ENGINEERING

Monthly Report

February 2016

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MONTHLY REPORT

February 2016 **ISSUE 6**

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FROM THE DIRECTOR

This month I had the honor of representing the City of Bend at the APWA Water Resources Management Committee meeting in Kansas City, Missouri. The committee meets twice a year to discuss clean water issues ranging from flood control and conservation to wastewater treatment and reuse. As an appointed member, all costs associated with this meeting are covered by the APWA. The committee works with national organizations such as the American Water Works Association and the National Association of Clean Water Agencies on legislation and environmental regulation.

In preparation of attending the meeting I was asked to submit an article for the February 2016 issue of the APWA *Reporter.* I chose to highlight the need for public engagement in master planning processes because of the overwhelming success we had working with the Sewer Infrastructure Advisory Group on the Collection System Master Plan (CSMP) update. As noted in the article, the efforts we made to involve the public allowed us to move forward with a plan that had broad support by the community and City Council.

One of the projects identified in the CSMP, the Colorado Pump Station and Sewer Mains project, was spotlighted this month by the State of Oregon Department of Environmental Quality (DEQ) for their Clean Water State Revolving Fund loan program. This program provides low-cost loans to public agencies in Oregon. The City of Bend will seek close to $110 million in financing for sewer infrastructure projects. Please read the full articles in this month's Executive Summary.

Tom Hickmann PE
EIPD Director
541 317-3029

Financial Impact Review: Review by Finance Director, Sharon Wojda, determined no significant change to previously published financial information at this time. Future budget adjustments may be needed for projects with significant changes in scope and schedule, but estimates are unknown at this time.

Operational Impact Review: Review by Utility Director, Paul Rheault, determined operational impacts are in line with achieving greater efficiency in our systems.

Executive Summary

CIP Numbers Snapshot

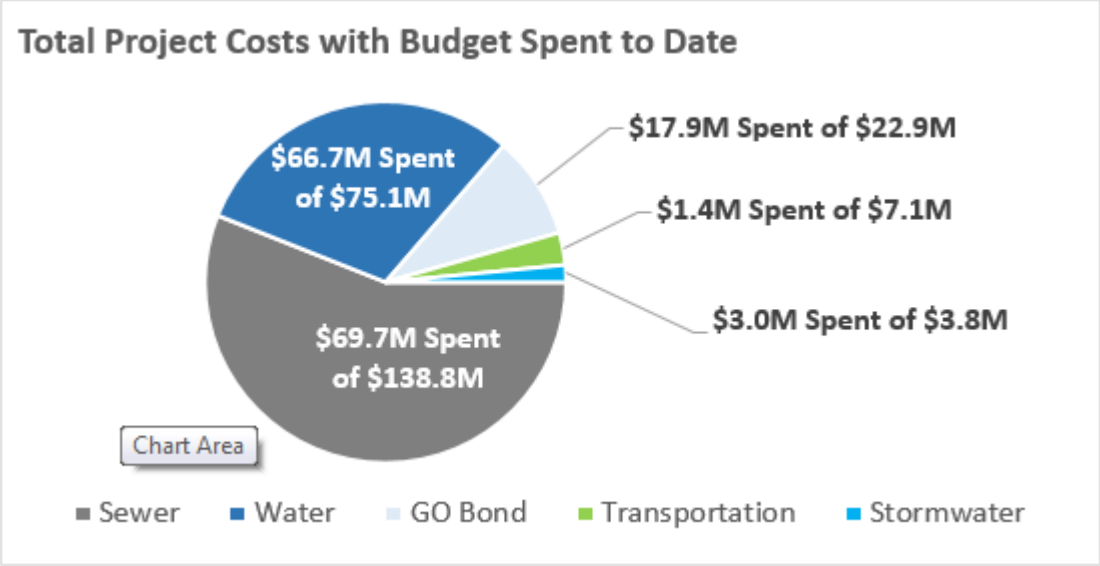
During the month of January no new projects were started and no projects were completed.

- **1 Transferred** Drake & Dohema Pump Station transferred to Utility Operations

The table below shows the status of projects in the current CIP Plan as of January 31, 2015.

Status	CIP	R&R
Open (Active): In planning, design or construction phase	21	1
Substantially Complete (Active): Asset transferred to Operations and City has beneficial use	5	0
Closed (Not Active): Completed 1-2 yr. warranty; Cancelled; Transferred project to Ops	8	3
Pending (Not Active): Scheduled to start within 5-Year CIP Plan	26	41
Total	**60**	**45**

The graph below shows the total value of the active projects in the 5-year CIP Plan and total budgets spent to date. Repair and Replacement projects are not included.



Note: Summit Drive Curb Ramps and Reed Market Newberry to 27th were unintentionally omitted from the Total Project Costs with Budget Spent to Date table. These projects are Substantially Complete and considered Active through the warranty period.

Project Highlight – City of Bend

In fiscal year 2015, the City of Bend received a CWSRF planning loan to update their Collection System Master Plan. The planning effort was to evaluate the existing system, identify risks and develop solutions that considered technical engineering elements as well as community values.

The city's master plan resulted in several years worth of projects that solve existing capacity issues, provides future capacity, connects neighborhoods without sewer services, streamlines operations and reduces operations and maintenance costs.

Their current project received approximately $28 million in funding and includes the construction of the Southeast interceptor, Colorado Lift Station, and associated sewer pipes. This project will provide a system that is more reliable, allows for the city's growth and will benefit residential, commercial, industrial users as well as serving public lands. For more information visit http://www.bendoregon.gov/index.aspx?page=1115


The City of Bend, OR–Force main, Colorado Lift Station, Force main. (L to R)
Photos courtesy of George Franklet, Project Manager

Using utility master planning for public engagement and developing public support

Thomas R. Hickmann, P.E.
Director of Engineering and Infrastructure Planning
City of Bend, Oregon
Member, APWA Water Resources Management Committee

One of the most difficult things civil servants experience in the public works profession is, ironically, working with the public. In fact, when I speak within our profession about public process, I rarely get a reaction of excitement when discussing public outreach and involvement. We prefer to do our jobs, do them well, in the background without the public even noticing. As a result, most of us are not geared up for deliberately engaging the public. We often leave the public process to others who don't have the knowledge or understanding of what is truly needed causing us to miss the target. We hold public meetings, present the facts, but evidence of meaningful engagement with the public is difficult to find, especially when it comes to master planning for water and sewer utilities. So why should we look to proactively engage the public if what we do seems to work?

One reason for us to encourage public involvement is to recognize it as a fundamental part of our role as public servants. The root of public engagement goes back a long way to our founding as a nation. Thomas Jefferson believed a lack of public involvement in government would create mistrust between the citizens and the government. The decisions that drive needed investments in water and sewer utilities are often policy decisions, and are not purely operational and engineering decisions. The point is that we owe our citizens meaningful engagement, particularly at the local level, and one of the places that lacks this engagement is in the area of utility master planning.

Another reason for us to create opportunities for public engagement is the overwhelming amount of investments needed in our public utility systems. The amount of investment on a national scale is staggering and is evident in reviewing the American Society of Civil Engineers (ASCE) infrastructure report cards. These report cards show that communities across the country are failing to make the needed investments in their water, stormwater, and sewer utilities. Thousands of communities struggle with maintaining aging infrastructure and keeping up with new regulations and growth. Despite the well-documented need and our best efforts, we continue to run into resistance and find ourselves trying to sell the need to our Councils and Boards, as well as the community and often end up doing less than what is needed.

Even though the need for these investments seems clear to us, having had limited participation in the process, the public rarely comes to the same conclusion. Oftentimes, the first we see the public involvement is when they see their utility bills increase, at which point they react. We are all painfully aware that the more the community reacts to rate increases, the more the political will to continue the needed investments decreases. Considering the level of investment that is needed in most communities, it's naïve to think the community will continue to accept rate increases unless understanding for the need increases as well.

The process of developing utility master plans is typically an exercise done by engineers and operational staff with some management oversight. It is rare for the public to have much, if any, involvement in the development of these documents. Furthermore, these documents are rarely read by more than the individuals who wrote them. This is a huge missed opportunity for us to close the gap between identifying the needs, and implementing the projects. We live in an informed society, and the days of telling the public "trust me, I am an engineer" no longer works. In a world driven by Google searches from everything between medical conditions to car repairs, the public is no longer willing to accept the expert's word. They want to understand and see for themselves what is driving the need for these utility investments. To get the public involved we need to change how we

think. What is needed, what is missing, is meaningful public engagement in the master planning process. We need more than an open house, more than a few public presentations and more than good engineering on our side. We need a strategy for involving citizens as early as possible in the master planning process in order to foster understanding amongst all stakeholders.

Most of us rely on our planning documents for our water, wastewater, and stormwater utilities to guide us on investments and timing of when the investments are needed. Good planning documents not only identify what projects are needed and when, but they also provide good financial estimates that should be tied with budget planning documents and linked to utility rate models. What we miss is the opportunity to use the master planning process and resulting documents to inform the public of the long-term and short-term impacts to the community. Pulling the public into this process can result in community support that is needed for those investments. Community support often translates to political will.

As suggested earlier, to pull the public into the master planning process we must invest the time and create a strategy to be effective. This can't be a "check the box" exercise, and there is no one-size-fits-all type of process. But if you are struggling to develop the support you need to implement the needed investments, it may be well worth your time to consider pulling the public into your master planning process.

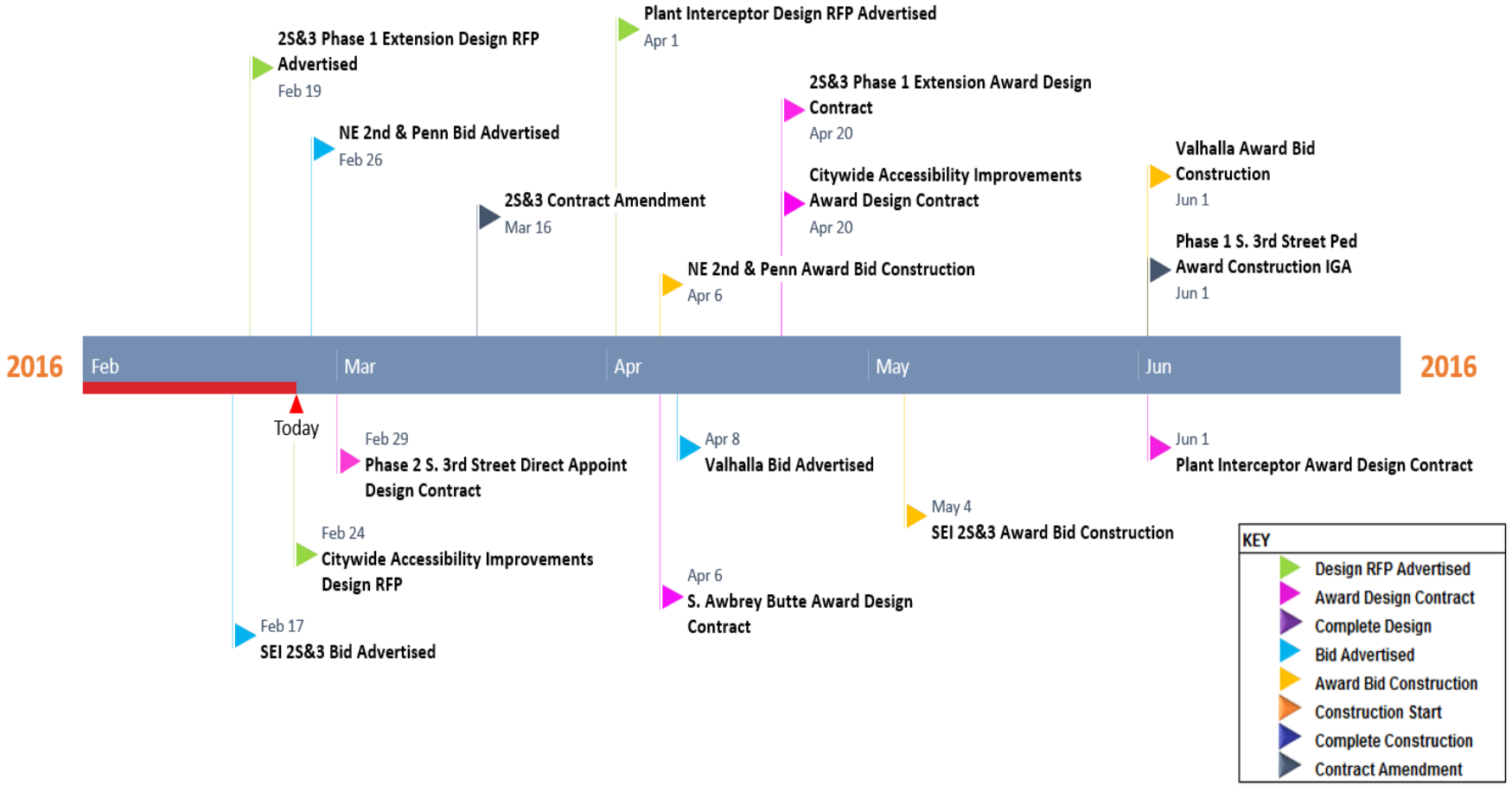
In Bend, Oregon, we found ourselves with significant public resistance to making the investments needed in both our water and sewer utilities. After completing a water master plan and struggling to gain support for the needed investments, we opted for a different approach with the sewer master plan. Bend City Council appointed eighteen community members to serve on what became known as the Sewer Infrastructure Advisory Group (SIAG). We spent two and a half years working with this group allowing them to make many of the very complex decisions that were required to complete the master plan. It was not easy, nor was it always comfortable. But in the end, we developed a detailed plan that required significant investments for the City that had broad support from the community and City Council.

The effort of involving citizens in the master planning process has garnered ongoing support and continues to pay off long after the work of creating the master plan is done. We recently discovered that several large capital projects that we believed we could postpone in order to soften rate increases would need to be completed much sooner than anticipated. Although moving these projects forward in the CIP resulted in larger rate increases than what was projected, our Council understood the need and because of SIAG's involvement in the process they knew that they had community support. Instead of city staff and Council spreading the message for the needed investments, we have community members engaged in public forums explaining the need to other community members.

How long this community support will last we don't know. We recognize that we cannot have as high a level of community involvement for every master plan because of the time and cost constraints; however, we will work with the public as much as possible in the future.

During the process of developing the sewer master plan, I was also working on my Masters of Public Administration at Portland State University. I based my thesis project on my experience in utility master planning and focused my research on the different forms of public process. I was surprised to find that there is almost no documentation or data available on the issue. I found information on public process for transportation system master planning, and a few cases of localized community master planning for sewer systems that was limited within neighborhoods, but there was absolutely nothing that covered a broad utility master planning effort. As a result, I would like to ask readers for their help. I am trying to collect information from communities about their public engagement for utility master planning. Even if your community has done no such process, that information is useful. If you are interested in participating in answering a few simple questions on the issue, please send me an e-mail at thickmann@bendoregon.gov saying you would like to participate. Understanding the benefits of public process and the different forms of it used in utility master planning is something that is beneficial to all of us.

EIPD Procurement Timeline



2016 – 2020 Project List

Leave this page blank and insert CIP Summary from Excel Workbook page 1

Leave this page blank and insert CIP Summary from Excel Workbook page 2

Phase I - S. 3rd St. Pedestrian Improvements

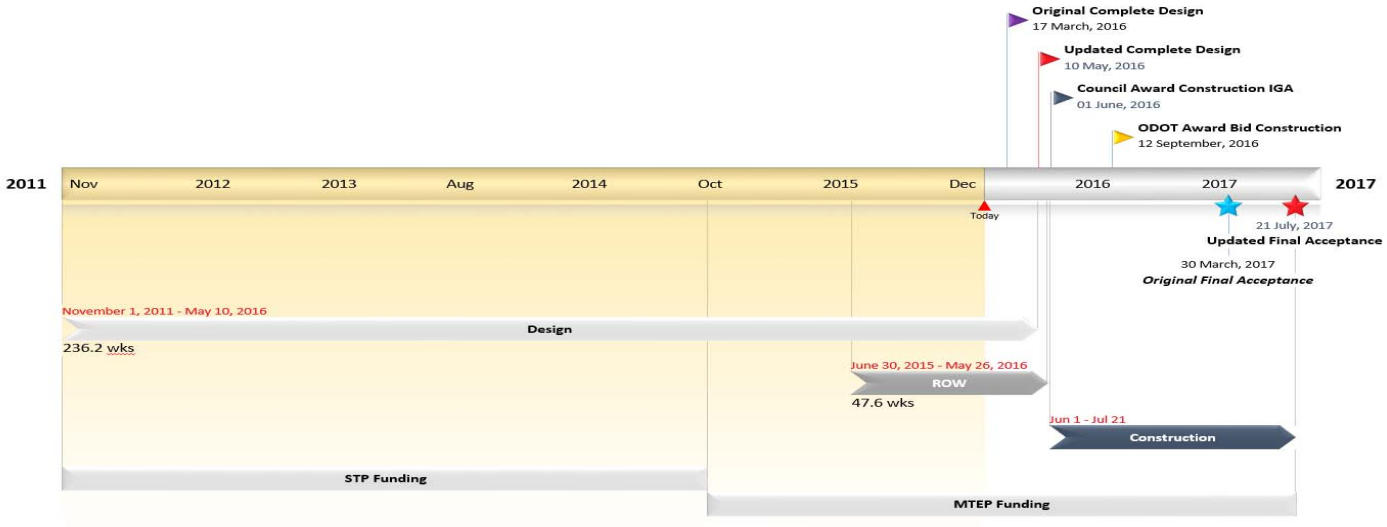
Project is a collaboration with ODOT to provide continuous pedestrian facilities along the 3rd Street corridor between Wilson Avenue and Powers Road by repairing existing facilities that are either non-compliant or deteriorated. In addition, the project will also construct pedestrian facilities where none currently exist. The project is being coordinated with several other projects (water, stormwater, streets) within the corridor.

Project Engineer: Jason Suhr | jsuhr@bendoregon.gov

Scope	Schedule	Cost
Design, right of way acquisition, and construction of sidewalks, curb ramps that is coordinated with other infrastructure for water, stormwater, and streets. Stormwater scope increased to now include catch basin and drill hole vault replacement.	Start Date: 11/1/2011 Substantial Completion: 7/21/2017 Final Closeout: 7/21/2018	Total Estimated: $655,309 Spent to Date: $157,953 % Spent to Estimated: 24% Three Projects: ADA $435,309, Water $70,000, Stormwater $150,000
Status: Increased Scope	**Status: Schedule Baseline Revision**	**Status: Potential Cost Increase**
Adjustments: Stormwater scope increased to include drill hole vault replacement	Adjustments: Adjusted due to the winter shutdown	Adjustments: Cost increase likely due to additional scope. Cost estimate will be updated upon design completion.

Status Update: Schedule, milestones and cost estimate classification updated as a result of receiving 95% Design submittal. Schedule baseline adjusted due to the scheduled winter shutdown.

Cost Estimate Classification: 3



Phase 2 - S. 3rd Street Improvements

Phase 2 projects are capital improvement projects and address maintenance issues. The timing is being driven to occur in advance of the street preservation work within 3rd Street that is planned for the summer of 2017. Due to the impacts to the 3rd Street roadway, it is imperative that they occur prior to the grind and inlay preservation work.

Scope	Schedule	Cost
Includes design and construction for streets, water, and stormwater. This work will include an analysis of the drainage basin to assess the condition of the existing stormwater facilities; creation of a striping and paving plan; replace existing 2-inch sub-standard waterlines with 8-inch pipelines.	Start Date: 10/1/2015 Substantial Completion: 6/30/2017 Final Closeout: 7/1/2018	Total Estimated: $1,530,000 Spent to Date: $0 % Spent to Estimated: 0% Three Projects: Water $1,100,000, Stormwater $400,000, Streets $30,000
Status: Reduced Scope	**Status: On Schedule**	**Status: Potential Cost Adjustment**
Adjustments: Removed performance assessment of the drainage basin	Adjustments: No anticipated impact to schedule due to reduction in scope	Adjustments: Cost estimate will likely decrease due to reduction in scope. Will update cost estimate once direct appoint contract appointed.

Status Update: Reduction in scope due to stormwater infrastructure assessment determining the non-standard assets should be replaced rather than continue with assessments.

Cost Estimate Classification: 5

Citywide Accessibility Improvements

Through the help of dedicated volunteers on the City of Bend Accessibility Advisory Committee (COBAAC) and the Central Oregon Coalition for Access (COCA), key corridors and neighborhoods across the city have been prioritized for accessibility improvements. This project will design, construct, or repair these curb ramps and sidewalks including those identified through the City's Barrier Removal Request process.

Scope	Schedule	Cost
Survey, design, and construction of accessibility improvements, as funding allows, in the Wells Acres, Bear Creek, Division, Downtown & Old Mill and Brookswood/Southwest neighborhoods.	Start Date: 3/1/16 Substantial Completion: 9/28/2018 Final Closeout: 09/28/2019	Total Estimated: $750,000 Spent to Date: $0 % Spent to Estimated: 0%
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: Project initiated	Adjustments: Project Initiated	Adjustments: Project Initiated

Status Update: Project Initiated February 2016.

Cost Estimate Classification: N/A

Murphy & Parrell Roundabout

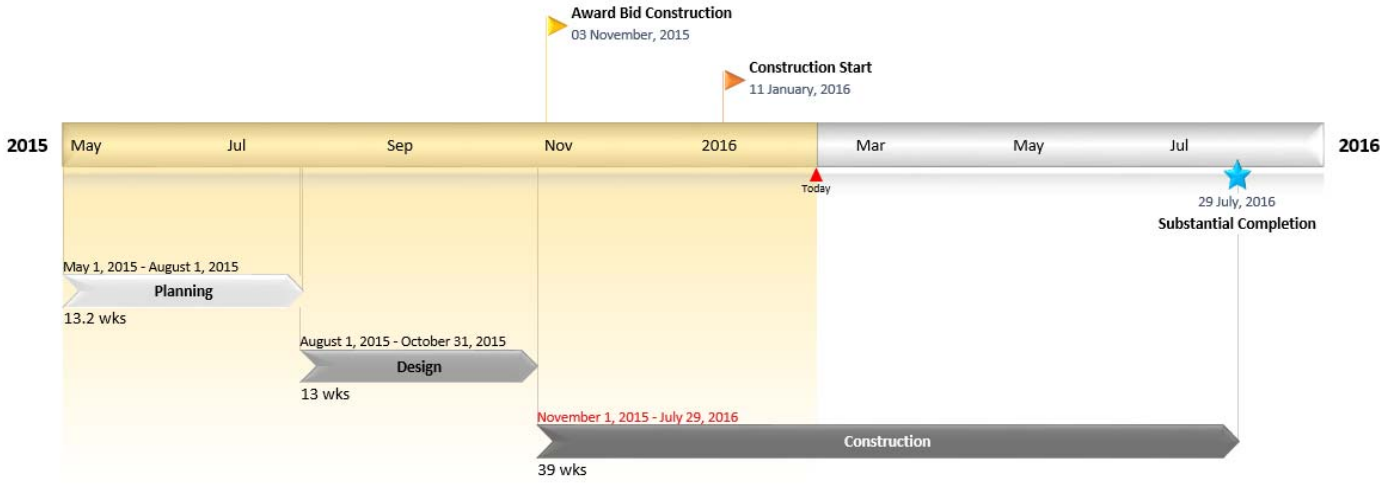
This project will finalize the original conceptualized extension of Murphy Road on the east side as a part of the Murphy Overcrossing Project and make the intersection safer for vehicles, pedestrians and bicycles.

Project Engineer: Ryan Oster | roster@bendoregon.gov

Scope	Schedule	Cost
Construct a portion of Segment 6 of the SE Interceptor. Construct a roundabout, landscaping, stormwater facilities, illumination, signs and striping to current City standards. Design was completed as part of the Murphy overpass and extension project.	Start Date: 5/1/2015 Substantial Completion: 7/29/2016 Final Closeout: 7/29/2019* * 1 Year warranty and 2 years additional for plant establishment	Total Estimated: $2,000,000 Spent to Date: $58,465 % Spent to Estimated: 3%
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

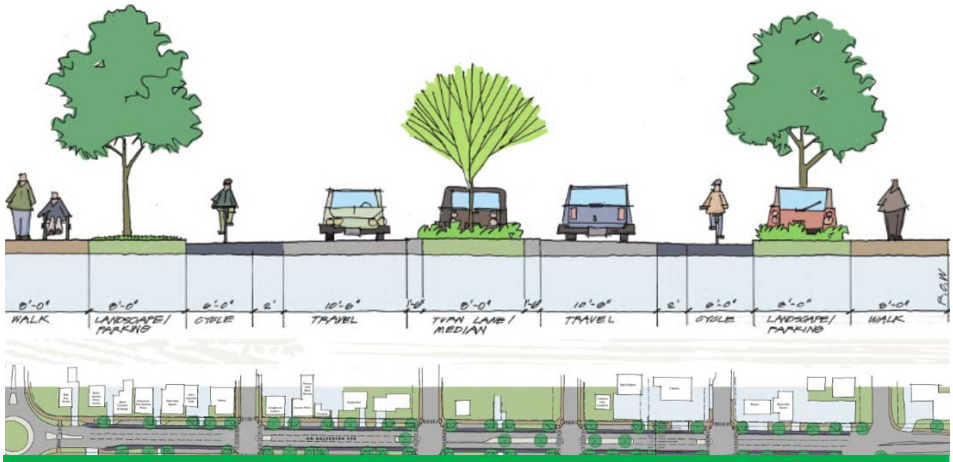
Status Update: Murphy Road and Parrell Road intersection closed and began removal of existing surfaces, franchise utility relocations and boring for sewerline blasting.

Cost Estimate Classification: 1



Galveston Corridor Improvements

The project is the highest ranked Traffic Safety Advisory Committee (TSAC) arterial and collector street safety project to improve vehicle, bicycle, and pedestrian safety, access, and connectivity. It also continues the bike and pedestrian improvements on Galveston from 14th to Lindsey Ct. The project will improve bicycle and pedestrian safety, access, stormwater system, and parking.

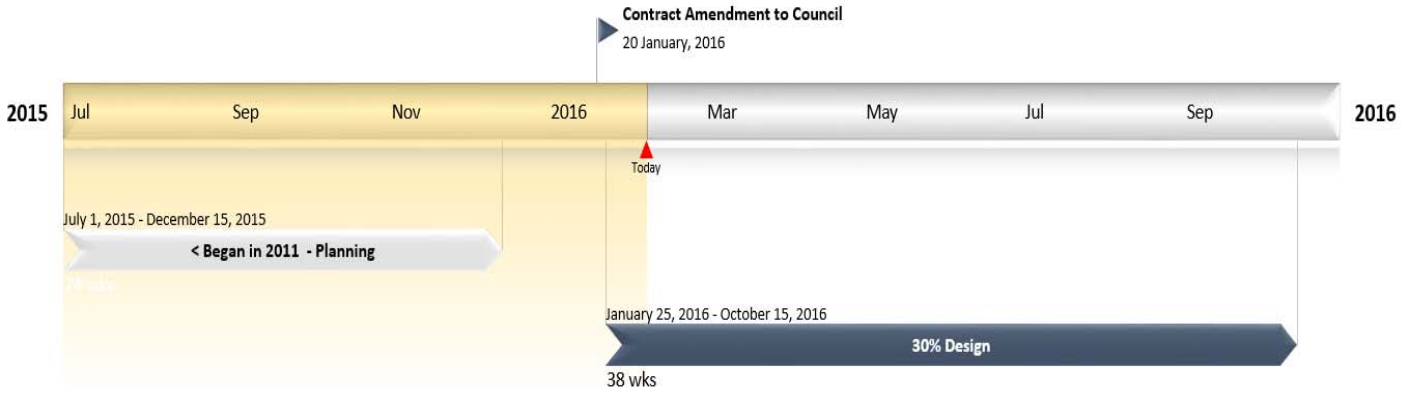


Project Engineer: Ryan Oster | roster@bendoregon.gov

Scope	Schedule	Cost
Study to improve safety, access, and connectivity for vehicles, bicycles, and pedestrians. Also to improve the streetscape along a newly emerging mixed use corridor. A collaborative process has formed between City staff and property/business owners with a taskforce to devise project concepts and designs.	Start Date: 06/01/2011 Substantial Completion: TBD Final Closeout: TBD	Total Estimated: $2,700,000 Spent to Date: $231,188* % Spent to Estimated: 9% * Includes planning At 30% design cost estimates will be updated to account for water, stormwater and sewer utility projects
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No revision needed, alternative stormwater design included in scope	Adjustments: No change from prior month	Adjustments: No change from prior month

Status Update: Contracts amendments being finalized and design kickoff meeting scheduled for end of February.

Cost Estimate Classification: 5



Citywide Safety Improvements

With the help of the community and a prior safety study, the city has identified multiple locations across the city where there have been a high number of crashes. Several treatments are proposed to make these locations safer for people walking, riding bicycles, and driving. This project will further develop the design of these treatments and construct them with additional community input.

Scope	Schedule	Cost
Survey, design, traffic analysis, public involvement, and construction of safety improvements at the following locations: 3rd St at Hawthorne, Franklin, Roosevelt, and Reed Market, Colorado Ave & Bend Pkwy (US Hwy 97) interchange, Neff Rd at Williamson Blvd, 27th St at Conners Ave, Brosterhous Road railroad underpass.	Start Date: 10/1/2014 Substantial Completion: 9/30/2018 Final Closeout: 9/30/2019	Total Estimated: $3,344,000 Spent to Date: $32,212 % Spent to Estimated: 1%
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

Status Update: Cost estimate classification updated, no impact to cost estimate. Design continues.

Cost Estimate Classification: 5

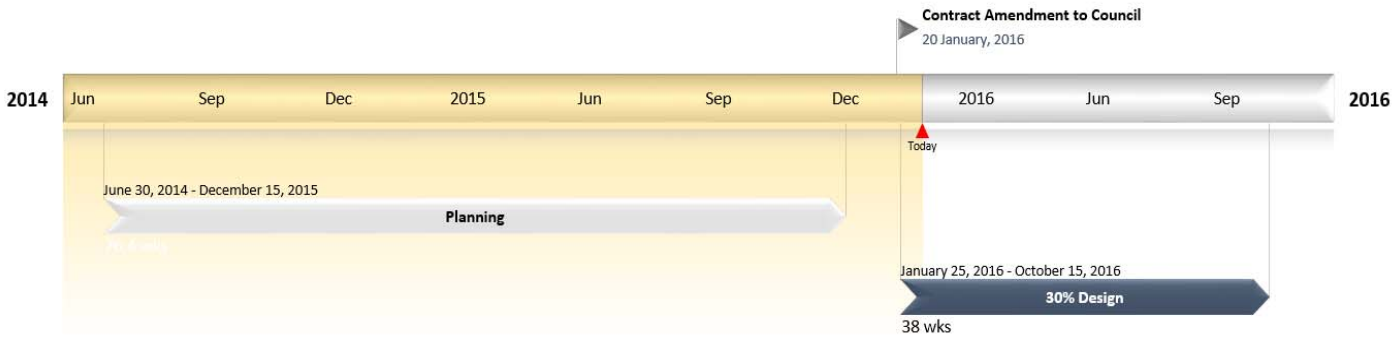
14th Street Reconstruction

Improve safety of corridor from SW Colorado Avenue to NW Newport Avenue for all modes of transportation. Project is part of voter approved General Obligation Bond and will focus on an up updated roadway configuration to include surfacing, striping, bike lanes, sidewalks and streetscape. Design will attempt to tie-in with suggested changes being made to the Galveston Corridor Improvements.

Scope	Schedule	Cost
Upgrade to City standard to include but not limited to: roadway, surface, curbs, sidewalks, and striping. Final scope to be determined at 30% concept level, but will include safety improvements for bicycles, pedestrians and vehicles.	Start Date: 06/30/2014 Substantial Completion: TBD Final Closeout: TBD	Total Estimated: $3,888,950* Spent to Date: $2,328 % Spent to Estimated: 0.06% *Corridor extension construction cost not included in Total Cost Estimate. At 30% design cost estimates will be updated to account for water, stormwater and sewer utility projects.
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

Status Update: Contracts amendments being finalized and design kickoff meeting scheduled for end of February.

Cost Estimate Classification: N/A



Bridge Creek Intake, Pipeline & Treatment

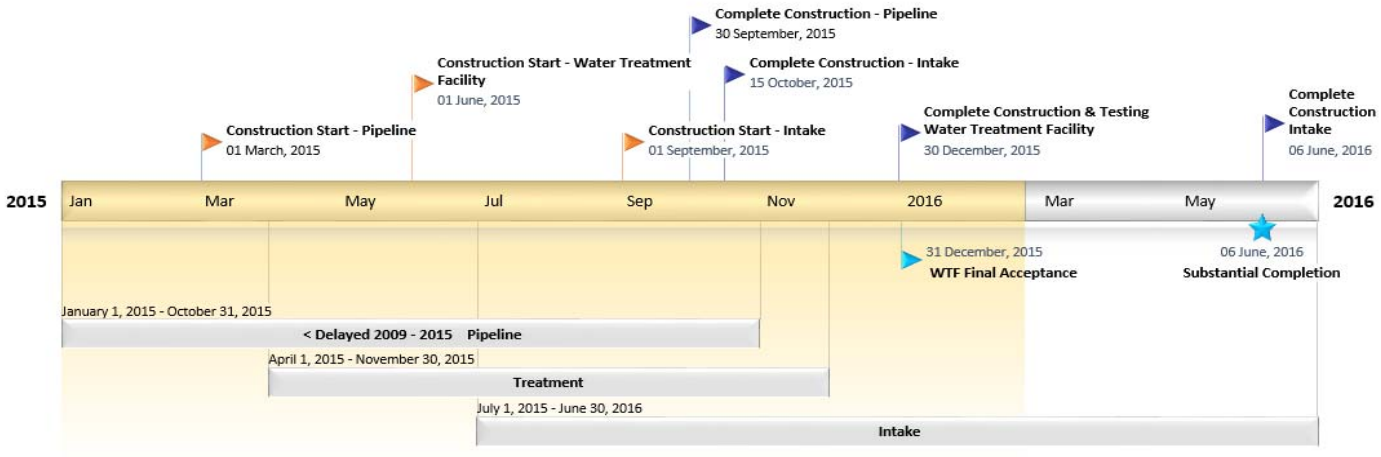
Replace pipeline to reduce risk of transmission main failure to secure a dual water supply source. Membrane treatment for surface water to meet federal treatment requirements to treat for Cryptosporidium will also protect Bend's surface water in the event of a fire in the watershed. Intake does not meet current building code, and lacks fish screens. New intake allows remote monitoring and operation of the facilities.

Project Engineer: Heidi Lansdowne | hlansdowne@bendoregon.gov

Scope	Schedule	Cost
Feasibility study of alternative water supplies; design and construction to replace transmission lines, intake, flow control, fish screens, membrane filtration, construction management, and inspection services. These costs also include all costs related to legal.	Start Date: 4/1/2008 Substantial Completion: 06/30/2016 Final Closeout: 06/30/2017	Total Estimated: $73,954,698 Spent to Date: $66,699,153 % Spent to Estimated: 90%
Status: On Scope	**Status: Ahead of Schedule**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: Project completion estimated early May	Adjustments: No change from prior month

Status Update: No change from prior month. The Water Treatment Facility is fully operational and staff are currently managing and operating the facility. Intake currently under construction, as shown in photos above. Anticipated completion for the Intake is May 2016.

Cost Estimate Classification: 1



Water Rec. Facility Secondary Expansion

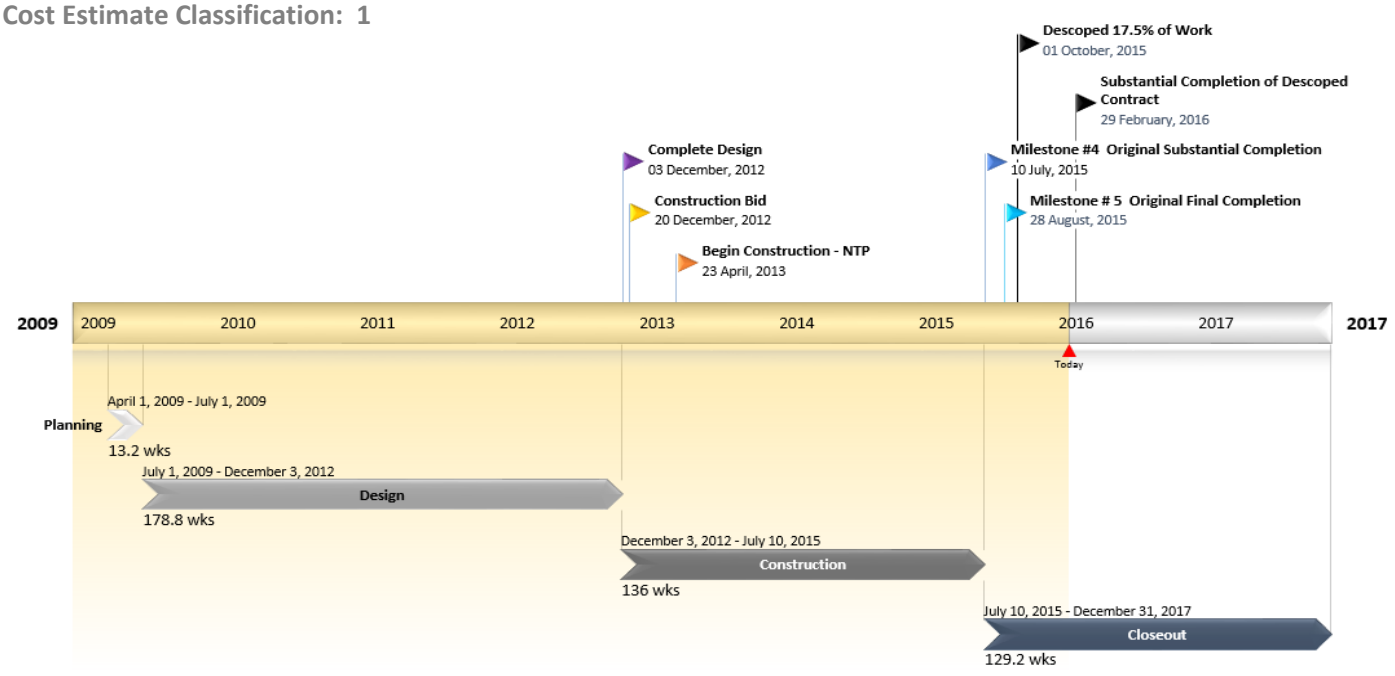
Provides additional treatment capacity at the Water Reclamation Facility (WRF) in order to ensure the City continues to meet the needs of the community and DEQ permit requirements. Treatment capacity increases from 6.5 MGD to 8.5 MGD when complete with greater flexibility in the future to increase capacity at a much lower cost.

Project Engineer: Jeff England | jengland@bendoregon.gov

Scope	Schedule	Cost
The project adds a primary clarifier, aeration basin, blower facilities, UV and sodium hypochlorite disinfection improvements, and various piping modifications.	Start Date: 4/1/2009 Substantial Completion: Feb. 2016* Final Closeout: Spring 2017* * Actual dates TBD	Total Estimated: $60,000,000* Spent to Date: $39,023,951 % Spent to Estimated: 65% *Includes Facilities Plan, pre-design, final design, services during construction, and construction.
Status: Reduced Scope	**Status: Behind Schedule**	**Status: Potential Cost Increase**
Adjustments: No change from prior month	Adjustments: Schedule revision is necessary due to change in scope and overall project delay.	Adjustments: Project cost increase likely. Cost estimate and budgets will be updated in Spring 2016.

Status Update: Winding down on construction and continuing to work with the legal team on contract disputes.

Cost Estimate Classification: 1



Southeast Interceptor Phase I

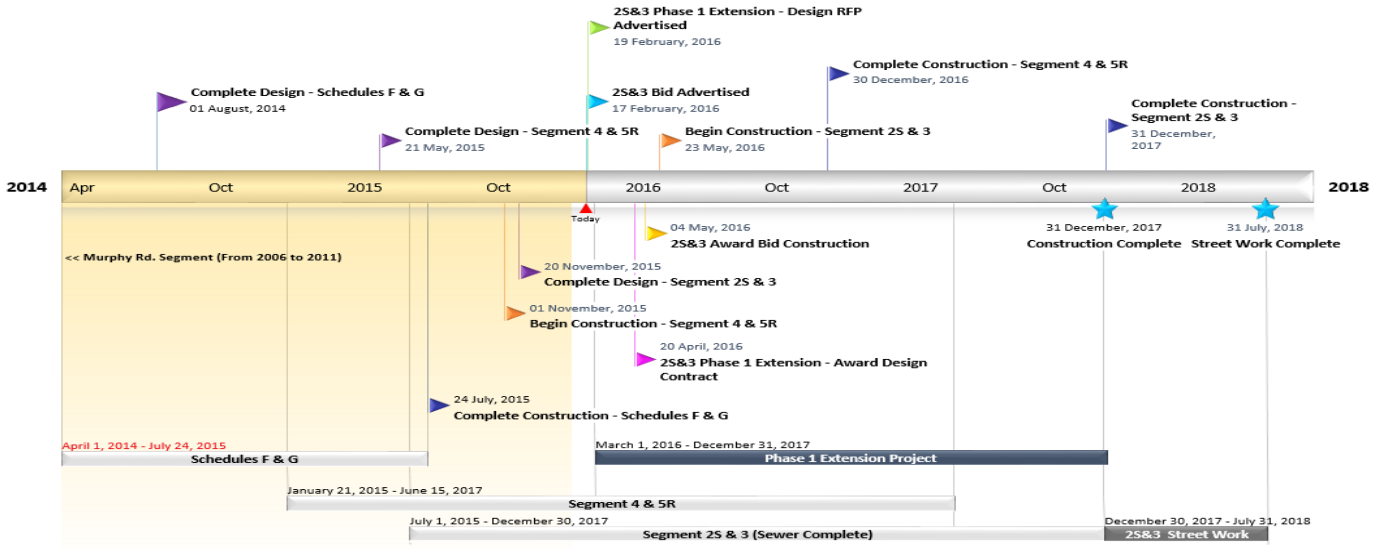
Large diameter gravity sewer pipeline extending from the southwest quadrant to the northeast quadrant of the City, approximately 4 ½ miles in length. This project reroutes or intercepts a significant volume of sewage away from the downtown and central sewer systems to the east side of the City in accordance with the Collection System Master Plan completed in 2014. Segment 2S&3 indicates the 2.5 mile stretch of 27th Street between Neff and Reed Market Rd.

Project Engineer: Eric Forster| eforster@bendoregon.gov

Scope	Schedule	Cost
Design and construction of gravity sewer, from South 3rd street to the Neff Road interim connection. Phase 1 Extension Project, approved in January 2016, adds approximately 3,000 feet of sewer main work.	Start Date: 7/1/2006 Sewer Completion: 12/31/2017 Street Completion: 07/31/2018 Final Closeout: 7/30/2019	Total Estimated: $60,000,000 Spent to Date: $20,757,916 % Spent to Estimated: 35%
Status: Increased Scope	**Status: Schedule Baseline Revision**	**Status: Potential Cost Increase**
Adjustments: No change from prior month	Adjustments: Revised schedule on 2S&3 to accommodate design of the Phase 1 Extension Project approved by council.	Adjustments: Project cost increase likely due to changes in scope and schedule. Cost estimate and budgets will be updated after bid closes.

Status Update: Currently exploring options to increase capacity. Expect the findings in February and will be included in the March update. Aggressive 2S&3 Extension procurement schedule subject to change. Construction on 27th St. scheduled to begin May 23, 2016 with significant impacts to the community.

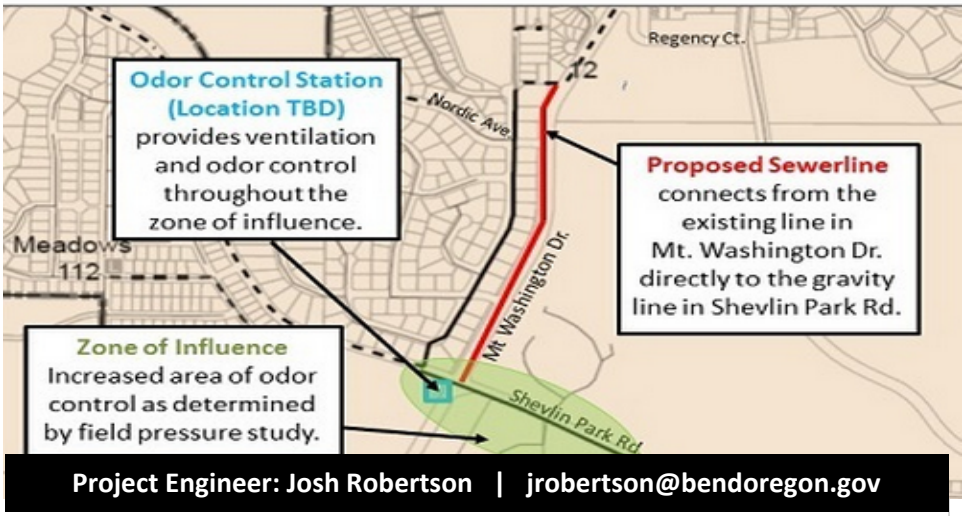
Cost Estimate Classification: 3



Valhalla Odor Control & Sewer Relocation

The Awbrey Glen lift station currently pumps into the sewage collections system located within the Valhalla neighborhood. A large wet well and long force main causes odorous air discharge. The project will mitigate odor and capacity issues in the neighborhood. This will eliminate neighborhood complaints and allow for the sewage pump station to run more efficiently reducing staff time and operating costs.

PROPOSED SEWER IMPROVEMENT PROJECT MAP

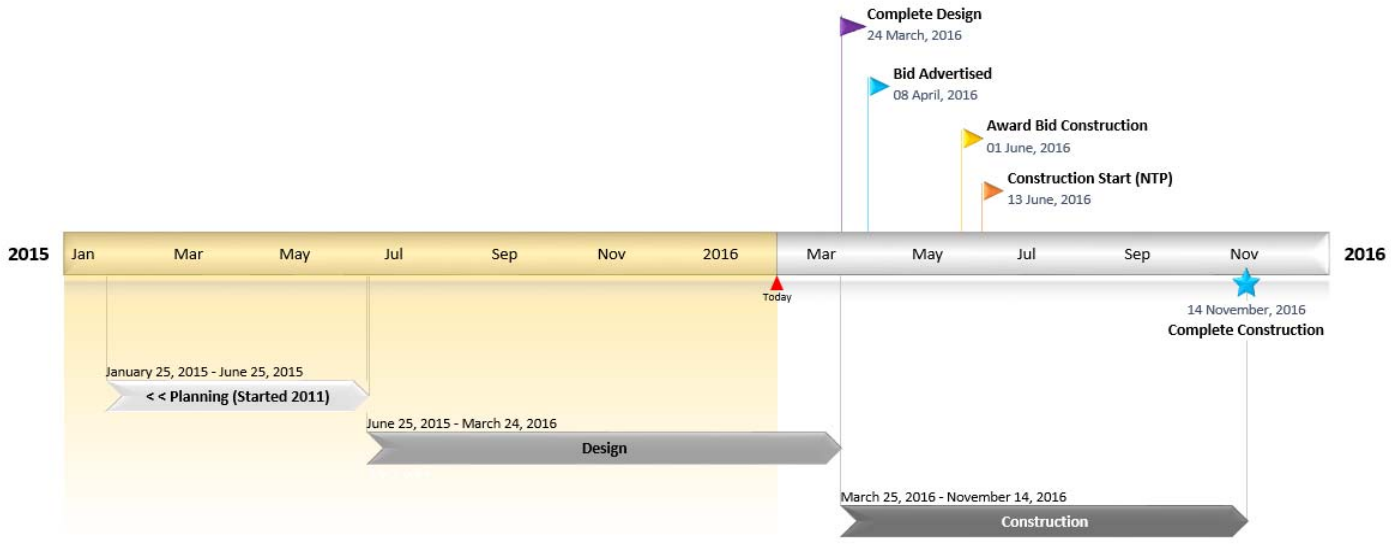


Project Engineer: Josh Robertson | jrobertson@bendoregon.gov

Scope	Schedule	Cost
Design and construction of a sewer main to direct sewage around the Valhalla neighborhood and install new odor control systems. Project includes paving restoration.	Start Date: 1/24/11 Substantial Completion: 11/14/2016 Final Closeout: 11/14/2017	Total Estimated: $1,860,370 Spent to Date: $244,856 % Spent to Estimated: 13%
Status: On Scope	**Status: On Schedule**	**Status: Potential Cost Increase**
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: Project cost increase likely due to changes in scope and schedule. Cost estimate and budgets will be updated after bid closes.

Status Update: Working on 95% plans and specifications are being finalized with submittal to the City 2/22/16.

Cost Estimate Classification: 3



North Area Sewer Capacity Improvements

This project will increase the capacity of the gravity main downstream of the multiple force main discharge point at manhole 3157 and reroute the force main discharge from several lift stations and the NE 3rd Street pressure sewer. It will also reconfigure the structure at Mervin Sampels Bypass and include modifications to both the Sawyer and Riverhouse lift stations.

Project Engineer: George Franklet | gfranklet@bendoregon.gov

Scope	Schedule	Cost
Analysis of alternatives for pipeline route and construction methods for crossing of irrigation canals and railroad tracks; design and construction of gravity and force mains, pump station modifications, and flow bypass optimization.	Start Date: 10/1/2013 Substantial Completion: 11/1/2016 Final Closeout: 11/1/2017	Total Estimated: $6,547,522 Spent to Date: $807,410 % Spent to Estimated: 12%
Status: On Scope	**Status: Behind Schedule**	**Status: Potential Budget Adjustment**
Adjustments: No change from prior month	Adjustments: Procurement schedule currently under development. Dates on timeline below will be updated in March report.	Adjustments: No impact to total cost estimate, however budget adjustment likely due to change in timing of project spending

Status Update: Negotiating construction easements with private land owners and completing permits with North Unit Irrigation District and BNSF Railroad. Next step in negotiations is to submit amounts for landowner approval. Assembling bid documents.

Cost Estimate Classification: 3

Colorado Pump Station and Sewer Mains

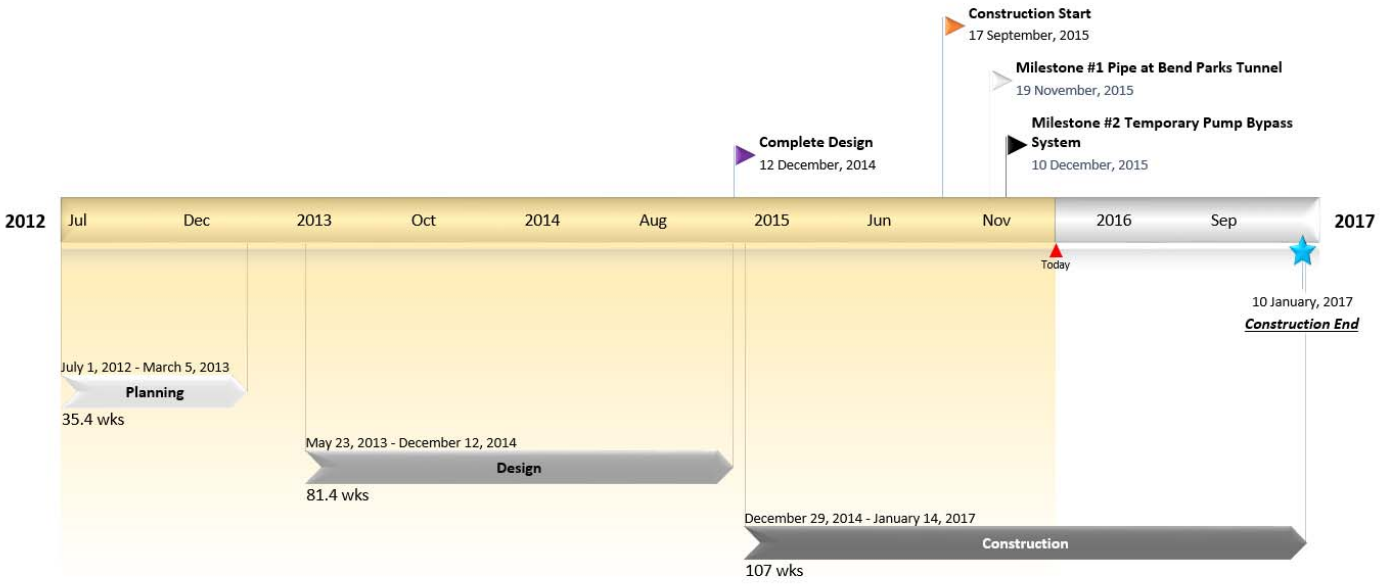
This project includes the design and construction of a new lift station and new gravity and force mains to divert flows from the existing Columbia Street sewer line to an existing trunk line east of the Deschutes River. This new lift station will provide service to future developments on the City's west side, allows decommissioning of an aging sewer lift station with access, capacity, and odor issue, and defer capacity-related improvements at Westside Lift Station.

Project Engineer: George Franklet | gfranklet@bendoregon.gov

Scope	Schedule	Cost
Analysis of service area, flows, capacities, alternatives for pump station sizing, siting, and pipeline route; design and construction of pump station, odor control facility, and gravity and force mains; decommissioning pump station.	Start Date: 2/1/2013 Substantial Completion: 01/10/2017 Final Closeout: 01/10/2018	Total Estimated: $13,620,132 Spent to Date: $4,909,299 % Spent to Estimated: 36%
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No revisions to scope at this time.	Adjustments: No change from prior month	Adjustments: No change from prior month

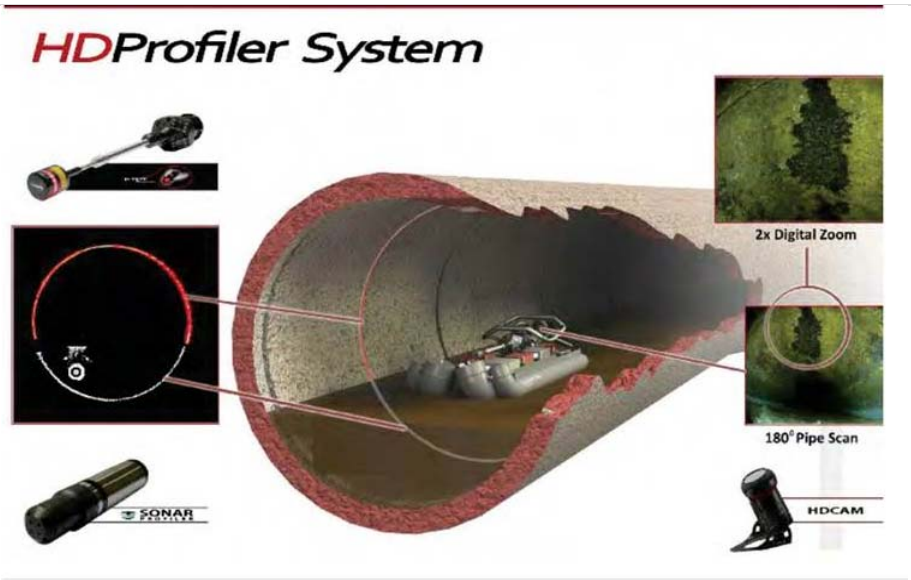
Status Update: Construction on Arizona Ave and Colorado Ave continues. Excavation for pump station is complete and concrete for the slab on-grade was poured mid-month.

Cost Estimate Classification: 1



Plant Interceptor Rehabilitation

The existing plant interceptor conveys all of the City's sewage to the WRF. The concrete pipeline is deteriorating due to age as well as the sulfides breaking down the concrete wall. This project will rehabilitate the plant interceptor by designing and constructing a Cured-In-Place Pipe (CIPP) liner on the pipe segments in the worst structural condition to lengthen the operational life of the pipeline. All project aspects were previously identified in the Plant Interceptor Condition Assessment and incorporated into the CSMP projects list.



Project Engineer: Jason Suhr | jsuhr@bendoregon.gov

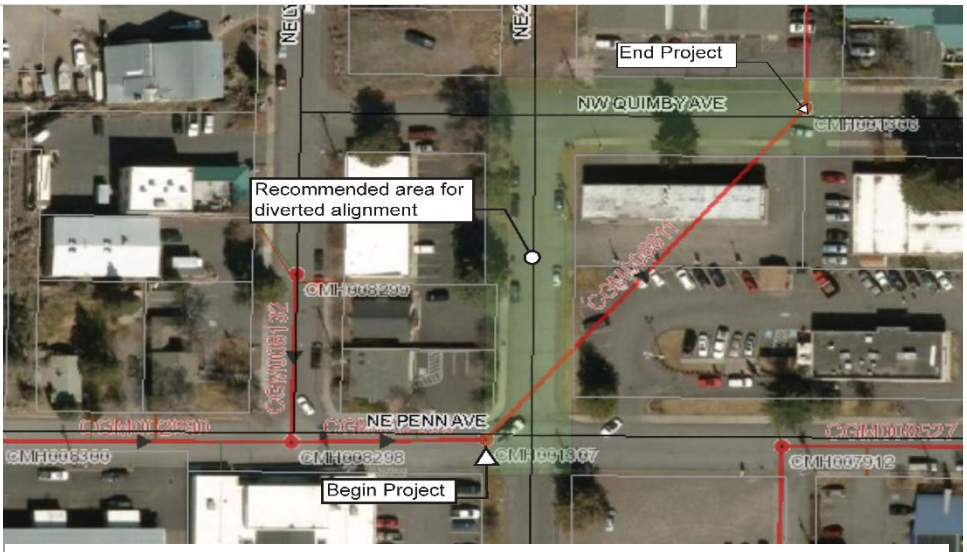
Scope	Schedule	Cost
Rehabilitate all Pipeline Assessment Certification Program (PACP) graded 4 and 5 pipe segments with a Cured-In-Place Pipe (CIPP) liner, replace the existing siphon junction box, and clean the double barreled siphons.	Start Date: 3/1/2015 Substantial Completion: 6/30/2017 Final Closeout: 6/30/2018	Total Estimated: $5,738,000 Spent to Date: $21,495 % Spent to Estimated: 0.37%
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

Status Update: Drafting an RFP for design services that will be reflective of the updated council direction. Timeline for design and construction phases will be updated when design contract is awarded.

Cost Estimate Classification: 5

NE 2nd & Penn Sewer Line Realignment

The sewer main of interest currently intersects two (2) private property parcels and exceeds the hydraulic requirements for the serviced catchment area. The purpose of this project is to design an alternate route, within the City of Bend Right of Way which meets current standards.

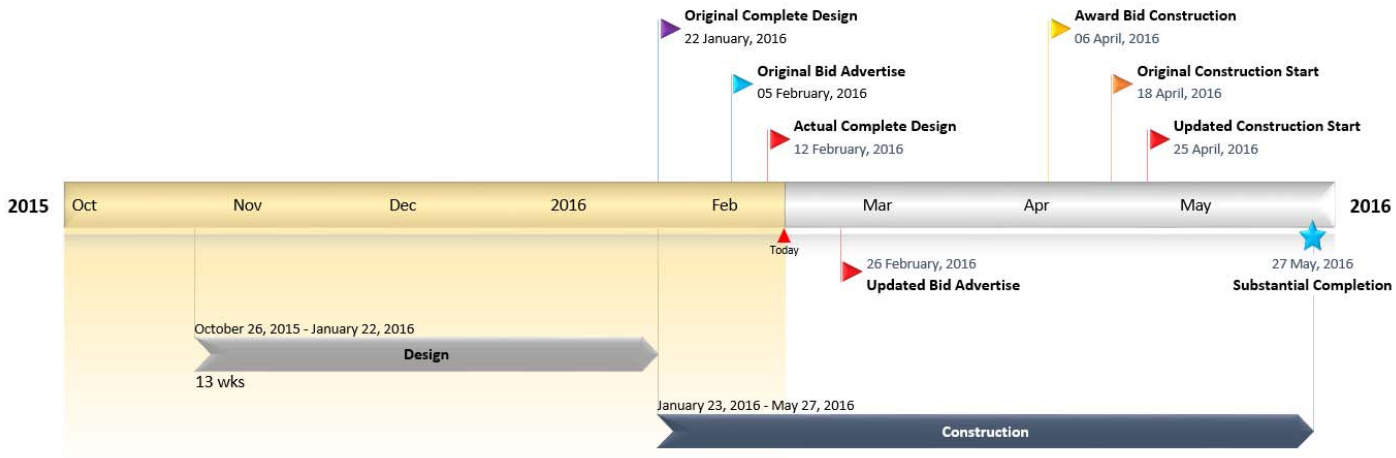


Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov

Scope	Schedule	Cost
Design and construct a section of gravity sewer main to provide an alternative conveyance route within the City of Bend Right of Way.	Start Date: 11/18/2015 Substantial Completion: 5/27/2016 Final Closeout: 5/27/2017	Total Estimated: $300,000 Spent to Date: $12,250 % Spent to Estimated: 4%
Status: On Scope	**Status: Schedule Baseline Revision**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: Timeline adjusted no impact to overall project schedule.	Adjustments: No change from prior month

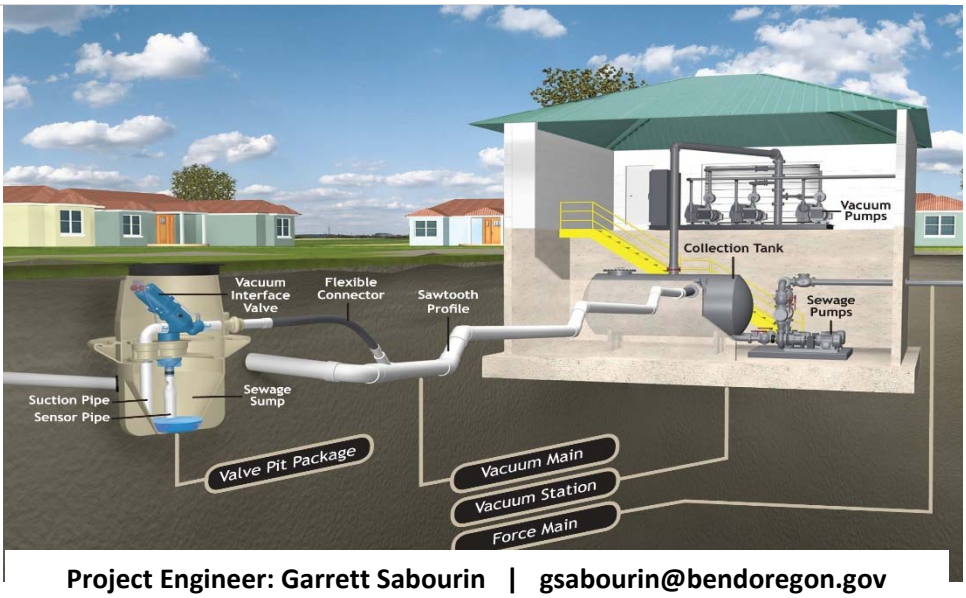
Status Update: Cost estimate classification updated and construction schedule pushed back one week. The Utility Department will not perform the project due to the cost estimate to complete anticipated work.

Cost Estimate Classification: 2



Wood River Village Lift Station & Vacuum Eval.

Evaluate existing system conditions in order to determine existing and future capacity as well as future development potential within the area.



Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov

Scope	Schedule	Cost
Complete a sewer system analysis and develop three (3) preliminary design solutions for a longstanding replacement and/or upgrade to the Wood River Village development's collection system.	Start Date: 9/1/2015 Substantial Completion: 3/11/2016 Final Closeout: 3/11/2016	Total Estimated: $50,000 Spent to Date: $18,976 % Spent to Estimated: 38%
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

Status Update: Design consultant has completed study and is developing final engineering report. Project will be closed out in next month's report. Anticipate final recommendations and next steps will be reported in April monthly report.

Cost Estimate Classification: N/A

Bend South Sewer Evaluation

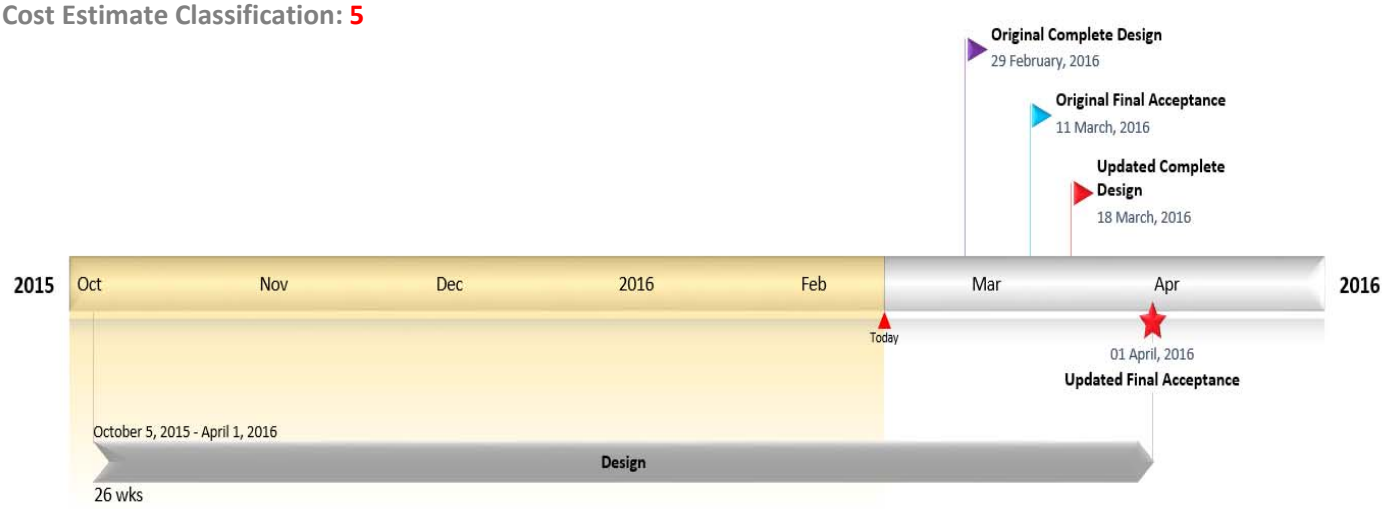
Evaluate existing system locations and conditions in order to determine existing and future capacity as well as future development potential within the area. This is part of the former Juniper Utility.

Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov

Scope	Schedule	Cost
Complete a sewer system analysis and develop three (3) preliminary design solutions for a longstanding replacement and/or upgrade to the Bend South development's collection system.	Start Date: 10/05/2105 Substantial Completion: 4/1/2016 Final Closeout: 4/1/2016	Total Estimated: $50,000 Spent to Date: $14,749 % Spent to Estimated: 29%
Status: Increased Scope	**Status: Schedule Baseline Revision**	**Status: On Budget**
Adjustments: Expanding study to include entire Bend South area	Adjustments: Schedule revised due to increase in scope.	Adjustments: No impact to total cost estimate due to increased scope and schedule revision.

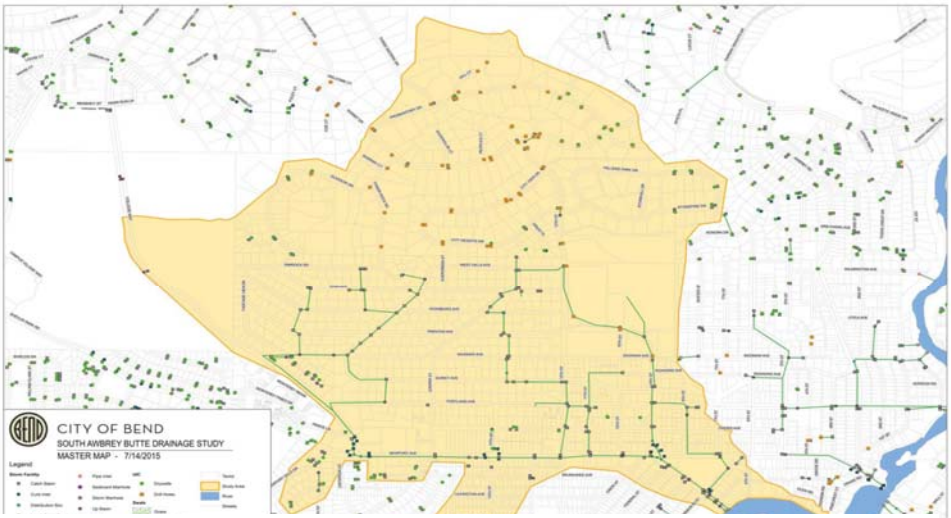
Status Update: Adding scope due to project cost savings. Class 5 Engineer's estimate have been prepared for multiple alternatives.

Cost Estimate Classification: 5



South Awbrey Butte Drainage Study

An evaluation will be completed in order to identify areas with run-off problems and complete a modeling effort in order to estimate run-off volumes. This will be the basis for future stormwater system improvements on Awbrey Butte and downstream areas.



Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov

Scope	Schedule	Cost
Complete a drainage system analysis for the southern hillside of Awbrey Butte. The intent is to identify and provide recommendations for drainage problem areas, as well as provide design peak flow rates at critical design locations along the Newport Avenue Storm Sewer Line.	Start Date: 7/1/15 Substantial Completion: 12/26/2016 Final Closeout: 01/02/2017	Total Estimated: $250,000 Spent to Date: $0 % Spent to Estimated: 0%
Status: On Scope	**Status: On Schedule**	**Status: On Budget**
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

Status Update: RFP Advertised and proposals received. Selection team to review proposals and provide scoring for selection of design consultant.

Cost Estimate Classification: N/A