

Alternative 3 would result in a temporary increase of noise during construction. The construction of Alternative 3 is anticipated to last 2 years. The construction would involve the reuse of all existing piers and rehabilitation of the thru-truss main spans 4, 5 and 6 and the replacement of the approach spans 1, 2, 3, 7, 8 and 9. Although the construction duration is shorter than Alternative 1, noise associated with the replacement of the approach spans may be more noise intensive compared to the rehabilitation activity occurring in Alternative 1.

Alternative 6

Alternative 6 would construct the non-motorized, recreational path adjacent to traffic on the southbound LBB. As this alternative would preserve the existing roadway geometries, there would be no change in traffic noise and no permanent direct noise impacts.

Alternative 6 would result in a temporary increase of noise during construction. The construction of Alternative 6 is anticipated to last 1.5 years and would involve the replacement of GSB Pier 1, and reuse of all other existing piers. Under Alternative 6, the deck of the southbound LBB would be widened approximately 17.5 feet to the west to accommodate a new multi-use path on the LBB. To accomplish this widening, the GSB superstructure would be removed, since the GSB is approximately 15 feet from the LBB. Although the construction duration is shorter than Alternatives 1 and 3, noise associated with the constructing the new superstructure and pier would be more intensive, due to the required removal of the existing GSB superstructure. Such removal would require the use of heavy construction equipment, increasing noise. The replacement of GSB Pier 1 would require foundation work, often requiring activities such as drilling or pile driving resulting in impact noise.

Alternative 7

Alternative 7 would carry bicyclists and pedestrians and would not affect motor vehicle traffic on the LBBs. Therefore, it would not be a substantial source of noise during operations and there would be no permanent direct noise impacts.

Alternative 7 would result in a temporary increase of noise during construction. Temporary noise impacts associated with Alternative 7 are expected to be largely similar to those described under Alternative 6, as the alternatives are similar. Alternative 7 varies from Alternative 6 in that Alternative 7 involves an independent deck versus the widened LBB deck. Although the construction duration is shorter than Alternatives 1 and 3, noise associated with constructing the new superstructure and pier would be more intensive, due to the required removal of the existing GSB superstructure. Such removal would require the use of heavy construction equipment, increasing noise. The replacement of GSB Pier 1 would require foundation work, often requiring activities such as drilling or pile driving resulting in impact noise.

Alternative 9 (Preferred Alternative)

Alternative 9 would carry bicyclists and pedestrians and would not affect motor vehicle traffic on the LBBs. Therefore, it would not be a substantial source of noise during operations and there would be no permanent direct noise impacts.

Alternative 9 would result in a temporary increase of noise during construction. The construction of Alternative 9 is anticipated to last 1.5 years. The construction would involve the reuse of all existing piers and complete replacement of the existing steel truss with a new steel girder superstructure. Although the duration is shorter than Alternatives 1 and 3, noise associated with constructing the new superstructure and pier would be more intensive, due to the required removal of the existing GSB superstructure. Such removal would require the use of heavy construction equipment, increasing noise. However, the Alternative 9 would reuse the existing piers, reducing the need for foundation work associated with impact noise activities such as pile driving.

3.8.2.2 Indirect Impacts

Under the No-Action Alternative, non-motorized transportation across the Little Bay would be permanently eliminated and no construction would occur. Eliminating of non-motorized transportation could increase vehicular traffic in the area, which could have an indirect effect on noise conditions.

All Action Alternatives would carry bicyclists and pedestrians and would not affect motor vehicle traffic on the LBBs. None of the Action Alternatives would be a substantial source of noise during operations. As such, no indirect impacts are anticipated for any of the Action Alternatives.

3.8.3 Mitigation

Since the Project would not affect operational noise impact, there would be no change in noise mitigation from that determined in the 2007 FEIS. There are no statewide noise regulations that relate to construction activities in New Hampshire and NHDOT is not subject to local restrictions related to construction noise.

3.9 Parks, Recreation, and Conservation Lands

This section identifies parks, recreational facilities, and conservation lands within the Study Area. FHWA evaluates potential impacts on parks and recreational facilities under NEPA and under Section 4(f) of the US Department of Transportation (USDOT) Act of 1966, 49 USC 303. Section 4(f) provides consideration of publicly-owned parks, recreation areas, wildlife or waterfowl refuges, or publicly- and privately-owned historic sites of national, state, or local significance, during the planning and design of transportation projects.⁴⁵

Certain parks and recreation areas are also protected by Section 6(f) of the Land and Water Conservation Fund Act, 16 USC 4601-8(f). Section 6(f) applies if the property was acquired or

⁴⁵ **Chapter 4, Programmatic Section 4(f) Evaluation for the Use of Historic Bridges**, presents an analysis of the properties afforded protection under Section 4(f), addresses potential impacts of the Project on these properties, and describes plans to minimize harm.

developed with financial assistance under the Land and Water Conservation Fund (LWCF) State Assistance Program. In general, Section 6(f) requires that when LWCF-funded properties are converted to non-park purposes, the converted property must be replaced with recreational property of at least equal fair market value and of reasonably equivalent usefulness and location. The US Department of the Interior, National Park Service administers the LWCF program at the federal level, with funding distribution and oversight occurring at the state level. In New Hampshire, the program is managed by the NH Department of Natural and Cultural Resources, Division of Parks and Recreation, Office of Community Recreation.

3.9.1 Affected Environment

Parks, recreational facilities, and conservation lands were identified based on field reviews, aerial imagery, location photographs, and review of existing federal and GRANIT GIS data. There are no parks, recreational facilities, or conservation lands within the Study Area on the Newington side of the GSB. Recreational resources located within and adjacent to the Study Area are depicted in **Figure 3.9-1**.

3.9.1.1 Hilton Park

Hilton Park, a publicly owned park located on Dover Point, offers picnic areas, a boat launch, fishing dock, a play area, benches, and open green space. Hilton Park was created in 1938 following the GSB construction and contains a historic monument commemorating the site of the first settlement in Dover in 1623. Park visitors have relatively unobstructed views of the Piscataqua River, Little Bay, and the LBB. Hilton Park is open from 6:00 AM – 8:00 PM; overnight use is prohibited. NHDOT, Bureau of Turnpikes, owns and manages the 16-acre park.

3.9.1.2 Marine Traffic

Recreational boating is prevalent in this coastal area of New Hampshire. Because the GSB crosses the Piscataqua River, a navigable water, recreational boaters and other marine traffic pass under the GSB. Within the Study Area, there is one public boat ramp on the eastern side of Hilton Park.

To access the Piscataqua River, boaters launching from nearby docks would need to pass underneath the GSB; therefore, this analysis identifies public boat ramps within a 2-mile radius of the GSB. In addition to the public boat ramp in Hilton Park, three public boat ramps are within 2 miles of the GSB. One public water access site in Newington is Fox Point Dock, about 1.7 miles west of the GSB. Patterson Lane Ramp in Newington is about 1.3 miles east of the GSB at the end of Patterson Lane. Eliot Boat Basin, in Eliot, Maine, is approximately 1.5 miles southeast of the GSB.

3.9.1.3 Bicycle and Pedestrian Facilities

The GSB provides a connection for bicyclists and pedestrians, including both recreational and commuting uses. In 2010, the Dover and Newington approaches to the GSB were reconstructed to enhance the pedestrian and bicycle access to the bridge. Following regular bridge inspections, the superstructure was determined to be in critical condition due to the deterioration of the truss and floor system. The degree of deterioration required the NHDOT to install fencing in 2015

along the bridge deck to restrict full access to the middle of the bridge. However, the bridge continued to support pedestrian and bicycle activity.

To measure the extent of pedestrian and bicycle activity on the bridge following the installation of the fencing, the NHDOT Bureau of Turnpikes installed temporary, passive pedestrian counting equipment at the Dover and Newington approaches to the bridge. This equipment provided NHDOT with daily counts of the pedestrians and bicyclists that crossed the counter thresholds in both directions at the two ends of the bridge (it is noted that the counting equipment did not differentiate between a bicyclist and a pedestrian). The counting equipment was in place from mid-July through the end of September of 2016. **Table 3.9-1** provides a summary of the weekly, average weekday, and average weekend pedestrian activity observed during these counting periods. These counts represent the combined totals of pedestrians and bicyclists passing the counter during the given time period.

Table 3.9-1 Bridge Pedestrian and Bicycle Count Data (Summer 2016)

Time Period (Week Ending Date)	Newington Approach			Dover Approach		
	Total Weekly Count	Average Weekday	Average Weekend	Total Weekly Count	Average Weekday	Average Weekend
July 23, 2016	527	76	74	944	133	139
July 30, 2016	477	61	86	*	95**	136**
August 6, 2016	438	76	29	*	*	*
August 13, 2016	595	61	146	817	103	152
August 20, 2016	503	64	92	854	118	132
August 27, 2016	610	86	91	969	120	184
September 3, 2016	*	*	*	874	111	159
September 10, 2016	*	59	*	668	77	142
September 17, 2016**	*	86**	72**	732	104	107
September 24, 2016**	*	61**	98**	602	85	90
October 1, 2016**	*	62**	78**	*	67**	134**
July/August Averages	525	71	86	896	114	149

Notes:

* Data unavailable

** Data from sampling only, no weekly totals available

The count data is not directional, so it is not possible to determine the origins and destinations of pedestrian and bicycle activity on the bridge. For example, the data cannot differentiate whether a pedestrian started on the Dover side, passed the Dover counter heading south onto the bridge, turned around near the middle of the bridge, and passed the Dover counter again, heading north off of the bridge; versus a pedestrian who started on the Dover side, crossed the Dover counter heading south and then crossed the Newington counter, continuing to the south. However, it may be inferred by the substantial difference between the total counts at the Newington approach and the total counts at the Dover approach that there were several pedestrians and bicyclists whose destination (and turnaround location) was the bridge itself. It can also be inferred that the total pedestrian and bicycle activity is equal to the total count at both count stations, divided by two (any pedestrian that passes one counter must necessarily

Figure 3.9-1



\\vhb\gis\proj\Bedford\2381.01\GIS\Project\SEIS\Figure 3.9-1_Parks, Recreation and Conservation Lands.mxd



- Legend
- Town Boundaries
 - Public Boat Ramp
 - Hilton Park

Newington-Dover 112385

Newington and Dover, NH

General Sullivan Bridge Supplemental EIS

Parks, Recreation and Conservation Lands



Source: NHGRANIT, VHB

pass the same counter or the opposite counter; therefore, each individual pedestrian or bicyclist is counted twice). As shown in **Table 3.9-1**, the bridge experienced an average of 525 counts per week at the Newington counter and 896 counts per week at the Dover counter. This is equivalent to approximately 710 pedestrians and bicyclists per week that used the bridge during the summer of 2016, or just over 100 pedestrians and bicyclists per day. The Dover approach showed more pedestrian and bicycle activity than the Newington approach. This is likely due to the relative proximity of Hilton Park and several residential properties on the Dover side, as opposed to the more commercialized properties on the Newington side.

As inferred from this data, the GSB has historically been used by pedestrians and bicyclists for both recreation and transportation purposes. As previously mentioned in **Chapter 1**, the GSB was forced to close to pedestrians and bicyclists in September 2018 due to safety concerns, and a temporary detour was established in August 2019 along northbound LBB to maintain the connection between Newington and Dover for transportation purposes.

3.9.2 Environmental Consequences

Potential impacts to parks, recreational facilities, and conservation lands were evaluated based on the potential for the Project to directly take land, impede access, or whether the proposal is compatible with local open space or park plans.

3.9.2.1 Direct Impacts

Temporary direct impacts to Hilton Park and marine traffic are described in this section. No permanent, direct impacts to Hilton Park or marine traffic are proposed under any of the Action Alternatives.

No-Action Alternative

The No-Action Alternative would not result in any direct permanent or temporary impacts to Hilton Park or marine traffic; however, the No-Action Alternative would not meet the Purpose and Need of providing non-motorized access between Newington and Dover.

Since the current temporary pedestrian and bicycle route along the northbound LBB impacts future vehicular traffic, this is a short-term solution that was implemented to maintain pedestrian and bicycle traffic over Little Bay until the permanent non-motorized crossing of the Little Bay is completed. Therefore, under the No-Action Alternative, this current accommodation would not be available. As such, non-motorized crossings of the Little Bay would not be possible as the existing GSB has been closed to all traffic due to its deteriorated condition. Therefore, non-motorized access from Newington to Dover would have a choice of an approximately 27-mile detour to the north, or an approximately 23.8-mile detour by following around Great Bay to the south.

Alternative 1

Hilton Park

Temporary, direct impacts due to occupancy of a portion of the western side of Hilton Park are anticipated during the construction period under Alternative 1. Approximately 48,000 square feet

of Hilton Park would be temporarily occupied and fenced off for construction access, laydown, and staging (**Appendix D**). This temporary staging area represents approximately 12 percent of the total Hilton Park property in recreational use, or about 29 percent of the approximately 3.8-acre western portion of the park. For all alternatives, the construction access, laydown, and staging would only occur within the portion of the west side of Hilton Park; no access, laydown, or staging is proposed within the eastern side of Hilton Park. Under Alternative 1, the duration of these temporary impacts would be approximately three years. The sidewalk along Wentworth Terrace, which passes underneath the Spaulding Turnpike and runs along Dover Point Road, connects the east and west sides of Hilton Park. This sidewalk would remain open for continued public use under Alternative 1, which would retain the existing connectivity of the east and west sides of Hilton Park, although the temporary staging area would require pedestrians to make a slight detour relative to the existing condition.

In addition to temporary occupancy during construction, Alternative 1 would involve relocation of the pavilion that is currently located on the west side of Hilton Park (refer to Site Photo 12 in **Appendix A**) to allow safe contractor access to the GSB. NHDOT would determine relocation details for the pavilion, such as the structure's final location and whether the structure would be relocated or replaced.

The Hilton Park driveway off of Dover Point Road would be used for construction access under Alternative 1 but would not be fenced off, allowing for continued public use and access to the west side of Hilton Park. More than 14.9 acres of Hilton Park would remain open and accessible to the public during the temporary occupancy for construction. Public access to the recreational opportunities provided by Hilton Park would be maintained. During construction, Hilton Park visitors would still be able to use the existing picnic areas, boat launch, fishing dock, play area, benches, and open green space.

Marine Traffic

During most of the construction proposed under Alternative 1, the main navigational channel (a 200-foot zone of passage under the center span of the GSB) would remain open. For public safety reasons, removal of the center spans and other construction activities may require brief, temporary closure of the navigational channel; closure would be planned in close coordination with the US Coast Guard (USCG), the NH Port Authority, the NH Marine Patrol, Pease Development Authority Division of Ports and Harbors, marine businesses and marine users. The timeframe of the periodic, temporary closures of the main navigational channel would likely correspond with construction activities and construction timeframes, which under Alternative 1 is proposed to be approximately three years. Alternative 1 would involve a longer time frame of temporary occupancy of Hilton Park but potentially fewer instances of closing the main navigational channel than Alternatives 6, 7 and 9 due to their required construction activities (*i.e.*, removal of the existing GSB superstructure and construction of a new superstructure).

Temporary, direct impacts to marine traffic is anticipated to occur under Alternative 1; final construction plans and coordination with the USCG would ultimately determine when, and how often, the 200-foot navigational channel would need to be closed.

Bicycle and Pedestrian Connection

As previously described, the GSB is relied on by pedestrians and bicyclists to provide recreation and transportation opportunities in the seacoast area of New Hampshire. Alternative 1 would re-establish this connection across the GSB for pedestrians and bicyclists.

Alternative 3

Impacts to parks, recreational facilities, and conservation lands under Alternative 3 would be similar to the impacts described under Alternative 1. The duration of the proposed temporary impacts under Alternative 3 would be two years, whereas the duration of temporary impacts under Alternative 1 would be three years. Like Alternative 1, Alternative 3 would involve a longer time frame of temporary occupancy of a portion of the west side of Hilton Park but potentially fewer instances of closing the main navigational channel than Alternatives 6, 7 and 9 due to their required construction activities that would include removing the existing GSB superstructure and construction of a new superstructure. Alternative 3 would re-establish connection across the GSB over Little Bay for pedestrians and bicyclists.

Alternative 6

Impacts to Hilton Park and marine traffic under Alternative 6 would be similar to the impacts proposed under Alternative 1. The duration of temporary construction impacts under Alternative 6 would be 1.5 years. This shorter construction period would result in less temporary, direct impacts to Hilton Park than Alternatives 1 and 3. However, in contrast to Alternatives 1, 3, and 9, Alternative 6 would involve partial closure of the sidewalk along Dover Point Road, which passes underneath the Spaulding Turnpike and runs along Wentworth Terrace (**Appendix D**). This portion of sidewalk connects the east and west sides of Hilton Park. This sidewalk would remain closed during construction for public safety reasons, resulting in a temporary loss of connectivity between the east and west sides of Hilton Park.

Alternative 6 involves removal of the GSB superstructure as well as construction of an entirely new superstructure, which would likely result in more instances of closing the main navigational channel than Alternatives 1 and 3. Alternative 6 would re-establish pedestrian and bicycle connection over Little Bay.

Alternative 7

Impacts to parks, recreational facilities, and conservation lands under Alternative 7 would be the same as the impacts described under Alternative 6. The duration of temporary impacts under Alternative 6 and 7 are the same, approximately 1.5 years. This shorter construction period would result in less temporary, direct impacts to Hilton Park than Alternatives 1 and 3. However, like Alternative 6, Alternative 7 would involve partial closure of the sidewalk along Dover Point Road, which passes underneath the Spaulding Turnpike and runs along Wentworth Terrace. This portion of sidewalk connects the east and west sides of Hilton Park. This sidewalk would remain closed during construction for public safety reasons, resulting in a temporary loss of connectivity between the east and west sides of Hilton Park.

Like Alternative 6, Alternative 7 involves removal of the GSB superstructure as well as construction of an entirely new superstructure, which would likely result in more instances of closing the main navigational channel. Alternative 7 would re-establish pedestrian and bicycle connection over Little Bay.

Alternative 9 (Preferred Alternative)

Impacts to parks, recreational facilities, and conservation lands under Alternative 9 would be similar to the impacts described under Alternative 1. The duration of temporary impacts under

Alternative 9 would be 1.5 years, whereas the duration of temporary impacts under Alternative 1 would be three years. Like Alternatives 6 and 7, this shorter construction period would result in less temporary, direct impacts to Hilton Park than Alternatives 1 and 3. As with Alternatives 1 and 3, the sidewalk along Dover Point Road, which passes underneath the Spaulding Turnpike and runs along Wentworth Terrace, would remain open for continued public use, although the temporary staging area would require pedestrians to make a slight detour relative to the existing condition. Alternative 9 would retain the existing connectivity of the east and west sides of Hilton Park during construction, in contrast to Alternatives 6 and 7.

Like Alternatives 6 and 7, Alternative 9 involves removal of the GSB superstructure as well as construction of an entirely new superstructure, which would likely result in more instances of closing the main navigational channel. Alternative 9 would also re-establish pedestrian and bicycle connection over Little Bay.

3.9.2.2 Indirect Impacts

None of the alternatives (No-Action Alternative or Action Alternatives) would cause indirect impacts to Hilton Park or park visitors. Indirect impacts occur at some future time other than a direct impact. Impacts to Hilton Park would be temporary and directly related to construction. Furthermore, the east side of Hilton Park would remain unimpacted during construction; the fenced off staging area would be within a portion of the west side of Hilton Park, immediately adjacent to the GSB Dover abutment. Once construction is complete, the public would regain full access to the western part of Hilton Park.

Overall, the Project would benefit the Newington-Dover area through improved recreational opportunities for the public by providing a long-term transportation and recreation route for pedestrians and bicyclists over Little Bay. As previously mentioned, the current temporary bicycle and pedestrian route over Little Bay along the northbound LBB is not a feasible long-term solution since the segment of the bridge used for the bicycle and pedestrian route is meant for vehicular traffic. Providing a permanent, long-term bicycle and pedestrian route would improve connectivity and non-motorized transportation modes, which could lead to improved recreational opportunities and access to alternative modes of transportation.

3.9.3 Mitigation

Public access to Hilton Park, outside of the staging and construction work zone, shall be maintained. However, temporary restrictions on public access may be necessary during delivery of materials to the staging areas. The replacement or relocation of the Hilton Park pavilion will be evaluated in coordination with the NHDOT Bureau of Turnpike. To minimize land disturbance, unpaved areas within the fenced-off staging area of Hilton Park are to be protected with temporary geotextile fabric under crushed stone. Disturbed areas shall be restored to pre-existing conditions once construction is complete. Additionally, coordination between NHDOT and NH Fish and Game regarding recreation opportunities at Hilton Park will be ongoing. As discussed further in **Section 3.15, Navigation**, potential periodic closures of the navigational channel during work on the GSB's center spans will be closely coordinated with the USCG, the NH Port Authority, the NH Marine Patrol, Pease Development Authority Division of Ports and Harbors, marine businesses and marine users to minimize impacts to marine traffic.