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Brockton Avenue Restriping Public Works Department



April 11, 2013

RiversideCa.gov





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City Goals

- Improve quality of life
- Decrease rates of obesity, diabetes etc.
- Enhance traffic and pedestrian safety
- Reduce vehicle related emissions
- Encourage bicycling / alternate transportation

Goals are achieved by implementing the City's General Plan and Bicycle Master Plan



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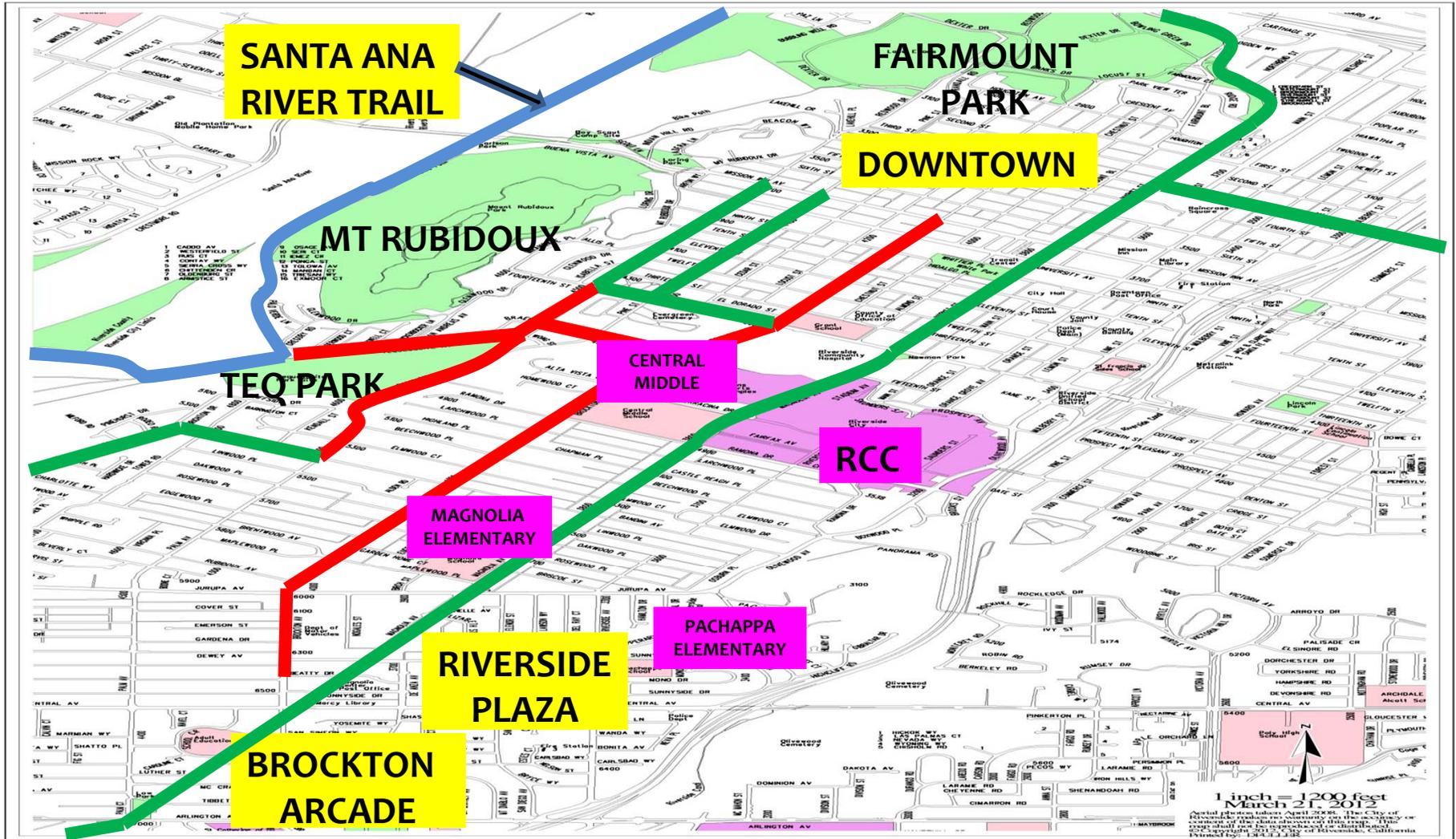
The Bicycle Master Plan

- Updated May 22, 2007
 - Expansion of bikeway network & connectivity
- Addendum approved March 27, 2012
 - Designated Class II lanes on Brockton
- Brockton bike lanes provide valuable connections
 - Local schools and parks
 - Downtown, Riverside Plaza, Magnolia Center
 - Existing bicycle trails (SART) and lanes



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Bike Lane Connections





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Proposed Concept - Striping

- Restripe Brockton from Mission Inn to Beatty:
 - Converts Brockton from 4-lanes to 3 lanes
 - 2 thru lanes and a new two way left-turn lane
 - Includes dedicated right-turn lanes at major intersections
 - Additional on-street parking





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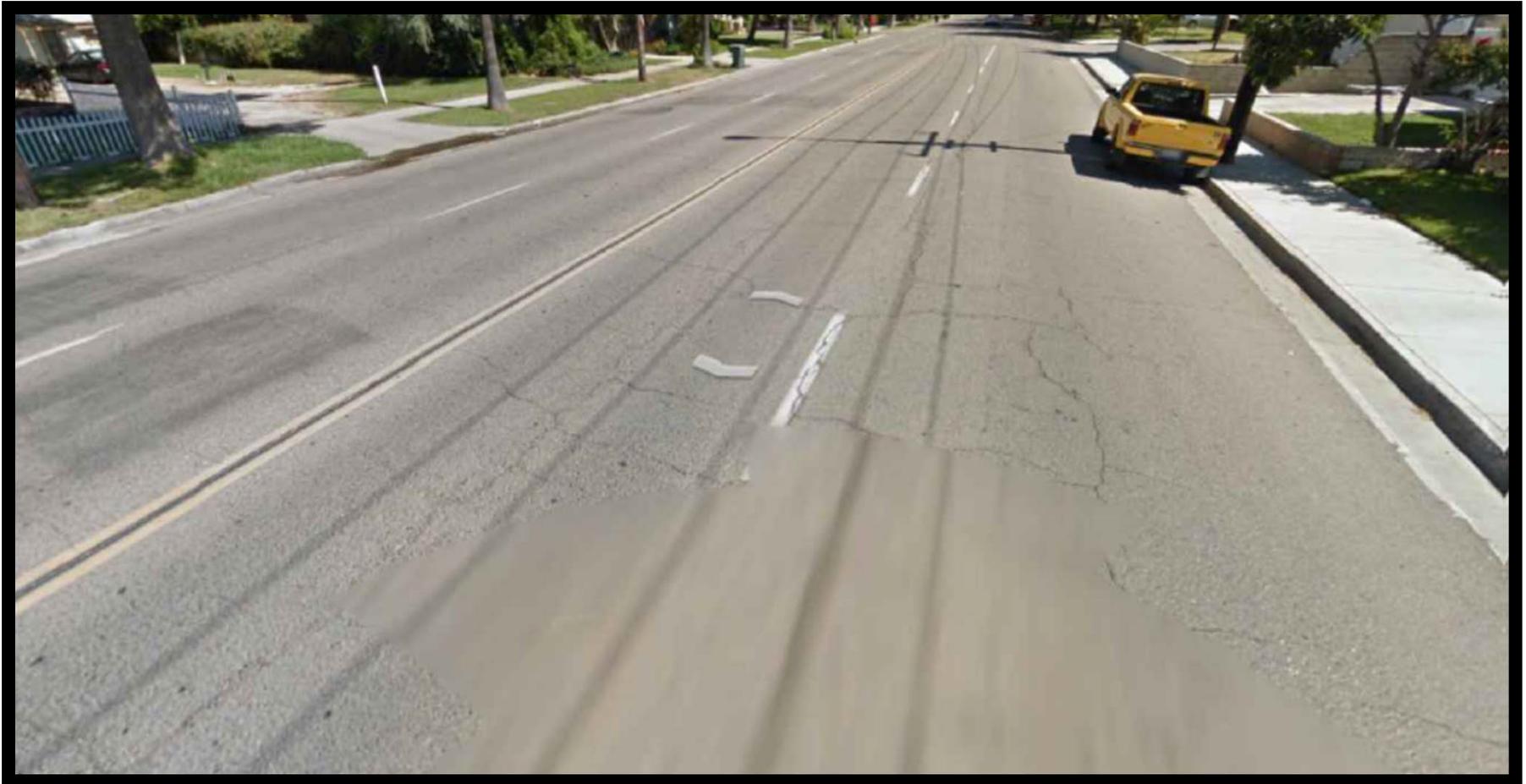
Additional Components

- Retime and synchronize signals
- Convert 4 signals to Protected/Permissive
- Install right-turn green arrows at select intersections
- Pavement repair and sealing



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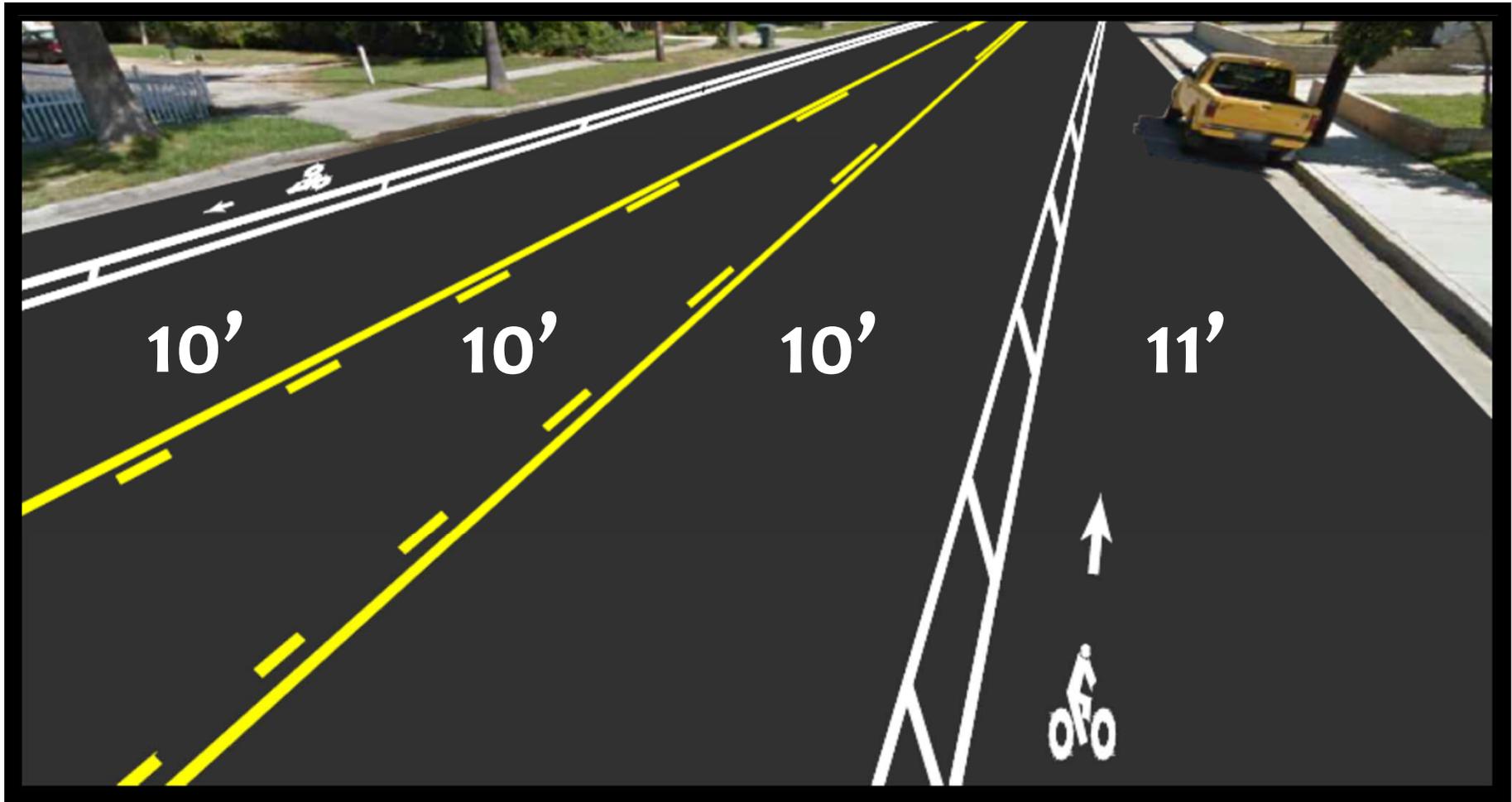
Road Configuration - Before





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Road Configuration - After





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Similar Roadways

WELLS AVENUE



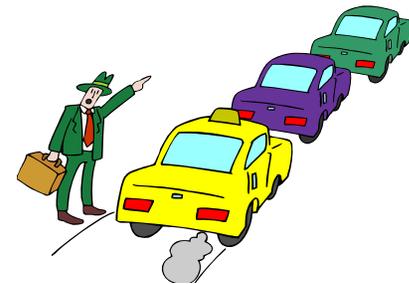
WATKINS DRIVE



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Brockton Traffic Volumes

- Feb. 2012 sampling of 24-Hr Volume Counts
- Highest volume (14,120) north of Terracina
- Lowest volume (11,501) north of Dewey
- Capacity with 3 lane configuration:
 - 18,000 to 20,000
 - (30 – 50% room for growth)





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Parallel Street Volumes (Capacity)

- Palm N/O Gardena - 7,100 (12,500)
- Palm S/O Tequesquite - 6,600 (12,500)
- Magnolia S/O Elizabeth - 23,000 (33,000)
- Magnolia S/O Terracina - 21,000 (33,000)



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Similar 2 & 3 Lane Streets

- Madison St -- 15,000
- Riverside Ave -- 16,000
- Canyon Crest Dr (UCR) -- 17,000
- Watkins Dr -- 11,000
- Third Street -- 13,000



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Benefits to Motorists

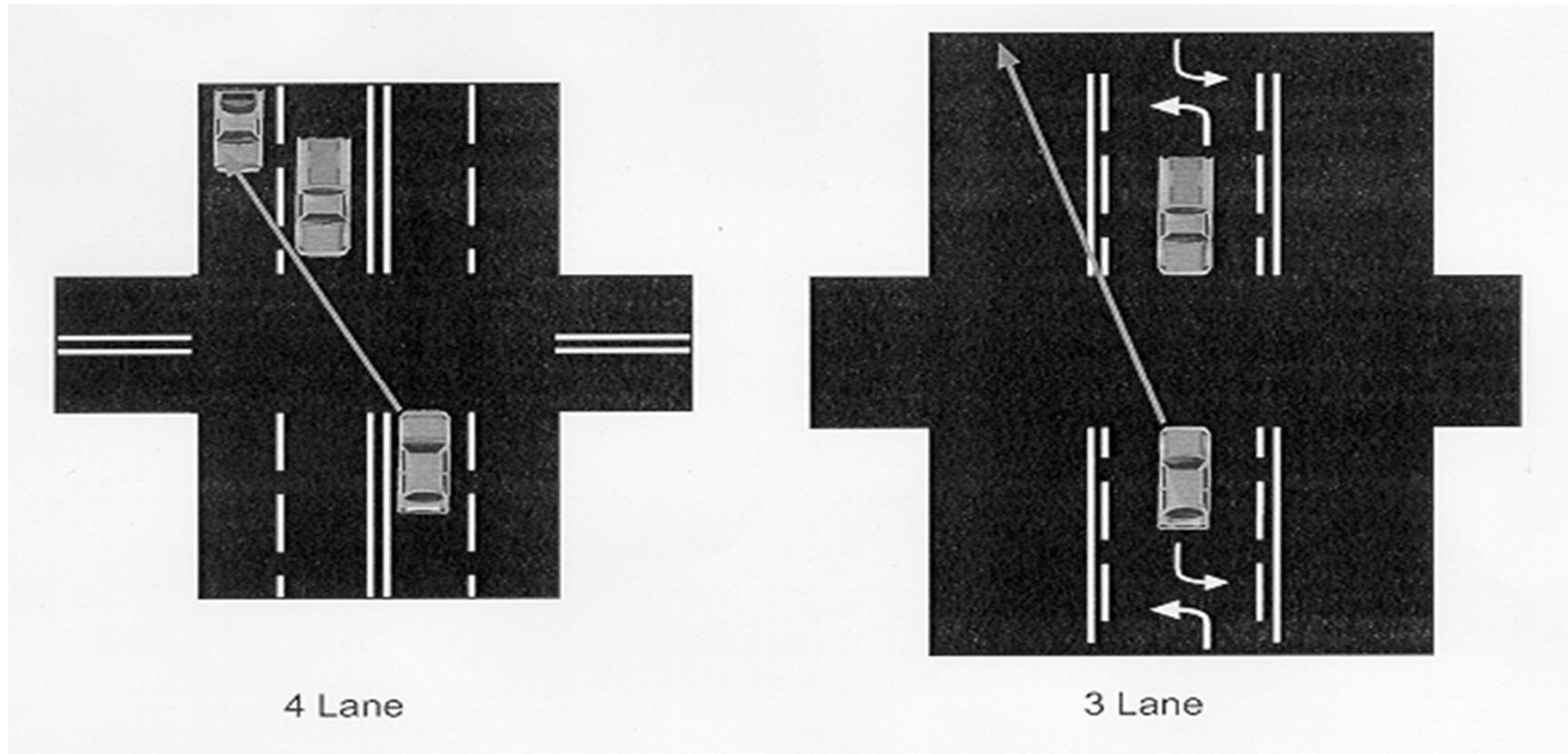


- Facilitates entry/exit from side streets & driveways
- Retains on-street parking
- Moves left turners out of path of thru traffic
 - safer & reduces delay
- Improves sight distance as all left turns are aligned



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Improved Sight Distance





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Additional Benefits to Motorists

- Optimize traffic flow:
 - 4 Signals converted to Protected / Permissive
 - University, 13th, Tequesquite, Bandini
 - 10 of 12 will allow permissive left turns
 - New left turn pockets at 4 Signals
 - 10th, Terracina, Ramona, Garden Home
 - Signals will be retimed and synchronized



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Estimated Accident Reduction

<u>Type</u>	<u>Total Past 10 Yrs</u>	<u>Reduced By</u>
➤ Rear End	87	58
➤ Side Swipe	45	31
➤ Broadside	142	17
➤ Head-on	31	1
➤ Pedestrian	13	13
➤ Bicyclist Involved	15	15
➤ Hit Object	22	0
➤ Overturned	2	0
➤ Other	5	1
➤ Not Stated	5	1
	<hr/> 367	<hr/> 137

➤ New striping should reduce total accidents by over 1/3



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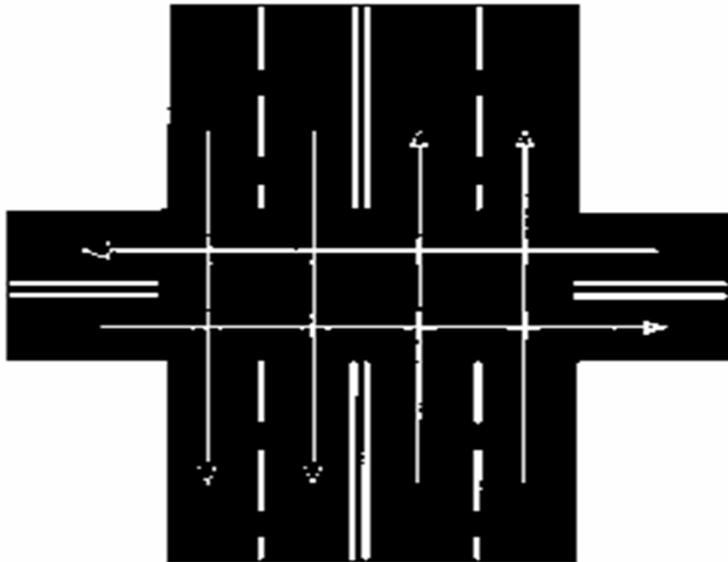
Significant Collision Statistics

- Based upon a review of most recent 10 year collision history the proposed project could:
 - Reduce pedestrian / bicyclist involved collisions by more than 90%
 - Diminish parked car involved collisions by over 85%
 - Reduce sideswipe collisions by over 68%
 - Cut rear-end collisions by almost 67%
 - Drop fatalities by 50%



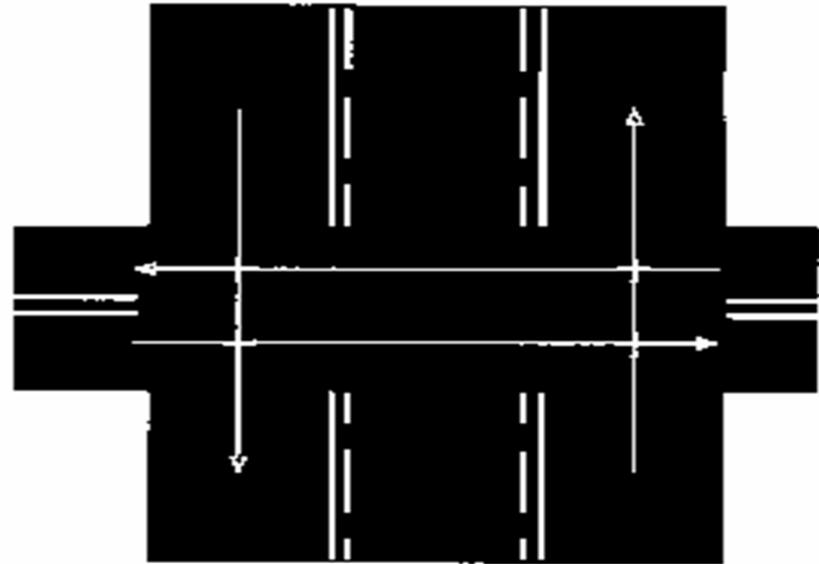
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Fewer Points of Conflict



4 Lane

○ Conflict Points



3 Lane



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Emergency Vehicles

- Emergency vehicles may utilize 2-way left turn lane for faster response time
- Motorists pulling over for emergency vehicles:
 - can pull adjacent to curb, or
 - can pull into bike lane

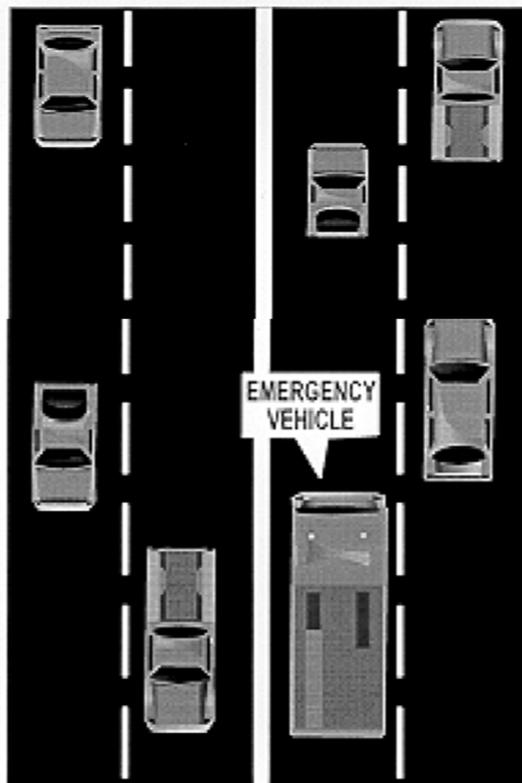




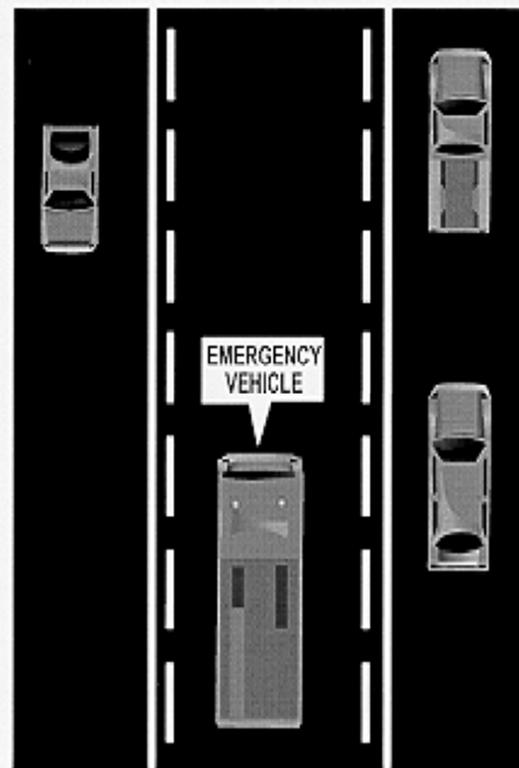
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Improved Emergency Access

Four - Lane Emergency Vehicle Access



Three - Lane Emergency Vehicle Access





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Benefits to Cyclists



- Separates cyclists from vehicular traffic
- Improves access to RCC, Central Middle & Magnolia Elementary Schools
- Provides connection to Santa Ana River Trail
- Connects to Downtown, the Plaza & Magnolia Ctr
- Serves as alternate route for cyclists currently using Magnolia Avenue
- Provides encouraging environment for new riders



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Benefits to Pedestrians



- Improves Safety:
 - Reduces # travel lanes pedestrians must cross
 - 2-Way left turn lane may provide refuge
 - Reduces multiple threat
 - More consistent vehicle speeds





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Safety Components

- Improves traffic safety by:
 - Providing dedicated Left-turn and Bike Lanes
 - Providing traffic calming/reduces top end speeds
 - Improving sight distance and safer entry/exit
 - Reducing conflict points
 - Separating bikes/parked cars from moving traffic
 - Improving Emergency access & response
 - Improving pedestrian safety



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Public Outreach

- April 17, 2012 – City Council approved grant application
- July 24, 2012-Charlie Gandy reports to Chamber EDC
- December 5, 2012 – Transportation Board received Consultant Report including Brockton Restriping
- January 17, 2013 –Land Use Committee received Consultant report including Brockton Restriping
- March 12, 2013 – City Council receives update
- March 20,2013 – Community meeting
- Second LUC meeting to be held on April 22



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Frequently Asked Question #1

Can we add sidewalks as well?

- Existing sidewalk on W/S & signalized crossings
- Requires right-of-way (costly)
- Removes landscaping in front yards
- Removes street trees
- Requires retaining walls for slopes



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Frequently Asked Question #2

How will hospital expansion and other major traffic generators be accommodated?

- Working with hospital on updating traffic study
- Generally do not generate traffic at peak times
- Projects will be phased in over several years
- As traffic changes will evaluate and adjust as needed



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Frequently Asked Question #3

Will delays at signalized intersections increase?

- Traffic signals will be timed so that traffic waiting will clear in one cycle



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Frequently Asked Question #4

How will one-lane handle traffic between Central and Jurupa?

- This segment has the lowest volume
- 2 lanes will be maintained SB south of Sunnyside
- Existing right-turn green arrow at Central
- New right-turn only lane NB at Jurupa



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Frequently Asked Question #5

Bike lanes exist on Magnolia, why add them to Brockton?

- Magnolia not as conducive to encourage new riders
- Magnolia lanes are narrower/gutter adjacent
- Parked cars
- Higher speeds & volumes



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Frequently Asked Question #6

Has HOV construction caused volumes in the area to increase?

- Historical traffic volumes before HOV and after are similar
- Magnolia s/o Jurupa – 23,182 (9/09) / 22,945 (3/13)
- Palm s/o Jurupa – 7,185 (1/10) / 7,105 (3/13)



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Frequently Asked Question #7

Will this help to reduce speeds along Brockton?

- More compliance with existing speed limit
- 1 lane - no passing allowed
- Enforcement
- Signal timing



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Questions / Comments

