



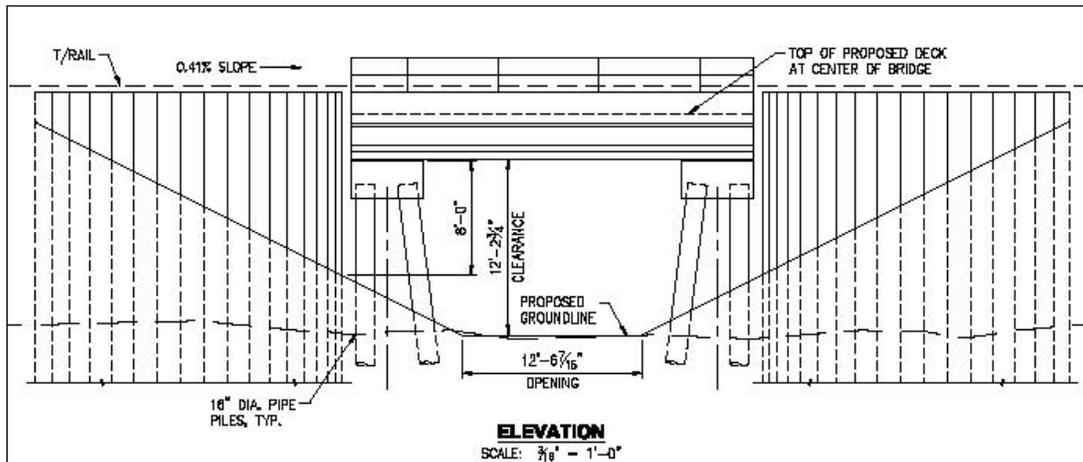
## **Iditarod Dog Sledding Historic District (IDSHD) Workshop Workshop Summary and Implementation Plan Summary Comment Resolution**

In accordance with the Section 106 Programmatic Agreement for the Port MacKenzie Rail Extension (PMRE) project, the Alaska Railroad Corporation (ARRC) hosted two of three planned Iditarod Dog Sledding Historic District (IDSHD) workshops in June and July 2011. At the request of IDSHD workshop participants, the Matanuska-Susitna Borough (MSB) hosted a larger trail user meeting in October 2011. ARRC and MSB, hereafter referred to collectively as the Project Team, have worked closely to identify design changes, modifications, and/or refinements to the project that will address concerns and mitigate impacts identified during those meetings. This document summarizes meeting/workshop participants' comments and concerns, and provides the Project Team's proposed resolution. In January 2012, ARRC will host a final IDSHD Workshop, and this document will serve as the basis for discussing how mushers' (and other trail users') comments and concerns have been addressed. Following that meeting, ARRC will prepare a *Workshop Summary and Implementation Plan* for submittal to the Surface Transportation Board (STB), State Historic Preservation Officer (SHPO), and appropriate Section 106 consulting parties.

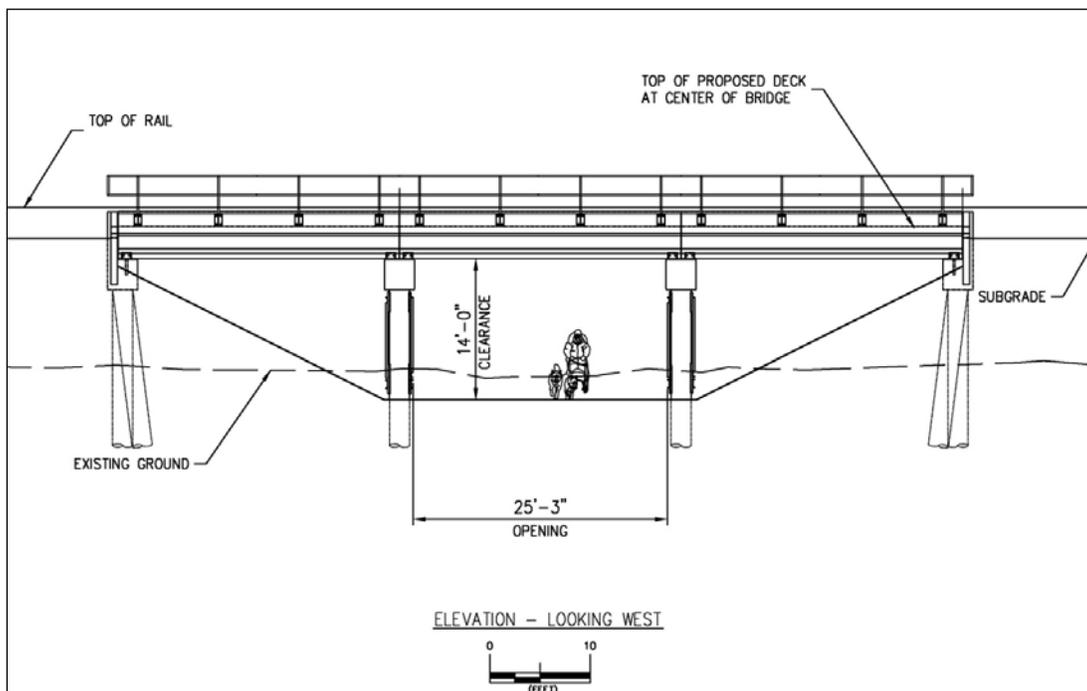
1. *The height (vertical clearance) of crossings needs to be increased to more than 12' to account for snow depth, accommodate equipment for grooming of trails, and enhance safety. The existing clearance is as low as 10' for some crossings.*

**Proposed Resolution:** The Project Team has redesigned bridges/crossings with the vertical clearance increased to a minimum of 14', whenever possible. Table 1 summarizes previously and currently proposed trail and road crossings for the PMRE project. Vertical clearances will range from 12' to over 18'. Only two crossing structures, located south of the Agricultural District, will have a vertical clearance less than 14'. One of these crossings (Crossing 14), which will be a three-span bridge providing between approximately 12' vertical by approximately 25' horizontal clearance, is adjacent to the Baker Farm Road at-grade crossing (Crossing 15) and provides an alternative crossing option in the vicinity (Table 1). The other crossing is the Figure 8 Lake Loop trailhead crossing (Crossing 16), which will be accommodated by a 19'-6" plate pipe, providing between approximately 9' and 14' vertical by 16' horizontal clearance (Table 1). A bridge crossing in this location is not practicable due to the poor soil conditions and high-railroad embankment through the area. Alternative access for over-height vehicles is provided by the access road from Lu Young Lane, south of the Bulk Material Bi-modal Facility (BMBF).

Increasing the vertical clearance under a bridge also increases the footprint of the embankment approaching the bridge, which often increases wetlands impacts. The design team has tried to strike a reasonable balance between the needs of trail users and our obligations to minimize impact to wetlands under Federal law. Exhibit 1 shows a comparison of the previously proposed Historic Iditarod Trail crossing and the currently proposed crossing that has been refined based on comments from trail users. As illustrated in this example, the vertical clearance was increased, based on comments from workshop participants, from approximately 12' to 14'.



**June 2011 Planned Crossing**



**December 2011 Planned Crossing**

**Exhibit 1: Historic Iditarod Trail crossing design before and after the IDSHD Workshops<sup>1</sup>**

<sup>1</sup> Please note that all exhibits/figures in this document are based on 60% design and are not final.

2. The length of a sled dog team with 16 to 20 dogs (approximately 85') needs to be considered during design of trail approaches to crossings to ensure curves are not too tight. (This comment was made in reference to the rerouted trails, specifically Crossing H 6.3 [Project Crossing 5]).

**Proposed Resolution:** The Project Team has been working with Sustainable Design Group to develop standards for sight distance needs and crossing approaches that will accommodate a 100' long vehicle/dog team, which requires a minimum 60' turn radius. The design standard for trail approaches to crossings includes gentle curves with turn radii between 75' and 90'. This turn radius will allow for a 100' long dog team to turn and safely pass through the structure while allowing adequate line of sight for trail users prior to passage (Exhibit 2).

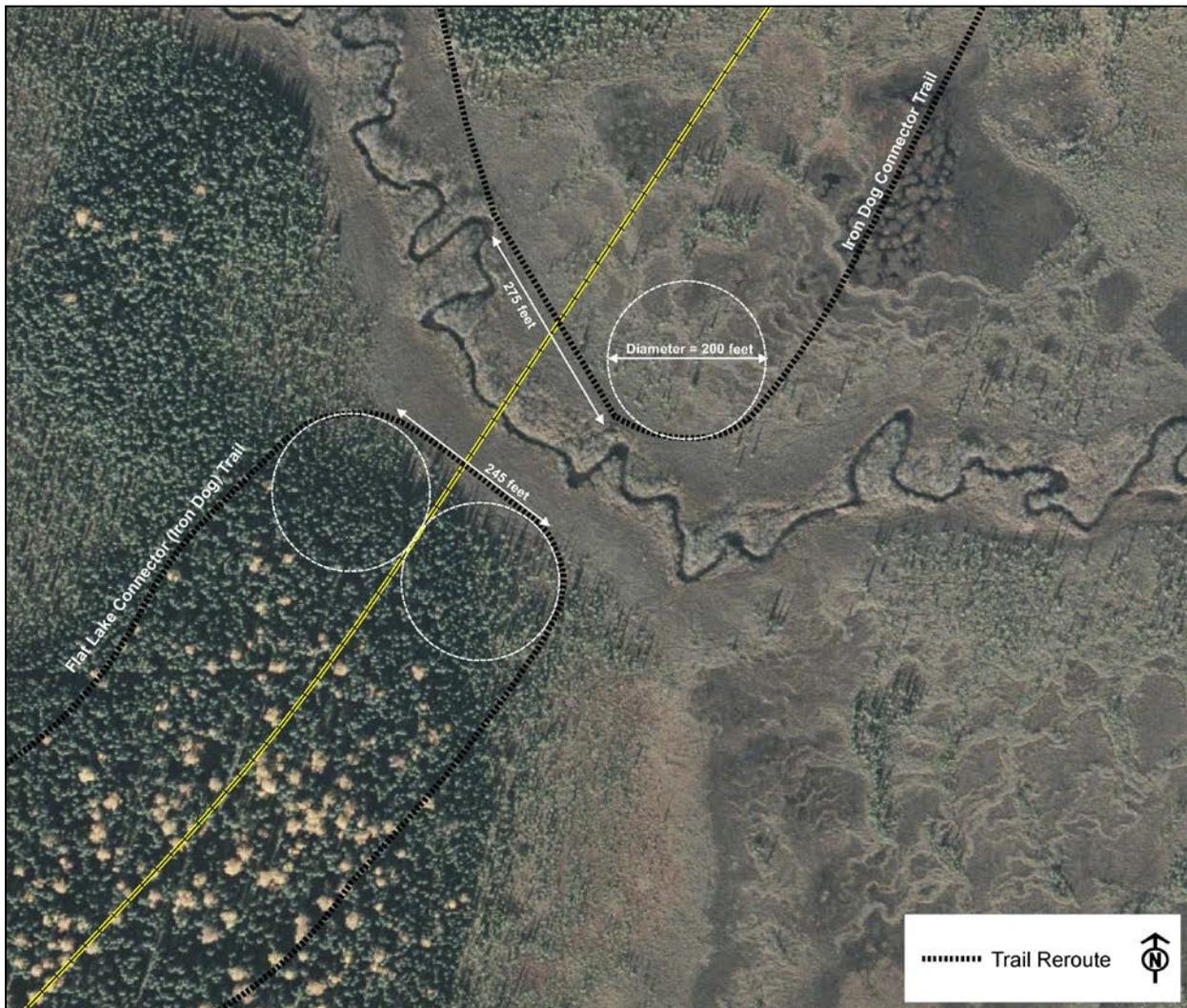


Exhibit 2: Approach example

- 3. Some crossings are single span bridges and do not provide mushers with adequate visibility to see if anything is approaching from the other direction. The length of these crossings needs to be increased. Trail approaches to crossings also need adequate line-of-sight.*

**Proposed Resolution:** The Project Team eliminated the 28' single-span concrete ballast deck (CBD) bridges that were originally proposed for some trails due to the sight distance concerns. Bridges are now a minimum of three spans, and the spans designated specifically for existing and or rerouted trails will generally provide a minimum of 20' of horizontal clearance. Adequate visibility/line-of sight will also be provided with relatively straight trail approaches to these longer bridges with higher vertical clearance (minimum of 14' whenever possible). The December 2011 design for the Historic Iditarod Trail crossing is typical of design changes undertaken by the Project Team to address Workshop participants' concerns (see Exhibit 1). Exhibit 2 illustrates typical design changes to approaches to address line of sight issues for trail reroutes.

- 4. Will trail crossings be turned into road crossings as growth and development increases? Planning for at-grade road crossings (e.g., West Susitna Parkway and Ayrshire Avenue) should take population growth and resulting development into consideration, as conflicts between users could increase.*

**Proposed Resolution:** The proposed designs for the various trail crossings are not adequate for roadways, and the trail crossings will not be turned into road crossings. The Project Team reviewed the MSB Long Range Transportation Plan (LRTP) and included sufficient road crossings to address those needs, with parallel trails separated from the road. The Project Team also considered future growth during design and right-of-way (ROW) acquisition for roads such as West Susitna Parkway and Ayrshire Avenue, which may grow from two to four lane roads at some point in the future. The proposed crossings at Millers Reach Road, West Papoose Twins Road, West Susitna Parkway, Ayrshire Avenue and West Holstein Avenue will include separated crossing panels on either side of the roadway to enhance safe passage for the various user groups (Table 1).

- 5. Easements do not exist but are needed for some trails. Also, with population increases, more and more trails could be sold into private ownership/development.*

**Proposed Resolution:** MSB Community Development and Land Management will continue to work with trail users and agencies to obtain easements for existing trails in the project area that do not currently have legal easements including the Iditarod Race Trail, the Houston Lake Loop Trail and Big Lake Trail #2. MSB will also work with agencies to try to secure easements or other legal instrument for recognized trails that are proposed to be rerouted as part of the project. These trails include the Iron Dog Connector Trail and Flat Lake Connector (Iron Dog) Trail.

- 6. Provide a map to workshop participants showing where crossings cannot be located (e.g., VORTAC or wetland restrictions or other design concerns).*

**Proposed Resolution:** A map showing restrictions/constraints limiting crossing locations was available at the MSB Trail User Open House (10/27/11). This map was posted on the

project website ([http://www.portmacrail.com/maps/Constraints\\_v2%20web.jpg](http://www.portmacrail.com/maps/Constraints_v2%20web.jpg)) and is included in this document (see Figure 1 in Attachment 1).

The Project Team continues to work with the Federal Aviation Administration (FAA) regarding project and construction constraints associated with the FAA VORTAC radar site, which controls the approach for all Anchorage air traffic. FAA defined a three-mile radius where construction restrictions will apply (see Figure 1 in Attachment 1). Within this restricted area, the rail embankment and passing trains cannot block the VORTAC electronic signals. These restrictions include minimizing the height and/or geometry of the rail embankment and associated crossing structures in the vicinity of the VORTAC. This constraint has resulted in the loss of one previously planned crossing as the height over the Outflow of Muleshoe Lake cannot meet the 14' of vertical clearance required. It also prevents grade separation of the Iron Dog Connector Trail to the west of the VORTAC site.

Other project concerns include area wetlands and land ownership. Wetland complexes between Crossings 4 and 6 have made adding crossings difficult. Adding a grade separated crossing in an area like the Iron Dog Connector Trail (Big Lake Trail #5) is not possible because raising the embankment high enough to provide 12' to 14' of clearance for trail users would also increase the fill footprint of the embankment over several miles. In consultation with the Project Team, the United States Corps of Engineers and the Environmental Protection Agency requested that there be no increases in the project footprint in wetlands areas to accommodate a widened embankment area. As a result, the Project Team has worked to keep the rail embankment as low as possible in wetlands areas to minimize impact. In the case of the Iron Dog Connector Trail, adding an at-grade crossing would increase the impact to wetlands as the crossing would require additional embankment at the approaches to the proposed railroad crossing.

Land ownership and lack of legal easements are also challenges. The Project Team must consider property ownership when planning crossing locations, so as to not promote trespass or provide a crossing that may not be usable into the foreseeable future. As identified in the above referenced constraints map, this is a concern between Crossings 1 and 3 and Crossings 7 and 10. The MSB is currently in discussions with UA and MHLT to attempt to establish easements for some of the currently used trails in the project area (e.g., at the Iditarod Race Trail).

- 7. More crossings in the heavily used area between Crossings 2 and 10 are needed to maintain connectivity. Limiting the number of crossings and relocating and/or combining trails in this area may "bottleneck" multiple user groups onto fewer trails, which will make the trails more dangerous by increasing the potential for collisions and user conflicts (e.g., between snow machiners or other users and mushers).*

**Proposed Resolution:** The Project Team has tried to strike a reasonable balance between the needs of trail users, our obligations to property owners and State and Federal agencies, and safety considerations. We continue to investigate inclusion of additional grade-separated crossings between Crossings 2 and 10 and are working with user groups, agencies, and landowners to find a solution.

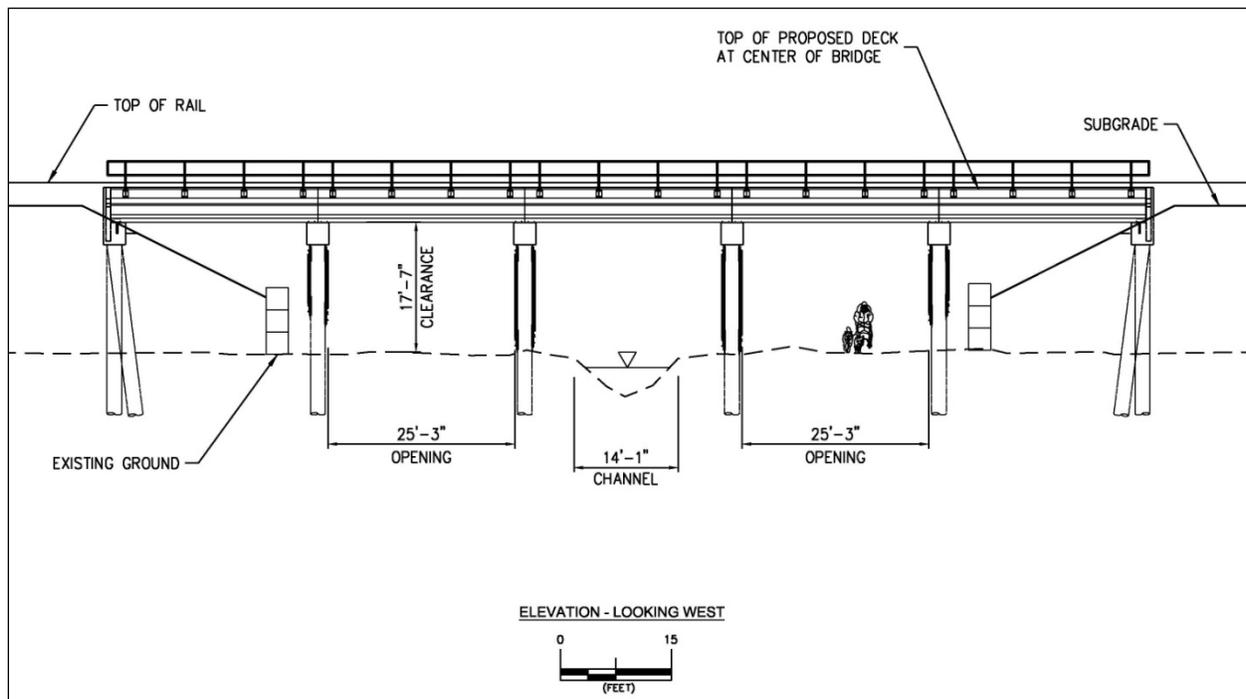
However, this area does not present good opportunities for separated grade crossing structures (e.g., bridges) because of safety concerns (e.g., visibility issues caused by topography and vegetation), regulatory issues related to wetlands impacts, design issues associated with a high water table in the area, property ownership, existing property/easement constraints, and construction restrictions associated with the FAA VORTAC radar site. Comment 6 describes

the latter constraints (see also Figure 1 in Attachment 1). The Project Team has been working with FAA regarding construction restrictions associated with the VORTAC site.

Safety is a significant concern. Much of the terrain in the area between Crossings 2 and 10 is undulating with patches of trees making it difficult for users to see an oncoming train. A train cannot stop quickly, and it generally takes one mile or more for a train to come to a stop. Sight distance for train operators is also a potential safety issue in areas where a curve in the tracks, dense vegetation, and topography may affect visibility. In addition, some users may be wearing helmets and listening to headphones while traveling in the area, or be operating loud vehicles, thus impeding their ability to hear a train coming.

8. Provide a crossing for the Iron Dog Connector Trail (Big Lake Trail #5 in MSB Trails Plan)

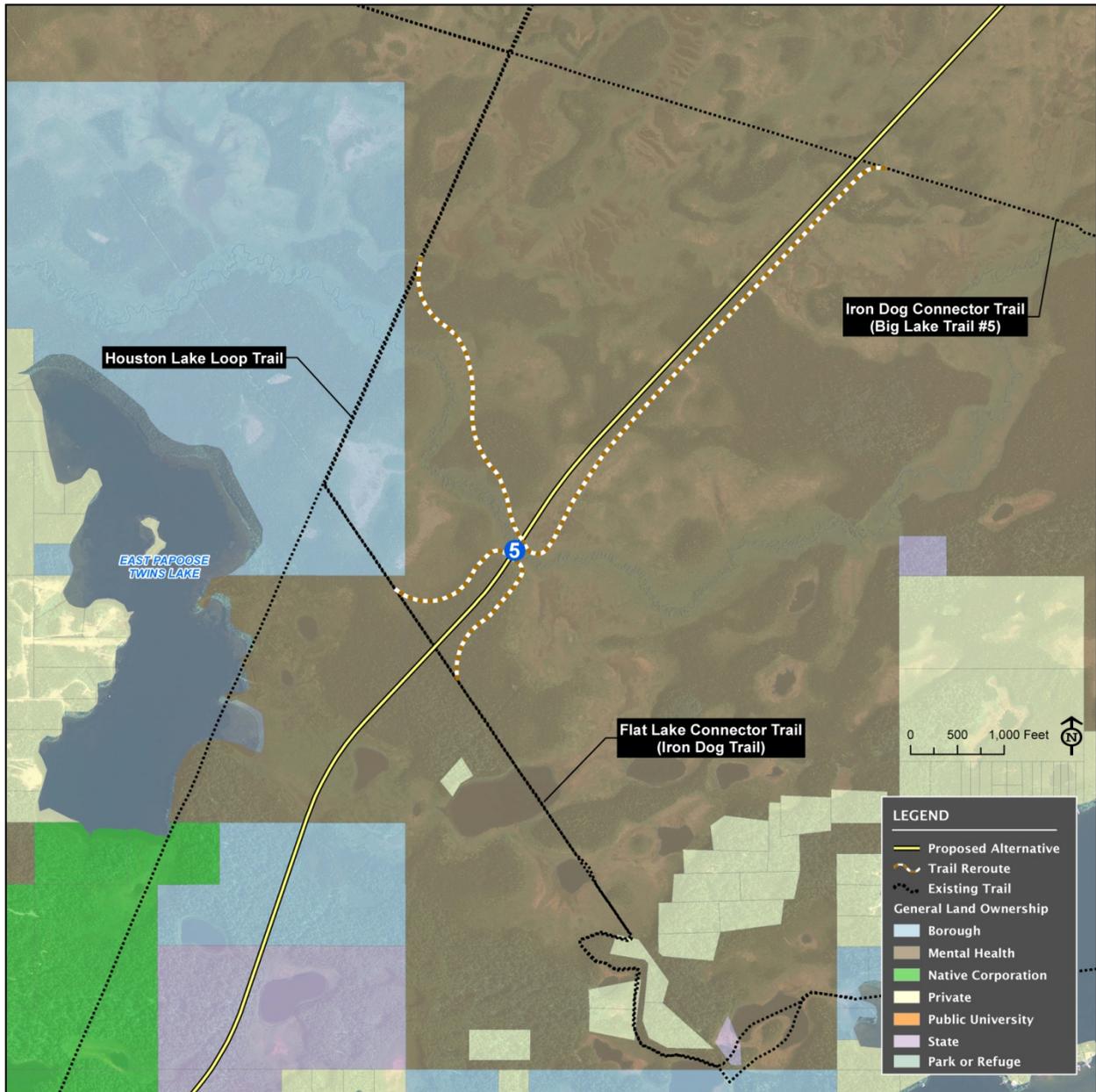
**Proposed Resolution:** The Iron Dog Connector Trail is identified in MSB trail plans as a winter use only trail as it traverses portions of wetlands and lakes in the project area. Due to safety concerns, wetland and regulatory concerns, tree cover, and topography (see Comment 5), a crossing is not a good option at its current location. Therefore, the Project Team proposes to reroute the trail to the northern usable span of a five-span bridge with approximately 25' of horizontal clearance and 17' of vertical clearance (Crossing 5; Exhibit 3). The rerouted trail will be reconnected with the Houston Lake Loop Trail north of the rail embankment (see Exhibit 4).



**Exhibit 3: Crossing 5 (H 6.3) profile view**

The Project Team is working with MHLT to acquire easements for the rerouted trail. If MSB can not acquire an easement for the reroute, the Project Team will notify Workshop participants and provide a revised proposal for continued access and connectivity.

The MSB has met with the Iron Dog Race Director regarding relocation of the Iron Dog Connector Trail to crossing Houston 6.3 (Crossing 5). The Iron Dog Race Director will present the reroute proposal to the Iron Dog Race Board of Directors. MSB will contact the Race Director again to determine the outcome of this meeting, and will work with the Race Director and/or Race officials to provide adequate safety coverage at this location during races.



**Exhibit 4: Proposed Iron Dog Connector Trail Reroute and Crossing (Crossing 5)**

9. *Provide a crossing for the Flat Lake Connector Trail (official Iron Dog trail; between Crossings 5 and 6). This is a well established trail with a legal easement that needs an at-grade crossing. Improvements should include cutting trees at the crossing to allow a wider field of view for approaches.*

**Proposed Resolution:** As discussed under Comment 1, workshop participants requested a minimum height of 14' to allow for snow depth, accommodate equipment for grooming of trails, and enhance safety. Based on the engineering work completed, this minimum height cannot be achieved at this location; no more than 10' of clearance is possible without interfering with the shallow underlying groundwater table. An at-grade crossing cannot be used due to safety concerns, since the available line of sight is minimal due to area topography even if trees are cleared.

To meet trail user crossing needs and allow for a safe crossing, the Project Team proposes to reroute the trail to a multi-use crossing structure, Houston 6.3 (Crossing 5; Exhibits 3 and 4; see Comments 8 and 10). This five-span bridge will have approximately 25' of horizontal clearance for three spans and over 17' of vertical clearance (see Comments 8 and 10). This trail will be routed under the southern span and reconnected with the existing trail west of the rail embankment.

MHLT issued a six year revocable license issued by the MHLT for the Flat Lake Connector Trail. MSB is working with MHLT to acquire the same or better legal rights for the rerouted Flat Lake Connector and other connecting trails currently used on MHLT lands. If MSB can not acquire an easement for the reroutes, the Project Team will notify Workshop participants and provide a revised proposal for continued access and connectivity.

10. *Incorporate safety considerations into design for the Houston 6.3 crossing (Crossing 5). Design should account for increased traffic caused by funneling multiple trails into a single crossing and should include wider/higher openings under the bridge, a wider turn radius for the reroutes approaching the crossing location, and a good line of sight approaching and extending under the crossing.*

**Proposed Resolution:** The original crossing design at this location was to construct a three-span bridge with 12'-7.5" of vertical clearance, two spans with 14' horizontal clearance, and a center span with over 25' of horizontal clearance. The design carried forward to the MSB Trail User Open House (10/27/11) where MSB presented a five-span crossing structure with increased vertical clearance but similar horizontal clearances. Concerns of trail users attending the MSB Trail User Open House (10/27/11) were addressed by upgrading the crossing structure to provide additional horizontal clearances. The improved structure will accommodate a trail on both the north and south side of the creek, each with 25' horizontal clearance to accommodate multiple users and grooming equipment with a vertical clearance of more than 17'. Exhibit 3 (see Comment 8 above) shows the most recent proposed design for Crossing 5.

The design of reroutes will allow for sufficient line of sight for all users and traffic will be accommodated by two parallel trails, one on each side of the creek. The trail groomer will be able to maintain access on the north and south spans of this crossing structure via existing trail connectivity.

As discussed under Comment 2, the Project Team has been working with Sustainable Design Group to develop standards for sight distance needs and crossing approaches that will accommodate a 100' long vehicle/dog team, which requires a minimum 60' turn radius. The design standard for trail approaches to crossings includes gentle curves with turn radii between

75' and 90' (see Exhibit 2). This turn radius will allow for a 100' dog team to turn and safely pass through the structure while allowing adequate line of sight for trail users prior to passage. Trails will be aligned to provide increased site distance. Trail embankments will be designed to minimize impacts from overflow.

*11. Provide a crossing for the Iditarod Race Trail and obtain an easement from the University of Alaska for this trail should one not currently exist. This trail has reportedly hosted 20 Iditarod races and is used more frequently/regularly than the Historic Iditarod Trail. A separated grade crossing (bridge) is preferred, but if a bridge is not possible, an at-grade crossing would be better than no crossing at all.*

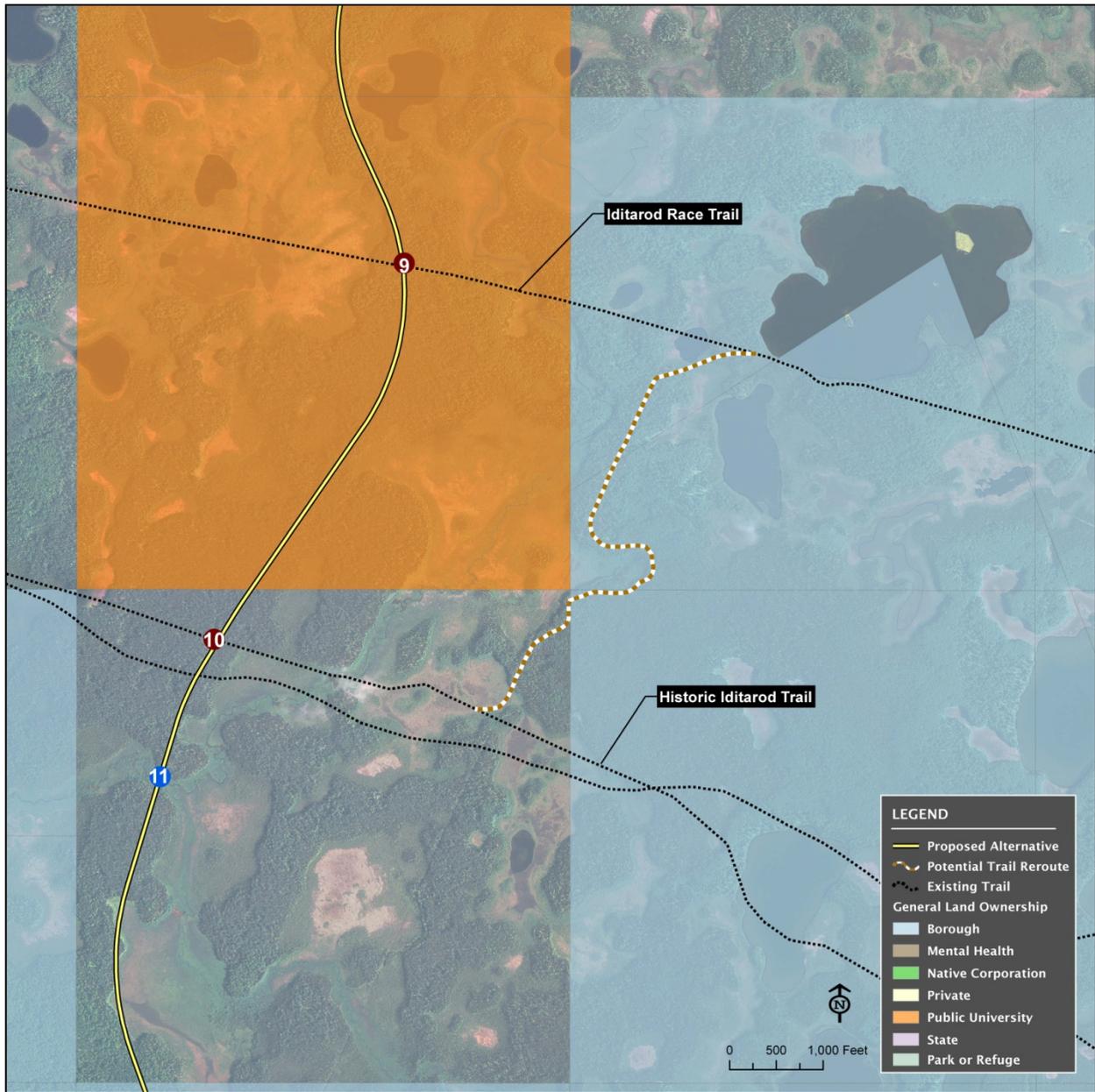
**Proposed Resolution:** Approaches to a crossing for the Iditarod Race Trail would be on University of Alaska land. The MSB is working with UA to secure an easement at this location if no easement currently exists. The crossing (Crossing 9) would be a typical three-span bridge with a minimum 14' vertical clearance, and approximately 25' of horizontal clearance in the center span (see Exhibit 1 as an example of a typical three-span bridge and Table 1). This crossing will involve excavation and grading of the trail to obtain 14-feet of vertical clearance at the current crossing location. As the trail passes beneath the embankment at a slight angle, only 20 feet of the crossing width will be usable for the trail. Approach improvements would include widening the trail in the vicinity of the crossing.

If negotiations with UA to secure an easement are unsuccessful, a crossing would not be provided for the Iditarod Race Trail as it would encourage trespassing on UA property. The Race Trail would be rerouted to the Historic Iditarod Trail, which would be upgraded/improved to accommodate the potential increase in users (Exhibit 5; see Comment 12).

*12. Provide a separated grade crossing (bridge) and trail improvements for the Historic Iditarod Trail (Crossing 10). The Historic Trail is not used as frequently as the Iditarod Race Trail and needs improvement if it is to be regularly used. It is currently too narrow for current and potential increased use and the portion of the trail west of the crossing location near the Little Susitna washes out and is in ill repair.*

**Proposed Resolution:** The Project Team would provide a separated grade crossing for the Historic Iditarod Trail. Original crossing designs for this trail included a single span crossing with 12' of vertical and 14' of horizontal clearance. Based upon comments received at the previous workshops, the crossing structure was redesigned to include a three-span bridge with over 25' of horizontal clearance and 14' of vertical clearance (see Exhibit 1 under Comment 1 and Table 1 for a comparison of early and current crossing design). Although only the central span of the bridge will be passable for trail users, the north and south spans increase visibility for potential oncoming traffic.

The Historic Trail will be improved where it passes beneath the rail embankment. As discussed under Comments 2 and 10, the Project Team has been working with Sustainable Design Group to develop standards for sight distance needs and crossing approaches that will accommodate a 100' long vehicle/dog team, which requires a minimum 60' turn radius. The design standard for trail approaches to crossings includes gentle curves with turn radii between 75' and 90' (see Exhibit 5). This turn radius will minimally allow for a 100' dog team to turn and safely pass through the structure while allowing adequate line of sight for trail users prior to passage.



**Exhibit 5: Possible Iditarod Race Trail Reroute and Crossings**

13. Add a crossing for the trail between current Crossings 12 and 13 (formerly Crossings 13 and 14) that is shown on various maps.

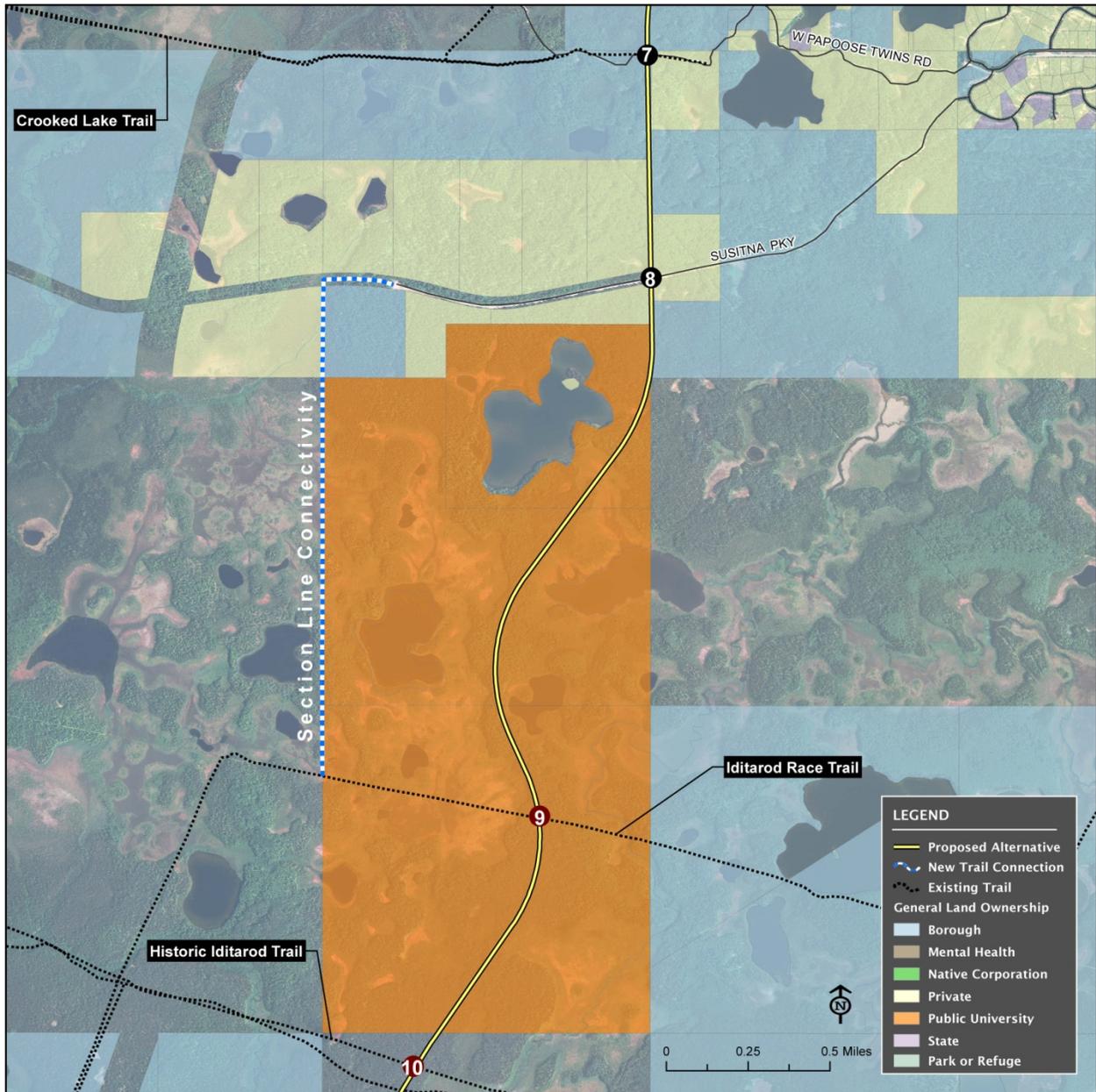
**Proposed Resolution:** This former trail is on agricultural land and no longer exists, although it appears on old maps and was included in the Stephen R. Braund & Associates (SRB&A) 2010 report prepared during the National Environmental Policy Act (NEPA) process. Per consultation with Workshop participants, the crossing for the trail between Crossings 12 and 13 is not needed as this trail is no longer in use. No other trail users have identified a need for a crossing at this location. An at-grade crossing at Baker Farm Road (Crossing 15) has been added to project crossing maps; however, this crossing is not currently planned for continual use. A summary of crossings is included in Table 1 and illustrated on Figure 2 of Attachment 1.

14. Provide north-south trail along one or both sides of the proposed ROW to help maintain connectivity. Even if there is not a dedicated trail, people would still likely travel along this area.

**Proposed Resolution:** Trail reroutes, enhanced crossing structures and strategies to maintain connectivity in a safe manner are all measures the Project Team has and continues to work toward as this project moves forward. The proposed railroad alignment is orientated predominately north-south, and therefore, the Project Team believes that the project primarily affects east-west connectivity, not north-south connectivity. We have been working diligently with local trails groups/users, regulatory agencies and other interested parties to maintain east-west connectivity.

Most of the existing trails identified both in the Final Environmental Impact Statement (FEIS) and trails workshops that provide north-south movement will remain intact. The Project Team believes that the existing trail system west of the proposed rail corridor provides a north-south corridor (Figure 3 of Attachment 1). However, one area of concern for north-south connectivity has been identified between Crossings 7 and 10 (Exhibit 6). This area demonstrates the biggest gap in connectivity and is owned primarily by UA. The Project Team has developed an alternative corridor for north-south travel in this area that may work for trail users and property owners (see Exhibit 6).

Providing additional north-south corridors along one or both sides of the rail line has many challenges, some of which include: FAA VORTAC issues, safety concerns, wetland and regulatory concerns, tree cover, topography and cost of constructing additional bridge structures. Current bridge and at grade crossing structures total over \$11 million dollars; mitigation measures such as signage, trail reroutes additional brushing activities and strategic plantings to deter moose have not been factored into these estimated costs. Based upon current north-south connectivity (Figure 3 of Attachment 1) and the varying issues identified above, a new trail(s) paralleling the proposed ROW for the project is not planned.



**Exhibit 6: Connectivity between Crossings 7 and 10**

15. Adequate signage needs to be provided to warn trail users. Consider standard snow machine/dog sledding trail signage as seen on Alaska State Parks Snowmobile Trail Advisory Committee (SnoTRAC) website, not road side signs.

**Proposed Resolution:** Appropriate signage would be placed at key points on trails, trail reroutes, and at crossings and could include: trail direction (e.g., North/South arrows), “Caution - Dog Teams on Trail,” “High Traffic Area,” “Clearance 14’,” “Slow – Keep Right,” “Trail Closed Ahead,” or “Slow – Trail Rerouted.”

Examples of signage presented at the MSB Trail User Open House (10/27/11) are provided in Exhibit 7, and are posted on the project website (<http://www.portmacrail.com/library.html> ). To

address user concerns, the Project Team will develop signage that is generally consistent with the Alaska State Parks SnoTRAC guidelines provided on its website ([http://www.dot.state.ak.us/stwdplng/projectinfo/project\\_pages/winter\\_trans/pdf/AppendixC.pdf](http://www.dot.state.ak.us/stwdplng/projectinfo/project_pages/winter_trans/pdf/AppendixC.pdf)).



**Exhibit 7: Signage examples presented at the MSB Trail User Open House (10/27/11)**

Kiosks with trail maps will be placed at key locations and will aid trail users by identifying trail reroutes and showing available trail connections. An example of a kiosk located on the Willow trails system is illustrated in Exhibit 8. A proposed design for the kiosks is illustrated in Exhibit 9.



Exhibit 8: Willow Trail System Kiosk

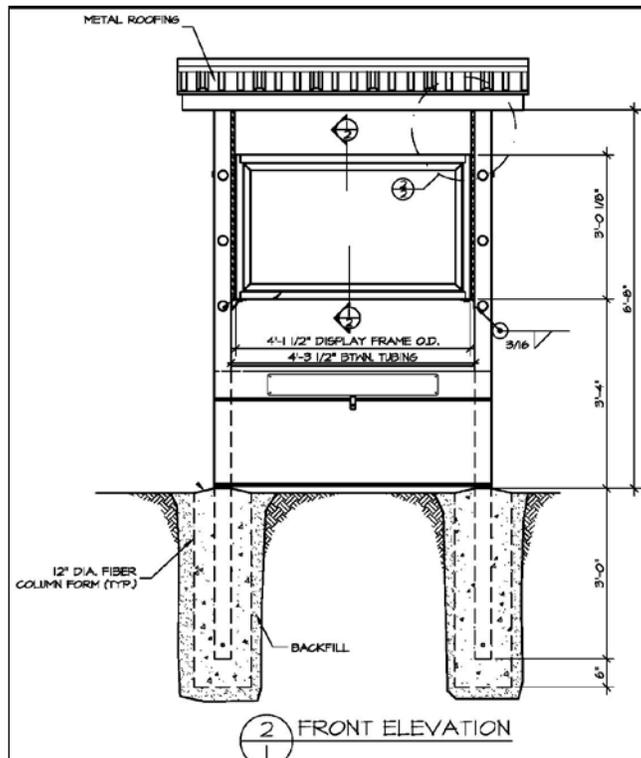


Exhibit 9: Kiosk schematic (Department of Natural Resources)

16. *Would the Iditarod Dog Sledding Historic District (IDSHD) work the same way as the Knik Sled Dog and Recreation Special Land Use District (SPUD) in the MSB? If a SPUD was created for the IDSHD area, would this require future development in the area to go through a formal review process? Consider a special use district similar to the Knik SPUD to create a formal procedure/process for review of projects planned in the IDSHD area and/or to solidify/formalize designation of the IDSHD for the National Register of Historic Places.*

**Proposed Resolution:** The Knik SPUD was implemented to preserve and protect the existing community of Knik and the homestead lifestyle (includes outdoor, historical, traditional recreational and agricultural uses), protect legal trails, and to provide for planning and growth in the Knik area. The Knik SPUD ordinance implements land use regulations to ensure compatibility between various land uses and encourage developers to recognize and dedicate legal trail ROWs where appropriate. For example, developers are required to identify legal and known trails that will be impacted by their project and work with MSB and the community to protect or relocate those trails. Any new SPUD or expansion of an existing SPUD would have to be initiated by a Community Council and approved by the MSB Assembly.

The IDSHD was found eligible for the National Register of Historic Places (NRHP) as a result of Section 106 (National Historic Preservation Act) review carried out as part of the NEPA process. A NRHP nomination is currently underway for the Iditarod National Historic Trail which may include the portion of the trail in the project area. As required under Section 106, development using Federal funds or requiring a Federal permit and/or oversight would require potential developers to go through the Section 106 review process. This review process includes identifying historic properties (i.e., cultural resources eligible for the NRHP) in the project area, assessing effects to historic properties from the project, and resolving adverse affects. Consultation (i.e., seeking, discussing, and considering the views of interested parties, and seeking agreement when feasible) occurs at all stages of the process. As the IDSHD has been found eligible for the National Register, Federal agencies would be required to consider the impact of any projects in the area on the IDSHD and avoid, minimize or mitigate any potential adverse effects. Listing and/or nomination of the IDSHD for the NRHP would provide no additional protection or review requirements than are currently in place. However, the Project Team and SHPO will continue to consult to refine the boundaries of the IDSHD.

17. *Relative to the planned third workshop with the mushers group, participants would prefer to postpone that meeting until after MSB's larger trail user meeting. Participants believe that the input of other trail users is necessary as the mushers are not the only users of the trails in the IDSHD.*

**Proposed Resolution:** A larger trail user meeting, sponsored by MSB and held on October 27, 2011, utilized an open house format and included participants from multiple trail user groups. Comments/questions from participants were compiled, responded to, and posted on the project website (<http://www.portmacrail.com/library.html>) following the meeting.

18. *Provide better/more detailed information on each crossing for the MSB Trail User Open House (10/27/11).*

**Proposed Resolution:** Maps/graphics providing details for crossings were available at the MSB Trail User Open House (10/27/11). These maps/graphics include proposed crossing design schematics and aerial maps showing relocations and approaches for each crossing and

are posted on the project website (<http://www.portmacrail.com/library.html> ). Detailed information regarding crossings is also included in Table 1.

19. *When the project was in the earlier phases of the EIS, public meetings participants were told by MSB and ARRC that trails in the MSB trails plan would have continued connectivity. Is this still the case?*

**Proposed Resolution:** Although certain east-west trails through the area will change, east-west connectivity will be maintained. The Project Team has been working with various trail user groups to identify and address access/connectivity concerns. We believe we have addressed the major concerns to insure continued access for mushers as well as other users, consistent with the need to maintain connectivity across the rail corridor in the IDSHD. In fact, the project will enhance connectivity by resolving multiple right-of-way issues on existing trails, ensuring that they will be maintained for the long-term.

Per the FEIS, "Where the proposed rail line would cross an officially recognized trail, ARRC has stated it would provide public access by a grade-separated crossing. Alternatively, the trail could be relocated by ARRC to avoid crossing the rail line." The Project Team has maintained throughout the EIS process that we will not provide crossings for "unofficial trails." Per the FEIS, an unofficial trail is any trail "that is not specifically established within currently adopted plans by ADNR and/or MSB or is established within these plans at the time of construction or ROW conveyance (whichever occurs first), and whose location is not provided for by recorded ROW or easement. ARRC does not propose to provide crossings for unofficial trails. Unofficial trails would be blocked, and ARRC's trespassing regulations would prohibit the public from crossing of the ROW without first obtaining approval from ARRC."

The Project Team has stated in IDSHD Workshops that trails that cannot be maintained in their current location will be rerouted. If there is a legal easement for the trail, such as the Historic Iditarod Trail, the trail will be maintained in its current location or the Project Team will work with regulatory agencies and or property owners to attempt to obtain similar legal access and easements for any rerouted trail (e.g., Flat Lake Connector Trail).

20. *How will the final decision be made on the crossings?*

**Proposed Resolution:** The Project Team is compiling as much information as possible to make informed decisions about the crossings. The IDSHD Workshops and MSB Trail User Open House address crossings concerns of all trail users, including mushers. ARRC will host a final IDSHD Workshop focusing on how mushers' (and other trail users') recommendations for additional trails and crossings, as well as design recommendations, were considered/responded to by the Project Team. As stipulated in the Section 106 Programmatic Agreement (PA; Stipulation V, Treatment of the Iditarod Dog Sledding Historic District), the Project Team's proposed project design changes, modifications, and/or refinements to avoid, minimize, or mitigate adverse effects on historic properties (i.e., the IDSHD) are included in this section of the draft *Workshop Summary and Implementation Plan* [Note: this draft document is only one section of a larger document], will be presented at the final IDSHD Workshop. As stipulated in the PA, ARRC will refine the *Workshop Summary and Implementation Plan*, in consultation with the Working Group, STB and SHPO, within 60 days of the final Workshop. ARRC will submit the revised document to PA Signatories, Invited Signatories, and other interested consulting parties (e.g., dog mushers and other trail users). Following a 30-day review and comment period, ARRC will incorporate comments as appropriate. ARRC will provide a final *Workshop*

*Summary and Implementation Plan* PA Signatories, Invited Signatories, and other interested consulting parties and will post the document on the project website.

*21. Moose will also use the dog musher crossings. Funneling wildlife and trail users onto fewer crossings/trails would increase conflicts.*

**Proposed Resolution:** Moose often go up and over the railroad embankment, although they may also use the crossings. On many trails, they are unlikely to be present due to the presence of human users. The longer bridges, with wider horizontal and vertical openings, will improve visibility for trail users and reduce the potential for wildlife conflicts. Moose conflicts on the existing trail system are not common and the number of moose encounters with dog teams, snowmachines or other user groups is not expected to increase as a result of this project. The length and width of the crossing structures provides ample space for moose and other wildlife to move away from the rail embankment.

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**Table 1: Crossing Comparison Summary**

Crossing # Crossing Name	Crossing Type	Original Design Description	Revised Design Description	Comment/Status
<b>Crossing 1</b> Millers Reach Road	At-Grade, Road	<ul style="list-style-type: none"> <li>• 32' road width</li> <li>• 40' crossing panels<sup>2</sup></li> <li>• \$150,000</li> </ul>	<ul style="list-style-type: none"> <li>• 72' crossing width</li> <li>• 32' road surface</li> <li>• 10' separation, 10' trail (north and south)</li> <li>• 80' of crossing panels for road and trail</li> <li>• \$300,000</li> </ul>	
<b>Crossing 2</b> Utility easement/Big Lake Trail	At-Grade	<ul style="list-style-type: none"> <li>• 14' utility corridor width</li> <li>• 20' crossing panels</li> <li>• \$75,000</li> </ul>	No change	Trails groups/users will be required to work with easement/property owner to ensure continued use and access.
<b>Crossing 3</b> Private property/Big Lake Trail	At-Grade	<ul style="list-style-type: none"> <li>• 32' gravel drive width</li> <li>• 40' crossing panels</li> <li>• \$150,000</li> </ul>	No change	Trails groups/users will be required to work with easement/property owner to ensure continued use and access.
<b>Crossing 4</b> Houston Lake Loop Trail	Bridge	<ul style="list-style-type: none"> <li>• 146' multi-plate culvert (19' diameter)</li> <li>• 14' vertical clearance</li> <li>• 16'-3" horizontal clearance</li> <li>• \$335,000</li> </ul>	<ul style="list-style-type: none"> <li>• 3-span bridge</li> <li>• 14' vertical clearance</li> <li>• 25'-3" horizontal clearance (center span)</li> <li>• \$1,600,000</li> </ul>	
<b>Crossing 5</b> Unnamed Tributary to the Little Susitna River (H 6.3)  Flat Lake/Iron Dog Connector Reroute	Bridge	<ul style="list-style-type: none"> <li>• 3-span bridge</li> <li>• 12'-7.5" vertical clearance</li> <li>• 14' horizontal clearance (opening 1)</li> <li>• 26' horizontal clearance (opening 2)</li> <li>• 14' horizontal clearance (opening 3)</li> <li>• \$1,600,000</li> </ul>	<ul style="list-style-type: none"> <li>• 5-span bridge</li> <li>• 17'-7" vertical clearance</li> <li>• 25'-3" horizontal clearance (openings 2-4)</li> <li>• Opening 3 is a stream channel</li> <li>• \$2,200,000</li> </ul>	
<b>Crossing 6</b> Unnamed Tributary to the Little Susitna River (H 4.3)	Bridge	<ul style="list-style-type: none"> <li>• Single span bridge</li> <li>• 17' vertical clearance</li> <li>• 45' horizontal clearance</li> <li>• \$1,200,000</li> </ul>	<ul style="list-style-type: none"> <li>• 5-span bridge</li> <li>• 14'-6" vertical clearance</li> <li>• 25'-3" horizontal clearance (opening 2-4)</li> <li>• Opening 3 is a stream channel</li> <li>• \$2,200,000</li> </ul>	
<b>Crossing 7</b> West Papoose Twins Road	At-Grade, Road	<ul style="list-style-type: none"> <li>• 32' road width</li> <li>• 40' crossing panels</li> <li>• \$150,000</li> </ul>	<ul style="list-style-type: none"> <li>• 72' crossing width</li> <li>• 32' road surface</li> <li>• 10' separation, 10' trail (north and south)</li> <li>• 80' of crossing panels for road and trail</li> <li>• \$300,000</li> </ul>	Trail would be separated from road and would have separate panels
<b>Crossing 8</b> West Susitna Parkway	At-Grade, Road	<ul style="list-style-type: none"> <li>• 32' road width</li> <li>• 40' crossing panels</li> <li>• \$150,000</li> </ul>	<ul style="list-style-type: none"> <li>• 72' crossing width</li> <li>• 32' road surface</li> <li>• 10' separation, 10' trail (north and south)</li> <li>• 80' of crossing panels for road and trail</li> <li>• \$300,000</li> </ul>	

<sup>2</sup> A crossing panel is an element that is placed on both sides and between the rails at a wheeled vehicle crossing. The purpose of the crossing panel is to provide a surface level with the top of the rail. The crossing panel allows wheeled vehicles to pass over the rails. The crossing panels may be constructed from metal, concrete or plastic.

Crossing # Crossing Name	Crossing Type	Original Design Description	Revised Design Description	Comment/Status
<b>Crossing 9</b> Iditarod Race Trail	Bridge	<ul style="list-style-type: none"> <li>• Single span bridge</li> <li>• 13'-4" vertical clearance</li> <li>• 14' horizontal clearance</li> <li>• \$900,000</li> </ul>	<ul style="list-style-type: none"> <li>• 3-span bridge</li> <li>• 14' vertical clearance</li> <li>• 25'-2" horizontal clearance (center span)</li> <li>• \$1,600,000</li> </ul>	Pending discussions with UA
<b>Crossing 10</b> Iditarod Historic Trail	Bridge	<ul style="list-style-type: none"> <li>• Single span bridge</li> <li>• 12'-6" vertical clearance</li> <li>• 12'-6" horizontal clearance</li> <li>• \$900,000</li> </ul>	<ul style="list-style-type: none"> <li>• 3-span bridge</li> <li>• 14' vertical clearance</li> <li>• 25'-3" horizontal clearance (center span)</li> <li>• \$1,600,000</li> </ul>	
<b>Crossing 11</b> Outflow of Diamond Lake (H 0.8)	Bridge	<ul style="list-style-type: none"> <li>• 3-span bridge</li> <li>• 18' vertical clearance</li> <li>• 60' horizontal clearance (center span)</li> <li>• \$1,600,000</li> </ul>	<ul style="list-style-type: none"> <li>• 5-span bridge</li> <li>• 18'-5" vertical clearance</li> <li>• 21'-11" horizontal clearance (opening 2 and 4)</li> <li>• 60' horizontal clearance (opening 3; stream channel)</li> <li>• \$2,400,000</li> </ul>	
<b>Crossing 12</b> Ayrshire Avenue	At-Grade, Road	<ul style="list-style-type: none"> <li>• 32' road width</li> <li>• 40' crossing panels</li> <li>• \$150,000</li> </ul>	<ul style="list-style-type: none"> <li>• 72' crossing width</li> <li>• 32' road surface</li> <li>• 10' separation, 10' trail (north and south)</li> <li>• 80' of crossing panels for road and trail</li> <li>• \$300,000</li> </ul>	
<b>Crossing 13</b> Holstein Avenue	At-Grade, Road	<ul style="list-style-type: none"> <li>• 32' road width</li> <li>• 40' crossing panels</li> <li>• \$150,000</li> </ul>	<ul style="list-style-type: none"> <li>• 72' crossing width</li> <li>• 32' road surface</li> <li>• 10' separation, 10' trail (north and south)</li> <li>• 80' of crossing panels for road and trail</li> <li>• \$300,000</li> </ul>	
<b>Crossing 14</b> Baker Farm Bridge	Bridge (stream)	<ul style="list-style-type: none"> <li>• 3-span bridge</li> <li>• 11'-9" to 12' vertical clearance</li> <li>• 19'-7" horizontal clearance (opening 1)</li> <li>• 25'-3" horizontal clearance (opening 2)</li> <li>• 19'-2" horizontal clearance (opening 3)</li> <li>• \$1,600,000</li> </ul>	No change	
<b>Crossing 15</b> Baker Farm Road	At-Grade, emergency access route	<ul style="list-style-type: none"> <li>• 32' road width</li> <li>• 40' crossing panels</li> <li>• \$150,000</li> </ul>	No change	Emergency access route
<b>Crossing 16</b> Figure 8 Lake Loop Trail	Culvert	<ul style="list-style-type: none"> <li>• 146' multi-plate culvert (19" diameter)</li> <li>• 9' to 14' vertical clearance</li> <li>• 16'-3" horizontal clearance</li> <li>• \$335,000</li> </ul>	No change	A trail embankment and parking lot improvements are planned for the Figure 8 Loop Trail

## **Attachment 1: Document Figures**

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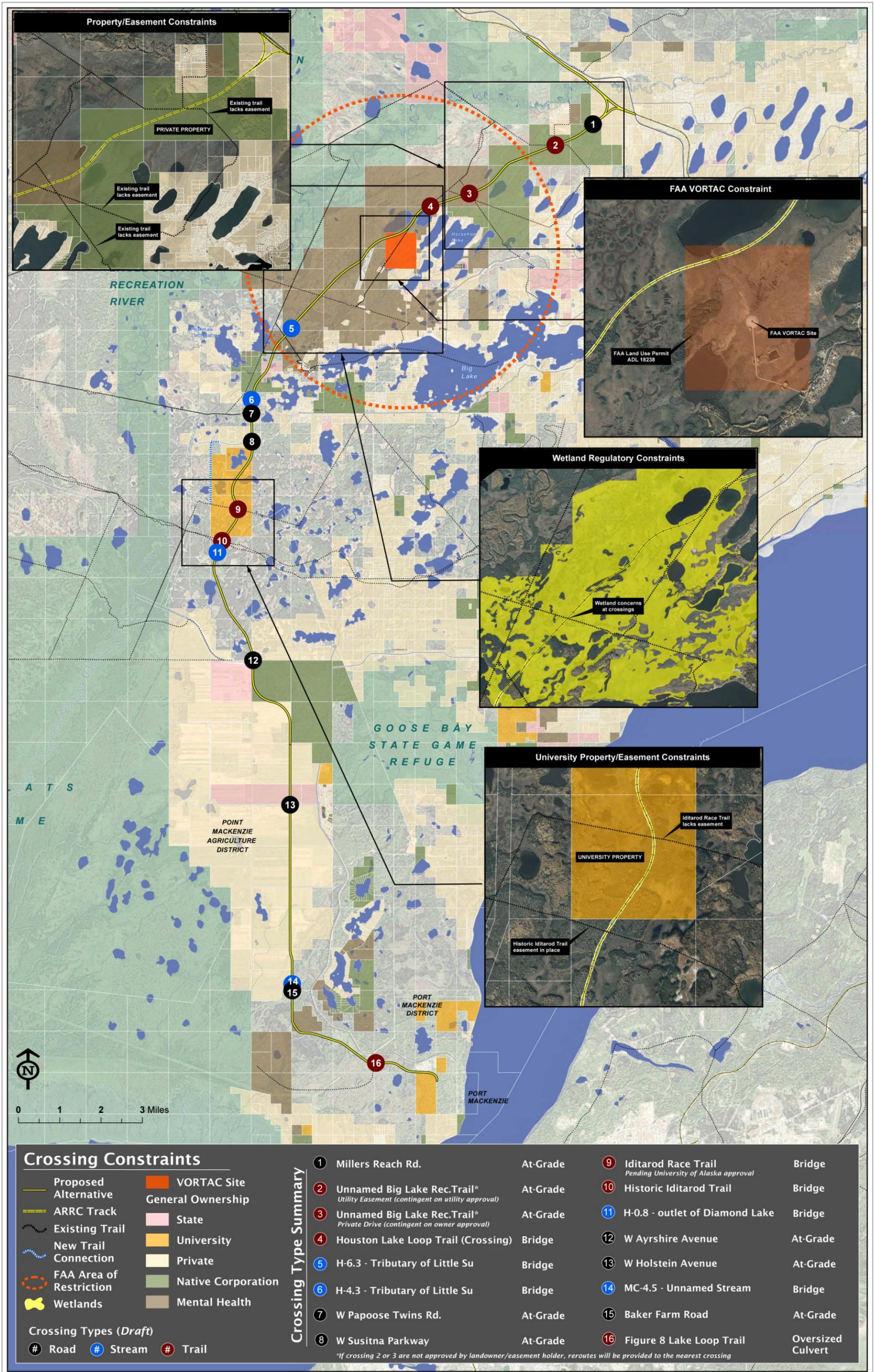


Figure 1: Crossing constraints

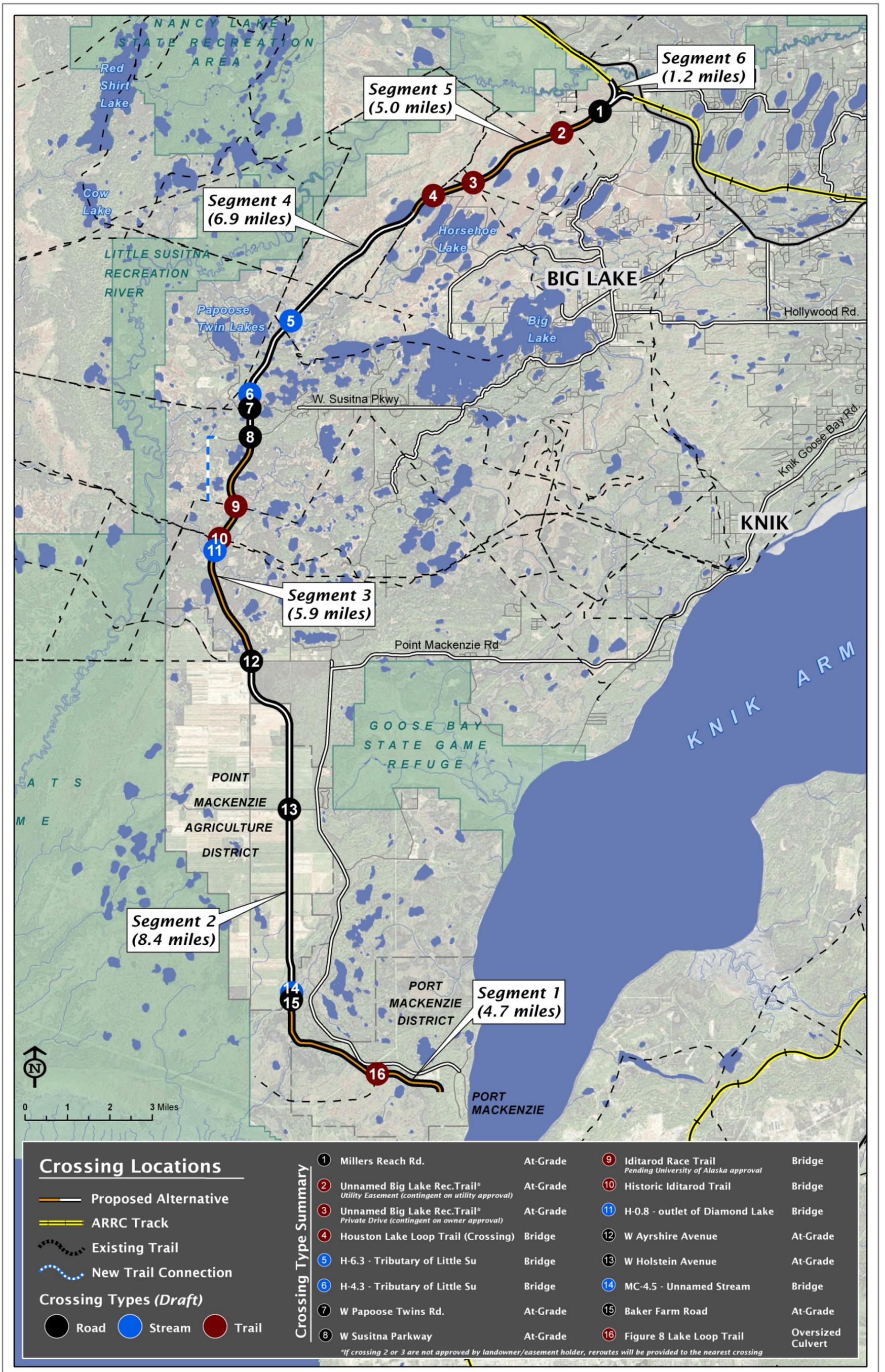


Figure 2: Crossing locations

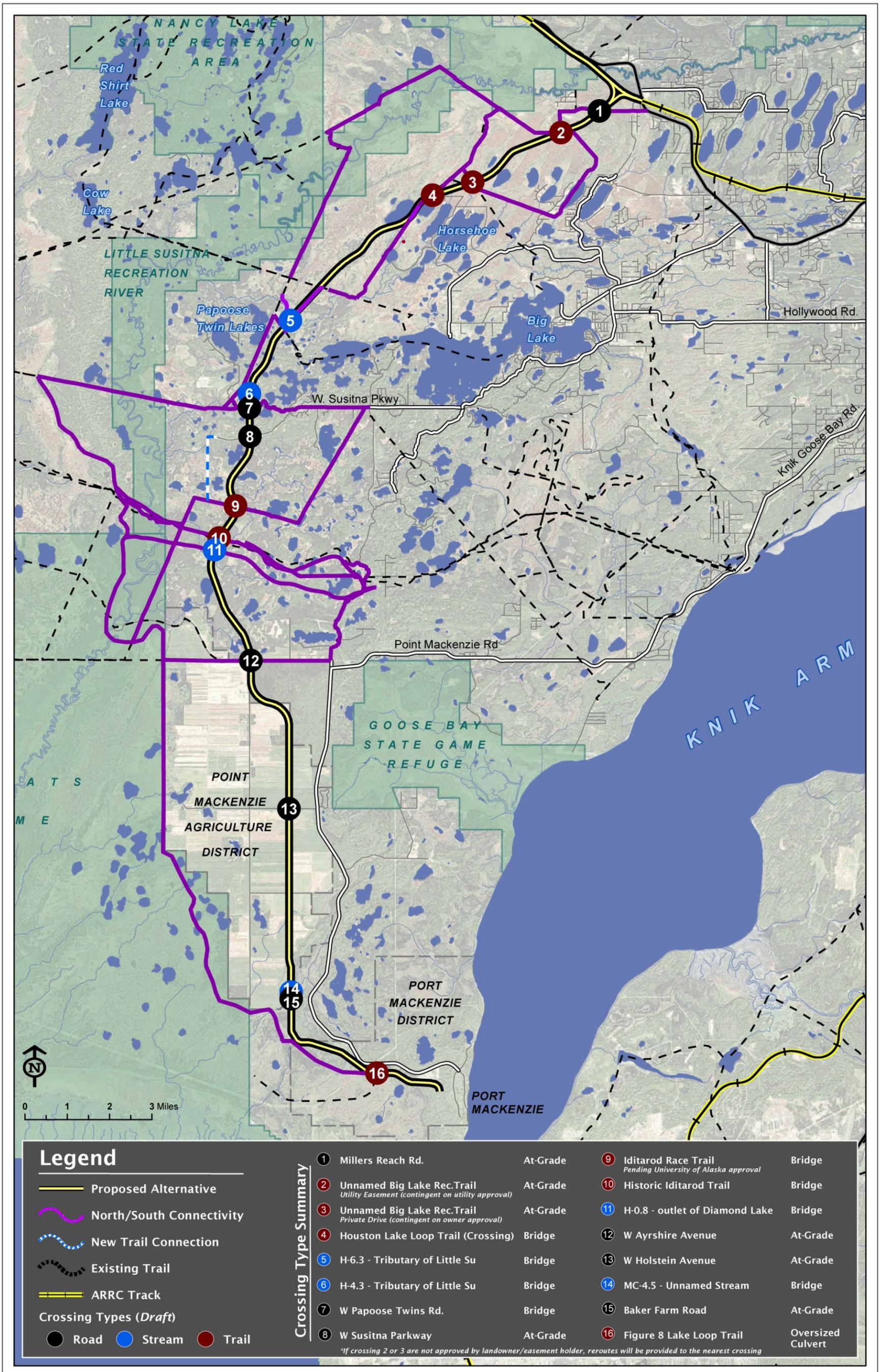


Figure 3: Trail connectivity