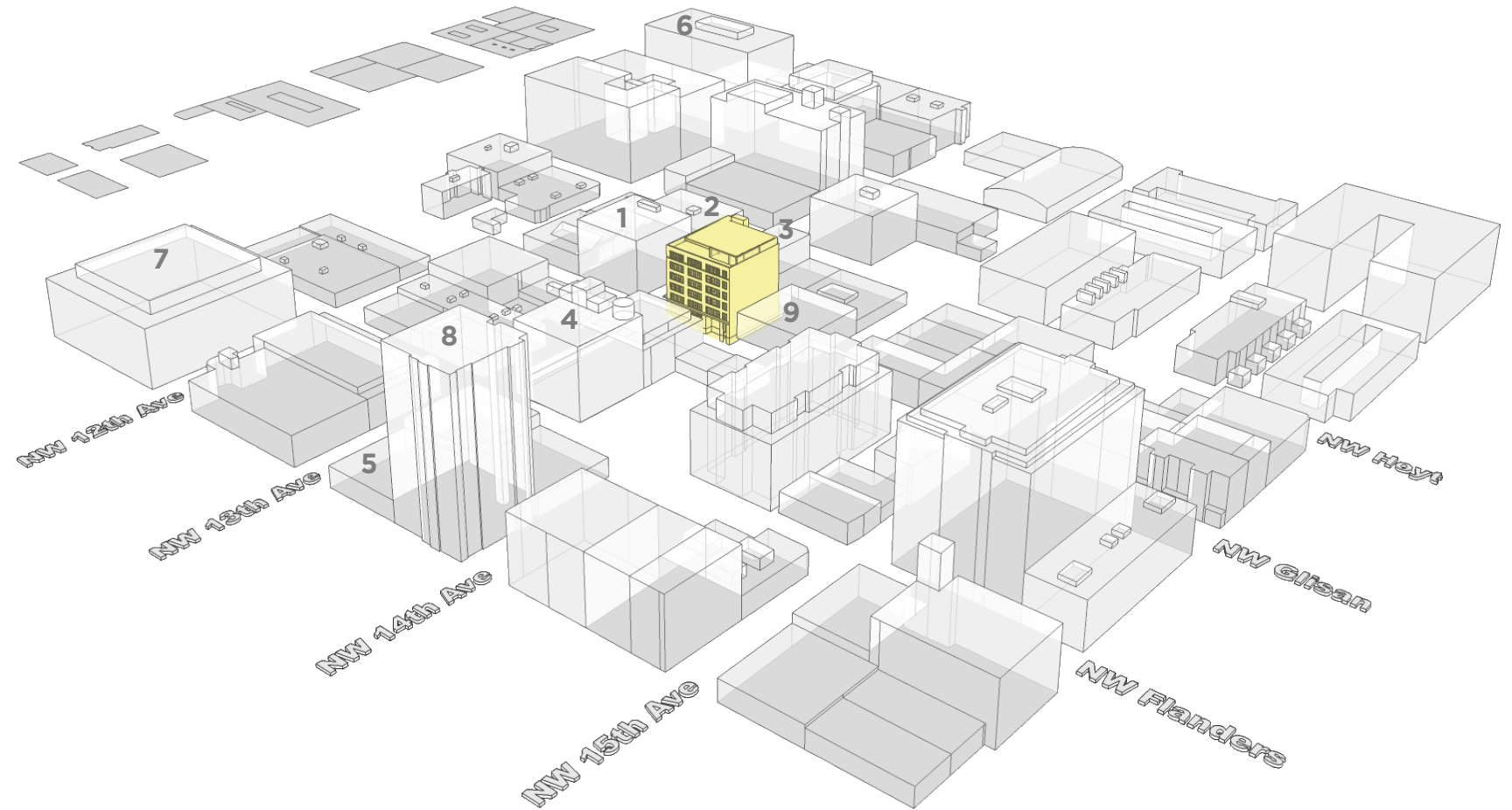
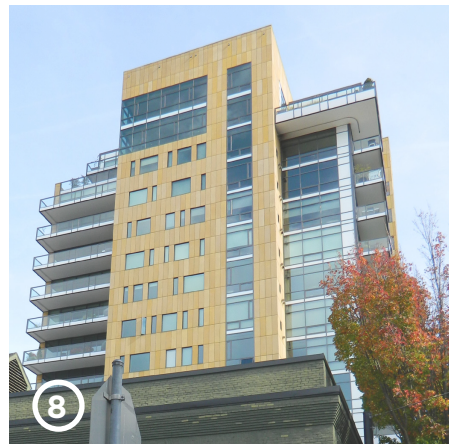
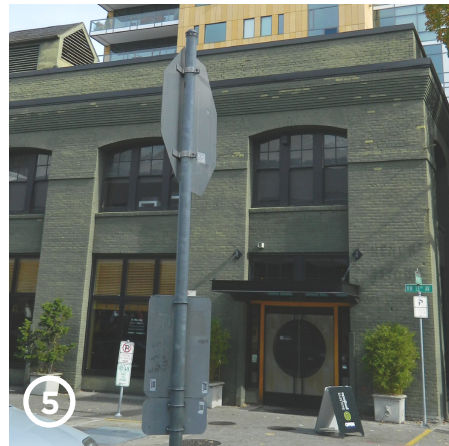
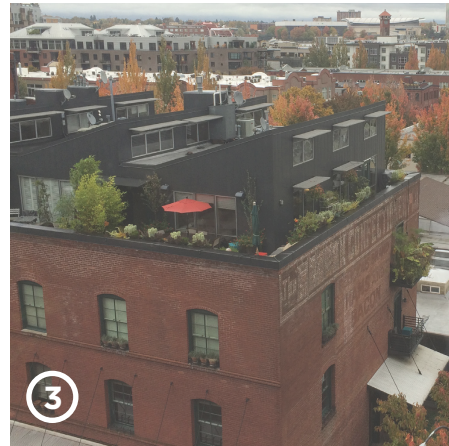
Vestas: 67 ft.
Chown Pella Lofts: 85 ft. / 55 ft.

The Casey: 187 ft.

The Gregory Lofts: 156 ft.

Outline of the 13th Avenue Historic District





There are a variety of tones, textures, and proportions in the neighborhood. The project design has the opportunity to take these aspects into consideration, while respecting the historic nature of NW 13th Ave.



CONFECTIONARY LOFTS COURTYARD



NW CORNER OF 13TH AND GLISAN



KEEN BUILDING



HISTORIC BUILDINGS AT WEST SIDE OF 13TH



13TH ON BARISTA LOADING DOCK



SITE AT GLISAN LOOKING EAST



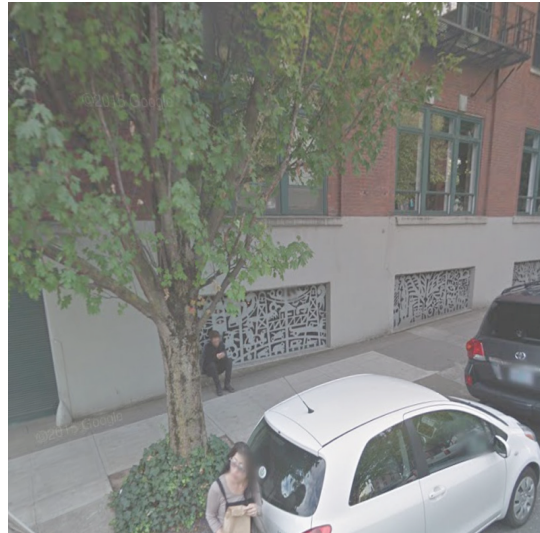
LOADING DOCK AT CONFECTIONARY LOFTS



SITE LOOKING NORTH



13TH AT CHOWN PELLA LOOKING NORTH



CHOWN PELLA CONCRETE BASE ON GLISAN

SITE AND PROGRAM

PROPERTY LINE

LOADING DOCK FOR PEDESTRIAN ACCESS
(WITH CANOPY ABOVE)

PARKING GARAGE ENTRANCE
(WITH CANOPY ABOVE)

ADA ACCESSIBLE RAMP

NEW SHORT-TERM BICYCLE PARKING (24)

EXISTING TRANSFORMER VAULT
TO REMAIN BELOW GRADE

PROPOSED NEW VAULT
LOCATION(S) BELOW GRADE

EXISTING LINE OF UTILITIES BELOW GRADE

NEW STREET LIGHTING AND
STREET TREE TO COMPLY WITH
RIVER DISTRICT R.O.W. STANDARDS

NW 13TH AVE.

35'-0"

22'-0"

P

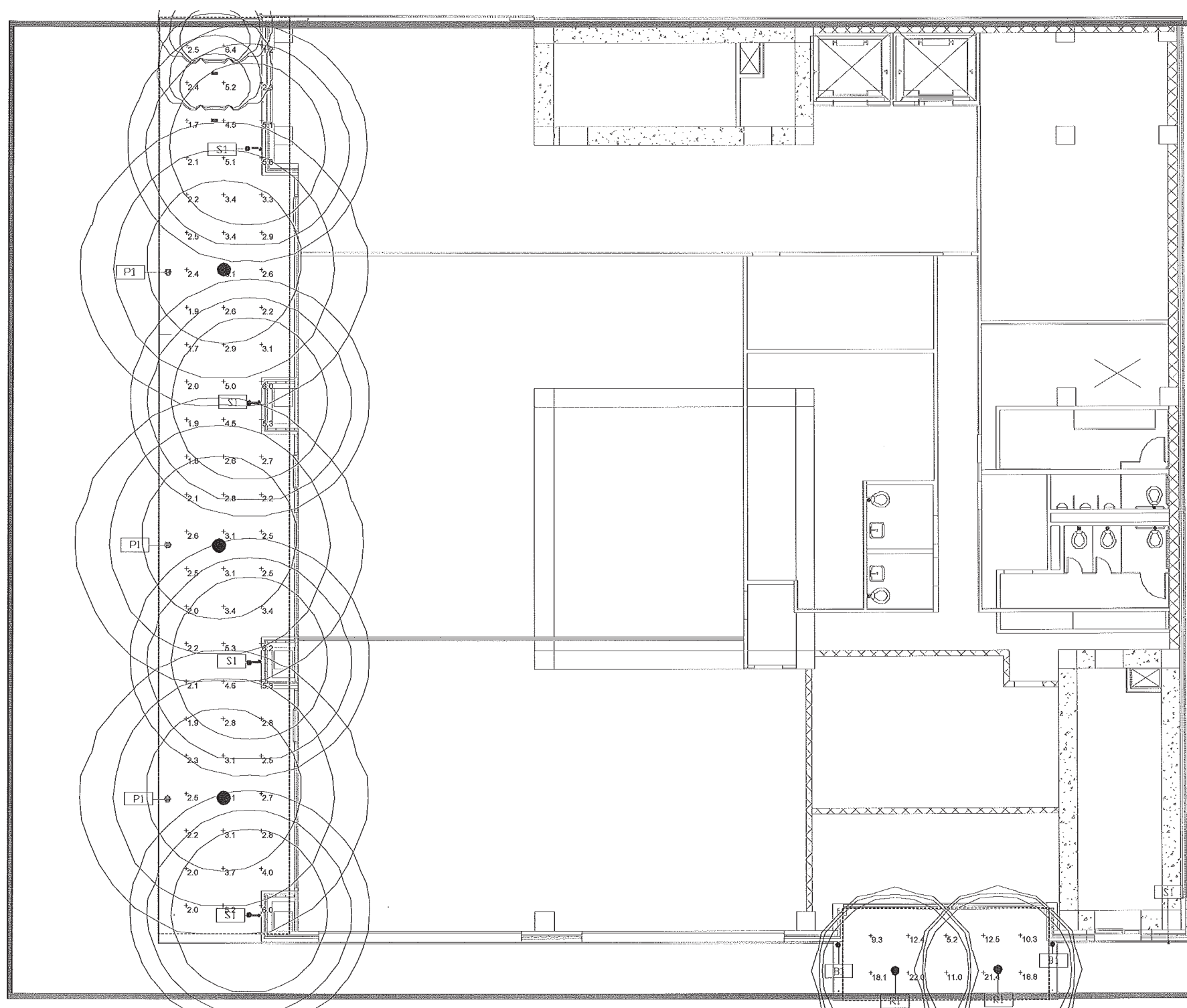
NW GLISAN STREET






Site Plan

Pearl Building East
LU 16-153002 HRM AD

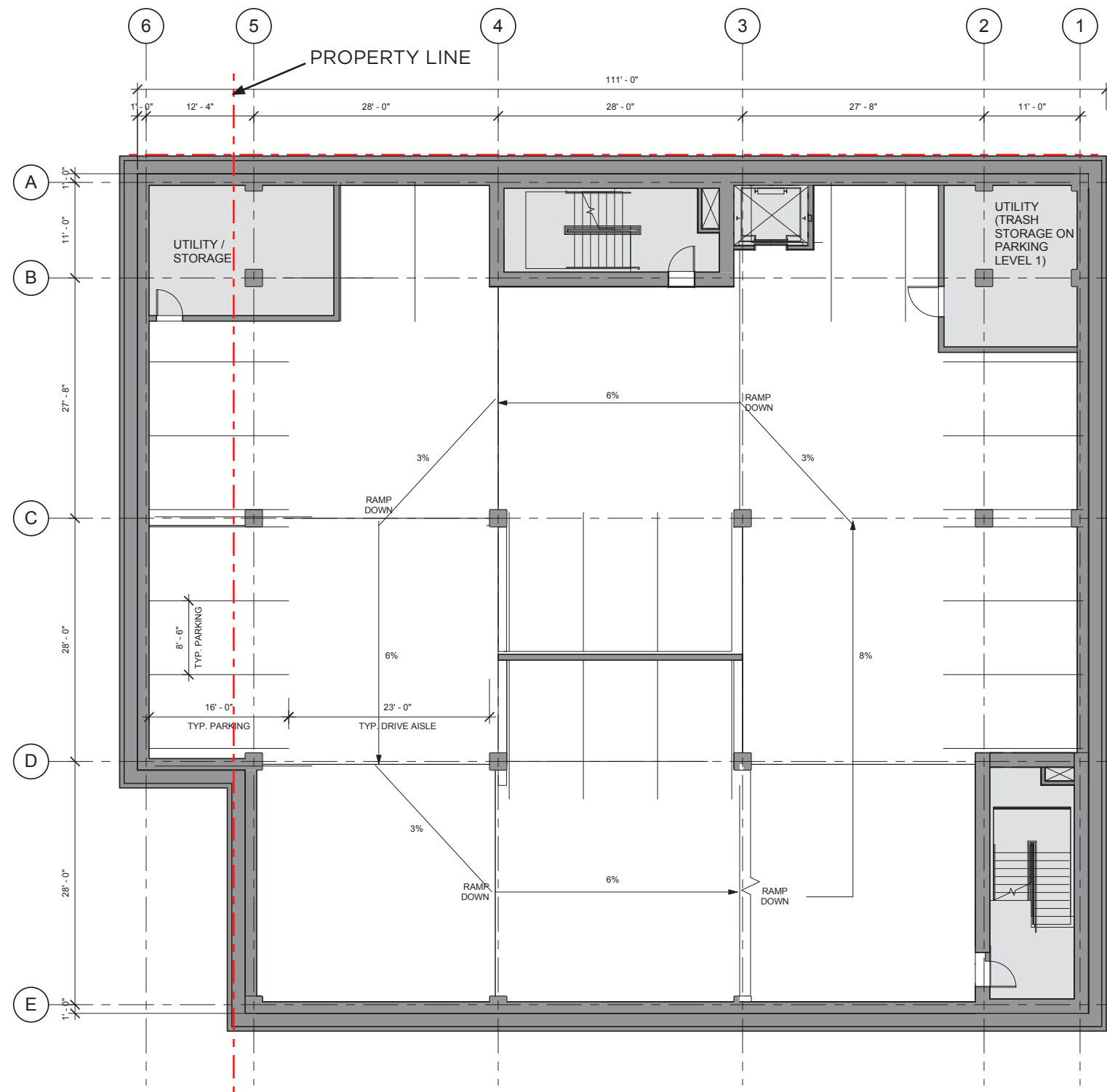
B.16



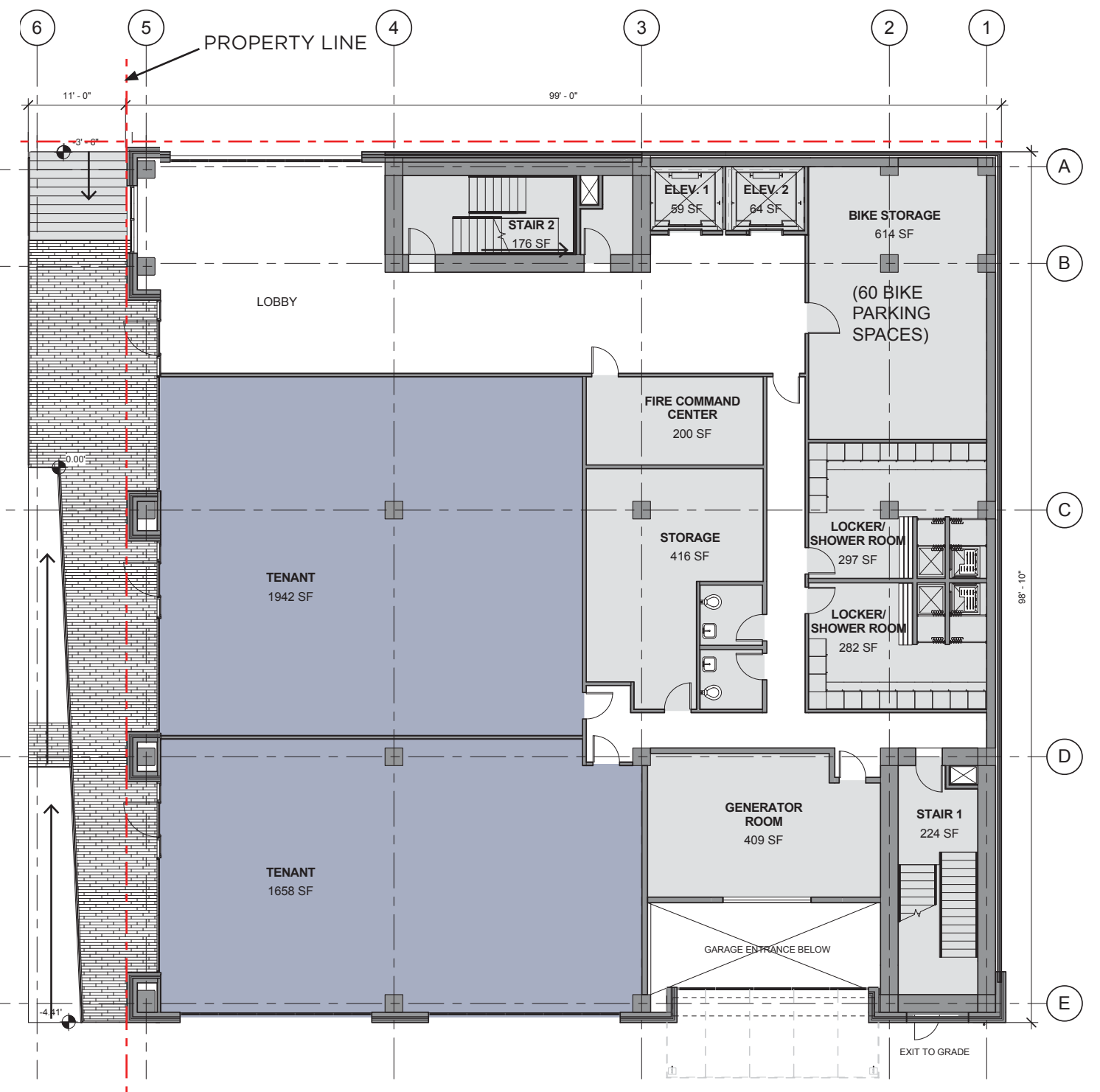


Luminaire Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	B1	2	TRI-LITE	MV2-12P	Rotating Amber Warning Beacon Light		1	LTL11476.IES	0	1	3
	P1	3	TMS Lighting	ABB-0-20-100INC-C48-F-16-G11	CREE LED LAMP	ONE CREE	1	LTL11476.IES	1600	1	36
	R1	2	Xicato Inc, San Jose, CA USA (http://www.xicato.com)	"XSM80xx-3000-C with XSA-43 - typical module at 70C and 1050mA"	"XSM80xx-3000-C with XSA-43 (41deg 134mm plastic reflector)"	"Xicato XSM80xx-3000-C - typical module at 70C, 1050mA, 80CRI(min)"	1	CORE_400_2000lm_41 degree.ies	3000	1	45
	S1	4	Crouse Hinds	VXHT25GP WALL MOUNTED	CREE LED LAMP	ONE CREE	1	LTL11476.IES	1600	1	36
	STEP	2	BEGA/US	22 382	CAST ALUMINUM HOUSING, CLEAR GLASS ENCLOSURE ABOVE STEPPED ALUMINUM FACEPLATE.	5 WHITE LEDS	1	22382.ies	154,7382	1	7.5

Statistics							
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
Garage Exit / Entrance	+	14.1 fc	22.0 fc	5.2 fc	4.2:1	2.7:1	0.6:1
Pearl East Exterior	+	3.2 fc	6.4 fc	1.2 fc	5.3:1	2.7:1	0.5:1

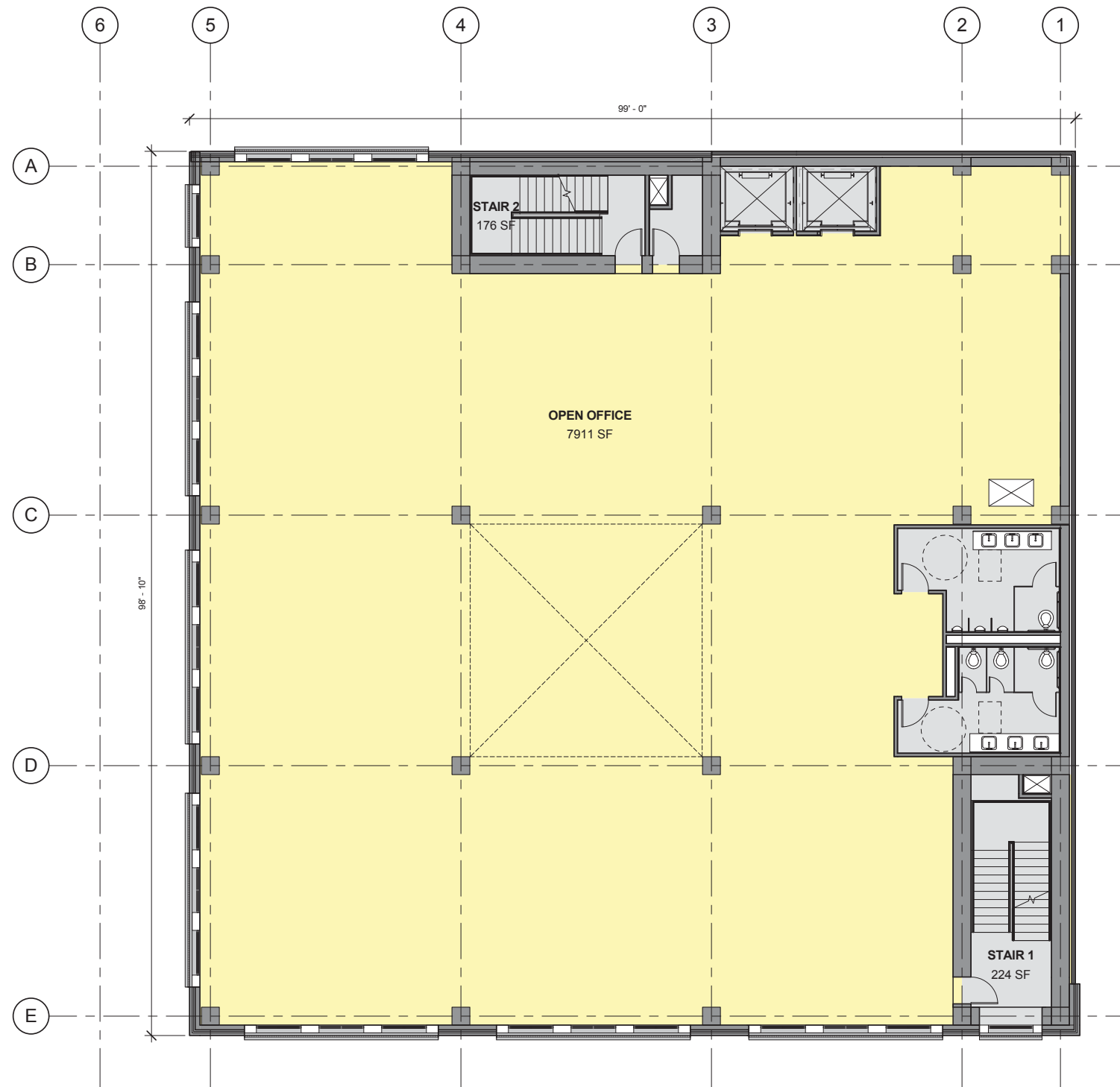


TYPICAL PARKING LEVEL (x3 Total)
1/16" = 1'-0"

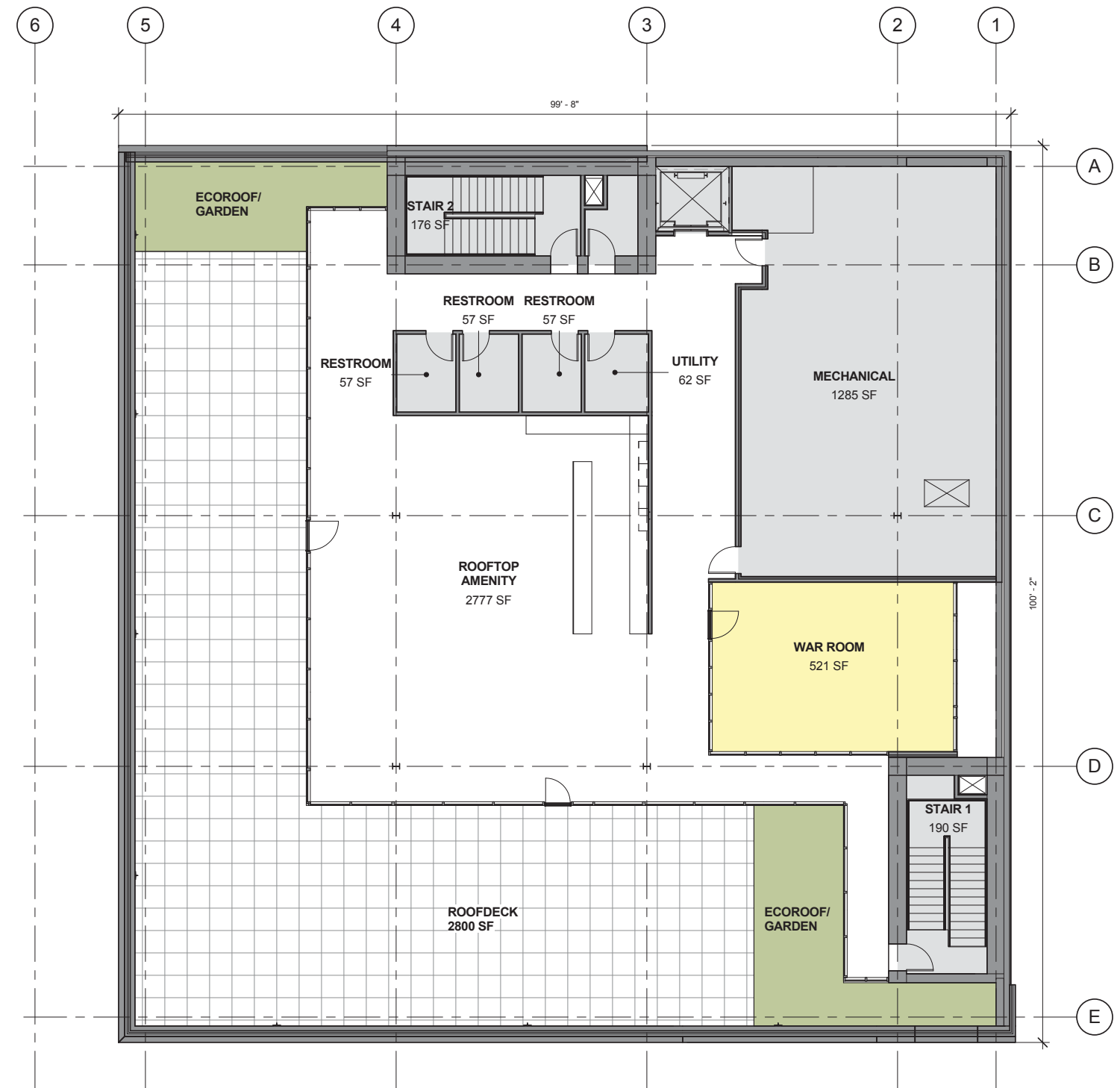



GROUND FLOOR LEVEL
1/16" = 1'-0"

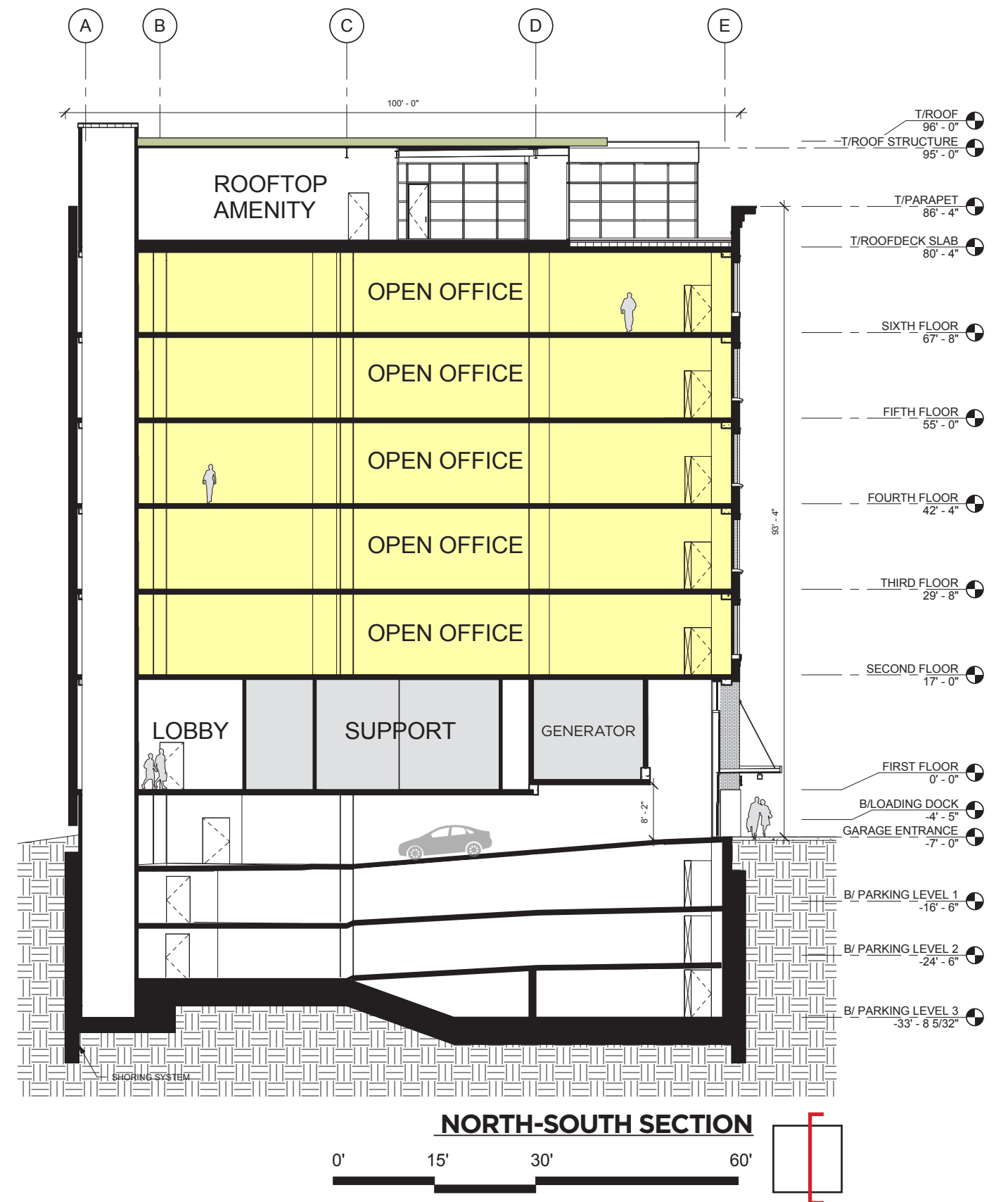
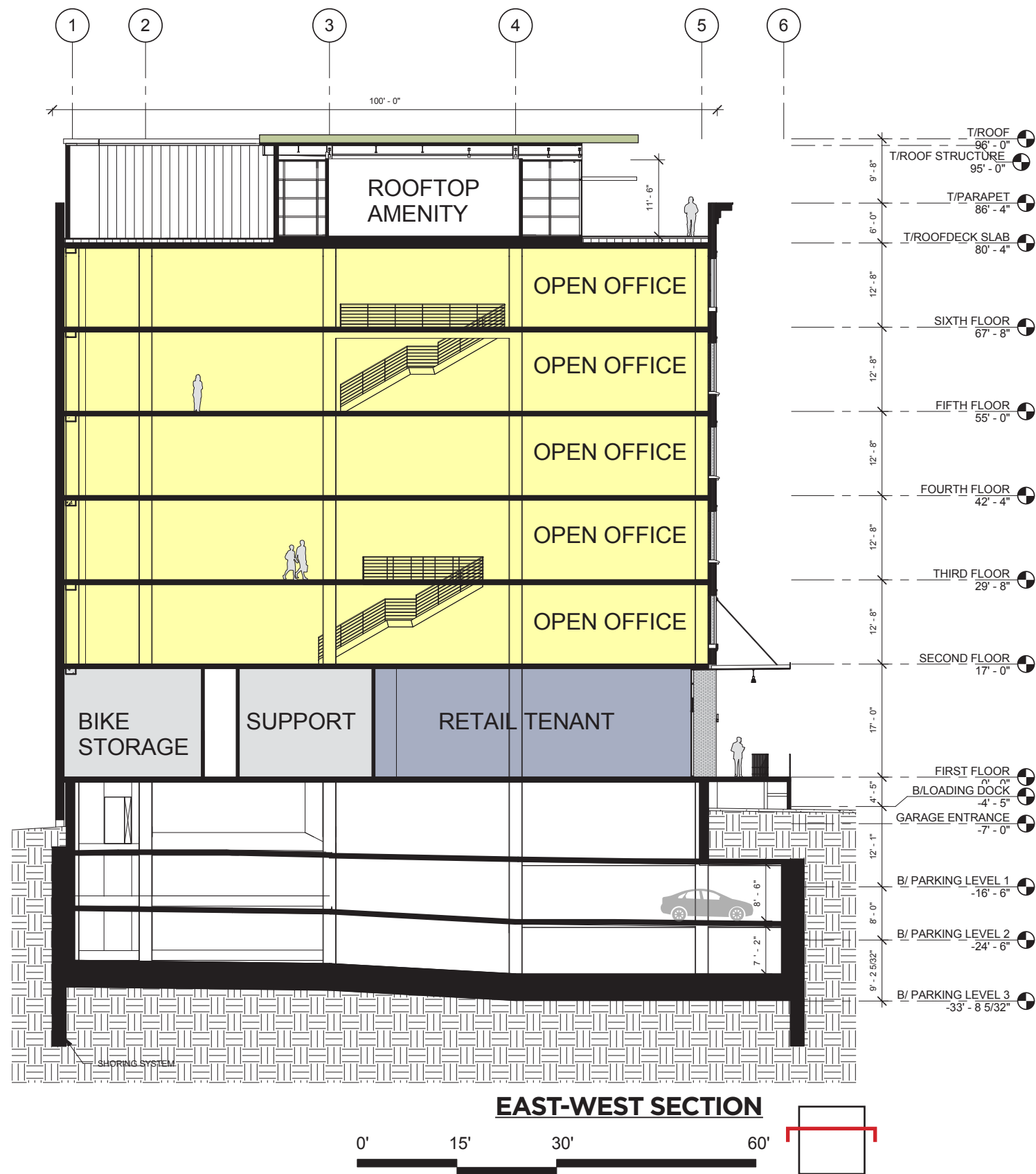




TYPICAL OFFICE LEVEL
1/16" = 1'-0" 



ROOFTOP LEVEL
1/16" = 1'-0" 

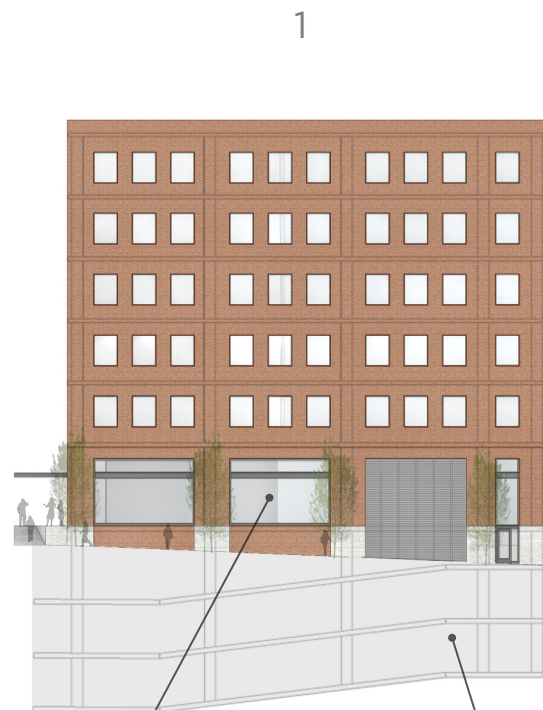




BUILDING DESIGN



Street View Perspective - Corner of NW 13th and Glisan



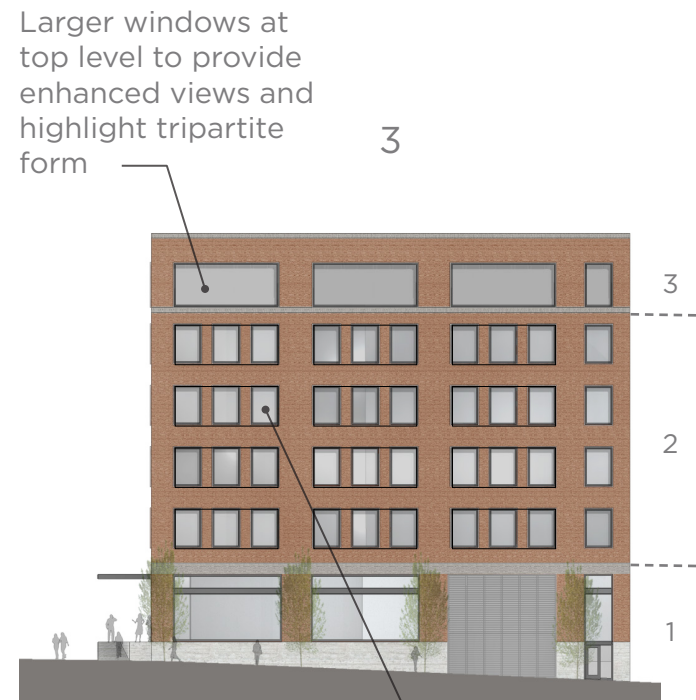
Increased glazing at base for strong retail presence at pedestrian level

Building grid dictated by column spacing for parking levels



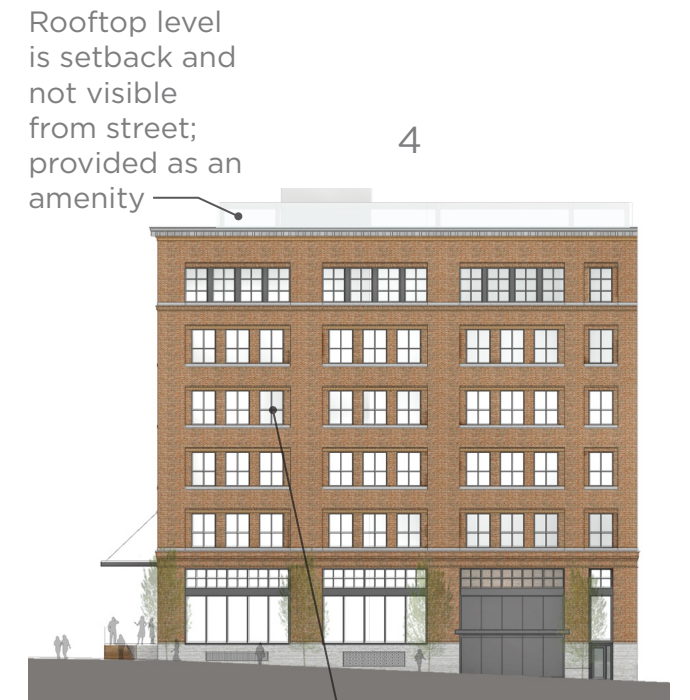
Optimize daylighting and utilize the advantages of current technology with larger window punches in the brick veneer

Differentiate base with a materiality change to build clean tripartite proportions for the building's scale



Larger windows at top level to provide enhanced views and highlight tripartite form

Maximize the depth of the openings and increase articulation of facade with inset planes at window bays



Rooftop level is setback and not visible from street; provided as an amenity

Operable windows provide flexible amenity to office users



- BRICK VENEER
- BOARDFORM CONCRETE
- WOOD LOADING DOCK

SOUTH ELEVATION
(NW GLISAN ST.)
1/16" = 1'-0"



WEST ELEVATION
(NW 13TH AVE)
1/16" = 1'-0"

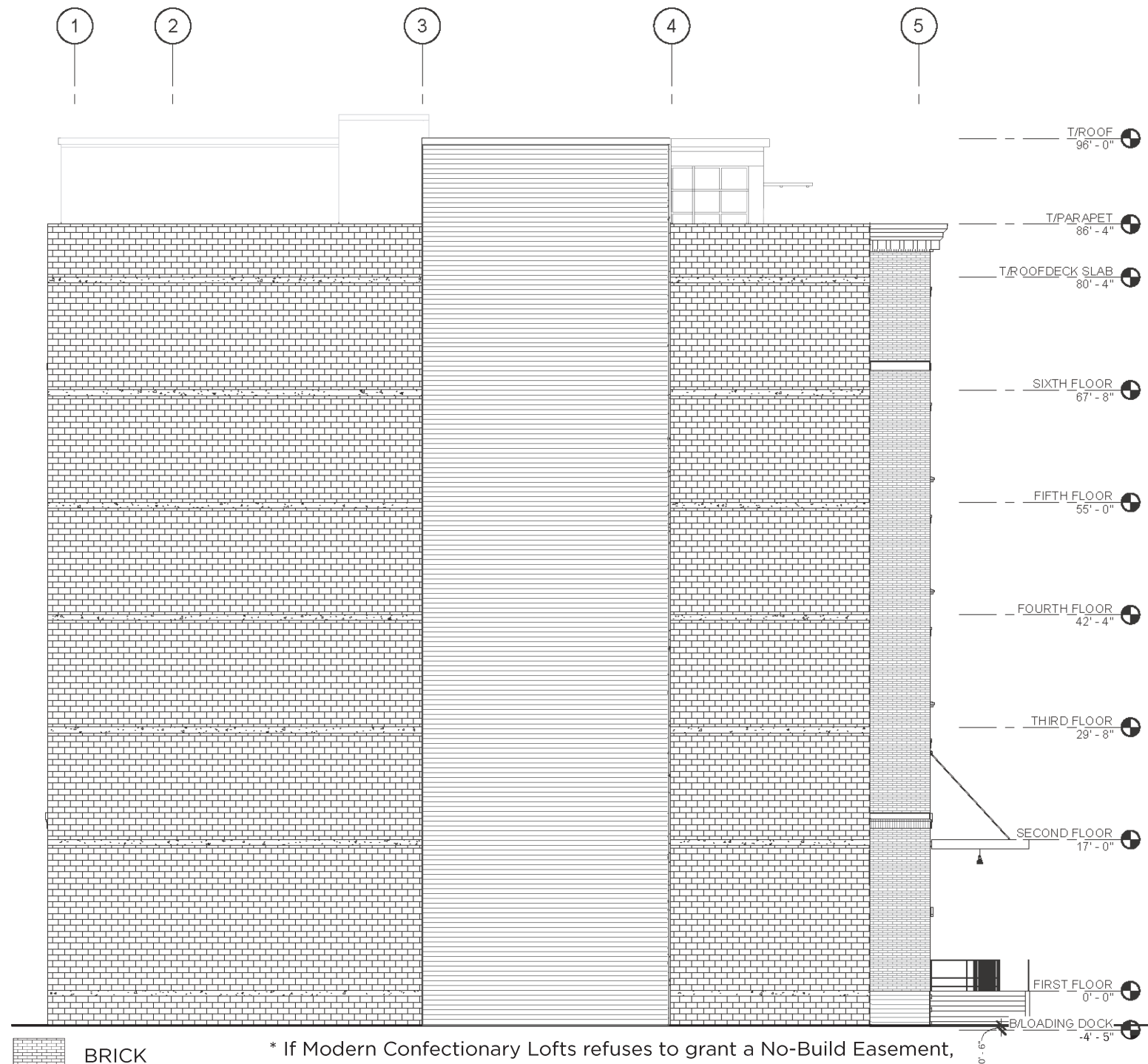






Elevations

Pearl Building East
LU 16-153002 HRM AD

B.24

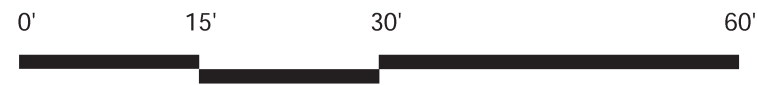




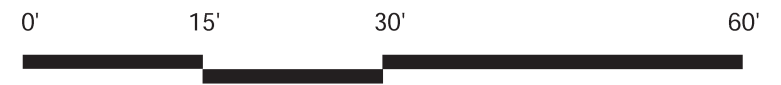
-  BRICK VENEER
-  BOARDFORM CONCRETE
-  WOOD LOADING DOCK
-  CMU VENEER*

* If Modern Confectionary Lofts refuses to grant a No-Build Easement, construction techniques will be limited to stacked CMU block with exposed concrete floor slabs and shear core.

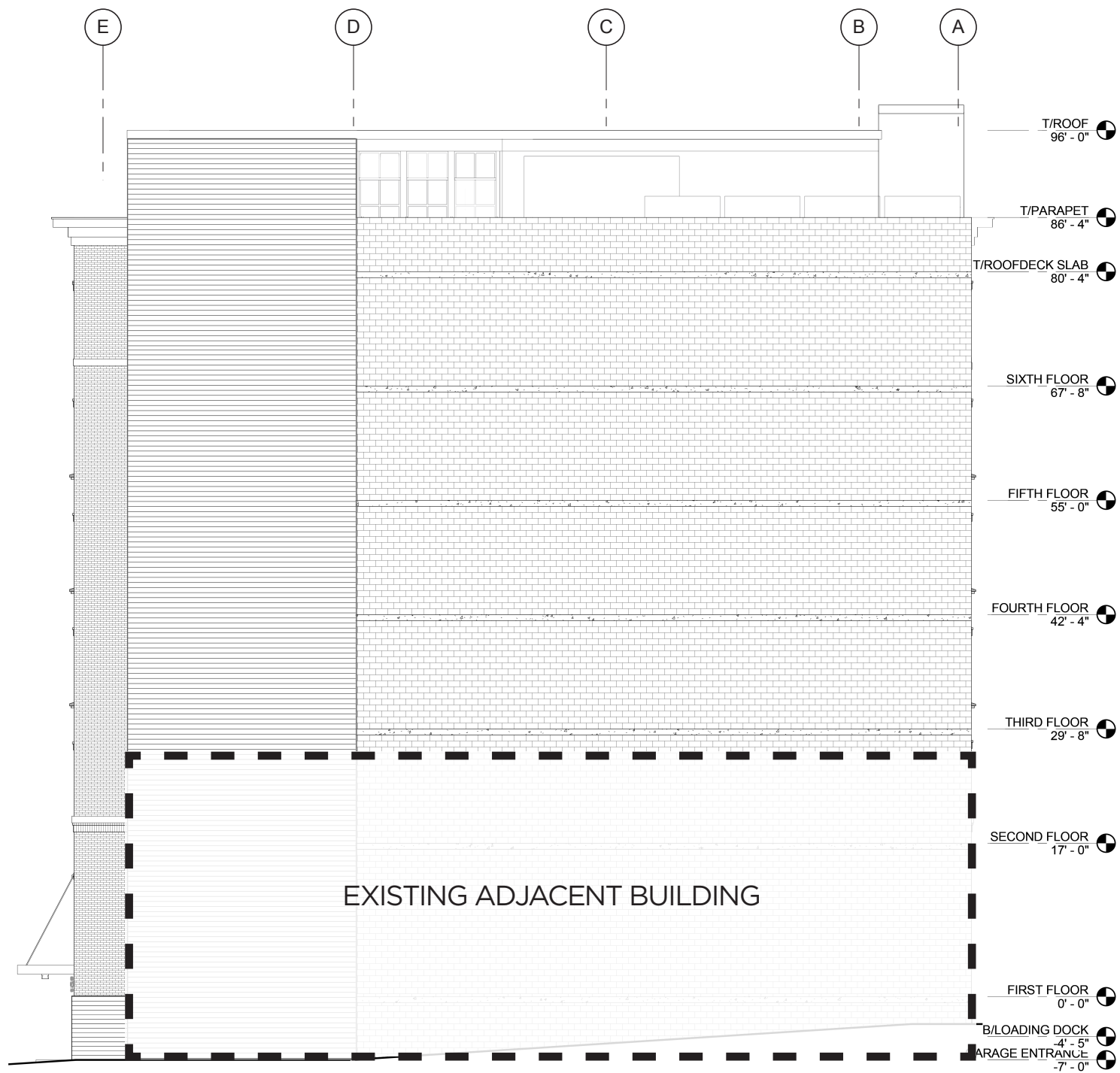
NORTH ELEVATION
01. WITHOUT NEIGHBOR EASEMENT AGREEMENT
 1/16" = 1'-0"







NORTH ELEVATION
02. WITH NEIGHBOR EASEMENT AGREEMENT
 1/16" = 1'-0"



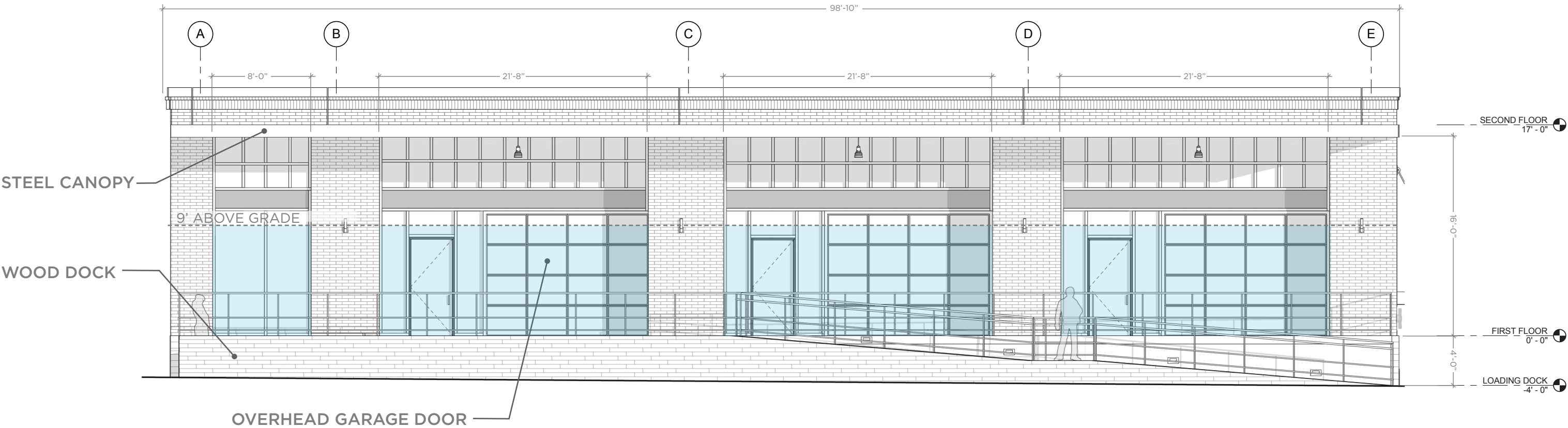
Elevations



-  BRICK VENEER
-  BOARDFORM CONCRETE
-  WOOD LOADING DOCK
-  CMU VENEER

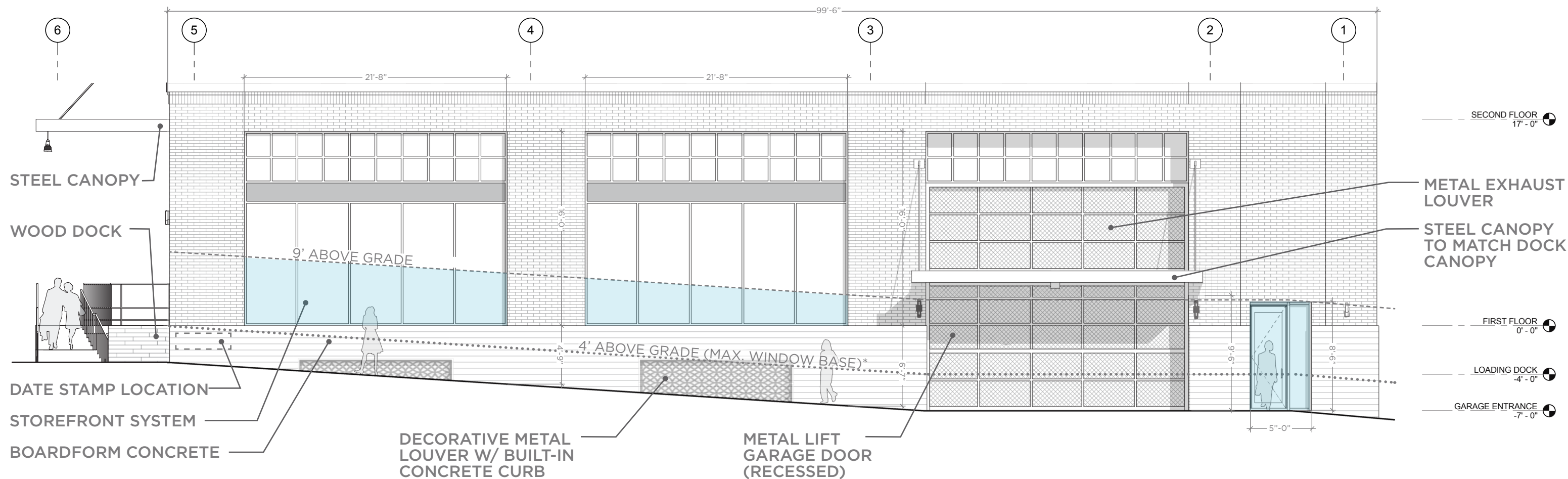
EAST ELEVATION
(VIEW LOOKING WEST ON GLISAN ST.)
 1/16" = 1'-0"





GROUND FLOOR GLAZING PERCENTAGES		
WALL AREA: 889.5 SF	GLAZING AREA: 656.44 SF	PERCENT: 73.80%
WALL LENGTH: 98'-10"	GLAZING LENGTH: 73'-0"	PERCENT: 73.86%

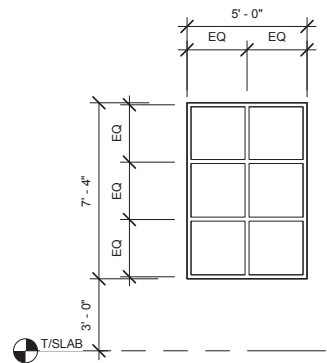
ENLARGED ENTRY WEST ELEVATION
(NW 13TH AVE)
1/8" = 1'-0"



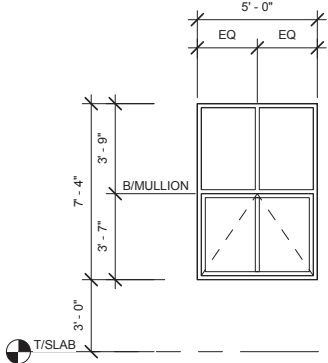
GROUND FLOOR GLAZING PERCENTAGES		
WALL AREA: 895.5 SF	GLAZING AREA: 195 SF	PERCENT: 21.78%
WALL LENGTH: 99'-6"	GLAZING LENGTH: 48'-4"	PERCENT: 48.58%

*MODIFICATION REQUEST
(SEE NARRATIVE)

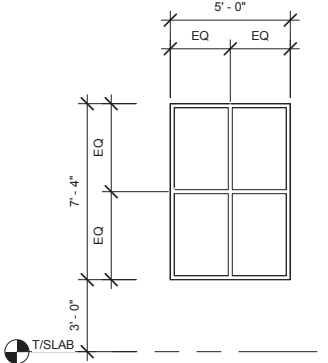
**ENLARGED GROUND FLOOR SOUTH ELEVATION
(NW GLISAN ST.)**
1/8" = 1'-0"



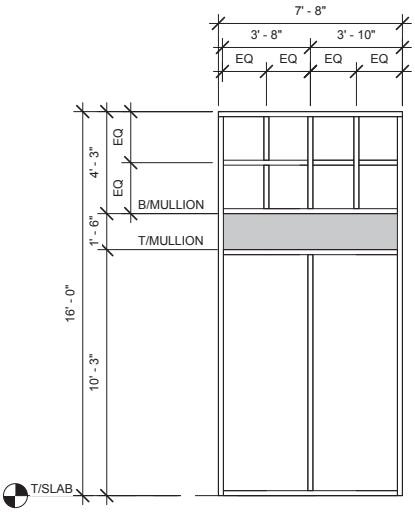
A. TYPICAL 6TH FLOOR WINDOW



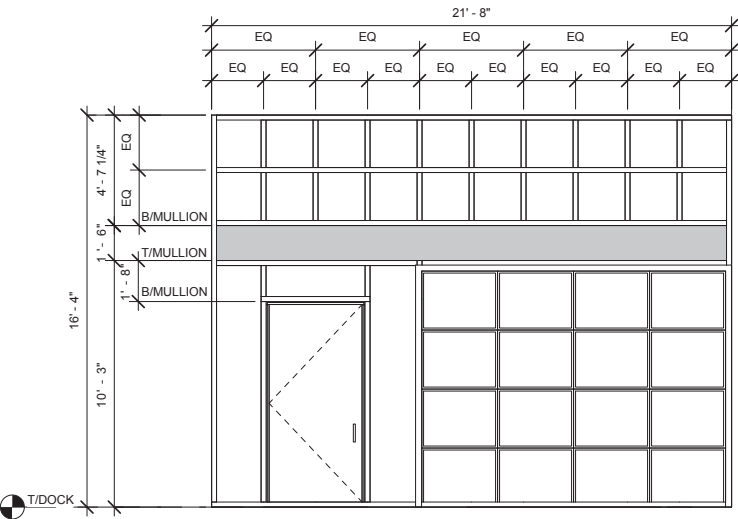
B. TYPICAL OFFICE LEVEL WINDOW, OPERABLE



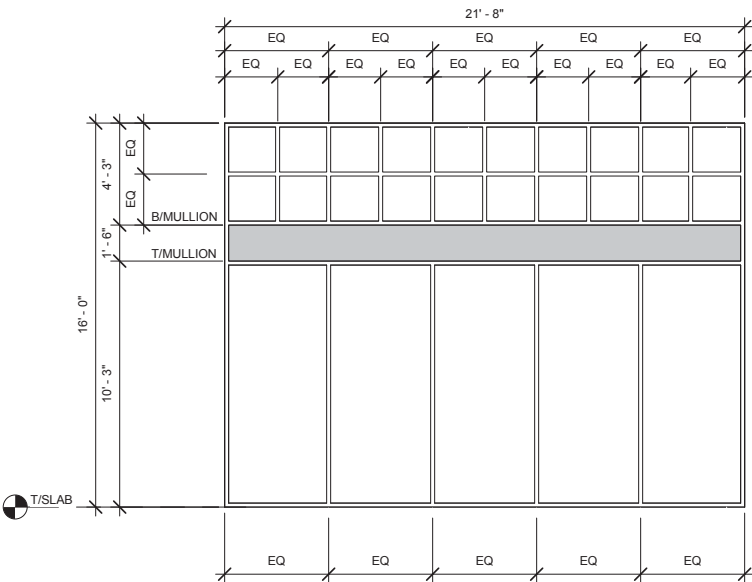
C. TYPICAL OFFICE LEVEL WINDOW, NON-OPERABLE



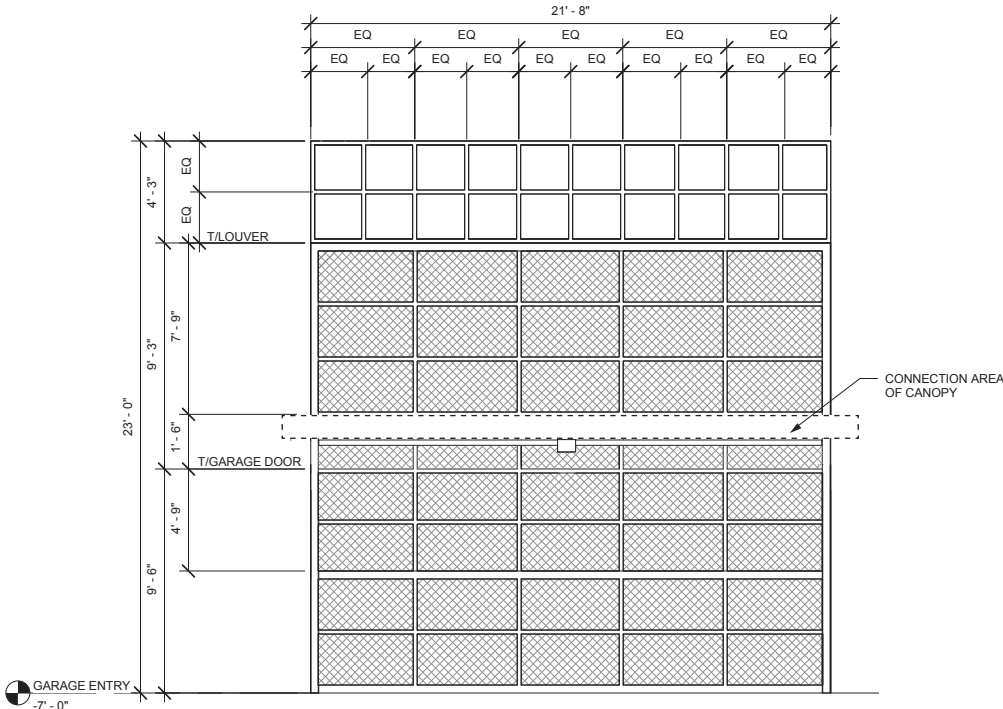
D. FIRST FLOOR STOREFRONT, NW CORNER OF 13TH AVE



E. TYPICAL 13TH AVE WINDOW BAY



F. TYPICAL GLISAN STREET WINDOW BAY



F. GLISAN STREET VERTICAL LIFT GARAGE DOOR AND LOUVER ABOVE

Window Schedule: 1/8" = 1' - 0" * Note: Window Cutsheets in Appendix B

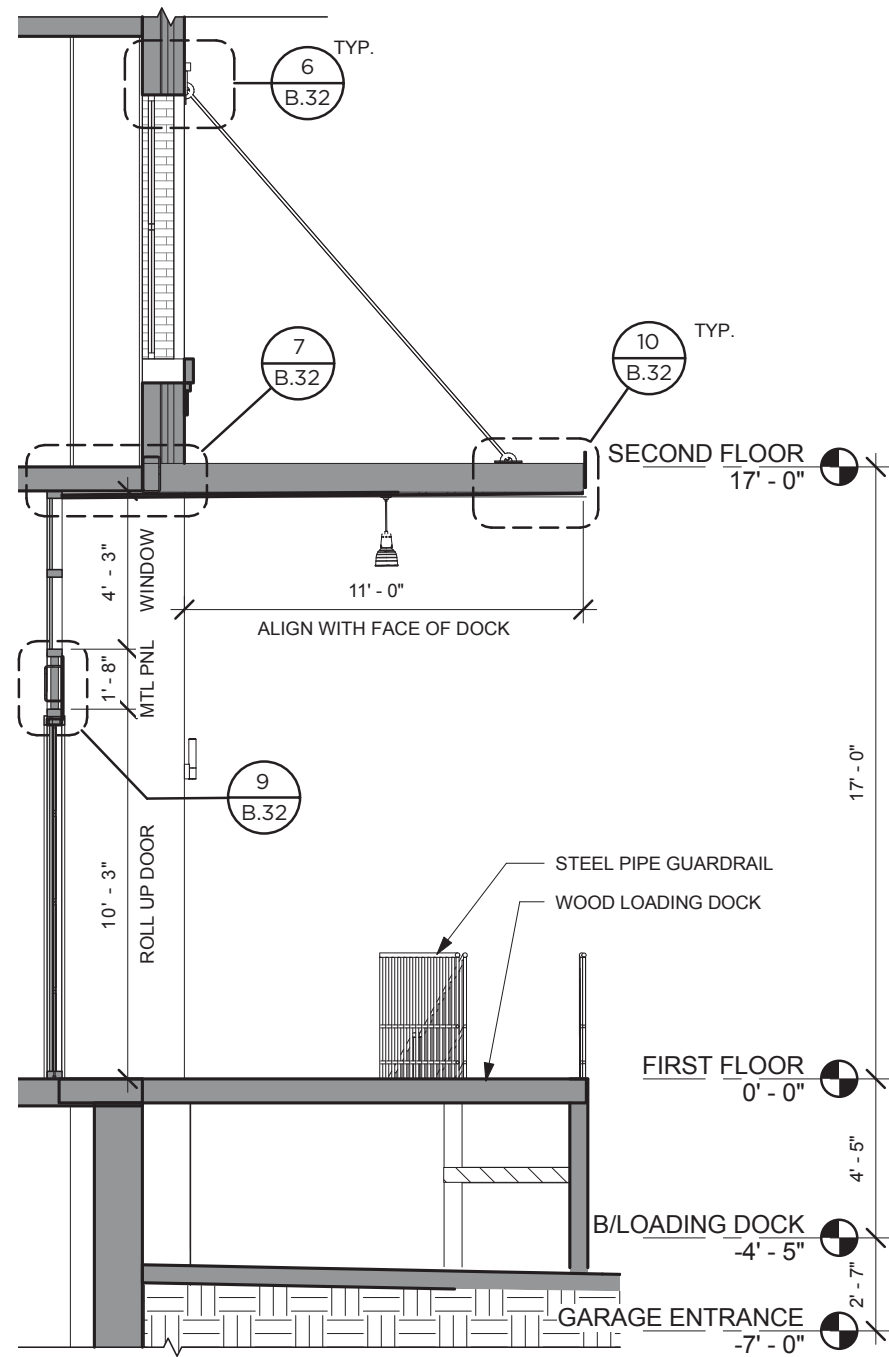


Initial Design Sketch

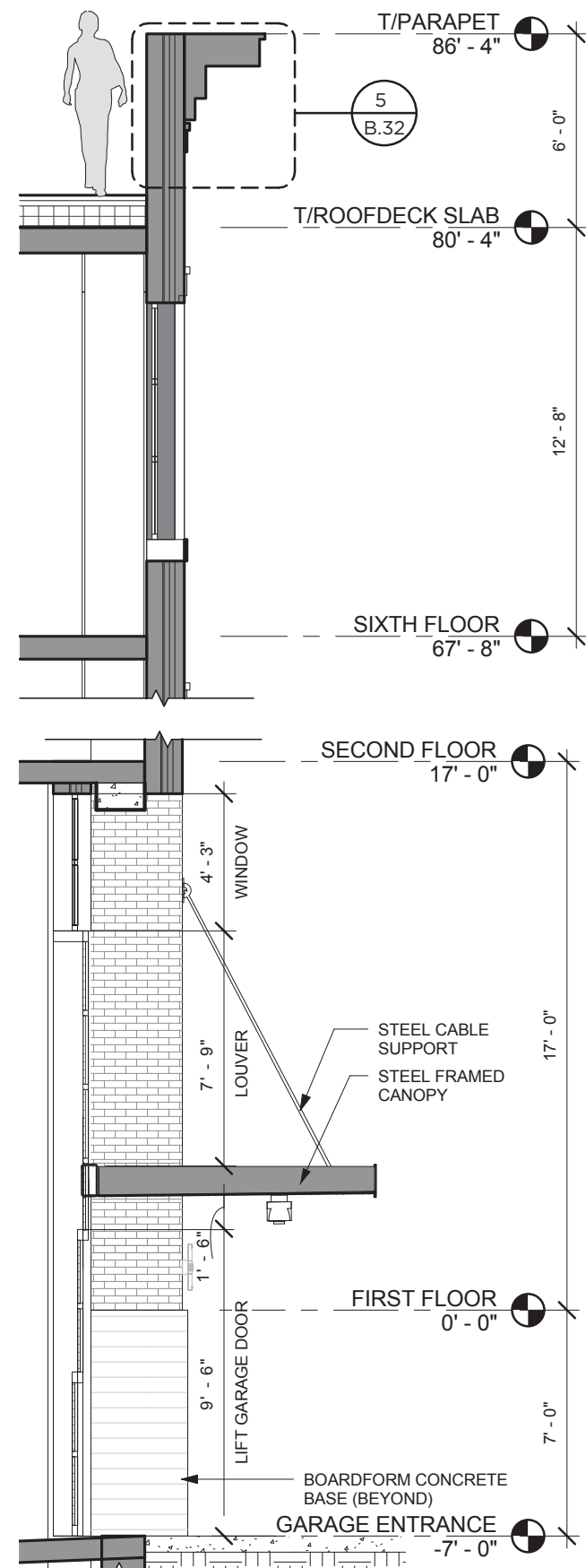
Pearl Building East
LU 16-153002 HRM AD

B.30

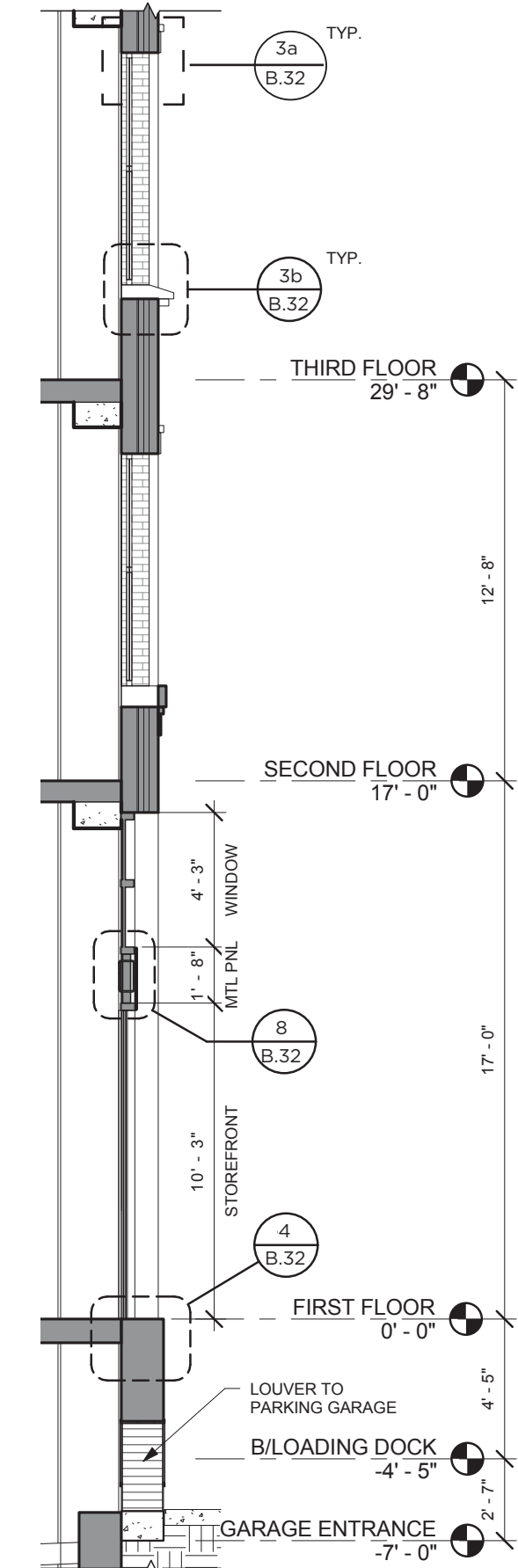
M.



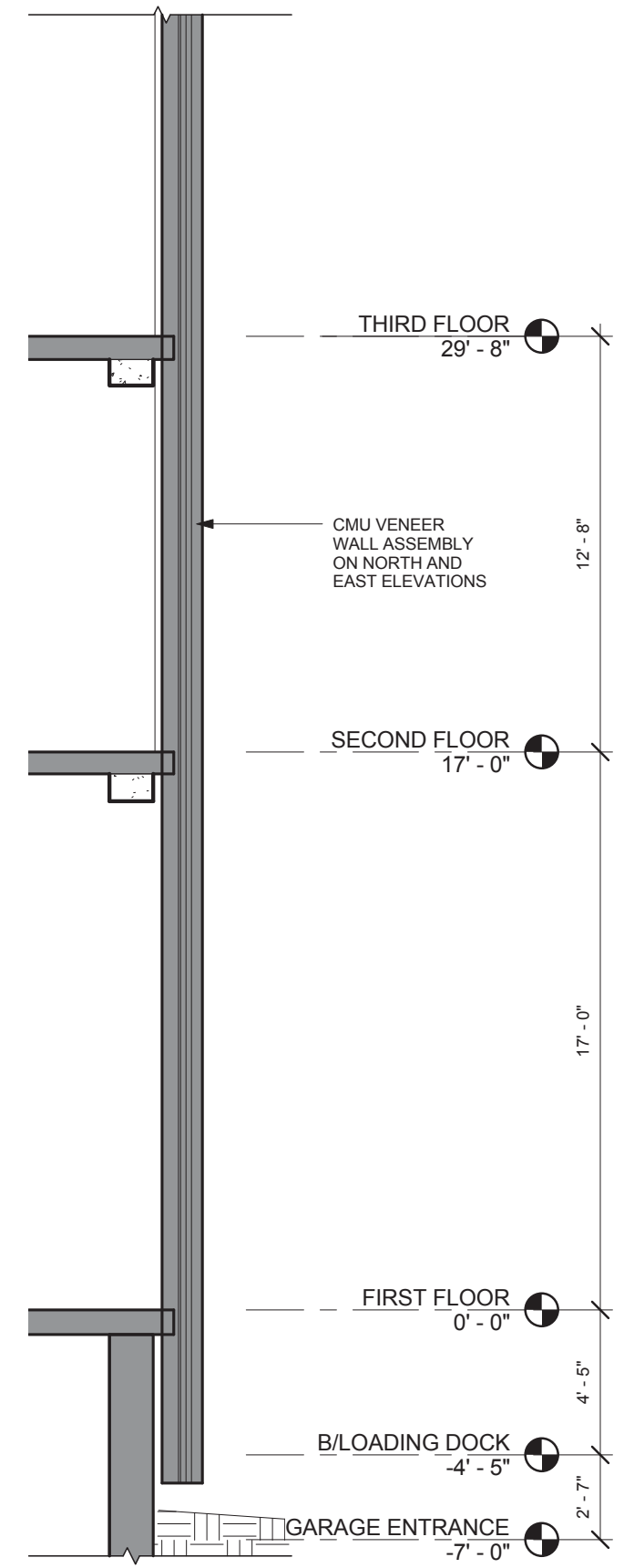
① 13TH AVE LOADING DOCK



② GLISAN GARAGE ENTRY



③ GLISAN STOREFRONT



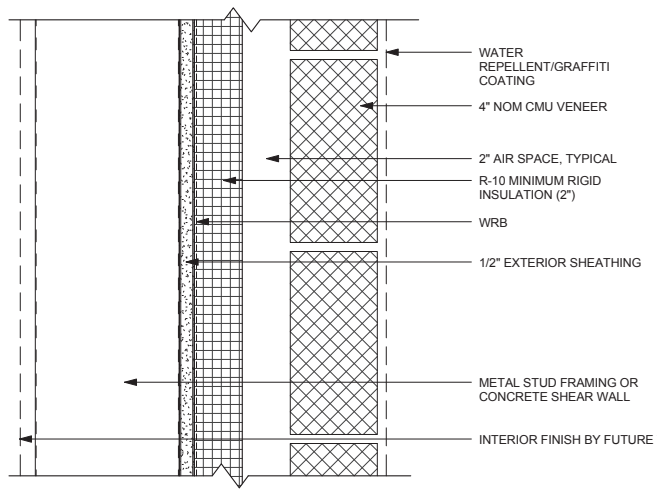
④ NORTH/EAST WALLS

Wall Sections - Scale: 3/16" = 1' - 0"

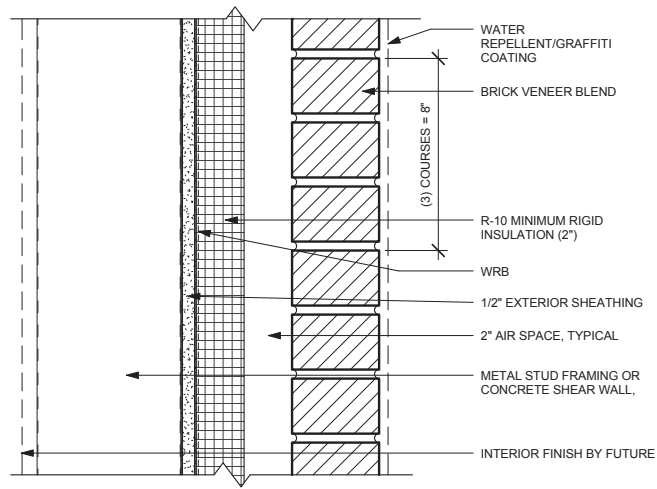
Pearl Building East
LU 16-153002 HRM AD

B.31

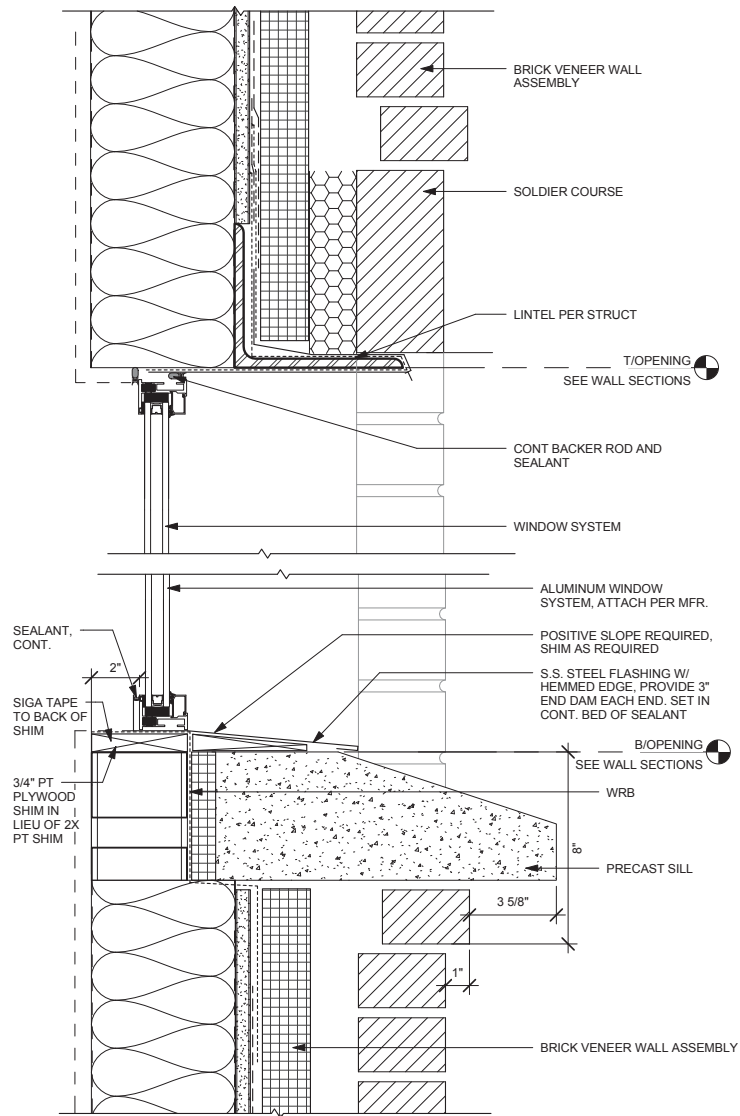




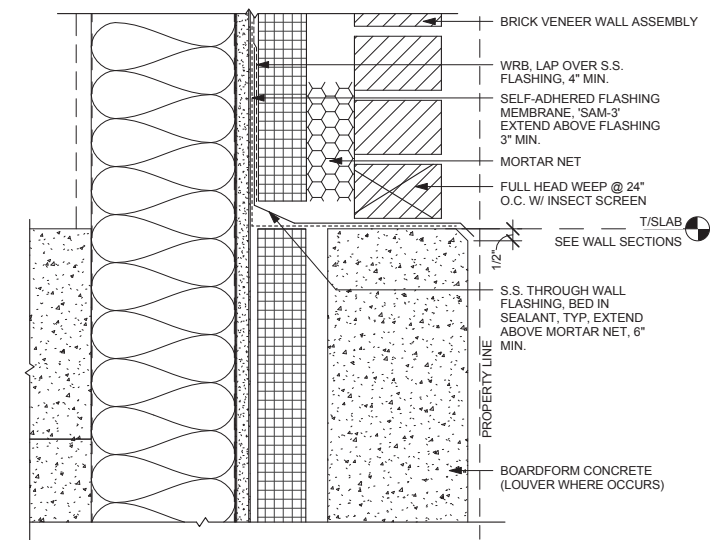
1. CMU VENEER WALL ASSEMBLY
11/2" = 1' - 0"



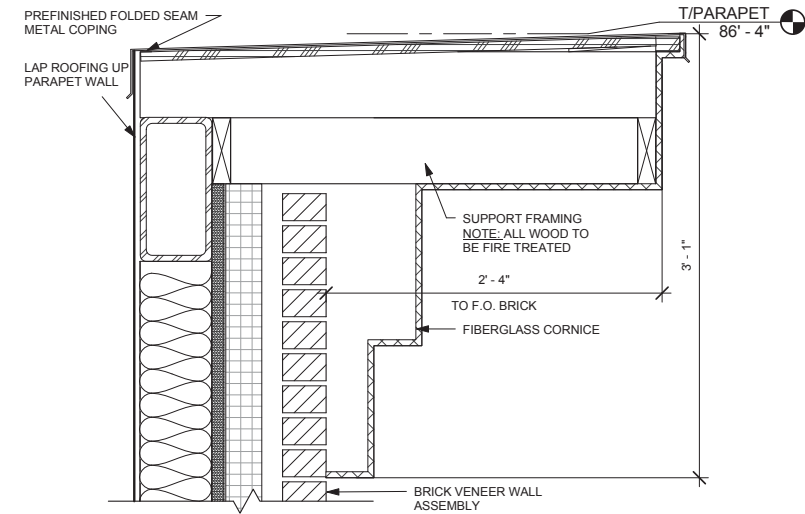
2. BRICK VENEER WALL ASSEMBLY
11/2" = 1' - 0"



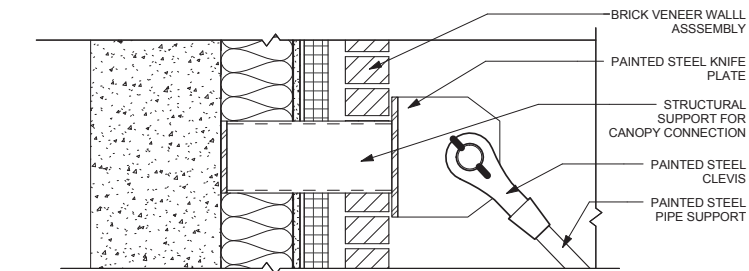
3. TYPICAL WINDOW HEAD (a) AND SILL(b)
11/2" = 1' - 0"



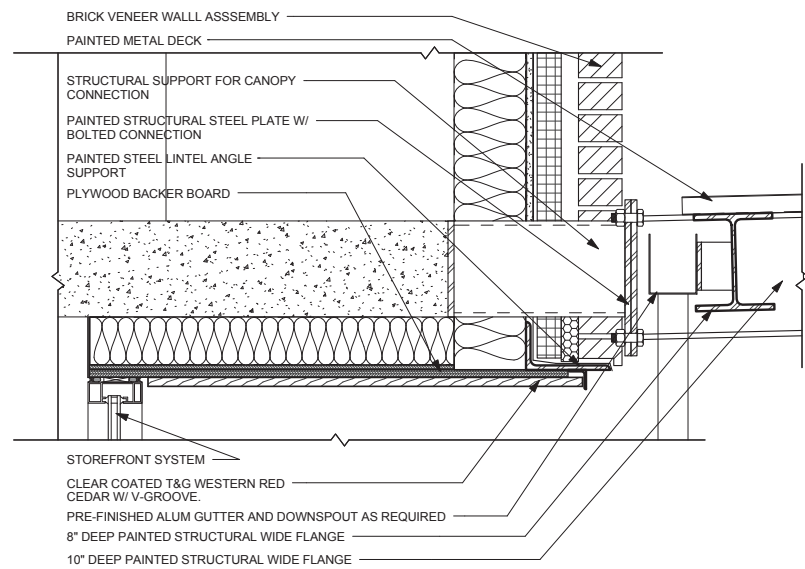
4. TYPICAL BRICK SILL AT CONCRETE
11/2" = 1' - 0"



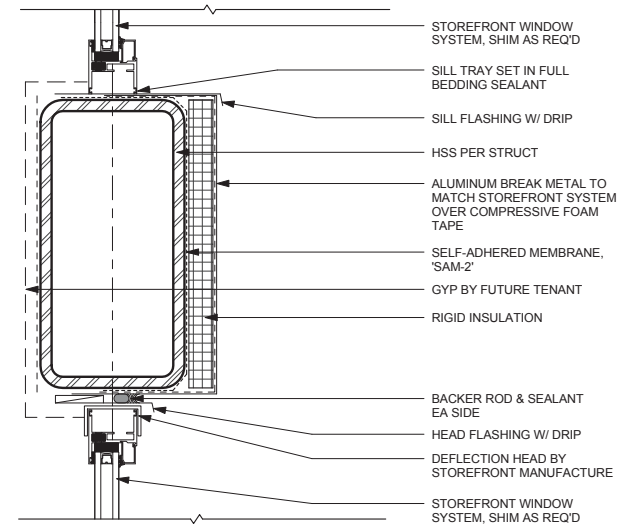
5. CORNICE DETAIL AT PARAPET
3/4" = 1' - 0"



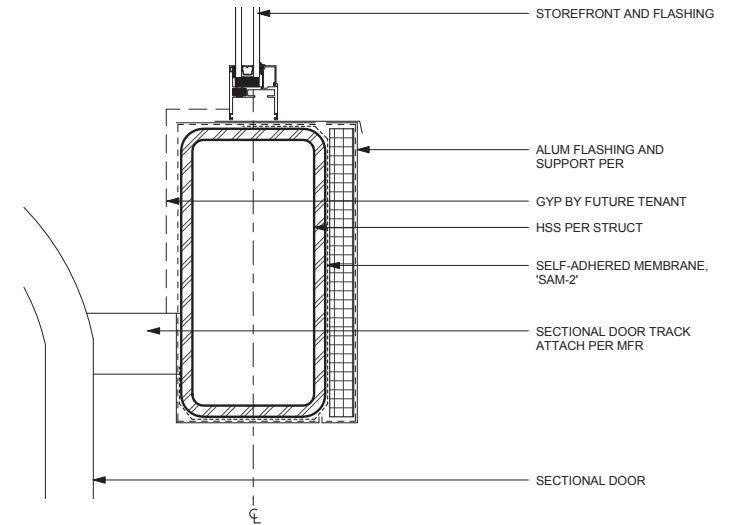
6. CANOPY SUPPORT BRACKET
3/4" = 1' - 0"



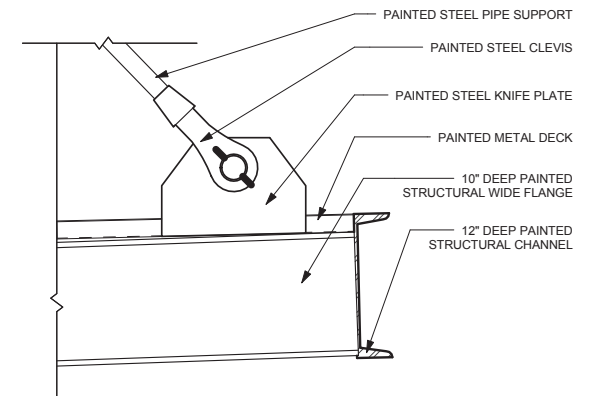
7. CANOPY CONNECTION AT BUILDING
3/4" = 1' - 0"



8. HSS SECTION AT STOREFRONT
11/2" = 1' - 0"



9. HSS SECTION AT SECTIONAL DOOR
11/2" = 1' - 0"



10. CANOPY EDGE
3/4" = 1' - 0"



Materials



BRICK FIELD



BRICK ACCENTS



BOARDFORM



CONCRETE



POWDER-COATED STEEL



WOOD

Sightline Study and Exterior Materials

Pearl Building East
LU 16-153002 HRM AD

B.33





Street View Perspective - Looking West on NW Glisan Street

Pearl Building East
LU 16-153002 HRM AD



DESIGN ADVICE REQUEST COMMENTS

- 1. LOWER AND/OR MITIGATE TALL HEIGHT OF GARAGE DOOR
- 2. REVISE THE GARAGE DOOR AND EXIT DOOR
- 3. BASEMENT LEVEL BELOW THE STOREFRONT WINDOWS NEEDS ADDITIONAL DESIGN REFINEMENT



DESIGN IN RESPONSE

- 1. RESPONSE:** ADDED CANOPY AT A PEDESTRIAN SCALE TO BREAK UP PLANE OF OPENING. GARAGE DOOR AND LOUVERS SET BACK FOUR FEET TO CREATE ADDITIONAL DEPTH IN THE FACADE.
- 2. RESPONSE:** ADJUSTED PATTERNING AND SEGMENTATION OF GARAGE DOOR AND LOUVERS. REMOVED WINDOW AND TRANSOM ABOVE EXIT DOOR TO ESTABLISH HIERARCHY.
- 3. RESPONSE:** ADDED DECORATIVE LOUVERS BELOW RETAIL WINDOWS TO BREAK UP CONCRETE BASE.



STOREFRONT ABOVE CONCRETE BASE -
240 SE CLAY ST.



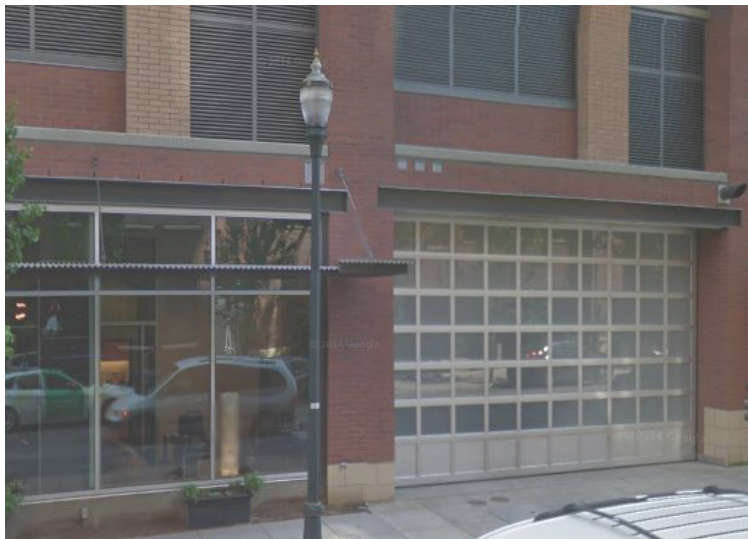
SECTIONAL OVERHEAD DOOR



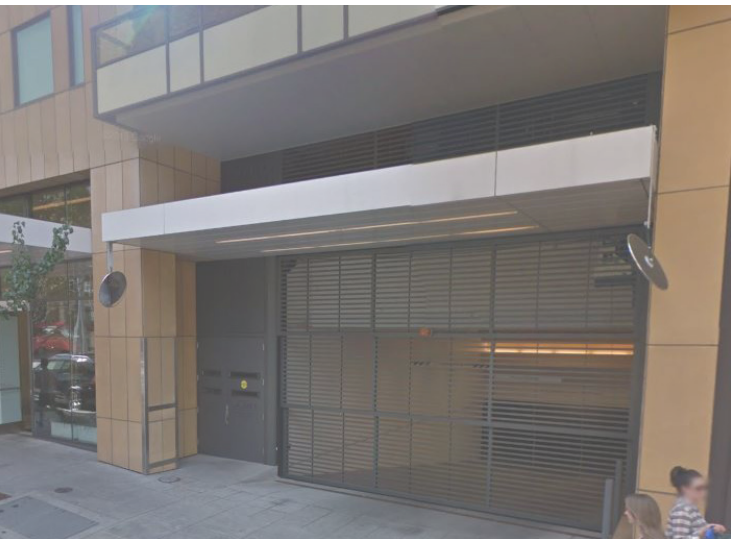
MEDITERRANEAN EXPLORATION CO. - PEARL DISTRICT



RETAIL STOREFRONT



NW 13TH AND MARSHALL -
PEARL DISTRICT



CANOPY ABOVE LIFT GARAGE DOOR -
THE CASEY, PEARL DISTRICT



METAL WIRE GARAGE DOOR,
SITKA APARTMENTS, PEARL DISTRICT



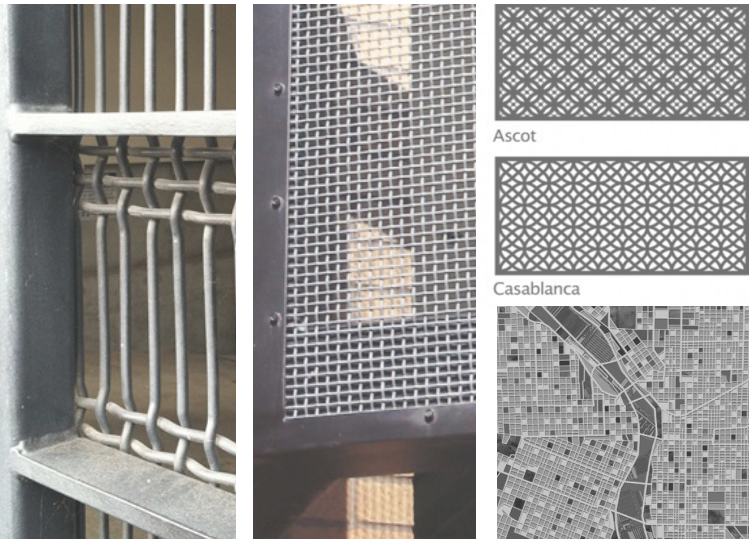
GARAGE DOOR



THE UNION APTS. DECORATED LOUVERS



DECORATIVE LOUVER SCREENS; LARGE CONCRETE BASE -
CHOWN PELLA , NW 13TH AND GLISAN



SCREEN / LOUVER DETAILING OPTIONS TO CREATE
ADDITIONAL PEDESTRIAN INTEREST ON GLISAN

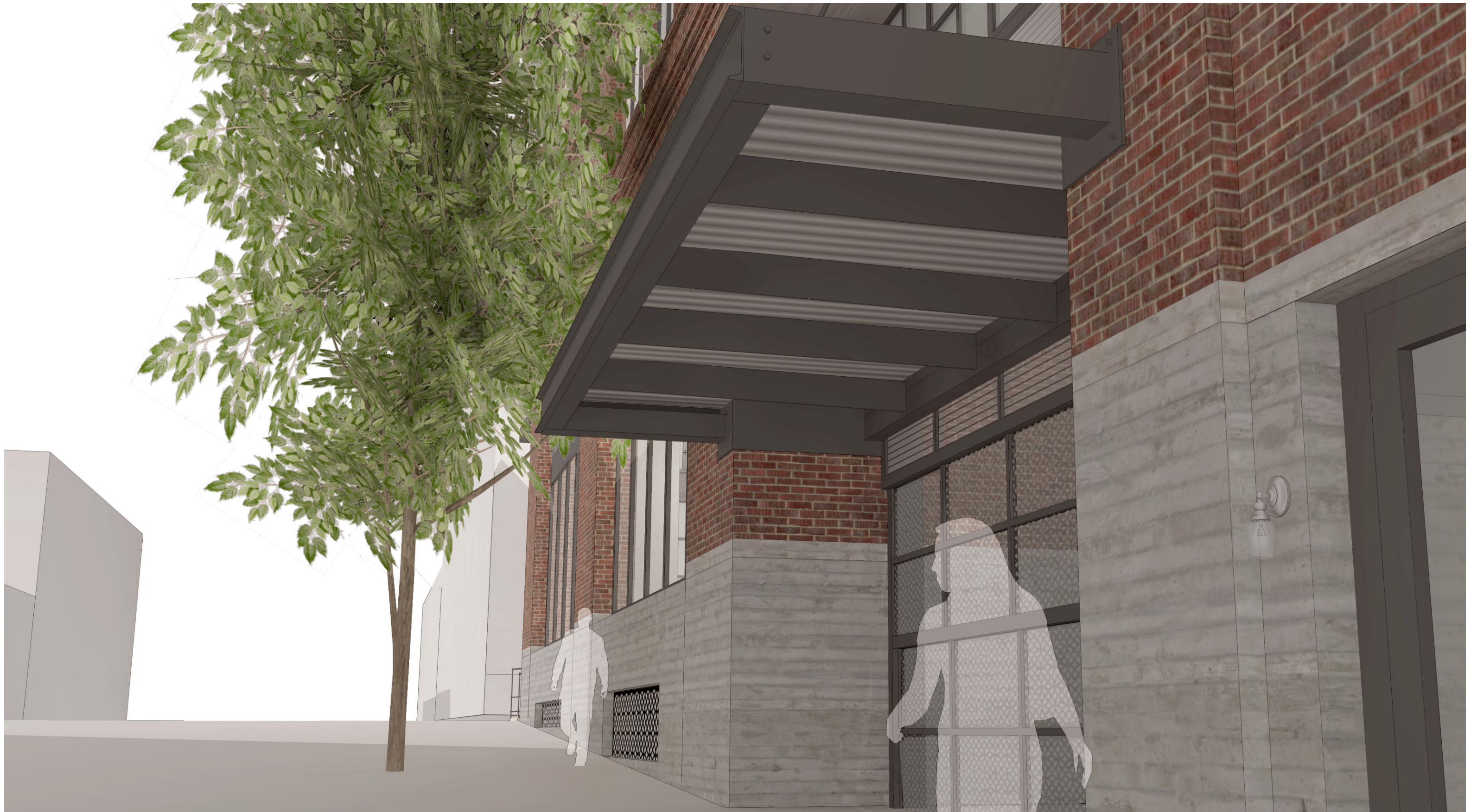


DECORATIVE LOUVERED
EXHAUST SCREENS

B.36

NW Glisan Street Material Options and Precedents

Pearl Building East
LU 16-153002 HRM AD



Street View of NW Glisan Street Elevation Looking West



Penthouse/Rooftop View

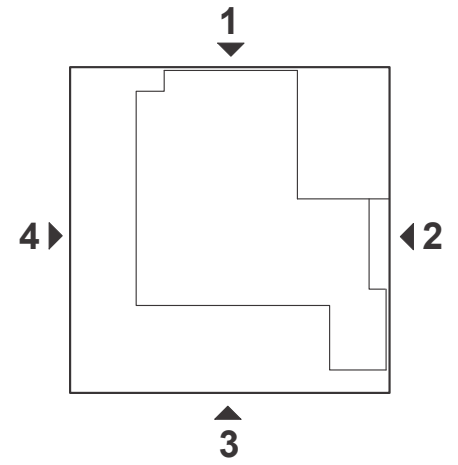
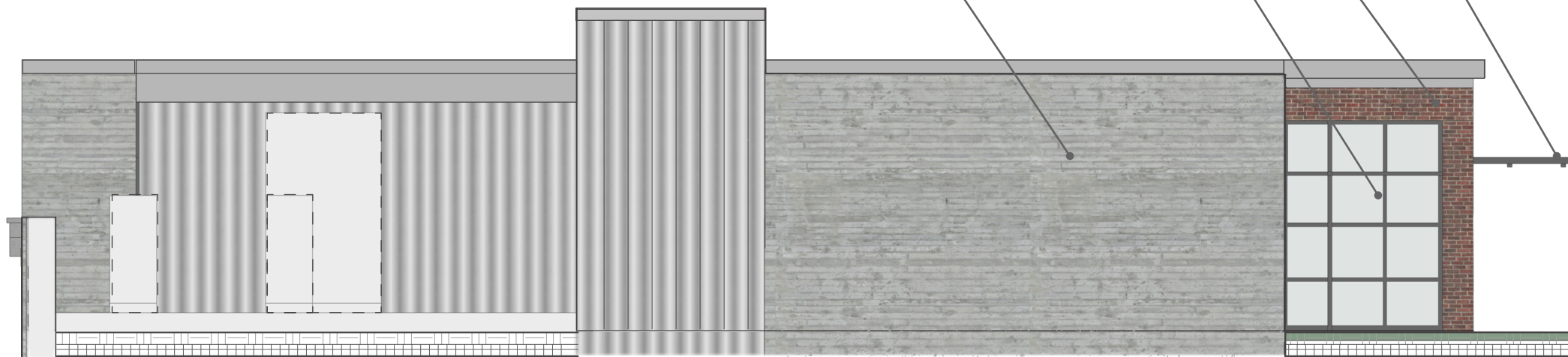
Pearl Building East
LU 16-153002 HRM AD

STEEL TRELLIS

BRICK VENEER

STOREFRONT SYSTEM

BOARDFORM CONCRETE SHEARWALL, RECESSED



T/ROOF
96' - 0"

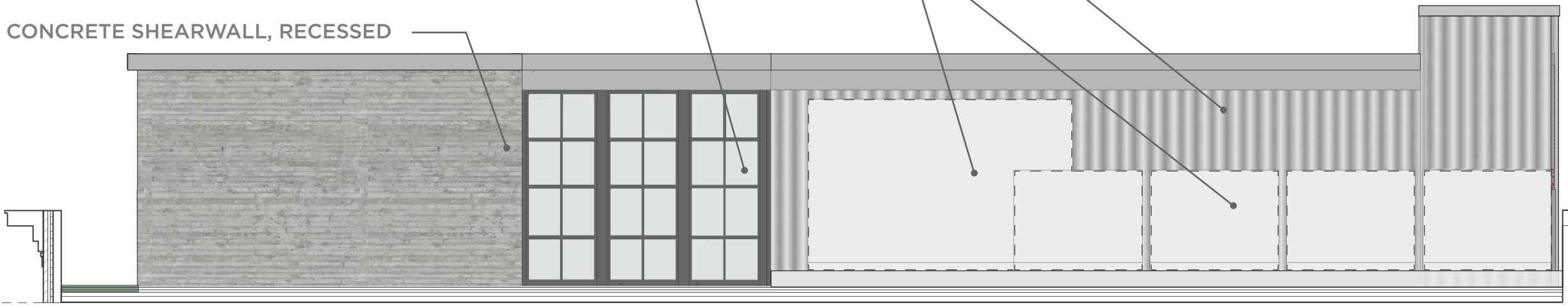
T/ROOFDECK SLAB
80' - 4"

RIBBED METAL PANEL

MECHANICAL EQUIPMENT

STOREFRONT SYSTEM

BOARDFORM CONCRETE SHEARWALL, RECESSED



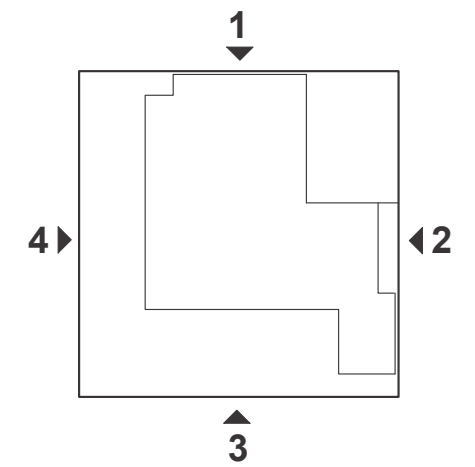
T/ROOF
96' - 0"

T/ROOFDECK SLAB
80' - 4"

1. PENTHOUSE/ROOFDECK ELEVATION - NORTH

2. PENTHOUSE/ROOFDECK ELEVATION - EAST

Enlarged Elevations at Penthouse/Roofdeck: 1/8" = 1' - 0"



BRICK VENEER

STEEL TRELLIS

STOREFRONT SYSTEM

PARAPET AS GUARDRAIL

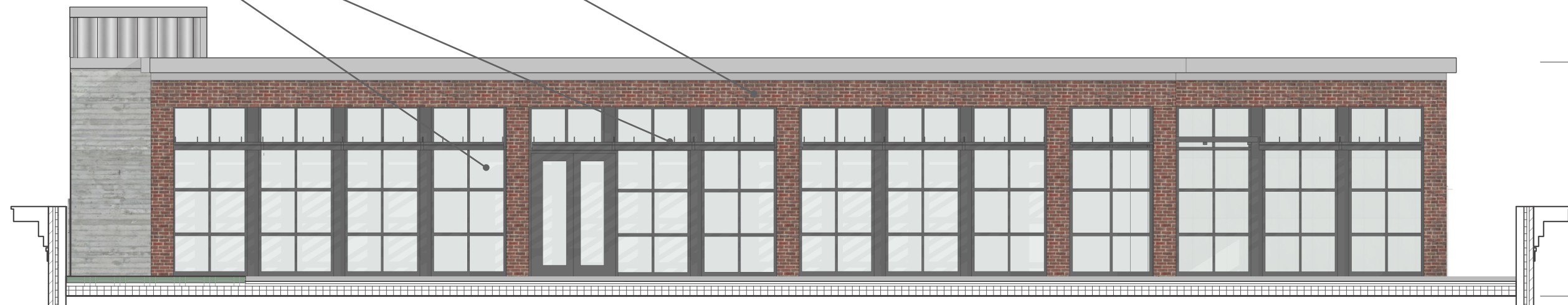


3. PENTHOUSE/ROOFDECK ELEVATION - SOUTH

BRICK VENEER

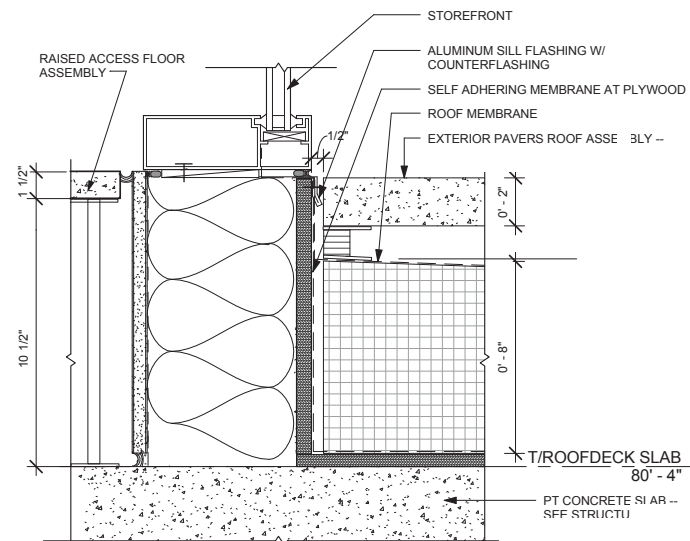
STEEL TRELLIS

STOREFRONT SYSTEM



4. PENTHOUSE/ROOFDECK ELEVATION - WEST

Enlarged Elevations at Penthouse/Roofdeck: 1/8" = 1' - 0"



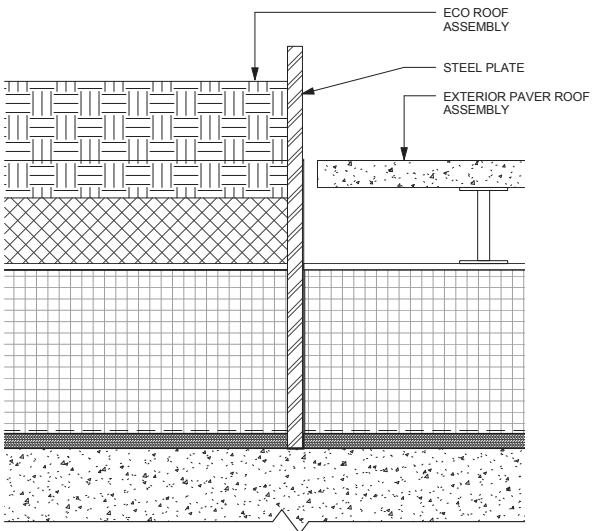
STOREFRONT SILL AT ROOFDECK PAVERS



STOREFRONT SYSTEM



CMU BLOCK



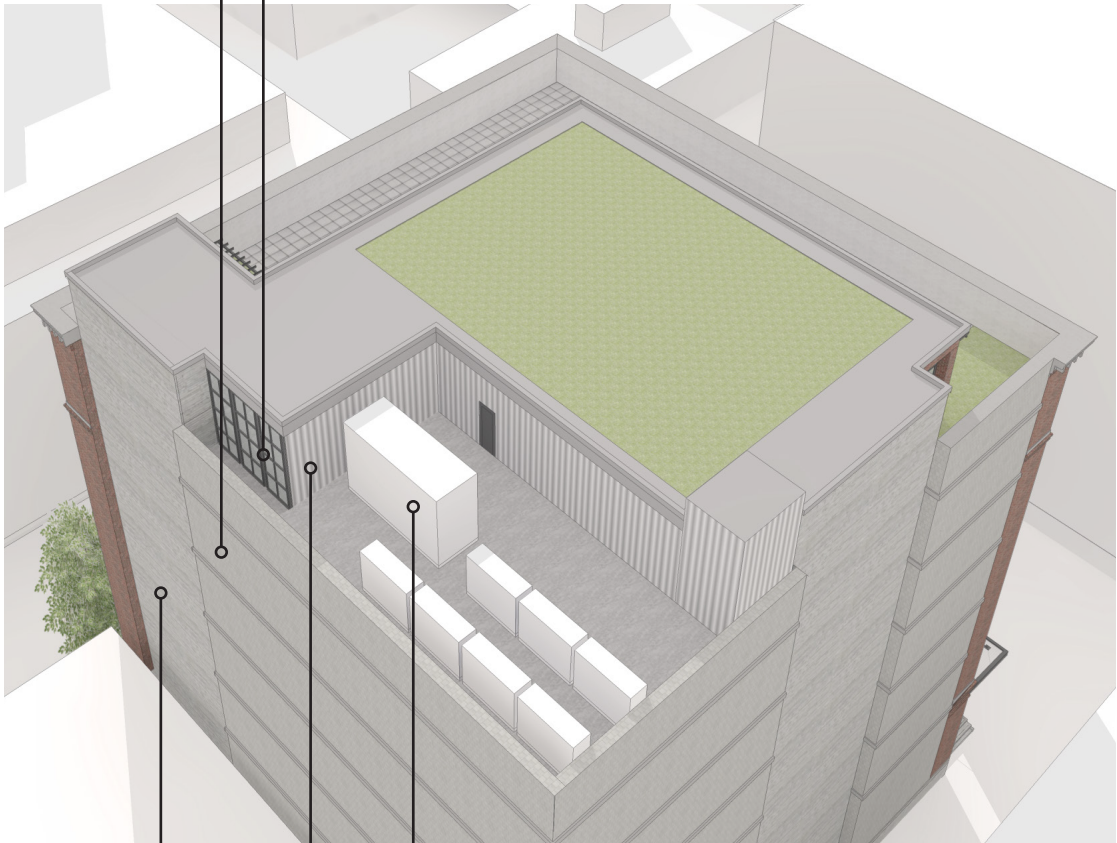
ECO ROOF TO PAVER TRANSITION



RIBBED METAL PANEL



BOARDFORM SHEARWALL



MECHANICAL EQUIPMENT - SEE CUTSHEETS IN APPENDIX B



OVERDAM FEATHER REED GRASS



KELSEYI DOGWOOD - SUMMER



MEIDILAND ROSE



WILD STRAWBERRY



KELSEYI DOGWOOD - WINTER



TUMBLLED GLASS / PEBBLES



NEIGHBORHOOD



ECOTRUST



THE JANEY



VESTAS



WASHINGTON HIGH SCHOOL REMODEL /
REVOLUTION HALL



PORTLAND



EASTSIDE EXCHANGE



THE SOCIETY HOTEL



VELOMOR APARTMENTS



CULVER BUILDING

Local Roofdeck Precedents

Pearl Building East
LU 16-153002 HRM AD

B.43

M.

NEIGHBORHOOD



AVEDA INSTITUTE



WEIDEN + KENNEDY



10 BARREL BREWING



MODERN CONFECTIONERY LOFTS

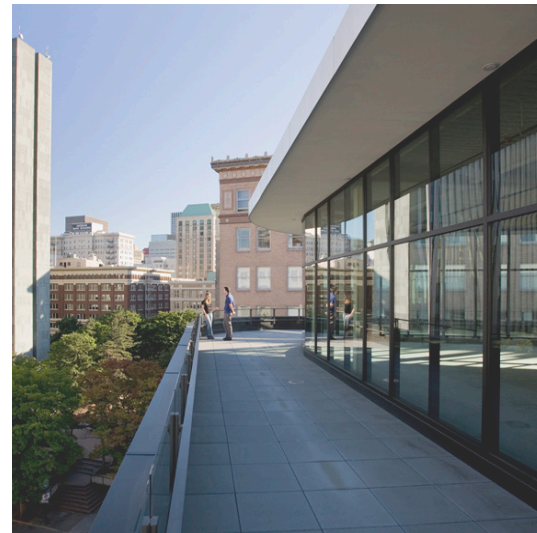
PORTLAND



RESIDENCE



TELEGRAM BUILDING

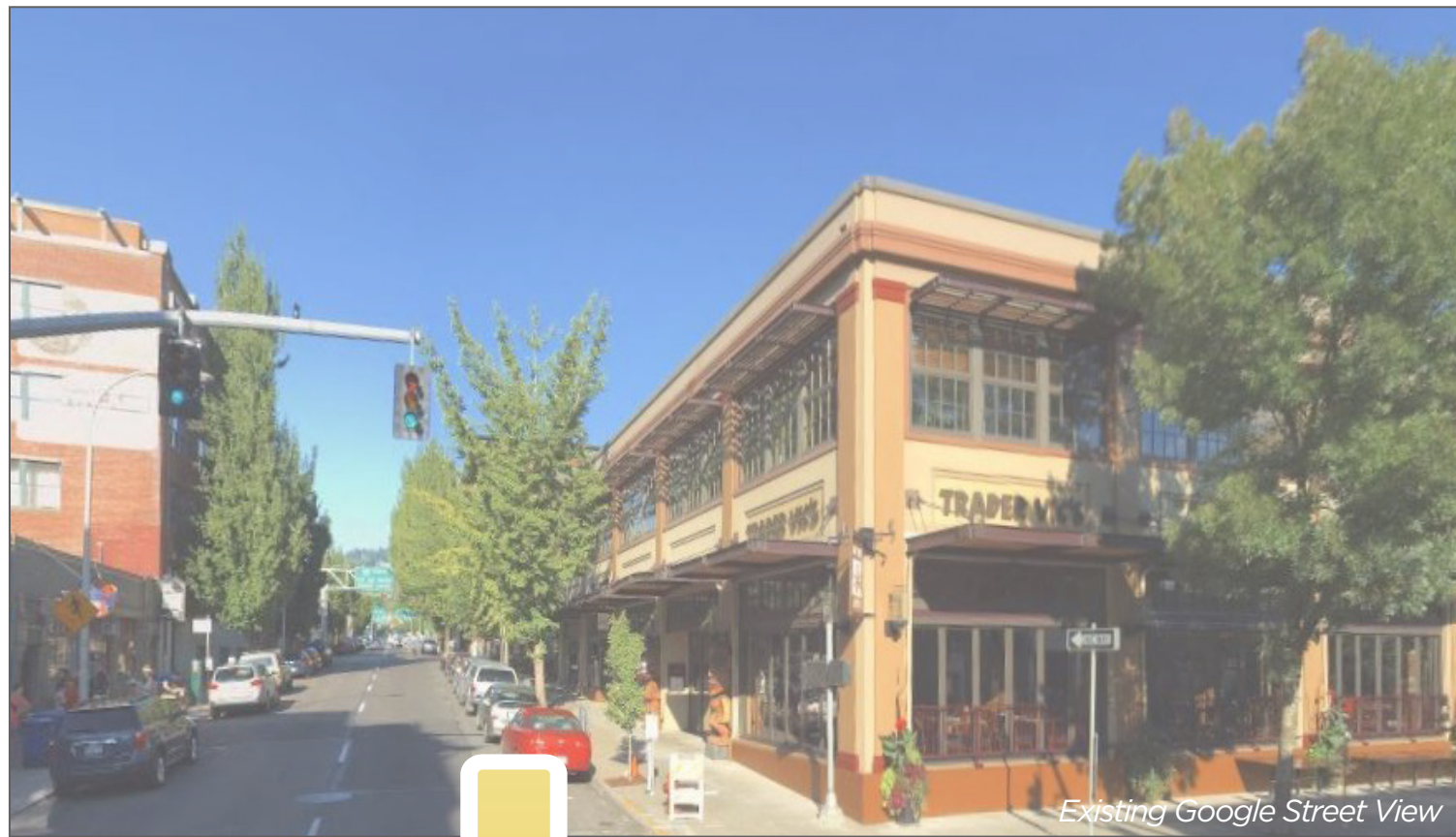


FEDERAL RESERVE BUILDING



CULVER BUILDING





Existing Google Street View



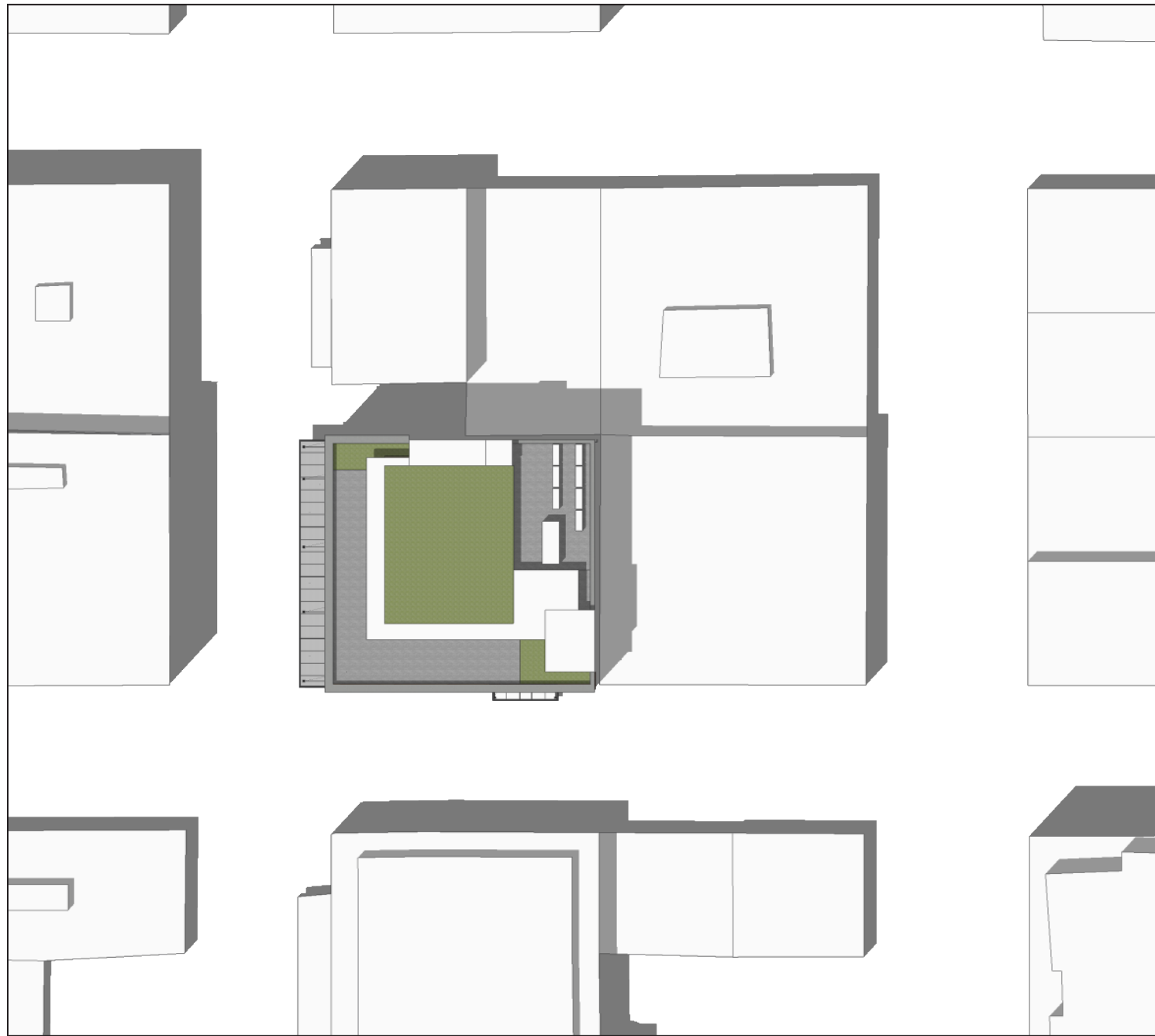
Existing Google Street View



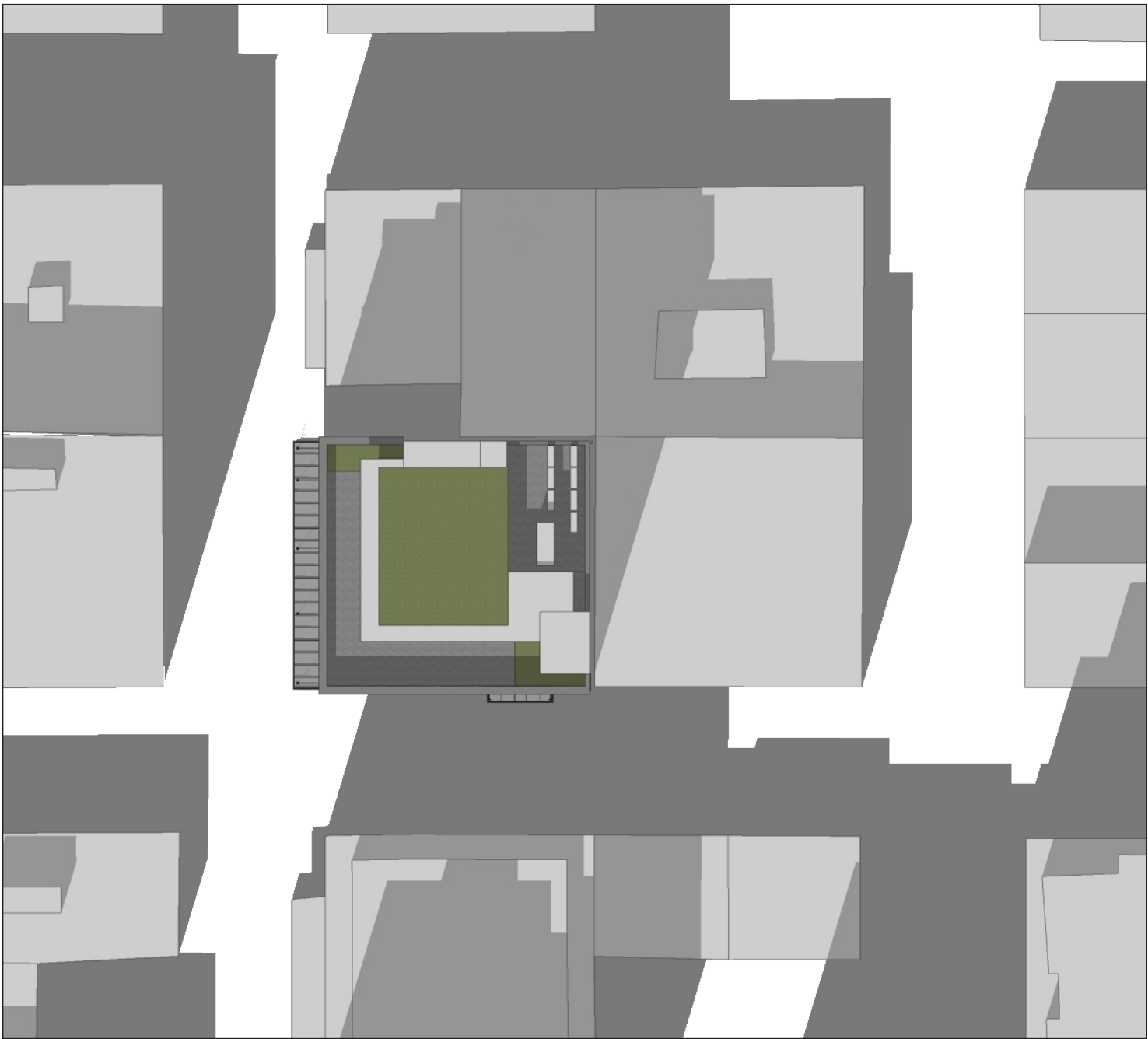
Above View: NW Glisan Looking West (*behind Trader Vic's*)



Above View: Corner of NW Hoyt and 12th (*behind Oba*)



June 21st at 1:00pm



December 21st at 1:00pm



Street View Perspective - Looking South on NW 13th Avenue

B.47

Pearl Building East
LU 16-153002 HRM AD



EXHIBIT B APPENDIX A STORMWATER REPORT

A large, light gray chevron graphic that originates from the bottom left corner and points diagonally upwards towards the top right corner, covering a significant portion of the page background.

MEMORANDUM

DATE: April 14, 2016
TO: File
FROM: Brent Nielsen, PE
PROJECT NAME: Pearl East
PROJECT #: 2150404.00

SUBJECT: Pearl East Stormwater Management – Design Review

The stormwater management system for the proposed Pearl East building has been designed to meet City of Portland standards for storm water quality treatment and discharge. These goals are achieved through a system of green roofs and subsurface infiltration. The facilities have been designed based on guidelines from the City of Portland 2014 Stormwater Management Manual.

The proposed building footprint covers the entire property at NW 13th Avenue and NW Glisan Street and includes green roof, traditional roof, and a canopy-covered pedestrian platform. Piped storm drainage from the site is provided through a combined sewer within NW Glisan Street.

Building Roof

The Pearl East building roof will consist of a combination of green roof and traditional roof surfaces. As shown in the attached roof plan, the green roof covers approximately XX sf of the building, with the remainder covered by traditional roof. A metal canopy overhangs the pedestrian platform on the west side of the building.

Runoff from the building roof and canopy will be collected and piped to the subsurface infiltration facility below the parking garage.

Per the SWMM standards, roof runoff which is directly piped to a UIC facility does not require pollution reduction water quality treatment.

Subsurface Infiltration

The proposed subsurface infiltration facility will be located below the parking garage levels and is sized to fully infiltrate the 10-year storm without surcharging the inlet pipes, and to handle the 100-year storm without backing up into the parking levels. The facility will consist of a single arch pipe chamber approximately 30 feet long and 4.25 feet wide. The chamber trench is backfilled with gravel drain rock.

The native infiltrating soils consist of sand and gravel approximately 35-40 feet below ground surface. While infiltration testing was not completed during the soil investigations due to the use of mud-rotary drill methods, soil sieve testing completed on representative samples at this depth indicate relatively low fines content. Based on experience with similar soils, we expect design infiltration rates (including factors of safety) to be approximately 10 inches per hour.

Groundwater in the project vicinity was measured through an on-site piezometer at approximately 41.59 feet below ground surface, at approximate elevation 8.41 (COP datum). The bottom of the

proposed infiltration facility is at elevation 16.25, which provides approximately 7.8 feet of separation from the groundwater table and meets minimum separation requirements.

The project team anticipates applying for and obtaining UIC authorization through the Oregon Department of Environmental Quality.

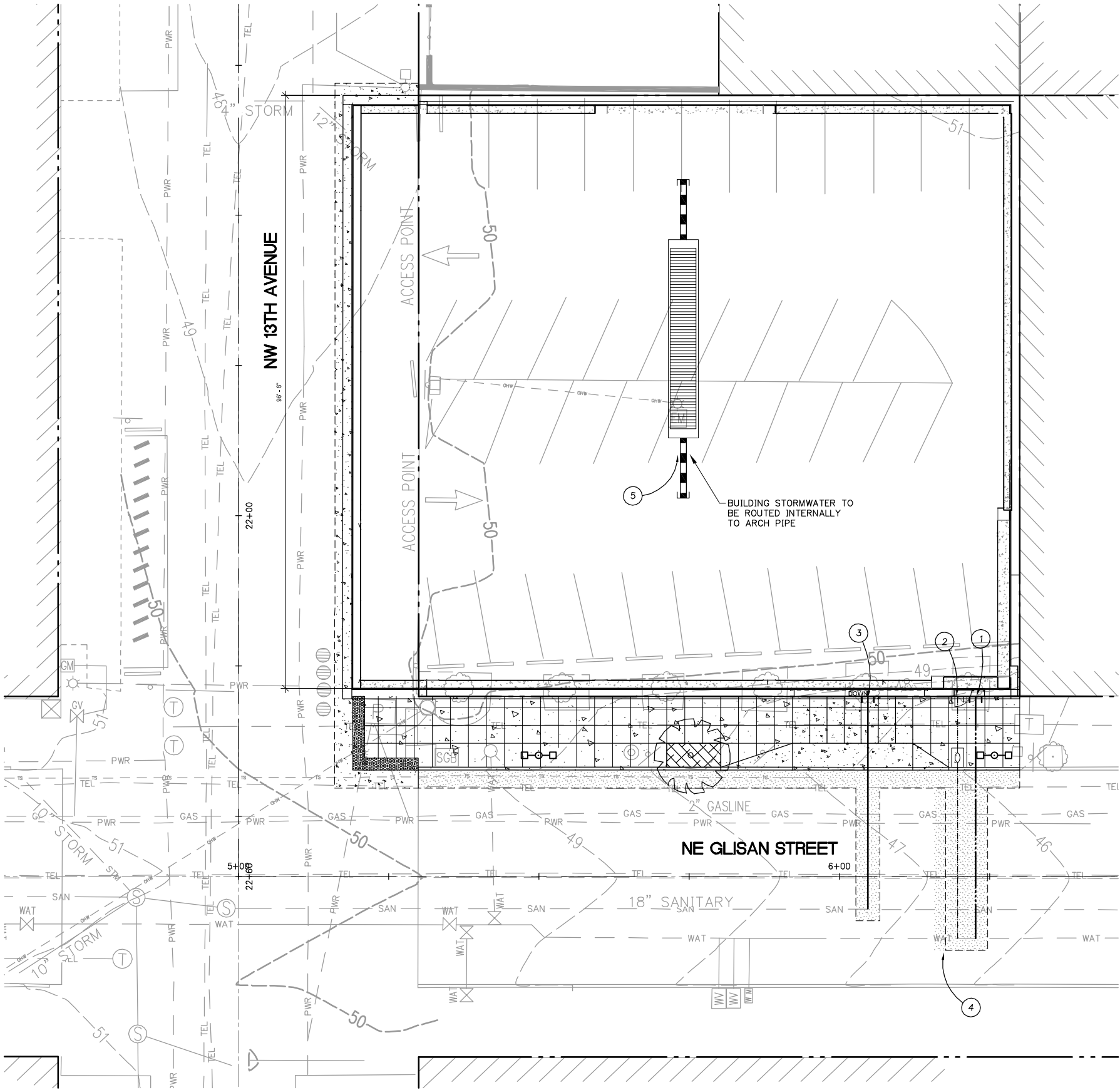
Hydrology calculations have been completed using published City of Portland precipitation estimates and the software program Hydroflow. Infiltration facility sizing calculations are attached to this memorandum.

Conclusion

The proposed Pearl East stormwater management system will collect and discharge all runoff from the building roof and canopy surfaces through a subsurface infiltration system. The facilities have been designed to meet City of Portland SWMM standards.

Enclosures:

1. Sheet C2.2 – Utility Plan
2. Sheet A108 – Roof Plan
3. Hydrology and Infiltration Facility Sizing Calculations
4. Geotechnical Engineering Report



1 UTILITY PLAN
C22

UTILITY NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND AND THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE AND THE INTERNATIONAL BUILDING CODE. ALL WORK WITHIN THE PUBLIC R.O.W. REQUIRES A PUBLIC WORKS PERMIT.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
- ALL STORM PIPING SHALL BE SIZED FOR A MANNING'S "N" VALUE = 0.013
ALL STORM PIPING SHALL BE DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED.
- SEE MECHANICAL DRAWINGS FOR UTILITIES LOCATED WITHIN THE BUILDING AND TO 5' OUTSIDE THE BUILDING.
- ALL DOWNSPOUT LEADERS TO BE 6" AT 2.0% MIN. UNLESS NOTED OTHERWISE.
- VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES BY POTHOLING PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES.
- THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS BASED ON AN ALTA SURVEY
- SEE BUILDING PLUMBING DRAWINGS FOR PIPING WITHIN THE BUILDING AND UP TO 5' OUTSIDE THE BUILDING, INCLUDING ANY FOUNDATION DRAINAGE PIPING.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A SPRINKLER/UNDERGROUND PERMIT TO INSTALL THE ON-SITE FIRE LINES AND HYDRANTS. THIS MUST BE OBTAINED FROM THE FIRE PREVENTION DIVISION OF PORTLAND FIRE AND RESCUE. THE CONTRACTOR SHOULD BE AWARE THAT THIS PERMIT COULD TAKE UP TO 2 WEEKS TO OBTAIN.
- CONTRACTOR TO MAINTAIN MINIMUM 3 FT OF COVER OVER ALL WATER LINE.
- REFER TO PBOT PUBLIC WORKS PERMIT FOR CONSTRUCTION IMPROVEMENTS IN PUBLIC RIGHT-OF-WAY. CONTRACTOR SHALL BE RESPONSIBLE FOR TRADE PERMITS

LEGEND

	EXISTING	PROPOSED
R.O.W.	---	
CURB	=====	
CONCRETE WALL	=====	
WATER LINE	---WAT---WAT---	AC PAVING
STORM LINE	---STM---STM---	CONCRETE PAVING
COMBINED SEWER LINE	---SAN---SAN---	LANDSCAPING
TELEPHONE LINE	---TEL---TEL---	
GAS LINE	---GAS---GAS---	CURB
OVERHEAD ELECTRIC LINE	---DHW---DHW---	SCORE LINE
POWER LINE	---PWR---PWR---	SAWCUT LINE
SURFACE ELEVATION CONTOUR	--- 31 ---	STORM LINE
TELEPHONE/POWER VAULT	[T]	PERFORATED STORM LINE
TRANSFORMER	[P]	WATER LINE
ELECTRIC METER/BOX	[EM] [EB]	SEWER LINE
WATER VALVE	[WV]	
GAS METER	[GM]	WATER METER
POWER POLE	[P]	CLEANOUT
SIGN	[S]	
EXISTING BUILDING	[Hatched Box]	
CONCRETE SIDEWALK	[Dashed Box]	

KEY NOTES:

- 6" FIRE SERVICE LINE, BY PORTLAND WATER BUREAU. DOUBLE CHECK BACKFLOW PROVIDED IN UTILITY ROOM
- 3" WATER SERVICE WITH METER, BY PORTLAND WATER BUREAU. PROVIDE DOUBLE CHECK BACKFLOW IN RISER ROOM
- 6" SEWER LATERAL, CONNECT TO PLUMBING
- TRENCH BACKFILL AND AC PAVEMENT RECONSTRUCTION, PER CITY STANDARD
- 30 LF STORMTECH INFILTRATION ARCH PIPE



Architecture - Interiors
Planning - Engineering

Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mcknze.com

MACKENZIE.
DESIGN DRIVEN | CLIENT FOCUSED

Client
PBE, LLC.
205 LYTHON AVENUE
SUITE 303
PALO ALTO, CALIFORNIA
94301

Project
PEARL BUILDING
EAST

1313 NW GLISAN STREET
PORTLAND, OREGON
97209

© MACKENZIE 2015
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY
OF MACKENZIE AND ARE NOT TO BE
USED OR REPRODUCED IN ANY MANNER,
WITHOUT PRIOR WRITTEN PERMISSION

REVISIONS:		
REVISION DELTA	REVISIONS THIS SHEET	REVISION DELTA CLOSING DATE

SHEET TITLE:
UTILITY PLAN

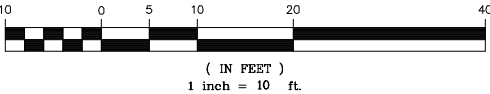
DRAWN BY: HEM
CHECKED BY: BDN
SHEET:

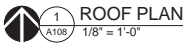
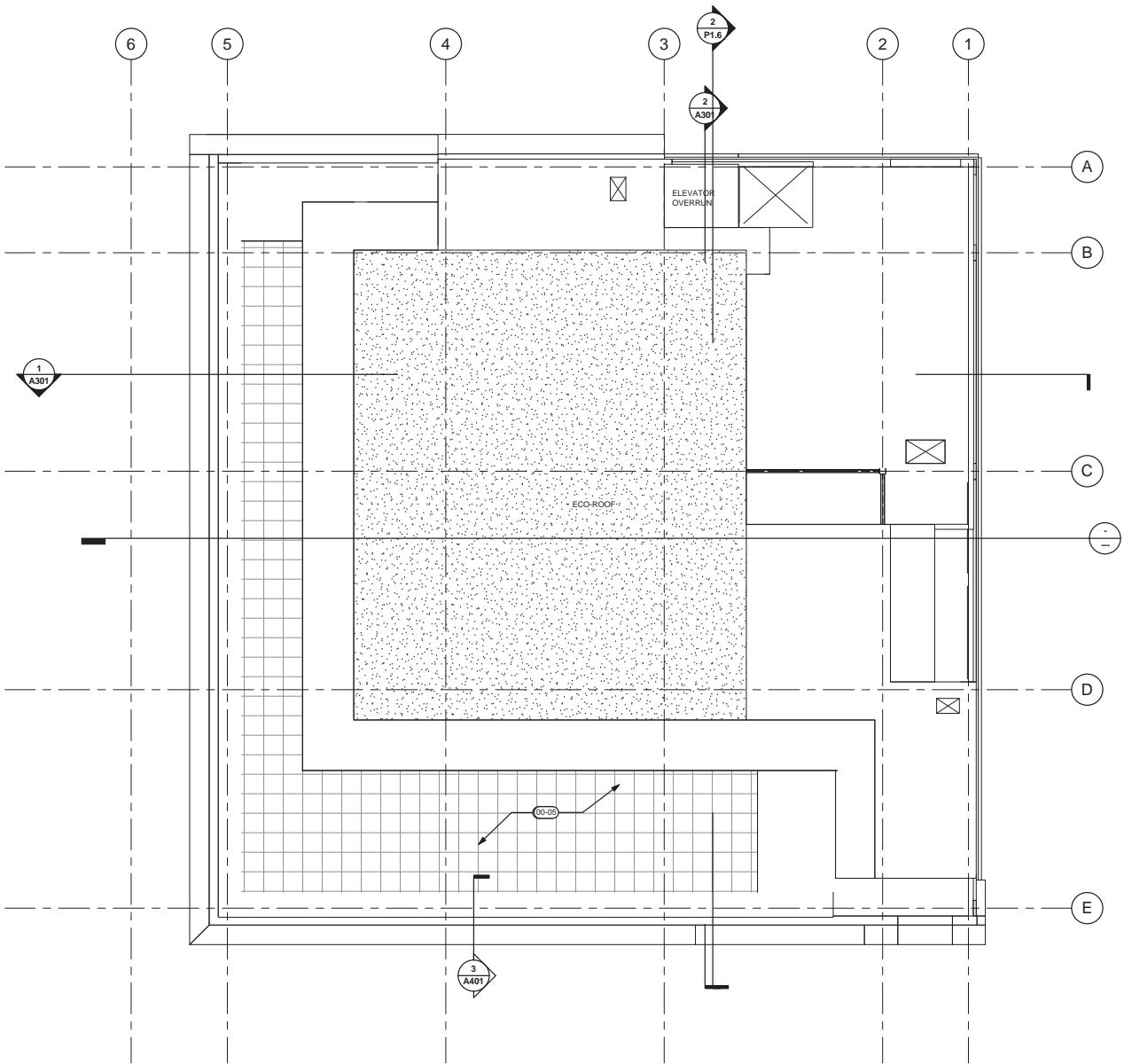
C2.2

JOB NO.
2150404.00

PRELIMINARY ONLY

215040400\4_DRAWINGS\CIVIL\404-C2.2.DWG BDN 04/14/16 11:47 1:10





ROOF PLAN

1/8" = 1'-0"

KEY NOTES

00-05 ROOF DECK BELOW

GENERAL NOTES

- ALL WORK NEW UNO
- ALL WORK SHALL COMPLY WITH CURRENT FEDERAL STATE AND LOCAL BUILDING CODES AND REGULATIONS
- ALL WORK SHALL COMPLY WITH TRADE STANDARDS AND MANUFACTURERS INSTRUCTIONS REFERENCED IN CONTRACT DOCUMENTS
- VERIFY AND CONFIRM ALL DIMENSIONS & CONDITIONS. NOTIFY OF ANY DISCREPANCIES PRIOR TO START OF WORK.
- DETAIL & KEYNOTE REFERENCES SHALL BE APPLIED TO ALL INSTANCES WHERE THE SAME CONDITION OCCURS.
- ELEVATION 0'-0" = 54'-6" FINISH FLOOR ELEVATION AS INDICATED ON CIVIL DRAWINGS
- REFER TO ENLARGED PLANS WHERE INDICATED FOR ADDITIONAL INFORMATION.
- CLEAR DIMENSIONS TAKE PRECEDENCE ~~DO NOT~~ SCALE DRAWINGS TO DETERMINE SIZES.
- DOORS TO BE 6" MIN FROM NEAREST PERPENDICULAR PARTITION UNO
- SEE ELEVATIONS AND GLAZING SCHEDULE FOR EXTERIOR WINDOW SIZES.
- DIMENSIONS GIVEN TO COLUMN LINES, ROUGH OPENINGS AND FACE OF FINISH UNO
- TEMPERED GLASS TO BE USED IN ALL LOCATIONS AS REQUIRED BY CODE. SEE ELEVATIONS
- SEE A500 FOR TYPICAL WALL, FLOOR, AND ROOF ASSEMBLIES.
- GENERAL CONTRACTOR SHALL SCHEDULE FIREFIGHTING MEETING. SEE XXX AND SPECIFICATIONS FOR REQUIREMENTS
- SEE DETAILS XXX, XXX FOR TYPICAL PIPE PENETRATIONS.
- WALL THICKNESSES NOMINAL UNO
- SEE XXXX FOR DOOR SCHEDULE
- SEE AXX FOR LIGHTING SCHEDULE
- SEE SHEET A191 FOR PARTITION TYPES AND STANDARD DETAILS
- ALL PARTITIONS WALL TYPE P1A UNO
- ALL EXIT CORRIDOR WALLS TYPE P2 UNO
- ALL SHAFT WALLS TYPE P3C UNO
- ALL CHASE WALLS TYPE P5 UNO
- ALL WALLS TO STRUCTURE, UNO -- SEE AXXX
- ALL INTERIOR WALLS INCLUDE ACOUSTICAL INSULATION
- CONTRACTOR TO ENSURE MAX 2% MAX CROSS SLOPE AT ALL AREAS IN PARKING WHERE SLAB SLOPES TO DRAIN TO COMPLY WITH ADA REQUIREMENTS PROVIDE VAPOR BARRIERS UNDER SLAB AT AREAS SCHEDULED TO RECEIVE FLOORING
- ALL EQUIPMENT AND APPLIANCES TO BE CONTRACTOR FURNISHED, CONTRACTOR INSTALLED

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Thursday, 04 / 14 / 2016

Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Thursday, 04 / 14 / 2016

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	-----
2	6.9527	2.1000	0.6577	-----
3	0.0000	0.0000	0.0000	-----
5	9.9393	2.7000	0.6824	-----
10	10.2300	2.0000	0.6569	-----
25	11.8938	2.0000	0.6571	-----
50	0.0000	0.0000	0.0000	-----
100	15.0837	2.1000	0.6597	-----

File name: City of Portland IDF.IDF

$$\text{Intensity} = B / (T_c + D)^E$$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1.92	1.35	1.07	0.91	0.79	0.71	0.65	0.59	0.55	0.52	0.49	0.46
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	2.47	1.75	1.40	1.18	1.03	0.92	0.83	0.77	0.71	0.66	0.62	0.59
10	2.85	2.00	1.59	1.34	1.17	1.05	0.95	0.88	0.82	0.76	0.72	0.68
25	3.31	2.32	1.85	1.56	1.36	1.22	1.11	1.02	0.95	0.89	0.83	0.79
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	4.14	2.91	2.32	1.96	1.71	1.53	1.39	1.28	1.19	1.11	1.05	0.99

Tc = time in minutes. Values may exceed 60.

Precip. file name: G:\Hydrograph Information\NOAA\Portland precipitation - from City design manual.pcp

[illegible]

Hydrograph Report

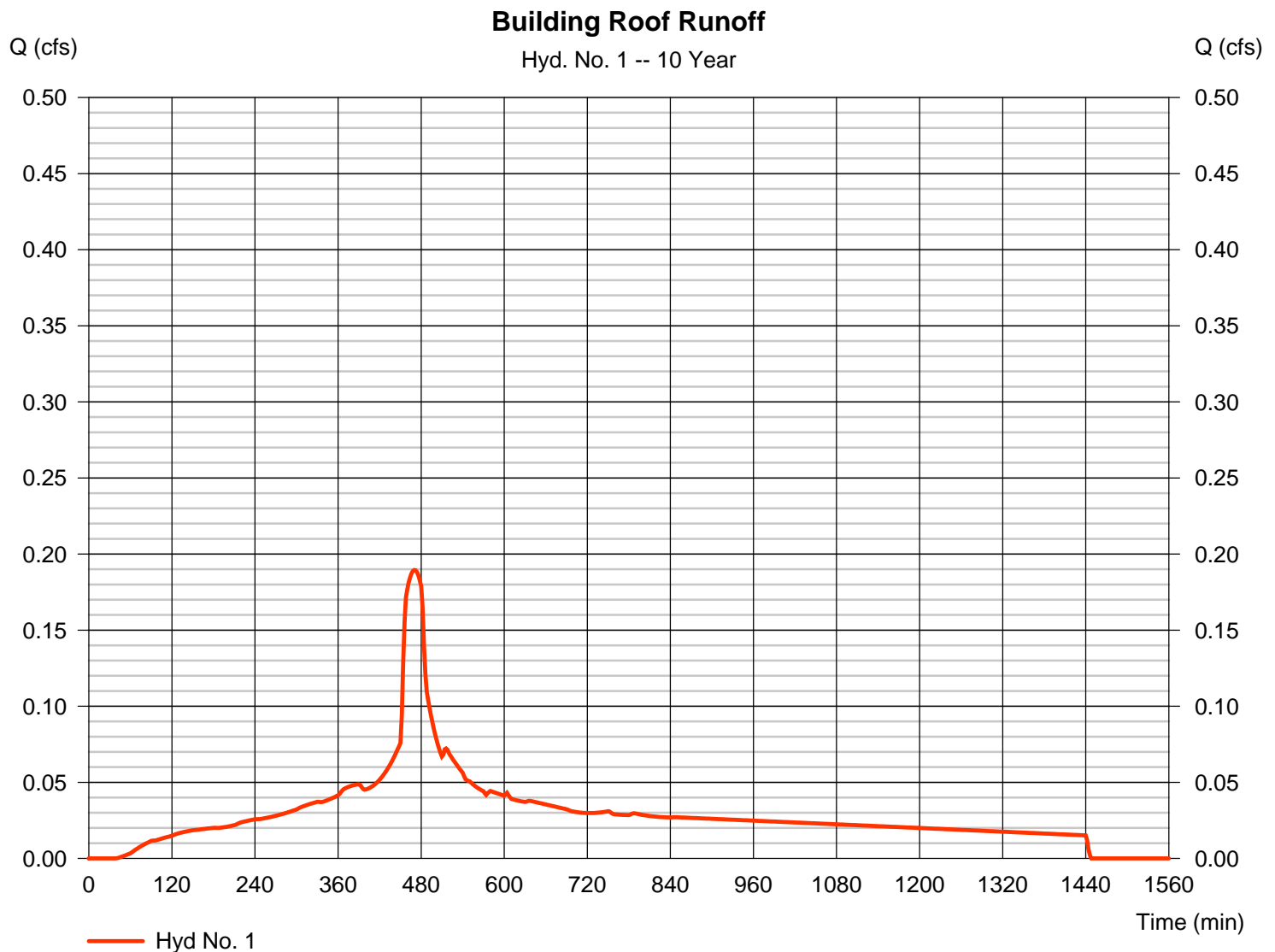
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Thursday, 04 / 14 / 2016

Hyd. No. 1

Building Roof Runoff

Hydrograph type	= SCS Runoff	Peak discharge	= 0.189 cfs
Storm frequency	= 10 yrs	Time to peak	= 470 min
Time interval	= 2 min	Hyd. volume	= 2,694 cuft
Drainage area	= 0.250 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.40 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

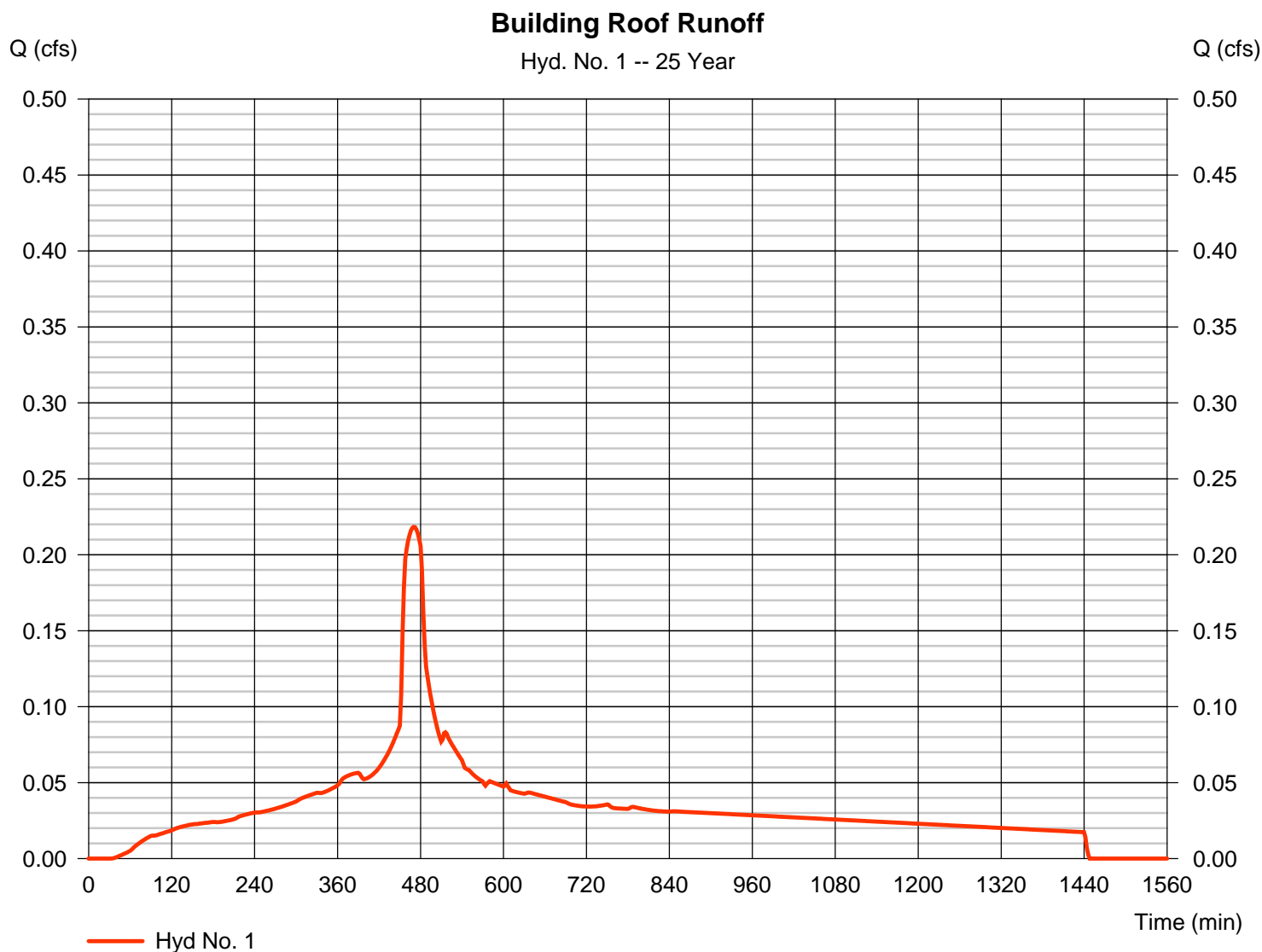
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Thursday, 04 / 14 / 2016

Hyd. No. 1

Building Roof Runoff

Hydrograph type	= SCS Runoff	Peak discharge	= 0.218 cfs
Storm frequency	= 25 yrs	Time to peak	= 470 min
Time interval	= 2 min	Hyd. volume	= 3,118 cuft
Drainage area	= 0.250 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.90 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

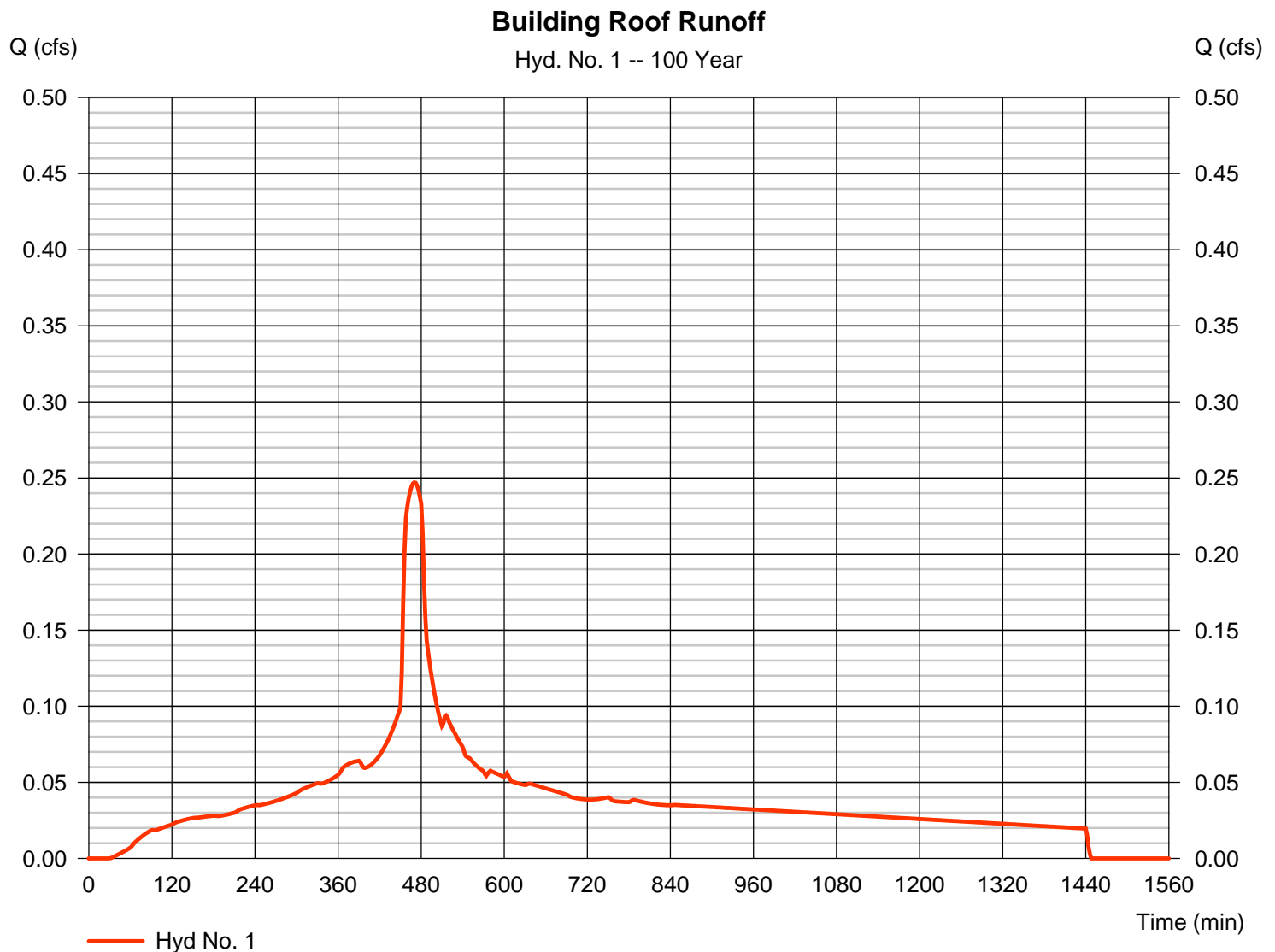
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Thursday, 04 / 14 / 2016

Hyd. No. 1

Building Roof Runoff

Hydrograph type	= SCS Runoff	Peak discharge	= 0.247 cfs
Storm frequency	= 100 yrs	Time to peak	= 470 min
Time interval	= 2 min	Hyd. volume	= 3,543 cuft
Drainage area	= 0.250 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.40 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= 484



Pond Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Thursday, 04 / 14 / 2016

Pond No. 1 - StormTech DC-780

Pond Data

UG Chambers -Invert elev. = 17.00 ft, Rise x Span = 2.50 x 4.25 ft, Barrel Len = 30.00 ft, No. Barrels = 1, Slope = 0.00%, Headers = No

Encasement -Invert elev. = 16.25 ft, Width = 5.00 ft, Height = 6.00 ft, Voids = 35.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	16.25	n/a	0	0
0.60	16.85	n/a	32	32
1.20	17.45	n/a	69	100
1.80	18.05	n/a	79	179
2.40	18.65	n/a	73	252
3.00	19.25	n/a	62	314
3.60	19.85	n/a	38	352
4.20	20.45	n/a	32	383
4.80	21.05	n/a	32	415
5.40	21.65	n/a	32	446
6.00	22.25	n/a	32	478

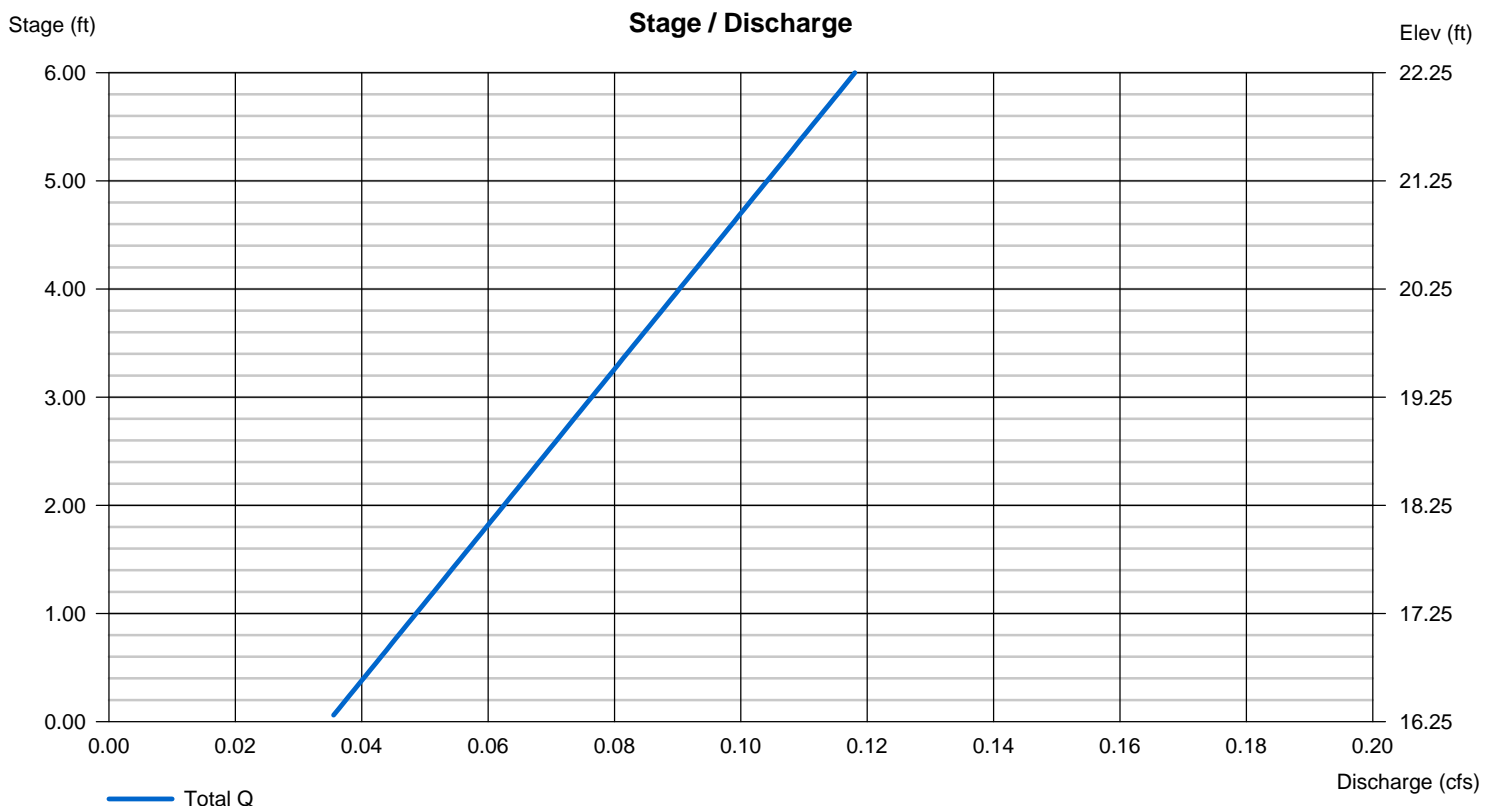
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 10.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

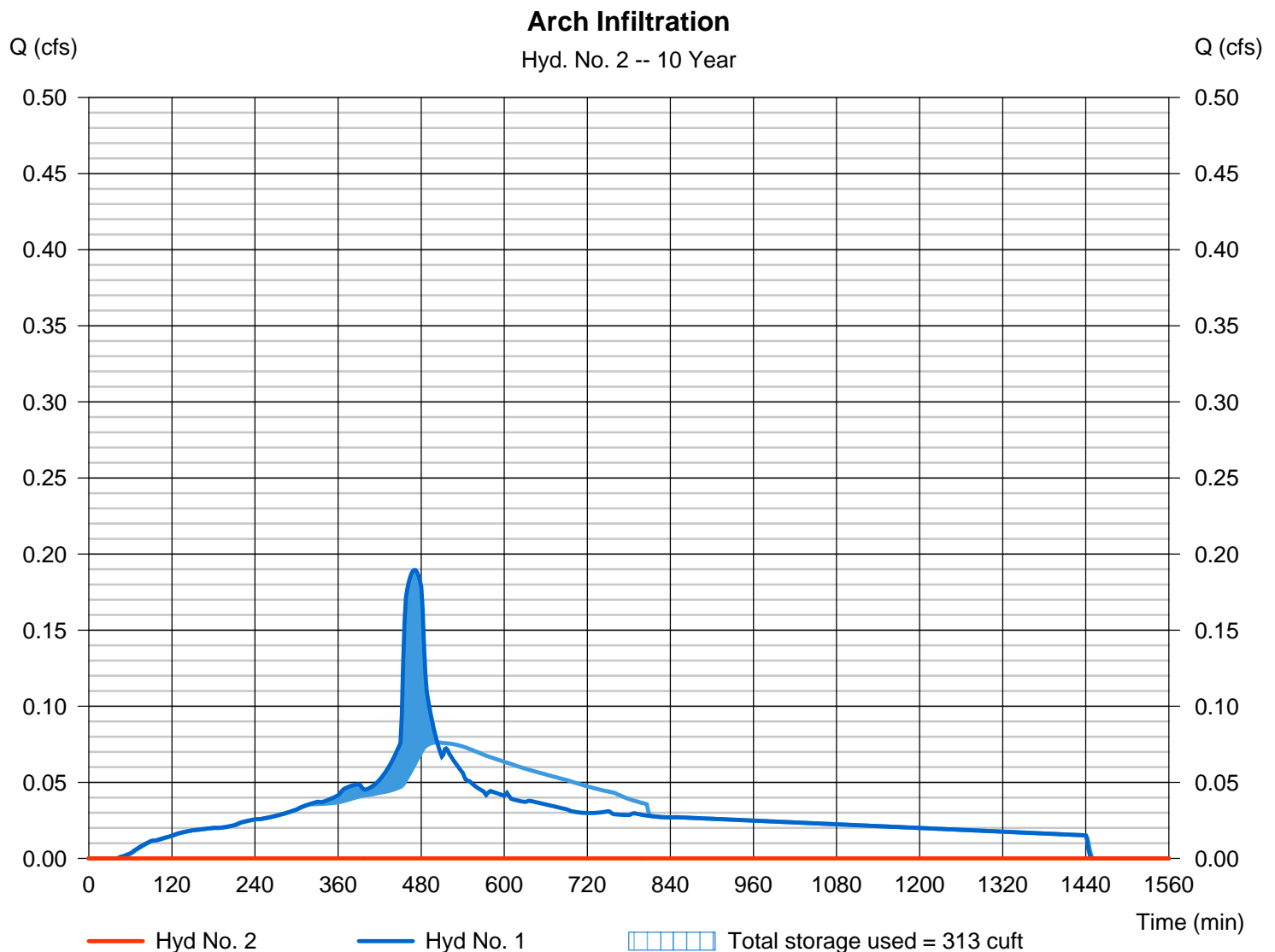
Thursday, 04 / 14 / 2016

Hyd. No. 2

Arch Infiltration

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 1 - Building Roof Runoff	Max. Elevation	= 19.24 ft
Reservoir name	= StormTech DC-780	Max. Storage	= 313 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



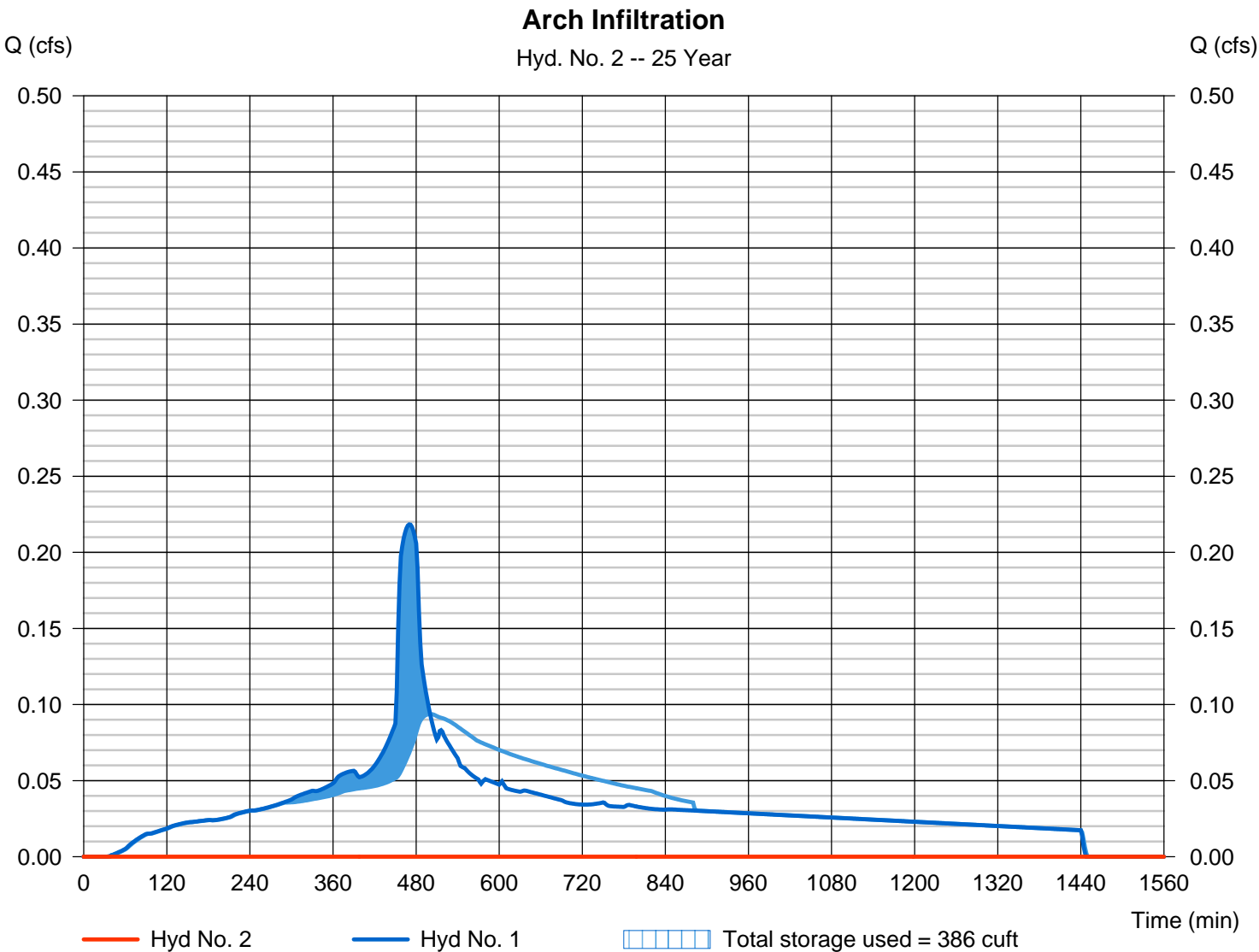
Hydrograph Report

Hyd. No. 2

Arch Infiltration

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 25 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 1 - Building Roof Runoff	Max. Elevation	= 20.50 ft
Reservoir name	= StormTech DC-780	Max. Storage	= 386 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Thursday, 04 / 14 / 2016

Hyd. No. 2

Arch Infiltration

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 1 - Building Roof Runoff	Max. Elevation	= 21.85 ft
Reservoir name	= StormTech DC-780	Max. Storage	= 457 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

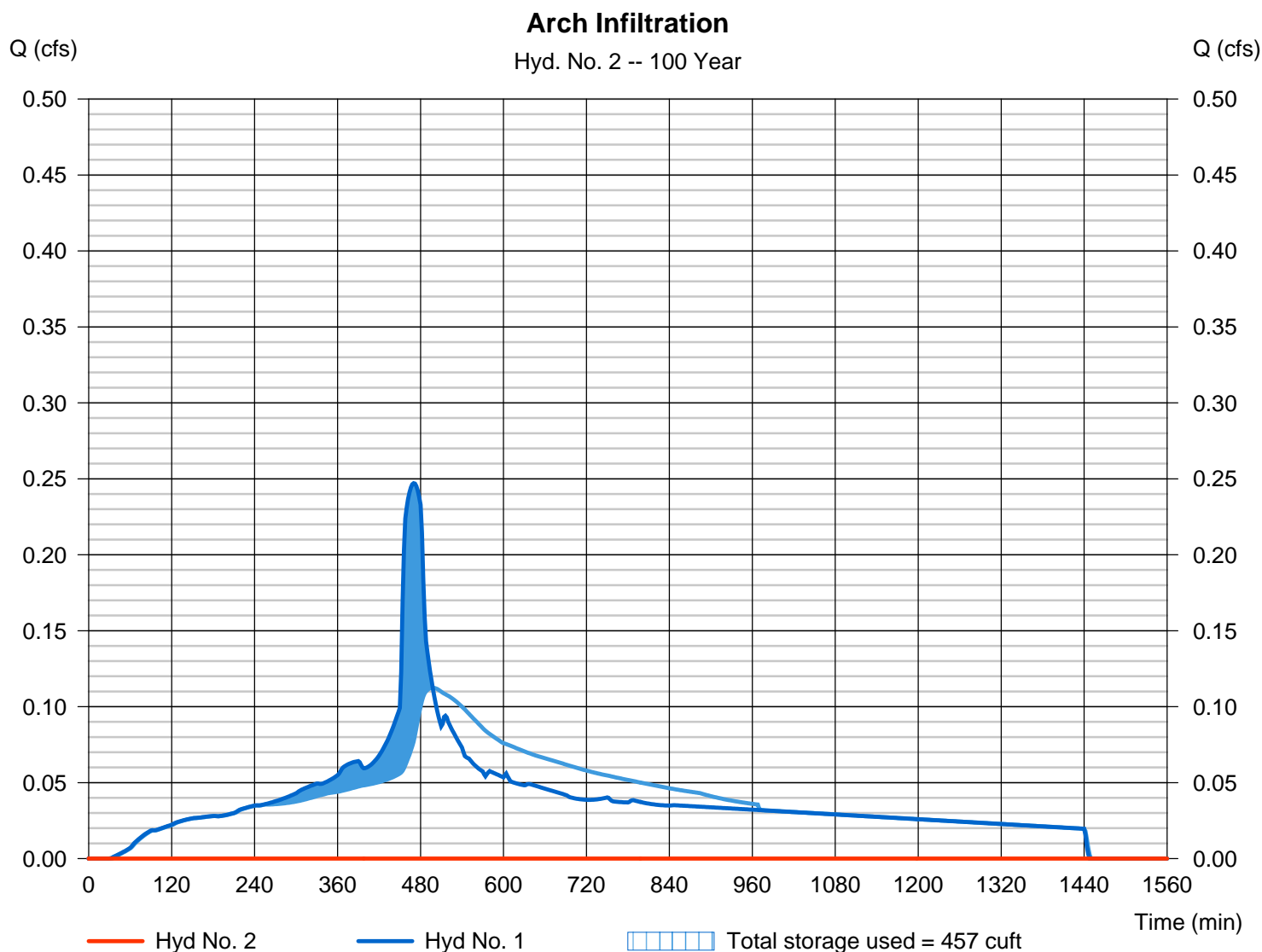


EXHIBIT B APPENDIX B MATERIALS AND CUTSHEETS

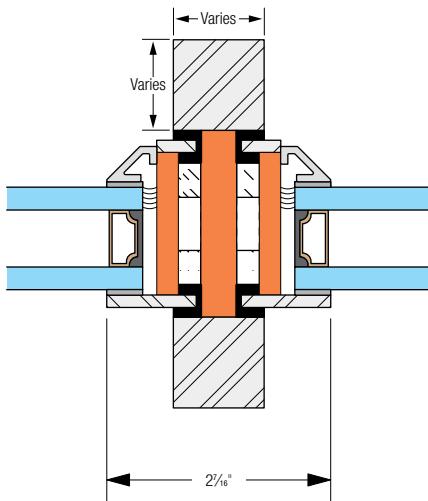
A large, light gray arrow graphic that originates from the bottom left corner and points diagonally upwards towards the top right corner, spanning most of the page.



The durability of steel coupled with minimal aesthetics. That's the hallmark of our Thermal Steel Windows and Doors. Because they are crafted from steel, our doors and windows provide security and durability, and the design flexibility to fit virtually any shape or opening. With profile face widths of just 1 to 2 inches, our Thermal Steel Windows and Doors produce narrow sight-lines and a lightness to the frame for a clean, crisp modern look.

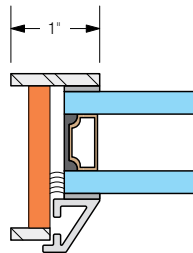
A E S T H E T I C D E T A I L S

Structural mullion

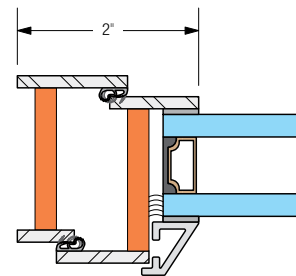


Factory installed pre-welded Glazing Frames eliminate gaps commonly found with onsite glazing.

Fixed window



Operating window and door



A R C A D I A C U S T O M

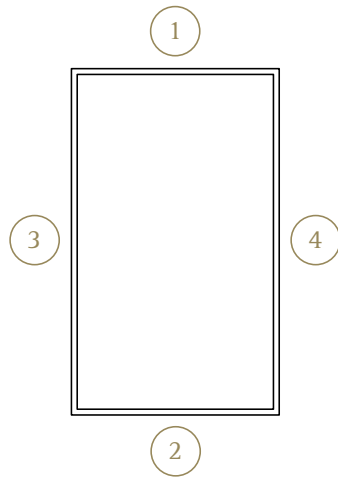
Page 4

Window System Cutsheets

Pearl Building East

LU 16-153002 HRM AD





STEEL SPECIFICATIONS

Model: *TSX-1000*

Description: *Fixed Window*

Material: *Thermally-Broken 10 gauge
304 Stainless Steel*

Glazing:

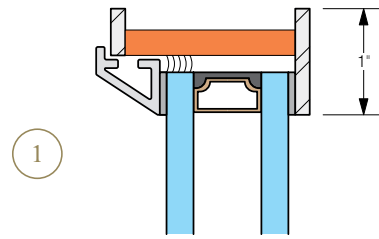
Type: *Dual (single and triple available)*
 Glass: *Guardian 62/27 low-e (others available)*
 Spacer: *Warm-edge, Dark Bronze*
 Thickness: *1 1/8" overall=1/4"-5/8"-1/4"*
(3/8"-1 9/16" available)

Glazing Frame:

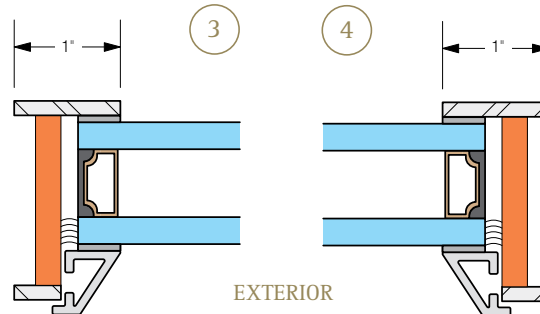
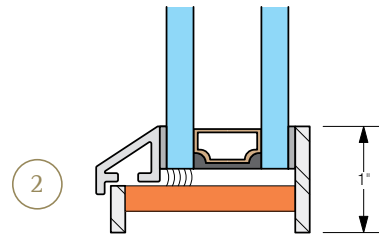
Orientation: *Exterior (interior available)*
 Detail: *Sloped Bevel (other details available)*
 Muntin: *Specify: None, SDL, TDL*

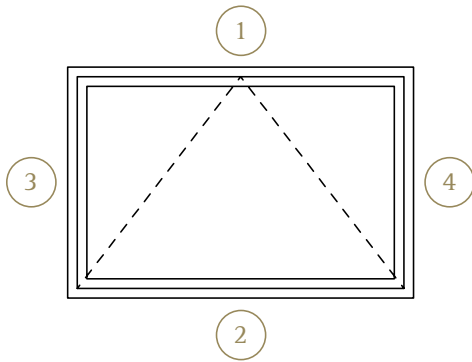
Frame Depth: *1 7/8"-TSX 40 (others available)*

Finish: *Powder Coat with Epoxy Primer,
Specify Color*



EXTERIOR





STEEL SPECIFICATIONS

Model: *TSX-3500*

Description: *Out-swing Awning*

Window Operation: *Push-Out*
(*roto crank-out available*)

Window Hinge: *Stainless Steel Friction Hinge*

Window Lock: *Simplex Sash Lock*
(*multi-point lock available*)

Material: *Thermally-Broken 10 gauge*
304 Stainless Steel

Glazing:

Type: *Dual (single and triple available)*

Glass: *Guardian 62/27 low-e (others available)*

Spacer: *Warm-edge, Dark Bronze*

Thickness: *1 1/8" overall=1/4"-5/8"-1/4"*
(*3/8"-1 1/2" available*)

Glazing Frame:

Orientation: *Exterior (interior available)*

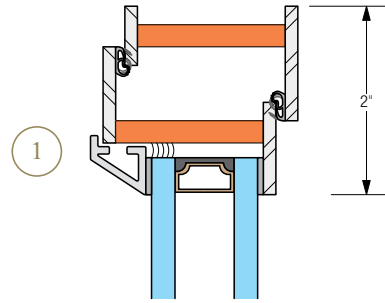
Detail: *Sloped Bevel (other details available)*

Muntin: *Specify: None, SDL, TDL*

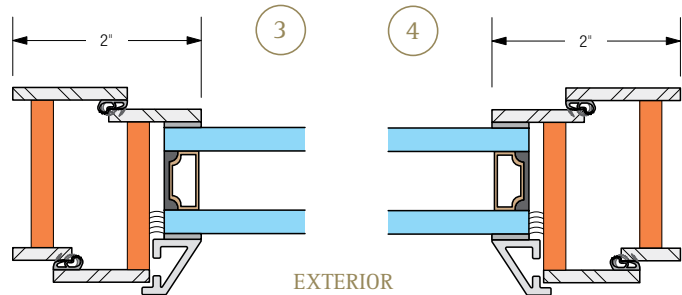
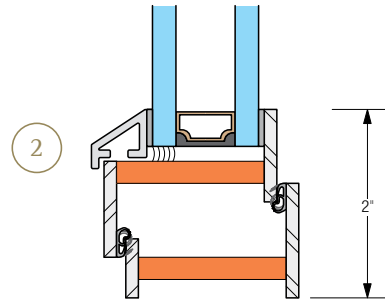
Weather-strip: *Silicone Gasket 4-point*
contact, black

Frame Depth: *1 7/8"-TSX 40 (others available)*

Finish: *Powder Coat with Epoxy Primer,*
Specify Color

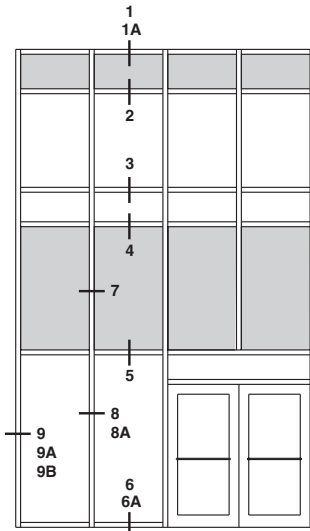


EXTERIOR

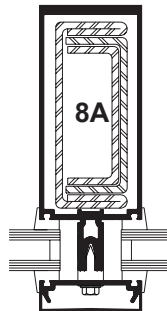
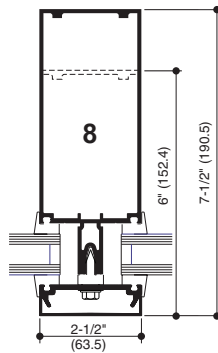
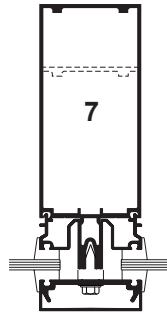
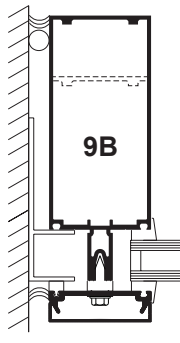
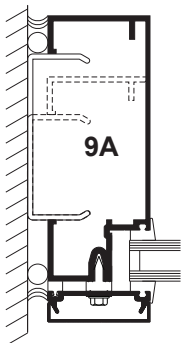
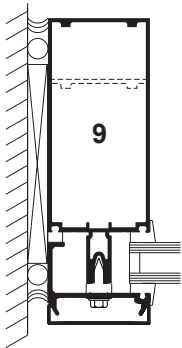
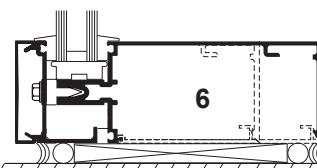
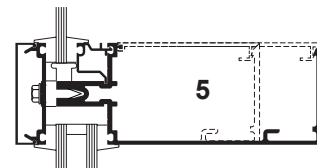
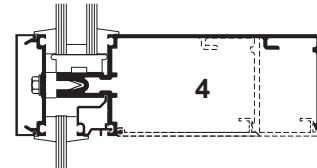
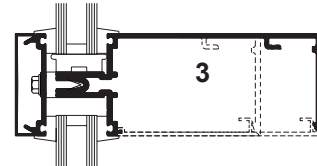
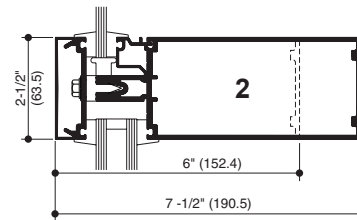
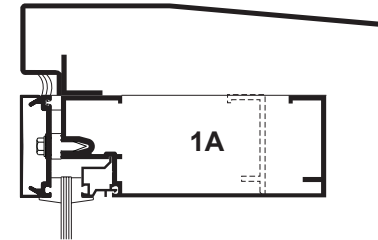
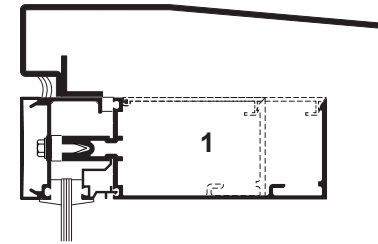
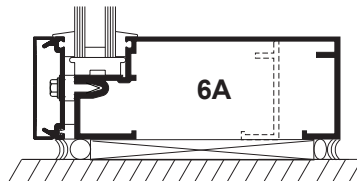


EXTERIOR

SCALE 3" = 1'-0"



ELEVATION IS NUMBER KEYED TO DETAILS

OPTIONAL STEEL
REINFORCING
AS REQUIRED

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2014



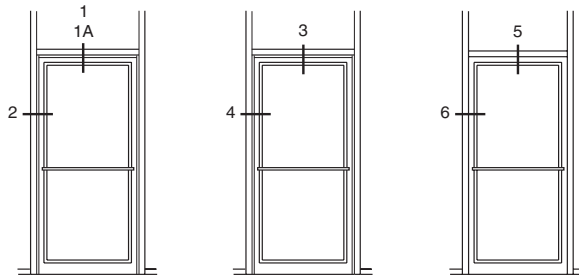
ADMD010

kawneer.com

Penthouse Window System Cutsheets

M Pearl Building East
LU 16-153002 HRM AD

SCALE 3" = 1'-0"

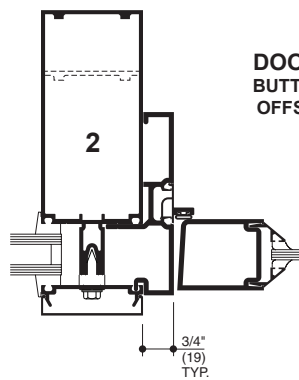
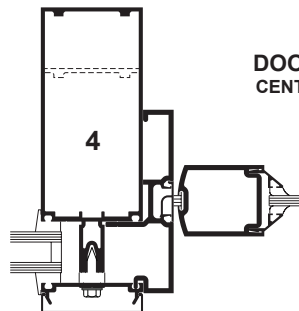
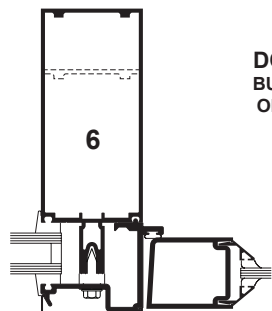
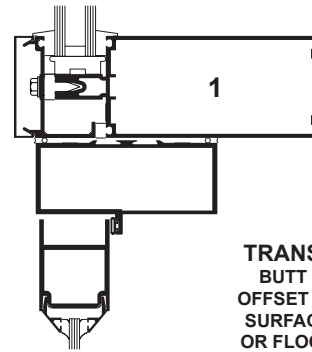
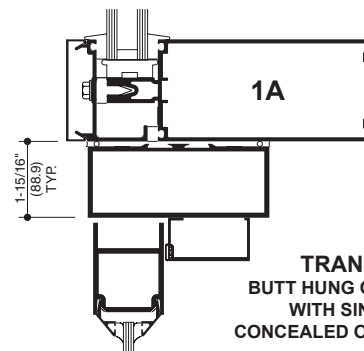
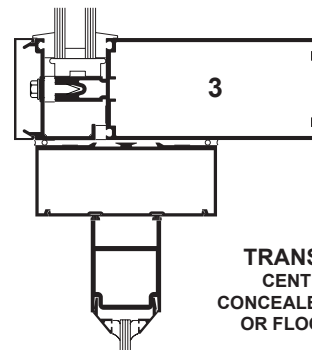
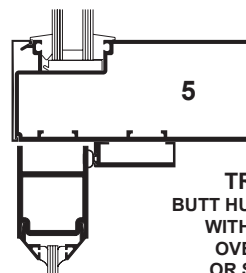


B/H OR O/P

C/H

B/H OR O/P

ELEVATION IS NUMBER KEYED TO DETAILS

DOOR JAMB
BUTT HUNG OR
OFFSET PIVOTDOOR JAMB
CENTER HUNGDOOR JAMB
BUTT HUNG OR
OFFSET PIVOTTRANSOM BAR
BUTT HUNG OR
OFFSET PIVOT WITH
SURFACE CLOSER
OR FLOOR CLOSERTRANSOM BAR
BUTT HUNG OR OFFSET PIVOT
WITH SINGLE ACTING
CONCEALED OVERHEAD CLOSERTRANSOM BAR
CENTER HUNG
CONCEALED OVERHEAD
OR FLOOR CLOSERTRANSOM BAR
BUTT HUNG OR OFFSET PIVOT
WITH LCN CONCEALED
OVER HEAD CLOSER
OR SURFACE CLOSER

ADMD010

kawneer.com

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.
© Kawneer Company, Inc., 2014

ALUMINUM DOOR SYSTEMS MODEL 511

doors are designed in sizes up to 16'2" wide and 16'1" high (4928 mm and 4902 mm). Featuring a narrow center stile width of 21/32" (17 mm), these doors are sleek, attractive and permit maximum visibility. An array of glazing choices, top-and bottom-rail widths, finishes and special options customizes the 511 Model to satisfy nearly any project requirement.

Model 511, black powder coat finish, clear glass.

ALUMINUM DOOR SYSTEMS MODELS 511/521

ALUMINUM SECTIONAL DOORS

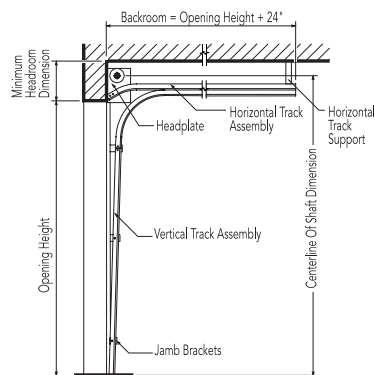
Track detail

Any of the following track configurations can be selected for 511 and 521 Aluminum door models.

O.H.=Opening height L.C.=Lift clearance D.H.=Door height

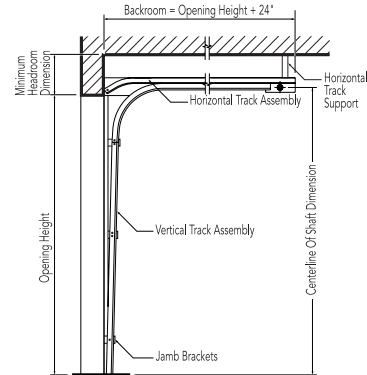
Standard lift track			Lift clearance track Standard			Full vertical track		
2" (51 mm) Track [15" (381 mm) radius]			2" (51 mm) Track [15" (381 mm) radius]			2" (51 mm) Track [15" (381 mm) radius]		
Door height	Centerline of shaft	Minimum headroom	Door height	Centerline of shaft	Minimum headroom	Door height	Centerline of shaft	Minimum headroom
Thru 12'0" (3658 mm)	O.H. + 11 5/8" (295 mm)	14 1/4" (362 mm)	Thru 12'0" (3658 mm)	O.H. + L.C. + 5 5/8" (143 mm)	L.C. + 8 3/4" (222 mm)	Thru 11'0" (3353 mm)	O.H. + O.H. + 3/8" (10 mm)	O.H. + 10 1/4" (260 mm)
Thru 16'0" (4877 mm)	O.H. + 12 5/8" (321 mm)	20 1/2" (521 mm)	Thru 16'0" (4877 mm)	O.H. + L.C. + 5 5/8" (143 mm)	L.C. + 11 1/4" (286 mm)	Thru 16'0" (4877 mm)	O.H. + O.H. + 3/8" (10 mm)	O.H. + 10 1/4" (260 mm)
3" (76 mm) Track [15" (381 mm) radius]			3" (76 mm) Track [15" (381 mm) radius]			3" (76 mm) Track [15" (381 mm) radius]		
Thru 18'0" (5486 mm)	O.H. + 14 5/8" (372 mm)	18" (457 mm)	Thru 22'0" (6706 mm)	O.H. + L.C. + 6 5/8" (168 mm)	L.C. + 11 1/2" (292 mm)	Thru 18'0" (5486 mm)	O.H. + O.H. + 3/8" (10 mm)	O.H. + 10 1/4" (260 mm)
Thru 32'0" (9754 mm)	O.H. + 16 7/8" (429 mm)	21 1/2" (546 mm)	Thru 32'0" (9754 mm)	O.H. + L.C. + 6 5/8" (168 mm)	L.C. + 12 1/4" (311 mm)			

Low headroom track Springs to front



2" (51 mm) Track [15" (381 mm) radius]		
Door height	Centerline of shaft	Minimum headroom
Thru 12'0" (3658 mm)	D.H. + 8" (203 mm)	11 3/4" (299 mm)
Thru 16'0" (4877 mm)	D.H. + 8" (203 mm)	12 1/2" (318 mm)
3" (76 mm) Track [15" (381 mm) radius]		
Thru 12'0" (3658 mm)	D.H. + 9" (229 mm)	13" (330 mm)
Thru 32'0" (5486 mm)	D.H. + 9" (229 mm)	13 3/4" (349 mm)

Low headroom track Springs to rear



2" (51 mm) Track [15" (381 mm) radius]		
Door height	Centerline of shaft	Minimum headroom
Thru 12'0" (3658 mm)	O.H. + 2" (51 mm)	7 1/2" (191 mm)
Thru 16'0" (4866 mm)	O.H. 2" (51 mm)	8" (203 mm)
3" (76 mm) Track [15" (381 mm) radius]		
Thru 18'0" (5486 mm)	O.H. 6 3/4" (171 mm)	9 3/4" (248 mm)

Roll Up Retail Door Cutsheets

Pearl Building East
LU 16-153002 HRM AD





STANDARD SIZES UP TO:
24' WIDE & 18' HIGH

THERMAL EFFICIENCY VALUES:
R-value up to 4.25

WIND LOAD OPTIONS AVAILABLE:
Wayne Dalton Certified



BEST APPLICATIONS:
WHERE HIGH VISIBILITY OR
NATURAL LIGHT IS NEEDED

General Operating Clearances

Type	Headroom***		Sideroom**		Depth Into Room	Center Line of Springs****	
	2" Track	3" Track	2" Track	3" Track	2" & 3" Track	2" Track	3" Track
Standard Lift Manual 12" R	12 1/2" to 17"	NA	4 1/2"	5 1/2"	Opening Height + 18"	Opening Height +12"	NA
Standard Lift Manual 14" R	14 1/2" to 20"	NA				Opening Height +13"	NA
Standard Lift Manual 15" R	NA	15 1/2" to 21"			Opening Height + 66"		Opening Height +15"
Standard Lift Motor Oper. 12" R	15 1/2" to 19 1/2"	NA				Opening Height +12"	NA
Standard Lift Motor Oper. 14" R	16 1/2" to 23"	NA			Opening Height - High Lift + 30"	Opening Height +13"	NA
Standard Lift Motor Oper. 15" R	NA	18 1/2" to 24"					Opening Height +15"
High Lift Manual	High Lift +12" to 16"		24" One Side		24"	Opening Height + High Lift + 6 1/2"	Opening Height + High Lift + 7 1/2"
High Lift Motor Operator			4 1/2" 5 1/2"			Door Height + 6"	
Full Vertical Lift Manual	Door Height +12"		24" One Side		Opening Height + 30"	Does Not Apply	
Vertical Lift Motor Operated			6" 9"				
Low Headroom Manual*	6-14 1/2"	10-14 1/2"	6"	9"	Opening Height + 30"	Does Not Apply	
Low Headroom Motor Operated*	9-14 1/2"	13-14 1/2"			Opening Height + 66"		

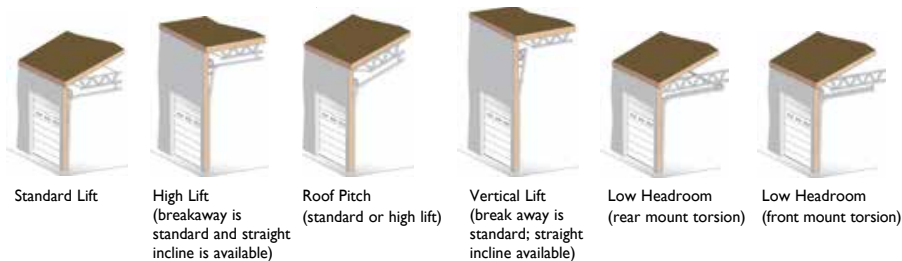
Panel/Section Guide

Door Width	No. Panels	Door Height	No. Sections
Up to 8'3" Wide	2	Up thru 8'1"	4
9'4" to 12'3"	3	8'2" to 10'1"	5
12'4" to 16'3"	4	10'2" to 12'1"	6
16'4" to 20'3"	5	12'2" to 14'1"	7
20'4" to 23'7"	6	14'2" to 16'1"	8
23'8" to 24'2"	7	16'2" to 18'1"	9

NOTES:

- * Rear mount torsion requirements shown on chart see drawings for front mount clearances
- ** 8" sideroom required on one side for doors having chain hoist. 24" side Room required on on side for doors having jackshaft operators.
- *** Clear Headroom is based on door weight and door size so please contact dealer for specific headroom for your door.
- **** Center line of shaft is based on door weight and door size so please contact dealer for specific headroom for your door.

Track Selection Guide



www.Wayne-Dalton.com/commercial

**Wayne
Dalton**

Printed in U.S.A.

5 of 13

Vertical Lift Garage Door Cutsheets

M Pearl Building East
LU 16-153002 HRM AD

Type: **PENDANT**

Description: **ABB-O-20-100INC-C48-120V-F16-G11**
Project: **Pearl East**
Notes:

Submitting Agency: **present electric supply company**
503-222-4000

Description: **ABB-O-20-100INC-C48-120V-F16-G11**
Project: **Pearl East**
Notes:

Submitting Agency: **present electric supply company**
503-222-4000

Abby



Features

- A compact, economical solution for general and localized lighting applications
- Reflector sizes, lamp types and color options for applications and design flexibility
- Optional glass globe or glass lens
- Weatherproof construction to withstand the elements
- Optional battery back-up in case of a power interruption
- Cool operations for extended lamp and component life
- Quality components combined with the most current technology for high efficiency and reduced lighting costs

Applications

The Abby reflector is ideal for illuminating spaces where a compact solution is required. It lends itself to many applications, ranging from commercial to recreational.



TMSLIGHTING

ESTABLISHED 1923

Construction

High grade spun aluminum, brushed copper, or a brushed stainless steel reflector, with stainless steel mounting hardware.

Lamp

Abby is designed to operate with compact fluorescent (42W max.), incandescent (100W max.), metal halide (100W max.), or Cree™ LED (32W max.) light sources. Incandescent and metal halide models use a medium base socket (E26). Specify 3000K, 3500K, or 4000K.

Ballast/LED Driver

Ballasts are integral and electronic. They are efficient with a high power factor greater than 90%, and quiet with an "A" sound rating.

The LED source is controlled by an advanced electronic driver that delivers consistent power.

Dimming

CF dimming options include the Mark 7 ® (0-10V), Mark 10 ® (line voltage), DALI (addressable), or Ecosystem ®.

The LED dimming option is the 0-10V, current-sinking type.

Note: Compatibility of this product is not guaranteed with all control systems.

Emergency

For CF lamps and LED, a remote mount or integral canopy-mounted, emergency back-up is available, in either the standard temperature or cold temperature version (CF 7ft. max, LED 20 ft. max. distance from lamp to EM).

The test switch and indicator light are remotely mounted.

Options

Globe: Clear and prismatic, glass globes are available.

Lens: Flat, tampered, clear glass lenses are available.

Mounting

Mount on a ceiling, directly to a standard 4" electrical junction box. It is available with either rigid conduit (1/2" NPT) or the drop cord suspension (10' max.). Custom lengths, the universal ceiling adapter (20" max.), and aircraft cable are optional.

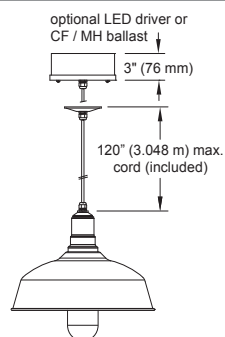
Finish

Available in several TMS standard, anodized, brushed, and powder-coated finishes. Custom or RAL finishes are available by special order. See the Finishes - Diffusers chart.

Compliances

QPS-C/US, or UL-C/US certified to UL1598 standards. Rated IP20 with the drop cord, for indoor locations; or outdoor, IP23 rated with the conduit suspension. The Consultants Europe (CE) listing is available upon request.

Drop Cord Suspension



Conduit Suspension

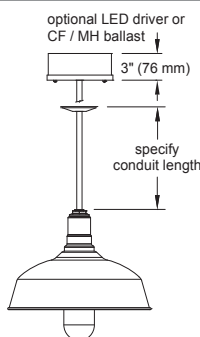
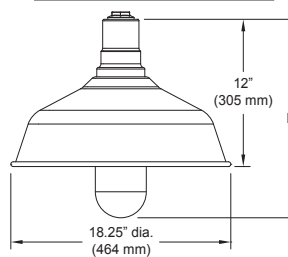
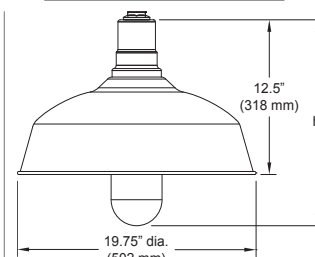


ABB-I/O-18



Globe	Height (h)
G1	15" (381 mm)
G3	15" (381 mm)
G11	15.75" (400 mm)

ABB-I/O-20



Globe	Height (h)
G1	15.5" (394 mm)
G3	15.5" (394 mm)
G11	16.25" (413 mm)

Custom

TMS Lighting can customize this and many of our standard fixtures. The dimensions, lamp types, enclosure and colors could be modified to suit your lighting and architectural requirements. Contact your local representative for more details: <http://www.tmslighting.com/info/agents>

Specifications are subject to change without notice.

TMS Lighting Inc.
247A Summerlea Road,
Brampton, Ontario,
Canada. L6T 4E1

Web Site: tmslighting.com

North America: (905) 793-1174
Toll-free: (866) 793-1174
Fax: (905) 793-1175

UK & Europe: 44-1474-250-654

Exterior Lighting Cutsheets

Pearl Building East
LU 16-153002 HRM AD



Submitting Agency:  crescent electric supply company 503-222-4000	Description: VXHT25GP Project: Pearl East Notes:	Type: GOOSE
--	---	------------------------------

VAPORGARD™ Incandescent Luminaires

Cl. I, Div. 2, Groups A, B, C, D
 Wet Locations
 NEMA 3, 3R

1L

Enclosed and Gasketed

Wall Mount – VXHT Series



Hub Size	Series	Max. Lamp Size	Complete Cat. # with globe/guard	Luminaire Components Cat. #s			
				Wall Bracket Mounting Module	Body	Globe	Guard
½ or ¾"	150	150 watt A-21	VXHT25GP	VXT20	VXH15	G54	P50
½ or ¾"	200	200 watt A-23	VXHT22GP	VXT20	VXH12	G24	P21
½ or ¾"	300	300 watt PS-25 & PS-30	VXHT23GP	VXT20	VXH13	G34/G251	P22

Wall Mount – Adapter Kit

Description	Cat. #
Mounts wall mount VXHT Series to a 4" Round Box	VXT K1

Wall Mount with Junction Box – VXHBF Series



Hub Size	Series	Max. Lamp Size	Complete Cat. # with globe/guard	Luminaire Components Cat. #s				
				Wall Bracket Mounting Module	Body	Globe	Guard	Junction Box
½ or ¾"	150	150 watt A-21	VXHBF25GP	VXT20	VXH15	G54	P50	VXF20
½ or ¾"	200	200 watt A-23	VXHBF22GP	VXT20	VXH12	G24	P21	VXF20
½ or ¾"	300	300 watt PS-25 & PS-30	VXHBF23GP	VXT20	VXH13	G34/G251	P22	VXF20

Stanchion Mount – VXHA Series



Hub Size	Series	Max. Lamp Size	Complete Cat. # with globe/guard	Luminaire Components Cat. #s			
				Stanchion Mounting Module	Body	Globe	Guard
1 ¼"		150 watt A-21	VXHA45GP	VXA4	VXH15	G54	P50
1 ¼"		200 watt A-23	VXHA42GP	VXA4	VXH12	G24	P21
1 ¼"		300 watt PS-25 & PS-30	VXHA43GP	VXA4	VXH13	G34/G251	P22

Note: All fixtures supplied with ½" reducers, except for pendant mount.


Crouse-Hinds
 by **E.T.N.**

www.crouse-hinds.com US: 1-866-764-5454 CAN: 1-800-265-0502 Copyright© 2013 Eaton's Crouse-Hinds Business

893

Exterior Lighting Cutsheets

M **Pearl Building East**
 LU 16-153002 HRM AD

Submitting Agency:  crescent electric supply company 503-222-4000	Description: C4SM-D-N-20-83-35-41 Project: Pearl East Notes:	Type: CANOPY
--	---	-------------------------------

TM

CORE 400 SX

surface mount

PROJECT

Job _____	Notes
Type _____	
Part # _____	

SPECIFICATIONS

Source Xicato XTM LED module - up to 4000 lumens
C.C.T. 2700K, 3000K, 3500K or 4000K
Color Consistency 1x2 SDCM (MacAdam) along BBL, CCT +/- 40K to 70K, Duv +/- .001
CRI (Ra) 83 or 98
Driver / Location Included / Remote mount or deep canopy options
Dimming 0-10V or phase dimming to 10% standard; DALI, DMX and 1% dimming available
Input Voltage 100 to 277VAC, phase dimmable versions are 120VAC only
Power Up to 48 watts max, depending on LED module / driver
Reflector 11°, 25°, 41°, 51°, or 83° - field replaceable without tools
Material CNC machined aluminum with stainless steel hardware
Finish Powder coat - TGIC polyester for exterior and interior use
Weight 7 lb. [3.2 kg]
Location Listed for Wet & Damp locations
Approvals ETL Listed to UL 1598, 2108, 8750 and CSA C22.2# 9 & #250.0
L80 Life > 50,000 hours at 80% lumen maintenance based on IESNA LM-80-08
Warranty Lifetime Limited Warranty - see warranty for details
IES Files LM-79-08 IES files available at www.v2LightingGroup.com/downloads
Modifications Any modification or customization is possible - consult factory



ORDERING LOGIC

Model	Driver Location	Dimming	Mounting Location	Output	CRI *	C.C.T.	Reflector	Shell	Options
C4SM									
	R =Remote	N =None	D =Damp	07 =700 lm	83 =83	27 =2700K	11 =11° **	XX	
	D =Deep	P =Phase	W =Wet	10 =950 lm	98 =98*	30 =3000K	25 =25°	(see chart on page 4)	
	Canopy	V =0-10V		13 =1300 lm		35 =3500K	41 =41°		
		Z =Other		20 =2000 lm		40 =4000K	51 =51°	ZZ =Custom	
				30 =3000 lm			83 =83° **		
				40 =4000 lm					

Specify mounting and finish

* 98 CRI not available in 4000 lm ** Not available with wet location

Example Part Number: **C4SM-RND-20832741-S3**

CORE 400 SX Surface Mount - **R**emote Driver, **N**o Dimming, **D**amp Location - **2000** lm, **83** CRI, **2700K**, **41°** Reflector - **S3** Red Shell

rev 151207 ©2015 v2 Lighting Group, Inc. Specifications subject to change without notice.

v2LightingGroup.com

1

Exterior Lighting Cutsheets

Pearl Building East

LU 16-153002 HRM AD

M.

Submitting Agency:

crescent
electric
supply
company

503-222-4000

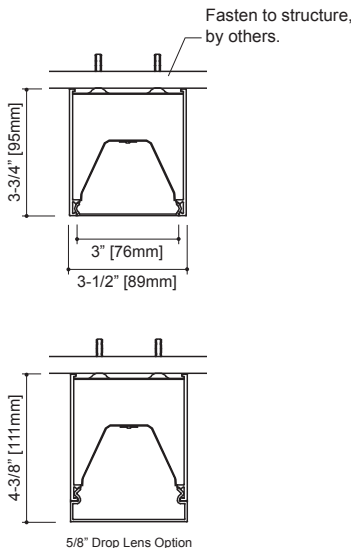
Description: **RP4-10L35-UNV-1C-FR-SV-4**Project: **Pearl East**

Notes:

Type:

**PENT
ROOF**

NULITE™

**Regolo 4 LED Surface Series**

Type:	Project:	Qty:
	Date:	
Catalog #:		

Description:

The Nulite Regolo RR4 series is a nominal 4" profile surface mount LED luminaire. The slender design is ideal for corridors, open and private offices, classrooms, lobbies and general purpose rooms.

Specifications:

Construction: The housing consists of visible extruded aluminum side rails with formed cold rolled steel back channel and heavy gauge end caps. Housing can be joined together for continuous row applications. Standard finish is powder coat textured white. Optional silver, black or custom color paint finishes.

Reflector / Driver: Reflector / driver cover is finished with high reflectance white paint. Constant current electronic driver with 0-10V dimming input; dimming range from 100% down to 10%. Universal (UNV) voltage is from 120 - 277V, 50/60 Hz.

Shielding: Extruded frosted acrylic or satin white acrylic snap-in lens with DR.

LED Module: Distributed LED array in a variety of lumen output packages. LED color is available in (L30) 3000K, (L35) 3500K or (L40) 4000K. Module is replaceable. L90 ≥ 100,000 hours.

Mounting: Surface mounting, individual or continuous row.

Labels: ETL listed, conforms to UL Standard 1598 / 8750 and CSA Standard C22.2, Damp location.

Warranty: 5-year limited warranty on LED and Driver.

Ordering Information

Sample: RR4-05L35-UNV-DIM-1C-FRD-WH-8'

Series	Lumen Package ¹ / LED Color	Voltage	Driver	Circuit	Shielding	Color	Length	Options
RR4								
RR4 (Surface - Nom. 4")	03 (~398 lm/ft, 4.2W/ft)	L30	UNV	DIM ² Dimming	1C Single Circuit	FR (Frosted)	2'	OS End of run Occupancy Sensor
	05 (~580 lm/ft, 6.3W/ft)	L35	120	SD ³ Step Dimming	1E Single Circuit w/ EM Circuit	ST (Satin white)	3'	DS ⁵ End of run Daylight Sensor
	06 (~739 lm/ft, 8.3W/ft)	L40	277			D (Opaque Ends Drop lens)	4'	
	09 (~896 lm/ft, 10.4W/ft)					SV (Silver)	5'	
						L (Luminous Ends Drop lens)	6'	
	10 (~1052 lm/ft, 12.5W/ft)					CC (Custom Color)	7'	
							8'	
							Continuous Runs⁴ XX ⁴ Specify run length in 1 foot increments. Con- sult factory for custom lengths.	

Specify driver**Notes:**

1. Nominal lumen output per foot w/ frosted lens.
2. 0-10V dimming inputs; dimming range 100% down to 10%, consult factory for specifications.
3. Consult factory.
4. 6" increments are common custom lengths. We can provide custom run length down to the nearest (+/- 1/8").
5. Not available with luminous end drop lens.



Specifications and dimensions are subject to change without notification. Specification sheets on our website supersede all other versions. 2015 Rev. C
Nulite reserves the right to bulk package any order.

Nulite Lighting 10770 East 51st Avenue, Denver, CO 80239

Phone 303-287-9646 Fax 303-287-0316

www.nulite-lighting.com

Exterior Lighting Cutsheets

M **Pearl Building East**
LU 16-153002 HRM AD



Submittal Data Sheet

22-Ton VRV-IV Heat Recovery Unit - 230V

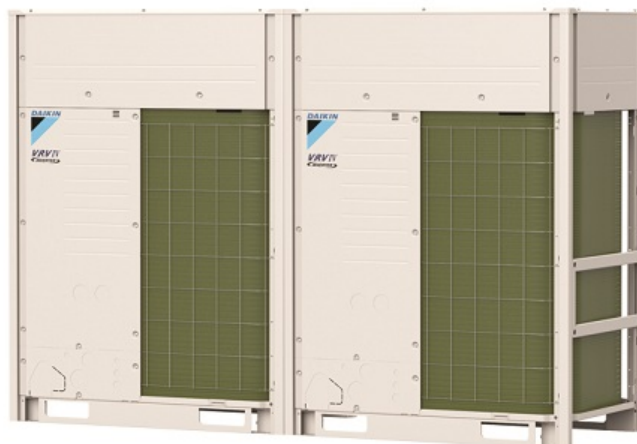
REYQ264TTJU

FEATURES

- Variable Refrigerant Temperature (VRT) control allows the VRV IV to deliver up to 28% of improvement in seasonal cooling efficiency compared to previous Daikin VRV heat recovery systems
- Improved efficiency with IEER values now up to 29.3
- Can provide heating down to -13°F WB as standard
- Larger capacity single modules ranging up to 14 tons and systems up to 38 tons allow for a more flexible system design, when compared to VRV III
- New configurator software designed to simplify the commissioning and maintenance of the system
- Standard Limited Warranty: 10-year warranty on compressor and all parts
- Larger capacity single modules allow for opportunity to reduce electrical connections, piping connections and outdoor unit mounting fixtures
- All inverter compressors to increase the efficiency and avoid starting current inrush
- Assembled in the US to increase flexibility and reduce lead times

BENEFITS

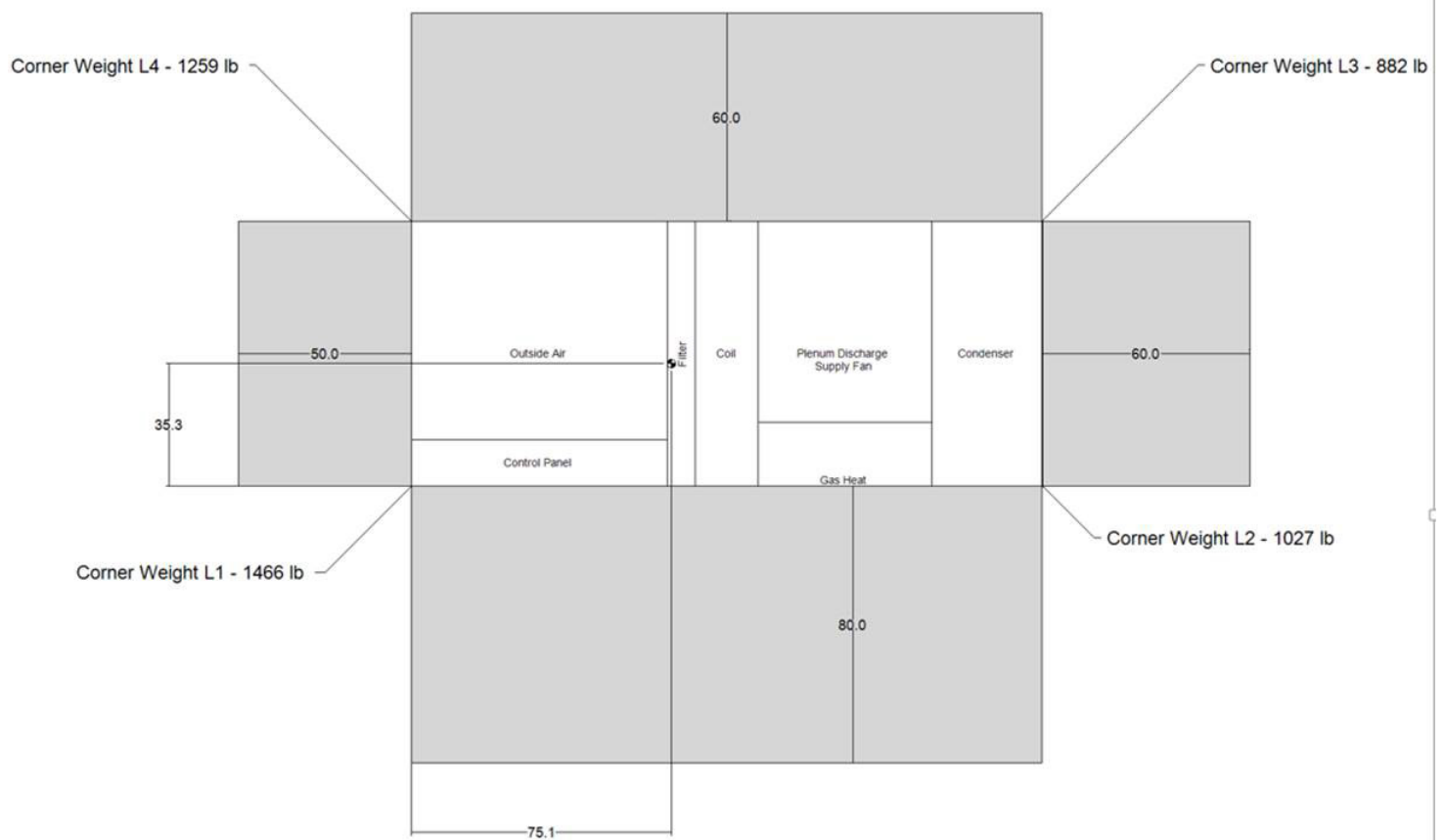
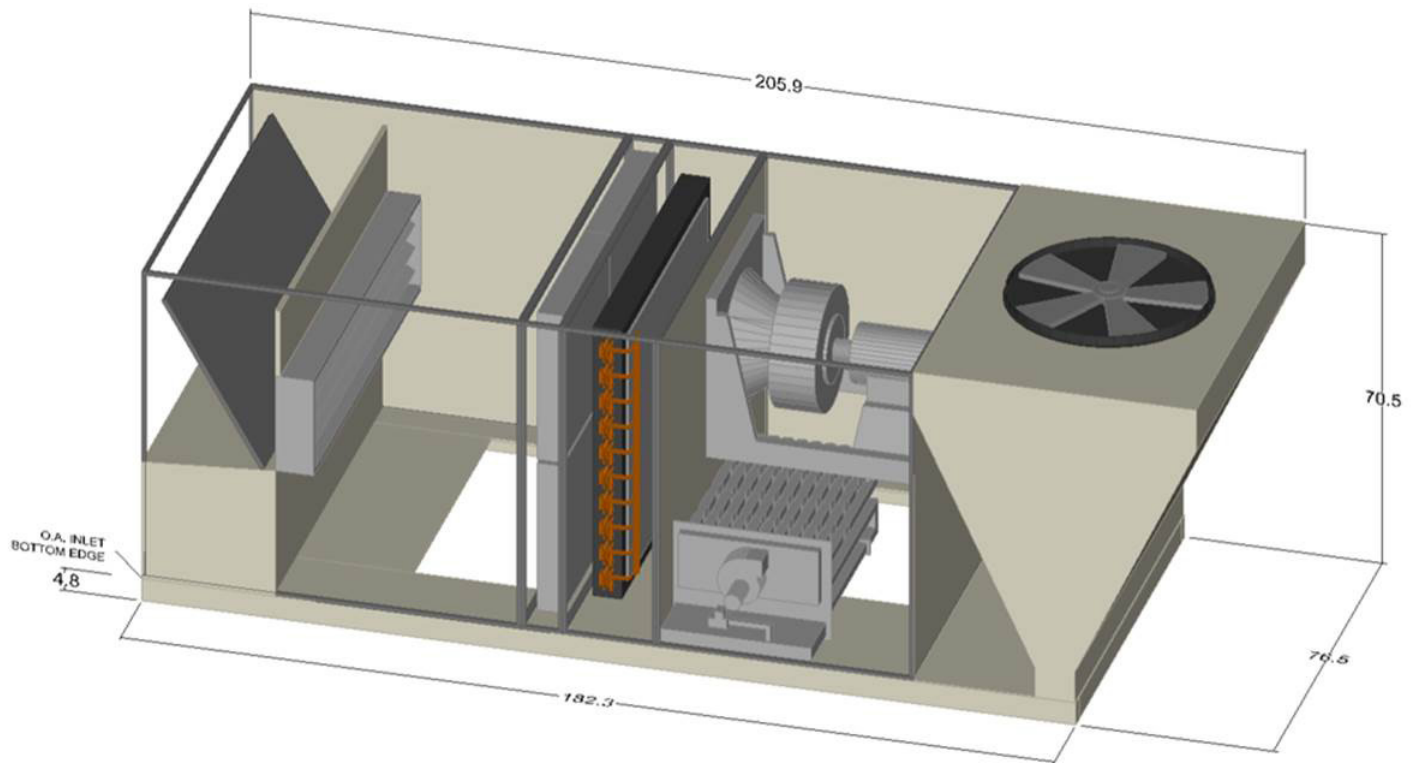
- Can operate up to 64 indoor units on a single piping network
- Inverter control board cooled by refrigerant to avoid influence from ambient temperatures
- Integrated inverter technology deliver maximum efficiency during part load conditions and provide precise individual zone control
- Heat exchanger coil wraps around on all 4 sides of the unit to increase the surface area/efficiency
- Continuous heating during defrost and oil return allows constant comfort control
- Modular and lightweight - enables flexibility in system layout and installation
- Ultra gold fin coating with a salt spray test rating of 1000 hours provides superior corrosion resistance for applications near seacoasts and other corrosive environments
- Design flexibility with long piping lengths up to 3,280 ft. total and 100 ft. vertical separation between indoor units
- Designed with reduced MOP to optimize installation cost
- Digital display on the unit for improved and faster configuration, commissioning, and troubleshooting.



VRV Unit Cutsheets

Pearl Building East
LU 16-153002 HRM AD



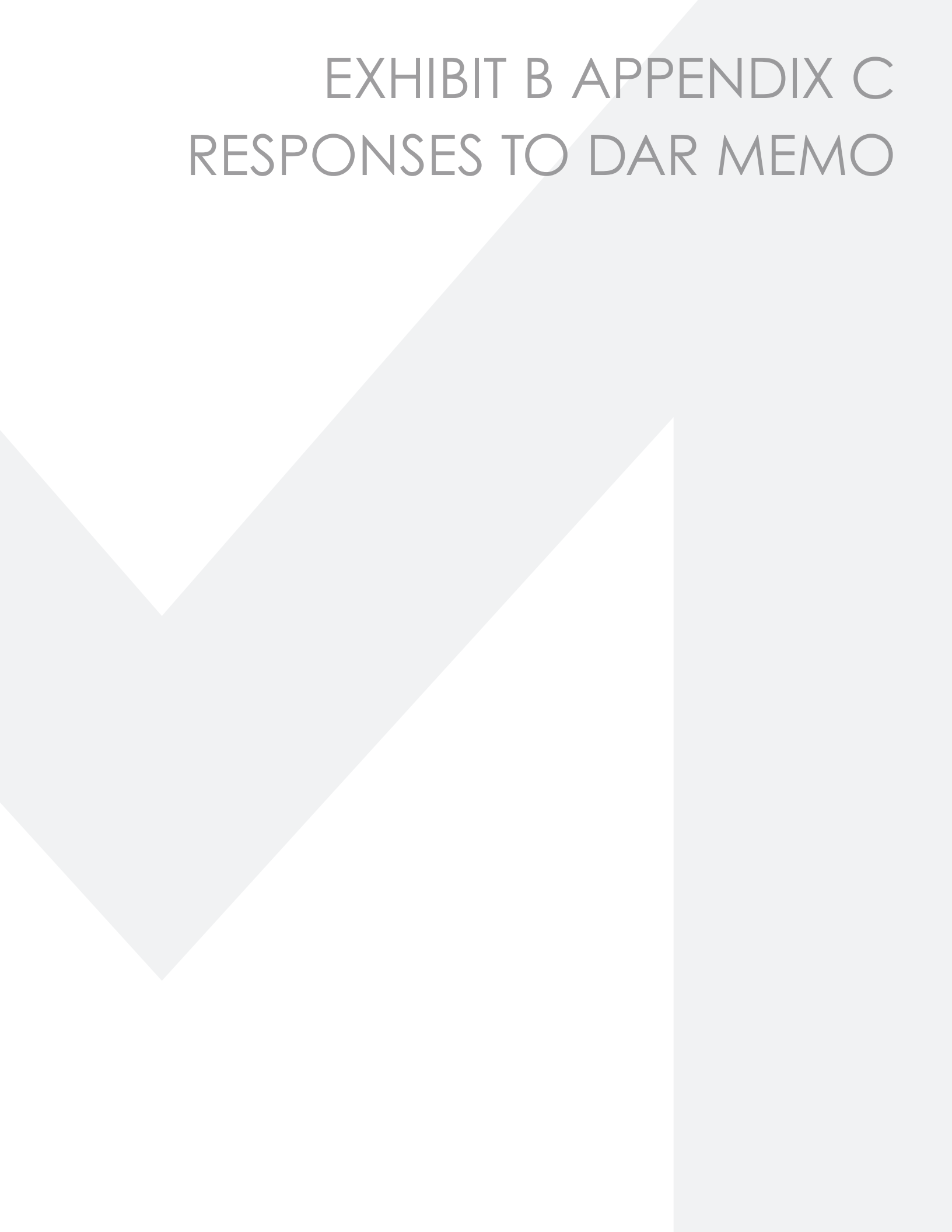


PLAN VIEW - CG, CORNER WEIGHTS, SERVICE CLEARANCE

Air Handling Unit Cutsheets

EXHIBIT B APPENDIX C

RESPONSES TO DAR MEMO





City of Portland, Oregon
Bureau of Development Services
Land Use Services
FROM CONCEPT TO CONSTRUCTION

Dan Saltzman, Commissioner
Paul L. Scarlett, Director
Phone: (503) 823-7300
Fax: (503) 823-5630
TTY: (503) 823-6868
www.portlandoregon.gov/bds

SUMMARY MEMORANDUM

DATE: May 3, 2016
TO: Suzannah Stanley, Mackenzie
FROM: Tim Heron, Design and Historic Resource Reviews
503-823-7726, tim.heron@portlandoregon.gov
CC: Portland Historic Landmarks Commission
RE: EA 16-108208 DA Pearl Building East

Thank you for meeting with the Historic Landmarks Commission on March 28, 2016 to seek their advice regarding the above-referenced proposal. I hope you will find it useful as you further develop the concept. Attached is a summary of the Commission's comments generated from staff notes and from review of the recording of the meeting. To review those recordings, please visit:

<http://efiles.portlandoregon.gov/Record?q=recClassification%3A7547&sortBy=recCreatedOn->

These Historic Landmarks Commission comments are intended to guide you in further project exploration, and they may also inform the staff when carrying out any future related land-use reviews. Keep in mind that these comments address the proposal as it was presented to the Commission on March 28, 2016, and that as the concept evolves they may no longer apply in the same way.

The Historic Landmarks Commission's advice is not a substitute for code-required land-use or legislative procedures. Please keep in mind that if the applicable cost threshold in the Zoning Code is met, a formal Type III land-use review process is required in order to obtain approval for a proposal.

At the end of the advice meeting on March 28, 2016, our understanding was that you would not be returning to the Historic Landmarks Commission for additional consultation. Please continue to coordinate with me if the proposal is going to advance.

Encl:
Summary Memo

Cc: Landmarks Commission
Respondents

This memo summarizes **Historic Landmarks Commission** design direction provided on **March 28, 2016**

Commissioners Present:

Jessica Engeman, Paul Solimano, Caroline Dao, Kirk Ranzetta, Kristen Minor, Mathew Roman, Carin Carlson

Topics for Discussion:

1. Overall scale and massing
2. NW 13th Avenue loading dock frontage and NW Glisan frontage
3. Rooftop penthouse
4. Building Windows
5. Materials and details

Executive Summary:

The Landmarks Commission was very supportive of the overall scale and massing of the proposal. While a larger building would not be found approvable, the attention to high-quality materials and details make the scale and massing of the new addition complimentary to the NW 13th Avenue Historic District.

Specific Discussion:

1. Overall scale and massing

- The overall massing of a 6-story building with a setback penthouse level from the adjacent streets [facing west and south] is generally appropriate.
- The blocky, muscular expression appears to have taken great care in crafting its proportions.
- Commissioners expressed concern however with the perception of the penthouse level's non-street facing elevations [facing north and east], appearing flush with the building end walls, emphasizing a 7th floor massing at these elevations. Additional design development and refinement will be needed to differentiate this level from the 6 floor building mass.

RESPONSE: The penthouse has been set back and disconnected from the major facades. The metal panel cladding also differentiates the penthouse walls from the mass of the brick building.

- The street facing 6th floor parapet and window patterning may also need another level of design refinement as well.
 - The current design feels too heavy, having too tall a solid brick expression between the 6th floor windows and the expressed cornice band.
 - Commissioners expressed some concern regarding the expression of the 6th floor windows needing additional treatment or differentiation from the windows below and/or potentially pulling the windows above the decorative banding.
 - Additional treatments could include further development of the cornice condition, potentially adjusting its placement at the 6th floor parapet to achieve a better proportion at the top of the building. The parapet may be able to stay at its current height above the roof if the cornice moves or perhaps gets slightly larger.

RESPONSE: Additional treatment of this level was explored and the Project team feel the differing window surrounds and proportion of brick field are appropriate expressions of the tripartite organization.

The cornice is sized to act as a guardrail so that an additional guardrail, in glass or other material and possibly adding clutter, is not necessary. The depth of the cornice also reduces sightlines of the penthouse and mechanical areas from the street. Oversized or more ornate cornices are not represented in existing buildings.

- The east and north ends walls were also discussed in some detail and additional refinement will be needed for the Land Use Review submittal.
 - The east end wall up to the 6th floor parapet was generally acceptable as a painted CMU or other uniformly textured surface, provided the NW Glisan

Street brick façade and decorative detailing returns around the east façade as typically done in the district. Simple banding lines, perhaps of another material, would also be appropriate.

- A public art installation would also be appropriate for this prominent wall as well.
- As discussed above, additional treatment is necessary for the wall of the penthouse level facing this elevation.
- The north end wall's 50' wide eastern portion facing outside the Historic District will need to follow the same concerns raised for the east end wall.
- The north end wall's 50' wide western portion facing the Historic District will need to be of the same red brick material, and use a more simplified approach to this elevation's detailing. One Commissioner noted that the entire north elevation, given its likely visibility from the district, should be entirely brick clad.
- Pending the outcome of the building appeal and consultation with the northern neighbors facing this elevation, Commission was supportive of windows being added to this elevation, but in either case, decorative brick details such as banding and the cornice should also return this section of the north wall. However, the windows if used should have a simpler appearance at this wall, without inset surrounds.

RESPONSE: Due to the restrictions posed by property owners to the north, there is a strong possibility that construction techniques will be limited to laid-up CMU from the Project property. Concrete bands would naturally be expressed at floor lines. The Project is submitting one option to add windows in one bay should the neighboring property owners reach a construction agreement.

2. NW 13th Avenue loading dock frontage and NW Glisan frontage

- Commission was very supportive of the NW 13th Avenue dock treatment, wood material, ADA ramp design, and overhanging canopy structure.
 - The storefront design however needs additional design development, particularly the proportion of the storefront header, which may be out of scale with the otherwise more proportional hand-drawn example provided.
 - Consideration of additional storefront modules within these tall bays may also improve the overall proportions. As developing the section details, consider intermediate mullions and planar shifts in the various storefront elements.

RESPONSE: Proportions and divisions of the storefront elements reflect those of the existing building across 13th Avenue as well as structural requirements to support the storefront and canopy systems.

- Commission was also unified in their concern of several aspects of the NW Glisan Street frontage, particularly that a Ground Floor Windows Modification Request is likely necessary, and that an Adjustment approval should parking access be desired for this site.
 - The garage door needs more design development to lower and/or mitigate its tall height and current design. Some considerations that were offered included a canopy feature to potentially mitigate the scale, additional design development of the egress door and transoms, and revising the door design.
 - Views into the garage, whether the door opened or closed [through perforations] is not a desirable solution. Ventilation and speed of operation of the door will need to be carefully considered given the zero-property line setback of the building and garage door.
 - The exposed basement level below the storefront windows will also need additional design refinement.

RESPONSE: A Modification to the ground floor window standard and an Adjustment to the parking access limitation have been requested. Project design directly reflects the Committee's suggestion to add a canopy over the garage entrance and visually decrease the size of the opening. Decorative louvers in an industrial style are proposed at the concrete base of the building on Glisan Street.

3. Rooftop penthouse

- Commission comments addressed above in "#1 Overall scale and massing."
- Commission reiterated the penthouse is at its maximum size and height.
- Commission also asked consideration of a more industrial expression of the penthouse addition; consideration of dark and/or metal materials may be an appropriate solution and more in keeping with other rooftop penthouse additions in the district.

- A clean rooftop penthouse design is important; Commission supported staff concerns of mechanical equipment not being located on the roof of the penthouse.
 - The proposed mechanical corral on the NE corner of the building at the penthouse floor level may present an opportunity to reduce the massing at this corner of the building. Additional detailing and location of mechanical equipment at this corner will be critical.
- Additional perspective views of the north elevation from within the Historic District will be necessary to best evaluate this elevations impact.

RESPONSE: Proposed penthouse materials are light-colored metal panel to blend into sky when viewed from the street and not distract from the bulk of the building. The mechanical equipment has been sized to be hidden by the parapet only with no additional screening required. Additional views of this area are provided in the Application.

4. Building Windows

- The highest quality window system that best reflects the color, scale, proportions and sectional relationships of this Historic District's National Register status will be expected. Commission has not yet seen a vinyl window system that meets this bar.
- The current design appears a half-step towards an industrial style, and the 6th floor window level as a multi-light metal sash window at the top level to differentiate this level. While this may be appropriate, Commission encouraged further exploration of the window system being lacier at the 6th floor.
- The equally divided four pane mullion pattern represented in Option A on Sheet C.20 for floors 2-5 appeared most appropriate, specifically excluding the 6th floor design shown in that option.

RESPONSE: Proposed windows are historic reproduction thermally broken steel system. The additional mullion detailing to reflect surrounding buildings with factory sash windows (see context photos on previous pages). This tripartite nature of the building mass is a key component in achieving an appropriate level of design detail, especially as this is a new building in a historic district.

5. Materials and details

- Commission appreciated the board form concrete as a base material for this project, particularly as a modern material with historic ties.
- The variegated standard brick size and mortar dimensions were supported by the Commission, with some Commissioners preference towards the black spotted brick example to be included in the mix.
- Commissioners would also support, given the building's desire to fit into the Historic District with a large degree of historic accuracy, to include a "date stamp" feature on the building.

RESPONSE: Proposed brick mix includes some black "clinker" style bricks. The brick module is a standard 3 bricks and 3 mortar joints equaling 8". A date stamp is proposed in the Application page B.27.

Exhibit List

- A. Applicant's Narrative & Drawings
 - 1. January 20, 2016 Submittal
- B. Zoning Map (attached)
- C. Drawings
 - 1.-29. Site Plan, Elevations, Renderings, Sections
- D. Notification information
 - 1. Posting letter sent to applicant
 - 2. Notice to be posted
 - 3. Applicant's statement certifying posting
- E. Agency Responses
 - 1. Bureau of Environmental Services
 - 2. Portland Bureau of Transportation
- F. Public Testimony [none]
- G. Other
 - 1. Application Form
 - 2. Land use history
- H. Hearing March 28, 2016
 - 1. Staff Memo with attachments
 - 2. Staff PPT
 - 3. Testimony Sheet