2.3.3.5 Cable Cove Bridge Corridor

The Cable Cove Bridge Corridor was suggested for detailed study because it would likely have fewer impacts than the other build alternatives and appeared to be a viable solution to settle the 1943 Agreement by providing vehicular access along most of the northern shore of Fontana Lake. This new route and connection between GSMNP and the Cable Cove Recreation Area may generate moderate increases in the number of visitors to the study area. This alternative may also have the potential to indirectly provide economic development opportunities for Bryson City and other communities in the study area. As compared with the alternatives that terminate near Fontana Dam, this alternative's crossing over Fontana Lake would avoid two other major bridge crossings (one each at the Hazel Creek and Eagle Creek embayments). While problematic rock formations are located throughout the study area, the Cable Cove Corridor would avoid construction west of the confluence of Hazel Creek and Fontana Lake, where the underlying rocks are believed to have the highest potential for acid production and are likely to contain higher concentrations of metallic minerals than the surrounding rocks. In addition, this alternative would avoid impacts to the AT. Overall, environmental impacts associated with this alternative are expected to be generally moderate as compared with the other preliminary study alternatives.

2.3.3.6 Northern Shore Corridor

This corridor was suggested for detailed study because it would likely have fewer impacts than the two build alternatives recommended for elimination and would comply with the original intent of the 1943 Agreement by providing vehicular access along the northern shore of Fontana Lake. This new vehicular access may have the potential to indirectly provide moderate economic development opportunities for Bryson City and other communities in the study area. In addition, this alternative may generate moderate increases in the number of visitors to the study area. While problematic rock formations are located throughout the study area, the Northern Shore Corridor would likely involve construction west of the confluence of Hazel Creek and Fontana Lake, where the underlying rocks are believed to have the highest potential for acid production and are likely to contain higher concentrations of metallic minerals than the surrounding rocks. Impacts through this area would be reduced through the use of major bridge crossings at the Hazel Creek and Eagle Creek arms of Fontana Lake. As compared with corridors that are located farther north toward the interior of GSMNP, the proposed location of this corridor along the northern shore of Fontana Lake would involve topography with generally less drastic elevation changes and would reduce the potential for habitat fragmentation. The Northern Shore Corridor would have major impacts on the GSMNP backcountry experience, and its terminus near Fontana Dam would have the potential for major impacts on the AT, as compared with the other alternatives. This study corridor, relative to the other corridors, would traverse the largest amount of the water supply watershed critical area, the most wetlands (per the National Wetland Inventory [NWI]), and the largest area of floodplains (per the 100-year designations by the Federal Emergency Management Agency [FEMA]). Overall, environmental impacts associated with this alternative are expected to be generally moderate to high as compared with the other preliminary study alternatives.

2.4 Alternatives Refinement

Public and agency comments and review of GSMNP visitor needs were given consideration in determining the facilities, amenities, and alternatives that were chosen for detailed study. Revisions to the initially suggested study alternatives include the following:

- elimination of the Special Purpose Park Road,
- elimination of the Administrative Access Road,
- elimination of the Cable Cove Bridge Corridor,
- addition of the Proctor Option (modified version of the Flint Gap Corridor and part of the baseline Northern Shore Corridor), and
- addition of a northern crossing of Forney Creek.

2.4.1 Two Road Types Recommended for Detailed Study

The Special Purpose Park Road was eliminated from further study due to the problems associated with a very long road (roughly 30 miles [48 km]) that provides travel in only one direction. A road would provide new vehicular access for emergency service vehicles attending to both visitor and vehicular incidents; however, the one-way road would not be able to provide a quick return route. The return route would include NC 28 and US 19/US 74 which, as compared with a two-way road, would delay the return of emergency vehicles. Also, motorists are not expected to utilize a long one-way road due to the inconvenience of this return route. The use of a pair of one-way, one-lane roads could reduce travel time and improve the usefulness of the road. However, the area of impact would be greater than that of the two-lane road types recommended for further study.

The Administrative Access Road was also eliminated from further study. Since the Administrative Access Road would not be opened to the public on a regular basis, the benefits for local communities and GSMNP visitors were not expected to justify the anticipated cost and environmental impacts associated with construction of the roadway. In addition, the roadway's designated use is inconsistent with the intent of the 1943 Agreement.

The remaining two road types, Principal Park Road and Primitive Park Road, were recommended for further study for the partial-build and build corridors (as described in Section 2.1.2 and illustrated in Figure 2-2 and Figure 2-4).

2.4.2 Elimination of the Cable Cove Bridge Corridor

The Cable Cove Bridge Corridor was proposed to cross Fontana Lake via a major bridge crossing to tie into Cable Cove Road within the Nantahala National Forest lands. Upon review, the United States Forest Service (USFS) determined and stated in a June 29, 2004 letter that the Cable Cove Bridge Corridor is not consistent with their current standards and guidelines as defined in the Nantahala/Pisgah Land and Resource Management Plan (Forest Plan). The USFS manages many of these areas for wildlife habitat and quality scenery, with limited disturbance from motorized vehicles. Many of these areas are also classified as Retention Visual Quality Objective because of visibility from Fontana Lake. This classification does not allow visual evidence or differentiate impacts to the surrounding characteristic landscape. In addition, the USFS' Transportation System Management guidelines require limits on motorized vehicles in certain areas, and the area that would be affected by the proposed alternative already exceeds that limit.

NPS could not proceed with implementation of this alternative without revision to the Forest Plan and USFS approval. In addition, based on comments received, the alternative seemed to lack public interest and support. Therefore, this alternative was dropped from further consideration.

2.4.3 Addition of the Proctor Option (Modified Version of the Flint Gap Corridor and part of the Baseline Northern Shore Corridor)

As noted in Section 2.3.2.3, the Flint Gap Corridor was modified to reduce impacts and to address the public's desire to avoid major bridge crossings and to have access to the Proctor area. The Flint Gap Corridor modification was renamed the Proctor option and incorporated into the baseline Northern Shore Corridor. The Proctor option would turn north just east of Hazel Creek to follow Lakeshore Trail for approximately 2.7 miles (4.3 km). The Proctor option would then turn to the west continuing to follow Lakeshore Trail to the vicinity of Fontana Lake and the Eagle Creek embayment. This route is shown on Figure 2-8 as the Northern Shore Corridor.

In addition to the Proctor option, another route was considered to address the public's desires. This route, the Deep Gap route, would turn north in the vicinity of Pilkey Creek and Clark Branch and continue through the Deep Gap for approximately 3.8 miles (6.1 km) (this route was considered during the initial-options phase and is shown on Figure 2-5 as segment 31). From here, this route would follow Lakeshore Trail to the west, overlapping the route of the Proctor option.

The Deep Gap route, as compared with the Proctor option, was expected to have a greater potential to inhibit the ability for vehicles to stop (due to steep grades), more frequent road closures, and increased erosion problems. The use of steep grades for long distances, especially with the presence of precipitation, is a greater concern with the Deep Gap route than with the Proctor option. More than half the length (approximately 2.7 miles [4.3 km]) of the Deep Gap route involves continual steep grades. In addition to snow and ice necessitating road closure, frost occurrences would likely hinder proper vehicle control and cause more closures for the Deep Gap route. Based on these concerns, the Deep Gap route was not recommended for further study.

2.4.4 Addition of the Forney Creek Crossing Option

Based on the public's concern regarding the aesthetic impact and financial cost associated with major bridge crossings, two options for crossing Forney Creek are under consideration for the Partial-Build Alternative to Bushnell and the Northern Shore Corridor (Figure 2-8). In addition to the original crossing proposed at the Forney Creek embayment, an option was added to avoid the major bridge crossing by following a northern route to cross Forney Creek upstream of the impounded waters. This northern route will be considered the baseline for the Partial-Build Alternative to Bushnell and the Northern Shore Corridor in the detailed analysis. The option around the Forney Creek embayment is more than a mile (1.6 km) longer than the option that crosses it.

2.5 Detailed Study Alternatives

The detailed study alternatives are described in Sections 2.5.1 through 2.5.6.3. The partial-build and build alternatives are shown in Figure 2-8.