



City of San Diego

COUNCIL POLICY 200-7: MARKED CROSSWALK CRITERIA AT UNCONTROLLED LOCATIONS

March 24, 2015



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MARKED CROSSWALKS

- Defined by California Vehicle Code Section 275
- Installed per Council Policy 200-07 Adopted in 1990
- Policy Update 2015



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UPDATE PROCESS

- Consulting Team
- Project Working Group
- Project Website
- Public Workshops
- Data Collection
- Pedestrian Risk Model
- 2015 City of San Diego Pedestrian Crosswalk Guidelines



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PEDESTRIAN RISK MODEL

- **STUDY LOCATIONS**
- **DATA COLLECTION**
- **STATISTICAL ANALYSIS**



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STUDY LOCATIONS

- 37 study sites provided characteristics to best fit methodology for developing the risk model.
- 296 units of measure achieved by reducing each of the 37 study sites by approach/departure for each crossing.





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PEDESTRIAN RISK MODEL

- STUDY LOCATIONS
- DATA COLLECTION
- STATISTICAL ANALYSIS



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DATA COLLECTION

- Collision Database (1999-2012)
 - 14 years of collision reports were utilized to determine exact locations of pedestrian collisions.
- Traffic Data
 - vehicle volumes, pedestrian counts, speed data, etc.
- Field Observations & Measurements
 - sidewalk widths, buffer widths, crossing distance, crossing restrictions, bus stops, etc.



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PEDESTRIAN RISK MODEL

- STUDY LOCATIONS
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- STATISTICAL ANALYSIS



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Statistically Significant Variables

- Average Daily Traffic
- Posted Speed Limit
- Crosswalk in poor condition
- Marked crosswalks
- Locations where pedestrian crossing is restricted but evidence shows pedestrians are crossing illegally.



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UPDATE TO COUNCIL POLICY 200-07

- Basic Warrants
- Point Warrants
- Crossing Treatments



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BASIC WARRANTS

- Pedestrian Volume Warrant
- Approach Speed Warrant
- Nearest Controlled Crossing Warrant
- Visibility Warrant
- Illumination Warrant
- Accessibility Warrant



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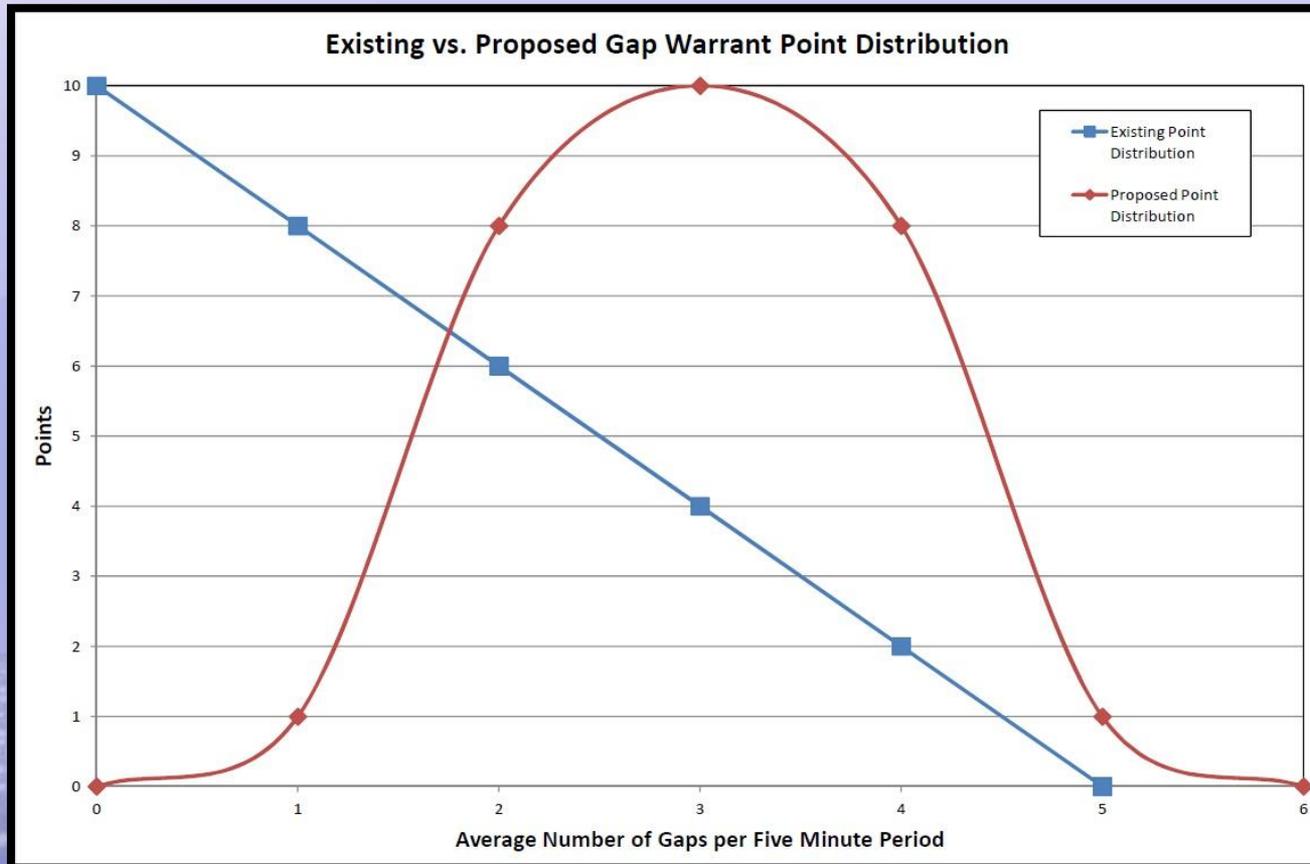
POINT WARRANTS

- Pedestrian Volume Warrant
- General Condition Warrant
- Gap Time Warrant



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GAP TIME WARRANT





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CROSSING TREATMENTS

Table 2-3: Crossing Treatment Thresholds for Uncontrolled Marked Crosswalks if Warrants are Met

Crossing Distance ²	Roadway ADT (vehicles per day)								
	< 1,500	1,501 – 5,000		5,001 – 12,000		12,001 – 15,000		> 15,000	
< 40'	A	B		B		C		C	D ¹
40' to 52'	A	B		C		C	D ¹	D	
> 52'	A	B	C ¹	C	D ¹	D		D	

1. For streets with more than one lane at an approach or posted speed limit 30 mph or greater.
2. Crossing distance can be measured to a pedestrian refuge island if one is present.



Table 2-4: Crossing Treatments for Uncontrolled Marked Crosswalks if Warrants are Met

Category	Crossing Treatments
A	<p>The following is required:</p> <ul style="list-style-type: none"> • (W11-2) Pedestrian Warning Signage with the corresponding (W16-7P) arrow plaque
B	<p>At least one of the following is required:</p> <ul style="list-style-type: none"> • (R1-6) State Law – Yield to Pedestrian sign if median is present • Rectangular Rapid Flashing Beacons (RRFBs) • Raised crosswalk or other traffic calming treatments if the City of San Diego’s Traffic Calming Guidelines are met
C	<p>At least two of the following are required:</p> <ul style="list-style-type: none"> • Radar Speed Feedback Signs • Striping changes such as narrower lanes, painted medians, road diets, or other speed reducing treatments. • RRFBs • Staggered crosswalks and pedestrian refuge island • Horizontal deflection traffic calming treatments¹ if the City of San Diego’s Traffic Calming Guidelines are met
D	<p>A Traffic Signal is required if the CA MUTCD warrants are met and it is recommended by a traffic engineering study. Otherwise at least one of the following is required:</p> <ul style="list-style-type: none"> • Pedestrian Hybrid Beacon if the CA MUTCD warrants are met • Horizontal deflection traffic calming treatment¹ with RRFBs if the City of San Diego’s Traffic Calming Guidelines are met

1. Horizontal deflection treatments include, but are not limited to: roundabouts, pedestrian refuge islands, and pedestrian bulb-outs.



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WARRANT COMPARISON

Location	Existing	Warranted	Proposed	Warranted
La Jolla Scenic Dr N & Sugarman Dr	8	NO	10	NO
Fay Ave - Kline St & Pearl St	10	NO	16	YES
Bayard St. & Turquoise St.	4	NO	10	NO
W Point Loma Ave & Castelar	8	NO	8	NO
30th St & Thorn St	2	NO	13	NO
Derrick Dr & Balboa Arms Dr	4	NO	10	NO
28th St & Cedar St	2	NO	10	NO
University Ave. & Shiloh Rd	12	NO	13	NO
Del Mar Trails Rd & Montellano Ter	10	NO	14	NO
Imperial Ave & Evans St	4	NO	19	YES
Torrey Pines Rd & Herschel Ave	10	NO	24	YES
El Cajon Blvd & 60th St	12	NO	10	NO
University Ave. & 36th St	12	NO	27	YES
11th Ave & K St	6	NO	14	NO
C St - 14th St & 15th St	12	NO	19	YES
Via Tazon - Rancho Bernardo Rd. & Bernardo Ct.	8	NO	13	NO
La Jolla Shores Dr & Horizon Way	2	NO	13	NO
29th & B St	10	NO	26	YES
Kensington Dr. & Adams Ave.	10	NO	26	YES
Renaissance Ave. - Town Centre Dr. & Calabria Ct.	2	NO	10	NO
Loring St. & Everts St.	2	NO	10	NO
Armstrong St. & Baltic St.	2	NO	17	YES
Mission Blvd. & Wilbur Ave.	12	NO	25	YES
Monterey Park Dr. & Iris Ave.	4	NO	13	NO
Cottonwood Rd. & S. Vista Ave.	10	NO	16	YES



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QUESTIONS?

