

PUBLIC SERVICES AND UTILITIES TECHNICAL REPORT

***SR 167 – 8th Street E Vicinity to 15th Street SW Vicinity
Northbound HOT Lane***

November 2008

Prepared by:

**Urban Corridors Office
Washington State Department of Transportation
Seattle, Washington**



**Washington State
Department of Transportation**

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EXECUTIVE SUMMARY

What is the proposed project and why is it needed?

The Washington State Department of Transportation (WSDOT) plans to widen the State Route (SR) 167 roadway to construct a new northbound high-occupancy toll (HOT) lane from the vicinity of 8th Street E in Pacific (MP 10.2), Pierce County, Washington to the vicinity of 15th Street SW in Auburn (MP 14.26), King County, Washington (Exhibit 1). The construction of the HOT lane will require widening the roadway to the outside of the existing pavement between 6th Avenue N in Algonia and 5th Avenue SW in Pacific. The rest of this project will be widened to the median. Ramp meters will be installed at the northbound on-ramps at the SR 167 interchanges with 8th Street E and Ellingson Road. All of the proposed widening work will occur within WSDOT right-of-way.

SR 167 is an important thoroughfare for cars, trucks, and transit in the Green River Valley. The additional capacity that this project will provide to SR 167 will relieve congestion and improve safety for commuters traveling northbound.

What areas and resources will be affected?

Public services that may be affected within the area include fire protection, emergency medical service, police protection, schools, parks, social services, transit, solid waste and recycling collection. Public and private utilities that exist within the study area and may be affected include water, sanitary sewer, electricity, natural gas, telephone, cable, and fiber optic cable¹. This report builds upon previous analysis done for the SR 167- 8th Street E. Vicinity to S. 277th Street Vicinity, Southbound HOT Lane Project (WSDOT, August 2008)

Two different study areas were used for public services and utilities due to the nature of effects on these elements. Public

¹ Stormwater drainage utilities and the effects to stormwater drainage are addressed under a separate report for the SR 167 – 8th Street E. to S. 277 th Street, Southbound, HOT Lane Project.

services were identified within a 0.5-mile radius (approximately 2640 feet) of the project alignment and public services outside the study area that provide services within the study area were noted. A 0.19-mile (approximately 1,000 feet) radius around the project alignment was used to identify any utilities and/or service boundaries that could be affected by the proposed project.

How were the effects on public services and utilities identified and evaluated?

For the analysis to determine what services, if any, could be affected by the project WSDOT performed the following steps:

- Identified the location of the existing public services and utilities within the proposed study area by reviewing data from local jurisdictions.
- Evaluated the effects of the proposed project on the existing public services and utilities (this can include effects during the construction as well as during the operation of the HOT lane facility)
- Provided a summary of the overall effects and potential mitigation strategies for the proposed project on the existing public services and utilities

For utilities WSDOT used the “Utility Franchise Permit Data Base”. The data base allows us to evaluate all utilities from mile post to mile post within the study area. We requested information from the utility service providers to see if there were any conflicts with WSDOT’s design.

What effects will the project have on public services and utilities?

No substantial effects to public services and utilities are anticipated due to the proposed project.

During project construction, SR 167 will be kept open to traffic most of the time and emergency vehicles will have access at all times. Some lane closures will be necessary during non-peak hours, and some late-night closures will likely be required which may include detouring traffic onto local streets or detouring traffic off at an off-ramp and immediately back onto

SR 167 at the on-ramp within the same interchange. This means that travel times for general traffic, fire, emergency medical, and police vehicles through the construction project area may increase slightly.

In the long-term, this project will help improve safety and travel times in the northbound lanes, thereby improving access for public services. The project will use electricity for ramp metering, lighting, electronic variable message signs, new signals, and cameras. This is not expected to create a negative effect on the availability of power to existing or future customers in the study area.

What mitigation measures are proposed to avoid or minimize project effects on public services and utilities?

A number of construction-related mitigation measures are identified in Chapter 4 of this report. Such measures include preparing a traffic control plan, providing adequate public notice of traffic disruptions during construction, and coordinating with emergency services, utility companies, and customers in a timely manner when a public service or utility will be temporarily impacted.

This project is expected to have minimal effects to public services and utilities during construction and no effects after construction.

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and possible mitigation measures. When there is a potential for public services or utilities to be affected as a result of the proposed project, then a review of those potential effects and possible mitigation measures is required.

This report describes the existing conditions and potential range of effects to public services and utilities that may be attributed to the construction and operation of a northbound HOT lane on SR 167, between the 8th Street E Vicinity and the 15th Street SW Vicinity.

This project can have an effect on public services and utilities in a number of ways by temporarily disrupting service or displacing infrastructure and requiring improvements or upgrades to the infrastructure. If effects are identified, WSDOT will implement actions to mitigate for those effects, as described in Chapter 4.

CHAPTER 2 EXISTING PUBLIC SERVICES AND UTILITIES

What is the study area for public services and utilities?

Two different study areas were used for identifying public services and utilities due to the nature of effects on these elements. Public services were identified within a 0.5-mile (approximately 2640 feet) radius of the project alignment (see Exhibit 2). Public services outside of the study area that provide services within the study area were noted in the evaluation. A 0.19-mile (approximately 1,000 feet) radius around the project alignment was used to identify any utility service areas that could be affected by the proposed project.

How was information on public services and utilities collected?

The following steps were used in determining what services, if any, could be affected by the project:

- Determine the location of the existing public services and utilities within the proposed study area
- Analyze the effects of the proposed project on the existing public services and utilities
- Provide a summary of the overall effects and mitigation strategies for the proposed project on the existing public services and utilities

In addition, the following information was reviewed to verify the locations of local services:

- The project's geographical information systems (GIS) database
- The Public Services and Utilities Technical Report for SR 167 – 8th St. E. to S. 277th St., Southbound HOT Lane Project
- GIS data from King County and Pierce County
- Local municipality and county Comprehensive Plans

Exhibit 2
Study Area for Public Services and Utilities



SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

- Local municipality, county, and utility websites
- Previously completed WSDOT base maps
- WSDOT Utility Permit Franchise Database
- Reports or studies prepared for this project, covering subjects such as transportation, environmental justice, Section 4(f), air, and noise
- Draft as-built plans for SR 167

Where do public services exist within the study area?

For this report, public services located within a 0.5-mile radius around the proposed project alignment were considered as part of this study. Exhibit 3 illustrates the location of public services and facilities, including parks, government buildings, and libraries within and outside of the identified study area.

Parks

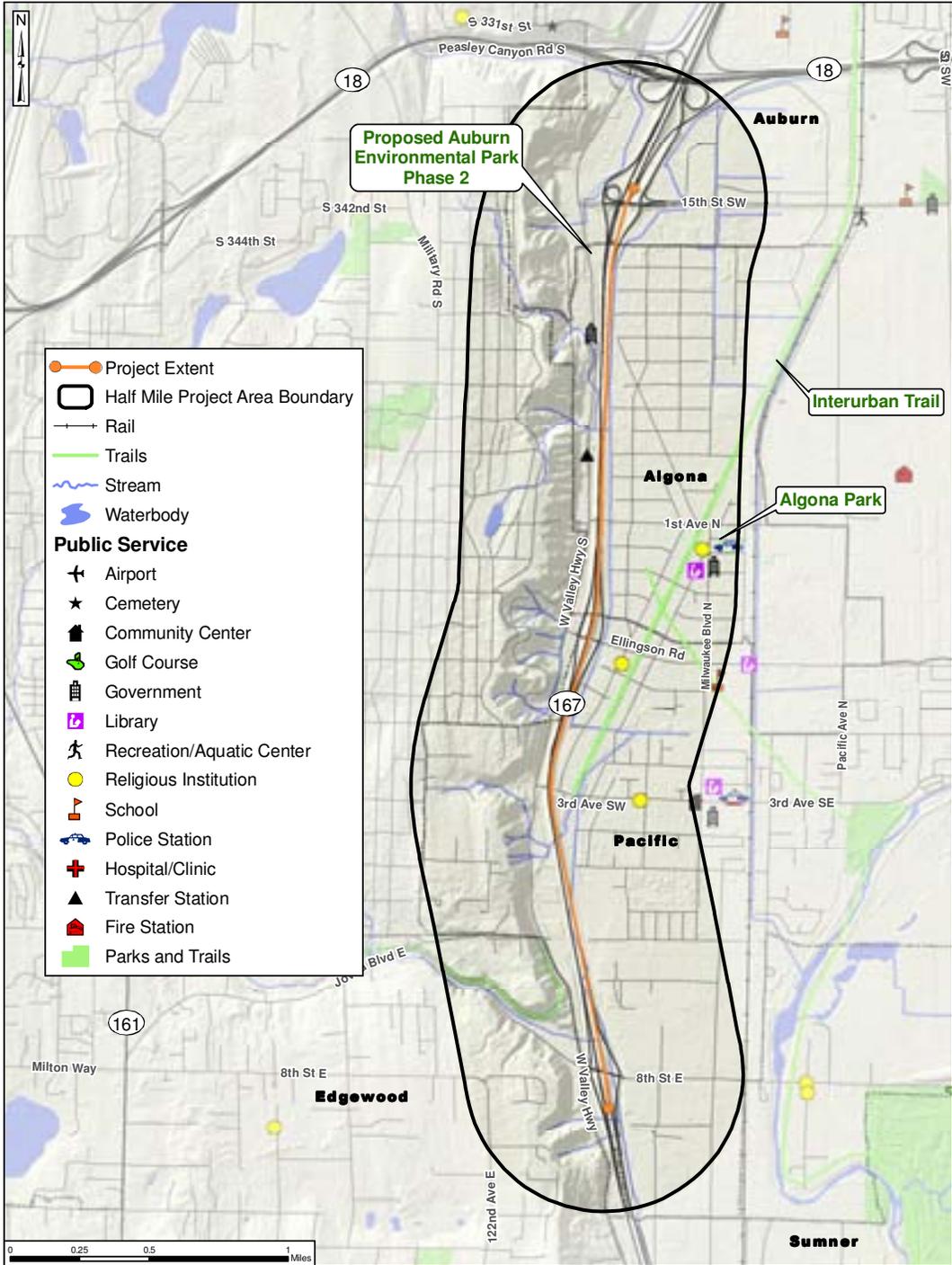
There is only one park and a trail that exist within the study area, Algona Park in Algona, and the Interurban Trail, which traverses most of the study area. In addition, the City of Auburn has proposed building an environmental park within the study area. These public park facilities are discussed below.

Interurban Trail

The 14-mile Interurban Trail, a non-motorized paved area, runs between I-405 in Renton and 3rd Avenue SW in Pacific. The Interurban Trail is paved with asphalt and has gravel shoulders which serves pedestrians and bicycle riders. The Interurban Trail runs parallel to SR 167 and is generally 0.5-mile to 1.0 mile east of the project from Renton to Auburn. The Interurban Trail veers to the southwest near 15th Street SW. Where the trail's end, at 3rd Avenue SW, it's approximately 300 feet east of SR 167.

SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

**Exhibit 3
Location of Public Services**



Algona Park

Algona Park is located on 402 Warde Street in Algona. It has athletic fields. Recently the City of Algona received a grant to help with the creation of a wetlands park in Algona and the city hopes these improvements will allow Algona Park to become a destination park.

Proposed Auburn Environmental Park

The City of Auburn is planning an environmental park adjacent to the SR 167 right-of-way. The Environmental Park is broken into two phases. Phase 1 of the proposed park will be approximately 120 acres and border along SR 167 to the west, and 15th Street NW to the north, the Interurban Trail to the east, and West Main Street to the south. In addition, Phase 2 of the environmental park, which encompasses a segment of Mill Creek, is a 130-acre area immediately west of the SR 167 right-of-way, and just south of 15th Street SW.

The Auburn Environmental Park Phase 1 and Phase 2 will provide public education and recreation opportunities and offer hiking trails, and bird viewing areas. The proposed parks are intended to create open space in an urbanized area while offering opportunities for economic development, water quality improvements, stormwater detention and flood control, as well as fish and wildlife enhancement. Phase 2 is the park that is being proposed within our study area.

Government Buildings

There are two government buildings within the study area: the Algona City Hall, and the Algona Library. No public medical facilities, senior centers, or museums exist within the study area.

Solid Waste and Recycling Facilities

Roadways in the study area are used for solid waste hauling and to reach local transfer facilities. A King County transfer station, shown in Exhibit 4, is located at 35315 West Valley Highway, just to the west of SR 167, half way between 15th Street SW and Ellingson Road. Nearly all of the study area is served by the King County Solid Waste facility in Algona, and waste collection services are through King County, which contracts with Waste Management. DM Disposal handles Edgewood and Sumner’s garbage and recycling. These solid waste contracts only include recycling for residential pick-up and do not cover recycling services for commercial firms; therefore, several private recycling companies serve businesses within the study area.

**Exhibit 4
King County’s Algona Transfer
Station**



Emergency Services

Emergency services include fire, police, ambulance, and emergency medical facilities. The Algona Police Department is the only emergency service facility located in the City of Algona City Hall, which is within the study area. Other stations also respond to emergency calls for fire or police assistance within the study area, as needed. All cities in the SR 167 study area have their own police and fire departments, with the exception of the City of Edgewood, which contracts with the Pierce County Sheriff’s Department and Fire District No. 8. All these emergency services use SR 167 as a major transportation thoroughfare.

Valley Regional Fire Authority provides regional fire and emergency medical treatment services throughout most of the study area. King County Medic One, of Kent, provides ambulatory service to the study area. The major medical facility in the area with emergency care is the Valley Medical Center, located at the interchange of SR 167 and S 180th Street in Renton.

Religious Institutions

There are three religious institutions located in the study area, Valley Baptist Church, Algona Pacific Church of God, and Jehovah’s Witnesses.

Transit Services

A number of transit agencies currently serve communities along SR 167. Specific transit operators include Sound Transit, King County Metro, and Pierce Transit. Sound Transit provides regional bus express service and Sounder commuter rail. The Sounder train serves Auburn Station which is located just outside the study area. King County Metro provides local and express buses and vanpools in the King County service area, while Sound Transit provides local and express bus service in the Pierce County area.

In the study area, bus transit routes run between and within all cities. While local service is available, majority of the transit routes provide service just outside the study area. The commuter rail service runs between Tacoma and Seattle, with new limited bi-directional service. In addition, there is one park and ride facility within the study area on Peasley Canyon Road.

Exhibit 5 illustrates the location of the transit facilities and routes within the study area; Exhibit 6, lists primary bus routes.

**Exhibit 6
Primary Bus Routes within the Study Area**

Route Number	Type of Service	Destinations
Sound Transit 564	Commuter	Puyallup, Sumner, Auburn, Kent, Renton, Bellevue
Sound Transit 565	Commuter	Federal Way, Auburn, Kent, Renton, Bellevue
Metro Transit 181	Local	Federal Way, Auburn, Green River Community College
Metro Transit 917	Local and DART	Auburn, Algona, Pacific

**Exhibit 5
Transit Services**



Schools

Within the study area, five school districts serve the population, including the Federal Way, Auburn, Fife, Puyallup, and Sumner school districts. The only school in the study area is Alpac Elementary in Algona. Exhibit 7 illustrates the location of the school district boundaries.

What utilities are within the study area?

The public utilities within the study area include those provided by local governments or utility districts — water, sanitary sewer, and storm water. Several private utilities also exist within the study area and include telephone, cable, electricity, gas, and fiber optic cable. Private utilities are typically not included on local government maps; they are available usually by written inquiry or through a utility locating service.

Utilities within or close to the project alignment will be reviewed by WSDOT’s design team to determine whether they will be unaffected, temporarily relocated, permanently relocated, or modified in some manner as part of the proposed project. At this point, WSDOT does not expect to have any impacts to utilities within the project area.

Exhibit 8 lists all of the known utility service providers serving the study area.

Exhibit 7
School District Map



SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

Exhibit 8

Public and Private Utilities Service Providers Serving the Study Area

Type of Service	Organization Name
Electricity	Puget Sound Energy
Natural Gas	Puget Sound Energy
Telephone/Internet	Qwest®, AT&T®
Fiber Optic Line	WSDOT, Above Net, 360 Networks USA
Cable/Internet	Comcast Cable
Water	Auburn: City of Auburn Utilities Algona: City of Algona Public Works Pacific: City of Pacific Public Works
Sanitary Sewer	Auburn: City of Auburn Utilities Algona: City of Algona Public Works Pacific: City of Pacific Public Works

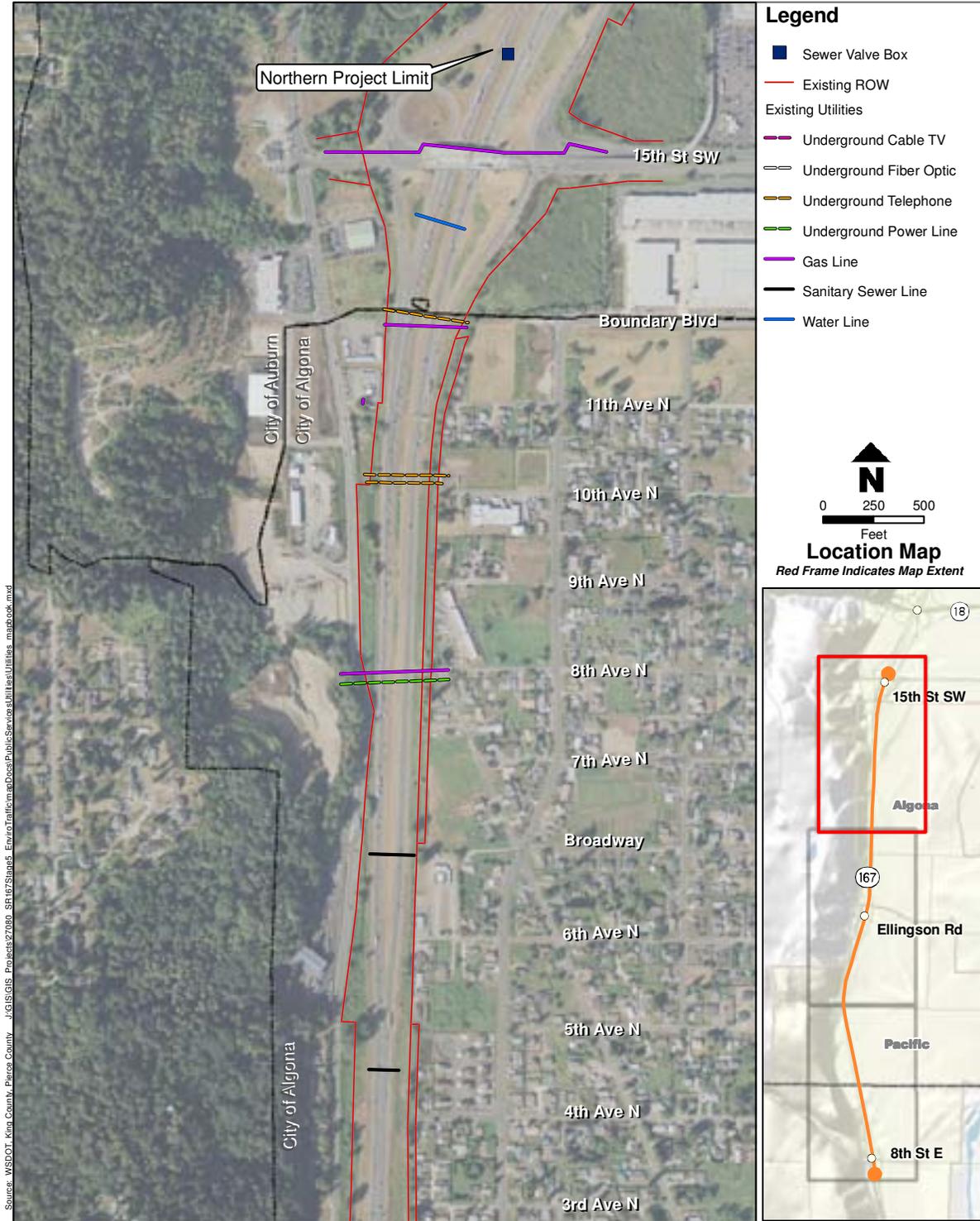
SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

Some utilities are located on the outside of the existing highway alignment, some are located within the median, and several utilities cross the highway perpendicularly. Utilities can be either underground or above ground.

Exhibits 9 through 11, starting at the northern terminus of the project, show aerial map locations of public and private utilities within the existing right-of-way. This is followed by a listing of the major utilities and services in WSDOT right-of-way within the project limits.

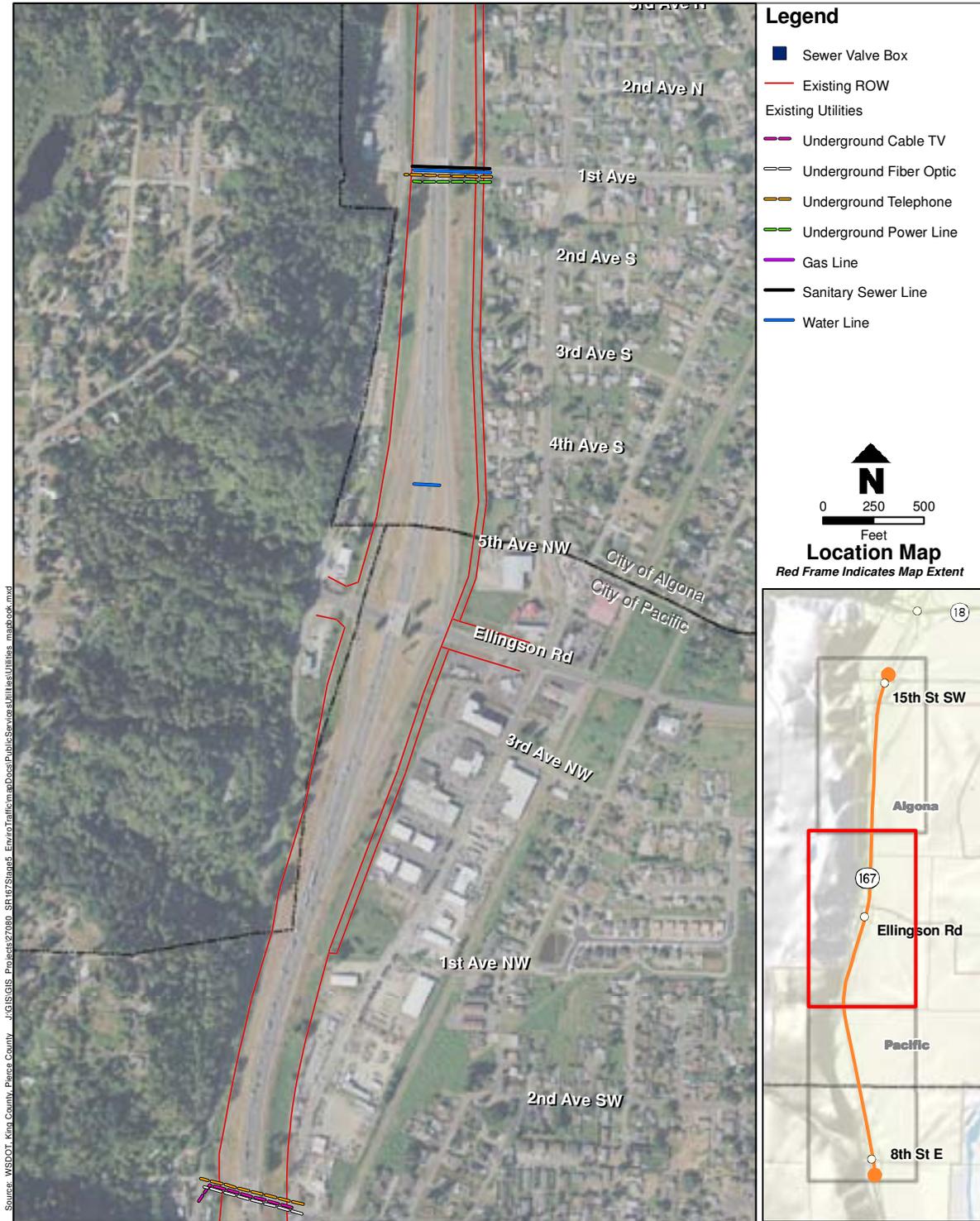
SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

**Exhibit 9
Location of Public and Private Utilities within Existing Right-of-Way**



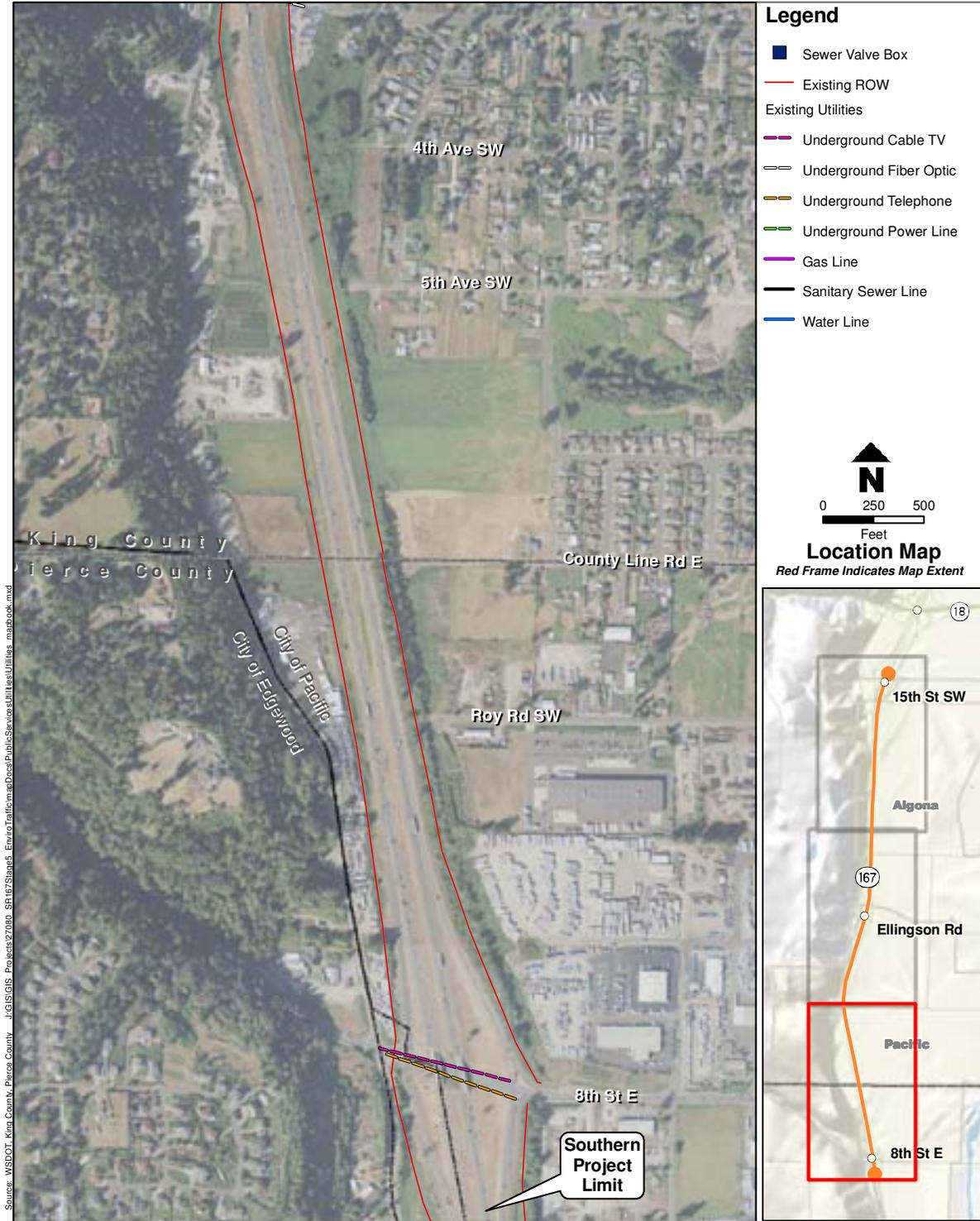
SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

**Exhibit 10
Location of Public and Private Utilities within Existing Right-of-Way**



SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

**Exhibit 11
Location of Public and Private Utilities within Existing Right-of-Way**



SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

Electricity

Private electrical power lines exist throughout the study area. There are two underground power line crossings at the following general locations within the study area:

- 8th Avenue N (Exhibit 9)
- 1st Avenue (Exhibit 10)

Natural Gas

Natural gas lines cross the highway at the following general locations:

- 15th Street SW (Exhibit 9)
- Boundary Boulevard (Exhibit 9)
- 8th Avenue N (Exhibit 9)

Telephone/Internet

There are underground telephone lines that cross the highway in several locations as listed here:

- Boundary Boulevard area (Exhibit 9)
- 10th Avenue N (Exhibit 9)
- 1st Avenue (Exhibit 10)
- 3rd Avenue SW (Exhibit 10)
- 8th Street E (Exhibit 11)

Fiber Optic Lines

The fiber optic line runs along the edge of SR 167 and crosses the highway near 3rd Avenue SW in Pacific city limits (Exhibit 10).

Cable TV/Internet

Underground cable television lines run along the edge of the roadway and cross SR 167 in the general location of 8th Street E (Exhibit 11).

Water

Water lines cross SR 167 at the following general locations within the study area:

- South of 15th Avenue SW (Exhibit 9)

SR 167- 8th Street E Vicinity to 15th Street SW Vicinity Northbound HOT Lane

- 1st Avenue (Exhibit 10)
- South of 4th Avenue S (Exhibit 10)

Sanitary Sewer

Sanitary sewer lines run along the western and eastern edge of the roadway and cross SR 167 at the following general locations:

- Broadway (Exhibit 9)
- South of 5th Avenue N (Exhibit 9)
- 1st Avenue (Exhibit 10)

CHAPTER 3 POTENTIAL PROJECT EFFECTS

WSDOT reviewed existing data, project plan sets, and construction methods to identify the areas of potential effects. The expected direct, indirect, and cumulative effects of the proposed project were determined by the process recommended in the *WSDOT Environmental Procedures Handbook*, Chapter 412, and the Council of Environmental Quality regulations (40 CFR 1508.7). The following definitions guided the analysis of effects for public services and utilities:

Direct effects are defined as the immediate effects of the project. Direct effects include all negative and positive immediate effects from project-related actions. A common example of a direct effect on public services and utilities occurs when the project requires temporary or permanent access to a property to repair, upgrade, or change a public facility or utility.

Indirect effects are sometimes called secondary effects and usually occur later in time, after project construction. These effects can be negative or positive. Changes to transportation patterns and land use are examples of indirect effects on public services and utilities.

Both direct and indirect effects can be temporary or permanent.

Cumulative effects are those that “result from incremental consequences of an action when added to other past, present, and reasonably foreseeable future actions.” The cumulative effects of a project may be undetectable when viewed in the individual context of direct or indirect effects. However, effects from a project can add to those from other actions to eventually lead to a measurable environmental change.

How will construction activities affect public services and utilities in the project area?

Direct Effects

The construction of this project will have limited permanent, direct effects on the public services. There may be some temporary direct effects in temporary re-rerouting or disruption of utilities due to construction. There are no major relocations required as a part of this project.

Minor temporary, direct effects on public services could occur during construction. Access to some public services could be temporarily disrupted due to temporary lane closures and increased congestion during construction. Also, some complete nighttime closures will require shifting traffic between the Ellingson Road on- and off-ramps and the 15th Street SW on-ramp. This means that travel times for general traffic, fire, emergency medical, and police vehicles through the project area will increase during construction-related traffic slowdowns.

Indirect Effects

The proposed project includes stand alone transportation improvements that will have no anticipated indirect effects on public services and utilities during construction.

Cumulative Effects

No cumulative effects are expected during the construction of this project. As the construction of this project nears, WSDOT will need to work with the local agencies to identify if any other construction projects in the area could potentially conflict with the proposed detour routes. Conflicting detour routes from multiple construction projects could affect emergency response times.

How will project operation affect public services and utilities in the project area?

Direct Effects

Once the project is completed, congestion along the SR 167 corridor will be reduced, thereby improving emergency response times, reliability for transit services, and access to public services.

The project will require long-term utility (electricity) usage for ramp metering, lighting, electronic variable message signs, and cameras. This is not expected to create a negative effect on the availability of power to existing or future customers in the study area.

Indirect Effects

The proposed project will have no anticipated indirect effects on public services and utilities during operations. Permanent adverse effects to public services are not expected, because the project will not cause permanent road closures or diversions that would limit access to public services.

Cumulative Effects

This project will improve traffic flow, speeds, and safety throughout the SR 167 corridor. The project will also improve access to public services within the study area. The change in traffic flow will improve response time and provide greater reliability within the study area.

CHAPTER 4 MITIGATION MEASURES

What measures are recommended to avoid or minimize the effects on public services and utilities during construction?

.Public Services

There are some potential temporary effects to public services such as detours, emergency vehicle access, and event traffic. Mitigation measures to address some temporary effects of the project could include:

- Develop and implement a traffic control plan that provides access through construction zones for emergency vehicles; post signs to show detour routes if temporary road closures are required.
- Provide the fire and police departments, and other service providers with advance notice of construction schedules to allow for coordination and to minimize the effects of road closures on response and travel times.
- Coordinate with staff at local event facilities to minimize construction-related effects during events.
- Provide adequate public notice of construction activities, lane closures, and detour routes.
- Coordinate the construction of the proposed project with all applicable agencies to minimize effects on public services.
- Communicate with the SR 167 Corridor Working Group to assess and coordinate potential cumulative effects that can result from multiple construction projects in the area, as they arise.

Utilities

There are some potential temporary effects on utilities such as relocation of some vaults, junction boxes, drainage structures, and the addition of new electrical components for the HOT lanes. Mitigation measures to address temporary effects of the project will include:

- Work directly with the utility companies and public agencies to ensure that any utility facilities that may be affected by the installation of HOT lane infrastructure are disturbed as little as possible.
- Provide sufficient notice of utility interruptions to the public. When a utility is switched from an old line to a new relocated line, small interruptions may occur. If a planned disruption becomes necessary, WSDOT and/or the utility provider will give sufficient notice to affected parties. WSDOT and/or utility providers also will work with the affected parties to minimize any effects from service disruptions. WSDOT is not anticipating any utility relocation within the study area. General measures to mitigate effects on utilities during construction could include:
 - Notify the fire department and power utilities, if power must be turned off. The utility companies will provide alternative sources of power to support emergency response systems within the construction zone and to replace power for any affected customers.
 - Notify the fire department and water utilities in the case of water utility relocation or temporary closure. Alternative sources of water will be identified for fire suppression for any affected customers.
 - Verify the exact locations and depths of underground utilities prior to construction, including coordinating with the utility providers. On-site measures include techniques such as potholing near suspected utilities and using drilling

or excavating techniques that will limit damage to utilities.

What measures are recommended to avoid or minimize the effects on public services and utilities during project operation?

WSDOT anticipates no negative effects to public services and utilities will occur as a result of the project once it is in operation. Therefore, no measures are proposed to avoid or minimize the effects of project operation on public services and utilities.

CHAPTER 5 REFERENCES

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