

Sunset and Heathfield Pump Stations and Force Main Upgrade

Project overview – project area

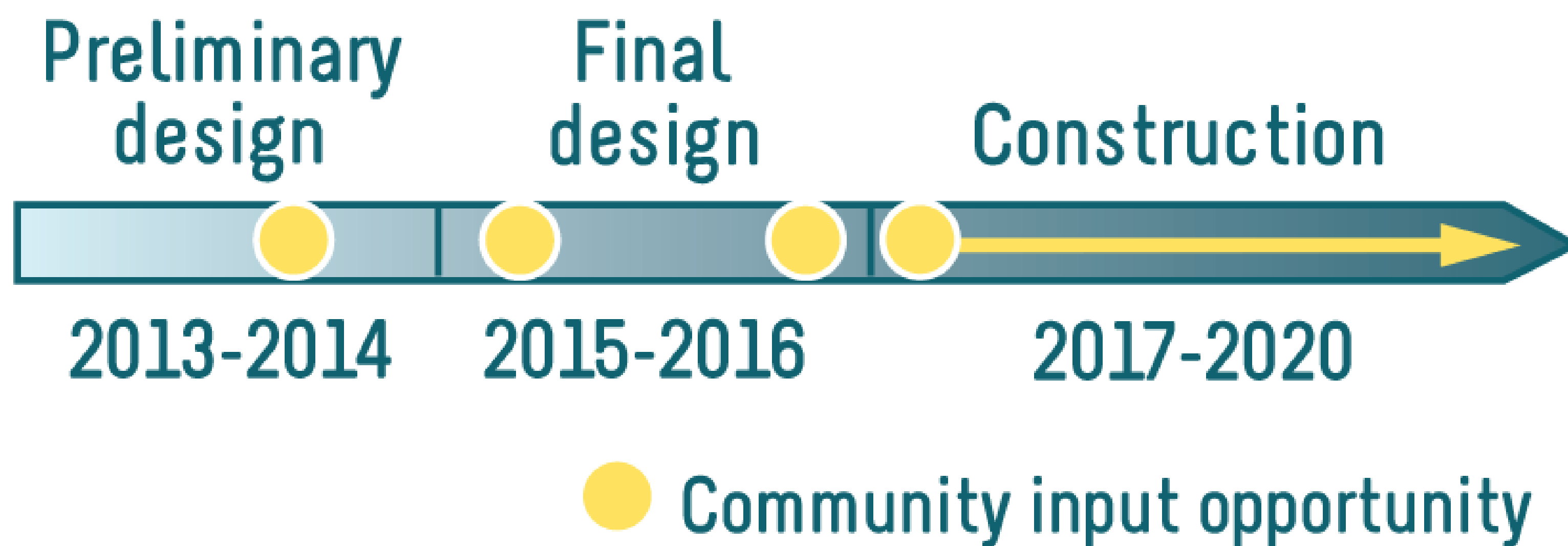
King County will upgrade the Sunset and Heathfield Pump Stations as well as the connected sewer force main pipe. The pump station and sewer pipes send sewage from Sammamish, Issaquah, and Bellevue to be cleaned at the County's treatment plant in Renton.

The sewer system is being upgraded with additional capacity to serve the area's growing population. At this point in the project, the team knows the general layout of the pump station equipment. The basic route and construction methods of the new force main pipe have also been decided.



Project overview – schedule and key terms

The project team has finished the preliminary design phase. The next phase of design will focus on fencing, lighting, and landscaping at the pump stations. The team will also decide the final layout of the pump station equipment and the exact location of the new force main pipe. Please note construction is not expected to begin until 2017.



Terms to know

- **Pump station:** A structure used to move wastewater uphill, against gravity.
- **Force main:** Pipe that carries flow from the Sunset and Heathfield Pump Stations to the Eastgate Trunk.
- **Eastgate Trunk:** Large pipe that carries wastewater from Sammamish, Issaquah, and Bellevue north to connect with additional pipes that carry the flow to the South Treatment Plant in Renton.
- **Sewage:** Used water that goes down drains and/or toilets in homes and businesses.

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Force main pipe improvements

The current 12 inch sewer force main pipe will be replaced with a 24 inch pipe to increase conveyance capacity.

Two different construction methods will be used to install the new force main pipe. Low-impact construction methods will be used where the new force main pipe crosses Vasa Creek.



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Construction method – open cut

A method of installing underground pipes that requires digging an open trench. Open cut will be used from 166th Avenue S.E. to S.E. Eastgate Way.

- Requires digging trenches in segments using backhoes and dump trucks.
- Impacts roadways; traffic detours will likely be necessary.
- Access to driveways will always be maintained.
- Paving is restored to original condition or better.
- Most common method for installing pipelines.
- Provides flexibility during construction to work around existing utilities.



Construction method – horizontal directional drilling (HDD)

A trenchless method of installing underground pipes. HDD will be used from Sunset Pump Station near Vasa Park to 166th Avenue S.E.

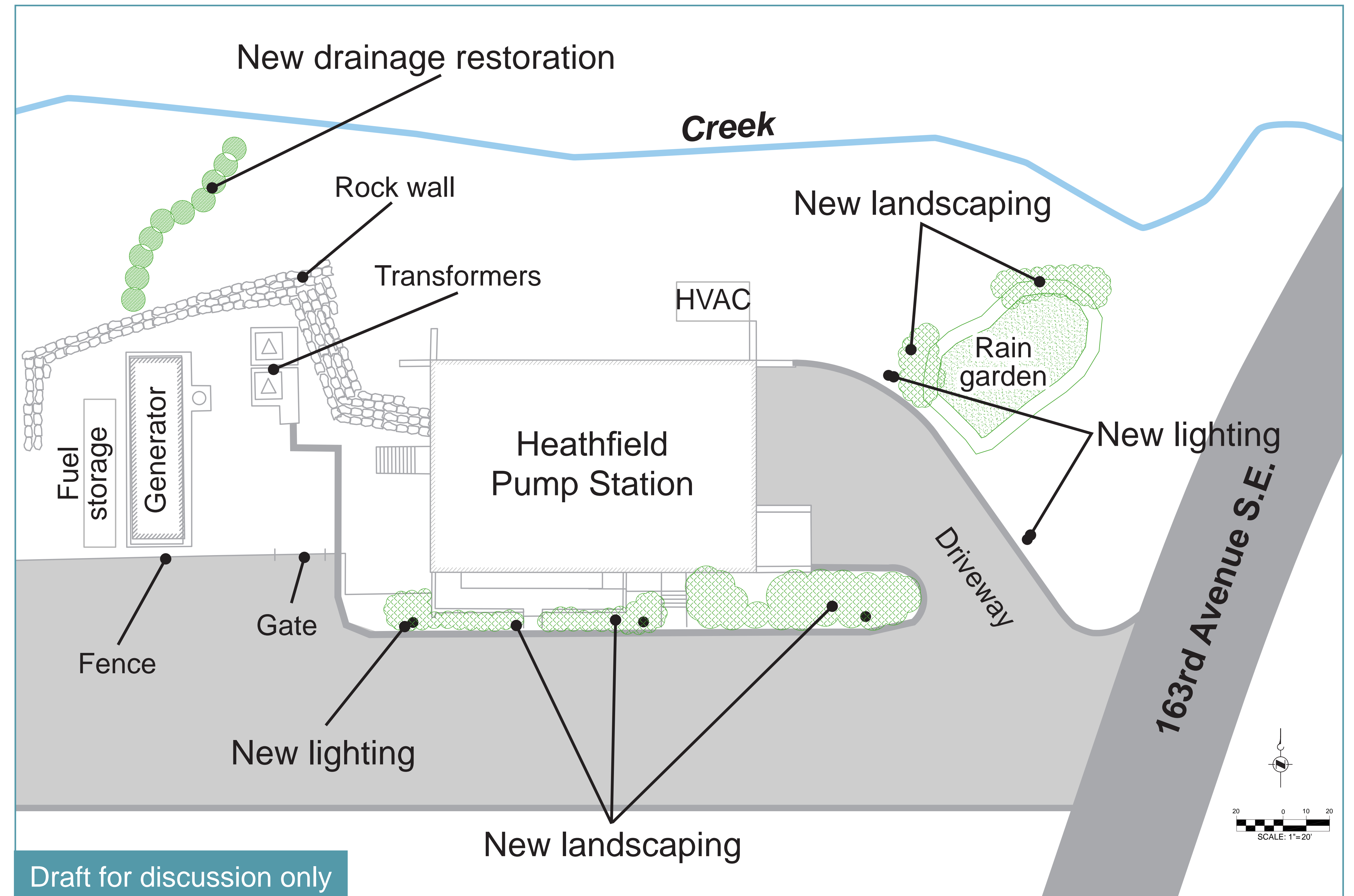
- Does not require digging trenches along roadways.
- Uses drilling rig equipment on the surface to install pipe underground from point to point without the need for open excavations.
- Reduces traffic impacts to West Lake Sammamish Parkway S.E.
- Lower impact to neighbors and residents.
- Reduces impacts to trees and wetlands along S.E. 38th Street.
- Requires a large staging area on both ends of the pipe.
- Requires specific site conditions to be cost-effective.



Heathfield Pump Station conceptual site layout

The Heathfield Pump Station is located on 163rd Avenue S.E. Improvements to Heathfield Pump Station include:

- 4 new pumps to increase capacity
- New electrical and controls systems
- New standby generator
- New heating and air conditioning systems (HVAC)
- Rain garden
- Landscaping
- Roof replacement
- New lighting



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Envision program

King County works to build and operate facilities that benefit the local community, environment, and economy on all our projects. The good news is King County can now earn a certificate for these efforts. The Envision program provides a framework to help measure how well an organization incorporates sustainability on infrastructure projects. Some of the factors King County considers include:

- Health and safety
- Reliability of the system
- Lifecycle cost
- Potential benefits and burdens associated with the wastewater system



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Equity and sustainability

Equity

King County works to advance equity and social justice (ESJ) throughout our project areas. We focus on fairness and provide opportunities for everyone's voice to be heard. We plan to include the following strategies on this project:

- Educate the community about King County's wastewater system
- Coordinate with City of Bellevue and nearby schools
- Provide translated materials to non-English speakers
- Incorporate an artistic kiosk with information about our project in the community

Sustainability

King County works to use their resources wisely and protect the environment. We plan to include the following strategies on this project:

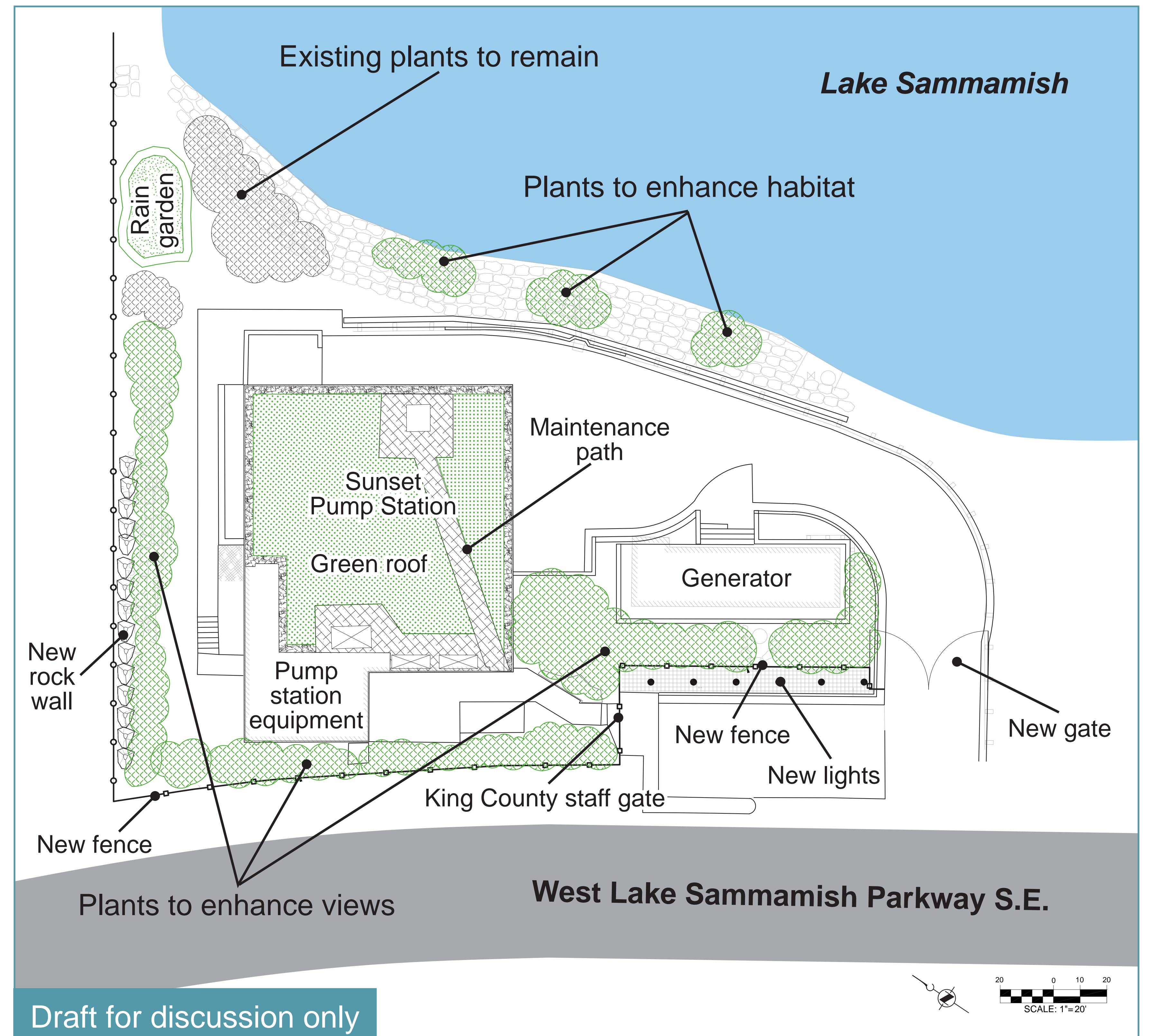
- Green roof and shoreline protection at Sunset Pump Station
- Rain gardens at each pump station
- Vasa Creek protection throughout the project area
- Energy efficient equipment
- Use of sustainable materials



Sunset Pump Station conceptual site layout

The Sunset Pump Station is located on West Lake Sammamish Parkway S.E. near Vasa Park. Improvements to the Sunset Pump Station include:

- New lighting and fencing
- 4 new pumps to increase capacity
- New electrical and controls systems
- New standby generator
- New heating and air conditioning systems (HVAC)
- Green roof
- Rain garden
- Landscaping
- Roof replacement



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Sunset Pump Station – green roof

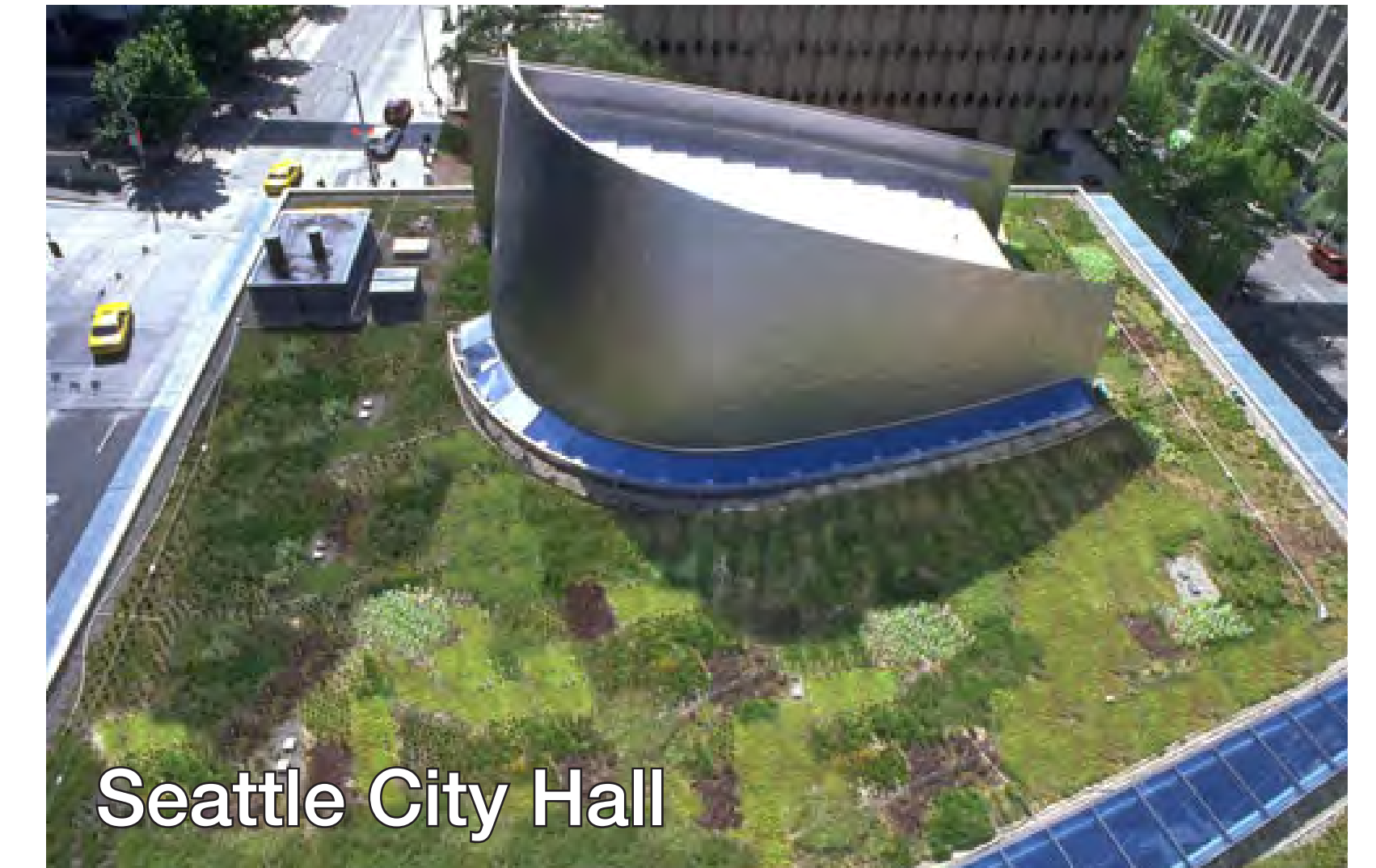
The project team is considering planting lightweight, low growing plants on the roof of the Sunset Pump Station.

Green roof benefits include:

- Help with heating and cooling
- Allow stormwater runoff to soak in before it reaches Lake Sammamish
- Camouflage building equipment to improve views



Ballard Public Library



Seattle City Hall



EPA Region 10 Headquarters, Seattle

Sunset Pump Station – lighting and fencing improvements

Lighting

The large streetlights will be removed from the Sunset Pump Station and replaced with lower impact lighting.

Fencing

The fencing at Sunset Pump Station that runs along West Lake Sammamish Parkway S.E. is going to be replaced.

Current fencing and lighting



Sunset Pump Station - we want to know what you think!

Place a sticker on your favorite design and add a post-it note to explain your preference or share additional thoughts.

Choice 1: Choose the type of fence top you would like to see at the Sunset Pump Station.



Choice 2: Choose the fencing/lighting combination you would like to see at the Sunset Pump Station.



Choice 3: If bollard lighting is selected, which type do you prefer?

