

FIRE STATION 31

SEATTLE DESIGN COMMISSION
SCHEMATIC DESIGN PHASE REVIEW

AGENDA

PROJECT OVERVIEW

NEIGHBORHOOD & SITE CONTEXT

COMMUNITY OPEN HOUSE & NEIGHBOR OUTREACH

STAKEHOLDER ENGAGEMENT

AGENCY UPDATES

ARTIST SELECTION

SUSTAINABILITY & MATERIALS

SITE DESIGN

BUILDING DESIGN

DESIGN COMMISSION COMMENTS

CONCEPT PHASE DESIGN COMMISSION COMMENT		SECTION ADDRESSED
1.	Create a facility that is as transparent and welcoming as possible.	BUILDING DESIGN
2.	Activate the southern edge of the site and create a visual bridge from Meridian eastward.	SITE DESIGN
3.	Further explore buffering solutions to residential properties to the north, using grade, vegetation and building design.	SITE DESIGN & BUILDING DESIGN
4.	Solicit input from the neighbors closest to the site.	OPEN HOUSE & NEIGHBOR OUTREACH
5.	Continue to work with fire fighters in the design process, and evaluate scenarios with them.	STAKEHOLDER ENGAGEMENT
6.	Continue to design for a spectrum of users from various races, ages, and genders.	STAKEHOLDER ENGAGEMENT
7.	Continue to provide opportunities for the public to learn about and provide input both in person and virtually.	OPEN HOUSE & NEIGHBOR OUTREACH
8.	Develop a site story that encompasses the trees, slopes and buffers, to aid decision makers on the waivers from development standards.	SITE DESIGN
9.	Consider using the trees that are being removed as material for the building.	BUILDING DESIGN
10.	Continue the material investigation and initiative for less-toxic interiors.	SUSTAINABILITY & MATERIALS

PROJECT OVERVIEW

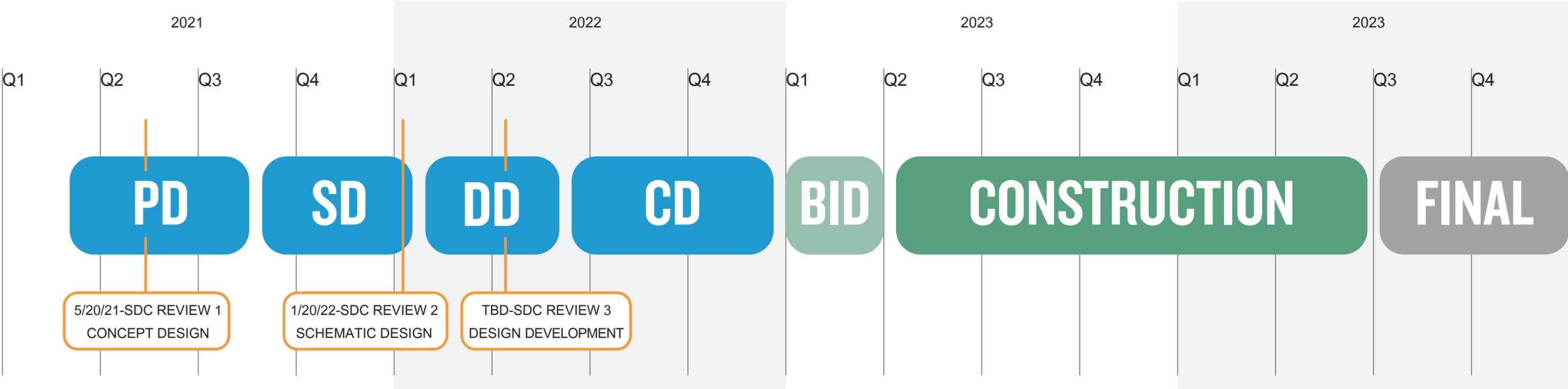


PROJECT INFO

- Northgate Neighborhood
- North 113th Street & Meridian Ave North
- 30,000 SF Site Area
- 22,700 SF Proposed Building Area
- (13) Regular Crew
- (3) Mobile Integrated Health Unit Staff
- (4) Apparatus Bays
- LEED v4 Gold Certification



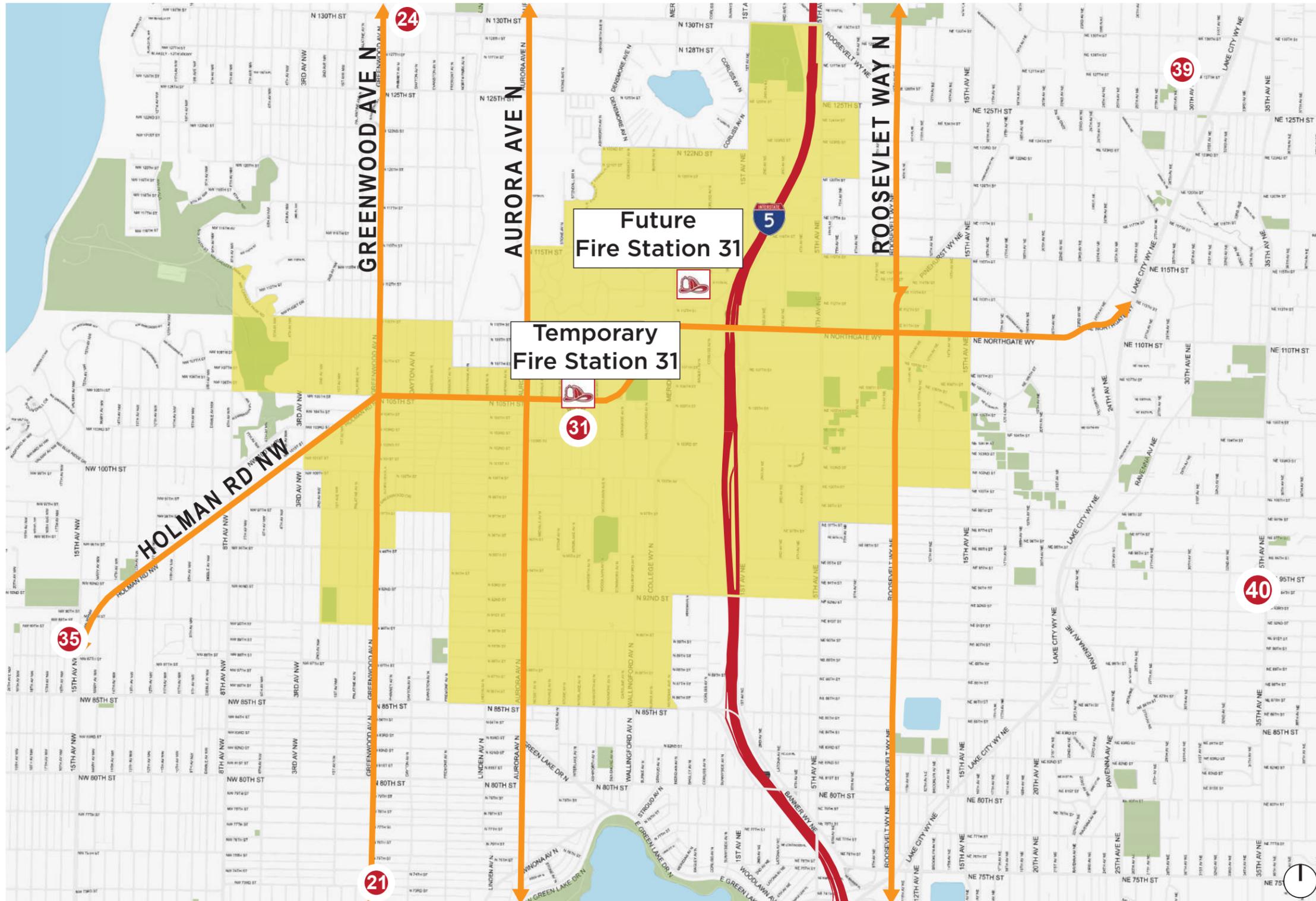
SCHEDULE



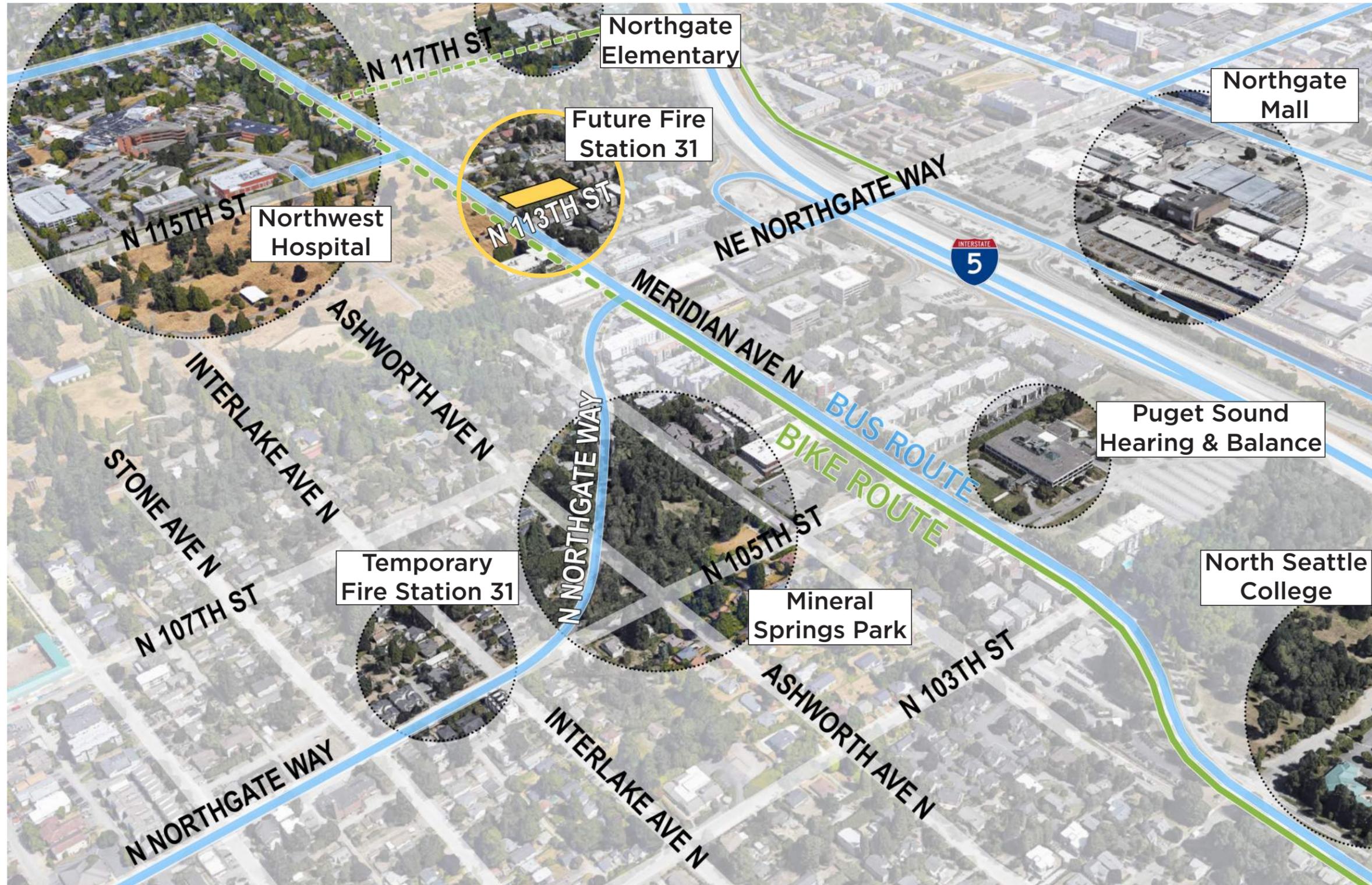
NEIGHBORHOOD & SITE CONTEXT



FIRE STATION 31 RESPONSE AREA



NORTHGATE NEIGHBORHOOD



NEIGHBORHOOD PHOTOS

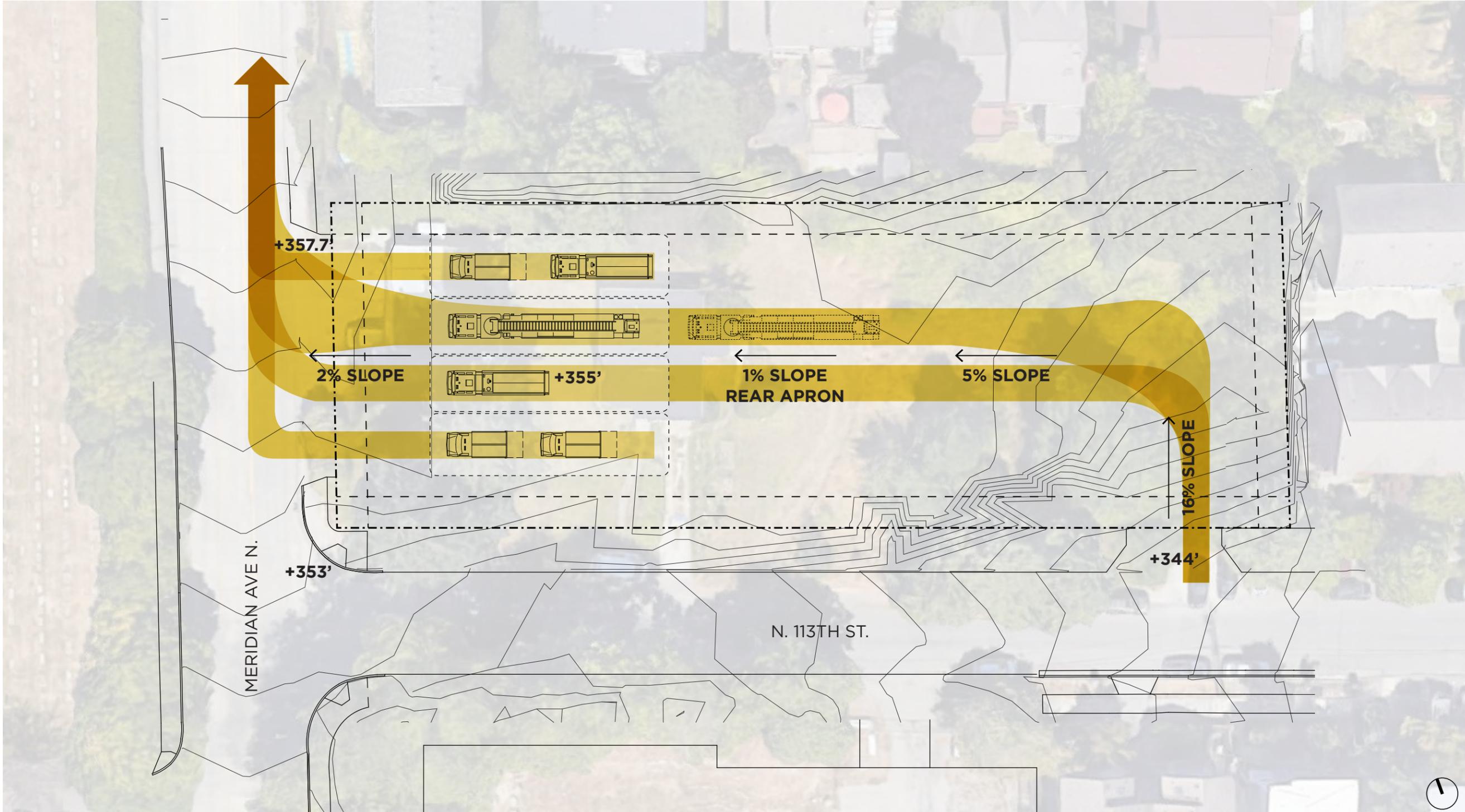


VICINITY MAP



PROPERTY LINE 
PROPOSED BUILDING 

SITE CONSTRAINTS



OPEN HOUSE & NEIGHBOR OUTREACH



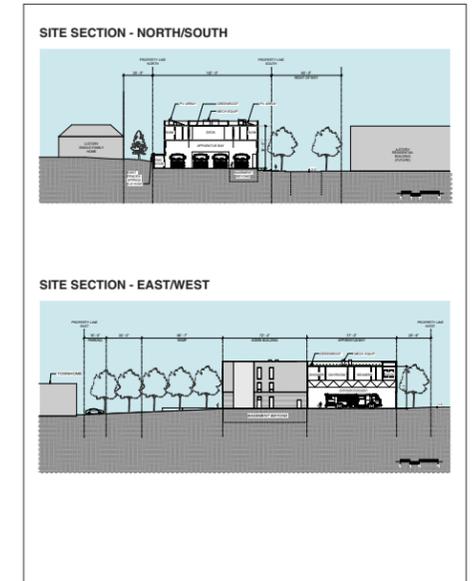
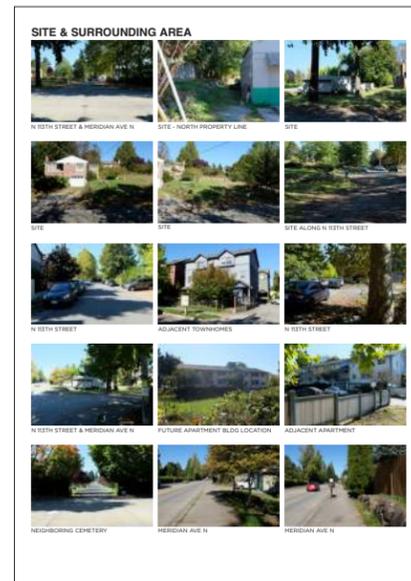
COMMUNITY OPEN HOUSE

FORMAT

- Virtual Project Update website only due to Covid-19 pandemic and Omicron variant
- Approximately 10 min recorded video presentation with translation services available
- Graphic boards and other information available on website
- Increases accessibility over in-person format at specific time and place

VIDEO PRESENTATION TOPICS

- Introduction and Timeline
- Neighborhood and Context
- Design Goals
- Site Design
- Building Design



NEIGHBOR OUTREACH

- Three most proximal neighbors to the North
- Discussed potential tree impacts and restoration
- Discussed construction impacts



STAKEHOLDER ENGAGEMENT



STAKEHOLDER ENGAGEMENT

SD Fire Workshop 1 - 10/11/2021

- Floor Plan Options and Massing
- Site Grading
- Fire Pole Transfer Concept

SD Fire Workshop 2 - 10/21/2021

- Apparatus Maneuvering Analysis
- Landscape Design
- Greenfactor Strategies

SD Fire Workshop 3 - 11/17/2021

- SDCI and SDOT Updates
- Structural and Circulation Plan Updates
- Mechanical and Plumbing Elements
- Exterior Building Design Updates

SD Fire Workshop 4 - 12/8/2021

- Heated Driveway
- Lighting Design Kickoff
- Beanery Layout Options
- Signalization Options

SD Fire Workshop 5 - 1/12/2021

- Floor Plan Updates
- Exterior Building Design Updates
- Schedule Updates
- Owner Coordination Items

Facility Operations Workshop - 11/17/2021

- Sustainable Systems and Design Elements
- Stormwater Design Strategy
- Rainwater Harvesting System Discussion
- Mechanical and Plumbing Design Strategies
- Controls Design Kickoff and Parameters

Seattle IT Workshop - 11/18/2021

- Bringing City Fiber to Site
- MDF Room Requirements
- Access Controls Planning
- Alerting System Planning
- Audio-Visual Needs
- Fire Alarm Planning

AGENCY UPDATES



Seattle



AGENCY MEETINGS

SDOT 30% Street Improvement Permit Corrections Review - 11/10/2021

- Sidewalk and planting strip configuration along N 113th Street
- New established roadway width at N 113th Street
- Driveways and trash enclosure access
- Process for signal planning and design

SDCI Land Use Pre-Submittal Conference - 11/10/2021

- Project overview and schedule
- Design Commission coordination with MUP Process (Valerie Kinast)
- Seattle City Light coordination and service application (Ray Ramos)
- SDOT coordination and 30% Street Improvement Permit submittal (Jackson Keenan Koch)
- City Council Type V process coordination (Keetil Freeman)

SCL Electrical Service Application Processing - 1/5/2022

- Application for service submitted on 12/20/2021
- On-site Pre-Application meeting with engineering scheduled for 1/21/2022

LAND USE CODE SUMMARY

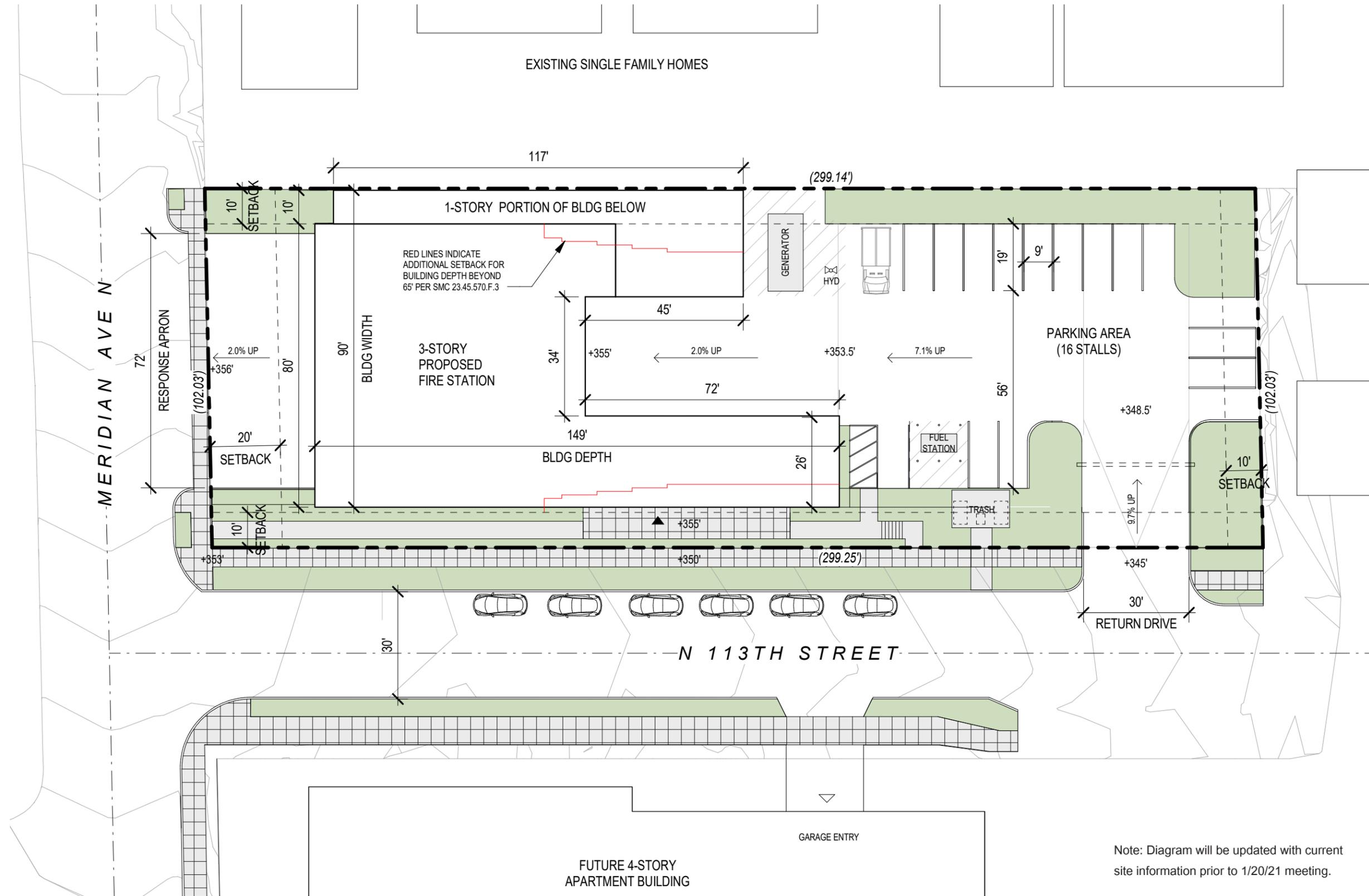
SMC 23.45.570 Requirements

- Per SMC 23.51A.004, the primary section governing development standards for this project is SMC 23.45.570. Project is anticipated to **COMPLY** with all requirements for structure height (C), structure width (D), structure depth (E), front (F.1) and rear (F.2) setbacks, setbacks for specific items (F.4), parking (G), odors (H), and light and glare (I).

Anticipated Departures Needed

- SMC 23.45.570.F.3 - Side Setbacks at North property line and South property line
- SMC 23.54.030.F.2.b.4 - Curb Cut Widths
- SMC 25.11.070 - Tree Protection

CURB CUTS AND SIDE SETBACKS



Note: Diagram will be updated with current site information prior to 1/20/21 meeting.

ARBORIST REPORTS

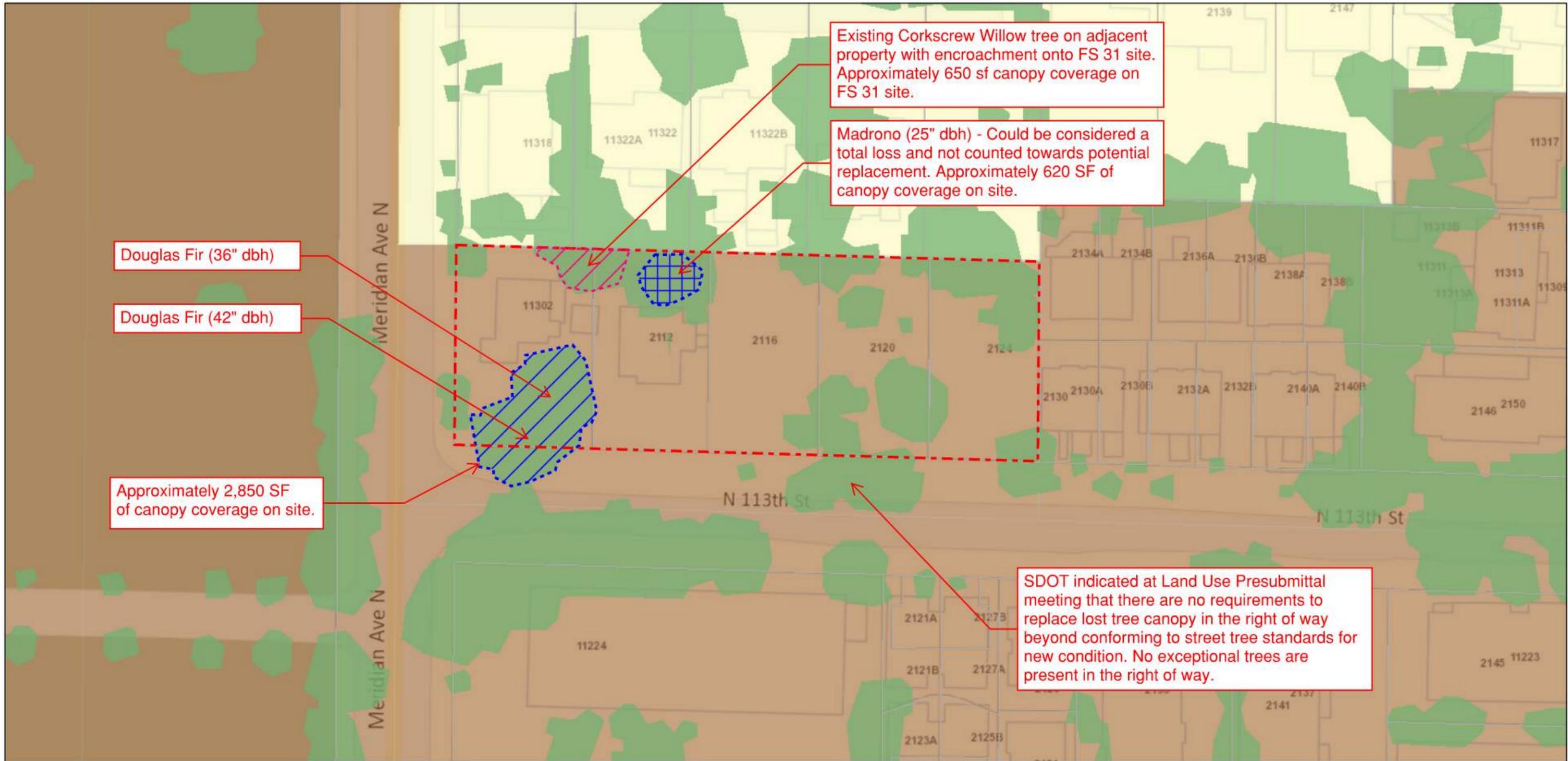
Arborist Report Prepared by Douglas Smith of Seattle Tree Consulting - 2/7/2020

- (3) Total Exceptional Trees Identified
- Douglas Fir - 42" DBH, 30' DLR, Condition 1 (Good), may have been topped and regrown with single leader
- Douglas Fir - 36" DBH, 30' DLR, Condition 2 (Acceptable), topped and regrown multiples iterations
- Madrona - 25" DBH, 25' DLR, Condition 3 (Declining), good structure, but excessive dead wood and minimal live foliage

Arborist Findings by Douglas Smith of Seattle Tree Consulting - 11/18/2021

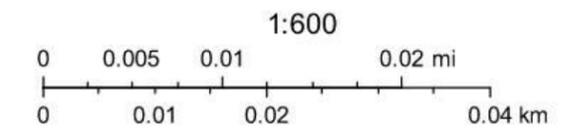
- Multiple small not-"exceptional", not-"significant" trees are present at the properties to the North of the proposed building. These trees have driplines that do not extend, or barely extend, onto the Fire Station 31 property, and will not be impacted by the anticipated building footprint.
- At 11322 A Meridian Ave North there is one "significant" Corkscrew Willow, 21" DBH. This tree should be assigned a critical root zone diameter of 20' based on species and condition, and thus should not be affected by the project. This is a non-native tree that could be removed and replaced without a permit if desired.

TREE REPLACEMENT ANALYSIS



11/11/2021, 10:31:08 AM

Parcels
 Tree Canopy Coverage



TREE REPLACEMENT PROPOSAL

- All three exceptional trees on-site must be removed to accommodate the operational footprint and needs of the new essential public safety facility.
- Project is currently vetting with SDCI replacement of equivalent canopy at another City-owned site.
- One possibility is the North Precinct site at 10049 College Way North, which has a wetland area whose habitat potential could benefit from the addition of a diversity of new plant types. Replacement at this location would also avoid the need for permanent or temporary irrigation systems to establish and maintain the trees.
- Options will continue to be studied in Design Development following input from SDCI.



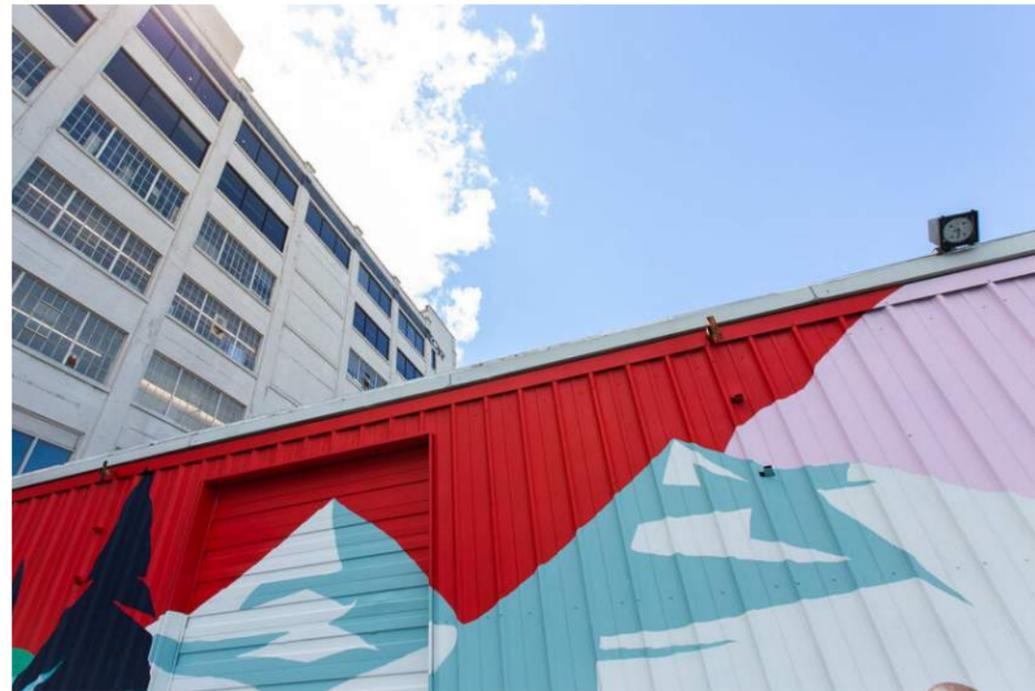
ARTIST SELECTION



DAMON BROWN - "CREATIVE LOU"



I am a Seattle-based artist who, from an early age, knew I loved art and creating new designs. I drew inspiration from comic books as I spent countless hours exploring different images and heroic storylines which opened my eyes to artistic creation. As my imagination grew, I began to study various art movements, illustration styles, and urban art. This, in turn, taught to me how things like color, shape, story, and texture can manifest into something so vivid for people to feel and see. I was then able to blend my love for classical art and illustration. - Damon Brown



SUSTAINABILITY & MATERIALS

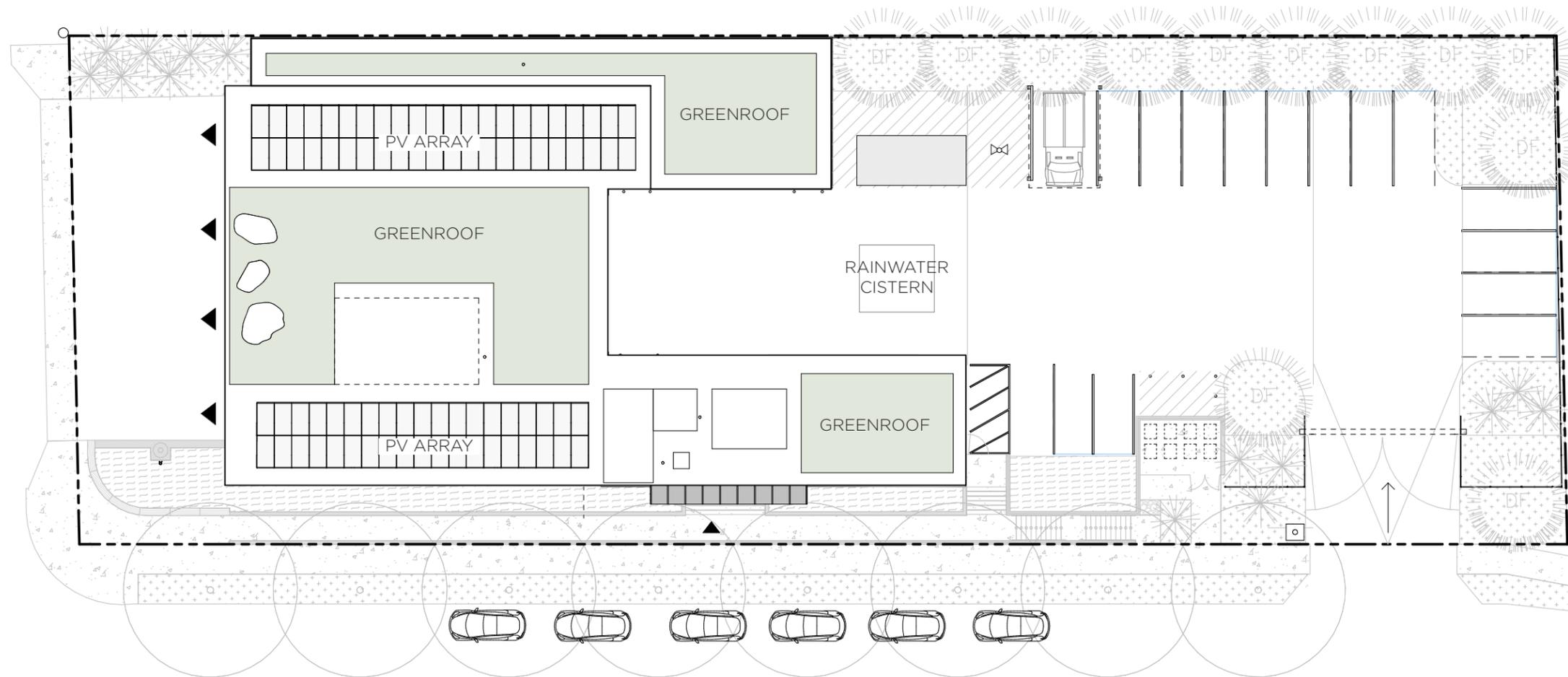


Seattle



SUSTAINABILITY OVERVIEW

- LEED v4 Gold Certification
- Fossil Fuel-Free Facility
- Healthy Materials
- Large Photovoltaic Array
- Rainwater Harvesting for Flushing
- Stormwater Bioretention Facilities
- Tightly-Zoned Ventilation Concept
- Refrigerant-Free Heating & Cooling System

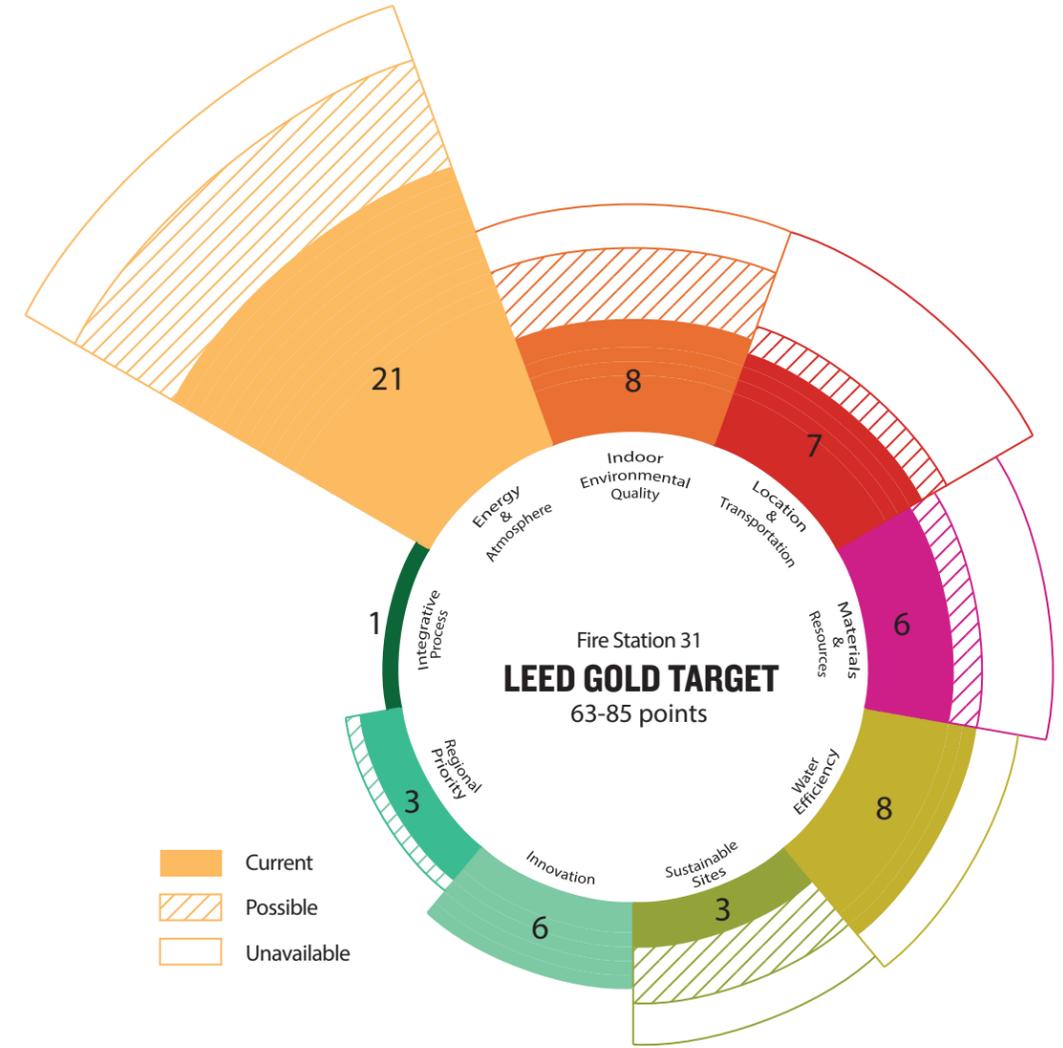


LEED v4 GOLD CERTIFICATION

FS31

LEED-NC v4 Scorecard

Yes	?	No	Max Pts.	
63	22	25	110	Project Totals (pre-certification estimates)
Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80 or more points				
1			1	Integrative Process
7	2	7	16	Location and Transportation
		n/a	16	Credit LEED for Neighborhood Development Location OR
1			1	Credit Sensitive Land Protection
2			2	Credit High Priority Site
3	2		5	Credit Surrounding Density and Diverse Uses
		5	5	Credit Access to Quality Transit
		1	1	Credit Bicycle Facilities
		1	1	Credit Reduced Parking Footprint
1			1	Credit Green Vehicles
3	4	3	10	Sustainable Sites
Y				Prereq. Construction Activity Pollution Prevention
	1		1	Credit Site Assessment
	2		2	Credit Site Development, Protect or Restore Habitat
	1		1	Credit Open Space
		3	3	Credit Rainwater Management
2			2	Credit Heat Island Reduction
1			1	Credit Light Pollution Reduction
8		3	11	Water Efficiency
Y				Prereq. Outdoor Water Use Reduction
Y				Prereq. Indoor Water Use Reduction
Y				Prereq. Building-Level Water Metering
1		1	2	Credit Outdoor Water Use Reduction
6			6	Credit Indoor Water Use Reduction
		2	2	Credit Cooling Tower Water Use
1			1	Credit Water Metering
6			6	Innovation in Design
1			1	Credit Innovation in Design: Equity? Gender Neutral bath
1			1	Credit Innovation in Design: Sustainable Wastewater Man
1			1	Credit Innovation in Design: O&M Toolkit?
1			1	Credit Pilot: Social Equity in the Project Team
1			1	Credit TBD
1			1	Credit LEED® Accredited Professional
21	8	4	33	Energy & Atmosphere
Y				Prereq. Fundamental Commissioning and Verification
Y				Prereq. Minimum Energy Performance
Y				Prereq. Building-Level Energy Metering
Y				Prereq. Fundamental Refrigerant Management
6			6	Credit Enhanced Commissioning
12	6		18	Credit Optimize Energy Performance
1			1	Credit Advanced Energy Metering
		2	2	Credit Demand Response
1	2		3	Credit Renewable Energy Production
1			1	Credit Enhanced Refrigerant Management
		2	2	Credit Green Power and Carbon Offsets
6	2	5	13	Materials & Resources
Y				Prereq. Storage and Collection of Recyclables
Y				Prereq. Construction and Demolition Waste Management Planning
1	2	2	5	Credit Building Life-Cycle Impact Reduction
1		1	2	Credit Building Product Disclosure & Optimization - EPDs
1		1	2	Credit Building Product Disclosure & Optimization - Sourcing
1		1	2	Credit Building Product Disclosure & Optimization - Material Ingredients
2			2	Credit Construction and Demolition Waste Management
8	5	3	16	Indoor Environmental Quality
Y				Prereq. Minimum IAQ Performance
Y				Prereq. Environmental Tobacco Smoke (ETS) Control
2			2	Credit Enhanced Indoor Air Quality Strategies
3			3	Credit Low-Emitting Materials
1			1	Credit Construction Indoor Air Quality Management Plan
	2		2	Credit Indoor Air Quality Assessment
1			1	Credit Thermal Comfort
1		1	2	Credit Interior Lighting
	1	2	3	Credit Daylight
	1		1	Credit Quality Views
	1		1	Credit Acoustic Performance
3	1		4	Regional Priority
3	1		4	Credit Regional Priority



HEALTHY MATERIALS

- Eliminate all building materials that include chemicals on the Miller Hull Red List

Asbestos



Lead



Mercury



PFAS



APE's



Wood Treatments



PVC



Flame Retardants



Chromium 6



Phthalates



Formaldehyde



BPA



HEALTHY MATERIALS

- Research and endeavor to eliminate additional contaminants as identified in the Washington State Council of Firefighters’ “Healthy In, Healthy Out” manual

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) CONTAMINANTS & CLASSIFICATIONS

CONTAMINANT	NOTE
Acetaldehyde	IARC Group 2B carcinogens
Acrolein	IARC Group 3 carcinogens
Aniline	IARC Group 3 carcinogens
Antimony compounds	Toxicity similar to arsenic poisoning
Arsenic	IARC Group 1 Carcinogens, endocrine disruptor
Benzene	IARC Group 1 Carcinogens
Beryllium compounds	IARC Group 1 Carcinogens
1,3-Butadiene	IARC Group 2A carcinogens
Cadmium	IARC Group 1 Carcinogens, endocrine disruptor
Dibutyl phthalate	Endocrine disruptor

1,8-dinitropyrene	Sufficient evidence in experimental animals
Dioxins and dibenzofurans	Are suspected human carcinogens
Formaldehyde	IARC Group 1 Carcinogens
Mercury compounds	IARC Group 3 carcinogens
Naphthalene	IARC Group 2B carcinogens
Nickel	IARC Group 2B carcinogens
3-Nitrobenzanthrone	One of the strongest carcinogens known
Benzo(e)pyrene	IARC group 3 carcinogens
Benzo(a)pyrene	IARC Group 1 carcinogen
Styrene	IARC Group 2B carcinogens
Toluene	IARC Group 3 carcinogens
Xylene isomers and mixtures: o-xylenes, m-xylenes, p-xylenes	IARC Group 3 carcinogens

DESIGN DRIVERS

FIREFIGHTER HEALTH

- Effective contaminant control
- Thermal comfort and adjustability
- Daylight spaces for work
- Maximize quality of sleep through thoughtful lighting, alerting and acoustical design
- Reduce chemicals of concern in building materials to greatest extent feasible
- Design site and building for maximum physical and operational safety

SUSTAINABILITY

- Low operational energy use
- Low embodied carbon
- Water reuse

OPERATIONS

- Every aspect of design serves to minimize response time
- Maximize apparatus maneuverability and minimize conflicts with other vehicle and pedestrians
- Specify low maintenance materials, systems, and landscaping
- Prioritize life cycle cost over first cost
- Ensure appropriate facility security

EQUITY

- Diverse stakeholder engagement
- Community engagement

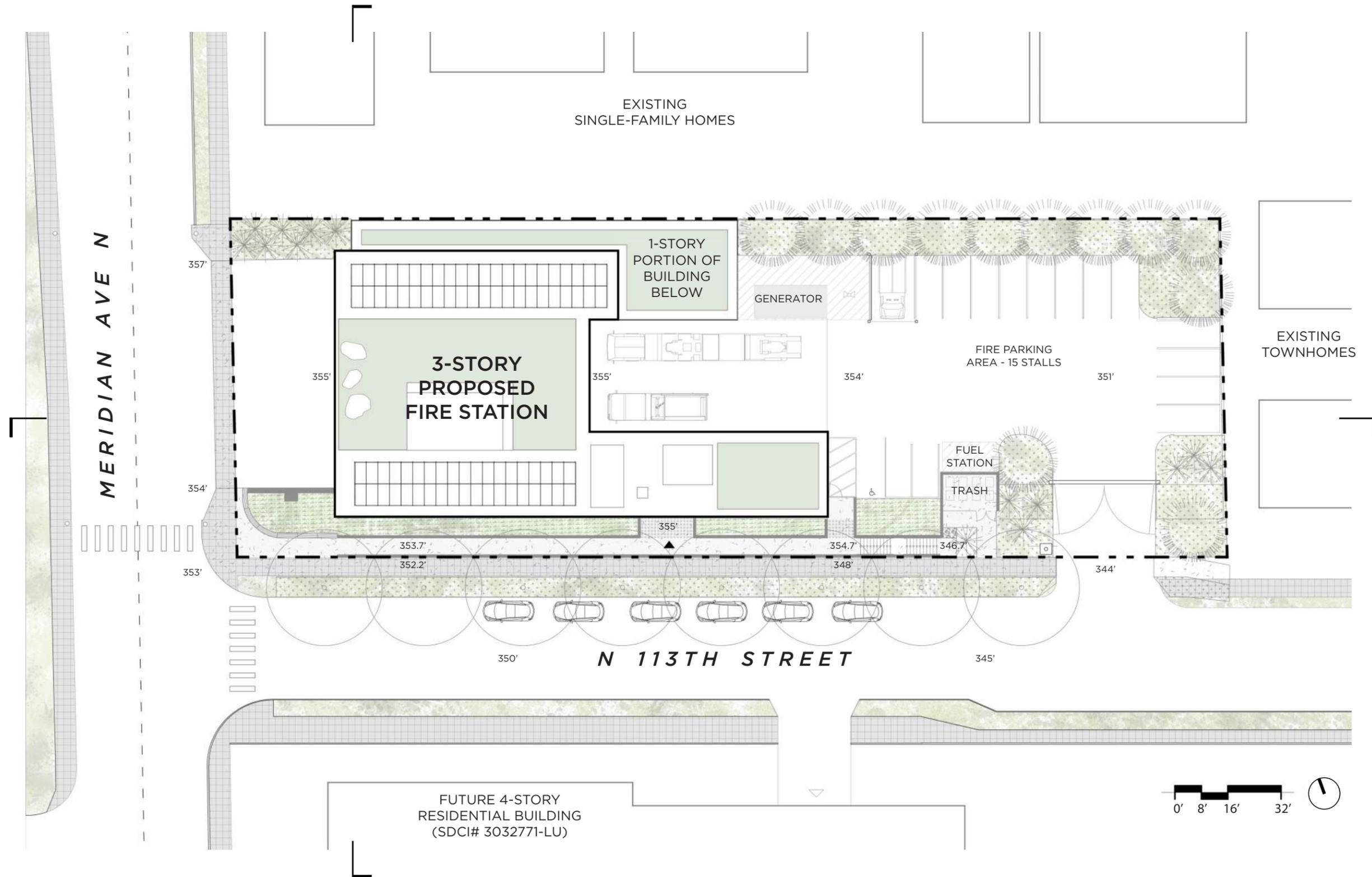
SITE DESIGN



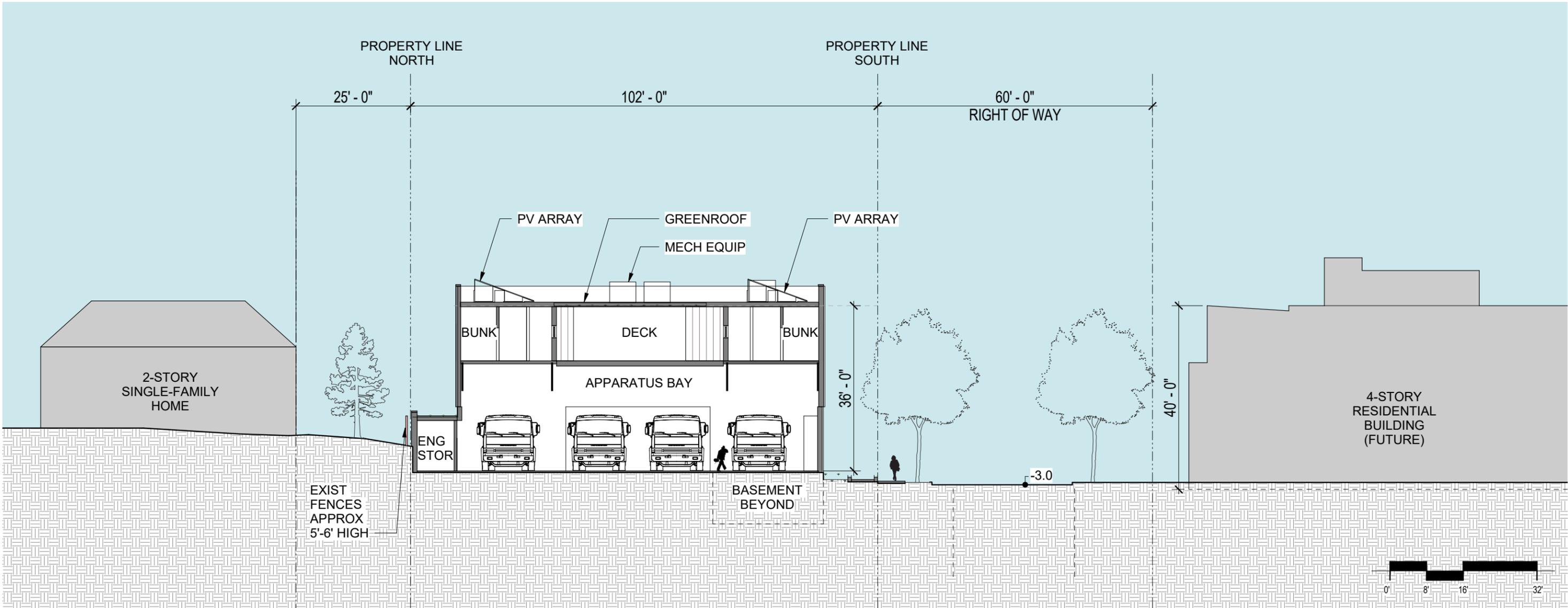
Seattle



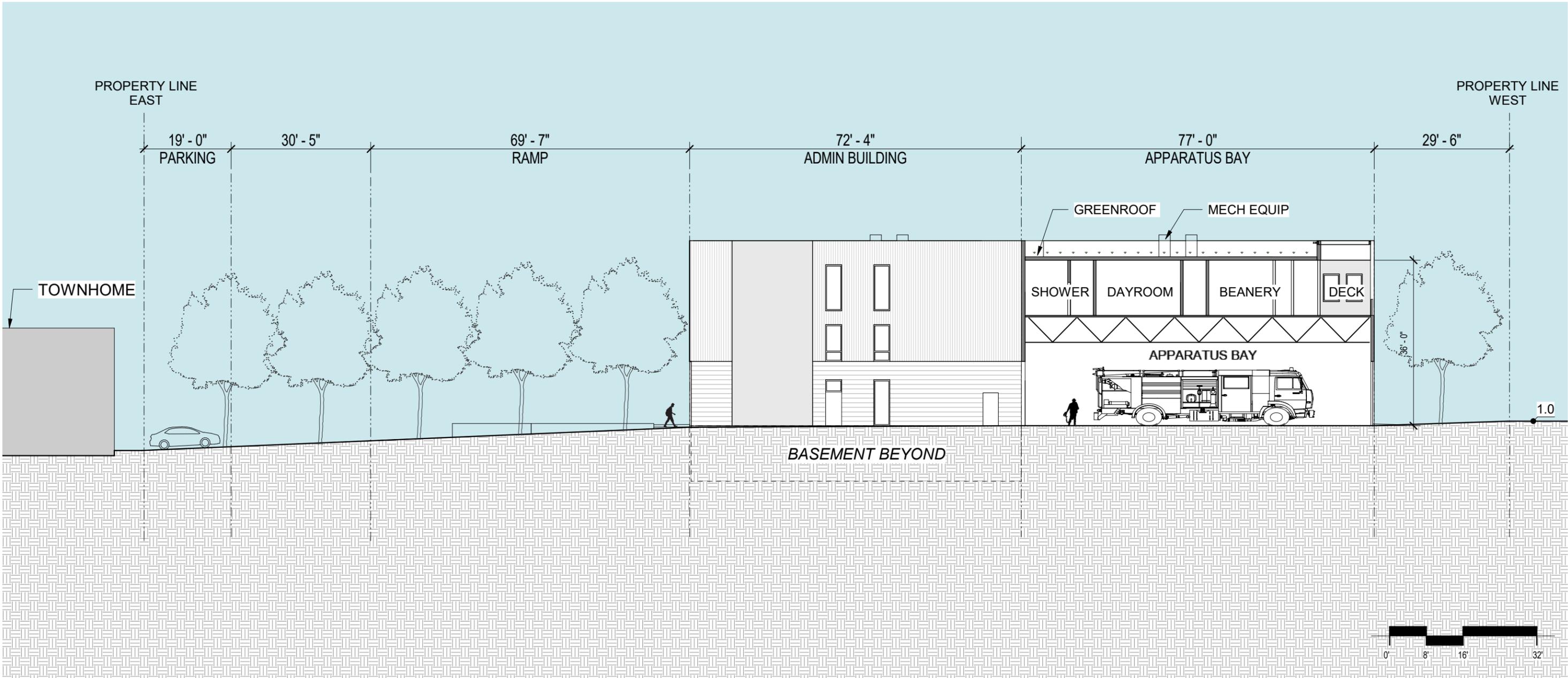
SITE PLAN



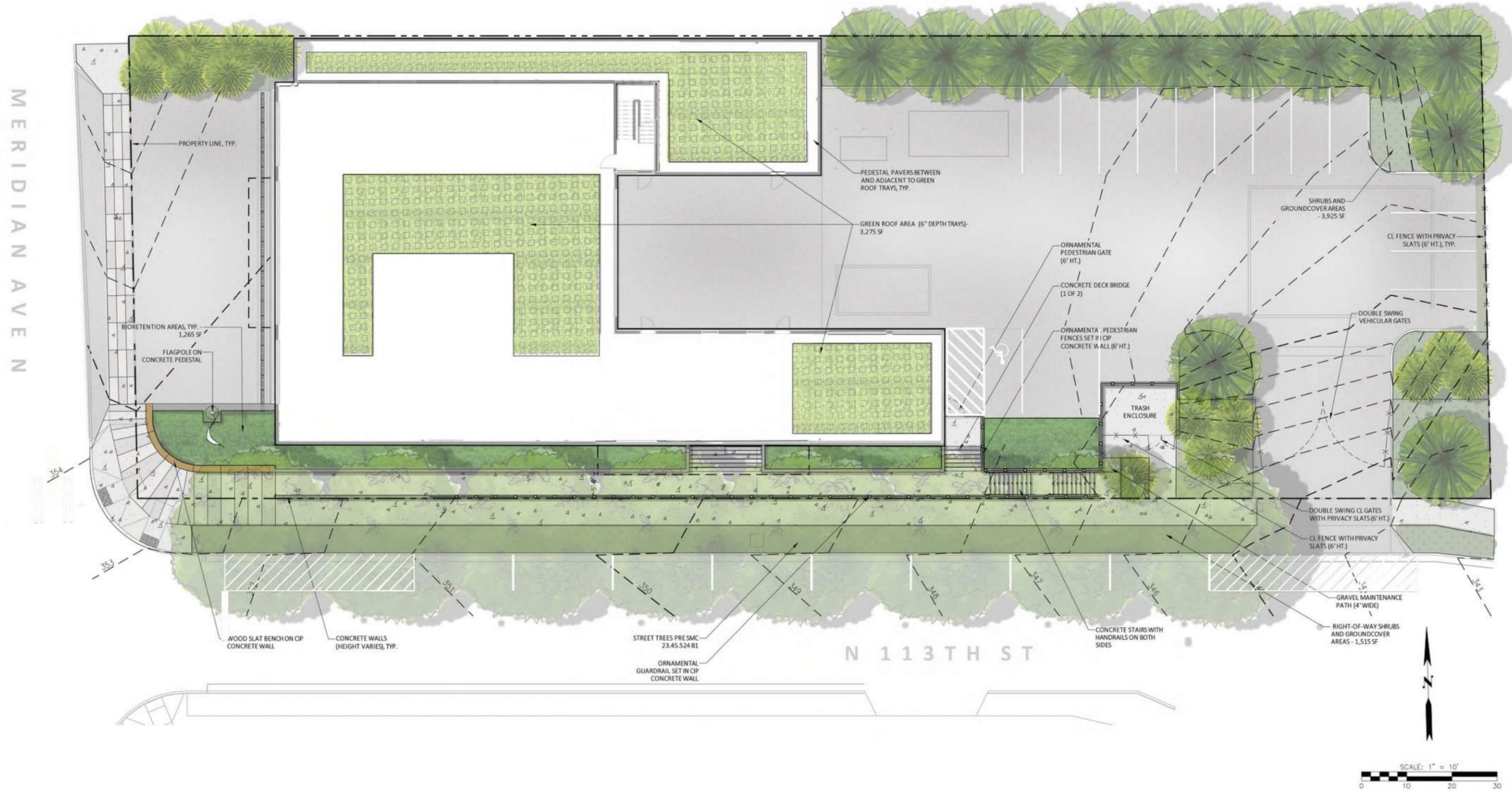
SITE SECTION



SITE SECTION



LANDSCAPE PLAN



LANDSCAPE DEVELOPMENT



LANDSCAPE DEVELOPMENT



concrete planks over bioretention area



horizontal board form finish



vertical board form finish



vertical groove finish

LANDSCAPE DEVELOPMENT



concrete planks over bioretention area



horizontal board form finish



vertical board form finish

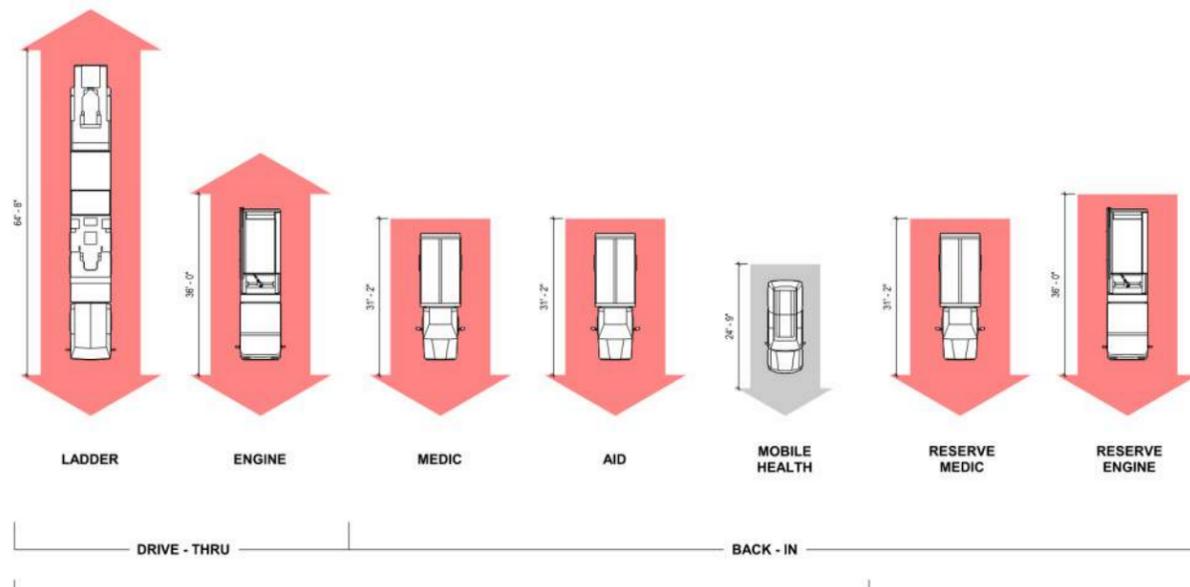


vertical groove finish

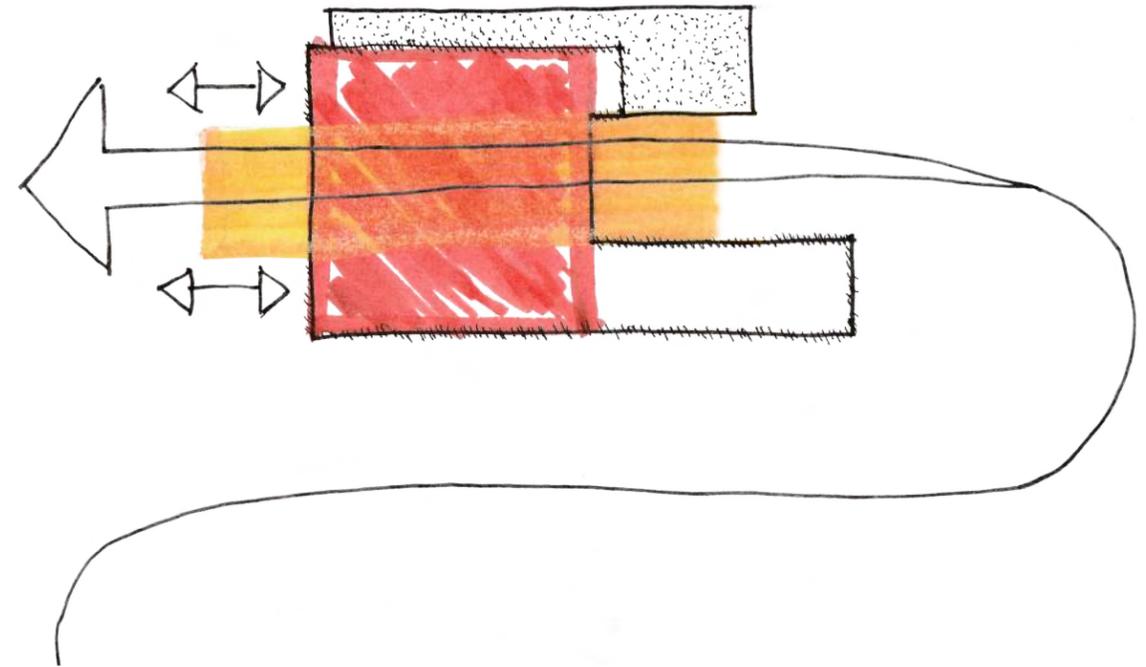
BUILDING DESIGN



CONCEPT

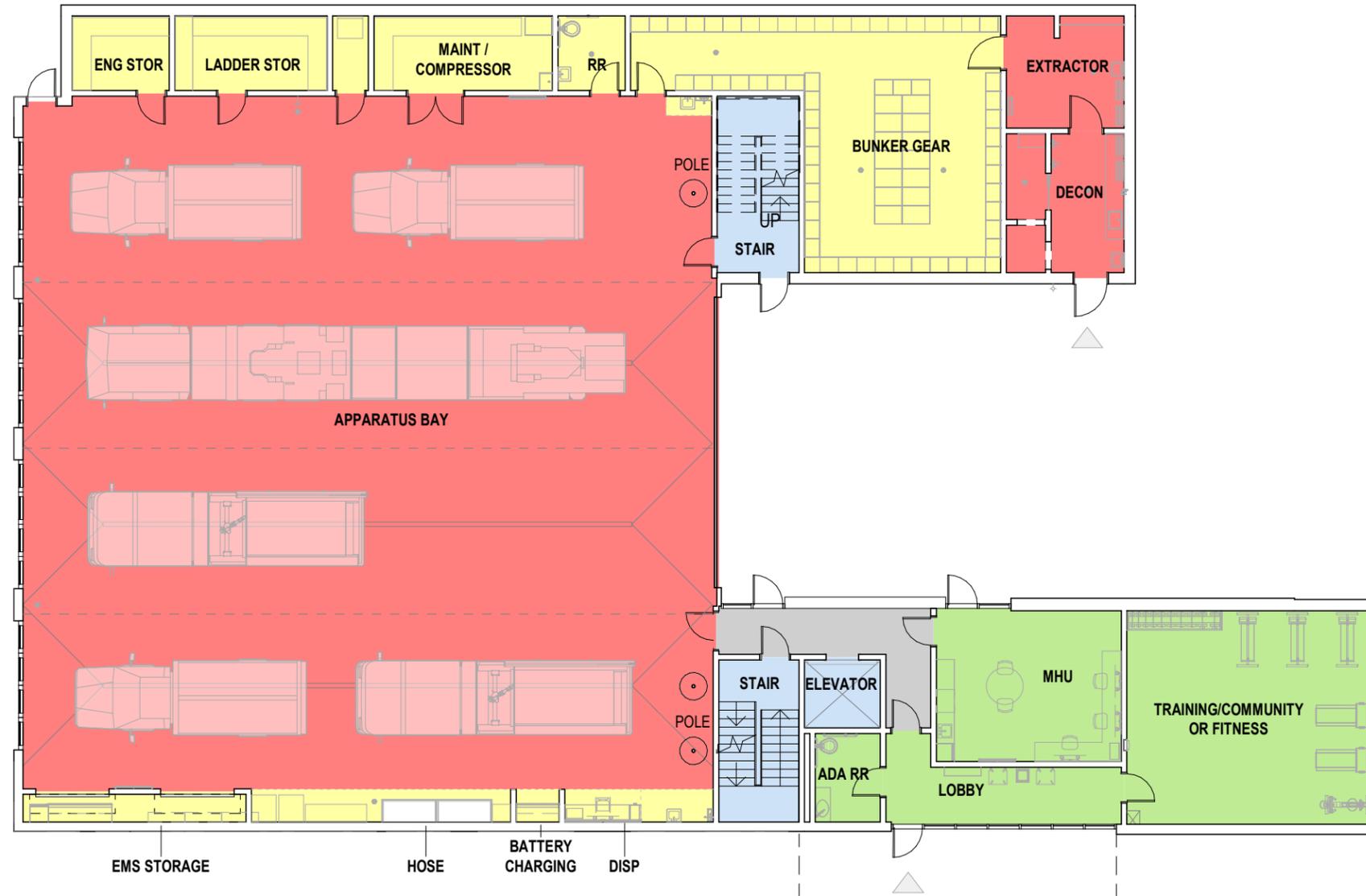


STATION VEHICLES

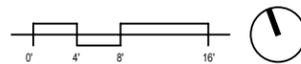


CONCEPT SKETCH

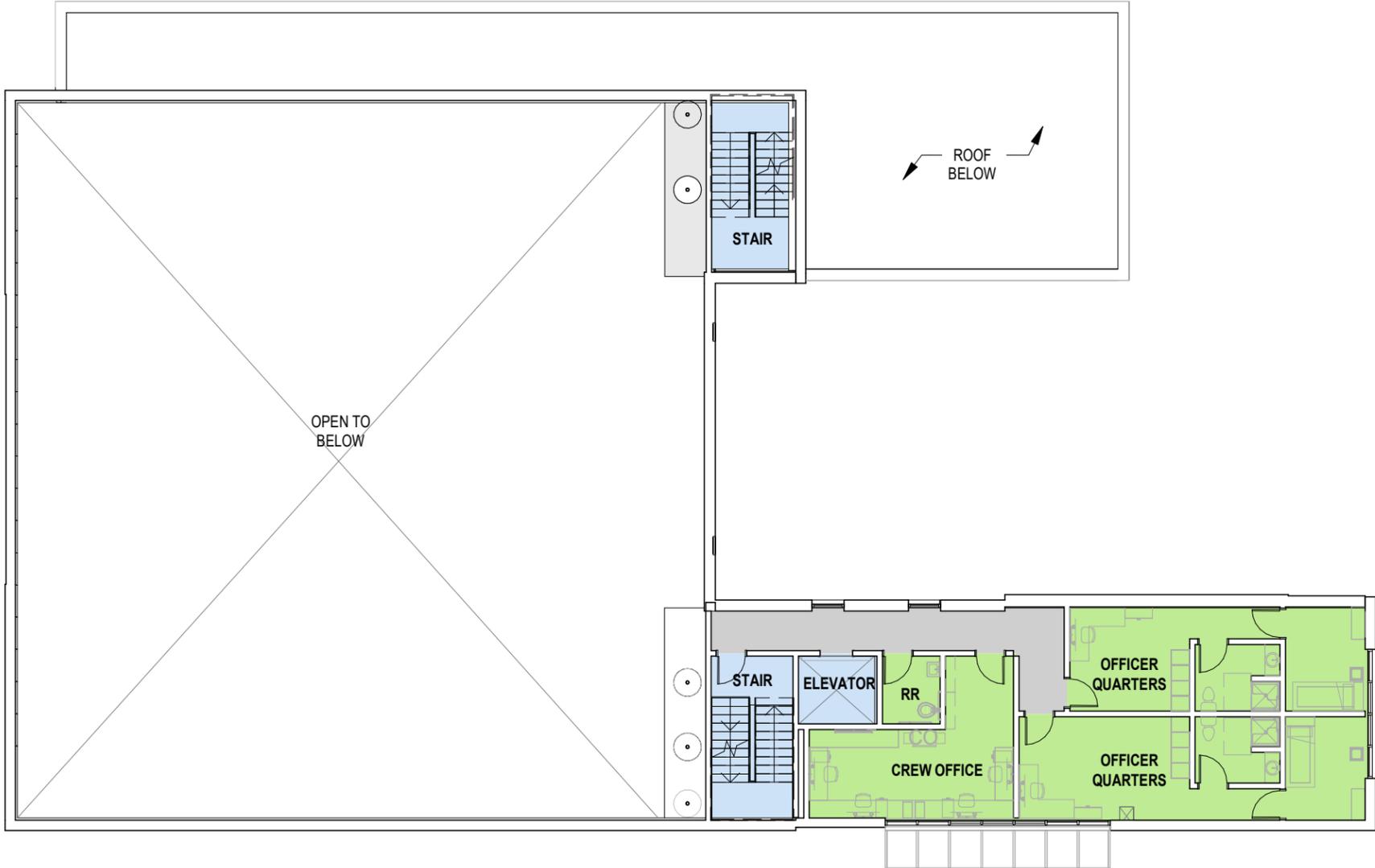
FLOOR PLANS



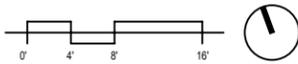
LEVEL 1



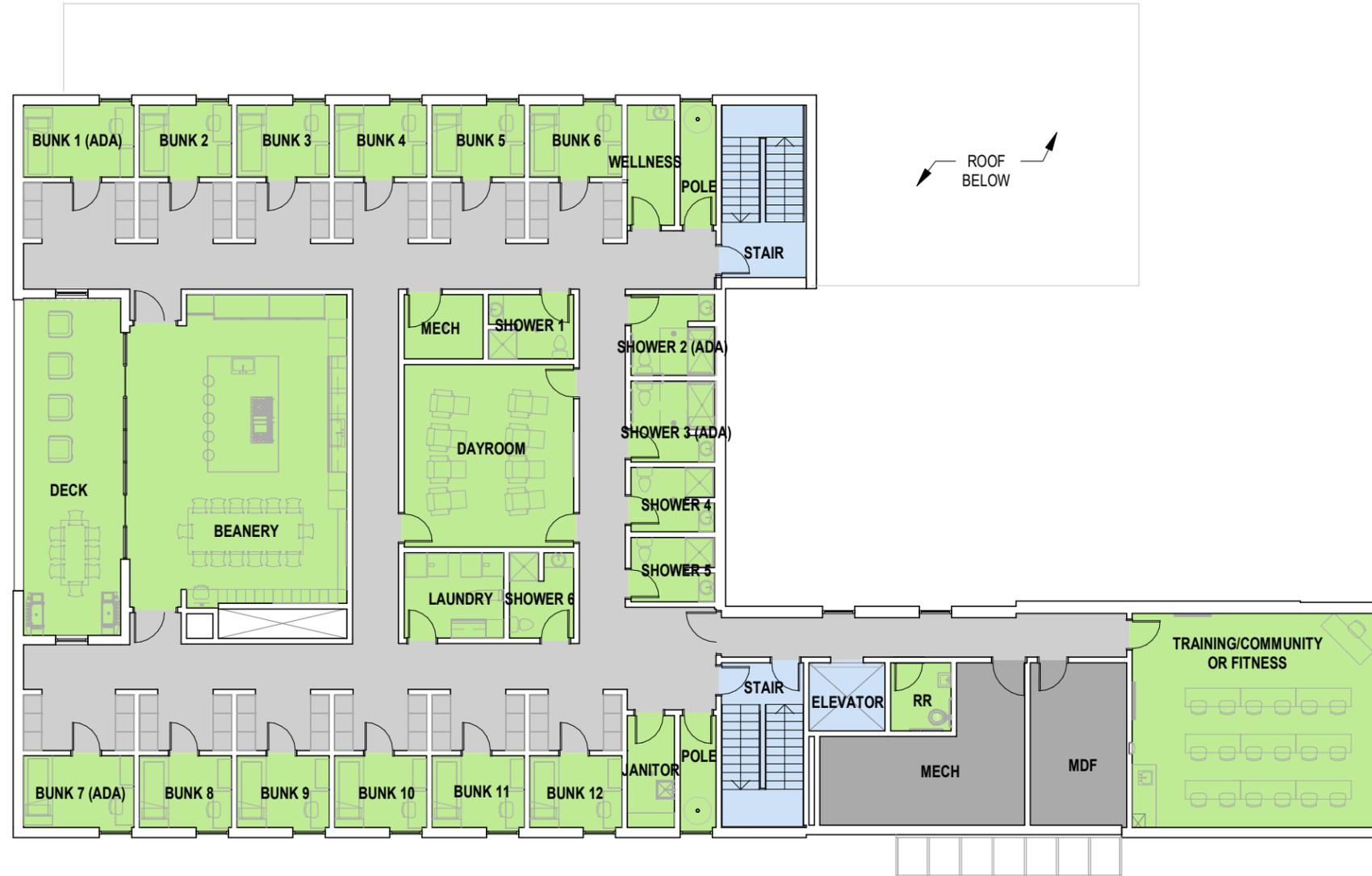
FLOOR PLANS



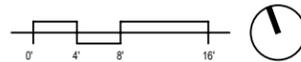
LEVEL 2



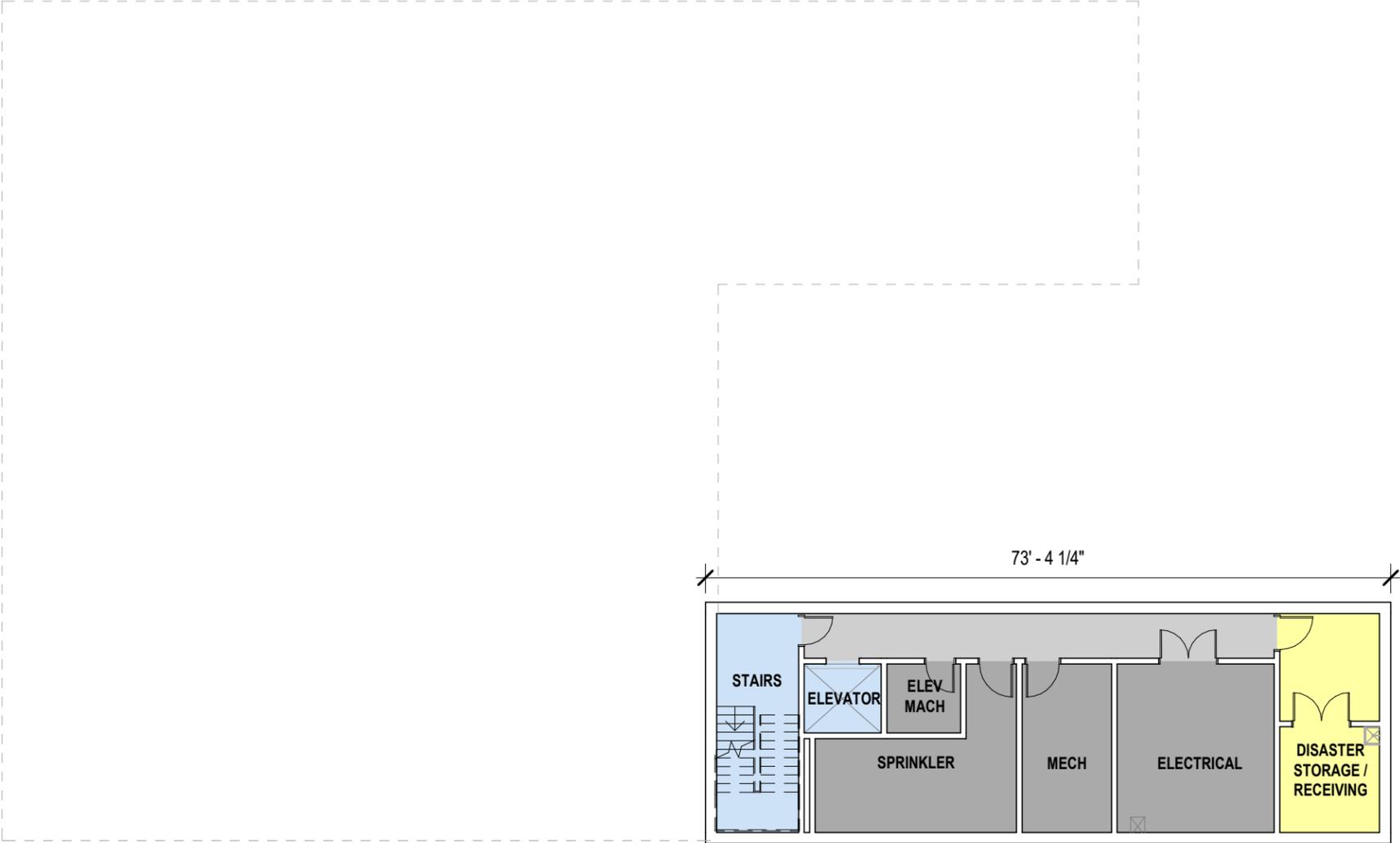
FLOOR PLANS



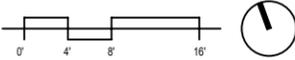
LEVEL 3



FLOOR PLANS



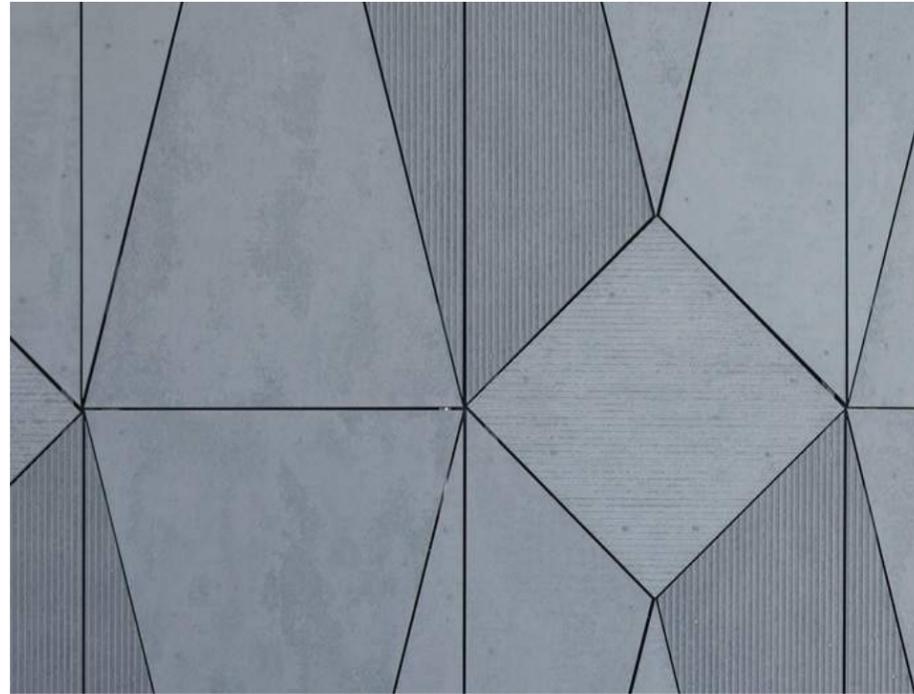
BASEMENT



MATERIAL PALETTE



BOARD & BATTEN WEATHERED WOOD



TEXTURED FIBER CEMENT PANEL



TRANSPARENCY AT APPARATUS BAYS - MERCER ISLAND FS 92
Miller Hull Partnership



WEATHERED WOOD AT FACADE - MULTNOMAH COUNTY
Hennebery Eddy Architects



WARM WOOD TONES AT FACADE - MERCER ISLAND FS 92
Miller Hull Partnership



TRANSPARENCY AT ACTIVE AREAS - MERCER ISLAND FS 92
Miller Hull Partnership

SOUTH ELEVATION



WEST ELEVATION



PERSPECTIVE FROM STREET CORNER



PERSPECTIVE AT MAIN ENTRY



PERSPECTIVE FROM SOUTHEAST



AERIAL PERSPECTIVE FROM NORTHEAST



THANK YOU



Seattle

