

APPENDIX C: SAN JOSE TO MERCED PROJECT SECTION CHECKPOINT B MATRIX

San Jose Diridon Station Approach		
Resource	Viaduct to Scott Blvd	Viaduct to I-880
Aquatic Resources		
Subtotal of Aquatic Resource Impacts (acres)	0.3	0.3
Wetlands		
Freshwater Emergent Wetland	-	-
Freshwater Forested/Shrub Wetland	0.3	0.3
Non-wetland Waters		
Riverine/Channel	-	-
Freshwater Pond	-	-
Lake/Reservoir	-	-
Other ¹	-	-
Vernal Pools		
Vernal Pool Complex ²	-	-
Biological Resources		
Listed Wildlife Habitat (acres per species/habitat)³		
California red-legged frog FT	0.6	0.6
California tiger salamander FT, ST	-	-
Least bell's vireo FE, SE	4.2	4.2
Swainson's hawk ST	-	-
Tricolored blackbird CT	0.4	0.2
Steelhead - Central Valley DPS - South-Central California Coast DPS FT	1.8	1.8
Bay checkerspot butterfly FT	-	-

San Jose Diridon Station Approach		
Resource	Viaduct to Scott Blvd	Viaduct to I-880
Conservancy fairy shrimp FE	-	-
Longhorn fairy shrimp FE	-	-
Vernal pool fairy shrimp FT	-	-
Vernal pool tadpole shrimp FE	-	-
San Joaquin kit fox FE, ST	-	-
Blunt-nosed leopard lizard FE, SE	-	-
Giant garter snake FT, ST	-	-
Listed Plant Habitat (acres)		
Colusa grass FT, SE	-	-
Hoover's spurge FT	-	-
Metcalf Canyon jewelflower FE	-	-
Palmate-bracted bird's-beak FE, SE	-	-
Santa Clara Valley dudleya FE	-	-
Other Environmental Resources		
100-year Floodplain (acres)	56.4	55.0
Important Agricultural Land		
Subtotal of Important Agricultural Land Impacts (acres)	-	-
Prime Farmland	-	-
Farmland of Statewide Importance	-	-
Unique Farmland	-	-
Farmland of Local Importance	-	-
Grazing Land	-	-
Cultural Resources		
Archaeological Sites	4	4

San Jose Diridon Station Approach		
Resource	Viaduct to Scott Blvd	Viaduct to I-880
Known Built Historic Resources (NRHP-listed or eligible resources)	6	6
Parks, Recreation, and Conservation Areas		
Subtotal of Parks, Recreation, and Conservation Area Impacts	3/3.9	1/3.0
Parks/Recreational Areas (number of resources/ acres of impact)	3/3.9	1/3.0
Wildlife Management Areas/Refuges (number of resources/ acres of impact)	-	-
Conservation Easement (number of resources/ acres of impact)	-	-
Community Resources		
Displacements		
Residential Displacement (units)	119 (111,653 sf)	103 (92,785 sf)
Business Displacement (square feet)	170 (1,966,697 sf)	113 (1,395,859 sf)
Environmental Justice Populations*		
Low-income Populations	23,587 (32.9%)	22,035 (32.6%)
Racial Minority Populations	33,025 (46.0%)	31,713 (46.9%)
Hispanic/Latino Minority Populations	28,388 (39.5%)	27,513 (40.7%)

Monterey Corridor		
Resource	At-grade	Viaduct
Aquatic Resources		
Subtotal of Aquatic Resource Impacts (acres)	-	-
Wetlands		
Freshwater Emergent Wetland	-	-
Freshwater Forested/Shrub Wetland	-	-
Non-wetland Waters		
Riverine/Channel	-	-
Freshwater Pond	-	-
Lake/Reservoir	-	-
Other ¹	-	-
Vernal Pools		
Vernal Pool Complex ²	-	-
Biological Resources		
Listed Wildlife Habitat (acres per species/habitat)³		
California red-legged frog FT	82.6	85.1
California tiger salamander FT, ST	-	-
Least bell's vireo FE, SE	-	-
Swainson's hawk ST	28.1	16.4
Tricolored blackbird CT	24.1	12.4
Steelhead - Central Valley DPS - South-Central California Coast DPS FT	-	-
Bay checkerspot butterfly FT	4.9	4.9
Conservancy fairy shrimp FE	-	-
Longhorn fairy shrimp FE	-	-
Vernal pool fairy shrimp FT	-	-

Monterey Corridor		
Resource	At-grade	Viaduct
Vernal pool tadpole shrimp FE	-	-
San Joaquin kit fox FE, ST	-	-
Blunt-nosed leopard lizard FE, SE	-	-
Giant garter snake FT, ST	-	-
Listed Plant Habitat (acres)		
Colusa grass FT, SE	-	-
Hoover's spurge FT	-	-
Metcalf Canyon jewelflower FE	7.1	7.1
Palmate-bracted bird's-beak FE, SE	-	-
Santa Clara Valley dudleya FE	4.9	4.9
Other Environmental Resources		
100-year Floodplain (acres)	13.9	13.9
Important Agricultural Land		
Subtotal of Important Agricultural Land Impacts (acres)	-	-
Prime Farmland	-	-
Farmland of Statewide Importance	-	-
Unique Farmland	-	-
Farmland of Local Importance	-	-
Grazing Land	13.1	0.1
Cultural Resources		
Archaeological Sites	2	2
Known Built Historic Resources (NRHP-listed or eligible resources)	-	-
Parks, Recreation, and Conservation Areas		
Subtotal of Parks, Recreation, and Conservation Area Impacts	-	-

Monterey Corridor		
Resource	At-grade	Viaduct
Parks/Recreational Areas (number of resources/ acres of impact)	-	-
Wildlife Management Areas/Refuges (number of resources/ acres of impact)	-	-
Conservation Areas (number of resources/ acres of impact)	-	-
Community Resources		
Displacements		
Residential Displacement (units)	121 (209,933 sf)	28 (46,540 sf)
Business Displacement (square feet)	88 (324,596 sf)	17 (214,842 sf)
Environmental Justice Populations*		
Low-income Populations	30,121 (28.4%)	30,121 (28.4%)
Racial Minority Populations	51,792 (48.9%)	51,792 (48.9%)
Hispanic/Latino Minority Populations	42,209 (39.8%)	42,209 (39.8%)

Morgan Hill and Gilroy								
Resource	Embankment to Downtown Gilroy	Viaduct to Downtown Gilroy	Viaduct to East Gilroy	US 101 to Downtown Gilroy	West of Coyote Creek Parkway to Downtown Gilroy	US 101 to East Gilroy	West of Coyote Creek Parkway to East Gilroy	East of UPRR to East Gilroy
Aquatic Resources								
Subtotal of Aquatic Resource Impacts (acres)	16.2	15.1	12.9	51.2	40.1	38.0	27.1	14.1
Wetlands								
Freshwater Emergent Wetland	1.8	1.6	5.0	5.2	3.3	6.2	4.3	4.5
Freshwater Forested/Shrub Wetland	4.4	4.3	2.5	9.4	7.5	5.5	3.6	3.8
Non-wetland Waters								
Riverine/Channel	8.2	7.2	4.9	28.9	25.3	22.2	18.9	5.5
Freshwater Pond	1.7	1.6	0.1	5.0	3.9	1.4	0.2	0.2
Lake/Reservoir	0.1	0.4	0.4	2.3	0.1	2.3	0.1	0.1
Other ¹	-	-	-	0.4	-	0.4	-	-
Vernal Pool								
Vernal Pool Complex ²	-	-	-	-	-	-	-	-
Biological Resources								
Listed Wildlife Habitat (acres per species/habitat)³								
California red-legged frog FT, SSC	2,294.1	1,688.1	1,609.7	2,422.6	2,671.5	2,105.2	2,301.2	2,481.4
California tiger salamander FT, ST	338.6	299.6	285.7	380.3	313.5	367.2	300.3	309.2
Least bell's vireo FE, SE	18.3	17.7	11.3	29.9	22.5	28.8	21.4	22.7

Morgan Hill and Gilroy								
Resource	Embankment to Downtown Gilroy	Viaduct to Downtown Gilroy	Viaduct to East Gilroy	US 101 to Downtown Gilroy	West of Coyote Creek Parkway to Downtown Gilroy	US 101 to East Gilroy	West of Coyote Creek Parkway to East Gilroy	East of UPRR to East Gilroy
Swainson's hawk ST	507.5	263.4	263.5	379.2	517.5	379.2	517.5	680.2
Tricolored blackbird CT	1,184.8	1,184.8	1,295.7	1,871.2	1,989.0	1,655.3	1,769.1	1,781.0
Steelhead - Central Valley DPS - South-Central California Coast DPS FT	37.5	34.2	44.2	62.1	55.9	54.9	49.7	45.8
Bay checkerspot butterfly FT	12.4	4.2	4.2	20.0	14.1	20.0	14.1	14.1
Conservancy fairy shrimp FE	-	-	-	-	-	-	-	-
Longhorn fairy shrimp FE	-	-	-	-	-	-	-	-
Vernal pool fairy shrimp FT	-	-	-	-	-	-	-	-
Vernal pool tadpole shrimp FE	4.5	4.5	7.7	5.9	0.7	7.8	4.9	4.9
San Joaquin kit fox FE, ST	620.4	620.4	523.1	1,174.8	1,174.8	627.8	627.8	627.8
Blunt-nosed leopard lizard FE, SE	-	-	-	-	-	-	-	-
Giant garter snake FT, ST	-	-	-	-	-	-	-	-
Listed Plant Habitat (acres)								
Colusa grass FT, SE	-	-	-	-	-	-	-	-
Hoover's spurge FT	-	-	-	-	-	-	-	-

Morgan Hill and Gilroy								
Resource	Embankment to Downtown Gilroy	Viaduct to Downtown Gilroy	Viaduct to East Gilroy	US 101 to Downtown Gilroy	West of Coyote Creek Parkway to Downtown Gilroy	US 101 to East Gilroy	West of Coyote Creek Parkway to East Gilroy	East of UPRR to East Gilroy
Metcalf Canyon jewelflower FE	12.4	4.2	4.2	20.0	14.1	20.0	14.1	14.1
Palmate-bracted bird's-beak FE, SE	-	-	-	-	-	-	-	-
Santa Clara Valley dudleya FE	12.4	4.2	4.2	7.1	14.1	7.1	14.1	14.1
Other Environmental Resources								
100-year Floodplain (acres)	887.9	767.1	680.5	1,370.5	1,364.3	879.0	928.8	960.1
Important Agricultural Land								
Subtotal of Important Agricultural Land Impacts (acres)	968.7	793.5	912.3	1,203.7	1,397.5	1,027.7	1,219.7	1,314.7
Prime Farmland	589.1	509.4	595.3	475.9	589.6	664.3	776.0	856.0
Farmland of Statewide Importance	133.9	101.8	140.8	446.6	446.6	166.3	166.3	167.3
Unique Farmland	17.2	11.3	3.6	28.6	30.2	6.3	8.0	7.5
Farmland of Local Importance	228.5	171.0	172.6	252.6	331.1	190.8	269.4	283.9
Grazing Land	479.6	421.3	401.9	520.4	552.2	445.4	477.2	452.3
Cultural Resources								
Archaeological Sites	3	1	3	5	2	7	4	4
Known Built Historic Resources (NRHP-listed or eligible resources)	17	12	11	9	12	8	10	13

Morgan Hill and Gilroy								
Resource	Embankment to Downtown Gilroy	Viaduct to Downtown Gilroy	Viaduct to East Gilroy	US 101 to Downtown Gilroy	West of Coyote Creek Parkway to Downtown Gilroy	US 101 to East Gilroy	West of Coyote Creek Parkway to East Gilroy	East of UPRR to East Gilroy
Parks, Recreation, and Conservation Areas								
Subtotal of Parks, Recreation, and Conservation Area Impacts	4/17.8	3/9.0	5/70.4	4/135.2	3/43.3	5/200.1	6/109.0	6/92.5
Parks/Recreational Areas (number of resources/ acres of impact)	4/16.8	2/8.0	2/8.0	4/135.2	4/43.3	2/134.4	3/43.3	3/26.8
Wildlife Management Areas/Refuges (number of resources/ acres of impact)	-	-	-	-	-	-	-	-
Conservation Easements (number of resources/ acres of impact)	1/1.0	1/1.0	3/62.4	-	-	3/65.7	3/65.7	3/65.7
Community Resources								
Displacements								
Residential Displacement (units) ^{4, 5}	205 (744,455 sf)	77 (208,021 sf)	70 (202,599 sf)	191 (658,637 sf)	225 (780,800 sf)	139 (321,404 sf)	209 (535,883 sf)	194 (535,883 sf)
Business Displacement (square feet)	245 (2,995,482 sf)	133 (1,705,735 sf)	28 (863,544 sf)	182 (2,299,503 sf)	148 (1,839,127 sf)	27 (974,455 sf)	94 (1,040,156 sf)	42 (1,040,156 sf)
Environmental Justice Populations*								
Low-income Populations	23,921 (30.0%)	19,708 (29.6%)	15,180 (27.5%)	22,283(29.3%)	18,864 (27.9%)	9,081 (19.6%)	9,081 (19.6%)	14,138 (23.9%)

Morgan Hill and Gilroy								
Resource	Embankment to Downtown Gilroy	Viaduct to Downtown Gilroy	Viaduct to East Gilroy	US 101 to Downtown Gilroy	West of Coyote Creek Parkway to Downtown Gilroy	US 101 to East Gilroy	West of Coyote Creek Parkway to East Gilroy	East of UPRR to East Gilroy
Racial Minority Populations	25,500 (32.0%)	21,647 (32.5%)	17,656 (30.8%)	23,675 (32.0%)	21,592 (31.9%)	14,531 (30.8%)	14,531 (30.8%)	18,439 (31.1%)
Hispanic/Latino Minority Populations	38,370 (48.1%)	32,865 (49.4%)	25,202 (45.6%)	37,328 (49.1%)	32,262 (47.7%)	16,797 (35.6%)	16,797 (35.6%)	22,905 (38.7%)

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Pacheco Pass			
Resource	North Pacheco Pass	Refined Program Alignment	Close Proximity to SR 152
Aquatic Resources			
Subtotal of Aquatic Resource Impacts (acres)	28.0	120.7	176.8
Wetlands			
Freshwater Emergent Wetland	5.8	9.3	10.2
Freshwater Forested/Shrub Wetland	2.0	5.1	5.0
Non-wetland Waters			
Riverine/Channel	19.9	56.0	53.2
Freshwater Pond	-	6.1	7.3
Lake/Reservoir	-	44.2	101.1
Other ¹	-	-	-
Vernal Pools			
Vernal Pool Complex ²	-	-	-
Biological Resources			
Listed Wildlife Habitat (acres per species/habitat)³			
California red-legged frog FT	973.7	2,889.3	2,760.6
California tiger salamander FT, ST	917.0	2,666.7	2,554.1
Least bell's vireo FE, SE	12.9	23.8	22.4
Swainson's hawk ST	820.5	2,473.5	2,377.6
Tricolored blackbird CT	899.4	2,283.3	2,325.0
Steelhead - Central Valley DPS - South-Central California Coast DPS FT	33.0	101.8	99.9
Bay checkerspot butterfly FT	-	-	-
Conservancy fairy shrimp FE	-	-	-
Longhorn fairy shrimp FE	-	-	-

Pacheco Pass			
Resource	North Pacheco Pass	Refined Program Alignment	Close Proximity to SR 152
Vernal pool fairy shrimp FT	-	-	-
Vernal pool tadpole shrimp FE	3.0	7.7	7.4
San Joaquin kit fox FE, ST	1,298.2	3,344.8	3,240.6
Blunt-nosed leopard lizard FE, SE	72.9	141.8	129
Giant garter snake FT, ST	34.0	33.8	31.2
Listed Plant Habitat (acres)			
Colusa grass FT, SE	-	-	-
Hoover's spurge FT	-	-	-
Metcalfe Canyon jewelflower FE	-	-	-
Palmate-bracted bird's-beak FE, SE	-	-	-
Santa Clara Valley dudleya FE	-	-	-
Other Environmental Resources			
100-year Floodplain (acres)	48.7	106.7	101.5
Important Agricultural Land			
Subtotal of Important Agricultural Land Impacts (acres)	241.0	263.7	260.7
Prime Farmland	150.0	168.4	166.3
Farmland of Statewide Importance	17.0	17.6	17.6
Unique Farmland	22.0	20.9	20.5
Farmland of Local Importance	51.0	56.8	56.3
Cultural Resources			
Archaeological Sites	4	11	8
Known Built Historic Resources (NRHP-listed or eligible resources)	3	3	3
Parks, Recreation, and Conservation Areas			

Pacheco Pass			
Resource	North Pacheco Pass	Refined Program Alignment	Close Proximity to SR 152
Subtotal of Parks, Recreation, and Conservation Area Impacts	-	3/1,287.5	3/1,315.1
Parks/Recreational Areas (number of resources/ acres of impact)	-	1/409.6	1/367.1
Wildlife Management Areas/Refuges (number of resources/ acres of impact)	-	1/399.8	1/402.0
Conservation Easements (number of resources/ acres of impact)	1/336.9	1/478.1	1/546.0
Community Resources			
Displacements			
Residential Displacement (units)	9 (11,860 sf)	6 (8,191 sf)	6 (8,604 sf)
Business Displacement (square feet)	3 (17,587 sf)	2 (5,462 sf)	2 (6,352 sf)
Environmental Justice Populations*			
Low-income Populations	3,272 (25.3%)	3,272 (25.3%)	3,272 (25.3%)
Racial Minority Populations	1,850 (14.3%)	1,850 (14.3%)	1,850 (14.3%)
Hispanic/Latino Minority Populations	7,163 (55.1%)	7,136 (55.1%)	7,136 (55.1%)

San Joaquin Valley	
Resource	Henry Miller Road
Aquatic Resources	
Subtotal of Aquatic Resource Impacts (acres)	69.4
Wetlands	
Freshwater Emergent Wetland	43.3
Freshwater Forested/Shrub Wetland	2.4
Non-wetland Waters	
Riverine/Channel	21.3
Freshwater Pond	2.4
Lake/Reservoir	-
Other ¹	-
Vernal Pool	
Vernal Pool Complex ²	34.9
Biological Resources	
Listed Wildlife Habitat (acres per species/habitat)³	
California red-legged frog FT	-
California tiger salamander FT, ST	57.3
Least bell's vireo FE, SE	7.4
Swainson's hawk ST	701.2
Tricolored blackbird CT	696.6
Steelhead - Central Valley DPS - South-Central California Coast DPS FT	-
Bay checkerspot butterfly FT	-
Conservancy fairy shrimp FE	30.9
Longhorn fairy shrimp FE	30.9
Vernal pool fairy shrimp FT	30.9

San Joaquin Valley	
Resource	Henry Miller Road
Vernal pool tadpole shrimp FE	30.9
San Joaquin kit fox FE, ST	827.9
Blunt-nosed leopard lizard FE, SE	-
Giant garter snake FT, ST	361.6
Listed Plant Habitat (acres)	
Colusa grass FT, SE	30.9
Hoover's spurge FT	30.9
Metcalf Canyon jewelflower FE	-
Palmate-bracted bird's-beak FE, SE	2.8
Santa Clara Valley dudleya FE	-
Other Environmental Resources	
100-year Floodplain (acres)	68.8
Important Agricultural Land	
Subtotal of Important Agricultural Land Impacts (acres)	643.6
Prime Farmland	285.6
Farmland of Statewide Importance	226.2
Unique Farmland	58.9
Farmland of Local Importance	72.9
Grazing Land	80.6
Cultural Resources	
Archaeological Sites	1
Known Built Historic Resources (NRHP-listed or eligible resources)	11
Parks, Recreation, and Conservation Areas	
Subtotal of Parks, Recreation, and Conservation Area Impacts	3/312.8

San Joaquin Valley	
Resource	Henry Miller Road
Parks/Recreational Areas (number of resources/acres of impact)	-
Wildlife Management Areas/Refuges (number of resources/acres of impact)	2/307.3
Conservation Easements (number of resources/acres of impact)	1/5.5
Community Resources	
Displacements	
Residential Displacement (units)	34 (192,747 sf)
Business Displacement (square feet)	1 (2,589 sf)
Environmental Justice Populations*	
Low-income Populations	9,657 (25.2%)
Racial Minority Populations	8,224 (21.4%)
Hispanic/Latino Minority Populations	26,110 (68.1%)

Notes:

*Environmental Justice Population results are the total number of low-income, racial minority, or Hispanic/Latino minority population within the census tracts that are intersected by the footprint of a given alignment alternative (and the percentage of the total number of persons within the same geography).

Yellow text indicates proposed alternative elements for removal from further design and environmental analyses

Sources:

Cultural Resources – ICF Developed 2016; Species Models – ICF Developed 2016

NHD – Info: <http://nhd.usgs.gov/data.html> Link to Data: <ftp://rockyftp.cr.usgs.gov/vdelivery/Datasets/Staged/Hydrography/NHD/State/HighResolution/GDB/>

NWI – Info: <https://www.fws.gov/wetlands/> Link to Data: <https://www.fws.gov/wetlands/data/data-download.html>

FMMP – Info: <http://www.conservation.ca.gov/dlrp/fmmp> Link to Data: <http://www.conservation.ca.gov/dlrp/fmmp/products/Pages/DownloadGISdata.aspx>

CPAD - Info: <http://www.calands.org/data> Link to Data: http://www.atlas.ca.gov/download.html#casil/planning/Land_Ownership/GreenInfoNetworkProject/CPAD-2016a-June2016

CCED – Info: <http://www.calands.org/cced> Link to Data: <http://www.calands.org/cced>

Vernal Pools – Info: <http://www.vernalpools.org/> Link to Data: <http://www.vernalpools.org/>

FEMA – Info: <https://www.fema.gov/view-your-communitys-preliminary-flood-hazard-data-0> Link to Data: <https://hazards.fema.gov/femaportal/prelimdownload/searchLoad.action>

Habitat Refuges- Info: https://www.fws.gov/gis/data/CadastralDB/index_cadastral.html?q=Realty&sort=none&metadata_type=geospatial&organization=fws-gov&ext_location=&ext_bbox=&ext_prev_extent=-142.03125,8.754794702435605,-59.0625,61.77312286453148#sec-tags Link to Data:

https://www.fws.gov/gis/data/CadastralDB/index_cadastral.html?q=Realty&sort=none&metadata_type=geospatial&organization=fws-gov&ext_location=&ext_bbox=&ext_prev_extent=-142.03125,8.754794702435605,-59.0625,61.77312286453148#sec-tags

¹ NWI data does not indicate the specific type of feature. This category has been included as non-wetland water for purposes of this analysis.

² Vernal pool complexes were not included as aquatic resources for this analysis because the available data does not distinguish between uplands and waters of the U.S. However, NWI data typically captured vernal pools as freshwater wetlands.

³ Status explanations:

FE = listed as endangered under the FESA

FT = listed as threatened under the FESA

CT = candidate for listing as threatened under the FESA

SE = Listed as endangered under the CESA

ST = Listed as threatened under the CESA

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