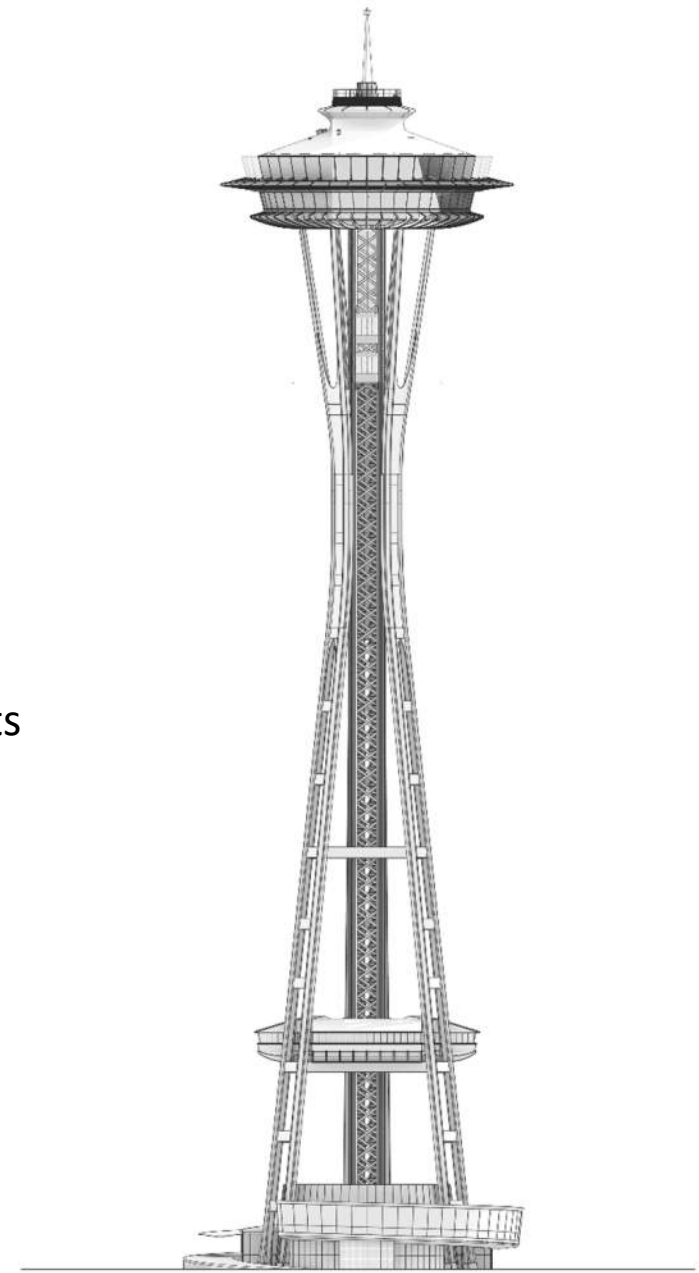
The Final Component of the “Century Project,” Space Needle Renovation – New Elevator System

Landmarks Preservation Board briefing presentation

August 30, 2022

Proposal history

- Fall 2011 / Spring 2012
  Glass box proposal (proposal withdrawn)
- August 9, 2016
  LPB Approval of renovation proposal
  - New observation deck and enclosure
  - New revolving floor level glazing
  - New revolving floor level glass floor and soffit
  - New observation deck doors and accessibility lifts
  - New elevator system
- June 2022
  The Final Component of the “Century Project,”
  Space Needle Renovation – New Elevator System



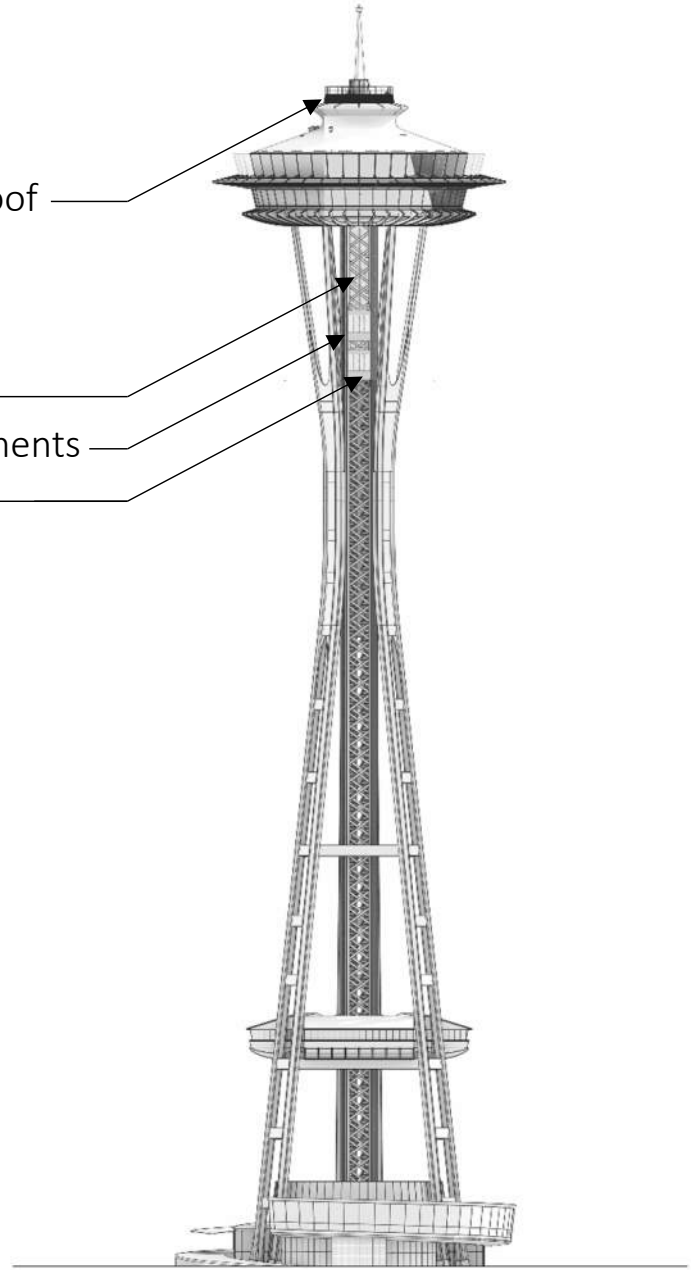
2016 proposal recap

- The renovation was completed (with the exception of the new elevators) in 2018 and has been enthusiastically received by visitors.
- The project was awarded the 2022 American Institute of Architects National Honor Award – the highest architectural award for U.S. projects.

Evening

Proposal update

4. New elevator machine room roof
3. New stair enclosure
2. New elevator hoistway attachments
1. Modernized elevator cabs



Why now

- To update, replace, and modernize existing elevator system
- Continue to operate safe, sustainable, and reliable elevator systems into the future
- Modernize elevators for optimized service, repair, and maintenance
- Increase redundancy of elevator operations

Guiding Principles

- Respect the character-defining features of the landmark Space Needle

- Contribute to renewing and refreshing the visitor experience, one that emphasizes the encompassing experience of the Needle and enhances views to the cityscape.

Elevator modernization outreach plan

- Architectural Historians
  - Historic Seattle
  - Docomomo/WEWA
  - Jeffrey Ochsner
    (Professor, University of Washington Department of Architecture College of the Built Environment)
  - Knute Berger
    (Space Needle historian, author of Space Needle – The Spirit of Seattle)
  - Grant Hildebrand
    (Professor emeritus, University of Washington Department of Architecture College of the Built Environment)
  - Lorraine McConaghy
    (Public Historian – retired, Museum of History and Industry)
  - Gary Noble Curtis
    (Structural engineer with the original 1962 John Minasian structural engineering team)
  - DLR Group archives research
    (John Graham and Co., the design firm responsible for the Space Needle was purchased by DLR in 1986)
- Community
  - Seattle Center
  - Queen Anne Historical Society
  - Seattle Uptown Alliance
- Technical
  - Otis Elevator Company
    (Elevator System Design, Manufacturing, Installation)
  - LMI Aerospace
    (Cab Engineering and Manufacturing)
  - Arup
    (Structural Engineering)
  - Olson Kundig
    (Elevator Cab Design)
  - Niteo
    (Lighting Consultant)
  - Karen Braitmayer
    (Accessibility Consultant)

Proposal update

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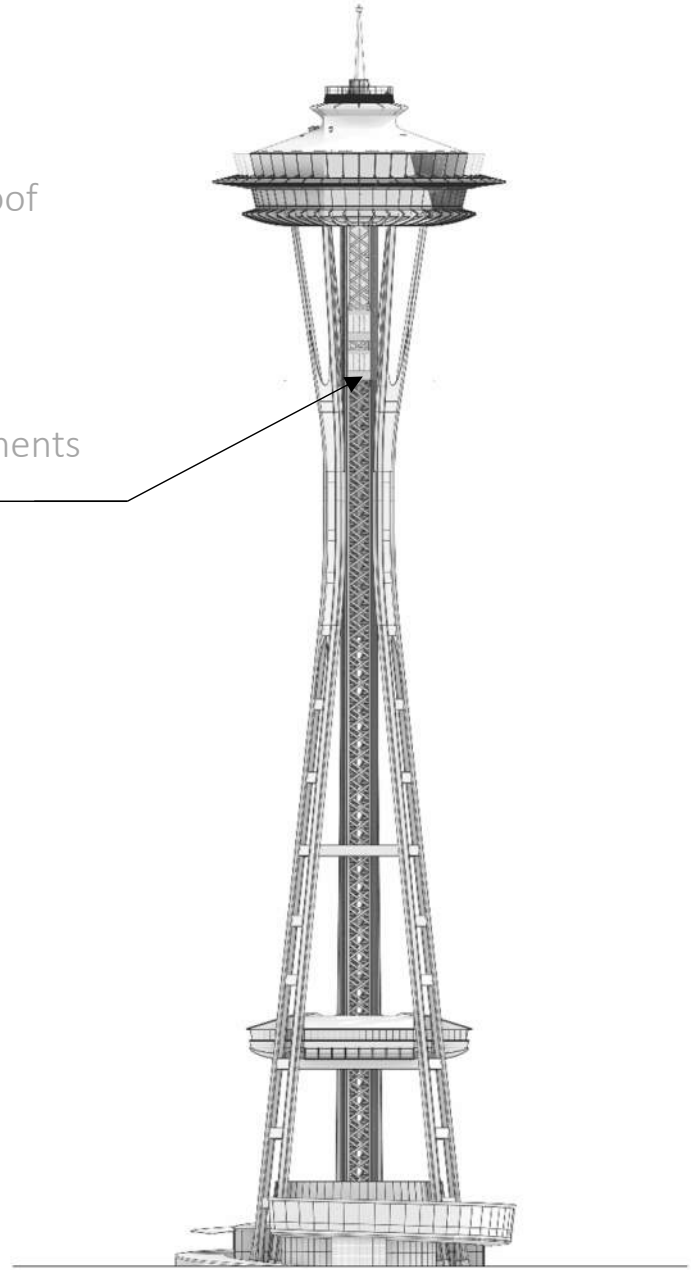
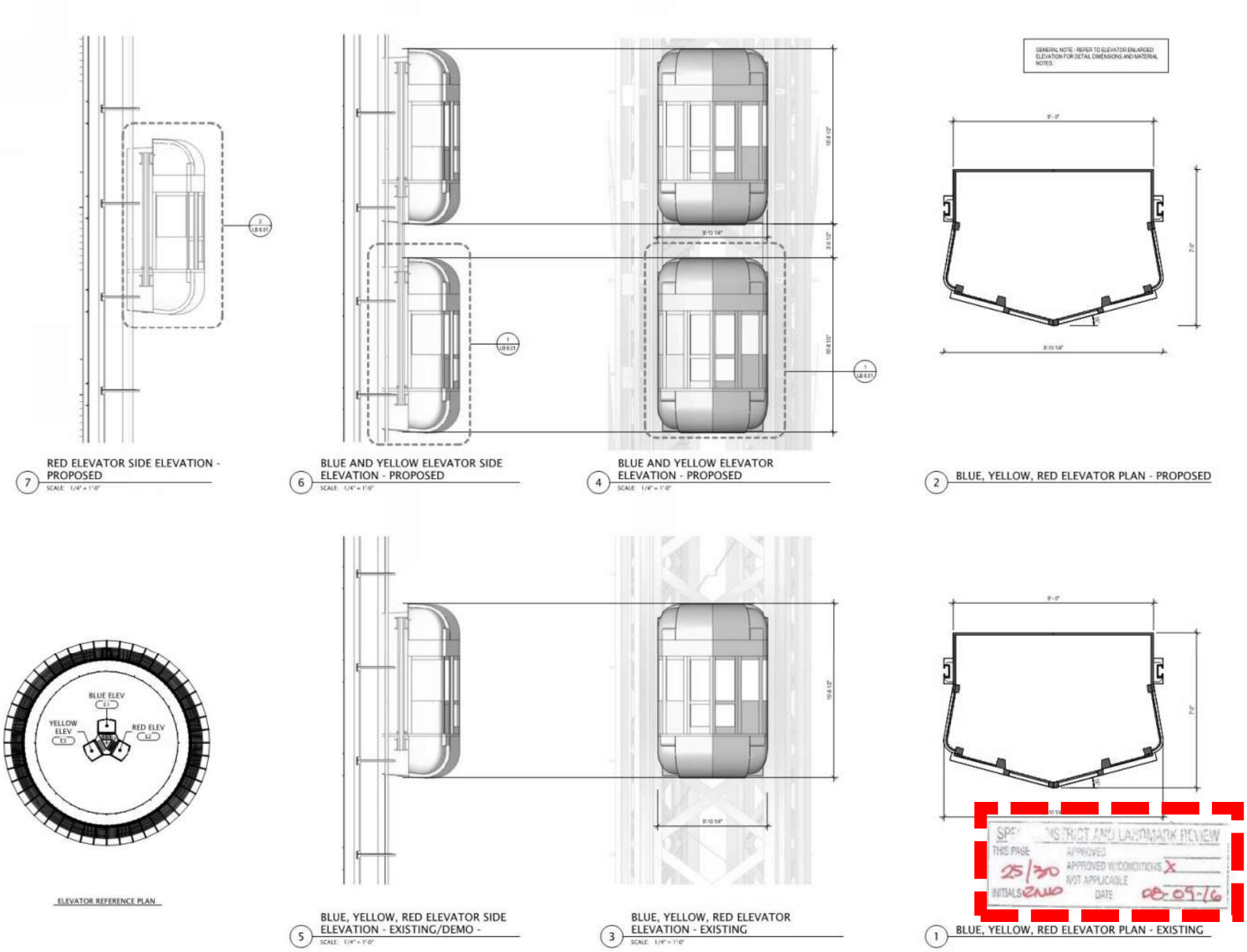


Original 1962
elevator cab
OBSERVATION WAITING TIME
0 HR 45 MIN
RESTAURANT WAITING TIME
2 HR 30 MIN

Elevator cab installed in 1992
(cab in place when building
was designated as a city
landmark in 1999)

2016 proposal (LPB approved)



2016 proposal (LPB approved)

The City of Seattle

Landmarks Preservation Board

Mailing Address: PO Box 94649, Seattle WA 98124-4649
Street Address: 600 4th Avenue, 4th Floor

CERTIFICATE OF APPROVAL **LPB 474/16**

Space Needle
219 4th Avenue North / 400 Broad Street

On August 3, 2016, the Landmarks Preservation Board voted to grant a Certificate of Approval for the proposed exterior alterations, per the applicant's submittal.

Features and Characteristics for which a Certificate of Approval is required: Exterior of the building, and the site.

Summary of proposed changes: Removal of observation level cage, and replacement with glazed safety enclosure and integral seating. Replacement of exterior wall assembly at observation level interior space, with full height glazing. Modifications to observation level exit doors, increasing quantity and distribution. Replacement of restaurant level glazing, with mullion-less system. Modifications to soffit below restaurant, replacing steel decking with fritted glass. Replacement of elevator cabs and equipment, including changing two passenger banks to double stacked cabs.

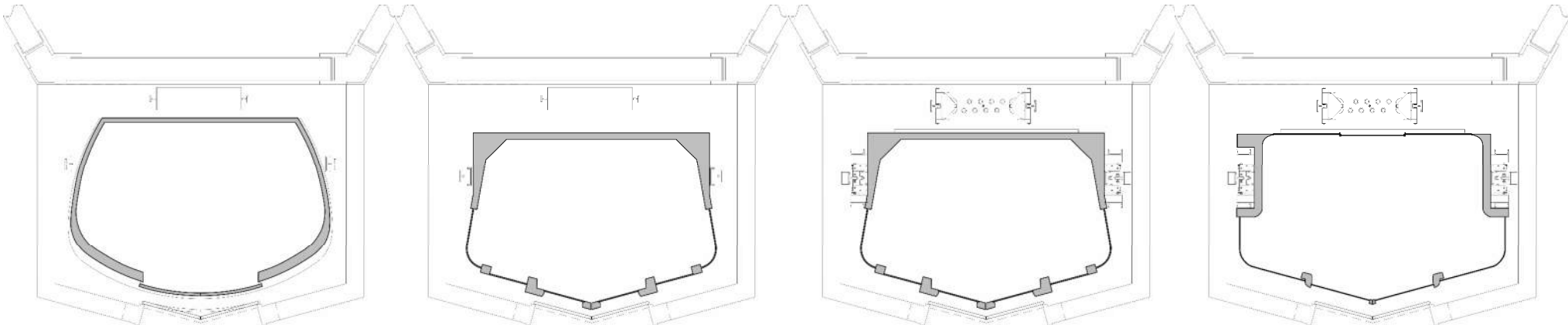
I hereby issue a Certificate of Approval for the proposed exterior alterations to the Space Needle at 219 4th Avenue North / 400 Broad Street, as per the attached submittal.

This action is based on the following:

1. The proposed exterior alterations do not adversely affect the features or characteristics specified in Ordinance No. 119428 as the proposed work is compatible with the massing, size and scale and architectural features of the landmark, as per Standard #9 of the *Secretary of Interior's Standards for Rehabilitation.*

2. The other factors in SMC 25.12.750 are not applicable to this application.

This action is pursuant to SMC 25.12 and does not waive the owner's obligations with regard to other permits and plans.

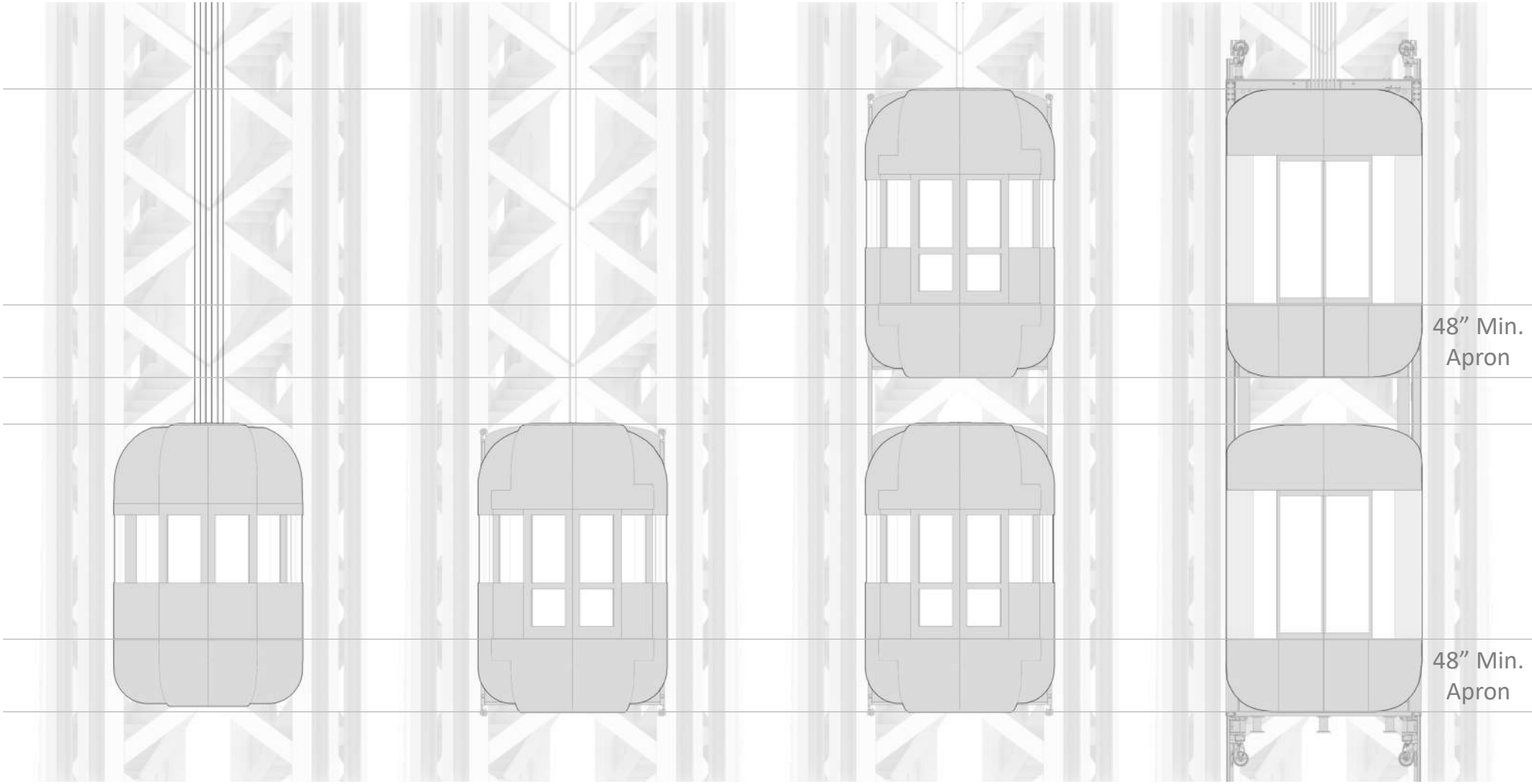


1962 original elevator cab

1992 existing elevator cab

2016 double stacked early concept cab

2022 double stacked engineered cab



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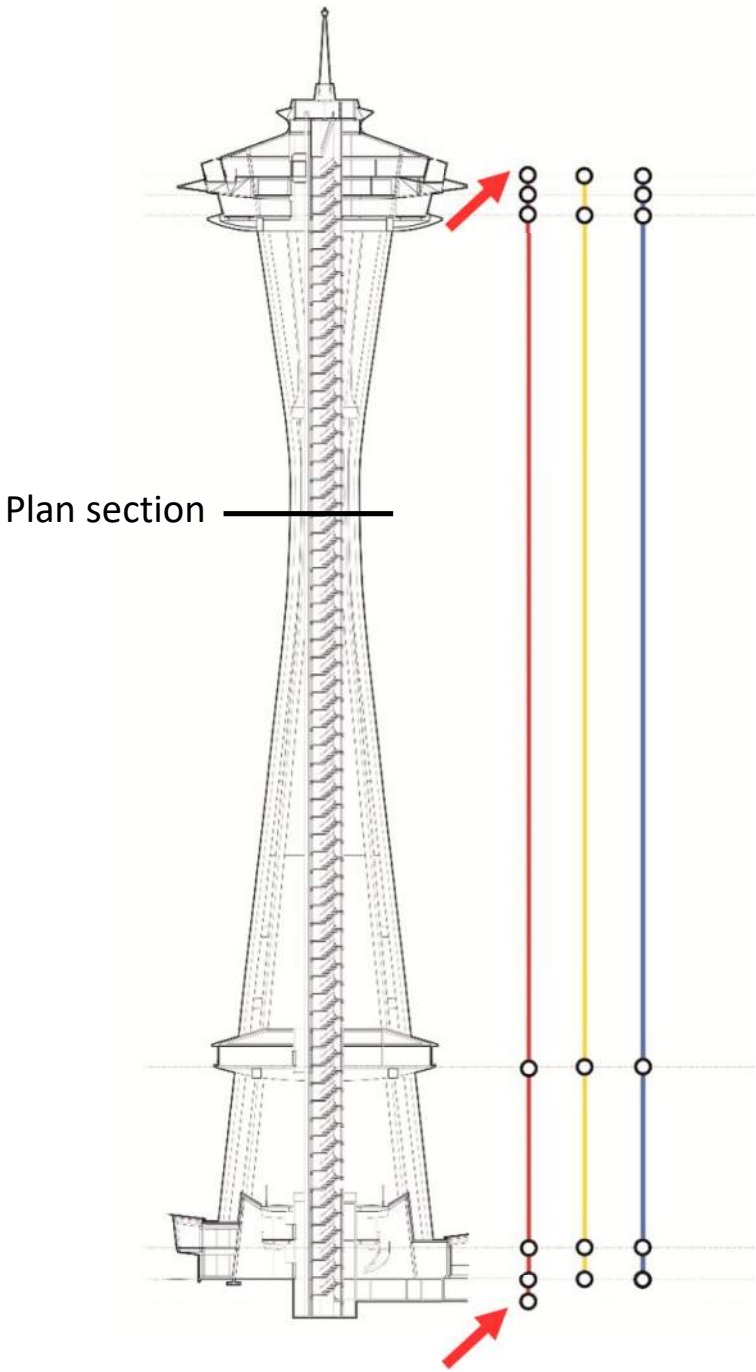
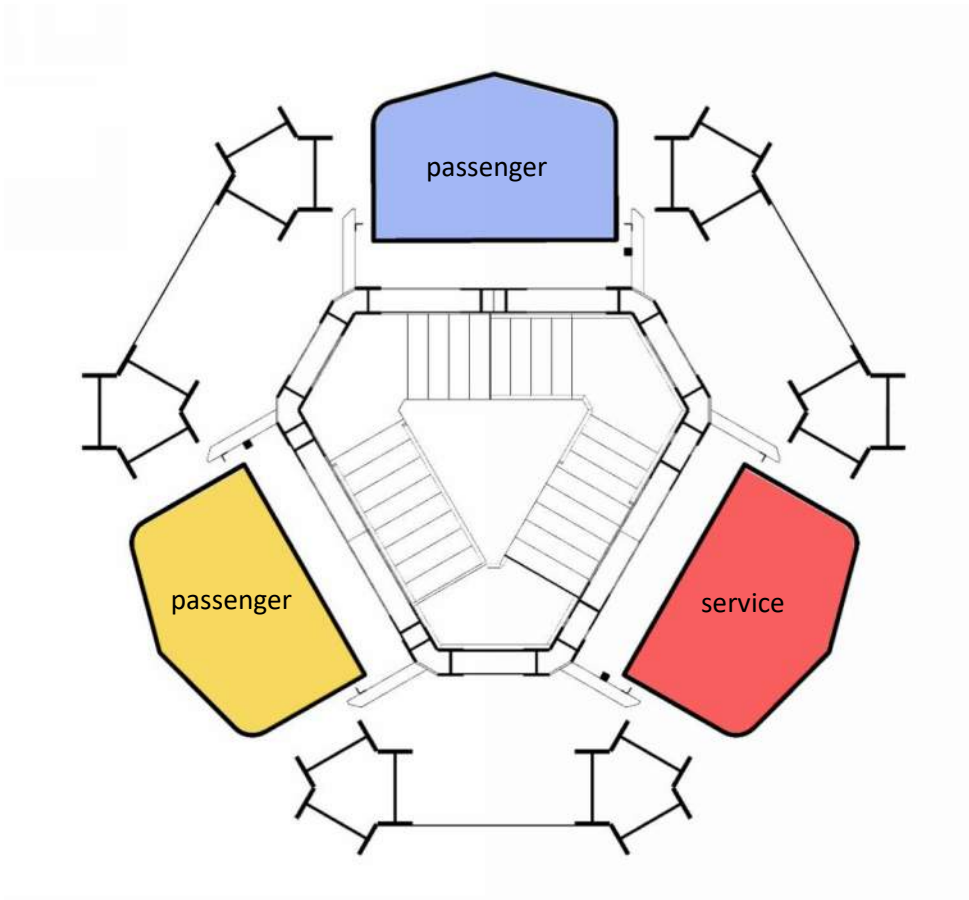
Why the red elevator is a single level





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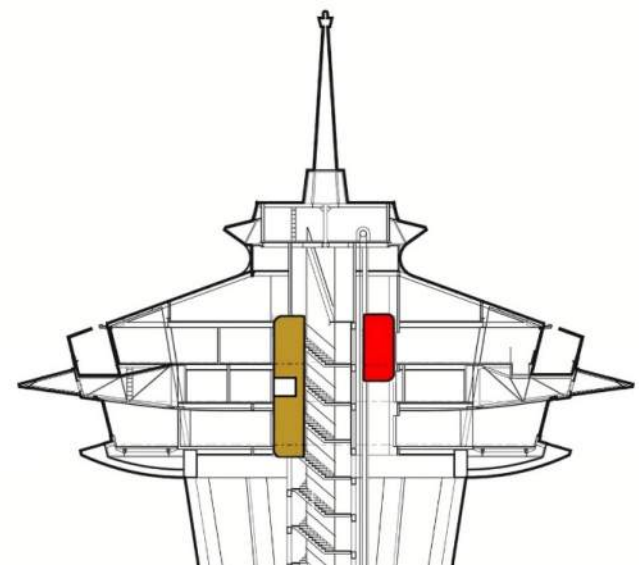
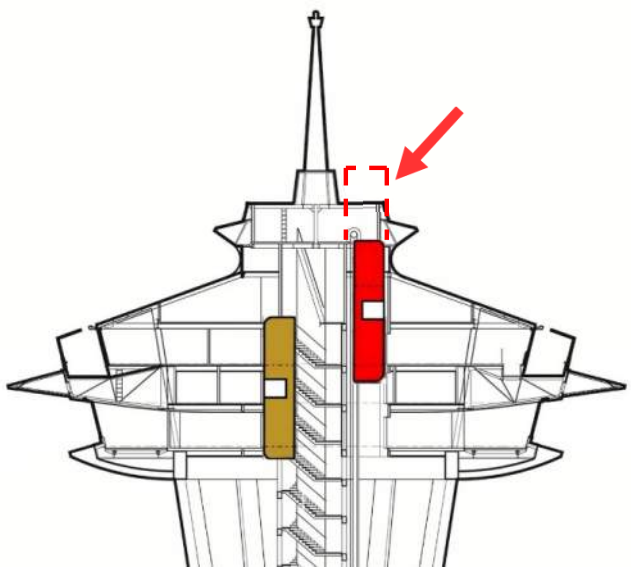
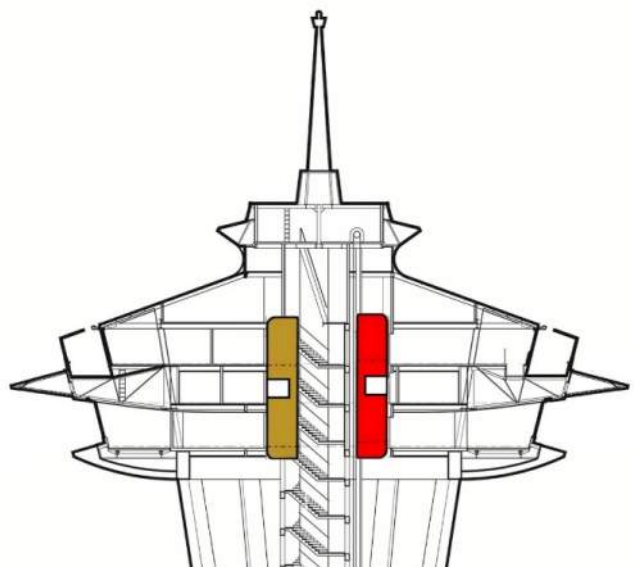
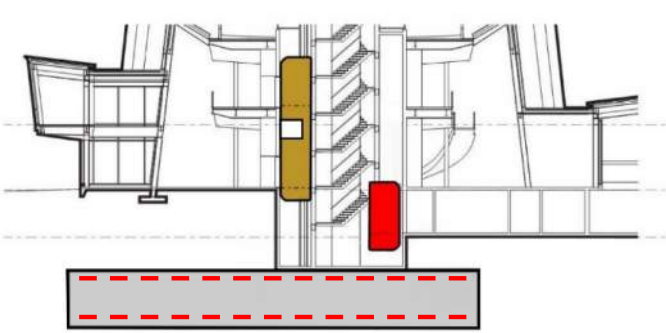
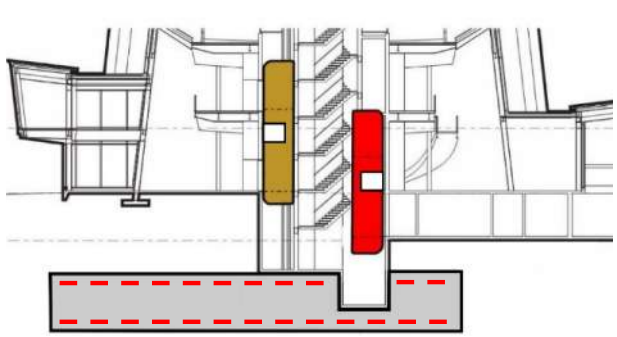
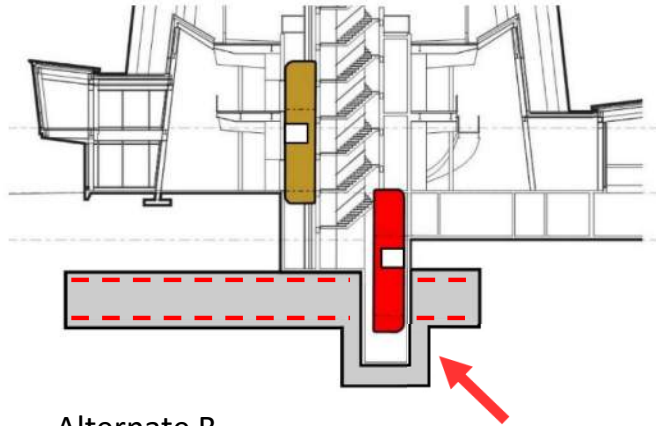










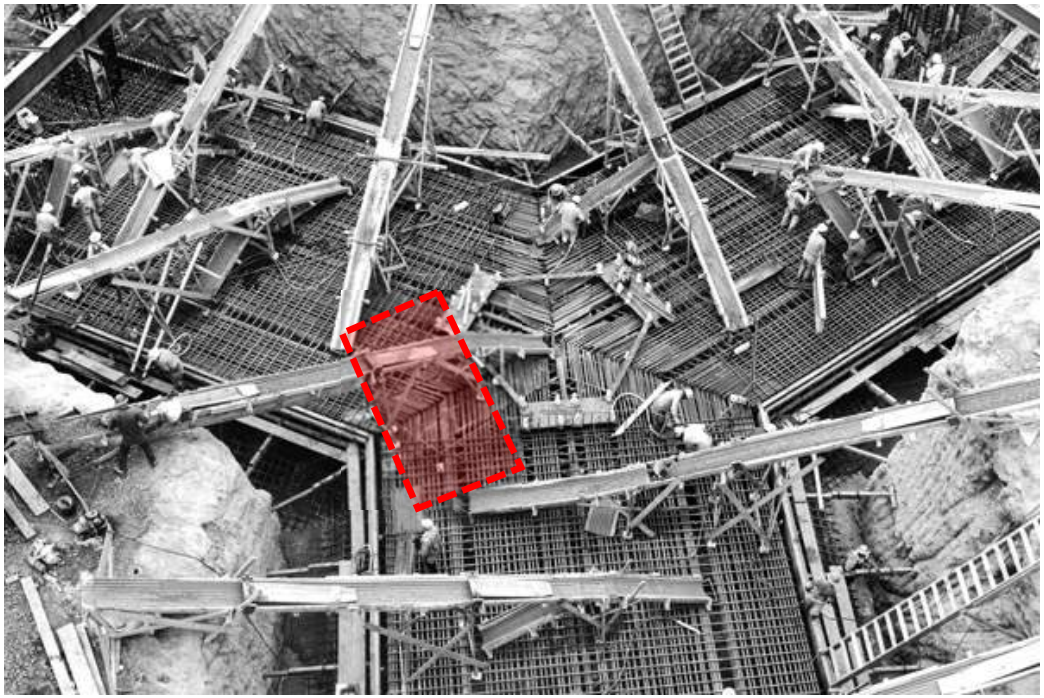


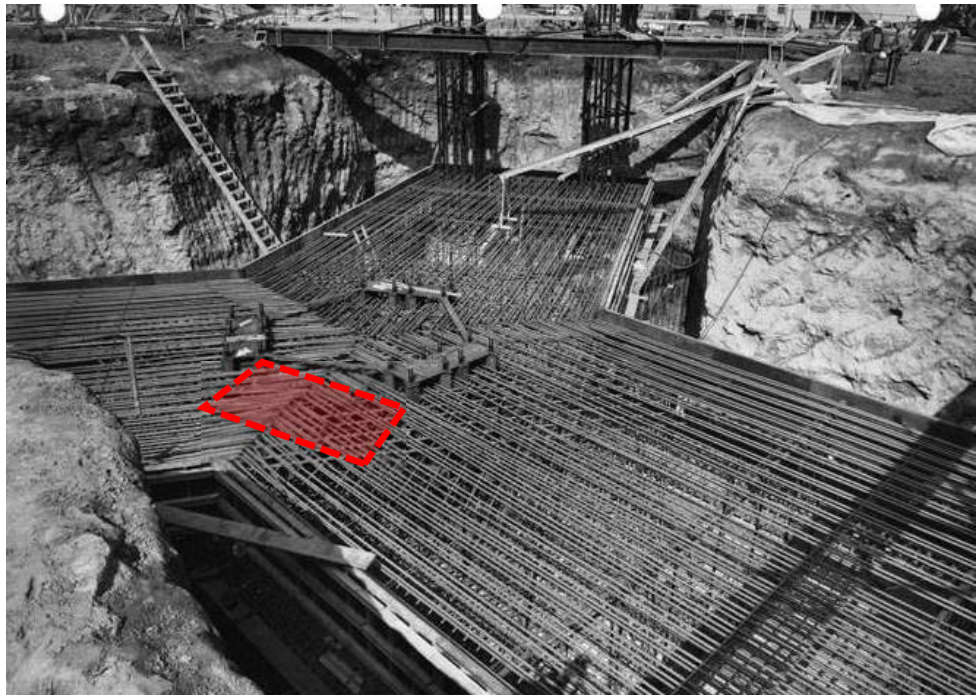
Proposed
Single cab serves all levels

Alternate A
Bottom cab serves basement but cannot serve observation (existing roof too low)

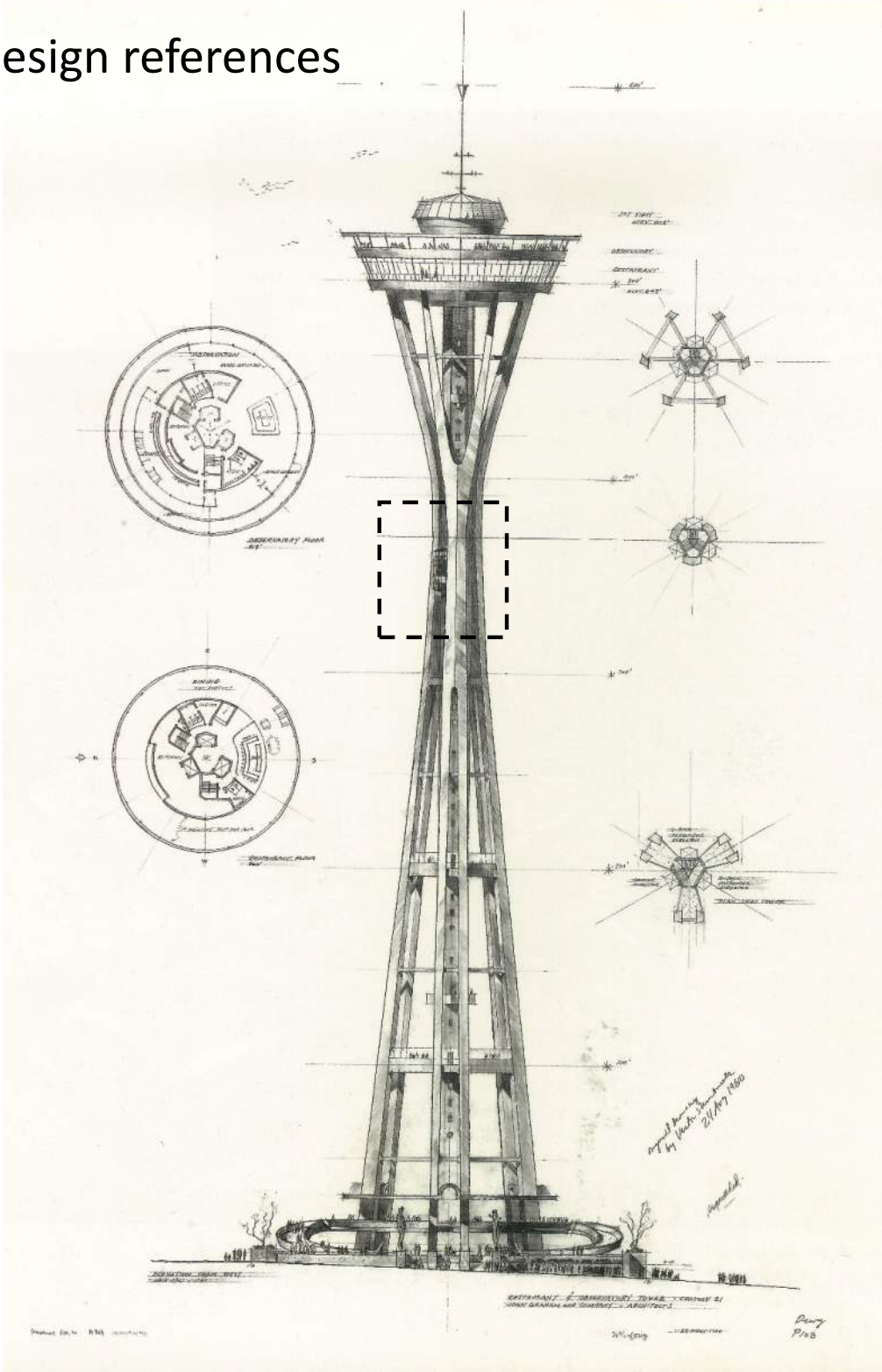
Alternate B
Top cab serves observation but cannot serve basement (existing footing cannot be fully penetrated)

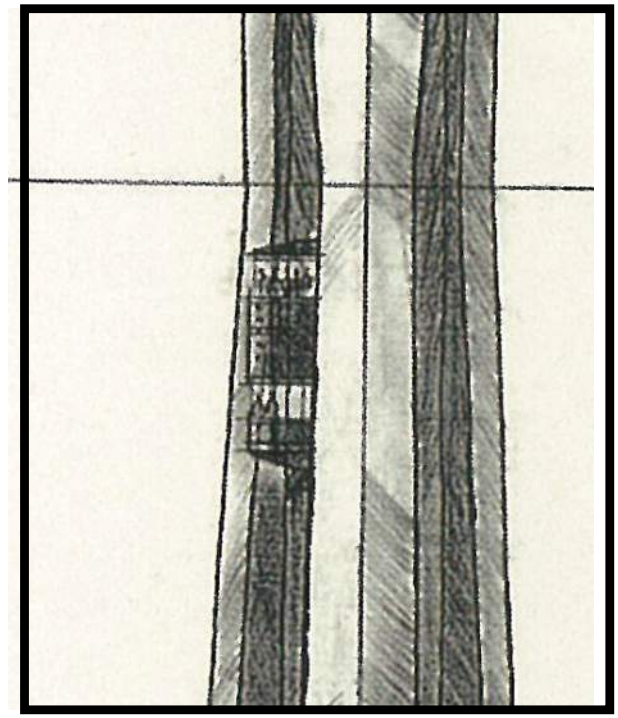
Why the red elevator is a single level





1961 design references





1961 design references

2016 proposed view from Kerry park

Updated proposed view from Kerry park

Proposal update

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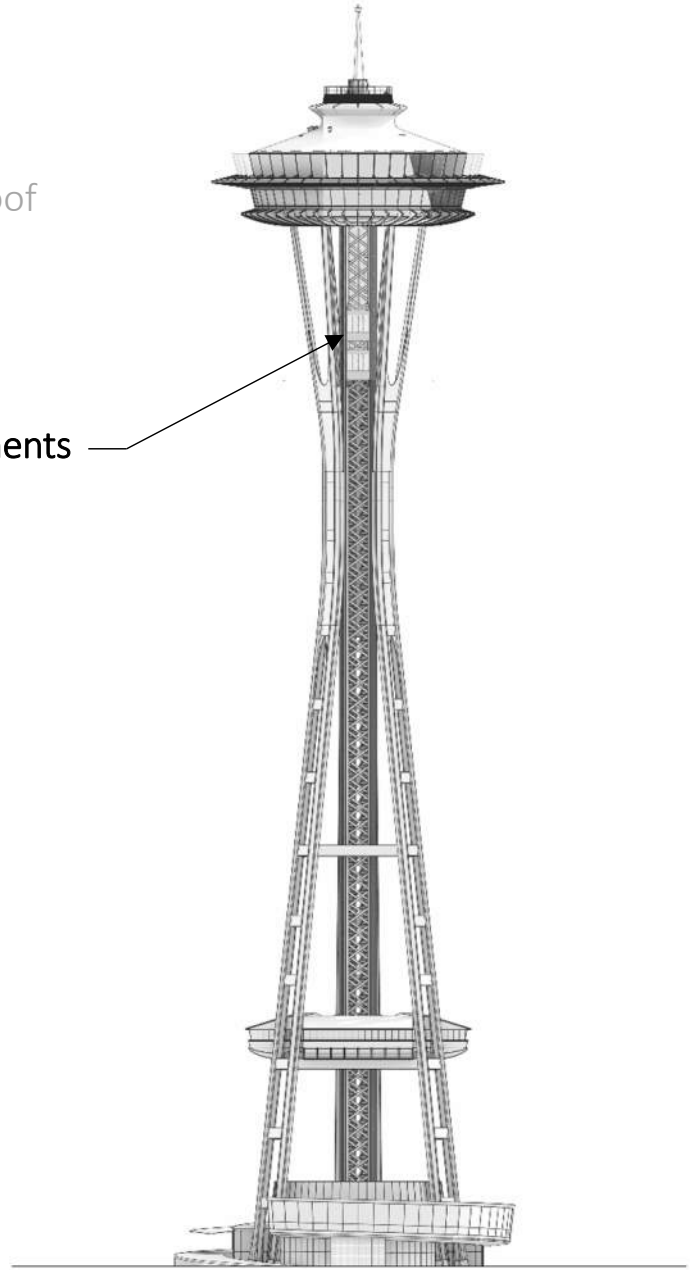
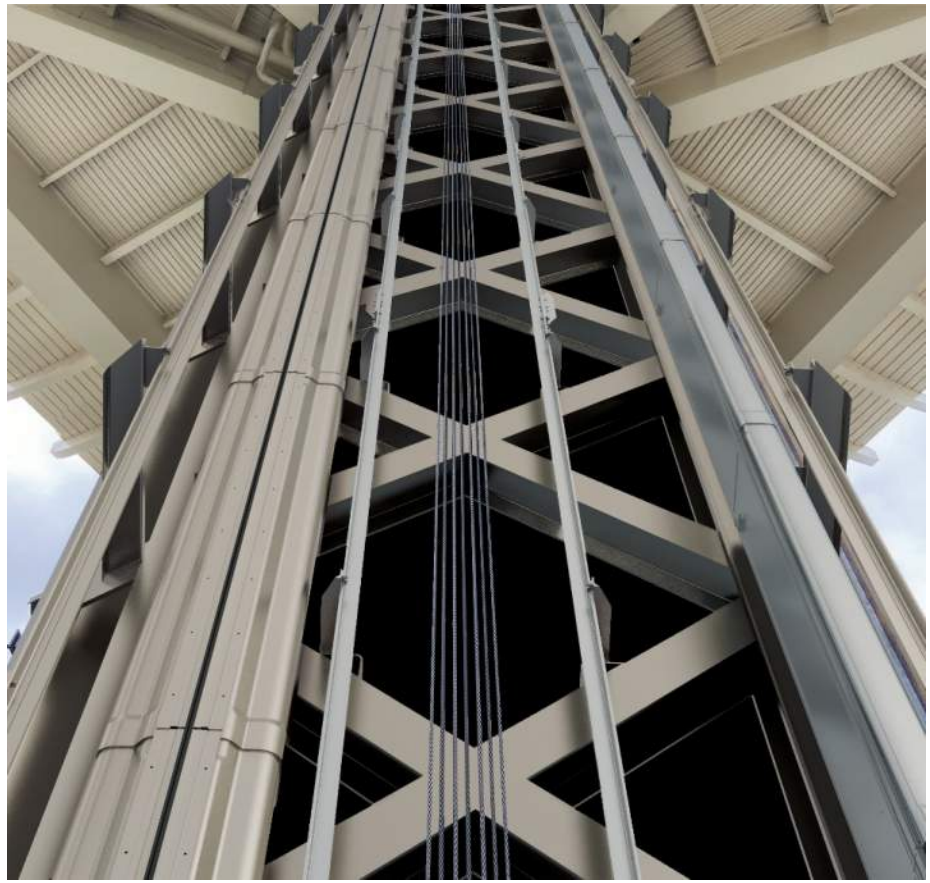


Existing Elevator Hoistway

Existing hoistway equipment



Proposed updated hoistway equipment

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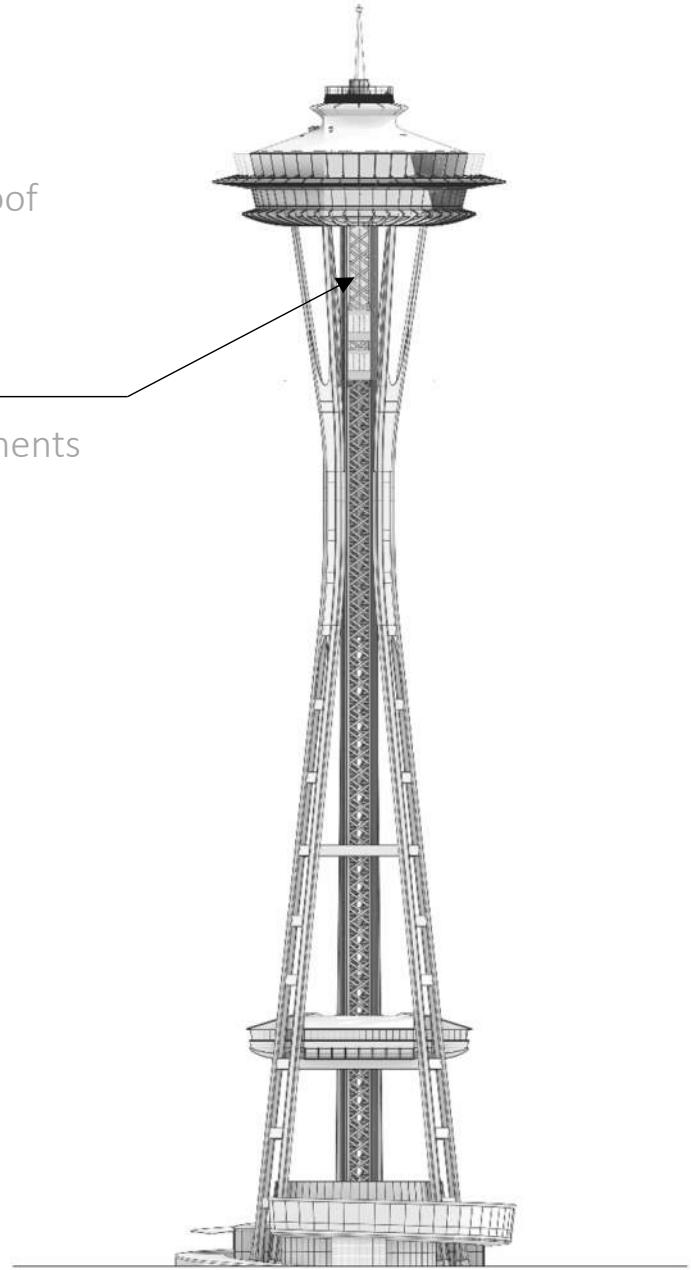

Existing stair chain link enclosure in photo above. Proposal is to match existing chain link material and paint to match in color.

2016 proposed view from the Space Needle base

Design intention for fencing enclosure is to match existing aesthetic. Refer to existing photo on this page.

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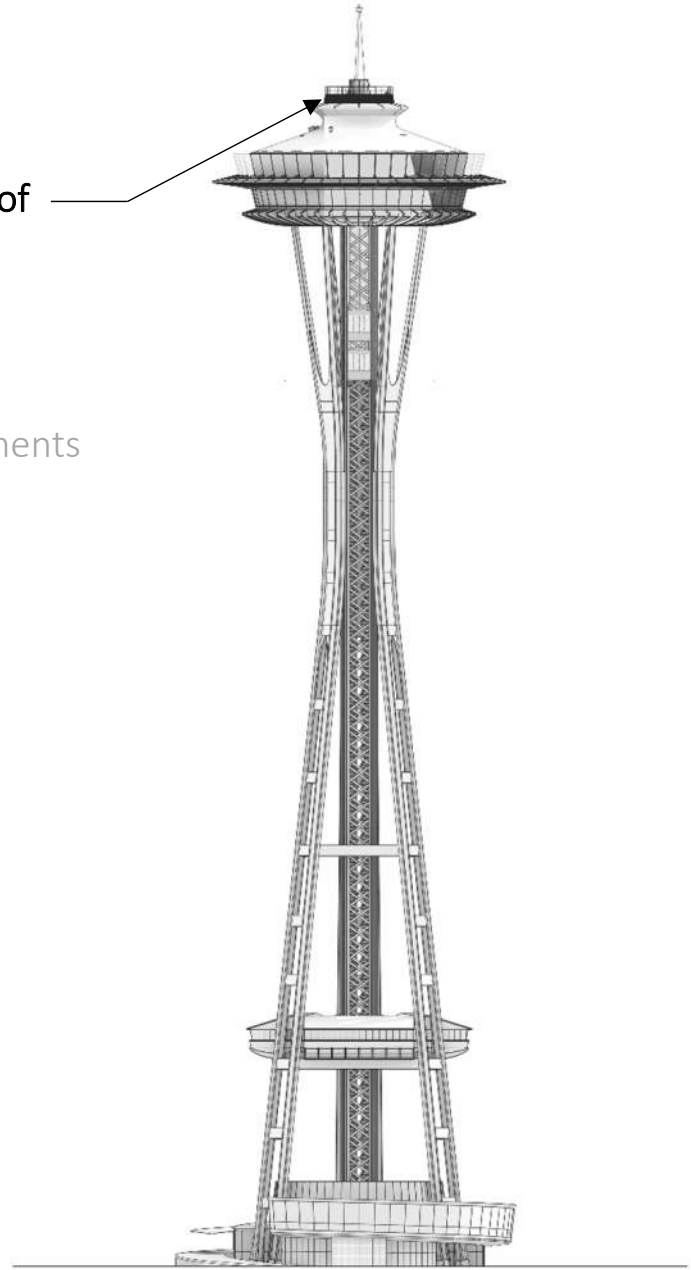
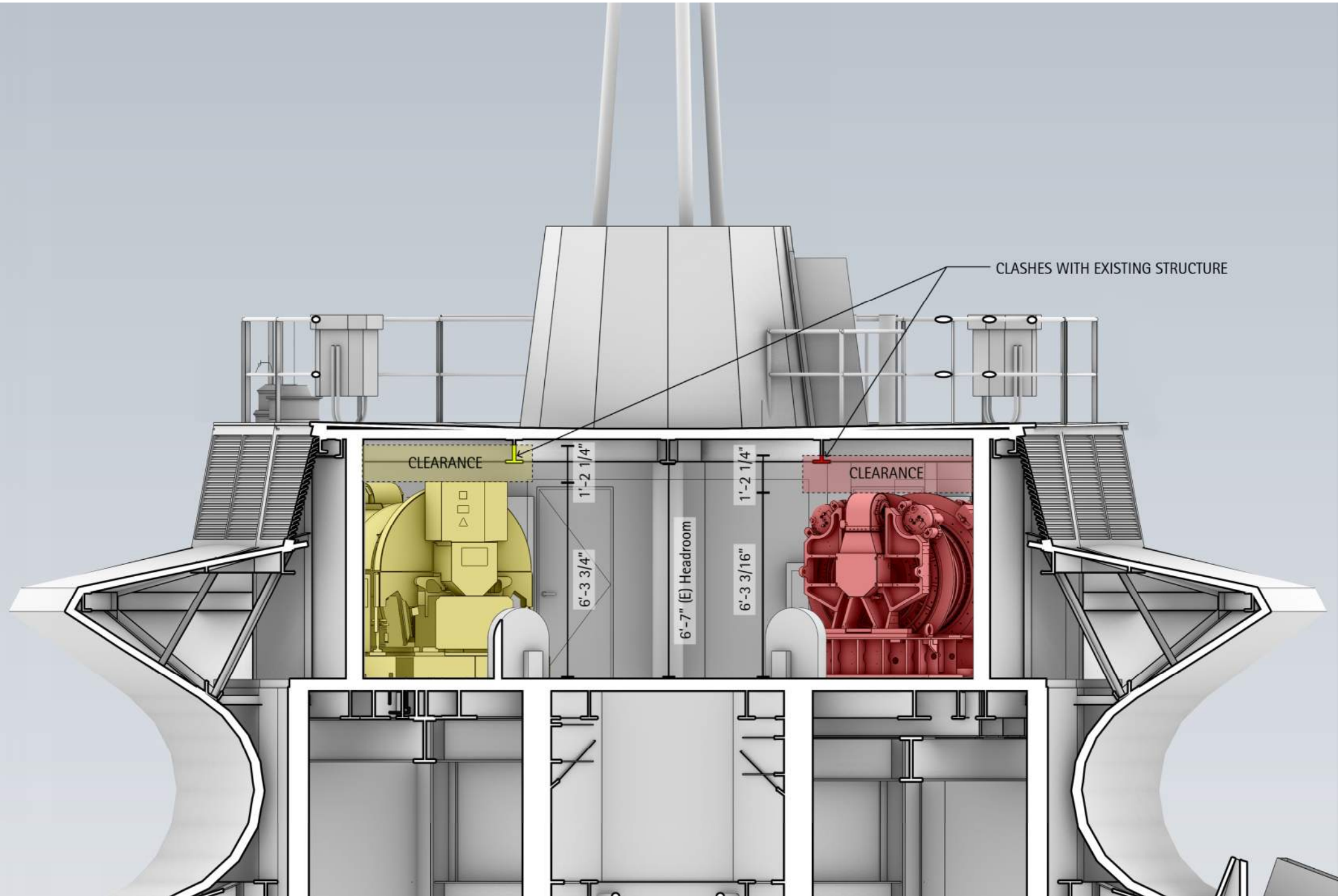
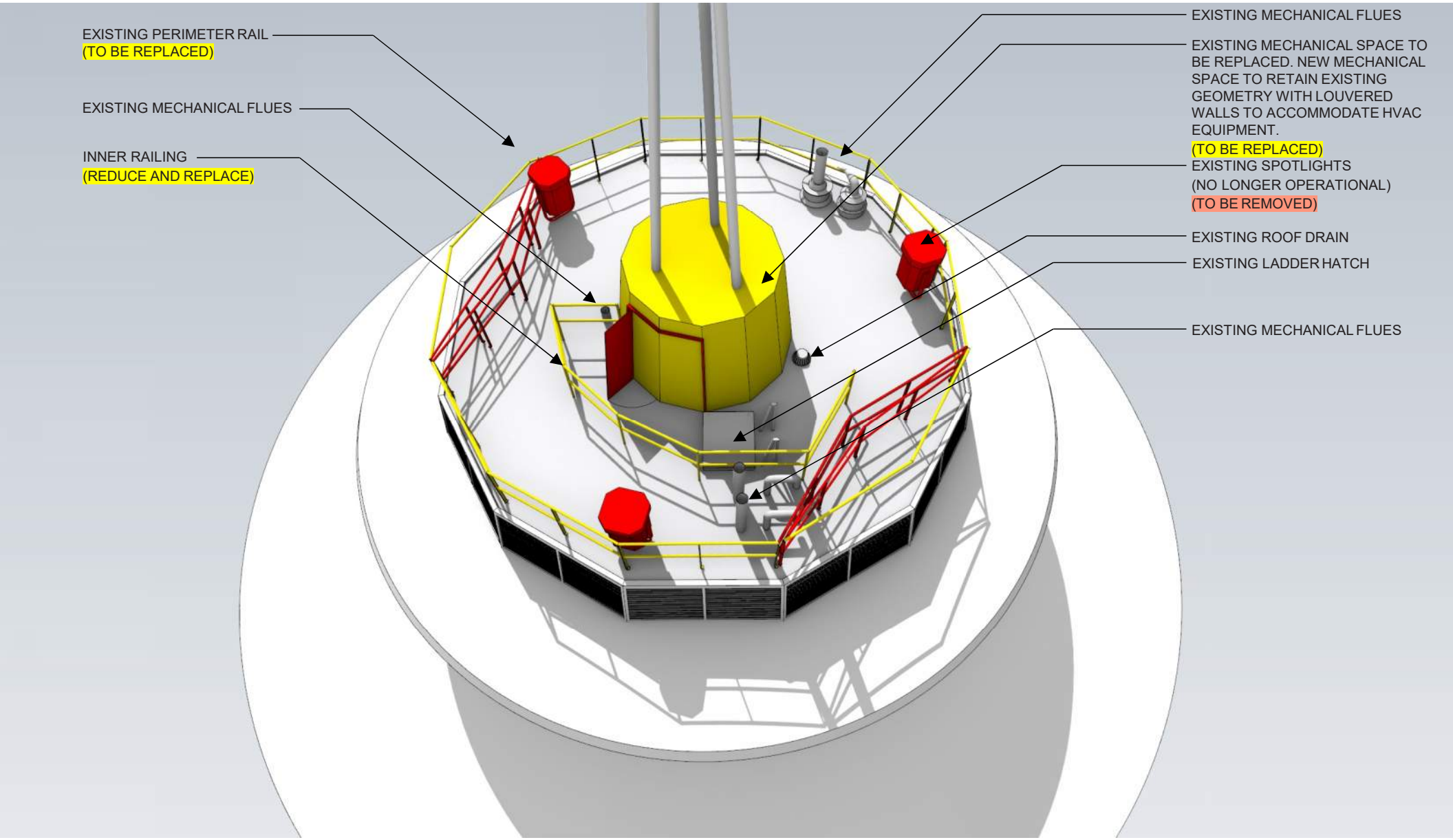


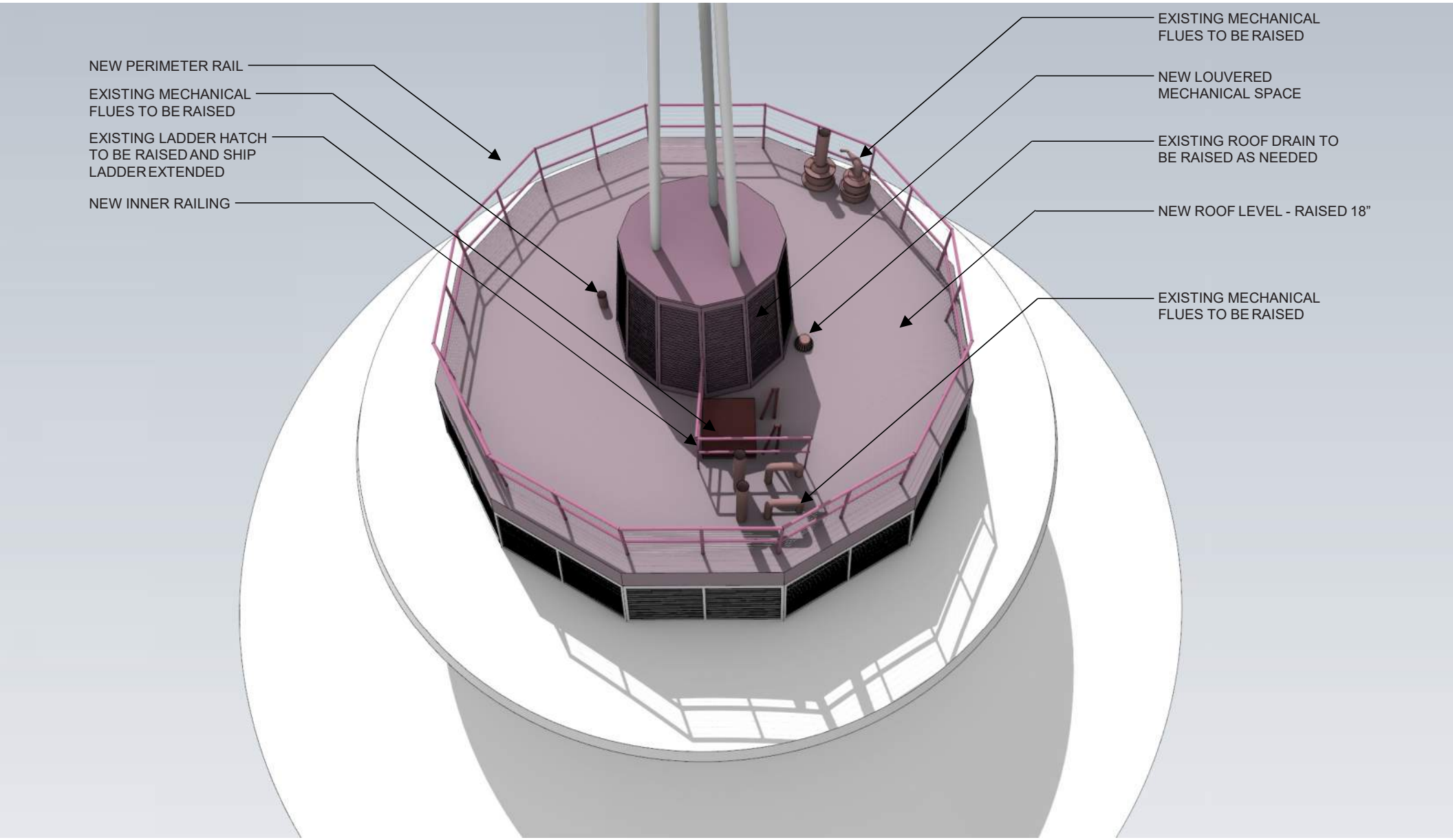
Providing clearance for the elevator machines



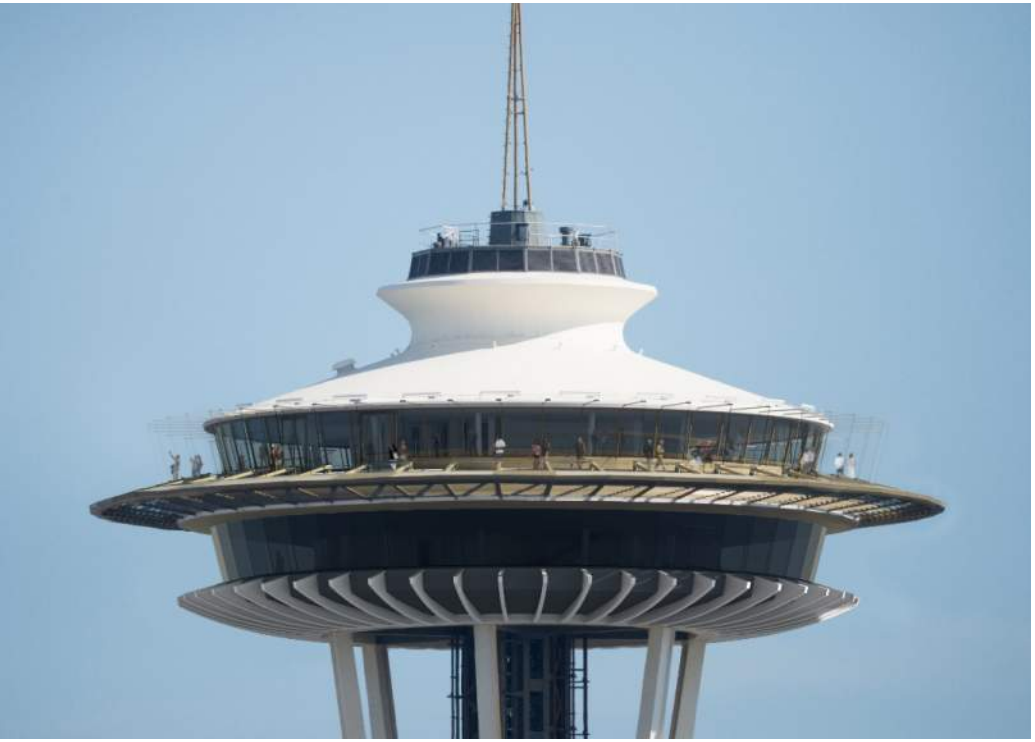
Existing roof equipment



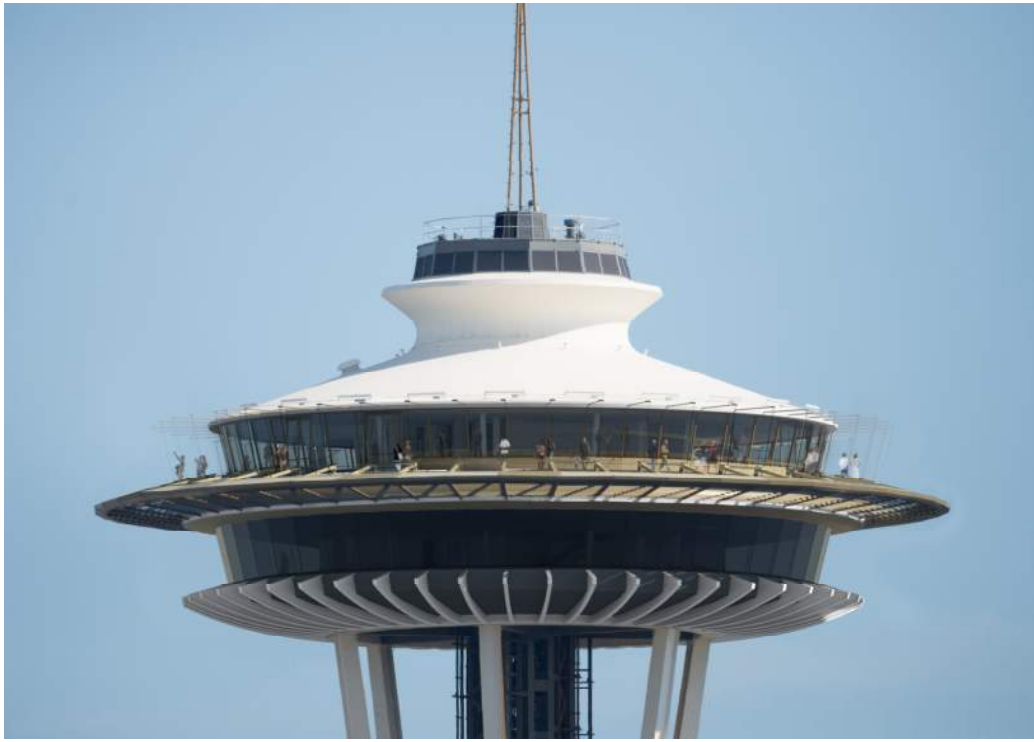
Existing roof equipment diagram



Raised roof with reduced equipment



2016 proposed view



Updated proposed view of roof

As Seen from the City

2016 proposed view from 4th Ave. N

Updated proposed view from 4th Ave. N

2016 proposed view from Lake Union Park

Updated proposed view from Lake Union Park

2016 proposed view from Broad Street

Updated proposed view from Broad Street

Existing View from Space Needle base

Updated proposed view from Space Needle base

2016 proposed view from Kerry Park

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Thank you