

## RECOMMENDATIONS & IMPLEMENTATION STRATEGIES

The 2035 MSB Long Range Transportation Plan (LRTP) supports the continued development of an active transportation work plan to strategically align non-motorized, human-powered transportation with other modes of transportation. An all-inclusive recommendation would be to include a Big Lake Road: Town Center Corridor Improvements Project in the LRTP. This design/build project would include a full design study of crossings, pathway extensions and additions, illumination and intersection improvements, driveway consolidation, and Fish Creek Bridge improvements, and other recommendations to improve the pedestrian and non-motorized user experience as discussed in this study.

The following table breaks down the recommendation of a larger design/build project into specific recommendations and implementable actions accompanied by a suggested term of completion relative to the level of effort required. The level of effort is based on the anticipated amount of upfront design, engineering, and construction required to implement the recommendation. Each term is based on this level of effort and degree of funding required, and corresponds to a general time frame for implementation as follows; Short Term is 1 to 3 years, Mid Term is 3 to 6 years, and Long Term is 6 years and beyond. A check mark in the LRTP column indicates the recommendation should be adopted into the MSB LRTP for implementation. Adoption of this Study and associated projects into the MSB's LRTP process is the first step of implementation. This will prioritize projects in conjunction with area-wide needs and funding availability.

RECOMMENDATION		LRTP	IMPLEMENTATION STRATEGY	IMPLEMENTATION CONSIDERATIONS	TERM
<b>1. FACILITY: CROSSINGS</b>					
<b>1A. Designated Crossing on Big Lake Road</b>					
<p><u>Issue:</u> No designated pedestrian crossings are marked south of the roundabout and north of the elementary school.</p>	<p><u>Recommendation:</u> Construct a designated pedestrian crossing at the following potential locations:</p> <ul style="list-style-type: none"> <li>- Big Lake Library</li> <li>- Hollywood Road</li> <li>- Lions Court</li> </ul>	◆	<p><b>Description:</b> Big Lake Road Crossing Design Study &amp; Build. Conduct a design study to determine the feasibility and location of a pedestrian crossing on Big Lake Road between the North Shore roundabout and Big Lake Elementary School to provide access from the dedicated non-motorized facility on the west side of Big Lake Road to the destinations on the east side of Big Lake Road, including the East Lake Mall and Big Lake Recreation Center. DOT&amp;PF and the local government (MSB) can consider a crosswalk and M&amp;O under the right conditions, but it would be locally provided.</p> <p><b>Purpose:</b> Safety, Active Transportation, Access, Connectivity</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> TBD</p>	<ul style="list-style-type: none"> <li>• The community favors a crossing at Big Lake Library and the Fire Station, however pedestrian counts from this study do not directly support it and current vehicle speeds demonstrate this is a safety concern without further roadway improvements.</li> <li>• Should a signalized intersection or roundabout be constructed at Big Lake and Hollywood Roads, a crossing at this location could qualify for designation due to improvements. This would fulfill the Safe Routes to School (SRTS) plan and further reduce the demand for other crossings in the corridor.</li> <li>• Development of the Davies subdivision could warrant a dedicated crossing at Lions Court, which also supports pedestrian and non-motorized access to the community center, as long as other roadway improvements are made to reduce vehicle speeds.</li> </ul>	Mid
<b>1B. Aero Lane Crossing</b>					
<p><u>Identified Issue:</u> The marked crossing near Aero Lane is part of an existing school zone crossing and ends in the shoulder on the east side of Big Lake Road, leading pedestrians and bicyclists from the Elementary School across Big Lake Road to an unconnected location without a designated non-motorized facility.</p>	<p><u>Recommendation:</u> Realign or otherwise improve the existing marked crossing near Aero Lane. This could include a mid-crossing pedestrian island.</p>	◆	<p><b>Purpose:</b> Safety, Active Transportation, Access, Connectivity</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> TBD</p>	<ul style="list-style-type: none"> <li>• OHVs were observed using the shoulder of Aero Lane during the traffic study; a designated pedestrian facility in this location would maintain OHV use while addressing non-motorized user safety.</li> <li>• School crossing guard presence at Aero Lane during drop-off and pick-up times is recommended for school district consideration.</li> <li>• The crossing should be realigned or improvements to the east side of the road should be made to encourage use of the marked crossing.</li> <li>• Consideration of a mid-crossing pedestrian island is recommended to improve crossing times if the Big Lake community advocates for its needs and can obtain agreement from DOT&amp;PF Maintenance and Operations.</li> </ul>	Short

RECOMMENDATION		L RTP	IMPLEMENTATION STRATEGY	IMPLEMENTATION CONSIDERATIONS	TERM
<b>2. FACILITY: SIGNAGE</b>					
<b>2A. Pathway Signage</b>					
<p><u>Identified Issue:</u> Conflicts between permitted non-motorized users and prohibited motorized users on or adjacent to the existing paved pathways.</p>	<p><u>Recommendation:</u> Install additional signage on the existing pathway prohibiting use by motorized vehicles.</p>		<p><b>Description:</b>                      Install stop signs on the existing non-motorized pathway and/or at driveway approaches to the pathway and Big Lake Road to increase awareness and visibility of the potential conflicting area users.</p> <p><b>Purpose:</b> Safety, Access</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> Local Sponsor</p>	<p>DOT&amp;PF capital improvements to side street intersections with pathways will be designed and constructed according to DOT&amp;PF standards (CR-T-01.10), which include number and location of signs, clearance distances, striping requirements, and "no motor vehicles" signage.</p>	Short
<b>2B. Pathway or Driveway Stop Signs</b>					
<p><u>Identified Issue:</u> Conflicts at pathway approaches to driveways and intersections with Big Lake Road were identified by the public as a safety concern, especially when sight lines are restricted and visibility is low.</p>	<p><u>Recommendation:</u> Install additional signage at driveways where sight lines are restricted.</p>		<p><b>Description:</b>                      Install stop signs on the existing non-motorized pathway and/or at driveway approaches to the pathway and Big Lake Road to increase awareness and visibility of the potential conflicting area users.</p> <p><b>Purpose:</b> Safety, Access</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> Local Sponsor</p>	<p>DOT&amp;PF capital improvements to side street intersections with pathways will be designed and constructed according to DOT&amp;PF standards (CR-T-01.10), which include number and location of signs, clearance distances, striping requirements, and "no motor vehicles" signage.</p>	Short
<b>3. FACILITY: LIGHTING</b>					
<b>3. Improved Lighting</b>					
<p><u>Identified Issue:</u> Low visibility of both motorized and non-motorized facilities can lead to hazardous conditions especially for use conflicts.</p>	<p><u>Recommendation:</u> Add and/or improve lighting along Big Lake Road.</p>		<p><b>Description:</b>                      Develop and adopt a Walking Route Plan to implement projects involving lighting and pathways for pedestrians, especially for children walking to and from school.</p> <p><b>Purpose:</b> Safety, Access, Connectivity</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> Local Sponsor</p>	<p>The MSB Safe Routes to School (SRTS) includes recommendations and guidance for Walking Route Plans.</p>	Mid

RECOMMENDATION		L RTP	IMPLEMENTATION STRATEGY	IMPLEMENTATION CONSIDERATIONS	TERM			
<b>4. FACILITY: PATHWAYS</b>								
<b>4A. Pathway Connections to Destinations</b>								
<p><u>Identified Issue:</u> Major destinations without existing pathway connections identified in this study:</p> <ul style="list-style-type: none"> <li>Residential subdivisions on the east side of Big Lake Road</li> <li>Big Lake South Recreation Site and South Port Marina</li> <li>East Lake Mall</li> <li>Big Lake Recreation Center</li> </ul>	<p><u>Recommendation:</u> Connect pedestrians and bicyclists from where they most commonly originate to major destinations.</p>	◆	<p><b>Description:</b> Big Lake Town Center Non-Motorized Network Improvements. Improve circulation, access and safety for motorized and non-motorized users of Big Lake Town Center, adopting a more Complete Streets approach, by providing improved existing pathways and adding new pathway connections to decrease the opportunities for user conflicts. Design strategies to reduce conflict may include locating pathways to allow minimum legal OHV pathway crossover, as well as leaving outer right-of-way (ROW) space for utilities and slopes that support OHV use.</p> <p>Pathway extensions and additions include:</p> <ul style="list-style-type: none"> <li>Extend pathway on west side of Big Lake Road to at least Big Lake South Recreation Site</li> <li>Add non-motorized facility on Fish Creek Bridge as part of bridge improvements</li> <li>Add new pathway on West Hollywood Road from Big Lake Road to at least Kluane Dr.</li> <li>Add pathway on east side of Big Lake Road through the Town Center, from Northshore Roundabout to the existing pathway spur at Norcross St.</li> </ul> <p><b>Purpose:</b> Safety, Active Transportation, Access, Connectivity</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> TBD</p>	<p>As Knik Goose Bay Road is developed to connect to Big Lake through Hollywood Road, traffic volumes are expected to increase and the need for pedestrian amenities will become more apparent.</p>	Long			
<b>4B. Pathway on East side of Big Lake Road</b>								
<p><u>Identified Issue:</u> Non-motorized access to destinations on the east side of Big Lake Road are more difficult to access and use conflicts occur.</p>	<p><u>Recommendation:</u> Provide a new pathway on the east side of Big Lake Road from the roundabout at North Shore Drive to the existing pathway spur at Norcross Street.</p>	◆				<p>An unofficial pathway extends the length of Big Lake Road in the study area, which is primarily used by off-highway vehicles (OHVs).</p>	Long	
<b>4C. New Pathway on West Hollywood Road</b>								
<p><u>Identified Issue:</u> Stakeholders indicated this is a much needed improvement, as there is no existing pedestrian facility, narrow roadway shoulders, limited sight distances and potentially hazardous vertical roadway variations. An elementary school is in operation at the Church and school children and parents walk on the roadway or its narrow shoulders, when available.</p>	<p><u>Recommendation:</u> Construct a new pathway at least to Kluane Drive, where Faith Bible Fellowship (operates a school) is located. Extend the non-motorized facility on West Hollywood Road from Big Lake Road to South Knik Goose Bay Road</p>	◆	<p>Hollywood Road Pathways could potentially be included with a Hollywood Road and Big Lake Road intersection improvements project, dependent on funding source(s). MSB SRTS recommends this pathway addition.</p>	Mid				

RECOMMENDATION		L RTP	IMPLEMENTATION STRATEGY	IMPLEMENTATION CONSIDERATIONS	TERM
<b>4D. Non-motorized Use of Fish Creek Bridge</b>					
<p><u>Identified Issue:</u> Bicycle crash history at the bridge, narrow roadway shoulders, lack of pedestrian facility, and proximity to popular destinations. Fish viewing from the bridge was identified by stakeholders as a dangerous recurring event during salmon spawning seasons.</p>	<p><u>Recommendation:</u> Improve the bridge across Fish Creek including a dedicated non-motorized facility to support creek and fish viewing.</p>	◆	<p><b>Description:</b> Fish Creek Bridge Improvements.  Add bridge improvements to LRTP and DOT&amp;PF bridge prioritization.</p> <p><b>Purpose:</b> Safety</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> TBD</p>		Mid
<b>5. FACILITY: INTERSECTIONS</b>					
<b>5A. Driveway Delineation Improvements</b>					
<p><u>Identified Issue:</u> Limited visibility of motorized and non-motorized users at driveways.</p>	<p><u>Recommendation:</u> Improve driveway delineation at intersections with Big Lake Road and the non-motorized pathway. Add intersection improvements to LRTP for redesign and construction.</p>	◆	<p><b>Description:</b> Big Lake Road and Intersections Improvements. Upgrade Big Lake Road as defined in the Big Lake Comprehensive Plan, using a complete streets typology, realigning skewed and disjointed intersections and managing driveway accesses onto Big Lake Road. Work with MSB platting authority and DOT&amp;PF on future driveway location approvals to discourage disjointed driveway alignments for private developments with direct access onto Big Lake Road.</p> <p><b>Purpose:</b> Safety, Access, Asset Management, Connectivity</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Sources:</b> HSIP, FHWA, State</p>		Short
<b>5B. Skewed Driveway / Roadway Alignments</b>					
<p><u>Identified Issue:</u> Disjointed and skewed driveway and roadway intersection alignments create more complicated and potentially difficult areas for pedestrians, bicyclists and motorists to safely navigate.</p>	<p><u>Recommendation:</u> Reduce skewed driveway alignments and realign the offset and skewed approaches, especially at the intersection of Big Lake Road and Big Lake Lodge Road.</p>	◆		<p>Intersection improvements include treatments to the Big Lake Road and Big Lake Lodge Road/ West Hollywood Road intersection.</p>	Short

<b>5C. Driveway Consolidation on Big Lake Road</b>		◆			Mid
<u>Identified Issue:</u> Non-motorized and motorized conflict at driveways create safety issue for both non-motorized users and through traffic.	<u>Recommendation:</u> Consolidate the over 40 driveways onto Big Lake Road within the projects limits.				
<b>5D. Appropriate Roundabout Crossings</b>			Review landscaping and signage at the roundabouts for opportunities to discourage improper crossing.		Short
<u>Identified Issue:</u> Pedestrians and Cyclists have been observed crossing through the roundabout's central island.	<u>Recommendation:</u> Prevent/discourage pedestrians and cyclists from crossing through the central island.				
<b>6. DESIGN &amp; MAINTENANCE</b>					
<b>6A. Roadside Vegetation</b>			Conduct routine vegetation control and remove tree roots/prevent new roots with pathway projects.		Short
<u>Identified Issue:</u> Limited sight distances and visibility for motorized and non-motorized users of Big Lake Road can lead to potentially hazardous use conflicts and continued maintenance can improve safety.	<u>Recommendation:</u> Control the growth of roadside vegetation to preserve sight distances and visibility. Remove tree roots on non-motorized pathway to maintain serviceability and encourage use.				
<b>6B. Improve ROW on east side of Big Lake Road</b>			Encourage the adoption of a statewide OHV policy that allows for targeted improvements within the ROW. In the meantime, treatments such as flattened roadside slopes where off-highway vehicles are allowed could discourage OHV use of the pedestrian paved pathway or shoulder on the west side of Big Lake Road.		Short
<u>Identified Issue:</u> Non-motorized user and OHV conflicts were identified by stakeholders as a recurring concern as well as the amount of dust produced on the east side of Big Lake Road by motorized users.	<u>Recommendation:</u> Placement of less erodible materials and added vegetation would reduce dust and roadside slopes.				

7. AREA CIRCULATION: MOTORIZED				
7. South Beaver Lake Road Extension				
<u>Identified Issue:</u> Big Lake Road is the primary route for motorized and non-motorized traffic traveling to the Big Lake Recreation Center and to the future residential development on the east side of Big Lake Road.	<u>Recommendation:</u> Extend South Beaver Lake Road to the south of Big Lake Road to connect with South Lions Court.	◆	<p><b>Description:</b> South Beaver Lake Road Extension to South Lions Court. Include in the MSB's LRTP and OS&amp;HP for future funding availability.</p> <p><b>Purpose:</b> Access, Congestion Management, Connectivity</p> <p><b>Estimated Cost:</b> TBD</p> <p><b>Potential Funding Source:</b> MSB Bond, State Legislative Grant</p>	<ul style="list-style-type: none"> <li>Improved area circulation for pedestrian and vehicles is achieved through increases in neighborhood and side street connections. Potential future residential development in this area will benefit from additional access.</li> <li>Preserving adequate ROW is recommended for improving area circulation for all modes of transportation. Connectivity for OHV use is highly dependent on adequate roadway ROW and when DOT&amp;PF facilities consume most of the ROW, connectivity is eliminated and can create more conflict.</li> </ul> <p style="text-align: center;">Long</p>
8. LAND USE & DEVELOPMENT POLICY				
8A. Walkability within Town Center				
<u>Identified Issue:</u> Big Lake Town Center is not considered walkable or friendly to non-motorized users due to the built environment, traffic patterns, and lack of pedestrian and non-motorized facilities.	<u>Recommendation:</u> Improve orientation of new development in the commercial core by incorporating land use and development strategies into future application requirements and design.		<p>Big Lake Community Council should work with MSB Planning staff to explore strategies for guided corridor development standards. Locate vehicle parking behind buildings on Big Lake Road. Limit building setbacks from Big Lake Road to improve pedestrian scale of built environment.</p>	<ul style="list-style-type: none"> <li>The Big Lake Comprehensive Plan identified walkability and development within the town center, the commercial core of Big Lake, as a priority.</li> <li>To achieve the goal of a walkable town center, all successful future development applications should support walkability within the commercial core.</li> </ul> <p style="text-align: center;">Long</p>
8B. Driveway Consolidation on Big Lake Road				
<u>Identified Issue:</u> The high number of driveway access points on Big Lake Road within the study area increases the number of potential non-motorized and vehicle points of conflict.	<u>Recommendation:</u> Consolidate the number of driveways onto Big Lake Road and encourage shared parking agreements for adjacent businesses to reduce the number of access points.	◆	<p>Include as part of the LRTP recommendation for Big Lake Road Corridor Improvements.</p>	<ul style="list-style-type: none"> <li>Reducing or limiting the number of possible conflict zones may increase safety for both pedestrians and motorized vehicles as well as improve the flow of through traffic on Big Lake Road.</li> <li>Proposed land use policy requiring driveway permits and/or managing driveways by requiring shared access would be put in front of the MSB Planning Commission and Assembly for adoption into the land use code.</li> </ul> <p style="text-align: center;">Mid</p>

9. EDUCATION & ENFORCEMENT				
<b>9A. Community Education on Non-Motorized Safety</b>				
<p><u>Identified Issue:</u> Stakeholders identified a general lack of education in non-motorized user safety as well as a lack of awareness for existing policies and non-motorized use within the community.</p>	<p><u>Recommendation:</u> Establish an ongoing community education effort on avoiding non-motorized and vehicle conflicts, preventing trespass onto private property, and increasing general awareness on non-motorized user safety, including high visibility clothing and equipment.</p>		<ul style="list-style-type: none"> <li>• Work with established community organizations and MSB SRTS and MSB School District to conduct ongoing community education efforts on non-motorized and traffic safety laws and practices                             <ul style="list-style-type: none"> <li>○ Implement a targeted public safety messaging campaign to specified audiences</li> <li>○ Incorporate more bike/ped and traffic safety education into K-12 programs (ex. Anchorage Trails Initiative, Schools on Trails program)</li> </ul> </li> <li>• Place bike, pedestrian, OHV and driver information (including safety and existing laws) in public places including the DMV, Post Office, and other frequented locations.</li> <li>• Place additional appropriate signage throughout Big Lake to provide consistent availability of bike, pedestrian and OHV laws.</li> </ul>	Short
<b>9B. Enforce Prohibition of Motor Vehicles on Paved Non-Motorized Pathway</b>				
<p><u>Identified Issue:</u> Use conflicts on the paved pathway were identified as a major safety concern by stakeholders who also sighted the use conflict as a reason some pedestrians and bicyclists do not use the pathway.</p>	<p><u>Recommendation:</u> Advocate for increased enforcement in Big Lake.</p>		<p>Coordinate and strategize with Alaska State Troopers on current and future enforcement patrols within Big Lake and what the community could do to support increased enforcement.</p>	Short

10. AMENITIES				
<b>10A. Establish Bike Parking at Destinations</b>				
<u>Identified Issue:</u> Bike parking at destinations is limited in Big Lake.	<u>Recommendation:</u> Encourage the establishment of bicycle parking at identified area destinations including Jordan Lake and Fish Creek Parks, commercial retailers, restaurants, East Lake Mall, Big Lake South State Recreation Site and South Port Marina, and transit park and ride location.		Encourage land and business owners to install bike parking on site.	To encourage more bicycling and non-motorized modes of transportation in the community, it is important to establish this dedicated, mode-supporting amenity.
<b>10B. Pedestrian and Wayfinding Pathway Improvements</b>				
<u>Identified Issue:</u> Big Lake Town Center is not considered walkable or friendly to non-motorized users.	<u>Recommendation:</u> Provide benches and signage (wayfinding) along the paved non-motorized pathway and at major destinations.		<ul style="list-style-type: none"> <li>• Partner with local organizations, businesses, and individuals to acquire sponsorships or for fundraising efforts for pedestrian and wayfinding amenities. Consider installation of non-motorized amenities in conjunction with or as part of an educational campaign on non-motorized safety.</li> <li>• Apply for grant funding</li> <li>• Include with MSB CIP recommendation for improving non-motorized transportation within Big Lake and Borough wide.</li> </ul>	To make the pathway more interesting, inviting, and easily navigable for Big Lake residents and visitors alike, wayfinding and pedestrian amenities should be placed along dedicated non-motorized facilities.
<b>10C. Park &amp; Ride Shelter</b>				
<u>Identified Issue:</u> People using the Valley Transit commuter services in Big Lake have to either wait in their personal vehicles or in the oftentimes cold and dark environment while waiting for the bus to arrive.	<u>Recommendation:</u> Provide a bike shelter and seating area at the Big Lake Park and Ride location.		To encourage increased use of the commuter transit system, a shelter with bicycle parking is recommended.	Short to Mid