

3.9 Historic and Archaeological Preservation

3.9.1 Affected Environment

3.9.1.1 Background and Identification of Historic Properties

The assessment of impacts to historic properties must follow Section 106 of the National Historic Preservation Act (NHPA; 36 CFR § 800). Coordination of the NHPA with the National Environmental Policy Act is outlined in 36 CFR 800.8, which states that “Agency officials should ensure that preparation of an...EIS and record of decision includes...identification of historic properties, assessment of effects upon them, and consultation leading to resolution of adverse effects.” An “historic property” is any cultural resource that has been listed in or may be eligible for listing in the National Register of Historic Places (NRHP), as defined in the NHPA (36 CFR § 800.16[I]).

The Federal Highway Administration (FHWA), in consultation with the State Historic Preservation Officer (SHPO), Tribal governments and organizations, and agencies, has determined that the Area of Potential Effect (APE) for the project consists of an indirect APE and direct APE, as shown on Map 3.9-1. The direct APE includes the area in which all aspects of construction, staging, access, and management may occur that could have a direct impact on identified historic properties. This area includes the right-of-way of the four build alternatives, proposed staging, earth materials disposal sites, and borrow sites. For the most part, the right-of-way is 300 feet wide, although in some areas it expands to 500 feet wide or more, to fully encompass proposed cut and fill limits. The indirect APE has been delineated to identify potential secondary effects to historic properties (such as impacts to setting, association, or feeling) as a result of the proposed alternatives. The indirect APE is thus broader in scope than the direct APE, encompassing the entirety of the Sqiłantnu Archaeological District.

3.9.1.2 Overview: Prehistory and History

The project area has a rich and varied history, with continued human use from prehistoric times to the present. The earliest site identified to date in the region is at Beluga Point, along Turnagain Arm (ca. 8,000 BP [Before Present]) located south of Anchorage, and to the north of the project area. Although there is a gap following early Holocene occupation, the Kenai Peninsula was later inhabited by Pacific Eskimos, who may have been related to coastal groups of Cook Inlet, as well as having ties to the Norton culture of the Bristol Bay region (CRC 2010). House depressions along the Russian River have documented this presence dating from 1,750 to 1,850 years ago (CRC 2010). Eskimos in the upper Cook Inlet and on the Kenai Peninsula were later displaced by Dena’ina people, who appear in the archaeological record around 1,000 years ago (CRC 2010). Ethnographic and oral history accounts from Dena’ina people confirm the ancestral use of the Kenai Mountains and river area, and its cultural importance (CRC 2010).

In the Kenai region, during the winter the Dena’ina lived in rectangular, semi-subterranean dwellings made of split logs, with roofs of moss, dirt, and sod (CRC 2010). These main houses had one or more sleeping rooms, with attached bath houses. Summer dwellings were smaller, tent-like structures of lashed-together poles covered with skins and bark, which also served as smoke houses. Summer communal bath houses were also constructed (CRC 2010). The Dena’ina

constructed temporary semispherical lodges out of bent alder and spruce roots, covered with skins and bark; sometimes these were built in round shapes in the mountains for sweat bathing. Food caches were constructed both as small houses on posts with log ladders, and as underground pits lined with moss, grass, and birch bark. Salmon was the principal food of the Dena'ina, and they traveled up the Kenai River to hunt and fish (CRC 2010).

Historic-era exploration of the Kenai River area first occurred in 1848 and 1850 when a Russian mining engineer, Petr Doroshin, prospected around Kenai and Skilak lakes. However, Doroshin's meager discoveries and the difficulty of transporting mining supplies to the area squelched any further Russian interest in mining in the area (CRC 2010). American trappers began exploiting the region following the sale of Alaska to the United States, but permanent interest in the area did not occur until American miners began looking for gold. Prospecting along the Kenai River in the 1870s recovered little gold; however, Joseph M. Cooper stayed in the area long enough to prospect and establish a trading post at the site of present day Cooper Landing (CRC 2010). By the 1890s, mining efforts increased, and limited finds of gold led to a rush, which led to the towns of Sunrise and Hope being established, as well as mines at the northern shore of Turnagain Arm near Girdwood (CRC 2010). The later Klondike discovery of gold initially lured prospectors away from the Kenai Peninsula, but many returned after facing difficulties accessing the Klondike.

Later prospecting led to established mines, including the Kenai Mining Company in 1905. Later mining led to the establishment of the Kenai Dredging Company in 1911. The first permanent non-Dena'ina residents settled around this time, building cabins associated with mining claims on Kenai Lake and the Kenai River. The first homestead applications occurred in 1915, and homesite platting followed in 1918 (CRC 2010). By 1920 the area between Quartz Creek and the Russian River was home to 25 people, and the area south of the Kenai Lake outlet became known as "the Landing" or "Cooper's Landing" (CRC 2010). Early transportation routes and plans were developed in the 1920s, with plans to build 22 miles of road from Moose Pass to the Russian River (CRC 2010); however, construction was delayed until the 1930s. Dog sled trails were built by the U.S. Forest Service (USFS) from Moose Pass to Cooper Landing, with truck routes following, and eventually a year-round maintained road was established in 1941 (DOT&PF 1982, CRC 2010). With the arrival of modern highways in the 1940s and 1950s, roadhouses were built to accommodate travelers, as well as gas stations, lodges, and ferry operations. The Post Office and school, which originally opened in the 1920s, were opened and closed intermittently based on demand (CRC 2010).

Although mining activity slowed with the start of World War I, mining work continued into the 1930s (CRC 2010). Mining efforts, however, virtually stopped during World War II, but began again in the 1950s. With additional regulations for water and waste treatment, additional costs accrued to the mining operations, and many small commercial mining operations went out of business (CRC 2010). Mining claims were reinitiated in the 1970s and 1980s.

Additional homesteads and homesites were made available by the USFS in the 1930s and 1940s, but with only "summer residence" permits granted. By 1950, the Sterling Highway was a "modern highway," providing increased access to travelers along the Kenai Peninsula (CRC 2010). Homestead sites and businesses continued to increase with demand throughout the latter half of the twentieth century.

The project area is widely recognized for its cultural heritage, including both Alaska Native prehistory and historic Russian and American prospecting. The Sterling Highway is a designated State Scenic Byway in part for its cultural features, and the entire area is encompassed within the Kenai Mountains–Turnagain Arm National Heritage Area, designated by Congress (see Section 3.2.1.7 of Land Use Plans and Policies). These designations do not add further protections for cultural resources, but recognize the important cultural backdrop of this area.

3.9.1.3 Cultural Resources Inventory

Efforts to identify historic properties in the project area have included historical research, reconnaissance and intensive surveys, site testing, and excavation. Investigations in the general project area have included work by the U.S. Bureau of Indian Affairs, State of Alaska Office of History and Archaeology (OHA), U.S. Fish and Wildlife Service (USFWS), USFS, and Cultural Resource Consultants (CRC; working on the current Sterling Highway Milepost [MP] 45–60 Project). The first archaeological surveys of proposed realignments of the Sterling Highway were conducted in 1978 and 1979 by archaeologists from the OHA. During the 1980s, there were several surveys related to proposed highway realignments, including yearly surveys and/or excavations by OHA between 1985 and 1989. More recently, Charles Holmes of OHA surveyed and tested sites along the Juneau Creek Alternative in 2000, and Douglas Reger (consultant to the Alaska Department of Transportation and Public Facilities [DOT&PF]) surveyed the Cooper Creek and G South alternatives in 2002 and 2003, respectively. Past consultations between the SHPO and DOT&PF on the eligibility of identified sites and project effects took place between March 1992 and October 1995.

An additional survey along the Juneau Creek Alternative at the Juneau Creek crossing was completed between July and August 2005, to include areas that could be affected by potential shifts in bridge alignments due to design requirements. Field verification of previously recorded sites also was completed in 2005. Surveying and mapping were completed in 2009 to address the more recently proposed Juneau Creek Variant Alternative, and an additional field survey in 2014 was completed to address a modified segment of the G South alignment. A comprehensive archaeological survey report documenting surveys completed for the proposed project's current Draft Supplemental Environmental Impact Statement (SEIS) phase is available, but is intended for limited distribution because it contains confidential information protected by law.

The historic properties identified in the project APE and determined eligible for listing in the NRHP are listed below. See Map 3.9-1, and see Maps 4-1, 4-6, 4-7, 4-8, and 4-12 in Chapter 4. Note that some historic properties and districts are not shown on the maps to help protect sensitive sites.

- **Sqilantnu Archaeological District.** The Sqilantnu Archaeological District comprises hundreds of archaeological sites representing late prehistoric to early historic Dena'ina occupation, and the district boundaries encompass virtually the entire project area downstream of the Kenai Lake outlet and up to approximately 1,000 feet elevation on both sides of the Kenai River Valley. There are hundreds of contributing historic properties (such as collections of Dena'ina cache pits or house depressions), including thousands of individual cultural features within the sites, that make up the archaeological district. The district and all its contributing historic properties have been determined eligible for listing in the NRHP. The Confluence Traditional Cultural Property (TCP) and the New Village TCP, also listed below as separate historic properties, contribute to the Sqilantnu

Archaeological District. Several contributing Sqilantnu sites, also located within the boundaries of identified TCPs, are used for cultural interpretation activities by the Kenaitze Indian Tribe, including the Beginnings and K’Beq Footprints Heritage Sites. The Russian River Land Act of 2002 conveyed the “archaeological estate” of some 500 acres of the Sqilantnu Archaeological District within the Kenai National Wildlife Refuge boundary to Cook Inlet Region, Incorporated (CIRI), the regional Native corporation, and assigned ownership of recovered artifacts throughout the district to CIRI.

- **Sqilantnu Russian River Confluence Traditional Cultural Property.** The Sqilantnu Russian River Confluence TCP is a large area encompassing the confluence of the Kenai and Russian rivers and lands nearby. The TCP is an area that holds an integral relationship with the beliefs and practices of the Kenaitze. Additionally, the sites contained within the Confluence TCP are significant for the association they continue to hold with Kenaitze cultural beliefs, practices, education, and history. The TCP is also recognized by the Kenaitze for its location as a meeting point for many cultures, from pre-history through today. As such, the entire site, including the existing Sterling Highway, the Russian River Ferry, and other modern and non-Native elements, are considered part of the TCP. In 2002, the Russian River Land Act recognized the “abundant archaeological resources of significance to the Native people of the Cook Inlet Region, the Kenaitze Indian Tribe, and the citizens of the United States” of the lands near the confluence of the Kenai and Russian rivers.
- **New Village Traditional Cultural Property.** The New Village TCP is the site of the last traditional Kenaitze village in the Sqilantnu District and upper Kenai River area. Its residents moved downstream in 1905, when the last occupants moved to Kenai. New Village is also significant as the location where the Susten Camp (a Kenaitze cultural education and youth camp) first began, with collaborative excavations of archaeological resources by Kenaitze elders, youth, and the USFS. The Susten Camp’s role at the site is an important link, providing continuity between the past and present, passing cultural heritage on to future generations.
- **Kenai Mining and Milling Company Historic District.** The historic district encompasses lands near Cooper Creek, including several historic mining pits and building foundations.
- **Charles G. Hubbard Mining Claims Historic District.** The historic district encompasses several historic mining claims along a reach of the Kenai River, including several prospect pits.
- **Stetson Creek Trail.** The historic trail provided access up Cooper Creek and Stetson Creek and provides access to mining claims today. It is still used recreationally.
- **Bean Creek Trail.** The Bean Creek Trail is the southern end of an historic trail from Cooper Landing to Hope. Most of the trail from Cooper Landing to Hope is now known as the Resurrection Pass National Recreation Trail. However, where the USFS re-routed the Resurrection Pass Trail to the west side of Juneau Creek, the Bean Creek Trail follows the historic route on the east side. The Bean Creek Trail is functional and continues to be used recreationally. The USFS has re-routed the last half-mile of the Bean Creek Trail to allow

for better public access via Slaughter Ridge Road; the historic route heading south is within private property.

- **Gwin’s Lodge.** The lodge, located near MP 52, is an historic Alaska roadhouse dating from the early days of the Sterling Highway. The building (but not the surrounding land) is considered historic property.
- **Broadview Guard Station.** The Broadview Guard Station is an historic Chugach National Forest property used in the past as a fire lookout, overlooking Kenai Lake. It is located near MP 46 overlooking Kenai Lake. The building (but not the surrounding land) is considered historic property.

Consulting parties (see next subsection) have agreed that a phased approach to identification of individual historic properties will be implemented, particularly for subsurface sites associated with the Sqilantnu Archaeological District. That is, while the current identification efforts are sufficient for the Draft SEIS, more identification efforts may occur once a single, preferred alternative has been selected.

3.9.1.4 Agency and Tribal Coordination

DOT&PF and FHWA have conducted Section 106 consultation with the SHPO, the Kenaitze Indian Tribe, the Salamatof Tribal Council, Cook Inlet Tribal Council, Kenaitze Native Association, CIRI, USFWS, USFS, and the Cooper Landing Historic Society. DOT&PF and FHWA also have consulted with the Russian River Land Act Memorandum of Understanding (MOU) Group, comprised of the Kenaitze Indian Tribe, CIRI, USFWS, and USFS.

3.9.1.5 Section 4(f) Protection

Section 4(f) of the U.S Department of Transportation (USDOT) Act provides an additional layer of protection for cultural resources in or eligible for listing in the NRHP (and for archaeological properties identified for preservation in place), prohibiting use of such properties for transportation projects unless there is no feasible and prudent avoidance alternative. Evaluation under Section 4(f) is required for any such historic property. Certain parks, wildlife and waterfowl refuges, and recreation areas also are afforded protection under Section 4(f). For this project, FHWA has determined that Section 4(f) protection applies to all of the historic properties listed in the preceding section and to park, recreation, and Kenai National Wildlife Refuge properties as indicated in Table 3.8-1, in Section 3.8, Parks and Recreation Resources. Chapter 4 is dedicated to evaluation of all affected Section 4(f) properties.

3.9.2 Environmental Consequences

3.9.2.1 No Build Alternative

Direct and Indirect Impacts

Several historic properties are located within the existing highway right-of-way, and under the No Build Alternative, routine scheduled maintenance (such as brush clearing, bridge replacement, and other minor modernization projects) could disturb or bury historic properties adjacent to the highway. The following historic properties could be adversely affected because the existing highway right-of-way overlaps them:

- Kenai Mining and Milling Historic District
- Charles G. Hubbard Mining Claims Historic District
- Sqilantnu Archaeological District
- Sqilantnu Russian River Confluence TCP

3.9.2.2 Issues Applicable to the Build Alternatives

The impact analysis for historic properties is based on the definition of adverse effect found in 36 CFR § 800.5, Assessment of Adverse Effects, which states:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Historic properties (i.e., sites determined eligible for listing in the NRHP) include prehistoric and historic cultural resources that are either individually eligible or are contributing elements to larger historic or archaeological districts, or both. Section 4(f) protection applies to virtually any historic property found eligible for listing in the NRHP, as stated in Section 3.9.1.5, above. See Chapter 4, Section 4(f) Evaluation, for more details on these properties. Adverse effects to historic properties may occur through direct and indirect impacts to a site and/or district that would diminish the qualities that cause a property to be eligible for NRHP listing.

Preliminary design of project alternatives includes earthwork estimates for removing existing soil (cut) and depositing material (fill) to be consistent with roadway design criteria and current highway standards. Cut-and-fill limits for each alternative were compared to cultural and historic site boundary locations in the project area; where cut-and-fill limits intersect, encompass, or are adjacent to existing site boundaries, a determination of adverse effect was made for the particular site under that alternative. Fill placement or excavation activity would disturb existing site conditions, compromising the integrity of buried eligible cultural sites.

Excavation and fill placement under all build alternatives would directly impact sites included in the Sqilantnu Archaeological District and Russian River Confluence TCP. These historic properties have been determined eligible for listing in the NRHP based on their association with important patterns of Alaska history. Excavation and fill placement would adversely affect the sites' integrity as features contributing to their association with broader historic patterns.

An assessment of potential visual impacts to character defining features of historic properties located in the direct APE for each alternative is included in a *Recommendations of Effect to Historic Properties* document (HDR 2010d). Visual assessments were not completed at archaeological resources, as the attributes of these sites lie primarily in their information potential and association, and not their overall above-ground setting. However, one historic property was identified as a place of cultural significance, in part due to setting and visual association, and was evaluated for potential visual impacts. This site was later identified, through consultation with the Kenaitze and Russian River Lands Act MOU Group, as contributing to the Sqilantnu Russian River Confluence TCP.

A comprehensive cultural resources survey report prepared for this project documents surveys completed for the proposed project's current Draft SEIS phase (CRC 2010). Due to the sensitive nature of cultural site information, this report is confidential and not available for public distribution.

The subsections below briefly summarize the impacts of each alternative. Impacts to historic properties would occur during construction and would result in permanent loss of the site or the information contained within an archaeological site. Therefore, direct impacts and construction impacts are considered the same. Historic properties are further protected under Section 4(f) law and therefore are also addressed in Chapter 4, Section 4(f) Evaluation. In Chapter 4, Table 4.8-13 provides a summary overview of impacts discussed for each alternative below.

Construction Impacts

Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above in Section 3.9.2.2.

Mitigation

FHWA, in consultation with SHPO, Tribal governments and organizations, the Russian River Lands Act MOU Group, land managing agencies, and other identified Section 106 consulting parties, has committed to developing an agreement document to address adverse effects to identified historic properties, in accordance with Section 106 of the NHPA. The Section 106 consultation is ongoing. The Federal Advisory Council on Historic Preservation will be invited to participate with other consulting parties in formation of the agreement document. An agreement document addressing adverse effects is not expected to be finalized until a single preferred alternative is selected in the Final Supplemental Environmental Impact Statement. Consulting parties have agreed that a phased approach to identification of historic properties will be implemented. That is, while the current identification efforts are sufficient for the Draft SEIS, it is intended that more identification efforts may be undertaken once a single alternative is selected. The agreement document would prescribe any additional identification efforts to be implemented for the selected alternative as well as methods for the resolution of adverse effects to historic properties. It would address jurisdictional and compliance responsibilities with the Archeological Resource Protection Act and the Native American Graves Protection Act. It would address curation requirements related to any artifacts discovered during road construction. The agreement document will be completed prior to the Record of Decision (ROD) and will be referenced in the ROD.

For any alternative, the construction contract would contain the provision: "should cultural or paleontological resources be discovered as a result of this activity, all work that could impact these resources will halt and the DOT&PF Project Engineer and SHPO will be notified immediately." Work would not resume at such sites until consultation was conducted and stabilization and disposition of materials was resolved among the FHWA and appropriate Section 106 consulting parties. Cultural material and human remains, should they be found during construction, would be handled in accordance with discovery and curation procedures and stipulations detailed in the agreement document developed among FHWA, SHPO, Kenaitze Indian Tribe, and other signatories and Section 106 consulting parties.

3.9.2.3 Cooper Creek Alternative

Direct and Indirect Impacts

The following would be adversely affected by the proposed Cooper Creek Alternative:

- The **Kenai Mining and Milling Company Historic District**, where the highway embankment would cut into and bury contributing district features of a roadbed/flumeway and a trail segment. (See Section 4.2.1 for definitions of NRHP criteria, Section 4.2.16 for more details on this historic property, and Section 4.5.2 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Stetson Creek Trail**, where the highway cut and embankment would cut into, cover, and affect approximately 1,250 linear feet of historic trail. (See Section 4.2.14 for more details on this historic property and Section 4.5.2 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Charles G. Hubbard Mining Claims Historic District**, where the widened highway would cut into and affect the location of prospect pits and trenches that have been identified as contributing district features. (See Section 4.2.15 for more details on this historic property and Section 4.5.2 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Sqilantnu Archaeological District**, where the widened highway would cut into or intersect and affect 28 contributing district prehistoric sites. (See Section 4.2.11 for more details on this historic property and Section 4.5.2 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Confluence Traditional Cultural Property**, where the widened highway and expected higher average vehicle speeds would alter the existing feeling and association within the TCP and visually alter the landscape in an incremental way. However, the highway is considered part of the TCP as the modern mechanism for bringing cultures together in the river confluence area. The widened highway would affect several archaeological sites that contribute to the TCP, a subset of the same sites listed above for the larger Sqilantnu District.

In considering potential visual impacts, the Cooper Creek Alternative is considered consistent with the active character of the existing corridor through Cooper Landing, which already experiences adjacent highway traffic. The Cooper Creek Alternative thus would not introduce new visual impacts in the APE that would affect historic properties. The proposed Cooper Creek Bridge and its approaches are inconsistent with the surrounding natural setting; however, most views of the Cooper Creek approaches to the crossing would be obscured by dense forest vegetation from identified historic properties, which are located primarily in or near the existing highway corridor in the project area. Therefore, there are no identified visual effects to historic properties (buildings and structures) under the Cooper Creek Alternative. The Cooper Creek Alternative would provide new access across high bench lands south of the Cooper Landing community and within the Sqilantnu Archaeological District. No historic properties are currently documented in this area. Therefore, no indirect impacts are anticipated. Further consultation and evaluation would occur during the development of an agreement document (see Section 3.9.2.2).

Section 4(f) Considerations. The Cooper Creek Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. It also would reconstruct the existing highway adjacent to Gwin’s Lodge. In both cases, there would be no use of the property on which these historic buildings sit, and no use of the historic structures themselves. FHWA has determined through the Section 106 process that there would be no adverse effect to these buildings; under Section 4(f), proximity impacts would not be so severe that the activities, features, or attributes of the historic properties would be substantially impaired. Therefore, these properties are not addressed in Chapter 4, Section 4(f) Evaluation.

Construction Impacts

Any impacts to historic properties occurring during construction would be considered direct impacts and are discussed above.

Mitigation

Mitigation will be developed to address adverse effects under an agreement document, as discussed above in Section 3.9.2.2. As recreation mitigation for effects to the Stetson Creek Trail, the trail would be altered/ rerouted and given a new pullout trailhead. It would remain a useable route. See detail in Section 4.6 for further discussion. Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have also considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.

3.9.2.4 G South Alternative

Direct and Indirect Impacts

The following historic properties would be adversely affected by the proposed G South Alternative:

- The **Bean Creek Trail**, where the highway embankment would cross the trail, effectively truncating it and burying it. (See Section 4.2.5 for more details on this historic property and Section 4.5.3 for impacts to the historic property associated with the G South Alternative.)
- The **Charles G. Hubbard Mining Claims Historic District**, where the widened highway would affect prospect pits and trenches that have been identified as contributing features of the historic district. (See Section 4.2.15 for more details on this historic property and Section 4.5.3 for impacts to the historic property associated with the G South Alternative.)
- The **Sqilantnu Archaeological District**, where the widened highway would affect 25 contributing district prehistoric sites. (See Section 4.2.11 for more details on this historic property and Section 4.5.3 for impacts to the historic property associated with the G South Alternative.)
- The **Confluence Traditional Cultural Property**, where the widened highway and expected higher average vehicle speeds would somewhat alter the existing feeling and association within the TCP and visually alter the landscape in an incremental way. However, the highway is considered part of the TCP as the modern mechanism for bringing cultures together in the river confluence area. The widened highway would affect

several archaeological sites that contribute to the TCP, a subset of the same sites listed above for the larger Sqilantnu District.

In considering potential visual impacts, the G South Alternative is considered consistent with the active character of the existing corridor through the project area, which already experiences adjacent highway traffic. However, the proposed approaches and bridge over Juneau Creek associated with the G South Alternative, along with the new approaches and bridge over the Kenai River, are inconsistent with the current character, as they occur in an undisturbed area north and west of the Cooper Landing community. The approaches to the Juneau Creek crossing for the G South Alternative would introduce a new highway corridor with visible bridge crossings in the project area that may otherwise be devoid of similar features. However, most views of the G South Alternative's approaches to the Juneau Creek crossing would be obscured by dense forest vegetation from identified potential historic properties, located primarily in or near the exiting highway corridor in the project area. Therefore, no visual effects to historic properties (buildings and structures) have been identified under the G South Alternative.

The G South Alternative would provide new access across lands north and west of the Cooper Landing community and within the Sqilantnu Archaeological District. No indirect impacts are anticipated. Further consultation and evaluation would occur during the development of an agreement document (see Section 3.9.2.2).

Section 4(f) Considerations. The G South Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. It also would reconstruct the existing highway near New Village TCP and Gwin's Lodge. In all three cases, the alternative has been designed to avoid impacts, and there would be no effect or use of the property on which these historic properties sit, and no use of the historic properties themselves. FHWA has determined through the Section 106 process that there would be no adverse effect to any of these three properties; and under Section 4(f), proximity impacts would not be so severe that the activities, features, or attributes of the historic structures or TCP would be substantially impaired. Therefore these properties are not addressed in Chapter 4, Section 4(f) Evaluation.

Construction Impacts

Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above.

Mitigation

Mitigation to address adverse effects will be developed under the agreement document discussed above in Section 3.9.2.2. As recreation mitigation for effects to the Bean Creek Trail, the trail would be connected under the highway (see detail in Section 4.6). Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have also considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.

3.9.2.5 Juneau Creek Alternative

Direct and Indirect Impacts

The following historic properties would be adversely affected by the proposed Juneau Creek Alternative:

- The **Bean Creek Trail**, where the highway embankment would cross the historic trail, effectively truncating it and burying it. (See Section 4.2.5 for more details on this historic property and Section 4.5.4 for impacts to the historic property associated with the Juneau Creek Alternative.)
- The **Sqilantnu Archaeological District**, where the highway would affect 13 contributing district prehistoric sites. (See Section 4.2.11 for more details on this historic property and Section 4.5.4 for impacts to the historic property associated with the Juneau Creek Alternative.)
- The **Confluence Traditional Cultural Property**, where the new highway would pass through the undeveloped northern edge of the TCP and would affect several archaeological sites that contribute to the TCP, a subset of the same sites listed above for the larger Sqilantnu District. Within the TCP, the alignment would run along the northern edge of CIRI Tract A, proposed as a site for a cultural resource center, but would not directly use land from Tract A.

In considering potential visual impacts, the Juneau Creek Alternative would introduce a new highway corridor with a visible new bridge in a portion of the project area otherwise devoid of similar features. However, most views of the Juneau Creek Alternative would be obscured by dense forest vegetation from identified historic properties, which are located primarily in or near the exiting highway corridor in the project area. Therefore, no visual effects to historic properties have been identified under the Juneau Creek Alternative.

The Juneau Creek Alternative would provide new access across a long stretch of lands north and west of the Cooper Landing community that to date have been mostly undeveloped. The alternative also would provide a new public trailhead parking area near Juneau Creek. These lands lie within the Sqilantnu Archaeological District. Further consultation and evaluation would occur during the development of an agreement document (see Section 3.9.2.2).

Section 4(f) Considerations. The Juneau Creek Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. There would be no use of the property on which the historic building sits, and no use of the historic structure itself. FHWA has determined through the Section 106 process that there would be no adverse effect to the building and has determined under Section 4(f) that proximity impacts would not be so severe that the activities, features, or attributes of the historic structures would be substantially impaired. Therefore, this property is not addressed in Chapter 4, Section 4(f) Evaluation.

Construction Impacts

Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above.

Mitigation

Mitigation to address adverse effects will be developed under the agreement document discussed above in Section 3.9.2.2. As recreation mitigation for effects to the Bean Creek Trail, the trail would be rerouted under the highway and would remain a useable route (see detail in Section 4.6). Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.

3.9.2.6 Juneau Creek Variant Alternative

Direct and Indirect Impacts

Following are the identified historic properties eligible for listing in the NRHP that would be adversely affected by the proposed Juneau Creek Variant Alternative:

- The **Bean Creek Trail**, where the highway embankment would cross the trail. (See Section 4.2.5 for more details on this historic property and Section 4.5.4 for impacts to the historic property associated with the Juneau Creek Variant Alternative.)
- The **Sqilantnu Archaeological District**, where the highway would affect 22 contributing district prehistoric sites. (See Section 4.2.11 for more details on this historic property and Section 4.5.4 for impacts to the historic property associated with the Juneau Creek Variant Alternative.)
- The **Confluence Traditional Cultural Property**, where the new highway would pass through an important portion of the TCP and would affect several archaeological sites that contribute to the TCP, a subset of the same sites listed above for the larger Sqilantnu District. Also included is CIRI Tract A, proposed as a site for a cultural resource center, which this alternative would bisect. Using a portion of Tract A would reduce the acreage useable for cultural activities or development and would impact CIRI's development plans.

In considering potential visual impacts, the Juneau Creek Variant Alternative would introduce a new highway corridor with visible bridge crossings in the project area that may otherwise be devoid of similar features, similar to the Juneau Creek Alternative. Most views of the Juneau Creek Variant Alternative would be obscured by dense forest vegetation from identified historic properties, primarily located in or near the exiting highway corridor in the project area. However, sites that would be affected under this alternative have been identified for their cultural significance beyond the information potential they may provide. Additionally, the Juneau Creek Variant Alternative could result indirectly in overflow of Sportsman's Landing-Russian River Ferry traffic parking onto the shoulder of the new highway. Although this would be discouraged through "No Parking" signs, it could occur (as it does today on the existing highway, even without substantive shoulders) and could lead to people wandering occasionally into sites important to the Kenaitze Indian Tribe. This alternative also would traverse a long stretch of land that to date is largely undeveloped and would provide a new recreational trailhead near Juneau Creek Falls. These lands lie within the Sqilantnu Archaeological District. Further consultation and evaluation would occur during the development of an agreement document (see Section 3.9.2.2).

Section 4(f) Considerations. The Juneau Creek Variant Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. There would be no use of the land on which the historic property sits, and no use of the historic property itself. FHWA has determined through the Section 106 process that there would be no adverse effect to the building and has determined under Section 4(f) that proximity impacts would not be so severe that the activities, features, or attributes of the historic properties would be substantially impaired. Therefore, this property is not addressed in Chapter 4, Section 4(f) Evaluation.

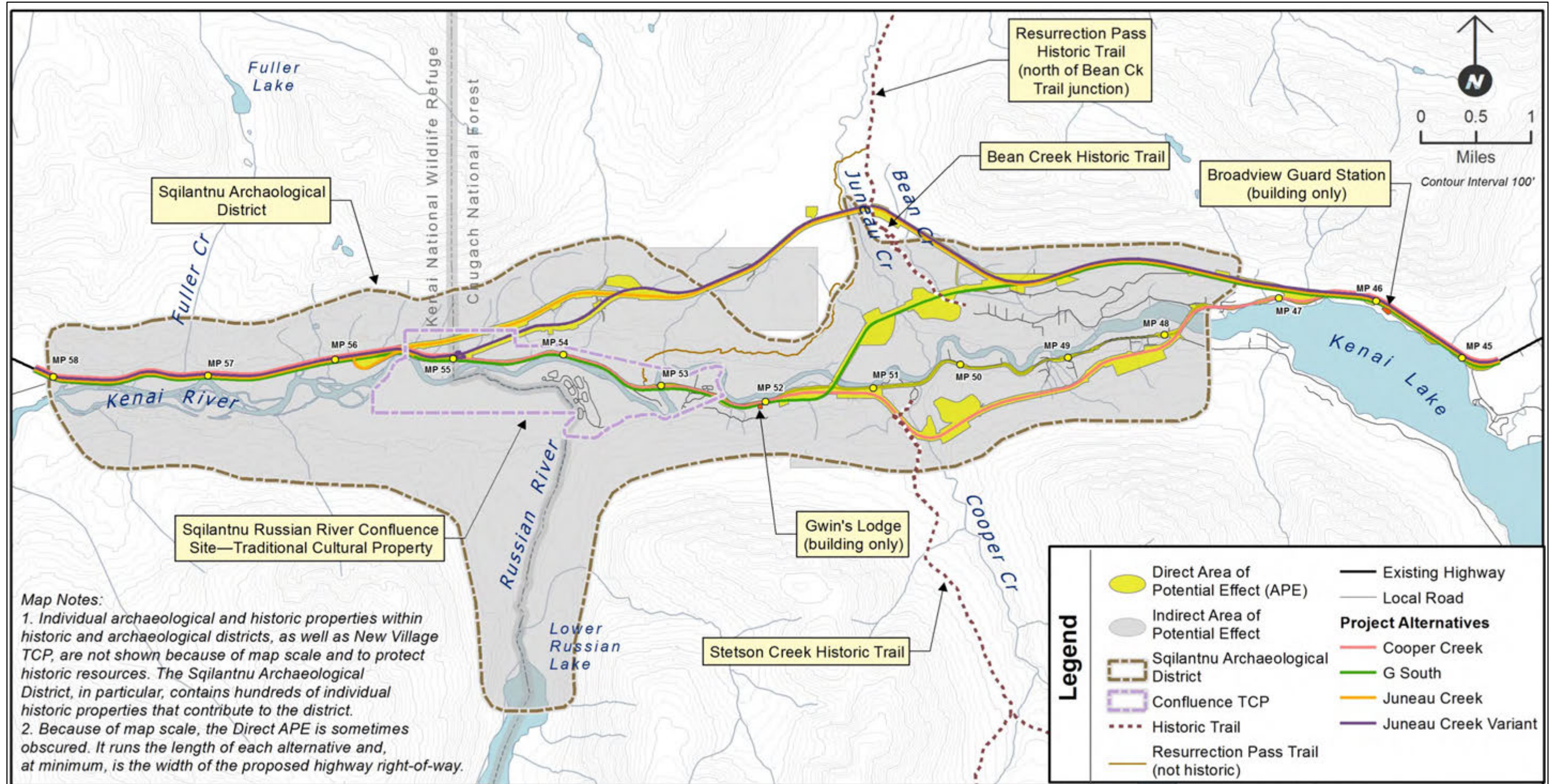
Construction Impacts

Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above.

Mitigation

Mitigation to address adverse effects will be developed under an agreement document discussed above in Section 3.9.2.2. As recreation mitigation for effects to the Bean Creek Trail, the trail would be rerouted under the highway and would remain a useable route (see detail in Section 4.6). Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.

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Map 3.9-1. Historic properties and Areas of Potential Effect in the project area

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