South Transfer Station Phase II

Seattle Design Commission – Concept Level
Oct 18, 2018

City of Seattle

Agenda

1. Project Re-Introduction
2. Project Goals, Scope and Design Parameters
3. Site Layout
4. User Experience
5. Architectural Concept
6. Sustainability Approach
7. Schedule

Project Goals

- Landfill closure is required by Dept. of Ecology.
  - Design criteria approved through Agreed Order
- Meeting regulatory landfill closure requirements
  - Cover system, surface water, landfill gas
- Cohesive site layout
- Efficient use of space
- Site access management (public and non- public areas)
- Perform mitigation that benefits community
- Minimize community impacts
- Minimize service interruption during construction

SPU Solid Waste Facility System

RSJI TOOLKIT AND SPU

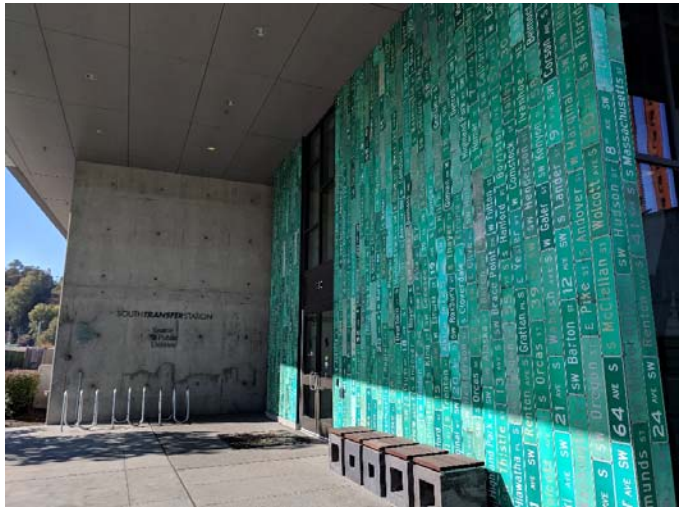
- **Utility-wide:**
  - Tools embedded into asset management-Stage gate process
  - EJSE staff part of project “Core Team”

- **Project specific:**
  - Provide comparable services between north and south facilities
  - Met for a year with representative community stakeholder group
  - Focus on environmental benefits, access to free recycling and hazardous waste disposal, and operational efficiencies
  - Currently partnering with DON Community Liaisons to engage South Park’s Spanish- and Vietnamese-speaking communities and small businesses

Community Outreach Process

- Four meetings with project stakeholders
- Participation in community events to gain input on project elements
- Drop in sessions for residential and business neighbors
- Community outreach for public artwork conducted via Office of Arts & Culture

Community input

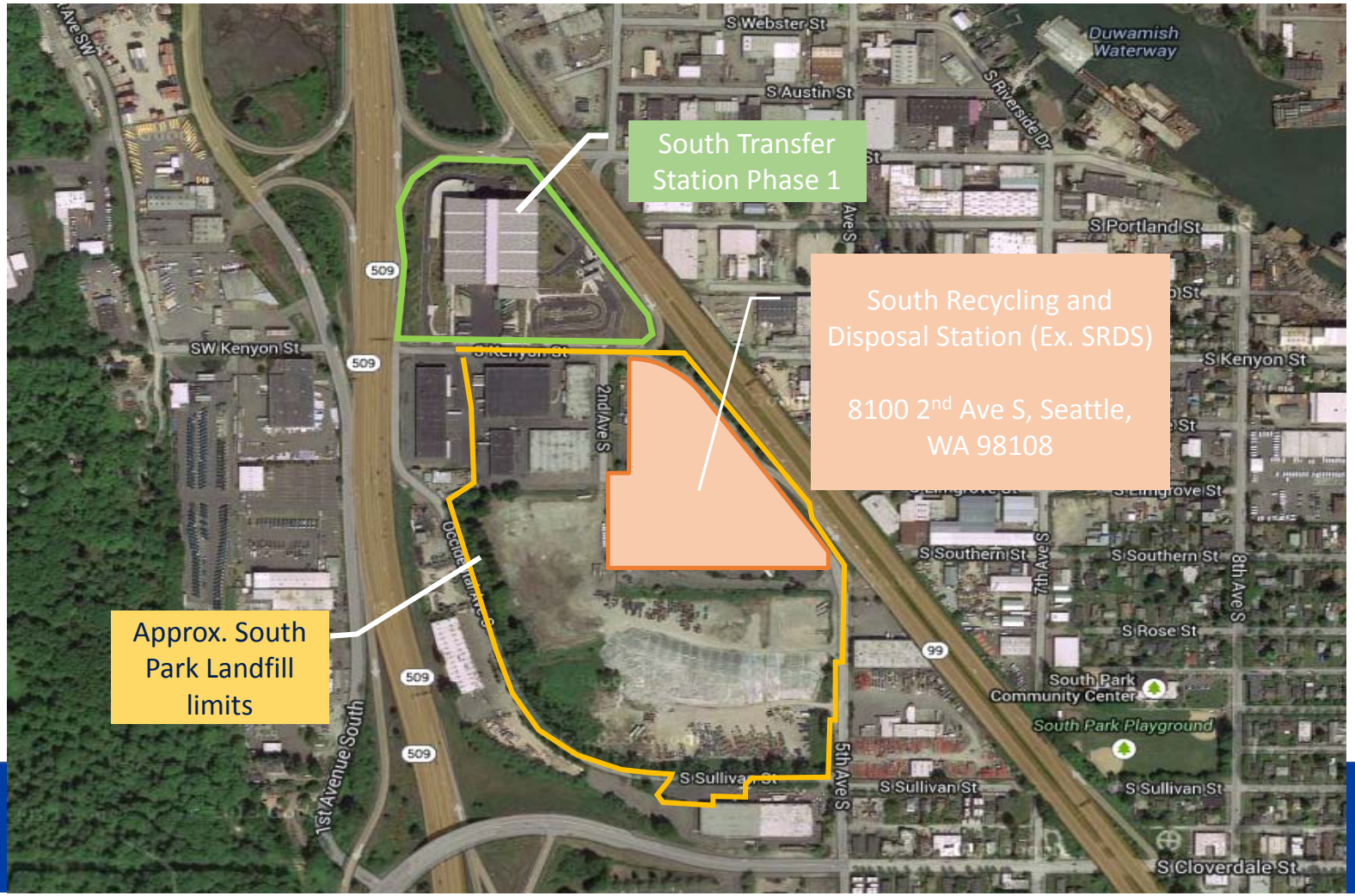


When asked "What do you like about the South Transfer Station architecture…?"

- Artwork
- Recycled pieces, "found art" wall
- View to tipping floor
- Use of daylight and diffused lighting is a success in this project
- Use of different materials (metal, concrete)
- Has a feeling of being grounded to site, connected to landscape
- Like the identification of the site at night using lighting

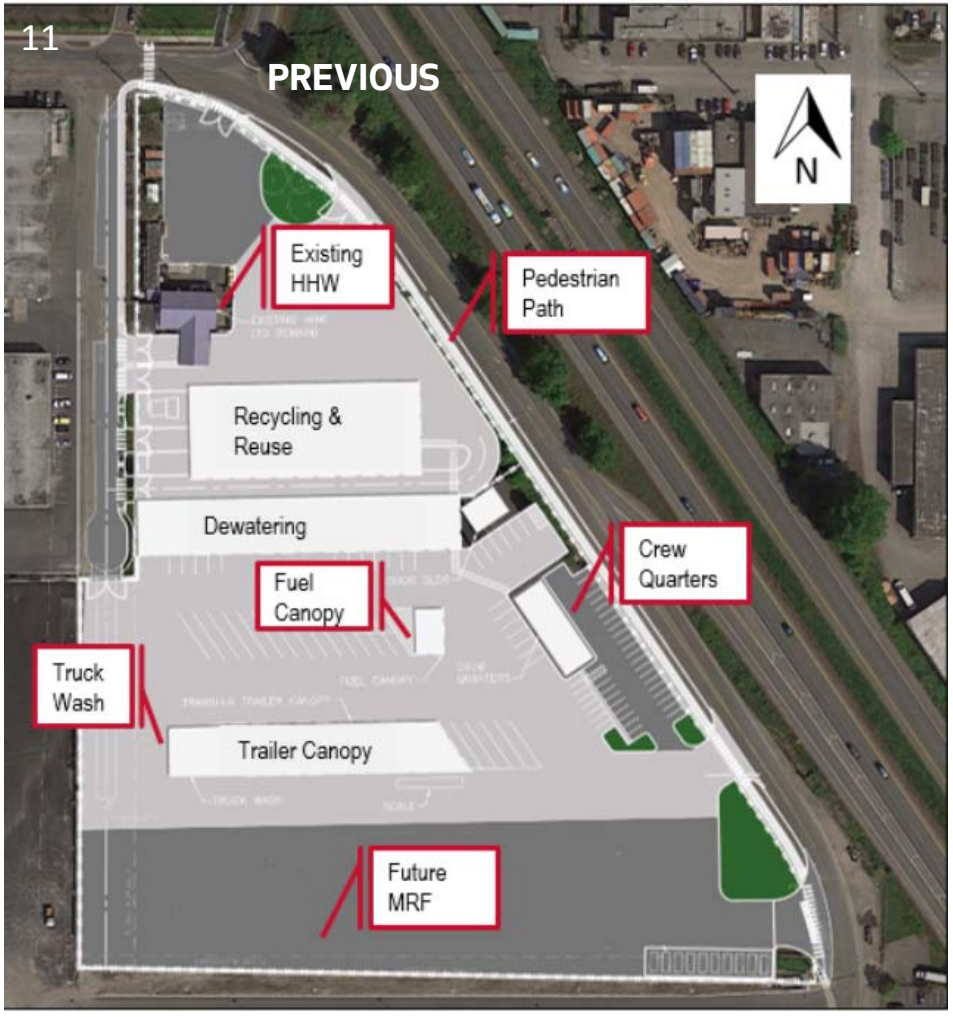
Design Parameters

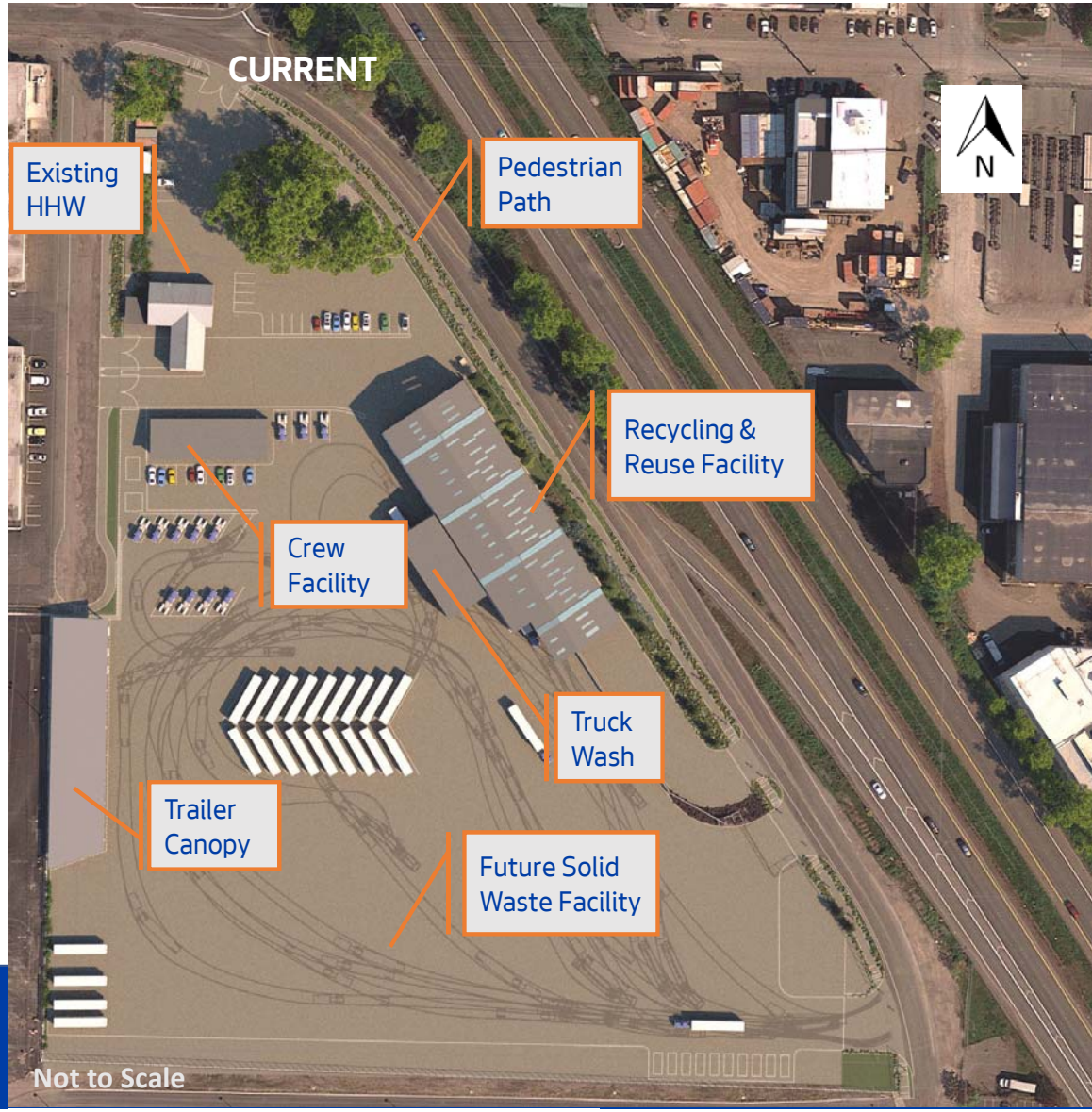
Existing Conditions



Project Scope and Design Parameters

- Limitations due to landfill (membrane cover system, limited soil depth, no infiltration)
- Separation of public and SPU-only areas
- Perimeter security fence
- Lighting (safety, security inside fence)
- Single-story buildings
- Connection with existing South Transfer Station Phase 1





Proposed Site Layout

Improved Tree Retention

To be removed

Was previously to be removed, now retained

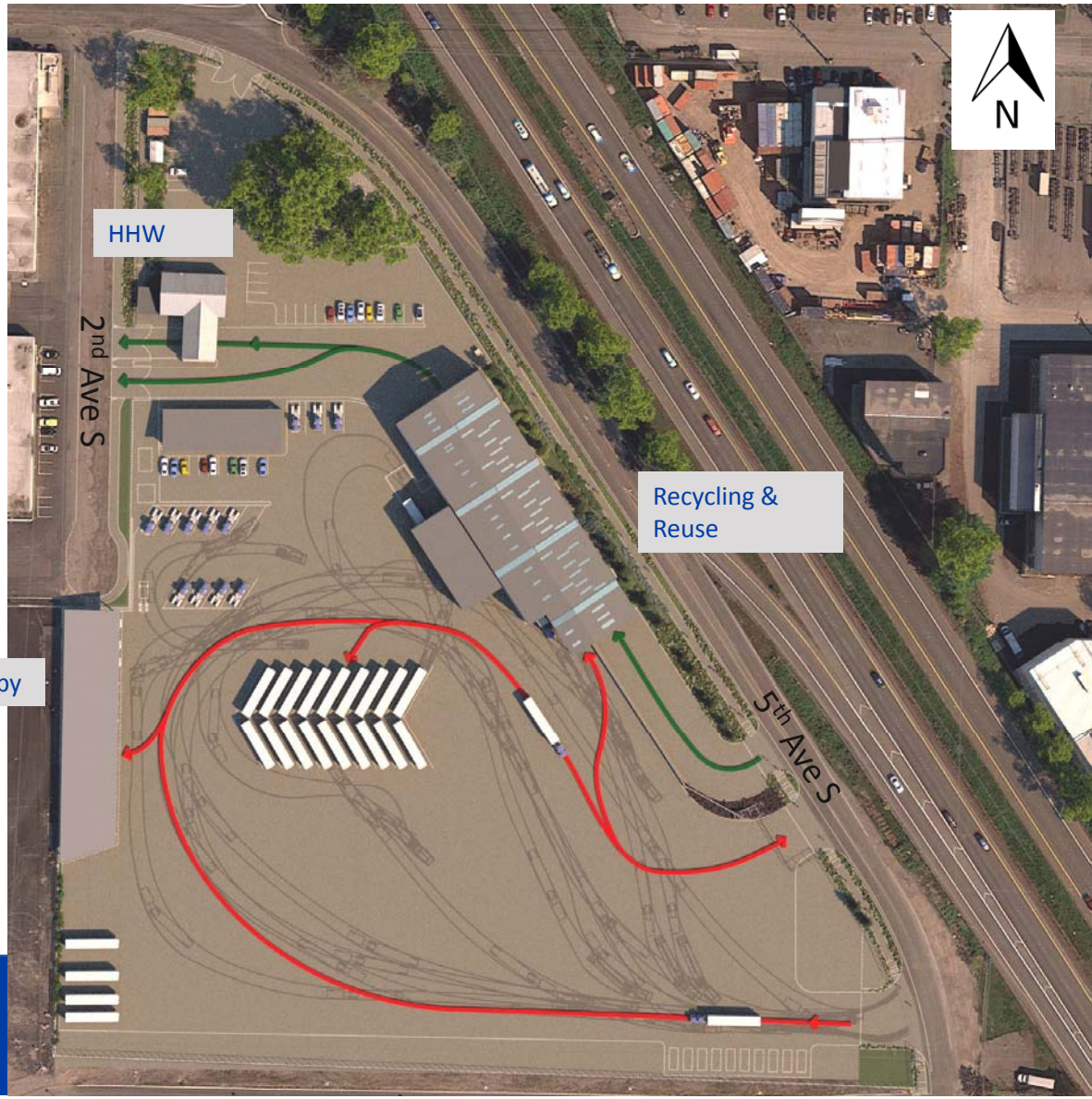
Was originally to remain, no change

City of Seattle

Site Circulation

Public Vehicles

Solid Waste Trucks



Transfer Station Functional Relationship

Customer traffic →

SPU truck traffic →

Facility Signage Concept

User Experience

Pedestrian Path

- Pedestrian users – walk to nearby bus stops
- Connect Mara Farms to Alki Trail (missing link)
- Connects to existing sidewalk from south and to STS Phase 1

A

B


KEY MAP
2ND AVE S: LOOKING SOUTH


KEY MAP
EXISTING GROVE OF TREES


KEY MAP
5TH AVE S: LOOKING SOUTH


KEY MAP
5TH AVE S: LOOKING NORTH

Initial Landscape Concept

Previous Design

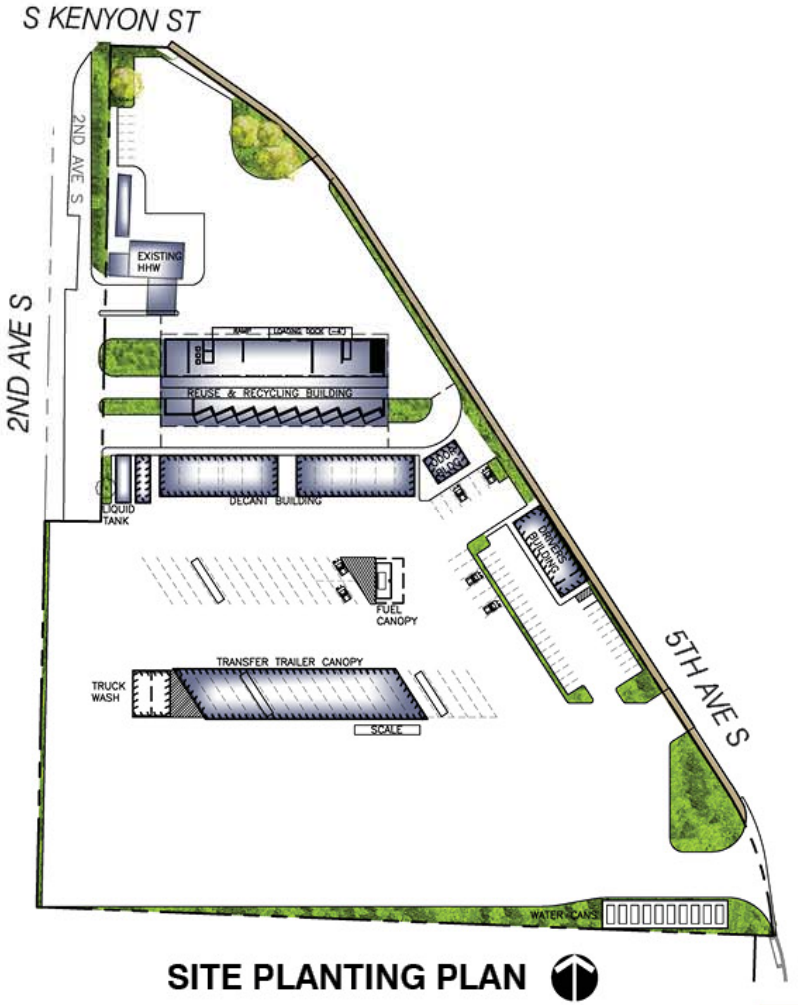
- Pedestrian path with 2 rest/bench areas
- Non-permeable membrane caps the landfill
- 24" soil depth above cap
- Trees not allowed
- No irrigation possible
- Plants selected for low soil volume only
  - No trees or shrubs
  - Grass lawn
  - Sedges/rushes/perennials
- Ex. Grove of trees - 5 protected
- Consistency with phase 1 campus not possible

LEGEND

Existing trees to remain (6)

Low height planting

Pedestrian Trail



SITE PLANTING PLAN

HBB

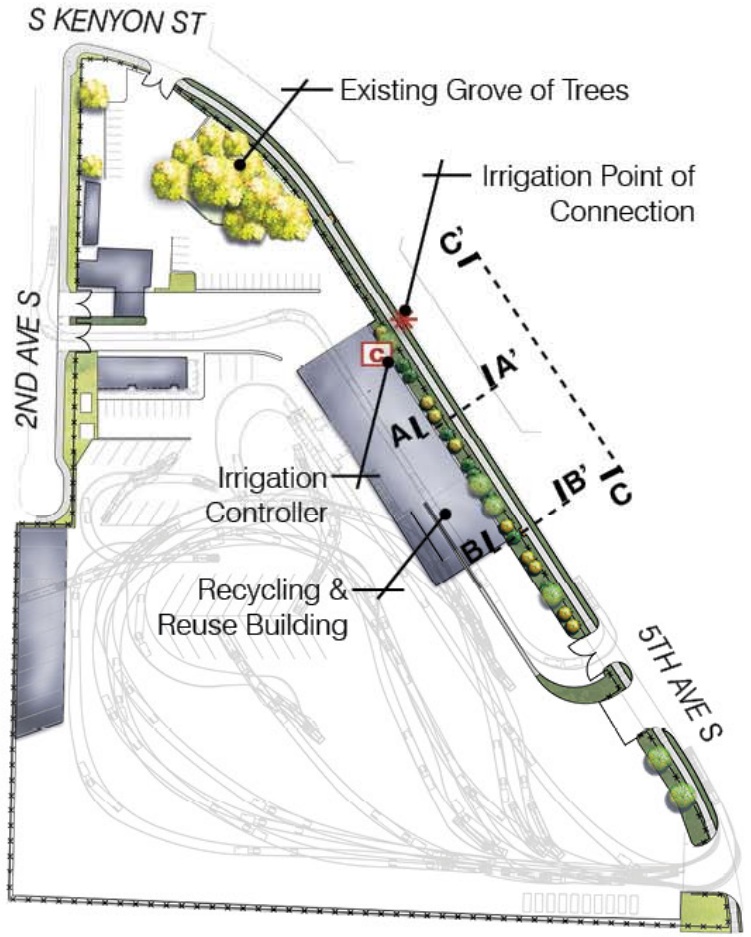
Updated Landscape Concept

Rethinking the Design

- Pedestrian path with 2 rest/bench areas
- Non-permeable membrane caps the landfill with the exception of the east side of site
- 24" soil depth above cap with the exception of the east side of site
- Trees allowed along 5th Ave S
- Irrigation possible along 5th Ave S
- Plant selection
  - 21 trees provided with low shrubs
  - Trees selected for phytoremediation qualities
  - Plants consistent with STS Phase 1
  - Sedges/rushes
- Ex. Grove of trees - 11 protected
- Consistency with phase 1 campus possible

LEGEND

- Existing Trees to Remain (13)
- Proposed Trees in Phytoremediation Tree Row (21)
- Proposed Amenity Planting (Irrigated)
- Eco-Lawn Seed Mix (Not Irrigated)
- Gabion Benches (2)
- Pedestrian Trail



SITE PLANTING PLAN

HBB LANDSCAPE ARCHITECTURE

Cohesive Campus: Existing STS Ph. 1 Photos

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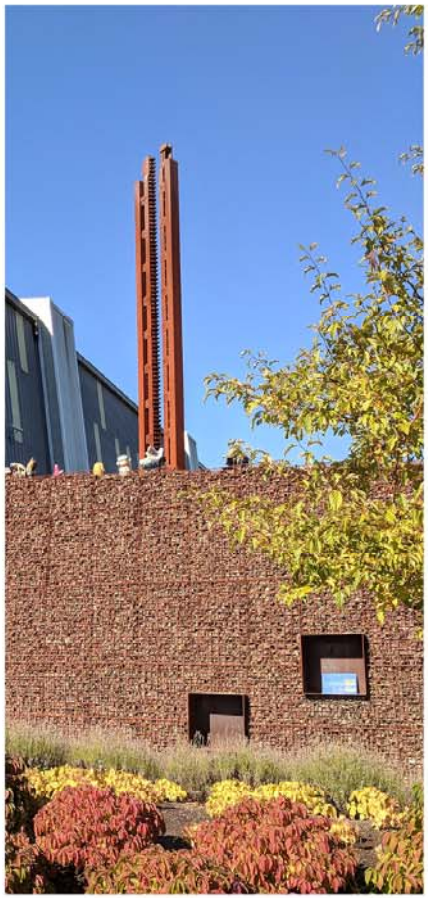


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LANDSCAPE ARCHITECTURE

Cohesive Campus: Plant Palette

18 October 2018

CORNUS SERICEA 'KELSEYI' /
RED-OSIER DOGWOOD

2.5' HT X 2.5' W

PRUNUS LAUROCERSUS 'MT. VERNON' /
MT VERNON LAUREL

1' HT X 3' W

JUNCUS PATENS 'ELK BLUE' /
ELK BLUE RUSH

1.5' HT X 1.5' W

SALIX PURPUREA 'CANYON BLUE' /
DWARF BLUE ARCTIC WILLOW

4' HT X 3' W

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LANDSCAPE ARCHITECTURE

Cohesive Campus: Plant Palette

18 October 2018

LAVANDULA ANGUSTIFOLIA /
ENGLISH LAVENDER

1.5' HT X 2' W

TAXUS X MEDIA 'DENSIFORMIS' /
CREEPING YEW

3' HT X 5' W

POTENTILLA FRUTICOSA 'GOLD STAR' /
GOLD STAR POTENTILLA

2' HT X 3' W

ECO-LAWN SEED (SDOT SEED MIX #5)

EUONYMUS ALATUS
BURNING BUSH

10' HT X 10' W

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LANDSCAPE ARCHITECTURE

Existing Grove: Preserved as is

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LANDSCAPE ARCHITECTURE

5th Ave S Tree Row

18 October 2018

Pinus flexilis 'Vanderwolf's Pyramid' /
Limber Pine

- Pine trees can remediate chlorinated solvents
- 20' – 25' mature height; 10' – 13' mature spread (in constrained soil conditions)
- Drought tolerant when established
- Listed as a 2017 tree for Seattle on City of Seattle website
- Excellent pest and disease resistance
- Roots are tolerant of restrictive soil volumes

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LANDSCAPE ARCHITECTURE

5th Ave S Tree Row

18 October 2018

Pinus heldreichii var. leucodermis /
Bosnian Pine

- Pine trees can remediate chlorinated solvents
- 30' – 35' mature height; 10' – 13' mature spread (in constrained soil conditions)
- Dense, pyramidal tree that makes an excellent accent or windbreak
- Tough, versatile, tolerant of a wide variety of growing conditions
- No major insect or disease problems

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LANDSCAPE ARCHITECTURE

5th Ave S Tree Row

18 October 2018

Liquidambar styraciflua 'Clydesform' /
Emerald Sentinel® Sweetgum

- Sweetgum trees can remediate chlorinated solvents
- Ideal for busy streets and poor air quality areas
- 30' – 35' mature height; 10' – 15' mature spread (in constrained soil conditions)
- Drought-tolerant when established
- Excellent red fall color and persistent leaves

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LANDSCAPE ARCHITECTURE

5th Ave S Tree Row

18 October 2018

Platanus occidentalis /
Sycamore

- Sycamore trees can remediate chlorinated solvents
- 45' – 65' mature height; 35' – 60' mature spread (in constrained soil conditions)
- Drought tolerant when established
- Listed as a 2017 tree for Seattle on City of Seattle website
- Tolerant of urban pollutants

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LANDSCAPE ARCHITECTURE

Landscape Sections: 5th Ave S

18 October 2018

EXISTING PEDESTRIAN PATH ON S KENYON ST

SECTION A-A' Pedestrian Pathway at Recycling & Reuse Building

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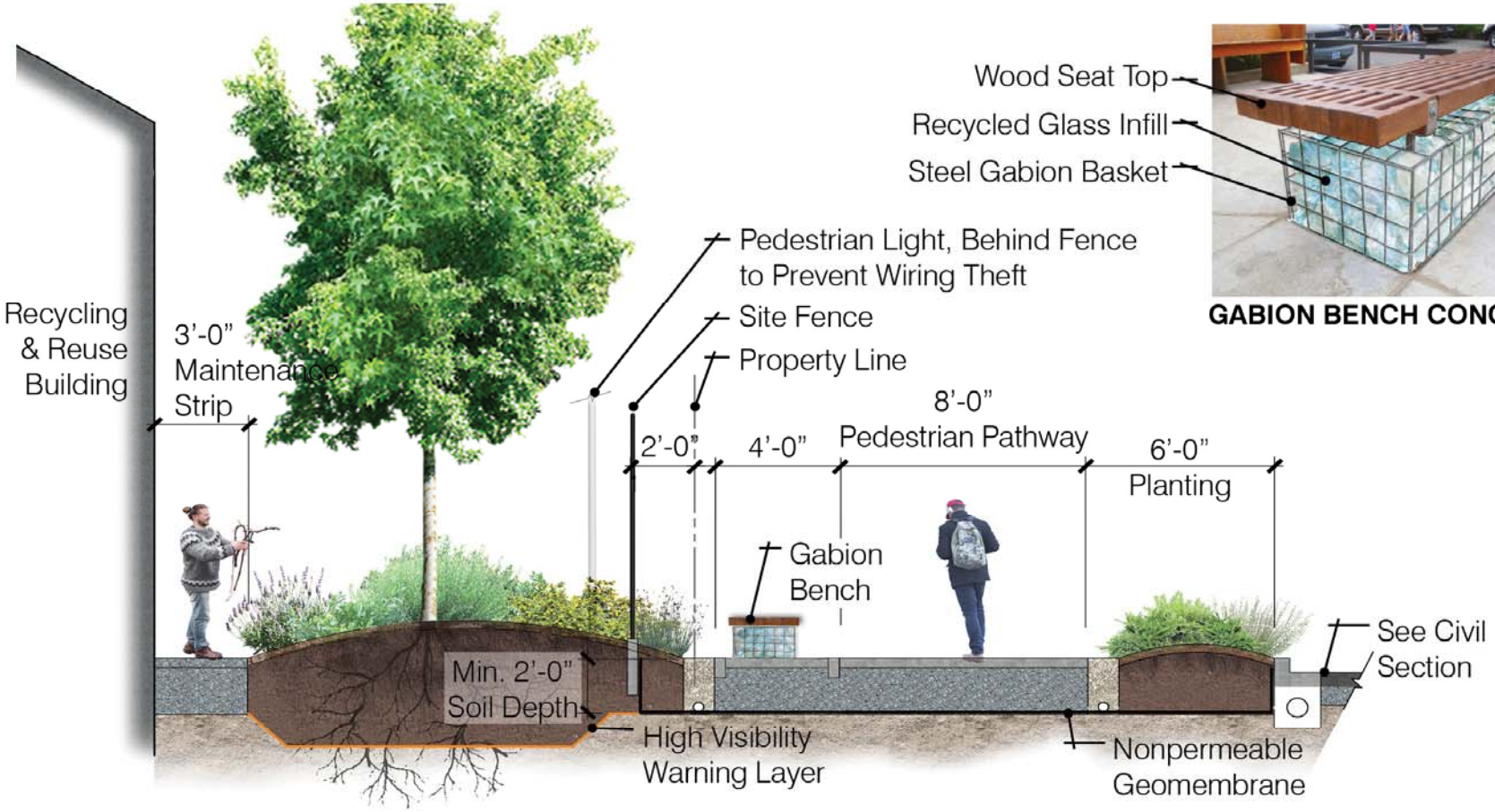
Landscape Sections: 5th Ave S

18 October 2018



GABION BENCH CONCEPT

SECTION B-B' Pedestrian Pathway at Gabion Bench

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Landscape Elevations C-C': 5th Ave S

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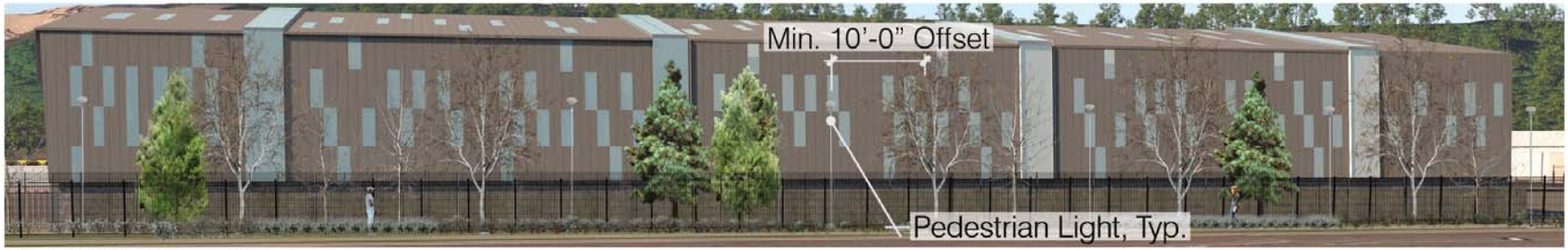
ELEVATION Summer

ELEVATION Autumn



ELEVATION Winter

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LANDSCAPE ARCHITECTURE

Architectural Concept

Facility Architecture

The Miller Hull Partnership

- Objective to provide similar " look and feel" to South Transfer Station Ph 1
  - Metal buildings
  - Emphasis on daylighting
  - Focus on specific elements

Site arrangement

aerial bird's eye view

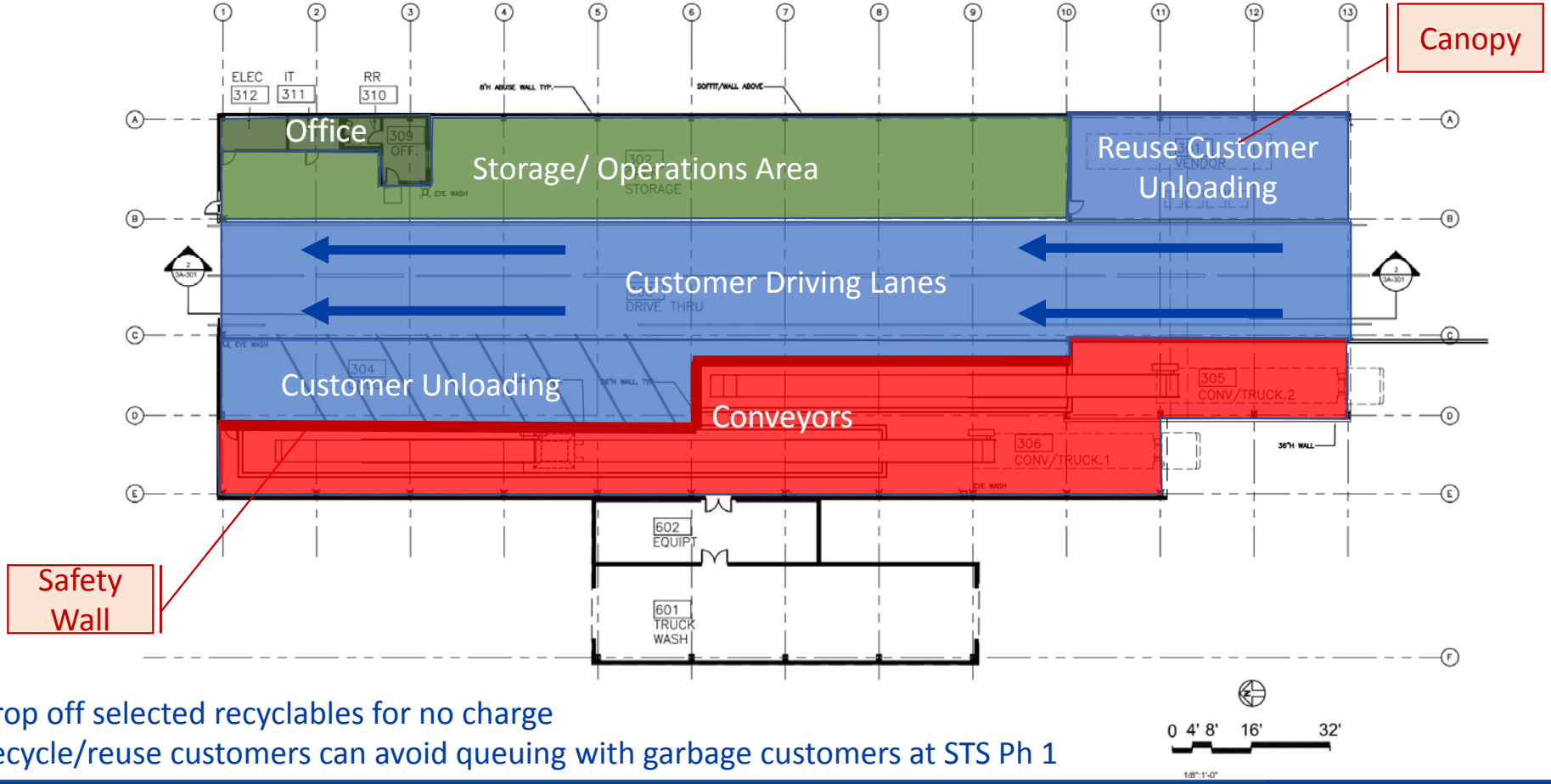
DESIGN MATERIALITY
TEXTURES AND PATTERNS




City of Seattle

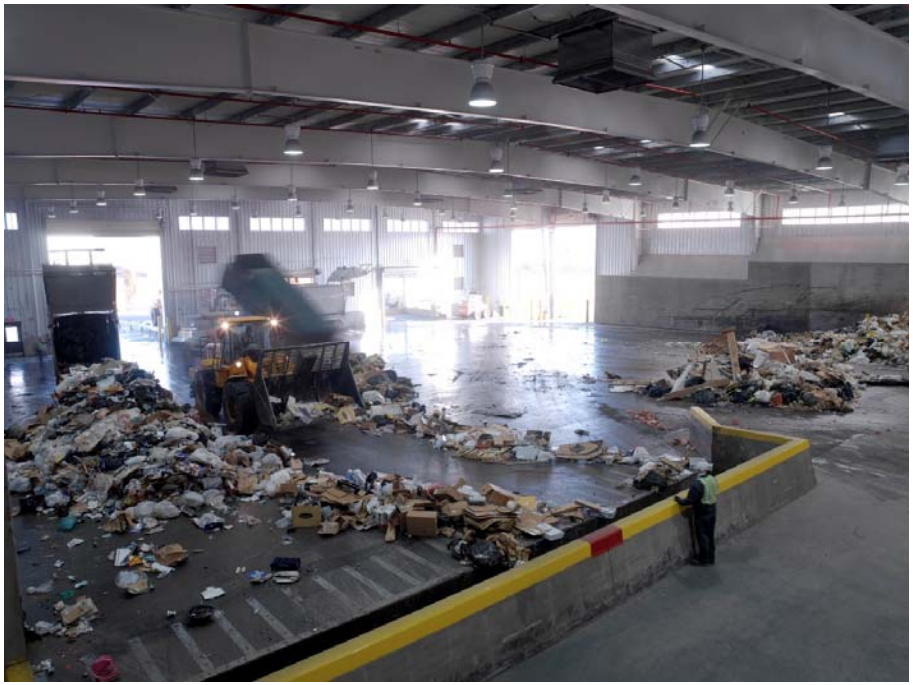
Recycling & Reuse Building

Recycling & Reuse Building - Floor Plan



- Drop off selected recyclables for no charge
- Recycle/reuse customers can avoid queuing with garbage customers at STS Ph 1

Recycling & Reuse Facility



Concrete safety wall for customer unloading

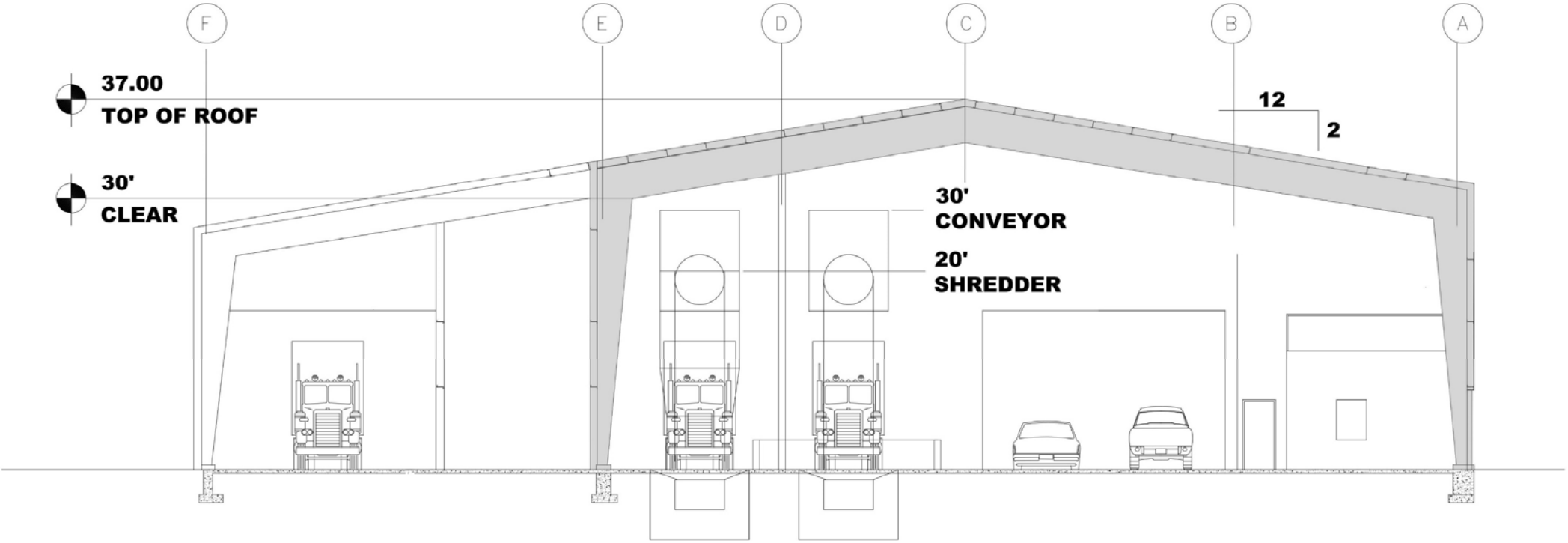
Heavier metals to be unloaded directly onto floor

Recycling & Reuse Facility

Conveyor elevate materials

Slow-speed shredder to improve density for hauling

Recycling & Reuse Facility

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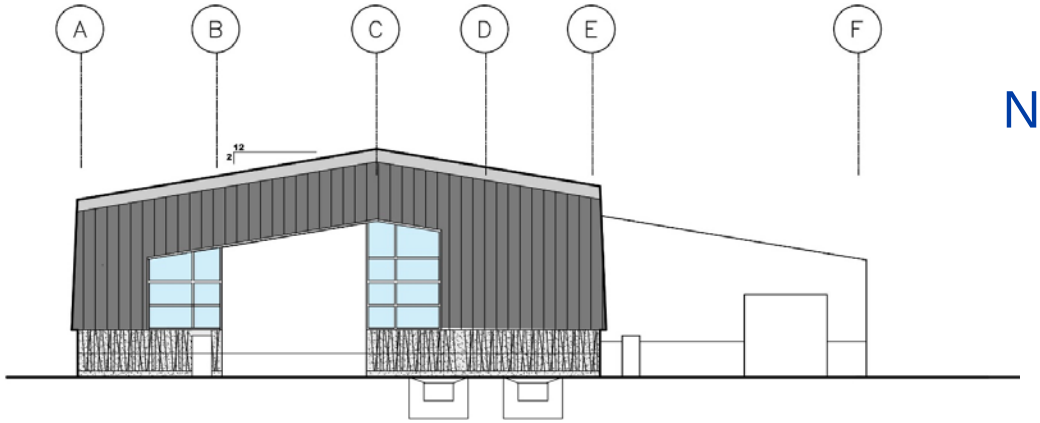
Texture & Pattern

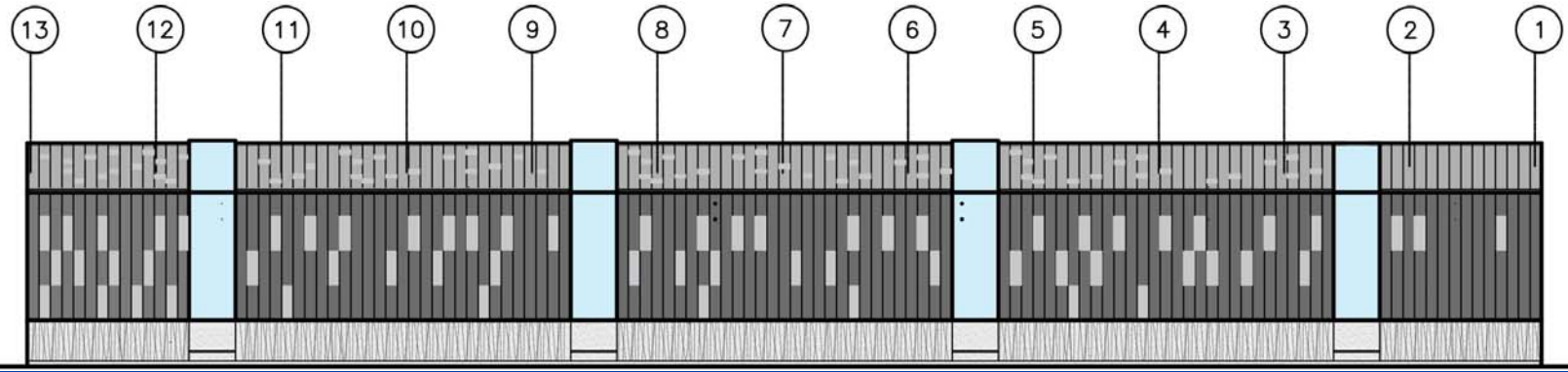
ELEVATIONS: Concrete, Material Panels, Translucent Panels



North Elevation

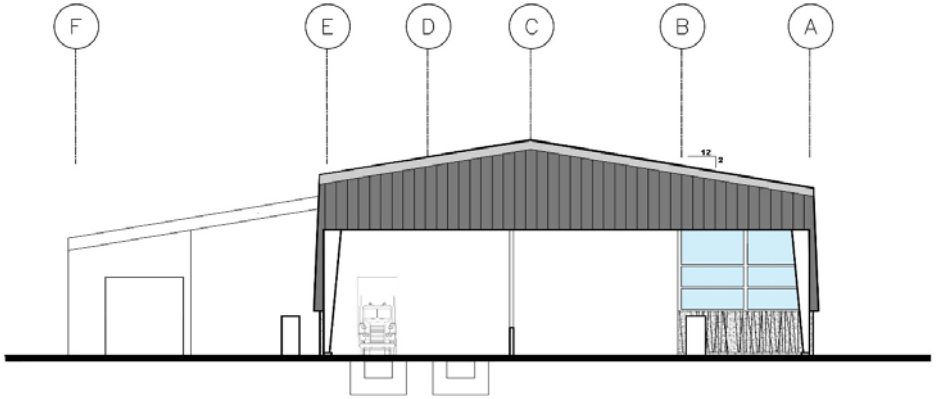
INSPIRATION MATERIALS

East Elevation



Texture & Pattern

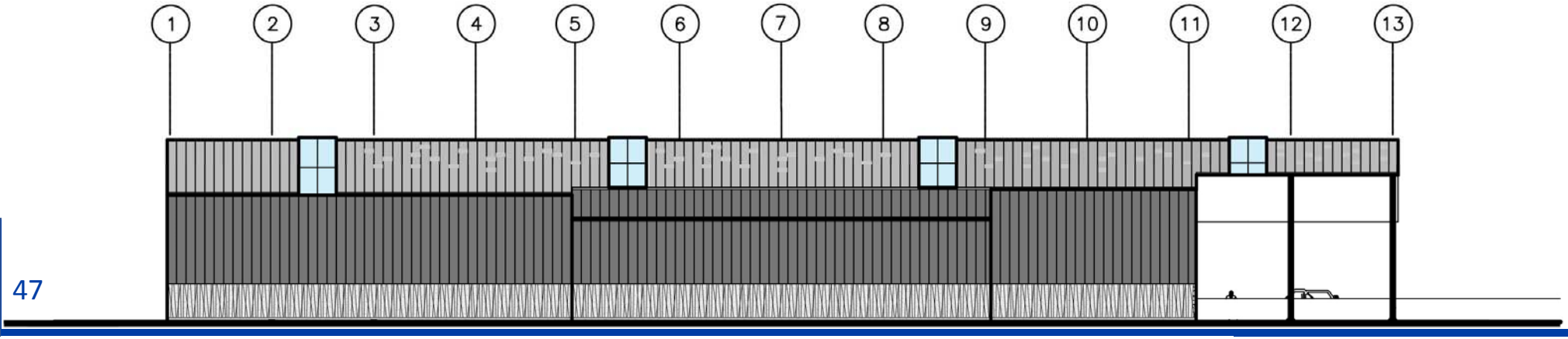
ELEVATIONS: Concrete, Material Panels, Translucent Panels



South Elevation

INSPIRATION MATERIALS

West Elevation



Sustainability Approach

SUSTAINABILITY PROGRAMS

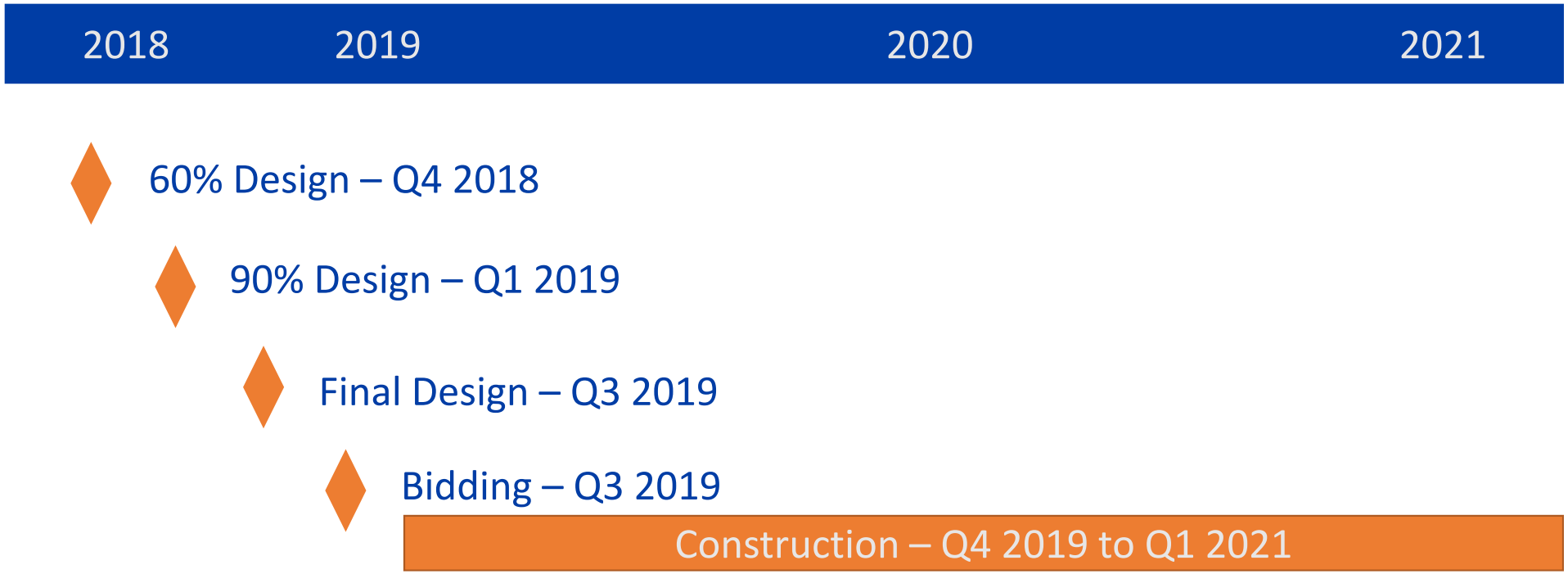
LEED (v4)		CAPITAL GREEN
Integrative Process	✓	*Using Capital GREEN is an integrative process*
Location and Transportation	✓	Site, Climate
Site Selection	✓	Site
Water Efficiency	✓	Water
Energy and Atmosphere	✓	Energy, Climate
Materials and Resources	✓	Materials
Indoor Environmental Quality	✓	Indoor Environment

Project Sustainable Elements

- **Sustainable objectives are set to meet the City of Seattle objectives:**
  - ***Project objective: Capital GREEN***

1. Repurposing of closed landfill site
2. Successful negotiation with Ecology for tree planting
3. Reuse of demolition material
4. Use of recycled content materials (i.e. recycled asphalt)
5. Vehicle charging stations and provisions for future truck charging
6. Reduction of site energy use
7. Reduction of water use
8. Reduction of off site light pollution
9. Underground provisions to minimize disturbance to landfill for re-development

Project Schedule



THANK YOU.