

Sunset Road, Silverbell Road to River Road

Summary of Process to Develop Preferred Alignment

Traffic Analysis

Traffic forecasts associated with the Sunset Road extension were estimated using the Dynamic Traffic Assignment Model (DTA) developed for the I-10, Ina Road to Ruthrauff Road DCR project. Three alternatives were evaluated, 1) Extend Sunset Road from Silverbell Road to I-10, 2) Extend Sunset Road from Silverbell Road to River Road, 3) Extend Sunset Road from Silverbell Road to Camino de la Tierra. Based on the analysis results, it was recommended that a direct extension with Camino de la Tierra was undesirable due to the adverse impacts associated with the increased traffic demand on this collector roadway.

Alignment Assessment

Silverbell Road to I-10

Several alignments for the connection between Silverbell Road and I-10 were evaluated. Santa Cruz River floodway/floodplain mapping prepared by the Pima County RFCD in 2010 was utilized to develop and evaluate each alternative.

RTA Plan Alignment – The alignment provided in the approved RTA plan maintains the extension of Silverbell Road on the existing roadway alignment. Based on the floodway limits and the water surface elevation, it was determined that a bridge some 1000 ft in length would be required to span the floodway and that the intersection at Silverbell Road would need to be raised some 14 feet. Raising Silverbell Road to this degree would have substantial impacts on adjacent residential properties. It was also determined that east of the Santa Cruz River, the roadway alignment would need to swing south out of the existing right-of-way in order to properly align with the Sunset Road TI.

RTA Plan Alignment with River Channelization – Channelizing the Santa Cruz River at this location to narrow and shift the channel was identified as a possible alternative, however RFCD recommended against this alternative since it would require substantial bank protection upstream and downstream and would likely generate significant 404 permitting challenges.

North Alignment – No suitable opportunity to move the connection to the north were identified based on the large gravel mining pit and inability to tie into the Sunset Road TI.

South Alignment - Approximately ¼ mile south of the existing Sunset Road alignment, the floodway narrowed to approximately 600 feet and then shifted to the east, allowing for a reduced bridge length and resulting in substantially less impact to Silverbell Road and adjacent properties. A crossing at this location also results in a much straighter alignment and tie-in with the Sunset Road TI than would be possible on the existing alignment.

Environmental Impacts – Potential impacts to cultural resources were discussed with Pima County Environmental staff. Since mapping of archeological sites within the Santa Cruz River in the Sunset Road area was unavailable, specific assessment of each alternative was not possible. However, it was generally agreed that given the history of the area and experience with other projects within the Santa Cruz River corridor, it is likely that sites would be present and that avoidance was unlikely. Therefore, neither alternative was considered to have any advantage relative to archeological site impacts and costs. Other environmental impacts, including biological and hazardous materials were not assessed.

Utility Impacts - Impacts to existing utilities , primarily the existing TEP and WAPA lines running parallel to and east of Silverbell Road, were considered to essentially be the same for both alternatives.

Right-of-Way Impacts – Right-of-way impacts were not specifically assessed, however were considered. The proposed Sunset Road connection alignment to the south was included in the area that RFCD was negotiating for purchase from Cal Portland Cement.

I-10 to River Road

The proposed alignment for this connection essentially followed the alignment included in the RTA Plan, however with some minor adjustments to provide appropriate tie-in to the TI, minimize right-of-way impacts, and provide a connection to River Road that could allow for future connection to Camino de la Tierra.