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# MOSES LAKE ACTIVITY TRAILS MASTER PLAN

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1-00 INTRODUCTION

Trails can be a wonderful addition to a community. A working system of trails and paths make people more active, healthier, and happier. Trails provide safe, inexpensive ways to get regular exercise. They also allow neighborhood children routes for walking to schools, and they provide corridors that connect residential areas to retail areas. Trails can link parks, common activity areas, and residential neighborhoods together providing opportunities for shaping a healthier and friendlier community.

In 2001, the City of Moses Lake was selected to pilot a program promoting physical activity and good nutrition to prevent obesity and chronic diseases that are associated with obesity. "Healthy Communities – Moses Lake" was formed with assistance from the National Center for Disease Control, Washington State Department of Health, National Park Service, and the University of Washington. The Trail Planning Team (TPT) was formed as a result of the Healthy Communities Project. TPT is a working partnership of citizen volunteers, City of Moses Lake Staff, community groups, and agencies committed to the goal of fulfilling the TPT vision.

TPT Vision Statement

“A network of linked paths that are used throughout the greater Moses Lake area for exercise, recreation, transportation, and tourism to promote healthier lifestyles for the community”

This TPT Activity Trail Master Plan outlines the process of designing a bicycle and pedestrian trail system for the City of Moses Lake and offers a detailed plan to expand the existing system to improve physical activity opportunities for the entire community.

“European countries place a significant emphasis on addressing the needs of pedestrians and bicyclists. In some countries, addressing the needs of these users is as important as improving vehicle mobility. Bicycle networks exist in all countries visited, and in some they are complete and rival vehicle networks. In the United States, addressing mobility needs has been traditionally viewed as providing a roadway network where drivers can move as quickly and freely as they desire. This notion needs to be expanded to include all users, in order to address the safety needs of these vulnerable road users.”

(Brewer, German, Krammes, Movassaghi, Okamoto, Otto, Ruff, Sillan, Nikiforos, Stamatiadis, Walters, X)
2-00 A BRIEF HISTORY OF MOSES LAKE

2-01 Cultural

The settled history of the community began in 1910. It started as the town of Neppel, founded to serve the needs of a small group of pioneering farmers who settled on the shores of the lake. From its small beginning, Moses Lake has grown and prospered to what it is today: the commercial hub of the Columbia Basin in Grant County, Moses Lake is located on State Highway 17 and east/west on Interstate 90. The rural environment of Moses Lake area offers a small town atmosphere, yet the urban resources of Seattle or Spokane are within easy driving distance. This is a pleasant living area with a great variety of scenic and recreational opportunities in an area of a high desert climate. The Moses Lake water body is made up of three main arms, referred to as Parker Horn, Lewis Horn and Pelican Horn. Each of these arms is over 18 miles long and up to one mile wide. It is the largest, natural body of fresh water in Grant County and the third largest natural lake in Washington. The Moses Lake water body has over 120 miles of shoreline and covers 6,500 acres.

Prior to settlers, local Indians inhabited the area (The Indians were called Sinkiuse, Kowalchina or Columbias) and were lead by Chief Sulktalthscosum, better known as Chief Moses. Chief Moses was one of the most influential Indian leaders in Eastern Washington and Northern Idaho. In 1938, the citizens of the town of Neppel voted to rename their community in honor of Chief Moses, and the city became known as Moses Lake. His name had already been attached to the lake and to a coulee between the City of Wenatchee and The City of Ephrata. The local Indians were well known for their fine horses.

2-02 Government

The City of Moses Lake has had a council-manager form of government since the early 1950’s. The city council consists of seven members elected at large for overlapping four-year terms. The seven council members choose the Mayor after councilmen are elected. Council meetings are held on the second and fourth Tuesday of every month and are open to the public. The city manager is appointed by the city council and is responsible to them. The current City Manager, Joe Gavinski, has held the position since 1980.

2-03 Population

The most recent 2000 Census figures show Grant County to be the third-fastest growing county in the state. The county’s population increased 36 percent from 1990 figures, and it now totals almost 75,000. According to the 2000 Census data, people of Hispanic or Latino heritage living in Grant County account for 30
percent of the total population. The City of Moses Lake has also experienced a significant population increase in the last decade. The city’s population within the city limits stands at 16,328, (April 26, 2005) up from the 1990 count of roughly 11,500. Moses Lake North unincorporated is an area that includes the former Larson Air Force Base. Moses Lake North pushes the city’s population to 20,000. Within a five-mile radius of the Moses Lake city limits, total population is about 30,500 (April 26, 2005).

2-04 Community Activities

The Moses Lake area hosts many Annual Events and community Activities. The Spring Festival is an annual event that takes place over the Memorial Day Weekend. It includes; Parades, sidewalk sales, car show, live entertainment, a carnival, kids street chalk art, and many on going activities that draw several thousands of people to the sand dunes on the south of the lake. The Grant County Fair and Moses Lake Roundup Rodeo are annual events that occur in mid-August. The fair is a seven-day event with many local talents and famous talents performing on an open midway stage centered amongst exhibits and a grand food court with the famous Lioness Space Burger. The Grant County Rodeo is part of the National Rodeo Series, since 1943, taking place on Thursday, Friday, and the finals on Saturday of fair week. The Rodeo was first talked about over a cold beer under a shade tree in 1942 and was held for the first time in 1943, in the area known now as Broadway Business Park Short Plat. In 1953 the rodeo was moved to the Grant County Fairgrounds and that is where it remains today. The Miss Moses Lake Scholarship Program is an annual event that has sponsored three Miss Washington’s to compete in the Miss America competition in Atlantic City. Washington State winners have also emerged from the Moses Lake’s annual Junior Miss program. Unique to Moses Lake area, an annual Dutch Oven/Bluegrass Festival is held in September.

Other annual events hosted by Moses Lake are the Washington State Potato Conference and Trade Show in early February, the Spring Fair and Northwest Junior Livestock Show in March, and boat races in the summer. Among Community activities, Moses Lake has an active Community Concert Association. The Association, City of Moses Lake Parks and Recreation, and local sponsors (businesses/clubs) provides free concerts in the park throughout the summer months bringing in professional entertainment to the beautiful waterfront Centennial outdoor Amphitheater, located in McCosh Park. Columbia Basin Allied Arts organization sponsors and coordinates activities, from both state and local funding sources.

2-05 Outdoor Recreation

Opportunities for outdoor recreation are virtually unlimited. The large number of lakes, the many small streams, and the Columbia River are any fisherman’s paradise. Trout, salmon, bass, spiny ray, and walleye pike are plentiful. Moses Lake is in the middle of the Columbia Basin Irrigation Project, which is widely known as one of the top upland game bird, waterfowl, and mule deer hunting...
areas in the country. Goose and duck hunting is a major attraction for sportsmen because the area is in the path of the Pacific Flyway. Deer hunting is excellent in the nearby Colockum and Blue Mountains, which also have large elk herds. Moses Lake, with its 120 miles of shoreline and 6,500 acres of open water is ideal for water skiing, boating, fishing, and other water recreation. A large area on the south end of the lake is known as the sand dunes and has been designated for ORV and recreational use. The Moses Lake area provides several golf courses, tennis courts, and a family aquatic center with water slides and an Olympic size competitive pool. City and state parks total more than 200 acres. They include well-equipped playgrounds, a skateboard park, extensive baseball and soccer fields, and a BMX course. The Moses Lake School District provides public access to the newly remodeled high school with a 400-meter all weather outdoor track, tennis courts, baseball fields, soccer fields, and football fields.

Winter sports in the Moses Lake area include an outdoor ice skating rink, downhill skiing at several locations within a few hours drive, as well as occasional opportunities for cross country skiing and snowmobiling in the Sand Dunes ORV area.

2-06 Climate

The City of Moses Lake is located in the Columbia Basin Irrigation Project in eastern Washington. This area is a high desert terrain of the Columbia Basin ranges from rather level to slightly rolling. The land under irrigation is highly productive; agricultural activities are very limited on the land not suitable for irrigation. With an altitude of 1,048 to 1,250 feet, the diverse climate can have severe temperatures from –30°F to 110°F. The typical is hot dry summers, dry winters, and mild comfortable spring and fall temperatures characterize the climate in the area. The average annual rainfall is about ten-inches; average annual snowfall is fifteen inches. The average afternoon temperature in the summer is in the upper 80’s and the nighttime temperature average in the mid 50’s. The winter season, average daytime temperature is near freezing and the average nighttime temperature in the winter ranges from 15-to-20 degrees.

2-07 Business/Economic Base

After Grand Coulee Dam was constructed, more than 2,250 miles of irrigation canals and laterals, with pumping plants and other related facilities, have been constructed to bring water to more than half a million acres of productive farmlands in the Columbia Basin. Many communities have grown in the Columbia Basin to meet the needs for goods and services required by the expanding agricultural activity. Processing plants have been established to transform raw produce into saleable food products and have thereby created thousands of new jobs. In 1992, Columbia Basin farmers produced a wide variety of crops with a gross value of more than 547 million dollars.
While Agriculture remains the base of Columbia Basin economic well being, also contribute to the areas economy, over 90 major industries and businesses not counting the retail outlets. Adding also to economics is the Columbia Basin Job Corps Center, Moses Lake School District, the Grant County Public Utility District, medical facilities, and the Port of Moses Lake. Moses Lake has had a slow and steady economic growth over the past 20 years, which is expected to continue for years to come.

In 1964, the Defense Department announced that Larson Air Force Base, a strategic air command, would be declared surplus for any further military purpose. A group of Moses Lake residents with foresight lost no time in forming the Port of Moses Lake. To take advantage of the airport facilities left behind. The former Larson Air Force Base was rededicated as the Grant County Airport, home of the Port of Moses Lake. Since 1966, the Grant County Airport has been operated as an international flight crew training/research and development center.

3-00 HEALTHY COMMUNITIES – MOSES LAKE

The Healthy Communities pilot program was implemented in Moses Lake as a result of research results obtained by The US Department of Health. In the United States, obesity has risen at an epidemic rate during the past 20 years. The research indicates that the situation is worsening rather than improving. Individual behaviors, environmental factors and genetics all contribute to the complexity of the obesity epidemic.

In 2001, the Washington State Department of Health (DOH) was awarded funding from the Center for Disease Control and Prevention (CDC) to develop a program promoting nutrition and physical activity for the prevention of chronic disease and obesity. Moses Lake was selected as the ideal community for the pilot project because of its diversity, rural setting, active community groups, and strong community leadership. This pilot project represented an opportunity to build a model community that other cities and towns in Washington could replicate.

A partnership was formed with the Nutrition and Physical Activity Section of DOH, the University of Washington Health Promotion Research Center, and the National Park Service Rivers, Trails, Conservation Assistance Program (NPS). These partners have worked with a local citizen advisory committee to create and implement the project plan.

The Healthy Communities project kicked off in July 2002 with a community parade and celebration. The local Advisory Committee, along with its partners, developed a mission to ensure, “Residents in the Moses Lake area enjoy an active, healthy lifestyle that includes nutritious foods, recreation, and positive interaction with each other.” This group assessed the community and chose “three” priority projects for the first year of the project that were key components to fulfilling the project mission. Consequently, the Trail Planning Team (TPT), Community Gardens, and the Breast Feeding Coalition were formed.
The TPT has been working since the fall of 2002 to further assess the community and its trail and path system. In October 2003, the committee held a 3-day design charrette to develop and design an overall trail and path system for the Moses Lake area. The TPT partnered with DOH, NPS, and Washington State Chapter of the American Society of Landscape Architects, CDC, and the Washington State Department of Transportation. All participated in the charrette, along with a diverse group of community citizens.
4-00 MOSES LAKE TRAIL PLANNING TEAM HISTORICAL ACTIONS

The Moses Lake Activity Trails Master-Plan is a document derived from the product outcome of the design charrette weekend, surveys, many hours of research, and Public input. This activity trail plan represents only one step in the process of making a community wide trail system a reality in the Moses Lake community. A great deal of work and initiative will be required in order to move this plan from idea to reality. The following steps have been identified to start the process:

4-01 Permanent Trails Committee

The Trail Planning Team should be a permanent committee. The committee should coordinate all further action on the Moses Lake Activity Trail-Plan. The TPT should encourage public participation in planning and designing the overall activity trail system and individual trail segments. The success of the plan and trail system will depend on the depth of community support.

4-02 Integration With Existing Plans

The Moses Lake Activity Trail Master-Plan will be presented to the City of Moses Lake Park and Recreation Advisory Committee, City of Moses Lake Planning Commission, City of Moses Lake Council to be adopted as part of the City of Moses Lake plans for community recreation. The Moses Lake Activity Trail Master-Plan will also be presented to Grant County Commissioners. TPT’s goal is to have this plan used as a guide to future recreational development in the Moses Lake area.

4-03 Building Partnerships

The Trails Planning Team understands how important it is to maintain an effective network of relationships among the many partners who share their common interest of enhancing and expanding the trail system. We have established a great working relationship with the government agencies such as the U.S. National Park Service, Washington State Department of Health and Grant County Health Department, Washington State Department of Transportation, The Moses Lake Irrigation District, the East Columbia Basin Irrigation District, Grant County Transit Authority, the City of Moses Lake, Grant County Commissioners, and Big Bend Community College. Excellent working relationships have been established with many businesses and community groups such as the Audubon Society, Washington State Society of Landscape Architects, Moses Lake Clinic, Samaritan Hospital, Vision 20/20, Moses Lake/Othello Realtors, Central Washington Railroad, Moses Lake Lioness, as well as Soroptimist, and Rotary Clubs. TPT is working on relationships with the Grant County Public Utility District, the Port of Moses Lake, Grant County Housing Authority, Moses Lake School District, and many other service and community groups.
4-04 Potential Funding Sources

To be successful, local business should be identified and contacted for support. Public and private grants should be researched and pursued.

In 2004, TPT and its partners submitted an application to the Robert Wood Johnson foundation for its Active Living by Design funding. Although that funding was not received, valuable experience was gained for pursuing other grant opportunities.

In February of 2004, TPT and its partners submitted an application to the Washington Wildlife & Recreation Program for a 50/50 grant to build Heron Trail Boardwalk. The Heron Trail Boardwalk project has an estimated implementation cost of $685,000.00. The application process took over one year and the letter notice for funding was received in June of 2005. The permit, land acquisition, and design process is underway and construction of Heron Trail Boardwalk should start in the fall of 2006.

The formation of a Transportation Benefit District is an opportunity for the entire community to contribute to the trail plan and development. State law allows the formation of a special Transportation Benefit District by resolution of the Board of County Commissioners. The District boundary would encompass the area that would benefit from the development of the trail. After the District has been formed, a small property tax assessment can be authorized by public vote, with the funds to be used to assist in trail development and construction.

Other potential sources of funding that have been identified are: Local Clubs, and foundations.

4-05 Community Survey

A community wide survey of Moses Lake residents on walking and bike paths was conducted by TPT in 2003. 13,000 survey forms, in both Spanish and English, were sent out to all postal addresses in the 98837 zip code area and 727 surveys were returned. Over 250 of those returned gave their name and address as being willing to help. The following graphs show the responses to questions 5, 6, and 7.

Question #5:

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Which of these places should be connected with a walking/bike path?

Graph #1: Results showed schools, parks, downtown, and lakeview or lakefront connections as priorities.

Question #6:
When paths are improved, how often would you or a member of your family use the walking/bike path?

Graph #2: Shows over 40% said they would use the trails weekly if some improvements were made.
**Question #7:**

*What things would make a walking/bike path system better for you?*

**Graph #3:** Shows that over 50% of the people place user priorities on restroom facilities, good lighting, landscaping and scenic views, safety, and separation from traffic.
These following design elements are listed as priorities based on a comprehensive survey of community wishes as well as an analysis of what has worked well in other communities. These design elements should be used to prioritize the planning and completion of projects.

A. Lakeshore Trails
Residents of Moses Lake selected lakeside trails as their most desirable path. Paths along waterways provide scenic views as well as exposure to interesting plants and wildlife. Trails along waterways form a backbone of many community trail systems and can be found in several neighboring communities such as Wenatchee, Yakima, and Coeur d’Alene.

B. Trails That Connect Parks and Schools
Today, the trail or path to community parks has become as important for many people as the park itself. Trails between parks and schools provide safe paths that also provide recreation and exercise. The end result is a healthier community.

C. Multi-Use Paths
Wherever possible, multi-use paths are preferred over sidewalks along roadways. A multi-use path is a trail separated from motorized traffic. A separated path provides safety for families with children, and can be shared by many users: walkers, bikers, roller-blades, skate boarders, and people with wheelchairs.

D. Activity Trails That Form Loops
Loops increase recreational use of trails. They mark a certain distance and allow people to enter and exit at the same place without having to retrace their route. Loops can also function to connect destinations such as parks, schools, shopping centers, and neighborhoods. Every loop should have its own personality by enhancing its unique environment and attributes to the users.
## MOSES LAKE ACTIVITY TRAIL DAILY USE COUNTS

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## MOSES LAKE ACTIVITY TRAIL
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# MOSES LAKE ACTIVITY TRAIL
## DAILY USE COUNTS

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5-00 Design Charrette

Pathway and Trail System for a Healthy Community design Charrette was held in Moses Lake from October 3-5, 2003 at Big Bend Community College in Moses Lake. The charrette was organized to complete a conceptual trail system for the area. There were four sponsors for this event: the Washington Chapter of the American Society of Landscape Architects (WASLA), the National Parks Service (NPS); Rivers, Trails, and Conservation Assistance Program (RTCA); the Washington State Department of Health; and the City of Moses Lake. The design charrette was the fourth organized under a WASLA/RTCA partnership agreement, part of a pilot program initiated by the City of Moses Lake and the Washington State Department of Health. The charrette was held to promote the Department of Health’s Healthy Communities program, which addresses growing concerns about obesity and other health issues in the United States. The goal of the charrette was to lay out a preliminary trail system that connects neighborhoods, downtown, schools, parks and other points of interest, in order to encourage walking, bike riding, and other alternatives to driving. Charrette participants included landscape architects, designers, and students from across the state; City of Moses Lake personnel; State Department of Health; Center for Disease Control personnel; RTCA personnel; other nearby municipal employees; members from the Moses Lake Trail Planning Team; and Moses Lake citizens.

Led by Alexandra Stone, landscape architect, and other RTCA personnel, the charrette began late Friday afternoon with the introduction of all participants, and charrette team assignments were made (five teams organized by color-coded sectors of the Moses Lake area). Introductions and assignments were followed by a dinner and background presentation on the Healthy Communities program. The Friday night keynote speaker was Dr. David Buchner (Chief, Physical Activity and Health Branch at the Center for Disease Control in Atlanta, Georgia).

The five teams reconvened Saturday morning and began laying out an overall trail system. After presenting their overall plans to the other groups, each team focused on designing a trail system for their respective color-coded sectors of Moses Lake area. Trails and street routes for bikers, pedestrians, roller blades, and other users were formulated for existing streets, for railroad rights-of-way, along shorelines, over proposed bridges, along irrigation canals, and near other areas where trails would connect points of interest. After lunch, the teams worked the rest of the day on their ideas and took selected site visits to familiarize themselves with their respective areas.

On Sunday morning, the teams resumed work at a rather frantic pace, to finalize their ideas and drawings before some members of the Moses Lake area community arrived for the open house presentation early on Sunday afternoon. All teams made an energetic presentation to an enthusiastic audience. The presentations were followed by questions and answers and other events, including a raffle. The charrette results will be used by the City to implement the results and recommendations in phases over the next few years.
5-01 BLUE TEAM

Pictured left to right in figure 5.1: Gale Hamm (PUD), Salley Goodwin (MLBA, TPT Coordinator), Gary Harer, PE (TPT, City of Moses Lake), Helen Peng (WSU Student), Tim Gavin, RLA (ASLA, Team Captain), Shelley Glendenning (BBCC), Paul Burke (Publisher CBH), Sherry Peck (NPS-Philadelphia)

Design area for the Blue Team includes
The northeast area bordering the Larson Subdivision, Port of Moses Lake, and Big Bend Community College (BBCC). Then East of the City of Moses Lake including the Grant County Irrigation District’s canals. The Southerly border is the I-90 right-of-way. (The designated area for the Blue Team is shown graphically in figure 5.2)
Projects

The ideas and conceptual projects presented by the Blue Team are as follows:

5-01.1 Multi-use trail along SR-17.
5-01.2 Pedestrian crossing at SR-17 and Airway Drive.
5-01.3 Pedestrian crosswalks on SR-17.
5-01.4 North Trail Loop Connection around Moses Lake.
5-01.5 Information Center near Big Bend Community College.
5-01.6 Shoulder widening for Road K, Road 7, Loring Drive, and Wheeler to create signed shared road.
5-01.7 BMX Park at northwest corner of SR-17 and Patton Boulevard.
5-01.8 Trails along Irrigation Canals.
5-01.9 Amenities at the Municipal Airport and The Columbia Basin Fish Hatchery.

Project Details

5-01.1 Multi-Use Path Along SR-17

Function

To provide a safe trail for activities from interstate 90 to the north along the easterly border of SR-17 to the McChonhie Flats area, which is on the northerly side of Moses Lake.

Existing Amenities

SR-17 is a Washington State highway that connects Moses Lake with Ephrata to the north. It has two lanes with 6-foot paved shoulders. The shoulders are wide enough for experienced bicyclists to use, but they are not comfortable for inexperienced bicyclists, walkers, and joggers to use. SR-17 has numerous connections with Moses Lake’s streets.

FIGURE 5.3
Drawing represents a multi-use trail with a buffer between vehicular traffic.
Form
A 12-foot-wide multi-use trail with separation buffer from SR-17 traveled way, with interior landscaping. (As shown in figure 5.3)

Concepts and Opportunities
The trail would provide a path that will be used by bicyclists, walkers, and runners traveling to and from the City of Moses Lake, the Larson Subdivision housing area, Big Bend Community College, and the Port of Moses Lake. The trail would promote people to exercise, take leisurely walks and commute by other means than automobiles. Future plans for the trail would be to extend the trail to Ephrata, so that users could commute and recreate between Moses Lake and Ephrata.

Constraints
The route is within state right-of-way and permission would be required from the Washington State Department of Transportation. Large fill and cut sections between Grape Drive and Patton Boulevard could make, construction difficult and costly. An agency will need to step forward and maintain the path and landscaping after it is constructed.

Potential Partners
Washington State Department of Transportation, Larson Housing Administration, and the Port of Moses Lake are potential partners in developing the multi-use path along SR-17.

5-01.2 SR-17 Crossing at SR-17 and Airway Drive

Existing Amenities
SR-17 has two lanes with a north-bound-left-turn pocket, and Airway Drive has two lanes with a left turn pocket. The intersection is very difficult to cross because of the highway speeds and the curvature of SR-17.

Function
Provide safe pedestrian access across SR-17.

Form
Provide safer highway crossings by means of crosswalks, pedestrian islands, overpasses, or underpasses.

Concepts and opportunities
An overpass or underpass will alleviate pedestrian and vehicular conflicts. Crosswalks with pedestrian islands will provide safer crossing for pedestrians.
a. An overpass provides for separation of pedestrians and vehicles as well as an architectural gateway feature to a horizontal area.
b. An underpass would provide for separation of pedestrians and vehicles.
c. Crosswalks with pedestrian islands provide safe havens for pedestrians while crossing, but do not eliminate pedestrian and vehicular conflicts.

Constraints
WSDOT approved design and participation in implementation expenses will be the constraints for the SR-17 crossings. Other constraints regarding underpasses are that they are typically prone to vandalism, graffiti, and poor visibility.

Potential Partners
Washington State Department of Transportation, Larson Housing Administration, Grant County, and the Port of Moses Lake are potential partners in developing the SR-17 pedestrian crossings.

5-01.3 Pedestrian Crosswalks on SR-17

Existing Amenities
Traffic signals with push buttons to operate the pedestrian crossing lights. Grape Drive and Patton Boulevard are currently safe crossings, but could use more convenient access to pedestrian activation push buttons.

Function
To provide safe pedestrian and bike crossing of SR-17, at Grape Drive, Patton Boulevard, and Airway Drive.

Form
Pedestrian crosswalks with properly located pedestrian activated push buttons.

Concepts and Opportunities
Crosswalks will be improved to allow bicyclists and pedestrians to easily operate the pedestrian activated push buttons. These three intersections crosswalks are access points used by bicyclists and pedestrians to accessing the Lauzier Ball fields, the community gardens, the Larson housing area and the Port of Moses Lade area.

Constraints
Approved plans, construction costs, and Washington State Department of Transportation accepting the maintenance of the improvements are all constraints on the crossing project.

Potential Partners
Washington State Department of Transportation, Larson Housing Administration, Grant County, and the Port of Moses Lake are potential partners in developing the SR-17 pedestrian crossings.
5-01.4 North Trail Loop Connection Around Moses Lake

North Trail Loop connection around the north end of Moses Lake in the future would provide continuity to the trails on the west and east sides of the lake. This future connection trail must cross water at some point and is most feasible to cross over Rocky Ford Creek tributary upstream from the converge point with Moses Lake.

Existing Amenities

On the north end of Moses Lake offers Connelly Park a well-used Park, residents on both sides of the water, Rocky Ford Creek Tributary recreation, and future connection to the City of Ephrata’s trail system.

FIGURE 5.6
Drawing shows a futuristic conceptual causeway and marina on the north end of Moses Lake.

Function

North Trail Loop would provide a pedestrian and cyclist route around the Moses Lake water body and complete the Moses Lake Activity Trail System North loop.

Form

Construct a trail or boardwalk around the north end of the lake for a loop connection.

Concepts and Opportunities

Moses Lake Activity Trail North Loop would connect the residents from both sides of the lake while taking advantage of the wildlife viewing of the Rocky Ford Creek Tributary’s corridor.

Constraints

Public outcry, Federal, State, and Department of Wildlife permits are required and construction costs would be extensive.

Potential Partners

Grant County, Moses Lake Irrigation District, and private developers are all potential partners.
5-01.5 Information Kiosk near Big Bend Community College

Existing Amenities
Big Bend Community College may provide the property required to install an informational kiosk. Big Bend Community College, Columbia Basin Secondary School, Job Corps, Port of Moses Lake, and the Larson Subdivision are in close proximity.

Form
An open informational kiosk will be installed near existing public restrooms.

Concepts and Opportunities
An Information kiosk will provide maps of the trails and pedestrian transportation trail routes, mileage, interest points, and other amenities such as drinking fountain locations, rest stations, and trash receptacles, and restroom facilities. Big Bend Community College campus is a good location for an informational center because of the many students who will be using the activity trail.

Constraints
Permission is required from the Big Bend Community College to construct the information kiosk on their property. Other constraints involved with this project will be the maintenance and construction costs of the kiosk.

Potential Partners
Big Bend Community College, Port of Moses Lake, Grant County, and Grant County Transit Authority are all potential partners.

5-01.6 Widen the shoulders of Road “K”, Road “L”, Road “7”, Loring Drive, and Wheeler Road to Create a Signed Shared Road

Existing Amenities
Road “K”, Road “L”, Road “7”, Loring Drive, and Wheeler Road have moderate traffic and create a good grid for the activity path system. Birds and wildlife exist along these roads, which lead to multiple destination points such as the Columbia Basin Fish Hatchery, Municipal Airport, Big Bend Community College, Port of Moses Lake, industrial campuses, and the City of Moses Lake.

Functions
Recreational users and commuters would be provided with a safe and enjoyable trail.

Form
A ten-foot-wide, paved shoulder would be constructed adjacent to County Roads, as activity trails.

Concepts and Opportunities
The non-motorized use of these county roads can be greatly enhanced by constructing a 10-foot-wide shoulder on one side of the road. People enjoy using trails that are outside of the congestion of the city. These trails provide scenery and wildlife viewing.

**Constraints**
Construction funds, Mitigation, and relocation of existing utilities along the sides of the road and drainage ditches are the constraints when widening the road shoulders. Other drawbacks to this type of trails are that they place the cyclist/pedestrian adjacent to traffic.

**Potential Partners**
Grant County and the Port of Moses Lake are potential partners.

**5-01.7 BMX Park at the Northeast corner of the SR-17 and Patton Boulevard**

**Existing Amenities**
A large vacant area with a borrow pit exists on the north west corner of SR-17 and Patton Boulevard intersection, where a BMX park could be built. An existing eight-foot concrete bike path runs along the east side of this potential BMX site and connects the Larsen Subdivision, a mini-mart, Big Bend Community College, and the Grant County Airport.

**Function**
A recreational area and park will be constructed adjacent to an area that has no access to a park.

**Form**
A track will be built that is sanctioned by the BMX racing circuit. Additional park facilities will be included.

**Concepts and Opportunities**
A park and track will be built that is sanctioned by the BMX racing circuit. The park will attract local users and draw out of town BMX racers to compete. The park will include other recreational facilities such as basketball courts, playground equipment, tables, and restrooms. An eyesore would be converted into a pleasant looking park that is well used.

**Constraints**
Permission is required from the Washington State Department of Transportation to use their right-of-way. Other constraints will include Approved engineered plans, permits, construction costs, and a governmental agency will be required to operate and maintain the park.
Potential Partners
Washington State Department of Transportation, Port of Moses Lake, and Grant County, and the City of Moses Lake are all potential partners.

5-01.8 Trails Along Irrigation Canals

Existing Amenities
Existing canal maintenance roads along Road “K” that extend from Road 7 NE to Kittelson Road will accommodate walkers and bikers.

Form
A 12-foot-wide trail could be constructed on the existing canal maintenance access roads.

Concepts and Opportunities
Maintenance roads along the canals will provide an enjoyable exercise, easy commutes to Big Bend Community College, Bird watching opportunities, and a comfortable place for daily strolls. The maintenance roads are separated from traffic, which was one of the highest priorities indicated by the survey. The Municipal Airport could be a destination point where benches, drinking fountains, trash receptacles, and public restrooms would be available.

Constraints
Permission is required from the East Columbia Basin Irrigation District. Barriers will need to be constructed around the open canals in certain areas.

Potential Partners
US Bureau of reclamation, East Columbia Basin Irrigation District, Grant County, and Municipal Airport Commissioners are all potential partners.

5-01.9 Install Amenities at the Municipal Airport and Columbia Basin Fish Hatchery

Existing Amenities
The Moses Lake Municipal Airport and Columbia Basin Fish Hatchery are owned by governmental agencies. The Columbia Basin Fish Hatchery has a designated youth fishing area and the Moses Lake Municipal Airport has potential airplane attractions. Both facilities are connected by Columbia Basin Irrigation canals and ditch maintenance roads, Road “L”, Road “K”, and Road 7 NE.

Function
A rest stop and shade would be provided at interesting locations.

Form
Covered tables, restrooms, drinking fountain, informational packets, and Trash receptacles would be provided at existing Government facilities.

Concepts and Opportunities
The Municipal Airport and Columbia Basin Fish Hatchery sites are located where people could rest and enjoy the scenery.

**Constraints**

Permission is required from the Moses Lake Municipal Airport Commission and the Washington State Department of Fish and Wildlife. Power, water, and sanitary sewer may need to be extended to the sites.

**Potential Partners**

Washington State Department of Fish and Wildlife and the City of Moses Lake are potential partners.

### 5-02 ORANGE TEAM

**Design Area**

The Mid & Lower Peninsula area, west to the Laguna area, and West Shore north Moses Pointe property.

*FIGURE 5.8* Drawing shows the Orange Teams area.

**Pictured from left to right:** Eileen Hyatt (Bicycle Alliance Board), Dr. Dave Buchner (CDC), Kathy Parker (People For People), Becky Meyer (TPT Co-Chair), Frank Ide, RLA (ASLA, Team Captain), Bob Russell (TPT), David Sims (Audubon).
Projects
The ideas and conceptual projects presented by the Blue Team are as follows:

5-02.1 Neppel Trail to Marina
5-02.2 Neppel Trail through Blue Heron Park to Moses Pointe
5-02.3 A Fishing Bump-Out Constructed off the Existing I-90 Pedestrian Bridge
5-02.4 Barrier Free Pedestrian Bridge Over Interstate 90
5-02.5 Sand Dunes Trail
5-02.6 Lower Peninsula Loop
5-02.7 Broadway Commuting Corridor
5-02.8 Peninsula Drive and Lakeside Drive to McCosh Park
5-02.9 Lakeside Drive Kayak Park

Project Details

5-2.1 Neppel Trail to Marina

Existing Amenities
A portion of the Neppel Trail currently runs east and west along the Southerly side of Marina Drive, but the trail lacks a connection to the lake and the area residents. The City of Moses Lake has ownership of property along the shoreline in Marina Shores area that has potential for trail use. This property could provide access to surrounding wetlands, natural habitat, and viewing areas.

Function
A destination trail would be constructed to provide access to wildlife, natural, historic, and scenic viewing areas.

Form
The trail would be offset from the road, 10-feet-wide, with widened areas placed at strategic locations along the trail for viewing and resting purposes.

Concepts and Opportunities
A wildlife park could be constructed on city owned property with viewing areas, interpretation areas, benches, and possibly restroom facilities, and water. A small pedestrian bridge could be constructed to Lakeview Island. Which is a prime wildlife refuge and fishing spot.

Constraints
Opposition from local homeowners, negative effects on wildlife, seasonal closures, environmental concerns, and boat restrictions are all drawbacks to a Lakeview Island connection. Construction costs, permits, and approved plans other constraints related to this project.

Partners
Local homeowners, City of Moses Lake, and The Audubon Society are potential partners.

5-02.2 Neppel Trail from Blue Heron Park to Moses Pointe

Existing Amenities
The existing Neppel Trail ends at Blue Heron Park, but beyond the Park, Westshore drive continues to Moses Pointe, a new destination resort golf course. Moses Pointe’s has a highly rated 18-hole par 72 golf course, Club House, Golf Pro-shop, waterfront driving, restaurant, Condominiums, housing, and boat launch facilities. The resort’s future plans include private houses, condos, a marina, and a hotel.

Function
The trail would serve as an important commuting route and recreational corridor.

Form
The trail to Moses Pointe from Blue Heron Park would be a lane, on a shared roadway.

Concepts and Opportunities
A pathway along Westshore Drive would connect residents on the west shoreline of Moses Lake to the existing Neppel Trail’s west trailhead, located at Blue Heron Park.

Constraints
Opposition form existing homeowners, exists minimal right-of-way widths, existing utilities structure locations, approved plans, construction costs, and a governmental agency will be required to operate and maintain the park.

Partners
Grant County, City of Moses Lake, and Moses Pointe Destination Resort are all potential partners.
5-02.3 Fishing Bump-Out
Would be constructed adjacent to the Existing I-90 pedestrian Bridge

Existing Amenities
Neppel Trail’s westerly terminus is Blue Heron Park, which provides amenities such as; restroom facilities, children’s play structure, boat launch facilities, swimming area, showers, picnic tables and shelters, parking, and drinking fountains.

Function
Provide areas for fishing and viewing to mitigate conflicts between users of the trail and users partaking in passive and lake activities.

Form
A fishing bump would be constructed as a cantilevered and pier deck adjacent to the existing pedestrian bridge crossing bridge with railing and sitting amenities.

Concepts and Opportunities
Bump outs would provide areas for opportunities of viewing, fishing, resting, and conversation outside the trail activities.

Constraints
Permitting, approved plans, construction costs, and the existing bridge structural designs abilities to accommodate the structure are all constraints on this project. Another constraint for this project is that a governmental agency will need to accept the responsibility to maintain this facility.

Potential Partners
Washington State Department of transportation, City of Moses Lake, Washington State Department of Fish and Wildlife, and Washington State Fishing Clubs are all potential partners.

5-02.4 Barrier Free Pedestrian Bridge Over Interstate 90
Barrier free bridge over I-90 will entail remodeling the existing pedestrian bridge to ADA standards.
**Existing Amenities**
South of I-90 there is residential development along the shoreline and lagoon. Farther south the area encompasses wetlands, natural wildlife habitat, sand dunes and small lakes called Potholes. The Audubon Society has planned a Nature Trail extending two miles south into the wildlife area, with access from Sage road. A pedestrian overpass exists from ML Community Park over I-90 to land adjacent to Pier Four RV, which is not ADA accessible. To the South of the housing development there is unimproved road around the south end of the lake.

**Function**
Provide a barrier free access across Interstate 90, from Blue Heron Park to Laguna residential development. This pedestrian bridge also provides a connection to the south end Loop. Pedestrian bridge crossing provides a gateway to the Activity Trail System.

**Form**
The existing pedestrian bridge will have the stairs removed and switchback ramps would be constructed on both sides to accommodate the barrier free access.

**Concepts and Opportunities**
A barrier free bridge over Interstate 90 will provide safe access to the Activity Trail System, Blue Heron Park, and complete the connection between the north end of the lake and the south end of Moses Lake.

**Constraints**
Permits, approved plans, Washington State Department of Transportation approval, construction costs, and the pedestrian bridge structural adaptation are all constraints on this project. Another constraint for this project is that a governmental agency will have to accept the responsibility to maintain this facility.

**Potential Partners**
Washington State Department of Transportation, City of Moses Lake, Moses Pointe Development Corp., Pier Four RV Park, Audubon Society, and area Home Owner Associations are all potential partners.
5-02.5 Sand Dunes Trail

Existing Amenities
Sand Dunes Road is paved for three quarters of a mile and continues as an unimproved road around the south end of Moses Lake. Then loops back north to Potato Hill Road on the east side of Moses Lake. Sand Dunes Road is the main access to Moses Lake’s south end for fishing, ORV, hunting, Camping, swimming, water skiing, and bird watching.

Function
Sand Dune Road will serve as a recreational loop around the south end of Moses Lake’s waters. This loop will also serve as the connection between the Laguna, Westlake, and Westshore Drive residences and the Desert Lakes, Pelican Point, and Montlake residents, while providing views and possible water access points.

Form
Sand Dunes Road will be used as a lane on a shared roadway with some section of the trail leaving the roadway and becoming a separated multi-use-path. The trail will be constructed of asphalt, concrete, and sections of crushed surfacing.

Concepts and Opportunities
The Sand Road trail is a gateway to the sand dunes, ORV-park, and lake. It provides ample opportunity for nature observations, fishing, viewing, and lake access.

Constraints
Water and sewer may have to be extended to serve rest stations and restroom facilities, incompatible uses between ORV heavy usage and bicycles, and high speed traffic passing through this area are all constraints on this project. A governmental agency will have to accept the responsibility to maintain this facility, construction costs, approved plans, and approval of private property owners are other constraints involved in the Sand Dune Road Trail.

Potential Partners
Washington State Department of Fish & Wildlife, Bureau of Reclamation, Grant County (manages ORV park), Sand Commandos (ORV user clubs), City of Moses Lake, and private landowners are all potential partners.

5-02.6 Lower Peninsula Loop

Existing amenities
The trail would follow an existing road system using Lakeshore Drive from the I-90 overpass to Peninsula Drive, then connecting the loop back from Peninsula Drive, along Wanapum Drive, to Lakeshore Drive just south of I-90. The Peninsula loop consists of a residential BST road with no curb and a gravel shoulder and is a residential, low-density area along a roadway.
Function
Lower Peninsula Loop is part of commute route and a daily exercise route for Peninsula residences.

Form
Lower Peninsula Loop is a shared bike & pedestrian trail (designated as a bike lane) on a shared roadway.

Concepts and opportunities
Lower Peninsula Loop provides the connection to Neppel Trail and Broadway routes with Lakeside Drive and Peninsula Drive routes. Water access and restrooms provided at Peninsula Boat Launch, broken views of the lake through the loop trail, and most of the trail has surrounding neighborhoods watchful eyes providing security.

Constraints
Overpasses have narrow sidewalks, existing improvements along right-of-way that may have to be moved, above ground utilities may have to be moved, construction costs, approved plans, A governmental agency will have to accept the responsibility to maintain this trail, and approval of private property owners are all constraints involved in the Lower Peninsula loop Trail.

Potential Partners
Washington State Department of Transportation, the City of Moses Lake, and neighborhood residents are all potential partners.

5-02.7 West Broadway Commuting Corridor

Existing Amenities
West Broadway Avenue is a main East-West arterial through Moses Lake connecting Interstate-90, the hub of Moses Lake, and highway business loop. West Broadway is the shortest and most direct bicycle trail route from the southwest end of town to the downtown core. Broadway Avenue is a four-lane road with a center turn lane and parking on both sides of the traveled way.

Function
The Broadway commuting corridor is a connector to many other trails. The route is adjacent to retail and service oriented businesses.

Form
Designated bike lanes would be delineated on both sides of Broadway Avenue by taking advantage of the low use parking strips along the curb.
Concepts and Opportunities
THE West Broadway commuting corridor would provide a direct commuter route from southern residential areas to the downtown business core.

Constraints
Presently, Broadway Avenue is striped for parking on both sides of the street. Opposition from businesses along the route may oppose the project because the parking would be eliminated or restricted.

Potential Partners
City of Moses Lake, Washington State Department of Transportation, and the business community are all potential partners.

5-02.8 Peninsula Drive and Lakeside Drive to McCosh Park

Existing Amenities
Peninsula Drive has a ten-foot-wide multi-use trail from Locust to Florence along the westerly side. This two-mile segmented section of trail runs through an older developed residential area and with no existing connection to anything. Although possibilities exist for future connections to McCosh Park, Aquatic Center, Amphitheatre, Montlake Park, Peninsula Elementary School, Larson Play Field, Restroom facilities, ball fields, batting cages, ice rink, and BMX bicycle track, the trail lacks connections to other trails and paths.

Function
The trail would serve as an important commuting route, recreational corridor, and connector.

Form
The trail would be a multi-use-path next to road with portions of the route in the shared roadway.

Concepts and Opportunities
The Lower Peninsula Loop connects to McCosh Park, Neppel Trail, and Montlake Park. The trail will cross the lake to Montlake Park on the east side of the lake with acquisition of railroad right-of-way, and also continue on Lakeside Drive to McCosh Park. A gateway to the community trail system could be created at McCosh Park, Montlake Park, and Larsen Field. A park at Pelican Horn’s railroad crossing could provide parking, restroom facilities, and trail access. Pelican Horn crossing will serve current uses like fishing, walking, running, canoeing, and kayaking activities.

Constraints
Acquisition of railroad right-of-way, limited street right-of-way, neighborhood residence, Construction costs, and approved plans are all constraints connected with the Lower Peninsula Loop.

**Potential Partners**
City of Moses Lake, Neighborhood, Railroad, Land Owner, and The Audubon Society are all potential partners.

**5-02.9 Lakeside Drive Kayak Park**
Lakeside Kayak Park would be located along the westerly shoreline of Pelican Horn south of the railroad lake crossing.

**Existing Amenities**
Lakeside Drive has full width improvements to the northerly border of the Kayak Park and Launch site. Midway Elementary School and Bus Garage is also adjacent to the proposed project site.

**Function**
The Lakeside Drive Kayak Park would provide a safe place to launch non-motorized boats in an established residential area. A restroom and park will provide for a destination location for trail users, green space for the neighborhood, and connect Midway Elementary School with lake education opportunities.

**Form**
Lakeside Drive Kayak Park will be a non-motorized boat launch with restrooms facilities, parking, trail information, and neighborhood green space.

**Concepts and Opportunities**
A kayak park at Pelican Horn’s railroad crossing could provide parking, restrooms facilities, and trail access. A kayak park at this location will be for current uses like fishing, canoeing, and kayaking activities, with a launch site. A non-motorized water zone is one proposal for this area, north of railroad crossing at Pelican Horn. This allows fishing, scenic vistas, recreational opportunities, and provides water access to McCosh Park.

**Constraints**
Rail Road Right of Way acquisition and property acquisition for kayak boat launch park, neighborhood resistance, approved plans, construction costs, and A governmental agency will have to accept the responsibility to maintain the kayak boat launch and park.

**Potential Partners**
City of Moses Lake, Neighborhood, Railroad, Land Owner, Canoe/Kayak club (Alan McFadin), and The Audubon Society are all potential partners.
5-03  YELLOW TEAM

Design Area
Yellow team area covered Cascade Valley between Airway Drive and the Westshore line of Cascade Valley.

Projects

5-03.1  Elgin Road public access to Lake/signed shared road
5-03.2  Valley Road Bike Lane
5-03.3  Boat Launch Park on Elgin Road
5-03.4  Pedestrian connection to Crest Island and to Marina Drive
5-03.5  Cascade Valley Loop Trail

Project Details

5-03.1 Elgin Road public access to lake

Existing Amenities
Elgin Road is a rural residential area. An unimproved trail parallels lake running north and south along Elgin Road. Houses along the west side Elgin Road buffer the lake from the roadway, while providing broken views of water. The dead-end road has an easy grade and provides captivating peaks of the lake in a rural setting.

Function
Elgin Road Trail is an important recreational corridor and could connect with the Cascade Valley Loop Trail as a commuter and recreational route.

**Form**

Elgin Road Trail would be a shared, multi-use path with designated bike lanes as needed. The undeveloped link at the dead-end portion of Elgin Road would serve well as a bike or pedestrian trail that could connect with the Cascade Valley Loop Trail.

**Concepts and Opportunities**

The Elgin Road Trail would allow a connection to the Cascade Valley loop Trail for both recreational and commuter traffic. Signs would provide orientation to the trails system. This trail would provide access to the lake by a narrow strip of land between two residences, which is the only existing public access to the lake in the Cascade Heights area.

**Constraints**

Elgin Road is narrow and has very little usable shoulder. Access to the lake from Elgin Road is unimproved and steep. Elgin Road Trail construction costs, approved plans, permits, neighborhood resistance, and a governmental agency will have to accept the responsibility to maintain the projects improvements are all constraints associated with this project.

**Potential Partners**

City of Moses Lake, Neighborhood, and Grant County are all potential partners.

**5-03.2 Valley Road Bike Lane**

Valley Road Bike Lane project would include six-foot bike lanes both directions adjacent to the existing curb, from Cascade Heights to Stratford Road.

**Existing Amenities**

Valley Road is the main access to Cascade Valley is heavily traveled. Valley Road is currently part of the existing trail system in Moses Lake, which consists of a shared bike and pedestrian path adjacent to the south side of Valley Road. Which has both pedestrian and bicycle traffic on the sidewalk and bike path. The existing trail is on the asphalt and concrete sidewalk running along the west side and south side of Valley Road. The elevation of the roadway provides occasional views of the lake, Cascade valley, and the Cascade Mountains.
Function
Valley road Trail is an important recreational and commuter route for bikers and pedestrians.

Form
Valley Road Trail has adequate width for designated bike lanes and pedestrian trials adjacent to bike lanes, with modifications to existing travel lanes.

Concepts and Opportunities
Valley Road Trail designated for pedestrian and bicycle traffic traveling in and out of Cascade Valley could improve safety for the pedestrian and cyclist.

Constraints
Valley Road is fairly new and may have some opposition from area residents, approved plans, construction costs, the grade is too great for barrier-free design, and a governmental agency will have to accept the responsibility to maintain the project improvements.

Potential Partners
Grant County, City of Moses Lake, and future Developers of Cascade Valley are all potential partners.

5-03.3 Boat Launch Park on Elgin Road

Existing Amenities
Elgin Road is a rural residential area with lake front lots on the west side of the road and small acre view lots on the east side of the road. One existing public access is available on Elgin Road. Elgin Road dead ends, but has potential if connected with the Cascade Valley Loop Trail. The access to the lake exist on the south end of Elgin Road and can provide adequate space for a park and boat launch facility. Elgin road has gentle grades and provides framed views of the lake.
Function
Elgin Road Trail could be a recreational and commuter route.

Form
An expanded roadway pavement with curbing will accommodate “on the road” designated bike lanes. A designated bike and pedestrian trail could connect Shorecrest Road Trail and the Cascade Valley Loop Trail to enhance this pedestrian friendly area.

Concepts and Opportunities
The Elgin Road boat launch park will provide a connection between the Cascade Valley Loop Trail and the Elgin Road Trail. Park amenities will include Restrooms, picnic tables, boat launch facilities, and adequate boat trailer parking. Signs at the park will provide trail orientation, and they will describe the trails, parks and historical features of the area.

Constraints
Grant County currently has no parks in their system and they have no means for maintenance of such facilities. Construction costs, approved plans, permits, and a governmental agency will have to accept the responsibility to maintain the project improvements are all constraints associated with the Elgin Road Boat Launch project.

Potential Partners
Grant County, City of Moses Lake, and area Fishing Clubs are all potential partners.

5-03.4 Pedestrian Connection to Crest Island and to Marina Drive
In an attempt to provide pedestrian access from cascade heights area to the downtown core/hub, a pedestrian bridge is one proposed idea. This futuristic would provide a combined foot/bike bridge from Cascade Valley to Crest and a second bridge from Island across Moses Lake to Drive. The second bridge complete the connection to existing Marina bike trail. The in Cascade Valley is within a setting. Crest Island provides public access to natural wildlife habitat area, and Marina Drive has an aquatic wildlife and residential setting. Neither the pedestrian
access to Crest Island via Cascade Valley nor a connection to the lake to Marina Drive exists and would provide an area of flora fauna study and exposure. This futuristic concept is not real feasible, but does bring the need of pedestrian connection to our attention. Whenever there is a lake crossing constructed the pedestrian facilities should be included in the design.

Existing Amenities

Crest Island improvements that have been constructed are a picnic table, restrictive use sign, and dedication placard.

Function

This trail is more of a recreational and nature viewing trail, but it could also be the pedestrian connector from the valley trail system to the trail on Marina Drive.

Form

Crest Island Trail would be a shared, multi-use Path. The trail would include bridges with sections having overhead protection and construction type being pier construction. The bridge to Marina Drive and to Cascade Heights would be 10-12-feet-wide to accommodate cyclists and pedestrians.

Concepts and Opportunities

a. Pathway connections

The Crest Island Trail connects the Cascade Valley Loop Trail and Marina Drive with Crest Island. The Crest Island Trail would provide a destination point to Crest Island as well as to provide a critical loop trail from Cascade Valley to the Downtown area. Crest Island could be enhanced with nature trails and restroom facilities.

b. Gateway Features

Crest Island is a bird sanctuary and is in need of an interpretive nature-trail boardwalk to provide outdoor educational activities. Signs would provide information on trail orientation, wildlife habitats and area’s historical features.

Constraints

Moses Lake’s Parker Horn is a major asset, but can be an obstacle as well. The Crest Island area is popular for many boat and water activities, which would dictate the height of bridge structures, for clearance requirements. The pedestrian bridge crossings from Crest Island would cross-large areas. Many hurdles would need to be overcome before Crest Island bridges would be approved. Building a long, tall bridge will be challenge and expensive. Additionally Crest Island is a nesting area for birds; therefore, it is off limits during the spring. Public opposition, Construction costs, approved plans, permits, and a governmental agency will have to accept the responsibility to maintain the Crest Island Trails are additional constraints on this proposed concept.
Potential Partners
Grant County, City of Moses Lake, Audubon Society, and Moses Lake Irrigation District are all potential partners.

5-04  RED TEAM

Design Area
Red Teams area of responsibilities point of beginning is on the west side State Route 17 at the BNFS Railroad crossing. Then runs west along the north side of Parker Horn to Stratford Road. From Stratford Road the area border runs south to Neppel Park. Then west along the south side of Parker Horn to Ash Street, south on Ash Street to Fourth Avenue. Then on fourth Avenue west to McCosh Park, south along the east side of Pelican Horn to the south end of the lake. The area then runs from the south end of the lake to Potato Hill Road heading north to the east side of Interstate 90. Then along the north side of Interstate 90 headed east to State Route 17 bordering the westerly side of State route 17 to the point of beginning.

Projects
5-04.1 Pedestrian overpass over Stratford Road at Neppel Landing
5-04.2 Loop Trail around northeast end of Parker Horn
5-04.3 Pedestrian Islands in Central Downtown
5-04.4 Heron Trail Boardwalk
5-04.5 Railroad-bed trail to Pelican Point from Montlake Park
5-04.6 Trail connections to schools, parks, neighborhoods, and city activity areas
5-04.7 Yonezawa Boulevard rest area and information center

Project Details
5-04.1 Pedestrian overpass from Neppel Landing to the NE side of Stratford Road

Existing Amenities
Neppel Landing is at the east end of the proposed pedestrian overpass. Neppel Landing is a great waterfront community park with an existing cement concrete trail. It connects to an asphalt trail headed west to Blue Heron Park, and to an asphalt trail headed north across the lake to Cascade Park. Neppel Landing borders the southern bank of Moses Lake’s Parker Horn and has broken views of the beautiful, flowing, landmark fountain provided by Japan Airlines. The Neppel Trail is used for fishing, walking, bicycling, and running. Neppel Trail is also used as a route for children traveling to and from school.

**Function**
The Neppel Trail pedestrian overpass would provide a safe pedestrian access to the easterly and westerly sides of the busiest street in town, Stratford Road.

**Form**
The Neppel Trail pedestrian overpass would be a pier and span type of construction with barrier free access ramps on each end. The proposed pedestrian overpass would serve as a multi-use-trail separated from traffic connecting to multi-use-trails separated from traffic on each end.

**Concepts and Opportunities**
The overpass will provide connection to both sides of Stratford Road alleviating vehicle-pedestrian conflicts. The overpass will serve as a vertical architectural feature to an area providing an overhead plain that would add another dimension to the area. A safe bridge and pedestrian crossing could encourage pedestrian movement, shopping, access to community activities; therefore a healthier community will be the result. The pedestrian overpass will provide a connection to the future railroad-bed trail on the easterly side of Stratford Road and the future trail around Parker Horn known as Parker Loop.

**Constraints**
Engineering design, construction costs, and the acquisition of railroad right-of-way are constraints.
Potential Partners
Washington State Department of Transportation, City of Moses Lake, Columbia Basin Railroad Company, and Rail to Trail Conservancy are all potential partners.

5-04.2 Parker Horn North Loop Trail
Parker Horn North Loop Trail would provide pedestrian access around the lake shoreline on the northeast end of Parker Horn between Highway 17 and Stratford Road creating a looped section of trail.

Existing Amenities
The Columbia Basin Railroad existing right-of-way borders the southeast shoreline of Parker Horn and would be the backbone of the activity trail system and a major portion of the Loop Trail. By taking advantage of the railroad right-of-way the Loop Trail could use the rail bed from Stratford Road to Highway 17. The northwest shoreline borders a commercial area and the existing buildings have turned their back to the lake creating an abused shoreline with piles of debris and fill. This section of the lake is shallow and provides a great habitat area for many birds and wildlife viewing opportunities.

Function
Looped Trail would provide access to Parker Horn area for viewing, biking, walking, running, fishing, and trail connection to both ends of Stratford Road Causeway, known as Neppel Crossing.

Form
Loop Trail would be a mixture of asphalt, Concrete, gravel, and boardwalk sections of ten-foot-wide meandering waterfront trail. The Loop Trail would have view locations, benches, shade structures, information signing, and bike racks strategically placed throughout the loop.

Concepts and Opportunities
Parker Horn is the inflow end of the lake and provides excellent habitat for birds, fish, and other wildlife for viewing opportunities. Parker Horn is on Moses Lake Irrigation and Rehabilitation District’s list of projects.

Constraints
Railroad and shoreline properties are all privately owned and could be the major constraints on Parker Horn North Loop Trail.
Potential Partners
Private property owners, Wal-Mart, City of Moses Lake, Columbia Basin Railroad, and Moses Lake Irrigation and Rehabilitation District are all potential partners.

5-04.3 Pedestrian Islands and Curb Extensions

To create a curb extension, the curb is extended horizontally into the road, narrowing the distance pedestrian area exposed to vehicular traffic. Curb extensions are also called a narrowing, choker, and bulge. Typically, curb extensions are used on roads with on-street parking or wide travel lanes, where space on the road adjacent the curb is not used by moving traffic. Curb extensions can be used at intersections or mid-block crossings. In addition to curb extensions, pedestrian islands can be placed in the center of the road way designed to provide a safe heaven for pedestrians between two-way traffic, while crossing the street. Curb extensions used in conjunction with pedestrian islands can narrow the distance the pedestrian has to negotiate traffic while crossing the street.

Existing Amenities
The City of Moses Lake and business owners have installed concrete brick sidewalks, placed plaza trees for canopy cover, installed decorative lighting, and have invested in downtown center activities and facilities. These facilities include a museum and art center, Sinkiuse Square, Moses Lake Aquatic Center, Centennial Amphitheater, Community Gardens, Japanese Gardens, Skateboard Park, and Family Fun Center.

Function
Pedestrian islands would provide safe pedestrian access and be more inviting for pedestrians to visit the downtown business and community activities.

Form
Pedestrian islands and curb extensions constructed at designated pedestrian crossings.
Concepts and Opportunities
Pedestrian islands would provide comfortable, safe crossings for people participating in downtown activities. Islands would serve as traffic calming elements and provide a third dimension to a vehicular and pedestrian area. Islands would also convert a high pedestrian-vehicular-accident area into a pedestrian-vehicular-friendly area. Curb extensions and pedestrian islands place the pedestrian closer to the flow of traffic therefore making the crossing distance shorter and also making the pedestrian more visible to the driver.

Constraints
Engineering design, storm water deviations and addition catch basins, citizen complaints regarding narrower travel lanes and tighter turning radii, and construction expense are all constraints associated with curb extensions and pedestrian islands projects.

Potential Partners
City of Moses Lake, Downtown Business Association, Washington State Department of Transportation, and Moses Lake School District are all potential partners.

5-04.4 Heron Trail Boardwalk
Heron Trail Boardwalk would be a 1.3-mile asphalt and boardwalk trail across the Pelican Horn finger of Moses Lake. Heron Trail Boardwalk would have asphalt trail connections to existing amenities within McCosh Park, the hub for the Activity Trails system. Heron Trail would also have trail connection to the Japanese Gardens located on the south end of Alder Street.

FIGURE 5-23
This aerial sketch is showing how Heron Trail could cross Pelican Horn from McCosh Park.
Existing Amenities
Heron Trail Boardwalk would compliment McCosh one of the City of Moses Lake’s most active parks would serve as the westerly connection to the Heron Boardwalk project. McCosh Park’s existing amenities include: the Moses Lake Aquatic Center, Centennial Amphitheater, basketball court, tennis courts, barrier free play equipment, restroom facilities, and the old Swedberg Pool House structure. The Swedberg pool house structure is currently used as a City Parks Department storage facility, but has great potential for an activity equipment rental facility. Heron Trail Boardwalk’s connection from the eastside would be the Japanese Gardens located at the south end of Alder Street. The garden offers trails, serene atmosphere, and barrier free restroom facilities. The Japanese Gardens also provides opportunities for bird watching and nature studies of flora/fauna with surroundings of ponds and wildlife habitat. To the south approximately one and one half miles from McCosh Park is Montlake park, offering boat launch facilities, play equipment, barbeque shelter, and restroom facilities. The Montlake Park connection will be in phase two or three. Also to the south of the Heron Trail boardwalk would be a youth and senior fishing pond proposed by the Vehrs Family.

Function
Heron Trail Boardwalk and trails would serve as a tranquil walk for commuting, education, meditation, and connect three established major activity facilities; McCosh Park, Japanese Gardens, and Montlake Park.

Form
Heron Trail is a multi-use, park-to-park, pedestrian trail in the form of a boardwalk and connecting hard surface trails.

Concepts and Opportunities
The Heron Trail would provide pedestrian connections to existing facilities, while offering unique educational opportunities. The boardwalk and trails would limit...
vehicular and pedestrian conflicts. Heron Trail Boardwalk and trails would provide an opportunity for humans and wildlife to cohabit in the natural environment, while humans experience wetlands through viewing, smelling, and hearing the outdoors. The Heron Trail would provide for a broader perspective of the Lake, Centennial Amphitheater, City of Moses Lake’s Aquatic Center, and the Japanese Gardens.

**Constraints**
Engineering design, construction costs, maintenance, shoreline management and permitted uses, and acquisitions of shoreline properties are all required to complete this project.

**Potential Partners**
City of Moses Lake, Audubon Society, Lions Club, Elks Lodge, Rotary, Washington Wildlife and Recreation Program’s Interagency Committee for Outdoor Recreation, General Public, Moses Lake Irrigation and Rehabilitation District, and Kiwanis Club are all potential partners.

5-04.5 Railroad bed trail to Pelican Point
Columbia Basin Railroad tracks cross Pelican Horn approximately one-half-mile north of Montlake Park and run south adjacent to Montlake Park. The Activity Trail system could take advantage of this railroad track bed after the rail is abandoned in the near future. This railroad track bed route would also serve the backbone for the Activity Trail System running through the City of Moses Lake.

**Existing Amenities**
The Columbia Basin Railroad tracks bed would provide an established surface and route for the future railroad bed trail. The route runs through the center of town and would serve as a backbone for the entire Activity Trail System. The portion of the railroad bed trail From the boardwalk to Pelican Point would cross the lake approximately one mile south of the McCosh park and along the east side of the Moses Lake to Montlake Park. The existing rail bed then runs along the easterly border of Montlake Park south approximately one and one half miles to Goodrich Road. Goodrich Road provides access to the Pelican Point neighborhood. The existing railroad bridge over I-90 would be a boardwalk or wooden bridge deck and has a stunning view of Moses Lake, Marsh Island, City of Moses Lake, the traffic lights, and amazing sunsets.

**Function**

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**FIGURE 5-26**
Picture shows the Columbia Basin Railroads tracks running north south adjacent to Montlake Park.

**FIGURE 5-27**
Picture is looking west at the existing railroad bridge crossing I-90.
The existing rail bed would be converted as a north and south cyclist and pedestrian trail route.

**Form**  
The Railroad Bed Trail would be a north-south multi-use hard surface trail separated from vehicular traffic.

**Concept and Opportunities**  
The Pelican Horn Trail will provide north-south connections from Heron Trail to Montlake Park by converting the existing railroad tracks to Activity Trail. Pelican Horn Trail includes the existing railroad lake crossing providing access across the Pelican Horn of Moses Lake; the area south of the lake crossing, which exhibits upland and wetland experiences; the section along the easterly border of Montlake Park that allows non-motorized access for surrounding neighborhood and park, and a bridge over I-90 that provides a non-conflict pedestrian connection from north area of Pelican Horn to the south end of Pelican Horn, in a dramatic form. Pelican Point and surrounding residents would have a much-desired non-motorized route to town for commuting and recreation.

**Constraints**  
Acquisition and abandonment of railroad, design, implementation, and permitting are all constraints associated with this project.

**Potential Partners**  
Columbia Basin Railroad, Grant County, City of Moses Lake, DOT, Rails to Trails Conservancy and Moses Lake Irrigation and Rehabilitation District are all potential partners.

**5-04.6 Connection Trails to Neighborhoods, Downtown Activities, Schools, and City Parks**  
Trails connecting schools, parks, neighborhoods, and downtown activities would encourage all ages to participate in walking, biking, and running as healthier method of transportation.

**Existing Amenities**  
Within the Red Teams designated area are Samaritan Hospital, Moses lake Medical Clinics, Pioneer Medical Clinic, Garden Heights Elementary School, Knolls Vista Elementary School, Chief Moses Middle School, Moses Lake High School, Montlake Park, Knolls Vista Park, Gillette Park, McCosh Park, Japanese Gardens, Neppel Park, Sinkiuse Square, Juniper Park, Municipal park and Pelican Point Park. Municipal improvements in these residential neighborhoods mostly consist of forty-foot-wide asphalt streets with curb and five-foot-wide sidewalks. However, a few of the older streets within this neighborhood do not have sidewalks. The arterials within this neighborhood are Pioneer Way, Division Street, Yonezawa Boulevard, Clover Drive, and Wheeler Road. Additionally, an existing widened sidewalk, designated as an activity trail, runs along Division Street from Nelson Road to Yonezawa Boulevard, east on Yonezawa Boulevard.
to Clover Drive, North on Clover Drive to Pioneer Way, north on Pioneer Way to Nelson Road, and west on Nelson Road to Division Street.

**Function**
Connection trails would be used as commuting and recreational connections from residential areas to existing facilities and activities would be provided or enhanced.

**Form**
Widened sidewalks, designated bike lanes, and signed/shared roadways are all forms of trails that would be constructed.

**Concepts and Opportunities**
By connecting the community with safe trails and routes, the residents would have more opportunity for physical activity, children commuting to and from school would have safer routes available to them, vehicular and pedestrian conflicts would be minimized, and more positive activities would be promoted in the parks, and residents would be more likely to commute on a bicycle or walk.

**Constraints**
Acquisition of more right-of-way, removal of existing improvements, engineering and design, removal of existing parking strips for bike lane designations, Public reactions, and implementation expenses are all constraints within this project.

**Potential Partners**
City of Moses Lake, and property owners, private groups, and Washington State Department of transportation are all potential partners.

5-04.7 **Yonezawa Boulevard rest area and Information center**
Yonezawa Boulevard Activity Trail has the highest rate of pedestrian use on a daily average then any other section of trail and has no resting or restroom facilities for the users. A barrier free restroom and information facility would be at a mid point between Highway 17 and Division Street for the users of the trail system.

**Existing Amenities**
Yonezawa Boulevard is approximately two and one half miles in length and is a four-lane roadway with landscaping in the medians and ten-foot-wide sidewalks adjacent to the curb on both sides. The existing activity trail, ten-foot-wide sidewalks, provides an open vista and roomy atmosphere parallel with I-90, one-quarter of a mile to the south. The Moses Lake High School is north of Yonezawa Boulevard and residential areas are west and north of Yonezawa Boulevard. Yonezawa Boulevard's section of designated Activity Trail has the highest current daily pedestrian use with an average of nearly 300 people per day.
Function
Restroom facilities, drinking water, and information kiosks about trails and activities would be provided adjacent to a popular pedestrian trail.

Form
Yonezawa is a ten-foot-wide concrete, multi-use trail, on east and westbound sides, abutting the roadway with a type “A” curb. The type “A” curb provides a 6-inch vertical elevation change between the sidewalk and asphalt roadway, but provides no buffer for the pedestrians.

Concepts and Opportunities
A rest area with much needed restrooms will serve the public in the southerly area of the trails system. An information center at the rest area would provide users with information on current community activities and aid in route planning. The rest area would establish a key destination point on the southerly end of the trail system. Shade trees would be installed around the rest area and along the activity trail would provide shade and establish an overhead element to the flat terrain of this high desert area. A breast-feeding station would be provided at the restroom facility to enhance the trail system for mothers.

Constraints
Acquisition of more right of way, engineering and design, maintenance, and implementation expenses are all constraints within this project.

Potential Partners
City of Moses Lake, property owners, Moses Lake School District, Washington State Department of Transportation, and Washington State Department of Health are all potential partners.
5-05 GREEN TEAM

Design Area

The Green Teams project area is south of SR-17, east of Airway Drive, including the Moses Lake Shoreline, along Crestview Drive, through Knolls Vista, to Stratford Road.

Projects

5-05.1 Shared bike path and parking lane along Airway Drive.
5-05.2 Grant County Fairgrounds Multi-use path from Airway to Central Drive
5-05.3 Multi-use path along State Highway SR-17.
5-05.4 Improvements to Valley Road Activity Trail.

Project Details

5-05.1 Shared bike path and parking lane along Airway drive.

The shared bike path adds bike lanes to the parking lane to create a shared bike and parking lane.

Existing Amenities

Airway Drive is a wide, two-lane road, with curbs, sidewalks, and a parking lane along the northbound lane. Airway Drive is an important...
road, which serves as a main arterial between Valley Road and SR17 provides access points to Cascade Valley, and pass through Grant County Fairgrounds. Several opportunities arise along Airway Drive for scenic viewpoints overlooking Mae Valley, Cascade Valley, the Cascade Mountains, and Mount Rainier. Grant County Fairgrounds, existing informal, primitive trail, which currently exists just north of the fairgrounds, between Airway Drive and Central Drive. In addition, an opportunity exists to install landscaping, as a buffer, in the planting strip along the roadway, in several sections.

**Function**
A shared bike and parking lane along Airway Drive would create a safer path for recreational cyclists and bike commuters to Big Bend Community College, the fairgrounds, and Cascade Valley parks. It would also provide a connection to the proposed multi-use path along SR 17.

**Form**
Existing driving lanes would be narrowed to allow the addition of a bike lane to the parking lane.

**Concepts and Opportunities**
The Airway Drive bike lane will improve the safety of bicyclists while providing better access to Cascade Valley, Big Bend Community College, and SR 17. The route also provides several opportunities for scenic viewpoints.

**Constraints**
Turn lanes will need to remain for access to the fairgrounds, limiting the space available for a bike lane. A lack of shade trees and insufficient right-of-way may pose problems for landscaping. Public opinions on narrowed travel lane widths, construction costs, design costs, maintenance, and land acquisition are all constraints within this project.

**Potential Partners**
City of Moses Lake, Grant County, Washington State Department of Transportation, Adjacent property owners, and the Grant County Fair Board are all potential partners.

### 5-05.2 Grant County Fairgrounds Multi-use Trail from Airway to Central Drive
Grant County Fairgrounds Trail from Airway Drive to Central Drive would provide a connection trail for area neighborhoods, parks, and major community activity area.

**Existing Amenities**
An existing primitive trail exists along the north border of the Grant County Fairgrounds connecting Central Drive and Airway Drive. Grant County Fairgrounds could provide restroom facilities, shade trees, benches, some lighting, and possibly maintenance for the multi-use trail.
Function
Adding a multi-use trail from Airway to Central Drive will allow cyclist and walkers from the neighborhoods north of the Fair Grounds to access the Lauzier Baseball fields, the Vista Village mall, as well as several large churches along Grape Drive. In addition, a multi-use path could be built along the PUD right of way that runs north of the Fair grounds. A multi-use path could be installed north of the fairgrounds to improve neighborhood access to ball fields and churches.

Form
The Grant County Fairgrounds Trail from Airway Drive to Central Drive would be a separate 12-foot-wide asphalt trail connecting Airway Drive to Central Drive through the Grant County Fairgrounds.

Concepts and Opportunities
The Grant County Fairgrounds Trail from Airway Drive to Central Drive would provide pedestrian access to Paul Lauzier Baseball Fields, Grant County Fairgrounds, and the Central Drive Activity Trails. The multi-use trail bisecting the area between SR 17 and Valley Road as an internal loop connection provides an artery for future smaller activity trail loop sections.

Constraints
Maintenance, construction costs, design costs, Grant County Fairgrounds Board approval, and property acquisition are all constraints related to this project.

Potential Partners
City of Moses Lake, Grant County, Washington State Department of Transportation, Adjacent property owners, and the Grant County Fair Board are all potential partners.

5-05.3 Activity Trail Paralleling SR17
Activity Trail parallel to SR 17 from Stratford Road north to Randolph Road would provide connection from downtown to the northerly rural area. This portion of that trail would be constructed from Airway Drive to Stratford Road.

Existing Amenities
State Route 17 is a highly used commuter route between Moses Lake and Ephrata (County Seat). State Route 17 runs north and south. SR 17 also serves as the main connection between the Larson Subdivision and the City of Moses Lake. State Route 17 is a four-lane road with 10 to 12 foot shoulders from Airway Drive to Stratford Road and has extensive use by pedestrians and highway traffic. The existing 180-foot right-of-
way would easily allow room for the construction of a safe, multi-use trail, separated from the highway.

**Function**
A multi-use trail would provide a safe route for pedestrians and cyclists between the City of Moses Lake and the Grant County Airport, Big Bend Community College, Columbia Basin Secondary High School and the Larson Subdivision.

**Concept and Opportunities**
A multi-use trail would create safer pedestrian and bicycle access from the City of Moses Lake to Grant County Airport. The trail could provide aircraft viewing areas. It would also provide a more secure commuter route to classes and cultural programs at Big Bend Community College and Columbia Basin Secondary High School. Finally, it would provide Larson Subdivision residents better access to The City of Moses Lake.

**Constraints**
The Activity Trail paralleling SR17 would be a large engineering project, as it has significant elevation changes and the possible need for retaining walls along cut sections. Construction costs, Engineering costs, maintenance, Washington State Department of Transportation approval, and SR17 crossings are all constraints related to this project.

**Potential Partners**
City of Moses Lake, Grant County, Washington State Department of Transportation, and the Port of Moses Lake are all potential partners.

### 5-05.4 Improvements to Valley Road Activity Trail
Valley Road Activity Trail improvements would be curb extensions, pedestrian islands at pedestrian crossings, and benches.

**Existing Amenities**
Valley Road is the primary connection to Cascade Valley, Grant County Fairgrounds, Stratford Road, and the City of Moses Lake. An existing multi-use-trail follows the southerly side of Valley Road from Stratford road west to Ottmar Road. Valley Road serves a collector for many neighborhood streets providing cyclists and pedestrian’s routes to churches, schools, ball fields, and shopping areas.

**Function**
The current multi-use trail functions as major walking and cycling connection between the neighborhoods of Valley Road, businesses along Stratford Road, and business and offices in the City of Moses Lake. The multi-use trail also provides a link between Cascade Valley Park and the Neppel Park trail.
Form
Currently, an 8-foot to 10-foot multi-use-trail runs along the southerly side of Valley Road. The improvements to Valley Road multi-use trail calls for improvements to the trail such as plantings and would investigate the need for refuge islands at major intersections. Also improvements would be made to sidewalks and bike access to all connecting to Valley Road.

Concepts and Opportunities
The current trail provides a primary route for commuters, bicyclists, runners, and walkers, but could use landscaping and crossing improvements. Landscaping would include planting strips and shade trees to enhance the existing trail, pedestrian refuge islands would be considered for major intersections to provide safer trail crossings.

Constraints
Valley Road is a congested thoroughfare, and crossing it may present safety issues for both bicyclists and pedestrians. A problem of inadequate right-of-way in some sections may limit landscaping opportunities and pedestrian-crossing improvements. One special concern is the area around the intersection of Valley Road and Stratford Road. This intersection has the city’s highest accident rate for bicycles and pedestrians as they attempt to cross either Stratford Road or Valley Road.

Potential Partners
City of Moses Lake, Grant County, Grant County Fair Board, Washington State Department of Transportation, Moses Lake School District, Vista Village Shopping Center, Local
Churches, and Commercial Businesses on Stratford Road are all potential partners.

COMMUNITY INPUT RESULTS

<table>
<thead>
<tr>
<th>Project/Location</th>
<th>Number of Dots</th>
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<tbody>
<tr>
<td>Heron Trail Boardwalk</td>
<td>34</td>
</tr>
<tr>
<td>Pedestrian overpass over Stratford Road at Neppel Landing</td>
<td>17</td>
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<tr>
<td>Lakeside Drive Kayak Park</td>
<td>15</td>
</tr>
<tr>
<td>Westlake Nature Trail</td>
<td>7</td>
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<tr>
<td>Multi-Use Trail along SR-17</td>
<td>6</td>
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<tr>
<td>BMX Park at NW Corner of SR-17 and Patton Boulevard</td>
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<td>Japanese Garden</td>
<td>4</td>
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<tr>
<td>North Trail Loop Connection Around Moses Lake</td>
<td>4</td>
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<tr>
<td>Railroad Bed Trail to Pelican Point</td>
<td>3</td>
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<td>Rail Trail to College</td>
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<td>Boat Launch/Park on Elgin road</td>
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<tr>
<td>Monuments and Art</td>
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<tr>
<td>Improvements to Valley Road Activity Trail</td>
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<td>Paul Lauzier Baseball Complex Fields</td>
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<tr>
<td>Highway 17 and Railroad Intersection</td>
<td>1</td>
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<tr>
<td>Marina Shores (and connect to Lakeview Island)</td>
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<tr>
<td>Fishing Bump-outs</td>
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<tr>
<td>Barrier Free Pedestrian Bridge over I-90</td>
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<td>Sand Dunes Trail</td>
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<tr>
<td>Peninsula Loop</td>
<td>1</td>
</tr>
<tr>
<td>Medians</td>
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</table>
Bike Accessible Stop Light Trigger Buttons 1
Walkway to Crest Island 1
Water Access to Crest Island 1
Shared Bike Path and Parking Lane Along Airway Drive 1
6-00 Activity Trails Design and Technical Criteria

6-01 Purpose
Safe and well-designed Activity Trails are essential to encourage bicycle, walking, running, jogging, skating, and other healthy outdoor activities. This master plan is designed to provide information and guidelines for the development consistency of Activity Trails, to enhance and encourage safe activity for the entire community.

6-02 Jurisdiction
This master plan is a guide only. The regulating jurisdiction will review and approve actual construction plans for all activity trails. The local Jurisdiction may require additional items.

6-03 Bicycle Travel Areas
Bicycles traveling in roadways should use designated bike lanes whenever possible. Bicyclists may share the traveled way and multi-use paths when bicycle lanes are not provided; except where bicycle travel may be prohibited.

6-04 Walkers, Runners, and Other Users Areas
Walkers, runners, and other users should use designated sidewalks, crosswalks, and all signed activity trails whenever possible.

6-05 Requirement for other Accesses
Onsite improvements may be required to provide public access to schools, community facilities, and other commercial areas.

6-06 Barrier Free Requirements
All designs for multi-use paths should conform to barrier free requirements. Appendix E provides the barrier free requirements for bicycle and pedestrian routes.

6-07 Access Right-of-Way
Where activity trails cross private land or coincide with private bike facilities, the developer should provide public right-of-way. This will ensure that paths or other bicycle facilities become part of the Activity Trails.

6-08 Maintenance Responsibility
Maintenance and operation responsibility for new activity trails should be determined during the construction design or subdivision plan review process.

6-09 Structures Not Allowed
Utility poles, mailboxes, and other obstructions should not be located in bike lanes or activity trails.
7-00  Design Requirements for Bike Lanes

7-01  Bike Lanes
Specific routes are designated in the Master Plans as bike lanes. Bike lane routes are designated on streets with lower traffic volumes and speeds; wide outside lanes; and minimal stop signs, stoplights, curb cuts, and traffic interference. Streets with bike lanes should be designed with additional width to accommodate the bike lanes. Additional right-of-way may be needed for bike lanes, Appendix – B shows typical street layouts for bike lane routes.

7-02  Width and Cross Sections
Bike lanes should be designed with 6-foot to 7-foot widths on both sides of every street. Bicycle lanes on one-way streets should be on the right side of the street, unless otherwise approved by Municipal Services Director. Bike lane widths should not be less than 5-feet in width.

7-03  Signage and Striping
All bike lanes should have signs and be striped, per MUTCD and as shown in Appendix - C.

7-04  Actuation Loop
All signalized intersections should have separate actuation loops in bike lanes. Quadra pole-type loops are recommended.

7-05  Non-Curbed Roads
All non-curbed road sections should include a minimum 6-foot, paved shoulder for a bike lane.

7-06  Bike Lanes at Intersections
At intersections where separate right turn lanes are striped, the bicycle lane should transition and should be placed between the through lane and the right turn lane. The width of a bike lane at a transition should remain the same as the approaching bike lane. Appendix – B depicts a typical transition for bike lanes at right-hand turn pockets.

8-00  Design Requirements
All activity trails should meet the design requirements of this chapter and meet the requirements of the regulating jurisdiction. Construction plans should be provided for all activity trails to the regulating jurisdiction for review and approval.

8-01  Multi-Use Path Location

I.  Location Criteria
Path locations should be based on safety, circulation, access, and existing facilities.

II.  Right-of-Way
A 20-foot right-of-way should be procured for a 10-foot-wide activity trail. Appendix – B shows typical layouts for activity trails.

8-02 Trees, Vegetation, and Obstacles

I. Preserving Trees
   Activity Trails should be routed to minimize the loss of trees and disruption of natural conditions. Enhancement or increased buffers should be provided for all activity trails that border wildlife areas.

II. Distance from Obstacles
   A minimum of 2-feet should be provided between the edge of the activity trail and all vertical obstructions such as utility poles, trees, fences, and signs.

III. Clearing of Vegetation
   All vegetation within 4-feet of the activity trail, regardless of trail surface, should be removed prior to activity trail construction.

IV. Overhead Clearance
   All activity trails should have a minimum of 10-feet, clear, vertical distance above the trail. Appendix B provides typical clearance requirements.

8-03 Cross Section
   Typical cross sections should be provided for the length an activity trail.

8-04 Grade

I. Profile
   A profile of the proposed activity trail construction should be included in the construction plans provided. If the proposed activity trail is a multi-use trail, a separate profile should be provided from the street profile.

II. Minimum and Maximum Grade
   Minimum grade should be 0.50 percent. Maximum grade should be 5 percent, but shouldn’t exceed ADA maximums. Appendix E provides typical grade designs.

8-05 Design Speed

I. Paved Surfaces
   A minimum design speed of 20 mph should be used on paved surfaces.

II. Unpaved Surfaces
   A minimum design speed of 10-mph should be used.

8-06 Horizontal Alignment
I. Minimum Radius of Curvature

The minimum radius of curvature negotiable by a bicycle is a function of the super elevation rate of the activity trail surface, the coefficient of friction between the apparatus tires and the activity trail surface, and the speed of the apparatus, AASHTO 37.

Formula for Radius Calculation

The minimum design radius of curvature should be based upon the following formula:

\[
R = \frac{V^2}{15(\frac{e}{100} + f)}
\]

- \( R \) = Minimum radius of curvature (ft)
- \( V \) = Design speed (mph)
- \( e \) = 2 percent or 0.02
- \( f \) = Coefficient of friction

Rate of Super-Elevation

Super elevation rate should be a maximum of 2 percent (the minimum slope required to provide adequate drainage).

Coefficient of Friction

The coefficient of friction depends upon speed, and surface condition. Friction factors used for design should be selected based upon the point at which centrifugal force causes the bicyclist to recognize a feeling of discomfort and instinctively act to control speed for negotiation. By extrapolating values used in highway design, design friction factors for paved activity trails can be assumed to vary from 0.26 at 20 mph to 0.22 at 30 mph. Unpaved surface friction factors should be reduced by 50-percent to allow an adequate margin of safety.

Minimum Radius

Based upon a super-elevation rate (e) of 0.02, a speed of 20 mph, and coefficient of friction of

Substandard Radius Curves

When substandard radius curves must be used on activity trails, because of right-of-way, topographical, or other considerations, curve warning signs and pavement markings should be installed in accordance with the MUTCD, information provided in appendix C.
Sight Distance

Sight distance is a primary element of road and trail intersection design. There are three main sight distance matters of significance to road and trail intersection designs; stopping sight distance, intersection sight distance, and judgment sight distance.

a. Stopping sight distance is the un-obscured view distance that the person traveling on the trail has, allowing the person time to make decisions for their planned route of travel.
b. Intersection sight distance is the distance needed to for approaching motorists/cyclists to see trail users who are approaching the intersection.
c. Judgment sight distance involves providing clear lines that are based on the distance that approaching bicyclist/trail user will travel in the amount of time the approaching bicyclist/trail user takes to clear the intersection.

The Activity Trails will have shared uses and should be designed with adequate stopping sight distances. In order to provide adequate sight distances, for the opportunity to see and react to the unexpected, sight distance should be design for the fastest moving apparatus, the bicycle. The distance required to bring a bicycle to a full controlled stop is dependent on the bicyclist’s perception, the traveling speed of the bicycle, braking time, the coefficient of friction between the trail surface and the tires, and the condition of the bicycles brakes, “Schermers 121”. Since the condition of all equipment to be used on the activity trails is an unknown the trails should be designed for wet weather conditions.

Figure 5-34 based on a total awareness and brake reaction time of 2.5 seconds and a coefficient of friction of 0.25 to account for wet weather braking, AASHTO 42.

\[ S = \frac{V^2}{30(f \pm G)} + 3.67V \]

Where:  
- \( S \) = stopping sight distance (ft)  
- \( V \) = velocity (mph)  
- \( F \) = coefficient of friction (0.25)  
- \( G \) = grade (ft/ft) (rise/run)
Figure 5-34 shows the minimum stopping sight distances for various design speeds.
8-08 **Cross Slope**

All cross slopes should be 2-percent.

8-09 **Drainage**

Drainage inlet grates and utility covers are potential obstructions to bicyclists and trail users. Therefore, bicycle-safe grates should be used, and grates and covers should be placed in locations, which will minimize maneuvering to avoid grates by the trail users.

I. **Local Standards**

All trail designs should satisfy the storm drainage requirements of the local jurisdiction. Appendix F provides storm drainage requirements for right-of-way.

8-10 **Safety Considerations**

I. **Pedestrians**

The safety of pedestrians, and others who may use or travel on the activity trails, should be the primary consideration in activity trail design.

II. **Clearance Between a Activity Trail and a Street**

No activity trail should be constructed directly adjacent to street curb or street pavement, except bike lanes. Minimum separation should be 2-feet.

III. **Barriers and Other Safety Devices**

For activity trails adjacent to streets with speed limits over 25 mph, and with slopes greater than 6 percent, the City of Moses Lake’s Municipal Services Director may require special safety measures. Examples include: barriers, buffers, or other safety devices should be provided between the roadway and activity trail.

IV. **Signs for Trails and Regulatory Messages**

Signs and pavement markings for all proposed trail designs should be provided on all activity trails to alert trail users of directions, hazards, and regulations. Typical signs and pavement markings are located in appendix C. Additionally, signs and pavement markings should adhere to the MUTCD.

V. **Intersection Grade**

Maximum grade of the activity trail at intersections should be 4-percent extending for 30 feet in all directions from the centerline of the intersection.

VI. **Access Ramps**

Standard access ramps should be provided at all curb crossings to provide for all trail users. Curb depressions equaling the activity trail width should be used, with the trail surface sloping to the pavement at 1:12 maximum slope, whenever possible.
8-11 Activity Trail Bridges

I. Crossings of Water
All activity trails should provide either a bridge or a fair weather crossing whenever the trail crosses water.

II. Pedestrian Crossings on Primary and Secondary Streets
Underpass or overpass should be installed whenever pedestrian crossings occur at Primary, Secondary Streets. Planned locations are in appendix B.

II. Barriers, Fences, or Railings
Barriers, Fences, or Railings on both sides of an activity trails structure should be a minimum of 4.5 feet high. Smooth rub rails should be attached to the barriers at handlebar height of 3.5 feet. Barriers should not impede storm water runoff from the path.

IV. Bridge Underpass Lighting
All bridges and underpasses on activity trails should have sufficient lighting for safety.

8-12 Activity Trail Underpasses
The minimum clearances for underpasses are recommended as follows: Horizontal: 10-feet from abutment, curb, or edge of water; 12-feet if equestrian accommodation is required. Vertical: 10-feet from trail surface to underside of bridge, 12-feet if equestrian accommodation is required. The trail surface elevation should be at or above the high water mark for 10-year storm.

8-13 Signage and Pavement Marking

I. General Requirements
All signs should conform to MUTCD.

II. Painted Centerline on Curves
All curves with restricted sight distances are should to be painted with a centerline to separate user traffic. The centerline should be 4 inches in width and painted yellow.

8-14 Intersections
The following requirements apply to all activity trail intersections with either roadways or other Activity trails:

I. Sight Distance
The Designer should ensure sufficient stopping and intersection sight distance at all activity trial intersections and curves, particularly where steep grades are proposed at activity trail/roadway intersections. Obstructions to the visibility of motorists or activity trail users should be removed or the activity trail aligned around the obstruction to maximize visibility.
III. Turning Radius at Intersections
The minimum turning radius at activity trails intersections should be 20 feet.

8-15 Bicycle Parking Areas

I. U Type Bike Rack
The inverted U-type bike rack should be provided for all bicycle-parking racks, as shown in appendix B.

II. Bike Parking
For proposed nonresidential land uses, bicycle parking should be equivalent to five percent of the off-street vehicle-parking requirements, with a minimum of one-six place inverted U-type bicycle rack. Appendix F provides information requirements for non-residential land usage.

8-16 Placement of Inverted U-Racks
Bicycle racks should be installed within fifty feet of building entrances. All bicycle parking provided should be on concrete, and located a minimum distance, from any wall:

<table>
<thead>
<tr>
<th>Bike Orientation</th>
<th>Min. Distance of Rack from Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel to wall</td>
<td>28-inches</td>
</tr>
<tr>
<td>Perpendicular to wall</td>
<td>34-inches</td>
</tr>
</tbody>
</table>

**Covered shelters for bike racks are encouraged.**

**Figure 5-35**

8-17 Lighting
Lighting should be installed for all activity trails for safety and comfort of all users. Lights should conform to the typical light details in appendix B.

8-18 Benches
Activity Trail furnishings and design elements incorporated into the trails system for resting and viewing purposes should conform to the typical details in appendix B.
Project Priority List

The project priority list was compiled and rated by the Trail Planning Team Priority Subcommittee, consisting of Joe Rogers, Bob Russell, Dennis Parr, Richard Teals, and Curt Carpenter. This subcommittee team rated the projects using the citywide survey results, design charrette results, and project implementation difficulty.

A – High Priority  B – Medium Priority  C – Low Priority
1 – Easy to Implement  2 – Moderately Difficult to Implement
3 – Difficult to Implement

1. Heron Trail Boardwalk – A1
   a. Raise $30,000.00 for grant match

2. Dogwood Court – A1
3. Road L Bike Lane – A1
4. Maple Drive Path – A1
   a. Grape Drive to Stratford Road
5. Neppel Trail to Marina Shores – A1
6. Airway Drive Shared Lane – A1
7. West Broadway Commuting Corridor – A1
8. Widen Stratford Road Bridge over I-90 – A2
9. Railroad Acquisition – A2
10. West Broadway Crossing at Burress Avenue – A2
11. Larsen Trail (Base Connection) – A2.5
12. Pedestrian Overpass from Neppel Landing to the NE side of Stratford road – A3
13. Connection form Road L to Town – B1
14. Lower Peninsula Loop – B2
15. Parker Horn North Loop Trail – B2
16. Pedestrian Overpass over SR 17 at Grape Drive – B3
17. Improvements to Valley Road Activity Trail – C1
18. Boat Launch on Elgin Road – C1
19. Railroad Bed Trail to Pelican Point – C2
20. Sand Dunes Trail – C2
21. Fishing Bump-Out – C2
22. Lakeside Drive Kayak Park – C3
23. Trails Along Irrigation Canals – C3
24. North Loop Connection Around Moses Lake – C3
The goal of the Moses Lake Trail Planning Team is to create a network of linked pedestrian and bicycle paths throughout the greater Moses Lake area. These Activity Trails will be used for exercise, recreation, transportation, tourism, and to promote healthy and enjoyable lifestyles for our community. Phase-I of this goal connects the existing Moses Lake Activity Trails and provides for an interconnecting trail with Big Bend Community College. Completion of Phase-I is compatible with the goals of Vision 2020, Walkable Communities, and Safe Routes to Schools programs. It will link major residential areas with downtown Moses Lake, the Moses Lake Park System, Japanese Gardens, shopping areas, the Aquatic Center, and Big Bend Community College. Completion of Phase-I will also create the foundation and backbone of an expanded Activity Trail System within the City of Moses Lake and the area surrounding Moses Lake in Grant County.

The eight sections comprising Phase-I are listed and described below.

**Section #1 - Larsen Trail**

Section #1, known as Larsen Trail, will complete the pedestrian and bicycle Activity Trails linkage from Patton Boulevard to Central Drive. Therefore Larsen Trail will connect Big Bend Community College and Grant County Municipal Airport to the downtown of Moses Lake. This section includes 9,600-feet of striping, 650-feet of 10-foot-wide sidewalk, and 4,500-feet of 10-foot-wide asphalt separated trail. The estimated cost to complete section #1 is $458,194.00.

**Section #2 – Interlake Connection**

Section #2 connects the existing Activity Trail System on Peninsula Drive with Neppel Trail at West Broadway by means of Interlake Avenue. This section of Activity Trail consists of 900-feet of 6-foot-wide separate sidewalk, 4,800-feet of bicycle lane striping. The estimated cost to complete section #2 is $149,287.00.

**Section #3 – Peninsula to McCosh Park**

Section #3 connects existing Activity Trails Locust Lane to McCosh Park. This section consists of 20,000-feet of bicycle lane striping, 1,600-feet of sidewalks, 1,600-feet of curb, 800-feet of Asphalt Street, and 1,000-feet of 10-foot-wide asphalt separated trail. The estimated cost to complete section #3 is $333,494.00.
Section #4 – West Broadway to McCosh Park

Section #4 connects the existing Neppel Trail from Interlake along West Broadway to McCosh Park. This section consists of 25,000-feet of bicycle lane striping, 800-feet of 10-foot-wide asphalt separated trail, 300-feet of asphalt street, 650-feet of type “A” curb, 650-feet of 6-foot-wide separated sidewalks, and decorative overhead lighting. The estimated cost to complete section #4 is $472,834.00.

Section #5 – Clover Loop

Section #5 connects the existing Activity Trail System on Clover Drive to 5th Avenue by means of Yonezawa Boulevard and Division Street. This section consists of 60,000-linear-feet of re-striping for bicycle lanes and bicycle detector loops for Division Street and 5th Avenue intersection. The cost estimate to complete section #5 is $59,152.00.

Section #6 – Wheeler Road

Section #6 connects McCosh Park to road “L” NE by means of Wheeler Road and 5th Avenue. This section consists of 23,000-feet of bicycle lane striping, 3,000-feet of curb and sidewalk extension, and 1,500-feet of sidewalk replacement. The cost estimate to complete section #6 is $754,056.00.

Section #7 – Dogwood Street

Section #7 connects existing Neppel Trail to McCosh Park by means of Dogwood Street. This section consists of 2,000-feet of bicycle lane striping, bicycle detector loops at 3rd Avenue and Dogwood Street intersection, and 800-feet of sidewalk improvements. The cost estimate to complete section #7 is $199,329.00.

Section #8 – Pioneer Way

Section #8 connects the existing Activity Trail System on Yonezawa Boulevard to 5th Avenue by means of Clover Avenue and Pioneer Way. This section consists of 135,000-feet of roadway re-striping for bicycle lanes, 1,200-feet of 10-foot-wide sidewalk, and bicycle detector loops at Clover Drive/SR-17 signal, Pioneer Way/Nelson Road, and Pioneer Way/5th Avenue signals. The cost estimate to complete section #8 is $184,700.00.
### PHASE I - MOSES LAKE ACTIVITY TRAILS
#### ESTIMATES

<table>
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**SECTION #3 - Peninsula to McCosh Park**

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<td>Embankment and Excavation</td>
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<td>Saw cut Asphalt/Concrete</td>
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| Crushed Surfacing Top Coarse                   | 800 Ton          | $16.00             | $12,800.00  

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*MOSES LAKE ACTIVITY TRAILS MASTER PLAN 2005*
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| SECTION #5 - Clover Loop                                           |                  |            |             |          |
| Striping                                                           | 60,000           | Linear Feet | $0.20       | $12,000.00|
| Removal of Striping                                                | 29,000           | Each       | $0.40       | $11,600.00|
| Signal Loop (Division and 5th Ave. signal)                         | 4                | Each       | $1,800.00   | $7,200.00 |
| Remove Concrete Curb                                               | 40               | Linear Feet| $4.00       | $160.00   |
| Remove Concrete Sidewalk                                           | 17               | Square Yard | $5.00       | $85.00    |
| Remove Asphalt                                                     | 30               | Square Yard | $3.50       | $105.00   |
| Saw cut Asphalt/Concrete                                           | 100              | Linear Feet | $3.00       | $300.00   |
| Type "A" Curb                                                      | 40               | Linear Feet | $15.00      | $600.00   |
| PVC Conduit 2-inch                                                 | 60               | Linear Feet | $8.50       | $510.00   |
| Concrete Sidewalk                                                  | 16.5             | Square Yard | $25.00      | $413.00   |
| Hot Mix Asphalt 3-inch Compacted (patch)                           | 5                | Ton        | $100.00     | $500.00   |
| Crushed Surfacing Top Coarse                                       | 6                | Ton        | $16.00      | $96.00    |
| Mobilization                                                       |                  | LS         | $8,000.00   | $8,000.00 |
| Contingency                                                        |                  | LS         | $4,157.00   | $4,157.00 |
| Engineering/Architecture                                           |                  | LS         | $9,146.00   | $9,146.00 |
| Sub-Total                                                          |                  |            |             | $54,872.00|
| Tax                                                                |                  |            | 7.80%       | $4,280.00 |
| Total                                                              |                  |            |             | $59,152.00|
**SECTION #6 - Wheeler Road**

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<td>Hot Mix Asphalt 3-inch Compacted (patch)</td>
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<td>Concrete Sidewalk</td>
<td>9,000</td>
<td>Square Yard</td>
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</tr>
<tr>
<td>Crushed Surfacing Top Coarse</td>
<td>800</td>
<td>Ton</td>
<td>$16.00</td>
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<tr>
<td>Embankment and Excavation</td>
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<td>$23,000.00</td>
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<tr>
<td>Remove Concrete Sidewalk</td>
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</tr>
<tr>
<td>Remove Asphalt</td>
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<td>$3.50</td>
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<tr>
<td>Plantings</td>
<td>4,500</td>
<td>Square Yard</td>
<td>$8.00</td>
</tr>
<tr>
<td>Irrigation</td>
<td>LS</td>
<td>$10,500.00</td>
<td>$10,500.00</td>
</tr>
<tr>
<td>Water Service Installation</td>
<td>2</td>
<td>Each</td>
<td>$4,000.00</td>
</tr>
<tr>
<td>Top Soil</td>
<td>170</td>
<td>Cubic Yard</td>
<td>$18.00</td>
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<tr>
<td>Mobilization</td>
<td>LS</td>
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<tr>
<td>Contingency</td>
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<td>$55,296.00</td>
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<td>Engineering/Architecture</td>
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<td>$91,239.00</td>
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<td>Sub-Total</td>
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<td>Tax</td>
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<tr>
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**SECTION #7 - Dogwood Street**

<table>
<thead>
<tr>
<th>Approx. Quantity</th>
<th>Unit</th>
<th>Unit Prices</th>
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<tbody>
<tr>
<td>Concrete Sidewalk</td>
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<td>Square Yard</td>
<td>$25.00</td>
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<tr>
<td>Remove Concrete Sidewalk</td>
<td>350</td>
<td>Square Yard</td>
<td>$5.00</td>
</tr>
<tr>
<td>Remove Concrete Curb</td>
<td>350</td>
<td>Linear Feet</td>
<td>$4.00</td>
</tr>
<tr>
<td>Saw cut Asphalt/Concrete</td>
<td>400</td>
<td>Linear Feet</td>
<td>$3.00</td>
</tr>
<tr>
<td>Remove Asphalt</td>
<td>500</td>
<td>Square Yard</td>
<td>$3.50</td>
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<td>Item</td>
<td>Approx. Quantity</td>
<td>Unit</td>
<td>Unit Prices</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------</td>
<td>-------</td>
<td>-------------</td>
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<tr>
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<td>Linear Feet</td>
<td>$15.00</td>
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<tr>
<td>Crushed Surfacing Top Coarse</td>
<td>20</td>
<td>Ton</td>
<td>$16.00</td>
</tr>
<tr>
<td>Signal Loop (Dogwood and Fourth)</td>
<td>2</td>
<td>Each</td>
<td>$1,800.00</td>
</tr>
<tr>
<td>Striping</td>
<td>2,000</td>
<td>Linear Feet</td>
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<td>Drywell Type &quot;A&quot;</td>
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<tr>
<td>Catch Basin Type I</td>
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<td>Each</td>
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<tr>
<td>Hot Mix Asphalt 3-inch Compacted (patch)</td>
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<td>Ton</td>
<td>$100.00</td>
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<tr>
<td>PVC Storm Pipe 10-inch diameter</td>
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<td>Linear Feet</td>
<td>$20.00</td>
</tr>
<tr>
<td>Plantings</td>
<td>700</td>
<td>Square Yard</td>
<td>$8.00</td>
</tr>
<tr>
<td>Irrigation</td>
<td></td>
<td>LS</td>
<td>$6,500.00</td>
</tr>
<tr>
<td>Water Service Installation</td>
<td>2</td>
<td>Each</td>
<td>$4,000.00</td>
</tr>
<tr>
<td>Top Soil</td>
<td>200</td>
<td>Cubic Yard</td>
<td>$18.00</td>
</tr>
<tr>
<td>PVC Conduit 2-inch</td>
<td>1,000</td>
<td>Linear Feet</td>
<td>$8.50</td>
</tr>
<tr>
<td>Overhead Lighting</td>
<td>7</td>
<td>Each</td>
<td>$5,700.00</td>
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<tr>
<td>Junction Box</td>
<td>8</td>
<td>Each</td>
<td>$400.00</td>
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<tr>
<td>Detectable Warning Surface</td>
<td>13</td>
<td>Each</td>
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<tr>
<td>Mobilization</td>
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<tr>
<td>Contingency</td>
<td>10%</td>
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<td>$14,617.00</td>
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<tr>
<td>Engineering/Architecture</td>
<td>15%</td>
<td>$24,119.00</td>
<td>$24,119.00</td>
</tr>
<tr>
<td>Sub-Total</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total</td>
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</table>

**SECTİON #8 – Pioneer Way**

<table>
<thead>
<tr>
<th>Item</th>
<th>Approx. Quantity</th>
<th>Unit</th>
<th>Unit Prices</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Striping</td>
<td>135,000.00</td>
<td>Linear Feet</td>
<td>$0.20</td>
<td>$27,000.00</td>
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<tr>
<td>Removal of Striping</td>
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<td>Signal Loop (Dogwood and Fourth)</td>
<td>6</td>
<td>Each</td>
<td>$1,800.00</td>
<td>$10,800.00</td>
</tr>
<tr>
<td>Remove Concrete Sidewalk</td>
<td>600</td>
<td>Square Yard</td>
<td>$5.00</td>
<td>$3,000.00</td>
</tr>
<tr>
<td>Remove Concrete Curb</td>
<td>100</td>
<td>Linear Feet</td>
<td>$4.00</td>
<td>$400.00</td>
</tr>
<tr>
<td>Remove Asphalt</td>
<td>40</td>
<td>Square Yard</td>
<td>$3.50</td>
<td>$140.00</td>
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<tr>
<td>Saw cut Asphalt/Concrete</td>
<td>150</td>
<td>Linear Feet</td>
<td>$3.00</td>
<td>$450.00</td>
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<tr>
<td>Type &quot;A&quot; Curb</td>
<td>100</td>
<td>Linear Feet</td>
<td>$15.00</td>
<td>$1,500.00</td>
</tr>
</tbody>
</table>
The total cost estimate to complete Moses Lake’s Activity Trails Phase-I is $2,611,046.00. This estimate does not include benches, activity trail signs, and drinking fountains; do to the location and quantity will be decided in the design process. The estimated cost of signs and benches is shown below.

*Benches = $2,500.00 each
*Activity Trail Signs = $95.00 each
GLOSSARY

DEFINITIONS

**ACTIVITY TRAIL**
A system of bikeways, multi-use paths, sidewalks, and other routes designated with appropriated signing and informational route markers. Trail routes should complete a connection or loop, but may be a combination of any and all types of trails.

**BICYCLE**
Any vehicle propelled solely by human power upon which any person may ride, having two tandem wheels, except scooters and similar devices. The term "bicycle for this publication also includes three-wheeled and four-wheeled human-powered vehicles, but not tricycles for children.

**BICYCLE FACILITIES**
A general term that denotes improvements and provisions made to accommodate or encourage bicycling, including parking, trails, and storage facilities. This term includes shared roadways that are available for bicyclists, but are not specifically designated solely for bicycle use.

**BICYCLE LANE or BIKE LANE**
A bicycle lane is a portion of a roadway, which is designated by striping, signing, and pavement markings to indicate the preferential or exclusive use by bicyclists.

**BICYCLE PATH or BIKE PATH**
A bikeway physically separated from motorized vehicular traffic by an open space or barrier. A bicycle path may be either within street right-of-way, city right-of-way, and city owned property. Bicycle paths or bike paths, may shared their use with pedestrians, skaters, wheelchair-users, joggers, and non-motorized users.

**BIKEWAY**
A general term for any street, roadway, path, or route that is designated for bicycle travel, regardless of whether such facility is designated for the exclusive use of bicycles or is to be shared with other transportation.

**HIGHWAY**
Refer to roadway description.

**RAILTRAIL**
A shared-use path, either paved or unpaved, built within the right-of-way of existing or former railroad right-of-way.

**RIGHT-OF-WAY**
A general term that denotes public and private land, property, or interest therein, acquired for or devoted to transportation purposes.
**ROADWAY**
The portion of right-of-way, including shoulders, intended for vehicular use.

**SHARED ROADWAY**
A roadway that is open to both bicycles and motorized vehicles. This may be a street with wide curb lanes or with paved shoulders.

**MULTI-USE PATH**
An activity trail physically separated from motorized vehicular traffic by an open space or barrier and either within right-of-way. Multi-use paths may be shared with pedestrians, skaters, wheelchair users, joggers, and other non-motorized users.

**SHOULDER**
The portion of a roadway that is contiguous with the traveled way, for accommodation of stopped vehicles, non-motorized vehicles, for emergency use, and lateral support of the roadway structure.

**SIDEWALK**
The portion of a roadway designed for exclusive use by non-motorized vehicles, walkers, joggers, and wheel chairs.

**SIGNED, SHARED ROADWAY**
A signed, shared roadway is a shared roadway with signs that indicate it as a route for bicycles.

**TRAVELED WAY**
The portion of roadway that is designated for the movement of motorized vehicles.

**UNPAVED PATH**
Unpaved paths are activity trails that are not surfaced with asphalt or concrete.


