APPENDIX C: SCJ FINAL REPORT/COST ESTIMATES

MAIN STREET ROCHESTER

CONCEPTUAL PROJECT PLAN FOR PRIORITY ACTIONS

PROJECT INFORMATION

Prepared for:

THURSTON REGIONAL PLANNING COUNCIL

Thurston Regional Planning Council
2424 Heritage Court SW, Suite A
Olympia, WA 98502

Prepared by:

SCJ ALLIANCE
CONSULTING SERVICES

SCJ Alliance
8730 Tallon Lane NE, Suite 200
Lacey, WA 98516
360.352.1465
scjalliance.com

With consultation from:

Thurston County
WSDOT Olympic Region
Thurston Regional Planning Council

Main Street Rochester Project Overview

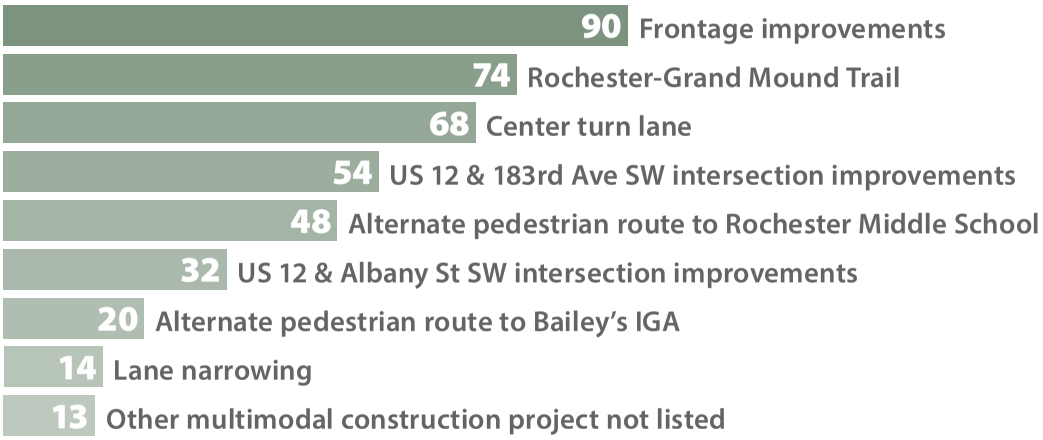
PROJECT PURPOSE

Thurston County is working with Washington State Department of Transportation (WSDOT) and Thurston Regional Planning Council (TRPC) to address community concerns related to US 12's dual role as a regional highway and Rochester's Main Street. Recommendations that come out of this planning process aim to:

- Improve safety and multimodal mobility
- Increase infrastructure investments
- Enhance sense-of-place and walkability
- Encourage economic vitality

The following project plan provides conceptual designs and a phasing strategy to address the Rochester community's priority actions as identified by a community survey in spring 2018 (see figure below). However, the projects proposed in this plan do not represent the entire Main Street Rochester project.

» *Priority Actions Identified by Community Survey, Spring 2018*



PROJECT LOCATION

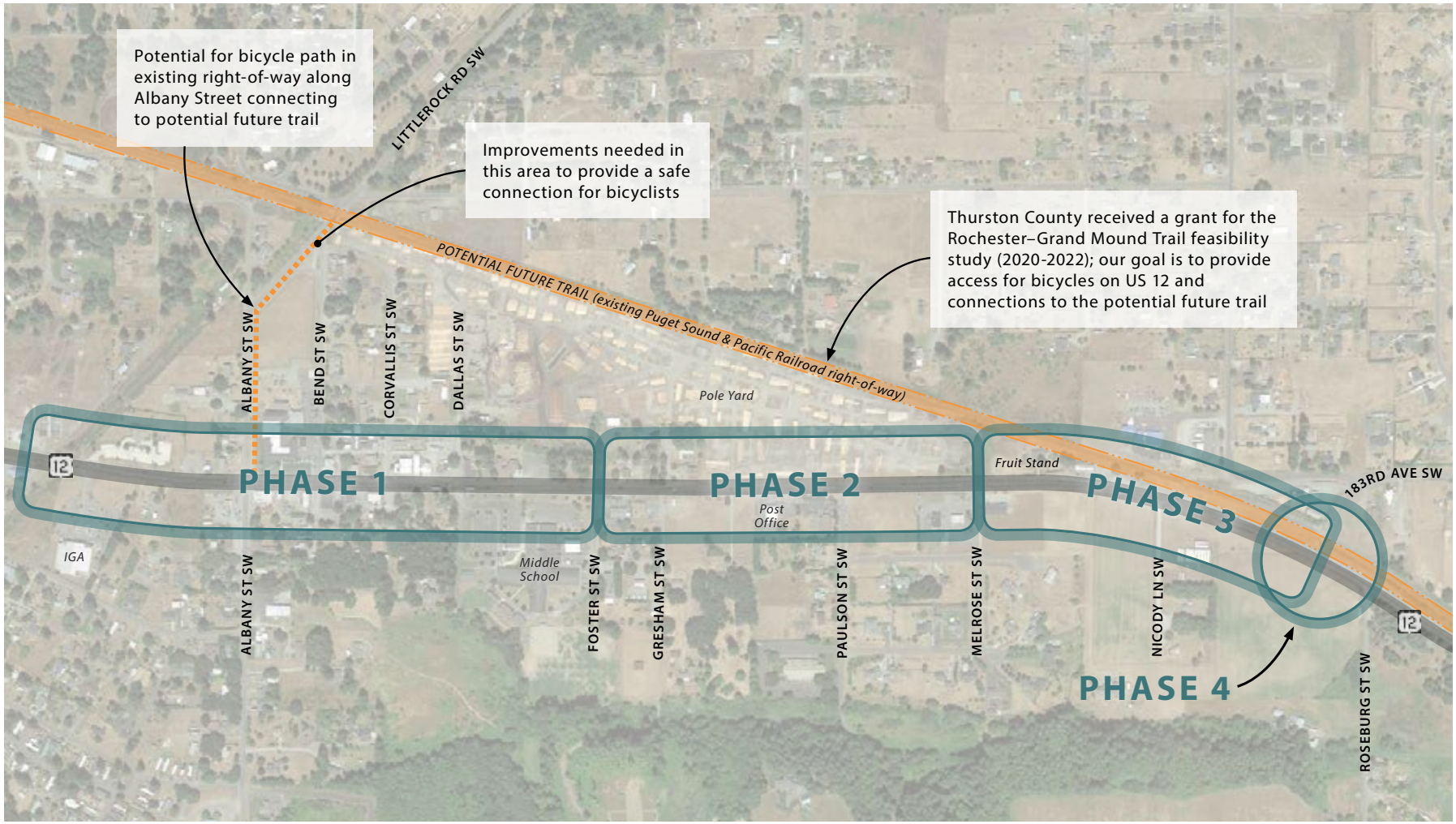
The Main Street Rochester project is located on US 12 in Rochester. The corridor is classified as a National Highway of Statewide Significance (NHSS) and WSDOT's functional classification is an urban-principal arterial. This area is served by Grays Harbor Transit (Route 45) and TRPC's Rural Transit (Route 3) but there are no marked bus stop locations. There is level terrain throughout the project area. The IGA supermarket is the project's western terminus, and the intersection at 183rd Avenue SW is the eastern terminus. The map on page 3 illustrates the project area.

PROJECT PHASING

The Main Street Rochester project is broken up into the following phases:

- Phase 1 – Corridor Improvements, US 12
  from IGA Supermarket (MP 41.74) to Foster Street SW (MP 42.19)
- Phase 2 – Corridor Improvements, US 12
  from Foster Street SW (MP 42.19) to Melrose Street SW (MP 42.53)
- Phase 3 – Corridor Improvements, US 12
  from Melrose Street SW (MP 42.53) to 183rd Avenue SW (MP 42.85)
- Phase 4 – US 12 and 183rd Avenue SW intersection
  from MP 42.80 to MP 42.90

» *Project Area*

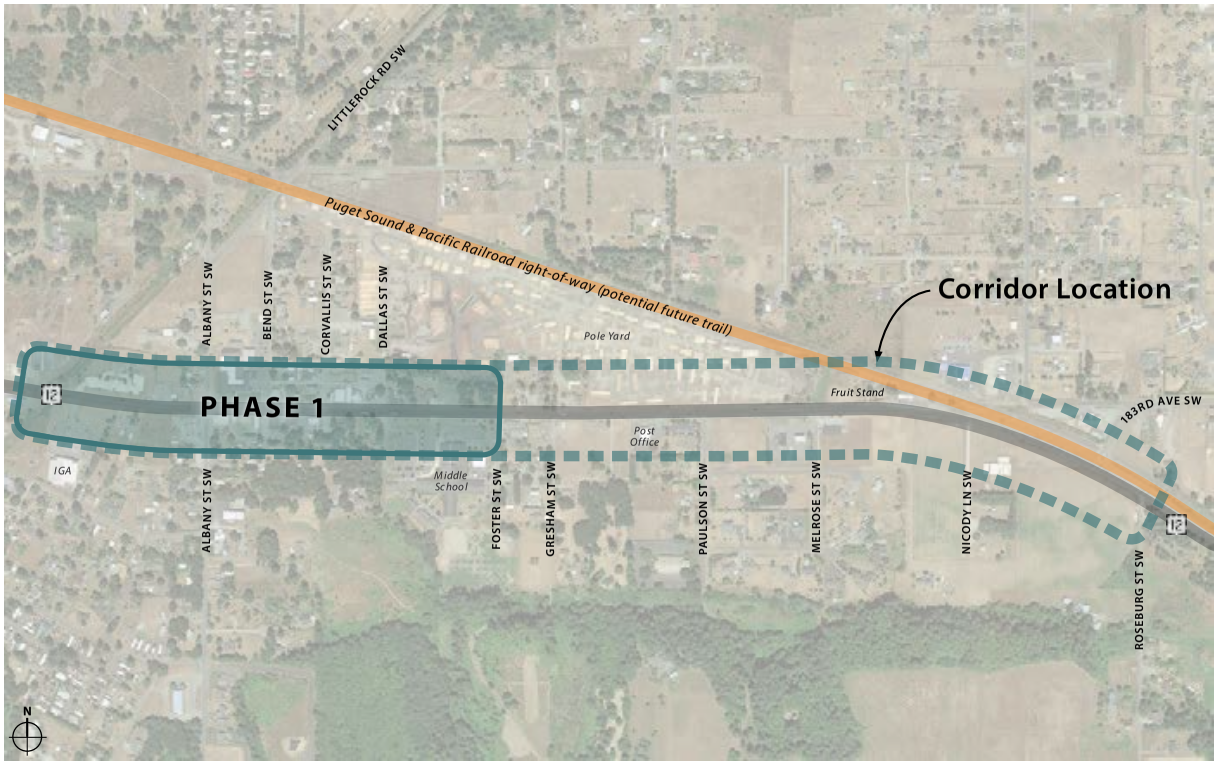


This page intentionally left blank.

US 12 Corridor Improvements – Phase 1

PHASE LIMITS

US 12 from IGA Supermarket (MP 41.74) to Foster Street SW (MP 42.19):



PHASE DESCRIPTION

In Rochester, US 12 acts as both a regional highway and the main street of town. In 2017, this segment of US 12 had an average daily traffic of 14,900 vehicles with truck traffic making up 10 percent of the total. The posted speed limit in this segment is 30 mph.

Currently, there are two vehicle lanes, one in each direction, and sporadic sidewalk connecting the offices and businesses that front the highway. There is one signalized intersection in this segment, at Albany Street SW, with marked crosswalks at three of the intersection's four legs. Additionally, three crosswalks are marked across US 12 at the unsignalized intersections of Bend Street SW, Dallas Street SW, and Foster Street SW (Rochester Middle School). A number of buildings and commercial parking areas currently encroach on the public right-of-way.

The proposed design will improve access and safety for pedestrians and bicycles by providing a wide, continuous sidewalk through the project area. Uncontrolled, marked crossings will be enhanced with Rapid Rectangular Flashing Beacons (RRFBs) and sidewalks will be extended at crossing locations to reduce crossing distances and improve pedestrian visibility. Bus stop improvements at Bend Street SW will increase transit rider security and elevate awareness of the existing transit service. The center turn lane throughout the project area will improve traffic flow and safety by reducing conflicts between vehicles. The design will preserve existing buildings, include parallel parking, and maintain access to existing businesses. At the IGA, the traffic-calming island and potential for a gateway treatment will help to enforce the speed limit reduction through town and convey to drivers the change in character from a regional highway to the main street of Rochester. Streetscaping elements and pedestrian-level lighting will also help to create a clearer sense-of-place and enhance the pedestrian experience.

PHASE ELEMENTS

- Two-way center turn lane
- 11-ft travel lanes, one in each direction
- Parallel parking where space allows
- Bicycle-friendly, wide sidewalk (minimum 10-feet) on south side of street
- Standard sidewalk (6-ft minimum) on north side of street
- Street trees, maintained by property owners if amenable, where appropriate
- Street lighting improvements, including pedestrian-scale lighting
- ADA accessible crossings with high-visibility crosswalk markings, sidewalk bulb-outs, and pedestrian activated flashing beacons

- Pedestrian refuge island at Foster Street SW crosswalk
- Traffic calming median island at IGA with potential for gateway treatment
- Bus stop improvements with shelters and signage

PRELIMINARY COST ESTIMATE

The quantities in the cost estimate were developed using SCJ's conceptual design and the survey provided by WSDOT via email in September 2018. The estimated construction cost assumes the following:

- Paving costs are based on widening the new pavement to the proposed curb, gutter, and sidewalk. Existing pavement is in good condition per the WSDOT Pavement Condition GIS database. SCJ's conceptual design and the cost estimate maintain the existing pavement as much as possible to minimize project cost.
- Decorative street light fixtures with pedestrian-scale arm are used for the existing commercial district. The remaining locations are lit using WSDOT standard LED cobra heads.
- Existing utility poles will be relocated, not undergrounded.
- The contingency includes, but is not limited to, such items as traffic control, removal of specific items, earthwork quantities, utility adjustments, traffic marking, etc.
- The estimated construction cost serves as the basis for estimated costs related to design engineering (15%), construction management (10%), and contingency (30%).

Detailed cost estimates are provided as Appendix A.

» *Phase 1 – Preliminary Cost Estimate*

Construction Total	$1,583,000
Design Engineering (15%)	$237,500
Construction Management (10%)	$158,500
Contingency/Misc. (30%)	$475,000
PHASE 1 GRAND TOTAL	**$2,454,000**

DESIGN CONSIDERATIONS

- The cost estimate assumes a bioretention stormwater facility that would combine treatment and flow control functionality. A bioretention pond can be planted with grasses which would require mowing and other minimal maintenance. The estimate does not include the right-of-way that would be required to site the pond. As an alternative to a pond, bioretention could be accommodated within the right-of-way along the roadway in sidewalk landscaping areas as long as minimum sidewalk widths are maintained.
- WSDOT will not maintain any street trees or landscaped areas. The County or another entity will be required to maintain any plantings.
- The median island located at IGA presents an opportunity to design and install a vertical gateway feature. An alternative would be to plant trees in the median island and install the gateway feature on the south side of US 12, potentially requiring additional right-of-way or an easement.
- Power utilities will need to be relocated, and potentially undergrounded, as a part of this project.

CONCEPTUAL DESIGN

» *Phase 1 – US 12 Cross-section*

» *Phase 1 – Plan View*

** Existing encroachment as determined by WSDOT survey taken in September 2018*

» *West Gateway Perspective, Alternative 1*

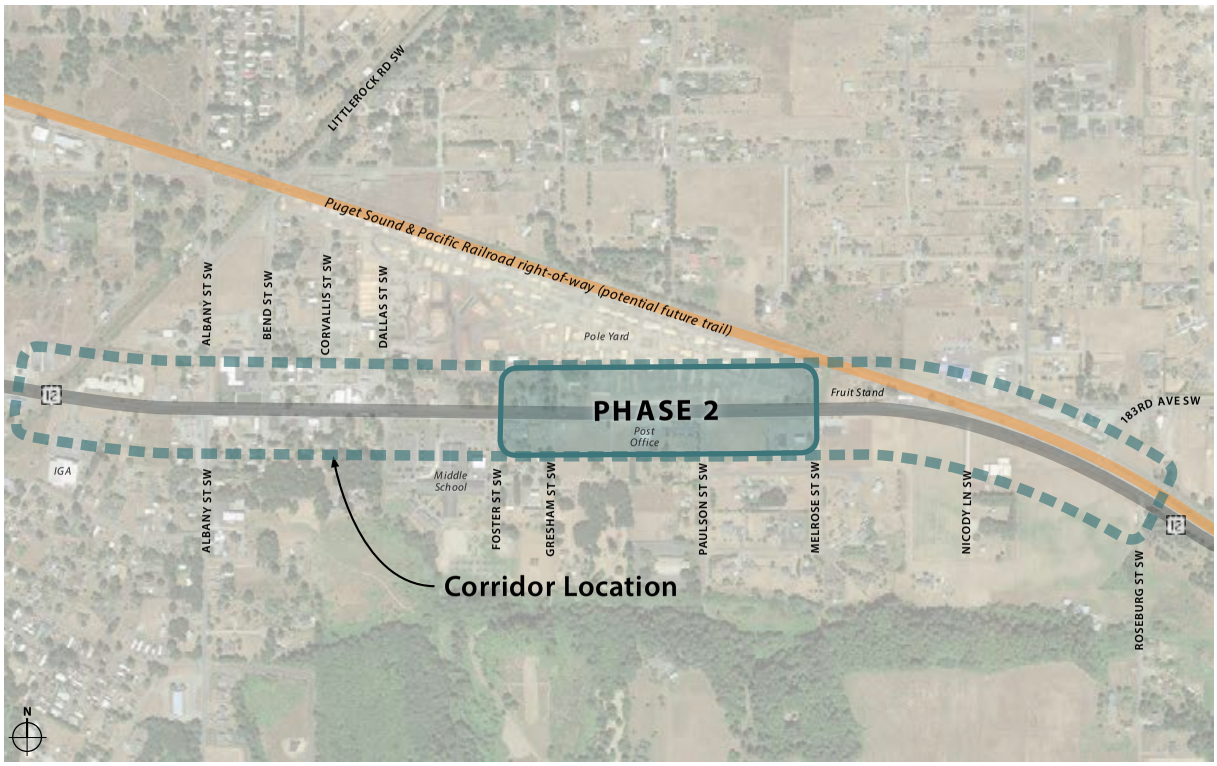
» *West Gateway Perspective, Alternative 2*

» *US 12 at Bend Street Perspective*

US 12 Corridor Improvements – Phase 2

PHASE LIMITS

US 12 from Foster Street SW (MP 42.19) to Melrose Street SW (MP 42.53):



PHASE DESCRIPTION

In 2017, this segment of US 12 had an average daily traffic of 15,000 vehicles with truck traffic making up 10 percent of the total. The posted speed limit is 30 mph between Foster Street SW and Paulson Street SW and 45 mph between Paulson Street SW and Melrose Street SW.

There is currently one travel lane in each direction with a paved shoulder of varying width on either side of US 12. A westbound left-turn lane and eastbound right-turn lane are provided at Melrose Street SW.

Many of the existing uses located to the east of Rochester Middle School, with the exception of Subway, generate limited pedestrian and bicycle activity. This is especially true for the pole yard located on the north side of US 12 throughout this segment. However, the area is zoned as Rural Commercial and has the potential for further development and/or redevelopment which may increase non-motorized activity.

The proposed design will provide a continuous sidewalk, ADA accessible crossings, and improved street lighting which will allow pedestrians to safely access businesses and residences in this segment of US 12. The center turn lane throughout the project area will improve traffic flow, support commercial access, and reduce conflicts between vehicles. The design will maintain the eastbound right-turn lane at Melrose Street SW. The raised sidewalk and narrower travel lanes will help to reduce speeding and reinforce the 30 mph speed limit.

PHASE ELEMENTS

- Two-way center turn lane
- 11-ft travel lanes, one in each direction
- Sidewalks (minimum 8-ft) on both sides
- ADA accessible crossings with high-visibility crosswalk markings on cross-streets
- Street lighting improvements

PRELIMINARY COST ESTIMATE

The quantities in the cost estimate were developed using SCJ's conceptual design and the survey provided by WSDOT via email in September 2018. The estimated construction cost assumes the following:

- Paving costs are based on widening the new pavement to the proposed curb, gutter, and sidewalk. Existing pavement is in good condition per the WSDOT Pavement Condition GIS database. SCJ's conceptual design and the cost estimate maintain the existing pavement as much as possible to minimize project cost.
- Illumination is WSDOT standard LED cobra heads.
- Existing utility poles will be relocated, not undergrounded.
- The property value of required right-of-way is estimated to be $3 per square foot based on recent Administrative Offer Summary (AOS) conducted by the County in the Rochester area. The property value estimate is inflated by 40 percent to account for services and fees related to acquisition.
- The contingency includes, but is not limited to, such items as traffic control, removal of specific items, earthwork quantities, utility adjustments, traffic marking, etc.
- The estimated construction cost serves as the basis for estimated costs related to design engineering (15%), construction management (10%), and contingency (30%).

Detailed cost estimates are provided as Appendix A.

» *Phase 2 – Preliminary Cost Estimate*

Construction Total	$861,000
Design Engineering (15%)	$129,000
Construction Management (10%)	$86,000
Contingency/Misc. (30%)	$258,500
Right-of-Way Acquisition	$30,000
PHASE 2 GRAND TOTAL	**$1,364,500**

DESIGN CONSIDERATIONS

- The cost estimate assumes a bioretention stormwater facility that would combine treatment and flow control functionality. A bioretention pond can be planted with grasses which would require mowing and other minimal maintenance. The estimate does not include the right-of-way that would be required to site the pond. As an alternative to a pond, bioretention could be accommodated within the right-of-way along the highway in a landscaping strip or ditch.
- With the exception of Subway, the adjacent land use in this project phase does not currently generate a large volume of non-motorized trips, especially the pole yard on the north side of US 12. Therefore, sidewalk on the north side of the project area may only be necessary if or when redevelopment occurs.
- As development occurs, the need for additional crosswalks with pedestrian activated flashing beacons may be required at specific locations depending on the type of businesses.
- The proposed design would require approximately 981 square feet of right-of-way acquisition.

CONCEPTUAL DESIGN

» *Phase 2 – US 12 Cross-section*

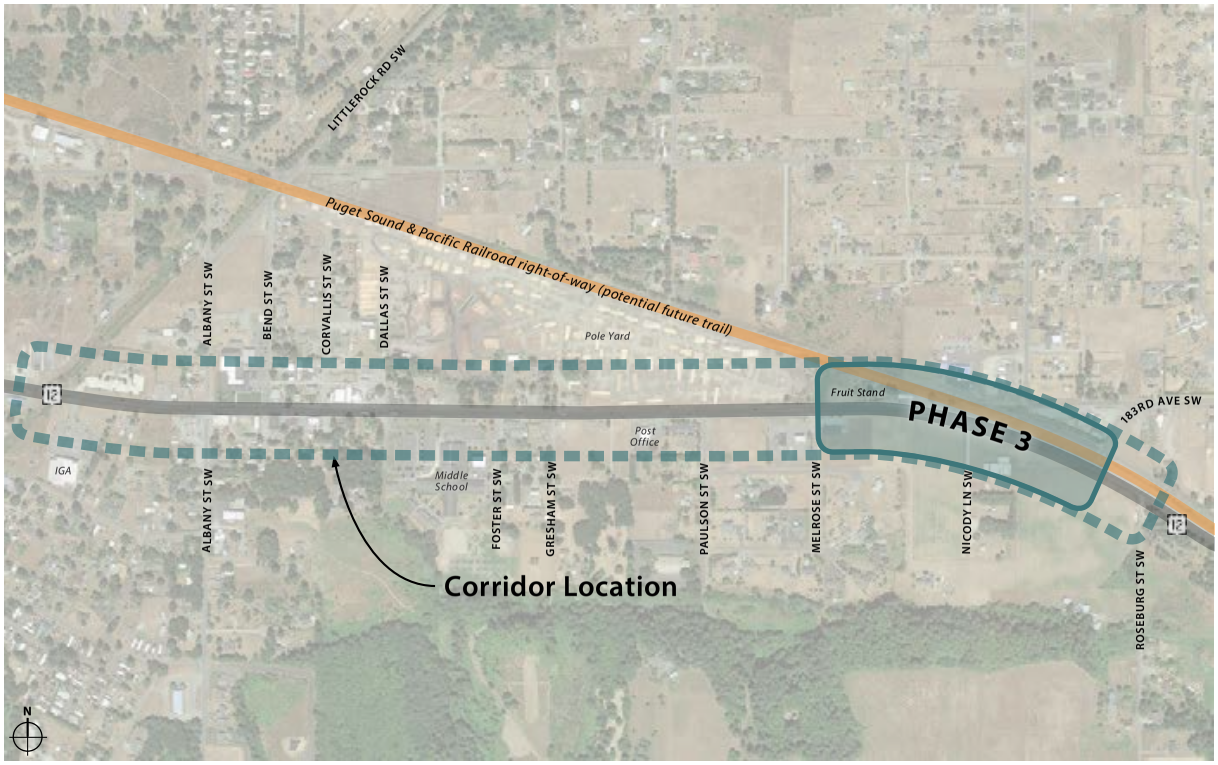
» *Phase 2 – Plan View*

» *US 12 at Foster Street Perspective*

US 12 Corridor Improvements – Phase 3

PHASE LIMITS

US 12 from Melrose Street SW (MP 42.53) to 183rd Avenue SW (MP 42.85):



PHASE DESCRIPTION

In 2017, this segment of US 12 had an average daily traffic of 15,000 vehicles with truck traffic making up 10 percent of the total. The posted speed limit is 45 mph.

The only existing commercial properties in this segment are the Rochester Fruit Stand on the north side of US 12 and a furniture/antiques store on the south side of US 12. However, the area is zoned as Rural Commercial and has the potential for further development and/or redevelopment. There is currently one travel lane in each direction with a paved shoulder of varying width on either side of US 12. An eastbound left-turn lane and westbound right-turn lane are provided at 183rd Avenue SW.

The proposed design will provide a continuous sidewalk, ADA accessible crossings, and improved street lighting which will allow pedestrians to safely access businesses and residences in this segment of US 12. The center turn lane throughout the project area will improve traffic flow, support commercial access, and reduce conflicts between vehicles. The raised sidewalk, narrower travel lanes and center median near the Rochester Fruit Stand will help to reduce speeding and calm traffic entering the community.

PHASE ELEMENTS

- Two-way center turn lane
- 11-ft travel lanes, one in each direction
- Sidewalks (minimum 8-ft) on both sides of US 12
- ADA accessible crossing with high-visibility crosswalk markings on cross-streets
- Traffic calming median island at the Rochester Fruit Stand with potential for gateway treatment
- Street lighting improvements

PRELIMINARY COST ESTIMATE

The quantities in the cost estimate were developed using SCJ's conceptual design and the survey provided by WSDOT via email in September 2018. The estimated construction cost assumes the following:

- Paving costs are based on widening the new pavement to the proposed curb, gutter, and sidewalk. Existing pavement is in good condition per the WSDOT Pavement Condition GIS database. SCJ's conceptual design and the cost estimate maintain the existing pavement as much as possible to minimize project cost.
- Illumination is WSDOT standard LED cobra heads.
- Existing utility poles will be relocated, not undergrounded.
- The contingency includes, but is not limited to, such items as traffic control, removal of specific items, earthwork quantities, utility adjustments, traffic marking, etc.
- The estimated construction cost serves as the basis for estimated costs related to design engineering (15%), construction management (10%), and contingency (30%).

Detailed cost estimates are provided as Appendix A.

» *Phase 3 – Preliminary Cost Estimate*

Construction Total	$644,500
Design Engineering (15%)	$96,500
Construction Management (10%)	$64,500
Contingency/Misc. (30%)	$193,500
PHASE 3 GRAND TOTAL	**$999,000**

DESIGN CONSIDERATIONS

- The cost estimate assumes a bioretention stormwater facility that would combine treatment and flow control functionality. A bioretention pond can be planted with grasses which would require mowing and other minimal maintenance. The estimate does not include the right-of-way that would be required to site the pond. As an alternative to a pond, bioretention could be accommodated within the right-of-way along the highway in a landscaping strip or ditch.
- The median island located at the Rochester Fruit Stand presents an opportunity to design and install a vertical gateway feature. An alternative would be to plant trees in the median island and install the gateway feature on the north side of US 12, potentially requiring additional right-of-way or an easement.
- WSDOT will not maintain any street trees or landscaped areas. The County or another entity will be required to maintain any plantings.

CONCEPTUAL DESIGN

» *Phase 3 – US 12 Cross-section*

» *Phase 3 – Plan View*

» *East Gateway Perspective, Alternative 1*

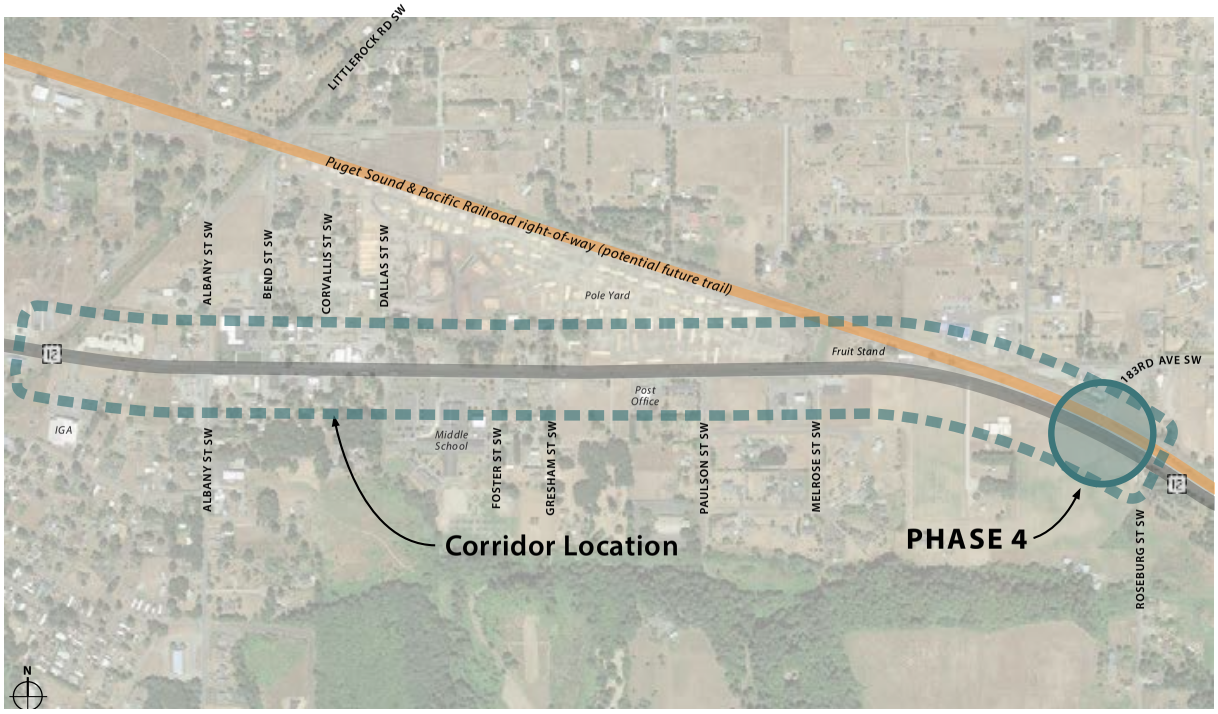
» *East Gateway Perspective, Alternative 2*

This page intentionally left blank.

US 12 and 183rd Avenue SW Intersection – Phase 4

PHASE LIMITS

US 12 and 183rd Avenue SW (MP 42.80 to MP 42.90):



PHASE DESCRIPTION

The intersection of US 12 and 183rd Avenue SW is currently a three-leg intersection with minor-leg stop controlled intersection. An at-grade rail crossing is located on the minor leg (183rd Avenue SW) approximately 40-ft from the intersection. Traffic on US 12 makes left-turns from 183rd Avenue SW difficult during peak periods and the proximity of the rail crossing adds another element of complexity to the intersection.

If existing volumes warrant further control at this intersection, WSDOT's Intersection Control Evaluation (ICE) would determine the most appropriate type of intersection control. In most cases, WSDOT prefers single-lane roundabouts which have fewer conflict points than signalized intersections and are proven to reduce the frequency of serious injuries and fatalities. However, due to the proximity of the at-grade railroad crossing, traffic would back-up into the single lane roundabout and block all movements for the duration of the train crossing event.

Therefore, the proposed solution is a roundabout that would include a bypass lane for US 12 traffic, which would keep thru traffic moving during a rail crossing event. Variable message boards would be used to alert westbound right-turning vehicles and eastbound left-turning vehicles to stop and wait in the storage lanes, keeping them from crossing the tracks until the train has cleared the intersection. Vehicles traveling straight on US 12 would not be held during a train crossing event. Each approach would have ADA accessible crossings with high-visibility crosswalks and Rectangular Rapid Flashing Beacons (RRFBs) on all three approaches.

PHASE ELEMENTS

- Single-lane roundabout with a bypass lane for US 12 traffic
- Railroad crossing gates on 183rd Avenue SW approaching roundabout
- Variable message boards on US 12 storage lanes
- Standard sidewalks (6-ft)
- ADA accessible crossings with high-visibility crosswalk markings and pedestrian activated flashing beacons

PRELIMINARY COST ESTIMATE

The quantities in the cost estimate were developed using SCJ's conceptual design and the survey provided by WSDOT via email in September 2018. The estimated construction cost assumes the following:

- Estimated cost of a three-leg roundabout is based on similar size roundabouts that SCJ has estimated.
- Additional pavement required for storage lanes on US 12 approaches to match existing storage lane lengths.
- The property value of required right-of-way is estimated to be $3 per square foot based on recent Administrative Offer Summary (AOS) conducted by the County in the Rochester area. The property value estimate is inflated by 40 percent to account for services and fees related to acquisition.
- The cost of two railroad gates and two variable messaging signs are based on recent SCJ project information.
- The contingency includes, but is not limited to, such items as traffic control, removal of specific items, earthwork quantities, utility adjustments, traffic marking, etc.
- The estimated construction cost serves as the basis for estimated costs related to design engineering (15%), construction management (10%), and contingency (30%).

Detailed cost estimates are provided as Appendix A.

» *Phase 4 – Preliminary Cost Estimate*

Construction Total	$1,625,000
Design Engineering (15%)	$243,750
Construction Management (10%)	$162,500
Contingency/Misc. (30%)	$487,500
Right-of-Way Acquisition	$150,000
PHASE 4 GRAND TOTAL	**$2,668,750**

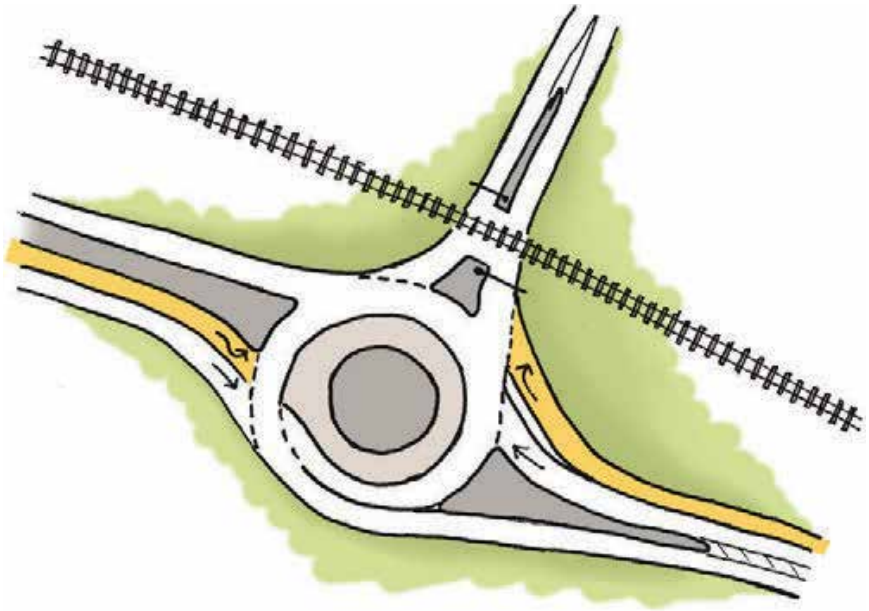
DESIGN CONSIDERATIONS

- The Intersection Control Evaluation (ICE) may reveal a different intersection control design is preferred over the solution proposed in this plan.
- The ICE may also consider the realignment of Roseburg Street SW as a part of this intersection improvement.
- WSDOT will not maintain any street trees or landscaped areas. The County or another entity will be required to maintain any plantings.
- Acquisition of approximately 35,161 square feet of right-of-way would be required to construct a roundabout at this location.
- The design of the storage lane and variable message signage would require special attention.

CONCEPTUAL DESIGN

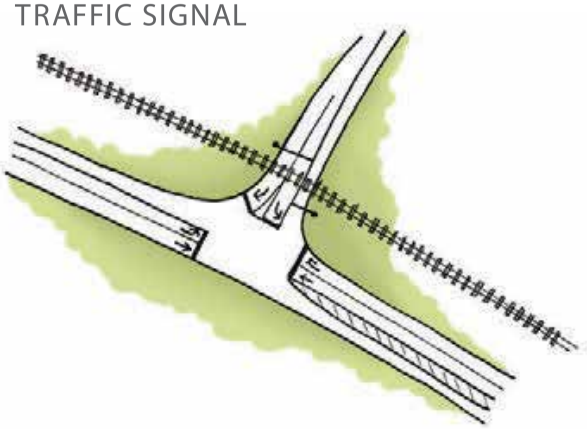
» *Proposed Solution*

ROUNDABOUT WITH BYPASS LANE AND SIGNALIZED STORAGE LANES

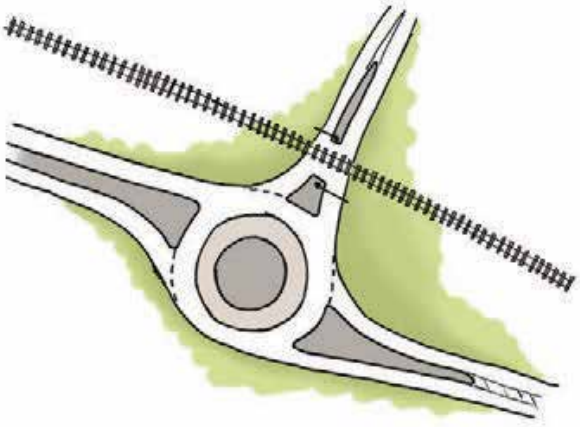


» *Alternative Solutions*

TRAFFIC SIGNAL



SINGLE-LANE ROUNDABOUT



This page intentionally left blank.

Potential Funding Sources

The following is a list of potential grant funding sources that are available for the projects identified in this plan, categorized by the administering agency.

WASHINGTON STATE DEPARTMENT OF COMMERCE

The state legislature created the Public Works Board, under the Department of Commerce, to assist local governments in addressing local infrastructure needs.

Pre-Construction and Construction Loan Programs

The Public Works Board is authorized to loan money to counties, cities, and special purpose districts to repair, replace, or create infrastructure, including roads and streets. The Pre-Construction Loan Program can be applied to design engineering, bid-document preparation, environmental studies, right-of-way acquisition, value planning, permits, cultural and historic resources, and public notification. The Construction Loan Program focuses on the activities that repair, replace, or create a facility and can be used for any combination of pre-construction and construction elements. Thurston County is eligible for either of these programs.

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT)

The following is a summary of federal funding programs that WSDOT administers and allocates directly to local agencies.

Safe Routes to School (SRTS) Program

The purpose of the SRTS program is to improve safety and mobility for children by enabling and encouraging them to walk or bike to school. Projects must be located within two-miles of primary, middle, and high schools to be eligible to apply. While all of the projects identified in this plan are close enough to Rochester Middle School to qualify for SRTS funding, the US 12 Corridor Improvements – Phase 1 represents the best fit for this funding source. The SRTS program is administered by WSDOT through a competitive application process. There is no local match

requirement. Projects have already been selected for the 2019–2021 biennium. The next call for projects is expected in early 2020.

Pedestrian and Bicycle Program

The Pedestrian and Bicycle Program objective is to make improvements to the transportation system that enhance safety and mobility for people who choose to walk or bike. The program funds two types of projects: construction projects that may include preliminary engineering and design-only projects. Projects proposed in this plan would fall into the construction project category. The Pedestrian and Bicycle Program is administered by WSDOT through a competitive application process. There is no local match requirement. Projects have already been selected for the 2019–2021 biennium. The next call for projects is expected in early 2020.

Highway Safety Improvement Program (HSIP)

The HSIP is a federal program administered by WSDOT that allows states and local governments to target safety. It provides funding for projects that aim to reduce serious traffic injuries and deaths, consistent with Washington's Strategic Highway Safety Plan (Target Zero) and local road safety plans. HSIP funds are split between local agency and state programs based on the priority one areas as identified in Target Zero which are currently lane departure crashes and intersection crashes. Under the HSIP, WSDOT administers the following three programs: County Safety, City Safety, and Railway-Highway Crossing.

The County Safety program provides funding for design, right-of-way acquisition, and construction phases of eligible projects. Eligible projects include corridor or intersection improvements that use engineering countermeasures to reduce fatal and serious injury crashes, such as the construction of roundabouts, that have been identified in the local road safety plan. The call for projects period is open from January to May of odd numbered years.

TRANSPORTATION IMPROVEMENT BOARD (TIB)

TIB administers a number of grant funding programs that serve large and small cities. However, counties and unincorporated communities, such as Rochester, are not eligible for a majority of these funding opportunities. The Complete Streets Award described below is a relatively new program that is available to Thurston County.

Complete Streets Award

The Complete Streets Award is flexible money given to any city or county in Washington state that has an adopted complete streets ordinance and shows an ethic of planning and building streets that use context sensitive solutions to accommodate all users, including pedestrians, transit

users, cyclists, and motorists. Eligible agencies may be nominated by a number of approved state agency partners and non-profit organizations. Thurston County is not listed with TIB as an eligible agency. To become eligible, the county has to adopt a complete streets ordinance or contact the TIB engineer for Thurston County, Jason Phelps, to determine eligibility. Award amounts range between $100,000 and $1,000,000. The US 12 Corridor Improvements – Phase 3 project cost is estimated to be below the $1 million threshold but all other projects would require a match or additional funding source. The next call for nominations is expected to open in the summer of 2020.

THURSTON REGIONAL PLANNING COUNCIL (TRPC)

Thurston Regional Planning Council (TRPC) administers the allocation of the following Federal Highways Administration (FHWA) formula grant programs which are authorized under the Funding America's Surface Transportation Act (FAST Act). The following are two programs that are available for Main Street Rochester projects. For both of these grants, a minimum non-federal match of 13.5% is required. Funding has been awarded for the 2020–2022 biennium and there is no call for projects scheduled at this time.

Surface Transportation Block Grant Program (STBG)

The Surface Transportation Block Grant Program (STBG) is the most flexible of the highway programs, providing funds to local agencies for almost any transportation related planning, design, or construction project. Based on a population-driven formula, WSDOT allocates funds to Metropolitan Planning Organizations (MPOs) and County Lead Agencies for prioritizing and selecting projects that align with their regional priorities. The current regional funding priorities for TRPC are safety, preservation, and efficiency of the multi-modal transportation system. The current effort, Main Street Rochester Study, which produced this project plan was funded using STBG funds.

Transportation Alternatives Set-Aside (STBG-TA)

TRPC administers the allocation of this funding program which is a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives (TA). STBG-TA funds can be used for a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity. Historically, TRPC has made STBG-TA awards for bicycle and pedestrian projects and programs. Project applicants are limited to one application for the SGTB-TA program but there is no limitation on how much a single grant application may request.

SCJ ALLIANCE
CONSULTING SERVICES

January 23, 2019

0670.02 THURSTON REGIONAL PLANNING COUNCIL - MAIN STREET ROCHESTER
ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
PHASE 1

ITEM #	STD ITEM	DESCRIPTION	UNIT	UNIT PRICE	TOTAL QTY.	SUBTOTAL
		PREPARATION				
1	0001	MOBILIZATION	L.S.	$130,000	1	$130,000
		PREPARATION				
2	0120	REMOVING ASPHALT CONC. PAVEMENT	S.Y.	$15	3,329	$49,930
		DRAINAGE				
3	SPEC	STORMWATER MITIGATION	L.S.	$57,000	1	$57,000
		SURFACING				
4	5120	CRUSHED SURFACING TOP COURSE	TON	$30	2,933	$88,002
		HOT MIX ASPHALT				
5	5767	HMA CL. 1/2 IN. PG 64-22	TON	$150	924	$138,668
		EROSION CONTROL AND ROADSIDE PLANTING				
6	6488	EROSION CONTROL AND WATER POLLUTION PREVENTION	L.S.	$10,000	1	$10,000
		TRAFFIC				
7	6700	CEMENT CONC. CURB AND GUTTER	L.F.	$25	5,990	$149,750
8	6890	PERMANENT SIGNING	L.S.	$5,000	1	$5,000
9	SPEC	RRFB PED ACTIVATED CROSSWALK SIGN	EACH	$30,000	3	$90,000
10	SPEC	SIGNAL SYSTEM UPGRADE	EACH	$20,000	1	$20,000
11	6904	ILLUMINATION SYSTEM	EACH	$10,000	36	$360,000
		OTHER ITEMS				
12	7055	CEMENT CONC. SIDEWALK	S.Y.	$60	7,348	$440,879
13	SPEC	TREE	EACH	$500	8	$4,000
14	SPEC	UTILITY POLE RELOCATION:	EACH	$4,000	10	$40,000

ASSUMPTIONS

- HMA depth of 4 inches
- Base course depth of 8 inches
- 2 inches per hour infiltration rate based on Web Soil Survey
- Stormwater applies to new surface only (HMA and Sidewalk)
- Sidewalk base depth of 2 inch is used
- 30% contingency used for all phases, includes temporary traffic control
- Storm pond and Bioretention costs were determined but ultimately all phases went with a Bioretention cost
- Utility poles based on WSDOT survey information.
- Mobilization estimated at 8% of total construction cost and rounded up to nearest $5,000

CONSTRUCTION TOTAL	$1,583,229
DESIGN ENGINEERING (15%)	$237,490
CONSTRUCTION MANAGEMENT (10%)	$158,330
CONTINGENCY/MISC. (30%)	$474,969
PHASE 1 GRAND TOTAL	**$2,454,018**

SCJ ALLIANCE
CONSULTING SERVICES

January 23, 2019

0670.02 THURSTON REGIONAL PLANNING COUNCIL - MAIN STREET ROCHESTER
ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
PHASE 2

ITEM #	STD ITEM	DESCRIPTION	UNIT	UNIT PRICE	TOTAL QTY.	SUBTOTAL
		PREPARATION				
1	0001	MOBILIZATION	L.S.	$70,000	1	$70,000
		PREPARATION				
2	0120	REMOVING ASPHALT CONC. PAVEMENT	S.Y.	$15	2,733	$40,995
		DRAINAGE				
3	SPEC	STORMWATER MITIGATION	L.S.	$44,000	1	$44,000
		SURFACING				
4	5120	CRUSHED SURFACING TOP COURSE	TON	$30	1,779	$53,361
		HOT MIX ASPHALT				
5	5767	HMA CL. 1/2 IN. PG 64-22	TON	$150	600	$89,948
		EROSION CONTROL AND ROADSIDE PLANTING				
6	6488	EROSION CONTROL AND WATER POLLUTION PREVENTION	L.S.	$10,000	1	$10,000
		TRAFFIC				
7	6700	CEMENT CONC. CURB AND GUTTER	L.F.	$25	3,669	$91,725
8	6890	PERMANENT SIGNING	L.S.	$5,000	1	$5,000
9	6904	ILLUMINATION SYSTEM	EACH	$10,000	19	$190,000
		OTHER ITEMS				
10	7055	CEMENT CONC. SIDEWALK	S.Y.	$60	3,698	$221,896
11	SPEC	TREE	EACH	$500	0	$0
12	SPEC	UTILITY POLE RELOCATION	EACH	$4,000	11	$44,000

ASSUMPTIONS:

- HMA depth of 4 inches
- Base course depth of 8 inches
- 2 inches per hour infiltration rate based on Web Soil Survey
- Stormwater applies to new surface only (HMA and Sidewalk)
- Sidewalk base depth of 2 inch is used
- 30% contingency used for all phases, includes temporary traffic control
- Storm pond and Bioretention costs were determined but ultimately all phases went with a Bioretention cost
- Utility poles based on Google Earth.
- Mobilization estimated at 8% of total construction cost and rounded up to nearest $5,000

CONSTRUCTION TOTAL	$860,925
DESIGN ENGINEERING (15%)	$129,140
CONSTRUCTION MANAGEMENT (10%)	$86,100
CONTINGENCY/MISC. (30%)	$258,278
RIGHT-OF-WAY ACQUISITION	$30,000
PHASE 2 GRAND TOTAL	**$1,364,443**

SCJ ALLIANCE
CONSULTING SERVICES

January 23, 2019

0670.02 THURSTON REGIONAL PLANNING COUNCIL - MAIN STREET ROCHESTER
ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
PHASE 3

ITEM #	STD ITEM	DESCRIPTION	UNIT	UNIT PRICE	TOTAL QTY.	SUBTOTAL
		PREPARATION				
1	0001	MOBILIZATION	L.S.	$55,000	1	$55,000
		PREPARATION				
2	0120	REMOVING ASPHALT CONC. PAVEMENT	S.Y.	$15	1,691	$25,367
		DRAINAGE				
3	SPEC	STORMWATER MITIGATION	L.S.	$43,000	1	$43,000
		SURFACING				
4	5120	CRUSHED SURFACING TOP COURSE	TON	$30	1,365	$40,939
		HOT MIX ASPHALT				
5	5767	HMA CL. 1/2 IN. PG 64-22	TON	$150	396	$59,364
		EROSION CONTROL AND ROADSIDE PLANTING				
6	6488	EROSION CONTROL AND WATER POLLUTION PREVENTION	L.S.	$10,000	1	$10,000
		TRAFFIC				
7	6700	CEMENT CONC. CURB AND GUTTER	L.F.	$25	4,629	$115,725
8	6890	PERMANENT SIGNING	L.S.	$5,000	1	$5,000
9	6904	ILLUMINATION SYSTEM	EACH	$10,000	0	$0
		OTHER ITEMS				
10	7055	CEMENT CONC. SIDEWALK	S.Y.	$60	4,083	$244,958
11	SPEC	TREE	EACH	$500	2	$1,000
12	SPEC	UTILITY POLE RELOCATION	EACH	$4,000	11	$44,000

ASSUMPTIONS:

- HMA depth of 4 inches
- Base course depth of 8 inches
- 2 inches per hour infiltration rate based on Web Soil Survey
- Stormwater applies to new surface only (HMA and Sidewalk)
- Sidewalk base depth of 2 inch is used
- 30% contingency used for all phases, includes temporary traffic control
- Storm pond and Bioretention costs were determined but ultimately all phases went with a Bioretention cost
- Utility poles based on Google Earth.
- Mobilization estimated at 8% of total construction cost and rounded up to nearest $5,000

CONSTRUCTION TOTAL	$644,353
DESIGN ENGINEERING (15%)	$96,660
CONSTRUCTION MANAGEMENT (10%)	$64,440
CONTINGENCY/MISC. (30%)	$193,306
PHASE 3 GRAND TOTAL	**$998,759**

SCJ ALLIANCE
CONSULTING SERVICES

January 23, 2019

0670.02 THURSTON REGIONAL PLANNING COUNCIL - MAIN STREET ROCHESTER
ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST
PHASE 4

ITEM #	STD ITEM	DESCRIPTION	UNIT	UNIT PRICE	TOTAL QTY.	SUBTOTAL
		PREPARATION				
1	SPEC	3-LEG ROUNDABOUT (Single-Lane)	L.S.	$900,000	1	$900,000
2	SPEC	VMS SIGNS	L.S.	$375,000	1	$375,000
3	SPEC	RAILROAD GATES	L.S.	$250,000	1	$250,000
4	SPEC	ADDITIONAL QUEUE LANES	L.S.	$100,000	1	$100,000

ASSUMPTIONS:

- HMA depth of 4 inches
- Base course depth of 8 inches
- 2 inches per hour infiltration rate based on Web Soil Survey
- RAB figure is provided by Brad Shea
- Stormwater applies to new surface only (HMA and Sidewalk)
- Sidewalk base depth of 2 inch is used
- 30% contingency used for all phases, includes temporary traffic control
- Storm pond and Bioretention costs were determined but ultimately all phases went with a Bioretention cost
- Mobilization estimated at 8% of total construction cost and rounded up to nearest $5,000

CONSTRUCTION TOTAL	$1,625,000
DESIGN ENGINEERING (15%)	$243,750
CONSTRUCTION MANAGEMENT (10%)	$162,500
CONTINGENCY/MISC. (30%)	$487,500
RIGHT-OF-WAY ACQUISITION	$150,000
PHASE 4 GRAND TOTAL	**$2,668,750**

Paving Estimate Details

PHASE 1	LF	W	SF	SY	DEPTH	CF	CY	TONS	15%	SW 15%
HMA	---	---	35,552	3950.22	0.33	11,732	434.52	803.87	924.45	
BASE	---	---	35,552	3950.22	0.67	23,820	882.22	1808.54	2079.82	
SIDEWALK	---	---	57,506	6389.56	0.17	9,776	362.07	742.25	853.59	7347.989
ASPHALT REM.			29,958	3328.67	---	---	---	---	---	
CURB & GUTTER	5,990	---	---	---	---	---	---	---	---	
PHASE 2	LF	W	SF	SY	DEPTH	CF	CY	TONS	15%	SW 15%
HMA	---	---	23,061	2562.33	0.33	7,610	281.86	521.43	599.65	
BASE	---	---	23,061	2562.33	0.67	15,451	572.25	1173.12	1349.09	
SIDEWALK	---	---	28,943	3215.89	0.17	4,920	182.23	373.58	429.62	3698.272
ASPHALT REM.			24,597	2733.00	---	---	---	---	---	
CURB & GUTTER	3,669	---	---	---	---	---	---	---	---	
PHASE 3	LF	W	SF	SY	DEPTH	CF	CY	TONS	15%	SW 15%
HMA	---	---	15,220	1691.11	0.33	5,023	186.02	344.14	395.76	
BASE	---	---	15,220	1691.11	0.67	10,197	377.68	774.25	890.38	
SIDEWALK	---	---	31,951	3550.11	0.17	5,432	201.17	412.40	474.27	4082.628
ASPHALT REM.			15,220	1691.11	---	---	---	---	---	
CURB & GUTTER	4,629	---	---	---	---	---	---	---	---	
PHASE 4	LF	W	SF	SY	DEPTH	CF	CY	TONS	15%	SW 15%
HMA	---	---	13,000	1444.44	0.33	4,290	158.89	293.94	338.04	
BASE	---	---	13,000	1444.44	0.67	8,710	322.59	661.31	760.51	
SIDEWALK										
ASPHALT REM.										
CURB & GUTTER										

Bioretention Estimate Details

Phase 1

DESCRIPTION	UNIT	UNIT PRICE	TOTAL QTY.	SUBTOTAL
SOIL AMENDED	ACRE	$10,000	0.28	$2,778
EXCAVATION	C.Y.	$15	1,569	$23,528
STORM WATER CONVEYANCE	L.S.	$30,000	1	$30,000
			TOTAL	$56,306

Phase 2

DESCRIPTION	UNIT	UNIT PRICE	TOTAL QTY.	SUBTOTAL
SOIL AMENDED	ACRE	$10,000	0.15	$1,469
EXCAVATION	C.Y.	$15	830	$12,444
STORM WATER CONVEYANCE	L.S.	$30,000	1	$30,000
			TOTAL	$43,914

Phase 3

DESCRIPTION	UNIT	UNIT PRICE	TOTAL QTY.	SUBTOTAL
SOIL AMENDED	ACRE	$10,000	0.13	$1,291
EXCAVATION	C.Y.	$15	729	$10,938
STORM WATER CONVEYANCE	L.S.	$30,000	1	$30,000
			TOTAL	$42,229

PHASE 1		
Length (Top)	110.00	
Width (Top)	110.00	
Total Depth	4.00	
Side Slopes	0	
Liquid Depth (ft)	3.50	
Freeboard (ft)	0.50	
	Length	Width
Pond Dims. @ Liquid Level	110.00	110.00
Pond Dims. @ Bottom	110.00	110.00
	Cubic Yards	Gallons
Pond Liquid Volume	1,568.52	11,733

PHASE 2		
Length (Top)	80.00	
Width (Top)	80.00	
Total Depth	4.00	
Side Slopes	0	
Liquid Depth (ft)	3.50	
Freeboard (ft)	0.50	
	Length	Width
Pond Dims. @ Liquid Level	80.00	80.00
Pond Dims. @ Bottom	80.00	80.00
	Cubic Yards	Gallons
Pond Liquid Volume	829.63	6,206

PHASE 3		
Length (Top)	75.00	
Width (Top)	75.00	
Total Depth	4.00	
Side Slopes	0	
Liquid Depth (ft)	3.50	
Freeboard (ft)	0.50	
	Length	Width
Pond Dims. @ Liquid Level	75.00	75.00
Pond Dims. @ Bottom	75.00	75.00
	Cubic Yards	Gallons
Pond Liquid Volume	729.17	5,454

Phase 2 Right-of-Way Acquistion Estimate

#	Tax ID #	Address	2018 Assessed Parcel Value with multiplier[1,2]	Parcel Area SF	Parcel Value per SF	ROW Acquisition SF	ROW Cost	Acquisition Costs	Negotiation	Title and Escrow	Appraisal	Statutory Evaluation Allowance	Commerical, Rental, Apartment Relocation	Relocation Services Commercial, Rental, Apartment (each unit)	Single Family Unit	Relocation Services Single Family Unit	Cost
1	51600100300	9917 HWY 12 SW	$120,000	14,375	$8	296	$2,471	$7,450	$5,300	$1,300	$0	$850	$0	$0	$0	$0	$9,921
2	70100401700	9925 HWY 12 SW	$110,000	13,068	$8	392	$3,300	$7,450	$5,300	$1,300	$0	$850	$0	$0	$0	$0	$10,750
3	56001500100	18210 DALLAS ST SW	$470,000	922,601	$3	293	$879	$7,450	$5,300	$1,300	$0	$850	$0	$0	$0	$0	$8,329
																Total[3]	$30,000

Phase 4 Right-of-Way Acquistion Estimate

#	Tax ID #	Address	2018 Assessed Parcel Value	Parcel Area	Parcel Value per SF	ROW Acquisition	ROW Cost	Acquisition Costs	Negotiation	Title and Escrow	Appraisal	Statutory Evaluation Allowance	Commerical, Rental, Apartment Relocation	Relocation Services Commercial, Rental, Apartment (each unit)	Single Family Unit	Relocation Services Single Family Unit	Cost
1	13505110700	18306 Nicody Ln SW	$62,800	112,385	$3	9,833	$29,499	$17,850	$7,500	$1,900	$7,600	$850	$0	$0	$0	$0	$47,349
2	13505110500	18320 Nicody Ln SW	$148,600	217,800	$3	25,328	$75,984	$17,850	$7,500	$1,900	$7,600	$850	$0	$0	$0	$0	$93,834
																Total[3]	$150,000

Notes:

1 Strip acquistions multiplier of 2.0 is used
2 Only land value is used for the assessed value
3 Rounded Up ROW Cost to nearest $5k
Set at $3 per square foot property value used based on County AOS study in Rochester