



Design Advisory Group Meeting #6

Thursday, February 18, 2016

6:00 p.m. – 8:00 p.m.

Community Outreach

- Near neighbor outreach
 - 121 people at 111 businesses
 - 6 languages
- Martin Court
- Partnerships
 - Georgetown Community Council
 - Office of Sustainability and Environment
 - Maple Elementary
 - South Seattle College
- Equity and Social Justice Action Plan

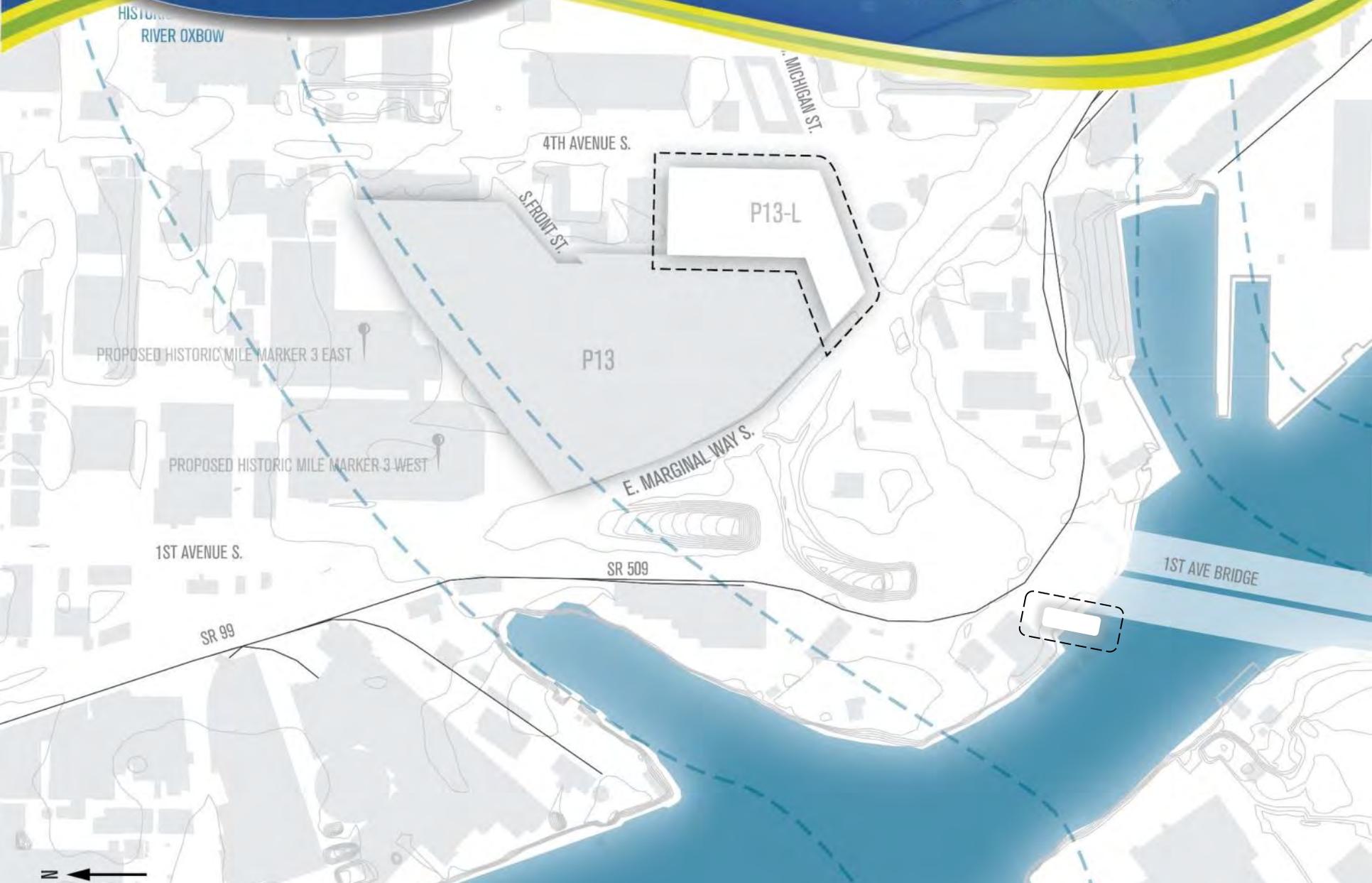


- Reflect the **individual character** of the neighborhood; from whimsical to hard working, industrial to residential, and handmade to natural systems.
- Enhance air and water quality while **making both natural and treatment processes visible**.
- Enhance the **understanding of public wastewater infrastructure** through education and employment opportunities.
- Balance the **public and private spaces** to meet the needs of the utility and the community.
- **Acknowledge the place, history, color palette, and transformations over time in Georgetown.**
- **Humanize the design** by expressing craft, grit, and elegance at all scales, resulting in a place of neighborhood pride.
- Create a facility that is **environmentally and socially sustainable** through conservation, efficiency and stewardship.
- Reflect the value of and **connection to the Duwamish River** and its benefits for the region.

GEORGETOWN

Wet Weather Treatment Station

 King County
Protecting Our Waters
Doing our part on rainy days



GEORGETOWN

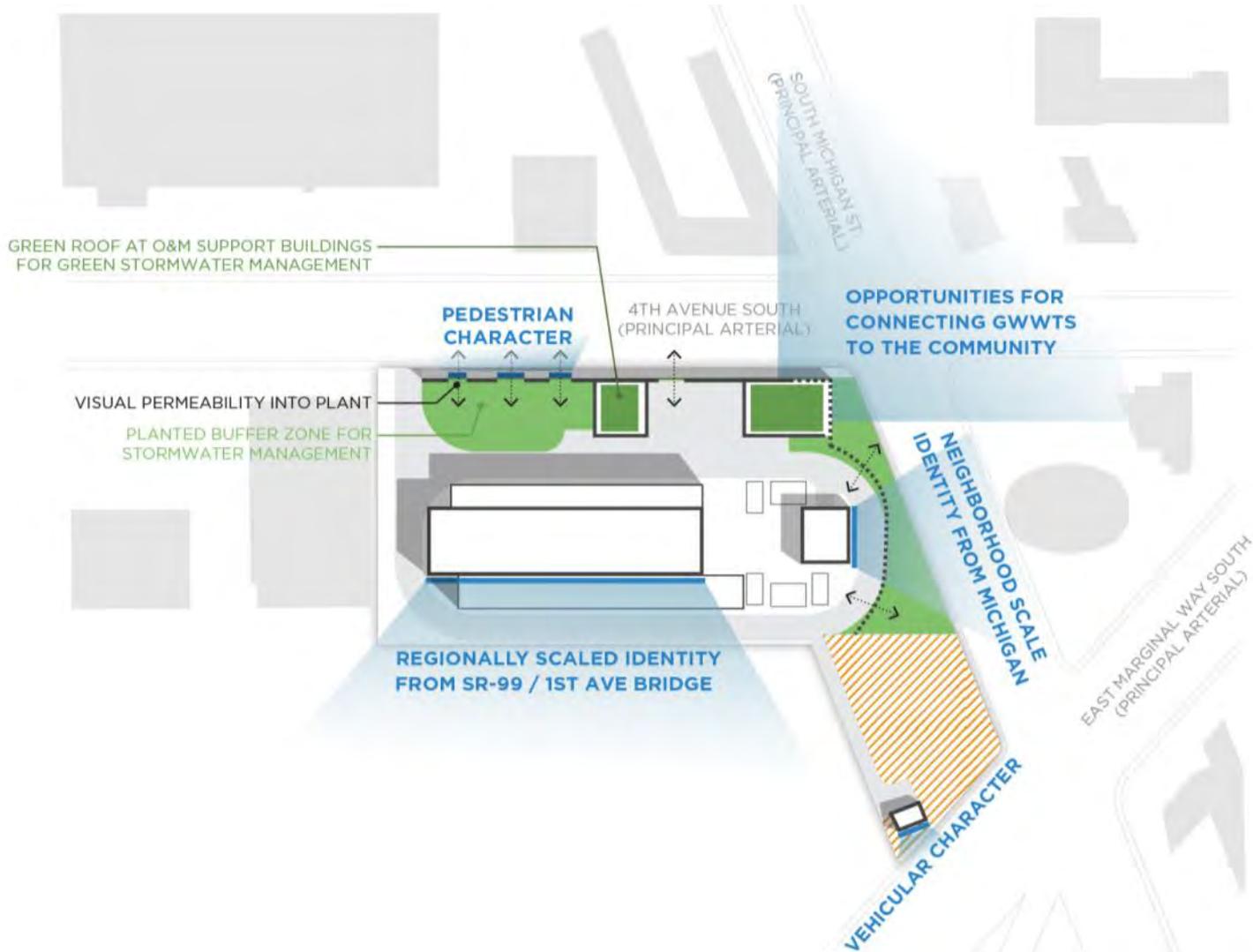
Wet Weather Treatment Station



King County

Protecting Our Waters

Doing our part on rainy days



CSO ART MASTERPLAN



Development updates





The tour of Brightwater treatment plant, with thorough explanations of the processes involved.



Lincoln Park Way, GSI on 34th Ave SW, Hanford 1



Bob Peterson

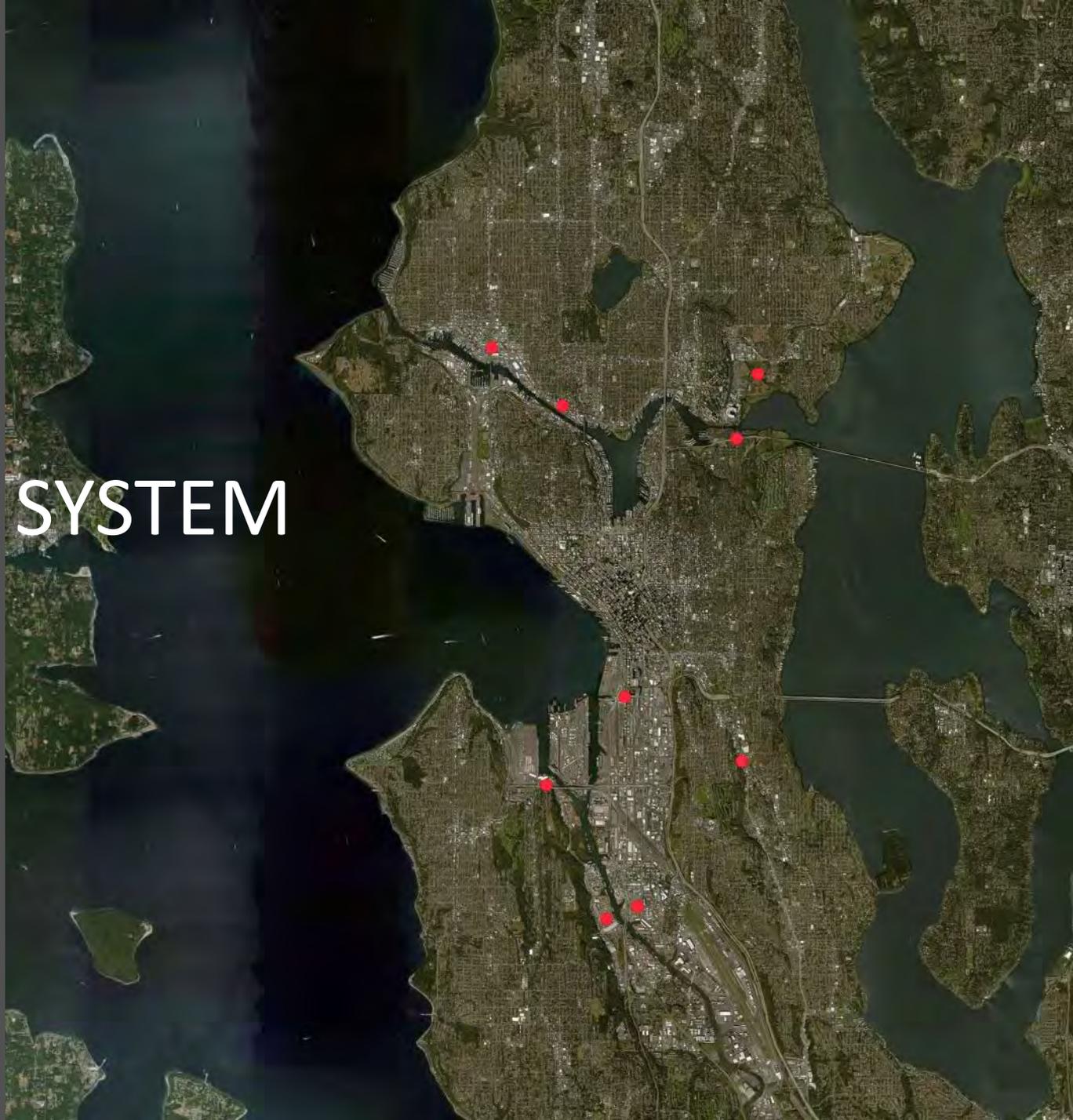


Tribal Liason, Duwamish Revealed, Riverside Memorial

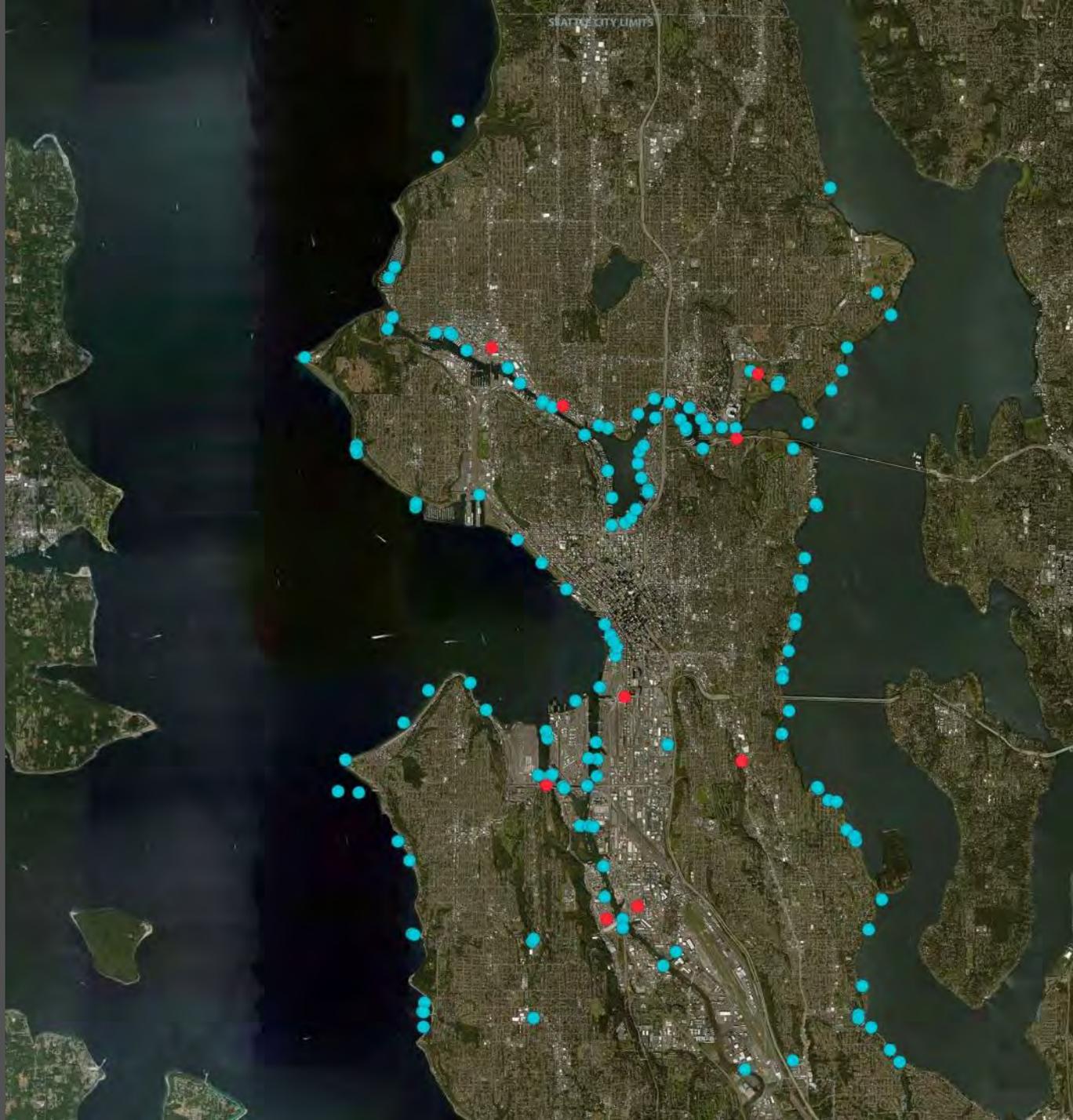
APPETITE

- > A program of art of global significance, presence, status, reputation
- > Fulfill (if not exceed) community expectation
- > Connect and involve folks outside CSO - not to be in isolation
- > Increase knowledge and understanding of infrastructure and environment
- > Work of scale and impact - Less little bits
- > Create and emotional connection to the CSO system for citizens

CITY-WIDE SYSTEM



SEATTLE CITY LIMITS





STORAGE

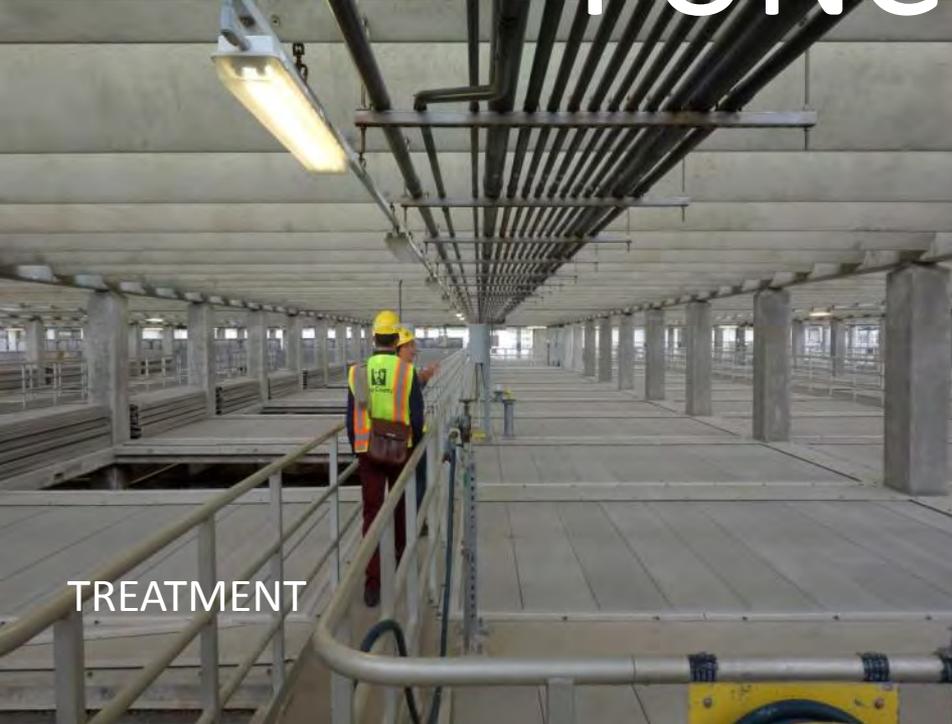


CONVEYANCE



FUNCTIONS

TREATMENT

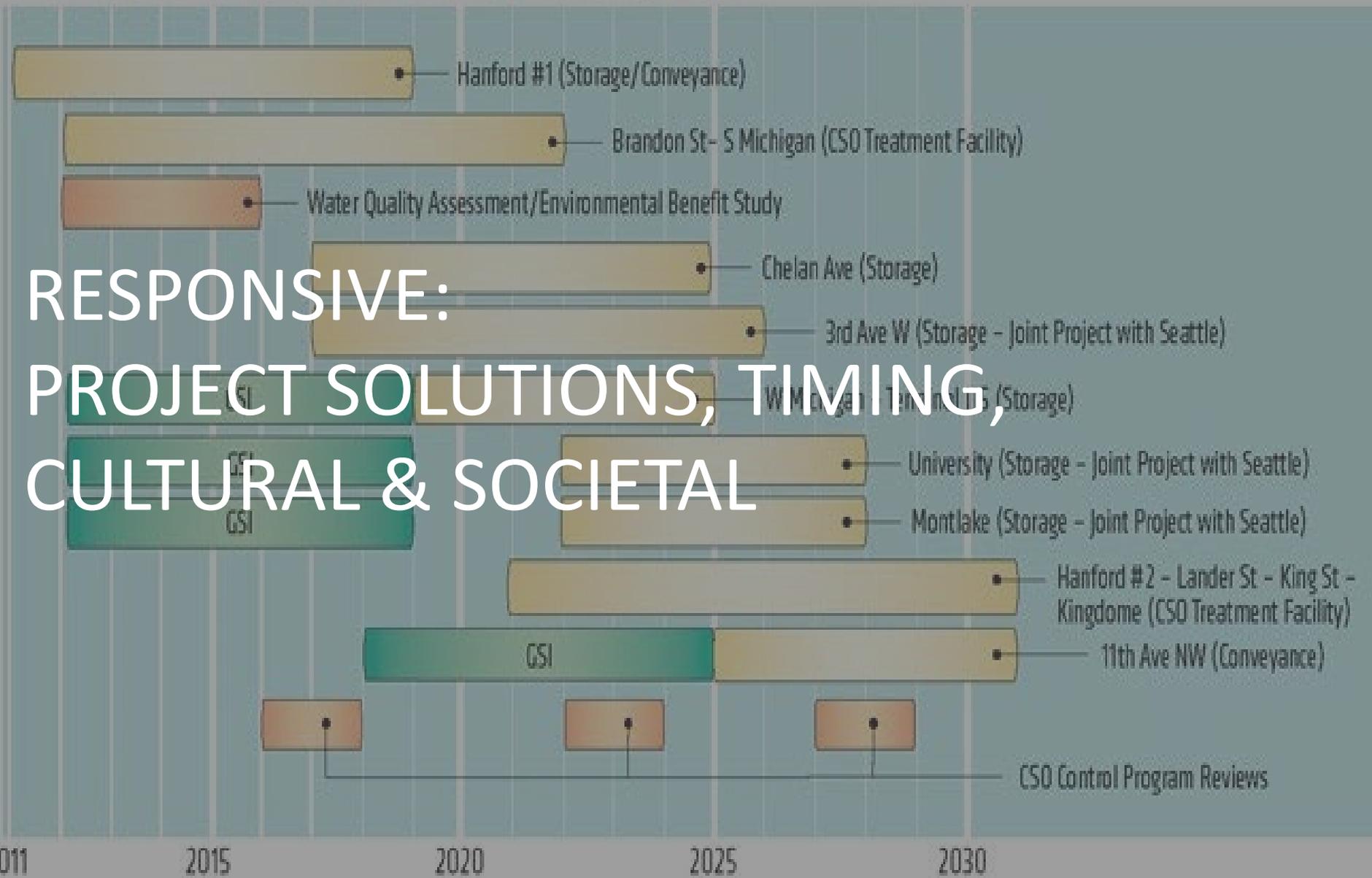


GREEN STORMWATER
INFRASTRUCTURE



Schedule to Complete CSO Control Plan by 2030

RESPONSIVE:
PROJECT SOLUTIONS, TIMING,
CULTURAL & SOCIETAL

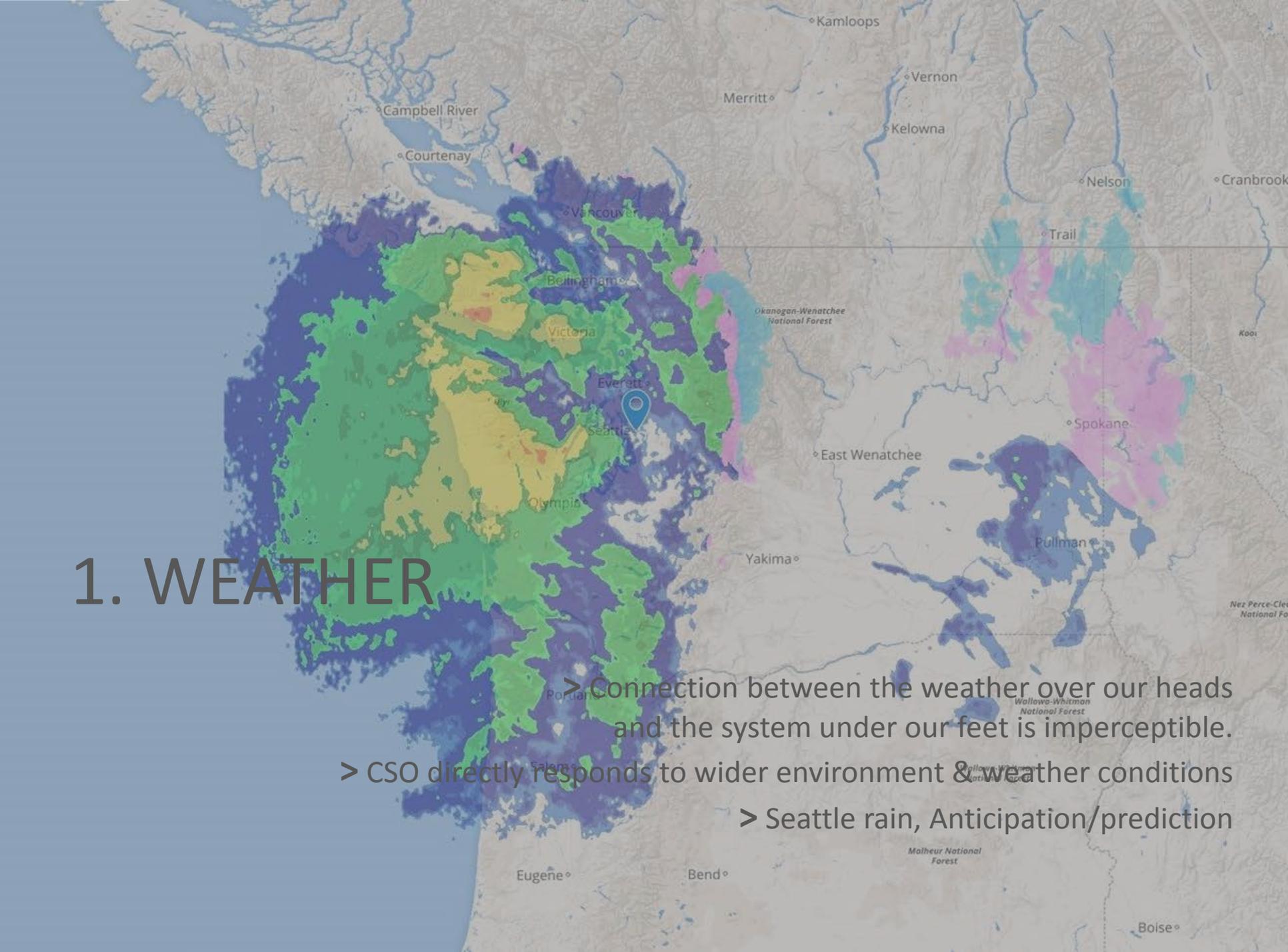


Note: All project timelines include planning, design, and construction phases.

ISSUE BASED

1. WEATHER

- > Connection between the weather over our heads and the system under our feet is imperceptible.
- > CSO directly responds to wider environment & weather conditions
 - > Seattle rain, Anticipation/prediction



2. HIDDEN RIVERS / INVISIBLE ARCHITECTURE

- > Underneath the city, hundreds of miles of (water) pipes crisscross our neighbourhoods, some big enough to drive cars through them.
- > This whole built infrastructure allows the visible city above ground to operate but is rarely thought about.
- > where in the system does the work happen, cycle of visible/invisible, points of contact

3. IMPERCEPTIBLE

- > How can the technical data feed the imagination
- > How can we see what they know
- > Data sharing, mapping
- > Recording, tracking



4. THE MAGICIANS



> The stories, the legends, the faces

> Ambassadors

> The weight of the work: the balance and critical nature of keeping the system going

5. END OF THE LINE

- > Connecting the hills to the rivers
- > Relationship to natural environment, recreational, cultural, historical
- > Impact/result (time); All the effort in building the CSO system to avoid the end of line question / issue / problem

RELATIONSHIPS:

INFORMED, IN-DEPTH, FOCUSED

GEORGETOWN
Wet Weather Treatment Station



VARIETY OF APPROACHES

King County
Protecting Our Waters
Doing our part on rainy days





COMMISSIONS

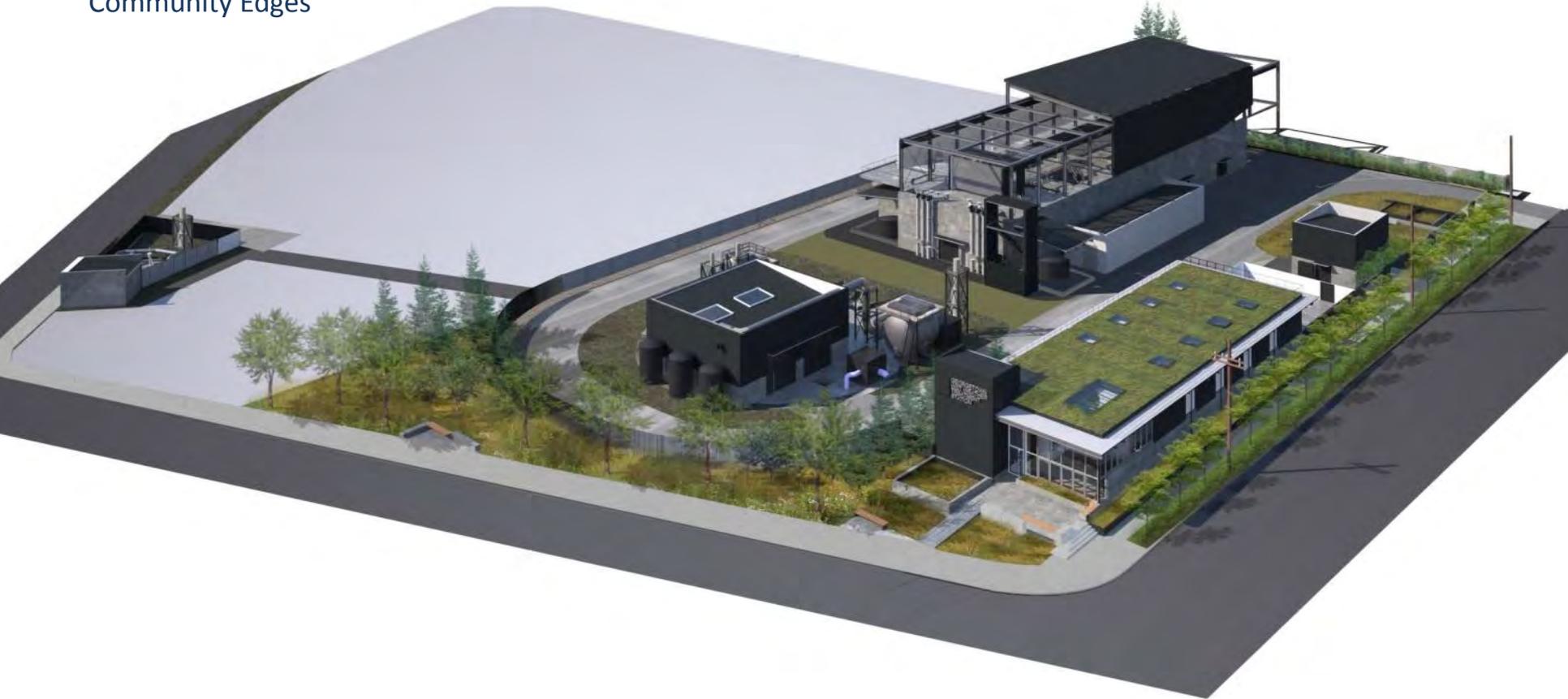
- > 8 areas of work
- > 14 commissions
- > 15 years
- > 9 sites

Concept Development

Water Systems

Materials & Visible Processes

Community Edges



Surface Water Systems

Enhance air & water quality while making processes visible

Understanding of public wastewater infrastructure

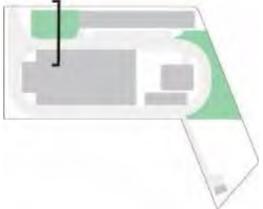
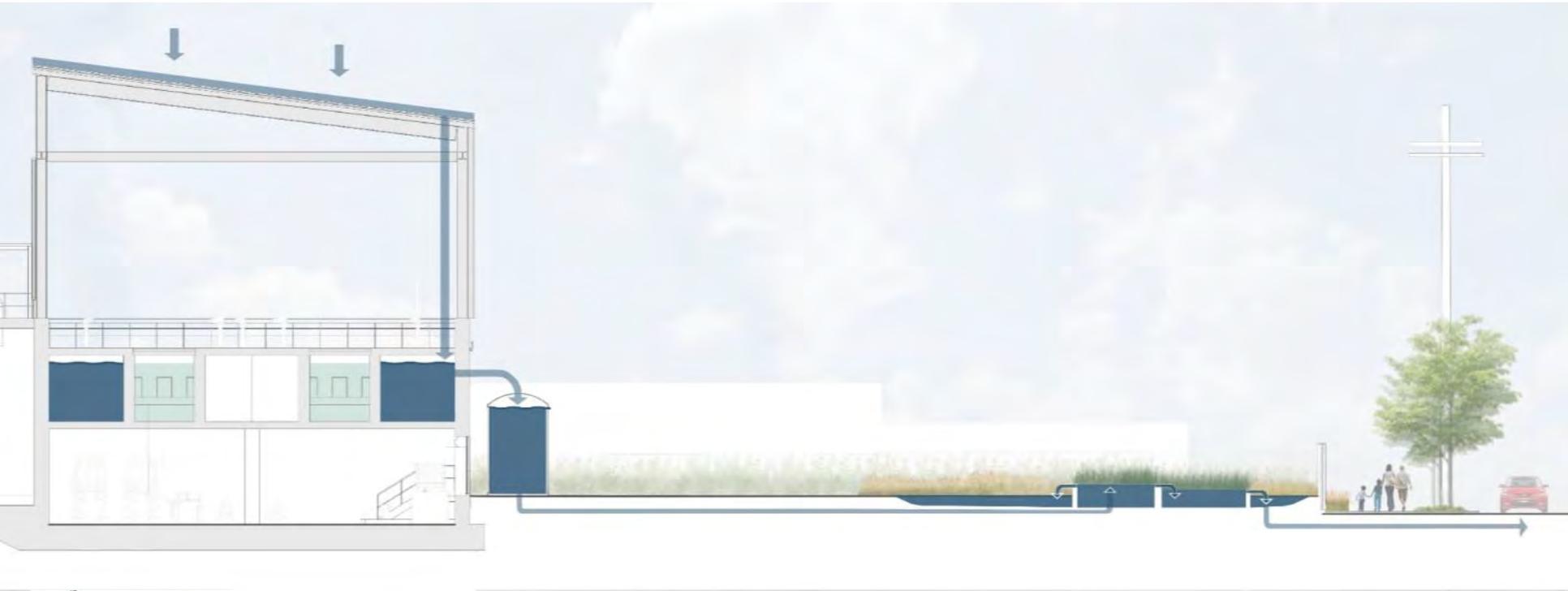
Environmentally & socially sustainable

Connection to the Duwamish River



Rainwater Capturing – 4th Avenue

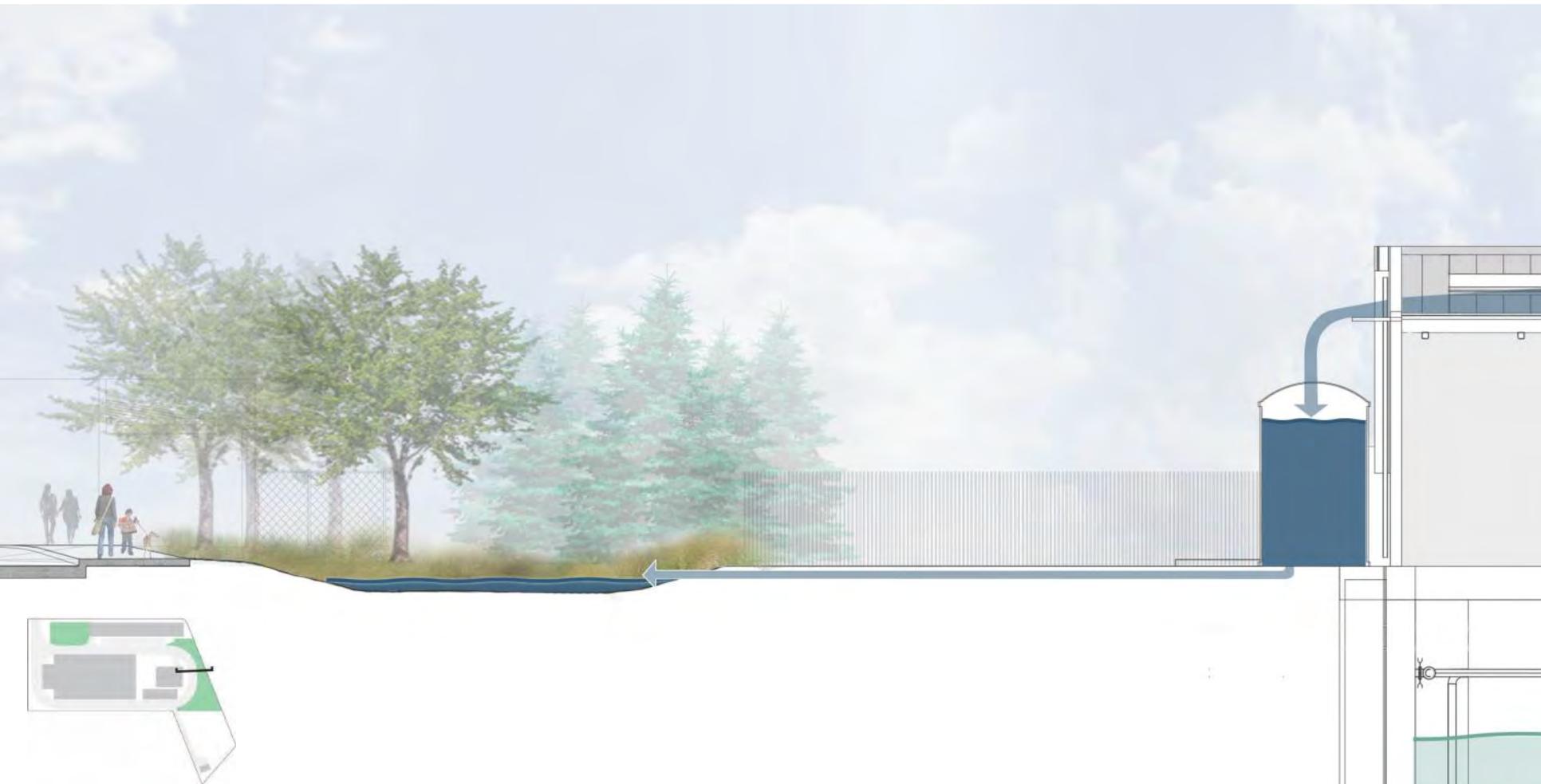
35,000 gallon provides 35% of irrigation needs





Rainwater Capturing - Michigan

35,000 gallon provides 35% of irrigation needs



Vegetated Roof

Size: ~6,000 SF

Type: Pre-Grown Vegetated Mat

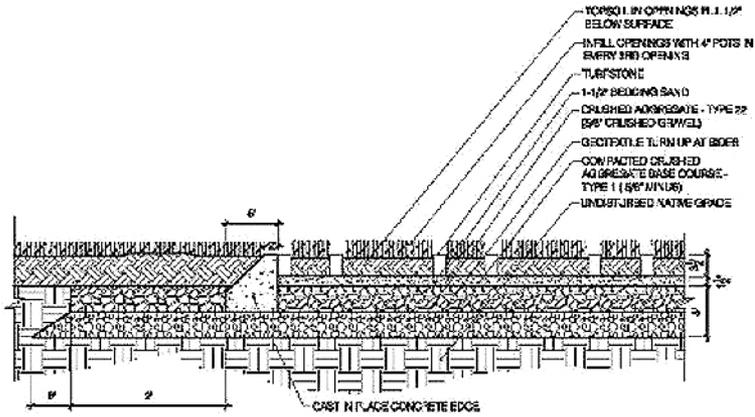
Depth: 4" Lightweight Soil Media

Edge: Vertical metal edge w rock ballast

Irrigation: Pop-up spray irrigation

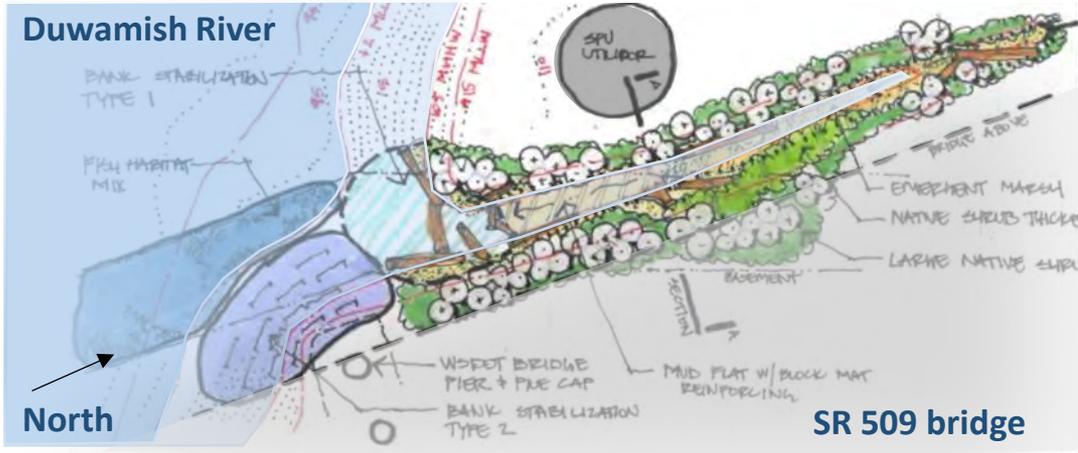


Reinforced Turf





Outfall



Plant schedule



EMERGENT MARSH:
 CAREX LYNGBYEI
 CAREX OBNUPTA
 JUNCUS ENSIFOLIUS
 SAGITTARIA LATIFOLIA
 SCIRPUS MICROCARPUS

LYNGBYE'S SEDGE
 SLOUGH SEDGE
 DAGGERLEAF RUSH
 WAPATO ARROWHEAD
 SMALL FLOWERED BULLRUSH



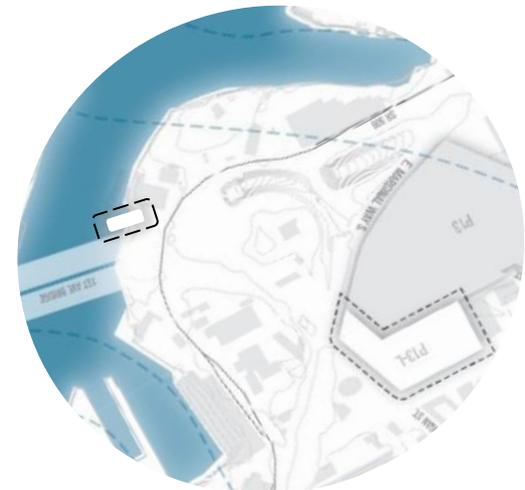
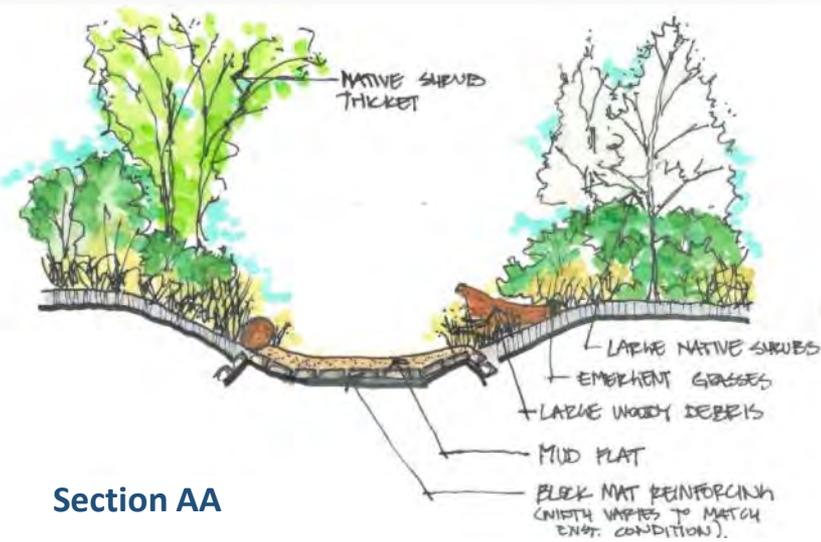
NATIVE SHRUB THicket:
 CORNUS STOLONIFERA
 SALIX SCOULERIANA

RED-OSIER DOGWOOD
 SCOULER'S WILLOW



LARGE NATIVE SHRUBS:
 AMELANCHIER ALNIFOLIA
 HOLODISCUS DISCOLOR
 RUBUS PARVIFLORUS
 RUBUS SPECTABILIS
 RIBES SANGUINEUM
 SYMPHORICARPOS ALBUS

SERVICEBERRY
 OCEANSPRAY
 THIMBLEBERRY
 SALMONBERRY
 RED FLOWERING CURRENT
 COMMON SNOWBERRY



Materials and Visible Processes

Making the Invisible Visible

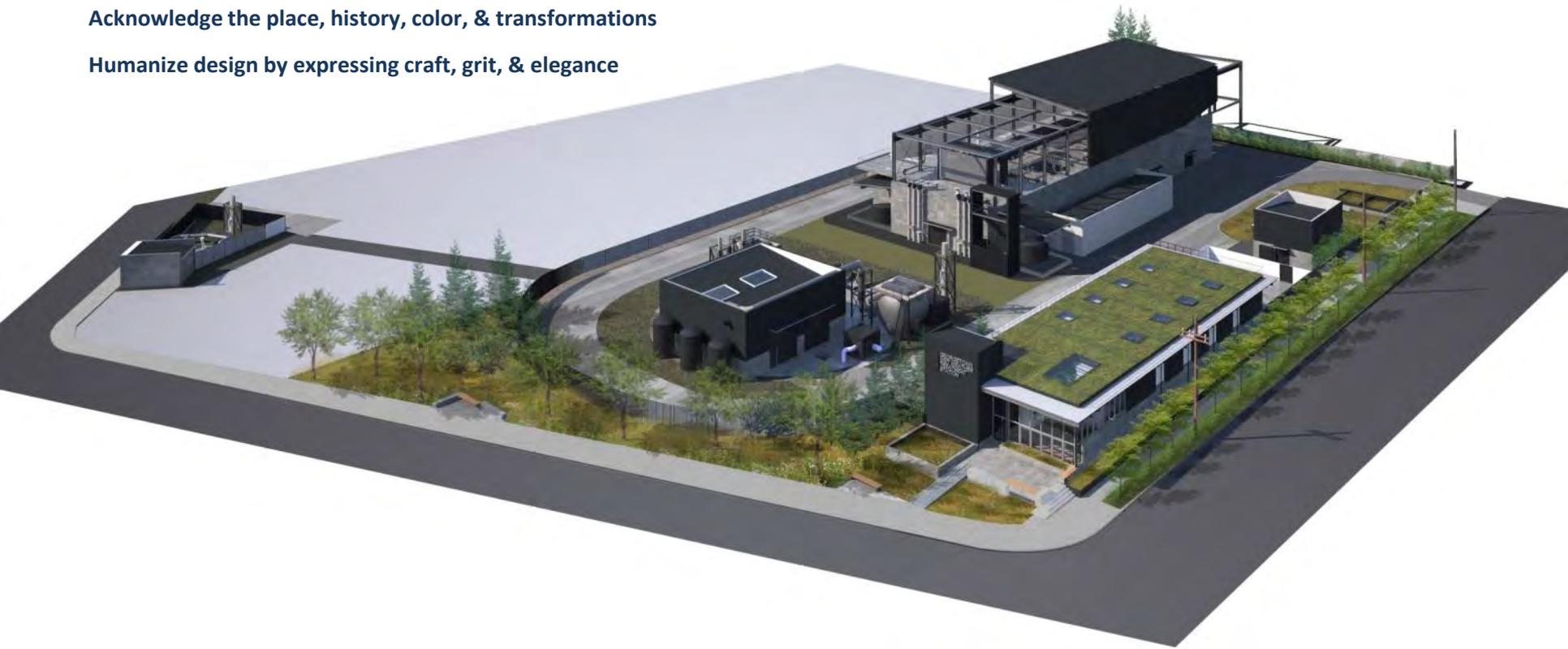
Reflect the value of and connection to the Duwamish River and its benefits for the region

Reflect individual character of neighborhood

Enhance understanding of public wastewater infrastructure

Acknowledge the place, history, color, & transformations

Humanize design by expressing craft, grit, & elegance



GEORGETOWN

Wet Weather Treatment Station



King County

Protecting Our Waters

Doing our part on rainy days

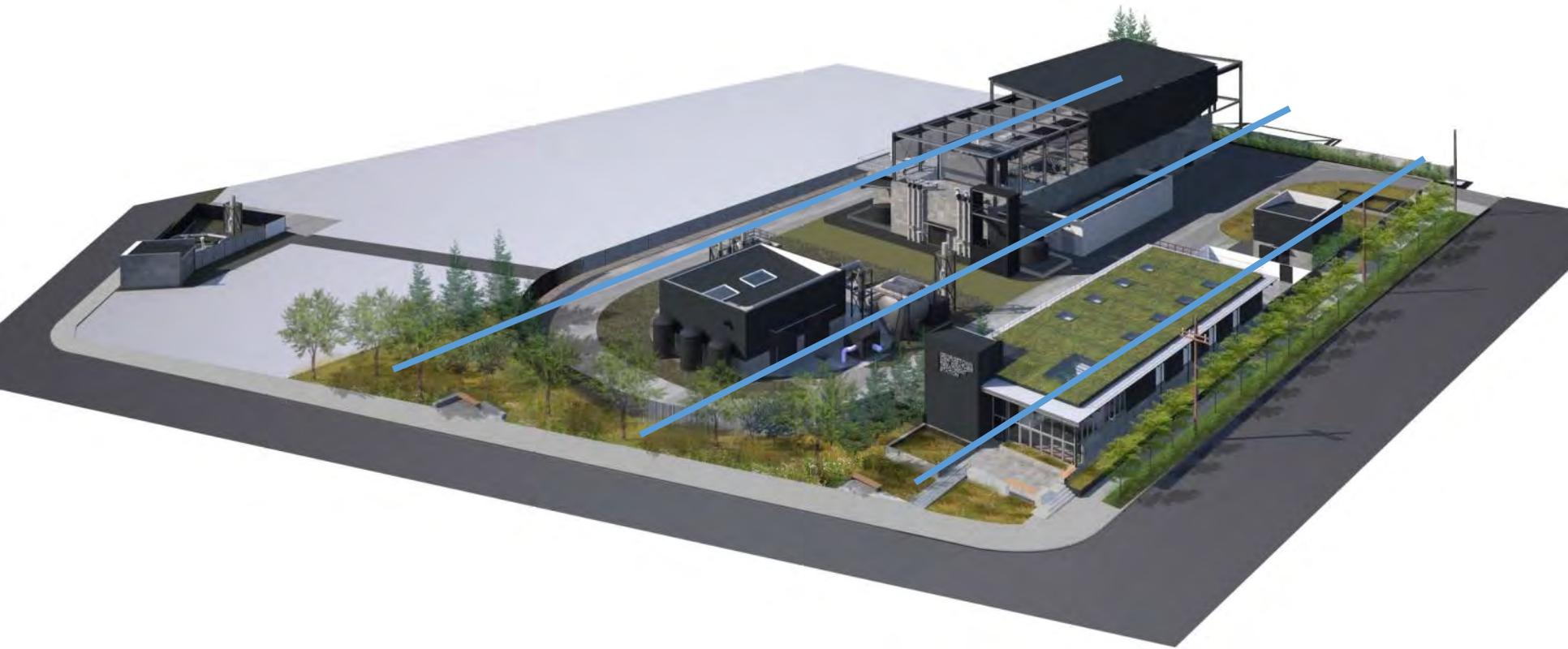
Materials and Visible Processes

Refined, modern industrial front door to West Georgetown



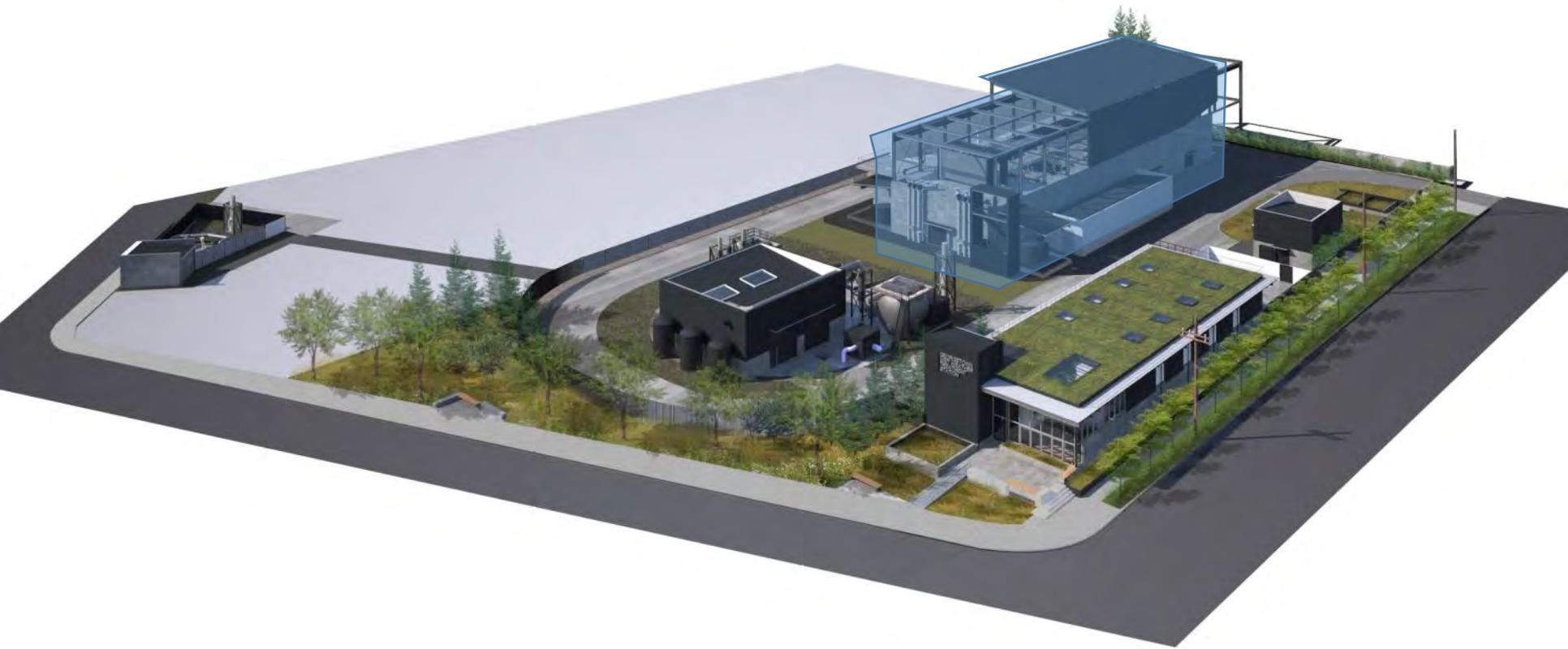
Materials and Visible Processes

Align Structures and Processes



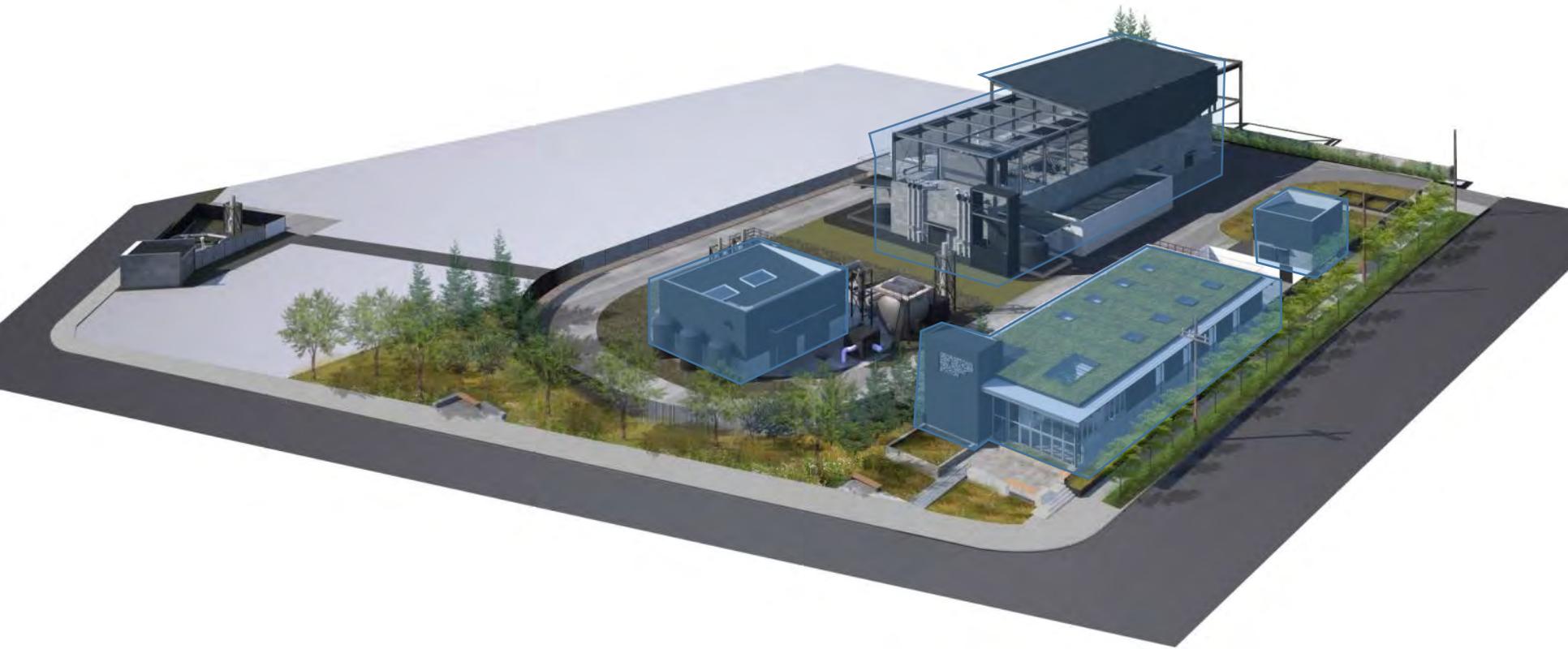
Materials and Visible Processes

Move large structures away from the corner



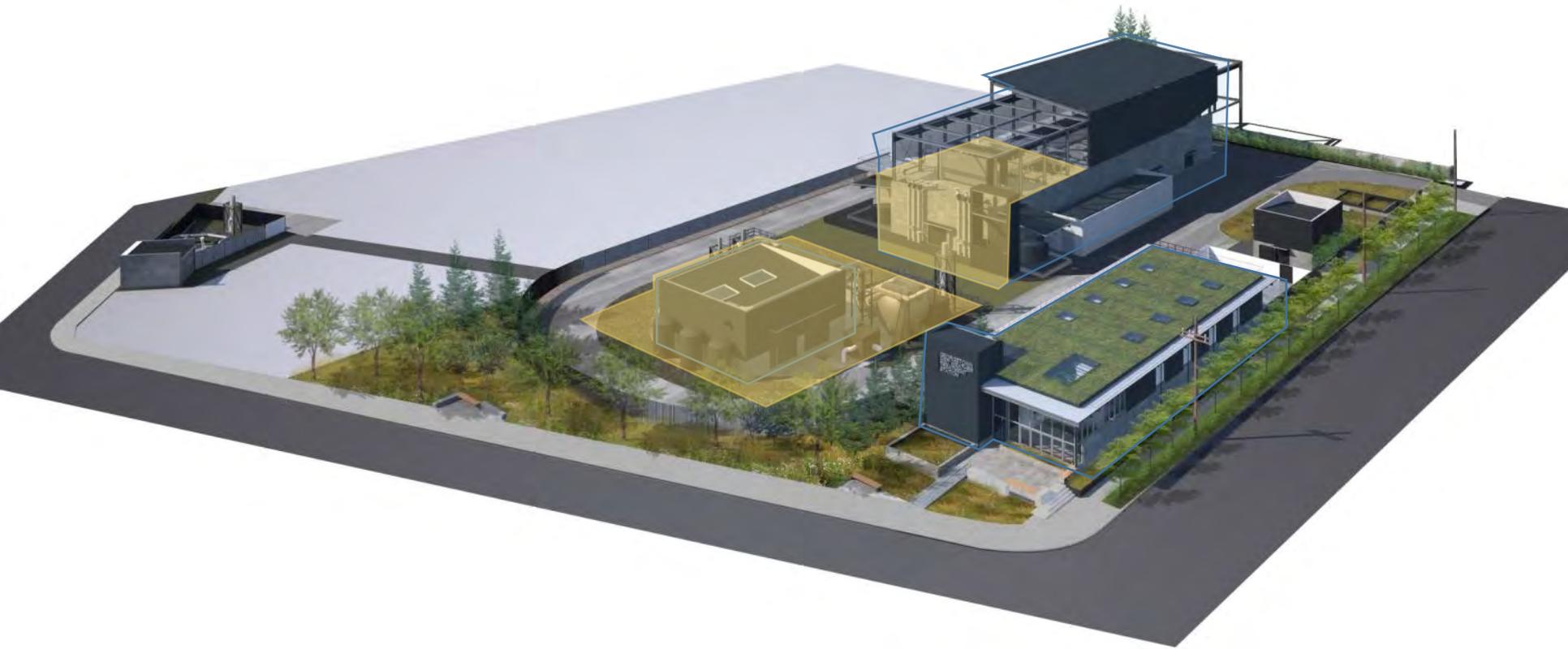
Materials and Visible Processes

Locate smaller, occupied buildings along the property line



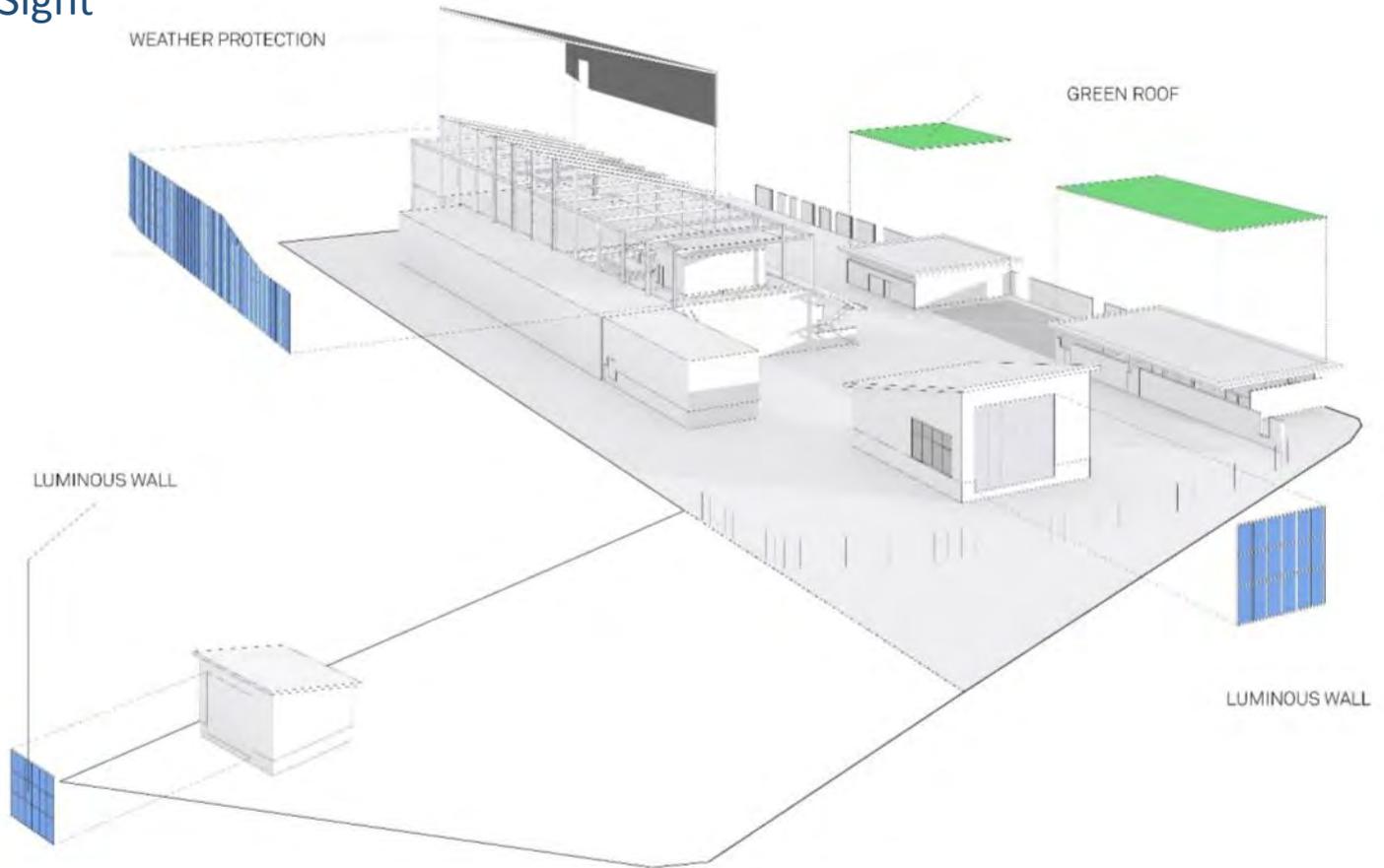
Materials and Visible Processes

Showcase the Machine and its operation



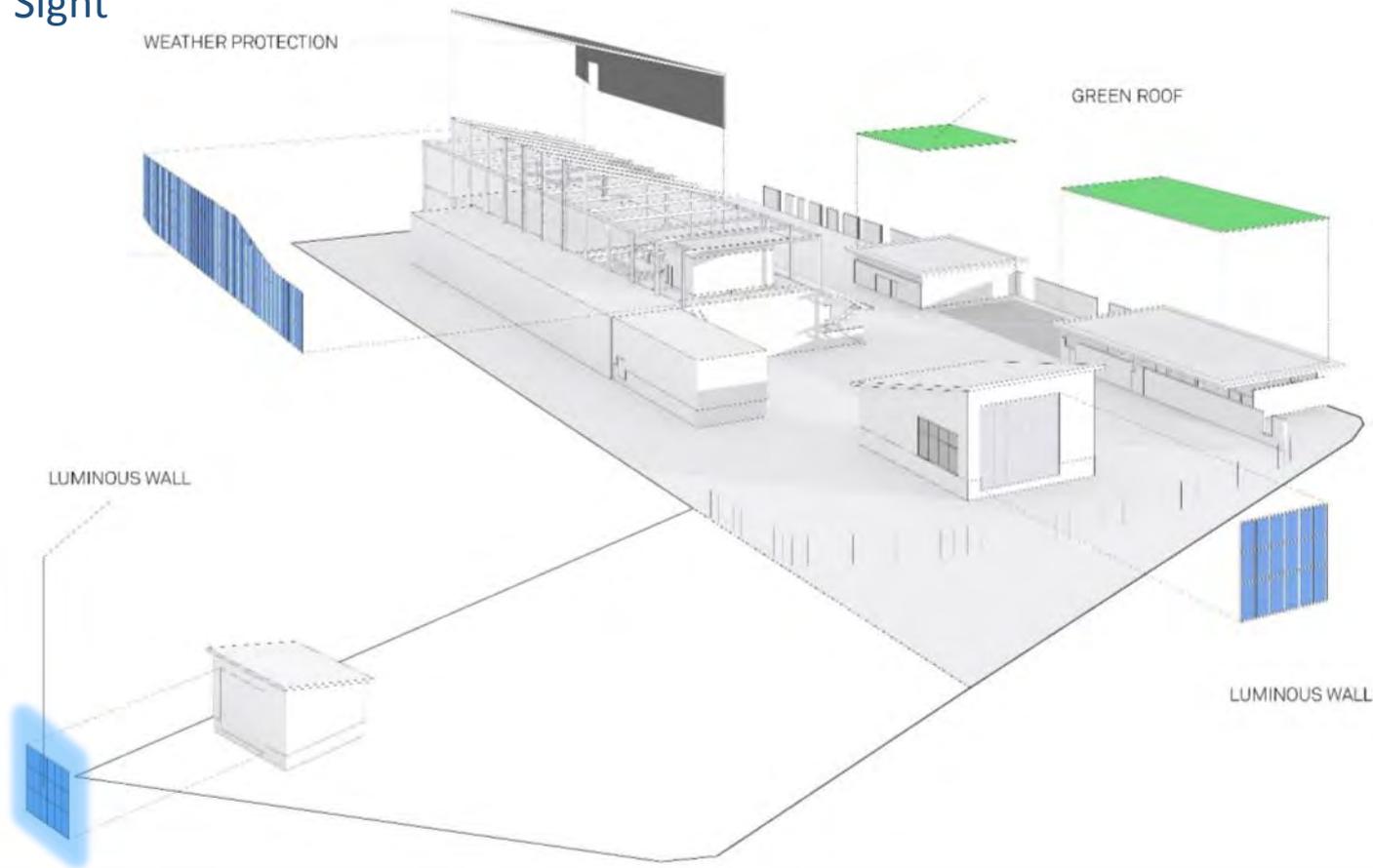
The Machine

Hidden in Plain Sight



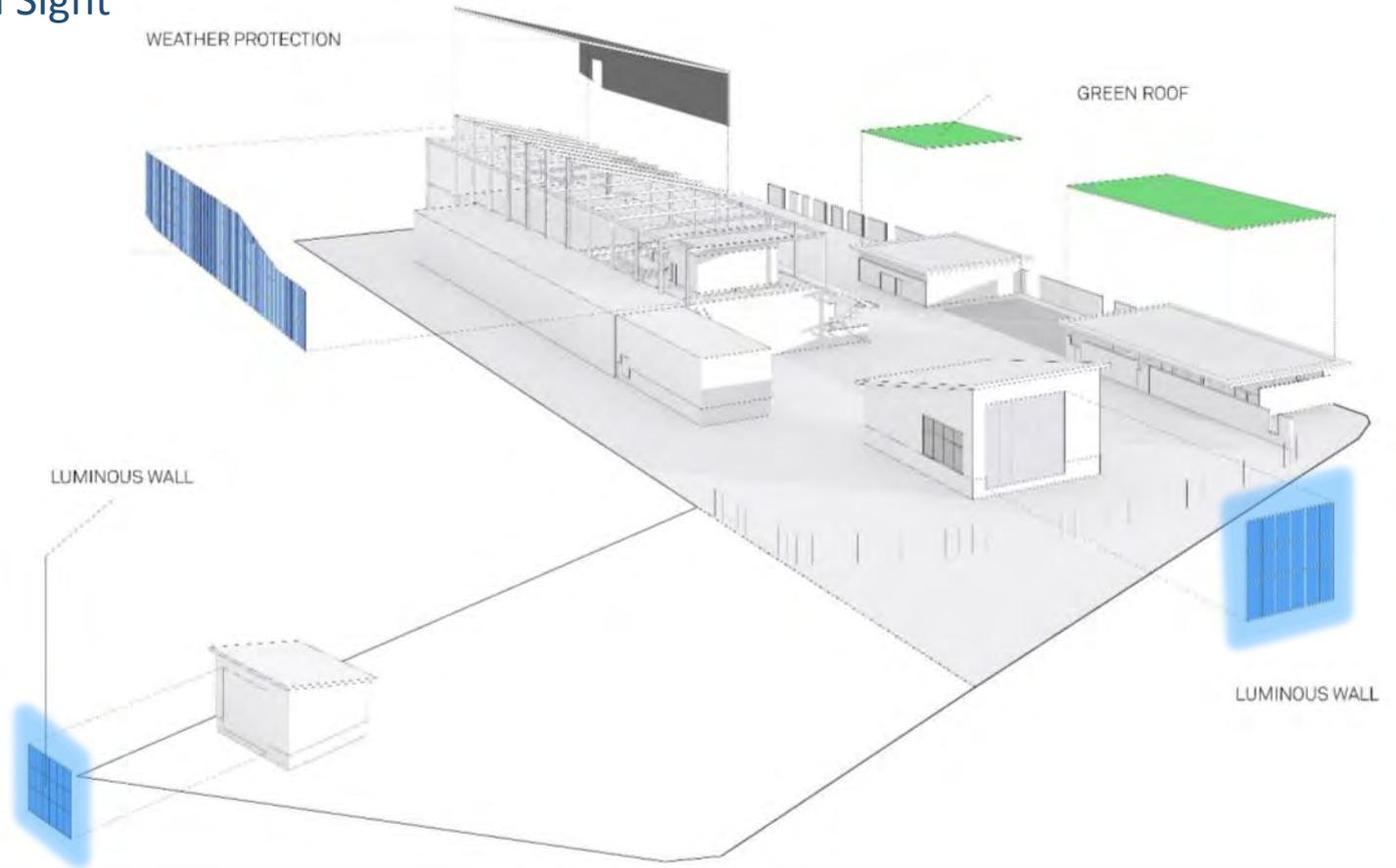
The Machine

Hidden in Plain Sight



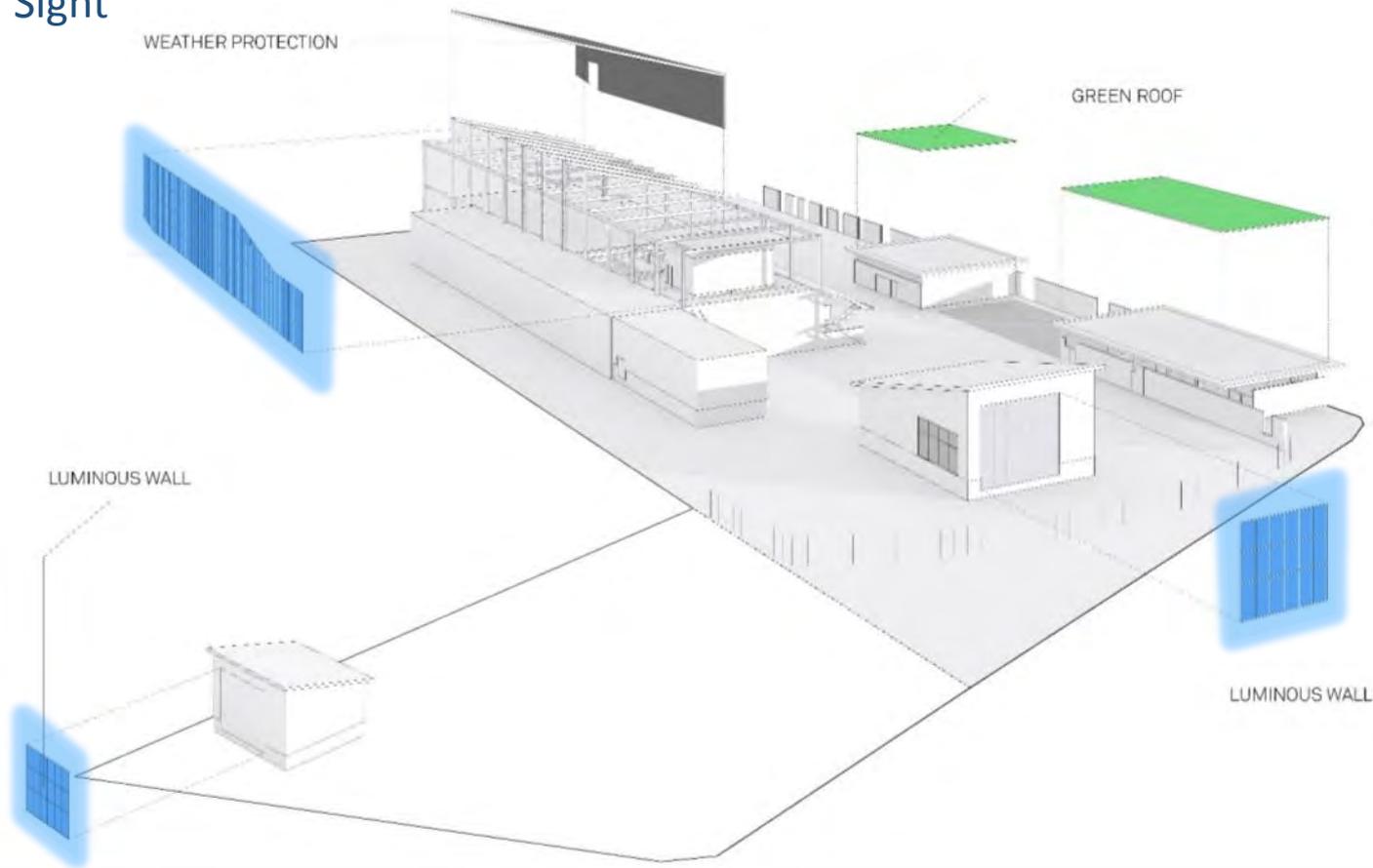
The Machine

Hidden in Plain Sight



The Machine

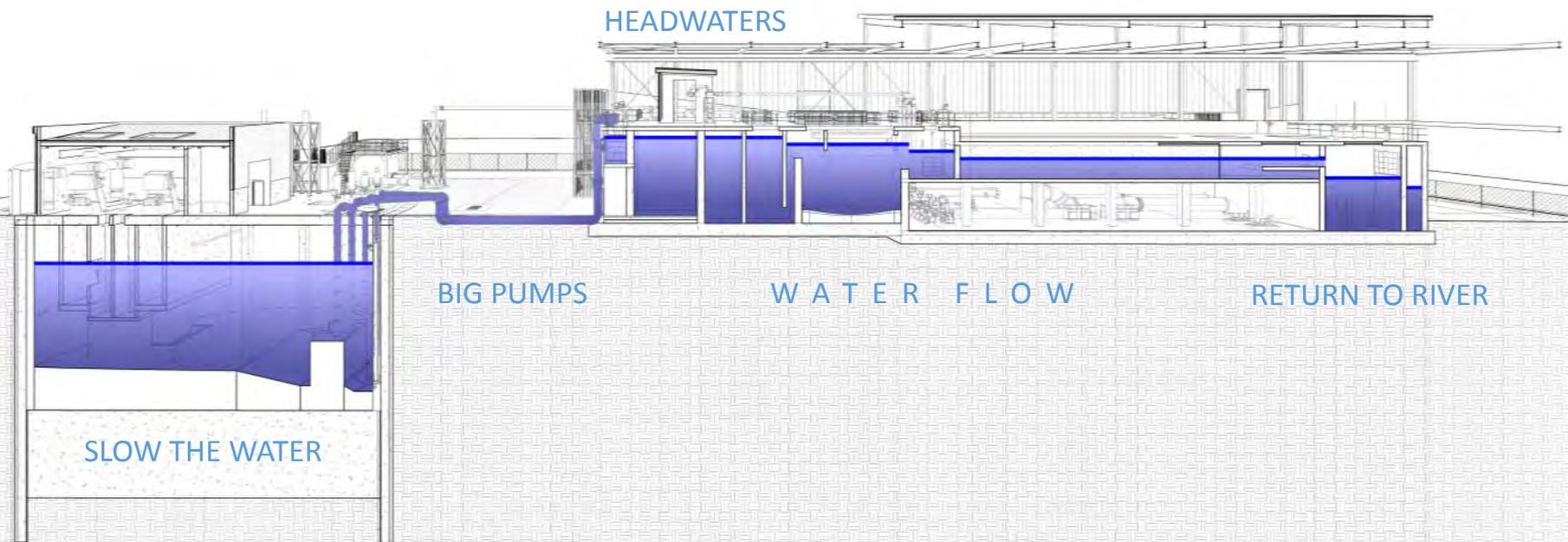
Hidden in Plain Sight





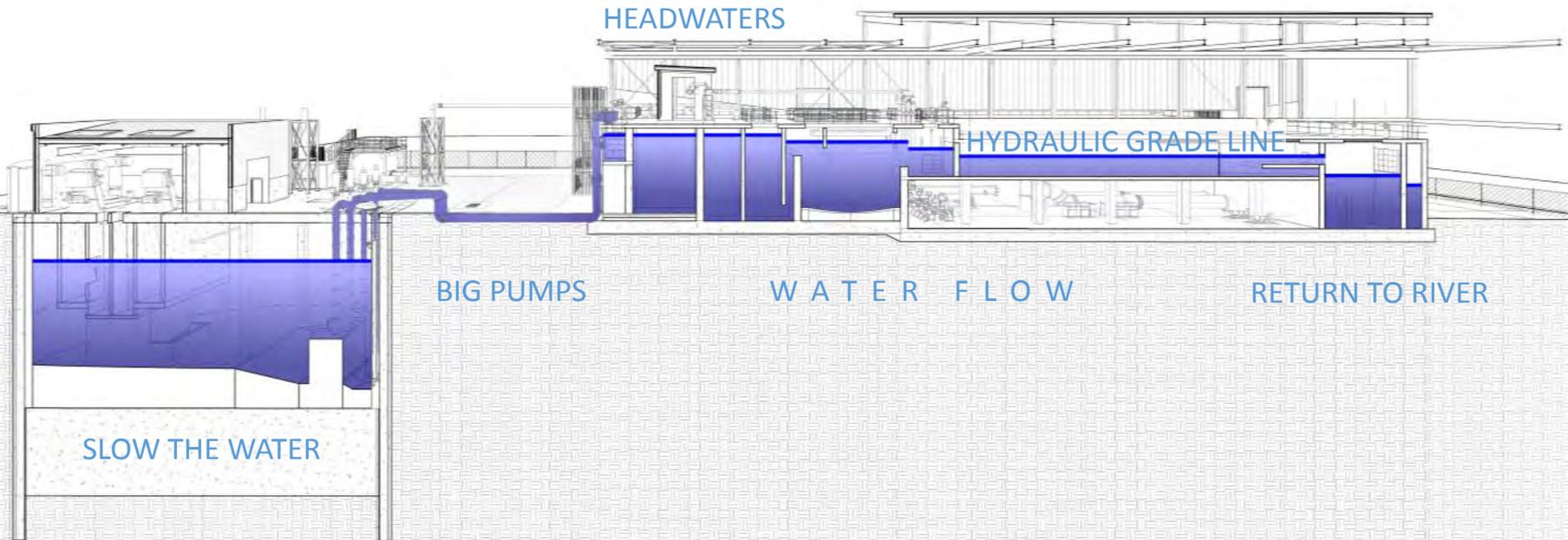
The Machine

Making the Invisible Visible



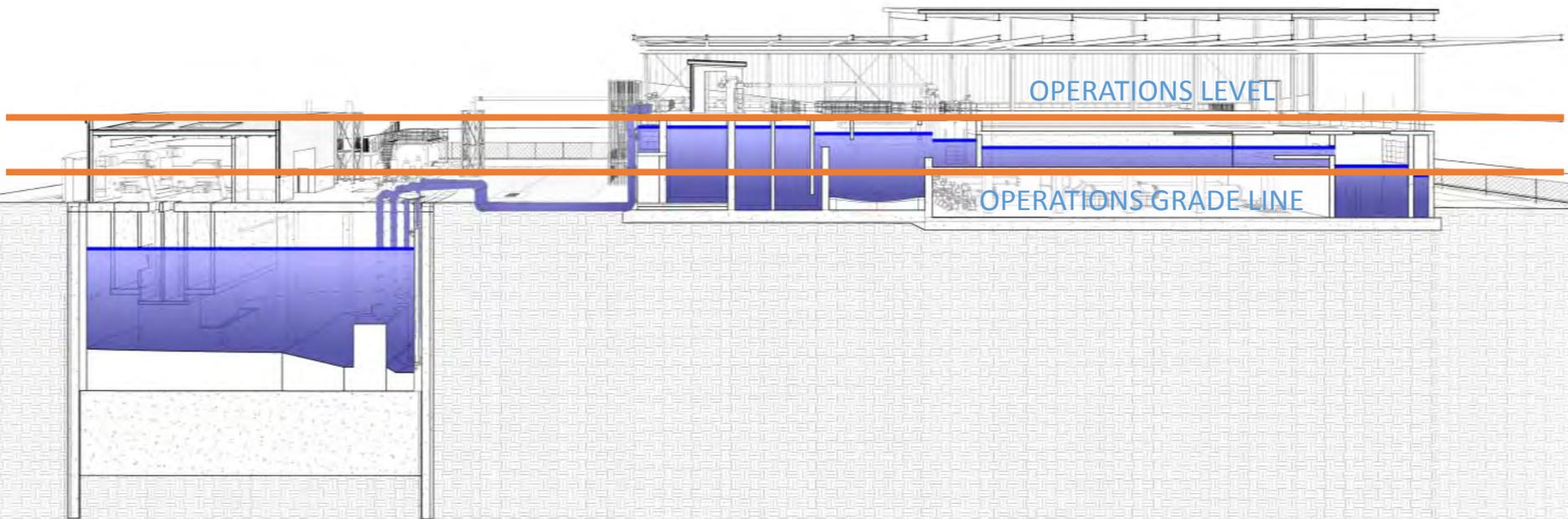
The Machine

Making the Invisible Visible



The Machine

Making the Invisible Visible



GEORGETOWN

Wet Weather Treatment Station



King County

Protecting Our Waters

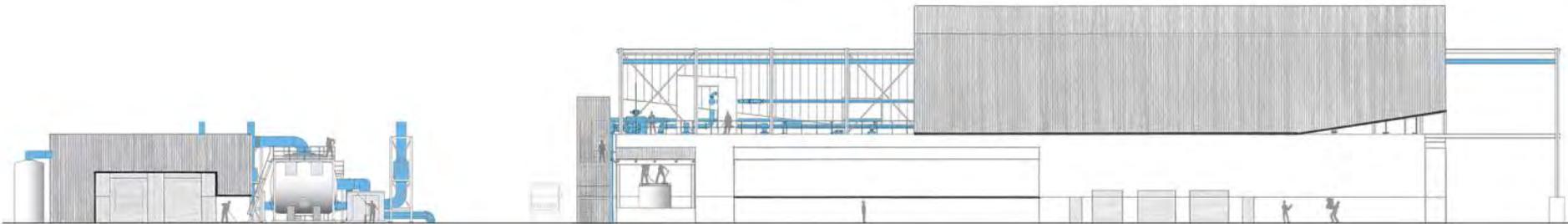
Doing our part on rainy days



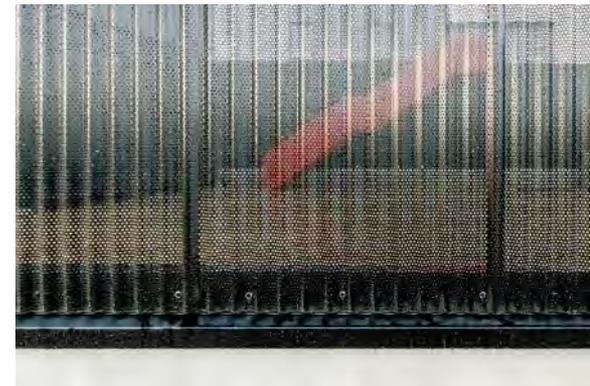
GEORGETOWN

Wet Weather Treatment Station

King County
Protecting Our Waters
Doing our part on rainy days



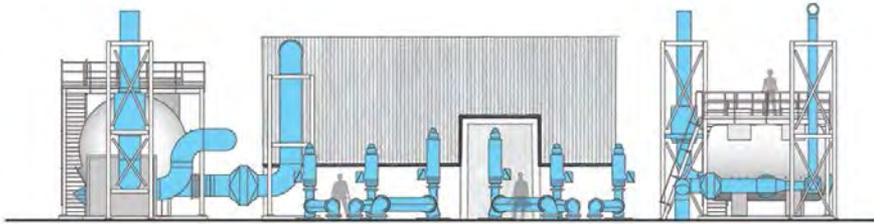
EAST ELEVATION - INTERIOR



GEORGETOWN

Wet Weather Treatment Station

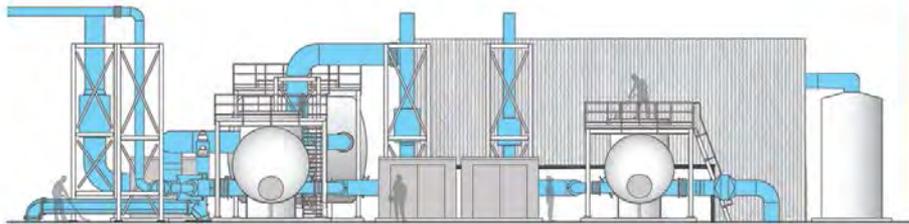
King County
Protecting Our Waters
Doing our part on rainy days



NORTH ELEVATION



SOUTH ELEVATION



WEST ELEVATION

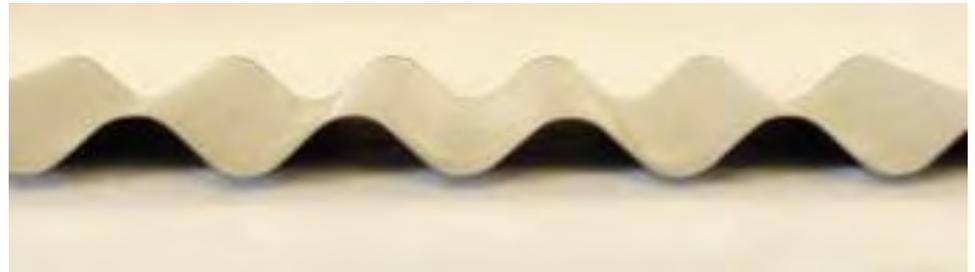


Corrugated Siding Types

VEE



NU WAVE



WIDE CHANNEL



Community Edges

Reflect individual character of neighborhood

Enhance air and water quality while making both natural and treatment processes visible.

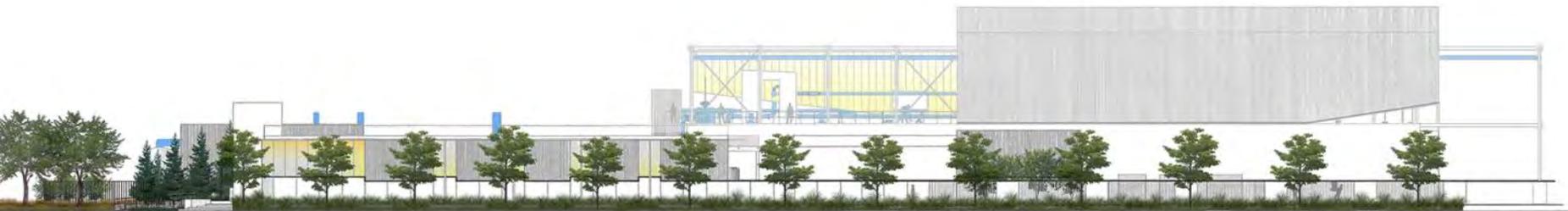
Enhance understanding of public wastewater infrastructure

Acknowledge the place, history, color, & transformations

Humanize design by expressing craft, grit, & elegance



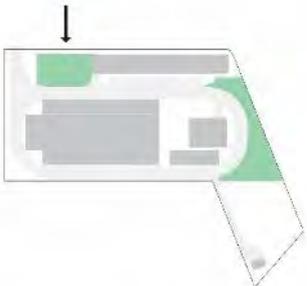
4TH Avenue South



OPERATIONS AND MAINTENANCE
BUILDING

VIEW WINDOWS THROUGH
PERIMETER ENCLOSURE

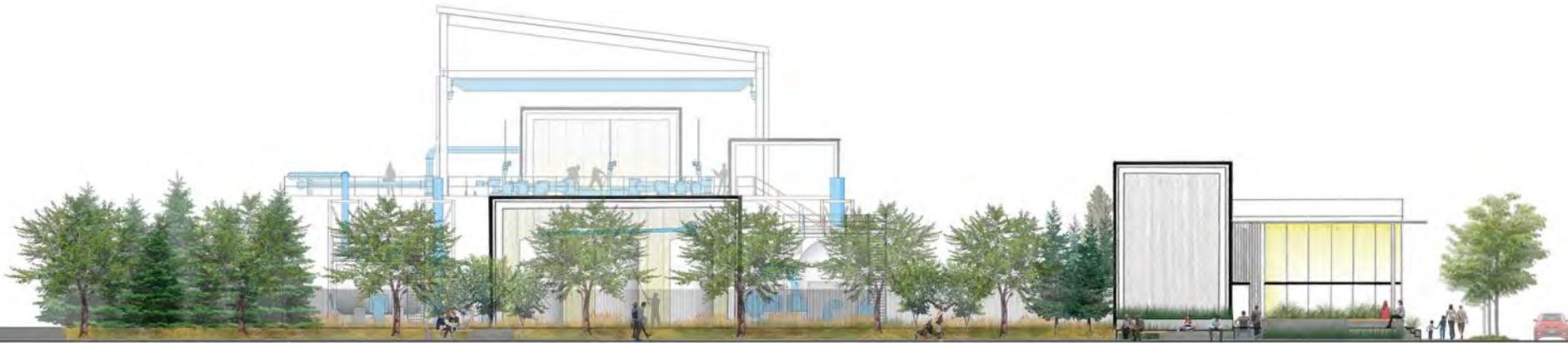
PROCESS BUILDING
BEYOND



GEORGETOWN

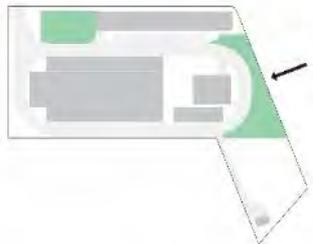
Wet Weather Treatment Station

 King County
Protecting Our Waters
Doing our part on rainy days



SCREENINGS BUILDING
(PROCESS BUILDING BEYOND)

O+M BUILDING
TRAINING ROOM











THE DUWAMISH

Seattle, WA

Once considered a wasteland, the Duwamish River is now a vibrant urban waterfront. After more than 100 years, every high bridge of the Duwamish River is now a vibrant urban waterfront.

Neighborhood Connection









Elliott Bay

Brandon

South Michigan

UW WRF-GFS 12km Domain

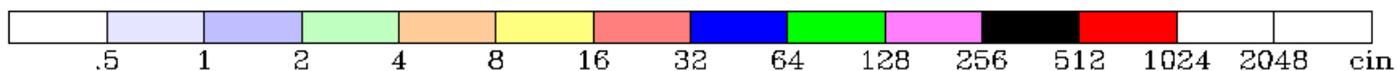
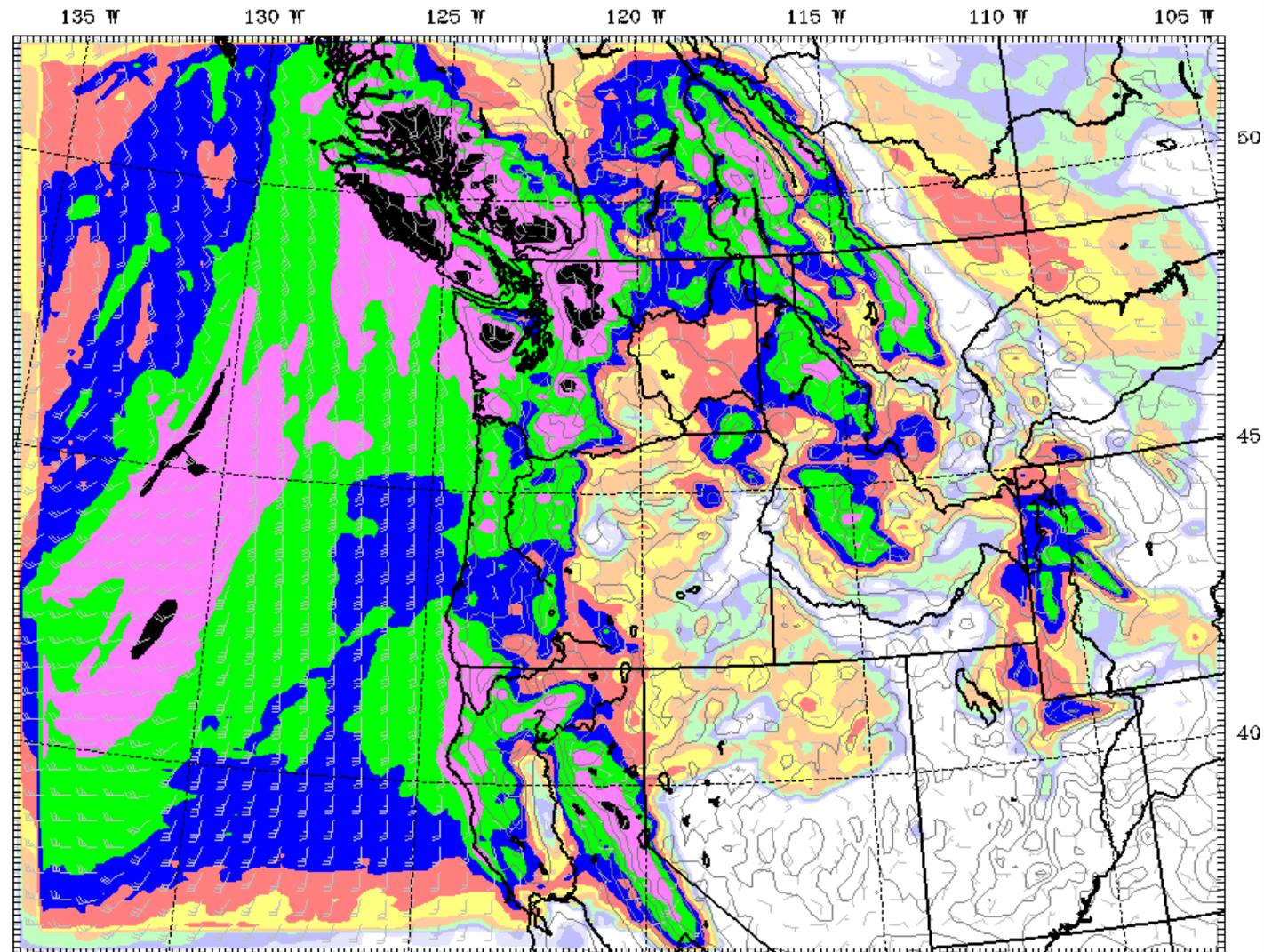
Init: 12 UTC Sat 13 Feb 16

Fest: 144 h

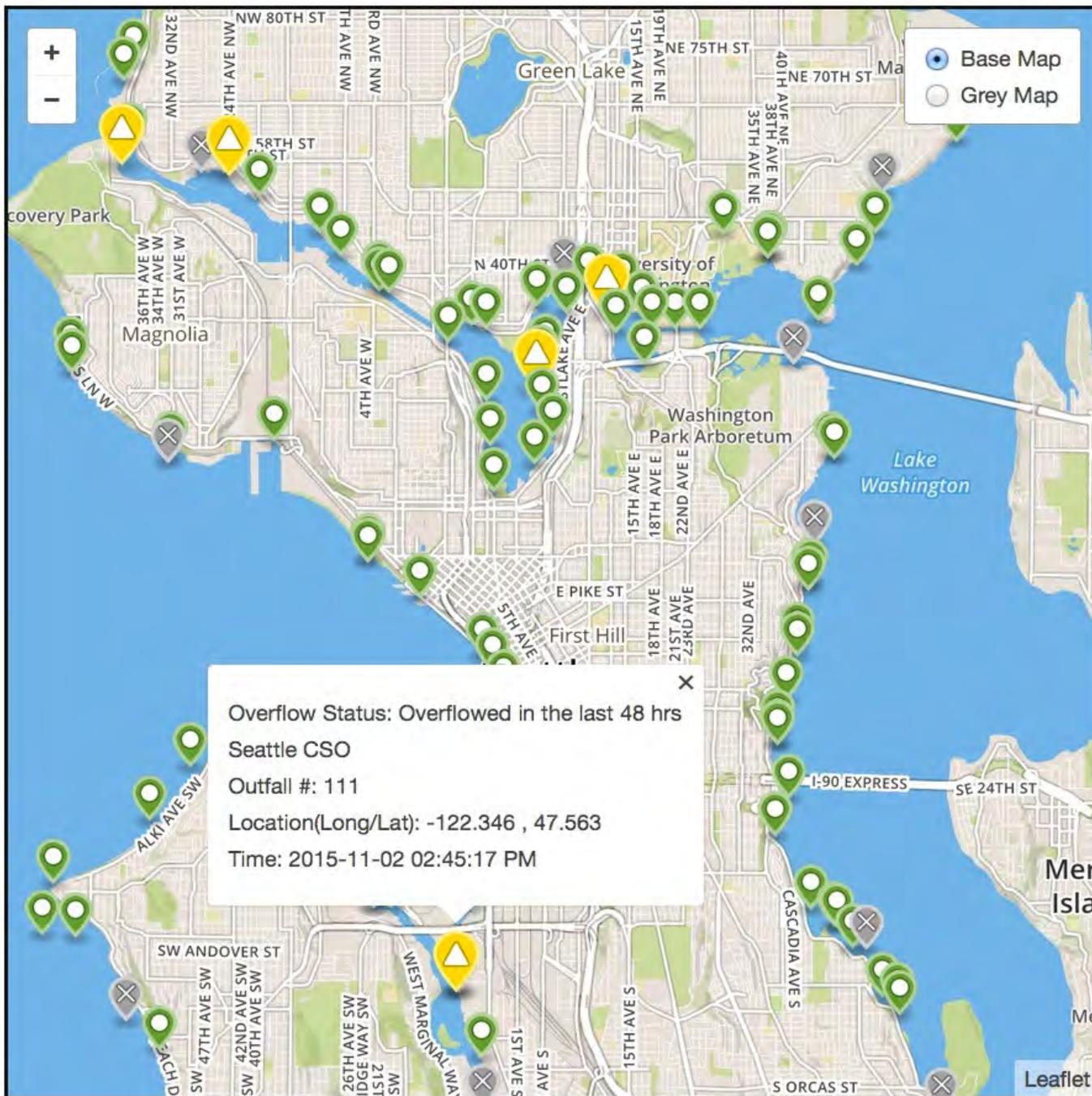
Valid: 12 UTC Fri 19 Feb 16 (04 PST Fri 19 Feb 16)

Total Precip in past 72 hrs (.01in)

Wind at 10m (full barb = 10kts)



Model Info: V3.7.1 G-D Ens YSU PBL Thompson Noah-MP 12 km, 37 levels, 72 sec
 LW: RRTMG SW: RRTMG DIFF: simple KM: 2D Smagor INIT: RAP+GFS



Legend

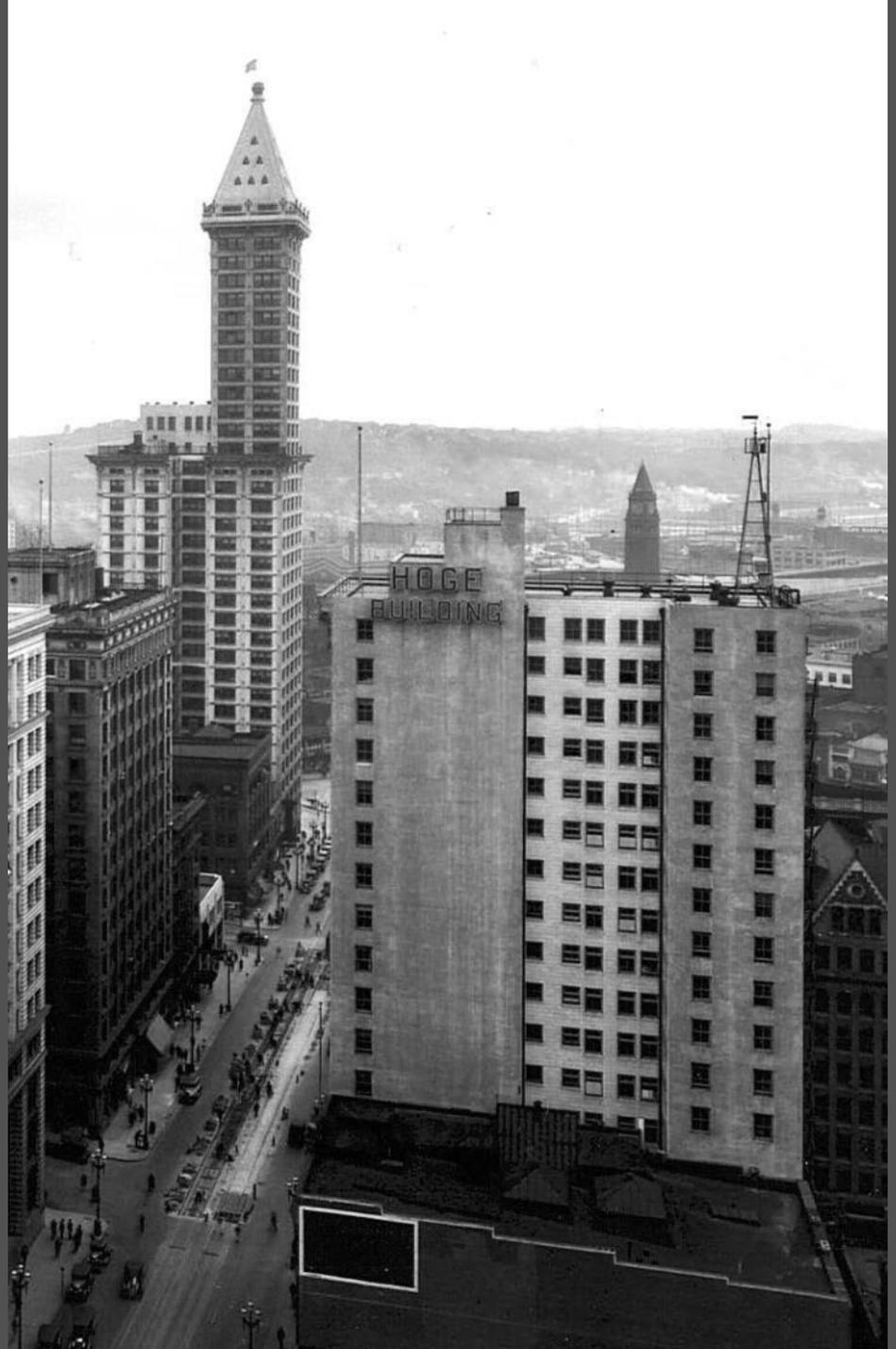
- Overflowing now
- Overflowed in the last 48 hrs
- No recent overflow
- Data not available

Health Questions?

Public Health Seattle & King County answers questions about CSOs

206-205-1151

[Frequently asked questions about public health and CSOs](#)



SEATTLE, WASH., THURSDAY, OCT. 24, 1918.

OFFICE, 1405 HOGE BUILDING. TELEPHONE, MAIN 363.

FORECAST TILL 5 P. M. FRIDAY.

For Seattle and Vicinity: To-night and Friday, rain; gentle southwesterly winds.

For Washington: To-night and Friday, rain.

WIND FORECAST

For Sounds and Strait: Gentle southwesterly winds.

For Coast: Gentle southwesterly winds.

SUMMARY OF WEATHER CONDITIONS.

Barometric pressure is high in Oregon and over the northern Rocky Mountain Slope, and relatively low in the northwestern Canadian provinces. The change in temperature has been slight, except in the Atlantic States, where it has increased several degrees.

Heavy frost occurred at Yakima last night. Light rain has occurred within the last 24 hours in western and southeastern Washington and a flurry of snow was reported at Kalispell, Mont., this morning. Scattered showers have occurred in Minnesota, South Dakota, and Wyoming.

In the last 12 hours the pressure has decreased in Washington, and the indications are for rain in the Puget Sound country to-night and Friday with moderate southwest winds.

A trough of low pressure extends throughout the Mississippi Valley, with two centers of disturbance: one in northern Missouri, the other, more energetic, in Louisiana. Heavy rain has fallen throughout much of the valley from New Orleans to St. Louis, and on as far as Chicago, where over an inch of rainfall has occurred in the last 12 hours.

G. N. SALISBURY.

SHIPPERS FORECAST.

Minimum temperatures during the next 36 hours; northward to Blaine, 44°; eastward to Spokane, 44°; southeast to Walla Walla, 46°; south to Portland, 48°; at Seattle about 50°.

OBSERVATIONS TAKEN AT 7 A. M. 75TH MERIDIAN TIME, CORRESPONDING TO 5 A. M. PACIFIC SUMMER TIME.

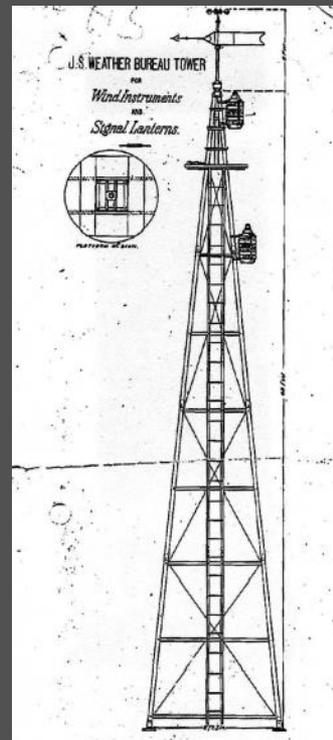
STATIONS.	Temperatures.					Wind velocity 8 a.m. 75th meridian time.	Precipitation in last 24 hours.	STATIONS.	Temperatures.					Wind velocity 8 a.m. 75th meridian time.	Precipitation in last 24 hours.
	At 8 a. m. 75th meridian time.	Change in 24 hours.	Highest yesterday.	Lowest last night.	Lowest last night.				At 8 a. m. 75th meridian time.	Change in 24 hours.	Highest yesterday.	Lowest last night.	Lowest last night.		
Ableton, Texas.....	84	+ 6	66	54	.....	0	Phoenix, Arizona.....	58	+ 2	78	56	.....	0	
Baker, Oregon.....	34	+ 4	44	34	.....	0	Pittsburg Pa.....	50	+ 4	68	48	.....	0	
Billings, Mont.....	28	+ 8	52	28	.....	0	Pocatello, Idaho.....	38	+ 4	48	34	.....	0	
Boise, Idaho.....	35	+ 2	48	35	.....	0	Portland, Oregon.....	50	+ 6	52	44	.....	0	
Boston, Mass.....	44	+ 4	60	47	.....	0	Prince Albert, Sask.....	38	+ 2	38	.....	0		
Buffalo, N. Y.....	50	+ 4	62	46	.....	0	Red Bluff, Calif.....	58	0	74	58	.....	0	
Calgary, Alberta.....	20	+ 4	42	20	.....	0	Roseburg, Oregon.....	38	+ 2	38	38	.....	0	
Chicago, Illinois.....	58	+ 2	58	55	.....	1.15	Roswell, N. M.....	50	0	50	.....	0		
Denver, Colorado.....	42	+ 2	58	40	.....	0	Sacramento, Calif.....	45	0	75	45	.....	0	
Des Moines Ia.....	50	+ 2	64	50	.....	0	St. Louis, Mo.....	60	+ 4	62	58	.....	1.15	
Edmonton, Alta.....	12	+ 4	28	10	.....	0	St. Paul, Minn.....	45	+ 2	50	45	.....	.02	
Eureka, Calif.....	45	0	56	45	.....	0	Minneapolis.....	42	+ 2	50	.....	0		
Fresno, Calif.....	52	+ 2	74	52	.....	0	San Francisco, Cal.....	54	0	70	54	.....	0	
Galveston, Texas.....	66	+ 2	76	64	.....	.01	San Diego, Calif.....	58	+ 2	70	58	.....	0	
Havre, Mont.....	25	+ 4	40	25	.....	0	Seattle, Wash.....	50	+ 4	52	45	.....	.04	
Helena, Mont.....	35	+ 6	44	35	.....	0	Sheridan, Wyo.....	28	+ 2	50	28	.....	.06	
Huron, S. D.....	35	+ 6	50	34	.....	.05	Spokane, Wash.....	42	+ 4	54	42	.....	.15	
Kalispell, Mont.....	32	+ 2	46	30	.....	0	Swift Current.....	45	+ 2	45	.....	.10		
Kansas City, Mo.....	54	+ 6	68	54	.....	.15	Tacoma, Wash.....	48	+ 2	58	48	.....	.12	
Knoxville, Tenn.....	58	+ 4	64	58	.....	0	Tampa.....	74	+ 4	84	72	.....	.01	
Los Angeles, Cal.....	58	+ 4	74	56	.....	0	Tatoosh Isl'd Wash.....	50	0	50	48	.....	.50	
Marshall, Ore.....	38	+ 6	57	35	.....	0	Tonopah, Nev.....	42	+ 2	58	40	.....	0	
Memphis, Tenn.....	62	+ 2	64	62	.....	.70	Walla Walla, Wash.....	45	+ 4	55	45	.....	.01	
Modena, Utah.....	30	+ 8	64	28	.....	0	Washington, D.C.....	46	+ 12	64	40	.....	0	
New Orleans, La.....	68	+ 4	82	65	.....	.71	Williston, N. Dak.....	34	+ 2	42	32	.....	0	
New York, N. Y.....	50	+ 2	64	48	.....	0	Winnetucca, Nev.....	38	+ 2	58	36	.....	0	
North Bend, Wash.....	52	0	55	50	.....	.12	Winnipeg, Man.....	34	+ 8	40	32	.....	.50	
North Platte, Neb.....	34	+ 2	48	34	.....	0	Yakima, Wash.....	30	+ 4	54	30	.....	0	
Oklahoma, Okla.....	26	+ 2	40	26	.....	.05								

THE FOLLOWING OBSERVATIONS TAKEN YESTERDAY.

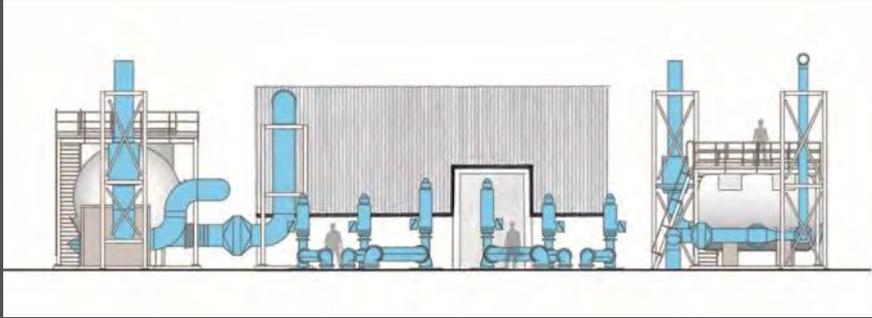
Dutch Harbor, Ala.....	38	+ 4	50	42	.....	0	Princes Rupert, B.C.....	36	+ 8	36	.....	20	.56
Etah, Alaska.....	8	+ 4	8	8	.....	0	Sitka, Alaska.....	42	+ 6	44	.....	0	0
Honolulu, H. Is.....	76	+ 2	82	76	.....	0	Tanana, Alaska.....	4	+ 2	10	.....	2	0
Juneau, Alaska.....	.....	.....	.....	.....	.....	0	Triangle Island, B.C.....	45	+ 2	45	.....	10	.70
Nome, Alaska.....	12	+ 6	30	10	.....	0	Valdez, Alaska.....	32	+ 4	34	.....	0	0

LOCAL PRECIPITATION DATA.

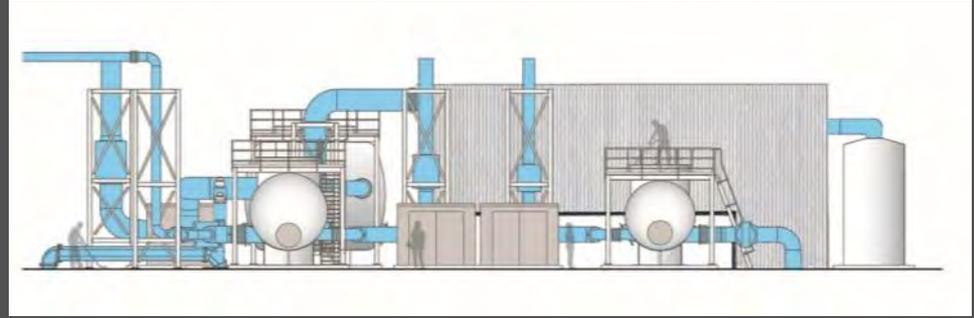
FROM JANUARY 1 TO OCTOBER 24.			
THIS YEAR.	LAST YEAR.	AVERAGE.	YEARLY AVERAGE
1933	16.89	22.11	34.03



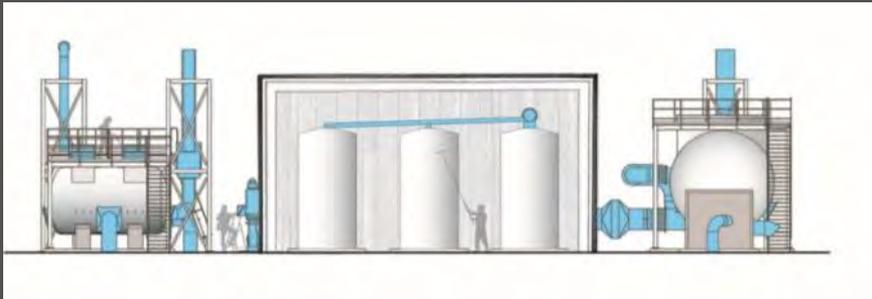




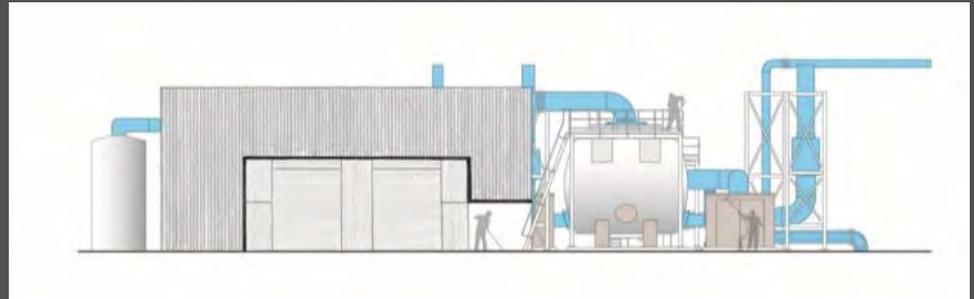
NORTH ELEVATION



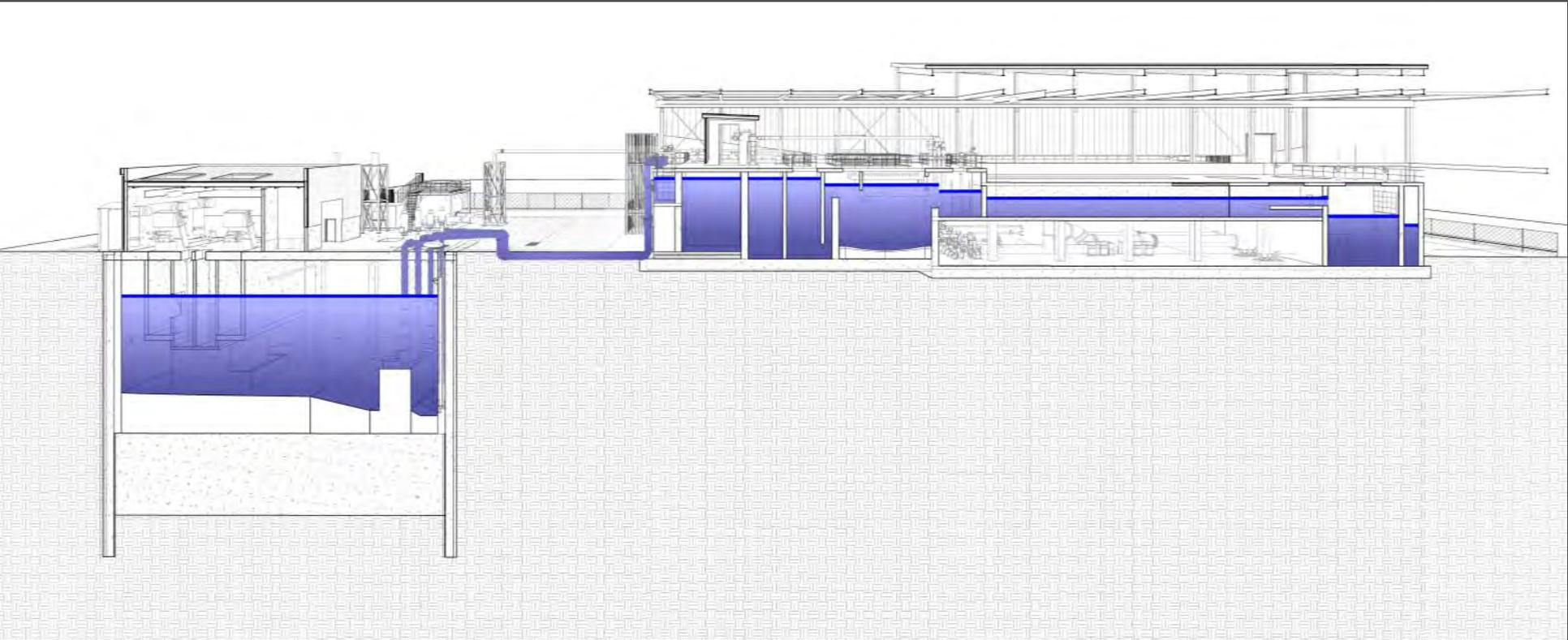
WEST ELEVATION

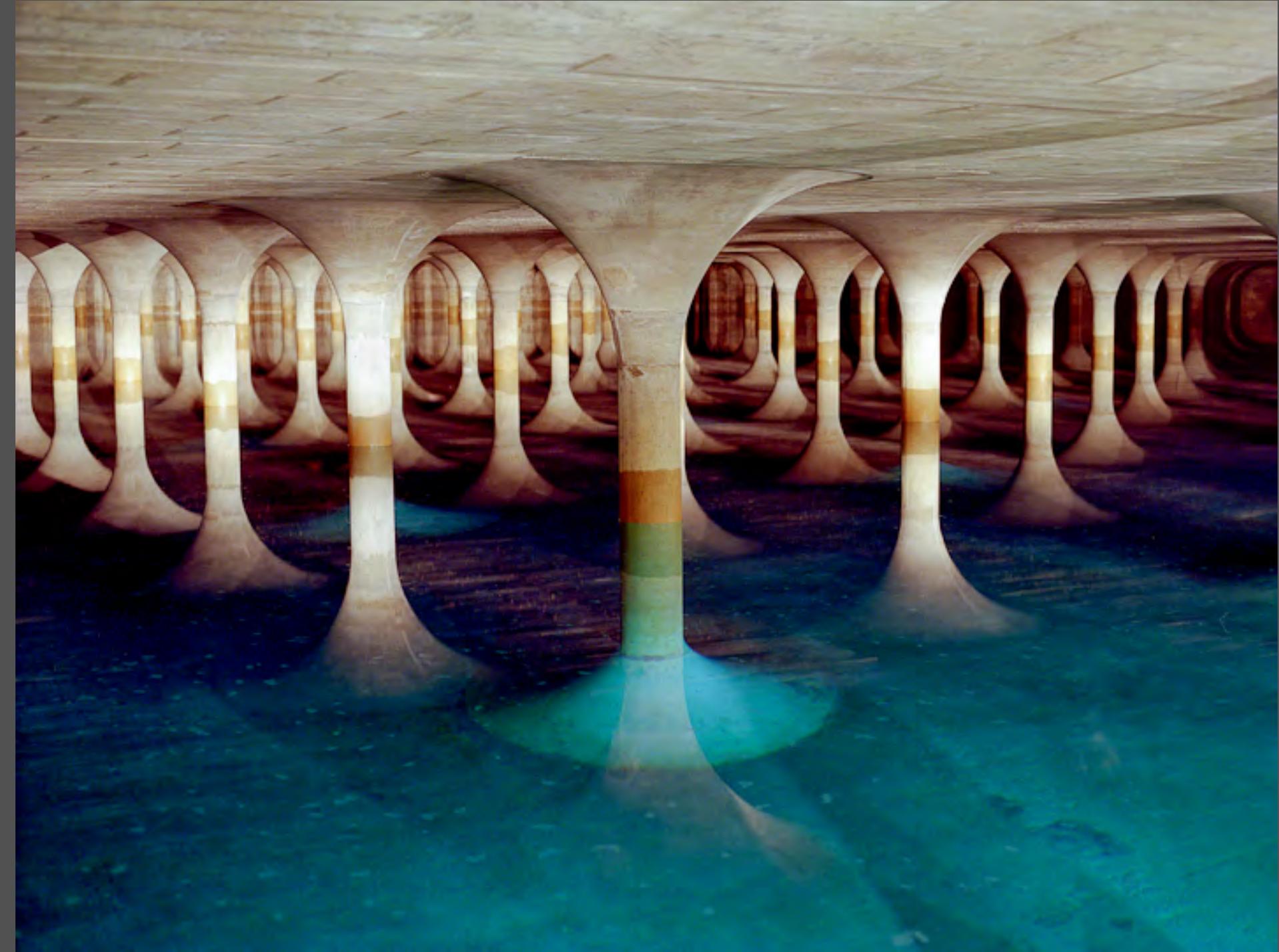


SOUTH ELEVATION



EAST ELEVATION











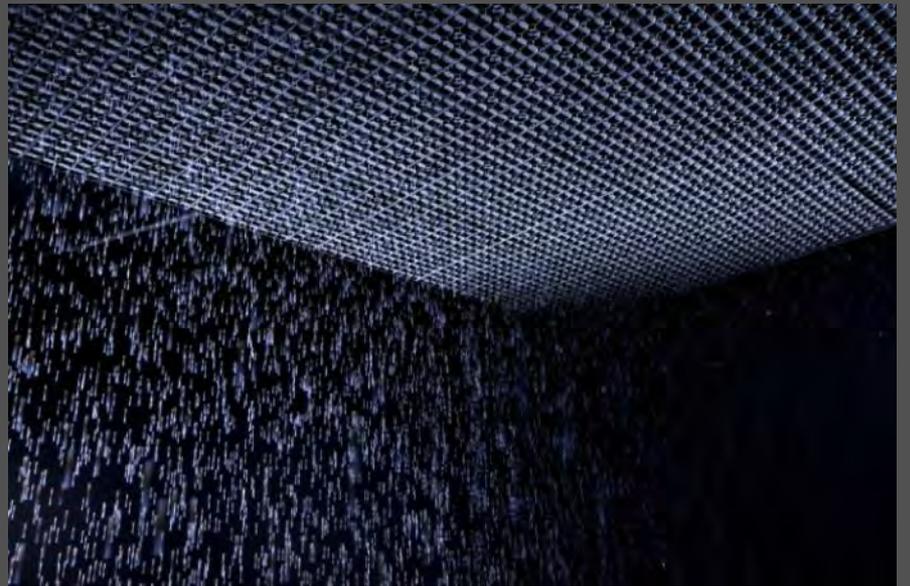
Rachel Whiteread, Water Tower



seattle Fishermens memorial



Olafur Eliasson, Your-strange-certainty-still-kept



rAndom international, Torrential Rain, 2012



William Pye, Vortex

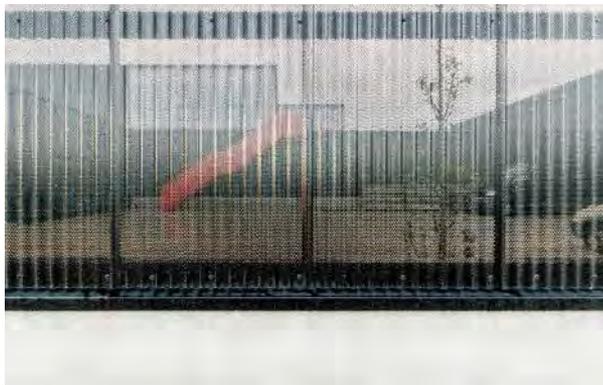
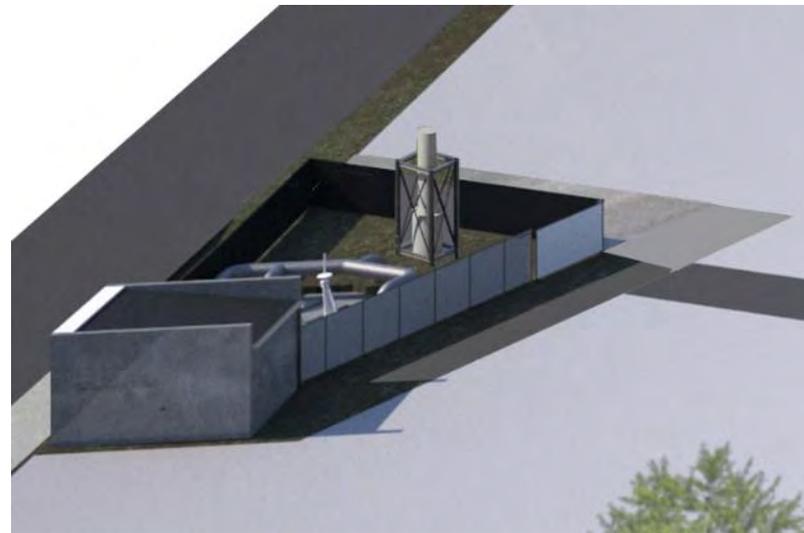




REGULATOR



VIEW FROM SOUTHEAST



Fence Typologies

Reflect individual character of neighborhood

Enhance understanding of public wastewater infrastructure

Acknowledge the place, history, color, & transformations

Humanize design by expressing craft, grit, & elegance



Bar Grating



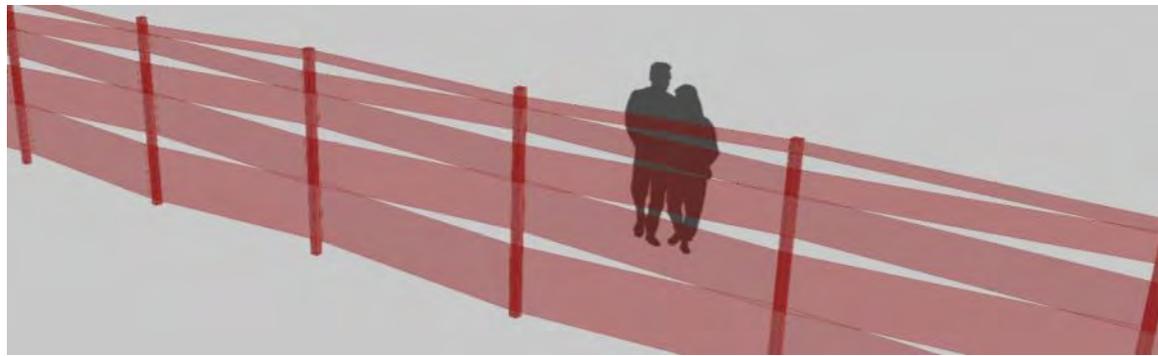
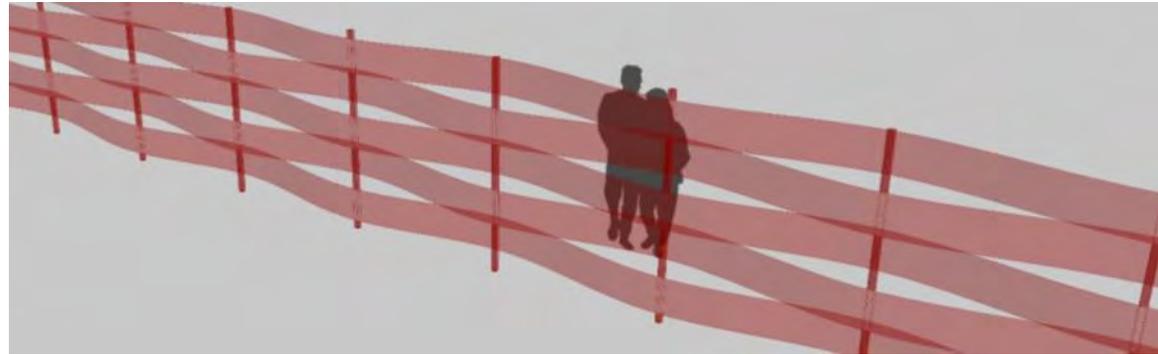
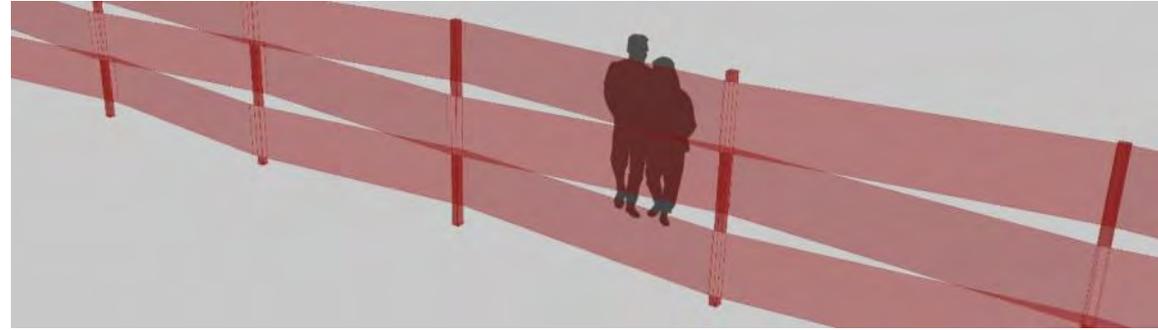
Woven & Folded



"Weaving entails gathering our natural materials, which ties us to nature. Nature is our life force, which without, we could not survive."

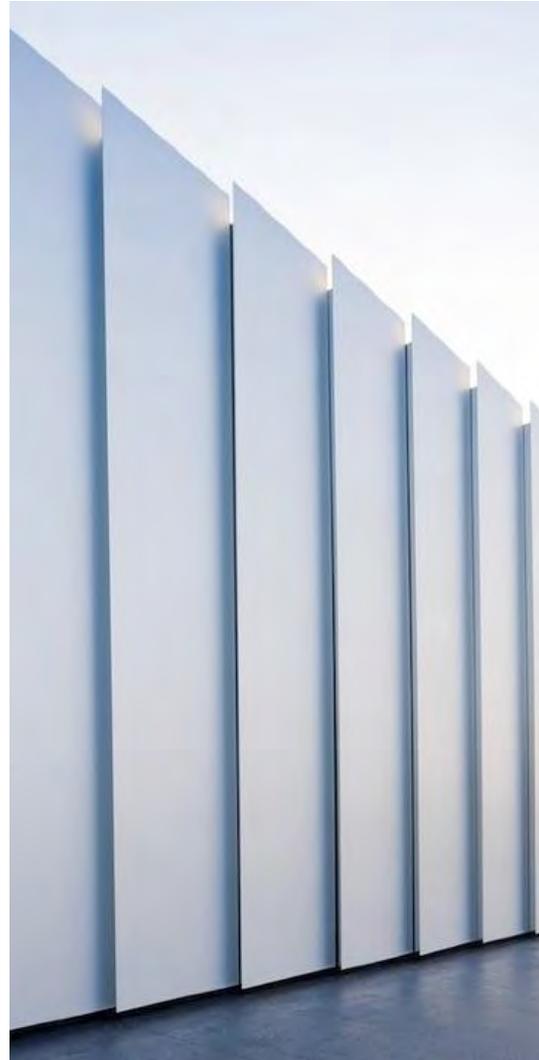
Excerpt from Duwamish Tribe website

Woven & Folded

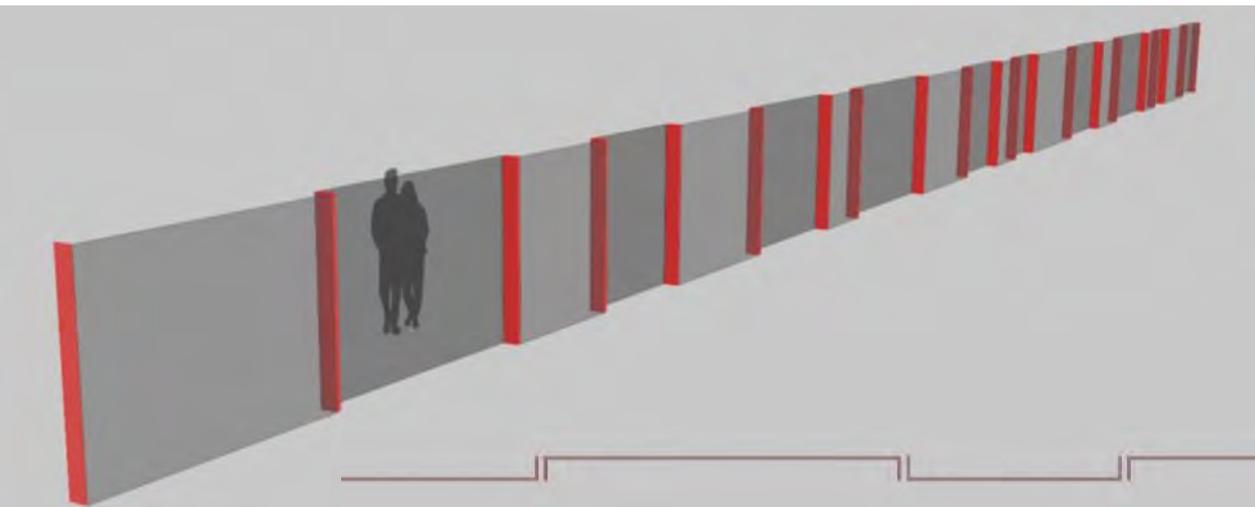
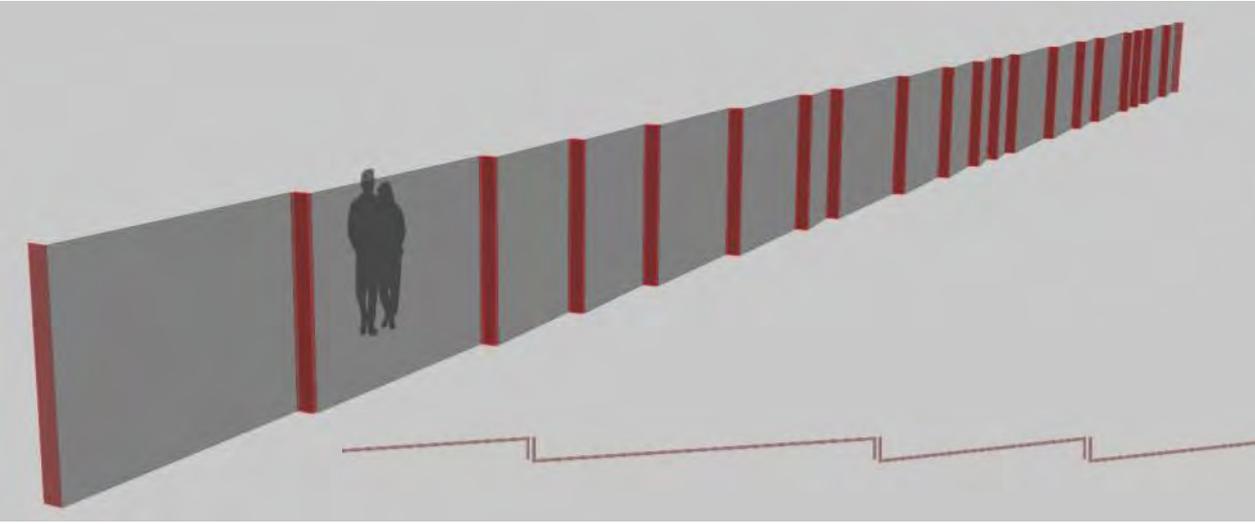


"Weaving entails gathering our natural materials, which ties us to nature. Nature is our life force, which without, we could not survive."
Excerpt from Duwamish Tribe website

Woven & Folded



Woven & Folded



Planting Typologies

Enhance air & water quality while making processes visible

Understanding of public wastewater infrastructure

Environmentally & socially sustainable

Connection to the Duwamish River



Planting Typologies – Native



TIDEFLATS



WETLANDS



LOWLAND FOREST



MEADOW



DRY FOREST

Planting Typologies – Adapted



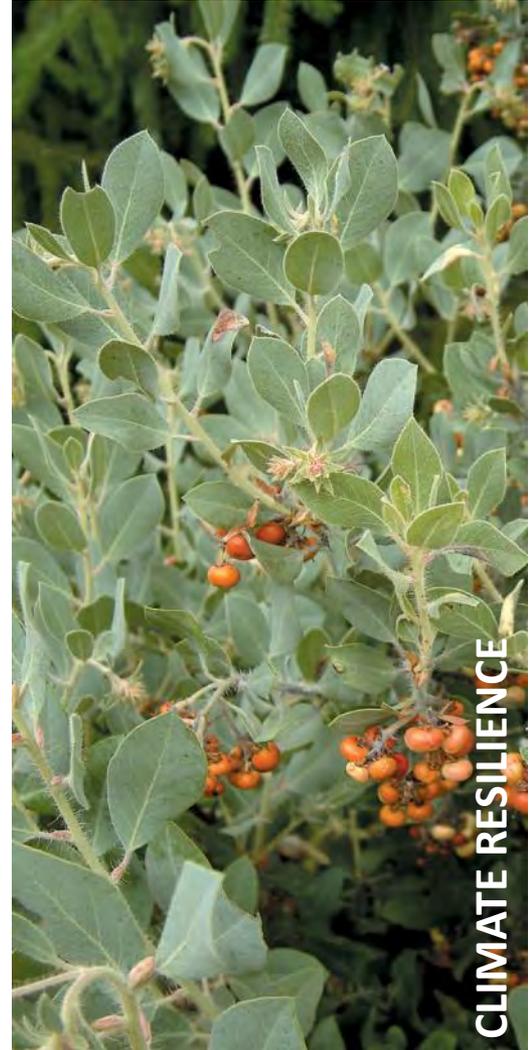
URBAN AIR QUALITY



RAIN GARDENS



POLLINATOR SPECIES



CLIMATE RESILIENCE

Street Trees - Michigan

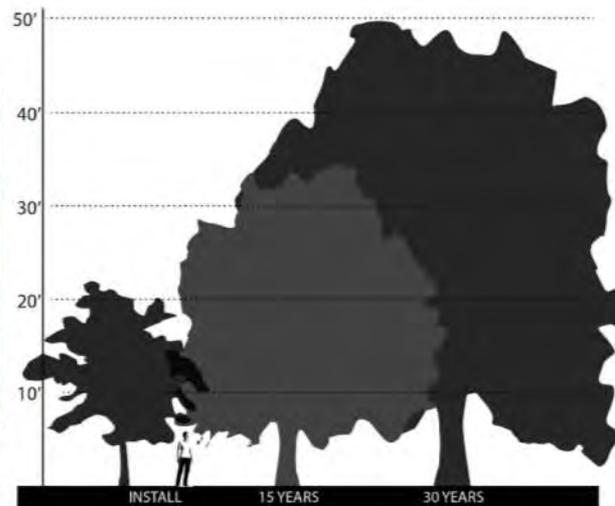
Native

Oregon White Oak
Quercus garryana



Plant Habit: Loose Pyramidal Height: 50' | Spread: 30'-40' | Full Sun

Installation Size: 2-1/2" Caliper Required
Seattle Streetscape Requirements: 6' minimum planter width



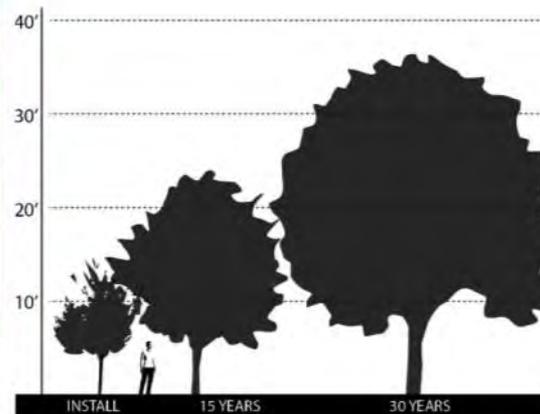
Adapted

Allee Elm
Ulmus parvifolia 'Emer II'



Plant Habit: Rounded Height: 45' | Spread: 30'-40' | Full Sun

Installation Size: 2-1/2" Caliper Required
Seattle Streetscape Requirements: 6' minimum planter width



Street Trees – 4th Avenue

Native

Cascara
Rhamnus purshiana

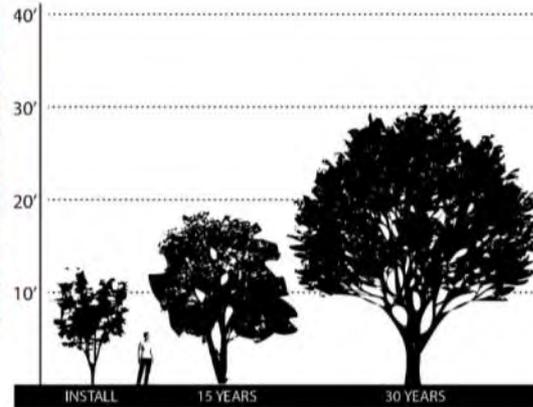


Vine Maple
Acer circinatum



Plant Habit: Rounded Height: 30' | Spread: 20' | Full Sun

Installation Size: 2-1/2" Caliper Required
Seattle Streetscape Requirements: 6' minimum planter width



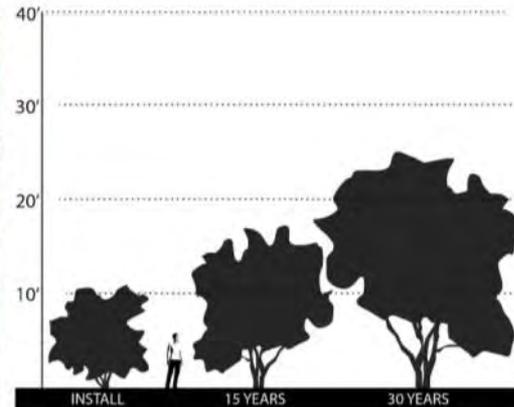
Adapted

Marina strawberry tree
Arbutus marina



Plant Habit: Rounded Height: 20' | Spread: 20' | Full Sun

Installation Size: 2" Caliper Required
Seattle Streetscape Requirements: 6' minimum planter width



ONWORLD
INTERIORS VANITIES MOSAICS
GRANITE MARBLE SLATE
206.764.9856

GO SOUTH
ON 101

GO SOUTH
ON 101

McDonald's
CHANGE YOUR
MIND & JOBS IN
HERE

McDonald's
DRIVE-THRU

ONWORLD
INTERIORS VANITIES MOSAICS
GRANITE MARBLE SLATE
206.764.9656

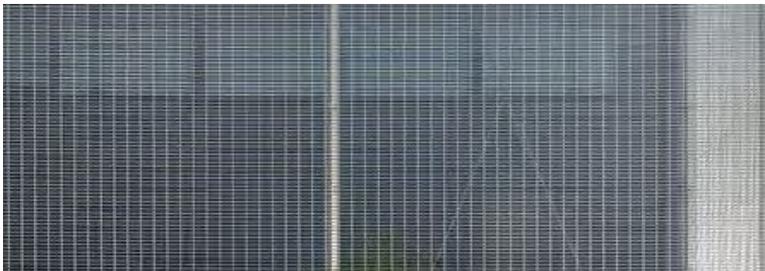




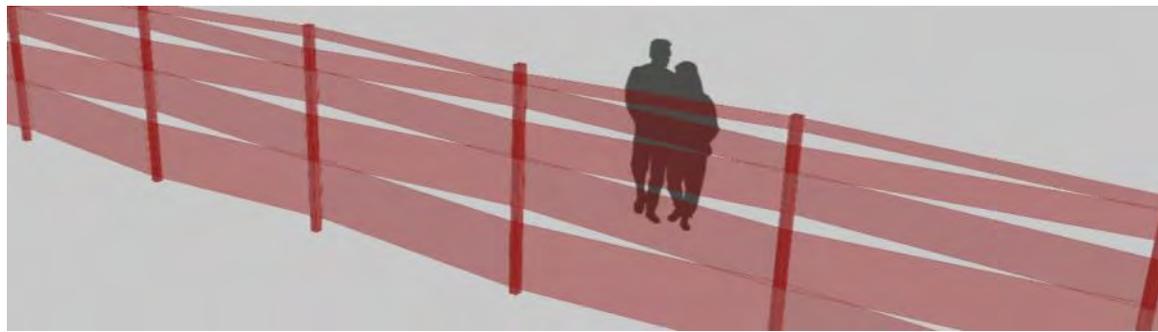
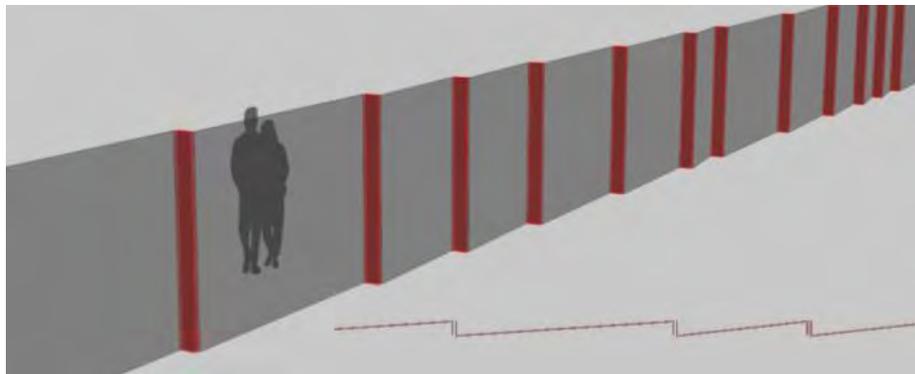
Feedback

- Fence character
- Planting concept
- Accent colors
- Corrugated siding appearance

Bar Grating



Woven & Folded



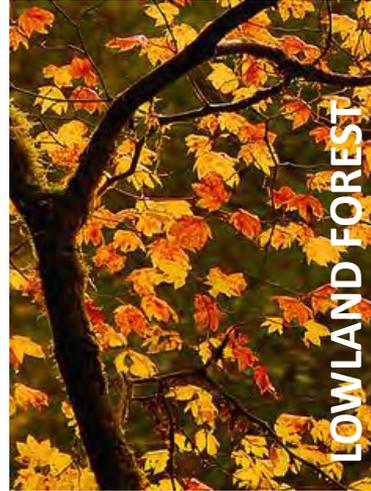
Native or Adapted



TIDEFLATS



WETLANDS



LOWLAND FOREST



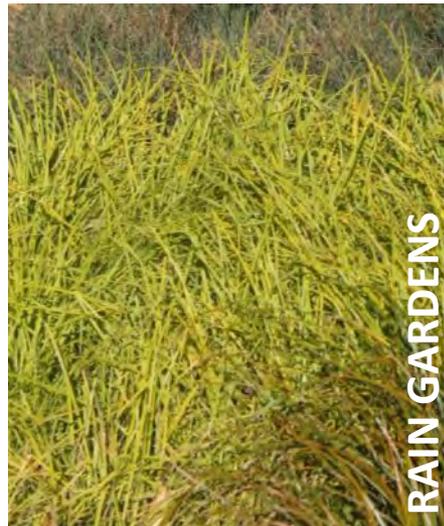
MEADOW



DRY FOREST



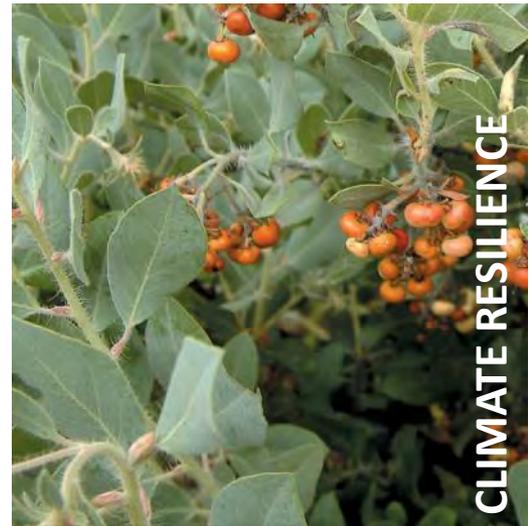
URBAN AIR QUALITY



RAIN GARDENS



POLLINATOR SPECIES

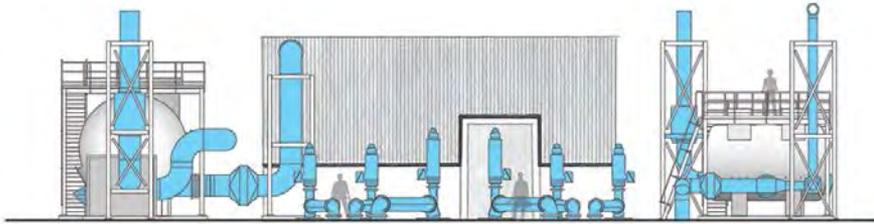


CLIMATE RESILIENCE

GEORGETOWN

Wet Weather Treatment Station

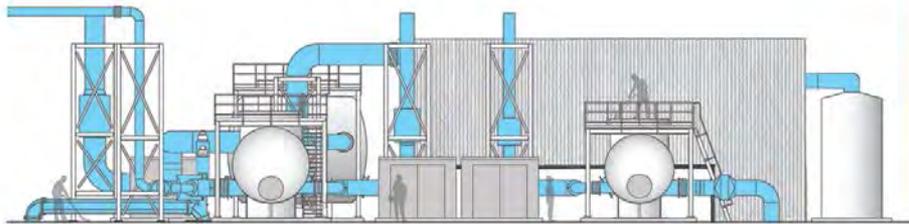
King County
Protecting Our Waters
Doing our part on rainy days



NORTH ELEVATION



SOUTH ELEVATION



WEST ELEVATION

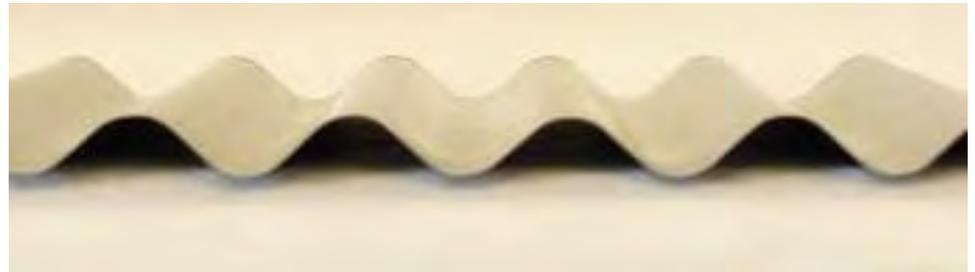


Corrugated Siding Types

VEE



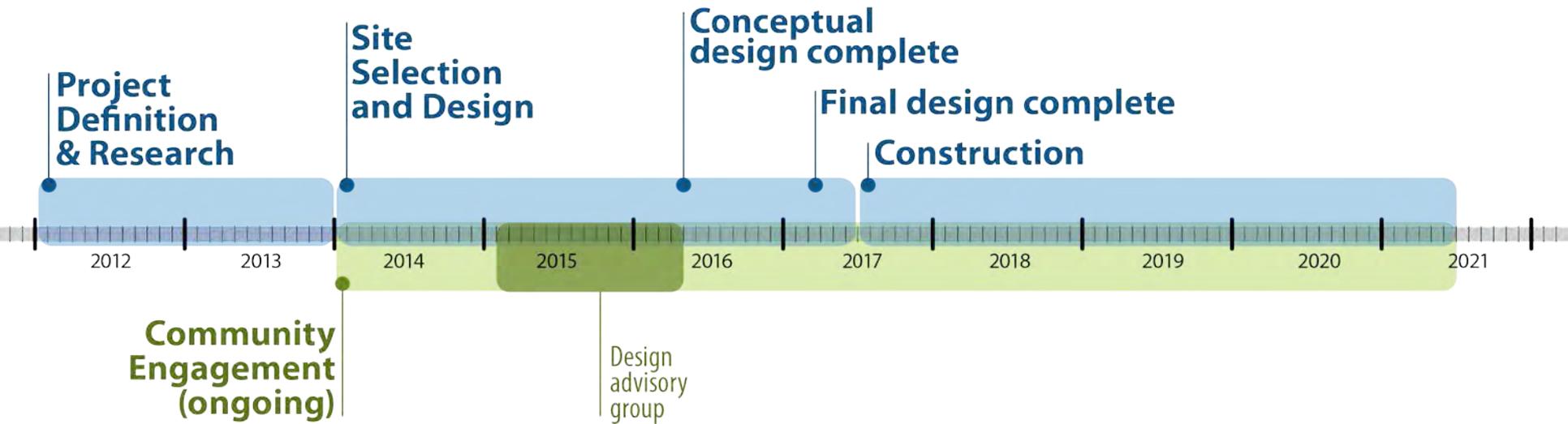
NU WAVE



WIDE CHANNEL



Project Schedule



Next Steps

- Broad community outreach
- Evening of Art
- Continued partnership development
- DAG meeting at 60% design?



Thank you!

For questions or comments, please
contact:

Kristine Cramer

206-477-5415

kristine.cramer@kingcounty.gov

www.kingcounty.gov/georgetownWWTS