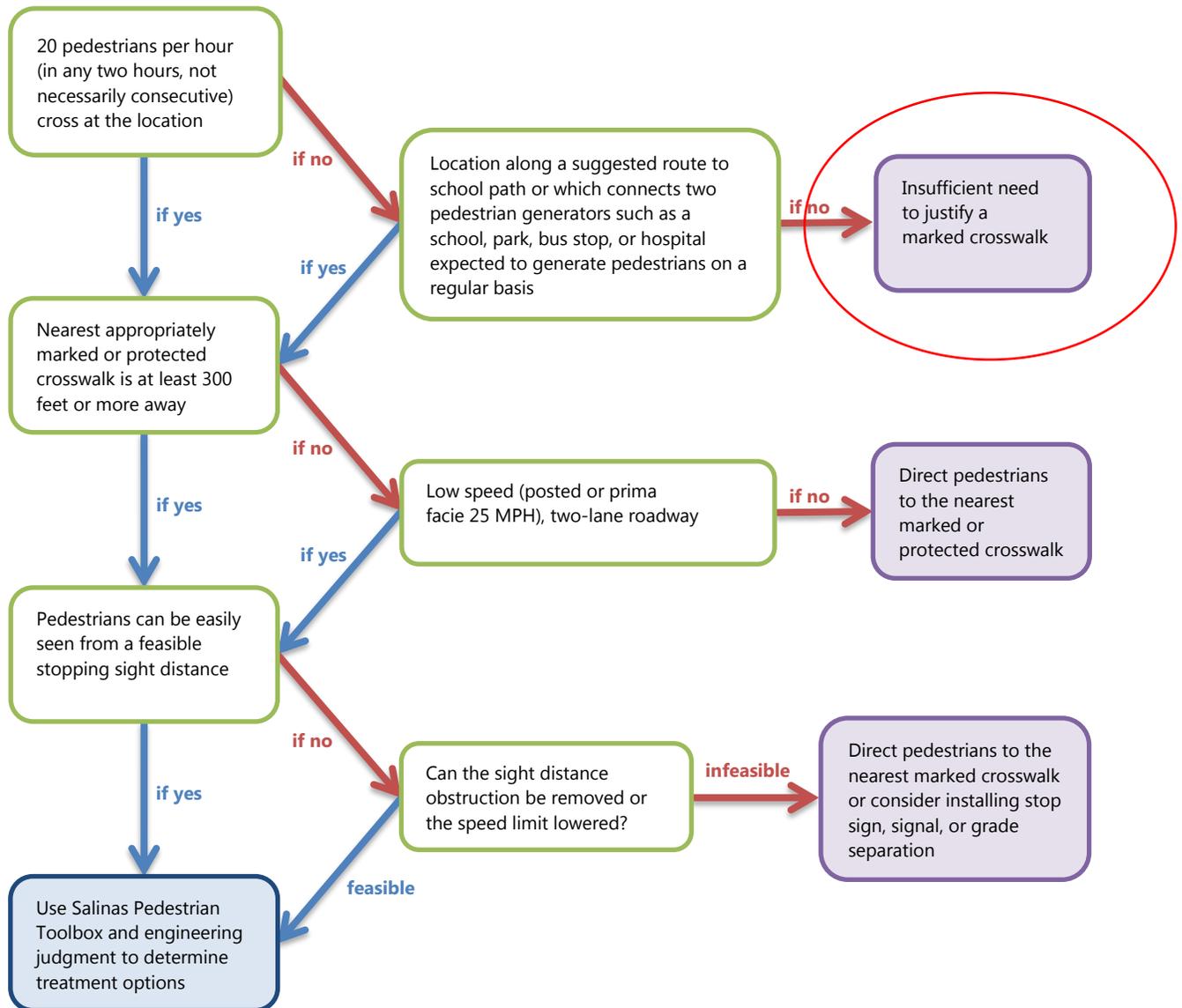


Figure 6: Feasibility Analysis for Treatments at Uncontrolled Locations



Note: Where no engineering action is recommended in Chart 2, consider applicable education and enforcement efforts.



Table 1. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.*

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9000 to 12,000			Vehicle ADT >12,000 - 15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 30 mi/h	35 mi/h	40 mi/h	≤ 30 mi/h	35 mi/h	40 mi/h	≤ 30 mi/h	35 mi/h	40 mi/h	≤ 30 mi/h	35 mi/h	40 mi/h
2 Lanes	C	C	P	C	C	P	C	C	N	C	P	N
3 Lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multi-Lane (4 or More Lanes) With Raised Median***	C	C	P	C	P	N	P	P	N	N	N	N
Multi-Lane (4 or More Lanes) Without Raised Median	C	P	N	P	P	N	N	N	N	N	N	N

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone **will not** make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. **These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.**

** Where the speed limit exceeds 40 mi/h (64.4 km/h) marked crosswalks alone should not be used at unsignalized locations.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, etc. may be needed at other sites. It is recommended that a minimum of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) exist at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased due to providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

*** The raised median or crossing island must be at least 4 ft (1.2 m) wide and 6 ft (1.8 m) long to adequately serve as a refuge area for pedestrians in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

With these studies as a backdrop, the remainder of this chapter outlines a decision making process to identify appropriate treatments and presents a variety of treatment options to mitigate safety, visibility, or operational concerns at specific locations.

TREATMENT SELECTION

At uncontrolled locations, a marked crosswalk with striping only may not provide adequate visibility to the pedestrian crossing, especially at high volume, high speed, or multi-lane crossings. Enhancements should



incidents at nearby intersections (5). These results validated the City’s belief that marked crosswalks should be very selectively reinstalled following a road repaving. However, this study did not consider the context of the crosswalks, such as traffic volume levels, speeds, or number of lanes. Also, since many pedestrians and motorists recognize only marked crosswalks as legal crossings, these studies and policies did not balance mobility needs with safety considerations.

A 2001 study by Zegeer, et al. attempted to clarify the results of the Herms study and resolve previous studies’ research design flaws by controlling for site context factors. Zegeer analyzed data from 1,000 marked and 1,000 matching unmarked crosswalks sites in 30 U.S. cities (6). The study concluded that site factors related to pedestrian-involved collisions included pedestrian average daily traffic (ADT), vehicle ADT, number of lanes, and presence of a raised median.. At uncontrolled locations on two-lane roads and multi-lane roads with ADT below 12,000 vehicles, Zegeer found that the presence of a marked crosswalk alone, compared with an unmarked crosswalk, made no statistically significant difference in the pedestrian crash rate. However, on multi-lane roads with an ADT of greater than 12,000 vehicles (without a raised median) and 15,000 vehicles (with a raised median) the presence of a marked crosswalk alone, without other improvements was associated with a statistically significant higher rate of pedestrian crashes compared to sites with an unmarked crosswalk (6).

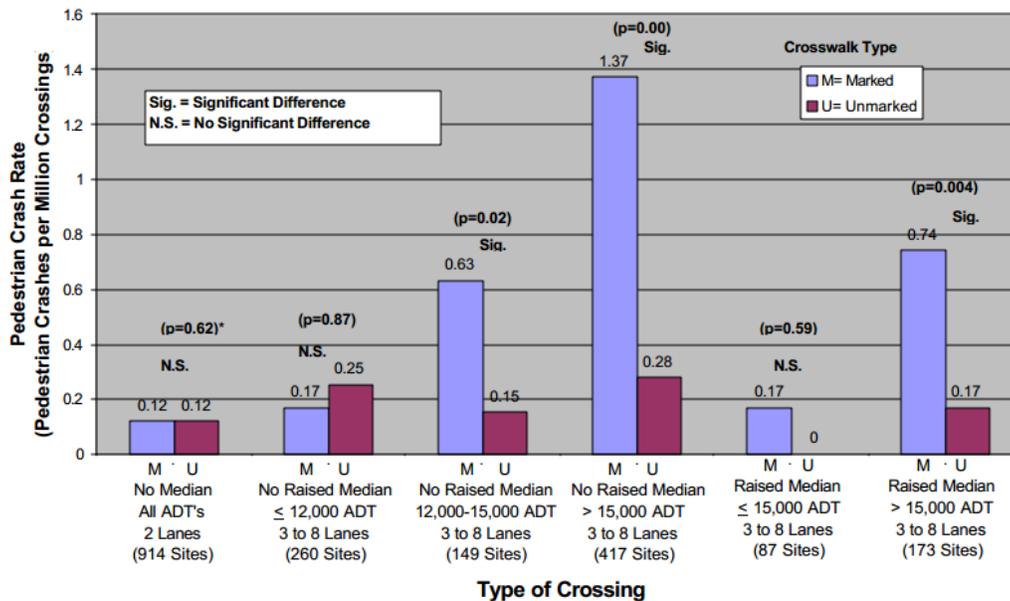
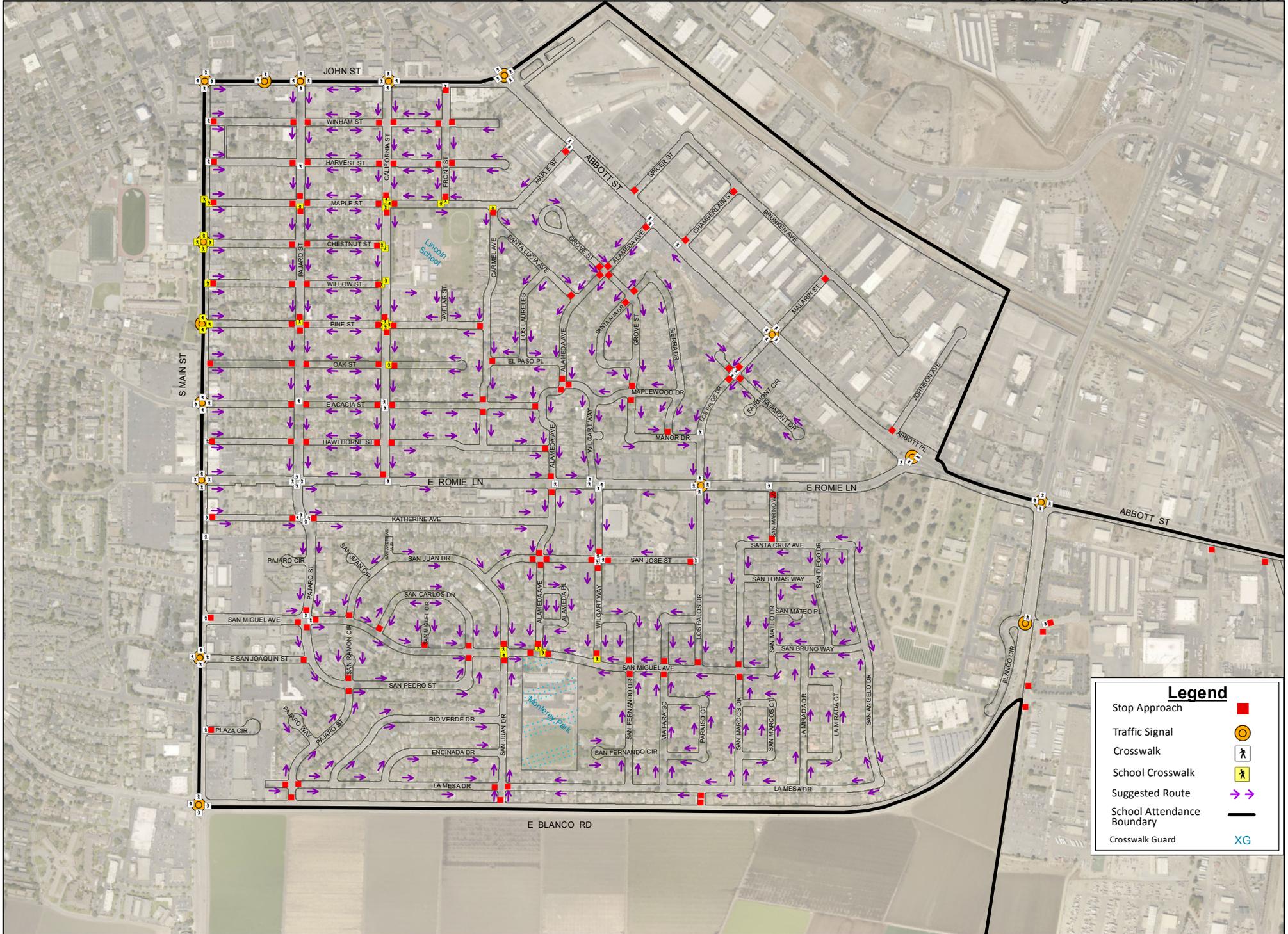


Figure 1 – Pedestrian crash rate versus type of crossing. Results from the Zegeer et al. (2001) study of marked versus unmarked crosswalks (6).

Monterey Park Elementary School



Legend	
Stop Approach	■
Traffic Signal	⦿
Crosswalk	⚡
School Crosswalk	⚡
Suggested Route	➡
School Attendance Boundary	—
Crosswalk Guard	XG

CITY OF SALINAS

TURNING MOVEMENT PROGRAM

E. Romie Ln. @ Alameda Ave.
 Pedestrian Counts
 7/17/2018
 7:00 AM - 6:00 PM

File Name : E. Romie Ln at Alameda 7-6PM
 Site Code :
 Start Date : 7/17/2018
 Page No : 1

Groups Printed- Cars +

Start Time	Alameda From North					E. Romie Ln From East					Alameda From South					E. Romie Ln From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
****BREAK***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0
****BREAK***																					
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
****BREAK***																					
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0
****BREAK***																					
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
****BREAK***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0
****BREAK***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	0	0	0	0	0	9
Apprch %	0	0	0	0		0	0	0	0		0	0	0	100		0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	0

Start Time	Alameda From North					E. Romie Ln From East					Alameda From South					E. Romie Ln From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 07:00 AM - Peak 1 of 1

TRAFFIC MONITOR COUNTS
CITY OF SALINAS

Romie Ln @ Alameda Ave
Pedestrian Counts
Weather: Sunny
Hours: 7:00am to 6:00pm

File Name : Romie @ Alameda
Site Code :
Start Date : 9/20/2018
Page No : 1

Groups Printed- Vehicles

Start Time	ALAMEDA AVENUE From North				E ROMIE LANE From East				ALAMEDA AVENUE From South				E ROMIE LANE From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
*** BREAK ***																	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
*** BREAK ***																	
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
*** BREAK ***																	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7
*** BREAK ***																	
Total	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
*** BREAK ***																	
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
*** BREAK ***																	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10
Apprch %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	