



## MEMORANDUM

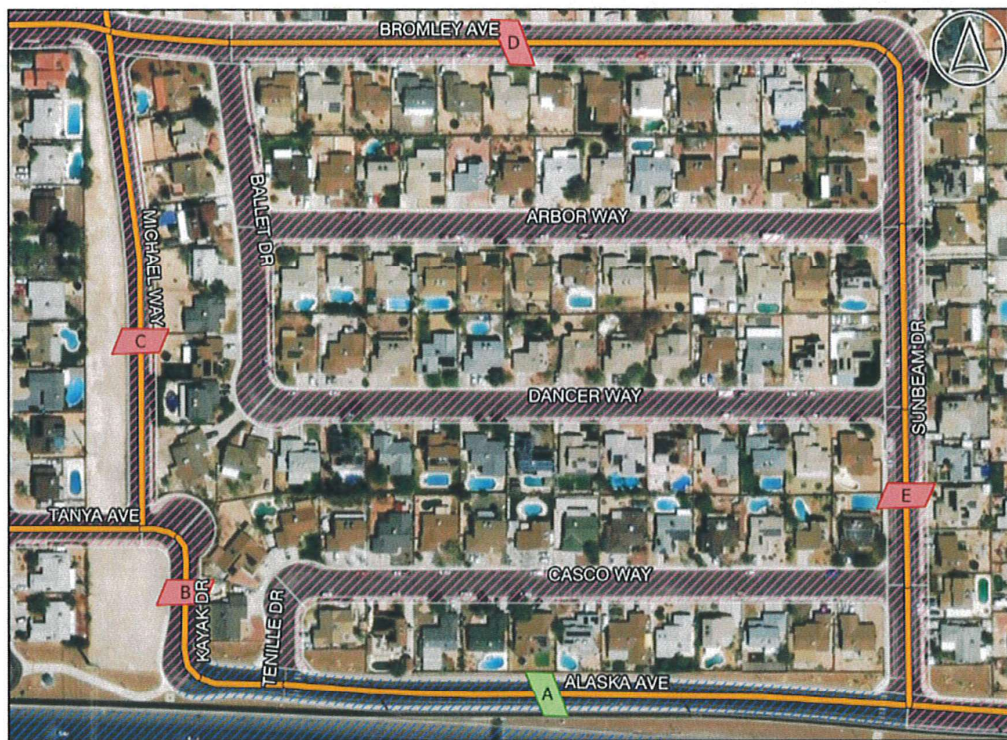
Department of Public Works – Transportation Division

Date: December 30, 2024

Re: Speed Hump & Ball Bank Study – Fremont Estates Neighborhood Study & Tanya Avenue / Kayak Drive / Alaska Avenue between Michael Way and Tenille Drive (Ward 1)

### Summary

On June 4, 2024, the Transportation Engineering Division (TED) collected speed, volume, and speed hump data along various corridors in the Fremont Estates to conduct a speed hump study following citizen request. The study segment corridors, Neighborhood Transportation Management Program (NTMP) evaluation results, and roadway ownership are identified in **Figure 1**.



### Legend

- Study Segment
- Not eligible for NTMP improvement
- Eligible for NTMP improvement
- NDOT Owned Road
- CLV Owned Road

Figure 1. Summary of Fremont Estates study area findings

**Table 1** summarizes the collection efforts and analysis results for the subject corridors within the Fremont Estates neighborhood community.

Table 1. NVTMP summary for Fremont Estates

Street Segment	Total points out of 100	Meets minimum requirement?	Roadway ownership
A: Alaska Ave. from Kayak Dr. to Sunbeam Dr.	114	Yes	*NDOT
B: Kayak Dr. from Alaska Ave. to Tanya Ave.	38	No	CLV



C: Michael Wy. From Tanya Ave. to Bromley Ave.	97	No	CLV
D: Bromley Ave. from Michael Wy. to Sunbeam Dr.	61	No	CLV
E: Sunbeam Dr. from Bromley Ave. to Alaska Ave.	45	No	CLV

**BOLD: Meets** minimum 100 points required for eligibility of NTMP Level 3 and Level 4 improvements.

*\*At the time of the study, the Right of Way (ROW) is currently under the jurisdiction of the Nevada Department of Transportation (NDOT) but is expected to be transferred to the City of Las Vegas (CLV) in the future.*

Segment B through Segment E received less **than the minimum points required** on the NTMP evaluation study, and therefore **did not meet** the City's requirements for the installation of speed humps. Conversely, Segment A, Alaska Avenue / Kayak Drive / Tanya Avenue from Sunbeam Drive to Michael Way, **exceeded the minimum points required** on the NTMP evaluation study, and therefore **did meet** the City's requirements for the consideration of installing speed humps. Collected traffic data (recorded speeds and volumes) and speed hump point study analysis are included in **Appendix A** and **Appendix B**, respectively.

There were a total of two (2) reported crashes within the 3-year evaluated period between 2022 and 2024, see **Appendix C**. Both reported crashes occurred on Kayak Drive (study Segment B), resulting in one (1) injury crash and no fatalities, in the evening hours.

### Ball Bank Analysis

On October 23, 2024, the TED collected and ball bank evaluation data along Tanya Avenue / Kayak Drive / Alaska Avenue between Michael Way and Tenille Drive, illustrated in **Figure 2**.



Figure 2. Ball bank study segment (identified in orange) run Tanya Avenue / Kayak Drive / Alaska Avenue between Michael Way and Tenille Drive

A ball bank indicator analysis, which is used to estimate superelevation rate, is designed to monitor a GPS receiver / speedometer and a ball bank indicator while a test vehicle is driven along the curve. As the roadway segment

curve is traversed, the ball bank indicator calculates curve radius and superelevation rate from the data stream. Per The *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) Section 2C, the determination of the recommended advisory speed for a horizontal curve are the following:

- 16 degrees of ball-bank for speeds of 20 mph or less,
- 14 degrees of ball-bank for speeds of 25 to 30 mph, and
- 12 degrees of ball-bank for speeds of 35 mph and higher.

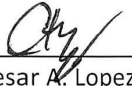

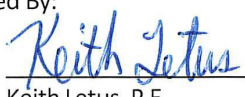
Referenced posted advisory speed determined by ball-bank degree values, is a 10 mph Advisory Speed (W13-P) plaque. Ball bank study results are included in **Appendix D**. While performing the ball bank study, City staff identified Reverse Turn (W1-3R) signage along the study segment at both Tanya Avenue and Alaska Avenue at both eastbound and westbound travel. However, posted advisory speed plaques were not present at time the field survey was conducted.

### Staff recommendation and actions

The traffic volumes and speeds observed **do not meet** the minimum criteria set for the installation of speed humps per the City's NTMP, as indicated in the analysis, at all study segments with the exception of Alaska Avenue between Kayak Drive and Sunbeam Drive, which is NDOT's jurisdiction. After NDOT transfers ownership of this roadway to the City, the City can re-evaluate the installation of speed humps. There are no residences along Alaska Avenue, therefore signatures from affected homeowners would not be required.

A ball-bank indicator study resulted in the determination of a recommended advisory speed for the Tanya Avenue / Kayak Drive / Alaska Avenue between Michael Way and Tenille Drive roadway segment horizontal curve. TED recommends the addition of a posted advisory speed of a 10 MPH Advisory Speed (W13-P) plaque at the current location of the Reverse Turn (W1-3R) signage located at the eastbound and westbound approaches on Tanya Avenue at Michael Way and on Alaska Avenue at Tenille Drive intersections, respectively. Additionally, pavement marking will be striped at the roadway centerline to delineate opposing traffic traversing through the curve.

Work Order exhibit is included in **Appendix E**.

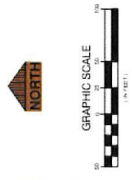
<p>Prepared By:</p> <p> Cesar A. Lopez Sr. Engineering Associate</p> <p> Cesar A. Lopez 12/30/2024</p>	<p>Reviewed By:</p> <p> Keith Letus, P.E. Engineering Project Manager</p> <p>12/30/2024</p>
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Cartegraph #  
Work Order Alaska Ave - Kayak Dr to Sunbeam Dr - Traffic Study 2024

# APPENDIX A

## TRAFFIC DATA





FREMONT ESTATES  
TRAFFIC STUDIES

DEPARTMENT OF PUBLIC WORKS  
TRANSPORTATION ENGINEERING

DATE: 6/20/2024  
DRAWN BY: JD

SHEET: 1 OF 1



8/25/24

CITY OF LAS VEGAS  
DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING DIVISION  
24 HOUR SPEED AND VOLUME STUDY

LOCATION: Alaska Ave W. of Sunbeam Dr				EXCEL
POSTED SPEED LIMIT = 25 MPH				RHCB
85 <sup>th</sup> PERCENTILE SPEED = 48 MPH				CARD
AVERAGE SPEED = 40 MPH				AM
% VEHICLES 5 MPH OR MORE OVER SPEED LIMIT = 90 %				
% VEHICLES 10 MPH OR MORE OVER SPEED LIMIT = 71 %				
DATE: 6/4/2024				
85 <sup>th</sup> ile speed	50	44		
Avg Speed	41	37		
HOUR BEGINS AT:	EASTBOUND	WESTBOUND	TOTAL	RANK
0:00	7	6	13	
1:00	3	7	10	
2:00	3	3	6	
3:00	5	1	6	
4:00	13	1	14	
5:00	35	8	43	
6:00	48	6	54	
7:00	37	10	47	
8:00	39	15	54	
9:00	28	17	45	
10:00	26	18	44	
11:00	30	14	44	
12:00	27	21	48	
13:00	29	25	54	
14:00	21	29	50	
15:00	27	37	64	
16:00	38	41	79	
17:00	46	37	83	1
18:00	39	41	80	
19:00	37	31	68	
20:00	17	39	56	
21:00	26	22	48	
22:00	13	11	24	
23:00	11	16	27	
24 HR. TOTAL:	605	456	1061	

HIGH 8 HOURS = 83

**COMMERCIAL TRAFFIC:**

EASTBOUND 0.0%

WESTBOUND 0.0%

**TWO-WAY 0.0%**

(TWO-WAY IS WEIGHTED AVERAGE)

MACHINE COUNTS NC-350

MACHINE COUNTS NC-350



**CITY OF LAS VEGAS  
DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING DIVISION  
24 HOUR SPEED AND VOLUME STUDY**

LOCATION: Bromley Ave W. of Sunbeam Dr				EXCEL
POSTED SPEED LIMIT = 25 MPH				RHCB
85 <sup>th</sup> PERCENTILE SPEED = 37 MPH				CARD
AVERAGE SPEED = 27 MPH				AM
% VEHICLES 5 MPH OR MORE OVER SPEED LIMIT = 45 %				
% VEHICLES 10 MPH OR MORE OVER SPEED LIMIT = 20 %				
DATE: 6/4/2024				
85 <sup>th</sup> ile speed	36	38		
Avg Speed	27	27		
HOUR BEGINS AT:	EASTBOUND	WESTBOUND	TOTAL	RANK
0:00	3	0	3	
1:00	1	1	2	
2:00	0	1	1	
3:00	1	1	2	
4:00	2	2	4	
5:00	8	1	9	
6:00	6	6	12	
7:00	8	9	17	
8:00	6	3	9	
9:00	10	10	20	
10:00	7	3	10	
11:00	4	9	13	
12:00	7	7	14	
13:00	8	9	17	
14:00	9	9	18	
15:00	2	6	8	
16:00	8	7	15	
17:00	13	18	31	1
18:00	14	3	17	
19:00	8	7	15	
20:00	6	4	10	
21:00	4	4	8	
22:00	6	2	8	
23:00	3	3	6	
24 HR. TOTAL:	144	125	269	

HIGH 8 HOURS = 31

**COMMERCIAL TRAFFIC:**

EASTBOUND 0.0%

WESTBOUND 0.0%

**TWO-WAY 0.0%**

(TWO-WAY IS WEIGHTED AVERAGE)

MACHINE COUNTS NC-350

MACHINE COUNTS NC-350

**CITY OF LAS VEGAS**  
**DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING DIVISION**  
**24 HOUR SPEED AND VOLUME STUDY**

LOCATION: Kayak Dr N. of Alaska Ave				EXCEL
POSTED SPEED LIMIT = 25 MPH				RHCB
85 <sup>th</sup> PERCENTILE SPEED = 23 MPH				CARD
AVERAGE SPEED = 14 MPH				AM
% VEHICLES 5 MPH OR MORE OVER SPEED LIMIT = 04 %				
% VEHICLES 10 MPH OR MORE OVER SPEED LIMIT = 02 %				
DATE: 6/4/2024				
85 <sup>th</sup> ile speed	23	24		
Avg Speed	13	14		
HOUR BEGINS AT:	NORTHBOUND	SOUTHBOUND	TOTAL	RANK
0:00	5	7	12	
1:00	7	2	9	
2:00	3	3	6	
3:00	0	5	5	
4:00	1	11	12	
5:00	4	32	36	
6:00	8	49	57	
7:00	11	38	49	
8:00	9	37	46	
9:00	16	30	46	
10:00	14	26	40	
11:00	18	33	51	
12:00	19	28	47	
13:00	19	28	47	
14:00	25	27	52	
15:00	24	31	55	
16:00	30	38	68	
17:00	24	50	74	1
18:00	34	40	74	
19:00	27	34	61	
20:00	35	22	57	
21:00	16	26	42	
22:00	10	13	23	
23:00	12	12	24	
24 HR. TOTAL:	371	622	993	

HIGH 8 HOURS = 74

**COMMERCIAL TRAFFIC:**

NORTHBOUND 0.0%

SOUTHBOUND 0.0%

**TWO-WAY 0.0%**

(TWO-WAY IS WEIGHTED AVERAGE)

MACHINE COUNTS NC-350

MACHINE COUNTS NC-350



CITY OF LAS VEGAS  
DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING DIVISION  
24 HOUR SPEED AND VOLUME STUDY

LOCATION: Michael Wy S. of Bromley Ave				EXCEL
POSTED SPEED LIMIT = 25 MPH				RHCB
85 <sup>th</sup> PERCENTILE SPEED = 40 MPH				CARD
AVERAGE SPEED = 32 MPH				AM
% VEHICLES 5 MPH OR MORE OVER SPEED LIMIT = 68 %				
% VEHICLES 10 MPH OR MORE OVER SPEED LIMIT = 36 %				
DATE: 6/4/2024				
85 <sup>th</sup> ile speed	41	40		
Avg Speed	32	32		
hour BEGINS AT:	NORTHBOUND	SOUTHBOUND	TOTAL	RANK
0:00	1	5	6	
1:00	4	0	4	
2:00	0	4	4	
3:00	2	3	5	
4:00	0	8	8	
5:00	3	15	18	
6:00	6	24	30	
7:00	11	25	36	
8:00	10	18	28	
9:00	7	21	28	
10:00	10	15	25	
11:00	15	19	34	
12:00	10	15	25	
13:00	13	25	38	
14:00	20	20	40	
15:00	20	24	44	
16:00	23	26	49	
17:00	11	33	44	
18:00	31	30	61	1
19:00	14	27	41	
20:00	25	16	41	
21:00	11	18	29	
22:00	7	8	15	
23:00	6	7	13	
24 HR. TOTAL:	260	406	666	

HIGH 8 HOURS = 61

COMMERCIAL TRAFFIC:  
NORTHBOUND 0.0%  
SOUTHBOUND 0.0%  
TWO-WAY 0.0%  
(TWO-WAY IS WEIGHTED AVERAGE)

MACHINE COUNTS NC-350  
MACHINE COUNTS NC-350

CITY OF LAS VEGAS  
DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING DIVISION  
24 HOUR SPEED AND VOLUME STUDY

LOCATION: Sunbeam Dr S. of Arbor Wy				EXCEL
POSTED SPEED LIMIT = 25 MPH				RHCB
85 <sup>th</sup> PERCENTILE SPEED = 34 MPH				CARD
AVERAGE SPEED = 22 MPH				AM
% VEHICLES 5 MPH OR MORE OVER SPEED LIMIT = 27 %				
% VEHICLES 10 MPH OR MORE OVER SPEED LIMIT = 12 %				
DATE: 6/4/2024				
85 <sup>th</sup> ile speed	35	34		
Avg Speed	21	22		
HOUR BEGINS AT:	NORTHBOUND	SOUTHBOUND	TOTAL	RANK
0:00	3	3	6	
1:00	1	1	2	
2:00	2	3	5	
3:00	0	5	5	
4:00	3	9	12	
5:00	4	18	22	
6:00	7	19	26	
7:00	8	22	30	
8:00	8	17	25	
9:00	9	19	28	
10:00	5	14	19	
11:00	19	17	36	
12:00	13	19	32	
13:00	15	13	28	
14:00	15	14	29	
15:00	17	12	29	
16:00	23	18	41	
17:00	31	11	42	1
18:00	12	21	33	
19:00	13	15	28	
20:00	11	8	19	
21:00	10	7	17	
22:00	4	7	11	
23:00	7	6	13	
24 HR. TOTAL:	240	298	538	

HIGH 8 HOURS = 42

**COMMERCIAL TRAFFIC:**

NORTHBOUND 0.0%

SOUTHBOUND 0.0%

**TWO-WAY 0.0%**

(TWO-WAY IS WEIGHTED AVERAGE)

MACHINE COUNTS NC-350

MACHINE COUNTS NC-350



## APPENDIX B

### SPEED HUMP DATA

#### NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM (NTMP) Traffic Calming Evaluation Sheet

Street and Limits: Alaska Ave Kayak Dr To: Sunbeam Dr

Speed Limit: 25 mph Length: 0.20 Miles Classification: Local

Emergency Response Route?: None: X Secondary:      Primary:     

Speed Criteria:		Points
2/3 point for every % $\geq 5$ mph over limit (50 max), +	% Excessive Speeding: <u>90%</u>	
1-1/3 point for every % $\geq 10$ mph over limit (50 max)	% Racing Speeding: <u>71%</u>	<u>100</u>
Volume Criteria:		
1 point for every 40 vpd over 500 ADT (40 max), +	ADT: <u>1,061</u>	
1 point for every 10 vpd of est. cut-thru ADT	Est. Cut-thru ADT: <u>0</u>	<u>14</u>
Crash Experience Criteria:		
5 points for every crash per mile (2 crash min) (20 max)	No. of crashes: <u>0</u>	<u>0</u>
Fronting Residential Criteria:		
Percent of Fronting Residential x 10% (10 max)	% Fronting Residential: <u>0%</u>	<u>0</u>
Adjacent/Nearby School Criteria:		
10 points for each public or private elementary or middle school within 200 feet of street	No. of Schools within 200': <u>0</u>	<u>0</u>
School Crossing Criteria:		
10 points for each suggested route to school crossing	No. of Schools Xng's: <u>0</u>	
+ 5 points for every uncontrolled crossing	No. of Uncontrolled Xng's: <u>0</u>	<u>0</u>
Pedestrian Oriented Facility Criteria:		
5 points for each pedestrian oriented facility (POF) within 200 feet of street	No. of POF's within 200': <u>0</u>	<u>0</u>
Sight Restriction Criteria:		
5 points for each side street with significant sight visibility restriction	No. of sight restrictions: <u>0</u>	<u>0</u>
TOTAL POINTS:		<u>114</u>

#### NOTE:

A minimum of 100 points is required for eligibility for NTMP Level 3 and Level 4 improvements.

Level 3 and Level 4 NTMP traffic calming treatment recommendations determined by City Transportation Engineering Division staff based on traffic characteristics and site conditions.

Abbreviations: vpd = vehicles per day. ADT = Average Daily Traffic, POF = Pedestrian Oriented Facility

**NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM (NTMP)**  
**Traffic Calming Evaluation Sheet**

Street and Limits: Bromley Ave Michael Wy To: Sunbeam Dr  
 Speed Limit: 25 mph Length: 0.20 Miles Classification: Local  
 Emergency Response Route?: None:        Secondary: X Primary:       

Speed Criteria:		Points
2/3 point for every % $\geq 5$ mph over limit (50 max), +	% Excessive Speeding: <u>45%</u>	
1-1/3 point for every % $\geq 10$ mph over limit (50 max)	% Racing Speeding: <u>20%</u>	<u>57</u>
Volume Criteria:		
1 point for every 40 vpd over 500 ADT (40 max), +	ADT: <u>269</u>	
1 point for every 10 vpd of est. cut-thru ADT	Est. Cut-thru ADT: <u>0</u>	<u>-6</u>
Crash Experience Criteria:		
5 points for every crash per mile (2 crash min) (20 max)	No. of crashes: <u>0</u>	<u>0</u>
Fronting Residential Criteria:		
Percent of Fronting Residential x 10% (10 max)	% Fronting Residential: <u>100%</u>	<u>10</u>
Adjacent/Nearby School Criteria:		
10 points for each public or private elementary or middle school within 200 feet of street	No. of Schools within 200': <u>0</u>	<u>0</u>
School Crossing Criteria:		
10 points for each suggested route to school crossing	No. of Schools Xng's: <u>0</u>	
+ 5 points for every uncontrolled crossing	No. of Uncontrolled Xng's: <u>0</u>	<u>0</u>
Pedestrian Oriented Facility Criteria:		
5 points for each pedestrian oriented facility (POF) within 200 feet of street	No. of POF's within 200': <u>0</u>	<u>0</u>
Sight Restriction Criteria:		
5 points for each side street with significant sight visibility restriction	No. of sight restrictions: <u>0</u>	<u>0</u>
<b>TOTAL POINTS:</b>		<b><u>61</u></b>

**NOTE:**

A minimum of 100 points is required for eligibility for NTMP Level 3 and Level 4 improvements.

Level 3 and Level 4 NTMP traffic calming treatment recommendations determined by City Transportation Engineering Division staff based on traffic characteristics and site conditions.

Abbreviations: vpd = vehicles per day, ADT = Average Daily Traffic, POF = Pedestrian Oriented Facility



**NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM (NTMP)**  
**Traffic Calming Evaluation Sheet**

**Street and Limits:** Kayak Dr Alaska Ave To: Tanya Ave

**Speed Limit:** 25 mph **Length:** 0.10 Miles **Classification:** Local

**Emergency Response Route?:** None: X Secondary:      Primary:     

<b>Speed Criteria:</b>		<b>Points</b>
2/3 point for every % $\geq 5$ mph over limit (50 max), +	% Excessive Speeding: <u>4%</u>	<u>5</u>
1-1/3 point for every % $\geq 10$ mph over limit (50 max)	% Racing Speeding: <u>2%</u>	
<b>Volume Criteria:</b>		
1 point for every 40 vpd over 500 ADT (40 max), +	ADT: <u>993</u>	<u>12</u>
1 point for every 10 vpd of est. cut-thru ADT	Est. Cut-thru ADT: <u>0</u>	
<b>Crash Experience Criteria:</b>		
5 points for every crash per mile (2 crash min) (20 max)	No. of crashes: <u>2</u>	<u>20</u>
<b>Fronting Residential Criteria:</b>		
Percent of Fronting Residential x 10% (10 max)	% Fronting Residential: <u>0%</u>	<u>0</u>
<b>Adjacent/Nearby School Criteria:</b>		
10 points for each public or private elementary or middle school within 200 feet of street	No. of Schools within 200': <u>0</u>	<u>0</u>
<b>School Crossing Criteria:</b>		
10 points for each suggested route to school crossing	No. of Schools Xng's: <u>0</u>	<u>0</u>
+ 5 points for every uncontrolled crossing	No. of Uncontrolled Xng's: <u>0</u>	
<b>Pedestrian Oriented Facility Criteria:</b>		
5 points for each pedestrian oriented facility (POF) within 200 feet of street	No. of POF's within 200': <u>0</u>	<u>0</u>
<b>Sight Restriction Criteria:</b>		
5 points for each side street with significant sight visibility restriction	No. of sight restrictions: <u>0</u>	<u>0</u>
<b>TOTAL POINTS:</b>		<u><b>38</b></u>

**NOTE:**

A minimum of 100 points is required for eligibility for NTMP Level 3 and Level 4 improvements.

Level 3 and Level 4 NTMP traffic calming treatment recommendations determined by City Transportation Engineering Division staff based on traffic characteristics and site conditions.

Abbreviations: vpd = vehicles per day, ADT = Average Daily Traffic, POF = Pedestrian Oriented Facility

**NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM (NTMP)**  
**Traffic Calming Evaluation Sheet**

Street and Limits: Michael Wy Tanya Ave To: Bromley Ave

Speed Limit: 25 mph Length: 0.10 Miles Classification: Local

Emergency Response Route?: None: X Secondary:      Primary:     

Speed Criteria:		Points
2/3 point for every % $\geq 5$ mph over limit (50 max), +	% Excessive Speeding: <u>68%</u>	<u>93</u>
1-1/3 point for every % $\geq 10$ mph over limit (50 max)	% Racing Speeding: <u>36%</u>	
Volume Criteria:		
1 point for every 40 vpd over 500 ADT (40 max), +	ADT: <u>666</u>	<u>4</u>
1 point for every 10 vpd of est. cut-thru ADT	Est. Cut-thru ADT: <u>0</u>	
Crash Experience Criteria:		
5 points for every crash per mile (2 crash min) (20 max)	No. of crashes: <u>0</u>	<u>0</u>
Fronting Residential Criteria:		
Percent of Fronting Residential x 10% (10 max)	% Fronting Residential: <u>0%</u>	<u>0</u>
Adjacent/Nearby School Criteria:		
10 points for each public or private elementary or middle school within 200 feet of street	No. of Schools within 200': <u>0</u>	<u>0</u>
School Crossing Criteria:		
10 points for each suggested route to school crossing	No. of Schools Xng's: <u>0</u>	<u>0</u>
+ 5 points for every uncontrolled crossing	No. of Uncontrolled Xng's: <u>0</u>	
Pedestrian Oriented Facility Criteria:		
5 points for each pedestrian oriented facility (POF) within 200 feet of street	No. of POF's within 200': <u>0</u>	<u>0</u>
Sight Restriction Criteria:		
5 points for each side street with significant sight visibility restriction	No. of sight restrictions: <u>0</u>	<u>0</u>
TOTAL POINTS:		<u>97</u>

**NOTE:**

A minimum of 100 points is required for eligibility for NTMP Level 3 and Level 4 improvements.

Level 3 and Level 4 NTMP traffic calming treatment recommendations determined by City Transportation Engineering Division staff based on traffic characteristics and site conditions.

Abbreviations: vpd = vehicles per day, ADT = Average Daily Traffic, POF = Pedestrian Oriented Facility

**NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM (NTMP)**  
**Traffic Calming Evaluation Sheet**

Street and Limits: Sunbeam Dr Bromley Ave To: Alaska Ave

Speed Limit: 25 mph Length: 0.20 Miles Classification: Local

Emergency Response Route?: None:      Secondary: X Primary:     

Speed Criteria:		Points
2/3 point for every % $\geq 5$ mph over limit (50 max), +	% Excessive Speeding: <u>27%</u>	
1-1/3 point for every % $\geq 10$ mph over limit (50 max)	% Racing Speeding: <u>12%</u>	<u>34</u>
Volume Criteria:		
1 point for every 40 vpd over 500 ADT (40 max), +	ADT: <u>538</u>	
1 point for every 10 vpd of est. cut-thru ADT	Est. Cut-thru ADT: <u>0</u>	<u>1</u>
Crash Experience Criteria:		
5 points for every crash per mile (2 crash min) (20 max)	No. of crashes: <u>0</u>	<u>0</u>
Fronting Residential Criteria:		
Percent of Fronting Residential x 10% (10 max)	% Fronting Residential: <u>100%</u>	<u>10</u>
Adjacent/Nearby School Criteria:		
10 points for each public or private elementary or middle school within 200 feet of street	No. of Schools within 200': <u>0</u>	<u>0</u>
School Crossing Criteria:		
10 points for each suggested route to school crossing	No. of Schools Xng's: <u>0</u>	
+ 5 points for every uncontrolled crossing	No. of Uncontrolled Xng's: <u>0</u>	<u>0</u>
Pedestrian Oriented Facility Criteria:		
5 points for each pedestrian oriented facility (POF) within 200 feet of street	No. of POF's within 200': <u>0</u>	<u>0</u>
Sight Restriction Criteria:		
5 points for each side street with significant sight visibility restriction	No. of sight restrictions: <u>0</u>	<u>0</u>
<b>TOTAL POINTS:</b>		<b><u>45</u></b>

**NOTE:**

A minimum of 100 points is required for eligibility for NTMP Level 3 and Level 4 improvements.

Level 3 and Level 4 NTMP traffic calming treatment recommendations determined by City Transportation Engineering Division staff based on traffic characteristics and site conditions.

Abbreviations: vpd = vehicles per day, ADT = Average Daily Traffic, POF = Pedestrian Oriented Facility



# APPENDIX C

## CRASH ANALYSIS

INTERSECTION DETAIL  
Kayak Dr - Alaska Ave to Tanya Ave  
01 JAN 22 - 01 May 24  
COUNTY CLARK

Crash Severity	Crash Date	Crash Year	Crash Time	Primary Street	Secondary Street	Dist	Dir	Weather	Fatalities	Injured	Crash Type	V1 Type	V1 Dir	V1 Age	V1 Action	V1 Driver Factors	V1 Driver Distressed	V2 Type	V2 Dir	V2 Age	V2 Action	Accident Rec Num
PUG	7/11/2023	2023	20:35	JANAKAVE	KAYAK DR	69	S	CLAR			NON COLLISION	HATCHBACK	E	38	NEGOTIATING A CURVE	IMPROPER DECISION						
UNJ	9/12/2024	2024	22:55	KAYAK DR	ALASKA AVE	97	N	CLAR		1	NON COLLISION	PICKUP	W	35	RIGHT TURN	NORMAL	FAILED TO MAINTAIN LANE					230700061316

## **APPENDIX D**

### **BALL BANK STUDY**

**CITY OF LAS VEGAS  
TRAFFIC ENGINEERING DIVISION**



LOCATION: Fremont Estates: Tanya/Kayak and Alaska/Kayak

DATE: 10/22/2024 DAY: Tuesday TIME: 10:00 AM

DRIVER: JD RECORDER: NN

POSTED SPEED: 25 MPH

SPEED	MAXIMUM SAFE DEFLECTION (in degrees)	OBSERVED DEFLECTION			
		STREET NAME AND DIRECTION			
		Tanya Ave / Kayak Dr		Alaska Ave / Kayak Ave	
10 MPH	16°	8	NB direction	10	NB direction
10 MPH	16°	12	SB direction	6	SB direction
15 MPH	16°	11	NB direction	<b>19</b>	<b>NB direction</b>
15 MPH	16°	<b>18</b>	<b>SB direction</b>	<b>13</b>	<b>SB direction</b>
20 MPH	16°	<b>19</b>	<b>NB direction</b>	<b>28</b>	<b>NB direction</b>
20 MPH	16°	<b>24</b>	<b>SB direction</b>	<b>20</b>	<b>SB direction</b>

**BOLD:** survey speed exceeding maximum deflection

**SUMMARY:**

**Section 2C.08 Advisory Speed Plaque (W13-1P)**

Among the established engineering practices that are appropriate for the determination of the recommended advisory speed for a horizontal curve are:

**16 degrees of ball-bank for speeds of 20 mph or less**

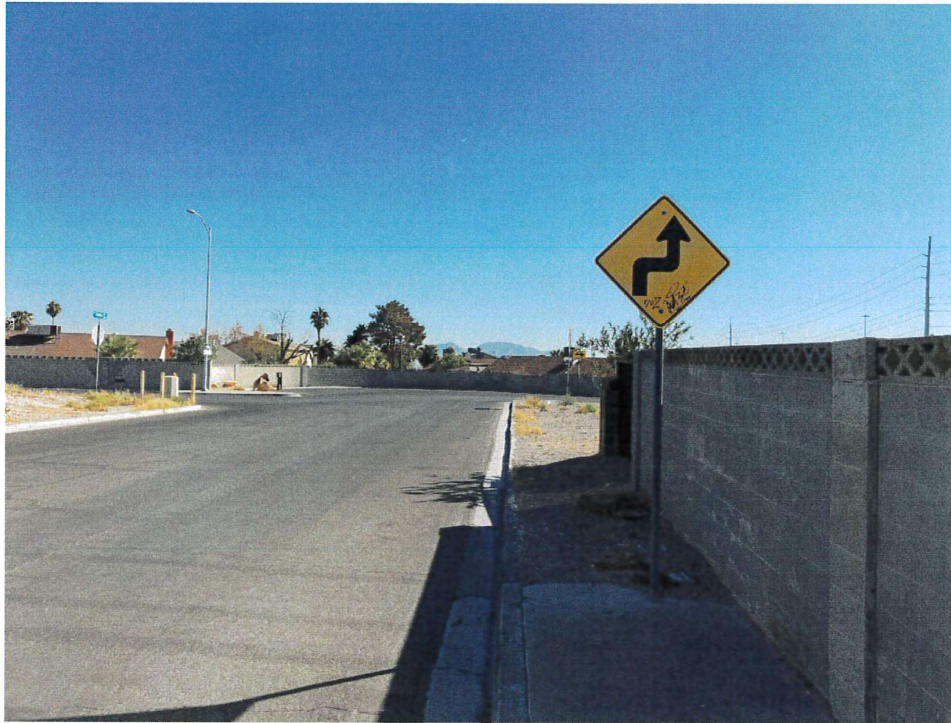
14 degrees of ball-bank for speeds of 25 to 30 mph or less

12 degrees of ball-bank for speeds of 35 mph and higher

SOURCE:

"F:\PW\_Traffic\COUNTS\10\_BALL BANK VIDEO\Fremont Estates Ball Bank 10-24 MP4"





*Figure A.1. Eastbound approach – Existing signage on Tanya Avenue*



*Figure A.2. Westbound approach – Existing signage on Alaska Avenue*

**APPENDIX E**  
**WORK ORDER EXHIBIT**





**NORTH**  
SCALE  
1" = 50'

**CONSTRUCTION NOTES:**

- 1 REPLACE EXISTING W1-38 (30"X30") SIGN AND INSTALL A NEW W13-1 (10 MPH (15"X18")) PLAQUE ON A EXISTING POST.
- 2 EXTEND DOUBLE YELLOW DOUBLE PAISED PAVEMENT MARKERS (RPMS), ENSURE THERE ARE 18" TRAVEL LANES IN EACH DIRECTION. INSTALL (2) SQUARE REFLECTIVE YELLOW RPMS AT EACH END OF THE CENTERLINE.

**DEPARTMENT OF PUBLIC WORKS**  
**TRANSPORTATION ENGINEERING**



DATE: 10/22/2024 DRAWN BY: CAL

SHEET: 1 OF 1

**TANYA AVE. / KAYAK DR. / ALASKA AVE.**  
**ADVISORY SIGNANGE & CENTERLINE**

**WORK ORDER**

10/20/24 17:00:00 C:\PROJECTS\2024\TANYA AVE. / KAYAK DR. / ALASKA AVE. / ADVISORY SIGNANGE & CENTERLINE\TANYA AVE. / KAYAK DR. / ALASKA AVE. / ADVISORY SIGNANGE & CENTERLINE.DWG