Throughout the project development process for the Honolulu High-Capacity Transit Corridor Project, the City's approach to project design and decision making has been to avoid and minimize impacts to historic, archaeological, and cultural resources potentially affected by the Project. The following is a summary of measures that have been taken to avoid and minimize effects, which have been incorporated into the design of the Project.

During the Alternatives Analysis Phase of the Project, a broad range of alternatives were considered and evaluated in terms of their potential to harm resources that were listed in or potentially eligible for listing in the National Register of Historic Places. This evaluation was completed prior to formally beginning the Section 106 consultation process, and included public scoping meetings to identify concerns and consultation with the SHPD and concerned groups, including the Outdoor Circle and Kawaiahao Church.

Comparison of alignment options:

- Long-term impacts to cultural resources were identified for: North King Street, Hotel Street at-grade/Kawaiaha'o Tunnel and King Street/Waimanu Street Tunnel option
- Identification of historic resources was used to differentiate among the alignment alternatives considered in the Kalihi and Downtown areas. In Kalihi, 33 resources were identified on the North King Alignment, while 12 were identified on the Dillingham Alignment. In the Downtown area, the Nimitz Highway/Halekauwila Alignment had the fewest number of resources with 33 as compared to between 45 and 56 for the other alignments.
- Related to archaeological resources and iwi, the Hotel Street at-grade/Kawaiaha'o Tunnel alignment was identified as having greater potential for disturbance than any other alignment.

Selection of Elevated Alignment: Selection of an at-grade rail technology would have required excavation of the full length of the Project to construct a stable under-track support system. This would have resulted in the excavation of approximately 15 feet of width for each track direction (a total of 30 feet) to a depth of between 4 and 5 feet for the full length of the corridor. This would have caused substantial likelihood of archeological impacts for the length of the corridor as well as numerous building demolitions, with few alternatives to avoid destructive impacts. For example, the project as currently designed allows some flexibility for column placement to avoid archeological resources or iwi. Further, the widening of right-of-way to construct at-grade stations and platforms would have resulted in the displacement of substantially more buildings compared to an elevated system with platforms placed above roadways. A cut-and-cover tunnel also was rejected because of the high probability of disturbance to iwi.

Dillingham Boulevard and Kaa'ahi Street: As discussed above, the number of listed and eligible resources along the Dillingham alignment will be substantially fewer compared to the North King alignment. The crossing of the former OR&L terminal building property was confined to a previously identified transportation easement, and the design avoided historic pavers adjacent to Iwilei Road at the request of the SHPD.

The alignment along Nimitz Highway through Chinatown was selected to minimize effects to the Chinatown Historic District. The proposed alignment is on the makai boundary of the district and therefore does not bisect the district. The location of the Chinatown station was selected to avoid impacts to any contributing resources within the district. While there is a visual impact to the district, there are no direct impacts.

At the beginning of the EIS Phase of the Project, FTA and the City initiated consultation under Section 106. In addition to elements of the Project intended to avoid and minimize harm to Section 106 resources, the following design choices were also implemented.

- A *Design Language Pattern Guidebook* was developed to provide an aesthetic framework for Project elements that considers the location and history of setting of the Project.
- The location of the Downtown Station was shifted Koko Head, away from Aloha Tower, the DOT Harbors Building, Pier 10/11 Building, Irwin Park, and Walker Park. While the revised station location will place touchdowns on the parcels occupied by two historic resources (the downtown HECO Plant and the Dillingham Transportation Building), the design will avoid direct effects to either resource. The station was placed Koko Head of the Dillingham Transportation Building adjacent to a modern high-rise to minimize the visual intrusion to the building. It is agreed that these visual impacts constitute adverse effects; however, these are preferable to direct impacts that will permanently physically alter the historic resources.
- After consultation with National Park Service, the initial station touchdown areas inside the Pearl Harbor NHL were re-designed to be outside the NHL boundaries. While this design change will require pedestrians to cross Kamehameha Highway at cross-walks, it does eliminate the physical effects of the project within the NHL boundary. Again, it is agreed that these visual impacts constitutes adverse effects; however, these are preferable to direct impacts that will permanently physically alter the NHL.
- Each station is being designed to fit with its setting. The station design process includes public meetings to collect input from the local community and other stakeholders, such as the Section 106 consulted parties, around each station. These meetings will be conducted for each station as the detailed design is being developed for the stations, so that the results of the design process can be shared back with the community as part of the process.
- The Project has been designed to minimize the effect to the 33 historic resources that the SHPD has identified as being adversely affected by the Project. For the following 22 of the 33 adversely affected resources, the project's effect would be limited to setting, feeling, and/or association, with no physical effect to the resource or the property on which it is located: Hono'uli'uli Stream Bridge; Waikele Stream Bridge and Span over OR&L Spur; 1932 Waiawa Stream Bridge; Waimalu Stream Bridge; Kalauao Spring Bridge; Kalauao Stream Bridge; United States Naval Base, Pearl Harbor National Historic Landmark; CINCPAC Headquarters Building; Makalapa Navy Housing Historic District; Ossipoff's

Aloha Chapel, SMART Clinic, and Navy-Marine Corps Relief Society; Hawai‘i Employers Council; Institute for Human Services/Tamura Building; Wood Tenement Buildings; Nu‘uanu Stream Bridge; Chinatown Historic District; Merchant Street Historic District; DOT Harbors Division Offices; Pier 10/11 Building; Aloha Tower; Irwin Park; Walker Park; and Mother Waldron Playground.