World Trade Center West (WTCW) Roof Replacement

Rod Jackson, Capital Project Manager

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Port of Seattle®

Action Requested

Construction Request Authorization: $1,815,000

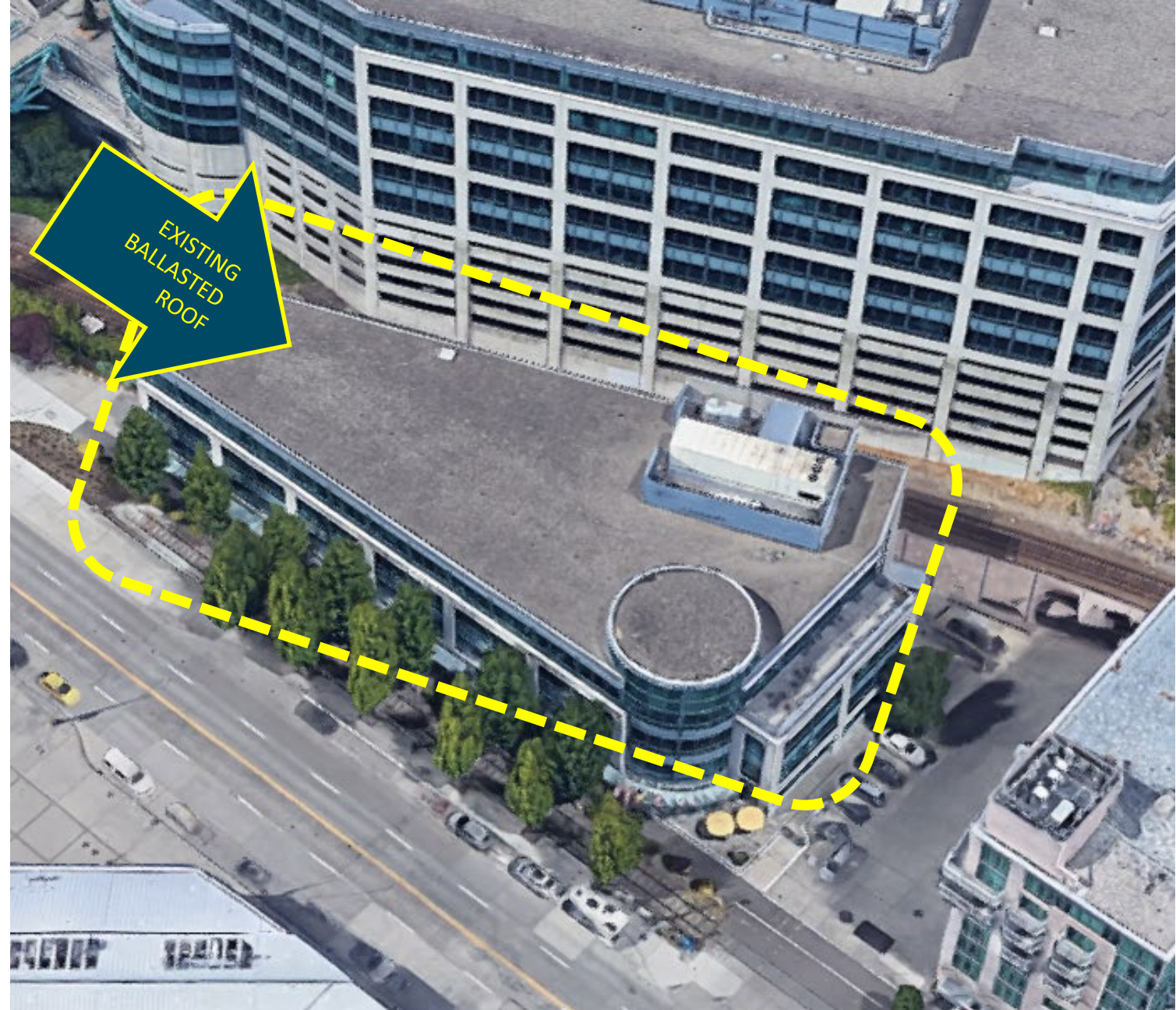Estimated Total Project Cost: $2,115,000

PIER 69

PIER 66

PROJECT LOCATION

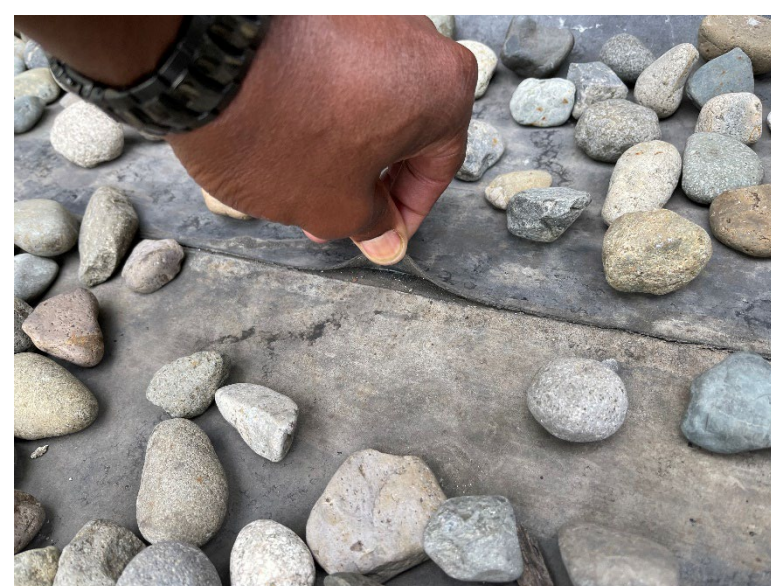World Trade Center West and Vicinity

Background

- 69,507 sf 4 story multi-tenant office building. Ballasted 17,000sf Roof system at the end of service life

- Tenants: World Trade Center Club, Café Opla, Columbia Hospitality, World Affairs Council and Others

Approach

- A Sustainable Evaluation Framework was used

- Balanced Cost with Increased Energy Efficiency

- Installation of a Green Roof Technology

- Overlay existing waterproof membrane, add insulation, and reuse of the existing Gravel Ballast

EXISTING BALLASTED ROOF

WTCW Roof Photos of Existing Gravel Ballast and Membrane

Sustainable Design Strategies Considered

- **In-kind System**
  - Inspect insulation and replace existing membrane
  - Overlay with new membrane

- **Green Roof**
  - Overlay with new membrane
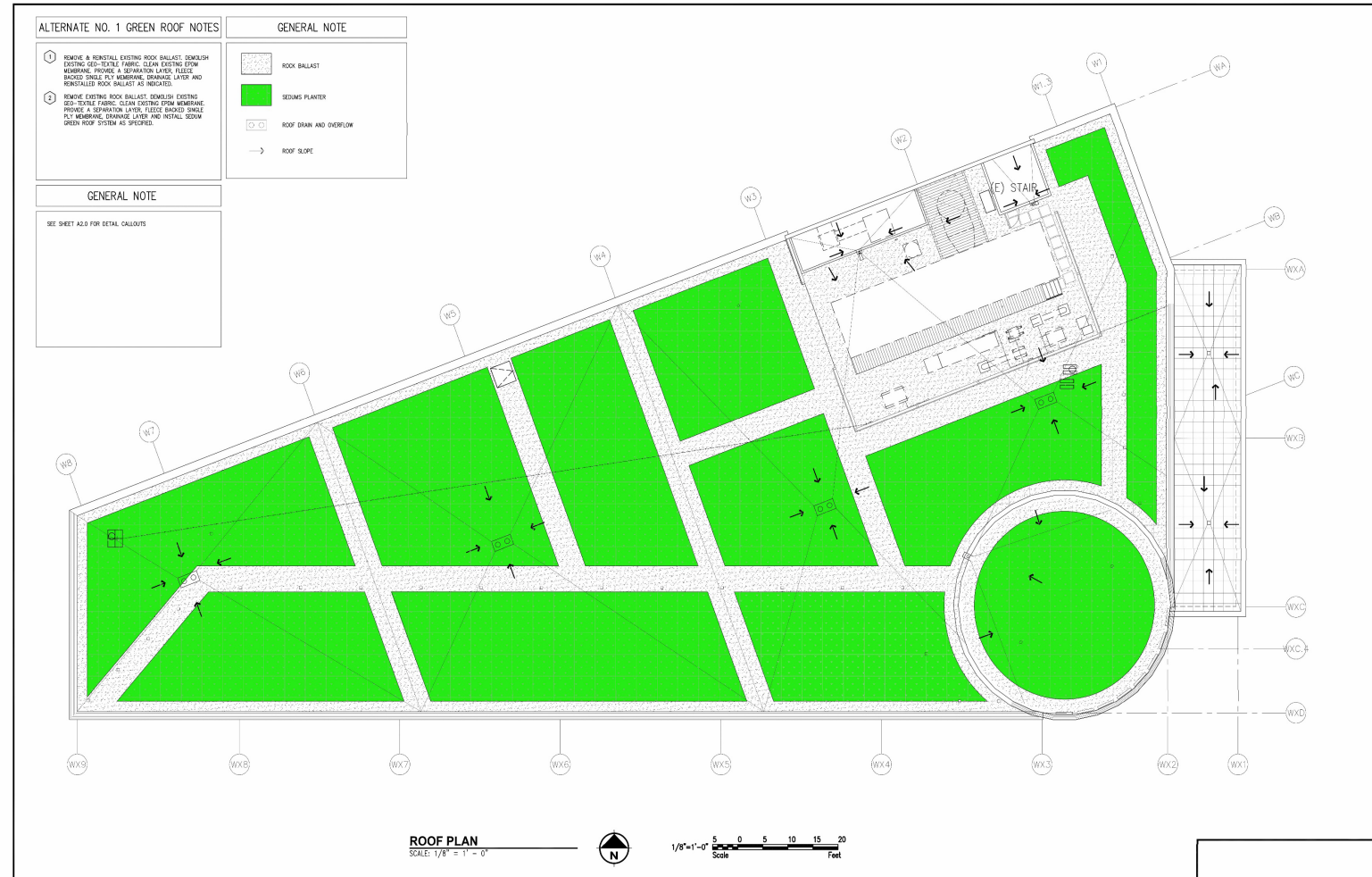 - Install green roof technology
  - PREFERRED ALTERNATIVE

- **Solar**
  - Overlay with new membrane
  - Install solar
  - NOT CARRIED FORWARD
    - Glare
    - Poor Positioning
    - Roof Structural Capacity Constraints

Green Roof Design

Benefits

- Innovative / Pilot Project

- Heat Island Reduction

- Carbon Sequestration

- Stormwater Retention

- Runoff Temperature Reduction

- Pollinator Habitat
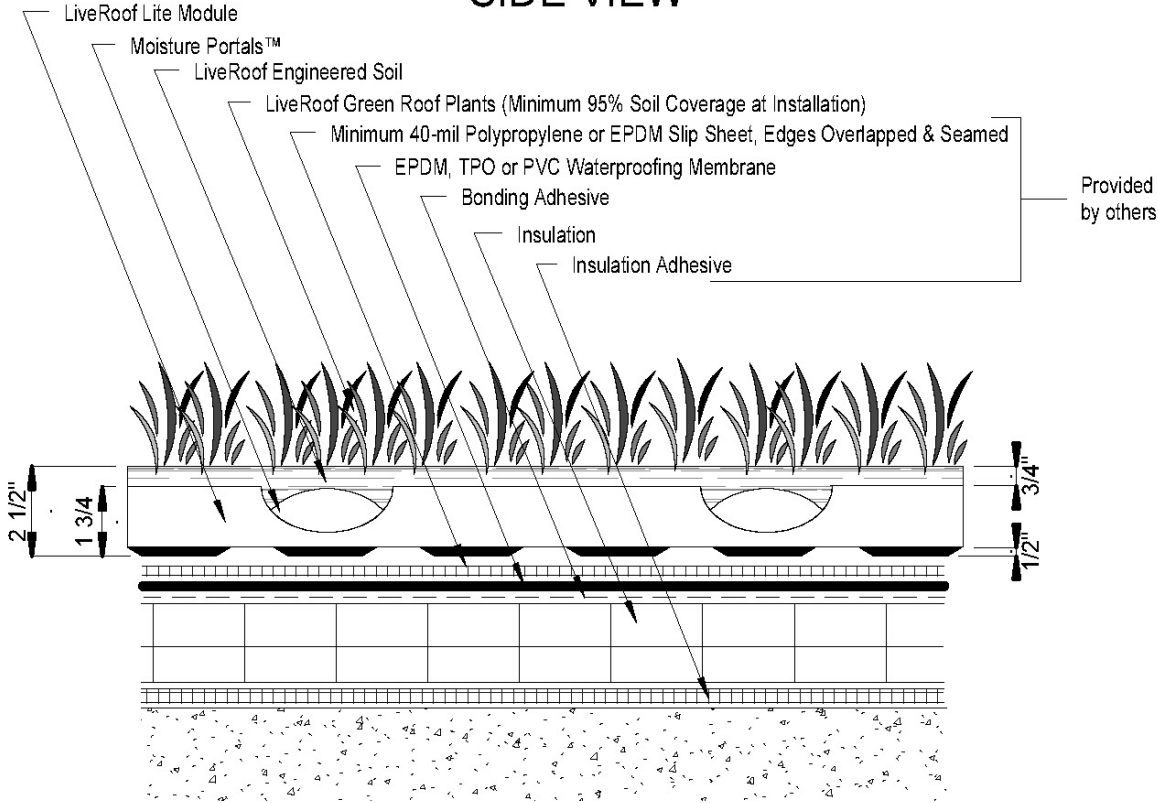
- Rooftop Insulation

- Aesthetics

WTCW Roof Top Schematic of Gravel Ballast with a Partial Green Roof Technology

Green Roof Details

SIDE VIEW

LiveRoof Lite Module
Moisture Portals™
LiveRoof Engineered Soil
LiveRoof Green Roof Plants (Minimum 95% Soil Coverage at Installation)
Minimum 40-mil Polypropylene or EPDM Slip Sheet, Edges Overlapped & Seamed
EPDM, TPO or PVC Waterproofing Membrane
Bonding Adhesive
Insulation
Insulation Adhesive

Provided by others

2 1/2"
1 3/4"
3/4"
1/2"

WTCW Roof Top Schematic of Gravel Ballast with a Partial Green Roof Technology

Contracting Method and Schedule

- December 2021: Design Authorization

- December 2021 ~ March 2022: Design

- March 22, 2022: Commission Authorization for Construction Funding

- Q2 2022 : Advertise, Award, and Execute Construction Contract

- Q3/Q4 2022 : Construction

- Q1/2023: In-use date

Questions?