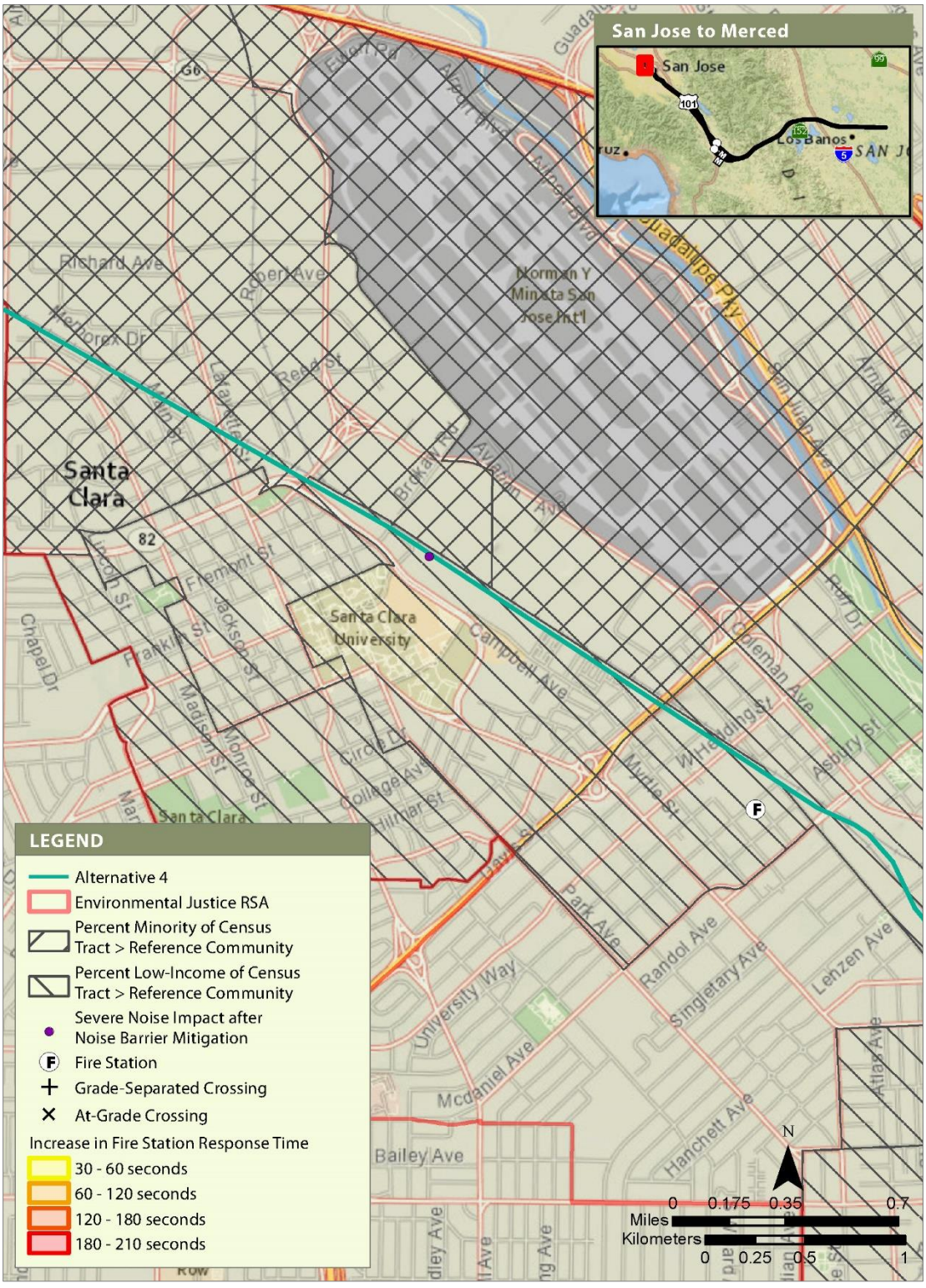
APPENDIX 5-D: PREFERRED ALTERNATIVE, MAPS OF DISPROPORTIONATELY HIGH AND ADVERSE EFFECTS BEFORE CONSIDERATION OF COMMUNITY IMPROVEMENTS

This appendix provides figures showing the disproportionately high and adverse effects on minority populations and low-income populations for Alternative 4 after consideration of direct mitigation and project benefits but before the consideration of the offsetting value of potential community improvements. Consequently, as explained in Chapter 5, Environmental Justice, Figures 5-D-1 through 5-D-37 show the locations of severe noise impacts (after implementation of noise barriers) and the locations where emergency vehicle response delay may be greater than 30 seconds. As described in Chapter 5, significant impacts associated with emergency vehicle response times with Alternative 4 are only expected if local jurisdictions do not implement the necessary improvements included in Mitigation Measure SS-MM#4 with the funding provided by the California High-Speed Rail Authority for capital improvements and for the first 5 years of operations of any new fire stations necessary to reduce impacts to a less-than-significant level. The figures also show the census tracts where minority populations or low-income populations constitute a greater percentage of the population in the census tract than the share of minority populations or low-income populations in the three-county reference community (Santa Clara, San Benito, and Merced Counties).

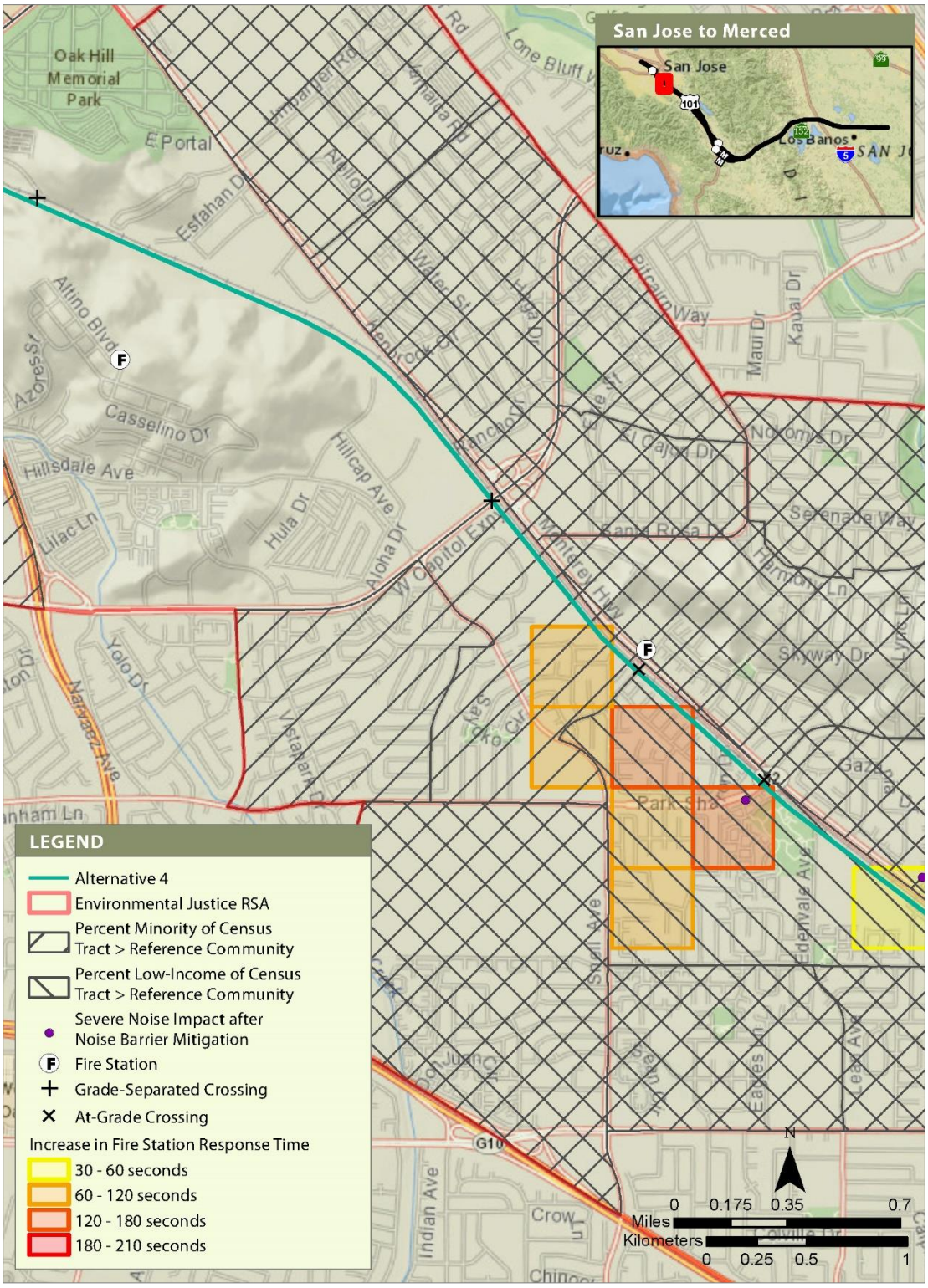


1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-1 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (1 of 37)

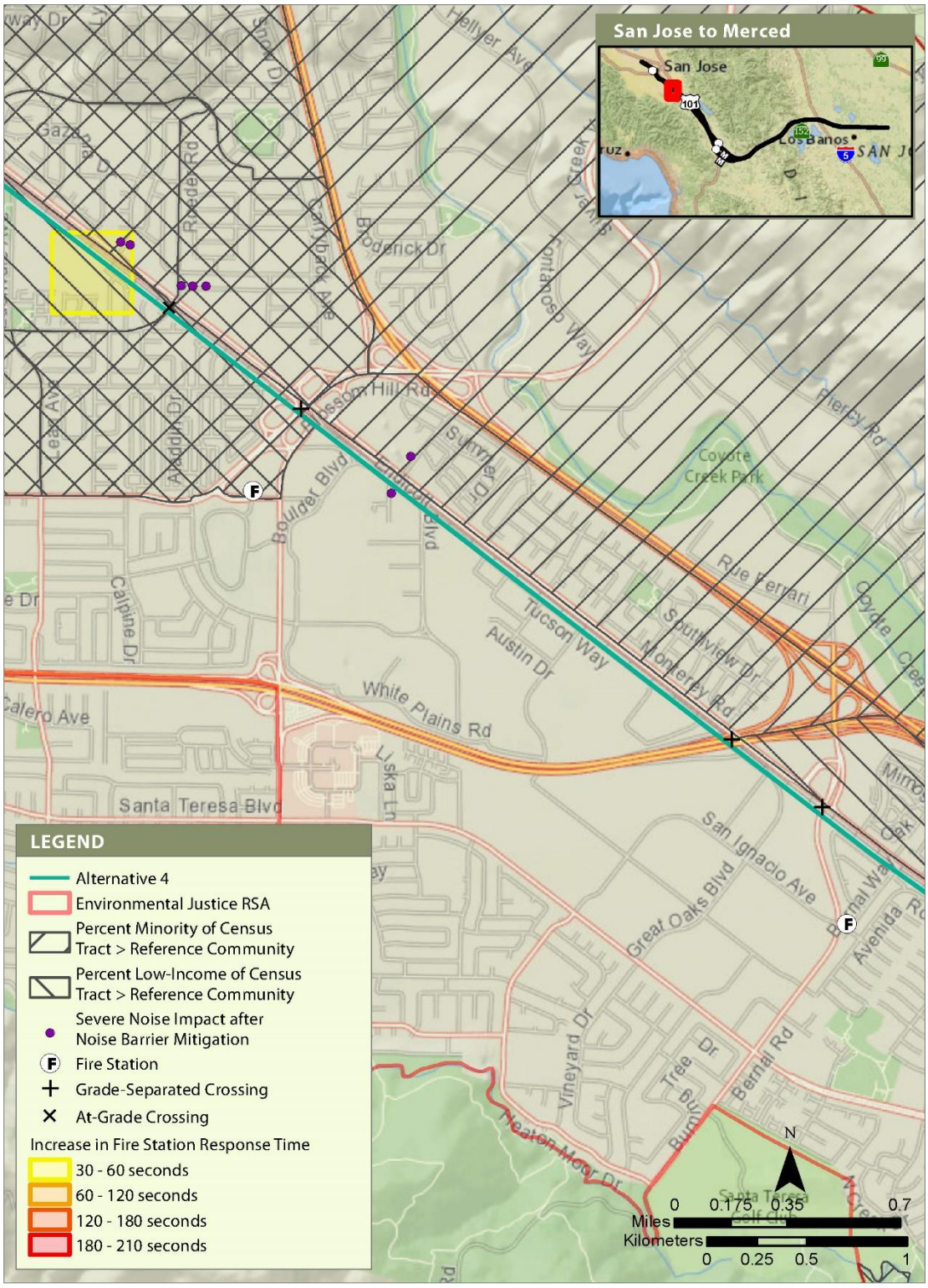
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-2 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (2 of 37)



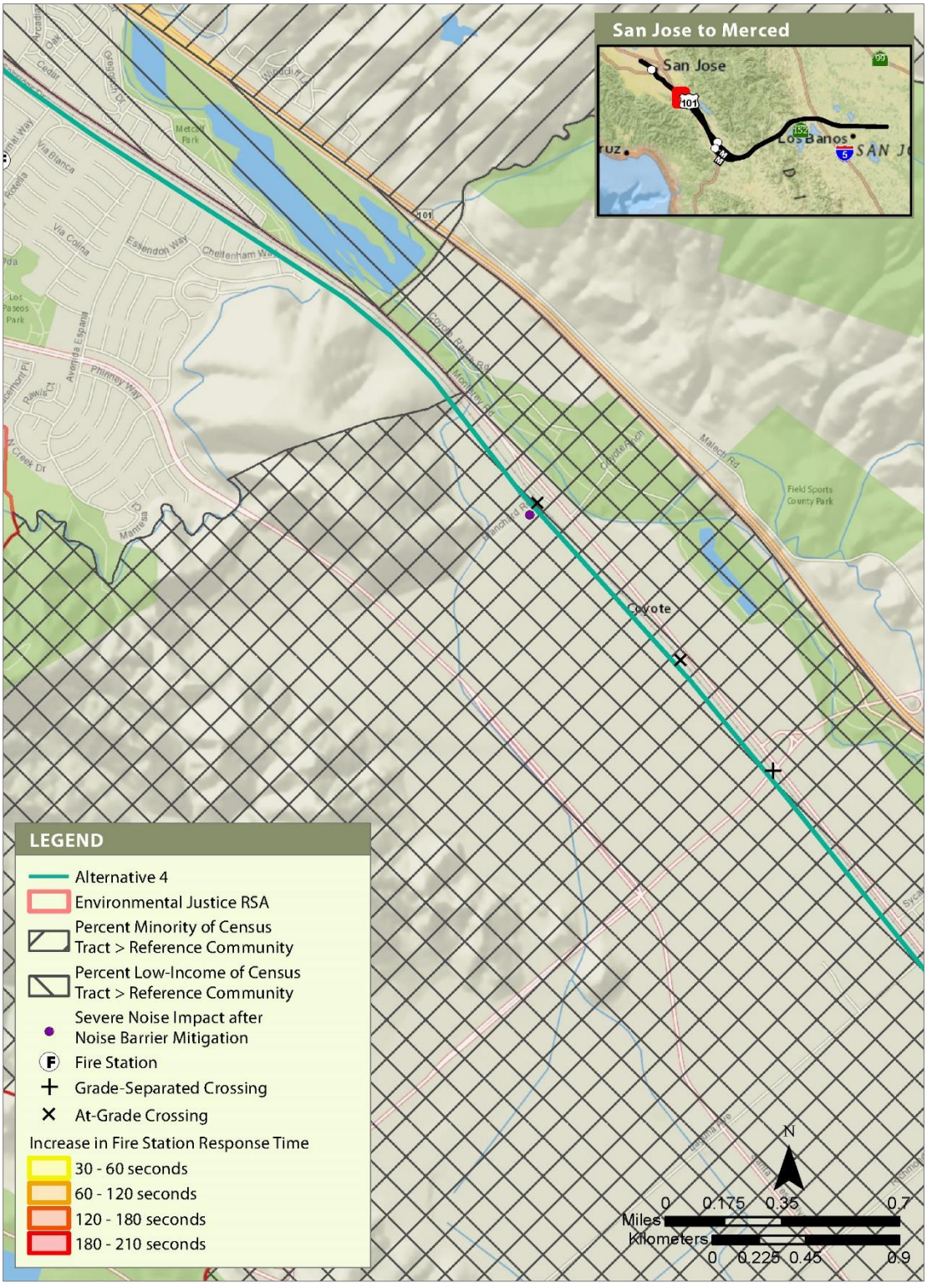
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-3 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (3 of 37)



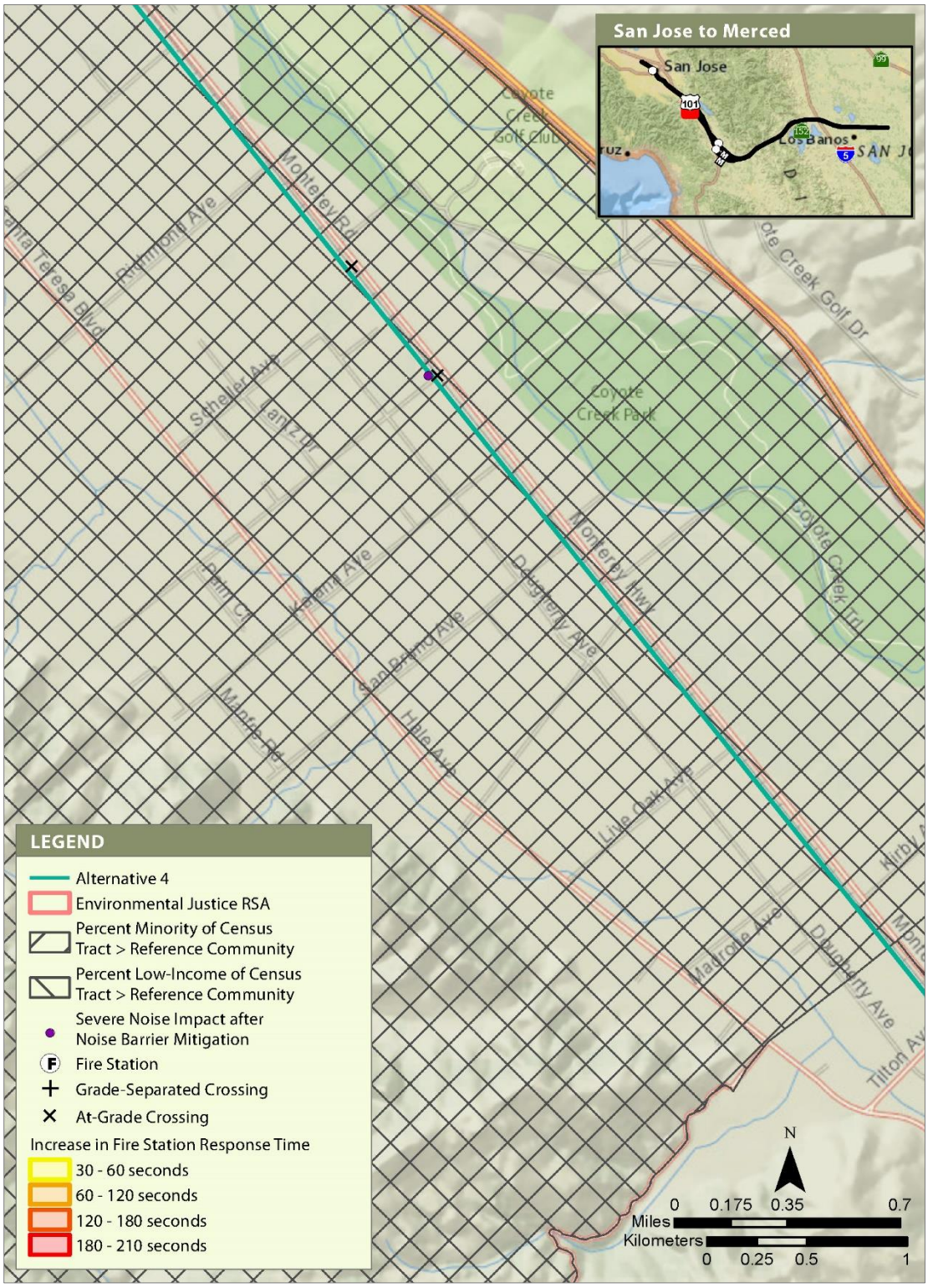
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-4 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (4 of 37)



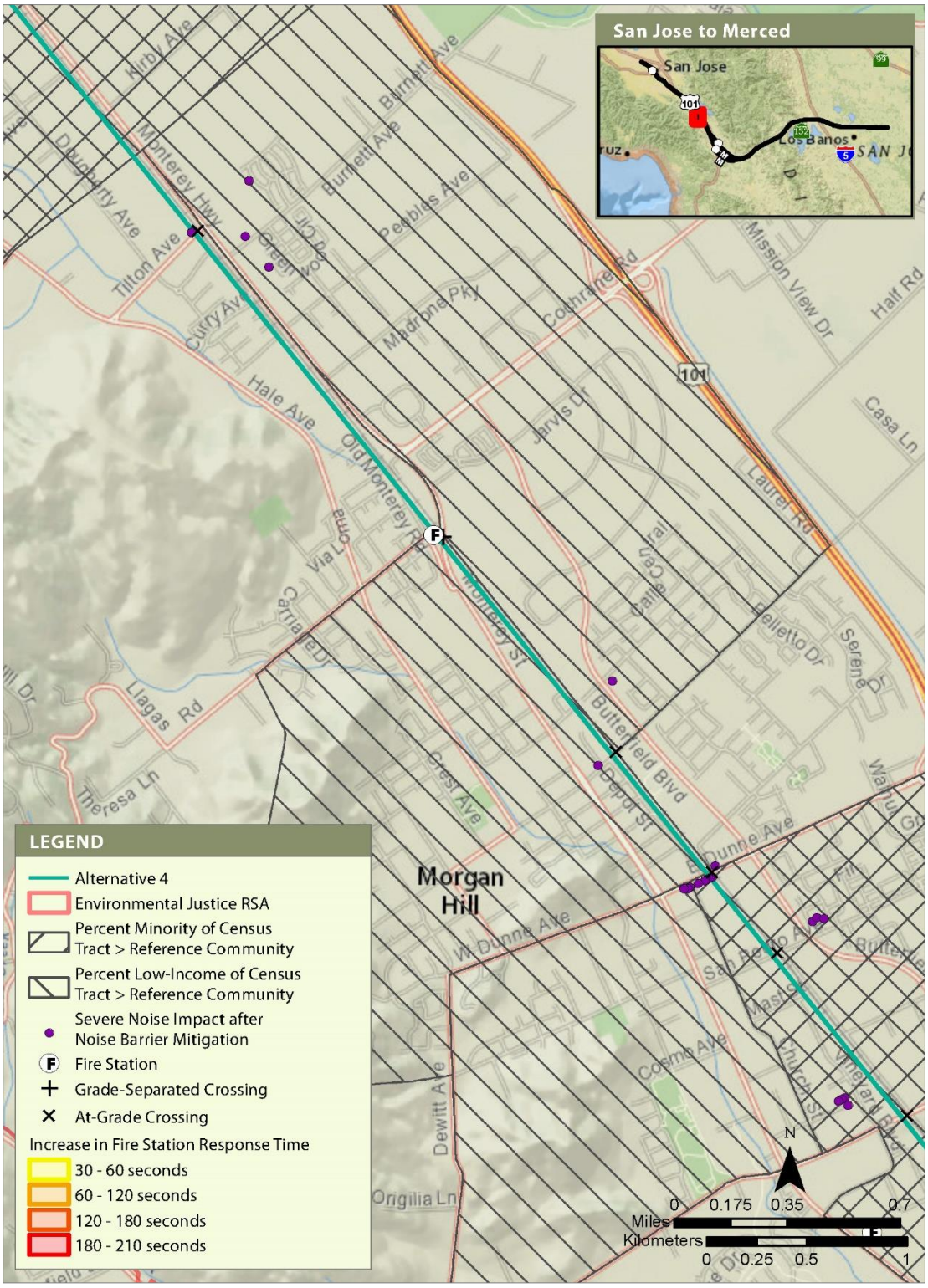
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-5 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (5 of 37)



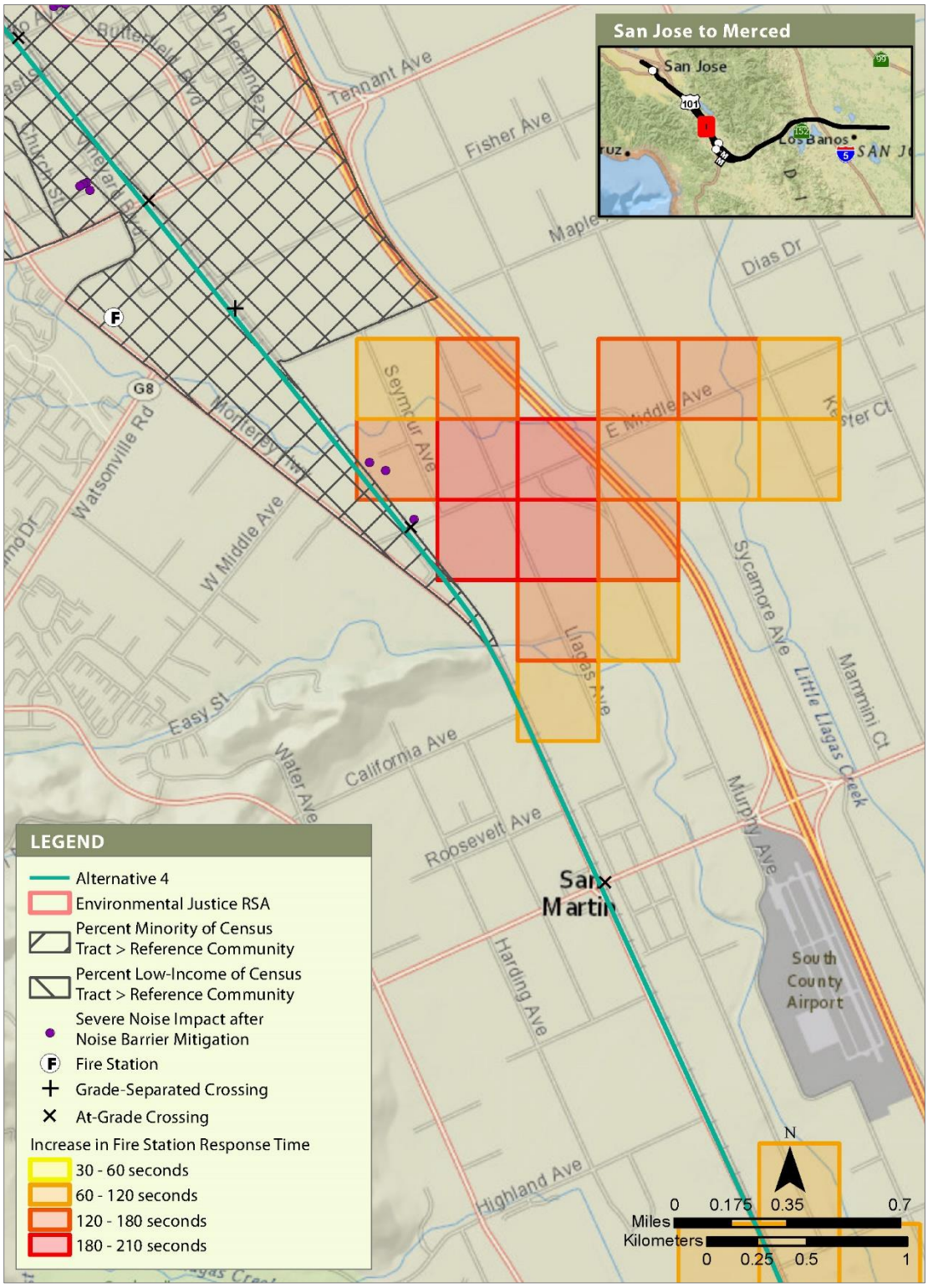
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-6 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (6 of 37)



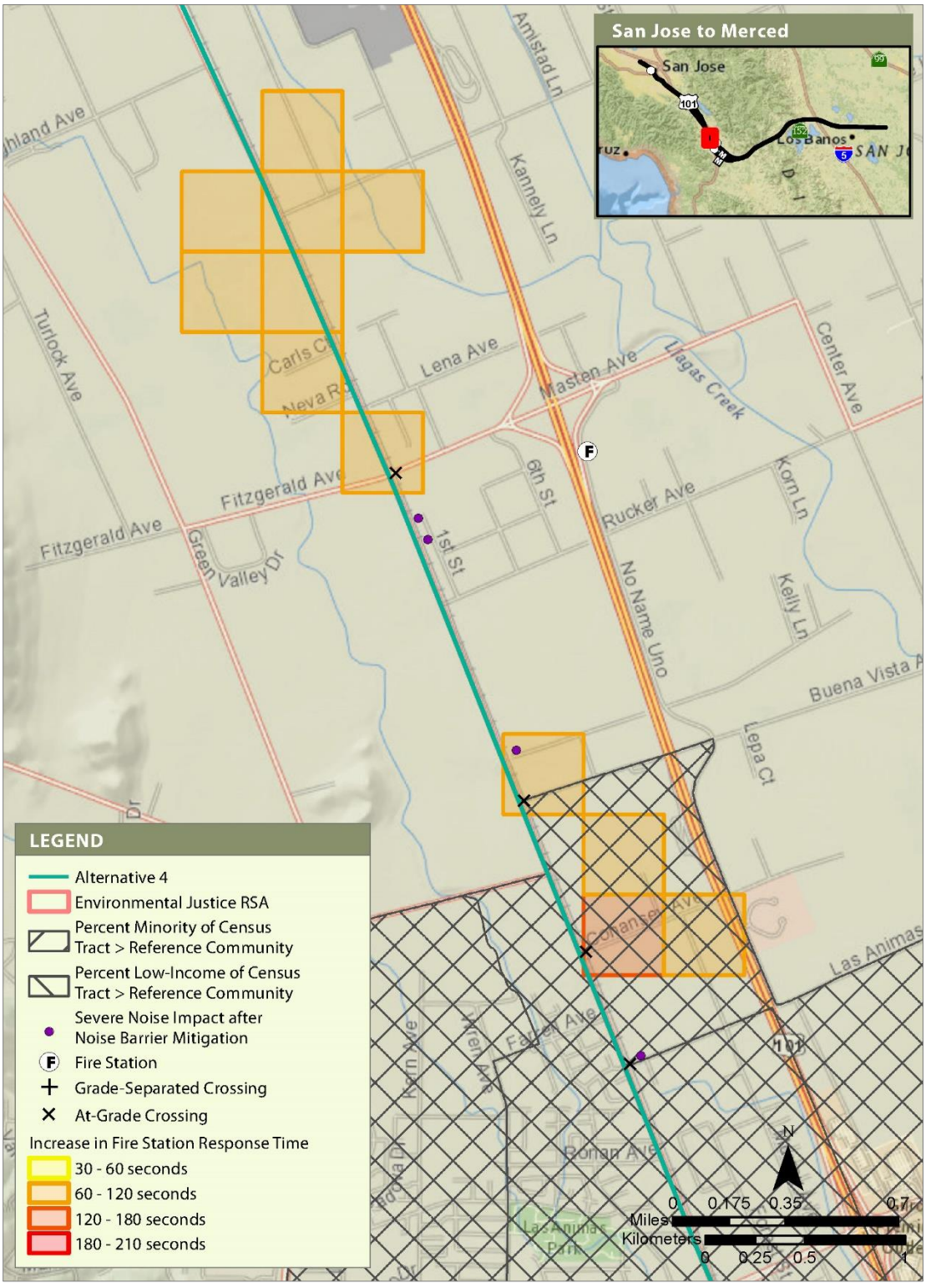
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-7 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (7 of 37)



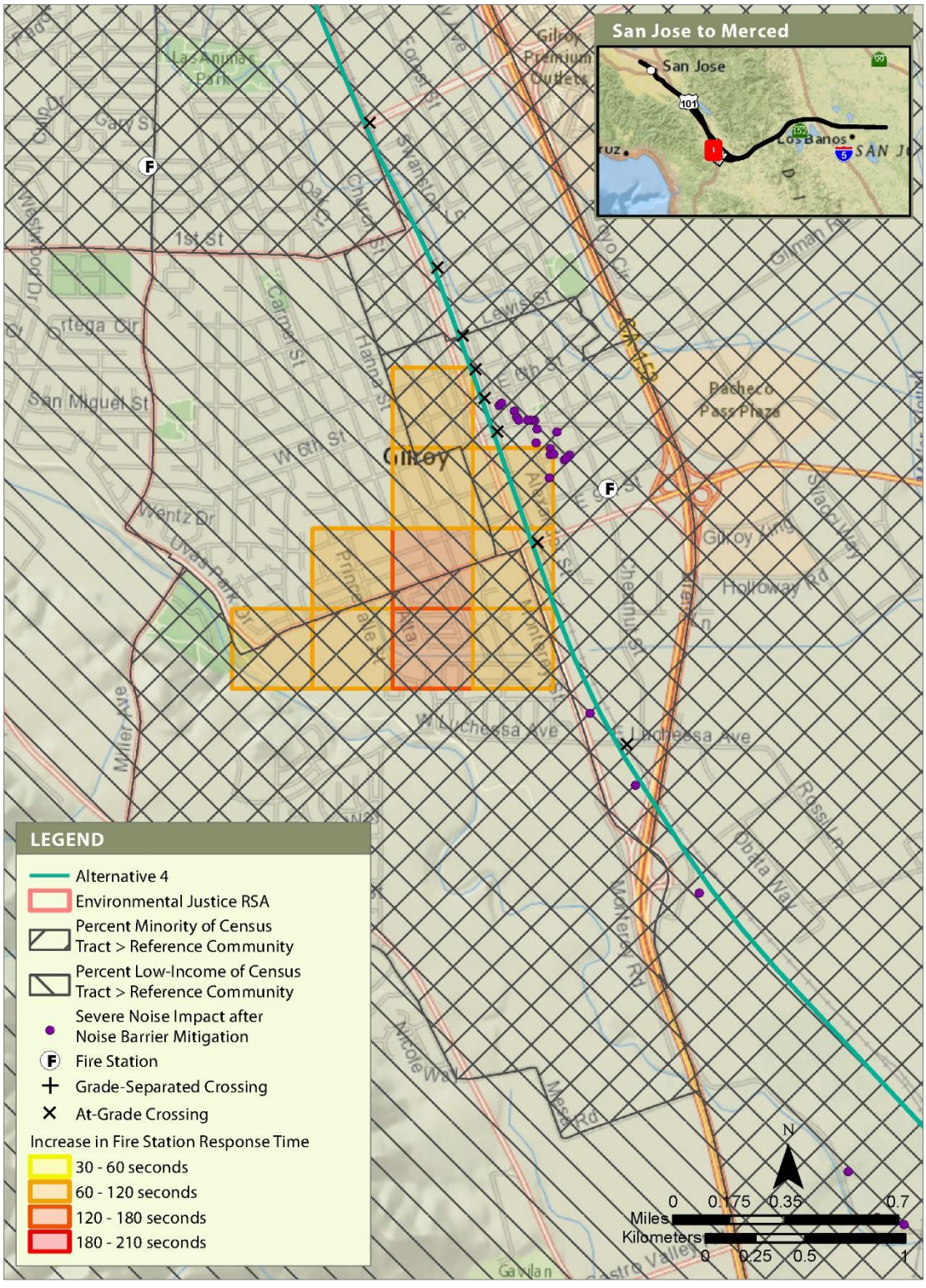
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-8 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (8 of 37)



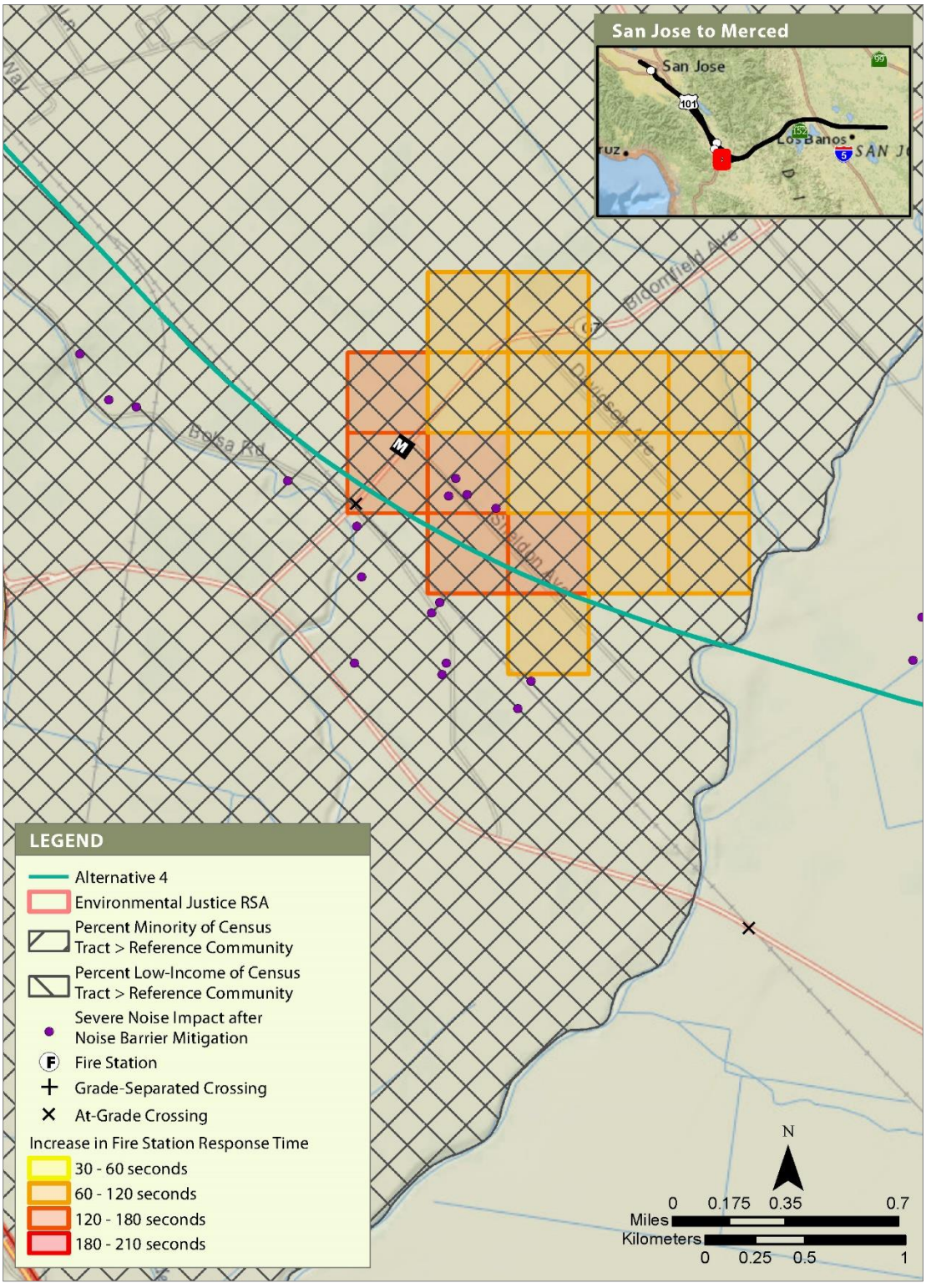
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-9 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (9 of 37)



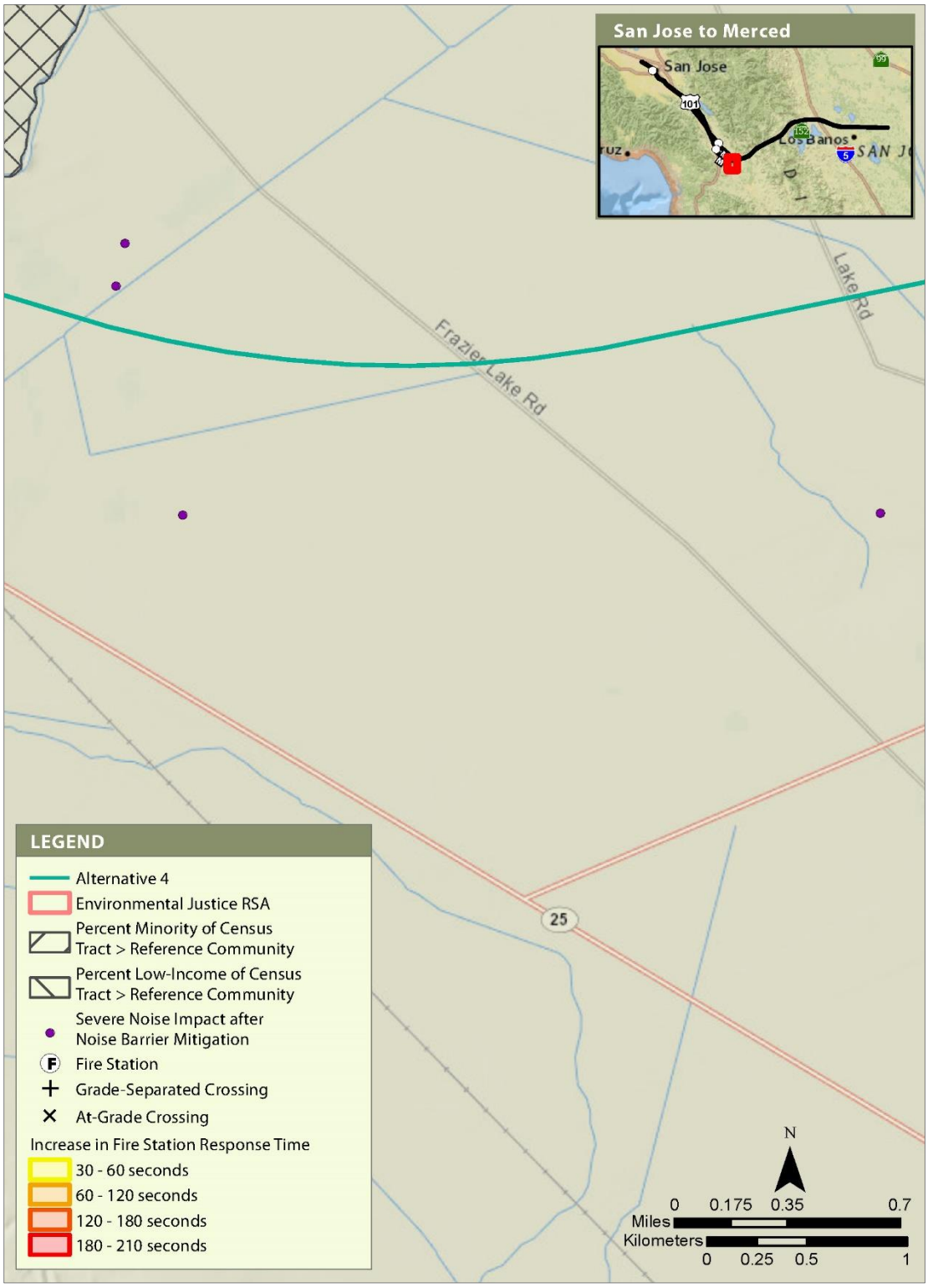
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-10 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (10 of 37)



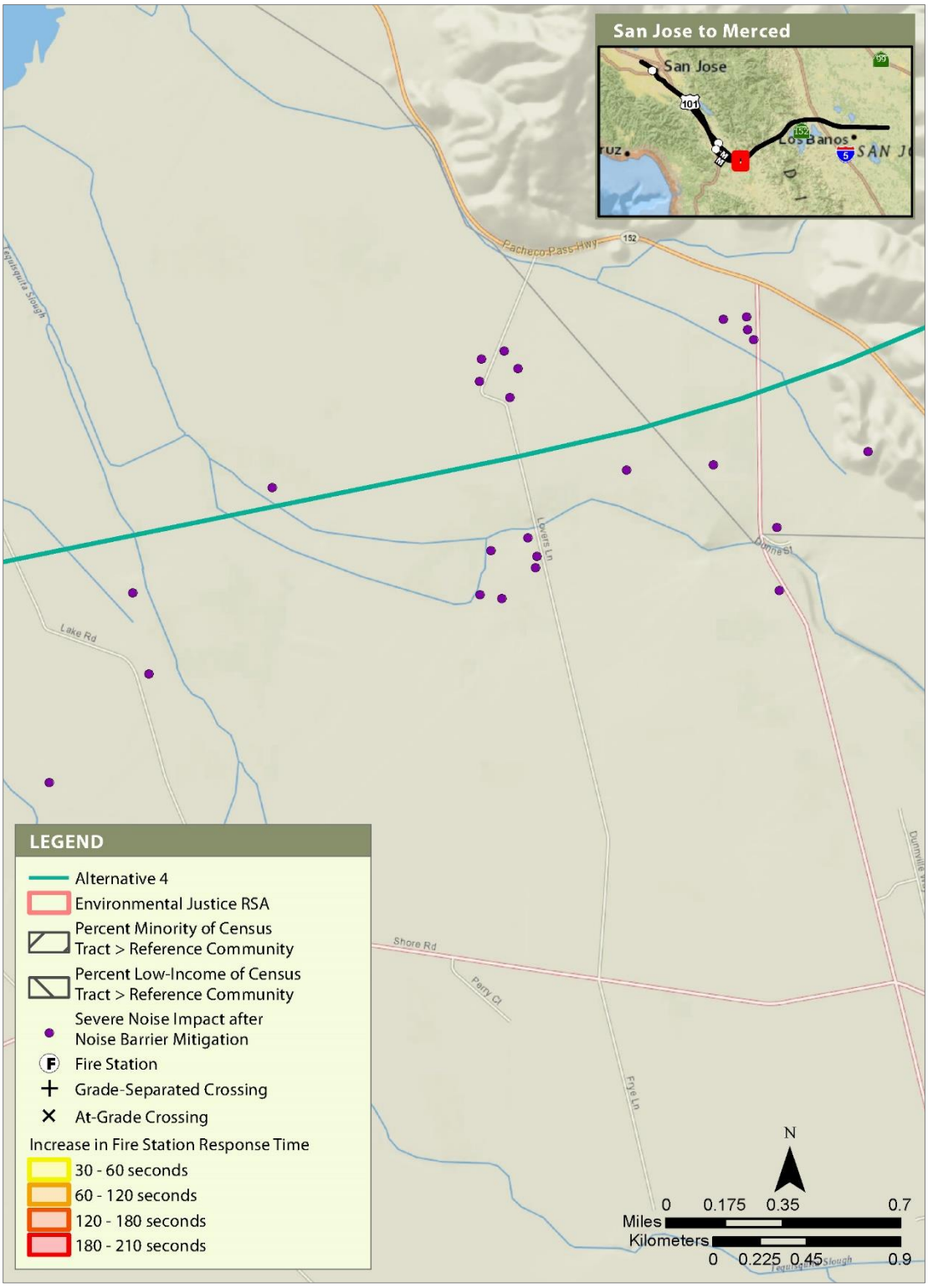
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-11 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (11 of 37)



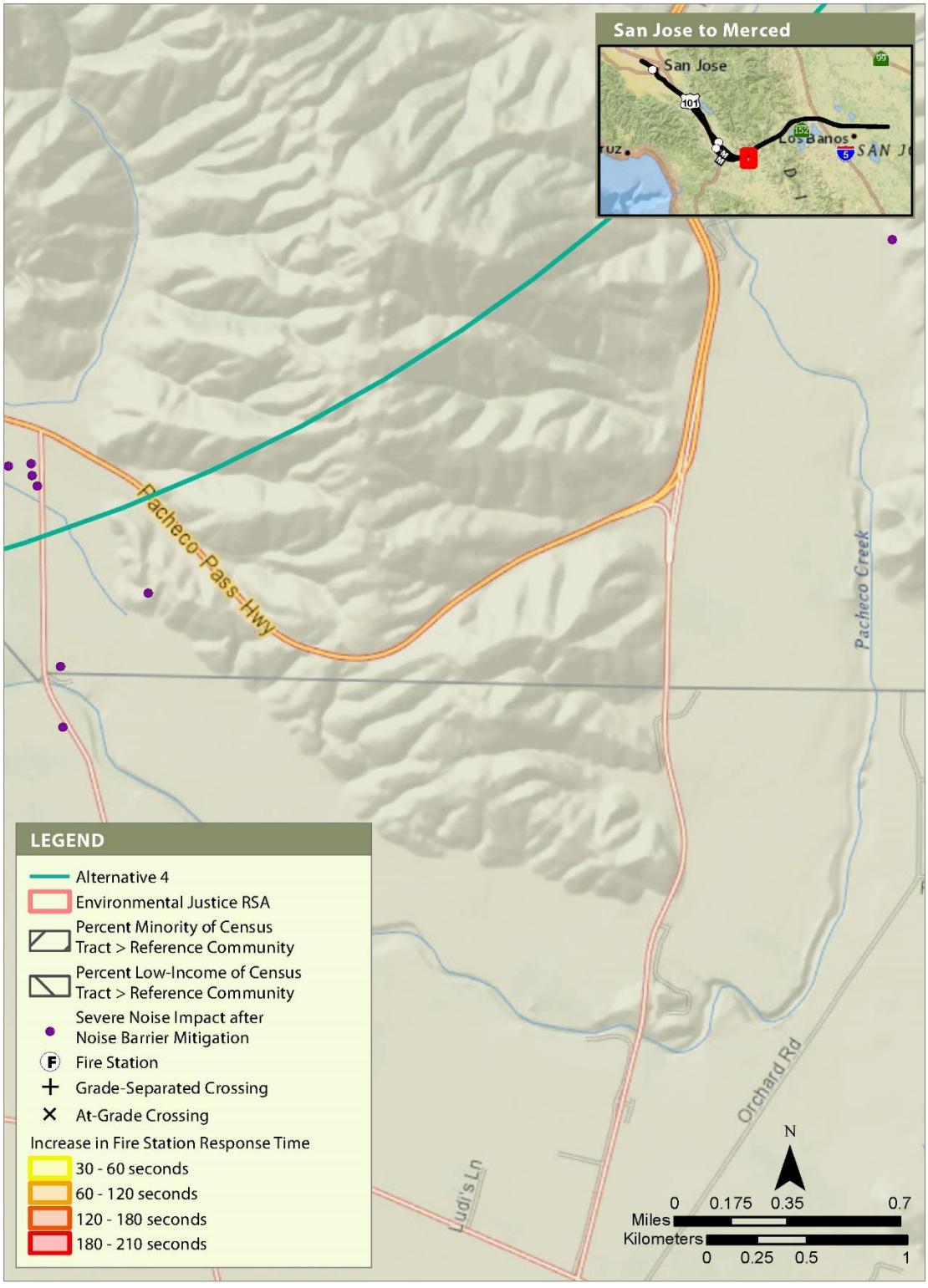
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-12 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (12 of 37)



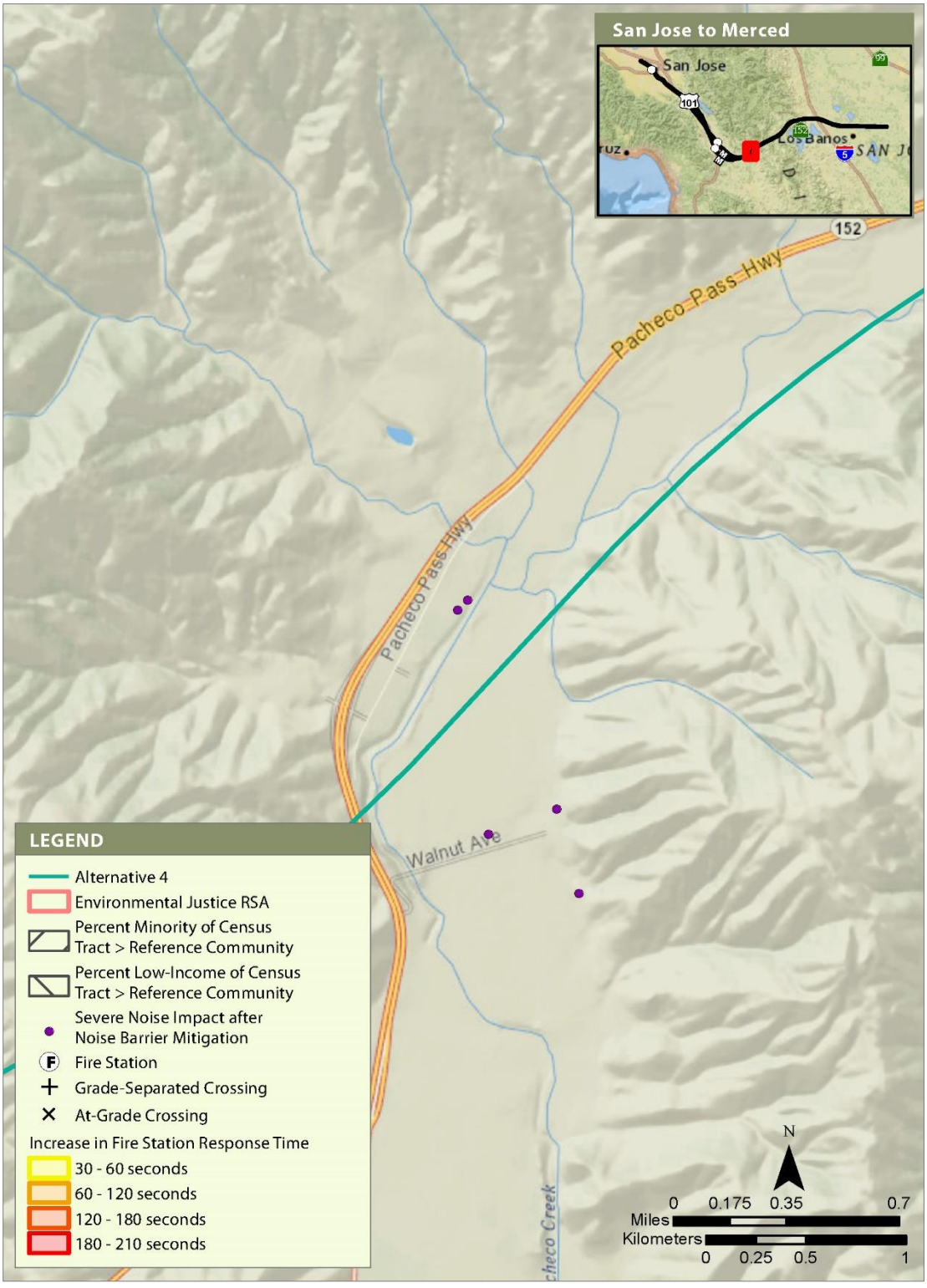
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-13 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (13 of 37)



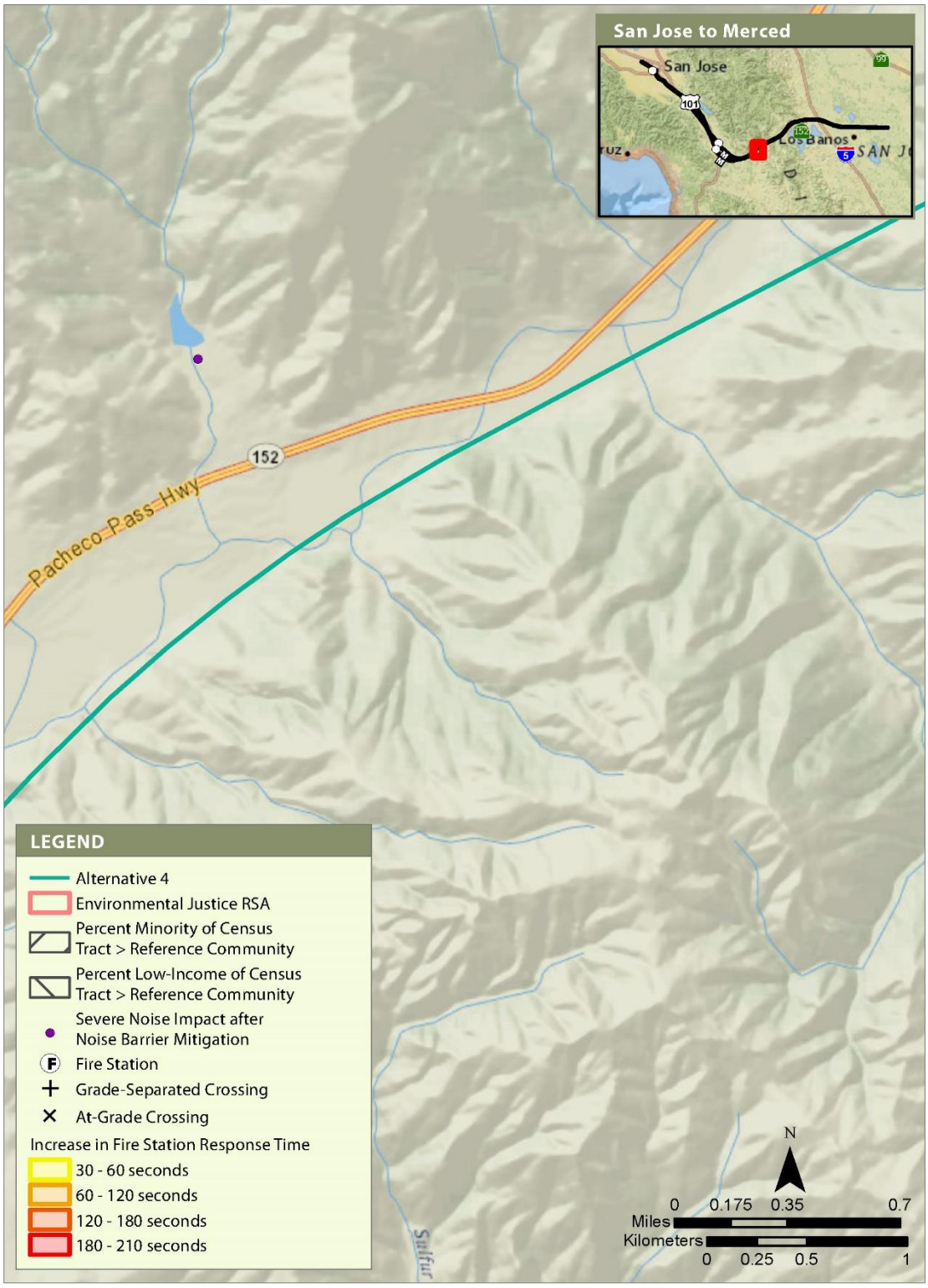
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-14 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (14 of 37)



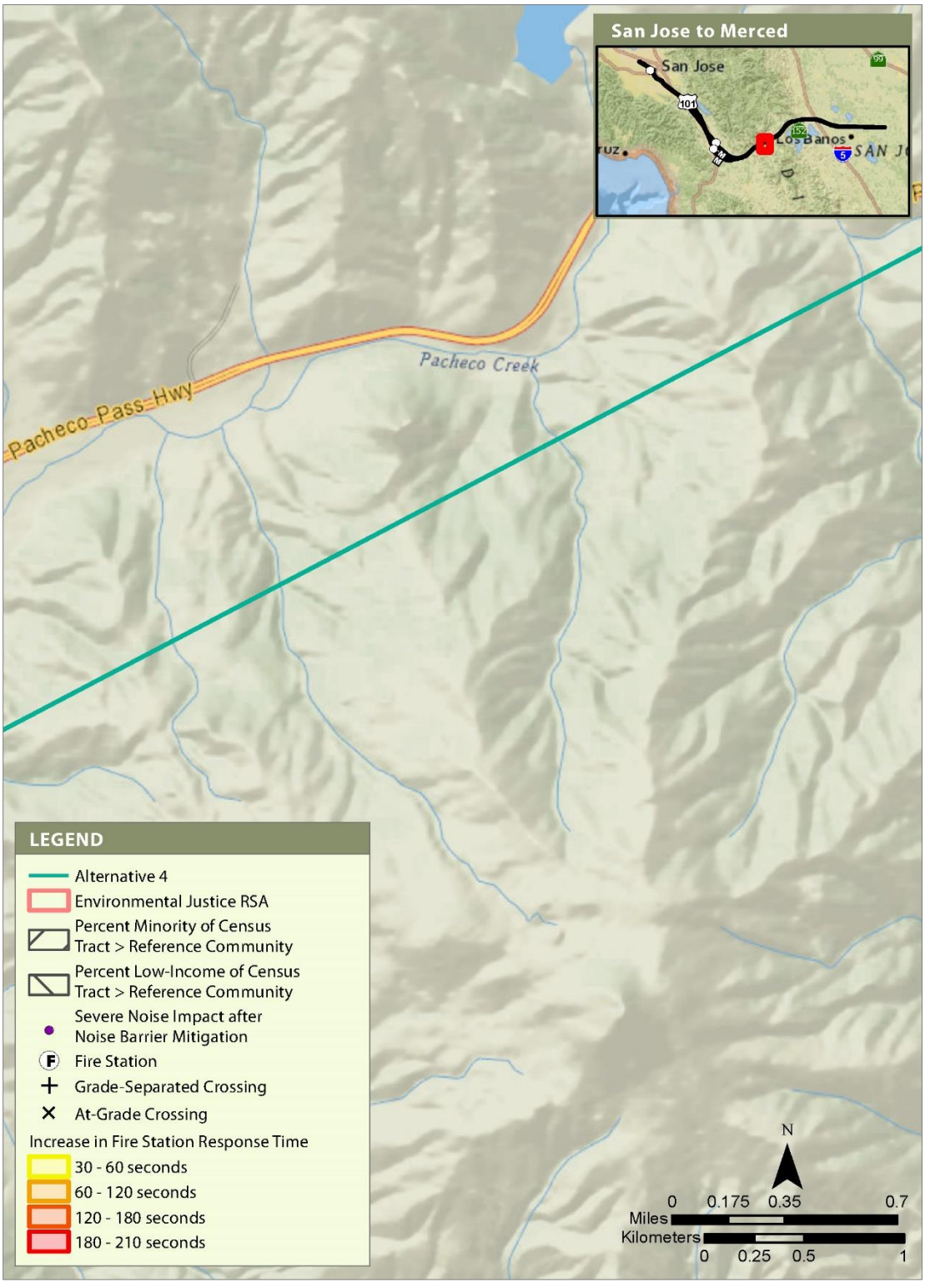
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-15 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (15 of 37)



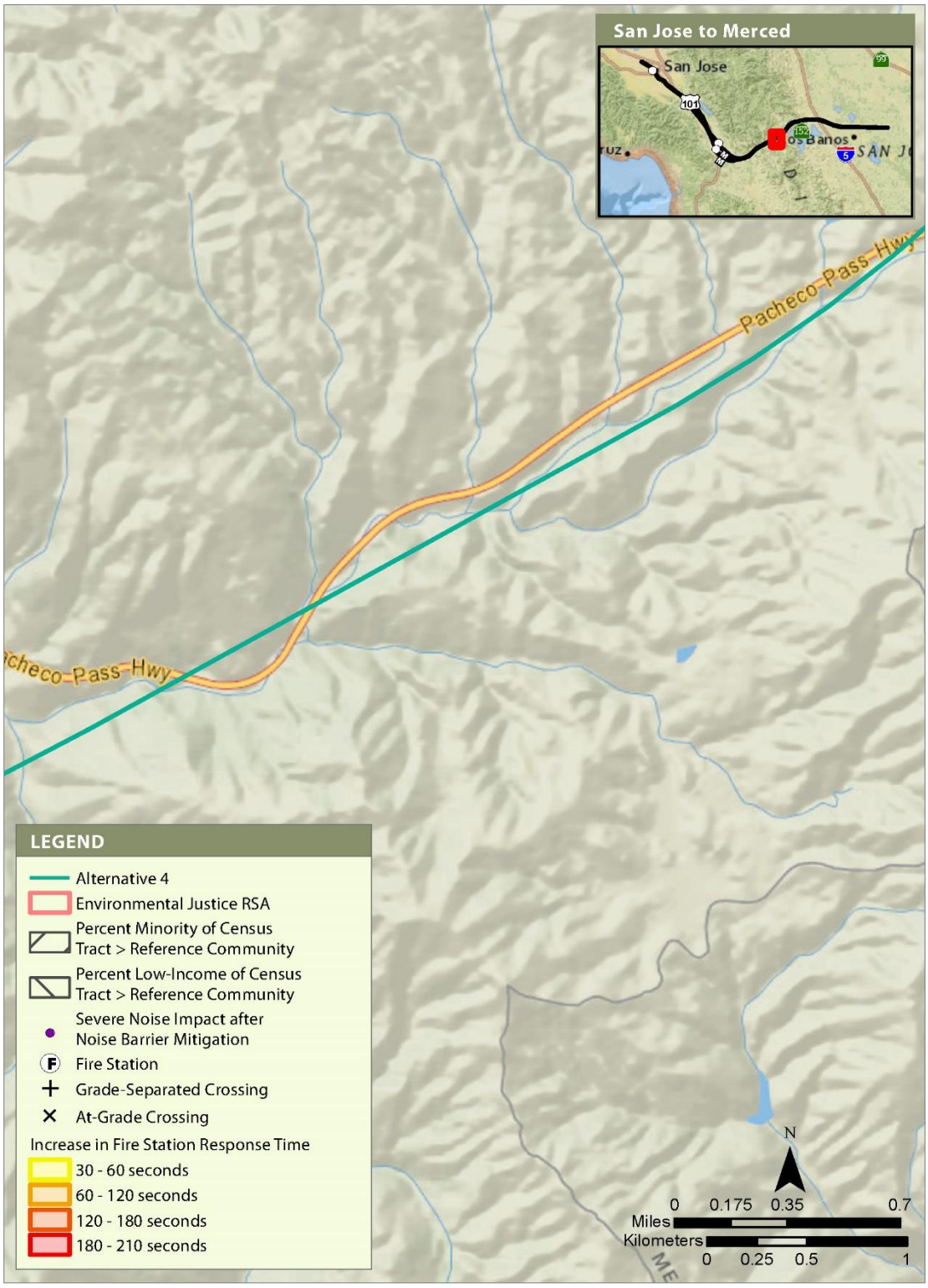
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-16 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (16 of 37)



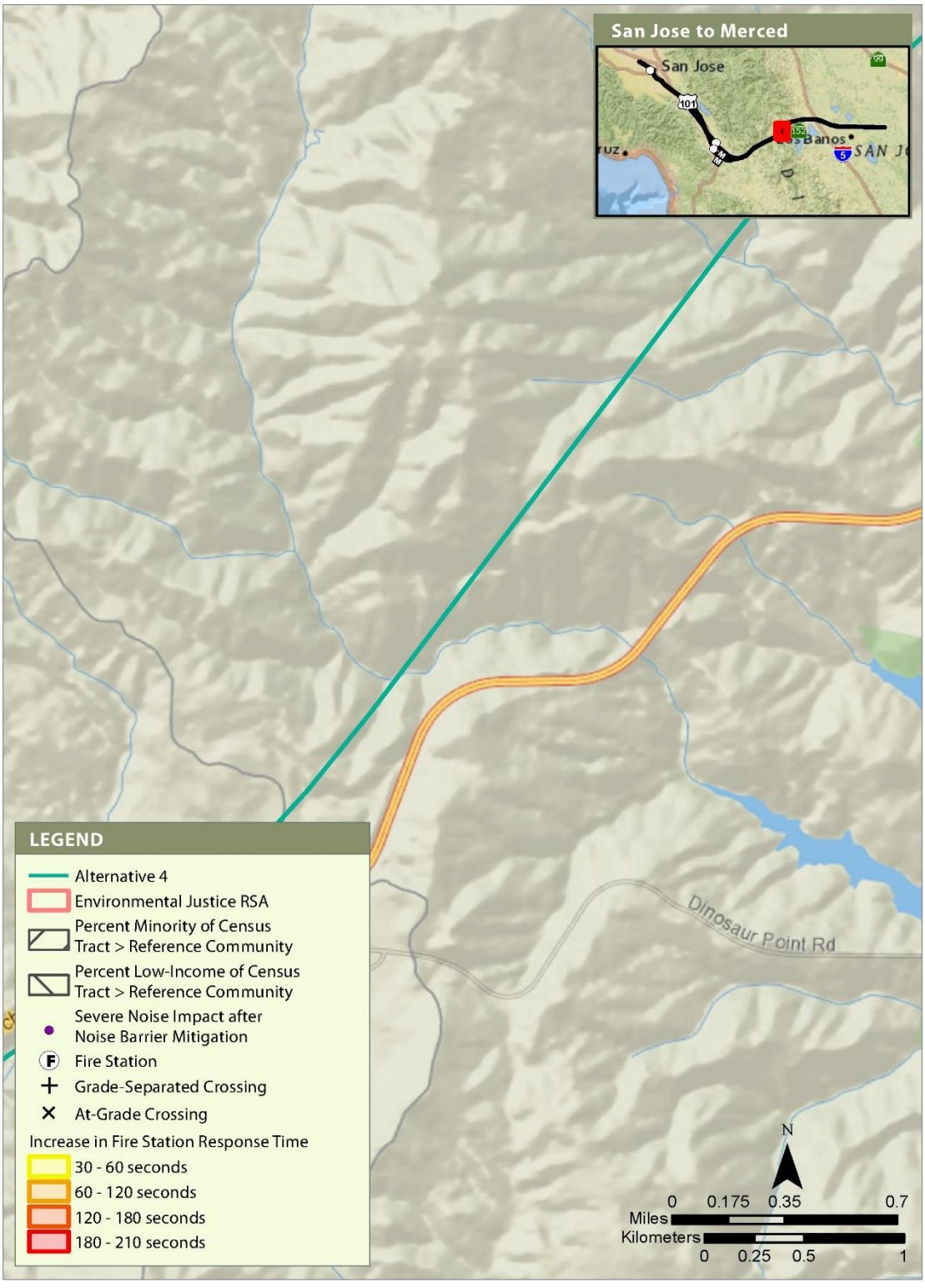
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-17 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (17 of 37)



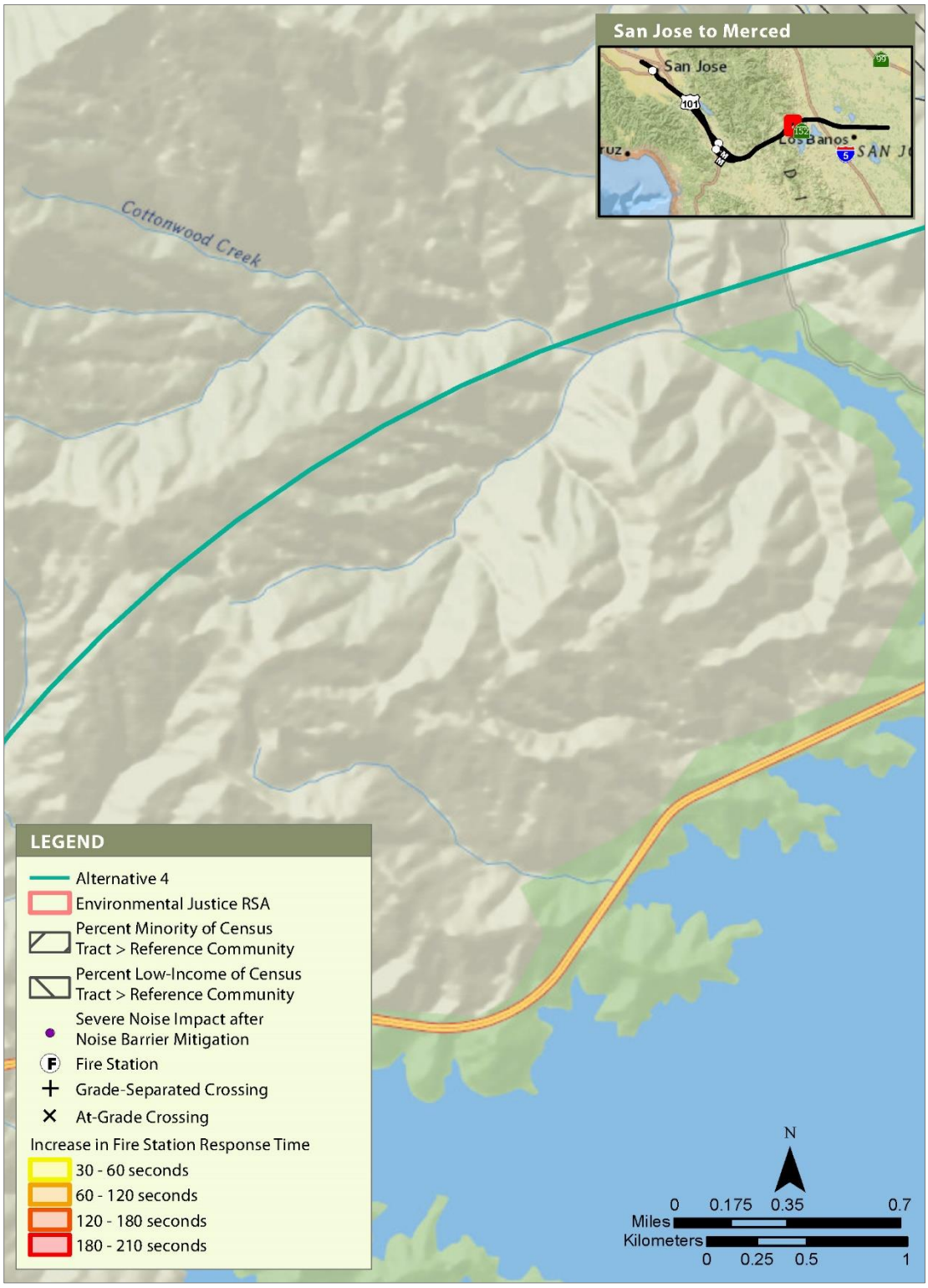
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-18 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (18 of 37)



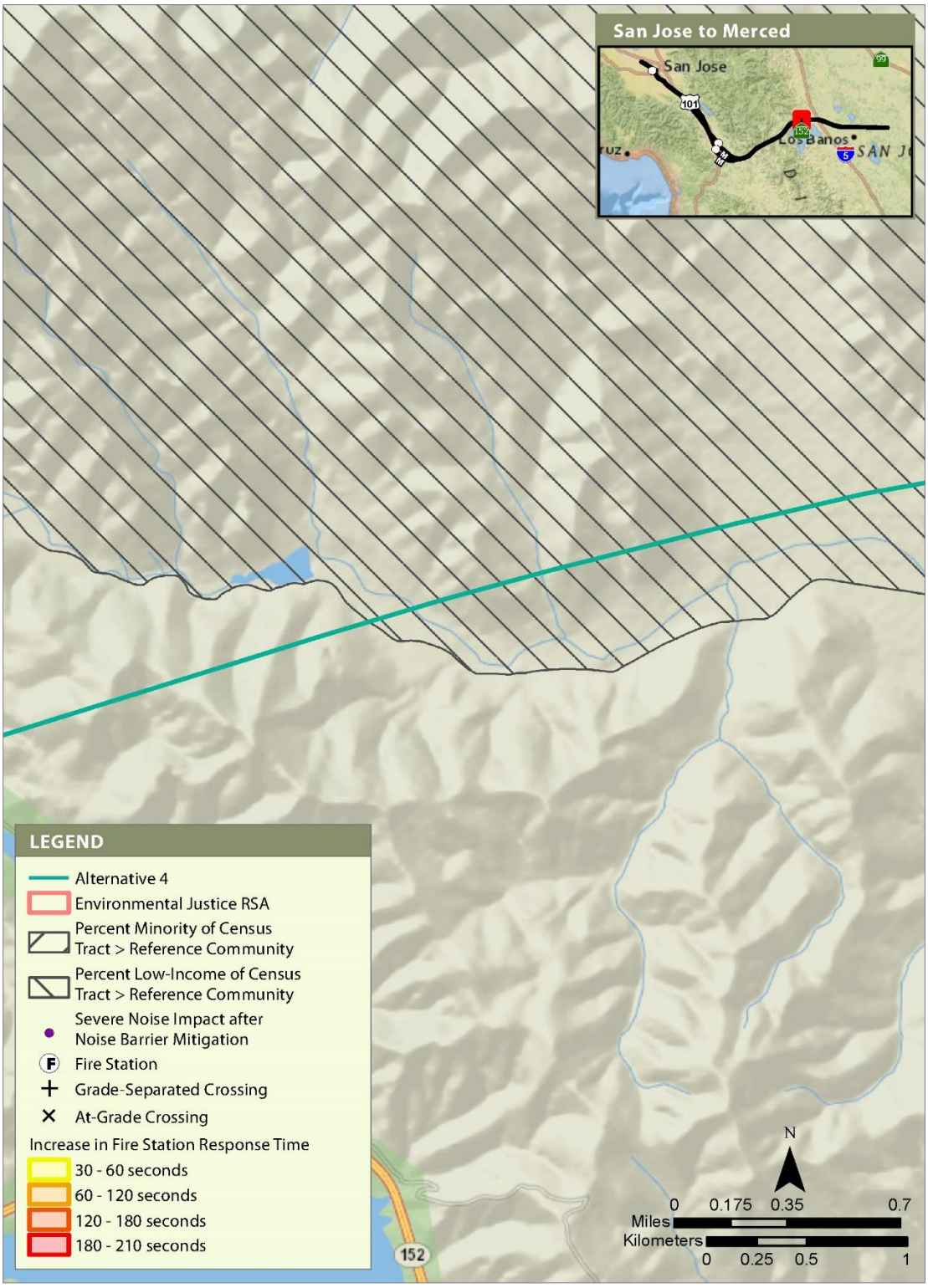
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-19 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (19 of 37)



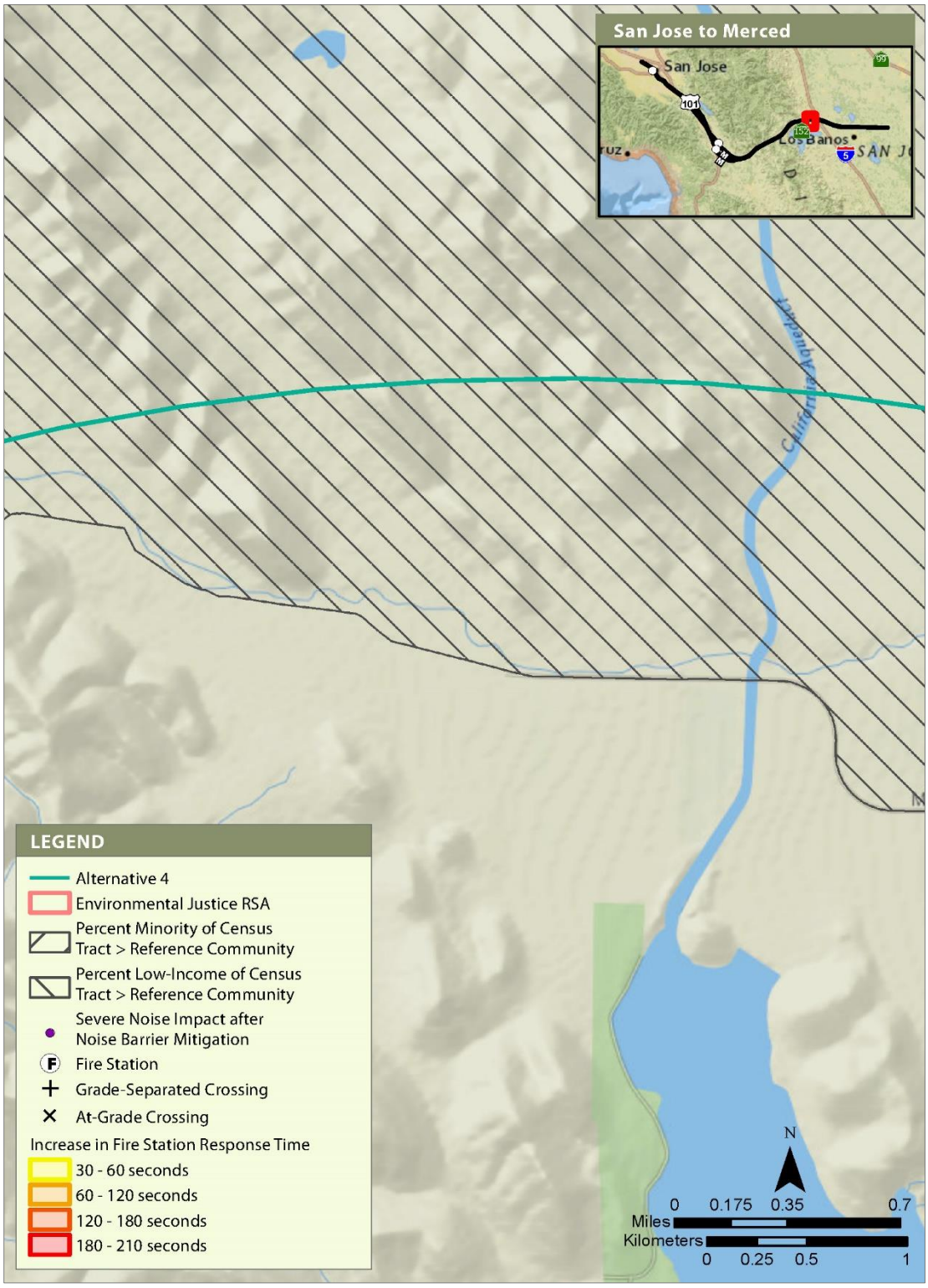
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-20 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (20 of 37)



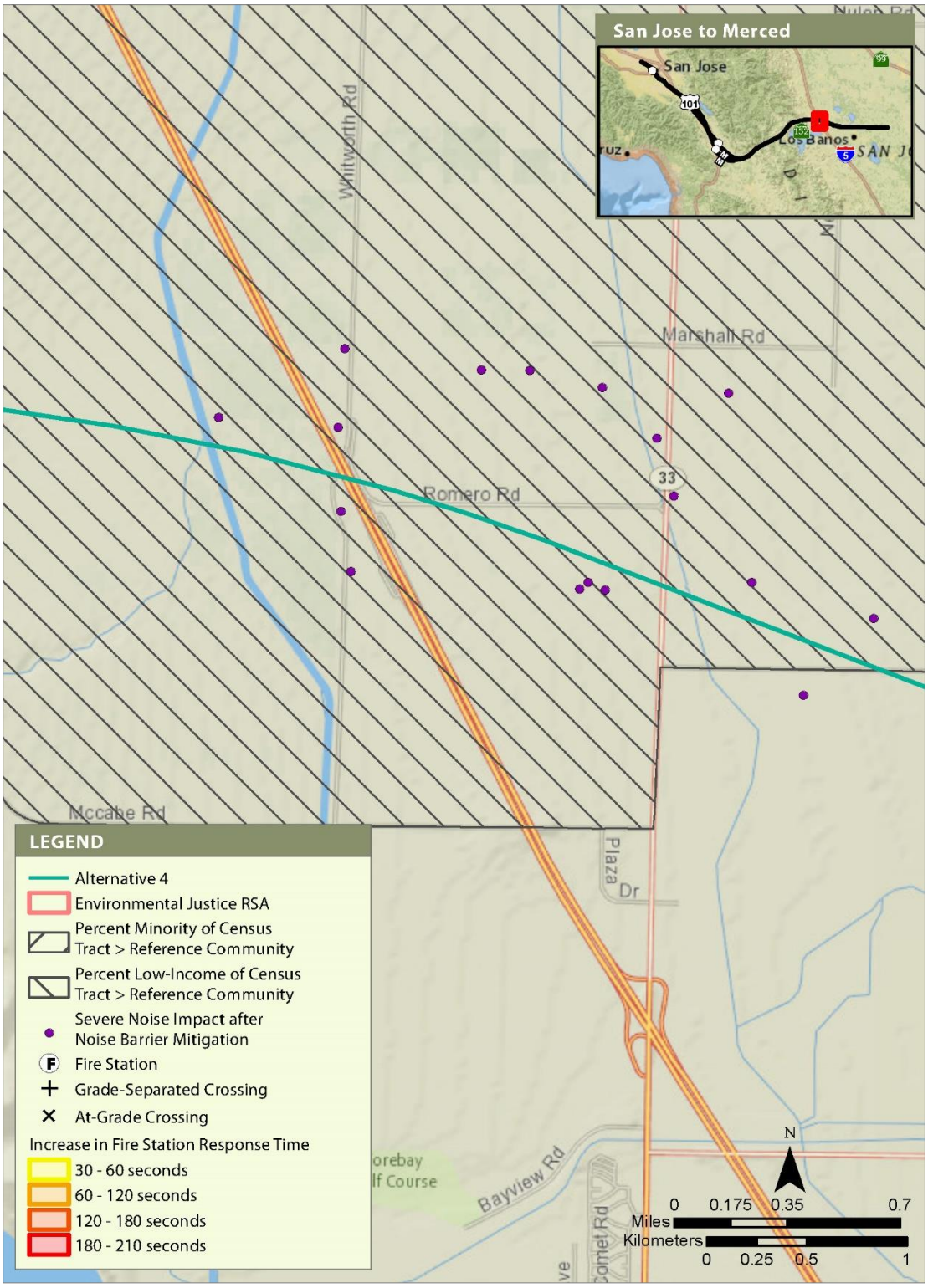
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-21 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (21 of 37)



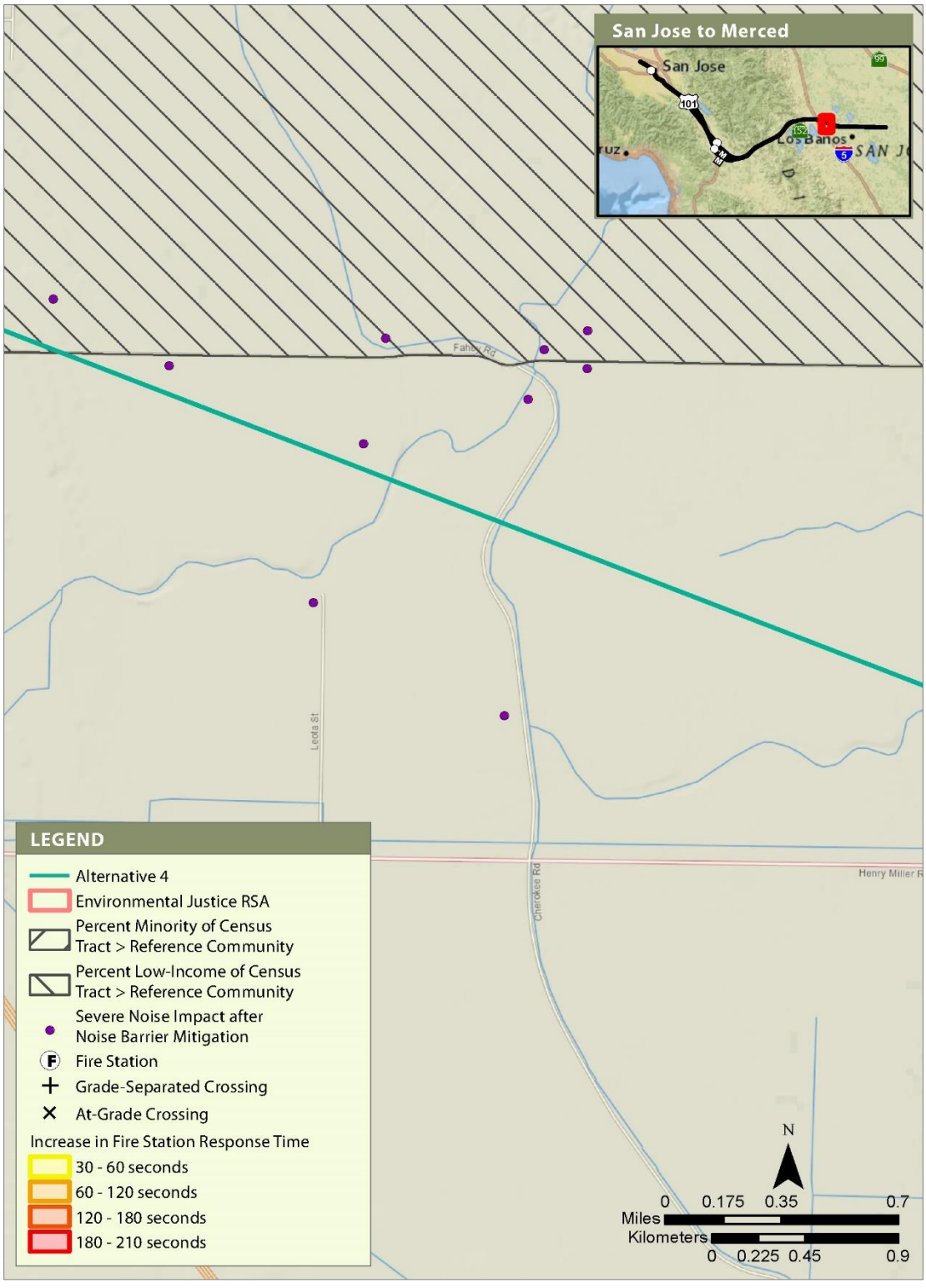
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-22 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (22 of 37)



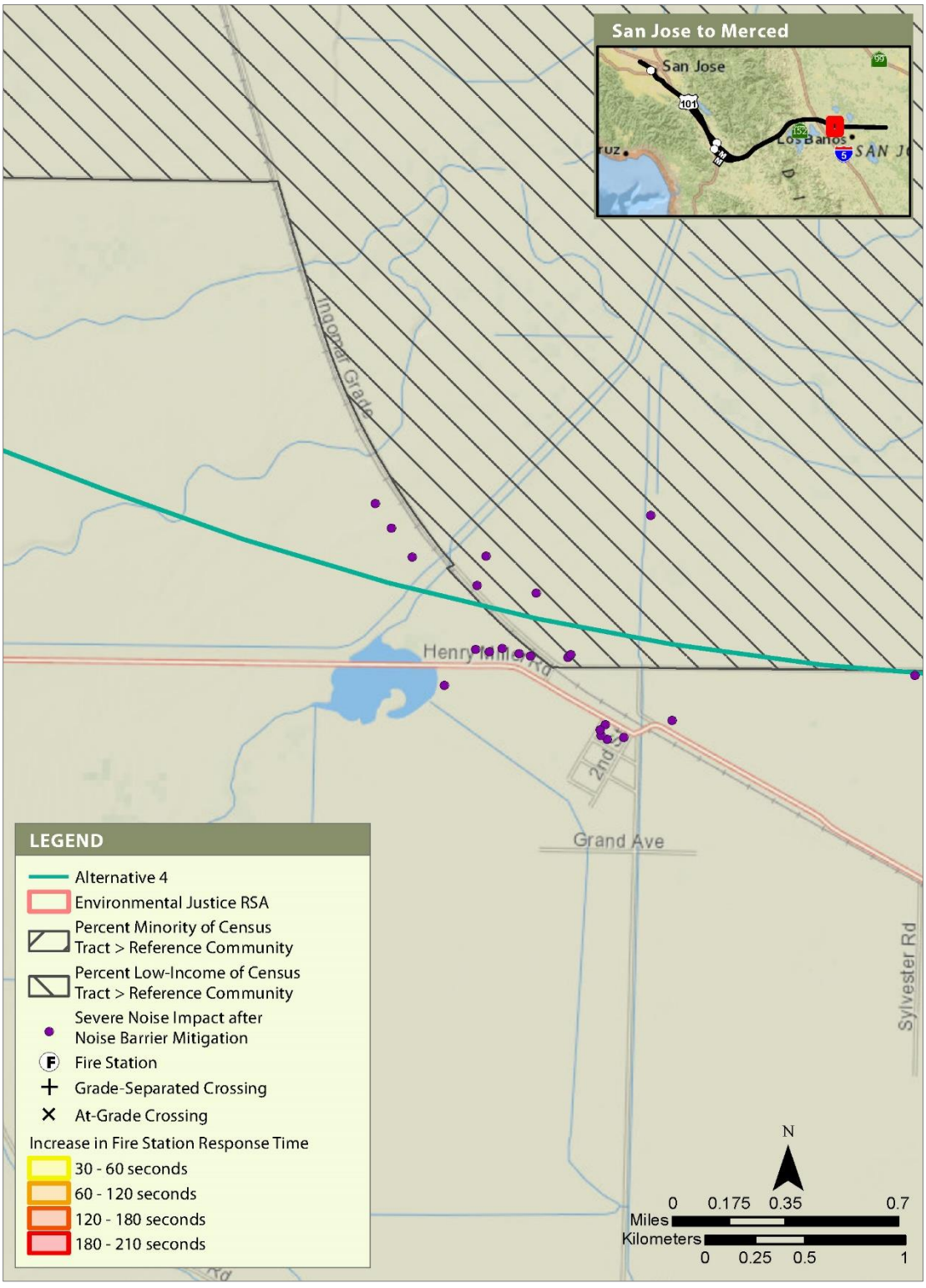
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-23 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (23 of 37)



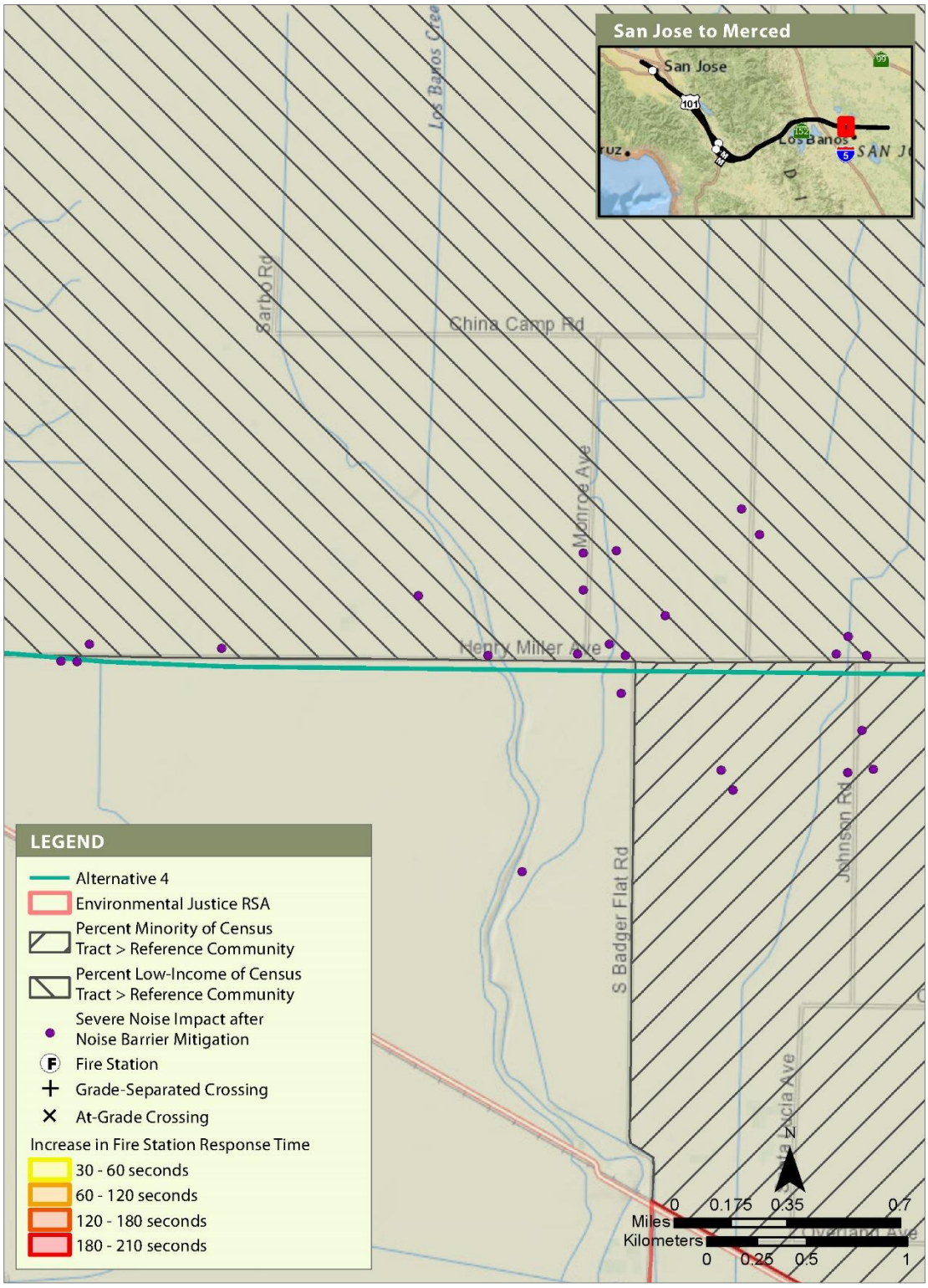
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-24 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (24 of 37)



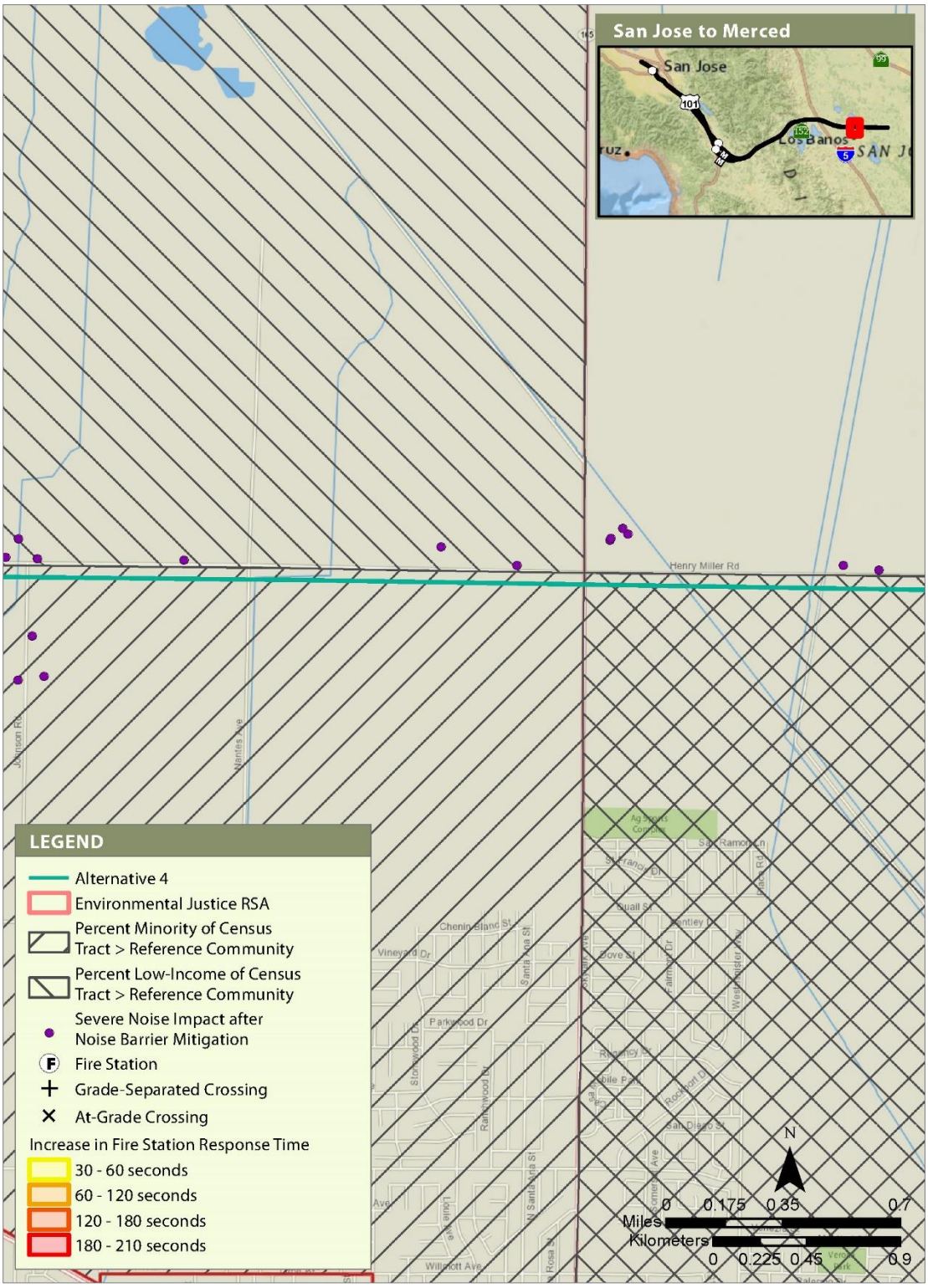
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-25 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (25 of 37)



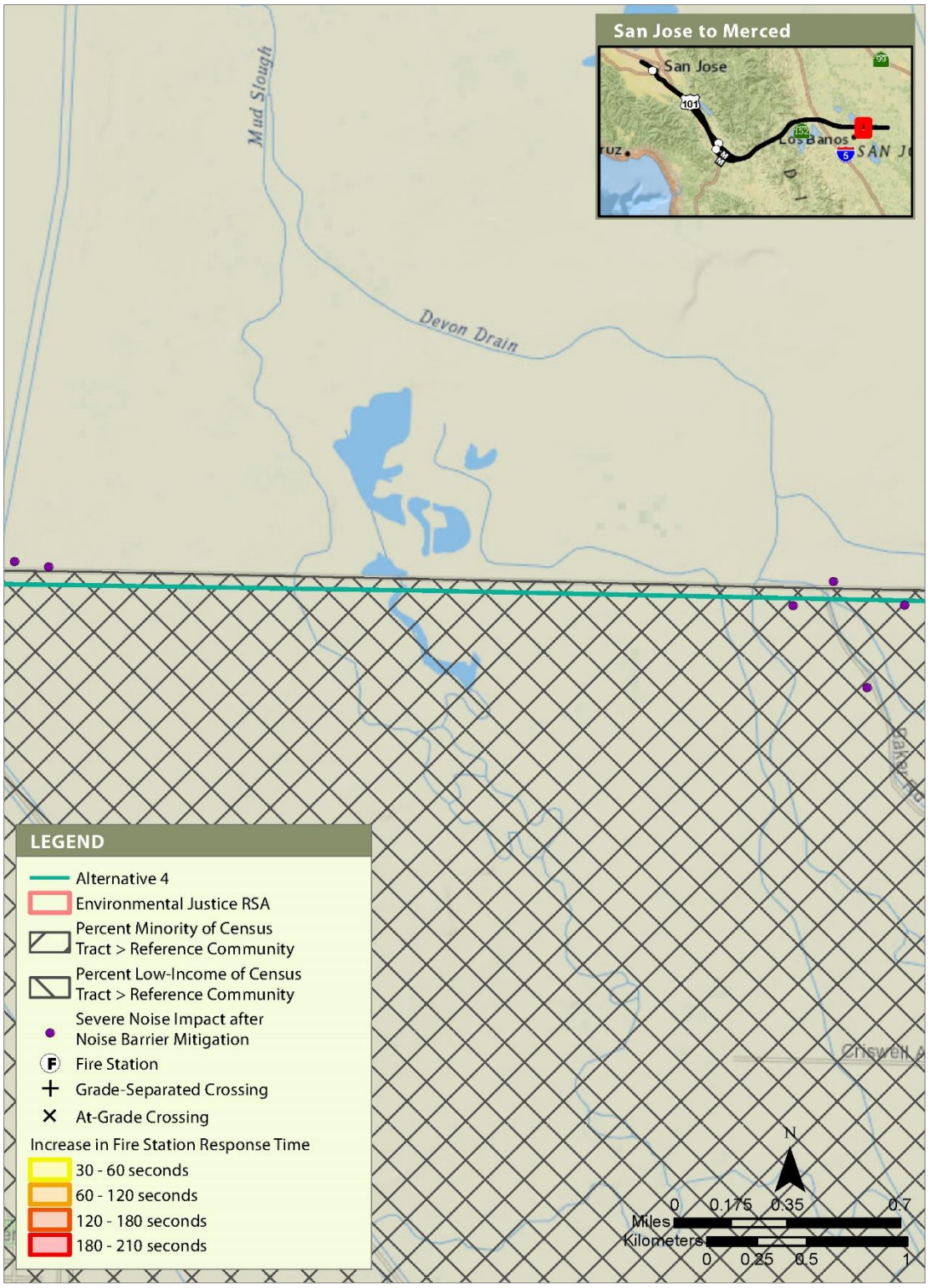
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-26 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (26 of 37)



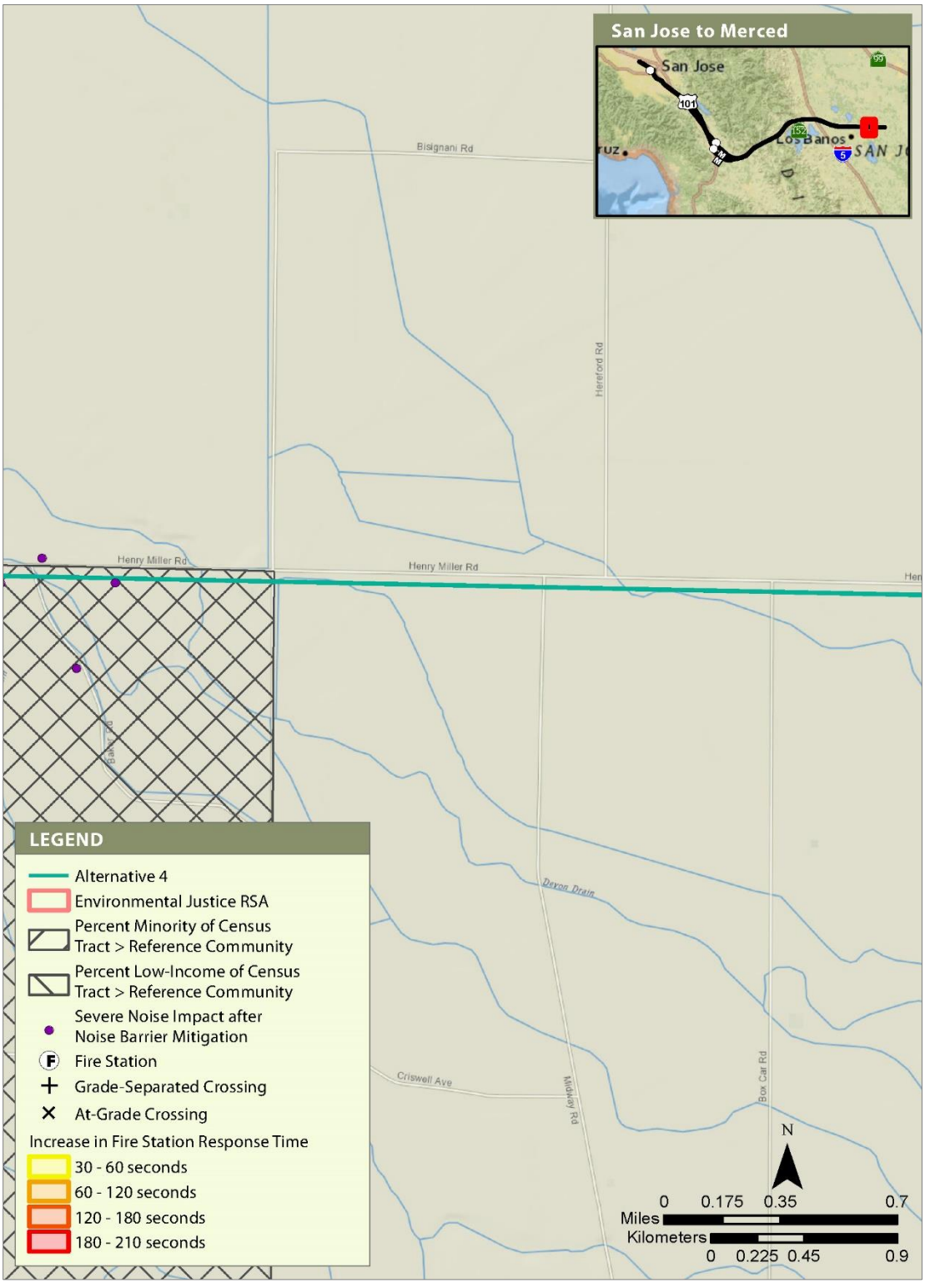
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-27 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (27 of 37)



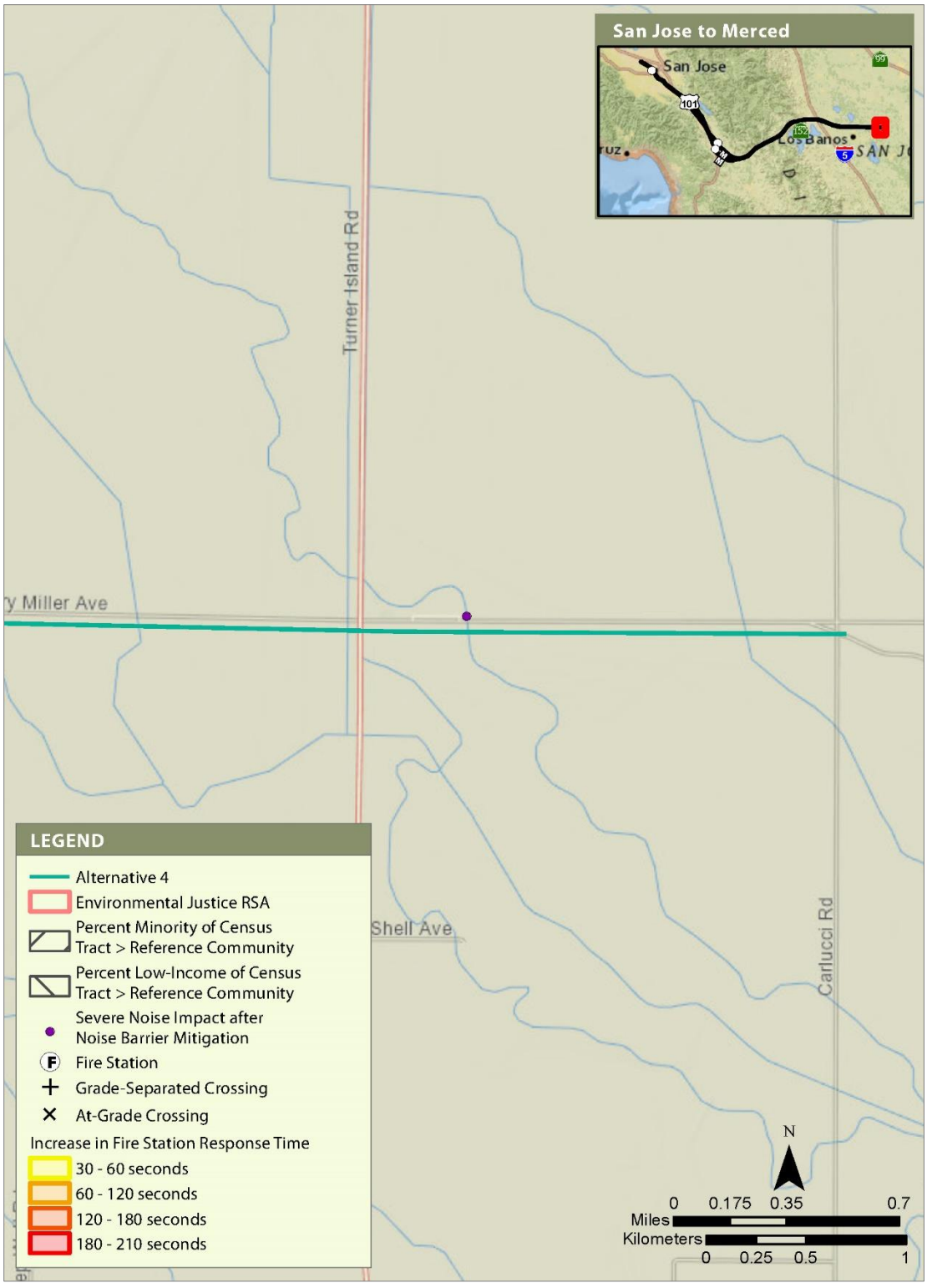
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-28 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (28 of 37)



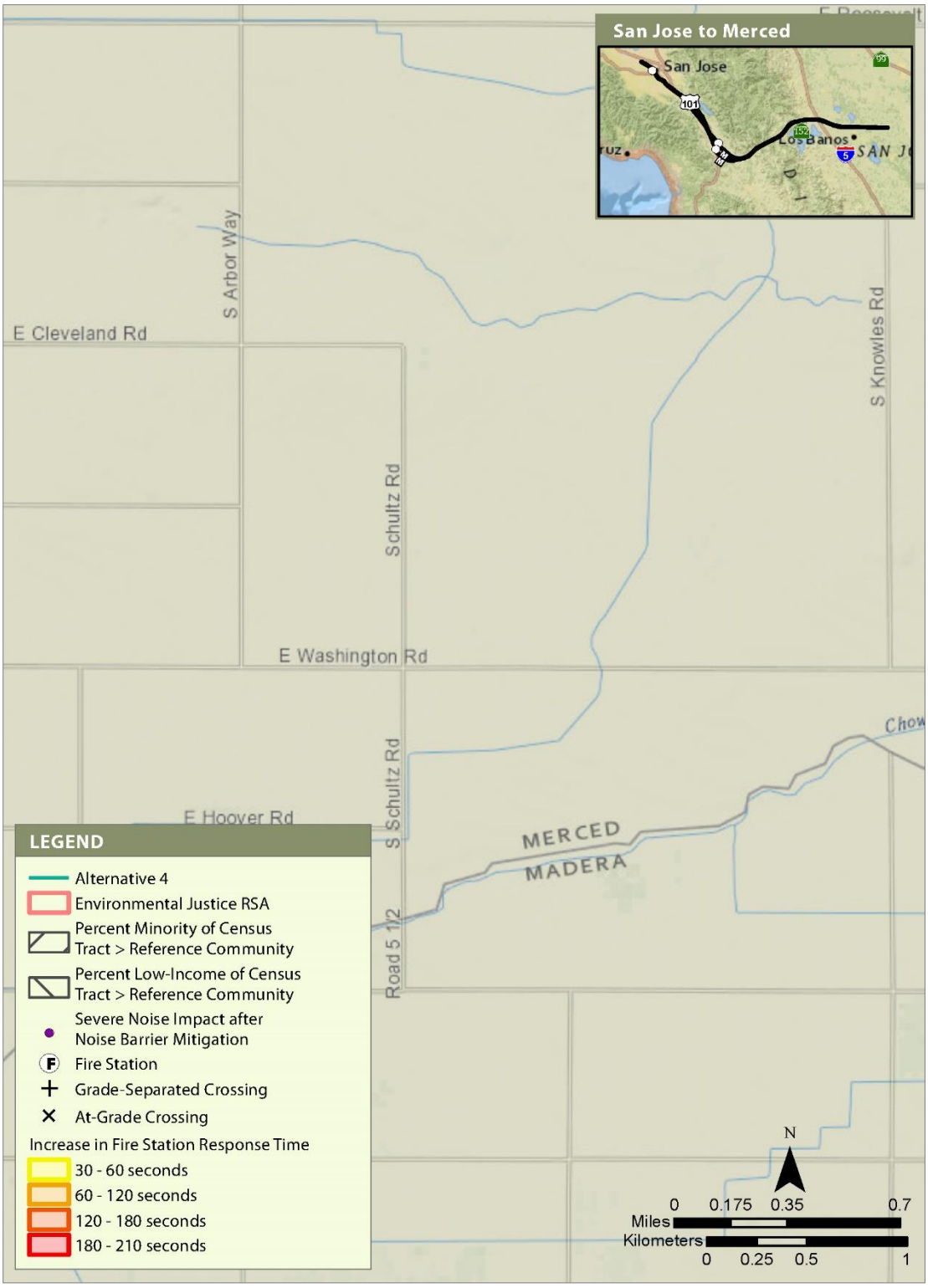
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-29 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (29 of 37)



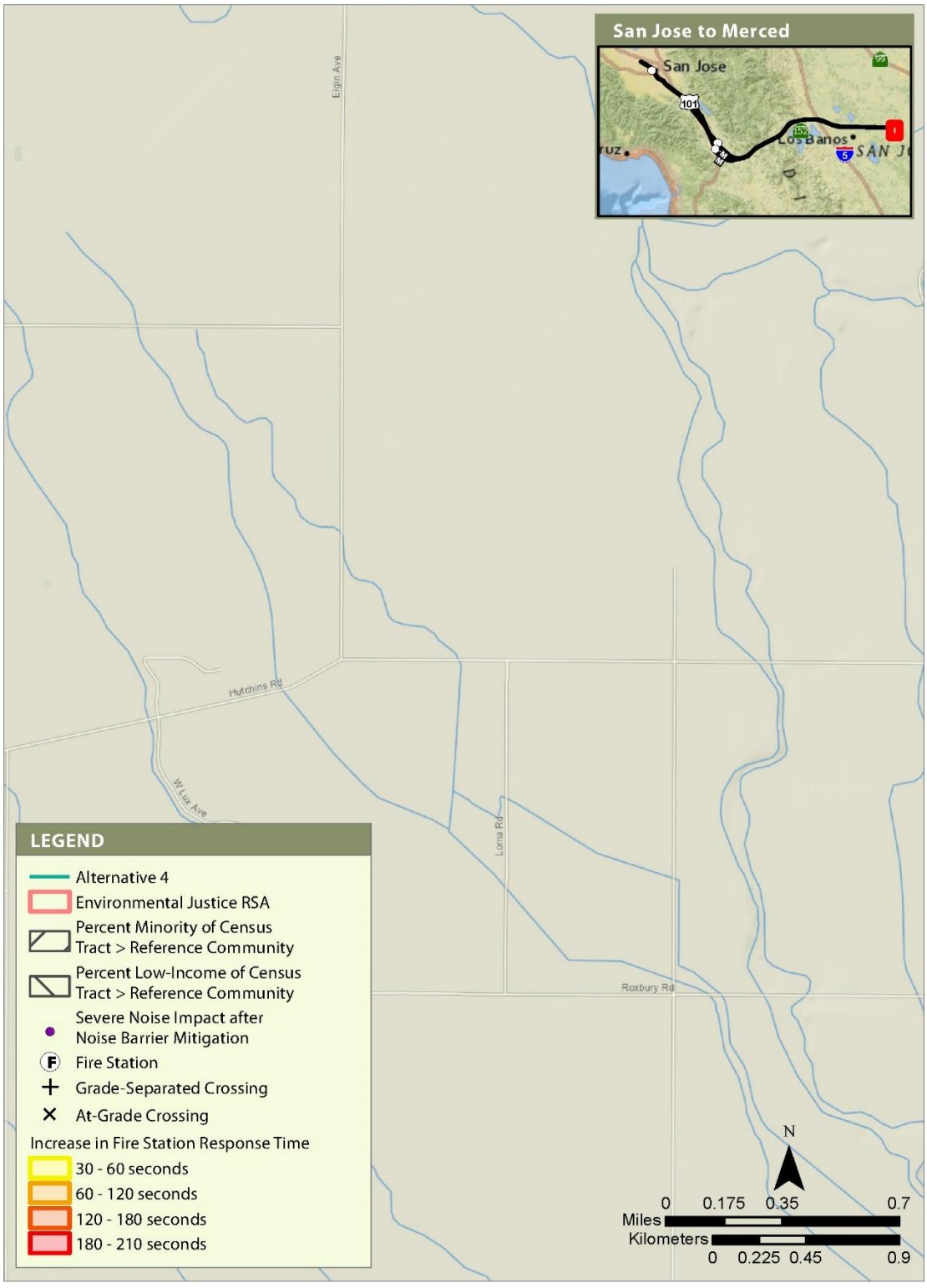
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-30 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (30 of 37)



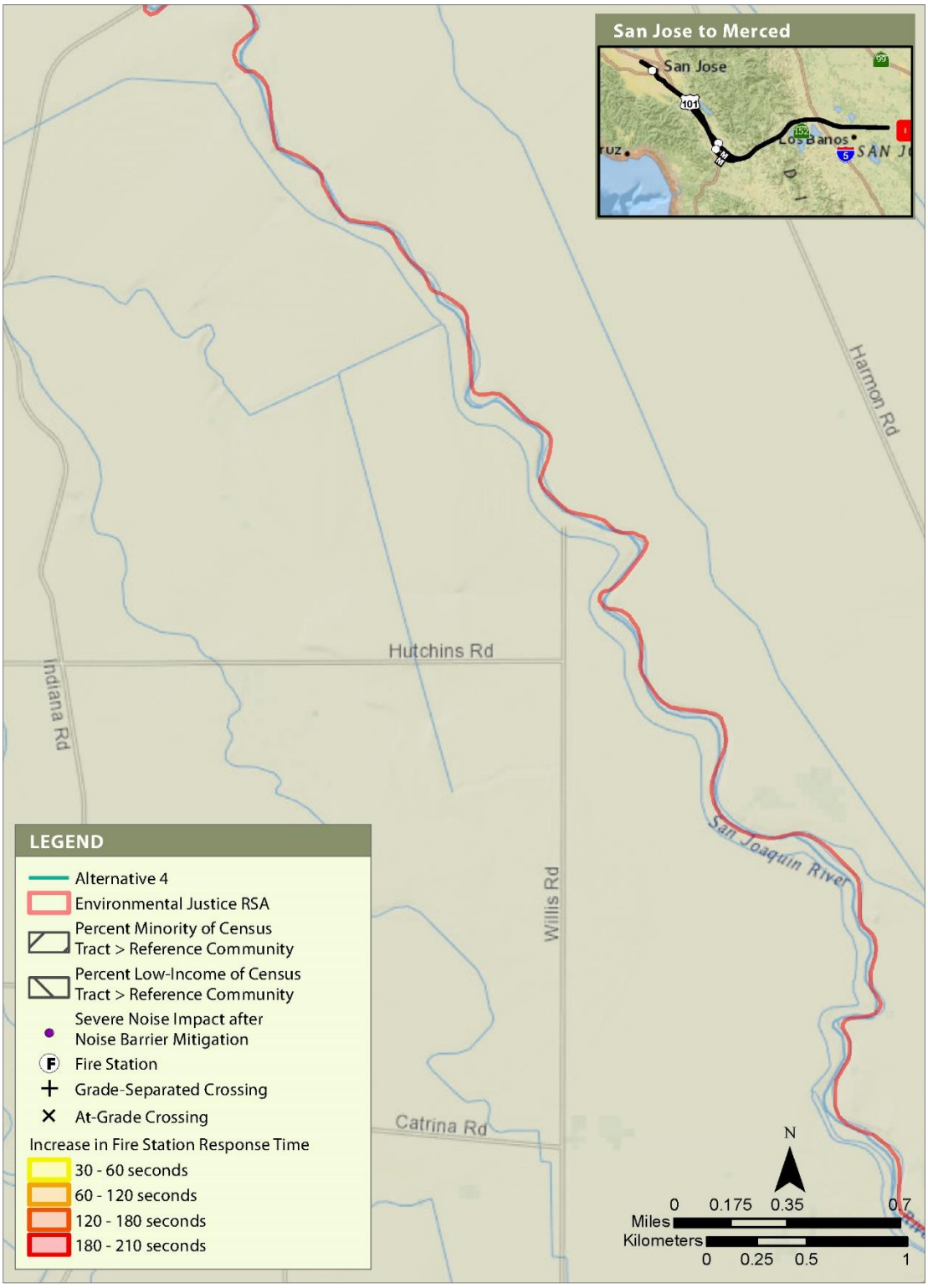
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-31 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (31 of 37)



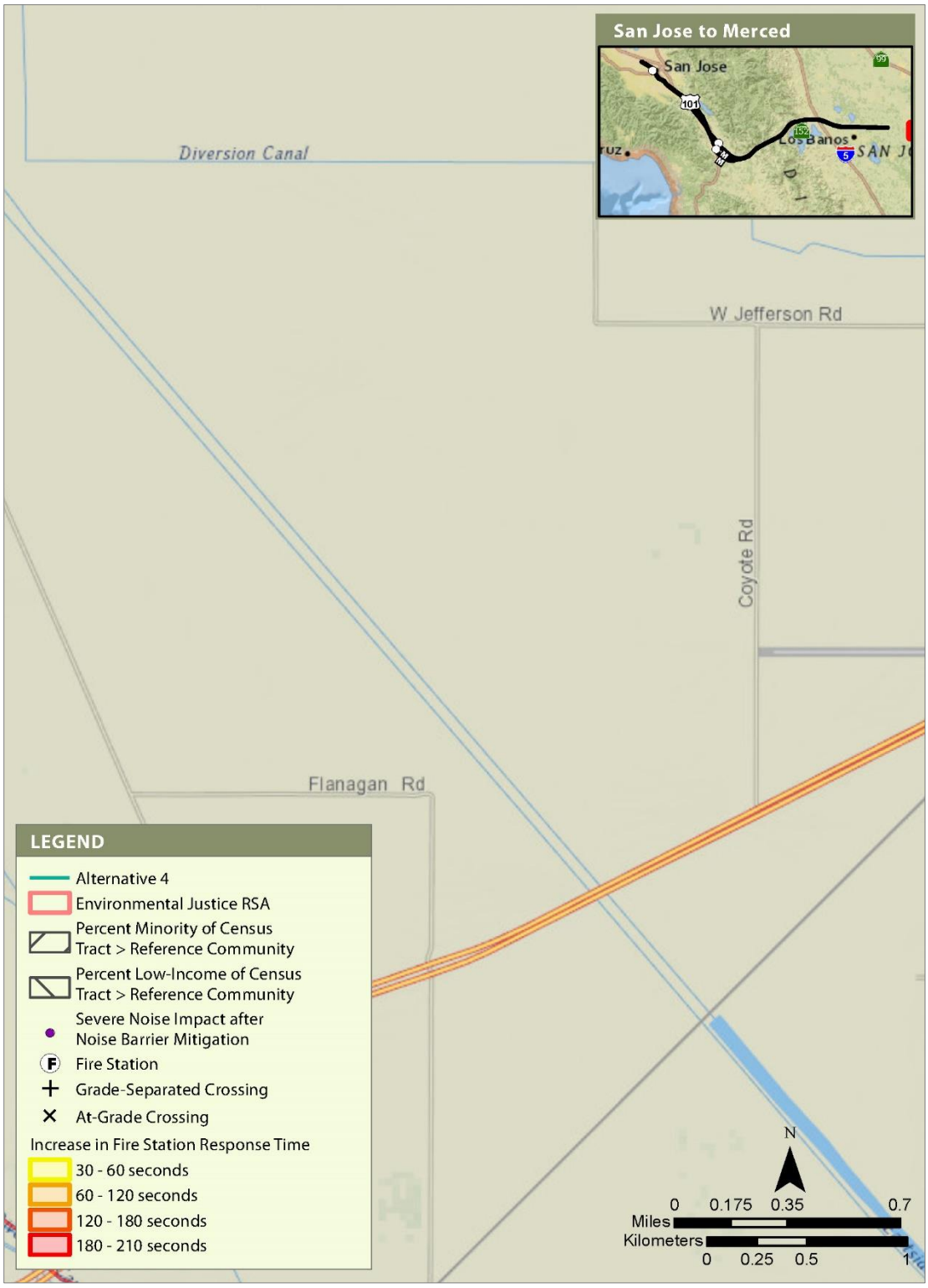
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-32 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (32 of 37)



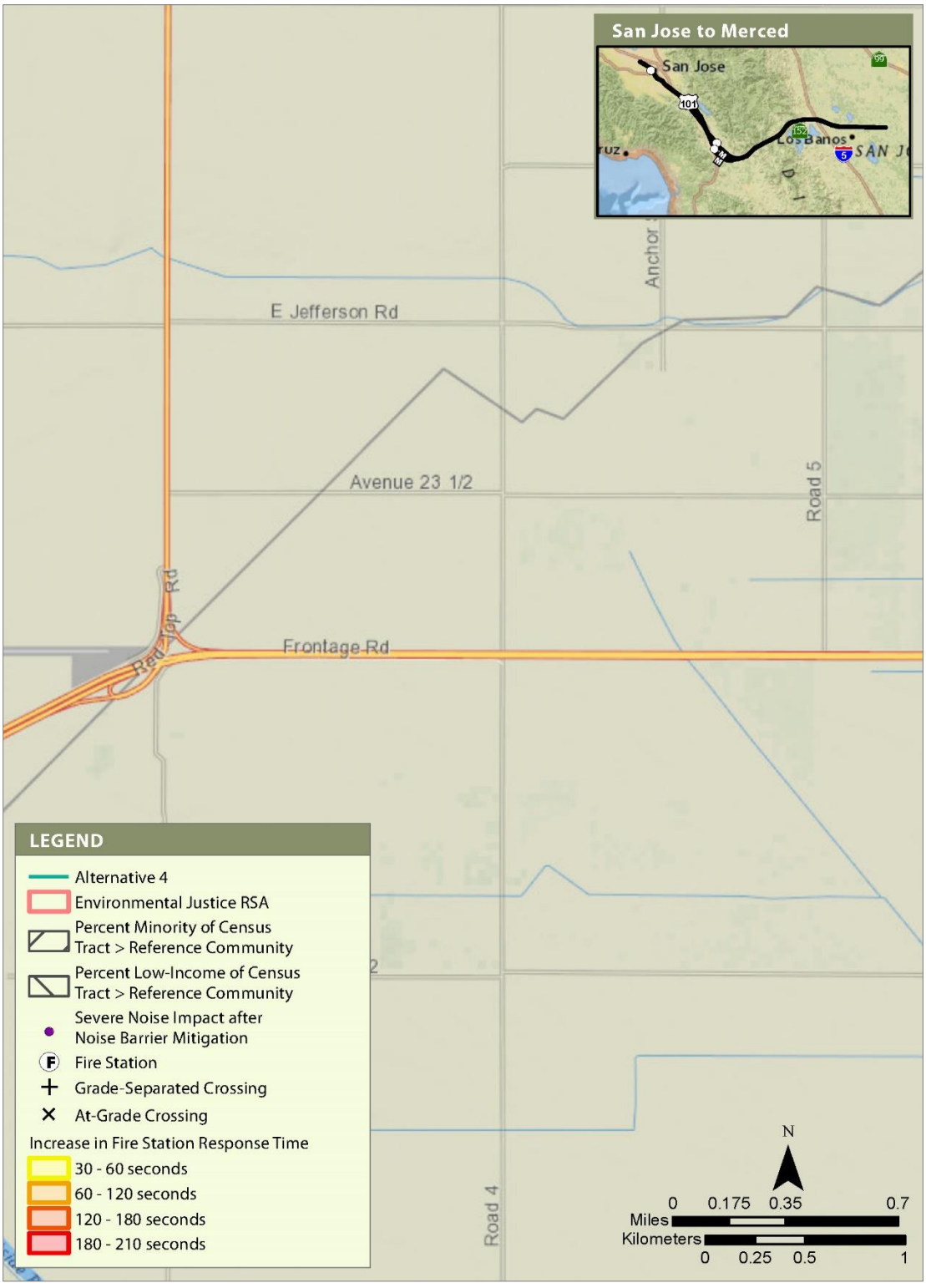
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-33 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (33 of 37)



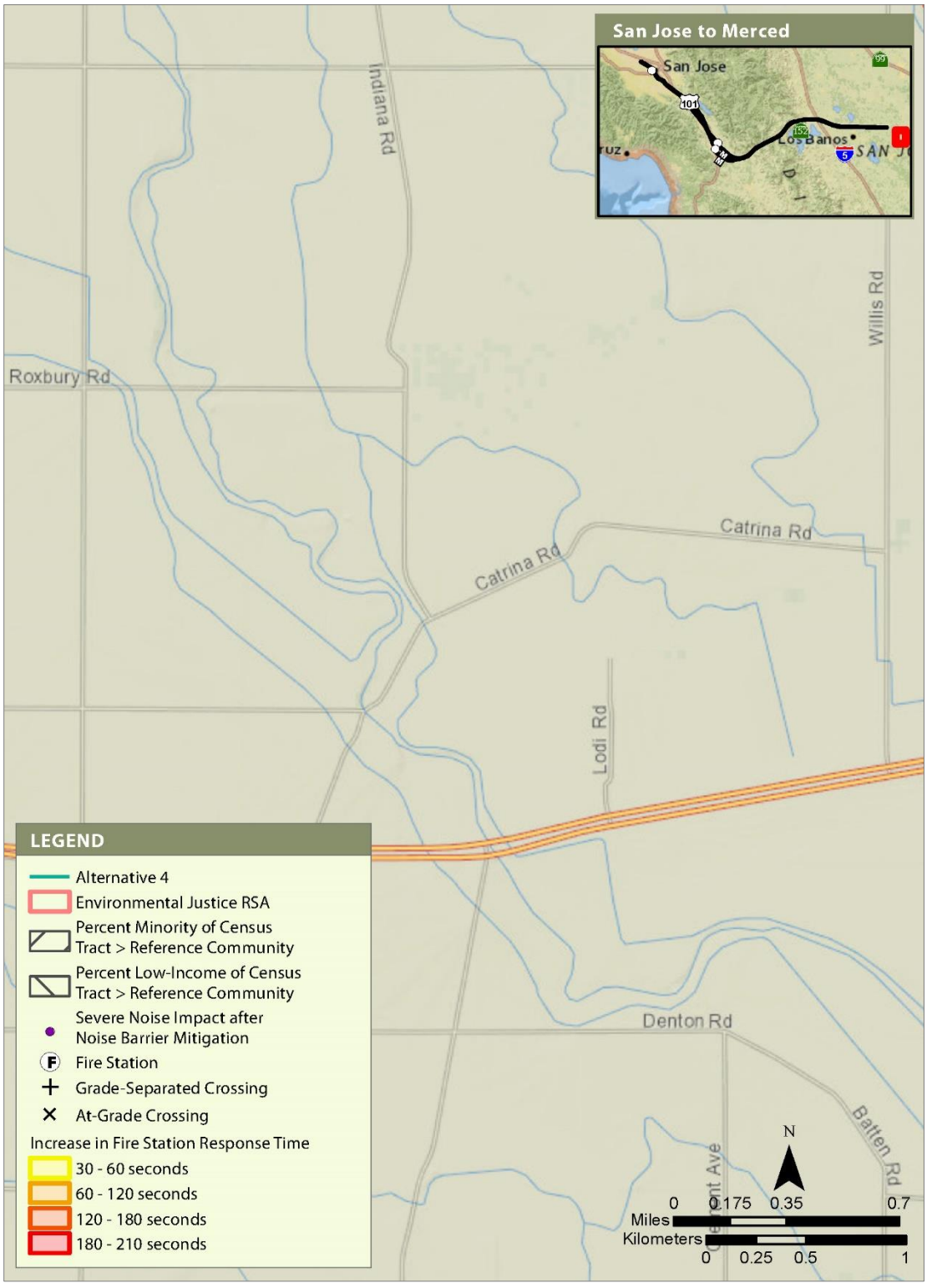
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-34 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (34 of 37)



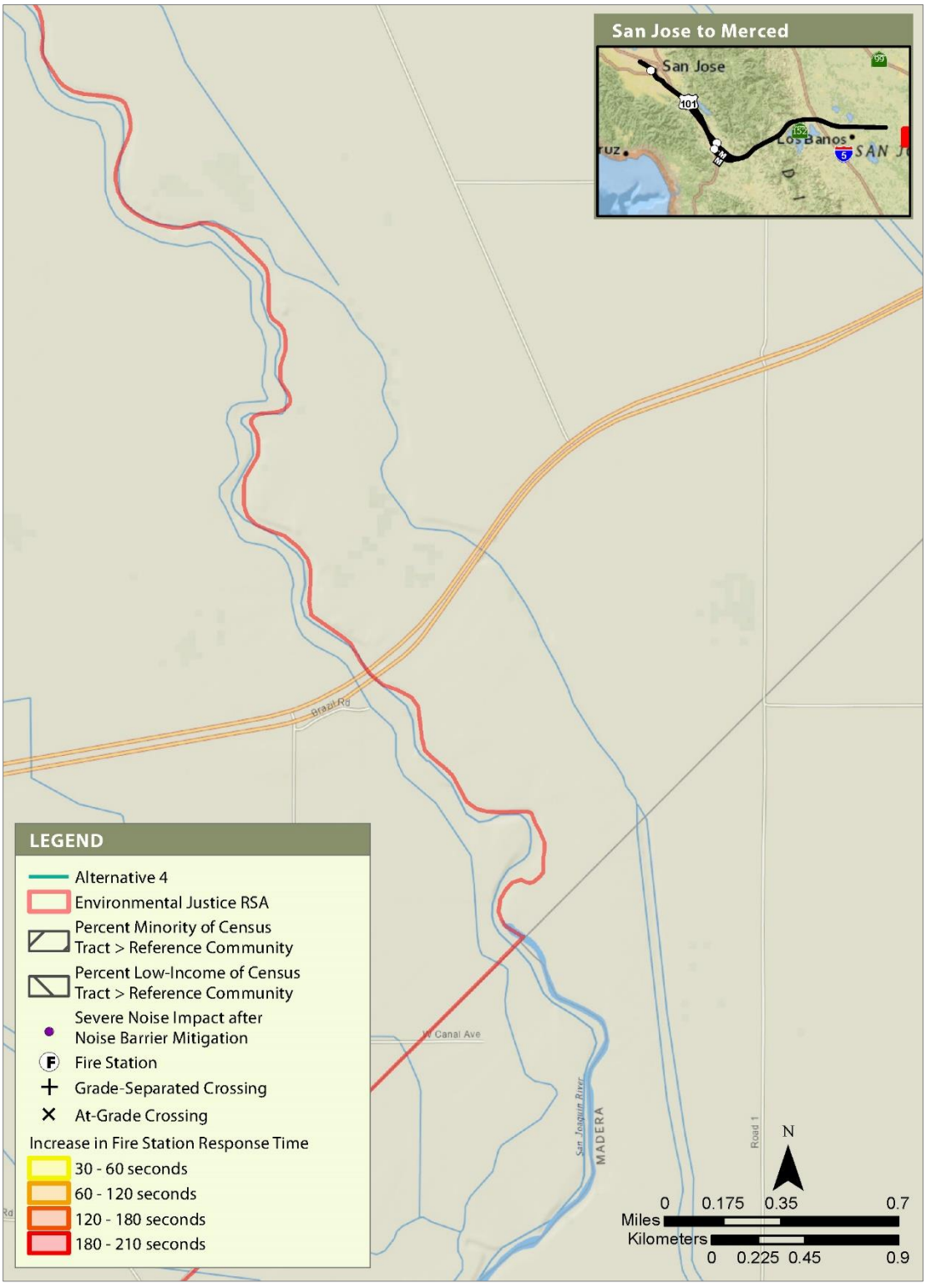
1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-35 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (35 of 37)



1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-36 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (36 of 37)



1. Noise impacts shown are locations of severe noise impacts after noise barrier mitigation (see discussion in Section 3.4, Noise and Vibration).
2. Emergency Response Vehicle Delays shown are areas with greater than 30 seconds delay based on worst-case analysis assuming all gates are down at the same time (see discussion in Section 3.11, Safety and Security).

Figure 5-D-37 Locations of Disproportionately High and Adverse Noise and Emergency Vehicle Response Delays before Consideration of Offsetting Community Improvements, Alternative 4 (37 of 37)