

**ENGINEERING AND TRAFFIC SURVEY
FOR SPEED LIMITS**

**CITY OF
INDIAN WELLS**

MARCH 2022

PREPARED FOR:

**CITY OF INDIAN WELLS
44950 EL DORADO DRIVE
INDIAN WELLS, CALIFORNIA 92210**

PREPARED BY:

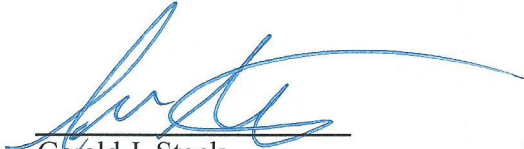
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CERTIFICATION

I, Gerald Stock, do hereby certify that this Engineering and Traffic Survey for the City of Indian Wells was performed under my supervision and is accurate and complete. I certify that I am both experienced in performing surveys of this type and duly registered in the State of California as a professional Traffic Engineer.



Gerald J. Stock
RTE # 2049



**CITY OF INDIAN WELLS
ENGINEERING AND TRAFFIC SURVEY FOR SPEED LIMITS**

Introduction

In accordance with procedures established by the State of California, this Engineering and Traffic Survey has been developed for the City of Indian Wells as the basis for the establishment and enforcement of speed limits for selected streets within the City. The work provided herein was authorized by the City and was performed by the engineering consulting firm of Hartzog & Crabill, Inc. The goal of the review was two-fold. The first was to review new roadway segments to determine if speed limit postings should be recommended. The second involved a determination as to whether changes in pre-existing conditions have occurred where older speed limits should be modified.

The requirement to perform Engineering and Traffic surveys for speed limits is based on the California Vehicle Code (CVC). CVC Section 40802 states that at least once every five (5), seven (7), or ten (10) years, States and local agencies should re-evaluate non-statutory speed limits on segments of their roadways. Recent changes to the CA MUTCD changed the policy and procedure for setting speed limits in California. Engineering and Traffic Surveys must be performed with the use of radar or other approved electronic devices if the use of radar is to be employed to enforce speed limits. If such a survey is not performed within five years (or seven years, or ten years as stated previously) of the date of the preceding survey, then the new data and its use will constitute a speed trap. Hence, evidence using such would not be admissible in court. From the Vehicle Code, a "speed trap" is either of the following:

- (a) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

- (b) A particular section of a highway with a prima facie speed limit provided by this code or by local ordinance under sub-paragraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established pursuant to Section 22354, 22357, 22358, or 22358.3 if that prima facie speed limit is not justified by an engineering and traffic survey conducted within five years prior to the date of the alleged violation, and where enforcement involves the use of radar or other electronic devices that measures the speed of moving objects. This paragraph does not apply to a local street, road, or school zone.

The definition of a Traffic and Engineering Survey is contained in Section 627 of the Vehicle Code and is as follows:

Engineering and Traffic survey, as used in this code, means a survey of highway and traffic conditions in accordance with methods determined by the California Department of Transportation (Caltrans) for use by State and local authorities. An engineering and traffic survey shall include, among other requirements deemed necessary by the department, consideration of the following:

- (a) Prevailing speeds as determined by traffic engineering measurements.
- (b) Accident records.
- (c) Highway, traffic and roadside conditions not readily apparent to the driver.

The California Vehicle code has set certain regulations regarding the posting and enforcement of speed zones. These regulations generally reflect the viewpoint that speed zoning should be based on traffic conditions and natural driver behavior and not because of an arbitrary response to a traffic event or occurrence. Therefore, it is important to have a general understanding of the "Basic Speed Law", "Prima Facie Speed Limits" and "Intermediate Speed Zones".

Basic Speed Law (CVC 22350)

All fifty states base their speed regulations on the Basic Speed Law. In California, CVC 22350 defines the basic speed law as:

"No Person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of the highway, and in no event at a speed which endangers the safety of persons or property."

This law recognizes that driving conditions vary widely from time-to-time and place-to-place and, therefore, no set of fixed driving rules will adequately serve all conditions. The motorist will constantly adjust their driving behavior to fit the conditions encountered, and must learn to do this with a minimum of assistance from the police. The Basic Speed Law is founded on the belief that a majority of motorists are able to modify their driving behavior properly, as long as they are aware of the conditions around them.

Prima Facie Speed Limits (CVC 22352)

All other speed limits are prima facie limits which, "on the face of it", are reasonable and prudent under normal conditions. The opportunity given to the driver to exceed a prima facie speed limit when it is safe to do so recognizes the fact that any posted speed limit cannot adequately reflect the many different conditions of traffic, weather, visibility, etc., that may be found on the same highway at different times.

Certain prima facie limits are automatically established by law (CVC 22352), including a 15 mph limit in alleys, blind intersections, blind railroad crossing, and the 25 mph limit in business and residence districts. There is also a part time 25 mph limit in school zones when children are present in route to or from school.

Business and residence districts are defined in the Vehicle Code as specific areas meeting a specified minimum density of roadside development. CVC Sections 235 and 515 define these regulations. A count of houses or active businesses facing on a highway must be made to determine whether or not a valid business or residence district exists. The law does not require posting these prima facie limits that are readily apparent.

Establishment of Speed Zones

The reason that speed limit areas and their required postings are done is to guard reasonable drivers from the unreasonable behavior of reckless, unreliable, or otherwise dangerous drivers. As with other similar laws, the limits identified are based on the consensus of the majority of those who drive the highway as to what speed is reasonable and safe. It is this type of information that is reflected in the analysis section of this report. Namely, posted speed limits are a reflection of

that speed which most people deem to be safe as opposed to a minority of drivers who do not drive in a reasonable manner.

Speed zones are also established to advise of road conditions or hazards that may not be readily apparent to a reasonable driver. For that reason, a field review of related road/traffic variables is conducted which considers the analytical data and accident history of a particular roadway segment to determine a safe and reasonable speed limit.

Data Collection Procedures

Speed evaluation data was collected at 17 different roadway segments on 11 different roadways in the City of Indian Wells. These areas and the number of segments on each are described as follows:

1. Cook Street (2)
2. El Dorado Drive (2)
3. Fairway Drive (2)
4. Fred Waring Drive (2)
5. Highway 111 (3)
6. Hovely Lane (1)
7. Miles Avenue (1)
8. Portola Avenue (1)
9. Rancho Palمراس Drive (1)
10. Warner Trail (1)
11. Washington Street (s/b) (1)

As described in various traffic engineering documents - including information provided by the State of California, the individual locations on which radar data collection procedures used involved considerations for the following:

- a. Stop sign or traffic signal locations;
- b. Visibility issues;
- c. Traffic flow at intersections, cross-traffic, major driveways, crosswalks, railroad crossings and unusual turning movements;
- d. The influence of other traffic factors on the speed of cars: such as on street parking, roadway features, adjacent land uses, and lighting.

Speed Zoning Methodology

The Manual on Uniform Traffic Control Devices, California Supplement (MUTCD CA Supplement) specifies a “short method of determining speed limits on City and County Through Highways, Arterial and Collector Roads Procedures.

Introduction - This short method of speed zoning is based on the premise that the reasonable speed limit is one that conforms to the actual behavior of the majority of motorists, and that by measuring motorist speeds; one will be able to select a speed limit that is both reasonable and effective. Other factors that need to be considered include, but are not limited to: the most recent two-year collision record, roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile conditions, intersection spacing and offsets, commercial driveway characteristics, pedestrian traffic in the roadway without sidewalks.

Speed Zone Survey

- Only one person is required for the fieldwork. Speeds can be read directly from a radar speed meter.
- A section of road should be selected with representative operating speeds. If speeds vary on a given road, additional surveys should be conducted. In this case, it may be necessary to establish additional speed zones with different speed limits. The section selected should be straight and should have no traffic signal, stop sign or intersection with a major cross street.
- Speed measurements should be taken during off-peak hours on weekdays. The weather should be fair with no unusual conditions prevailing. It is important that the surveyor and his equipment be so inconspicuous as not to affect traffic speeds. For this reason, an unmarked car is recommended, with the radar speed meter located as inconspicuously as possible. It should be placed so as to be able to survey traffic in both directions, and should not make an angle greater than 15 degrees with the roadway center line.
- It is desirable to have a minimum sample of 100 automobiles in each survey. This may result in excessive survey periods for low-volume roads. Under these conditions, the survey should be conducted for a minimum of two hours, but in no case should the sample for any survey contain less than 50 automobiles.
- The MUTCD with California Supplement states that speed limits are established at or near the 85th percentile speed, which is defined as that speed at or below which 85 percent of the traffic is moving. This speed can be selected directly from the data sheet. However, roadway conditions not readily apparent to the motorist or other roadway conditions that may impact sight distance may result in a further reduction of 5 mph in the recommended speed limit.
- As a check on the validity of the proposed speed limit, an analysis should be made of the three-year accident record for the section of roadway under consideration. If this record shows an abnormally high percentage of accidents normally associated with excessive speeds, the proposed speed limit should be further reduced. This is a judgement situation, and will not usually be a factor,
- Short speed zones of less than half a mile should be avoided, except in transition areas.
- Speed zone changes should be coordinated with changes in roadway conditions or roadway development.
- Speed zoning in 5 mile per hour increments should be avoided if possible. A 10-mile per hour increment is preferable.
- Speed zoning should be coordinated between adjacent jurisdictions.

Local Street Exemptions (CVC 40802)

Many streets are designated as "Local" streets per CVC 40802. These streets are exempt from the radar study. Therefore, the speed limit for these streets does not require an Engineering and Traffic Survey. The code is as follows:

"For the purpose of this section, local streets and roads shall be defined by the latest functional usage and federal aid system maps as submitted to the Federal Highway Administration. When these maps have not been submitted, the following definition shall be used: A local street or road primarily provides access to abutting residential property and shall meet the following three conditions:

1. Roadway width of not more than 40 feet.
2. Not more than one half mile of uninterrupted length.
3. Not more than one traffic lane in each direction.

Other Considerations

Every street should be inspected for unusual traffic, roadway and roadside conditions not readily apparent to a motorist. A check should be made of the adequacy of traffic control devices, roadway alignment, width, surface conditions, accident history and any unique traffic hazards that may exist. Any of these conditions may warrant the selection of a speed lower than the 85th percentile speed for speed zoning.

Radar Collection Time-Frames

The hours of radar operation were restricted to off-peak periods for heavily traveled streets and to uncongested peak periods on lightly traveled streets. All surveys were conducted in fair weather. The radar unit was mounted at the top of the front dash of an unmarked vehicle with the meter-reading unit sustained inside the vehicle. The radar unit's calibration was checked periodically using a tuning fork.

The radar operator and assistant recorded the speed meter readings for each location on Radar Speed Survey Field Sheets included in the appendix of this report. A representative sampling of at least 100 vehicles were surveyed.

Analysis Factors

Several factors were used as input to our recommendations for speed limits. These include the 85th Percentile, the 10 MPH Pace and others. These are described in detail below.

1. The **CRITICAL SPEED**, or the 85th percentile, is defined as that speed at or below which 85 percent of the traffic is moving. From experience, traffic engineers have found that this is one of the most reliable factors in determining appropriate speed limits.

Hence, the accepted practice, and one that has been used in this case is to set the speed limit at or near the critical speed. This recognizes that other factors could be present where the above may not be appropriate. When this procedure is used, it not only conforms to that required by

the State but it also provides a strong base for law enforcement personnel to properly enforce speed limits.

2. The **10 MPH PACE** is that continuous 10 mph incremental range of speeds in which the largest number of recorded vehicles is contained. It is a measure of the dispersion of speeds within the sample surveyed. For this element, the accepted practice to the greatest extent possible is to try and keep the recommended speed limit within the 10 mph pace after considering the critical speed and any factors requiring a speed lower than the critical speed.
3. The **MEDIAN (MIDDLE) SPEED**, or 50th percentile speed, represents the mid-point value within the range of recorded speeds for a particular roadway location. In other words, 50% of the vehicles travel faster than, and 50% travel slower than the median speeds. This value is another measure of the central tendency of the vehicle speed distribution.
4. The **15th PERCENTILE SPEED** is that speed at or below which 15% of the vehicles are traveling. This value is important in determining the minimum allowable speed limit, given that the vehicles traveling below this speed tend to obstruct the flow of traffic, thereby increasing the accident potential.
5. **MODAL SPEED**: The modal speed is the speed, which occurs most frequently in the distribution. It serves as another useful measure in verifying the correct recommendation for speed limits.
6. **STANDARD DEVIATION**: This is a mathematical element, which relates to measures of dispersion of data. It is used to assist in describing the center of speed distribution information around the arithmetic mean or the time mean speed. It also is used in the overall review of recommended speed limits and serves to verify the level of confidence of data used in making recommendations.
7. The **MEAN (AVERAGE)** is the sum of the speeds of the samples divided by the number of samples.

The numerical values of the above factors are derived from the speed distribution curves calculated for each survey location. These distribution curves represent a method of graphic analysis that compares the cumulative percentage of vehicles to the speed at which the vehicles are traveling.

Field Review

In addition to the availability of the above statistical data, a significant aspect of speed limit recommendations is based on the field review. Its importance is that existing conditions may warrant a lower speed than is actually indicated by the application of survey data. Examples of the field data collected for the purposes of analyzing related roadway characteristics as they pertain to the determination of appropriate speed limits are listed below:

1. Segment length, width and alignment
2. Level of pedestrian activity
3. Traffic flow characteristics

4. Vertical and/or horizontal curves.
5. Driver sight distance constraints.
6. Adjacent residential/commercial/industrial etc. zoning.
7. Number of lanes and other channelization/stripping factors
8. Frequency of intersections, driveways and on street parking;
9. Location of stop signs, traffic signals, and other regulatory traffic control devices;
10. Roadway conditions, bumps and dips;
11. Obstructions to pedestrian visibility;
12. Land use and proximity of schools;
13. Uniformity and continuity with existing speed zones to/with adjacent jurisdictions;
14. Any other unusual conditions not readily apparent to the driver.

The results of the field review of related road/traffic variables are summarized on the Engineering and Traffic Survey forms found in the Appendix of this report.

Accident History

The Engineering and Traffic Survey forms summarize the available three-year accident information for the subject streets. The accident information includes the total number of accidents within each street segment and of those accidents, the number that are speed-related. This information was obtained from the California Statewide Integrated Traffic Records System (SWITRS) for the City of Indian Wells.

The annual accident rate figures represent the number of speed-related accidents divided by three years of accident records. The evaluation of accidents is useful as a check on the accuracy of recommended or existing speed limits. Should this review show a high percentage of accidents associated with excessive speeds, then consideration based on professional traffic engineering judgement should be directed toward reducing the posted or recommended speed limits.

Results and Recommendations

The following Summaries: No Speed Limit Changes, New Speed Limit Postings, Conflicting Speed Postings, Residence District, Speed Limit Increases, Speed Limit Reductions and Summary of Recommendations, present the results of the radar survey for the selected 17 locations. As shown, the Summary of Recommendations chart presents the necessary analysis elements that in addition to the field review of a registered traffic engineer led to the recommendations indicated.

Locations of "No Speed Limit Changes"

The Summary indicates that all of the 17 segments studied are recommended for no speed limit changes. The reason centers mostly on the fact that the newly measured values of the 85th percentile and the 10 MPH pace are still within the parameters of the existing speed limits. Additional factors such as reduced sight distance, higher collision rates and keeping continuity with the speeds of neighboring segments form the basis in some instances of our recommendation. Therefore, the current postings should remain as is. At one location, only one direction of travel is posted and is listed for no change in the speed limit. Hence, the other direction should be posted for consistency. These segments noted as "post", as well as the segments recommended for "No Change" are listed below:

<u>Cook Street</u>	
Fairway Drive to Highway 111	Remain posted at 35 mph
Highway 111 to Fred Waring Drive	Remain posted at 40 mph
<u>El Dorado Drive</u>	
Fairway Drive to Highway 111	Remain posted at 35 mph
Highway 111 to Fred Waring Drive	Remain posted at 40 mph
<u>Fairway Drive</u>	
Cook Street to Rancho Palmeras Drive	Remain posted at 35 mph
Rancho Palmeras Drive to El Dorado Drive	Remain posted at 35 mph
<u>Fred Waring Drive</u>	
Phyllis Jackson Lane to Cook Street	Remain posted at 45mph
Cook Street to Washington Street	Remain posted at 50 mph
<u>Highway 111</u>	
East City Limits to Club Drive	Remain posted at 50 mph
Club Drive to Cook Street	Remain posted at 45 mph
Cook Street to West City Limits	Remain posted at 45 mph
<u>Hovley Lane</u>	
East City Limits to West City Limits	Remain posted at 45 mph
<u>Miles Avenue</u>	
Washington Street to Highway 111	Remain posted at 50 mph
<u>Portola Avenue</u>	
Mockingbird Trail to Haystack Road	Remain posted at 40 mph
<u>Rancho Palmeras Drive</u>	
Fairway Drive to Highway 111	Remain posted at 35 mph
<u>Warner Trail</u>	
Fred Waring Drive to Miles Avenue	Remain posted at 35 mph
<u>Washington Street (Southbound)</u>	
Fred Waring Drive to South City Limits	Remain posted at 50 mph

Support Explanations of "No Speed Limit Changes"

The following are support explanations for the two roadway segments that the recommended speed limit is 5 mph lower or more than the newly measured 85th percentile speed and the one survey location with only one direction posted and recommended to install speed limit.

Cook Street

Highway 111 to Fred Waring Drive

This section of Cook Street is a four lane roadway with a 40 mph speed limit. Field observations include the adjacent land uses are residential golf communities and commercial, no parking anytime signs and bike lanes along both sides of the roadway, a 35 mph speed limit is posted in the adjacent southerly segment. The speed study resulted with an 85th percentile speed of 46.2 mph and a 10 mph pace range of 38 to 47 mph. To prevent a 10 mph jump in speed limit between segments, it is recommended that the 40 mph speed limit remain.

El Dorado Drive

Highway 111 to Fred Waring Drive

This section of El Dorado Drive is a four lane roadway. The posted speed limit is 40 mph. The adjacent land uses are residential in a golf course community, fire station, and City Hall. Field observations include painted bike lanes, No Trucks over 3 tons 9pm-9am, no parking anytime along roadway, a gradual horizontal curve, and areas of limited sight distance. The Traffic Engineering speed study results show an 85th percentile speed of 46.6 mph and a 10 mph pace range of 37 to 46 mph. With areas of limited sight distance and in effort of preventing a 10 mph jump in speed between segments, it is recommended that the existing speed limit remain.

Fairway Drive

Cook Street to Rancho Palmeras Drive

The recommended 35 mph speed is 3.4 mph below the 85th percentile speed and meets CVC standards. Field observations include a 35 mph speed sign posted eastbound only, is a two lane roadway, land use is residential, no sidewalks thus pedestrians use roadway, painted bikes lanes and no stopping anytime eastbound. For enforcement, a 35 mph speed sign should be installed westbound.

**CITY OF INDIAN WELLS
SUMMARY OF RECOMMENDATIONS**

STREET LOCATION	EXISTING SPEED LIMIT	RECOMMENDED SPEED LIMIT	85TH PERCENTILE SPEED	AVERAGE SPEED	10 MPH PACE RANGE	PERCENT OF VEHICLES IN PACE	JUSTIFICATION / COMMENTS
<u>COOK STREET</u>							
FAIRWAY DR TO HIGHWAY 111	35	35	39.6	34.3	30-39	82.1	NO CHANGE – 85 TH PERCENTILE
HIGHWAY 111 TO FRED WARING DR	40	40	46.2	42.1	38-47	78.5	NO CHANGE – 85 TH PERCENTILE / RETAIN 5 MPH SPEED JUMP
<u>EL DORADO DRIVE</u>							
FAIRWAY DR TO HIGHWAY 111	35	35	39.5	35.2	32-41	83.5	NO CHANGE – 85 TH PERCENTILE
HIGHWAY 111 TO FRED WARING DR	40	40	46.6	40.3	37-46	75.8	NO CHANGE – 85 TH PERCENTILE / SIGHT DISTANCE / RETAIN 5 MPH SPEED JUMP
<u>FAIRWAY DRIVE</u>							
COOK ST TO RANCHO PALMERAS DR	35 EB	35	38.4	34.8	31-40	84.2	NO CHANGE – 85 TH PERCENTILE – POST WB
RANCHO PALMERAS DR TO EL DORADO DR	35	35	37.3	34.1	30-39	89.8	NO CHANGE – 85 TH PERCENTILE
<u>FRED WARING DRIVE</u>							
PHYLLIS JACKSON LN TO COOK ST	45 / 25*	45 / 25*	48.9	44.7	41-50	79.2	NO CHANGE – 85 TH PERCENTILE
COOK ST TO WASHINGTON ST	50 / 25*	50 / 25*	54.3	49.9	46-55	83.7	NO CHANGE – 85 TH PERCENTILE
<u>HIGHWAY 111</u>							
EAST CITY LIMITS TO CLUB DR	50	50	50.4	45.2	42-51	71.4	NO CHANGE – 85 TH PERCENTILE
CLUB DR TO COOK ST	45	45	48.9	44.7	40-49	73.1	NO CHANGE – 85 TH PERCENTILE
COOK ST TO WEST CITY LIMITS	45	45	46.5	41.0	38-47	63.4	NO CHANGE – 85 TH PERCENTILE

*25 mph When Children Present
NB = Northbound
SB = Southbound

EB = Eastbound
WB = Westbound

STREET LOCATION	EXISTING SPEED LIMIT	RECOMMENDED SPEED LIMIT	85TH PERCENTILE SPEED	AVERAGE SPEED	10 MPH PACE RANGE	PERCENT OF VEHICLES IN PACE	JUSTIFICATION / COMMENTS
<u>HOVLEY LANE</u>							
EAST CITY LIMITS TO WEST CITY LIMITS	45	45	49.9	45.0	42-51	79.1	NO CHANGE – 85 TH PERCENTILE
<u>MILES AVENUE</u>							
WASHINGTON ST TO HIGHWAY 111	50	50	51.8	46.4	43-52	62.7	NO CHANGE – 85 TH PERCENTILE
<u>PORTOLA AVENUE</u>							
MOCKINGBIRD TRAIL TO n/o OF HAYSTACK RD	40	40	41.6	37.4	34-43	78.3	NO CHANGE – 85 TH PERCENTILE
<u>RANCHO PALMERAS DR</u>							
FAIRWAY DR TO HIGHWAY 111	35	35	35.9	32.8	29-38	90.4	NO CHANGE – 85 TH PERCENTILE
<u>WARNER TRAIL</u>							
FRED WARING DR TO MILES AVE	35 / 25*	35 / 25*	38.3	33.2	29-38	73.1	NO CHANGE – 85 TH PERCENTILE
<u>WASHINGTON STREET (S/B)</u>							
FRED WARING DR TO SOUTH CITY LIMITS	50	50	51.5	46.9	42-51	69.0	NO CHANGE – 85 TH PERCENTILE

*25 mph When Children Present
NB = Northbound

NP = Not Posted
SB = Southbound

APPENDIX A

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS

HCI

COOK STREET

FAIRWAY DR TO HIGHWAY 111

DATE: 1/27/2022

SURVEY BY: C. BUENDIA

TIME: 11:15 AM - 11:15 AM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF FRED WARING
DATE OF SURVEY	1/27/2022
85th PERCENTILE	39.6 MPH
10 MPH PACE	30 - 39 MPH
PERCENT IN PACE	82.1 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,750
LANE CONFIGURATION	2 LANES PER DIRECTION (1 LANE SB ONLY AT COVE GATE)
TRAFFIC CONTROLS	SIGNAL - HWY 111, STOP- FAIRWAY
CROSSWALKS	AT HWY 111
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	DESIGNATED BIKE LANES NO TRUCKS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.45
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / NO
STREET LIGHTING	NONE
DRIVEWAY DENSITY	NONE
OTHER	RAISED MEDIAN ISLAND

ADJACENT LAND USE	COMMERCIAL / RESIDENTIAL SEPERATED BY BRICK WALLS
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RECOMMENDED SPEED LIMIT	35 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:	The recommended speed of 35 mph is within 4.6 of the 85th percentile speed and meets CVC standards.
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RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

COOK STREET

DATE: 1/27/2022

TIME: 11:15 AM - 11:15 AM

FAIRWAY DR TO HIGHWAY 111

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	100.0%
55					X	100.0%
54					X	100.0%
53					X	100.0%
52					X	100.0%
51					X	100.0%
50					X	100.0%
49					X	100.0%
48					X	100.0%
47					X	100.0%
46					X	100.0%
45					X	98.5%
44					X	97.0%
43					X	95.0%
42					X	92.0%
41					X	89.1%
40					X	86.6%
39					X	83.1% } PACE ---85PCT
38					X	77.6% } PACE
37					X	72.1% } PACE
36					X	65.2% } PACE
35					X	57.7% } PACE
34					X	46.3% } PACE ---MEAN
33					X	36.8% } PACE
32					X	29.4% } PACE
31					X	23.4% } PACE
30					X	18.9% } PACE
29					X	1.0% ---15PCT
28					X	0.5%
27					X	0.0%
26					X	0.0%
25					X	0.0%
24					X	0.0%
23					X	0.0%
22					X	0.0%
21					X	0.0%
20					X	0.0%
19					X	0.0%
18					X	0.0%
17					X	0.0%
16					X	0.0%
15					X	0.0%

UPPER LIMIT 10 MPH PACE:	39 MPH	85th PERCENTILE SPEED:	39.6 MPH
LOWER LIMIT 10 MPH PACE:	30 MPH	MEDIAN SPEED:	34.3 MPH
PERCENT OVER PACE:	16.9 %	15th PERCENTILE SPEED:	29.8 MPH
PERCENT IN PACE:	82.1 %		
PERCENT UNDER PACE:	1.0 %		

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



COOK STREET

HIGHWAY 111 TO FRED WARING DR

DATE: 1/27/2022

SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 11:10 AM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF CACHUMA DR
DATE OF SURVEY	01/27/2022
85th PERCENTILE	46.2 MPH
10 MPH PACE	38 - 47 MPH
PERCENT IN PACE	78.5 %
POSTED SPEED LIMIT	40 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	5
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	14,000
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - FRED WARING / CACHUMA-DESERT HORIZON / HWY 111
CROSSWALKS	AT FRED WARING / CACHUMA-DESERT HORIZON / HWY 111
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	DESIGNED BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.52
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / NO (NB) - NO / NO (SB)
STREET LIGHTING	NONE
DRIVEWAY DENSITY	NONE
OTHER	RAISED MEDIAN ISLAND

ADJACENT LAND USE	COMMERCIAL / RESIDENTIAL GOLF COURSE COMMUNITIES
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RECOMMENDED SPEED LIMIT	40 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:

This section of Cook Street is a four lane roadway with a 40 mph speed limit. Field observations include the adjacent land uses are residential golf communities and commercial, no parking anytime signs and bike lanes along both sides of the roadway, a 35 mph speed limit is posted in the adjacent southerly segment. The speed study resulted with an 85th percentile speed of 46.2 mph and a 10 mph pace range of 38 to 47 mph. To prevent a 10 mph jump in speed limit between segments, it is recommended that the 40 mph speed limit remain.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

COOK STREET

DATE: 01/27/2022

TIME: 10:30 AM - 11:10 AM

HIGHWAY 111 TO FRED WARING DR

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60						X 100.0%
59						X 100.0%
58						X 100.0%
57						X 100.0%
56						X 100.0%
55						X 100.0%
54						X 100.0%
53						X 100.0%
52						X 100.0%
51						X 100.0%
50						X 100.0%
49						X 97.5%
48						X 94.9%
47						X 89.2% }PACE
46						X 84.2% }PACE ---85PCT
45						X 77.8% }PACE
44						X 69.6% }PACE
43						X 60.1% }PACE
42						X 49.4% }PACE ---MEAN
41						X 39.9% }PACE
40						X 33.5% }PACE
39						X 23.4% }PACE
38						X 17.1% }PACE
37						X 10.8% ---15PCT
36						X 7.6%
35						X 5.1%
34						X 3.2%
33						X 2.5%
32						X 1.9%
31						X 0.6%
30						X 0.6%
29						X 0.0%
28						X 0.0%
27						X 0.0%
26						X 0.0%
25						X 0.0%
24						X 0.0%
23						X 0.0%
22						X 0.0%
21						X 0.0%
20						X 0.0%
19						X 0.0%
18						X 0.0%
17						X 0.0%
16						X 0.0%
15						X 0.0%

UPPER LIMIT 10 MPH PACE:	47 MPH	85th PERCENTILE SPEED:	46.2 MPH
LOWER LIMIT 10 MPH PACE:	38 MPH	MEDIAN SPEED:	42.1 MPH
PERCENT OVER PACE:	10.8 %	15th PERCENTILE SPEED:	37.7 MPH
PERCENT IN PACE:	78.5 %		
PERCENT UNDER PACE:	10.8 %		

ENGINEERING AND TRAFFIC SURVEY
CITY OF INDIAN WELLS



EL DORADO DRIVE

FAIRWAY DR TO HIGHWAY 111

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 2:00 PM - 2:30 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF HWY 111
DATE OF SURVEY	1/26/2022
85th PERCENTILE	39.5 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	83.5 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	2,600
LANE CONFIGURATION	2 LANES (Hwy 111-Altamira), 1 LANE (to Fairway)
TRAFFIC CONTROLS	SIGNAL - HWY 111, STOP - FAIRWAY
CROSSWALKS	HWY 111
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	DESIGNATED BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.48
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / FEW
STREET LIGHTING	NO
DRIVEWAY DENSITY	MEDIUM
OTHER	PARTIAL SOLID DBL YELLOW CENTERLINES & RAISED MEDIAN ISLAND

ADJACENT LAND USE	RESIDENTIAL (fronting & non-fronting)
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RECOMMENDED SPEED LIMIT	35 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
The recommended speed 35 mph speed limit is within 4.5 mph of the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

EL DORADO DRIVE

DATE: 1/26/2022

TIME: 2:00 PM - 2:30 PM

FAIRWAY DR TO HIGHWAY 111

SURVEY BY: E. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60						X 100.0%
59						X 100.0%
58						X 100.0%
57						X 100.0%
56						X 100.0%
55						X 100.0%
54						X 100.0%
53						X 100.0%
52						X 100.0%
51						X 100.0%
50						X 100.0%
49						X 100.0%
48						X 100.0%
47						X 100.0%
46						X 100.0%
45						X 100.0%
44						X 99.2%
43						X 99.2%
42						X 98.3%
41					X	95.0% }PACE
40					X	90.1% }PACE
39					X	80.2% }PACE ---85PCT
38				X		74.4% }PACE
37			X			65.3% }PACE
36			X			57.9% }PACE
35			X			47.9% }PACE ----MEAN
34		X				34.7% }PACE
33		X				26.4% }PACE
32		X				19.8% }PACE
31	X					11.6% ---15PCT
30	X					6.6%
29	X					3.3%
28	X					1.7%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE:	41 MPH	85th PERCENTILE SPEED:	39.5 MPH
LOWER LIMIT 10 MPH PACE:	32 MPH	MEDIAN SPEED:	35.2 MPH
PERCENT OVER PACE:	9.9 %	15th PERCENTILE SPEED:	31.4 MPH
PERCENT IN PACE:	83.5 %		
PERCENT UNDER PACE:	11.6 %		

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

EL DORADO DRIVE

DATE: 1/26/2022

TIME: 2:00 PM - 2:30 PM

FAIRWAY DR TO HIGHWAY 111

SURVEY BY: E. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES										VEH.	PCT.	
	5	10	15	20	25	30	35	40	45	50			
60													
55													
50													
45	X											1	0.8%
												0	0.0%
	X											1	0.8%
	X	X	X	X								4	3.3%
	X	X	X	X	X	X						6	5.0%
40	X	X	X	X	X	X	X	X	X	X		12	9.9%
	X	X	X	X	X	X						7	5.8%
	X	X	X	X	X	X	X	X	X	X		11	9.1%
	X	X	X	X	X	X	X	X	X	X		9	7.4%
	X	X	X	X	X	X	X	X	X	X	X	12	9.9%
35	X	X	X	X	X	X	X	X	X	X	X	16	13.2%
	X	X	X	X	X	X	X	X	X	X		10	8.3%
	X	X	X	X	X	X	X					8	6.6%
	X	X	X	X	X	X	X	X	X			10	8.3%
	X	X	X	X	X	X						6	5.0%
30	X	X	X	X								4	3.3%
	X	X										2	1.7%
	X	X										2	1.7%
25													
20													
15													
TOTAL VEHICLES											121		

UPPER LIMIT 10 MPH PACE:	41	MPH			
LOWER LIMIT 10 MPH PACE:	32	MPH	85th PERCENTILE SPEED:	39.5	
PERCENT OVER PACE:	9.9	%	MEDIAN SPEED:	35.2	
PERCENT IN PACE:	83.5	%	15th PERCENTILE SPEED:	31.4	
PERCENT UNDER PACE:	11.6	%			

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS

HCI

EL DORADO DRIVE

HIGHWAY 111 TO FRED WARING DR

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 2:30 PM - 3:00 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF FRED WARING
DATE OF SURVEY	1/26/2022
85th PERCENTILE	46.6 MPH
10 MPH PACE	37 - 46 MPH
PERCENT IN PACE	75.8 %
POSTED SPEED LIMIT	40 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	4,200
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - HWY 111 / FRED WARING
CROSSWALKS	AT HWY 111 / FRED WARING
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	FEW
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	NO TRUCKS OVER 3 TONS, 9pm-9am

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.53
VERTICAL CURVE	NONE
HORIZONTAL CURVE	GRADUAL "S" CURVE NORTH OF DESERT HORIZON
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (Areas of)
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	PARTIAL / FEW (NB), PARTIAL / FEW (SB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	RAISED MEDIAN ISLAND / DBL DBL SOLID YELLOW CENTERLINE

ADJACENT LAND USE	RESIDENTIAL (NF) GOLF COMMUNITES / FIRE STATION / CITY HALL
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RECOMMENDED SPEED LIMIT	40 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:

This section of El Dorado Drive is a four lane roadway. The posted speed limit is 40 mph. The adjacent land uses are residential in a golf course community, fire station, and City Hall. Field observations include paved bike lanes, No Trucks over 3 tons 9pm-9am, no parking anytime along the roadway, a gradual horizontal curve, and areas of limited sight distance. The Traffic Engineering speed study results show an 85th percentile speed of 46.6 mph and a 10 mph pace range of 37 to 46 mph. With areas of limited sight distance and in effort of preventing a 10 mph jump in speed between segments, it is recommended that the existing speed limit remain.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

EL DORADO DRIVE

HIGHWAY 111 TO FRED WARING DR

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 2:30 PM - 3:00 PM

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60						X 100.0%
59						X 100.0%
58						X 100.0%
57						X 100.0%
56						X 100.0%
55						X 100.0%
54						X 100.0%
53						X 100.0%
52						X 100.0%
51						X 100.0%
50						X 99.2%
49						X 95.5%
48						X 91.7%
47						X 86.4%
46						X 83.3% }PACE -- -85PCT
45						X 77.3% }PACE
44						X 72.0% }PACE
43						X 66.7% }PACE
42						X 59.1% }PACE
41						X 58.3% }PACE
40						X 47.0% }PACE ---MEAN
39						X 32.6% }PACE
38						X 23.5% }PACE
37						X 14.4% }PACE ---15PCT
36						X 7.6%
35						X 4.5%
34						X 1.5%
33						X 0.0%
32						X 0.0%
31						X 0.0%
30						X 0.0%
29						X 0.0%
28						X 0.0%
27						X 0.0%
26						X 0.0%
25						X 0.0%
24						X 0.0%
23						X 0.0%
22						X 0.0%
21						X 0.0%
20						X 0.0%
19						X 0.0%
18						X 0.0%
17						X 0.0%
16						X 0.0%
15						X 0.0%

UPPER LIMIT 10 MPH PACE:	46 MPH	85th PERCENTILE SPEED:	46.6 MPH
LOWER LIMIT 10 MPH PACE:	37 MPH	MEDIAN SPEED:	40.3 MPH
PERCENT OVER PACE:	16.7 %	15th PERCENTILE SPEED:	37.1 MPH
PERCENT IN PACE:	75.8 %		
PERCENT UNDER PACE:	7.6 %		

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



FAIRWAY DRIVE

COOK ST TO RANCHO PALMERAS DR

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 11:40 AM - 12:10 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	EAST OF COOK
DATE OF SURVEY	1/26/2022
85th PERCENTILE	38.4 MPH
10 MPH PACE	31 - 40 MPH
PERCENT IN PACE	84.2 %
POSTED SPEED LIMIT	35 MPH EB

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,200
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - COOK / RANCHO PALMERAS
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NONE
ON-STREET PARKING	YES (WB) / NO STOPPING ANYTIME (EB)
OTHER	DESIGNATED BIKE LANES NO TRUCKS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.52
VERTICAL CURVE	NONE
HORIZONTAL CURVE	GRADUAL "S" CURVE (east of Cook)
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / NO (EB) - NO / FEW (WB)
STREET LIGHTING	NONE
DRIVEWAY DENSITY	LIGHT (WB)
OTHER	SOLID DBL YELLOW CENTERLINE

ADJACENT LAND USE	RESIDENTIAL (F+NF) / GREENBELT (EB)
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RECOMMENDED SPEED LIMIT	35 MPH
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SPEED LIMIT CHANGE	NO CHANGE - POST WESTBOUND
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JUSTIFICATION:

The recommended 35 mph speed is 3.4 mph below the 85th percentile speed and meets CVC standards. Field observations include a 35 mph speed sign posted westbound only, is a two lane roadway, land use is residential, no sidewalks thus pedestrians use roadway, painted bikes lanes and no stopping anytime eastbound. For enforcement, a 35 mph speed sign should be installed westbound.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

FAIRWAY DRIVE

DATE: 1/26/2022

TIME: 11:40 AM - 12:10 PM

COOK ST TO RANCHO PALMERAS DR

SURVEY BY: E. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	100.0%
55					X	100.0%
54					X	100.0%
53					X	100.0%
52					X	100.0%
51					X	100.0%
50					X	100.0%
49					X	100.0%
48					X	100.0%
47					X	100.0%
46					X	100.0%
45					X	99.3%
44					X	99.3%
43					X	98.0%
42					X	97.4%
41					X	94.7%
40					X	90.8% }PACE
39					X	87.5% }PACE
38					X	83.6% }PACE -- -85PCT
37					X	77.0% }PACE
36					X	67.8% }PACE
35					X	53.3% }PACE
34					X	40.1% }PACE ---MEAN
33					X	28.3% }PACE
32					X	19.1% }PACE
31					X	11.2% }PACE ---15PCT
30					X	6.6%
29					X	3.3%
28					X	1.3%
27					X	0.7%
26					X	0.0%
25					X	0.0%
24					X	0.0%
23					X	0.0%
22					X	0.0%
21					X	0.0%
20					X	0.0%
19					X	0.0%
18					X	0.0%
17					X	0.0%
16					X	0.0%
15					X	0.0%

UPPER LIMIT 10 MPH PACE:	40 MPH	85th PERCENTILE SPEED:	38.4 MPH
LOWER LIMIT 10 MPH PACE:	31 MPH	MEDIAN SPEED:	34.8 MPH
PERCENT OVER PACE:	12.5 %	15th PERCENTILE SPEED:	31.5 MPH
PERCENT IN PACE:	84.2 %		
PERCENT UNDER PACE:	6.6 %		

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

FAIRWAY DRIVE

DATE: 1/26/2022

TIME: 11:40 AM - 12:10 PM

COOK ST TO RANCHO PALMERAS DR

SURVEY BY: E. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES										VEH.	PCT.	CUM. PCT.		
	5	10	15	20	25	30	35	40	45	50					
60														100.0%	
														100.0%	
														100.0%	
														100.0%	
55														100.0%	
														100.0%	
														100.0%	
														100.0%	
50														100.0%	
														100.0%	
														100.0%	
														100.0%	
45	X												1	0.7%	100.0%
													0	0.0%	99.3%
	X	X											2	1.3%	99.3%
	X												1	0.7%	98.0%
	X	X	X	X									4	2.6%	97.4%
	X	X	X	X	X	X							6	3.9%	94.7%
40	X	X	X	X	X								5	3.3%	90.8%
	X	X	X	X	X	X							6	3.9%	87.5%
	X	X	X	X	X	X	X	X	X				10	6.6%	83.6%
	X	X	X	X	X	X	X	X	X	X	X		14	9.2%	77.0%
	X	X	X	X	X	X	X	X	X	X	X	X	22	14.5%	67.8%
35	X	X	X	X	X	X	X	X	X	X	X	X	20	13.2%	53.3%
	X	X	X	X	X	X	X	X	X	X	X	X	18	11.8%	40.1%
	X	X	X	X	X	X	X	X	X	X	X		14	9.2%	28.3%
	X	X	X	X	X	X	X	X	X				12	7.9%	19.1%
	X	X	X	X	X	X							7	4.6%	11.2%
30	X	X	X	X	X								5	3.3%	6.6%
	X	X	X										3	2.0%	3.3%
	X												1	0.7%	1.3%
	X												1	0.7%	0.7%
25														0.0%	0.0%
														0.0%	0.0%
														0.0%	0.0%
														0.0%	0.0%
20														0.0%	0.0%
														0.0%	0.0%
														0.0%	0.0%
														0.0%	0.0%
15														0.0%	0.0%
	TOTAL VEHICLES										152				

UPPER LIMIT 10 MPH PACE:	40	MPH			
LOWER LIMIT 10 MPH PACE:	31	MPH	85th PERCENTILE SPEED:	38.4	MPH
PERCENT OVER PACE:	12.5	%	MEDIAN SPEED:	34.8	MPH
PERCENT IN PACE:	84.2	%	15th PERCENTILE SPEED:	31.5	MPH
PERCENT UNDER PACE:	6.6	%			

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



FAIRWAY DRIVE

RANCHO PALMERAS DR TO EL DORADO DR

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 1:00 PM - 1:30 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA LOCATION OF SURVEY DATE OF SURVEY 85th PERCENTILE 10 MPH PACE PERCENT IN PACE POSTED SPEED LIMIT	WEST OF EL DORADO 1/26/2022 37.3 MPH 30 - 39 MPH 89.8 % 35 MPH
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ACCIDENT HISTORY NO. OF MONTHS OBSERVED SPEED-RELATED ACCIDENTS TOTAL ACCIDENTS ANNUAL ACCIDENT RATE ACC./MILLION VEH. MILES	36 0 0 0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY) 0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)
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TRAFFIC FACTORS AVERAGE DAILY TRAFFIC LANE CONFIGURATION TRAFFIC CONTROLS CROSSWALKS PEDESTRIAN/BICYCLES TRUCK TRAFFIC ON-STREET PARKING OTHER	3,100 1 LANE PER DIRECTION STOP - RANCHO PALMERAS / EL DORADO NONE YES / YES NO YES DESIGNATED BIKE LANES NO STOPPING 4-7am
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ROADWAY FACTORS LENGTH OF SEGMENT (MILES) VERTICAL CURVE HORIZONTAL CURVE LATERAL VISIBILITY ROAD CONDITIONS SIDEWALKS/DRIVEWAYS STREET LIGHTING DRIVEWAY DENSITY OTHER	0.51 NONE SLIGHT CURVE AT EL DORADO GOOD GOOD NO / YES (WB) - NO /NO (EB) ONE AT EAST END MEDIUM (WB) RADAR FEEDBACK (at Williams) SOLID DBL YELLOW CENTERLINE
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ADJACENT LAND USE	RESIDENTIAL (F+NF) / GREENBELT (EB)
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RECOMMENDED SPEED LIMIT	35 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended speed is within 2.3 mph of the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

FAIRWAY DRIVE

DATE: 1/26/2022

TIME: 1:00 PM - 1:30 PM

RANCHO PALMERAS DR TO EL DORADO DR

SURVEY BY: E. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60						X 100.0%
59						X 100.0%
58						X 100.0%
57						X 100.0%
56						X 100.0%
55						X 100.0%
54						X 100.0%
53						X 100.0%
52						X 100.0%
51						X 100.0%
50						X 100.0%
49						X 100.0%
48						X 100.0%
47						X 100.0%
46						X 100.0%
45						X 100.0%
44						X 100.0%
43						X 100.0%
42						X 100.0%
41						X 99.2%
40						X 97.5%
39						X 94.9% }PACE
38						X 90.7% }PACE
37						X 83.1% }PACE ---85PCT
36						X 74.6% }PACE
35						X 63.6% }PACE
34						X 48.3% }PACE ---MEAN
33						X 35.6% }PACE
32						X 22.9% }PACE
31						X 13.6% }PACE ---15PCT
30						X 8.5% }PACE
29						X 5.1%
28						X 1.7%
27						X 0.0%
26						X 0.0%
25						X 0.0%
24						X 0.0%
23						X 0.0%
22						X 0.0%
21						X 0.0%
20						X 0.0%
19						X 0.0%
18						X 0.0%
17						X 0.0%
16						X 0.0%
15						X 0.0%

UPPER LIMIT 10 MPH PACE:	39 MPH	85th PERCENTILE SPEED:	37.3 MPH
LOWER LIMIT 10 MPH PACE:	30 MPH	MEDIAN SPEED:	34.1 MPH
PERCENT OVER PACE:	5.1 %	15th PERCENTILE SPEED:	31.2 MPH
PERCENT IN PACE:	89.8 %		
PERCENT UNDER PACE:	5.1 %		

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS
FAIRWAY DRIVE

RANCHO PALMERAS DR TO EL DORADO DR

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 1:00 PM - 1:30 PM

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES					VEH.	PCT.	CUM. PCT.
	5	10	15	20	25			
60								100.0%
								100.0%
								100.0%
								100.0%
								100.0%
55								100.0%
								100.0%
								100.0%
								100.0%
50								100.0%
								100.0%
								100.0%
								100.0%
45								100.0%
								100.0%
								100.0%
X							1	0.8%
X X							2	1.7%
X X X							3	2.5%
X X X X X							5	4.2%
X X X X X X X X X							9	7.6%
X X X X X X X X X X							10	8.5%
X X X X X X X X X X X X X							13	11.0%
X X X X X X X X X X X X X X X X X							18	15.3%
X X X X X X X X X X X X X X							15	12.7%
X X X X X X X X X X X X X							15	12.7%
X X X X X X X X X X X							11	9.3%
X X X X X X							6	5.1%
X X X X							4	3.4%
X X X X							4	3.4%
X X							2	1.7%
								0.0%
								0.0%
25								0.0%
								0.0%
								0.0%
								0.0%
								0.0%
20								0.0%
								0.0%
								0.0%
								0.0%
15								0.0%
								0.0%
								0.0%
								0.0%
								0.0%
TOTAL VEHICLES							118	

UPPER LIMIT 10 MPH PACE:	39	MPH	85th PERCENTILE SPEED:	37.3	MPH
LOWER LIMIT 10 MPH PACE:	30	MPH	MEDIAN SPEED:	34.1	MPH
PERCENT OVER PACE:	5.1	%	15th PERCENTILE SPEED:	31.2	MPH
PERCENT IN PACE:	89.8	%			
PERCENT UNDER PACE:	5.1	%			

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



FRED WARING DRIVE

PHYLLIS JACKSON LN TO COOK ST

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 3:10 PM - 3:35 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA LOCATION OF SURVEY DATE OF SURVEY 85th PERCENTILE 10 MPH PACE PERCENT IN PACE POSTED SPEED LIMIT	WEST OF COOK 1/26/2022 48.9 MPH 41 - 50 MPH 79.2 % 45 MPH / 25 MPH*
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ACCIDENT HISTORY NO. OF MONTHS OBSERVED SPEED-RELATED ACCIDENTS TOTAL ACCIDENTS ANNUAL ACCIDENT RATE ACC./MILLION VEH. MILES	36 0 1 0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY) 0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)
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TRAFFIC FACTORS AVERAGE DAILY TRAFFIC LANE CONFIGURATION TRAFFIC CONTROLS CROSSWALKS PEDESTRIAN/BICYCLES TRUCK TRAFFIC ON-STREET PARKING OTHER	31,900 3 LANES PER DIRECTION SIGNAL - COOK / PHYLLIS JACKSON AT COOK (SCH) / PHYLLIS JACKSON (SCH) YES / YES YES NO PARKING ANYTIME BUS STOP NO TRUCKS OVER 8 TONS
--	--

ROADWAY FACTORS LENGTH OF SEGMENT (MILES) VERTICAL CURVE HORIZONTAL CURVE LATERAL VISIBILITY ROAD CONDITIONS SIDEWALKS/DRIVEWAYS STREET LIGHTING DRIVEWAY DENSITY OTHER	0.26 NONE NONE GOOD FAIR YES / NO YES NONE RAISED MEDIAN ISLAND
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ADJACENT LAND USE	RESIDENTIAL (non-fronting)
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RECOMMENDED SPEED LIMIT	45 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended speed is within 3.9 mph of the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

FRED WARING DRIVE

PHYLLIS JACKSON LN TO COOK ST

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 3:10 PM - 3:35 PM

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60						X 100.0%
59						X 100.0%
58						X 100.0%
57						X 100.0%
56						X 100.0%
55						X 99.5%
54						X 99.0%
53						X 97.0%
52						X 96.0%
51						X 92.6%
50					X	89.6% }PACE
49				X		85.6% }PACE
48				X		81.2% }PACE ---85PCT
47				X		74.3% }PACE
46			X			64.9% }PACE
45			X			53.5% }PACE
44			X			41.6% }PACE ---MEAN
43		X				31.7% }PACE
42		X				24.3% }PACE
41		X				14.9% }PACE ---15PCT
40		X				10.4%
39	X					6.9%
38	X					5.0%
37	X					2.5%
36	X					1.0%
35	X					0.5%
34	X					0.0%
33	X					0.0%
32	X					0.0%
31	X					0.0%
30	X					0.0%
29	X					0.0%
28	X					0.0%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE: 50 MPH
 LOWER LIMIT 10 MPH PACE: 41 MPH
 PERCENT OVER PACE: 10.4 %
 PERCENT IN PACE: 79.2 %
 PERCENT UNDER PACE: 10.4 %

85th PERCENTILE SPEED: 48.9 MPH
 MEDIAN SPEED: 44.7 MPH
 15th PERCENTILE SPEED: 41.0 MPH



RADAR SPEED DISTRIBUTION SHEET

CITY OF INDIAN WELLS

FRED WARING DRIVE

PHYLLIS JACKSON LN TO COOK ST

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 3:10 PM - 3:35 PM

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES																				VEH.	PCT.	CUM. PCT.			
	5	10	15	20	25																					
60																									100.0%	
																									100.0%	
																									100.0%	
				X																				1	0.5%	100.0%
55				X																				1	0.5%	99.5%
	X	X	X	X																				4	2.0%	99.0%
	X	X																						2	1.0%	97.0%
	X	X	X	X	X	X	X																	7	3.5%	96.0%
	X	X	X	X	X	X																		6	3.0%	92.6%
50	X	X	X	X	X	X	X	X																8	4.0%	89.6%
	X	X	X	X	X	X	X	X	X															9	4.5%	85.6%
	X	X	X	X	X	X	X	X	X	X	X	X	X											14	6.9%	81.2%
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						19	9.4%	74.3%
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				23	11.4%	64.9%
45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			24	11.9%	53.5%
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				20	9.9%	41.6%
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				15	7.4%	31.7%
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				19	9.4%	24.3%
	X	X	X	X	X	X	X	X																9	4.5%	14.9%
40	X	X	X	X	X	X	X																	7	3.5%	10.4%
	X	X	X	X																				4	2.0%	6.9%
	X	X	X	X	X																			5	2.5%	5.0%
	X	X	X																					3	1.5%	2.5%
	X																							1	0.5%	1.0%
35	X																							1	0.5%	0.5%
																										0.0%
																										0.0%
																										0.0%
30																										0.0%
																										0.0%
																										0.0%
																										0.0%
25																										0.0%
																										0.0%
																										0.0%
																										0.0%
20																										0.0%
																										0.0%
																										0.0%
																										0.0%
15																										0.0%
	TOTAL VEHICLES																				202					

UPPER LIMIT 10 MPH PACE: 50 MPH
 LOWER LIMIT 10 MPH PACE: 41 MPH
 PERCENT OVER PACE: 10.4 %
 PERCENT IN PACE: 79.2 %
 PERCENT UNDER PACE: 10.4 %

85th PERCENTILE SPEED: 48.9 MPH
 MEDIAN SPEED: 44.7 MPH
 15th PERCENTILE SPEED: 41.0 MPH

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



FRED WARING DRIVE

COOK ST TO WASHINGTON ST

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 3:35 PM - 4:00 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA LOCATION OF SURVEY DATE OF SURVEY 85th PERCENTILE 10 MPH PACE PERCENT IN PACE POSTED SPEED LIMIT	WEST OF WARNER TRAIL 1/26/2022 54.3 MPH 46 - 55 MPH 83.7 % 50 MPH / 25 MPH*
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ACCIDENT HISTORY NO. OF MONTHS OBSERVED SPEED-RELATED ACCIDENTS TOTAL ACCIDENTS ANNUAL ACCIDENT RATE ACC./MILLION VEH. MILES	36 13 27 4.33 ACCIDENTS PER YEAR (SPEED RELATED ONLY) 0.14 ACCIDENTS PER MVM (SPEED RELATED ONLY)
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TRAFFIC FACTORS AVERAGE DAILY TRAFFIC LANE CONFIGURATION TRAFFIC CONTROLS CROSSWALKS PEDESTRIAN/BICYCLES TRUCK TRAFFIC ON-STREET PARKING OTHER	28,250 3 LANES PER DIRECTION SIGNAL-COOK / EL DORADO/ CALIF/ WARNER TRAIL / SW CHURCH/ WASHINGTON AT COOK / EL DORADO/ CALIF/ WARNER TRAIL (sch) / SW CHURCH/ WASHINGTON NO / NO YES NO STOPPING ANYTIME RADAR SPEED FEEDBACK (east of Tennessee) BUS STOPS
--	---

ROADWAY FACTORS LENGTH OF SEGMENT (MILES) VERTICAL CURVE HORIZONTAL CURVE LATERAL VISIBILITY ROAD CONDITIONS SIDEWALKS/DRIVEWAYS STREET LIGHTING DRIVEWAY DENSITY OTHER	3.02 SLIGHT UP/DOWNHILL GRADES NONE GOOD FAIR PARTIAL / NO (WB) - PARTIAL / ONE (near Washington) YES NONE RAISED MEDIAN ISLAND / SOLID DBL YELLOW CENTERLINE
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ADJACENT LAND USE	RESIDENTIAL (NF) COMMUNITES w/GOLF COURSES / SCHOOL / CHURCH
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RECOMMENDED SPEED LIMIT	50 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended speed is within 4.3 mph of the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

FRED WARING DRIVE

COOK ST TO WASHINGTON ST

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 3:35 PM - 4:00 PM

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	99.1%
58					X	98.6%
57					X	95.9%
56					X	93.7%
55					X	89.1% }PACE
54				X	X	83.3% }PACE -- -85PCT
53				X		78.3% }PACE
52				X		70.6% }PACE
51			X	X		63.3% }PACE
50			X			51.1% }PACE
49		X	X			35.7% }PACE ---MEAN
48		X				23.5% }PACE
47		X				16.3% }PACE
46	X					10.9% }PACE ---15PCT
45	X					5.4%
44	X					2.3%
43	X					0.5%
42	X					0.0%
41	X					0.0%
40	X					0.0%
39	X					0.0%
38	X					0.0%
37	X					0.0%
36	X					0.0%
35	X					0.0%
34	X					0.0%
33	X					0.0%
32	X					0.0%
31	X					0.0%
30	X					0.0%
29	X					0.0%
28	X					0.0%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE:	55 MPH	85th PERCENTILE SPEED:	54.3 MPH
LOWER LIMIT 10 MPH PACE:	46 MPH	MEDIAN SPEED:	49.9 MPH
PERCENT OVER PACE:	10.9 %	15th PERCENTILE SPEED:	46.8 MPH
PERCENT IN PACE:	83.7 %		
PERCENT UNDER PACE:	5.4 %		

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

FRED WARING DRIVE

DATE: 1/26/2022

TIME: 3:35 PM - 4:00 PM

COOK ST TO WASHINGTON ST

SURVEY BY: E. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES																									VEH.	PCT.	CUM. PCT.						
	5	10	15	20	25																													
60	X	X																													2	0.9%	100.0%	
	X																														1	0.5%	99.1%	
	X	X	X	X	X	X																									6	2.7%	98.6%	
	X	X	X	X	X																										5	2.3%	95.9%	
	X	X	X	X	X	X	X	X	X	X																					10	4.5%	93.7%	
55	X	X	X	X	X	X	X	X	X	X	X	X	X																		13	5.9%	89.1%	
	X	X	X	X	X	X	X	X	X	X	X	X																			11	5.0%	83.3%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															17	7.7%	78.3%
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X												16	7.2%	70.6%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	27	12.2%	63.3%		
50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		34	15.4%	51.1%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		27	12.2%	35.7%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														16	7.2%	23.5%	
	X	X	X	X	X	X	X	X	X	X	X	X	X																		12	5.4%	16.3%	
	X	X	X	X	X	X	X	X	X	X	X	X																			12	5.4%	10.9%	
45	X	X	X	X	X	X	X																								7	3.2%	5.4%	
	X	X	X	X																											4	1.8%	2.3%	
	X																														1	0.5%	0.5%	
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																																		0.0%
																																		0.0%
15																																		0.0%
																																		0.0%
																																		0.0%
TOTAL VEHICLES																									221									

UPPER LIMIT 10 MPH PACE: 55 MPH	85th PERCENTILE SPEED: 54.3 MPH
LOWER LIMIT 10 MPH PACE: 46 MPH	MEDIAN SPEED: 49.9 MPH
PERCENT OVER PACE: 10.9 %	15th PERCENTILE SPEED: 46.8 MPH
PERCENT IN PACE: 83.7 %	
PERCENT UNDER PACE: 5.4 %	

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



HIGHWAY 111

EAST CITY LIMITS TO CLUB DR

DATE: 1/26/2022

SURVEY BY: C BUENDIA

TIME: 1:00 PM - 1:30 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA LOCATION OF SURVEY DATE OF SURVEY 85th PERCENTILE 10 MPH PACE PERCENT IN PACE POSTED SPEED LIMIT	WEST OF MILES 1/26/2022 50.4 MPH 42 - 51 MPH 71.4 % 50 MPH
--	---

ACCIDENT HISTORY NO. OF MONTHS OBSERVED SPEED-RELATED ACCIDENTS TOTAL ACCIDENTS ANNUAL ACCIDENT RATE ACC./MILLION VEH. MILES	36 3 9 1.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY) 0.05 ACCIDENTS PER MVM (SPEED RELATED ONLY)
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TRAFFIC FACTORS AVERAGE DAILY TRAFFIC LANE CONFIGURATION TRAFFIC CONTROLS CROSSWALKS PEDESTRIAN/BICYCLES TRUCK TRAFFIC ON-STREET PARKING OTHER	32,650 2 LANES PER DIRECTION SIGNAL - CLUB / MILES / MOUNTAIN COVE AT CLUB / MILES / MOUNTAIN COVE YES / YES YES / YES NO DESIGNATED BIKE LANES BUS STOPS / SHARE THE ROAD?
--	---

ROADWAY FACTORS LENGTH OF SEGMENT (MILES) VERTICAL CURVE HORIZONTAL CURVE LATERAL VISIBILITY ROAD CONDITIONS SIDEWALKS/DRIVEWAYS STREET LIGHTING DRIVEWAY DENSITY OTHER	1.69 NONE SLIGHT-GRADUAL "S" CURVE GOOD GOOD YES / NO (EB) - PARTIAL / NO (WB) NONE NONE PARTIAL PAINTED AND RAISED MEDIAN ISLAND
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ADJACENT LAND USE	RESIDENTIAL (non-fronting) / OPEN
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RECOMMENDED SPEED LIMIT	50 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended 50 mph is 0.4 mph below the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

HIGHWAY 111

DATE: 1/26/2022

TIME: 1:00 PM - 1:30 PM

EAST CITY LIMITS TO CLUB DR

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	99.5%
55					X	98.5%
54					X	96.9%
53					X	94.9%
52					X	92.3%
51					X	88.3% }PACE
50				X		82.7% }PACE ---85PCT
49				X		76.5% }PACE
48				X		70.9% }PACE
47				X		63.3% }PACE
46			X			55.6% }PACE
45			X			48.5% }PACE ---MEAN
44		X				35.7% }PACE
43		X				27.0% }PACE
42		X				22.4% }PACE
41		X				16.8% ---15PCT
40	X					13.8%
39	X					8.2%
38	X					5.6%
37	X					3.1%
36	X					2.6%
35	X					1.5%
34	X					0.0%
33	X					0.0%
32	X					0.0%
31	X					0.0%
30	X					0.0%
29	X					0.0%
28	X					0.0%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE: 51 MPH
 LOWER LIMIT 10 MPH PACE: 42 MPH
 PERCENT OVER PACE: 11.7 %
 PERCENT IN PACE: 71.4 %
 PERCENT UNDER PACE: 16.8 %

85th PERCENTILE SPEED: 50.4 MPH
 MEDIAN SPEED: 45.2 MPH
 15th PERCENTILE SPEED: 40.4 MPH

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



HIGHWAY 111

CLUB DR TO COOK ST

DATE: 1/26/2022

SURVEY BY: C BUENDIA

TIME: 12:15 PM - 12:50 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA LOCATION OF SURVEY DATE OF SURVEY 85th PERCENTILE 10 MPH PACE PERCENT IN PACE POSTED SPEED LIMIT	EAST OF CAMINO DE DORADO 1/26/2022 48.9 MPH 40 - 49 MPH 73.1 % 45 MPH
--	--

ACCIDENT HISTORY NO. OF MONTHS OBSERVED SPEED-RELATED ACCIDENTS TOTAL ACCIDENTS ANNUAL ACCIDENT RATE ACC./MILLION VEH. MILES	36 29 46 9.67 ACCIDENTS PER YEAR (SPEED RELATED ONLY) 0.45 ACCIDENTS PER MVM (SPEED RELATED ONLY)
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TRAFFIC FACTORS AVERAGE DAILY TRAFFIC LANE CONFIGURATION TRAFFIC CONTROLS CROSSWALKS PEDESTRIAN/BICYCLES TRUCK TRAFFIC ON-STREET PARKING OTHER	34,250 2 LANES PER DIRECTION SIGNAL - COOK / PROVINCE / R. PALMERAS / EL DORADO / INDIAN WELLS / CLUB AT COOK / PROVINCE / R. PALMERAS / EL DORADO / INDIAN WELLS / CLUB YES / YES YES NO PARKING ANYTIME PAIANTED BIKE LANES BUS STOPS / SHARE THE ROAD SIGN
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ROADWAY FACTORS LENGTH OF SEGMENT (MILES) VERTICAL CURVE HORIZONTAL CURVE LATERAL VISIBILITY ROAD CONDITIONS SIDEWALKS/DRIVEWAYS STREET LIGHTING DRIVEWAY DENSITY OTHER	1.70 NONE NONE GOOD GOOD YES / FEW FEW LIGHT RAISED MEDIAN ISLAND / SOLID DBL YELLOW CENTERLINE
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ADJACENT LAND USE	GOLF COURSES / CITY HALL / RESIDENTIAL (non-fronting)
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RECOMMENDED SPEED LIMIT	45 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended 45 mph is 3.9 mph below the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

HIGHWAY 111

DATE: 1/26/2022

TIME: 12:15 PM - 12:50 PM

CLUB DR TO COOK ST

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	100.0%
55					X	98.9%
54					X	95.7%
53					X	94.1%
52					X	91.9%
51					X	90.3%
50					X	88.2%
49				X		85.5% }PACE
48				X		81.2% }PACE -- -85PCT
47				X		76.3% }PACE
46				X		70.4% }PACE
45			X			53.8% }PACE
44			X			40.9% }PACE ---MEAN
43		X				34.9% }PACE
42		X				27.4% }PACE
41		X				20.4% }PACE
40		X				17.7% }PACE
39		X				12.4% --- -15PCT
38		X				8.6%
37		X				7.0%
36	X					5.4%
35	X					3.8%
34	X					2.2%
33	X					1.6%
32	X					0.5%
31	X					0.0%
30	X					0.0%
29	X					0.0%
28	X					0.0%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE: 49 MPH
 LOWER LIMIT 10 MPH PACE: 40 MPH
 PERCENT OVER PACE: 14.5 %
 PERCENT IN PACE: 73.1 %
 PERCENT UNDER PACE: 12.4 %

85th PERCENTILE SPEED: 48.9 MPH
 MEDIAN SPEED: 44.7 MPH
 15th PERCENTILE SPEED: 39.5 MPH

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS

HCI**HIGHWAY 111****COOK ST TO WEST CITY LIMITS (340' e/o Hospitality)**

DATE: 1/26/2022

SURVEY BY: C BUENDIA

TIME: 11:30 AM - 12:10 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF COOK
DATE OF SURVEY	1/26/2022
85th PERCENTILE	46.5 MPH
10 MPH PACE	38 - 47 MPH
PERCENT IN PACE	63.4 %
POSTED SPEED LIMIT	45 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	10
TOTAL ACCIDENTS	18
ANNUAL ACCIDENT RATE	3.33 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	1.01 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	34,750
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - VILLAGE CENTER / COOK
CROSSWALKS	AT VILLAGE CENTER / COOK
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	PAINTED BIKE LANES BUS STOPS / CUT OUT (EB)

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.26
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	NONE
DRIVEWAY DENSITY	LIGHT.
OTHER	RAISED MEDIAN ISLAND / PAINTED ISLAND

ADJACENT LAND USE	COMMERCIAL
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RECOMMENDED SPEED LIMIT	45 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:	The recommended speed is within 1.5 mph of the 85th percentile speed and meets CVC standards.
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RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

HIGHWAY 111

DATE: 1/26/2022

TIME: 11:30 AM - 12:10 PM

COOK ST TO WEST CITY LIMITS (340' e/o Hospitality

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60						X 100.0%
59						X 100.0%
58						X 100.0%
57						X 100.0%
56						X 100.0%
55						X 100.0%
54						X 100.0%
53						X 100.0%
52						X 100.0%
51						X 99.4%
50						X 98.3%
49						X 93.6%
48						X 91.3%
47						X 87.8% }PACE
46						X 82.6% }PACE -- -85PCT
45						X 76.7% }PACE
44						X 72.1% }PACE
43						X 64.5% }PACE
42						X 57.0% }PACE
41						X 50.0% }PACE ----MEAN
40						X 41.9% }PACE
39						X 34.9% }PACE
38						X 29.1% }PACE
37						X 24.4%
36						X 19.8%
35						X 17.4%
34						X 12.8% -- -15PCT
33						X 10.5%
32						X 7.6%
31						X 4.7%
30						X 4.1%
29						X 1.7%
28						X 1.2%
27						X 0.0%
26						X 0.0%
25						X 0.0%
24						X 0.0%
23						X 0.0%
22						X 0.0%
21						X 0.0%
20						X 0.0%
19						X 0.0%
18						X 0.0%
17						X 0.0%
16						X 0.0%
15						X 0.0%

UPPER LIMIT 10 MPH PACE: 47 MPH
 LOWER LIMIT 10 MPH PACE: 38 MPH
 PERCENT OVER PACE: 12.2 %
 PERCENT IN PACE: 63.4 %
 PERCENT UNDER PACE: 24.4 %

85th PERCENTILE SPEED: 46.5 MPH
 MEDIAN SPEED: 41.0 MPH
 15th PERCENTILE SPEED: 34.5 MPH

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



HOVLEY LANE

EAST CITY LIMITS TO WEST CITY LIMITS

DATE: 1/27/2022

SURVEY BY: C BUENDIA

TIME: 12:10 PM - 12:40 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	EAST IF WATER WAY
DATE OF SURVEY	1/27/2022
85th PERCENTILE	49.9 MPH
10 MPH PACE	42 - 51 MPH
PERCENT IN PACE	79.1 %
POSTED SPEED LIMIT	45 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	1
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	15,300
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - EL DORADO-VIA TOSCANO
CROSSWALKS	AT EL DORADO-VIA TOSCANO
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO
OTHER	NO PARKING ANYTIME
	BIKE LANES / BUS STOPS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.93
VERTICAL CURVE	SLIGHT UP- DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / NO
STREET LIGHTING	NO
DRIVEWAY DENSITY	NONE
OTHER	RAISED MEDIAN ISLAND

ADJACENT LAND USE	RESIDENTIAL (non-fronting)
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RECOMMENDED SPEED LIMIT	45 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended speed 45 mph is within 4.9 mph of the 85th percentile speed of 49.9 mph and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

HOVLEY LANE

DATE: 1/27/2022

TIME: 12:10 PM - 12:40 PM

EAST CITY LIMITS TO WEST CITY LIMITS

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	99.5%
55					X	98.5%
54					X	96.6%
53					X	94.7%
52					X	92.2%
51					X	89.8% }PACE
50					X	85.4% }PACE
49					X	81.6% }PACE ---85PCT
48					X	75.7% }PACE
47					X	67.5% }PACE
46					X	60.2% }PACE
45					X	50.5% }PACE
44					X	36.9% }PACE ---MEAN
43					X	24.8% }PACE
42					X	17.5% }PACE
41					X	10.7% ---15PCT
40					X	7.3%
39					X	4.4%
38					X	2.4%
37					X	1.0%
36					X	0.0%
35					X	0.0%
34					X	0.0%
33					X	0.0%
32					X	0.0%
31					X	0.0%
30					X	0.0%
29					X	0.0%
28					X	0.0%
27					X	0.0%
26					X	0.0%
25					X	0.0%
24					X	0.0%
23					X	0.0%
22					X	0.0%
21					X	0.0%
20					X	0.0%
19					X	0.0%
18					X	0.0%
17					X	0.0%
16					X	0.0%
15					X	0.0%

UPPER LIMIT 10 MPH PACE: 51 MPH
 LOWER LIMIT 10 MPH PACE: 42 MPH
 PERCENT OVER PACE: 10.2 %
 PERCENT IN PACE: 79.1 %
 PERCENT UNDER PACE: 10.7 %

85th PERCENTILE SPEED: 49.9 MPH
 MEDIAN SPEED: 45.0 MPH
 15th PERCENTILE SPEED: 41.6 MPH

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

HOVLEY LANE

DATE: 1/27/2022

TIME: 12:10 PM - 12:40 PM

EAST CITY LIMITS TO WEST CITY LIMITS

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES					VEH.	PCT.	CUM. PCT.
	5	10	15	20	25			
60								100.0%
								100.0%
								100.0%
	X						1	0.5%
	X	X					2	1.0%
55	X	X	X	X			4	1.9%
	X	X	X	X			4	1.9%
	X	X	X	X	X		5	2.4%
	X	X	X	X	X		5	2.4%
	X	X	X	X	X	X	9	4.4%
50	X	X	X	X	X	X	8	3.9%
	X	X	X	X	X	X	12	5.8%
	X	X	X	X	X	X	17	8.3%
	X	X	X	X	X	X	15	7.3%
	X	X	X	X	X	X	20	9.7%
45	X	X	X	X	X	X	28	13.6%
	X	X	X	X	X	X	25	12.1%
	X	X	X	X	X	X	15	7.3%
	X	X	X	X	X	X	14	6.8%
	X	X	X	X	X	X	7	3.4%
40	X	X	X	X	X	X	6	2.9%
	X	X	X	X			4	1.9%
	X	X	X				3	1.5%
	X	X					2	1.0%
35								0.0%
								0.0%
								0.0%
								0.0%
								0.0%
30								0.0%
								0.0%
								0.0%
								0.0%
25								0.0%
								0.0%
								0.0%
								0.0%
20								0.0%
								0.0%
								0.0%
								0.0%
15								0.0%

TOTAL VEHICLES

206

UPPER LIMIT 10 MPH PACE:	51	MPH	85th PERCENTILE SPEED:	49.9	MPH
LOWER LIMIT 10 MPH PACE:	42	MPH	MEDIAN SPEED:	45.0	MPH
PERCENT OVER PACE:	10.2	%	15th PERCENTILE SPEED:	41.6	MPH
PERCENT IN PACE:	79.1	%			
PERCENT UNDER PACE:	10.7	%			

ENGINEERING AND TRAFFIC SURVEY
CITY OF INDIAN WELLS



MILES AVENUE

WASHINGTON ST TO HIGHWAY 111

DATE: 1/26/2022

SURVEY BY: C BUENDIA

TIME: 2:00 PM - 2:35 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF WASHINGTON
DATE OF SURVEY	1/26/2022
85th PERCENTILE	51.8 MPH
10 MPH PACE	43 - 52 MPH
PERCENT IN PACE	62.7 %
POSTED SPEED LIMIT	50 MPH
	35 MPH (Advisory at Curve)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	5
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	5,600
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - WASHINGTON / WARNER TRAIL / HWY 111
CROSSWALKS	AT WASHINGTON / WARNER TRAIL / HWY 111
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	NO TRUCKS OVER 3 TONS 9pm-9am
	BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.27
VERTICAL CURVE	SLIGHT UP-DOWNHILL GRADES
HORIZONTAL CURVE	SWEEPING "C" CURVE (N/O Hwy 111)
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	YES / MINIMAL
STREET LIGHTING	NONE
DRIVEWAY DENSITY	LIGHT
OTHER	RAISED MEDIAN ISLAND & PAINTED MEDIAN ISLAND

ADJACENT LAND USE	RESIDENTIAL (non-fronting) / PARK / INDIAN WELLS TENNIS GARDENS / OPEN
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RECOMMENDED SPEED LIMIT	50 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended speed is 1.8 mph below the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

MILES AVENUE

DATE: 1/26/2022

TIME: 2:00 PM - 2:35 PM

WASHINGTON ST TO HIGHWAY 111

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES																									VEH.	PCT.	CUM. PCT.
	5	10	15	20	25																							
60	X	X	X																							3	1.9%	100.0%
	X																									1	0.6%	98.1%
																										0	0.0%	97.5%
	X	X																								2	1.3%	97.5%
	X	X																								2	1.3%	96.2%
55	X	X	X	X	X	X																				6	3.8%	94.9%
	X	X	X	X																						4	2.5%	91.1%
	X	X	X	X																						4	2.5%	88.6%
	X	X	X	X	X	X	X	X	X	X																10	6.3%	86.1%
	X	X	X	X	X	X	X	X	X	X	X															11	7.0%	79.7%
50	X	X	X	X																					4	2.5%	72.8%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										16	10.1%	70.3%
	X	X	X	X	X	X	X																		7	4.4%	60.1%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										16	10.1%	55.7%	
	X	X	X	X	X	X	X	X																		8	5.1%	45.6%
45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										16	10.1%	40.5%	
	X	X	X	X	X																				5	3.2%	30.4%	
	X	X	X	X	X	X																			6	3.8%	27.2%	
	X	X	X	X	X	X																			6	3.8%	23.4%	
	X	X	X	X																					4	2.5%	19.6%	
40	X	X	X	X	X	X	X	X	X																	9	5.7%	17.1%
	X	X																							2	1.3%	11.4%	
	X	X	X	X	X	X	X																		7	4.4%	10.1%	
	X																								1	0.6%	5.7%	
	X																								1	0.6%	5.1%	
35	X	X	X																						3	1.9%	4.4%	
	X	X																							2	1.3%	2.5%	
																									0	0.0%	1.3%	
	X	X																							2	1.3%	1.3%	
30																											0.0%	
																											0.0%	
																											0.0%	
																											0.0%	
25																											0.0%	
																											0.0%	
																											0.0%	
																											0.0%	
20																											0.0%	
																											0.0%	
																											0.0%	
																											0.0%	
15																											0.0%	
TOTAL VEHICLES															158													

UPPER LIMIT 10 MPH PACE:	52	MPH	85th PERCENTILE SPEED:	51.8	MPH
LOWER LIMIT 10 MPH PACE:	43	MPH	MEDIAN SPEED:	46.4	MPH
PERCENT OVER PACE:	13.9	%	15th PERCENTILE SPEED:	39.6	MPH
PERCENT IN PACE:	62.7	%			
PERCENT UNDER PACE:	23.4	%			

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

MILES AVENUE

DATE: 1/26/2022

TIME: 2:00 PM - 2:35 PM

WASHINGTON ST TO HIGHWAY 111

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	98.1%
58					X	97.5%
57					X	97.5%
56					X	96.2%
55					X	94.9%
54					X	91.1%
53					X	88.6%
52					X	86.1% }PACE
51				X		79.7% }PACE ---85PCT
50				X		72.8% }PACE
49				X		70.3% }PACE
48			X			60.1% }PACE
47			X			55.7% }PACE
46			X			45.6% }PACE ----MEAN
45			X			40.5% }PACE
44		X				30.4% }PACE
43		X				27.2% }PACE
42		X				23.4%
41		X				19.6%
40		X				17.1% ---15PCT
39	X					11.4%
38	X					10.1%
37	X					5.7%
36	X					5.1%
35	X					4.4%
34	X					2.5%
33	X					1.3%
32	X					1.3%
31	X					0.0%
30	X					0.0%
29	X					0.0%
28	X					0.0%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE:	52 MPH	85th PERCENTILE SPEED:	51.8 MPH
LOWER LIMIT 10 MPH PACE:	43 MPH	MEDIAN SPEED:	46.4 MPH
PERCENT OVER PACE:	13.9 %	15th PERCENTILE SPEED:	39.6 MPH
PERCENT IN PACE:	62.7 %		
PERCENT UNDER PACE:	23.4 %		

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS

HCI**PORTOLA AVENUE****MOCKINGBIRD TRAIL TO SCL (n/o HAYSTACK RD)**

DATE: 1/26/2022

SURVEY BY: C BUENDIA

TIME: 3:30 PM - 4:10 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF MOCKINGBIRD
DATE OF SURVEY	1/26/2022
85th PERCENTILE	41.6 MPH
10 MPH PACE	34 - 43 MPH
PERCENT IN PACE	78.3 %
POSTED SPEED LIMIT	40 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	9,000
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	STOP - GRAPEVINE / MARRAKESH COUNTRY CLUB
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	BIKE LANE / GOLF CART LANE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.51
VERTICAL CURVE	SLIGHT UPHILL (SB)
HORIZONTAL CURVE	GRADUAL "S" CURVE (Near Haystack)
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	PARTIAL / NO (SB) - NO / NO (SB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	NONE
OTHER	SOLID DBL YELLOW CENTERLINE

ADJACENT LAND USE	GOLF COURSE / RESIDENTIAL (on golf course)
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RECOMMENDED SPEED LIMIT	40 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:	The recommended 40 mph speed limit is 1.6 mph below the 85th percentile speed and meets CVC standards.
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RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

PORTOLA AVENUE

DATE: 1/26/2022

TIME: 3:30 PM - 4:10 PM

MOCKINGBIRD TRAIL TO SCL (n/o HAYSTACK)

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES					VEH.	PCT.	CUM. PCT.
	5	10	15	20	25			
60								100.0%
								100.0%
								100.0%
								100.0%
55								100.0%
								100.0%
								100.0%
								100.0%
50								100.0%
								100.0%
								100.0%
	X						1	0.7%
	X						1	0.7%
45	X	X	X	X			4	2.6%
	X	X	X	X			6	3.9%
	X	X	X	X	X	X	8	5.3%
	X	X	X	X	X		7	4.6%
	X	X	X	X	X	X	13	8.6%
40	X	X	X	X	X	X	16	10.5%
	X	X	X	X	X	X	15	9.9%
	X	X	X	X	X	X	9	5.9%
	X	X	X	X	X	X	15	9.9%
	X	X	X	X	X	X	12	7.9%
35	X	X	X	X	X	X	15	9.9%
	X	X	X	X	X	X	9	5.9%
	X	X	X	X			6	3.9%
	X	X	X	X			6	3.9%
	X	X	X	X			4	2.6%
30	X	X	X	X			4	2.6%
							0	0.0%
	X						1	0.7%
								0.0%
								0.0%
								0.0%
25								0.0%
								0.0%
								0.0%
								0.0%
20								0.0%
								0.0%
								0.0%
								0.0%
15								0.0%
TOTAL VEHICLES						152		

UPPER LIMIT 10 MPH PACE: 43 MPH

LOWER LIMIT 10 MPH PACE: 34 MPH

PERCENT OVER PACE: 7.9 %

PERCENT IN PACE: 78.3 %

PERCENT UNDER PACE: 13.8 %

85th PERCENTILE SPEED: 41.6 MPH

MEDIAN SPEED: 37.4 MPH

15th PERCENTILE SPEED: 33.2 MPH

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

PORTOLA AVENUE

MOCKINGBIRD TRAIL TO SCL (n/o HAYSTACK RD)

DATE: 1/26/2022

SURVEY BY: C BUENDIA

TIME: 3:30 PM - 4:10 PM

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	100.0%
55					X	100.0%
54					X	100.0%
53					X	100.0%
52					X	100.0%
51					X	100.0%
50					X	100.0%
49					X	100.0%
48					X	100.0%
47					X	100.0%
46					X	99.3%
45					X	98.7%
44					X	96.1%
43					X	92.1% }PACE
42					X	86.8% }PACE
41					X	82.2% }PACE ---85PCT
40				X		73.7% }PACE
39				X		63.2% }PACE
38			X			53.3% }PACE
37			X			47.4% }PACE ----MEAN
36		X				37.5% }PACE
35		X				29.6% }PACE
34		X				19.7% }PACE
33		X				13.8% ---15PCT
32	X					9.9%
31	X					5.9%
30	X					3.3%
29	X					0.7%
28	X					0.7%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE: 43 MPH
 LOWER LIMIT 10 MPH PACE: 34 MPH
 PERCENT OVER PACE: 7.9 %
 PERCENT IN PACE: 78.3 %
 PERCENT UNDER PACE: 13.8 %

85th PERCENTILE SPEED: 41.6 MPH
 MEDIAN SPEED: 37.4 MPH
 15th PERCENTILE SPEED: 33.2 MPH

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS

HCI

RANCHO PALMERAS

HIGHWAY 111 TO FAIRWAY DRIVE

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 12:15 PM - 1:00 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF DESERT PARK
DATE OF SURVEY	1/26/2022
85th PERCENTILE	35.9 MPH
10 MPH PACE	29 - 38 MPH
PERCENT IN PACE	90.4 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	1,100
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - HWY 111, STOP - FAIRWAY
CROSSWALKS	AT HWY 111
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO (DELIVERY TRUCKS ONLY)
ON-STREET PARKING	YES
OTHER	BIKE LANE ROUTE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.49
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / YES
STREET LIGHTING	NO
DRIVEWAY DENSITY	MEDIUM
OTHER	PARTIAL SOLID DBL YELLOW CENTERLANE & RAISED MEDIAN

ADJACENT LAND USE	RESIDENTIAL (fronting & non-fronting)
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RECOMMENDED SPEED LIMIT	35 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
The recommended speed 35 mph speed limit is 0.9 mph below the 85th percentile speed and meets CVC standards.



RADAR SPEED DISTRIBUTION SHEET

CITY OF INDIAN WELLS
RANCHO PALMERAS
 DATE: 1/26/2022
 TIME: 12:15 PM - 1:00 PM

HIGHWAY 111 TO FAIRWAY DRIVE
 SURVEY BY: E. BUENDIA
 CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES																									VEH.	PCT.	CUM. PCT.							
	5					10					15					20					25														
60																																		100.0%	
																																		100.0%	
																																		100.0%	
																																		100.0%	
55																																		100.0%	
																																			100.0%
																																			100.0%
50																																			100.0%
																																			100.0%
																																			100.0%
																																			100.0%
45																																			100.0%
	X																															1	0.9%	100.0%	
	X																															1	0.9%	99.1%	
																																0	0.0%	98.2%	
	X	X																														2	1.8%	98.2%	
40	X																															1	0.9%	96.5%	
	X																															1	0.9%	95.6%	
	X	X	X	X																												4	3.5%	94.7%	
	X	X	X	X	X	X																										6	5.3%	91.2%	
	X	X	X	X	X	X	X	X																								8	7.0%	86.0%	
35	X	X	X	X	X	X	X	X	X	X	X	X	X																			14	12.3%	78.9%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X																		15	13.2%	66.7%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	16	14.0%	53.5%	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	14	12.3%	39.5%	
	X	X	X	X	X	X	X	X	X																							9	7.9%	27.2%	
30	X	X	X	X	X	X	X	X	X	X	X	X	X																			13	11.4%	19.3%	
	X	X	X	X																												4	3.5%	7.9%	
	X	X	X	X																												4	3.5%	4.4%	
	X																															1	0.9%	0.9%	
25																																		0.0%	
																																		0.0%	
																																		0.0%	
																																		0.0%	
20																																		0.0%	
																																		0.0%	
																																		0.0%	
																																		0.0%	
																																		0.0%	
15																																		0.0%	
																																TOTAL VEHICLES		114	

UPPER LIMIT 10 MPH PACE: 38 MPH 85th PERCENTILE SPEED: 35.9 MPH
 LOWER LIMIT 10 MPH PACE: 29 MPH MEDIAN SPEED: 32.8 MPH
 PERCENT OVER PACE: 8.8 % 15th PERCENTILE SPEED: 29.6 MPH
 PERCENT IN PACE: 90.4 %
 PERCENT UNDER PACE: 4.4 %

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

RANCHO PALMERAS

HIGHWAY 111 TO FAIRWAY DRIVE

DATE: 1/26/2022

SURVEY BY: E. BUENDIA

TIME: 12:15 PM - 1:00 PM

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	100.0%
55					X	100.0%
54					X	100.0%
53					X	100.0%
52					X	100.0%
51					X	100.0%
50					X	100.0%
49					X	100.0%
48					X	100.0%
47					X	100.0%
46					X	100.0%
45					X	100.0%
44					X	100.0%
43					X	99.1%
42					X	98.2%
41					X	98.2%
40					X	96.5%
39					X	95.6%
38					X	94.7% }PACE
37					X	91.2% }PACE
36					X	86.0% }PACE
35					X	78.9% }PACE -- -85PCT
34					X	66.7% }PACE
33					X	53.5% }PACE
32					X	39.5% }PACE ---MEAN
31					X	27.2% }PACE
30					X	19.3% }PACE
29	X	X				7.9% }PACE ---15PCT
28	X					4.4%
27	X					0.9%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE:	38 MPH	85th PERCENTILE SPEED:	35.9 MPH
LOWER LIMIT 10 MPH PACE:	29 MPH	MEDIAN SPEED:	32.8 MPH
PERCENT OVER PACE:	8.8 %	15th PERCENTILE SPEED:	29.6 MPH
PERCENT IN PACE:	90.4 %		
PERCENT UNDER PACE:	4.4 %		

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



WARNER TRAIL

FRED WARING DR TO MILES AVE

DATE: 11/3/2011

SURVEY BY: C BUENDIA

TIME: 1:25 PM - 3:10 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF BLACKFOOT
DATE OF SURVEY	11/3/2011
85th PERCENTILE	38.3 MPH
10 MPH PACE	29 - 38 MPH
PERCENT IN PACE	73.1 %
POSTED SPEED LIMIT	35 MPH / 25 MPH* (Flashing Beacon)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,250
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - MILES / FRED WARING
CROSSWALKS	AT FRED WARING (sch) / EVENING STAR (sch)
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	YES, NO PARKING ANYTIME (SB)
OTHER	AREAS OF RED CURB

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.44
VERTICAL CURVE	SLIGHT UPHILL (NB)
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	POOR
SIDEWALKS/DRIVEWAYS	YES / FEW (NB) - PARTIAL / YES (SB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	MEDIUM
OTHER	SOLID DBL YELLOW CENTERLINE NO EVENT PARKING

ADJACENT LAND USE	RESIDENTIAL (Fronting) / TENNIS GARDENS / CHURCH / SCHOOL
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RECOMMENDED SPEED LIMIT	35 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:

The recommended speed 35 mph speed limit is 3.3 mph below the 85th percentile speed and CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

WARNER TRAIL

FRED WARING DR TO MILES AVE

DATE: 11/3/2011

SURVEY BY: C BUENDIA

TIME: 1:25 PM - 3:10 PM

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES					VEH.	PCT.	CUM. PCT.
	5	10	15	20	25			
60								100.0%
								100.0%
								100.0%
								100.0%
								100.0%
55								100.0%
								100.0%
								100.0%
								100.0%
50								100.0%
								100.0%
								100.0%
								100.0%
45								100.0%
								100.0%
	X X X					3	2.1%	100.0%
	X X X X					4	2.8%	97.9%
	X X X X					4	2.8%	95.2%
40	X X X X X X X					7	4.8%	92.4%
	X X X X X					5	3.4%	87.6%
	X X X X X					5	3.4%	84.1%
	X X X X X X X X					9	6.2%	80.7%
	X X X X X X X X X X X X					12	8.3%	74.5%
35	X X X X X X X X X X X X X X X X					17	11.7%	66.2%
	X X X X X X X X					8	5.5%	54.5%
	X X X X X X X X X X X X					12	8.3%	49.0%
	X X X X X X X X X X X X X					13	9.0%	40.7%
	X X X X X X X X X X X X					10	6.9%	31.7%
30	X X X X X X X X X X X X X					13	9.0%	24.8%
	X X X X X X X					7	4.8%	15.9%
	X X X X					4	2.8%	11.0%
	X X X X X X					6	4.1%	8.3%
	X X					2	1.4%	4.1%
25	X X X X					4	2.8%	2.8%
								0.0%
								0.0%
								0.0%
								0.0%
20								0.0%
								0.0%
								0.0%
								0.0%
								0.0%
15								0.0%
TOTAL VEHICLES						145		

UPPER LIMIT 10 MPH PACE:	38	MPH		
LOWER LIMIT 10 MPH PACE:	29	MPH	85th PERCENTILE SPEED:	38.3 MPH
PERCENT OVER PACE:	15.9	%	MEDIAN SPEED:	33.2 MPH
PERCENT IN PACE:	73.1	%	15th PERCENTILE SPEED:	28.8 MPH
PERCENT UNDER PACE:	11.0	%		

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

WARNER TRAIL

DATE: 11/3/2011

TIME: 1:25 PM - 3:10 PM

FRED WARING DR TO MILES AVE

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	100.0%
55					X	100.0%
54					X	100.0%
53					X	100.0%
52					X	100.0%
51					X	100.0%
50					X	100.0%
49					X	100.0%
48					X	100.0%
47					X	100.0%
46					X	100.0%
45					X	100.0%
44					X	100.0%
43					X	100.0%
42					X	97.9%
41					X	95.2%
40					X	92.4%
39					X	87.6%
38					X	84.1% }PACE -- -85PCT
37					X	80.7% }PACE
36					X	74.5% }PACE
35					X	66.2% }PACE
34					X	54.5% }PACE
33					X	49.0% }PACE ----MEAN
32					X	40.7% }PACE
31					X	31.7% }PACE
30					X	24.8% }PACE
29					X	15.9% }PACE
28					X	11.0% -- -15PCT
27					X	8.3%
26					X	4.1%
25					X	2.8%
24					X	0.0%
23					X	0.0%
22					X	0.0%
21					X	0.0%
20					X	0.0%
19					X	0.0%
18					X	0.0%
17					X	0.0%
16					X	0.0%
15					X	0.0%

UPPER LIMIT 10 MPH PACE:	38 MPH	85th PERCENTILE SPEED:	38.3 MPH
LOWER LIMIT 10 MPH PACE:	29 MPH	MEDIAN SPEED:	33.2 MPH
PERCENT OVER PACE:	15.9 %	15th PERCENTILE SPEED:	28.8 MPH
PERCENT IN PACE:	73.1 %		
PERCENT UNDER PACE:	11.0 %		

ENGINEERING AND TRAFFIC SURVEY

CITY OF INDIAN WELLS



WASHINGTON STREET (S/B)

FRED WARING DR TO SOUTH CITY LIMITS

DATE: 1/27/2022

SURVEY BY: C BUENDIA

TIME: 12:50 PM - 1:20 PM

CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	NORTH OF MILES
DATE OF SURVEY	1/27/2022
85th PERCENTILE	51.5 MPH
10 MPH PACE	42 - 51 MPH
PERCENT IN PACE	69.0 %
POSTED SPEED LIMIT	50 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	36
SPEED-RELATED ACCIDENTS	13
TOTAL ACCIDENTS	19
ANNUAL ACCIDENT RATE	4.33 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.73 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	33,000
LANE CONFIGURATION	3 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - FRED WARING / MILES / VIA SEVILLA-TENNIS GARDENS
CROSSWALKS	AT FRED WARING / MILES
PEDESTRIAN/BICYCLES	FEW / FEW
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	BUS STOPS (SB)

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.49
VERTICAL CURVE	SLIGHT UPHILL GRADE (NB)
HORIZONTAL CURVE	MODERATE "S" CURVES
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (Areas of)
ROAD CONDITIONS	FAIR-POOR
SIDEWALKS/DRIVEWAYS	PARTIAL / NONE
STREET LIGHTING	NO
DRIVEWAY DENSITY	NONE
OTHER	RAISED MEDIAN ISLAND

ADJACENT LAND USE	PARK / COMMERCIAL / RESIDENTIAL (non-fronting) / TENNIS GARDENS / HOTEL
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RECOMMENDED SPEED LIMIT	50 MPH
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SPEED LIMIT CHANGE	NO CHANGE
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JUSTIFICATION:
 The recommended speed 50 mph speed limit is within 1.5 mph of the 85th percentile speed and meets CVC standards.

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

WASHINGTON STREET (S/B)

DATE: 1/27/2022

TIME: 12:50 PM - 1:20 PM

FRED WARING DR TO SOUTH CITY LIMITS

SURVEY BY: C BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES																				VEH.	PCT.	CUM. PCT.	
	5	10	15	20	25																			
60	X	X																				2	1.4%	100.0%
																						0	0.0%	98.6%
	X																					1	0.7%	98.6%
	X																					1	0.7%	97.9%
	X																					1	0.7%	97.2%
55	X	X	X																			3	2.1%	96.5%
	X	X	X	X	X																	5	3.5%	94.4%
	X	X	X																			3	2.1%	90.8%
	X	X	X	X	X	X	X	X	X													10	7.0%	88.7%
	X	X	X	X	X	X	X	X	X	X												10	7.0%	81.7%
50	X	X	X	X	X	X	X	X	X	X	X	X	X									13	9.2%	74.6%
	X	X	X	X	X	X	X	X	X	X	X	X	X									12	8.5%	65.5%
	X	X	X	X	X	X	X	X	X													9	6.3%	57.0%
	X	X	X	X	X	X	X	X	X	X	X	X	X	X								14	9.9%	50.7%
	X	X	X	X	X	X	X	X														8	5.6%	40.8%
45	X	X	X	X	X	X	X	X	X	X												10	7.0%	35.2%
	X	X	X	X	X	X																6	4.2%	28.2%
	X	X	X	X	X																	5	3.5%	23.9%
	X	X	X	X	X	X	X	X	X	X	X											11	7.7%	20.4%
	X	X	X																			3	2.1%	12.7%
40	X	X	X	X	X																	5	3.5%	10.6%
	X	X	X	X																		4	2.8%	7.0%
	X																					1	0.7%	4.2%
	X	X	X																			3	2.1%	3.5%
	X																					1	0.7%	1.4%
35	X																					1	0.7%	0.7%
																								0.0%
																								0.0%
																								0.0%
																								0.0%
30																								0.0%
																								0.0%
																								0.0%
																								0.0%
25																								0.0%
																								0.0%
																								0.0%
																								0.0%
																								0.0%
20																								0.0%
																								0.0%
																								0.0%
																								0.0%
																								0.0%
																								0.0%
15																								0.0%
TOTAL VEHICLES																						142		

UPPER LIMIT 10 MPH PACE:	51	MPH			
LOWER LIMIT 10 MPH PACE:	42	MPH	85th PERCENTILE SPEED:	51.5	MPH
PERCENT OVER PACE:	18.3	%	MEDIAN SPEED:	46.9	MPH
PERCENT IN PACE:	69.0	%	15th PERCENTILE SPEED:	41.3	MPH
PERCENT UNDER PACE:	12.7	%			

RADAR SPEED DISTRIBUTION SHEET



CITY OF INDIAN WELLS

WASHINGTON STREET (S/B)

FRED WARING DR TO SOUTH CITY LIMITS

DATE: 1/27/2022

SURVEY BY: C BUENDIA

TIME: 12:50 PM - 1:20 PM

CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	98.6%
58					X	98.6%
57					X	97.9%
56					X	97.2%
55					X	96.5%
54					X	94.4%
53					X	90.8%
52					X	88.7%
51				X		81.7% }PACE -- -85PCT
50				X		74.6% }PACE
49				X		65.5% }PACE
48			X			57.0% }PACE
47			X			50.7% }PACE
46			X			40.8% }PACE ----MEAN
45		X				35.2% }PACE
44		X				28.2% }PACE
43		X				23.9% }PACE
42		X				20.4% }PACE
41		X				12.7% -- -15PCT
40		X				10.6%
39	X					7.0%
38	X					4.2%
37	X					3.5%
36	X					1.4%
35	X					0.7%
34	X					0.0%
33	X					0.0%
32	X					0.0%
31	X					0.0%
30	X					0.0%
29	X					0.0%
28	X					0.0%
27	X					0.0%
26	X					0.0%
25	X					0.0%
24	X					0.0%
23	X					0.0%
22	X					0.0%
21	X					0.0%
20	X					0.0%
19	X					0.0%
18	X					0.0%
17	X					0.0%
16	X					0.0%
15	X					0.0%

UPPER LIMIT 10 MPH PACE:	51 MPH	85th PERCENTILE SPEED:	51.5 MPH
LOWER LIMIT 10 MPH PACE:	42 MPH	MEDIAN SPEED:	46.9 MPH
PERCENT OVER PACE:	18.3 %	15th PERCENTILE SPEED:	41.3 MPH
PERCENT IN PACE:	69.0 %		
PERCENT UNDER PACE:	12.7 %		

APPENDIX B



TRAFFIC RADAR CERTIFICATION

TESTED TO NHTSA SPECIFICATIONS / IACP CRITICAL PERFORMANCE STANDARDS
 (NHTSA) National Highway and Traffic Safety Administration.
 (IACP) International Association of Chiefs of Police.

16202 Keats Circle
 Westminster, Calif. 92683

R.H.F. is a certified independent testing and repair facility.

1	TEST ID	Date Received 7-17-20	Certification Number 75489				
2	DEVICE ID	Make Applied Concepts	Model Stalker-Dual SL or DSR	Type (I-IV) IV	Directional radar <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Same direction <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		Counting unit S/N 040953	Antenna-1 S/N 026727	Antenna-2 S/N 033539			
3	§ 2.4 / § 5.4 TUNING FORK CALIBRATION	Low speed fork S/N 248728	Last date calib.	Freq. (Hz)	Speed (mph) 25	Measured (Hz) 2611	PASS FAIL
		High speed fork S/N 400111	Last date calib.	Freq. (Hz)	Speed (mph) 55	Measured (Hz) 5716	
4	§ 2.5 / § 5.5 RADAR DEVICE TUNING FORK TESTS	Stationary mode		Lo fork	High fork		PASS FAIL
		Fork speed (mph)		25	40		
		Disp. Speed (mph)		25	40		
		Moving mode Opposite Direction	TARGET SPEED (Hi fork - Lo fork)	Expected. (mph) 15	Displayed. (mph) 15		
		Moving mode Same Direction	TARGET SPEED Hi fork + Lo fork Hi fork - Lo fork	Expected. (mph) 65 15	Displayed. (mph) 65 15		
5	§ 2.6.1. / § 5.6.1 TRANSMISSION FREQUENCY STABILITY	Standard supply Voltage (V) 13.6 V	Antenna 1 Freq. GHz 34.720	Antenna 2 Freq. GHz 34.716	PASS FAIL		
		Standard supply Voltage - 20% (V) 10.8 V	Antenna 1 Freq. GHz 34.720	Antenna 2 Freq. GHz 34.716			
		Standard supply voltage + 20% (V) 16.3 V	Antenna 1 Freq. GHz 34.720	Antenna 2 Freq. GHz N/A 34.716			
6	§ 2.6.5 / § 5.6.5 POWER DENSITY	Mfg. Spec. (max mW/cm) ≤ 2	Antenna 1 Power (mW/cm) .9	Antenna 2 Power (mW/cm) .9	PASS FAIL		
7	§ 2.8 / § 5.8 LOW VOLTAGE	Mfg. spec. (V) ≤ 10.8	LVA activates (V) 8.2	LVA deactivates (V) 9.0	PASS FAIL		
8	§ 2.9.1 / § 5.9.1 DOPPLER AUDIO	A. Audio tone correlates with received Doppler signal <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		B. Functioning audio volume-adjustment control <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		PASS FAIL	
9	§ 2.12.4 / § 5.12.4 INTERNAL CIRCUIT	Mfg. Spec. PASS	Test results PASS		PASS FAIL		
10	§ 2.12.6.5 / § 5.12.6.5 DIRECTIONAL	A. Selects only targets moving towards radar <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N.A.		B. Selects only targets moving away from radar <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N.A.		PASS FAIL	
11	§ 2.12.7 / § 2.12.8 / 5.12.7 / 5.12.8 LOW AND HIGH SPEED DISPLAY TEST	Stationary mode: target channel (mph)	Low speed spec. 12	Lo speed disp. 12	PASS FAIL		
			Hi speed spec. 200	Hi speed disp. 200			
		Moving Mode target channel (mph)	Low speed spec. 20	Lo speed disp. 20			
			Hi speed spec. 200(C)	Hi speed disp. 200			
		Moving Mode: patrol channel (mph)	Low speed spec. 15	Lo speed disp. 15			
			Hi speed spec. 79	Hi speed disp. 79			
12	§ 2.13 / § 5.13 RFI TEST	PASS FAIL					
13	LABORATORY COMMENTS						
14	NHTSA/IACP CERTIFICATION	<i>This radar device meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration. California Vehicle Code Section 40802</i> <input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL Certified by: <i>Robert Friesen</i> Date: 7-17-20					
15	INVENTORY	<input type="checkbox"/> Fork Cert <input type="checkbox"/> Manual <input type="checkbox"/> 2 nd Ant. <input type="checkbox"/> Remote <input type="checkbox"/> Battery <input type="checkbox"/> Carrying Case <input type="checkbox"/> Other: (please list)					



TRAFFIC RADAR CERTIFICATION

TESTED TO NHTSA SPECIFICATIONS / IACP CRITICAL PERFORMANCE STANDARDS
 (NHTSA) National Highway and Traffic Safety Administration.
 (IACP) International Association of Chiefs of Police.

16202 Keats Circle
 Westminster, Calif. 92683

R.H.F. is a certified independent testing and repair facility.

1	TEST ID	Date Received 7-17-20	Certification Number 75490						
2	DEVICE ID	Manufacturer MPH	Model: K-15	Type (1-IV) III	Directional radar <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Same direction <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
		Counting unit S/N 12145	Antenna-1 S/N N/A	Antenna-2 S/N N/A					
3	§ 2.4 / § 5.4 TUNING FORK CALIBRATION	Low speed fork S/N 25560	Last date calib.	Freq. (Hz)	Speed (mph) 35	Measured (Hz) 2541	PASS	FAIL	
		High speed fork S/N	Last date calib.	Freq. (Hz)	Speed (mph)	Measured (Hz)			
4	§ 2.5 / § 5.5 RADAR DEVICE TUNING FORK TESTS			Lo fork		High fork		PASS	FAIL
		Stationary mode	Fork speed (mph)	35		65			
			Disp. Speed (mph)	35		65			
		Moving mode Opposite Direction	TARGET SPEED (Hi fork - Lo fork)	Expected. (mph)	N/A		Displayed. (mph)		
TARGET SPEED Hi fork + Lo fork Ho fork - Lo fork	Expected. (mph)		N/A		Displayed. (mph)	N/A			
5	§ 2.6.1. / § 5.6.1 TRANSMISSION FREQUENCY STABILITY	Standard supply Voltage (V) 13.6 V	Antenna 1 Freq. GHz 24.153	Antenna 2 Freq. GHz N/A	PASS	FAIL			
		Standard supply Voltage - 20% (V) 10.8 V	Antenna 1 Freq. GHz 24.153	Antenna 2 Freq. GHz N/A					
		Standard supply voltage + 20% (V) 16.3 V	Antenna 1 Freq. GHz 24.153	Antenna 2 Freq. GHz N/A					
6	§ 2.6.5 / § 5.6.5 POWER DENSITY	Mfg. Spec. (max mW/cm) ≤ 5	Antenna 1 Power (mW/cm) .5	Antenna 2 Power (mW/cm) N/A	PASS	FAIL			
7	§ 2.8 / § 5.8 LOW VOLTAGE	Mfg. spec. (V) ≤ 10.8V	LVA activates (V) N/A	LVA deactivates (V) N/A	PASS	FAIL			
8	§ 2.9.1 / § 5.9.1 DOPPLER AUDIO	A. Audio tone correlates with received Doppler signal <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		B. Functioning audio volume-adjustment control <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		PASS	FAIL		
9	§ 2.12.4 / § 5.12.4 INTERNAL CIRCUIT	Mfg. Spec. 32	Test results 32			PASS	FAIL		
10	§ 2.12.6.5 / § 5.12.6.5 DIRECTIONAL	A. Selects only targets moving towards radar <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N.A.		B. Selects only targets moving away from radar <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N.A.		PASS	FAIL		
11	§ 2.12.7 / § 2.12.8 / 5.12.7 / 5.12.8 LOW AND HIGH SPEED DISPLAY TEST	Stationary mode: target channel (mph)	Low speed spec. 20	Lo speed disp. 20		PASS	FAIL		
			Hi speed spec. 199	Hi speed disp. 199					
		Moving Mode target channel (mph)	Low speed spec. N/A	Lo speed disp. N/A					
			Hi speed spec. N/A	Hi speed disp. N/A					
Moving Mode: patrol channel (mph)	Low speed spec. N/A	Lo speed disp. N/A							
	Hi speed spec. N/A	Hi speed disp. N/A							
12	§ 2.13 / § 5.13 RFI TEST	N/A				PASS	FAIL		
13	LABORATORY COMMENTS								
14	NHTSA/IACP CERTIFICATION	<i>This radar device meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration. California Vehicle Code Section 40802</i> <input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL					Certified by: Robert J. Riesen Date: 7-17-20		
15	INVENTORY	<input type="checkbox"/> Fork Cert	<input type="checkbox"/> Manual	<input type="checkbox"/> 2 nd Ant.	<input type="checkbox"/> Remote	<input type="checkbox"/> Bat.			
		<input type="checkbox"/> Carrying Case	<input type="checkbox"/> Other: (please list)						

Radar Certification

Certificate of Completion and Competency
DOPPLER RADAR OPERATION

Name & Title Cathy Buendia
Technician

Department Transportation

has successfully completed a course of instruction in the operation of Moving Car and Stationary Doppler Radar and is deemed competent to utilize the same Doppler Radar to determine the velocity of motor vehicles.

7/23/91 Date [Signature] Instructor

ENI WIPH 318 East Ninth Street
Owensboro, KY 42301
Subsidiaries of MPD, Inc. (502) 605-8200

CERTIFICATE OF COMPLETION

THIS IS TO CERTIFY THAT –

1. Eddy Buendia has successfully completed a course for Traffic Engineers on the operation of Radar devices in application with Traffic and Engineering Speed Surveys as outlined in the California Vehicle Code and the Manual of Uniform Traffic Control Devices. This course is based upon the standards as outlined by the National Highway Traffic Safety Administration, California Commission on P.O.S.T standards and Section 40802 of the California Vehicle Code.
2. Eddy Buendia completed the classroom instruction on operation and theory of Radar devices, case law, traffic and engineering surveys, the California Vehicle Code as well as the test, set-up, operation and identification of erroneous readings.
3. Eddy Buendia, in field settings demonstrated competence in the test and set-up of a radar device, operation and trouble shooting of the device and correct evaluation of readings provided by the device.
4. Eddy Buendia demonstrated competence in making visual speed estimations in actual field settings.
5. Eddy Buendia is recognized for his competence as a Radar Operator this 19th day of July, 2021.



Steve Chauncey
P.O.S.T. Certified Radar Instructor