

3.0 ALTERNATIVES

The O'Malley Road Reconstruction Project proposes to improve O'Malley Road between the New Seward Highway and Hillside Drive (Figure 2). Several roadway improvement alternatives were investigated. Three alternatives were eliminated from further consideration, while three viable alternatives were studied in detail. Two build alternatives, along with the no-action alternative, are being considered and form the basis for the comparative analysis of environmental consequences presented. The three alternatives considered are compared for their ability to meet the purpose and the need for the project, as described in Section 2.0, while minimizing impacts to the human and natural environment.

3.1 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

The O'Malley Road Reconstruction Preliminary Engineering Report (Lounsbury, 2002) evaluated several project alternatives for different segments of the roadway. If these alternatives did not address the purpose and need, had unacceptable environmental issues, or were contrary to public input, they were eliminated. The following is a list of alternatives that were considered but eliminated. Full descriptions of these alternatives can be found in the Preliminary Engineering Report (Lounsbury, 2002).

- 4-lane Rural Segment A – New Seward Highway to Lake Otis Parkway
- 3-lane and 2-lane Urban Segment B - Lake Otis Parkway to Hillside Drive
- Transportation Systems Management and Transportation Demand Management (TSM and TDM)

The following paragraphs detail the eliminated Segment A, Segment B, and Transportation Management alternatives.

The 4-lane rural Segment A—New Seward Highway to Lake Otis Parkway alternative consisted of a rural section with paved shoulders, V-ditches, separated sidewalk and pathway and cleared clear zone. While this alternative would meet the purpose and need for the project, it was eliminated for several reasons—1) It would generate an abrupt transition from the urban section west of New Seward Highway, to the rural section east of the highway; 2) The segment carries the highest volume of traffic of the two project segments and a rural section would not provide the a high degree of channelization needed year-round. This is due to the absence of curb, gutter, and raised medians; and 3) the rural section would not provide the flexibility in design to minimize wetlands and right-of-way impacts because of the requirement for rural typical sections to include 6-meter clear zones in the cut areas and 9-meter clear zone in fill areas. For Segment A, the curb and gutter option/urban section was determined a more viable option to reduce the migration of storm water onto the structural section and it minimizes wetlands and right-of-way impacts as noted above.

The 3-lane and 2-lane Urban Segment B—Lake Otis Parkway to Hillside Drive consisted of an urban section with installation of curb and gutter in a configuration with either 3-lanes or 2-lanes. An urban section was eliminated for several reasons—1) access point density and frequency of turning movements increase in this segment and the LOS would decrease as the turning vehicles delay through traffic; 2) the urban section would eliminate the continuity present on O'Malley

Road since all intersecting roads are gravel or paved with V-ditches; and 3) engineered ditches can be developed to treat and divert runoff away from the road where curb and gutter require expensive storm drains.

When traffic congestion problems are identified, the most common solution is to widen the roadway and add more travel lanes. TSM and TDM are techniques that may be used to overcome roadway congestion without widening the roadway to increase the number of travel lanes. TSM strategies improve the capacity of the existing roadway through methods such as signal system improvement, intersection improvement, and access management. TDM strategies attempt to manage the demand on the system with initiatives such as ridesharing programs, alternative work hours, park-and-ride facilities, and improved transit systems. Since one of the identified needs for the O'Malley Road Reconstruction Project is increased capacity, TSM and TDM techniques were investigated to determine if their implementation alone would result in an acceptable LOS. The single occupancy vehicle analysis, contained in the Preliminary Engineering Report (Lounsbury, 2002), showed that additional travel lanes are needed on O'Malley Road to obtain an acceptable LOS despite the implementation of TSM and TDM strategies.

3.2 ALTERNATIVE ONE: URBAN FOUR-LANE FROM THE NEW SEWARD HIGHWAY TO LAKE OTIS PARKWAY AND RURAL THREE-LANE FROM LAKE OTIS PARKWAY TO HILLSIDE DRIVE (PREFERRED ALTERNATIVE)

Alternative One consists of an urban four-lane divided roadway between the New Seward Highway and Lake Otis Parkway and a three-lane, two-way roadway between Lake Otis Parkway and Hillside Drive. This alternative is preferred by DOT&PF, however a final alternative will not be selected until after comments received from the public and agencies on the EA are evaluated

From the New Seward Highway to Lake Otis Parkway the roadway would consist of four 3.6-meter (12-foot) lanes divided by a 4.9-meter (16-foot) median and have 1.8-meter (6-foot) shoulders with curb and gutter. Multi-use pathways between New Seward Highway and Lake Otis Parkway would include a 1.5-meter (5-foot) wide concrete sidewalk along the north side and a 3.0-meter (10-foot) separated paved pathway on the south side (Figure 5).

Between Lake Otis Parkway and Hillside Drive, the roadway would be upgraded to current standards. Improvements would provide a rural three-lane, two-way roadway with 3.6-meter (12-foot) wide travel lanes and a 4.3-meter (14-foot) wide middle lane for two-way left turns. The road would have 2.4-meter (8-foot) wide shoulders without curb and gutter and a 3.0-meter (10-foot) wide separated paved pathway along the south side of the road (Figure 6).

Providing a left-turn lane will prevent motorists from passing left-turning vehicles on the shoulder. According to public comments, this has been a problem in the past on O'Malley Road because of the two-lane roadway (Appendix A).

The design speed and proposed posted speed under this alternative is 50 mph. This alternative will generate a LOS of D or better during peak traffic flows in the design year 2031 (Lounsbury, 2003). The separated pathway will increase pedestrian/recreation safety by moving users away

from the roadway.

This alternative would meet the purpose and need for the project. Lane additions, shoulders and channelization provide increased capacity. The multi-use pathway, lighting and clearing will provide enhanced pedestrian and non-motorized access and improve safety.

3.3 ALTERNATIVE TWO: URBAN FOUR-LANE FROM NEW SEWARD HIGHWAY TO LAKE OTIS PARKWAY AND RURAL TWO-LANES FROM LAKE OTIS PARKWAY TO HILLSIDE DRIVE

The urban four-lane option for Segment A, New Seward Highway to Lake Otis Parkway, is the same for both Alternative One and Alternative Two. Alternative Two (Segment B), Lake Otis Parkway to Hillside Drive, is a rural two-lane roadway with exclusive left-turn pockets at the major intersections. This differs from Alternative One (Segment B) which is a three-lane roadway with a CTWLT lane in the center.

Alternative Two would bring the roadway up to current standards. Improvements would consist of a rural two-lane, two-way roadway with 3.6-meter (12-foot) travel lanes and left-turn lanes at major intersections. The road would have 2.4-meter (8-foot) shoulders without curb and gutter and a 3.0-meter (10-foot) separated paved pathway along the south side (Figure 6).

Providing channelized left-turn pockets at the major intersection will prevent motorists from passing left-turning vehicles on the shoulder. According to public comments, this has been a problem in the past on O'Malley Road because of the lack of left-turn treatment along the existing two-lane roadway (Appendix A).

The design speed and proposed posted speed under this alternative is 50 mph. This alternative will generate a LOS of D or better during peak traffic flows in the design year 2031 (Lounsbury, 2003). The separated pathway will increase pedestrian/recreation safety by moving users away from the roadway.

This alternative would meet the purpose and need for the project. Lane additions, shoulders and channelization provide increased capacity. The multi-use pathway, lighting and clearing will provide enhanced pedestrian and non-motorized access and improve safety.

3.4 NO-ACTION ALTERNATIVE

The no-action alternative would maintain O'Malley Road in its current condition. No improvements other than normal maintenance. This alternative would not provide pedestrian walkways, improve drainage, or improve traffic flow along O'Malley Road. With the expected increase in peak-hour volumes by the year 2031, traffic would deteriorate to a LOS F between New Seward Highway and Lake Otis Parkway (Lounsbury, 2003). The no-action alternative would not address the project purpose and need—increased capacity, enhanced intermodal transportation, or safety.