

## Mitigation for Traffic

### H- Street

**Phase I:** construct as 2 lane class III west of Marina Pkwy

Traffic Signal at Gaylord Truck Driveway ●

From I-5 to Marina Pkwy 4 lane Major street

Widen to 3- lane class II collector west of Marina Pkwy

**Phase II:** widen between St A and I-5 ramps to 5 lane major street

Add exclusive left turn lane at each approach at intersection of H and Gaylord Drive

Traffic signal at H and A ●

**Phase IV:** I-5 ramps to Broadway widen to 6-lane Gateway Street

### Trolley Crossings H&E

**Phase I** H & E trolley crossing unmitigatable impact until someone makes trolley not on grade

### E

**Phase I:** 2-lane Class III in H-3

**Phase III:** from Gaylord Driveway to Bay Blvd. as 2-lane Class III

**Phase IV:** between F & Bay Blvd. to 4-lane class I collector  
Add eastbound through lane and eastbound right-turn lane at intersection with Bay Blvd.

### Marina Parkway

**Phase I:** New 3 lane, Class II between H and J ●

**Phase II:** traffic signal intersection with J ●

### A

**Phase I** from J north as 2 lane Class III

**Phase II** Prior to dev. Of H-23 2 lane Class III H to C  
Between C and J to 4-lane Class I Collector

Add exclusive southbound right turn lane

**Phase III:** extend south to B as 2-lane class III collector  
Widen between C and H to 4-lane Class I Collector

**Phase IV:** dual southbound left-turn lane

### C

**Phase 2** construct as 2 lane Class II collector

### Bay Blvd.

**Phase I:** widen between E and F from 2-lane class III collector to 2-lane Class II collector

Traffic Signal J & Bay Blvd. ●

Traffic Signal intersection I-5 southbound on ramp and Bay Blvd. ●

**Phase IV:** exclusive southbound right turn-lane at intersection with J

**J**

**Phase II:** Between Street A and I-5 ramps to 6 lane Major Street

Add exclusive westbound and exclusive south through lanes at intersection of J & Bay Blvd.

Traffic Signal at A & J ●

Add Exclusive right turn lane at A

Add Exclusive eastbound right turn lane at intersection with Bay Blvd.

Exclusive westbound right turn lane at I-5 northbound ramps

**B**

**Phase III**

Construct as 2-lane, Class III collector to bridge at Telegraph Canyon Creek

**F**

**Phase IV:** New F street extension to Nature Center Parking Lot as 2-lane Class III collector

**TABLE 2-5**  
**LOS CRITERIA FOR SIGNIFICANT IMPACTS**

<b>FACILITY</b>	<b>Measurement of Effectiveness (MOS)</b>	<b>Significance Threshold</b>
Intersection	Seconds of delay	LOS E or F and >5% of entering volume
Roadway Segment	ADT	Non Urban Core Circulation Element Roadways: LOS C or better → LOS D or worse at buildout or LOS D/E → LOS E/F at buildout, >5% of segment volume, and >800 ADT  Urban Core Circulation Element Roadways: LOS D or better → LOS E or F at buildout or LOS F, >5% of segment volume, and >800 ADT  If the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is considered not significant
Freeway Segment	ADT	LOS E or F and >5% of total forecasted ADT on respective freeway segment

Note: If an impact is identified and does not meet the direct impact significance threshold described in this table, the impact is considered a cumulative impact for the project.

Source: *Guidelines for Traffic Impact Studies in the City of Chula Vista*, February 13, 2001 and City of Chula Vista Adopted General Plan.



**TABLE 2-3  
ROADWAY SEGMENT CAPACITY AND LEVEL OF SERVICE**

FACILITY		ACCEPTABLE LOS	LEVEL OF SERVICE (LOS)				
CLASS (a)	LANES		A	B	C	D	E
CIRCULATION ELEMENT ROADWAYS							
Expressway	7/8	C	52,500	61,300	70,000	78,800	87,500
Prime	6	C	37,500	43,800	50,000	56,300	62,500
Major Street	6	C	30,000	35,000	40,000	45,000	50,000
	5	C	26,250	30,650	35,000	39,400	43,750
	4	C	22,500	26,300	30,000	33,800	37,500
Class I Collector	4	C	16,500	19,300	22,000	24,800	27,500
Class II Collector	2	C	9,000	10,500	12,000	13,500	15,000
Class III Collector	2	C	5,600	6,600	7,500	8,400	9,400
URBAN CORE CIRCULATION ELEMENT ROADWAYS							
Gateway Street	6	D	40,800	47,600	54,400	61,200	68,000
	4	D	28,800	33,600	38,400	43,200	48,000
Urban Arterial	4	D	25,200	29,400	33,600	37,800	42,000
Commercial Boulevard	4	D	22,500	26,250	30,000	33,750	37,500
Downtown Promenade	4	D	22,500	26,250	30,000	33,750	37,500
	2	D	9,600	11,200	12,800	14,400	16,000

Note:

Shaded cells correspond to the acceptable traffic volumes for each respective roadway.

(a) The adopted Circulation Element roadways are considered to be Class I Collector Streets and above, and the Urban Core Circulation Element are considered to be 6-lane Gateway Streets and below.

**\*\*\*\*\*The way the road is classified determines what LOS is acceptable. Numbers show amount of traffic allowable for each LOS rating. As you go down table streets are supposed to be wider so they can handle more cars.\*\*\*\*\***

**TABLE 2-4**  
**LOS CRITERIA FOR FREEWAY SEGMENT ANALYSIS**

LOS	v/c Ratio	Congestion/Delay	Traffic Description
A	$\leq 0.41$	None	Free flow
B	$> 0.41$ and $< 0.62$	None	Free to stable flow, light to moderate volumes
C	$> 0.62$ and $< 0.80$	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted
D	$> 0.80$ and $< 0.92$	Minimal to substantial	Approaches unstable flow, heavy volumes, and very limited freedom to maneuver
E	$> 0.92$ and $< 1.00$	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor
F <sub>0</sub>	$> 1.00$ and $< 1.25$	Considerable 0 - 1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go
F <sub>1</sub>	$> 1.25$ and $< 1.35$	Severe 1 - 2 hour delay	Very heavy congestion, very long queues
F <sub>2</sub>	$> 1.35$ and $< 1.45$	Very severe 2-3 hour delay	Extremely heavy congestion, very long queues
F <sub>3</sub>	$> 1.45$	Extremely severe 3+ hours of delay	Gridlock
Notes: Based on the 1992 Caltrans guidelines.			

### **Significance Determination**

The significance criteria to evaluate the project impacts to intersections are based on the City of Chula Vista's *Guidelines for Traffic Impact Studies in the City of Chula Vista*, February 13, 2001 and on the City of Chula Vista's adopted General Plan. At intersections, the measurement of effectiveness (MOE) is based on allowable increases in delay. At roadway segments and freeway segments, the MOE is based on allowable increases in the ADT.

#### **Signalized Intersections**

Within the City of Chula Vista, the goal is to achieve LOS D or better at all signalized and unsignalized intersections. A project specific impact would occur if (i) the operations at intersections are at LOS E or F and (ii) the project trips comprise five percent or more of the entering volume. Entering volumes are the total approach volumes entering an intersection. A cumulative impact would occur if only criteria (i) above is met..

#### **Roadway Segments**

For non-Urban Core Circulation Element roadways (Expressway, Prime Arterial, Major Street, Class I and II Collector), a roadway segment that currently operates at LOS C or better and with the proposed changes would operate at LOS D or worse at General Plan buildout is considered a significant impact. In addition, a

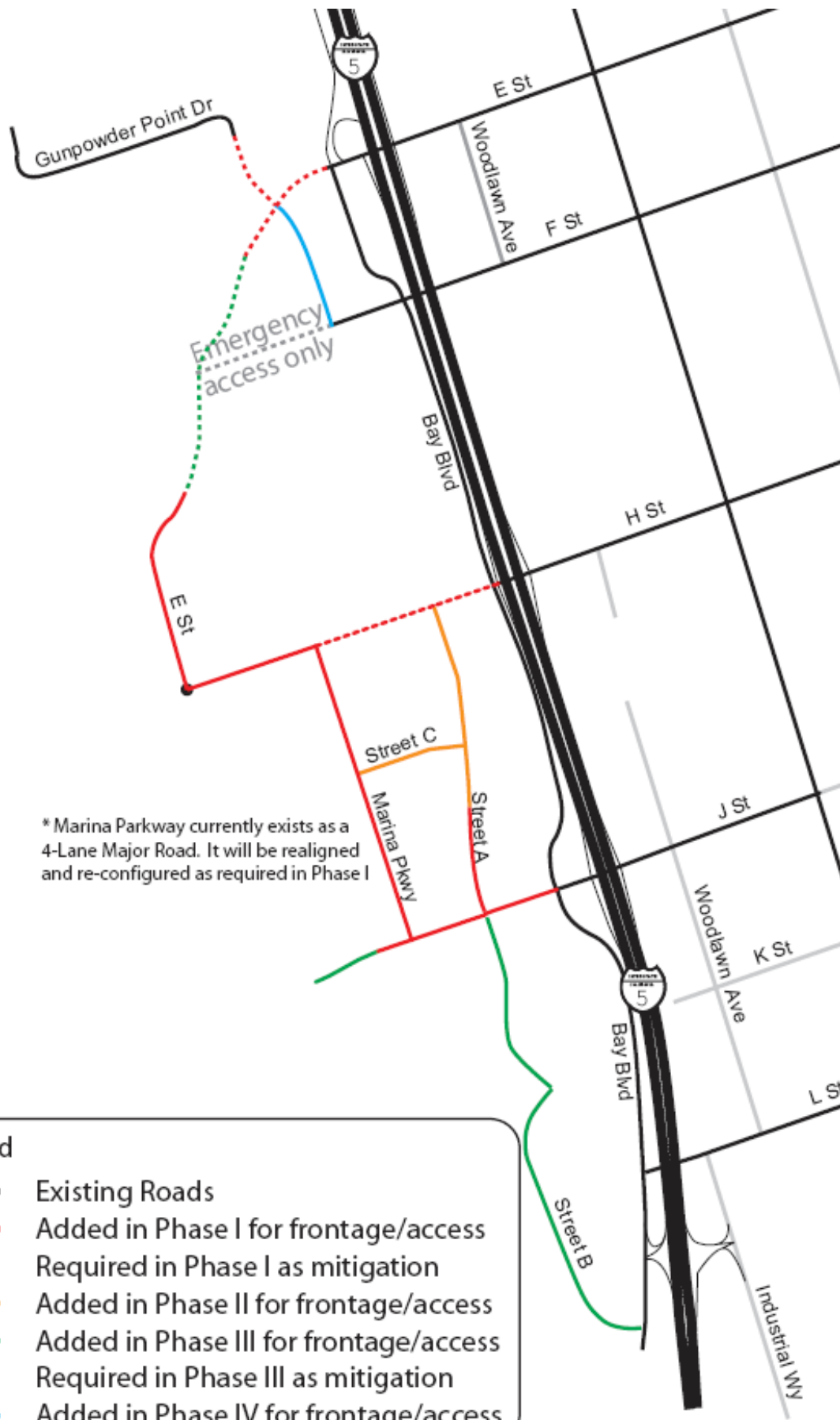
roadway segment that currently operates at LOS D or E would operate at LOS E or F at General Plan buildout, respectively, or which operates at LOS D, E, or F and would worsen by five percent or more a General Plan buildout is considered a significant impact.

For Urban Core Circulation Element roadways (Gateway Street, Urban Arterial, Commercial Boulevard Downtown Promenade), a roadway segment that currently operates at LOS D or better and with the proposed changes would operate at LOS E or F at General Plan buildout is considered a significant impact. In addition, a roadway segment that currently operates at LOS F and would worsen by five percent or more at General Plan buildout is considered a significant impact.

For all roadways, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is not considered significant since the intersection analysis is more indicative of actual roadway system operations than street segment analysis. If segment Level of Service is LOS F, impact is significant regardless of intersection LOS. For segments with trolley crossings, due to the added delay caused by the trolley, if the roadway segment operates at LOS D, E, or F for non-Urban Core Circulation Element roadways, or LOS E, or F for Urban Core Circulation Element roadways, the impact is considered significant. Table 2-5 shows the criteria for determining levels of significance at intersections and roadway segments.

<p align="center"><b>TABLE 2-5</b> <b>LOS CRITERIA FOR SIGNIFICANT IMPACTS</b></p>		
Facility	Measurement of Effectiveness (MOE)	Significance Threshold
Intersection	Seconds of delay	LOS E or F and >5% of entering volume
Roadway Segment	ADT	<p>Non Urban Core Circulation Element Roadways: LOS C or better → LOS D or worse at buildout or LOS D/E → LOS E/F at buildout, &gt;5% of segment volume, and &gt;800 ADT</p> <p>Urban Core Circulation Element Roadways: LOS D or better → LOS E or F at buildout or LOS F, &gt;5% of segment volume, and &gt;800 ADT</p> <p>If the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is considered not significant</p>
Freeway Segment	ADT	LOS E or F and >5% of total forecasted ADT on respective freeway segment
<p>Note: If an impact is identified and does not meet the direct impact significance threshold described in this table, the impact is considered a cumulative impact for the project.</p> <p>Source: <i>Guidelines for Traffic Impact Studies in the City of Chula Vista</i>, February 13, 2001 and City of Chula Vista Adopted General Plan.</p>		





### Legend

- Existing Roads
- Added in Phase I for frontage/access
- ... Required in Phase I as mitigation
- Added in Phase II for frontage/access
- Added in Phase III for frontage/access
- ... Required in Phase III as mitigation
- Added in Phase IV for frontage/access