

Wastewater Treatment Division

Capital Projects Update
Presented to MWPAAC
Engineering and Planning Subcommittee
August 3, 2017

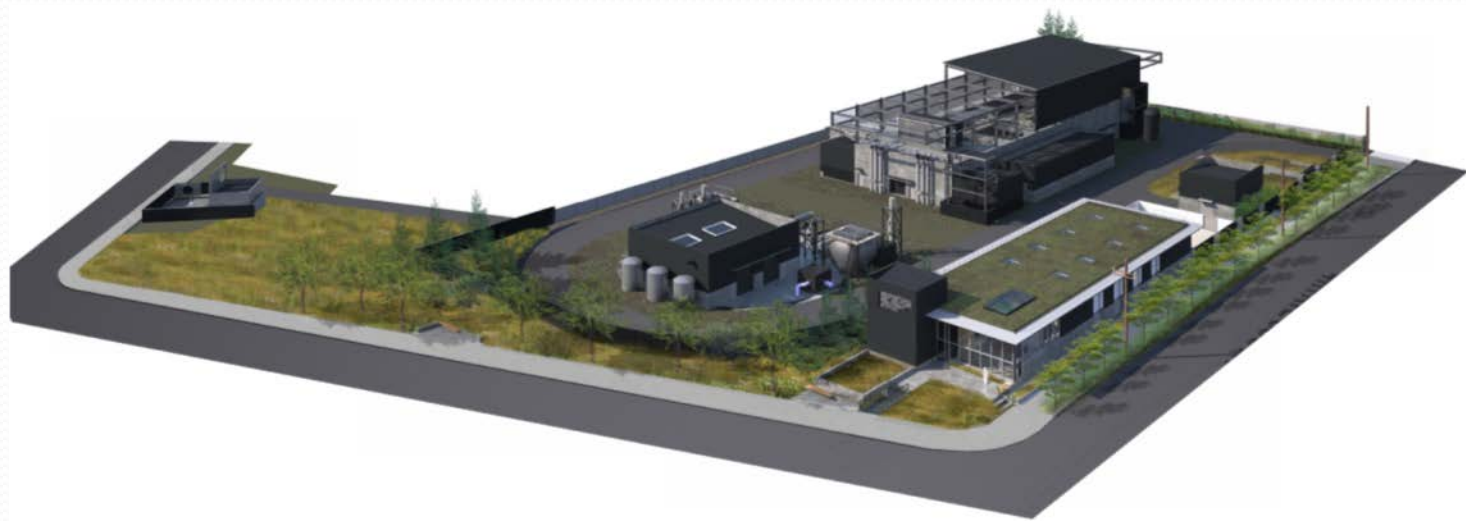
Presentation Overview

Overview of sample capital projects

- Combined Sewer Overflow Control projects
 - Georgetown Wet Weather Treatment Station
 - Chelan CSO Control
 - Rainier Valley Wet Weather Storage Facility
 - South Magnolia CSO
- Conveyance, pump station, and other improvement projects
 - Sunset/Heathfield Pump Station
 - Kent Auburn Conveyance System Improvements Phase B
 - North Mercer/Enatai Interceptor Upgrade
 - North Creek Interceptor
 - Eastside Interceptor Section 2 Rehabilitation
 - Eastgate Interceptor Rehabilitation Phase III
 - South Plant Heating and Biogas Upgrade

Georgetown Wet Weather Treatment Station

- Control CSO's at Michigan and Brandon Street Regulators
- Improve water quality in Lower Duwamish
- High-rate CSO Treatment and Disinfection
- Site Preparation and Demolition Underway
- Construction completion 2022
- Total project cost \$262M (lifetime)



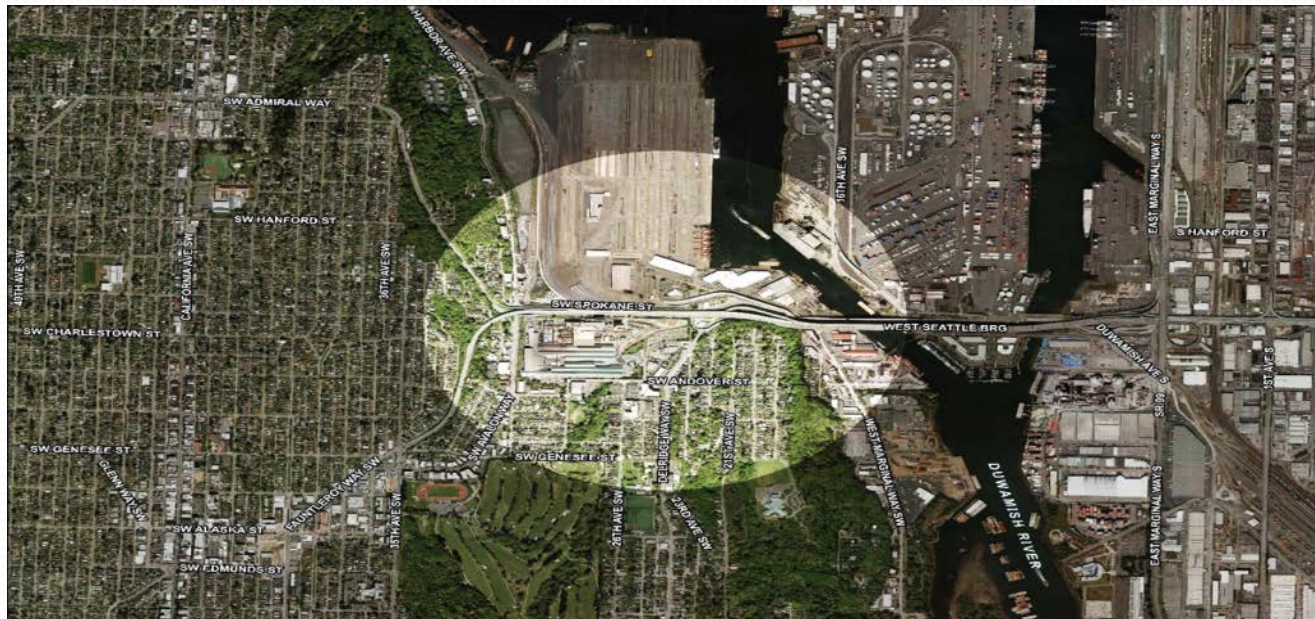
Demolition, Remediation, Site Preparation Contract

- Demolition of structures complete
- Pavement removal
- Contaminated soils removal is underway
- Treatment Station contract to be awarded Fall 2017
- Conveyance and Outfall contracts to be advertised Fall 2017



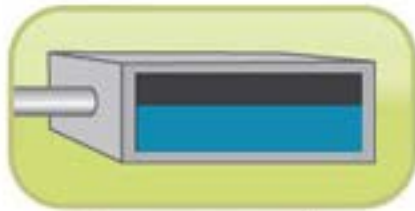
Chelan CSO Control

- Control CSOs at the Chelan Regulator; improve water quality in Lower Duwamish
- Alternatives analysis underway
- Facility Plan to be submitted by December 31, 2018

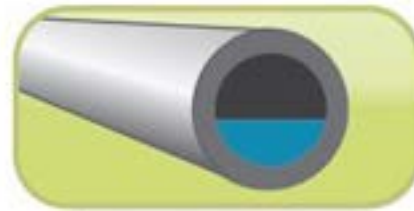


Alternatives Evaluation

- Alternatives analysis is focusing on storage of water during storms including underground storage tank or tunnel.



Storage tank



Storage tunnel

- Evaluate technical needs, community impacts, cost, land use and permitting, O&M requirements, and how Chelan integrates into WTD system.

Rainier Valley Wet Weather Storage Facility

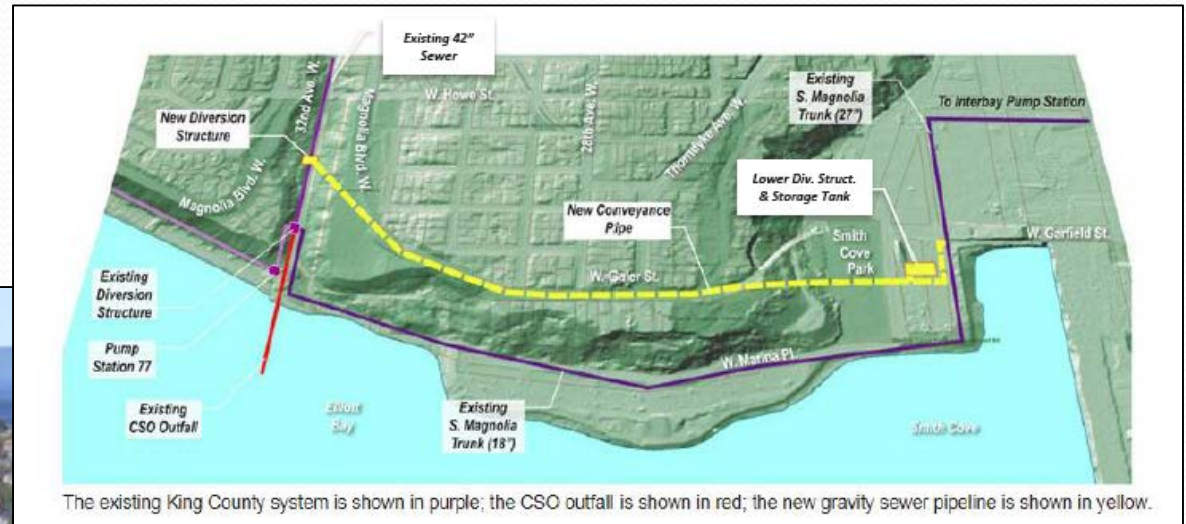
- Control CSOs at Hanford Trunk
- Peak flow diversion to the Bayview Tunnel and construction of a 0.34 MG off-line storage near the CSO discharge location
- Construction substantial completion expected 4th Quarter 2017
- Total project cost \$34.2 M (lifetime)





Base slab for Rainier Valley storage tank

South Magnolia CSO



South Magnolia CSO

- Convey and store combined wet weather flows to limit overflows into Elliot Bay to one per year
- 30" dia, 3000-ft long, conveyance pipe up to 150-ft deep and 1.5 million gallon below grade storage tank
- Project completed and put into operation to achieve December 2015 consent decree substantial completion milestone
- Discovered pipe break November 2016. Contractor corrective action plan currently under review.
- Facility anticipated to be back online first half of 2018.

Sunset/Heathfield Pump Station

- Upgrade Sunset/Heathfield Pump Stations and Force Mains to increase capacity
- Replace 12-inch sewer force main pipe with a 24-inch pipe
- Construction methods used will be open cut, trenchless crossing, and horizontal directional drilling
- Construction begins May 2017; completion anticipated in 2020
- Total project cost \$75.3M (lifetime)



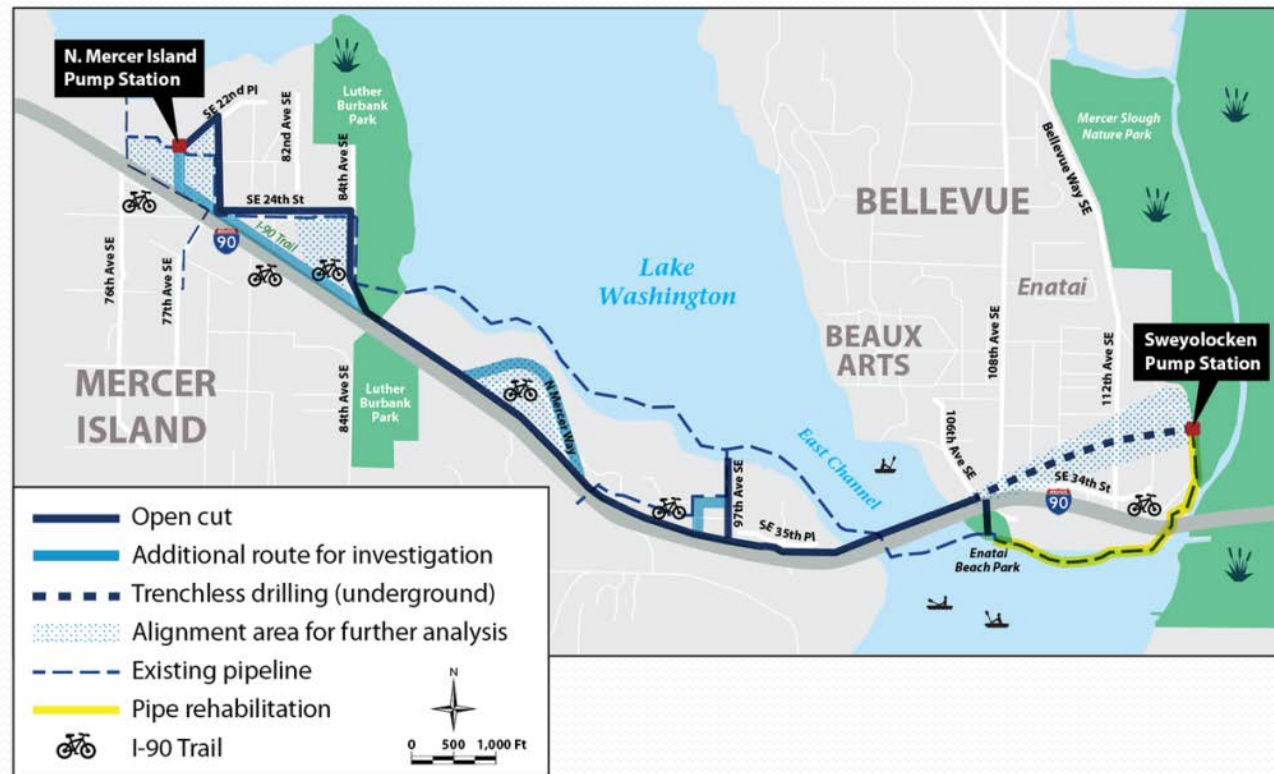
Kent-Auburn Conveyance System Improvements Phase B

- Convey wet weather flows originating at Pacific Pump Station to the Auburn West Interceptor (AWI) and partially parallel the AWI
- Construction underway with substantial completion anticipated June 2019
- Total project cost \$37.7M (lifetime)



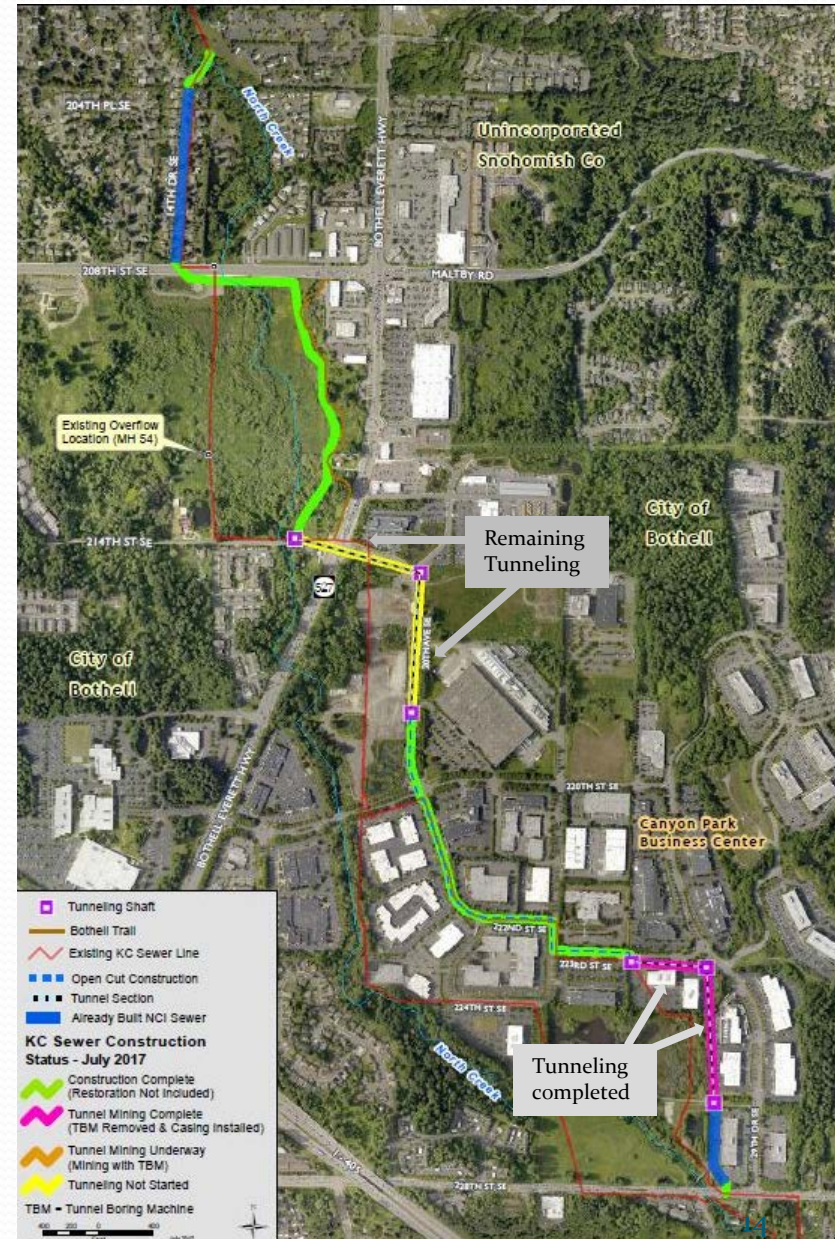
North Mercer/Enatai Interceptor Upgrades

- Increase reliability and capacity in the North Mercer Island and Enatai Interceptors
- Final design underway
- Construction to begin 2020 with completion 2024
- Total project cost \$106.2M (lifetime)



North Creek Interceptor

- Increase capacity of the North Creek Interceptor
- WTD hired a new contractor (JW Fowler) under emergency declaration in January 2017
- Second of four tunnel segments completed, and tunneling on the third segment will begin in early August
- Project completion is expected in 2018

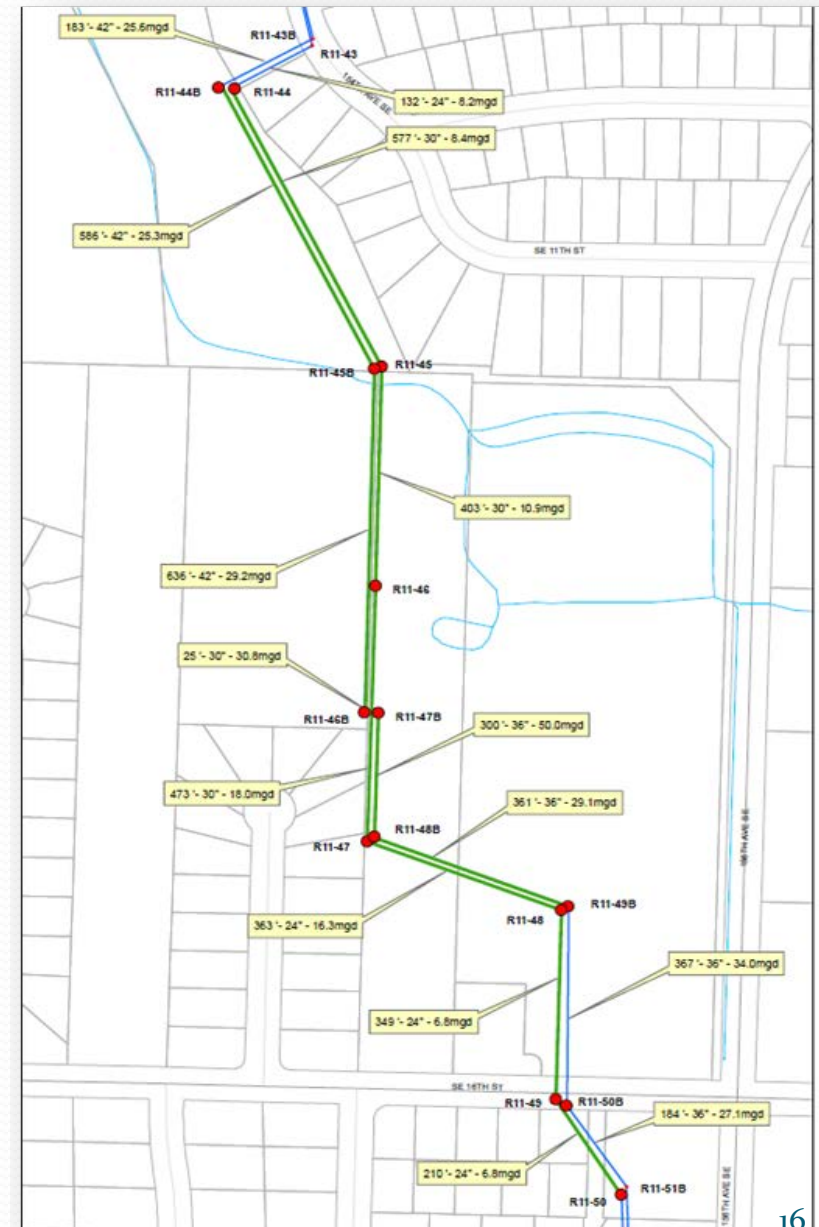


South Plant Biogas and Heat

- Replace existing biogas gas treatment system (installed in 1987), and provide heating equipment to meet year-round plant heat demand.
- Improve system performance, efficiency, and reliability.
- Maximize cost effectiveness and contribute to targets established by King County's Climate Action Plan
- Project in final design. Construction to start in 2019 with completion in 2021.
- Total project cost \$59.9 M (lifetime).

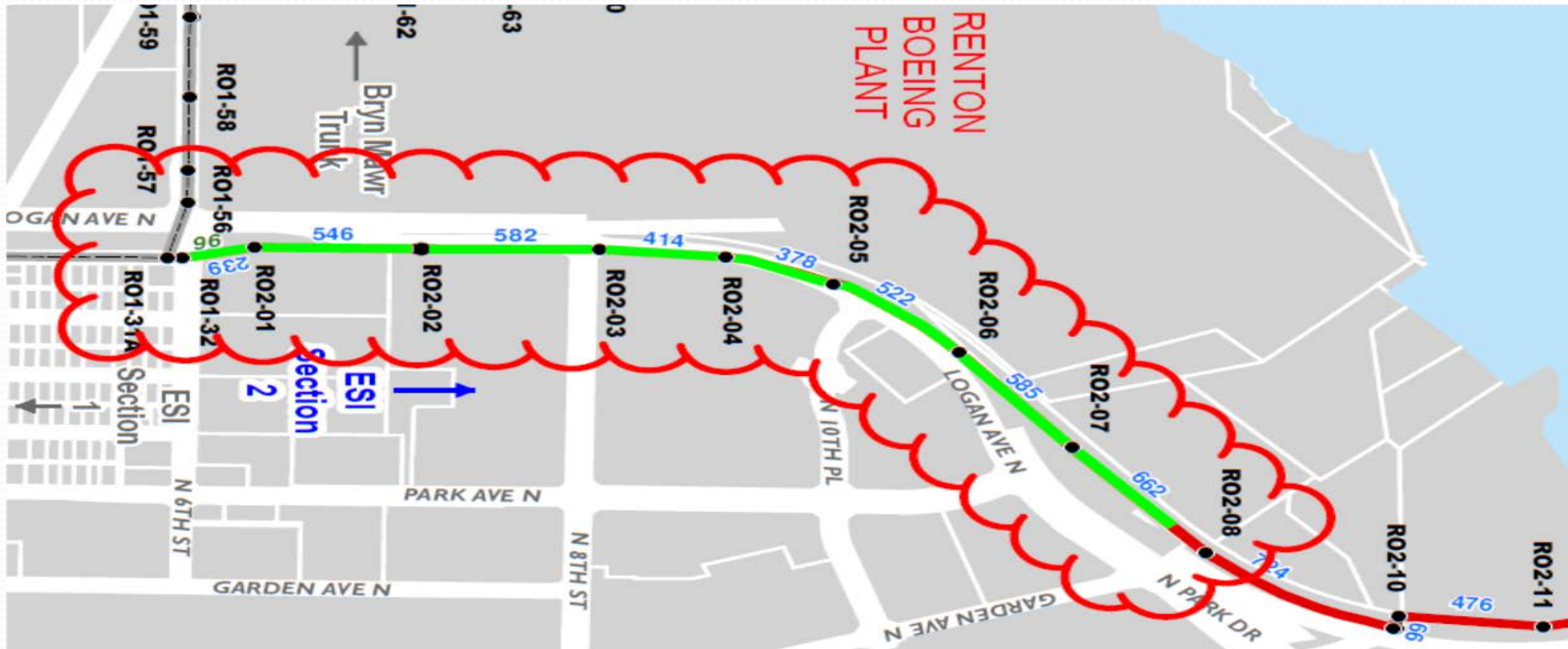
Eastgate Interceptor Rehabilitation Phase III

- Rehabilitate 4,000 linear feet of parallel 24 to 42 inch diameter reinforced concrete pipes with cured-in-place liner.
- Majority of the pipe passes through Lake Hills Greenbelt Park in Bellevue
- 2,000 feet of temporary bypass piping and pump(s) to divert 100% of flow up to 24 MGD
- NTP projected April/May 2018
- Total project cost \$7.2M



Eastside Interceptor Section 2 Rehabilitation

- Rehabilitate 3,900 feet of 96-inch heavily corroded reinforced concrete pipe
- Sewer bypass as large as 70 MGD may be necessary
- Work in public right-of-way and Boeing Property
- Construction 2019 - 2020
- Total project cost \$27.5M



Questions?

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