

CIP Project Highlights

Informational Briefing Environmental Services Commission

Bellevue Utilities

September 2, 2021

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Goals of this Informational Briefing



AGENDA

Overview of Utilities Capital Investment Plan

Highlights of 7 CIP Projects

Discussion and Summary

CIP Overview

- Aging infrastructure
- Supports community growth and development
- Ensures Utilities infrastructure continues to support excellent Utility services



Utilities Capital Investment Plan (CIP) 2021-2027



2021 - CIP Projects in the Works

Project Phase	Water	Sewer	Storm
Initiation	7	6	5
Design	8	6	8
Construction	10	4	2
Completion	3	2	2
Total	28	18	17

Total # Projects - All Funds: 63

Drinking Water Projects

Pikes Peak Reservoir Replacement



Existing 1.0 Million Gallon Steel Reservoir



Demolition of existing reservoir



Proposed 1.25 Million Gallon Prestressed Concrete Reservoir (photographic rendering)

Project Drivers, Scope, Schedule & Cost

Drivers:

- Aging water reservoir (built in 1968) has seismic and structural deficiencies.
- Additional volume to meet current and future requirements for fire flow storage.

Scope:

Project location

1.25 MG pre-stressed concrete reservoir with associated piping, stormwater system, site improvements and landscaping.

Phase and Schedule:

Construction. To be completed Q3 2022.

Cost: \$9.5 million (CIP W-85)



Community Outreach & Engagement

- Formation of Community Advisory Group
 - Composed of various local groups/neighbors
 - Multiple meetings/correspondence
 - Design input (reservoir height, trail accessibility)
 - Consensus and collaboration
- CIP Projects link on City website
- Project Website
 - Fact sheet, map, schedule
 - Frequently Asked Questions
 - Utilities Contact information
- Mailers
 - Neighbors in service area
- Neighbors directly adjacent to site



Community Advisory Group onsite meeting

Design, Construction and O&M Aspects

- Alternatives Evaluation
- Multiple permitting agencies
- Working near SCL overhead transmission lines
- Coordination with Cherry Crest Pump Station Replacement
- Volatile prices during bidding

Entrance to site and State Park



- Working within State Park
 - **Temporary Construction Easements**



- Improved water quality and fire flow storage
- Improved safety for O&M staff

Cherry Crest Pump Station Replacement



Existing pump station building (Cherry Crest reservoir in background)



Inside new pump station building





Completed pump station building

Project Drivers, Scope, Schedule & Cost

NE 60th St

Pikes Peak Reservoir

and Pump Station

Drivers:

Replacement of aging pump station building and pumps, combine Pikes Peak pump station into the same facility.

Scope:

- Building and pumps
- **Emergency generator**
- Main replacements and upsizing ۲
- **PRV** Station
- Street pavement overlay/restoration

Phase and Schedule:

Construction recently completed Q2 2021.

Cost: \$8.7 million (CIP W-91 and W-16)



Design, Construction and O&M Aspects

- Alternatives Evaluation (multiple pumping configurations)
- Accelerated schedule (complete before Pikes Peak Reservoir)
- Consolidation of Pikes Peak
 pump station facility
- Onsite emergency generator
- Increased capacity and pumping options/flexibility
- Preserve Cherry Crest reservoir storage
- Improved security
- Construction schedule impacted due to COVID-19.

Pumps and controls COHLER 5 KW generator **Building floor** and foundation

Community Outreach & Engagement

- Formation of Community Advisory Group
 - Composed of neighbors
 - Multiple meetings/correspondence
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- CIP Projects link on City website
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 - Neighbors in service area
- Door-to-door water shut-down notification (COVID-19)



Community Advisory Group site meeting

136th Inlet Station/NE 8th Transmission Main



Inlet station site on left side of street





Looking towards downtown through the new transmission main

Project Drivers, Scope, Schedule & Cost

Drivers:

- Growth in downtown, Bel-Red and Wilburton.
- Need for redundancy and reliability in supplying water for domestic and fire protection uses.

TESSL **Transmission Main** Connection to New water City's existing main pipe water system NE 8th St 썾 New water Connection made here inlet station to SPU's water supply line to expand the capacity of Bellevue's New SPU Inlet Station drinking water system meter vault 26th N

Scope:

- Inlet station (buried concrete vault)
- Connection to TESSL
- SPU meter vault
- 3,400 LF 24-inch main
- 2,200 LF 8 to 20-inch main
- Hydro turbine
- Pavement restoration

Phase and Schedule: Construction. To be completed Q3 2021.

Cost: \$8.6 million (CIP W-104, W-103 & W-16)

Design, Construction and O&M Aspects

- Alternatives Evaluation
- Working within City right-of-way
- Working within City park property
- Improves capacity and redundancy
- Hydro turbine generator (cost savings)
- Earthquake-resistant pipe (seismic reliability)
- Permits/Approvals:
 - City of Bellevue
 - Seattle Public Utilities & CWA
 - Washington State RCO
 - Olympic Pipeline Company
 - Washington Department of Health

Inside inlet station vault



Setting vault at TESSL connection

Community Outreach & Engagement

- CIP Projects link on City website
- Project Website
 - Fact sheet, map, schedule
 - Frequently Asked Questions
 - Utilities Contact information
- Mailers
 - Neighbors in service area
- Open House
- Variable Message Sign prior to construction
- Onsite meetings with apartment manager, nearby residents



Wastewater Projects

Lake Heights Wastewater Pump Station



Project Drivers, Scope, Schedule, & Cost

• Drivers:

- Station at the end of useful life
- Severely out of compliance with electrical and safety codes
- Scope:
 - New Control Building, Retaining Wall, Electrical Service, Pumps, Piping, Rehab Wet Well, Flow Meter, Programming
- Schedule:
 - Design Jan 2019
 - Bid June 2020
 - Complete May 2021
- Cost:
 - 2.11 M



Community Outreach & Engagement

- Project Notice sent to surrounding neighborhood
- Worked with homeowners for temporary construction access
- Maintained community driveway access
- Resident across street selected control building block and roof colors



Design, Construction and O&M Aspects

- Coordination with PSE for electrical new service
- Finished facility is safer to maintain for City staff, and more reliable which minimizes service interruptions





Newport Sewer Capacity Improvements Project



Project Driver and Scope

Drivers:

During large storm events, rain induced infiltration and inflow (I&I) overwhelms capacity of aging sewer system and increases risks of wastewater backups into low-lying homes.

Scope:

- Phase 1 Construct a new sewer force main to divert wastewater with an aid of portable pumps and alleviate capacity constraints.
- Phase 2 Rehabilitate/Rebuild pump stations and upsize associated sewer pipe to increase capacity and reliability of the system.

Project Cost:

- Phase 1 \$2.1 M (current project)
- Phase 2 \$10 M (future project)



Design, Construction and O&M Aspects

Business Case Alternatives Analysis to identify cost effective solution

- Range of Alternatives from Operational Solution to Capital Improvements
- ✓ Trible Bottom Line (TBL) Evaluation Environmental, Social and Financial
- ✓ Maintain Level of Service
- ✓ Manage risk

O&M

- Complex Operation of Pump Stations.
- Utilize City Owned
 Portable Pumping
 System for Interim
 Solution.





Design

- Creative solution for Crossing Coal Creek – Pipe supported from bridge culvert
 - reduces environmental impact, saves \$,

Community Outreach & Engagement

- Early Engagement
 - ✓ Postcard Mailers
 - ✓ Project Website
 - ✓ Virtual Open House

- Newport Yacht Club
- Neighbors directly adjacent to project site



Stormwater Projects



Factoria Boulevard Stormwater Improvements

Project Driver and Scope

Purpose: Construct storm system improvements to reduce the risk of street flooding during high intensity storm events.

- Storm Conveyance Improvements
 - Replace existing 5.3 feet x 3.3 feet CMP w/ 9-feet x 4 feet concrete box conveyance
 - Replace Stormwater Outfall
- Utilities Relocation
- Downstream Open Channel Improvements – Widen Channel, Enhance Fish Habitat and Upland Vegetation (Mitigation)
- Project Cost: \$12.8 M



Design, Construction and O&M

- Complex Construction Close both Northbound lanes
- Traffic Impact Management
- Access to businesses maintained
- Coordination with Franchise Utilities



Factoria Blvd SE (Looking North)

Community Outreach and Engagement

- □ Community and Public Outreach and Engagement Plan
- □ Ongoing through planning, design, construction
 - > 1:1 Meetings with Businesses

T-Mobile, Factoria Village, Factoria Mall, Brown Bear Car Wash, Formula 1 Fast Lube etc.

Online Open House and Survey

> Project websites, email, postcard mailer, and social media

- □ Valuable Feedback:
 - $\circ\,$ Impacted by COVID
 - o Concerned about traffic impacts
 - Appreciate advance communication
 - Avoid holidays/busy hours





Interagency Coordination



- U.S. Army Corps of Engineers
- Department of Fish and Wildlife (WDFW)
- Muckleshoot Indian Tribes
- WSDOT

- King County Flood Control District (KCFCD)
- King County Metro
- City of Bellevue (Transportation, Parks, DSD, Fire, Police)

Project Schedule



Construction Schedule Constraints:

- Fish Window for In-Water Construction: July-August
- Holiday ROW Work Restriction: Thanksgiving through early January

Vasa Creek Culvert at SE Newport Way



Project Drivers, Scope, Schedule, & Cost

- In November 2020, an engineering study revealed a public health and safety hazard
 - An emergency was declared on December 4th

• Scope:

 Immediate repair of the culvert while maintaining road and utility stability

2" CMP E IE=447.3

P CHP S (E=147)

CAPPED AND ABANDONED

18" CMP SO PIP

SLEEVE PORT

AC WM CUT AN APPED 40' EACH NRECTION FROM 16' CULVERT LOW MOBILITY

GROUT

PIPES (TYP

OVERHEAD POWER

MOBILITY

ERMEATION

GRAVEL

ROUTING ZONE

GROUT

PER DETAI

- Schedule:
 - Substantial Completion April 14th
- Cost:
 - 1.68M

Community Outreach & Engagement Project

- Initial emergency notice handed out December 17th to homeowners and businesses in the area
- Emergency construction notice postcard sent early February
- Emergency repair completion postcard sent in June

CONSTRUCTION NOTICE: Vasa Creek Culvert Repairs

The City of Bellevue will begin work to repair the Vasa Creek culvert. As shared in the previous notice, the necessary repair work was discovered while repairing several sink holes near SE Newport Way.

Where

SE Newport Way, just to the east of 152nd Avenue SE

When

Work will begin on February 5 and last approximately 5 weeks.

Construction Impact

The contractor will be working in the city's right-ofway, Monday through Friday, from 7 a.m. to 6 p.m. The presence of construction equipment within the street will require some temporary lane closures and limited vehicle accessibility through the area of work. Traffic flaggers will direct cars safely through the work site.

If you have questions about this work, please contact: Dwight Smith, Senior Engineer dbsmith@bellevuewa.gov | 425-452-4127 BellevueWA.gov/utilities

Thank you for your patience as we make this important repair.



For alternate formats, interpreters, or reasonable accommodation requests please phone at least 48 hours in advance 425-452-4881 (voice) or email jguthrie@bellevuewa. gov. For complaints regarding accommodations, contact City of Bellevue ADA/Title VI Administrator at 425-452-6168 (voice) or email ADATitleVI@bellevuewa.gov. If you are deaf or hard of hearing dial 711. All meetings are wheelchair accessible

UTL-21-5970

FINAL CONSTRUCTION NOTICE: Vasa Creek Culvert Repairs Complete

Thank you for your patience as the City performed emergency repairs to the Vasa Creek culvert near SE Newport Way, just east of 152nd Avenue SE. The culvert work is now complete, and the sidewalk and adjacent stream bank have been restored. During construction, crews removed invasive blackberry bushes and placed mulch. New vegetation will be planted following completion of the permitting process.

If you have questions about this work, please contact:

Dwight Smith, Senior Engineer dbsmith@bellevuewa.gov | 425-452-4127 BellevueWA.gov/utilities



정보 Information 情報 Información "de Mbl सचना 425-452-6800



Design, Construction, and O&M Aspects

O&M Immediate Response Construction





BIP and CWA Coordination

Fish Passage Mitigation

Summary and Key Points

