

RIFT Traffic Analysis

Santa Monica City Council

June 24, 2008

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Presentation Outline

- Introduction
- Trip Evaluation Methodology
- Land Use Scenarios
- Cut-Through Traffic
- LUCE Transportation Initiatives
- Trip Generation Estimates
- Other Implications
- Conclusions

Trip Evaluation Methodology

- Conducted trip generation analysis of potential land use scenarios for a baseline scenario, LUCE and RIFT.
- City divided into key districts and boulevards.
- Trips estimated for seven categories of land use: residential, retail, office, post-production, medical, hotel, and industrial.

Trip Estimation Methodology

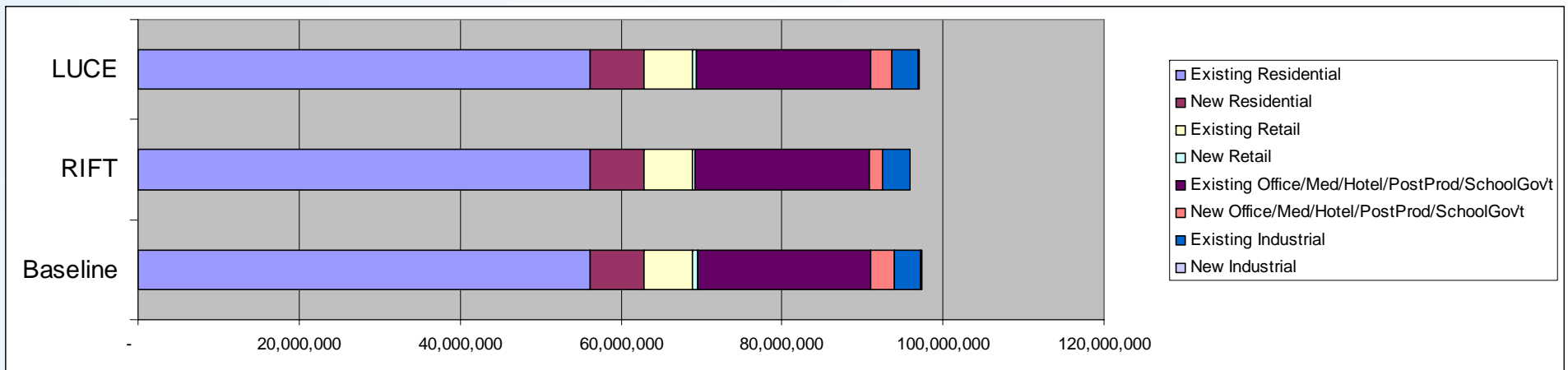
- Estimated person trips by mode using SCAG and Santa Monica data.
- Estimated PM peak hour vehicle trips.
- Adjustments made to reflect mixed-use internalization for districts and surrounding areas.
- TOD adjustment made to reflect fixed-rail transit (Expo line) for ½ mile area surrounding each of the three stations.
- Demand management adjustment made to reflect additional TDM measures (e.g., bike network, transit passes & shuttles, parking management, employer transportation management).

Future Scenarios

- Analyzed three 2023 future scenarios:
 - Baseline: Projects existing trends into future.
 - RIFT: Caps non-exempt, non-residential land uses at 75,000 square feet a year (~118,000 including exempt).
 - LUCE: Assumes same market conditions as other two, but implements the shifts in land use pattern and transportation investments as envisioned in draft LUCE. Assumes non-residential growth rate of ~195,000 square feet a year, on average.
 - Residential projected to increase by 15% (~7,100 units) under all scenarios.

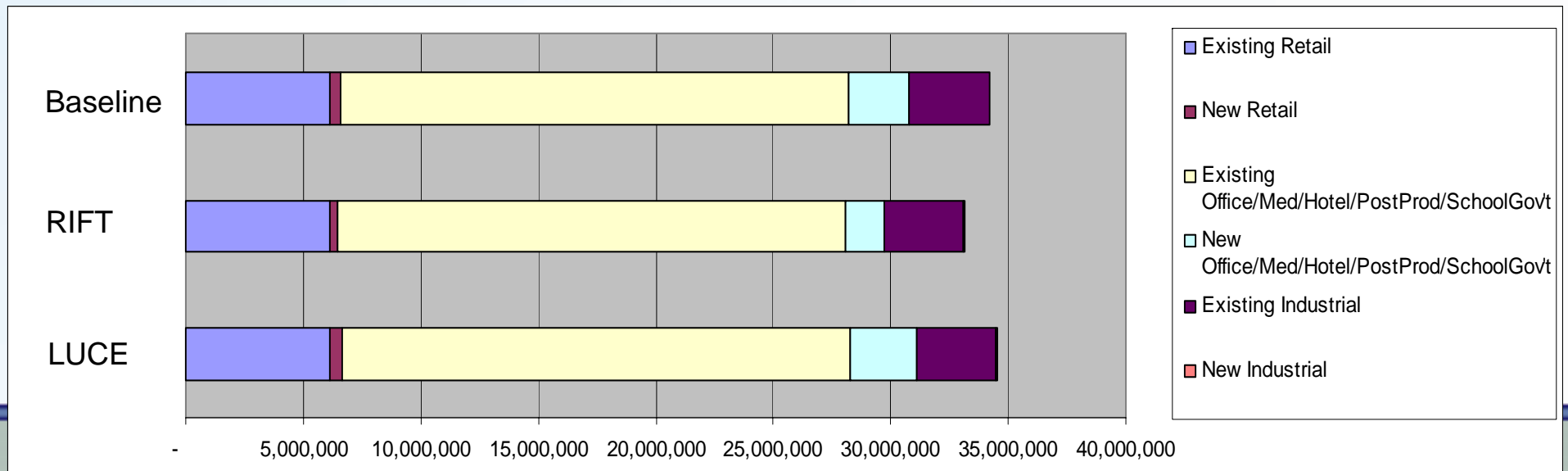
Comparing the Scenarios: Total Development

- Expected total growth by 2025:
 - Baseline: 12%
 - LUCE: 11%
 - RIFT: 10%
- LUCE adds 1% more total development than RIFT by 2025.



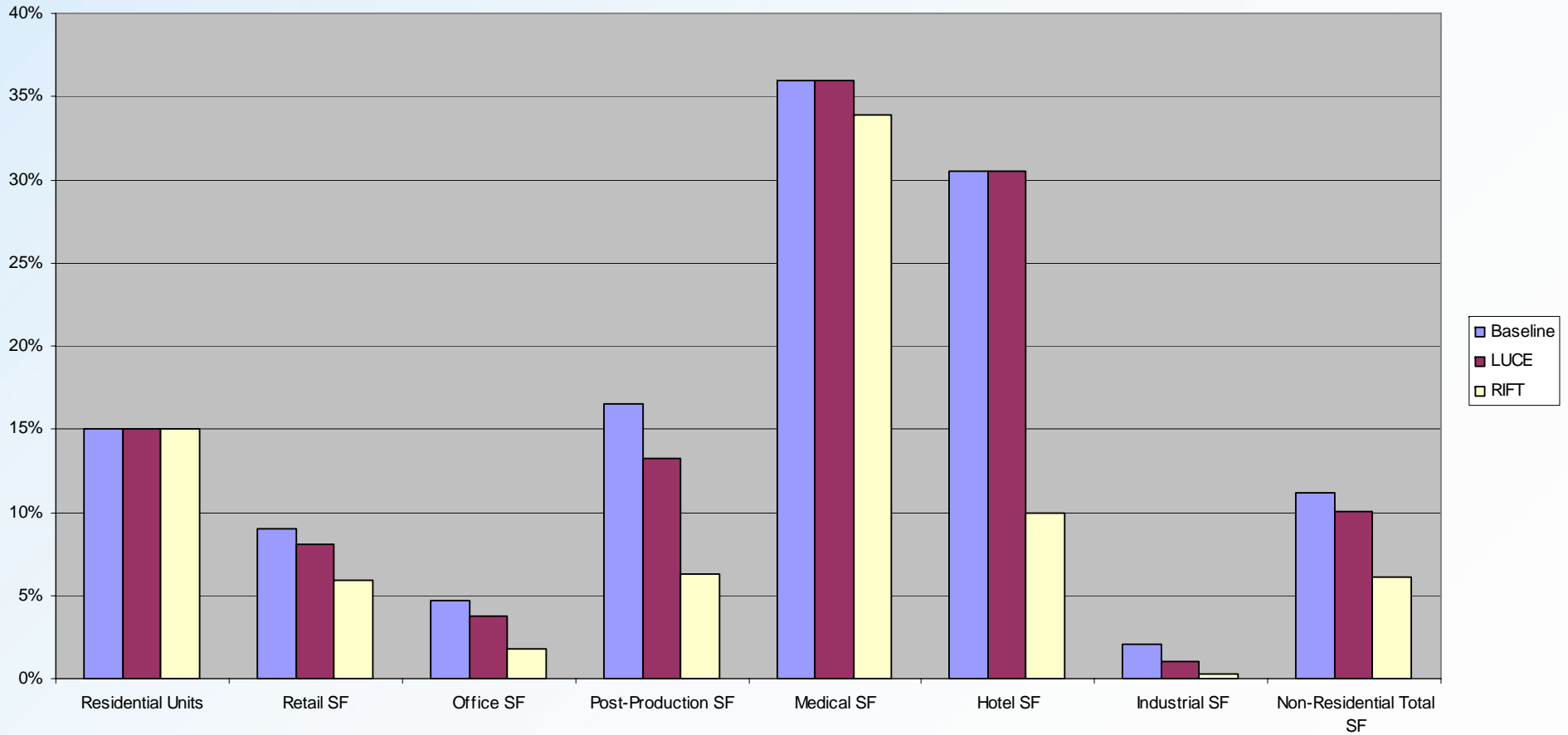
Comparing the Scenarios: Commercial Development

- Expected non-residential growth by 2023:
 - Baseline: +3,464,000 SF +11%
 - LUCE: +3,123,000 SF +10%
 - RIFT: +1,890,000 SF +6%
- LUCE adds 4% more total non-residential development than RIFT by 2023.

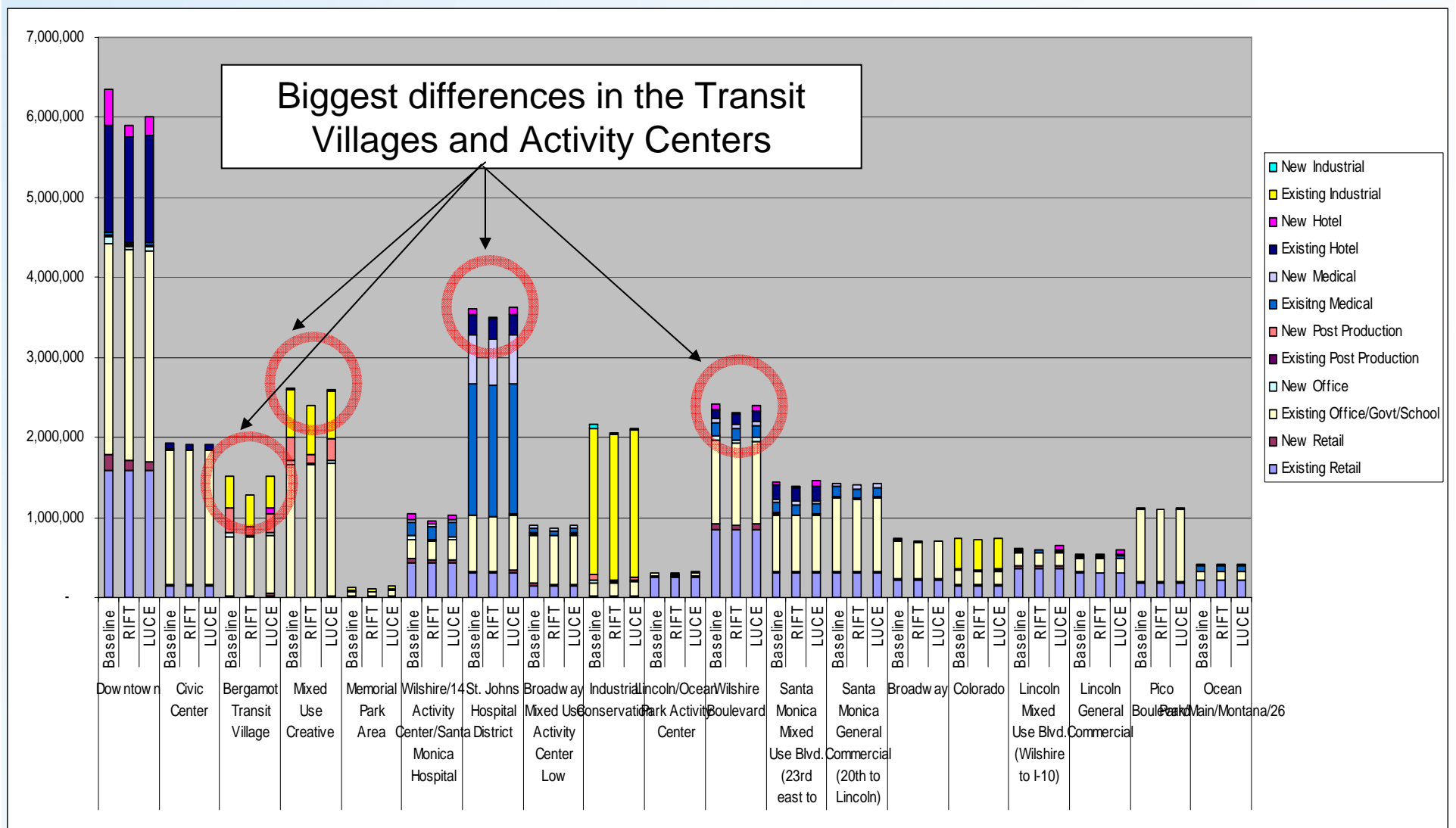


Comparing the Scenarios: Residential & Commercial

LAND USE PERCENT CHANGE BY CATEGORY
1984 PLAN, LUCE & RIFT

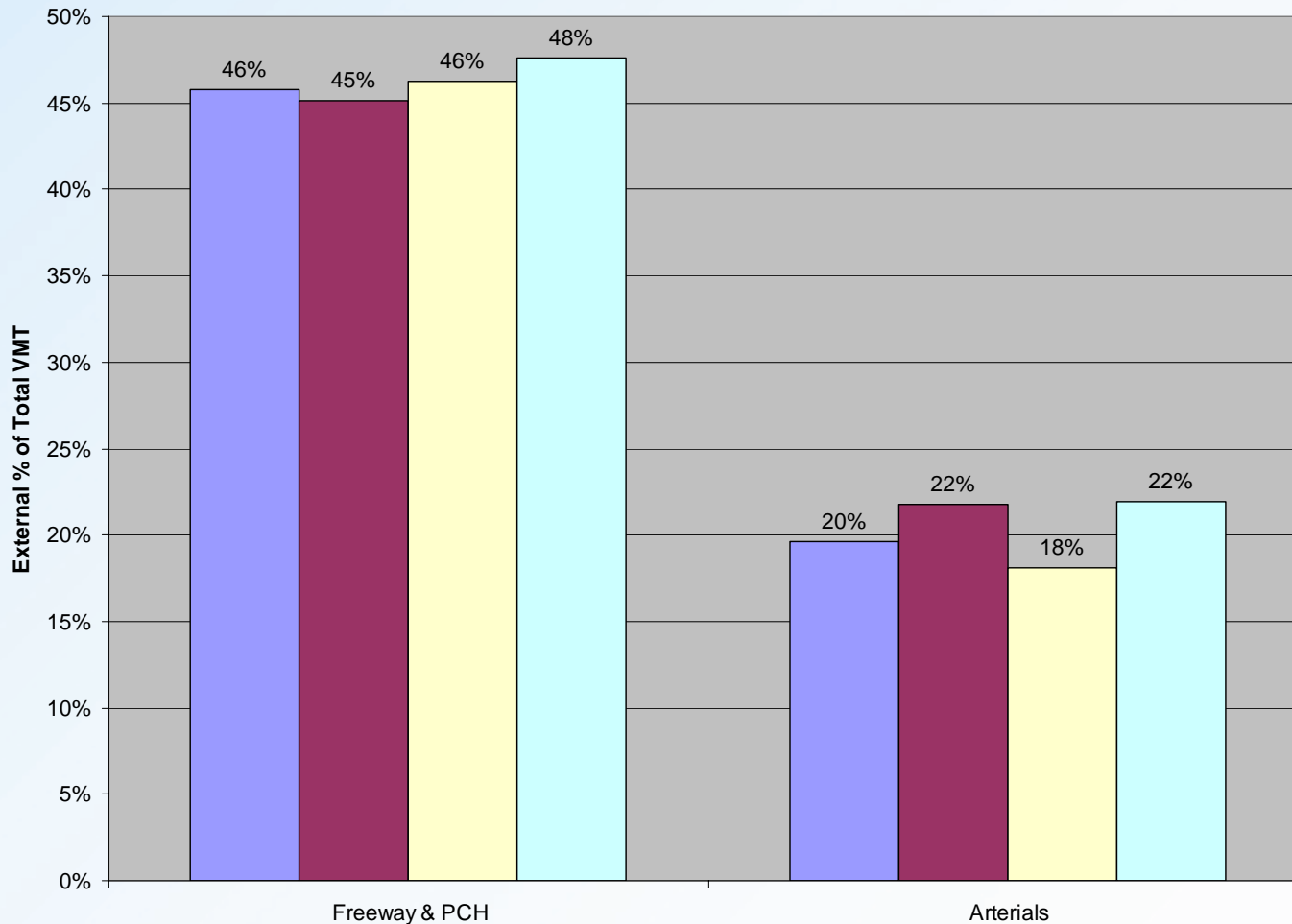


Comparing the Scenarios: Commercial by Type and Location



Cut-Through Traffic

EXTERNAL PERCENT OF VMT ON FREEWAYS AND ARTERIALS IN SANTA MONICA



PM Peak cut-through on I-10 and PCH 45% to 48%

PM Peak cut-through on arterials 22%

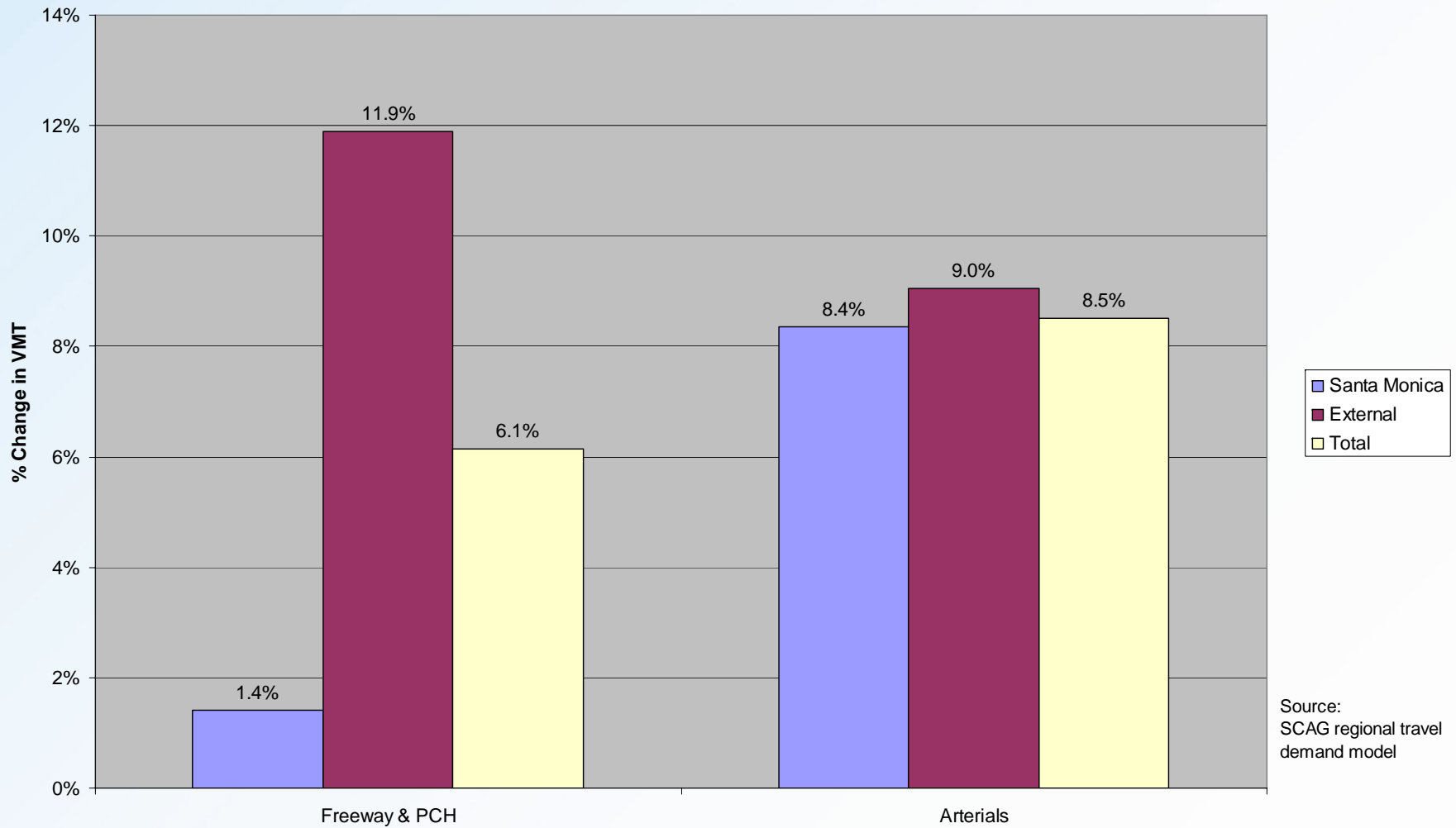
- Year 2000 AM Peak Period VMT
- Year 2000 PM Peak Period VMT
- Year 2030 AM Peak Period VMT
- Year 2030 PM Peak Period VMT

Arterials with higher than average cut-through include: Lincoln, Main, Ocean, Nielson, San Vicente, 23rd, 26th

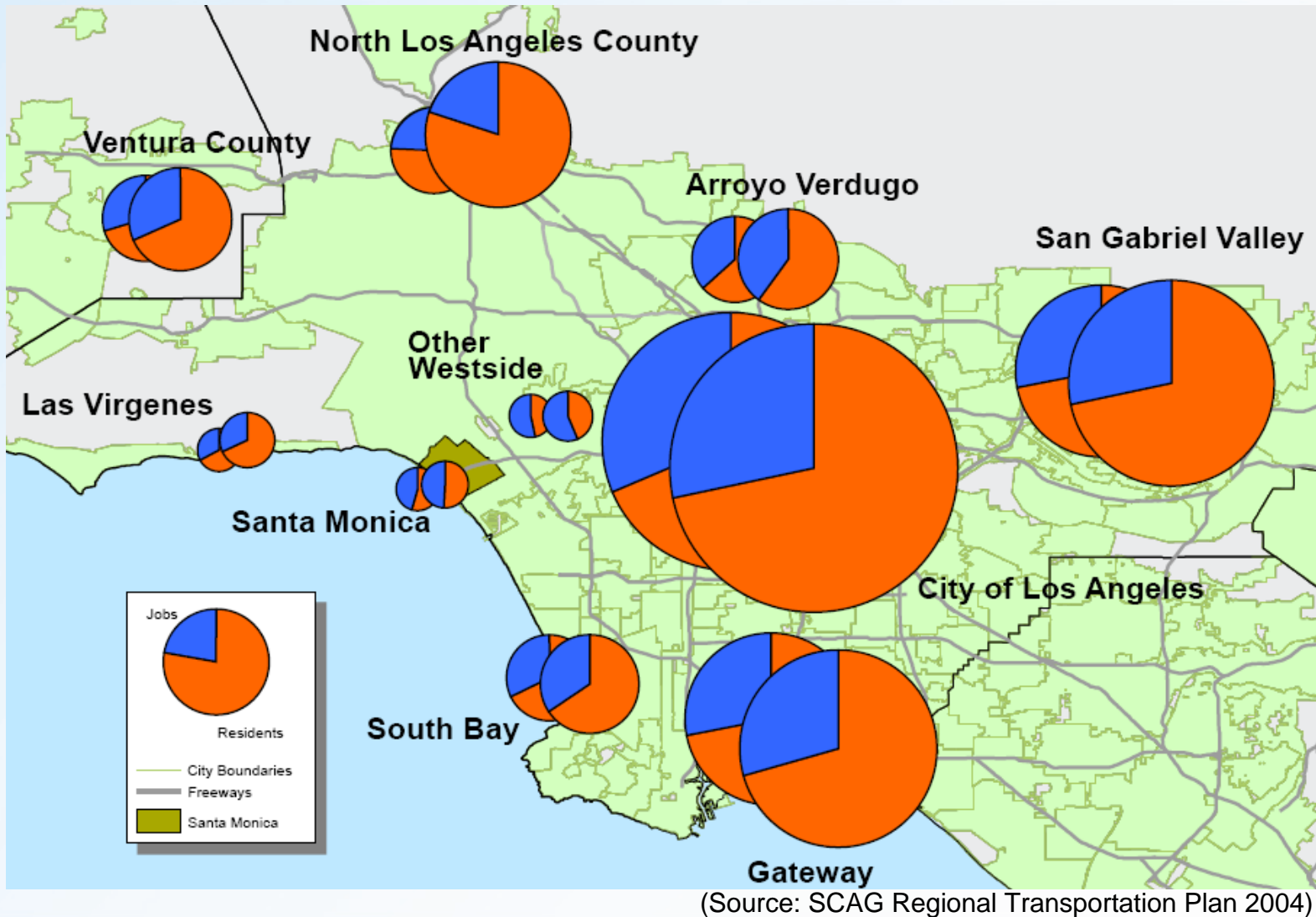
Source: SCAG regional travel demand model

Cut-Through Traffic Growing Faster than Santa Monica – Even on Arterials

2000 TO 2030 CHANGE IN PM PEAK PERIOD VMT



Regional Growth 2005-2025



Proposed Demand Management Districts



Demand Management Districts

City of Santa Monica
Land Use and Circulation Element

- Highest goal
Largest concentration of employees, students and transit ridership
- Higher goal
Employment centers and institutions/schools
- District wide mode split goal
Other commercial
- Major transit stop zones
Areas requiring highest level of investment in pedestrian accommodation, and where building design should be most oriented to transit.
- Light Rail Stop

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Updated 5-6-2008

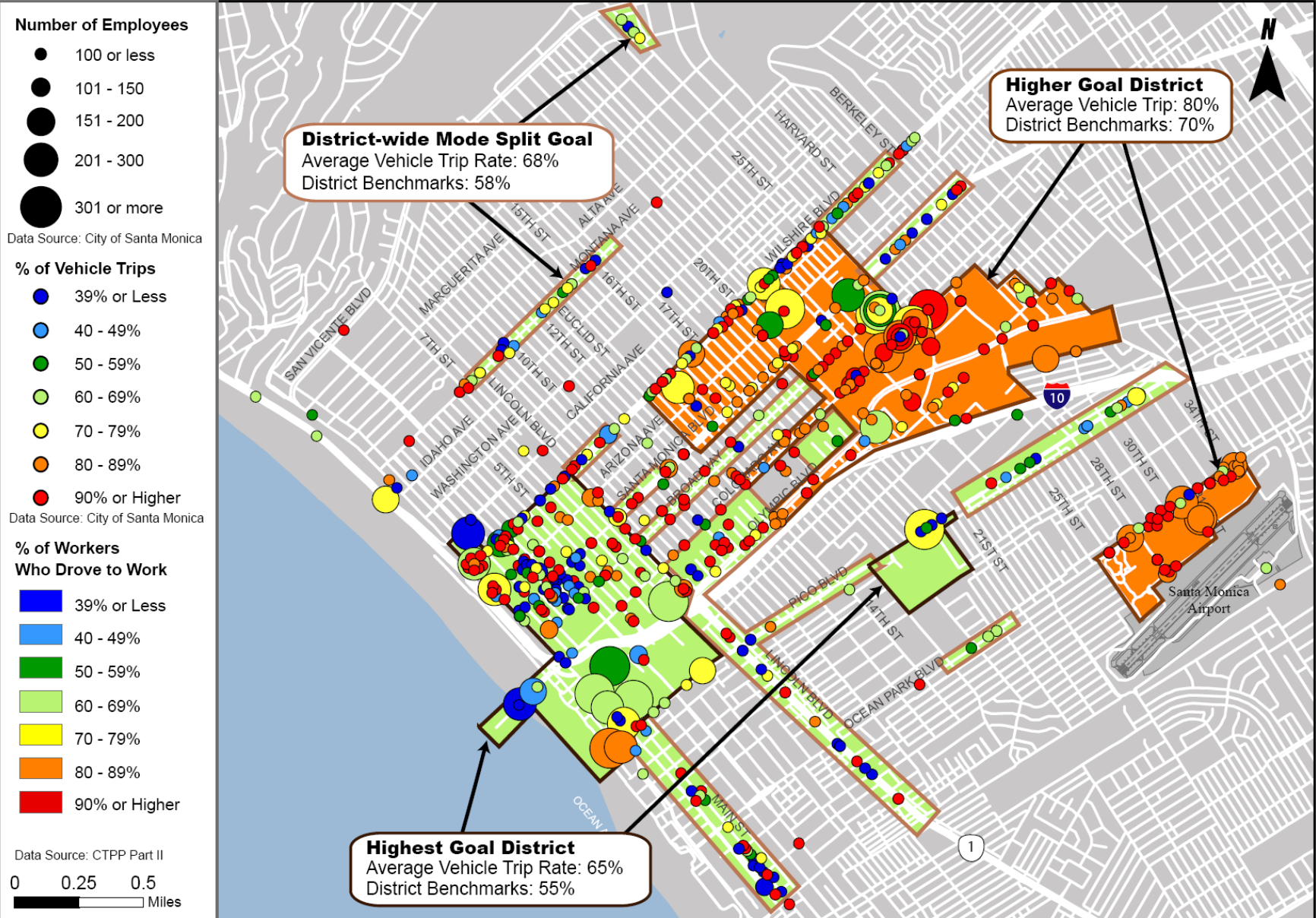
0 0.25 0.5 MILES

Existing Employer Data Analysis

- Coded employee travel data from around 700 Santa Monica employers
- Screened out errors to analyze ~665 employers
- Mapped by district and land use type
- Identified employers with good TDM results as benchmarks
- Below: Rates of employee driving by land use and district

TDM District		Office	Retail	Med-ical	Hotel	School	Indus-trial	Overall
Highest	Average	74%	54%	87%	63%	NA	NA	65%
	Benchmark	69%	33%	80%	42%	NA	NA	55%
Higher	Average	85%	68%	72%	74%	80%	83%	80%
	Benchmark	70%	58%	72%	56%	77%	69%	70%
District-wide	Average	89%	61%	65%	52%	80%	67%	68%
	Benchmark	75%	43%	40%	48%	71%	45%	58%

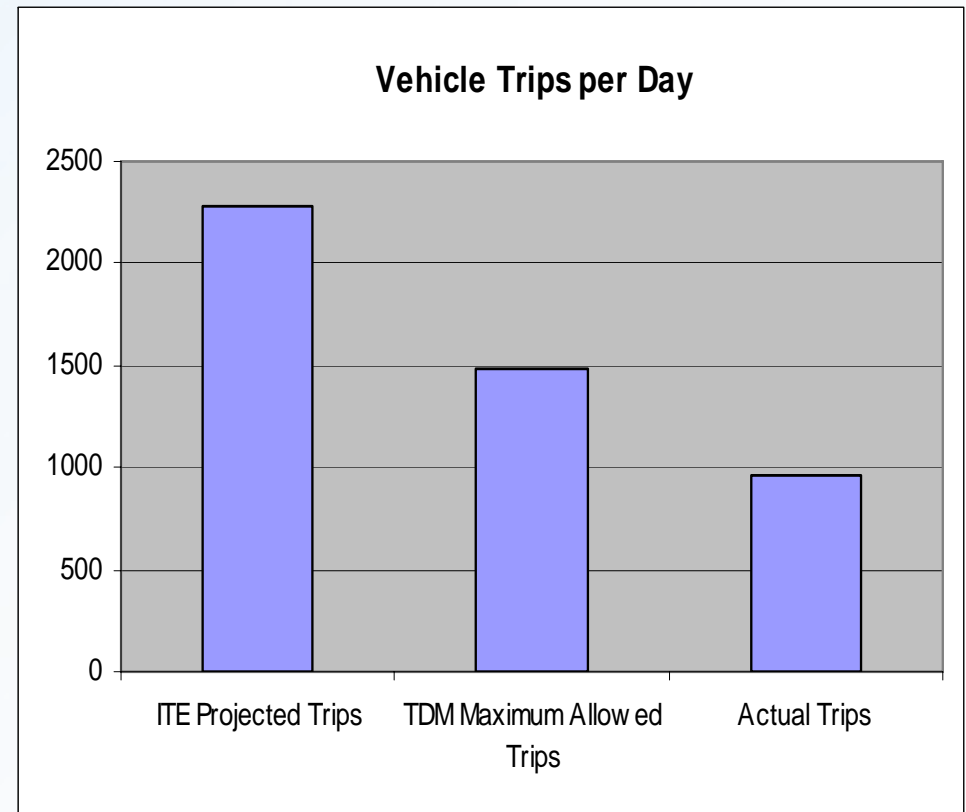
All Day Employer Travel Data



Example: Water Garden Development

Traffic Study Results (2007)

- Mix of office, retail, restaurant and health club uses
- Required to meet TDM goal
- Measured traffic shows 36% fewer car trips than allowed
- Trips are 58% lower than predicted by conventional traffic projections



LUCE Traffic Mitigations

- Largest traffic mitigations are those that focus on existing trips, since they are >90% of traffic:
 - Creating new locally serving retail in places without it (Transit Villages, Activity Centers)
 - Transportation Management Organizations
 - Impact Fees

Traffic Mitigations – Impact Fee

- Sample Impact Fee program for each scenario

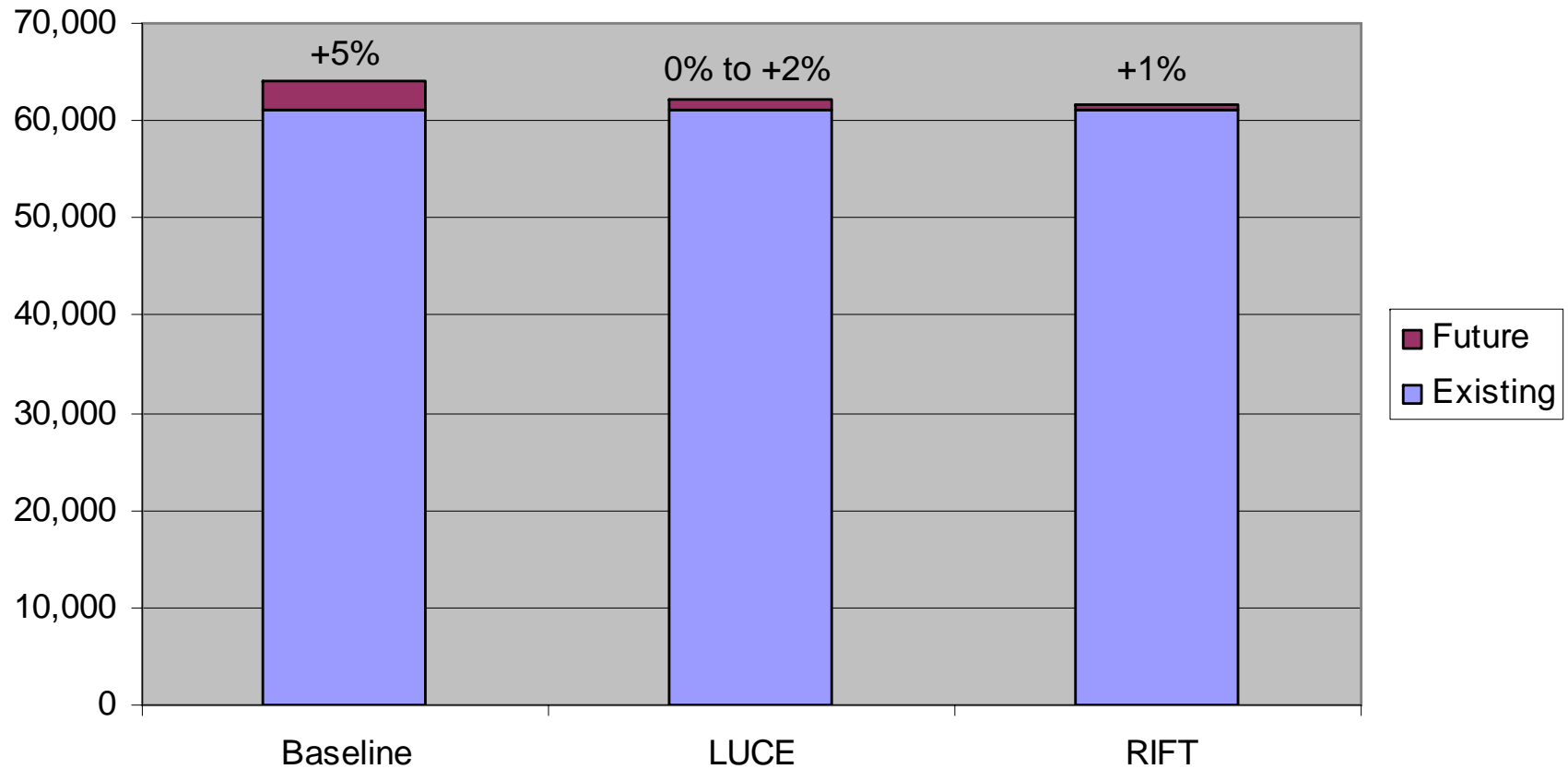
Program	Baseline	RIFT	RIFT/LUCE Hybrid	LUCE
SaMoHi transit passes (payment to BBB)	\$0	\$0	\$300,000	\$300,000
Two new local shuttles	\$0	\$0	\$0	\$300,000
TMO formation and capacity building (staff)	\$0	\$0	\$100,000	\$100,000
Parking manager (1 staff)	\$0	\$0	\$100,000	\$100,000
Safe Routes to School (1 staff and curriculum)	\$0	\$0	\$250,000	\$250,000
Bicycle program (1 staff and annual capital program)	\$0	\$0	\$550,000	\$550,000
Other	\$0	\$0	\$100,000	\$300,000
Total	\$0	\$0	\$1,400,000	\$1,900,000

Trip Reductions

- Mixed use internalization - applied to each land use scenario by development district, but yields greater percent reduction for more dense development.
 - Home-work vehicle trip reduction: 3% to 20%
(shifts trips to transit, walking and bicycling)
- TOD rail transit reduction - applied to each land use scenario since Expo light rail is assumed as base condition.
 - Home-work vehicle trip reduction: up to 7%
(shifts trips to transit)
- Demand management reductions - higher levels for LUCE than RIFT; higher levels for new employers than for existing employers.
 - Home-work vehicle trip reduction: 3% to 13%
(shifts trips to transit, walking and bicycling)
- Potential overall mode shift for home-work trips varies from 6% to 31%, depending on district density, location, and scenario.

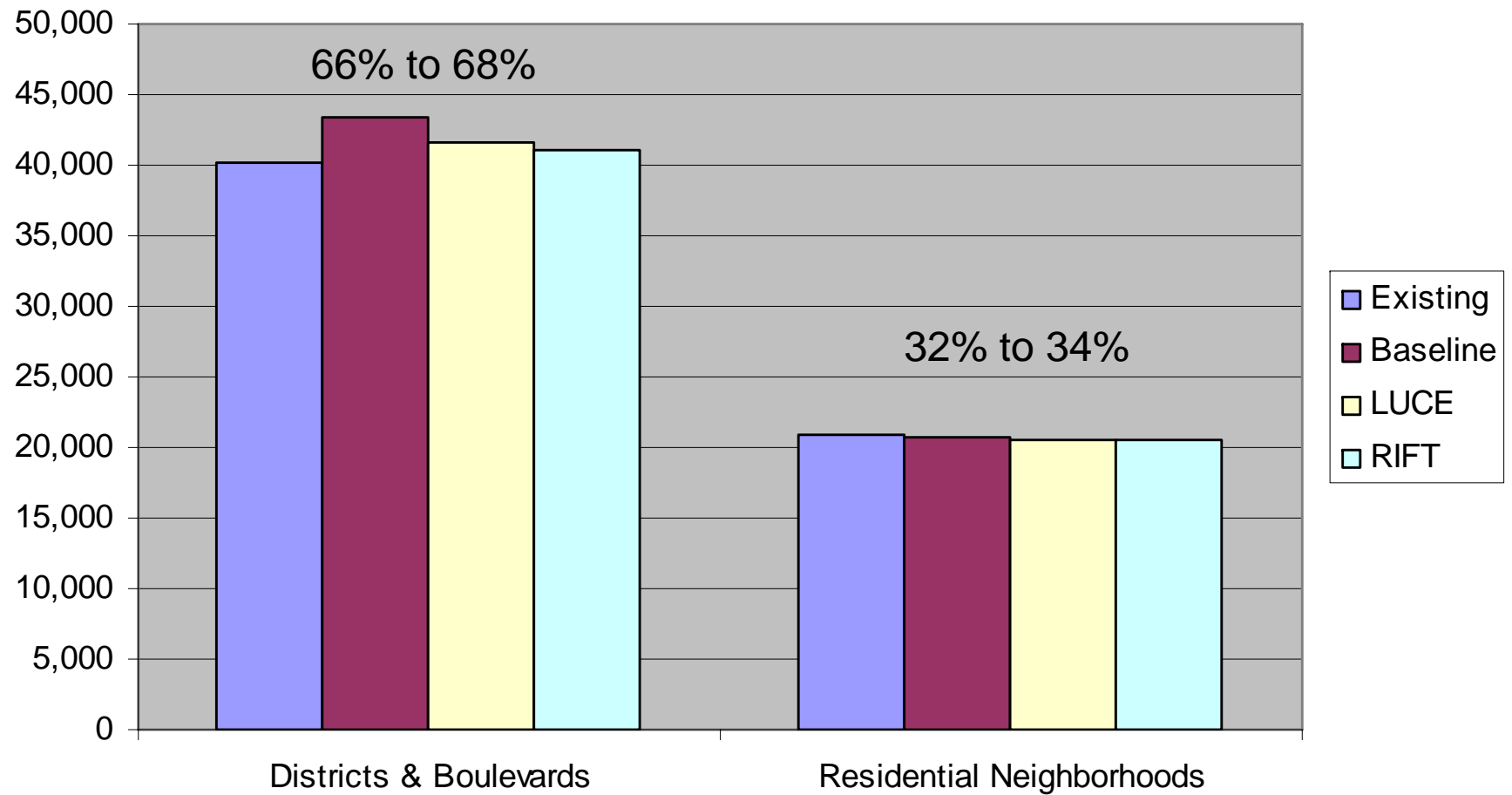
Total Estimated Trip Generation

**TOTAL ESTIMATED PM PEAK HOUR VEHICLE TRIPS
GENERATED IN CITY OF SANTA MONICA**



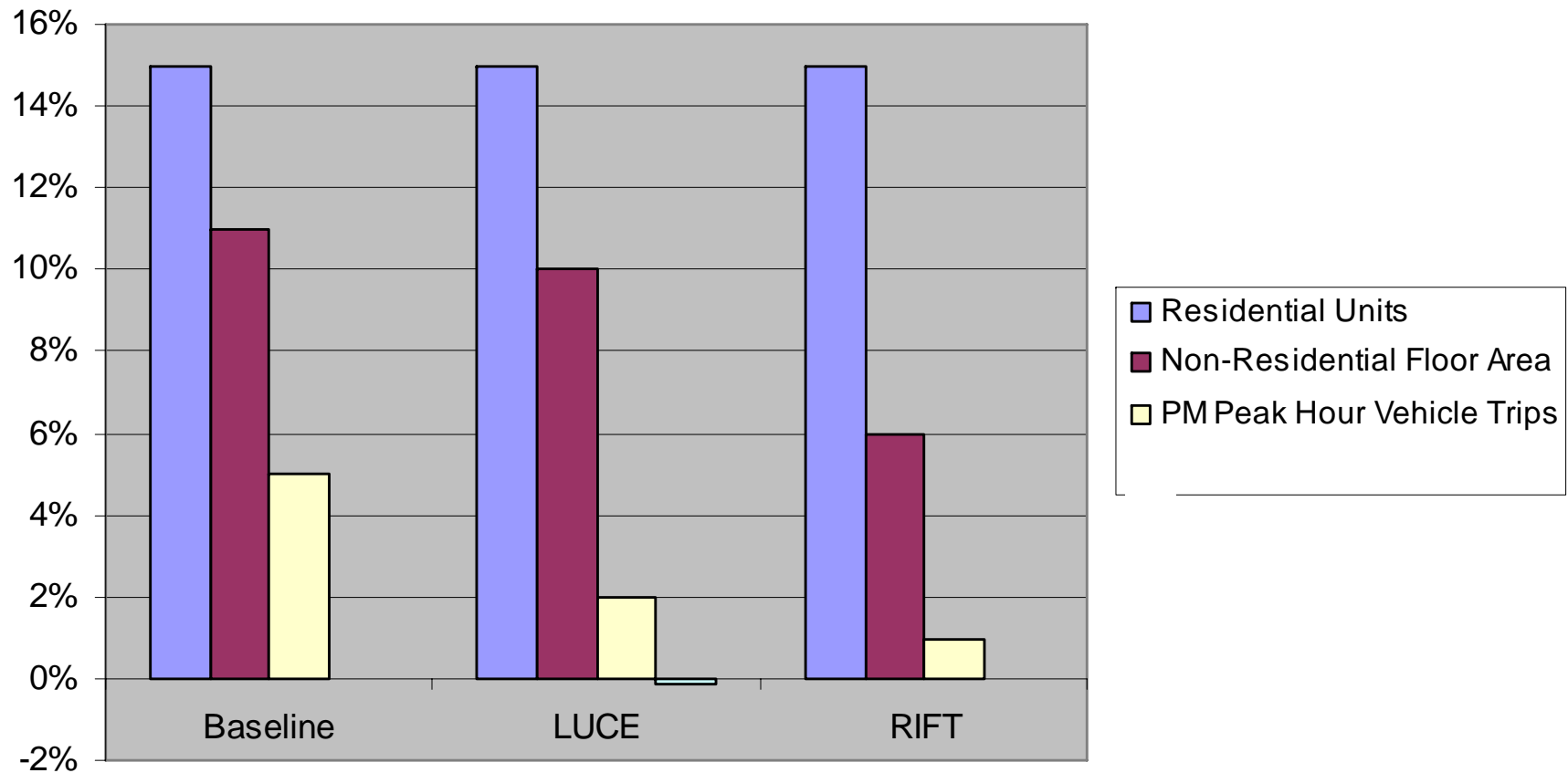
Estimated Trip Generation by Area

ESTIMATED PM PEAK HOUR VEHICLE TRIPS BY AREA



Change in Land Use vs. Change in Trips

**PERCENT CHANGE IN LAND USE AND
PM PEAK HOUR VEHICLE TRIP GENERATION**



Traffic Comparison: RIFT

- By reducing rate of commercial development in Santa Monica, RIFT generates ~4% fewer vehicle trips in 2023 than the baseline scenario, all else being equal.
- By creating scarcity in the development market, RIFT will tend to drive up commercial rents slightly.
- Higher-value uses such as office and formula, regional retailers will tend to out-compete local services for new space.
- Result would be a modest increase in vehicle trip rates into Santa Monica, if local services are displaced by regional services.
- These factors would offset some traffic reductions of RIFT.

Traffic Comparison: LUCE

- LUCE estimated to cut total traffic a minimum of 3% from the baseline -- compared to 4% for the RIFT.
- Assuming a more aggressive demand management program under the LUCE that is successful in meeting targets, LUCE is estimated to cut total traffic 5% from the baseline.

Hybrid Option?

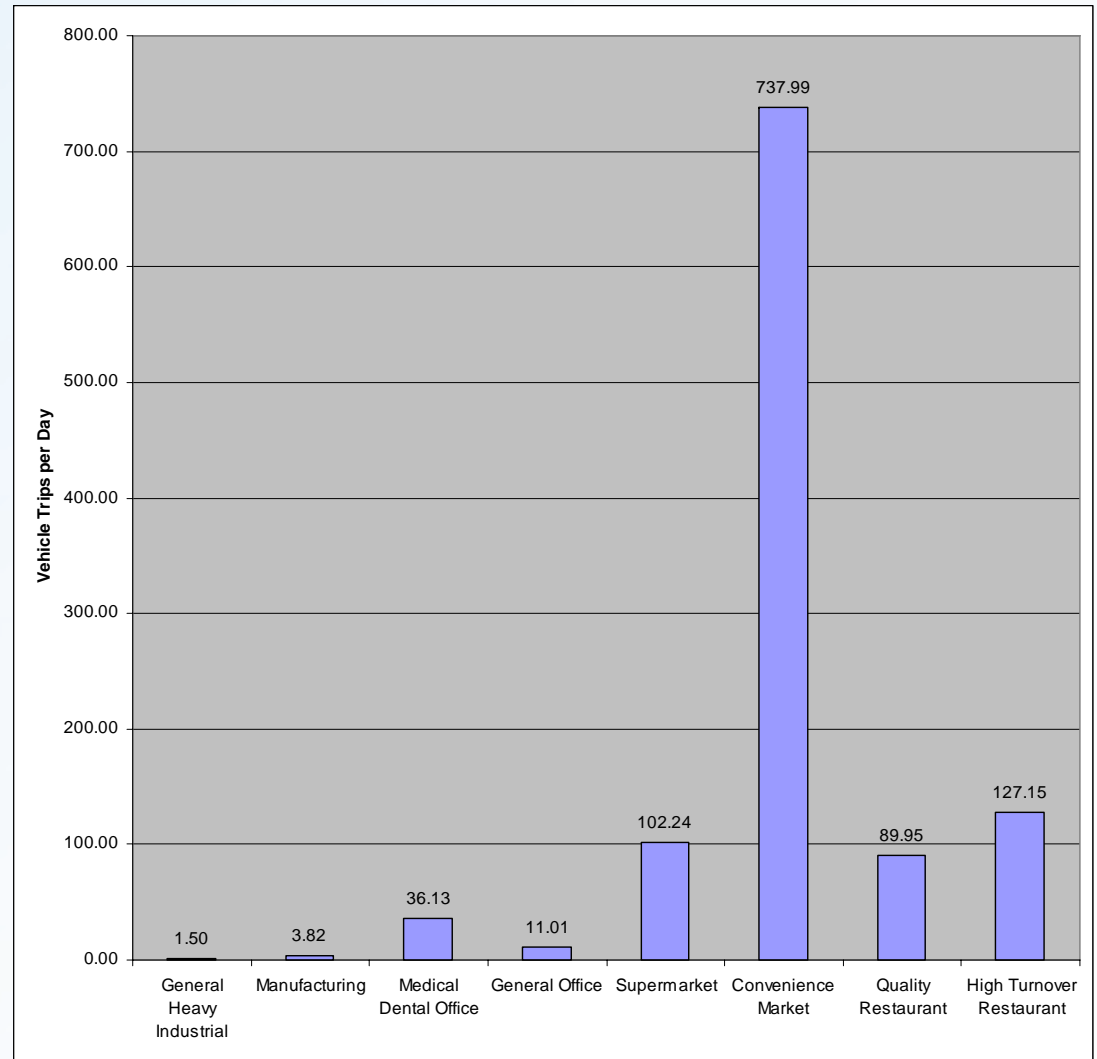
- Can the lower development levels of the RIFT be combined with the traffic mitigations of the LUCE?
- Partially, yes. But with these exceptions:
 - Impact fees. 39% reduction from LUCE.
 - General Fund/Redevelopment: \$12.7 million less each year.
 - Activity Centers and Transit Villages. General Office and Regional Retail will tend to outcompete local services for limited space. Result: higher traffic rates for 80% of trips that are non-work trips.

Locally Serving Retail

- RIFT exempts “neighborhood-serving goods, services, or retail uses that are located on the ground floor of an affordable housing development in which one hundred percent of the dwelling units are designated for affordable housing.”
- When new uses replace or re-use an existing building, RIFT provides credit for existing square footage, but translates it to new use through ITE Trip Generation manual or “a comparable source used by jurisdictions of a comparable size to Santa Monica.”
- ITE data are total vehicle trips for isolated, single-use buildings with no alternative form of access. Data do not count “internal capture.” That is, a locally serving corner market is assumed to generate more traffic per square foot than a region-serving Whole Foods or regional employer.

Locally Serving Retail & Adaptive Reuse

- Trip rate for a corner market is 193 times higher than a manufacturing building.
- In actuality, most trips for a local market would be walk trips or trips shifted from elsewhere – not “new” vehicle trips.
- RIFT counts all trips the same – whether long distance automobile commute trips or short walk trips.
- Result: Replacement of industrial uses with local retail under RIFT could result in a reduction of actual existing traffic.
- But: Development market would likely respond by discouraging new local retail, resulting in higher traffic.



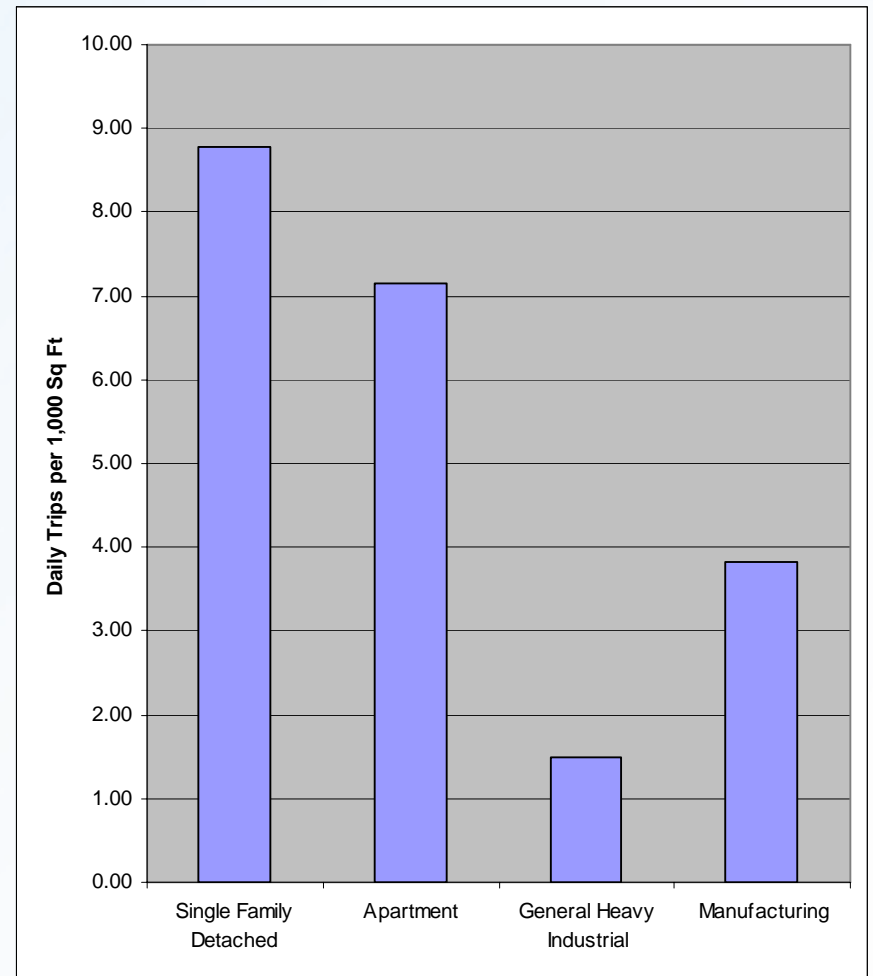
Adaptive Reuse

- Consider a 100,000 square foot, obsolete manufacturing building.
- Developer proposes converting to mixed use: Local market, four lunch restaurants and medical/dental offices.
- Due to trip generation differences, developer only gets “credit” for 2% of existing building space – or 2,200 square feet of existing 100,000 square feet.
- 97,800 square feet must be borrowed against 75,000 square feet annual commercial cap.
- In actuality, many of these ITE trips would not be “new” trips or vehicle trips. The local market and restaurants may result in negative vehicle trips – replacing existing drive trips with new walk trips.

	Original Square Feet	Trips per Weekday	Allowable Trips	Sq Ft Allowed
Former Manufacturing Building	100,000	382		
Proposed New Building				
Convenience Market	15,000	11,070		331
Four lunch restaurants	35,000	4,450		772
Medical Dental Office	50,000	1,807		1,102
Total	100,000	17,327	2%	2,205

Adaptive Reuse

- RIFT's use of ITE trip rates may result in vehicle trip reduction to the extent Industrial is replaced by Retail.
- But, result may be strong discouragement of new locally serving retail and encouragement of uses with lower trip rate, such as office
- Result may also be encouragement of replacement of single family homes rather with new commercial: Developers get 5.8 times as much "credit" per square foot for displacing a single family home than a heavy industrial building.



Conclusions

- On the surface, RIFT appears to be successful in creating a 4% reduction in traffic compared to baseline.
- Secondary impacts of RIFT, however, will likely discourage locally serving retail and favor higher-value, higher-traffic uses such as office and regional retail, reducing the traffic benefits of RIFT.
- Moreover, any benefits of both LUCE and RIFT are likely to be less than impact of additional cut-through traffic, which is growing at a faster rate than baseline traffic.
- In the worst case, LUCE produces 1% more traffic than the RIFT. If TDM programs are successful, LUCE would create 1% less traffic than the RIFT, keeping traffic levels the same as they are today.