

GEORGETOWN

Wet Weather Treatment Station



King County

Protecting Our Waters

Doing our part on rainy days



THE MILLER HULL PARTNERSHIP || SIGNAL ARCHITECTURE + RESEARCH || BERGER PARTNERSHIP

GEORGETOWN WWTS

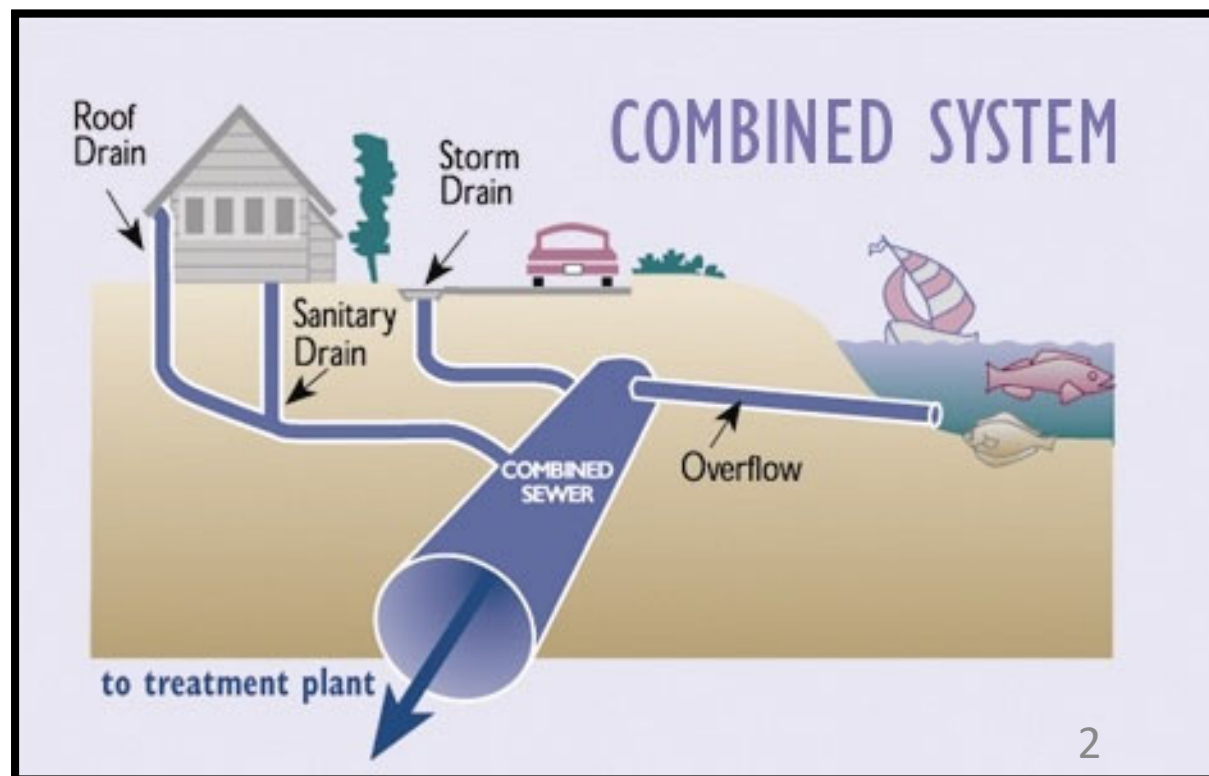


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WTD's Mission: Protect Public Health and Enhance the Environment





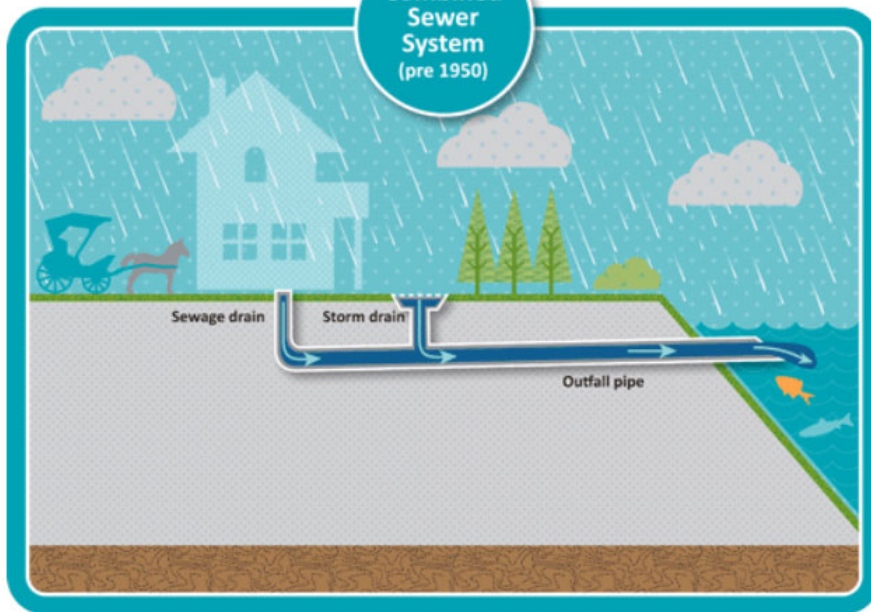
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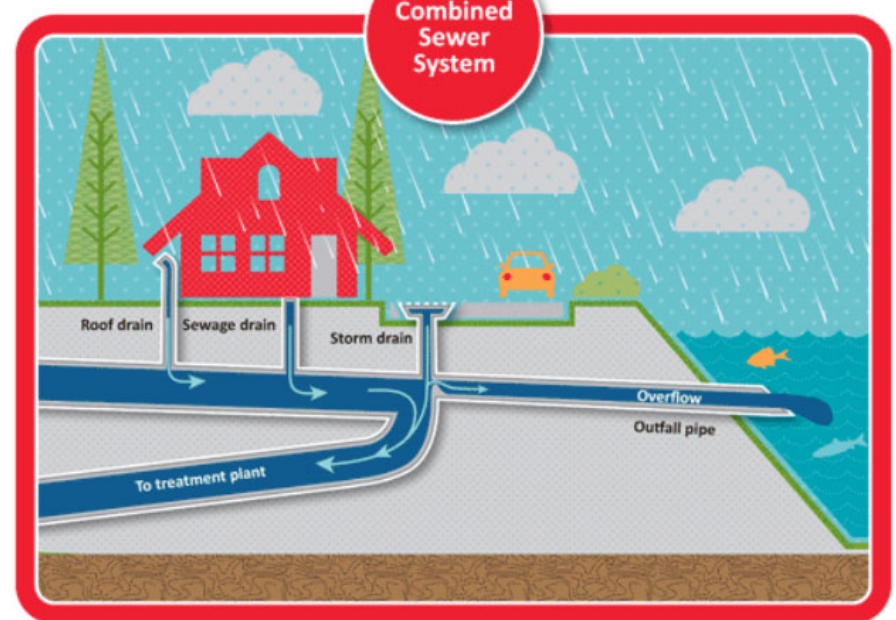
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Problem

Combined
Sewer
System
(pre 1950)



Combined
Sewer
System





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Solutions

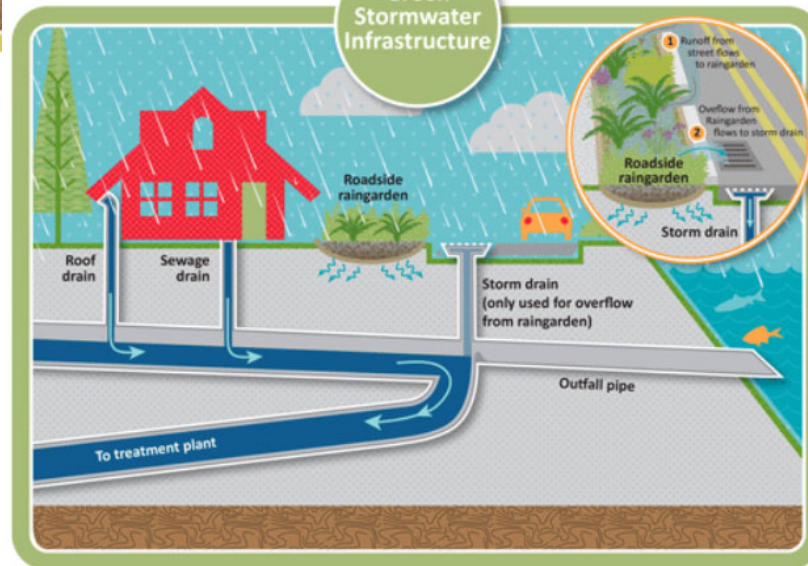
Storage tank



Wet weather treatment station



Green Stormwater Infrastructure





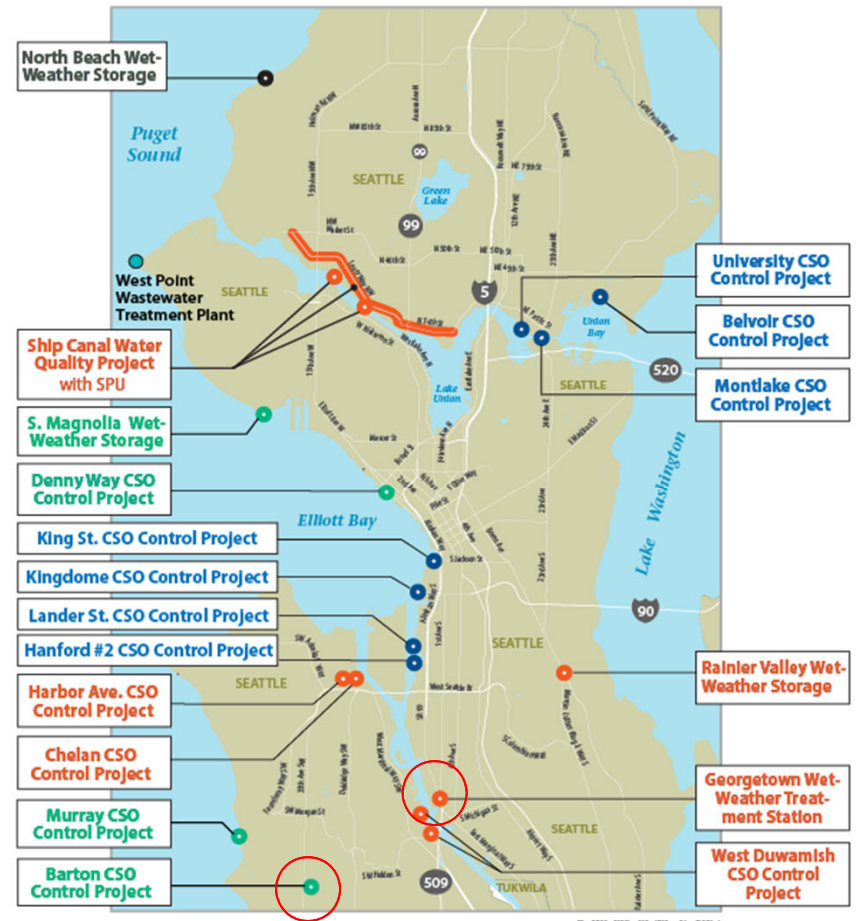
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King County 2012 Long-Term Combined Sewer Overflow (CSO) Control Plan

King County Protecting Our Waters Projects to Control CSOs CURRENT PROJECTS





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Consent Decree Requirements

Project defined as:

- CSO Treatment and Conveyance – 70 MGD peak
- High rate clarification treatment

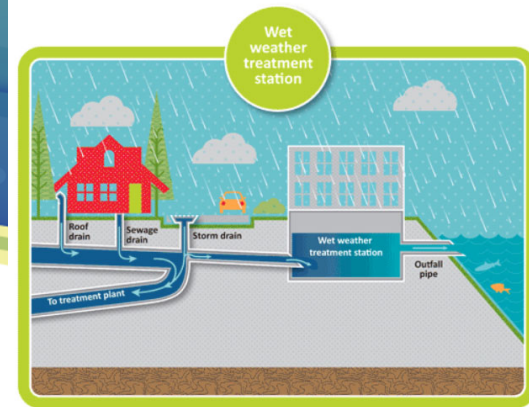
Compliance Schedule:

- Submission of Facilities Plan by December 31, 2015
- Completion of Bidding by December 31, 2017
- Construction Completion by December 31, 2022
- Achievement of Performance Standard by December 31, 2024 or two full wet seasons.

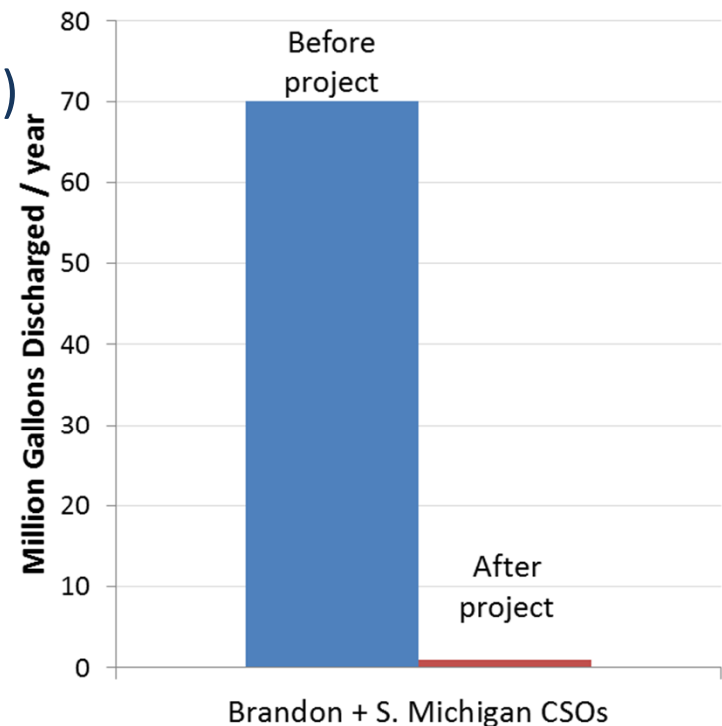
Georgetown Wet Weather Treatment Station

Background - Purpose

- Control of Brandon and South Michigan Street CSO Outfalls in accordance with Washington Administrative Code (WAC)
- WAC defines control as “no more than one event per year over a twenty year average” or treatment that is at least equal to primary treatment standards.
- Achieve all consent decree requirements



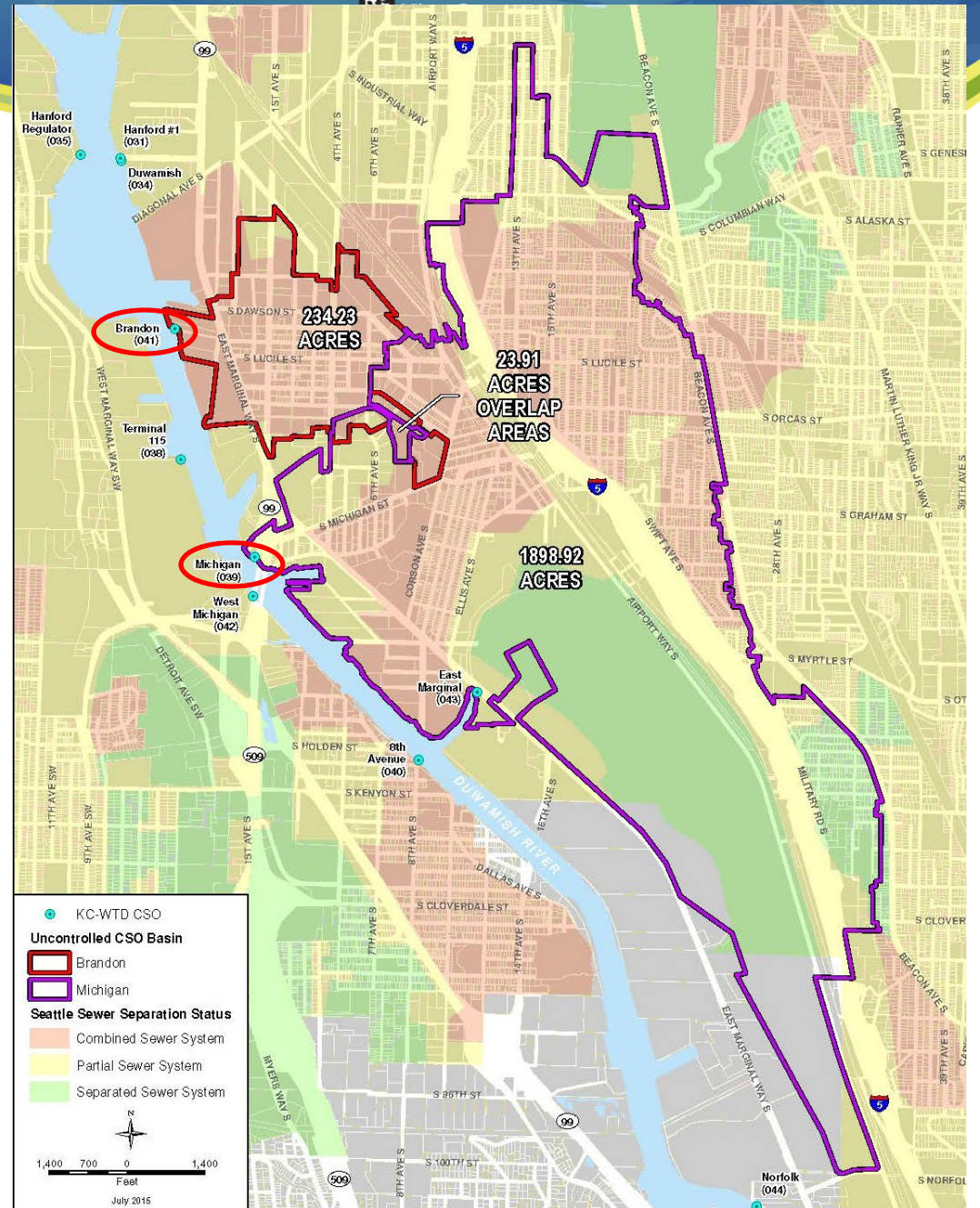
Untreated CSO Volume Reduction

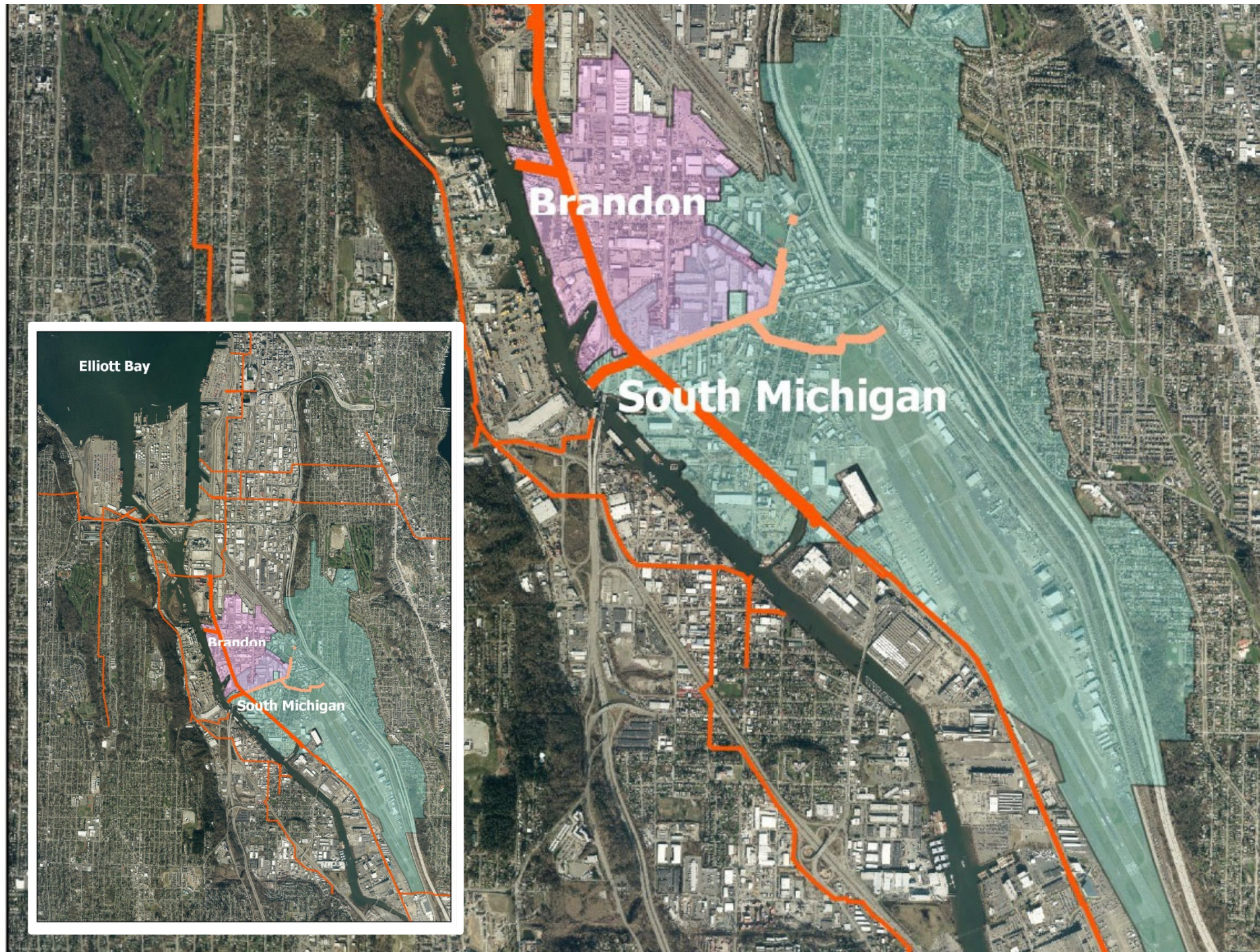




Brandon St. Outfall

Michigan St. Outfall





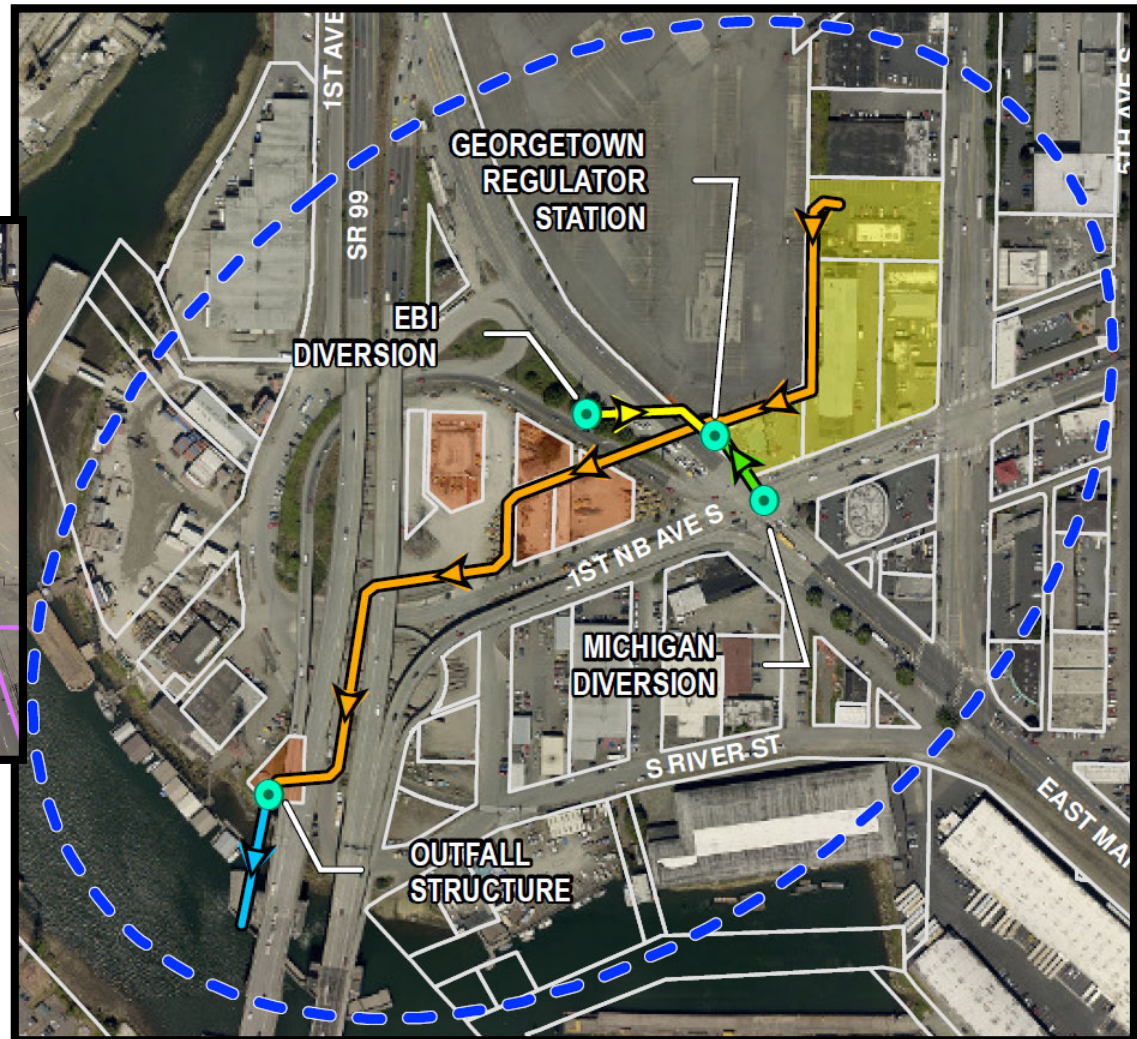


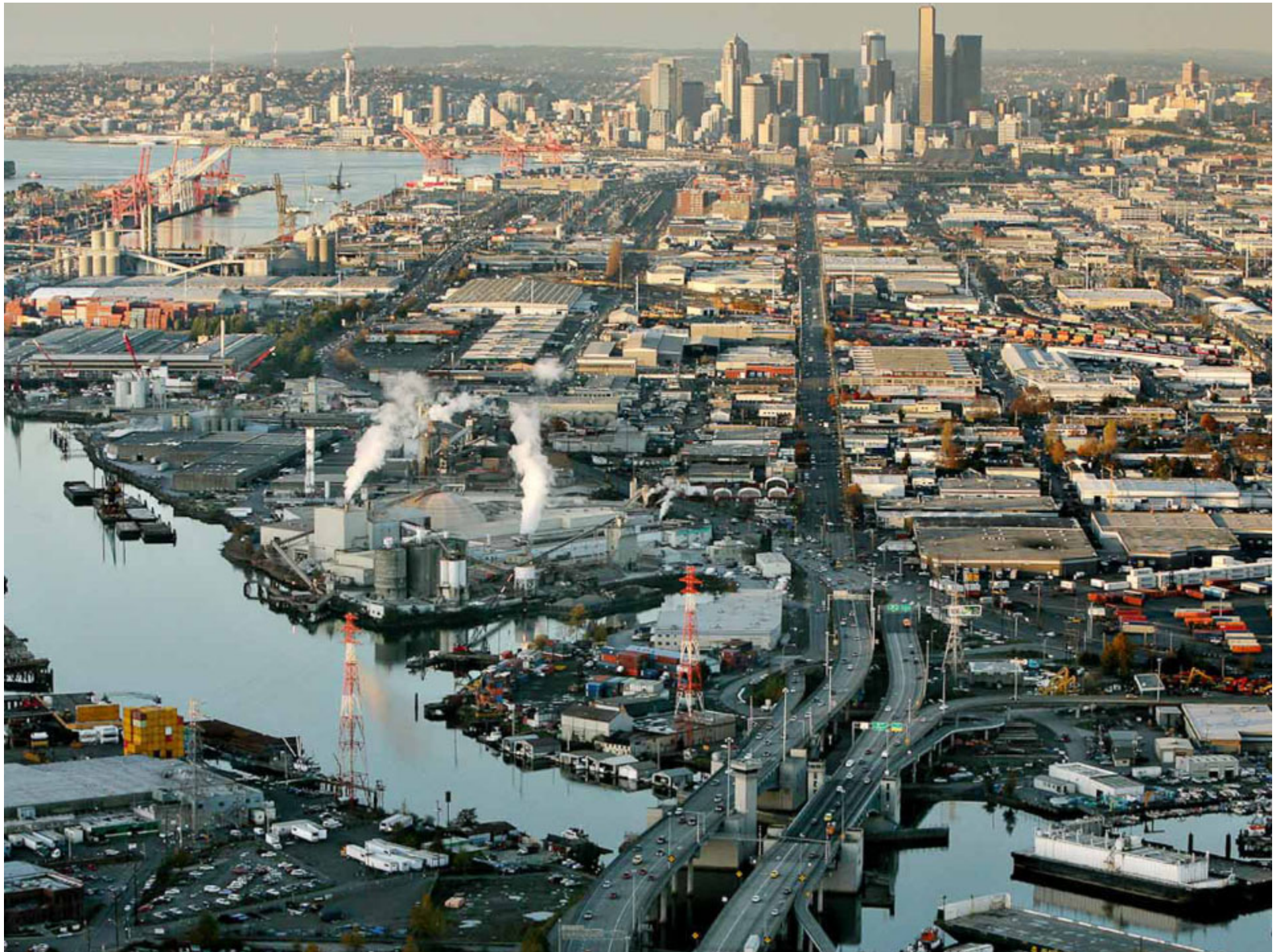
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System Overview







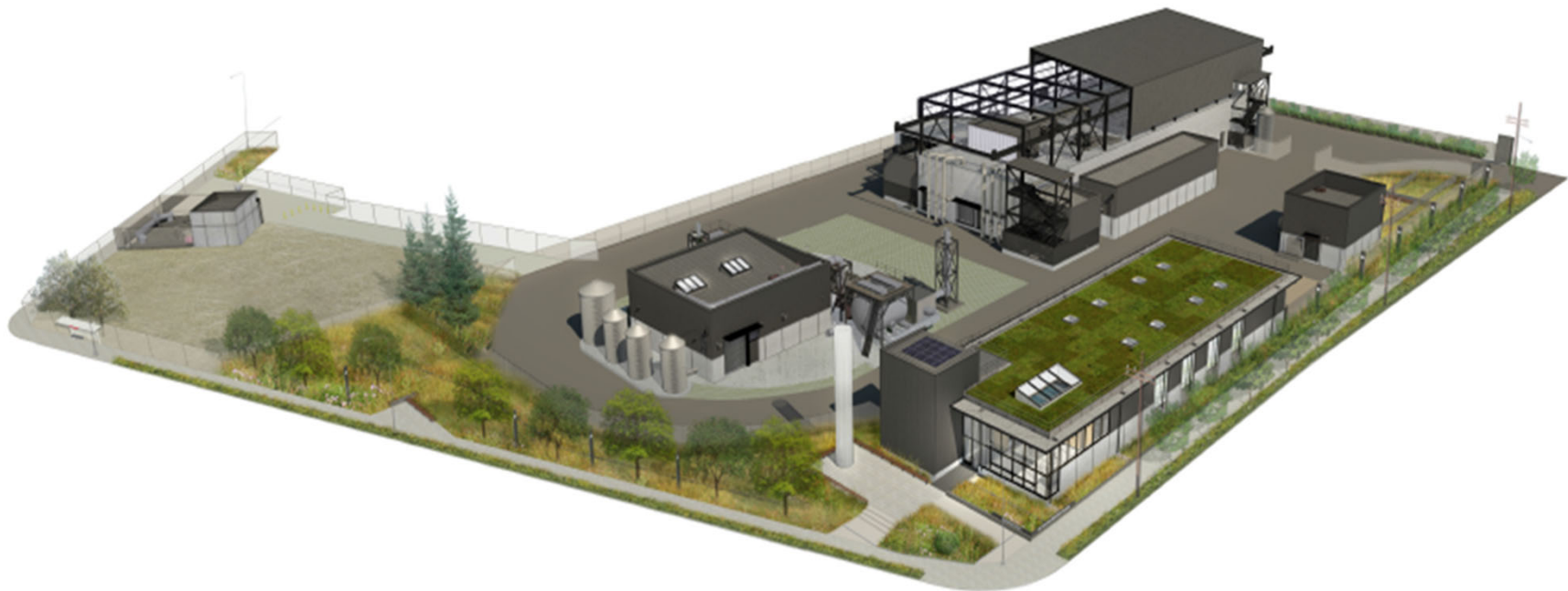


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WWTS Birds Eye View



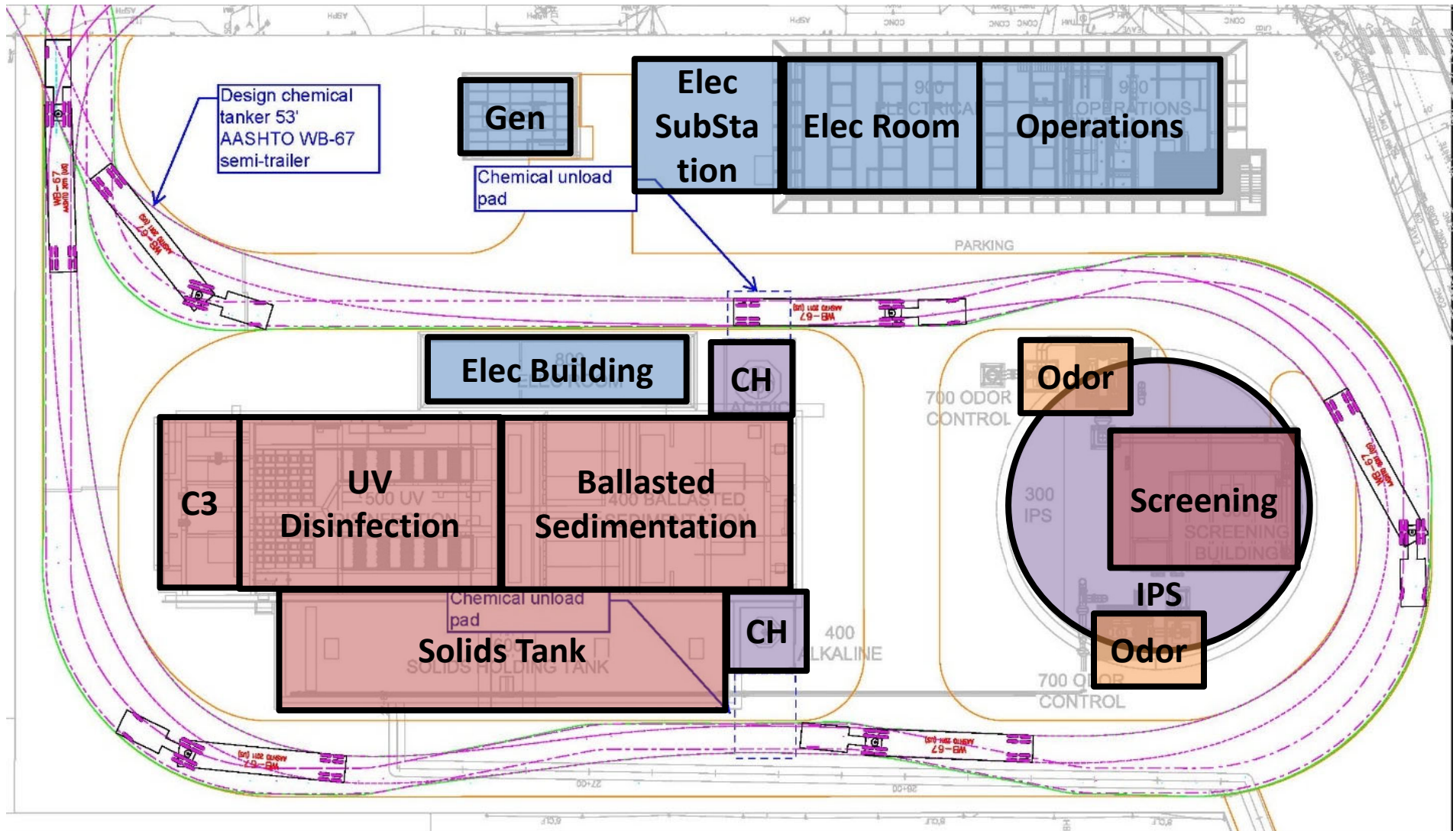


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Site Layout



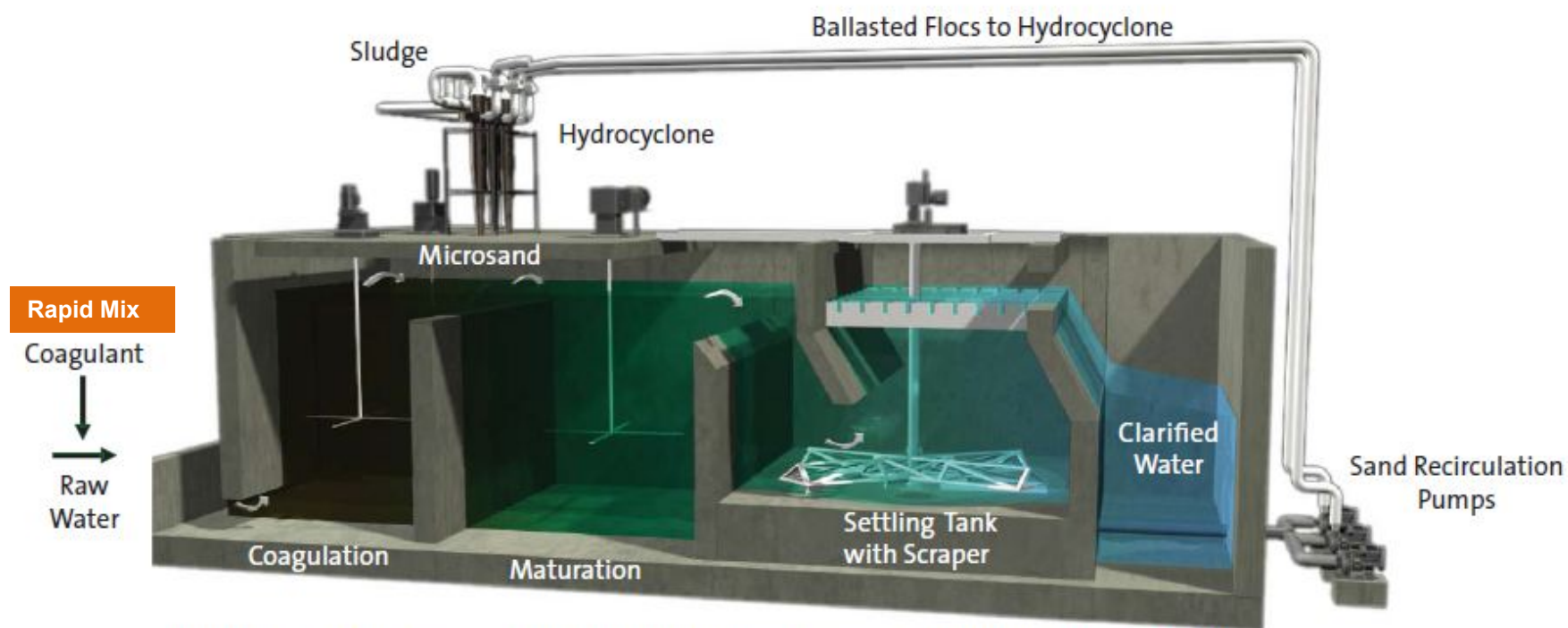


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Typical Ballasted Sedimentation



Solutions & Technologies

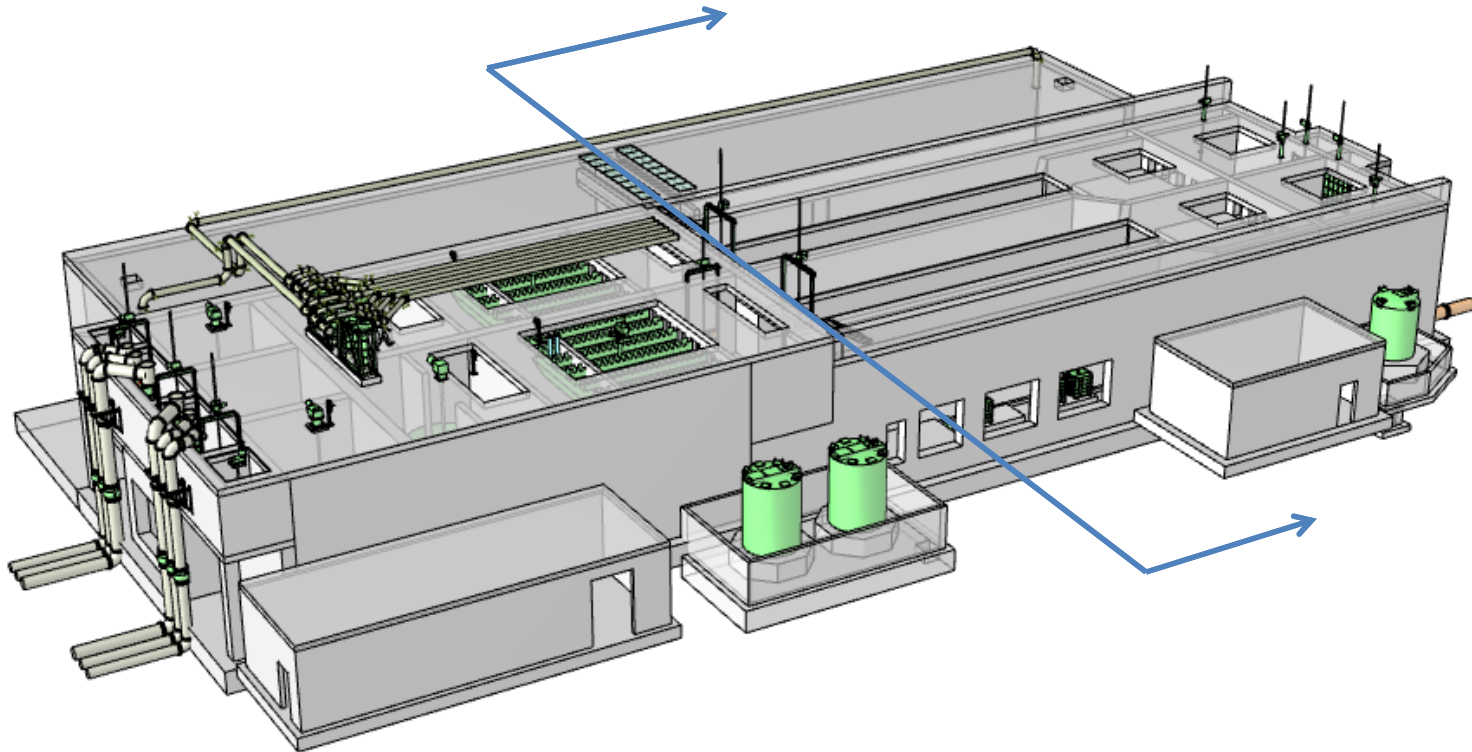


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UV Disinfection





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Construct Techniques

- Rigid Inclusion
- Secant Piles
- Tremie Slab – 8,600 CY, 30 FT Deep
- In-Water Work with Fish Window
- Large Diameter Pipe Installation



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Project Challenges

- **Four construction contracts: Demolition, Treatment Plant, Outfall, and Conveyance**
- **Constrained site**
- **Fish Window for in-water work**
- **Utility conflicts**
- **Traffic - Night Work**



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Treatment Plant Site





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Rigid Inclusion





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Rigid Inclusion





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Secant Pile Ring Wall Prep





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Secant Pile Ring Wall Prep





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Secant Pile Dredging Pump with Jets





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Tremie Slab Pour





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Liner Wall Demo on a Flexifloat





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12.06.2018



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Large Diameter Pipe – 96" & 60"





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Bifurcated Pipe





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Outfall Site





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Trestle over Outfall Trench





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Floating in Outfall Pipe



Questions?

