

## DEPARTMENT OF TRANSPORTATION

## DISTRICT 3

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JUL 20 2017

NEVADA COUNTY  
BOARD OF SUPERVISORS



*Making Conservation  
a California Way of Life.*

cc: AIBUS  
CEO  
7-20

July 14, 2017

Mr. Hank Weston  
Chair, Board of Supervisors  
Nevada County Board of Supervisors  
950 Maidu Avenue Suite #200  
Nevada City, CA 95959-8616

Dear Chairman Weston:

Thank you for your letter of July 11, 2017 in which you shared the Nevada County Board of Supervisors' concerns regarding the Caltrans Highway 174 Safety Project. Your letter also requested additional data in order to more fully understand the justifications for the project.

The Caltrans District 3 Traffic Safety Unit reviews two sources of collision data for any traffic safety project proposals: the Caltrans Traffic Accident Surveillance and Analysis System (TASAS) collision database and California Highway Patrol's Statewide Integrated Traffic Records System (SITRS) database. Data for 2005 to 2014 was obtained from the Caltrans TASAS collision database. Collision data for 2015 to June 2017 was obtained from the CHP SWITRS database. It should be noted that the TASAS data is obtained directly from the CHP database and contains only collisions that are related to the state highway system.

The section of Highway 174 in Nevada County that runs from the Bear River up to Grass Valley has experienced 511 collisions in the period from 2005 through June of 2017 (12½ years). That's an average of nearly **41** collisions per year on this entire segment of Highway 174. Of those 511 collisions, 10 were fatal collisions that killed 11 people, and 220 were injury collisions that injured 316 people. That means that **45%** of all collisions along this section of Highway 174 have resulted in an injury or fatality. The remaining 281 collisions involved property damage only. Keep in mind that these are the reported collisions. Neither CHP nor Caltrans have records of property damage only collisions that are not reported. This is due to vehicle collision reporting requirements under the California Vehicle Code (CVC) Section 20002 that states in part that the parties involved in a property damage only collision need only exchange information between the parties involved to meet their legal obligations under this section of the CVC.

The table below lists the collisions for the entire segment from the Bear River to Grass Valley.

Year	Total Collisions	Fatal Collisions	Fatal + Injury Collisions	Multi Vehicle	Wet Pavement	Nighttime	Persons Injured	Persons Killed
2005	38	0	10	21	10	14	12	0
2006	44	1	27	25	10	12	42	1
2007	54	3	25	31	11	13	36	3
2008	29	1	16	15	1	10	19	1
2009	35	1	16	21	6	8	16	1
2010	34	1	18	23	8	7	28	1
2011	49	0	26	29	6	10	37	0
2012	26	1	13	15	4	10	20	1
2013	40	2	15	21	5	17	27	3
2014	32	0	11	15	9	10	12	0
2015	48	0	22	25	7	17	32	0
2016	58	0	23	21	18	19	26	0
2017*	24	0	8	13	7	4	9	0
<b>Total</b>	<b>511</b>	<b>10</b>	<b>230</b>	<b>275</b>	<b>102</b>	<b>151</b>	<b>316</b>	<b>11</b>

\*January to June data only

The data clearly shows that collisions are continuing to occur along this entire section of highway. The table below indicates the types of collisions that have taken place along the corridor.

Collision Type	Total	% of Total
Head-on	39	7.6
Sideswipe	34	6.7
Rear end	91	17.8
Broadside	107	20.9
Hit Object	190	37.2
Overtake	27	5.3
Auto/Ped	4	0.8
Other	19	3.7

From this table you can see that over 37% of all collisions involved a vehicle that ran off the road and struck some type of object. For example, a tree, rock, utility pole, guard rail or any other object. A paved shoulder with a clear recovery zone would reduce these types of collisions. A clear recovery zone (CRZ) is a 20 foot area clear of fixed objects that allows an errant vehicle that leaves the roadway to recover and return to the roadway. The 20 foot required area is measured from the white line on the right side of the travel lane (referred to as the edge of traveled way or ETW) and would include any paved shoulder width. One critical component of the clear recovery area is to provide increased sight distance for drivers to be able to see hazards sooner thereby providing critical time to react and avoid a hazard. An eight foot paved shoulder provides the following:

1. A safe area for CHP enforcement activities.
2. Room for a disabled vehicle or large truck to get out of the travel lane.
3. Space for school buses stopping to pick up or drop off kids.
4. A safe space for trash haulers to pick up waste.
5. A safe area for mail or newspaper delivery.

For the expanded project limits covering post mile (PM) 2.74/4.63 there were 102 total collisions with two fatal collisions that killed three people and 54 injury collisions that injured 67 people. The collisions that have occurred within the projects limits represent **20% of all collisions** along the entire Route 174 corridor in the same 12½ year period. The 102 collisions in this segment over the same time period of 12½ years averages to about **8 collisions per year**. The table below lists the collisions that have occurred within the projects limits.

Year	Total Collisions	Fatal Collisions	Fatal + Injury Collisions	Multi Vehicle	Wet Pavement	Nighttime	Persons Injured	Persons Killed
2005	11	0	3	3	4	7	3	0
2006	12	0	9	3	3	6	11	0
2007	8	0	5	3	1	2	8	0
2008	8	0	6	2	1	3	6	0
2009	6	0	2	3	2	1	2	0
2010	12	1	6	6	4	4	9	1
2011	10	0	6	2	2	3	6	0
2012	7	0	7	3	1	2	8	0
2013	6	1	2	5	1	1	2	2

2014	3	0	2	0	1	0	2	0
2015	7	0	2	4	3	1	3	0
2016	7	0	5	5	2	2	6	0
2017*	5	0	1	3	3	1	1	0
<b>Total</b>	<b>102</b>	<b>2</b>	<b>56</b>	<b>42</b>	<b>28</b>	<b>33</b>	<b>67</b>	<b>3</b>

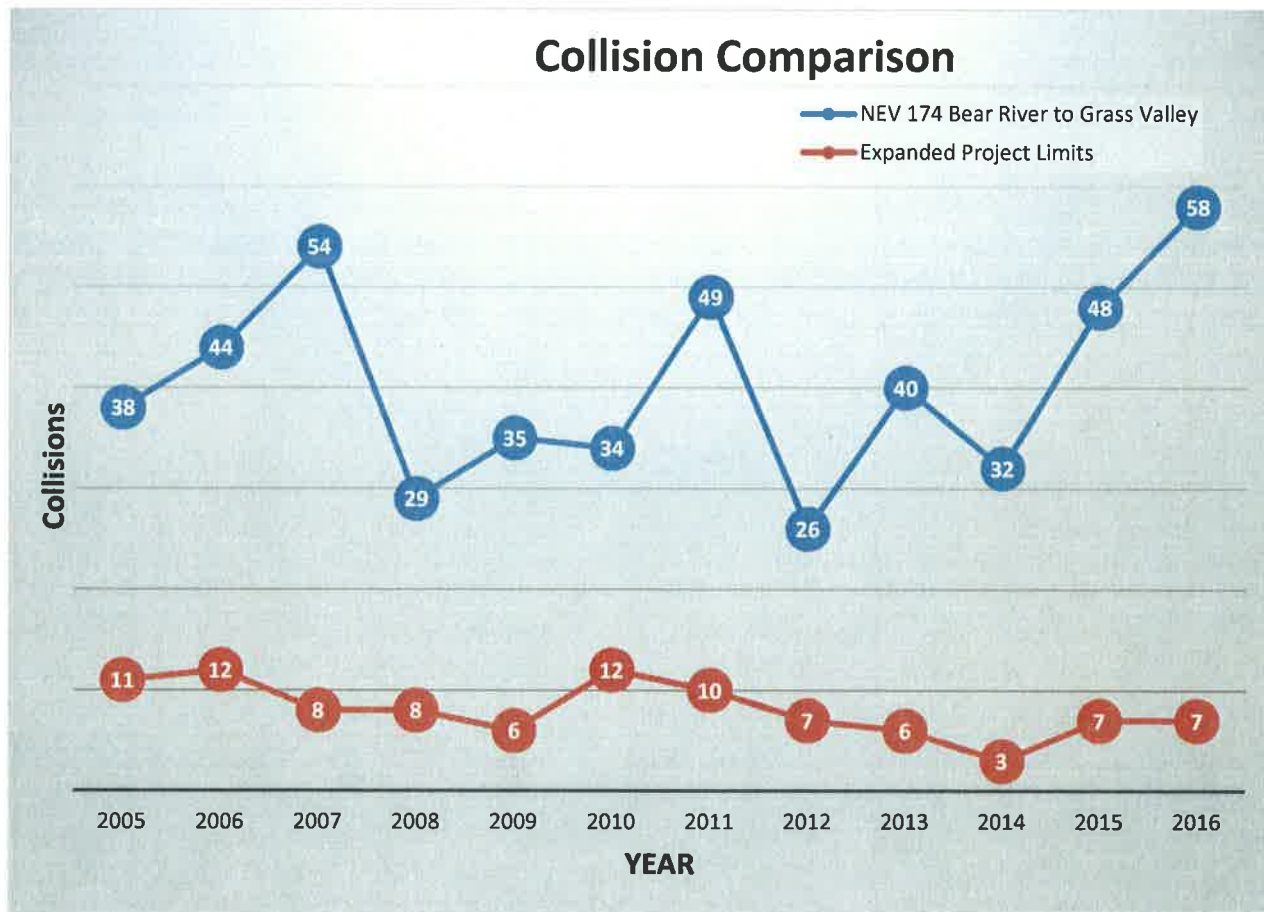
\*January to June data only

The data shows that collisions continue to occur within the segment just as they have along the entire corridor. The collision data used to initiate this safety project was not an anomaly but rather the most current data available at the time the project was initiated. From the table above you can see that **55% of all collisions within the expanded project limits resulted in injuries or fatalities over the same 12½ year period.** The table also lists 42 multiple vehicle collisions. If subtracted from the total of 102, that leaves 60 collisions involving single vehicles that ran off the road and either struck an object or in some cases overturned. The table below lists the collision types that have occurred within the expanded project limits. As you can see the percentage of collisions involving vehicles that ran off the road or overturned (59.8%) is significantly higher in this segment when compared to the rest of Route 174 in Nevada County (42.5%). This is further evidence of the benefits of a clear recovery area that would allow errant vehicles such as those running off the road some opportunity to recover and return to the roadway.

<b>Collision Type</b>	<b>Total</b>	<b>% of Total</b>
Head-on	12	11.8
Sideswipe	9	8.8
Rear end	7	6.9
Broadside	11	10.8
Hit Object	50	49.0
Overturn	11	10.8
Auto/Ped	0	0.0
Other	2	2.0

**102**

The chart below shows the collisions that have occurred over time along Nevada 174 and those that have taken place within the expanded project limits.



As you can see, the number of collisions along the corridor and within the projects limits have varied over time. It should be noted here that the collisions that have occurred in the first half of 2017 are not shown on the graph as they represent only half of the year. For the first half of 2017, 24 collisions have occurred along the entire corridor while 5 have occurred within the projects limits. At this pace for 2017, the number of collisions within the projects limits may well exceed the 7 collisions that took place in 2015 and 2016.

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Caltrans values both the rural nature of Highway 174, and the lives of motorists traveling the roadway. The project's design seeks, as much as possible, to preserve the beauty of Highway 174 while increasing motorist safety on this critical state highway corridor. Caltrans staff have recently met with members of the community group which has organized in opposition to the project. On behalf of the District 3 staff involved with the project, I look forward to continuing these discussions as we move forward to increase the safety of motorists on this critical state highway corridor.

Sincerely,



For

RAY ZHANG  
Acting District 3 Director

cc: Governor Edmond G. Brown  
Assemblyman Brian Dahle  
Senator Ted Gaines