Oregon
Theodore R. Kulongoski, Governor

Department of Land Conservation and Development
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NOTICE OF ADOPTED AMENDMENT

07/26/2013

TO: Subscribers to Notice of Adopted Plan or Land Use Regulation Amendments

FROM: Plan Amendment Program Specialist

SUBJECT: City of Falls City Plan Amendment
DLCD File Number 001-13

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. Due to the size of amended material submitted, a complete copy has not been attached. A Copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office. This amendment was submitted without a signed ordinance.

Appeal Procedures*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: Monday, August 12, 2013

This amendment was submitted to DLCD for review prior to adoption pursuant to ORS 197.830(2)(b) only persons who participated in the local government proceedings leading to adoption of the amendment are eligible to appeal this decision to the Land Use Board of Appeals (LUBA).

If you wish to appeal, you must file a notice of intent to appeal with the Land Use Board of Appeals (LUBA) no later than 21 days from the date the decision was mailed to you by the local government. If you have questions, check with the local government to determine the appeal deadline. Copies of the notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR Chapter 661, Division 10). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

*NOTE: The Acknowledgment or Appeal Deadline is based upon the date the decision was mailed by local government. A decision may have been mailed to you on a different date than it was mailed to DLCD. As a result, your appeal deadline may be earlier than the above date specified. NO LUBA Notification to the jurisdiction of an appeal by the deadline, this Plan Amendment is acknowledged.

Cc: Marjorie Mattson, City of Falls City
Gordon Howard, DLCD Urban Planning Specialist
Angela Lazarean, DLCD Regional Representative
Gary Fish, DLCD Transportation Planner

<paa> YA

Form 2 DLCD Notice of Adoption

This Form 2 must be mailed to DLCD within **20-Working Days after the Final Ordinance is signed** by the public Official Designated by the jurisdiction and all other requirements of ORS 197.615 and OAR 660-018-000

Jurisdiction: **City of Falls City**
Local file number: **LA 2013-01**
Date of Adoption: **7/11/2013**
Date Mailed: **2/1/2013**
Was a Notice of Proposed Amendment (Form 1) mailed to DLCD? ☒ Yes ☐ No Date:

☒ Comprehensive Plan Text Amendment
☐ Comprehensive Plan Map Amendment
☒ Land Use Regulation Amendment
☐ Zoning Map Amendment
☐ New Land Use Regulation
☒ Other: **Transportation System Plan**

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached".

Adoption of the City of Falls City Transportation System Plan (TSP); accompanying amendments to the Public Facilities and Transportation Elements of the Comprehensive Plan; and accompanying and implementing measures to the Falls City Zoning and Development Ordinance, including updating the notification of DLCD of proposed amendments from 45 to 35 days.

Does the Adoption differ from proposal? Please select one

Plan Map Changed from: to:
Zone Map Changed from: to:
Location: Acres Involved:
Specify Density: Previous: New:
Applicable statewide planning goals:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐

Was an Exception Adopted? ☐ YES ☒ NO
Did DLCD receive a Notice of Proposed Amendment...

35-days prior to first evidentiary hearing?	☒ Yes	☐ No
If no, do the statewide planning goals apply?	☐ Yes	☐ No
If no, did Emergency Circumstances require immediate adoption?	☐ Yes	☐ No

DLCD file No. _____

Please list all affected State or Federal Agencies, Local Governments or Special Districts:

Local Contact: **Marjorie Mattson** Phone: **(503) 540-1617** Extension:

Address: **100 High Street SE, Suite 200** Fax Number: **503-588-6094**

City: **Salem** Zip: **97301** E-mail Address: **mmattson@mwvcog.org**

ADOPTION SUBMITTAL REQUIREMENTS

This Form 2 must be received by DLCD no later than 20 working days after the ordinance has been signed by the public official designated by the jurisdiction to sign the approved ordinance(s)

per ORS 197.615 and OAR Chapter 660, Division 18

1. This Form 2 must be submitted by local jurisdictions only (not by applicant).
2. When submitting the adopted amendment, please print a completed copy of Form 2 on light green paper if available.
3. Send this Form 2 and **one complete paper copy** (documents and maps) of the adopted amendment to the address below.
4. Submittal of this Notice of Adoption must include the final signed ordinance(s), all supporting finding(s), exhibit(s) and any other supplementary information (ORS 197.615).
5. Deadline to appeals to LUBA is calculated **twenty-one (21) days** from the receipt (postmark date) by DLCD of the adoption (ORS 197.830 to 197.845).
6. In addition to sending the Form 2 - Notice of Adoption to DLCD, please also remember to notify persons who participated in the local hearing and requested notice of the final decision. (ORS 197.615).
7. **Submit one complete paper copy** via United States Postal Service, Common Carrier or Hand Carried to the DLCD Salem Office and stamped with the incoming date stamp.
8. Please mail the adopted amendment packet to:

ATTENTION: PLAN AMENDMENT SPECIALIST
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
635 CAPITOL STREET NE, SUITE 150
SALEM, OREGON 97301-2540

9. **Need More Copies?** Please print forms on 8½ -1/2x11 green paper only if available. If you have any questions or would like assistance, please contact your DLCD regional representative or contact the DLCD Salem Office at (503) 373-0050 x238 or e-mail plan.amendments@state.or.us.

STAFF REPORT

ADOPTION OF TRANSPORTATION SYSTEM PLAN
LEGISLATIVE AMENDMENT 2013 – 01

Staff Report: April 29, 2013
City Council Hearing Date (second of two sessions): May 9, 2013

APPLICANT:	City of Falls City
REQUEST	To adopt the City of Falls City Transportation System Plan (TSP), amend the Comprehensive Plan regarding Public Facilities and transportation related activities, and amend the Falls City Zoning and Development Ordinance (FCZDO). See Attachment A (replacement pages).
CRITERIA:	FCZDO--Section 3.206, Falls City Comprehensive Plan Goals and Policies (Public Facilities and Transportation Elements); and Statewide Planning Goals: 1 (Citizen Involvement), 2 (Land Use Planning), and 12 (Transportation)
ATTACHMENTS:	Attachment A: Draft Transportation System Plan (replacement pages for the document used at the April 2013 hearing) Attachment B: Draft Comprehensive Plan and FCZDO Amendments

STAFF REPORT FORMAT. *This staff report includes the following sections: background; appeal; review procedures; review standards and findings of fact; City Council options, and a recommended motion. The review standards provide the basis for making a determination under the land use process. The first of two sessions of the public hearing was conducted April 11th and the second and final hearing is scheduled for May 9th. In addition to the public hearing, the City Council also needs to pass an ordinance that adopts the TSP and the amendments to all the documents referenced in the Attachments. Staff listed the applicable sections of City and State documents that need to be addressed and a "finding" (response) to each standard or goal.*

I. BACKGROUND

In 2011, the City of Falls City was awarded a grant from the Oregon Department of Transportation (ODOT) and the Department of Land Conservation and Development (DLCD) under the Transportation Growth Management (TGM) Program to prepare the first Falls City Transportation System Plan (TSP). The City formed a Project Advisory Committee (PAC) in 2012 that included representatives from the Public Utility Committee, City Council, City staff, Polk County, Lukiamute Watershed Council, School District, and Fire Department. Selected State agencies were also involved in reviewing the materials prepared during the project. The PAC met on five (5) occasions over a year's period of time to prepare a final draft TSP for City Council review.

Two separate community-wide events that invited public review and comment were sponsored in the Spring and Fall of 2012.

The Transportation System Plan lists existing and future transportation needs/deficiencies and evaluates alternatives to address those needs. The project also results in a plan to address City transportation elements through the year 2036, including development of a finance program to assist in funding transportation improvement projects identified in the plan.

This is a legislative code amendment process that was preceded with a public open house and Council Work session in March 2013. City Council conducts public hearings in April and May to decide whether to adopt, modify, or not adopt the proposed TSP and accompanying Comprehensive Plan (CP) and FCZDO (Code) amendments. Council is also required to pass an ordinance to formally adopt the TSP and CP/Code amendments.

Potential Comprehensive Plan amendments include (as noted in the following summary):
*updating the Water System information to include the Polk County's analysis of the Valsetz Water Storage Concept;
*noting the City's efforts to update its Waste Water Master Plan;
*updating the City's contractor and solid waste/recycling services;
*updating the City's 911 and police services via Polk County Sheriff's Office;
*relisting equipment available to the Falls City Fire District;
*revising student population and facility list including transportation services for the Falls City School District;
*excerpting text from the Falls City draft TSP to revise the Transportation Element, adding a 2013 Street Plan map, updating functional classifications/designs for the City's street system, listing potential street improvement projects, providing additional references to travel lanes for bicycles, and adding text to address recreational trail opportunities;
*adding the City's addition of an electric car-charging station;
*revising financing options based upon changes to Federal and State funding sources; and
*explaining a potential local transportation system revenue option entitled a Transportation Utility Fee (TUF).

Potential Zoning and Development Ordinance amendments include (as noted in the following summary):
*adding a definition for "hostel" as an potential new use within the Commercial Residential zone district based upon utilizing a conditional use application process for considering such a request,
*clarifying vehicle parking spaces and adding requirements for on-site bicycle parking facilities at the time of development, and
*revising the required notice of the Department of Land Conservation and Development of City land use document changes to be consistent with the State's requirement of providing a notice 35 days prior to the first evidentiary hearing.

Amendments to the staff report for May public hearing include a draft cover page, a revised table of contents, maps changes (to better allow printing in black and white), and some table heading and identification changes. No text changes were made to the findings in the April public hearing. The May hearing staff report is revised to indicate the Council's action at the first hearing.

II. APPEAL

If the City Council adopts the TSP and document amendments to the City's Comprehensive Plan and Zoning and Development Ordinance, the City notifies the Oregon Department of Land Conservation and Development (DLCD) regarding approved Code amendments within five (5) working days of the final decision. The DLCD notifies parties of the City's final decision and provides an opportunity for individuals to comment.

III. REVIEW PROCEDURE

The Falls City Zoning and Development Ordinance outlines the process for these types of amendments. According to FCZDO Section 3.106, a Type IV action is a legislative review in which the City considers amendments to the text of the Zoning and Development Ordinance which affect a group of properties or a large area of the City Comprehensive Plan. Notification of the public hearing and the hearing procedures are as indicated in the FCZDO, subsections 3.106 B. and C.

IV. REVIEW STANDARDS & FINDINGS OF FACT

TRANSPORTATION SYSTEM PLAN (TSP) AND COMPREHENSIVE PLAN

The proposal is to amend portions of the City's Public Facilities and Transportation Elements and to adopt a Falls City Transportation System Plan (TSP)—a reference document to the Comprehensive Plan. Criteria for review of a Comprehensive Plan amendment are as follows:

The proposed amendment is consistent with applicable goals and policies of the Comprehensive Plan.

Findings: One of the goals of the Comprehensive Plan/Public Facilities element is to provide for . . . orderly. . . and efficient delivery of services. Updating the status of the current City facilities and services allow communication among the cooperating parties and entities.

Selected goals and policies of the Transportation Element were reviewed. The first applicable goals is to "provide a circulation system which is safe and efficient for vehicles users, pedestrians, and bicyclists." In developing the TSP, the planning committee and review members considered safety elements and maintained a focus on including all modes of travel.

Another City goal is considering "methods to create a more equitable and cost effective system of financing street development and improvements." Multiple funding sources and finance options were considered and are listed in the TSP and Comprehensive Plan. Additional categories were added to the local street system to allow for lesser standards in an effort to provide in more places throughout the City widened street areas to provide pedestrian and bicycle travel outside the vehicle travel lanes. Alternatives designs were considered and recommended to provide for a

safer intersection north of the bridge crossing on Bridge Street near its intersection with N. Main and Mitchell Streets. A list of potential street improvement projects and estimated costs are included in the TSP. The City can then consider based upon available funds or grants improvements to begin and complete projects within a 20-year time period.

At the time of development or at the time funding becoming available, the City can also consider future street connections to better design connectivity within the community for both drivers and pedestrians. Presenting future streets helps to guide development as it occurs—another Transportation Element policy. Noting a recreation trail also provides an alternative route for connecting citizens and visitors with City services, businesses, and other points of interest.

The proposed amendment is not in conflict with the Statewide Planning Goals, applicable Oregon Administrative Rules, or State statutes.

Findings: Goal 1 requires a program for Citizen Involvement. The involvement has been implemented throughout the planning and now pending implementation process. Two public outreach events were conducted in the spring and fall of 2012 and several presentations were made at City Council meeting to provide progress reports regarding the draft of a TSP. An open house and work session were conducted in March 2013 and two sessions of a public hearing are conducted on April 11th with the final hearing scheduled for May 9th. The City Council serves as the review body at both public hearings.

Goal 12 (Transportation) is "to provide and encourage a safe, convenient and economic transportation system." Using ODOT's Transportation System Planning Guidelines 2008, the planning committee reviewed the background materials and assessment of the City's current transportation system to include in the TSP and summarize in the Comprehensive Plan, Transportation Element, to recommend projects and measures for future improvements over a 20-year period of time to help create and form a City's transportation system toward allowing a safe, convenient, and economic system.

There is a public need for the proposed amendment.

Finding: Several years ago the City adopted a Street Improvement Plan that started the process to consider the City's needed transportation system improvements. The Transportation System Plan (TSP) refines the earlier planning and prioritizes recommended improvements for all modes of travel and includes potential funding sources that could allow the City to incrementally begin constructing/installing needed changes.

ZONING AND DEVELOPMENT ORDINANCE AMENDMENTS

The criteria in Section 3.207 applicable to zone changes apply to changes in the zone districts applied to property. Therefore, because there are no proposed zone changes, the text amendments are reviewed using the applicable criteria that address a Comprehensive Plan amendment.

The proposed amendment is consistent with applicable goals and policies of the Comprehensive Plan.

Finding: One of the Transportation Element policies is to have new construction "provide bicycle and pedestrian facilities" including for residential, commercial, industrial, and public uses. Clarifying the vehicle and parking requirements helps meeting that policy. Another policy is to "consider a reduction of rights-of-way and paving widths." For local streets lesser widths are proposed for both ROW and paving requirements.

The proposed amendment is not in conflict with the Statewide Planning Goals, applicable Oregon Administrative Rules, or State statutes.

Finding: Statewide Planning Goal 2 addresses the land use planning process. For the City to be consistent with State requirements, the FCZDO is being amended to require 35 days versus the 45 days for notifying the DLCD when land use planning documents are proposed for adoption or existing planning and implementation requirements are being amended.

The proposed amendments support State required notification in regards to City-initiated amendments to its land use planning documents. In addition, the amendments support alternate modes of travel as presented in Statewide Planning Goal 12: Transportation.

City staff, the Project Advisory Committee, and consulting staff members used the ODOT document Transportation System Planning Guidelines (2008) in the development of the draft TSP and accompanying summarized Comprehensive Plan amendments.

There is a public need for the proposed amendment.

Findings: The City and many of its citizen and volunteers periodically explore and discuss City amenities that can be used to attract visitors to the community. City recreational opportunities including its parks, natural areas along the river, the water fall, and the Black Rock Mountain Bike area are all included as featured amenities. Allowing for an additional uses within the Commercial Residential district by providing lodging arrangements for individuals who enjoy the outdoors and travel to the community or with bicycles is advantageous.

In the City's effort to reduce vehicles trips and increase alternate modes of travel, requiring the installation of bicycle parking facilities at the time of development or redevelopment encourages more bicycle ridership by both citizens and visitors. At TSP planning meeting, members raised concern about the competition for what is perceived as limited parking facilities within the commercial sections of the City. Creating bicycle parking can help increase the number of both on- and off-street vehicle parking spaces.

PUBLIC WORKS DESIGN STANDARDS
(To be added later and can be considered outside the land use planning process.)

V. CITY COUNCIL OPTIONS

A. Approve the amendments as presented in Attachment A (April 11, 2013) with the changes as presented in the replacement pages (Attachment A- May 9, 2013) and Attachment B (Comprehensive Plan and Zoning and Development Ordinance amendments), or

B. Approve the amendments with modifications to Attachments A and B (stating the revisions and the findings for the change(s)), or

C. Deny the amendments as presented in Attachments A and B stating how the proposed amendments do not meet a City or State standard, goal, or policy and identifying the applicable provision not met.

LEGISLATIVE LAND USE ACTION RECOMMENDED MOTION:

I move that the City Council approve Legislative Amendment 2013-01 to adopt the City of Falls City Transportation System Plan (TSP); amend portions of the Falls City Comprehensive Plan Public Facilities and Transportation Elements as presented in the staff report; and amend the Falls City Zoning and Development Ordinance (FCZDO) based upon the findings as presented in the staff report and as presented in Attachments A (April and May hearings) and B.

ATTACHMENT A

FALLS CITY TRANSPORATION SYSTEM PLAN (TSP) as presented at the April 2013 hearing.

Also see replacement pages presented with the May hearing staff report as Attachment A.

ATTACHMENT B

Comprehensive Plan – Section 1 – Public Facilities Element – Water System

Polk County Water Storage Concept
In 2011, Polk and Lincoln Counties presented a Valsetz Water Storage Concept Analysis (www.co.polk.or.us/cd/ch/valsetz-water-storage-concept-analysis). The two counties are facing increased water demand and scarce water supplies. "Both counties have worked collaboratively to explore whether a water storage reservoir on the South Fork Siletz River at the site of the historic town of Valsetz could meet water demands projected for 2050 for water providers and agricultural users. This potential storage facility would be located near the coastal mountain divide. Impounded water would be diverted to the west to serve Lincoln County and east to serve Polk County."

The purpose of the study was to "conduct an appraisal level assessment of potential environmental effects and benefits of the Valsetz water storage project. The assessment focuses on three storage concept alternatives determined by dam height and reservoir storage." Study analysis served as "preliminary, concept-level review of the resources that may be affected if a project were developed. The initial investigation" relied on "existing information, an extremely limited amount of field data and some preliminary modeling and analysis. This is a first step in understanding potential effects in the area that would be inundated by a project and the Siletz and Lukiamute Rivers."

Although City representatives are aware of the Valsetz Water Storage Concept, interested City officials and citizens need to continue monitor and consider involvement in the currently on-going development discussions.

(Note: Insert map presented at April 2013 hearing.)

Comprehensive Plan – Section 1 – Public Facilities Element – Sewage Treatment Facilities

B. SEWAGE TREATMENT FACILITIES

1. System Planning

Note: In 2013 the City was finalizing an update to the its Wastewater Master Plan with an anticipated adoption date of during the summer of that same year. Upon adoption, the Master Plan is used as an additional reference for analysis of its sewer treatment facilities.

D. SOLID WASTE FACILITIES & SERVICES

The City of Falls City does not have a solid waste disposal facility. Republic Service of Dallas/Allied Waste Division (www.disposal.com) provides the solid waste disposal service for the City. The company disposes waste at the Coffin Butte landfill north of Corvallis. According to the City's 2001 version of the Comprehensive Plan, Valley Landfills, Inc., expects the Coffin Butte site to have a 30 to 50 year service capacity.

The City's 2001 Comprehensive Plan indicated that no recycling programs were available to its residents. Since that the time the City now contracts for curbside co-mingled recycling but does not provide for recycling of lawn debris.

Republic Service of Dallas/Allied Waste Division currently has representation on the Mid-Valley Garbage and Recycling Association, a group for companies transporting solid waste.

E. POLICE SERVICES

Willamette Valley Communications Center and Polk County Emergency Services both provides the emergency (911) communications services to the area. The Communications Center and Emergency Services receives all emergency calls and off-hours business calls. The Communications Center also dispatches the officers from the County Sheriff's Office, Falls City Fire Department, and the Rural Fire District.

Falls City residents may call either call 911 or the Sheriff's office directly based upon the severity of the issue. Polk County Sheriff's office offers an on-line reporting system via http://www.co.polk.or.us/sheriff/report-crime and a list of reportable crimes may be accessed via http://www.co.polk.or.us/sheriff/crimes-available-online-reporting.

Additionally, the Polk County Sheriff's Office will continue participation in Polk County major crime team, the multi-disciplinary Child Abuse Investigation Team, Western States Information Network (W.S.I.N.), the Oregon State Sheriff's Association, and the Oregon Narcotics Enforcement Association.

F. FIRE SERVICES

The Falls City Fire Department (FCFD) provides fire protection for the City and is notified by Willamette Valley Communication Center (WVCC) that is an enhanced 911 call-center. The FCFD service area includes areas outside the City limits through contract with the Southwest Rural Fire Protection District

(SRFPD). The fire department has an average staff of 30 volunteers. The Chief and Assistant Chief are volunteer positions.

The Insurance Service Office (ISO) reviews fire districts/departments and applies a fire suppression-rating schedule. Before assigning the rate, the ISO evaluates fire protection services based upon the available water supply, ability to transport water, the number and type of trained personnel, type of available equipment, and handling emergency alarms. Rating ranges from one (1) to ten (10) with number one (1) being the best and number 10 being the worst. In 2011, the City's fire ISO rating was five (5).

Apparatus available to the district in 2013 includes the following:
SRFPD: Engine 121, Tender 124, Tender 125, and Duty 127, and
FCFD: Engine 122 and Engine 123.

The two (2) City engines hold 1400 gallons of water. Engine 122 holds 750 gallons of water and Engine 123 holds 650 gallons of water. Each engine carries multiple lengths of hoses and sizes. Both engines carry a variety of fire suppression equipment including wild-land firefighting equipment and medical equipment.

The Falls City Fire Department's mission is to provide services in these three areas:

- Protect life and property from destructive fires.
- Provide non-transported emergency medical services.
- Actively educate the community and its schools about fire prevention.

G. SCHOOL SYSTEM

Falls City School District #57 was formed in 1885. The District is a separate governmental agency within the community.

Total enrollment in the School District during the 2012-2013 (January 2013) school year was 133 students in grades Kindergarten through 12th with an additional 15 students participating in the pre-Kindergarten program. Over the last ten (1) years, the School District has experienced a decline in student enrollment.

Currently, the school district uses four (4) buildings – the elementary school that houses grades K-8, the high school (grades 9 through 12), the gymnasium, and a shared-use building. Half of the building is the location of the Wagner Community /High School Libraries—both of which are operated by the School District. The other portion of the building is utilized as the Science classroom and lab.

The grade school, 177 Prospect Street, is located on the south side of the street and west of Boundary Street. The high school, 111 N. Main Street, is located on the south side of the street and east of Boundary Street.

Transportation services for the School District are contracted through Mid Columbia Bus Company with an office in Dallas, OR, and the main office being in Pendleton.

City of Falls City
Comprehensive Plan
Amendments made as part of the adoption of the City's 2013 TSP

TRANSPORTATION ELEMENT

This chapter of the Falls City Comprehensive Plan provides a guide for improvement of the City's streets and circulation system. Consideration of other modes of transportation is also incorporated into the Plan.

Street Network Plan

In 2010, the City of Falls City adopted a "Street Improvement Plan" that first developed a street network plan and evaluated how well the City's transportation system might serve existing and planned development. The evaluation process consisted of reviewing how the proposed street network achieves stated goals and objectives in light of the projected build-out of the urban area and projected 2015 traffic volumes. Other criteria included potential environmental constraints, overlapping jurisdictions, impacts on rural/resource lands and financial feasibility. The street network plan is was intended to: (1) provide the local jurisdiction and developers direction for the location of future streets; (2) ensure a safe and efficient street circulation system; (3) guide and assure the dedication or acquisition of rights-of-way for streets to establish adequate pavement widths; and (4) aid in the development of a capital improvement program including priorities for expenditures and design standards.

While the street network plan identified certain streets of particular importance for traffic circulation, most local streets are built as development occurs. It is important that the City requires local streets to connect with existing and planned streets wherever possible. Residential areas with only one primary access point places residents at risk in the event of a major emergency. Multiple access points, achieved through a well-connected street network, is important to ensure that emergency services are not cut off and that local access is not eliminated or greatly lengthened in the event that one access is closed. In addition, a well-connected street network with numerous alternative routes reduces the overall traffic volume on any one route which results in a more efficient use of existing transportation resources and also creates a more bicycle and pedestrian friendly environment. Good connectivity is achieved through the application of standards contained in the Falls City Zoning and Development Ordinance.

In 2013, under a grant provided by the Traffic Growth Management Program (funded by the Oregon Departments of Transportation and Land Conservation and Development), the City adopted its first Transportation System Plan (TSP). The TSP expanded the work completed by the 2010 Street Improvement Plan and provides a 20-year planning time frame.

Functional Classification of Streets

Streets serve a variety of needs including transportation through an area and direct access to adjacent property. In order to serve this wide range of uses effectively, the street network is designed to serve a primary function within a structural hierarchy. The street network plan should also achieve a balance between the demands for mobility and access.

The roadway functional classification system groups City streets into categories based upon the character of service they are intended to provide. Identification of the appropriate roadway functions is the basis for planning roadway improvements and establishing appropriate standards (right-of-way, roadway width, design speed).

The three (3) general types (that include sub-categories for local streets) of roadway functional classifications are described as follows:

- *Arterials* - Intra- and inter-community roadways connecting community centers with major facilities. In general, arterials serve both through traffic and local traffic. Access should be partially controlled with infrequent access to abutting properties.
- *Collectors* - Streets connecting residential neighborhoods with smaller community centers and facilities as well as access to the arterial system. Property access is generally a higher priority for collector versus arterials; through-traffic movements are served as a lower priority.
- *Local (Minor) Streets* - Streets within residential neighborhoods connecting housing (also can be commercial, industrial, etc.) with the arterial system. Property access is the main priority; through traffic movement is not encouraged. Sub-categories include Local Street with a "Walkway," Local Street with a "Shoulder," and allowances for street configuration in the form of a cul-de-sac.

Inventory and Evaluation of the Street Network

The street network plan evaluates how well the City's street system can accommodate existing and projected future traffic volumes. Based on the functional classifications identified above, the City's arterial network is designed to provide a higher level of mobility than collectors and local streets by carrying the highest traffic volumes and the longest trip lengths. As a result, capacity deficiencies on the arterial system will also affect the performance of the local and collector street systems as well. An inventory of the City street system included in the 2010 Street Improvement Plan is provided in **Transportation Element – Table 1** (at the end of the Transportation Element).

The following describes the functional classifications of the street system:

Arterial Streets

The City has designated the following streets as arterials within the City limits:
- Bridge Street,
- Main Street, North (N. Main Street),
- Main Street, South (S. Main Street),
- Mitchell Street, and
- Sheldon Avenue.

Collector Streets

The City has designated the following streets as collectors within the City:
- Chamberlin Road,
- Clark Street,
- Ellis Street,
- Fairoaks Street (5th to Ellis Street)
- Lombard Street,
- Montgomery Street,
- Parry Street,
- 5th Street (from Mitchell to Fairoaks Street).

Local Streets

Local streets comprise the remainder of the City's street system. These streets provide direct access to the adjoining land uses and efficient connectivity to the City's collector streets.

Traffic Circulation

Transportation Element - Figure 1 includes a map of the existing City street network, identifies functional classification, and future streets. **Figure 2** includes a map of the streets paved and unpaved streets within City limits for the year 2013.

Streets in the northern part of the City are laid out in a grid pattern. In the southern part of the City, streets are in a more irregular pattern. Traffic circulation is impeded in the City, not by high traffic volumes, but because of limited development of platted streets. Many streets only have a paved or graveled area wide enough to accommodate one car at a time. In many cases, street right-of-ways have not been developed for the full length of the street, leading to streets that dead-end or exist only on paper.

Another issue that impacts traffic circulation is the lack of vehicle bridges over the Little Luckiamute River. There is only one bridge that allows automobiles to travel over the river – Bridge Street. If the Bridge Street bridge were damaged or destroyed, residents and visitors of Falls City would have to venture several miles outside City limits to travel between the north and south portions of the City. All emergency response vehicles must also take Bridge Street. Two pedestrian-only bridges are located at the south terminus of Third Street and Dayton Street. The Dayton Street Bridge was once used for vehicles. The City would like to develop a secondary vehicle access across the Little Luckiamute River within the City limits.

A long-term (10-20 years) transportation improvement was identified by the City in 2013 to address the intersection of the N. Main/Bridge Street/Mitchell Street intersection. The project description is as follows: Reconfigure the intersection to provide a more defined and delineated Mitchell Street approach. Provide curb modifications to shorten the Mitchell Street pedestrian crossing. Combine the Mitchell Street left and right-turn lanes into one single lane. An estimated capital cost was $9,000. See **Transportation Element, Design 1,** that graphically presents the recommend re-alignment delineated over an intersection aerial photograph. **(Note: Insert Map presented at April 2013 hearing.)**

Street Signage

The 1998 Falls City Strategic Plan identified the need to improve street signage in the City. Street signs do not mark many of the streets in town. In many cases the signs are broken, faded or simply missing, making it impossible for out-of-town visitors to find their way around. The strategic plan recommends replacing signs in the downtown core area (some replaced in 2000 but more work could be done) and constructing directional signage to Falls City Parks.

In 2013 in conjunction with the City's adoption of a TSP, the City confirmed the need to replace any deteriorating street signs in the downtown core area, expand uniform street identification signs throughout the City, and provide directional and wayfinding signage to Falls City parks and other City points of interest.

Street Addressing

An issue related to street signage is the process of assigning street addresses to new development. Several properties within the City have addresses that do not follow the standard street addressing grid pattern.

Improper street addressing makes it difficult to find locations within the City, and can present a safety hazard in the event of an emergency.

Electric Car-Charging Stations

In January 2013, the City of Falls City located two (2) electric car-charging stations at City Hall (299 Mill Street). The stations are Level II chargers, meaning a full charge takes about two (2) hours. The locations are listed on both National and State maps. After the City filed an application, installation costs were paid for through an incentive program sponsored by the U. S. Department of Energy.

Transportation Element - Figure 1 – 2013 Falls City Street Plan
(Note: Insert Map presented at April 2013 hearing.)

Transportation Element – Figure 2 – 2013 Falls City Paved Streets
(Note: Insert Map presented at April 2013 hearing.)

The purpose of the Street plan is to identify future rights-of-way that the City may need for circulation and to maintain, to the extent possible, a balanced street network in accordance with the Oregon Transportation Planning Rule (TPR). The plan designates:

1. where existing streets could be developed to collector/arterial street standards;
2. where new local streets could be located to provide better connection between existing streets (grid infill); and
3. where new local streets could be located to provide adequate connection to significant local destinations for both automobiles and pedestrians.

Transportation Element - Figure 1 provides Street Network Plan. Locations for the right-of-way and improvements were identified based on review of the existing street grid, existing parcel boundary locations, physical constraints (such as steep slopes and floodways that might preclude economical road construction), and research on existing rights-of-way.

If the City determines the need for additional rights-of-way (ROW), ROWs are generally placed along current parcel boundaries to facilitate dedication as development occurs. Existing parcels are traversed (where necessary) in a configuration that should be conducive to future development. Layout of additional local roads should remain flexible and be performed by local developers to suit market and site constraints. However, suitable pedestrian accessways to all sides of the street network are required to the maximum extent possible.

As development occurs, the street plan will continue to be refined as the site constraints and opportunities of each property are addressed. The plan is intended to provide some flexibility in alignments and primarily serve to define the desired level of connectivity in each area. The City's maximum block length standard of 1,000 feet helps provide a consistent tool to evaluate modifications to the future street plan as development occurs.

Potential Bypass/Truck Route—

Large truck traffic through Falls City generally consists of logging trucks and delivery vehicles. Currently truck traffic travels through the City using the arterials Mitchell and N. Main Streets, in addition to Chamberlain/Bridge Street from the south.

During the development of the City's TSP the potential development of a truck by-pass to route truck traffic out of the downtown, off Chamberlain Road and Mitchell Streets and along the periperhy of the City limits was discussed. Local access to these roads would be severely limited to protect the through movement of these streets. A future roadway may also provide a secondary bridge access in the vicinity of Waymire Road to aid emergency response efforts. Because the roadways adjacent southerly and easterly City limits are under the County's jurisdiction--the roadways that could potentially be used to re-route truck traffic--the City needs to enter into discussion with Polk County staff prior to any designating any truck routes. For reference purposes, see an excerpted portion of the Polk County 2009 TSP roadway map-**Transportation Element, Figure 3**.

Due to the economic, financial and political implications associated with creating a by-pass, further transportation analysis is needed. Prior to designating a truck by-pass, the City needs to consider potential impacts to the commercial viability of the downtown associated with creating a bypass. While the creation of a truck by-pass would help slow the deterioration of Main Street and create a more pedestrian-friendly downtown, it can also divert other vehicle traffic, thereby reducing the visibility and commercial viability of the downtown. Further transportation analysis is also needed to determine any optimum alignment **of the bypass.**

Street Standards

Oregon Administrative Rules (OAR), Chapter 660, Division 12, Section -045, Paragraph (3)(b)(D) require local governments to establish their own standards or criteria for providing streets, while Paragraph (7) states that local governments shall establish standards for local streets and accessways that minimize pavement widths and total right-of-way consistent with the operational needs of the facility. Paragraph 7 also states that this requirement need not be adopted as land use regulations.

As determined during the development of the City's TSP, Section 4 of the Falls City Zoning and Development Ordinance, includes the following street standards:

TRANSPORTATION ELEMENT – TABLE 2
STREET RIGHT-OF-WAY AND WIDTHS

Arterial	60 feet	40 feet	[1]	[1]	None	Optional	5 feet	5 feet
Collector	60 feet	40 feet	[1]	[1]	Both Sides	Optional	5 feet	[1]
Local Road (with Walkway)	50 feet	32 feet	2 Lanes	None	One Side	Optional	5 feet	[2]
Local Road (with Shoulder)	40 feet	24 feet	2 lanes	None	Both Sides[2]	None	-	-
Residential Cul-de-sac (Length > 200 ft)	50 feet	30 feet	-	-	None	Optional	5 feet	-
Residential Cul-de-sac (Length < 200 ft)	45 feet	30 feet	-	-	None	Optional	5 feet	-
Alleys	20 feet	20 feet	-	-	No	No	No	No

[1] The number of travel lanes for Arterial and Collector roadways shall be determined by the volume of traffic. The City may require additional turning lanes based on situational analysis or a traffic engineer's report evaluating the need for additional turning lanes.
[2] 8' shoulder that could be used as an on-street parking lane or a pedestrian/biking walkway.
[3] Traffic volumes are projected to be low enough such that vehicles and bicyclists can share the travel lane.

See **Transportation Element – Figure 4 – Street Configuration by Functional Classification.**
(Note: Insert Map presented at April 2013 hearing.)

BIKE/PEDESTRIAN NETWORK

With the exception of several small trails in the City parks there are no bicycle facilities and few pedestrian facilities in the City. A revitalization project completed in 2002 added pedestrian facilities in the downtown area of Falls City. These pedestrian improvements included sidewalks, Americans with Disability Act (ADA) compliant curb cuts and curb extensions at intersections.

In the 1998 Falls City Strategic Plan, the City identified a goal of building a pedestrian network for Falls City. Currently, pedestrians from the City's neighborhoods must negotiate a maze of disconnected sidewalks to walk to important destinations such as the North Main Street downtown district (City Hall, Falls City High School, grocery store and churches), and post office. Even on Falls City's most traveled roads, in most cases, pedestrians must walk in the roadways to reach their destinations. This situation is made all the more dangerous by the high volume of logging traffic that threads its way through the City on any given day.

To alleviate these issues, the City is proposing to develop pedestrian networks on the south and north sides of town. On the south side of town, the goal is to develop a pedestrian route from residential areas to the downtown core area. Currently many "southside" residents use the Bridge Street vehicular bridge to cross to the north side of the City. Sidewalks on the vehicular bridge are very substandard; specifically, they are 3.5 feet wide, elevated over one foot off the roadway, and without ramps for persons in wheelchairs. This bridge is particularly hazardous due to the high volume of truck traffic that crosses the bridge every day.

In an effort to address the substandard sidewalks on the bridge, the City's pedestrian network plan calls for pedestrian traffic bound for the north side of the City to be diverted away from the vehicular bridge on Bridge Street and over to the pedestrian bridges on Dayton and Third Streets. To accomplish this, the City proposes to build new sidewalk and repair existing sidewalk on South Main Street (the street that runs

parallel to the river), Bridge Street, and Lombard Street and on the north and south approaches to the Dayton Street Bridge. Upon completion of this element of the project, pedestrian traffic is collected from the south side's residential neighborhoods onto the Bridge Street and Lombard Street collectors. From Bridge and Lombard Streets, pedestrians will make their way down to South Main Street where they may safely access the Dayton or Third Street pedestrian bridges. (Note: Due to the steps in the design of the Third Street bridge, the Dayton Street bridge provides better accessibility.) These improvements, a mix of construction of new sidewalk, and repair of existing sidewalk, enables Falls City's "southside" citizens to get to the downtown core without walking on the City's busier roads.

The City also proposes to complete a new section of sidewalk directed eastward that will connect existing sidewalk adjacent the post office on Parry Road with existing sidewalk on South Main Street.

Improvements to the development of a pedestrian network on the north side of town include the continuation of sidewalk improvements along North Main Street and the installation of an ADA accessible ramp at the crosswalk in front of Prospect Street Grade School. Currently, individuals with disabilities are unable to cross the street between the grade school and the school playground without outside assistance due to the absence of an ADA ramp. As previously stated, sidewalks along portions of North Main Street were developed with the downtown improvements in 2002.

The City does not have the resources to develop all of the proposed pedestrian or bicycle facilities. Some pedestrian or bicycle facilities may be constructed as land is developed. Section 5.030 of the Falls City Zoning and Development Ordinance requires construction of sidewalks as a condition of approval for land divisions. In areas of the City that are already developed, funding for pedestrian or bicycle facilities must be obtained through grants or loans.

Potential pedestrian and bicycle improvements were further examined when the City developed its Transportation System Plan in 2013. **Transportation Element, Table 3**, indicates potential improvement projects by location; describes the projects, estimates project and rights-of-way costs in 2012 "dollars;" and identifies whether the project is near term (5 to 10 years) or far term (10 to 20 years). Also see **Transportation Element, Figure 4**, that indentifies the location of the potential improvements projects. (Note: Insert Map presented at April 2013 hearing.)

RECREATIONAL TRAIL SYSTEM

The City of Falls City is located near and has roadway access to the Black Rock Mountain Bike area with the trailhead located approximately three (3) miles west of Falls City. The area offers multiple trail systems, featuring four (4) main trails available for beginner to advanced riders and covering approximately nine (9) miles. A parking area (if used without driving or parking past a private camp archway) is available at the edge of Camp Tapawingo. Riders may cycle on Socialist Valley Road through the camp while staying on the roadway.

The trail system (located on 500 acres of property under the jurisdiction of the Department of Forestry—DOF) is built and maintained by a non-profit organization—Black Rock Mountain Bike Association (BRMBA). The discussion for development of a bike trail system began with the DOF in the year 2000.

The City of Falls City in 2012 discussed development opportunities in combination with the Black Rock Mountain Bike area. Topic ideas included potential use of abandoned railroad rights-of-way, development of multi-use trails paralleling sections of the Lukiamute River including areas adjacent the river within City limits, and development of staging/parking areas for shuttling riders to the Black Rock bike trails.

In regards to other multi-use paths, the City may explore the construction/installation of trails that connect City parks, the waterfall located within City limits, other sites of interest, and commercial activities within the community.

RAILWAY

There is no rail service to Falls City. Rail right-of-way transverses the City, but the tracks have been removed. There is no evidence to indicate that rail service will return to Falls City in the near future. There have been suggestions that the rail right-of-way be converted to pedestrian trails.

AIRPORT

The nearest airport is located 15 miles away in Independence. For commercial air travel, however, Falls City residents must travel over 70 miles to either Portland or Eugene.

PUBLIC TRANSPORTATION

Public transportation is not currently available in Falls City. The nearest public transportation system provides service between Dallas, Independence, Monmouth and Salem.

FINANCING

Transportation system improvements are usually capital-intensive projects that can place a great fiscal burden on a community. For this reason, transportation projects are often paid for using a combination of funding and financing. Funding describes methods that generate revenue for transportation projects. Financing refers to how projects are paid for over time.

The City can investigate a number of funding and financing sources to construct transportation improvement projects. The following is a list and brief description of transportation funding and financing opportunities. No effort has been made to screen alternatives according to their political or legal feasibility. The intent of the discussion is to provide an overview of a number of alternative revenue sources.

Federal Resources

The Federal government offers a variety of grant and loan program for transportation-related capital projects. As with all special assistance programs provided by State and Federal governments, funding for special projects is highly competitive. Two of the programs currently offered are the Transportation Investment Generating Recovery (TIGER) Program that provides grants, and the Transportation Infrastructure Finance and Innovation Act (TIFIA) that provides loans and other forms of credit assistance. (Note: There is speculation that the TIGER program will be discontinued in the future.) Also see MAP-21 listed below.

MAP-21 (Moving Ahead for Progress in the 21st Century).

The current federal transportation funding bill is the Moving Ahead for Progress in the 21st Century (commonly known by the acronym, MAP-21), which authorizes funding for the Nation's surface transportation programs. It was signed into law in July 2012 and replaced the expired Safe, Accountable

Flexible, and Efficient Transportation Equity Act: A Legacy for Users (commonly known by its acronym, SAFETEA-LU). The law establishes funding levels and policies for the federal government's highway, highway safety, transit, motor carrier, and some rail programs administered by the U.S. Department of Transportation (DOT). Funds to local agencies within the State of Oregon are primarily allocated by the Oregon Department of Transportation (ODOT) unless dedicated to a local agency through a specific project earmark. MAP-21 expires September 30, 2014. While previous transportation bills provided funding for six (6) years, MAP-21 is only for two (2) years, which many anticipate as the pattern for future Federal legislation.

Potential: The potential for Falls City to take advantage of the next bill will likely be through lobbying to get their projects on the next ODOT State Transportation Improvement Plan (STIP) and applying for funds dedicated to specific types of projects, such as pedestrian and bicycle projects or downtown revitalization. No specifics are available regarding how much funding will be available for local agencies. It is advisable that the City maintain contact of its representative to the Mid-Willamette Valley Area Transportation Committee (MWACT) in regards to the STIP planning and funding process(es). Representative information is available by contacting the Mid-Willamette Valley Council of Governments (MWVCOG), Transportation Section.

Community Development Block Grants (CDBG)

Some of the past grants to the City of Falls City have been CDBG Program funds, which are offered through the Federal Department of Housing and Urban Development. To receive CDBG funds, cities must compete for grants based upon a formula that includes factors such as rural/urban status, demographics, local funding match, and potential benefits to low-to-moderate income residents, including new job creation. CDBG funds can also be used for emerging public work needs.

Potential: In small rural communities this program has limited application but may be a source of street funds for roads serving new developments supporting job creation or multifamily housing. A CDBG grant was used in 2002 to help fund street improvement to N. Main Street.

Federal Economic Development Administration (EDA)

The Federal Economic Development Administration provides annual grant funding on a competitive basis for public works improvements that directly generate or retain jobs in local communities. These funds can be used for local utilities and transportation facilities that serve new development sites.

Potential: EDA funds are difficult to obtain but could be considered for targeted improvements for local industry expansion. Funding requests for EDA grants should be coordinated with Polk County and the OECDD.

State Funding Options

State Motor Vehicle Fund

The State of Oregon currently (January 2013) collects the following fuel and vehicles fees for the State Motor Vehicle Fund:

- State Gas Tax $ 0.30 per gallon

- Vehicle Registration Fee $86.00 per year for passenger vehicle

In addition, a weight-mile tax is assessed on freight carriers to reflect their use of state highways. A portion of the revenue from the fund is used by ODOT and distributed to cities and counties throughout the state with each City's distribution based on a City's share of statewide population, and the county distribution based on a county's share of statewide vehicle registration.

Existing Application: ODOT Region 2, Polk County, and the City of Falls City each receive funds from the state Motor Vehicle Fund. ODOT uses their allocation from the State Motor Vehicle Fund for maintenance and capital purposes. Polk County and the City of Falls City typically use their funding allocation for street maintenance; however it could be used for other types of projects such as pedestrian and bicycle projects.

Information on file (January 2013) indicates that the State distributes approximately 16 percent of the State Motor Vehicle Fund to cities and 25 percent to counties based on a per capita rate (cities) and vehicle registration (counties). The remaining amount in the State Motor Vehicle Fund is used to maintain and enhance the state highway system. The state operates a grant program available to cities for bicycle-related transportation system improvements and one percent of the fuel tax returned to cities and counties is designated for bike paths and lanes.

Potential: With an increase in population, number of registered vehicles, and fuel sales, the total revenue from the State Motor Vehicle Fund may rise but if the fees (tax per gallon) stay at current levels, there will be a reduction in buying power due to inflation and may be less revenue because individuals driving fewer miles due to higher gas prices. The gas tax will however continue to be a source of funds for the City of Falls City directly as well as through ODOT for highway and pedestrian and bicycle projects.

Special Public Works Funds (SPWF) and Immediate Opportunity Funds (IOF) — Lottery Program

Description: The State of Oregon through Business Oregon—Infrastructure Authority and the Oregon Department of Transportation provides grants and loans to local governments to construct, improve, and repair public infrastructure in order to support local economic development and create new jobs.

Existing Application: SPWF and IOF funds have been used in a number of cities for the construction of water, sewer, and limited street improvements.

Potential: These funds are limited to situations where it can be documented how a project will contribute to economic development and family-wage job creation.

Special Small City Allotment (SCA)

Description: SCA funding is available to incorporated cities with populations less than 5,000. This funding comes from state gas tax funds and provides grants up to $50,000 to selected cities. Cities are asked by ODOT annually to apply for funding for projects they select on their local street system. Cities can apply only if previous SCA Grants are complete and paid for. ODOT regions evaluate project proposals from each City and rank each proposal.

Application: Region 2 is allocated several grants per year for small cities. Falls City has received several SCA Grants through ODOT in the past for pavement maintenance and sidewalk projects. Funding was awarded for additional 2013 street improvements on Bridge Street from its intersection with S. Main Street/Parry Road to the intersection Terrace Street.

ODOT Enhancement and Fix-It Programs

In 2012, the Oregon Department of Transportation formed the Active Transportation Section in order to combine and promote programs that focus on multi-modal and sustainable transportation solutions. As a result, the Transportation Enhancement and Oregon Bicycle and Pedestrian Programs joined for the purpose of issuing grants. Through the Fix-It and Enhance Program communities can obtain funds to carry out a variety of pedestrian, bicycle, streetscape, and other sustainable transportation systems. Enhance is defined as activities that enhance or improve the transportation system and the Fix-It is activities that fix or preserve the system.

Existing Application: Applications filed with ODOT are reviewed and prioritized by the Area Commissions on Transportation (ACT) with the Mid-Willamette Valley ACT providing representation for the Falls City area. For projects proposed to begin construction in 2017-2020, applications are due in 2014 for inclusion in the State Transportation Improvement Plan (STIP) that is updated every two (2) years. Projects selected for funding are determined by the Oregon Transportation Commission (OTC).

Oregon Transportation Investment Act (OTIA)

Description: The goal of OTIA signed into law in 2003 is to provide a boost to the State's economy, ensure efficient delivery routes for products and services, and help solve city and county transportation challenges. More than half of the funding is designated for repairing and replacing bridges.

Existing Application: Funds are distributed by a formula: 40 percent to cities and 60 percent to counties. Local governments select individuals projects for city and county roads.

State Parks Funds

Description: Recreational Trails Grants are national grants administered by the Oregon Parks and Recreation Department (OPRD) for recreational trail-related projects, such as hiking, running, bicycling, off-road motorcycling and all-terrain vehicle riding. For additional details, contact the Department's web site: www.Oregon.gov/OPRD/Pages/index.aspx and "visit" the "grant categories."

Existing Application: OPRD gives more than $4 million annual to Oregon communities for outdoor recreation project, and has awarded more than $40 million in grants across the state since 1999. Grants can be awarded to non-profits, cities, counties, and state and federal agencies.

Potential: Funding is primarily intended for recreational trail projects. Eligible projects could include are a trail system paralleling the Lukiamute River and connecting City parks with the City with links to other points of interest.

Local Funding Options

The following programs are used by cities in the funding of transportation improvements.

General Obligation Bonds (G.O. Bonds)

Description: Bonds are often sold by a municipal government to fund transportation (or other types) of improvements, and are repaid with property tax revenue generated by that local government. Under Measure 50, voters must approve G.O. Bond sales with at least a 50 percent voter turnout.

Existing Application: Subject to voter approval, the City can issue general obligation (GO) bonds to finance capital improvements. Debt service for GO bonds is provided by a bond levy that increases property taxes outside the limitation of Measure 5.

Potential: Depending on (1) the criticality of the planned projects and (2) the willingness of the electorate to accept increased taxation for transportation improvements, voter-approved GO bonds may be a feasible funding option for specific projects. Proceeds may not be used for ongoing maintenance.

Serial Levy/Property Taxes within the Limits of Ballot Measure 50

Description: Local property tax revenue (city or county) could be used to fund transportation improvements through a serial bond levy.

Existing Application: Revenue from property taxes ends up in the local government general fund where it is used for a variety of uses. Precedents for the use of property taxes as a source of funding for transportation capital improvements can be found throughout the state. However, with the limitations resulting from Measure 50, use of property taxes for transportation capital improvements will continue to compete with other general government services under the three percent assessed value increase allowed by Measure 50 and the local tax limits of $15 per $1,000 of assessed value established under Measure 5. Under Measure 50, however, there is no limit on assessed value generated by new construction.

Potential: Because the potential for increased funding from property tax revenue is limited by Ballot Measures 5 and 50 and by competition from other users who draw funds from the general fund, it is not a practical source for financing major local street improvements but could finance a package of minor improvement projects.

Revenue Bonds

Description: Like general obligation bonds, revenue bonds are a form of debt that can be used to finance capital improvements. However, revenue bonds are secured and repaid not be a property tax levy but by a pledge on a specific revenue stream.

Existing Application: Revenue bonds are a common source of financing capital improvements in traditional utilities (water and sewer) where rate revenues can be pledged to repayment of the debt. Transportation utilities that impose fees for the maintenance of City streets are less common than traditional utilities, but they are becoming more numerous among jurisdictions in Oregon. (See TUF below for more details.) Fees generated by a transportation utility fee can be pledged to the repayment of revenue bond debt.

Potential: Once a transportation utility has a stable stream of rate revenue, the City Council can issue revenue bonds without voter approval. Interest rates depend on market conditions and the City's credit rating. Upon establishing a revenue bond, the City is required to comply with certain covenants (such as debt service coverage ratio) for the life of the bonds.

Local Transportation Utility Fee (TUF)

Description: A transportation utility fee is based on the fact that streets are utilities used by citizens and businesses just like a public water or sewer system. The general objectives are to (1) ensure reliable,

ongoing funding and property maintenance for the City's transportation infrastructure and (2) recover costs in a way that is equitable among users (rate equity).

Several potential rate structures often serve as the basis for a TUF with peak-hour and daily trips providing the strongest link between the charge basis and transportation costs. In a study completed by FCS Group in 2013 in conjunction with the City's preparation of its TSP, the consultants recommended using the number of daily trips generated by its customers (residences and employers).

Existing Application: This fee is used in many Oregon cities through a monthly fee charged to local dwelling units and businesses. Typically the revenue generated by these fees are used for operations and maintenance of the street system but the ability to use these fees for capital projects, including pedestrian and bicycle projects should be explored.

Potential: If the City Council chooses to adopt and ordinance initiating a TUF, FCS Group recommends a rate ranging from $3.00 to $5.00 per month with the options of charging only residential customers or both residential and non-residential customers.

Local Improvement District (LID)

Description: Oregon Revised Statutes (ORS) 223.387 to 223.401 authorizes local governments to have the ability to establish local improvement districts (LIDs) and levy special assessments on benefitted property to pay for capital improvements.

Existing Application: LID programs have wide application for funding new or reconstructed streets, sidewalks, water/sewer or other public works projects. The LID method is used primarily for local or collector roads, though arterials have been built using LID funds in certain jurisdictions.

Potential: LIDs continue to offer a good mechanism for funding projects such as new sidewalks and street surface upgrades. An example of a good application for an LID may be for sidewalk projects on collector streets. In the developed areas of Falls City where there are no sidewalks in front of existing developed properties, the City may be able to fund the cost of sidewalks on collector streets to provide a connected pedestrian system for current and future residents.

Specific procedures that are applicable to the City are found in Section 43 of its Charter and Chapter 3.12 of its Municipal Code.

Urban Renewal District

Description: ORS Chapter 457 authorizes cities and counties to establish urban renewal areas (URAs) in which a dedicated stream is known in statutory language as "division of taxes." When a URA is formed, the assessed value within the area's boundaries is frozen for the incumbent taxing jurisdictions. To the extent that assessed value rises above that frozen base, the URA receives the property tax revenue that all overlapping jurisdictions would have otherwise received.

Existing Application: Urban Renewal Districts have been formed in over 50 cities in Oregon, generally focused on revitalizing downtowns. Revenues generated can be substantial but by no means quickly raised. For that reason, capital improvements within a URA are typically financed with debt, and the tax increment is used to service that debt.

Potential: Urban Renewal dollars can be used to fund infrastructure projects such as roadway, sidewalk, or transit improvements. Falls City does not currently have an URA, but the City could consider one for areas that are expected to experience potential redevelopment over the next 10 to 20 years—areas with the potential.

Developer Dedications of Right-of-Way and Local Street Improvements

Description: New local streets required to serve new development areas are provided at the developer's expense to the City in accordance with the tentative and final plan approvals granted by the City Council.

Existing Application: Current City ordinance requires local streets and utilities to be provided in accordance with the adopted Land Use Plan, and the zoning ordinance and subdivision ordinance. This includes dedication of street/utility right-of-way and construction of streets, pedestrian/bicycle facilities, and utilities to City design standards.

Potential: Private developer street dedications are an excellent means of funding new local street/utility extensions, and are most effective if guided by a future street plan. This funding mechanism can apply to all new local street extensions in Falls City within the 20-year planning period.

Systems Development Charges (SDCs)

Description: Another option is to exact fees from developers to pay for off-site or oversize improvements. Sometimes fee systems generate money that goes into a common fund to pay for system wide capital facilities.

Existing Application: The Falls City Charter currently prohibits the collection of SDCs. Due to the limited availability of funds to construct street improvements, and limitations on the amount of exactions the City can require through the development review process, the City may want to consider amending this charter provision in the future.
Potential: SDCs can only be used to address growth-related transportation needs. SDC's cannot be used to fund any existing transportation deficiencies.

GOALS AND POLICIES

RECREATIONAL NEEDS

GOAL: To provide the necessary facilities, activities and programs to fulfill the recreational needs of community citizens and visitors from surrounding areas.

Falls City has many areas serving to fulfill the recreation needs of its residents. However, needs change over time and the city must keep aware of these changing needs. Recreation areas may serve as open spaces and as community centers that utilize residents' leisure time in constructive ways.

Policies

1. To annually update the review of the community's recreational needs, and adjust the corresponding priorities.

2. To establish an ongoing program of leisure-time activities for senior citizens and youth.

3. To encourage and support the provision and use of recreational facilities in nearby areas that would assist the local residents in meeting recreational needs.

4. To encourage a study toward the development of a multi-use trail that parallels the Lukiamute River and connects City parks, the falls, and provides areas for parking, staging, and/or transportation services to facilitate access to the Black Rock Mountain Bike area.

5. To support the construction of a trailhead at Michael Harding Park or adjacent city-owned land, with eventual connection to the Coast Trail proposal on file with Polk County.

TRANSPORTATION

GOAL

7. Continue communication with public transportation providers in an effort to seek such transportation services for the community.

18. The City will pursue traffic calming techniques for neighborhood and local streets so as to reduce travel speeds and dust and create a more livable neighborhood environment for residents.

IMPLEMENTATION

1. Identify streets, curbs, and sidewalks, bikeways and pedestrian ways that need repair/construction and including considering minimal improvements such as adding gravel surfacing on unimproved streets as the budgeting process allows. Prioritize multi-modal improvements into a capital improvement program.

Note: This is a change from the March work session version to "put on the record" the need to re-surface streets that currently do not have any improvements. The change may also help address air quality and maintain some equity in the distribution of funds for street improvements.

7. Monitor the need and periodically contact the Chemeketa Regional Transportation System (CARTS) and/or other providers to communicate with the agencies regarding the need to provide public transportation services to the City of Falls City to serve its "senior" population and those without access to personal vehicles.

FALLS CITY TSP
Draft Code Amendments
January 2013
RE. Hostels and use within Commercial-Residential (CR) zone

PROPOSED text is indicated in **bold/underline**
Text proposed for deletion is indicated by ~~strikeout~~

1.202.02 DEFINITIONS

Home Occupation: A legal occupation or profession carried on within a dwelling or a residential accessory structure by the resident(s) of the dwelling when such occupation or profession is secondary to the main residential use of the dwelling or accessory structure. The residential character of the property is maintained in a manner as not to give an outward appearance nor manifest any characteristic of a business in the ordinary meaning of the term. A home occupation shall not include the outside storage of equipment or materials.

Hostel: Accommodations where guests rent a bed mainly in a dormitory-style arrangement with shared restrooms, communal areas such as a lounge, and may include a kitchen.

Hotel: Any building in which lodging is provided to guest for compensation, and in which no provision is made for cooking in individual rooms.

2.102 COMMERCIAL-RESIDENTIAL ZONE (CR)

2.102.05 CONDITIONAL USES

The following uses are allowed subject to the provisions of Section 3.201, Conditional Use Permits, and completing a Site Design Review, subject to the provisions of Section 3.203.

A. Any conditional use permitted in the Residential Zone

B. Recreational vehicle park and/or campground facility, subject to the provisions of Section 2.209.05.

C. Hostels

Reletter C. through N. as **D. through O.**

C. Automobile, truck, motorcycle, trailer, recreational vehicle and boat sales and repair.

D. Retail tire sales, service and repair; tire recapping, service and repair, paint and body shop.

E. Automobile service station, including towing services and vehicle washing and polishing facilities, and services.

F. Part and accessory sales for automobiles, trucks, motorcycles, trailers, recreational vehicles and boats.

G. Lumber yard and contracting supplies for lumber, stone, masonry or metal (sales only).

H. Special trade contracting facilities, such as floor layering, building equipment, masonry and stone, plumbing, electrical, metal work or painting.

I. Welding shop and blacksmith where activities are conducted wholly within a building.

J. Newspaper, periodical, publishing and printing.

K. Tractor and farm equipment, logging equipment, sales and service.

L. Veterinary clinic.

M. Cabinet shop, conducted wholly within a building.

N. Tent and awning shop.

2.202 OFF-STREET PARKING AND LOADING

2.202.01 PURPOSE

The purpose of this Section is provide adequate means for parking, maneuvering, loading, and unloading vehicles **and bicycles** for all land uses in the City.

2.202.02 Location

Off-street parking and loading areas for **vehicles** shall be provided on the same lots with the main building or structure or use except that: (*no changes to A. and B.*)

2.202.03 Joint Use

Parking area **reserved for vehicles** may be used for loading area during those times that parking area is not needed or used. (*no changes to language of remaining paragraph*)

REQUIRED VEHICLE PARKING SPACES

A.	Residential:	
1.	One-family and Two-family Dwelling	2 **vehicle** spaces per dwelling unit.
2.	Multiple-family Dwelling	1.5 **vehicle** spaces per dwelling unit
3.	Boarding, Lodging or Rooming House	1 vehicle space per 2 guest accommodations
B.	Public/Semi-Public Uses:	
1.	Convalescent Hospital Nursing Home, Sanitarium, Rest Home, Assisted Living Facility.	1 **vehicle** space per 2 beds for patients
2.	Hospital	3 **vehicle** spaces per 2 beds.
3.	Library, Reading Room.	1 **vehicle** space per 400 square feet of floor area
4.	Day care facility	2 **vehicle** spaces per classroom.
5.	Elementary or Junior High School.	2 **vehicle** spaces per classroom.
6.	High School.	5 **vehicle** spaces per classroom.
7.	Other Places of Public Assembly, Including Churches.	1 **vehicle** space per 4 seats or 8 feet of bench length.
8.	Government Buildings	2 **vehicle** spaces per 600 square feet of floor area.
C.	Commercial Uses:	
1.	Theater, movie theater	1 **vehicle** space per 4 seats.
2.	Amusement and Recreational Services	1 **vehicle** space per 200 square feet of floor area.
3.	Retail Store	1 **vehicle** space per 300 square feet of floor area
4.	Service or Repair Shop; Retail Store handling exclusively bulky merchandise such as automobiles and furniture.	1**vehicle** space per 600 square feet of floor area
5.	Financial Institutions, Banks, Professional Offices	1 **vehicle** space per 500 square feet of floor area plus 1 space per employee
6.	Mortuary	1 **vehicle** space per 4 seats or 8 feet of bench length
7.	Motel or Hotel	1 **vehicle** space per guest room
8.	Restaurant	1 **vehicle** space per 3 seats or 6 feet of bench length

Add as Renumbered **8. Hostel 1 space per 4 beds**
Renumber current ~~8~~ as 9.

D.	Industrial Uses:	
1.	Manufacturing Establishment.	1 **vehicle** space per 25,000 square feet of floor area plus 1 space per 0.75 employees
2.	Wholesale Establishment, Warehouse, Rail or Truck Freight terminal.	1 **vehicle** space per 2,000 square feet of floor or storage area plus 1 space per employee.

REQUIRED BICYCLE PARKING SPACES

Type of Use	Minimum Number
Single-Family Residential	-0-
Duplex, Triplex, Multi-Family	Minimum of two (2) or one (1) per every two dwelling units, whichever is greater.
Retail, Office and Institutional	Minimum of two (2) or one (1) per every 20 vehicle parking spaces, whichever is greater.
Industrial	Minimum of two (2) or one (1) per every 40 vehicle parking spaces, whichever is greater.
Schools and Parks	Minimum of two (2) or one (1) per every 10 vehicle parking spaces, whichever is greater.

Note: Bicycle parking facilities minimum design guidelines:

1. All bicycle parking shall be within one hundred (100) feet from a building entrance and located within a well-lit and clearly visible area;
2. Bicycle parking shall be convenient and easy to find. Where necessary, a sign shall be used to direct users to parking facility;
3. Each bicycle parking space shall be at least two (2) feet by six (6) feet with a vertical clearance of 6 feet;
4. An access aisle of at least five (5) feet shall be provided in each parking facility; and
5. Bicycle parking facilities shall offer security in the form of either a lockable enclosure in which the bicycle can be stored or a stationary object, i.e., a "rack," upon which the bicycle can be locked. Structures that require a user-supplied lock shall accommodate both cables and U-shaped locks and shall permit the frame and both wheels to be secured (removing the front wheel may be necessary.) Note: businesses may provide long-term, employee parking by allowing access to a secure room within a building.

2.204.04 Off-Street Parking Requirements

Off-street vehicle parking shall be provided as required by Section 2.202.07, Design Requirements, and approved by the City in the amount not less than listed below. *(Text of remaining paragraph remains the same.)*

2.202.07 Design Requirements

All bicycle parking spaces shall be developed and maintained as indicated in Section 2.202.03 (Joint Use).

All vehicle parking and loading areas, except those for single-family dwellings, shall be developed and maintained as follows: *(Text of remaining section remains unchanged.)*

ORDINANCE 532 -2013

AN ORDINANCE ADOPTING A TRANSPORTATION SYSTEM PLAN (TSP) AND TEXT AMENDMENTS TO THE CITY OF FALLS CITY COMPREHENSIVE PLAN AND THE CITY'S ZONING AND DEVELOPMENT ORDINANCE

WHEREAS, the City of Falls City determined the need to adopt a Falls City Transportation System Plan (TSP) and amend applicable and accompanying text of the Falls City Comprehensive Plan and the City's Zoning and Development Ordinance (FCZDO) as presented in Exhibit A; and

WHEREAS, the City Council acting in the role of the Planning Commission conducted a public hearing to consider the draft document and proposed amendments on April 11,2013, at which time the public was given full opportunity to be present and heard on the matter; and

WHEREAS, at the close of the public hearing, the Council voted while serving as the Planning Commission to recommend City Council approve of the draft TSP and revised documents at the public hearing; and

WHEREAS, the City Council conducted a public hearing to consider the requests on May 9, 2013 , at which time the public was given full opportunity to be present and heard on the matter; and

WHEREAS, at the close of the public hearing on May 9, 2013, the City Council voted to approve the requests subject to the revisions stated at the public hearing; and

WHEREAS, proper notice of the said public hearings was given to the public pursuant to applicable state statutes for legislative amendments; and

WHEREAS, the City Council of the City of Falls City hereby adopts the findings of fact set forth in the staff report dated April 29, 2013, prepared for the May 9, 2013, public hearing,

NOW THEREFORE THE CITY OF FALLS CITY ORDAINS AS FOLLOWS:

Section 1. The adoption of the Falls City Transportation System Plan (TSP), amendments to the City of Falls City Comprehensive Plan, and the City of Falls City Zoning and Development Ordinance (FCZDO),as provided in Exhibit A; and

Section 2. The City Council for the City of Falls City completed its first reading of Ordinance on June 13, 2013; with a second reading July 11, 2013., the City of Falls City notes that this Ordinance becomes effective within thirty (30) days, and therefore, this Ordinance shall be in full force and effect August 9, 2013.

First Reading: June 13, 2013 Second Reading: July 11, 2013

First reading PASSED by the City Council of the City of Falls City on this 13th day of June 2013, by the following votes.

AYES: 5 NAYS: 0

Second reading PASSED by the City Council of the City of Falls City on this 11th day of July 2013, by the following votes.

AYES: 6 NAYS: 0

7/11/13
Amy Houghtaling
Attest:

7/11/13
Amber Mathiesen, City Recorder/Administrator

Falls City
Transportation System Plan (2013)

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This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), local government, and the State of Oregon funds. The contents of this document do not necessarily reflect views or policies of the State of Oregon.

July 2013

Acknowledgments

The following people are acknowledged for their contributions to the development of this Transportation System Plan:

Technical Advisory Committee
Julee Bishop, City Councilor, City of Falls City
Rich Bontrager, Black Rock Mt. Bike Association
Dan Fricke, Oregon Department of Transportation
John Gilbert, Falls City School District/Falls City Fire District
Amy Houghtaling, Mayor, City of Falls City
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Michael Morales, Falls City Resident
Don Poe, City of Falls City
Janet Runkle, Forest Capital Partners LLC
Nancy Taylor, Oregon Department of Fish & Wildlife
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Section 1
Chapter 1
Background and Introduction

Section 1 – Chapter 1
Background and Introduction

The Falls City Transportation System Plan (TSP) establishes City goals, policies, and strategies for developing and improving the transportation system within the Falls City Urban Growth Boundary. The Falls City TSP serves as a twenty year plan to guide transportation improvements and enhance overall mobility for vehicles, pedestrians and bicyclists. (A glossary of transportation terms and acronyms are presented in **Section I, Appendix A.**)

Transportation Planning Requirements

The Falls City Transportation System Plan (TSP) was developed utilizing the Oregon Department of Transportation System Planning Guidelines (2008) and in accordance with the requirements of Statewide Planning Goal 12 - Transportation and the Transportation Planning Rule (TPR - OAR 660, Division 12). Statewide Planning Goal's (12 - Transportation) purpose is to "provide and encourage a safe, convenient and economic transportation system."

Goal 12 is implemented through the Oregon Transportation Planning Rule (TPR) that requires local governments and state agencies to prepare and adopt TSPs. The plan strives to be consistent with other relevant County and State plans. See **Section II, Appendix B.**

A TSP is defined as a "plan for one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas." The TPR encourages multi-modal transportation systems to reduce dependence on auto traffic.

Statewide Planning Goal 12 and the TPR provide the following guidelines for developing a TSP:

"A transportation plan shall (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian; (2) be based upon an inventory of local, regional, and state transportation needs; (3) consider the difference in social consequences that would result from utilizing differing combinations of transportation modes; (4) avoid principal reliance upon any one mode of transportation; (5) minimize adverse social, economic and environmental impacts and costs; (6) conserve energy; (7) meet the needs of the transportation disadvantaged by improving transportation services; (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and (9) conform with local and regional comprehensive land use plans."

Although the City of Falls City is eligible for an exemption to the TPR requirements based upon the City's current population of less than 2,500, Falls City elected to develop a TSP in order to better manage the City's transportation facilities and promote the development of a safe and well-planned transportation system. In 2010 as preparation for a future plan, the City developed and adopted with the assistance of a grant from the Rural Investment Fund, a 2010 Falls City Street Improvement Plan. Information gathered

during that process was used to update and supplement the development of a City of Falls Transportation System Plan.

Benefits of a well-planned transportation system:

- Affords residents, businesses, and visitors alike, convenient and efficient **mobility** throughout the community in a **safe** manner.
- Encourages **economic development**, in terms of both direct construction spending, and helping reduced the costs of transporting goods and services through an efficient transportation system.
- Provides individuals and household greater **choice** and freedom to access the transportation system in many different ways.
- Influences the character and **appearance** of the community through the design and development of transportation facilities.

(A glossary of transportation terms and acronyms is provided in **Section 1 - Appendix A**.)

Transportation System Plan – Background

In 2011, the City of Falls City was awarded a grant from the combined Oregon Department of Transportation (ODOT) and the Department of Land Conservation and Development (DLCD) Transportation Growth Management (TGM) program to focus on key transportation issues as part of the adoption of elements of a Transportation System Plan (TSP) to:

- Link the bicycle and pedestrian facilities to key land uses and activity centers, such as schools, residential areas, downtown area, parks, recreational areas and other community designations;
- Provide well-designed, visible, safe and convenient bicycle and pedestrian facility access points and street crossings;
- Identify a prioritized list of planned improvements, including cost estimates, to guide future transportation investments;
- Inventory infrastructure facilities located within street rights-of-way, such as drainage facilities that would be impacted by planned improvements;
- Provide an effective financing program for planned improvements and potential sources of funding;
- Actively engage property owners, businesses, residents, stakeholders, and elected and appointed officials in all phases of this project; and
- Adoption of the elements of a TSP.

The preparation of the planning document results in the adoption of a TSP for the City. The process also includes incorporating any needed Comprehensive Plan goals and policies updates and adopting implementing ordinances into the Falls City Zoning and Development Ordinances (FCZDO). Adoption of the TSP and Comprehensive Plan /FCZDO amendments were completed under Legislative Amendment 2013-01. The applicable sections of the TSP must comply with the Transportation Planning Rule (Oregon Administrative Rule (OAR 660-012-0015), and be consistent with other relevant County and State plans. See **Section II - Appendix B**.

In 2010, the City of Falls City completed and adopted the "Falls City Street Improvement Plan" (FCSIP) as a first step toward preparing a more detailed TSP. See **Section II – Appendix B** for an assessment of the FCSIP. The City needs to ensure for the current City residents and at the time of future development that the transportation system serves the community with a safe and efficient transportation system that is accessible by a variety of transportation modes (e.g. riding in vehicles, walking as pedestrians, or riding bicycles).

Transportation System Planning

The purpose of the Falls City's Transportation System Plan (TSP) is to identify a system of transportation facilities and services that will provide for local transportation needs and meet state and federal transportation planning requirements. The TSP serves as an important tool for local officials to make informed transportation investments and sound land use decisions, as well as allow for protection of rights-of-way needed for planned transportation improvements[1].

A TSP generally includes the following information:

- Determination of transportation needs,
- Road Plan,
- Bicycle/Pedestrian Plan,
- Public Transportation Plan,
- Air, Rail, Water and Pipeline Plan,
- Policies and regulations for implementation of the transportation system plan, and
- Transportation Financing Program.

The process of preparing a TSP included the following steps:

- **Step 1**: Inventory of the elements of the existing transportation system.
- **Step 2**: Review of existing plans, policies, regulations and standards.
- **Step 3**: Review and update, as needed, of the City's Comprehensive Plan local transportation goals and objectives.
- **Step 4**: Identify current conditions and deficiencies.
- **Step 5**: Identify existing funding mechanisms and projected revenues.
- **Step 6**: Determine future deficiencies and needs.
- **Step 7**: Develop criteria for evaluating project alternatives that are linked to project goals and objectives.
- **Step 8**: Develop and evaluate alternatives that address deficiencies and needs that can be constructed at a reasonable cost.
- **Step 9**: Select a recommended transportation system.
- **Step 10**: Develop of a transportation improvement program and local ordinances that implement the TSP.
- **Step 11**: Develop a transportation finance program that seeks to fund the projects identified in the transportation improvement program.

[1] Source: ODOT TSP Guidelines 2008; online at http://www.oregon.gov/ODOT/TD/TP/

- **Step 12**: Adopt the TSP and related implementing ordinances (e.g. Zoning and Development Ordinance amendments and creating TSDCs).

Other documents were reviewed for additional information that is important to the transportation facilities. Summaries of those documents and assessment of their details are included in **Section II – Appendix B**. Examples of resource materials not already listed include the Oregon Downtown Development Association (ODDA) Report (2000), a 1997 Bicycle and Pedestrian Assessment, and selected US Census and PSU population data and projections.

Information that supplements the assessment of the City's Comprehensive Plan is provided in **Section II – Appendix B**.

Throughout the project, efforts were made to obtain stakeholder and public feedback on the TSP (e.g. community events, utility surveys, and updates at several City Council meetings)

The Planning Process

The 2013 TSP Update was prepared with assistance from a Project Advisory Committee (PAC). The PAC consisted of representatives from the Oregon Department of Transportation (ODOT), City staff from Falls City, Polk County Public Works Department, Oregon Department of Land Conservation and Development (DLCD), Oregon Department of Fish and Wildlife, Luckiamute Watershed Council, Weyerhaeuser, and project staff from the consulting firm of Kittelson and Associates and the Mid-Willamette Valley Council of Governments (MWVCOG). The PAC also included members from the community at large and representatives from the City Council of Falls City and its Public Works Committee. The City completed development and review of the TSP through a series of committee meetings held over a period of approximately 12 months. Information gathered at a community events in April and October and other activities during the planning year helped obtain feedback on the TSP from the citizens of the community and prioritize the list of transportation improvements.

Planning Area

The planning area for the Falls City TSP update is the Falls City Urban Growth Boundary (UGB). The City of Falls City layout consists of a discontinuous grid pattern. Streets that connect outside City limits include Ellis Street and Socialist Valley Road on the north; Sheldon Avenue, Clark Street, and Harrington Road on the south; Falls City Road connection to north Main Street on the east; and Mitchell Street connects to Black Road on the west. All other streets provide internal circulation within City limits.

The primary commercial core area of the City is centered along North Main Street. Other common destinations include the elementary and high schools, City Hall, a Community Center/Fire District building, the Falls and several City parks.

Maps of the current Comprehensive Plan and zoning designations within the planning area are shown in **Chapter 1 – Map 1-1 —Comprehensive Plan Designations** and **Chapter 1 - Map 2-1—Zoning and Address map**.

SECTION 1 - APPENDIX A
Glossary of Transportation Terms and Acronyms

Access Management: Measures regulating access to streets, roads, and highways from public streets or roads and private driveways. Measures may include, but are not limited to, restrictions on the siting of interchanges, restrictions on the type and amount of access to roadways, and the use of physical controls, such as signals and channelization including raised medians to reduce impact of approaching traffic on the main facility.
ADA: Americans with Disabilities Act of 1990. Federal legislation requiring that public facilities and commercial buildings have doorways, corridors, accessways, elevators, seating, and other facilities that are accessible to the handicapped population.
Arterials: A highway primarily for through traffic, usually on a continuous route.
Average Daily Traffic (ADT): The annual average two-way traffic volume. It represents the total traffic for the year divided by 365.
Bikeway: A bikeway is created when a road has the appropriate design treatment for bicyclists, based on motor vehicle traffic volumes and speeds: shared roadway, shoulder bikeway, bike lane or bicycle boulevard. Another type of facility is separated from the roadway: multi-use path.
Bikelane: A portion of the roadway which has been designated by striping and pavement markings for the preferential or exclusive use of bicyclists.
Collectors: Collector provide links between an area or neighborhood and the arterials. Collectors supply abutting properties with the same degree of land service as a local street but are usually given priority over local streets in any traffic control installation.
Comprehensive Plan: A local document that guides a community's land use, conservation of natural resources, economic development, and public services. Plans contain data and information called the inventory, and the policy element. The policy element sets forth the community's long-range objectives and the policies by which they will be achieved. The plan in adopted by ordinance and has the force of law.
DLCD: Department of Land Conservation and Development, the State of Oregon's land use planning agency.
Functional Classification: See definitions for Arterials, Collectors, and Local Streets. Identifying functional classifications for roadways provides a basis for future improvements and establishing design standards, such as: access spacing, roadway width, right-of-way needs, design speed, and type of pedestrian and bicycle facilities.
Implementing Measures: The mechanisms used to accomplish the goals, policies, and objectives contained in a comprehensive plan. There are a variety of measures and two common examples are zoning and land-subdivision ordinances.
Level of Service: A quantitative measure of the effect of a number of factors on transportation service including speed and travel time, traffic interruptions, freedom of movement, safety, driving comfort, and convenience (see **Section I, Chapter 2, Existing Traffic Operations**).
Local Streets: The primary function of a local street is to provide access to abutting properties. While connectivity is encouraged for all streets, through traffic movement is not the intended purpose of local streets.
Mobility: Being able to move easily from place to place.

Modes of Transportation: Mass transit, air, water, pipeline, rail, highways, bicycle, pedestrian types of travel and transport. The terms "modes", "mode connectivity", and intermodal refer to these types of travel.

Multimodal: Involving several modes of transportation.

Public Transit: Bus, van, light rail and other surface transportation systems open to the general public which operate frequently and on predetermined routes and schedules.

OAR: Oregon Administrative Rules. A body of law that describes how legislation and other laws will be implemented.

ODOT: Oregon Department of Transportation.

Shared Roadway Bikeway: A type of bikeway where bicyclists and motor vehicles share a travel lane.

Shoulder Bikeway: A type of bikeway where bicyclists travel on a paved shoulder.

STIP: Statewide Transportation Improvement Program.

Structures: A bridge, retaining wall, or tunnel.

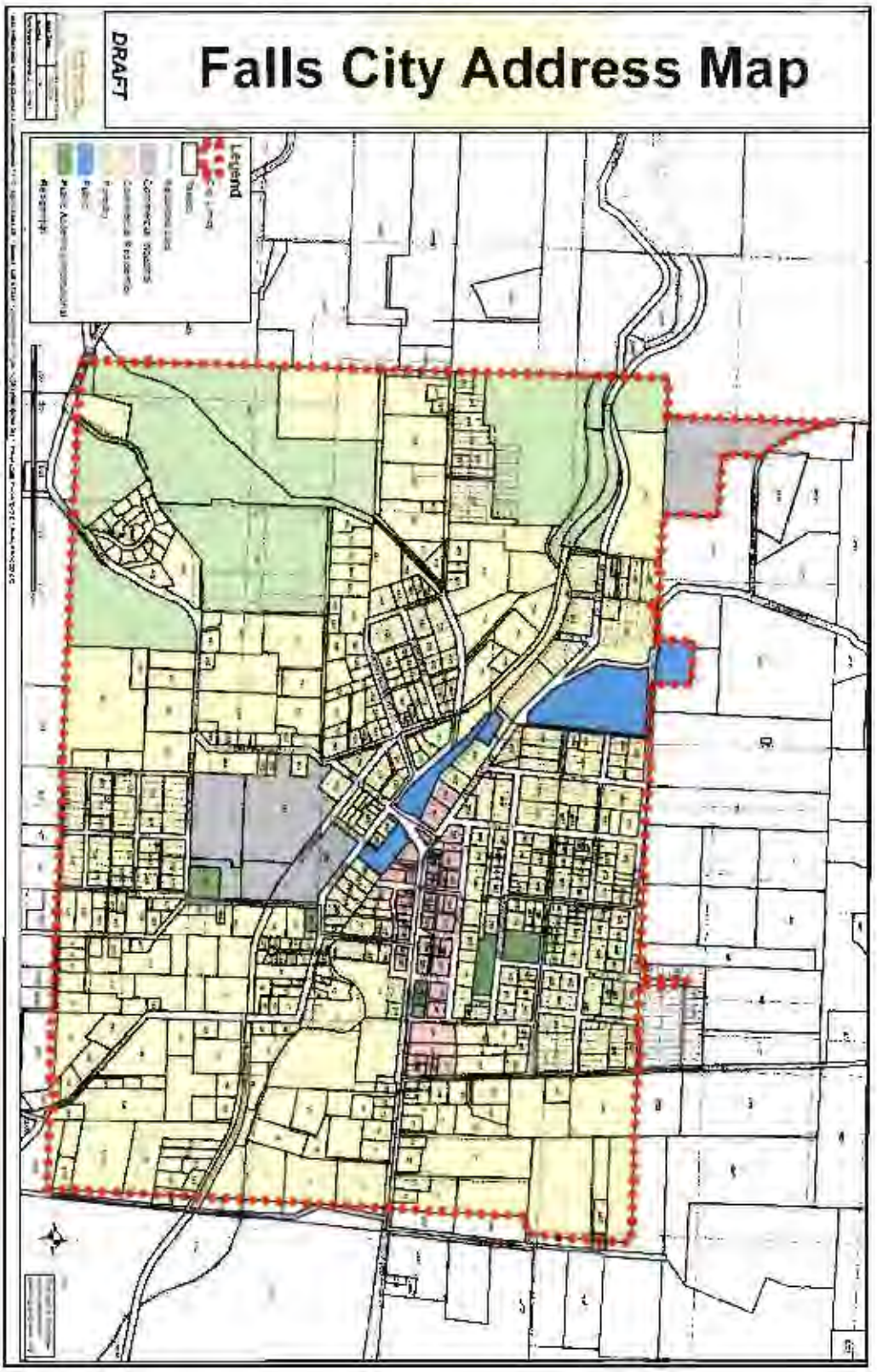
Transportation Disadvantaged: A term used to denote individuals without the ability or capability to use personal conveyances to travel. For example, these individuals may be the working poor, students, physically or mentally challenged people.

TPR: The Transportation Planning Rule contained in Oregon's Administrative Rule, Chapter 660, Division 12, which implements the statewide planning Goal 12: Transportation.

UGB: Urban Growth Boundary. A line drawn around a geographic area that separates urban use lands from resource, or rural, use lands; and shows where the city intends to grow.


CHAPTER 1 – Map 1-1 – Falls City Comprehensive Plan Designations (2013)
Comprehensive Plan Designation
Falls City

Chapter 1 – Map 1-2 – Falls City Address Map
(and including Zone Districts (2013))



Section 1
Chapter 2
Existing and Future Conditions

Section I - Chapter 2
Existing and Future Conditions

The City of Falls City is located in the Willamette Valley approximately four (4) miles west of OR 223 (Kings Valley Highway #223) and approximately six (6) miles southwest of Dallas, Oregon. The adoption of this City's 2013 Transportation System Plan (TSP) will be the first for this Polk County City. A transportation assessment was completed in 2010 that provided a formal roadway inventory, an updated roadway functional classification, and updated Public Works design standards. Using this information, the City proceeded with the task of completing a formal TSP.

The review process included the distribution of memoranda. The first memorandum summarized the background information needed to support the development of a TSP and was organized into the following sections:

- Population Inventory,
- Roadway Network,
- Pedestrian and Bicycle Network,
- Rail Network,
- Air Transportation,
- Pipeline Facilities,
- Water Transportation Facilities, and
- Transportation Funding.

The findings in this chapter do not include solutions or improvements to mitigate identified deficiencies. Rather, findings combined with the goals, objectives, and plan and policy review, are intended to provide a comprehensive overview of Falls City's anticipated transportation needs. Subsequent chapters will describe and evaluate alternative solutions.

POPULATION

The purpose of the population inventory is to identify the characteristics of the population served by the Falls City transportation network, such as modes of transportation used and number of residents with mobility limitations. The population inventory helps inform the existing and future conditions in the analyses preparing the TSP document, particularly as the project team worked with the community to develop future alternative scenarios that serve residents' needs.

According to the latest certified estimates from the Portland State University Population Research Center, Falls City has a population of approximately 947. In 2010, 41.1 percent of Falls City residents belonged to age groups that are considered to have mobility limitations; 17.9 percent were between the ages of 5 and 14; and 23.2 percent of residents were greater than 60 years of age.

In 2010, the Falls City workforce included 402 residents, approximately 43 percent of the population. Driving alone was the most common means of transportation to work (79.6 percent).

followed by carpooling (13.9 percent). Approximately 1.4 percent walked or biked to work while 1.2 percent used other forms of transportation such as a motorcycle. Approximately 100 percent of the Falls City workforce had access to at least one (1) vehicle in 2010. These figures have remained relatively unchanged in the last 10 years.

ROADWAY NETWORK

Falls City is unique in the sense that it is not located on a major state highway. The nearest regional highway is OR 223 located approximately four (4) miles to the east. Access to OR 223 is provided primarily via two Polk County roadways: Falls City Road and Bridgeport Road/Sheldon Avenue. Within the City limits, Falls City Road becomes N. Main Street and is the City's primary east-west arterial. Bridgeport Road becomes Sheldon Avenue within the southeast portion of the City and later S. Main Street as it parallels the Little Luckiamute River. The remaining roadway network is a collection of Arterial, Collector, and Local Streets that form a loosely defined grid pattern on the north side of the Little Luckiamute River and a more irregular pattern on the south side of the river. Bridge Street (connecting S. Main Street with N. Main Street) is the only vehicular river crossing within City limits.

In 2009, City staff conducted an existing street system inventory for all roadways within Falls City that was incorporated into the 2010 Street Improvement Plan. The referenced inventory was prepared by MWVCOG staff and documented in the *2012 Falls City Street Improvement Plan*. Key elements of this inventory include:

- Street classification and jurisdiction,
- Street width and right-of-way,
- Surface type and condition, and
- Presence of curbs and sidewalks.

The following sub-sections provide additional discussion of jurisdictional responsibility and functional classification, as well as analysis of existing traffic operations, crash history, and future traffic operations of the roadways within Falls City.

JURISDICTION

All streets within the Falls City boundary are owned and maintained by Falls City. Polk County owns and maintains all roadways that provide regional accessibility to/from Falls City. **Table 2-1** summarizes the jurisdictional responsibilities and functional classification of the primary roadways (Collector and higher) within the City limits of Falls City.

Table 2-1 2013 Roadway Ownership and Functional Classification

Roadway	Jurisdictional Responsibility	Functional Classification
Bridge Street	Falls City	Arterial
Main Street, North (N. Main)	Falls City	Arterial
Mitchell Street	Falls City	Arterial
Sheldon Avenue	Falls City	Arterial
Chamberlain Road	Falls City	Collector
Clark Street	Falls City	Collector
Ellis Street	Falls City	Collector
Fairoaks (5th to Ellis)	Falls City	Collector
Lombard Street	Falls City	Collector
Main Street, South (S. Main)	Falls City	Collector
Parry Road	Falls City	Collector
5th Street (Mitchell to Fairoaks)	Falls City	Collector

Note: All other streets are classified as Local Streets and are owned and maintained by Falls City

FUNCTIONAL CLASSIFICATIONS, STREET DESIGN STANDARDS AND ACCESS SPACING STANDARDS

Identifying the appropriate functional classification for roadways provides a basis for planning future improvements and establishing design standards, such as: access spacing, roadway width, right-of-way needs, design speed, and type of pedestrian and bicycle facilities. The Falls City Public Works Design Standards identify three (3) roadway classifications: Arterials, Collectors, and Local Streets. **Figure 2-1** shows the functional classifications of roadways within the Falls City and is identified as the **2013 Street Plan**.

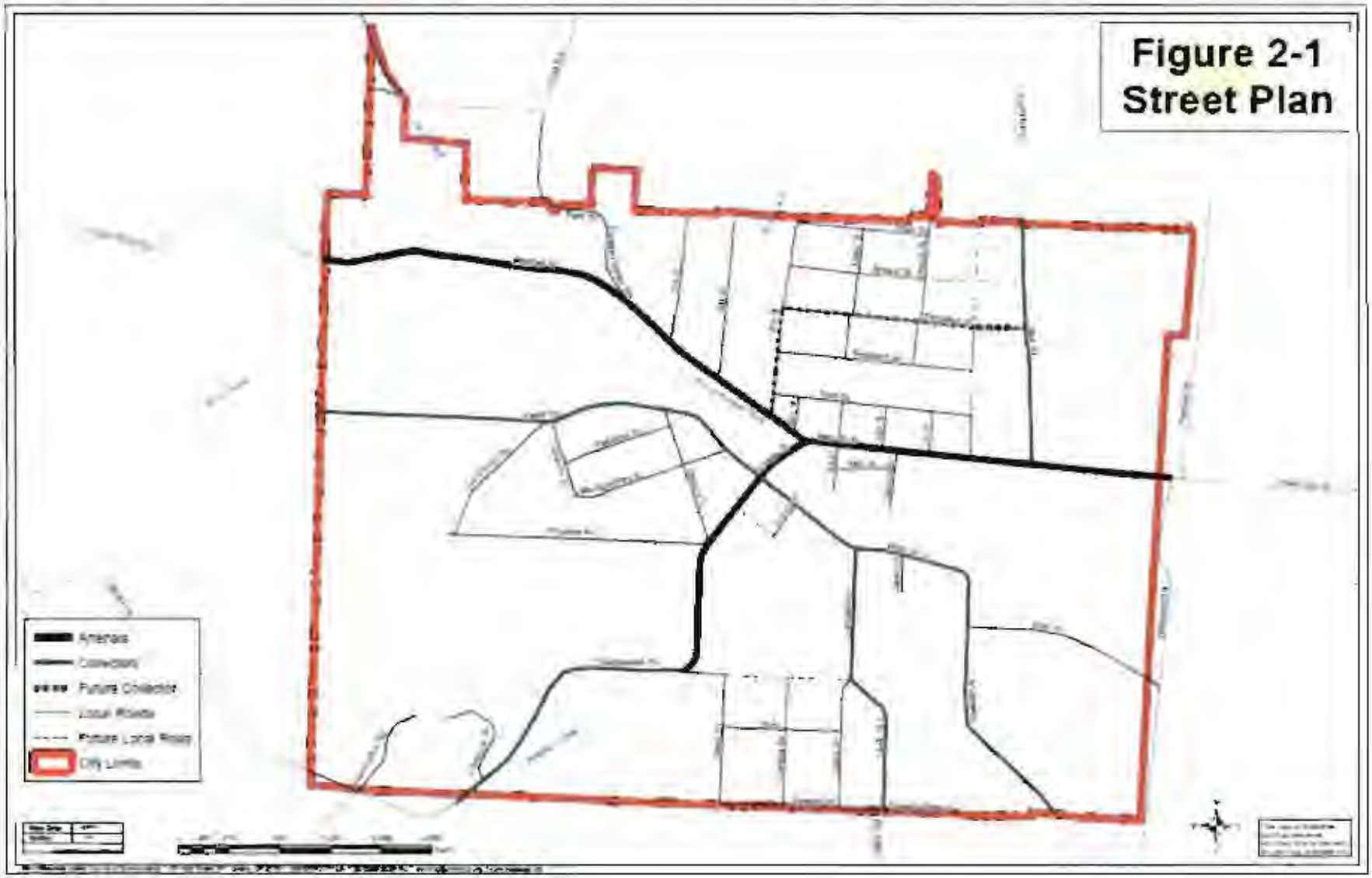


Figure 2-1
Street Plan
Arterials
Collectors
Future Collector
Local Roads
Private Local Roads
City Limits

Table 2-2 summarizes the street design standards corresponding to each of the functional classifications adopted in the Falls City Public Works Design Standards.

Table 2-2 – 2013 Falls City Street Design Standards

Functional Classification	ROW Width	Paved Width	Travel Lanes	Turning Lane	Parking	Landscape Strip	Sidewalk Width	Bike Lane
Arterial	60 feet	40 feet	1	1	None	Optional	5 feet	5 feet
Collector	60 feet	40 feet	1	1	Both Sides	Optional	5 feet	None
Local Road	50 feet	32 feet	2 Lanes	None	One Side	Optional	5 feet	None
Residential Cul-de-sac (Length > 200 ft)	50 feet	30 feet	-	-	None	Optional	5 feet	None
Residential Cul-de-sac (Length < 200 ft)	45 feet	30 feet	-	-	None	Optional	5 feet	None
Alleys	20 feet	20 feet	-	-	No	No	No	No

[1]The number of travel lanes for Arterial and Collector roadways shall be determined by the volume of traffic. The City may require additional turning lanes based on situational analysis or a traffic engineer's report evaluating the need for additional turning lanes.

EXISTING TRAFFIC VOLUMES

Existing traffic operations were evaluated in 2012 to identify current traffic conditions. **Figure 2-2** shows the study intersection and roadway locations. **Figure 2- 3** shows the existing weekday a.m. and p.m. peak hour traffic volumes at each of the study intersections. **Section II – Appendix C** contains the raw 2011 traffic count summary worksheets. These volumes were balanced and adjusted to account for seasonal fluctuations in traffic volumes. The seasonal adjustment factor selection process is described in the Methodology Memo, included in **Section II – Appendix D** of this document.

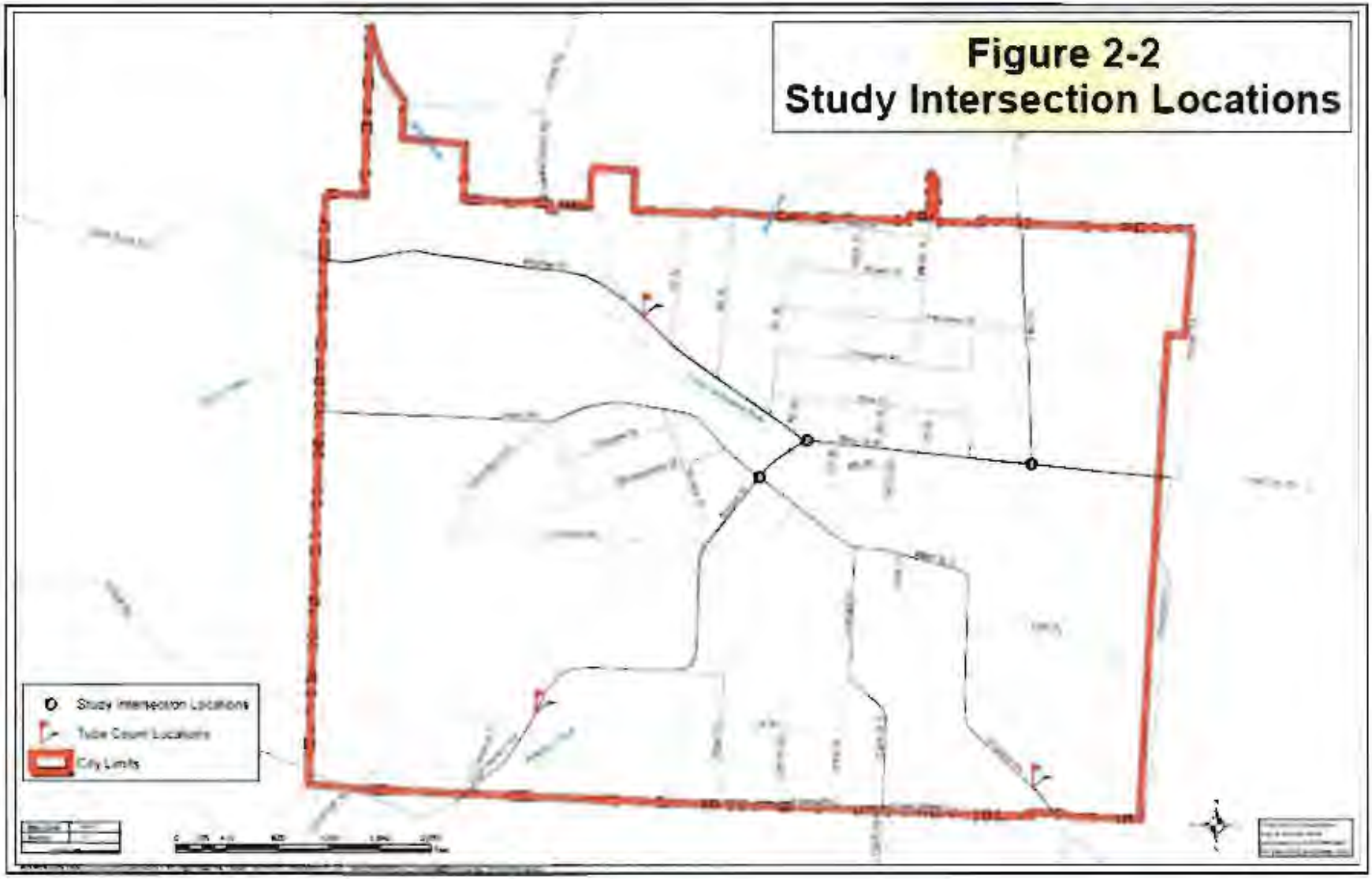
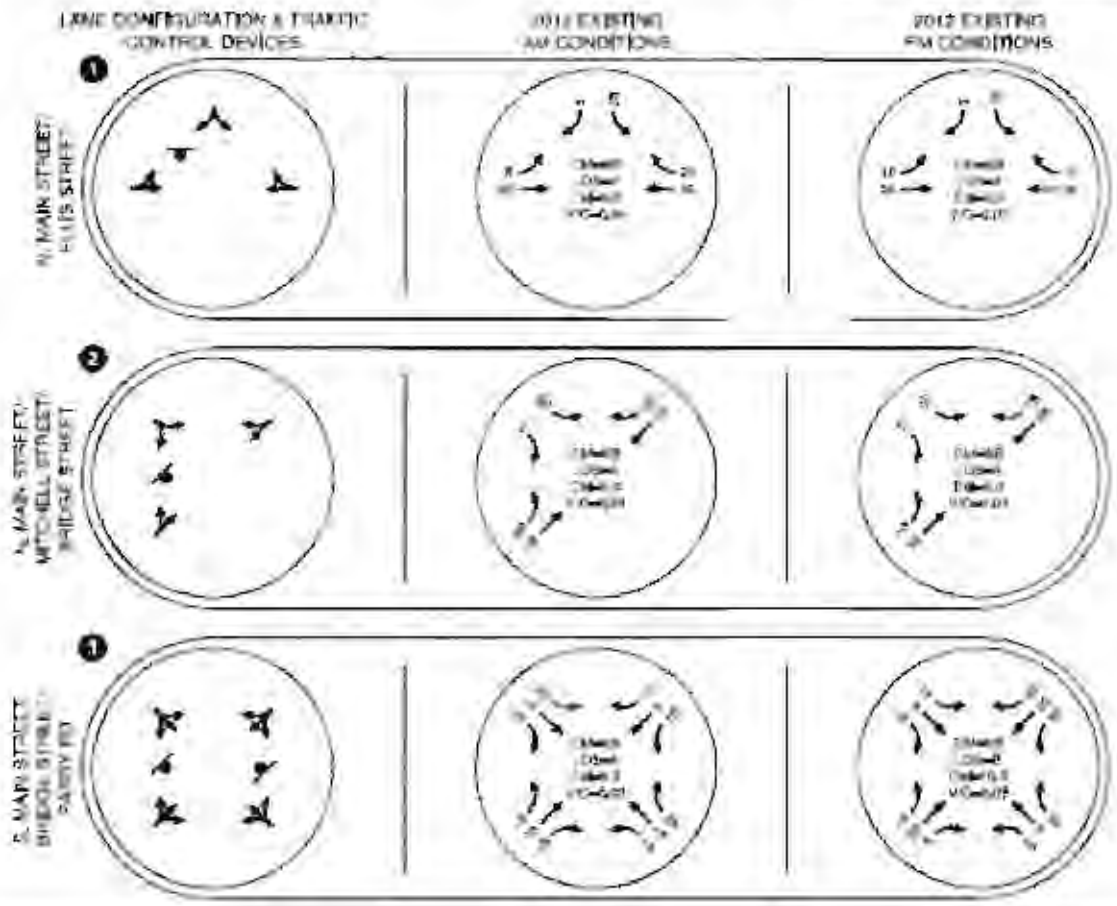


Figure 2-2
Study Intersection Locations
Study Intersection Locations
Tube Count Locations
City Limits

Figure 2-3
2012 Traffic Conditions



EXISTING TRAFFIC OPERATIONS

Traffic operations at intersections are typically gauged using a measure known as "level of service" (LOS). Level of service represents the average amount of delay that motorists experience when passing through an intersection using a letter grade scale from "A" (best) to "F" (worst). At signalized and all-way stop-controlled intersections, LOS is based on the average delay experienced by all vehicles entering the intersection. At two-way stop-controlled intersections, LOS is based on the average delay experienced by the worst movement at the intersection, typically a left-turn from the stop-controlled street. For signalized intersections, LOS "D" (drivers experience no more than 55 seconds of average delay) is generally considered to be an acceptable operational level. For unsignalized intersections, LOS "E" (drivers experience no more than 50 seconds of average delay) is generally considered to be an acceptable level.

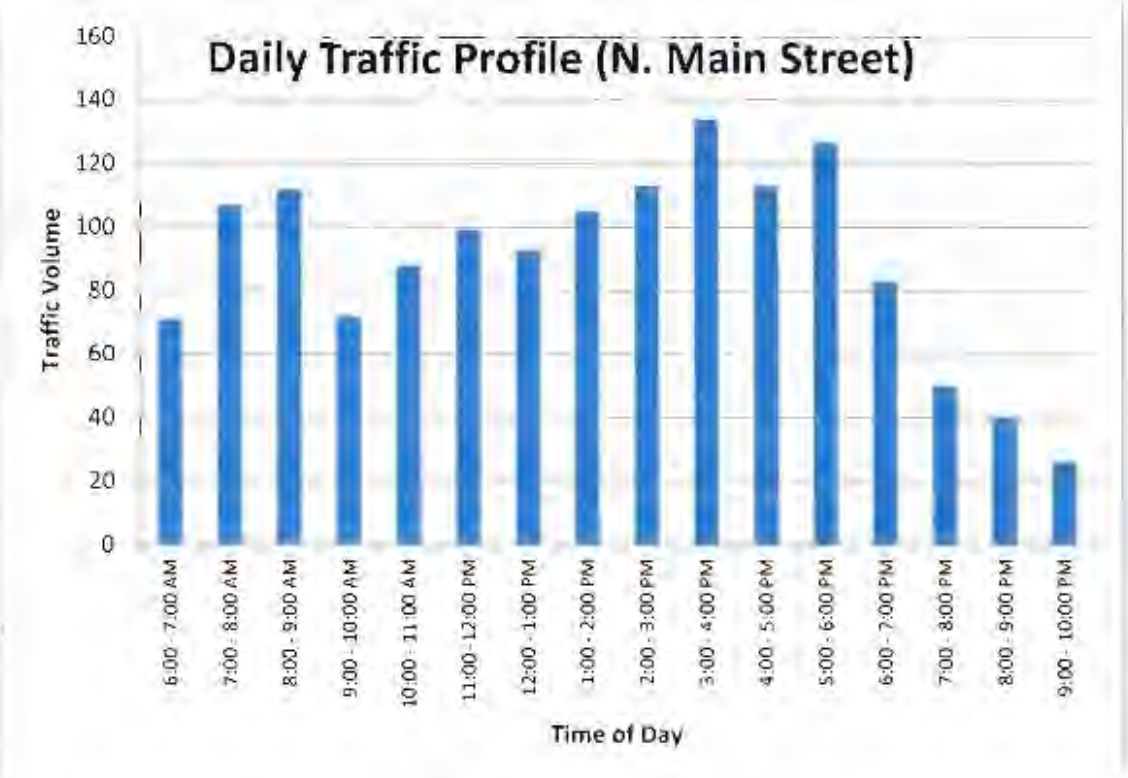
All of the operational analyses described in this report were performed in accordance with the procedures stated in the 2010 Highway Capacity Manual (Reference 1) and the ODOT Analysis Procedures Manual (Reference 2, page 2-21).

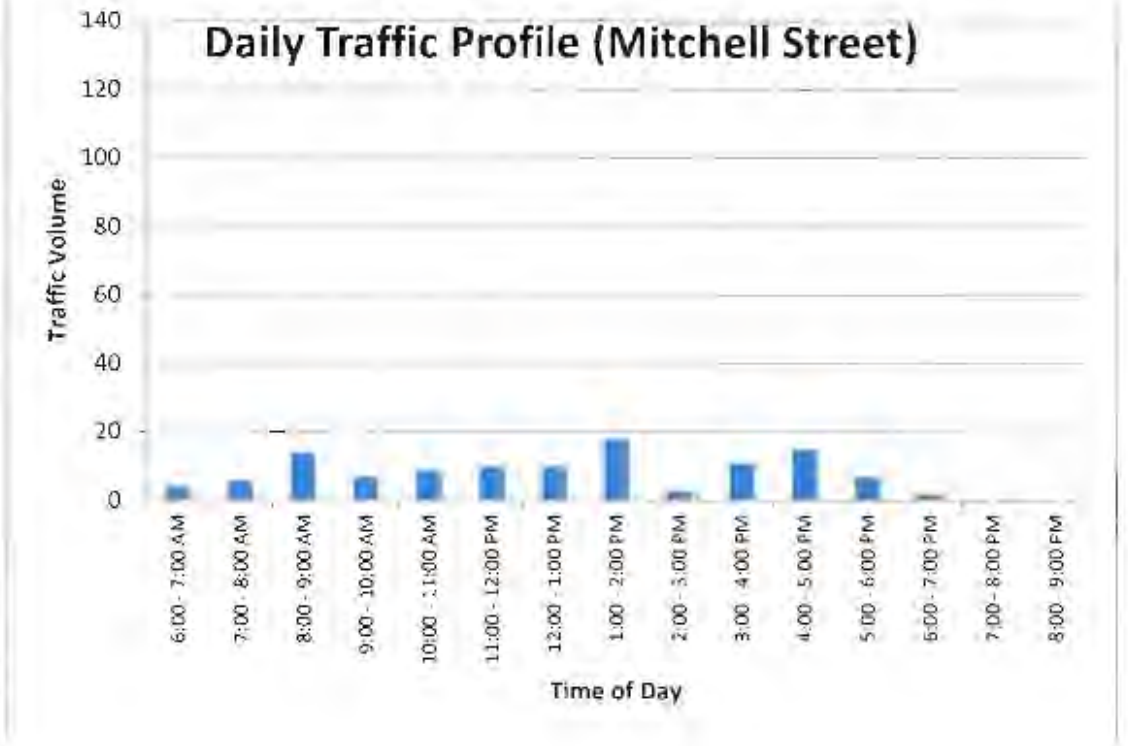
Based on 2012 a.m. and p.m. peak hour traffic volumes, level of service was calculated for the study area intersections. The results of the level of service analysis are summarized in **Figure 2-3**. As shown in the Figure, all of the study area intersections currently operate within acceptable performance standards during the weekday a.m. and p.m. peak hours. **Section II – Appendix E** provides the 2012 existing conditions operational analysis worksheets for each study intersection.

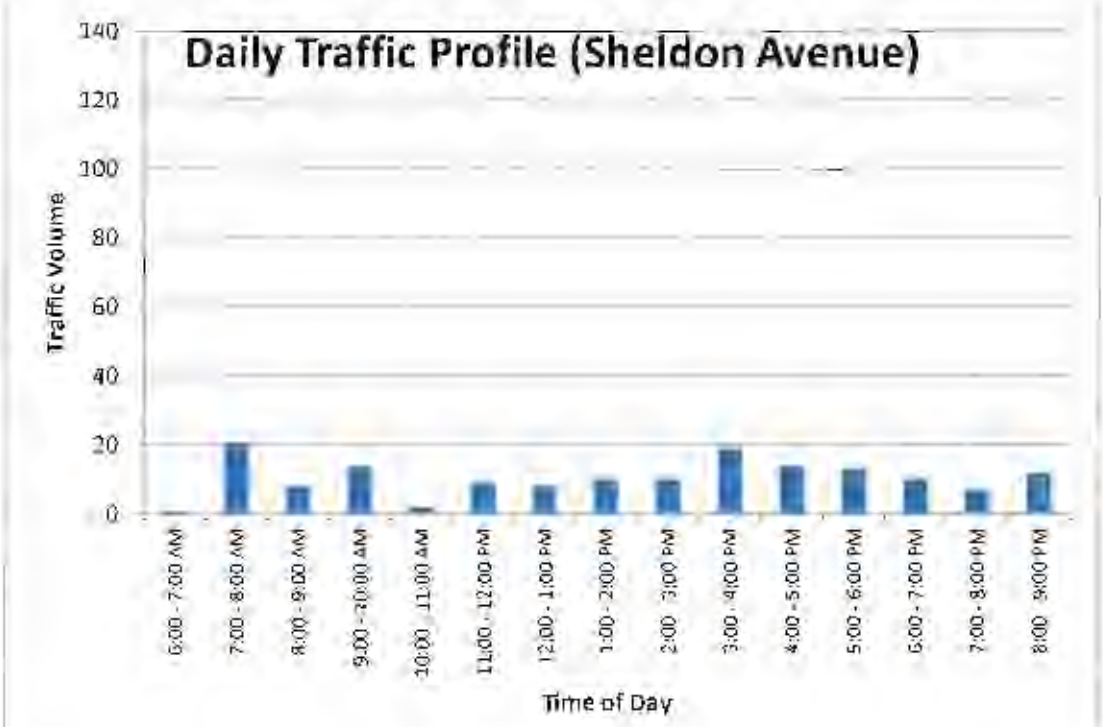
EXISTING TRAFFIC PROFILE

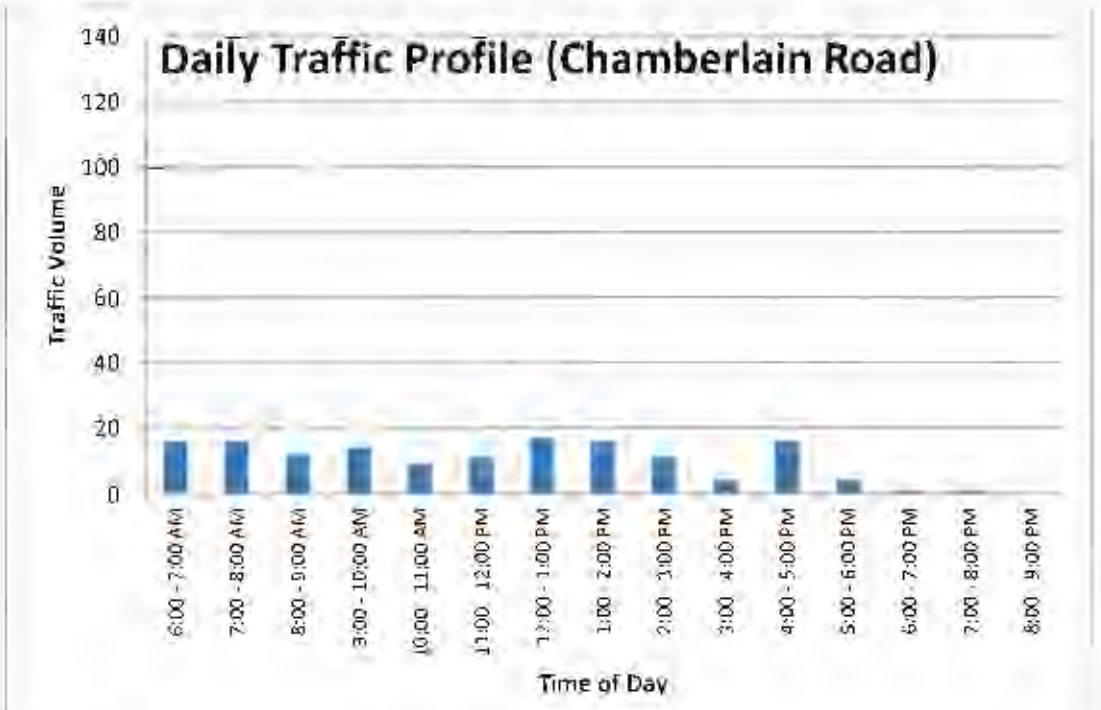
In addition to the peak hour intersection traffic counts, daily traffic counts (2012) were obtained at each of the roadways that provide regional access to/from Falls City. These roadways include N. Main Street, Sheldon Avenue, Chamberlain Road, and Mitchell Street. The following charts (**Figure 2-4**) summarize the daily traffic profile for each roadway. As shown, N. Main Street is the primary roadway providing regional access to/from Falls City.

Figure 2 - 4, Daily Traffic Profiles









Source: KAI using ODOT data

CRASH ANALYSIS

To identify potential safety deficiencies or conflict points at study intersections within Falls City, five (5) years of crash data (from 2006 through 2010) were obtained from ODOT and analyzed. Crash data were reviewed at the intersection level in order to identify potential safety issues that should be addressed.

Typically, intersection safety is evaluated by calculating the intersection's crash rate (the number of crashes per million vehicles entering the intersection) and the frequency of crashes (the number of crashes per year). These rates are compared to other similar facilities and crash patterns are examined to determine whether a safety deficiency exists.

For this analysis, the critical rate method was used to evaluate each of the study intersections. **Section II - Appendix F** contains the raw ODOT crash data and **Section II - Appendix G** contains the critical crash rate calculations. Under this methodology, a critical crash rate is calculated for each intersection and compared to each intersection's observed crash rate. The critical crash rates are based on the performance of other study intersections with the same traffic control device[1].

Crash rates for intersections were calculated in crashes per million entering vehicles (MEV). The observed crash frequency, crash rate, and critical crash rate for each study intersection is summarized in **Table 2-3**[2]. As shown in Table 2-3, none of the study intersections exceeded their critical rate.

Table 2-3 Crash Analysis Summary (2006-2010)

Intersection	Property Damage Only (PDO) Crashes	Injury Crashes	Fatal Crashes	Total Crashes	Crash Frequency (per year)	Observed Crash Rate (per MEV)	Critical Crash Rate	Exceeds Critical Rate?
N. Main Street/ Ellis Street	1	0	0	1	0.2	0.3	0.78	No
N. Main Street/ Mitchell Street/ Bridge Street	0	1	0	1	0.2	0.27	0.75	No
S. Main Street/ Bridge Street/ Parry Road	0	1	0	1	0.2	0.29	0.76	No

Source: KAI using ODOT data

[1] More information on the method can be found in the American Association of State Highway Officials (AASHTO) *Highway Safety Manual*, (Reference 3, see Chapter 4 Network Screening).

[2] Not all crashes that occur at an intersection are reflected in the reported data. Some crashes are not reported by motorists or do not exceed the property damage limit necessary to be reported and classified.

Table 2-4 provides additional detail about the types of crashes that were reported at each intersection.

Table 2-4 Intersection Crash Type and Severity (2006-2010)

Intersection	No. of Crashes	Collision Type				
		Angle	Head-On	Read-End	Turning	Other
N. Main Street/ Ellis Street	1	1	0	0	0	0
N. Main Street/ Mitchell Street/ Bridge Street	1	0	0	0	0	1
S. Main Street/ Bridge Street/ Parry Road	1	1	0	0	0	0
Total	**3**	**2**	**0**	**0**	**0**	**1**

Source: KAI using ODOT data

FUTURE TRAFFIC OPERATIONS

The following section describes anticipated future growth in Falls City and the surrounding region between 2012 and 2036. How the transportation system is anticipated to operate with the additional traffic in the "no build" scenario (if no improvements were made to the existing system) is also summarized. Future traffic operations were evaluated in accordance with the Cumulative Analysis Procedure identified in the ODOT Analysis Procedures Manual. The detailed methodology for this analysis and development of future growth forecasts are included in **Section II – Appendix D**.

Population and Employment Growth

Projected 2036 housing growth was estimated based on historical building permit data as researched by MWVCOG. The City's Comprehensive Plan indicates the number of housing construction starts between the years of 1995 and 2001 to be a total of 38 new units. Limited information was obtained from Polk County Community Development Department for April 2007 through December 2011. From this source, a total of eight (8) single-family residential permits were issued for the five (5) year period. Based on these figures, approximately two (2) new dwelling units per year could be projected through the 2036 planning horizon resulting in a total of 48 additional dwelling unitsthrough the year 2036. These estimates were reviewed by City staff and were determined to be reasonable given the inability to accommodate significant amounts of growth based on the status of the sanitary sewer system. As shown in **Table 2-5**, an increase of 48 housing units[3] is anticipated within Falls City between 2011 and 2036.

Table 2-5 Housing Growth Projections (2011-2036)

	2011	2036	Absolute Growth (2011-2036)
Housing Units	381	429	48

Source: KAI using MWVCOG analysis

Household Growth Allocation

In order to evaluate the anticipated growth in the City, the projected housing growth was assigned to the traffic network according to different geographic regions. Based on discussions with City staff, it is anticipated that those portions of the City with sanitary sewer service are likely to experience approximately two-thirds of the long-term housing growth. These areas include the half of the City north of the Little Luckiamute River. Based on a review of land availability and topographic constraints, it was assumed for the purposes of the TSP that this housing growth will occur north of N. Main Street and west of Ellis Street. The other third of the residential growth is anticipated to occur throughout the half of the City located south of the Little Luckiamute River.

[3] Housing unit growth is assumed to be single-family residential.

Based on a review of land availability and topographic constraints, it has been assumed for the purposes of the TSP that this housing growth within the southern portion will occur south and west of the S. Main Street/Bridge Street intersection.

Trip Generation

Trip generation estimates for the housing growth areas previously described were prepared based on observations found in the standard reference manual, Trip Generation, 8th Edition, published by the Institute of Transportation Engineers (Reference 4, page 2-21). **Table 2-6** summarizes the estimated trip generation for each of the growth areas rounded to the nearest five trips.

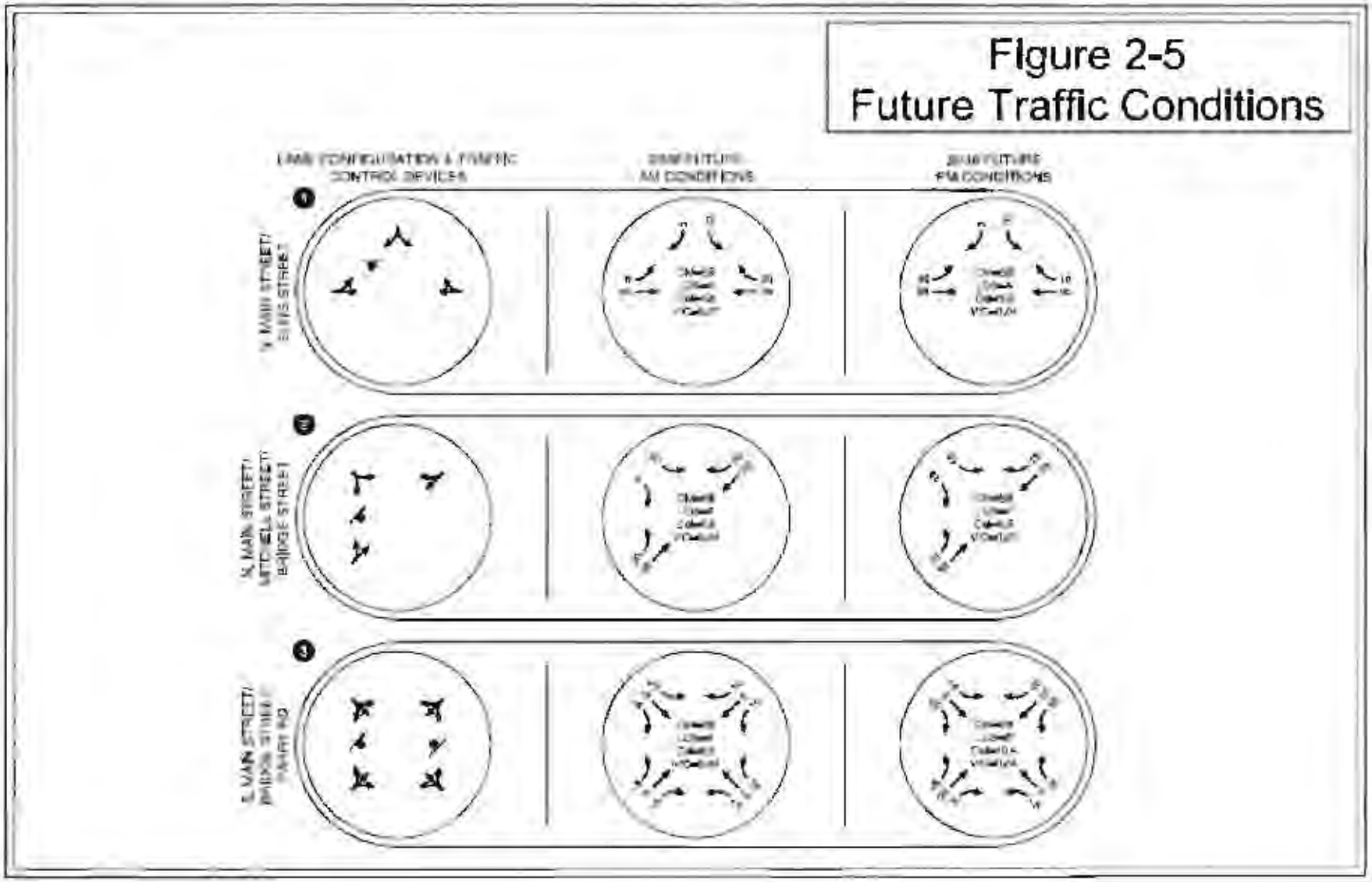
Table 2-6 2036 Single-Family Housing Trip Generation Estimate by Growth Area, Weekday AM and PM Peak Hour.

	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Total	In	Out	Total	In	Out
Northeast Quadrant	30	10	20	40	25	15
Southwest Quadrant	20	5	15	20	10	10
Area-wide	**50**	**15**	**35**	**60**	**35**	**25**

Source: KAI

The trips generated by future housing growth were added to the existing traffic volumes. The projected 2036 traffic volumes at the study intersections are shown in **Figure 2-5**. As shown in Figure 2-5, assuming the existing transportation network is not improved, all of the study intersections are forecast to operate within acceptable standards through the 2036 horizon year. **Section II – Appendix H** provides the 2036 no-build conditions operational analysis worksheets for each study intersection.

Figure 2-5
Future Traffic Conditions



PEDESTRIAN AND BICYCLE NETWORK

The following sections document the existing and future conditions and deficiencies for the pedestrian and bicycle network.

Pedestrian System

Pedestrian facilities serve a variety of needs, including:

- Relatively short trips (under a mile) to local destinations and pedestrian attractors, such as schools, parks, stores, and public facilities (e.g., libraries, recreation centers, community centers);
- Recreational trips (e.g., jogging or hiking) and circulation within parklands; and
- Local commute trips, where residents have chosen to live near where they work or to shop and obtain city services.

With small communities that have a small overall footprint such as Falls City, most origins and destinations are within a ¼ to 1-mile distance, meaning that walking could be employed regularly for a variety of trips.

The *2010 Falls City Street Improvement Plan* describes existing pedestrian facilities in Falls City and provides an overview of pedestrian-related goals and policies. **Figure 2-6** shows existing sidewalk locations, widths, and conditions in the City of Falls City. The most complete sidewalk network exists along both sides of N. Main Street from Ellis Street to Bridge Street and along Bridge Street to S. Main Street. Smaller sidewalk connections exist on a few other streets where schools exist or where new development was required to install them. Two pedestrian bridges cross the Little Luckiamute River at the south end of 3rd Street and at Dayton Street.

In general, very few streets within Falls City have sidewalks as most streets were constructed prior to formal adoption of the current street design standards. As such, Falls City should focus sidewalk improvements along those facilities that provide safe and convenient access between neighborhoods, schools, parks, and shopping locations. Discussion of specific pedestrian facility needs, cost estimates, and project prioritization are addressed in the 2013 TSP alternatives analysis **Section I – Chapter 3**.

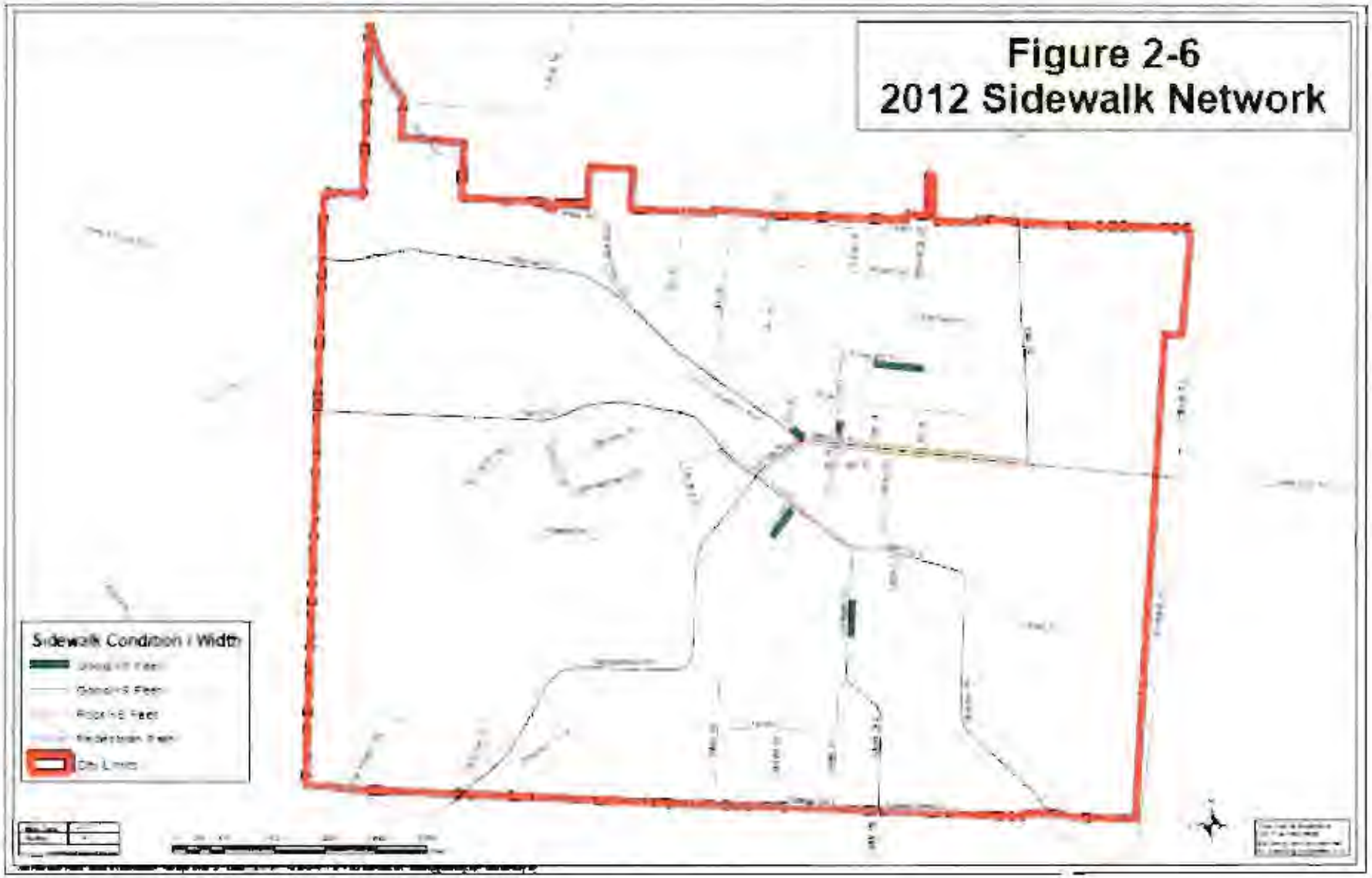


Figure 2-6
2012 Sidewalk Network
Sidewalk Condition / Width

Bicycle System

Similar to pedestrian facilities, bicycle facilities can serve a variety of trip purposes, including local errands, commute trips, and recreational trips.Falls City currently has no marked bicycle facilities of any kind.

A variety of bicycle facilities are feasible within Falls City and have been implemented in similar small communities throughout Oregon. ODOT categorizes bicycle facilities into the following four (4) major classifications:

- Shared roadway - Bicycles and vehicles share the same roadway area under this classification. The shared roadway facility is best used where there is minimal vehicle traffic to conflict with bicycle traffic.
- Shoulder bikeways - This bicycle facility consists of roadways with paved shoulders to accommodate bicycle traffic.
- Bike lanes - Separate lane adjacent to the vehicle travel lane for the exclusive use of bicyclists are considered bike lanes.
- Bike paths. These bicycle facilities are exclusive bicycle lanes separated from the roadway.

Similar to the pedestrian system, the bicycle system should connect residential areas throughout the City with parks, shopping, employment, and other destinations. Support facilities such as bike parking are necessary to make cycling a more secure and convenient travel option.

PUBLIC TRANSPORTATION

The following information documents the existing and future conditions and deficiencies for the public transportation network.

There is no fixed-route public transportation system serving Falls City. The Chemeketa Area Regional Transportation System (CARTS) has flex route service provided by Cherriots Salem-Keizer Transit, but this service does not cover Falls City. The closest connection is Dallas, Oregon.

RAIL SERVICE

There is no passenger or freight rail service within Falls City. The closest passenger rail service is Amtrak with a station in Salem.

AIR SERVICE

There are no air strips within Falls City, Falls City is served by the Independence State Airport and Salem Municipal Airport and the airport in the cities of Portland and Eugene.

Independence State Airport

The Independence State Airport is located approximately one mile northwest of downtown Independence. Thisstate-owned airport serves a variety of charter, corporate and recreational users. It is equipped with one 2,935-foot runway.

Salem Municipal Airport

The Salem Municipal Airport is frequently referred to as McNary Field and is located approximately two (2) miles southeast of downtown Salem. The airport is bordered by I-5 to the East and the Pacific Railroad on the West. Currently, the 751 acre airport serves general aviation aircraft and the Oregon Army National Guard – Army Aviation Support Facility. The airport is made up of two jet runways and supporting taxiways that mainly support commercial activities on a limited basis. Both runways were recently resurfaced and grooved. The airport is owned and operated by the City of Salem and is organizationally structured under the Urban Development Department. The Salem Municipal Airport Plan was last updated in 1997.

Airports in the Cities of Portland and Eugene

Portland International Airport, operated by the Port of Portland, is located approximately 85 miles to the north and east of the City of Falls City and provides both commercial and passenger services. Additional information is available at www.portofportland.com/PDX. The City of Eugene's airport is located about 70 miles south and east of Falls City. Information about commercial and passenger services is available at the following website: www.eugene-or.gov/index.aspx.

PIPELINE SERVICE AND WATER TRANSPORTATION FACILITIES

There are no regional pipelines nor are there water transportation facilities in Falls City.

TRANSPORTATION FUNDING

There are a variety of options available for Falls City to fund its transportation improvements. The following section identifies the funding sources that contributed to projects within the City over the past five (5) years and forecasts the future funding availability from these existing funding sources.

In the future it is likely that the transportation program in Falls City will be funded by a combination of funding sources. The purpose of this section is to provide the City with a reasonable assumption of future funding during the development of transportation alternatives.

Existing Funding

Table 2-7 provides a summary of the funding that was used for transportation projects within Falls City over the past five (5) years. As shown in **Table 2-7**, there have been eight (8) projects completed within Falls City since 2006. The majority of these projects were maintenance projects with a total dollar value of approximately $80,700.

Table 2-7 Past Transportation Project Funding in Falls City

Fiscal Year	Location	Improvements Completed	Cost	Funding Source
2011 – 2012	Various City Streets	Graded and Graveled	$3,439	Local Funds
2010-2011	Various City Streets	Graded and Graveled	$6,730	Local Funds
2009-2010	Various City Streets	Graded and Graveled	$5,561	Local Funds
2008-2009	Various City Streets	Graded and Graveled	$3,278	Local Funds
2008-2009	Bridge Street	Pavement Overlay	$30,372	Local Funds ODOT SCA Grant
2007-2008	Various City Streets	Graded and Graveled	$5,114	Local Funds
2006-2007	Various City Streets	Graded and Graveled	$4,145	Local Funds
2006-2007	Prospect Street	Pavement Overlay	$25,000	ODOT SCA Grant
	City Funds **ODOT/Grant Funds**		**$33,639** **$50,000**	
	Total		**$80,639**	

Source: KAI with City of Falls City background materials

Future Funding

An estimate of future funding was made by looking at past funding sources. **Table 2-8** provides a summary of the potential future project funding over the next five, ten, and twenty years based on an assumed average funding level of approximately $16,700 per year from local and state sources combined.As shown in Table 8, it is assumed that approximately $334,000 will be available for transportation project funding over the next twenty (20) years.

Table 2-8 Future Transportation Project Funding

	5-Year Forecast	10-Year Forecast	20-Year Forecast
City Funds	$33,700	$67,000	$134,500
ODOT/Grant Funds	$50,000	$100,000	$200,000
Total	**$83,700**	**$167,000**	**$334,500**

Source: KAI

SUMMARY

In summary, this chapter evaluated the existing and future transportation system conditions within Falls City and identified the performance and deficiencies of each component of the system. Components of the transportation system include the roadway, pedestrian, bicycle, transit, rail, air, water, and pipeline/transmission networks. The overview provided for development of the TSP and subsequent tasks that describe and evaluate alternative solutions to mitigate identified deficiencies.

References

1. Transportation Research Board. Highway Capacity Manual.2010.
2. Oregon Department of Transportation. Analysis Procedures Manual. 2006.
3. American Association of State Transportation Officials (AASHTO). Highway Safety Manual. 2010.
4. Institute of Transportation Engineers. Trip Generation Manual, 8th Edition 2008.

Appendices (Falls City TSP, Section II)

C. Traffic Count Worksheets
D. Methodology Memo
E. 2011 Existing Conditions Traffic Analysis Worksheets
F. ODOT Crash Data
G. Critical Crash Rate Calculations
H. 2036 No-Build Conditions Traffic Analysis Worksheets

Section 1
Chapter 3
Transportation System Alternatives

Chapter 3
Transportation System Alternatives

Chapter 3 of the TSP summarizes the transportation system needs in an effort to address the existing and future deficiencies identified for the roadway, pedestrian, and bicycle networks in Falls City. These deficiencies were presented in Chapter 2: Existing and Future Conditions. In addition, feedback received during Community Workshop #1 and #2 (conducted in 2012) identified a number of other issues and concerns regarding the existing and future transportation network in Falls City. A summary of the Community Workshop feedback in presented in **Section II – Appendix** I.

ROADWAY NETWORK

The following sections summarize an analysis of proposed roadway alternatives to address identified needs and deficiencies.

Summary of Roadway Deficiencies

A number of existing and future roadway issues within Falls City are outlined below:

- Projected traffic volumes are relatively low due to estimates of slower and limited growth potential in the City. As such, no capacity based improvements are necessary to the roadway network for this planning period.
- Many City streets are narrow and do not meet the adopted Street Design Standard cross sections. These narrow streets can make bicycling and walking uncomfortable for travelers.
- Many City streets are unpaved gravel and un-graveled surfaced roadways.
- The N. Main Street/Bridge Street/Mitchell Street intersection is a large intersection. Roadway striping and signing is less than ideal on some approaches, making it confusing for drivers and pedestrians.
- Many streets do not have sidewalks or provide sidewalks narrower than the required five to six (5 to 6) feet. Sidewalks or continuous sidewalk sections are missing along many streets that serve the elementary or high school.

Roadway Alternatives

The following section summarizes the alternatives considered to mitigate the issues described above.

N. Main Street/Mitchell Street/Bridge Street Intersection

The existing N. Main Street/Mitchell Street/Bridge Street intersection is a unique intersection with a large pavement area (to accommodate large logging trucks). This can make certain approaches difficult to maneuver – particularly for unfamiliar drivers and pedestrians. Some approaches such as the Mitchell Street approach, experience pavement striping loss due to wear and tear, making the traffic movements unclear. To address these issues, several options were identified that could better define

the specific movements at this intersection, yet still stay within available right-of-way. These options are described below and illustrated in **Figures 3-1 through 3-3**.

- Option #1 – This concept maintains the existing "T" intersection design with a raised channelized right-turn lane on the Mitchell Street approach. In addition, the curb on the north side of the intersection would be pushed out to provide a narrower westbound movement from N. Main Street to Mitchell Street. This modification would provide a more defined and shorter pedestrian crossing along the north side of the intersection. However, it would also limit the movement of trucks through the intersection which would be a significant constraint.
- Option #2 – This concept creates a 4-way intersection by incorporating 4th Street. Although it provides a more traditional intersection configuration with narrower channelized movements and shorter/better defined pedestrian crossings, the predominate N. Main Street to Bridge Street movement is made less efficient and would likely require all-way stop-control. Some larger trucks would also have a harder time making some of the turning movements without tracking into adjacent travel lanes.
- Option #3 –This mini-roundabout concept would provide a fully mountable central island to accommodate trucks. Although the design as shown fits within the available right-of-way, the Bridge Street to N. Main Street and Bridge Street to Mitchell Street movements do not provide good deflection, thereby limiting the effectiveness of the mini-roundabout. In addition, it does not fully accommodate movements to/from 4th Street. Thereby creating some circulation challenges.

Table 3- 1 provides planning level cost estimates for the three improvement concepts. As shown in the table, Option #1 is the least expensive, as it generally maintains the existing layout and intersection configuration. Options #2 and #3 are significantly more expensive as they require more substantial modifications of the intersection.


Figure 3-1
N. Main Street/Bridge Street/Mitchell Street Option #1


Figure 3-2
N. Main Street/Bridge Street/Mitchell Street Option #2


Figure 3-3
N. Main Street/Bridge Street/Mitchell Street Option #3
Mitchell St
Mitchell St
N Main St
N Main St
Bridge St
Bridge St
A

Table 3-1 – N. Main Street/Bridge Street/Mitchell Street Improvement Concept Cost Estimates

Concept	Planning Level Cost Estimate[1]	Right of Way Available?
Option #1	$24,000	Yes
Option #2	$45,000	Yes
Option #3	$75,000	Yes

[1] All cost estimates include mobilization (10%), traffic control (5%), contingencies (30%), architectural/engineering fees (15%), and construction management (10%) (2012 dollars)
Source: Kittleson and Associates, Inc.

Functional Classification Changes

In response to the previously summarized roadway and circulation issues,the existing roadway functional classifications were reviewed as part of the alternatives analysis. Based on that review, the following modifications were considered:

- 5th Street from Mitchell Street to Fairoaks Street – change from a Local Road to a Collector
- Fairoaks Street from 5th Street to Ellis Street – change from a Local Road to a Collector

These recommendations are based upon the connectivity these streets provide to the Arterial network and the larger residential neighborhoods that they serve. There is no cost associated with these changes, however, additional right-of-way is required on Fairoaks Drive to accommodate the minimum right-of-way width of 60 feet for Collector streets outlined in the Falls City Public Works Design Standards. Fairoaks Drive currently has a right-of-way of 50 feet. The resultant design and access standards are applied as new development occurs and as roadway, pedestrian, and bicycle improvements are made. A functional classification map is shown in **Figure 3-4**.

Future Street Network

The TSP Street Plan (**Chapter 3 – Figure 4, Street Plan**)identifies new streets or extensions of existing streets in order to maintain a balanced street network (to the extent possible) that are in accordance with the Oregon Transportation Planning Rule. The Street Plan designates where new local roads and/or pedestrian ways may be located to provide better connections between existing streets and significant local destinations such as parks and schools.

Locations for the right-of-way and improvements are identified based on review of the existing street grid, existing parcel boundary locations, physical constraints (e.g. steep slopes or creeks that might preclude economical road construction), applicable access management guidelines and research on dedicated rights-of-way.

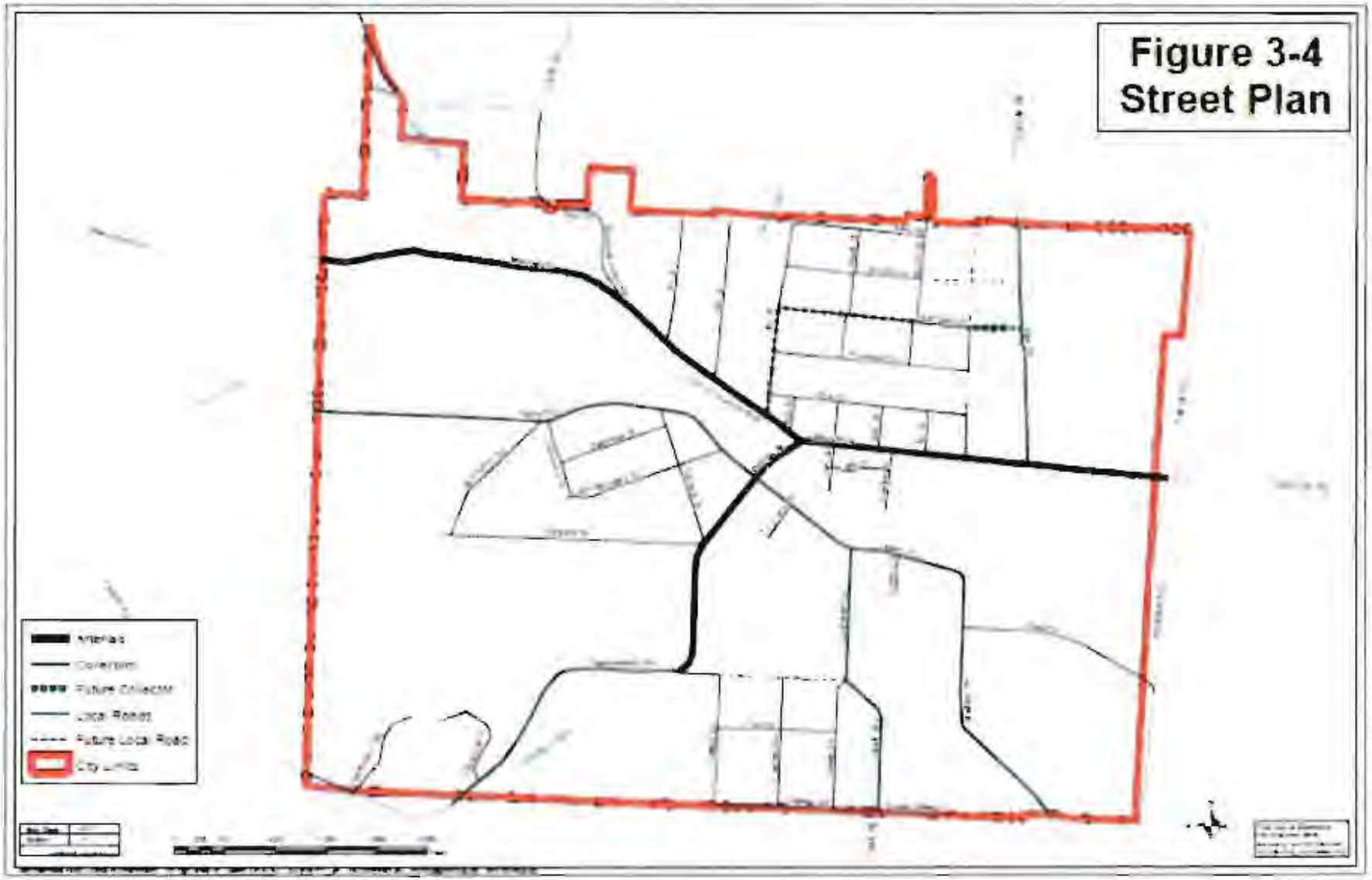


Figure 3-4
Street Plan

Figure 3-4 shows a map of potential future extensions of the local street network. All of the proposed future roadways are anticipated to be local roadways. They include:

- Vine Street extension from Bridge Street to Lombard Street,
- Chamberlain Road extension from Bridge Street to Lewis Street,
- Bryant Street extension from Wood Street to Ellis Street,
- Boundary Street extension from Pine Street to Prospect Avenue, and
- Boundary Street from Fairoaks Avenue to north city limits.

Rights-of-way exist for these street extensions. In all cases, alignments are identified that would provide for the most logical street layout. However, alignments are flexible and more refined layouts meeting the site and development constraints would be performed at the time of development by developers.

STREET DESIGN STANDARDS

The 2010 Street Improvement Plan and the City's Public Works Design Standards provided the street categories and street design standards based upon the categories of Arterial, Collector, Local Road, Cul-de-Sac (separately at less than and greater than 200 feet in length), and Alley. (Note: alleys are public right-of-way but not considered a public street in determining primary access to a property.) Chapter 4 of the TSP presents additional categories and design options as updated in 2013.

Local Road

Standards for local streets within the City of Falls City were adopted in 2010 in conjunction with the Street Improvement Plan. However, preparation of the TSP determined that additional categories are needed for design standards. The additional categories, including alternatives to rights-of-way and surfacing for pedestrian/bikeway travel areas, were revised in 2013. See Chapter 4 for dimensions, surfacing and design standards.

PEDESTRIAN NETWORK

Street design standards in 2012 required sidewalks on all local, collector, and arterial roadways within the City limits. There are many roadways without sidewalks, sidewalks in poor condition or with critical gaps. The following text identifies pedestrian and bicycle network projects that were identified as potential priorities. The analysis also provides planning level cost estimates to complete all of the identified projects. The planning level costs provided are for stand-alone pedestrian projects and do not account for full road reconstruction or potential cost savings of implementing multiple projects together. Project costs were refined to account for these factors after a recommended list of improvements is identified and additional feedback is received from City staff.

Pedestrian Projects

For the purpose of this analysis, priority sidewalk project locations were identified based on arterials and collectors without sidewalks, system connectivity needs, and gaps in existing sidewalks on local streets. Based on this analysis, the following locations were identified as potential sidewalk priorities:

- Boundary Street - Both sides between Fairoaks Street and Prospect Avenue. Installing sidewalks would connect Fairoaks Street to Prospect Avenue, thereby improving access to the elementary school.
- Bridge Street – Both sides between S. Main Street and Hopkins Avenue. Sidewalks along this stretch of Bridge Street would connect the Hopkins/Terrace Avenue neighborhoods to the Main Street corridors.
- Dayton Street – Both sides between N. Main Street and Little Lucklamute River Constructed sidewalks would connect N. Main Street with the existing pedestrian bridge.
- Ellis Street - East side between N. Main and Fairoaks Streets. This project would provide a natural connection between N. Main Street and the residential neighborhoods along the Fairoaks Street and Prospect Avenue corridors. In addition, Ellis Street intersections N. Main Street near the high school, thereby improving the ability to high school kids to safely walk to school.
- Fairoaks Street - Both sides between Ellis and 5th Streets. Installing sidewalks along Fairoaks Street would provide a natural east-west connection between Ellis and 6th Streets.
- Lombard Street – East side between S. Main and Lewis Streets. A complete sidewalk network would be beneficial in connecting the south side neighborhoods to the existing pedestrian facilities and existing pedestrian bridge crossings of the Little Lucklamute River
- Mitchell Street – North side between 5th and 4th Streets. Constructing this small stretch of sidewalk would provide a continuous sidewalk connection to N. Main Street.
- Prospect Avenue - Both sides between 5th and Boundary Streets. Installing sidewalks along Prospect Avenue would provide access to the elementary school.
- 3rd Street – East side between N. Main Street and the river. Installing sidewalks would connect N. Main Street with the existing pedestrian bridge.
- 5th Street - East side between Fairoaks and Mitchell Streets. Installing sidewalks along 5th Street would complete a pedestrian loop, therefore serving the upper residential neighborhoods and connect them to Mitchell Street/N. Main Street.

This list of potential pedestrian priority projects is presented in **Table 3-2** and provides planning level cost estimates for the pedestrian projects identified above. Locations of the projects are identified in **Figure 3-5.**

Figure 3-5
Revised Street Design Standards

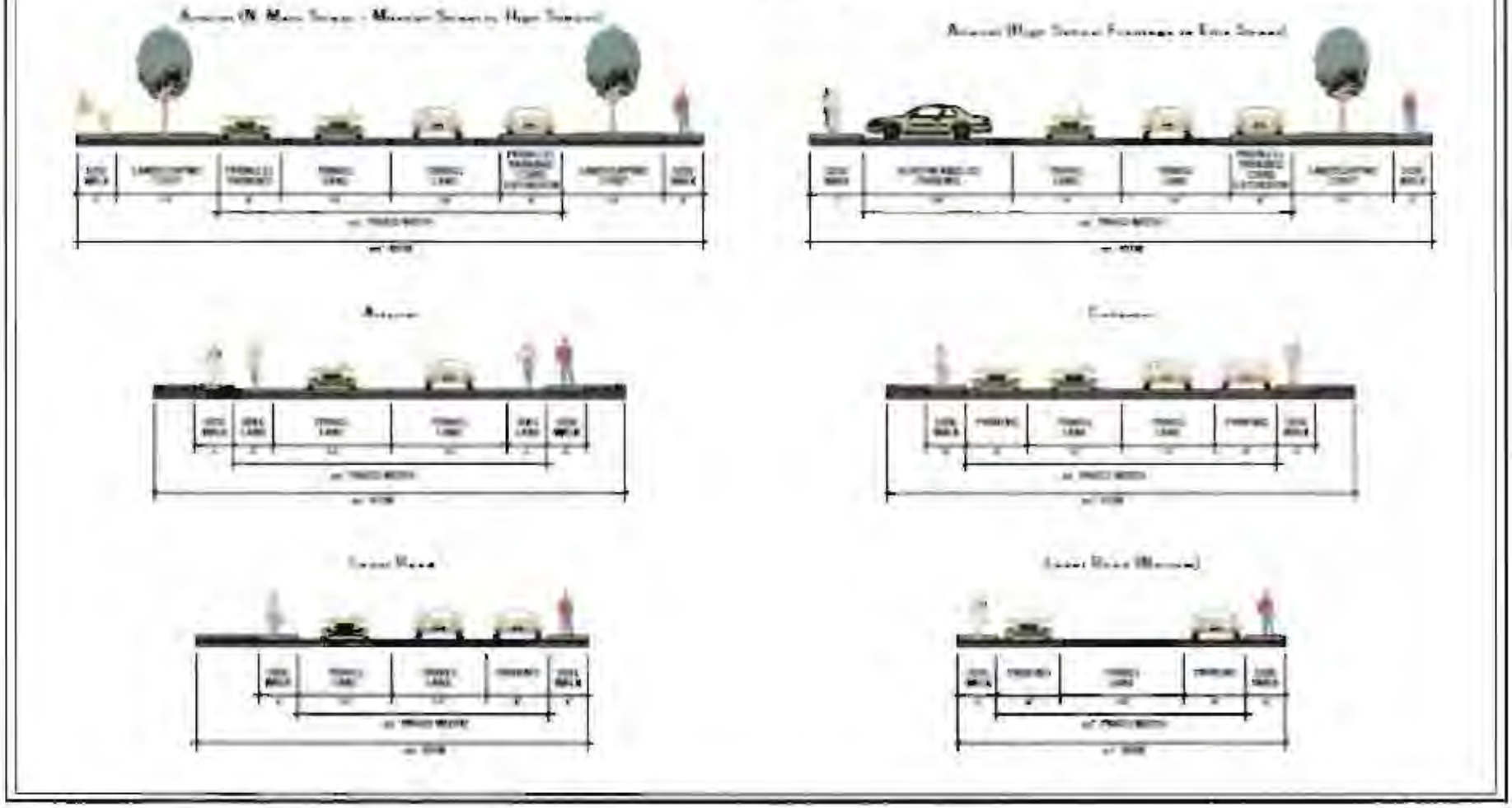


Table 3-2: Pedestrian Improvement Cost Estimates

Improvement	Street	Length Side	From	To	New Length (ft)[1]	Retrofit Length (ft)[1]	Curb & Gutter (ft)[1]	Cost Estimate[2,3]	ROW Available?
Sidewalks	Ellis Street	West	N. Main Street	Fairoaks Street	2,000	-	2,000	$187,000	No
	Fairoaks Street	Both	Ellis Street	5th Street	3,750	-	3,750	$351,000	No[4]
	Boundary Street	Both	Fairoaks Street	Prospect Avenue	600	-	600	$56,000	Yes
	Prospect Avenue	North	Boundary Street	5th Street	1,500	-	1,500	$140,000	Yes
		South	Boundary Street	5th Street	1,250	-	1,250	$117,000	Yes
	5th Street	Both	Fairoaks Street	Mitchell Street	1,740	-	1,740	$163,000	Yes
	Bridge Street	Both	S. Main Street	Chamberlain Road	3,500	-	3,500	$328,000	Yes
	S. Main Street	South	Bridge Street	Lombard Street	950	-	950	$89,000	Yes
		North	Bridge Street	Lombard Street	-	950	950	$89,000	Yes
	Lombard Street	West	S. Main Street	Lewis Street	900	-	900	$84,000	No
		East	S. Main Street	Lewis Street	1,100	-	1,100	$103,000	No
	3rd Street	Both	N. Main Street	Bridge	400	-	400	$38,000	Yes
	Dayton Street	Both	N. Main Street	Bridge	850	-	850	$80,000	Yes
	Mitchell Street	North	4th Street	5th Street	200	-	200	$19,000	Yes
							Total	**$1,844,000**	

Source: KAI

[1] Combined Length – both sides of street (if applicable).

[2] All cost estimates include mobilization (10%), traffic control (5%), contingencies (30%), architectural/engineering fees (15%), and construction management (10%) (2012 dollars).

[3] Assumes replacement of existing "poor" quality sidewalks for same price as installation of new sidewalk.

[4] Insufficient right-of-way assuming Fairoaks Street is modified to Collector status.

The total cost to complete all of the identified pedestrian priorities is approximately $1,844,000. The planning level cost estimates do not include additional costs for right-of-way acquisition costs in areas where the existing right-of-way is not adequate to accommodate the minimum cross section.

Section 1
Chapter 4
Recommended Transportation Improvements

Chapter 4
Recommended Transportation Improvements

Chapter 2 (Existing and Future Conditions) discussed the existing and future roadway, pedestrian, and bicycle deficiencies in Falls City. Chapter 3 (Transportation System Alternatives Analysis) developed and analyzed a number of options for addressing those deficiencies. Using feedback received from the Project Advisory Committee (PAC), City staff, and attendees at the April 25/September 28 (2012) community workshops, Chapter 4 identifies recommended transportation improvements for consideration in the Falls City Transportation System Plan.

The recommended improvements are categorized into Near- and Long-term transportation projects to address future transportation system needs. Near- and Long-Term projects are defined as follows:

- Near-term – The projects in the Chapter 4 list mitigate declining infrastructure conditions and maximize the existing system through lower-cost multi-modal improvements, where possible. Listed projects are generally recommended for implementation in the more immediate time-frame (5 to 10 years).
- Long-term – The projects in the Chapter 4 list maintain the basic transportation infrastructure within the city and meet the long-term vision for a fully connected and enhanced multi-modal network. Referenced projects are generally recommended for implementation over a longer period of time as development and capital expenditures are acquired (10 to 20 years).

In addition to presenting the improvements for future roadway, pedestrian, and bicycle systems; the Transportation System Plan includes 1) Roadway Classifications, 2) a Future Street Plan, and 3) Roadway Cross-Section Standards for all streets in Falls City.

SUMMARY OF TRANSPORTATION NETWORK DEFICIENCIES

Chapter 2 and Community Workshops #1 and #2 identified a number of existing and future circulation issues within Falls City. These issues are outlined below:

- Projected traffic volumes are relatively low due to estimates of limited growth potential in the City (based on infrastructure deficiencies). As such, no capacity based improvements are necessary to the roadway network. However, the existing transportation network does need to be better integrated and connected from a multi-modal perspective.
- The N. Main Street/Bridge Street/Mitchell Street intersection is a large intersection. Roadway striping and signing is less than ideal on some approaches, making it confusing for drivers and pedestrians.
- Many streets do not have sidewalks, or provide sidewalks narrower than the required 5 to 6 feet. Sidewalks or continuous sidewalk sections are missing along many streets that serve the elementary or high school.
- Many City streets are narrow and do not meet the adopted Street Design Standard cross sections. These narrow streets can make bicycling and walking uncomfortable.
- Many City streets are unpaved gravel and un-graveled surfaced roadways.

- There is a desire to develop a multi-use pathway that better connects Falls City to tourist attractions (inside City limits) and recreational mountain biking (further west outside City limits).

TRANSPORTATION IMPROVEMENTS

The recommended transportation improvements identify roadway, pedestrian, bicycle, and other projects needed to address the transportation deficiencies. The projects are categorized as either near-term or long-term projects based on how they will meet the City's needs and the order in which the projects could potentially be pursued. **Figure 4-1, Future Transportation Improvements**, provides a map of the improvements. **Table 4-1, Transportation Improvement Projects**, summarizes the improvements by mode and priority.

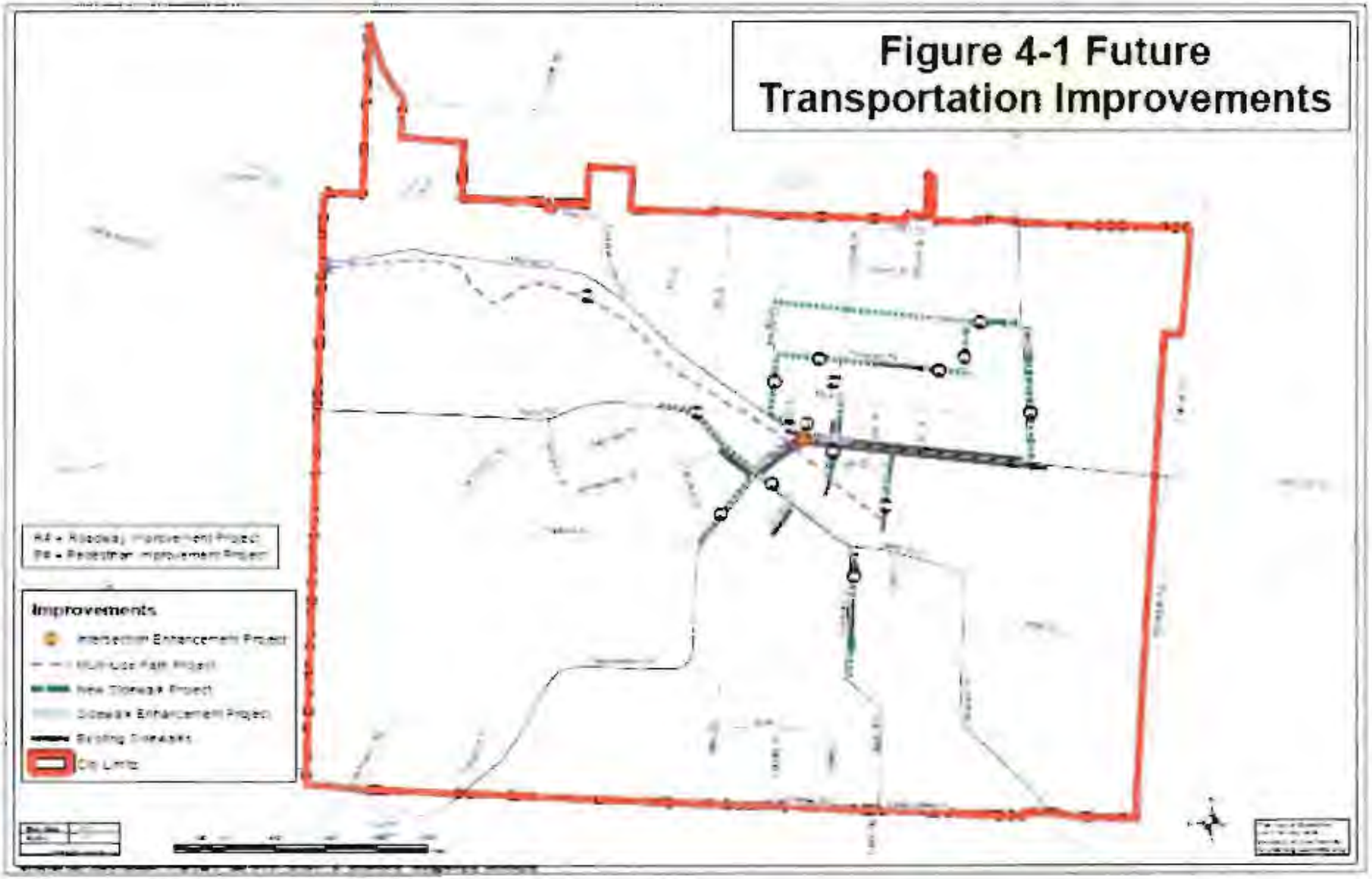


Figure 4-1 Future Transportation Improvements
Improvements
Intersection Enhancement Project
Multi-use Path Project
New Sidewalk Project
Sidewalk Enhancement Project
Existing Sidewalks
City Limits

Table 4 - 1 – Transportation Improvement Projects

Project	Location	Description	Capital Cost[1]	ROW Cost[2]	Priority
Roadway Projects					
R1	N. Main Street/ Bridge Street/ Mitchell Street	Reconfigure the intersection to provide a more defined and delineated Mitchell Street approach. Provide curb modifications to shorten the Mitchell Street pedestrian crossing. Combine the Mitchell Street left- and right-turn lanes into one single lane	$9,000	N/A	Long-term
Pedestrian/Bicycle Improvements					
P1	Ellis Street	Construct an 6' wide gravel walkway along the east side of Ellis Street from N. Main Street to Fairoaks Street	$38,000	N/A	Near-term
		Install sidewalks on the east and west sides of Ellis Street from N. Main Street to Fairoaks Street	$210,000 or Development Driven	Development Driven	Long-term
P2	Fairoaks Street	Construct an 6' wide gravel walkway along the north side of Fairoaks Street from Ellis Street to 5th Street	$35,000	N/A	Near-term
		Install sidewalks on the north and south sides of Fairoaks Street	$395,000 or Development Driven	Development Driven	Long-term
P3	Boundary Street	Construct an 6' wide gravel walkway on the west side of Boundary Street from Fairoaks Street to Prospect Avenue	$5,600	N/A	Near-term
		Install sidewalks on the west side of Boundary Street	$35,000 or Development Driven	N/A	Long-term
P4	Prospect Ave	Install sidewalks on the south side of Prospect Avenue	$140,000 or Development Driven	N/A	Long-term
P5	5th Street	Construct an 6' wide gravel walkway on the east side of 5th Street from Mitchell Street to Fairoaks Street	$16,400	N/A	Near-term
		Install sidewalks on the east side of 5th Street from Mitchell Street to Fairoaks Street	$85,000 or Development Driven	N/A	Long-Term
P6	Bridge Street	Construct an 6' wide gravel walkway on the west side of Bridge Street from S. Main Street to Hopkins Avenue	$9,000	N/A	Near-term
		Install sidewalks on the west side of Bridge Street from S. Main Street to Hopkins Avenue	$70,000 or Development Driven	N/A	Long-term
P7	S. Main Street	Reconstruct/Install sidewalks on the north side of S Main Street from Bridge Street to Lombard Street	$95,000	N/A	Near term
P8	Lombard Street	Construct a wide shoulder along the east side of Lombard Street from S. Main Street to Lewis Street	$16,400	N/A	Near-term
P9	3rd Street	Install sidewalks on the east side of 3rd Street from N. Main Street to the river bridge	$20,000 or Development Driven	N/A	Long-Term
P10	Dayton Street	Install sidewalks on the west side of Dayton Street from N. Main Street to the river bridge	$50,000 or Development Driven	N/A	Long-term

P11	Parry Road	Install sidewalks on the north side of Parry Road from Bridge Street to falls parking area	$55,000	N/A	Long-Term
P12	Mitchell Street	Install sidewalks on the north side of Mitchell Street from 4th Street to 5th Street	$20,000 or Development Driven	N/A	Long-term
P13	Little Luckiamute River	Conduct an engineering study and, if feasible, construct a multi-use path along the Little Luckiamute River	To be determined	To be determined	Long-Term
P14	3rd Street	Acquire right-of-way and complete a side walk at the top of the existing pathway/stair connection between Pine Street and Prospect Avenue	$16,000	$58,500	Near-Term

Source: KAI ROW = Right-of-way

[1] All cost estimates include mobilization (10%), traffic control (5%), contingencies (30%), engineering fees (15%), and construction management (10%) (in 2012 dollars).

[2] Planning level cost of right-of-way estimated at $15 per square foot. Actual right-of-way acquisition cost will vary.

N. Main Street/Mitchell Street/Bridge Street Improvement Project

Figure 4-1, Future Transportation Alternatives, and **Table 4-1, Transportation Improvement Projects,** identify an improvement project (R1) for the N. Main Street/Mitchell Street/Bridge Street intersection. This intersection has a large pavement area (to accommodate large logging trucks) which makes certain approaches difficult to decipher, particularly for unfamiliar drivers and pedestrians. Some approaches such as the Mitchell Street approach, have experienced pavement striping loss due to wear and tear, making the traffic movements unclear. To address this, a preferred intersection configuration was developed based on the feedback from the TSP Planning Advisory Committee (PAC) review of draft chapters. **Figure 4-2, N. Main Street/Bridge Street/Mitchell Street Improvement Project,** graphically indicates the revised design. Under the referenced configuration, the Mitchell Street approach realigned so that all left and right-turn movements are made from the same travel lane. In addition, the curb on the north side of the intersection is proposed to be "bumped out" in order to shorten the pedestrian crossing distances across the Mitchell Street approach. The redesign still accommodates large logging trucks while providing a better delineated intersection that accommodates pedestrian movements in a more efficient and safe manner.

TRANSPORTATION IMPROVEMENT COSTS

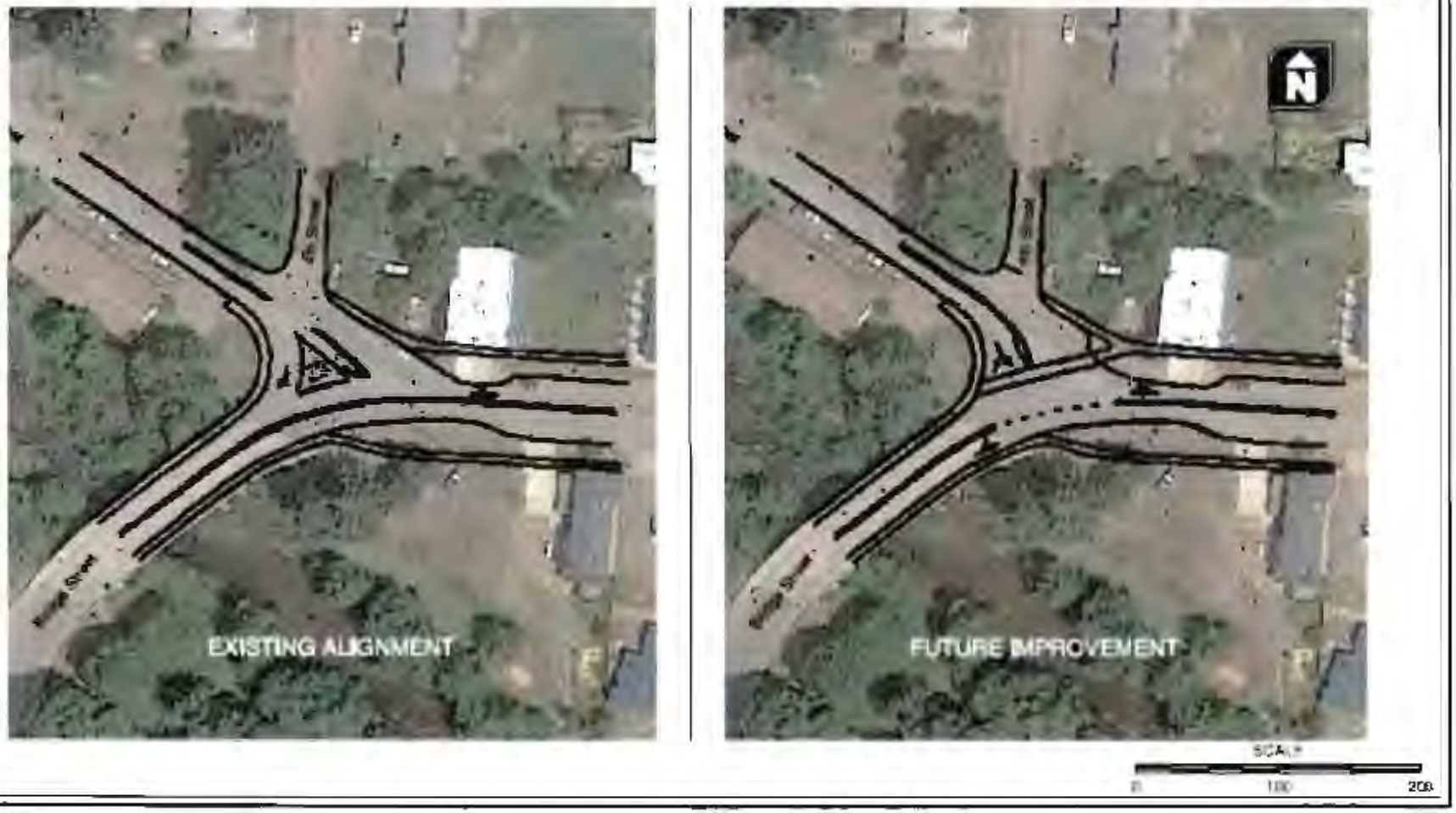
The total cost of the transportation improvements contained in **Table 4-1** is approximately $1.3 million, as shown in **Chapter 4 - Table 2, Planning Level Transportation Improvement Costs.** The costs include all projects identified in the list and represent an ideal improvement scenario.

Table 4-2 – Planning Level Transportation Improvement Costs (Identified List)

Type	Near-Term	Long-Term	Total
Roadway	-	$9,000	$9,000
Bicycle/Pedestrian	$231,900	$1,080,000	$1,311,900
Total	**$231,900**	**$1,089,000**	**$1,320,900**

Source: KAI

Figure 4-2
N. Main Street/Bridge Street/Mitchell Improvement Project



Source: KAI

Roadway Functional Classification and Future Street Plan

In preparation of the City's TSP, the roadway classifications for the existing and future street network were reviewed. As part of the review, suggested changes to existing roadway classifications and the location of potential future local and collector roadways were identified. The Roadway Functional Classification Map is shown in **Figure 4-3**. The 2013 Street Plan designates:

- The upgrade of several existing local streets to collectors;
  - 5th Street from Mitchell Street to Fairoaks Street - change from a Local Road to a Collector
  - Fairoaks Street from 5th Street to Ellis Street - change from a Local Road to a Collector
- The potential location of new local access streets to provide better connection between existing streets; and
- The potential of new local access streets to provide adequate connections for automobiles, pedestrians and bicyclists to significant local destinations and new development

Figure 4-3 provides a map showing future extensions of the local and collector street network. Depending on future lot sizes, additional local road(s) may be needed within the proposed grids to access all of the lots. Layout of local roads should remain flexible and be performed by developers to suit market, design opportunities, and site constraints.

The street plan should continue to be refined, as development occurs and the site constraints and opportunities of each property are addressed. The TSP is intended to provide some flexibility in alignments and primarily serve to define the desired level of connectivity in each area.

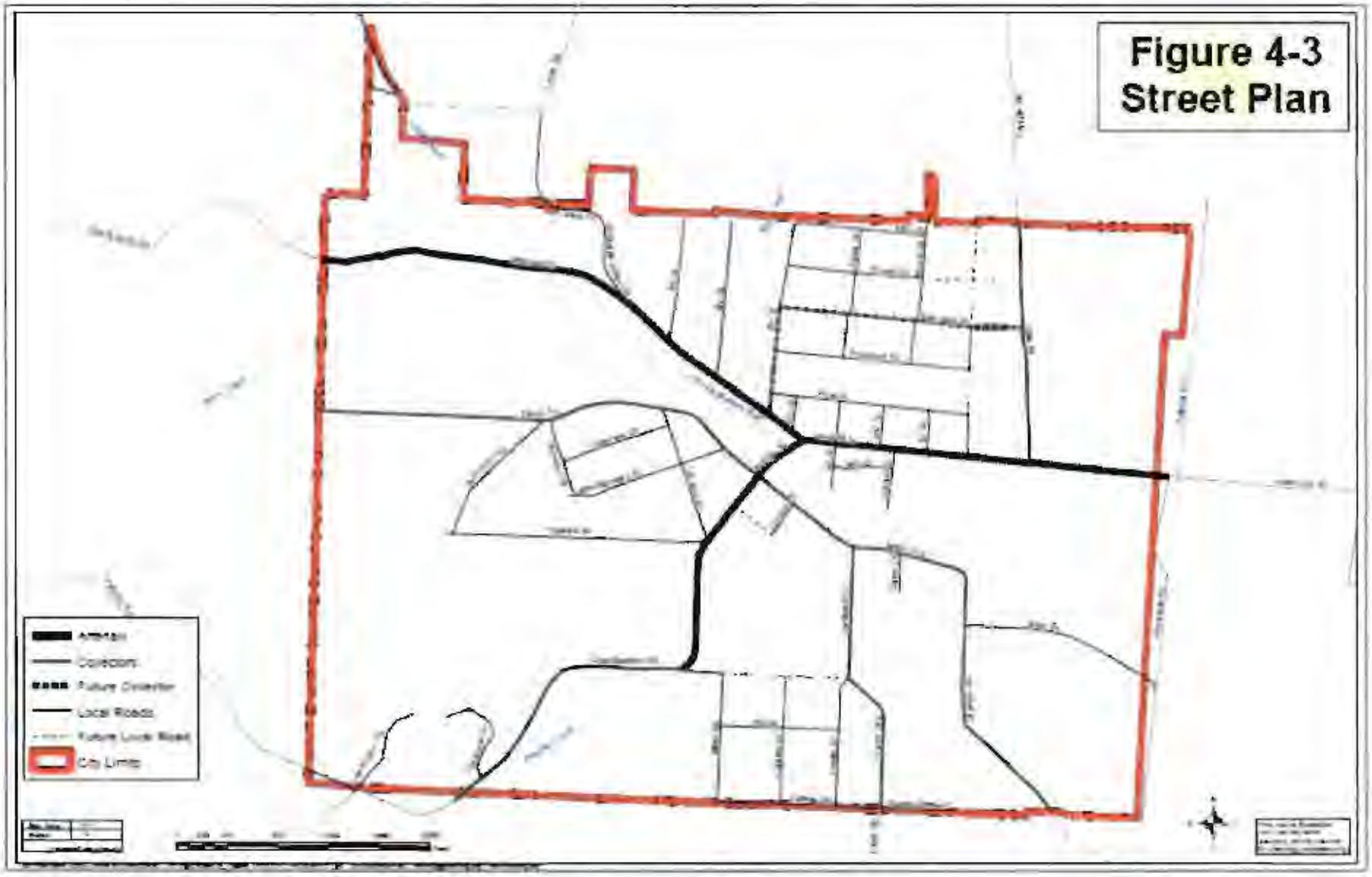


Figure 4-3
Street Plan

STREET CROSS-SECTION STANDARDS

Figure 4-4, Street Design Standards, illustrates the TSP's Street Cross-Section Standards. Cross sections are consistent with the street design standards corresponding to each of the functional classifications adopted in the Falls City Public Works Design Standards, with the addition of two revised local street standards outlined below:

- Local Road (with Walkway) - This local street standard provides a lower cost section that does not include curb and gutter. Instead, it allows a 2.5 foot drainage swale on the outside of the travel way and sidewalks five (5) feet wide on both sides of the street.
- Local Road (with Shoulder) – Because many of the existing local streets have 40-foot right-of-ways, and given that it may be difficult to obtain a right-of-way 50 feet in width due to property impacts and topography constraints, a second narrower standard is proposed. This standard calls for a 40 foot wide right-of-way, two 12-foot travel lanes, and two shoulders eight (8) feet in width that could be used for on-street parking, walking or bicycling.

Table 4-3 summarizes the street design standards corresponding to each of the functional classifications.

Table 4-3: Proposed Falls City Street Design Standards

Functional Classification	ROW Width	Paved Width	Travel Lanes	Turning Lane	Parking	Landscape Strip	Sidewalk Width	Bike Lane
Arterial	60 feet	40 feet	[1]	[1]	None	Optional	5 feet	5 feet
Collector	60 feet	40 feet	[1]	[1]	Both Sides	Optional	5 feet	[1]
Local Road (with Walkway)	50 feet	32 feet	2 Lanes	None	One Side	Optional	5 feet	[2]
Local Road (With Shoulder)	40 feet	24 feet	2 lanes	None	Both Sides[3]	None	[2]	[3]
Residential Cul-de-sac (Length > 200 ft)	50 feet	30 feet	-	-	None	Optional	5 feet	-
Residential Cul-de-sac (Length < 200 ft)	45 feet	30 feet	-	-	None	Optional	5 feet	-
Alleys[4]	20 feet	20 feet	-	-	No	No	No	No

Source: KAI

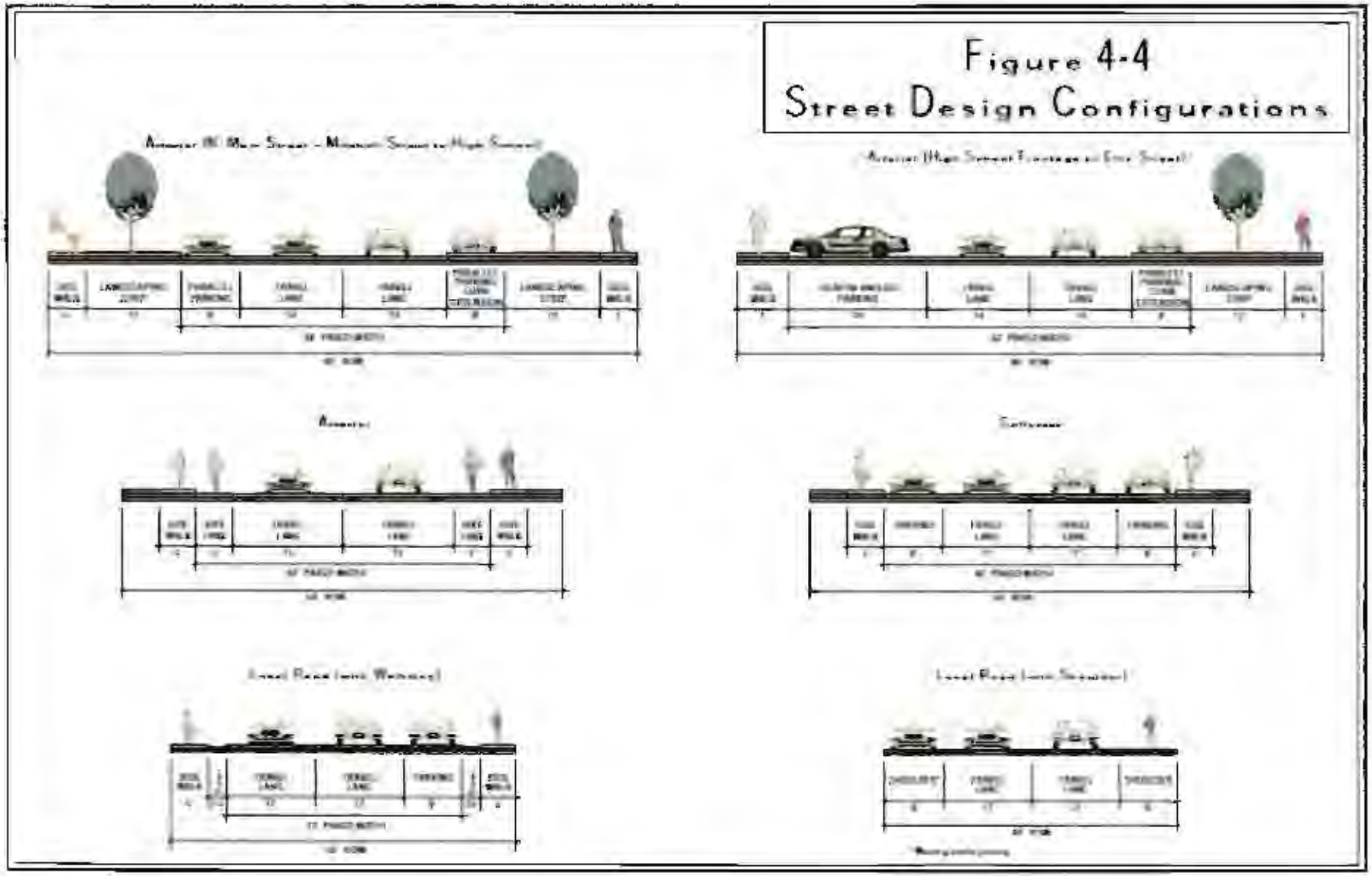
[1] The number of travel lanes for Arterial and Collector roadways shall be determined by the volume of traffic. The City may require additional turning lanes based on situational analysis or a traffic engineer's report evaluating the need for additional turning lanes.

[2] 8' shoulder that could be used as an on-street parking lane or a pedestrian/biking walkway.

[3] Traffic volumes are projected to be low enough such that vehicles and bicyclists can share the travel lane.

[4] Alleys are public rights-of-way but shall not serve as primary access to a property.

Figure 4-4
Street Design Configurations



Source: KAI

SUMMARY

The proposed improvement projects are a comprehensive set of projects to address the City's near- and long-term needs. A summary of current and future funding sources and recommendations to increase local funding for transportation facilities are addressed in the TSP, Chapter 5, Transportation Financing Program and the City's Comprehensive Plan, Transportation Element.

Section 1
Chapter 5
Transportation Financing Program

Section I – Chapter 5
Transportation Financing Program

A list of planned multi-modal transportation improvements were identified in the Falls City Transportation System Plan - Chapter 4 (Recommended Transportation Improvements). Chapter 5 also provides a general estimate of the priority/timing of improvements as well as a conceptual capital cost estimates. The following memorandum provides an overview of existing and anticipated funding sources and identifies additional strategies for funding capital projects.

CURRENT TRANSPORTATION FUNDING SOURCES

Falls City currently funds local transportation operations, maintenance and construction activities using a "Street Fund". This fund relies upon the following revenue streams:

- State Highway Fund revenues: For cities and counties in Oregon, distributions from the State Highway Fund (SHF) are a primary source of revenue for transportation needs. Fund distributions, based on population, represent each local government's share of the State's fuel tax, weight-mile tax, and vehicle registration fees.
- General Fund revenues: At the discretion of the City Council, the City can allocate General Fund revenues (the largest portion of which is property tax) to pay for any portion of its transportation needs.
- State/Federal Grants: The City can apply for various grants to improve their transportation infrastructure. Grants are typically competitive, and to be eligible, most grant applications require a formal acknowledgement/adoption of a project on the local transportation system plan or capital improvement plan.

PROJECTED TRANSPORTATION FUNDING

Chapter 2 documented the funding sources of transportation projects within Falls City over the previous five (5) years. There were eight (8) projects completed within Falls City over this time period for a total of approximately $80,700 (2011 dollars). Only a portion of these projects came from dedicated local funds. The majority came from grants administered by ODOT Small City Allotment (SCA) Grants.

An average of approximately $10,100 was spent on transportation projects over the last eight (8) years in Falls City. Of this, Falls City provided approximately $4,200 per year on average for transportation projects with the remainder $5,900 provided by ODOT and ODOT grants. An estimate of future funding was based on past funding trends.

Table 5-1 – Forecast Future Transportation Funding provides a summary of the estimated future project funding over the next five, ten, and twenty years based on an assumed average funding level of approximately $10,100 per year (the forecast numbers are cumulative). As shown in **Table 5-1**,

approximately $202,000 is projected to be available over the next twenty years for transportation projects based on historic funding levels from the City and ODOT/ODOT grants.

Table 5-1 – Forecast Future Transportation Funding

	5-Year Forecast	10-Year Forecast	20-Year Forecast
City Funds	$21,000	$42,000	$84,000
ODOT/Grant Funds	$29,500	$59,000	$118,000
Total	$50,500	$101,000	$202,000

Source: Kittelson and Associates and FCS Group (2012 dollars)

IDENTIFIED TRANSPORTATION IMPROVEMENT COSTS

Table 5-2 – Planning Level Transportation Improvement Costs (Identified List) provides an overview of the identified transportation improvements documented in Chapter 4. As shown, the total cost of the project list is approximately $1,321,000.

Table 5-2 – Planning Level Transportation Improvement Costs (Identified List)

Type	Near-Term	Long-Term	Total
Roadway	-	$9,000	$9,000
Bicycle/Pedestrian	$231,900	$1,080,000	$1,311,900
Total	**$231,900**	**$1,089,000**	**$1,320,900**

Source: Kittelson and Associates and FCS Group (2012 dollars)

Between the projected transportation funding levels (**Table 5-1**) and the costs associated with the identified Transportation Improvements (**Table 5-2**), there is a funding shortfall of approximately $1,118,900. Based on this shortfall, additional funding is needed to fund the near- and long-term transportation improvement projects in Falls City.

ADDITIONAL FUNDING AND FINANCING SOURCES

There are several options for enhancing transportation revenues for capital improvement projects. These funding sources are listed in **Table 5-3 – Existing and Potential Transportation Funding Sources**. A description of local considerations for each funding option is provided in **Section II – Appendix J (Transportation Utility Formation Study Report)** and the City's **Comprehensive Plan – Transportation Element** (other sources).

Table 5- 3 – Existing and Potential Transportation Funding Sources

Funding Source	$ Could be Spent		May Require Voter Approval
	Operations/Maintenance	Capital	
Street Fund (existing)	X		
General Fund (existing)	X	X	
Transportation Utility Fee	X	X	X
Transportation System Development Charges *		X	
Local Option Taxes (i.e., property or fuel tax)	X	X	X
Local Improvement District		X	
Reimbursement District		X	
Economic Improvement District	X	X	
Urban Renewal District		X	
General Obligation Bonds		X	X
Revenue Bonds		X	
Grants and Loans		X	

* Not permitted by City Charter Source: Kittelson and Associates and FCS Group

TRANSPORTATION UTILITY FEE

As part of the Transportation System Plan development, the Falls City Council gave approval to explore the potential creation of a Transportation Utility Fee (TUF). A transportation utility fee recovers a specific set of local transportation-related operating and/or capital costs by charging a fee to users. Because the same set of residences and businesses typically use both the water/sewer system and the transportation system, the transportation utility fee is usually added to an existing water or sewer utility bill.

Fees generated by the utility can finance both operating and capital costs directly, and they can also secure revenue bond debt that is used to finance capital costs. To date, more than 20 Oregon cities have created a utility fee to provide dedicated revenue for transportation needs. If the City of Falls City were to implement a transportation utility fee, a formation study is provided in **Section II - Appendix J.**

Section II
Appendix A
Transportation System Inventory 2012

FALLS CITY TRANSPORTATION SYSTEM INVENTORY 2012

Note: All photographs and maps referenced in this section refer to Section II unless otherwise noted.

The 2012 Falls City Transportation System Plan (TSP) update includes an inventory of the existing transportation system in the City of Falls City. The transportation system inventory includes the street system as well as an assessment of the pedestrian, bikeway, public transportation, rail, air, water, and pipeline systems.

Background Document. In July 2010, the City adopted The Falls City Street Improvement Plan (FCSIP). Sections of the document include a street inventory, street improvement policies, a plan for a future street network, street design and construction standards, transportation funding sources, and recommendations.

Street Network and Jurisdiction. The City's street network is generally divided into two main sections north and south of the Little Luckiamute River. Streets in the northern part of the City are generally laid out in a grid pattern. In the southern part of the City, streets are in a more irregular pattern. It should be noted that the primary access road to the City – Falls City Road – is under the jurisdiction of Polk County. Upon entering City limits, the roadway is renamed North Main Street and under the City's jurisdiction. All roadways within City limits are City streets with the exception of Black Rock Road—classified as a "resource road" by Polk County. (Note: There are no transportation facilities under the jurisdiction of the Oregon Department of Transportation (ODOT) within the boundaries of Falls City.)

County roads listed in the County Transportation plan nearest the City include Black Rock Road (west of Falls City) and Socialist Valley Road (north of the City) and both are classified as Resource Roads. Polk County lists such roads as providing "connection between resource areas and principal and minor arterials. These roads are generally rural and provide access to agricultural and timber roadways, to function in serving areas that contribute to the economic base of the community even though they may have low volumes of traffic." The County-listed portions of Socialist Valley and Black Rock Roads are outside City limits; however, both connect to Mitchell Street—a City street.

The Polk County 2009 Transportation Plan map indicates roadway classifications. Falls City Road westerly from Highway 223 (inside and outside City limits) is indicated as a major collector. Bridgeport Road from Highway 223 to its intersection with Waymire Drive (southeast of the City) is listed as minor collector.

Deficiencies. The FCSIP street inventory identified that the majority of streets in Falls City do not meet the City's current street construction standards for pavement width and surfacing requirements. For many streets the width only accommodates one vehicle passing at a time. Most City streets do not have sidewalks. Lack of sidewalks serves as a barrier to providing safe pedestrian access from residential to schools, the downtown, and local parks.

Additionally, within City limits there are a number of undeveloped street rights-of-way that serve as impediments to providing a well-connected and convenient street system. In certain instances these rights-of-way may be unnecessary or impractical to develop based upon topographic conditions.

The FCSD notes that limitations placed by the availability of only one bridge that crosses the Lukiamute River on Bridge Street and has the potential of creating a public safety hazard. (See **Appendix A - Photograph 1**/Bridge Street.) Other missing transportation elements include lack of an insufficient storm water management system and adequate City-wide street signage. A parallel factor that complicates safety elements of the transportation system is the City's improper street addressing within some areas of the community.

The City of Falls City does not have a well-connected pedestrian system. Sidewalks are basically limited to North Main Street. (See **Appendix A - Photograph 2**/North Main Street.) As part of the TSP adoption process, the City needs to determine a pedestrian system that will provide safe routes to school and other public facilities such as the library, City Hall, Community Center, and public parks. After locations for sidewalks are identified, construction priorities need to be ranked and listed. No bicycle lanes or routes are established in the City and those facilities need to be determined as to type and location and prioritized.

In 1997, the City Engineer (John D. McGee) submitted to the Mayor the results of an investigation into the "possibility of upgrading/constructing bicycle and pedestrian ways." The Bicycle and Pedestrian Way Assessment summarized Federal, State, and local laws, plans, rules and standards. Although the information is dated, it continues to support the need for pedestrian and bicycle facilities within the Community. An interesting statement is that "as petroleum products increase in cost, the energy efficient forms of transportation such as bicycles and walking will become more important"—a point even more relevant in today's economy.

In preparation of the Assessment an inventory was completed for "each of the existing walkways in Falls City . . . As part of the inventory the width and length of all segments of walkways that were visible were physically measured. The general conditions were also noted." A rating system was developed. See **Appendix A - Street Inventory – Table** 1 (Bicycle and Pedestrian Way Assessment). (Information is listed pages 5, 11, and 16 of the full report.) The inventory and rating may continue to be of value in assessing the City's pedestrian and bicycle transportation needs.

The Assessment, Section III, covers "Inventory Shortcomings and Possible Solutions." The number of miles for sidewalks is explained noting that the "focus of enhancing pedestrian ways should initially be concentrated on areas which will be likely to receive the highest volume of traffic (schools, business', postal facilities, church, etc.)." The City Engineer determined that prioritizing those areas could be referenced as a Phase I. Phase II could then ". . . be designated as the residential areas with the greatest population distribution adjoining Phase I areas." The Assessment notes the need to meet requirements according to the Americans with Disability Act (ADA).

Safe Routes to School. Safe and convenient pedestrian and bicycle facilities are of special importance in the vicinity of schools to enable easier and healthier ways for children to walk and bicycle to and from school safely.

Sidewalks are located adjacent the high school property on both sides of North Main Street. Marked and signed crosswalks are located near the east and west ends of the school building. (See **Appendix A - Photograph 3**/Falls City High School.) Streets connecting to North Main Street from the residential areas do not have sidewalks.

At the Falls City Elementary School crosswalks are available to access the play area across the street. Sidewalks are installed in front of the school building. (See **Appendix A - Photograph 4**/Falls City Elementary School.)

Two interesting pedestrian elements within the Community include an unfinished pedestrian stairway connecting Pine Street to Prospect Avenue within an area without street connections and having steep topography. A pedestrian bridge connects 3rd Street to South Main Street. (See **Appendix A - Photograph 5**/Pedestrian Stairway and **Photograph 6**/Pedestrian Bridge.)

Existing and Future Street Network. The FCSTP includes a Future Street Network Plan to guide overall growth and development of new streets in the future. Streets needed to serve future development will be funded primarily by new development. The Improvement Plan includes an existing street network map that notes future street connections (2009). See **Appendix A - Street Inventory -- Map 1** (future street connections).

In 2009, City staff conducted an inventory of existing street conditions within Falls City. The street inventory included a summary of the following information:

- *Jurisdiction* – identifies whether or not a street is under the jurisdiction of Falls City or Polk County;
- *Classification* – identifies whether a street is classified as a local (minor), collector or arterial street;
- *Street width* – includes an estimate of the current street width;
- *Surface* – describes whether a street is currently paved or unimproved (gravel);
- *Pavement condition* – describes the current condition of paved streets (e.g. poor, fair, good and very good condition);
- *Curbs and Sidewalks* – identifies whether a street currently has curbs and sidewalk; and
- *Right of way* – includes an estimate of the current street right-of-way width

See **Appendix A - Street Inventory (2009) – Table 2.**

Functional Classification. The roadway functional classification system groups city streets into categories based upon the character of service they are intended to provide. Identification of the appropriate roadway functions is the basis for planning roadway improvements and establishing appropriate standards (right-of-way, roadway width, design speed).

The three (3) general types of roadway functional classifications are described as follows:

- ***Arterials*** – Intra- and inter-community roadways connecting community centers with major facilities. In general, arterials serve both through traffic and local traffic. Access should be partially controlled with infrequent access to abutting properties.
- ***Collectors*** - Streets connecting residential neighborhoods with smaller community centers and facilities as well as access to the arterial system. Property access is generally a higher priority for collector arterials; through-traffic movements are served as a lower priority.
- ***Local (Minor) Streets*** - Streets within residential neighborhoods connecting housing (also can be commercial, industrial, etc.) with the arterial system. Property access is the main priority; through traffic movement is not encouraged.

The Transportation Element of the Falls City Comprehensive Plan does not currently designate any streets in the City as arterials. Falls City Road, the main access to the City, has been designated as a major collector by Polk County.

North Main Street, the only City street designated by the City as a collector street, provides access to local streets on the north side of town and access to Bridge Street, the only vehicle bridge currently available to

access the area of town located south of the Little Lucknamute River. The remainder of the City's street system is comprised of local streets that provide direct access to the adjoining land uses.

As part of the adoption process for the FCSIP, the following streets were classified as arterial and collector streets:

Arterial Streets:

- Bridge Street
- Mitchell Street
- North Main Street

Collector Streets:

- Chamberlain Street
- Clark Street S. Main Street
- Ellis Street
- Lombard Street
- Parry Street
- Sheldon Avenue
- South Main Street

Other streets names include and unless portions are otherwise listed, they are classified as local streets:

1st Street
2nd Street
3rd Street
4th Street
5th Street
6th Street
7th Street
1st Avenue

Alan Street
Alder Street
Boundary Street
Bryant Street
Cameron Street
Carey Court
Central Avenue
Church Street

Clarence Drive
Dayton Street
East Avenue
Estelle Road
Fair Oaks Street
Fairview Street
Forrest View Lane
Harrington Road
Hopkins Avenue
Lewis Street
Mill Street
Montgomery Street
Pine Street
Terrace Street
Socialist Valley Road
Valsetz Road
West Boulevard

Wood Street

See Appendix A - Street Inventory – Map 2 (Functional Classification System).

During the discussion in preparation of the Street Improvement (2010) document, there was limited discussion about the designation of a truck route that would pass the City on the south side. On the north side of the side, the route provides a connection from Palmer Road, then westward toward Alan Street, and continuing to the west City limits. Not all of the right-of-way on this route is improved. On the south side of Falls City, a potential route was indicated as using a portion of Estelle Road (from the intersection

with Chamberlain Road), traversing the City eastward to Forest View Lane and to City limits. If the route continued it would connect northward on streets under Polk County's jurisdiction--Waymire and Palmer Roads. See **Appendix A - Street Inventory – Map 1** (future street connections), for location of potential truck route.

The formal designation of any truck route in the future requires coordination among the City, its residents, Polk County, and the forest industry. A representative of Weyerhaeuser indicated that a route may be beneficial but needs additional time to analyze topography/slopes, impact on residential areas, river crossings, and other route options.

(Please Note: Notwithstanding the content of the City's TSP, facilities located outside the Urban Growth Boundary are not planned facilities or improvements. These facilities may represent logical extensions or connections to meet future needs, but are not needed to meet current transportation needs within the City. Any such projects are suggestions for consideration when future land use decisions, such as Urban Growth Bounty (UGB) expansion amendments, are considered. Designation of these projects as planned facilities or improvements required an amendment to the Polk County TSP (which may require an exception to the statewide planning goals), as the County is the local government with jurisdiction, or a UGB amendment and amendment to the TSP.)

To complete the inventory for the City's transportation system and according to Step 9 of ODOT's Transportation System Planning Guidelines, the City needs to identify certain additional categories and include air travel, rail service, water system, transmission lines and public transportation.

Air Travel. The 2009 Polk County Transportation System Plan (PCTSP) explains that "there is only one public airport in the county. It is a state-owned facility located at the north edge of the City of Independence . . . The airport has maintenance, fuel, and a manned fixed-base operation seven days a week. It serves general aviation aircraft and has no scheduled airline operations. The airport does not have an instrument landing system, so operations are limited to visual flight rules." There are several privately owned airports within the County. However, in order to access regular passenger services, individuals need to commute to cities of either Eugene or Portland.

Rail Service. The closest passenger rail service is Amtrak with a station in Salem. According to the County's TSP, there are no rail lines that can serve the City as a freight service.

Water System. In conjunction with the maps being prepared for the City's TSP, City utilities will be incorporated into the GIS information based upon records readily available to City staff. The inventory will be reviewed by City staff for accuracy after the electronic and printed copies are prepared.

Transmission Lines (Pipelines). Information about other utilities not under the jurisdiction or ownership, the City relies upon the records and details available from the providers. Such utilities can include natural gas pipelines, electricity, telephone, cable television, and etc.

There are no cell towers within City limits. Private utilities authorized within the City under franchise agreements include Allied Waste, Pacific Power, Century Link, and Charter Communications.

Public Transportation. Transportation programs to benefit the elderly, and people with disabilities, and individual with lower incomes are limited for the residents of Falls City. As documented in the Polk County Transportation System Plan, the closest "fixed route, express, and flexible public transportation provided by the Chemeketa Area Regional Transportation System (CARTS)" is located in Monmouth and Independence. The County TSP continues, "there is no fixed route public transportation

system to Falls City . . . The Cherriots Rideshare Program (formerly Salem Rideshare), operating in the Salem-Keizer area since 1975, is available to Polk County residents. The program includes carpool, vanpool, buspool matching service, a preferential parking program, and reduced parking fees for carpools. It is financed by ODOT through the Salem-Keizer Metropolitan Planning Organization (MPO) from federal Surface Transportation Program (STP) funds under Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU)."

Polk County TSP notes that in regards to paratransit, "the largest . . . provider in Polk County is the Oregon Housing and Associated Services (OHAS aka 'Wheels'). Although there are other providers, OHAS unlike the others "is open to the general-public."

Additionally, there are no park-and-ride locations, Intelligent Transportation System facilities, public transportation services, intermodal connections or facilities, or an ODOT designated Freight Route within City limits.


Section II – Appendix A – Street Inventory – Photograph 5


Section II – Appendix A – Street Inventory – Photograph 6

Section II – **Appendix A – Street Inventory – Table I**

Bicycle and Pedestrian Way Assessment - City of Falls City, Oregon
WW97

Falls City Physical Inventory

The inventory of existing walkways was a matter of locating, measuring and noting the condition in place. Since a number of varying conditions were encountered, the following code system was developed:

G = Good: walkway is passable for all users

B = Broken: typically fractured and uneven surface, which would probably be difficult for disabled persons to negotiate

C = Cracked: Surface cracks often with vegetation protruding

U = Uneven surface: Surface irregularities which could make negotiation difficult for the disabled

H = Heaved: heaved surface indicates that a portion of the walkway has encountered a force which has resulted in adjacent walkway sections not to be coplanar. An example is a section of walkway where tree roots have lifted one section at an expansion joint, leaving a two to three inch lip in the direction of travel

In addition to these designations, unique conditions were noted by area. Unless otherwise noted, walkway material is Portland cement concrete (PCC).

General location of existing walkways: Falls City has relatively few existing walkways. Fortunately most are in areas where pedestrian traffic is likely to occur (i.e. schools, shopping areas and post office). In the report the location will listed in terms of street name as well as facility vicinity. A planning map of Falls City is also included to aid in locating existing walkways.

Prospect Street: (Falls City Grade school)

On the south side of Prospect street there is approximately 270 feet of Portland cement concrete (PCC) walkway. All but the western most 30 feet is five feet four inches wide. The western 30 feet is four feet wide. The western end terminates at grade on a gravel street shoulder. There is a striped cross walk across the street near the main entrance to the school. No Curb-cut or ramp exists at the cross walk. The cross walk terminates at the gravelpe shoulder on the north side of the street. The east end of the walkway terminates with a non-standard ramp. The ramp does not comply with the ADA standards. In particular, the side slope exceeds the 2 % maximum

Bicycle and Pedestrian Way Assessment - City of Falls City, Oregon
9/15/97

Mitchell Street (adjoining N. Main at Bridge street)

On the north side of Mitchell Street there is approximately 75 feet of eight foot wide PCC walkway extending from Fourth street to N. Main. The end which intersects fourth street has no ramp or curb cut. There is a relatively large accumulation of debris deposited at that end which would create a significant challenge for some users. The entire length of the walkway is cracked and broken.

Third Street (adjoining N. Main Street)

Third Street perpendicularly intersects North Main Street. On the North side of North Main Street, Third has walkways on both the East and West side. Each are 100 feet long. The East side walk is six feet wide cracked asphalt concrete. The West side walk is four feet wide cracked Portland cement concrete (PCC). Along Third on the South side of North Main, there is 45 feet of 4 foot wide PCC in good condition. Then there is a 20 foot section, 4 feet wide, of PCC which is beyond repair.

N. Main Street: (businesses and High school)

Because north Main Street has the majority of existing sidewalk, and the condition of these walkways vary significantly, the information gathered during the inventory is best displayed in table form.

Staring with the west end of the south side of North Main Street and proceeding toward the east.

Section length	width	Condition code	Remarks
56 ft	11 ft	C	Eight feet of the width is relatively coplanar and cracked, while the remaining 3 feet is patched at a side slope exceeding 2%.
82 ft	11 ft	C	The transition between the two sections (the 56 ft and the 82 ft) is rather abrupt. At some time, an attempt has been made to ease the transition by troweling an application of concrete between the two elevation planes.
95 ft	8 ft.	B, U	This section includes a driveway curb cut which extends the remainder of the block in front of the Hometown Hardware store.

Third Street cross-walk east end has a three inch curb from street up to walkway. No ramp exists.

56 ft. 12-5 ft. G The transition to the asphalt parking lot grade of the Hometown Grocery to the east is smooth.

67 ft. driveway G The east edge of the Hometown Grocery asphalt parking lot transitions smoothly to the adjoining Portland cement concrete (PCC) walkway section.

11.5 ft. 5 ft. G PCC

28 ft 7 ft. G PCC

46 ft. 7 ft. B, I Located in front of a vacant house adjacent to the store.

209 ft. 4 1/2 ft. G In this section there is a 24 foot drive way crossing the sidewalk, but it remains relatively level so side slope is not a concern. The end of this section terminates on Dayton Street.

Dayton Street crosswalk There is an access ramp at this cross walk.

72 ft 4 ft G, H PCC

50 ft 4 1/2 ft H PCC

9 ft. 4 1/2 ft G PCC

77 ft. 4 1/2 ft H PCC

49 ft 4 1/2 ft U Asphalt concrete (AC)walkway. This section is located across Main street from the intersection of First street and Main.

200 ft 5 ft. G PCC

160 ft 5 ft. C This section is located in front of the Seventh Day Adventist Community Center and has a small amount of cracking. The damage is mostly cosmetic.

20 ft. 5 ft. S This section transitions from a street set-back which accommodates diagonal parking in front of the community center toward the centerline of the street in front of the Falls City High School grounds. It also traverses some topography which leaves the sidewalk with a side slope exceeding the allowable 2%.

230 ft 5 ft C This section ends in front of the High School. The cross walk in front of the school does not have an access ramp.

Bicycle and Pedestrian Way Assessment - City of Falls City, Oregon
9/1997

216 ft	4 ft	C, U, H	East side of High School. Ends at a gravel drive way.
150 ft	3 ft	C, U, H	This section is overgrown and unusable.

On the west end of the north side of North Main Street and proceeding toward the east

Section length	width	Condition code	Remarks
21 ft	11 ft	G	In front of the ornamental concrete manufacturing business
11 ft	11 ft	U	The side slope is greater than 2% in the drive way to the ornamental concrete manufacturing business
18 ft	11 ft	G	PCC
55 ft	11 ft	C, B, C	PCC
44 ft	11 ft	C, U, H	Right lane is cracked but serviceable. The remaining 5 foot width is uneven and heaved.
93 ft	11 ft	C	PCC
34 ft	4 ft	G	PCC
23 ft	5 ft	G	Asphalt concrete Fire Hall parking driveway
50 ft	6 ft	G	In front of the Fire Hall
90 ft	6 ft	C	PCC
35 ft	NA		Gravel section between the telephone company building and the Lucksamute Clinic
93 ft	6 ft	G	In front of the Lucksamute Clinic

There is no walkway from Second Street to First Street except for a 170 foot segment of 5 foot wide PCC in front of the Methodist Church. Much of it is new. The oldest portion is also in good condition with some minor cracking.

There is no ramp at First Street on either side of the cross walk. The East access to the sidewalk is extremely rough, and would be difficult to navigate for many users, particularly the young, elderly or persons who use mobility devices.

108 ft.	4 1/2 ft.	U	PCC
100 ft.	4 1/2 ft.	C, B, U	PCC

There is a large expanse along N. Main on both sides of Boundary Street which does not have any sidewalk.

Across from the High School, there is .80 feet of 5 foot wide cracked PCC.

Bridge Street. (connects N. Main Street to the South side of Falls City)

The bridge on Bridge Street is 166 feet long. Both sides has a 3 1/2 foot walkway. Neither end of either side has an access ramp. Both ends have significant abrupt ledges. The minimum ledge is 3 inches high.

The East side of Bridge Street has an 80 foot PCC walkway abutting the bridge. It is 4 feet wide and in good condition. Then there is 40 feet of gravel shoulder which has rubble embedded resulting in an area which could be impassable for some users. Then there is a 63 foot segment 4 1/2 feet wide which extends to South Main Street. It is in good condition. The cross walk at South Main has a significant curb with no access ramp.

Parry Street. (adjacent to the "New" Post Office)

The walkway on Parry street is four feet wide, is on the South side and run generally East and West. The East end is near the intersection of Bridge and Parry Streets. The East end terminates abruptly with no access ramp near Bridge Street. There is a 40 foot section which transitions to a 64 foot parking lot driveway curb cut, then a 36 foot section followed by a 54 foot driveway curb cut and then another section 30 feet long. Both driveway sections have side slopes which appear to exceed the ADA 2% maximum.

South Main Street

The North side of South Main has 300 feet of 4 foot wide PCC side walk which extends from Bridge Street to the City park. It is generally cracked through out the length with some portions being heaved and uneven. Neither end has and access ramp.

The South side of South Main has 125 feet of 4 foot wide PCC side walk which is broken, cracked, heaved and uneven. Neither end adjoins another walkway.

Bicycle and Pedestrian Way Assessment - City of Falls City, Oregon
(1997)

On South Main between Lombard and Sheldon Street, there are a two unrelated segments of sidewalk. One is adjacent to the Christian Church. It is 110 feet long, 4 feet wide and is cracked and broken. The other is near the intersection of South Main and Sheldon Streets. It is 145 feet long, 5 feet wide and cracked.

Lombard Street (Residential collector)

Mid way down the East side of Lombard Street, there is a section of PCC which is 235 feet long and 5 feet wide. It is in good condition and does not connect to another walkway at either end.

FALLS CITY STREET INVENTORY 2009

Section II – Appendix A – Street Inventory – Table 2

Street Segment	Jurisdiction	Classification	Right-of-way Width (feet)	Street Width (feet)	Surface (e.g. asphalt, gravel, composite)	Pavement Condition (very good, good, fair, poor)	Curbs (yes or no)	Sidewalk (yes or no)
1st Avenue	City	local	41	15	gravel	na	no	no
1st Street	City	local	60	30	gravel	na	no	no
2nd Avenue	City	local	40	15	gravel	na	no	no
2nd Street	City	local	60	15	gravel	na	no	no
3rd Street								
N Main to Pine	City	local	66	15	asphalt	fair	no	yes at post
N Main to river	City	local	66	28	asphalt	poor	no	no
4th Street	City	local	60	20	asphalt	fair	no	no
5th Street								
Mitchell to Fairview Street	City	local	60	26	asphalt	fair	no	no
Fairview to Allen Street	City	local	60	18	gravel	fair	no	no
6th Street	City	local	60	10	gravel	poor	no	no
7th Street	City	local	60	40-15	gravel	fair	no	no
Allen Street	City	local	66	15	gravel	fair	no	no
Allen Street	City	local	60	15	gravel	fair	no	no
Black Hawk Road								
W end of Mitchell to	Polk County	residence	60?	17	asphalt/concrete	good	no	no
Building Street	City	local	40	15	gravel	fair	no	no
Bridge Street								
at bridge	City	arterial	61	24	asphalt	very good	yes	yes
at Highway 4W	City	local	60	20	asphalt	good	no	no
Bryant Street	City	local	60	15	gravel	fair	no	no
Cameron Street	City	local	66	15	gravel	fair	no	no

FALLS CITY STREET INVENTORY 2009

Street Segment	Jurisdiction	Classification	Right-of-way Width (feet)	Street Width (feet)	Surface (e.g. asphalt, gravel, unimproved)	Pavement Condition (very good, good, fair, poor)	Curbs (yes or no)	Sidewalk (yes or no)
Carey Court	City	local	40	18	asphalt	very good	no	no
Central Ave	City	local	40	10-15	gravel	na	no	no
Church Street	City	local	60	33	asphalt	very good	yes-east no-west	yes-east no-west
Clark Street	City	local						
Lombard St southeast 345 feet	City	local	40	22	asphalt	good	no	no
To Forest View Ln/south city limits	City	local	40	15	gravel	na	no	no
Clarence Drive	Private	local	40	27	asphalt	fair	no	yes-north no-south
Chamberlain Road								
Bridge Street to south city limits	City	arterial	80	25	paved	fair	no	no
Bridge to Lombard Street	City	local	40	18	gravel	fair	no	no
Dayton Street								
to 2 nd bridge	City	local	60	15	paved	good	no	no
East Avenue		local	40	15	gravel	na	no	no
Ellis Street								
Main to Fairoaks	City	local	40	20	asphalt	very good	no	no
Fairoaks to north city limits	City	local	40	20	asphalt	fair	no	no
Estelle Road	City	local	20	15	gravel	na	no	no
Fairoaks Street	City	local	50	20	gravel	fair	no	no
Fairview Street	City	local	40	15	gravel	na	no	no
Forest View Lane	City	local	40	15	gravel	na	no	no
Harrington Road	City	local	20 (varies)	10	gravel	na	no	no
Hopkins Avenue	City	local	30	15	gravel	na	no	no

November 2009

FALLS CITY STREET INVENTORY 2008

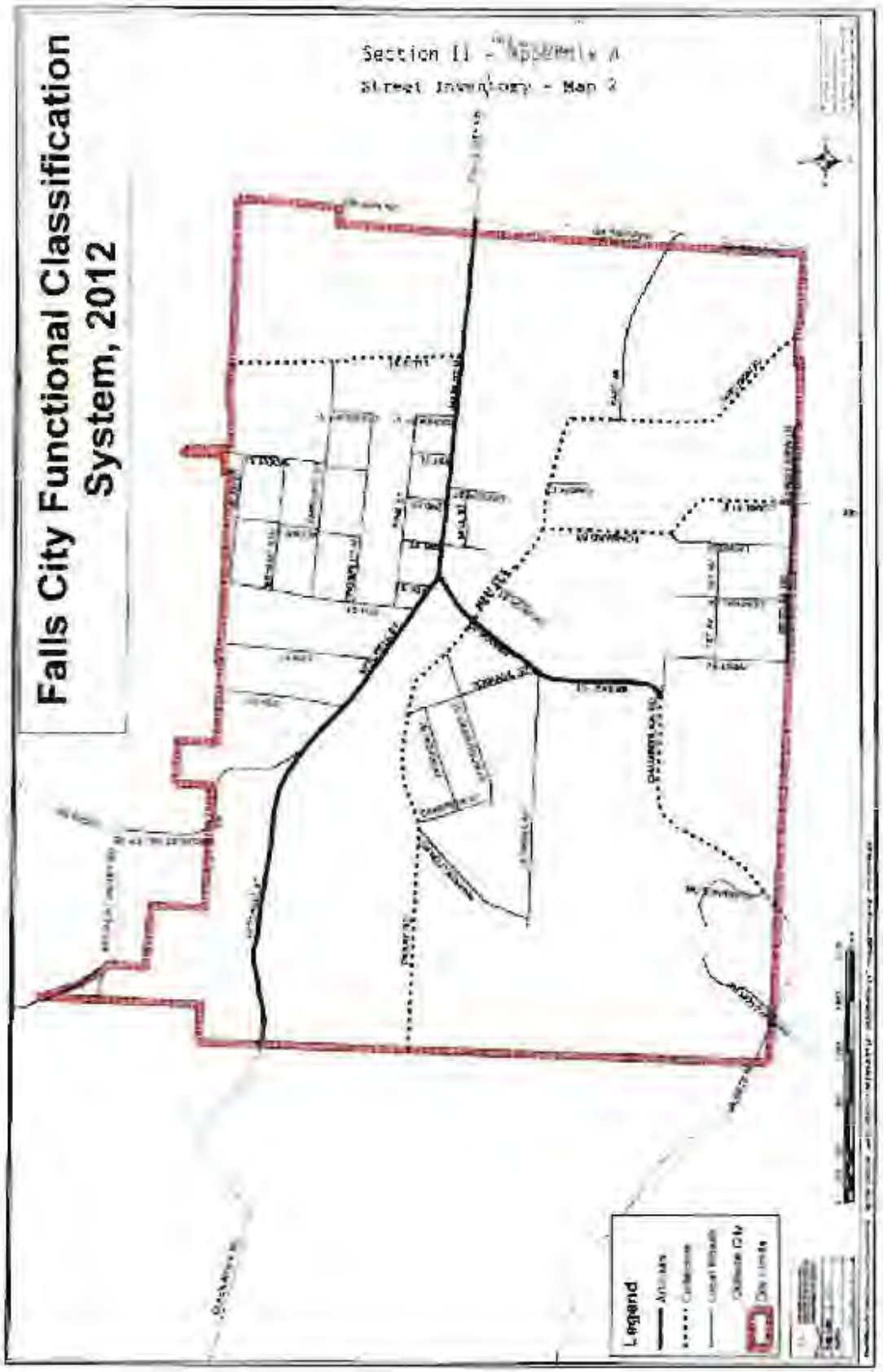
Street Segment	Jurisdiction	Classification	Right-of-way Width (feet)	Street Width (feet)	Surface (e.g. asphalt, gravel, unimproved)	Pavement Condition (very good, good, fair, poor)	Curbs (yes or no)	Sidewalk (yes or no)
Lewis Street								
Lombard to Front Street	City	local	45	20	asphalt	good	no	no
Lombard Street								
	City	local	40	20	asphalt	good	no	no
N Main Street								
E Diamond to Boundary St	City	collector	60	23-40	asphalt/concrete	very good	yes	yes
Boundary St to Mitchell St	City	collector	60	40	asphalt/concrete	very good	yes	yes
S Main Street	City	local	66	20	asphalt	fair-poor	no	no
Ott Street	City	local	40	20	asphalt	fair-poor	no	no
Mitchell Street								
N Main to Scoutter Valley Rd	City	local	60	23	asphalt	very good	no	no
at Rock to Scoutter Valley	City	local	60	20	gravel	no	no	no
Montgomery Street								
S Main to Terrace	City	local	60	20	gravel	no	no	no
Terrace to alley east of Cameron Street	City	local	60	15	gravel	no	no	no
Alley to Carleton	City	local	30 - 40	15	gravel	no	no	no
Perry Street								
Bridge to Montgomery Street	City	local	40	33	asphalt	good	gravel/curb	yes (south)
Bridge to Cameron	City	local	50	33	asphalt	good	no	no
Perry Rd	City	local	38	20	asphalt	good	no	no
Pine Street	City	local	66	15	gravel	no	no	no
Prospect Street	City	local	50	20	asphalt	very good	no	no
Quidam Avenue	City	local	66	30	asphalt	very good	no	no
Terrace Street	City	local	50 / 60	15	gravel	no	no	no
Unnamed road to city park	City	local	40(R/W)	15	gravel	no	no	no
Vine Street	City	local	60	13	gravel	no	no	no

November 2008

FALLS CITY STREET INVENTORY 2008

Street Segment	Jurisdiction	Classification	Right-of-way Width (feet)	Street Width (feet)	Surface (e.g. asphalt, gravel, concrete)	Pavement Condition (very good, good, fair, poor)	Curbs (yes/no)	Sidewalks (yes/no)
Main (Old)	City	local	30	15-18	gravel	na	no	no
Main Street	City	local	30	15	gravel	na	no	no


Falls City Future Streets


Falls City Functional Classification System, 2012
Section II - Appendix A
Street Inventory - Map 2
Legend

Section II
Appendix B
Review of Existing Plans, Policies, Standards, and Laws and Assessment of the Falls City TSP 2013

REVIEW OF EXISTING PLANS, POLICIES, STANDARDS AND LAWS AND ASSESSMENT TOWARD THE 2013 FALLS CITY TSP

Note: All tables referenced in this section refer to Section II unless otherwise noted.

The 2013 Falls City Transportation System Plan (TSP) includes a review of existing transportation plans, studies, and available data produced by federal, state, and local jurisdictions in the past. This review also includes information from the 2010 Falls City Street Improvement Plan. Transportation plans and studies reviewed as part of the 2013 Falls City TSP update include the following:

- Oregon Transportation Planning Rule (TPR) (Oregon Administrative Rule; Chapter 660, Division 012);
- Oregon Bicycle and Pedestrian Plan;
- Polk County Comprehensive Plan, Transportation Element;
- Polk County Transportation System Plan (2009);
- Oregon Downtown Development Association Report (2000);
- Falls City Comprehensive Plan;
- Falls City Zoning and Development Code;
- Falls City Street Improvement Plan including Roadway Inventory (2010);
- Falls City data on recently funded transportation improvement projects
- Falls City Public Works Design Standards;
- Falls City data on building permit and employment and including forecast
- (Falls City) Bicycle and Pedestrian Way Assessment (1997);
- Portland State University population information and including forecast; and
- Data from US Census.

To follow is a summary of the relevant transportation plans and studies listed above and a description of the key transportation issues that were addressed as part of the 2013 Falls City Transportation System Plan (TSP).

Oregon Transportation Planning Rule (1991) and as amended in 2011

As applicable to the City of Falls City, the Oregon Transportation Planning Rule (TPR) requires local jurisdictions to develop a TSP to accommodate future travel demand resulting from adopted land uses. The plan must accommodate all travel modes in use within the City, be consistent with the Oregon Transportation Plan (OTP), and coordinated with Federal, State and local agencies and various transportation providers.

The TPR requires every local Transportation System Plan (TSP) to assess existing facilities for their adequacy and deficiencies; develop and evaluate system alternatives needed to accommodate land uses in the acknowledged comprehensive plan; and adopt local land use regulations to support implementation of the recommended alternative. The City TSP must also

ensure that its functional classification system is consistent or compatible with those applying to facilities maintained by adjacent jurisdictions.

The TPR includes a requirement for local governments to adopt land use or subdivision regulations for urban areas that, "...provide for safe and convenient pedestrian, bicycle and vehicular circulation, to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel in areas where pedestrian and bicycle travel is likely if connections are provided, and which avoids wherever possible levels of automobile traffic which might interfere with or discourage pedestrian or bicycle travel." Local governments are required to establish their own standards or criteria for providing streets and accessways consistent with the TPR. Examples of these measures include standards for spacing of streets or accessways and standards for excessive out-of-direction travel.

2013 Assessment: While the Falls City Zoning and Development Code includes general requirements to provide safe and convenient pedestrian, bicycle, and vehicular travel; additional measures could be developed to strengthen these standards. For example, additional standards could be provided to require pedestrian accessways at reasonable distances (e.g. every 300-600 feet) between residential developments, schools, parks, commercial areas, through parking lots, etc.). Standards could also be developed in the future to require additional pedestrian amenities (e.g. benches, plazas, lighting, etc.) and internal pedestrian circulation within commercial areas.

While the 2011 State legislative amendments address issues more likely affecting larger communities, the categories listed include the following (excerpted from a September 2011 ODOT Legislative Summary). (The City continued to monitor during the development of the TSP, needed amendments to the City's Zoning and Development ordinances.)

- Planning requirements placed on zone changes that are consistent with locally adopted comprehensive plans.
- Development of practical methods to mitigate the transportation impacts of economic development.
- Analysis required for transportation impacts for urban growth boundary changes.
- Thresholds for required analysis of transportation impacts of project proposals.
- Use of average trip generation rates.
- Analysis required for transportation impacts of comprehensive plan amendments that require improvement to avoid further degradation of transportation facility performance by the time of development.

Oregon and Bicycle and Pedestrian Program (1995)/Oregon Bicycle and Pedestrian Design Guide (2011).

The Oregon Bicycle and Pedestrian Program was adopted by the Oregon Transportation Commission in 1995. Part I of the Oregon Bicycle and Pedestrian Plan (Policy and Action Plan) remains unchanged. Part II of the Plan and its appendices were replaced in 2011 by the Oregon Bicycle and Pedestrian Design Guide (OBPDG) and is considered an element of the ODOT

Highway Design Manual (HDM). The OBPDG now guides bicycle and pedestrian travel planning and design/operation for such facilities.

The OBPDG provides seven (7) chapters that are entitled On-Road Bikeways, Restriping Roads with Bike Lanes Road Diets, Bicycle Parking, Walkways, Street Crossing, Intersections, and Shared Use Paths. According to the Design Guide, "bicycle and pedestrian facilities must be considered at the onset of transportation projects and incorporated into the design process at all stages, so potential conflicts with other modes, topography or right-of-way constraints are resolved early. Bikeways and walkways risk being under-designed if they are considered add-on features."

The bicycle and pedestrian design document advocates that only under certain circumstances should bicyclists and pedestrians share the same space. While the Guidelines cover both, the separate modes of travel have different issues and construction features.

The American Association of State Highway and Transportation Officials (AASHTO) publishes the Guide for Development of Bicycle Facilities and the Guide for the Planning, Design, and Operation of Pedestrian Facilities. Both AASHTO "guides" are referenced in the OBPDG and may serve as additional resources when designing bicycle and pedestrian facilities. The OBPDG indicates that all ODOT walkway design standards meet or exceed the minimums set by the Americans with Disability Accessibility Guidelines (ADAAG).

2013 Assessment. The City of Falls City does not have a well-connected pedestrian system. Sidewalks are basically limited to North Main Street. As part of the TSP adoption process, the City determined a pedestrian system that will provide safe routes to school and other public facilities such as the library, City Hall, Community Center, and public parks. After locations for sidewalks were identified construction priorities were ranked and listed.

Polk County Comprehensive Plan, Transportation Element (2009)

The Comprehensive Plan for Polk County establishes the official goals and policies related to future development in the County. Review of selected goals are as indicated below with the opening goals being to:

- Provide and encourage a balanced, energy efficient transportation system giving due consideration to all modes of travel consistent with the Polk County Comprehensive Land Use Plan.
- Develop and assist in the development of a safe, convenient, and economic transportation system available to all persons.

Policies under these goals address Air Transportation, Highways, Public Transportation, and items noted in and "Other" category.

An identified Goal 2 is "to maintain an ongoing transportation planning process keyed to meet the needs of the traveling public and coordinated among the state, regional, and local jurisdictions." Policies applicable to the City include (2.1) coordinating with cities and that the

County will support transportation planning efforts of all municipalities and (2.7) promoting and encouraging carpooling.

Goal 4 (no Goal 3 is indicated in the Plan) is "to implement a level of transportation development which positively contributes to Polk County livability." Policy 4.5 notes that "aesthetics will be considered when new construction or reconstruction is accomplished on the road network; however, safety needs will not be compromised."

2013 Assessment: The City of Falls City communicated with Polk County regarding the development of its TSP and the County Public Works Department Director was designated as a reviewer during Falls City TSP document preparation. The City considers in its TSP development all aspects of a multi-modal system (including the element of carpooling) and strives for transportation facilities to be safe, convenient, and economical. Development of a City TSP positively contributes to the City residents and its visitors.

Polk County Transportation System Plan (2009)

The Polk County TSP is a multimodal transportation system plan that includes automobile, bicycle, rail, transit, air, walking and transmission systems (such as pipelines). The Polk County Transportation System Plan includes a county road plan, a bicycle/pedestrian element, an air/rail/water/pipeline element, and a public transportation element. The following goals and policies found in the Polk County TSP relate to the Falls City TSP:

Goal 1: To provide and encourage a balanced, energy transportation system giving due consideration to all modes of travel consistent with Polk County Comprehensive Plan.

Goal 2: To develop and assist in the development of a safe, convenient, and economic transportation system available to all persons.

Policy 2.3. Polk County will ensure that roads for which it has maintenance responsibility are kept in serviceable condition.

Policy 2.5. Polk County will consider the road network as an important and valuable component of the transportation system.

The Polk County 2009 Transportation Plan map (including roadway classifications) indicates Falls City Road westerly from Highway 223 (inside and outside City limits) as a major collector. Bridgeport Road from Highway 223 to its intersection with Waymire Drive (southeast of the City) is listed as minor collector.

Two other County roads listed in the plan include Black Rock Road (roadway portions located within and west of the City) and Socialist Valley Road (roadway portions located within and north of the City) that are both classified as Resource Roads for the roadways outside City limits. Polk County lists such roads as providing "connection between resource areas, and principal and minor arterials. These roads within the County are generally rural and provide access to agricultural and timber roadways, to function in serving areas that contribute to the economic

base of the community event though they may have low volumes of traffic." The County sections of Socialist Valley Road and Black Rock Road are outside City limits, however, both connect to street sections within the City and to Mitchell Street—a City street.

Traffic volumes (for the year 2009) were presented in the County TSP for the portion of Falls City Road starting at the City's easterly City limits and continuing to Highway 223. The roadway is listed as a "Higher Volume County Road" (classified by Polk County as a major collector). The Average Daily Trips (ADT) were presented as 2,170. Between the years of 2003 and 2007, there were 33 "crashes" on Falls City Road (all between mileposts zero (0) and 3.82).

In regards to Polk County Road and Intersection Improvement Projects over a 20-year time period (Polk County TSP Table 12, page 10-2), Black Rock Road is listed as needing a "realignment" with an estimated cost of $3.5 million. Polk County TSP Table 13 (Polk County Bridge Improvement Projects—page 10-3) indicates the need for a bridge replacement on Falls City Road over Fern Creek (estimated cost of $1.3 million) and a replacement on Black Rock Road over the Lukiamute River (estimated at $1.4 million). Page 11-2 (County TSP) notes that "the 2009 TSP does not prioritize the projects. The county prioritizes its projects on an annual basis. . . approved each year with the adoption of the county's operating budget."

Polk County TSP notes "Outstanding Actions, Next Steps, and Future Plan Refinements" that include an on-going need to "Coordinate with CARTS and Cherriots for transit services in Polk County" and to "Review need for . . . truck routes."

2013 Assessment: The Falls City TSP was developed with policies to provide and encourage consideration of all modes of travel while striving to develop and assist in development of safe, convenient, and economic transportation system. Including those goals provides compatibility with the Polk County Transportation System Plan. Future street planning needs to recognize the roadway classification of the connecting roadways under the jurisdiction of Polk County to accommodate the intended levels of trips. Polk County's ongoing effort to expand transit services for the community is considered important to the City. In the past, the City has also discussed the potential of designating a truck route with the topic needing coordination with Polk County.

Oregon Downtown Development Association (ODDA) Report (2000)

The Oregon Downtown Association (ODDA) was completed in December 2000. It was funded in part by a grant from the Community Response Fund, an in-kind grant from the Oregon Arts Commission's Art Build Communities Program, and the City of Falls City. The plan includes recommendations for public and private spaces, suggestions for public art, and analysis of business retention and recruitments. The five-member ODDA Resource team met with City officials and staff, County staff, local merchants, property owners and interested individuals.

The Executive Summary created the following categories (summaries with added suggestions from the more detailed text).

- Strengthening the Senses of Place and Community. Create a downtown to serve as the "heart" of the community and a place to gather with a focus on North Main Street.
- Design: Public Space. Create better pedestrian and bicycle linkages throughout the community with traffic calming features and standardized sidewalk widths on North and South Main Streets.
- Design: Private Space. Capture redevelopment opportunities of downtown core with connections to the Little Lukiamute River, the falls (including a crossing footbridge) and City parks including the enhancement of public gathering spaces using the expansion of the Fire Station facility as an example. Move forward on signage (pedestrian scale) for points of interest.
- Design: Public Art. Incorporate public art into the Community and create ways to attract artists to the community.
- Design: Private Space. Work toward façade rehabilitation along Main Street and developing infill properties.
- Market Assessment and Business Mix. Expand the commercial area in multiple ways (meeting needs of residents and commuting population; expanding housing base; and creating new jobs such as small industry, cottage industry, and tourism).

2013 Assessment: Many of the topics are relevant to City developing a TSP and the development allows for the document to better plan for the location of pedestrian (sidewalks) and bicycle (paths)--either for new routes or areas where connections are needed. Planning for the downtown can be directed at creating public space, striving to make it a walkable area, and creating attractive citizen and visitor amenities. Adding a Community Center to the Fire District building created good progress toward efforts mentioned in the ODDA report. Better street signage such as using wayfinding signs supports the community by directing residents and visitors to City services, amenities, and points of interest.

More specifically in regards to the downtown, the City may consider developing specific street standards in an effort to create a more pedestrian friendly environment and can include wider sidewalks; requirements for installing amenities such as benches, hanging baskets, and event kiosks; special street lighting standards; design or building facades addressing location/design of windows and entrances; and creating downtown parking areas/lots.

City efforts should also create a focus on the tourism element noted in the ODDA plan. An example of this element is "capturing" the recreational bicyclists who access the trails to and from the Black Rock area and the "Valley of the Giants."

Falls City Comprehensive Plan (2001, 2003, 2010)

With the exception of the Transportation Element (2010), the majority of the City's current Comprehensive Plan was updated by the Falls City in 2001 with additional amendments to the Housing Element in 2003. (Note: There are some references in the Plan itself indicating that the document process began in the late 1970s.) Revisions were acknowledged by the Oregon Department of Land Conservation and Development. The purpose of the Plan is to provide for orderly growth and to encourage development of a community that meets the needs of its current

and future residents. The Comprehensive Plan is the City's highest policy document and establishes the policy framework for future growth decisions.

LAND USE ELEMENT
The current land use element indicates projections for residential, commercial, and industrial lands. A land use element table also makes an assessment of the projected housing mix for the year 2020. The categories include single-family, multi-family, and manufactured home parks (although in 2013 there are only five multiple family units and no manufactured dwelling parks within the City).

HOUSING ELEMENT
The Housing Element provides housing data from the mid-1990's with projections to year 2020. The analysis covers the categories of single-family, multi-family, manufactured dwellings, and public-assisted housings. There are five multi-family units at Lukiamute Falls Apartments and no manufactured dwelling parks within City limits. (Further information on housing is provided in the summary of building permit data later in this section of the appendix—Section II of the TSP.)

PUBLIC FACILITIES AND SERVICES ELEMENT
The City's water, sewerage treatment, storm-water drainage, solid waste, police, fire, and school system facilities are addressed in this Plan element. Evaluation of the services is, however, based upon a 2001 assessment and included minimal updates in 2013.

In 2003, the Fire Department building was expanded to include a Community Center and is now used for many City events.

In 2012, the City began working to update its waste water master plan with a completion date estimated as the summer of 2013.

GOAL 5 (Statewide Planning Goal) RESOURCES
Based upon concerns regarding the type of regulations that might be imposed and even though goals and policies were prepared, the City chose to reconsider in the future Goal 5 resources related to wetlands and riparian areas. No riparian inventory was prepared but it was referenced as areas that "potentially include banks and adjacent areas along the waterways." A wetland inventory was conducted and the details are available for the City's later review. (See **Appendix B – Map 1**). The proposal in early 2000 was to provide protection of these resources under a "safe harbor" ordinance. None of the background information or text regarding riparian and wetland areas were adopted with the 2001 Comprehensive Plan amendments.

In regards to other Goal 5 Resources, the City determined following a response from the Oregon Natural Heritage Program (ONHP) found that no rare, threatened, or endangered plant or animal species in Falls City. The State of Oregon has not identified any Scenic Rivers or waterways; wellhead protection, critical groundwater, or groundwater limited areas; recreation trails or natural areas; significant mineral or aggregate resources; or cultural areas. According to the National Park Service, there are no Federal Wild and Scenic River designated within the City.

According to the City's Comprehensive Plan, "the City recognizes that certain significant resources located within its boundaries contribute to the unique character of the community and are irreplaceable . . . Existing City ordinance establishes an Historic Landmark Commission (*HLC*); a program for identification, evaluation, and designation of historic landmarks; public incentives for preservations of Designated Landmarks; and land use regulations regarding the alteration, moving, or demolition of Designated Landmarks and Historic Resources of Statewide significance." Some of the activities of the HLC include development of a context statement, adoption of criteria to be used in nominating significant historic resources, preparation of a pre-inventory under a SHPO (State Historic Preservation Office) grant, and development of public incentives for historic protection. (A copy of the SHPO listing is included in **Appendix B - Table 1.**) The Commission has considered " . . . the possibility of recommending an historic corridor along the river (since many of the identified and pre-inventoried structures are on North and South Main streets), including the falls, or an historic overlay district."

The City evaluated scenic resources in 1979 (using a system employed by the U. S. Forest Service) as part of the comprehensive planning process. "The two-acre (0.81 hectare) city park in the northwest section and the Little Lukiamute River are significant open space resources."

AIR, WATER, AND LAND RESOURCES QUALITY

References the City's Comprehensive Plan indicate State requirements for quality standards and requirements. The Air, Water, and Land Resources Quality section was prepared in 2001.

As noted in the Public Facilities and Services Element, the City is working on a plan to address potentially needed upgrades to the sanitary sewer system. For the water system, the State Department of Environmental Quality (DEQ) following an assessment in 2000, identified the only water quality risk for the City as those from forest activities occurring upstream from Falls City. The Oregon Practices Act regulates activities on both private and public forest lands. Natural ground water quality from a regional perspective is generally good, though some groundwater has saline or is high in iron/manganese and arsenic content (Oregon Water Resources 1992).

Currently, there are no registered hazardous waste generators in Falls City. In the 1990's two leaking underground storage tanks were identified. However, clean-up occurred at both sites.

Brownfields are vacant or underutilized commercial or industrial property where known or perceived contamination has hindered the property's reuse or redevelopment. In 1997, Falls City requested that the former Atlas Mill site be included in the DEQ Brownfield program. The City wished to redevelopment the vacant 2-acre site into a municipal park. After completing certain testing, DEQ found that the site would be safe for development as a park without clean-up required. Further testing and analysis is required if the City decides to use the site for a more intensive use.

AREA SUBJECT TO NATURAL DISASTERS AND HAZARDS

Seismic hazards are indicated in this section of the City's Comprehensive Plan and references that Polk County Comprehensive Plan notes the location of a major fault approximately nine (9) miles north of Falls City that continues east and west for several miles. Also noted are other

faults near Valsetz Lake about six (6) miles from the City. According to the Polk County Plan, "there have been two minor (magnitude of 2 or below) earthquakes experienced in northwestern Polk County since 1997."

A Federal Emergency Management Agency (FEMA) map was updated in 2006 and indicates the flood plain areas for the City. See **Appendix B – Map 2.**

Detailed information about soils in the Comprehensive Plan indicates the presence of weak foundation soils. "The shear strength and load-bearing capacity of many soils . . . have low to very low shear strength and low load-bearing capacity. Shrink-swell potential for most soils . . . are low to moderate." Information is also provided in regards to types of landslides and notes requirements in regards to wildfires. See **Appendix B – Map 3 – Building Limitations Map.**

Also see summary regarding the Comprehensive Plan, GOAL 5 (Statewide Planning Goal) RESOURCES listed above.

TRANSPORTATION ELEMENT

As part of the development of the City's 2010 Street Improvement Plan, the City's Comprehensive Plan was assessed and amended to help implement the City's Improvement Plan. The City's existing transportation goals and policies give priority to street improvements that are necessary to achieve safety, lower maintenance costs, and increase efficiency. Constructing or installing connection of the existing streets also needs consideration when development is proposed.

Other sections of the Transportation Element include summaries of the Street Network Plan, Functional Classification of Streets, an inventory and analysis of the Street Network, Traffic Circulation, Street Signage, Street Addressing, Future Street Network Plan, Future Bypass/Truck Route, Street Standards, Bike/Pedestrian Network, Public Transportation, Financing, and a Plan evaluation.

An earlier update to the Comprehensive Plan (2003) noted the need to provide a circulation system that is safe and efficient for vehicle users, pedestrians, and bicyclists. The Plan also notes that wherever possible, streets within the urbanizing need to be extended. However, a policy was added that allows the City to review unused street rights-of-way and certain established factors for when street (right-of-way) vacation may be considered.

Also see, **Falls City 2010 Street Improvement Plan.**

2013 Assessment. According to Step 9 of the Transportation System Plan Guidelines, the City needs a street inventory that identifies certain things. The following additional elements of the City's Transportation System Inventory were not identified in the Street Improvement Plan. The following categories need integration into the Transportation System Plan.

Air Travel. The 2009 Polk County Transportation System Plan (PC-TSP) (page 7-1) explains that "there is only one public airport in the county. It is a state-owned facility located at the north edge of the City of Independence . . . The airport has maintenance, fuel, and a manned fixed-base

operation seven days a week. It serves general aviation aircraft and has no scheduled airline operations. The airport does not have an instrument landing system, so operations are limited to visual flight rules." There are several privately owned airports within the County. However, in order to access regular passenger services, individuals need to commute to Cities of either Eugene or Portland.

Rail Service. The closest passenger rail service is Amtrak with a station within the City of Salem. According to the County's TSP, there are no rail lines that can serve the City as a freight service.

Water System. In conjunction with the maps being prepared for the City's TSP, City utilities were incorporated into a GIS format based upon records readily available to City staff. The inventory was reviewed by the City Engineer for accuracy and an electronic file prepared.

Transmission Lines (Pipelines). For information about other utilities not under the City's jurisdiction or ownership, the City relies upon the records and details available from the providers. Such utilities can include natural gas pipelines, electricity, telephone, cable television, and etc.

There are no telephone company cell towers within City limits. Private utilities authorized within the City under franchise agreements include Allied Waste, Pacific Power, Century Link and Charter Communications.

The Transportation Element only included several sentences about Public Transportation. Transportation programs to benefit the elderly, and people with disabilities, and individuals with lower incomes are limited for the residents of Falls City. As documented in the Polk County Transportation System Plan, the closest "fixed route, express, and flexible public transportation provided by the Chemeketa Area Regional Transportation System (CARTS)" is located in Monmouth and Independence. The County TSP continues, "there is no fixed route public transportation system to Falls City . . . The Cherriots Rideshare Program (formerly Salem Rideshare), operating in the Salem-Keizer area since 1975, is available to Polk County residents. The program includes carpool, vanpool, buspool matching service, a preferential parking program, and reduced parking fees for carpools." It is financed by ODOT and the Salem-Keizer Metropolitan Planning Organization (MPO) from federal Surface Transportation Program (STP) funds.

Polk County TSP notes that in regards to paratransit, "the largest . . . provider in Polk County is the Oregon Housing and Associated Services (OHAS aka 'Wheels'). Although there are other providers, OHAS unlike the others "is open to the general-public."

In addition to the transportation system elements listed above and based upon items that are to be listed in a street inventory; there are no park-and-ride locations, Intelligent Transportation System facilities, public transportation services, intermodal connections or facilities, or an ODOT designated Freight Route within City limits.

GOALS AND POLICIES

The Falls City Comprehensive Plan goals and policies relevant to the TSP include the following:

- Residential Land. Policy 2 (excerpted). Residential development shall be encouraged in a compact and efficient manner . . . and facilitate the provision of public facilities and services in an efficient and economic manner.
- Residential Land. Policy 4. Multifamily units should be located close to arterial or collector streets and interspersed with single-family residential when new subdivisions are developed.
- Commercial Land. Policy 3. Commercial centers should be oriented toward pedestrians, with adequate parking provided.
- Commercial Land. Policy 6. The mixing of uses in the commercial area will provide a means of access to transportation, housing and shopping to those persons who need to locate near the various facilities.
- General Goals for Public Facilities and Services. To provide for an orderly, efficient and economical system of delivery of city service and to seek and maintain cooperation and coordination of public services with other governmental agencies.
- Recreational Needs. Policy 5. To support the construction of a trailhead at Michael Harding Park or adjacent city-owned land, with eventual connection to the Coast Trail proposal presently on file with Polk County.
- Energy Conservation. Policy 1. To develop bike and pedestrian paths when feasible.

2013 Assessment: Goals and Polices were updated as the TSP was drafted and decisions were made about street networks, any special street standards, and promoting alternate modes of travel (over the single-occupancy vehicles). Comprehensive Plan goals indicate the City concerns and constraints to the development of the transportation system such as the lack of connection to the south part of the community based upon only one bridge that is constructed to cross the Lukiamute River. Other constraint elements include areas of steep slopes that are greater than 20 percent and areas with the 100-year flood plain.

Falls City Zoning and Development Ordinance (FCZDO)

As part of the development of the City's 2010 Street Improvement Plan, the City's Zoning and Development Ordinance (FCZDO) was assessed and amended to help implement the City's Improvement Plan.

The City's Street Improvement Plan in 2010 indicated the City's need to comply with OAR, Chapter 660, Division 12, Section -45, Paragraph (3)(b)(D) and the need to establish its own standards for local streets and accessways that minimize pavements widths and total right-of-way consistent with the operational needs of the facility. The FCZDO, Subsection 2.207, more specifically addresses this requirement.

The Street Improvement Plan in 2010 indicated that within the Zoning Ordinance are standards for addressing street locations to implement future street policies including design elements. An updated Street Plan is included in **Appendix B – Map 4**.

2013 Assessment: The process to adopt the Street Improvement Plan in 2010 also updated the City's Zoning Ordinance. Revisions included making changes to standards for vision clearance areas and making the requirements compatible with the PWDS, eliminating street standards specific to partitions and subdivisions, incorporating the Local Fire Official in decisions regarding the creation of easements, and establishing a separate street standards section.

The FCDZO was revised during the TSP process to update bicycle parking requirements.

Falls City 2010 Street Improvement Plan (FCSIP)

Overview. The Falls City Street Improvement Plan was adopted on July 2, 2011. Funding for the project was provided by the City of Falls and a grant from the Rural Investment Fund (granted in 2008). Sections of the document include a street inventory, street improvement policies, a plan for a future street network, street design and construction standards, transportation funding sources, and recommendations.

Street Network and Jurisdiction. The City's street network is generally divided into two main sections--north and south of the Little Luckiamute River. Streets in the northern part of the City are generally laid out in a grid pattern. In the southern part of the City, streets are in a more irregular pattern. It should be noted that the primary access road to the City—Falls City Road—is under the jurisdiction of Polk County. Upon entering City limits, the roadway is renamed North Main Street and under the City's jurisdiction. All roadways within City limits are City streets with the exception of Black Rock Road. Polk County classifies Black Rock Road as a "resource road" by Polk County. (Note: There are no transportation facilities under the jurisdiction of the Oregon Department of Transportation (ODOT) within the boundaries of Falls City.)

Deficiencies. The street inventory identified that the majority of streets in Falls City did not meet the City's current street construction standards for pavement width and surfacing requirements. For many streets the width only accommodates one vehicle passing at a time. Most City streets do not have sidewalks. Lack of sidewalks serves as a barrier to providing safe pedestrian access from residential to schools, the downtown, and local parks.

Additionally, within City limits there are a number of undeveloped street rights-of-way that serve as impediments to providing a well-connected and convenient street system. In certain instances these rights-of-way may be unnecessary or impractical to develop based upon topographic conditions.

The plan notes that limitations placed by the availability of only one bridge that crosses the Luckiamute River on Bridge Street and, therefore, creating a public safety hazard. Other missing transportation elements include lack of both a public storm water management system and adequate City-wide street signage. A parallel factor that complicates safety elements of the transportation system is the City's improper street addressing within some areas of the community.

Existing and Future Street Network. The FCSIP includes a Future Street Network Plan to guide overall growth and development of new streets in the future. Streets needed to serve future development funded primarily by new development. The Street Plan was updated as part of the TSP adoption process.

In 2009, City staff conducted an inventory of existing street conditions within Falls City. The street inventory included a summary of the following information:

- *Jurisdiction* – identifies whether or not a street is under the jurisdiction of Falls City or Polk County;
- *Classification* – identifies whether a street is classified as a local (minor), collector or arterial street;
- *Street width* – includes an estimate of the current street width;
- *Surface* – describes whether a street is currently paved or unimproved (gravel);
- *Pavement condition* – describes the current condition of paved streets (e.g. poor, fair, good and very good condition);
- *Curbs and Sidewalks* – identifies whether a street currently has curbs and sidewalk; and
- *Right of way* – includes an estimate of the current street right-of-way width.

See **Section 1 – Appendix A, Table 2** for the complete street inventory.

Functional Classification

The roadway functional classification system groups City streets into categories based upon the character of service they are intended to provide. Identification of the appropriate roadway functions is the basis for planning roadway improvements and establishing appropriate standards (right-of-way, roadway width, design speed).

The three (3) general types as identified in the Street Improvement Plan included functional roadway classifications described as follows:

- ***Arterials*** – Intra- and inter-community roadways connecting community centers with major facilities. In general, arterials serve both through traffic and local traffic. Access should be partially controlled with infrequent access to abutting properties.
- ***Collectors*** - Streets connecting residential neighborhoods with smaller community centers and facilities as well as access to the arterial system. Property access is generally a higher priority for collector arterials; through-traffic movements are served as a lower priority.
- ***Local (Minor) Streets*** - Streets within residential neighborhoods connecting housing (also can be commercial, industrial, etc.) with the arterial system. Property access is the main priority; through traffic movement is not encouraged. (Note: This level of street classification was updated during the TSP adoption process.)

The FCSIP lists N. and S. Main, Mitchell, Bridge Streets and Sheldon Avenue as arterials. Falls City Road (outside City limits), the main access to the City, is designated as a major collector by Polk County.

For collector streets, the FCSIP lists Hills, Lombard, Clark, Parry, Terrace and Montgomery Streets and Chamberlain Road as collector streets. North Main Street provides access to local streets on the

north side of town and access to Bridge Street, the only vehicle bridge currently available to access the area of town located south of the Little Luckiamute River.

The remainder of the City's street system listed in the Street Improvement Plan classifies the remaining streets as local streets that provided direct access to the adjoining land uses.

As part of the TSP adoption process the functional classifications of the Street Improvement Plan were updated. See **Appendix B – Map 4.**

Funding. The Street Improvement Plan indicated potential funding source available to the City in 2010 and included recommendations based upon evaluation of the different options. Funding options were reviewed during the adoption process of the City's TSP and Section I, Chapter 5, includes updated materials.

A Street Inventory (2009) matrix and cost estimates for streets improvements were provided that were also updated during the TSP adoption process.

Key Transportation Issues (as identified in the Plan): Updates to the Plan adopted in 2010, indicated the need for the City to consider vacating unused rights-of-way (ROW) based upon certain factors such as being consistent with the City's transportation goals and policies, it being a ROW not identified on the "Future Street Network," the ROW not being needed for private or public utilities (that could be reasonably accommodated by an easement), and the vacation not being detrimental to public health, safety, and welfare.

Another item presented was to pursue traffic calming techniques for neighborhood and local streets to reduce speeds and dust and to create more livable neighborhoods.

2013 Assessment: Identified key transportation issues that need to be or were addressed in the City 2013 TSP are listed in the above paragraphs.

Falls City Public Works Design Standards (PWDS)

As part of the development of the City's 2011 Street Improvement Plan, the City's Public Works Design Standards were assessed and amended to help implement the City's Improvement Plan.

2013 Assessment: The City prior to 2010, used the PWDS prepared by another jurisdiction. As part of the 2010 Street Improvement Plan the City revised the document and adopted standards applicable to installation of transportation facilities within the City of Falls City. Topics covered include plan submittal requirements; specifications for construction materials and use of alternative materials and methods; improvement levels by street classifications and including cul-de-sacs, turnarounds, and stub streets; requirements for street alignments, street grades, curbs and gutters, sidewalks, driveways/driveway approaches, intersections, and street lighting; and specifications for clear vision areas and monumentation.

Revisions in the 2013 TSP include modifications to street classifications and design standards and adding requirements for bicycle parking.

Falls City data on building permit and employment and including forecast

2013 Assessment: The City's Comprehensive Plan indicated the number of housing construction between the years of 1995 and 2001 with a total of new units of 38 (six (6) year period of time) with the larger increases between the years of 1995 and 1997). Recent building permit (for 2002 through 2006) data was not readily assessable. Limited information was obtained from Polk County Community Development Department for the dates of April 2007 through December 31, 2011. The following information (**Appendix B - Table 2**) indicates the number of new single-family development issued during that time frame including site built single-family dwellings and manufactured homes.

Appendix B - Table 2
Building Permits issued: 2007-2011

YEAR	Single-Family Dwellings	Manufactured Dwellings	Total # of units per year
2007 (April - Dec	2	1	3
2008	2	2	4
2009			
2010	1		1
2011			
Total (5 year period)	5	3	8

Source: Polk County Community Development Department/MWVCOG

The number of permits issued for single-family residences totals 8 for the five (5) year period. A projection assumption could be made for two (1.6) new dwellings per year for the planning document time period. Using that estimate, the community can anticipate an additional 48 additional dwelling through the end of 2036.

Another alternative is to use the population projection for the year 2036 (1,481) and subtract the 2011 estimated population (947--certified by PSU in March of 2011) and divide the difference (534) by the average household size of 2.59 (Census data) and that calculates to 206 housing units. For a 25 year time period, the number of housing units indicates the number of dwellings per year as 8.24. See **Appendix B – Table 3.**

Appendix B – Table 3
Average Number of Dwelling Units (DUs) per year between 2011 and 2036

Population – 2011	Projected Population – 2036	Average Household Size	Difference in population	Estimated DUs per year to 2036
947	1,481	2.59	534	8.24

Source: US Census PSU and MWCOG (2012)

Appendix B -Section 4 presents a higher estimate for the number of households. However, based upon the development restrictions because of the limitations of the City's current sanitary sewer system, it is advisable to use the estimates presented in **Appendix B – Table 2** for planning purposes. At which time more capacity is provided for accommodating waste water, the City can re-assess it projections for dwelling units.

An assessment of commercial and industrial activities uses the land inventories of the Comprehensive Plan in comparison with the population projection (**Appendix B – Table 4**). The Comprehensive Plan indicates for the year 2020 a surplus of .21 acre for a commercial land supply and a 1.1 acres surplus for an industrial land supply.

Appendix B - Table 4
Assessment of Commercial and Industrial Land (2011 to 2036)

Population Change	Commercial Ratio	Needed Land
534	0.009	4.8 acres
Population Change	**Industrial Ratio**	**Needed Land**
534	0.04	21.36 acres

Source: Mid-Willamette Valley Council of Governments (2012)

(Falls City) Bicycle and Pedestrian Way Assessment (1997)

In 1997, the City Engineer (John D. McGee) submitted to the Mayor the results of an investigation into the "possibility of upgrading/constructing bicycle and pedestrian ways." The Assessment summarized Federal, State, and local laws, plans, rules and standards. Although the information is dated, it continues to support the need for pedestrian and bicycle facilities within the Community. An interesting statement is that "as petroleum products increase in cost, the energy efficient forms of transportation such as bicycles and walking will become more important"—a point even more relevant in today's economy.

In preparation of the Assessment an inventory was completed for "each of the existing walkways in Falls City . . . As part of the inventory the width and length of all segments of walkways that were visible were physically measured. The general condition was also noted." A rating system was developed and noted on page 5 of the report. See **Section II, Appendix A, Table 1**. Pages 11 through 16 provide the details of the inventory.

The Assessment covers "Inventory Shortcomings and Possible Solutions" (Page 5). The number of miles for sidewalks is explained noting that the "focus of enhancing pedestrian ways should initially be concentrated on areas which will be likely to receive the highest volume of traffic (schools, business', postal facilities, church, etc.)." The City Engineer determined that prioritizing those areas could be referenced as a Phase I. Phase II could then " he designated as the residential areas with the greatest population distribution adjoining Phase I areas." The document notes the need to meet requirements according to the Americans with Disability Act (ADA).

2013 Assessment: Updated laws, rules, and standards were partially addressed in the City 2010 Street Improvement Plan and further information provided as part of the TSP. However, the inventory and rating continue to be of value in assessing the City's pedestrian and bicycle transportation needs.

To further assess the pedestrian and bicycle networks, the City and the Falls City School District could pursue a grant from the federal Safe Routes to School (SRTS) program or participate in its Outreach Program. In order to develop an understanding of the routes by which students travel to school; a team of school, City government representatives, and community members identify classroom population, conduct surveys to assess parental "attitudes" about children walking to school, survey the route areas, and provide community involvement sessions to assess the efficiencies and deficiencies establishing the plan.

Population Data
U. S. Census Bureau

Appendix B – Table 6
American Fact Finder (AFF)
2006-2010 American Community Survey 5-Year Estimates

Household by Type (Estimates)		
Selected Social Characteristics, 2006-2010		
Total Households:	381	
Family households	288	75.6%
Households with children under 18 years of age	114	29.9%
Households with one or more people 65 years or older	133	29.4%
Nonfamily households	93	
School Enrollment (Estimates)		
Kindergarten	3	1.0%
Elementary (grades 1 - 8)	120	39.0%
High School	122	39.6%
Disability Status/Non-Institutionalized		
No numbers provided		
Employment Status (Estimates)		
Population 16 years of age and over	870	
Civilian labor force	458	52.6%
Employed	412	47.4%
Unemployed	46	5.3%
Commuting to Work		
Workers 16 years of age and over	402	
Drove alone	320	79.6%
Carpooled	56	13.9%
Walked	3	0.7%
Worked at home	15	3.0%
Mean travel time (minutes)	32.7	
Occupation		
Population 16 years and older	412	
Management, business, science, and arts occupations	75	18.2%
Service occupations	89	21.6%
Sales and office occupations	71	17.2%
Natural resources, construction, and maintenance occupations	101	24.5%
Production, transportation, and material moving occupations	76	18.4%

Industry		
Population 16 years and older	412	
Agriculture, forestry, fishing and hunting, and mining	19	4.6%
Construction	64	15.5%
Manufacturing	55	13.3%
Wholesale trade	0	0.0%
Retail trade	62	15.0%
Transportation and warehousing, and utilities	15	3.6%
Information	10	2.4%
Finance and insurance, and real estate and rental and leasing	16	3.9%
Professional, scientific, and management, and administrative and waste management services	23	5.6%
Educational services, and health care and social assistance	101	24.5%
Arts, entertainment, and recreation, and accommodation and food services	6	1.5%
Other serves, except public administration	10	2.4%
Public administration	31	7.5%

Percentage of Families and People Whose Income in the Past 12 Months is below poverty level	
All families	17.4%
Ages 18 to 64 years	21.3%
65 years and older	16.8%

Housing Occupancy		
Total housing units	433	
Occupied	381	88%
Vacant	52	12%
Homeowner vacancy rate		3.4%
Rental vacancy rate		0%

Total housing units	433	
Built 2000 or later	51	13.4%
Built 1980 to 1999	82	18.9%
Built 1960 to 1970	68	15.7%
Built 1940 to 1959	32	7.4%
Built 1939 or earlier	193	44.6%

Housing Tenure		
Owner-occupied	273	71.7%
Renter-occupied	108	28.3%

Vehicles Available		
No vehicles available	14	3.7%
1 vehicle available	104	27.3%
2 vehicles available	116	30.4%
3 or more vehicles available	147	38.6%
Value (Housing)		
Owner-occupied	273	
Less than $50,000	13	4.8%
$50,000 to $99,999	55	20.1%
$100,000 to $149,000	90	33.0%
$150,000 to $199,000	80	29.3%
$200,000 or more	35	12.9%
Gross Rent		
Occupied units paying rent	93	
Less than $500	6	6.4%
$500 to $749	44	47.3%
$750 to $999	28	30.1%
More than $1,000	15	16.1%
Sex and Age		
Total Population	1073	
Male	541	50.4%
Female	532	49.6%
19 years and under	221	31.0%
20 to 24 years	51	4.8%
25 to 34 years	102	9.5%
35 to 44 years	101	9.4%
45 to 54 years	186	17.3%
55 to 59 years	80	7.5%
60 to 64 years	91	8.5%
65 and older	131	11.6%
Median age	40.8 years	

Race

95.6 percent of the population is white

Hispanic or Latino and Race = 32 in number

U. S. Census Bureau

Appendix B – Table 7
General Population and Housing Characteristics: 2010
2010 Demographic Profile

Total Population	947	
Ages under 5 to 19	240	25.3%
Ages 20 to 64 years	553	58.5%
Ages 65 and older	154	16.3%
Median Age	43.5	
Race		
Total Population	947	
White	867	91.6%
Black or African American	1	0.1%
American Indian/Alaska Native	22	2.3%
Asian	4	0.4%
Native Hawaiian/Other Pacific Isl.	1	0.1%
Some other race	17	1.8%
Household by Type		
Total Households	366	
Family households	261	71.3%
Male householder	24	6.6%
Female householder	38	10.4%
Households with under 18 yrs	111	33.3%
Households with 65 yrs +	114	31.1%
Average household size	2.59	
Housing Occupancy		
Total housing units	395	
Occupied	366	92.7%
Vacant	29	7.3%
Homeowner Vacancy Rate		1.6%
Rental Vacancy Rate		2.9%
Average household size (owner-occupied)	2.49	
Average household size (renter-occupied)	3.03	

2013 Assessment: The information presented in **Appendix B – Tables 6 and** 7 are the most readily available from the sources as indicated. (Comparison should not be made between the U. S. Census Fact Finder estimates and the U. S. Census data because they are collected and tabulated differently.)

In summary of some of the presented information, the 2010 population is 947 (also certified by PSU in March 2011) with the number of housing units ranges from 395 (Census) to 433 (APT). The City has an average of 2.59 persons per household. The estimated in increase in population between the years 2011 and 2036 is 534.

Population coordination between the City and County occurred during the Polk County's update of its TSP. As presented in the County TPS and using the City's percentage of the County's population the estimated population for Falls City the year of 2036 is 1,481. (The tabulation utilized the Oregon Office of Economic/PSU Analysis prepared in 2004 with County estimates provided for the years 2035 and 2040).

Almost 80 percent of the employed individuals drive to work alone with a mean travel time of approximately 32 minutes.

Families living below the poverty level is over 17 percent but no numbers were listed for individuals with disabilities. For the portion of population that is retirement age or older, the percentage range is between 11 and 16 percent. It is estimated that slightly more than 5 percent of the population is unemployed and almost 4 percent do not have vehicles. These groups of people may more readily need public transportation opportunities.

Appendix B – Map 1 Local Wetland Inventory Map

Appendix B - Map 2

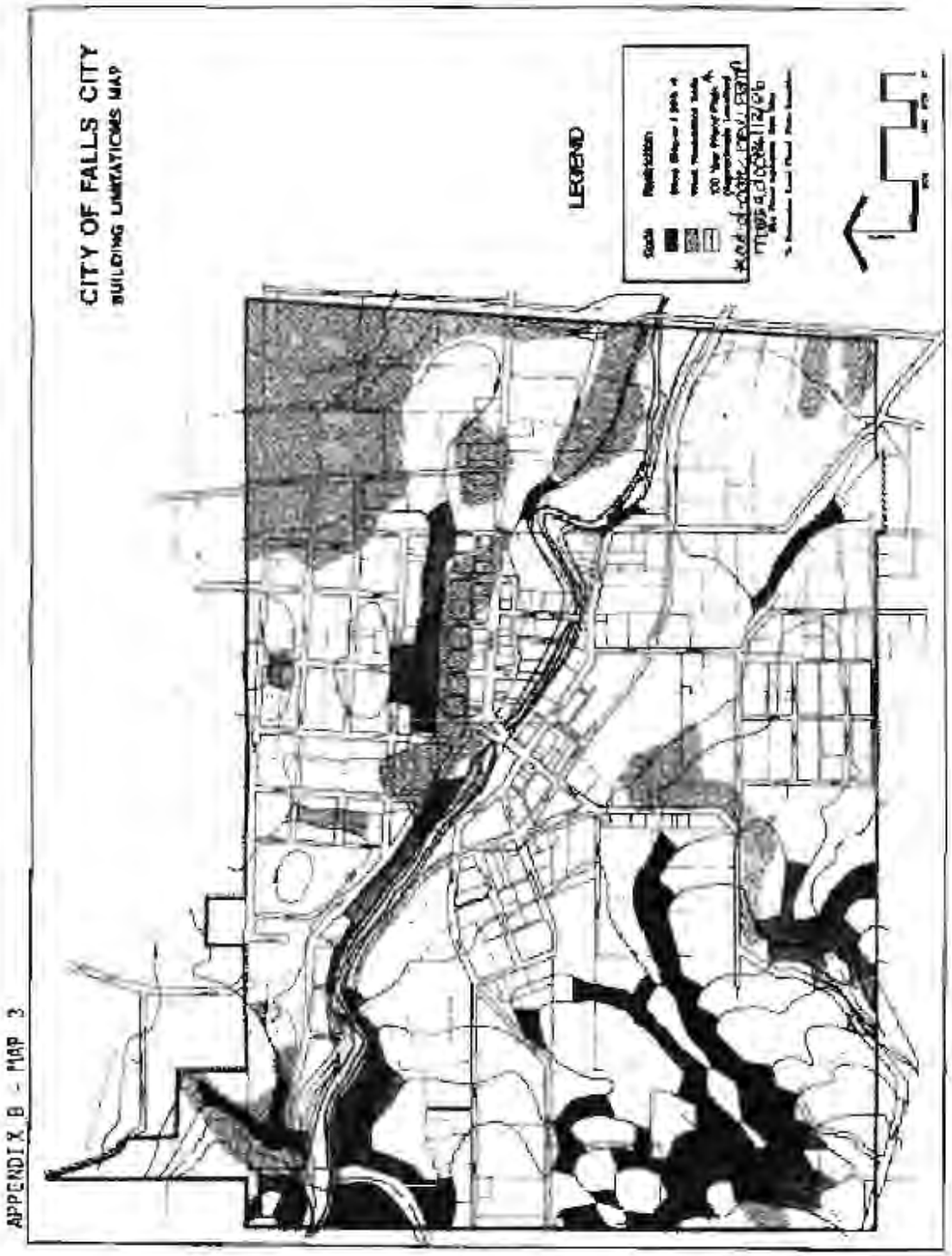
Falls City Flood Plain Map

Polk County Web Maps v. 2.0

Disclaimer: This map was produced using Polk County GIS data. The GIS data is maintained by the County to support its governmental activities. This map should not be used for survey or engineering purposes. The County is not responsible for map errors, omissions, misuse or misinterpretation.

Printed 02/27/2013

POLK COUNTY


CITY OF FALLS CITY
BUILDING LIMITATIONS MAP
LEGEND
APPENDIX B - MAP 3

APPENDIX B - Map 4

Falls City Transportation System Plan
Appendix B - Table 5 1997 Bicycle and Pedestrian Way Assessment
Adapted from: Bicycle and Pedestrian Way Assessment - City of Falls City, Oregon (*9/19/97)
Prepared by: John McGhee
(*comments on latter improvements inserted)

The inventory of existing walkways was a matter of locating, measuring and noting the condition in place. Since a number of varying conditions were encountered, the following code system was developed:
G = Good: Walkway passable for all users.
B = Broken: Typically fractured and uneven surface, which would probably be difficult for disabled person to negotiate.
C = Cracked: Surface cracks often with vegetation protruding.
U = Uneven surface: Surface irregularities which could make negotiation difficult for the disabled.
H= Heaved: heaved surface indicates that a portion of the walkway has encountered a force which has resulted in adjacent walkway sections not be coplanar. An example is a section of walkway where trees roots have lifted one section to an expansion joint, leaving two to three inch lip in the direction of travel.

In addition to these designations, unique conditions were noted by area. Unless otherwise noted, walkway material is Portland Cement Concrete (PCC).

General location of existing walkways: Falls City has relatively few existing walkways. Fortunately, most are in areas where pedestrian traffic is likely to occur (i.e. schools, shopping areas and Post Office. The location of sidewalks is listed in terms of street name, as well as, facility vicinity.

STREETS (with numbered streets first and others in alphabetical order)

Third (3rd) Street (adjoining North Main Street)
Third Street perpendicularly intersects with North Main Street. On the North Side of North Main Street, Third has walkways on both the East and West side. Each are 100 feet long. The East side walk is six (6) feet wide of cracked asphalt concrete. The West side walk is four (4) feet wide of cracked PCC. Along Third on the South side of North Main, there is 45 feet of PCC 4 feet in width.

Bridge Street (connects North Main Street to the South side of Falls City)
The bridge on Bridge Street is 166 feet long. Both side have a walkway 3.5 feet in width. Neither end of either side has an access ramp. Both ends have significant abrupt ledges. The minimum ledge is three (3) inches high.

Lombard Street (Residential collector)
Mid-way down the East side of Lombard Street, there is a section of PCC which 235 feet long and five (5) feet wide. It is in good condition and does not connect to another walkway at either end.

Mitchell Street (adjoining North Main at Bridge Street)
On the north side of Mitchell Street there is approximately 75 feet of an eight (8) wide PCC walkway extending from Fourth (4th) Street to North Main Street. The end which intersects with Fourth (4th) Street has no ramp or curb cut. There is a relatively large accumulation of debris deposited at the end which would create a significant challenge for some users. The entire length of the walkway is cracked and broken.

North Main Street (businesses and high school)
Note: In 2006, the City completed street and sidewalk improvements from Ellis Street to Bridge Street on both the north and south sides of the streets that substantially alters the 1997 Bicycle and Pedestrian Way Assessment. An updated 2012 Street Inventory provides the status of the sidewalk facilities.

Parry Street (adjacent Post Office)
The walkway on Parry Street is four (4) feet wide, is on the South side and runs generally east and west. The east end is near the intersection of Bridge and Parry Streets. The East end terminates abruptly with no access ramp near Bridge Street. There is a section 40 feet in length that transitions to a parking lot driveway curb cut 64 feet in width, then a section 66 feet in length followed by another driveway cut 54 feet wide, and then a section 30 feet long. Both driveways have side slopes that appear to exceed the ADA 2 percent maximum.

Prospect Street (Falls City Grade School)
On the south side of Prospect Street there is approximately 270 feet of a PCC walkway. All but the western end terminates at grade on a gravel street shoulder. There is a striped cross-walk across the street near the main entrance to the school. No curb-cut or ramp exists at the crosswalk. The crosswalk terminates at the graveled shoulder on the north side of the street. The east end of the walkway terminates with a non-standard ramp. The ramp does not comply with the ADA standards. In particular, the side slope exceeds the 2 percent maximum.

Section II
Appendix C
Traffic Count Worksheets

Summary of Transit Count

Site: 27132011
County: Polk
City: Falls City
Date: 11/2/2011
Hours: 8:00 AM-10:00 PM
Highway #: 1534
N Main St & Mitchell St
Location: @ Bridge St.
Weather: Clear,Fog
Milepoint:
Count Number: 1.00

Time of Day	Summary By Movements							TOTAL	Entering Volumes		
	E-S	E-W	S-E	S-W	W-E	W-S			East	South	West
8:00	16	2	31	1	10	2		62	12	32	12
7:00	15	17	46	18	28	9		123	32	64	27
8:00	28	13	42	8	13	11		115	40	48	26
9:00	22	10	40	5	8	11		96	32	50	13
10:00	28	15	40	8	14	13		118	43	48	27
11:00	33	18	48	8	16	11		124	49	48	27
12:00	30	8	46	12	9	7		112	38	58	16
13:00	33	14	44	2	15	8		132	47	46	24
14:00	45	15	41	12	12	8		132	60	53	19
15:00	50	16	40	7	12	11		140	74	52	23
16:00	34	24	46	8	10	8		130	78	54	23
17:00	28	13	45	8	42	13		109	99	87	23
18:00	43	10	30	5	9	4		101	83	39	12
19:00	26	8	14	6	6	6		66	35	21	12
20:00	20	12	12	2	6	1		53	30	14	7
21:00	12	6	6	5	3	7		39	18	13	5
Total Count	535	196	376	115	178	122		1728	730	680	318
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1		1.1	1.1	1.1	1.1
24hr Volume	592	216	414	127	196	135		1900	803	748	350

Summary of Transit Count

Site: 27132011
County: Polk
City: Falls City
Date: 11/10/2011
Hours: 8:00 AM-10:00 PM
Highway #: 1534
N Main St @ Elm St
Location:
Weather: Clear,Fog
Milepoint:
Count Number: 1.00

Time of Day	Summary By Movements							TOTAL	Entering Volumes		
	N-E	N-W	E-N	E-W	W-N	W-E			North	East	West
8:00 AM	11	2	2	16	0	44		75	13	18	44
7:00 AM	27	8	18	27	4	53		135	31	41	57
8:00 AM	18	9	8	42	5	45		127	70	50	57
9:00 AM	7	7	9	23	4	42		89	4	31	30
10:00 AM	11	8	10	28	5	48		111	19	39	53
11:00 AM	13	7	8	37	6	49		121	20	45	53
12:00 PM	9	10	7	32	0	52		118	19	39	58
1:00 PM	14	8	15	45	5	46		130	19	60	31
2:00 PM	8	6	18	54	8	53		143	12	62	59
3:00 PM	15	9	8	71	6	48		157	27	79	54
4:00 PM	6	8	31	61	7	41		154	17	82	55
5:00 PM	9	4	11	75	11	45		155	13	86	54
6:00 PM	11	3	15	44	4	28		107	14	59	34
7:00 PM	4	1	4	34	3	14		60	5	38	17
8:00 PM	3	2	13	23	3	14		58	5	36	17
9:00 PM	3	1	3	14	2	9		34	4	18	11
Total Count	169	93	179	625	79	632		1780	283	797	700
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1		1.1	1.1	1.1	1.1
24hr Volume	189	84	190	685	87	701		1938	310	877	790

Site: 37110011
County: Polk
City: Polk City

Date: 11/9/2011
Hours: 6:00 AM-10:00 PM
Highway #: 1524
Location: @ Bridge St
Weather: Clear Fog

Waypoint
Count Number: 1.00

Time of Day	Summary By Movements							Entering Volumes		
	E-S	E-W	S-E	S-W	W-E	W-S	TOTAL	East	South	West
6:00	10	2	31	1	10	2	56	12	32	12
7:00	16	17	46	16	20	7	122	33	64	27
8:00	28	12	43	6	13	11	113	40	49	24
9:00	22	10	45	6	6	11	99	33	50	17
10:00	26	15	40	9	14	13	116	41	48	27
11:00	33	18	40	8	10	11	124	43	48	31
12:00	30	8	46	10	9	7	110	38	55	10
13:00	33	14	44	2	10	9	111	47	46	24
14:00	40	15	41	12	15	6	129	49	53	18
15:00	38	10	43	7	15	11	124	74	32	33
16:00	34	24	46	6	15	8	133	78	34	22
17:00	38	13	43	9	12	13	128	91	50	28
18:00	45	10	30	8	6	4	101	61	35	17
19:00	38	8	15	8	6	8	89	36	31	17
20:00	35	12	12	2	6	1	68	33	14	7
21:00	12	6	8	6	3	2	36	18	13	6
Total Count	528	198	575	135	178	123	1736	736	590	300
DHV Factor	0.9	1.1	0.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1
DHV Volume	605	216	653	127	195	135	1935	810	750	330

Site: 37110011
County: Polk
City: Polk City

Date: 11/9/2011
Hours: 6:00 AM-10:00 PM
Highway #: 1524
Location: @ Main St. & Mitchell St
Weather: Clear Fog

Waypoint
Count Number: 1.00

Time of Day	Summary By Movements							Entering Volumes		
	N-S	N-W	S-E	E-W	W-N	W-E	TOTAL	North	East	West
6:00	11	2	2	15	0	44	75	13	18	44
7:00	27	6	18	22	4	53	130	33	43	53
8:00	18	2	8	40	5	52	127	20	53	54
9:00	7	1	5	23	4	42	82	8	31	43
10:00	11	5	10	26	5	43	111	16	39	55
11:00	13	7	9	37	9	45	121	20	46	55
12:00	9	10	7	32	6	32	116	16	38	59
13:00	14	5	13	45	3	45	130	19	59	51
14:00	6	6	14	54	6	50	145	12	73	56
15:00	10	9	8	71	6	48	187	20	79	54
16:00	9	9	11	61	7	44	150	17	83	51
17:00	9	4	11	75	11	43	153	13	86	54
18:00	11	3	10	44	6	33	107	14	59	34
19:00	4	1	4	32	3	14	58	5	36	17
20:00	3	2	13	23	3	14	58	5	36	17
21:00	3	1	6	14	2	9	34	4	19	11
Total Count	186	76	172	625	79	639	1780	346	787	716
DHV Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
DHV Volume	166	68	153	558	71	570	1586	309	702	639

Summary of Traffic Count
Transportation Development Division

Site: 27112011
County: Polk
City: Fate City

Date: 11/7/2011
Hours: 8:00 AM-10:00 PM
Highway #: 1644

Mikosini
Count Number: 1 00

Location: Bridge 81 @ S 49th St/Perry Rd
Weather: Cloudy, Fog

Time of Day	Summary By Movements													Entering Volumes			
	NE-SE	NE-SW	NE-NW	SE-NE	SE-SW	SE-NW	SW-NE	SW-SE	SW-NW	NW-NE	NW-SE	NW-SW	TOTAL	North-East	South-East	South-West	North-West
6:00	4	9	0	12	0	1	11	0	0	10	0	0	47	13	13	11	10
7:00	9	5	8	26	0	1	13	1	0	22	0	1	85	22	28	14	21
8:00	20	10	14	33	2	3	9	3	1	10	1	1	107	44	36	13	12
9:00	8	5	15	14	1	1	13	1	1	17	3	3	82	25	19	16	23
10:00	8	10	17	17	2	1	10	1	2	8	1	1	78	35	30	13	8
11:00	26	7	14	28	0	5	12	1	0	5	4	0	102	47	33	13	9
12:00	13	9	16	23	3	2	19	3	3	12	0	0	104	40	27	25	12
13:00	18	10	14	15	5	5	15	0	3	9	3	1	98	42	33	20	12
14:00	20	14	23	18	3	5	20	2	2	16	4	0	126	57	25	24	19
15:00	35	10	24	28	5	6	14	4	5	10	5	1	147	69	39	23	16
16:00	22	17	22	28	0	2	20	4	0	10	0	1	127	61	28	24	14
17:00	44	19	34	26	2	3	18	6	3	11	4	1	169	87	31	24	18
18:00	28	9	11	22	0	1	8	1	0	8	2	2	90	45	23	7	12
19:00	17	5	8	7	0	1	4	1	0	6	1	0	50	31	9	5	5
20:00	12	7	0	13	0	2	1	1	0	2	3	0	47	25	16	2	3
21:00	6	4	1	8	0	0	3	2	0	3	0	0	28	14	6	5	3
Total Count:	293	150	230	312	32	39	186	31	21	165	33	12	1484	679	379	256	200
24hr Factor:	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
24hr Volume:	322	165	253	344	35	43	205	35	24	182	37	14	1630	747	417	282	220

Summary of Traffic Count
Transportation Development Division

Site: 27112011
County: Polk
City: Fate City

Date: 11/7/2011
Hours: 8:00 AM-10:00 PM
Highway #: 1644

Mikosini
Count Number: 1 00

Location: Bridge 81 @ S 49th St/Perry Rd
Weather: Cloudy, Fog

Time of Day	Summary By Movements													Entering Volumes			
	NE-SE	NE-SW	NE-NW	SE-NE	SE-SW	SE-NW	SW-NE	SW-SE	SW-NW	NW-NE	NW-SE	SW-SW	TOTAL	North-East	South-East	South-West	North-West
6:00	4	9	0	12	0	1	11	0	0	10	0	0	47	13	13	11	10
7:00	9	5	8	26	0	1	13	1	0	22	0	1	85	22	28	14	21
8:00	20	10	14	33	2	3	9	3	1	10	1	1	107	44	36	13	12
9:00	8	5	15	14	1	1	13	1	1	17	3	3	82	25	19	16	23
10:00	8	10	17	17	2	1	10	1	2	8	1	1	78	35	30	13	8
11:00	26	7	14	28	0	5	12	1	0	5	4	0	102	47	33	13	9
12:00	13	9	16	23	3	2	19	3	3	12	0	0	104	40	27	25	12
13:00	18	10	14	15	5	5	15	0	3	9	3	1	98	42	33	20	12
14:00	20	14	23	18	3	5	20	2	2	16	4	0	126	57	25	24	19
15:00	35	10	24	28	5	6	14	4	5	10	5	1	147	69	39	23	16
16:00	22	17	22	28	0	2	20	4	0	10	0	1	127	61	28	24	14
17:00	44	19	34	26	2	3	18	6	3	11	4	1	169	87	31	24	18
18:00	28	9	11	22	0	1	8	1	0	8	2	2	90	45	23	7	12
19:00	17	5	8	7	0	1	4	1	0	6	1	0	50	31	9	5	5
20:00	12	7	0	13	0	2	1	1	0	2	3	0	47	25	16	2	3
21:00	6	4	1	8	0	0	3	2	0	3	0	0	28	14	6	5	3
Total Count:	293	150	230	312	32	39	186	31	21	165	33	12	1484	679	379	256	200
24hr Factor:	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
24hr Volume:	322	165	253	344	35	43	205	35	24	182	37	14	1630	747	417	282	220

Location: Mitchell - Falls City
Weather: cloudy
Counter #s: 5219

Site: Mitchell - Falls City
Date: 11/7/2011 - Monday

24 Hour Volume, per Channel

Interval Begin		Near lane fl
	12:00 PM	10
	1:00 PM	16
	2:00 PM	3
	3:00 PM	11
	4:00 PM	14
	5:00 PM	7
	6:00 PM	2
	7:00 PM	0
	8:00 PM	0
	9:00 PM	1
	10:00 PM	0
	11:00 PM	1
11/8/2011		
	12:00 AM	0
	1:00 AM	0
	2:00 AM	3
	3:00 AM	5
	4:00 AM	6
	5:00 AM	8
	6:00 AM	4
	7:00 AM	6
	8:00 AM	14
	9:00 AM	7
	10:00 AM	8
	11:00 AM	10
Totals		136

Peak Hours

12:00 AM - 12:00 PM	8:00 AM
Volume	14
12:00 PM - 12:00 AM	1:00 PM
Volume	16

Location:	Mitchell Falls City	Site:	Mitchell Falls City
Weather:	cloudy	Date:	1/26/2011
Counter No.:	5139		Tuesday

24 Hour Volume, per Channel

Interval Begin	Near lane fi
12:00 PM	10
1:00 PM	8
Totals	18

Peak Hours

12:00 AM -
12:00 PM
Volume -

12:00 PM -
12:00 AM 12:00 PM
Volume 10

Location: Chamberlain Falls City
Weather: cloudy
Counter No.: 5316

Site: Chamberlain Falls City
Date: 11/7/2011
Thursday

24 Hour Volume, per Channel

Interval Begin	Lane Flow
11:00 AM	11
12:00 PM	16
1:00 PM	16
2:00 PM	11
3:00 PM	4
4:00 PM	16
5:00 PM	4
6:00 PM	1
7:00 PM	1
8:00 PM	0
9:00 PM	0
10:00 PM	0
11:00 PM	0
11/8/2011	
12:00 AM	0
1:00 AM	0
2:00 AM	0
3:00 AM	9
4:00 AM	10
5:00 AM	9
6:00 AM	15
7:00 AM	15
8:00 AM	11
9:00 AM	14
10:00 AM	8
Totals	171

Peak Hours

12:00 AM - 12:00 PM	6:00 AM
Volume	15
12:00 PM - 12:00 AM	12:00 PM
Volume	16

Location: Chamberlain - Falls City
Weather: cloudy
Counter No.: 5238

Site: Chamberlain - Falls City
Date: 11/8/2011
Tuesday

24 Hour Volume, per Channel

Interval Begin	Lane Flow
11:00 AM	12
12:00 PM	3
Totals	15

Peak Hours

12:00 AM - 12:00 PM — 11:00 AM
Volume — 12

12:00 PM - 12:00 AM — 12:00 PM
Volume — 3

Location: Sheldon Ave - Falls City
Weather: Cloudy
Counter No.: 5597

Site: Sheldon
Date: 11/7/2011 Monday

24 Hour Volume, per Channel

Interval Begin	Lane Flow
12:00 PM	8
1:00 PM	5
2:00 PM	10
3:00 PM	19
4:00 PM	14
5:00 PM	13
6:00 PM	10
7:00 PM	7
8:00 PM	12
9:00 PM	3
10:00 PM	4
11:00 PM	0
11/8/2011	
12:00 AM	0
1:00 AM	0
2:00 AM	0
3:00 AM	2
4:00 AM	0
5:00 AM	3
6:00 AM	1
7:00 AM	20
8:00 AM	8
9:00 AM	14
10:00 AM	2
11:00 AM	9
Totals	164

Peak Hours

12:00 AM - 12:00 PM	7:00 AM
Volume	20
12:00 PM - 12:00 AM	7:00 PM
Volume	19

Location:	Sheldon Ave - Iowa City	Site:	Sheldon
Weather:	Cloudy	Date:	11/8/2011
Counter No.:	5597		Tuesday

24 Hour Volume, per Channel

Interval Begin	Lane Flow
12:00 PM	8
1:00 PM	7
Totals	15

Peak Hours

12:00 AM - 12:00 PM		
Volume		-
12:00 PM - 12:00 AM	12:00 PM	
Volume	8	

Section II
Appendix D
Methodology Memorandum

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700 Portland, OR 97205 · 503.228.5230 · 503.273.8169

MEMORANDUM

Date: April 20, 2012 Project #: 11988.0

To: Naomi Zwerdling, ODOT Region 2
Marjorie Mattson, MWVCOG

From: Matt Hughart, AICP
Project: City of Falls City Transportation System Plan
Subject: Project Methodology & Assumptions

The purpose of this memorandum is to document the methodology and key assumptions to be used in preparation of the existing and future conditions analyses for the Falls City Transportation System Plan (TSP). The methodologies included in this memorandum are based on guidance provided in the Oregon Department of Transportation (ODOT) *Transportation System Plan Guidelines* (Reference 1) and the *Analysis Procedures Manual* (APM – Reference 2) as they relate to small urban areas.

Existing Traffic Volumes

STUDY INTERSECTIONS

Traffic counts were conducted by ODOT at the study intersections in early November 2011 and consist of both 16-hour turning movement counts and 24-hour tube counts. All intersection traffic counts include vehicular turning movements, pedestrian movements (with or without marked crosswalks), bikes, and wheeled pedestrians (wheelchairs, skateboards, etc). Table 1 summarizes the traffic count information obtained for the TSP update.

Table 1 Traffic Counts Summary

Intersection	Count Date	Count Type
N Main Street / Ellis Street	11/7/11	16-Hour Turning Movement Count
N Main Street / Mitchell Street / Bridge Street	11/7/11	16-Hour Turning Movement Count
Bridge Street / S. Main Street	11/7/11	16-Hour Turning Movement Count
Chamberlain Road at Southwest City Limits	11/7/2011	24-hour Tube Count
Sheldon Avenue at Southeast City Limits	11/7/2011	24-hour Tube Count
Mitchell Street at Socialist Valley Road	11/7/2011	24-hour Tube Count

PM Peak Hour Development

Consistent with the recommended practice in the APM, a system-wide peak hour was identified for the study area. The volume for each individual intersection was totaled over the system for every 15-minute period between 4:00 p.m. and 6:00 p.m. The 15-minute totals were then summed for each 1-hour period within that range. The system demonstrated a peak hour between 5:00 p.m. and 6:00 p.m.

Intersection Operational Standards

City of Falls City Facilities

Falls City has not currently adopted level-of-service (LOS) or volume-to-capacity (V/C) ratio standards for unsignalized intersections. Falls City intersections that do not meet the following operational thresholds will be identified:

- LOS "D" at all-way stop controlled intersections if the V/C ratio is not higher than 1.0 for the sum of critical movements.
- LOS "E" for the poorest operating approach at two-way stop intersections. Approaches operating at a LOS "F" where a traffic signal is not warranted will also be identified.

A summary of the operational thresholds that will be used to identify study intersections under city jurisdiction with operational issues is included in Table 2.

Table 2 Operational Thresholds for City Intersections

Intersection	Traffic Control[1]	Threshold for Identification
N Main Street / Ellis Street	TWSC	LOS "E"
N Main Street / Mitchell Street / Bridge Street	TWSC	LOS "E"
Bridge Street / S. Main Street	TWSC	LOS "E"

[1]TWSC: Two-way stop-controlled (unsignalized)

Seasonal Adjustment Factor

Given that the traffic counts were conducted in early November and there is a propensity for higher traffic volumes along City streets in the summer months, the traffic counts were adjusted to account for the effects of seasonal variation. As previously discussed, Falls City and the study intersections are not located on or near an ODOT state highway. As such, the typical ODOT-based seasonal adjustment methodologies were not utilized. Instead, historical traffic counts were obtained from Polk County along different segments of Falls City Road. Comparing July and December traffic counts, it was determined that traffic volumes along this main Falls City portal to OR 213 are on average 24 percent higher in the month of July when compared to the month of December. In recognition of the limited data sample, discussions were had with both Falls City and Polk County staff. From these discussions, it was determined that 24 percent is a reasonable and appropriate seasonal adjustment factor for the purposes of this TSP.

ANALYSIS MODEL PARAMETERS

The bullets below identify the specific sources of data and methodologies we propose to utilize. Analyses of all state facilities will be conducted according to the APM, unless otherwise agreed upon by both ODOT's Transportation Planning and Analysis Unit (TPAU) and the consultant team.

1. *Intersection/Roadway Geometry* (lane numbers and arrangements, cross-section elements, signal phasing, etc.) will be verified for consistency with previous work efforts, reviewed through aerial photography, and confirmed through a site visit. Available as-built data may also be used to verify existing roadway geometry. The analysis models will be built on scaled roadway line work from GIS or aerial photography.
2. *Operational Data* (such as posted speeds, intersection control, parking, transit stops, rail crossings, right-turn on red, etc.) will be verified. Data will be reviewed during a site visit and supplemented by available GIS data, traffic count DVDs, aerials, and photos.
3. *Peak Hour Factors* (PHF) will be calculated for each intersection and applied to the existing conditions analyses. PHFs of 0.95 will be used for the year 2035 analysis for high-order facilities (arterials), with 0.90 applied to medium-order facilities (collectors) and 0.85 applied to local roads. If the existing PHF is greater than these default future values, the existing PHF will be applied.
4. *Traffic Volume* development is described above and resulted in the November counts being seasonally adjusted by 24 percent.
5. Traffic Operations
    a. The 2010 Highway Capacity Manual (HCM) methodology shall be used for intersection analyses of the design hour conditions. The existing and future no-build analysis will utilize Synchro software using HCM reports for signalized and stop-controlled intersections. Level-of-service, delay, and volume-to-capacity ratios will be reported at each of the study intersections regardless of roadway jurisdiction.

Crash Analyses

The most recent five years of crash data will be reviewed at the study intersections, as available and where reflective of the current configuration. The data will be analyzed for type, severity and location to identify potential crash patterns.

Forecasting Traffic Volumes

Various methods of estimating future traffic growth have been developed for planning purposes. The Cumulative Analysis method was selected to estimate future traffic volumes in Falls City. The ODOT *Analysis Procedures Manual* (APM – Reference 1) identifies the Cumulative Analysis method as appropriate for "small urban areas that are growing at a fairly uniform rate or for areas where only minor changes are expected to take place." Two distinct components comprise the cumulative method:

- Background growth reflecting anticipated increases in through traffic
- Household growth within the city that results in new land development

The derivation of trips associated with each of these components is described below.

BACKGROUND GROWTH RATE

Given that Falls City is not located on a regional state highway or County road system that is subject to through traffic, background growth is anticipated to be minimal to non-existent. However, for conservative purposes, a small 0.5% annual growth rate was assumed to account for small growth in the outlying portions of Polk County that are accessed via city streets.

HOUSEHOLD GROWTH

The 2036 traffic volume forecast also needs to reflect anticipated household growth in Falls City. The methodology to relate anticipated household growth to future traffic increases will be based on the Cumulative Analysis traffic forecasting methodology outlined in the APM. This methodology combines an analysis of specific growth in land uses within the city as well as anticipated increases in "through" traffic.

Projected 2036 housing growth was estimated based on historical building permit data as researched by MWVCOG. The City's Comprehensive Plan indicates the number of housing construction starts between the years of 1995 and 2001 to be a total of 38 new units. Limited information was obtained from Polk County Community Development Department for April 2007 through December 2011. From this source, a total of eight (8) single-family residential permits were issued for the five year period. Based on these figures, approximately two (2) new dwelling units per year could be projected through the 2036 planning horizon resulting in a total of 48 additional dwelling units. through the year 2036. These estimates were reviewed by city staff and were determined to be reasonable given the inability to accommodate significant amounts of growth on the sanitary sewer system.

Table 3 Housing Growth Projections (2011-2036)

	2011	2036	Absolute Growth (2011-2036)
Housing Units	381	429	48

As shown in Table 3, an increase of 48 housing units is anticipated within Falls City between 2011 and 2036.

Household Growth Allocation

In order to evaluate the anticipated growth in the City, the projected housing growth will be assigned to the traffic network according to different geographic regions. Based on discussions with City staff, it is anticipated that those portions of the City with sanitary sewer service are likely to experience the majority of long-term housing growth. This includes the half of the City north of the Little Luckiamute River. Based on a review of land availability and topographic constraints, it has been assumed for the purposes of the TSP that this housing growth will occur north of N. Main Street along the Ellis Street and Palmer Road corridors.

A smaller element of housing growth is reasonable for that portion of the city located south of the Little Luckiamute River. Based on a review of land availability and topographic constraints, it has been assumed for the purposes of the TSP that this limited housing growth will occur south and west of the S. Main Street/Bridge Street intersection.

Trip Generation

Trip generation estimates for the housing growth areas previously described were prepared based on observations found in the standard reference manual, *Trip Generation, 8th Edition*, published by the Institute of Transportation Engineers (ITE – Reference 3). Table 4 summarizes the estimated trip generation for each of the growth areas rounded to the nearest five trips.

Table 4
2036 Trip Generation Estimate by Growth Area, Weekday PM Peak Hour

	Housing		
	In	Out	Total
Northeast Quadrant	25	15	40
Southwest Quadrant	10	10	20
Area-wide	***35***	***25***	***60***

CUMULATIVE ANALYSIS

The cumulative analysis method is generally used to forecast future traffic volumes for small urban areas that are growing at a fairly uniform rate or for areas where only minor changes are expected to occur. The method combines information on existing and planned land uses in a given area along with historical growth trends to predict total future traffic volumes. Similar to a travel demand model, the cumulative analysis method accounts for four types of vehicle trips:

- Through trips (External-External): no external trips are anticipated for Falls City
- Inbound trips (External-Internal): vehicles that come from outside of Falls City to a destination within the city

- Outbound trips (Internal-External): vehicles that leave Falls City and travel to a destination outside the city
- Local trips (Internal-Internal): vehicles that travel from one point in Falls City to another without leaving the city

Given the small size of Falls City, its isolated location, and the limited number of study intersections, a detailed allocation of inbound, outbound, and local trips was not performed. Instead, new trips associated with the assumed housing growth will be assigned to the roadway network assuming the majority of weekday p.m. peak hour trips are External-Internal. With only two roadways providing regional access to/from Falls City, this assignment will focus mainly of routes that provide the most direct access to Falls City Road and Bridgeport Road.

Next Steps

Please review the methodology and analysis described in this memorandum and advise us of any questions, concerns, or suggestions. Once the methodology and projections are confirmed, the net new through, inbound, outbound, and local trips will be assigned to the study intersections. Future 2036 traffic operations will then be analyzed at the study intersections.

If you have any questions as you review this material, please call us at (503) 228-5230.

REFERENCES

1. Oregon Department of Transportation. *Transportation System Plan Guidelines, 2008.*
2. Oregon Department of Transportation. *Analysis Procedures Manual, 2006.*
3. Institute of Transportation Engineers. *Trip Generation Manual, 8th Edition*, 2008.

Section II
Appendix E
2011 Existing Conditions
Traffic Analysis Worksheets

Kittelson & Associates, Inc. - #11988
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Scenario Report

Scenario:	AM
Command:	AM
Volume:	AM
Geometry:	AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. - #11988
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Intersection Volume Report
Base Volume Alternative

Node	Intersection	Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R
1	N. Main Stree	0	0	0	27	0	6	4	66	n	0	33	38
2	N. Main Stree	0	0	0	25	0	7	18	44	0	0	19	21
3	S. Main Stree	1	15	1	11	5	10	24	1	1	1	1	25

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KITTELSON, PORTLAND

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Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base v/c	Future LOS	Future Del/Veh	Future v/c	Change in v/c
1 N. Main Street/Ellis Street	A	9.3	0.037	A	9.3	0.037	+ 0.000 D/V
2 N. Main Street/Mitchell Street	A	9.4	0.036	A	9.4	0.036	+ 0.000 D/V
3 S. Main Street/Bridge Street/S	A	9.3	0.033	A	9.3	0.033	+ 0.000 D/V

Kittelson & Associates, Inc. - 011088
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 N. Main Street/Ellis Street

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A(9.3)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1!	0	0	1	0	0	0
Volume Module:												
Base Vol:	0	0	0	27	0	6	4	66	0	0	11	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	27	0	6	4	66	0	0	11	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	32	0	7	5	78	0	0	29	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	32	0	7	5	78	0	0	29	21
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	117	117	59	81	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	861	757	1002	1475	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	858	754	1002	1474	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.01	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2WayStbQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	A	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT	LTR	RT	LT	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	861	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.3		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Note: Queue reported is 1/4 number of cars per lane.

Kittelson & Associates, Inc #11960
Falls City TSP
2012 Existing Traffic Conditions Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #3 N. Main Street/Ellis Street

Approach	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
ApproachVeh:		0			0			11			11	
ApproachGrade:		0%			0%			0%			0%	
Ped/Hour:		0			1			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	
Time Period: 0.25 hour												

Kittelson & Associates, Inc - #11960
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 N. Main Street/Mitchell Street/Bridge Street

Average Delay (sec/veh): 9.2 Worst Case Level Of Service: B| 9.4|

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	1	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	25	0	7	19	46	0	0	19	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	25	0	7	19	46	0	0	19	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	29	0	8	21	50	0	0	22	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	29	0	8	21	54	0	0	22	25
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.5	6.6	6.1	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.6	4.1	3.3	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	149	133	37	69	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	826	756	1032	1478	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap:	xxxx	xxxx	xxxxx	817	724	1001	1476	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.4	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc #11988
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #3 N. Main Street/Mitchell Street/Bridge Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
MovVeh:	0%		14%			15%			20%			
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed, 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Kittelson & Associates, Inc - #11988
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 S. Main Street/Bridge Street/Ferry Road

Average Delay (sec/veh): 5.9 Worst Case Level Of Service: A(9.2)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include								
Lanes:	0	0	1!	0	0		0	0	1!	0	0	
Volume Module												
Base Vol:	1	35	1	11	0	10	26	1	1	1	1	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse	1	35	1	11	0	10	26	1	1	1	1	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	1	16	1	13	0	12	29	1	1	1	1	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	16	1	13	0	12	29	1	1	1	1	29
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	20	xxxx	xxxxx	28	xxxx	xxxxx	76	62	14	60	67	15
Potent Cap.:	1593	xxxx	xxxxx	1587	xxxx	xxxxx	927	818	1066	920	812	1062
Move Cap.:	1587	xxxx	xxxxx	1586	xxxx	xxxxx	883	804	1066	911	803	1061
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.03	0.00	0.00	0.00	0.00	0.03
Level Of Service Module:												
2WayQ1tHO:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	967	xxxxx	xxxx	1024	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx
Shrd CndDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	xxxxx	8.6	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	A	*
ApproachDel	xxxxxx			xxxxxx			9.0			8.6		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - #11988
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #3 S. Main Street/Bridge Street/Perry Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	38%			20%			9%			8%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			2			1		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Kittelson & Associates, Inc. - #19988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Scenario Report

Scenario:	PM
Command:	PM
Volume:	PM
Geometry:	PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. - #19988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Intersection Volume Report
Base Volume Alternative

Node	Intersection	Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R
1	N. Main Street	0	0	0	9	0	4	11	53	0	0	93	11
2	N. Main Stree	0	0	0	12	0	53	9	53	0	0	97	25
3	S. Main Stree	3	18	5	50	30	40	19	4	3	2	3	38

Kittelson & Associates, Inc. - #19988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Impact Analysis Report
Level Of Service

	Intersection	Base LOS	Delay/Veh	V/C	Future LOS	Delay/Veh	V/C	Change in
1	N. Main Street/Ellis Street	A	9.3	0.014	A	9.5	0.014	+ 0.000 D/V
2	N. Main Street/Mitchell Street	A	9.4	0.018	A	9.4	0.018	+ 0.000 D/V
3	S. Main Street/Bridge Street/P	B	10.1	0.037	B	10.1	0.037	+ 0.000 D/V

Kittelson & Associates, Inc. 11988
Wally City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 N. Main Street/Ellis Street

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: A(9.5)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1!	0	0	0	0	0	1
Volume Module:												
Base Vol:	3	0	0	4	0	4	11	53	0	0	95	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	0	0	4	0	4	11	53	0	0	95	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	3	0	0	11	0	5	13	62	0	0	109	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	11	0	5	13	62	0	0	109	13
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Conflict Vol:	xxxx	xxxx	xxxxx	309	305	117	123	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	701	693	938	1470	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	773	686	937	1469	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	-	*	A	*	*	-	*	*
Movement:	LT - LTR		RT	LT - LTR		RT	LT - LTR		RT	LT - LTR		RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	817	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.5	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	-	A	-	A	*	-	*	*	-
ApproachDel:	xxxxxx			9.5			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. 11988
Wally City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

(A)Intersection #1 N. Main Street/Ellis Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
MovVeh:	0			0			13			13		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.75 hour												

Kittelson & Associates, Inc. - #19988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 N. Main Street/Mitchell Street/Bridge Street

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[9.4]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1!	0	0	1	0	0	0
Volume Module:												
Base Vol:	0	0	0	12	0	13	9	53	0	0	97	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	0	13	9	53	0	0	97	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	14	0	15	11	62	0	0	114	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	14	0	15	11	62	0	0	114	19
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	209	207	124	133	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	782	691	930	1458	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	776	686	930	1458	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	849	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.4	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - #19988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #2 N. Main Street/Mitchell Street/Bridge Street

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	1%	1%	1%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	2
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Kittelson & Associates, Inc. - 819988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 S. Main Street/Bridge Street/Parry Road

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: B[10.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:												
Base Vol:	2	18	5	50	30	40	15	4	1	2	3	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	18	5	50	30	40	15	4	1	2	3	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	2	21	5	59	34	47	17	5	1	2	4	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	21	5	59	34	47	17	5	1	2	4	32
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	71	xxxx	xxxxx	29	xxxx	xxxxx	212	199	49	200	219	36
Potent Cap.:	1536	xxxx	xxxxx	1577	xxxx	xxxxx	747	699	1022	741	681	1051
Move Cap.:	1536	xxxx	xxxxx	1576	xxxx	xxxxx	695	670	1021	733	653	1052
Volume/Cap:	0.00	xxxx	xxxx	0.04	xxxx	xxxx	0.03	0.01	0.00	0.00	0.01	0.03
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	704	xxxxx	xxxx	972	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	xxxxx	8.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	A	*
ApproachDel:	xxxxx			xxxxx			10.3			8.9		
ApproachLOS:	*			*			B			A		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - 819988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #1 S. Main Street/Bridge Street/Parry Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min.Veh:	1!			1!			1!			1!		
Grade:	0%			0%			0%			0%		
Ped/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Section II
Appendix F
ODOT Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF FALLS CITY, POLK COUNTY

N. Main Street @ Table Street

JANUARY 1, 2006 THROUGH DECEMBER 31, 2010

SER# / INVEST	S P E R I O U S	D A D C T	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / STREET STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (ISLANDS)	JUC-REL / TRAF- / CONTL	OFF-RD / WKZNE / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SPCL	SPCL USE / TRLR QTY / DAMGE / VEH TYPE	MOVE / FROM / TO	PS	PRTC TYPE	INJ SVRTY	A G E P	D L I C E N S	RES / LOC	ERROR	ACTN	EVENT	CAUSE
75260	N	N	05/08/2006	07	ELLIS ST	INTER	3-LEG	N		R	ELB	ANGL-OTH	01	HOME	E	STRGHT								
4140			Mon	0	N MAIN ST	ON		UNKNOWN		R	SMP	ANGL		MPVTR		E R							000	
			PM			01	0			D	DAY	FOG		TRAILR PAS			01	DRVR	NONE	17	N	OR-C		538	526	
																						DW425			
													W	LOT	1	STRGHT								
														PRVTL	C	W							000	00
														SEMI TRK			01	DRVR	NONE	00	M	08-1	030	000	09
																						08-1			

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF FALLS CITY, POLK COUNTY

N. Main Street @ Mitchell St.dec/ Bridge Street

JANUARY 1, 2006 THROUGH DECEMBER 31, 2010

SER# / INVEST	S P E R I O U S	D A D C T	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (ISLANDS)	JUC-REL / TRAF- / CONTL	OFF-RD / WKZNE / DRVWY	WTHR / SURF / LGHT	CRASH TYP / COLL TYP / SPCL	SPCL USE / TRLR QTY / DAMGE / VEH TYPE	MOVE / FROM / TO	PS	PRTC TYPE	INJ SVRTY	A G E P	D L I C E N S	RES / LOC	ERROR	ACTN	EVENT	CAUSE
00-0	Y	N	03/07/2007	03	BRIDGE ST	INTER	3-LEG	N		R	ELB	OVERTURN	01	HOME	E	TURN-I								210,001	01
00007			Sat	0	N MAIN ST	ON		NONE		W	SMP	ROLL		MPVTR	E	SR							001	010,040,04	07
			AM			01	0			D	DAY	TRE		MTRCYCLE			01	DRVR	MALE	57	M	OR-Y	050,040,081	000	001	01
																						DW425			

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF FALLS CITY, POLK COUNTY

S. Main Street @ Building Street/ Derry Road

JANUARY 1, 2006 THROUGH DECEMBER 31, 2010

SER# / INVEST	S P E R I O U S	D A D C T	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / STREET STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (ISLANDS)	JUC-REL / TRAF- / CONTL	OFF-RD / WKZNE / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SPCL	SPCL USE / TRLR QTY / DAMGE / VEH TYPE	MOVE / FROM / TO	PS	PRTC TYPE	INJ SVRTY	A G E P	D L I C E N S	RES / LOC	ERROR	ACTN	EVENT	CAUSE
00012			11/04/2007	07	BRIDGE ST	INTER	3-LEG	N		C	SSW	HEAD-VIEW	01	WENT	S	STRGHT								03
00007			Sat	0	S MAIN ST	ON		STOP SIGN		W	SMP	ANGL		MPVTR		SE NW							000	09
			PM			03	0			D	DAY	TRE		DRIVER	W		01	DRVR	MALE	21	N	OR-Y	073	---	03
																						DW425		
													02	WENT	S	STRGHT								00
														PRVTL		SE NW							000	00
														STOP SIGN			01	DRVR	MALE	24	N	OR-Y	000	000	00

Section II
Appendix G
CRITICAL CRASH DATA

INTERSECTION CRASH RATES CALCULATOR

INT.	Peak Hour	Daily Vol.	5-Year TEV	5-Year MEV	Crash Total	Crash/Year	Intersection Type	Crash Rate	Critical Rate	Over Critical
N. Main Street / [illegible]	191	1910	3363250	3.4	1	0.2	1	0.30	0.78	0
N. Main Street/Milk Hill Street/Bridge Street	200	2000	3650000	3.7	1	0.2	1	0.27	0.75	0
S. Main Street/Bridge Street/Perry Road	189	1890	3449250	3.4	1	0.2	1	0.29	0.76	0

NOTES:
Anything "0" is not entered is an invalid value from data source 0. Shaded cells have formulas to perform calculations.
Definitions:

Daily Volumes: Peak Hour x 10
5-Year TEV: Daily Volume x 365 x 5
5-Year MEV: 5-Year Volume / 1,000,000
Crash/Year: Crash Total / 5
Crash Rate: Crash Total / 5-Year MEV
Critical Rate: Average Crash Rate Per Intersection Type + (1.645 x (Value(s)/ Crash Rate Per Intersection Type) + (1 / 2 x 5 Year TEV)

Intersection	Type
1	0.25
2	
3	

Section II
Appendix H
2036 NO-BUILD CONDITIONS TRAFFIC ANALYSIS WORKSHEETS

Kittelson & Associates, Inc. [illegible]
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Scenario Report

Scenario:	AM
Comment:	AM
Volume:	AM
Geometry:	AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. [illegible]
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Turning Movement Report

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#1 N. Main Street/Ellis Street													
Base	2	3	0	27	0	5	4	66	1	0	11	10	154
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	0	15	0	0	0	16	0	0	0	5	36
Total	2	3	0	42	0	11	0	82	0	0	34	33	304
#2 N. Main Street/Mitchell Street/Bridge Street													
Base	0	0	1	25	0	7	18	46	0	0	11	9	117
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	0	0	0	0	0	16	0	0	0	7	23
Total	0	0	0	25	0	7	18	62	0	0	24	22	140
#3 S. Main Street/Bridge Street/Ferry Road													
Base	1	15	1	11	3	20	24	1	1	1	1	25	96
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	0	3	1	3	5	0	1	0	0	5	23
Total	1	15	1	14	4	23	29	1	2	1	1	30	119

Kittelson & Associates, Inc. - 811900
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change In
1 N. Main Street/Ellis Street	A	9.3	0.037	A	8.6	0.061	+ 1.325 D/V
2 N. Main Street/Mitchell Street	A	9.4	0.036	A	9.4	0.037	- 0.127 D/V
3 S. Main Street/Bridge Street/P	A	9.3	0.033	A	9.5	0.041	- 1.172 D/V

Kittelson & Associates, Inc. - 811900
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 N. Main Street/Ellis Street

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: A(9.6)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1	0	0	0	1	0	1
Volume Module:												
Base Vol:	0	0	0	27	2	6	4	66	0	2	13	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	27	2	6	4	66	0	2	13	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	15	0	5	5	15	0	0	5	5
Initial Fut:	0	0	0	42	2	11	9	81	0	2	18	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	49	2	13	11	95	0	2	21	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	49	2	13	11	95	0	2	21	25
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	176	176	68	73	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	819	721	1001	1460	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	813	716	992	1459	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.00	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	965	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.6	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.6			xxxxxx			xxxxxx	
ApproachLOS:	*				A			*			*	

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. 8/1/08
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

****
Intersection #1 N Main Street/Ellis Street
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	25	3	7	18	66	3	0	13	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	25	3	7	18	66	3	0	13	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	12	0	0	5	0
Initial Fut:	0	0	0	25	3	7	18	78	3	0	18	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	29	3	8	21	92	3	0	21	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	29	3	8	21	92	3	0	21	25
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.5	6.6	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.6	4.1	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	161	157	42	95	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	831	734	999	1471	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	787	682	999	1458	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.01	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movements:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	824	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.6	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.6			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

****
Note: Queue reported is the number of cars per lane.
****

Kittelson & Associates, Inc. 8/1/08
Falls City TSP
2012 Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #2 S Main Street/Mitchell Street/Bridge Street
****

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: A(9.5)

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	25	3	7	18	66	3	0	13	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	25	3	7	18	66	3	0	13	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	12	0	0	5	0
Initial Fut:	0	0	0	25	3	7	18	78	3	0	18	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	29	3	8	21	92	3	0	21	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	29	3	8	21	92	3	0	21	25
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.5	6.6	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.6	4.1	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	161	157	42	95	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	831	734	999	1471	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	787	682	999	1458	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.01	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movements:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	824	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.6	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.6			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

****
Note: Queue reported is the number of cars per lane.
****

Kittelson & Associates, Inc. - 81960
Falls City TSP
2012 Existing Traffic Conditions: Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #2 N. Main Street/Mitchell Street/Bridge Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HeavyVeh:	0%			0%			15%			20%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			2			0			4		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Kittelson & Associates, Inc. 81960
Falls City TSP
2012 Existing Traffic Conditions: Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 S. Main Street/Bridge Street/Perry Road

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A(9.5)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0		0	0	2	0		0	0	0	0		1	0	0	0	0		1	0
Volume Module:																				
Base Vol:	1	15		0	11	0		10	24		1			1		0	5			25
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00
Initial Bse:	1	15		0	11	0		10	24		1			1		0	5			25
Added Vol:	0	0		0	0	0		0	0		0			0		0	0			0
PasserByVol:	0	5		0	0	1		2	5		0			0		1	0			0
Initial Fut:	1	20		0	11	1		12	29		1			1		1	5			25
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00
PHF Adj:	0.85	0.85		0.85	0.85	0.85		0.85	0.85		0.85			0.85		0.85	0.85			0.85
PHF Volume:	1	24		0	13	1		14	34		1			1		1	6			29
Reduct Vol:	0	0		0	0	0		0	0		0			0		0	0			0
FinalVolume:	1	24		0	13	1		14	34		1			1		1	6			29
Critical Gap Module:																				
Critical Gp:	4.5	xxxx	xxxxx			4.1	xxxx	xxxxx			7.2	6.6	6.3			7.1	6.5	6.2		
FollowUpTim:	2.5	xxxx	xxxxx			2.1	xxxx	xxxxx			3.6	4.1	3.3			3.6	4.1	3.3		
Capacity Module:																				
Cnflict Vol:	83	xxxx	xxxxx			25	xxxx	xxxxx			91	75	16			73	61	25		
Potent Cap.:	1387	xxxx	xxxxx			1579	xxxx	xxxxx			876	802	1043			903	798	1034		
Move Cap.:	1385	xxxx	xxxxx			1578	xxxx	xxxxx			837	791	1041			892	787	1033		
Volume/Cap:	0.00	xxxx	xxxx			0.01	xxxx	xxxx			0.04	0.00	0.00			0.00	0.00	0.03		
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx			0.0	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	7.6	xxxx	xxxxx			7.5	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	A	*	*			A	*	*			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	840	xxxxx			xxxx	1018	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	0.1	xxxxx			xxxxx	0.1	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	9.5	xxxxx			xxxxx	8.7	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	A	*			*	A	*		
ApproachDel:	xxxxxx					xxxxxx						9.5					8.7			
ApproachLOS:	*					*						A					A			

Note: Queue reported is # of number of cars per lane.

[illegible] Associates, Inc. - Silver
Falls City TSP
2012 Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

****

Intersection #3 S. Main Street/Bridge Street/Ferry Road

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min Vol:	99			99			99			99		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour

Kittelson & Associates, Inc. - Silver
Falls City TSP
Existing Traffic Conditions Weekday PM Peak Hour

Scenario Report

Scenario:	PM
Common:	PM
Volumes:	PM
Geometry:	PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. - 819988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Turning Movement Report

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#1 N. Main Street/Riley Street													
Base	0	0	0	9	0	4	11	85	0	0	95	11	131
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	0	10	0	5	5	10	0	0	10	20	60
Total	0	0	0	19	0	9	16	83	0	0	105	31	191
#2 N. Main Street/Mitchell Street/Bridge Street													
Base	0	0	0	12	0	13	9	53	0	0	97	16	200
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	0	0	0	0	0	10	0	0	10	0	20
Total	0	0	0	12	0	13	9	63	0	0	107	16	220
#3 S. Main Street/Bridge Street/Perry Road													
Base	2	18	6	40	20	10	15	1	1	2	1	20	136
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	4	0	5	5	0	0	0	0	0	0	5	20
Total	2	22	6	55	25	10	15	1	1	2	1	25	156

Kittelson & Associates, Inc. 819988
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/Veh	V/C	Future LOS	Del/Veh	V/C	Change Del
# 1 N Main Street/Riley Street	A	9.5	0.014	A	9.9	0.031	+ 0.361 C/V
# 2 N Main Street/Mitchell Street	A	9.4	1.015	A	9.5	0.019	+ 0.108 C/V
# 3 S Main Street/Bridge Street/P	B	10.2	1.037	B	10.5	0.041	+ 0.251 C/V

Kittelson & Associates, Inc. #19980
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 W. Main Street/Ellis Street

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A(9.9)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
RightA:	Include			Include			Include			Include		
Lanes:	0 0 0	3 0		0 0	1! 0	0	0	1 2	2 2	0	1! 0	0 1 0
Volume Module:												
Base Vol:	0	0	0	9	0	4	11	53	0	0	13	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	9	0	4	11	53	0	0	13	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	10	0	5	5	10	0	0	10	28
Initial Fut:	0	0	0	19	0	9	16	63	0	0	123	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	22	0	11	19	74	0	0	121	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	22	0	11	19	74	0	0	121	39
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	236	262	143	136	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	735	683	910	1457	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	720	664	905	1456	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.03	0.00	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95th	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	-	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR	- RT		LT - LTR - RT			LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	775	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.9			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. #19980
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #1 W. Main Street/Ellis Street

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
MinVeh	0%	3%	2%	1%
Grade:	0%	3%	0%	0%
Peds/Hour:	0	3	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	0 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Kittelson & Associates, Inc. #10998
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 M. Main Street/Mitchell Street/Bridge Street

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A(9.5)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1!	0	0	1	0	0	1
Volume Module:												
Base Vol:	0	0	0	12	0	13	9	53	0	0	81	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	0	13	9	53	0	0	81	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	20	0	0	20	0
Initial Fut:	0	0	0	12	0	13	9	53	0	0	101	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	14	0	15	11	74	0	0	140	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	14	0	15	11	74	0	0	136	19
Critical Gap Module:												
Critical Gp:	xxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
FollowUpTim:	xxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	933	230	135	145	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	750	671	916	1494	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	750	666	916	1444	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	829	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.5	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.5			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Bikes
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #2 M. Main Street/Mitchell Street/Bridge Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:												
Rights:												
Lanes:												
Grade:												
Peds/Hour:												
Pedestrian Walk Speed:												
LaneWidth:												
Time Period:												

Kittelson & Associates, Inc. #19088
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 S. Main Street/Bridge Street/Parry Road

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B(10.6)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1!	0	1	0	0	0	1!	0	0	1!
Volume Module:												
Base Vol:	3	18	6	50	25	40	15	4	1	2	3	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	18	6	50	25	40	15	4	1	2	3	28
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	5	0	0	0	0	0	0	0	0	0	5
Initial Fut:	3	23	6	50	25	40	15	4	1	2	3	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	2	27	7	59	29	47	18	5	1	2	4	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	27	7	59	29	47	18	5	1	2	4	39
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	76	xxxx	xxxxx	35	xxxx	xxxxx	219	222	55	224	221	32
Potent Cap.:	1520	xxxx	xxxxx	1570	xxxx	xxxxx	744	679	1010	734	681	1045
Move Cap.:	1520	xxxx	xxxxx	1568	xxxx	xxxxx	695	668	1010	705	671	1045
Volume/Cap:	0.00	xxxx	xxxx	0.04	xxxx	xxxx	0.03	0.01	0.00	0.00	0.01	0.04
Level Of Service Module:												
2Way95th Q:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	673	xxxxx	xxxx	990	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx	xxxxx	8.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			10.5			8.9		
ApproachLOS:	*			*			B			A		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. #19088
Falls City TSP
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #3 S. Main Street/Bridge Street/Parry Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HrsVeh:	1%			3%			1%			1%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	2			0			0			2		
Pedestrian Walk Speed: 4.00 feet/sec.												
Length/Wth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 1.25 hour												

Section II
Appendix I
COMMUNITY SURVEY WORKSHOP #1
Feedback Summary, Survey Forms, Public Announcements and PAC Minutes

MEMORANDUM

Date: October 3, 2012 Project #: 12988

To: Amber Mathieson, Project Advisory Committee

From: Matt Hughart, AICP

Project: Falls City Transportation System Plan

Subject: Community Workshop #2 Meeting Summary

This memorandum summarizes the transportation feedback received at the September 28, 2012 Community Workshop #2.

Community Workshop Event Summary

A public display tent was put up at the September 28th high school varsity football game in Falls City. The display tent showcased the maps and graphics prepared as part of the Falls City Alternatives Analysis memorandum. Attendees at the football game were encouraged to visit the tent while staff members from ODOT, MWVCOG, Kittelson and Associates, and Falls City were on hand to answer questions and collect feedback.

Feedback Summary:

- Don't need sidewalks on the north side of Fairoaks Street. Sidewalks on the south side are sufficient.
- Sidewalks should only be added to the east side of 5th Street.
- Sidewalks should be added on Mitchell Street from Bridge Street to 7th Street.
- Add sidewalks along N. Main Street from their current terminus to the east city limits.
- Pave Pine Street from 1st Street to 3rd Street and pave 1st Street from N. Main Street to Pine Street.
- Roadways in general could use better drainage. On-going maintenance is needed on many of the gravel roadways.
- Paved shoulders are an acceptable alternative to separate sidewalks and bicycle lanes on some low volume roadways.

- Need better public utility records to indicate where utilities are located along public rights-of-way.
- Streets for vehicles should be a higher priority over pedestrian and bicycle.
- Wider shoulders would help non-motorized transportation.
- Need to connect the south falls park to Bridge Street.
- Safety for kids walking or biking to schools should be a priority of the TSP.
- The city should consider electric car charging stalls @ city hall.

City of Falls City Transportation System Plan (TSP)

April 25, 2012 -- Community Event Survey

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . . .

In the City of Falls City (check if you agree)

____ We need more sidewalks.
Please list where or put a sticker on the map—[illegible] Sticker. 5th St. [illegible] to school

____ We need more crosswalks.
Please list where or put a sticker on the map—[illegible] Sticker.

____ We need bike paths.
Please list where or put sticker on the map—[illegible] Sticker.

____ I think the City will grow and the first area(s) is/are—Yellow Sticker.

To make it easier to get around town the City should:

_X_ Fix potholes

_X_ Pave more streets

_X_ Add more street lights — need one on S. Main at [illegible]

____ Other(s)/list:
– Remove unnecessary stop signs
– [illegible]

I would walk more to more places in Falls City if:

If one was available, I would ride a bus from Falls City to other cities. _X_ Yes ____ No
– for [illegible]

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In the City of Falls City (check if you agree)

____ We need more sidewalks.
Please list where or put a sticker on the map—[illegible] Sticker.

____ We need more crosswalks.
Please list where or put a sticker on the map—[illegible] Sticker.

____ We need bike paths.
Please list where or put sticker on the map—[illegible] Sticker.

____ I think the City will grow and the first area(s) is/are—Yellow Sticker.

To make it easier to get around town the City should:

____ Fix potholes

_X_ Pave more streets – [illegible]

_X_ Add more street lights – important for safety issues

_X_ Other(s)/list:
– repair unpaved gravel streets

I would walk more to more places in Falls City if:

If one was available, I would ride a bus from Falls City to other cities. _X_ Yes ____ No
[illegible] Dallas [illegible] opportunities

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . . .

In the City of Falls City (check if you agree)

____ We need more sidewalks.
Please list where or put a sticker on the map—[redacted] Sticker.

____ We need more crosswalks.
Please list where or put a sticker on the map—[redacted] Sticker.

____ We need bike paths.
Please list where or put sticker on the map—[redacted] Sticker.

____ I think the City will grow and the first area(s) is/are—Yellow Sticker.

To make it easier to get around town the City should:

____ Fix potholes

____ Pave more streets

____ Add more street lights

____ Other(s)/list:

I would walk more to more places in Falls City if:

If one was available, I would ride a bus from Falls City to other cities. ____ Yes ____ No

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April 25, 2012 – Community Event Survey

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In the City of Falls City (check if you agree)

____ We need more sidewalks.
Please list where or put a sticker on the map—[redacted] Sticker.

____ We need more crosswalks.
Please list where or put a sticker on the map—[redacted] Sticker.

____ We need bike paths.
Please list where or put stickers on the map—[redacted] Sticker.

____ I think the City will grow and the first area(s) is/are—Yellow Sticker.

To make it easier to get around town the City should:

____ Fix potholes

____ Pave more streets

____ Add more street lights

____ Other(s)/list:

I would walk more to more places in Falls City if:

If one was available, I would ride a bus from Falls City to other cities. ____ Yes ____ No

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April 25, 2012 – Community Event Survey

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . . .

In the City of Falls City (check if you agree)

____ We need more **sidewalks**.
Please list where or put a sticker on the map→ Red Sticker.

____ We need more **crosswalks**. [illegible]
Please list where or put a sticker on the map→ Blue Sticker.

____ We need **bike paths**.
Please list where or put sticker on the map→ Black Sticker.

[illegible] St. [illegible] 1960's [illegible] [illegible] [illegible] (Bridge)

____ I think the City will grow and the first area(s) is/are—**Yellow** Sticker.

To make it easier to get around town the City should:

XX Fix potholes

XX Pave more streets

XX Add more street lights

____ Other(s)/list:

[illegible] away / deer jump / [illegible] away / Shortage of houses

[illegible]

I would walk more to more places in Falls City if:

walking [illegible] [illegible]

If one was available, I would ride a bus from Falls City to other cities. ✓ Yes ____ No

ride to Dallas Monmouth Independence [illegible]

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In the City of Falls City (check if you agree)

____ We need more **sidewalks**.
Please list where or put a sticker on the map→ Red Sticker.

____ We need more **crosswalks**.
Please list where or put a sticker on the map→ Blue Sticker.

____ We need **bike paths**.
Please list where or put sticker on the map→ Black Sticker.

____ I think the City will grow and the first area(s) is/are—**Yellow** Sticker.

To make it easier to get around town the City should:

____ Fix potholes

____ Pave more streets

____ Add more street lights

X Other(s)/list:

Improve the existing streets, need better storm drainage

I would walk more to more places in Falls City if:

If one was available, I would ride a bus from Falls City to other cities. X Yes ____ No

Regional bus connection, but no inner city service

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In the City of Falls City (check if you agree)

____ We need more **sidewalks**.
Please list where or put a sticker on the map— Sticker. [illegible]

____ We need more **crosswalks**.
Please list where or put a sticker on the map— Sticker.

____ We need **bike paths**.
Please list where or put sticker on the map— Sticker.

____ I think **the City** will **grow** and the first area(s) is/are—**Yellow** Sticker

To make it easier to get around town the City should:

____ **Fix potholes**

_X_ **Pave more streets**

_△_ **Add more street lights** – Bridge & S. Main

____ **Other(s)/list:**

I would **walk more to more places** in Falls City if:

If one was available, I would ride a bus from Falls City to other cities. ____ Yes ____ No

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April 25, 2012 – Community Event Survey

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In the City of Falls City (check if you agree)

____ We need more **sidewalks**.
Please list where or put a sticker on the map— Sticker. [illegible]

____ We need more **crosswalks**.
Please list where or put a sticker on the map— Sticker. [illegible]

____ We need **bike paths**.
Please list where or put sticker on the map— Sticker. [illegible]

____ I think **the City** will **grow** and the first area(s) is/are—**Yellow** Sticker. [illegible]

To make it easier to get around town the City should:

_✓_ **Fix potholes**

____ **Pave more streets** [illegible]

____ **Add more street lights** [illegible]

____ **Other(s)/list:**

I would **walk more to more places** in Falls City if: [illegible] all the time

If one was available, I would ride a bus from Falls City to other cities. ____ Yes ____ No

[illegible]

April 25, 2012 :: Community Event Survey

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . .

In the City of Falls City (check if you agree)

____ We need more **sidewalks.**
Please list where or put a sticker on the map—Red Sticker.

____ We need more **crosswalks.**
Please list where or put a sticker on the map—Blue Sticker.

____ We need **bike paths.**
Please list where or put sticker on the map—Green Sticker.

____ I think the City will grow and the first area(s) is/are—Yellow Sticker.

To make it easier to get around town the City should:

____ **Fix potholes**

____ **Pave more streets**

____ **Add more street lights**

____ **Other(s)/list:**

I would **walk more to more places** in Falls City if:

If one was available, I would **ride a bus** from Falls City to other cities: ____Yes ____ No

City of Falls City Transportation System Plan (TSP)

April 25, 2012 :: Community Event Survey

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . .

In the City of Falls City (check if you agree)

____ We need more **sidewalks.**
Please list where or put a sticker on the map—Red Sticker.

____ We need more **crosswalks.**
Please list where or put a sticker on the map—Blue Sticker.

X We need **bike paths.**
Please list where or put sticker on the map—Green Sticker.

____ I think the City will grow and the first area(s) is/are—Yellow Sticker.

To make it easier to get around town the City should:

X **Fix potholes**

____ **Pave more streets**

____ **Add more street lights**

____ **Other(s)/list:**

I would **walk more to more places** in Falls City if:

If one was available, I would **ride a bus** from Falls City to other cities: ____Yes ____ No

City of Falls City Transportation System Plan (TSP)

April 15, 2012 - Community Event Survey

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . .

In the City of Falls City (check if you agree)

____ We need more sidewalks.
Please list where or put a sticker on the map— [redacted] sticker.

____ We need more crosswalks.
Please list where or put a sticker on the map— [redacted] Stickers

____ We need bike paths.
Please list where or put sticker on the map— [redacted] Sticker

____ I think the City will grow and the first area(s) is/are— Yellow Sticker

To make it easier to get around town the City should:

__X__ Fix potholes

__X__ Pave more streets

____ Add more street lights

____ Other(s)/list:

- ADD A DRAINAGE DITCH @ CANAL STREET

I would walk more to more places in Falls City if:

- EXTEND SW 2ND HIGH SCHOOL TO
- MAIN STREET CONNECTING TO BRIDGE)

If one was available, I would ride a bus from Falls City to other cities. ____ Yes ____ No

City of Falls City Transportation System Plan (TSP)

April 15, 2012 – Community Event Survey

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . .

In the City of Falls City (check if you agree)

____ We need more sidewalks.
Please list where or put a sticker on the map— [redacted] Sticker.

____ We need more crosswalks.
Please list where or put a sticker on the map— [redacted] Sticker.

____ We need bike paths.
Please list where or put sticker on the map— [redacted] Sticker

____ I think the City will grow and the first area(s) is/are— Yellow Sticker

To make it easier to get around town the City should:

____ Fix potholes

__X__ Pave more streets

____ Add more street lights

____ Other(s)/list:

I would walk more to more places in Falls City if:

If one was available, I would ride a bus from Falls City to other cities ____ Yes ____ No

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April 25, 2012 – Community Event Survey

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WE NEED RESIDENTS AND CITIZENS TO SHARE THEIR IDEAS AND CONCERNS . . . .

In the City of Falls City (check if you agree)

____ We need more **sidewalks.**
Please list where or put a sticker on the map—[redacted] Sticker

____ We need more **crosswalks.**
Please list where or put a sticker on the map—[redacted] Sticker

____ We need **bike paths.**
Please list where or put stickes on the map—[redacted] Sticker.

____ I think the City will grow and the first area(s) is/are—[redacted] Sticker

To make it easier to get around town the City should:

__X__ **Fix potholes**

__X__ **Pave more streets**

____ **Add more street lights**

____ **Other(s)/list:**

I would **walk more** to more places in Falls City if:

They were more St. & better lighting

If one was available, I would ride a bus from Falls City to other cities __X__ Yes ____ No

City of Falls City Transportation System Plan (TSP)

April 25, 2012 – Community Event Survey

Help Wanted: In 2011, the City of Falls City was awarded a grant from the Oregon Department of Transportation (ODOT) to develop and adopt a **Falls City Transportation System Plan (TSP)**. The document is the City's first transportation plan and it is prepared with the help of a committee of local citizens, City Councilors, City staff, ODOT and Polk County representatives, consultants, and other interested parties. The project identifies existing and future transportation needs and deficiencies and evaluates alternatives to address the needs.

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__X__ **Pave more streets**

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____ **Other(s)/list:**

I would **walk more** to more places in Falls City if:

If one was available, I would ride a bus from Falls City to other cities: __X__ Yes ____ No

City of Falls City
Planning Department
299 Mill Street
Falls City, OR 97344
Voice (503) 540 - 1616
Fax (503) 588 - 6094
mmattson@mwvcog.org

FALLS CITY PRESENTS DRAFT TRANSPORTATION SYSTEM PLAN (TSP)

BACKGROUND. In 2012, the City of Falls City conducted two public outreach workshops and met with City volunteers during several meetings over the last year in an effort to prepare the City's first **Transportation System Plan (TSP)**. With funding provided by the State's Transportation Growth Management (TGM) program and technical assistance provided by the Mid-Willamette Valley Council of Governments and Kittelson and Associates, Inc., a draft document is ready for public review during a presentation scheduled **on MARCH 14, 2013.**

The purpose of the **TSP** is to better assure safe and convenient trips for all modes of transportation; such as traveling in a vehicle, walking, or riding a bicycle.

A PLAN FOR NOW AND INTO THE FUTURE—THE YEAR 2036. The draft **TSP** lists existing and future transportation needs/deficiencies and evaluates alternatives to address those needs. The project also results in a plan to address City transportation elements through the year 2036, including options for a finance program to fund transportation improvement projects identified in the plan.

*****TO ASSURE THE ADOTPION OF A GOOD PLAN, THE CITY NEEDS TO HEAR FROM THE PEOPLE WHO LIVE IN FALLS CITY. *****

TELL THE CITY. Thanks to everyone who participated during the Spring and Fall Community Events and those folks who contacted the City suggesting elements the plan needs to better serve local residents. The City again needs to hear from residents and other interested parties in response to the draft **TRANSPORTATION SYSTEM PLAN**. An **OPEN HOUSE** will be conducted on Thursday, **MARCH 14, 2013,** at the Community Center from **6:00 to 7:00 P.M. YOU ARE INVITED TO ATTEND AND STRONGLY ENCOURAGED TO PARTICIPATE!** A **WORK SESSION** (also open to the public) will be presented at the March 14th City Council meeting. The **Council meeting begins at 7:30 p.m.**

DOCUMENT DETAILS. The City will "post" a draft **TSP** a minimum of one (1) week prior to the Work Session. Please check the City's web site: www.fallscity.org and "click" the button **Transportation System Plan**. The City anticipates conducting a public hearing to consider adoption of the TSP at the **APRIL 2013** City Council meeting. A final draft will be available a minimum of one week prior to the hearing that will also be posted on the above listed website.

CITY OF FALLS CITY. 299 MILL STREET. FALLS CITY, OREGON 97344

TSP PAC#1 MEETING MINUTES
April 17, 2012

People in attendance: Amy Houghtaling (Mayor, City of Falls City), Marjorie Mattson (MWVCOG), Naomi Zwerdling (ODOT), Matt Hughart (Kittleson), John Gilbert (FCSD), Gary Fish (DLCD), James Walton (City of Falls City, Public Works), Guy Mack (Public works committee), Mike McConnell (public works committee) Ed Miller (Luckiamute Watershed council)

The meeting started about 6:05p.m. Marjorie Mattson from MWVCOG ran the meeting. Introductions were made around the table. Marjorie spoke about how TSP came about and who is on the TSP PAC. Marjorie also mentioned that there are review members that do not attend the meetings but have the materials and may comment on them as needed. Marjorie mentioned the community event coming up on April 25th at the Falls City Community Center. She also mentioned there would be a community event sometime in the fall. Final project is slated to be complete in Spring 2013. Marjorie went onto say that the project is written to include improvements, changes and projections to the year 2036.

The group spoke about the confusion of the e-mails and file sizes. Marjorie apologized for the inconvenience. Matt from Kittleson suggested that future TSP PAC documents be available on Kittleson's web site that will be especially designed for Falls City. Naomi from ODOT stated that that method worked well in another city. All parties involved agreed to change the process.

Marjorie went through the packets that were emailed and/or printed and then opened the floor for questions or comments.

Gary Fish noted that there is a road outside the city limits and the UGB and that it cannot be included in the TSP.

Mike McConnell asked about Harrington Rd. Is it ours? (Meaning the city of Falls City)

The TSP PAC decided that the street inventory has many inaccuracies and would need a lot of work to bring up to date.

Mike McConnell asked if we should be taking into consideration flying cars since we are looking that far into the future. The group chuckled.

The group went over the Falls City street Inventory 2009 again. James said that Ellis to 4th St. needed to be changed and the parking lots and sidewalks around the community center are not documented in it. Guy Mack felt the condition of Parry Rd should be changed to fair. Other people began to comment on other road conditions. Marjorie will find the rubric used to score the roads and we will reevaluate them. There was also a question about Vine St. Is it a street? Where is it? James Walton and John Gilbert commented that sidewalks on N. Main St. and Prospect need to be added.

Mike McConnell asked when building codes would be updated. Matt said it would be in between final plan and adoption.

Matt began to tell us what his next steps are: His job is to assess current conditions and plan for future growth and future conditions. He will also look into potential funding opportunities.

Marjorie stated that any more feedback or changes should be to her early next week.

Mike McConnell stated that he will invite Rich from BRMBA to join us at the next meeting.
The meeting ended at 7:40p.m.

CITY OF FALLS CITY. 299 MILL STREET. FALLS CITY, OREGON 97344

TSP PAC#2 MEETING MINUTES
May 21, 2012

People in attendance: Amy Houghtaling (Mayor, City of Falls City), Marjorie Mattson (MWVCOG), Naomi Zwerdling (ODOT), Matt Hugart (Kittleson), Guy Mack (Public works committee), Mike McConnell (public works committee), Michael Morales (community member)

The meeting started about 6:05p.m. Matt began talking about alternatives such as paving streets, sidewalks, street lights, etc. and prioritizing needs and different funding scenarios.

Matt began talking about the Memo and explained that it is a draft and he would like feedback on it throughout the entire process.

Population- No comments

Roadway network- Michael asked if maps were going to be part of the plan? Matt said that once we determine what we want to put where, there will be maps. Mike Mc Connell pointed out that Ellis St. is a 40 foot street and it is a collector street and that all streets connected to it are 60 feet. Marjorie happy to know that information because of codes. Matt commented on Ellis St. and mentioned safety versus funding. In other words figure out if the issue is worth the money or make a code for it, such as "No Parking". Mike Mc Connell mentioned round curbs like they have in Molalla.

Matt went on to talk about design standards. Marjorie stated that we might want to make sidewalks 8 feet on arterial roads so as to enhance our downtown area. Guy Mack mentioned the "bump outs" on N. Main St and how terrible they are and that they take up a lot of parking.

Matt went over figure 2 and figure 3. Michael Morales asked if the different types of vehicles that travel our roads, such as log trucks would be in the report.

Crash Data- Matt said that the crash data is based on bigger accidents. He pointed out that although there is not a lot of data it also points out that there are not a lot of red flags in certain intersections.

Future Traffic Operations- Matt said that there are different ways to look at growth. It can be looked at from a land availability or an economic standpoint meaning there need to places in Falls City for people to live and work before there will be growth. Matt said that the functionality of the sewer system could play a big part in growth. Guy Mack mentioned that the southwest part of town can grow because they can be on their own septic system. Matt said Falls City is special in that people choose to live here. They are not living here to be close to work. Matt said that growth would most likely take place on the north side but that we could put a small percentage of growth on the south side. Matt stated that it was a conservative growth estimate. The group agreed the assumed growth was appropriate. Guy Mack stated that he would like to see the south side septic tank growth investigated.

Existing Sidewalks- There are not many sidewalks in Falls City. Amy mentioned the "high school trail" from Prospect Ave. down Boundary. Matt said that we could put in the plan to make it an actual trail or multi use path.

Bicycle System- There is not a bicycle system and not much need for one. It would be good to have on some of the major streets either a bike path, a bike lane or special markings on the street that warn drivers they are sharing the road with bicycles.

Public Transportation- We do not have it now. CARTS does not currently serve Falls City. Matt will fix it in the plan.

Rail service- Matt said that according to Oregon state law, we must include all modes of transportation in our plan. We do not have rail service.

Air service- We do not have air service.

Pipe line- We have no pipeline transportation.

Funding- Matt stated that finding is the most difficult part. In looking at funding from the past five or six years you can see what has been funded. $80,000 of capital improvements have been made in the last five years to our streets. If you look at this over the next 20 years following the trend it would total $334,000 not including cost of inflation. We are going to take this plan a step further and look into other funding sources. There is a sub consultant involved that is going to look at other funding sources either through charges on new development, a transportation utility fee, etc.

Michael mentioned charging logging trucks a toll. Guy Mack stated Boise Cascade has new owners so we could talk to them about helping with our transportation costs.

Matt mentioned that this is a draft memo. PAC members are encouraged to e-mail or give any comments or corrections to Amy at City Hall. Amy will pass them onto Matt.

July 16th is the next TSP PAC meeting.

Mike McConnell brought up the use of golf carts within the city limits. He was wondering if something like that should be put in the plan. Matt agreed that golf carts are a reasonable thing to consider for the plan.

Marjorie brought up that other cities that realize they are not going to get very street paved. She was wondering if Falls City wanted to have some standards that new developments would follow so that parts of roads were not paved but that they have to follow certain gravel amounts and other standards. Mike was concerned that our charter would not allow some of these things based on the way it is written now.

CITY OF FALLS CITY. 299 MILL STREET. FALLS CITY, OREGON 97344

TSP PAC #3 MEETING MINUTES
Monday, July 16, 2012

Members in attendance: Marjorie Mattson (MWVCOG), Naomi Zwerdling (ODOT), Matt Hughart (Kittleson), Angela Lazarean (DLCD), Ed Miller (Luckiamute Watershed Council), Guy Mack (Public Works Committee), Mike McConnell (Public Works Committee), Michael Morales (Public Works Committee), James Walton (Public Works Supervisor), Domenica Protheroe (City Clerk)

The meeting started 6:12 p.m. Matt Hughart attended via conference call.

Matt summarized Tech Memo #2. Matt requested comments from the group comment on where they agreed or disagreed with memo text. The next step would be to finalize this information, determine projects, priorities and define costs. This document would become the Transportation System Plan (TSP).

PAC members reviewed Roadway Network: Matt used comments from community outreach for bullet points in this section. Matt stated that congestion/capacity not really an issue –vehicle trip volume relatively minimal. He did not find need for traffic control such as traffic lights.

Roadway alternatives for Bridge, North Main, Mitchell, and 4th. Area not good for pedestrians.
Matt described Figure 1, 2 and 3. Considerations requested for parking and maneuvering of log/large trucks potentially would shift some of the designs. Group considered likely affected property under the City's jurisdiction, maintaining sight distance, concerns impact NE quadrant including existing ROW, include consideration of bridge abutment.

PAC members considered roadway alternatives. Matt noted that Figure 1, 2 and 3 had been discussed with the former Administrator.
Figure 1 – narrowed travel, better for autos but not for trucks, maintains traffic volumes
Figure 2 – created a four way stop (all-stop). Concerned that site distance may be an issue. Per Matt not likely best option.
Figure 3 – traffic circle/round-about. Matt mentioned that round-about can be difficult initially to accept but can be accepted quickly with use. Several in group wondered if log trucks could make the turn radius. Matt described inner circle as raised skirt, mountable island, truck apron could be driven over, but vehicles could not drive through inner circle of round-about. Round-about often not used in areas with heavier truck traffic and this intersection has. Group concerned with radius. Round-about does keep traffic flowing. Group considered whether this option would limit parking options. PAC objected to crosswalk for 4th too far west and 4th Street limited to right-in/right-out. PAC positive comments: Option does provide gateway feature, several member stated positive feedback.

PAC members reviewed Cost Estimates: Shortage of downtown parking noted. City had looked at 4th as area to add parking. Michael Morales asked if design met the 20-year horizon of the plan. Matt responded affirmatively.

Matt provided an overview of circulation maps: PAC members agreed to reclassify 5th and Fairoaks from local to collector. Question was raised about extending 5th Street north but group indicated area too steep. Discussed how abutting property owners would be affected by new street standards; City could require citizens to install upgrades when houses are built or upgraded. Comment that 7th to 6th swampy area, may be too steep, and may need bridge. Bryant Street is also steep. Several members believed Harrington has been vacated.
Mike McConnell mentioned that the City lost history on Streets when the Committee was combined with Public Works.

PAC considered Street Design Standards: Marjorie Mattson stated she would talk to former planner about street discussions at the Public Hearing for the 2010 Street Improvement Plan adoption.
Discussed streets within the South West area. Discussed reducing rights-of-way for collector from 60 feet to 50 feet. It was noted that Ellis to Fairoaks is 40' ROW Fairoaks has 50' ROW. Fifth is short of 50'.
PAC discussed either utilities under streets or PUEs outside the rights-of-way or remain as "overhead". PAC member noted that phone is in ROW and power/cable is overhead.
PAC member stated that city considered extending Boundary versus Ellis but area is too steep.
PAC discussed addition of a local road classification. This classification would allow improvement without purchase of ROW. Members discussed an option to create less costly standard for local streets that would allow curb shoulders that would also provide walking area or would not requiring paving to curb and gutter. Mike McConnell suggested sidewalk on one side only.

PAC members considered Figure 6 and Table 3: Proposed Pedestrian Network Improvements and Cost Estimates. The majority of community comments gathered at workshop concerned pedestrian facilities. Many citizens do not drive. Some citizens commented that they do not feel safe.
Public voiced concern that plan needs to provide facilities for walkers and consider children's access routes to school. Angela Lazarean (DLCD) stated she would check on Safe Routes to School program.
Group discussed recreation trails to Falls, Upper Park and along the little Luckiamute River. PAC member suggested adding a route to the Falls for community. The Falls route has heavy use. This path would be best if on the north side of Parry Road. James Walton noted that Mitchell Street has a high volume of log trucks.
PAC members noted that pedestrian project costs presented in Table 3 were expensive. Project costs range from $19,000 to $351,000 totaling $1,844,000. Improvements such as sidewalks and curbs cost money and funding may not be available in future. Naomi Zwerdling (ODOT) recommended the list prioritize by short, medium and long range.
Angela Lazarean (DLCD) advised the group to give the most focus on where the plan can offer the most connectivity and safety, give priority to residents and pedestrians.

PAC members discussed Black Rock mountain bike trail system and access.
Mike McConnell would like feedback from BRMBA.
Example is use of Mitchell to Upper Park to Socialist Valley Road (not used much for log trucks), trail along Luckiamute River, and Black Rock area with connections to the Falls.
Have been some designs in past and PAC members will try to locate
Concerns over parking needed for riders and possibility of providing shuttles to different areas
City discussed using its property in area of Parry Road as parking or use for events

Weyerhaeuser may be approachable regarding trail that involves abandoned railroad ROW.

James Walton commented that the City does not have money for street improvements; providing lower budget projects might allow grant funds for realistically completing at least some level of improvement.

Possible topic for the plan – electric cars and installing a charging station

Matt Hughart encouraged feedback from PAC members.

Marjorie Mattson stated she will ask Matt Hughart to add additional text to the plan for paths and trails.

Meeting was adjourned at 8:30 PM.

City of Falls City

TRANSPORTATION SYSTEM PLAN (TSP) PAC #5 MEETING MINUTES

Monday November 26, 2013 6:00 pm

Meeting Location: 320 N Main Street, Falls City

Members in attendance: Marjorie Mattson (MWVCOG), Naomi Zwerdling (ODOT), Matt Hughart (Kittleson), Henry Hughes (Citizen), John Gilbert (Falls City School District), Ed Miller (Luckiamute Watershed Council), Guy Mack (Public Works Committee), Mike McConnell (Public Works Committee), and James Walton (Public Works Supervisor).

Matt Hughart reviewed Tech Memo #3 and #4.

Mike McConnell stated that the highest priority for sidewalks was to provide a circular route for the Elementary School and High School: Main Street to the stairs, stairs to Elementary School, Elementary School to Ellis Street, and Ellis to Main Street.

James Walton asked if pricing was in 2012 dollars. This was confirmed by Matt Hughart.

It was noted that the Falls City Charter prohibits System Development Charges (SDC's).

Marjorie Mattson announced that a status report for the TSP will be presented on December 13, 2012 at the regular City Council Meeting. The meeting begins at 7:30 PM.

Matt Hughart asked that each member review the materials and provide revisions and modification as soon as possible.

City of Falls City
Transportation System Plan (TSP) PAC #6 Meeting Minutes
Monday, January 28, 2013

In attendance: Constance Beaumont (ODOT), Todd Chase (FCS Group), Amy Houghtaling (Mayor) Matt Hughart (Kittelson), Angela Lazarean (DLCD), Guy Mack (Public Works Committee), Amber Mathiesen (City Administrator), Marjorie Mattson (MWVCOG),Ed Miller (Lukiamute Watershed Council), James Walton (City PW Supervisor), and Naomi Zwerdling (ODOT).

Todd Chase with FCS Group (a subcontractor affiliated with Kittelson and Associates) presented an update to the analysis on a potential Transportation Utility Fee (TUF) at which time the City might consider it an option for funding transportation system improvements. The TUF would be an alternative funding source over using General Fund monies to complete street maintenance and improvements. Currently $5,000 is budgeted per year but the study indicates the need to increase that amount to $6,000 during the next budget cycle. According to the City Administrator, the City is not able to meet the minimum established projects per year and the City may lose its ability to utilize the general fund for supporting transportation improvements in the future. Another option for use of TUF funds is serving as a monetary match when applying for grants from State or Federal sources when applying for TSP recommended projects.

The goal is to keep the monthly fee (that is not classified as a tax) at a very low rate for City residents. Calculations projecting for a five-year period factored in an increase in residents of 10 per year. Some City's have provided options to "waive" the fee for certain residents (such as Senior Citizens on a fixed income) but according to the City Manager, the City's system is not currently structured to allow exceptions. A TUF can be initiated but established to end ("sunset") within a specified number of years. PAC members commented on the importance of identifying projects with community support such as sidewalks to school. Another important element is to complete projects indicated and keeping the public aware of their completion.

City of Falls City

TRANSPORTATION SYSTEM PLAN (TSP) OPEN HOUSE

Thursday March 14, 2013 6:00 pm

Meeting Location: 320 N Main Street, Falls City

Council Present: Mayor Amy Houghtaling, Councilor Barbara Spencer, Councilor Terry Ungricht
Staff Present: Amber Mathiesen (City Administrator), James Walton (Public Works Superintendent), Domenica Protheroe (City Clerk)
Consultants Present: Marjorie Mattson (MWVCOG), Naomi Zwerdling (ODOT), Matt Hughart (Kittleson), Doug Gabbard (FCS Group)
PAC Members Present: Michael Morales,
Public Present: Brian Walton, two additional residents

The Open House began at 6:00 PM.

Matt Hughard provided five large display posters for the open house: Figure 4-1 Future Transportation Improvements, Table 4-1 Transportation Improvement Projects, Figure 4-2 N State Street/Bridge Street/Mitchell Improvements Project, Figure 4-3 Street Plan, and Figure 4-4 Street Design Configurations.

Two color copies of the Falls City Draft Transportation System Plan dated March 7, 2013 were on display.

Consultants took comments and provided information.

The Open House ended at 7:00 PM.

Section II
Appendix J
February 2013
TRANSPORTATION UTILITY FORMATION STUDY REPORT

Falls City
Oregon

Revised Report

TRANSPORTATION UTILITY FORMATION

February 2013

CONSULTING SERVICES PROVIDED BY

FCS GROUP

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FALLS CITY
TRANSPORTATION UTILITY FORMATION STUDY REPORT

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	Strategic Capital Scenario Forecast	Appendix B

SECTION 1: INTRODUCTION

A. EXECUTIVE SUMMARY

As part of the Falls City Transportation System Plan update, the City of Falls City is exploring the formation of a Transportation Utility Fee (TUF) in lieu of forming a Transportation Systems Development Charge. FCS GROUP worked closely with City staff, Kittelson Associates (lead traffic consultant) and a technical subcommittee throughout the study.

B. SCOPE OF SERVICES

The City's general objectives for the study are (1) to ensure reliable, ongoing funding and proper maintenance for the City's transportation infrastructure, and (2) to recover costs in a way that is equitable among users (rate equity). The contractual scope of services, developed to meet the City's goals for the study, is summarized below.

- Develop Funding Options and Policy Framework. In this step, FCS GROUP worked with City staff to identify, analyze, and agree on potential funding options and key policy issues for considering a new local Transportation Utility Fee (TUF).
- Prepare Baseline Street Utility Costs. In this step, FCS GROUP worked with City staff to identify maintenance costs and to refine the transportation project list, which represented the non-maintenance capital costs that require funding.
- Prepare Financial Analysis. In this step, FCS GROUP combined proposed capital and operating costs to project revenue requirements for six years.
- Provide Implementation Assistance. In this step, FCS GROUP develops a draft utility implementing ordinance for use by staff.
- Support Public Involvement Program. In this step, FCS GROUP participates in technical workshops and City Council public hearings to answer questions and provide recommendations.

C. PURPOSE AND NEED FOR A TUF

Transportation funding in Falls City is now primarily funded by State Highway Fund (gas tax) revenues. As the City's transportation infrastructure was expanded to serve the needs of new development over the years, the cost of maintaining the City's transportation system increased accordingly. However, the State gas tax rate has not kept up with the cost of maintaining local streets. Moreover, the Oregon Department of Transportation estimates that vehicle efficiency increased from 18.4 miles per gallon in 1990 to 19.6 miles per gallon. The result is that, for each mile driven on the City's roadways, State gas taxes have actually declined – while service increased and maintenance costs grew.

Falls City currently relies upon its General Fund and beginning fund balances for providing additional local funding resources to the transportation budget. As indicated in **Exhibit 1**, future transportation funding requirements are likely to outpace available funding resources, leading to a significant funding shortfall that is projected to grow over time after existing fund balances become depleted.

Unless an additional funding source is identified, Falls City is likely to fall behind in basic maintenance needs, which can result in higher street reconstruction costs overtime. After consideration of other funding options, a transportation utility fee was identified as a potentially logical local source of transportation funding, which could in-turn leverage state and federal grants for strategic projects.

Exhibit 1: Falls City Transportation Budget Forecast

Falls City Transportation Funding Model								
	Annual		Fiscal Year (forecast)					
Description	3-Yr Trend	Projected Change	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Requirements								
Personnel services	16.83%	10.00%	$ 33,932	37,325	41,058	45,163	49,680	54,648
Materials and services	7.58%	6.00%	29,570	30,753	31,983	33,262	34,593	35,976
Capital outlay	-47.06%	0.00%	500	500	500	500	500	500
Transfers (excl. Gen. Fund)	0.00%	0.00%	500	500	500	500	500	500
Ending fund balance								
Total requirements			$ 64,502	$ 69,078	$ 74,041	$ 79,426	$ 85,273	$ 91,624
Resources								
Beginning fund balance			$ 5,640	-	-	-	-	-
State Highway Fund	9.62%	4.00%	52,500	54,600	56,784	59,055	61,418	63,874
Other revenues	0.00%	0.00%	-	-	-	-	-	-
Subtotal resources			$ 58,140	$ 54,600	$ 56,784	$ 59,055	$ 61,418	$ 63,874
Proj. Shortfall before General Fund or TUF Transfers			**$ (6,362)**	**$ (14,478)**	**$ (17,257)**	**$ (20,370)**	**$ (23,855)**	**$ (27,750)**

This report is organized in accordance with the approach taken during the study. Section II discusses the key policy and funding issues that were reviewed. In Section III, the analysis of revenue requirements is summarized. In Section IV, the customer base is identified, and finally in Section V the transportation utility fee scenarios are formulated and rates are presented.

SECTION 2: POLICY ANALYSIS

The following is a summary of the issues that will be reviewed by the Falls City Transportation System Plan Planning Advisory Committee (PAC) and the resulting findings.

1 LOCAL FUNDING OPTIONS FOR TRANSPORTATION

Transportation program funding options range from local taxes, assessments, and charges to state and federal appropriations, grants, and loans. Each of these resources can be constrained by a variety of factors, including the burden that they place on residents and businesses, the availability of local funds to be dedicated or diverted from other competing City programs, and the availability and competitiveness of state and federal funds.

Falls City has existing City Charter limitations on charging a local impact fees through Systems Development Charges without a public vote. Due to limits in the availability and eligibility of many transportation funding options, FCS GROUP recommend that the City consider establishing a transportation utility as the "backbone" of its ongoing local transportation funding approach. A transportation utility fee (TUF) provides a stable source of dedicated revenue useable for transportation system operations, maintenance, and capital construction. In addition, the City may pursue grant and other special program funding in order to mitigate the costs of transportation capital construction.

2 RATE STRUCTURE OPTIONS

Four potential rate structures often serve as the basis for a TUF, including: peak-hour trips, average daily trips, parking spaces, and a flat rate per parcel. Of these, peak-hour and average daily trips provide the strongest link between charge basis and transportation costs.

Peak-hour trips are often a determining factor in the sizing of the physical transportation system. However, the need for system maintenance is generally linked to the total number of trips, regardless of when they occur. Therefore, FCS GROUP **recommends that the City base its transportation rate on the number of average daily trips generated by its customers** (residences and employers).

[illegible]

In order to provide the strongest nexus between the fee basis and the activities funded, and taking into account what other Oregon jurisdictions do, FCS GROUP recommends that **the costs of pavement treatments, roadway operations, and capital construction – to the extent that it benefits existing users and not growth – be included in the transportation utility rate**, as practical.

Furthermore, future adjustments to the fee must be tied to changes in the revenue requirement. Rate adjustments cannot be made arbitrarily or in a way that generates a profit. Rather, adjustments in rates should be initiated by either a change in the cost of service provided or a change in the level of service provided by the utility.

[illegible]

Generally, if the City wishes to pursue a policy of granting rate credits or exemptions for reasons that are not based on service demands, the utility and its ratepayers should not bear the cost. To preserve the cost-of-service approach to rate design and avoid causing utility customers to subsidize other users, the general fund could possibly be used to fund the costs of senior citizen, low-income, and perhaps public or tax-exempt customer credits or exemptions.

[illegible]

Additionally, there are a number of fiscal policies that a transportation utility may adopt. FCS GROUP's review of the four that are most relevant is summarized below.

A. Inflationary Rate Adjustments

FCS GROUP recommends that **the City adopt a TUF policy of implementing an initial TUF that remains fixed for the initial five years**, then is subject to annual increases linked to an appropriate index or combined index, although inflationary increases should not exceed 3 percent per year. This approach, combined with comprehensive rate reviews no less frequently than every five years, should ensure utility fiscal health – assuming a constant level of service.

B. Operating Reserve

Given the possibility of significant fluctuations in maintenance expenses, FCS GROUP recommends that an operating reserve be established to accommodate variations in expenditures and revenues. It is **FCS GROUP's recommendation that the utility adopt and sustain a minimum operating reserve of no less than 45 days (about 12.3 percent) of annual cash operating expenses.**

C. Capital Funding for System Replacement

It is preferable that Fall City's attempt to fund annual depreciation expense to the maximum extent practical, and fund transportation planning efforts including an evaluation of system replacement needs to determine if funding greater than annual depreciation is necessary. In some instances, additional capital expenses are not reflected in TUF revenue requirements to help keep TUF charges as low as possible. However, in cases where a City opts to fund specific capital projects using TUF revenues, the additional capital costs can be included in the TUF fee calculation.

D. Separate Accounts

FCS GROUP recommends that the City establish an account to track the receipt and expenditure of transportation utility rate proceeds separately from other City funds. Furthermore, another

recommendation is to create separate accounts to track the utility's operating and capital revenues and expenditures.

SECTION 3: REVENUE REQUIREMENT

Proceeding with the transportation utility study, the next step is identifying specific activities and costs that the Falls City TUF might fund.

At the discretion of the City Council, the City can allocate General Fund revenues (the largest portion of which is property tax) to pay for any portion of its transportation needs. In fact, the City's recent practice was to supplement State Highway Fund distributions with General Fund monies. In fiscal year 2010-11, the General Fund contributed an estimated $7,800 to the Street Fund. However, because General Fund monies are the most discretionary, they "compete" with the broadest range of community priorities (such as disbursements for police and emergency services) and are therefore scarce.

The City's current adopted transportation budget for FY2012/13 is $65,940 (**Exhibit 2**); representing the cost of transportation system needs, which are in-part limited by available revenues at the current level of expenditure for transportation activities.

Exhibit 2. Falls City Transportation Budget Trends

Category	Actual 2009-10	Actual 2010-11	Budget 2011-12	Budget 2012-13	CAGR
Resources					
Beginning fund balance	$15,130	$ 7,790	$15,080	$ 5,640	
State Highway Fund	39,857	45,741	45,600	52,500	9.62%
City General Fund	-	6,800	7,200	7,800	
Other revenues	1,700	-	-	-	
Total resources	$56,687	$60,331	$67,880	$65,940	
Requirements					
Personnel services	$21,280	$21,487	$36,190	$33,932	16.83%
Materials and services	23,748	22,775	25,050	29,570	7.58%
Capital outlay	3,369	489	500	500	-47.06%
Transfers	500	500	500	500	0.00%
Ending fund balance	7,790	15,080	5,640	1,438	
Total requirements	$56,687	$60,331	$67,880	$65,940	
Revenue gap (excluding contingency)	$ 9,040	$ (490)	$16,640	$12,002	9.91%

Source: Adopted budget for fiscal year 2012-13

Source: City budget documents; compiled by FCS GROUP. CAGR= compound average annual growth rate.

The revenue requirement can be split into residential and non-residential cost shares based on the amount of trip generation activity that serves each customer type. Based on that review, shown in **Exhibit 3**, 72% of the road system cost was identified as serving residential customers, and 28% serves non-residential customers. The residential share is calculated by dividing the estimated daily weekday residential trips (3,484) into the total number of trips (4,820). And the non-residential share is calculated by dividing the total non residential trips (1,336) into the total number of trips (4,820).

Exhibit 3: Falls City Local Trip Generation Assumptions, Existing Conditions

Census Data		ITE Category		Average Daily Weekday Trips per Unit	Total Daily Weekday Trips
Description	Count	Code#	Name		
Households	366	210	Single-family residence	9.52	3,484
Employees in construction	3	110	General light industrial	3.02	9
Employees in manufacturing	1	140	Manufacturing	2.13	2
Employees in retail trade	4	826	Specialty retail center	22.36	89
Employees in transportation and warehousing	1	151	Mini-warehouse	8.50	9
Employees in real estate and rental and leasing	4	710	General office building	3.32	13
Employees in education (schools & library)	62	520/530	Elementary/High school	17.73	1,099
Employees in accommodation and food service	3	932	High-turnover restaurant	29.10	87
Employees in public administration	8	710	General office building	3.32	27
Total	452				4,820

Source: U.S. Census Bureau (2010 data from decennial census and OnTheMap Application) and Trip Generation 9th ed. (low end of range)

SECTION 4: CUSTOMER BASE

As noted previously, average daily trips (ADTs) provide the most appropriate basis for recovering the cost of maintaining the City's transportation system. Estimates of average daily trip generation, as reported in the Institute of Transportation Engineers (ITE) Trip Generation manual, vary by the type of land use and the size of the development (as measured in terms that are relevant to the type of land use – for example, building square footage for an office building, students for a high school, or fueling positions for a gas station).

In order to estimate ADTs for Falls City, FCS GROUP reviewed detailed Census information from 2010. Census estimates reported 366 households (occupied dwelling units), and estimated employment to consist of 86 workers.

Residential trip generation of 3,503 ADTs in 2010 was estimated by applying ITE estimates of 9.57 average daily trips for each occupied dwelling unit.

Non-residential trip generation of 236 ADTs in 2010 was estimated by applying ITE trip generation estimates to the employment land use codes.

The TUF customer base assumptions were derived from the City's current water and sewer rate account database. According to the City, there are 368 active residential and commercial customers within the City today, and 40 inactive customers (based on water utility billing accounts). The active residential and commercial customer accounts are assumed to grow at 0.55% annual over the planning time frame to 378 accounts by FY 2017-18 (**Exhibit 4**).

Exhibit 4: Projected Falls City Transportation Funding and Customer Assumptions

		Fiscal Year (forecast)					
Description	Projected Change	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Active Customer Accounts (Inside City Limits)							
Residential	0.55%	353	355	357	359	361	363
Residential/Commercial	0.55%	2	2	2	2	2	2
Non Residential/Commercial	0.55%	13	13	13	13	13	13
Total Accounts		368	370	372	374	376	378

SECTION 5: TRANSPORTATION UTILITY FEE SCENARIOS

The transportation utility fee calculations are based on residential and non-residential estimated average daily trip generation, and revenue requirements. The rate is then expressed as a dollar amount per ADT. Under this approach, the rate calculation is relatively simple: annual program costs, or the rate revenue requirement, are divided by the total number of average daily trips in the customer base. The result is divided by twelve to convert it to a monthly rate. The annual revenue requirements and rate calculations for three TUF Scenarios and a capital funding option are depicted in **Exhibit 5.**

The average revenue requirement for TUF operations and maintenance over the next five fiscal years is projected to be $17,285 per year. Under the status quo scenario, it is assumed that 100% of the revenue requirement would need to be met by the City General Fund, and no TUF would be implemented.

All of the following TUF scenarios assume that there would be one similar charge for all customers (residential and non-residential) alike. Please refer to Appendix A for detailed assumptions.

Exhibit 5: Summary of TUF Funding Scenarios, Avg. Over Next 5 Fiscal Years

TUF Scenarios	Transportation Revenue Requirement (Avg. Annual)	General Fund Transfer Assumption (Avg. Annual)	TUF Revenue Assumption (Avg. Annual)	Monthly TUF Fee Per Customer (Avg. Annual)
Status quo	$17,285	$17,285	$0	**$0.00**
1. TUF covers 100% of O&M Requirement	$17,285	$0	$17,285	**$4.96**
2. TUF covers 75% of O&M Requirement	$17,285	$4,148	$13,828	**$3.97**
3. TUF covers 50% of O&M Requirement	$17,285	$8,297	$10,371	**$2.98**
A. TUF covers 100% of $50k Capital Project every 5 years (additional TUF)	$11,368	$0	$11,368	**$3.18**

Derived from Appendix A and B.

TUF Funding Scenario 1

The annual average revenue requirement for TUF Scenario 1 is $17,285, and it is assumed that **100% of this requirement would be met by a new local TUF.** The average monthly TUF fee for residential and non-residential customers in the Falls City would equate to $4.96 per month for the first five years.

TUF Funding Scenario 2

The annual average revenue requirement for TUF Scenario 1 is $17,285, and it is assumed that **80% of this requirement would be met by a new local TUF, and 20% would be met by the General Fund.** The average monthly TUF fee for residential and non-residential customers in the Falls City would equate to $3.97 per month for the first five years, and the average General Fund transfer requirement would be approximately $13,828 per fiscal year.

TUF Funding Scenario 3

The annual average revenue requirement for TUF Scenario 3 is $17,285, and it is assumed that **60% of this requirement would be met by a new local TUF, and 50% would be met by the General Fund.** The average monthly TUF fee for residential and non-residential customers in the Falls City would equate to $2.98 per month for the first five years, and the average General Fund transfer requirement would be approximately $10,371 per fiscal year.

TUF Funding Scenario A

This scenario includes a local option of an additional TUF revenue requirement over and above the O&M funding requirements associated with Scenarios 1-3. In TUF Funding Scenario A, it is assumed that the City obtains adequate additional TUF revenues to amortize a loan to construct a $50,000 strategic capital improvement over five years. The annual average revenue requirement for TUF Scenario A is $11,368, and it is assumed that **the city finances the construction cost over five years at 5%, and maintains a 120% debt service coverage ratio.** The average monthly TUF fee for residential and non-residential customers in the Falls City would equate to $3.18 per month for the first five years, and the average General Fund transfer requirement would be zero.

The City may in the future opt to continue or sunset this additional TUF capital fee once the capital cost is fully amortized.

Next Steps

The methodology and findings contained in this report have been reviewed by the Falls City Transportation System Plan Advisory Committee, and discussed in a public City Council Worksession. This TUF Methodology Report, once adopted per ORS public notice requirements, may serve as a basis for a new Falls City TUF Ordinance that could be refined with additional public input. The TUF Ordinance should specify the basis for the TUF charges (including findings contained in this report), the stated purposes and revenue requirements for the utility, the initial fee, and procedures for fee updates, appeals, billing/collections, accounting, and exemptions.

APPENDIX

A-1: Transportation Utility Fee, Funding Scenario 1 Assumptions and 5-Year Forecast

Falls City Transportation Funding Model

Scenario 1: 100% Revenue Requirement Met by TUF

Description	Annual 3-Yr Trend	Projected Change	Fiscal Year (forecast) 2013-13	2013-14	2014-15	2015-16	2016-17	2017-18	
Requirements									
Personnel services	16.53%	16.00%	$ 53,937	$ 57,326	$ 61,058	$ 65,163	$ 69,680	$ 74,648	
Materials and services	3.36%	3.00%	29,570	30,457	31,960	33,762	34,595	35,926	
Capital outlay	-47.06%	0.00%	500	500	500	500	500	500	
Transfers (excl. Gen. Fund)	0.00%	0.00%	500	500	500	500	500	500	
Ending fund balance			1,438	1,438	1,438	1,438	1,438	1,438	
Total requirements			$ 85,945	$ 90,516	$ 95,456	$ 101,362	$ 106,713	$ 113,012	
Resources									
Beginning fund balance			$ 5,640	1,438	1,438	1,438	1,438	1,438	
State Highway Fund	5.62%	3.00%	32,300	54,600	56,784	59,055	61,418	63,874	
City General Fund (fy 2012/13)			7,800	-	-	-	-	-	
Other revenue	0.00%	0.0%	-	-	-	-	-	-	
Total resources			$ 85,940	$ 56,038	$ 58,222	$ 60,493	$ 62,856	$ 65,312	
Proj. Net Transportation Funding Requirement									
Operations & Maintenance			$	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750	
Capital Projects			$	$ -	$ -	$ -	$ -	$ -	
Subtotal Transportation Revenue Requirement			$	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750	$ 17,285 - 5 yr avg.
percent of funding requirement to be met by TUF		100%	0%	100%	100%	100%	100%	100%	
TUF Contribution			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750	$ 17,285 - 5 yr avg.
General Fund Contribution			n/a	$ -	$ -	$ -	$ -	$ -	
Subtotal TUF & Gen. Fund			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750	
Proj. TUF Calculation									
Total daily weekday trips		3.00%	4,010	4,032	4,054	4,076	4,097	4,121	
Annual fee per trip			$	$ 3.59	$ 4.26	$ 5.00	$ 5.82	$ 6.73	
Monthly fee per trip			$ -	$ 0.30	$ 0.35	$ 0.42	$ 0.49	$ 0.56	
Customer Accounts in City		0.58%	368	370	372	374	376	378	
Net Monthly fee per customer (before inflation)			$	$ 3.36	$ 3.87	$ 4.64	$ 5.29	$ 6.12	
Net Monthly fee per customer (adjusted for inflation)		2.0%	$ -						
Required Avg. Monthly TUF over next 5 years			$ 4.51						
Required Avg. Annual General Fund Transfer over Next 5 years			$						

A-2: Transportation Utility Fee, Funding Scenario 2 Assumptions and 5-Year Forecast

Falls City Transportation Funding Model

Scenario 2: 60% Revenue Requirement Met by TUF

Description	Annual 3-Yr Trend	Projected Change	Fiscal Year (forecast) 2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Requirements								
Personnel services	16.67%	10.00%	$ 35,932	37,329	41,058	45,163	47,693	54,648
Materials and services	7.58%	4.00%	29,570	30,753	31,983	33,262	34,593	35,976
Capital outlay	-47.06%	0.00%	500	500	500	500	500	500
Transfers (excl. Gen. Fund)	0.00%	0.00%	500	500	500	500	500	500
Ending fund balance			1,438	1,438	1,438	1,438	1,439	1,438
Total requirements			$ 65,940	$ 70,516	$ 75,479	$ 80,864	$ 86,711	$ 93,062
Resources								
Beginning fund balance			$ 5,640	1,439	1,438	1,438	1,438	1,438
State Highway Fund	9.62%	6.00%	52,500	54,600	56,784	59,055	61,418	63,874
City General Fund (FY 2012/13)			7,800	-	-	-	-	-
Other revenues	0.00%	0.00%	-	-	-	-	-	-
Total resources			$ 65,940	$ 56,038	$ 58,222	$ 60,493	$ 62,856	$ 65,312
Proj. Net Transportation Funding Requirement								
Operations & Maintenance			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750
Capital Projects			$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Transportation Revenue Requirement			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750
percent of funding requirement to be met by TUF		60%	0%	80%	80%	80%	80%	80%
TUF Contribution			$ -	$ 11,582	$ 13,805	$ 16,296	$ 19,084	$ 22,200
General Fund Contribution		n/a	$ -	$ 2,896	$ 3,451	$ 4,074	$ 4,771	$ 5,550
Subtotal TUF & Gen. Fund			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750
Proj. TUF Calculation								
Total daily weekday trips		1.50%	4,010	4,070	4,054	4,076	4,099	4,121
Annual fee per trip			$ -	$ 3.69	$ 4.26	$ 5.00	$ 5.82	$ 6.73
Monthly fee per trip			$ -	$ 0.30	$ 0.35	$ 0.42	$ 0.49	$ 0.56
Customer Accounts in City		0.50%	368	370	372	374	376	378
Net Monthly fee per customer (before inflation)			$ -	$ 2.61	$ 3.07	$ 3.63	$ 4.23	$ 4.89
Net Monthly fee per customer (adjusted for inflation)		2.30%	$ -					
Required Avg. Monthly TUF per dwelling unit			$ -					
Required Avg. Monthly Transportation Fee per dwelling unit			$ -					

A-3: Transportation Utility Fee, Funding Scenario 3 Assumptions and 5-Year Forecast

Falls City Transportation Funding Model

Scenario 3: 60% Revenue Requirement Met by TUF

Description	Annual 3-Yr. Trend	Projected Change	Fiscal Year (Forecast) 2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	
Requirements									
Personal services	16.89%	10.00%	$ 33,932	37,325	41,058	45,163	49,680	54,648	
Materials and services	7.59%	4.00%	29,570	30,753	31,983	33,262	34,593	35,976	
Capital outlay	42.06%	10.00%	500	500	500	500	500	500	
Transfers (excl. Gen. Fund)	0.00%	0.00%	500	500	500	500	500	500	
Ending fund balance			1,438	1,438	1,438	1,438	1,438	1,438	
Total requirements			$ 65,940	$ 70,516	$ 75,479	$ 80,841	$ 86,711	$ 93,062	
Resources									
Beginning fund balance			$ 5,640	1,438	1,438	1,438	1,438	1,438	
State Highway Fund	5.62%	5.00%	52,500	54,900	56,764	59,055	61,418	63,874	
City General Fund (FY 2012-13)			7,800	-	-	-	-	-	
Other revenue	0.00%	0.00%	-	-	-	-	-	-	
Total resources			$ 65,940	$ 56,038	$ 58,202	$ 60,493	$ 62,856	$ 65,312	
Proj. Net Transportation Funding Requirement									
Operations & Maintenance			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750	
Capital Projects			$ -	$ -	$ -	$ -	$ -	$ -	
Subtotal Transportation Revenue Requirement			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750	$ 17,262 = 5-yr avg.
Percent of funding requirement to be met by TUF		60%	0%	60%	60%	60%	60%	60%	
TUF Contribution			$ -	$ 8,687	$ 10,354	$ 12,222	$ 14,313	$ 16,650	$ 10,371 = 5-yr avg.
General Fund Contribution			n/a	$ 5,791	$ 6,903	$ 8,148	$ 9,542	$ 11,100	
Subtotal TUF & Gen. Fund			$ -	$ 14,478	$ 17,257	$ 20,370	$ 23,855	$ 27,750	
Proj. TUF Calculation									
Total daily weekday trips		2.50%	4,010	4,032	4,054	4,076	4,099	4,121	
Annual fee per trip			$ -	$ 2.59	$ 4.26	$ 5.00	$ 5.82	$ 6.73	
Monthly fee per trip			$ -	$ 0.20	$ 0.35	$ 0.42	$ 0.49	$ 0.56	
Customer Accounts in City		0.50%	368	370	372	374	376	378	
Net Monthly fee per customer (before inflation)			$ -	$ 1.96	$ 2.82	$ 2.72	$ 3.13	$ 3.67	
Net Monthly fee per customer (adjusted for inflation)		2.20%	$ -	$	$	$	$	$	
Required Avg. Monthly TUF rate next 5 years		$ 2.51							
Required Avg. Annual General Fund transfer next 5 years		$ 7,727							

Appendix B: Strategic TUF Capital Project Assumptions

Strategic TUF Capital Project Example: $60,000 project every 5 years
Conceptual Debt Amortization Schedule
Falls City

	Assumptions	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Project Construction Cost	$ 50,000						
Loan Origination Cost (1.5%)	$ 750						
Total Principal	$ 50,750						
Term (years)	5						
Interest Rate	4%						
Loan Coverage Ratio	125%						
Beginning Year Balance		$ 50,750	$ 40,600	$ 30,450	$ 20,300	$ 10,150	
Interest Payment		$ (2,030)	$ (1,624)	$ (1,218)	$ (812)	$ (406)	$ (6,090)
Principal Payment		$ (10,150)	$ (10,150)	$ (10,150)	$ (10,150)	$ (10,150)	$ (50,750)
Ending Year Balance		$ 40,600	$ 30,450	$ 20,300	$ 10,150	$	
Total Payments		$ (12,180)	$ (11,774)	$ (11,368)	$ (10,962)	$ (10,556)	$ (56,840)
Loan Coverage Requirement		$ (15,225)	$ (14,718)	$ (14,210)	$ (13,703)	$ (13,195)	
Number of Customers		368	370	372	374	376	
Monthly TUF Fee Requirement Per Customer		$ 3.45	$ 3.31	$ 3.18	$ 3.05	$ 2.92	
Avg. TUF Fee Increase over 5 Years	**$ 3.18**						