

**Figure 3-2: Bus-on-Shoulder Concept Focus Area – Monterey County**

## Summary

A summary of the alternatives considered, and the results of the analysis and evaluation of the alternatives is presented here with additional detail provided in Chapters 4 and 5.

### Monterey County Alternatives

Seven different alternatives were studied for the SR 1 Corridor in Monterey County including a No-Build Alternative and an HOV Lane Alternative.

1. **Southbound Bus-on-Shoulder** – This alternative would provide bus-on-shoulder operations on SR 1 between Del Monte Boulevard in Marina and Del Monte Avenue in Monterey. Currently, congestion on this section of SR 1 occurs southbound in the morning peak period, so the bus-on-shoulder operation would be southbound only. The current shoulders in this segment are not the minimum 10 feet width needed for bus-on-shoulder operations, they are typically in the 6-to-8-foot range. Thus, this project would require shoulder widening. There are also four bridges that would either have to be widened or the buses would need to leave the shoulder to bypass them. The estimates of costs and time savings assume that there would not be any widening of structures, as this type of construction would dramatically increase the costs of the project, with only small improvements in travel time. There is also no connection to the planned Intermodal Center at 8<sup>th</sup> Street in Fort Ord. The Intermodal Center would be the western terminus of the planned Marina-Salinas Multimodal Corridor to Salinas.

**Figure 1-6 - Depiction of Bus-on-Shoulder on SR-1 Southbound**



2. **Southbound Bus-on-Shoulder Plus Branch Line** – This alternative involves southbound AM peak period bus-on-shoulder operations between Del Monte Boulevard in Marina and the Monterey Road, California Avenue, Fremont Boulevard intersection in Sand City. From the Monterey Road, California Avenue, Fremont Boulevard intersection

to Contra Costa Street in Sand City, a single lane, bi-directional busway (southbound in the morning and northbound in the afternoon) would be developed in the Monterey Branch Line right-of-way. Beyond Contra Costa Street the buses would operate on Del Monte Boulevard all the way to Monterey. The busway would underpass the Monterey Road, California Avenue, Fremont Boulevard intersection to avoid conflicts with traffic at this complex set of intersections. The City of Seaside is currently studying alternative solutions to this intersection, which could be a less costly approach as compared with the cut-an-cover underpass, which would cost about \$2.1 million. There would be traffic signals or roundabouts at the three other street crossings in this area. There is also no connection to the planned Intermodal Center at Fort Ord with this alternative.

3. **Branch Line** – The Branch Line Alternative uses the rail right-of-way from Reservation Avenue in Marina all the way to Contra Costa Street in Sand City, and then uses Del Monte Boulevard to Monterey. The busway would be a single lane, bi-directional facility which would operate southbound in the morning and northbound in the afternoon, consistent with peak traffic flow directions. This alternative also provides an underpass of the Monterey Road, California Avenue, Fremont Boulevard intersection and it provides a connection to the Intermodal Center in Fort Ord via an existing underpass of SR 1 that was a rail spur. This would allow a direct connection to the future Marina-Salinas Multimodal Corridor.

**Figure 1-7 – Depiction of Bus on the Monterey Branch Line**



4. **Pedestrian/Bike Trail Plus Branch Line** – This alternative is very similar to Alternative 3 except that instead of using the rail right-of-way between Marina and Sand City it uses the alignment of the Monterey Peninsula Recreational Trail. This is the trail closest to SR 1 and there is another existing parallel recreational trail immediately adjacent to the west. This alternative also provides an underpass of the Monterey Road, California Avenue, Fremont Boulevard intersection and it provides a connection to the Intermodal Center in Fort Ord.

**Figure 1-8 - Depiction of Bus on the Caltrans Pedestrian/Bike Trail**



5. **Northbound Bus-on-Shoulder** – This alternative serves a different purpose from the others in that it is focused strictly on bus-on-shoulder operations on SR 1 in the northbound direction between Casa Verde Avenue in Monterey and Fremont Boulevard in the northern part of Sand City. The shoulder would need to be widened in several areas and there are three structures that the buses would need to bypass by leaving the shoulder and using the right traffic lanes.
6. **No-Build** – This alternative represents current conditions as a baseline for comparison with the build alternatives. It is assumed that there will be some increases in bus service in the corridor by year 2025 and that the Intermodal Center and Marina-Salinas Multimodal Corridor would be in operation.
7. **HOV Lanes** – This alternative is hypothetical, as it is not included in any regional or local plans. It was included for the purposes of providing a comparison of costs and impacts. It would involve adding a new lane to SR 1 in each direction between Marina and Monterey. The new lanes would accommodate buses, carpools, and other exempt vehicles per the California motor vehicle code. It would involve extensive new



construction in the freeway corridor including widening or lengthening of eight structures at costs averaging from \$25-\$35 million for each bridge. There would not be a connection to the Intermodal Center.

**Table 1-1** presents a summary of the alternatives and their evaluation results. Some of the key findings are:

- In general, the alternatives involving bus-on-shoulder (Alternatives 1, 2, and 5) do not perform well compared to the others. Because the shoulders are not wide enough and would have to be widened in most areas to accommodate the buses, the construction costs are relatively high. The fact that buses would need to leave the shoulder to bypass structures along the route somewhat defeats the purpose of trying to use the shoulder to bypass traffic. Also, traffic conditions today are often not congested to the point where speeds drop below 35 miles per hour, so bus-on-shoulder operations would not occur every weekday. By year 2025, however, congestion is expected to be more severe and would support bus-on-shoulder operations.
- The HOV Lane alternative also does not perform well primarily due to its high cost and significant environmental impacts. A major concern would be the ability of buses to safely and efficiently make the weaving movement to and from the freeway ramps, across the general purpose traffic lanes and into the HOV lane.
- Compared to other alternatives, the Branch Line Alternative would be a strong performer. Its cost is similar to the Bus-on-Shoulder Alternative, but it provides service in both directions and has connections to the Intermodal Center and Marina-Salinas Multimodal Corridor. It would have environmental impacts which would need to be addressed, particularly in the areas of habitat preservation and biological resources. It also displaces the parking and storage facilities for some existing businesses in Sand City, although they are only leasing the use of the land on a temporary basis.
- Alternative 4, which displaces the Monterey Peninsula Recreational Trail, performs well and is very similar to Alternative 3, the Branch Line Alternative. Displacing the trail may prove to be a very difficult task even though there is an alternative parallel trail that appears to be more heavily used.

**Table 1-1: Evaluation Summary – Monterey County**

Alternatives		Evaluation Results											
		Constructability Issues	Average 2025 Transit Time Savings (minutes)*	Annual Transit Operating Cost Savings (percent of existing service costs)	2025 Annual Operating Costs Compared to No-Build (millions)*	Buses Required (increase over No-Build)*	2025 Annual Rider-ship*	Connection to Intermodal Center?	Vehicle Miles of Travel Reduction*	Environmental Issues**	Total Capital Costs*	Benefit/Cost Ratio	Overall Assessment
1	Southbound Bus-on-Shoulder	Medium	7.1	3.1%	\$5.8	8	112,400	No	613,100	2	\$35.0	0.18	+
2	Southbound Bus-on-Shoulder Plus Branch Line	Medium	10.1	4.3%	\$5.5	8	304,900	No	1,663,100	7	\$32.1	0.25	++
3	Branch Line	Medium	15.9	6.8%	\$5.0	8	449,400	Yes	2,451,200	9	\$33.4	0.66	+++
4	Pedestrian/Bike Trail Plus Branch Line	Medium	15.9	6.8%	\$5.0	8	449,400	Yes	2,451,200	10	\$32.6	0.67	++
5	Northbound Bus-on-Shoulder	Low	4.8	2.1%	\$5.2	8	240,800	N/A	1,313,400	3	\$10.5	0.26	+
6	No-Build	NA	0.0	0.0%	\$0.0	0	0	No	0	4	\$0.0	N/A	N/A
7	HOV Lanes	High	14.2	6.1%	\$25.7	8	465,400	No	2,538,500	11	\$449.7	0.07	+

Notes: \* - Results are incremental to the No-Build Alternative, all costs are in 2017 dollars.

\*\* - Score calculated the sum for all impact categories, using for each category: 2 points for significant, 1 point for possibly significant and 0 points for not significant (see Table 5-11).