City of Whittier

Traffic Calming Policy

A Procedural Guide to Neighborhood Traffic Management

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April 26, 2005 (Revised)

Questions To Be Answered

This report presents a Neighborhood Traffic Management and Calming Program aimed at making existing residential streets more livable by reducing traffic speed and volume. The pertinent questions are:

1. Which neighborhood or neighborhoods have the most immediate and correctable traffic concerns?
2. How can the City identify which neighborhood(s) should receive immediate attention?
3. What are the processes to be followed by the public and staff in recommending and deploying traffic calming technique(s)?
4. How should the implementation and maintenance phases be funded?
5. What monitoring method(s) should be used to measure the long-term effectiveness of the deployed traffic calming technique(s)?

These five questions are the basis for the formation of the Whittier's Traffic Calming Policy.

Introduction

The City of Whittier is nestled on the southern slope of Puente Hills and bordered by three (3) major interstate freeways: Interstate 605, Interstate 5, and the Pomona (State Route 60) Freeway. The backbone of the City's roadway network is the arterial system consisting of Colima Road, Whittier Boulevard, Lambert Road, Painter Avenue, Beverly Boulevard and Norwalk Boulevard. These roadways provide access to motorists between the freeways and the local street system.

As a result of the continuing growth in this region, the surrounding freeways and some of the City's arterials have been experiencing an increase in congestion. Many motorists have discovered ways of bypassing the congested freeways and arterials by utilizing neighborhood residential streets to move from one arterial to another or as a shortcut to their destination. As a result, the undesirable characteristics of the bypassing traffic in some neighborhoods have evolved to a level where some residential neighborhoods have become intolerant. The City Council has recognized the need of addressing residents' concern of high traffic speed and volume.

Furthermore, neighborhoods that are located in close proximity to a desirable destination (such as a school, a shopping center/district or other commercial establishment) experience heavier than usual traffic flows. Traffic studies verify that often, visitors to these establishments and the residents of the neighborhoods themselves, are guilty of not heeding traffic regulations and contribute to their own traffic-related problems.

In the past, the Council has adopted various traffic calming and pedestrian safety policies to address known and perceived traffic-related problems. Staff has been following the adopted policies to review and address each citizen request. Upon

receipt of each request, staff performs the standard traffic engineering study and sometimes requests police assistance to mitigate the problem. If the problem persists, staff brings the issue before the Parking and Transportation Commission for consideration of recommending that the City Council establish additional traffic control devices in the neighborhood as necessary.

As the neighborhood traffic issues become an increasing concern to the City Council, a comprehensive program that addresses the traffic issues becomes increasingly necessary. This Traffic Calming Policy is expected to efficiently and effectively manage the neighborhood traffic by identifying a process to determine the best traffic management strategies for implementation.

This Traffic Calming Policy was developed to address the needs of the City of Whittier. Specific methods and/or calming techniques are to be evaluated during the comprehensive process that heavily involves the citizens' participation. The funding authority rests with the Whittier City Council from recommendations of the Parking and Transportation Commission.

Traffic Calming – Achieving Livable Communities

The goals and objectives of this Policy are to:

1. Provide for safe and efficient vehicular and pedestrian movements on all City streets.
2. Address residential neighborhoods' concerns on traffic issues.
3. Promote, through the deployment of various traffic calming strategies, livable communities.
4. Partner with local the Whittier Police Department, in formulating acceptable enforcement levels and strategies for addressing the needs of the neighborhood.
5. Develop procedures to prioritize traffic management requests and project rankings.

Traffic Calming Techniques and Strategies

Many different methods of traffic calming techniques, devices and strategies have been documented in various publications. In 2001, Mr. Dan Burden was invited to give a presentation on traffic calming. The booklet that he authored, *Streets and Sidewalks, People and Cars – The Citizens' Guide to Traffic Calming*, covered a wide variety of traffic calming techniques, devices and strategies. These tried and proven techniques include the horizontal and vertical treatment of roadway structures.

While traffic calming techniques were developed to reduce speeding problems and heavy traffic flow on residential streets, careful development of these techniques is mandatory to avoid shifting the traffic problems to another street in the neighborhood or creating other undesirable outcomes for neighboring residents.

Furthermore, the **3-E** (**E**ducation, **E**ngineering, and **E**nforcement) approach should be incorporated into all traffic calming techniques and management programs to maximize the benefits and returns. **Education** informs drivers as to the ways they can help ease traffic problems by driving slower and/or advising them of the use of alternate routes. **Engineering** tools include a variety of traffic calming devices designed to reduce traffic speed or improve pedestrian safety. **Enforcement** enlists the assistance of the Whittier Police Department's Traffic Bureau, chartered with enforcing and increasing community awareness regarding speeding problems.

Before The Process

It should be noted that the Traffic Calming Process should only begin after all standard protocols have been considered. These protocols include, but not limited to: staff's evaluation of standard traffic control device applications and warrant studies; police enforcement (number of citations) and deployment of radar educational trailer (records of the speed profile); augmentation of roadway design; etc. Staff and the Parking and Transportation Commission, will continue to work closely with the Whittier Police Department to request an increase of enforcement as a tool in addressing traffic-related concerns whenever necessary.

The Process

Residents and property owners who are interested in traffic calming in their residential area shall read Mr. Dan Burden's Streets and Sidewalks, People and Cars - The Citizens' Guide to Traffic Calming and review the Traffic Calming Operations Flow Sequence (Appendix A). The requesting residents and property owners shall meet with the City Traffic Engineering staff to determine the street segment(s) or boundary area that a petition shall be circulated. This petition form (sample attached – Appendix B) must be signed by **at least 70%** of the residents/property owners whose properties are within the street segment(s) of concern before the City will initiate the traffic data inventory and collection process.

Traffic Calming Operations Flow Sequence (Appendix A)

Step 1: ***Request from Neighborhood*** – Residents may submit written requests to the City identifying their needs and request for a traffic calming review.

Step 2: ***City staff establishes study boundary*** – City staff will work with requestee(s) to establish a study boundary and notify the requestee of the petition requirements. This boundary becomes the resident voting area.

Step 3: ***Traffic Data Inventory*** - City staff will collect the following traffic data:

1. Traffic Volume Counts – These traffic volume counts consist of a 24-hour bi-directional traffic counts within the study boundaries. They are used to compare actual vehicle quantities with the traffic volumes normally expected to be generated within the neighborhood. The normally expected neighborhood traffic volumes will be determined by the *Trip Generation Manual*, as

promulgated by the Institute of Transportation Engineers (ITE). The traffic volume of the study boundary must exceed the expected trip generation volume per the ITE trip generation rate by at least 10%.

2. Traffic Speed Profile – A 24-hour speed profile will be collected. This will include the traffic speed in both directions. In order to qualify for further review, the critical speed (or 85th percentile speed) shall exceed the posted speed limit by a minimum of 10 MPH.

3. Accident History – The street segment's accident rate shall demonstrate a minimum of 3 reported accidents of similar type within the last 12 months.

To qualify the street segment for further review and ranking process for traffic calming/management strategies deployment, one of the above stated criteria should be met.

Step 4: Ranking and Certification of Projects - Each project area will be given a score based on the following criteria. A ranking (priority) list will be developed based on the scores.

The table below should be used to score the street candidates and compare them with each other so that a priority list can be developed. Street segments with the most total points are ranked highest.

The table consists of seven (7) basic criteria as described below:

	Criteria	***Points***	***Basis Point Assignment***
1	Speed	0 to 25	Extent by which traffic speeds (critical speeds) exceed 35 MPH (2 points assigned for every one MPH)
2	Volume	0 to 20	Average daily traffic volumes (2 points assigned for every 1,000 vehicles per day)
3	Accident History	0 to 20	5 points per reported accident within the street segments reported within a 12-month period
4	Residential Density	0 to 20	4 points assigned for every 100 dwelling units per square mile
5	Elementary School Crossing	0 to 5	5 points assigned if marked school crosswalk exists
6	Sidewalks	0 to 5	5 points assigned if there is not a CONTINUOUS sidewalk on at least one side of the street
7	Pedestrian Generators	0 to 5	5 points assigned if pedestrian generators (retail commercial uses, institutional uses, parks, or other schools occur along or within 1,000 feet of the street
Total Points Possible		***100***	

The ranking will be certified by the Parking and Transportation Commission. Staff will begin to work with the neighborhood that received the highest ranking to coordinate a Traffic Calming Charrette.

Step 5: ***City Notifies Residents within the Resident Voting Area and Neighboring Streets of the Traffic Calming Charrette*** – City mails Charrette notification to all residents within the resident voting area and to other residents who live within 1,000 feet or one block length from the proposed traffic calming street segment(s), whichever is greater. City also posts flyers within the study area.

Step 6: ***Conduct Traffic Calming Charrette*** – This will be conducted in a workshop format. City will assign a "Facilitator [(A)]" to conduct the Charrette. Voting area residents will be given the opportunity to develop traffic calming alternatives. Non-voting residents may participate regarding potential undesirable outcomes on neighboring streets and to identify possible safety and access issues. Once staff and the residents agree on the traffic calming features for the study area, residents will be asked to volunteer as coordinator(s) between the City and their neighborhood. They will help to secure the required 70% "Buy-in" petition signatures from the voting area residents for the proposed traffic calming features.

Once the required 70% "Buy-in" is secured, City staff will place "temporary" traffic calming features at the specified locations for a test period of no less than forty-five (45) days. Notices shall be posted at each location informing the public of the test period and the Parking and Transportation Commission's Public Hearing date for "permanent" installation.

During the test period, City staff shall solicit comments from all emergency agencies, utility companies and public services agencies regarding the "temporary' traffic calming features and their effects on their operations.

Step 7: ***Hold Public Hearing*** – The Parking and Transportation Commission holds a public hearing at its regular meeting to receive public comments regarding the "temporary" traffic calming features. The Commission can adopt and/or modify the traffic calming features and direct staff to either forward a recommendation to the City Council or continue to work with the neighborhood to fine tune the proposed traffic calming features. Any significant modification and/or change to the traffic calming features will again require a 70% 'Buy-in" petition signatures from voting area residents.

Step 8: ***Parking and Transportation Commission's Recommendation*** – Once the Commission approves the final design of the proposed traffic calming measures, a recommendation will be forwarded to the City Council for consideration and approval.

Step 9: ***City Council Approve Funding*** - The City Council considers placing the project on the City's Capital Improvement Program and allocates funds for its implementation/construction.

Step 10: ***Construction Begins***

Step 11: ***Review and Monitoring Reporting*** – City staff shall perform 6-month and one-year studies and submit monitoring reports to the Parking and Transportation Commission. Should modifications to the traffic calming features be identified in the monitoring report, the Commission will forward a recommendation to City Council for consideration and approval. The City Council would consider placing the modification project on the City's Capital Improvement Program and allocates funds for construction.

(A) *Traffic Calming Facilitator*: This is an individual who volunteers to serve as the Facilitator for the "Working Group" and the representative from the Parking and Transportation Commission. The Facilitator shall not reside within the same neighborhood where the study is being conducted. He/she shall attend a 4-hour orientation session conducted by the Parking and Transportation Commission on "How to be an effective Traffic Calming Facilitator." The Facilitator shall remain neutral at all times and represent the interests of the Parking and Transportation Commission.

Funding and Implementation

Over the years, the City's Public Works Department has been absorbing the expenditures for the installation of traffic signs and minor pavement striping under the Street Maintenance account. For larger scale improvements, such as traffic signal installations, total restriping of major roadways, major signage installations, and traffic calming installations; the Public Works Department would nominate the project(s) to be included in the City's Capital Improvement Program.

It is practical and appropriate that the City continue to exercise this practice of funding traffic calming improvements. Staff has developed three levels of funding options (Level 1, Level 2, and Level 3) to assist with the implementation of all future traffic calming projects (see Appendix C).

Level 1 is the least restrictive and least expensive, while Level 3 is the most restrictive and expensive to implement. The maintenance cost for Level 2 and 3 options would be relatively more costly than the Level 1 options. It is believed that most traffic calming projects enhance the aesthetic of the neighborhood, and it would not be unreasonable for the residents to share the improvement and maintenance expenses.

Level of landscaping that the City will consider for installation as part of permanent traffic calming features are listed below. Residents can choose to adopt Level A at no monetary contribution requirements from the residents. Level B treatment will require residents' contribution to initial costs as well as long-term and on-going maintenance expenses.

Level A. Hardscape only for permanent traffic calming features with or without drought tolerant landscaping and no irrigation systems.

Level B. Landscape and irrigation of permanent traffic calming features will require agreement from resident association to pay for ongoing maintenance.

Conclusion

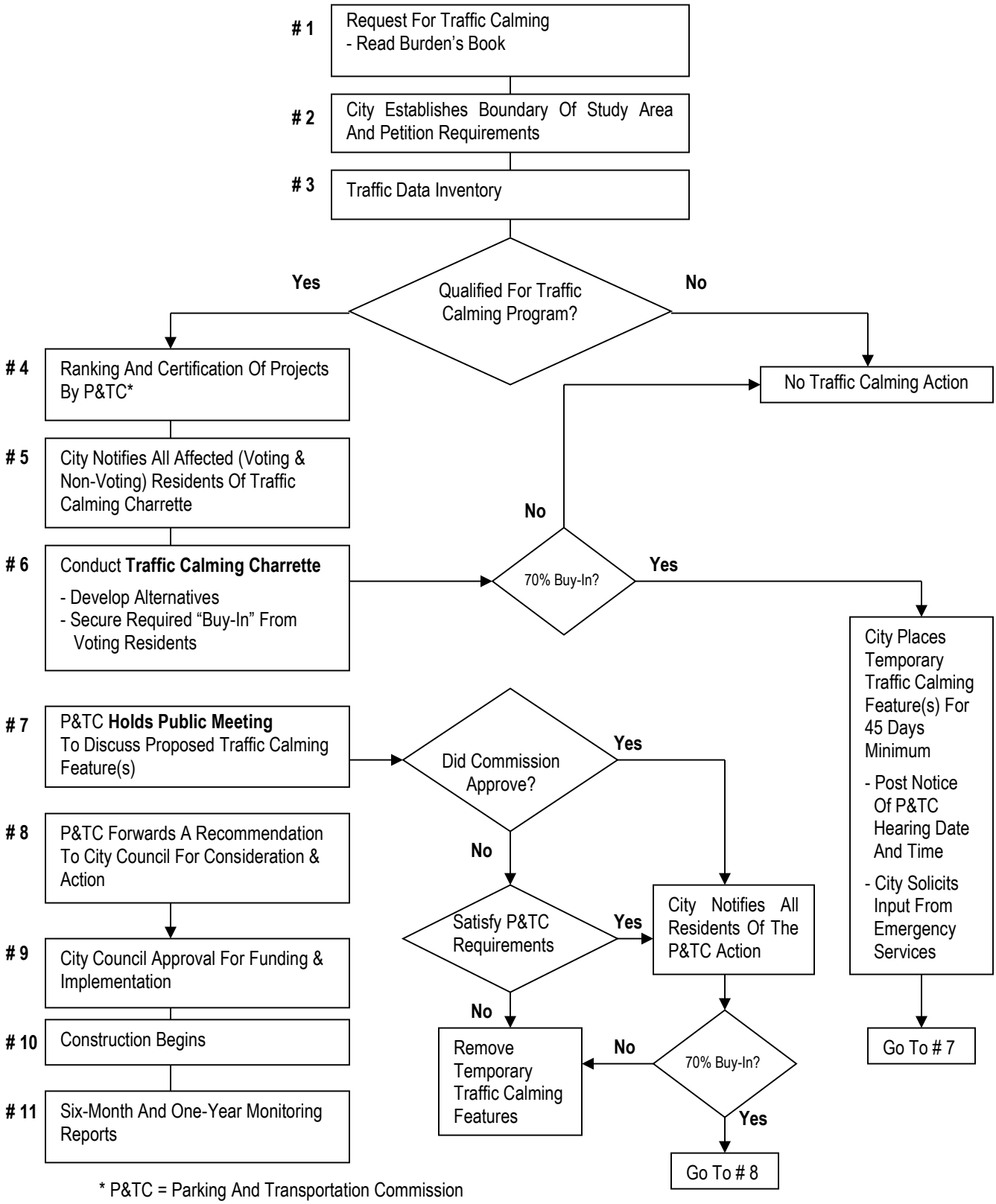
If before 5-years from the completion date of the project, should the residents elect to have permanently installed devices removed, the City will consider removal of any or all of the devices upon receipt of petition representing 70% of the residents within the area boundaries originally requesting the installation of the devices. Residents/property owners shall be responsible for all removal costs.

(Revised: 04-07-05)

APPENDIX

A. Traffic Calming Operation Flow Sequence
B. Traffic Calming Petition Form
C. Traffic Calming Option Levels
D. Traffic Calming Efforts in Whittier (since 1994)
E. References
F. Dan Burden, *Streets and Sidewalks, People and Cars – The Citizens' Guide To Traffic Calming*, Local Government Commission

APPENDIX A: Traffic Calming Operations Flow Sequence



* P&TC = Parking And Transportation Commission

APPENDIX B: Traffic Calming Petition

Street_____ between _____ and _____

BEFORE YOU SIGN THIS PETITION, KNOW WHAT YOU ARE SIGNING. CHANGES MADE TO YOUR NEIGHBORHOOD COULD RESULT IN OTHER NEGATIVE IMPACTS. IT IS RECOMMENDED THAT YOU FIRST READ THE "***STREETS AND SIDEWALKS, PEOPLE AND CARS – THE CITIZENS' GUIDE TO TRAFFIC CALMING***" BY DAN BURDEN.

We, the undersigned residents of the area as described above petition the City of Whittier to:

_____

_____

All persons signing this petition do hereby certify that their residences on or near the above described streets are impacted by the proposed traffic flow alteration. **Seventy (70) percent** of the affected households shall sign this petition in order to initiate a preliminary review of the neighborhood.

	Signature	PRINT Name	PRINT Street Address	Telephone No.
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APPENDIX C: Traffic Calming Option Levels

Level	*Calming Option*	*Speed Reduction*	*Volume Reduction*	*Noise Pollution*	*Loss of Street Parking*	*Access Restriction*	*Bus Route and Emergency Response Impacts*	*Increase Street Maint. Cost*	*Estimated Implementation Cost**
1	Posting Traffic Signs	Possible	No	No Change	No	No	No	No	Low
1	Deploy Radar Trailer	Yes	No	No Change	No	No	No	No	Low
1	Police Enforcement	Yes	No	No Change	No	No	No	No	Low
1	Police Presence	Yes	No	No Change	No	No	No	No	Low
2	Striping Edgeline (Narrower Lanes)	Slightly	No	No Change	No	No	No	Yes	Medium
2	Construction of Bulb-outs/ Chokers, Chicanes	Yes	Possible	Possible	Yes	No	Yes	Yes	Medium
2	Construction of Speed Humps, Islands, Mini-Circles	Yes	Possible	Possible	Maybe	No	Yes	Yes	Medium

*Low Cost: Below $5,000
Medium Cost: $5,000 - $50,000
High Cost: Over $50,000

APPENDIX C: Traffic Calming Option Levels

Level	*Calming Option*	*Speed Reduction*	*Volume Reduction*	*Noise Pollution*	*Loss of Street Parking*	*Access Restriction*	*Bus Route and Emergency Response Impacts*	*Increase Street Maint. Cost*	*Estimated Implementation Cost*
2	Median Barrier (Landscaping Median)	Possible	Yes	Possible	No	Yes (Right Turn Only)	Yes	Yes	Medium
2	Intersection Channelization	Yes	Possible	No	Yes	No	No	Yes	Medium
2	One Way Street	No	Yes	Possible	No	Yes	Yes	No	Medium
2	Diverter (forced turns)	No	Yes	Possible	No	Yes	Yes	No	Medium
3	Full Street Closure	Yes	Yes	No	No	Yes	Yes	No	High
3	Full Traffic Circle	Yes	Possible	No Change	Yes	No	Yes	Yes	High
3	Traffic Signal Installation	Yes	No	Yes	No	No	No	Yes	High

*Low Cost: Below $5,000
Medium Cost: $5,000 - $50,000
High Cost: Over $50,000

APPENDIX D: Traffic Calming Efforts in Whittier (since 1994)

Street (Limit)	Technique(s)	Year Installed	Monitoring Results
Beverly Boulevard Curve (West of Citrus Ave.)	1. Installed center median and guard rail along curve	1994	• Reduced traffic speed around curve by 3 MPH. • Reduced head-on collisions by 100% around curve (3 prior, 0 after).
Mar Vista Street (Colima Rd. to College Ave.)	1. Modified Signal Timings 2. Constructed Chicanes 3. Constructed Median Landscaping Islands 4. Restriped Lane width 5. Installed 32 MPH Educational Signs 6. Implemented Right Turn Metering 7. Created Left Turn Pockets	1995-98	• Increased gap time by 60 seconds and reduced side street delays for residents due to gaps in traffic. • Reduced traffic speed by 1 to 7 MPH along entire length of street. • Reduced traffic volume by 1,100 vehicles per day during regulated right turns in morning peak hours of 6:00 to 9:00 A.M. • Enhanced safety by creating left turn pockets that reduced potential for rear-end collisions. • Accidents reduced by 41% over three-year period.
Ocean View Avenue (North of Second St.)	1. Constructed one Speed Hump	1997	• 5 MPH reduction of traffic speed in immediate vicinity of hump.
Palm Avenue (Hunter Ave. to Broadway)	1. Installed Stop Signs 2. Constructed Speed Humps	1996-98	• Reduced traffic speed by 3 to 4 MPH. • 80% reduction of accidents (5 prior, 1 after) 1-year after installation.
First Avenue (Leffingwell Rd. to Whittier Blvd.)	1. Installed 2-way left turn lane 2. Installed bike lane 3. Reduced the number of travel lane	1998	• Reduced traffic speed by 2 MPH after 6-months. • 100% reduction of reported traffic collisions during 6-mouths following installation.
Santa Gertrudes Avenue (South) (Whittier Blvd. to Lambert Road)	1. Installed bike lanes 2. Installed 2-way left turn lane between Whittier & La Forge.	1998	• No change in traffic speed. • Enhanced safety for bicyclist. • 31% reduction in left turn collisions (13 prior, 9 after).
Norwalk Blvd. (Whittier Blvd. to Beverly Blvd.)	1. Installed 2-way left turn lane 2. Prohibited on street parking	1998	• 72 % reduction in accidents (22 prior, 6 after) during the 6-months after installation.
Russell Street (Whittier Blvd. To Valley Home Ave.)	1. Installed 2-way left turn lane 2. Installed bike lane 3. Reduced the number of travel lane	1999	• Reduced traffic speed by 1 to 3 MPH. • Enhanced left turn access for residents. • Enhanced sight visibility at intersections.
Orange Grove Avenue (Norwalk Blvd. To Pioneer Blvd.)	1. Constructed Speed Humps 2. Constructed Median Islands	1999	• 5 MPH reduction in traffic speed. • Eliminated wrong side driving at Pioneer Blvd. and Orange Grove Ave. due to problem of drivers making wide left turns.
Mar Vista Street (Villaverde Dr. to Cerquita Dr.	1. Installed 2-way left turn lane 2. Installed bike lanes	2000	• Reduced traffic speed by 1 to 3 MPH. • 100% reduction in accidents (1 prior, 0 after) 6-months after installation.
Santa Gertrudes Avenue (North) (Whittier Blvd. to Janine Dr.)	1. Installed bike lanes 2. Installed 2-way left turn lane	2000	• Enhanced safety for bicyclist. • 100% reduction of mid-block left turn collisions (1 prior, 0 after).

APPENDIX D: Traffic Calming Efforts in Whittier (since 1994)

Street (Limit)	Technique(s)	Year Installed	Monitoring Results
Mills Avenue (Whittier Blvd. To Lambert Rd.)	1. Installed 2-way left turn lane 2. Installed bike lane 3. Reduced the number of travel lane 4. Established 3-ton load limit	2000	• Reduced traffic speed by 1 to 3 MPH. • 67% reduction in accidents (3 prior, 1 after) 6-months after installation. • 52% reduction of truck (335 prior, 161 after) traffic per day.
Scott Avenue (Whittier Blvd. To Lambert Rd.)	1. Installed edge lines	2000	• Inconclusive reduction in traffic speed 6-months after installation.
La Serna Drive (Janine Dr. to Youngwood Dr.)	1. Installed edge lines	2000	• Inconclusive reduction in traffic speed 6-months after installation.
Greenleaf Avenue (Hadley St. to Beverly Blvd.	1. Installed bike lanes 2. Installed 2-way left turn lane	2002	• Reduced traffic speed by 1 to 4 MPH. • 33% reduction in collisions (3 prior, 2 after) 1-year after installation.
Broadway (Western Ave. to Greenleaf Ave.)	1. Installed bike lanes	2001	• Reduced traffic speed by 2 to 8 MPH. • 100% reduction in accidents (6 prior, 0 after) 6-months after installation.
Philadelphia Street Lindley Ave. to Pickering Ave.	1. Reduced the number of travel lanes 2. Installed angle parking stalls	2001	• Reduced traffic speed by 3 to 5 MPH. • 25 additional on street parking spaces created.
Santa Fe Street Santa Gertrudes Ave. to First Ave.	1. Installed edge lines 2. Installed stop signs	2001	• Reduced traffic speed in vicinity of stop signs, with 1 to 2 MPH reduction in speed between stop signs. • No change in traffic volume.
Leffingwell Road (Lambert Road to Valley Home Ave.	1. Installed bike lanes	2003	• Enhanced safety for bicyclist. • 2 to 4 MPH reduction in the speed of traffic.
Hadley Street (Comstock Ave. to Painter Ave.)	1. Installed 2-way left turn lane 2. Installed bike lanes 3. Reduced the number of travel lanes 4. Installed median island	2004	• Reduced traffic speed by 1 to 6 MPH • Enhanced intersection visibility. • Enhanced bicycle safety. • Enhanced left turn access for residents.
Colima Road Lambert Road to North City Limits	1. Installed bike lanes	2004	• Reduced occurrences of drivers gutter running. • Enhanced safety for bicyclist. • Pending analysis of 1-year update speed surveys.
Beverly Drive (Davison Dr. to Citrus Ave.)	1. Installed mini-roundabouts 2. Medians and curb extensions	2005	• Pending 6-month evaluation.
Magnolia Avenue (Beverly Blvd. to Beverly Dr.)	1. Installed mini-roundabouts 2. Medians and curb extensions	2005	• Pending 6-month evaluation.
Youngwood Drive (Lindante Dr. to Seranata Dr.)	1. Installed mini-roundabouts 2. Medians and curb extensions	2005	• Pending 6-month evaluation.

APPENDIX E: REFERENCES

1. Dan Burden, Streets and Sidewalks, People and Cars – The Citizens' guide to Traffic Calming. Local Government Commission, Center for Livable Communities.
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