

APPENDIX E

GRADE CROSSING LOCATIONS

GRADE CROSSING ENHANCEMENTS PLAN PVL - SAN JACINTO BRANCH LINE ADVANCED PRELIMINARY ENGINEERING (65%) INTERIM DESIGN			
No.	LOCATION	MP CPUC No. DOT No.	Design Summary
1	Citrus Avenue Riverside County and City	MP 0.57 002X-0.6 027301Y	<ol style="list-style-type: none"> Existing track alignment to be shifted nominally for new Citrus curve. Install No. 9 vehicle gates and warning devices. Install raised median both east and west of crossing. Adjacent driveways will be right in right out only. Reconfigure driveway in NW quadrant. Terminate access through portion of RCTC ROW. Install sidewalks on north and south side with channelization and signage. Active pedestrian warning devices not required by SCRRRA decision tree.
2	Palmyrita Avenue City of Riverside	MP 1.00 002X-1.0 027302F	<ol style="list-style-type: none"> Existing track alignment to be maintained. Install No. 9 vehicle gates and warning devices. City has plans to widen north side of street and install raised median islands both east and west of crossing. Street design to be coordinated with City work. Install sidewalks on north and south side with channelization and signage. Active pedestrian warning devices not required by SCRRRA decision tree.
3	Columbia Avenue City of Riverside	MP 1.24 002X-1.3 027303M	<ol style="list-style-type: none"> Existing track alignment to be maintained. (Potential future 2nd track approx. 20' east of mainline.) City has completed final design plans for Columbia widening and installation of raised median islands. City to install No. 9 vehicle gates and warning devices. Install sidewalks on north side with channelization and signage. Active pedestrian warning devices not required by SCRRRA decision tree. Install sidewalks on south side with active pedestrian warning devices per SCRRRA decision tree because adjacent to Marlborough Station.

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4	Marlborough Avenue City of Riverside	MP 1.5 002X-1.5 027304U	<ol style="list-style-type: none"> Existing track alignment to be maintained. (Potential future 2nd track approx. 20' east of mainline.) City constructed roadway includes raised median islands and No. 9 vehicle gates and warning devices. Install sidewalks on north and south side with active pedestrian warning devices per SCRRRA decision tree because adjacent to Marlborough Station.
5	Spruce Street City of Riverside	MP 2.02 002X-2.02 027305B	<ol style="list-style-type: none"> Existing track alignment to be maintained. Add Traffic Signal at Watkins with sequential phasing, interconnected to rail. Signal will have sequential phasing, for Spruce, as each leg gets green light all other traffic stops. (No left turn pocket from Spruce to Watkins because would have to remove all trees on north side of Spruce to create LT pocket.) Install No. 9 vehicle gates and warning devices. Install raised median both east and west of crossing. Install sidewalks on north and south side with active pedestrian warning devices per SCRRRA decision tree due to school route. City has constructed sidewalk on north side in 2009. Previously said to block pedestrian access on north side since no continuation of sidewalk to the west. Need SCRRRA Design Exception for Watkins right turn onto Spruce. Cannot accommodate WB-65.

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No.	LOCATION	MP CPUC No. DOT No.	Design Summary
6	W. Blaine Street/Watkins Drive City of Riverside	MP 2.66 002X-2.7 027307P	<ol style="list-style-type: none"> Existing track alignment to be maintained. Modify existing medians to SCRRRA standard length, width, and height. Maintain existing No. 9 vehicle gates and warning devices. Maintain existing traffic signal. Install pedestrian channelization and active pedestrian warning devices per SCRRRA decision. Full pedestrian treatments on both sidewalks with ped gates due to school route. Existing Watkins Dr. right to Blaine St. Curve radius is sub-standard for WB-65. Obtain design exception from SCRRRA.
7	Mt. Vernon Avenue City of Riverside	MP 3.41 002X-3.4 027308W	<ol style="list-style-type: none"> Existing track alignment to be maintained. Relocate existing No. 9 vehicle gates to meet side clearance requirements. Install raised medians approx. 100 feet in length. Restrict residential driveway access to right in right out only. Install pedestrian channelization and active pedestrian warning devices per SCRRRA decision. Full pedestrian treatments on north side due to school route. No sidewalk on south side.
8 Close	Poarch Road County of Riverside	MP 5.02 002X-5.0 027311E	<ol style="list-style-type: none"> Recommend closure to regular vehicular traffic. Provide locked entry gates for emergency vehicles only. Fencing along RR ROW for 400'+ both sides of current crossing.
8 Open	Poarch Road County of Riverside	MP 5.02 002X-5.0 027311E	<ol style="list-style-type: none"> Opening Poarch Road to vehicular access would require significant lowering of the finished surface of Watkins Road and the Freeway on ramp and significant construction of Poarch Road. Since alternate access is available, this is included in this project. Refer to project memorandum for further discussion.

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No.	LOCATION	MP CPUC No. DOT No.	Design Summary
9	River Crest Drive Box Springs Blvd. City of Riverside	MP 7.00 002X-7.0 909090S	<ol style="list-style-type: none"> 1. Existing track alignment to be maintained. 2. Reconstruct medians to standard height and width. Extend medians to the intersections of River Crest Drive with Box Springs Boulevard and Fischer Road. 3. Existing No. 9 gates to remain.
10	San Jacinto Avenue City of Perris	MP 18.05 002X-18.0 027338N	<ol style="list-style-type: none"> 1. Existing track alignment to be maintained. 2. Install No. 9 vehicle gates and warning devices. 3. Install raised median islands both east and west of crossing. 4. Modify sidewalk to accommodate active pedestrian warning devices per SCRRA decision tree because adjacent to Perris Station and senior center. 5. Interconnect with traffic signal at D Street intersection for railroad preemption of traffic signal. 6. Revised street profile to smooth “hump” crossing. 7. City long range plan shows San Jacinto as E/W through route and significantly widened. West of crossing, San Jacinto ends at C Street. 8. Can widen San Jacinto roadway westbound but must block off due to flow of traffic. See plan.
11	W. 2nd Street City of Perris	MP 18.20 002X-18.2 027339V	<ol style="list-style-type: none"> 1. Crossing currently closed to vehicle traffic. 2. City of Perris is applying for pedestrian crossing which would be within the PVL station platform. If this is approved by SCRRA and CPUC, the project will update the construction plans.

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No.	LOCATION	MP CPUC No. DOT No.	Design Summary
12	W. 4th Street/SR 74 City of Perris	MP 18.34 002X-18.3 027340P	<ol style="list-style-type: none"> 1. PVL track will be located approx. 20' west of existing mainline. (Existing mainline is location for potential future 2nd track.) 2. Relocate existing No. 9 vehicle gates and warning devices. 3. Widen sidewalks on north and south sides and install active pedestrian warning devices per SCRRRA decision tree because adjacent to Perris Station. 4. No additional lanes required. Some shift of lanes to create space for medians. 5. Future OERM track is to be located west of new mainline. Moving median gates west of PVL tracks will reduce the length of the left turn pocket from westbound 4th, south to C Street to an in effective and essentially unusable length. When the OERM track is installed, this movement would be prohibited.
13	W. 5 th Street City of Perris	MP 18.42 002X-18.4 027341W	<ol style="list-style-type: none"> 1. This crossing was closed by the City. 2. The abandoned 5th St. will be incorporated into the future station parking lot/facility. 3. Fencing along RR ROW both sides of current crossing.
14	W. 6 th Street City of Perris	MP19.03 002X-19.0 027342D	<ol style="list-style-type: none"> 1. Close Crossing with garden wall and or fencing. 2. Cul-de-sac shown on east side but may be deleted if Fire Department does not require it. 3. Reconfigure west side per plan.

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No.	LOCATION	MP CPUC No. DOT No.	Design Summary
15	W. 7 th Street City of Perris	MP 19.10 002X-19.1 027343K	<ol style="list-style-type: none"> 1. Existing track alignment to be shifted nominally for new track geometry. 2. Install No. 9 vehicle gates and warning devices. 3. Install raised medians approx. 100 feet in length. 4. Reprofile 7th Street to match track profile including super elevation at crossing. 5. Install sidewalks on south side with active pedestrian warning devices per SCRRRA decision tree due to proximity of medical facility on D Street and local pedestrian activity. 6. New construction requires about 30 s.f. additional ROW at NE quadrant for new pedestrian treatments. 7. Future OERM track is to be located west of new mainline. Moving median gates west of PVL can be accomplished at the time the track is installed.
16	South D Street City of Perris	MP 19.17 002X-19.2 027347M	<ol style="list-style-type: none"> 1. Existing track alignment to be shifted nominally for new track geometry. 2. Install No. 9 gates and flashing signal devices. 3. Install raised medians at least 100 feet in length. 4. Reprofile South D Street to match track profile including superelevation at crossing (7 degree curve). 5. City is requesting widen pavement width to 44'. Lane striping is for single lane each direction. 6. No existing sidewalk on west side so none will be constructed across ROW. 7. Install sidewalks on east side with active pedestrian warning devices per SCRRRA decision tree due to proximity of medical facility on D Street and local pedestrian activity.

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No.	LOCATION	MP CPUC No. DOT No.	Design Summary
17	South Perris Blvd. City of Perris	MP 19.17 002X-19.2 027347M	<ol style="list-style-type: none"> 1. Existing track alignment to be maintained. 2. Install No. 9 vehicle gates and warning devices. 3. State Street - Construct directional raised median in conjunction with center raised median such that southbound traffic would be limited to right turn out only. (City requested directional median at State. This is exit only so directional median is not appropriate.) 4. Commercial Street, make right in right out, this MAY require ROW acquisition. Alternately, close Commercial and access could be via 9th Street, which is unpaved, as is Commercial. 5. Install raised median islands. 6. Widen northbound roadway to match City Master Plan and adjacent developer plan (ROW width 1/2 of 128', 3 traffic lanes). Install K-rail to block out extra pavement until developer continues widening beyond RCTC ROW. 7. City has requested full widening of southbound roadway (ROW width 1/2 of 128', 3 traffic lanes). This cannot be widened across the ROW as it does not allow workable street and crossing geometry or crossing gating. RCTC can dedicate ROW from RCTC to City of full width at crossing. 8. Install sidewalks on west side with active pedestrian warning devices per SCRRA decision tree because adjacent on an indentified school route. 9. No existing sidewalk on west side therefore none provided. 10. Widen right turn area from Case Road to NB South Perris Street. Raised median restricts turn radius so must compensate with widening. 11. City requested garden wall in lieu of fence along State Street.

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18	G Street City of Perris	MP 19.68 002X-19.7 027349B	<ol style="list-style-type: none"> 1. Existing track alignment to be maintained. 2. Realign G Street to create perpendicular crossing and provide all turn movements. 3. Provide for lanes per City General Plan which calls for G Street to have 1 lane each direction. 4. Widen Case roadway at crossing for median and to meet existing pavement on north side. 5. Acquire private ROW at Commercial and G Street for right turn into Commercial. No left turn exit or entry would be permitted. Alternately, private developer is reviewing relocation of Commercial tie into G to the north, >100' from crossing, so that all movements can be allowed. 6. Install No. 9 vehicle gates and warning devices. 7. Modify grade crossing profile to eliminate hump and provide track drainage. This is done by raising Case to level of tracks at crossing. 8. Construct channelizing island at Walker Road for right turn access only. 9. Install traffic signal at G Street/ Case Road intersection and interconnect with railroad signal system. 10. Construct right turn pocket on Case Road so that when the gates are down, traffic on Case Road may flow freely and not be blocked by a right turn vehicles. 11. No existing sidewalks and none required per SCRRRA decision tree.

GRADE CROSSING ENHANCEMENTS PLAN			
PVL - SAN JACINTO BRANCH LINE			
ADVANCED PRELIMINARY ENGINEERING (65%) INTERIM DESIGN			
No.	LOCATION	MP CPUC No. DOT No.	Design Summary
19	E. Ellis Avenue City of Riverside	MP 19.87 002X-19.9 027350V	<ol style="list-style-type: none"> 1. Existing track alignment to be maintained. 2. PROHIBIT left turns from East Ellis to southbound Case Road as this cannot be properly gated to prevent vehicles from entering track way while still providing required turning clearances for large vehicles such as tractor trailers. Signage and raised median islands will physically prevent this movement. 3. Install No. 9 vehicle gates and warning devices. 4. Widen right lane of northwest bound Case Road to accommodate truck turning radii. Concurrently, widen Ellis across the RR to allow for trucks to make a right turn from Case Road to Ellis Avenue. 5. Construct 100' raised median on east side of crossing. 6. Construct raised channelization islands on west side of crossing. 7. Close off access from future Ellis Avenue on west side of Case Road as it is currently an unpaved street and access is available from Goetz Road. 8. Install traffic signal with pre-emption at Case Road and East Ellis Avenue as required for operation of rail gates. 9. No existing sidewalks and none required per SCRRRA decision tree. 10. Dedicate ROW to City's GP width of 128'. 11. RCTC PVL cannot construct crossing with the City General Plan pavement width (94' roadway with 6 lanes) until widening in completed on adjacent parcels and on the other side of Case Road.

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No.	LOCATION	MP CPUC No. DOT No.	Design Summary
20	Mapes Rd. City of Riverside	MP 21.59 002X-21.6 027352J	NO IMPROVEMENTS RECOMMENDED. Layover facility was redesign so that no trains in service or accessing layover cross Mapes Road.
21-27	BNSF 4 th Main		Deleted after 30% Submittal (Iowa, Palmyrita, Columbia, Chicago, Spruce, 3rd Street, Mission Inn)
28	Moreno Valley/March Field Station, March Field JPA	MP 8.63	1. Design per SCRRRA standards, install No. 9 pedestrian gates and swing gates for two track crossing.
29	Perris Station City of Perris	MP 18.3	1. Design per SCRRRA standards, install No. 9 pedestrian gates and swing gates at north end of platform. 2. City is pursuing alternate design with pedestrian crossing at 2nd Street which would be within the PVL platform.