PSRC's 2023 Rural Town Centers & Corridors Program Application

The following application is intended for sponsors that have been recommended by their countywide forum to compete in PSRC's regional competition for its 2023 Rural Town Centers and Corridors program. If selected to compete in the regional competition, an application must be submitted to PSRC using this online form by ***6:00pm on July 28, 2023.***

A resource document has been developed to direct sponsors to resources available to complete the application, and assist in verifying eligibility for these funds.

For information related to the 2023 Rural Town Centers and Corridors program, contact:

Doug Cox, AICP

Puget Sound Regional Council
1011 Western Avenue
Seattle, WA 98104
(206) 971-3050 or DCox@psrc.org

Project Identification and Description

Project Title

Lackey Rd NW / Jackson Lake Rd NW / Key Peninsula Hwy NW

Indicate below whether this project is for a standalone planning project (such as a corridor study or master plan) or a capital project.

Capital Project

Regional Transportation Plan ID#

N/A

The current list of investments that are required to be on the Regional Transportation Plan Regional Capacity Project List and have a designated ID # can be accessed at Appendix G of the Regional Transportation Plan, here. If your project is exempt from this requirement, please enter "N/A." Helpful information on those exempt investments that are considered programmatic in nature, or are on local facilities and therefore not required to be on the Project List, is provided here.

For assistance or questions regarding these issues, contact Mitch Koch at (206) 464-7537 or mkoch@psrc.org.

Lead Agency	**List Applicable Partnership Agencies Involved**
Pierce County	N/A

Does the sponsoring agency have "Certification Acceptance" (CA) status from WSDOT?
More information on certification acceptance and a listing of current CA agencies can be found here.

Yes

If not, which agency will serve as your CA sponsor?

Contact Information

Primary Contact Name	**Alternate Contact Name**
Peter Lewis-Miller	Clint Ritter
Primary Contact Phone	**Alternate Contact Phone**
12537986813	12537982762
Primary Contact Email	**Alternate Contact Email**
peter.lewis-miller@piercecountywa.gov	clint.ritter@piercecountywa.gov

Project Description

Project scope: Please describe clearly and concisely the individual components of the project. What will be the specific outcome of this project? What will be built, purchased or provided with this grant request? For example, if this is part of a larger project, please be specific as to what portion on which the grant funds will be used.

Construct a single lane roundabout with non-mountable center, truck aprons, and raised splitter islands. The work will include chicanes, crosswalks, cement concrete curb, gutter, and sidewalks, rectangular rapid flashing beacons, street lighting, and storm drainage conveyance and treatment.

Project Location

County Location:
Please identify the county(s) in which the project is located. Check all that apply.
Pierce County

Project Location:
For example, please include street, route or trail name, or other identifiable location.
The intersection of Lackey Rd. NW, Jackson Lake Rd NW, and Key Peninsula Highway NW.

Crossroad/landmark nearest to the beginning of the project:
167th Ave. Ct. NW

Crossroad/landmark nearest to the end of the project:
38th St. NW

Federal Functional Classification

Roadways must be approved on the federally classified roadway system before projects on it may use federal transportation funds (this includes proposed new facilities), unless the project meets certain exceptions. Resources to identify a facility's functional classification or exceptions to this requirement is provided here.

Please select the appropriate functional classification.

Minor Arterial

Bicycle and Pedestrian Accommodations

Per US Department of Transportation policy, transportation projects in urbanized areas should include bicycling and walking facilities unless certain conditions are met. For more information on this policy, refer to FHWA's website.

Does the project include bicycle and/or pedestrian features and/or paved shoulders?
Yes

If yes, please check the classifications below that best reflect the scope of the project.
Walkways (pedestrian facilities separate from or part of the roadway), Other (e.g. bike/pedestrian bridge, curb cuts, medians, refuge island, signage)

If no, please explain why the project does not include bicycle and/or pedestrian facilities.

Plan Consistency

All projects must be consistent with a comprehensive plan that has been certified by PSRC as being consistent with the Growth Management Act, VISION 2050 and the Regional Transportation Plan. Projects must be consistent with the comprehensive plan of each jurisdiction in which the project is located. If a comprehensive plan has not been certified, projects located in that jurisdiction may not be included in the Regional TIP. For more information, please refer to PSRC's Plan Review page or contact Liz Underwood-Bultmann at LUnderwood-Bultmann@psrc.org.

Is the project specifically identified in a local comprehensive plan?
Yes

If yes, indicate 1) plan name 2) relevant section 3) page number.
The project is identified as a high priority project in Pierce County's Comprehensive Plan. The chosen configuration has been updated to a roundabout since this listing, but the reason and need for the project remains the same. See p.12-141 of the Transportation Element, project # KP6.

If no, describe how the project is consistent with the applicable local comprehensive plan,

citing specific local policies and provisions the project supports. Please include the actual text of all relevant policies or information on where it can be found, e.g. the policy document name and page number.

Type of Project

Please select your agency's project type.
Capital Project

NOTE: Once a selection is made, you will be taken to a new page to enter additional information based on the category selected.

Capital Project

Local and Regional Policy Support

Please address the following:
Describe how the project will help the rural town center develop in a manner consistent with the adopted policies or comprehensive plans of the respective local jurisdiction(s). Please provide citations and a copy of the appropriate page(s) from the plan or policies with your application.

The project develops appropriate facilities to accommodate planned growth in the Comprehensive Plan, namely, it is a cost-effective intersection improvement that enhances safety and reduces congestion (Goal KP T-1.4.1, p. G-133). Pierce County's traffic report (2017, updated 2022) recommended a roundabout to accomplish these goals. The roundabout will serve as a traffic calming measure, which is especially important for Key Peninsula Highway since it connects the Key Center Rural Activity Center (RAC) and the "Home" Rural Neighborhood Center (RNC). The Comprehensive Plan points out that traffic calming is needed on this corridor due to the presence of parks, schools, and other public facilities (Goal KP T-1.7.1, p. G-134). Traffic improvements at this location in particular "facilitate access to current and proposed public facilities" (Goal KP T-1.4.4, p. G-133) because the intersection is the only access point for traveling to southern Key Peninsula.

Describe how the project fits the intended character of the center or area in which the corridor is located to help better define or provide a clear distinction between rural corridors and rural centers. For instance, does the project include context sensitive design elements that consider preserving the aesthetic, cultural and environmental resources of the subject area?

A new roundabout on the corridor connecting Home RNC to Key Center RAC furthers "a system of nonmotorized facilities to enhance pedestrian, bicycle, and equestrian travel throughout the Key Peninsula area" (Goal KP T-2, p. G-135). The roundabout is also strongly supported by the public, who view it as a particularly appropriate treatment for this location (see public engagement and innovation-related questions below for more discussion).

If the project is interjurisdictional in nature, describe the partners that have been identified and the actions developed to work together and coordinate on project components

Pierce County has sole jurisdiction over the roadways and centers connected by the Key Peninsula HWY rural corridor, however, the project enjoys strong public support and input. Pierce County hosted an online open house in March of 2022 which resulted in more than 300 survey responses and 25+ Facebook comments. Respondents consisted primarily of residents and nearby park/amenity users who expressed that a roundabout was strongly preferred as compared to other options. Community-driven projects like this accomplish Comprehensive Plan goals to remain responsive to local input, especially concerning non-motorized facilities and concerns (Comp. Plan Goal KP T-2.13, p. G-136).

Circulation, Mobility, and Accessibility

Please address the following:
Describe the issue being addressed by the project and the impact it is intended to have on the center(s). Describe how the project will provide better access to the center(s) from adjacent communities or significantly improve circulation within a center by filling a missing link and/or removing barriers to community mobility.

Pierce County places high importance on the Lackey/Jackson/Key Peninsula HWY intersection for several mobility and accessibility reasons:
1. It is situated on Key Peninsula's primary rural highway, midway between Key Center RAC (the largest Rural Activity Center on the peninsula) and Home RNC.
2. It's a choke point for accessing all the southern areas of Key Peninsula. 5,500 residents live south of the project. Emergency responders or evacuating residents must travel through this intersection to traverse the peninsula.
3. It's within 1 mile of schools (Key Peninsula Middle School), parks (Volunteer Park), recreational lakes (Jackson Lake), churches, etc. that are important to the community.
4. The highway is well situated to bolster non-motorized modes of transportation that link these amenities, furthering Comprehensive Plan goals for connectedness (Goals KP T-2, 2.1, & 2.1.1, p. G-135).

Describe whether the project is multimodal in nature and how it will benefit a range of travel modes and user groups either accessing the center(s) or using the corridor

The current intersection is free-flowing on Key Peninsula and stop-controlled on the Lackey Rd NW/Jackson Lake Rd NW approaches. The intersection is situated in the middle of vertical and horizontal curves on Key Peninsula Highway, making visibility a challenge, and the public has a perception that speeding is a distinct problem at this location. Yet, this corridor is intended to be usable by all modes, as evidenced by Comprehensive Plan projects to widen shoulders or provide roadside paths (see projects KP7 and KP21, plan p. 12-141 to 12-142).

The new roundabout on Key Peninsula Highway responds to all these considerations with an appropriate solution. Elements friendly to multimodal use include the addition of curb, gutter, and sidewalk; crosswalks; rectangular rapid flashing beacons; illumination; and roundabout elements to calm traffic.

Describe how the project will enhance opportunities for active transportation, such as improving or enhancing a pedestrian-oriented environment in the center or along the

corridor to the center(s).

The rural character of Key Peninsula Highway makes it a very walkable and bike-friendly area. Non-motorized modes using the highway, or approaching from Lackey Rd NW/Jackson Lake Rd NW, or accessing the adjacent church property will appreciate the separation from road traffic and the speed reduction provided by the roundabout.

Describe how the project contributes to transportation demand management and commute trip reduction opportunities.

The new facility may help encourage Transit adoption in the future. The Comprehensive Plan seeks ways to encourage Transit providers to extend service into southern Key Peninsula (see Goals KP T-4.1.5 and T-4.1.7, p. G-137 to -138). Improvements like this project keep the road in a state of good repair to potentially host bus stops in and between the rural centers.

System Performance and Innovative Solutions

Please address the following:
Describe how the project will result in more reliable and efficient travel flows in the center, along a corridor, or both, and how it will provide for time savings for moving freight and goods.

Pierce County's traffic report projected Level of Service in the year 2042 for the existing and proposed intersection configurations (see Traffic Report p. 13). The analysis shows that the roundabout will be a modest improvement over the no build option. This benefits the safety and reliability of Key Peninsula Highway, which is a T-3 truck route (0.3M-4.0M freight tons per year) on the Washington State Freight and Goods Transportation System, and the only route to transport goods to southern Key Peninsula.

Describe how the project provides a long-term solution to maximize the efficiency of the transportation system within the rural center or along the connecting rural corridor.

The project will provide a large-radius roundabout with truck aprons and non-mountable center island. This configuration will remedy the awkward intersection angles of the approach roads and the horizontal/vertical curves on Key Peninsula Highway, facilitating truck movements (up to and including a WB-40 design vehicle) from and to every leg of the intersection. The roundabout also mitigates rear end collisions, which are a common hazard in this area due to traffic slowing down on Key Peninsula Highway to turn onto side streets. These improvements will make the connection between Key Center RAC and Home RNC safer and more reliable for freight traffic.

Describe any particularly innovative facilities or traffic operational concepts included in this project.

Pierce County’s proposed roundabout is an innovative solution for this rural location. The skew of the roads intersecting Key Peninsula Highway, the relatively high speeds, and the horizontal/vertical curves at the intersection do not allow for a simplistic design approach. Deliberation about the most appropriate intersection treatment has vacillated between signalization and a roundabout, though it’s notable that the intersection does not met warrants for

such a traffic signal. Public commentary guided Pierce County's final choice of a roundabout, confirming that this solution fits their perception of the location's character and safety needs.

For the reasons above, Pierce County believes the roundabout is a particularly apt and context-sensitive design that enjoys strong public support and will enhance the unique rural character and safety of this corridor.

Equity

Please address the following:
Section 1. Addressing population groups, benefits and disparities – see PSRC's resources to help answer the questions below.

Please identify the population groups in the planning study area.

(i.e people of color, people with low incomes, older adults, youth, people with disabilities, people with Limited English Proficiency, populations located in highly impacted communities, areas experiencing high levels of unemployment or chronic underemployment, immigrants and refugees, and transit dependent populations)

Please identify the disparities or gaps in the transportation system / services for these populations that need to be addressed.

The intersection of Lackey Rd NW/Jackson Lake Rd NW/Key Peninsula HWY NW is the only route for southern Key Peninsula residents to access commercial centers or leave the vicinity. Elderly, disabled, and low income populations live adjacent to and south of the project in much greater concentrations than regional averages.

This also means that emergency services must pass through the intersection to reach these populations.

Please describe how the project is addressing those disparities or gaps and providing a benefit to the population groups identified under Step 1.

The project provides a safer transportation corridor for older, disabled, and low-income populations to access emergency and health services. It also encourages good health through active transportation, making it easier to navigate the currently skewed, higher-speed intersection by providing safe multi-modal crossing options. It is vital to ensure adequate road facilities and a state of good repair at this location for the sake of these sensitive groups, especially those who live in Key Peninsula's southern areas.

Section 2. Addressing outreach

Please describe the public outreach process that led to the development of the project. This could be at a broader planning level (comprehensive plan, corridor plan, etc.) or for the specific project. Include specific outreach or communication with the population groups identified in the previous section.

Project design began in 2017 when a Pierce County traffic report identified safety needs at the intersection and proposed 6 alternatives for improvements with the preferred option being a roundabout. The County developed these options and presented them to the public in March of 2022 through an online open house. The outreach campaign included a press release, distribution of informative postcards to residents and businesses, posters hung in public gathering spaces and centers, Facebook and Twitter posts, and an online open house. Over the course of a month the public submitted dozens of comments by email and social media, several hundred survey responses, and viewed the open house web site over 4,000 times.

Please describe how this outreach influenced the development of the project, e.g., the location, scope, design, timing, etc.

Results from the online open house made it clear that the public strongly preferred a roundabout (55%) with a distant second group (28%) preferring a two-intersection solution (see Open House Results Excerpts). Respondents were predominantly residents (90%) and those who utilize parks, businesses, and other amenities in the area (48%). Safety (53%) and ease of use (28%) where the main reasons cited for supporting the roundabout. There is a public perception that the existing intersection is awkward and dangerous, with speeding and inattention on Key Peninsula Highway contributing to an unsafe condition. The public also believes that non-motorized elements like sidewalks are important to the location (see the Safety section below for specific quotes).

At the conclusion of the open house Pierce County solidified the roundabout as the chosen alternative, we are now accelerating design efforts and seeking funding opportunities to fully implement the project.

Section 3. Addressing displacement – see PSRC's displacement risk map

Is the project in an area of low, medium, or high displacement risk?

Both the project area and the census tract to the south have a "low" displacement risk.

If the project is in an area of medium or high displacement risk, identify the broader mitigation strategies in place by the jurisdiction to address those risks.

N/A, the affected areas are a low displacement risk.

Safety

Please address the following:
Please describe the safety and/or security issue(s) that the project will address.

The geometrics and characteristics of the intersection are not conducive to safety. Key Peninsula Highway is a free-flowing high-speed arterial (45 MPH) that is intersected by slower stop-controlled roadways (Lackey Rd 40 MPH, Jackson Lake Rd 35 MPH). Lackey Rd and Jackson Lake Rd both approach from the west and meet in the middle of a horizontal and vertical curve on Key Peninsula Highway, forming acute turning angles.

Pierce County's traffic report identified 16 crashes from 2012-2016 and concluded that road safety

should be improved (see Traffic Report Excerpts). This trend continued from 2017-2021 with WSDOT reporting 13 crashes in the project vicinity, 7 of which resulted in injuries including 2 involving bicyclists (see Historical Crashes). Recent public outreach also confirms the safety issue at this intersection, with more than half of respondents surveyed mentioning safety and/or speeding concerns (see Open House Survey Results).

While rural in character, the corridor is known by the public as an important non-motorized facility that should be safer and more accessible for all abilities and age groups. Comments from the recent Open House include:
- "A roundabout would cut down on speeding cars and would allow for safer crossing for walking residents. We need more street lights and sidewalks."
- "This intersection is near a school. Prioritize kids safely walking and biking."
- "A roundabout is the fastest and safest for all road users. It is a long-term investment that drivers, walkers and rollers will all appreciate."
- "Cars speed down the hwy around the area and a roundabout would focus them to slow down. Roundabout is safest way to go. Need street lights, sidewalks and more roundabouts out here on the KP."
- The most important factor for choosing an alternative is "Safety for pedestrians and bicyclists and ADA access"

Please explain how the project will help protect vulnerable users of the transportation system.

A roundabout at the intersection of Lackey Rd NW / Jackson Lake Rd NW / Key Peninsula HWY NW will mitigate the occurrence and severity of crashes in the area by raising user awareness, separating modes, calming traffic speeds, providing accessible non-motorized surfaces, and reducing conflict points. Project elements contributing to safety include raised splitter islands, chicanes, crosswalks with rectangular rapid flashing beacons, raised sidewalks, and illumination.

As the Federal Highway Administration's (FHWA) Office of Safety notes:
1. Roundabouts "lower speeds and reduce conflicts, substantially reducing the risk of injuries or fatalities."
2. "The lower vehicular speeds and reduced conflict environment can create a more suitable environment for walking and bicycling."
3. "Roundabouts are an effective option for managing speed and transitioning traffic from high-speed
to low-speed environments, such as [. . .] rural intersections along high-speed roads."
(See FHWA Roundabout Safety Attachment)

All three points are relevant to the Lackey Rd / Jackson Lake Rd/ Ken Peninsula HWY intersection due to its rural location, high speeds, and historical crash injuries.

Please describe how the project reduces reliance on enforcement and/or designs for decreased speeds.

Roundabouts are a proven method of reducing traffic speeds and conflict points within an intersection (see FHWA Roundabout Safety Attachment). Per Pierce County's Traffic Report, the

roundabout will be designed for travel speeds between 15 and 25 MHP. Visual cues like sidewalks, approach splitter islands, flashing beacons, and a non-mountable center island will alert drivers to slow down and prepare for the intersection. Chicanes will further slow and align approaching traffic to merge into the circulating lane.

Does your agency have an adopted safety policy (e.g. Target Zero, Vision Zero, etc.)? If so, how did the policy inform the development of the project?

In August 2022 the Pierce County Council adopted resolution R2022-118 relating to Vision Zero and traffic safety. Its purposes included:
1. Endorsing Vision Zero with the goal of achieving zero traffic deaths and serious injuries on Pierce County roadways by 2035.
2. Directing the Planning and Public Works Department to prepare a Vision Zero Action Plan.
3. Authorizing the submittal of grant applications in support of the Vision Zero effort.

Pierce County received funding through the USDOT's Safe Streets and Roads for All (SS4A) Grant Program and is one of the agencies PSRC is supporting to develop a Local Safety Plan. The project kickoff meeting with the consultant team and the public engagement period begins in Summer 2023, and the draft Vision Zero plan is expected to be complete in 2024.

Project Readiness & Financial Plan

In this section, sponsors will address questions regarding the PSRC funding request, the total estimated project cost and schedule, and the project's readiness to obligate PSRC funds. $3.045 million is available for each of the 2025 and 2026 federal fiscal years. Sponsors should be aware of the following information before completing this section:

Funding Request: Sponsors may request up the total annual award for one program year (up to $3,045,000). Sponsors may request funding for any single project phase, but requests for multiple phases are limited to preliminary engineering plus the subsequent phase necessary, i.e, a sponsor may request funding for both preliminary engineering and right-of-way phases, or preliminary engineering and construction phases, but not both right-of-way and construction phases.

Funding Requirements: A minimum of 13.5% of local matching funds is required for the FHWA funding being distributed through the RTCC competition. The combination of the requested PSRC funds plus all other funding must be adequate to fully fund that phase. Requests that do not result in a phase being fully funded will be considered ineligible for PSRC funding.

Obligation Requirements: Sponsors must select 2025 or 2026 as the expected year of obligation. In order to align with annual delivery expectations, all project phases awarded PSRC's FHWA funds must obligate the funds by June 1 of the program year selected. Funds may be obligated beginning October 1 prior to the program year. The earliest the RTCC funds will be available is the 2025 federal fiscal year (beginning October 1, 2024). If a sponsor plans to begin work for the phase awarded prior to this date, they will need to utilize Advanced Construction (AC). For more information on this topic, contact Jennifer Barnes at (206) 389-2876 or jbarnes@psrc.org.

Per PSRC's project tracking policies, all project phases awarded PSRC funds must obligate by June 1st of the program year selected. For more information, see PSRC's project tracking policies.

PSRC Funding Request

Please identify the phase(s) for which PSRC funds are being requested, the amount, and expected year of obligation. Confirm the total by pressing the calculate button.

Phase	**Year**	**Amount Requested (i.e - for $1,000.00, enter "1000")**
Construction	2026	$1500000
		$

Total PSRC Funding Request:
$1500000

Has the project received PSRC funds previously?
No

Please provide the project's PSRC TIP ID.

Financial Plan

In the table below, please provide the total estimated cost and schedule for all phases of the project, from start to finish, and indicate when each phase was, or is planned to be, completed. If a phase is not required for the project, indicate with N/A.

Please include all funding amounts and sources (including the requested PSRC funds) and identify whether they are secure, reasonably expected, or unsecure. PSRC's definitions and guidance for determining secure and reasonably expected funds is provided here.

PE/Design Phase

Funding Source	**Funding Status**	**Funding Amount**

Local County Road Funds	Secured	$658000
		$
		$
		$
		$

Total Preliminary Engineering/Design Phase Cost

$658000

Actual or estimated date of completion (month and year):

June 2026

Right-of-Way Phase

Funding Source	**Funding Status**	**Funding Amount**
Local County Road Funds	Secured	$180000
		$
		$
		$
		$

Total Right-of-Way Phase Cost:

$180000

Actual or estimated date of completion (month and year):

May2026

Construction Phase

Funding Source	Funding Status	Funding Amount
Local County Road Funds	Secured	$3229000
Federal RTCC (This Competition)	Unsecured	$1500000
		$
		$
		$

Total Construction Phase Cost

$4729000

Actual or estimated date of completion (month and year):

June 2026

Other Phase

Funding Source	Funding Status	Funding Amount
		$
		$
		$
		$

		$

Total Other Phase Cost

$0

Actual or estimated date of completion (month and year):

Project Summary

The calculated total project cost below is based on the entries completed above. Please review for accuracy before proceeding to ensure all funding is reflected.

Total Estimated Project Cost:

$5567000

Estimated Project Completion Date (month and year):

December 2027

Financial Documentation

Please provide supporting documentation using the upload function below to demonstrate that all additional funds for the phase(s) for which PSRC funds are being requested are secure or reasonably expected.

f-131-475-18574403_V3Cw6sTq_Lackey-Jackson-KeyPen_Secured_Match_-_2024_Draft_TIP.pdf

Please describe the secure or reasonably expected funds identified in the supporting documentation. For funds that are reasonably expected, an explanation of procedural steps with milestone dates for completion which will be taken to secure the funds for the project or program must also be included.
For more information, refer to PSRC's financial constraint guidance.
Match funds will come from amounts already programmed to the Lackey/Jackson/Key Peninsula project and from the "Grant / Developer Matching Program" in the 6-year TIP (see attached).

Project Readiness

PSRC recognizes that the complexity of some projects can trigger a variety of prerequisites that must be satisfied before federal funding is typically eligible to be obligated. The questions in this section are designed to assist sponsors to:

- *Identify which obligation prerequisites and milestones apply to their specific project.*
- *Identify which of these have already been satisfied at time of application.*
- *Provide an explanation and realistic completion date for all obligation prerequisites and milestones not yet completed.*

In the following section, sponsors will be asked a series of questions about the project. Past experience has shown that delays in one phase often result in a delay to subsequent phases. PSRC's project tracking policies require that funds be obligated by June 1 of the funding year, or be returned for redistribution. Consequently, sponsors are encouraged to carefully consider the complexity of their project and develop a project schedule that is realistic.

NOTE: Sponsors applying for funds for only planning studies or preliminary engineering/design phases are not required to provide further information for project readiness and will be directed to the next required set of questions.

Project Readiness

Are you requesting funds for ONLY a planning study or preliminary engineering?
No

Is preliminary engineering/design for the project complete?
No

Please provide the date the preliminary engineering/design phase was completed, or the anticipated date of completion (month and year).
May 2026

Are there any other PE/Design milestones associated with the project? Please identify and provide dates of completion. You may also use this space to explain any dates above.
April 2024 - 30% Design Completion
Oct 2024 - NEPA Completion
May 2026 - ROW Certification

Project Readiness

What is the current or anticipated level of environmental documentation under the National Environmental Policy Act (NEPA) for this project?
Documented Categorical Exclusion (DCE)

Has the NEPA documentation been approved?
No

Please provide the date of NEPA approval, or the anticipated date of completion (month and year).
October 2024

Project Readiness

Will right of way be required for the project?
Yes

How many parcels do you need, if applicable?
4

What is the zoning in the project area?
Rural 10

Discuss the extent to which your schedule reflects the possibility of condemnation and the actions needed to pursue this.
Pierce County has scheduled 2 years to complete ROW phase acquisitions, which includes ample time for condemnation should it become necessary. Since there will be no federal funds in ROW, the beginning of acquisitions can overlap the end of the NEPA process. Given that only 4 parcels are involved, the County believes schedule risk due to condemnation is low. Should voluntary negotiations not resolve all ROW needs we will request Council action on condemnation in order to meet project schedules, which is an action the Council has supported in the past for similar public priorities.

Does your agency have experience in conducting right-of-way acquisitions of similar size and complexity?
Yes

If not, when do you expect a consultant to be selected, under contract, and ready to start (month and year)?

In the box below, please identify all relevant right-of-way milestones, including the current status and estimated completion date of each. For example:
• True cost estimate (TCU) or Project Funding Estimate (PFE) for the right of way
• Stamped right-of-way plans (stamped)
• Approved relocation plan, if applicable
• Right-of-way certification
• Right-of-way acquisition
ROW TCE or PFE - March 2024
Stamped ROW Plans - March 2024
Approved relocation plans - March 2024
Begin acquisitions - April 2024
ROW certification - May 2026

Project Readiness

Are funds being requested for construction?
Yes

Do you have an engineer's estimate?
Yes

Please upload a copy of your engineer's estimate below.
f-131-116-18574403_WiAjvXzW_Lackey-Jackson-KeyPen_Engineers_Estimate.xls

Identify the environmental permits needed for the project and when they are scheduled to

be acquired.
NEPA - October 2024
SEPA - May 2026 (at the latest)
NPDES Construction Stormwater Permit - May 2026 (at the latest)

Are Plans, Specifications & Estimates (PS&E) completed?
No

Please provide the date of completion, or the date when PS&E is scheduled to be complete (month and year).
May 2026

When is the project scheduled to go to ad (month and year)?
June 2026

Note: For projects awarded PSRC funds through this competition, the information provided above for each milestone will be incorporated into the project's Progress Report for future monitoring, as part of PSRC's project tracking program.

Other Considerations

Please describe any additional aspects of your project not previously addressed in the application that could be relevant to the final project recommendation and decision-making process. Note, no points will be given to this section.
N/A

File Submission

Please provide any additional supporting documents, including maps, through the upload functions below.
f-131-107-18574403_lKYo6Ygv_Lackey-Jackson-KeyPen_Combined_Attachments.pdf

Final Review

Please review all application form questions to ensure you have completed all fields. An email copy of the project application will be sent to the project contact upon submission.

NOTE: Please contact Doug Cox (DCox@psrc.org) if you need to make updates to a submitted application prior to the July 28, 2023 deadline. After the deadline has passed, the form site will close.

Key Peninsula Overview

Pierce County

Population – 18,300

Key Center

Zoning: Rural Activity Center (RAC)

97 Acres, Largest Commercial Center on Peninsula

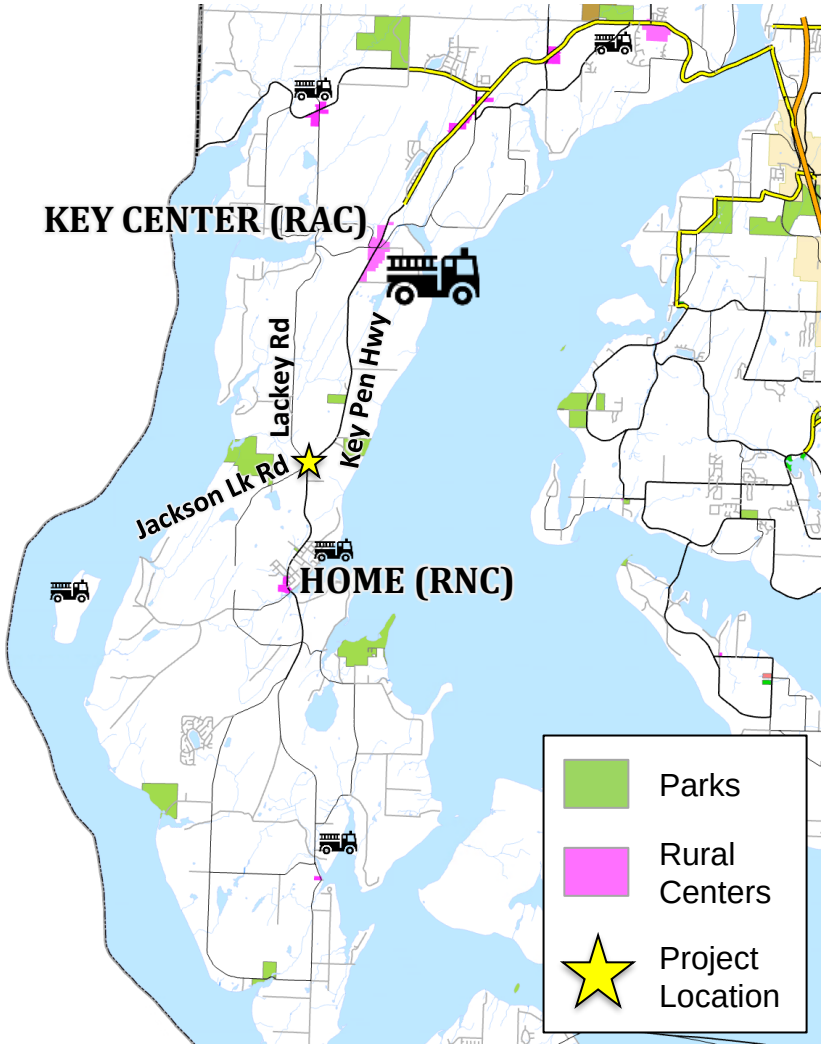
Fire District HQ

‘Home’

Zoning: Rural Neighborhood Center (RNC)

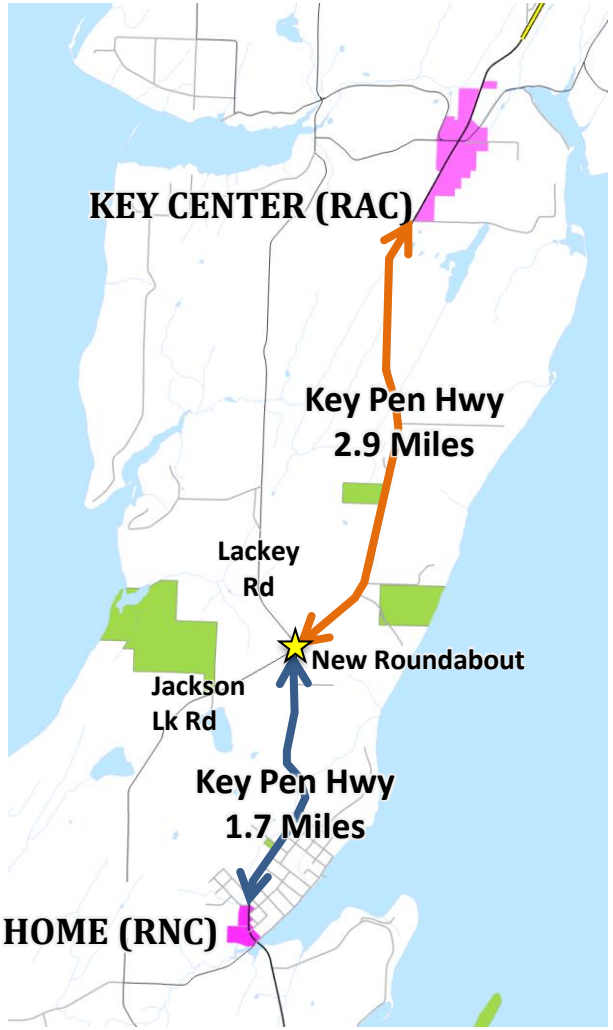
18 Acres

Fire Station



Lackey-Jackson-Key Pen

Key Peninsula HWY Rural Corridor



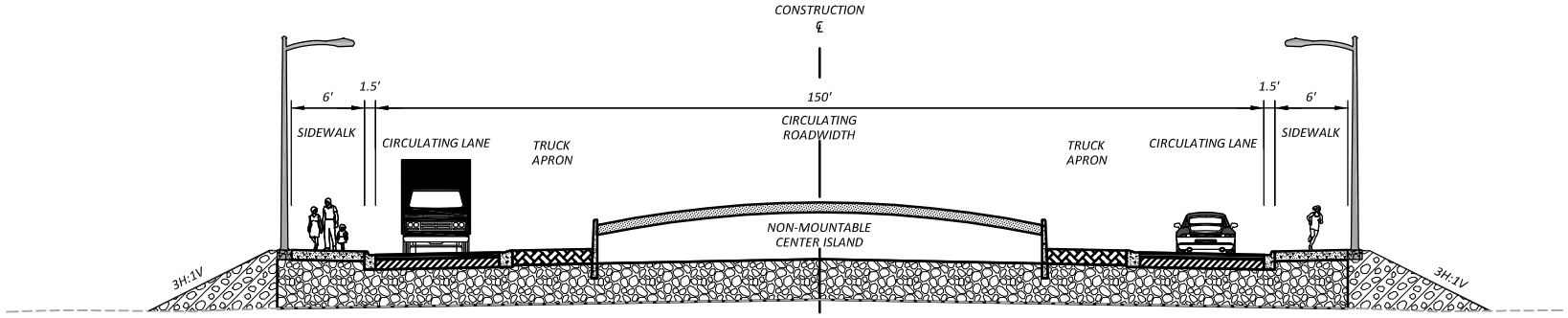
Key Center Rural Activity Center (RAC)

4.6-mile corridor

Home Rural Neighborhood Center (RNC)

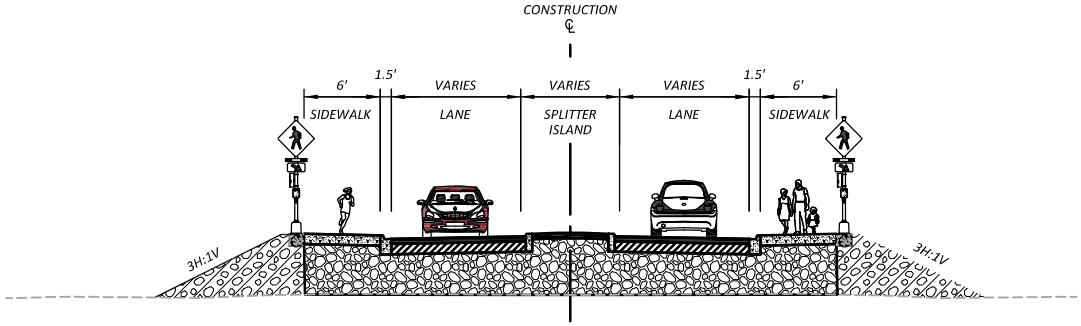
ADT

- 7,500 – Key Pen Hwy 45 MPH
- 1,350 – Lackey Rd 40 MPH
- 850 – Jackson Lk Rd 35 MPH



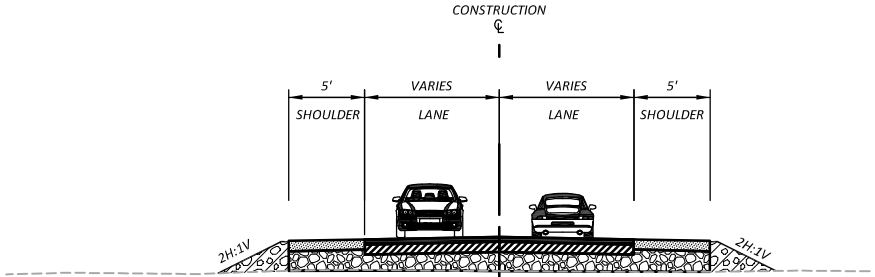
CENTRAL ISLAND AND CIRCULATORY ROADWAY SECTION

NOT TO SCALE



SPLITTER ISLAND AND PEDESTRIAN REFUGE ROADWAY SECTION

NOT TO SCALE



ROADWAY SECTION

NOT TO SCALE

Pierce County
Planning & Public Works
Office of the County Engineer
Tacoma Mall Office Building
2702 South 42nd Street, Suite 109
Tacoma, Washington 98409
An APWA Accredited Agency

LACKEY RD N/JACKSON LAKE RD NW/KEY PENINSULA HWY INTERSECTION

TYPICAL ROADWAY SECTION

CRP 5769

Drawing: P:\5769-LACKEYRDJACKSONLKRDKEYPENHYKPN\ENGRES\DRAWINGS\MISCELLANEOUS\TYPICAL SECTIONS 8.5X11\5769RDWYSECT8.5X11.DWG Layout Tab: LAYOUT1
Xrefs:
Date: 05/31/2023 Time: 01:09:42 PM Plotted by: EAMUNDS

PIERCE COUNTY PLANNING AND PUBLIC WORKS
TRANSPORTATION IMPROVEMENT SECTION

Lackey Rd NW / Jackson Lk Rd NW / Key Peninsula Highway NW
Intersection w/Roundabout
CRP 5769

Engineer: E. Amundsen
Lead Engineer: M. Vairapandi, PE
Date: 5/23/2023

ENGINEER'S ESTIMATE					
ITEM NO.	QUANTITY	UNITS	ITEM DESCRIPTION	UNIT PRICE	AMOUNT
			PREPARATION		
1	LUMP SUM	LS	MOBILIZATION	10%	$289,000.00
2	3.5	ACRE	CLEARING AND GRUBBING	$15,000.00	$52,500.00
3	104	LF	REMOVING EXISTING PIPE	$12.00	$1,248.00
4	100	LF	REMOVING FENCE	$5.00	$500.00
			GRADING		
5	4,000	CY	ROADWAY EXCAVATION INCL. HAUL	$25.00	$100,000.00
6	3,340	TON	GRAVEL BORROW INCL. HAUL	$35.00	$116,900.00
7	1,670	CY	EMBANKMENT COMPACTION	$10.00	$16,700.00
8	975	CY	POND EXCAVATION INCL. HAUL	$50.00	$48,750.00
			DRAINAGE		
8	35	TON	QUARRY SPALLS	$70.00	$2,450.00
9	240	LF	UNDERDRAIN PIPE 12 IN. DIAM.	$75.00	$18,000.00
			STORM SEWER		
10	35	EACH	CATCH BASIN TYPE 1	$1,750.00	$61,250.00
11	11	EACH	CATCH BASIN TYPE 2 48 IN. DIAM	$4,400.00	$48,400.00
12	2	EACH	CATCH BASIN TYPE 2 84 IN. DIAM	$11,000.00	$22,000.00
13	3,402	LF	SCHEDULE A STORM SEWER PIPE 12 IN. DIAM	$55.00	$187,110.00
14	2	EACH	PRECAST STORMFILTER VAULT INCLUDING INSTALL	$75,000.00	$150,000.00
			SURFACING		
15	2,600	TON	CRUSHED SURFACING BASE COURSE	$45.00	$117,000.00
			HOT MIX ASPHALT		
16	2,600	TON	HMA CL. 1/2 IN. PG58H-22	$160.00	$416,000.00
17	CALC. 8,320	DOL	COMPACTION PRICE ADJUSTMENT	$1.00	$8,320.00
18	CALC. 20,800	DOL	ASPHALT COST PRICE ADJUSTMENT	$1.00	$20,800.00
19	275	TON	HMA FOR APPROACH CL. 1/2 IN. PG58H-22	$200.00	$55,000.00
			EROSION CONTROL AND ROADSIDE RESTORATION		
20	46	DAY	ESC LEAD	$55.00	$2,530.00
21	49	EACH	INLET PROTECTION	$50.00	$2,450.00
22	125	SY	STABILIZED CONSTRUCTION ENTRANCE	$25.00	$3,125.00
23	1,765	LF	SILT FENCE	$6.00	$10,590.00
24	EST. 7,500	DOL	EROSION/WATER POLLUTION CONTROL	1.00	$7,500.00
25	17,100	SY	STRAW MULCH	$0.75	$12,825.00
26	1,444.4	SY	NATIVE WATER QUALITY SEED MIX	$1.50	$2,166.67
27	0.5	ACRE	SEEDING, FERTILIZING, AND MULCHING	$5,000.00	$2,500.00
28	1.5	ACRE	TOPSOIL TYPE A	$40,000.00	$60,000.00
29	0.5	ACRE	TOPSOIL TYPE C	$30,000.00	$15,000.00
30	17	EACH	PSIPE EVERGREEN HUCKLEBERRY (*VACCINIUM OVATUM*) 1 GAL	$15.00	$255.00
31	18	EACH	PSIPE WILD ROSE (*ROSA NUTKANA*)1 GAL	$15.00	$270.00
32	36	EACH	PSIPE SNOWBERRY (*SYMPHORICARPOS ALBUS*) 1 GAL	$10.00	$360.00
33	72	EACH	PSIPE CRIMSON PYGMY BARBERRY (*BERBERIS THUNBERGII*)1 GAL	$15.00	$1,080.00
34	52	EACH	PSIPE OREGON GRAPE (*MAHONIA AQUIFOLIUM*) 1 GAL	$10.00	$520.00
35	58	EACH	PSIPE TRUMPET DAFFODIL (*NARCISSUS KING ALFRED*)	$8.00	$464.00
36	236	EACH	PSIPE ELIJAH BLUE FESCUE (*FESTUCA GLAUCA*)1 GAL	$8.00	$1,888.00
37	4500	SF	WETLAND SOD	$6.00	$27,000.00
38	710	SY	BARK OR WOOD CHIP MULCH	$10.00	$7,100.00

ITEM NO.	QUANTITY	UNITS	ITEM DESCRIPTION	UNIT PRICE	AMOUNT
			TRAFFIC		
39	890	LF	CEMENT CONC. TRAFFIC CURB AND GUTTER	$40.00	$35,600.00
40	1,550	LF	CEMENT CONC. TRAFFIC CURB	$50.00	$77,500.00
41	283	LF	ROUNDABOUT CENTRAL ISLAND CEMENT CONC. CURB	$50.00	$14,150.00
42	358	LF	ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER	$40.00	$14,320.00
43	256	LF	CEMENT CONC. PEDESTRIAN CURB	$40.00	$10,240.00
44	2,250	LF	TEMPORARY PAVEMENT MARKING	$0.50	$1,125.00
45	LUMP SUM	LS	PERMANENT SIGNING	$20,000.00	$20,000.00
46	EST. 14,000	DOL	ELECTRICAL SERVICE	$1.00	$14,000.00
47	LUMP SUM	LS	ILLUMINATION AND RRFB SYSTEM	$250,000.00	$250,000.00
48	1,920	HR	PORTABLE CHANGEABLE MESSAGE SIGN	$5.00	$9,600.00
49	LUMP SUM	LS	OTHER TEMPORARY TRAFFIC CONTROL	$25,400.00	$25,400.00
50	5,600	HR	FLAGGERS	$65.00	$364,000.00
51	700	HR	OTHER TRAFFIC CONTROL LABOR	$55.00	$38,500.00
52	LUMP SUM	LS	TRAFFIC CONTROL SUPERVISOR	$54,600.00	$54,600.00
53	104	SF	CONSTRUCTION SIGNS CLASS A	$30.00	$3,120.00
			OTHER ITEMS		
54	LUMP SUM	LS	UTILITY COORDINATION	$15,000.00	$15,000.00
55	2,100	CY	STRUCTURE EXCAVATION CLASS B INCL. HAUL	$5.00	$10,500.00
56	15,829	SF	SHORING OR EXTRA EXCAVATION CLASS B	$1.00	$15,829.00
57	567	CY	PIPE ZONE BACKFILL	$45.00	$25,515.00
58	306	CY	GRAVEL BACKFILL FOR UNDERGROUND DRAINAGE	$40.00	$12,240.00
59	50	MGAL	WATER	$60.00	$3,000.00
60	LUMP SUM	LS	SURVEYING	$10,000.00	$10,000.00
61	2	EACH	MONUMENT	$1,300.00	$2,600.00
62	591	SY	CEMENT CONC. SIDEWALK	$40.00	$23,640.00
63	430	SY	TEXTURED CEMENT CONC. TRUCK APRON	$100.00	$43,000.00
64	490	SY	TEXTURED CEMENT CONC. SPLITTER ISLAND	$90.00	$44,100.00
65	8	EACH	CEMENT CONC. CURB RAMP TYPE SINGLE DIRECTION	$1,000.00	$8,000.00
66	8	EACH	CEMENT CONC. CURB RAMP TYPE PARALLEL	$3,000.00	$24,000.00
67	1,033	LF	CHAIN LINK FENCE TYPE 3	$40.00	$41,320.00
68	12	EACH	END, GATE, CORNER, PULLPOST FOR CHAIN LINK FENCE	$450.00	$5,400.00
69	1	EACH	DOUBLE 20 FT. COATED CHAIN LINK GATE	$1,500.00	$1,500.00
70	EST. 10,000	DOL	ROADSIDE CLEANUP	1.00	$10,000.00
71	LUMP SUM	LS	TRIMMING AND CLEANUP	$3,000.00	$3,000.00
72	EST. 30,000	DOL	MINOR CHANGE	1.00	$30,000.00
73	LUMP SUM	LS	SPCC PLAN	$500.00	$500.00
74	LUMP SUM	LS	FDC PLAN	$500.00	$500.00
75	1,944	SY	TEXTURED GEOMEMBRANE LINER	$12.00	$23,333.33
76	33	SY	CONSTRUCTION GEOTEXTILE FOR SEPARATION	$20.00	$660.00
77	668	SY	CONSTRUCTION GEOTEXTILE FOR UNDERGROUND DRAINAGE	$5.00	$3,340.00

BID ITEM SUBTOTAL	**$3,178,684.00**
Contingency (15%)	$476,802.60
CONTRACT ESTIMATE	**$3,655,486.60**
INFLATION (3 YEARS @ 4% PER YEAR)	$456,438.68
TOTAL CONTRACT ESTIMATE	**$4,111,925.28**

CONSTRUCTION PHASE

Construction Engineering (15% Total Contract Estimate)	$616,789
Contract Total	$4,111,925
CONSTRUCTION PHASE TOTAL	**$4,728,714**

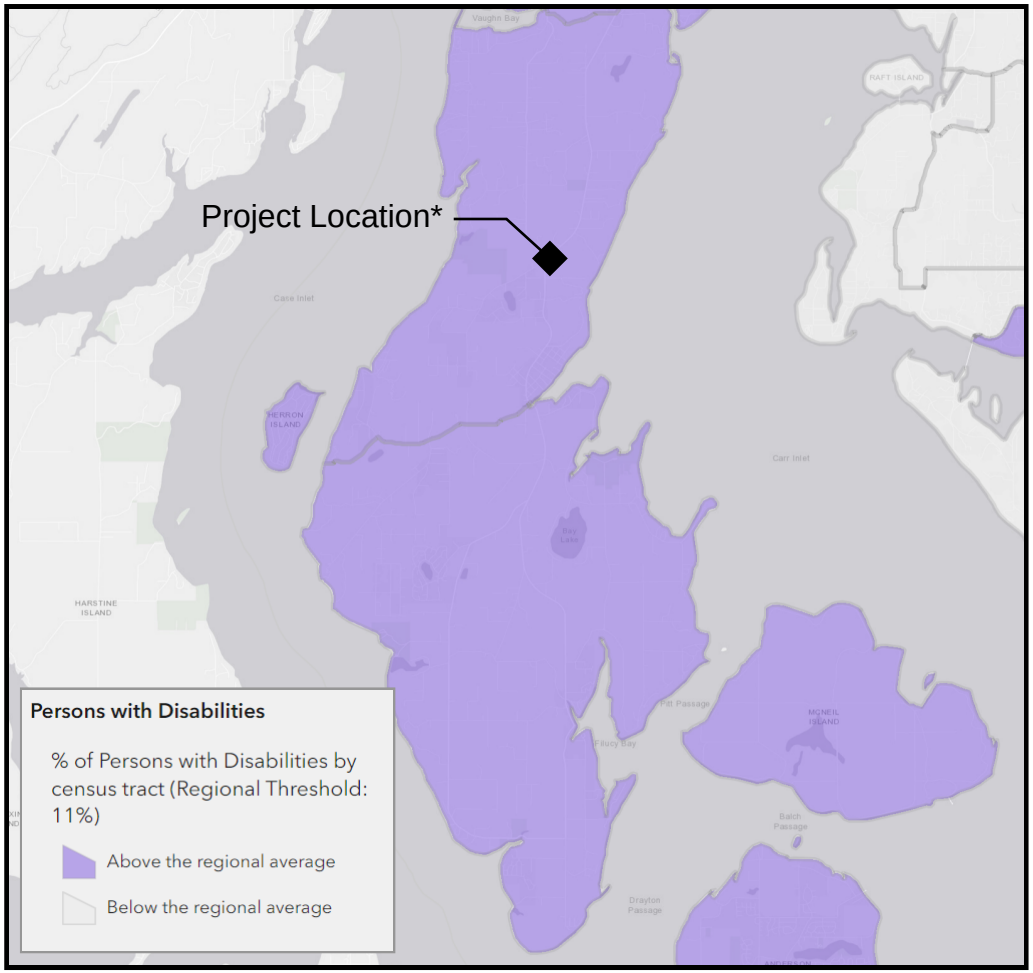
Use **$4,729,000**

Equity Maps

Lackey Rd NW / Jackson Lake Rd NW / Key Peninsula Hwy NW

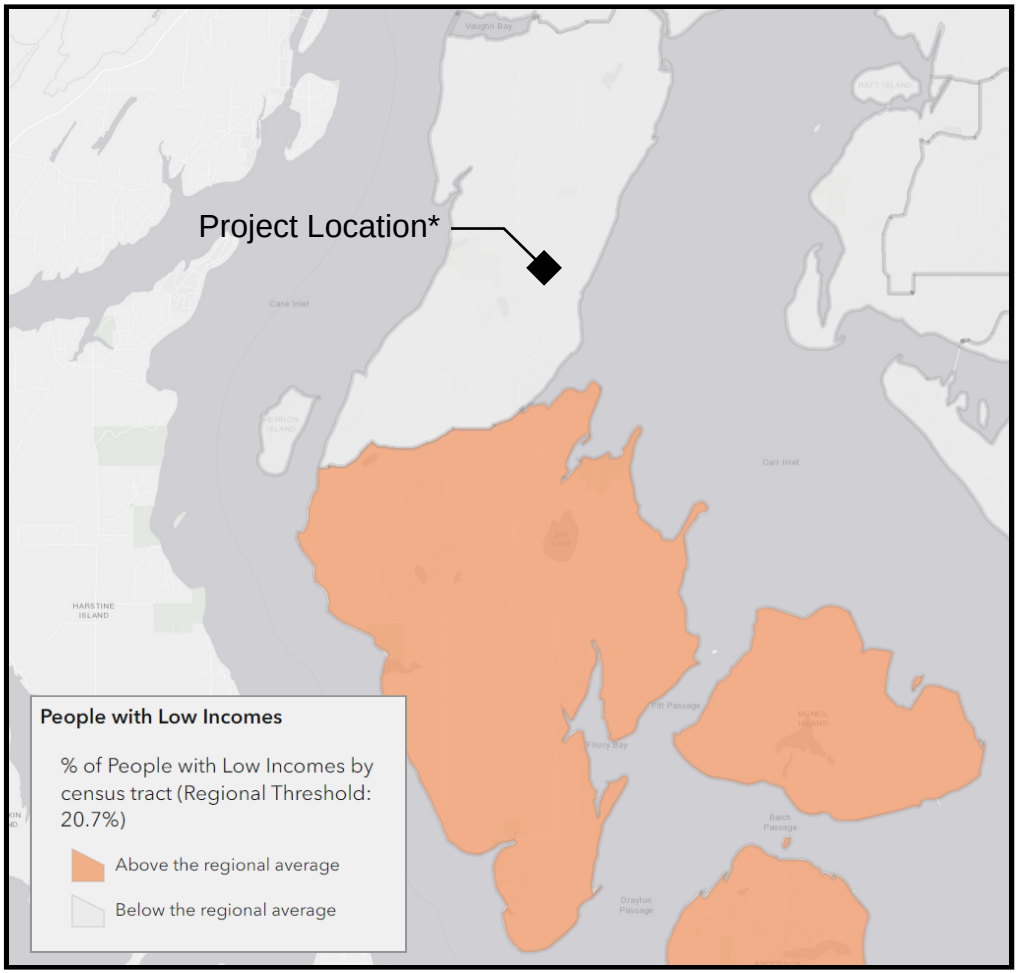
Disabled Population (PSRC Resource Map):

17% in Project Area, 20% in Southern Peninsula, vs. 11% Regional Average



People with Low Incomes (PSRC Resource Map):

17% in Project Area, 32% in Southern Peninsula, vs. 20.7% Regional Average



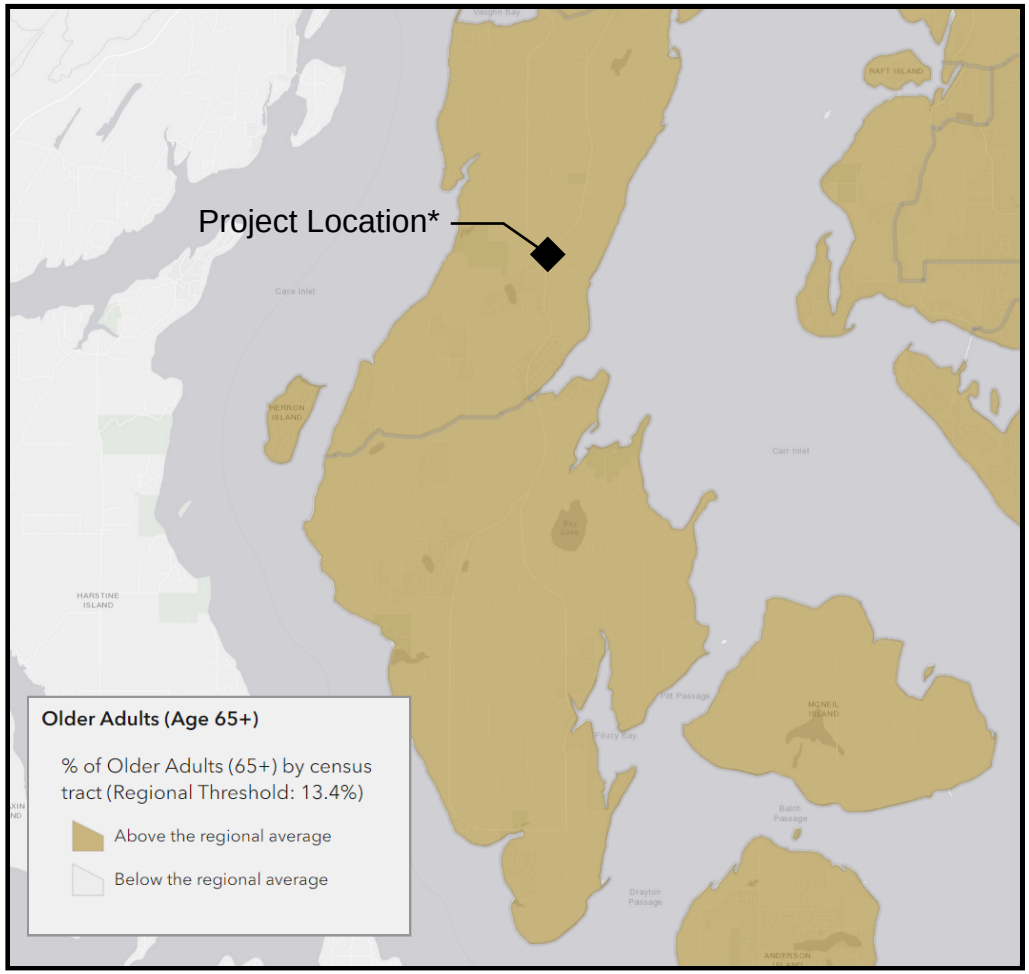
** The population in southern Key Peninsula must pass through the project intersection to reach the nearest Rural Activity Centers.*

Equity Maps

Lackey Rd NW / Jackson Lake Rd NW / Key Peninsula Hwy NW

Older Adults 65+ (PSRC Resource Map):

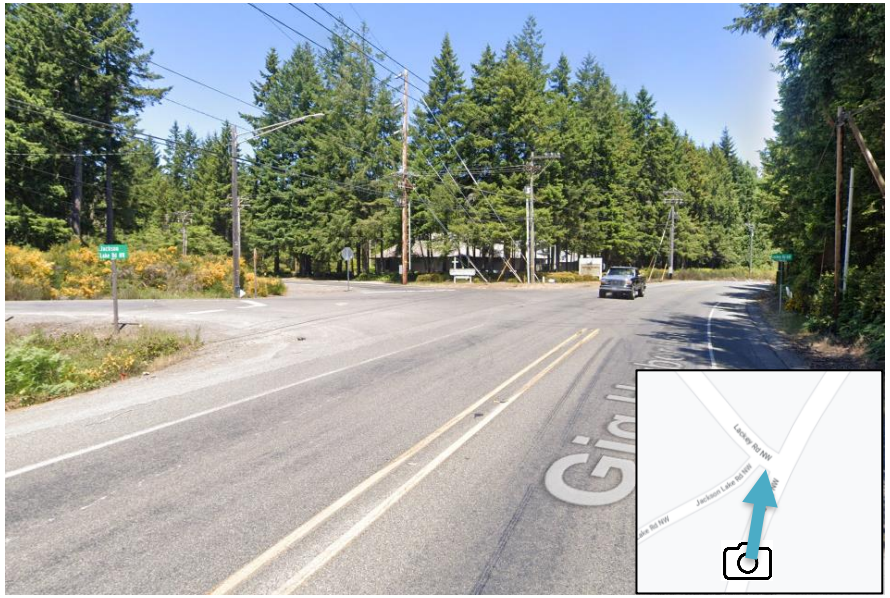
23% in Project Area, 26% in Southern Peninsula, vs. 13.4% Regional Average



** The population in southern Key Peninsula must pass through the project intersection to reach the nearest Rural Activity Centers.*

Lackey-Jackson-Key Pen

Existing Road Pictures

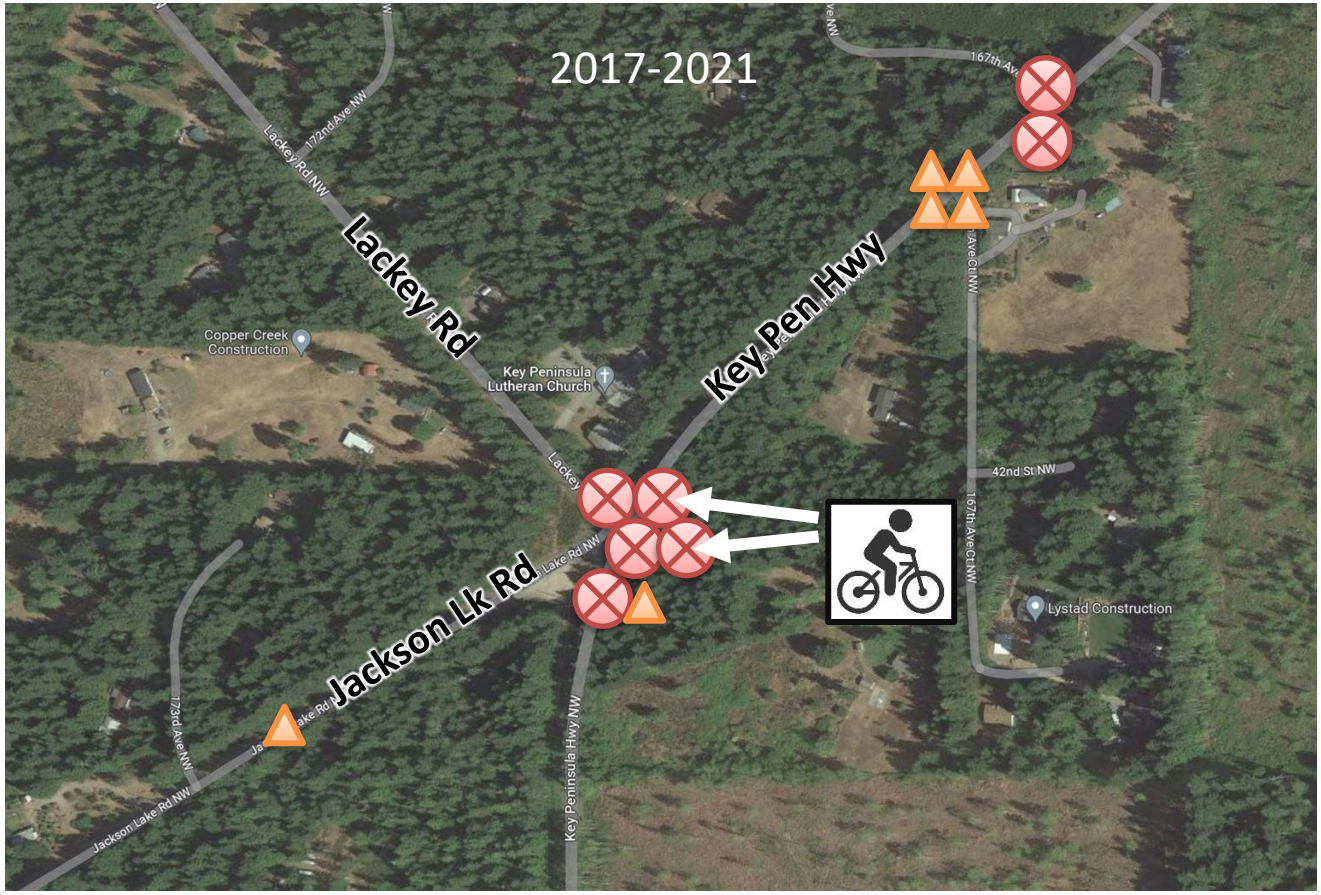


Lackey-Jackson-Key Pen

Historical Crashes

2012-2016: 16 Crashes (Pierce County Traffic Report)

2017-2021: 13 (WSDOT Database)



Injury (7)

Non-Injury (6)

Bicyclist Involved (2)

Lackey-Jackson-Key Pen

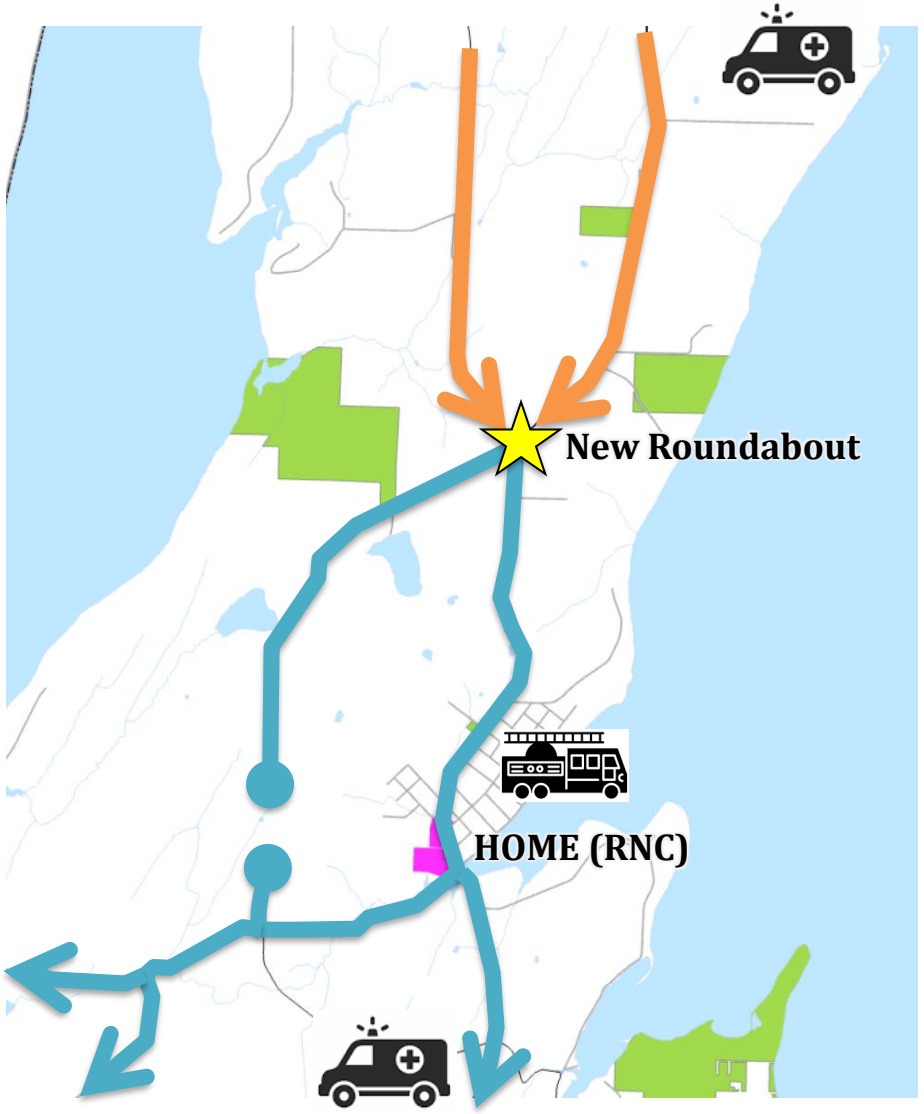
Southern Peninsula Access & Emergency Response

Single Choke Point for Emergency Service or Evacuation

5,500 Residents South of Project

Typical Fire District Staffing*

- 1 Medic Unit North
- 1 Fire Unit South
- 1 Medic Unit South



**KPFD 2022 Annual Report*

Table 12-II: Key Peninsula Community Plan Project Recommendations

ID#*	Roadway**	Limits	Description***	Estimated Cost****
Premier Priority Projects (4)				
KP1	134th Ave KPN/Key Peninsula Hwy KPN	Intersection	Realign intersection and add turn lanes	$640,000
KP2	186th Ave/Jackson Lake Rd KPN	Herron Rd KPN to Key Peninsula Hwy KPN	Construct missing roadway segment on 186th Ave KPN, widen existing lanes, and add roadside path	$6,650,000
KP3	Key Peninsula Hwy KPN	Olson Dr/Cramer Rd KPN to SR 302 (Elgin-Clifton Rd KPN)	Widen existing paved shoulders, add pedestrian facilities in commercial center	$6,360,000
KP4	Olson Dr/Cramer Rd/Key Peninsula Hwy KPN	Intersection	Realign intersection and add turn lanes	$1,115,000
High Priority Projects (7)				
KP5	Cramer Rd/134th Ave KPN	Key Peninsula Hwy KPN to SR 302	Add paved shoulders	$4,390,000
KP6	Jackson Lake Rd/Key Peninsula Hwy/Lackey Rd KPN	Intersection	Reconfigure into 3-way intersection and add turn lanes	$1,340,000
KP7	Key Peninsula Hwy KPS	76th St KPS to Erickson Rd KPS	Add paved shoulders or roadside path, add pedestrian facilities in commercial center	$3,240,000
KP8	Key Peninsula Hwy KPN	Herron Rd/A St KPN to 89th St KPN	Widen existing paved shoulders or add roadside path, add pedestrian facilities in commercial center	$9,750,000
KP9	Key Peninsula Hwy KPN	89th St KPN to Olson Dr/Cramer Rd KPN	Add center turn lane and pedestrian facilities in commercial center	$930,000
KP10	Olson Dr KPN	S Vaughn Rd/Wright-Bliss Rd KPN to Key Peninsula Hwy KPN	Improve alignment and add paved shoulders or roadside path	$3,400,000
KP11	Whiteman Rd KPS/ Key Peninsula Hwy KPS	Intersection	Realign intersection	$460,000

ID#*	Roadway**	Limits	Description***	Estimated Cost****
Medium Priority Projects (14)				
KP12	92nd St KPN	S Vaughn Rd KPN to Olson Dr KPN	Add paved shoulders	$1,570,000
KP13	94th Ave NW (Developer)	0.25 miles south of SR 302 to SR 302	Construct new roadway with paved shoulders	$500,000
KP14	94th Ave NW	SR 302 to Kitsap County Line	Widen existing lanes and add paved shoulders	$3,460,000
KP15	118th Ave NW	Creviston Dr NW to SR 302	Add paved shoulders or roadside path	$1,293,000
KP16	Cornwall Rd KPS/Delano Rd KPS	Herron Rd KPN to 158th Ave KPS	Add paved shoulders or roadside path	$4,690,000
KP17	Creviston Dr NW	134th Ave KPN to SR 302	Improve alignment and add paved shoulders	$7,500,000
KP18	Hall Rd KPN	West terminus to S Vaughn Rd/Wright-Bliss Rd KPN	Add paved shoulders or roadside path	$1,230,000
KP19	Herron Rd KPN/ Key Peninsula Hwy KPN	Intersection	Add turn lanes	$330,000
KP20	Key Peninsula Hwy KPS	Erickson Rd KPS to Herron Rd/A St KPN	Widen existing paved shoulders or add roadside path	$7,770,000
KP21	Lackey Rd KPN	Jackson Lake Rd KPN to S Vaughn Rd KPN	Add paved shoulders or roadside path	$1,980,000
KP22	Rouse Rd KPS/ Key Peninsula Hwy KPS	Intersection	Realign intersection	$450,000
KP23	S Vaughn Rd KPN	Lackey Rd KPN to Hall Rd/ Olson Dr KPN	Add paved shoulders	$612,000
KP24	Wright-Bliss Rd KPN	Hall Rd/Olson Dr KPN to SR 302 (Elgin-Clifton Rd KPN)	Widen existing paved shoulders or add roadside path	$3,234,000
KP25	Wright-Bliss Rd KPN	SR 302 (Elgin-Clifton Rd KPN) to Kitsap County Line	Improve alignment and add paved shoulders or roadside path	$5,720,000
Low Priority Projects (8)				
KP26	76th St/Whiteman Rd KPS	Key Peninsula Hwy KPS s/72nd St KPS to Key Peninsula Hwy KPS n/174th Av KPS	Add paved shoulders	$16,670,000

KP PR-4.13.6 Mitigate impacts to adjoining private property when marine parks or shoreline access points are developed.

Transportation Policies

Goals

Provide transportation facilities and services that meet the needs of the community and that are appropriate for this rural area while preserving the natural characteristics of the land. Strive to develop a transportation system that accommodates growth, emphasizes safety, and promotes alternate means of travel.

Roadway Improvements

GOAL KP T-1 Pursue options for improving traffic flow and safety on the major thoroughfares that will benefit the Key Peninsula area. Develop a roadway system that accommodates existing and future traffic levels.

KP T-1.1 Give high priority to supporting the efforts of the Washington State Department of Transportation (WSDOT) in the funding and implementation of a new east-west transportation corridor within the Key Peninsula area.

KP T-1.1.1 Support the efforts of WSDOT to establish a new SR 302 corridor and to make improvements to the existing SR 302 corridor to adequately accommodate the future traffic needs of Key Peninsula and the regional highway corridor. Request that WSDOT investigate alternatives that utilize existing roadway and utility corridors to minimize impacts to existing and planned land uses and the environment. Request that WSDOT avoid alternatives in South Kitsap County that will significantly increase travel time and distance for Key Peninsula commuters traveling to and from SR 16 and the Gig Harbor Peninsula.

KP T-1.1.2 Continue to support WSDOT safety and operational improvements along the existing SR 302 alignment, including the intersections and the Purdy spit bridge. Request that WSDOT consider the addition of centerline rumble strips or buttons, roadside guide posts, raised reflective pavement markers, shoulders, guardrails, passing lanes or pullouts, center turn lanes, and turn lanes at intersections, where appropriate.

KP T-1.2 Support improvements outside of the Key Peninsula area that will provide improved access between Key Peninsula and Gig Harbor Peninsula. Support improvements that provide congestion relief and improve safety for commuters traveling between SR 16 and SR 302.

KP T-1.2.1 Request that WSDOT consider capacity and operational improvements on westbound SR 16, including the potential need for auxiliary lanes and off-ramp improvements leading to SR 302 from the Gig Harbor area.

KP T-1.2.2 Request that WSDOT consider capacity and operational improvements (signal adjustments, turn restrictions, etc.) to the SR 302/Purdy Drive intersection to relieve traffic congestion in the Wauna area.

KP T-1.3 Implement improvements to the north-south arterials that facilitate access to SR 302, any future realignment of SR 302, and Kitsap County.

KP T-1.3.1 Support improvements on Wright-Bliss Road KPN, 118th Avenue NW, and 94th Avenue NW. Consider the addition of turn lanes at the intersections of these arterials with SR 302.

KP T-1.3.2 Partner with Kitsap County in the planning, funding, and implementation of transportation improvements on the arterials that serve both counties.

KP T-1.4 Develop transportation facilities to accommodate planned growth, but not encourage or promote excessive growth. Avoid unnecessary duplication of roadways to save costs, minimize impervious cover, and preserve scenic atmosphere and open space.

KP T-1.4.1 Place primary emphasis in funding on the improvement of existing roadways rather than the construction of new roadways. Give priority to intersection improvements since they reduce congestion, improve safety, and are cost effective.

KP T-1.4.2 Give priority to new roadways which improve access or reduce congestion on existing roadways and to new roadways which facilitate access to local areas for emergency and service vehicles (fire trucks, school buses).

KP T-1.4.3 Consider traffic improvements that facilitate access to the proposed *360 regional park* and fire department property.

KP T-1.4.4 Consider traffic improvements that facilitate access to current and proposed public facilities.

KP T-1.4.5 Require that any new public roads meet current Pierce County standards pursuant to the Pierce County Code. This requirement shall also apply to any private roads which are proposed to become a public road.

KP T-1.5 Coordinate with WSDOT concerning proposed improvements on SR 302. Seek consistency between the short-term and long-term transportation planning documents of WSDOT and the County.

KP T-1.6 Conduct or participate in community outreach efforts for the purpose of discussing local transportation issues and the study of related programs and projects.

KP T-1.7 Strive to maximize the safety and operational efficiency of the Key Peninsula roadway system.

KP T-1.7.1 Implement a program to investigate the feasibility of traffic calming measures and other innovative strategies to address speeding and pedestrian safety concerns on the Key Peninsula. Emphasis should be given to the Key Peninsula Highway near the rural commercial areas (Key Center and Home), Key Peninsula Middle School/sports complex (Volunteer Park) area, and other public facilities. These improvements should be consistent with the Key Peninsula Community Plan, County policies, state law, and the national standards as set forth in the Manual on Uniform Traffic Control Devices (MUTCD).

KP T-1.7.2 Work with the Sheriff's Department to increase the enforcement of traffic laws. Work with WSDOT and civic groups to develop a strategy to educate motorists about traffic safety and speeding issues on the Key Peninsula.

KP T-1.7.3 Maximize the operating efficiency of arterials through the use of traffic signals (if warranted), center turn lanes, turn lanes, roundabouts, and other traffic flow improvements at appropriate locations.

KP T-1.7.4 Design any new or reconstructed intersections at right angles, wherever feasible. Discourage the use of offsets or sharp angle turns at intersections.

KP T-1.7.5 Encourage property owners to remove trees and other vegetation adjacent to driveways to improve driver visibility and sight distance.

KP T-1.7.6 Design any new or reconstructed arterials to meet current Pierce County standards. Strive to upgrade the existing major and secondary arterials within the Key Peninsula to current standards, if feasible. In addition to traffic volumes, consider other factors such as the condition and safety of the roadway when allocating funding for any upgrades to arterials.

KP T-1.7.7 Provide physical and visual separation between automobile traffic and pedestrians in the commercial areas through the use of curbing, raised walkways, changes in walkway surface treatment or material texture, and streetscaping.

KP T-1.7.8 Consult with the Peninsula School District to identify, prioritize, and implement safety-related improvements near schools and established bus stops. Improvements may include shoulders, sidewalks, crosswalks, street lighting, and traffic calming measures.

KP T-1.8 Provide a street lighting system consistent with safety requirements and the rural character of the Key Peninsula.

KP T-1.8.1 Consider providing street lighting in areas of safety concern, including major arterials, intersections, and locations with high accident rates.

KP T-1.8.2 Consider pedestrian and street lighting near commercial centers, schools, and other community facilities.

KP T-1.8.3 Gather public input in identifying candidate locations for street lighting within the framework of the applicable County street lighting policies.

KP T-1.9 Maximize the joint use of access roads and driveways by new development to improve traffic flow on SR 302, Key Peninsula Highway, and other arterials.

KP T-1.9.1 Consider changes to the County's access regulations to encourage shared access driveways serving multiple properties. Ensure that shared access driveways are wide enough to accommodate simultaneous vehicular ingress and egress.

Nonmotorized Travel

GOAL KP T-2 Create a system of nonmotorized facilities to enhance pedestrian, bicycle, and equestrian travel throughout the Key Peninsula area.

KP T-2.1 Provide a continuous and interconnected network of nonmotorized facilities that link residential areas to community facilities, commercial centers, and other neighborhoods.

KP T-2.1.1 Work with the community to identify and pursue nonmotorized improvements leading to schools, libraries, parks, playfields, bus stops, shopping areas, and neighborhoods.

KP T-2.1.2 Accommodate nonmotorized travel by providing continuous paved shoulders along SR 302 and Key Peninsula Highway.

KP T-2.1.3 Provide nonmotorized connections to ferry docks, boat launches, public docks and piers, beaches, wildlife viewing areas, and other shoreline uses.

KP T-2.1.4 Accommodate equestrian use on routes that lead to public stables, trailheads, and other equestrian activity centers when the equestrian use does not limit other transportation modes.

KP T-2.1.5 Consider the use of gravel paths for horse riders adjacent to the shoulder, where appropriate.

KP T-2.2 Consider the use of wider paved shoulders (more than six feet) on SR 302 and Key Peninsula Highway, wherever feasible, to achieve increased safety for pedestrians, bicyclists, and equestrians and to provide sufficient room for temporary or emergency parking.

KP T-2.3 Enhance safe pedestrian, bicycle, and equestrian travel through the provision of paths which are physically separated from the roadway, wherever feasible.

KP T-2.4 Separate pedestrian facilities from roadways with planting strips or other enhancements in high use areas such as schools, commercial centers, and recreation areas.

KP T-2.5 Consider the provision of paths or shoulders on local roads since they may serve heavier pedestrian and bicycle use than arterials.

KP T-2.6 Consider the placement of signs to advise bicyclists to use Creviston Drive NW and Cramer Road NW as an alternative to SR 302 and Key Peninsula Highway.

KP T-2.7 Encourage new businesses to provide pedestrian connections to adjacent businesses to encourage walking between businesses.

KP T-2.8 Explore funding options (e.g., tax incentives, land use credits) to encourage property owners to create or extend nonmotorized facilities, including paths and trails.

KP T-2.9 Request that WSDOT consider the provision of a regional trail as part of future improvements to the SR 302 corridor.

KP T-2.10 Work with Kitsap County and Mason County to provide continuous pedestrian, bicycle, and trail connections between these jurisdictions.

KP T-2.11 Work with the Tacoma Utilities Department and other affected property owners to determine the most desirable use or combination of uses (local road, bike path, horse trail, etc.) along 144th Street KPN/NW (Powerline Road) and the Tacoma-Lake Cushman power transmission lines.

KP T-2.12 Work with utility providers to explore opportunities to locate paths and trails along areas where utility lines will be underground.

KP T-2.13 Conduct or participate in community outreach efforts to gather input on local nonmotorized needs and concerns.

Roadway Aesthetics

GOAL KP T-3 Preserve the rural character of the Key Peninsula roadway system.

KP T-3.1 Maintain the existing rural character of the roadways through residential neighborhoods and commercial centers.

KP T-3.1.1 Limit widening on the collector arterials and local roads to upgrading the roadway to meet design standards or to provide shoulders, turn lanes, or nonmotorized improvements.

KP T-3.1.2 Consider the use of paved shoulders instead of sidewalks outside of rural commercial areas to preserve the rural character of the community.

KP T-3.1.3 Work with local groups to explore opportunities for funding alternatives (e.g., grants, local improvement districts, tax incentives) for pedestrian facilities in the rural commercial centers.

KP T-3.1.4 Explore the possibility of developing different styles and widths of pedestrian facilities (e.g., bulb-outs or curb extensions) that would be unique to the rural commercials centers on the Key Peninsula.

KP T-3.2 Maintain the visual corridors along the highways and major roadways on the Key Peninsula through the retention of trees, greenery, and native vegetation on adjacent properties.

KP T-3.2.1 Include streetscaping between any new pedestrian facilities and the roadway, where feasible. If possible, any streetscaping should consist of drought-resistant or native vegetation.

KP T-3.2.2 Enhance roadway aesthetics through the commercial centers through the use of adjoining greenbelts and boulevard concepts.

KP T-3.2.3 Provide pedestrian facilities at bridge locations to enhance viewing opportunities. Consider the use of bulb-outs or curb extensions at new bridges or bridge upgrades to create character and to slow traffic speeds.

KP T-3.3 Plan and locate roadways to preserve neighborhoods and natural resources by avoiding bisection of these areas.

KP T-3.4 Develop a pilot program on the Key Peninsula to authorize the installation of off-site tourist-oriented directional signs within the County road right-of-way.

KP T-3.5 Require that the replacement or expansion of existing overhead utilities adjacent to the roadways be underground.

Transit Service

GOAL KP T-4 Promote the continued development of the transit system to serve the internal and external travel needs of Key Peninsula residents.

KP T-4.1.1 Promote increased transit service for commuters traveling within and outside of the Key Peninsula area. Provide a range of transit services that is cost effective and reliable.

KP T-4.1.2 Request that transit agencies provide more frequent bus service (i.e., hourly service) within the Key Peninsula area as demand warrants.

KP T-4.1.3 Work with transit agencies to expand express services to the Purdy park-and-ride lot. Coordinate these services with services operating on the Key Peninsula.

KP T-4.1.4 Work with transit agencies to establish commuter services that link population centers and park-and-ride facilities on the Key Peninsula with the network of regional express services.

KP T-4.1.5 Work with transit agencies to determine the feasibility of providing service to areas on the Key Peninsula that are not currently served by transit. Request that transit agencies consider the extension of bus service to the Longbranch area.

KP T-4.1.6 Support efforts by transit agencies to develop stops along future primary bus service routes, including SR-302 (Elgin-Clifton Road KPN), Key Peninsula Highway, Wright-Bliss Road KPN, Lackey Road KPN, Creviston Drive NW, Cramer Road KPN, and Whiteman Road KPS.

KP T-4.1.7 Provide bus stops at the rural commercial centers and community facilities within the Key Peninsula area.

KP T-4.1.8 Ensure that potential bus stops are considered as part of future roadway improvement projects. Consider the provision of adequate right-of-way to accommodate the placement of accessible bus stops.

KP T-4.1.9 Work with transit agencies to provide improved marketing and promotion of the full range of transit services available to Key Peninsula residents, including bus service, vanpooling, and rideshare services.

KP T-4.1.10 Encourage transit agencies to expand the network of vanpool services that operate on the Key Peninsula.

KP T-4.2 Provide transportation improvements that facilitate bus travel and pedestrian access to bus stops.

KP T-4.2.1 Work with transit agencies to identify locations where improvements are needed to improve bus travel. Consider such improvements as part of future roadway improvement projects.

KP T-4.2.2 Facilitate pedestrian access to bus stops through the provision of shoulder improvements, which can also serve as passenger waiting areas.

KP T-4.2.3 Locate bus stops at convenient locations where buses can pull off the roadway. Avoid the placement of bus stops near busy intersections, whenever possible.

KP T-4.3 Support the expansion of existing park-and-ride lots that serve Key Peninsula commuters and the development of new park-and-ride lots in the Key Peninsula area.

KP T-4.3.1 Support the expansion of the Purdy park-and-ride lot and any related expansion of local and regional bus service at that location.

KP T-4.3.2 Work with transit agencies to obtain park-and-ride lots through leasing or purchasing of state and private properties. Consider the feasibility of developing a park-and-ride lot along SR-302 (e.g., Lake Kathryn Village shopping center) to serve residents in the northern part of the Key Peninsula area.

14. Work with Key Peninsula Metro Parks and the Washington State Department of Natural Resources to transfer surplus DNR lands to Metro Parks. (PALS, Parks)
15. Work with Key Peninsula Metro Parks to finalize the 360 acre park Master Development Site Plan and implement the plan through approval by the County Hearing Examiner. (Parks, PALS)
16. Pursue partnership opportunities for the acquisition of regional, neighborhood, and community park sites. (Parks)
17. Provide technical assistance to the Key Peninsula Metro Parks in the preparation of grants for park property acquisition, operation, and maintenance. (Parks)
18. Plan for a community-wide system of public trails to complement the nonmotorized transportation system. (Parks)
19. Establish a park impact fee, land dedication, or fee-in-lieu-of dedication program for community and neighborhood level parks within the plan area. (PALS, Parks)
20. Amend the Pierce County Development Regulations to require the dedication of regional trails or a fee-in-lieu-of land dedication during the site development process and to require the installation of nonmotorized transportation trails that connect new developments to schools, parks, or adjacent developments. (PALS, Parks)

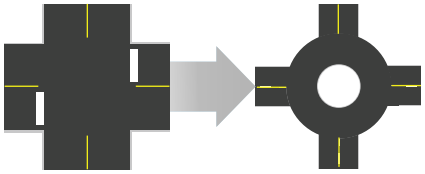
Transportation

21. Consider amending the Pierce County Transportation Plan (Element) to include the motorized and nonmotorized transportation projects and priorities in the Key Peninsula Community Plan. (PWU)
22. Coordinate with WSDOT to ensure that improvements to SR 302 in the Key Peninsula area are included in the updates to the Highway System Plan (HSP) and other WSDOT planning and programming documents. (PALS, PWU)
23. Implement a program to investigate the feasibility of traffic calming measures and other strategies to address vehicle speeding and pedestrian safety concerns on the Key Peninsula. This program should include the participation of WSDOT, Peninsula School District, and local civic groups. (PWU, Sheriff)
24. Coordinate with WSDOT, the Key Peninsula Metro Park District, and other local groups to identify and implement an interconnected system of nonmotorized improvements throughout the Key Peninsula area. (Parks, PALS, PWU)
25. Work with the City of Tacoma, the Key Peninsula Metro Park District, and other affected property owners to study the feasibility of developing a regional multi-use trail along 144th Street KPN/NW (Powerline Road) and the Tacoma-Lake Cushman power transmission lines. (Parks, PALS, PWU)
26. Coordinate with Pierce Transit to increase the frequency and number of bus stops for the Bus PLUS service in Key Peninsula. Emphasis should be given to providing more frequent connections to the express bus service at the Purdy Park-and-Ride lot. (PALS, PWU)
27. Work with Pierce Transit to increase the number of Park-and-Ride lots in the Key Peninsula area. Consideration should be given to Lake Kathryn Village as a potential site for a Park-and-Ride lot. (PALS, PWU)

U.S. Department of Transportation
Federal Highway Administration

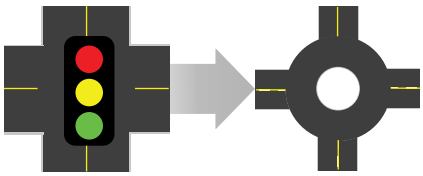
Safety Benefits:

Two-Way Stop-Controlled Intersection to a Roundabout



82%
reduction in fatal and injury crashes.[1]

Signalized Intersection to a Roundabout



78%
reduction in fatal and injury crashes.[1]

For more information on this and other FHWA Proven Safety Countermeasures, please visit https://highways.dot.gov/safety/proven-safety-countermeasures and https://highways.dot.gov/safety/intersection-safety/intersection-types/roundabouts.

FHWA-SA-21-042

Roundabouts

The modern roundabout is an intersection with a circular configuration that safely and efficiently moves traffic. Roundabouts feature channelized, curved approaches that reduce vehicle speed, entry yield control that gives right-of-way to circulating traffic, and counterclockwise flow around a central island that minimizes conflict points. The net result of lower speeds and reduced conflicts at roundabouts is an environment where crashes that cause injury or fatality are substantially reduced.

Roundabouts are not only a safer type of intersection; they are also efficient in terms of keeping people moving. Even while calming traffic, they can reduce delay and queuing when compared to other intersection alternatives. Furthermore, the lower vehicular speeds and reduced conflict environment can create a more suitable environment for walking and bicycling.

Roundabouts can be implemented in both urban and rural areas under a wide range of traffic conditions. They can replace signals, two-way stop controls, and all-way stop controls. Roundabouts are an effective option for managing speed and transitioning traffic from high-speed to low-speed environments, such as freeway interchange ramp terminals, and rural intersections along high-speed roads.

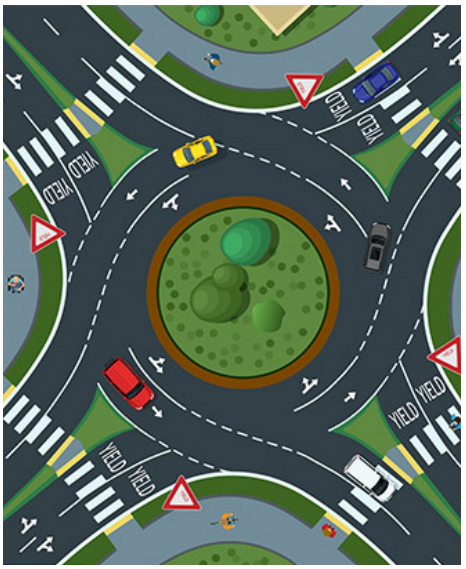


Illustration of a multilane roundabout. Source: FHWA

Example of a single-lane roundabout. Source: FHWA

1 (CMF ID: 211,226) AASHTO. The Highway Safety Manual, American Association of State Highway Transportation Professionals, Washington, D.C., (2010).

The preferred alternative, to construct a single-lane roundabout, would include the reconstruction of the intersection and the approaches on Key Peninsula Highway KPN, Lackey Road KPN, and Jackson Lake Road KPN. The single-lane roundabout would provide a non-mountable center island with a truck apron and would provide raised splitter islands on all legs. The raised splitter islands would include crosswalk cut-outs on each leg. From the project limits to the beginning point of each splitter island, the project would provide paved shoulders and barrier curb which would transition into curb, gutter and sidewalk at the beginning point of the splitter island. The curb, gutter, and sidewalk should be constructed along each quadrant within the roundabout.

The intersection analysis was based upon the AM and PM peak hour data that was conducted on March 28, 2017. The future data was projected by using an annual growth factor applied to the current peak hour data. The PM peak hour traffic volumes are typically higher than the AM peak hour. For this reason the PM peak hour levels of service are compared in the future conditions section for the six alternatives.

The existing level of service for the intersection of Key Peninsula Highway KPN, Lackey Road KPN and Jackson Lake Road KPN is an A for all approaches.

Recommendations

- It is proposed to construct alternative two, a single-lane roundabout with a non-mountable center island, a truck apron, and raised splitter islands with crosswalk cut-outs on all legs of the intersection.
- Construct intersection illumination to Pierce County lighting standards.
- Construct a 100 to 150 foot outside diameter of circulating roadway in the roundabout. The non-mountable center island would be sized based upon Autoturn analysis. The design vehicle would be a WB-40.
- The design entry speed for the single-lane roundabout is recommended to be 15 MPH to 25 MPH per the WSDOT Design Manual.
- The entry lane width should be within the range of 14 feet to 18 feet and the circulating lane width should be in the range of 14 feet to 20 feet. The intersection corner radii should include curb, gutter, and sidewalk. Outside of the roundabout splitter islands, the approach roadway should include paved shoulders with asphalt barrier curb.
- The design of the single-lane roundabout shall adhere to published criteria based upon design speed for the sight distance around the circulating roadway and on the approaches of the roundabout.
- Additional right of way should be acquired if necessary to accommodate the roundabout and splitter islands.
- Lane markings should adhere to published Pierce County Standard Drawings.

Collision Review

In the past 5 years, there have been 16 collisions (from January 1, 2012 thru December 31, 2016). The highest number of collision types reported at this intersection are right angle collisions. The leg with the most collisions over the last five years is Lackey Road KPN with 10 collisions. All rear end type collisions have occurred on the northbound approach on Key Peninsula Highway KPN. The number of collisions per year by type are indicated below.

Accident Type	2012	2013	2014	2015	2016	Total	Percent of Total
Right angle	0	0	2	2	2	6	38
Rear end	1	1	0	3	0	5	31
Sideswipe	0	0	0	1	0	1	6
Fixed object	0	3	1	0	0	4	25

FUTURE CONDITIONS

Alternative One would do nothing to the intersection. There would be a drop in level of service in the eastbound direction to a LOS B, while all other approaches would remain at a LOS A with the delay increasing minimally in the buildout year of 2022. In the design year of 2042 however, the level of service in the eastbound direction and the south-eastbound direction would fall to a LOS C and a LOS B, with the north and southbound directions remaining the same.

Alternative Two (Preferred) would construct a single-lane roundabout at the intersection of Key Peninsula Highway KPN, Lackey Road KPN, and Jackson Lake Road KPN. This alternative would improve the level of service in the eastbound direction from a LOS B to a LOS A in the build-out year when compared to Alternative One. All other approaches would remain the same with a LOS A. Alternative Two would slightly increase the delay in the north and southbound directions due to traffic slowing down through the roundabout. In 2042, the level of service would remain the same at a LOS A for all approaches with delays minimally increasing. This Alternative would also likely improve safety for the minor approaches based on slower moving traffic at the roundabout.

Alternative Three would provide a left-turn lane on Key Peninsula Highway KPN in the northbound direction. This alternative would improve safety with the addition of the left-turn lane by removing the left turning vehicles from the through lane in a horizontal curve. However, this alternative would not improve the level of service in the buildout year when compared to Alternative One. By 2042, the level of service in the eastbound and south-eastbound directions would be a LOS C and a LOS B.

Alternative Four would realign Jackson Lake Road KPN to connect into Lackey Road KPN, northwest of the current intersection location. This would create two separate “Tee” intersections. Jackson Lake Road KPN would be stop controlled at Lackey Road KPN. This alternative would eliminate the confusion at the current intersection by combining the two approaches into one approach. The level of service in the PM peak hour for the buildout year,

ANALYSIS

Future Level of Service at Project Build-out and Design Year

The following table summarizes the Project Build-out and Design Year Level of Service during both the AM and PM peak hour:

AM PEAK HOUR

Year	Alternative	Approach Direction	Approach Delay (sec/veh)	Approach LOS	Overall LOS & Delay (sec/veh)	Maximum V/C
2017	1 *Existing Alignment*	NB	0.9	A		
		SB	0.4	A		
		EB*	7.4	A		
		SEB	5.0	A		
2022	1 *Existing Alignment*	NB	1.0	A		
		SB	0.5	A		
		EB*	7.9	A		
		SEB	5.3	A		
2022	2 *Single-lane Roundabout*	NB	5.4	A	A	0.28
		SB	3.7	A		
		EB	3.6	A	4.6	
		SEB	3.4	A		
2022	3 *Left-Turn Lane NB*	NB	0.7	A		
		SB	0.5	A		
		EB*	8.5	A		
		SEB	5.7	A		
2022	4 *Jackson Lake Rd KPN / Lackey Rd KPN*	NEB*	8.8	A		
		NWB	2.7	A		
		SEB	0	A		
	Key Peninsula Hy / Lackey Rd KPN	NB	0.7	A		
		SB	0	A		
		SEB*	12.4	B		
2022	5 *Left-Turn Lane NB and Right-Turn Lane SB*	NB	0.7	A		
		SB	0.4	A		
		EB*	8.9	A		
		SEB	5.7	A		
2022	6 *Key Peninsula Hy KPN / Lackey Rd KPN*	NB	0.7	A		
		SB	0	A		
		SEB*	10.5	B		
	Key Peninsula Hy KPN / Jackson Lake Rd KPN	NB	0.1	A		
		SB	0	A		
		EB*	11.5	B		

2042	1 *Existing Alignment*	NB	1.3	A		
		SB	0.6	A		
		EB*	10.8	B		
		SEB	6.3	A		
2042	2 *Single-lane Roundabout*	NB	6.7	A	A	0.39
		SB	4.1	A		
		EB	4.0	A	5.6	
		SEB	3.7	A		
2042	3 *Left-Turn Lane NB*	NB	0.9	A		
		SB	0.6	A		
		EB*	11.7	B		
		SEB	6.9	A		
2042	4 *Jackson Lake Rd KPN / Lackey Rd KPN*	NEB*	9.0	A		
		NWB	2.8	A		
		SEB	0	A		
	Key Peninsula Hy / Lackey Rd KPN	NB	0.7	A		
		SB	0	A		
		SEB*	15.2	C		
2042	5 *Left-Turn Lane NB and Right-Turn Lane SB*	NB	0.9	A		
		SB	0.5	A		
		EB*	12.4	B		
		SEB	7.1	A		
2042	6 *Key Peninsula Hy KPN / Lackey Rd KPN*	NB	0.7	A		
		SB	0	A		
		SEB*	11.5	B		
	Key Peninsula Hy KPN / Jackson Lake Rd KPN	NB	0.1	A		
		SB	0	A		
		EB*	12.8	B		

SYNCHRO 10: HCM 6th

* The critical movement

PM PEAK HOUR

Year	Alternative	Approach Direction	Approach Delay (sec/veh)	Approach LOS	Overall LOS & Delay (sec/veh)	Maximum V/C
2017	1 *Existing Alignment*	NB	1.7	A		
		SB	1.3	A		
		EB*	10.0	A		
		SEB	6.7	A		
2022	1 *Existing Alignment*	NB	1.9	A		
		SB	1.4	A		
		EB*	10.8	B		
		SEB	7.7	A		
2022	2 *Single-lane Roundabout*	NB	4.2	A	A	0.45
		SB	7.2	A		
		EB	5.2	A	6.2	
		SEB	5.5	A		
2022	3 *Key Peninsula Hy KPN Left-Turn Lane NB*	NB	1.4	A		
		SB	1.4	A		
		EB*	12.3	B		
		SEB	8.5	A		
2022	4 *Jackson Lake Rd KPN / Lackey Rd KPN*	NEB*	9.0	A		
		NWB	3.6	A		
		SEB	0	A		
	Key Peninsula Hy / Lackey Rd KPN	NB	1.6	A		
		SB	0	A		
		SEB*	13.5	B		
2022	5 *Left-Turn Lane NB and Right-Turn Lane SB*	NB	1.4	A		
		SB	1.3	A		
		EB*	13.0	B		
		SEB	9.0	A		
2022	6 *Key Peninsula Hy KPN / Lackey Rd KPN*	NB	1.3	A		
		SB	0	A		
		SEB*	12.1	B		
	Key Peninsula Hy KPN / Jackson Lake Rd KPN	NB	0.3	A		
		SB	0	A		
		EB*	12.1	B		

2042	1 *Existing Alignment*	NB	3.5	A		
		SB	2.1	A		
		EB*	18.5	C		
		SEB	14.5	B		
2042	2 *Single-lane Roundabout*	NB	4.9	A	A	0.61
		SB	10.2	B		
		EB	6.5	A	8.4	
		SEB	7.2	A		
2042	3 *Key Peninsula Hy KPN Left-Turn Lane NB*	NB	2.3	A		
		SB	2.1	A		
		EB*	21.4	C		
		SEB	15.7	B		
2042	4 *Jackson Lake Rd KPN / Lackey Rd KPN*	NEB*	9.1	A		
		NWB	3.7	A		
		SEB	0	A		
	Key Peninsula Hy / Lackey Rd KPN	NB	1.6	A		
		SB	0	A		
		SEB*	17.8	C		
2042	5 *Left-Turn Lane NB and Right-Turn Lane SB*	NB	2.2	A		
		SB	1.8	A		
		EB*	22.0	C		
		SEB	17.4	C		
2042	6 *Key Peninsula Hy KPN / Lackey Rd KPN*	NB	1.4	A		
		SB	0	A		
		SEB*	14.4	B		
	Key Peninsula Hy KPN / Jackson Lake Rd KPN	NB	0.3	A		
		SB	0	A		
		EB*	13.9	B		

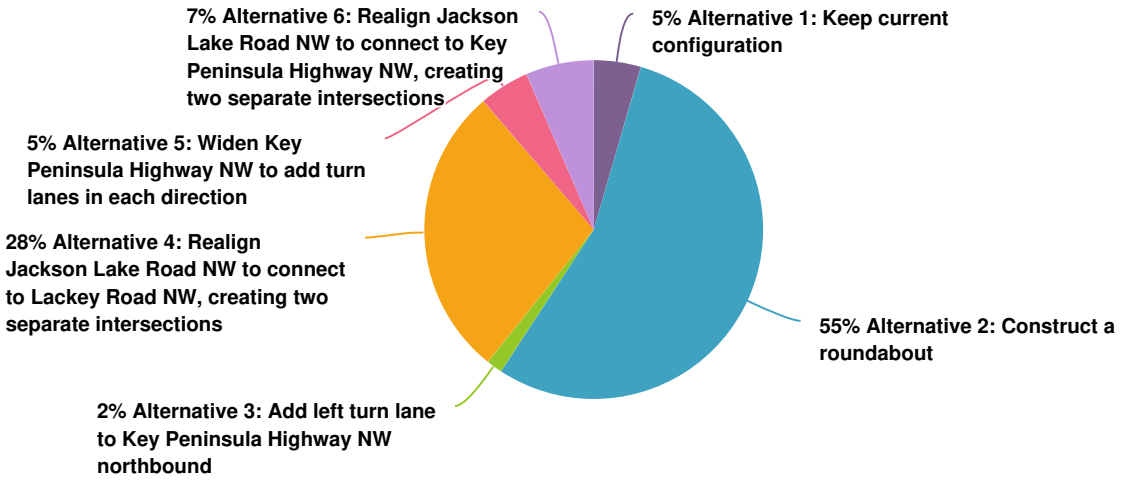
SYNCHRO 10: HCM 6th

* The critical movement

Queue Length

The following tables provide the 95th percentile queue length for the alternatives shown in the prior table:

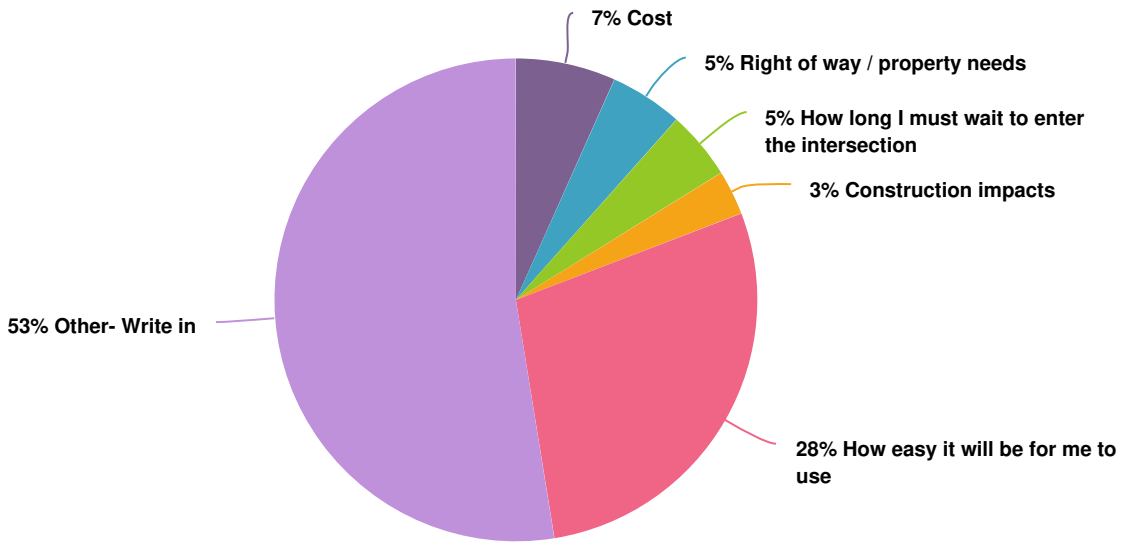
1. After viewing the alternatives for reconfiguring the intersection at Key Peninsula Highway NW/Lackey Road NW/Jackson Lake Road NW, which one do you feel would be the best option?



Value	Percent	Responses
Alternative 1: Keep current configuration	4.5%	15
Alternative 2: Construct a roundabout	54.8%	184
Alternative 3: Add left turn lane to Key Peninsula Highway NW northbound	1.5%	5
Alternative 4: Realign Jackson Lake Road NW to connect to Lackey Road NW, creating two separate intersections	28.0%	94
Alternative 5: Widen Key Peninsula Highway NW to add turn lanes in each direction	4.8%	16
Alternative 6: Realign Jackson Lake Road NW to connect to Key Peninsula Highway NW, creating two separate intersections	6.5%	22

Totals: 336

5. What is the most important factor to you when choosing your preferred alternative?

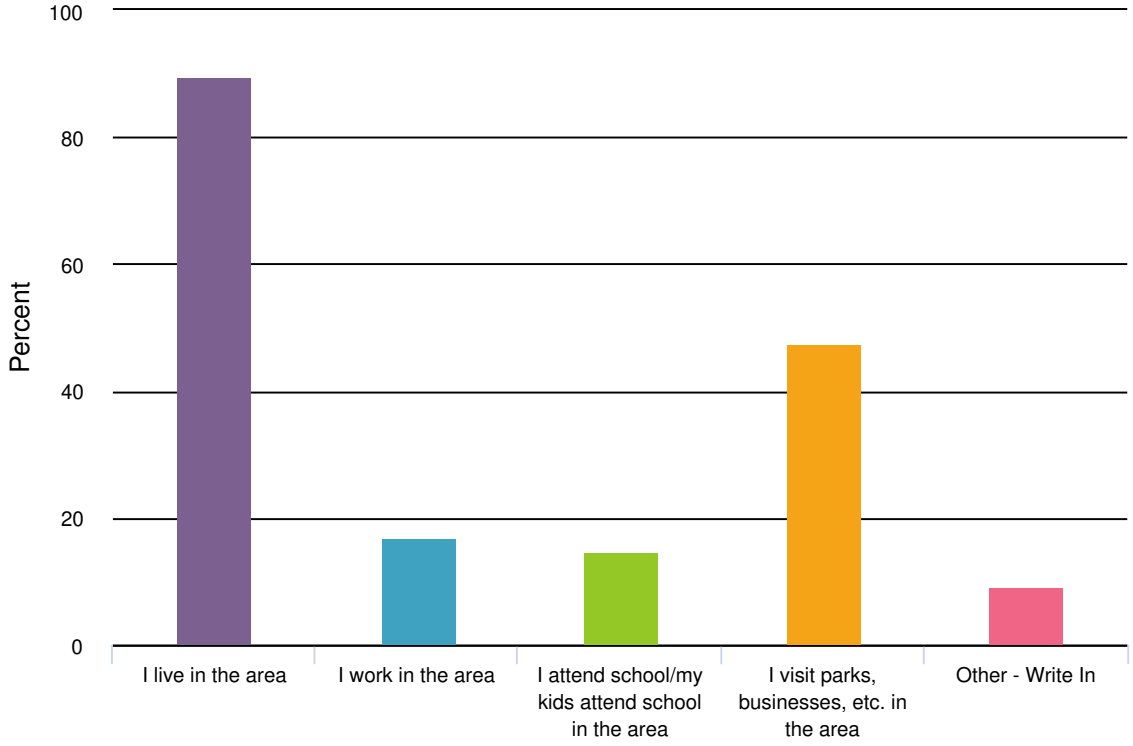


Value	Percent	Responses
Cost	6.7%	22
Right of way / property needs	4.9%	16
How long I must wait to enter the intersection	4.6%	15
Construction impacts	3.0%	10
How easy it will be for me to use	28.3%	93
Other- Write in	52.6%	173

Totals: 329

Other- Write in	Count
Safety	41
safety	18
Safety	11
Totals	173

7. Tell us about yourself. (Check all that apply)



Value	Percent	Responses
I live in the area	89.5%	290
I work in the area	17.0%	55
I attend school/my kids attend school in the area	14.8%	48
I visit parks, businesses, etc. in the area	47.5%	154
Other - Write In	9.3%	30

Other - Write In	Count
Almost had a collision at this Intersection	1
Commute daily through this location.	1
Family	1
Family in area	1
Have lived and still frequent the area often.	1
Totals	30

Pierce County
Planning & Public Works

2024-2029 TRANSPORTATION IMPROVEMENT PROGRAM

Road Projects

	Project Phase	Prior Expend.	2024 ANNUAL PROGRAM Revenue Sources in $1,000's Local	Federal	State	Other	2024 Total	2025 Future Allocation Revenue Sources in $1,000's Local	Federal	State	Other	2026 Future Allocation Revenue Sources in $1,000's Local	Federal	State	Other	2027- 2029 Future Allocation Revenue Sources in $1,000's Local	Federal	State	Other	2024 - 2029 TOTAL
Project Title: **FALLING WATER BV E** Limits: - Tehaleh Bv E to 181 Av E Scope Description: - Public/private partnership to construct a new arterial roadway. Other project information: Priority Group: **MP** Work Class: **1** CRP: **5841** Est. Total Cost: **TBD** Map ID: **672** Fully funded: **No** Map Page No.: **4** Council District: **1** Length (miles): **1.21** Elements: **A,B,D,J,W,X**	**PE**	37																		
	FE					25 DEV	**25**				25 DEV									**50**
	ROW																			
	CON					25 DEV	**25**				25 DEV									**50**
	Total	*37*				**50**	**50**				**50**									**100**
								50												
Project Title: **GOLDEN GIVEN RD E / 99 ST E** Limits: - Intersection Scope Description: - Construct urban compact roundabout with the associated sidewalk, illumination, and storm drainage improvements. Other project information: Priority Group: **TSIP** Work Class: **6** CRP: **5887** Est. Total Cost: **1,600** Map ID: **726** Fully funded: **Yes** Map Page No.: **4** Council District: **5** Length (miles): **0.25** Elements: **B,D,F,J**	**PE**	199																		
	FE	65		75 HSIP			**75**	74 CRF	26 HSIP											**175**
	ROW	25		65 HSIP			**65**	25 CRF	15 HSIP											**105**
	CON							33 CRF	300 HSIP			78 CRF	701 HSIP							**1,116**
	Total	*289*		**140**			**140**	**132**	**341**			**78**	**701**							**1,396**
								473				**779**				**4**				
Project Title: **GRANT / DEVELOPER MATCHING PROGRAM** Limits: - Various locations Scope Description: - Match for unforeseen outside grants, and/or developer latecomer agreements. Other project information: Priority Group: **MPGM** Work Class: **8** CRP: **5900** Est. Total Cost: **TBD** Map ID: **Not on Map** Fully funded: **Yes** Map Page No.: **N/A** Council District: Length (miles): **N/A** Elements:	**PE**		50 CRF				**50**	50 CRF				50 CRF				150 CRF				**300**
	FE		50 CRF				**50**	50 CRF				50 CRF				150 CRF				**300**
	ROW		50 CRF				**50**	50 CRF				50 CRF				150 CRF				**300**
	CON		350 CRF				**350**	350 CRF				350 CRF				1,050 CRF				**2,100**
	Total		**500**				**500**	**500**				**500**				**1,500**				**3,000**
								500				**500**				**1,500**				

If the grant is awarded, these funds will be moved into the Lackey/Jackson/Key Peninsula project (next page) to complete the local match.

Pierce County
Planning & Public Works

2024-2029 TRANSPORTATION IMPROVEMENT PROGRAM

Road Projects

	Project Phase	Prior Expend.	2024 ANNUAL PROGRAM Revenue Sources in $1,000's Local	Federal	State	Other	2024 Total	2025 Future Allocation Revenue Sources in $1,000's Local	Federal	State	Other	2026 Future Allocation Revenue Sources in $1,000's Local	Federal	State	Other	2027- 2029 Future Allocation Revenue Sources in $1,000's Local	Federal	State	Other	2024 - 2029 TOTAL
Project Title: **GUARDRAIL PROGRAM - 2025**	PE																			
Limits: -Various locations	FE							20 CRF												20
Scope Description: -Install new guardrail, and/or replace existing guardrail.	ROW																			
Other project information: Priority Group: **MPGM** Work Class: **6** CRP: **5978** Est. Total Cost: **TBD** Map ID: **Not on Map** Fully funded: **Yes** Map Page No.: Council District: Length (miles): **N/A** Elements: **V**	CON							180 CRF				4 CRF								184
	Total							200				4								204
								200				4								
Project Title: **GUARDRAIL PROGRAM - 2026-2029**	PE																			
Limits: -Various locations	FE											20 CRF				60 CRF				80
Scope Description: -Install new guardrail, and/or replace existing guardrail.	ROW																			
Other project information: Priority Group: **MPGM** Work Class: **6** CRP: **5400** Est. Total Cost: **1,020** Map ID: **Not on Map** Fully funded: **Yes** Map Page No.: **N/A** Council District: Length (miles): **N/A** Elements: **V**	CON											180 CRF				540 CRF				720
	Total											200				600				800
												200				600				
Project Title: **LACKEY RD NW / JACKSON LK RD NW / KEY PEN HY NW**	PE	437	193 CRF				193													193
Limits: -Intersection	FE							100 CRF												100
Scope Description: -Construct rural roundabout with shoulders.	ROW	45						20 CRF												20
Other project information: Priority Group: **TSIP** Work Class: **1** CRP: **5769** Est. Total Cost: **TBD** Map ID: **152** Fully funded: **No** Map Page No.: **1** Council District: **7** Length (miles): **0.44** Elements: **U**	CON											500 CRF 500 REET								1,000
	Total	*482*	193				193	120				1,000								1,313
								120				1,000								

Local funding committed:
$ 482K - Prior Expenditure
$ 1,313K - Programmed
$ 1,795K - TOTAL

Any remaining match funds will come from the "Grant / Developer Matching Program" (see previous page).

PIERCE COUNTY PLANNING AND PUBLIC WORKS
TRANSPORTATION IMPROVEMENT SECTION

Lackey Rd NW / Jackson Lk Rd NW / Key Peninsula Highway NW
Intersection w/Roundabout
CRP 5769

Engineer: E. Amundsen
Lead Engineer: M. Vairapandi, PE
Date: 5/23/2023

ENGINEER'S ESTIMATE					
ITEM NO.	**QUANTITY**	**UNITS**	**ITEM DESCRIPTION**	**UNIT PRICE**	**AMOUNT**
			PREPARATION		
1	LUMP SUM	LS	MOBILIZATION	10%	$289,000.00
2	3.5	ACRE	CLEARING AND GRUBBING	$15,000.00	$52,500.00
3	104	LF	REMOVING EXISTING PIPE	$12.00	$1,248.00
4	100	LF	REMOVING FENCE	$5.00	$500.00
			GRADING		
5	4,000	CY	ROADWAY EXCAVATION INCL. HAUL	$25.00	$100,000.00
6	3,340	TON	GRAVEL BORROW INCL. HAUL	$35.00	$116,900.00
7	1,670	CY	EMBANKMENT COMPACTION	$10.00	$16,700.00
8	975	CY	POND EXCAVATION INCL. HAUL	$50.00	$48,750.00
			DRAINAGE		
8	35	TON	QUARRY SPALLS	$70.00	$2,450.00
9	240	LF	UNDERDRAIN PIPE 12 IN. DIAM.	$75.00	$18,000.00
			STORM SEWER		
10	35	EACH	CATCH BASIN TYPE 1	$1,750.00	$61,250.00
11	11	EACH	CATCH BASIN TYPE 2 48 IN. DIAM	$4,400.00	$48,400.00
12	2	EACH	CATCH BASIN TYPE 2 84 IN. DIAM	$11,000.00	$22,000.00
13	3,402	LF	SCHEDULE A STORM SEWER PIPE 12 IN. DIAM	$55.00	$187,110.00
14	2	EACH	PRECAST STORMFILTER VAULT INCLUDING INSTALL	$75,000.00	$150,000.00
			SURFACING		
15	2,600	TON	CRUSHED SURFACING BASE COURSE	$45.00	$117,000.00
			HOT MIX ASPHALT		
16	2,600	TON	HMA CL. 1/2 IN. PG58H-22	$160.00	$416,000.00
17	CALC. 8,320	DOL	COMPACTION PRICE ADJUSTMENT	$1.00	$8,320.00
18	CALC. 20,800	DOL	ASPHALT COST PRICE ADJUSTMENT	$1.00	$20,800.00
19	275	TON	HMA FOR APPROACH CL. 1/2 IN. PG58H-22	$200.00	$55,000.00
			EROSION CONTROL AND ROADSIDE RESTORATION		
20	46	DAY	ESC LEAD	$55.00	$2,530.00
21	49	EACH	INLET PROTECTION	$50.00	$2,450.00
22	125	SY	STABILIZED CONSTRUCTION ENTRANCE	$25.00	$3,125.00
23	1,765	LF	SILT FENCE	$6.00	$10,590.00
24	EST. 7,500	DOL	EROSION/WATER POLLUTION CONTROL	1.00	$7,500.00
25	17,100	SY	STRAW MULCH	$0.75	$12,825.00
26	1,444.4	SY	NATIVE WATER QUALITY SEED MIX	$1.50	$2,166.67
27	0.5	ACRE	SEEDING, FERTILIZING, AND MULCHING	$5,000.00	$2,500.00
28	1.5	ACRE	TOPSOIL TYPE A	$40,000.00	$60,000.00
29	0.5	ACRE	TOPSOIL TYPE C	$30,000.00	$15,000.00
30	17	EACH	PSIPE EVERGREEN HUCKLEBERRY (*VACCINIUM OVATUM*) 1 GAL	$15.00	$255.00
31	18	EACH	PSIPE WILD ROSE (*ROSA NUTKANA*)1 GAL	$15.00	$270.00
32	36	EACH	PSIPE SNOWBERRY (*SYMPHORICARPOS ALBUS*) 1 GAL	$10.00	$360.00
33	72	EACH	PSIPE CRIMSON PYGMY BARBERRY (*BERBERIS THUNBERGII*)1 GAL	$15.00	$1,080.00
34	52	EACH	PSIPE OREGON GRAPE (*MAHONIA AQUIFOLIUM*) 1 GAL	$10.00	$520.00
35	58	EACH	PSIPE TRUMPET DAFFODIL (*NARCISSUS KING ALFRED*)	$8.00	$464.00
36	236	EACH	PSIPE ELIJAH BLUE FESCUE (*FESTUCA GLAUCA*)1 GAL	$8.00	$1,888.00
37	4500	SF	WETLAND SOD	$6.00	$27,000.00
38	710	SY	BARK OR WOOD CHIP MULCH	$10.00	$7,100.00

ITEM NO.	QUANTITY	UNITS	ITEM DESCRIPTION	UNIT PRICE	AMOUNT
			TRAFFIC		
39	890	LF	CEMENT CONC. TRAFFIC CURB AND GUTTER	$40.00	$35,600.00
40	1,550	LF	CEMENT CONC. TRAFFIC CURB	$50.00	$77,500.00
41	283	LF	ROUNDABOUT CENTRAL ISLAND CEMENT CONC. CURB	$50.00	$14,150.00
42	358	LF	ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER	$40.00	$14,320.00
43	256	LF	CEMENT CONC. PEDESTRIAN CURB	$40.00	$10,240.00
44	2,250	LF	TEMPORARY PAVEMENT MARKING	$0.50	$1,125.00
45	LUMP SUM	LS	PERMANENT SIGNING	$20,000.00	$20,000.00
46	EST. 14,000	DOL	ELECTRICAL SERVICE	$1.00	$14,000.00
47	LUMP SUM	LS	ILLUMINATION AND RRFB SYSTEM	$250,000.00	$250,000.00
48	1,920	HR	PORTABLE CHANGEABLE MESSAGE SIGN	$5.00	$9,600.00
49	LUMP SUM	LS	OTHER TEMPORARY TRAFFIC CONTROL	$25,400.00	$25,400.00
50	5,600	HR	FLAGGERS	$65.00	$364,000.00
51	700	HR	OTHER TRAFFIC CONTROL LABOR	$55.00	$38,500.00
52	LUMP SUM	LS	TRAFFIC CONTROL SUPERVISOR	$54,600.00	$54,600.00
53	104	SF	CONSTRUCTION SIGNS CLASS A	$30.00	$3,120.00
			OTHER ITEMS		
54	LUMP SUM	LS	UTILITY COORDINATION	$15,000.00	$15,000.00
55	2,100	CY	STRUCTURE EXCAVATION CLASS B INCL. HAUL	$5.00	$10,500.00
56	15,829	SF	SHORING OR EXTRA EXCAVATION CLASS B	$1.00	$15,829.00
57	567	CY	PIPE ZONE BACKFILL	$45.00	$25,515.00
58	306	CY	GRAVEL BACKFILL FOR UNDERGROUND DRAINAGE	$40.00	$12,240.00
59	50	MGAL	WATER	$60.00	$3,000.00
60	LUMP SUM	LS	SURVEYING	$10,000.00	$10,000.00
61	2	EACH	MONUMENT	$1,300.00	$2,600.00
62	591	SY	CEMENT CONC. SIDEWALK	$40.00	$23,640.00
63	430	SY	TEXTURED CEMENT CONC. TRUCK APRON	$100.00	$43,000.00
64	490	SY	TEXTURED CEMENT CONC. SPLITTER ISLAND	$90.00	$44,100.00
65	8	EACH	CEMENT CONC. CURB RAMP TYPE SINGLE DIRECTION	$1,000.00	$8,000.00
66	8	EACH	CEMENT CONC. CURB RAMP TYPE PARALLEL	$3,000.00	$24,000.00
67	1,033	LF	CHAIN LINK FENCE TYPE 3	$40.00	$41,320.00
68	12	EACH	END, GATE, CORNER, PULLPOST FOR CHAIN LINK FENCE	$450.00	$5,400.00
69	1	EACH	DOUBLE 20 FT. COATED CHAIN LINK GATE	$1,500.00	$1,500.00
70	EST. 10,000	DOL	ROADSIDE CLEANUP	1.00	$10,000.00
71	LUMP SUM	LS	TRIMMING AND CLEANUP	$3,000.00	$3,000.00
72	EST. 30,000	DOL	MINOR CHANGE	1.00	$30,000.00
73	LUMP SUM	LS	SPCC PLAN	$500.00	$500.00
74	LUMP SUM	LS	FDC PLAN	$500.00	$500.00
75	1,944	SY	TEXTURED GEOMEMBRANE LINER	$12.00	$23,333.33
76	33	SY	CONSTRUCTION GEOTEXTILE FOR SEPARATION	$20.00	$660.00
77	668	SY	CONSTRUCTION GEOTEXTILE FOR UNDERGROUND DRAINAGE	$5.00	$3,340.00

BID ITEM SUBTOTAL	**$3,178,684.00**
Contingency (15%)	$476,802.60
CONTRACT ESTIMATE	**$3,655,486.60**
INFLATION (3 YEARS @ 4% PER YEAR)	$456,438.68
TOTAL CONTRACT ESTIMATE	**$4,111,925.28**

CONSTRUCTION PHASE

Construction Engineering (15% Total Contract Estimate)	$616,789
Contract Total	$4,111,925
CONSTRUCTION PHASE TOTAL	**$4,728,714**

Use **$4,729,000**

Pierce County
Planning & Public Works

2024-2029 TRANSPORTATION IMPROVEMENT PROGRAM

Road Projects

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Project Title: **FALLING WATER BV E** Limits: - Tehaleh Bv E to 181 Av E Scope Description: - Public/private partnership to construct a new arterial roadway. Other project information: Priority Group: **MP** Work Class: **1** CRP: **5841** Est. Total Cost: **TBD** Map ID: **672** Fully funded: **No** Map Page No.: **4** Council District: **1** Length (miles): **1.21** Elements: **A,B,D,J,W,X**	**PE**	37																		
	FE					25 DEV	**25**				25 DEV									**50**
	ROW																			
	CON					25 DEV	**25**				25 DEV									**50**
	Total	*37*				**50**	**50**				**50**									**100**
								50												
Project Title: **GOLDEN GIVEN RD E / 99 ST E** Limits: - Intersection Scope Description: - Construct urban compact roundabout with the associated sidewalk, illumination, and storm drainage improvements. Other project information: Priority Group: **TSIP** Work Class: **6** CRP: **5887** Est. Total Cost: **1,600** Map ID: **726** Fully funded: **Yes** Map Page No.: **4** Council District: **5** Length (miles): **0.25** Elements: **B,D,F,J**	**PE**	199																		
	FE	65		75 HSIP			**75**	74 CRF	26 HSIP											**175**
	ROW	25		65 HSIP			**65**	25 CRF	15 HSIP											**105**
	CON							33 CRF	300 HSIP			78 CRF	701 HSIP							**1,116**
	Total	*289*		**140**			**140**	**132**	**341**			**78**	**701**							**1,396**
								473				**779**				**4**				
Project Title: **GRANT / DEVELOPER MATCHING PROGRAM** Limits: - Various locations Scope Description: - Match for unforeseen outside grants, and/or developer latecomer agreements. Other project information: Priority Group: **MPGM** Work Class: **8** CRP: **5900** Est. Total Cost: **TBD** Map ID: **Not on Map** Fully funded: **Yes** Map Page No.: **N/A** Council District: Length (miles): **N/A** Elements:	**PE**		50 CRF				**50**	50 CRF				50 CRF				150 CRF				**300**
	FE		50 CRF				**50**	50 CRF				50 CRF				150 CRF				**300**
	ROW		50 CRF				**50**	50 CRF				50 CRF				150 CRF				**300**
	CON		350 CRF				**350**	350 CRF				350 CRF				1,050 CRF				**2,100**
	Total		**500**				**500**	**500**				**500**				**1,500**				**3,000**
								500				**500**				**1,500**				

If the grant is awarded, these funds will be moved into the Lackey/Jackson/Key Peninsula project (next page) to complete the local match.

Pierce County
Planning & Public Works

2024-2029 TRANSPORTATION IMPROVEMENT PROGRAM

Road Projects

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Limits: -Various locations	FE							20 CRF												20
Scope Description: -Install new guardrail, and/or replace existing guardrail.	ROW																			
Other project information: Priority Group: **MPGM** Work Class: **6** CRP: **5978** Est. Total Cost: **TBD** Map ID: **Not on Map** Fully funded: **Yes** Map Page No.: Council District: Length (miles): **N/A** Elements: **V**	CON							180 CRF				4 CRF								184
	Total							200				4								204
								200				4								
Project Title: **GUARDRAIL PROGRAM - 2026-2029**	PE																			
Limits: -Various locations	FE											20 CRF				60 CRF				80
Scope Description: -Install new guardrail, and/or replace existing guardrail.	ROW																			
Other project information: Priority Group: **MPGM** Work Class: **6** CRP: **5400** Est. Total Cost: **1,020** Map ID: **Not on Map** Fully funded: **Yes** Map Page No.: **N/A** Council District: Length (miles): **N/A** Elements: **V**	CON											180 CRF				540 CRF				720
	Total											200				600				800
												200				600				
Project Title: **LACKEY RD NW / JACKSON LK RD NW / KEY PEN HY NW**	PE	437	193 CRF				193													193
Limits: -Intersection	FE							100 CRF												100
Scope Description: -Construct rural roundabout with shoulders.	ROW	45						20 CRF												20
Other project information: Priority Group: **TSIP** Work Class: **1** CRP: **5769** Est. Total Cost: **TBD** Map ID: **152** Fully funded: **No** Map Page No.: **1** Council District: **7** Length (miles): **0.44** Elements: **U**	CON											500 CRF 500 REET								1,000
	Total	*482*	193				193	120				1,000								1,313
								120				1,000								

Local funding committed:
$ 482K - Prior Expenditure
$ 1,313K - Programmed
$ 1,795K - TOTAL

Any remaining match funds will come from the "Grant / Developer Matching Program" (see previous page).