

**TOWN OF
APPLE VALLEY, CALIFORNIA**

AGENDA MATTER

Subject Item:

FOUR-WAY STOP AT THE INTERSECTION OF KIOWA ROAD AND TUSSING RANCH ROAD

Summary Statement:

On September 3, 2008, the Traffic Safety Committee met and evaluated the need for four-way STOP controls at the intersection of Kiowa Road and Tussing Ranch Road. The Committee concurred with the staff recommendation to establish the intersection as a four-way STOP. In addition, the Committee determined that rumble strips and flashers would be needed at this location. Attached is the staff report submitted to the Traffic Safety Committee for Council information.

Recommended Action:

Adopt Resolution 2008-54, "A Resolution of the Town Council of the Town of Apple Valley establishing the intersection of Kiowa Road and Tussing Ranch Road as a four-way STOP intersection."

Proposed by: **Engineering Division** **Item Number** _____

T. M. Approval: _____ **Budgeted Item** **Yes** **No** **N/A**

ITEM # 3

To: Traffic Committee Members
From: Richard Pedersen, Deputy Town Engineer
Date: September 3, 2008
Subject: Four-way STOP sign installation at the intersection of Kiowa Road and Tussing Ranch Road

Staff received a request to investigate the intersection of Kiowa Road and Tussing Ranch Road to determine if a four-way stop is warranted. Currently there are STOP signs on the east and west legs of the intersection on Tussing Ranch Road.

Staff performed a traffic engineering investigation which included an evaluation of past records of vehicle conflict, traffic volumes, and a field review of the intersection. Four-way STOP controls may be warranted if 1) the total volume of the major approach legs of the intersection average 210 vehicles per hour for the peak eight hours and 2) that for the same eight hour period the minor approach legs average a total of 140 vehicles per hour. Currently the average is 373 vehicles per hour for the major legs and 87 vehicles per hour for the minor legs.

State warrants also indicate that if 5 accidents occur in a 12 month period that may be susceptible to correction by placing additional stop signs, a four way stop may be justified. Between February 2007 and February 2008 there have been six (6) traffic collisions at this intersection, and six (6) collisions occurred where additional stop signs may be a correction measure.

Staff investigated other factors including surrounding geography and intersection layout for clear sight views. There is a railroad crossing and a slight rise in the road on Tussing Ranch Road approximately 500 feet south of the intersection and a line of telephone poles on the east side of Tussing Ranch Road. Kiowa Road has 2 lanes of traffic in each direction with a speed limit of 50 mph. The east leg of Tussing Ranch Road has 2 lanes of traffic in each direction with a prima facie speed limit of 55 mph. The west leg of Tussing Ranch Road is dirt.

Recommendation

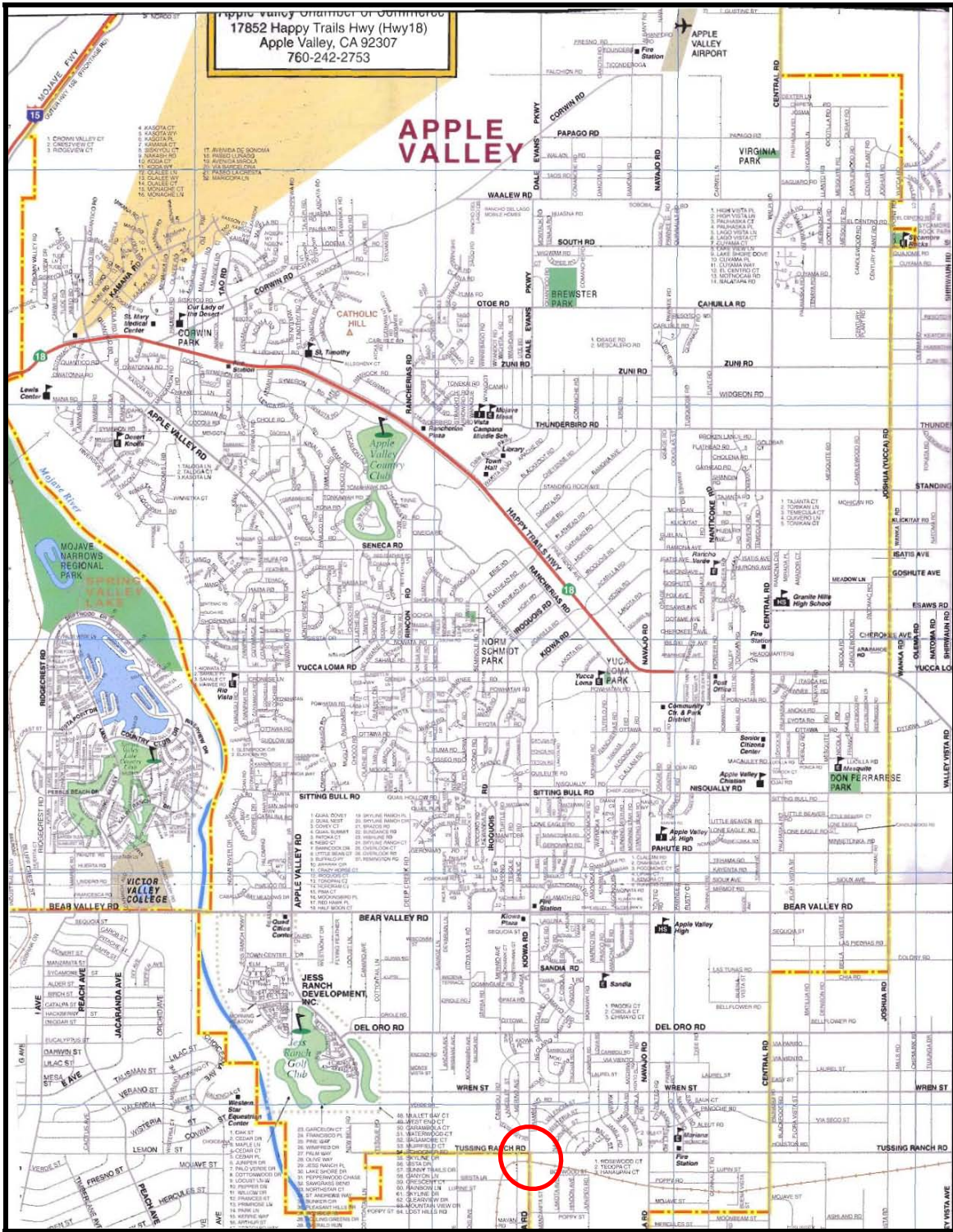
Staff recommends that four-way STOP controls be installed at the intersection of Kiowa Road and Tussing Ranch Road because the accident warrant has been met. However, because the southwest corner of the intersection is in the County, the Town will need to coordinate the final approval and installation with their department.

Fiscal Impact

Installation of 2 stop signs \$150 each

Exhibits

Location Map, Traffic Volume Analysis, Traffic Collision History Report, Traffic Collision Diagram



LOCATION MAP

Kiowa Road and Tussing Ranch Road

TOWN OF APPLE VALLEY

Traffic Count Datasheet

Intersection of Kiowa Road and Tussing Ranch Road

Study Date: August 14, 10:00 A.M. 2008 - August 15, 11:00 A.M. 2008

Kiowa Road and Tussing Ranch Road							
Time of Day	Location				Traffic Count	Traffic Count	
(Military Time)	Tussing Ranch Rd E/B	Tussing Ranch Rd W/B	Kiowa Rd N/B	Kiowa Rd S/B	on Major Legs	on Minor Legs	
					<i>210 Required</i>	<i>140 Required</i>	
00:00 - 01:00	1	5	25	20	45	6	
01:00 - 02:00	1	9	22	15	37	10	
02:00 - 03:00	0	4	17	14	31	4	
03:00 - 04:00	0	13	16	7	23	13	
04:00 - 05:00	0	16	15	24	39	16	
05:00 - 06:00	4	25	51	50	101	29	
06:00 - 07:00	5	71	148	100	248	76	
07:00 - 08:00	6	88	168	106	274	94	
08:00 - 09:00	11	89	180	156	336	100	
09:00 - 10:00	10	67	153	116	269	77	
10:00 - 11:00	9	58	140	100	240	67	
11:00 - 12:00	7	56	148	108	256	63	
12:00 - 13:00	11	87	177	170	347	98	
13:00 - 14:00	15	66	148	141	289	81	
14:00 - 15:00	13	60	202	170	372	73	
15:00 - 16:00	24	82	195	166	361	106	
16:00 - 17:00	9	77	243	179	422	86	
17:00 - 18:00	6	75	297	182	479	81	
18:00 - 19:00	12	59	228	147	375	71	
19:00 - 20:00	6	40	152	119	271	46	
20:00 - 21:00	6	36	119	126	245	42	
21:00 - 22:00	0	32	85	75	160	32	
22:00 - 23:00	4	17	73	52	125	21	
23:00 - 24:00	1	12	43	25	68	13	
TOTALS	161	1,144	3,045	2,368	5,413	1,305	
= 8 hour period					Average for highest 8 hours =	373	87
= maximum hour					Required =	210	140

TRAFFIC VOLUME ANALYSIS

**Town of Apple Valley
Traffic Engineering Department
Traffic Collision History Report**

8/12/2008
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**Location: Kiowa Rd / Tussing Ranch Rd
Date Range Reported: 1/1/2007 - 8/1/2008**

Report No.	Date	Time	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Direct. of Travel 1	Movement Prec. Coll. 1	Direct. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil
180700762	2/3/07	18:08	0	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Other Hazardous Movement	0	0
180700892	2/9/07	15:33	0	In Int.	Head-On	Motor Vehicle on Other	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
180703184	5/25/07	17:05	0	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
180703852	6/24/07	12:37	0	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	2	0
180705151	8/23/07	09:28	0	In Int.	Broadside	Other Motor Vehicle	West	Making Right Turn	North	Proceeding Straight	Auto R/W Violation	0	0
180800053	1/4/08	10:29	0	In Int.	Sideswipe	Other Motor Vehicle	North	Passing Other Vehicle	North	Making Left Turn	Wrong Side of Road	0	0
180803908	7/1/08	15:10	0	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0

TRAFFIC COLLISION HISTORY REPORT

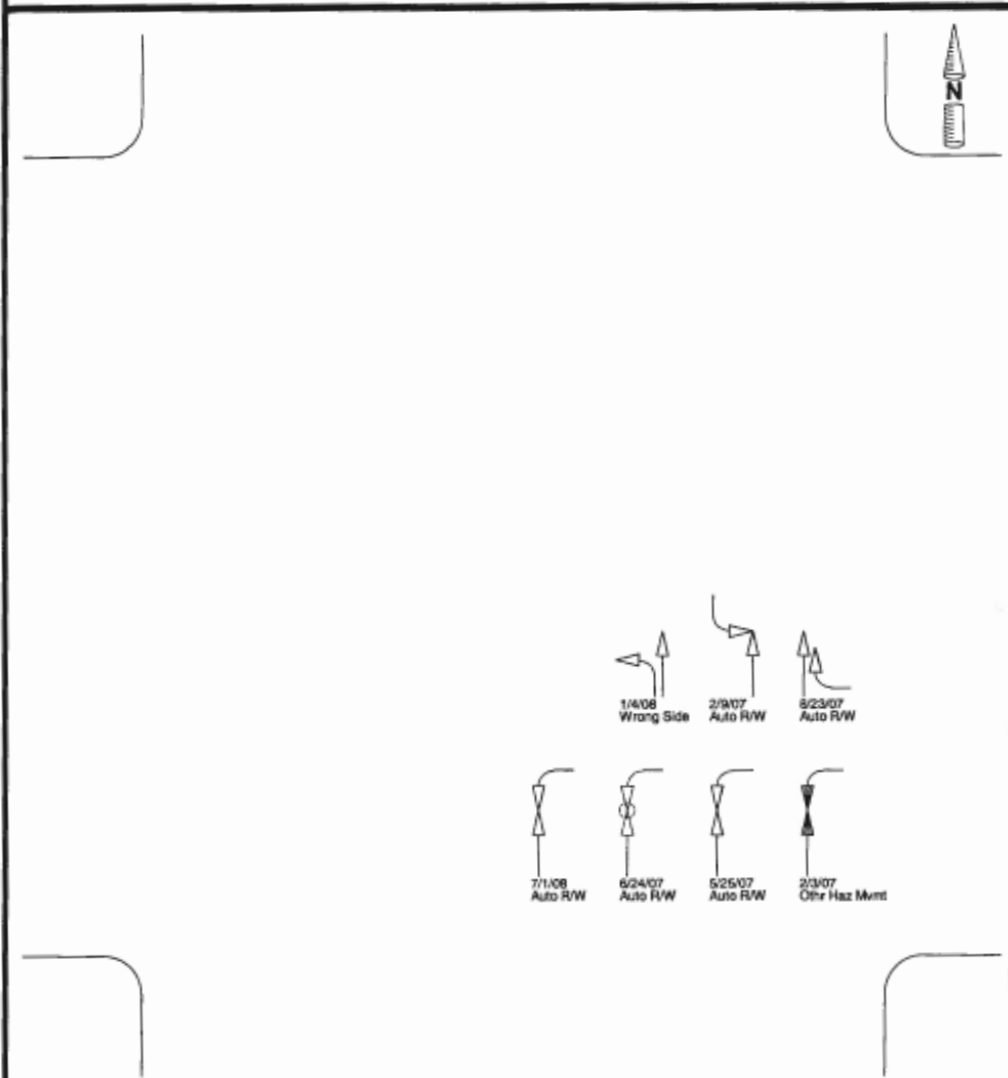
Collision Diagram

Horizontal Street: TUSSING RANCH RD

From: 1/1/2007 **To:** 8/1/2008

Vertical Street: KIQWA RD

Date Prepared: 8/12/2008



<p><u>Number of Collisions</u></p> <p>6 Property Damage Only</p> <p>1 Injury Collisions</p> <p>0 Fatal Collisions</p> <p>7 Total Collisions</p>	<p><u>Legend</u></p> <p>← Moving Vehicle</p> <p>← Stopped Vehicle</p> <p>←→ Backing Vehicle</p> <p>←~ Ran Off Road</p> <p>←..... Movement Unknown</p> <p>↘ Right Turn</p> <p>↙ Left Turn</p> <p>←↔ Sideswipe</p> <p>◁ Day</p> <p>◁ Night</p> <p>🚶 Pedestrian</p> <p>📦 Fixed Object</p> <p>🚲 Bicycle</p> <p>🍷 DUI</p> <p>⊙ Injury</p> <p>⊙ Fatal</p>
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RESOLUTION NO. 2008-54

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY ESTABLISHING THE INTERSECTION OF KIOWA ROAD AND TUSSING RANCH ROAD AS A FOUR-WAY STOP INTERSECTION.

WHEREAS, a traffic engineering investigation has determined that establishing the intersection of Kiowa Road and Tussing Ranch Road as a four-way STOP intersection is warranted in accordance with Section 52.0111 of the San Bernardino County Code as adopted by the Town of Apple Valley.

NOW THEREFORE, THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY DOES RESOLVE AND ORDER AS FOLLOWS:

Section 1: Approves and establishes the intersection of Kiowa Road and Tussing Ranch Road as a four-way STOP intersection.

Section 2: Authorizes and directs the Town Manager to cause additional STOP signs to be placed on Kiowa Road and Tussing Ranch Road.

APPROVED and ADOPTED this the 23rd day of September, 2008.

MAYOR

ATTESTED:

TOWN CLERK