Funding Application

**Competition**  
Regional FTA

**Application Type**  
Main Competition

**Status**  
submitted

**Submitted:**  
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**Prepopulated with screening form?**  
Yes

## Project Information

1. **Project Title**  
South King County Corridor Speed and Reliability Improvements

2. **Regional Transportation Plan ID**  
N/A

3. **Sponsoring Agency**  
King County Metro

4. **Cosponsors**  
N/A

5. **Does the sponsoring agency have "Certification Acceptance" status from WSDOT?**  
N/A

6. **If not, which agency will serve as your CA sponsor?**  
N/A

7. **Is your agency a designated recipient for FTA funds?**  
Yes

8. **Designated recipient concurrence**  
N/A

## Contact Information

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## Project Description

1. **Project Scope**  
This project will construct transit speed and reliability improvements on congested segments of Routes 165 (new) and 181. Route 181 travels between the Twin Lakes Park & Ride southeast of Federal Way, to the Federal Way Transit Center and Green River College in Auburn. Route 165 is a consolidation of routes 164 and 166, and is scheduled to begin service in September 2020, connecting the Burien Transit Center, Normandy Park commercial/residential areas, Highline College, the Kent Des Moines Park & Ride, Kent Station, and Green River College.

The project would reduce transit delay by constructing or implementing enhanced HOV lanes,
new bus lanes/bypass lanes, signal queue jumps, intersection turning restrictions, bus bulbs, signal timing optimization, improved bus stop spacing, passenger facility improvements, transit signal priority, off-board fare collection at selected locations if appropriate, channelization improvements, improved access to bus stops, and layover improvements if needed to enhance operations. See attachment 4 for list of preliminary improvements.

Project outcomes include:
- Travel time saving averaging 3-5 minutes per trip, a 5-10% reduction in peak hour travel times;
- A 3% ridership increase, adding an estimated 170 new weekday riders or 43,400 riders annually to the existing 1.5 million annual riders;
- Improved access and mobility to 140,000 people, include historically dependent transit populations;
- Improved access to 61,000 jobs from all sectors;
- Improved transit access and mobility to designated local and regional centers;
- Support adopted land use goals for housing and employment growth and retention;
- Eliminate greenhouse gas emission of approximately 38,000 kg CO2, and reduce an estimated 7,000 gallons annual fuel use from improved traffic operations and transit mode shift from single occupant vehicle (SOV) trips;

In addition, the Route 165 corridor is identified in METRO CONNECTS as a future RapidRide corridor.

2. Project Justification, Need, or Purpose
The need for the project is related to the following conditions and desired outcomes:

1) Reduce congestion and improve transit service speed and reliability.
   Congestion has increased bus travel times and impacted service reliability. These routes are among Metro’s least reliable routes in South King County. The routes fall well below Metro’s system wide on-time performance goal of 80%, averaging 68% evening peak on-time performance and 70-74% all-day on-time performance.

   This project will improve the reliability of service in these corridors and improve travel time by approximately 5-10%, removing or reducing travel time barriers and average time saving 3 to 5 minutes per trip (75,000-125,000 passenger hours per year).

2) Provide better service to designated regional and local centers.
The routes provide high-frequency service to multiple regional and local centers including:
- Kent, Burien, Auburn, Federal Way, and Kent Regional Manufacturing/Industrial (MIC) regional centers;
- Metro activity centers: Des Moines Marine View Dr/S 223rd, Highline College, and Kent East Hill 104th Ave SE/SE 240th, Twin Lake Commercial District, and Green River Community College; and
- City centers including: Federal Way’s Twin Lake Commercial District, Kent’s Midway Subarea and Auburn’s designated “Impression Corridors” on SE 320th St, SE 312th St, 8th St NE, M St, and 15th St SW.

3) Serve areas experiencing high population and employment growth.
In the cities of Burien, Normandy Park, Des Moines, Kent and Auburn, steady population and employment growth have increased demand for transit service. The corridor serves 140,000 people and 61,000 jobs located within 1/2 mile of the corridor. By 2040, PSRC forecasts population in the corridors will increase 14% to 160,000, and employment will increase 28% to 78,000.

4) Meet the transportation needs of historically underserved communities.
The routes serve a majority of minority, transit-dependent, and low income communities. The corridors serve areas where needs are the greatest, identified as priority population routes in King County Metro’s Mobility Framework.

5) Improve air quality and reduce greenhouse gas emissions.
The project is forecasted to reduce toxic vehicle emissions including approximately 38,000 kg of CO2 annually, improving air quality along the transit corridors.

Project Location
Project Location
Metro’s Routes 181 and 165 (new) in south King County. This corridor extends from Burien Transit Center in Burien to Twin Lakes Park & Ride in Federal Way, passing through the cities of Des Moines, Normandy Park, Kent, and Auburn and Transit Centers at Kent, Auburn, and Federal Way.

Please identify the county(ies) in which the project is located. (Select all that apply.)
King

Crossroad/landmark nearest the beginning of the project
Burien Transit Center

Crossroad/landmark nearest the end of the project
Twin Lakes Park & Ride

Map and project graphics
Attachment_1.pdf

Plan Consistency

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

If yes, please indicate the (1) plan name, (2) relevant section(s), and (3) page number where it can be found.
The project is consistent with the King County Metro Strategic Plan for Public Transportation which is adopted by the King County Council and included in the King County Comprehensive Plan by reference. It is also included in King County Metro’s METRO CONNECTS long-range plan. The project is supported in the comprehensive plans of Auburn, Burien, Des Moines, Federal Way, Kent, and Normandy Park.

King County Comprehensive Plan (2018):
• T-101 The Strategic Plan for Public Transportation 2011-2021 and King County Metro Service Guidelines, or successor plans, shall guide the planning, development and implementation of the public transportation system and services operated by the King County Metro Transit Division. (p. 7-6)

• T-103 In striving to meet the growing need for transportation services, King County shall seek to maximize the efficiency and effectiveness of its services, infrastructure and facilities. (p 7-8)

• T-204 King County should support local and regional growth plans and policies by focusing transit services on centers and other areas of concentrated activity. (p. 7-13)

Metro Strategic Plan (2015) Strategies:
• 5.1.3: Improve transit speed and reliability; (p. 41)

• 6.2.1: Continually explore and implement cost efficiencies, including operational and administrative efficiencies; (p. 45) and

• 6.2.2: Provide and maintain capital assets to support efficient and effective service delivery (p. 45).

METRO CONNECTS (2017):
Metro designated plan corridors 1052, 1056, and 1515 follow the majority of the current Route 165/181 corridor between Des Moines, Kent and Auburn and Federal Way. Metro Connects identifies these corridors for potential RapidRide service by 2025 and 2040, highlighting the potential for future investment in these routes. (pgs. 24, 25, and 30)

• Work with partners to invest in speed and reliability improvements (pg. 42)

• Develop partnerships to improve access to transit (pg. 59)

• Routes 165 and 181 are within Metro Access to Transit type Zones 1 and 2: High-density or medium density areas that are within walking distance of at least one frequent transit service served by frequent service. Strong emphasis on more bicycle and pedestrian facilities, little or no expansion of parking, Future bike/walk share 82-96% (pg. 54)

City of Auburn Comprehensive Plan (2015):
5.1 Coordination, Planning and Implementation Objective: Transportation System Management (TSM) To efficiently operate the existing transportation system through TSM strategies, thereby maximizing resources and reducing the need for costly system capacity expansion projects. (pg. 5-7)
5.4 Transit System Objective: Transit Services - To encourage the continued development of public transit systems and other alternatives to single occupant vehicle travel, to relieve traffic congestion, to reduce reliance on the automobile for personal transportation needs, to improve route coverage and scheduling, and to improve route coverage and scheduling, and to ensure transit is a convenient and reliable mode option for both local and regional trips. (pg. 5-19)

City of Burien Comprehensive Plan (2019)
Pol. TR 3.1.5 Work to improve transit system efficiency by incorporating transit supportive design features into its capital projects and road standards. Examples of transit-supportive design features include signal prioritization and stop-in-lane roadway designs. (pg. 2-70)

Pol. TR 3.1.6 Support enhanced local and regional transit service and facilities that provide frequent and reliable service between Burien, downtown Seattle, Sea-Tac Airport, employment centers and other designated centers or transit hubs. (pg. 2-70)

City of Des Moines Comprehensive Plan (2015):
TR 4.1.6 Support frequent local service linking Downtown, Des Moines businesses and Highline College with HCT on Pacific Highway South. (pg. 3-8)

TR 9.1.4 Coordinate and optimize traffic signal systems to minimize delay and congestion, and maximize the use of existing transportation system capacity. (pg. 3-11)

TP1.1 Reduce reliance on drive alone trips by prioritizing and implementing supportive local-level transit, high occupancy vehicle (HOV), and nonmotorized improvements. (pg. III-7)

TP1.4 Allow improvements to vehicle throughput only where they enhance traffic and pedestrian safety, improve high capacity transit and HOV facilities, or reduce air pollution. (pg. III-8)

TP1.5 Enhance mobility using the existing footprint of the roadway and technological advancements. When widening roadways, impacts to non-motorized users and transit vehicles and passengers should be minimized. (pg. III-8)

TP1.10 Coordinate with transit agencies to provide convenient non-motorized access to transit facilities. (pg. III-8)

City of Kent Comprehensive Plan (2015):
Policy T-5.1: Emphasize transit investments that provide mobility and access within the community and make it possible for citizens to access local services and support local businesses while reducing auto-dependent travel. (pg. 4-67)

Policy T-5.5: Work with regional transit providers to provide a high level of transit stop amenities, including pads, bus shelters, pedestrian access, safety and visibility features such as lighting, and transit speed and reliability. (pg. 4-67)

Also from Kent’s Comprehensive Plan:
“TSM techniques, which make more efficient use of the existing transportation system, can reduce the need for costly system capacity expansion projects. These techniques can also be used to improve LOS when travel corridors approach the adopted LOS standard. TSM techniques identified in the TMP include the following: Rechannelization/ restriping, adding turn lanes, adding/increasing number of intersection through lanes, Business Access and Transit (BAT) lanes, Signal interconnect and optimization, turn movement restrictions, Access Management, and Intelligent Transportation Systems (ITS).” (pg. 4-73)

City of Normandy Park Comprehensive Plan (2016):
P.09-XP Manage single occupant vehicle usage and encourage walking, biking, carpooling, and transit ridership to reduce greenhouse gas emissions and foster public health. Methods may include:

• Prioritizing pedestrian and transit corridor improvements;

• Monitoring employer compliance with Commute Trip Reduction Act, if applicable;

• Working with transit providers to pursue new local circulator (“sweep shuttle”) and light rail shuttle service;

• Working with METRO and PSRC on efforts to increase carpooling and transit ridership; and

• Encourage use of low-emission vehicles. (pg. 4-33).
P.15-XP Work with Metro and other agencies involved in public transportation to provide improved transit services for city residents, including local circulator routes (“sweep shuttle”) and service to the new S. 200th Street light rail station. (pg. 4-34)

P.16-XP Coordinate public transportation planning with adjacent communities and regional transportation systems, including the pursuance of transit service connections to the new South 200th Street light rail station. (pg. 4-34)

P.17-XP Support work to reduce Single-Occupancy Vehicle use, including METRO and PSRC efforts that increase carpooling and transit ridership. (pg. 4-35)

3. If no, please describe how the project is consistent with the applicable local comprehensive plan, including specific local policies and provisions the project supports. In addition, please describe how the project is consistent with a transit agency plan or state plan, if applicable.

N/A

Federal Functional Classification

1. Functional class name
   14 Urban Principal Arterial

Support for Centers

1. Describe the relationship of the project to the center(s) it is intended to support. Identify the designated regional growth or manufacturing/industrial center(s) and whether or not the project is located within the center or along a corridor connecting to the center(s).

The Route 165/181 corridor will provide direct, frequent service to multiple regional & local centers including: five PSRC regionally designated growth centers in Kent, Burien, Auburn, and Federal Way, and the Kent MIC; six local centers at Highline Community College, Des Moines Marine View Dr./S. 223rd, Kent East Hill 104th Ave SE/SE, the Twin Lake Commercial District, Green River Community College, the Kent Midway Subarea and on Auburn’s designated Impression Corridors and many other key destinations along the corridor.

Route 165/181 service will also provide transfer connections along the corridor at four transit centers to other frequent and high capacity transit (HCT) services traveling to regional growth centers in Seattle, Renton, Bellevue, Kirkland, Bothell, Everett, SeaTac and Tukwila. This includes ST’s Link light rail service (Federal Way Link Extension), which will begin service in 2024.

Criteria: Benefit to Center

1. Describe how the project will benefit or support the existing and planned housing and employment development of a center or centers. Does it support multiple centers?

The Route 165/181 corridor will provide frequent, all day and weekend transit service to large areas of concentrated housing, and commercial services in South King County. The corridor serves 140,000 people and 61,000 jobs located within 1/2 mile of the corridor. By 2040, PSRC forecasts population in the corridors will increase 14% to 160,000, and employment will increase 28% to 78,000. The corridor travels within and connects to five PSRC regionally designated growth centers, 6 designated local centers, and along 5 City of Auburn designated Impression Corridors (see full list in 2. Project Justification).

These routes average over 5,500 weekday riders (1.5 million annual), providing all-day, two-way service, with 12-15 minute frequencies during peak hours, 30 minutes all-day and on weekends. The routes serve multiple regional and local centers and connect riders to high capacity transit.

The project will support existing and planned housing and employment development in these centers by meeting increasing transportation demand with high quality transit service that is faster and provides more reliable on time performance. Transit ridership is projected to increase as a result of these improvements by 3-5%. High frequency transit service on the Route 165/181 corridor is recommended in local and regional plans to supporting more compact and walkable land use zoning within the centers.

The project will also increase the Route 165/181 corridor’s person throughput capacity by implementing traffic operations improvements that benefit transit and general purpose vehicle traffic. The project will support increased travel within and between regional and local centers where significant population and employment growth in South King County is forecasted to occur.
This project is a priority to Metro and the South King County cities to maintain the viability of Route 165/181 corridor to meet growing transportation demand associated with increased development in designated centers and their connecting corridors. Please see project letters of support in Attachment 2.

2. **Describe how the project will support the development or redevelopment plans and activities (objectives and aims) of a center or centers.**

   Local and regional growth and development strategies in South King County rely on significant increases in transit ridership and mode shift to transit to help achieve higher levels of development density.

As transportation impacts are a significant growth related concern, and often a constraint to development, transit speed and reliability improvements are an effective low-cost strategy to improve system performance and capacity. Providing both greater system operational efficiency and mode shift to transit, this project would allow more people to travel on congested arterials served by the route 165/181 corridor, fostering higher levels of land use development within the connected local and regional centers.

Policies and strategies that support this assertion are included in the comprehensive plans of each of the five cities where these routes operate (see Plan Consistency section).

3. **Describe how the project improves access to major destinations within the center, including enhanced opportunities for active transportation that can provide public health benefits through the following relevant areas: walkability, public transit access, public transit speed and reliability, bicycle mobility and facilities, streetscape improvements, etc.**

Route 165/181 service provides an important link to nonmotorized travelers in south King County, providing access and extending their range of trip lengths to major destinations such as Green River and Highline Colleges, Boeing worksites, hospitals and medical campuses, grocery stores, community centers, and multiple residential areas. The corridor provides access to regional trails such as the Green River and Interurban trails local and regional parks including Panther Lake Park and Lake Fenwick Park. The corridor also provides service to four major transit centers providing high capacity transit service to other destinations across the region.

Proposed project improvements will:

1) Increase transit ridership, extending active transportation provides public health benefits to a larger segment of the population;

2) Construct non-motorized access improvements at select bus stops, increasing service attractiveness and active transportation health benefits for existing and new riders traveling to centers and connecting destinations;

3) Reduce vehicle toxics emissions including approximately 38,000 kg of CO2 annually as a result of improved transit operations, improved general purpose traffic operations, and increased mode shift to transit from (SOV), providing positive health benefit impacts for the population within the service area; and

4) Provide opportunities for cyclists to use the routes as all Metro buses are equipped with bike racks that hold up to three bikes.


4. **Describe how the project provides a range of travel modes to users traveling to centers, or if it provides a missing mode.**

This project will provide improvements to multiple travel modes, addressing bottlenecks in the corridors and making the transportation system operate more efficiently:

a) Transit trips will be more reliable and predictable as a result of the planned improvements. This will make transit an attractive alternative to driving alone to reach jobs, services, residential and recreation areas and trails in urban centers, resulting in increased transit ridership.

b) General purpose traffic, truck freight, car/vanpool, taxi/rideshare modes traveling the corridors will benefit from improved traffic operations as the project will include improvements to signal timing, channelization, and traffic flow. The project would also help reduce traffic congestion on the corridors through increasing transit ridership through mode shift from SOV trips.

c) The project will improve non-motorized access to bus stops. In some cases, the improvement would complete missing links in the nonmotorized system, increasing safety
improvement would complete missing links in the non-motorized system, increasing safety and use of these facilities. Also, the corridor provide vital links to the non-motorized transportation system on various local bicycle facilities, local and regional parks, and regional trails such as the Green River and Interurban trails.

5. **Describe how the project will benefit a variety of users, including commuters, residents, and commercial users**.

By increasing transit service reliability and providing faster travel along the corridors between local and regional growth centers, the project will benefit numerous user groups including commuters, residents, and commercial users.

- Commuters will have faster, more reliable transit connections to 61,000 existing jobs located along the corridor, plus faster and more predictable scheduled transfer to many more jobs in regional and local growth centers across the region accessible from connecting routes at four transit centers served by routes 165 and 181.

- Residents, including historically underserved populations along the routes will have faster and more reliable access to their neighborhoods, employment and training opportunities, shopping and commercial services, health and human service resources, and recreation destinations. The project’s targeted improvements will decrease transit trip travel times by an average of 3-5 minutes, reducing delay for all bus riders.

- Commercial users will benefit from improved general purpose traffic flow and reduced conflicts with buses from speed and reliability treatments such as improvements to traffic signal timing and improved channelization.

- Faster, more reliable and easier to access bus service will result in increased ridership, higher corridor person throughput, fewer SOV’s on the corridors and on other congested arterial and highways, better transfer experiences for riders, and safer active transportation access. Ridership is expected to increase 3%, adding 170 new weekday trips, improving traffic flow and congestion which will benefit all travelers on the corridors.

6. **Describe how the project will benefit those groups identified in the President’s Order for Environmental Justice, seniors, people with disabilities, those located in highly impacted communities, and/or areas experiencing high levels of unemployment or chronic underemployment**.

This project will provide improved transit service to communities across south King County with high percentages of populations defined in Metro Transit’s Mobility Framework (2019) as “areas of unmet need”.

Of the 140,000 people that live within 1/2 mile of the corridors, about 51% are minority populations, 12% are seniors, 15% of households are living in poverty, 12% are living with a disability, and 8% are without access to a vehicle. Public transit is a significant form of transportation for these user groups, and improved speed and reliability provides users with improved access to employment opportunities and other necessary services.

The corridors serve large areas in Burien, Kent, Auburn and Federal Way designated in the top 10% of Air Quality Focus Communities, classified by the Puget Sound Clean Air Agency as communities that bear the highest impacts due to air pollution and which also tend to have greater socioeconomic challenges. The project will benefit these areas specifically by improving air quality through improved transit and general purpose operational efficiency, and by increasing the benefits of transit through better mobility and access.

7. **Describe how the project will support the establishment of new jobs/businesses or the retention of existing jobs/businesses including those in the industry clusters identified in the adopted Regional Economic Strategy**.

The project will enhance transit access and mobility to 61,000 jobs along the corridors from all industry clusters, consistent with the foundational goal of the PSRC’s Regional Economic Strategy to “Ensuring residents have access to family wage jobs and employers have access to world class talent”. The Regional Strategy also discusses the important link between the region’s economic vitality and a healthy transportation system.

The project would remove barriers to job access ensuring a competitive pool of workers by increasing the speed and schedule reliability of transit service in south King County positively impacting time sensitive commuters, increasing Route 165 and 181 ridership for work and commercial user trips serving these locations:

- Kent Valley, home to the fourth largest warehousing and distribution hub in the U.S. Located within the Kent MIC, this hub provides direct connections to a robust freight transportation network. Demand for industrial space in the region is at an all-time high, expanding employment opportunities in this center with transit access from Kent Station served by the new Route 165.

- There are also efforts to expand access to the arts and culture, such as the region’s newest venue of the 716-seat Federal Way Performing Arts and Events Center that is adjacent to the Federal Way Transit Center accessible by Route 181.
King County's concentration of Aerospace Manufacturing jobs is over 8 times the national average. Boeing anchors a growing Aerospace ecosystem, including a fabrication facility in Auburn accessible by Route 181.

Another key component of a healthy transit system is increasing transit oriented development (TOD). The proposed project supports TOD by providing improved transit service to regional and local growth centers in south King County characterized by dense mixed use developments and TODs.

8. **Does the project promote Commute Trip Reduction (CTR) opportunities?**

The project will improve transit reliability, reduce delay and generally make bus travel more attractive and convenient for all employers along the South King County Corridor (Routes 165 and 181). Transit will become a faster, more feasible option for people traveling along this corridor to any of the 80,000 jobs located within a half mile of the corridor.

There are approximately 20 CTR-affected employers within a ½ mile of the corridors who would benefit from these improvements. Improved schedule reliability will also enable more reliable transfer connections to other modes and services for commuters, attracting more employee work trips to transit.

Proposed project access improvements at/near corridor bus stops will increase walk and roll modal connection to transit service in the corridors. And as transit service become faster and more reliable by the proposed improvements, the travel time of combined walk-bus or roll-bus trips can become fast enough to make them viable and attractive transportation alternatives to SOV commuting.

### Criteria: System Continuity/Long Term Benefit-Sustainability

1. **Describe how this project provides a "logical segment" that serves a center, or allows users to access the system.**

   The planned speed and reliability improvements are logical next steps to improving system operation along the corridors. Addressing traffic congestion and increasing capacity in the corridors through significant road widening projects is not feasible due to cost. The proposed specific improvements implemented as part of this project will increase mobility and access within and to the connected regional and local centers.

   The project would support King County Metro’s core priorities of providing fast and reliable transit service by significantly increasing transit speed and reliability and reducing bus travel times for south King County riders making east-west connections. Routes 165 and 181 are very productive and valuable transit corridors serving south King County with over 5,500 average weekday boardings. The corridors are recommended for future RapidRide service by 2040 in Metro Connects (2017), King County Metro’s long-range public transportation plan.

   High frequency transit service along the corridors provides access to many regional and local centers outside the immediate service area by connecting transfers through the Twin Lakes Park-and-Ride, Federal Way Transit Center, Auburn Transit Center, Kent Station, South Sounder (Kent and Auburn Stations) and the future Federal Way Link extension (Kent/Des Moines Station and Federal Way Transit Center Station). The corridors also intersect with existing RapidRide Lines A and F.

   The utility of these valuable transit corridors is negatively impacted by traffic congestion and delay. This low-cost project has been proposed to meet increasing transportation demand and resolve congestion and service reliability issues.

2. **Describe how the project fills in a missing link or removes barriers to a center (e.g. congestion, inadequate transit service/facilities.). Describe how this project will relieve pressure or remove a bottleneck on the Metropolitan Transportation System and how this will positively impact overall system performance.**

   This project will remove barriers and missing links that hinder transit from accessing the regional and local centers in a timely and reliable way. Congestion along these routes creates travel time and transfer reliability barriers that push potential transit users to other modes due to the excessive time penalty of using transit on these corridors.

   The project would address critical bottlenecks and congested corridor segments by implementing traffic engineering solutions such as updated traffic signal timing plans, improved channelization, and transit signal priority. By updating signals and channelization, traffic bottlenecks can be removed, improving traffic flow for all modes using the corridors.

   The project targets strategic investments that would have the greatest impact on reducing delay and improve transit service performance as well as general purpose traffic flow. By employing a variety of bus operations, traffic control, and infrastructure strategies at critical bottlenecks and congested corridor segments, the project will improve travel time and schedule reliability to high frequency transit service providing increased service performance through and between designated regional and local growth centers.
Project benefits also include bridging missing transit links to other regional and local centers outside the corridors by improving mobility, access and transfer reliability to high capacity transit modes including ST Sounder and Link rail and Metro RapidRide. With increased speed and higher schedule reliability, transit becomes a more attractive and reliable option in south King County, attracting people out of their vehicles, and improving the performance of the regional transportation system.

3. Describe how this project addresses safety and security.
The project improves both transportation safety and security along the corridors in multiple ways:

1) Reduce conflict between general purpose traffic and transit by providing transit only bus lanes, improved channelization, and transit queue jumps at key intersections. This will lower collision rates and improve the operational efficiency of the corridors.

2) Provide signal operations, provide high visibility crosswalks, better lighting, possibly reconstruct sidewalks and bike connections, new improved stop shelters, curb cuts, pedestrian signals near bus stops if warranted, and other improvements. These improvements will help riders safely access route 165 and 181 service, creating a safer and more secure customer environment.

3) Increase mode shift from personal vehicle travel to transit. A 2016 American Public Transportation Association Study concluded that transit trips are 10 times safer per mile than car trips.

4. Describe how the project improves intermodal connections (e.g. between autos, ferries, commuter rail, high capacity transit, bus, carpool, bicycle, etc.), or facilities connections between separate operators of a single mode (e.g., two transit operators).
Faster, more reliable trips on routes 165 and 181 will result in fewer missed transfers, reduced schedule deviations, and less waiting for transfer connections to/from other modes, resulting in substantially shorter trips. This increases the efficiency and effectiveness of the corridors to connect to other transportation modes and services, providing a more interconnected and efficient regional transportation system.

The South King County Corridor (Routes 165 and 181) connect with multiple modes and so by making it fast and reliable service, riders will have better transfer experience to other modes. The two route corridors connects to the ST Sounder and future Link rail, Pierce Transit routes, Metro RapidRide and other routes, the Kent/Des Moines and Kent/James St Park-and-Rides. The corridors also connects with various local bicycle facilities as well as regional trails such as the Green River and Interurban trails.

5. If applicable, describe how the project provides an improvement in travel time and/or reliability for transit users traveling to and/or within centers.
The project will provide transit users with improved travel time and reliability by implementing targeted improvements along the route intended to provide average travel time savings of 5-10% (3-5 minutes per trip). Improvements to transit will be focused on bottlenecks and congested segments in areas where needs are greatest by employing transit preferential tactics related to bus operations, infrastructure improvements, traffic control strategies, and bus lanes improvements. See Attachment 4 for list of preliminary improvements.

6. If applicable, describe how the project increases transit use to or within centers.
By improving transit speed and schedule reliability, and constructing access improvements to select bus stops, the project is projected to attract 3% more riders or 43,000 additional trips per year and improve rider transfer experiences to connecting transit services and other modes. With faster, more reliable trips and better transit access, transit will become more useful to people living and working along the corridors.

7. Describe how this project supports a long-term strategy to maximize the efficiency of the corridor? Describe the problem and how this project will remedy it.
The evaluation process to identify priority speed and reliability projects is established as part of Metro’s long-range planning efforts with annual system performance evaluations and special studies.

The project improves a priority transit corridors identified in Metro Connects (2017) that provides transit service in support of regional and local centers development in south King County. The corridors have frequent transit service and are identified as a possible RapidRide route by 2040.

Metro’s 2019 System Evaluation Report recommended speed and reliability improvements on the corridors through a thorough evaluation process that considered ridership, connections to centers, travel time variability, schedule reliability and social equity.

Routes 164, 166 and 181 are among Metro’s least reliable routes in south King County,
especially in the evening peak commute time with up to 62% delay in travel time, with an
evening peak on-time performance rate of 68% and all-day on-time performance ranges
between 70-74%, falling below Metro’s system wide on-time performance goal of 80%.

The project will make strategic investments that will improve travel time by 5-10%, draw 3%
more riders to the corridors, and improving traffic operations and person capacity
throughput. The project support mode shift to transit, as more people choose to ride transit
over personal vehicle use for their trips, reducing the number of cars on the road, vehicle air
toxic and carbon emissions, and reduce fuel use. The project’s cost-effective transit
performance and access improvements will enhance transit operations and ridership without
the high cost of roadway widening and acquisition of additional right of way.

The project meets the purpose of Metro’s Transit Speed and Reliability program to implement
cost-benefit transit speed and reliability to improve service quality and increase ridership, and
helps meet Metro’s commitment to support local land use and regional transportation
investments that promote the continued viability of King County and the Region.

Criteria: Air Quality and Climate Change

1. **Please select one or more elements in the list below that are included in the
   project’s scope of work, and provide the requested information in the pages to
   follow.**
   Roadway Improvement, Transit and Ferry Service, Intelligent Transportation Systems

Air Quality and Climate Change: Roadway Improvement

1. **What is the length of the project?**
   28 miles per direction

2. **What is the average daily traffic before and after the project?**
   AADT ranges from 5,200 to 35,000 along the two corridors and is not expected to change as
   a result of this project.

3. **What is the average speed before and after the project?**
   Posted speed limits range from 25-55 mph throughout the corridors. Average transit speeds
   are 19 mph. Speed limits are not expected to change as a result of this project, though
   average transit speeds are expected to increase approximately 5-10%, up to 22 mph.

4. **What is the average daily transit ridership along the corridor?**
   5,500 average weekday rider, cumulatively. Route 181 - 2,000; Route 164 - 1,600; and Route
   166 - 1,700.

5. **How many daily peak period transit trips serve the corridor?**
   AM peak period: 54 trips (~13 trips/hour); PM peak period: 48 trips (12 trips/hour)

6. **What is the expected increase in transit speed due to the BAT/HOV lanes?**
   BAT/HOV lanes are expected to increase transit speed by 13.5% (PSRC default value from Air
   Quality and Climate Change worksheet).

7. **What is the expected increase in transit ridership due to the BAT/HOV lanes?**
   BAT/HOV lanes are expected to increase transit ridership by 1.5% during peak periods (PSRC
   default value from Air Quality and Climate Change worksheet).

8. **What is the percentage of freight truck traffic on the facility?**
   Up to 4%. A majority of the corridors segments are classified as T-3 or T-2 by WSDOT Freight
   and Goods Transportation System (FGTS).

9. **Will the project result in shorter trips and reduced VMT? If so, please explain.**
   Increased transit speed and reliability will encourage people to ride transit instead of driving,
   reducing VMT. The estimated daily VMT reduction is 900 miles/day. The combination of travel
time savings and ridership increase, along with improvements to general purpose traffic flow
is projected to save approximately 38,000 kg of CO per year. The project will save
approximately 7,000 gallons of fuel per year from the traffic operations improvements and
decrease in single-occupant vehicles as people switch to transit.

10. **Please describe the source of the project data provided above (e.g.,
    Environmental Impact Statement, EPA/DOE data, traffic study, survey, previous
    projects, etc.).**
    King County Metro onboard systems and automated passenger counter data, and
    experience on previously completed speed and reliability program projects.

Air Quality and Climate Change: Transit and Ferry Service
1. **What is the current transit ridership for the affected transit stops or routes?**
   5,500 daily weekday riders

2. **What is the average transit trip length for the affected routes?**
   The average for the 3 routes is 4.4 miles. Route 164 is 4.12 miles; Route 166 is 4.32 miles; and Route 181 is 4.77 miles.

3. **What is the average transit trip length of the entire system?**
   The KCM system wide average transit trip length is 10.4. The average transit trip length for the affected routes is 4.4 miles. The regional PSRC assumption is 8.66 miles per trip.

4. **If the project includes a park and ride, how many new stalls are being provided?**
   N/A

5. **Are there other amenities included to encourage new transit ridership? If so, please describe.**
   Approximately 175 bus stops could be improved as a result of this project, including enhancements to safety, security and comfort. While upgrades would be targeted towards improving the speed and reliability of buses accessing these stops, the upgrades could allow for additional/improved bus stop amenities and safety.

6. **What is the expected increase in transit ridership from the project?**
   3% (~43,000 new annual riders)

7. **If a new or expanded ferry service, what is the length of the driving route being replaced?**
   N/A

8. **Please describe the source of the project data provided above (e.g., Environmental Impact Statement, EPA/DOE data, traffic study, survey, previous projects, etc.).**
   WSDOT Freight and Goods Transportation System (FGTS), Puget Sound Regional Council Household Travel Survey Program, King County Metro onboard systems and automated passenger counter data, experience on past projects.

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**Air Quality and Climate Change: Intelligent Transportation Systems and Corridor Efficiency**

1. **What is the existing level of service?**
   At some locations, the overall intersection may be operating at LOS D or better, but the specific transit movement operates at LOS E or F. While about 6 intersections operate at LOS E or F during the AM peak hour and twelve intersections operate at LOS E or F during the PM peak hour, 16 transit movements in the AM peak hour and 18 transit movements in the PM peak hour operate at LOS E or F.

2. **What are the existing number of lanes (in one direction)?**
   The number of lanes varies between one (1) and two (2) with most sections having one lane and either protected left turn lanes at the intersections, or a continuous two-way center left turn lane.

3. **What is the existing average daily traffic?**
   The AADT ranges from 5,200 to 35,000 across the corridors (average AADT is approximately 16,000).

4. **What is the existing average speed?**
   Posted speed limits are 25-55 mph throughout the corridors. The average speed limit is 35 mph.

5. **What are the ITS improvements being provided?**
   New transit signal priority (TSP) deployments, and upgrades to existing TSP to Next Gen wireless at selected intersections along the corridors, communication between cities signal central system and Metro transit signal priority system, and possibly real-time signs at busiest bus stop locations.

6. **How many intersections are being improved?**
   Approximately 30 intersections were identified for potential improvements to signal timing, queue jumps, and channelization.

7. **What is the length of the project?**
   28 miles per direction

8. **What is the percentage of freight truck traffic in the project area?**
   Up to 4%. A majority of the corridors are classified as T-3 or T-2 by WSDOT Freight and Goods Transportation System (FGTS).

9. **What is the expected improvement to level of service?**
This project will improve service reliability and reduce bus travel time by approximately 3-5% during peak hours.

10. **What is the expected improvement to average speed?**
Existing average transit speeds are 19 mph. Speed limits are not expected to change as a result of this project, though average transit speeds are expected to increase approximately 5-10%, up to 22 mph.

11. **What is the expected improvement to average vehicle delay?**
There is no project specific data available, but a prior evaluation of the RapidRide E-Line documents how much time TSP can save for buses. This study showed 3% to 5% transit travel time reductions in the peaks and 8% to 14% reductions in transit delay during peak hours.

12. **Please describe the source of the project data provided above (e.g., Environmental Impact Statement, EPA/DOE data, traffic study, survey, previous projects, etc.)**
Cities' traffic count data, Metro and cities' traffic and transit operations analysis reports, and past project experience on existing RapidRide Lines.

### Criteria: Project Readiness and Financial Plan

1. **What is the PSRC funding source being requested?**
   N/A

2. **Has this project received PSRC funds previously?**
   No

3. **If yes, please provide the project's PSRC TIP ID**
   N/A

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Total Request: $3,650,000.00

### Total Estimated Project Cost and Schedule

**PE**

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**Expected year of completion for this phase:** 2022

**Construction**

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**Expected year of completion for this phase:** 2024

### Summary

1. **Estimated project completion date**
   12/2024

2. **Pretty total project cost**
   $7,274,000.00

**Funding Documentation**
2. **Please enter your description of your financial documentation in the text box below.**

Reasonably expected local match funds will be secured as part of the 2023-2024 King County budget. The 2023-2024 budget will be developed in the spring/summer of 2022 and is scheduled for adoption in the fall of 2022. Metro management will approve the capital program budget request and transmit it to the County Executive’s Office by July 1, 2022. The capital budget requests will be reviewed, finalized and sent to the King County Council on September 24, 2022. The Council should adopt the final budget by mid-November 2022.

A capital appropriation proposal for the project (#1134294 and #1134295) to provide local funding to complete the PE/Design phase has been included by King County Metro as part of its overall capital program request for the proposed FY2021-22 biennial budget (please see Attachment 3).

### Project Readiness: PE

1. **Are you requesting funds for ONLY a planning study or preliminary engineering?**
   - No

2. **What is the actual or estimated start date for preliminary engineering/design?**
   - 8/2021

3. **Is preliminary engineering complete?**
   - No

4. **What was the date of completion (month and year)?**
   - N/A

5. **Have preliminary plans been submitted to WSDOT for approval?**
   - N/A

6. **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.**
   - N/A

7. **When are preliminary plans expected to be complete?**
   - 12/2022

### Project Readiness: NEPA

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

2. **Has the NEPA documentation been approved?**
   - No

3. **Please provide the date of NEPA approval, or the anticipated date of completion (month and year).**
   - 5/2022

### Project Readiness: Right of Way

1. **Will Right of Way be required for this project?**
   - No

2. **What is the actual or estimated start date for right of way?**
   - N/A

3. **What is the estimated (or achieved) completion date for the right of way plan and funding estimate (month and year)?**
   - N/A

4. **Please describe the right of way needs of the project, including property acquisitions, temporary construction easements, and/or permits.**
   - N/A

5. **What is the zoning in the project area?**
6. Discuss the extent to which your schedule reflects the possibility of condemnation and the actions needed to pursue this.
N/A

7. Does your agency have experience in conducting right of way acquisitions of similar size and complexity?
N/A

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

9. In the box below, please identify all relevant right of way milestones, including the current status and estimated completion date of each.
N/A

Project Readiness: Construction

1. Are funds being requested for construction?
   Yes

2. Do you have an engineer’s estimate?
   No

3. Engineers estimate document
   N/A

4. Identify the environmental permits needed for the project and when they are scheduled to be acquired.
   Documented Categorical Exclusion (DCE)

5. Are Plans, Specifications & Estimates (PS&E) approved?
   N/A

6. Please provide the date of approval, or the date when PS&E is scheduled to be submitted for approval (month and year).
   N/A

7. When is the project scheduled to go to ad (month and year)?
   3/2023

Other Considerations

1. Describe any additional aspects of your project not requested in the evaluation criteria that could be relevant to the final project recommendation and decision-making process.
   N/A

2. Describe any innovative components included in your project: these could include design elements, cost saving measures, or other innovations.
   N/A

3. Describe the process that your agency uses to determine the benefits of projects; this could include formal cost-benefit analysis, practical design, or some other process by which the benefits of projects are determined.
   Metro is required by King County ordinance to conduct an annual assessment of its transit system. The assessment is based on adopted Service Guidelines, established criteria and processes that Metro uses to analyze and plan changes to our transit system. Metro’s 2019 System Evaluation Report recommends routes 166 and 181 for speed and reliability improvements.

   Past Metro transit speed and reliability projects have demonstrated their cost effectiveness in enhancing transit service. Metro’s Speed and Reliability program identifies and prioritizes projects to improve performance and increase ridership. The program focuses on working with our partner cities to increase the operating efficiency of existing bus service in highly congested corridors.

4. Final documents
   Attachment_2.pdf, Attachment_4.pdf
March 20, 2020

Rob Gannon
General Manager
King County Metro Transit
201 South Jackson Street, KSC-TR-0415
Seattle, Washington 98104

RE: 2020 PSRC Regional Grant Competition Program for speed & reliability

Dear Mr. Gannon:

On behalf of the City of Auburn, I am writing to express our support for King County Metro Transit’s application to the 2020 PSRC Regional Grant Competition Program for speed and reliability (S&R) improvements on the South King County Corridors. This interagency project, led by King County Metro Transit, will implement transit S&R improvements on Routes 164 and 181 to reduce peak hour bus travel times, improve service reliability, increase transit ridership, and improve access to transit.

Primary elements of the project include improvements such as bus lanes, queue jumps, turning restrictions, bus bulbs, signal timing optimization, transit signal priority, access to bus stops, layover, and other treatments to enhance bus operations, to improve service reliability and reduce bus travel time by approximately 5-10% during peak hours.

With over 5,500 weekday riders, these routes serve communities with high rates of low-income, minority, and transit-dependent populations. This project will improve key east-west connections in South King County by providing fast and reliable transit service and reducing bus travel times. The communities along the Routes 164, 166 and 181 will benefit from improved access, more reliable, and faster travel to employment and education opportunities, shopping and commercial services, health and human service resources, and recreation destinations. Additionally, the project will connect South King County residents to the future Federal Way Link extension planned for 2024.

Overall, this project supports the City of Auburn’s mobility goals and is consistent with the Auburn’s Comprehensive Plan policies. It also supports broader countywide and regional policies and goals. The City of Auburn will actively support the project through in-kind services such as: participating in project development and relevant community meetings.

The City of Auburn supports the selection of this project for funding.

Sincerely,

Ingrid Gaub
Director
Public Works Department

ENG-163, Revised 12/19
March 24, 2020

Rob Gannon
General Manager
King County Metro Transit
201 South Jackson Street, KSC-TR-0415
Seattle, Washington 98104

Dear Mr. Gannon:

On behalf of the City of Des Moines, I am writing to express our support for King County Metro Transit’s application to the 2020 PSRC Regional Grant Competition Program for speed and reliability (S&R) improvements on the South King County Corridors. This interagency project, led by King County Metro Transit, will implement transit S&R improvements on Routes 164, 166, and 181 corridors to reduce peak hour bus travel times, improve service reliability, increase transit ridership, and improve access to transit.

Primary elements of the project include bus lanes, queue jumps, turning restrictions, bus bulbs, signal timing optimization, transit signal priority, access to bus stops, layover, and other treatments to enhance bus operations. This project will improve service reliability and reduce bus travel time by approximately 5-10% during peak hours, resulting in 2-5 minutes saved per trip and increasing transit ridership by 2-4% (adding ~43,000 annual riders).

With over 5,500 weekday riders, these corridors serve communities with the highest rates of low-income, minority, and transit-dependent populations. This project will improve key east-west connections in South King County by providing fast and reliable transit service and reducing bus travel times. The communities along the Routes 164, 166 and 181 will benefit from improved access, more reliable, and faster travel to employment and education opportunities, shopping and commercial services, health and human service resources, and recreation destinations. Additionally, the project will connect South King County residents to the future Federal Way Link extension.
Rob Gannon, General Manager
Paget Two
March 24, 2020

Overall, this project supports the City of Des Moines’ mobility, climate, and equity goals and is consistent with the City of Des Moines’ Comprehensive Plan and Commute Trip Reduction Plan. It also supports broader countywide and regional policies and goals. The City of Des Moines will actively support the project through in-kind services such as: reviewing plans, participating in relevant community meetings, aiding in implementation of signal timing improvements and help with permitting processes.

The City of Des Moines enthusiastically supports the selection of this project for funding.

Sincerely,

Matt Pina
Mayor

The Waterland City
April 14, 2020

Mr. Rob Gannon
General Manager
King County Metro Transit
201 South Jackson Street, KSC-TR-0415
Seattle, Washington 98104

Dear Mr. Gannon:

On behalf of the City of Federal Way, I am writing to express our support for King County Metro Transit’s application to the 2020 PSRC Regional Grant Competition Program for speed and reliability (S&R) improvements on the South King County Corridors. This interagency project, led by King County Metro Transit, will implement transit S&R improvements on Routes 164, 166, and 181 corridors to reduce peak hour bus travel times, improve service reliability, increase transit ridership, and improve access to transit. Route 181 enhancements are important to Federal Way, as this route is expected to experience increases in ridership as a result of Link light rail coming to Federal Way in 2024, and would lay the groundwork for eventually upgrading this route to RapidRide service levels as planned in Metro Connects.

Primary elements of the project include bus lanes, queue jumps, turning restrictions, bus bulbs, signal timing optimization, transit signal priority, access to bus stops, layover, and other treatments to enhance bus operations. This project will improve service reliability and reduce bus travel time by approximately 5-10% during peak hours, resulting in 2-5 minutes saved per trip and increasing transit ridership by 2-4% (adding ~43,000 annual riders).

With over 5,500 weekday riders, these corridors serve communities with the highest rates of low-income, minority, and transit-dependent populations. This project will improve key east-west connections in South King County by providing fast and reliable transit service and reducing bus travel times. The communities along the Routes 164, 166 and 181 will benefit from improved access, more reliable, and faster travel to employment and education opportunities, shopping and commercial services, health and human service resources, and recreation destinations. Additionally, the project will connect South King County residents to the future Federal Way Link extension.

Overall, this project supports the City of Federal Way’s mobility, climate, and equity goals and is consistent with the City’s Comprehensive Plan goals and policies, as well as the City’s Local Road Safety Plan. It also supports broader countywide and regional policies and goals. The City of Federal Way will actively support the project through in-kind services such as: reviewing plans, participating in relevant community meetings, aiding in implementation of signal timing improvements and help with permitting processes.
The City of Federal Way enthusiastically supports the selection of this project for funding.

Sincerely,

E.J. Walsh, P.E.

Public Works Director
April 7, 2020

Rob Gannon, General Manager
King County Metro
King Street Center, KSC-TR-0415
201 S. Jackson Street
Seattle, WA 98104-3836

RE: Support for King County Metro Transit’s application to the 2020 PSRC Regional FTA Competition Program for Speed and Reliability (S&R) Improvements on South King County Routes 165 (previously portions of Route 164 and 166) and 181

Dear Mr. Gannon:

On behalf of the City of Kent, I am writing to express our support for King County Metro Transit’s application to the 2020 PSRC Regional FTA Competition Program for speed and reliability (S&R) improvements on South King County Routes 165 (previously portions of Routes 164 and 166) and 181.

Primary elements of the project include bus lanes, queue jumps, turning restrictions, bus bulbs, signal timing optimization, transit signal priority, access to bus stops, layover, and other treatments to enhance bus operations. This project will improve service reliability and reduce bus travel time by approximately 5-10% during peak hours, resulting in 2-5 minutes saved per trip and increasing transit ridership by 2-4% (adding approximately 43,000 new annual boardings).

With over 5,500 weekday riders, these corridors serve communities with the highest rates of low-income, minority, and transit-dependent populations. This project will improve key east-west connections in South King County by providing fast and reliable transit service and reducing bus travel times. The communities along the Routes will benefit from improved access as well as more reliable and faster travel to employment and educational opportunities, shopping and commercial services, health and human service resources, and recreational destinations. Additionally, the project will connect South King County residents to Sound Transit’s Federal Way Link Extension, which is currently under construction.

By providing improved transit speed and reliability, the project will help support existing and planned development densities within the Kent Regional Growth Center by encouraging more efficient use of limited transportation resources and capacity within the Regional Centers and on the corridors connecting to these Regional Centers.
The project is consistent and supportive of the City's Comprehensive Plan. It is also an important element of broader countywide and regional policies to help meet economic and environmental goals by creating more compact and efficient land use patterns through transit investment.

The City of Kent will actively support the project through in-kind services such as: reviewing plans, participating in relevant community meetings, aiding in implementation of signal timing improvements, and assisting with permitting.

We encourage the consideration and selection of this project for funding.

Sincerely,

Dana Ralph
Mayor

c: Irin Limargo, Supervisor, Capital Planning Supervisor | Speed and Reliability, King County Metro
Eric Irelan, King County Grants Administrator
March 19, 2020

Rob Gannon
General Manager
King County Metro Transit
201 South Jackson Street, KSC-TR-0415
Seattle, Washington 98104

Dear Mr. Gannon:

On behalf of the City of Normandy Park, I am writing to express our support for King County Metro Transit’s application to the 2020 PSRC Regional Grant Competition Program for speed and reliability (S&R) improvements on the South King County Corridors. This interagency project, led by King County Metro Transit, will implement transit S&R improvements on Routes 164, 166, and 181 corridors to reduce peak hour bus travel times, improve service reliability, increase transit ridership, and improve access to transit.

Primary elements of the project include bus lanes, queue jumps, turning restrictions, bus bulbs, signal timing optimization, transit signal priority, access to bus stops, layover, and other treatments to enhance bus operations. This project will improve service reliability and reduce bus travel time by approximately 5-10% during peak hours, resulting in 2-5 minutes saved per trip and increasing transit ridership by 2-4% (adding ~43,000 annual riders).

With over 5,500 weekday riders, these corridors serve communities with the highest rates of low-income, minority, and transit-dependent populations. This project will improve key east-west connections in South King County by providing fast and reliable transit service and reducing bus travel times. The communities along the Routes 164, 166 and 181 will benefit from improved access, more reliable, and faster travel to employment and education opportunities, shopping and commercial services, health and human service resources, and recreation destinations. Additionally, the project will connect South King County residents to the future Federal Way Link extension.

Overall, this project supports the City of Normandy Park’s mobility, climate, and equity goals and is consistent with the Normandy Park’s Comprehensive Plan. It also supports broader countywide and regional policies and goals. The City of Normandy Park will
actively support the project through in-kind services such as: reviewing plans, participating in relevant community meetings, aiding in implementation of signal timing improvements and helping with permitting processes.

The City of Normandy Park enthusiastically supports the selection of this project for funding.

Sincerely,

Mark E. Hoppen

Mark E. Hoppen, ICMA-CM
City Manager
City of Normandy Park
## Capital Appropriation Proposal


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Capital Appropriation Proposal


EXPENSE

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BUDGET ANALYSIS

<table>
<thead>
<tr>
<th>Capital Phase</th>
<th>Baseline</th>
<th>Estimate At Completion</th>
<th>ITD Actuals thru 06/2018</th>
<th>ITD Budget thru 06/2018</th>
<th>ITD Actuals thru 12/2017 + 2018 Projected YE</th>
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<td>4 Implementation</td>
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</table>

NARRATIVES

TDC MCDP CORRIDOR #2

1. CURRENT PROJECT SCOPE

Metro Connects Development Plan Corridor #2 - This is a placeholder project that will support the ongoing investment in corridor improvements associated with METRO CONNECTS. These investments are anticipated in 2021-2022 with details to be developed as part of the next budget cycle. Corridor improvements are identified in collaboration with partner agencies to scope the investments for the corridor. Improvements can include transit and bypass lanes, pavement marking changes, signal modifications, signal synchronizations, bus access improvements, and other operational improvements to improve transit speed and reliability.

2. PROGRAMMATIC PROJECT DISCUSSION

3. PROJECT JUSTIFICATION
<table>
<thead>
<tr>
<th>NARRATIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. PROJECT BENEFITS/OUTCOMES</td>
</tr>
<tr>
<td>5. BUDGET REQUEST BASIS</td>
</tr>
<tr>
<td>6. FUNDING AND REVENUE DISCUSSION</td>
</tr>
<tr>
<td>7. OPERATING BUDGET AND OTHER IMPACTS</td>
</tr>
<tr>
<td>8. PROJECT STATUS</td>
</tr>
<tr>
<td>9. ALTERNATIVES ANALYSIS</td>
</tr>
<tr>
<td>10. OTHER AGENCY INVOLVEMENT</td>
</tr>
<tr>
<td>11. ART ELIGIBILITY</td>
</tr>
<tr>
<td>12. EQUITY AND SOCIAL JUSTICE IMPACT</td>
</tr>
<tr>
<td>13. STRATEGIC CLIMATE ACTION PLAN ALIGNMENT</td>
</tr>
<tr>
<td>14. OTHER CONSIDERATIONS (OPTIONAL)</td>
</tr>
</tbody>
</table>

**ADDITIONAL QUESTIONS FOR IT PROJECTS ONLY**

| 15. STRATEGIC IT PLAN ALIGNMENT |
| 16. PROJECT COMPLEXITY |
| 17. CAPACITY TO IMPLEMENT THE PROJECT |
| 18. PROJECT RISKS |
### Capital Appropriation Proposal

**Budget:** 2019-2020 Biennial, **Scenario:** Executive Proposed, **Agency:** Transit, **Fund:** All, **Project:** All, **Cap Status:** All, **Is IT Proj?** Both Yes and No

#### TDC MCDP CORRIDOR #3

1134295

**Green Building Reporting**

<table>
<thead>
<tr>
<th>Department</th>
<th>TRANSPORTATION</th>
</tr>
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<tbody>
<tr>
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#### BUDGET (Appropriation)

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<th>FY19-20</th>
<th>FY21-22</th>
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<th>Total Budget</th>
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CAP Detail Report Created on: 09/06/2018 03:18 PM
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<td>$2,388,423</td>
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### BUDGET ANALYSIS

<table>
<thead>
<tr>
<th>Capital Phase</th>
<th>Baseline</th>
<th>Estimate At Completion</th>
<th>ITD Actuals thru 06/2018</th>
<th>ITD Budget thru 06/2018</th>
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<tr>
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</table>

### NARRATIVES

**1. CURRENT PROJECT SCOPE**

Metro Connects Development Plan Corridor #3 - This is a placeholder project that will support the ongoing investment in corridor improvements associated with METRO CONNECTS. These investments are anticipated in 2023-2024 with details to be developed as part of the next budget cycle. Corridor improvements are identified in collaboration with partner agencies to scope the investments for the corridor. Improvements can include transit and bypass lanes, pavement marking changes, signal modifications, signal synchronizations, bus access improvements, and other operational improvements to improve transit speed and reliability.

**2. PROGRAMMATIC PROJECT DISCUSSION**

**3. PROJECT JUSTIFICATION**
4. PROJECT BENEFITS/OUTCOMES

5. BUDGET REQUEST BASIS

6. FUNDING AND REVENUE DISCUSSION

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8. PROJECT STATUS

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13. STRATEGIC CLIMATE ACTION PLAN ALIGNMENT

14. OTHER CONSIDERATIONS (OPTIONAL)

ADDITIONAL QUESTIONS FOR IT PROJECTS ONLY

15. STRATEGIC IT PLAN ALIGNMENT

16. PROJECT COMPLEXITY

17. CAPACITY TO IMPLEMENT THE PROJECT

18. PROJECT RISKS
<table>
<thead>
<tr>
<th>Index</th>
<th>Priority</th>
<th>Route</th>
<th>Project</th>
<th>Location</th>
<th>Description</th>
<th>Cost</th>
<th>Improvement Type</th>
<th>City</th>
<th>Comments</th>
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<tbody>
<tr>
<td>C</td>
<td>1</td>
<td>181</td>
<td>Convert the eastbound and westbound curb lanes to HOV lanes</td>
<td>320th Street between Peter Von Reichenbauer Way S and 21st Avenue S</td>
<td>Convert the eastbound and westbound curb lanes on S 320th Street to high-occupancy vehicle (HOV) lanes</td>
<td>$160,000</td>
<td>Infrastructure</td>
<td>Federal Way</td>
<td>Extends the existing HOV lane to reduce bus delays associated with traveling in general purpose lanes. Estimation for 1 block.</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>181</td>
<td>TSP at the intersection and overlap right and turn left phase</td>
<td>W Valley Highway and Peasley Canyon Road</td>
<td>Overlap the eastbound right and the northbound left phase at the intersection and provide TSP.</td>
<td>$80,000</td>
<td>Traffic Control</td>
<td>Federal Way</td>
<td>Provides additional green time for the eastbound right turn and prioritizes bus movements at this intersection.</td>
</tr>
<tr>
<td>F1</td>
<td>4</td>
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<td>TSP at the intersection</td>
<td>15th St SW and W Valley Highway S</td>
<td>Provide TSP at the following intersections on 15th Street SW: W Valley Highway S, SR 167 southbound ramps, SR 167 northbound ramps, O Street, Market Street, Industry Drive SW, and Perimeter Road, and remove the bus pullouts eastbound at O Street and westbound at Market Street.</td>
<td>$20,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of 15th Street SW.</td>
</tr>
<tr>
<td>F2</td>
<td>4</td>
<td>181</td>
<td>TSP at the intersection</td>
<td>15th St SW and SR 167 southbound ramps</td>
<td>Provide TSP at the following intersections on 15th Street SW: W Valley Highway S, SR 167 southbound ramps, SR 167 northbound ramps, O Street, Market Street, Industry Drive SW, and Perimeter Road, and remove the bus pullouts eastbound at O Street and westbound at Market Street.</td>
<td>$20,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of 15th Street SW.</td>
</tr>
<tr>
<td>F3</td>
<td>4</td>
<td>181</td>
<td>TSP at the intersection</td>
<td>25th St SW and SR 167 northbound ramps</td>
<td>Provide TSP at the following intersections on 15th Street SW: W Valley Highway S, SR 167 southbound ramps, SR 167 northbound ramps, O Street, Market Street, Industry Drive SW, and Perimeter Road, and remove the bus pullouts eastbound at O Street and westbound at Market Street.</td>
<td>$20,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of 15th Street SW.</td>
</tr>
<tr>
<td>F4</td>
<td>4</td>
<td>181</td>
<td>TSP at the intersection</td>
<td>15th St SW and O Street</td>
<td>Provide TSP at the following intersections on 15th Street SW: W Valley Highway S, SR 167 southbound ramps, SR 167 northbound ramps, O Street, Market Street, Industry Drive SW, and Perimeter Road, and remove the bus pullouts eastbound at O Street and westbound at Market Street.</td>
<td>$20,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of 15th Street SW.</td>
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<tr>
<td>F5</td>
<td>4</td>
<td>181</td>
<td>TSP at the intersection</td>
<td>15th St SW and Market Street</td>
<td>Provide TSP at the following intersections on 15th Street SW: W Valley Highway S, SR 167 southbound ramps, SR 167 northbound ramps, O Street, Market Street, Industry Drive SW, and Perimeter Road, and remove the bus pullouts eastbound at O Street and westbound at Market Street.</td>
<td>$20,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of 15th Street SW.</td>
</tr>
<tr>
<td>F6</td>
<td>4</td>
<td>181</td>
<td>TSP at the intersection</td>
<td>15th St SW and Industry Drive SW</td>
<td>Provide TSP at the following intersections on 15th Street SW: W Valley Highway S, SR 167 southbound ramps, SR 167 northbound ramps, O Street, Market Street, Industry Drive SW, and Perimeter Road, and remove the bus pullouts eastbound at O Street and westbound at Market Street.</td>
<td>$20,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of 15th Street SW.</td>
</tr>
<tr>
<td>F7</td>
<td>4</td>
<td>181</td>
<td>Remove pullouts (2)</td>
<td>15th St SW and Perimeter Road</td>
<td>Provide TSP at the following intersections on 15th Street SW: W Valley Highway S, SR 167 southbound ramps, SR 167 northbound ramps, O Street, Market Street, Industry Drive SW, and Perimeter Road, and remove the bus pullouts eastbound at O Street and westbound at Market Street.</td>
<td>$200,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of 15th Street SW.</td>
</tr>
<tr>
<td>G1</td>
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<td>181</td>
<td>TSP at the intersection</td>
<td>C St SW and 15th St SW</td>
<td>Provide TSP at the following intersections on C Street SW: 15th Street SW, 8th Street SW, and SR 18 eastbound ramps. Also provide TSP at the intersection of S Division Street and 3rd Street SW.</td>
<td>$40,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of C Street SW and the adjacent intersections.</td>
</tr>
<tr>
<td>G2</td>
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<td>181</td>
<td>TSP at the intersection</td>
<td>Coordinate the C Street SW and SR 18 eastbound ramp intersection signal with the C Street SW and SR 18 eastbound ramp intersection</td>
<td>Provide TSP at the following intersections on C Street SW: 15th Street SW, 8th Street SW, and SR 18 eastbound ramps. Also provide TSP at the intersection of S Division Street and 3rd Street SW.</td>
<td>$40,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of C Street SW and the adjacent intersections.</td>
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<tr>
<td>G3</td>
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<td>TSP at the intersection</td>
<td>C St SW and SR18 eastbound ramps</td>
<td>Provide TSP at the following intersections on C Street SW: 15th Street SW, 8th Street SW, and SR 18 eastbound ramps. Also provide TSP at the intersection of S Division Street and 3rd Street SW.</td>
<td>$40,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of C Street SW and the adjacent intersections.</td>
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<td>G4</td>
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<td>TSP at the intersection</td>
<td>S Division Street and 3rd Street SW</td>
<td>Provide TSP at the following intersections on C Street SW: 15th Street SW, 8th Street SW, and SR 18 eastbound ramps. Also provide TSP at the intersection of S Division Street and 3rd Street SW.</td>
<td>$40,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Prioritizes bus movements through this segment of C Street SW and the adjacent intersections.</td>
</tr>
<tr>
<td>H</td>
<td>6</td>
<td>181</td>
<td>Signal retiming</td>
<td>C Street SW and 15th Street SW</td>
<td>Increase the cycle length during the PM peak hour, and extend the eastbound left/southbound right overlap at the intersection.</td>
<td>$20,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Provides additional green time for buses in the eastbound direction.</td>
</tr>
<tr>
<td>I1</td>
<td>7</td>
<td>181</td>
<td>Signal retiming</td>
<td>C Street SW and SR 18 eastbound ramp and C Street SW and SR 18 westbound ramp signal to the north</td>
<td>Coordinate the C Street SW and SR 18 eastbound ramp intersection signal with the C Street SW and SR 18 westbound ramp signal to the north to help southbound platoon progress through the interchange. Restrict northbound/southbound U-turns at this intersection.</td>
<td>$40,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Improves the traffic flow through the ramp intersections and provides additional green time for northbound and southbound through bus movements.</td>
</tr>
<tr>
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<td>Signal modification</td>
<td>C Street SW and SR 18 eastbound ramp</td>
<td>Provide a northbound left permissive-protected phase and eastbound right/northbound left overlap phase at the C Street SW and SR 18 eastbound ramp intersection.</td>
<td>$80,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Improves the traffic flow through the ramp intersections and provides additional green time for northbound and southbound through bus movements.</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>181</td>
<td>Remove split phasing by allowing protected-permissive westbound left turn and permissible eastbound left turns.</td>
<td>Auburn Way S and E Main Street</td>
<td>Remove split phasing at Auburn Way S and E Main Street by allowing protected-permissive westbound left turn and permissible eastbound left turns.</td>
<td>$80,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Allows additional green time for bus movements in the northbound and westbound directions.</td>
</tr>
<tr>
<td>A</td>
<td>9</td>
<td>181</td>
<td>TSP at the intersection</td>
<td>SW 336th Street and 21st Avenue SE</td>
<td>Provide TSP at the intersection.</td>
<td>$40,000</td>
<td>Infrastructure, Traffic Control</td>
<td>Federal Way</td>
<td>Provides additional green time for bus movements in the eastbound and westbound directions.</td>
</tr>
<tr>
<td>L</td>
<td>10</td>
<td>181</td>
<td>Signal modification</td>
<td>Eastbound and westbound directions at the M Street SE and E Main Street intersection.</td>
<td>Provide a flashing yellow arrow in the eastbound and westbound directions.</td>
<td>$160,000</td>
<td>Traffic Control</td>
<td>Auburn</td>
<td>Provides additional time for buses to make left turns.</td>
</tr>
<tr>
<td>M1</td>
<td>11</td>
<td>181</td>
<td>TSP at the intersection</td>
<td>M Street NE and 4th Street NE</td>
<td>Provide TSP at the intersection.</td>
<td>$40,000</td>
<td>Priority bus movements through segments of M Street NE</td>
<td>Auburn</td>
<td>Prioritizes bus movements through segments of M Street NE</td>
</tr>
</tbody>
</table>
M2 11 181 TSP at the intersection Harvey Road and 8th Street NE Provide TSP at the intersection $40,000 Auburn Prioritizes bus movements through segments of 8th Street NE.

M3 181 TSP at the intersection R Street NE and 8th Street NE Provide TSP at the intersection $40,000 Auburn Prioritizes bus movements through segments of 8th Street NE.

M4 181 TSP at the intersection 104th Avenue SE and SE 320th Street. Provide TSP at the intersection $40,000 Traffic Control Auburn Prioritizes bus movements through segments.

B 12 181 Provide additional WB left-turn pocket and TSP 21st Avenue SW and SW 320th Street Add an additional westbound left-turn pocket at the intersection to allow a dual left-turn lane to accommodate peak demand. Provide TSP at the intersection $820,000 Infrastructure, Traffic Control Federal Way Prioritizes bus movements through segments of 8th Street NE.

D 2 181 Construct a shared right-turn queue jump pocket for the westbound bus through movement and an exclusive queue jump lane for the eastbound bus through movement. Military Road South and S 320th Street Construct a shared right-turn queue jump pocket for the westbound bus through movement and an exclusive queue jump lane for the eastbound bus through movement. For westbound movements, right turns will be permitted in both the through and queue jump phase. Right-turning vehicles will be allowed to turn right on red. For the eastbound approach, the queue jump will need to be placed between the through lanes and the right-turn lane because of very high eastbound right-turning volumes. Receiving lane may be required for queue jump. $1,400,000 Infrastructure, Traffic Control Federal Way Provides a queue jump for buses and reduces delay. Maybe can fit in existing ROW, civil work would be needed

K 13 181 Add bus bulbs at stations Main Street between Auburn Way and M Street NE. Add bus bulbs at stations on Main Street between Auburn Way and M Street NE. $1,500,000 Infrastructure Auburn Allows buses to stop in-lane, eliminating delays from merging back into traffic.

C 1 166 Convert the curbside westbound lane to a queue jump lane with queue jump signal Meeker Street and 64th Avenue S intersection Convert the curbside westbound lane to a queue jump lane with queue jump signal $50,000 Transit Lane Kent Allows buses to bypass queues, reducing delay. No civil work.

E 2 166 Modify the geometry of the intersection to improve the turn radius and provide wider lanes for buses. N Lincoln Avenue and W Meeker Street intersection Modify the geometry of the N Lincoln Avenue and W Meeker Street intersection to improve the turn radius and provide wider lanes for buses. $400,000 Infrastructure Kent Provides additional lane width

F1 3 166 TSP at the intersection Ramsey Way and E Smith Street intersection Install TSP at the intersection. $40,000 Traffic Control Kent Reduces delay

F2 4 166 TSP at the intersection 4th Avenue N and E Smith Street intersection Install TSP at the intersection. $40,000 Traffic Control Kent

K1 5 164 TSP at the intersection SE 256th Street and 104th Avenue SE TSP at the intersection $40,000 Transit Lane, Traffic Control Kent Reduces delay for buses, TSP ONLY

K2 6 164 TSP at the intersection Kent-Kangley Road and 108th Ave SE TSP at the intersection $40,000 Transit Lane, Traffic Control Kent Reduces delay for buses, TSP ONLY

K3 7 164 TSP at the intersection Kent-Kangley Road and 111th Ave SE TSP at the intersection $40,000 Transit Lane, Traffic Control Kent Reduces delay for buses, TSP ONLY

K4 8 164 TSP at the intersection Kent-Kangley Road and 115th Ave SE TSP at the intersection $40,000 Transit Lane, Traffic Control Kent Reduces delay for buses, TSP ONLY

K5 9 164 TSP at the intersection Kent-Kangley Road and 124th Ave SE TSP at the intersection $40,000 Transit Lane, Traffic Control Kent Reduces delay for buses, TSP ONLY

K6 10 164 TSP at the intersection Kent-Kangley Road between 104th Avenue SE and 132nd TSP at the intersection $40,000 Transit Lane, Traffic Control Kent Reduces delay for buses, TSP ONLY

L 11 164 Reconfigure the southbound approach at intersection to a shared through-right turn lane and two left turn lanes. Add a second northbound left turn lane. Kent-Kangley Road and 132nd Avenue SE Reconfigure the southbound approach of the Kent-Kangley Road and 132nd Avenue SE intersection to a shared through-right turn lane and two left turn lanes. Add a second northbound left turn lane. $600,000 Infrastructure Kent Provides more green time for buses, reducing delay, Exiting ROW

M 12 164 Traffic signal installation SE 278th Place and 132nd Avenue SE Install a traffic signal at the intersection. $800,000 Traffic Control Kent Reduces delay for buses turning onto 132nd Avenue SE

O 13 164 Traffic signal installation and modify geometry SE 277th Place and 124th Avenue SE Install a traffic signal. Modify geometry to improve sight distance and turning radius for buses. $830,000 Infrastructure, Traffic Control Kent Reduces delay for buses turning onto 124th Avenue SE and improves path through intersection

P 14 164 TSP at the intersection SE 312th Street and 124th Avenue SE Provide TSP for northbound and southbound buses. $40,000 Transit Lane, Traffic Control Auburn Allows buses to bypass northbound and southbound queues, reducing delay, TSP ONLY

Q 15 164 TSP at the intersection SE 320th Street and 124th Avenue SE TSP at the intersection $40,000 Provides more green time for buses, reducing delay Auburn Traffic Control, TSP ONLY
### CONVERT SHOULDER TO A BUS LANE IN WESTBOUND DIRECTION AND NEW CENTER BUS LANE IN EASTBOUND DIRECTION

**Kent Des Moines Road between Military Road and Meeker St**

Between Military Road and Meeker Street the westbound shoulder would be converted to a bus lane, and in the eastbound direction, a new center bus lane would be added.

**$5,200,000 Transit Lane Kent**

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### IMPROVE PAVEMENT SURFACE

**SE 277th?**

Improve pavement surface to handle buses, provide roadway striping, and remove parking on one side of the street.

**$2,400,000 Infrastructure Kent**

Provides a wider lane and smooth ride for buses.

*The cost estimate DOES NOT include the cost of fiber interconnect installation.*