

Seattle Design Commission

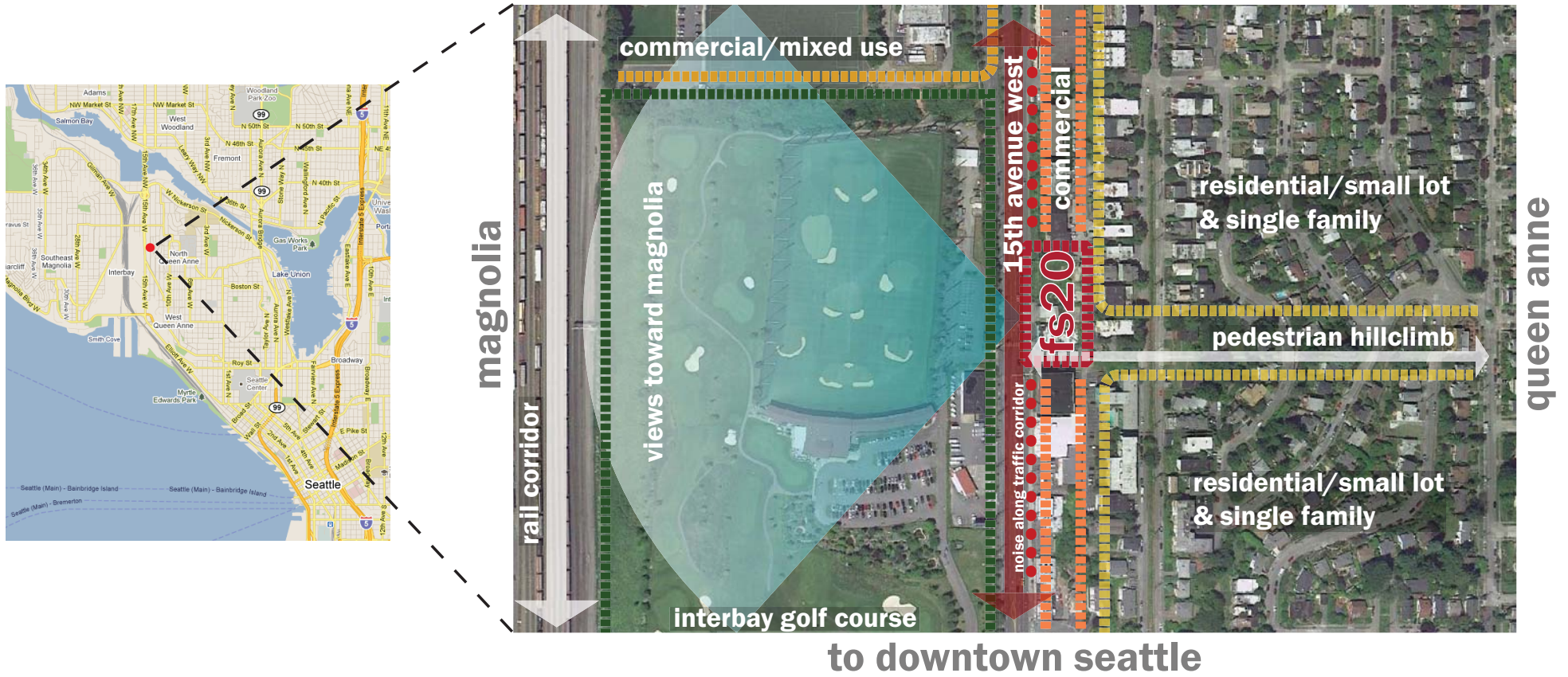
Fire Station 20

Design Development

16 February 2012



site context



site photos



SW corner of 15th Ave West and West Armour looking across to Fire Station 20 site



Alley looking southwest at Fire Station 20 site

site photos



Looking north at 15th Ave and Fire Station 20 site



15th Ave West looking across to Fire Station 20 site

design goals

Provide for public safety

Meet fire station program

efficient operations, quick response times, firefighter comfort areas for decompression after events

Create a civic building

differentiate from adjacent storage facilities and multifamily housing, provide landscaped environment

Implement sustainable strategies

LEED Gold at minimum, pursue opportunities to achieve higher performance

sustainable strategies



www.obrienandco.com

Project: **Fire Station 20**

Date: **Revision Date: February 14, 2012**

LEEDv2009 New Construction

Yes Maybe No Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80 points and above **design | construction**

73 23 14 Total Project Score **Possible Points 110**

Yes	Maybe	No		Possible Points	26
18	3	5	Sustainable Sites		
Y			C Prereq. 1 Construction Activity Pollution	required	
1			d Credit 1 Site Selection	1	
5			d Credit 2 Development Density and Community	5	
		1	d Credit 3 Brownfield Redevelopment	1	
6			d Credit 4.1 Alternative Transportation: Public Transportation Access	6	
1			d Credit 4.2 Alternative Transportation: Bicycle Storage & Changing Rooms	1	
		3	d Credit 4.3 Alternative Transportation: Low Emitting and Fuel Efficient Vehicles	3	
	2		d Credit 4.4 Alternative Transportation: Parking Capacity	2	
1			C Credit 5.1 Reduced Site Disturbance: Protect or Restore Habitat	1	
1			C Credit 5.2 Reduced Site Disturbance: Maximize Open Space	1	
		1	d Credit 6.1 Stormwater Management: Quantity Control	1	
1			d Credit 6.2 Stormwater Management: Quality Control	1	
1			C Credit 7.1 Heat Island Effect: Non-Roof	1	
1			d Credit 7.2 Heat Island Effect: Roof	1	
	1		d Credit 8 Light Pollution Reduction	1	

Yes	Maybe	No		Possible Points	10
6	2	2	Water Efficiency		
Y			d Prereq. 1 Water Use Reduction: 20% Reduction	required	
2			d Credit 1.1 Water Efficient Landscaping: Reduce by 50%	2	
		2	d Credit 1.2 Water Efficient Landscaping: No Potable Water Use or No Irrigation	2	
2			C Credit 2 Innovative Wastewater Technologies	2	
2	2		d Credit 3 Water Use Reduction: 30-40% Reduction	2 to 4	

Yes	Maybe	No		Possible Points	35
19	16		Energy & Atmosphere		
Y			C Prereq. 1 Fundamental Building Systems Commissioning	required	
Y			d Prereq. 2 Minimum Energy Performance	required	
Y			d Prereq. 3 Fundamental Refrigerant Management	required	
10	9		d Credit 1 Optimize Energy Performance: 1pt. 12% New/8% Existing, 1pt. each 2%	1 to 19	
2	5		d Credit 2 On-Site Renewable Energy: 1pt. 1%, 1pt. each 2%	1 to 7	
2			C Credit 3 Enhanced Commissioning	2	
2			d Credit 4 Enhanced Refrigeration Management	2	
1	2		C Credit 5 Measurement & Verification	3	
2			C Credit 6 Green Power	2	

Yes	Maybe	No		Possible Points	4
2	2		Regional Priority Credits		
1			Credit 1.1 Regional Priority Credit 1	1	
1			Credit 1.2 Regional Priority Credit 2	1	
	1		Credit 1.3 Regional Priority Credit 3	1	
	1		Credit 1.4 Regional Priority Credit 4	1	

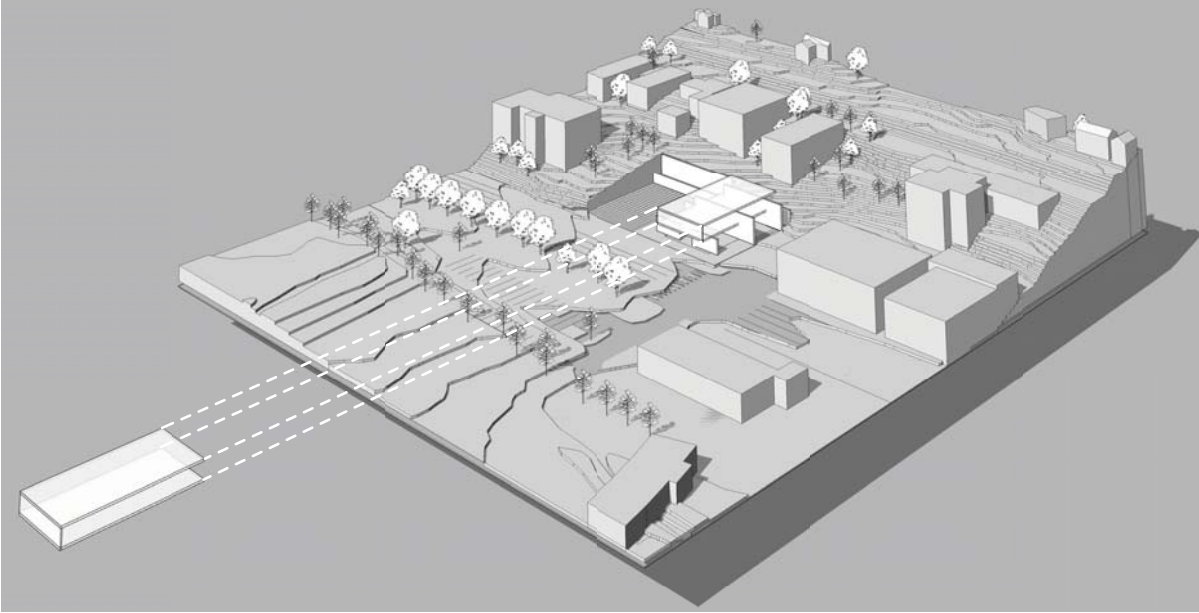
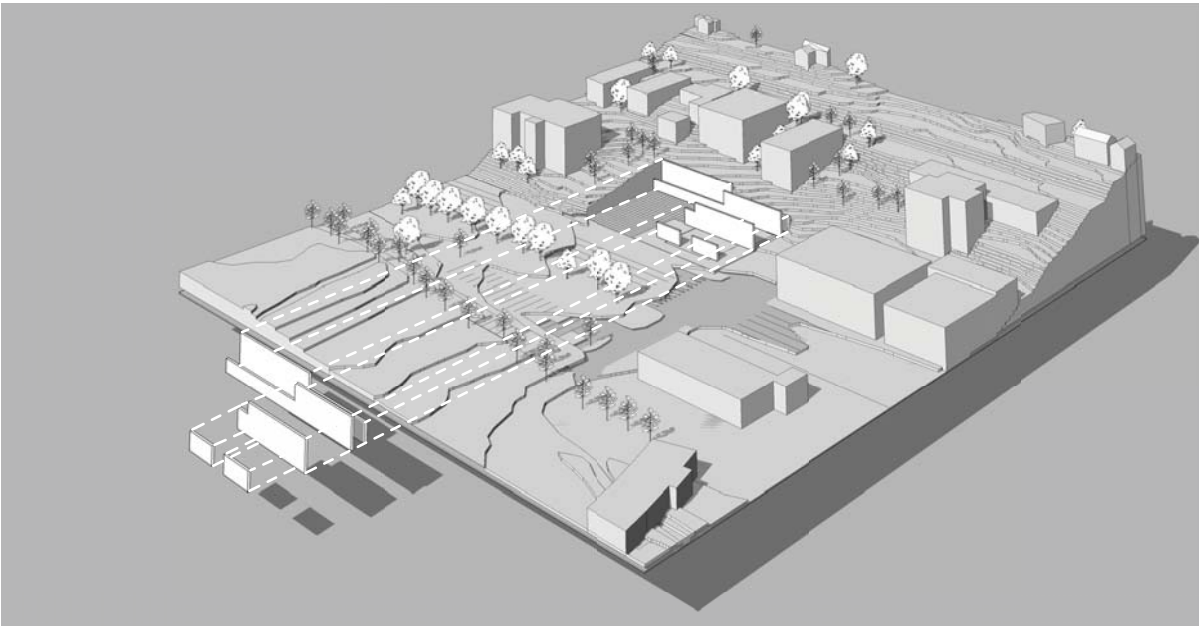
Yes	Maybe	No		Possible Points	14
7	7		Materials & Resources		
Y			d Prereq. 1 Storage & Collection of Recyclables	required	
		3	C Credit 1.1 Building Reuse: Maintain Existing Walls, Floors & Roof	1 to 3	
		1	C Credit 1.2 Building Reuse: Maintain 50% of Interior Non-Structural Elements	1	
2			C Credit 2 Construction Waste Management: Divert 50% (75%)	1 to 2	
		2	C Credit 3 Resource Reuse: Specify 5% (10%)	1 to 2	
2			C Credit 4 Recycled Content: Specify 10% (20%)	1 to 2	
2			C Credit 5.1 Local/Regional Materials: 10% (20%) Extracted, Processed & Manufactured Regionally	1 to 2	
		1	C Credit 6 Rapidly Renewable Materials	1	
1			C Credit 7 Certified Wood	1	

Yes	Maybe	No		Possible Points	15
15			Indoor Environmental Quality		
Y			d Prereq. 1 Minimum IAQ Performance	required	
Y			d Prereq. 2 Environmental Tobacco Smoke (ETS) Control	required	
1			d Credit 1 Outdoor Air Delivery Monitoring	1	
1			d Credit 2 Increase Ventilation	1	
1			C Credit 3.1 Construction IAQ Management Plan: During Construction	1	
1			C Credit 3.2 Construction IAQ Management Plan: Before Occupancy	1	
1			C Credit 4.1 Low-Emitting Materials: Adhesives & Sealants	1	
1			C Credit 4.2 Low-Emitting Materials: Paints and Coatings	1	
1			C Credit 4.3 Low-Emitting Materials: Flooring Systems	1	
1			C Credit 4.4 Low-Emitting Materials: Composite Wood and Agrifiber Products	1	
1			d Credit 5 Indoor Chemical & Pollutant Source Control	1	
1			d Credit 6.1 Controllability of Systems: Lighting	1	
1			d Credit 6.2 Controllability of Systems: Thermal Comfort	1	
1			d Credit 7.1 Thermal Comfort: Design	1	
1			d Credit 7.2 Thermal Comfort: Verification	1	
1			d Credit 8.1 Daylight & Views: Daylight 75% of Spaces	1	
1			d Credit 8.2 Daylight & Views: Views for 90% of Spaces	1	

Yes	Maybe	No		Possible Points	6
6			Innovation in Design		
1			d Credit 1.1 Innovation in Design: Green Building Education	1	
1			d Credit 1.2 Innovation in Design: Green Housekeeping	1	
1			d Credit 1.3 Innovation in Design: Exemplary Performance: MRc2	1	
1			d Credit 1.4 Innovation in Design: Exemplary Performance: EA6	1	
1			d Credit 1.5 Innovation in Design: [Specific Title]	1	
1			d Credit 2 LEED™ Accredited Professional	1	

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diagrams & concepts





Above looking northwest to site



Looking northeast to site from 15th Ave



Looking east to site from across 15th Ave

design review comments and response

Applaud the green roof. Support the inclusion of the photovoltaic array. If the photovoltaic array is not possible, replacing it with a green roof is acceptable.

- Project has a 20KW photovoltaic system
- Alternate for an additional 20KW's
- Solar hot water will be incorporated into the project

Integrate the artist and his artwork into the project and its planning.

- Rob Ley selected as the artist for this station
- Artwork is sited in a prominent location, becoming part of the primary view of the fire station at the corner of 15 Ave W and W. Armour and frames the building entry
- The sculpture is integrated with a building/site wall, creating an interdependent relationship between art and architecture

Make sure the materials, placement, and composition of walls feel as though they are an extension of the building even if they step down beyond the building edge.

- The base of the building and the landscape walls are conceived of as an integrated element that ties the fire station to its site
- Site walls are natural grey, cast-in-place concrete
- Building walls are a compatible natural grey, ground face concrete block that merge with the site walls but have a slightly different texture and scale for variation

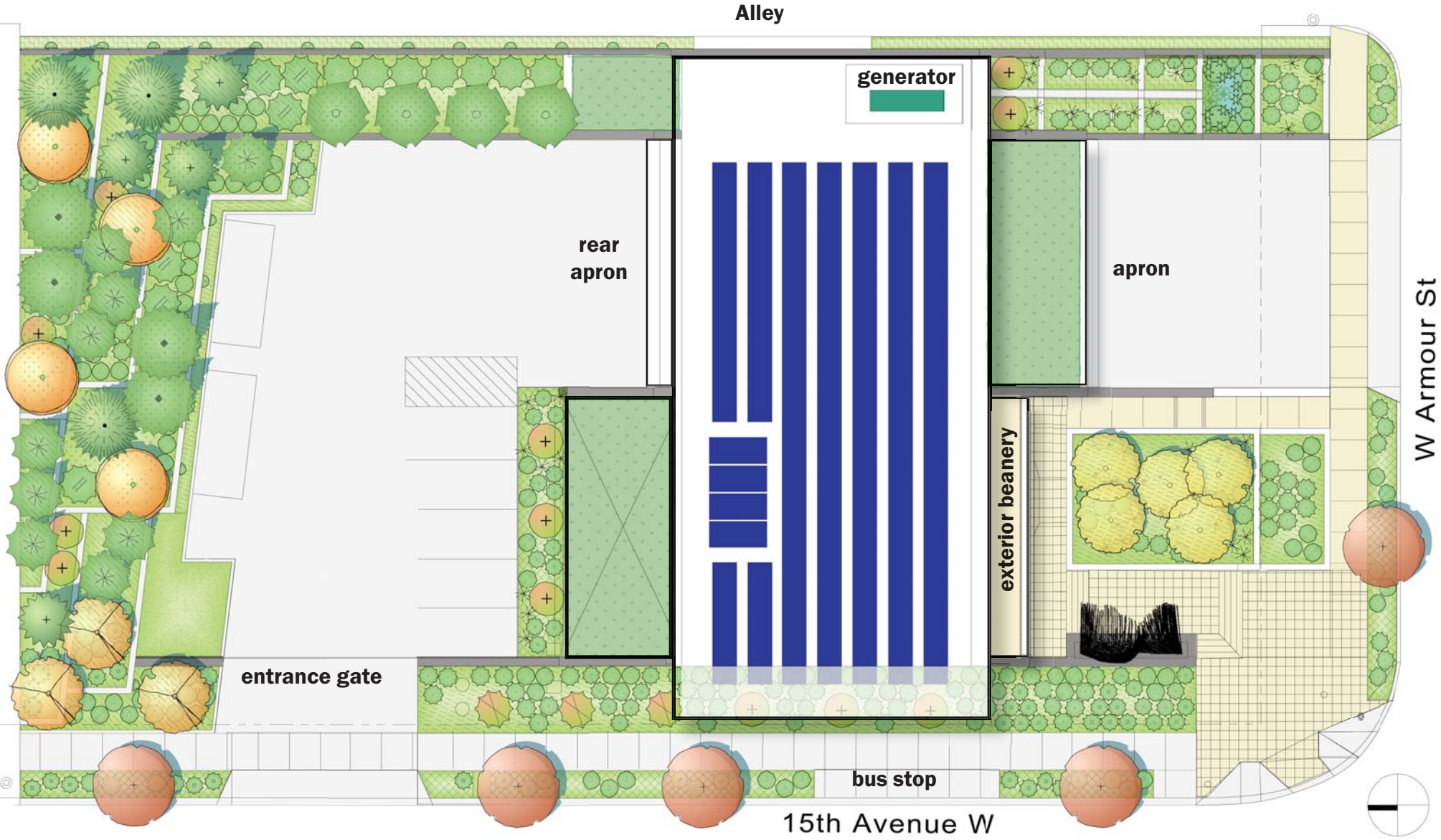
Provide more material samples and graphics to show what plant materials will be used on site and in the plaza.

- We are providing samples of the building and landscape materials for your review

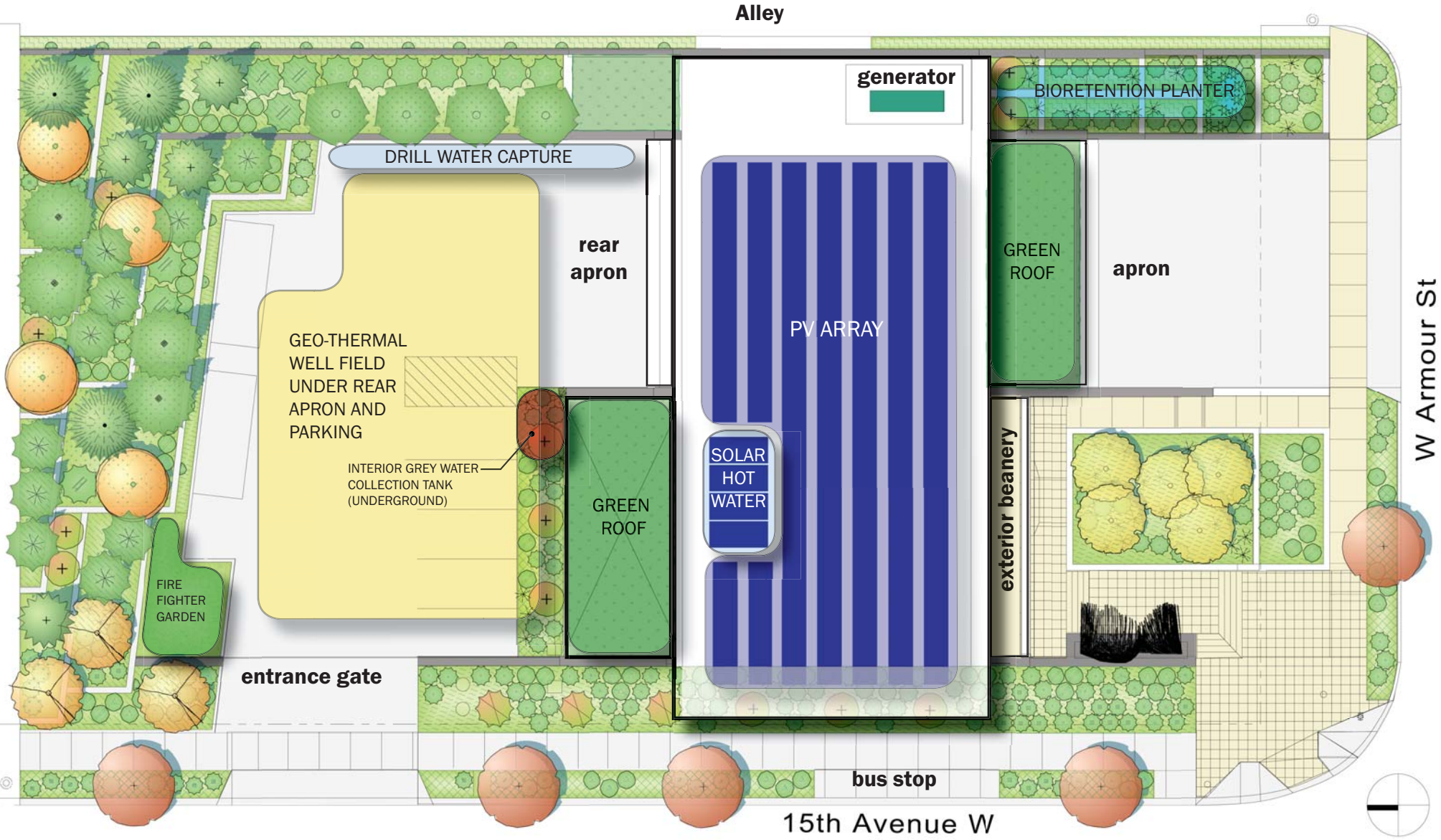
Provide more information about the natural drainage system.

- The plan includes a bio-retention planter in the southeast terraced area
- SFD is evaluating a private hydrant which would allow drilling and drilling water capture

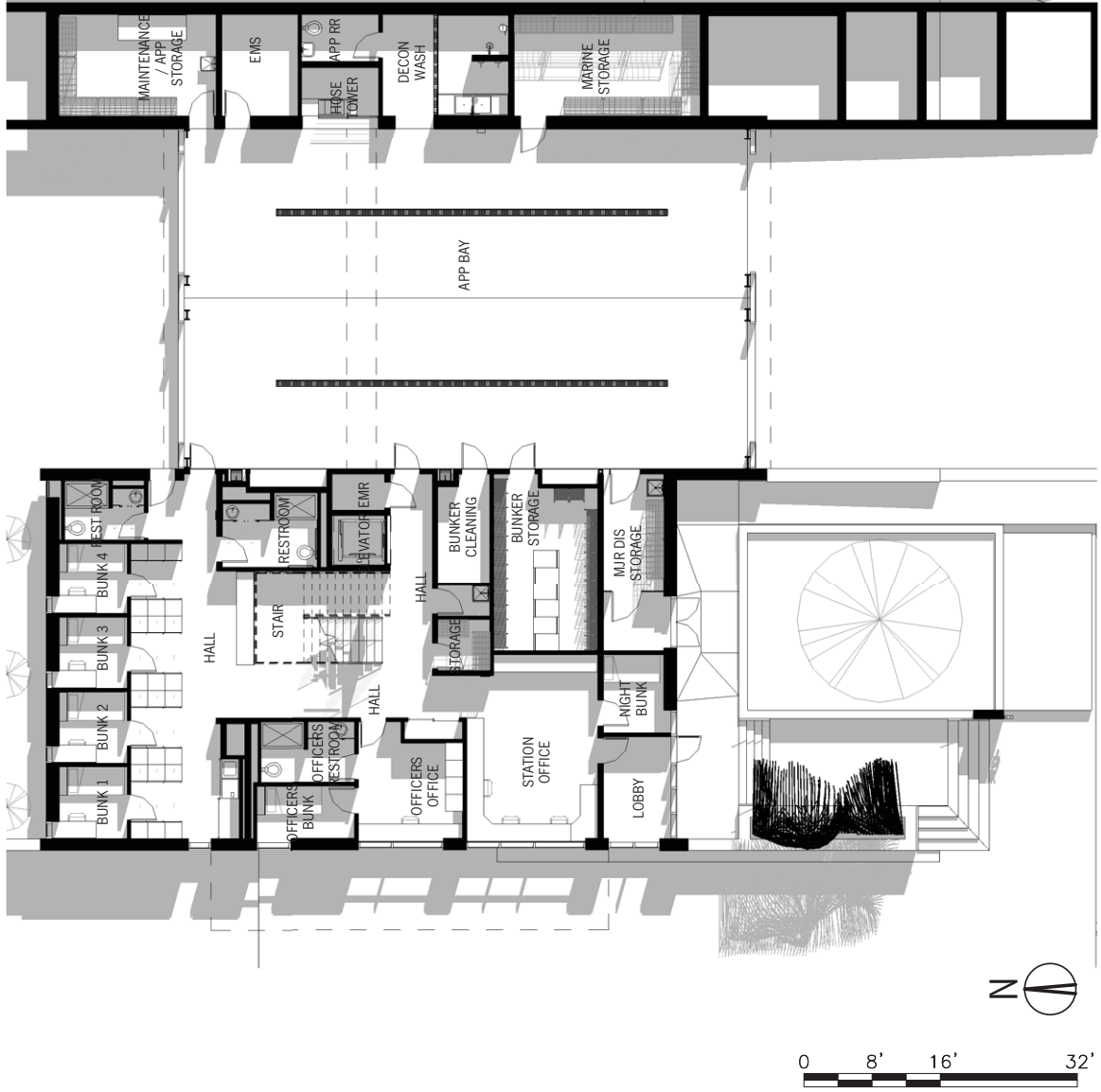
site plan



site plan



first floor plan



second floor plan



north and south elevations



north elevation

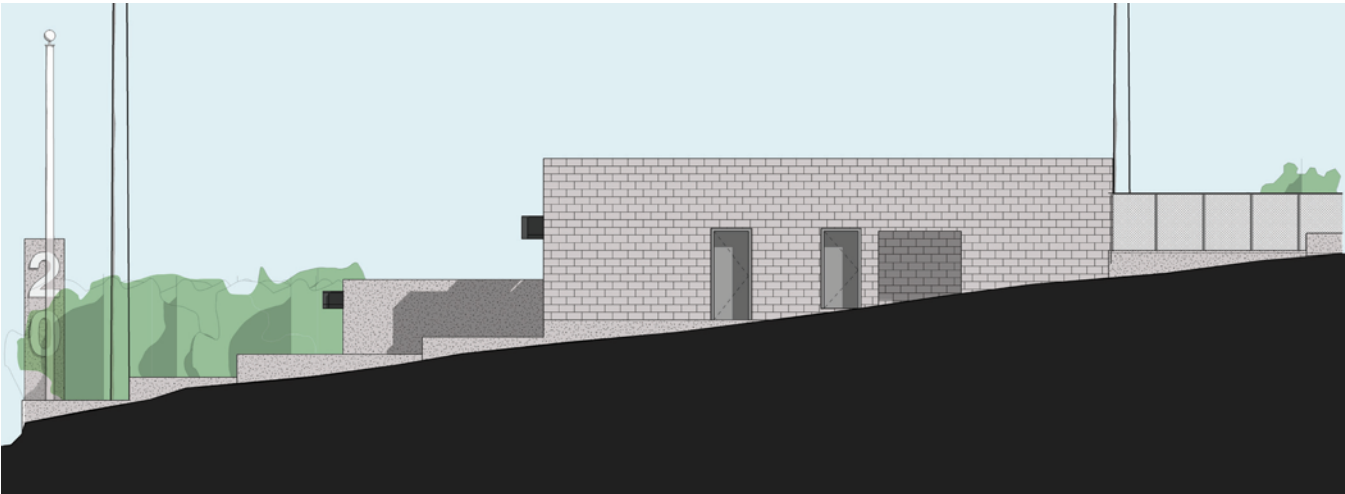


south elevation

west and east elevations



west elevation



east elevation

materials



north elevation



structural silicon glazed curtainwall lower spandrel panel



spandrel glass



spandrel glass



glass sunshade



south elevation



structural silicon glazed curtainwall with metal panel infill

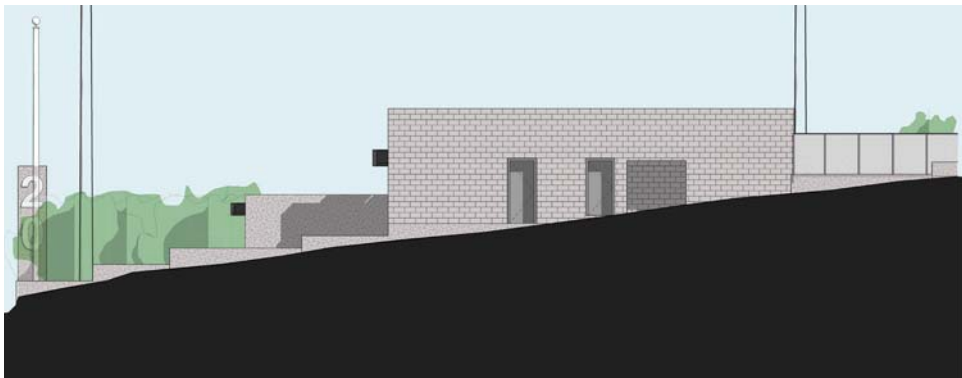
materials



west elevation



Louis Kahn examples of cmu and cast concrete



east elevation



ground - face cmu with cast concrete below



green screen

Rob Ley

Fire Station 20

Early in this project, as ideas were beginning to form, an opportunity arose in which I was allowed to spend the day with the fire fighters of Station 20. During the time I spent riding along with the fire fighters, I was able to experience and understand, in a small way, what a day in the life was like for them. While with them, I asked about the strategies of fire fighting and all that is involved in what seems as much of an art as it is a science. Something that was mentioned several times was the amount of training involved. It was also explained to me that there are things that can be controlled, while there were other elements outside of anyone's control during a fire, and that the training and strategies are very much about understanding and commanding this condition. The two most striking, and in some ways opposing elements, I was told, are water and wind.

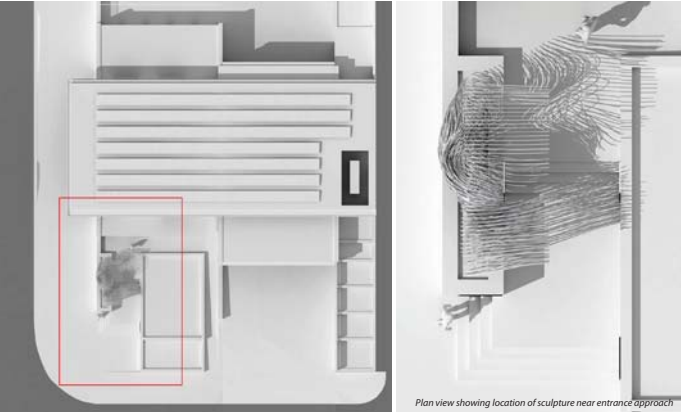
Opposing forces... Wind, which fuels the flames, is the element outside of anyone's control, while water is the extinguishing element that they are heavily trained to control. Water may present itself as a gentle natural rain or as an incredibly forceful stream, controlled by the able hands of fire fighters. Wind, as well, may be experienced as a gentle breeze or as a gusting gale force fueling a nearly uncontrollable fire.

Art Considerations

1. To capture or embody an important aspect of fire fighting and make it visible to those that experience the new Fire Station 20.
2. To create a piece that is compelling and will stand out and be seen by the majority of people that engage that site, including pedestrians and motorists along 15th Ave. West.

Composed of 250 stainless steel tubes, each of a unique form unto themselves, that combine to create a singular sculpture when assembled together

The piece engages the south west corner of the building and helps to both strengthen this corner site as well as frame the entrance to the station.



landscape



edible garden



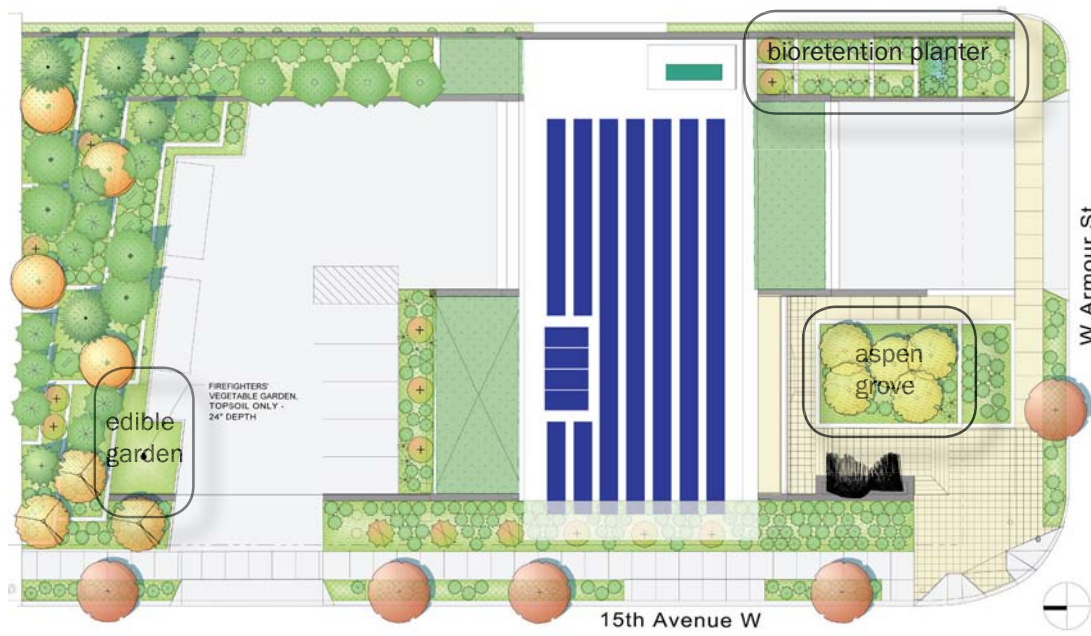
edible garden



bioretention planter



aspen grove - trunks



aspen grove

landscape



vegetated retaining walls



vegetated retaining walls



vegetated retaining walls



vegetated green screen

landscape

EVERGREEN TREES



HOGAN WESTERN RED CEDAR



MOUNTAIN HEMLOCK



JAPANESE WHITE PINE



ARBUTUS

DECIDUOUS TREES



VINE MAPLE



CORAL BARK MAPLE



PACIFIC SUNSET MAPLE



QUAKING ASPEN

EVERGREEN SHRUBS



YEDDO HAWTHORN



SARGOCOCOA, SWEET BOX



LONGLEAF MAHONIA



CEANOTHUS



EVERGREEN HUCKLEBERRY

DECIDUOUS SHRUBS



HEAVENLY BAMBOO



WHITE SPIREA



REGENT SERVICEBERRY

GROUND COVERS



KINKINICK



WILD STRAWBERRY



SEDUM 'AUTUMN FIRE'



SALAL

FERNS



SWORD FERN

VINES



CLIMBING HYDRANGEA



STAR JASMINE



BOSTON IVY

FIRE STATION # 20
PLANT MATERIAL