

CEQA Compliance Strategies for TOD in a Changing Regulatory Environment





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Panel Participants

What's Driving Growth in TOD

- Population Growth CA building at least 100,000 fewer units a year that it needs to keep pace with population growth
- Affordability 1/3 of California renters spend more than half their income on housing
- Climate Change strategy Reduce greenhouse gas emissions to 40% below 1990 levels by 2030
- Transportation Funding Initiatives LA Metro's Measure M, Bart's Measure RR

Introduction

TOD Challenges



Introduction

CEQA Legal Challenges

- Most CEQA litigation targets projects designed to advance California's policy goals
- 80 percent of CEQA lawsuits target infill projects in established communities
- Transit projects are CEQA's most frequently challenged public infrastructure project

Introduction

CEQA Streamlining?

STEP 1: Is Project in an "infill" location? EITHER:

- A. Previously developed for qualified urban uses, including residential, commercial, public instutional transit or transportation passenger facility, or retail use, or mixed use OR
- B. Currently undeveloped but:
 - either completely surrounded by existing qualified urban uses or 75% surrounded by existing qualified urban uses and 25% previously developed with qualified urban uses; AND
 - 2. no new parcels were created on site within past 10

STEP 2: <u>Is Project a Transit Priority Project ("TPP")?</u> <u>ALL CRITERIA MUST BE MET:</u>

- A. Site location and transit access eligibility criteria: Is Project located within 1/2 mile of a "major transit stop or a high quality transit coridor ("HQTC") as designated in a regional transit plan? [Note: a HQTC must have fixed bus service at no less than 15 minute intervals during peak periods; and if the project site is partly outside the 1/2 mile area then effectively no more than 10% of the project is more than 1/2 mile from the HQTC.]
- B. Site size and use type eligibility criteria: Is the Project either a residential or residential/mixed use project with:
 - A minimum net density of 20 units per acre?
 - Has a minimum residential component of 50% of total building square footage, and if it has between 25-50% non-residential uses the project has a minimum floor area ratio of 0.75?

C. SB 375 Plan consistency criteria: Is Project consistent with the "general use designation, density, building intensity, and applicable policies for the project area" in an SB 375 plan (Sustainable Communities Strategy or Alternative Plan Strategy) adopted by the regional metropolitan planning organization (e.g., SCAG)?



SB 375 (Steinberg, 2008) "CEQA Streamlining" Will This CEQA Reform Help Your Infill Project?

STEP 3: Is the TPP a "Sustainable Communities Project"? ALL CRITERIA MUST BE MET:

- 1. Project is served by adequate existing utilities
- 2. Project pays or offers to pay all in lieu and development impact fees?
- Project site has no wetlands or riparian areas, and has no significant value to wildlife habitat
- Project will cause no "harm" to any plant or animal species protected under federal, state or local law
- Project site is not on the "Cortese" list of contaminated and formerly contaminated/remediated sites?
- If contaminated but not on "Cortese" list, project has a completed contamination assessment and contamination will either be removed or mitigated to have no significant impact on or off-site
- 7. Project has no significant effect on any historic resource
- 8. Project has no significant fire or public health hazard risk
- 9. Project is not located in earthquake fault or seismic hazard zone
- Project is not located on "developed open space" consisting of open space that is publically owned or partly acquired with public funds, is open to and used by the public, and has only park and park-like structures (play equipment, benches, etc.)
- 11. Project is 15% more energy efficient than required by California Code
- 12. Project uses 25% less water than average households
- 13. Project is a maximum of 8 acres
- 14. Project has a maximum of 200 dwelling units
- 15. Project will cause no net loss in affordable housing
- 16. Project has no single level building larger than 75,000 square feet
- Project complies with all applicable mitigation measures and performance standards from prior EIR
- 18. Project causes no significant conflicts with nearby industrial uses
- Located closer to transit service than TPP (1/2 mile from rail or ferry station, or 1/4 mile from HQTA, as identified in regional transit plan
- 20. Includes one of these affordable housing components:
 - a. Project includes 20% for sale units, or 10% low and 5% very low rental units
 - b. Developer gives enough money to local government to assure that outcome in (a) above is achieved
 - c. Project includes open space equivalent to 5 acres of parks per 1,000 residents of project

Holland & Knight

After a public hearing before legislative body of the lead agency (e.g., City Council or Board of Supervisors), the TPP may be declared a "Sustainable Communities Project" which is statutorily exempt from CEQA.

Step 1A: TPP may go through normal CEQA process, but if it has NO significant impacts it is "eligible for" an alternative "Sustainable Communities Environmental Assessment" (SCEA) CEQA process. SCEA requires:

- Initial study identifying all significant or potentially significant TPP impacts, and any cumulative impacts that have been "adequately addressed" in a prior EIR (e.g., a
- General or Specific Plan EIR). 2. Mitigation of all TPP impacts to less than significant level
- Mitigation of all cumulative impacts to less than significant level (except those within other agency's jurisdiction).
- 30-day public review period, hearing, and legislative body decision or appeal right required.

Step 1B: If TPP is not eligible for SCEA (e.g., project-level or cumulative significant adverse impacts remain), then TPP EIR is required, and EIR may focus on significant impacts and need not consider off-site alternatives.

Normal CEQA Litigation Process Applies:

- Abuse of discretion for Infill EIR and exemption determination: Substantial evidence
- Abuse of discretion for Mitigated Negative Declaration: Fair argument

Introduction

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Tom Liao- City of San Leandro Deputy Community Development Director



City of San Leandro Downtown TOD Strategy

- Priority Development Area (established residential and commercial growth areas through 2035)
 - Consistent with regional SCS (Plan Bay Area)
 - Approx. 3400 residential units, 720,000 s.f. office, 120,000 sf. Retail
- Challenging Issue: Parking and Land use
 - Feasibility of lower parking ratios
 - Inadequate public parking garages
 - Higher density office near BART tracks (vs residential).
 - Increasing mass transit ridership
 - 5.0 FAR in TOD Land Use areas next to BART.

City of San Leandro Downtown TOD Strategy

- Notable CEQA Analytical Strategies
 - Downtown TOD Strategic Program EIR
 - IS-ND/MND for future development
- Mitigation Measure Strategies
 - Traffic Control Measures (Air Quality)
 - TOD Parking Strategies (Transportation/Parking)
- Lesson's Learned
 - Expect the unexpected (Great Recession)
 - More Flexibility

Marea Alta Project

- Nonprofit Developer: BRIDGE Housing Corporation
 - 200 affordable rental units (2&3 bedrooms and senior)
 - childcare center (not yet built),
 - 408 underground parking spaces (including 245 BART replacement parking spaces.
 - located on former BART parking lot
- Challenging Issue: Avoid re-entitlements
 - Entitlements transferred to BRIDGE Housing
 - Public financing deadlines

Marea Alta Project

- Notable CEQA Analytical Strategies IS-MND Tiered Off Program EIR
- Mitigation Measure Strategies
 - Variable parking standards by phase and bike parking/storage
 - Shared payment for new signalized intersection in/near BART
 - Solar roof panels to power building common areas, 75% replacement of BART parking (vs 100%)
- Lesson's Learned
 - Persistence & Patience
 - Committed Public-private partnerships
 - Committed public leadership

San Leandro Tech Campus

- Private Developer: Westlake Urban
 - 3 Phases: (2) 6-story offices @ 132, 000 s.f, 5 story office @ 100,000 s.f.
 - 1100 space parking structure
- Challenging Issue: CEQA Streamlining due to water demand capacity
 - Prepared IS-MND instead
- Challenging Issue: Achieving Lower TOD Parking Ratios
 - Commercial tenant documented need for more parking
 - Parking ratio reduced by phase and establishment of TDMs

San Leandro Tech Campus

- Notable CEQA Analytical Strategies
 - IS-MND tiered off of Program EIR
- Mitigation Measure Strategies
 - TDMs, recycled water use, energy efficiency systems, ADA & public safety improvements at rail crossings, connection to East Bay Greenway
 - Other environmental features: LEED Gold for Phase 1, EV stations in parking garage
 - Lessons Learned
 - Compromise now to achieve TOD goals in long-term
 - Embrace technology
 - Push the high density development envelop

San Leandro General Plan Update

- Challenging Issue: Alameda County Traffic Modeling
 - City traffic would increase substantially due to regional growth
 - Considered significant and unavoidable impact
- Challenging Issue: GHG Emission Reduction Targets
 - Maintain accurate qualitative methodology
 - Considered Significant and Unavoidable
- Challenging Issue: LOS vs. VMT
 - Utilize LOS now but included VMT policies anticipating shift to VMT
 - Utilized lower LOS standard for PDA/TOD areas (less auto focused)
- Challenging Issue: Noise
 - Potential mitigation measures were infeasible

San Leandro General Plan Update

- Notable CEQA Analytical Strategies
 - Program EIR
 - Self-Mitigating General Plan(MMRP)
- Mitigation Measure Strategies
 - Health risk assessment for industrial/warehouse uses (Air Quality)
 - Street/traffic signal improvements at key intersections (Transportation)
 - Lessons Learned
 - Keep future options open (VMT, self-driving cars)
 - Transparency/public outreach are vital

Bay Fair TOD Specific Plan and EIR (Underway)

- Challenging Issue: Auto-centric CEQA analysis;
 - no alternative
 - Walking, biking, transit use, open space are non-factors on impacts
 - Disproportionate time/money expended on traffic issues
- Challenging Issue: Limitations of Traditional Modeling
 - Traffic, air quality, GHG, and traffic noise = key issues
 - Overstated negative/understated positive impacts
 - How to effectively convey the environmental benefits of high density?
 - VMT may be transformational
 - regulatory framework remains in flux

Bay Fair TOD Specific Plan and EIR

- Notable CEQA Analytical Strategies
 Program EIR
- Mitigation Measure Strategies
 - To Be Determined
 - Draft Plan & EIR due out in Summer 2017
- Lessons Learned (so far)
 - Ensure key stakeholders are engaged
 - Communicating growth impacts from a Plan vs Project to public
 - Stay Tuned!

Chris Bersbach – Rincon Consultants, Inc. Technical Services Program Manager



Challenges with TOD and Noise Issues

- Density
 - More people, closer together
 - Noise-sensitive receptors in close proximity to noise sources
- Regulatory Environment
 - Typically driven by local General Plan policies and Noise Ordinance requirements
 - Also some applicable State requirements (interior requirement in Title 24)
 - Conflicts between progressive Land Use goals and existing policies/standard to protect people from noise
 - Potential for multiple agencies, standards, thresholds

Lynwood Transit Area Specific Plan

- Specific Plan to facilitate transit-oriented community design
- Prioritize development of sites along major roadway corridors, existing industrial and hospital districts, and existing neighborhoods in the project area
- Challenging Issues/Methods:
 - Interior Noise
 - Noise at roadway-facing balconies/patios
 - Existing and future roadway noise levels estimated using FHWA Traffic Noise Model Version 2.5



Lynwood Transit Area Specific Plan

- Mitigation Strategies:
 - Buffer noise-sensitive land uses
 - Site non-habitable uses near arterial roadways
 - Site balconies away from roadways
 - Shield balconies to reduce exterior noise
 - Interior noise mitigation
 - STC-rated windows, doors, walls
 - Post-development interior noise analysis to verify compliance
 - Lessons Learned
 - Mitigation through design, so early evaluation is key

Baldwin Park Transit Center Apartments IS-MND

- Mixed-use development including residential and retail
- Located across from Baldwin Park Metrolink Station
- Challenging Issues/Methods:
 - Metrolink rail next to project site, Metrolink and freight train pass-bys
 - Metrolink noise levels estimated using Department of Housing and Urban Development's Online Day/Night Noise Level Calculator
 - Analysis determined that rail noise would not exceed the local standard at the site

Baldwin Park Transit Center Apartments IS-MND

"Mitigation" Strategies:

- LA Metro noise easement deed
 on the residential portion of the project site
 - Language informing potential residents of the noise and vibration from train operations included in lease agreements

Lessons Learned

- CEQA "significance" is often just one piece of the puzzle
- Public concern may drive mitigation needs



Long Beach Civic Center Supplemental EIR

- Mixed use (library, offices, park, commercial, residential) project
- One block from a major transit center in downtown Long Beach
- Challenging Issues/Methods:
 - Construction noise conflicts between phases of development with different timelines
 - Construction noise evaluated using noise levels reported by FTA's Office of Planning and Environment
 - More recent projects use RCNM
 - Construction & demolition vibration
 - Pile driving may be required
 - Lower vibration thresholds for historic structures

Long Beach Civic Center Supplemental EIR

- Mitigation Strategies:
- Develop Noise Control Plan to address demolition noise, including hearing damage safety radius
 - Vibration Control Plan to repair damage caused by demolition
- Lessons Learned
 - More accurate project information (e.g., construction schedule/phasing/equip) leads to better analysis (and maybe less mitigation)

Santa Maria General Plan/Noise Ordinance

- City updated the noise standards in their General Plan and Municipal Code to allow higher noise levels at "outdoor living areas" in multifamily development projects
- Allowable primarily in the downtown area of the City
- Lessons Learned
 - CEQA practitioners and lead agencies can coordinate to facilitate requirements that are appropriate for urban/TOD areas

Bill Piazza –Air Quality Dynamics Principal



Sustainable Communities Strategy

- The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act or SB 375) supports California's climate goals by <u>linking integrated land use and transportation</u>
 <u>planning</u> with reductions in greenhouse gas (GHG) emissions.
 - A key feature of SB 375 is the encouragement of Transit-Oriented Development (TOD) that promotes higher residential and employment densities in High Quality Transit Areas (HQTA) which would <u>serve to reduce total vehicle miles traveled by placing</u> homes and jobs closer to existing and planned transit networks which lie in close proximity to existing freeway corridors. Some TODs can therefore present a challenge by potentially reducing regional emissions while increasing the exposure of residents in those project areas to elevated pollutant concentrations found in near-roadway environments.

Health Effects of Mobile Source Emissions

- Health effect studies indicate that residing near sources of traffic pollution is associated with adverse health effects such as exacerbation of asthma, onset of childhood asthma, non-asthma respiratory symptoms, impaired lung function, reduced lung development during childhood, and cardiovascular morbidity and mortality.
 - Other reputable research entities such as the Health Effects Institute indicate that exposure to unhealthy traffic emissions may in fact occur up to 300 to 500 meters (984 to 1640 feet). The range reported by HEI reflects the variable influence of background pollution concentrations, meteorological conditions and season.

- Section 15126.2. Consideration and Discussion of Significant Environmental Impacts.
 - Section (a) The Significant Environmental Effects of the Proposed Project.
 - The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected.
- <u>California Building Industry Assoc. v. Bay Area Air Quality</u> <u>Management District (Dec. 17, 2015)</u> challenged the District's adoption of new CEQA guidance, including thresholds for determining whether a project's exposure to existing levels of toxic air contaminants would result in a significant impact.
- The California Supreme Court accepted the case for review, limiting its examination of whether CEQA requires "an analysis of how existing environmental conditions will impact future residents or users (receptors) of a proposed project."

- The Court ruled that the determination of a "significant effect on the environment" is explicitly defined by statute in a manner that does not encompass the environment's effect on the project.
 Requiring such an evaluation in all circumstances would impermissibly expand the scope of CEQA.
- The Court identified several statutory exceptions to this "general rule." They include:
 - airport projects (Section 21096)
 - school construction projects (Section 21151.8)
 - housing projects (Sections 21159.21, 21159.22, 21159.23, and 21159.24)
 transit priority projects (Section 21155.1)

- Aside from these statutory provisions, the Court did not exclude further consideration of existing conditions from CEQA and noted:
 - An agency must "evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present" and;
 - CEQA does not prohibit an agency from considering as part of an environmental review how existing conditions might affect a project's future users or residents.

- California Air Resources Board (CARB) promulgated an advisory recommendation to <u>avoid siting sensitive land uses within 500</u> feet of a freeway, urban roads with 100,000 vehicles per day or rural roads with 50,000 vehicles per day.
 - CARB notes that a site specific analysis would be required to determine the actual risk near a particular land use and should consider factors such as prevailing wind direction, local topography and climate.

- Los Angeles County Department of Public Health (LACDPH) strongly recommends <u>a buffer of at least 500 feet be maintained</u> <u>between the development of new schools, housing or other</u> <u>sensitive land uses and freeways</u>.
 - New schools, housing or other sensitive land uses built within 1500 feet of a freeway should adhere to current best-practice mitigation measures to reduce exposure to air pollution which may include: the use of air filtration to enhance heating, ventilation and air conditioning (HVAC) systems, and the orientation of site buildings and placement of outdoor facilities designed for moderate physical activity as far from the emission source as possible.

- South Coast Air Quality Management District (SCAQMD) recommends that, prior to approving the project, lead agencies consider the impacts of air pollutants on people who will live in a new project and provide mitigation where necessary.
 - The SCAQMD notes the limited effectiveness of air filters to remove gaseous emissions as well as the need to address outdoor exposures while individuals frequent amenities such as courtyards and related common areas.

- Ventura County Air Pollution Control District (VCAPCD) recommends that development projects which site near congested intersections or <u>roadways with</u> high traffic volumes be assessed for localized criteria and toxic pollutant
 impacts.
- Santa Barbara County (SBCAPCD) strongly recommends lead agency policies which require <u>re-designing a residential project so that sensitive receptors are</u> <u>moved 500 feet away from a freeway</u> to reduce potential health impacts.
- Sacramento Metropolitan Air Quality Management District (SMAQMD)
 recommends avoiding land use conflicts such as siting sensitive receptors in
 <u>close proximity to a congested intersection or roadway</u> with high levels of
 emissions from motor vehicles.
- Bay Area Air Quality Management District (BAAQMD) recommends when siting new receptors near freeways or major roadways, existing or future proposed sources of TAC and/or PM2.5 emissions that would adversely affect individuals within the planned project should be examined.

Lead Agency Guidelines

City Burbank

 The City of Burbank's 2035 General Plan requires the completion of a <u>health risk assessment</u> when siting sensitive land uses near significant pollutant sources such as freeways and rail lines.

City of Los Angeles

 The Los Angeles City Planning Commission (Commission) has drafted an advisory notice regarding siting sensitive land uses near freeways. The Commission advises that applicants of projects requiring discretionary approval, located within 1,000 feet of a freeway, and contemplating residential units and other sensitive uses, perform a <u>health risk assessment</u>.

City of San Francisco

In an effort to identify areas of San Francisco most adversely affected by sources of TACs, San Francisco partnered with the BAAQMD to conduct a <u>citywide health risk assessment based on an inventory and assessment of air pollution and exposures from mobile, stationary, and area sources within San Francisco</u>. Areas with poor air quality, termed the "Air Pollutant Exposure Zone," were identified based on health-protective criteria that considers estimated cancer risk, exposures to fine particulate matter, proximity to freeways and locations with particularly vulnerable populations.

Health Risk Assessment for Freeways

- Health risk assessment is the process to estimate the nature and probability of adverse health effects to individuals who are exposed to pollutant concentrations through the inhalation pathway now and/or in the future.
- The steps in the health risk assessment process are:
 - Source Identification
 - Source Characterization
 - Exposure Quantification
 - Risk Characterization

- Source Identification
- Proposed Project 5-story residential apartment with 3 levels of subterranean parking
 - Buildout Year 2018
 - Source Location Los Angeles County
 - Freeway Link Interstate 405 with 2 on ramps/2 off ramps
 - Route Speeds 65 and 60 MPH north/southbound (average)/10 MPH (minimum)





California Department of Transportation Hourly Freeway Traffic Volumes

	Roadway Segment	Speed Scenario		Traffic Volumes	
CITYNATIONA			All	Gas	Diesel
	Interstate 405 Northbound	Average	5999	5785	214
	Interstate 405 Southbound	Average	6644	6407	237
	Interstate 405 Northbound	Minimum	5773	5567	206
	Interstate 405 Southbound	Minimum	6260	6037	223
	Northbound Off/Santa Monica Boulevard	Average Minimum	1066	1028	38
	Northbound On/Santa Monica Boulevard	Average Minimum	470	453	17
4	Southbound Off/Santa Monica Bouldvard	Average Minimum	435	419	15
	Southbound On/Santa Monica Boulevard	Average Minimum	660	637	24
SAL DE CARE			100 Mar		

- Source Characterization
- California Air Resources Board EMFAC2014 emission factor model was utilized to identify pollutant emission rates for:
 - Total Organic gases (TOG),
 - Benzene
 - Formaldehyde
 - 1,3-Butadiene
 - Acetaldehyde
 - Acrolein
 - Diesel Particulates,
 - Particulates (PM₁₀ and PM_{2.5}),
 - Carbon Monoxide (CO)
 - Nitrogen Oxides (NO_x)

California Air Resources Board EMFAC2014 Vehicle Fleet Mix Profile

	Vehicle Class	l	os Angeles County	(SC)
ent		Fuel	Population	Percent
udv	LDA	Diesel	28725	0.44
uuy	LDA	Gas	3570797	54.95
C2011	LDT1	Diesel	480	0.01
C2014	LDT1	Gas	314311	4.84
	LDT2	Diesel	1870	0.03
	LDT2	Gas	1259405	19.38
	LHDT1	Diesel	43038	0.66
/	LHDT1	Gas	76637	1.18
1 y	LHDT2	Diesel	19200	0.30
	LHDT2	Gas	15529	0.24
	МСҮ	Gas	156381	2.41
	MDV	Diesel	11000	0.17
	MDV	Gas	833248	12.82
	МН	Diesel	4264	0.07
	МН	Gas	20253	0.31
	MHDT	Diesel	66252	1.02
The state	MHDT	Gas	12067	0.19
	HHDT	Diesel	46832	0.72
	HHDT	Gas	480	0.01
	OBUS	Diesel	3480	0.05
WIN .	OBUS	Gas	5207	0.08
: C	SBUS	Diesel	2727	0.04
	SBUS	Gas	1107	0.02
	UBUS	Diesel	3840	0.06
1 1 1	UBUS	Gas	1299	0.02

Source-Receptor Grid Network



Risk Characterization

- For chronic, annual and 24-hour exposures, concentration estimates for residential receptors were considered static whereby exposures are assumed to be continuous based upon the averaging time under consideration. Short duration exposures (i.e., 1-hour and 8-hours) apply to all receptor locations including common areas since it is reasonable to assume that an individual could be present for periods of one to eight hours.

Carcinogenic Chemical Risk / Threshold 1.0E-05

Maximum Exposed Receptors

	Exposure Scenario		
Floor Level	30 Year	9 Year	
1	2.1E-05	6.3E-06	
2	2.0E-05	6.1E-06	
3	1.9E-05	5.6E-06	
4	1.6E-05	4.9E-06	
5	1.4E-05	4.1E-06	

Non-carcinogenic Hazards / Threshold 1.0 (unity)

Maximum Exposed Receptor

Receptor	Chronic	Short Duration (1/8 Hour)
1	6.1E-02	6.6E-02 / 1.1E-01

CO Threshold Background + Source > 20 PPM

Averaging Time Background 1-Hour **CO Threshold Background + Source > 9 PPM**

Maximum Exposed Receptors

Maximum Exposed Receptors

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Averaging Time	Background	Source	Concentration
8-Hour	1.4 ppm	0.16550 ppm	1.5655 ppm

2.1 ppm

Source

0.43810 ppm

Concentration

2.5381 ppm

NO₂ Threshold Background + Source > 0.18 PPM **Maximum Exposed Receptors**

Averaging Time	Background	Source	Concentration
1-Hour	0.0639 ppm	0.03969 ppm	0.10359 ppm
: (in			

PM₁₀ >4 μg/m³ (24-Hour) / >1.0 μg/m³ (Annual)

PM_{2.5} >2.5 μg/m³PPM

Maximum Exposed Receptors

Floor Level	PM ₁₀ 24-Hour	PM ₁₀ Annual	PM _{2.5} 24-Hour
1	9.73830	6.38269	3.70250
2	9.54478	6.26570	3.59050
3	9.14005	5.95995	3.37610
4	8.27343	5.34176	3.00102
5	7.17391	4.55244	2.57442

- Mitigation of Particulate Impacts
 - Installation of air filtration systems with efficiencies equal to or exceeding Minimum Efficiency Reporting Values (MERV) as defined by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 52.2.



Particulate Filter Efficiencies

Floor Level	MERV Rating
1	≥13
2	≥13
3	≥13
4	≥13
5	≥13

CITYNATIONAL BANK

Maximum Residential Receptor / Carcinogenic Risk w/MERV 13 Filter Mitigation

	Floor Level	Exposure Scenario	TUNNUT
		30 Year	
	1	9.7E-06	
_	2	9.4E-06	
	3	8.7E-06	
	4	7.6E-06	
	5	6.4E-06	

Maximum Residential Receptor / PM₁₀ and PM_{2.5} w/MERV 13 Filter Mitigation

		Рс	ollutant / Averaging	Time
	Floor Level	PM ₁₀ 24	PM ₁₀ Annual	PM _{2.5} 24-
III IIII		Hour		Hour
	1	0.97383	0.63827	0.37025
	2	0.95448	0.62657	0.35905
	3	0.91401	0.59600	0.33761
	4	0.82734	0.53418	0.30010
E FT	5	0.71739	0.45524	0.25744
			a J La Cienega	

- Section 15183.5. Tiering and Streamlining the Analysis of Greenhouse Gas Emissions.
 - Section (c) Special Situations. As provided in Public Resources Code sections 21155.2 and 21159.28, environmental documents for certain residential and mixed use projects, and transit priority projects, as defined in section 21155, that are consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in an applicable sustainable communities strategy or alternative planning strategy <u>need not analyze global warming impacts resulting from cars and light duty trucks.</u>

Ezra Pincus-Roth – Nelson Nygaard Transportation Planner

NELSON NYGAARD

Transportation Performance Measures

- Carbon emissions?
- Vehicle-miles travelled?
- The amount of land devoted to parking supply over open space?
- Traffic fatalities?
- The classic number of "trips" generated?



Old Transportation Metrics Die Hard

- Model results are to provide insight and, looking around the world these days, we clearly always can't predict the future.
- "Essentially, all models are wrong, but some are useful" George E. P. Box
- The Institute of Transportation Engineers Manual
 - Does not account for the presence of a TDM program (to any extent) on any of the sites it incorporates in its research.

Can you Model the Transportation Demand Impacts of

ron?	Carrots	Mixed	Sticks
	Transit/Shuttle Integration/Improvements	Access management	Vehicle use/VMT fees
	Pedestrian and Cycling Facilities	Car-free planning	Parking pricing
	Bike parking	Market reforms	Road pricing
	Shower/locker facilities	HOV preference	Vehicle use restrictions
	Alternative work schedules	Parking management	
	Telecommuting	Street reclaiming	
	Ridesharing	Traffic calming	
	Carsharing		
	Bikesharing		
	Financial Commuter Incentives		
	Guaranteed Ride Home		
	TDM Marketing		
	Personalized commute planning		
	Source: VTPI		

Every project is different, and our best examples inform our models:

- Urbemis (Incorporates the number of buses and trains per day)
- CalEEMOD (Incorporates whether "accessibility to transit" will improve with the proposed TDM program)

Meridien 25, San Carlos, CA

- Challenging Issues:
 - Modeling the unique surrounding built environment
- Mitigation Strategies:
 - A robust TDM program
 - End-of-trip facilities for bikers
 - New "last mile" sidewalk access improvements in the Development Agreement



Genentech, South San Francisco, CA

Service	Incentive	Resolve Adoption Issue	9 Ovster Point
All Alternative Commute Options	\$4 per day	Guaranteed Ride Home Midday dasher for errands	Channel
Private bus	Wi-Fi and other amenities	Pick-up in neighborhood Not public transportation	OYSTER POINT Ovster West Basin
Public Transportation	\$120 / month provided	Genentech shuttle to / from public transportation	Ilvd Point Park Ast Basin
Car- and vanpooling	Preferred parking Stipend to cover cost - \$4 per day per commuter carried	Ride planning and matching services	Forbes Blvd Forbes Blvd
Biking		Showers and lockers	Forbes F A A A A A A A A A A A A A
	den Ale	Mitchell Ave Cut 20% of its d	AST SIDE Ave Swift Ave Grand Ave Blue Line Transfer rive-alone share in 7 years

CEQA Transportation Strategies

San Brun

Lessons Learned

- Modelling a reduction in trips may or may not take into account the existing conditions on the ground, and some places have better "bones" than others.
- Don't sacrifice a good context-sensitive and researchsupported transportation demand management program to appease a model.
- Think outside the lot on TOD. Work with the community to improve the station area. Make the "last mile" better for all, including your TOD patrons.



CEQA Compliance Strategies for TOD in a Changing Regulatory Environment