Council Meeting Date: August 1, 2011 **Agenda Item: 7(a)**

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Transportation Master Plan – Concurrency, Projects and Funding
DEPARTMENT:	Public Works
PRESENTED BY:	Mark Relph, Public Works Director Kirk McKinley, Transportation Services Manager Alicia McIntire, Senior Transportation Planner

ACTION: ____Ordinance ____Resolution ____Motion __X__Discussion

PROBLEM/ISSUE STATEMENT:

The purpose of this staff report is to discuss the next set of draft goals, policies and implementation strategies associated with the Transportation Master Plan (TMP) update: Concurrency, Recommended Projects, and Funding. The TMP is a 20-year plan that helps the City plan for changes to its transportation network. Staff is in the final stages of developing the draft TMP and would like feedback from Council regarding the identified issues. The topics of this discussion include concurrency, funding, projects, and forecasts. The feedback received at this meeting and at the July 18 Council meeting will help staff prepare the final draft.

The draft TMP is scheduled for release and environmental review in early August. Staff will return to Council for a public hearing on the TMP on September 12, with final adoption scheduled for September 26.

RESOURCE/FINANCIAL IMPACT:

At this time, there is no financial impact to the City associated with completion of the TMP. Funds for the staff and consultant time needed to complete the update are already allocated. Consultant costs for work associated with the TMP, including development of the impact fee program, total $285,000. However, the policies and projects identified in the plan, as well as the funding strategy contained therein, will direct the City's transportation investments for several years to come.

RECOMMENDATION

No formal action is required at this time, although staff would like Council direction for policy issues. This report is for discussion purposes only.

Approved By: City Manager JL City Attorney ___

INTRODUCTION

Staff is in the final stages of developing the draft TMP for Council and public review. At this meeting, staff will discuss the draft policy direction for the remaining three chapters of the TMP and requests feedback from Council. The recommendations prepared to date have been developed utilizing previous Council direction, public input, the existing vision, and goals and policies in the Comprehensive Plan and the Shoreline Sustainability Strategy. Staff will integrate Council comments into the final draft before releasing it for public and environmental review.

BACKGROUND

The background description for the TMP update, including these sections, was described in the July 18, 2011 staff report, which can be found at http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/Council/Staffreports/2011/Staffreport071811-8a.pdf.

DISCUSSION

The guiding direction in the TMP is established with goals, policies and implementation strategies. The goals and policies establish the framework and objectives for the City's transportation system and guide its development and management. The implementation strategies are a new addition to the TMP and are action items or specific tasks the City can undertake in order to implement an identified goal or policy. The implementation strategies described in the TMP are not necessarily the only options available to achieve a stated goal or policy.

Attachment A lists the draft goals, policies and implementation strategies for three chapters of the TMP:

1. Concurrency
2. Recommended Projects
3. Funding

The Concurrency standard outlined in this report is based upon Council direction provided in August 2010. Through development of this standard, staff identified several transportation projects that will be needed to accommodate growth, which in turn, will be used to develop the City's transportation impact fee.

Staff would like to review these policies during this study session. Additionally, staff would like to discuss the growth forecasts used to develop these policies and recommendations. The draft policies contained in the Concurrency, Recommended Projects, and Funding chapters are listed in Attachment A.

Forecasts: Understanding the future nature and volume of traffic in the City makes it possible to recommend appropriate transportation facility improvements in Shoreline. This information builds upon an understanding of existing traffic volumes and flow patterns in the City. The City contracted with DKS Associates to develop a 2030 Shoreline travel demand forecast model to analyze future traffic volumes for the TMP.

This model uses the Puget Sound Regional Council's (PSRC) four-county regional transportation model as a base, but divides Shoreline into a much more detailed zone and network system. The City will be able to update this model as needed when land use forecasts are revised and other input data, such as new developments or roadway improvements, are constructed.

Demographic data sets, including household and employment forecasts associated with a system of transportation analysis zones, form the basis for travel demand forecasting. Within Shoreline, household and employment forecasts were based upon future growth estimates developed by King County. For the region outside the City, the model used PSRC's regional household and employment forecasts for 2030, with some adjustments.

The City selected the year 2030 as the planning horizon for developing the future traffic forecasts. Using the growth estimates provided by King County, the City developed the 2030 housing and employment forecasts.

For development of the travel demand model, the City evaluated three land use scenarios – the Auroracentric scenario, the Transit Oriented Development (TOD) scenario and the Dispersed scenario. Each scenario was based upon the City's assigned growth targets for 2030 of 5,000 new households and 5,000 new jobs. Each of the 2030 land use scenarios include the two light rail station locations identified in the Sound Transit 2 package along Interstate 5 at NE 145th Street and NE 185th Street. Parking for 500 vehicles was assumed at each station. Each scenario also includes the same growth in households and employment for all zones outside of the City of Shoreline, in accordance with PSRC forecasts.

Following is a description of each scenario and the assumptions associated with each scenario.

1. Auroracentric scenario – This scenario assumed that the vast majority of household and job growth will be centered on the Aurora Avenue N corridor. All of the new jobs are allocated directly adjacent to or just off of Aurora. Similarly, eighty percent (80%) of the new housing units are concentrated along Aurora Avenue N. The remaining twenty percent (20%) of housing units (1,000 units) are distributed evenly throughout the City.

2. Transit Oriented Development scenario – This scenario assumes that new household and job growth will be concentrated around several transit hubs and corridors in Shoreline, such as the light rail stations at Interstate 5, the Shoreline Park and Ride, North City, and the Aurora Corridor. Approximately ¼ of the City's household growth is dispersed evenly throughout the City in accordance with existing densities.

3. Dispersed scenario – This scenario assumes that job and housing growth is dispersed throughout the City in a similar manner to existing land uses, with some areas of concentrated growth in locations such as the Aurora Corridor, NE 145th Street and Bothell Way NE, and NE 165th Street and 5th Avenue NE.

The future traffic impacts of these three scenarios were shown by the traffic model to be similar throughout the City. In response to these results and current planning efforts, staff created a "TOD Enhanced" scenario. This scenario assumes concentrations around the transit hubs in the original TOD scenario to a lesser degree, with additional increased concentrations of jobs and housing units in the Town Center (Aurora Avenue N and N 175th – N 185th Streets).

In general, the traffic modeling shows that Shoreline's future traffic issues are fairly manageable. The results of the traffic modeling were used to identify projects needed to accommodate growth and develop the City's concurrency standard, described below.

Concurrency: The State Growth Management Act (GMA) requires each local jurisdiction to identify facility and service needs based on level of service standards for all arterials and transit routes. Level of service (LOS) standards are used to judge the performance of the transportation system. The GMA further requires that the transportation element of a City's comprehensive plan include specific actions and requirements for bringing into compliance any facilities or services that are below an established level of service standard. The relationship between LOS standards, funding needs to accommodate increased travel, and land use assumptions is referred to as "concurrency."

Concurrency is balanced when growth is matched with needed facilities. If any of the features is unbalanced, one of the following three actions must be taken:

1. Reduce growth by denying or delaying land use permit applications, or
2. Increase funding for new facilities, or
3. Change the level of service standard.

Transportation concurrency requires adequate transportation facilities to be available concurrent with private development. Development is not allowed if it causes the LOS on transportation facilities to fall below standards adopted in the comprehensive plan. In the case of transportation facilities, the GMA defines "concurrent with development" to mean that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years.

Transportation concurrency is determined by comparing the capacity of transportation facilities needed by each application for development to the uncommitted capacity that is (or will be) available. If the uncommitted available capacity is equal to, or greater than the capacity required, the applicant passes the concurrency "test." If the uncommitted available capacity is less than the capacity required, the applicant fails the concurrency "test."

If the concurrency test is "failed," there are several alternatives: (1) the applicant can mitigate the impacts to achieve a satisfactory LOS, (2) the applicant can revise the proposed development to reduce the impacts and maintain a satisfactory LOS, or (3) the application is denied, and the proposed development does not occur.

The GMA allows each local jurisdiction to choose a LOS method and standards, and the jurisdictions have flexibility regarding how to apply concurrency within their plans, regulations, and permit systems. Level of Service is a qualitative measure used to denote roadway or intersection operating conditions. It generally describes levels of traffic congestion along a roadway segment or at signalized and unsignalized intersections in an urban area.

The Volume to Capacity (V/C) ratio is a common LOS metric for evaluating traffic operations on roadway segments. The V/C ratio compares the volume of traffic traveling over a section of roadway against the theoretical capacity of that roadway segment. Low V/C ratios indicate low levels of congestion, while V/C ratios of 1.0 or greater indicate high levels of congestion.

Intersection delay is a LOS methodology for evaluating traffic operations at signalized intersections. The Highway Capacity Manual 2010 defines LOS at signalized intersections based on the average delay experienced per vehicle traveling through the intersection. At signalized intersections, average vehicle delays of 35 seconds or less represent stable operating conditions with little or no congestion. Average vehicle delays longer than 80 seconds per vehicle indicate high levels of congestion and jammed conditions at intersections.

LOS is typically represented as a "report card" grading ranging from A at the highest/best level to F at the lowest/worst level. LOS A and B represent minimal delays, and LOS C represents generally acceptable delays. LOS D represents an increasing amount of delay where vehicle movements become more limited based on the density of surrounding vehicles, speeds begin to reduce on roadway segments, and an increasing number of vehicles are stopped at intersections. LOS E represents unstable flow where vehicle speeds are highly variable, and intersections operations are approaching capacity, resulting in long queues with more vehicles stopped for longer durations. LOS F represents conditions when the volumes exceed the capacity of the system, which results in slow vehicle speeds, excessive delays and long queues. Vehicles approaching an intersection with LOS F frequently have to wait for more than one signal cycle to get through the intersection. The following table summarizes LOS for roadway segments and signalized intersections.

Level of Service	Roadway Segments V/C Ratio	Signalized Intersections Avg. Delay (sec/veh)	General Description
A	≤ 0.60	≤ 10	Free Flow
B	> 0.60 - 0.70	> 10 - 20	Stable Flow (slight delay)
C	> 0.70 - 0.80	> 20 - 35	Stable Flow (acceptable delay)
D	> 0.80 - 0.90	> 35- 55	Approaching unstable flow (speeds somewhat reduced, more vehicles stop and may wait through more than one signal cycle before proceeding)

E	> 0.90 - 1.0	> 55- 80	Unstable Flow (speeds reduced and highly variable, queues occur, many vehicles have to wait through more than one signal cycle before proceeding)
F	> 1.0	> 80	Forced Flow (jammed conditions, long queues occur that do not clear, most vehicles wait through more than one signal cycle before proceeding)

LOS can be measured during different times of the day. Typically, traffic volumes during the p.m. peak periods are used, with the hour experiencing the worst traffic congestion being the time frame measured. However, a.m. peak periods are also used, as well as the average daily traffic for a roadway or intersection.

Many cities apply LOS to intersections using the p.m. peak period traffic volumes. The focus of this type of analysis is on vehicles and the capacity of an intersection to manage the highest traffic demand. This often results in the construction of large intersections with excess capacity during the non-peak period. By measuring LOS on both roadway segments and intersections, staff was able to more comprehensively evaluate impacts to the City's transportation network. As a result, staff has identified roadway improvements that both increase capacity and, in accordance with the City's roadway development standards, benefit all users, including bicyclists, pedestrians, transit, and vehicles.

Currently, Shoreline's transportation network functions fairly well, even during the peak travel periods. The table below shows examples of roadway segments and signalized intersections in Shoreline currently functioning at different levels of service.

Level of Service	Roadway Segments	Signalized Intersections
A	Northbound 5th Ave NE: 145-185 in the p.m. peak	N 196th St & 15th Ave NE in the p.m. peak
B	Eastbound 175th Ave N: Meridian-I-5 in the p.m. peak	Richmond Beach Rd & 3rd Ave NW in the p.m. peak
C	Northbound Meridian Ave N: 155-200 in the p.m. peak	Richmond Beach Rd & 8th Ave NW in the p.m. peak
D	Southbound Meridian Ave N: 175-185 in the a.m. peak	N 185th St & Meridian Ave N in the p.m. peak
E	Northbound 15th Ave NE: 152nd (transition for 4 to 3 lanes) in the p.m. peak	N 145th St & Greenwood Ave N in the p.m. peak
F	None currently	N 145th St & I-5 Northbound Ramp/5th Ave NE in the p.m. peak

Attachment G shows the current (2008) V/C ratio for all of the City's arterial and local primary streets. The anticipated V/C ratio for the same streets in 2030 is shown on Attachment H. The model run to develop this attachment is the TOD Enhanced

Scenario described above and had completion of the Aurora Corridor Project as the only completed project that added capacity to the City's transportation network.

When developing the concurrency recommendations, staff considered the various functions and needs of Shoreline's transportation network and the desire to have a system that works well for all users. Staff took a two-tiered approach (V/C and intersections) to evaluating concurrency that looked at the network in a more comprehensive manner. The recommended concurrency standard results in improvements to both roadway segments and intersections that will help traffic flow throughout the City. The traffic improvements will also result in improvement for pedestrians, bicyclists and transit, through implementation of the Shoreline's complete streets standards for roads.

The draft policy language recommends that the City adopt LOS D for all signalized intersections on arterials, with additional volume to capacity standards for Principal and Minor arterials. With these standards, the City will accept intersections that operate at LOS D or better and will help balance levels of congestion, the cost of added capacity, and the need to minimize diversion of traffic onto neighborhood streets.

Due to budget constraints associated with the TMP update, the City was not able to perform an analysis of all signalized intersections in the City to predict their future LOS. However, staff reviewed the existing TMP, adopted in 2005, which evaluated all signalized intersections in the City. The only intersections that fell below the proposed LOS D were located on state highways. These intersections are exempt from the City's concurrency standard and must comply with a lower standard, established by the State, which is E-mitigated (meaning that congestion should be mitigated through alternative means of travel such as transit).

Recommended Projects: The TMP will identify many transportation projects for the City. They will include projects to accommodate growth, bicycle and pedestrian projects needed in order to complete the system plans, projects to correct existing safety problems, and corridor studies that will help identify solutions for large, corridor-wide projects, such as Richmond Beach Road and 145th Street. All of the unfunded projects included in the 2012-2017 Transportation Improvement Program (TIP) are included in the TMP, as well as several additional non-motorized and safety projects. Attachments B and C identify the locations for all projects needed to complete the draft bicycle and pedestrian system plans presented at the July 18 Council meeting. The projects identified in the TMP will be used during the annual development of the 6 Year TIP.

Projects identified that are needed to accommodate growth and maintain our level of service include:

1. Addition of a two-way left turn lane on Meridian Avenue N from N 145th Street to N 205th Street
2. Addition of a two-way left turn lane on NE 185th Street from 1st Avenue NE to 5th Avenue NE
3. Addition of a two-way left turn lane on N 175th Street between Stone Avenue N (City Hall) and Meridian Avenue N

4. Extension of left turn pockets on N 175th Street between Meridian Avenue N and the I-5 on/off ramps
5. Intersection improvements at N 185th Street and Meridian Avenue N
6. Intersection improvements at N 175th Street and Meridian Avenue N
7. Intersection improvements at NE 175th Street and 15th Avenue NE

The total estimated costs for the seven projects identified to accommodate growth is $11 million. These projects are shown on Attachment E. Attachment J shows the specific improvements suggested for projects 5, 6 and 7.

Attachment I shows the anticipated V/C ratios for all of the City's arterial and local primary streets when the growth projects are included in the traffic model. Comparing it with Attachment H shows how the growth projects will help alleviate traffic problems in the City.

In addition to the growth projects identified above, the traffic modeling has identified the potential need to improve the interchange at NE 175th Street and Interstate 5. Currently, this interchange experiences delays during the peak periods, due in part to the ramp metering, and the backup affects other intersections. The City's traffic consultant modeled a potential new configuration for this intersection known as a Single Point Urban Interchange (SPUI). Attachments D and K show a diagram of a SPUI. A SPUI is similar to the existing diamond interchange, however, the configuration allows opposing left turns to proceed simultaneously by combining two intersections of the diamond into one over or under the free-flowing road. The "single point" refers to the fact that all through traffic on the arterial street, as well as traffic turning left onto or off of the interchange, can be controlled from a single set of traffic signals. Because SPUIs use space efficiently relative to the volume of traffic they handle, they are used extensively in freeway reconstruction in urban environments. An animation of the operation of a SPUI can be seen at http://www.youtube.com/watch?v=mwpoPQ1SPJU.

Reconstruction of this interchange would allow the City to improve bicycle and pedestrian safety at this location, as well as improve the operations of the nearby intersections. However, because his project is not entirely within the jurisdiction of the City, it will require coordination with the Washington State Department of Transportation (WSDOT). This project is estimated to cost approximately $58 million. Staff recommends that this project be identified in the TMP for additional study and coordination with WSDOT.

Funding: The City of Shoreline funds transportation capital projects from the General Fund, Real Estate Excise Tax (REET), Transportation Benefit District (TBD), and grant revenue from the state and federal governments. The largest sources of funding for Shoreline's transportation programs and projects are grants. The Real Estate Excise Tax, General Fund, the City's Transportation Benefit District and investment interest comprise one-quarter of the funding for transportation projects and programs. REET funds and gambling taxes were much higher revenue sources in the past. Attachment F shows the decline of REET funds and gambling tax revenues over the past ten years.

Grant funding for transportation projects is available from federal, state, and local resources. Each funding source has specific rules and guidelines about what types of

projects they will fund, how much of a project will be funded, and timelines for expenditure of funds. Funding for bicycle and pedestrian transportation projects is very limited, especially in comparison to funding for highway and roadway projects. Most of the City's sidewalk projects that are funded by grants are part of larger capital projects, such as the Aurora Corridor project.

As shown in the recently adopted 2012-2017 Transportation Improvement Program, the City's list of desired transportation projects includes many that are unfunded. This is common in jurisdictions, as the need for transportation improvements is continuous and new projects are needed to maintain existing infrastructure or to accommodate growth.

The City's current funding sources for transportation projects are becoming increasingly less reliable. In 2000, voters in Washington State eliminated the motor vehicle excise taxes, resulting in a significant reduction for transportation funding. As vehicles become more fuel efficient and drivers switch to alternate modes of transportation, gasoline taxes that support grant programs diminish. Sales tax and Real Estate Sales Tax may be unstable revenue sources, varying with the economy. Grants from all sources are highly competitive, each of which have specific eligibility criteria and restrictions for use of the funds.

In order to plan for transportation improvements, the City must identify and secure predictable funding sources. There are several local revenue sources authorized by the State, which Shoreline can utilize for transportation projects. Many are voter-approved options and are established as Transportation Benefit Districts (TBD). Cities may establish TBDs to fund a variety of transportation projects, such as capital improvements, operation of city streets, high capacity transportation systems, and other transportation programs of regional or statewide significance. A specific project or purpose must be identified when a funding source is established through a TBD.

Financial options include:

Impact Mitigation Fee
The underlying premise of impact mitigation is that development, rather than the general taxpaying public, should be responsible for mitigating the impacts that occur as a result of development. Mitigation of impact is a one-time payment by development for the capital costs or facilities needed to accommodate growth. Impact mitigation fees are allowed pursuant to the Growth Management Act (GMA).

The GMA mitigation addresses impacts on all arterial and collector streets in the City, not just the nearest streets. The amount of mitigation is limited to each applicant's proportionate share of the mitigation projects. No development is exempt from GMA mitigation. Each development's impact is determined by standardized trip generation tables and standardized costs per trip, so mitigation costs are predictable in advance, and no development has to pay for traffic studies for impact mitigation.

Many cities in our region charge an impact mitigation fee associated with development. The fees cover a broad range, depending upon the estimated costs of the transportation improvements that will be needed to accommodate growth. Because impact fees can

only be collected to pay for the impacts of growth, there needs to be another source of funding to cover the costs of correcting any existing deficiencies.

Council directed staff to develop an impact fee program in August 2010. Staff is scheduled to bring a draft recommendation to Council this October, after adoption of the TMP.

Motor Vehicle License Renewal Fee
The Shoreline City Council established a TBD in 2009 that includes the municipal limits of the City and is funded as an annual motor vehicle license renewal fee of $20. The fees collected through this district are used to fund the City's annual road surface maintenance program. With voter approval, this fee can be raised to up to $100. Specific programs or projects that will be funded as part of the TBD must be identified prior to its approval.

The existing TBD generates approximately $600,000 annually. For every $10 increase to the motor vehicle license renewal fee, the City would collect an additional $300,000.

Voted General Obligation Bonds and Revenue Bonds
With a 60 percent approval rate, Shoreline voters can authorize the City to borrow money that will be paid back over time via a property tax increase. General obligation bonds are for a finite amount and generally fund a one-time project, such as construction of specific improvements. Revenue bonds can be used to construct a facility. They have an income source that assists with the repayment of the bonds, such as tolling.

While bonds are reliable funding sources once approved, the City must be fiscally prudent and ensure that the Roads Capital Fund does not carry significant debt, resulting in a fund that exists solely to pay interest on the bonds.

Property Tax Levy Lid Lift
Voters can approve a property tax levy lid lift in order to provide a dedicated, six year revenue source. This lift can be reapproved. The City's levy rate cannot exceed $1.60 per $1,000 of assessed property value. Due to its time frame, a levy lid lift is a common source of funding for on-going programs, as well as specific projects. The City's levy rate is currently $1.48.

Sales Tax Increase
A voter approved sales tax of up to 0.2%, which may not exceed a ten-year period without voter reauthorization, is another option for Transportation Benefit Districts. Similar to a property tax levy lid lift, a sales tax increase is used for specific projects as well as longer-term programs.

Local Improvement District
Local Improvement Districts (LIDs) are special assessment districts in which road improvements will specially benefit primarily the property owners in the district. They are created under the sponsorship of a municipal government and must be approved by both the local government and benefitted property owners.

Revenue Generating Business License Fees
State law allows municipalities to establish a fee structure that allows them to generate revenue beyond the cost of administering the business license. Fees are paid by the business owner. The fee structure can levy charges per employee, fees based upon the square footage of buildings, costs based upon categories of business type, or a combination thereof. Revenue from this source can be used for any purpose designated by the City Council

STAKEHOLDER OUTREACH

Stakeholder outreach for the TMP update, including these sections, was described in the July 18, 2011 staff report.

COUNCIL GOAL(S) ADDRESSED

This project addresses Council Goal 2: "Provide safe, efficient and effective infrastructure to support our land use, transportation and surface water plans," as one of the major objectives of the Goal is the update of the Transportation Master Plan, including citywide trail, bicycle, and transit elements.

RESOURCE/FINANCIAL IMPACT

At this time, there is no financial impact to the City associated with completion of the TMP. Funds for the staff and consultant time needed to complete the update are already allocated. Consultant costs for work associated with the TMP, including development of the impact fee program, total $285,000. However, the policies and projects identified in the plan, as well as the funding strategy contained therein, will direct the City's transportation investments for several years to come.

RECOMMENDATION

No formal action is required at this time, although staff would like Council direction for policy issues. This report is for discussion purposes only.

ATTACHMENTS

Attachment A: Draft TMP Goals, Policies and Implementation Strategies
Attachment B: Draft Bicycle Projects Plan
Attachment C: Draft Pedestrian Projects Plan
Attachment D: Single Point Urban Interchange (SPUI) Diagram
Attachment E: Proposed Roadway Projects to Accommodate Growth
Attachment F: REET funds and Gambling Tax revenues from 2000-2010
Attachment G: 2008 V/C Ratios in the P.M. Peak
Attachment H: 2030 V/C Ratios in the P.M. Peak, with No Projects Completed
Attachment I: 2030 V/C Ratios in the P.M. Peak, with Identified Growth Projects Completed
Attachment J Proposed Intersection Improvements
Attachment K: Single Point Urban Interchange (SPUI) Diagram

The Transportation Master Plan identifies several goals and policies that provide the framework for the City's transportation vision. It includes existing goals and policies contained in the City's Comprehensive Plan, as well as new policy recommendations for the next update of the Comprehensive Plan. Many of the goals, policies and implementation were developed in response to Council direction provided during a series of meetings in spring/summer 2010. The staff reports for those discussions can be viewed at:

- March 22, 2010 Staff Report
- June 14, 2010 Staff Report
- June 21, 2010 Staff Report
- July 6, 2010 Staff Report
- August 10, 2010 Staff Report

The goals and policies establish the framework and objectives for the City's transportation system and guide its development and management. The implementation strategies are action items or specific tasks the City can undertake in order to implement an identified goal or policy. The implementation strategies described in this plan are not necessarily the only options available to achieve a stated goal or policy. Where additional detail or clarification is needed for an implementation strategy, discussion is provided.

The draft goals, policies and implementation strategies listed below are an excerpt from the working draft of the TMP. They are not written in priority order. When incorporated within the document, the supporting text helps to provide context.

Several of the policies and implementation strategies reference impact fees. These policies and implementation strategies are subject to the adoption of an impact fee program by Council.

I. Concurrency

1. ***Recommended Policy:*** *Adopt a volume to capacity (V/C) ratio of 0.9 or lower (better) for Principal Arterials and Minor arterials, excluding the following areas:*
   - *Widening the roadway cross-section is not feasible, due to significant topographic constraints,*
   - *Interjurisdictional coordination is required to mitigate congestion,*
   - *Rechannelization and safety improvements result in acceptable levels of increased congestion in light of the improved operational safety of the roadway, or*
   - *Intersections locations where the V/C ratio on one or more legs of the intersection is greater (worse) than 0.9 but the intersection operates at LOS D or better.*

   Adopt LOS D at the signalized intersections on the arterials within the City as the level of service standard for evaluating planning level concurrency and reviewing traffic impacts of developments, excluding the Highways of Statewide Significance (I-5 and Aurora Avenue N). Intersections that operate worse than LOS D will not meet the City's established concurrency threshold. The level of service shall be calculated

with the delay method described in the Transportation Research Board's Highway Capacity Manual 2010 or its updated versions.

2. ***Recommended Policy:*** *Adopt the following levels of service as the desired frequency of transit service in the City of Shoreline: Headways on all-day service routes should be no less than thirty minutes, including weekends and evenings. Strive for twenty-minute or less headways during the day on these routes. Headways on peak-only routes should be no more than twenty minutes. Strive for fifteen-minute or less headways on these routes.*

3. ***Recommended Policy:*** *Ensure development in the City of Shoreline does not exceed the City's ability to provide transportation infrastructure.*

Implementation Strategies

a) Develop and adopt a concurrency program based upon the anticipated trip increase in Shoreline associated with growth. Integrate program incentives and rewards for development that constructs or enhances non-motorized transportation or transit.
b) Develop and adopt an impact fee program to reimburse the City for the costs of transportation capacity improvements associated with growth.
c) Pursue one of the following actions in the event that the City is unable to fund the transportation capital improvements needed to maintain adopted transportation level of service standards:
   - Phase development which is consistent with the Land Use Plan until such time that adequate resources can be identified to provide adequate transportation improvements;
   - Reassess the Land Use policies and regulations to reduce the travel demand placed on the system to the degree necessary to meet adopted transportation service standards; or
   - Reassess the City's adopted transportation level of service standards to reflect levels that can be maintained, based on known financial resources. **(Existing Comprehensive Plan Policy T64)**

II. Recommended Projects

1. ***Recommended Policy:*** *Prioritize projects that implement the City's Complete Streets policy.*

Implementation Strategies

a) Prioritize projects, programs and services that improve the efficiency of the City's transportation network.
Discussion: Shoreline is fully built out, with very little opportunity to expand or construct new transportation facilities. Through expanded transit service, additional multi-modal transportation opportunities and use of technology, such as signal progression and a traffic management center, Shoreline can more efficiently utilize the existing transportation network.

2. ***Recommended Policy:*** *Prioritize projects that complete the City's bicycle networks, as shown on the Bicycle System Plans, using the following criteria:*
   - *Connects to the Interurban Trail*

- *Completes a portion of the routes connecting the Interurban and Burke Gilman Trails*
- *Provides access to bus rapid transit or light rail*
- *Connects to existing facilities*
- *Connects to high density housing, commercial areas or public facilities*
- *Connects to a regional route or existing or planned facilities in a neighboring jurisdiction*
- *Links to a school or park*
- *Can be combined with other capital projects or leverage other funding.*

3. ***Recommended Policy:*** *Prioritize projects that complete the City's pedestrian networks, as shown on the Pedestrian System Plans, using the following criteria:*
   - *Can be combined with other capital projects or leverage other funding*
   - *Proximity to a school or park*
   - *Located on an arterial*
   - *Connects to an existing walkway*
   - *Located in an activity center, such as Town Center or North City, or connects to Aurora Avenue N*
   - *Connects to transit*
   - *Links major destinations such as neighborhood businesses, high density housing, schools and recreation facilities.*

Implementation Strategies

a) Create a sidewalk "gap" filling program dedicated to the design and construction of small sections of sidewalk, thereby completing larger, continuous walkways.
Discussion: By constructing short, missing segments of sidewalk (less than five blocks) in locations where there is a gap, the city can work to complete the larger pedestrian system, connecting parks, schools and other pedestrian destinations. Develop a program as part of the city's capital improvement program dedicated to completing sidewalks that connect to transit routes.

b) Develop a program as part of the city's capital improvement program dedicated to completing sidewalks that connect to transit routes.
Discussion: The city's pedestrian system plan emphasizes completion of the sidewalk system on the arterial roadway network. Similarly, transit service in shoreline is almost exclusively on arterial streets. Sidewalks that connect to transit will help encourage ridership, as users have a safe path to and from their transit stop.

4. ***Recommended Policy:*** *Coordinate the construction of new capital projects with the projects planned by city's utility providers.*

Implementation Strategies

a) Work with the City's utility providers to integrate utility upgrades and improvements into capital projects or coordinate the timing of major projects.
Discussion: By combining projects, the City and utility providers can minimize disruption to residents and businesses near the project, drivers, pedestrians, bicyclists and transit users. The City and utility providers may also be able to minimize costs by using a single contractor and reducing mobilization costs associated with projects.

III. Funding

1. ***Existing Comprehensive Plan Goal IX:*** *Secure reliable and fair funding to ensure continuous maintenance and improvement of the transportation system.*

2. ***Existing Comprehensive Plan Policy 59 (modified):*** *Aggressively seek grant opportunities to implement the City's Transportation Master Plan and work to ensure that Shoreline receives its fair share of regional and federal funding.*

Implementation Strategies
a) Create a grant matching reserve fund in the City's Capital Improvement Program for transportation projects.
b) Pursue grant opportunities for joint project needs with adjacent jurisdictions. **(Existing Comprehensive Plan Policy 59 – modified)**

3. ***Existing Comprehensive Plan Policy 61:*** *Support efforts at the state and federal level to increase funding for the transportation system.*

4. ***Recommended Policy:*** *Identify and secure funding sources for transportation projects.*

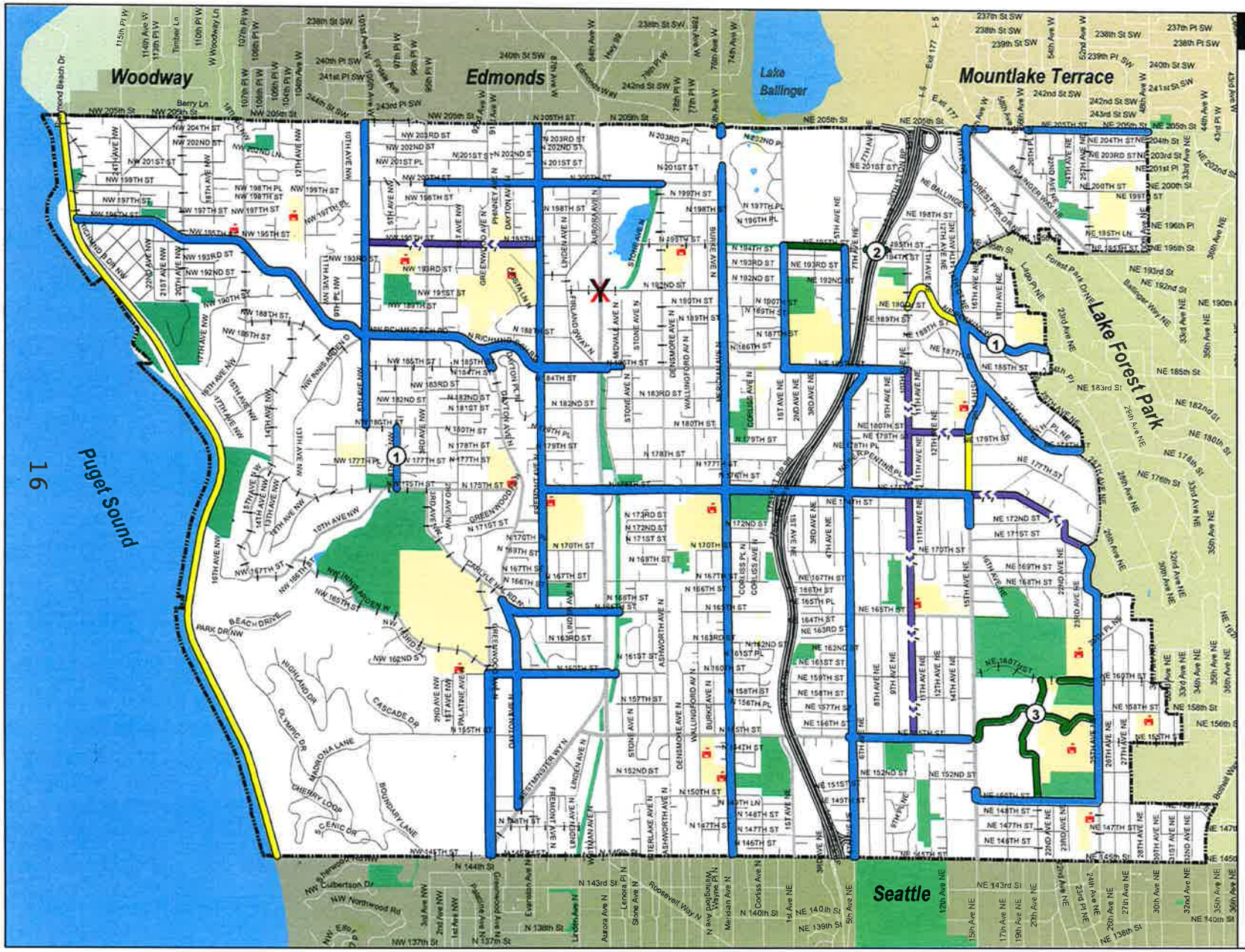
Implementation Strategies
a) Adopt a stable funding source for construction of sidewalks. Options may include LID, TBD or property tax levy lid lift.
b) Develop and fund a capital improvement program for the city's sidewalk "gap" filling program.
c) Establish a right-of-way acquisition fund that would allow the City to purchase right-of-way in advance of major capital projects, such as when new development occurs.

5. ***Recommended Policy:*** *Develop and implement a City-wide transportation impact fee program to fund growth related transportation improvements and, when necessary, use SEPA to provide traffic mitigation for localized development project impacts.*

6. ***Recommended Policy:*** *Continue to fund the City's Neighborhood Traffic Safety Program and Neighborhood Traffic Action Plan program.*

7. ***Recommended Policy:*** *Ensure adequate funding for maintenance, preservation and safety.*

Implementation Strategies
a) Identify the estimated operation and maintenance expenditures for capital projects and integrate them into the City's annual Operation and Maintenance budget.



SHORELINE

Geographic Information System

DRAFT

Bicycle Projects Plan

Attachment B

Legend

Bicycle Plan Routes:

- Designated Bike Lane
- Separated Path
- Sharrow Lane
- Signed Bicycle Route
- To Be Determined
- Bicycle/Pedestrian Bridge

Other Map Features:

- School
- Park
- School Property

1 = Bicycle Lane, Uphill; Signed Route, Downhill

2 = Repair or replace existing bridge

3 = Exact location through Fircrest to be determined

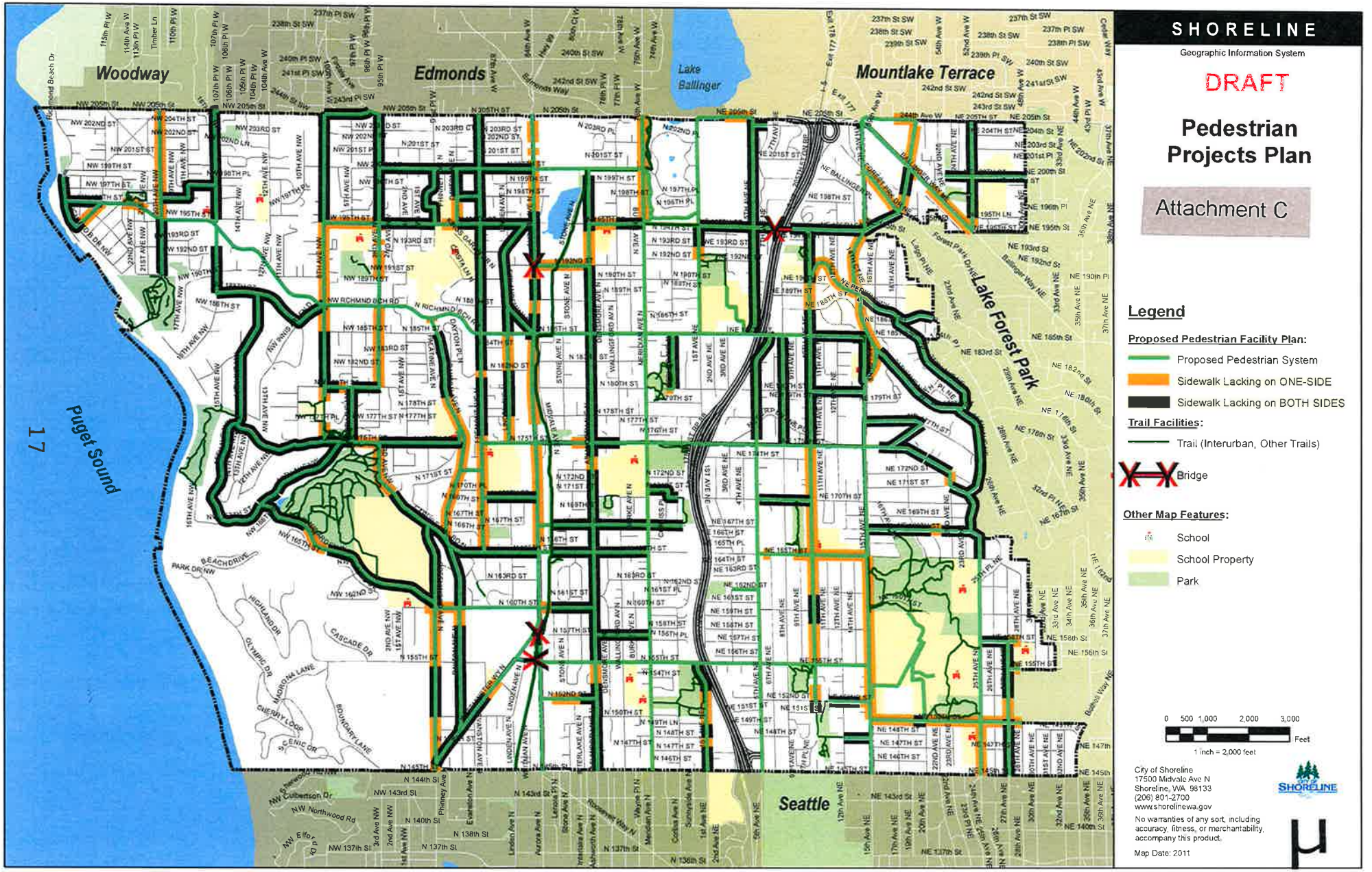
The projects shown on this plan represent the proposed projects from the draft Bicycle System Plan minus the City's existing bicycle facilities.

0 500 1,000 2,000 3,000 Feet

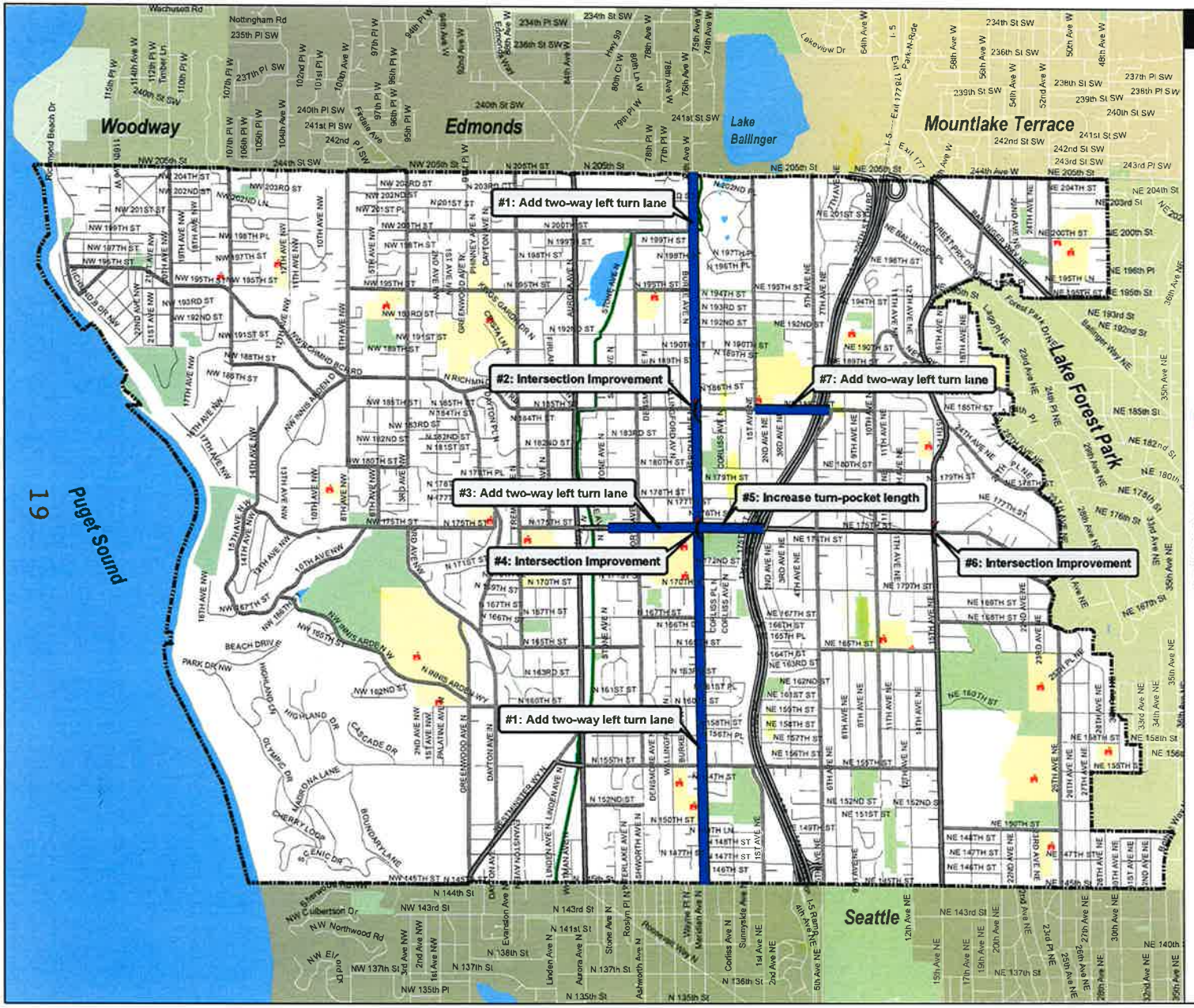
1 inch = 1,953 feet

City of Shoreline
17500 Midvale Ave N
Shoreline, WA 98133
(206) 801-2700
www.shorelinewa.gov

Map Date: 2011


SHORELINE
Geographic Information System
DRAFT
Pedestrian Projects Plan
Attachment C
Legend
Proposed Pedestrian Facility Plan:
Proposed Pedestrian System
Sidewalk Lacking on ONE-SIDE
Sidewalk Lacking on BOTH SIDES
Trail Facilities:
Trail (Interurban, Other Trails)
Bridge
Other Map Features:
School
School Property
Park
0 500 1,000 2,000 3,000
Feet
1 inch = 2,000 feet
City of Shoreline
17500 Midvale Ave N
Shoreline, WA 98133
(206) 801-2700
www.shorelinewa.gov
No warranties of any sort, including accuracy, fitness, or merchantability, accompany this product.
Map Date: 2011
Woodway
Edmonds
Mountlake Terrace
Lake Ballinger
Lake Forest Park
Seattle
Puget Sound

Attachment D – Single Point Urban Interchange (SPUI) Diagram



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Proposed Roadway Projects to Accommodate Growth

Attachment E

Legend

Intersection Improvements

Roadway Improvements

Proposed Projects:

1. Add Two-way Left Turn Lane: Aurora Ave N (N 145th St to N 205th St)
2. Intersection Improvement: Aurora Ave N / N 185th St
3. Add Two-way Left Turn Lane: N 175th St (Stone Ave N to Meridian Ave N)
4. Intersection Improvement: Aurora Ave N / N 175th St
5. Increase Turn-pocket Length: N 175th St (Meridian Ave N to I-5)
6. Intersection Improvement: 15th Ave NE / NE 175th St
7. Add Two-way Left Turn Lane: NE 185th St (1st Ave NE to 7th Ave NE)

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Shoreline, WA 98133
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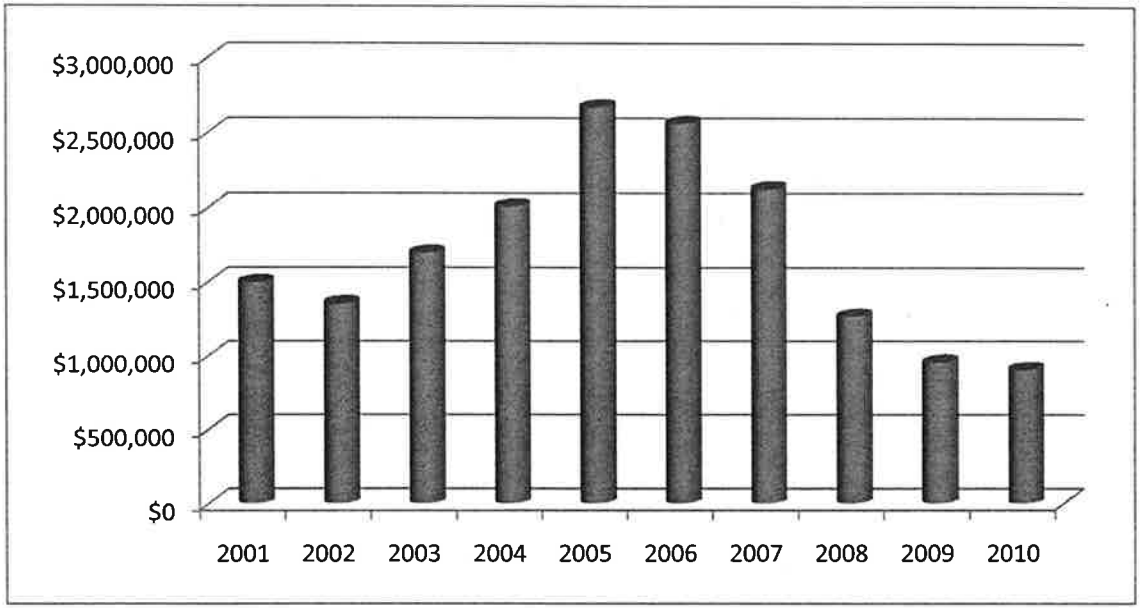
Map Date: 2011

0 500 1,000 2,000 3,000 Feet

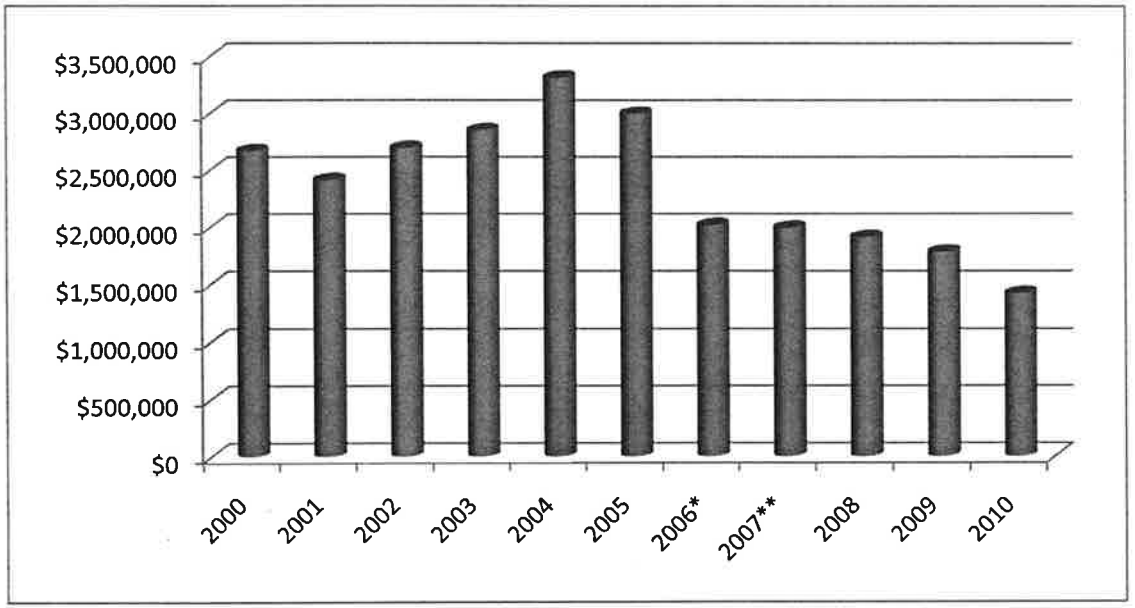
1 inch = 2,132 feet

ATTACHMENT F - REET Funds and Gambling Tax Revenues

REET Revenue 10 Year Picture		$$ Change	% Change
2000	$1,366,634		
2001	$1,502,980	$136,346	10.0%
2002	$1,359,470	-$143,510	-9.5%
2003	$1,702,914	$343,444	25.3%
2004	$2,016,162	$313,248	18.4%
2005	$2,675,632	$659,470	32.7%
2006	$2,565,362	-$110,270	-4.1%
2007	$2,131,416	-$433,946	-16.9%
2008	$1,271,030	-$860,386	-40.4%
2009	$958,612	-$312,418	-24.6%
2010	$908,384	-$50,228	-5.2%



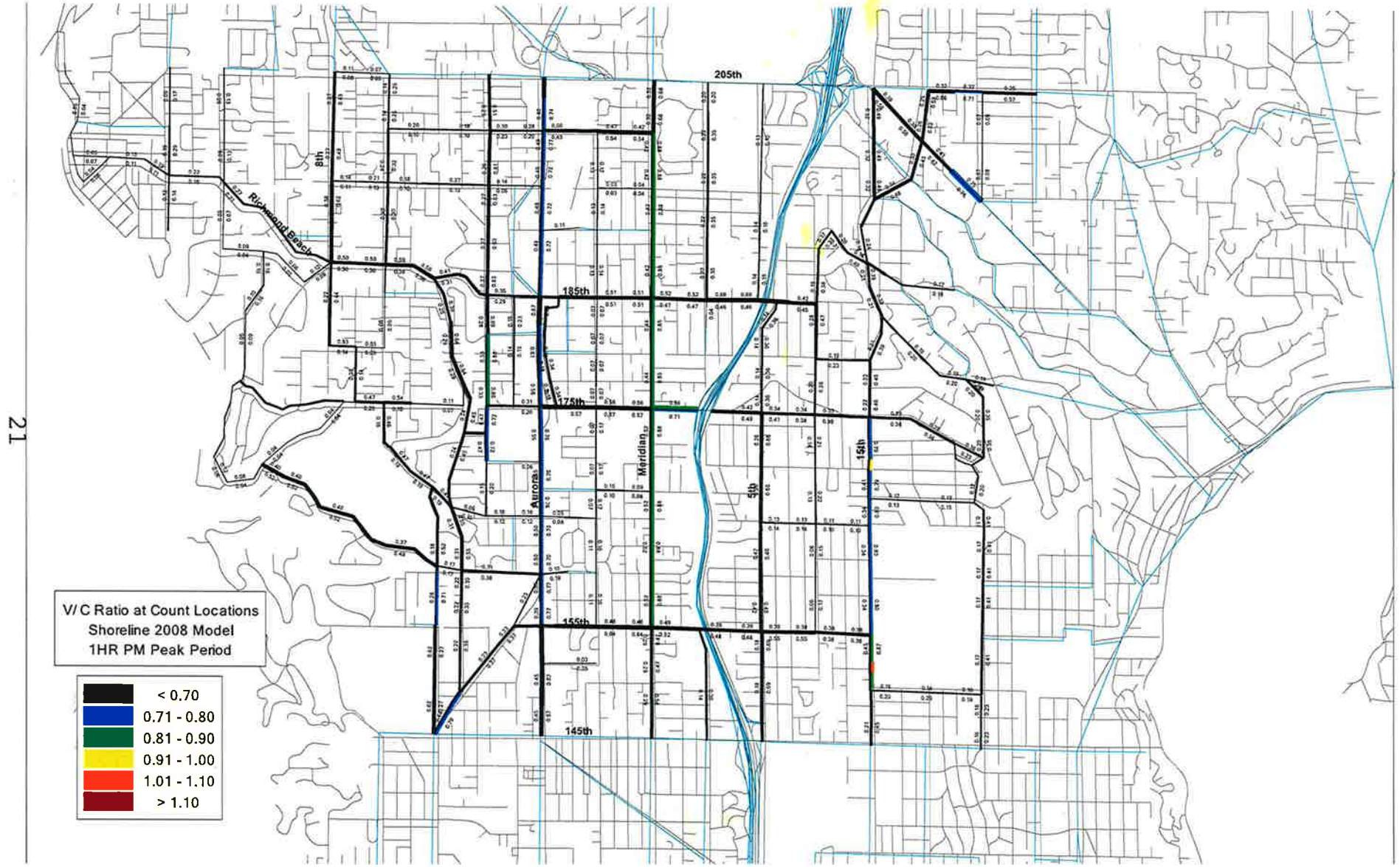
Gambling Tax Revenue 10 Year Picture		$$ Change	% Change
2000	$2,674,099		
2001	$2,418,418	-$255,681	-9.6%
2002	$2,699,862	$281,444	11.6%
2003	$2,855,280	$155,418	5.8%
2004	$3,321,060	$465,780	16.3%
2005	$3,003,002	-$318,058	-9.6%
2006*	$2,020,244	-$982,758	-32.7%
2007**	$1,998,002	-$22,242	-1.1%
2008	$1,916,451	-$81,551	-4.1%
2009	$1,786,315	-$130,136	-6.8%
2010	$1,426,204	-$360,111	-20.2%



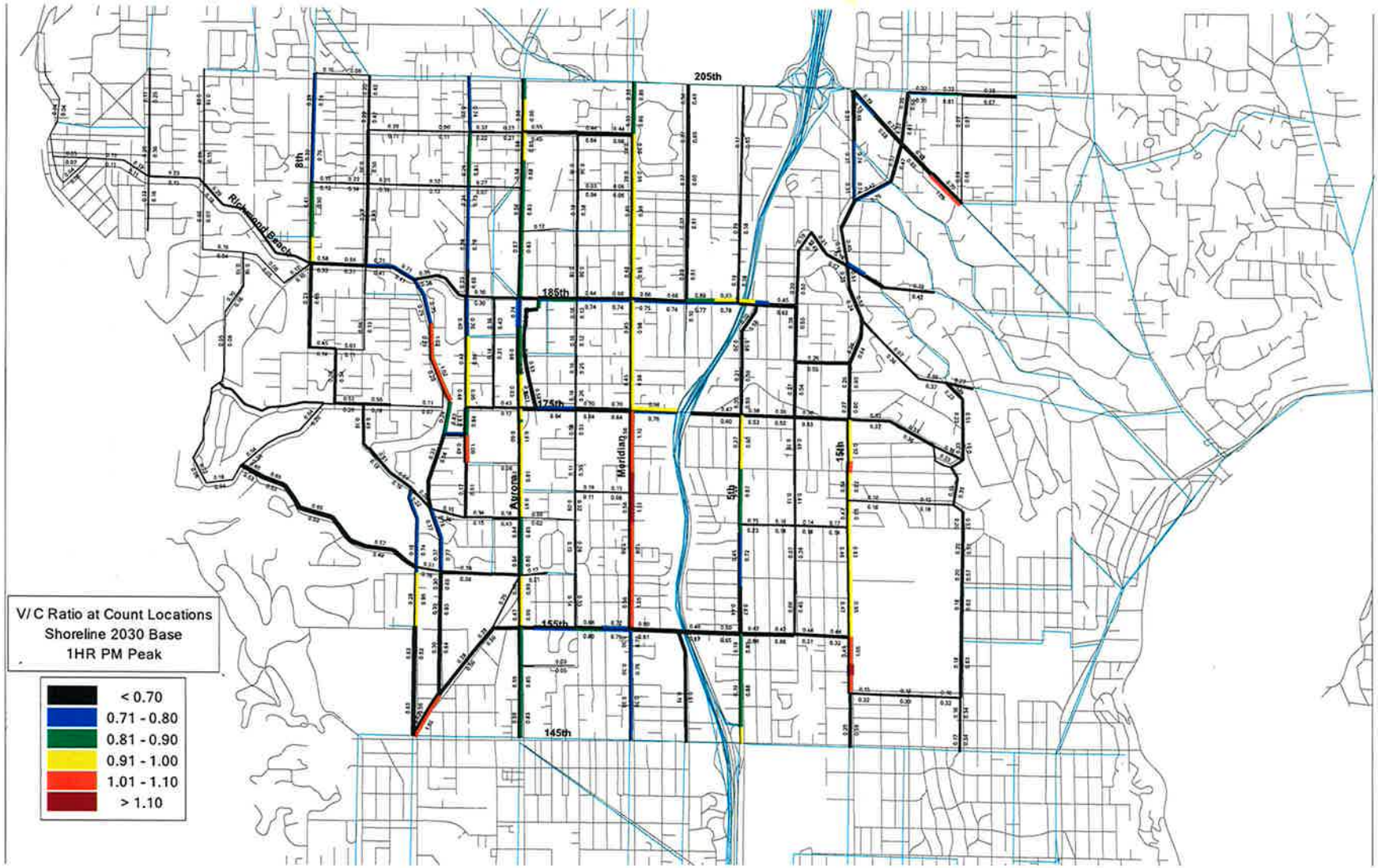
*Please note for half of 2006 the card game tax rate was reduced from 10% to 7%

**Please note for one quarter of 2007 the card game tax rate was reduced from 10% to 7%

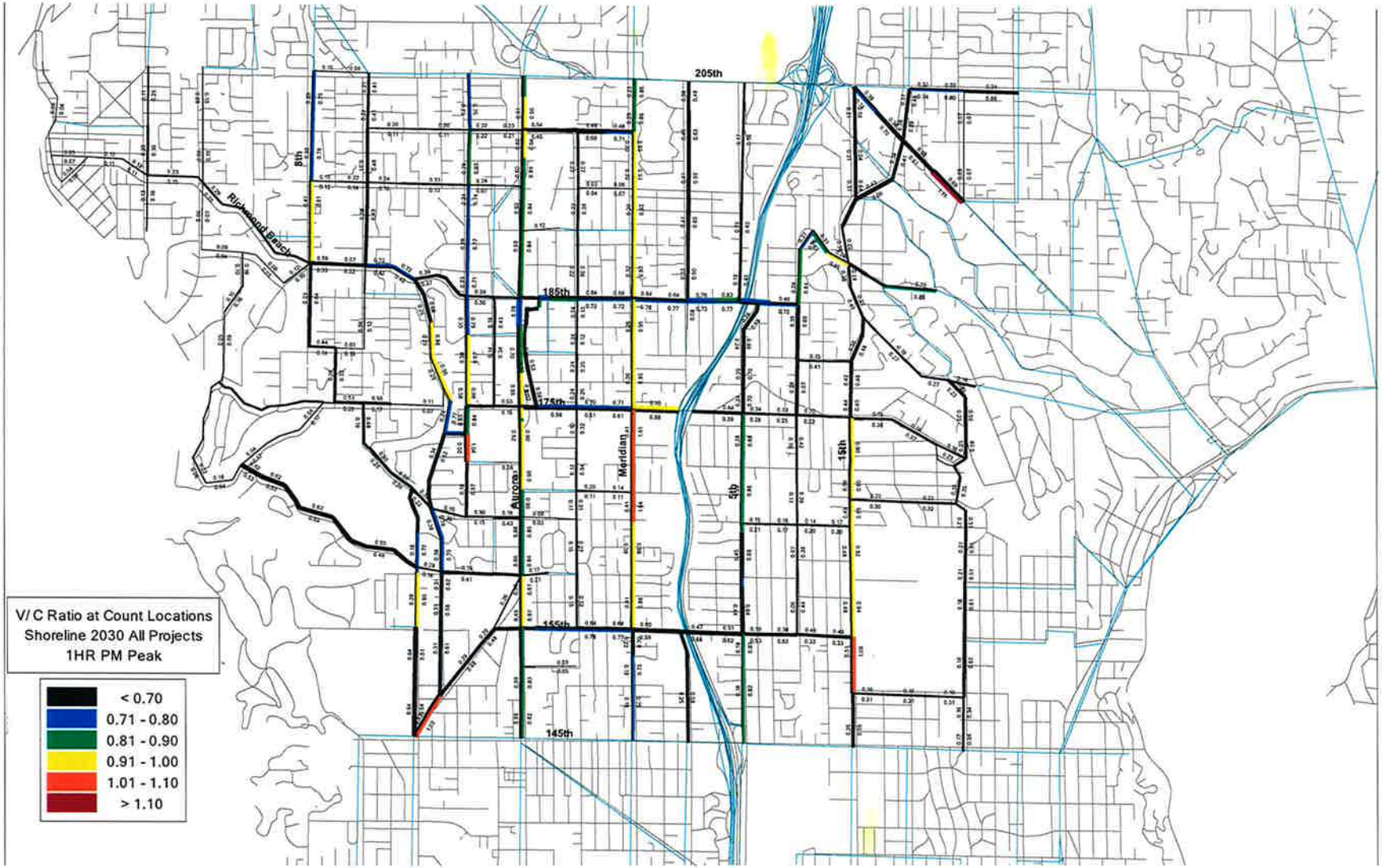
Attachment G - 2008 V/C Ratios in the PM Peak



Attachment H - 2030 V/C Ratios in the P.M. Peak, with no Identified Projects Completed

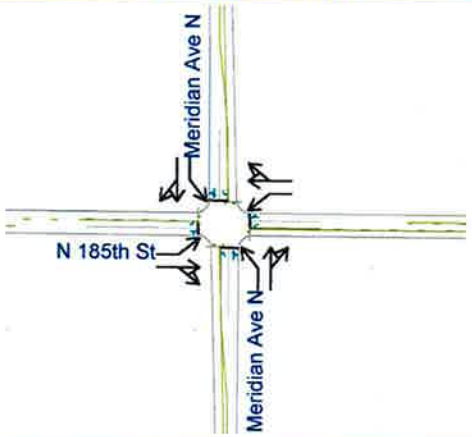
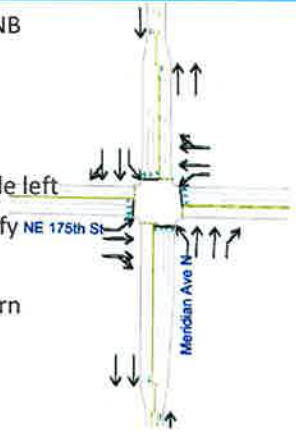


Attachment I - 2030 V/C Ratios in the P.M. Peak, with Identified Growth Projects Completed

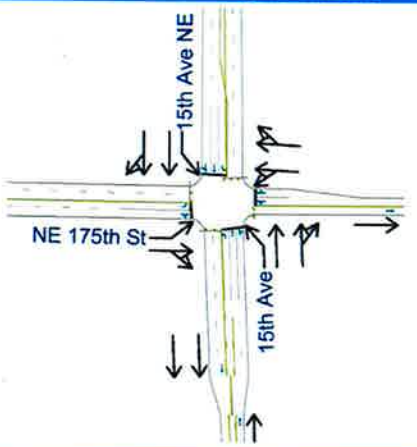
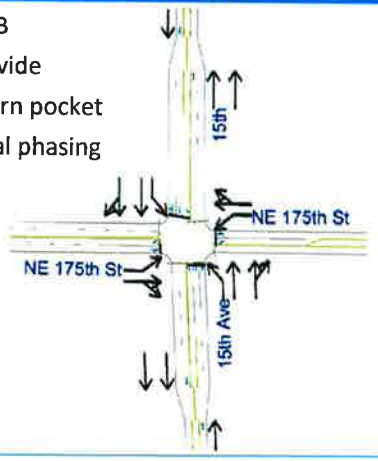


ATTACHMENT J

Proposed Intersection Projects

Intersection	Existing Conditions	2030 Intersection Improvement
N 185th St / Meridian Ave N		• Add NB & SB add/drop lanes on Meridian Ave N • Coordinate signal timing with N 185th St/1st Ave NE 
N 175th St / Meridian Ave		• Add an additional NB through lane on Meridian Ave NE • Rechannelize SB approach with single left turn lane and modify signal phasing • Increase WB left turn pocket length 

ATTACHMENT J

Intersection	Existing Conditions	2030 Intersection Improvement
N 175th St / 15th Ave NE		• Rechannelize WB approach to provide dedicated left turn pocket and modify signal phasing 

Attachment K – Single Point Urban Interchange (SPUI) Diagram