PEDESTRIAN & BICYCLE MASTER PATHWAYS PLAN





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CITY PARK .25m CITY HALL .25m



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A. PURPOSE & GOALS

- Develop an aesthetically pleasing and safe pathway system that links important community destinations such as parks, schools, neighborhoods, Emmett's Historic District, Commercial District, the Gem Island Sports Complex, the Payette River, and other Gem County pathways.
- 2. Create a connected network of pathways and pedestrian/bicycle infrastructure that serves both recreation and transportation needs. The network should provide a viable transportation alternative to motorized transportation. The network should be designed not only for recreation but to serve as means of transportation to get people from home to places of work, shopping, and services.
- 3. Establish the Payette River corridor as a greenway for recreation, water rehabilitation projects, community open space, flood control, and habitat preservation.
- 4. Use this Plan as the basis for prioritizing pedestrian and bicycle infrastructure improvements and expansions, including being used as a tool in seeking funding.
- 5. Develop site-specific pedestrian/bicycle plans for every school in the District, i.e. Safe Routes to School plans, that identify and prioritize new pedestrian/bicycle access opportunities and safety improvements, and connections to the larger network.
- 6. Work with the Idaho Transportation Department (ITD) to improve pedestrian and bicycle mobility and safety on Washington Ave. and Hwy 52.

The purpose of this Pedestrian and Bicycle Master Pathways Plan is to lay the groundwork for the location and design of future pedestrian and bicycle infrastructure, i.e. sidewalks, bike lanes, and multi-use pathways in the City of Emmett. It is <u>not</u> a plan to build or acquire right-of-way for any particular segment identified on the Plan Map. If the City, a property owner, a private developer, or any other entity does construct such infrastructure it will need to be done in substantial compliance with this Plan and other pertaining Emmett City Codes.

B. EXISTING CONDITIONS

Emmett's first sidewalk ordinance was passed in 1893 after a Special Session of the City Council¹. The Ordinance ordered new "cement walks" to be constructed on both sides of Main Street from the Farmer's Canal to the Odd Fellows corner (a three-block distance). At

¹ "Gem County ID Historic Moments, News & Photos 1893-2010 (pg 5)

that time, the ordinance required cement walks to be 10 feet wide, and specified the manner and proportions in which the cement was to be mixed. Iron rings for hitching horses were to be inserted every 25 feet.

Since then the City's sidewalk standards and networks have changed and expanded quite a bit. However, much of the existing sidewalk network now is old and in disrepair. There are inconsistencies in sidewalk-widths and types of adjacent-curbs, missing gaps, and places where the sidewalk just ends . . . Thus, there are many different areas of the City where sidewalk improvements are needed for a continuous network.

Due to lack of infrastructure funding, the City must rely on property owners to repair existing sidewalks, and rely on new developments to construct new ones. Sidewalks are in the City's Right-of-Way but it is the responsibility of the property owner to repair and maintain them. In all new developments (residential and commercial) the City requires the installation of curb, gutter, and sidewalks. These requirements are brought forth through the City's Building Permit Process.

The updated Plan Map, that accompanies this Plan, does not show existing sidewalks located outside the priority corridors (see Appendix A). A more comprehensive sidewalk inventory was done in 2018 for the City's Transportation Plan Update which is also appended to this plan (see Appendix B). The Transportation Plan states that "sidewalks are less continuous in neighborhoods immediately to the north, northeast, and south of Downtown. Some outlying neighborhoods to the south, southeast, and southwest are devoid of sidewalks, while others have sidewalks but do not connect to the downtown network." In regards to existing bike lanes, there is one on-street bike lane located on both sides of 12th Street that extends west from S. Washington Ave. to Emmett High School, and another one planned on S. Johns Ave from 4th Street to 12th Street for 2021 construction.

Despite infrastructure funding barriers, Emmett's geographics and demographics make a good combination of conditions for creating a "bike friendly town". Most of the roads in the City are flat, well connected, and the City is still relatively small. The Payette River, one of Emmett's most beautiful natural assets, runs North across the City. The possibility of a continuous multi-use path along the River that connects to Emmett's Old Town and the City Park is a promising one. Such an attraction would bring several benefits to Emmett's residents, visitors, and business owners.

Emmett's demographics are mostly comprised of students, the elderly, and low-income households. Some are too young or too old to drive at all. Others just can't afford to own and drive a car. 27% of the population is under 18 years of age, and the proportion of those

aged 65 or older is higher than the State's average². For these groups, walking and bicycling could be one of their primary modes of transportation, otherwise they depend on others for a ride. The cost of owning and maintaining a vehicle is increasingly expensive. One has to figure not just the cost of gas, but the cost of vehicle insurance, registration, expected maintenance, and unexpected repairs. The more pedestrian and bicycle trips made, the more Emmett residents can save money, stay active, and reduce traffic congestion!

C. DESIGN STANDARDS

The American Association of State Highway and Transportation Officials (AASHTO) has developed national standards and guidelines for pedestrian and bicycle infrastructure, and other such paths. These standards and guidelines, which are periodically updated, have been embraced by the Idaho Transportation Department and the City of Emmett to protect the safety of pathway and bike lane users and to provide a consistent policy direction to planners and engineers.

The design standards in this section are divided into four major categories:

- Sidewalks (pedestrians only)
- Shared Use Paths (pedestrians, bicyclists, and other non-motorized users)
- Bicycle Facilities (no pedestrians allowed)
- Design Standards at Railroad crossings

These design standards were referenced from current publications by local, regional, and national agencies and organizations as of February 2020. Check the most recent editions of the referenced publications for the most up-to-date design guidance. It is important to note that, of the referenced publications, only the Manual on Uniform Traffic Control Devices (MUTCD) and Americans with Disabilities Act (ADA) are mandated by state or federal law; the other publications represent generally-accepted guidance/standards/best-practices.

SIDEWALKS

In accordance with AASHTO recommendations, the City of Emmett Code 6-1-7 prohibits the use of bicycles, skateboards, or motor vehicles on sidewalks. Although not explicitly stated in the Code, electric-assisted bicycles and e-scooters are generally treated the same as bicycles in this circumstance. Design of sidewalks in the City of Emmett should be in accordance with the current edition of the Idaho Standards for Public Works Construction (ISPWC). Sidewalks, ramps, and other pedestrian facilities are subject to ADA requirements.

² City of Emmett Transportation Plan 2018 (pg 5)

Where there is sufficient Right-of-Way, sidewalks that create a buffer between pedestrians and moving vehicles are preferred. Fencing should be no closer than 1.5 feet from sidewalk edge to allow full use of width of sidewalk.

SHARED USE PATHS

Shared use paths (also called multi-use or multi-purpose paths) may be used by bicyclists, pedestrians, and other non-motorized users. Shared use paths are physically separated from motor vehicle traffic by open space or barriers and are typically two-way facilities, as shown in Figure 1 below. This design guidance for shared use paths is referenced from the Fourth Edition (2012) of the AASHTO Guide for the Development of Bicycle Facilities. Please reference the 2020 edition, expected later 2020.



Figure 1: Typical Cross-Section of a Two-Way Shared Use Path (Source: AASHTO Guide for the Development of Bicycle Facilities, Fourth Edition 2012)

Ten (10) feet is the standard minimum width for a separated multiple-use path. Twelve (12) feet is preferred in order to provide enough distance when passing. A minimum 2-foot graded area should be maintained adjacent to both sides of the pavement to provide clearance (shy distance) from poles, trees, fences and other obstructions.

Sidepaths

Shared use paths adjacent to roadways, also known as "sidepaths", can be appropriate if there are minimal street/driveway crossings, but frequent crossings are an operational and safety concern, as shown in Figure 2 below.



Figure 2: Potential Sidepath Conflicts (Source: AASHTO Guide for the Development of Bicycle Facilities, Fourth Edition 2012)

Where a shared use path must be adjacent to a roadway due to right-of-way or physical constraints, there should be a 5-foot minimum width separating the pathway from the roadway, or a physical barrier of sufficient height (equivalent to a standard guardrail) should be installed. Vertical elements (candles) should be used to identify driveways and crossings.

BICYCLE FACILITIES

Dedicated bicycle lanes, paved shoulders, and shared lanes are the three main categories of bicycle facilities. The design guidance below for bicycle facilities is referenced from the Fourth Edition (2012) of the AASHTO Guide for the Development of Bicycle Facilities. Please reference the 2020 edition, expected later 2020.

Dedicated Bicycle Lanes

Where bicycle travel and demand are substantial, a dedicated bicycle lane can be provided for preferential/primary use by bicyclists. Guidance allows bike lanes to be as narrow as 4 feet wide or 5 feet wide including the gutter pan. This Plan encourages bike lanes to be at least 5 feet wide excluding the gutter pan wherever possible to provide space for bicyclist's comfort and safety. Where there are high traffic volumes or higher speed traffic, bike lanes can be enhanced with a protective buffer, extruded curbing and vertical elements such as candles. Bike lanes must be well marked and signed to call attention to their preferential use by bicyclists; see the most recent edition of the MUTCD for signing and marking standards and guidance.

AASHTO guidance for bike lane widths are summarized in Figure 3 below. Further guidance can be found in the National Association of City Transportation Officials Urban Bikeway Design Guide and the FHWA Small Town and Rural Multimodal Networks guide.



Figure 3: Bike Lane Cross-Sections (Source: AASHTO Guide for the Development of Bicycle Facilities, Fourth Edition 2012)

Paved Shoulders

Smooth, paved roadway shoulders can operate as bikeways to provide a suitable area for bicycling alongside faster-moving motor-vehicle traffic. The majority of rural bicycle travel on the state highway system is accommodated on shoulder bikeways. Adding or improving shoulders can often be the best way to accommodate bicyclists in rural areas; even minimal-width shoulders (2-3 feet) are an improvement over no shoulders at all.

Paved shoulder width should be at least 5 feet from lane line to face of guardrails, curbs or other roadside barriers. A 4 foot width is allowable on uncurbed cross-sections with no obstructions immediately adjacent to the roadway, but not recommended.

Rumble Strips

Shoulder rumble strips create a rough and un-rideable surface for bicycles. However, in some cases, research shows it is an effective way to keep drivers, pedestrians, and bicyclists safe. For example, research has been done on Idaho rural highways showing that, narrowing lanes widths to 11 feet, and putting a rumble strip on the shoulder lanes' marking makes it safer for drivers and anyone using the shoulder. If it is determined that rumble strips ought to be use, a minimum 4 foot wide smooth surface should be provided between the rumble strip and outside edge of the paved shoulder; a minimum 5 foot smooth surface should be provided between a rumble strip and face of guardrails, curbs or other roadside barriers.

Shared Lanes & Bicycle Boulevards

In a shared lane, bicyclists and motorist share the same travel lane, see Figure 4 below. They are an acceptable solution for low-speed city streets when there is inadequate width to provide dedicated bike lanes or paved shoulders. Delineating shared lanes with signs or pavement markings are recommended; see the most recent edition of the Manual on Uniform Traffic Control Devices (MUTCD) for signing and marking standards and guidance.

A shared lane with 14 feet of total usable width is desired in an urban setting which allows a motor vehicle and a bicycle to operate side by side. Usable width of a shared lane is normally measured from lip of gutter to lane line. Widths greater than 16 feet may encourage the undesirable operation of two motor vehicles in one lane. In this situation, consideration should be given to striping a bicycle lane or shoulder bikeway. Where bicycle travel is significant, shared lanes may be signed as bicycle routes.



Figure 4: Example of a Shared Lane with Shared-Lane markings

A bicycle boulevard is a type of shared roadway, see Figure 5 below, designed to offer priority for bicyclist operating within a roadway shared with motor vehicle traffic. For more design guidance on shared lanes and bicycle boulevards please reference the Small Town and Rural Multimodal Networks guide.



Figure 5: Example of a Shared Lane with Bike Boulevard markings

RAILROAD CROSSING DESIGN STANDARDS

There are at least two locations where existing pathways cross a railroad track, and more locations where planned pathways may cross in the future. As you can see, the Idaho Northern & Pacific Railroad (INPR) corridor is shown on the Master Pathways Plan Map (See Appendix A). The following options exist to improve pedestrian/bicycle safety when crossing the tracks: Pathway-railroad crossings located within 25 ft of the traveled way of a roadway do not require additional signage or traffic control devices³ according to MUTCD Section 8D.05 and 8D.06.

Off-street pathway-railroad crossing should include signing and markings as shown in Figure 6 below; according to MUTCD Section 8B.04, Yield (R1-2) signs should be used unless an engineering study determines a Stop (R1-1) Sign is more appropriate for particular location.

Unless there is restricted sight distance, "active" traffic control devices such as automatic gates or flashing light should both be needed for off-street pathways in Emmett, considering the low train volumes (two trains per day according to Crossing Inventories from the Federal Railroad Administration)⁴.



Figure 6: Example of an off-street pathway railroad crossing

³ Assumes the roadway-rail crossing is adequately signed with a Crossbuck (R15-1) sign at a minimum, according to MUTCD Section 8B.03.

⁴ The MUTCD does not specify warrants or conditions that require active traffic control devices at railroad crossings, and instead states that the public agency with jurisdiction over the pathway should determine the need and selections of devices.

D. CONNECTIVITY

As one of the major stated goals above, the Pedestrian and Bicycle Master Pathways network ought to be linked to parks and other recreational areas, such as the Gem Island Sports Complex and the Payette River. A continuous connection from Historic Main Street to the Gem Sports Island Complex is identified on the Plan Map as a Future Priority Pathway. A connection between the City Park and the River via N. Johns Ave. and from Downtown to the City Cemetery are also identified as Future Priority Pathways. Although the City Cemetery is uphill from town, it is still quite an attraction to ascend to. That route is on ITD's Hwy 52, where the speed limit increases, so it is even more important that there is a safe pathway for pedestrians/bicyclists on that route.

E. WATERWAYS, RIGHT-OF-WAYS & EASEMENTS

There are significant portions of the City's existing and proposed pathways that are immediately adjacent to the Payette River or are on other waterways that are on private property. Potential disagreements over right-of-way could arise due to the lack of written authorization for the City's pathways to cross private land bordering the Payette River.

According to Idaho Fish and Game, Chapter 16, Title 36 – Recreational Trespass, the public has access along all navigable streams up to the high-water line. Navigable streams are defined as "any stream which, in its natural state, during normal high water, will float cut timber having a diameter in excess of 6 inches or any other commercial or floatable commodity, or is capable of being navigated by oar or motor propelled small craft for pleasure or commercial purposes." According to Gem County, there is a public easement on, and only on, the old mill property. When dealing with properties outside the City limits, the Public Works Department is advised to approach land owners and receive written documentation authorizing the pathway to cross private land. A plan should be created to address maintenance along the private land to alleviate land owners potential worry about littering, vandalism, etc.

F. SIGNAGE, LIGHTING, & AMENITIES

Public awareness of the network plays a key role in reaching the goals of this Plan. Signage should be installed at access points to provide direction and mileage to other access points and popular destinations. Please see Appendix D for a preview of the map board design. As funding and construction of the pathway system materializes, the City's goal is to provide pedestrian and bicyclist amenities along its pathways. A separate pathway amenities plan is needed to determine the type and placement of such amenities, including:

- Benches
- Trash receptacles
- Distance and location markers
- Directional signs
- Lighting

G. SAFETY & PRESERVATION

Public safety and pathway preservation are high priorities for the City of Emmett's pathway system. To enhance safety as the system expands, guidelines and/or ordinances may be adopted in such areas as leashing rules, safety lighting, traffic signs/signal-crossings, and ensuring that access points and visual corridors are protected.

To facilitate the need to keep motorized vehicles off the paths, bollards are recommended to be installed at some of the access points. Existing parking areas for the pathway system are shown in the Plan Map. At some of these locations along the Payette River, chains are in place to deter motorized vehicles (ATV, UTV) from riding on the pathway; however, the chains have been cut multiple times and motorized vehicles still ride on the paths. If access is required by maintenance vehicles, removable bollards may be installed and locked in place.



APPENDIX A: PEDESTRIAN & BICYCLE PATHWAYS PLAN MAP

APPENDIX B: 2018 SIDEWALK INVENTORY MAP



APPENDIX C: WASHINGTON AVE. & HWY 52 CROSSING



The existing pathway alignment along the Payette River passes under the Washington Ave (ID-52) bridge, with 7 to 9 feet of vertical clearance between the pathway and bridge structure. This does not meet current AASHTO recommendations. According to their Guide for the Development of Bicycle Facilities 4th Edition, the minimum vertical clearance for pathways is 8 feet with a desired height of 10 feet. Currently, the pathway is not maintained under the bridge crossing. Consequently, pathway users have to depart from the pathway and cross Highway 52 above the trail or somewhere else. It is important to note that the pathway is on top of an existing non-FEMA-certified levee that does provide flood protection against river flooding.

One option could be to re-route the pathway around the bridge onto Riverside St./Carson St. This option, while functional, puts users of the pathway in more contact with traffic and introduces a conflict area at the intersection of Washington Ave & Riverside St./Carson St. Options that involve further excavation under the bridge may impact the floodplain and floodway which has permitting implications with the Federal Emergency Management Agency (FEMA). A more in-depth analysis of design and permitting considerations will be necessary when this portion of the pathway is in the implementation stage.

APPENDIX D: MAP BOARD DESIGN

Specifications: prefabricated post mount, two-sided, heavy duty aluminum construction, bronze powder-coated finish, includes two 14 inch arms, and one 36-1/2 inch center bridge. Posts are approximately 4 inches x 4 inches wide. Posts ought to be concreted 24 inches in the ground, with historic red brick surrounding base to resemble the old "EMMETT" monument sign and be consistent with Emmett's historic character.

