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Union Station East & West Lot Development Study
October 2022

Union Station Campus Redevelopment

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Campus Redevelopment

General Site Plan



Orientation and Connectivity



Streetscaping

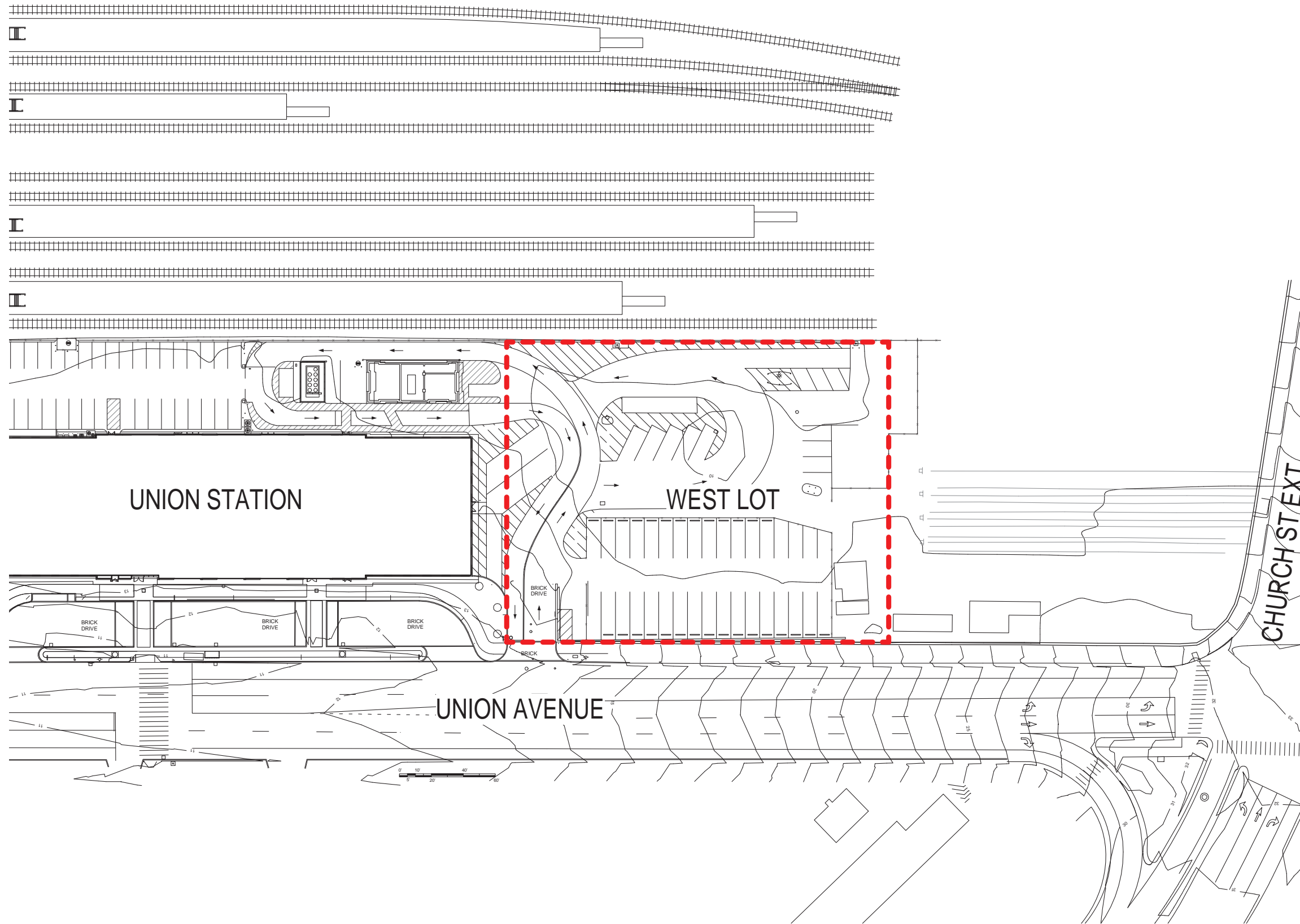


Pedestrian Skywalk



West Lot

Existing Conditions



- Designated lot for bus parking & turn around
- Designated parking for car rentals
- Access to existing rail yard is through parking lot
- Above ground utilities on south side of Union Station must remain accessible to large vehicles
- The current parking lot services truck loading, trash-pick up, and access to rear of building and track areas

Considerations for Design

Public Parking

- West Lot does not have designated long term parking
- Existing Union Station garage on East side of Union Station is only public parking available
- Provide 600 parking spaces maximum
- Access to existing rail-yard must be maintained

Car Rental

- Provide designated spaces for car rental services

Pedestrian Connection

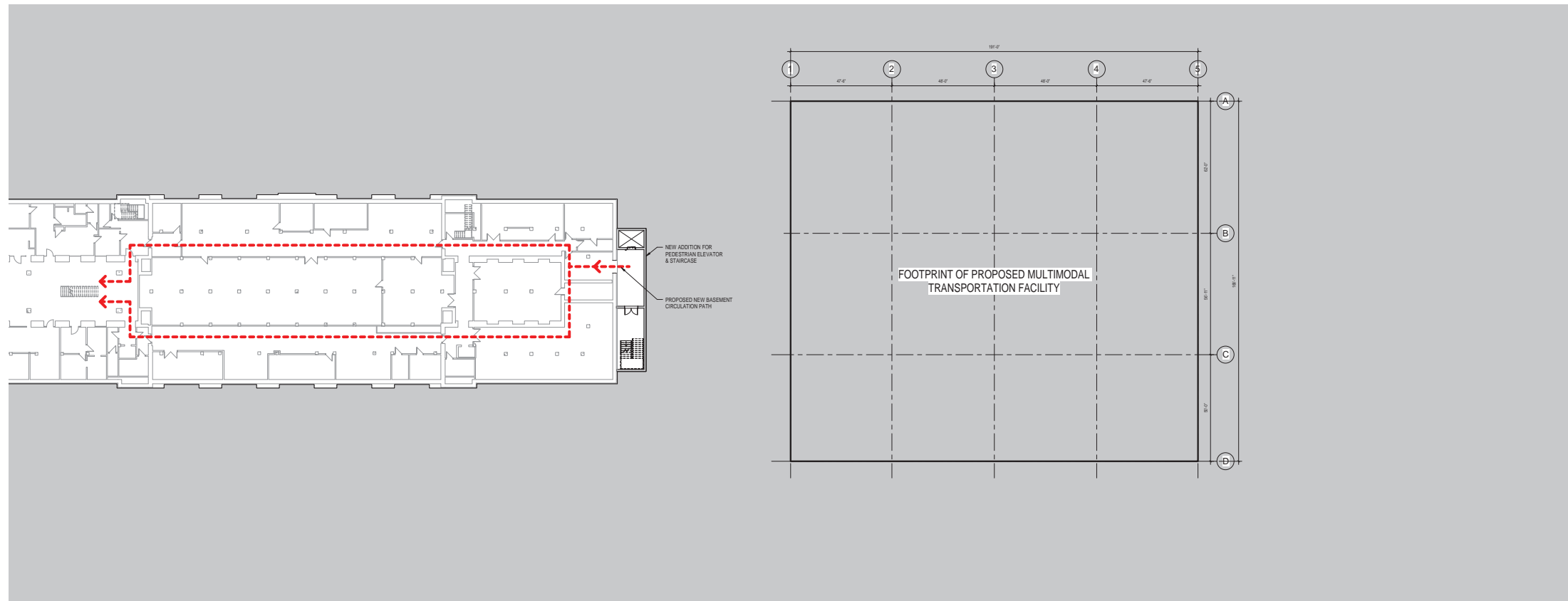
- Pedestrians should comfortably flow from parking garage into Union Station

Union Station

- Historic nature of campus should be preserved & respected



Multi-modal Option A



Basement Floor

Basement Floor

Addition to West facade of Union Station

- Stair & pedestrian/freight elevator
- Pedestrian access from level above through Basement level

New Multimodal Transportation Center

- No activity on this level

First Floor

Addition to West facade of Union Station

- Stair & pedestrian/freight elevator
- Pedestrian access from Union Station, exterior, and level above

New Multimodal Transportation Center

- Designated bus bay with parking & office
- Designated car rental/maintenance bay
- Designated shuttle bay with parking & waiting area
- Public bathrooms
- Pedestrian circulation core is along center axis of Union Station for direct connection

Future Addition - South of Union Station

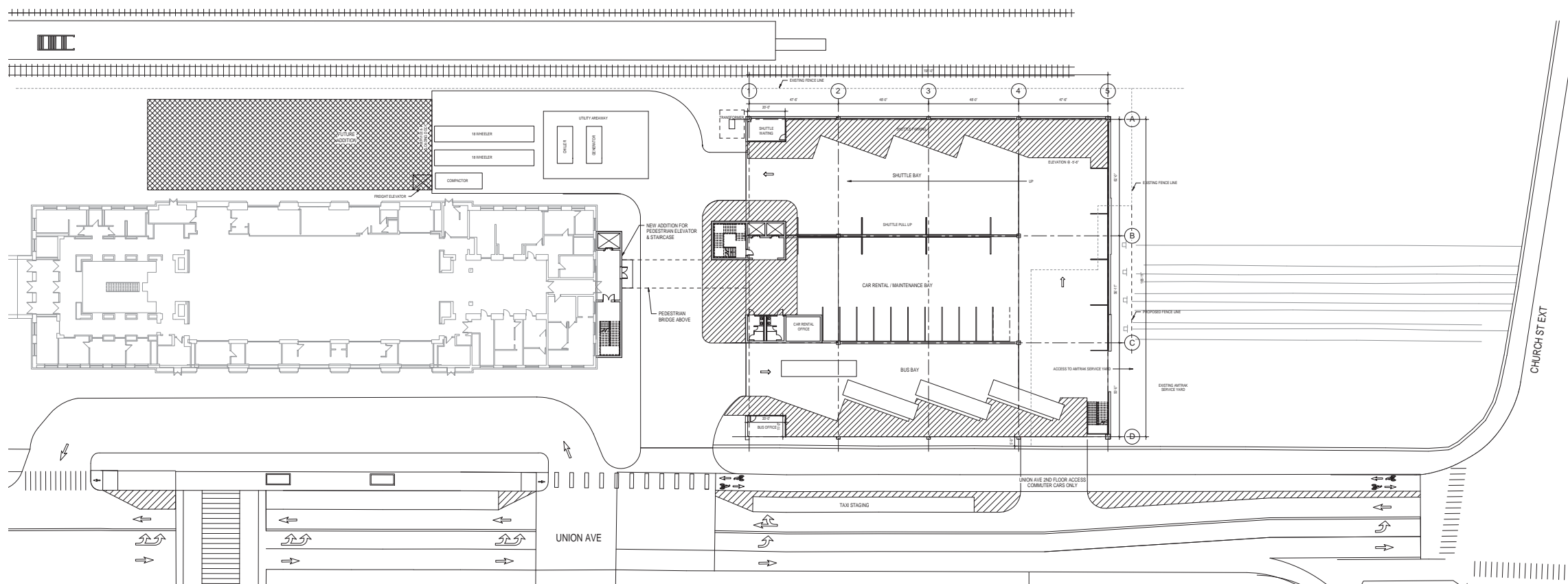
- Contains service & loading dock
- Freight elevator for deliveries & service
- Existing generator, chiller, & utilities to be buried into an underground utility area-way that can be driven over - providing appropriate maneuverability for service & loading

Pros

- 600 maximum parking space requirement met
- Service & loading is in rear of Union Station, out of view from Union Avenue and more centrally located to access interior spaces
- Below grade utility area-way allows for drive access above

Cons

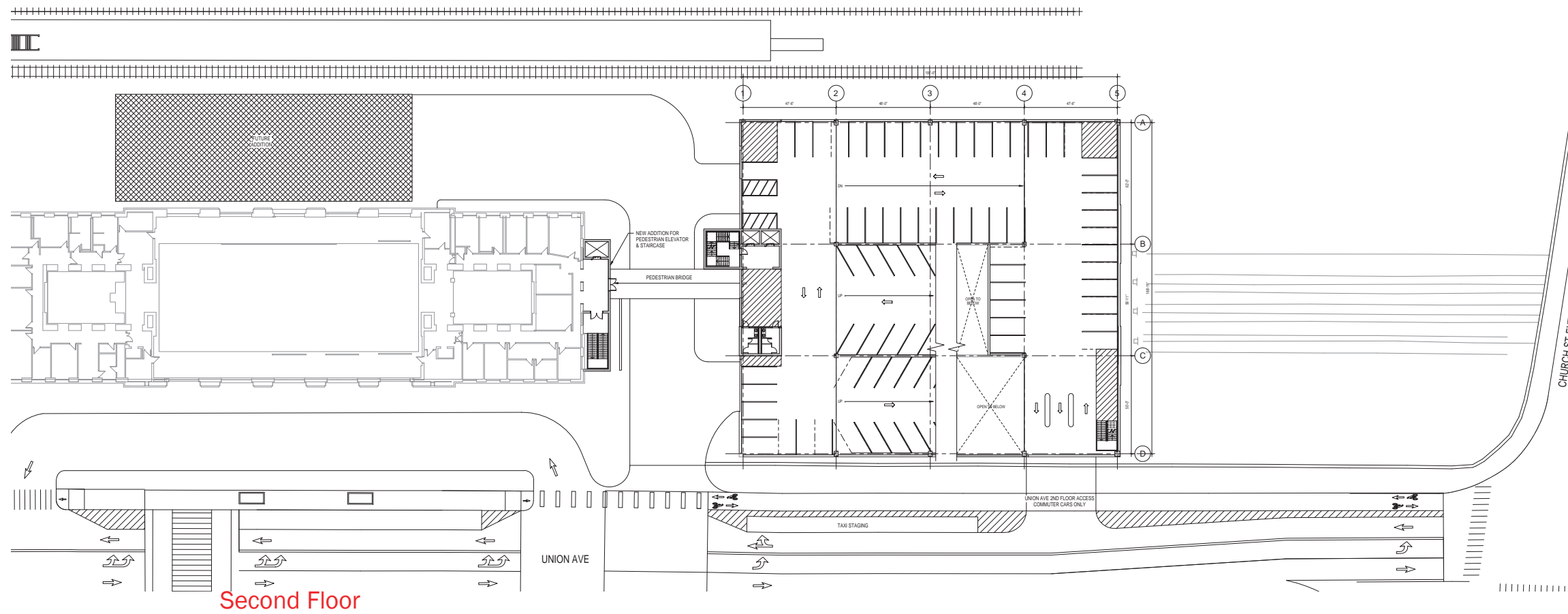
- West face of Union Station has new addition
- Possible clearance concerns for large vehicles under pedestrian bridge
- Access to existing rail yard will require a ramp to get back up to grade



First Floor



Multi-modal Option A



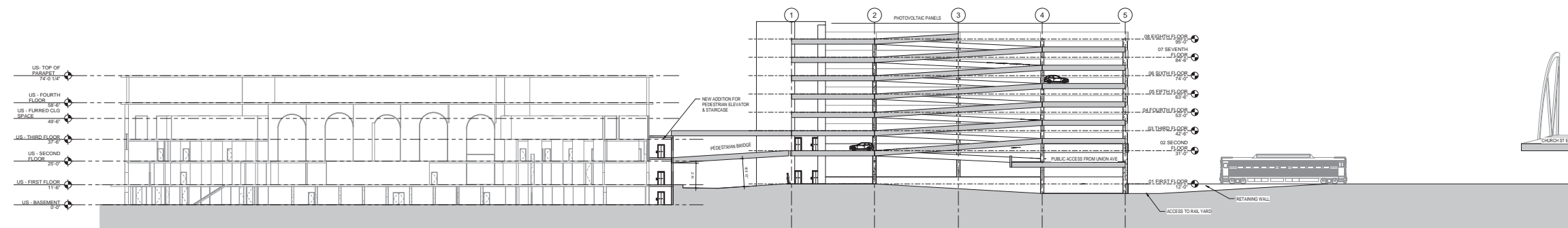
Second Floor

New Multimodal Transportation Center

- Only access to garage for the public is directly off Union Avenue onto the Second floor
- Pedestrian access to Union Station through West addition
- Enclosed pedestrian bridge slopes down to align with second floor of Union Station

Section

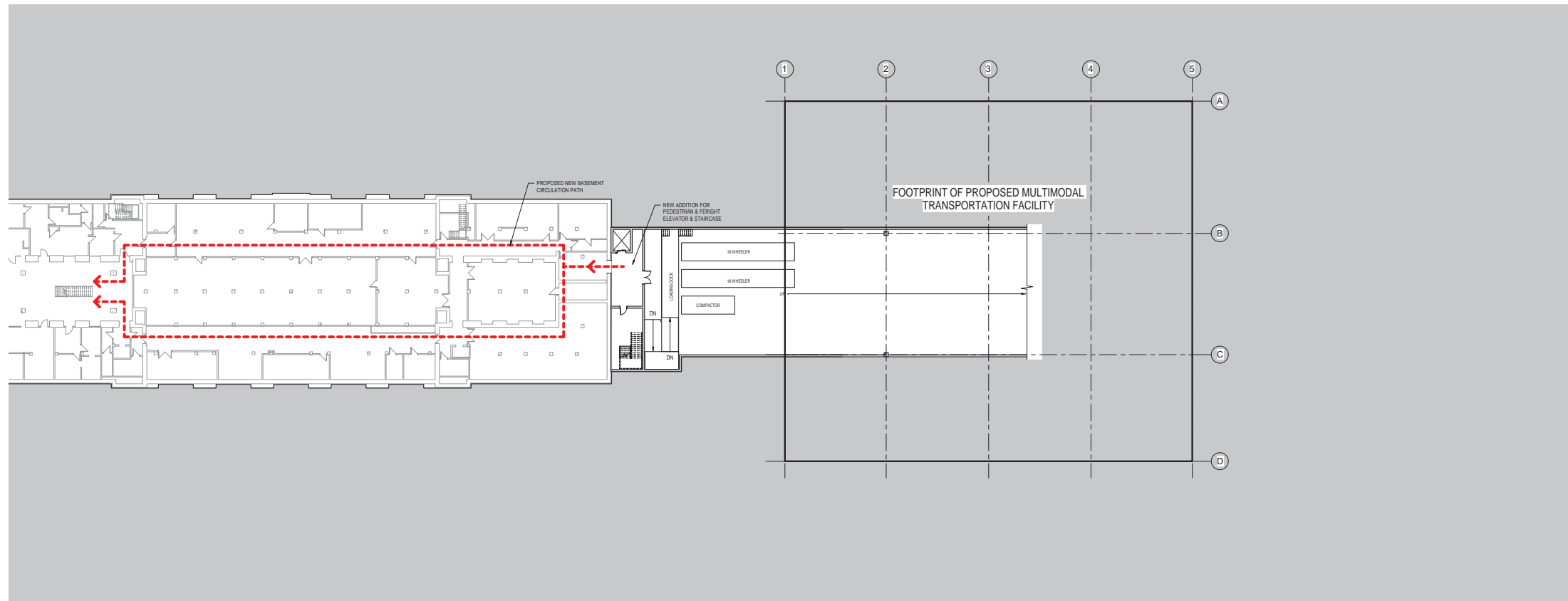
- Existing floor-to-floor heights of Union Station do not align with the proposed floor levels of the multimodal transportation center, therefore the pedestrian bridge connection will need to be sloped to provide access
- Grade is lowered below pedestrian bridge to allow for vehicular and truck clearance
- 8 floors total to provide maximum of 600 parking spaces



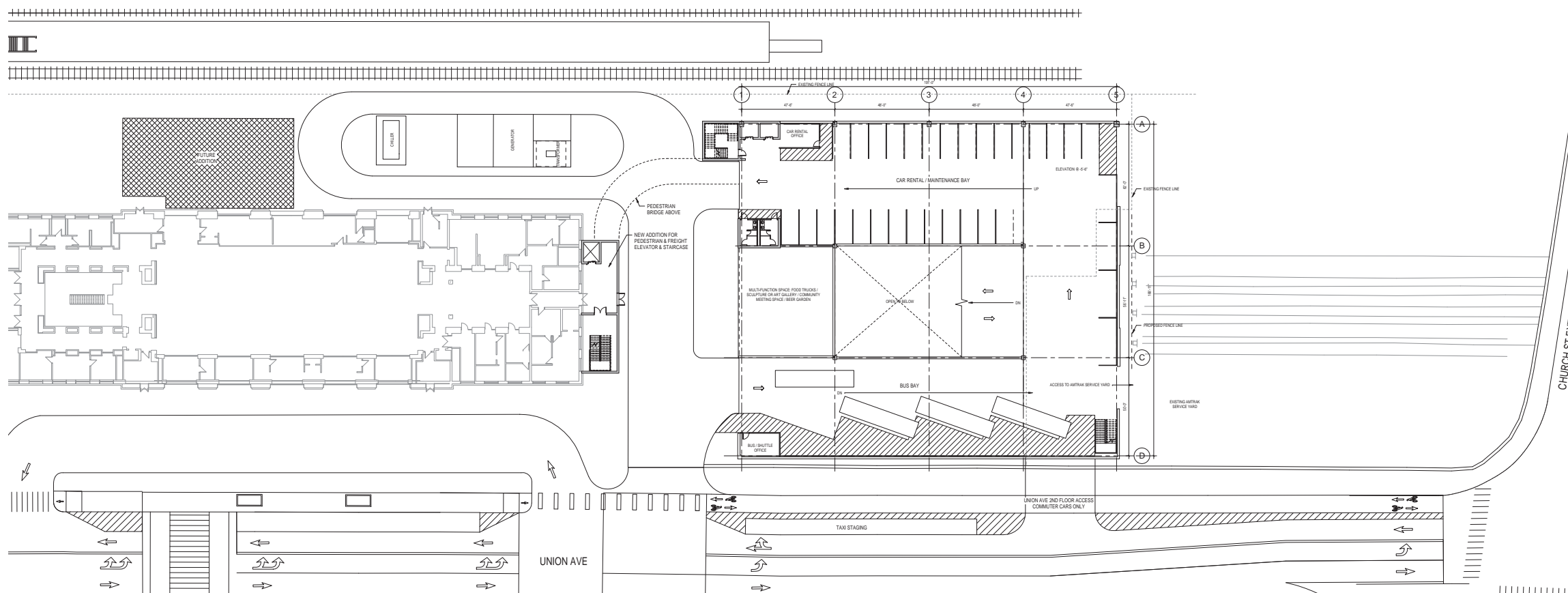
Longitudinal Section



Multi-modal Option B



Basement Floor



First Floor

Basement Floor

Addition to West facade of Union Station

- Stair & pedestrian/freight elevator
- Pedestrian access from level above through Basement level
- Access to service & loading dock

New Multimodal Transportation Center

- Vehicle connection down to service & loading dock in center bay
- Head height clearance for trucks

First Floor

Addition to West facade of Union Station

- Stair & freight elevator
- Pedestrian access from Union Station, exterior, and level above

New Multimodal Transportation Center

- Designated bus bay with parking & office
- Designated car rental/maintenance bay
- Public bathrooms
- Pedestrian circulation core is placed South, close to the tracks

Future Addition - South of Union Station

- Existing generator, chiller, & utilities to be buried into an underground utility area-way that can be driven on
- Existing truck & vehicle drive turn around maintained

Pros

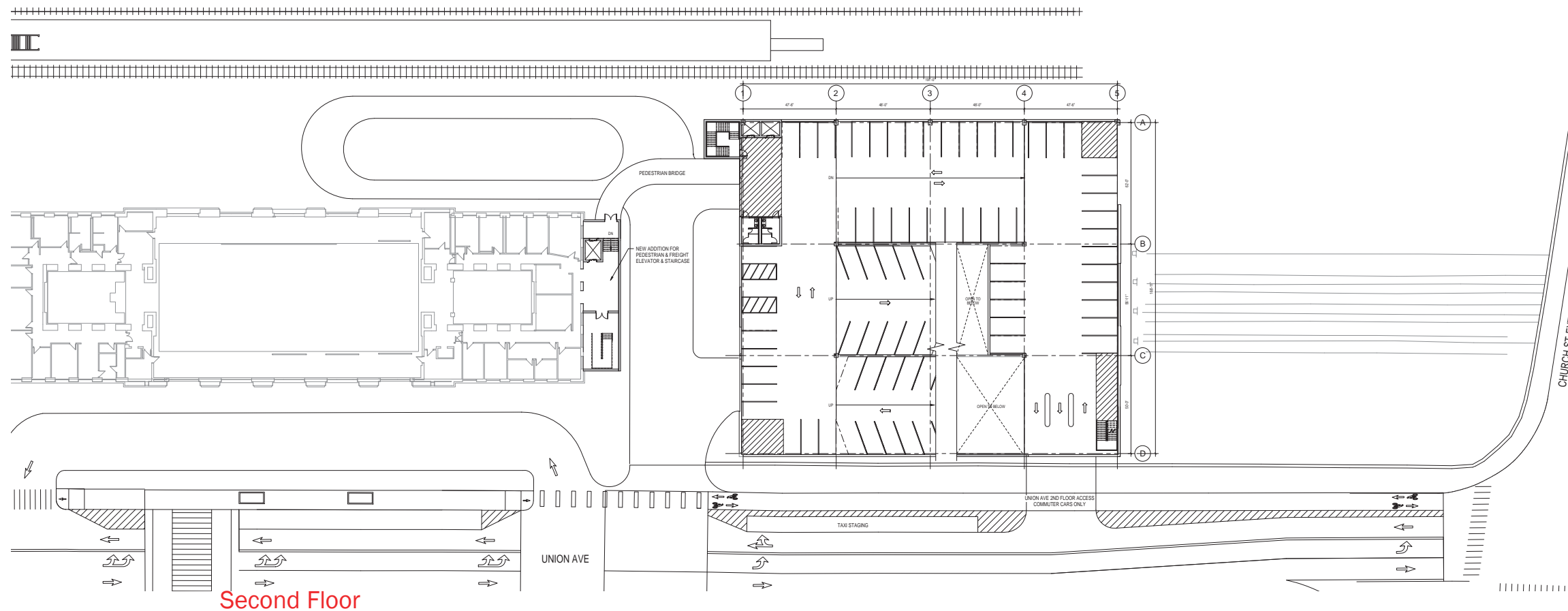
- 600 maximum parking spaces requirement met
- Service & loading is underground, out of view from Union Avenue and allows for trucks to load from underground
- Existing Utilities behind Union Station remain

Cons

- West face of Union Station has new addition
- Below grade excavation for service & loading dock, along with Union Station additions
- Access to existing rail yard will require a ramp to get back up to grade



Multi-modal Option B



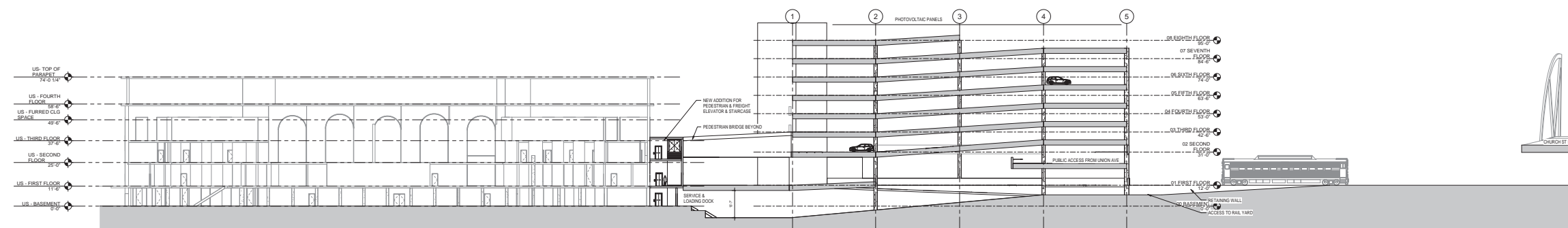
Second Floor

New Multimodal Transportation Center

- Only access to garage for the public is directly off Union Avenue onto the Second floor
- Pedestrian access to Union Station West addition
- Enclosed bridge is level across drive below and steps down to meet second floor down of Union Station within the addition

Section

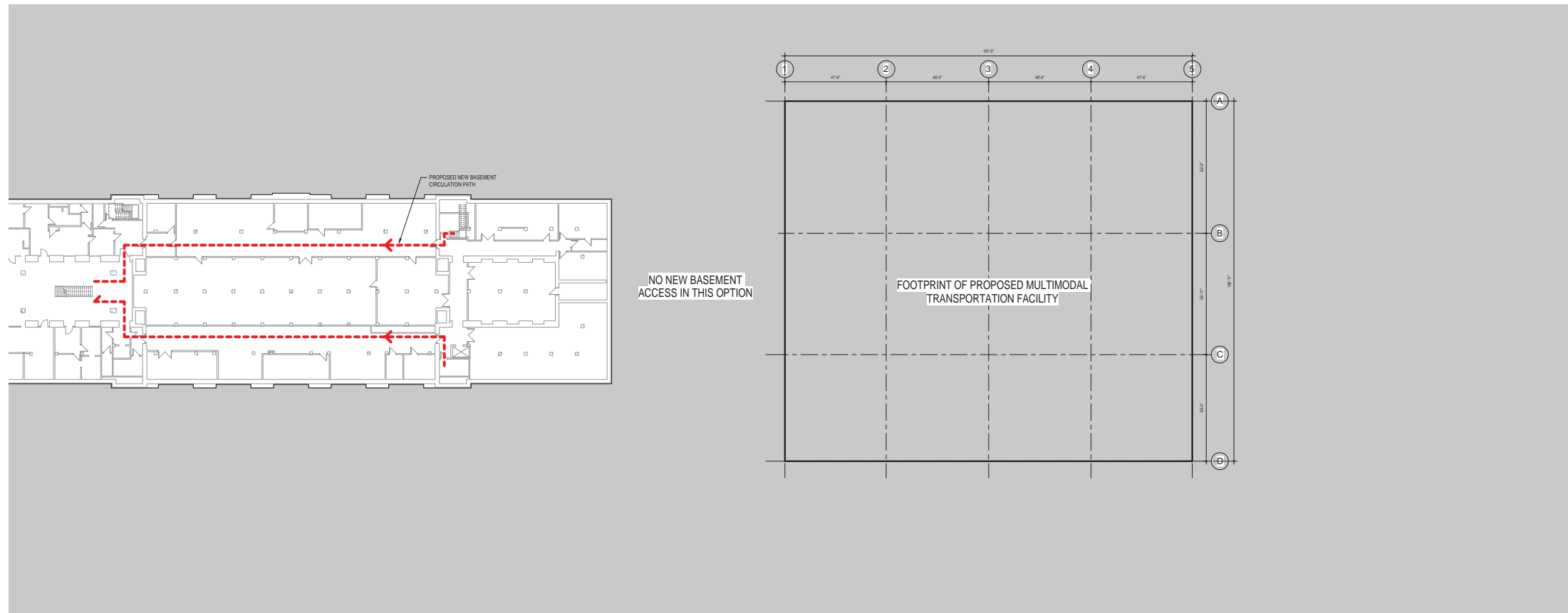
- Existing floor-to-floor heights of Union Station do not align with the proposed floor levels of the multimodal transportation center, therefore the pedestrian bridge connection will need to be sloped to provide access
- Grade is level between ground floor of Union Station and entrance to multimodal
- Service & loading dock is excavated lower than the Union Station basement level, in order to achieve head height clearance for trucks and access to raised loading dock
- 8 floors total to provide maximum of 600 parking spaces



Longitudinal Section



Multi-modal Option C



Basement Floor

Basement Floor

New Multimodal Transportation Center

- No activity on this level

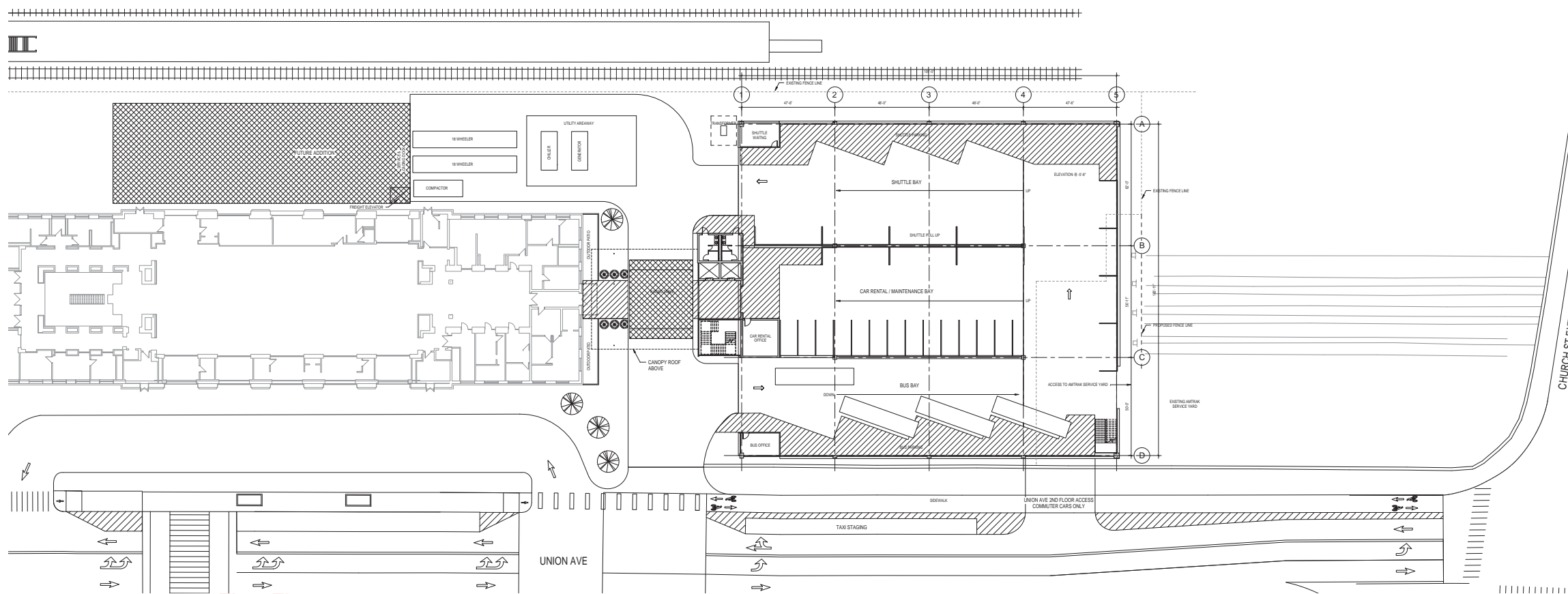
First Floor

New Multimodal Transportation Center

- Designated bus bay with parking & office
- Designated car rental/maintenance bay
- Designated shuttle bay with parking & waiting area
- Public bathrooms
- Pedestrian circulation core is along center axis of Union Station for direct connection

Future Addition - South of Union Station

- Contains service & loading dock
- Freight elevator for deliveries & service
- Existing generator, chiller, & utilities to be buried into an underground utility area-way that can be driven over



First Floor

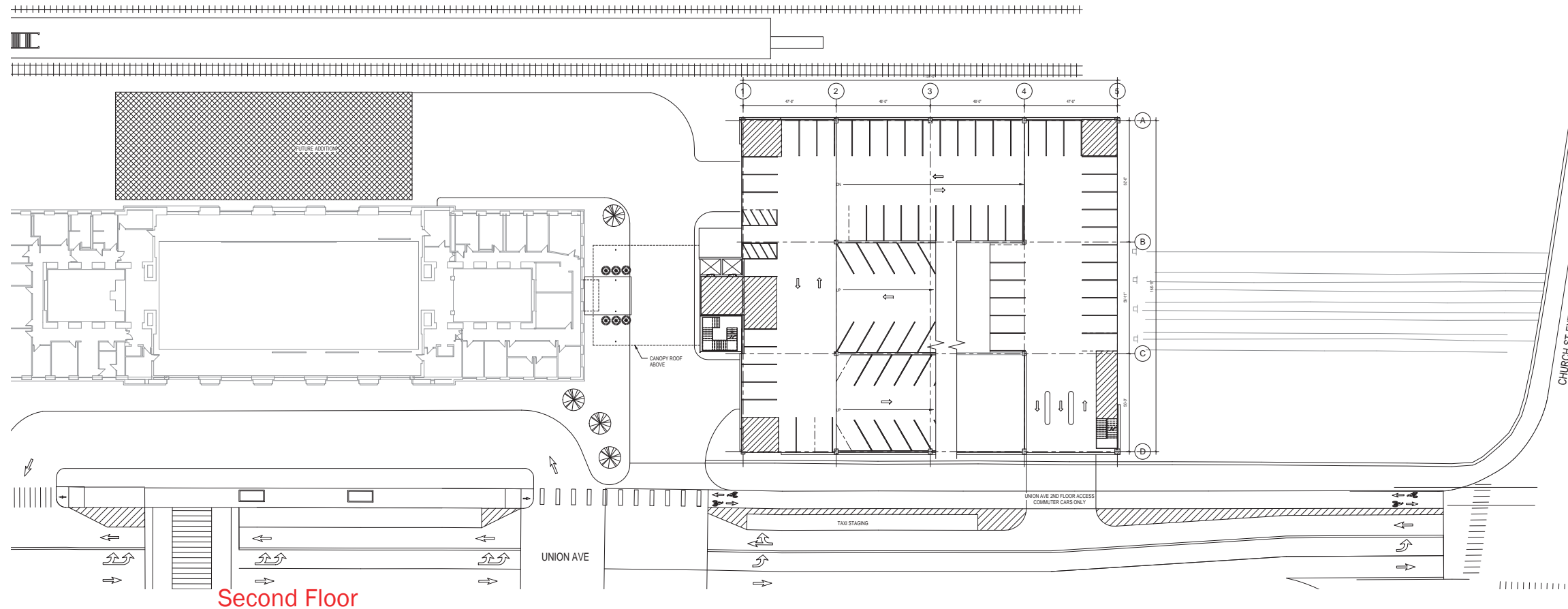
Pros

- 600 maximum parking spaces requirement met
- Service & loading is in rear of Union Station, out of view from Union Avenue and more centrally located to access interior spaces
- Below grade utility area-way allows for drive access above
- Pedestrian connection between multimodal and Union Station is on the ground level with exterior canopy covering the connection
- No pedestrian bridge or addition is added to existing historic nature of Union Station

Cons

- Existing utilities to be relocated
- Access to existing rail yard will require a ramp to get back up to grade





Second Floor

Multi-modal Option C

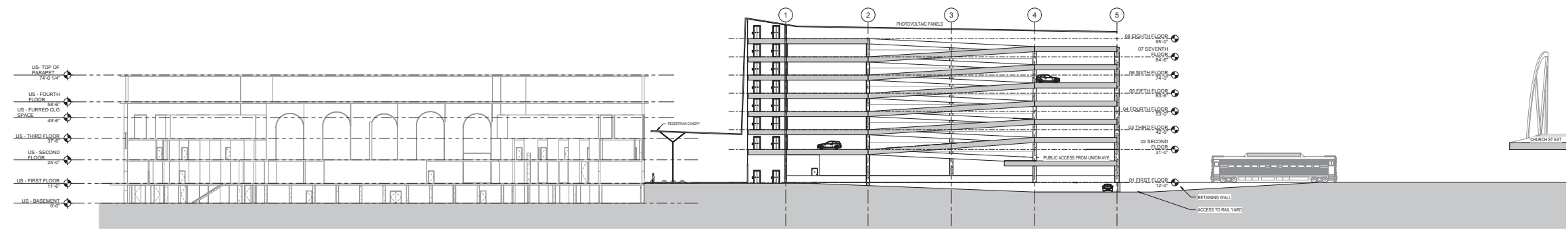
Second Floor

New Multimodal Transportation Center

- Only access to garage for the public is directly off Union Avenue onto the Second floor
- Pedestrian core outlets to the ground floor to connect under an exterior canopy into Union Station

Section

- Existing floor-to-floor heights of Union Station do not align with the proposed floor levels of the multimodal transportation center
- Exterior canopy covers the connection between multimodal and Union Station
- 8 floors total to provide maximum of 600 parking spaces



Longitudinal Section



West Lot - Option C



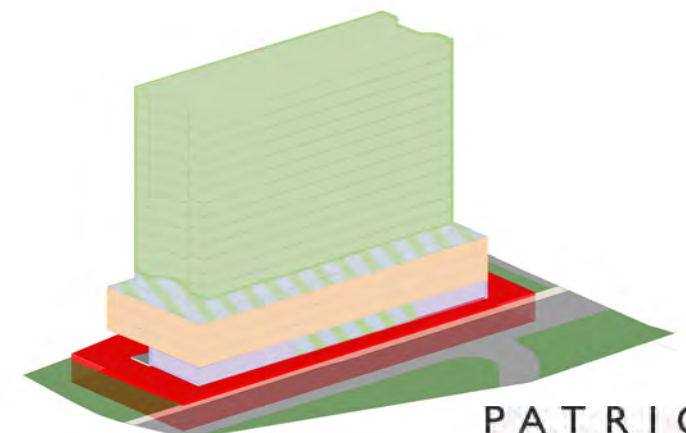
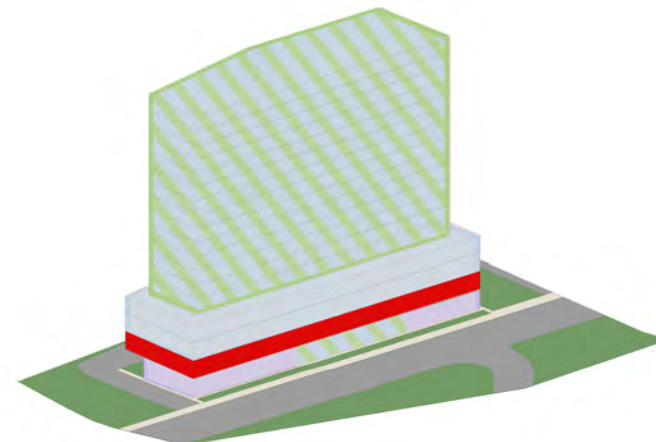
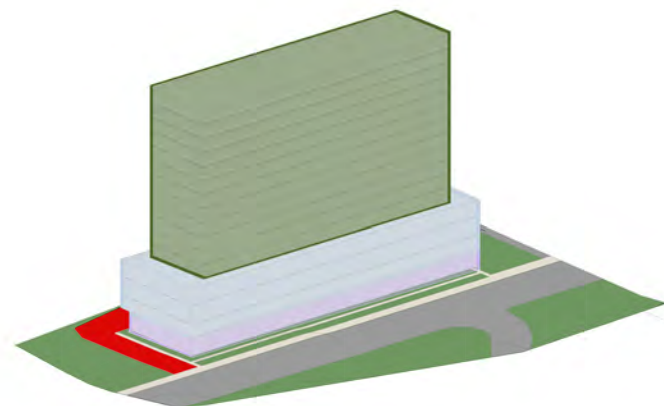
Multi-modal Summary of Options

Givens for each option		Pedestrian Connection	Service & Loading Dock	Footprint	Height	
<ul style="list-style-type: none"> + 600 max car parking spaces + Ground level circulation of Multimodal is reserved for shuttles & buses only + Designated bus/shuttle parking & turnaround + Designated space for car rentals + Vehicle entry for general public is accessed off Union Avenue directly onto second floor of garage + Photovoltaic panels provided on south facade of Multimodal + Create a more pedestrian friendly environment around Union Station + Considerations to be given for retail & associated loading/trash on street level along Union Ave + Garage cannot be taller than Union Station, per SHPO + Considerations to be given for SHPO requirements during design 	Option A Enclosed Pedestrian Bridge	<ul style="list-style-type: none"> • Pedestrian bridge runs on center axis into new addition of Union Station • Addition to West facade of Union Station 	Part of Future Addition in rear of Union Station	Within property limits of existing lot	<ul style="list-style-type: none"> • 8 floors - based on max footprint of the property limits • Multimodal is taller than Union Station • Top floor has PV panels 	
	Option B Underground Service & Loading Dock	<ul style="list-style-type: none"> • Pedestrian bridge runs on south side of site and turns north into new addition of Union Station • Addition to West facade of Union Station 	Below grade connection to Basement level of new addition of Union Station	Within property limits of existing lot	<ul style="list-style-type: none"> • 8 floors - based on max footprint of the property limits • Multimodal is taller than Union Station • Top floor has PV panels 	
	Option C Open Pedestrian Canopy	<ul style="list-style-type: none"> • No bridge - pedestrians cross from Multi-modal Center to Union Station on ground level under covered canopy • No addition to West facade of Union Station 	Part of Future Addition in rear of Union Station	Within property limits of existing lot	<ul style="list-style-type: none"> • 8 floors - based on max footprint of the property limits • Multimodal is taller than Union Station • Top floor has PV panels 	

East Lot

Mixed Use Tower Options

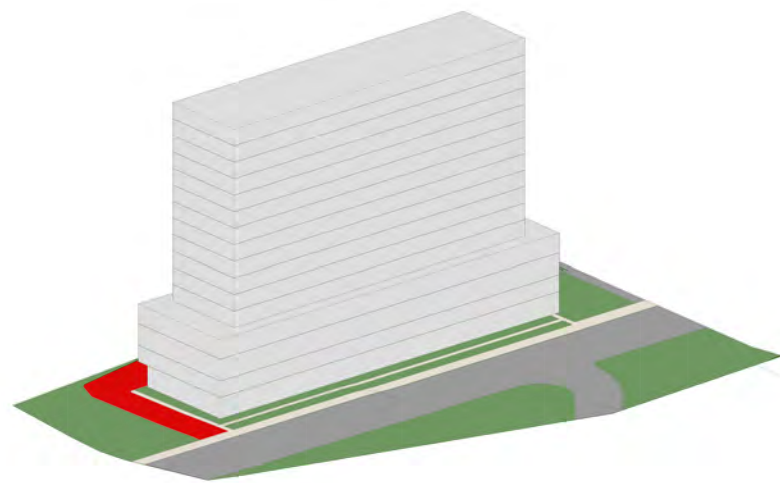
Categories	Option A Tower w/ On Grade Parking	Option B Tower w/ Second Floor Parking	Option C Tower w/ Subsurface Parking
Size (SF)	400,000 GSF	455,000 GSF	447,000 GSF
Parking	+/- 35 Spaces	+/- 50 Spaces	+/- 120 Spaces
# of Units/Rooms	+/- 270 units	+/- 540	+/- 540
Program	Residential/Retail/Office	Hotel/Office/Conference	Hotel/Office/Conference
Stories	14	18	18
Tower	Residential (12 Floors)	Hotel / Office (14 Floors)	Hotel (14 Floors)
Terrace	Residential / Public Amenities	Hotel / Office Amenities	Hotel Amenities / Office Co-working
Podium	Office / Co-Working (2 Floors)	Office (2 Floors)/Parking	Conference (2 Floors)
Ground Floor	Lobby / Retail	Lobby / Retail	Lobby / Restaurant / Retail
Sub Grade	NA	NA	Structured Parking
Site	Traffic modifications required for site development.	Traffic modifications required for site development.	Traffic modifications required for site development.



East Lot

Massing Development

Parking Layouts



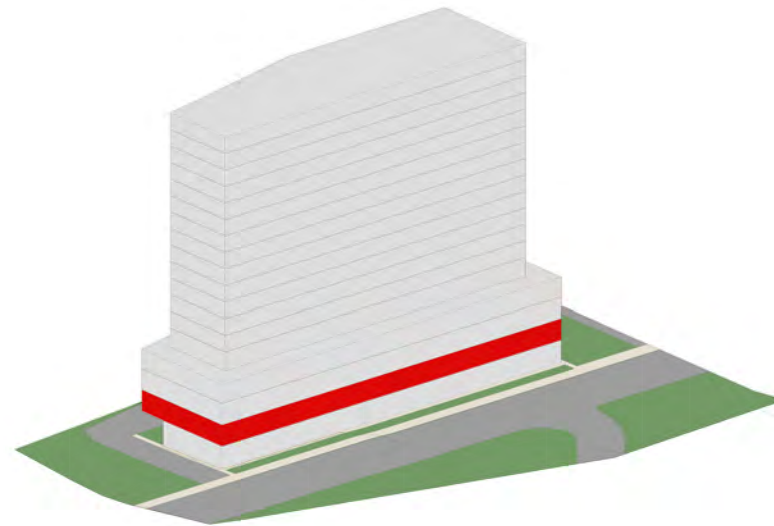
Option A - Surface Parking

Parking

- +/- 35 exterior on-site spaces

Features

- smallest building footprint
- no structured parking



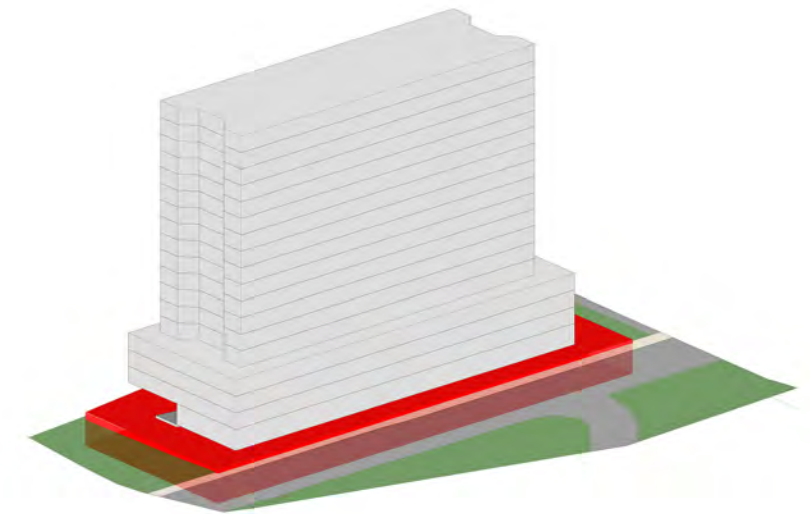
Option B - Second Level Structured Parking

Parking

- +/- 50 Spaces

Features

- second-story parking reduces rentable space within podium
- entry to a ramp accessed from east side drive
- larger building footprint than Option A



Option C - Sub Level Parking

Parking

- +/- 120 Spaces

Features

- parking below grade allows for more parking than in Option B
- access to below-grade parking from east side drive
- larger building footprint than Option A, similar to Option B

East Lot

Massing Development

SAMPLE PROGRAM

Tower

Residential (12 Floors)

Terrace

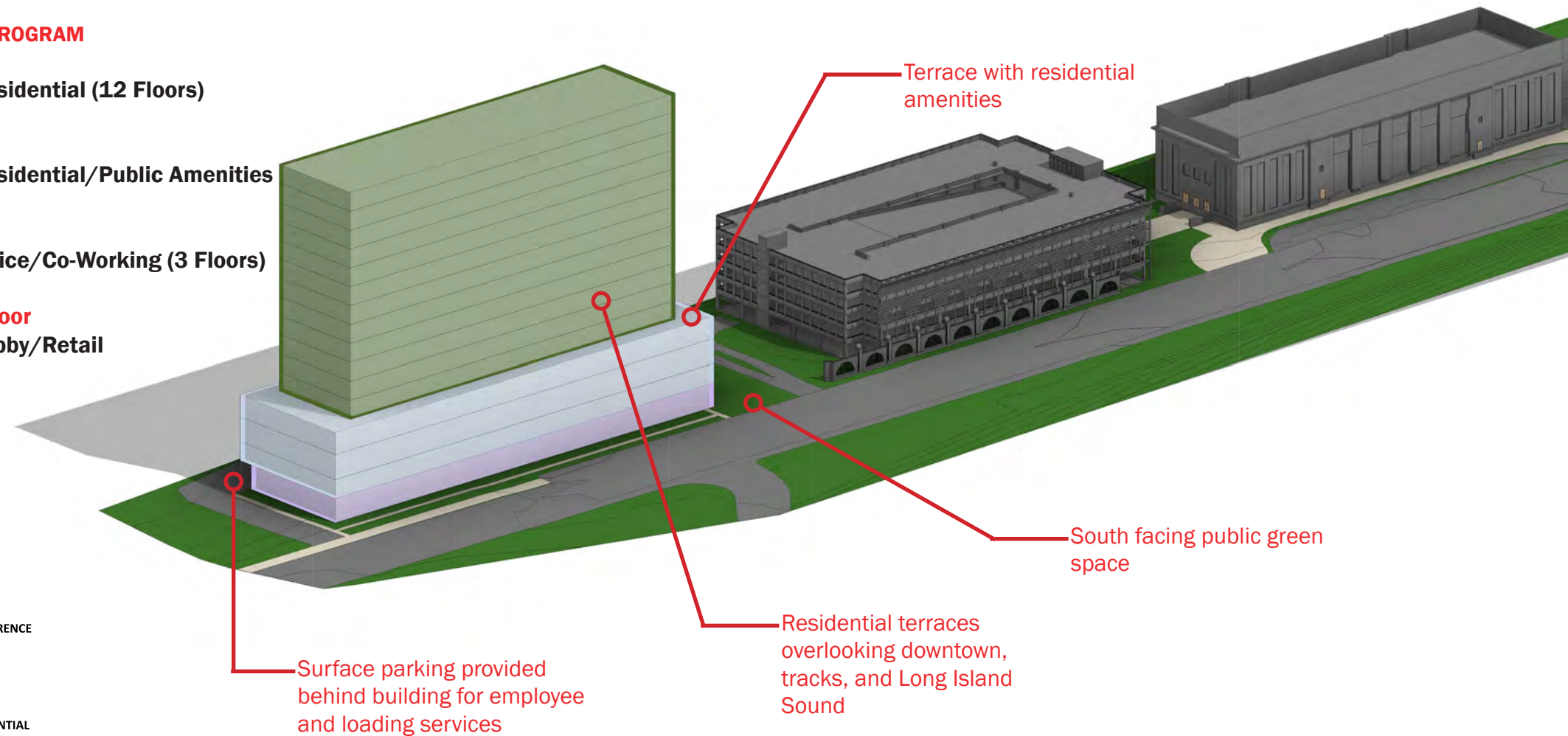
Residential/Public Amenities

Podium

Office/Co-Working (3 Floors)

Ground Floor

Lobby/Retail



Option A

Site

Surface Parking

- +/- 35 Parking Spaces

First Floor

Public Spaces

- 4 Retail Spaces that face Union Avenue

Service

- Loading Dock
- Mechanical and Waste

Program Opportunities

- Ideal Program options for base: Retail & Restaurant
- Ideal Program options for tower: Residential, Hotel or Office
- Provides an Outdoor Terrace
- Surface parking
- Not suitable for conference space or large office tenants

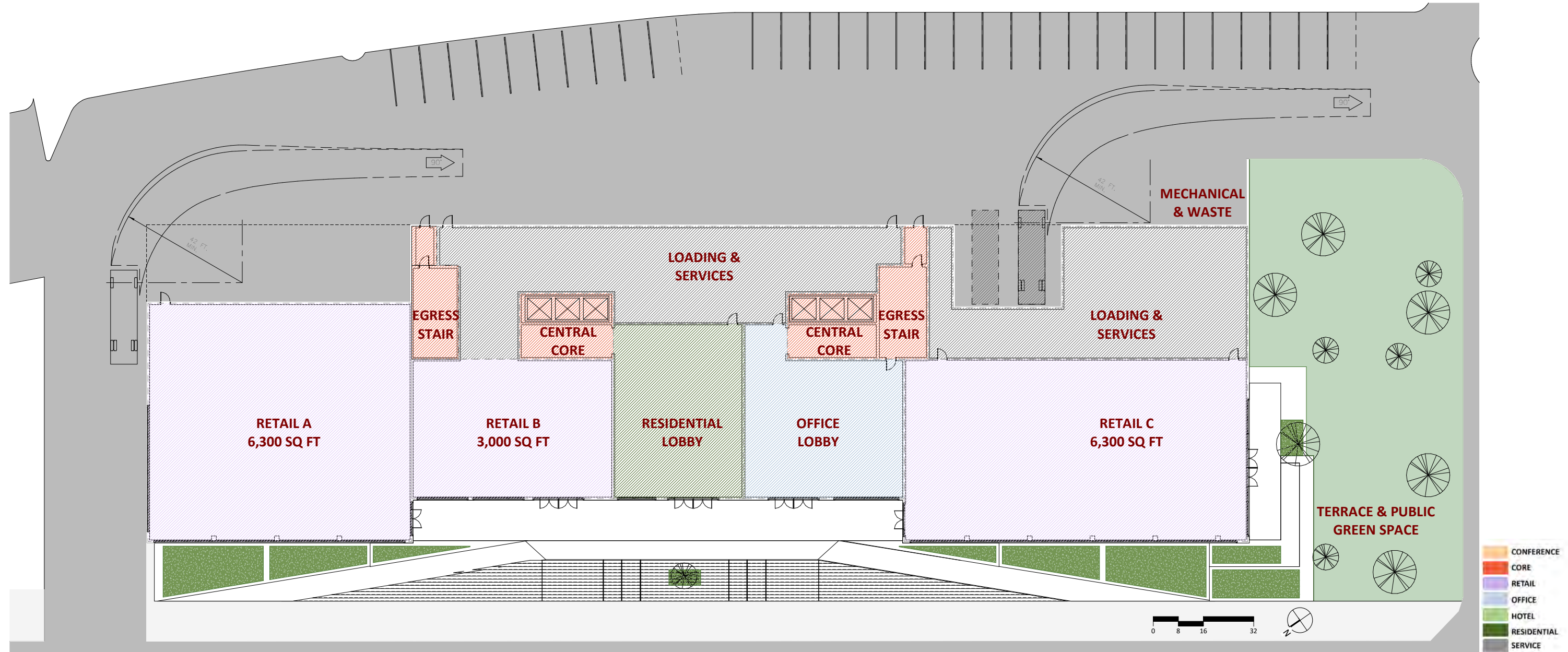
Features

- Based on the zone FAR : 6.0
- Suitable for surface level parking
- Service and Loading are located at the rear of the building, hidden from the street

East Lot

Massing Development

Option A



Main Level

Lobby Spaces

- Office
- Hotel
- Residential

Retail Spaces

- Retail A - 7,300 SF Mixed Retail
- Retail B - 3,700 SF Mixed Retail
- Retail C - 5,900 SF

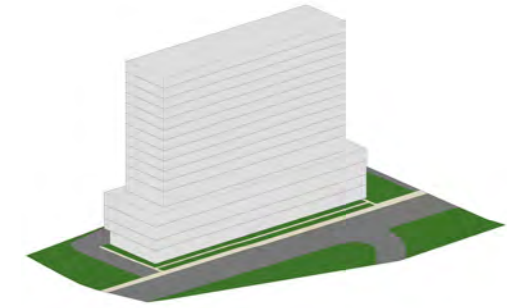
Features

- South facing patio space, ideal for restaurant placement and outdoor green space
- Individual entrances provides to retail
- 2 lobby spaces to access office and hotel or residential
- Surface parking and vehicular loading

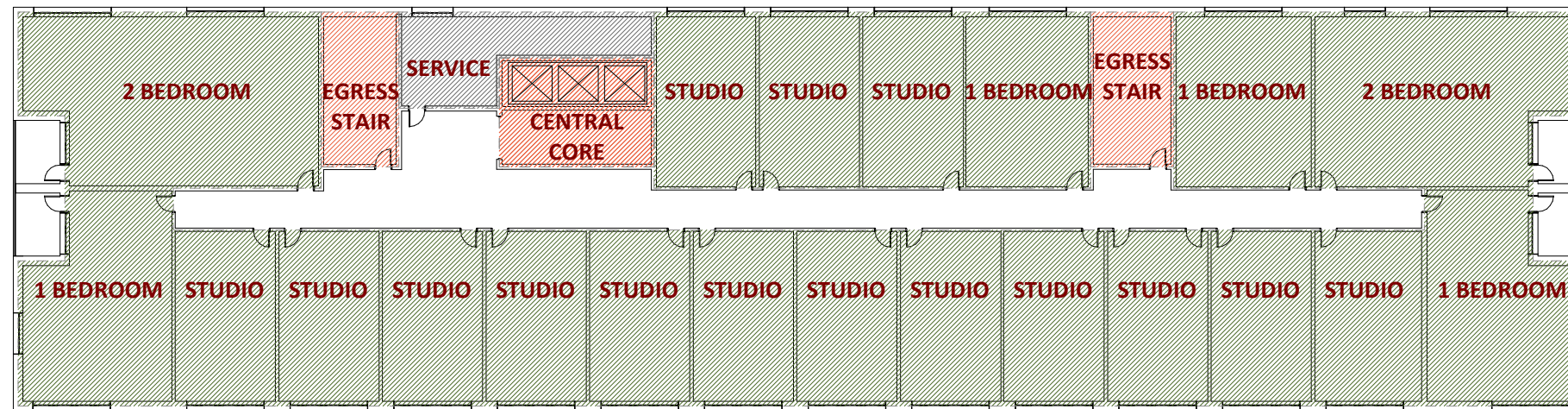
East Lot

Massing Development

Option A



Typical Tower Level



Residential Tower Rooms:

- Studio - 15 Units
- 1 Bedroom - 4 Units
- 2 Bedroom - 2 Units

Total Units in Tower = +/- 270 Units

Features

- Private residential balconies, facing both North and South to overlook downtown, the tracks, Long Wharf, and Long Island Sound
- Exterior residential patio space on top level of the podium

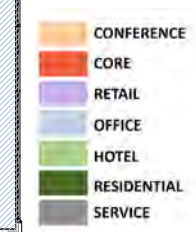
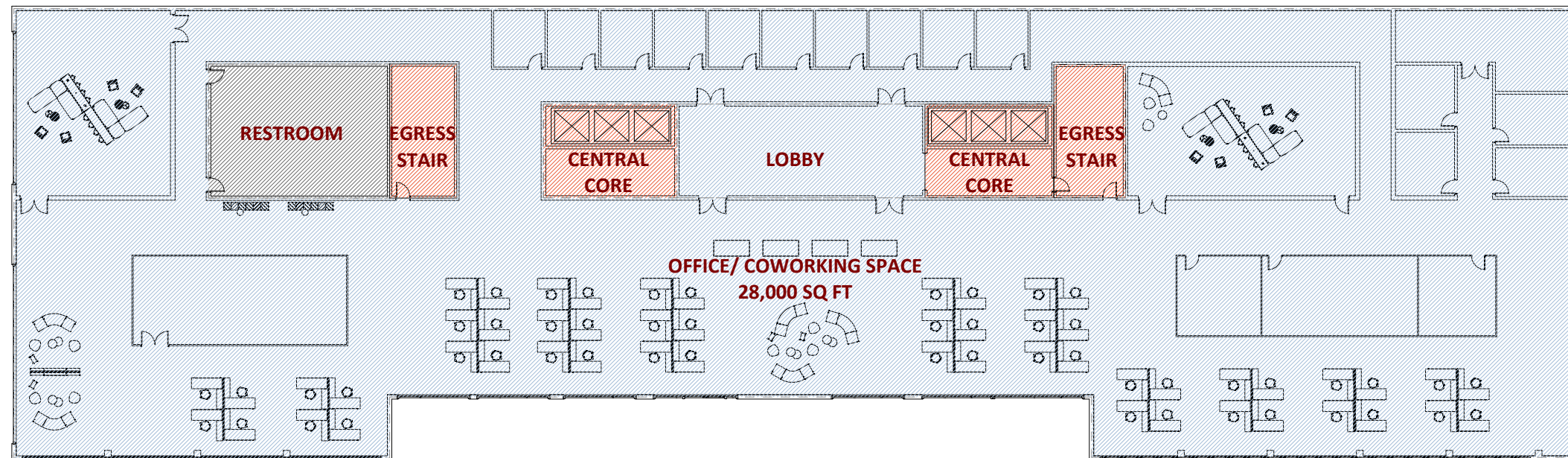
Second Level

Coworking Office Space

- Office

Features

- South facing patio space, ideal for restaurant placement and outdoor green space
- Mixed-use lobby space with service access
- Surface parking and vehicular loading



East Lot

Massing Development

SAMPLE PROGRAM

Tower

Hotel/Office (14 Floors)

Terrace

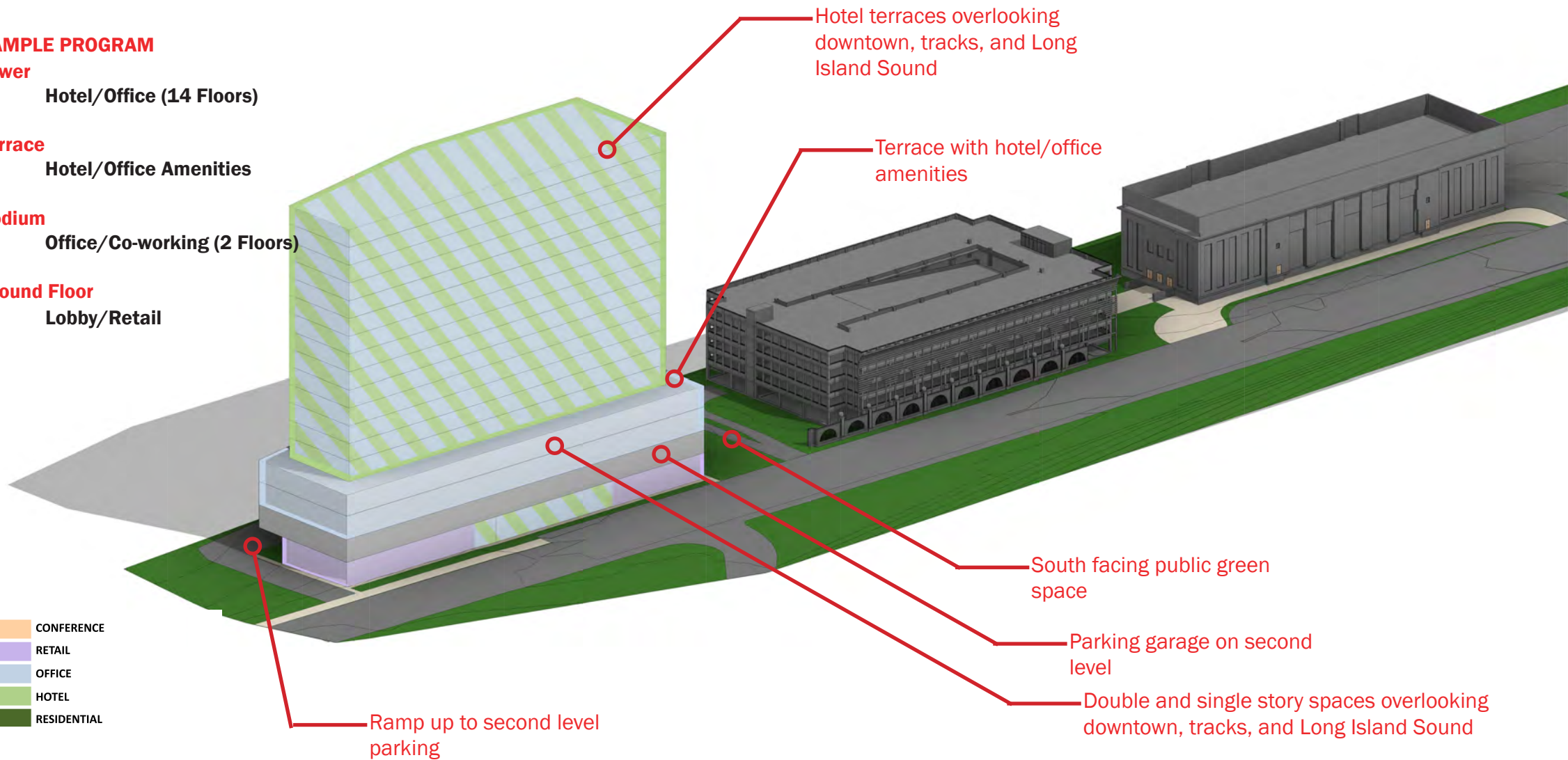
Hotel/Office Amenities

Podium

Office/Co-working (2 Floors)

Ground Floor

Lobby/Retail



Option B

Site

Parking

- Structured Parking ramp
- Second Floor Structured Parking

First Floor

Public Spaces

- 3 Retail Spaces that face Union Avenue
- Terrace and Green Space

Service

- Loading Dock
- Mechanical and Waste

Program Opportunities

- Suitable for structured parking above grade
- Ideal Program options for base: Conference, Retail, & Restaurant
- Ideal Program options for tower: Office & Hotel

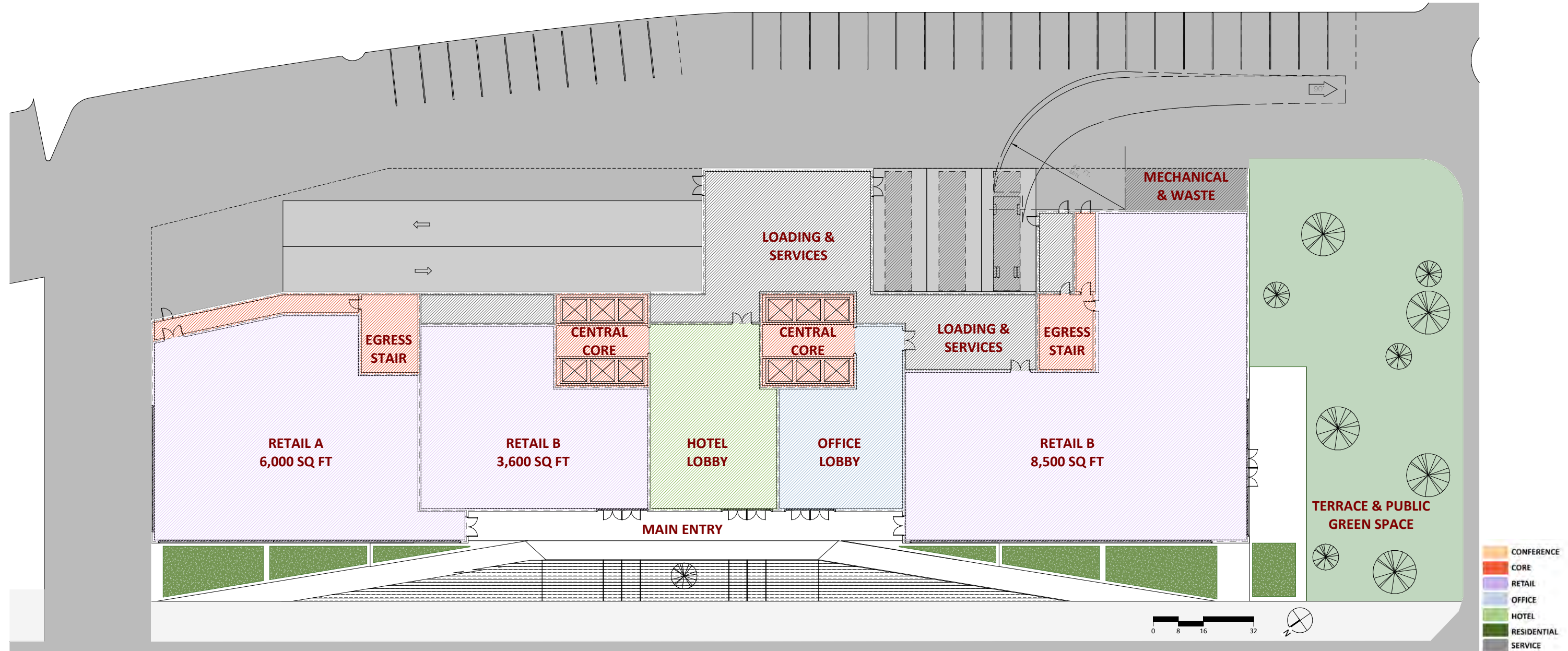
Features

- Provides larger rentable areas in both the podium and tower as compared to Option A
- Provides an Outdoor Terrace
- At 18 stories, FAR is +/- 7.0
- Second level of the podium is lost to parking
- Challenges faced in creating a building envelope that breaks at second level due to parking level

East Lot

Massing Development

Option B



Main Level

Lobby Spaces

- Office
- Hotel
- Conference

Retail Spaces

- Retail A - 8,000 SF Mixed Retail
- Retail B - 10,000 SF Mixed Retail
- Retail C - 8,000 SF Restaurant + South facing patio

Features

- South facing patio space, ideal for restaurant placement and outdoor green space
- Mixed-use lobby space with service access

East Lot

Massing Development

Option B

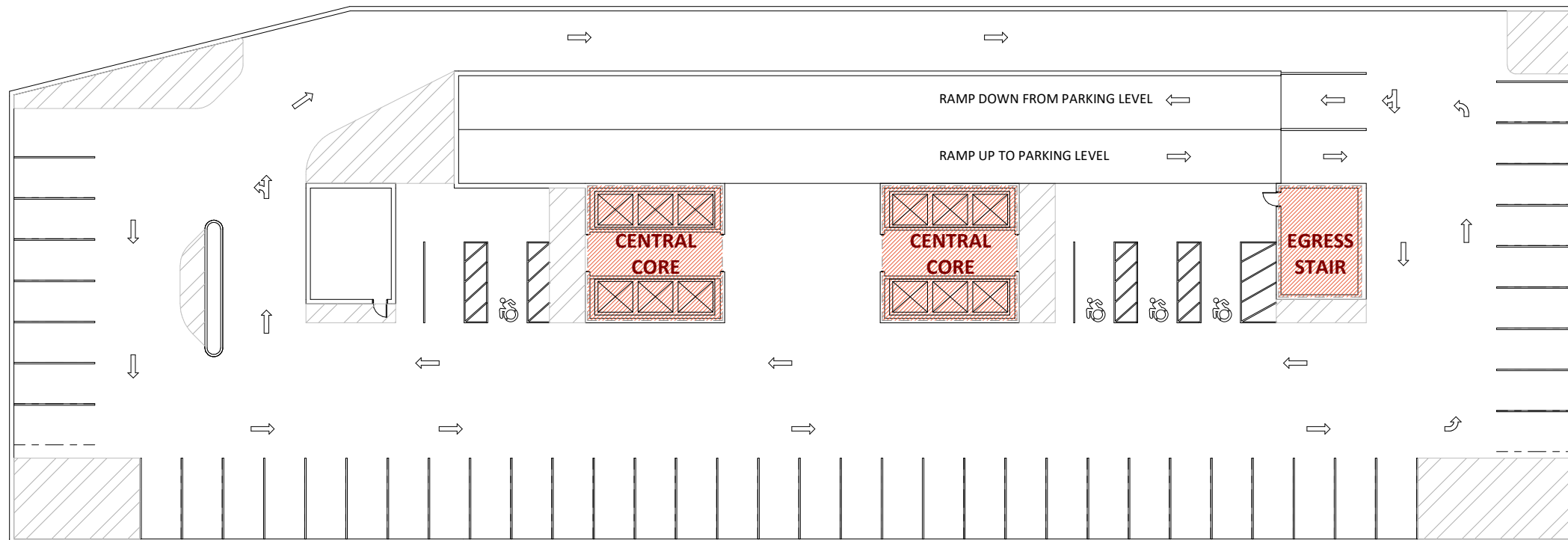
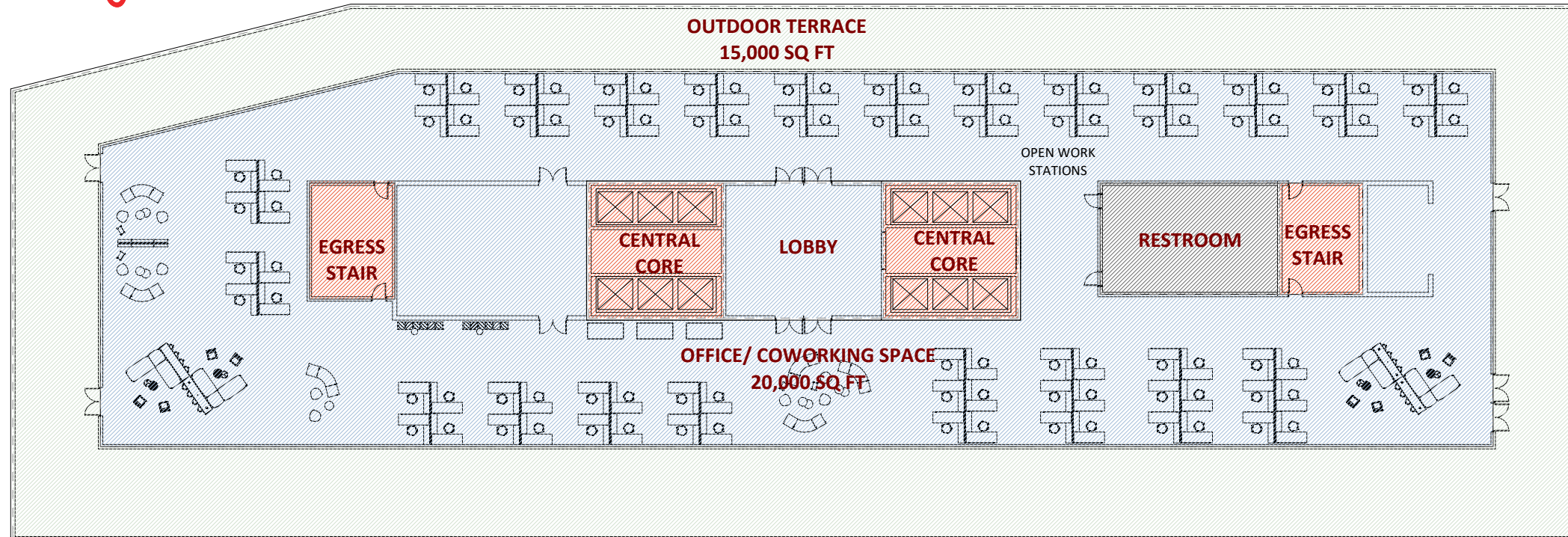


Typical Tower Level

- Office
- Hotel

Features

- South facing patio space
- Open, flexible office space allowing for bright work environments and views to the surrounding city



Second Level

Structured Parking

- +/- 50 Spaces

East Lot

Massing Development

- CONFERENCE
- RETAIL
- OFFICE
- HOTEL
- RESIDENTIAL

SAMPLE PROGRAM

Tower

Hotel/Office (14 Floors)

Terrace

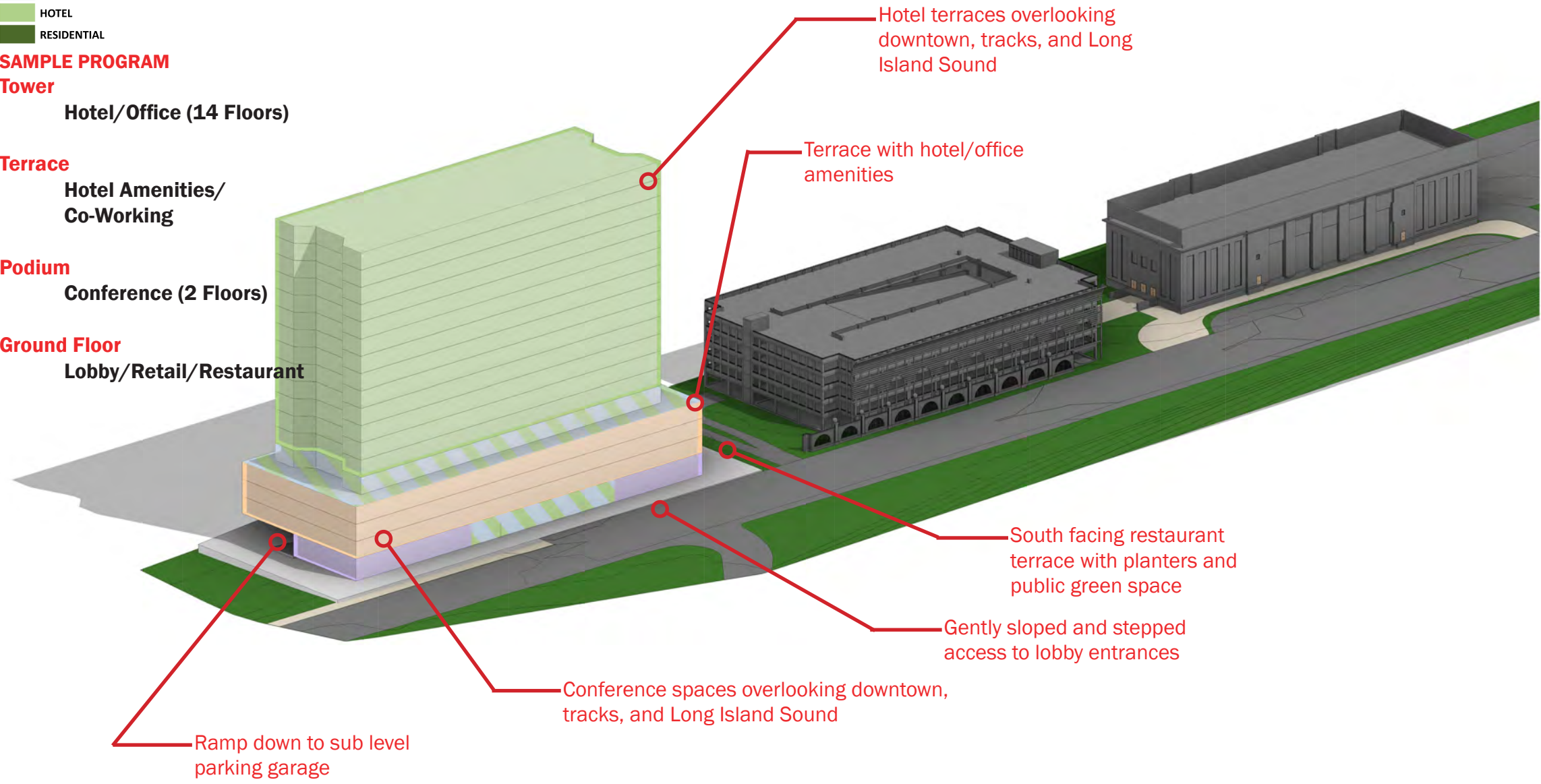
Hotel Amenities/
Co-Working

Podium

Conference (2 Floors)

Ground Floor

Lobby/Retail/Restaurant



Option C

Site

Outdoor Spaces

- Outdoor Green Space on the West Side of the Building

Basement

Subsurface Parking

- +/- 120 spaces

First Floor

Public Spaces

- Retail and Restaurant Spaces that face Union Avenue
- Terrace and Green spaces

Service

- Loading Dock
- Mechanical and Waste

Program Opportunities

- Structured parking below grade
- Ideal Program options for base: Conference, Retail & Restaurant
- Ideal Program options for tower: Office & Hotel
- Ideal Program options for podium terrace: Co-working & Hotel amenities
- Ideal Program options for rooftop terrace: Hotel amenities

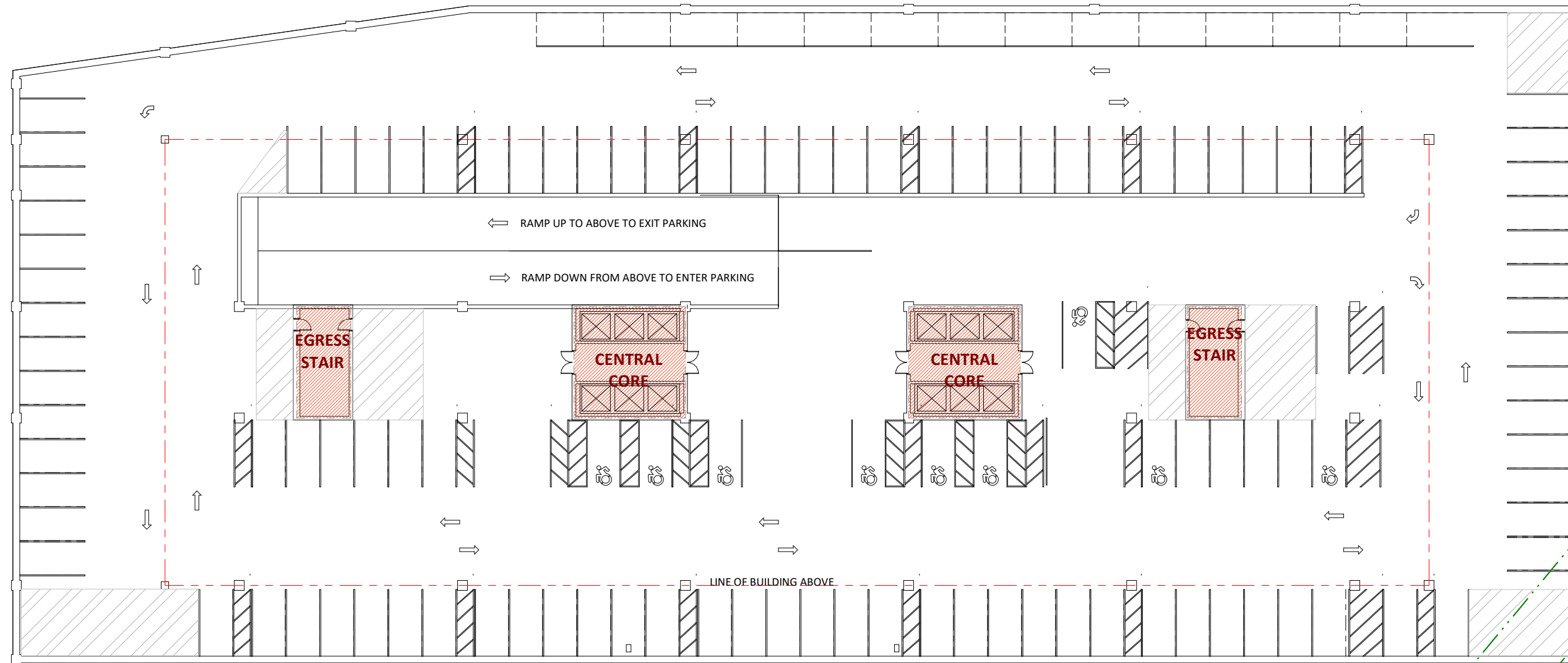
Features

- Outdoor public spaces at southwest side allow excellent opportunity for Restaurant usage

East Lot

Massing Development

Option C



Basement Level

Parking

- +/- 120 spaces

Features

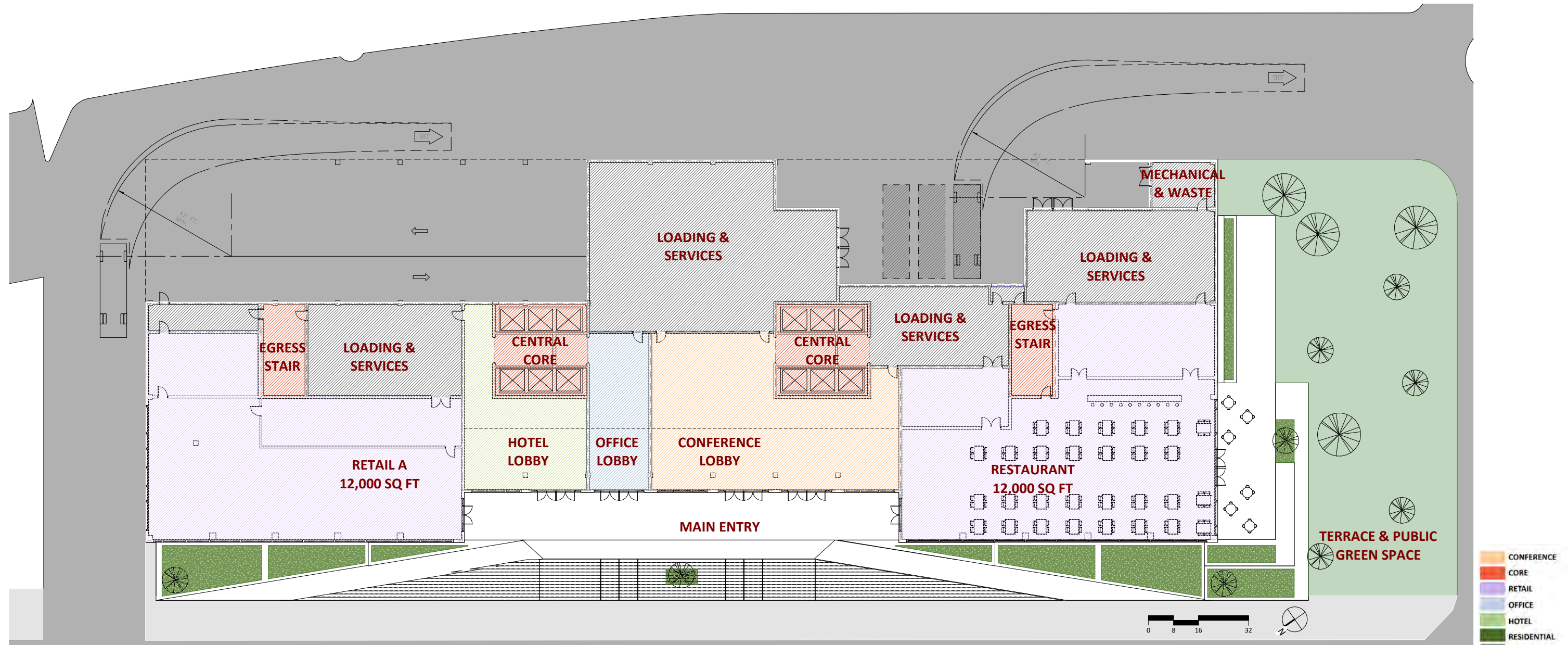
- accessible parking and access to building
- speed ramp entryway

	CONFERENCE
	CORE
	RETAIL
	OFFICE
	HOTEL
	RESIDENTIAL
	SERVICE

East Lot

Massing Development

Option C



Main Level

Lobby Spaces

- Hotel
- Office
- Conference

Retail Spaces

- Retail A - 12,000 SF Retail
- Retail B - 12,000 SF Restaurant + South facing patio

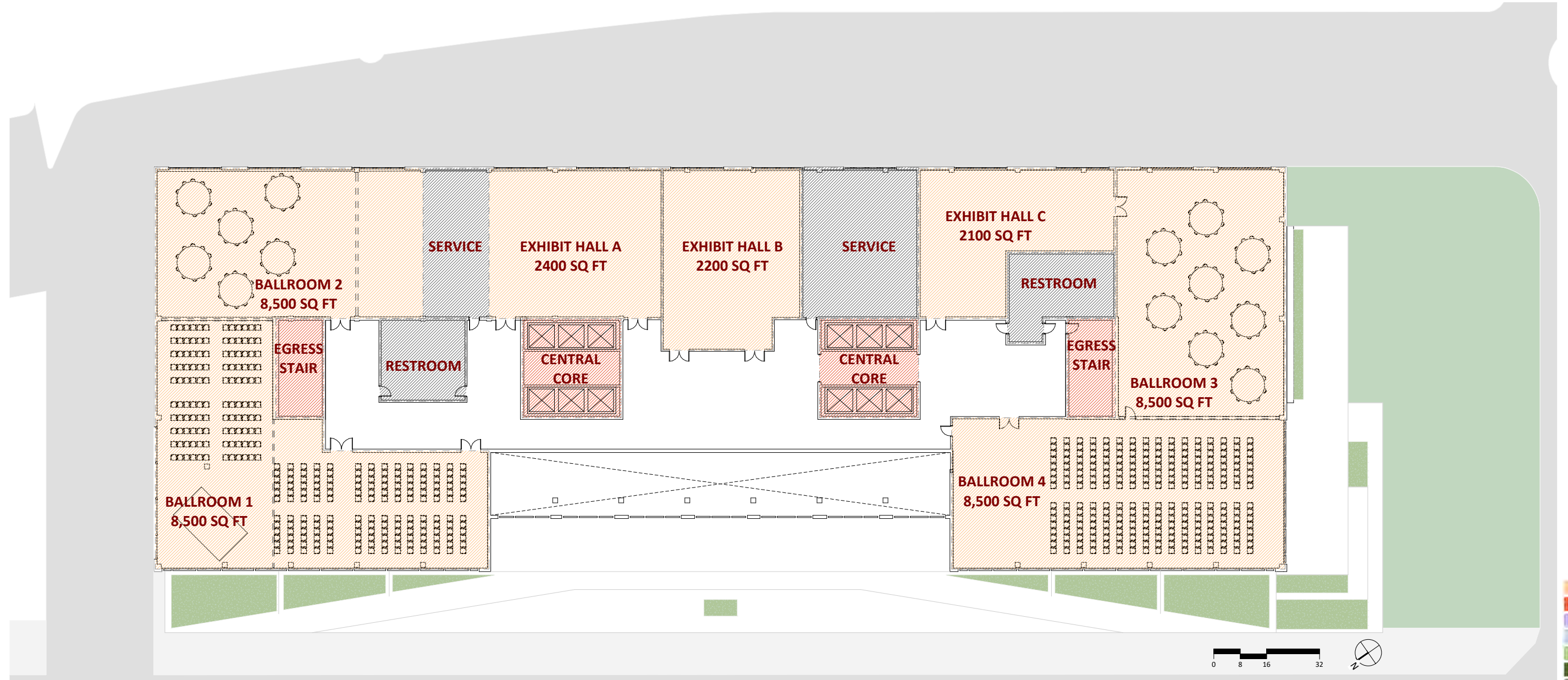
Features

- Sloped stair and entry terrace to provide universal access to a raised entry level
- Exterior green wall and planter space
- South facing patio space, ideal for restaurant placement and outdoor green space
- 3 Separate lobby spaces that provide access to hotel, office, and conference use
- Ramped parking access to sub grade garage
- Separate elevator access for hotel, office, conference, and service programs
- Double story lobby entry space

East Lot

Massing Development

Option C



Second Level

Rooms Per Floor:

- 4 Main Ballrooms (Or 6 smaller rooms)
- 6 Smaller Conference Spaces overlooking tracks

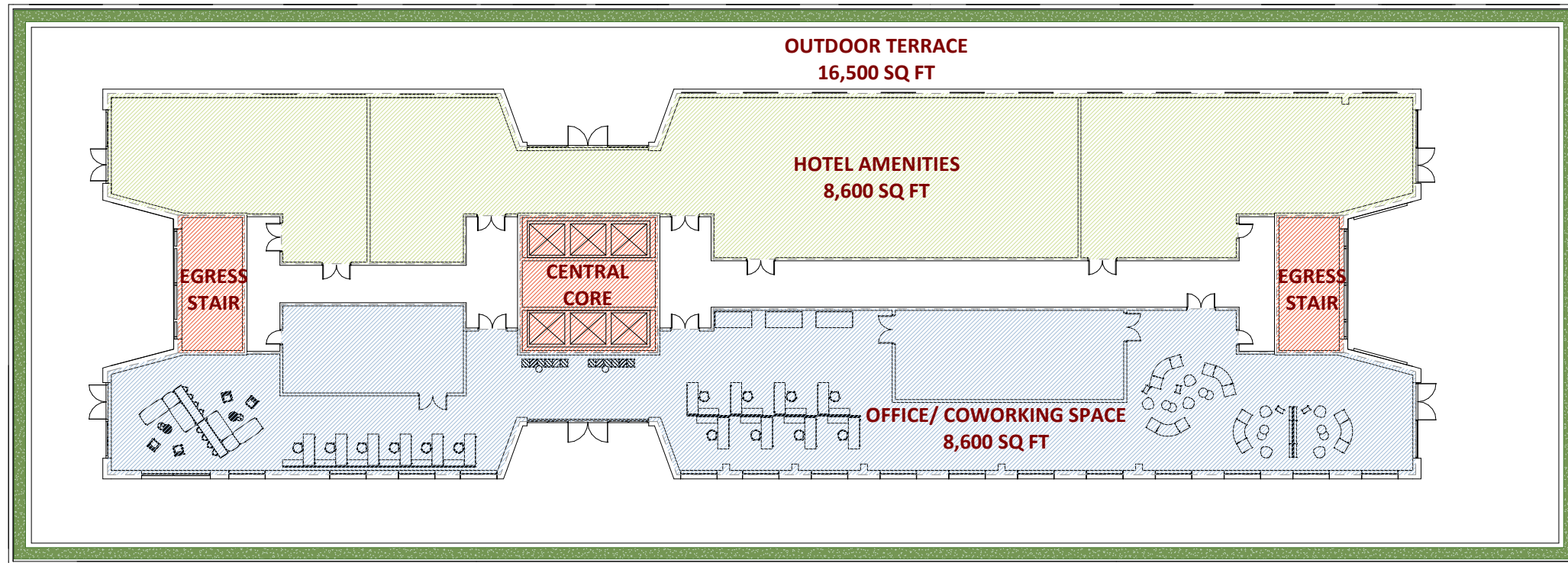
Features

- South facing exhibit halls with grand windows for train and Long Island Sound views during events
- Large ballrooms with dividing walls to break into smaller spaces

East Lot

Massing Development

Option C



Level 4

Office and Coworking Space:

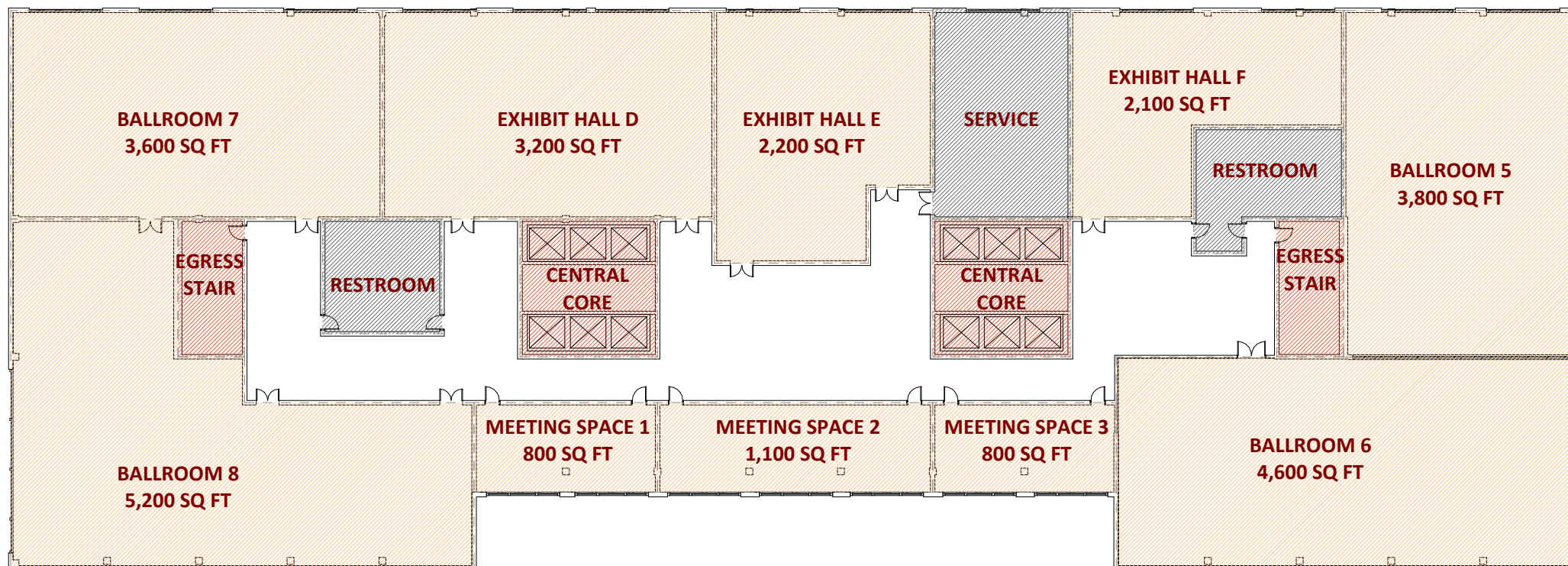
- 8,500 SQ FT

Hotel Amenities:

- 8,500 SQ FT

Features

- Hotel or residential amenities
- Terrace space overlooking tracks, downtown, and Long Island Sound



Level 3

Rooms Per Floor:

- 4 Main Ballrooms (Or 6 smaller rooms)
- 3 Smaller Conference Spaces overlooking tracks
- 3 Meeting Spaces overlooking Union Avenue

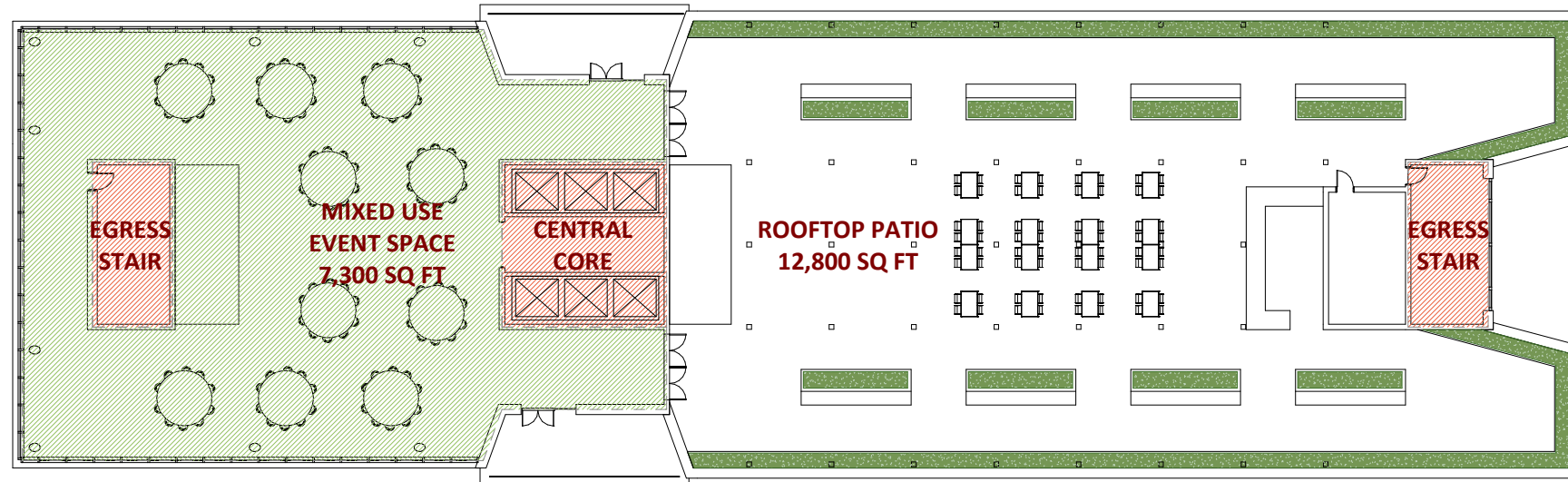
Features

- South facing exhibit halls with grand windows for train and Long Island Sound views during events
- Large ballrooms with dividing walls to break into smaller spaces



East Lot

Massing Development



Option C

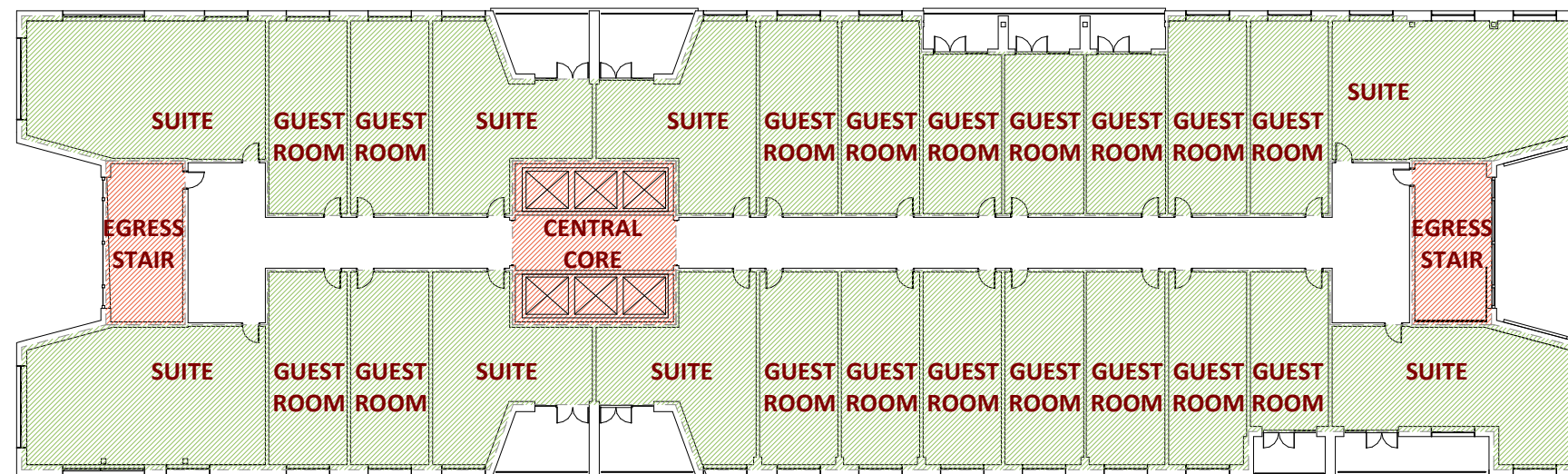
Top Floor Event Space & Terrace

Rooms Per Floor:

- Mixed used event space with adjacent rooftop access to patio

Features

- Event space overlooks city views and train activity
- Rooftop access with mixed planters and event seating



Typical Hotel Level

Rooms Per Floor:

- 6 Suites
- 18 Guest Rooms

Total Rooms Per Floor: 24

18 Floors of Hotel

Total Rooms in Tower: +/- 380

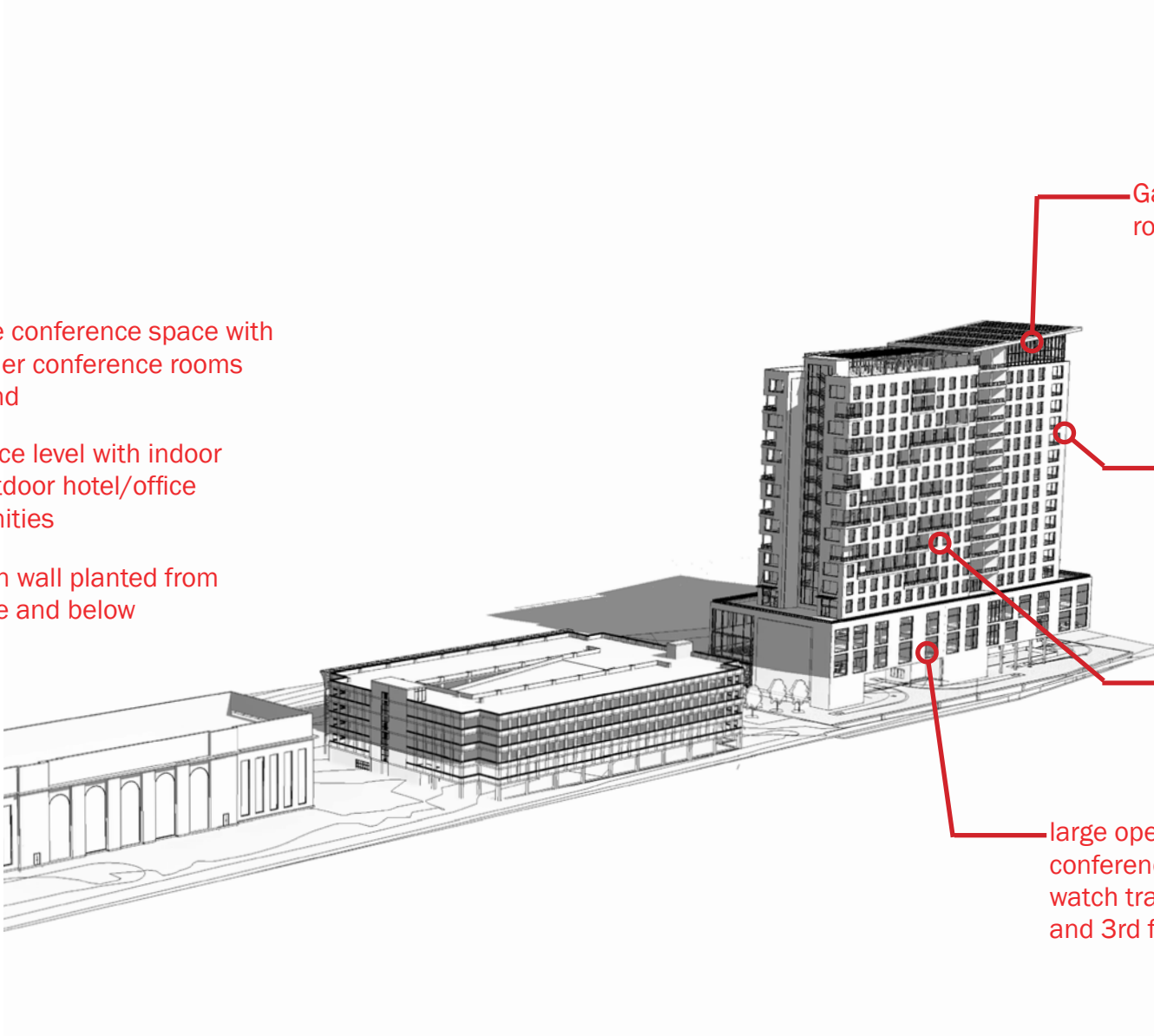
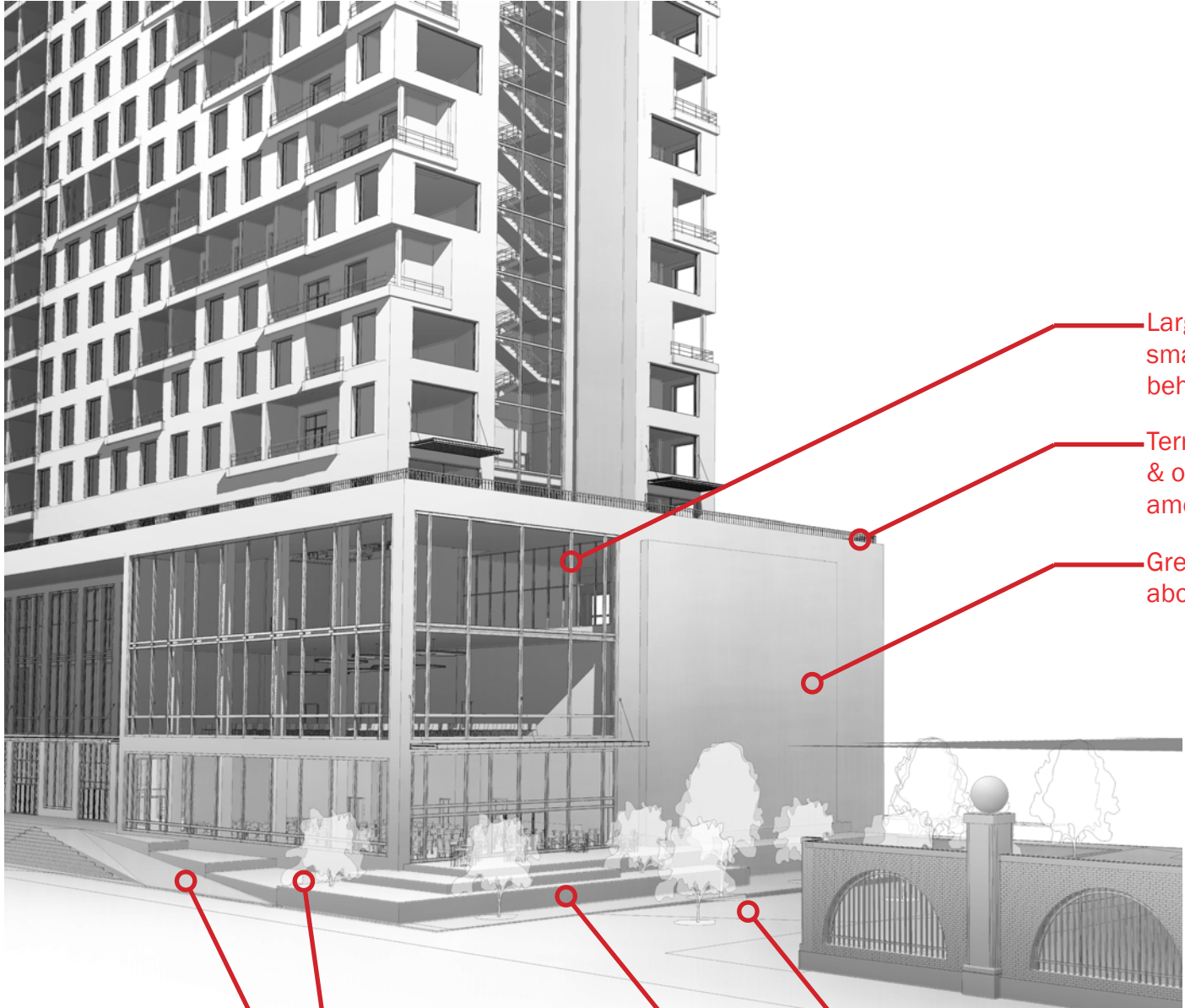
Features

- South and North facing private terraces to overlook city views and train activity



East Lot

Massing Development



Large conference space with smaller conference rooms behind

Terrace level with indoor & outdoor hotel/office amenities

Green wall planted from above and below

Gathering/Event space with rooftop access

North tower overlooks views of downtown

South tower has balconies overlooking tracks, Long Wharf, and Long Island Sound beyond

large open windows to allow conference attendees to watch train activity from 2nd and 3rd floors

South facing restaurant patio

Terraced planters

Public green space

Stepped plaza and gentle slope for universal access

East Lot

Aerial Perspective



SVIGALS + PARTNERS

DESMAN ASSOCIATES | UNION STATION EAST & WEST LOT DEVELOPMENT STUDY

PATRIQUIN
ARCHITECTS

OCTOBER 2022

East Lot

Aerial Perspective



East Lot
View from Union Avenue



SVIGALS + PARTNERS

DESMAN ASSOCIATES | UNION STATION EAST & WEST LOT DEVELOPMENT STUDY

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