

**AMENDMENT TO CHAPTER VI (CAPITAL FACILITIES) AND
CHAPTER VIII (TRANSPORTATION) OF THE MASON COUNTY
COMPREHENSIVE PLAN**

ORDINANCE amending the Capital Facilities element (Chapter VI) and the Transportation element (Chapter VIII) of the Mason County Comprehensive Plan under the authority of RCW 36.70A.70.

WHEREAS, the Washington State Growth Management Act (RCW 37.70A.130) requires each county, including Mason County, to take legislative action to review and revise its comprehensive plan and development regulations to ensure that the plan and regulations continue to comply with the requirements of the Act; and

WHEREAS, the on September 15, 2008 the Mason County Planning Advisory Commission held a public hearing about the proposed changes to the Capital Facilities element of the Comprehensive Plan, and passed a motion to recommend approval of said changes; and

WHEREAS, the Planning Advisory Commission held hearings for the Transportation element Plan on September 29, 2008, October 20, 2008, and November 3, 2008 about the proposed changes, and passed a motion to recommend approval of said changes; and


WHEREAS, based upon staff's report, the proposed revisions to the Mason County Comprehensive Plan, and public testimony, the Mason County Board of Commissioners has approved the finding of fact to support its decision as ATTACHMENT A.

NOW THEREFORE, BE IT HEREBY ORDAINED, THE Mason County Board of Commissioners hereby approves and ADOPTS revisions to Chapter VI (Capital Facilities element) and Chapter VIII (Transportation element) of the Mason County Comprehensive Plan as described by ATTACHMENTS B and C, respectively.


DATED this 9th day of December, 2008.

Board of Commissioners
Mason County, Washington

BOARD OF COUNTY COMMISSIONERS
MASON COUNTY, WASHINGTON

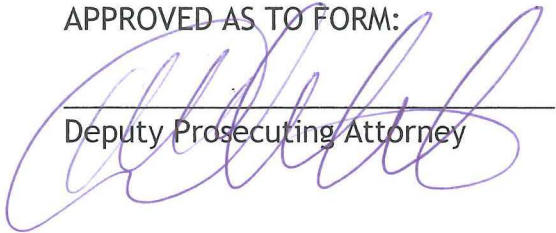


Tim Sheldon, Chair




Rebecca S. Rogers, Clerk of the Board


APPROVED AS TO FORM:



Deputy Prosecuting Attorney



Ross Gallagher, Commissioner



Lynda Ring Erickson, Commissioner

MASON COUNTY BOARD OF COMMISSIONERS

FINDINGS OF FACT

AMENDMENTS TO CHAPTER VI (CAPITAL FACILITIES ELEMENT)
AND CHAPTER VIII (TRANSPORTATION ELEMENT)
OF THE MASON COUNTY COMPREHENSIVE PLAN

December 9, 2008

1. Under consideration in this update of these elements for 2008 stating the planned maintenance and improvements to publicly owned roads and facilities over the six-year period 2009-2014; these elements include important policies that affirm the needs for these road and facilities and their on-going maintenance and/or improvements.
2. Listings of the extent of these roads and facilities and their costs are prepared as the important step for establishing annual budgets for each year of the six-year period for the various county departments.
3. Based on the contributions of the county departments in the preparation of the Capital Facilities and Transportation elements, the Board of County Commissioners finds the proposed update to the Comprehensive Plan Chapters VI (Capital Facilities) and VIII (Transportation) shall be adopted as part of the current Mason County Comprehensive Plan.



Chair, Mason County Board of
Commissioners

Date: 12/12/2008

Chapter VI

CAPITAL FACILITIES

VI - 1 INTRODUCTION

Purpose

The Capital Facilities Chapter contains the capital facilities element, one of the six elements required for Mason County's Comprehensive Plan under the Growth Management Act (GMA) (36.70A.070 RCW). This element provides an inventory of existing conditions and publicly owned facilities by quantifying capital facilities currently provided by Mason County or by other jurisdictions operating in the County.

The chapter also contains goals and policies for the capital facilities operated by Mason County, except for transportation facilities, which are discussed in the Transportation Chapter.

The capacity of the County facilities and the level of service they provide is discussed and compared with the County's desired levels of service. The "level of service" is an objective measure of how well services are provided to the public. Deficiencies and improvement needs are identified, improvement costs are estimated, projects are scheduled for six and 20-year planning horizons, and a six-year finance plan and possible financing options are discussed.

Besides the City of Shelton, there are other public organizations and special districts that have capital facilities and taxing authority which exist in the county. These include the school districts, hospital districts, port districts, cemetery district Public Utility Districts, regional library system, and fire districts. These districts have their own governing body and capital facilities planning. The county coordinated the comprehensive plan with these bodies, through meetings, correspondence, and by providing draft of the comprehensive plan to these districts for comment. A list of these districts is provided as follows:

Mason County Hospital District #1
Mason County Hospital District #2

Port of Allyn
Port of Dewatto
Port of Grapeview
Port of Hoodsport
Port of Shelton

Southside School District #42
Grapeview School District #54
Elma School District #68/137
Shelton School District #309
Mary M Knight School District #311
Pioneer School District #402
North Mason School District #403
Hood Canal School District #404

Fire Protection District #1
Fire Protection District #2

Fire Protection District #3
Fire Protection District #4
Fire Protection District #5
Fire Protection District #6
Fire Protection District #8
Fire Protection District #9
Fire Protection District #11
Fire Protection District #12
Fire Protection District #13
Fire Protection District #16
Fire Protection District #17
Fire Protection District #18

Cemetery District #1

Belfair Water District #1
Public Utility District #1
Public Utility District #3

Organization and Contents

The following section of this chapter, VI-2, includes a list of goals and policies that provides the direction for future capital facility decisions for Mason County.

Subsequent sections, VI-3 through 9, profile and analyze seven types of capital facilities in the County, as follows:

- **Water and Wastewater Utilities**
- **Solid Waste Utility**
- **Parks and Recreation Facilities**
- **County Administration Buildings**
- **Police and Criminal Justice Facilities**
- **Stormwater Management Facilities**
- **Public Works Facilities**

Sections 3 through 9 each includes a brief description of the existing systems and public entities that provide the facilities. An assessment of future facility needs is also developed for each category of facility. The last section of this chapter, VI-10, discusses financing for county owned and operated facilities for the six-year financial planning period 2009 to 2014.

Facility Needs

A number of methods can be used to determine Mason County's capital facility needs over the next six and 20-year GMA planning periods. As not all capital facilities require the same level of analysis to determine needed improvements, different analytical techniques can be employed to identify facility needs as long as they accomplish the goal of determining future need for the capital facilities.

While the state Growth Management Act requires that level of service (LOS) standards be established to identify transportation improvements, the need for other capital facilities can be assessed using either LOS or planning level assumptions (WAC 365-195-315).

The advantage of using LOS standards is the ability to quantify deficiencies and identify improvement needs. The LOS can also be used as a performance standard for concurrency by comparing the service level being provided by a capital facility against the quantitative LOS standard. The service is considered deficient if it does not meet the service level standard that the County has determined it wants to deliver to its residents and users. The LOS approach makes the most sense where there are easily quantifiable facilities or where the state has defined the standards, such as for sewer and water facilities.

The less rigorous planning assumptions approach also has advantages. The capital facilities planning assumptions are not quantitative measures of facility need. Instead, they identify facility improvements based upon the need to serve growth and development anticipated in the land use element. This approach works best where identification of quantitative measures would be difficult, where there are no statewide standards, or where the necessary information or data to apply quantitative measures would be difficult or too time-consuming to obtain. Facilities such as parks and recreation and stormwater facilities might best be handled with this approach.

Financing

Facility needs are identified, and a six-year finance plan is developed, in section VI-10 for the following County-owned-and-operated facilities.

- **Sewer**
- **Water**
- **Parks and recreation**
- **Stormwater**

This section also includes the results of facility planning efforts completed by the County for County administrative buildings, police and criminal justice facilities, and solid waste facilities. Financing needs and options are included for these facilities as well. The section includes by reference the capital facilities plans for Grapeview, Hood Canal, North Mason, Pioneer, and Shelton School Districts, to facilitate orderly growth and coordination in the provision of future capital facility needs.

Concurrency Management

One of the Growth Management Act goals, referred to as "concurrency," is the provision of infrastructure facilities and services to serve projected growth at the time such growth occurs, or within a reasonable time afterwards. This starts with identifying specific facility needs using the strategies previously discussed. Another important aspect of concurrency is the ability to monitor the development of infrastructure improvements to assess whether they keep pace with approved development.

Concurrency management, as it is called, involves a set of land use and permit approval processes designed to ensure facilities and services keep pace with growth. In some cases, development codes could be enacted to require that specific LOS standards be promulgated through the development of identified improvements.

In other cases, restrictions to growth may be imposed until appropriate service standards for capital facilities are achieved. Land use applications for certain development proposals, in areas targeted for future growth, could have their approvals withheld pending concomitant development of appropriate urban service level facilities (e.g., sewer facilities). The municipality would be responsible for managing the concurrent development of these urban services. This can be accomplished by requiring that individual developers fund and implement needed improvements. Under this arrangement, the final tenant (e.g., homebuyer or building purchaser) would ultimately pay for the new facilities through a higher initial purchase price or through a periodic assessment.

Mason County's policies for concurrency management are contained in the following section, VI-2.

VI.2 GOALS AND POLICIES

Introduction

Mason County's Capital Facilities Element is guided by goals and policies for the preferred service philosophy of the County. Goals and policies are required as part of the Capital Facilities Element (RCW 36.70A) of the overall GMA Comprehensive Plan.

Development Process

Mason County evaluated its existing facilities, its future needs, its costs, and the types and levels of services which it should require or provide in the county. The goals and policies listed herein are the result of this process. Policies listed under General Capital Facilities apply to all facilities addressed in the Capital Facilities Chapter. Facility-specific policies apply only to those facilities.

General Capital Facilities Policies

Land Use

Manage land use change and develop County facilities and services in a manner that directs and controls land use patterns and intensities.

- CF-101** Establish urban services that shall require concurrency under the GMA.
- CF-102** Ensure that future development bears a fair share of capital improvement costs necessitated by the development. The County shall reserve the right to collect mitigation impact fees from new development in order to achieve and maintain adopted level of service standards.
- CF-103** Extend facilities and services in a manner consistent with the following County-wide policies previously adopted in 1992 (see Section II-3).
- CF-104** County facilities shall be provided at urban or rural levels of service, as defined in the Capital Facilities Element of the Comprehensive Plan.
- CF-105** Develop capital facilities within established urban growth areas (UGAs) to conform to urban development standards.
- CF-106** Develop capital facilities within UGAs that are coordinated and phased through inter-jurisdictional agreements.
- CF-107** Coordinate and support other capital facility plans from special purpose districts, cities and towns, and other non-county facility providers that are consistent with this and other chapters of the Comprehensive Plan.
- CF-108** As the capital facilities plan is amended to reflect a changing financial situation or changing priorities, the land use chapter shall be reassessed

on at least a biennial basis to assure internal consistency of the land use chapter with the capital facilities chapter and its six-year financial plan.

Concurrency

Establish standards for levels of service for County public facilities, and ensure that necessary facilities are available at the time new development impacts existing systems.

CF-201 After adoption of this Comprehensive Plan and subsequent development regulations, level of service standards for each type of public facility shall apply to development permits issued by Mason County.

CF-202 Adopt level of service standards and concurrency requirements recommended in this plan for wastewater/sanitary systems, water supply systems, transportation facilities, and Storm water management facilities.

CF-203 Public facilities needed to support development shall be available concurrent with the impacts of development or within a reasonable time thereafter. The county shall establish development regulations that will establish procedures and requirements to assure that the concurrency requirements are met.

CF-204 New development which has potential storm water impacts shall provide evidence of adequate storm water management for the intended use of the site. This policy shall apply in all areas of the county.

CF-205 Building permits for any building necessitating domestic water systems shall provide evidence of an adequate water supply for the intended use of the building. Proposed subdivisions and short plats shall not be approved unless the county makes written findings that adequate provisions for potable water are available for each development site. This policy shall apply in all areas of the county.

CF-206 Building permits for any building necessitating wastewater treatment shall provide evidence of an adequate sanitary sewer system for the intended use of the building. This policy shall apply in all areas of the county.

Finance

Develop a six-year finance plan for capital facilities that meets the recommendations of the comprehensive plan, achieves the County's levels of service, and is financially attainable.

CF-301 Adopt a six-year capital improvement program that identifies projects, outlines a schedule, and designates realistic funding sources for all County capital facility projects.

- CF-302** For all capital facility projects, evaluate alternatives to programs, purpose, and service as a method to reduce capital facilities and associated operating costs.
- CF-303** Develop a public process that informs, notifies and allows participation on all capital facility proposals.

Essential Public Facilities

Facilitate the siting of essential public facilities¹ sponsored by public or private entities within unincorporated areas when appropriate.

- CF-401** Identify and allow for the siting of essential public facilities according to procedures established in this plan. Essential public facilities shall include group homes, state and local correctional facilities, substance abuse facilities, and mental health facilities. Work cooperatively with the City of Shelton and neighboring counties in the siting of public facilities of regional importance. Work cooperatively with state agencies to ensure that the essential public facilities meet existing state laws and regulations that have specific siting and permitting requirements.
- CF-402** Review proposed development regulations to ensure they allow for the siting of essential public facilities consistent with the goals, policies and procedures established in this plan.

Facility-Specific Policies

Wastewater/Sanitary Sewer

Assure that wastewater facilities necessary to carry out comprehensive plan are available when needed, and finance these facilities in an economic, efficient, and equitable manner.

- CF-501** Maintain a safe, efficient and cost-effective sewage collection and treatment system.
- CF-502** All new development within designated urban growth areas and rural activity centers shall connect to existing sewer systems or provide a plan for connection to proposed public sewer systems when available. Public

¹ RCW 36.70A.200(1) The comprehensive plan of each county and city that is planning under RCW 36.70A.040 shall include a process for identifying and siting essential public facilities. Essential public facilities include those facilities that are typically difficult to site, such as airports, [marinas, railroad systems], state education facilities and state or regional transportation facilities as defined in RCW 47.06.140, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities as defined in RCW 71.09.020.

sewer systems are those owned and operated by any legally recognized municipal organization as a public utility.

- CF-503** Allow existing single-family homes with septic systems to continue using septic systems, except in areas where public sewers are being developed, that conform to existing standards. Replace deficient septic systems in a timely fashion.
- CF-504** Provide a septic system management and education program to protect groundwater quality and promote the proper care and use of septic systems.
- CF-505** Eliminate any unlicensed point or non-point pollution sources associated with sewage transport and disposal.
- CF-506** Monitor infiltration and inflow in major public systems through routine inspection. Conduct improvements to limit and reduce current infiltration and inflow.
- CF-507** Encourage innovative approaches to onsite wastewater treatment.

Water Supply

Assure that water facilities necessary to carry out the comprehensive plan are available when needed, and finance those facilities in an economic, efficient and equitable manner.

- CF-601** Ensure that the supply and distribution of water in public systems is consistent with the Mason County Comprehensive Plan.
- CF-602** Ensure that future water system expansions and service extensions are provided in a manner consistent with the Land Use Element of the Comprehensive Plan. Where possible, those uses designated by the Land Use Element to require fire flow should be serviced by a Class A water system.
- CF-603** Create ways to use Class A reclaimed water for beneficial use to replace withdrawals from the community's fresh water aquifers.

Parks and Recreation

Achieve level of service targets for park land and facilities that support County objectives and priorities.

- CF-701** Identify and preserve significant geographic, historic and environmental features and other characteristics that reflect Mason County's natural and cultural heritage.
- CF-702** Increase park development within urban areas and develop a comprehensive system of multi-purpose trails throughout the County.

- CF-703** Develop and adopt a realistic long-range schedule for park management, maintenance, and operation. Adopt a workable County capital improvement program (CIP) every six years, to be amended as needed.
- CF-704** Update current 2006 Comprehensive Parks and Recreation Comprehensive Plan in 2011 to project future demands and needs; define acquisition, leases, and development opportunities; draft financial implementation programs; and be eligible for state and federal grants.

Administrative Services

Develop and implement a long-range program of expansion and improvement to accommodate the County's projected administrative staffing requirements.

- CF-801** Annually review the long-range facilities plan for buildings and space improvements to efficiently provide work space for projected staffing levels.

Police and Criminal Justice

Develop and implement a coordinated facility program among the departments and agencies that provide the County's police and criminal justice services.

- CF-901** Complete a strategic long-range plan for the effective and coordinated operation and management of all County police and criminal justice functions, including a full analysis of all space and facility needs required to support the plan.
- CF-902** Explore alternative funding sources for law and justice facilities and operations, including contracts for service with other agencies and joint use of facilities.

Stormwater Management

Create a facilities strategy that preserves and supplements necessary natural drainage processes and other natural systems to minimize runoff impacts from development.

- CF-1001** Investigate needs and means for implementing and maintaining a safe and cost-effective storm and stormwater collection system in identified problem areas.
- CF-1002** Protect surface and ground water quality through state and local controls and public education on water quality issues.
- CF-1003** Design stormwater systems to meet the approval standards prescribed in the Mason County Stormwater Management Ordinance.
- CF-1004** Protect physical and biological integrity of wetlands, streams, wildlife habitat, and other identified critical areas.

- CF-1005** Maintain water quality within all Shoreline Management Act waterfront areas through careful design, operation, construction, and placement of public facilities.
- CF-1006** Carefully control development in areas with steep slopes where surface water runoff can create unstable conditions. Maintain natural vegetation for slope stabilization.
- CF-1007** Public facility development shall minimize impacts to shorelines, preserving the natural stream environments where possible.
- CF-1008** Comply with the National Pollutant Discharge Elimination System (NPDES) and state regulations.
- CF-1009** Under no circumstances should hazardous waste be allowed to contaminate the groundwater, surface water, or sewer systems of Mason County. Dispose of hazardous wastes only in locations designated for that purpose.

Solid Waste

Ensure that garbage collection and recycling needs of the County are met in an efficient and cost-effective manner.

- CF-1101** Manage a cost-effective and responsive solid waste collection system.
- CF-1102** Manage solid waste collection methods to minimize litter, neighborhood disruption, and degradation of the environment.
- CF-1103** Promote the recycling of solid waste materials through waste reduction and source separation. Develop educational materials on recycling and other waste reduction methods.
- CF-1104** Work cooperatively with cities, the Washington State Department of Ecology, and the Mason County Health District to achieve an environmentally safe and cost-effective solution to the disposal of catch basin wastes and street sweepings.

VI.3 WATER AND WASTEWATER UTILITIES

Introduction

The County owns and operates small water and sewer systems for the Rustlewood, and Beard's Cove communities. In addition, the County operates a medium-sized wastewater collection system and treatment plant for the North Bay Case Inlet area. This area was defined through studies of the area contributing human sewage contamination to Case Inlet, and the system service area was set accordingly. In the smaller community-based systems, there is no planned expansion beyond the existing platted lots. These systems currently provide services to approximately 1200 customers, with the potential to serve an additional 100. The North Bay Case Inlet system provides service to approximately 950 customers, with additional capacity to serve an estimated 850 additional equivalent residential units within the existing service area.

The Belfair Water Reclamation facility is under design and is expected to be operational by late 2010. This Membrane BioReactor plant will treat sewage from more developed areas of the Belfair UGA to Class A reclaimed status. Future sewer extensions and plant upgrades will follow a schedule, which will provide service to the entire Belfair UGA by 2025.

The following "Water" and "Wastewater" sections provide project-level detail on the planned improvements necessary to meet state regulatory guidelines in the provision of water and wastewater services for these systems. Each project in each section is accompanied by a separate project sheet, which provides a description, and justification, along with a table depicting the estimated costs and funding sources for planning period 2008 through 2013. A summary table that provides overall costs and funding sources for each water and sewer system follows each section.

Financing the planned utility improvements requires the use of grants, loans, utility fees, system development charges, developer contributions, and capital reserves. The specific combination of funds, and the availability of grants and loans, will affect user rates for each system as well as the timing on projects. The ability to initiate specific projects will be assessed annually based on the urgency of need, reserve funds available, and commitments from funding agencies to provide grants and/or loans. The decisions about whether or not to proceed with any planned project is the decision of the Mason County Board of Commissioners for consideration in the annual budgeting and rate-setting process. To the extent possible, projects will be funded through:

- 1) Rate revenues (capital reserves)
- 2) Grants;
- 3) Low interest loans; or
- 4) developer contributions
- 5) Some combination of 1-4 above.

Project costs shown in each section range in accuracy from + or - 40% to + or - 15%.

Each project cost sheet identifies the accuracy of the estimated costs shown, based on the following scale:

- “Planning Level” – The least accurate of costs estimates, in the range of + or – 40%. Cost estimates at this level are usually based on a project concept and some assessment of relative scale, or annual program amounts commensurate with a level of activity sufficient to accomplish the intent of the program over time.
- “Design Report” – Moderate accuracy, in the range of + or – 30%. Based on design report evaluation of options and an assessment of project elements and associated costs.
- “Engineer’s Estimate” – Most accurate estimate, in the range of + or –15%. These estimates are based on a project design or significant completion of design work.

Future System Development

Included in the wastewater sections of this document are additional projects that are not associated with the existing County-owned utility systems. These projects represent efforts to provide utility services to areas which have been identified as problems with regard to density and water quality, but where no established systems are currently in place. There are two such areas where the County is currently investing resources in the long-term resolution of identified problems:

Belfair Urban Growth Area

The County has amended the Belfair/Lower Hood Canal Water Reclamation Facility Plan Supplemental Information to reflect the most recent population projections and the proposed service area boundary for the Belfair sewer project. The Department of Ecology in May 2007 approved the Belfair Facility Plan which outlines the development of an MBR facility adjacent to the UGA as the preferred action for treatment of sewage from Belfair

Hoodsport /Skokomish Area

A Tri-Party planning and implementation group that includes Mason County, Public Utility District #1 and the Skokomish Indian Tribe was formed in 2006 to improve water quality in the middle and upper reaches of Hood Canal. Sewer facility plans has been completed for the Hoodsport Rural Activity, the Potlach State Park Area and major portions of the Skokomish Tribal lands. The funding for any recommended system development will initially be provided through grants and/or loans until there is an established rate base to provide payments for the system.

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 410-Hartstene Pointe Sewer

Project Name: Minor Facility and System Improvements Program

Estimates: Planning Level

Description: Annual improvements program for system facilities, buildings, and grounds. Projects may include small piping improvements, pump stations, lighting, exterior painting, and other general improvements.

Justification: The treatment plant and system construction provided basic functionality, however the facilities and system need improvements from time to time to correct deficiencies and improve operational capabilities. Plant operations and system maintenance staff are not equipped to address these types of improvements in addition to the plant operations. It is also anticipated that the work can be completed professionally and more expediently through contracts with specialty firms.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	25	25	25	25	25	25	150
TOTAL COST:	25	25	25	25	25	25	150
Funding Sources:							
Grants							
Loans							
Rates	25	25	25	25	25	25	150
TOTAL FUNDING:	25	25	25	25	25	25	150

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 403 - NBCI

Project Name: Minor Facility and System Improvements Program

Estimates: Planning Level

Description: Annual improvements program for system facilities, buildings, and grounds. Projects may include small piping improvements, pump stations, lighting, exterior painting, and other general improvements.

Justification: The treatment plant and system construction provided basic functionality, however the facilities and system need improvements from time to time to correct deficiencies and improve operational capabilities. Plant operations and system maintenance staff are not equipped to address these types of improvements in addition to the plant operations. It is also anticipated that the work can be completed professionally and more expediently through contracts with specialty firms.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	74.3	25	25	25	25	25	199.3
TOTAL COST:	74.3	25	25	25	25	25	199.3
Funding Sources:							
Grants							
Loans							
Rates	74.3	25	25	25	25	25	199.3
TOTAL FUNDING:	74.3	25	25	25	25	25	199.3

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 403-North Bay Sewer System

Project Name: Treatment Plant Capacity Upgrades

Estimates: Planning Level

Description: Analyze the options for providing additional treatment plant capacity and provide engineering to design the improvements for construction in subsequent years.

Justification: The existing plant may be reaching design capacity for treatment in 2010. This will require us to revisit the original sewer facility plan and address how we will maintain sufficient capacity for the twenty-year period beyond 2010. This project outlines the need for funding to conduct the analysis and design the next increment of capacity for the plant.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering		40					40
Design Engineering		125					125
Construction							
TOTAL COST:	0	165	0	0	0	0	165
Funding Sources:							
Grants							
Loans							
Rates		165	0	0			165
TOTAL FUNDING:	0	165	0	0	0	0	165

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 405 – Wasterwater Development Fund

Project Name: Basin Analysis and Developer Review Services

Estimates: Engineers Estimate

Description: Engineering services to assist staff in planning for future development and developer review

Justification: The Allyn UGA will develop and grow. Currently there are many large lots that will be divided and platted. There are also many small lots that will be combined and developed. In addition many of the rights of way and easements have been vacated and are now private property. This analysis will assist county staff with the identification of sewer system expansion needs within the UGA and with review of developer submittals as this growth occurs.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering	20	20	20	20	20	20	120
Construction							
TOTAL COST:	20	20	20	20	20	20	120
Funding Sources:							
Grants (.09 funds)							
Loans							
Rates	20	20	20	20	20	20	120
TOTAL FUNDING:	20	20	20	20	20	20	120

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 412 Beards Cove Water

Project Name: Beards Cove Booster Pump

Estimates: Planning Level

Description: Installation of a booster pump to improve water pressure to residences near the water storage tank and provide additional fire flow to the entire community.

Justification: Currently only the top 16.7 feet or 120,000 gallons of the 60' 400,000 gallon Storage tank can be considered for usable storage. The total requirement for this system identified in the 2002 water system plan is 250,050 gallons. That document identified fire flow as 500 gpm for 30 minutes or 15,000 gallons. That number has increased to 45,000 gallons under the code adopted by the county since the water plan was written. Technically the system is 150,000 gallons deficient on usable storage. The addition of a booster pump to provide pressure to all homes with an elevation within 57' of the storage tank base will allow for the use of the systems entire water storage capability and meet the system's storage requirements.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	60						60
TOTAL COST:	60	0	0	0	0	0	60
Funding Sources:							
Grants							
Loans							
Rates	60						60
TOTAL FUNDING:	60	0	0	0	0	0	60

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: Hartstene Pointe Water

Project Name: Water Service Meter Installation

Estimates: Planning Level

Description: Water service meters will be installed at every service in the development. The project began in 2008 with a total project cost anticipated to be \$575,000.

Justification: Implementation of the Water Use Efficiency Rule will require Hartstene Pointe to install service meters at all connections by 2017. Although the rule allows up to twelve years for installation, it will benefit the community to begin the process as soon as possible. Water service meters will benefit Hartstene Pointe by providing system leakage data, and will allow billing based on usage.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	100	100	100	100			400
TOTAL COST:	100	100	100	100			400
Funding Sources:							
Grants							
Loans							
Rates	100	100	100	100			400
TOTAL FUNDING:	100	100	100	100			400

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: Hartstene Pointe Water

Project Name: Booster pump Installation

Estimates: Planning Level

Description: Installation of a booster pump to improve water pressures and increase usable storage capacity.

Justification: A result of the system's storage analysis indicates a deficiency in the usable storage available in the community's water storage tank. A booster pump would allow usage of the entire volume of the existing tank and provide sufficient storage for the entire twenty-year planning period.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering					25		25
Construction					246		246
TOTAL COST:	0	0	0	0	271		271
Funding Sources:							
Grants							
Loans							
Rates					271		271
TOTAL FUNDING:	0	0	0	0	271		271

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: Hartstene Pointe Water

Project Name: Stationary Generator Installation

Estimates: Planning Level

Description: Install a Stationary Generator at Well #1

Justification: The December 15, 2006 windstorm knocked out power to the Hartstene Pointe community for approximately seven days. In addition a secondary power line to the well houses and community center faulted and PUD crews could not repair it until all primary power lines were repaired. County Staff worked around the clock to prevent the sewage pump stations from overflowing and needed the same portable generator used to power well number one. It was realized at that time that the plan to provide emergency power to all the facilities using one portable generator was flawed as a result of the failure to compensate for sewer system Infiltration & Inflow when calculating the needed frequency that the sewage pump stations needed pumping.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering			3				3
Construction			97				97
TOTAL COST:	0	0	100	0	0	0	100
Funding Sources:							
Grants							
Loans							
Rates			100				100
TOTAL FUNDING:	0	0	0	0	0	0	100

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 411

Project Name: Rustlewood Water Distribution System Improvements

Estimates: Planning Level

Description: Water Distribution System Improvements

Justification: Over the past two decades, maintenance activity for the water system has consisted primarily of leak repairs and service repairs or replacement. To insure the continued performance of the system, it is necessary to replace key components as they wear out. These small projects for pipe replacement are beyond the current staff resources and much more efficiently performed by outside contractors. Finally, several of the fire hydrants on this system are in need of replacement.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering	1	1	10	1	1	1	15
Construction	4	4	4	44	4	4	64
TOTAL COST:	5	5	14	45	5	5	79
Funding Sources:							
Grants							
Loans				40			40
Rates	5	5	14	5	5	5	39
TOTAL FUNDING:	5	5	14	45	5	5	79

**2009-2014 Capital Facilities Plan Worksheet
 Utilities & Waste Management**

Fund: 411 – Beards Cove Water

Project Name: Beards Cove Water System Meter Installations

Estimates: Planning Level

Description: Installation of Water Service meters on all new and existing water service connections

Justification: The Water Use Efficiency Rule requires all water systems install service meters by 2018. Although the rule allows twelve years to implement installation, the community will benefit by implementing the process as soon as possible. The community will benefit from meters by providing leakage data and allow billing based on usage. This plan is designed to fund this effort entirely through rates. The water rate must increase from 27 per month to 32 to fund the effort.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	100	100	100	100	100	100	500
TOTAL COSTS:	100	100	100	100	100	100	500
Funding Sources:							
Grants*							
Loans							
Rates	100	100	100	100	100	100	500
TOTAL FUNDING:	100	100	100	100	100	100	500

**2009-2014 Capital Facilities Plan Worksheet
 Utilities & Waste Management**

Fund: 411 – Rustlewood Water

Project Name: Rustlewood Water System Plan

Estimates: Planning Level

Description: Develop a Small Water System Plan

Justification: There is currently no plan in place. To secure future public grants and loan funding for needed improvements to the system a Small Water System Plan is required.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering	10						10
Construction							
TOTAL COSTS:	10	0	0	0	0	0	10
Funding Sources:							
Grants*							
Loans							
Rates	10						10
TOTAL FUNDING:	10	0	0	0	0	0	10

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 405 - Capital Development Fund

Project Name: Belfair Sewer Development

Estimates: Construction Level

Description: Design and develop documents required for constructing the Belfair Sewer Collection and Reclamation Facilities and provide construction management services.

Justification: In 2007 the County entered into an agreement with CH2Mhill to design the Belfair Sewer Utility. The project will begin construction sometime in 2008 and should be completed in late 2010 or early 2011. *The Belfair Long Range Water Reclamation Financing Plan*, developed in 2008 will guide the expansion of the Belfair sewer system to build out in 2025.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering				200	200		400
Design Engineering	750	500	150	200	200		1800
Construction	10000	10000	5000	400	400		25800
TOTAL COST:	10750	10500	5150	800	800		28000
Funding Sources:							
Grants (CTED)	10750	10500	4350				
Loans							
Rates/GFC's			800	800	800		1700
TOTAL FUNDING:	10750	10500	5150	800	800		28000

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 405 - Capital Development Fund

Project Name: Hoodsport Sewer Design

Estimates: Planning Level

Description: Design and Construct the Hoodsport Sewer System

Justification: The low oxygen levels in Hood Canal are partly attributed to the inability of onsite septic systems to reduce nitrogen. By conveying wastewater to a technologically advanced sewage treatment facility that can significantly reduce nitrogen, and apply the effluent upland, this project will reduce the human contribution of nutrients to the waters of Hood Canal.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering	2000	100					2100
Construction			2500	2500			5000
TOTAL COST:	2000	100	2500	2500			7100
Funding Sources:							
Grants (Centennial)	2000	100	2500	2500			7100
Loans							
Rates							
TOTAL FUNDING:	2000	100	2500	2500			7100

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 410

Project Name: Water Filter Refurbishments

Estimates: Planning Level

Description: Changing the media and painting of the tanks and piping

Justification: The media requires refurbishment as small amounts are washed out during backwash cycles eventually filtration of contaminates is reduced. Well #2 is in particular need of painting.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	20						20
TOTAL COST:	20						20
Funding Sources:							
Grants							
Loans							
Rates	20						20
TOTAL FUNDING:	20						20

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 410

Project Name: WRP PLC upgrade

Estimates: Planning Level

Description: Replace the water treatment plant's Programmable Logic Controls.

Justification: The existing mechanical rotary switch is outdated and should it fail would not be able to be repaired. Replacing the unit with a PLC would improve the system operations and reliability.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction			12.6				12.6
TOTAL COST:			12.6				12.6
Funding Sources:							
Grants							
Loans							
Rates			12.6				12.6
TOTAL FUNDING:			12.6				12.6

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 410

Project Name: WTP Environmental Controls

Estimates: Planning Level

Description: Install better environmental controls in the WTP buildings.

Justification: Excessive corrosion in both filter rooms needs to be mitigated by providing better environmental controls using dehumidifiers and better ventilation systems.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	13.1						13.1
TOTAL COST:	13.1						13.1
Funding Sources:							
Grants							
Loans							
Rates	13.1						13.1
TOTAL FUNDING:	13.1						13.1

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 403 – North Bay Sewer System

Project Name: Biosolids thickening facility

Estimates: Engineers Estimate

Description: The purchase and installation of thickening equipment required to achieve a 20% solids concentration.

Justification: The current method of hauling and disposing of liquid biosolids with concentrations of about 2% is not cost effective. In addition it is not suitable for composting without significant de-watering. With the increasing generation of this material at the treatment plant alternative to the current process needs to be implemented.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering		60					60
Construction			550				550
TOTAL COST:		60	550				610
Funding Sources:							
Grants							
Loans							
Rates		60	550				610
TOTAL FUNDING:		60	550				610

VI.4 SOLID WASTE UTILITY

Introduction

Mason County's solid waste utility provides transfer and disposal operations for solid waste at four transfer station locations, and eight "blue box" drop off sites for household recyclable materials. The largest transfer facility is located outside Shelton on Eels Hill Road. Materials collected from the other smaller stations at Hoodsport, Union, and Belfair, are transported to the Shelton facility for shipping to Centralia, WA. From there, the material is long-hauled via railroad to Roosevelt Landfill in Klickitat County, located in Eastern Washington.

Household hazardous wastes (HHW) are collected and disposed of by Mason County staff at the Shelton transfer facility. Residents in North Mason County can take their HHW to the Kitsap County transfer station. This arrangement is established through interlocal agreement and Mason County pays approximately \$60 per customer for collection and disposal of materials from residents who take their materials to the Kitsap County facility.

The Shelton transfer facility is located at the former Mason County Landfill. The current utility provides post-closure monitoring and capital construction in support of the closed landfill. The Shelton facility receives wastes collected by private and municipal haulers operating inside Mason County.

The Belfair and Shelton transfer facilities are nearing capacity in terms of the tonnage they can effectively handle on a daily basis. Growth in the Belfair area and elsewhere in the County continues to impact operations at these facilities and capacity improvements will need to be addressed in the near future.

The following pages provide details on specific projects proposed for the current capital facilities planning period. Project estimates range in accuracy from + or - 40% to + or - 15%. Each project cost sheet identifies the accuracy of the estimated costs shown based on the following scale:

- "Planning Level" – The least accurate of costs estimates, in the range of + or - 40%. Cost estimates at this level are usually based on a project concept and some assessment of relative scale, or annual program amounts commensurate with a level of activity sufficient to accomplish the intent of the program over time.
- "Design Report" – Moderate accuracy, in the range of + or - 30%. Based on design report evaluation of options and an assessment of project elements and associated costs.
- "Engineer's Estimate" – Most accurate estimate, in the range of + or -15%. These estimates are based on a project design or significant completion of the design work.

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 402 - Solid Waste

Project Name: Minor Facility Improvements

Estimates: Design Report

Description: Annual program to ensure continued operational effectiveness of transfer station facilities and preserve existing assets. Improvements will include: road resurfacing, facility roof replacements, minor building modifications, storage or handling facility construction, or modifications to comply with regulatory requirements or preserve capacity.

Justification: Normal operation of transfer station facilities requires ongoing facility improvements to existing fixed assets to maintain overall operational capabilities. Providing an annual program and funding to complete these improvements is more efficient from an administrative perspective and prudent in terms of ensuring the longevity of existing assets.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering							
Design Engineering							
Construction	21	22	22	24	24	28	141
TOTAL COST:	21	22	22	24	24	28	141
Funding Sources:							
Grants							
Loans							
Tipping Fees	21	22	22	24	24	28	141
TOTAL FUNDING:	21	22	22	24	24	28	141

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 402 - Solid Waste

Project Name: Belfair Household Hazardous Waste Facility Improvements

Estimates: Design Report

Description: Design and construct a facility to provide household hazardous waste collection services to north county residents.

Justification: Currently north county residents must take their household hazardous waste to the Kitsap County facility. This service is provided through an interlocal agreement that costs \$65.00 per visit. The costs are the same no matter what type of material is dropped off at their facility. Our own facility would save us considerable cost for disposal of less harmful materials such as motor oil or latex paints. Operation of a county-owned facility would allow us to tailor the hours of operation and types of material accepted to decrease these costs.

Estimated Project Costs (in thousands)

	2008	2009	2010	2011	2012	2013	TOTAL
Prelim Engineering							
Design Engineering		4					4
Construction		31					31
TOTAL COST:	0	35	0	0	0	0	35
Funding Sources:							
Grants							
Loans							
Tipping Fees		35					35
TOTAL FUNDING:	0	35	0	0	0	0	35

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 402 - Solid Waste

Project Name: Household Hazardous Waste Facility Improvements

Estimates: Design Report

Description: This facility serves the south end of the county by providing residential drop off of household generated hazardous wastes seven days a week. The volumes of materials have been increasing annually, and the facility is both outgrowing its current structure and behind on needed safety improvements. Further, the changes in regulations in recent years and the near future will necessitate increased capacity.

Justification: Due to policy changes at the state and national level, the facility itself is inadequate to meet the standards mandated. Since some of these changes are state priorities, state funding may be available.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering					3		3
Design Engineering	50						50
Capital Equipment (scale)							
Construction	75	10	1	5	5	2	98
TOTAL COST:	125	10	1	5	8	2	151
Funding Sources:							
Grants	95						95
Loans							
Rates	30	10	1	5	8	2	56
TOTAL FUNDING:	125	10	1	5	8	20	151

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 402 – Shelton Transfer Station

Project Name: Transfer Station System Improvements

Estimates: Planning Level

Description: This facility serves as a hub for all the garbage in Mason County. When originally constructed in the early 1990's, throughput was a fraction of current levels. In order to safely and efficiently serve the needs of the public and our commercial accounts, a second access road with a scale is needed. Other minor improvements and enhancements will be required to maintain the system over the next few years, such as road work, tip walls, and typical wear and tear.

Justification: Over the past 15 years, the number of customers has grown dramatically, along with tons exported. Steps to improve customer safety, reduce wait times, and increase efficiency for commercial customers will allow the facility to postpone major construction for this planning period.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering	1	1	1			1	3
Design Engineering	1			15	5		21
Capital Equipment (scale)		100					100
Construction	10	100	10	10	50	10	190
TOTAL COST:	12	202	11	25	55	11	314
Funding Sources:							
Grants							
Other: timber		100					100
Loans		50					50
Rates	12	52	11	25	55	11	214
TOTAL FUNDING:	12	202	11	25	55	11	314

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 402 – Belfair Drop Box

Project Name: Belfair Improvements

Estimates: Planning Level

Description: This facility serves the north end of the County by providing residential drop off of wastes and recyclables seven days a week. Growth in the portion of the County is significant, and will likely increase at the current high rate for the near future. Minor improvements and enhancements will be required to maintain the system over the next few years, such as road work, tip walls, and typical wear and tear. A wholly new facility, with a scale and compaction equipment, may be necessary by the end of this planning period.

Justification: Currently, our system is able to support the Belfair area. However, the current and projected growth may exceed the capacity of this facility in the relatively near future. Due to the location, it does not make sense to increase the tonnage without exporting directly to rail, or at least to rail containers. To do so, a new facility would be necessary.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering			1	5			6
Design Engineering					25		25
Capital Equipment (scale)						250	250
Construction	5	10	1	5	25	250	296
TOTAL COST:	5	10	2	10	50	500	577
Funding Sources:							
Grants						50	50
Other: timber						100	100
Loans							
Rates	5	10	2	10	50	350	427
TOTAL FUNDING:	5	10	2	10	50	500	577

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 402 – Hoodsport Drop Box

Project Name: Hoodsport Improvements

Estimates: Planning Level

Description: This facility serves the north and west end of the County by providing residential drop off of wastes and recyclables several days a week. Growth in this portion of the County is occurring, and will likely increase in the near future. Minor improvements and enhancements will be required to maintain the system over the next few years, such as road work, tip walls, and typical wear and tear.

Justification: Currently, our system is able to support the Hoodsport area. However, the current and projected growth may exceed the capacity of this facility in the relatively near future, which can be addressed by simply increasing the days and hours of operation.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering					3		3
Design Engineering							
Capital Equipment (scale)							
Construction	2	10	1	5	5	20	43
TOTAL COST:	2	10	1	5	8	20	46
Funding Sources:							
Grants							
Other: timber							
Loans							
Rates	2	10	1	5	8	20	46
TOTAL FUNDING:	2	10	1	5	8	20	46

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: 402 – Union Drop Box

Project Name: Union Improvements

Estimates: Planning Level

Description: This facility serves the south end of the canal area by providing residential drop off of wastes and recyclables several days a week. Growth in this portion of the County is occurring, and will likely increase in the near future. Minor improvements and enhancements will be required to maintain the system over the next few years, such as road work, tip walls, and typical wear and tear.

Justification: Currently, our system is able to support the Union area. However, the current and projected growth may exceed the capacity of this facility in the relatively near future, which can be addressed by simply increasing the days and hours of operation.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering					3		3
Design Engineering							
Capital Equipment (scale)							
Construction	2	10	1	5	5	20	43
TOTAL COST:	2	10	1	5	8	20	46
Funding Sources:							
Grants							
Other: timber							
Loans							
Rates	2	10	1	5	8	20	46
TOTAL FUNDING:	2	10	1	5	8	20	46

VI.5 PARKS AND RECREATION FACILITIES

System Description

Recreational opportunities in Mason County include parks for day-use activities and overnight camping; fresh and salt water areas for boating and other water sports; facilities and equipment for sports and play activities; and wilderness areas and other open spaces for hiking, hunting, and horseback riding.

Existing parks and recreation facilities in Mason County are available through a variety of public and private entities. Federal and state facilities include camping, boating, and day-use parks. The County-owned park system includes day-use and water access facilities, sports fields, and related recreational areas. Other agencies providing park and recreational resources include municipalities, port districts, and public schools. Some private recreational facilities are open to the public as well.

Mason County has adopted a Parks and Recreation Plan in November of 2006 and a Mason County Regional Trails Plan in March of 2008. Both of these plans are incorporated herein by reference.

County Park Facilities

The County currently manages 21 park properties in Mason County two of which are undeveloped, and three others have large portions that are also undeveloped. Of the developed parks, two are large baseball/softball complexes, five provide saltwater access parks, three are located on freshwater lakes, and three provide upland day use and recreation facilities (see FIGURE VI.5-1). In addition to the day use facilities, the County also owns and maintains one above-ground skate park. The conditions of these facilities vary by location, however, significant investment in facilities has been made in the last two years from Real Estate Excise Tax proceeds (REET 2). The capital plan for the next six years continues this trend of investment in park development and facility upgrades. The heavy use and demand from both county and non-County residents are particularly high during the spring, summer and fall.

In recent years, parks operated by Mason County have received substantial increases in visitors. Total visits increased 52 percent from 1992 to 1993, from 180,600 to 274,500 annual visits. Nearly half of the total increase was at Sandhill Park, a sports park in Belfair. Sandhill's visitation increased by 230 percent, from 20,300 to 67,000 visits, due in large part to increased use of the park by local baseball, softball, and soccer leagues. Sandhill Park received significant improvements in 2006 and use of this park has continued to grow. Mason County Recreation Area, the largest baseball/softball complex has grown in use the last several years and is now recognized regionally as a preferred site for major tournaments.

There are no facilities for overnight camping throughout the Mason County Parks system. The last county-wide park plan was developed in 1991 and subsequently updated in 2006. Camping options will be examined in the long-term development plan being crafted for these and other park properties with large portions of undeveloped land. Mason County developed a new county-wide parks plan in 2006, which includes

analysis and recommendations to address recreation needs within the county. Camping by special use permit is being examined for Truman Glick Park and Foothills Park.

Inventory

An inventory of all Mason County parks including federal, state, private, and County-owned parks is listed in TABLE VI.5-1. Also included are the number of acres and amenities available at each park location. The locations of parks and recreational facilities operated by the County are shown on FIGURE VI.5-1.

Figure VI.5-1

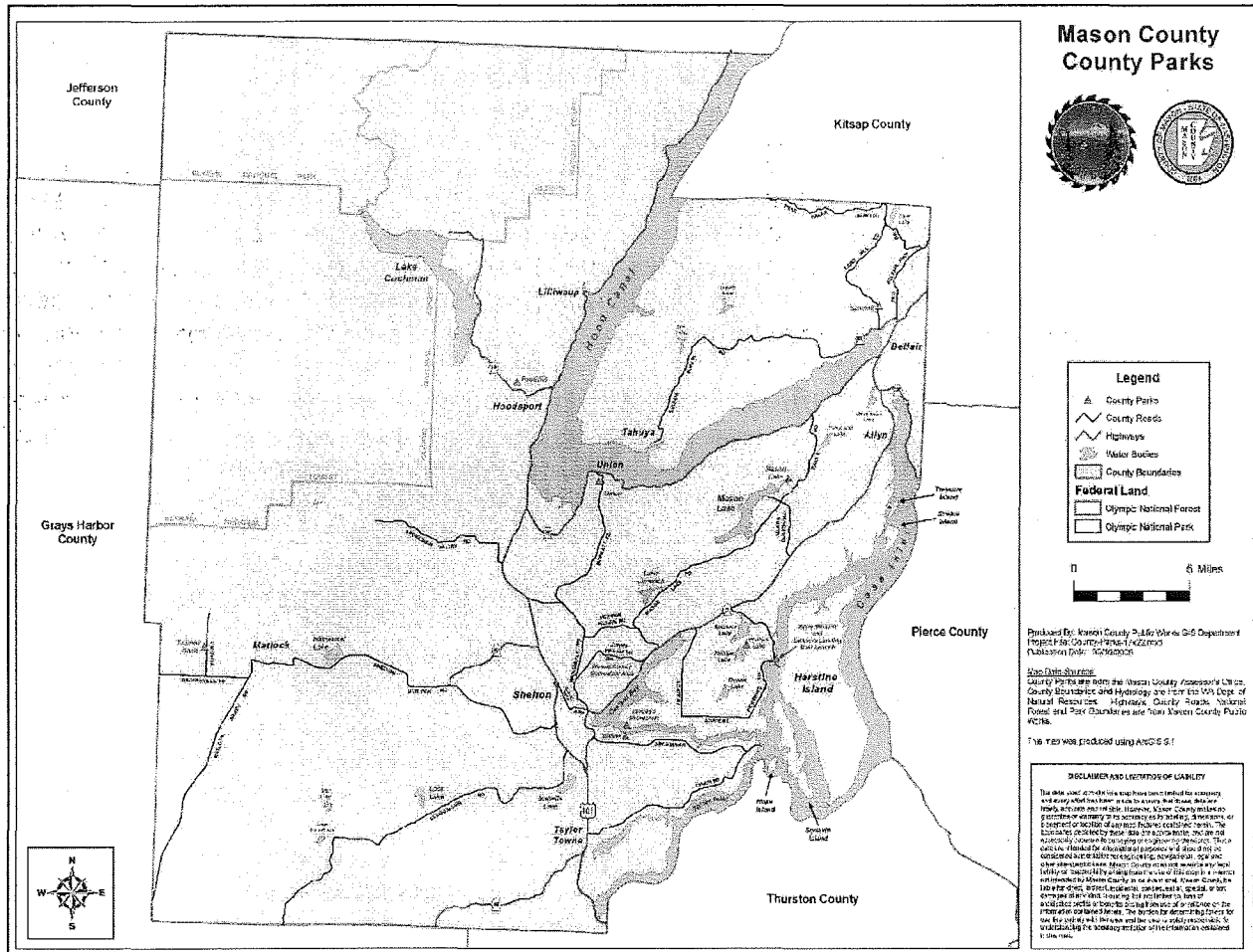


TABLE VI.5-1. Inventory of Parks		
Name of Facility	Acres	Amenities Available
Washington State Parks		
Belfair State Park	62.77 (3,780 ft tidelands)	Camping: 134 tent sites, 47 utility sites, primitive sites, wheelchair accessible trails, trailer dump facility.
Harstine Island State Park	310 (3,100 ft tidelands)	Currently undeveloped. Future development plans include: day use area; walking/hiking trails; 50 campsites.
Hoodsport Trails	80	Natural area with trails.
Hope Island	106 (8,540 ft tidelands)	Currently undeveloped. Future development plans include: trails; picnic tables; rest rooms; 6 to 8 campsites; group camping for 150 people. Washington Water Trails site.
Jarrells Cove	42.6 (3,500 ft tidelands)	Camping: 20 tent sites; group site for maximum of 64 people, 2 picnic shelters, facilities for handicapped, wheelchair accessible trails, marine pump out station, 2 docks providing 500 feet of moorage, 14 mooring buoys. Fee required.
Lake Isabella	193.75	Currently undeveloped. Future development plans include: full-service park, camping, picnic area, lakefront beach, rest rooms. Plans will be completed in the next 10 to 20 years.
Lilliwaup Tide Land	(4,100 ft tidelands)	Tidelands for public use. No facilities. Small shoulder area for parking.
McMicken Island	11.45 (1,660 ft tidelands)	Currently undeveloped. Boater destination; clamming. Plans to develop include: 5 to 8 camping sites, composting toilet.
Potlatch State Park	56.95 (9,570 ft tidelands)	Camping: 17 tent sites; 18 utility sites; primitive sites. Underwater park, trailer dump facilities.
Schafer State Park	119	Camping: 47 tent sites, 6 utility sites, primitive sites, day use group area, trailer dump facilities
Squaxin Island	31.4	Closed indefinitely.

TABLE VI.5-1. Inventory of Parks (Continued)		
Name of Facility	Acres	Amenities Available
Stretch Point	4.2 (610 ft tidelands)	Natural area. Day use only; 5 mooring buoys. No plans for future development.
Twanoh State Park	182 (3,167 ft tideland)	Camping: 30 tent sites, 9 utility sites, primitive sites, handicapped facilities, wheelchair accessible trails.
Total	1208.02 (38,027 ft tideland)	
Washington State Department of Fish and Wildlife		
Aldrich Lake	0.5	Unpaved boat launch, parking for 15 vehicles.
Benson Lake	78.8	Boat launch, beach access, parking for 100 vehicles.
Cady Lake	1.6	Unpaved boat launch, parking for 10 vehicles.
Clara Lake	9	Unpaved boat launch, parking for 30 vehicles.
Devereaux Lake	1.3	Boat launch, beach access, parking for 40 vehicles.
Haven Lake	4.1	Unpaved boat launch, parking for 50 vehicles.
Island Lake access	1	Freshwater boat launch, toilets.
Isabella Lake	1.6	Boat launch, parking for 20 vehicles.
Lake Kokanee	44	Boat Launch, parking for 100 vehicles.
Lake Limerick	0.5	Boat launch, beach access, parking for 30 vehicles.
Lost Lake	1.3	Boat launch, parking for 40 vehicles.
Lake Nahwatzel	2.0	Boat launch, parking for 10 vehicles, toilets
Maggie Lake	0.4	Unpaved boat launch, parking for 15 vehicles.
Mason Lake		Boat launch, parking for 30 vehicles.
Panhandle Lake	20	Undeveloped.
Panther Lake	3.8	Unpaved boat launch, parking for 30 vehicles.
Phillips Lake	1	Boat launch, beach access, parking for 40 vehicles.
Pricket Lake	0.5	Unpaved boat launch, parking for 30 vehicles.
Skokomish River	64	30.6 feet of riverfront, shore access, parking for 20 vehicles.
Spencer Lake	2	Boat launch, beach access, parking for 50 vehicles.
Tahuya River	2.9	4,400 feet of riverfront, parking for 10

Name of Facility	Acres	Amenities Available
Tee Lake	3.6	Unpaved boat launch, parking for 20 vehicles.
Twin Lake	3.6	Unpaved boat launch, parking for 15 vehicles.
Union River	61.8	8,098 feet of riverfront, parking for 10 vehicles.
Victor access to North Bay	.5	Boat launch, pit toilets
Wildberry Lake	10	Undeveloped.
Wooten Lake	1	Unpaved boat launch, parking for 60 vehicles.
Total	318.3	
Washington State Department of Natural Resources		
Aldrich Lake Camp	24 (approx.)	1,700 feet waterfront, hand boat launch, 4 picnic tables, 4 campsites, toilets, drinking water, lake stocked with trout, parking for 16 vehicles.
Camp Pond		Day use only
Camp Spillman	10 (approx.)	800 feet waterfront, 6 camp sites, 4 group sites, toilets, drinking water.
Elfendahl Pass Staging Area	5	11 picnic sites, self-contained RVs okay, toilets, drinking water
Howell Lake		3 group sites, 10 campsites, hand boat launch, toilets, drinking water, parking for 20 vehicles.
Kammenga Canyon		2 campsites, toilets
Mission Creek Trailhead	1	Parking for trail access
Robbins Lake	1.1	175 feet waterfront, hand boat launch, 3 picnic tables, toilets. Day use only.
Tahuya River Horse Camp	12 (approx.)	1,600 feet waterfront, 9 campsites, 2 group sites, toilets, drinking water, 20 horse corrals.
Toonerville	5.7	570 feet waterfront, 4 campsites, 2 picnic sites, toilets.
Twin Lakes		6 camp sites, 3 picnic sites, toilets, hand boat launch. Lake is stocked with trout.
Melbourne		Lake setting, 1,000 feet waterfront, 5 campsites, toilets.
Lilliwaup	7	Stream setting, 500 feet waterfront, 13 campsites, toilets, drinking water.
Public Tidelands #24		Water access only.
Public Tidelands #33		Water access only.
Public Tidelands #34		Water access only.
Public Tidelands #43		Road access, clamming.

Name of Facility	Acres	Amenities Available
Public Tidelands #44 a,b		Road access, clamming, crab pot fishing.
Public Tidelands #46		Water access only, clamming, oysters, shrimp pot fishing.
Public Tidelands #47		Water access only, clamming, oysters.
Public Tidelands #48		Water access only, clamming, oysters
Eagle Creek Recreational Tidelands		Road access, clamming, crabbing.
Rendsland Creek Tidelands		Road access, clamming.
Total		
United States Forest Service		
Brown Creek Campground	6	78 camp sites, toilets.
Hamma Hamma Campground	5	Picnic area, 12 campsites.
Lower Lena Lake Campground	6	Hike-in only, 40 camp sites, pit toilets.
Upper Lena Lake Campground	7	Hike-in only, 14 camp sites, pit toilets.
Total	24	
City of Shelton Parks and Recreation Department		
Brewer Park	0.3	3 picnic tables, curbside parking only.
Callanan Park	6.9	Lighted softball field with spectator stands, 7 picnic tables, 2 swings, 1 slide, rest room, foot trails across 40-foot natural depression, parking space for 30 vehicles plus additional parking along street.
City Park	1.75	Currently undeveloped.
Eleventh Street Site	0.92	Deep well location with the potential to be developed into a city park.
Huff and Puff Trail	80	2 miles of jogging trail and 20 incorporated exercise stations, drinking fountain and parking for 20 vehicles at trailhead.
Kneeland Park	3.9	2 slides, swings, 1 merry-go-round, horizontal bars, 1 dome climber, 1 large sand box, 1 small log playhouse, a few rocking saddle mates, horseshoe pit, aging rest room and picnic shelter, deteriorated clubhouse, 10 picnic tables, 2 tennis courts in need of resurfacing, street parking for approximately 25 vehicles.

Name of Facility	Acres	Amenities Available
Johnson Park	0.5	1 merry-go-round, 1 swing, single basketball backboard and substandard concrete court, street parking for approximately 10 vehicles.
Loop Field	4	2 tennis courts, softball field, soccer field, jogging trail along the perimeter, 1 picnic shelter, 5 picnic tables, rest room, parking for 100 vehicles.
Oakland Bay Overlook	1.03	Views of downtown Shelton, industrial waterfront, Oakland Bay, and the Olympic Mountains, historic band saw display with large log section and interpretive information, paved parking for 5 vehicles. Development plans for the next 2 years include: picnic area, rest rooms, kiosk, small shelter, additional parking.
Pine Street Boat Launch	60 feet	Crude gravel boat launch and a deteriorating wooden boat repair grid.
Total	99.3	
Port of Dewatto		
Port of Dewatto Campground	1	Camping: 11 with hook-ups, 19 tent sites; 2 rest rooms; nature/hiking trails; 23 picnic tables; two picnic shelters; 1 kitchen; fishing. Future plans to add more stoves and picnic tables, and to place gravel around kitchen. Fee required.
Port of Shelton		
Sanderson Field	1,170	Flying: 5,000 feet of runway, tie downs, skydiving; rifle club; model aircraft society. Future plans to provide increased hangar availability.
Oakland Bay Marina		Boat moorage.
Total	1170	
Port of Allyn		
Waterfront Park in Allyn	2	400 feet waterfront, moorage, dock (for up to 15 boats), picnic, gazebo, parking for 20 vehicles. Office building planned.
Kayak Park	.3	150 feet waterfront, small parking lot, picnic tables, portable toilet facilities.
North Shore Ramp Belfair/North Shore	1.2	150 feet waterfront, boat launch with floating dock, beach access, parking for 20 vehicles with trailers.

Name of Facility	Acres	Amenities Available
Port of Hoodspout		
Ingvald Gronvold Waterfront Park	2	Dock, saltwater beach access, tidelands, 2 portable rest rooms. Proposed future development includes an interpretive center and picnic tables.
Port of Grapeview		
Fair Harbor Marina	5	Boat launch and parking area
Mason County		
Latimer's Landing overflow parking area	2.5	Primary use is to provide parking for neighboring Latimer's Landing, parking for 20 vehicles.
Foothills Park	80	1 field which serves as a multiuse field; basketball court; rest rooms; children's play area; picnic tables; parking for 50 vehicles.
Harvey Rendsland Jiggs Lake	8	Currently undeveloped; 1,905 feet waterfront.
Latimer's Landing (Water)	.59	Saltwater access boat launch for vessels no longer than 20 feet, parking for 10 vehicles, portable toilet, boat dock; additional parking available at neighboring Latimer's Landing overflow parking area. Renovated in 2008.
Mason County Fairgrounds (Picnic)	12	100 camp sites with hook ups; additional space for tent camping, rest rooms and showers; 30 picnic tables; horse arena; 2 indoor kitchens; natural area.
Mason County Recreation Area (MCRA Sport)	40	7 baseball/softball fields which also serve as soccer and football fields; children's play area, bleachers, maintenance shop, user's storage facility, seasonal concession stand, 4 batting cage; parking for 100 vehicles. This facility serves as the headquarters for the Mason County Parks Department. Fee required for scheduled field use.
Mason Lake Park (Water)	17.36	1.36 acres currently in use; freshwater access/boat launch for small watercraft no longer than 18 feet, dock, play area, rest rooms, 4 picnic table; parking for maximum of 50 vehicles. The County owns 16 unused acres that can be

		used for expansion of the park (possible trails, picnic area, and remote camping area).
Phillips Lake County Park (Picnic)	0.4	Passive day use area, picnic area, located next to State of Washington Boar Launch with vault type toilets.
Sandhill Park (Sport)	30	7 baseball/softball fields, one multiuse field, bleachers; parking is available for 100+ vehicles; concession-restroom building; 4 fields and parking renovated in 2006; walking path around park.
Shorecrest Park (Water)	2.8	320 feet waterfront, boat launch for vessels no longer than 16 feet, saltwater beach access, 3 picnic tables.
Truman Glick Memorial Park (Picnic)	35.46	Natural setting, creek, trails, picnic tables, covered group shelter, barbecue pit, vault toilets, RV area. Future improvements include: possible construction of group camping area and interpretive signage along trails.
Union Community Park (Picnic)	1.92	Picnic shelter, children's play area; small baseball diamond, basketball court; rest rooms.
Union Boat Ramp (Water)	0.16	Boat ramp for access to Hood Canal, portable toilets, no parking.
Hunter Park	.5	2 picnic tables, bus shelter
Skate Park	.6	11 above ground ramps in Shelton
Walker Park (Water)	5.04	Saltwater access to Hammersley Inlet, gravel beach, picnic tables, barbecues, rest rooms, shelter, children's play area, interpretive center providing marine information; parking for 15 vehicles.
Oakland Bay Preservation Area	80	Habitat preservation area and education center (currently undeveloped)
Watson Wildwood View	36	Undeveloped
Mendards Landibng Park	40	Recently transferred from the Port of Tahuya to County. Parks provices beach access, picnic areas, gazebo, portable toilet, access to DNR tidelands, small boat launch for kayaks and canoes
Mason Lake Picnic Park	.9	Undeveloped
Harstene Island	6.9	Undeveloped
Total	328.03	
Mason County Public Schools		
Belfair Elementary		Playground.

Sandhill Elementary		Playground.
Hood Canal Elementary/Junior High School		2 baseball backstops, 1 football field, bleachers, playground, track, parking for 30 vehicles.
Oakland Bay Middle School		x
Olympic Middle School		x
Pioneer Elementary		2 baseball backstops, covered play area, playground.
Grapeview Elementary		Playground
Southside Elementary		1 baseball backstop.
Bordeaux		Football field, soccer field, playground, track.
Evergreen Elementary		Playground.
Mountain View Elementary		5 baseball backstops, football field, soccer field, playground.
Shelton High School		6 tennis courts, 2 baseball backstops, football field, soccer field, bleachers, 2 swimming pools, track, rest rooms.
Mary M. Knight District		2 baseball backstops, 1 football field, bleachers, playground.
North Mason High School		2 baseball backstops, 2 tennis courts, football field, soccer field, bleachers, playground, track.
Private Facilities Open to the Public		
Shelton/South Mason Soccer Park	14	6 soccer fields, 1 under development
Glen Ayr Canal Resort	10	Adult-only RV park with hookups; no tent camping, motel, 2 rest rooms, 2 showers, laundry facility, saltwater boat launch, beach access, tidelands, spa, fishing, clamming, oysters, dock.
Lake Nahwatzel Resort	2	Camping: 12 utility sites, 5 sites without hookups; 2 rest rooms, 2 showers, boat launch, freshwater beach access, nature/hiking trails, 8 picnic tables, restaurant, fishing, swimming, cabins.
Minerva Beach RV Resort and Mobile Village	20	Camping: 23 sites without hookups, 50 sites with hookups; 5 rest rooms, 6 showers, laundry facilities, boat launch, saltwater beach access, 60 picnic tables, driving range, scuba dive center.
Rest-A-While RV Park and Marina	15	Saltwater boat launch, moorage, dock, 70-80 camp sites with hookups (may be used for RVs or tents), 4 rest rooms, 4 showers, laundry facilities, beach access, clamming, oysters,

		fishing, boat rentals, nature trail, 60 picnic tables, 2 covered picnic areas with kitchen, concession stand. Future improvements include easier access to marina, and boat fuel.
Theler Center	unknown	Wetlands interpretive trails
Lake Cushman	602.9	Camping: 51 tent sites, 30 utility sites, 2 primitive walk-in sites, group site with cooking shelter for maximum of 56 people, rest rooms with showers; facilities for handicapped, boat launch, trailer dump facility.
Total	663.9	
Other		
Olympic National Park - Staircase Campground		Picnic area, 50 camp sites, parking for 60 vehicles.
Tacoma City Light Saltwater Park		6 picnic tables, rest rooms, saltwater boat launch, saltwater beach access.
Mike's Beach Resort		Boat launch, SCUBA diving, cabins, camping, beach access for guests
Robin Hood Village		16 RV sites, cabins, camping, beach access for guests
COUNTY TOTAL	<u>63,032.27</u>	

Projects

The following pages provide details on specific Park projects proposed for the current capital facilities planning period.

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0900

Project Name: Walker Park Improvements

Estimates: Construction Level

Description: Would involve improvements to the Walker Park Play Area equipment.

Justifications: Play equipment does not meet current safety standards and is not ADA accessible.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering							
Site Prep & Utilities/ Well							
Construction Engineering							
Construction	50,000						50,000
Total Costs:	50,000						50,000
Funding Sources:							
In House	50,000						50,000
Grants							
Loans	0						0
Total Funding:	50,000						50,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0800

Project Name: Union Park Improvements

Estimates: Construction Level

Description: Would involve improvements to the Union Park Play Area equipment.

Justifications: Play equipment does not meet current safety standards and is not ADA accessible.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering							
Site Prep & Utilities/Well							
Construction Engineering							
Construction	42,000						42,000
Total Costs:	42,000						42,000
Funding Sources:							
In House	42,000						42,000
Grants							
Loans	0						0
Total Funding:	42,000						42,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 676.80.41.1100 Planning
 351.000.000 594.76.63.1000 Development

Project Name: Union Boat Ramp

Estimates: Construction Level

Description: Scope of this project includes planning/design and development to renovate the existing County Boat Ramp in Union on Hood Canal.

Justifications: Project listed as a high priority in the 2006 County Parks Plan. Project would enhance water access and boating.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning, Design					50,000		50,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction						465,000	465,000
Total Costs:							515,000
Funding Sources:							
In House					15,000	90,000	105,000
Grants					35,000	375,000	410,000
Loans							
Total Funding:					50,000	465,000	515,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0500

Project Name: Sandhill Park Renovation

Estimates: Construction Level

Description: Scope of this project includes planning/design and development services to complete the renovation of Sandhill Park. Main work would include the renovation of fields #1, #2, and #3. New backstops, ADA access, irrigation, and complete field renovation would be included.

Justifications: This project is listed as a high priority in the 2006 Park Plan. Plan recommended improving existing facilities before developing new facilities.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning, Design						75,000	75,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction						725,000	725,000
Total Costs:						800,000	800,000
Funding Sources:							
In House						400,000	400,000
Grants						400,000	400,000
Loans							
Total Funding:						800,000	800,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.1700

Project Name: Harvey Rendsland County Park Planning and Improvements

Estimates: Construction Level

Description: Would involve completing a park plan to facilitate public access to the park and then the development of a parking area, picnic facility, passive recreation and support facilities..

Justifications: This park was donated to Mason County in 2007 by Washington State Parks. It provides water access to Jiggs Lake. Water access is the top priority in the 2006 County Parks Plan. Additional developed park space is needed on the Tahuya Peninsula.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design	20,000						20,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction			265,000				265,000
Total Costs:	20,000		265,000				285,000
Funding Sources:							
In House	20,000		115,000				135,000
Grants			150,000				150,000
Loans	0						0
Total Funding:	20,000		265,000				285,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.1400

Project Name: Phillips Lake County Park

Estimates: Construction Level

Description: Scope of this project includes basic park improvements, including park amenities such as tree removal, picnic tables, park benches, trash containers, and signage.

Justifications: This small park has have very little in the way of improvements and is needed.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning, Design				10,000			10,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction							
Total Costs:				10,000			10,000
Funding Sources:							
In House				10,000			10,000
Grants							
Loans							
Total Funding:				10,000			10,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.1300

Project Name: Oakland Bay County Park

Estimates: Construction Level

Description: The Oakland Bay property was purchased jointly by the County and the Capitol Land Trust. Project scope would involve a two-phase development program for the park. The first phase would concentrate on public access facilities, the entry road, parking area, restrooms, and signage. The second phase would concentrate on trail development, environmental education facilities, and interpretative displays.

Justifications: Project listed in the 2006 County Parks Plan as a high priority for implementation.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design							
Site Prep & Utilities/ Well							
Construction Engineering							
Construction		700,000			700,000		1,400,000
Total Costs:		700,000			700,000		1,400,000
Funding Sources:							
In House		350,000			350,000		700,000
Grants		350,000			350,000		700,000
Loans							
Total Funding:		700,000			700,000		1,400,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.1600

Project Name: Menards Landing County Park

Estimates: Construction Level

Description: This park was transferred from the Port of Tahuya to Mason County in 2006. Project scope includes improvements that would incorporate ADA access improvements, new picnic facilities, non-motorized watercraft improvements to the present launch site, and new park amenities such as park benches and garbage cans,

Justifications: Project listed in the 2006 County Parks Plan as a priority for implementation.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design							
Site Prep & Utilities/ Well							
Construction Engineering							
Construction			50,000				50,000
Total Costs:			50,000				50,000
Funding Sources:							
In House			50,000				50,000
Grants							
Loans							
Total Funding:			50,000				50,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0300

Project Name: Mason County Recreation Area (MCRA) Improvements

Estimates: Construction Level

Description: Project scope would involve needed renovations and improvements to MCRA Park. The improvements include: new field lights, restroom renovation, irrigation improvements, drainage upgrades, new office, new bleachers, play equipment surfacing, asphalt, scoreboards, and concession building.

Justifications: Project listed in the 2006 County Parks Plan for implementation.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design							
Site Prep & Utilities/ Well							
Construction Engineering							
Construction		800,000		800,000			1,600,000
Total Costs:		800,000		800,000			1,600,000
Funding Sources:							
In House		400,000		400,000			800,000
Grants		400,000		400,000			800,000
Loans							
Total Funding:		800,000		800,000			1,600,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0400

Project Name: Mason County Boat Launch Renovation

Estimates: Construction Level

Description: Renovation of existing boat launch facility, including the boat ramp, dock, Entry and exit road, and parking improvements. The parking would be improved and expanded, entry road widened, and restroom improved for ADA accessibility.

Justifications: Park has not been renovated since initial development. Listed in 2006 Parks Plan for renovation and expansion. ADA improvements are needed, especially access to dock and restrooms.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering							
Site Prep & Utilities/ Well							
Construction Engineering	25,000						20,000
Construction	950,000						950,000
Total Costs:	975,000						950,000
Funding Sources:							
In House	275,000						275,000
Grants	700,000						700,000
Loans	0						0
Total Funding:	975,000						975,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0220
 351.000.000 576.80.41.0220 - Planning

Project Name: Latimers Landing County Park

Estimates: Construction Level

Description: Scope of this project includes planning and design to develop 2.4 acres of undeveloped land at Latimers Landing into additional boat and trailer parking, and public access to Pickering Passage. The 2.4 acres was purchased in 2008 to compliment the .59 acre Latimers Landing Boat Launch.

Justifications: Project listed as a high priority in the 2006 County Parks Plan. Project would enhance water access and provide additional parking for boats and trailers.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning, Design	90,000						90,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction				750,000			750,000
Total Costs:							840,000
Funding Sources:							
In House	30,000			185,000			215,000
Grants	60,000			565,000			625,000
Loans							
Total Funding:	90,000			750,000			840,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.2000

Project Name: Lake Nahwatzel County Park

Estimates: Construction Level

Description: Scope of this project includes planning/design and development services to develop a future waterfront park on Lake Nahwatzel. Project would be completed in cooperation with Green Diamond Resource Company.

Justifications: This project is listed as a high priority in the 2006 Park Plan because is addressed a parkland deficiency in western Mason County and also provides water access.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning, Design					100,000		100,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction					400,000	500,000	900,000
Total Costs:					500,000	500,000	1,000,000
Funding Sources:							
In House					250,000	250,000	500,000
Grants					250,000	250,000	500,000
Loans							
Total Funding:					500,000	500,000	1,000,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0600

Project Name: Jacoby Park (Shorecrest) Improvements

Estimates: Construction Level

Description: Project scope would involve implementation of Park Improvement Plan based on Park Site Plan developed in 2008. Improvements would provide more amenities at the park than what currently exist.

Justifications: Project listed in the 2006 County Parks Plan for implementation.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design							
Site Prep & Utilities/ Well							
Construction Engineering							
Construction		180,000					180,000
Total Costs:		180,000					180,000
Funding Sources:							
In House		180,000					180,000
Grants							
Loans							
Total Funding:		180,000					180,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.1900

Project Name: Goldsborough Creek County Park

Estimates: Construction Level

Description: Scope of this project would include the development of passive recreation facilities at a 9.4 acre park site along Goldsborough Creek. Project would include passive recreation amenities, primarily parking, restroom, trails, and passive recreation along the creek, park benches and picnic areas.

Justifications: Project listed as a priority in the 2008 County Regional Trails Plan and would also provide additional parkland in the western section of Mason County, which was listed in the 2006 Park Plan as an area of the County with a park and open space deficiency.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design			30,000				30,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction			320,000				320,000
Total Costs:			350,000				350,000
Funding Sources:							
In House			175,000				175,000
Grants			175,000				175,000
Loans							
Total Funding:			350,000				350,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.0100

Project Name: Foothills County Park

Estimates: Construction Level

Description: Project scope would include working with the Port of Hoodspport to develop a Master Site Plan for Foothills County Park. Future development of the park via a partnership with the County and Port of Hoodspport would be likely.

Justifications: Project listed in the 2006 County Parks Plan.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design		20,000					20,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction							
Total Costs:		20,000					20,000
Funding Sources:							
In House		20,000					20,000
Grants							
Loans							
Total Funding:		20,000					20,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.000 594.76.63.2100

Project Name: Camp Govey Trail Parking Lot and Support Facilities

Estimates: Construction Level

Description: Project scope would include development of a parking and support facility just off Forest Service Road #23 on Green Diamond Resource Company Land for the Camp Govey Trail and view park. Improvements include parking, signage, restroom facility, picnic area.

Justifications: High priority project identified in the 2008 Mason County Regional Trails Plan.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design							
Site Prep & Utilities/ Well							
Construction Engineering							
Construction	125,000						125,000
Total Costs:	125,000						125,000
Funding Sources:							
In House	32,000						32,000
Grants	93,000						93,000
Loans							
Total Funding:	125,000						125,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 2 Capital Improvement Program
Fund Number: 351.000.100 594.76.63.0001

Project Name: Park Development Partnership Program

Estimates: Construction Level

Description: The Park Development Partnership Program provides matching grant funds to **plan, construct, reconstruct, repair, rehabilitate and improve parks** in Mason County. To be eligible for funding, community organizations and public entities must have an established a partnership. Public entities include, but necessarily be limited to: school districts, utility districts and cities. The public entity must submit the application.

Justifications: Provides funds to improve parks in Mason County by promoting partnerships with community groups and public entities. Program would provide for one \$50,000 project from 2009 to 2014.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering							
Site Prep & Utilities/ Well							
Construction Engineering							
Construction	50,000		50,000		50,000		150,000
Total Costs:	50,000		50,000		50,000		150,000
Funding Sources:							
In House	50,000		50,000		50,000		150,000
Grants							
Loans	0						0
Total Funding:	50,000		50,000		50,000		150,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 1 Capital Improvement Program
Fund Number: 350.000.000

Project Name: Trails Development Program

Estimates: Construction Level

Description: Trail development program for Mason County.

Justifications: Begin Implementation of a trail development program as per the County Regional Trails Plan.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Planning and Design		75,000		75,000			150,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction	100,000	200,000	300,000	300,000	200,000	100,000	1,200,000
Total Costs:							
Funding Sources:							
In House		100,000	100,000	100,000	100,000		400,000
Grants	100,000	100,000	200,000	200,000	100,000	100,000	800,000
Loans							
Total Funding:	100,000	200,000	300,000	300,000	200,000	100,000	1,200,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 1 Capital Improvement Program
Fund Number: 350.000.000

Project Name: MCRA Office Renovation

Estimates: Construction Level

Description: Convert old maintenance garage to a ground level office building.

Justifications: Current parks office is 25+ years old and can only be accessed up a flight of stairs. Current office is not ADA accessible.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Acquisition							200,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction	200,000						
Total Costs:	200,000						200,000
Funding Sources:							
In House	200,000						200,000
Grants							
Loans							
Total Funding:	200,000						200,000

2009-2014 Capital Facilities Plan Worksheet – Parks & Trails Department

Fund Name: REET 1 Capital Improvement Program
Fund Number: 350.000.000

Project Name: Goldsborough Creek Park Acquisition

Estimates: Construction Level

Description: Acquire 9.4 acres on Goldsborough Creek in partnership with the Capitol Land Trust.

Justifications: High priority for acquisition for use as trailhead site and County Park.
 High priority in both the Regional Trails Plan and the County Park Plan.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Acquisition	555,000						555,000
Site Prep & Utilities/ Well							
Construction Engineering							
Construction							
Total Costs:	555,000						555,000
Funding Sources:							
In House	75,000						75,000
Grants	480,000						480,000
Loans							
Total Funding:	480,000						555,000

** County contribution would be proceeds from a land sale at Mason Lake.

VI.6 COUNTY AND ADMINISTRATIVE BUILDINGS

System Description

Mason County owns several buildings, most of which are located in the City of Shelton, the County seat. These buildings are used to support general County functions such as internal management, health, public service, and general administration. Other buildings owned by the County include Memorial Hall, the Cooperative Extension Office, the two buildings on Pine Street, the Mason County Fair/Convention Center, the Public Works Campus and the Belfair Public Works Shop. TABLE VI.6-1 describes these sites. Locations of the facilities within the Shelton Campus are shown in FIGURE VI.6-1.

Memorial Hall and the two buildings on Pine Street are located in Shelton, a few blocks from the main campus area. The Mason County Extension Office is located about 3 miles north of Shelton, on the northeast side of Highway 101, across from the Shelton airport. The Public Works campus is located about 4 miles north of Shelton, on the northwest side of Highway 101. The Belfair Public Works Shop is situated on the north shore of Hood Canal about 3 miles from Belfair.

Inventory

Mason County's administrative offices and departments housed in the buildings are listed in TABLE VI.6-2. Also provided is a summary of current office area allocations for the County departments and departmental functions.

Most of the County's administrative offices are located in the Shelton Campus, a four-squareblock section of the downtown area. At this location, the County operates from 23 publicly owned buildings. These include the Courthouse, Jail, Juvenile Detention Facility, Building I, Building II, Building III, Building IV, Building V, Building VI, Building VII, Building VIII, and Building IX. Other county administrative offices are located at Building XI (Cooperative Extension Building), the 3rd & Pine building (the Sheriff Office), the Public Works campus, and the offices at the Mason County Fairgrounds.

Facility Needs

Facility needs are being developed through a space planning effort currently being updated by the County. This work is based on an assessment of agency needs related to growth in both the six- and 20-year planning horizons. While planning is continuing, the county has identified the space needs for County administration, law enforcement, and criminal justice facilities. Specific planned improvements for the first six-year planning period and associated financing are detailed in Section VI.10, Finance Plan. Based on the "Space Standards Manual" published by the State of Washington Department of General Administration, 251 square feet are needed per employee. In addition, certain governmental functions have special requirements for facilities. Currently the county has a deficit in space. Significant additional space will be required over the next six and twenty years if the county is to offset that deficit and meet the future growth. The information is summarized in Table VI.6-3. Needs analysis and facility planning was done in 1995 and 1996. The background information and analysis can be found in "Update to Mason County Space Needs Analysis for inclusion in the Mason County and Master Plan update, June 16, 1999."

Site	Square Feet	Acres
Shelton Campus	169,200	3.88
Memorial Hall	12,000	0.275
Extension Office	Approx. 18,600	
Fairgrounds	Not reviewed	43
Belfair Public Works Shop	Approx. 61,000	1.4
Public Works Campus		
3 rd & Pine Property	19,000	1.16

Department or Office	Area (square feet)	Building
Assessor	2,525	Building I
Auditor	3,228	Buildings I, XI, Courthouse
Central Operations	99	Building I, VII
Clerk	1,430	Courthouse
Community Development	2,121	Buildings I, III
Cooperative Extension Office	2,377	Extension Office
Coroner	99	Building VI
County Commission	1,508	Building I
District Court	2,322	Courthouse, Building VIII
Equipment, Rental and Revolving Fund (ER&R)	374	Buildings I, IX, III, Public Works Campus
Facilities & Grounds	757	Building IX, Courthouse, 3 rd & Pine
Health Services	3,299	Buildings II, III, IV
Permit Assistance Center	1,726	Building III
Probation Services	1,383	Building VIII
Prosecutor	3,535	Building VII
Public Works Campus		Public Works Campus
Public Works – Maintenance	61,000	Belfair Shop
Sheriff	13,000	3 rd & Pine Property,

		Belfair Sub-Station
Superior Court	4,371	Courthouse, Building VI
Treasurer	2,157	Building I, Courthouse

2007 Space Needs Update - Area Projections for primary space needs						
<i>Summary Sheet for departments not included in new Mason County Shop facility</i>						
Department	Current				Projected	
	Allocation (s.f.)	2007 need (s.f.)	Deficit (s.f.)	Deficit (%)	2012 need (s.f.)	2017 need (s.f.)
Assessor	2,519	4,440	1,921	43%	4,218	4,440
Auditor	3,407	4,074	667	16%	4,296	4,518
Treasurer	2,481	2,442	-39	0%	1,998	1,998
Budget and Finance / Risk Management	210	444	234	53%	666	666
Human Resources	215	444	229	52%	666	666
Facilities and Grounds	7,096	3,500	-3,590	0%	5,500	6,500
Board of County Commissioners / Central Operations	1,640	3,398	1,758	52%	3,620	4,892
Clerk	1,277	3,508	2,231	64%	4,618	5,728
District Court	2,925	7,664	4,739	62%	8,774	13,162
Superior Court	5,090	12,400	7,310	59%	16,600	21,200
Probation Services	4,745	4,608	-137	0%	5,052	5,496
Juvenile Detention / Alternatives to Detention	3,408	9,400	5,992	64%	12,200	15,000
Sheriff	7,239	16,000	8,761	55%	18,000	20,000
Adult Detention / Alternatives to Detention	19,315	55,000	35,685	65%	61,000	67,600
Prosecutor	3,533	4,468	935	21%	4,690	5,406
Coroner	294	744	450	61%	966	2,188

Community Development - Planning	1,998	3,552	1,554	44%		3,996	4,440
Community Development - Permit Assistance Center	3,681	5,550	1,869	34%		6,216	7,104
Community Development - Utilities and Waste Management	635	1,554	919	59%		2,664	3,330
Public Health Services	1,695	8,992	7,297	81%		11,656	14,098
Parks and Trails	1,094	1,554	460	30%		1,776	1,998
WSU MC Extension	2,311	4,330	2,019	47%		4,774	5,218
Total	+/- 76,808	158,066	+/- 81,258	+/-51%		183,94	215,648

VI.7 POLICE AND CRIMINAL JUSTICE FACILITIES

System Description

The Mason County Sheriff's Office provides police services including, patrol, traffic enforcement, service of civil process, jail operation and investigative services to the citizens in unincorporated Mason County. The Mason County Sheriff's Office currently has a total of 98 employees. Of those, 47 are commissioned officers, 30 are jailers, and 21 are civilian employees.

The Mason County Sheriff's Office currently serves 53,100 citizens covering an area of 961 square miles. The Mason County Sheriff's Office also covers over 900 miles of shorelines, 622 miles of county roads and nearly **115** miles of state highways.

The Mason County Sheriff's Office will be taking over primary responsibility for traffic law enforcement and collision investigations on all county roads commencing July 1, 2009. Accordingly the Sheriff's Office received authorization for 2 new positions to be dedicated to traffic enforcement on January 1, 2008 and two more on July 1, 2008, providing for a total of 5 officers and a supervisor working traffic and investigating collisions.

Criminal Activity

The following table illustrates calls for service for the Mason County Sheriff's Office 2004 through 2007.

2004	19046
2005	22177
2006	20013
2007	20052
2008	19272

The following TABLE VI.7-1 illustrates Mason County Crimes from 2003 through 2007. Figures for 2008 not yet available at the time of this update.

TABLE VI.7-1. Mason County Crime 2003 through 2007

	2003	2004	2005	2006	2007
Murder	2	2	6	1	0
Forcible rape	32	46	26	26	31
By force	27	42	20	24	27
Attempted	5	4	6	2	4
Robbery	14	8	11	15	13
Firearm	9	2	5	7	6
Knife	2	0	1	0	1
Other weapon	2	3	3	1	1
Strong arm	1	3	2	7	5
Assault	418	461	412	405	419
Firearm	6	13	9	2	12
Knife	15	8	6	8	9
Other weapon	34	45	35	30	47
Simple assaults	354	380	350	340	324
Burglary	646	676	945	656	593
Forced entry	297	297	409	297	279
No force	306	351	489	332	288
Attempted	43	28	47	27	26
Larceny-theft	1,006	1,071	1,323	1,150	1090
Vehicle theft	219	244	296	256	243
Autos	124	149	173	153	164
Trucks, buses	31	39	45	38	30
Other vehicles	64	56	78	65	49
Total	2,337	2,508	3,019	2,509	2391
Unfounded	196	197	246	229	191
Cleared	221	230	208	226	273

Traffic in Mason County

2007	Traffic Infractions issued by MCSO	827
	Criminal Non Traffic issued by MCSO	373
	Total Traffic Collisions responded to by MCSO	710
	Total Traffic Collisions investigated by MCSO	215

Washington State Patrol (WSP) maintains records for all citations and collisions within Mason County. The Washington State Patrol has notified Sheriff Casey Salisbury that they will no longer investigate non-injury collisions on County Roads starting July 1, 2009.

According to a Sheriff's Office analysis, the county for the county to take over the traffic accident investigations on county roads with the associated enforcement component, at least four deputies will be required. The Washington State Patrol currently has nine troopers assigned to Mason County. Approximately 40 percent of all of the collisions in the county occur on county roads. Additionally, according to WSP statistics, they have been conducting about 4000 contacts per year with nine troopers on county roads, which accounts for about 40 percent of the total WSP contacts in the entire county. This amount of contacts along with the collisions investigated takes up over 40 percent of WSP's time.

In 2006, there were 1,035 collisions in all of Mason County. Of those collisions, 383 resulted in personal injuries. There were 15 fatalities with 5 of those fatalities occurring on County Roads. A total of 307 collisions occurred on County Roads. From January 1, 2007 to June 15, 2007, WSP has responded to a total of 102 collisions on County Roads. Between 1993 and 2003 Mason County had the 4th highest Drinking Driver Involved (DDI) death rate in the state. During the same time period Mason County had the 6th highest traffic fatality rate in the state.

Jail Facilities

The Mason County Jail opened in 1986 with a population capacity of 45 inmates. In 1989, capacity was increased to 51, and in 1991 it was increased to 58 beds with floor space for 106. In 1993 the average daily population (ADP) was 62. In 2004 the ADP was at 95 - 146% over capacity.

The Direct Supervision Unit (DSU) opened on October 1, 2006, bringing the jail capacity up to 128 inmates. ADP for 2005 was 111, ADP for 2006 was 119 and ADP for 2007 was 113.7.

Strategic Plan

The Mason County Sheriff's Office has no current formalized strategic plan at this time; however, the creation of a formal strategic plan is currently being considered.

Alternate Funding Sources

The Mason County Sheriff's Office continues to explore alternative funding sources including Federal Homeland Security Grants, Justice Assistance Grants, and grants from other federal, state, and private sources. Additionally the Mason County Sheriff's Office

is committed to forming community partnerships with public and private agencies to more efficiently provide services and utilize facilities to maximum efficiency.

Overall Facility Needs

In 2008, Foster and Williams conducted a space analysis to be incorporated in the Mason County Comprehensive Plan. According to this analysis, the Sheriff's Office will have a space deficit of 10,761 by 2012. However, not reflected in that analysis is the County's acquisition of a building located at 3rd & Pine in Shelton. It is anticipated that the Sheriff's Office will moving from its current location into the 3rd & Pine building alleviating many of the department's spacing needs.

Space Allocation Criteria

Standard space allocations methods do not apply to all areas of the Sheriff's Office because of the diverse functions found within the department such as training, locker rooms, K-9 holding, briefing room, interview rooms, public receptions, fingerprinting, criminal complaints, evidence processing and others. Space for many of the above mission essential functions does not exist. Please note that full time work stations are not required for each patrolman. However, four to six work stations for patrol are currently required.

Storage Needs

The most important need of the Sheriffs Office is that of evidence storage. Property taken in by the Sheriff's Office, whether it's contraband, found property, stolen property, or safekeeping is held in trust by the Sheriff's Office. Therefore the Sheriff is responsible for its security, preservation, chain of custody as well as its return, sale or disposal in the same condition it was when we acquired it according to law. Currently evidence is stored in a vault in the basement of the courthouse, on the third floor of the courthouse and in buildings and containers at the impound yard at the county shop. Space allotted for evidence storage space is currently 2908 square feet. It is estimated Sheriff's Office evidence storage should be about 6000 square feet. This would allow for enough space to properly store and process evidence and should take care of evidence storage needs for at least the next 10 years. That space needs to include an 800 square ft space that is heated and well lit for indoor vehicle processing. The evidence storage facility ideally would be all in one location to eliminate the need for transportation to remote locations for storage.

Additionally the Mason County Sheriff's Office must have covered storage for it's three boats, two personal watercrafts, light armored vehicle, ATV, skid car and trailer along with spare vehicles. Additional secure storage is needed for other training equipment, tactical equipment and ordinance that is not routinely issued to officers and needs to be in a secure location.

Storage needs will continue to be revisited and it is anticipated that the Sheriff's Office move to the 3rd & Pine will address many of them.

Courts

The Mason County District courts handled 11,195 cases in 2004, mostly infractions and misdemeanors. Domestic violence and civil cases make up less than 13 percent of the District Court caseload. Mason County Superior Court handled 2,541 cases in 2004, with civil cases being the most common, followed by criminal actions, domestic cases, juvenile offender cases, and probate/guardianship cases, in that order. TABLE VI.7-2 summarizes the caseload for the two courts for the years 2002, 2003, and 2004.

TABLE VI.7-2 Mason County Court Cases			
Case Type	2002	2003	2004
Mason County District Court			
Infractions	4,213	5,591	6,574
Misdemeanors	2,278	2,980	3,192
Domestic violence	296	293	258
Civil cases	1,011	1,139	1,171
Total	7,798	10,003	11,195
Mason County Superior Court			
Criminal actions	503	475	531
Civil actions	1,020	1,146	1,199
Domestic	322	337	368
Probate/guardianship	212	185	192
Juvenile offender	261	214	251
Total	2,318	2,357	2,541

Source: State of Washington; Courts of Limited Jurisdiction Annual Caseload Report

Facility Needs

In 1996, the Facilities Steering Committee and the Criminal Justice Working Team, working with a consultant, assessed future County building needs. A report was issued jointly by the Facilities Steering Committee and Criminal Justice Working Team in 1996, and updated in 1999 ("Mason County Space Needs Analysis for inclusion in the Mason County Master Plan update, June 16, 1999") which identified four capital facility projects. Space needs are not determined by a simple set of standards but by a comprehensive approach to the criminal justice systems program needs. The projected cost of this plan and potential funding sources are incorporated in the finance plan contained in Section VI-10 of this chapter. A summary of space needs for the next six-year and 20-year planning periods can be located on Table VI.6-3, in the previous section VI.6.

VI.8 STORMWATER MANAGEMENT

System Description

Existing stormwater facilities in Mason County include both natural systems and built collection and conveyance. Existing systems generally handle runoff from State and County Roads and existing development. Run-off control is limited to new construction which is managed through requirements in 1992 Ecology Stormwater Manual. More stringent control is proposed for the Belfair/Allyn Urban Growth areas and the Hoodspport Rural Activity Center by implementing the 2005 Ecology Stormwater Manual and Low-Impact Development techniques.

Increases in the amount of residential and commercial impervious surfaces have increased stormwater runoff in the county. In addition, forestry practices, such as logging, and new road construction, have also increase runoff and created sedimentation problems in a number of the county's creeks and streams resulting in diminished water quality and loss of critical aquatic habitat. Stormwater runoff, erosion, sedimentation, habitat loss and flooding problems will likely continue in the County especially in the designated urban growth areas if strong control measures are not implanted.

Inventory

Mason County has adopted a Stormwater Management Ordinance (Mason County Code Section 14.48). This ordinance adopts by reference the 1992 edition of the Washington State Department of Ecology's Stormwater Management Manual, with the exception of the Minimum Requirements chapter, for use in designing best management practices (BMPs) for new development and other improvements. The ordinance defines specific minimum requirements and other approval standards for development on all ranges of parcel sizes

The City of Shelton has prepared a Surface Water Drainage Utility Master Plan. Their master plan identifies existing problems in the city and offers recommendations for improvements. The city has scheduled improvements based on the existing master plan; the city intends to update the plan before 2013.

The county is in the process of adopting stormwater plans for the Belfair/Allyn Urban Growth Area, and the Hoodspport Rural Activity Center. A more general plan for the entire county is expected to be developed in 2009. The specific plans and the more general countywide plan will set the stage for the development of a utility that will implement programmatic and capital improvement projects to manage stormwater. Activities will focus on addressing flooding in the county, improving the water quality in South Puget Sound and protecting critical aquatic habitat. Stormwater programs and capital improvements will be lunched through direct developer contributions as new development occurs; grants and loans; a dedicated portion of the Real Estate Excise Tax (REET 2) collected by the county; and utility fees.

Facility Needs

Mason County continues the development of a comprehensive countywide Stormwater Management Plan. This planning process focuses on a review of existing stormwater policies and the County's stormwater regulations. In addition, a review for regulatory consistency with

the County's Critical Areas Ordinance (CAO) and Low Impact Development (LID) Standards will be completed. The plan addresses changing state, federal, and regional regulatory requirements. This includes the National Pollutant Discharge Elimination System (NPDES) Phase II permit program of the Clean Water Act. This act controls water pollution by regulating point sources that discharge pollutants into waters of the state. Also, the plan will consider implementation of the 2005-2007 Puget Sound Conservation Plan as well as consider the adoption of the Department of Ecology (DOE) 2005 Stormwater Design Manual for Western Washington in areas of the County beyond the designated Urban Growth Areas. The plan will address evolving water quality needs affecting Hood Canal and South Puget Sound. Also the plan will delineate program objectives and capital facility needs and identify funding sources to implement required action elements.

The County will begin community environmental education and training activities in the Belfair, Allyn, Shelton and Hoodspout areas. This program will expand to other areas of sensitive water quality in 2009 / 2010 and continuing throughout the county in later years.

The identification of capital projects to address both regional stormwater problems and the need to retrofit existing development will complete during the planning process. Stormwater planning in the urban growth areas and water quality monitoring by the County's Environmental Health Section have identified needed capital projects. These projects will be address from revenues secured from grants provided by the state. Revenues generated by the utility will fund future capital facilities.

Flooding problems in the Skokomish River watershed have been addressed in a Comprehensive Flood Hazard Management Plan. This plan defines a total program of river maintenance activities, valley creek maintenance measures, flood protection measures, and flood warning and emergency response procedures.

Mason County anticipates that the Skokomish River Watershed Comprehensive Flood Hazard Management Plan will be completed and adopted in 2007.

**2009-2014 Capital Facilities Plan Worksheet
 Public Works/Utilities & Waste Management**

Fund: Storm Drainage System Development Fund/Stormwater Utility

Project Name: Storm Water Facilities Development

Estimates: Planning Level

Description: Upgrading and construction of stormwater facilities in the County to provide affective stormwater management and treatment to reducing the risk of flood damage improve water quality and enhance aquatic habitat.

Justifications: Stormwater planning has identified several areas within Mason County where contamination is decreasing the water quality of South Puget Sound

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Project Management	27,000	12,000	6,000	30,000	30,000	30,000	135,000
Program Design & Implementation	264,500	139,500	36,000				440,000
Stormwater Project Design & Construction	370,000	195,000	150,000	275,000	315,000	360,000	1,675,000
Total Cost :	661,500	346,500	192,000	305,000	345,000	390,000	2,250,000
Funding Sources:							
Real Estate Excise Tax (REET)	150,000	100,000	50,000	20,000	20,000	20,000	360,000
Developer contributions			10,000	10,000			20,000
Utility Fees & GFC				225,000	275,000	330,000	830,000
Grants/Loans	511,500	246,500	132,000	50,000	50,000	50,000	1,040,000
Total Funding:	661,500	346,500	192,000	305,000	345,000	400,000	2,250,000

*** GRANT DETAIL**

2009

\$ 75,000 Oakland Bay
\$ 75,000 Annas Bay
\$ 361,500 New 1 Million \$ grant
\$ 511,500

2010

\$246,500 New 1 million \$ grant

2011

\$ 142,000 New 1 million \$ grant

2012

Unknown

Equals = \$ 750,000 New 1 million \$ grant

**2009-2014 Capital Facilities Plan Worksheet
 Utilities, & Waste Management**

Fund: Stormwater Utility

Project Name: Critical Habitat Rehabilitation

Estimates: Planning

Description: preservation and enhancement of critical aquatic habitat including purchase of land or land conservation easement.

Justification: The loss of critical aquatic habitat can be attributed to poor stormwater management. Improvements to and enhancement of aquatic habitat along county creeks, streams, and in Puget Sound estuaries and shorelines will increase fish and shellfish populations.

Estimated Project Costs (in thousands)

	2009	2010	2011	2012	2013	2014	TOTAL
Prelim Engineering	5	5	5	7.5	7.5	10	40
Environmental Engineering Design	5	5	5	10.5	2.5	2.5	30.5
Construction/including accruing critical land				56.5	56.5	56.5	169.5
TOTAL COST:	10	10	10	74.5	66.5	69	240
Funding Sources:							
Grants/Loans	5	5	5		10	15	40
Developer contributions							
Rates				64.5	46.5	51.5	162.5
Real estate Excise Tax (REET)	5	5	5	10	10	12.5	37.5
TOTAL FUNDING:	10	10	10	74.5	66.5	69	240

VI.9 PUBLIC WORKS FACILITIES

Introduction

Mason County Public Works is responsible for engineering, construction, operation and maintenance of approximately 640-miles of county roads. Currently staff are housed on the Shelton campus, the Central Shop on Johns Prairie Road and the Belfair Shop.

Building 8, located on the Shelton campus, includes administrative services, accounting services, environmental services, engineering and construction services and geographic information services. The Information Services Section of Equipment Rental & Revolving Fund (ER&R) is located a block away in Building 9. Road Maintenance and the Vehicle Maintenance Section of ER&R share the Central Shop facility located on Johns Prairie Road approximately 3-miles north of Shelton. A small maintenance crew is located at the satellite shop in Belfair to service roads in North Mason County.

Public Works has outgrown the Shelton campus facilities. The buildings located at the central shop are over 50-years old, overcrowded and inefficient. The vehicle maintenance shop lacks several modern amenities like insulation, women's restroom and building ventilation systems. A lack of sufficient storage facilities results in expensive road maintenance equipment being stored outside in the elements.

As a result, Public Works proposes to develop a master plan and construct a multi-use facility to house the entire department. This will result in better communication and coordination of the various sections in the department. A shared multi-use facility will provide more efficient use of space and county resources. The Belfair Shop, however, will continue to operate as a satellite facility.

Financing the planned multi-use facility requires the use of grants, loans, and county road funds. Project costs shown range in accuracy from + or - 40% to + or - 15%. Each project cost sheet identifies the accuracy of the estimated costs shown, based on the following scale:

- "Planning Level" – The least accurate of costs estimates, in the range of + or - 40%. Cost estimates at this level are usually based on a project concept and some assessment of relative scale, or annual program amounts commensurate with a level of activity sufficient to accomplish the intent of the program over time.
- "Design Report" – Moderate accuracy, in the range of + or - 30%. Based on design report evaluation of options and an assessment of project elements and associated costs.
- "Engineer's Estimate" – Most accurate estimate, in the range of + or -15%. These estimates are based on a project design or significant completion of design work.

2009-2014 Facilities Plan Worksheet - Public Works

Fund: County Road Fund and Equipment Rental & Revolving Fund

Project Name: New Belfair Shop

Estimates: Planning Level

Description. The Shop will include a work staging area, vehicle maintenance bay, crews lunch/meeting room, restrooms & shower facilities, offices, vehicle and equipment storage and materials storage.

Justifications: The current Belfair Shop is very old, it is located in a residential neighborhood adjacent to Hood Canal and does not have it's own water source. The Shop is hooked up to the neighbor's well. Concerns have been expressed about the proximity of the material storage to the Canal. The site is woefully inadequate for the road maintenance services being provided to the north end of the County. If the land trade negotiations are successful, there would be no capital outlay for the land and the shop would be in a much more appropriate location.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering		8,000					8,000
Site Preparation		25,000					25,000
Utility Install		25,000					25,000
Well Drilling		20,000					20,000
Construction Engineering		6,000					6,000
Construction		230,000					230,000
Total Cost :		314,000					314,000
Funding Sources:							
In House		314,000					314,000
Grants							
Loans							
Total Funding:		314,000					314,000

2009-2014 Facilities Plan Worksheet - Public Works

Fund: County Road Fund and Equipment Rental & Revolving Fund

Project Name: Satellite Maintenance Yard Development

Estimates: Planning Level

Description: Public Works will be developing selected sites at various locations across the County to better serve the requirements of maintenance activities such as: clearing and grading, installing wells and water systems, installing electric power to support site services, constructing equipment/materials storage buildings and facilities, paving storage sites and developing roads on the properties. Acquisition of individual properties will supplement existing property holdings to provide for uses such as sites for stormwater treatment facilities and disposal sites for ditch spoils and slide materials from maintenance or construction excavations.

Justifications: The changing mandates and requirements of road maintenance necessitate the expansion / upgrade of certain facilities, while the need to develop stormwater detention facilities and ditch spoil disposal sites require the purchase of property in specific locations.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering	10,000	10,000	10,000	10,000	10,000	10,000	60,000
Well Drilling							
Permits & Utilities	20,000	20,000	30,000	20,000	30,000	30,000	150,000
Property Acquisition							
Construction Engineering							
Construction	20,000	20,000	30,000	20,000	30,000	30,000	150,000
Total Cost:	50,000	50,000	70,000	50,000	70,000	70,000	360,000
Funding Sources:							
In House	50,000	50,000	50,000	50,000	50,000	50,000	300,000
Grants		20,000		20,000		20,000	60,000
Loans							
Total Funding:	50,000	50,000	70,000	50,000	70,000	70,000	360,000

2009-2014 Capital Facilities Plan Worksheet - Public Works

Fund: County Road Fund and Equipment Rental & Revolving Fund

Project Name: Pole Barn Structure at Shelton-Matlock Road Site

Estimates: Planning Level

Description: The County Road Fund owns property on Shelton-Matlock Road that is currently used as a fenced materials and equipment storage yard. The construction of a Pole Barn type Structure on this site will help to facilitate the efficient deployment of crews and equipment to the south end of the County, particularly during snow and ice conditions. The price below reflects a fully enclosed metal structure.

Justifications: Currently crews assigned to maintain, plow and de-ice the south portion of the County must go to the Central Shop to get the equipment needed to respond. When doing scheduled maintenance in the south end, the crews end up using valuable working time traveling to and from the Central Shop transporting heavy equipment, vehicles, tools and materials needed for their work. One of the Public Work's long range goals is the placement of satellite maintenance yards in several locations in the county to improve response and efficiency.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering		7,500	7,500				15,000
Site Prep & Utilities		10,000	10,000				20,000
Construction Engineering		1,000	1,000				2,000
Construction		57,500	57,500				115,000
Total Costs:		76,000	76,000				152,000
Funding Sources:							
In House		76,000	76,000				152,000
Grants							
Loans							152,000
Total Funding:		76,000	76,000				152,000

2009-2014 Capital Facilities Plan Worksheet - Public Works

Fund: County Road Fund and Equipment Rental & Revolving Fund

Project Name: New Public Works Facility and Vehicle Maintenance Shop

Estimates: Construction Level

Description: The construction phase of this project will be complete at the end of 2008. In 2009, ER&R will be constructing the new Fueling Facility and the various divisions of Public Works will be moving into the new facility. The Facility will hook up to City of Shelton Sewer Service and Reclaimed Water in 2010 and Potable Water Service is scheduled to be available in 2011. This final phase of the project will be financed with Public Works funds.

Justifications: The Central Shop used by the Road Maintenance division and the ER&R Mechanical Shop has been identified as a priority replacement due to it's age, condition and safety concerns. Road Administration & Engineering have completely outgrown the current office space and have personnel in other buildings and in hallways. The Emergency Services department currently rents space from the Port, but the space does not comply with Homeland Security's access restriction standards and the infrastructure is not reliable enough to serve as the County's Emergency Operations Center.

Estimated Project Costs

	2009	2010	2011	2012	2013	2014	Total
Preliminary Engineering							
Site Prep & Utilities/ Well		200,000	100,000				300,000
Construction Engineering							
Fuel Facility	450,000						450,000
Total Costs:	450,000	200,000	100,000				750,000
Funding Sources:							
In House	450,000	200,000	100,000				750,000
Grants							
Loans							
Total Funding:	450,000	200,000	100,000				750,000

VI. 10 FINANCE PLAN

Introduction

This section discusses Mason County capital facilities needs and related funding sources. As required under the Growth Management Act (GMA) a six-year finance plan has been prepared for the years 2009 to at least the year 2014 for those facilities currently, or to be, owned and operated by the County.

The following facilities are included in the financial planning:

- **Water and Wastewater Systems**
 - Belfair Sewer 20 Year Finance and Rate Forecast (Appendix A)
 - Cost Calculations for Build Out (Appendix B)
 - Real Estate Excise Tax 1(REET1), REET 2, and .09 Sales Tax Revenues. (Appendix C)
- **Solid Waste Management Facilities**
- **County Administrative and Law Enforcement Buildings**
- **Public Works Facilities**
- **Parks and Recreation**

Only County owned and operated facilities, except for the community-based wastewater systems for rural activity centers, are included in the finance analysis. Several alternatives have been suggested to deal with the problem of providing water and wastewater service in areas outside the existing utility service area in which growth is forecast. The service area for the solid waste utility is county-wide.

The finance plan identifies reasonably reliable funding sources, and forecasts revenue and expenses to at least the year 2014. Funding varies depending on the facility. The different financing methods, public or private, could have significant implications on the cost of utility service. Potential funding sources that could be used to fund unanticipated needs and shortfalls are also discussed.

Financial Impact Overview

The financial impact for capital facility improvements have been analyzed for the six year planning period. Information on transportation can be found in the Transportation Chapter. A summary of the six year improvement costs, revenues and financing is listed in Table 10-1. The Table displays the cost by capital facility category. The total of improvement costs and expenditures is

TABLE 10-1
COUNTY OWNED AND OPERATED CAPITAL FACILITY
IMPROVEMENT & FINANCE COSTS
YEARS 2009-2014

Capital Facility Category	Improvement Costs	Expenditures	Finance/Revenues
Water & Wastewater Systems	30,781	30,781	30,781
Solid Waste Management	1,310	1,310	1,310
County Administration & Law Enforcement Buildings	\$4,612	\$4,612	\$4,612
Stormwater Facilities	\$2,532	\$2,532	\$2,532
Public Works Facilities	1,576	1,576	1,576
Parks & Recreation	10,662	10,662	10,662
Total	\$141,417	\$141,417	\$141,417

Water and Wastewater Systems

The County owns and operates water utilities in the Belfair and Rustlewood areas. The County also operates water treatment facilities for Rustlewood and Beard's Cove. There is no expected expansion in any of the service utility areas with the exception for the Belfair sewer. A 20 year plan has been developed for sewer expansion to serve the entire Belfair Urban Growth Area. A financial plan and rate structure has been developed to accommodate this growth. The Belfair Sewer Finance and Rate Forecast, Facility Expansion Map, and Phasing Program Map are incorporated into this Chapter as Appendix A.

Facility worksheets provided in Section VI.4 summarize the planned water supply and sewer system capital improvements over the next six years.

Solid Waste

Facility Worksheets provided in Section VI.4-present revenue sources and expenditure levels for Mason County solid waste services from 2009 to 2014.

Municipal Buildings and Law Enforcement Facilities

Any necessary or proposed improvements to municipal buildings and law enforcement facilities are provided in the worksheets in Section VI-7 for years 2009-2014.

Parks and Recreation

The County has identified over the six year period large number of park and recreation improvements. The projects include improvements to existing parks and boat. The total cost for these improvements are expected to be approximately \$10.6 million (see Section VI-5).

Stormwater Management

Mason County created a stormwater utility in 2008. The initial emphasis for Stormwater management will be placed on the Belfair/Allyn area. The utility outlines future expansion to other areas of the County with the whole county being included within the boundaries of the utility by 2013. The County also adopted the 2005 Department of Ecology Stormwater Drainage Manual and Low Impact Development Standards which will be enforced in the Belfair and Allyn UGAs first with the entire county being subjected to the requirements as water quality monitoring dictates. The following tables outline expected Capital projects in the stormwater utility in 2009 – 2014.

APPENDIX A

MASON COUNTY – BELFAIR SEWERING PROJECT

FINANCIAL AND RATE FORECAST - JULY 8, 2008

Purpose

The purpose of this document is to provide a current financial forecast for the Belfair sewer project, to support the County's efforts to receive GMA approval for the project.

A financial forecast was prepared with the Wastewater Management Plan. Since completion of that document there have been significant changes to financial assumptions including additional service areas, updated capital costs, and additional secured grants.

The County has existing sewer utilities with policies in place to support fiscally and financially prudent operation of those entities. This forecast presents a rate forecast that modifies some of those policy assumptions where it may bring the rate closer to an "affordable" range. Doing so may bring on financial risk, and so two forecast scenarios are presented here: a "conservative" scenario and an "affordability" scenario. In the conservative scenario, the County's current policies continue to be used in the Belfair area. In the affordability scenario, the County uses all policy options to make the rates as affordable as possible in the initial years.

Data Sources and Assumptions

The capital financing analysis uses capital costs, project timing, and capital inflation rate as projected and provided by CH2M Hill. Also provided were existing ERUs and new annual connections, projected O&M costs and estimated timing of capital spending. Each set of data was provided for four different phases including 1. Initial Connection (this is the Core Service area evaluated in the Master Plan), 2. Old Belfair Hwy Connection, 3. New Kirk Road Connection and 4. Southern Connection.

At the time of the forecast presented in the Master Plan, the County had secured \$16 million in grants and \$2.4 million in state loans (SRF). The County has since secured a total of \$24 million in grants and has \$3 million of state loans available.

The forecast period includes 2008 through 2025. However, actual 2007 costs are included in the summary and financing analysis in order to consider total costs and total resources for the project.

Capital Costs

The following table shows the capital costs, both in current dollars as well as inflated at 8% annually to the year of projected spending. Capital costs are scheduled to be complete before the first year of operation for each of the service areas.

Table 1. Capital Cost Data

	2007	2008	2009	2010	2014	2015	2016	2018	2019	2024	2025	Total
Capital Costs (2008 \$)												
Initial Connection	\$ 780,000	\$ 4,500,000	\$ 12,720,000	\$ 20,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 38,000,000
Old Belfair Hwy Connection	-	-	-	-	4,785,000	3,785,000	1,000,000	-	-	-	-	9,570,000
New Kirk Road Connection	-	-	-	-	-	-	-	3,298,760	1,592,511	-	-	4,891,271
Southern Connection	-	-	-	-	-	-	-	-	-	1,183,057	-	1,183,057
Total	\$ 780,000	\$ 4,500,000	\$ 12,720,000	\$ 20,000,000	\$ 4,785,000	\$ 3,785,000	\$ 1,000,000	\$ 3,298,760	\$ 1,592,511	\$ 1,183,057	\$ -	\$ 53,644,328
Escalated Capital Costs	\$ 780,000	\$ 4,500,000	\$ 13,737,600	\$ 23,328,000	\$ 7,593,194	\$ 6,486,825	\$ 1,850,930	\$ 7,121,775	\$ 3,713,161	\$ 4,053,085	\$ -	\$ 73,164,570

The capital costs for the Initial Connection are projected 2007 through 2010, with year 1 of operation, 2011. This includes treatment plant costs for enough capacity to serve the four identified service areas (at the projected rate of growth), as well as the infrastructure planned to serve the Initial Connection service area.

Capital costs to build infrastructure to connect customers in the Old Belfair Hwy Connection are planned for 2014 through 2016 with first year of operation targeted for 2017.

The New Kirk Road connection is projected to begin service in 2020 with capital spending in the two years preceding, and the Southern Connection in 2025 after infrastructure is built in 2024.

Customer Base

The customer base is defined in Equivalent Residential Units (ERUs), and it is projected to grow at 5% annually. The Sewer Master Plan completed in 2007 forecasted growth at about 9% annually, though, the financial projections in that plan also used the more conservative rate of 5% annually.

The customer base is defined with two types of service connections: existing and new. The analysis distinguishes between developed properties with existing permitted septic systems (as of Jan 1 2008) and new connections since the sewer project has begun.

The following table summarizes the annual ERU projection used in the forecast.

Table 2. ERU and Growth Summary

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ERUs															
Initial Connection	617	648	681	715	751	788	827	869	912	958	1,006	1,056	1,109	1,164	1,223
Old Belfair Hwy Connection	0	0	0	0	0	0	210	230	250	270	290	310	330	350	370
Newkirk Road Connection	0	0	0	0	0	0	0	0	0	19	49	79	109	139	169
Southern Connection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Total	617	648	681	715	751	788	1,037	1,099	1,162	1,247	1,345	1,445	1,548	1,653	1,783

Operations and Maintenance

Operations and Maintenance costs were provided in current dollars for the first year of operation for each service area. For rate projections, annual O&M costs are escalated at 3% annually. The rate forecast separately calculates excise taxes on projected rate revenue, which are added to these O&M costs for rate projection calculations.

Table 3. Operations and Maintenance Projection

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Annual O&M															
Initial Connection	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800
Old Belfair Hwy Connection	-	-	-	-	-	-	97,000	97,000	97,000	97,000	97,000	97,000	97,000	97,000	97,000
New Kirk Road Connection	-	-	-	-	-	-	-	-	-	35,890	35,890	35,890	35,890	35,890	35,890
Southern Connection	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,670
Total	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$341,800	\$438,800	\$438,800	\$438,800	\$474,690	\$474,690	\$474,690	\$474,690	\$474,690	\$485,360
Escalated Annual O&M	\$373,494	\$384,699	\$396,240	\$408,127	\$420,371	\$432,982	\$572,534	\$589,711	\$607,402	\$676,794	\$697,098	\$718,011	\$739,552	\$761,738	\$802,226

The Initial Connection begins 2011 with \$341,800 of O&M, escalated from 2008 to \$373,494. In year 2025 when the fourth service area begins receiving service, escalated O&M costs total \$802,226.

Capital Facilities Charge - CFC (conversion/connection charges)

Calculation of a connection charge for the Belfair sewerage project considers total project costs, 2025 customer base, secured grants toward funding the identified capital costs and reduction of unit costs to customers paying a ULID to fund a portion of their capital costs.

Separate charges are calculated for conversions (existing development) and new development. In order to distinguish the separate charges, the connection charge for existing development is referred to as a "conversion charge," while the charge for new development continues to be referred to as a "connection charge."

The charges are calculated as three separate components of the total. One reason is so that if a developer chooses to build and finance particular infrastructure ahead of the County doing so, there is a clear dollar amount per ERU of credits that they may receive toward their connection charge, based on the type of project they are building and for how many ERU units. Another is to properly reflect the Old Belfair Hwy Connection ULID contribution and adjust their connection charge accordingly. And finally, it is done to provide an opportunity for existing development (as defined in the ERU section) to benefit from available grants toward reduction of their treatment unit cost.

The total unit cost before adjustments is about \$30,000 per ERU (using the number of ERUs

projected in 2025).

The ULID-funded projects (in the Old Belfair Hwy Connection service area) are then deducted from the cost total. The ERU basis is also adjusted to recognize ERUs served by the ULID-funded projects.

The number of ERUs served by the identified treatment costs through 2025 total 1,783. ERUs served by the trunk and collection costs after removing the Old Belfair Hwy Connection portion total 1,413.

Capital Financing

As discussed in the Master Plan, utility formation requires consideration of unique cash flow constraints. An existing utility has an existing revenue stream and some level of cash reserves to support capital financing and debt repayment. In the case of a new utility, capital costs will be incurred preceding a revenue stream from a rate-paying customer base. Even use of grant funds requires approximately 60 days of financing since funds are dispersed on a reimbursement basis. The capital financing analysis developed for this rate projection uses a mix of the County's funding and financing options to complete 2007 through 2010 capital spending preceding connection of customer base.

The capital financing analysis considers use of the lowest cost funding options first and balances the total financing need with those that have a greater rate impact. The financing priority is as follows: 1. Secured grants (CTED), 2. Secured state loans (SRF), 3. Accumulated cash reserves [from CFCs or projected Real Estate Excise Tax (REET) funds] and 4. Revenue bonds.

An exception to this priority list is that the County is planning to fund the Old Belfair Hwy Connection trunk and collection line costs with a ULID. The County would borrow funds to finance those costs, and they would be repaid through property assessments within the service area boundary.

In order to have funds available to finance the first 60 days of grant use, a combination of SRF and grant use is projected to fund capital costs for each of the four years of capital spending. Because SRF repayment begins the fiscal year after the first draw, debt service obligations are projected begin ahead of year one of operation and therefore require another County resource for repayment. The County has pledged \$200,000 annually of REET monies from the General Fund beginning in 2009 to help fund the project. These funds allow the County to make SRF payments that are due ahead of the 2011 first year of operation. Without the REET funds, the County would not be able to utilize all lowest cost financing options first, but rather would need to issue revenue bonds and capitalize the interest for the period preceding utility revenue collection.

Revenue bonds are needed to balance the net financing need after use of all available grants, state loans and any available cash reserves. Revenue bonds not only affect rates through debt repayment obligation, but also carry a security requirement, bond coverage. Bond coverage defines an annual minimum level of revenue the utility must collect. The coverage factor is a factor applied to the utility's revenue bond payment in each year of

repayment. It requires revenues be sufficient to make the bond repayment as well as an additional percentage of that amount. For example a bond coverage factor of 1.25 requires that rate revenue (along with any other eligible revenues) be sufficient to fund annual operating and maintenance expenses plus 125% of the revenue bond payment. Coverage will be discussed further with the rate projections.

The following table summarizes planned annual financing of the capital costs for this project.

Table 4. Projected Annual Capital Funding Plan

	2007	2008	2009	2010	2014	2015	2016	2018	2019	2024	Total
Capital Costs (2008 \$)											
Projected Capital Funding Need	\$ 780,000	\$ 4,500,000	\$ 13,737,600	\$ 23,328,000	\$ 7,593,194	\$ 6,486,825	\$ 1,850,930	\$ 7,121,775	\$ 3,713,161	\$ 4,053,085	\$ 73,164,570
ULID-Funded*	\$ -	\$ -	\$ -	\$ -	\$ 7,593,194	\$ 6,486,825	\$ 1,850,930	\$ -	\$ -	\$ -	\$ 15,930,949
Grant-Funded	780,000	3,833,333	12,270,302	7,116,365	-	-	-	-	-	-	24,000,000
SRF Loans	-	666,667	1,467,299	899,535	-	-	-	-	-	-	3,033,500
Capital Reserves (CFC Rev, etc)	-	-	-	0	-	-	-	1,487,387	1,069,338	4,053,085	6,609,811
Revenue Bonds	-	-	-	11,833,981	-	-	-	5,634,388	2,643,823	-	20,112,192
Short-term Financing	-	-	-	3,478,119	-	-	-	-	-	-	3,478,119
Total Funding	\$ 780,000	\$ 4,500,000	\$ 13,737,600	\$ 23,328,000	\$ 7,593,194	\$ 6,486,825	\$ 1,850,930	\$ 7,121,775	\$ 3,713,161	\$ 4,053,085	\$ 73,164,571

*Old Belfair Hwy Connection collection/trunk costs

The County is planning on a ULID to finance the Old Belfair Hwy Connection infrastructure costs, planned for 2014 through 2016, totaling \$9,570,000 in current dollars and \$15,930,949 in projected future dollars. The County would issue debt for the projected \$16 million total and repayment would occur through annual assessment revenue collected from the Old Belfair Hwy Connection properties.

Secured grant funds are used from 2007 through 2010, totaling \$24 million. SRF loan proceeds are projected to be spent from 2008 through 2010. The balance of capital financing needed for the Initial Connection period is \$15,312,100. This consists of a projected \$11.8 million in conventional municipal revenue bonds and \$3.5 million of short-term financing.

The purpose of the short-term financing is to allow the County to use CFC revenue from conversions and new connections in 2011 to reduce the rate burden from debt repayment.

Based on results of the connection charge analysis, an expected \$4.1 million of CFC revenue is anticipated to be collected in 2011. Of that, \$400,000 is planned to support existing annual debt service obligations, leaving \$3.7 million available for project costs. Since capital financing is completed before customers connect, it is assumed the County could secure short-term financing for what could be repaid with the net available 2011 CFC revenue. This reduces the debt repayment obligation from rates.

On July 5, 2008, the 2-year municipal bond yield was 2.75%. Assuming this interest rate and a 0.5% issuance cost, the County could realize debt reduction of \$3.5 million by using the \$3.7 million of 2011 CFC revenue.

The following table shows a summary of total costs to finance and total resources used.

Table 5. Summary of Capital Financing 2007-2025 – Affordable Scenario

Total Costs Current \$	\$ 53,644,328
Total Costs Escalated	\$ 73,164,570
Total Grants	\$ 24,000,000
Total State Loans	3,033,500
Total ULID	15,930,949
Total CFCs, other reserves	7,016,123
Total Revenue Bonds	<u>23,183,999</u>
	\$ 73,164,571

The above capital financing summary represents a rate scenario in which some level of available capital funds are used directly for debt repayment for rate relief, rather than reserved and available for cash-funding capital. The most conservative scenario does not consider capital revenues for debt repayment (with the exception of the short-term financing). They are reserved in the Capital Fund and used to cash-fund future projects, which would reduce the need for future revenue bonds.

The following table shows the capital financing summary for the more conservative forecast, in which capital revenues are not utilized for debt repayment and are reserved in the Capital Fund to cash-fund future projects.

Table 6. Summary of Capital Financing 2007-2025 – Conservative Scenario

Total Costs Current \$	\$ 53,644,328
Total Costs Escalated	\$ 73,164,570
Total Grants	\$ 24,000,000
Total State Loans	3,033,500
Total ULID	15,930,949
Total CFCs, other reserves	15,127,436
Total Revenue Bonds	<u>15,072,685</u>
	\$ 73,164,570

The result is that no additional revenue bond borrowing is required after the Initial Connection financing and \$15 million of capital reserves fund the remainder of projected capital costs (with the exception of the ULID).

Revenue

There are four types of revenue considered to meet annual cash obligations. These include revenue from rates, interest earnings on the operating fund, and use of REET funds and CFC revenue toward debt repayment. In order to provide the greatest level of rate relief, a scenario is provided that uses 100% of REET funds and \$400,000 per year of CFC revenue (which represents about 70% of total CFC revenue initially, going to under 20% by 2025) toward annual debt repayment. The conservative alternative is that REET funds are used only for debt repayment that precedes utility operation. In the remainder of the forecast, REET funds are reserved for cash-funding future capital. CFC revenue is also reserved for cash-funding future capital rather than supporting annual debt repayment obligations.

REET funds and CFC revenue are also considered in the coverage calculation. The County's bond counsel has indicated that dedicated REET funds would be an eligible revenue for the coverage calculation and that the County could specifically write them in to a bond covenant as an eligible revenue source. The risk is the potential that the County will not collect sufficient REET funds to make the full \$200,000 support to the utility in a given year. Similarly, due to the variable nature of revenue collection from CFCs, which are also subject to economic conditions, there is risk associated with including CFCs in the coverage calculation as eligible revenue. Typically, coverage is tested at a higher factor when including CFCs.

The two scenarios vary in coverage calculation in that the conservative scenario tests coverage at a 1.25 factor and excludes REET funds and CFCs as eligible revenues and the scenario that targets affordability includes REET funds and 75% (an element of conservatism within this scenario) of annual CFC revenue, though tests at a higher coverage factor of 1.50

The higher rate revenue need of the total cash and total coverage obligations becomes the basis for setting rates. Coverage is the driving factor in most years before the second service area begins operation. The total rate obligation, divided by the total ERUs in each year results in a monthly unit cost per ERU. Because this amount varies annually and typically trends down with ERU growth, operating reserves are managed to set a single rate for

periods within the forecast.

Sewer Connection Zone Characterization

Initial Connection Zone:

The area consists of scattered residential and the "core" commercial corridor for the Belfair community. A majority of the commercial development is underutilized because of little organized infrastructure, especially sewers. The area is the most problematic for the contribution of pollutants to Hood Canal. The County has secured funds to construct a collection system and a Membrane BioReactor (MBR) treatment facility to serve the area along State Route # 3 which transverses the length of Belfair. Following the construction and commissioning of the NBR treatment plant all properties within 500 feet of the initial sewers lines will be required to connect to the Belfair sewer system. All on-site expenses incurred for connection will be borne by the property owner. Once connection occurs a monthly utility rate will be collected from each property.

Old Belfair Highway Connection:

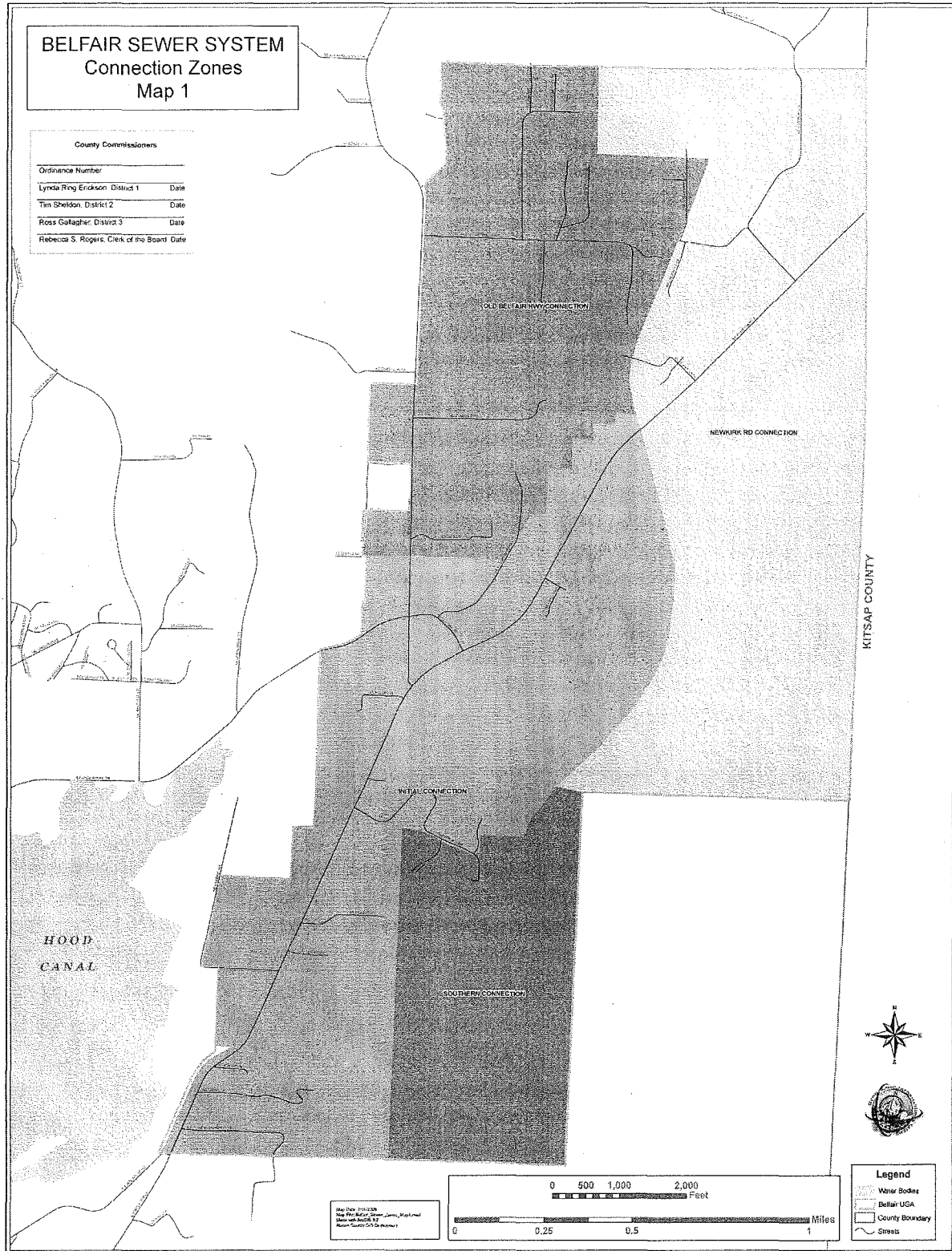
The area is a larger urban density residential community north of the Belfair "core" commercial corridor. Many of the owner occupied structures are pre-and early posts World War II stock. The structures use on-site systems as their method of sewage disposal. Because of older on-site systems, denser development patterns and high ground water tables the area likely contributing nitrates and fecal contamination to the canal. The area is low-to moderate income and financing large sewer improvements will be difficult without Federal and state assistance. The county will rely on grants and loans and County supported Utility Local Improvement Districts (ULID) to develop sewers in the area.

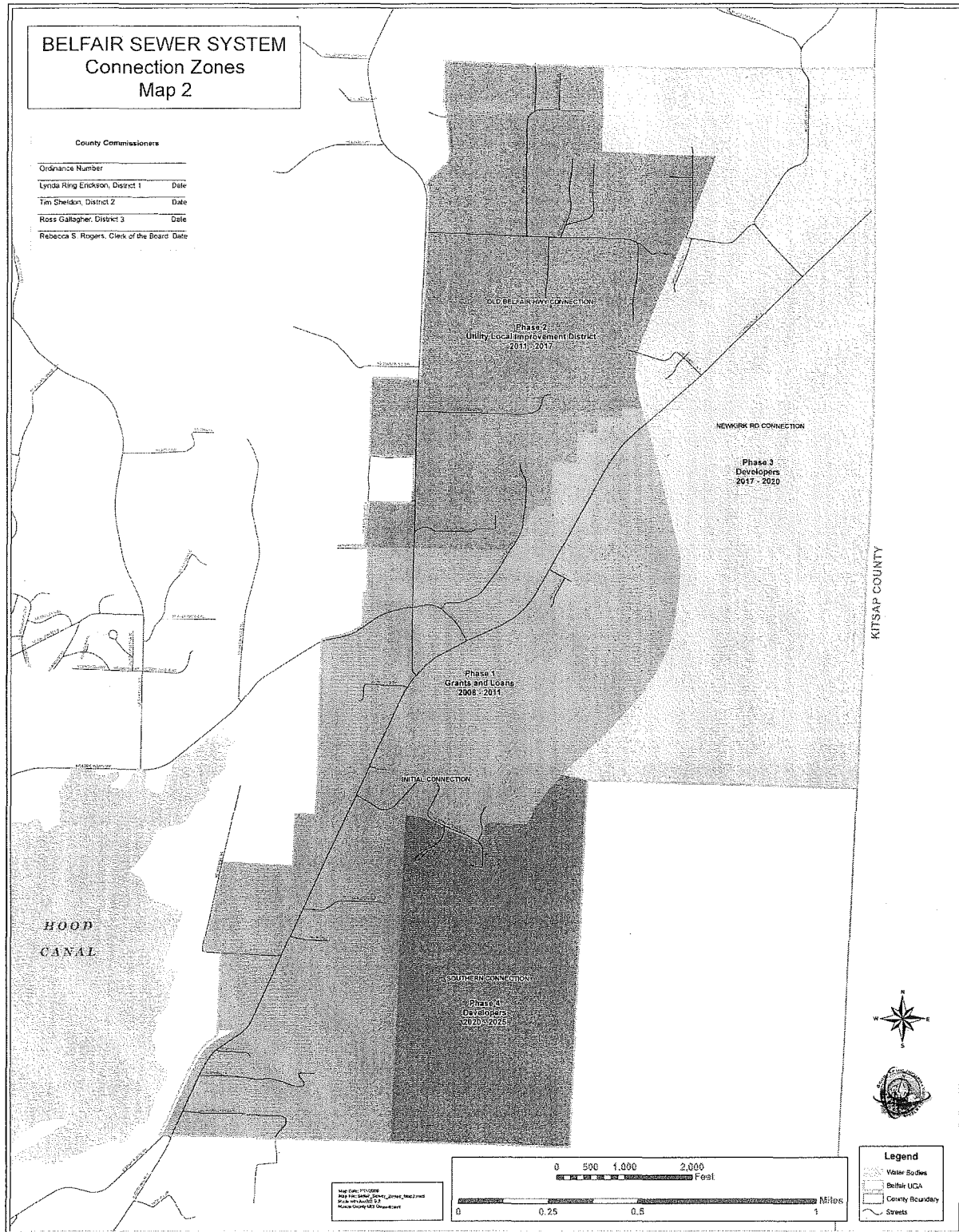
Newkirk Road Connection Zone:

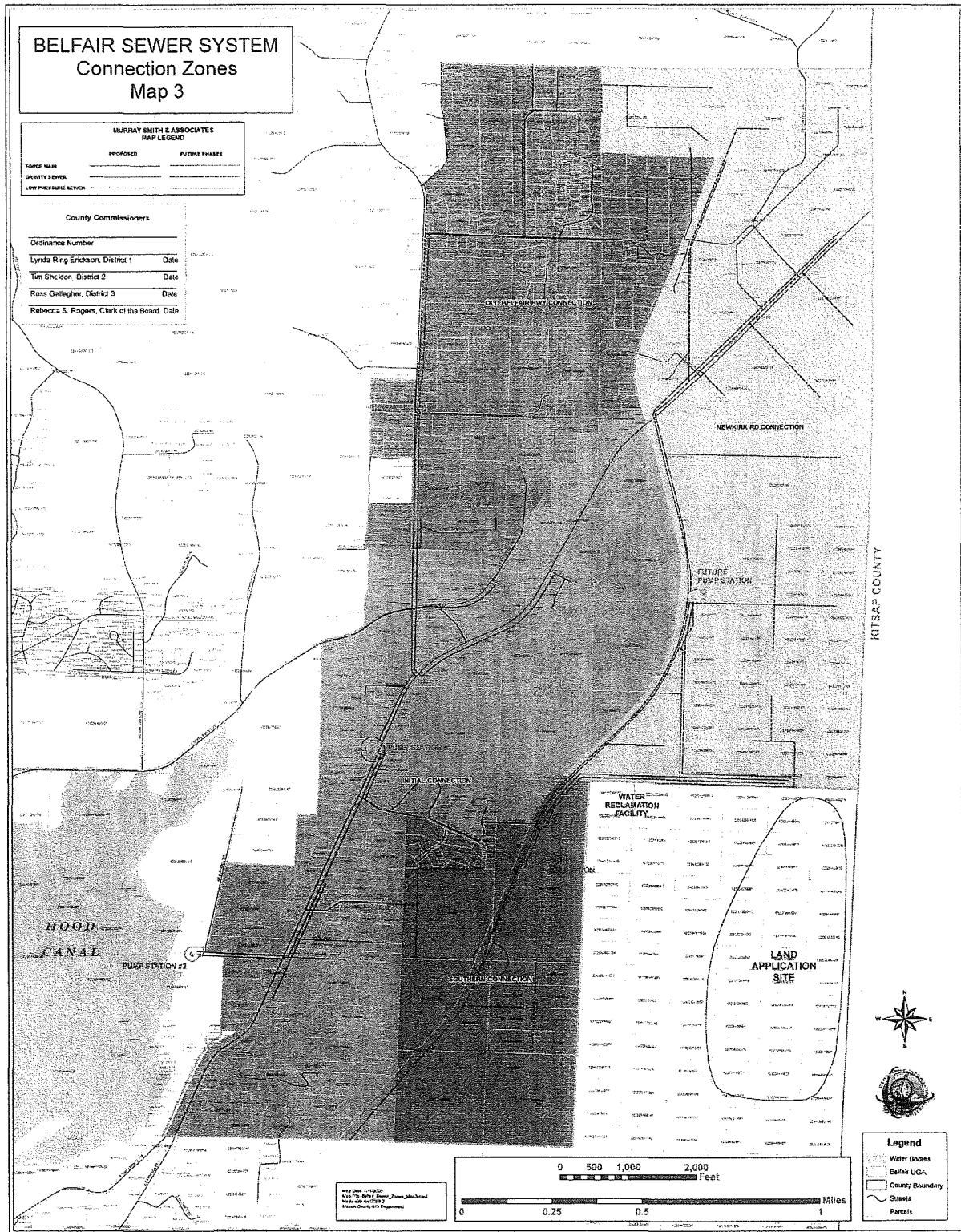
The area is divided into two sectors. The area to the north is vacant, larger parcels held by four developers. It is planned and zoned for commercial and industrial development. The area to the south is comprised of vacant properties still in large parcels with a single owner. The land is planned and zoned for higher destiny residential development. There is current demand for the development of the northern area. The development of the sewer collection system to serve the northern area will occur as the MBR plant is developed at developer expense. The southern area will remain in large tracts until near the end of the UGA planning period.

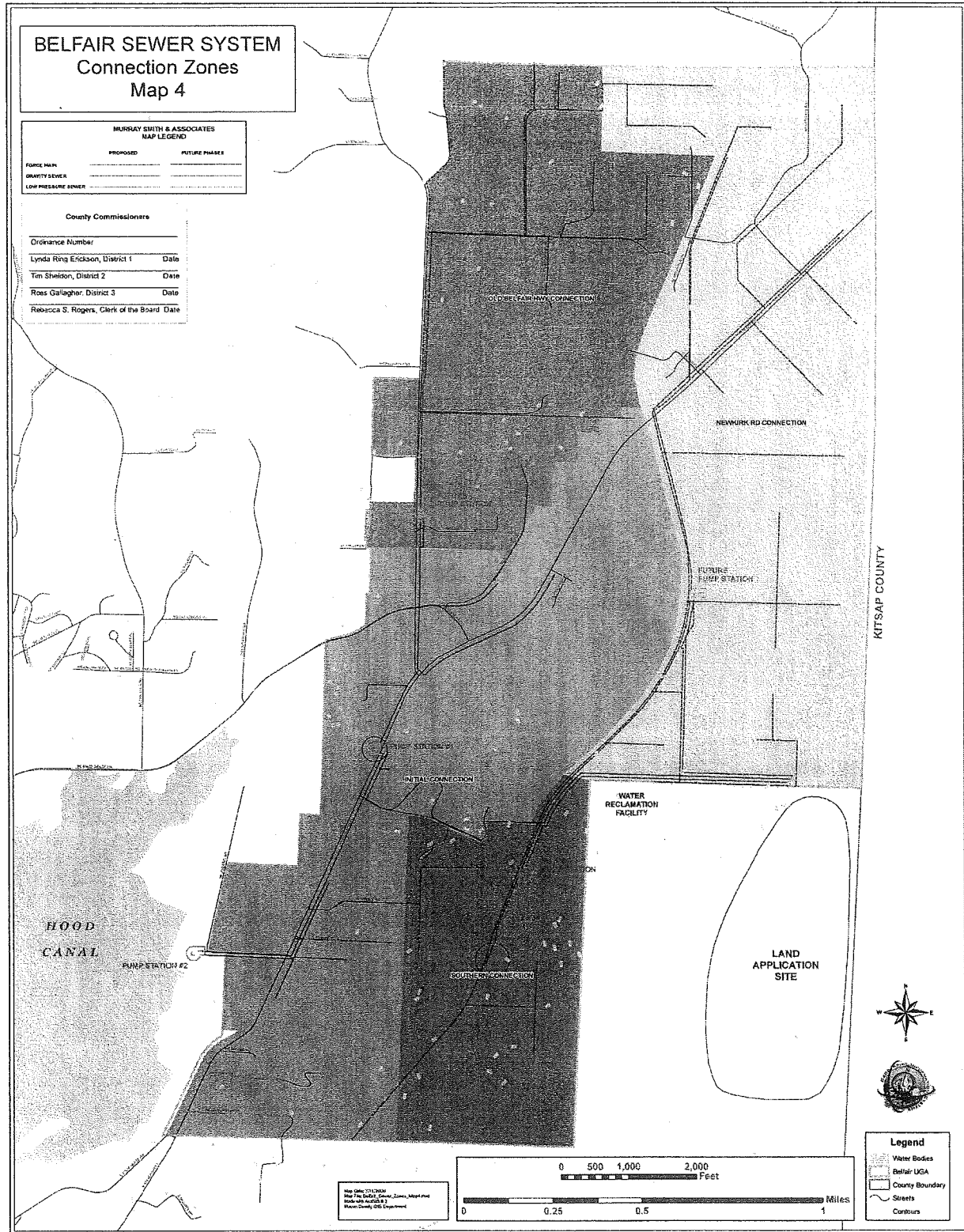
Southern Connection:

The area is the most difficult to develop because of environmental constraints. There is some scattered low-density residential development but most of the land remains in large undeveloped tracts. Portions of the area will be impacted by the development of the Belfair by-pass. The properties will remain vacant until the later years of the planning period.









APPENDIX "B"

* these costs are from Facility Plan Supplemental Information Transmission to Belfair Facility

Items of Work and Material	Unit	Unit Price	Contingency 20%
UGA Gravity Sewer Collection System			
8" Gravity Sewer Pipe 0-6 Feet Deep	LF	\$85.00	\$102.00
8" Gravity Sewer Pipe 6-9 Feet Deep	LF	\$90.00	\$108.00
8" Gravity Sewer Pipe 9-12 Feet Deep	LF	\$100.00	\$120.00
10" Gravity Sewer Pipe 0-6 Feet Deep	LF	\$120.00	\$144.00
15" Gravity Sewer Pipe 9-12 Feet Deep	LF	\$200.00	\$240.00
18" Gravity Sewer Pipe 6-9 Feet Deep	LF	\$200.00	\$240.00
48" STD Precast Manhole	EA	\$5,000.00	\$6,000.00
Sanitary Sewer Service Connection	EA	\$1,200.00	\$1,440.00
Pump Station			
Electrical Service to Pump Station	LS	\$10,000.00	\$12,000.00
Pump Station Mechanical Equipment	LS	\$325,000.00	\$390,000.00
Wetwell	LS	\$80,000.00	\$96,000.00
Chemical Feed/ Electrical Building	SF	\$150.00	\$180.00
Odor Control	LS	\$60,000.00	\$72,000.00
Electrical Equipment	LS	\$150,000.00	\$180,000.00
Telemetry/SCADA	LS	\$35,000.00	\$42,000.00
Generator	LS	\$60,000.00	\$72,000.00
Fencing	LS	\$5,000.00	\$6,000.00
Site Work and Landscaping	LS	\$15,000.00	\$18,000.00
Erosion Control	LS	\$3,500.00	\$4,200.00
Valved and Vault	LS	\$40,000.00	\$48,000.00
Meter and Vault	LS	\$20,000.00	\$24,000.00
Total		\$803,650.00	\$964,380.00
6" Forcemain	LF	\$50.00	\$60.00
Grinder Pump	EA	\$6,000.00	\$7,200.00
3" Forcemain	LF	\$35.00	\$42.00
48" STD Precast Manhole	EA	\$5,000.00	\$6,000.00
RR Crossing	EA	\$25,000.00	

Appendix C

Table 10- (continued)							
Mason County Rural Counties (.09) Fund Capital Improvements Plan @ 06-17-08							
Type	2009	2010	2011	2012	2013	2014	Revised 2009-2014 Total
							.09 CIP
Revenues/Resources							
Beginning Balance	\$ 2,232,936	\$ 814,680	\$ 9,466	\$ 8,792	\$ 55,916	\$ 56,464	\$ 2,232,936
Rural Counties Sales & Use Tax	578,838	619,357	662,712	709,102	758,736	\$ 811,850	\$ 4,140,595
Interest Income	69,663	\$ 40,734	\$ 473	\$ 440	\$ 2,796	\$ 2,823	\$ 116,929
Total Resources	\$ 2,881,437	\$ 1,474,771	\$ 672,651	\$ 718,334	\$ 817,448	\$ 871,137	\$ 6,490,460
Expenditures/Uses							
Interfund Chg for Services	2,158	2,266	2,379	2,498	2,623	\$ 2,754	\$ 14,678
Economic Development Council	\$ 31,000	\$ 31,000	\$ 31,000	\$ 31,000	\$ 31,000	\$ 31,000	\$ 186,000
Capital Improvement Projects:							\$ -
Oakland Bay Shellfish Protection Dist	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,200,000
Belfair Wastewater Water Reclamation System	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,200,000
Hoodsport Sewer System	\$ 1,500,000	\$ 900,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 300,000	\$ 3,100,000
City of Shelton Regional Sewer	\$ 133,599	\$ 132,039	\$ 130,480	\$ 128,920	\$ 127,361	\$ 125,801	\$ 778,200
Total Planned Expenditures	\$ 2,066,757	\$ 1,465,305	\$ 663,859	\$ 662,418	\$ 760,984	\$ 859,555	\$ 6,478,878
Total Ending Fund Balance	\$ 814,680	\$ 9,466	\$ 8,792	\$ 55,916	\$ 56,464	\$ 11,582	\$ 11,582
Total Uses	\$ 2,881,437	\$ 1,474,771	\$ 672,651	\$ 718,334	\$ 817,448	\$ 871,137	\$ 6,490,460
<i>Mason County agreed to make annual payments for 20 years to City of Shelton for Regional Sewer - this is payment #2</i>							
<i>Under current funding legislation, the .09 Sales Tax Credit for Rural Counties will end in the year 2023 before the 20 year period of payments to the City of Shelton are completed. It will be necessary to adjust expenditures in future years for this scenario.</i>							

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Table 10- (continued)							
REET 1 Capital Improvement Program @ 06/17/08 2009-2014							
Type	2009	2010	2011	2012	2013	2014	2009-2014 Total
Revenues/Resources							
Other:							
Beginning Fund Balance 350-000-000	\$ 589,455	\$ 622,824	\$ 288,776	\$ 160,066	\$ 42,949	\$ 14,188	\$ 589,455
REET 1	\$ 645,744	\$ 665,116	\$ 685,070	\$ 705,622	\$ 726,791	\$ 748,595	\$ 4,176,938
Grant to purchase Goldsborough Creek Property	\$ 555,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 555,000
Interest Income	\$ 29,473	\$ 31,141	\$ 14,439	\$ 8,003	\$ 2,147	\$ 709	\$ 85,913
Total	\$ 1,819,672	\$ 1,319,081	\$ 988,285	\$ 873,691	\$ 771,888	\$ 763,492	\$ 5,407,306
Expenditures/Uses							
Interfund Chgs	\$ 2,158	\$ 2,266	\$ 2,379	\$ 2,498	\$ 2,623	\$ 2,754	\$ 14,678
Bond Debt Service 1998 GOBonds	\$ 169,613	\$ 172,962	\$ 170,763	\$ 173,167	\$ -	\$ -	\$ 686,505
Bond Debt Service 2008 GO Bonds 3rd & Pine Property	\$ 115,011	\$ 115,011	\$ 115,011	\$ 115,011	\$ 215,011	\$ 311,511	\$ 986,566
Loan Purchase Property from Road Fund	\$ 55,066	\$ 55,066	\$ 55,066	\$ 55,066	\$ 55,066	\$ 55,066	\$ 330,396
Capital Improvement Projects:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Purchase Goldsborough Creek Property	\$ 555,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 555,000
Cap Imprv/Repairs existing facilities	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 1,800,000
Downtown Campus Facilities Plan	\$ -	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000	\$ 425,000
Trails Development Program - Annual - Parks	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ 400,000
Parks & Trails Office Improvements	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000
Total Planned Expenditures	\$ 1,196,848	\$ 1,030,305	\$ 828,219	\$ 830,742	\$ 757,700	\$ 754,331	\$ 5,398,145
Est. Ending Fund Balance 350-000-000	\$ 622,824	\$ 288,776	\$ 160,066	\$ 42,949	\$ 14,188	\$ 9,161	\$ 9,161
Total	\$ 1,819,672	\$ 1,319,081	\$ 988,285	\$ 873,691	\$ 771,888	\$ 763,492	\$ 5,407,306
<i>Note: REET 1 increased 3.0% ea. yr, interest income 5% X Beg. Fund balance, interfund chgs increase 5% ea yr</i> 1998 GO Bonds - last bond payment is in 2012 - that payment is in the amount of \$173,167 - in 2013 the 2008 GO Bond payment increases to \$215,011 Purchase of lower half of Building from Road Fund is \$700,000 @ est. 4.92% for 20 years							

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12.02.08

Table 10- (continued)							
REET 2 Capital Improvement Program 2008-2014 @ 6/17/08							
Type	2009	2010	2011	2012	2013	2014	Total 2009-2014
REVENUES/RESOURCES							
Bag Balance (REET 2 Fund) budget	\$ 1,479,755	\$ 1,542,829	\$ 1,714,321	\$ 1,440,227	\$ 837,862	\$ 1,087,048	\$ 1,479,755
Operations:							
Interest (REET 2 Fund)	\$ 73,988	\$ 77,141	\$ 85,716	\$ 72,011	\$ 41,893	\$ 54,352	\$ 405,102
Other:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
REET 2	\$ 645,744	\$ 665,116	\$ 685,070	\$ 705,822	\$ 726,791	\$ 748,594	\$ 4,176,937
RCO Grant Mason Lake Boat Launch	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 700,000
RCO Grant Latimer's Landing Dev. Plan	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,000
RCO Grant Truman Glick	\$ -	\$ 72,000	\$ -	\$ -	\$ -	\$ -	\$ 72,000
RCO Grant MCRA Improvements	\$ -	\$ 425,000	\$ -	\$ -	\$ -	\$ -	\$ 425,000
RCO Grant Oakland Bay Development	\$ -	\$ -	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ 600,000
Foothills Park/Malch - Port of Hoodport	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000	\$ -	\$ 4,000,000
Total Resources	\$ 2,959,487	\$ 2,782,087	\$ 2,785,106	\$ 2,517,861	\$ 5,606,546	\$ 1,889,994	\$ 11,918,794
EXPENDITURES/USES							
Capital Improvement Projects:							
514.23.91.0014 Interfund Chg for Svcs/Budget & Fin	\$ 2,158	\$ 2,266	\$ 2,379	\$ 2,498	\$ 2,623	\$ 2,754	\$ 14,678
541.40.63.0010 Drainage/Nordstrom	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 60,000
597.00.00.0010 Transfer Out to Coop	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 210,000
597.00.00.0480 Transfer Out to Storm Drainage System Dev P	\$ 82,500	\$ 82,500	\$ 82,500	\$ 82,500	\$ -	\$ -	\$ 330,000
Parks Capital Projects:							
576.80.41.0300 MCRA Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
576.80.41.0200 Latimers Landing Proj. Mgmt.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
576.80.41.0400 Mason Lake Park Prof. Svcs.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
576.80.41.0130 Oakland Bay Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
594.76.62.0310 MCRA Maintenance Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
594.76.63.0100 Foothills County Park	\$ -	\$ 20,000	\$ -	\$ -	\$ 4,000,000	\$ -	\$ 4,020,000
594.76.63.0200 Latimer's Landing Boat Launch	\$ -	\$ 200,000	\$ -	\$ 25,000	\$ 336,875	\$ -	\$ 581,875
594.76.63.0300 Mason County Recreation Area Capital Improv	\$ 350,000	\$ -	\$ 540,000	\$ -	\$ -	\$ -	\$ 890,000
594.76.63.0311 MCRA Field Drainage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
594.76.63.0400 Mason Lake County Park	\$ 230,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 230,000
594.76.63.0500 Sandhill County Park	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000
594.76.63.0510 Sandhill County Park Field #3 Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
594.73.63.0600 Jacoby Park (Shorecrest)	\$ 180,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 180,000
594.76.63.0700 Truman Glick Memorial Park	\$ -	\$ 123,000	\$ -	\$ -	\$ -	\$ -	\$ 123,000
594.76.63.0800 Union Park	\$ 42,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,000
594.76.63.0900 Walker Park	\$ 30,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
594.76.63.1300 Oakland Bay Park	\$ 125,000	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 1,125,000
594.76.63.1700 Harvey Rendsland Park	\$ -	\$ -	\$ 265,000	\$ -	\$ -	\$ -	\$ 265,000
594.76.63.1000 Watson Wildwood Park	\$ -	\$ -	\$ 25,000	\$ 280,000	\$ -	\$ -	\$ 315,000
594.76.63.0810 Union Boat Launch	\$ 30,000	\$ 230,000	\$ -	\$ -	\$ -	\$ -	\$ 260,000
594.76.63.1800 Menard's Landing Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
597.00.00.0001 Transfer Out To Parks C/E reim capital imprv	\$ 30,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 255,000
Transfer Out to Parks/project management	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 120,000
Parks Partnership Projects							
594.76.63.0001 Parks Partnership Projects	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ 400,000
Sewer Utilities Projects							
Rustlewood I&I	\$ 100,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 200,000
Rustlewood Dump Station	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Rustlewood Water System storage tank	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000
Facilities & Grounds Infrastructure							
Sidewalks, parking lots,	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 300,000
Total all REET 2 Expenditures	\$ 1,416,658	\$ 1,067,786	\$ 1,344,879	\$ 1,679,998	\$ 4,519,498	\$ 182,753	\$ 10,211,553
Ending Fund Balance	\$ 1,542,829	\$ 1,714,321	\$ 1,440,227	\$ 837,862	\$ 1,087,048	\$ 1,707,241	\$ 1,707,241
Total Uses	\$ 2,959,487	\$ 2,782,087	\$ 2,785,106	\$ 2,517,861	\$ 5,606,546	\$ 1,889,994	\$ 11,918,794
<i>Note: Chgs for Accounting & Oper thr to C/E increased 5% ea. yr, REET 3% ea. yr, int income 5% X Beginning Fund Balance</i>							

excel/capimfor/REET 2 capital improvement plan 2008-2014
6-17-08 xls

VI-108

12.02.08
Drainage

7/30/2008

ATTACHMENT C

To Ordinance No. 129-08

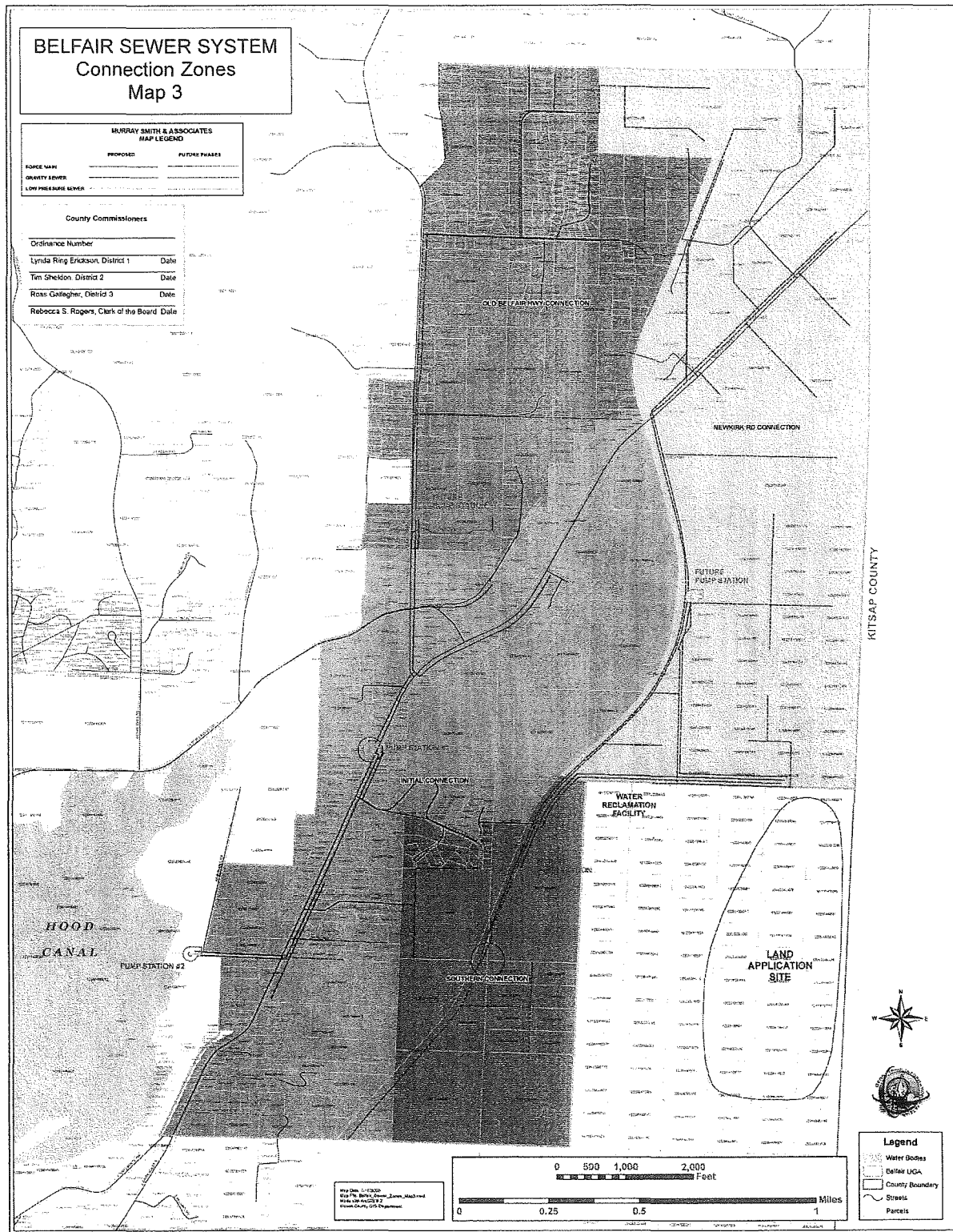
Mason County Comprehensive Plan -

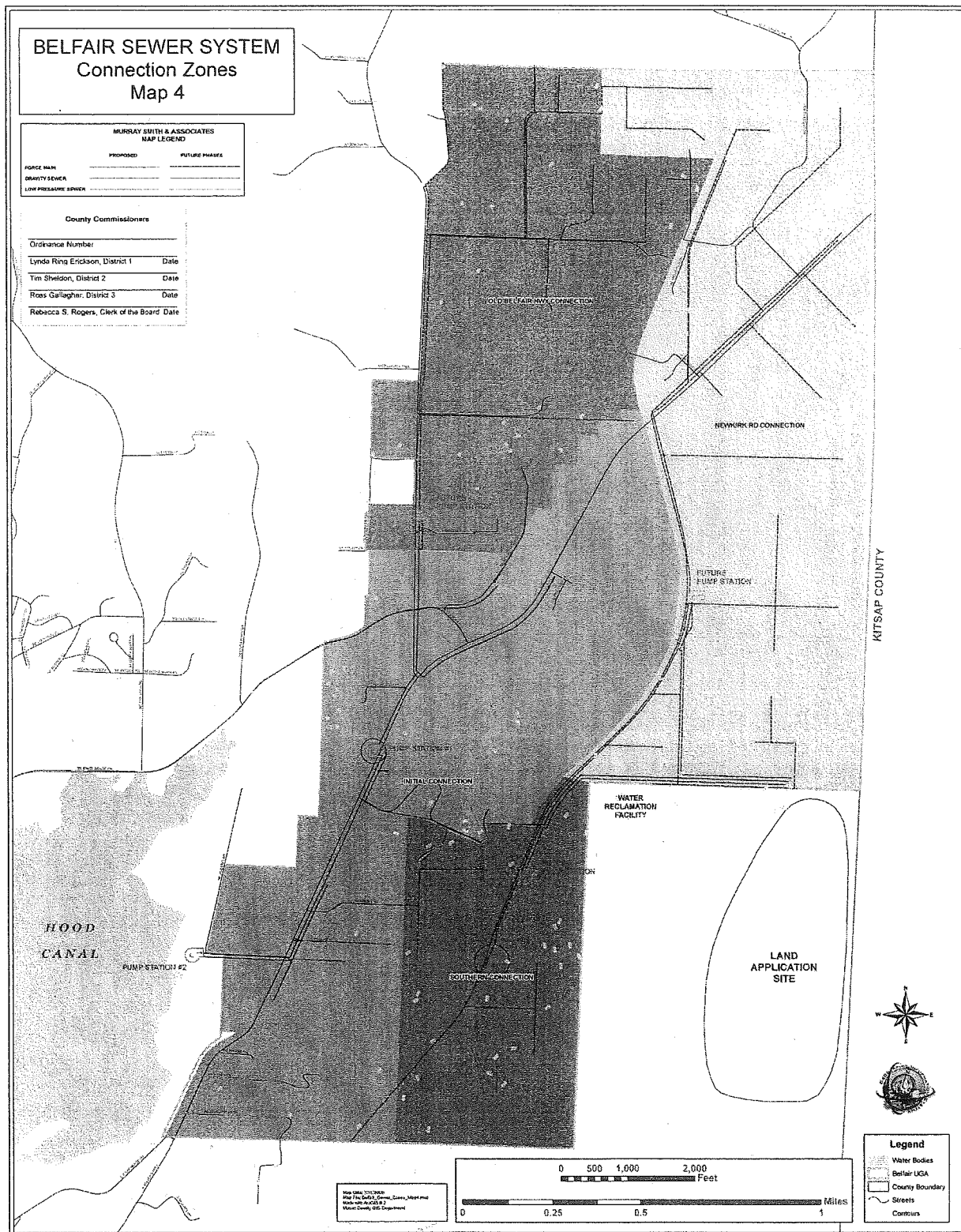
Transportation

**MASON COUNTY
COMPREHENSIVE
PLAN**

**TRANSPORTATION
ELEMENT**

August 2008





APPENDIX "B"

* these costs are from Facility Plan Supplemental Information Transmission to Belfair Facility

Items of Work and Material	Unit	Unit Price	Contingency 20%
UGA Gravity Sewer Collection System			
8" Gravity Sewer Pipe 0-6 Feet Deep	LF	\$85.00	\$102.00
8" Gravity Sewer Pipe 6-9 Feet Deep	LF	\$90.00	\$108.00
8" Gravity Sewer Pipe 9-12 Feet Deep	LF	\$100.00	\$120.00
10" Gravity Sewer Pipe 0-6 Feet Deep	LF	\$120.00	\$144.00
15" Gravity Sewer Pipe 9-12 Feet Deep	LF	\$200.00	\$240.00
18" Gravity Sewer Pipe 6-9 Feet Deep	LF	\$200.00	\$240.00
48" STD Precast Manhole	EA	\$5,000.00	\$6,000.00
Sanitary Sewer Service Connection	EA	\$1,200.00	\$1,440.00
Pump Station			
Electrical Service to Pump Station	LS	\$10,000.00	\$12,000.00
Pump Station Mechanical Equipment	LS	\$325,000.00	\$390,000.00
Wetwell	LS	\$80,000.00	\$96,000.00
Chemical Feed/ Electrical Building	SF	\$150.00	\$180.00
Odor Control	LS	\$60,000.00	\$72,000.00
Electrical Equipment	LS	\$150,000.00	\$180,000.00
Telemetry/SCADA	LS	\$35,000.00	\$42,000.00
Generator	LS	\$60,000.00	\$72,000.00
Fencing	LS	\$5,000.00	\$6,000.00
Site Work and Landscaping	LS	\$15,000.00	\$18,000.00
Erosion Control	LS	\$3,500.00	\$4,200.00
Valved and Vault	LS	\$40,000.00	\$48,000.00
Meter and Vault	LS	\$20,000.00	\$24,000.00
Total		\$803,650.00	\$964,380.00
6" Forcemain	LF	\$50.00	\$60.00
Grinder Pump	EA	\$6,000.00	\$7,200.00
3" Forcemain	LF	\$35.00	\$42.00
48" STD Precast Manhole	EA	\$5,000.00	\$6,000.00
RR Crossing	EA	\$25,000.00	

Table 10- (continued)								REET 2
REET 2 Capital Improvement Program 2008-2014 @6/17/08								
Type	2008	2010	2011	2012	2013	2014	Total 2008-2014	
Revenues/Resources								
Bag Balance (REET 2 Fund) budget	\$ 1,479,755	\$ 1,542,829	\$ 1,714,321	\$ 1,440,227	\$ 837,862	\$ 1,087,048	\$ 1,479,755	
Operations:								
Interest (REET 2 Fund)	\$ 73,988	\$ 77,141	\$ 85,716	\$ 72,011	\$ 41,893	\$ 54,352	\$ 405,102	
Other:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
REET 2	\$ 645,744	\$ 665,116	\$ 685,070	\$ 705,622	\$ 726,791	\$ 748,594	\$ 4,176,937	
RCO Grant Mason Lake Boat Launch	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 700,000	
RCO Grant Latimer's Landing Dev. Plan	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,000	
RCO Grant Truman Glick	\$ -	\$ 72,000	\$ -	\$ -	\$ -	\$ -	\$ 72,000	
RCO Grant MCRA Improvements	\$ -	\$ 425,000	\$ -	\$ -	\$ -	\$ -	\$ 425,000	
RCO Grant Oakland Bay Development	\$ -	\$ -	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ 600,000	
Foothills Park Match - Port of Hoodspout	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000	\$ -	\$ 4,000,000	
Total Resources	\$ 2,959,487	\$ 2,782,087	\$ 2,785,106	\$ 2,517,861	\$ 5,606,546	\$ 1,889,994	\$ 11,918,794	
Expenditures/Uses								
Capital Improvement Projects:								
514.23.91.0014 Interfund Chg for Svcs/Budget & Fin	\$ 2,158	\$ 2,266	\$ 2,379	\$ 2,498	\$ 2,623	\$ 2,754	\$ 14,678	
541.40.63.0010 Drainage/Nordstrom	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 60,000	
597.00.00.0010 Transfer Out to Coop	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 210,000	
597.00.00.0480 Transfer Out to Storm Drainage System Dev F	\$ 82,500	\$ 82,500	\$ 82,500	\$ 82,500	\$ -	\$ -	\$ 330,000	
Parks Capital Projects:								
576.80.41.0300 MCRA Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
576.80.41.0200 Latimers Landing Proj. Mgmt.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
576.80.41.0400 Mason Lake Park Prof. Svcs.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
576.80.41.0130 Oakland Bay Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
594.76.62.0310 MCRA Maintenance Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
594.76.63.0100 Foothills County Park	\$ -	\$ 20,000	\$ -	\$ -	\$ 4,000,000	\$ -	\$ 4,020,000	
594.76.63.0200 Latimer's Landing Boat Launch	\$ -	\$ 200,000	\$ -	\$ 25,000	\$ 336,875	\$ -	\$ 561,875	
594.76.63.0300 Mason County Recreation Area Capital Improv	\$ 350,000	\$ -	\$ 540,000	\$ -	\$ -	\$ -	\$ 890,000	
594.76.63.0311 MCRA Field Drainage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
594.76.63.0400 Mason Lake County Park	\$ 230,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 230,000	
594.76.63.0500 Sandhill County Park	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	
594.76.63.0510 Sandhill County Park Field #3 Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
594.73.63.0600 Jacoby Park (Shorecrest)	\$ 180,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 180,000	
594.76.63.0700 Truman Glick Memorial Park	\$ -	\$ 123,000	\$ -	\$ -	\$ -	\$ -	\$ 123,000	
594.76.63.0800 Union Park	\$ 42,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,000	
594.76.63.0900 Walker Park	\$ 30,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000	
594.76.63.1300 Oakland Bay Park	\$ 125,000	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 1,125,000	
594.76.63.1700 Harvey Rendsland Park	\$ -	\$ -	\$ 265,000	\$ -	\$ -	\$ -	\$ 265,000	
594.76.63.1000 Watson Wildwood Park	\$ -	\$ -	\$ 25,000	\$ 290,000	\$ -	\$ -	\$ 315,000	
594.76.63.0810 Union Boat Launch	\$ 30,000	\$ 230,000	\$ -	\$ -	\$ -	\$ -	\$ 260,000	
594.76.63.1600 Menard's Landing Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
597.00.00.0001 Transfer Out To Parks C/E re:im capital imprv	\$ 30,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 255,000	
Transfer Out to Parks/project management	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 120,000	
Parks Partnership Projects:								
594.76.63.0001 Parks Partnership Projects	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ 400,000	
Sewer Utilities Projects:								
Rustlewood I&I	\$ 100,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 200,000	
Rustlewood Dump Station	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000	
Rustlewood Water System storage tank	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000	
Facilities & Grounds Infrastructure:								
Sidewalks, parking lots,	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 300,000	
Total all REET 2 Expenditures	\$ 1,416,658	\$ 1,067,766	\$ 1,344,879	\$ 1,679,998	\$ 4,519,498	\$ 182,753	\$ 10,211,553	
Ending Fund Balance	\$ 1,542,829	\$ 1,714,321	\$ 1,440,227	\$ 837,862	\$ 1,087,048	\$ 1,707,241	\$ 1,707,241	
Total Uses	\$ 2,959,487	\$ 2,782,087	\$ 2,785,106	\$ 2,517,861	\$ 5,606,546	\$ 1,889,994	\$ 11,918,794	
<i>Note: Chgs for Accounting & Oper tfr to C/E increased 5% ea. yr. REET 3% ea. yr. Int income 5% X Beginning Fund Balance</i>								

excel/capim/for/REET 2 capital improvement plan 2008-2013
6-17-08.xls

7/30/2008

VI-108

12.02.08
Drainage

ATTACHMENT C

To Ordinance No. 129-08

Mason County Comprehensive Plan -

Transportation

MASON COUNTY COMPREHENSIVE PLAN

TRANSPORTATION ELEMENT

August 2008

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Chapter VIII

TRANSPORTATION

VIII.1 BACKGROUND AND ANALYSIS

Introduction and Purpose

The Comprehensive Plan Transportation Element was updated by Public Works staff, under the direction of the County Engineer in the Public Works Department and the Planning Manager in the Community Development Department.

Mason County is primarily rural in nature, with large forest areas, major water bodies, and rolling to mountainous terrain. Approximately 80 percent of Mason County land is privately held land devoted to commercial tree farming. The only urbanized area in the County is Shelton, where approximately 20 percent of the County's population and approximately 50 percent of commercial activities are located. FIGURE VIII.1-1 shows the study area.

This element of the County's comprehensive plan defines existing facilities and establishes future strategies that include funding, system expansion, and management. The plan complies with laws and regulations of Mason County and coordinates with land use planning and other agencies and the public. FIGURE VIII.1-2 shows a broad outline of Mason County's transportation plan and the relationship of the existing facilities, goals and policies, system plan, and standards and management of the transportation system.

Inventory

Mason County Public Works maintains an inventory of all county roads, which includes their location, dimensions, attributes, and condition. Also included are inventories of other roadway features (sign, culverts, bridges, etc). A combination of surveys, records, plans, field inspections, and programmatic evaluations are used to define the existing condition of the County's transportation system. Information from WSDOT and the Mason County Transportation Authority is used for the inventory and existing conditions for their portions of the transportation network.

Traffic Data

Traffic counts have been taken on the majority of Mason County collector roads at key locations. This was accomplished using recording counters to determine weekly, daily, and hourly travel patterns. The technical appendix to the transportation element contains this data. A summary of average daily traffic (ADT) volumes is shown in FIGURE VIII.1-3.

See Appendix for hard copy of Figures

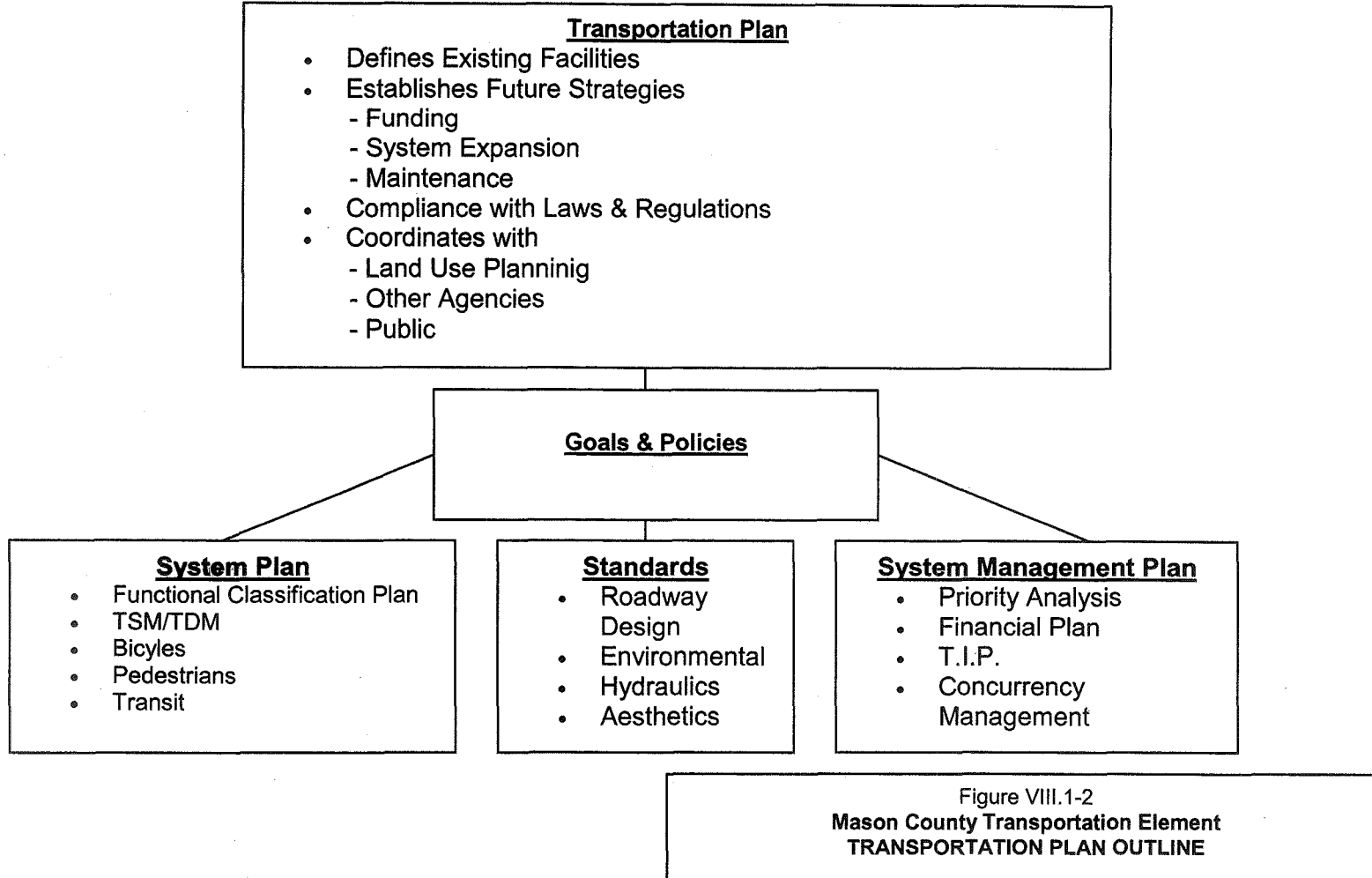
FIGURE VIII.1-1

STUDY AREA FIGURE

FIGURE VIII.1-3

DAILY TRAFFIC VOLUMES

FIGURE VIII.1-2



Origin-Destination Survey

Two license plate origin-destination surveys were conducted to analyze existing traffic patterns as part of the last Mason County transportation study. The information gathered at that time is still representative of the driving patterns experienced in the county currently, so a new survey was not conducted as part of this update. The Cloquallum Road/SR 101 survey provided information concerning the Shelton area, with particular emphasis on Cloquallum Road traffic. This study provided specific information on traffic from Cloquallum Road to SR 101. The Belfair area survey provided information on travel patterns concerning SR 3, SR 300, SR 302, and SR 106.

The purpose of an origin-destination survey is to determine amount and direction of traffic in a specific area. The survey identifies where vehicles enter and exit an area or if they stopped within the study area. A survey is performed by placing surveyors on all major roads serving an area; the surveyors record the license plate numbers and times vehicles enter or leave an area. By comparing license plate numbers using a computer-matching program, the volume of through-traffic between stations can be determined. The survey determines the number of trips that pass the survey station or stay within the area. This origin-destination survey information is then used to analyze the existing road system's efficiency. The data provides the basis for forecasting future travel patterns when coupled with the anticipated economic and population growth information.

Origin-Destination Conclusions

Cloquallum Road:

- Cloquallum Road carries nineteen (19) percent of its traffic to SR 101 in the AM peak hour and fifty-eight (58) percent in the PM peak hour traffic.
- Seventy-three (73) percent of the Cloquallum Road traffic stays in the Shelton area during the AM peak hour and twenty-two (22) percent in the PM peak hour
- Cloquallum Road carries very little traffic and only 20 vehicles exited on SR 101 during the AM peak hour and 63 vehicles in the PM peak hour
- This study indicates that Cloquallum Road traffic does not need a direct connection to SR 101 based on the small volumes currently making this connection. The need for a direct connection (interchange) cannot, however, be based solely on traffic volumes. Savings due to travel time and vehicle-miles of travel should be weighed against the cost of construction before a final decision could be reached regarding the interchange.

Belfair Area:

- The Belfair survey showed that a majority of traffic around the Belfair area had destinations in Belfair. This traffic amounted to approximately 60 percent on SR 3 and approximately 75 percent on other highways.
- Of the remaining 40 percent on SR 3, 11 percent was through traffic to Shelton, 8 percent was through traffic to SR 106
- Of the remaining 25 percent on other highways, approximately 10 to 15 percent was through traffic to Shelton and 5 percent was traffic towards SR 106
- An estimate of traffic that would use a new Belfair bypass (if constructed) connecting SR 3 north of SR 300 to SR 106 is approximately 700 - 800 vehicles in the PM peak hour and 600 - 700 vehicles in the AM peak hour. This indicates a new two-lane bypass for SR 3 around Belfair would be justified. The Legislature approved the Belfair bypass project in 2005. WSDOT is drawing up design plans to implement this project.

Truck Traffic Patterns

A truck use survey was conducted as part of the last Mason County transportation study. The information gathered from the survey at that time is still representative of the transportation routes and demands for trucks in the county currently, so a new survey was not conducted as part of this update. There were 24 trucking companies in the County at that time which included dump trucks, heavy haulers, and freight carriers. A total of 10 companies responded to the mail-in truck survey form. The businesses listed that 40 percent of their deliveries are made and/or received before 9:00 am and approximately 60 percent are between 9:00 am to 4:00 pm.

Primary routes include approximately 75 percent using SR 101 and 25 percent using SR 3. This shows that the trucking industry has a minor effect on the PM peak hour traffic generated on Mason County roads.

In 1994, the Washington State Legislature commissioned the Cost Responsibility Study (CRS). The Transportation Commission recertified the Freight and Goods Transportation System (FGTS) in 2004. One of the objectives of the CRS was to establish the FGTS. The CRS Committee established criteria for determining the several Truck Route Classes, based on Gross Annual Tonnage carried on the route. Mason County Public Works conducted a truck classification study and identified 28 road segments that met the criteria established by the CRS. These are the county roads that bring the logs to the mills and freight and goods to and from the distribution point and the users. The information is updated as part of the ongoing traffic counting and classification program.

Mason County FGTS Routes:

Road Name	Approximate Landmarks
Agate Road	SR-3 - Timberlake Drive
Arcadia Road	SR-3 - Mill Creek Bridge
Bear Creek-Dewatto Road	N of Daly Drive - Old Belfair Highway
Belfair-Tahuya Road	SE of Haven Way to SR-300
Brockdale Road	Batstone Cutoff Road - US-101
Cloquallum Road	City Limits - Grays Harbor County Line
Dayton-Airport Road	Little Egypt Road - SR-102
Golden Pheasant Road	US-101 - End County Road
Grapeview Road	Fire Station - SR-3
Highland Road	Shelton-Matlock Road - Cloquallum Road
Johns Prairie Road	City Limits - SR-3
Lakeland Drive	SR-3 - Old Ranch Road
Lynch road	US-101 - Sells Drive (2nd)
Mason Benson Road	SR-3 - Trails Road
Mason Lake Road	SR-3 - Trails Road
Matlock Brady Road	Shelton-Matlock Road - Grays Harbor County Line
McEwan Prairie Road	Mason Lake Road - Brockdale Road
McReavy Road	SR-106 - Brockdale Road
North Bay Road	SR-3 - SR-302
Old Belfair Highway	SR-300 - Old Belfair Highway
Old Belfair Highway	N of Fish Hatchery Road - Kitsap County Line
Old Olympic Highway	SR-101 - Taylor Road
Pickering Road	SR-3 - Harstine Island Road
Sand Hill Road	SR-300 - Transfer Station
Shelton Springs Road	SR-101 - Shelton City Limits
Shelton Matlock Road	Shelton City Limits - Matlock-Brady Road
Skokomish Valley Road	US-101 - Lower Vance Creek Bridge
Trails Road	SR-106 - Mason Lake Road

Collision Data

Collision data was obtained from the Mason County Department of Public Works and critical sections (i.e., sections with five or more collisions per year) were summarized. Using the Collision Rate formula from the 1996 Washington State Highway Collision Report, collision rates per million vehicle miles was calculated for each roadway section:

$$\text{Collision Rate} = \frac{(\text{Number of Collisions}) \times (1 \text{ million})}{(\text{Section Length}^*) \times (\text{AADT}^{**}) \times (365 \text{ Days})}$$

*If section length is less than one mile, it is excluded from the formula.

**AADT = Annual Average Daily Traffic

A critical collision rate is defined by the ITE *Traffic Engineering Handbook* as the average collision rate found on a particular class of roadway. The critical collision rates for Mason County's Collectors is 1.77 collisions per million vehicle miles of travel.

TABLE VIII.1-1 summarizes the collisions on each roadway segment that has a collision rate higher than the critical rate, and their corresponding collision rate per million vehicle miles. This table shows that the highest rate occurred on the Bear Creek-Dewatto Road between the Public Access Road and Sand Hill Road. FIGURE VIII.1-4 locates these collisions on a map.

The road segments with the highest collision rates are:

Bear Creek-Dewatto Road	-	Public Access Road – Sand Hill Road
McReavy Road	-	SR-106 – Manzanita Drive
Highland Road	-	N of Little Egypt Road – S of Karl's House
Cole Road	-	Lynch Road – Shadowood Drive
Bear Creek-Dewatto Road	-	Kitsap County Line – Elfendahl Pass Road
Arcadia Road	-	Mill Creek Bridge – Lynch Road

The majority of these collisions involved a fixed object off the roadway. The leading causes of these collisions were (1) excessive speed and (2) driving under the influence of alcohol or drugs, which indicates the actions of the drivers involved were the cause of the collisions. Approximately one-third of the collisions in Mason County occur during hours of darkness.

System Analysis

LOS is the primary method of analyzing the traffic capacity of roadways. Future land use scenarios and traffic projections are discussed and Collector LOS is summarized. Criteria for determining roadway deficiencies are described at the end of the chapter.

TABLE VIII.I-1: Critical Collision Locations (2002 - 2004)					
Road Name	Approximate Landmarks	Length (miles)	Volume (ADT)	Collisions (3 year total)	Collision Rate (per MVM)
Agate Road	Crestview Drive - Timberlake Drive	1.60	2,250	8	2.03
	Timberlake Drive - Benson Loop Road	1.28	744	3	2.88
Arcadia Road	SR-3 - Railroad Bridge	1.45	4,974	15	1.90
	Railroad Bridge - Binns Swiger Loop Road	1.42	3,125	9	1.85
	Binns Swiger Loop Road - Mill Creek Bridge	1.85	1,637	6	1.81
	Mill Creek Bridge - Lynch Road	2.35	830	9	4.21
Bear Creek-Dewatto Road	Kitsap County Line - Elfendahl Pass Road	5.09	255	6	4.22
	Elfendahl Pass Road - Public Access Road	1.54	852	3	2.09
	Public Access Road - Sand Hill Road	1.46	1,204	28	14.55
Belfair-Tahuya Road	North Shore Road - Dewatto Road	4.29	353	6	3.62
	Dewatto Road - Collins Lake Road	2.10	909	7	3.35
Boundary Road West	Matlock-Brady Road - Grays Harbor County Line	2.31	178	1	2.22
Cloquallum Road	Shelton City Limits - Gravel Pit	1.45	1,592	6	2.37
	Gravel Pit - Rock Bridge #1	3.10	1,280	12	2.76
	Rock Bridge #1 - Satsop-Cloquallum Road	8.19	614	21	3.81
Cole Road	Lynch Road - Shadowood Drive	1.61	1,187	9	4.30
Grapeview Loop Road	SR-3 - Fire Station	4.43	594	6	2.08
	Fire Station - N of Cronquist Road	1.67	1,078	8	4.06
Harstine Island North Road	Harstine Island South Road - North Island Drive	3.35	200	2	2.73
Highland Road	N of Little Egypt Road - S of Karl's House	2.00	603	7	5.30
Lynch Road	SR-101 - NE of BNRR Tracks	1.10	2,648	7	2.19
	Sells Drive (2nd) - Arcadia Road	3.97	587	7	2.74
Mason Benson Road	Trails Road - Mason Lake Drive East	0.60	1,000	2	1.83
Matlock-Brady Road	Ford Loop Rd (1st) - SW of Evers Bridge	2.62	597	7	4.09
McEwan Prairie Road	Mason Lake Road - Brockdale Road	2.45	3,551	21	2.20
McReavy Road	SR-106 - Manzanita Drive	1.85	540	15	13.71
	Manzanita Drive - Commissioner District	1.65	1,179	5	2.35
North Bay Drive	SR-3 - SR-302	1.96	1,938	9	2.16
North Island Road	South Island Drive - Harstine Island North Road	3.09	945	10	3.13
North Shore Road	W of Blomlie Road - Shorebrook Drive	8.09	761	27	4.01
Pickering Road	W of Fire Station - Harstine Bridge road	1.77	2,174	9	2.14
	Schneider Road - Benson Loop road	1.02	425	1	2.11
Sand Hill Road	N of Grade School - Bear Creek-Dewatto Road	4.94	500	8	2.96
Satsop-Cloquallum Road	E of Plug Mill Road - Satsop Road E	1.88	140	1	3.47
Shelton-Matlock Road	Power Lines - W of Power Lines (2nd)	1.27	2,768	9	2.34
South Island Drive	W of Waterland Drive - Harstine Island South Road	2.42	564	3	2.01
Tahuya-Blacksmith Road	Bear Creek-Dewatto Road - Belfair-Tahuya Road	7.95	85	2	2.70

VIII.1 Critical Rate = 1.77 Crashes per Million Vehicle Miles

See Appendix for hard copy of Figures

FIGURE VIII.1-4

COLLISION MAP

Level of Service

IX LOS describes the quality of traffic flow on a roadway or at an intersection. The 1997 *Highway Capacity Manual* (HCM) uses three parameters to describe service quality for two-lane rural highways.

1. Average travel speed
2. Percent time delay
3. Capacity utilization (volume-to-capacity ratio [v/c])

The percent time delay parameter is the primary measure of LOS recommended by the 1994 HCM with speed and v/c ratio as secondary measures. Percent time delay is typically used for extensive operational analysis and involves cumbersome computations. For planning applications, v/c ratio or speeds are the most common approaches.

Average travel speed is not a meaningful indicator of LOS where speeds have been restricted below 60 mph by an agency through a community. Therefore, v/c ratio or capacity utilization are the more meaningful indicators for Mason County's road system.

Level of Service standards for this update will be based on the 1994 Highway Capacity Manual, which defines six LOS definitions for two lane highways:

Level of Service A: LOS A relates to average speeds approaching 60 mph and delays no more than 30 percent of the time by slow-moving vehicles. It corresponds to a volume-to-capacity (v/c) ratio below 0.05 for rolling terrain and below 0.07 for level terrain, assuming 60 percent no-passing zones.

Level of Service B: This characterizes speeds slightly over 55 mph on level terrain, with delays of up to 45 percent of the time. Typical volume-to-capacity (v/c) ratio assuming 60 percent no-passing zones are 0.05 and 0.17 on a rolling terrain and 0.07 and 0.19 on a level terrain. Traffic flow is stable.

Level of Service C: This represents average speeds exceeding 52 mph on level terrain and drivers experiencing delays 60 percent of the time. Corresponding volume-to-capacity (v/c) ratios for rolling and level terrains are 0.18 to 0.32 and 0.20 to 0.34, respectively. Traffic flow may be said to be at stable conditions until this LOS.

Level of Service D: At this LOS, unstable traffic flow begins to occur. Passing demand is very high, while passing capacity approaches zero. The fraction of no passing zones along the roadway has little influence on passing. Motorists are delayed up to 75 percent of time, although speeds of 50 mph can be maintained on a 60 mph design speed. For LOS D, volume-to-capacity (v/c) ratios are between 0.33 and 0.48 on rolling terrain and 0.35 to 0.59 on level terrain.

Level of Service E: It is defined as flow conditions having a percent time delay greater than 75 percent and speeds dropping below 50 mph on a 60 mph design speed. Passing is virtually impossible. The volume-to-capacity (v/c) ratios are between 0.49 and 0.91 on a rolling terrain and 0.60 to 1.00 on a level terrain.

Level of Service F: It represents heavily congested flow with traffic demand exceeding capacity. Average speed drops below 40 mph on a 60 mph design speed and volume-to-capacity (v/c) ratios exceed 0.91 for rolling terrains and 1.00 for level terrain. The percent time delay experienced by drivers is 100 or more.

Capacity Estimates for Mason County Roads

Mason County roads have varying lane and shoulder widths. These variations result in varying capacity values. Mason County's Public Works Department provided capacity for roadways having different lane and shoulder widths. TABLE VIII.1-2 shows these capacity estimates for different roadway types. This table assumes that the terrain is rolling or level in nature and passing is not possible on 60 percent of roadway sections.

Lane Width (feet)	Capacity in Vehicles Per Hour With Shoulder Widths							
	6 Feet		4 Feet		2 Feet		0 Feet	
	Level	Rolling	Level	Rolling	Level	Rolling	Level	Rolling
12	2,405	1,542	2,333	1,496	2,237	1,434	2,117	1,357
11	2,261	1,450	2,213	1,419	2,117	1,357	1,973	1,265
10	2,093	1,342	2,045	1,311	1,948	1,249	1,804	1,157
9	1,828	1,172	1,780	1,141	1,684	1,080	1,508	1,018

Note: Table assumes 60 percent no-passing zones

Source: Mason County Public Works Department

Based on the capacity estimates in TABLE VIII.1-2, and the capacity definitions, LOS analyses were performed on all Mason County major and minor Collectors. The Collectors rated at LOS C are listed in TABLE VIII.1-3. Remaining Collectors operate at LOS B or better.

TABLE VIII.1-3: Collector Level of Service in Mason County					
Collector	Segment	2005 PM Peak Volume	2005 PM Peak Capacity	Volume / Capacity Ratio	LOS
Major Collectors					
Belfair Tahuya Road	Elfendahl Pass Road - SR 300	434	1,450	0.30	C
Grapeview Loop Road	Fire Station - Cronquist Road	253	1,203	0.21	C
Old Belfair Highway*	SR 300 - Milepost 1.4	580	2,165	0.27	C
Old Belfair Highway*	Milepost 1.4 - County Line	430	1,997	0.22	C
Shelton-Matlock Road	Deegan Road - Carman Road South	376	1,474	0.26	C
Shelton-Matlock Road	Dayton Airport - Dayton Store	292	1,203	0.24	C
Shelton-Matlock Road	Dayton Store - Milepost 10.76	268	1,418	0.19	C
Minor Collectors					
Agate Road	SR 3 - Pickering Road	325	1,311	0.25	C
Cole Road	Shadowood Road - Craig Road	362	1,419	0.26	C
Crestview Drive	Agate Road - Parkway Boulevard	213	1,122	0.21	C
Lynch Road	SR 3 - Milepost 1.10	365	1,434	0.25	C
Mason Lake Road	SR 3 - McEwen Prairie Road	314	1,512	0.21	C
McEwen Prairie Road	Mason Lake Road - Brockdale Road	328	1,512	0.22	C
Sand Hill Road	SR 300 - Transfer Station	282	1,357	0.21	C

* Collectors where the LOS criteria is based on level terrain

Operational Review

A review of the County's road system was performed by field inspection. Intersections where operational problems have occurred—such as sight distance or inadequate traffic control are listed in TABLE VIII.1-4.

TABLE VIII.1-4: Intersection Problems	
Intersection	Major Operational Problems
US 101 / Lynch Road	Inadequate acceleration distance
SR 106 / McReavy Road	Sight distance
SR 106 / Webb Hill Road	Sight distance
SR 3 / Johns Prairie Road	Intersection geometrics and traffic control

Traffic Model

One of the most important tools of transportation planning is the development of a traffic or transportation model. A transportation model that accurately depicts the existing traffic conditions (i.e., calibrated to the traffic patterns) can often help in making better decisions about the future transportation system. Therefore, it is important to have an accurate traffic model for the planning process. The model used for Mason County is TMODEL2.

There are five basic steps in developing a traffic model:

- Establish traffic analysis zones (TAZs)
- Develop network description
- Allocate land use to the traffic analysis zones (TAZs)
- Calibrate the model to existing traffic conditions
- Forecast future traffic volumes

FIGURE VIII.1-5 shows the TAZ map and FIGURE VIII.1-6 shows Mason County's road network used for modeling purposes.

The Mason County TMODEL2 was originally developed and calibrated in 1992 and was used for preparing the 1996 Transportation element of the Comprehensive Plan. For this current update the model calibration was reviewed by checking model volumes with actual volumes at 22 locations on the County system. On State routes, traffic volumes were assembled from WSDOT. PM peak model volumes were converted to average daily traffic (ADT) using a k-factor of 0.09 whenever a model street segment consisted of two or more links; the volumes were averaged over the segment in the model to determine the value. The calibration review showed that the model was under assigning traffic on many Mason County roads.

As a result of the calibration review the model was updated by revising the land use information for the Traffic Analysis Zones. New Traffic forecasts for 2025 were then generated. Additional calibration reviews showed better results; however, it was still evident that the model is under assigning traffic on some Mason County roads. In most cases this is not significant since the overall volumes are low. The differences will not effect major needs assessments; however, the model will not be useful for analyzing intersection level operations. TMODEL2 is becoming obsolete as a traffic forecasting model. New models are taking its place in the travel forecasting field. Future updates of the Transportation element will need to employ a new Traffic Forecasting Model.

See Appendix for hard copy of Figures

FIGURE VIII.1-5

TRAFFIC ANALYSIS ZONES (TRANSPO)

Future Travel Demand

Future travel demand was forecasted for the 20-year scenario of the comprehensive plan. The Mason County Public Works Department provided the growth rates in each TAZ.

In the 20 year analysis, overall growth was calculated to approximately 1.8 percent per year. The TAZs where growth exceeded 5 percent were TAZs 3, 4, 14, 15, 16, 33, 37, 41, and 42. These TAZs were near Belfair-Tahuya, Harstine Island area, and Mason Lake. However, commercial growth was limited to traffic analysis zones (TAZs) 4, 5, 8, 9, 18, 19, 24, 25, and 28. These traffic analysis zones (TAZs) represent Belfair and Shelton Urban Growth Areas (UGAs).

The following is a summary of the total land use allocation for the county:

1992 Existing:

Permanent Housing	16,168 households
Employment	8,817 employees
Seasonal housing	6,315 households

2025 High Growth Scenario:

Permanent Housing	37,254 households
Employment	39,166 employees
Seasonal housing	9,935 households

Future Trips

Using trip generation and trip distribution created for Mason County's transportation model, future trip tables were created for the 20 year analysis. These trip tables give information on internal-internal trips, internal-external trips, external-internal trips, and external-external trips. External trips are trips, which are generated outside the County's limits. These trips are shown in TABLE VIII.1-6.

Trip Category	1992 Existing	20 Year
Internal-Internal	7,165	12,713
Internal-External	1,280	4,563
External-Internal	2,255	5,769
External-External	297	784
Total	10,997	23,829

Approximately 53 percent of trips are internal-internal while only 3 percent of the trips are from external to external areas. This means that only 3 percent of Mason County

traffic travels through the study area without stopping.

Future Traffic Assignment

Traffic assignment for the 20 year analysis was made using the adjusted model volumes. County roads that were predicted to have traffic volumes in excess of 5,000 vehicles per day were Lynch Rd, John's Prairie Rd, Agate Road, Belfair - Tahuya Road, Old Belfair Highway, and Shelton-Matlock Road.

Future Volume-to-Capacity (v/c) Ratios and Level of Service Deficiencies

Based on the capacity estimates in TABLE VIII.1-3 and LOS definitions in TABLE VIII.1-2, a future LOS analysis was performed on all Mason County major and minor collectors. The future LOS indicated that only one collector—Old Belfair Highway from SR-3 to Newkirk Rd operates at LOS D. The remaining collectors operate at LOS C or better. TABLE VIII.1-7 shows the collectors where LOS is C or lower.

Collector	Segment	v/c Ratio	LOS
Old Belfair Highway	SR-3 to Newkirk Rd	0.40	D
North Shore Rd	West of SR-300	0.18	C
Skokomish Valley Rd	West of SR-101	0.25	C
John's Prairie Rd	Brockdale Rd to SR-3	0.24	C
Agate Rd	East of SR-3	0.25	C
Highland Rd	South of Shelton – Matlock Rd	0.28	C
Lynch Rd	Sr-101 to Cole Rd	0.29	C
Cole Rd	Lynch Rd to SR-3	0.33	C

Minimum Standards Criteria and Deficiencies

Mason County Collectors are not deficient from a volume-to-capacity (v/c) ratio or a LOS point of view. Many of the Collectors have pavement widths and shoulder widths that do not meet current design standards. Some Collectors are also deficient from a vertical alignment point of view where the grades are too steep; this is due to the preferred practice of following the terrain to establish the road, rather than creating excessive cut and fill sections. Mason County roads are well maintained and properly signed, and are adequate for use by drivers who are attentive to what they are doing and are driving in accordance with state laws, the rules of the road, and the signing. Mason County has established minimum standards criteria to compare existing roads with current design standards to establish a priority array to maximize road improvement funding.

Mason County's minimum standards criteria for pavement and shoulder width and horizontal and vertical alignment were determined using *A Policy on Geometric Design Highways and Streets (Green Book)*, 2004 edition and the *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400)*, 2001 as published by the American Association of State Highway and Transportation Officials (AASHTO). TABLE VIII.1-8 shows Mason County criteria. TABLE VIII.1-8 also shows a rating for each range of values for a given criteria. A rating of 0 indicates no deficiency or an ideal condition and a rating of 5 indicates the least desirable condition. A rating of 3 indicates average conditions of pavement and shoulder width, horizontal and vertical alignment, or collision rate.

The AASHTO Green Book suggests that a pavement width of between 22 to 24 feet and a shoulder width of 4 to 8 feet is acceptable where speeds are approximately 40 miles per hour for volumes less than 400 to over 2000 vehicles per day. (NOTE: 10-foot travel lanes and 3-foot shoulders are no longer acceptable on rural collectors. Under certain circumstances the shoulder can be reduced to 2-feet) Therefore, these values were given a rating of 3 in TABLE VIII.1-8. For vertical alignment, a grade of 6 to 8 percent is considered acceptable by AASHTO. The rating for horizontal alignment in TABLE VIII.1-8 shows a 60 percent no passing as an average condition. This value is an average condition in Mason County and the capacity estimates were based on the assumption of 60 percent no passing. The critical collision rate described in *Collision Data* is given a rating of 3 for this analysis. Based on these ratings, each collector in Mason County was evaluated for deficiencies. Note that any collector with a rating of 4 or 5 is deficient in the respective criteria.

A number of Mason County Collectors are deficient in pavement and shoulder width. A significant number of collectors are deficient in horizontal alignment and a few are deficient in vertical alignment. In summary, the majority of Mason County's collectors are deficient by the minimum standards criteria. This evaluation is based on comparing the existing roadway to current design standards. From an operations standpoint, Mason County's collectors are adequate and will be able to accommodate future growth. From a capacity standpoint, Mason County's Collectors will be able to accommodate future growth.

TABLE VIII.1-8: Mason County's Minimum Standards Criteria Rating for Collector Roads					
Criteria Rating	Pavement Width (feet)	Shoulder Width (feet)	Horizontal Alignment	Vertical Alignment	Collision Rate (per million vehicle miles)
0	≥ 12	> 6	0% no passing	0 - 2%	0 - 1.0
1	11.1 - 11.9	5 - 5.9	20% no passing	2.1 - 4%	1.1 - 2.0
2	10.1 - 11.0	4 - 4.9	40% no passing	4.1 - 6%	2.1 - 3.0
3	= 10	3 - 3.9	60% no passing	6.1 - 8%	3.1 - 4.0
4	9.1 - 9.9	1 - 2.9	80% no passing	8.1 - 12%	4.1 - 7.0
5	≤ 9.0	0 - 0.9	100% no passing	> 12%	≥ 7.1

VIII.2 Goals and Policies

Transportation System Goals

Mason County's goal is to provide adequate mobility for all people, goods, and services in an efficient and economical manner. Transportation facilities will be maintained and improved while minimizing changes to the physical and social environment so as to preserve the "rural character" of the area. The transportation system shall support the transportation needs of Mason County within the context of the County's Comprehensive Plan.

Coordination Policies

Mason County's goal is to promote effective coordination between and among governments, private enterprise, and the community. The County will facilitate effective use of the transportation system through coordination of the transportation facilities and services for all types of motorized and non-motorized transportation. These policies address a wide range of issues which affect Mason County such as:

- Multi-agency planning and coordination
- Planning for pedestrians and non-motorized vehicles
- Consistency of transportation programs among jurisdictions
- Coordination of construction projects
- Transit service throughout Mason County

1. Public Participation Policy

Mason County encourages and welcomes public participation in the transportation planning process.

- a) This transportation element was developed with the assistance of the Growth Management Advisory Committee, established specifically to help prepare the Comprehensive Plan. Mason County will continue to use a similar committee to advise and periodically update the plan. Public participation in transportation planning is encouraged through open workshops and public hearings. Citizen groups can also provide valuable insight during the planning phase of road projects.
- b) The 6-year Transportation Improvement Program (TIP) is prepared with the assistance of the Transportation Improvement Program – Citizens Advisory Panel

(TIP-CAP), and updated on an annual basis. Public hearings shall be held on the 6 Year TIP, as required by law (*RCW 36.81.121*).

- c) Prior to the initiation of major construction projects, adjacent property owners and area residents will be informed of the project and their input will be evaluated during the planning process. The intent is to provide the community with an opportunity to incorporate their input into the project.

2. Intergovernmental Coordination Policy

The County will coordinate efforts in planning, construction, and operation of transportation facilities with other agencies' programs as appropriate. This coordination will allow County efforts to support and complement the transportation functions of the State, Peninsula Transportation Planning Organization (PRTPO), adjacent counties, Shelton and neighboring cities, Mason Transit Authority (MTA), and other entities responsible for transportation facilities and services in Mason County. Coordination will be achieved by:

- a) Participating in the activities of the PRTPO.
- b) Working with other jurisdictions to plan, fund, and implement multi-jurisdictional projects necessary to meet shared transportation needs (including right-of-way preservation and acquisition).
- c) Making transportation planning decisions consistent with WSDOT, PRTPO, and neighboring jurisdictions.

3. Multi-Modal Coordination Policy

The County will cooperate with Mason County Transit Authority (the MTA) to provide facilities that will enhance and encourage transit use. The MTA will be asked to provide input into the County's six-year plan and annual construction program. The County will support the MTA in:

- a) Transit service between the urban centers.
- b) Encourage demand-responsive service for Mason County citizens with less transportation capability, such as elderly and handicapped.
- c) Encourage demand-responsive service to the rural residential areas.
- d) Transportation capability for access to essential services (i.e., medical, legal, social assistance).

4. Utility Coordination Policy

The County recognizes the effectiveness of coordinating utility services in transportation corridors and provides standards that coordinate construction of utilities with existing and future transportation needs. These will include:

- a) Coordinate new utility construction with the County's six-year improvement plan
- b) Coordinate improvement programs being developed by utility agencies' with the County transportation system
- c) Provide standards for repair and maintenance of utilities within the transportation corridor (i.e., the County road right-of-way)
- d) Establish traffic control standards for new construction and maintenance of utilities consistent with Part 6 Temporary Traffic Control of the Manual on Uniform Traffic Control Devices 2003. (MUTCD).

5. Special Interest Coordination Policy

The County will assist in the accommodation of special interests that require use of the transportation system. This will include but not be limited to:

- a) Coordinate with the school districts to assist in providing safe and efficient school transportation. As appropriate, the County will work with the schools to enhance school bus routes, student walking routes, and crossings. Traffic signing will be provided in accordance with the MUTCD.
- b) Provide for special events such as fairs, parades, athletic events, and large meetings by making appropriate provisions for safe traffic operations with the minimum effect on the general public. The cost of such provisions will be assessed to the organizers of such events as appropriate.

6. Education/Public Information Policy

The citizens and other users of the Mason County transportation system will be provided information to enhance the users' safety and convenience. The County will appoint a public information representative from the Public Works Department to provide coordinated information to the general public and news media. This information will be coordinated with the Sheriff's Office. Information efforts will include:

- a) Informing the public of traffic safety measures for both the road system and vehicles.

- b) Directly informing area residents about road projects planned for construction in their locality.
- c) Informing specific neighborhoods about maintenance projects that will affect traffic flow.

Design and Capacity Policies

The County's goal is to provide a safe, cost effective, comfortable, and reliable transportation system. The design and capacity policies are based on AASHTO's *A Policy on Geometric Design of Highways and Streets 2004*, *Guidelines for Geometric Design of Very Low-Volume Local Roads* (ADT \leq 400), WSDOT Design and Construction Manuals, and other proven standards that define criteria for:

- Design
- Maintenance
- Safety standards
- Roadway adequacy
- Transportation system needs
- Demand management strategies

7. Road Adequacy Policy

Road adequacy is broken down into two separate considerations, congestion and safety. Mason County will strive to provide a safe road network, which operates at an LOS that reflects the preference of the community. The County will consider development of a plan for the future transportation network to guide both private and public transportation development. This planning should address issues in a multi-model fashion and be coordinated with other planning processes, in particular the Mason County Master Trails Plan. The plan should address location, design, and financial issues. Financial issues should include when public/private partnerships or other financing mechanisms might be appropriate.

Roads in unincorporated UGAs

The County actively supports the Belfair Future Road Map Study to evaluate the performance of the Belfair UGA road system. It is anticipated that the study will address at a minimum the following issues:

1. Assessment of the current UGA infrastructure.
2. Shortcomings of the current UGA road system.
3. A blueprint for identifying and addressing future UGA roads.
4. A long term plan for developing a comprehensive UGA road net.

Where possible, the methodologies employed by the Belfair Future Road Map Study will be adapted and applied to the Allyn UGA.

Roads

The County will construct and maintain the road network in accordance with safety standards established by AASHTO, WSDOT and the MUTCD. Upgrading existing deficiencies will be accomplished on a priority evaluation that considers collision occurrence, traffic volumes, and compliance to design standards.

An LOS for the road system is based upon definitions in the 2000 edition of the Highway Capacity Manual. The County has adopted LOS C for peak hour flow (congestion) on all rural County roadways and LOS D for roadways lying inside designated UGAs.

Transit

To be coordinated with Mason County Transit Authority policies.

Pedestrians

Pedestrian walking areas shall be provided, terrain permitting, on all of the County's collector road system as these roads are improved or reconstructed. This may be accomplished through the use of shoulder areas, separate walkways, or sidewalks, depending on the area needs.

Bicycles

Bicyclists will be accommodated in a similar manner as pedestrians. Facilities will be provided, terrain permitting, on County collectors designated as bikeways in the Bicycle Plan as these roads are improved or reconstructed. The extent of the bicycle facilities will be dependent on the classification of the facilities as defined in the Bicycle Plan. For example, on the routes that are on the collector road system, a minimum 4-foot shoulder should help provide an area which pedestrians and bicyclist can utilize.

8. Functional Classification Policy

Mason County classifies the road network according to Federal, regional, and local guidelines based on the following:

- a) State routes will maintain designations as mandated by *RCW 47.05.021*.
- b) County roads will follow the specified functional classification system in TABLE VIII.2-1.

- c) The designation for "primitive roads" (as defined by *RCW 36.75.300*) will be used when appropriate.

Mason County Public Works uses the Federal Function Classes (FFC), as approved by the Federal Highway Administration, for departmental funding, design, and planning. The FFCs were last updated in December 2003, based on the required Urban Area Update based on the 2000 US Census. The FFC determines which roads are eligible for federal and state funding programs, and determine the design standards that will be used.

The County supports the Port of Shelton's goals and policies, as outlined in their *Shelton Airport Master Plan* and their designation under the Federal Aviation Administration's classification system for airports.

TABLE VIII.2-1 Functional Classification Categories
State Routes: Roads owned and operated by the Washington State Department of Transportation (WSDOT). These highways provide for regional and inter-regional travel.
Major Collectors: Roads that provide for regional and inter-regional travel, typically carrying large volumes of through-traffic, with limited direct access to abutting properties.
Minor Collectors: Roads that connect neighborhoods and commercial areas to major Collectors and State highways operated by WSDOT. They provide access to major adjacent land uses and generally carry moderate volumes of traffic.
Local Collectors: Roads that collect and distribute traffic between neighborhoods, business areas, and the rest of the collector system. They provide for easy and direct access to abutting properties and carry low to moderate volumes of traffic.
Local Roads: These facilities provide direct access to abutting property and carry traffic to the collector system. Local roads typically carry low volumes of traffic at low speeds.

8a. Airport Designations

Mason County supports the preservation of air navigation resources and facilities in the County by:

- a) Providing compatibility with surrounding land uses.
- b) Preventing encroachment by development that negatively impacts airport operations through a coordinated review process for proposed land development located within the airport influence zone.
- c) Supporting adequate ground transportation to move people and goods to and from the airport.

9. Functional Design Policy

Functional design ensures adequate and safe access to property via a system of public and private roads.

A range of design and construction standards adopted in *Mason County Title 16* shall be used for secondary roads and roads within developments. Standards for Collectors shall meet the current edition of WSDOT's *Local Agency Guidelines Manual* (LAG Manual). These standards include roadway alignment and location, roadway sections, and right-of-way. All roadway design will be coordinated with Mason County, the City of Shelton,

Washington State Department of Transportation, and the Federal Highway Administration to achieve compatible design standards. These standards will be:

- a) Linked to the level and type of land development served by the transportation facilities.
- b) Consistent with the collector road functional classification.
- c) Compatible between jurisdictions.
- d) In compliance with Federal (AASHTO) and State (LAG Manual) design criteria..

10. System Integration Policy

Mason County strives to maintain an interconnected network of roads with appropriate pedestrian and bicycle facilities to serve the citizens' travel needs. This is achieved by the following:

- a) The present road system is the foundation which meets the majority of the County's current transportation needs.
- b) New routes designed to serve either new development or to reduce congestion and conflicts will be established after thorough review of economic, environmental, and public interests.

11. Safety

The goal of the County is to provide a safe roadway system maximizing the use of existing facilities and prioritizing the improvement program with special consideration of safety issues:

- a) Incorporate safety features into all facets of the transportation system; AASHTO

and the LAG Manual will provide guidance in the application of these safety features.

- b) Monitor high-collision locations and evaluate these areas to provide solutions for corrective action.
- c) Pursue grants for safety improvements from State and Federal sources.
- d) Maintain a sign inventory and monitor sign condition for compliance with the MUTCD.

12. Aesthetic Design Policy

The design and maintenance of the roadway system will include attention to aesthetic qualities. Special consideration will be given to maintaining the natural and manmade amenities of the community:

- a) Establish cooperative programs to enhance the roadway appearance (i.e., Adopt-A-Road Program).
- b) Preserve the scenic character of road corridors with designs that follow as much of the old alignment as possible. Realignment and major changes to the original corridor will be topics specifically addressed with area residents in the planning phase of the project.
- c) Maintain standards for erosion control, which encourage retention and restoration of native vegetation, and naturally occurring landscaping for roadway projects.
- d) Coordinate with other agencies and local communities to consider the establishment of design guidelines and/or standards for urban gateway areas. The intent of the review is to determine how best to guide both private and public development in corridors identified as important gateways to the urban growth areas.

13. Transportation System Management (TSM) Policy

Promote efficient operation of the transportation system through TSM strategies which will maximize the efficient use of existing systems without major changes to the overall road configuration. Considerations will include:

- a) Access control for major and minor collectors to minimize disruptions in traffic flow.
- b) Geometric improvements to improve traffic flow and capacity.
- c) The use of traffic signalization and other intersection treatments to control traffic flow as these systems become warranted.

14. Pedestrian and Bicycle Policy

Encourage and provide a safe means of travel for pedestrians and bicyclists on the County road network. Mason County will provide facilities for non-motorized travel by:

- a) Incorporating improvements for non-motorized travel into programmed road improvement projects. The most appropriate design for these facilities will be determined on a case by case basis.
- b) Exploring opportunities to provide low-cost improvements within the existing public right-of-way that improves conditions for non-motorized travel modes.
- c) Developing a Bicycle Plan and Pedestrian Plan in coordination with the Mason County Master Trails Plan and the Future Transportation System Network Plan.

Improved shoulders, off-street trails, and off-street paved corridors are examples of typical improvements, which will accommodate non-motorized travel.

15. Maintenance Policy

The County will maintain the road network to provide safe, reliable, and effective movement of people and goods. Specific maintenance considerations will include:

- a) Emergency repairs required for public safety will receive the highest priority.
- b) Provide safe and reliable roadway surfaces through pavement patching, sealing and surface treatments.
- c) Maintain visibility of traffic control and safety devices.
- d) Maintain drainage facilities in proper working order.
- e) Maintain roadside vegetation to meet safety requirements. If possible, this will be done in a manner compatible with the natural character of the land.
- f) Provide traffic control for maintenance work in accordance with Part 6 of the MUTCD.

16. Access Policy

The County will provide (or limit) access to the road network in a manner consistent with the function and purpose of each roadway. The County will strive to consolidate access points on State highways, major and minor collectors in order to reduce interference with traffic flow on the collectors and discourage through-traffic on local access streets. To achieve this, the County:

- a) Supports the State's controlled access policy on all State highway facilities.

- b) Encourages and may possibly assist landowners cooperative efforts in preparing access plans that emphasize efficient internal circulation and discourage multiple access points to major roadways. Special design features (Traffic Calming) may be used to discourage excessive through-traffic on local access roads such as geometrics (roadway layout), signing, traffic circles, and pavement treatment.
- c) Encourage access to private developments through a system of local collectors and local access streets, thus limiting direct access onto the arterial (State) and primary County network.
- d) Encourages consolidation of access in developing commercial and higher density residential areas through frontage roads, shared use driveways, and local access streets, which intersect with collectors at moderate to long spacing.

17. Private Roads Policy

The County requires private roadways to meet the minimum design standards required by the Mason County Fire Marshal per the *Uniform Fire Code*. These standards can be found at the Public Works Department, the Building Department, and Department of Community Development. Private roads may be adopted into the County's road system if they meet the minimum standards found in the *Mason County Title 16* per Policy 9—Functional Design Policy and improve the County's road network.

18. Emergency Response Needs Policy

Police, fire protection, and medical response services are critical uses of the roadway system. The County will coordinate and integrate emergency response needs into the transportation program. This will include:

- a) Coordination of maintenance and construction work with emergency response agencies.
- b) Review elements of the roadway system that support emergency response services to help determine where improvements can serve to enhance emergency response capabilities.

19. Transportation Demand Management (TDM) Policy

The County will encourage the implementation of a TDM system through the following strategies, as mandated by Washington State law. TDM encourages alternate modes of transportation to reduce the numbers of single-occupancy vehicles. These include:

- a) Encouraging the use of high-occupancy vehicles (HOV)—bus, carpool, and vanpool programs—through both public and private programs under the direction of the MTA.
- b) Encouragement and support for non-motorized travel.
- c) Promoting flexible work schedules to encourage use of transit, carpools, or vanpools.
- d) Encouraging employers to provide TDM measures in the work place through such programs as preferential parking for HOVs, improved access for transit vehicles, and employee incentives for using HOVs. This will coordinate with the Washington State law considering trip reduction programs for major employers.

Land Use, Environment, and Economic Policies

The transportation network will support development in accordance with the *Mason County Comprehensive Plan*.

20. Land Use Policy

The County transportation system is a critical component of land use planning. The relationship between the transportation network and land use is based on mobility and access needs. Land use creates the transportation demand and the road network serves to provide circulation between the land use elements. Compatibility between transportation services and land uses is critical to the success of the County's comprehensive plan.

- a) Mason County will strive to maintain the rural character of the road system with designs that emphasize safe road networks and aesthetic qualities that make the County unique.
- b) The existing and future land use plans shall provide the basis for access needs.
- c) The transportation network shall support the County's needs resulting from population and economic growth.
- e) To meet future travel needs, transportation corridors shall be preserved by obtaining sufficient right-of-way and controlling access to the road network.
- e) To meet future travel needs, the County will consider developing a future transportation network plan. The plan will help guide the establishment of new or improved roads and other transportation facilities during private or public development. The plan should support the Mason County Comprehensive Plan and be coordinated with the Mason County Master Trails Plan.

21. Environmental Policy

The design of transportation facilities within the County shall minimize adverse environmental impacts resulting from both their construction and operation.

- a) Environmentally sensitive areas shall be protected and, if unavoidable impacts occur, appropriate mitigation shall be implemented. Special attention will be given to wetlands, aquifer recharge areas, fish and wildlife habitat, floodplains, and geologically hazardous areas.
- b) The construction and maintenance of the roadway system shall strive to be compatible with the natural characteristics of the area. Erosion control, water quality, and re-vegetation methods will be applied where appropriate.

- c) The transportation improvement program shall coordinate with the State and Federal resource agencies to ensure compliance with regulations and best design practices to minimize impacts on the environment.

22. Economic Policy

The transportation network shall be supportive of the economic and development goals of Mason County. County emphasis will be based on:

- a) Safe and convenient service to existing business and industry which minimizes impacts to residential areas.
- b) County goals for the transportation network will be prioritized in support of network enhancement and economic growth and development.
- c) The County shall establish and maintain a process to assess the traffic impacts of new development.

Priorities and Financing

The County will continue to develop a transportation network that distributes costs and benefits equitably to the citizens. The maximum return from expenditures of County funds will be accomplished through wise use of the limited resources (such as land, fuel, and money). The County has the responsibility and challenge to make the best use of the limited funds available to maintain and develop the County's road system. As such, County transportation improvement projects are prioritized in an organized, analytical manner that promotes a comprehensive transportation program. Project prioritization relies on a matrix that includes such factors as Traffic Volumes, Road Deficiencies, Accidents, and Service Rating. The service-rating criterion is divided into five general categories: commercial, economic, recreation, service oriented, and community oriented. The infrastructure needs of the unincorporated UGAs would be identified and included in the prioritization matrix in this category. It is the intent of Mason County to secure funding and allocate these funds in a consistent and equitable method.

23. Project Priority Policy

- a) A standardized, well documented, and objective process shall be used to establish priorities for transportation expenditures.
- b) The prioritization process shall include, as a minimum, the following factors:
 - Traffic Volumes
 - Traffic Collisions
 - Roadway Width
 - Horizontal Curvature
 - Grade

- Sight Distance
- Clear Zone Criteria
- Fund Leveraging Ability
- Structural Adequacy
- Drainage Adequacy
- Bicycle and Pedestrian Plan
- Current Service Rating (Economic, Recreation, Commercial, Civic)
- Future Service Rating (Opportunities for expansion of the transportation network or implementation of the network system plans in cooperation with private development or improvement projects.)

24. Financing Policy

- a) Establish a procedure that maximizes the available funding from State and Federal grant programs.
- b) May require traffic impact mitigation from new development in accordance with the County's concurrency management policy.
- c) Encourage the use of Local Improvement Districts (LIDs) by property owners to upgrade roads to meet County standards.
- d) Maintain a capital improvement program that balances expenditures for the transportation system with available funding resources.

25. Concurrency Management Policy

As required by the *Washington State Growth Management Act*, the transportation element of the County's comprehensive plan must contain a concurrency policy (*RCW 36.70A.070.6e*). This policy requires new development to mitigate traffic impacts, which reduce the LOS or safety below the County's adopted standards. Mitigation measures are required to be implemented concurrently with the proposed development to accommodate or offset the impacts which the proposed development may have on public facilities. If impacts cannot be properly mitigated, the new development may be denied. It is not the intent of this policy to adversely impact an individual property owner who wishes to short plat a single tract of land. However, it does recognize the need to analyze those areas, which have the potential for providing dense growth due to a single subdivision and/or several consecutive subdivisions. The result of such an analysis may require contributions toward improvement costs of roads which cannot support additional traffic volume resulting from new subdivisions. Short plats established in the same locality within a six-year time frame may be considered as one contiguous development if there is a substantial cumulative impact to the area.

- a) The County may require construction or financial commitment for significant

traffic impacts on County roads.

- b) A Latecomers Agreement Program may be drafted and administered by the County. This type of agreement will help landowners recover some costs associated with road construction which directly benefits a future developer.
- c) Improvements shall conform to County road standards.

REFERENCES

X Mason County Code

Highway Capacity Manual, 1997, *Transportation Research Board*, Washington D.C.

Local Agency Guidelines, *WSDOT Highways and Local Programs Division*, Olympia, WA

Manual of Uniform Traffic Control Devices, 2000, Revision 3, *American Traffic Safety Services Association*, Fredericksberg, VA

Mason County Title 16 Plats and Subdivisions, 1991, *Mason County Code*

Policy on Geometric Design of Highways and Streets, 2004, *AASHTO*, Washington D.C.

Guidelines for Geometric Design of Very Low-Volume Roads (ADT \leq 400), 2001, AASHTO, Washington D.C.

PRTPO Comprehensive Plan, 1995, *Clallum, Jefferson, Kitsap, and Mason Counties*

Revised Code of Washington 35.72 and 35.91 - Latecomers Clause

Revised Code of Washington 36.75.300 - Primitive Roads

Revised Code of Washington 36.78 - Growth Management Act

Revised Code of Washington 36.81.121 - 6-Year TIP

Revised Code of Washington 47.05.021 - State Route Classification

Revised Code of Washington 47.40 - Adopt-a-road

Uniform Fire Code, 1994, International Fire Code Institute, Austin, TX

Adopted by Washington State - June, 1995

Adopted by Mason County - March, 1996

VIII.3 SYSTEM PLAN

The Mason County transportation system is comprised of the State Routes, Major Collectors, Local Collectors, Local Access Roads, transit, railroads, and bicycle/pedestrian routes. The backbone of the system is the collector roadways that serve the majority of travel in and through the County.

Functional Classification Plan

The functional classification system is a uniform method of defining the collector roads that is accepted by local, State, and Federal agencies. The purpose is to classify roads by their primary use in serving traffic as through-trips or varying degrees of access to adjacent property. FIGURE VIII.3-1 shows the Mason County functional classification system for use in GMA planning and analysis.

State Routes

The principal state routes serving Mason County are US 101, SR 3 and SR 106, SR 108, SR 119 and SR 302. The purpose of these highways is to provide for regional and inter-regional travel and provide connections to recreational and population areas.

State Route (SR)	From	To
SR 3	SR 101	Kitsap County Line
SR 101	Jefferson County Line	Thurston County Line
SR 102 (Dayton Airport Rd)	SR 101	Dayton Airport Road
SR 106	SR 101	SR 3
SR 108	Grays Harbor County Line	SR 101
SR 119 (Lake Cushman Rd)	SR 101	Staircase Road
SR 300	Belfair State Park	SR 3
SR 302	SR 3	Pierce County Line

Major Collectors

Major Collectors are roads that have a primary function of carrying traffic to and from major traffic generators. Some local access is provided, but the primary function is for through-trips. These Collectors typically have speed limits between 35 and 45 miles per hour (mph) and many connect to freeways.

Minor Collectors

Minor collectors serve as connecting roads between neighborhoods and provide some through-trips with additional local access. The minor Collectors also provide access to major community-wide traffic generators (i.e. hospitals, schools). Speed limits are between

30 and 45 mph and they typically connect to major collectors.

The prime transportation routes through Mason County are U.S. Route 101 running north and south. The northern section of this highway is on the eastern side of the Olympic Peninsula along Hood Canal. The southern section of this highway passes through Shelton and connects with Olympia. SR 106 extends easterly from U.S. 101 at the Skokomish Indian Reservation and runs along the southern side of Hood Canal. SR 106 intersects SR 3 south of Belfair. SR 3, from Bremerton and other points on the Kitsap Peninsula, enters Mason County at the Belfair area and runs in a southwesterly direction past Mason Lake to Shelton. SR 300 provides access to the southern tip of the Tahuya Peninsula from its intersection with SR 3. SR 302 branches off SR 3 toward northwest Pierce County. SR 108 south of Shelton intersects with U.S. 101 at Kamilche and continues southwesterly to McCleary (in Grays Harbor County), providing connections with Aberdeen and points along the Pacific Ocean. SR 119 (Lake Cushman Road) extends east-west from US 101 in Hoodspport.

TABLE : Collectors in Mason County		
Collector	From	To
Major Collectors		
Arcadia Road	SR 3 -	Binns Swiger Loop
Belfair Tahuya Road	Elfendahl Pass Road	SR 300
Brockdale Road	Shelton City Limits	McReavy Road
Grapeview Loop Road	Stadium Beach Road	SR 3
Harstene Bridge Road	Bridge	
Johns Prairie Road	Brockdale Road	SR-3
Old Belfair Highway*	SR 300 - Milepost 1.4	County Line
Pickering Road	SR 3	Harstene Bridge
Shelton-Matlock Road	City Limits	Mile Post 10.76
Minor Collectors		
Agate Road	SR 3	Pickering Road
Cole Road	Shadowood Road	Craig Road
Crestview Drive	Agate Road	Parkway Boulevard
Harstine Island South Road	Island Shore Road	County Line
Kamilche Point Road	Old Olympic Highway	County Line
Lynch Road	SR 3	Milepost 1.10
Mason Lake Road	SR 3	McEwen Prairie Road
McEwen Prairie Road	Mason Lake Road	Brockdale Road
Sand Hill Road	SR 300	Transfer Station

Roads of Regional Significance

The PRTPO has identified roadway of regional significance in Mason County.

Local roads that are not classified under the Mason County functional classification system but have regional significance are:

Roadway	From	To
Dayton Airport Rd	Shelton Matlock Road	SR 102
Hurley-Waldrup Rd	SR 108 Junction	SR 101 Junction
McReavy Road	SR 106 Junction	Blockdale Road
Purdy Cutoff Road	SR 101 Junction	SR 106 Junction
Old Olympic Highway	SR 101	SR 101
Clifton Lane	SR 3 Junction	SR 300 Junction

Mason County's road system consists of major and minor collector roads. Information concerning the collector system was provided by the Mason County Public Works Department.

As FIGURE VIII.1-3 illustrates, Pickering Road, Brockdale Road, Arcadia Road, Mason Lake, and Agate Road are some of the Collectors which have an ADT in excess of 2,000. These volumes indicate that currently County Collectors operate at a satisfactory level, with very little capacity problems.

Mason County Public Works uses the FFC system in their planning activities. Eligibility for state and federal grants and funding programs is based on the FFC of the road. In order to maximize the amount of state and federal funding Mason County roads receive, their road planning processes, priority array, and analyses include all roads that are classified as arterials and collectors in the Federal Function Class system. The FFC of a road also dictates the design criteria to be used when a road is improved. FHWA administers the establishment of and approves the FFC in each state. Proposed updates to the FFC system can be made at any time as the functionality of roads change over time.

See Appendix for hard copy of Figures

FIGURE VIII 1-3

AVERAGE DAILY TRAFFIC VOLUMES

FIGURE VIII.3-1

FUNCTIONAL CLASSIFICATION EXHIBIT

FFC Roads		
Road Name	From Location	To Location
Rural Major Collector	FFC 07	
Agate Road	SR-3	Timberlake Drive
Arcadia Road	SR-3	Lynch Road
Bear Creek-Dewatto Road	Elfendahl Pass Road	Old Belfair Highway
Belfair-Tahuya Road	North Shore Road	SR-300
Brockdale Road	Batstone Cutoff Road	McReavy Road
Clifton Lane	SR-3	SR-300
Cloquallum Road	Shelton City Limits	Satsop-Cloquallum Road
Cole Road	Lynch Road	Craig Road
Craig Road	SR-3	Cole Road
Dayton Airport Road	Little Egypt Road	SR-102
Grapeview Loop Road	SR-3	SR-3
Harstine Bridge Road	Pickering Road	South Island Drive
Harstine Island North Road	Harstine Island South Road	North Island Drive
Highland Road	Shelton-Matlock Road	Cloquallum Road
Johns Prairie Road	Shelton city Limits	SR-3
Lynch Road	SR-101	Arcadia Road
Mason Benson Road	SR-3	Mason Lake Drive East
Mason Lake Road	SR-3	Trails Road
Matlock-Brady Road	Shelton-Matlock Road	Grays Harbor County Line
McEwan Prairie Road	Mason Lake Road	Brockdale Road
McReavy Road	SR-106	Brockdale Road
North Island Drive	South Island Drive	Harstine Island North Road
Old Belfair Highway	SR-300	Kitsap County Line
Pickering Road	SR-3	Harstine Bridge Road
Purdy Cut-Off Road	US-101	SR-106
Sand Hill Road	SR-300	Bear Creek-Dewatto Road
Shelton-Matlock Road	Shelton city limits	Matlock-Brady Road
South Island Drive	North Island Drive	Harstine Island South Drive
Trails Road	SR-106	Mason Lake Road

Rural Minor Collector	FFC 08	
Agate Road	Timberlake Drive	Agate Road
Bear Creek-Dewatto Road	Kitsap County Line	Elfendahl Pass Road
Boundary Road West	Matlock-Brady Road	Grays Harbor County Line
Brockdale Road	McReavy Road	US-101
Cloquallam Road	Satsop-Cloquallum Road	Grays Harbor County Line
Crestview Drive	Agate Road	Parkway Boulevard
Deckerville Road	Matlock-Brady Road	Grays Harbor County Line
Dewatto Road	Belfair-Tahuya road	Dewatto-Holly Road
Dewatto-Holly Road	Dewatto Beach Drive	Kitsap County Line
Dickinson Avenue	City Limits	Jones Road
Elfendahl Pass Road	North Shore Road	Bear Creek-Dewatto Road
Harstine Island South Road	South Island Drive	Camus Drive
Kamilche Point Road	Old Olympic Highway	90 Degree Turn North
Mason Lake Drive West	Trails Road	Mason Lake Road
North Bay Road	SR-3	SR-302
North Shore Road	Belfair-Tahuya road	Dewatto Road
Old Olympic Highway	US-101	Kamilche Point Road
Parkway Boulevard	Crestview Drive	Shorecrest Drive
Pickering Road	Harstine Island Drive	Agate Road
Satsop Cloquallum Road	Cloquallum Road	Satsop Road East
Schaefer Park Road	Matlock-Brady Road	Satsop Road East
Shelton Springs Road	US-101	Shelton City Limits
Shelton Valley Road	Shelton-Matlock Road	Cloquallum Road
Skokomish Valley Road	US-101	475 ft. West of Govey Road (DNR)
Tahuya Blacksmith Road	Bear Creek-Dewatto Road	Belfair-Tahuya Road
Urban Collector	FFC 17	
Walker Park Road	Arcadia Road	Shelton City Limits

Transit System

The MTA initiated transit service December 1, 1992 by establishing a Public Transportation Benefit Area (PTBA) Board with the following goals:

To develop a coordinated system of affordable public transportation that: operates within existing financial limitations, maximizes the use of existing transportation resources including volunteers, and is available, to some extent, in most areas of Mason County.

MTA has begun partnering with Federal, State, regional, local and private transportation entities to improve planning and coordination of services. Current service includes dial-a-ride service, scheduled route service, van pool/car pool coordination and volunteer transportation.

Dial-a-Ride Service

This service was started with a system of service zones designed to allocate operations based upon identified locations of population densities. Current service zones consist of 7 areas covering the populated areas of Mason County that can be safely accessed by bus service. Service is on reservation basis and is subject to availability.

For Information or to schedule a ride, contact the Customer Service Center at **(360) 427-5033** or Toll Free **1-800-374-3747** or visit the Mason County Transportation Authority for the most current information at: <http://masontransit.org/>

Park-and-Ride Lots

There are four designated park-and-ride lots in Mason County:

Location	Capacity	Usage	Maintenance
Pickering Road and Highway 3	30	< 10%	County
Shelton-Matlock Interchange	30	0-10%	State
Highway 8 and Highway 101	20	78%	State
Cole Road and Highway 3	20	25-30%	State

Volunteer Services

Transportation services for special populations (i.e., elderly and handicapped) are provided by a number of different social service and community-based organizations. The majority of these services operate with volunteers using their own cars or vans. Organizations that are able to provide van transportation include the Area Agency on Aging for Lewis-Mason-Thurston Counties (contracting with Intercity Transit), Skokomish Indian Reservation, and Exceptional Foresters. Organizations that operate with volunteers are Harstine Island, North Mason County Chamber of Commerce, Fiercely Independent Elders, Catholic Community Services, Senior Activities, Colony Surf, and Matthew House. The availability of volunteers can be a limiting factor in an organization's ability to provide these services.

Rail Transportation

There is no passenger rail transportation in Mason County. Rail services are used primarily by the lumber and wood products industry. The main Mason County rail line follows the same general alignment as SR 3 from Shelton through Belfair. From Belfair, the line goes north to Bremerton and Bangor. The right-of-way for this segment of the railroad is owned by the U.S. Government and operated and maintained by Burlington Northern Railroad (BNRR). The line south from Shelton is owned by BNRR and runs in a southwesterly direction to McCleary and Elma in Grays Harbor County.

The Simpson Timber Company owns and operates a line from Shelton to the Dayton/Matlock area. This line is used exclusively for the timber business. While Simpson and other timber concerns had previously used rail extensively in their operations, all but this one remaining line has been closed.

Pedestrian/Bicycle Facilities

Mason County has two designated pedestrian/bicycle trails; these are: (1) on Brockdale Road from Wallace Boulevard to Island Lake Drive and (2) on Arcadia Road from SR 3 to Binns-Swiger Road. Other informal paths off the roadway may exist within neighborhoods, but otherwise bicycle and pedestrian travel is on the roadway or roadway shoulder. Much of Highway 101 has a shoulder wide enough to accommodate bicycle travel. However, SR 106 and SR 3 generally do not have sufficient shoulder width to safely accommodate pedestrian and bicycle travel and both are heavily traveled. The County's standard asphalt road provides for at least a 5-foot shoulder. This type of roadway shoulder can be used by bicycle and pedestrian travel. The factor which may disrupt continuous shoulder paving is the contour of the land—rather steep hillsides.

In September of 2004, the Mason County Board of Commissioners signed a Resolution that established a County trails committee. The work of the committee led to the development of a Master Trails Plan. The Trails Plan developed six new policy statements that specifically address trails.

1. Destinations – Develop trails that lead to or between specific points of interest or attractions.
2. Population Center Linkages/Mobility – Develop trails that provide access and mobility to, from, or between population centers.
3. Local Circulation – Develop trails to facilitate access and transportation within urban areas or areas of intense rural development.
4. Opportunities – Develop trails that are designed or located to take advantage of existing or future opportunities.
5. Off-Road Vehicle Trails – Develop trails that either lead to parks or sites that allow ORVs; or trails that allow ORVs as an acceptable use. (Designating trails specifically for ORVs to relieve the pressure on trails designated for bicycle or pedestrian traffic.)
6. Water Resources – Develop trails that utilize, promote, and provide access to fresh and saltwater activities.

Transportation System Management/Transportation Demand Management

Strategies for efficient utilization of existing transportation systems are called transportation demand management (TDM) strategies. These strategies do not involve new road construction, but do reduce demand for new facilities. Specific strategies for future improvements should include:

Park-and-Ride Service

Remote parking lots should be located at transit stops to allow those users beyond the normal $\frac{1}{4}$ mile walking distance to drive to a transit stop.

Left blank intentionally

Shuttle Systems

Short-distance transit services should provide reduced auto dependence (i.e., shuttle service from places of employment to restaurants and shopping areas).

Employment Transit Subsidies

Employers should subsidize their employees' use of transit by giving cash subsidies for purchase of transit passes.

Ridesharing

Carpooling and vanpooling offer tremendous potential for improving utilization of existing transportation facilities. Modest increases in ridesharing should produce measurable improvements.

Alternative Work Hours

Promotion of staggered work hours should spread peak period demand. An example of this concept should include flex-time, which gives employees personal choice to determine their work hours.

Parking Management

This strategy should include limiting the supply and availability of parking, preferential parking for carpools and vanpools, or reducing the amount of free parking provided to employees.

Bicycle/Pedestrian Facilities

Provision of bicycle/pedestrian facilities should be based on the type of area served and related travel needs for pedestrians and bicycles. The general types of travel by these users are recreation, school, and commuting. As part of the transportation plan route, it is important to designate pedestrian and bicycle facilities. Minimum needs to serve this type of traffic should be based on adequate safety, and convenient service. Design and provisions of facilities should implement the future transportation network system plan, bicycle plan, pedestrian plan, Master Trails Plan, or other county plans as appropriate.

It is generally felt that all collector roads should have minimum areas for bicycle/pedestrian lanes. Where appropriate, they should be separated from the road and serve the type of travel warranted for the specific area.

Transit Service

Mason County has a transit program underway that is providing service to the communities and connections between the activities centers. Some of the key elements that need to be considered in the transportation plan relating to transit service are:

- Ridership
- Service Areas
- Social Needs
- Cost of Service
- Special Areas
- Route Structure

The Mason County Transportation Authority is providing planning for the transit system. The Mason County Transportation Plan will coordinate with this agency's work to ensure that the two plans are compatible.

VIII.4 ROAD DESIGN STANDARDS

The adopted design standards for roads in Mason County have been developed to provide cost-effective design that is consistent with the road users' driving expectations and meets the public safety needs. The needs of motor vehicles, bicycling, and pedestrians are all elements of the transportation system.

The application of design standards creates the basic geometric configuration of the roadway. However, the philosophy of design establishes the character of the roadway by integrating sensitivity to the terrain, environment, and visual appearance. Mason County's philosophy is to design new or improved roadways in a manner that retains a natural and rural character consistent with the prudent use of resources. The use of curvilinear horizontal and vertical alignment can give a more interesting and changing visual effect while not sacrificing safety, convenience, or economy. Retaining and restoring natural vegetation to the graded areas of the roadway will enhance the visual appearance while minimizing erosion.

Principles of Design Standards

The design standards for Mason County roads incorporate:

- *Local Agency Guidelines City and County Design Standards*, Washington State, November 2004
- *A Policy on Geometric Design of Highways and Streets*, AASHTO, 2004

These standards cannot provide for all situations. Specific conditions may require deviations from adopted standards, but must be done using professional judgment to obtain a design that is justified and considers economic, environmental, and public welfare.

The design standards are intended to achieve the following principles:

- The roadway meets the needs of safe, economic, and convenient transportation for the public.
- The roadway design shall be sensitive to the environment and rural character of Mason County.
- The design will balance the life cycle costs of construction, maintenance, and resources.

Collector Road System

The Mason County collector road system design standards will conform to the guidance and standards in the *Local Agency Guidelines City and County Design Standards*, Washington State, November 2004. The geometric standards of the roadway sections are shown in TABLE VIII.4-1. FIGURE VIII.4-1 shows the definition of roadway section elements.

The County desires to retain and enhance the natural environment and rural character of the collector road system. To accomplish this, special considerations are necessary for the design and maintenance of the roadways.

New Construction

Road construction that involves new location, significant realignment, or major widening will consider:

- Natural terrain to minimize grading requirements for cuts and fills
- Retention of natural drainage courses, water bodies, and wetlands
- Retention and enhancement of natural vegetation

Maintenance

Roadway maintenance is to be accomplished to retain the areas adjacent to the roadway (clear zone), kept clear of fixed or non-traversable objects, and provide a surface that is safe for use by errant vehicles. This area will be maintained with low-growing vegetation that serves as erosion control as well as providing a natural appearance.

Low-Volume Local Access Roads

To maintain the rural character of Mason County's low-volume roads, the following principles will apply:

- Paved roadway surface will be minimized to reduce drainage requirements and lower maintenance costs.
- Disturbance or removal of vegetation and trees will be minimized.
- Disturbance of soil will be minimized to reduce potential scarring of hillsides and erosion.

TABLE VIII.4-1: Geometric Cross-Section for Two-Way Collector Roads									
Minimum Design Elements	Collector								
	Principal ⁽⁴⁾		Minor ⁽⁴⁾			Local ⁽⁴⁾			
	DHV ⁽⁵⁾ Below 200	DHV ⁽⁵⁾ 200 and over	DHV Below 100	DHV ⁽⁵⁾ 100 to 200	DHV 201 and Over	ADT ⁽⁶⁾ 400 to 750	ADT ⁽⁶⁾ 751 to 1,000	DHV ⁽⁵⁾ 100 to 200	DHV 201 and Over
Right-of-Way	60 Feet Minimum								
Roadway Width ⁽¹⁾⁽³⁾	36'	40'	32'	36'	40'	26'	28'	34'	40'
Intersection									
Lane Width:									
- Exterior ⁽¹⁾	12'	12'	12'	12'	12'	10'	10'	11'	12'
- Interior Thru ⁽¹⁾	11'	11'	11'	11'	11'	10'	10'	11'	11'
- 2-Way Left Turn ⁽¹⁾	11'	11'	11'	11'	11'	10'	10'	11'	11'
- Exclusive Turn ⁽¹⁾	11'	11'	11'	11'	11'	10'	10'	11'	11'
Shoulder Width ⁽²⁾⁽³⁾	6'	8'	4'	6'	8'	3'	4'	6'	8'

Notes:

- (1) May be reduced to minimum allowed by AASHTO
- (2) When guardrail is necessary, provide 2 feet of widening or longer posts to ensure lateral support
- (3) For roads with traffic volumes less than 400 ADT, the low volume road and street standards may be used
- (4) Federal functional classification defined by WSDOT (Strategic Planning & Programming Division)
- (5) Design Hourly Volume
- (6) Average Daily Traffic

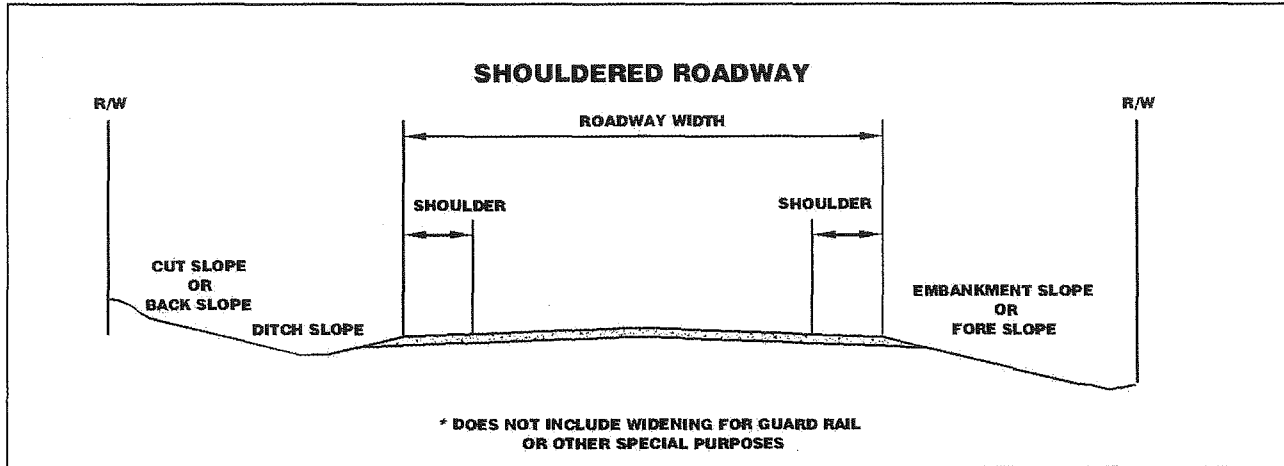


FIGURE VIII.4-1: Definition of Roadway Elements. Shoulder Roadway
(Does not include widening for guardrail or other special purposes)

Low-Volume Local Access Roads (continued)

- Roadways will provide access to property at a minimal disruption to the natural environment.
- Where appropriate and safe, curvilinear alignments will be used.

These principles will apply on local access roads forecasted with less than 400 vehicles per day traffic volume. Collisions on these roads are less than 50 percent of the average collision rate for Mason County. The result of collisions is property damage only with limited injuries. A non-continuous street will not exceed 700 feet in length without an adequate turn around. Truck traffic will be limited to serving the local property owners only.

Private Road Section

The Uniform Fire Code specifies that there will be 20 feet of unobstructed access to any building. A 2-foot shoulder is required for a total roadway width of 24 feet. A 2 percent cross slope must be provided to ensure removal of water from the roadway surface. Private fire apparatus access standards are shown in Table VIII.4.2.

Geometrics

The minimum design speed for determining horizontal and vertical curves and maximum grades will be 25 mph. This may not be the posted speed, so warning signs must be integrated into the design. Stopping sight distance will be designed for 30 mph to provide an unobstructed view of the roadway for 200 feet in front of each vehicle. Passing sight

distance and intersection sight distance will be controlled by appropriate signage and striping. No bicycle or pedestrian facilities are required unless a part of the bicycle/pedestrian plan or near school/commercial/industrial areas.

Clear Zone

Drainage facilities provided through borrow ditches will be a part of the clear zone. Utilities and other obstructions (i.e., culvert head walls) will be located on the outside of drainage facilities as much as possible. Tree and vegetation removal will be minimized except to remove an obvious hazard/obstruction on the outside of a curve or to provide stopping sight distance on the inside of a curve.

TABLE VIII.4-2: Private Fire Apparatus Access Road Standards							
Dwelling Units	Min Easement Width***	Roadway Section	Max.*** Grade	Min. Sight Distance	Curvature Max Degree/ Min Radius	Structural * Capacity (Bridge)	Cul-De-Sac and Turn Around
1-2	30'	12' **	14%	200'	90 Deg in 50'	NONE	NO****
3-4	40'	20'	14%	200'	38 Deg/ 150'	H-20	YES
5-9	40'	20'	14%	200'	38 Deg/ 150'	H-20	YES
10-20	60'	20'	12%	200'	20 Deg/ 287'	H-20	YES
21-100	60'	26' (3'shldrs)	12%	200'	20 Deg/ 287'	H-20	YES
NOTE: A MINIMUM VERTICAL CLEARANCE OF 13 FEET 6 INCHES MUST BE MAINTAINED ON ALL ROADS							
* HS-25 IF ACCESS IS NEEDED TO AREAS WHICH MAY PROVIDE HEAVY LOADS. Licenced Engineering Required.							
** SEE THE SECTION FOR DRIVEWAY STANDARDS ON PAGE 5.							
*** THE MAXIMUM GRADE OF 12% AND THE 60' EASEMENT MAY APPLY TO THOSE DEVELOPMENTS OF LESS THAN 10 DWELLING UNITS, IF THE POTENTIAL DENSITY SERVED BY THE ACCESS ROAD COULD EXCEED 10 DWELLING UNITS.							
**** ENOUGH OPEN SPACE MUST BE PROVIDED TO ALLOW EMERGENCY VEHICLES ROOM TO TURN AROUND AT THE END OF THE DRIVEWAY.							

VIII.5 SYSTEM MANAGEMENT PLAN

The Mason County Transportation System Management Plan provides a process to control, prioritize, and finance the transportation improvement program. FIGURE VIII.5-1 graphically shows the process for managing the County transportation system. The key elements are:

- Priority analysis
- Financial plan
- Transportation improvement plan
- Concurrency management system

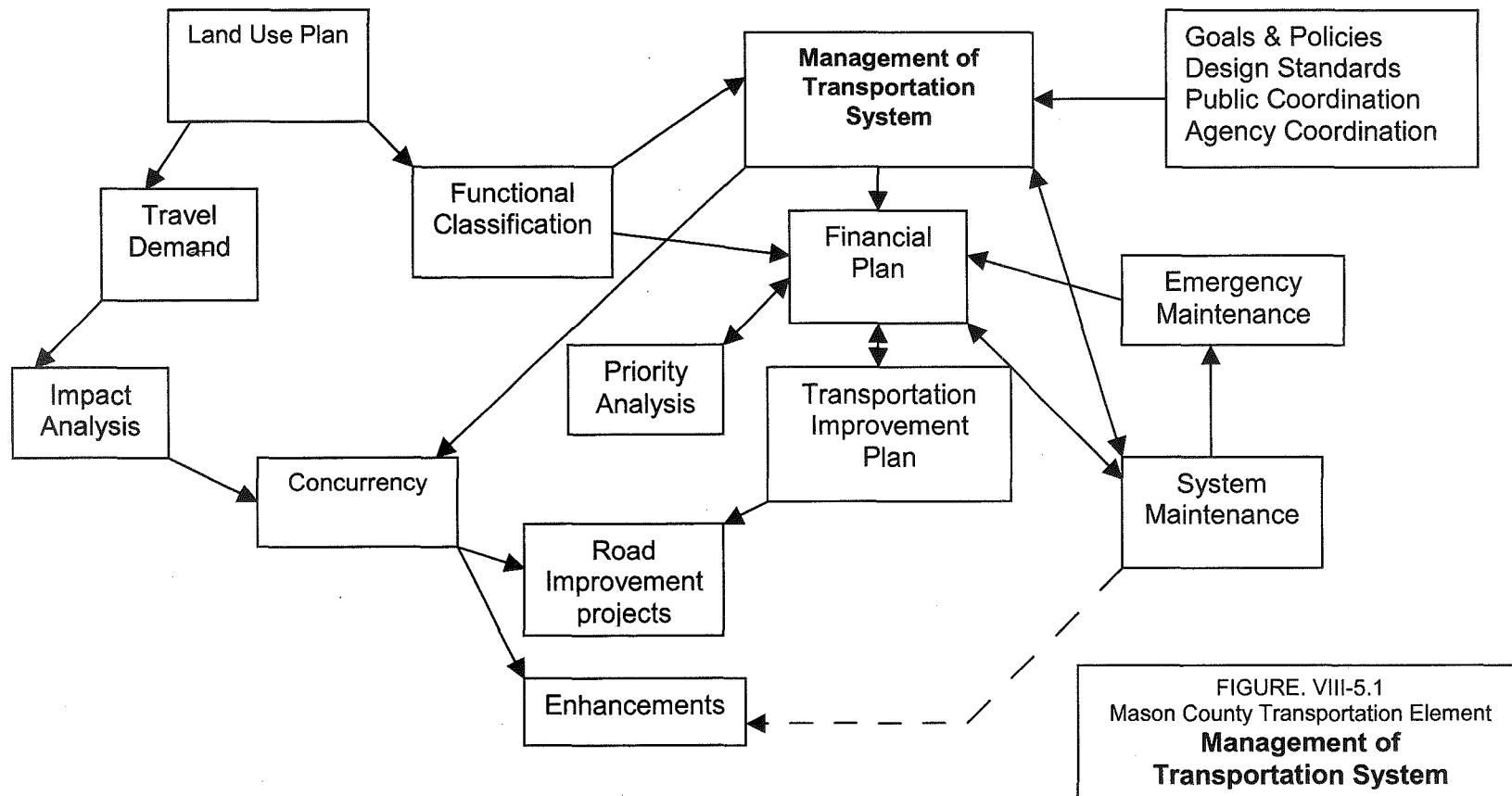
This report provides an evaluation of the existing system and identifies deficiencies in pavement and shoulder width, horizontal and vertical alignment, and safety. These deficiencies have been prioritized into a six-year and twenty-year transportation improvement program (TIP).

Priority Analysis

Transportation improvements are selected for construction by the County Commissioners using the goals and policies, local knowledge, and an evaluation of physical and operational criteria. The criteria include pavement width, shoulder width, alignment characteristics, and safety. The evaluation of physical and operational criteria provides priority analysis. This is coupled with the other selection considerations to develop the transportation improvement program.

Mason County's Collectors were rated using the physical and operational criteria established in Section VIII.1. The Collector and Arterials that are already included in the Transportation Improvement Program (TIP) are given the highest priority. That is, a roadway having the highest total score was given the highest priority and roadways with lower scores were given lower priority. The list of projects was subsequently divided into six-year improvement programs (TIPs) based on current and future funding availability. The financial plan over the 20-year period is discussed in the next section.

FIGURE VIII.5-1



Financial Plan

Funding a transportation system involves incorporating the resources from county, state, federal, and private sources. The blending of these resources is dependent upon the needs of the jurisdiction, as well as the political philosophies of the responsible governmental units. The following provides a discussion of funding resources.

County Funds

A county has the ability to utilize revenue from the following sources:

General Funds

Tax revenues that are not dedicated to specific use can be used by a county for the transportation system.

County Road Fund – Portion of Property Tax

Property tax up to \$2.07 per \$1,000 assessed valuation can be used for roads in unincorporated county areas. This funding source makes up almost half of the County's road budget. A portion of this budget, limited by RCW 36.33.220, can be diverted to other sources for services rendered to Public Works such as law enforcement for traffic and work site operation.

Fuel Tax

The county's portion of the tax received from fuel sales is distributed by the state to the various counties based on population and road mileage in accordance with a standard formula.

Vehicle License Fee

A vehicle license fee up to \$15 can be applied by a county for general transportation. This is subject to referendum. These fees are not currently used by Mason County.

Special Fuel Tax

Based on voter approval, a 10 percent fuel tax can be added for highway construction by a county. This tax is not currently utilized by Mason County.

Transportation Benefit Districts

A special taxing district can be formed for transportation purposes to issue voter-approved general obligation bonds, revenue bonds, special property taxes, and Local Improvement Districts (LIDs). These districts can range in area from an entire region (special property taxes) to a neighborhood LID.

State and Federal Assistance

Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act, 2005, updates and continues the TEA-21 passed in 1998. Funds are made available to the State of Washington and local agencies from federal revenue sources.

The Transportation Equity Act, 1998, provides funds that are made available to the State of Washington and local agencies from federal revenue sources. This program incorporates a number of special programs such as bridge replacement, railroad/highway crossing, and hazard elimination projects.

Intermodal Surface Transportation Efficiency Act (ISTEA)

This Federal Transportation Act of 1990 was the predecessor TEA-21 and operated under the same general guidelines. Mason County still has a few projects in the 6-Year TIP which were funded under this program.

Federal Forest Funds

Based on the Federal forest lands within a county, funds are provided to construct and maintain roads within these Federal areas.

Transportation Improvement Account (TIA)

This is a State-funded program for local agencies to alleviate and prevent traffic congestion caused by growth. This program has been established from revenue obtained from Washington State's gas tax.

Urban Arterial Trust Account (UATA)

This is also a State-funded program for traffic improvements to alleviate congestion. It is funded by Washington State's gas tax and allocated to communities based on priority evaluation of needs.

Rural Arterial Program (RAP)

This is a State-funded program for counties to improve rural collector roads.

County Arterial Preservation Program (CAPP)

This is a program with Washington State funding to counties to preserve existing paved county Collector roads.

Community Economic Revitalization Board (CERB)

This program provides low-interest loans and occasional grants to finance access roads for specific sector development.

Public Works Trust Fund (PWTF)

This is a low-interest loan program for public works improvements.

Private Sources

Based on State and Federal legislation of *The Growth Management Act*, *The State Environmental Protection Act*, and *The National Environmental Protection Act*, mitigation for new development can be assessed based on the requirements to serve the traffic demand generated by the new development.

Revenue Sources

Mason County has used a wide range of funding sources for their transportation program. TABLE VIII.5-1 identifies transportation funding sources.

This was then used to create a base year amount for each funding source. The base year was then expanded using estimated percentage annual increases considering the growth of the County, changes anticipated in funding sources, and economic conditions. It is important to note that the revenues and construction costs have not been adjusted for inflation. The changes are only the result of growth.

Table VIII.5-1 Mason County Revenue Sources
Property Tax
Forest Excise
Real Estate Excise
Fed Forest Funds
Fed – STP;BIA
CAPP
RAP
Motor Veh Fuel Tax
Other Sources
Carry Over Balance
Total Funds

Transportation Plan and Improvement Program

A Transportation Plan for the 20-year period was developed for Mason County utilizing the priority analysis and financial plan as previously discussed. The recommended plan for the Collector road system is shown in FIGURE VIII.5-2. Projects scheduled to be funded in the next six years are listed in the 6-year Transportation Improvement Program shown in FIGURE VIII.5-2A. The revenue forecast indicates that adequate funds are available to fund the projects contained in the next six year Transportation Improvement Program. TABLE VIII.5-2A shows the list of projects over the 20-year period.

Concurrency Management System

The *Washington State Growth Management Act* (GMA) specifies that a transportation element of a city or county comprehensive plan must incorporate a concurrency management system (CMS) into their plan. A CMS is a policy designed to enable the city or county to determine whether adequate public facilities are available to serve new developments. This process is shown in FIGURE VIII.5-3.

The transportation element section of the GMA defines the CMS as follows:

“Local jurisdictions must adopt and enforce ordinances which prohibit development approval if the development causes the LOS on a transportation facility to decline below the standard adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development.”

“Concurrent with development implies that public infrastructure improvements and strategies that are required to service land development be in place, or financially planned for, within six years of development use.”

See Appendix for hard copy of Figures

FIGURE VIII.5-2

POTENTIAL NEW ROADS

FIGURE VIII.5-2A

CURRENT 6-YEAR TIP

See Appendix for hard copy of Figures

FIGURE VIII.5-2A

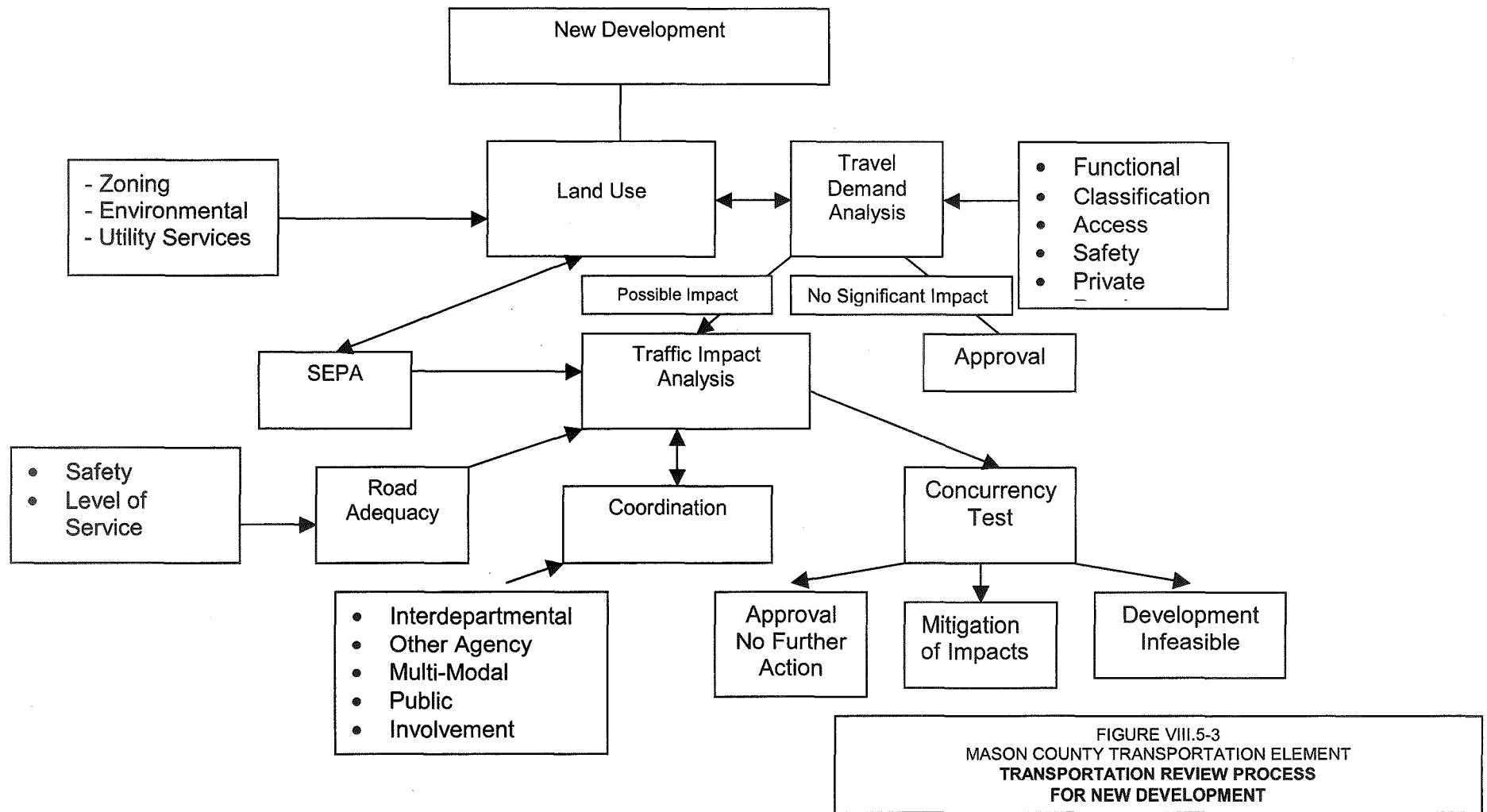
6-Year TIP

TABLE VIII.5-2A: Transportation Improvement Plan 2012 through 2029 (County Collectors Only)				
<i>Project I.D.</i>	<i>Milepost</i>	<i>Beginning Milepost Location</i>	<i>Recommended Improvement</i>	<i>Cost (\$1000)</i>
Bear Creek Dewatto Road - 1	6.57-7.45	0.07 mi. East of Panther Lake	Realign and Regrade	300
Belfair-Tahuya Road - 1	0.00-1.85	At North Shore Road	Horizontal & Vertical Alignment	1034
Bear Creek-Dewatto Road - 2	7.45-8.45	0.16 mi. East of Gold Creek Rd.	Realign and Regrade	333
Johns Prairie Road/SR 3	3.8-3.9	Intersection with SR 3	Install New Traffic Signal	156
Sandhill Road - 2	2.66-3.94	At Transfer Station	Realign and Regrade	380
North Island Drive - 2	1.31-3.09	0.44 mi. North of Fox lane	Realign and Regrade	593
Grapeview Loop Road - 4	4.43-5.9	At Grapeview Store	Realign and Regrade	481
Pickering Road - 4	4.51-5.35	At Scenic View Road	Realign and Regrade	277
New Road: Razor Road	N/A	Approximately Trails End Drive	New Construction	1600
Grapeview Loop road - 5	6.1-6.93	At Cronquist Road	Realign and Regrade	254
Pickering Road-5	5.35-6.24	At Schneider Road	Realign and Regrade	315
North Shore Road	9.63-10.63	0.68 mi. South of pokes Road	Realign and Regrade	333
Elfendahl Pass Road - 1	0.00-1.85	At North Shore Road	Realign and Regrade	616
Sandhill Road - 3	3.94-5.82	At Delmore Road	Realign and Regrade	624
Shelton Matlock Road	0.91-1.38	At City Limits	Realign and Regrade	792
New Frontage Roads (Belfair Bypass)	Approx. 3 mi.	Vicinity of Belfair Bypass	New Construction	300
Johns Prairie Road - 2	3.42-3.90	At Capitol Hill Road	New Construction for New Alignment	441
Grapeview Loop Road - 2	2.78-3.5	At Murray Road South	Realign and Regrade	315
Grapeview Loop Road - 1	1.62-2.78	At Stadium Beach Road	Realign and Regrade	386
Bear Creek-Dewatto Road - 7	6.63-7.45	105 ft. East of Public Access Area	Hor. & Vert. Align., Widen Shoulder	369
Shelton Valley Road - 2	2-3.85	.67 mi North of Deegan Road West	Realign and Widen Shoulder	832.5
Shelton Valley Road - 1	0-2	At Shelton-Matlock Road	Realign and Widen Shoulder	900
Elfendahl Pass Road - 1	0-1.85	At North Shore Road	Realign, Widen Shoulder & Pavt.	832.5
Belfair-Tahuya Road - 1	1.85-4.61	.25 mi. South of Lakeshore Drive South	Realign, Widen Shoulder & Pavt.	1,242

Bear Creek Dewatto Road - 8	9.6-9.75	.78 mi East of Tiger Mission Road	Hor. & Vert. Align., Widen Pavt.	67.5
Bear Creek Dewatto Road - 4	1.68-3	At 45 Degree Curve Left	Realign and Widen Shoulder	594
<i>Project I.D.</i>	<i>Milepost</i>	<i>Beginning Milepost Location</i>	<i>Recommended Improvement</i>	<i>Cost (\$1000)</i>
Bear Creek Dewatto Road - 5	3-5.09	.97 mi. SE of 40 Degree Curve Right	Realign and Widen Shoulder	940.5
Cloquallum Road - 3	4.6-5.85	At Shelton Valley Road	Widen Shoulder and Pavement	562.5
Elfendahl Pass Road 3	3.5-7.9	1.03 mi S. of Pvt. Rd. (Goat Ranch Rd.)	Realign, Widen Shoulder & Pavt.	1,980
Kamilche Point Road - 1	0-2.8	At Old Olympic Hwy.	Widen Pavement and Shoulder	1,260
Satsop-Cloquallum Road	0-1.68	At Cloquallum Road	Realign, Widen Pavt. & Shoulder	756
Tahuya Blacksmith Road - 1	0-2.5	At Bear Creek Dewatto Road	Realign, Widen Pavt. & Shoulder	1,125
Shelton-Matlock Road - 2	7.2-7.5	At Little Egypt Road	Widen Shoulder and Pavement	135
Bear Creek Dewatto Road - 6	5.09-7.98	At Elfendahl Pass Road	Horizontal & Vertical Align.	693
Cloquallum Road - 4	5.85-7.98	At Rock Bridge #1	Widen Shoulder & Pvt.	958.5
Crestview Drive	2.02-3.16	At Hillcrest Drive	Widen Pavement	513
Elfendahl Pass Road - 2	1.85-3.5	At Belfair-Tahuya Road	Realign, Widen Shoulder & Pavt.	742.5
Shelton-Matlock Road - 7	16.86-20.91	At Matlock-Deckerville Road	Widen Pavement	1,822.50
Shelton-Matlock Road - 8	20.91-23.22	At Ford Loop Road	Widen Pavement	1,039.50
Shelton-Matlock Road - 9	23.22-26.38	210 ft NE of Ever's Bridge	Widen Pavement	1,422
Shelton-Matlock Road - 10	26.38-27.81	55 ft West of Boundary Road	Widen Pavement	643.5
Cloquallum Road - 5	12.4-14.09	0.5 mi East of Highland Road	Widen Shoulder and Pavement	760.5
Highland Road - 1	0-2.43	At Shelton-Matlock Road	Realign, Widen Shoulder	1093.5
Kamilche Point Road - 2	2.8-4.2	At Bloomfield Road	Widen Pavement and Shoulder	630
Tahuya Blacksmith Road - 2	2.5-5.64	0.98 mi South of 4-H Camp	Realign, Widen Pavement	1413
Arcadia Road - 1	4.96-6.33	0.24 mi East of Mill Creek Bridge	Widen Shoulder	616.5
Arcadia Road - 2	6.33-7.07	0.74 mi Northwest of Lynch Road	Widen Shoulder and pavement	333
Shelton-Matlock Road - 6	15..56-16.86	At Bingham Creek Bridge	Widen Shoulder and Pavement	585
Highland Road - 3	4.43-6.43	0.5 mi South of Panhandle Lake	Widen Pavement and Shoulder	900
Trails Road - 3	3.35-4.6	At Mason lake Drive West	Vertical Alignment	562.5
Shelton-Matlock Road - 1	1.85-3.12	At Power Lines	Realign & Regrade, Widen Shoulder	571.5
Shelton-Matlock Road - 5	14.22-15.56	0.93 mi West of Lake Nahwatzel Drive	Widen Shoulder	603
Shelton-Matlock Road - 3	9.1-10.76	210 ft North of 90 Degree Curve Right	Widen Shoulder	747

Shelton-Matlock Road - 4	11.89-14.22	0.36 mi East of Nahwatzel Beach Drive	Widen Shoulder	1049
Highland Road - 2	2.43-4.43	1.39 mi. SW of Highway Road "Y"	Realign, Widen Shoulder	900
Highland Road - 4	6.43-7.93	1.5 mi. North of Cloquallum Road	Widen Pavement and Shoulder	675
<i>Project I.D.</i>	<i>Milepost</i>	<i>Beginning Milepost Location</i>	<i>Recommended Improvement</i>	<i>Cost (\$1000)</i>
New Road	N/A	South Island Drive - Harstene Island North Road	New Construction	630
New Road	N/A	SR 101 - Brockdale Road	New Construction	744
New Road	N/A	Johns Prairie Road - Mason Lake Road	New Construction	442
New Road	N/A	Mason Lake Road - SR 3	New Construction	744
New Road	N/A	McReavy Road - Mason Lake Road	New Construction	1644
		Total 2006-2029 Transportation Improvement Plan Cost		88319

FIGURE VIII.5-3



Principal Components

The concurrency management system (CMS) for Mason County includes the following components.

- Identification and definition of facilities and services to be monitored.
- Establishment of LOS standards.
- Identification of when, in the development approval process, the concurrency test is applied.
- Responsibilities of the applicant and Mason County defined for determining capacity.

Transportation Facilities to Meet Concurrency

The Collector road system (as defined in Section VIII.3) that serves Mason County will be monitored to determine impact of new development on the established LOS standards.

The County Collector system is anticipated to meet the traffic capacity standard of LOS C through the 20-year planning period. The design standards for the Collector road system, which related to the physical features of the road (i.e., width of lanes, shoulders, etc.), will be addressed in the 20-year TIP. However, localized improvements may be required to ensure safe traffic operations of the new development facilities.

The State Highway System is an integral part of the County's Collector road system and will be monitored to determine conformance with the LOS standards established by the County. Capacity and design standards will be applied to new development that impact the State Highway System and localized improvements may be required as part of the development approval. Although the State system generally will meet capacity standards, there are areas that will not meet minimum design standards. The County will work closely with WSDOT to encourage timely completion of needed highway improvements to bring the system up to the County's design standards.

Level of Service Standards

LOS standards apply to all new development projects that generate ten or more peak hour vehicle trips during an average weekday on any segment of a Collector road or intersection. If the proposed development generates less than ten vehicle trips per hour, minimum design standards will be met as described below.

LOS will be determined based on the assumption that the existing Collector road system improvements that are included in the County's current six-year TIP are in place. Existing

deficiencies that are corrected by the six-year TIP will not be considered a deficiency for the new improvement.

Two LOS standards will be the basis of compliance with concurrency requirements: traffic capacity and design standards.

Traffic Capacity

The Collector road system will meet the LOS C. Capacity LOS is defined in the *2000 Highway Capacity Manual* and is based on peak hour traffic during the most critical or highest volume times of the day.

Design Standards

The Collector road system will meet the geometric and road section standards for the Collector classification defined in Section VIII.4—Road Design Standards. Water and sanitary sewer services will be coordinated with other project requirements.

Minimum design standards for projects that generate more than twenty vehicle trips per hour shall include:

1. A minimum 26-foot-wide street section with sufficient traffic capacity to serve the existing and project-generated traffic. The road will connect from the proposed development to the closest fully constructed collector street.
2. A paved pedestrian path that connects from the development to either an equivalent path or sidewalk on the Collectors serving the development where appropriate.

Existing Deficiencies

As per the analysis in Section VIII.1, pg VIII.1.18, Mason County does not presently have any existing LOS or traffic capacity deficiencies on the road system. Furthermore, only one road segment in the County is expected to fall below LOS C, albeit just barely, for the preferred land use alternative in the 20-year time frame. Suffice it to say that Mason County has very few capacity concerns.

Growth has caused traffic volumes to increase to a point that several roads in the County have fallen below the design standards (Section VIII.4) needed to support those volumes. Some of those roads are County Collectors and are scheduled for reconstruction in the six-year TIP. These projects correct the many of the existing deficiencies on the system.

Growth Deficiencies

Growth may cause some localized capacity concerns not anticipated in the transportation model. Overall, the County road system will provide a LOS C or better for the next 20 years.

New development may be required to mitigate impacts to the system if the proposed project will require a higher design standard to properly service the additional traffic.

Note: Mitigation will only be required if the affected road does not meet current standards.

Traffic Impact Fees and Development Review

Traffic impact fees are collected to improve the transportation system to accommodate the higher travel demand added by new development. The County needs to reassess its traffic impact fee position where new developments are projected to adversely impact the ability of the current transportation infrastructure to accommodate the additional demand.

The County may require a traffic analysis through the SEPA review process to determine whether significant, localized impacts could be expected from a new development. Any need for mitigation from the developer will be dealt with at that time (i.e., access issues, impact to design standard thresholds, etc.). If it is found that a development will cause significant impacts to the surrounding road system which cannot be mitigated, the development may be denied.

Collector Road System Compliance

The Collector road system and project funding that has been prepared for the County transportation system will provide facilities to meet capacity and design standards. The transportation improvement program has been based on prioritization of the projects and will be accomplished based on the anticipated financial resources. If development occurs that is compatible with the improvement program, there may be localized development improvements required to the collector system. At specific locations, the concentration of traffic by new development may cause a need for road or intersection improvements to provide adequate capacity or operational feature.

++++Responsibilities of Applicant

The project applicant will provide the following information for concurrency review:

1. Traffic Impacts to be performed by a qualified Traffic Engineer.
2. Recommended off-site traffic improvements.
3. Development site traffic plan to include street sections, traffic control plan, and signing.

The traffic impact studies will be prepared in accordance with the County's adopted requirements.

VIII.6 STATE TRANSPORTATION SYSTEM

Table VIII.6-1 lists a brief inventory of the state highways located within Mason County. The State Highway System Plan is a publication produced by WSDOT which provides a comprehensive review of the state system and identifies specific deficiencies and summarizes respective remedies. The State Highway System Plan establishes the LOS status of the state highways in Mason County and the surrounding region. For highways of statewide significance, the LOS thresholds are as follows:

Urban Areas: LOS “D”
Rural Areas: LOS “C”

Copies of this State Highway System Plan are available for distribution at:

Washington State Department of Transportation
Washington State Transportation Plan
P. O. Box 47370
Olympia, WA 98504-7370
360-705-7962

Mason County regularly coordinates with WSDOT, both directly and through active participation with, the Peninsula Regional Transportation Planning Organization (PRTPO). It is through these joint efforts that Mason County maintains consistency with the State and the surrounding jurisdictions.

Route	BMP	EMP	From Location	To Location	Lanes	Length	LOS
SR 101	314.63	331.74	Mason/Jefferson County Line	SR 119 Jct/Hoodspport	2	17.11	B
SR 101	331.74	343.44	SR 119 Jct/Hoodspport	SR 102 Jct/Dayton-Airport Rd.	2	11.70	C
SR 101	343.44	349.16	SR 102 Jct/Dayton-Airport Rd.	SR 3 Jct	2	5.72	C
SR 101	349.16	353.05	SR 3 Jct	SR 108 Jct/Squaxin Casino	4	3.89	B
SR 101	353.05	356.92	SR 108 Jct/Squaxin Casino	Mason/Thurston Co. Line	4	3.87	B
				Total		42.29	
SR 3	0.00	1.19	SR 101/SR 3 Jct	Shelton City Limits (So.)	2	1.19	C
SR 3	1.19	3.58	Shelton City Limits (So.)	Shelton City Limits (East)	2	2.39	D
SR 3	23.26	24.91	SR 302 Jct in Allyn	SR 106 Jct/Enter Belfair	2	1.65	D
SR 3	24.91	26.38	SR 106 Jct/Enter Belfair	SR 300 Jct in Belfair	3	1.47	D
SR 3	26.38	28.20	SR 300 Jct	Mason/Kitsap County Line	3	1.82	D
				Total		28.20	
SR 119	0.00	10.93	SR 101 Jct. in Hoodspport	Staircase Rd.	2	10.93	B
SR 106	0.00	20.09	SR 101 Jct	SR 3 Jct	2	20.09	B
SR 102	0.00	2.86	SR 101 Jct	Dayton-Airport Rd	2	2.86	B
SR 108	4.18	11.96	Mason/Grays Harbor Co. Line	SR 101 Jct/Squaxin Casino	2	7.78	B
SR 302	0.00	5.01	SR 3 Jct in Allyn	Mason/Pierce County Line	2	5.01	B
SR 300	0.00	3.35	Belfair State Park	SR 3 Jct in Belfair	2	3.35	C
				Grand Total		120.51	

New State Routes

Belfair Bypass Road

A bypass highway would be constructed to redirect SR 3 through-traffic around the community of Belfair - Figure VIII.7-1. The proposed alignment would begin on SR 3 at MP 23.70 near North Mason High School and continue generally in the northeasterly direction until it connects with SR 3 north of Belfair at approximately MP 28.00 near the Mason / Kitsap county line. The new State Route is largely within the Belfair Urban Growth Area.

See Appendix for hard copy of Figures

FIGURE VIII.7-1

BELFAIR BYPASS EXHIBIT

VIII.7 TRANSPORTATION ELEMENT DRAFT ENVIRONMENTAL IMPACT STATEMENT (E.I.S.)

Discussion of Issues

The *Washington State Growth Management Act of 1990* requires that all counties experiencing growth and development meeting the criteria of the act adopt or update their comprehensive land use plans to comply with the provisions of the Act. One requirement of the Act is for counties to develop goals and policies in the form of a transportation element that is consistent with the land use element of the comprehensive plan.

The transportation element consists of goals and policies aimed at providing a safe, cost-effective, comfortable, and reliable transportation system. As required by the Growth Management Act, it contains a concurrency policy, which prohibits development approval if the development causes the LOS or safety on a transportation facility to be reduced below a prescribed level, unless measures are implemented concurrent with construction to accommodate or offset the impacts on that facility. Other policies contained in the transportation element focus on finance, design, public and inter-governmental coordination, and system management.

Plan Objectives

It is the intent of the proposed updated comprehensive plan to provide for transportation facilities that meet the needs of Mason County residents for the next 20 years. The following objectives form the framework of this:

- Provide adequate mobility for all people, goods, and services.
- Establish an effective transportation planning process in Mason County.
- Provide a safe, comfortable, and reliable transportation system.
- Ensure compatibility between transportation facilities and surrounding development.
- Minimize negative environmental impacts on the physical and social environments so as to preserve the "rural character" of the area.

Significant Impacts and Mitigation Measures

Geology, Soils, and Topography

Affected Environment

The construction of roads involves removing or adding material, compacting soils, and spreading of asphalt or other impermeable surfaces. The transportation element has several goals and policies, which may require the construction of new roads or widened existing ones. The expansion of shoulders to accommodate bicycle lanes or pedestrian facilities will require additional asphalt surfaces. The construction of new roads in urban growth areas may be necessary to accommodate development. The construction of new facilities will be required to achieve the prescribed LOS and eliminate safety problems where deficiencies exist. It is likely that there will be environmental impacts associated with these structures.

Impacts

Grading for road construction changes topography and has a potential to divert or modify stream and surface drainage patterns. Because roads are usually long and continuous, stream flow diversion can be extensive. Modification of the natural streambeds can create unstable conditions which may cause settlement or erosion. The removal of natural vegetation can also change the stability of soil and topography. Other conditions can increase runoff with associated impacts on the soils and geology in the area.

Mitigation Factors

Preservation and restoration of vegetation will mitigate erosion impacts and provide an aesthetically pleasing experience for the motorists. Natural vegetation stabilizes soils, helps retain water runoff from road surfaces, and prevents erosion of soils. Design of drainage facilities that includes ditches and restored streambeds through the use of proper grades, construction materials, and runoff control will minimize the impacts of construction.

During the construction of new or expanded facilities, it is necessary to protect exposed areas. Siltation traps and water control techniques can retain soils during construction.

Protection of wildlife and watersheds requires that County roads be managed in accordance with the *WSDOT Highway Runoff Manual* that incorporates the Department of Ecology's Best Management Practices.

Air Quality

Affected Environment

The surface transportation system primarily affects emissions of carbon monoxide (CO) from vehicles. Other pollutants generated by traffic include the ozone precursors, hydrocarbons, and nitrate oxides. Fine particulate matter also is emitted in vehicle exhaust and generated by tire action on pavement (or unpaved areas), but the amounts of particulate matter generated by individual vehicles is small compared with other sources. Sulfur oxides and nitrogen dioxide also are emitted by space heating and motor vehicles, but concentration of these pollutants are generally not high except near large industrial facilities.

Impacts

The transportation element of the *Mason County Comprehensive Plan* will have minor impacts on air quality in the area. Increased traffic flow will increase the pollutants in the air. Construction activities can also create dust and related air pollutants.

Mitigation Measures

The transportation element introduces a variety of strategies aimed at reducing single-occupancy vehicle use and promoting alternative modes of transportation. These strategies will reduce the impacts on air quality. Traffic demand management strategies include incentives for the use of alternative transportation modes and disincentives for the use of single-occupancy vehicles. The construction of improved roads will provide more uniform traffic flow with better pavement surfaces. This will improve the efficiency of the automobile, thus reducing vehicle emissions.

Water Quality

Affected Environment

The transportation system collects, transports, and retains water that is the natural runoff. The roadways may require changes in natural drainage courses and can change the rate of runoff. The roadway is also a source of pollutants that can infiltrate the water source.

Impacts

The construction of new or rebuilt roads will result in increasing impervious surfaces which may cause adverse impacts on surface water quantity and quality. The change in runoff characteristics can have an effect on groundwater due to potentially decreased recharge area

and diminished water quality. The compaction of soils and the introduction of other impermeable surfaces reduces the soil's natural infiltration capabilities and can increase contamination of lower lying soils. Surfaces that formerly were able to absorb and moderate surface water runoff are replaced by non-absorbing surfaces that shed water. The paved surface also is a source of non-point pollution, exhaust, oil, transmission fluid, and radiator fluid from automobiles. The runoff washes these pollutants into ditches and eventually into the lower lying soils, rendering them of less quality. Loss of riparian vegetation due to pollution can increase the problem of erosion adjacent to the roadway.

Mitigation Measures

The construction of detention ponds, biofilters, settling ponds, and erosion protection will be used in design and construction of new roadways to protect surface water quality. Maintenance practices by the County will incorporate the same methods of water quality protection and enhancement.

Vegetation and Wildlife

Affected Environment

Much of the County road system is bordered by natural vegetation and wildlife habitat. Stream corridors, shorelines, and wetlands are sensitive areas that can be affected by the construction of new or expanded roadways.

Impacts

The construction of new roadways or widening of existing County roads reduces the wildlife habitat and removes natural vegetation. Increasing the number of vehicles on the County roads will increase the exposure of animals to auto-related collisions, threatening not only the animals but the motorist. Greenbelts located in proximity to open areas—like clearcuts—provide deer and other animals with shelter and food. The preservation of roadside vegetation creates a buffer for the enhancement of scenic roads that may increase the number of animals exposed traffic.

Mitigation Measures

The environmental policy of the transportation element is aimed at natural vegetation and wildlife protection. Avoidance of wildlife habitat, stream corridors, wetlands, and shorelines will retain wildlife habitat and reduce impact on natural vegetation. Technologies are currently being developed to deter large animals such as deer and elk from entering a road corridor. Use of these types of measures could be implemented in wildlife

corridors which come in contact with major roadways. Public awareness beyond the usual deer crossing sign can help inform the public of the hazards of automobile and animal collisions.

Energy and Natural Resources

Affected Environment

The transportation system creates demands on energy and natural resources. The powering of vehicles requires energy and the roadways require space that affect natural resource areas such as timberlands and agricultural areas.

Impacts

The primary impact of the transportation system on the energy and natural resources is the consumption of energy resources and consuming area for transportation facilities.

Mitigation Measures

The primary measures included in the transportation element of the proposed *Mason County Comprehensive Plan* would be the goals and policies which offer alternative modes of transportation and strategies which will reduce single-occupancy vehicles. Additionally, consideration of construction methods that minimize space requirements and impacts on natural areas will reduce the effects of the transportation system on energy and natural resources.

Land Use

Affected Environment

The relationship between a transportation system and land use is based on mobility and access. Land use creates the transportation demand and the road system serves to provide circulation between the land use elements.

Impacts

The transportation plan has been coordinated with the *Mason County Comprehensive Plan* and is consistent with the growth patterns and policies set forth by the County. On a local level, the timing of land use changes and the mix and density of land uses could be affected to some degree by the transportation system. However, it is assumed that community plans and area zoning would continue to exercise primary control over the location, mix, and

densities and land uses. Land uses adjacent to the road network would be directly affected where right-of-way acquisition displaces or encroaches on existing uses.

Mitigation Measures

Interlocal agreements can be used to coordinate actions on transportation issues. As community plans are prepared and updated, their visions will be coordinated with the transportation planning efforts of the County. The Mason County transportation element will be reviewed and updated regularly to respond to land use planning changes. Consistency and compatibility of the transportation and land use elements of the comprehensive plan will require continual review by the County. The County will also conform to the requirements of the *State of Washington Growth Management Act* which specifies that the transportation element will be compatible with the land use element.

Some impacts will be unavoidable. Land will be consumed as more right-of-way is needed for new construction and major widening projects. Some existing land uses will be displaced.

Developers may be required to assist the county in the provision of additional transportation facilities needed to serve new developments in proportion to the impacts and needs generated by their projects. This may make the cost of developing land more expensive than if no mitigation were required.

Land Use Alternatives:

Four land use alternatives, described in the Rural Element, were analyzed to determine their respective traffic impacts on the transportation system in Mason County. Increased population in any of these four alternatives will result in increased traffic and demand for transportation system improvements. The impacts associated with these improvements are discussed above. The degree to which a project impacts the surrounding environment will vary depending on the specific conditions associated with that project.

The impacts to the transportation system associated with congestion (a result of growth) were also studied. This analysis was performed using a transportation model (TMODEL2). The traffic forecast for the 20 year projection for each land use alternative was calculated by the model and discussed in Section VIII.1-17. Anticipated employment and housing factors were used to update the traffic analysis zones in the traffic model. The following is a summary of the results for the 20 year growth forecast:

- The findings show that there is no significant difference in the amount of traffic loaded onto the road network by any of the four land use alternatives. This implies

that impacts associated with overall road usage will be relatively the same in each land use alternative.

- Traffic in the County will essentially double over the next 20 years.
- All county roads should continue to operate at a LOS C or better. A few roads may fall to an LOS D if a localized spike in the growth rate occurs in an area which concentrates traffic to a single road.
- Mason County roads are generally safe for drivers who are reasonably attentive to driving, obeying the laws, rules of the road, and the signing. Impacts associated with perceived safety deficiencies will necessitate improvements to the road network. The need for these safety improvements primarily exists on roads built before modern day design standards were put into practice. As these improvements are made over the next 20 years, collision rates may decrease.

Appendix:

Includes the following illustrations:

Figure VIII 1-1	Study Area
Figure VIII 1-3	Average Daily Traffic Volumes
Figure VIII 1-4	Critical Accident Locations
Figure VIII 1-5	Traffic Analysis Zones
Figure VIII 3-1	Functional Classification
Figure VIII 5-2	Potential New Roads
Figure VIII 5-2A	Current 6-Year TIP
Figure VIII 7-1	Belfair Bypass Connector

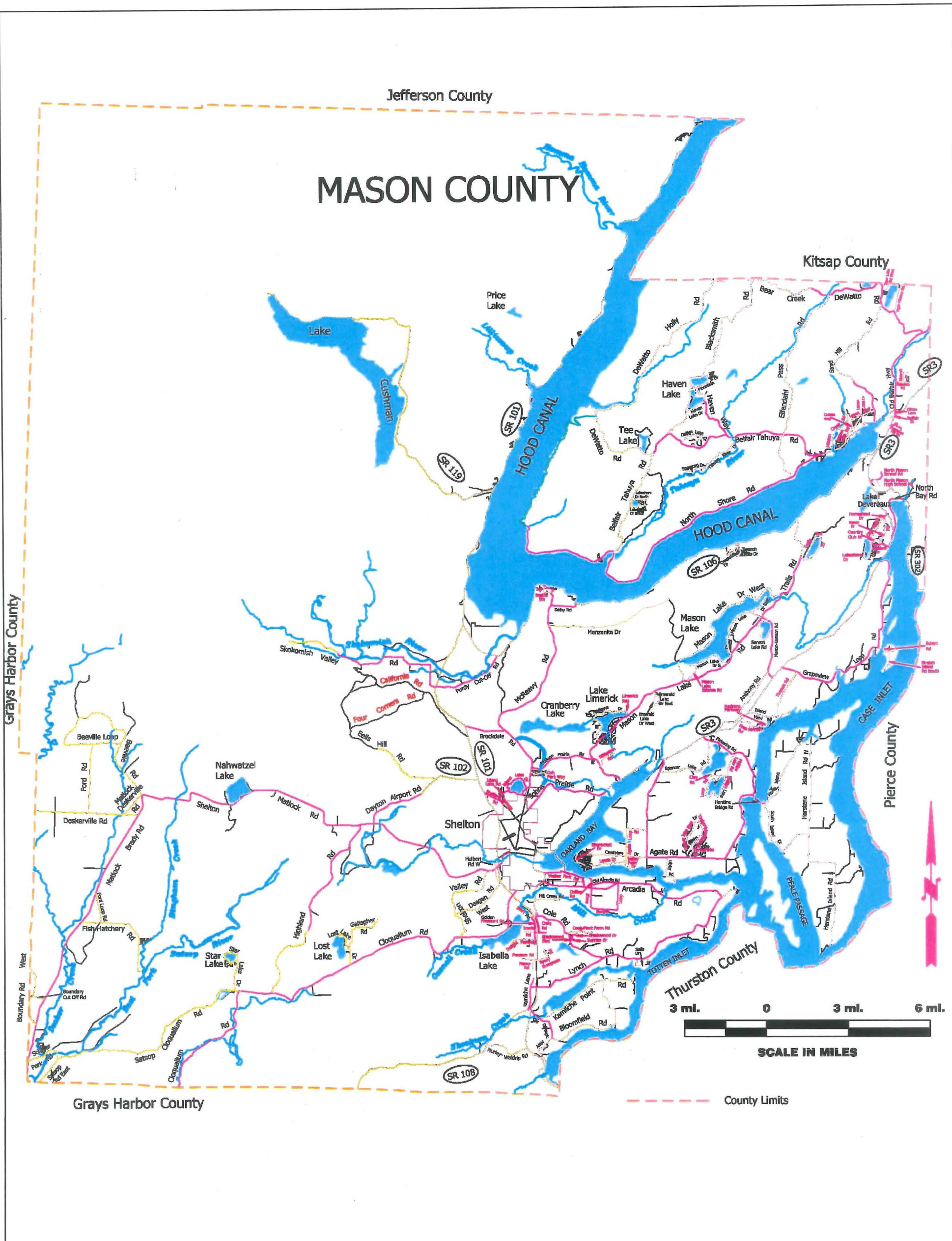
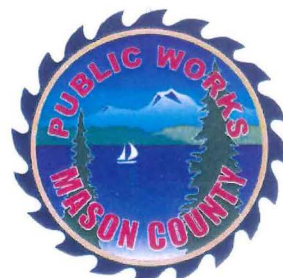
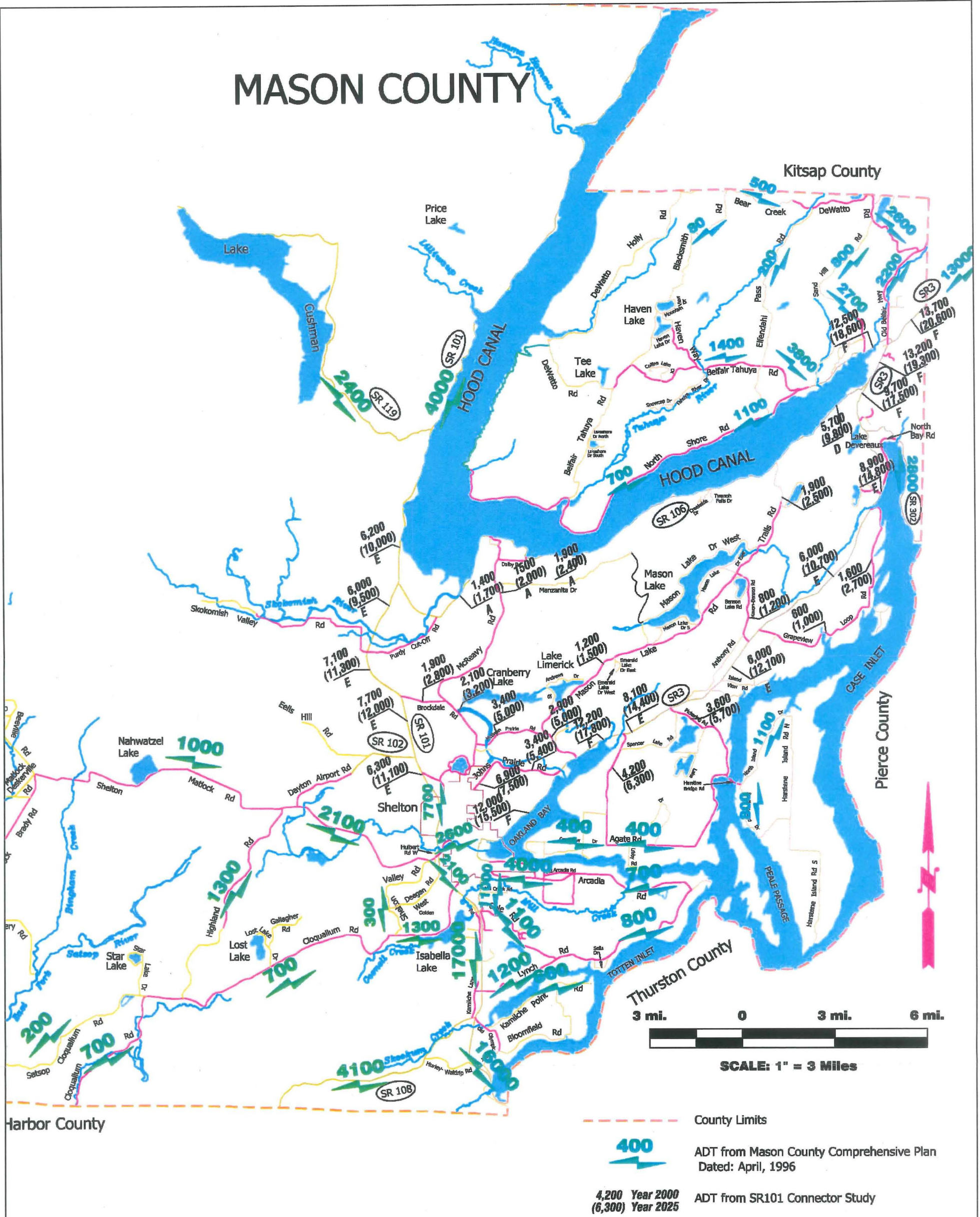


FIGURE VIII.1-1
MASON COUNTY TRANSPORTATION ELEMENT
STUDY AREA

Nov 2005



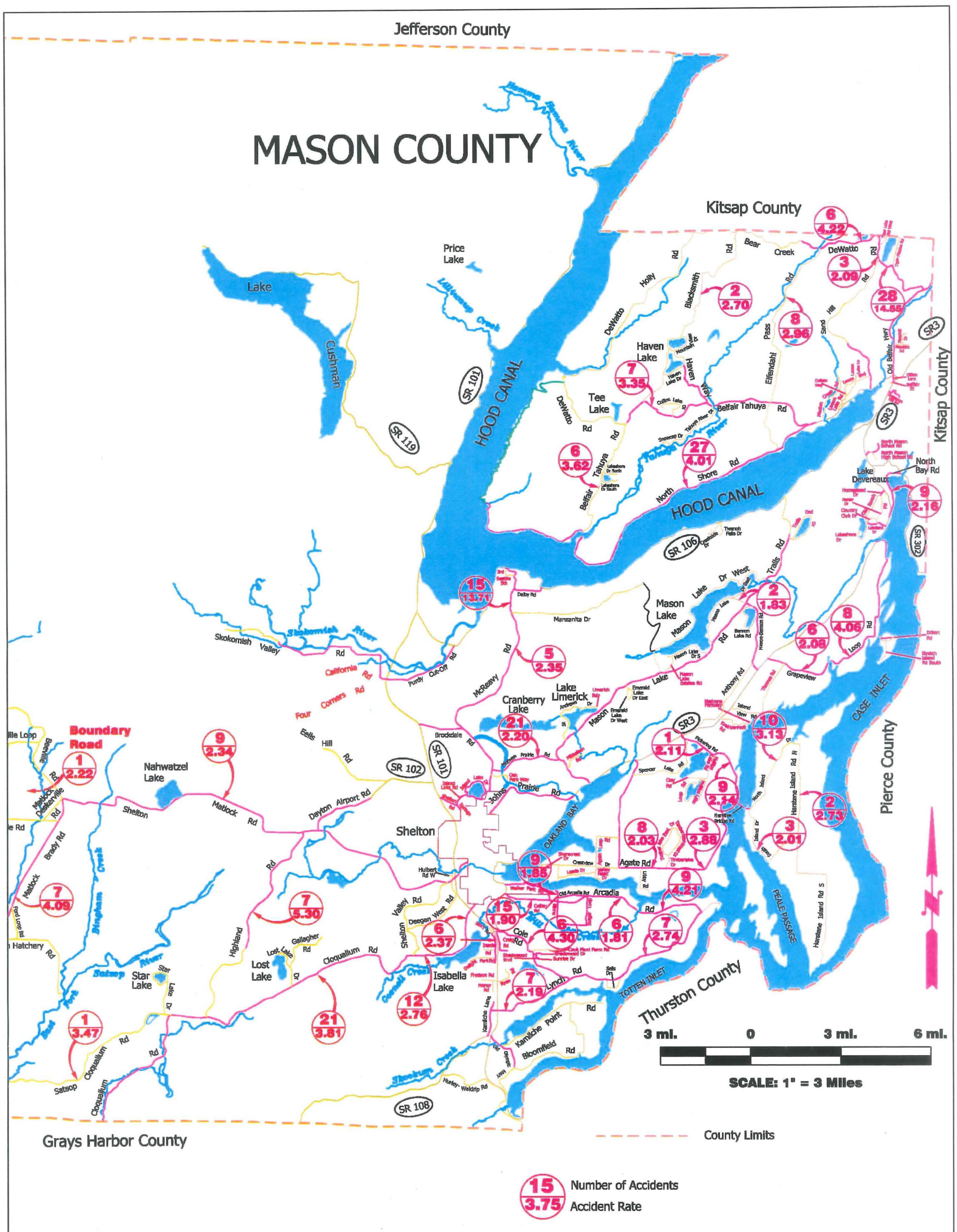
MASON COUNTY



**Figure VIII - 1-3
Mason County Transportation Element
Average Daily Traffic Volumes**

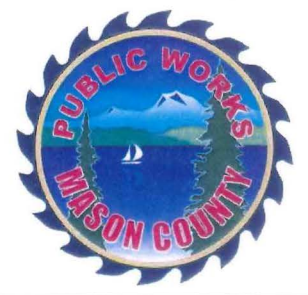
Nov 2005



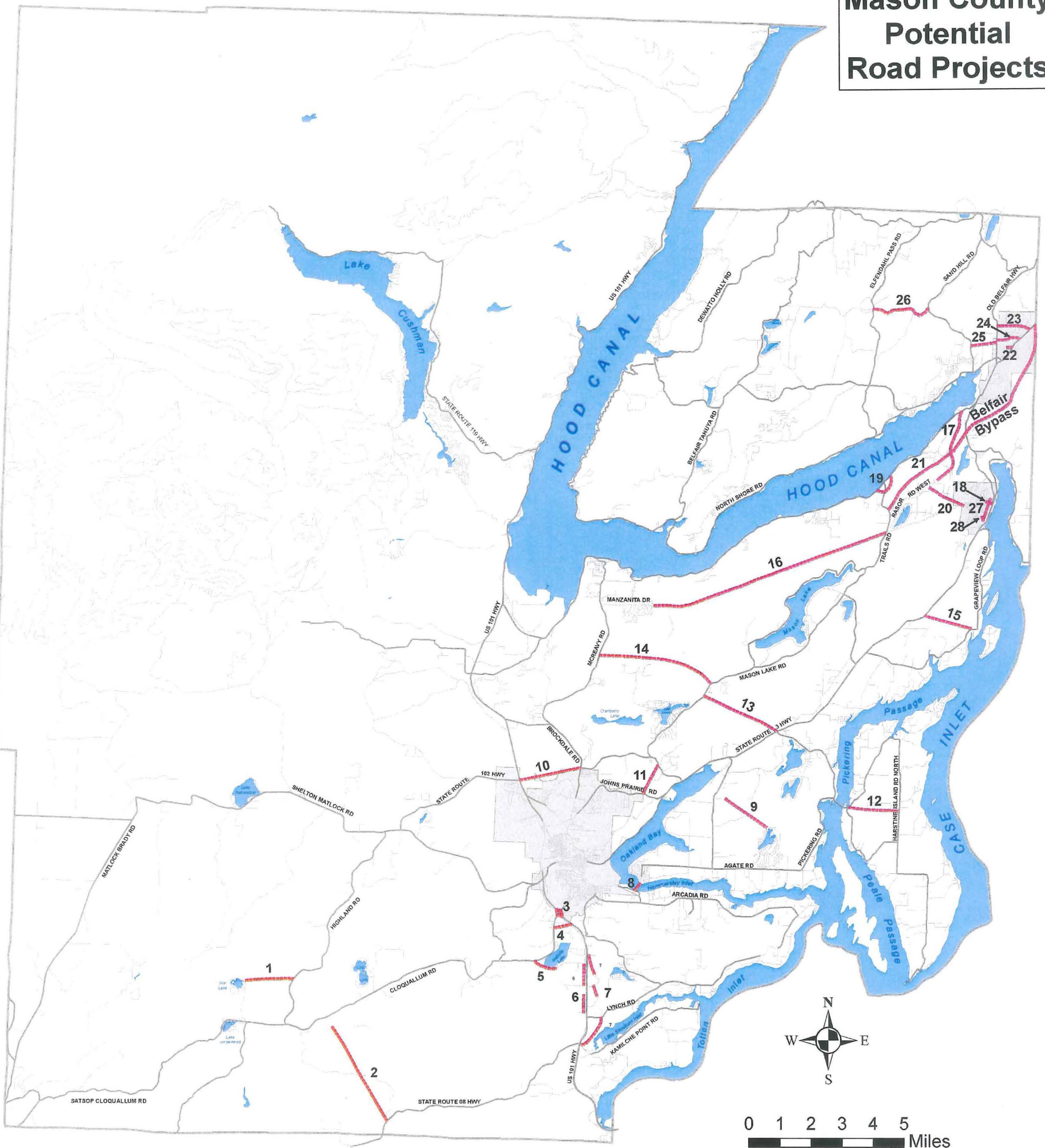


**Figure VIII.1-4
 Mason County Transportation Element
 Critical Accident Locations
 (2002-2004)**

Nov 2005



Mason County Potential Road Projects



POTENTIAL ROAD PROJECT INDEX:

- | | |
|---|--|
| <ul style="list-style-type: none"> 1 STAR LAKE NE ACCESS 2 CLOQUALLUM TO SR 108 3 CLOQUALLUM TO SR 101 - NEW INTERCHANGE 4 CLOQUALLUM TO SR 101 - NORTH OF LAKE ISABELLA 5 CLOQUALLUM TO SR 101 - SOUTH OF LAKE ISABELLA 6 WEST US 101 FRONTAGE 7 EAST US 101 FRONTAGE 8 SHORECREST CONNECTION 9 TIMBER LAKE NORTH ACCESS 10 MCEWEN PRAIRIE CONNECTION 11 JOHNS PRAIRIE CONNECTION 12 HARSTINE CONNECTION 13 PICKERING CONNECTION 14 MCREAVY CONNECTION | <ul style="list-style-type: none"> 15 GRAPEVIEW LOOP CUTOFF 16 MANZANITA CONNECTION 17 RASOR ROAD EAST CONNECTION NORTH 18 WADE ST 19 TRAILS ROAD HILL REVISION 20 LAKELAND VILLAGE WEST ACCESS 21 W T BUDDING ROAD 22 ROY BOAD EXTENSION 23 BELFAIR NORTH ACCESS - NORTH OF SR 3 RR XING 24 BELFAIR NORTH ACCESS - SOUTH OF SR 3 RR XING 25 UNION RANCH BYPASS 26 GOAT RANCH CONNECTION 27 WHEELWRIGHT ST 28 MASTERSON ST |
|---|--|

Potential road projects are in no particular order. The numbers are present to aid in identification. Lines represent general corridors and are not exact locations of where a potential road would go.

Figure VIII 5-2
Potential New Roads



Legend

- Local Roads
- Highways and Major Roads
- Potential New Roads
- Urban Growth Areas
- Water Bodies
- Mason County Boundary

Produced By: Mason County Public Works GIS Department
Project File: Potential_Road_Projects_2007_Update.mxd
Publication Date: 5/2/07

Map Data Sources:
Roads, Shelton City Limits and UGA Boundaries are from Mason County GIS. County Boundary and Water Bodies are from WA Dept. of Natural Resources.

This map was produced using ArcGIS 9.2.

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6-YEAR TIP PROGRAM 2009 - 2014

PRIORITY		Project	BMP	EMP	2009			2010			2011			2012			2013			2014			Project Total
2008	2009				PE	RW	Constr	PE	RW	Constr	PE	RW	Constr	PE	RW	Constr	PE	RW	Constr	PE	RW	Constr	
1	1	ACP Overlays (maintenance)	-	-	3		500	3		1,200	4		1,400	4		1,400	5		1,680	5		1,680	7,884
2	2	BST on Gravel (maintenance)	-	-	10	15	600	10	15	600	10	15	600	10	15	600	10	15	600	10	15	600	3,750
3	3	Safety (maintenance)	-	-	15	5	200	15	5	200	15	5	200	15	5	200	15	5	200	15	5	200	1,320
4	4	Minor Const (maintenance)	-	-	21	9	200	21	9	200	21	9	200	21	9	200	21	9	200	21	9	200	1,380
5	5	Large Culverts (maintenance)	-	-	70	31	800	40	20	400	30	15	300	30	15	300	30	15	300	30	15	300	2,741
		Belfair Tayhua Bridge Replacement	8.16		20	10	45																75
		North Shore Road Slide	11.12		20	5	40																65
		North Shore Road Slide	11.60		20	5	35																60
		Finch Creek Bridge Replacement	0.18		15	5	30																50
		Dewatto Holly Road Slide	1.54		15	5	30																50
		Sunnyside Road Slide	0.87		10	5	10																25
		Sunnyside Road Slide	1.02		10	5	10																25
6	6	Grapeview Loop Road Slide	6.05		5	18	613																636
7	7	Sand Hill Road Slide	4.70		5	13	915																933
8	8	Lower Elfendahl Pass Rd. Reconstr.	0.00	1.87	5	308	500																813
9	9	North Shore Road Erosion Repairs	var	var																			0
10	10	Lynch Rd / SR 101 Improvements	0.00	1.06	0	0	0																0
11	11	Johns Prairie Rd	2.52	3.45	25	60	595																680
12	12	Grapeview Loop Road - 2 (4/17/09)	1.61	3.50	10	200	370	10	100	700			2,000										3,390
13	13	Bear Creek Dewatto - 2 (4/13/09)	7.59	10.00	10	200	800	10	50	2,292													3,362
14	14	Shelton-Matlock Rd - 2 (4/18/10)	14.50	15.50	64	26		10	15	400			800										1,315
15	15	Cloquallum Road - 3R (4/29/11)	5.85	6.85	25	100		25	200		10	10	400			1,000							1,770
16	16	North Island Dr - 1	0.31	1.31				40	20		30	30			300			1,000					1,420
17	17	Rock Creek No. 1 Bridge	5.83	5.87				54	10		54	10			720								848
18	18	Matlock Brady Road - Phase 1	23.53	28.79				60	50		60	50			1,315			1,315					2,850
19	19	Weaver Creek Bridge Const	0.69		5	2		50	25		50	25			800								957
20	20	Trails Rd -2	0.40	1.59							70	30						400					600
21	21	Arcadia Road	5.50	7.07							45	30			45	30							650
22	22	Hunter Creek Bridge	1.73	1.80	5	7					50	25			50	25							962
23	23	Pickering Rd -3	3.35	4.45							30	20			30	20							400
24	24	Shelton - Matlock Rd - 1	0.91	1.38										15			20	15		75	100	200	425
25	25	Belfair - Tahuya Rd - 1	0.00	1.15											45	30			75	100	200	450	
26	26	South Island Dr - 1	0.00	1.80											10				75	100	200	385	
27	27	Matlock Brady Road - Phase 2	16.86	23.53											10				75	100	200	385	
28	28	Cloquallum - 2	4.58	5.23											10				75	100	200	385	
29	29	Deckerville Road - 1	0.00	1.86											10				75	100	200	385	
30	30	Island Lake Drive	0.44	1.18											10				75	100	200	385	
31	31	Johns Prairie/SR 3 Intesection	n.a	n.a											10				75	100	200	385	
32	32	Razor Road W. Extension to SR 3	n.a	n.a											10				75	100	200	385	
33	33	Newkirk Road Extension	n.a	n.a											10				75	100	200	385	
34	34	Wheelwright Street	n.a	n.a											10				75	100	200	385	
35	35	Wade Street	n.a	n.a											10				75	100	200	385	
36	36	Masterson Street	n.a	n.a											10				75	100	200	385	
		Misc. Engineering & ROW Costs			75	75		75	75		75	75		75	75		75	75		75	75		900
		SUBTOTAL			463	1,109	6,293	423	594	5,992	554	349	5,900	365	224	6,835	331	164	7,295	1,131	1,419	5,580	45,021
		TOTAL ESTIMATED EXPENDITURES				7,865			7,009			6,803			7,424			7,790			8,130	45,021	

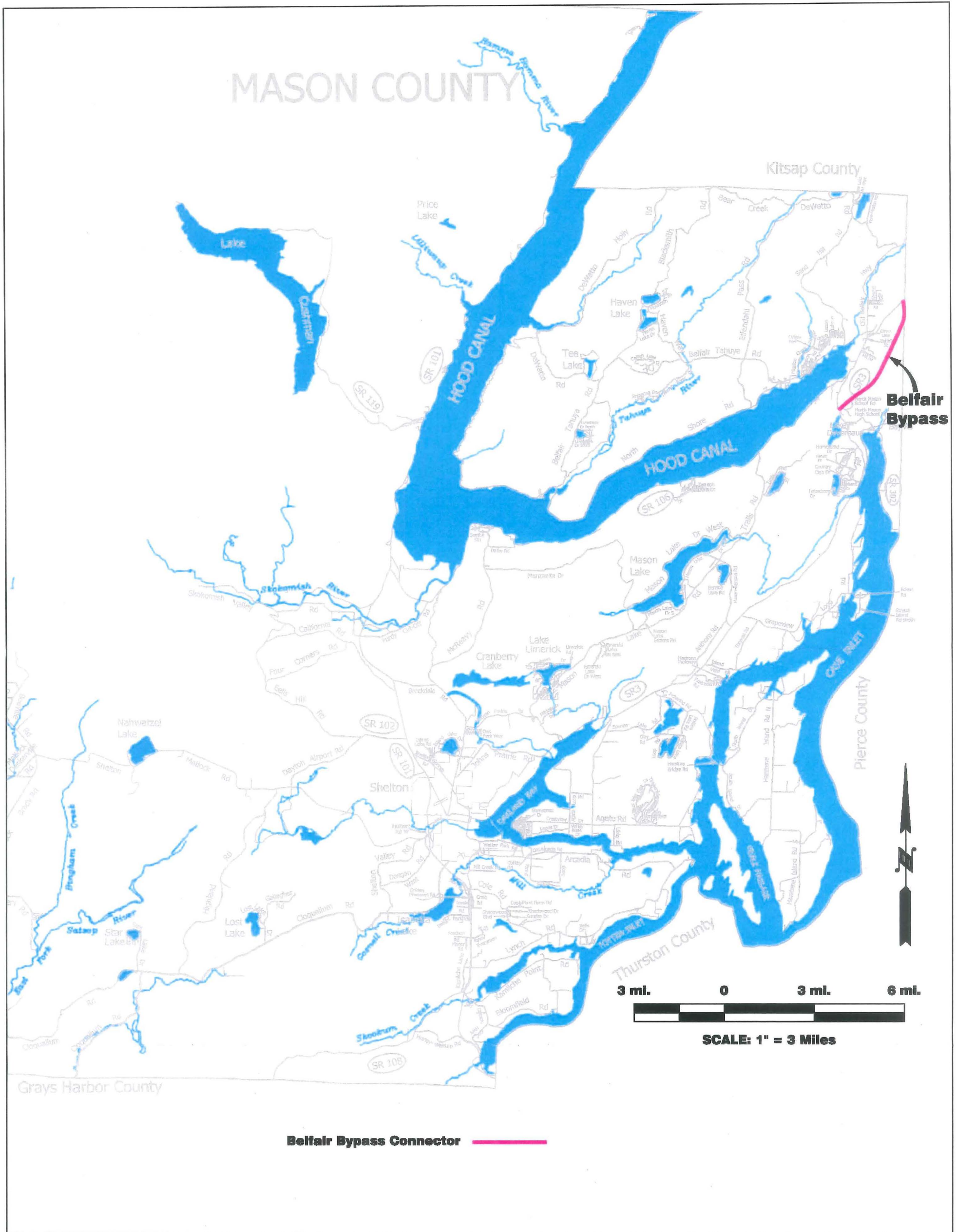
- NOTES:** (1) All dollar figures in thousands
 (2) PE = Preliminary Engineering
 (3) RW = Right of Way
 (4) Constr = CE + Construction
 (5) CE = Construction Engineering

APPROVED BY TIP-CAP

Date of Final Approval: _____

APPROVED BY BOARD OF COUNTY COMMISSIONERS

Hearing Date: _____
 Date of Final Adoption: _____
 Resolution Number: _____



Belfair Bypass Connector —————

**Figure VIII - 7-1
Mason County Transportation Element
Belfair Bypass Connector**



Nov 2005