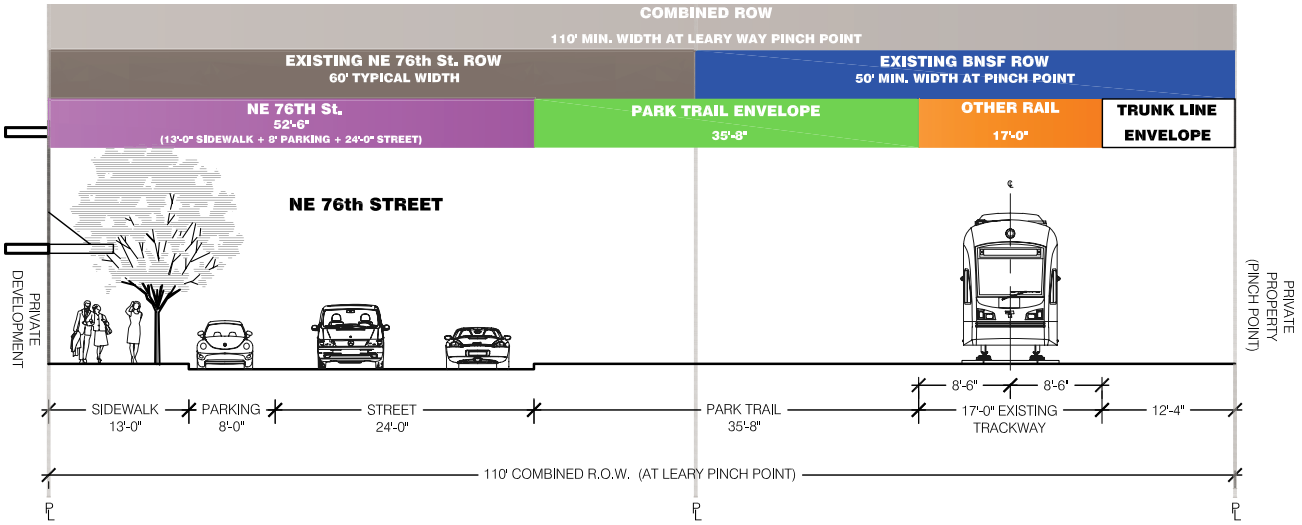
10 DOWNTOWN STUDY AREA INFRASTRUCTURE ALIGNMENT PLAN

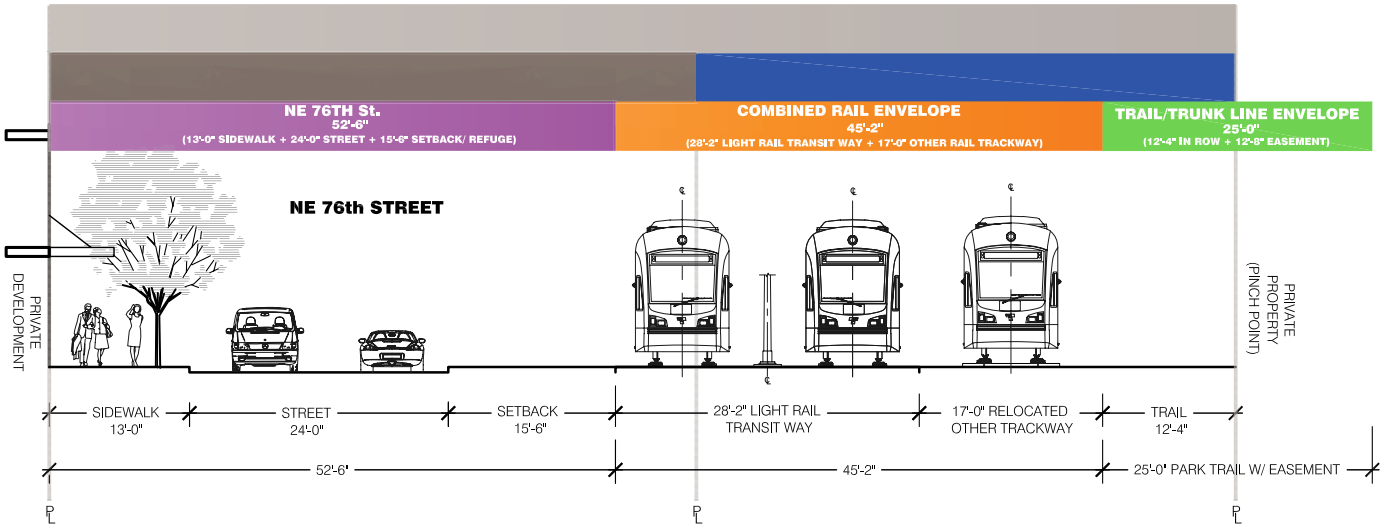
SCALE: 1"=20'-0"

9/10/2010

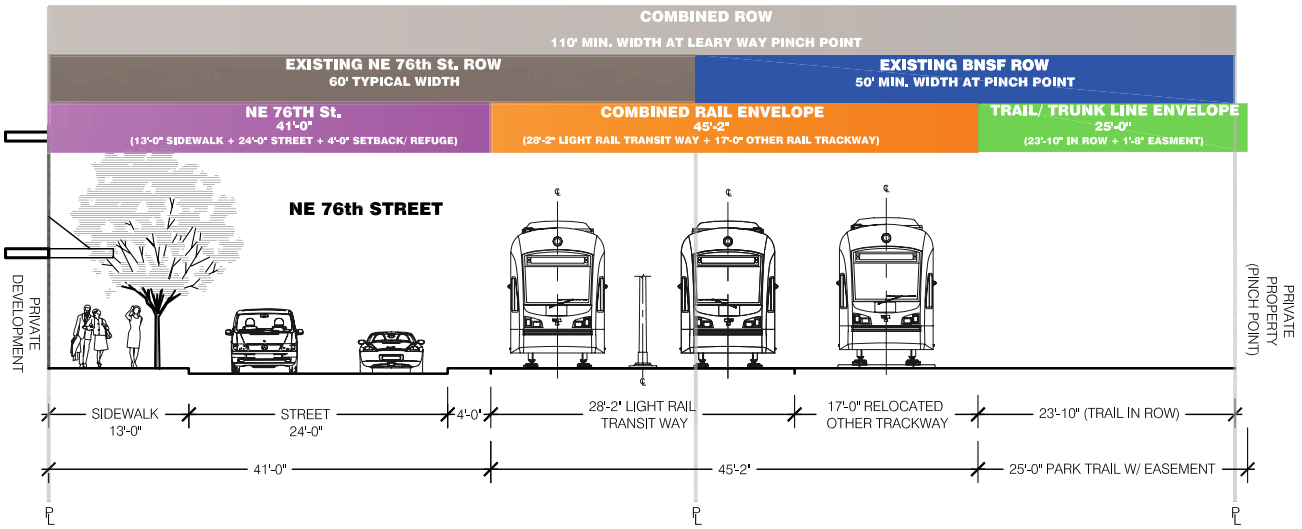
Redmond Central Connector Master Plan



a- Downtown other rail study: near term/ prior to light rail with existing other rail tracks



b- Downtown other rail study: long term/ with light rail and existing other rail tracks



c- Downtown other rail study: long term/ with light rail and relocated other rail tracks

Figure 4.03
Other Rail Envelope Studies

5.0 Sammamish Valley Study Area

The Sammamish Valley Study Area runs from the Sammamish River north to the intersection of Willows Road and NE 124th Street in the Sammamish Valley (see **Figure 1.04**). This section focuses on considerations for the future Park Trail Envelope and potential Passenger Rail Envelope. There are no immediate projects planned for this segment of the corridor; therefore, the level of analysis included in this document for the Sammamish Valley Study Area is less detailed. A preferred alignment has not been made yet as the City is looking for more public input on the alignment.

The Sammamish Valley Study Area has varying widths ranging from 50 feet at pinch points to 100 feet in places. Much of the study area parallels the adjacent Willows Road NE right-of-way. In this preliminary analysis, alternative alignment studies look at one segment of the study area that presents the greatest challenges for future development. This segment, located at the intersection of Willows Road NE and NE 116th Street, is a critical pinch point where the corridor narrows to 50 feet. Three preliminary scenarios for this pinch point are presented below. They are as follows:

- Trail corridor with no rail
- Trail corridor with existing tracks remaining and trail
- Trail corridor with relocated tracks and trail

In studying these scenarios, the following assumptions were applied:

- The minimum trail width per King County standards is 25 to 29 feet.
- The operations envelope for rail is 8.5 feet offset from the centerline of tracks for a total rail operations width of 17 feet.[1]
- Requirements for physical separations between trail users, rail, and additional train signaling are undetermined but could require expansion of the rail operations envelope beyond 17 feet.
- The study recognizes the need for sidings for potential future rail operations, but locations of such existing sidings and the future need for relocated or redesigned sidings has not been considered in this study. However, this study does recognize that any such sidings would further reduce corridor width for park and trail use.

5.1 Evaluation of Alternatives

Alignment alternatives were evaluated at the most critical pinch point within the Sammamish Valley Study Area, which is at the Intersection of Willows Road NE and NE 116th Street. At this location, the Redmond Central Connector right-of-way is only 50-feet wide.

5.1.1 Trail Corridor without Rail:

This alternative proposes a trail corridor without rail, meaning the existing rail would be removed in the future. The trail would be constructed on the existing track bed (see **Figure 5.01**). The construction of the trail at this point:

- Roughly centers the trail on the track bed, and therefore the corridor, and allows ample room to meet trail standards even at the pinch point.
- Would require minimal grading, as the track bed area and grades would largely work for the planned trail with relatively minor grading, widening, and mitigation of critical areas.
- Allows additional width for parallel hard surface and soft surface trails as well as space for buffers/planting and park/trail amenities like seating, art, etc.

1 These are standards used by ST in the Bel-Red corridor for rail design adjacent to other rail.

5.1.2 Trail Corridor with Existing Tracks

This alternative preserves the existing rails for potential operation while integrating the trail adjacent to the tracks. It assumes that the trail would be on the west side of the tracks, where it would run adjacent to Willows Road. With the trail on the west side, trail users would not have to regularly cross the tracks to return to the intersections along Willows Road (see **Figure 5.02**). However, the trail location will be evaluated further with the public during the master planning process. The construction of the trail at this location:

- Does not allow adequate room at the pinch point.
- May require trail encroachment into Willows Road NE right-of-way, including realignment of curb and elimination of existing bike lane, to meet the minimal standard width.
- Could require significantly more grading and possibly retaining walls that separate the rail from the trail, as compared to the corridor with no rail.
- Regrading of the grade transition zone between the track and Willows Road NE could require fill of possible ditch/wetlands and associated regulatory and permit issues.
- Reduced or inadequate width for multiple trails and surfaces, as well as reduced or inadequate space for buffers and plantings, and park trail amenities like seating, art, etc.

5.1.3 Trail Corridor with Relocated Tracks

Relocating the tracks to one side of the corridor for rail operation allows increased space and flexibility for the trail. This alternative assumes that the trail would be on the west side of the tracks where it would run adjacent to Willows Road, and the tracks would be relocated to the east side of the study area. With the trail west of the tracks, trail users would not have to regularly cross the tracks to return to the intersections along Willows Road (see **Figure 5.03**). The construction of the trail at this location:

- Allows ample room to meet trail standards even at the pinch point.
- Could require retaining walls and significantly more grading than the other two alternatives, as the trail construction would take place in the existing grade transition zone between the existing tracks and existing Willows Road NE.
- Requires reconstruction of rail/street crossings.
- Regrading the grade transition zones between the tracks and Willows Road NE and between the tracks and the east corridor boundaries could require fill of possible ditch/wetlands and associated regulatory and permit issues.
- Allows additional width for multiple trails and surfaces as well as space for buffers and plantings, and park/trail amenities like seating, art, etc.

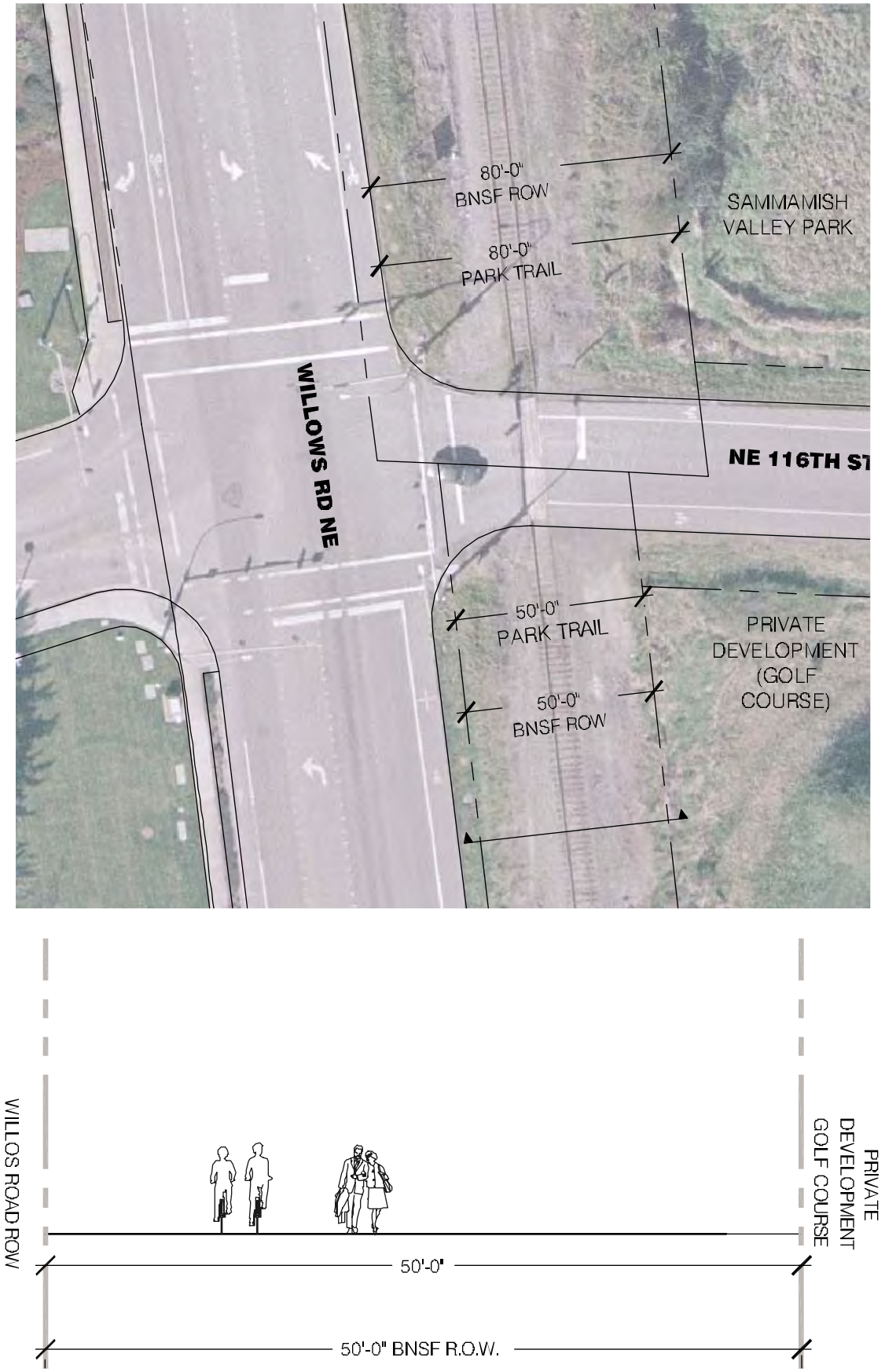
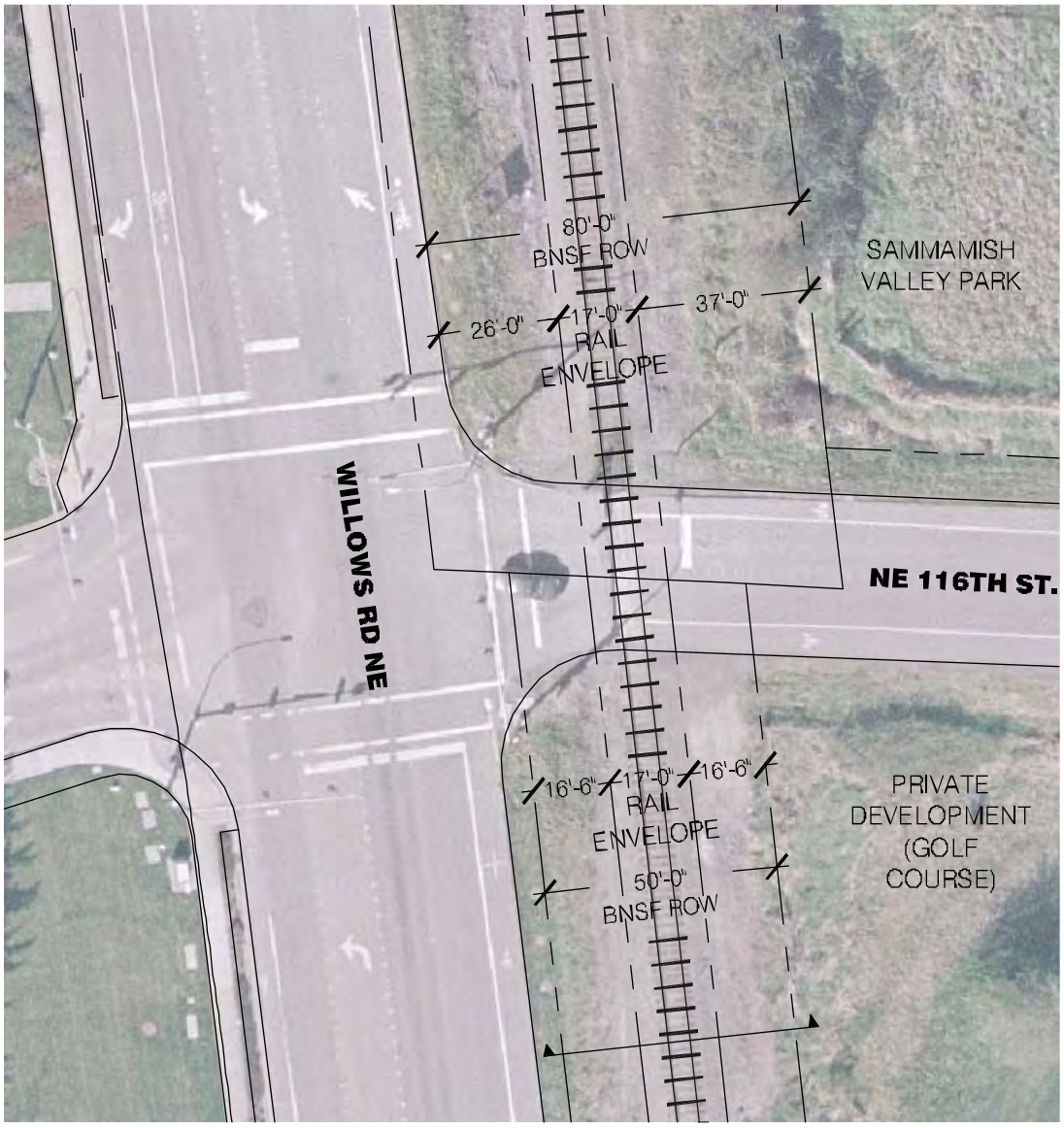


Figure 5.01a Sammamish Valley Study Area: Trail Corridor with No Rail (Typical Plan)
Figure 5.01b Sammamish Valley Study Area: Trail Corridor with No Rail (Typical Section)



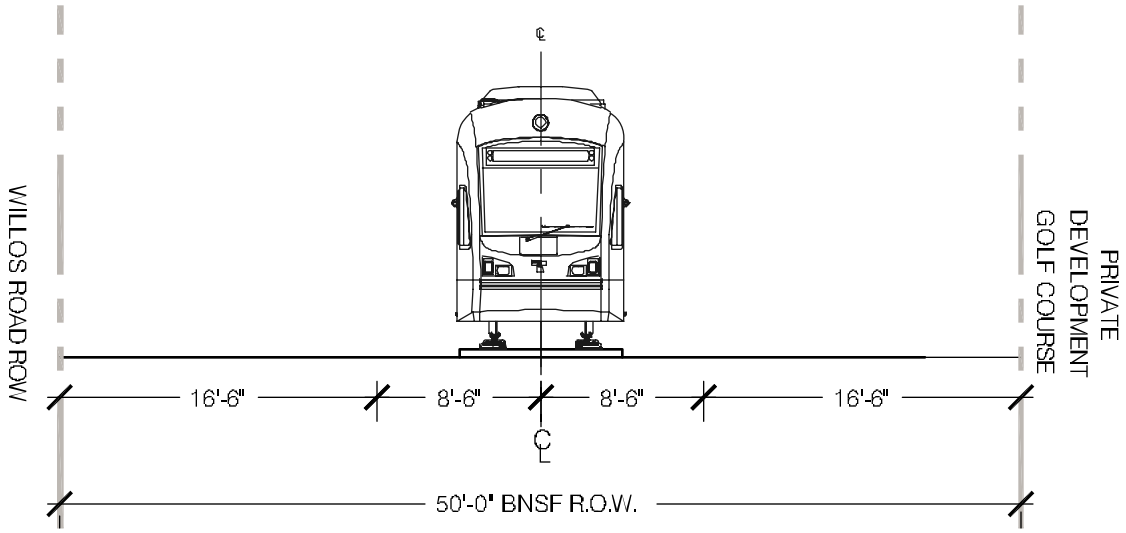
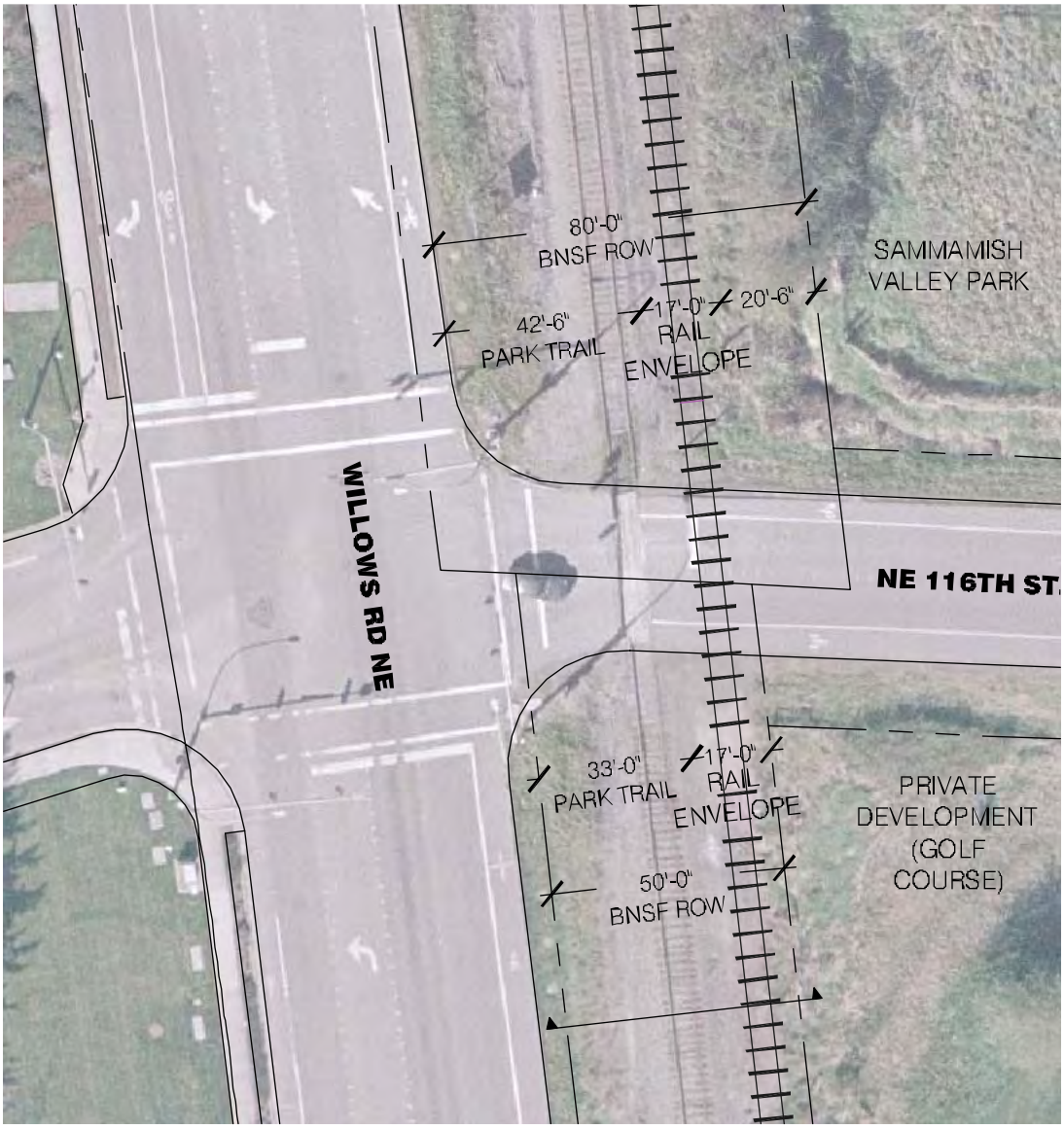


Figure 5.02a Sammamish Valley Study Area: Trail Corridor with Existing Tracks (Typical Plan)
Figure 5.02b Sammamish Valley Study Area: Trail Corridor with Existing Tracks (Typical Section)



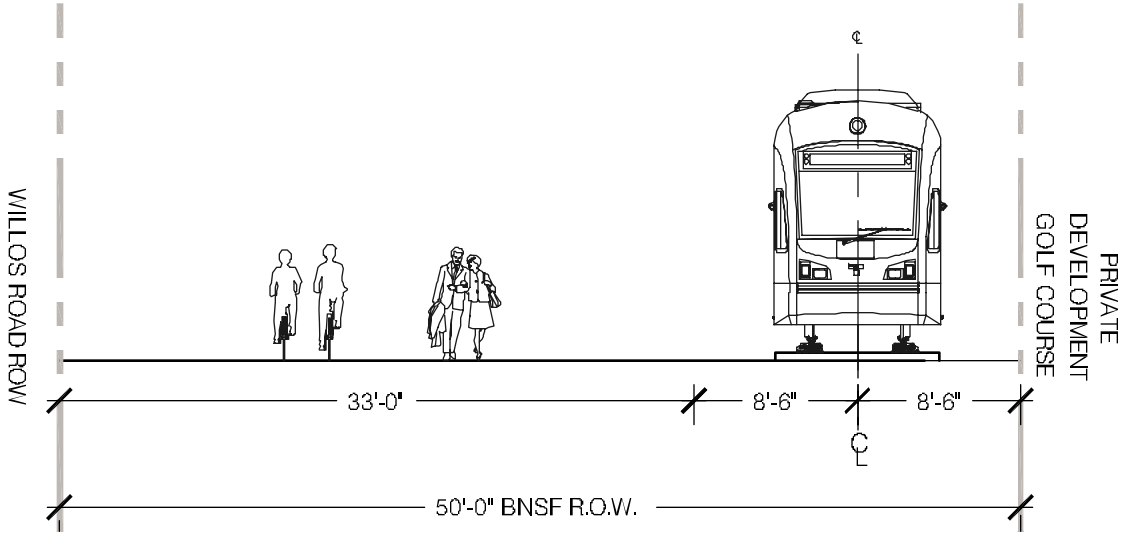


Figure 4.03a Sammamish Valley Study Area: Trail Corridor with Relocated Tracks (Typical Plan)
Figure 4.03b Sammamish Valley Study Area: Trail Corridor with Relocated Tracks (Typical Section)

6.0 Future Steps

The definitions and locations of infrastructure envelopes included in this document will serve as the basis to:

- Proceed with final design of the stormwater trunk line.
- Continue with the master planning process to define conceptual design of the Redmond Central Connector.
- Finalize required agreements with the City's partners for the Redmond Central Connector.

The master plan will be presented in a draft form in early 2011, and the final master plan is anticipated to be presented for City Council adoption in spring of 2011.

Through the forthcoming Redmond Central Connector master planning process, the envelopes defined in this Infrastructure Alignment Plan will be viewed as minimal conditions. The master plan will add additional detail such as infrastructure improvements and identification of elements that people would like included in the development of the corridor. The master plan will be a road map to bring the Redmond Central Connector to reality, with each near-term step moving the project closer to the City's long-term vision for developing the corridor as a great amenity that serves the community.