

Laramie Bicycle Facility Master Plan



Submitted to:

City of Laramie, Wyoming



Prepared by:

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in association with

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Laramie Bicycle Facility Master Plan

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Laramie Bicycle Facility Master Plan

Executive Summary

The Laramie City Council initiated the preparation of this plan to develop and encourage the use of alternative forms of transportation. Recognizing the formulation of a holistic and implementable plan requires broad-based input and support, a Steering Committee was formed as the lead entity for preparation of this master plan. The Steering Committee combined members of the Laramie community with representatives of City government to form a planning and policy group dedicated to assuring the plan developed through this process satisfies the needs of the citizens of Laramie.

Solid broad-based input and support promotes successful implementation of the master plan.

As an initial task, the Steering Committee adopted the following vision statement to guide the planning process: ***The vision of the master plan is to accommodate current bicycle use and to promote and encourage the increased use of the bicycle as an alternative form of transportation and for recreation, within the fiscal constraints of the City of Laramie.***

Vision and goals guide the planning process.

To realize this vision, the Steering Committee established three goals:

Goal #1: Provide bicycle facilities between traffic generators that include residential areas, University of Wyoming Housing areas, schools, shopping areas, employment centers, parks and other recreational facilities, and connection points to bicycle routes outside corporate limits.

Goal #2: Identify potential bicycle facilities, including lanes and routes developed on existing streets, and separated multiple use paths, that will accomplish the goals of the project.

Goal #3: Identify improvements that will be required and incorporate the improvements into an implementation plan with estimated costs and a phasing schedule, and incorporate bicycle transportation as an element into the Major Street and Highway System and into subdivision infrastructure requirements.

The *Laramie Bicycle Facility Master Plan* recommends the development of bicycle facilities designed to achieve the goals and realize the vision of the plan. The implementation plan, which is presented graphically on Plate 1, accomplishes the following:

- identifies 26 miles of existing streets where lanes are to be installed over the next two years;
- designates existing and future streets where bicycle lanes will be placed when the future street is constructed or an existing street is reconstructed to a standard that will accommodate bicycle lanes;

Bicycle lanes will make bike transportation throughout Laramie safer and more efficient.

In addition to designating streets for developing bicycle lanes, the master plan also:

- identifies 13 miles of bicycle paths to be constructed by the City of Laramie, Laramie Economic Development Corporation, Wyoming Department of Transportation, and Union Pacific Railroad; and,
- recommends the **Laramie River Greenbelt Bike Path** for the initial implementation plan, with construction of this 1.5-mile long path to begin in 1999.

Bicycle paths will provide new recreational experiences to the citizens of Laramie and help satisfy the ever-expanding appetite for recreational opportunities.

To complement the development of the proposed bicycle facilities presented on Plate 1, this master plan addresses other topics critical to achieving a complete and successful program. The plan:

- ◆ describes features and activities to **enhance** the use of the bicycle paths and bicycle lanes;
- ◆ recommends **educational** opportunities to promote safe bicycle transportation;
- ◆ identifies and encourages **enforcement** actions to increase the knowledge and understanding of the importance of traffic codes related to bicycle transportation;
- ◆ explores **intermodal relationships** between bicycle transportation and other modes of transportation available in Laramie;
- ◆ enumerates revisions to Laramie's **municipal codes** to encourage bicycle use and promote the development of bicycle facilities; and,
- ◆ discusses alternative **funding sources** available to develop bicycle facilities.

Critical planning elements complete the process:

- ✓ *Enhancement*
- ✓ *Education*
- ✓ *Enforcement*
- ✓ *Intermodal relations*
- ✓ *Municipal codes*
- ✓ *Funding sources*

The citizens of Laramie will benefit in a number of ways from the implementation of this plan:

Citizens will realize the benefits of plan implementation.

- increased use of the bicycle as an economical transportation mode;
- decreased reliance on the automobile;
- reduced traffic congestion;
- additional recreational opportunities; and,
- physical fitness and health benefits.

The costs associated with the development of the proposed facilities must be recognized:

- construction, operation, and maintenance of the new facilities will impact the financial resources of the City of Laramie; and,
- addition of bicycle lanes will reduce the number of parking spaces in some areas.



Section 1 - Introduction

1.1 Introduction

Recognizing the need to develop alternative forms of transportation, the City of Laramie, Wyoming, applied for and obtained grant funding through the Wyoming Department of Transportation (WYDOT) under the Transportation Enhancement Activities - Local (TEAL) program to develop an alternative transportation plan. This planning process initiated by the City of Laramie led to the completion of this *Laramie Bicycle Facility Master Plan*.

A report prepared by the Laramie Bicycling Association titled *Scope and Planning Recommendations on Alternative Transportation*, dated March 10, 1994, was submitted to the Laramie City Council and forms the basic framework for this planning process.

A Steering Committee was formed as the lead entity for preparation of the *Laramie Bicycle Facility Master Plan*. The Steering Committee combined members of the Laramie community with representatives of City government to form a planning and policy group to assure the plan developed through this process satisfies the needs of the City of Laramie. The Steering Committee consisted of the following individuals:

Bob Boysen	Director, Laramie Economic Development Corporation (LEDC)
Pryce Taylor	Laramie Bicycling Association (LBA)
Donna Cuin	Laramie Greenbelt Committee
Jim McGrath	University of Wyoming Facilities Engineering Department
Bob Juve	City Engineer
Paul Harrison	Director, Parks and Cemetery Department
Harold Colby	Director, Street Department
Dale Stalder	Sergeant, Laramie Police Department

The City of Laramie contracted with the planning and engineering firm of MSE-HKM, Inc. to provide a study and technical input to facilitate the planning process. The contract with MSE-HKM, Inc. was approved by the City Council on February 3, 1998. Lord Consulting LLC and Joanne Garnett, AICP, served as subconsultants to MSE-HKM, Inc.

MSE-HKM, Inc. and their subconsultants wish to express appreciation to the members of the Steering Committee for their efforts in the development of this plan. Without their dedication, direction, and guidance this plan could not have been successfully completed.

Appreciation is also expressed to representatives of WYDOT in the local District Office, Jay Gould, Steve Cook, Donna Whitcomb, and Jim Kladianos, and in the State office in Cheyenne, Jay Meyer, State Bicycle and Pedestrian Coordinator, C. J. Brown, local area planner for Laramie, and Rich Douglass, Local Government Coordinator.

Thanks to Bill Besselièvre of the Cheyenne office of the Federal Highway Administration for his assistance in providing documents and reference materials.

1.2 Vision and Goals

The vision of this *Laramie Bicycle Facility Master Plan*, as defined by the Steering Committee, is to accommodate current bicycle use and to promote and encourage the increased use of the bicycle as an alternative form of transportation and for recreation, within the fiscal constraints of the City of Laramie.

Project goals, presented below, were adopted by the Steering Committee.

1. Provide bicycle facilities between traffic generators that include residential areas, University of Wyoming Housing areas, schools, shopping areas, employment centers, parks and other recreational facilities, and connection points to bicycle routes outside corporate limits.
2. Identify potential bicycle facilities, including lanes and routes developed on existing streets, and separated multiple use paths, that will accomplish the goals of the project.
3. Identify improvements that will be required and incorporate the improvements into an implementation plan with estimated costs and a phasing schedule, and incorporate bicycle transportation as an element into the Major Street and Highway System and into subdivision infrastructure requirements.

Although a twenty year planning horizon is adopted for the process, the Steering Committee directed that the plan provide a recommendation for improvements to be implemented in the near-term, defined as the initial five years following plan adoption. After the elements included in the near-term implementation plan have been developed, the remaining features included in the long-term vision plan will be evaluated to prioritize a new implementation plan.

The *Laramie Bicycle Facility Master Plan* is intended to be a planning document that will serve as a constant tool in the development of all transportation and related facilities. As such, the Steering Committee recommends that the plan be reviewed and updated at an interval not to exceed three years, or less if significant changes occur to warrant the review.

1.3 Methodology

The methodology used in the planning process consisted of the following steps leading to the development of the *Laramie Bicycle Facility Master Plan*:

1. Analyze the existing situation to determine the extent of bicycle facility development in Laramie.
2. Identify the needs for bicycle facilities, including the compilation of traffic generators.
3. Compile a list of potential bicycle facilities, including paths, lanes, routes, and a loop around the City, that will satisfy the identified needs.
4. Evaluate the potential bicycle facilities to: 1) determine if the facility should be incorporated into the plan; and 2) identify the improvements that would have to be implemented to develop the facility.
5. Develop and adopt the *Laramie Bicycle Facility Master Plan* that will identify the components of the facility plan and the estimated development cost of these components.

The *Laramie Bicycle Facility Master Plan* will present both a *vision plan* having a long-term horizon of twenty years, and an *implementation plan* to be achieved in the next five years.

6. Identify and describe enhancement and educational opportunities to further the vision of the plan, and enforcement issues related to implementing the *Laramie Bicycle Facility Master Plan*.
7. Identify the relationship of the *Laramie Bicycle Facility Master Plan* to other modes of transportation in the Laramie area.
8. Recommend modifications to the Laramie Municipal Code to enhance the implementation of the bicycle plan.

1.4 Definitions

The Steering Committee adopted definitions of classifications of bicyclists and types of bicycle facilities for use in the planning effort. Since definitions for these items have not been adopted by the City of Laramie, Albany County, or the State of Wyoming, the Steering Committee adopted definitions presented in federal documents, modified to fit local conditions.

1.4.1 Classification of Bicyclists

The Steering Committee adopted the two broad classifications of bicycle users as defined in *Selecting Roadway Design Treatments to Accommodate Bicycles*, Federal Highway Administration (FHWA), January 1994. These classifications are defined as follows:

Group A - Advanced Bicyclists

These are experienced riders who can operate under most conditions. They comprise the majority of the current users of collector and arterial streets. This group is best served by making every street "bicycle friendly".

Group B/C - Basic Bicyclists and Children

This group combines two classifications. Basic bicyclists are casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles. Some will develop greater skills and progress to the advanced level, but there will always be many millions of basic bicyclists. Children are pre-teen riders whose roadway use is initially monitored by parents. Eventually they are accorded independent access to the system. Group B/C riders will best be served by identifying key travel corridors (typically served by arterial and collector streets) and by providing designated bicycle facilities on selected routes through these corridors.

1.4.2 Types of Bicycle Facilities

The following definitions for *lanes*, *paths* and *routes*, were adapted by the Steering Committee from *Final Draft, Guide for the Development of Bicycle Facilities*, February 1998, prepared by the American Association of State Highway and Transportation Officials (AASHTO) Task Force on Geometric Design. A typical bicycle path is presented on Figure 1-1 on page 1-5, and Figure 1-2 on page 1-6 shows a typical bicycle lane.

Bicycle Lanes

A bicycle lane is a portion of the roadway designated by striping, signing, and pavement markings for preferential or exclusive use of bicycles. Bicycle lanes are considered when it is desirable to delineate available road space for preferential use by bicyclists and motorists and to provide for predictable movements by each. Bicycle lane markings can increase a bicyclist's confidence in motorists not straying into his/her path of travel. Likewise, passing motorists are less likely to swerve to the left out of their lane to avoid bicyclist on their right. Bicycle lanes are always one-way facilities and carry traffic in the same direction as adjacent motor vehicle traffic.

On curbed streets with parking, bicycle lanes shall be 5 feet wide and shall be placed between the parking lane and the travel lane. On curbed streets without parking bicycle lanes shall be 4 feet wide measured from the edge of the gutter, or 6 feet wide measured from the face of the curb. On roadways without curbs, bicycle lanes shall be placed between the travel lane and the shoulder and shall be 5 feet wide.

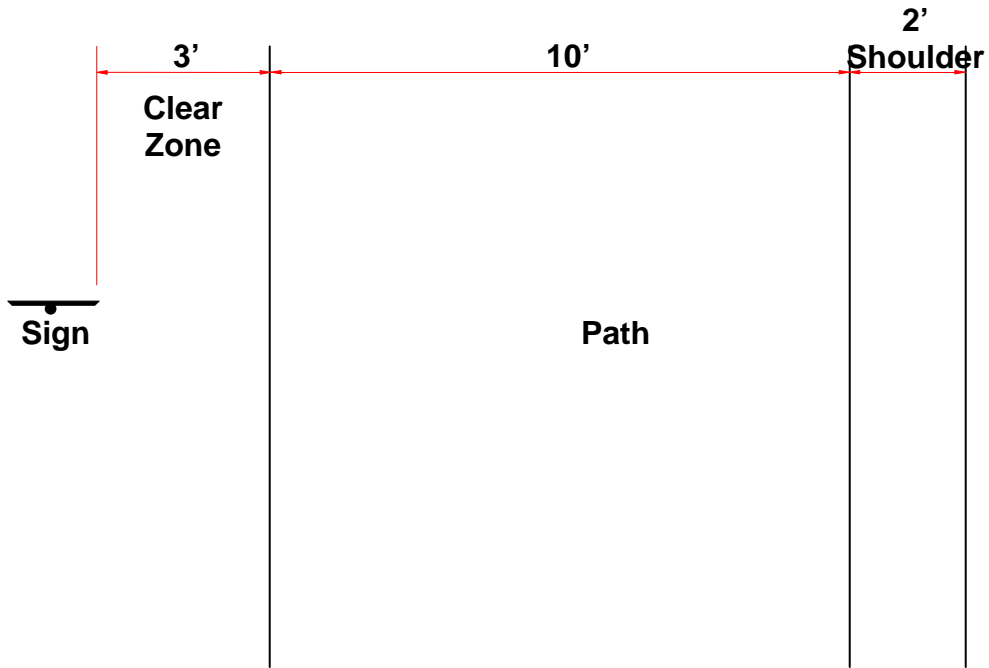
Bicycle Paths

Bicycle paths are paved surfaces dedicated to the exclusive use of non-motorized forms of transportation, have minimum cross flow by motor vehicles, and are physically separated from motorized vehicular traffic by an open space or physical barrier.

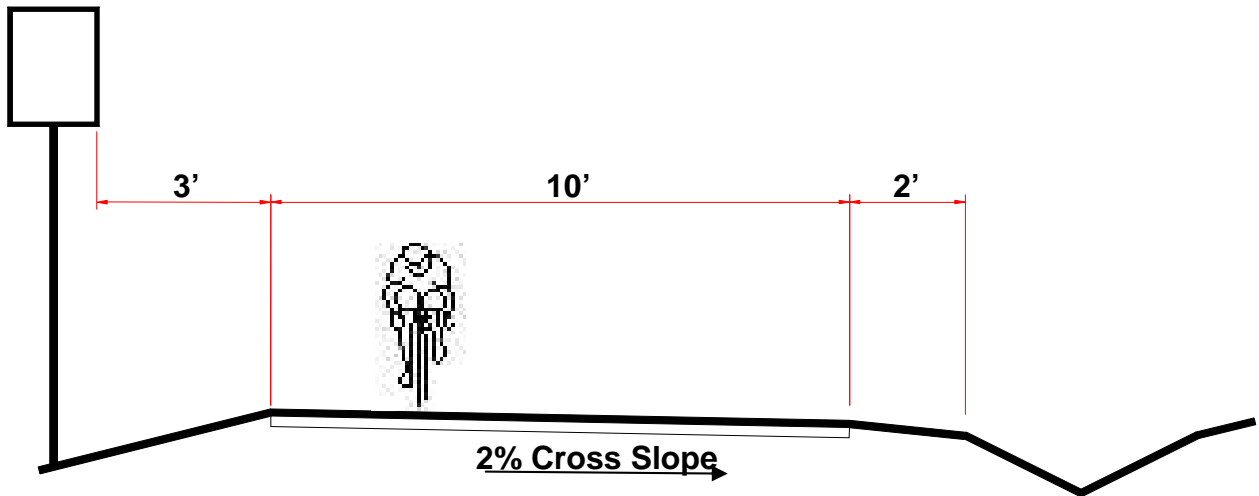
Bicycle paths will be two-way paths with connections to continuing systems at both ends of the path. The paved surface shall have a minimum width of 10 feet and 2-foot wide graded shoulders will be provided on both sides of the path. Bicycle paths will be constructed with a 2-inch asphalt surface over a 6-inch base. The minimum vertical clearance will be 8 feet.

Bicycle Routes

A bicycle route is a shared roadway designated by the jurisdiction having authority with appropriate directional and informational markers, without a bicycle route number and without striping and bicycle lane markings. Bike routes shall be used to provide continuity to other bicycle facilities where existing roadway facilities are not adequate to provide bicycle lanes, or where bicycle paths are not feasible.



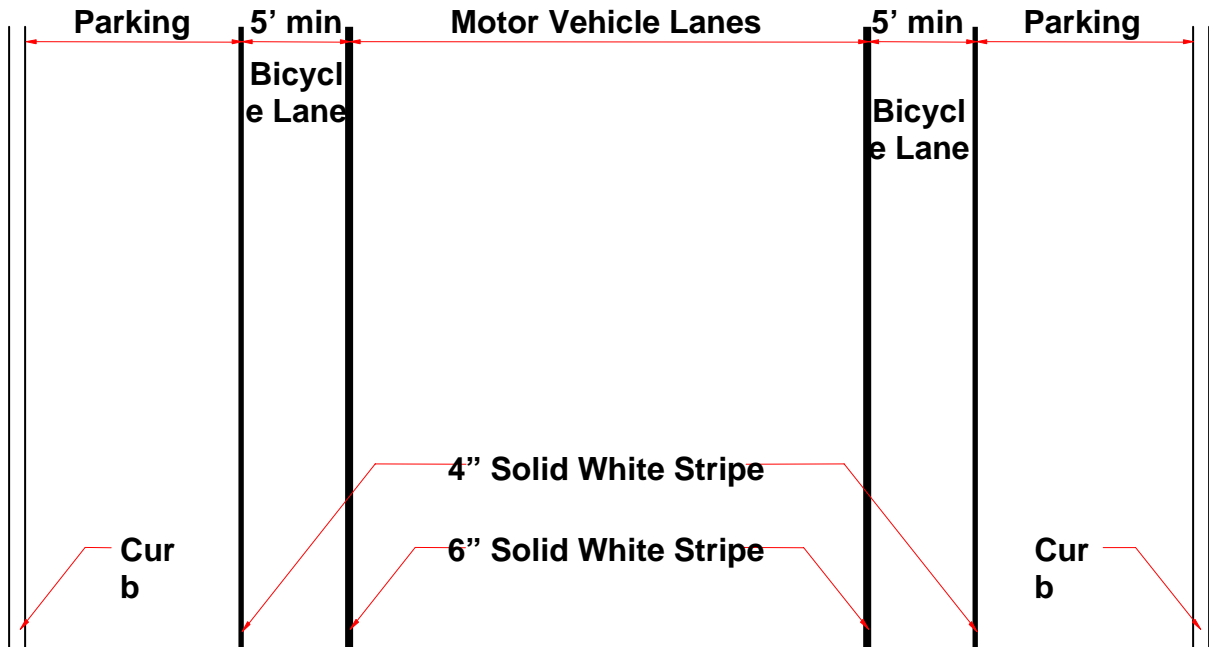
Plan



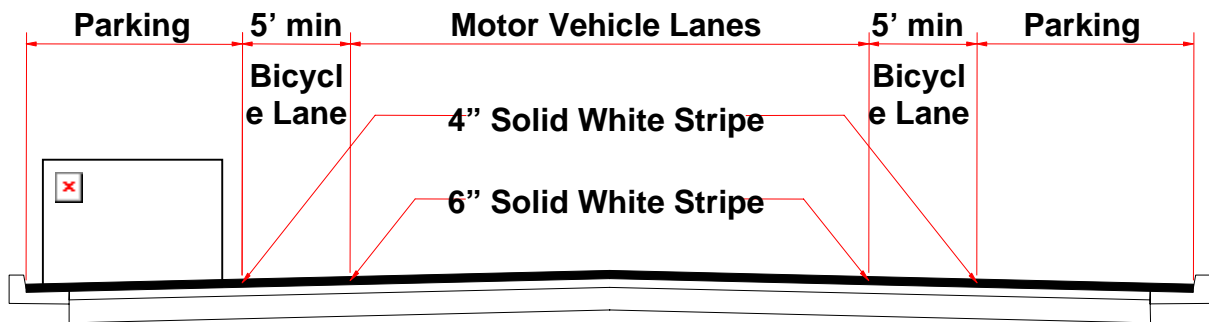
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This section provides a 10-foot path with 2-foot shoulders and 3 feet is recommended as a clear zone to any obstruction, including signs.

Figure 1-1: Typical Bicycle Path



Plan



Section

(shown with on street parking)

The solid white stripe may not be desirable where parking stalls are not marked and parking is light, as motorists may misconstrue the bicycle lane to be an additional traffic lane.

Figure 1-2: Typical Bicycle Lane

Section 2 – Plan Formulation

2.1 Existing Situation Analysis

In 1978 the City of Laramie completed the *Laramie Bikeway Study* that proposed an extensive system of bicycle facilities throughout Laramie consisting of paths, lanes, and routes. Implementation of the *Laramie Bikeway Study* recommendations was limited and only the following elements were developed:

- bicycle lanes on Reynolds Street from 5th Street to 30th Street;
- bicycle lanes on Iverson Street from 5th Street to 15th Street;
- bicycle route on Iverson Street from 3rd Street to 5th Street;
- bicycle route on 8th Street from Iverson Street to Canby Street; and,
- bicycle route on 7th Street from Shield Street to Reynolds Street.

The bicycle lanes on Reynolds Street serve the Laramie Junior High School and Laramie Senior High School, while the Iverson Street bicycle lanes provide a connection between the Laramie central business district and the University of Wyoming campus. The effectiveness of the 8th Street bicycle route, which was intended to be a north-south access corridor, was subsequently compromised when stop signs were installed at a frequency unacceptable to commuting bicyclists.

Separate from the facilities available within the City of Laramie, the University of Wyoming has developed an aggressive system of bicycle facilities on the portion of campus west of 15th Street. The campus system consists of designated bicycle routes, separated bicycle paths, and bicycle lanes shared with pedestrians. The *Laramie Bicycle Facility Master Plan* does not address facilities on campus other than to integrate facilities developed by the City of Laramie with campus facilities.

2.2 Needs Analysis

There is no doubt that the automobile and its excessive demands for space and energy has created a more urgent examination of alternative urban transportation modes. If a bikeway plan and system encouraged higher bicycle usage and lower automobile dependence, parking and traffic congestion would be alleviated at key Laramie locations, and the visual, noise, and chemical pollution of the car would be lessened.

A bikeway system in Laramie would also accrue the following benefits:

- *Promote a very economical transportation mode for those unable to afford automobiles. Much of Laramie's student population use bicycles now because of economic benefits derived from cycling.*

- *Promote physical fitness and health benefits to existing and potential Laramie cyclists.*
- *Reduce automobile bicycle safety conflicts.*
- *Make recreational, commercial, educational, and, civic areas accessible to more city residents and provide a major linkage of these uses.*
- *Provide an alternative recreation resource to all Laramie residents.*
- *Encourage fuller utilization of the central business district.*

The size and scale of Laramie also make this city an ideal place for cycling. It takes about one-half hour to cycle from one end of the city to the other (at 10 mph across five miles), and most key destination areas are within 15 minutes of all residents. There cannot be a more suitable size city for bicycle travel.

These words were presented in the 1978 *Laramie Bikeway Study* and are as accurate today as they were twenty years ago. In reality, the need for a bikeway system has grown not only because of the increase in population, but more importantly the need has increased as a result of several significant changes that have occurred to impact the traveling public:

- new residential areas have been developed;
- new schools have been built and old schools have been closed;
- major streets have been constructed;
- new commercial and shopping areas have been developed; and,
- traffic on principal arterials has increased.

The ultimate objective of the *Laramie Bicycle Facility Master Plan* is to promote the use of bicycles by the citizens of Laramie. To accomplish this objective, bicycle facilities need to be located within a reasonably reachable distance from all bicycle traffic generators, which are broadly defined as those areas within the City with the potential to be either the origin or destination of a bicycle trip. Traffic generators generally include residential areas, schools, universities, parks and other recreational facilities, shopping areas, and employment centers. A list of specific traffic generators was developed by the Steering Committee and is presented in Table 2-1 on page 2-3.

2.3 Bicycle Facility Identification

As previously stated, a bikeway system needs to be implemented so as to assure that all of the traffic generators are reasonably close to a developed bicycle facility. The Steering Committee agreed that the optimum approach to establishing a bikeway system would focus on the definition and development of **bicycle paths** and **bicycle lanes** that will be within a short connecting distance to the traffic generators presented in Table 2-1. This approach represents a significant move toward achieving the two planning goals of 1) facilitating the bicycle commute, and 2) providing recreational opportunities.

Table 2-1 – Traffic Generators

Schools and Libraries

University of Wyoming	Linford Elementary
Wyoming Technical Institute	Slade Elementary
Laramie High School	Spring Creek Elementary
Whiting Alternative High School	Thayer Elementary
Laramie Junior High School	St. Laurence Elementary
Beitel Elementary	Albany County Library
Indian Paintbrush Elementary	

Parks and Recreational Facilities

Aragon Complex	LJHS Park
Harbon Park	O'Dell Mini Park
Fox Theater	Optimist Park
Kiowa Park	Skyline Skate and Oasis Golf
Kiwanis Park	Undine Park
Kourt House Racquet & Fitness Center	Washington Park
La Bonte Park	Wyoming Childrens Museum and Nature Center
La Prele Park	Wyoming Territorial Prison and Old West Park
Laramie Athletic Center	Wyo Theater
Laramie Senior Center	Foothills Area East of Laramie

Shopping, Commercial, and Employment Areas

3rd Street: I-80 to Curtis
15th Street at I-80
Albertsons Shopping Center
Central Business District
Grand Avenue: 15th Street to Boulder Drive
I-80 and Curtis Street Interchange
Ivinson Memorial Hospital
Laramie Cold Storage area
North Ridge/Buttreys Shopping Area
Snowy Range Highway: I-80 to "Y"
Skyline Road

The Steering Committee adopted the concept of developing a **bicycle loop** to serve as the backbone of the bikeway system. This loop would consist of a system of paths and lanes specifically identified to allow bicyclists in the Group B/C category to travel around the City of Laramie on designated bicycle facilities.

2.3.1 Bicycle Paths

Corridors for **bicycle paths** were selected primarily based on previous work completed by the *Laramie Greenbelt Committee (LGC)*, the *Laramie Economic Development Corporation (LEDC)*, the *Union Pacific Railroad Company (UPRR)*, and WYDOT. Proposals advanced by these entities are briefly discussed below.

- LGC's long-term vision is to develop a greenway around the City utilizing the Laramie River and Spring Creek as principal corridors. Their initial efforts have been concentrated on developing a multiple use greenbelt path along the Laramie River. LGC is in the process of obtaining easements for the proposed Laramie River facilities.
- LEDC completed the design and prepared construction plans for their *Laramie River Greenbelt Project*. This project includes a 10-foot wide path for 0.3 miles along the northern and eastern boundaries of the Laramie River Business Park, which is situated on the west side of the Laramie River south of I-80. The LEDC project also identified the possible extension of the path under I-80 to the north along the west side of the Laramie River. This project is currently on hold pending development of this *Laramie Bicycle Facility Master Plan*.
- In April, 1998, UPRR announced their intent to construct a 2.3-mile trail along the east side of the Laramie River. The proposed 12-foot wide path will begin at Optimist Park and extend to and around the Baxter Tie Plant Site located on the south side of I-80. Construction of the path is scheduled to begin as early as 1999.
- As part of the planned reconstruction of Curtis Street from 3rd Street to McCue Street, WYDOT will construct a bicycle path generally along the south edge of the right-of-way. This project will also widen the Curtis Street Bridge over the railroad tracks and the bridge over the Laramie River to accommodate additional travel lanes as well as enhance bicycle and pedestrian use. This project is in the design phase and is scheduled for construction beginning in 1999.

The City of Laramie is in the process of developing cooperating agreements with LEDC, UPRR, and WYDOT whereby the City assumes operation and maintenance responsibilities upon completion of construction of these bicycle facilities.

Table 2-2 on page 2-5 lists candidate bicycle paths initially identified by the Steering Committee as logical candidates for incorporation into the proposed bikeway system. These paths, which are shown on Plate 1 in the pocket at the end of this report, were selected for evaluation to determine their suitability as a bikeway facility and to determine the necessary improvements to incorporate the path into the *Laramie Bicycle Facility Master Plan*.

In addition to the paths listed in Table 2-2, one other path was identified and considered. This path would run along the west side of the Laramie River from Optimist Park to the LEDC path on the south side of I-80. After further consideration this path was eliminated because the Steering Committee agreed the funds required to develop this path would be more appropriately spent constructing a bridge over the Laramie River to connect the UPRR and LEDC paths.

As future subdivision development occurs around Laramie, the Steering Committee recommends that this development include the construction of bicycle paths. These paths will provide additional commuting corridors and recreational opportunities, and will also allow access to the open spaces around the City.

Table 2-2: Candidate Bicycle Paths

Name of Path	Beginning Point	Ending Point
Laramie River Greenbelt	Curtis Street	Optimist Park
Coalmont RR	Laramie River Greenbelt	Welsh Lane
LEDC	Through Laramie River Business Park	
UPRR	Optimist Park	UPRR Baxter Tie Plant Park
West Spring Creek	UPRR Baxter Tie Plant Park	4 th Street Bicycle Path
Central Spring Creek	4 th Street Bicycle Path	30 th Street
East Spring Creek	30 th Street	East Corporate Boundary
4 th Street	Sanders Street	Central Spring Creek Bicycle Path
22 nd Street	Spring Creek Drive	Central Spring Creek Bicycle Path
Grand Avenue	East Spring Creek Bicycle Path	Pilot Peak Road
Curtis Street (WYDOT)	3 rd Street	McCue Street

2.3.2 Bicycle Lanes

The process of selecting corridors for **bicycle lanes** involved comparing the list of traffic generators presented in Table 2-1 with *Urban Roadway Functional Classification, Laramie, Albany County, 1992*, a map produced by WYDOT to categorize Laramie streets based on their functional use within the city transportation network. Streets classified as *principal arterials*, *minor arterials* and *collectors*, are the roadways that carry the majority of the traffic whereas streets classified as *locals* carry only limited amounts of traffic.

Comparing the list of traffic generators with the urban roadway functional classification map resulted in the decision to consider *minor arterials* and *collector* streets for the development of bicycle lanes. The Steering Committee agreed that the *principal arterials*, namely Grand Avenue (US Highway 30), 3rd Street (US Highway 287-30), and Snowy Range Road (State Highway 130-230), should be avoided for development of bicycle lanes because of the extensive use of these roadways by motorized vehicles. However, development of bicycle lanes on *principal arterials* will be considered in instances where lanes are clearly needed and reasonable alternatives do not exist. Further, the recommended posted speed limit on *principal arterials* with bicycle lanes should not exceed 40 mph.

Table 2-3 on page 2-6 lists candidate bicycle lanes initially identified by the Steering Committee as logical candidates for incorporation into the proposed bikeway system. These lanes, which are shown on Plate 1 in the pocket at the end of this report, were selected for evaluation to determine their suitability as a bikeway facility and to determine the necessary improvements to incorporate the lane into the *Laramie Bicycle Facility Master Plan*.

As future *minor arterial* and *collector* streets are constructed in and around Laramie, either as entirely new streets, street extensions, or upgrade modifications to existing streets, the Steering Committee recommends that bicycle lanes be developed as part of the construction. A select number of these future *minor arterial* and *collector* streets, as identified on *Laramie, Albany County, Wyoming 1992 Major Street and Highway System Plan Map as of Aug. 10, 1992*, are shown on Plate 1.

2.4 Bicycle Facility Evaluation

2.4.1 Bicycle Paths

The proposed bicycle paths listed in Table 2-2 were evaluated to determine the improvements required to incorporate the path into the bikeway system. For the purpose of this report it is assumed the paths proposed by LEDC, UPRR, and WYDOT will be constructed by these entities in accordance with the requirements of the City of Laramie. The remaining paths will be incorporated into the *Laramie Bicycle Facility Master Plan* and will be constructed by the City or possibly another entity interested in bicycle facility development.

The paths proposed for incorporation into the master plan are presented and discussed in the following paragraphs. The paths are described and specific construction considerations are identified. Path alignments were broadly selected for purpose of the analysis. Actual alignments will be established after further investigations conducted during the final design process.

Table 2-3: Candidate Bicycle Lanes

Name of Lane	Beginning Point	Ending Point
Pierce Street	Snowy Range Road	500' north of Washington Street
McCue Street	Curtis Street	South end of McCue Street
Cedar Street	Garfield Street	Curtis Street
4 th Street	Curtis Street	Sanders Street
9 th Street	Spring Creek Bicycle Path	North corporate boundary
15 th Street	Skyline Road	North end of 15 th Street
22 nd Street	Spring Creek Drive	North terminus
30 th Street	Spring Creek Bicycle Path	Reynolds Street
Inca Drive	Grays Gable Road	Reynolds Street
Boulder Drive	Garfield Street	Grand Avenue
Skyline Road	15 th Street	I-80 Eastbound Lane Ramp
Corthell Road	Sheridan Street	Whitman Street
Sheridan Street	4 th Street	Spring Creek Bicycle Path
Snowy Range Road	Garfield Street	Hayes Street
West Garfield Street	Optimist Park	4 th Street
East Garfield Street	30 th Street	Boulder Drive
Grand Avenue	Boulder Drive	Bill Nye Avenue
Ivinson Street	4 th Street	15 th Street
Wyoming Avenue	Pierce Street	Snowy Range Road
Lewis Street	4 th Street	15 th Street
Harney Street	4 th Street	30 th Street
Grays Gable Road	30 th Street	45 th Street
Curtis Street	3 rd Street	4 th Street
Reynolds Street	4 th Street	Inca Drive
Beaufort Street	7 th Street	East terminus

Laramie River Greenbelt Bicycle Path

This path will extend from Curtis Street to the Coalmont Branch of UPRR along the west side of the Laramie River, and from the Coalmont Branch to Optimist Park along the east side of the river. Specific construction considerations are as follows:

1. Total path length is approximately 8,000 feet.
2. The existing railroad bridge on the Coalmont Branch will be modified and used to cross the Laramie River.
3. Snowy Range Road will be crossed by developing passage under the existing Laramie River bridge.
4. Garfield Street will be crossed at grade.
5. A bridge will be constructed over the Laramie River south of I-80 to connect the LEDC and UPRR paths, after these two paths have been completed.
6. The path will be constructed above the 10-year floodplain.
7. Wetland mitigation will likely be required along certain reaches of this path.
8. Easement acquisition activities will need to be completed.

This path will connect the facilities constructed by LEDC, UPRR, and WYDOT to create an extensive pathway system to facilitate commuting and provide extensive recreational opportunities. In addition to exercise related activities, these paths will provide access for enjoyment of the natural environment along the river. Benches and picnic areas can be developed to enhance this enjoyment. Furthermore, these paths will provide access to the river to enjoy fishing and boating activities. These paths will also be principal components of the Laramie bicycle loop system.

An unplatted strip of land, approximately 60 feet wide, extends from McCue Street east to the Laramie River. This strip of land, which is located across McCue Street from Baker Street and north of the Wyo Tech Dorms, should be considered to develop a path connecting the Laramie River Greenbelt Bicycle Path with McCue Street.

Coalmont RR Bicycle Path

This path will serve as the primary connector to West Laramie. It will extend along the existing Coalmont RR right-of-way from the Laramie River Greenbelt bicycle path west to Welsh Lane where it will provide access to Snowy Range Road (State Highway 130) for the long-distance Group A category rider. Specific construction considerations are as follows:

1. Total path length is approximately 8,500 feet.
2. The path will pass under I-80 through an existing bridge.
3. Pierce Street will be crossed at grade without a signal.
4. The status of the Coalmont RR corridor and bridge over the Laramie River is unknown and will need to be researched to determine the easement acquisition requirements. The City will likely need to acquire easements for this path.

West Spring Creek Bicycle Path

This path will begin at the proposed UPRR Baxter Tie Plant Park and extend to the south end of the **4th Street Bicycle Path**. Specific construction considerations are as follows:

1. Total path length is approximately 5,000 feet.
2. An overpass structure will be required to cross the UPRR tracks south of I-80.
3. I-80 will be crossed at 3rd Street on a path to be installed as part of the planned reconstruction of the I-80/3rd Street interchange.
4. Spring Creek will be crossed using the existing bridge on 2nd Street.
5. The bridge at 3rd Street will be modified to allow the path to pass under this street.
6. Easements will need to be acquired by the City.

Central Spring Creek Bicycle Path

This path will begin at the north end of the **West Spring Creek Bicycle Path** and extend to 30th Street along the north side of Spring Creek. Specific construction considerations are as follows:

1. Total path length is approximately 11,000 feet.
2. 9th Street, 13th Street, 15th Street, 17th Street, and Corthell Road will be crossed at grade.
3. Easements may need to be acquired by the City.

East Spring Creek Bicycle Path

This path will begin at the east end of the **Central Spring Creek Bicycle Path** at 30th Street and follow the Spring Creek channel to the east corporate boundary. Specific construction considerations are as follows:

1. Total path length is approximately 7,000 feet.
2. The channel configuration under the existing bridge at Grand Avenue will be modified to allow the path to pass under this bridge.
3. Easements may need to be acquired by the City.

4th Street Bicycle Path

This path will connect the south terminus of the 4th Street Bicycle Lane at Sanders Street to the Spring Creek Bicycle Path. The total path length is approximately 1,000 feet and easements will likely need to be acquired by the City.

22nd Street Bicycle Path

This path will connect the south terminus of the 22nd Street Bicycle Lane at Spring Creek Drive to the Spring Creek Bicycle Path through La Prele Park. The total path length is approximately 200 feet and no easements will need to be acquired by the City.

Grand Avenue Bicycle Path

This path will begin at the **East Spring Creek Bicycle Path** where it turns north, and extend along the south side of Garfield Street to Boulder Drive, then along the south side of Grand Avenue to Vista Drive where it will cross Grand Avenue and continue along the east side of Grand Avenue to Pilot Peak Road. Specific construction considerations are as follows:

1. Total path length is approximately 9,000 feet.
2. Street crossings at Vista Drive and Bill Nye Avenue will be made at grade and the path will not be developed until signal controls are installed at the proposed Vista Drive crossing.
3. Easements may need to be acquired by the City.

2.4.2 Bicycle Lanes

The proposed bicycle lanes listed in Table 2-3 were evaluated to determine if they could reasonably be incorporated into a bikeway system for the City of Laramie. If the determination was made that the facility was suitable for the bikeway system, the evaluation process continued to identify the improvements required to incorporate the lane into the *Laramie Bicycle Facility Master Plan*.

The primary suitability criteria used to evaluate the identified corridors was the width between the two curb faces. The ideal width for the development of a bicycle lane on a curbed street with parking on both sides is 50 feet. This width provides two 12-foot travel lanes, two 8-foot parking lanes, and two 5-foot bicycle lanes. On a curbed street with no parking 36 feet is necessary to provide two 12-foot travel lanes and two 4-foot bicycle lanes between the lip of the gutter and the travel lane. These bicycle lane widths were adopted by the Steering Committee as discussed in Section 1 of this report.

City of Laramie Standards (Revised 3/19/97) specify the width between curb faces to be 68 feet for *minor arterial* streets, and 52 feet for *collector* streets. These street widths are adequate to provide for the ideal development of bicycle lanes on curbed streets that have only two travel lanes and no additional turning lanes. However, several streets with these functional classifications do not have adequate width to meet these minimum standards, and some of these streets have additional lanes to provide for turning movements.

In situations where existing street widths and travel and parking lane configurations do not allow for the ideal development of bicycle lanes, adjustments are required to lane configurations and/or lane widths to accommodate the bicycle lanes. The following general rules were adopted by the Steering Committee to make these adjustments:

- If the existing lane width is greater than 50 feet, adequate width is available and no adjustments are required.
- If the width is between 48 feet and 50 feet, the width of the parking lane is reduced from 8 feet to 7 feet.

- If the width is between 46 feet and 48 feet, the width of the parking lane is reduced from 8 feet to 7 feet, and the width of the travel lane is reduced from 12 feet to 11 feet.
- If the width is less than 46 feet, the parking lane is eliminated from one side of the street.

These rules are applicable where bicycle lanes will be placed on curbed streets with parking on both sides. On streets where parking is prohibited there is adequate width available on all of the streets identified for lane placement. Streets without curbs are considered as individual cases.

An inventory was prepared of the existing situation on streets selected for proposed bicycle lane development. This inventory is presented in Appendix B and was used to evaluate the proposed facilities. The evaluation of the proposed facilities is presented in the following paragraphs. The minimum improvements necessary to develop a bicycle lane is the installation of striping and pavement markings to delineate the lane and create the separation between the travel lane and the bicycle lane. Additional improvements or modifications required to develop the bicycle lane are presented in the following evaluations.

Pierce Street from Snowy Range Road to 500 feet north of Washington Street

With only 30.6 feet of pavement, Pierce Street does not provide adequate width to accommodate bicycle lanes. Until such time as the pavement is widened to at least 42 feet, Pierce Street can not be incorporated into the facility plan. A width of 42 feet will allow two 12-foot travel lanes, two 4-foot shoulders, and two 5-foot bicycle lanes.

McCue Street from Curtis Street to the south terminus

No additional improvements or modifications are required to develop bicycle lanes on this street.

Cedar Street from Garfield Street to Curtis Street

No additional improvements or modifications are required to develop bicycle lanes on this street.

4th Street from Sanders Street to Curtis Street

This street has adequate width for the development of bicycle lanes from Clark Street to Garfield Street only. However, left turn lanes at Clark Street, Iverson Street, and Grand Avenue will require the elimination of parking from both sides of the street from the beginning of the channel taper to the intersection. This will essentially eliminate parking from both sides of 4th Street from Iverson Street to Grand Avenue. From Curtis Street to Clark Street the width is between 46 feet and 48 feet and the parking lanes will need to be reduced to 7 feet wide and the width of the travel lanes will be reduced to 11 feet. Since 4th Street is 48 feet wide from Garfield Street to Sanders Street, the parking lanes will be reduced to 7 feet wide but the travel lanes will have the full 12-foot width.

9th Street from Spring Creek to the north Corporate Boundary

This street has adequate width for the development of bicycle lanes from the north corporate boundary to Grand Avenue. However, left turn lanes at Lewis Street, Iverson Street, and Grand Avenue will require the elimination of parking from both sides of the street from the beginning of the channel taper to the intersection. From Grand Avenue south to Spring Creek channel 9th Street is only 45 feet wide and the development of bicycle lanes will require the elimination of parking on one side. The east side of the street appears to be the best choice to eliminate parking since an apartment complex and a school, both of which have off-street parking, occupy two of the blocks.

15th Street from Skyline Road to the north end of 15th Street

Bicycle lanes can be developed on 15th Street from the north end to Bradley Street and from Garfield Street to Skyline Road. The I-80 overpass bridge has an 8-foot wide sidewalk on the east side that is separated from the travel lane by a concrete wall. This sidewalk provides a bicycle lane over the bridge and down to Skyline Road. This sidewalk only serves the northbound bicyclist, and a bicycle lane will need to be marked on the west side of the bridge and the approaches to accommodate southbound cyclists. The pavement width on the approaches and the bridge is approximately 29 feet which is adequate for two 11.5-foot wide travel lanes and a 6-foot wide bicycle lane.

The left-turn lanes at Reynolds Street and Harney Street will require the elimination of parking from the beginning of the channel taper to the intersection. However, parking will not need to be eliminated north of Reynolds Street since 15th Street has a width of 68 feet at this location. Striping and pavement marking at the Reynolds Street intersection will require special attention since this intersection has an offset alignment.

The segment of 15th Street from Grand Avenue to Garfield Street is 52 feet wide and parking is prohibited in this reach. This width is adequate to provide two 12-foot travel lanes, a left-turn lane, and two 6-foot bicycle lanes. However, the northbound right-turn lane makes it impossible to place lanes in this reach of 15th Street without removing either the left-turn or right-turn lane.

The portion of 15th Street between Bradley Street and Grand Avenue divides the University of Wyoming Campus and requires special attention. Although the width in this segment varies from 50 feet to 56 feet, and there is no parking permitted in this reach, the presence of multiple travel and turning lanes hampers the development of bicycle lanes. Placing lanes in this reach will require modifying the lane configuration to include only three 12-foot wide travel lanes with the center lane being left turn lanes or painted islands. Two 6-foot wide bicycle lanes can then be developed on both sides of the street.

The Steering Committee evaluated this street segment extensively and concluded that the portion of 15th Street from Bradley Street to Garfield Street should be designated as a bicycle route rather than a bicycle lane. This designation does not provide any striping or pavement markings, but simply provides a sign warning motorists that the roadway is to be shared with bicyclists.

The majority of this segment of 15th Street has a posted speed limit of 20 mph. Further, the majority of bicyclist who travel this route are commuters with a relatively higher ability since less experienced riders will select alternative routes to avoid this segment. For these reasons the route designation, which results in the integration of the cyclist with automobile traffic, is considered practical until a more definitive solution is developed for this situation.

22nd Street from the north terminus to Spring Creek Drive

This street has adequate width for the development of bicycle lanes from the north terminus to Spring Creek Drive. The reach between Willett Street and Grand Avenue has a width of only 46 feet. This width is sufficient, however, since parking is not permitted on the west side of the street. Left-turn lanes at Harney Street and the left-turn lane on the north side of Willett Street will not hinder lane development since parking is not permitted in these locations. However, the left-turn lane on the south side of Willett Street will necessitate the removal of parking from the east side of 22nd Street from the beginning of the channel taper to the intersection, and the reduction in the width of the left-turn lane from 12 feet to 11 feet. In the segment between Reynolds Street and the north terminus, stop signs will need to be installed at four currently uncontrolled intersections.

30th Street from Reynolds Street to Spring Creek channel

This street has adequate width for the development of bicycle lanes from Reynolds Street to the Spring Creek channel, as long as only one travel lane is provided in each direction. It will not be possible to accommodate bicycle lanes if two additional travel lanes are added to this street. The northbound right-turn lane on the south side of Grand Avenue will need to be eliminated to accommodate the bicycle lane. Elimination of this lane will require further analysis by the Street Department.

Inca Drive from Grays Gable Road to Reynolds Street

The only additional modifications required to develop bicycle lanes on this street are the installation of stop signs on Hildago Drive and Alta Vista Drive, and on Inca Drive at Reynolds Street.

Boulder Drive from Garfield Street to Grand Avenue

No additional modifications are required to develop bicycle lanes on this street as long as parking is not permitted on at least one side of the street.

Skyline Road from 15th Street to I-80 Eastbound Lane Ramp at 3rd Street

No additional modifications are required to develop bicycle lanes on this street. The center-turn lane along Skyline Road does not present a problem since parking is not permitted on this street.

Corthell Road from Sheridan Street to Whitman Street

No additional modifications are required to develop bicycle lanes on this street. Special attention will be required in the design of the striping plan for the intersection of Corthell Road and Sheridan Street.

Sheridan Street from 4th Street to Spring Creek Channel

This street has adequate width to develop bicycle lanes from 4th Street to 9th Street and from 15th Street to the Spring Creek channel. Placing lanes from 9th Street to 15th Street will require the elimination of parking on both sides of the street since this segment has a width of only 40 feet. Special attention will be required in the design of the striping plan for the intersection of Sheridan Street and 15th Street since this intersection has an offset alignment.

Snowy Range Road from Garfield Street to Hayes Street

Bicycle lanes can be developed from Garfield Street to the I-80 interchange by placing pavement markings in the paved shoulders. The speed limit posted for this area needs to be reduced to 40 mph. Through the I-80 interchange special attention will be required in the design of the lane marking configuration to provide for safe passage of the bicyclist. From the I-80 interchange to Pierce Street, the width of the five travel lanes will need to be 11 feet to allow for the development of two 6-foot bicycle lanes. From Pierce Street to Hayes Street the width of the four travel lanes will need to be 11 feet to develop two 5-foot bicycle lanes while providing two 7-foot parking lanes. The eastbound left-turn lane at Pierce Street will require that parking be eliminated from both sides of the street from the beginning of the channel taper to the intersection.

West Garfield Street from Optimist Park to 4th Street (over Garfield Street Footbridge)

This street has adequate width to develop bicycle lanes. The Garfield Street Footbridge is not an ideal bicycle facility since it is only 6 feet wide and the slope of the approach ramps is too steep. However, even with its shortcomings, the bridge is a functional bicycle path and can be used to connect the lanes on either side. Special attention will be required in the design of the striping plan at both ends of the footbridge. Further, the diagonal parking configuration between 2nd Street and 3rd Street will need to be changed to parallel parking to accommodate the lanes.

East Garfield Street from 30th Street to Boulder Drive

No additional improvements or modifications are required to develop bicycle lanes on this street.

Grand Avenue from Boulder Drive to Bill Nye Avenue

Developing 6-foot wide bicycle lanes from Boulder Drive to a point approximately 300 feet east of Boulder Drive where the curb & gutter terminates will require the five travel lanes to have a width of 11 feet. East of this point the bicycle lanes can be developed by placing pavement markings in the paved shoulders. The speed limit posted for this area needs to be reduced to

40 mph. These lanes will be eliminated after the Grand Avenue Bicycle Path has been developed.

Ivinson Street from 4th Street to 15th Street

This street has adequate width to develop bicycle lanes from 4th Street to 9th Street. The travel lane width will need to be reduced to 11 feet from 9th Street to 15th Street since the street width in this section is only 48 feet.

Wyoming Avenue from Pierce Street to Snowy Range Road (Wyoming Highway 130)

Until such time as this street is paved to a width of at least 42 feet, Wyoming Avenue can't be incorporated into the facility plan. A width of 42 feet will allow two 12-foot travel lanes, two 4-foot shoulders, and two 5-foot bicycle lanes.

Lewis Street from 4th Street to 15th Street

The width of this street is only 47.5 feet. Consequently, parking lanes on Lewis Street will only be 7 feet wide. Further, the travel lanes will be reduced from 12 feet to 11 feet.

Harney Street from 4th Street to 30th Street

No additional improvements or modifications are required to develop bicycle lanes on this street.

Grays Gable Road from 30th Street to 45th Street

No additional improvements or modifications are required to develop bicycle lanes on this street.

Curtis Street from 3rd Street to 4th Street

No additional improvements or modifications are required to develop bicycle lanes on this street. The left-turn lanes at 3rd Street and 4th Street will not hinder lane development since parking is not permitted in the segment.

Reynolds Street from 4th Street to Inca Drive

No additional improvements or modifications are required to develop bicycle lanes on this street. A portion of Reynolds Street between Ridge View Road and Frontera Drive has not been completed and it may be necessary to construct a temporary bicycle path until this segment has been constructed.

Beaufort Street from 7th Street to the east terminus

The only improvements required to develop bicycle lanes on this street is the installation of stop signs on four intersections that are currently uncontrolled.

Section 3 – Plan Description

3.1 Plan Components

The candidate bicycle facilities identified and evaluated in Section 2 were screened to determine which of the paths and lanes should be incorporated into the *Laramie Bicycle Facility Master Plan*. Selected facilities could then be analyzed further to estimate the cost of developing the component and projecting a schedule for the orderly implementation of the plan.

Once the *Laramie Bicycle Facility Master Plan* components are known, opportunities related to **enhancements** and **education** can be identified. Further, **enforcement** issues can also be identified as they relate to the success of the master plan. Changes to Laramie’s municipal codes can be recommended to enhance implementation of the bicycle plan.

Finally, the relationship of the components of the master plan to other modes of transportation available in Laramie can be explored to foster the intermodal integration of all transportation facilities.

3.1.1 Bicycle Paths

The evaluation of the candidate bicycle paths listed in Table 2-2 resulted in the selection of all of the paths for further analysis for possible incorporation into the facility plan.

3.1.2 Bicycle Lanes

All of the bicycle lane segments presented in Table 2-3 were also selected except for the bicycle lanes proposed for Pierce Street and Wyoming Avenue. Improvements required to develop lanes on Pierce Street and Wyoming Avenue would include major street reconstruction to provide a suitable surface and adequate width. Since this street reconstruction will likely occur as part of a major improvement district, the Steering Committee elected to have the *Laramie Bicycle Facility Master Plan* provide connection to West Laramie and have bicycle facilities in West Laramie developed in conjunction with the improvement district.

3.1.3 Trailheads

The *Laramie Bicycle Facility Master Plan* identifies trailheads along the proposed bicycle paths and bicycle lanes. These trailheads are connection points to roads and trails outside the Laramie corporate limits that may be available for use by bicyclists and pedestrians. Trailheads are also identified to connect proposed bicycle facilities with bicycle facilities on the UW campus. Trailheads are shown on Plate 1. Since trails outside of the corporate limits are generally on private land, it is the responsibility of bicyclists and pedestrians to coordinate use of the trail with the landowner. The Steering Committee recommends further dialogue between the City, County, and private landowners to further define trailheads and available trails.

3.2 Development Costs

3.2.1 Bicycle Paths

Estimates of the cost to develop the selected bicycle paths were generated and are presented in Appendix C. The estimated costs include: 1) the cost of anticipated construction; 2) a 25% contingency to allow for the construction of unanticipated items and for variations in quantities and prices; and, 3) an amount equal to 25% of the total of the anticipated construction cost and the contingency for engineering services during design and construction. Estimated prices are at 1998 price levels and no allowance is made for escalation of the costs to the period of construction. Prices do not include right-of-way and easement acquisition or the costs of the City of Laramie for internal management and legal services.

Table 3-1 below presents the total estimated development costs for each of the proposed bicycle lanes.

Table 3-1: Estimated Costs for Bicycle Paths

Name of Path	Amount
Laramie River Greenbelt	\$600,000
Coalmont RR	\$340,000
West Spring Creek	\$1,050,000
Central Spring Creek	\$445,000
East Spring Creek	\$330,000
4 th Street	\$40,000
22 nd Street	\$8,000
Grand Avenue	\$363,000
Total Estimated Path Cost	\$3,176,000

The path cost estimates were based on using asphalt pavement rather than a concrete surface. Both types of surface are widely used for path construction but asphalt was selected because of the greater advantage of this option. In addition to its lower construction cost, \$40 per foot rather than \$75 per foot for concrete, asphalt provides a better surface for walking, jogging, bicycling, rollerblading, and skateboarding. Maintenance and repair is also easier and less expensive with asphalt.

For concrete, on the other hand, maintenance and repair is less frequent than with asphalt, but repair costs are generally significantly higher when they do occur.

The cost estimates presented in Appendix C and summarized in Table 3-1 required certain assumptions relative to the selection of facilities. These assumptions are discussed in the following paragraphs.

The **West Spring Creek Bicycle Path** includes a separate overpass for bicyclist to move across the railroad tracks. Other options should be identified and evaluated, including utilizing the I-80 bridge in some fashion.

The **West Spring Creek Bicycle Path** and the **East Spring Creek Bicycle Path** projects include modifications to existing bridges to allow passage under the bridge by users of the path. This modification generally includes constructing a floor in the north bay of the structure. The floor would be above the 10-year flood elevation and the other bay or bays may need to be modified to effectively convey low flows without encroaching on the bicycle path.

3.2.2 Bicycle Lanes

Placing bicycle lanes on streets includes the following:

1. painting a 6-inch wide white stripe on the left side of the lane, and a 4-inch wide white stripe on the right side of the lane; and,
2. painting bicycle decals in the lane at the beginning of every block or at a minimum spacing of 400 feet.

This study recommends that signs not be used to designate bicycle lanes. The benefit derived from these signs does not justify their expense and the visual clutter they create.

The cost to paint the stripes is estimated at \$0.08 per foot of stripe, or \$0.32 per foot of street since there are four stripes for each street. The estimated cost to paint the bicycle pavement markings is \$15 each or \$30 for each 400 feet, or about \$0.08 per foot of street. The resulting total estimated cost to develop a bicycle lane on the street is \$0.40 per foot of street. However, a price of \$0.70 per foot is used in this estimate to allow for: 1) the removal of striping in some of the streets; 2) special striping, pavement marking, and signage at intersections; 3) improving the condition of the pavement edge adjacent to the gutter by milling or filling; and, 4) design and construction engineering services.

Table 3-2 on page 3-4 presents the estimated cost to develop the bicycle lanes.

Table 3 -2: Estimated Costs for Bicycle Lanes

Name of Lane	Amount
McCue Street	\$1,820
Cedar Street	\$4,340
4 th Street	\$6,335
9 th Street	\$8,190
15 th Street	\$10,570
22 nd Street	\$6,811
30 th Street	\$4,480
Inca Drive	\$980
Boulder Drive	\$245
Skyline Road	\$2,800
Corthell Road	\$2,870
Sheridan Street	\$6,727
Snowy Range Road	\$4,200
West Garfield Street	\$1,855
East Garfield Street	\$2,170
Grand Avenue	\$4,200
Ivinson Street	\$2,835
Lewis Street	\$2,765
Harney Street	\$6,657
Grays Gable Road	\$3,675
Curtis Street	\$280
Reynolds Street	\$8,183
Beaufort Street	\$3,150
Total Estimated Lane Cost	\$96,138

3.3 Enhancement, Education, Enforcement

3.3.1 Enhancement

Generally, the bicycle lane and path facilities proposed will enhance the bicycle experience for the commuter, recreationalist, Group B/C bicyclist as well as the Group A bicyclist. In addition to the proposed path and lane facilities, maintenance of these facilities plays a significant role in enhancing the bicycling experience.

This study recommends a program for painting/stripping of the bicycle facilities on an annual basis. For the most part, existing collector and minor arterial streets provide adequate “structural geometry” to provide bicycle lanes consistent with applicable criteria; however if the intent is not clearly delineated (i.e. durable pavement markings), the bicyclist will not experience the “comfort” of their “own” space. Pavement markings must adhere to consistent standards to provide for a level of expectation for both the motorist as well as the bicyclist. As well, pavement markings must be kept visible at all times. Good pavement marking visibility requires quality control in both the specified paint product and application of this product.

This study recommends development of a program for sweeping of both lanes and paths on a regular basis. As well, to extend the time period each year of bicycle facility use, snow removal activities must be conducted to maintain paths and lanes clear for use. Furthermore, this plan recommends that all physical surfaces and appurtenances, including manholes and inlets, be improved and maintained to be compatible with the use of the bicycle lane.

Other enhancements such as vista areas, points of interest markers, benches, tables located at strategic locations along lanes and paths enhance the experience for the recreational and /or Group B/C bicyclist, as well as provide a “rest spot” for the Group A bicyclist.

To identify Laramie as a bicycle-friendly community, and to make motorists aware of bicyclists on Laramie streets, the Steering Committee recommends installation of “SHARE THE ROAD” signs on highways entering Laramie. These signs should be placed on Grand Avenue, Highway 130, Highway 230, and on the north and south ends of 3rd Street.

A critical enhancement to bicycle transportation is the development of bicycle parking facilities. If the City of Laramie wishes to increase the use of the bicycle as an alternative form of transportation, then facility improvements such as secure and convenient bicycle parking are necessary. Unless bicycle paths and lanes are accompanied by such supporting infrastructure, it is unlikely that they will be used to their full potential.

Generally, the type of parking design ranges from lockers and enclosed storage areas, to racks that allow wheels and frames to be locked, or which permit users to lock bicycles to supportive posts, racks, or rails. A general guideline is that bicycle parking should be free, unless bicycle lockers are installed. Because of the higher costs associated with installing and maintaining lockers, users should expect to pay for the use of this space.

3.3.2 Education

The proposed lane and path facilities provide an enhanced experience for bicyclists of all types and ages. Education of bicyclists as well as motorists and pedestrians will further enhance the experience for ALL. Education must be multi-faceted to “connect” with all potentially impacted travelers.

This study recommends:

- providing copies of the bicycle plan map free of charge for distribution at City Hall, bicycle shops, and other public areas;
- expanding the current program implemented to provide elementary school age children education and training with the use of bicycles and understanding of all markings and signage;
- using the existing bicycle registration program to provide another opportunity to educate users by distributing literature and the bicycle facility map at the time of the registration;
- requesting the State of Wyoming to add several questions to the standard drivers license exam to assess knowledge of bicycle markings and signage;
- continuing and expanding the annual “bike fairs” held each spring by the City of Laramie and the University of Wyoming;
- the Mayor and council endorsing an annual bike week or bike day, when all travelers are encouraged to ride their bicycle, with prizes provided to organizations with the highest percentage of riders, etc; and,
- taking advantage of all opportunities to provide local (or WYDOT) staff to make presentations such as educational talks and seminars.

3.3.3 Enforcement

To optimize use of the proposed bicycle lane and path facilities, it must be demonstrated to be detrimental to ALL who ignore or improperly utilize these facilities, or fail to appropriately yield to users.

Recommendations for modifications to existing City code to address enforcement of regulations pertaining to use of bicycle facilities, and also with regard to the expected regulations of “others” is presented in other Sections of this study.

This study recommends local police officials annually conduct an aggressive, visible campaign to provide warning tickets to violators. This campaign should be conducted within the first three weeks after the bicycle lanes have been painted, and should be accompanied by newspaper, radio and television educational advertisements stating the intent, procedures and results of the enforcement campaign. Local police officials should be versed through seminars, as to appropriate regulations and enforcement procedures. This “campaign” should be implemented for a short duration at intervals throughout the year, especially in the Spring when the use of bicycles increases sharply, as a reminder to ALL.

Enforcement of bicycle safety rules will primarily be the responsibility of City police and campus security officers. Schools, parents, bicycle clubs, and other user groups may assist by sponsoring events such as Bike Fairs where safe riding practices are described, or public service announcements that promote bicycle safety. Posting speed signs on bicycle lanes and paths may serve as a deterrent to speeding, as it would provide a measure for ticketing to occur. Certainly bicyclists that are using the city streets should be ticketed for moving violations along with any other motorists.

3.4 Implementation Phasing Plan

The Steering Committee selected the **Laramie River Greenbelt Bicycle Path** to be constructed as the first bicycle path project of the *Laramie Bicycle Facility Master Plan*. This path will connect the three bicycle/pedestrian path projects proposed to be constructed in the near term by: 1) WYDOT along Curtis Street; 2) UPRR from Optimist Park to a proposed park south of I-80; and, 3) LEDC through the Laramie River Business Park.

With an estimated cost of \$672,000, this project is expected to take between two and five years for full development. The actual time required for development will depend on the amount of money budgeted by the City of Laramie, and the availability of TEAL grant funding from the State of Wyoming. The project implementation period can also be shortened if other funding sources can be secured.

The Steering Committee recommends that the development of bicycle lanes on existing streets begin immediately and be completed over the next two years. The intent of the Steering Committee is that TEAL grant funding not be used for bicycle lanes. The initial development cost and the annual operation and maintenance costs should be incorporated into the established budgetary process.

These two major undertakings, the construction of the **Laramie River Greenbelt Bicycle Path** and the development of the bicycle lanes, constitute the near-term implementation plan discussed at the outset of this study. The remaining bicycle paths listed in Table 2-3 formulate the long-term vision of the *Laramie Bicycle Facility Plan*. After the near-term plan has been implemented, the projects identified in the long-term vision plan will be evaluated by the Steering Committee to prioritize a new implementation plan.

3.5 Intermodal Transportation Relationships

This section of the report discusses the present and potential relationships between bicycle transportation and other modes of transportation utilized in the City of Laramie. The principal modes of transportation are identified and discussed relative to their current situation and possible integration into the *Laramie Bicycle Facility Master Plan*. In addition to the general categories of pedestrian, bus, air, train, and taxi, the specific programs of the University of Wyoming Campus Shuttle Service and the Laramie Public Assisted Transportation Service (PATs) are addressed.

Automobile: This mode of transportation, which includes cars, trucks, motorcycles, and other forms of motorized vehicles that use public roadways, is directly related to bicycle transportation since these vehicles use the streets of Laramie. Implementing the proposed bicycle facility plan will impact automobile traffic in three principal ways:

1. construction and use of separated bicycle paths will reduce the numbers of automobiles competing for space on the roadways;
2. developing bicycle lanes will increase the confidence of both the bicyclist and the motorists by clearly identifying the portion of the street restricted for the exclusive use of each; and,
3. development and increased use of bicycle facilities will reduce automobile volume and competition for limited parking spaces as motorists choose to cycle rather than drive.

As motorists and bicyclists become accustomed to bicycle lanes on Laramie streets, the transportation experience of each will be enhanced.

Pedestrian: The proposed bicycle paths will provide pedestrians with commuting and recreational facilities that currently do not exist in Laramie. Opportunities for walkers and joggers are currently limited to sidewalks and the paths constructed in the City parks. Although pedestrians, bicyclists, rollerbladers, skateboarders, and other forms of nonmotorized transportation will share the proposed paths, the design of the path anticipates this multiple use to maximize the enjoyment of all users.

A second way in which implementation of the proposed plan will improve the situation for pedestrians is in the reduction of the potential conflicts on the sidewalks. Although current City ordinances prohibit bicyclists from riding on sidewalks, many bicyclists use the sidewalks because streets are not perceived as safe. Developing bicycle lanes will encourage bicyclists to use the streets thereby reducing the potential for bicycle and pedestrian conflicts on sidewalks.

Air: Air transportation facilities are provided at Laramie Regional Airport located approximately two miles west of Laramie on Highway 130. Both commercial and general aviation services are available at the airport. While probably limited in use, providing bicycle parking and storage facilities at the airport to accommodate individuals traveling to the airport would nonetheless enhance integration of air transportation with bicycle users, both airport employees and passengers.

Train: There is currently no passenger train service to the City of Laramie. Consequently there is no opportunity to integrate train travel with bicycle facilities.

Bus: The City of Laramie is presently served by Greyhound Bus Lines at its facility on the east end of Grand Avenue. A program that allows bicyclists to carry their bicycles on buses to travel between cities would enhance the intermodal relationship between bicycle and bus travel. Bicycle parking and storage facilities at the bus station would also encourage this relationship.

Taxi: Laramie Cab & Currier Company operates three taxicabs daily until midnight with hours extended to 3:00am on Friday and Saturday nights. There is no apparent opportunity to integrate this taxicab service with bicycle facilities.

UW Campus Shuttle Service: The University of Wyoming Campus Shuttle Service operates on a published schedule from about 7:00am to 6:00pm on University scheduled class days. Buses with a capacity of approximately thirty passengers depart from sixteen locations on campus on 30-minute intervals to provide transportation around campus from 9th Street to 30th Street. This service offers campus commuters an alternative to bicycle and pedestrian transportation, in particular during periods of inclement weather. Equipping these buses with bike carriers would allow riders to travel to the main part of campus by bus then travel around campus on their bicycle. These bike carriers would also allow commuters the option to make one leg of their trip by bicycle, an option that would be particularly attractive if the return trip occurs after the last scheduled bus departure.

Laramie Public Assisted Transportation Service (PATS): The Eppson Center for Seniors, located on north 3rd Street at Curtis Street, operates this bus service using three buses, capable of carrying 12-14 passengers, and a 7-passenger van. The buses are ADA accessible and the service is available on an “on-call” basis throughout Albany County to riders of all ages. Preference is given to medical trips but transportation is provided for all purposes. PATS buses are available for transportation from 8:00am to 4:00pm Monday through Friday with future plans to extend the service later in the day and into the weekend. Although the buses operate on an “on-call” basis, one of the buses runs daily routes to transport riders to and from work and to the Eppson Center for Seniors for lunch and other activities. Similar to the UW Campus Shuttle Service, equipping the PATS buses with bike carriers would enhance the intermodal relationship between this bus service and bicycle facilities.

3.6 Municipal Code Analysis

Sections of the Laramie City Code were reviewed in order to propose recommendations for strengthening the Code in relation to bicycle facilities. Bicycle use can be greatly enhanced by the adoption of City policies, plans, and ordinances that include language in support of bicycle facilities. In some cases, simple language additions to existing codes will be all that is necessary to demonstrate the community’s commitment for the expanded use of bicycles. Maintaining a planning document that provides implementation strategies and which is routinely updated is also important for successful bicycle facility planning. In other instances, new ordinances will need to be written to better support bicycling as a viable option to automobile use.

3.6.1 Existing Codes

The two Chapters of the Laramie City Code reviewed for this study included *Chapter 10.32, Bicycles*, and *Chapter 16, Subdivisions*.

Comments pertaining to *Chapter 10.32, Bicycles*, follow below.

- Add definitions of bicycle lanes, paths, and routes at the beginning of Chapter 10.32, as defined by the Steering Committee in the *Laramie Bicycle Facility Master Plan*.
- Add paragraphs regarding design standards for bicycle routes, lanes, and paths. It is recommended Laramie use standards found in *Final Draft, Guide for the Development of Bicycle Facilities*, February 1998, prepared by the American Association of State Highway and Transportation Officials (AASHTO) Task Force on Geometric Design.
- Insert a new paragraph following 10.32.100 that outlines a bicyclist's rights and duties when riding on a bicycle path.
- Consider revising 10.32.150 regarding riding on roadways. Is it necessary to prohibit roadway use by bicyclists when a path or lane is available? What is gained by maintaining this regulation?
- AASHTO guidelines for bicycle facilities do not recommend sidewalk bicycle paths. Therefore, language in 10.32.180 should be modified to simply prohibit the riding of a bicycle on city sidewalks, since according to AASHTO sidewalks should not be part of any designated and marked bicycle path.
- Note that speed limits should be posted on the bicycle route, lane, or path (10.32.220).

A review of *Chapter 16, Subdivisions*, was also conducted. Recommendations for incorporating bicycle facilities into the regulations are as follows.

- Add a definition of bicycle facilities in Chapter 16.08. Include as part of that definition a description of bicycle routes, lanes, and paths. Again, use the definitions prepared by the Steering Committee.
- Refer to the 1998 AASHTO guidelines for route, path, and lane design standards and include in a new paragraph within Chapter 16.12 (Design Requirements).
- Elevate the importance of bicycle facilities by adding discussion in sections 16.12.210, Conformance with City Plans, and 16.16.010 (E), Preparation -- Contents. This will clearly call out that bicycle facilities must be included and considered in plat development.
- Add bicycle facilities to the final plat contents listed within 16.20.030. Paragraphs A and C are the most appropriate location.
- Insert bicycle paths or lanes under 16.24.010 (C), Requirements Enumerated.

Another option the City may wish to consider is new language within the Subdivision Code which requires preliminary and final plats to be designed with interconnection to existing and planned bicycle lane or path systems to adjoining subdivisions and/or adjoining land uses. This creates a mechanism for designing and mandating an interconnected bicycle lane or path system shall be developed as part of plat approval. The reason for this type of action is that typically the

best time to develop interconnected bicycle facilities is at the very beginning of the development process, rather than attempting to do a retrofit along existing streets after the fact.

3.6.2 Existing Plans

Planning documents currently in use should be reviewed to assess their contents pertaining to bicycle facilities and to add language where needed to further promote and stimulate bicycle use. Such documents may include the City of Laramie Master Plan, the City's capital improvement plan, park and recreation plans, land use and traffic plans for schools and the University of Wyoming, and major private development plans.

Examples of the types of language that can be added to various plans include supportive land use policies for bicycle use; encouragement of mixed use and cluster zoning, and interconnected street patterns that lend themselves to bicycle routes; schedules for specifically implementing bicycle facility improvements; uniform signage for bicycle facilities; improved bicycle access and parking; and encouragement of cooperative and coordinated transportation planning efforts among City agencies and the University.

The bicycle facility plan implemented of the University of Wyoming and the *Downtown Streetscape Master Plan* adopted by the Laramie Downtown Development Authority (DDA) specifically relate to the *Laramie Bicycle Facility Master Plan*. The plans of these two entities are presented in Appendix E to this report, and the corollary provisions of these two plans are adopted by reference into the bicycle master plan. By this adoption the Steering Committee recommends that development plans of the three entities be coordinated to maximize bicycle facility development and utilization.

It is particularly recommended that the *Laramie Bicycle Facility Master Plan* be included as a component of the *Major Street and Highway Plan*. This will increase the visibility of bicycle planning and further encourage the development of bicycle facilities by both public agencies and private developers. Specifically, the future development of *arterial streets* and *collector streets* will include the development of bicycle lanes.

3.6.3. Proposed Ordinances

A bicycle parking ordinance should be developed as part of the city's land use and zoning regulations, or as an amendment to existing parking regulations the City may have. A typical ordinance will estimate the number of required bicycle parking spaces according to the land use and the amount of required automobile parking. Locations are likely to concentrate around traffic generators such as employment and commercial centers, schools and universities, shopping centers, and recreation sites.

Section 4 – Financial Alternatives

This section describes some of the financial alternatives available, and the requirements for securing this financial assistance, for funding of the proposed bicycle facilities. Opportunities for funding of the proposed bicycle facilities include; the City of Laramie; LEDC (Laramie Economic Development Corporation) funding; the University of Wyoming; Wyoming Department of Transportation; Laramie Parks and Recreation grants; TEAL (Transportation Enhancement Activities Local) funding; bicycle registration fees; SIMMS recreation trails grants; user fees and other mechanisms. As this potential funding list demonstrates, the more widespread the funding the greater the potential to “tap” the various user groups the stronger commitment to developing and maintaining bicycle facilities to enhance the bicycling experience for both the commuter and the recreational cyclist.

These funding alternatives are further discussed below.

City of Laramie

The City of Laramie has taken a lead role in providing enhanced bicycle facilities. The City has provided administrative services for this study. As well the City will be the contracting agency for many bicycle facilities projects for application to the various funding agencies. Matching funds may be provided by the City of Laramie. As well, although oftentimes not as visible, costs to continue to administrate and coordinate a bicycle facilities enhancement program are typically provided by City staff.

Annual operation and maintenance and enforcement costs of bicycle facilities will typically be provided by the City.

Laramie Economic Development Corporation (LEDC)

The LEDC has taken an active role toward enhancing recreational opportunities, specifically along the Laramie River. The LEDC intends to apply for TEAL funding for design and construction of a bike path along the southwest side of the Laramie River, south of I-80, through the Laramie River Business Park. LEDC would provide the 20% matching funds to secure the TEAL grant.

University of Wyoming

University students, staff and faculty comprise a significant percentage of the bicycle facilities users, and improvement to these facilities would tremendously enhance and augment campus facilities thereby greatly enhancing the cycling experience.

Discussions with University of Wyoming staff indicate some funding for bicycle facilities may be available through the Associated Students of the University of Wyoming (ASUW).

Wyoming Department of Transportation (WYDOT)

As part of existing roadway improvement projects, the Wyoming Department of Transportation is funding the design and construction of bicycle facilities consistent with these Study recommendations. Potential exists to continue to include the construction of bicycle facilities in future WYDOT roadway improvement projects.

Laramie Parks and Recreation

Grants with approximately a \$2,000 limit are available through the Laramie Parks and Recreation Department for enhancement to park and recreation facilities. Application for these funds is typically made through user groups, neighborhood associations and civic organizations. Some bicycle facilities would “fall” within the guidelines for this funding.

Transportation Enhancement Activities Local (TEAL)

TEAL funds are provided to Wyoming through the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and administered by the Wyoming Department of Transportation (WYDOT). Funding decisions are made by the Wyoming Transportation Commission based on recommendations of the advisory committee consisting of representatives of Wyoming Association of Municipalities (WAM), County Commissioners Association, Federal Highways Administration (FHWA), Bureau of Land Management (BLM) and the Forest Service.

Historically, approximately \$2,000,000 in TEAL funding is provided to municipalities, counties and agencies throughout Wyoming, annually. Typically, all design, right-of-way acquisition, and construction costs are eligible for TEAL funding. TEAL funds are usually provided on an 80/20 split with the sponsor paying 20% of the costs.

According to historic TEAL funding levels, an application for a grant of \$250,000 is a reasonable annual fundable request. The assistance of the WYDOT District Engineer is provided in all phases of TEAL funded projects; including review of planning documents, construction plans and contract documents to assure compliance with Federal standards. As the ISTEA authorization for TEAL funding has expired, and a new federal transportation bill is yet to be passed, the future of TEAL funding is uncertain. However, current proposed legislation indicates continuation of the current program.

This study is funded by TEAL funds provided through WYDOT to the City of Laramie.

Bicycle Registration Fees

Currently the City of Laramie administers a bicycle registration fee. Proceeds from this fee are dedicated to development of the Laramie River Greenbelt.

Symms Recreation Trails Grants

Symms grants are administered by the State Trails Advisory Council through the Parks and Historic Sites Division of the Department of Commerce and Development Block Trail Program. Some bicycle path facilities are eligible for funding through this program.

Laramie Bicycle Facility Master Plan

Appendix A

Minutes of Steering Committee Meetings

March 12, 1998

April 22, 1998

May 20, 1998

Laramie Bicycle Facility Master Plan
Steering Committee Meeting – May 20, 1998

The following comments and action items identified during the course of the study have not been incorporated or completed as of the 2nd draft of the report. The comments and action items are presented below along with a proposed resolution.

1. *COMMENT:* Figure 1-1 should include plan views as well as the cross-sections.
PROPOSED RESOLUTION: Plan view perspectives will be added to the figure; two figures will be developed.
2. *COMMENT:* A 20-foot sanitary sewer easement along Spring Creek from 15th Street to Corthell Road could possibly be used as a bicycle path, or may present a utility conflict.
PROPOSED RESOLUTION: Add discussion that the final alignment of the Spring Creek Bike Paths will be selected after further investigation, and that the alignment may be on the south side of the channel rather than the north side.
3. *COMMENT:* There is an existing handicap path through LaPrele Park at 22nd Street and this path might be suitable for use as a bicycle path. *PROPOSED RESOLUTION:* Add discussion that use of this path will be investigated prior to final development.
4. *COMMENT:* Page 2-6, second paragraph, last sentence, states *principal arterials* should be avoided for development of bicycle lanes whereas bicycle lanes are proposed for Grand Avenue and Snowy Range Road. *PROPOSED RESOLUTION:* Add a statement that development of lanes on *principal arterials* will be considered in instances where lanes are clearly needed and reasonable alternatives do not exist, and that the recommended posted speed limit on *principal arterials* with bicycle lanes not exceed 40 mph.
5. *COMMENT:* Throughout the report, the name of the North Laramie River Greenbelt Bike Path should be changed by deleting “North” since the South Laramie River Greenbelt Bike Path has been eliminated. *PROPOSED RESOLUTION:* This name change will be made.
6. *COMMENT:* Page 2-12, first full paragraph, last sentence, “west” should be “east”.
PROPOSED RESOLUTION: This change will be made.
7. *COMMENT:* Page 2-15, first paragraph, add a statement that this lane will be eliminated after the Grand Avenue Bike Path has been constructed. *PROPOSED RESOLUTION:* This statement will be added.
8. *COMMENT:* Page 3-5, 3rd and 5th bullets, a registration program currently exists and bike fairs are currently held annually. *PROPOSED RESOLUTION:* The text will be modified to recognize these items.
9. *COMMENT:* Add the street names for Wyoming Avenue, Garfield Street (east) and Boulder Drive to the map. *PROPOSED RESOLUTION:* These names will be added to the map. Wyoming Avenue is already named.

10. *COMMENT*: Add the two locations where UW bike facilities meet the proposed bicycle lanes on 9th Street at Clark Street, and on Iverson Street at 10th Street, as trailheads on the map. *PROPOSED RESOLUTION*: These trailheads will be added.
11. **Action Item**: **The status of the Coalmont Railroad should be investigated to determine if the right-of-way is available for a bike path. *PROPOSED RESOLUTION*: A statement will be added in Section 2.4.1 to recognize the unknown status of the railroad easement and the bridge. The City will continue researching this topic.**
12. *ACTION ITEM*: The plan for access to and utilization of areas outside City limits must coordinate with the landowners. *PROPOSED RESOLUTION*: **Section 3.1.3 Trailheads** will be added on Page 3-1 as follows: “The *Laramie Bicycle Facility Master Plan* identifies trailheads along the proposed bicycle paths and bicycle lanes. These trailheads are connection points to roads and trails outside the Laramie corporate limits that can be used by bicyclists and pedestrians. Trailheads are also identified to connect proposed bicycle facilities with bicycle facilities on the UW campus. Trailheads are shown on Plate 1. Since trails outside of the corporate limits are generally on private land, it is the responsibility of bicyclists and pedestrians to coordinate use of the trail with the landowner.”
13. *ACTION ITEM*: Issues associated with the development of a Greenbelt through the Coalmont Railroad property outside of the City limits must be addressed. *PROPOSED RESOLUTION*: These issues are addressed in the new **Section 3.1.3 Trailheads** presented above.
14. *ACTION ITEM*: Research the 43-foot easement from McCue Street to the Laramie River at Lyon Street as a possible bike path to connect the McCue Street bicycle lanes with the Laramie River Greenbelt bicycle path. *PROPOSED RESOLUTION*: According to Joel Coffey, there is no easement at this location. However, there is an unplatted strip of land, approximately 60 feet wide, between the north line of Lot 1, Block 3, of the McCue Addition, and the south line of Lot 3, Block 1, of the Riverfront Addition, that may be suitable for development of a bicycle path. This strip of land is immediately north of the Wyo Tech dorms and opposite Baker Street. Further research is required and text will be added to page 2-8 recommending that this corridor be considered to develop a path connecting the Laramie River Greenbelt Bike Path with McCue Street.
15. *ACTION ITEM*: Add a general note to the report stating that the future development of *arterial streets* and *collector streets* will include bicycle lanes. *PROPOSED RESOLUTION*: This text will be included on page 3-10 at the end of the last paragraph under Section 3.6.2.
16. *ACTION ITEM*: The WYDOT District Office will be contacted to discuss the development of bicycle lanes on Grand Avenue east of Boulder Drive, and Snowy Range Road from Garfield Street to the “Y”. *PROPOSED RESOLUTION*: The proposed bicycle lanes were presented to Jay Gould and Pat Persson on April 30. No comments have been received and no changes will be made to the report without specific direction from WYDOT.

17. *ACTION ITEM:* Incorporate UW and DDA comprehensive plans into the bicycle plan report. *PROPOSED RESOLUTION:* These plans will be incorporated into the report in Section 3.6.2.
18. *ACTION ITEM:* The report will recommend that the City acquire the easement necessary for the Coalmont RR bicycle path directly rather than through the “rails-to-trails” program. *PROPOSED RESOLUTION:* This recommendation will be added to item 4 under the presentation of the Coalmont RR Bike Path on page 2-9.
19. *ACTION ITEM:* The report should state that future street reconstruction projects will evaluate the feasibility of developing bicycle lanes if the corridor is appropriate. *PROPOSED RESOLUTION:* This recommendation will be added under Section 3.6.2.
20. *COMMENT:* A path extending north and west along the ridge north of town from the east end of the East Spring Creek Bike Path to the Laramie River should be added to the bicycle master plan. The plan does not need to include a specific alignment or details relative to how the path will reach and cross the Laramie River. *PROPOSED RESOLUTION:* This proposal will be discussed by the Steering Committee.
21. *COMMENT:* Manholes and drainage inlets need to be maintained to be compatible with bicycle use. *PROPOSED RESOLUTION:* Text will be added to the 3rd paragraph on page 3-5 recommending that existing manholes and drainage inlets be improved and maintained to be compatible with use of the bicycle lane.
22. *COMMENT:* “SHARE THE ROAD” bicycle signs should be posted at the entrances to the City to identify Laramie as a bicycle-friendly community and to warn motorists to be cognizant of bicyclists on Laramie streets. *PROPOSED RESOLUTION:* Text will be added under **Section 3.3.1 Enhancement** recommending installation of “SHARE THE ROAD” signs on Grand Avenue, Highway 130, Highway 230, and on the north and south ends of 3rd Street.
23. *COMMENT:* Asphalt is a better surface for rollerblading and skateboarding than concrete. *PROPOSED RESOLUTION:* The text on page 3-2 will be modified accordingly.
24. *COMMENT:* The report is silent regarding the use of bicycle lanes by rollerbladers, skateboarders, rollerskiers, and pedestrians, i.e. runners and joggers. *PROPOSED SOLUTION:* Pleasure of the Steering Committee.

Laramie Bicycle Facility Master Plan

Appendix B

Inventory of Proposed Bicycle Facilities

Appendix B

Inventory of Proposed Bicycle Lanes

Existing streets were identified for potential development as bicycle lanes. This inventory was prepared to determine the suitability of the identified streets and improvements required for this development. The following list identifies the parameters included in the inventory and the source of the data.

Functional Classification: Taken from map titled *Urban Roadway Functional Classification, Laramie, Albany County, Wyoming, 1992* prepared by the Wyoming Department of Transportation (WYDOT) and obtained from the Laramie/Albany County Planning Office.

Length: Scaled from 1" = 600' map received from the City Engineer's Office.

Width: For the majority of the identified street segments, the widths were obtained from a tabulation provided by the City Engineer's Office, or from direct communication with a representative of the City Engineer's Office. The tabulation was based on field measurements. For identified street segments not included in the tabulation, width dimensions were obtained from construction plans, the database contained in the MicroPAVER program maintained by the Street Department, or field estimation. These specific instances are noted in the inventory.

Traffic Count Range: Taken from maps titled *1996 May Traffic Counts, Laramie, Albany County, Wyoming, 1992*, and *1993 May Traffic Counts, Laramie, Albany County, Wyoming, 1992*, prepared by the Wyoming Department of Transportation (WYDOT) and obtained from the Laramie/Albany County Planning Office.

Signal Controlled Intersections, Sign Controlled Intersections, Uncontrolled Intersections, and Left Turn Lanes: Based on personal knowledge and field observation.

Pavement Condition Index: Based on field observation.

Incompatible Storm Drain Inlets: Inlet locations were identified from a 1" = 600' map titled *Storm Sewer System* received from the City Engineer's Office. Field observations were made to identify incompatible inlets defined as inlets located in the bike lanes having openings parallel to the direction of travel that are wider than 1 inch and longer than 9 inches.

Problem Areas: Based on personal knowledge and field observation.

North - South Corridors

(Listed from west to east)

Pierce Street from Snowy Range Road to 500 feet north of Washington Street

Functional Classification: Collector

Length: 4,200 feet, 0.80 miles

Width: 30.6 feet Snowy Range Road to VanBuren, no curb & gutter
No pavement VanBuren to 500 feet north of Washington

Traffic Count Range: 1996: 2,241 - 2,396 1993: 1,822 - 1,866

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.

McCue Street from Curtis Street to the south terminus

Functional Classification: Collector

Length: 2,600 feet, 0.49 miles

Width: 52.0 feet Curtis Street to south terminus

Traffic Count Range: 1996: 3,678 1993: 3,095

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Heavy semi-truck traffic from Pilot Truck Stop in southwest quadrant of intersection of McCue Street and Curtis Street.

Cedar Street from Garfield Street to Curtis Street

Functional Classification: Collector

Length: 6,200 feet, 1.17 miles

Width: 51.7 feet Garfield to Curtis

Traffic Count Range: 1996: 1,818 - 3,085 1993: 2,348 - 3,291

Signal Controlled Intersections: Snowy Range Road

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Railroad crossing north of Flint Street – abandoned Coalmont Branch

4th Street from Sanders Street to Curtis Street

Functional Classification: Collector

Length: 9,050 feet, 1.71 miles

Width: 46.5 feet Curtis to Lewis

47.5 feet Lewis to Clark

54.0 feet Clark to Garfield

48.0 feet Garfield to Sanders

Traffic Count Range: 1996: 979 – 4,028 1993: N/A

Signal Controlled Intersections: Harney, Clark, Ivinson, Grand

Sign Controlled Intersections: Russell

Uncontrolled Intersections: none

Left Turn Lanes: Clark, Ivinson, Grand

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Elementary school, Kearney to Sheridan

Fire station, Ivinson to Grand

9th Street from Spring Creek channel to the north corporate boundary

Functional Classification: Collector

Length: 11,700 feet, 2.22 miles

Width: 52.0 feet north corporate boundary to Curtis
 58.1 feet Curtis to Reynolds
 52.5 feet Reynolds to Shield
 51.1 feet Shield to Grand
 45.0 feet Grand to Spring Creek channel

Traffic Count Range: 1996: 1,567 - 8,055 1993: 1,657 - 5,996

Signal Controlled Intersections: Reynolds, Harney, Lewis, Ivinson, Grand

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: Lewis, Ivinson, Grand

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: UW campus, Lewis to Grand

15th Street from Skyline Road to the north end of 15th Street

Functional Classification: Minor Arterial

Length: 15,100 feet, 2.86 miles

Width:

68.0 feet	north end of 15 th to Renshaw
68.0 feet	Renshaw to Reynolds (Street Department)
50.0 feet	Reynolds to Shield
52.0 feet	Shield to Bradley
56.0 feet	Bradley to cemetery entrance
46.5 feet	cemetery entrance to Lewis
50.0 feet	Lewis to Willett
51.0 feet	Willett to Sorority Row
51.5 feet	Sorority Row to Ivinson
52.0 feet	Ivinson to Sheridan
51.0 feet	Sheridan to Palmer
78.0 feet	Palmer to alley south of Palmer
68.0 feet	alley south of Palmer to 7 Acres Road
29.0 feet	I-80 overpass; 8-foot sidewalk with concrete wall on east side
unknown	I-80 overpass to Skyline Road; widens from 29 feet

Traffic Count Range: 1996: 1,070 - 12,668 1993: 1,815 - 11,999

Signal Controlled Intersections: Reynolds, Harney, Willett, Sorority Row, Ivinson, Grand, Sheridan, Spring Creek

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: Reynolds, Harney, Willett (southbound), Fraternity Row (southbound), Ivinson (northbound), Grand

Additional Lanes: **Southbound:** right turn lane at Lewis; second travel lane from just north of Sorority Row to Grand, second lane is a right turn only lane at Grand
Northbound: right-turn lane at Grand, second travel lane from Grand to Lewis

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: UW campus from Grand to Bradley;
Cemetery entrance between Lewis and Bradley;
steep grades Shield to Bradley and over I-80
narrow bridge over I-80
offset intersection alignment at Reynolds

22nd Street from the north terminus to Spring Creek Drive

Functional Classification: Collector

Length: 9,730 feet, 1.84 miles

Width:

52.0 feet	north Terminus to Reynolds (Street Department)
51.5 feet	Reynolds to south of LJHS
52.0 feet	south of LJHS to Willett (plans)
46.0 feet	Willett to Grand (Street Department)
51.0 feet	Grand to Garfield
55.5 feet	Garfield to Rainbow
55.0 feet	Rainbow to Spring Creek Drive

Traffic Count Range: 1996: 974 - 4,777 1993: 412 - 2,110

Signal Controlled Intersections: Grand

Sign Controlled Intersections: Reynolds, Harney, Willett, Sheridan

Uncontrolled Intersections: Trabling, Nighthawk, Curtis, Henry

Left Turn Lanes: Harney, Willett, Grand

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Laramie Junior High School east of 22nd at Reynolds
Steep grade a short distance north of Harney

30th Street from Reynolds Street to Spring Creek channel

Functional Classification: Minor Arterial

Length: 6,400 feet, 1.21 miles

Width: 52.0 feet Reynolds to Spring Creek channel

Traffic Count Range: 1996: 3,094 - 10,046 1993: 3,037 - 10,701

Signal Controlled Intersections: Harney, Grand

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: Grand

Additional Lanes: **Northbound:** right turn lane at Grand

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Steep grade a short distance north of Harney

Inca Drive from Reynolds Street to Grays Gable Road

Functional Classification: Collector

Length: 1,400 feet, 0.27 miles

Width: 52.0 feet Reynolds to ½ block north of Hildago (Street Department)
52.0 feet ½ block north of Hildago to Grays Gable Road

Traffic Count Range: 1996: 701 1993: 792

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: Hildago, Alta Vista

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.

Boulder Drive from Grand Avenue to Garfield Street

Functional Classification: Local

Length: 350 feet, 0.07 miles

Width: 44.0 feet Grand to Garfield (*Collector* street standard)

Traffic Count Range: 1996: N/A 1993: N/A

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.

East - West Corridors
(Listed from south to north)

Skyline Road from 15th Street to I-80 Eastbound Lane Ramp at 3rd Street

Functional Classification: Minor Arterial

Length: 4,000 feet, 0.76 miles

Width: 52.0 feet 15th to I-80 (Street Department)

Traffic Count Range: 1996: 2,458 - 3,247 1993: 2,031 - 2,651

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: continuous through entire reach

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.

Corthell Road from Sheridan Street to Whitman Street

Functional Classification: Collector

Length: 4,100 feet, 0.78 miles

Width: 50.5 feet Sheridan to Spring Creek bridge
52.0 feet Spring Creek bridge to Whitman

Traffic Count Range: 1996: 1,528 - 3,691 1993: 940 - 2,369

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none, channel island at Sheridan

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Spring Creek crossing

Sheridan Street from 4th Street to Spring Creek channel

Functional Classification: Collector

Length: 9,610 feet, 1.82 miles

Width: 48.0 feet 4th to 10th
40.0 feet 10th to 15th
51.0 feet 15th to 18th
59.5 feet 18th to Corthell
51.0 feet Corthell to 24th
52.0 feet 24th to Spring Creek channel (Street Department)

Traffic Count Range: 1996: 2,038 - 4,641 1993: 1,991 - 4,391

Signal Controlled Intersections: 15th

Sign Controlled Intersections: 9th

Uncontrolled Intersections: cul-de-sac west of 21st

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Sheridan Street is offset at the 15th Street intersection
Elementary schools: 17th to 18th; 24th to 25th

Snowy Range Road from Garfield Street to Hayes Street

Functional Classification: Principal Arterial

Length: 6,000 feet, 1.14 miles

Width: 76.0 feet Garfield to I-80 interchange, five 12-foot lanes, two 8-foot shoulders, no curb & gutter (WYDOT plans)
68.0 feet I-80 interchange to Pierce Street, five 12-foot lanes (City standard for arterial street assumed)
68.0 feet Pierce to Hayes Street, four 12-foot lanes plus parking on both sides (City standard for arterial street assumed)

Traffic Count Range: 1996: 7,209 - 11,295 1993: 7,019 - 10,732

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: eastbound at Pierce, continuous left-turn lane Pierce to Garfield

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: I-80 interchange

West Garfield Street from Optimist Park to 4th Street (over Garfield Street Footbridge)

Functional Classification: Collector - Optimist Park to Cedar and 1st Street to 4th Street
Local – Cedar to Pine

Length: 2,650 feet, 0.50 miles

Width: 51.2 feet Spruce (south end of Optimist Park) to Pine (west end of footbridge)

56.0 feet 1st (east end of footbridge) to 4th

Traffic Count Range: 1996: 1,157 (west side) 1993: 1,283 - 1,809 (east side)

Signal Controlled Intersections: 2nd and 3rd

Sign Controlled Intersections: Cedar, 1st

Uncontrolled Intersections: Pine

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Footbridge only 6 feet wide, approach ramps very steep

Diagonal parking from 2nd to 3rd

Restricted intersection at 1st (west portion)

One-way eastbound traffic between the east end of the footbridge and 1st

East Garfield Street from 30th Street to Boulder Drive

Functional Classification: Local

Length: 3,100 feet, 0.59 miles

Width: 52.0 feet 30th to Boulder Drive

Traffic Count Range: 1996: N/A 1993: 980

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Bridge over Spring Creek channel

Grand Avenue from Boulder Drive to Bill Nye Avenue

Functional Classification: Principal Arterial

Length: 6,000 feet, 1.14 miles

Width: 68.0 feet Boulder Drive east approximately 300 feet, five 12-foot travel lanes, curb & gutter (City standard for arterial street assumed)
76.0 feet Approximately 300 feet east of Boulder Drive to Bill Nye, five 12-foot travel lanes, two 8-foot shoulders, no curb & gutter (Field observation and measurements)

Traffic Count Range: 1996: 4,388 – 6,593 1993: 4,347 – 6,412

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: continuous through entire reach

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Posted speed limit of 55 mph for majority of reach

Iverson Street from 4th Street to 15th Street

Functional Classification: Collector

Length: 4,050 feet, 0.77 miles

Width: 51.5 feet 4th to 9th
48.0 feet 9th to 15th

Traffic Count Range: 1996: 4,096 - 5,254 1993: 2,981 - 3,229

Signal Controlled Intersections: 9th

Sign Controlled Intersections: 11th (4-way)

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: UW campus from 9th to 15th

Wyoming Avenue from Pierce Street to Snowy Range Road (Wyoming Highway 130)

Functional Classification: Collector

Length: 2,450 feet, 0.46 miles

Width: 26.0 feet Pierce to Snowy Range Road, no pavement, no curb & gutter

Traffic Count Range: 1996: 391 - 955 1993: 513 - 960

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No pavement

Lewis Street from 4th Street to 15th Street

Functional Classification: Collector

Length: 3,950 feet, 0.75 miles

Width: 47.5 feet 4th to 15th

Traffic Count Range: 1996: 3,471 - 5,536 1993: 3,875 - 4,864

Signal Controlled Intersections: 9th

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: UW campus from 9th to 15th
Steep grade a short distance west of 15th

Harney Street from 4th Street to 30th Street

Functional Classification: Collector

Length: 9,510 feet, 1.80 miles

Width: 52.0 feet 4th to 15th
52.0 feet 15th to 30th (plans)

Traffic Count Range: 1996: 4,980 - 6,086 1993: 2,126 - 2,678

Signal Controlled Intersections: 9th, 15th, 30th

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: 15th

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.
Steep grades between 11th and 12th and just west of 19th

Grays Gable Road from 30th Street to 45th Street

Functional Classification: Collector

Length: 5,250 feet, 1.00 miles

Width: 52.0 feet 30th to 45th

Traffic Count Range: 1996: 3,094 - 5,842 1993: 2,864 - 5,881

Signal Controlled Intersections: none

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.

Curtis Street from 3rd Street to 4th Street

Functional Classification: Collector

Length: 400 feet, 0.08 miles

Width: 50.0 feet 3rd to 4th (listed as Reynolds)

Traffic Count Range: 1996: 9,246 1993: 9,854

Signal Controlled Intersections: 4th

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: 3rd, 4th

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.

Reynolds Street from 4th Street to Inca Drive

Functional Classification: Collector

Length: 11,690 feet, 2.21 miles

Width: 50.0 feet 4th to 15th

51.5 feet 15th to 30th

52.0 feet 30th to Inca

Traffic Count Range: 1996: 4,824 - 10,384 1993: 6,385 - 11,319

Signal Controlled Intersections: 9th, 15th

Sign Controlled Intersections: none

Uncontrolled Intersections: none

Left Turn Lanes: none

Pavement Condition Index: generally poor with broken pavement, raveled edges, and debris from 9th to 15th; otherwise good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: Laramie Senior High School 11th to 15th

Laramie Junior High School 22nd to 27th

Street not yet completed from east of Ridge View to west of Frontera

Steep grade east of Ridge View

Beaufort Street from 7th Street to the east terminus

Functional Classification: Collector (future)

Length: 4,500 feet, 0.85 miles

Width: 52.0 feet 7th to 9th (estimated)
 52.0 feet 9th to 10th
 52.0 feet 10th to 13th (estimated)
 52.0 feet 13th to 15th
 68.0 feet 15th to east terminus

Traffic Count Range: 1996: N/A 1993: N/A

Signal Controlled Intersections: none

Sign Controlled Intersections: 9th, 15th

Uncontrolled Intersections: 10th, 13th, 17th, Ames Court

Left Turn Lanes: none

Pavement Condition Index: generally good except raveled edges and debris

Incompatible Storm Drain Inlets: none

Problem Areas: No specific areas identified.
Steep grade east 15th

Laramie Bicycle Facility Master Plan

Appendix C

Cost Estimates for Proposed Bicycle Paths

Appendix C

Cost Estimates For Proposed Bicycle Paths

Estimated development costs are presented in this appendix. The estimates include: 1) the cost of anticipated construction; 2) a 25% contingency to allow for the construction of unanticipated items and for variations in quantities and prices; and, 3) an amount equal to 25% of the total of the anticipated construction cost and the contingency for engineering services during design and construction. Estimated prices are at 1998 price levels and no allowance is made for escalation of the costs to the period of construction. Prices do not include right-of-way and easement acquisition or the costs of the City of Laramie for internal management and legal services.

Laramie River Greenbelt Bicycle Path

No.	Item Description	Amount
1	8,000 feet of path @ \$40	\$320,000
2	Snowy Range Road crossing	60,000
3	Laramie River Bridge south of I-80	200,000
4	Wetland mitigation	20,000
	Total Estimated Cost	\$600,000

Coalmont RR Bicycle Path

No.	Item Description	Amount
1	8,500 feet of path @ \$40	\$340,000
	Total Estimated Cost	\$340,000

West Spring Creek Bicycle Path

No.	Item Description	Amount
1	5,000 feet of path @ \$40	\$200,000
2	UPRR Overpass structure	800,000
3	Modifications to 3 rd Street structure	50,000
	Total Estimated Cost	\$1,050,000

Central Spring Creek Bicycle Path

No.	Item Description	Amount
1	11,000 feet of path @ \$40	\$440,000
2	Grade crossings, 5 @ \$1,000	5,000
	Total Estimated Cost	\$445,000

East Spring Creek Bicycle Path

No.	Item Description	Amount
1	7,000 feet of path @ \$40	\$280,000
2	Modifications to channel under Grand Avenue bridge	50,000
	Total Estimated Cost	\$330,000

4th Street Bicycle Path

No.	Item Description	Amount
1	1,000 feet of path @ \$40	\$40,000
	Total Estimated Cost	\$40,000

22nd Street Bicycle Path

No.	Item Description	Amount
1	200 feet of path @ \$40	\$8,000
	Total Estimated Cost	\$8,000

Grand Avenue Bicycle Path

No.	Item Description	Amount
1	9,000 feet of path @ \$40	\$360,000
2	Grade crossings, 3 @ \$1,000	3,000
	Total Estimated Cost	\$363,000

Laramie Bicycle Facility Master Plan

Appendix D

Public Involvement

The following items are included:

1. Information handout for the open house held April 29, 1998
(handout was 8 ½"x11" folded, front and back)
2. Comment form used at the open house held April 29, 1998
3. Registration sheets (3) from the open house held April 29, 1998
4. Transcription of public comments

Laramie Bicycle Facility Master Plan

Appendix E

Related Development Plans

The following items are included:

University of Wyoming
Bicycle Facility Plan

Laramie Downtown Development Authority
Downtown Streetscape Master Plan

