

MEMORANDUM

To: Julia Walton, AHBL

From: Thomas Brennan

Date: April 10, 2009

Subject: Transportation Assessment and SWOT Analysis

This memo assesses the existing transportation system within the City of Covington Downtown Study Area. The assessment was based on draft principles developed to guide the Downtown Plan and Zoning Study. The draft guiding principles related to transportation include:

Public Realm, Access and Connectivity

3. Provide a public realm of connected streets and plazas in the Downtown. A complete system of local streets, regional connections, transit and linkages for bicycles and pedestrians will provide safe and comfortable access for all modes of travel.
4. Make the public realm a comfortable walking environment supported by clear signage to help people find their way, distinctive landmarks, street trees, lighting and street furniture.
7. Design the Town Center for linkages to future high quality transit, regional trails and the system of existing and planned parks and natural areas that ring the Downtown.
8. Redesign SR 516, which carries the most traffic and bisects Downtown, into an attractive and inviting corridor that weaves together the two sides of downtown, facilitates travel for all modes, is flanked by pedestrian-oriented ground floor uses, and presents a positive image for the community and investors,

Parking

9. Develop a Downtown parking strategy that reinforces the Town Center as a compact and walkable place, making it easy and convenient for people to park once and walk to shopping and amenities.

The first section of the memo consists of an assessment of transportation and circulation in downtown Covington, focusing on access, circulation, non-motorized facilities, transit, and parking. It first summarizes existing conditions within each of these categories and identifies projects already underway or planned. A SWOT analysis was then used to identify strengths, weaknesses, opportunities, and constraints for each category as they relate to achieving the general principles for the Downtown Plan and Zoning Study. The SWOT analysis is presented in table form and key features are identified on a series of maps.

The second section of the memo provides a preliminary assessment of adding a new interchange on SR 18 with access to Downtown Covington.

Transportation and Circulation Assessment

Existing Conditions

This subsection briefly summarizes the existing transportation system in Downtown Covington in the areas of access, circulation, non-motorized facilities, transit, and parking.

Access

SR 18 and SR 516 (SE 272nd Street) provide excellent auto access to downtown Covington (see Figure 1). SR 18 is a limited access highway that runs southwest-northeast through Covington. It serves as a barrier on the west side of downtown and is congested at the 272nd junction. A potential interchange opportunity that would help relieve congestion at 272nd and improve access to the southern part of downtown is discussed in a separate section below.

SE 272nd is a high-traffic arterial that is the main street through downtown, running east-west. It has a significant number of driveways providing access to retail and commercial establishments on both sides of the street. The section between SR 18 and SE Wax Road was the focus of a completed access management project and an access management project east of Wax Road is currently programmed.

Balancing automobile access to businesses with a transition to a more walkable downtown environment will be a key policy and design challenge for Covington. Achievement of the guiding principle to redesign SR 516 as an attractive and inviting corridor that weaves together the two sides of downtown is indicative of the tradeoffs that will be faced in this study. This roadway is the primary route for auto and transit access to Downtown Covington, yet in its current design creates a significant barrier to pedestrian mobility.

Circulation

Other than SE 272nd Street, an east-west key regional link that serves many commercial properties in the center of downtown, Downtown Covington has a limited street grid. Other arterial streets that circulate traffic at the margins of downtown are:

- Covington Way SE, which runs northwest-southeast between 272nd and SE Wax Rd in the south part of downtown. It connects 272nd to Covington-Lake Sawyer Road.
- SE Wax Rd, which runs northeast-southwest along the east side of downtown. It continues north-south as SE 180th Ave, crossing over SR-18 about one mile north of the 272nd interchange.

Figure 1 is a map of the downtown street network and circulation. It highlights aspects of the transportation system that impede circulation and connectivity within downtown, including:

- Disconnected streets
- Shopping centers with large amounts of surface parking
- A lack of east-west alternatives to SE 272nd and a lack of continuous north-south streets
- Cul-de-sacs in residential areas that further limit connectivity

Criteria that require and specify how the street grid and connections will be made are critical to shaping the urban form in a way that is more consistent with the guiding principles. Covington's design manual provides some guidance, however more specific criteria could be added such as: maximum intersection spacing, priority locations for intersections, minimum features for intersection and crosswalk design, maximum parking square footage allowances before internal sidewalks are required.

Non-Motorized Facilities / Multi-use Trail Network

SE 272nd is a busy street with sidewalks on both sides of the street, but it lacks a planting strip to provide a buffer from traffic and has relatively infrequent pedestrian crossings. There are no parallel alternative routes, presenting challenges in developing 272nd into a pedestrian-friendly street. Sidewalks and bicycle facilities on many other streets are intermittent, although they are required for new development. Disconnected streets, big box stores with large amounts of surface parking, and cul-de-sacs in residential areas create additional challenges for walking access on both sides of 272nd. These challenges are not insurmountable and will be focus of this study, but will require tradeoffs and will need to involve WSDOT.

The Soos Creek and Jenkins Creek regional trails are located on the west and east side of downtown and are opportunities for off-street bicycle and pedestrian access to the downtown area, particularly with improved on-street facilities. The Covington CIP includes potential trail improvements that would extend these trails in a partial ring around the City, including areas west, south and east of downtown.

Although current design guidelines and standards provide for a network of sidewalks and bicycle facilities, gaps in the existing facilities could be inventoried and prioritized to help plan improvements.

A map of non-motorized facilities in and around downtown is provided in Figure 2.

Existing Transit Services

King County Metro operates three routes that serve Covington:

- Route 168 provides hourly transit service in the downtown core seven days a week, 18 hours of service on weekdays, 15 hours on Saturdays, and 12 hours on Sundays. Route 168 runs east-west along 272nd, with a loop on SE Wax Rd, 180th Ave SE, SE 262nd Place, and Timberlane Way SE, and connects to Sounder commuter rail in Kent. While it provides important regional connections, poor service frequencies make traveling by transit unattractive for residents or employees that have other choices.
- Route 159 provides commuter service to downtown Seattle that starts from SE 164th Ave and 272nd, just west of the the 272nd–SR 18 junction. It runs north west of SR 18 then completes a loop north and east of downtown, rejoining 272nd at 192nd Ave SE.
- Route 912 makes several daily weekday trips from 272nd and 164th Place SE to Black Diamond and Enumclaw, ending at Enumclaw Pool.

A map of existing transit services is shown in Figure 3.

Parking

Figure 4 depicts surface parking lots for the shopping areas both north and south of SE 272nd Street. These large areas of parking increase the perceived distance between destinations and discourage walking between them. However, they can provide future redevelopment opportunities and can be subdivided into smaller, more walkable blocks.

City design guidelines call for no on-street parking on major streets (arterials) and minimal on-street parking on minor streets, e.g. collectors. On-street parking is permitted on residential streets.¹ Encouraging on-street parking throughout the Downtown could help to reduce the

¹ See Covington Design Guidelines, Circulation & Parking - General Street Design (4/6/2005, p. 15)

need for large areas of surface parking over time. Additionally, the elimination or reduction of minimum parking requirements for new development will be important to encourage more compact and mixed-use urban form. A comprehensive Downtown parking management plan will be needed that examines the feasibility of creating municipal parking facilities, possibly supported by an in-lieu-program to replace minimum parking requirements, shared parking options and more flexible programs allowing developers to unbundle parking costs from new development.

Programmed Improvements

Covington has a 6-year (2009-2014) transportation improvements program (TIP) that includes several capital projects within downtown that improve both vehicular and non-motorized access and circulation. Figure 5 is a map of these projects. The projects slated for 2009 include:

- Extension of 168th Ave SE south of 272nd to Covington Way SE, including access management. This project has been completed and added a key north-south route to the limited street grid.
- Widening and reconstruction of SE Wax Road and 180th Ave SE between SE 272nd Street and SR 18, including sidewalks and installation of a roundabout at the Wax Rd – 180th Ave intersection. This project is funded.
- Access control, pedestrian improvements, and signal revisions on SE 272nd Street between SE Wax Rd and Jenkins Creek. Design is funded but not construction.

SWOT Analysis

A SWOT Analysis was used to identify attributes of Downtown Covington’s transportation system that are favorable and unfavorable to achieving the general principles outlined above. The analysis is organized in five major categories in the following table:

Strengths	Weaknesses	Opportunities	Constraints
Access			
<ul style="list-style-type: none"> • WSDOT and the City completed an access improvements project on 272nd between SR-18 and SE Wax Rd, limiting driveways, adding median street trees, and adding traffic signals with pedestrian crosswalks • Current city policy is to minimize entry and egress points; design guidelines for commercial zones call for no more than one per parcel or per 200 feet 	<ul style="list-style-type: none"> • There is a large number of access points and driveways along 272nd in the downtown area, which detracts from a pedestrian-friendly character and creates potential for conflicts with vehicle turning movements 	<ul style="list-style-type: none"> • It may be feasible to add a “peel off ramp” to the northbound off-ramp from SR 18 that would provide an additional access to the south side of downtown 	<ul style="list-style-type: none"> • There is only one primary access point to downtown • Bicycle and pedestrian access to downtown is limited to very busy streets many of which have no facilities or discontinuous options for non-motorized travel

Strengths	Weaknesses	Opportunities	Constraints
Circulation			
<ul style="list-style-type: none"> • 272nd is a major east-west thoroughfare in South King County and combined with SR 18 provides excellent auto access to Downtown Covington • Good grid form in center of downtown north of 272nd between 168th and 272nd Place 	<ul style="list-style-type: none"> • Disconnected local street grid in the downtown area, which is served by a limited number of arterials • Big box retail stores are barriers to walking and connectivity. They lack internal circulation or connections to surrounding street grid (examples: Safeway Shopping Center and QFC plaza) • SR 18 is a barrier to the west of downtown with no crossings between SE 180th & SE 272nd. The existing crossings are not well-suited for non-motorized uses • In many respects, SE 272nd is not a pedestrian-friendly street (see non-motorized facilities) • Residential development in and around downtown is characterized by cul-de-sacs 	<ul style="list-style-type: none"> • Improve pedestrian connectivity between residential pockets in and around the downtown area and retail/commercial uses and transit • Connect the street grid and improve intersections, particularly in the Town Center and Gateway East districts. For example, the creation of 168th Ave SE extension. • Establish criteria for future street connection, such as maximum intersection spacing, priority locations for intersections, minimum features for intersection and crosswalk design, maximum parking square footage allowances before internal sidewalks are required • Consider renaming one or more numbered streets to improve legibility and sense of identity in the downtown core. 	<ul style="list-style-type: none"> • Big box retail stores create impediment to connecting street grid • It is difficult to improve cul-de-sac connectivity due to private property at street ends • 272nd will continue to be a high-volume traffic street as there are few or no parallel travel opportunities. This will make it challenging to develop a pedestrian-friendly street

Strengths	Weaknesses	Opportunities	Constraints
<p>Non-motorized Facilities</p> <ul style="list-style-type: none"> • Current City policy promotes pedestrian-oriented features in new development, e.g. street frontage improvements are required for new development, which can include sidewalks and right-of-way dedication. Design guidelines call for separated sidewalks (8-10 feet in downtown commercial areas) with landscaping/trees on all streets and bike lanes on major and minor streets. • 272nd has 5-foot sidewalks on both sides, from Covington Way to Wax Rd. • The east side of 180th Ave SE has continuous sidewalks. Capital project to widen SE Wax Rd and 180th Ave SE to include bicycle lanes on both sides and 8-foot sidewalks. • Newly constructed Covington Way SE has bike lanes on both sides of the street. Covington-Sawyer Rd and the 168th Ave extension are also designated as bicycle routes • Many streets north of 272nd have relatively low traffic volumes and shoulders. • North of 272nd, 164th Ave SE, part of 180th Ave SE, SE 270th Pl, 168th Pl SE, and part of SE Wax Rd are designated for bicycle use. • Many King County Metro buses have bike racks • Regional bike routes include Soos Creek regional trail, just west of the city, and the Jenkins Creek trail. 	<ul style="list-style-type: none"> • Infrequent street crossings on 272nd (about 0.1 to .25 miles from SR 18 to SE Wax Rd.) and it lacks a planting strip to act as a buffer between the street and the sidewalk • High traffic volumes on 272nd act as a barrier to pedestrian and bicycle travel between activities north and south of the roadway • Streets historically have a rural character with limited sidewalks. • Sidewalks required as part of new development are piecemeal/discontinuous • The west side of 180th Ave SE has only intermittent sidewalks. • Most streets do not have dedicated bike facilities. • Bike facilities do not exist nor are proposed for the access control segment of 272nd between SR 18 and SE Wax Rd. • Area south of 272nd to Wax Road, including school district side, needs improved connections 	<ul style="list-style-type: none"> • Median planter strips added on 272nd may provide opportunities for mid-block crossings • Most major roadways have paved or gravel shoulders between 1-5 feet wide. • Crossing over SR-18, 180th has narrow paved shoulders but no sidewalks; however there is a center turn lane which could provide additional right-of-way if it is feasible to reconfigure. • Provide continuous alternate bike/ped routes to 272nd, e.g. Covington Way • Connections to current and future regional trails from downtown • Local improvement districts (LIDs) are an adopted policy tool for Covington. • Identify priority locations for non-motorized facilities on existing streets to help plan improvement of facilities. 	<ul style="list-style-type: none"> • Big box retail / shopping centers create impediment to connecting street grid • Connecting to the regional trail system from downtown requires riding on streets that are busy and lack bicycle facilities.

Strengths	Weaknesses	Opportunities	Constraints
Transit			
<ul style="list-style-type: none"> • Downtown Covington is part of King County Metro high ridership “Core Service Connection” network that will receive priority for bus shelters and service improvements as part of the Transit Now program (although Covington is not on the preliminary list of planned improvements)² • Route 168 operates seven days a week, 12-18 hours per day, between Covington and Kent • Route 159 provides commuter service to downtown Seattle • Routes 159 and 168 serve loops north and east of downtown in addition to 272nd • Route 159 and 168 connect to Sounder commuter rail service in Kent • City design guidelines calls for transit stop locations to be incorporated into all development plans. 	<ul style="list-style-type: none"> • Transit service is relatively infrequent, even during peak hours • No transit service south of 272nd. 	<ul style="list-style-type: none"> • Covington is one of the areas with rapidly developing population growth where King County Metro is planning to expand service, contingent on “sufficient density to support transit service, and with a street network that accommodates non-circuitous transit routing and pedestrian access”³ • Install transit shelters at stops on 272nd, encouraging additional transit use • Develop a central transit center facility using surface parking or other underutilized land in the downtown core along 272nd. Such a facility should be coordinated with town center design to maximize access to the most pedestrian friendly part of the downtown • In the long term, it may be possible to utilize a rail line in south part of the city to extend Sounder commuter rail service to Covington 	<ul style="list-style-type: none"> • Covington is not identified as an urban or regional center, which would prioritize it for service improvements and a transit hub • Transit service improvements in Covington are under the jurisdiction of King County Metro
Parking			
<ul style="list-style-type: none"> • Plentiful parking in big box retail shopping areas • New projects (Covington Place and Skagen Plaza) improve pedestrian access to storefronts across parking lots and city design guidelines promote such features • Current city policy for Main Streets is to have shared parking lots with pedestrian connections to main walkways, located behind or between buildings. (For example, Covington Place) 	<ul style="list-style-type: none"> • Large blocks of parking increase the difficulty of walking between destinations • City development code contains minimum parking requirements, one space per 400 square feet (equivalent to 2.5 per 1000 square feet) for most retail and office uses. While parking requirements of this magnitude are not uncommon for suburban retail, they limit flexibility for developers interested in pedestrian-oriented or mixed-use projects and are still likely to be a barrier to accomplishing a more fine-grained urban form.⁴ 	<ul style="list-style-type: none"> • Large surface lots provide good development opportunities and if oriented with the grid can be subdivided into smaller, walkable blocks 	<ul style="list-style-type: none"> • City design guidelines call for no on-street parking on major streets and minimal on-street parking on minor streets

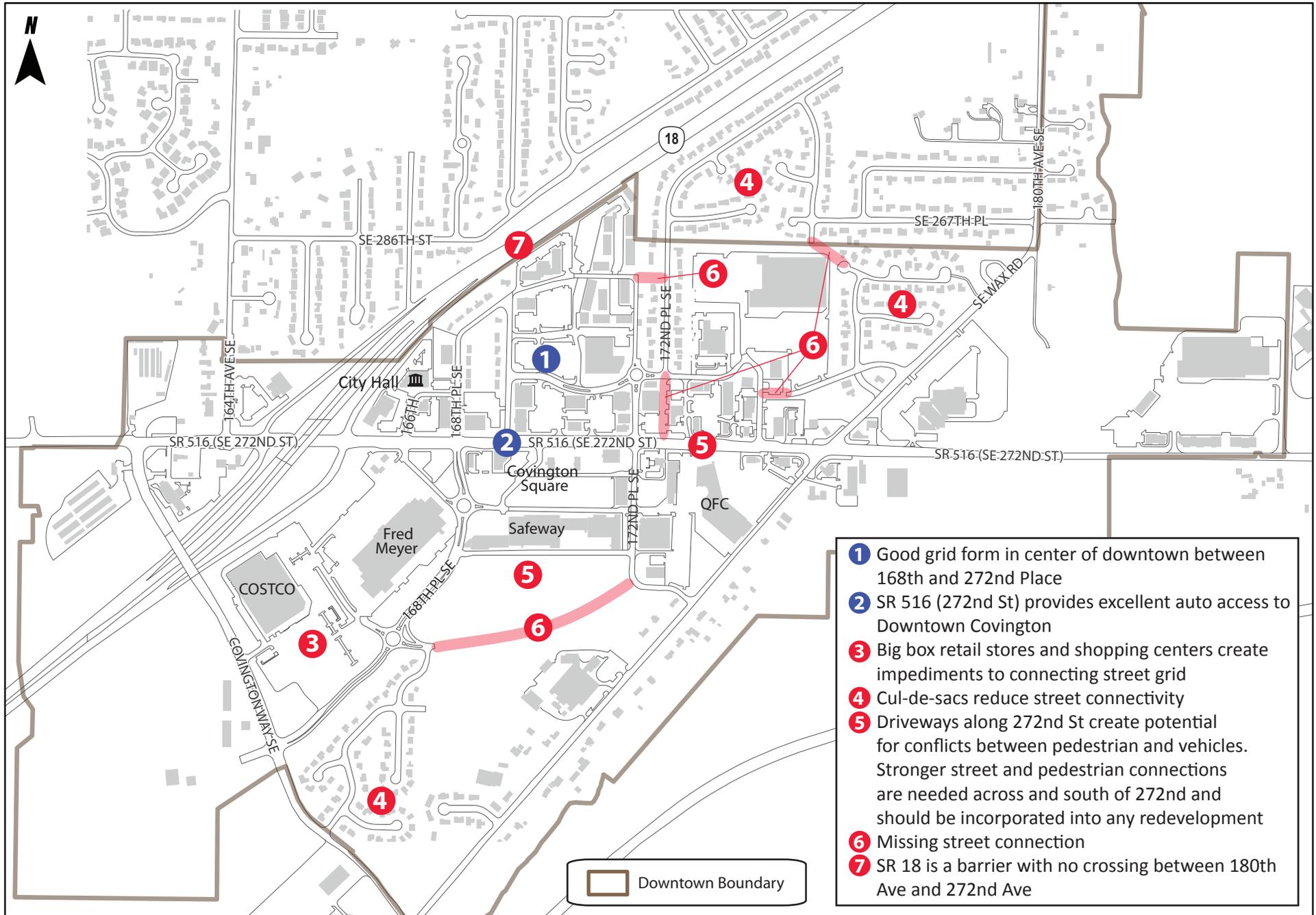
² King County Metro Strategic Plan for Public Transportation, 2007-2016, Sections 4 and 6, e.g. p. 6-2

³ King County Metro Strategic Plan for Public Transportation, 2007-2016, Section 4, e.g. p. 4-16 and 4-17

⁴ See Covington Municipal Code, 18.50.030, for complete listing of minimum parking requirements. <http://www.codepublishing.com/WA/Covington/html/Coving18/Coving1850.html#18.50.030>

To summarize, SR 18 and SR 516 (SE 272nd Street) provide excellent auto access and circulation to retail and commercial properties along 272nd, but there is a limited street grid within Downtown to complement these major routes. As a result of limited alternatives, access and circulation for bicyclists and pedestrians is challenging. Plentiful parking serving the retail centers is an additional barrier to pedestrian access and mobility. Covington's policies and design guidelines have encouraged a greater mix of uses and development patterns favorable to non-motorized access in more recent development and current capital projects and there are additional opportunities for Covington to make strides in this direction. However, the pattern of existing development and some remaining policies are constraints to achieving Covington's goals for the downtown area.

Figure 1 Downtown Street Network and Circulation



- 1** Good grid form in center of downtown between 168th and 272nd Place
- 2** SR 516 (272nd St) provides excellent auto access to Downtown Covington
- 3** Big box retail stores and shopping centers create impediments to connecting street grid
- 4** Cul-de-sacs reduce street connectivity
- 5** Driveways along 272nd St create potential for conflicts between pedestrian and vehicles. Stronger street and pedestrian connections are needed across and south of 272nd and should be incorporated into any redevelopment
- 6** Missing street connection
- 7** SR 18 is a barrier with no crossing between 180th Ave and 272nd Ave

Figure 2 Non-Motorized Facilities and Multi-use Trail Network

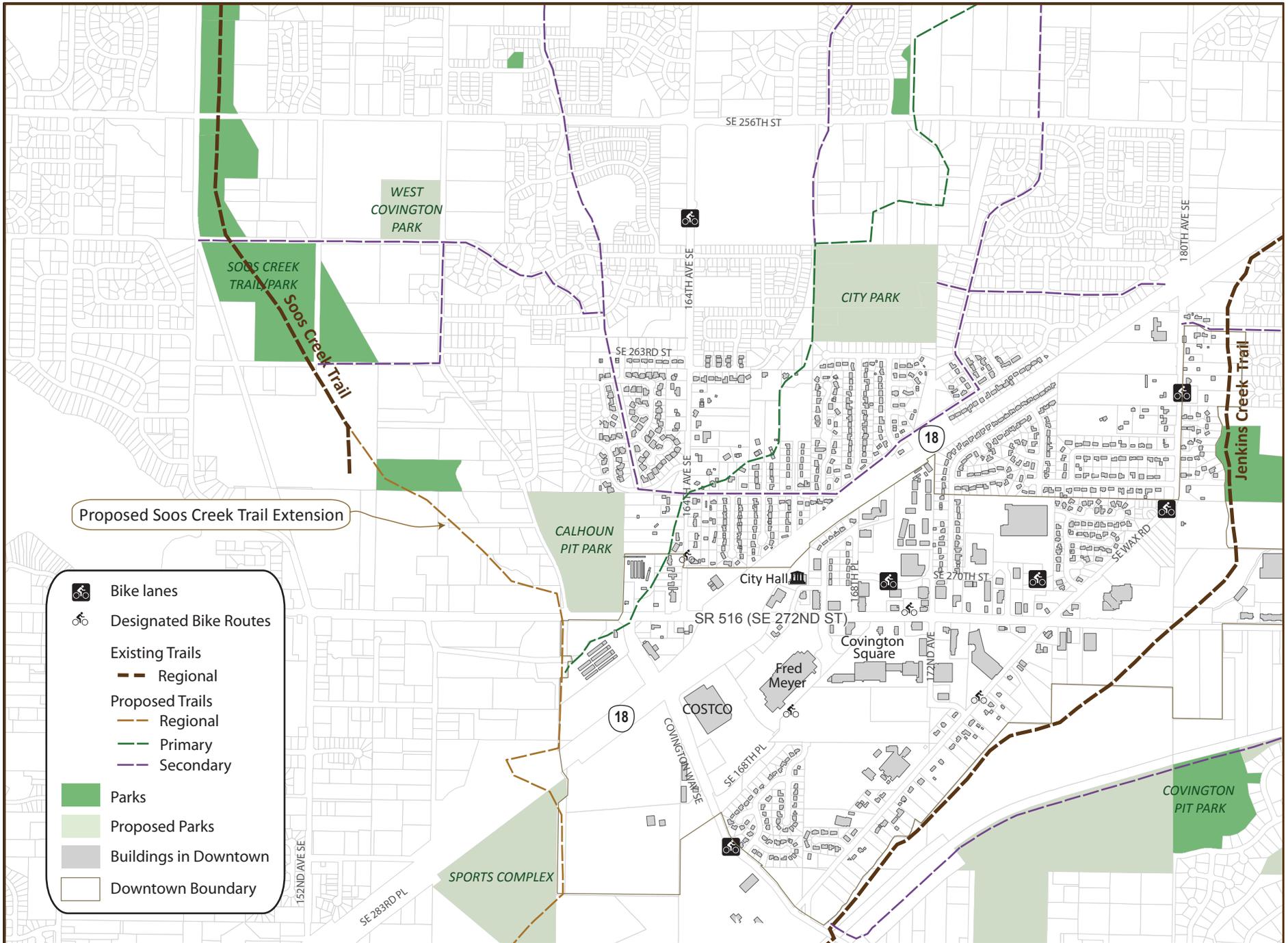


Figure 3 Existing Transit Services

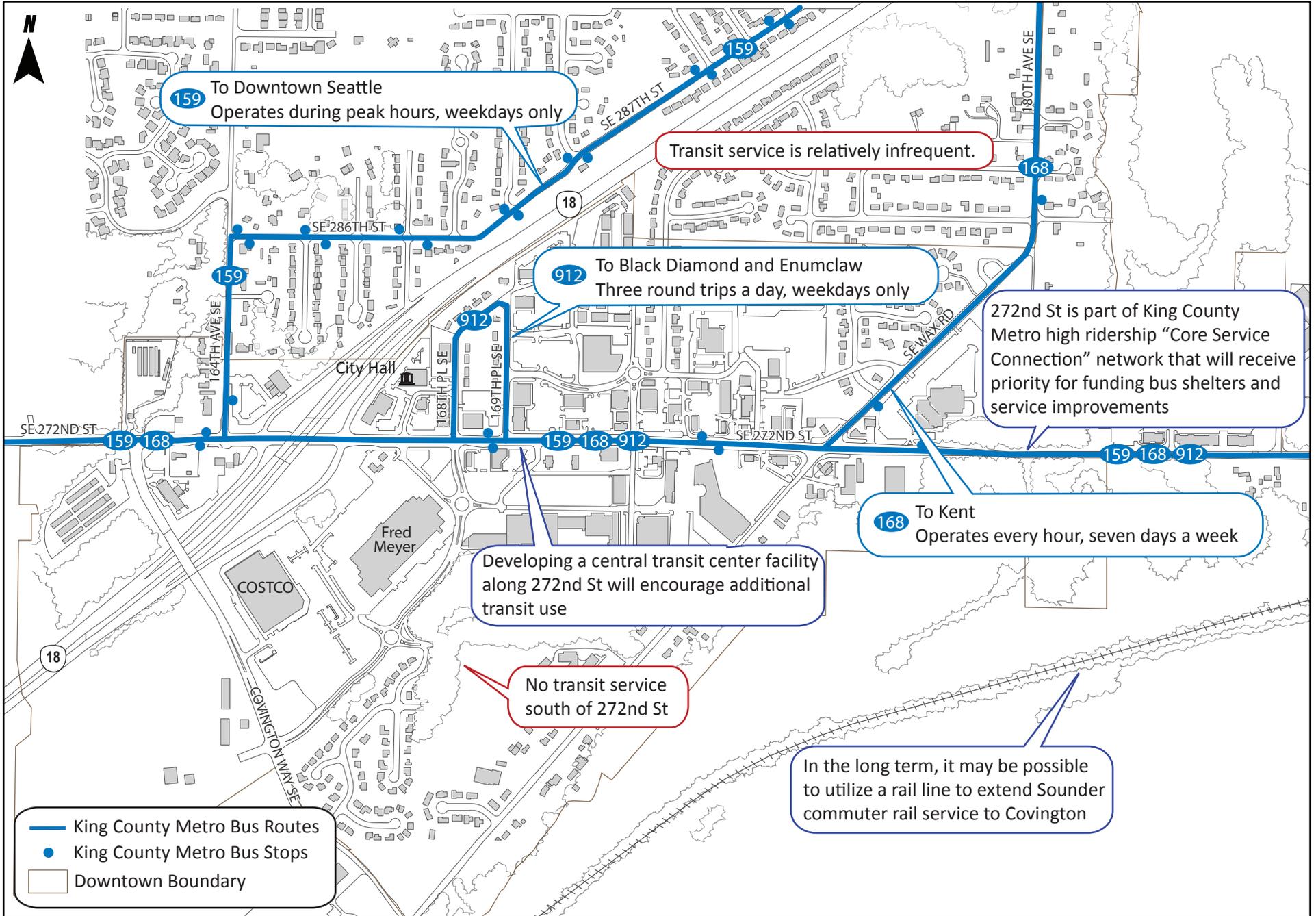


Figure 4 Parking

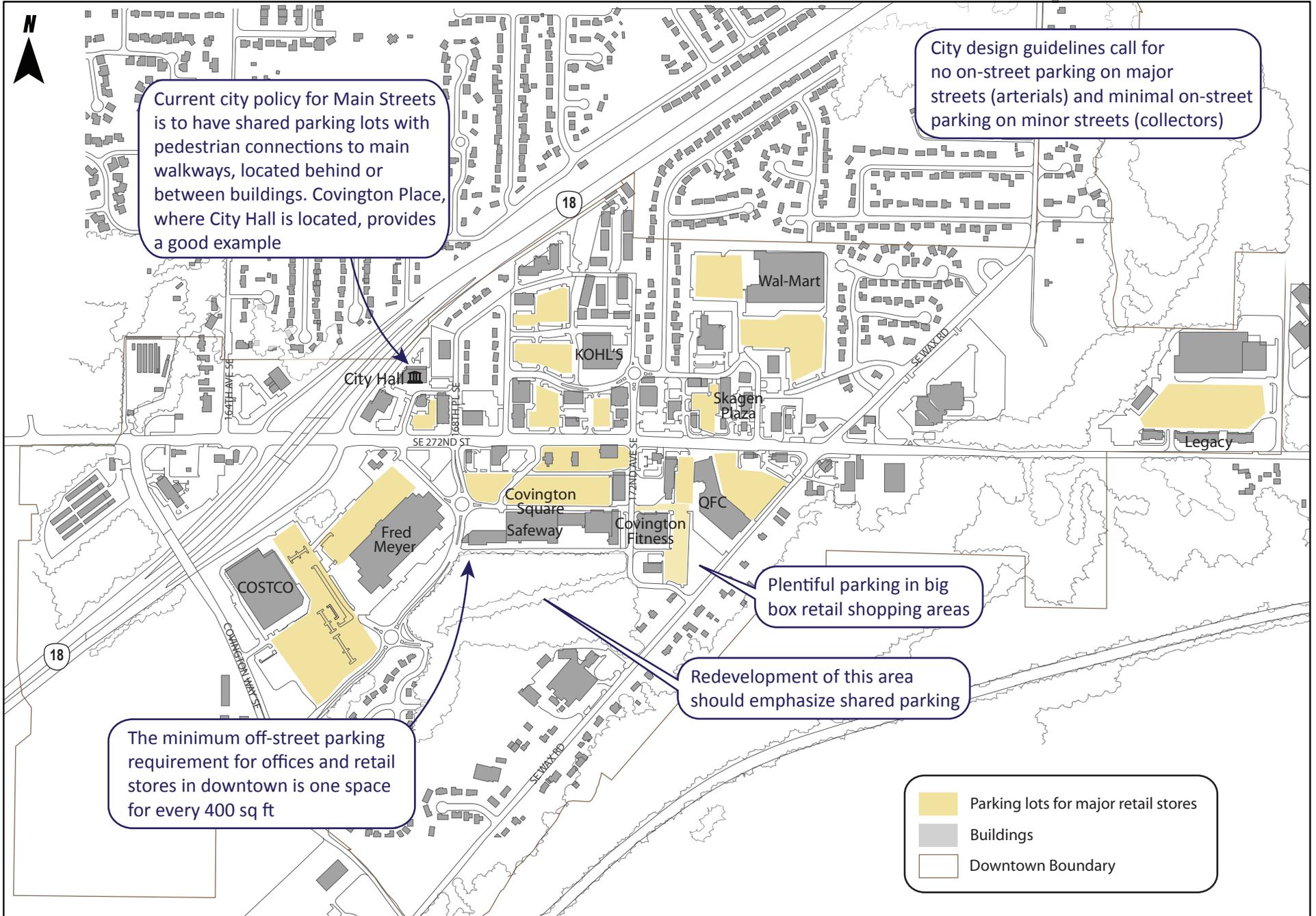
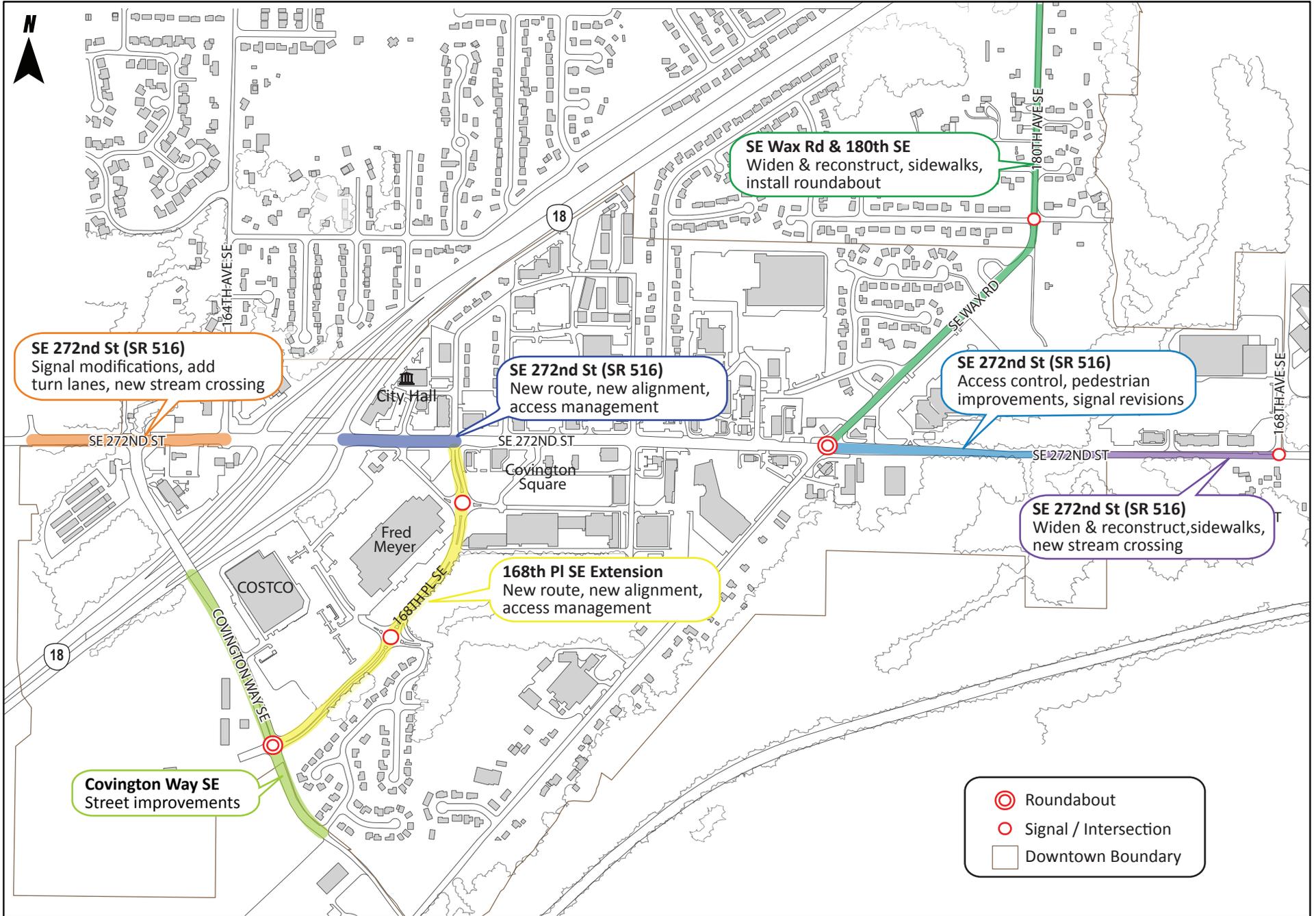


Figure 5 Six-Year Transportation Improvement Projects



Potential Interchange Analysis

The intent of this analysis is to do a preliminary assessment of the feasibility of increasing access to Downtown Covington from State Route 18, the largest regional highway serving the community. West of Covington, SR 18 links the community to Auburn, where connections to Sounder Commuter Rail service, SR 167, I-5 and Pacific Highway are available, providing a critical regional mobility link for Covington residents. To the northeast the highway passes through Maple Valley and eventually loses its state highway designation passing Tiger Mountain State Forest before connecting to I-90. Two options are explored in this Memo for potential feasibility: 1) a new interchange on SR 18 that would link exiting traffic directly to Downtown Covington, or 2) a new “peel off” ramp added to the existing Eastbound exit ramp for SR 516.

1. New interchange on SR18

WSDOT standards require interchange spacing of one mile, which would preclude the construction of another highway interchange that would effectively serve Downtown Covington. There are procedures for exceptions; however, most exceptions would require a major land-use generator or opportunity for relief of a severely congested interchange.⁵ A primary concern in access management is the volume of traffic that will be generated on the state highway resulting from the interchange and commensurate impact on highway levels of service. Given current land uses in Covington and current levels of service on SR 18, this is not likely to be a concern. Also considered are the environmental impacts of right-of-way (ROW) acquisition to build the road geometry required by safety standards (i.e., removing buildings or wetlands). An Engineering Manager from WSDOT Northwest Regional office stressed the importance of conducting a detailed environmental assessment before pursuing an exception with WSDOT, since the agency would be unlikely to grant an exception to a new interchange with significant environmental issues⁶.

Even if a new interchange were approved, funding would be a challenge. Interchanges are very expensive and small communities typically require 90% in federal funds for construction. Given the high demand around the state for the monies and the type of projects Covington would be competing with, it may be challenging to obtain federal funds.

The most likely location for an additional interchange would be at Wax Road, which is just less than one mile to the northeast of the SR 516 interchange. This high level assessment concludes that it is feasible to add a full interchange at this location, but would require a rigorous environmental and traffic engineering analysis to make a viable exception case to WSDOT.

2. New “peel-off” exit ramp added to existing ramp

The existing exit ramp from Eastbound SR 18 to SR 516 is approximately 2,000 feet long. After about 800 feet, it passes under Covington Way SE, and then vehicles travel another roughly 1,200 feet to reach the end of the ramp, where they may turn right (East) or left (West) onto SR 516. There is ample room for the addition of a new turning option, or “peel off”, on this portion of the exit ramp, which is directly adjacent to Covington Square.

Figure 6 shows this option on a map.

⁵ A summary of WSDOT’s access management policy for state roads may be found online at <http://www.wsdot.wa.gov/NR/rdonlyres/482ED3C5-8E26-4FD5-A220-C73B01467012/0/AccessGuide.pdf>

⁶ Information in this memo reflects an interview with Gil McNabb, an Engineer Manager for the WSDOT Northwest Region Office in Shoreline. He may be reached at 206-440-4578.

The fact that this would be an exit-only access point avoids some of the issues of access management policy. WSDOT engineers felt issues that arise when building inbound-traffic access points could be avoided, such as new traffic generation on SR 18 and adequate road space for vehicle merge patterns. (The issues would be evaluated as part of planning a new interchange, but would not be required in evaluating a peel off ramp). He also pointed out that while state highways such as SR 18 are entirely within the state's jurisdiction, access ramps are often shared between state and local entities. This means it is not necessary to involve federal funds or oversight.

The main issue with the peel-off ramp concept is one of right-of-way. The design speed for an exit ramp is 25 mph. A detailed survey and engineering analysis of the area would be needed to determine where the peel-off ramp might fit on the available land, assess potential environmental impacts, and determine impacts on existing buildings and parking lots. Then a cost estimate could be made of engineering needs and ROW acquisition costs. Such an assessment would require accessing the opportunity areas using the WSDOT Right-of-Way plan to determine property ownership. At a conceptual level, there appear to be limited physical and/or environmental barriers to construction of such a ramp.

To conclude, the peel-off ramp appears to be a feasible option from a technical standpoint, subject to a review of the ROW maps. As opposed to building a new interchange on SR 18, it would be a locally-driven project, rather than relying heavily upon the leadership and resources of the State. This means it could be built in a timelier and more cost effective manner. It is likely that Covington would bear much of the cost burden; however, there may be a state or federal grant program that would support the project.

Figure 6 Interchange Opportunities

