

5.0 SECTION 4(f) EVALUATION

FHWA regulations (23 CFR 771), in compliance with Section 4(f) of the 1966 U.S. Department of Transportation Act (U.S. law codified in 49 USC 303 and 23 USC 138), require that a Section 4(f) Evaluation be prepared for any federally funded highway project which uses property from any significant historic property considered eligible for inclusion in the National Register of Historic Places and/or a significant publicly owned park, recreational area, or wildlife/waterfowl refuge.

This Section 4(f) Evaluation has been prepared for the proposed project for those historic and parkland properties that would be directly impacted by the proposed Route U.S. 1/Penns Neck Area Improvements.

The Section 4(f) regulations require that the following conditions be shown for any project using any historic or parkland property: 1) there is no feasible or prudent alternative to the use of land from the property; and, 2) the project includes all possible planning to avoid or minimize harm to the property resulting from such use (23 CFR 771.135).

A description of the proposed project is provided in Section 1.2 of the EA/4(f). Section 2.0 provides detailed information with regard to the project purpose, need, and objectives.

5.1 Historic Properties

5.1.1 Project Area Historic Properties

Section 4.10 of the EA/4(f) identifies and describes the cultural resources located within the project area. The following is a list of these properties:

- C Penns Neck Baptist Church (National Register (NR) listed 12/28/98)
- C Delaware and Raritan Canal Historic District (NR listed 5/11/75)
- C Lake Carnegie Historic District (NR listed 6/28/90)
- C Covenhoven-Silvers-Logan House (NR eligible 7/8/98)
- C Princeton Operating Station (AT&T Building)(NR eligible 7/8/98)
- C Aqueduct Mills Historic District (NR eligible 12/20/88)
- C Aqueduct Mills Historic District Extension (NR eligible 7/8/98)
- C Penns Neck Cemetery (NR eligible 3/10/97)
- C Washington Road Elm Allee (NR eligible 3/10/97)
- C Archaeological Site 28-Me-2 (NR eligible 9/13/76)
- C Archaeological Site 28-Me-23 (NR eligible 3/10/97)
- C Archaeological Site 28-Me-86 (NR eligible 9/9/76)

Consultation comments from the SHPO on the matter of these properties is provided in Appendix D. Figure 4-9 shows the locations of Section 4(f) properties.

5.1.2 Impacts on Section 4(f) Historic Properties

This section discusses each of the fifteen (15) alternatives examined during the development of the project. These alternatives are described in more detail in Section 3.0 of this EA/4(f). The criteria used to examine the feasibility of each of these alternatives included the extent to which an alternative meets the project purpose and need as well as each of the project objectives set forth in Section 2.0 of the EA/4(f). Table 3-1 presents a summary of the findings of this analysis.

The development of project alternatives strived to avoid impacts to the community and the environment while improving operating conditions on Route U.S. 1 and east-west roadways. The project purpose and need as well as the project objectives are discussed in Section 2.0. As shown in Table 3-1, the project area contains many, often conflicting social and environmental issues. Thus, the development of a viable project necessitated compromise in terms of meeting the project purpose and need and minimizing project impacts.

The alternatives developed by the NJDOT came about largely in a sequential fashion, as they were molded to meet not only the project purpose and need, but also public officials and stakeholders interests, environmental concerns, public input, regulatory requirements, socioeconomic considerations, and engineering requirements. Alternatives C, D-1, D-1.1, and F, for example, were initially considered viable by the NJDOT as impacts to wetlands, floodplains, and cultural resources could be minimized. However, as discussed in Section 2.1.1, these alternatives were found to be undesirable due to the large area and location of right-of-way needed. Coordination with stakeholders led to the development of Alternatives D-1.1A, D-1.1B, and D-1.1C as modifications to Alternative D-1.1. In moving toward these alternatives, greater cultural resources impacts would unavoidably result, namely the impacts to the Princeton Operating Station and Covenhoven-Silvers-Logan House. At the same time, the NJDOT and D&R Canal Commission favored a shift of the proposed Relocated Route 571/Washington Road intersection to the east to minimize motorist/pedestrian conflicts near the canal.

As well, discussions between the NJDOT and the County Engineer led to the refinement of the intersection configuration to provide smooth through movements. This refinement necessarily enlarged the intersection. As a result of these two modifications, Alternative D-1.1C was modified into the currently Preferred Alternative. These changes resulted in a greater impact to the Washington Road Elm Allee that would be unavoidable.

The following discussion summarizes the findings of the alternatives analysis (Section 3.0) and addresses the extent to which each of the alternatives would impact Section 4(f) historic properties. Table 5-1 summarizes this discussion. All Build Alternatives including the Preferred would impact the Aqueduct Mills Historic District as widening of Route U.S. 1 to the west would impact an existing stone wall within the District boundary. Widening to the west would enable the Route U.S. 1 lane configuration in the project area to match the existing, upgraded Route U.S. 1 section north of Mapleton Road, a key project goal. All Build alternatives would provide for the relocation of the wall as mitigation for this unavoidable impact.

None of the Build alternatives would impact the Penns Neck Cemetery or Lake Carnegie Historic District, although Alternatives D-1.1D and the Alexander Road connection have the potential to place a disproportionate volume of traffic on Harrison Street and Alexander Road, respectively.

C No-Build Alternative - The No-Build alternative would involve making no improvements to Route U.S. 1 or east-west corridors in the project area, with the exception of in-kind replacement of the Route U.S. 1 bridge over the Millstone River. This alternative would have no impact on Section 4(f) historic properties.

The No-Build alternative would not meet project Objective 1. Goals of improving operating conditions along Route U.S. 1 by eliminating existing traffic signals and relieving congestion from the residential neighborhoods adjacent to Washington Road (County Route 571) would not be achieved. The traffic analysis for the project includes in both the No-Build and Build scenarios traffic generation expected from other roadway and land development projects in the area (Harris, 1993a and 1998). Examination of the effect of this development on Route U.S. 1 and east-west corridors in the project area determined that increasing traffic demand would exacerbate already impaired roadway operating and safety conditions.

The No-Build alternative would not meet project Objective 3 as it would not be responsive to state, county, municipal, and major stakeholder master planning for an east-west link in the project area. The No-Build alternative would not address the state and county goals of improving linkage between Route U.S. 1 and Route 571, as well as reducing land access to arterial highways. The No-Build alternative would be contrary to the municipal and University master plans for relocation of Route 571 in the project area.

With respect to project Objectives 4 or 5, the No-Build alternative would have no long-term impact on human or environmental resources. Thus, the No-Build alternative would meet Objectives 4 and 5.

As the No-Build alternative would meet only project Objectives 2, 4, and 5, this alternative was determined to not meet the overall project purpose and need.

C Preferred Alternative - The Preferred Alternative would have an impact on eight (8) Section 4(f) properties: the Covenhoven-Silvers-Logan House, the Princeton Operating Station (AT&T Building), the Washington Road Elm Allee, the Delaware & Raritan Canal Historic District, the Aqueduct Mills Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Unavoidable impacts to the Elm Allee would result from the Route 571/Washington Road connection that was specifically developed in coordination with the County, West Windsor, and Princeton to maintain the existing distribution of traffic between the municipalities at Harrison Street, Washington Road, and Alexander Road (Section 2.1.1). The impact of this intersection on the Elm Allee would be minimized to the greatest extent practicable and new elms would be planted at the Route 571/Washington Road intersection.

All of the AD@series alternatives would unavoidably impact archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86 due to the alignment of Relocated Route 571 north of the Sarnoff campus. Data recovery would be undertaken to mitigate this impact.

As well, minor right-of-way takes in the D&R Canal Historic District cannot be avoided to meet the existing Harrison Street and Washington Road sections at the canal crossings. The section of Relocated Route 571 that parallels the District, though moved away from the canal as requested by the D&R Canal Commission, remains an unavoidable impact to the District in terms of setting. It is proposed that this portion of Relocated Route 571 be planted with dense vegetation to enhance the existing vegetative screen between the roadway and the park.

This alternative meets the project need and each of its objectives, and would avoid or minimize environmental impacts. The preferred alternative would meet the project need and project Objective No. 1 as it would eliminate the existing Route U.S. 1 traffic signals as well as the constriction at the Millstone River bridge. Elimination of these existing impediments is expected to stabilize peak period LOS at D to E in 2022 and provide uniform traffic flow. This benefit is expected to be enhanced by the provision for auxiliary traffic lanes that would move turning traffic more quickly and safely into and out of the through traffic stream.

The preferred alternative meets project Objective No. 2 as it maintains existing east-west traffic distribution patterns. The relocation of Route 571 as proposed in the preferred alternative would provide connections to Washington Road as well as Harrison Street. As now, motorists would have the opportunity to select the route that best suits their travel needs. The reconfiguration of east-west through traffic patterns via a grade-separated interchange would substantially improve the east-west flow of traffic through the Penns Neck area. All movements

to access Route U.S. 1, Route 571, Washington Road, and Harrison Street would be provided.

The volume of through and turning traffic from Washington Road would be accommodated on Relocated Route 571 and the proposed interchange. The elimination of east-west through traffic from Washington Road and the portion of Harrison Street between Route U.S. 1 and the canal via Relocated Route 571 would dramatically reduce heavy volumes on these local collector roads and would alleviate impacts to the communities of Penns Neck and Harrison Street between Route U.S. 1 and the canal.

The Route U.S. 1/Penns Neck Area Improvements would include provisions to reduce the potential for accidents within the project area. As a whole, these improvements would provide for a consistent roadway section throughout the Route U.S. 1 corridor, thereby eliminating potential driver confusion associated with inconsistent roadway geometry. New auxiliary lanes would divert turning traffic out of the through traffic stream. Auxiliary lanes would meet design standards for geometry and sight distance which would improve the safety of traffic weaves.

Tight curvature and poor sight distance on Harrison Street near the canal would be eliminated by construction of the connector road to Relocated Route 571. This improvement would benefit not only vehicular traffic but D&R Canal Park users who must cross Harrison Street.

The preferred alternative meets project Objective No. 3. The proposed action is consistent with the *Mercer County Growth Management Plan* which recommends reduced land access to arterial highways and the improvement of linkages among state and county highways (Mercer County, 1989). At the municipal level, the preferred alternative is a modified version of Alternative D-1.1 that was adopted by West Windsor and included in the *West Windsor Traffic Circulation Master Plan* (West Windsor, 1993).

As well, Princeton University, the major stakeholder on the west side of Route U.S. 1, has indicated that the preferred alternative is consistent with the Route 571 alignment included on their Master Plan for the land between the D&R Canal Park and Route U.S. 1. Moreover, in discussion with the University and Sarnoff, both stakeholders preferred to consider relinquishing land holdings as far north as possible. The University suggested that the interchange be moved north to the Logan Drive area. The David Sarnoff Research Center mirrored this suggestion that the alignment be moved as far north of their developed complex as possible to provide the maximum useable area for their future development plans. This alignment would create useable parcels for the existing stakeholders, and would minimize the potential that subdivided properties be ultimately developed by others in what would amount to ongoing development sprawl. This shift would place the interchange as far north as possible, maximizing the distance between the Relocated Route 571 interchange and Alexander Road interchange. Maximizing the distance between the interchanges is also beneficial as the weaving distance between the interchanges and the northbound acceleration and deceleration lanes between the interchanges can be optimized. At the proposed location, the interchange would have an unavoidable impact on the Princeton Operating Station and Covenhoven-Silvers-Logan House.

In compliance with project Objective No. 4, the preferred alternative would utilize existing bridges to cross the D&R Canal Park. Thus, no impairment of Park usage would occur (Section 5.2). Realignment of Harrison Street to the east of the Park would improve existing geometry and increase sight distance in the vicinity of the Park. Relocation of the existing Park parking areas at Washington Road and Harrison Street would improve accessibility and

safety for Park users. Additional discussion of the preferred alternative meeting project Objective No. 4 as well as Objective No. 5 is provided in Section 4.0 of this EA/4(f).

- C Alternative A - Alternative A would have an impact on eight (8) Section 4(f) properties: the Penns Neck Baptist Church, the Princeton Operating Station, the Aqueduct Mills Historic District and Extension, the Washington Road Elm Allee, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

AA@ is the only alternative that would definitively impact the Penns Neck Baptist Church. Construction of ramps and retaining walls would unavoidably impact the cemetery on the church property, as well as numerous businesses and residences near the Route U.S. 1/Washington Road intersection.

Due to the interchange location at existing Harrison Street, substantial impacts to the Millstone River would be unavoidable. The northwest quadrant of the interchange would be in the wetlands of the Millstone River as well as the 100-year flood plain. Near its easterly terminus point, Relocated Route 571 would cross Little Bear Brook at a sharp skew involving substantial impacts to both the wetlands and the 100-year flood plain of the Brook.

Alternative A would preserve useable parcels of land for the existing stakeholders=future plans, and would minimize the potential that subdivided properties be ultimately developed by others in what would amount to ongoing development sprawl.

Alternative A would not meet project Objective Nos. 3, 4, and 5. This alternative would not achieve the project objective of removing through traffic movements from Washington Road in the Penns Neck community. Impacts to the Millstone River and Little Bear Brook (wetlands, floodplain, and floodway) would be the largest of all the alternatives considered. In addition, impacts consequent to construction of the retaining walls, particularly in terms of restricting access to adjacent businesses and residences as well as visual impacts to the same, were considered unacceptable. An adverse effect on the Penns Neck Baptist Church would likely result due to setting impacts as well as right-of-way acquisition at the cemetery. Moreover, the construction of two grade-separated interchanges is unnecessarily redundant, particularly considering the proximity of the Alexander Road interchange one third of a mile to the south.

- C Alternative C - Alternative C would have an impact on four (4) Section 4(f) properties: the Washington Road Elm Allee, the Aqueduct Mills Historic District, the Princeton Operating Station, and the D&R Canal Historic District.

Alternative C would not meet project Objectives 3 and 4. Relocated Route 571 would be located very close to the Penns Neck community on the east side of Route U.S. 1, resulting in adverse impacts related to traffic noise, socioeconomics, and aesthetics. This alternative would have an adverse impact on the David Sarnoff Research Center whose formal campus entrance is Fairview Avenue. Alternative C would traverse the manicured front lawns of the Center causing a substantial negative impact on the existing campus-like setting afforded by the extensive lawns and landscaping.

Alternative C would avoid impacts on the Millstone River, and its floodplains and wetlands, that would occur in the interchange configuration proposed in Alternatives A and E. However, Alternative C would have a greater impact on the Little Bear Brook corridor than the AD-1.1@ series alternatives as Relocated Route 571 would cross the brook at one of the widest points of its floodplain and wetlands.

Alternative C was also rejected as Relocated Route 571 and the interchange would require acquisition of extensive property frontage along Route U.S. 1 owned by Princeton University and the David Sarnoff Research Center. These two land holders objected to such takes. In particular, Princeton University's Master Plan calls for the development of their lands west of Route U.S. 1 within the near future. Alternative C would have a substantial adverse impact on these plans as Relocated Route 571 would divide their holdings into multiple parcels and would virtually eliminate their frontage on Route U.S. 1. The David Sarnoff Research Center also expressed disfavor with the potential loss of substantial property frontage on Route U.S. 1 under this alternative. Discussions with both Princeton University and David Sarnoff Research Center indicated that Alternative C is highly unfavorable to their long-term improvement plans, and would reduce the visibility that each enjoys. Moreover, the subdivision of these parcels would increase the potential that the subdivided properties be ultimately developed by others in what would amount to ongoing development sprawl.

From a traffic engineering standpoint, the interchange could not provide all turning movements due to land use constraints, which preclude development of the required loop and finger ramps. Movements that Alternative C would not provide include: 1) from Route U.S. 1 southbound to Relocated Route 571 westbound, and 2) from Relocated Route 571 eastbound to Route U.S. 1 southbound. These two movements would be made at either the Harrison Street/Route U.S. 1 intersection or the Washington Road/Route U.S. 1 intersection. However, these requirements would not alleviate heavy westbound through traffic flows on Harrison Street between Route U.S. 1 and the canal, and the portion of Washington Road west of Route U.S. 1 would have to remain in order to provide access to Route U.S. 1 southbound. Further, strong opposition was voiced by local residents and municipal officials to the diversion of traffic to Harrison Street under Alternative C.

- C Alternative D-1 - Alternative D-1 would have an impact on seven (7) Section 4(f) properties: the Washington Road Elm Allee, the Aqueduct Mills Historic District, the Princeton Operating Station, the D&R Canal Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative D-1 would have a similar configuration to the Preferred Alternative and would impact many of the same cultural resources. Alternative D-1 would not meet project Objectives 4 and 5. Extensive property takes on either side of Route U.S. 1 to build the interchange would substantially impact the University and Sarnoff properties. As discussed under Alternative C, these front yards are extremely important to both stakeholders in terms of visibility, and in the case of the University, future campus development plans. Alternative D-1 would generally create useable parcels for the existing stakeholders, although the alignment does not optimize these land areas. Alternative D-1 would minimize the potential that subdivided properties be ultimately developed by others in what would amount to ongoing development sprawl.

The location of the interchange would require closure of the Washington Road intersection with southbound Route U.S. 1 in order to provide acceptable acceleration lane distance for the southbound on-ramp. There would be insufficient taper and weave distance for both the southbound on-ramp and right turns in and out of Washington Road from Route U.S. 1.

- C Alternative D-1.1 - Alternative D-1.1 would have an impact on seven (7) Section 4(f) properties: the Washington Road Elm Allee, the Aqueduct Mills Historic District, the Princeton Operating Station, the D&R Canal Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative D-1.1 would have a similar configuration to the Preferred Alternative and would impact many of the same cultural resources. Alternative D-1.1 would not meet project Objective No. 4. This alternative was developed to put greater distance between Relocated Route 571 and the Penns Neck community to the south than was provided by Alternative C, while avoiding impacts to the PSE&G substation and properties along Logan Drive to the north. However, as with Alternatives C and D-1, the land acquisition requirements for the interchange would be substantial and would eliminate the Route U.S. 1 frontage currently held by Princeton University and the David Sarnoff Research Center. Alternative D-1.1 would generally create useable parcels for the existing stakeholders, although the alignment does not optimize these land areas.

The location of the interchange would require closure of the Washington Road intersection with southbound Route U.S. 1 in order to provide acceptable acceleration lane distance for the southbound on-ramp. There would be insufficient taper and weave distance for both the southbound on-ramp and right turns in and out of Washington Road from Route U.S. 1.

Finally, the proximity of the intersection of Relocated Route 571 and Washington Road to the canal crossing and park parking area would be less than optimal for pedestrian and motorist safety.

Alternative D-1.1 would have minimal waterway impacts. Relocated Route 571 would cross Little Bear Brook at one of the narrowest points of its floodplain and wetlands. The alignment would not encroach on the Millstone River floodplain or wetlands except where the connector road meets Harrison Street.

C Alternative D-1.1A - Alternative D-1.1A would have an impact on eight (8) Section 4(f) properties: the Washington Road Elm Allee, the Aqueduct Mills Historic District, the Princeton Operating Station, the Covenhoven-Silvers-Logan House, the D&R Canal Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative D-1.1A would have many of the same impacts on cultural resources as the Preferred Alternative. Alternative D-1.1A was developed in response to stakeholder concerns regarding right-of-way acquisition. The interchange was relocated to the north such that the ramp configuration would surround the PSE&G substation.

This configuration would require retaining walls to be placed alongside both the substation and the Princeton Operating Station building. On the PSE&G side of Relocated Route 571, approximately 300 linear feet of wall would be required. The wall, with a maximum height of 25 feet, would be placed just north of the existing control house. On the Institute side of Relocated Route 571, approximately 550 linear feet of wall would be required. This wall would be placed down the side slope to minimize its height but also provide a side yard for the Institute. The proximity of the roadway and retaining wall configuration would impact the settings of the historic Princeton Operating Station and Covenhoven-Silvers-Logan House.

Alternative D-1.1A would meet project Objectives. However, the interchange would require acquisition of a portion of PSE&G lands currently occupied by substation equipment. Compensation to PSE&G for relocation of this equipment was determined to cost approximately \$15 million, an unreasonable fee considering the total project cost. Moreover, the project schedule would be constrained by the time required to relocate the equipment.

C Alternative D-1.1B - Alternative D-1.1B would have an impact on eight (8) Section 4(f) properties: the Covenhoven-Silvers-Logan House, the Princeton Operating Station, the

Washington Road Elm Allee, the Aqueduct Mills Historic District, the D&R Canal Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative D-1.1B would impact the same cultural resources as the Preferred Alternative. Alternative D-1.1B would meet all project Objectives. However, the proximity of the Relocated Route 571/Washington Road intersection would be less than optimal for protecting pedestrian and motorist safety at the canal crossing and the existing park parking area. Moreover, the Route U.S. 1 interchange ramp configurations would provide less than optimal access and turning movement capability considering the magnitude of the project. This limitation is caused primarily by the desire to avoid impacts to the Sunoco Station. On the basis of these safety concerns, Alternative D-1.1B would not meet the project purpose and need.

- C Alternative D-1.1C - Alternative D-1.1C would have an impact on eight (8) Section 4(f) properties: the Covenhoven-Silvers-Logan House, the Princeton Operating Station, the Washington Road Elm Allee, the Aqueduct Mills Historic District, the D&R Canal Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative D-1.1C would impact the same cultural resources as the Preferred Alternative. Alternative D-1.1C would meet all project objectives. However, a concern was raised by the D&R Canal Commission regarding the proximity of the westernmost leg of Relocated Route 571 to the D&R Canal Park. This alternative, as well as Alternatives D-1, D-1.1, D-1.1A, D-1.1B, and E-1, would place this leg of Relocated Route 571 parallel and near to the Park. The Commission's concerns center on the potential for project impacts on the Park in terms of traffic noise, visibility, and pedestrian safety for park users crossing Washington Road and using the existing park parking area. This alternative was modified in the vicinity of the D&R Canal to provide more distance between the canal and Relocated Route 571. This modification resulted in the Preferred Alternative.

Alternative D-1.1C was originally designed to provide a cul de sac on Washington Road on the west side of Route U.S. 1. This would have eliminated through movements on Washington Road between Route U.S. 1 and destinations from the canal westward. Public input regarding this design indicated a desire to preserve the Washington Road approach to the Princetons. As a consequence, the earlier cul de sac design was eliminated in favor of allowing right turn movements in and out of Washington Road at Route U.S. 1. Both this alternative and the Preferred Alternative would preserve this through movement and enable the public to enjoy the elm allee.

- C Alternative D-1.1D - Alternative D-1.1D would have an impact on eight (8) Section 4(f) properties: the Covenhoven-Silvers-Logan House, the Princeton Operating Station, the Aqueduct Mills Historic District, the D&R Canal Historic District, the Lake Carnegie Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative D-1.1D would not have a connection between Relocated Route 571 and Washington Road, west of Route U.S. 1, and, thus, would have no impact on the Elm Allee. Alternative D-1.1D and the *Traffic Analysis Technical Memorandum* (Harris, 1999) were reviewed by Princeton Borough and rejected as placing too great a burden on the Harrison Street/Faculty Road street system. In terms of meeting NJDOT's project need and objectives, the diversion of Route 571 traffic volume to Harrison Street is contrary to the project Objective No. 2, maintaining the existing traffic distributions between the three east-west corridors into Princeton.

- C Alternative E-1 - Alternative E-1 would have an impact on seven (7) Section 4(f) properties: the Princeton Operating Station, the Aqueduct Mills Historic District and Extension, the D&R Canal Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative E-1 would carry a disproportionate volume of traffic on Harrison Street between the canal and Route U.S. 1.

Alternative E-1 would not meet project Objective Nos. 4 and 5. A large portion of Harrison Street is within the 100-year flood plain of the Millstone River. Relocated Route 571 on the Harrison Street alignment, as well as portions of the interchange, would also be within the 100-year floodplain. Also, relocated Route 571 would encroach on the wetlands and 100-year flood plain of the Millstone River at the curve in the alignment just north of the David Sarnoff Research Center. Near its easterly terminus point, Relocated Route 571 would cross Little Bear Brook at a sharp skew involving substantial impacts to both the wetlands and the 100-year flood plain of the Brook.

The westernmost leg of Relocated Route 571 would be located very close and parallel to the D&R Canal Park. Proximity impacts to the Park, including loss of existing wooded buffer, traffic noise, visibility, and safety concerns with regard to pedestrian and motorist activity in the vicinity of the existing park parking area, would be unavoidable.

- C Alternative F - Alternative F would have an impact on seven (7) Section 4(f) properties: the Washington Road Elm Allee, the Aqueduct Mills Historic District, the Princeton Operating Station, the D&R Canal Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

Alternative F would not meet project Objectives 3, 4, and 5. As with Alternative C, the interchange would require acquisition of extensive property frontage along Route U.S. 1 owned by Princeton University and the David Sarnoff Research Center. This would be highly unfavorable to the long-term improvement plans of both stakeholders. In addition, Alternative F would bisect the University property in a manner incompatible with their master plan goals. Moreover, the configuration would increase the potential that the subdivided properties could ultimately be developed by others in what would amount to ongoing development sprawl.

The interchange would require acquisition and relocation of the PSE&G substation. Compensation to PSE&G for relocation of this equipment was determined to be an exorbitant expense in light of the total project cost.

Relocated Route 571 would encroach on wetlands and the 100-year flood plain of the Millstone River at the curve in the alignment just north of the David Sarnoff Research Center. Near its easterly terminus point, Relocated Route 571 crosses Little Bear Brook at a sharp skew involving substantial impacts to both the wetlands and the 100-year flood plain of the Brook.

- C Depress Route U.S. 1 - Depressing Route U.S. 1 would have an impact on four (4) Section 4(f) properties: the Penns Neck Baptist Church, the Princeton Operating Station, the Washington Road Elm Allee, and the Aqueduct Mills Historic District.

Depressing Route U.S. 1 would allow traffic to flow unimpeded in an east-west direction over Route U.S. 1. With regard to historic resource protection, depressing Route U.S. 1 in front of the Penns Neck Baptist Church raises concerns with regard to protecting the structural integrity of the building, as well as the contextual change that would occur. As well, existing land uses, particularly on the east side of Route U.S. 1, would limit construction of right-turn movement

ramps between depressed Route U.S. 1 and Washington Road. Right-of-way acquisition involving residential and business properties, as well as direct impacts to the Penns Neck Baptist Church cemetery and Washington Road Elm Allee would be unavoidable to construct these ramps, even with the use of retaining walls. Left turn movements at this intersection would be prohibited due to lack of space and geometrical limitations. The proximity of the Dinky bridge would preclude construction of access ramps to NJDOT's design standards.

Although direct impacts to cultural resources would be relatively few, depressing Route U.S. 1 would introduce a number of safety and design issues not present in other alternatives. This alternative would eliminate the traffic signals at Washington Road and Fisher Place. Because the depressed section would have to come up to grade in order to cross the Millstone River, the adjacent Route U.S. 1/Harrison Street intersection would remain at grade. Retaining this intersection would necessitate a traffic signal. Thus, this alternative would not fully address the project purpose and need, to remove all traffic signals in the Penns Neck corridor.

Addressing both the need to remove all traffic signals in the Route U.S. 1 Penns Neck corridor and the need to accommodate turning movements to and from Route U.S. 1 would necessitate construction of a new interchange and bypass roadway in addition to the Washington Road overpass contemplated under this alternative. Constructing both an interchange and an overpass is more than is warranted to satisfy the purpose and need.

Depressing Route U.S. 1 through Penns Neck would necessitate substantial retaining wall construction on both sides of the roadway forming a canyon-like section. Soil boring work in the project area has identified shallow bedrock as occurring at intervals. Thus, excavation work may require blasting to achieve the desired section. The proximity of existing structures to the roadway edge, in particular the historic Penns Neck Baptist Church, raises serious concerns regarding protecting the structural integrity of these buildings during construction. Simple excavation so close to these structures would render these structures vulnerable to future settlement and shifting consequent to the loosening of the soil and traffic vibration. Placing proximate residences and historic structures at this risk is an unacceptable environmental impact.

Both sides of depressed Route U.S. 1, as well as the Washington Road and Fisher Place crossings, would have to be fitted with safety fencing and/or barrier walls to separate residents and pedestrians from Route U.S. 1. Such elements would have to be approximately eight feet in height, thereby obstructing views across Route U.S. 1 from the community. This visual impact would likely have a greater feeling of physical separation than existing Route U.S. 1 because, excepting peak traffic periods, breaks in traffic flow currently allow views across Route U.S. 1.

Depressing Route U.S. 1 would not meet the project purpose and need as existing impediments to smooth traffic flow on Route U.S. 1 would remain in the project area, and would not meet project Objectives 1, 3, and 4.

- C Route U.S. 1 Frontage Road - The Route U.S. 1 Frontage Road alternative would have an impact on seven (7) Section 4(f) properties: the Covenhoven-Silvers-Logan House, the Princeton Operating Station, the Washington Road Elm Allee, the Aqueduct Mills Historic District, and archaeological sites 28-Me-2, 28-Me-23, and 28-Me-86.

The frontage road alternative would not meet project Objectives 3 and 4. The alignment is inconsistent with Princeton University's Master Plan for redevelopment of their lands, as it would create a less than optimal subdivision of University land. The frontage road alignment would unnecessarily restrict their use of the property in the future. This alignment would

encourage the potential for ultimate development of the frontage property by others in what would amount to ongoing development sprawl.

- C Alexander Road - An Alexander Road connection alternative would have an impact on two (2) Section 4(f) properties: the Aqueduct Mills Historic District and the Princeton Operating Station. A connection to Alexander Road may also impact the D&R Canal Historic District and Lake Carnegie Historic District if Alexander Road is forced to handle a disproportionate share of traffic between Princeton and West Windsor.

This alternative was evaluated prior to Princeton voicing their concern that existing traffic distribution patterns into and out of the Borough be maintained on Alexander Road, Washington Road, and Harrison Street. At the time, determination of a probable route for such a connection was unsuccessful due to the presence of substantial existing development between Washington Road and Alexander Road. North of the Dinky, existing residential development, the broad floodplain of Little Bear Brook, and Princeton Junction Station block a feasible alignment for Relocated Route 571. South of the Dinky Railroad, existing office-research development and the Little Bear Brook floodplain preclude identification of a feasible alignment. Crossing the Dinky railroad would be problematic considering the elevated nature of the rail line relative to the surrounding terrain.

Consideration was also given to upgrading existing roadways connecting Route 571 with Alexander Road east of the Amtrak right-of-way. However, construction of such roadway improvements in the context of the existing residential development along these roadways would shift impacts from one community to another. This concept was considered by the NJDOT to be unacceptable.

The new Alexander Road interchange was constructed to handle existing and projected traffic within the corridor based on known development patterns in the local and regional area. These patterns did not include diversion of Washington Road/Route 571 traffic to Alexander Road. As stated in Section 3.9 above, Washington Road/Route 571 currently handles approximately 30-34% of the total traffic distribution to Princeton among Alexander Road, Washington Road, and Harrison Street. Alexander Road currently handles approximately 42-53% of the current traffic into Princeton. Diversion of Route 571 traffic to Alexander Road would result in Alexander Road handling a majority of the current traffic. Such substantial traffic growth would cause an over capacity situation at the interchange, requiring modifications to accommodate the additional traffic.

This type of growth would also require substantial improvement of a large portion of Alexander Road itself and its intersections in Princeton, as these traffic volumes represent vehicles entering and exiting Princeton. As stated in Section 3.9 above, a change in the existing distribution patterns in and out of Princeton would be unsatisfactory to the Borough. Moreover, it would be contrary to the project need and objectives.

Finally, an Alexander Road connection would not provide traffic relief to the portion of Harrison Street between Route U.S. 1 and the canal. In sum, this Alternative does not meet project Objectives 1, 3, 4, and 5.

5.1.3 Alternatives to Avoid or Minimize Historic Property Impacts

An investigation was conducted of alternatives to avoid or lessen impacts upon Section 4(f) properties. The regulations governing Section 4(f) require that the three following alternatives be explored: No-Build; improve the facility without using the protected Section 4(f) property; and build an improved facility at a new location without using the protected Section 4(f) property.

5.1.3.1 No-Build

As described in Section 5.1.2 above, the No-Build alternative would have no impact on Section 4(f) properties. Roadway improvements would be limited to in-kind replacement of the Route U.S. 1 bridge over the Millstone River. No other improvements to Route U.S. 1 or east-west roadways would be undertaken under the No-Build alternative. The design year No-Build roadway network would be the same configuration as the existing network. Increasing traffic demand would only worsen impaired roadway operating and safety conditions. The No-Build alternative would not meet the project purpose, need, or project Objectives 1 and 3 (EA/4(f) Section 3.15). Consequently, the No-Build alternative was determined to be imprudent and was rejected from further consideration.

5.1.3.2 Improve the Facility Without Using the Protected Section 4(f) Properties

An examination of the improvements that could be implemented without impact on Section 4(f) properties was undertaken. Traffic signals could be eliminated at Washington Road, Harrison Street and Fisher Place. However, Route U.S. 1 could not be widened to the west without impact to the Princeton Operating Station. Elimination of the southbound auxiliary lane south of the Millstone River bridge would deny a deceleration lane that would improve mobility to the ramp to eastbound Relocated Route 571. Without a deceleration lane, the live through lane on southbound Route U.S. 1 would accommodate an unsafe mix of through and exiting traffic. Elimination of the proposed southbound auxiliary lane between Mapleton Road and the bridge would deny the opportunity to correct a current situation in which motorists entering Route U.S. 1 from Mapleton Road are forced to pull out directly into a live travel lane. Although this is feasible and would avoid impact to the eastern edge of the eligible Aqueduct Mills Historic District, this movement is not safe or desirable. In sum, these improvements would not meet project Objective No. 1 as impediments to smooth traffic operations would not be eliminated.

Relocated Route 571 could be constructed to convey east-west traffic over Route U.S. 1. The location and configuration of the proposed grade-separated interchange was examined among all of the project alternatives. Factors influencing the location and configuration of the interchange included input from Sarnoff Research Center and Princeton University as major property holders, traffic and geometrical considerations, proximity of residences, businesses, an electrical substation, the Millstone River and Little Bear Brook with their floodplains and wetlands, and cultural resources. A Relocated Route 571/Route U.S. 1 interchange could be constructed in the configuration of Alternative D-1.1A so as to avoid direct impacts on most Section 4(f) properties, except the archaeological sites, and avoid or minimize other impacts.

Convergence of Relocated Route 571 with existing Route 571 west of Route U.S. 1 cannot be accomplished without impact on the Washington Road Elm Allee. This is because the allee extends nearly the full length of Route 571 between Route U.S. 1 and the D&R Canal Park. Avoiding an impact on the allee would necessitate that Relocated Route 571 connect to Harrison Street much in the same way as described for Alternative D-1.1D (Section 3.9). No connection to Route 571 (Washington Road) could be provided.

The result of this examination is a hybrid alternative made up of various features of the Build alternatives. As with the Build alternatives, this hybrid was subjected to evaluation as to its ability to meet the project purpose, need, and supporting objectives. The project purpose and need, removal of existing impediments to smooth traffic operations on Route U.S. 1, would be partially met by this alternative. In terms of meeting project objectives:

Objective 1 - Although traffic signals would be eliminated under this alternative, roadway widening would not be undertaken. Thus, this alternative does not meet project Objective No. 1, as both elements are needed to achieve this goal.

Objective 2 - The existing distribution of east-west traffic would not be maintained by this alternative. Diversion of Washington Road traffic to Harrison Street would result in unacceptable impacts similar to Alternative D-1.1D. This alternative does not meet project Objective 2.

Objective 3 - This alternative would not be compatible with local, county, and regional planning initiatives. Because this alternative would not meet project Objective 2, it would be contrary to the municipal planning goals of equal east-west traffic distribution. Connection of Relocated Route 571 to Harrison Street would be contrary to the *Mercer County Growth Management Plan* goal of improving linkages among state and county highways. This alternative would not meet project Objective 3.

Objective 4 - This alternative would not avoid or minimize community impacts. Diversion of Washington Road traffic to Harrison Street would increase traffic impacts on the D&R Canal Park near Harrison Street and the portion of the Princeton community in the vicinity of the Harrison Street/Faculty Road intersection. These impacts would be similar to those experienced under Alternatives A and D-1.1D. With regard to Section 106 effects on historic resources, this alternative would have an adverse effect on the settings of the Princeton Operating Station and Covenhoven-Silvers-Logan house. This alternative would not meet project Objective 4.

Objective 5 - The project would avoid or minimize environmental impacts. Environmental impacts of this alternative involving wetlands, floodplains, vegetation, and water quality would be similar to those of the preferred alternative. This alternative meets project Objective 5.

On the basis of the foregoing evaluation, this alternative eliminates impacts to Section 4(f) properties, but does not meet project Objectives 1, 2, 3, or 4. As such, this alternative is rejected from further consideration.

5.1.3.3 Build an Improved Facility at a New Location Without Affecting the Section 4(f) Resources

As discussed in the foregoing section, Route U.S. 1 widening and traffic signal elimination cannot be undertaken without impact to Section 4(f) resources. The alternative alignments for Relocated Route 571, also presented in the foregoing section as well as Section 3.0, constitute new locations. However, none of the alternatives would meet the project purpose, need, and supporting objectives, while avoiding Section 4(f) impacts.

5.1.4 Measures to Minimize Harm

Mitigation for unavoidable impacts to cultural resources would be identified in a Memorandum of Agreement developed between the NJDOT, the FHWA, the SHPO, and the Advisory Council on Historic Preservation.

5.1.5 Coordination

Direct coordination and consultation with the SHPO is on-going with respect to the Section 106 process. Section 7.0 of the EA/4(f) summarizes the NJDOT's major coordination with public officials, relevant agencies, and the public with regard to this project. Appendix D contains applicable correspondence with SHPO.

5.1.6 Conclusion

The foregoing Section 4(f) Historic Resources Evaluation identified the impacts to historic properties consequent to each alternative considered for the project. Only the No-Build alternative would have no Section 4(f) historic property impacts. The Preferred Alternative would fulfill the project purpose and need as well as each of the project objectives. Whereas Alternatives D-1.1A, D-1.1B, and D-1.1C were also found to meet the project purpose and need as well as each of the project objectives, these alternatives were found to embody less than optimal design elements or impacts.

Direct consultation and coordination with the SHPO is on-going with the intent to identify appropriate mitigation measures to address unavoidable adverse effects resulting from the proposed project. Mitigation measures to be agreed upon by the FHWA, the NJDOT, the SHPO, and the Advisory Council on Historic Preservation would be set forth in a Memorandum of Agreement developed as part of the Section 106 process.

5.2 Parklands

Project Section 4(f) involvement pertaining to parklands would result from the acquisition of small portions of the D&R Canal Park in the vicinity of the existing Washington Road and Harrison Street crossings of the Park. The project-related acquisition is necessary for required right-of-way associated with roadway cross section and alignment improvements at these locations.

5.2.1 D&R Canal Park

The Delaware & Raritan Canal (D&R) State Park is a linear recreational and historic waterway corridor comprising over 60 miles. The Park forms the western border of the project study area for a distance of 0.70 miles. The Park serves four primary purposes: a human recreational resource, an historical resource, a naturalized corridor, and a potable water supply in the form of a manmade canal. The Park is managed by the State of New Jersey, under an entity known as the Delaware & Raritan Canal Commission who is responsible for the protection of the Park and its contributing watershed.

Within the project area, the Park property contains a water-filled canal prism, towpath, berm, several benches, and interpretive signs. The towpath and berm serve as pedestrian and bicycle corridors. The canal is utilized for canoeing and kayaking.

5.2.1 Impacts on Section 4(f) Parkland Property

The proposed project is designed to remove impediments to traffic flow along Route U.S. 1, while maintaining east-west traffic operations through the Penns Neck area. Maintenance of east-west traffic operations requires crossing of the D&R Canal in two locations: existing Washington Road (County Route 571) and existing Harrison Street crossings. These locations are proximate to existing pedestrian crossings and Park parking areas. Currently, limited pavement width and sight distance are concerns for both motorists and Park users. Improvements at the Washington Road crossing would require minor impacts to D&R Canal Park property associated with providing an NJDOT-standard roadway section on Washington Road up to and on the east side of the existing bridge over the canal.

The additional pavement area would allow more room to accommodate motorists and Park users. No additional travel lanes are proposed. Specific impacts would involve minor cut activities associated with the grading required to connect Washington Road to the existing bridge.

Improvements at the Harrison Street crossing would require minor impacts to the D&R Canal Park property associated with intersection of the proposed Harrison Street Extension with existing Harrison Street on the east side of the bridge over the D&R Canal. Within Park property, impacts would consist of minor fill (creation of embankments) adjacent to the existing right-of-way to facilitate the new roadway alignment.

The area of impact to Park property consequent to these proposed improvements on Washington Road and Harrison Street would be approximately 0.029 acres of the Park. In the context of the Park as a whole (approximately 100 acres), the proposed modification/taking would be less than 1% of the Park.

Each of the project alternatives was evaluated to determine the potential for impact to the D&R Canal Park. Impact was assessed according to whether an alternative would require right-of-way acquisition to implement improvements to Washington Road and Harrison Street, as described above.

- C No-Build Alternative - The No-Build Alternative would involve making no improvements to Route U.S. 1 or east-west corridors in the project area, with the exception of in-kind replacement of the Route U.S. 1 bridge over the Millstone River. This alternative would have no impact on the D&R Canal Park.
- C Preferred Alternative - The Preferred Alternative would impact the D&R Canal Park as described within this section above.
- C Alternative A - Alternative A would have no impact on the D&R Canal Park.
- C Alternative C - Alternative C would impact the D&R Canal Park at Harrison Street as described within this section above.
- C Alternative D-1 - Alternative D-1 would impact the D&R Canal Park as described within this section above.
- C Alternative D-1.1 - Alternative D-1.1 would impact the D&R Canal Park as described within this section above.
- C Alternative D-1.1A - Alternative D-1.1.A would impact the D&R Canal Park as described within this section above.
- C Alternative D-1.1B - Alternative D-1.1B would impact the D&R Canal Park as described within this section above.
- C Alternative D-1.1C - Alternative D-1.1C would impact the D&R Canal Park as described within this section above.
- C Alternative D-1.1D - Alternative D-1D would impact the D&R Canal Park at Harrison Street as described within this section above.
- C Alternative E-1 - Alternative E-1 would impact the D&R Canal Park as described within this section above.
- C Alternative F - Alternative F would impact the D&R Canal Park at Harrison Street as described within this section above.
- C Depress Route U.S. 1 - This alternative would have no impact on the D&R Canal Park.
- C Route U.S. 1 Frontage Road - This alternative would impact the D&R Canal Park at Harrison Street as described within this section above.
- C Alexander Road - This alternative would have no impact on the D&R Canal Park.

5.2.3 Alternatives to Avoid or Minimize Parkland Property Impacts

An investigation was conducted of alternatives to avoid or lessen impacts upon Section 4(f) properties. The regulations governing Section 4(f) require that the three following alternatives be explored: No-Build; improve the facility without using the protected Section 4(f) property; and build an improved facility at a new location without using the protected Section 4(f) property.

5.2.3.1 No-Build

As described in Section 5.2.2 above, the No-Build alternative would have no impact on Section 4(f) parkland property. No roadway improvements would be undertaken along Route U.S. 1 in the Penns Neck area under the No-Build alternative, with the exception of in-kind replacement of the Route U.S. 1 bridge over the Millstone River. The design year No-Build roadway network would be the same configuration as the existing network. Increasing traffic demand would only worsen impaired roadway operating and safety conditions. The No-Build alternative would not meet the project purpose, need, or project Objectives 1 and 3 (EA/4(f) Section 3.15). Consequently, the No-Build alternative was determined to be imprudent and was rejected from further consideration.

5.2.3.2 Improve the Facility Without Using the Protected Section 4(f) Properties

An examination of the improvements that could be implemented without impact on Section 4(f) parkland property was undertaken. Traffic signals could be eliminated at Washington Road, Harrison Street and Fisher Place, and the Route U.S. 1 lane configuration adjusted as proposed to provide a uniform section throughout the corridor. These improvements would meet project Objective No. 1 as impediments to smooth traffic operations would be eliminated.

Relocated Route 571 could be constructed to convey east-west traffic over Route U.S. 1. The location and configuration of the proposed grade-separated interchange was examined among all of the project alternatives. Factors influencing the location and configuration of the interchange included input from Sarnoff Research Center and Princeton University as major property holders, traffic and geometrical considerations, proximity of residences, businesses, an electrical substation, the Millstone River with its floodplains and wetlands, and cultural resources. A Relocated Route 571/Route U.S. 1 interchange could be constructed in the configuration of the Preferred Alternative and would avoid direct impacts on Section 4(f) parkland property.

Convergence of Relocated Route 571 with existing Route 571 west of Route U.S. 1 could be accomplished without impact on Section 4(f) parkland property. As well, the existing Washington Road section could be maintained up to the bridge over the canal. Likewise, the proposed Harrison Street Connector Road could be tied into existing Harrison Street, without making alignment adjustments to Harrison Street as proposed. However, the proposed cross section adjustment at Washington Road and the realignment at Harrison Street are intended to improve sight distance and safety for both motorists and Park users (Section 5.2.2). Improvements made under a no impact scenario would do nothing to address this existing concern. Avoiding an impact on the Park would necessitate that the project be undertaken in much the same way as described for Alternative A (Section 3.2).

The result of this examination is a hybrid alternative made up of various features of the Build alternatives. As with the Build alternatives, this hybrid was subjected to evaluation as to its ability to meet the project purpose, need, and supporting objectives. The project purpose and need, removal of existing impediments to smooth traffic operations on Route U.S. 1, would be partially met by this alternative. In terms of meeting project objectives:

Objective 1 - Traffic signals would be eliminated under the hybrid alternative and roadway widening would be undertaken. Thus, the hybrid alternative would meet project Objective No. 1.

Objective 2 - The existing distribution of east-west traffic would be maintained by the hybrid alternative. The hybrid alternative would meet project Objective 2.

Objective 3 - The hybrid alternative would not be compatible with local, county, and regional planning initiatives. Although the hybrid alternative would meet project Objective 2, connection of Relocated Route 571 to Harrison Street would be contrary to the *Mercer County Growth Management Plan* goal of improving linkages among state and county highways. The hybrid alternative would not meet project Objective 3.

Objective 4 - The hybrid alternative would not avoid or minimize community impacts. As described in Section 3.2 of the EA/4(f), impacts consequent to construction of the retaining walls at the Washington Road/Route U.S. 1 intersection would restrict access to adjacent businesses and residences as well as visually impact the same. An adverse effect on the Penns Neck Baptist Church would likely result both due to setting impacts as well as right-of-way acquisition at the cemetery. Moreover, the construction of two grade-separated interchanges would be unnecessarily redundant, particularly considering the proximity of the Alexander Road interchange one third of a mile to the south.

Diversion of Washington Road traffic to Harrison Street would increase traffic impacts on the D&R Canal Park near Harrison Street and the portion of the Princeton community in the vicinity of the Harrison Street/Faculty Road intersection. These impacts would be similar to those experienced under Alternative D-1.1D (Section 3.9). The hybrid alternative would not meet project Objective 4.

With regard to Section 106 effects on historic resources, the hybrid alternative would have an adverse effect on the settings of the Penns Neck Baptist Church, the Princeton Operating Station, and the Covenhoven-Silvers-Logan House, as well as the three archaeological sites.

Objective 5 - The hybrid alternative would have impacts to the Millstone River and Little Bear Brook (wetlands, floodplain, and floodway) that would be the largest of all the alternatives considered. The hybrid alternative would not meet project Objective 5.

On the basis of the foregoing evaluation, the hybrid alternative would eliminate impacts to Section 4(f) parkland property, but would not meet project Objectives 3, 4, or 5. As such, this alternative is rejected from further consideration.

5.2.3.3 *Build an Improved Facility at a New Location Without Affecting the Section 4(f) Resources*

As discussed in the foregoing section, Route U.S. 1 widening and traffic signal elimination cannot be undertaken without impact to Section 4(f) parkland property. The alternative alignments for Relocated Route 571, also presented in the foregoing section as well as Section 3.0 of the EA/4(f), constitute new locations. However, none of the alternatives would meet the project purpose, need, and supporting objectives, while avoiding Section 4(f) parkland impacts.

5.2.4 Measures to Minimize Harm

The proposed parkland impacts have been minimized to the extent practicable so as to not impair the use of remaining Section 4(f) parkland. The total 0.029 acres of direct disturbance would be located immediately adjacent to the existing Washington Road and Harrison Street bridges over the D&R Canal Park. These embankment areas are not located in actively used areas of the Park and would not impair the ability to use the Park. All towpath, bridge, berm, and prism components which are the actively used components of the Park, would be unaffected by these improvements.

The proposed improvements at these locations would not change existing traffic patterns, volumes, or speeds in the Park vicinity. This portion of the project is anticipated to have no impacts with regard to noise, air, water pollution, wildlife, habitat effects, aesthetic values, or other environmental resources.

As described in Sections 2.1.1 and 4.8.3 of the EA/4(f), the project includes provision to relocate the existing Park parking area at Harrison Street to a new, nearby location having improved access and sight distance. To a similar benefit, the project includes relocation of the Park parking area located adjacent to Washington Road to Princeton University land.

5.2.5 Coordination

The NJDOT will consult with the Delaware and Raritan Canal Commission as the agency with jurisdiction over the D&R Canal Park in regard to obtaining agreement on the proposed Section 4(f) parkland impacts.

5.2.6 Conclusion

The foregoing Section 4(f) Parkland Evaluation identified the impacts to parkland consequent to each alternative considered for the project. The No-Build alternative, Alternative A, depressing Route U.S. 1, and an Alexander Road connection would have no Section 4(f) parkland property impacts. However, none would meet the project purpose, need, and each supporting objective. The Preferred Alternative would fulfill the project purpose and need as well as each of the project objectives. Whereas Alternatives D-1.1A, D-1.1B, and D-1.1C were also found to meet the project purpose and need as well as each of the project objectives, these alternatives were found to embody less than optimal design elements or impacts.

The proposed project is designed to improve the operational characteristics of Route U.S. 1 and maintain local east-west routes. The amount and location of Section 4(f) land to be utilized by the project is less than 1 percent of the total Park area. Neither this impact nor the proximity of the project to the remaining Section 4(f) land would impair the use of the remaining Section 4(f) land for its intended purpose.