



ENGINEERING

Monthly Report

May 2016



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FROM THE DIRECTOR

In the December 2015 issue I talked briefly about the department’s efforts to meet the workload requirements on CIP projects through recruiting new staff. With several highly complex, large-scale projects in progress, we rely on our long-term staff members to guide us. This past year we had a few setbacks with the loss of several key staff members.

First, our Inspection Services took a hit when Jackie Jappert-Saul and Dennis Coffman, two of the City’s longest-term inspectors, retired from the city. Jackie was with the City over 33 years and Dennis nearly 16 years. Then in March Ryan Oster, Principal Engineer, was promoted to the City Engineer position in the Community Development Department. This July Heidi Lansdowne, Principal Engineer, will retire from the City with 15 years of service. With approximately 20% of current staff members eligible to retire within the next five years I do not see the pressure easing up.

We have hired some amazing talent to backfill these positions but we are still behind the 8-ball trying to keep up. The Cascade Business News recently reported that Deschutes County is amongst the fastest growing economies in the nation with 2,800 jobs added in April. A significant number of positions (980) are in the private sector professional and business services. As more positions become available and the market becomes competitive candidates have more options for employment and recruiting becomes more difficult.

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

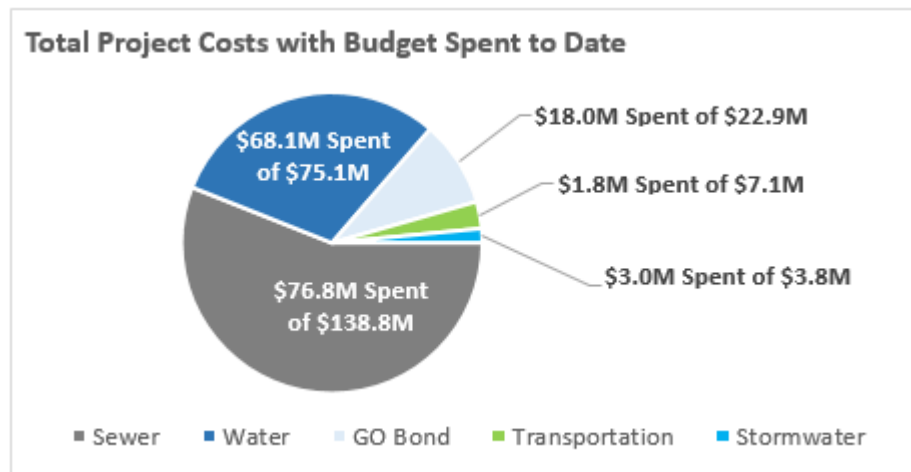
CIP Numbers Snapshot

- **3 Completed** Wood River Village Lift Station, Bend South Sewer Evaluation and Colorado Arizona Paving Project

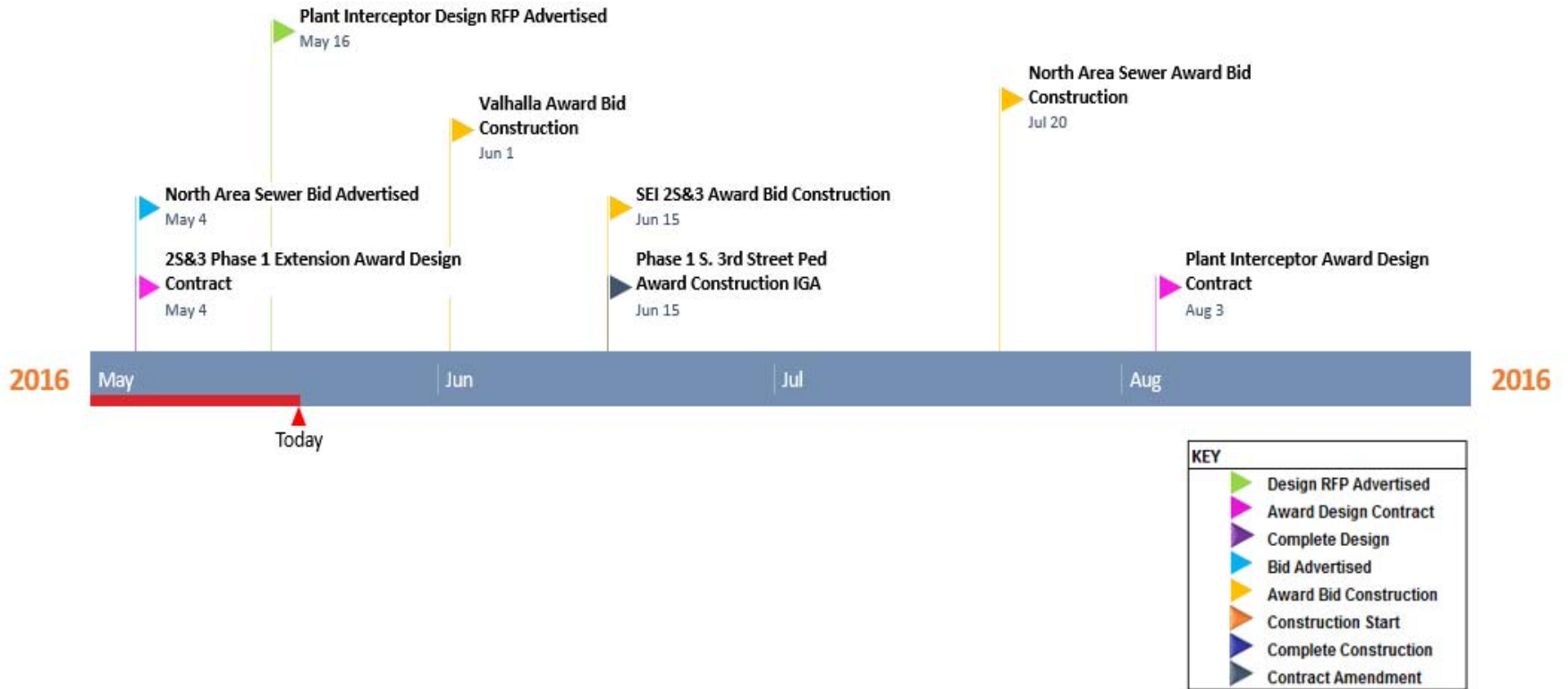
The table below shows the status of projects in the current CIP Plan as of April 30, 2016.

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	7	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	62	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.



EIPD Procurement Timeline



City of Bend 2016 - 2020 Capital Improvement Program Project List

Project Name & Number	Project Start	Estimated Substantial Completion	Project Stage	Cost Estimate Classification	Total Project Budgeted	Total Project Spent to Date	2015-16 Adopted Budget	2016-17 Adopted Budget	2017-18 Proposed Budget	2018-19 Proposed Budget	2019-20 Proposed Budget	Current 5-Year CIP Planned Budgets	Budget Revisions	Percent Budget Spent
ADA Construction														
AA11FA South 3rd Street Pedestrian Improvements	2011	3/31/17	Design	3	435,309	157,953	355,000	-	-	-	-	355,000		36%
AA14DA Summit Drive Curb Ramps	2015	10/9/15	Sub.Complete	1	910,000	900,320	393,000	-	-	-	-	393,000	1	99%
AA16AA Citywide Accessibility Improvements	2016	2017	Pending	5	350,000	-	100,000	250,000	-	-	-	350,000	4	0%
Total ADA Construction Projects					1,695,309	1,058,273	848,000	250,000	-	-	-	1,098,000		
BURA - Murphy Crossing Construction														
ST15MA Murphy & Parrell Roundabout	2015	7/29/16	Construction	1	1,800,038	432,757	1,755,022	-	-	-	-	1,755,022	2	24%
Total BURA Projects					1,800,038	432,757	1,755,022	-	-	-	-	1,755,022		
Transportation Construction														
ST11GA Galveston Corridor Improvements	2011	2017	Design	5	626,099	232,218	250,000	50,000	-	-	-	300,000		37%
ST14CA Sidewalk Design and Projects	2014	2018	Pending	5	1,396,097	32,306	350,000	970,000	20,000	-	-	1,340,000		2%
ST14DA Neff and Purcell Sidewalks	2016	2017	Pending	5	800,000	-	300,000	500,000	-	-	-	800,000		0%
ST14EA Citywide Safety Improvements	2016	9/30/18	Design	5	3,344,000	124,856	360,000	-	-	-	-	360,000	6	4%
ST15NA Phase 2 South 3rd Street Striping	2016	6/30/16	Design	5	30,000	450	30,000	-	-	-	-	30,000		2%
ST16AA Colorado Arizona Paving Project	2016	4/20/16	Construction	1	220,000	-	-	-	-	-	-	-		
Total Transportation Projects					6,196,196	389,830	1,290,000	1,520,000	20,000	-	-	2,830,000		
GO Bond														
ST12CB Empire/18th Roundabout	2012	10/15/15	Complete	1	2,647,809	2,645,834	10,200	-	-	-	-	10,200		100%
ST12CC Simpson/Mt. Washington Roundabout	2012	10/15/15	Complete	1	2,181,647	2,181,659	20,000	-	-	-	-	20,000		100%
ST12CD Powers/Brookwood Roundabout	2012	10/15/15	Complete	1	2,147,600	2,147,703	1,000	-	-	-	-	1,000		100%
ST12CE Reed Mkt: Newberry to 27th	2012	10/15/15	Sub.Complete	1	4,841,330	4,850,965	20,000	-	-	-	-	20,000		100%
ST12CJ Reed Mkt: 3rd to Newberry	2012	11/13/15	Sub.Complete	1	14,145,450	13,141,678	4,234,610	-	-	-	-	4,234,610		93%
ST12CH 27th Street Reconstruction	2017	2017	Pending	5	1,049,300	-	-	1,049,300	-	-	-	1,049,300		0%
ST12CK 14th St. Reconstruction	2016	2017	Design	5	3,888,950	7,178	2,732,050	1,149,300	-	-	-	3,881,350		0.18%
Total GO Bond Projects					30,902,086	24,975,016	7,017,860	2,198,600	-	-	-	9,216,460		
Water														
WA0902 Bridge Creek Intake and Pipeline	2008	6/30/16	Construction	1	73,954,698	68,148,078	17,713,500	-	-	-	-	17,713,500	3	92%
WA12AA 18th Street Waterline Extension (JR)	2012	4/30/16	Pending	2	485,063	25,063	460,000	-	-	-	-	460,000		5%
WA15BA Water SDC Methodology Study	2016	6/30/16	Pending	-	60,000	578	60,000	-	-	-	-	60,000		1%
WA15FA Firerock Bridge & Waterline	-	-	Transferred	-	450,000	-	-	-	-	-	-	-	5	0%
WA15GA South 3rd Street Pedestrian - Water portion	2017	3/31/17	Design	3	70,000	-	70,000	-	-	-	-	70,000		0%
WA15HA Water Master Plan Update	2016	6/30/16	Pending	-	500,000	-	500,000	-	-	-	-	500,000		0%
WA15JA Phase 2 South 3rd St. - Water portion	2016	6/30/16	Design	5	1,100,000	-	1,100,000	-	-	-	-	1,100,000		0%
WA16AA Westwood Reservoir Maintenance	-	-	Transferred	-	345,000	-	-	-	-	-	-	-	5	0%
WA20AX Awbrey Well Supply Expansion	2020	2020	Pending	5	1,944,000	-	-	-	-	-	1,944,000	1,944,000		0%
WA20BX Lafayette Pipe Enlargement	2020	2020	Pending	5	241,000	-	-	-	-	-	241,000	241,000		0%
WA20CX College Parallel Pipe Study	2020	2020	Pending	-	1,169,000	-	-	-	-	-	1,169,000	1,169,000		0%
WA20DX Valves Operational System Study	2020	2020	Pending	-	75,000	-	-	-	-	-	75,000	75,000		0%
Total Water Projects					80,393,761	68,173,718	19,903,500	-	-	-	3,429,000	23,332,500		

City of Bend 2016 - 2020 Capital Improvement Program Project List

Project Name & Number	Project Start	Estimated Substantial Completion	Project Stage	Cost Estimate Classification	Total Project Budgeted	Total Project Spent to Date	2015-16 Adopted Budget	2016-17 Adopted Budget	2017-18 Proposed Budget	2018-19 Proposed Budget	2019-20 Proposed Budget	Current 5-Year CIP Planned Budgets	Budget Revisions	Percent Budget Spent
Sewer - Water Reclamation														
SW0802 Secondary Expansion	2009	12/30/17	Construction	1	49,835,881	39,471,729	6,148,000	1,102,000	-	-	-	7,250,000		79%
SW14CA Headworks Upgrade	2016	10/1/17	Pending	1	1,720,492	176,018	1,000,000	-	-	-	-	1,000,000		10%
SW16AA Solids Handling (Secondary Expansion)	2017	2020	Pending	1	4,000,000	-	-	250,000	1,750,000	1,000,000	1,000,000	4,000,000		0%
SW0707 Southeast Interceptor Phase 1	2007	12/31/17	Construction	3	57,000,000	25,059,914	16,163,000	7,925,000	7,185,000	-	-	31,273,000		44%
SW0707 SEI Phase II North	2020	2025	Pending	5	16,500,000	-	-	-	-	-	5,737,000	5,737,000		0%
SW11BA Valhalla Sewer Relocation	2011	10/16/16	Design	2	1,860,370	260,325	1,746,000	-	-	-	-	1,746,000		14%
SW12AA Collection System Master Plan Update	2012	12/30/14	Sub.Complete	5	3,791,557	3,966,350	506,000	-	-	-	-	506,000		105%
SW13DA North Area Sewer Capacity Improvements	2013	11/1/16	Design	2	6,547,522	848,342	5,909,300	-	-	-	-	5,909,300		13%
SW13EA Colorado Pump Station and Sewer Mains	2013	1/10/17	Construction	1	13,620,132	7,020,109	11,321,400	-	-	-	-	11,321,400		52%
SW14BA Deschutes Brewery Sewer	-	-	Cancelled	-	300,000	-	170,000	-	-	-	-	170,000		0%
SW15AA Plant Interceptor Rehabilitation	2015	6/30/17	Planning	5	5,738,000	21,963	5,718,000	-	-	-	-	5,718,000		0.4%
SW15DA N.E. 2nd & Penn Sewer Line Realignment	2016	5/27/16	Design	2	300,000	21,894	100,000	200,000	-	-	-	300,000		7.3%
SW15GA Wood River Village Lift Station/Vacuum Evaluation	2016	3/11/16	Sub.Complete	-	50,000	49,198	50,000	-	-	-	-	50,000		98%
SW15IA Bend South Sewer Evaluation	2016	3/11/16	Sub.Complete	-	50,000	49,194	50,000	-	-	-	-	50,000		98%
SW16DA Riverhouse Lift Station Hydraulic Upgrade	2016	6/30/17	Planning	5										
SW15JA WRF Treatment Plant Upgrades	2016	On-Going	Transferred	5	700,000	-	-	-	-	-	-	-	5	0%
SW17AA WRF Facilities Plan Update	2018	2018	Pending	5	500,000	-	-	-	500,000	-	-	500,000		0%
SW18BX Parallel Sewer on Olney Avenue	2018	2018	Pending	5	581,000	-	-	-	581,000	-	-	581,000		0%
SW15KA WRF Evaporation Percolation Ponds	2019	2019	Pending	5	1,567,000	-	-	-	-	1,567,000	-	1,567,000		0%
SW19AX Amethyst/Mahogany Street Sewer	2019	2019	Pending	5	679,000	-	-	-	-	679,000	-	679,000		0%
SW19BX Mahogany Street/Hwy 97 Sewer	2019	2019	Pending	5	999,000	-	-	-	-	999,000	-	999,000		0%
SW18AA WRF Support Facilities Upgrade	2020	2020	Pending	5	2,400,000	-	-	-	-	-	2,400,000	2,400,000		0%
SW20AX Odor Control Master Plan	2020	2020	Pending	5	1,000,000	-	-	-	-	-	1,000,000	1,000,000		0%
SW20BX Sewer Storage - Land Acquisition	2020	2020	Pending	5	700,000	-	-	-	-	-	700,000	700,000		0%
SW20EX Plant Interceptor Condition Assessment	2020	2020	Pending	5	600,000	-	-	-	-	-	600,000	600,000		0%
SW20FX Collection System Master Plan (Years 6-10)	2020	2020	Pending	5	1,000,000	-	-	-	-	-	1,000,000	1,000,000		0%
SW20GX Gravity Pipe Condition Assessment Improvements	2020	2020	Pending	5	200,000	-	-	-	-	-	200,000	200,000		0%
Total Water Reclamation (Sewer) Projects					172,239,954	76,945,036	48,881,700	9,477,000	10,016,000	4,245,000	12,637,000	85,256,700		
Stormwater														
SR0802 Drake and Dohema Pump Station	-	-	Transferred	-	404,686	241,939	-	-	-	-	-	-	5	60%
SR09AA Third Street Underpass	2009	10/30/15	Sub.Complete	1	2,999,008	2,964,938	55,000	-	-	-	-	55,000		99%
SR14AA Phase 2 3rd Street - Stormwater portion	2016	6/30/16	Planning	5	400,000	-	400,000	-	-	-	-	400,000		0%
SR15AA South Awbrey Butte Drainage Study	2016	12/26/16	Design	5	250,000	518	150,000	100,000	-	-	-	250,000		0%
SR15BA South 3rd Street - Stormwater portion	2016	3/31/17	Design	3	150,000	-	150,000	-	-	-	-	150,000		0%
SR15CA Newport Pipe Replacement Design	2018	2019	Pending	5	425,000	-	-	-	-	425,000	-	425,000		0%
Total Stormwater Projects					4,628,694	3,207,395	755,000	100,000	-	425,000	-	1,280,000		
Total Capital Improvement Program Projects					297,856,038	175,182,025	80,451,082	13,545,600	10,036,000	4,670,000	16,066,000	124,768,682		

Budget Revisions:
 1 - \$75,000 budget adjustment approved 11/18/2015
 2 - \$455,022 prior FY carryforward approved 11/18/2015
 3 - \$3,382,000 prior FY carryforward approved 11/18/2015
 4 - Project initiated early, moved \$100,000 to current FY 12/23/2015
 5 - \$1,667,000 transferred to Utility Operations
 6 - \$360,000 Project Initiated

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.

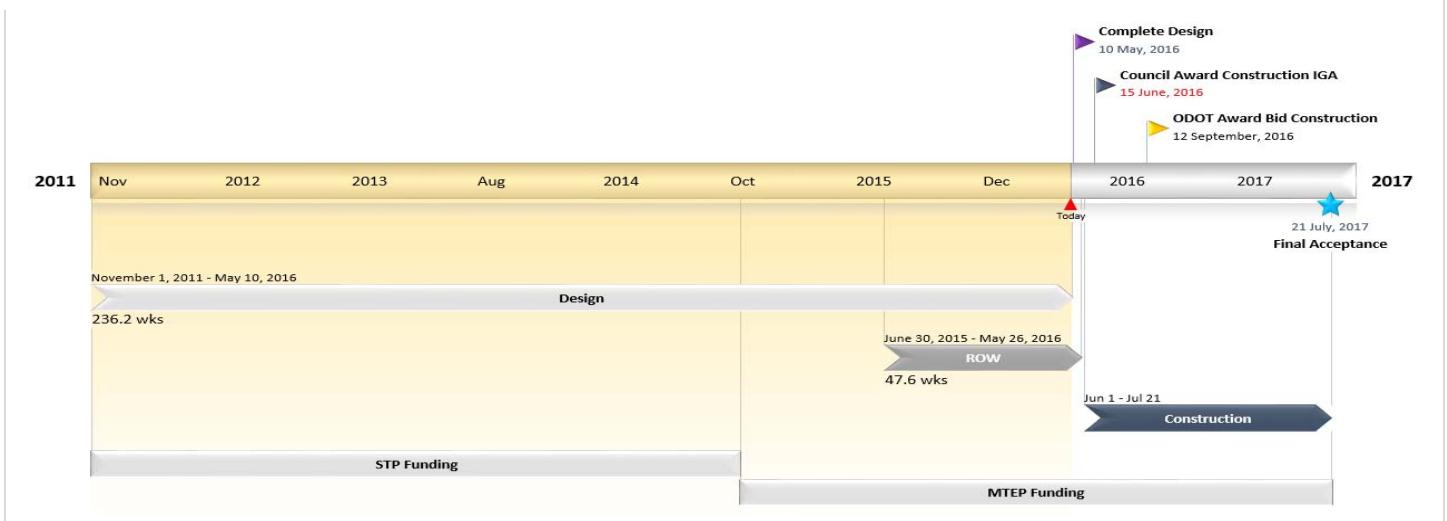


Project Engineer: Jason Suhr | jsuhr@bendoregon.gov

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: \$1,205,000 Spent to Date: \$157,953 % Spent to Estimated: 13% Three Projects: ADA \$665,000 , Water \$70,000, Stormwater \$470,000
Status: On Scope	Status: On Schedule	Status: Potential Cost Increase
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: Cost increase likely due to additional scope. Cost estimate will be updated upon design completion

Status Update: ADA project increased due to an increase in the engineer’s estimate at final design. Transferred scope and budget from Phase II Stormwater project in order to maximize efficiency and control cost on the project.

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.



Project Engineer: Jason Suhr | jsuhr@bendoregon.gov

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: \$1,135,000 Spent to Date: \$900 % Spent to Estimated: 0.08% Three Projects: Water \$1,100,000, Stormwater \$5,000 , Streets \$30,000
Status: On Scope	Status: On Schedule	Status: Cost Adjustment
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: Cost estimate decreased by \$395,000 due to reduction in scope

Status Update: Transferred scope and budget to Phase I Stormwater project in order to maximize efficiency and control cost on the project. The Striping plans are 60% complete.

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.



Project Engineer: Rory Rowan | rrowan@bendoregon.gov

Scope

Survey, design, and construction of accessibility improvements, as funding allows, in the Wells Acres, Bear Creek, Division, Downtown & Old Mill and Brookwood/Southwest neighborhoods.

Schedule

Start Date: 3/1/16
 Substantial Completion: 9/28/2018
 Final Closeout: 09/28/2019

Cost

Total Estimated: \$750,000
 Spent to Date: \$0
 % Spent to Estimated: 0%

Status: On Scope

Adjustments: No change from prior month

Status: On Schedule

Adjustments: No change from prior month

Status: On Budget

Adjustments: No change from prior month

Status Update: Design contract awarded and proceeding with initial task orders in highest priority neighborhoods and corridors.

Cost Estimate Classification: 5



Murphy & Parrell Roundabout

This project will finalize the 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

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.

Schedule

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

Cost

Total Estimated: \$2,000,000
 Spent to Date: \$432,757
 % Spent to Estimated: 22%

Status: On Scope

Adjustments: No change from prior month

Status: On Schedule

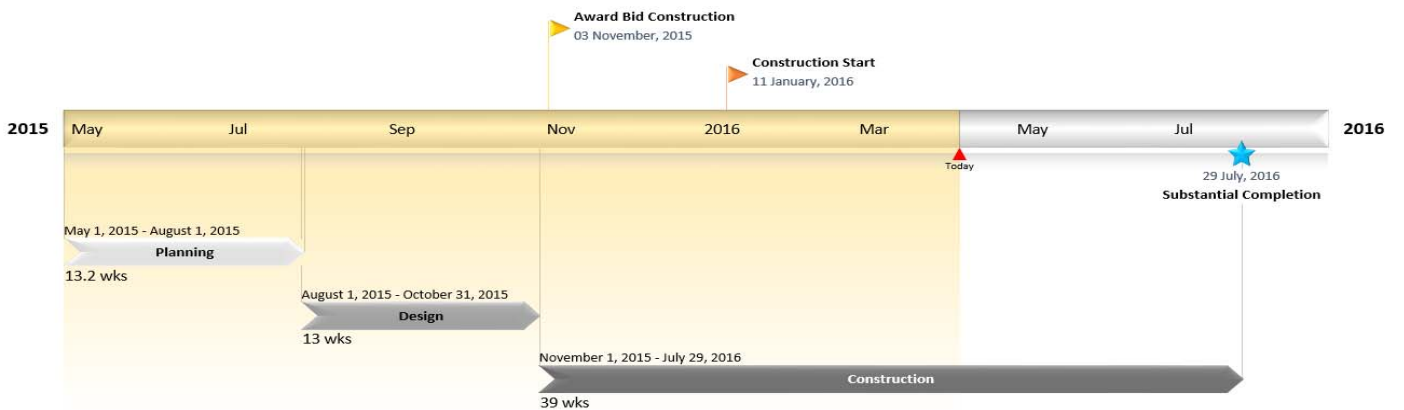
Adjustments: No change from prior month

Status: On Budget

Adjustments: No change from prior month

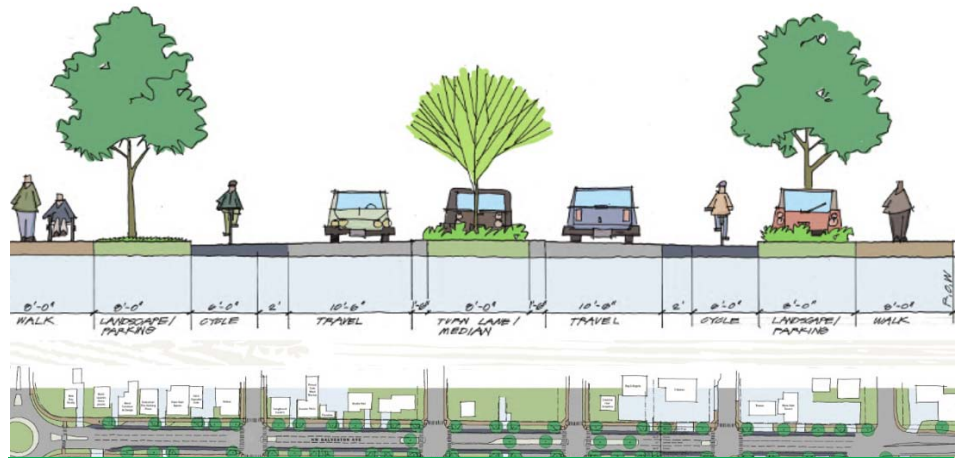
Status Update: Sewerline installation complete in April. Ongoing franchise utility relocations. Stormwater infrastructure piping and inlets are starting to be installed. Intersection will be closed until substantial completion in July.

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: Garrett Sabourin | gsabourin@bendoregon.gov

Scope

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. At 30% design project will be brought to council to decide the Stormwater and other elements to be carried forward.

Schedule

Start Date: 06/01/2011
 Substantial Completion: TBD
 Final Closeout: TBD

Cost

Total Estimated: \$2,700,000
 Spent to Date: \$232,218*
 % 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 change from prior month

Adjustments: No change from prior month

Adjustments: No change from prior month

Status Update: Scheduled project charter and kickoff meeting for internal stakeholders.

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.



Project Engineer: Rory Rowan | rrowan@bendoregon.gov

Scope

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.

Schedule

Start Date: 10/1/2014
 Substantial Completion: 9/30/2018
 Final Closeout: 9/30/2019

Cost

Total Estimated: \$3,344,000
 Spent to Date: \$124,856
 % Spent to Estimated: 4%

Status: On Scope

Adjustments: No change from prior month

Status: On Schedule

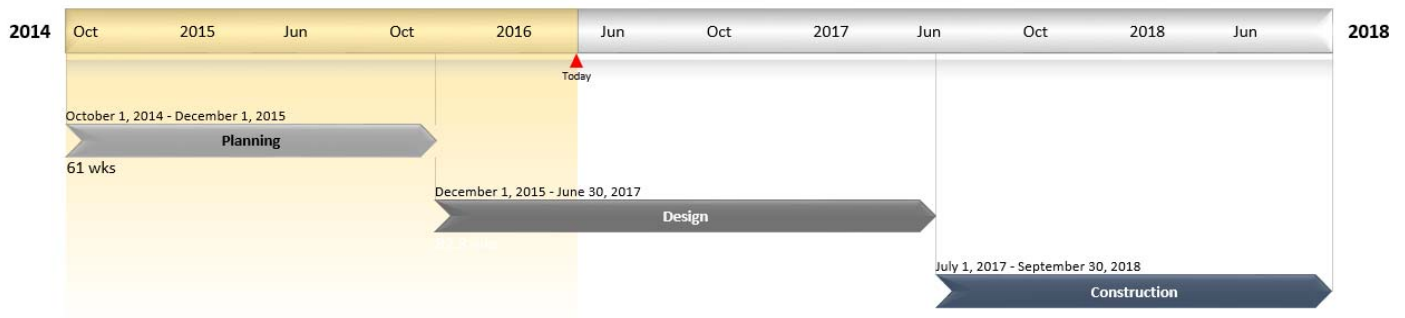
Adjustments: No change from prior month

Status: On Budget

Adjustments: No change from prior month

Status Update: Neff and Williamson design has been finalized and will be constructed as part of Southeast Interceptor Phase 1 Extension project. A public engagement campaign will be launched in the coming months.

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.



Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov

Scope

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.

Schedule

Start Date: 06/30/2014
 Substantial Completion: TBD
 Final Closeout: TBD

Cost

Total Estimated: \$3,888,950*
 Spent to Date: \$7,178
 % Spent to Estimated: 0.18%

*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: Scheduled project charter and kickoff meeting for internal stakeholders.

Cost Estimate Classification: 5



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.

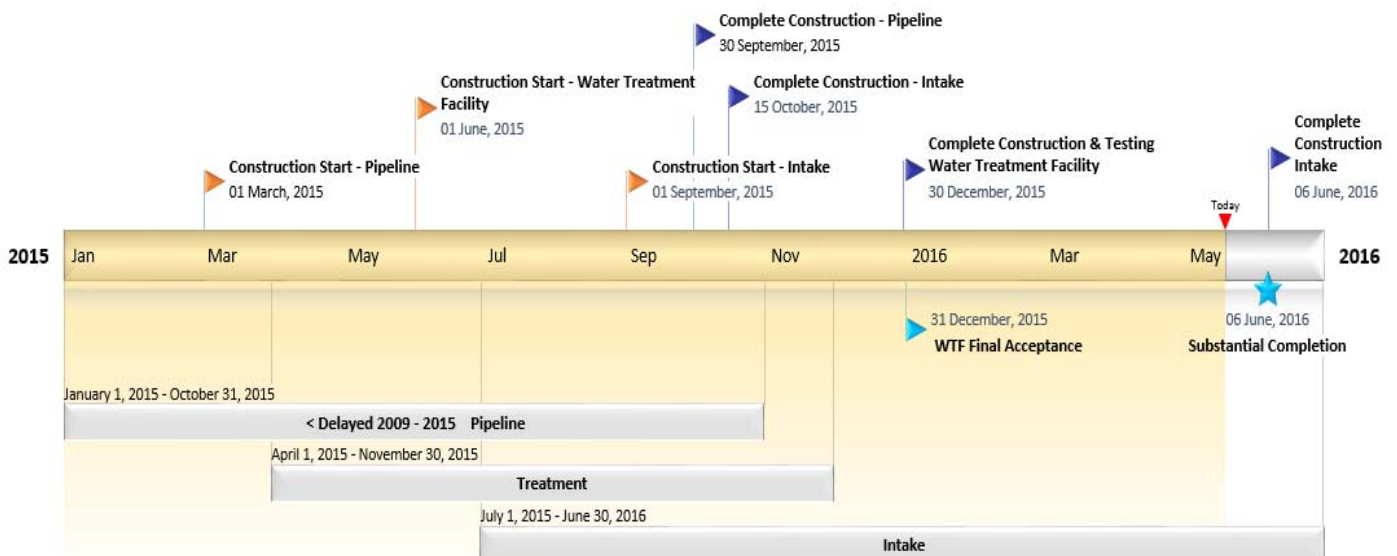


Project Engineer: Heidi Lansdowne | hansdowne@bendoregon.gov

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: \$68,148,078 % Spent to Estimated: 92%
Status: On Scope	Status: On Schedule	Status: On Budget
Adjustments: No change from prior month	Adjustments: Project completion estimated June 2016	Adjustments: No change from prior month

Status Update: Substantial completion of Intake expected June 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

The project adds a primary clarifier, aeration basin, blower facilities, UV and sodium hypochlorite disinfection improvements, and various piping modifications.

Schedule

Start Date: 4/1/2009
 Substantial Completion: Feb. 2016*
 Final Closeout: Spring 2017*
 * Actual dates TBD

Cost

Total Estimated: \$60,000,000*
 Spent to Date: \$39,471,729
 % Spent to Estimated: 66%
 * Includes Facilities Plan, pre-design, final design, services during construction, and construction.

Status: Reduced Scope

Adjustments: No change from prior month

Status: Behind Schedule

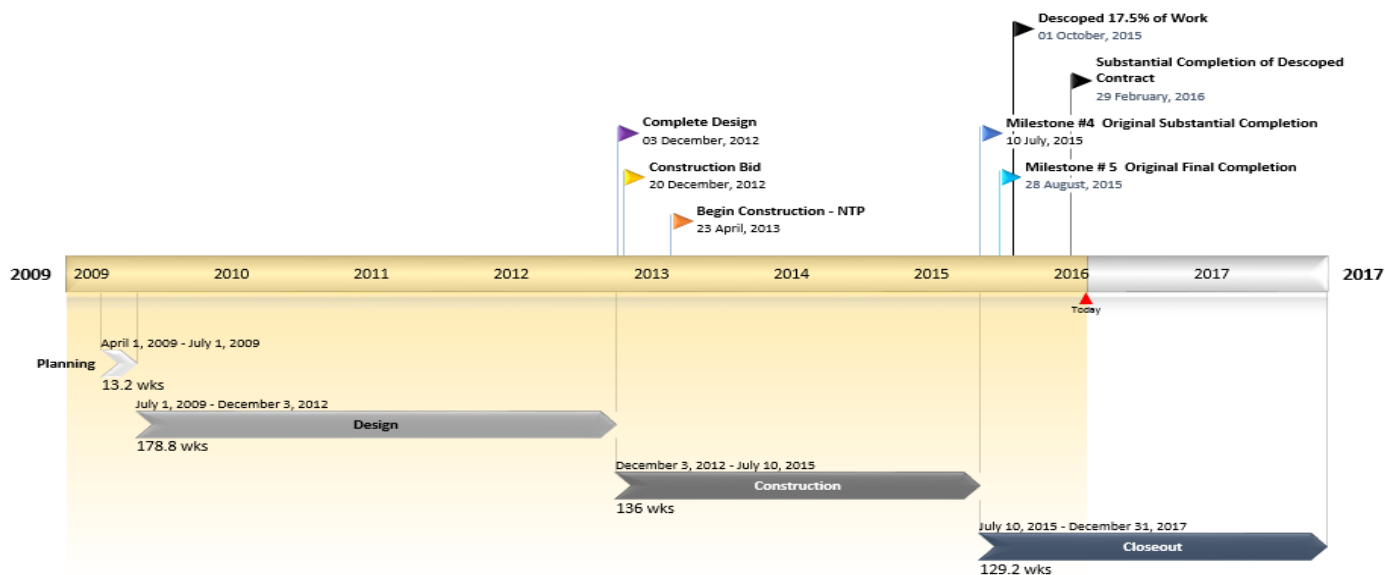
Adjustments: Schedule revision is necessary due to change in scope and overall project delay.

Status: Potential Cost Increase

Adjustments: Project cost increase likely. Cost estimate and budgets will be updated in Spring 2016.

Status Update: No change from prior month. Continue winding down on construction and demobilizing on-site contractors.

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.

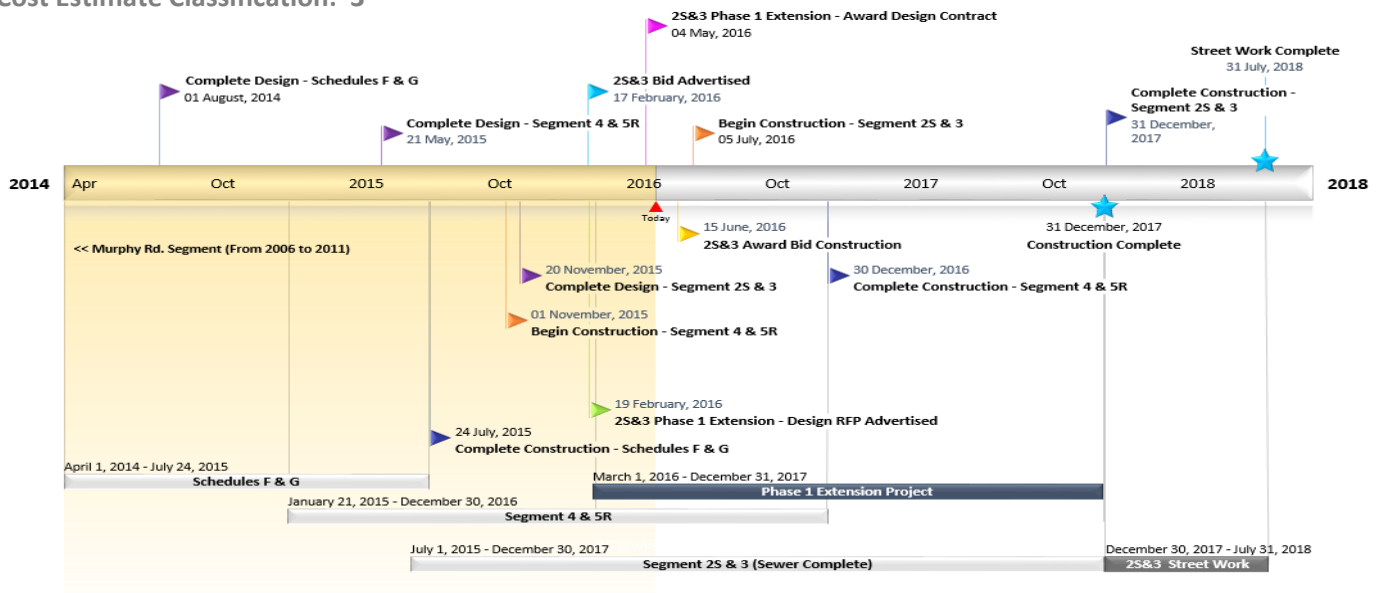


Project Engineer: Eric Forster | eforster@bendoregon.gov

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: \$68,000,000 Spent to Date: \$25,059,914 % Spent to Estimated: 37%
Status: Increased Scope	Status: On Schedule	Status: Cost Increase
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: Overall project cost estimates have increased \$8 million to include the Phase I Extension. Contract spending is within budget.

Status Update: Anticipate contract approval for construction for 2S&3 (27th Street Sewerline) project in mid-June, with construction to begin in July. Kings Forest section is nearing 50% completion of construction.

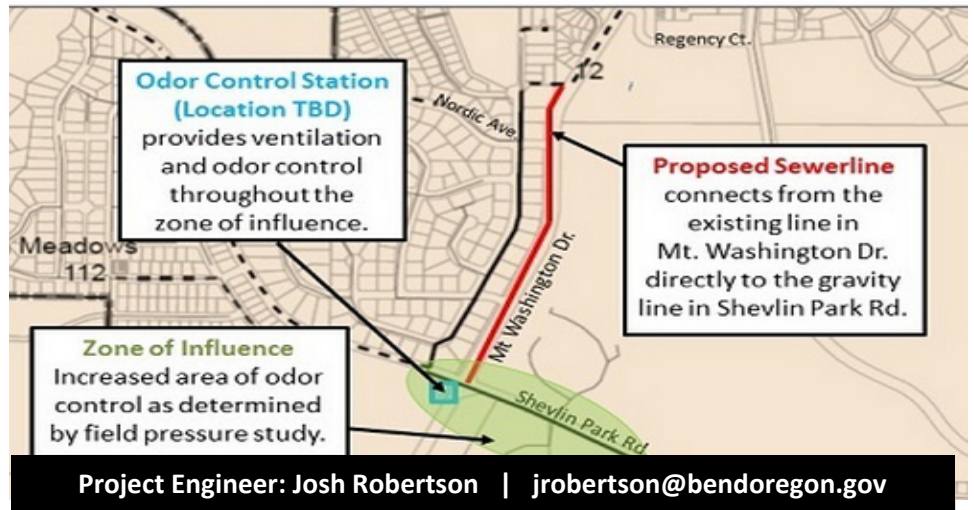
Cost Estimate Classification: 3



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



Scope

Design and construction of a sewer main to direct sewage around the Valhalla neighborhood and install new odor control systems. Project includes paving restoration.

Schedule

Start Date: 1/24/11
Substantial Completion: 11/14/2016
Final Closeout: 11/14/2017

Cost

Total Estimated: \$1,860,370
Spent to Date: \$260,325
% Spent to Estimated: 14%

Status: On Scope

Adjustments: No change from prior month

Status: On Schedule

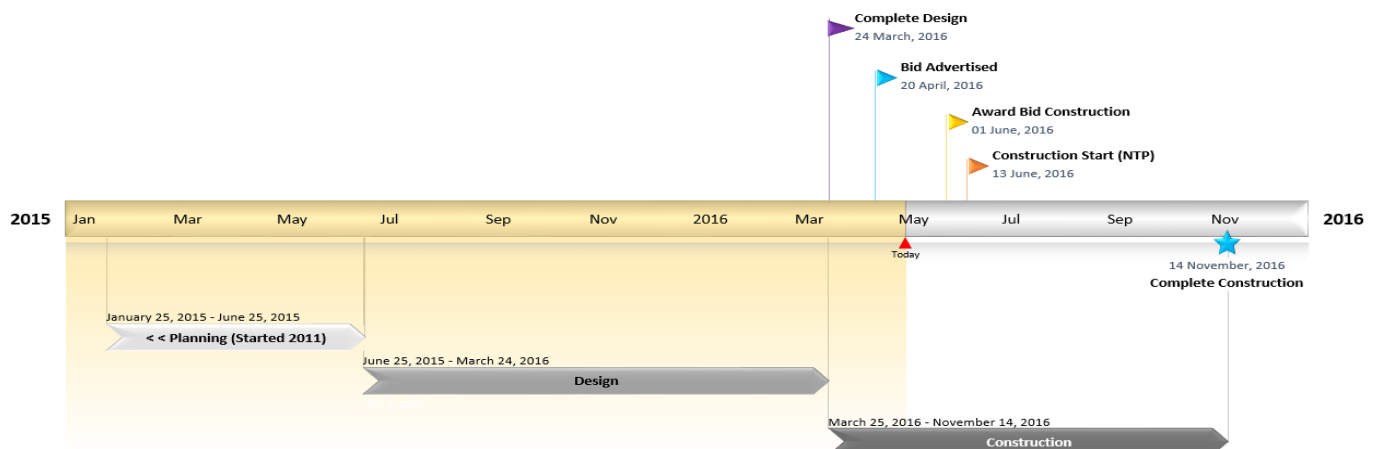
Adjustments: No change from prior month

Status: Potential Cost Increase

Adjustments: Project cost increase likely due to changes in scope and schedule. Cost estimate and budgets will be updated after bid closes.

Status Update: Construction bid opening May 12 and Council award scheduled for June 1.

Cost Estimate Classification: 2



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

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.

Schedule

Start Date: 10/1/2013
 Substantial Completion: 4/30/2017
 Final Closeout: 4/30/2018

Cost

Total Estimated: \$6,547,522
 Spent to Date: \$848,342
 % Spent to Estimated: 13%

Status: On Scope

Adjustments: No change from prior month

Status: Behind Schedule

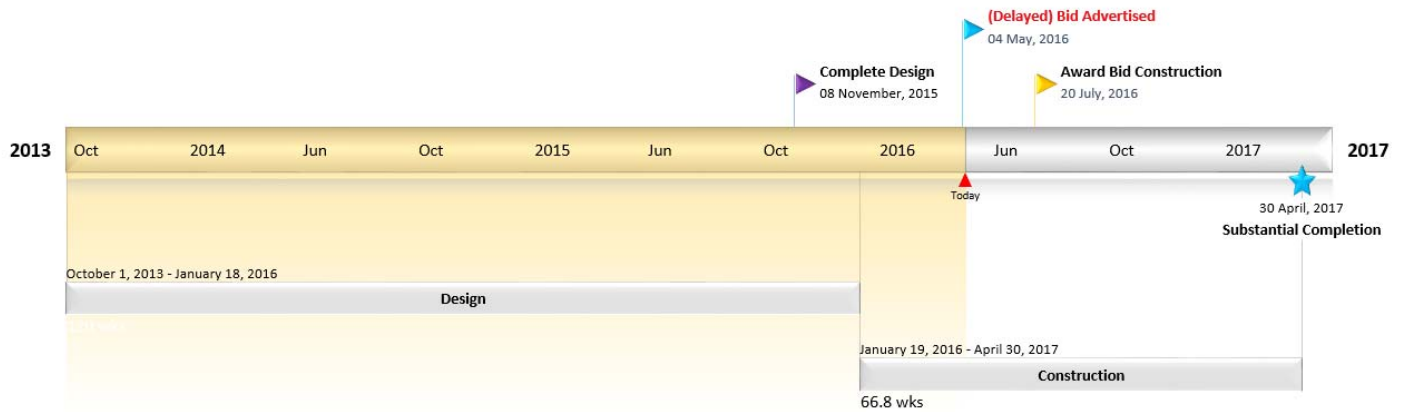
Adjustments: No change from prior month

Status: Potential Budget Adjustment

Adjustments: No change from prior month

Status Update: Bid advertisement delayed due to easement negotiations and irrigation district permits. Construction timeline extended to accommodate paving in March and April 2017 due to seasonal restrictions.

Cost Estimate Classification: 2



Colorado Pump Station and Sewer Mains

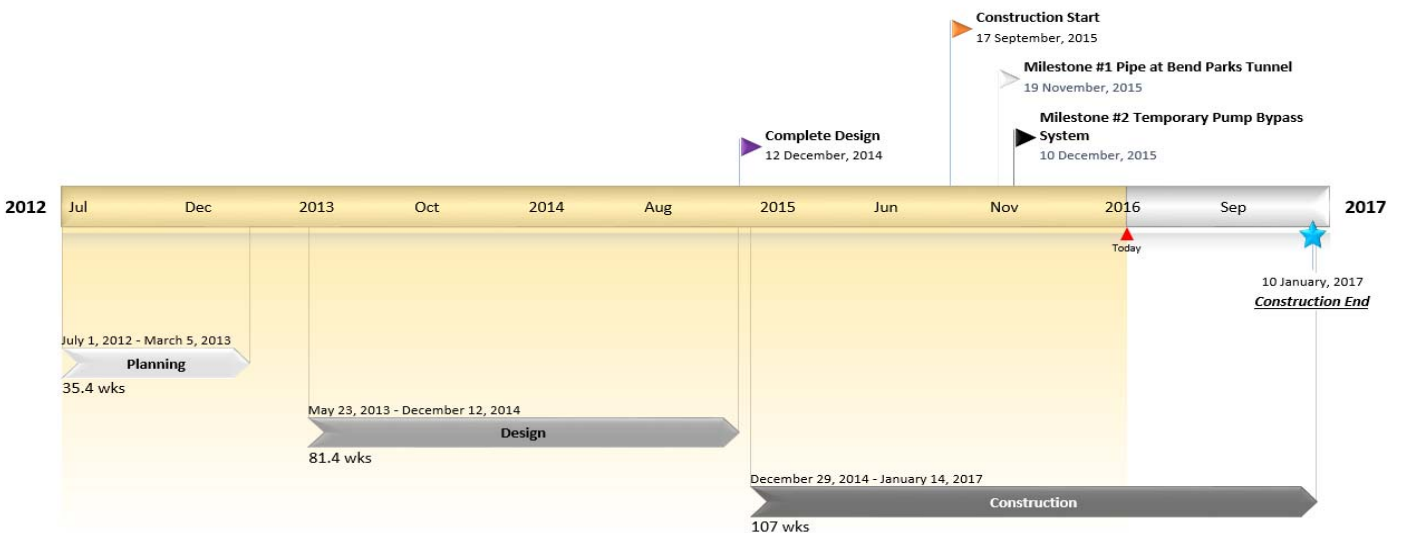
This project includes the design and construction of a new lift station and new gravity and force mains to divert flows from the existing Columbia Street sewer line to an existing trunk line east of the Deschutes River. This new lift station will provide service to future developments on the City's west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



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: \$7,020,109 % Spent to Estimated: 52%
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: Paving of Arizona Ave started May 9 and will be completed by the end of the month. Both lanes of Arizona Ave will be intermittently closed for night paving as needed, but one lane will remain opened during the day. The pump station shoring will be removed in late May with disruption to the localized area due to vibrations.

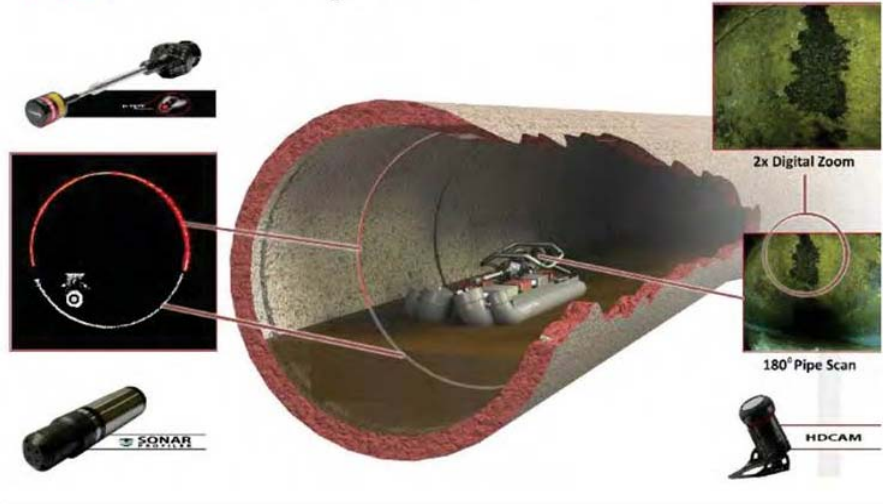
Cost Estimate Classification: 1



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.

HDProfiler System



Project Engineer: Jason Suhr | jsuhr@bendoregon.gov

Scope

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.

Schedule

Start Date: 3/1/2015
 Substantial Completion: 6/30/2017
 Final Closeout: 6/30/2018

Cost

Total Estimated: \$5,738,000
 Spent to Date: \$21,963
 % Spent to Estimated: 0.38%

Status: On Scope

Status: On Schedule

Status: On Budget

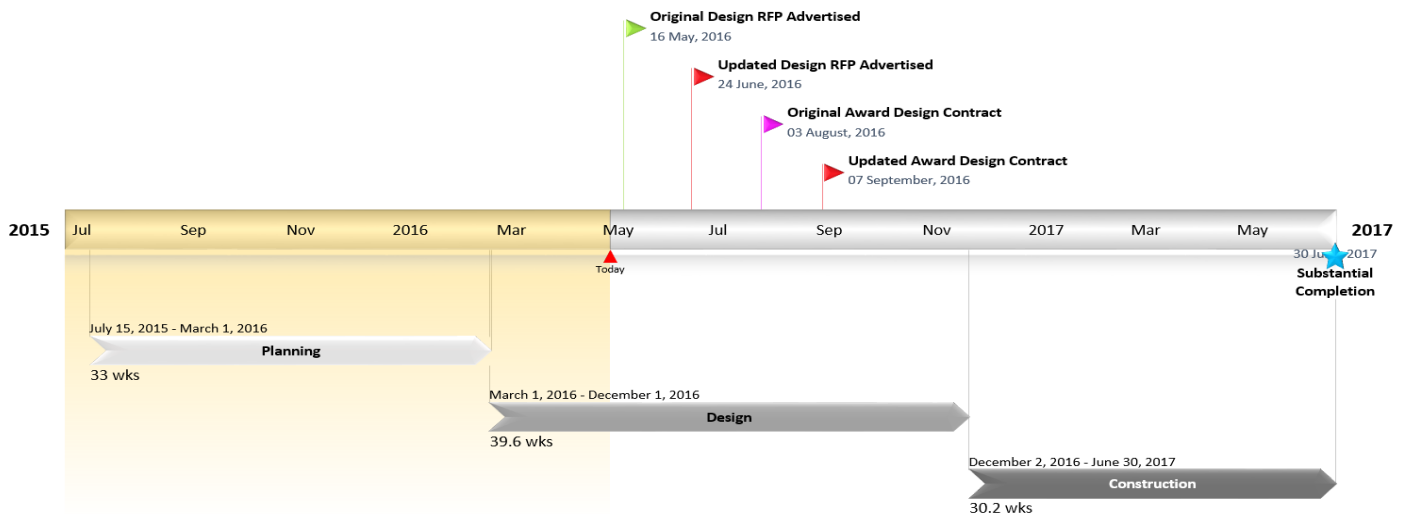
Adjustments: No change from prior month

Adjustments: No change from prior month

Adjustments: No change from prior month

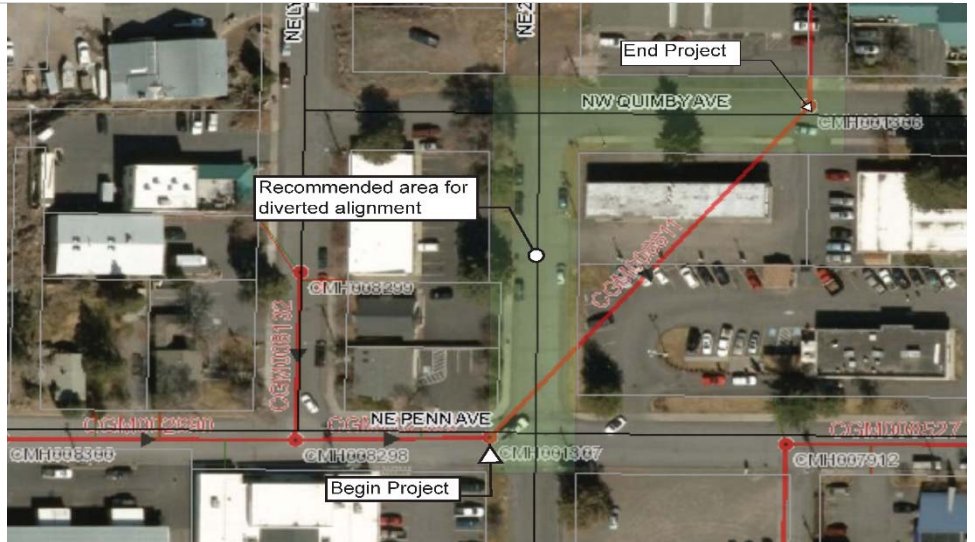
Status Update: Completed the archaeological impact statement (CWSRF loan requirements). Design RFP delayed due to workload constraints.

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.

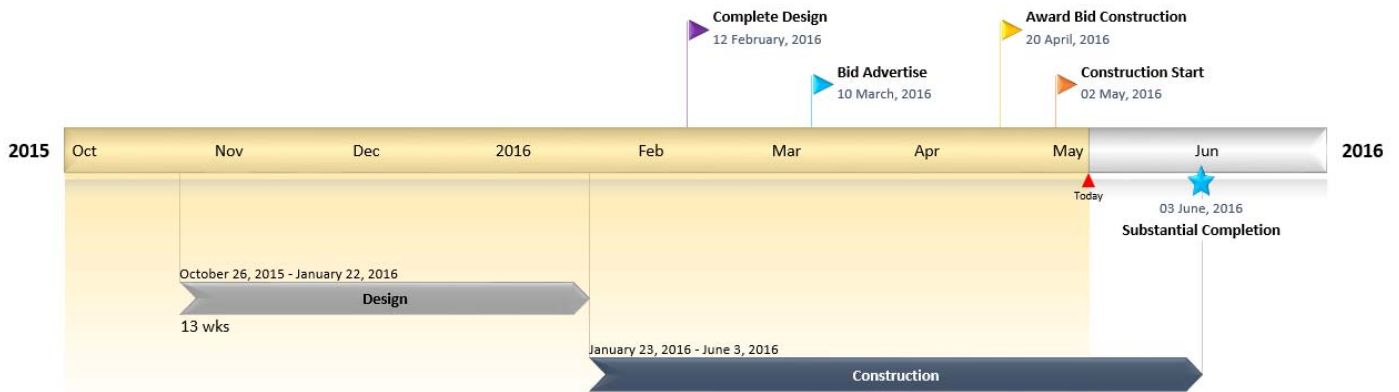


Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov

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: 6/3/2016 Final Closeout: 6/3/2017	Total Estimated: \$300,000 Spent to Date: \$21,894 % Spent to Estimated: 7%
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: Council approved construction contract on April 20 with Emery and Sons Construction Group. Notice to Proceed issued May 2 and the contractor is currently on schedule.

Cost Estimate Classification: 2



Riverhouse Lift Station Hydraulic Upgrade

This project was identified in the Collection System Master Plan as a project to be partially funded by the hotel/developer. The City received an in-lieu of payment from the developer to complete the work of downsizing the mechanical pump components to match required capacity for peak we-weather flow and will coordinate the work in conjunction with the North Area Sewer Capacity Improvements project.



Scope

Downsize of mechanical pumping and/or electrical components to decrease hydraulic capacity to closer to required capacity. Rehabilitation and, where required, replacement of deteriorating lift station components where O&M Department condition assessment indicated poor condition: wet well, pumps, motors and electrical equipment

Schedule

Start Date: 2/25/2016
 Substantial Completion: 6/30/2017
 Final Closeout: 6/30/2018

Cost

Total Estimated: \$500,000
 Spent to Date: \$0
 % Spent to Estimated: 0%

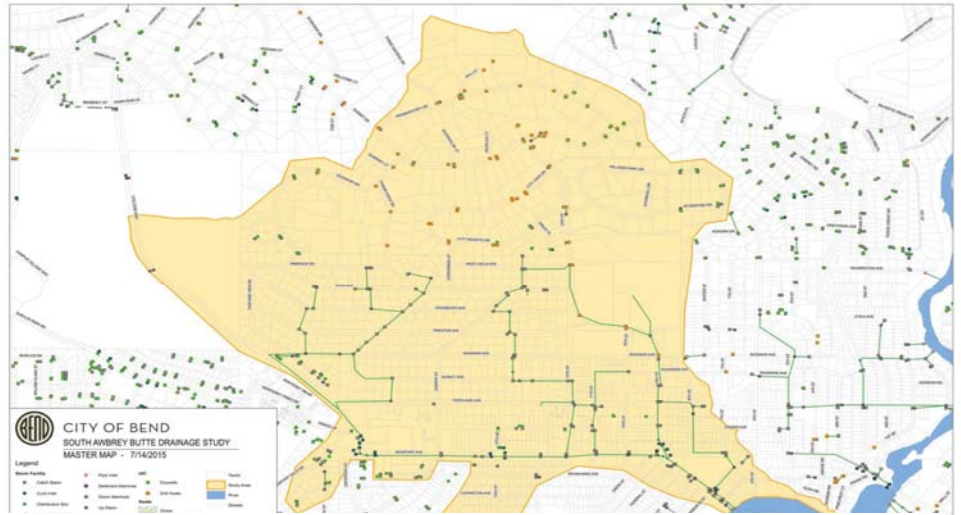
Status Update: Design contract initiated and design proceeding to 30%.

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: 05/26/2017 Final Closeout: 05/26/2017	Total Estimated: \$250,000 Spent to Date: \$518 % Spent to Estimated: 0.21%
Status: On Scope	Status: Baseline Schedule Adjustment	Status: On Budget
Adjustments: No change from prior month	Adjustments: Updated to reflect consultant timeline.	Adjustments: No change from prior month

Status Update: Council approved professional services contract on April 20 with HDR Engineering, Inc. Notice to proceed and kickoff meeting held on May 3.

Cost Estimate Classification: 5

