

# Preliminary Off-Campus Traffic Analysis

UNIVERSITY OF CALIFORNIA  
SANTA CRUZ  
LRDP #11, October 19, 2004

Cooper, Robertson & Partners  
EDAW  
Arup  
Kimley-Horn & Associates

## Overview

- First step towards LRDP EIR traffic analysis
- Addresses off-campus traffic impacts at key intersections
- Further details and other modes/issues analyzed in EIR
- Preliminary findings – assists in refining assumptions and analysis

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Overview of Traffic Study

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# Methodology

- Existing conditions from Fall 2003/Spring 2004 traffic counts
- AMBAG model used to develop 2020 projections
- Model validated to within (+-) 10% on key roads in Santa Cruz
- Growth in campus added onto 2020 baseline traffic projections
- Analysis includes Home Depot and Coast Hotel

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## Traffic Study Methodology

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# Campus Trip Generation

- Based on per capita rate from counts/current population
- Adjusted to reflect 50% on-campus undergrad housing
- Fall 2003, 40% undergrad on-campus housing

Estimated Campus Trip Generation

	Persons	AM Peak	PM Peak	Daily
		Hour	Hour	
Students:	21,000	1,579	2,172	26,846
Faculty/Staff:	5,158	413	567	7,015
Total Trips in 2020	26,158	1,992	2,739	33,861
Existing Trips		1,452	2,040	24,830
Growth (2003/04 to 2020)		540	699	9,031

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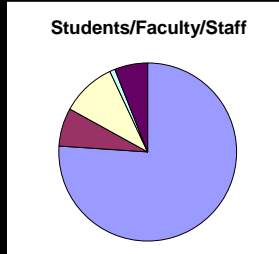
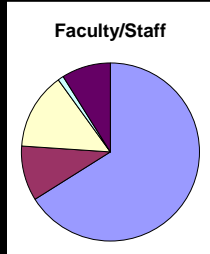
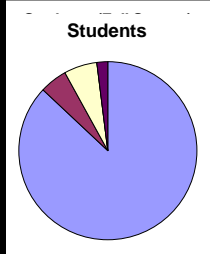
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## Measuring Traffic Impacts

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# Countywide Trip Distribution

Fall 2003 Data

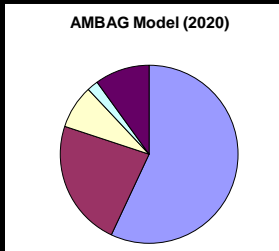


Fall data is of place of residence

AMBAG model charts reflect trip distribution

- Santa Cruz
- North Mountain
- Central County
- North Coast
- South County

2020 AMBAG Model



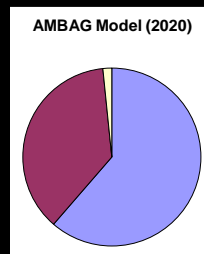
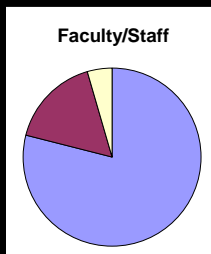
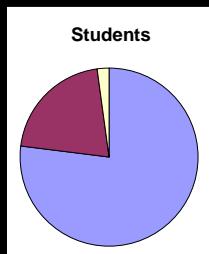
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Campus Trip Distribution

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# Santa Cruz Trip Distribution



Fall 2003 Data

2020 AMBAG Model









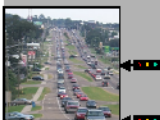







- West Santa Cruz
- East Santa Cruz
- North Santa Cruz

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Campus Trip Distribution

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# Level of Service

Level of Service	Automobile	Bicycle	Pedestrian	Bus
A/B				 >4 buses/hour
C/D				 2 to 4 buses/hour
E/F				 ≤ 1 bus/hour
				

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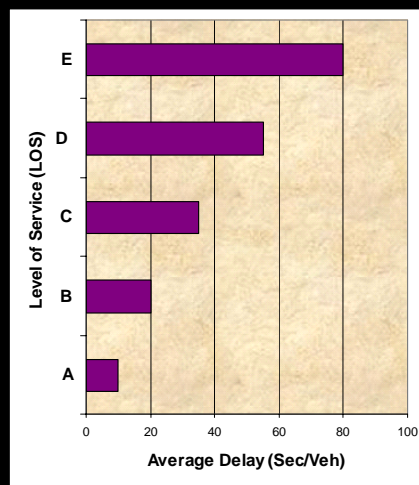
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# Level of Service

- Intersection level of service (LOS):
  - Based on the delay experienced by drivers
  - Peak hours of the day
  - Letter grades A-F



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# Significant Impacts

- City of Santa Cruz' significance criteria:
  - Needs to change LOS from acceptable to unacceptable
  - And...add more than 3% traffic
  - Or...require a traffic signal at a stop controlled intersection
  - And...add more than 3% traffic

Level of Service

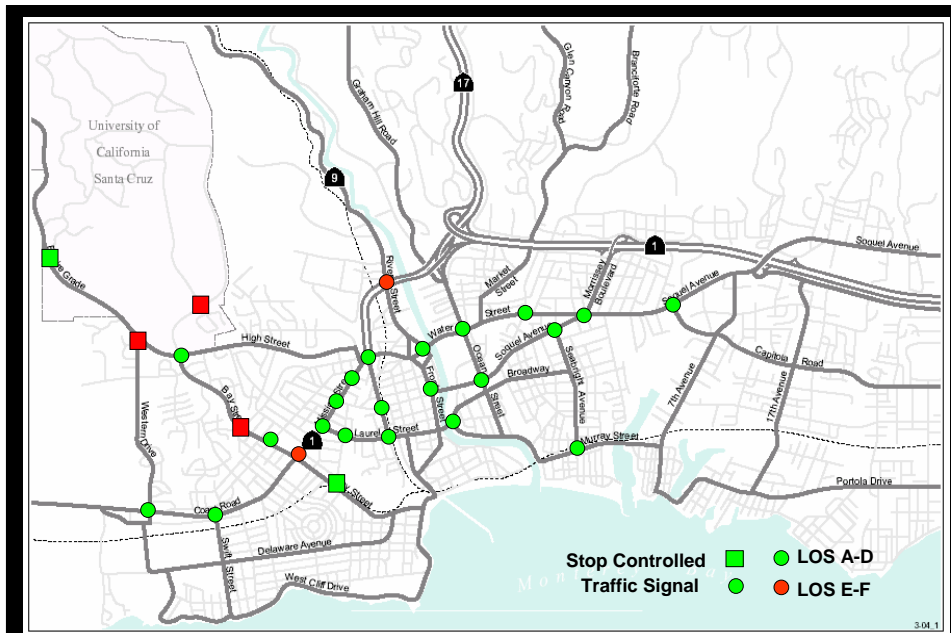
Without Project	With Project	Project Contribution to Intersection	
		Less Than 3%	More Than 3%
<b>Signalized Intersections</b>			
A-D	A-D	NO	NO
A-D	E-F	NO	YES
E-F	E-F	NO	YES
<b>Unsignalized Intersections</b>			
Meets Warrants for Signal		NO	YES

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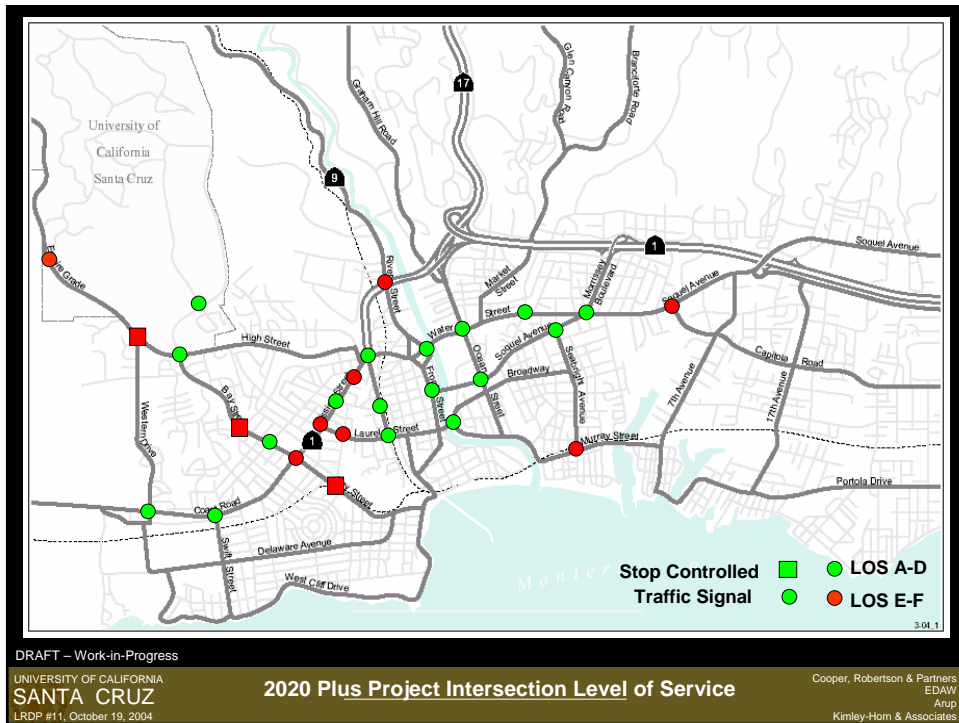
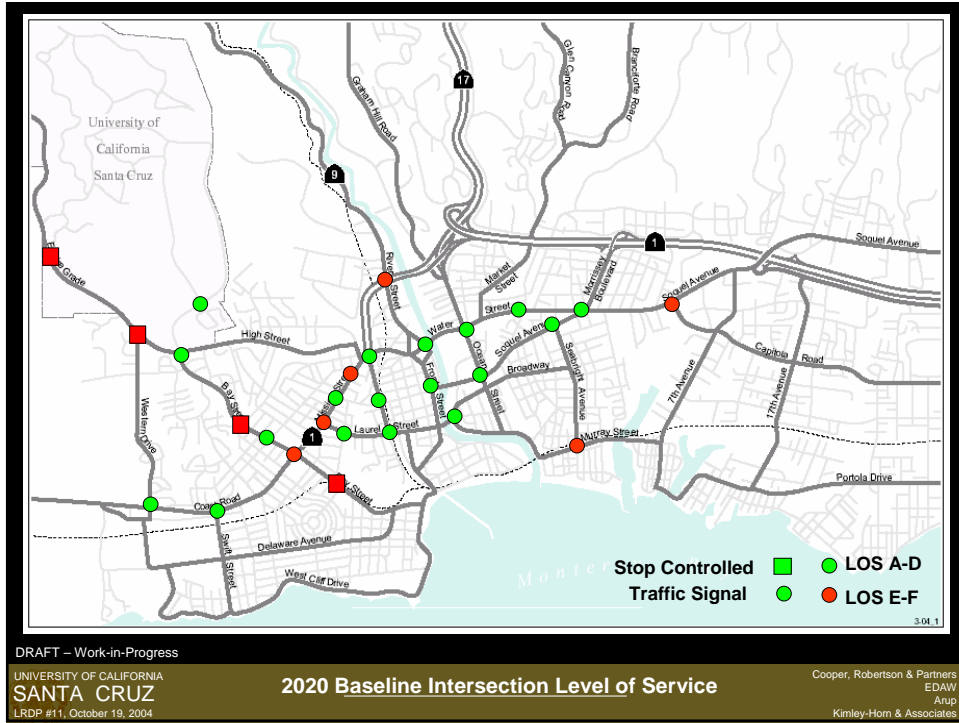


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## Existing Intersection Level of Service

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# Transit Improvement Measures

- Direct express Eastside to Campus bus service bypassing Downtown Transit Center
- Increase frequency and capacity of existing bus routes serving campus
- Transit pre-emption/queue jump lanes for transit on campus and selected off campus locations or major corridors
- Bus priority lanes on Bay Street
- Improve special event transit service

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Potential Improvement Measures

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# Engineering Measures

- Install traffic signals where warranted
- Widen Bay Street in two-lane segments to allow exclusive bus lane
- Eliminate left turns along Bay Street between Escalona and Mission (access management)
- Implement access management measures on Mission Street

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# Engineering Measures

- Implement traffic-adaptive signal systems and coordination on critical arterial streets
- Implement minor capacity and safety improvements at critical intersections

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