

# WILDLIFE MOVEMENT IN NORTHERN CALIFORNIA

The California High-Speed Rail system is being designed to minimize impacts to important wildlife linkages, contribute to wildlife passage improvement plans, and mitigate impacts to wildlife movement consistent with Proposition 1A, approved by California voters. The California High-Speed Rail Authority (Authority) has analyzed wildlife movement and mitigation options since 2001. The goal is to limit, where feasible, the extent to which high-speed rail presents an additional barrier to an animal’s natural movement, and improve movement where barriers currently exist.

Coordination with local and regional conservation groups throughout the design and environmental review process provided valuable insight and on-the-ground knowledge. The Authority has adopted a variety of mitigation measures tailored to the nature of impacts. Where existing rail right-of-way will be used, the Authority ensures that the guideway’s permeability will be protected or improved. In other areas, such as Pacheco Pass, an overcrossing is proposed. Viaduct sections, guideway enclosures, and dedicated undercrossings are proposed in the Grasslands Ecological Area and vicinity.

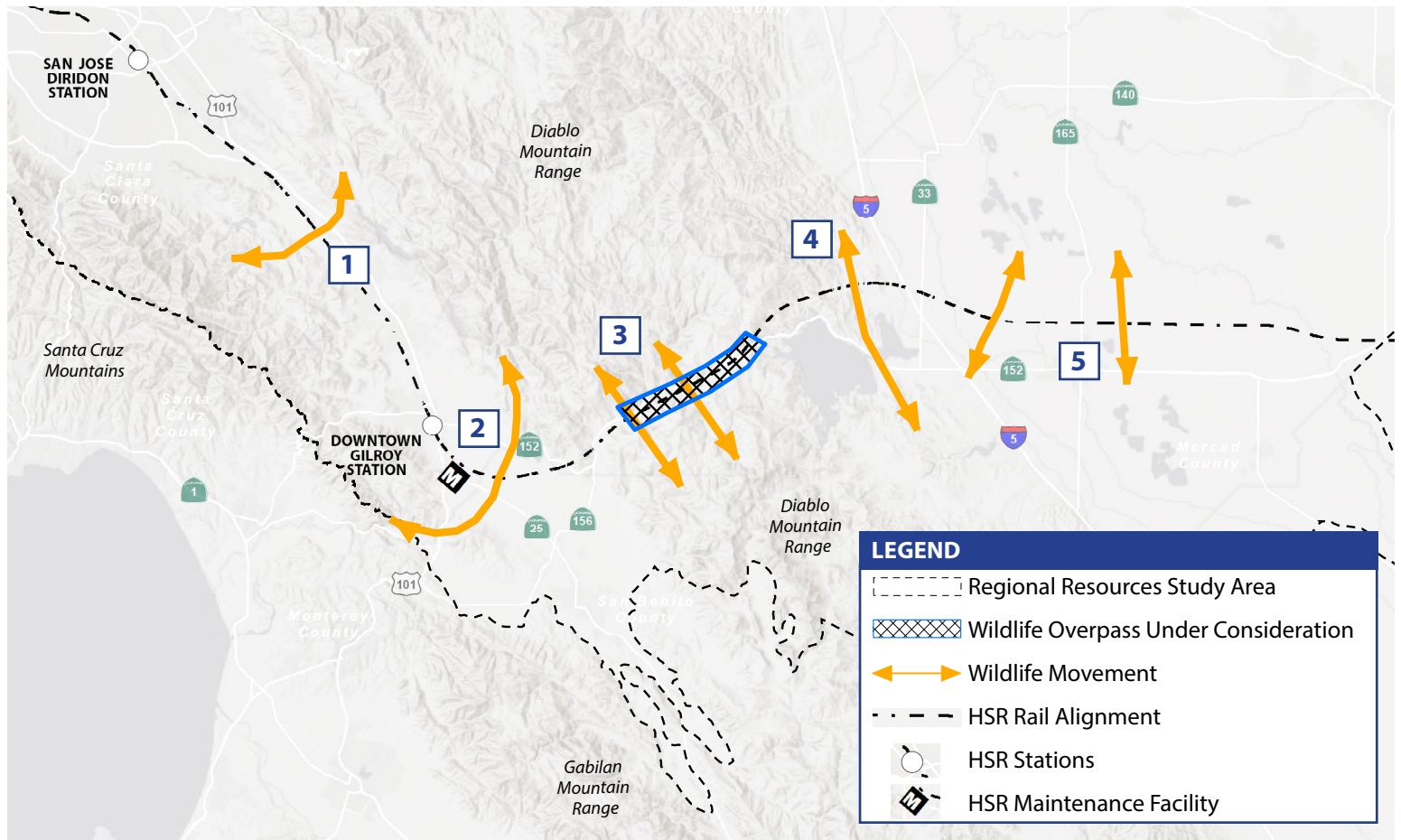
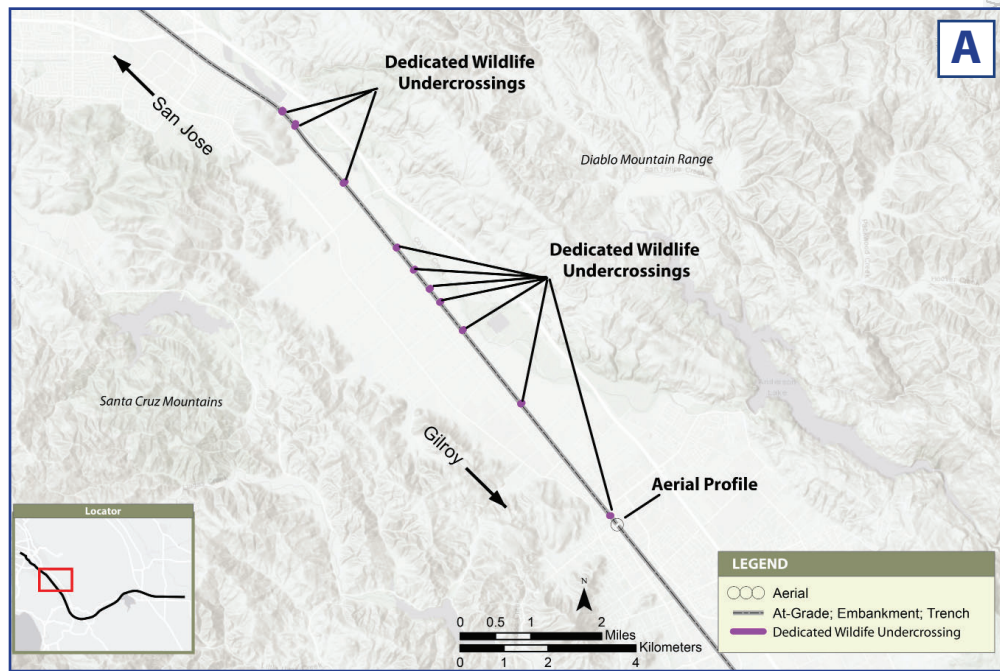


Figure 1. Shows the alignment between San Jose, Gilroy, and the Central Valley and shows the location of areas that are important for wildlife movement, including the following:

- 1 Coyote Valley:** East-west movement between the Diablo Range and the Santa Cruz Mountains.
- 2 Soap Lake Floodplain:** Northeast to southwest movement between the Diablo Range, the Santa Cruz Mountains, and the Gabilan Range.
- 3 Western Pacheco Pass** } North-south movement along the Diablo Range both west and east of San Luis Reservoir. A possible location of a wildlife overpass over State Route 152 is shown in Pacheco Pass in an approximately 7- to 8-mile zone west of San Luis Reservoir.
- 4 Eastern Pacheco Pass** }
- 5 Central Valley:** North-south movement between federal, state, and regionally held natural lands in the Grasslands Ecological Area.

# IMPORTANT WILDLIFE LINKAGES

Figure 2. Key map with three zoom-in maps, showing A. Coyote Valley, B. Soap Lake/Western Pacheco Pass, and C. Western Pacheco Pass/Grasslands Ecological Area

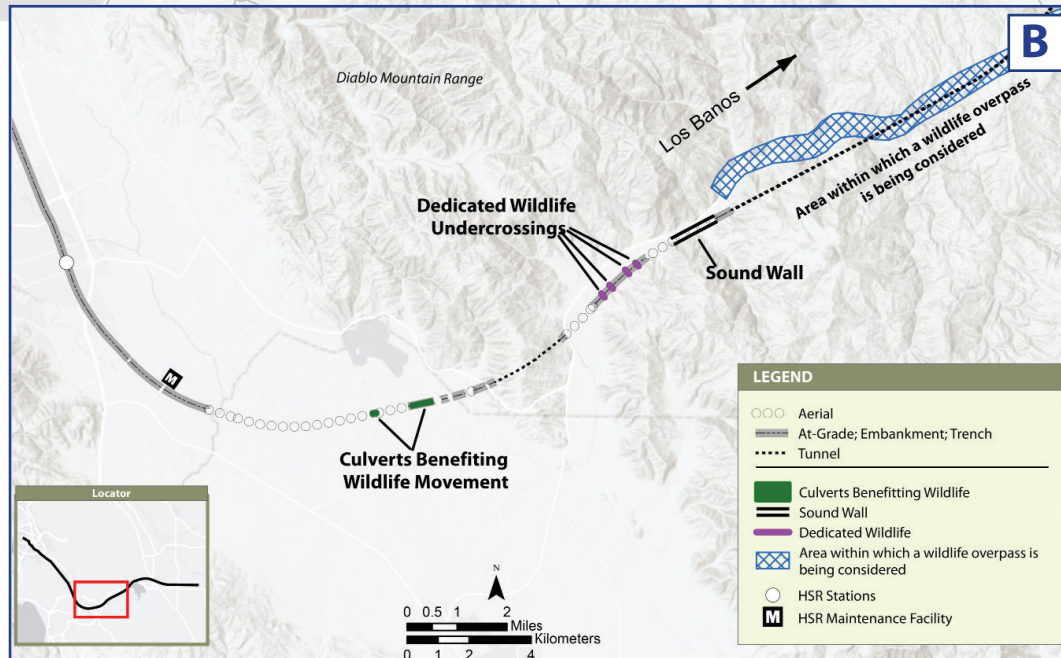
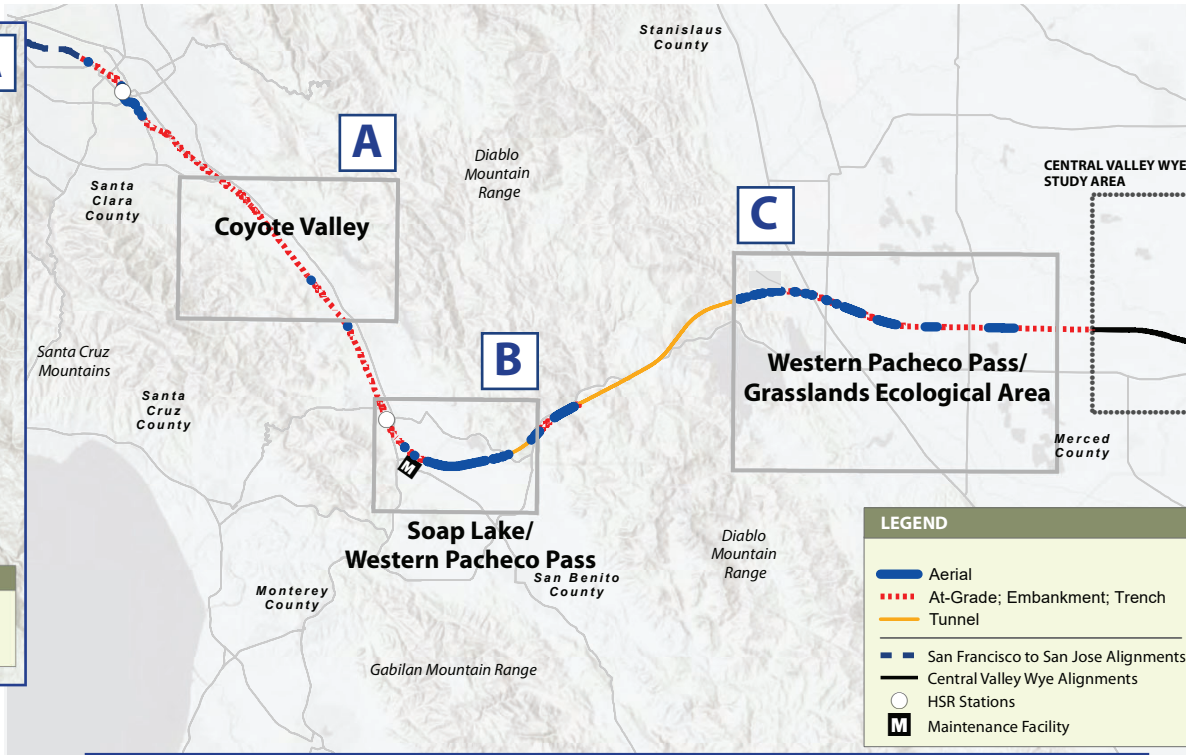


**A** This map depicts the locations of dedicated wildlife crossings in Coyote Valley.

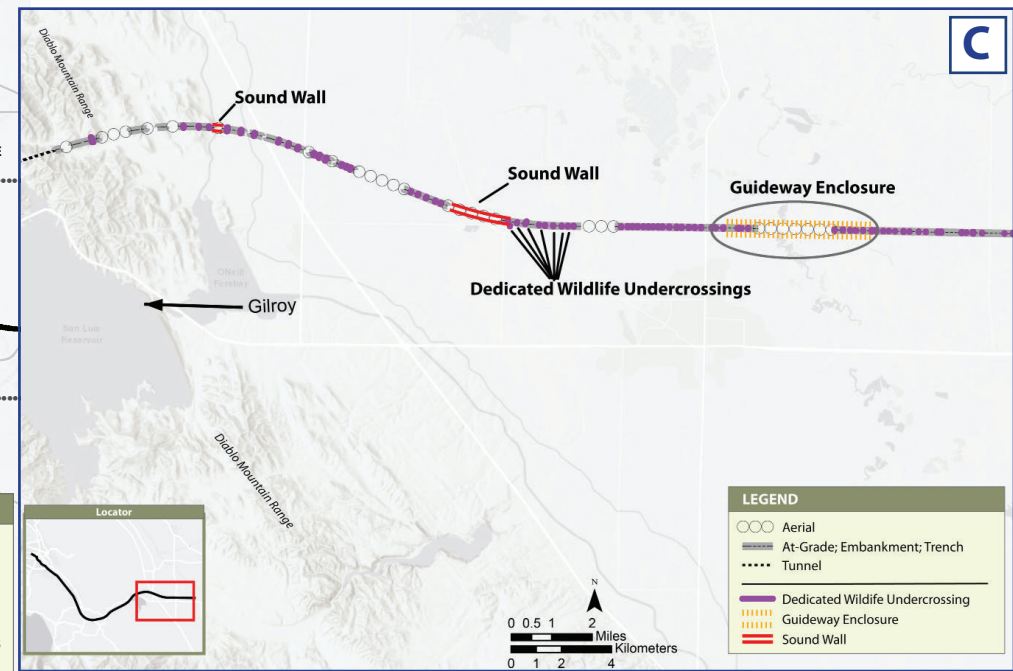
**Coyote Valley** is the narrowest point of connection between the Diablo Mountain Range and the Santa Cruz Mountains. This region is relatively undeveloped compared to San Jose to the north and Morgan Hill and Gilroy to the south. The Authority is proposing to create a new undercrossing for the existing rail corridor and for Monterey Road, a major arterial that runs through the area. This will lead to an overall improvement in wildlife habitat and connectivity.

**The Soap Lake Floodplain** includes the Upper Pajaro River between the Diablo Range, the Gabilan Range and the Santa Cruz Mountains. One of the Authority's primary strategies to minimize adverse effects to wildlife movement in Soap Lake is the conversion of embankment and at-grade rail sections to viaducts.

**Pacheco Pass** offers wildlife north-south connectivity between the inner and outer portions of the Diablo Range, roughly divided by State Route 152. Tunnel sections avoid approximately 15 miles of rail impacts to wildlife movement in Pacheco Pass. In addition, the Authority is supporting the planning of a proposed wildlife overpass in the section where the rail is underground to provide safe passage across State Route 152 for larger species such as Tule elk and mountain lions.



**B** This map shows the locations of aerial structures, culverts, dedicated wildlife crossings, and sound walls in Soap Lake and Western Pacheco Pass that will provide for improved wildlife movement across or in the vicinity of the rail. This figure also shows the area where a wildlife overpass crossing over State Route 152 is being considered.



**C** This map depicts the locations of aerial sections, dedicated wildlife crossings, and sound walls placed on the east side of Pacheco Pass and Grasslands Ecological Area to minimize impacts to wildlife movement. This map also shows the location of the guideway enclosure in the Grasslands Ecological Area to avoid bird strikes, light, and visual effects, as well as to minimize noise and vibration effects.

**The Grasslands Ecological Area (GEA)** is an important stopover on the Pacific Flyway for tens of thousands of migratory birds, especially waterfowl and shorebirds. A three-mile section of the rail alignment in the GEA northwest of Los Banos will be enclosed with a "tubelike" structure, called a guideway enclosure, to avoid train strike electrocution, light, and visual impacts, as well as to minimize noise effects on migratory birds.

**Wildlife undercrossings** provide for movement under the rail alignment in Coyote Valley, Pacheco Pass, and the GEA.

**Noise walls** are also proposed in discreet sections of Pacheco Pass and the GEA to further limit noise, visual, and light impacts to important wildlife movement locations.

**Wildlife jump-outs** or escape ramps are designed to allow animals to escape from the fenced rail corridor.

## Safe Passages for Wildlife

The importance of wildlife movement has increased in recent years. Many native species continue to experience population declines, especially those with large habitat ranges. This is due, in part, to ongoing habitat fragmentation which limits mobility and ultimately the number of available resources such as food and mating partners. Providing safe passages for wildlife across busy roads has not only been shown to reduce effective habitat fragmentation, it has also been shown to significantly reduce vehicle collisions.

The importance of providing safe passages for wildlife is reflected in the 2022 California Wildlife Conservation Board allocation of approximately \$30 million dollars to wildlife movement improvement projects and the 2021 federal Infrastructure Investment and Jobs Act, which includes \$350 million for wildlife crossing planning and infrastructure.

The Authority is designing the system to minimize and mitigate impacts to wildlife movement and to create a permeable corridor. The Authority has partnered with Pathways for Wildlife, a wildlife movement research organization, as well as other transportation agencies and the Santa Clara Valley Habitat Agency to apply for a California Wildlife Conservation Board planning grant. If received, it will fully or partially fund planning efforts to inform placement of a wildlife overcrossing over State Route 152.



Figure 3. Typical Wildlife Undercrossing



Figure 4. Dual Purpose Culvert/Wildlife Undercrossing

