

Vehicle-Miles-Traveled for Smarter Development



Webinar
January 23, 2018

Webinar Hosts



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Outline

1. Background: VTA and Local Jurisdictions
2. Background: Level of Service and Vehicle Miles Traveled
3. What Senate Bill 743 Does
4. Implications for VTA and Local Jurisdictions
5. Next Steps and Key Take-Aways
6. Questions & Answers



1. Background: VTA and Local Jurisdictions



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About VTA

- Independent special district, covering 15 cities and the County of Santa Clara (“local jurisdictions”)
- Responsible for:
 - Bus, light rail and paratransit operations;
 - Congestion management;
 - Specific highway improvement projects; and
 - Countywide transportation planning
- Involved with transit, freeways, Express Lanes, bikeways and pedestrian facilities
- Also the Congestion Management Agency (CMA) and the transportation sales tax authority for Santa Clara County



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VTA's Local Jurisdictions

15 cities/towns plus the
County of Santa Clara

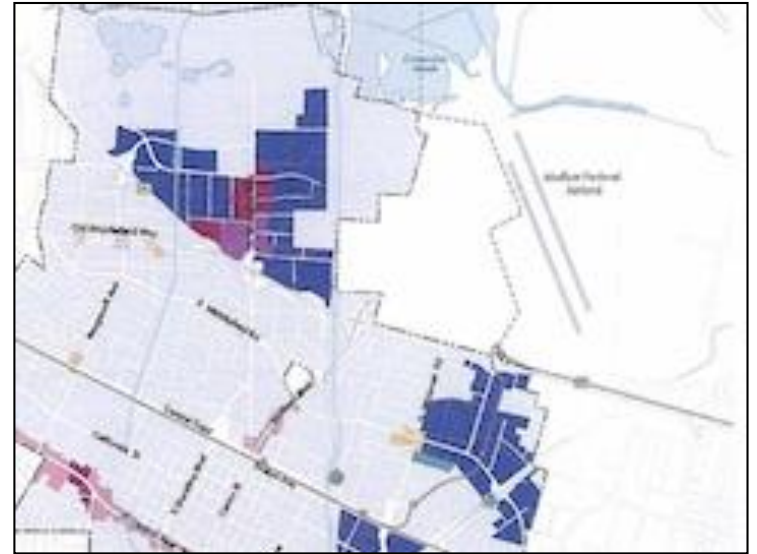


(Source: www.upnest.com)

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Roles: Land Use and Development

- Most developments are proposed by private developers
- Local jurisdictions analyze projects, have authority to approve projects and plans
- VTA may review and comment, but does not have decision-making authority



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Roles: Transportation Projects

- Most transportation projects are led by public agencies
- Both VTA and local jurisdictions have authority to approve transportation projects



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VTA's Congestion Management Program Role

- CMA Legislation (1991) requires establishment of a CMP in urbanized counties
- Legislation requires:
 - **“a program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems”**
 - **uniform methodology** for analyzing Level of Service
- VTA is the CMA and maintains the CMP for Santa Clara County



2. Background: Level of Service and Vehicle Miles Traveled



Background: Level of Service and Vehicle Miles Traveled

- Vehicular **Level of Service (LOS)** - a way of measuring transportation performance that focuses on delay and congestion; letter scale from A to F
- **Vehicle Miles Traveled (VMT)** - measures amount of vehicular travel across the system, rather than at specific points; usually expressed per person



Level of Service (LOS)

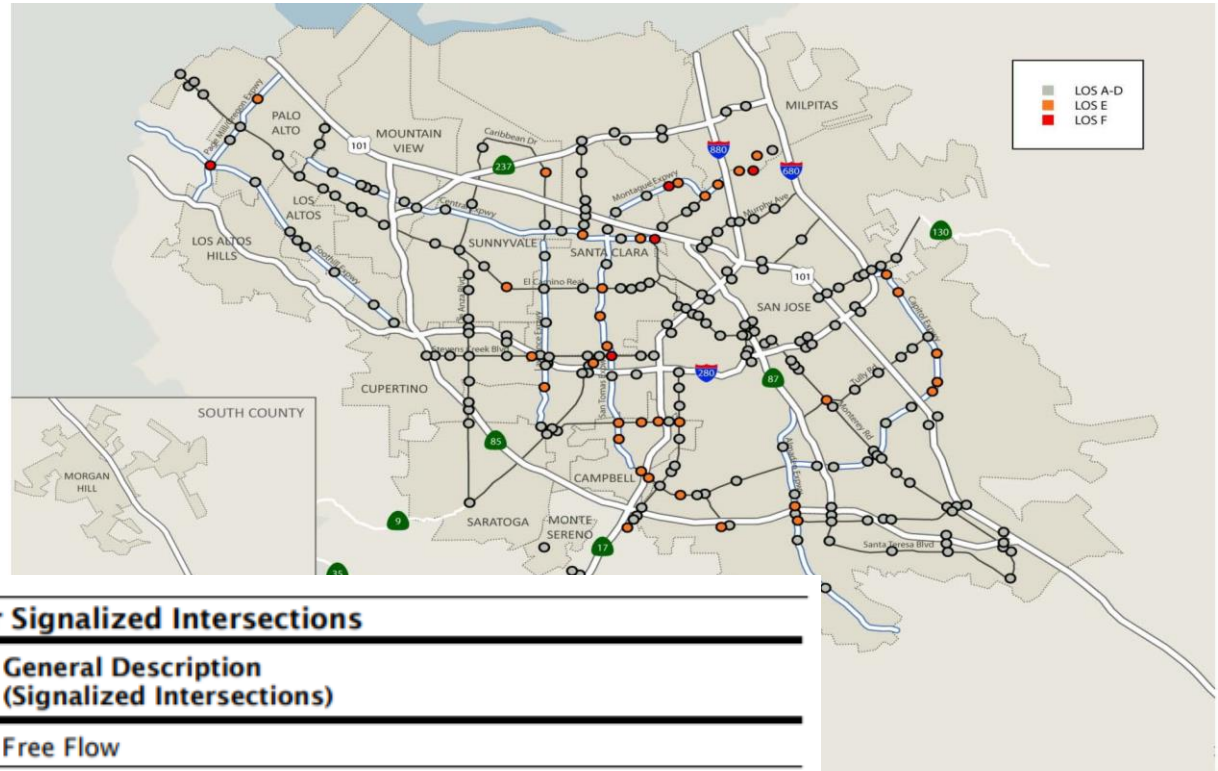


Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	General Description (Signalized Intersections)
A	≤10	Free Flow
B	>10 - 20	Stable Flow (slight delays)
C	>20 - 35	Stable flow (acceptable delays)
D	>35 - 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 - 80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

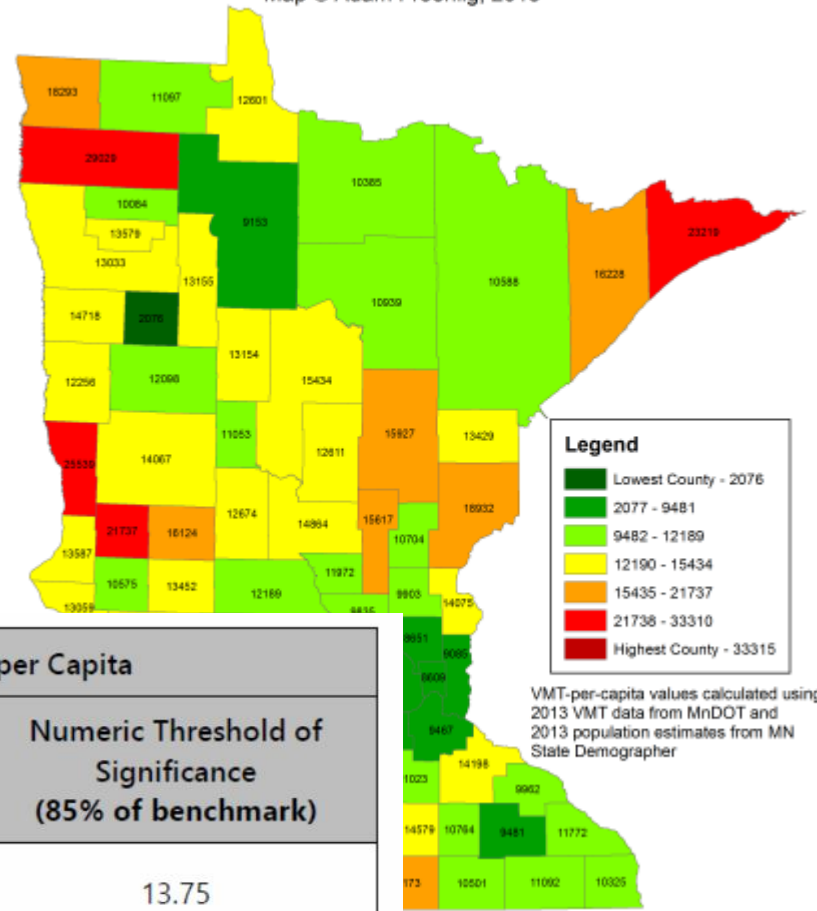


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Vehicle Miles Traveled (VMT)

2013 Minnesota VMT-per-capita by County

Map © Adam Froehlig, 2015



Traveler and Trip Type	Daily VMT per Capita	
	Benchmark (region-wide average)	Numeric Threshold of Significance (85% of benchmark)
Worker Home-Based-Work Daily VMT per Worker	16.18	13.75
Resident Home-Based Daily VMT per Capita	17.33	14.73

Source: Fehr & Peers, 2016



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LOS and VMT

- For the past few decades, transportation analysis of projects has focused on Level of Service.
- Senate Bill 743 is shifting the emphasis to Vehicle Miles Traveled.



Transportation Impact Analysis Today: Problems

1. Good grade in LOS \neq Success in Transportation

“...time lost to commuter traffic delays is more than off-set by the greater opportunities to reach destinations over shorter distances to which high development densities gives rise.”

Mondschein, Osman, Taylor, Thomas

http://www.its.ucla.edu/wp-content/uploads/sites/6/2015/11/Haynes_Congested-Development_1-Oct-2015_final.pdf

Which is better?

**45 min commute,
including 5 min from
congestion**



Good LOS Grade

Bad Accessibility

**20 min commute,
including 10 min from
congestion**



Bad LOS Grade

Good Accessibility



Level of Service A

(Courtesy of Governor's Office of Planning and Research)



Level of Service F

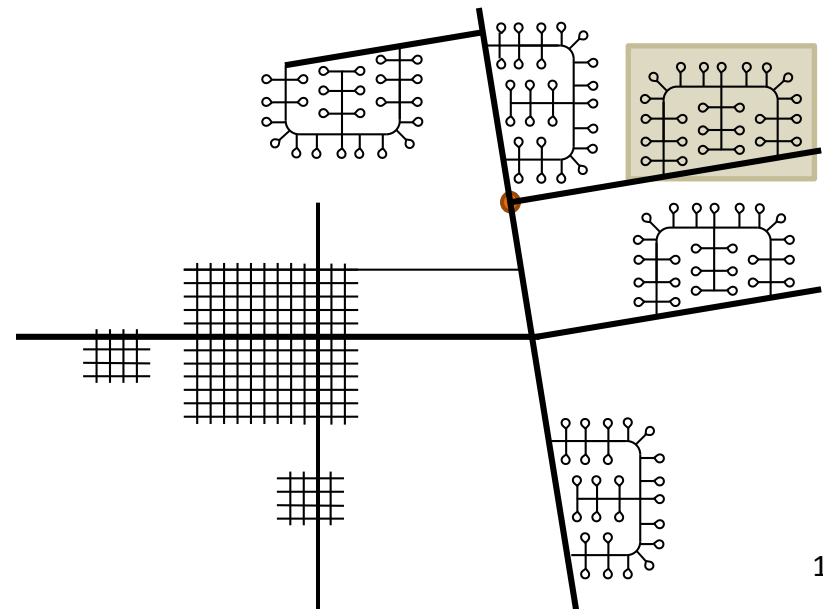
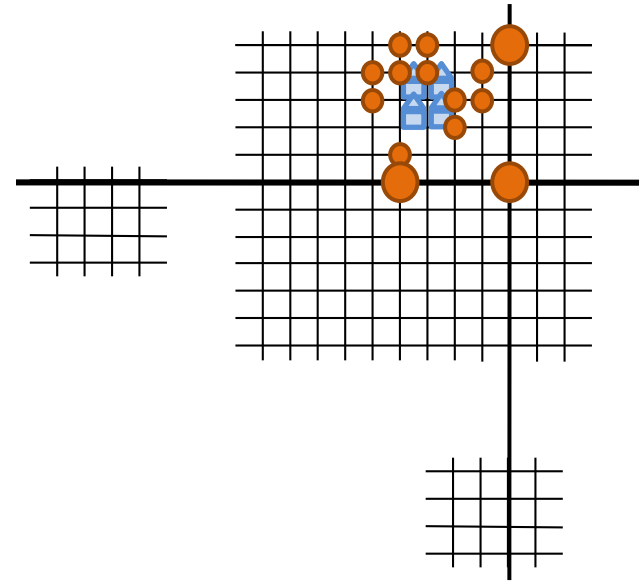
(Courtesy of Governor's Office of Planning and Research)

Source: Neighborhoods.org

Transportation Impact Analysis Today: Problems

1. Punishes last-in, inhibits infill, pushes development outward

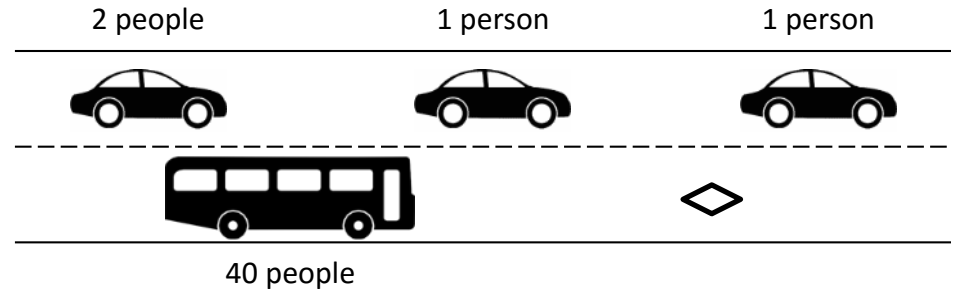
http://www.opr.ca.gov/docs/ITE_Journal_Article_-_Decisions_Values_and_Data.pdf



Transportation Impact Analysis Today: Problems

1. Punishes last-in, inhibits infill, pushes development outward
- 2. Inhibits transit and active transportation**

http://www.opr.ca.gov/docs/ITE_Journal_Article_-_Decisions_Values_and_Data.pdf



Transportation Impact Analysis Today: Problems

1. Punishes last-in, inhibits infill, pushes development outward
2. Inhibits transit and active transportation
3. **Forces more road construction than we can afford to maintain**

http://lgc.org/wordpress/docs/events/first_thursday_dinners/ftd_2013_Protecting_Transportation-june.pdf



Transportation Impact Analysis Today: Problems

1. Punishes last-in, inhibits infill, pushes development outward
2. Inhibits transit and active transportation
3. Forces more road construction than we can afford to maintain
4. **Generates an array of environmental impacts**

<https://ncst.ucdavis.edu/white-paper/cutting-greenhouse-gas-emissions-is-only-the-beginning-a-literature-review-of-the-co-benefits-of-reducing-vehicle-miles-traveled/>

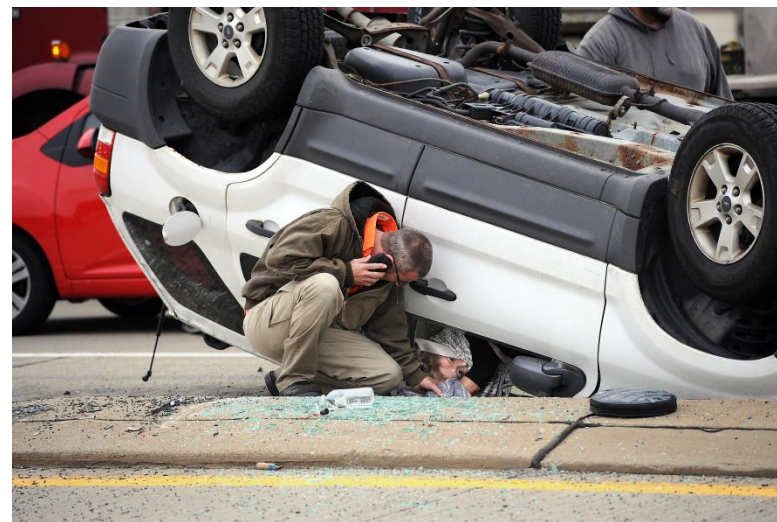
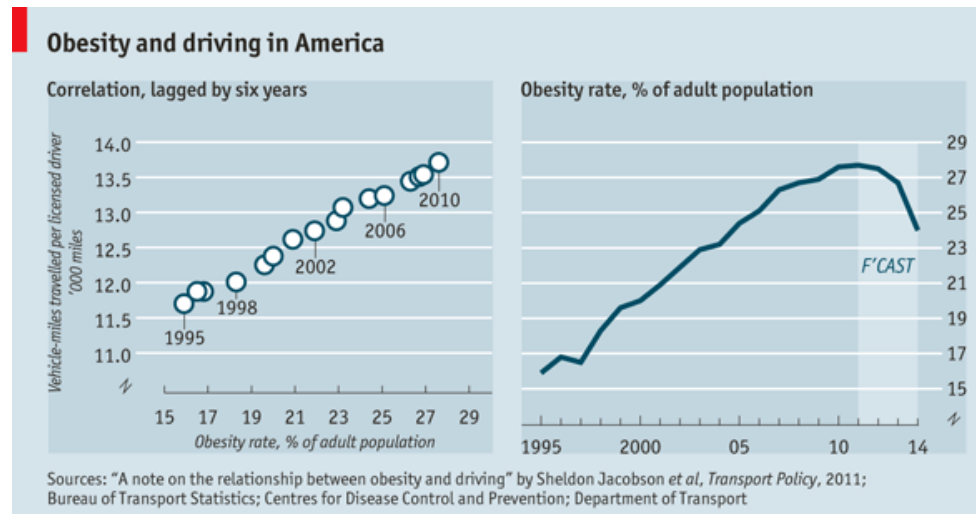
Peer-reviewed research on environmental impacts from high VMT projects:

- Emissions
 - GHG
 - Regional pollutants
- Energy use
 - Transportation energy
 - Building energy
- Water
 - Water use
 - Runoff – flooding
 - Runoff – pollution
- Consumption of open space
 - Sensitive habitat
 - Agricultural land

Transportation Impact Analysis Today: Problems

1. Punishes last-in, inhibits infill, pushes development outward
2. Inhibits transit and active transportation
3. Forces more road construction than we can afford to maintain
4. Generates an array of environmental impacts
5. **Worsens public health and safety**

<https://ncst.ucdavis.edu/white-paper/cutting-greenhouse-gas-emissions-is-only-the-beginning-a-literature-review-of-the-co-benefits-of-reducing-vehicle-miles-traveled/>



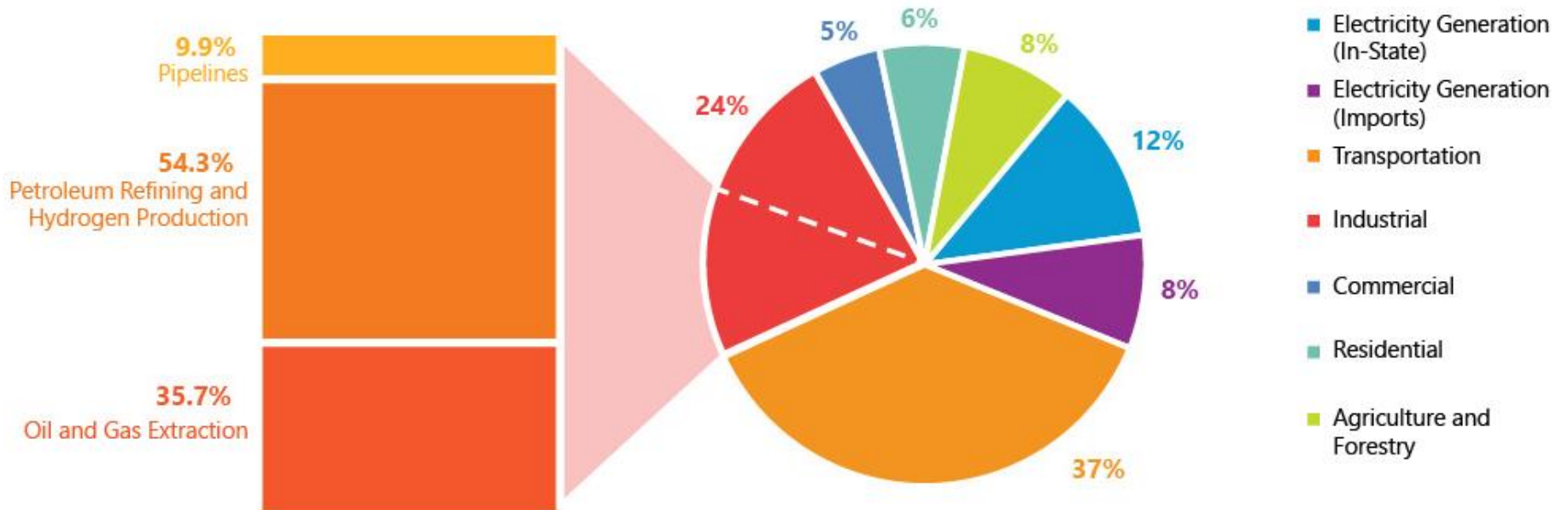
Benefits of VMT as a Measure of Transportation Impact

1. Streamline TOD
2. Streamline infill
3. Streamline transit projects
4. Streamline active transportation projects
5. Streamline locally-serving retail
6. Streamline modeling for remaining projects
7. Attack regional congestion more effectively
8. Reduce future pavement maintenance deficits
9. Massive public health improvements
- 10. Reduction in GHG and other emissions**



CA GREENHOUSE GAS INVENTORY 2014 BY SECTOR AND ACTIVITY (2016 EDITION)

Transportation-Related Industrial Emissions



<http://ca50million.ca.gov/Transportation/transportation.html>

3. What Senate Bill 743 Does



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Senate Bill 743

- Became state law in September 2013
- Intended to promote:
 - Reduction of Greenhouse Gas emissions
 - Multimodal transportation networks
 - Diversity of land uses
- Mainly affects the California Environmental Quality Act (CEQA), our state's law for env. review of proposed projects
- Effects ripple to other areas



Smarter Development



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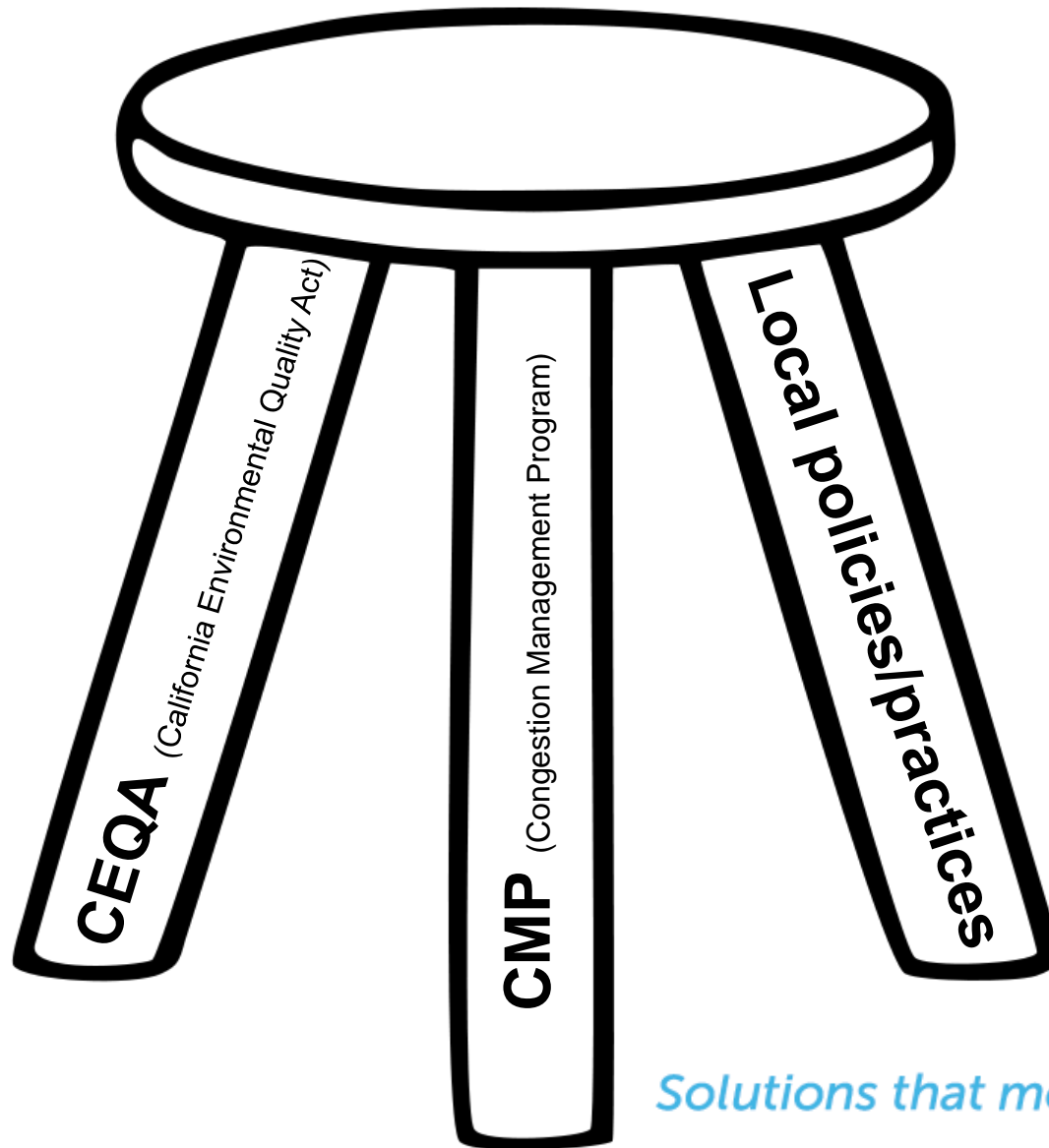
Multimodal Transportation



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Transportation Analysis of Development Projects

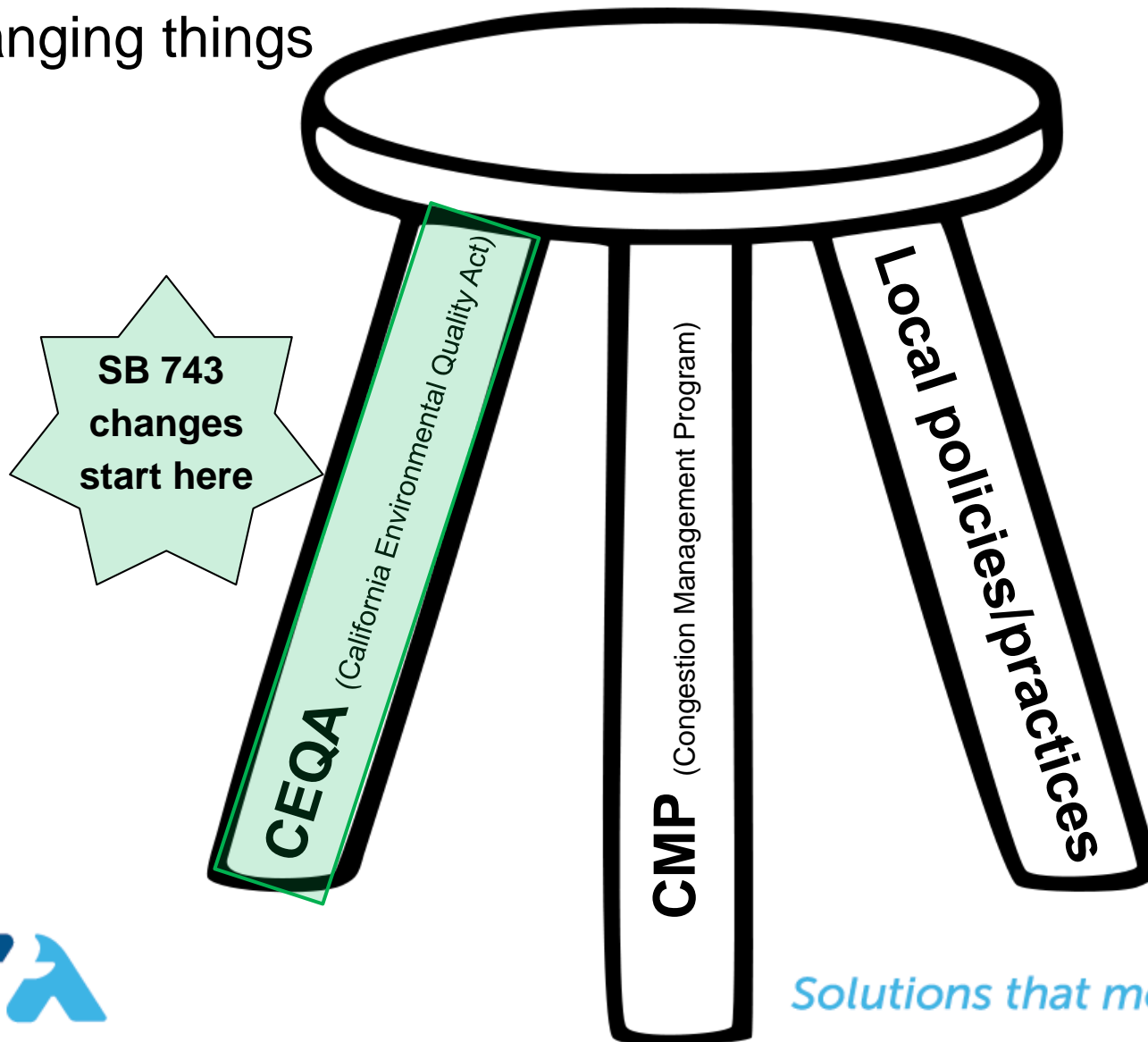
The “three-legged stool”



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Transportation Analysis of Development Projects

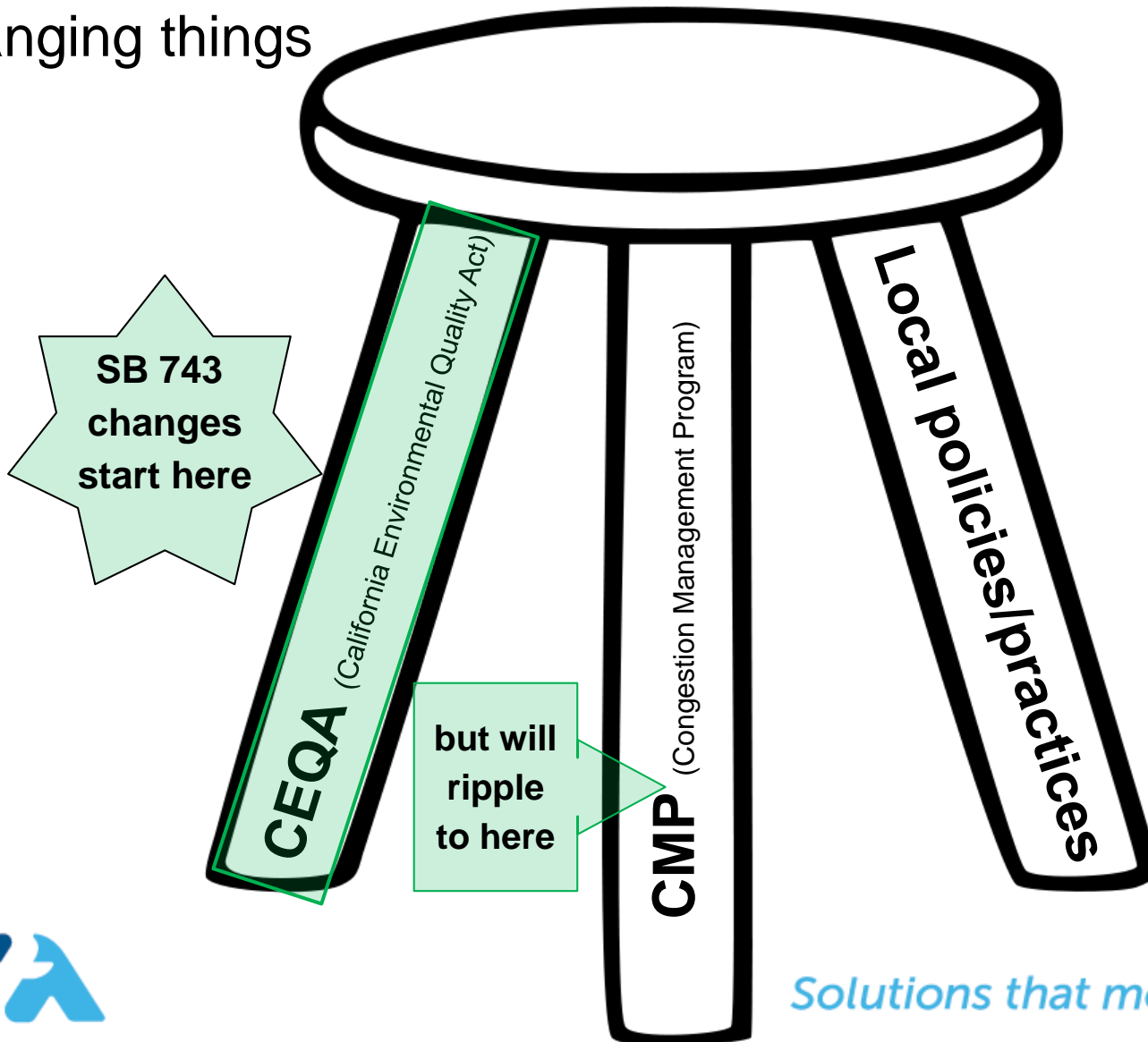
How SB 743 is
changing things



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Transportation Analysis of Development Projects

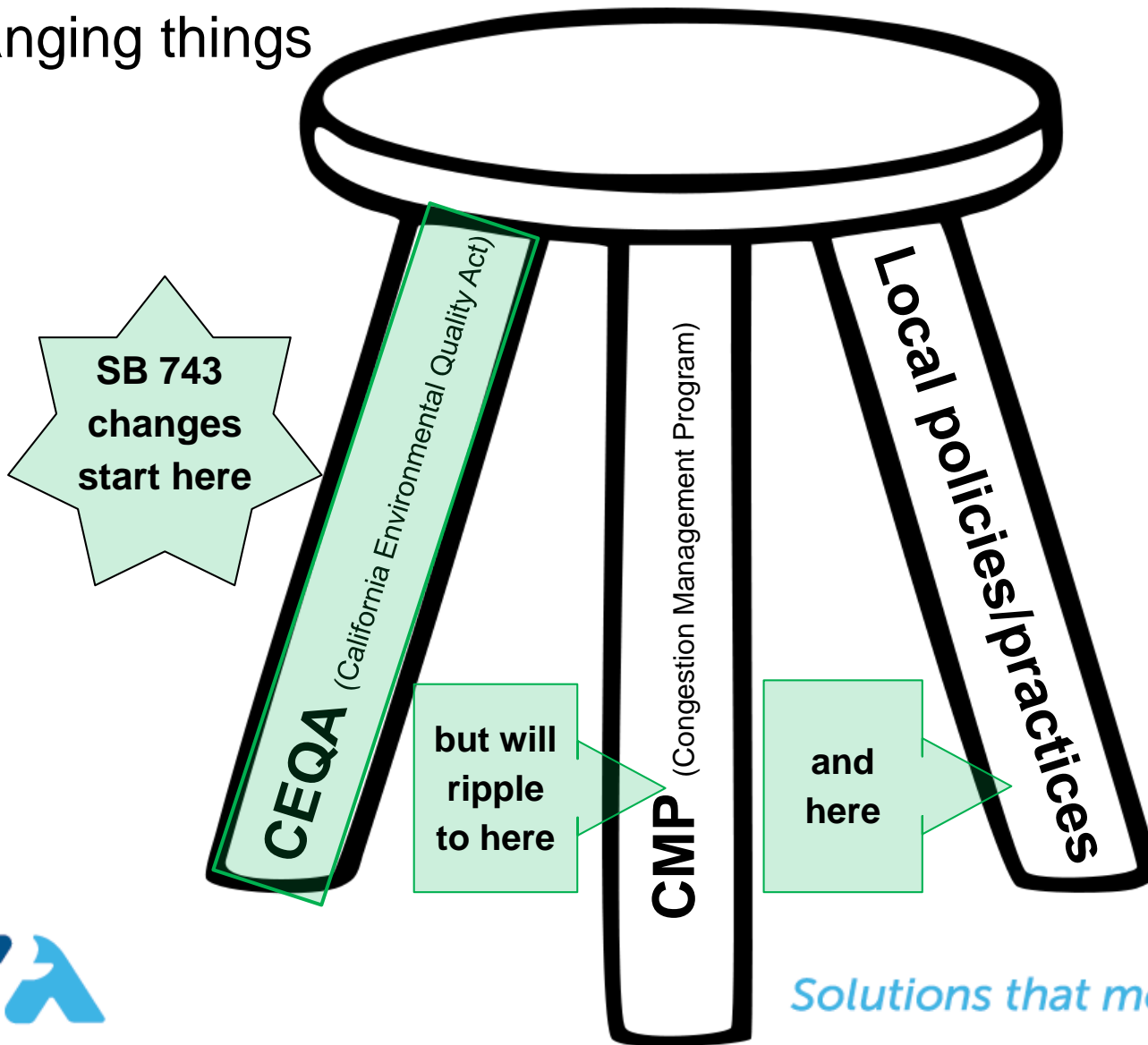
How SB 743 is changing things



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Transportation Analysis of Development Projects

How SB 743 is changing things



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Senate Bill 743 – CEQA

SB 743 primarily changes CEQA practice

- Directs Governor’s Office of Planning and Research (OPR) to establish new CEQA criteria for transportation impacts
- **“Automobile delay... shall not be considered a significant impact on the environment”** in locations where the new criteria will apply
- OPR has indicated that the new primary metric will be **VMT, state-wide**



SB 743 – CMP and Local Practice

SB 743 and Congestion Management Programs (CMPs):

- Reinstates the ability of cities and counties to designate **“Infill Opportunity Zones” (IOZs)** where CMP LOS standard would not apply

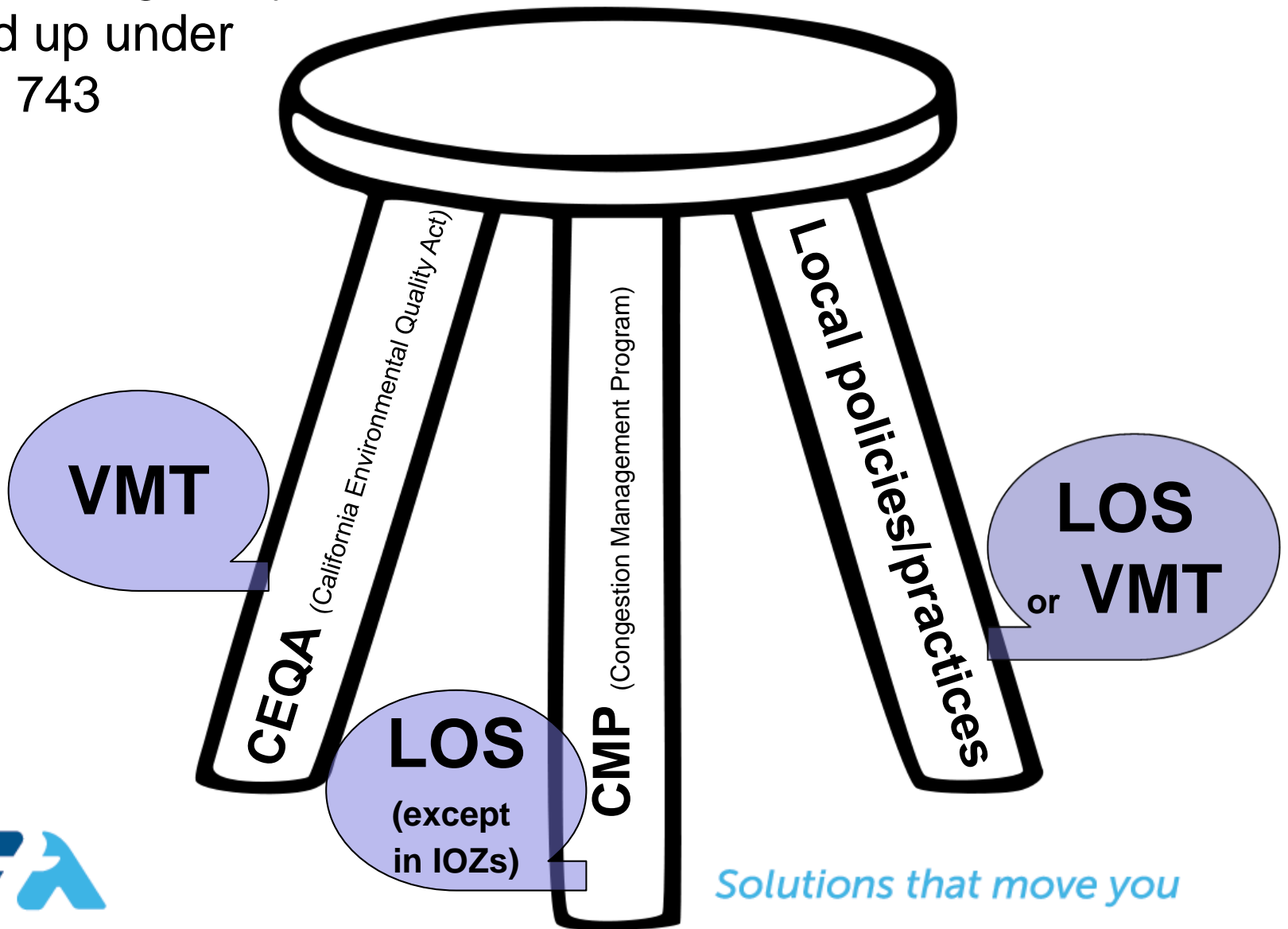
SB 743 and Local Practice

- SB 743 does not preclude local agencies from applying LOS in policies, codes, conditions of approval, etc.



Transportation Analysis of Development Projects

How things may
end up under
SB 743



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SB 743 Implementation

- OPR has issued several rounds of draft guidance
- In November 2017 OPR submitted latest draft for formal rule-making (6-8 months)
- OPR calling for phase-in period, with mandatory switch to VMT by **January 1, 2020**
- Several cities have already switched, others planning to switch soon



4. SB 743 Implications for VTA and Local Jurisdictions



VTA Perspective on SB 743

Key benefits:

- Streamline transit, bicycle, and pedestrian projects
- Promote/streamline TOD
- Help cities/counties align transportation analysis with community values

Some challenges and opportunities – e.g., consistency and transition



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VTA Activities to Date on SB 743

2014 – First Half 2017:

- Getting informed and sharing information
- Gathering input from local jurisdictions
- Providing VTA input to OPR/state process

New - starting Fall 2017:

- Fostering discussion about how cities, County and VTA can work together on implementation



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VTA Activities – Gathering/Sharing Information

Presentations to VTA Board Committees and Technical Advisory Committee Working Groups

Presentations to other audiences:

- MTC/ABAG, Grand Boulevard Initiative, SPUR SJ, Santa Clara County Planning Officials, CA Transit Association

Participation in regional-level working groups; webinars; workshops

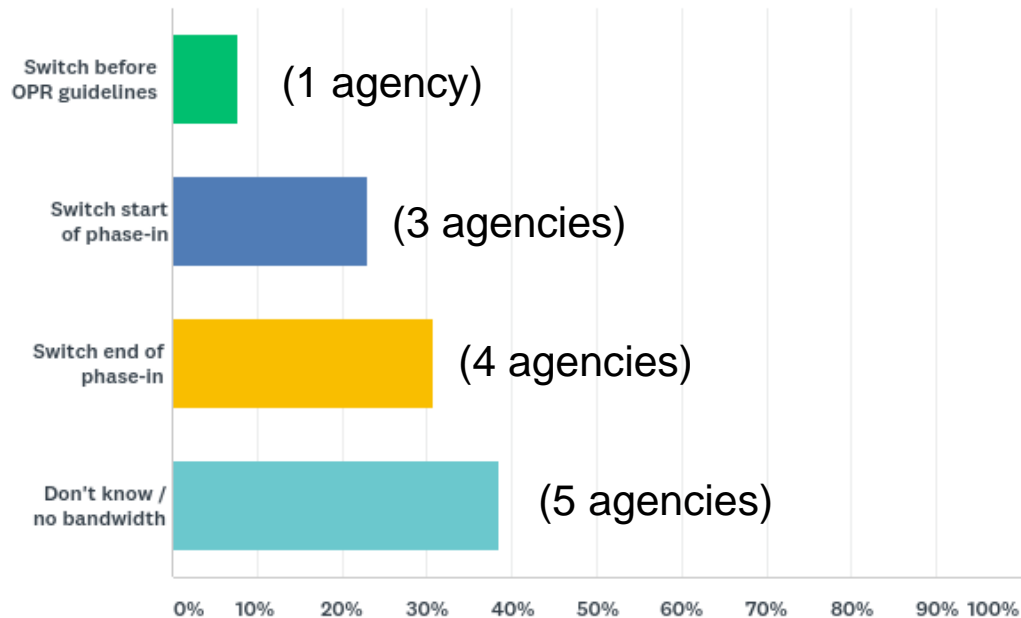


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Survey in Santa Clara County

- VTA web survey of its 16 local jurisdictions in Sept 2017
- 13 of 16 local jurisdictions, plus Caltrans, responded

Q1 Where is your agency at in regards to SB 743 and the LOS-to-VMT transition? (SELECT ONE)



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Suggested Topics based on Web Survey

- Guidelines for VMT
- Shared tools/resources
- Analysis across jurisdictions
- CEQA / CMP relationship
- VMT training, support, funding for implementation
- Example calcs, for recent projects
- Potential other metrics besides VMT and LOS
- Small/rural project analysis



CMP Guidance on LOS Analysis

- VTA has provided an established framework for conducting LOS analysis in a TIA Report

2017 CMP
2017 CONGESTION MANAGEMENT PROGRAM DOCUMENT
PREPARED BY THE SANTA CLARA VALLEY TRANSPORTATION AUTHORITY
THE CONGESTION MANAGEMENT AGENCY FOR SANTA CLARA COUNTY
DECEMBER 2017

TRAFFIC LEVEL OF SERVICE ANALYSIS GUIDELINES
SANTA CLARA COUNTY TRANSPORTATION AUTHORITY
CONGESTION MANAGEMENT PROGRAM
ADOPTED | JANUARY 1995
UPDATED | JUNE 2003

TRANSPORTATION IMPACT ANALYSIS GUIDELINES
ADOPTED OCTOBER 2014

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY
CONGESTION MANAGEMENT PROGRAM



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New Guidance for VMT

- VTA is planning to work with its local jurisdictions to develop guidance for VMT analysis



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5. Next Steps and Key Take-Aways



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VTA's Goals and Objectives for LOS-to-VMT Transition

- Goal: Steer VTA through the LOS-to-VMT transition, and play a leadership role in guiding local jurisdictions
- Objectives:
 - A. Take a leadership role
 - B. Move county in overall progressive and pragmatic direction
 - C. Reform VTA's practices – focusing on CMA and CEQA Lead Agency roles
 - D. Provide guidance on thresholds and methodology



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VTA Process - End Results

DRAFT – Subject to Change

- Understand context
- Consensus on VMT Modeling – Baseline and Thresholds
- Consensus on VMT Sketch Tools – Project VMT and Reductions
- Updated VTA CMP guidance:
 - 2019 CMP Document
 - VMT Analysis Guidelines (*NEW*) – specify how to analyze VMT
 - Interim Guidance on TIAs (*NEW*) – specify when/how to include VMT analysis in TIAs
- Updated VTA CEQA Lead Agency Practices



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Considerations for Local Jurisdictions

- Who will steer the process?
- How soon to make the change?
- Fully shift to VMT, or retain LOS for some purposes?
- What VMT threshold?
- What city policies/practices will require updates?
- What action/approval will be required?
- Relationship to ongoing/upcoming planning efforts?



Next Steps in Santa Clara County

- Form ad hoc LOS-to-VMT working group
- Identify points of contact at each local jurisdiction
(both Transportation/Engineering and Planning)
- Develop work plan and schedule for VTA/countywide efforts
- Bring updates to VTA Board Committees
- Explore key topics in-depth
- Work towards consistent methodology/guidance
- Local jurisdiction changes to policies/practices



Resources

Websites:

- OPR SB 743 site: <http://www.opr.ca.gov/ceqa/updates/sb-743/>
- VTA Congestion Management Program: <http://www.vta.org/cmp>
- City of San Jose VMT Transition: <http://www.sanjoseca.gov/vmt>
- Streetsblog (CAL, SF, LA)

Professional organizations:

- American Planning Association (APA)
- Institute of Transportation Engineers (ITE)
- Association of Environmental Professionals (AEP)

Other organizations:

- SPUR, TransForm, Grand Boulevard Initiative



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6. Questions and Answers

During webinar: Use YouTube chat box

After webinar: Email Rob Swierk
robert.swierk@vta.org



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