



**December 16, 2020  
RESPONSE TO XCAP COMMENTS**

**1. What is Shoofly linear cost?**

Unit costs used per track foot of shoofly is \$550/track foot. In our case, we have two tracks so the linear feet of the track would be doubled for track feet. In addition, \$400/linear feet is needed for the temporary OCS for the shoofly. This unit cost for shoofly includes the removal of the tracks once the shoofly is no longer needed.

**2. How much width of frontage property takeoffs is estimated when we call it sliver of Right of way? Is it like 1-2 feet or 4-5 feet or more like between 5-10 feet? Any estimate?**

The width of the slivers generally vary, but are less than 10 feet wide.

**3. Additional cost for alternatives when considering 1% slope rather than 2% or 1.4% etc. that were assumed in these alternatives. Can a factor be used to get the approximate costs?**

No, a factor cannot be applied because each alternative is unique and has various impacts to surrounding infrastructure making the cost implications complex. For Meadow/Charleston a 1% incline or decline from Charleston Road would not allow for tie-in with existing rails leading to relocation or reconfiguration of San Antonio Station. San Antonio Rd overpass structure would also need to be modified for the Viaduct option, the structure would need to be raised and the ramps adjusted. For construction, the shoofly tracks would be expected to occupy half of Central Expressway, with a temporary station and tie back in after the curve just north of Rengstorff Ave. At Churchill, the constraint would be Palo Alto Station and the reverse curve immediately south of the station. For the 1% slope, Palo Alto station and this reverse curve of tracks would likely need to be reconfigured. The platform would likely need to be raised, which would affect the surrounding grading of the area and the shoofly would encroach onto Alma Street for a lengthier portion of the downtown Palo Alto Area.

**4. What are maintenance costs for various alternatives?**

We have not developed costs for the long-term maintenance items, but we have identified the anticipated items. These can be found in Row M of the Evaluation Matrix. Items include pump stations for dewatering for all the alternatives, except the Viaduct. Lift stations/siphons for the creek diversions for the Trench and the Tunnel alternatives are also identified. Caltrain has provided some clarity on who would be responsible for maintenance costs related to the railroad. Caltrain will take on the maintenance responsibility of new infrastructure that will raise or lower the tracks by embankment, viaduct or bridge; however, the City should assume it is responsible for the cost to maintain a Trench or Tunnel alternative.”

**5. Is the ROW impact temporary during construction or permanent in Option 1, 2 of Churchill Closure and for Partial Underpass Alternative for Churchill Avenue?**

Longitudinal encroachment into Caltrain ROW is required for Churchill Closure with Mitigation Option 1 since this option requires the ramp structure for pedestrian tunnel within the Caltrain ROW. The improvements on the layout plans are shown inside the Caltrain ROW (magenta Caltrain ROW lines). However, for Churchill Avenue Closure with Option 2, transverse encroachment below ground is anticipated.

For the Churchill Avenue partial underpass option, both transverse and longitudinal encroachments will be required to provide the tunnel and ramp structure for the pedestrian crossing that will fall within the current Caltrain ROW.

All options will require permanent easements and temporary construction easements in Caltrain Right-of-Way.