Background
Why We are Briefing You:

• Interim guidance will apply to all projects for which Caltrans is CEQA lead
• Includes Caltrans and locally-sponsored projects on SHS
Our Current Practice for CEQA: GHG Analysis

We **have** been analyzing GHG emissions at the project level for over 10 years, including:

- Doing qualitative/quantitative emission modeling
- Emphasis on comparative differences between the alternatives

We **have** been disclosing measures and efforts by Caltrans to reduce GHG

We **have not** been making a CEQA significance determination for GHG
Key Current Mandate

Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America
Published: Apr 29, 2015

New California Goal Aims to Reduce Emissions 40 Percent Below 1990 Levels by 2030

• EO B-30-15
  • GHG emissions target **40% below 1990** level by 2030
  • State Agencies **shall take** climate change into account in their planning and investment decisions
State-wide GHG Emission Targets

![Graph showing GHG emissions targets over time.](https://www.arb.ca.gov/cc/inventory/1990level/1990level.htm)

- **AB32**: 431 MMTCO₂e in 1990 levels
- **SB32**: 258.6 MMTCO₂e in 40% below 1990 levels
- **80% below 1990 levels**
- **EO B-30-15 EO S-3-05**: 86.2 MMTCO₂e in 80% below 1990 levels

https://www.arb.ca.gov/cc/inventory/1990level/1990level.htm
Electricity Generation (Imports) 8%
Electricity Generation (In State) 11%
Industrial 23%
Agriculture 8%
Residential 6%
Commercial 5%
Not Specified <1%
Transportation 39%

2015 Total CA Emissions: 440.4 MMTCO2e

ARB 2017 GHG Inventory: https://www.arb.ca.gov/cc/inventory/data/data.htm
Draft Interim Guidance

Key points
CEQA Checklist GHG Questions

VII. GREENHOUSE GAS EMISSIONS. Would the project:

Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

Does the project have impacts that are individually limited, but cumulatively considerable?
Emission Sources

Construction

Operational
Project Type

Non-Capacity Increasing/ Congestion Relief

- Rehabilitation
- Maintenance
- Replacement
- Repair projects designed to improve the conditions of existing transportation assets (e.g., highways, roadways, bridges, culverts, transit systems, and assets that serve bicycle and pedestrian facilities) and

- Do not increase the number of motor vehicle lanes or result in a change in speed or volume

Capacity-Increasing/ Congestion Relief

- Addition of through lanes
- General purpose/mixed flow lanes, high occupancy vehicle (HOV) lanes, new managed/express/toll lanes
- New interchange or interchange reconfiguration
- Auxiliary lanes over 1 mile
### Examples of Congestion Relief and Capacity-Increasing Projects

<table>
<thead>
<tr>
<th>New Roadway/Facility</th>
<th>Additional Lanes</th>
<th>Interchange Reconfiguration</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Bypass</td>
<td>HOV lane</td>
<td>Ramp widening</td>
<td>Auxiliary lanes more than 1 mile long</td>
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<tr>
<td>New or extended highway</td>
<td>New general purpose or mixed-flow lanes</td>
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<tr>
<td>New interchange</td>
<td>Managed, express, or toll lanes</td>
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<td>Safety</td>
<td>Maintenance</td>
<td>Operational Improvements</td>
<td>Other</td>
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<tr>
<td>Install Rumble Strips</td>
<td>Pavement Rehab</td>
<td>Construct turn pockets</td>
<td>Change Superelevation</td>
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<td>Curve Correction</td>
<td>Slope Stabilization</td>
<td>Install vehicle classification System</td>
<td>Excess Land Disposal</td>
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<td>Install Guardrail</td>
<td>Replace Bridge</td>
<td>Install loop detectors</td>
<td>Construct noise wall</td>
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<td>Install median barrier</td>
<td>Replace Bridge Joint</td>
<td>Install ramp meters</td>
<td>Air space lease</td>
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<td>Seals</td>
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<td>Widen shoulders</td>
<td>Bridge overlay</td>
<td>Install signals</td>
<td>Storm-water improvements and installations</td>
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<td>Install lighting</td>
<td>Storm damage repair</td>
<td>Install receiver and signals for FasTrak</td>
<td>Approve research grants</td>
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<td>Install sidewalk</td>
<td>Restore planting and</td>
<td>Modify intersection</td>
<td>Relinquishment</td>
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<td></td>
<td>upgrade irrigation</td>
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<td>Install signs</td>
<td>Replace culvert</td>
<td>On-ramp/off-ramp improvements</td>
<td>Upgrade park and ride</td>
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<tr>
<td>Replace bridge rails</td>
<td>Tie-back slope/soil nails</td>
<td>Install traffic operation system</td>
<td>Upgrade highway rest areas</td>
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<tr>
<td>Install highway</td>
<td>Replace bridge in-kind</td>
<td>Install closed circuit television cameras</td>
<td>Install wireless cell towers</td>
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<td>planting</td>
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<tr>
<td>Bridge Retrofit</td>
<td>Repair sidewalk</td>
<td>Realignments that don’t add capacity</td>
<td>Upgrade facilities for ADA compliance</td>
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<tr>
<td>Addition of an</td>
<td>Repair signs/lighting</td>
<td>Grade separations</td>
<td>Test drilling and soil sampling</td>
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<td>auxiliary lane of</td>
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<td>less than one mile in</td>
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<td>length</td>
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<td>Install retaining</td>
<td>Install Roundabout</td>
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<td>wall</td>
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<td>Maintenance station</td>
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<td>improvements</td>
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<td>Pavement grinding</td>
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<td>Culvert clean-out</td>
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<td>Maintain storm-water</td>
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Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

**Non-Capacity Increasing Projects**
- **Construction Emissions**
  - Include good faith estimate
  - Addressed by through the inclusion of standard measures designed to reduce or eliminate those emissions

- **Operational Emissions (Qualitative)**
  - Assume no substantive changes in operational emissions

- **Significance**
  - Generally considered to be less than significant w/supporting information

**Capacity Increasing Projects**
- **Construction Emissions**
  - Include good faith estimate
  - Addressed through the inclusion of standard measures designed to reduce or eliminate those emissions

- **Operational Emissions (Quantitative)**
  - Analyze changes in emissions among alternatives: existing, future build, and future no-build

- **Significance**
  - Generally considered significant if future build emissions are greater than existing
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

- **GHG emissions reductions targets**
  
  - Set forth in executive orders, addressed in ARB Scoping Plan for meeting emissions reduction targets

- **SB 375**
  
  - Consistency with applicable Sustainable Community Strategies from MTP or RTP

- **Climate action plans and general plans as applicable**
Does the project have impacts that are individually limited, but cumulatively considerable?

- If the proposed project is expected to result in an increase of operational emissions when compared to existing conditions, then it may be considered a cumulatively considerable contribution to global climate change

- unless substantial evidence is presented that the project will implement or fund its fair share of the mitigation for the GHG cumulative impact
Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring and reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effect of greenhouse gas emissions may include, among others:

- **Measures in an existing plan** or mitigation program for the reduction of emissions that are required as part of the lead agency’s decision
- Reduction in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F
- **Off-site measures**, including offsets that are not otherwise required, to mitigate a project’s emissions
- Measures that **sequester greenhouse gases**
- In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions
Mitigate: Construction Impacts

Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to:

- Use energy and fuel efficient vehicles and equipment. Project proponents are encouraged to meet and exceed all EPA/NHTSA/CARB standards relating to fuel efficiency and emission reduction;
- Use alternative (non-petroleum based) fuels;
- Deployment of zero- and/or near zero emission technologies as defined by CARB;
- Use lighting systems that are energy efficient, such as LED technology;
- Use the minimum feasible amount of GHG-emitting construction materials that is feasible;
- Use cement blended with the maximum feasible amount of fly ash or other materials that reduce GHG emissions from cement production;
Mitigate: Construction Impacts (cont.)

- Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste reduction, recycling and reuse;
- Incorporate passive solar and other design measures to reduce energy consumption and increase production and use of renewable energy;
- Incorporate design measures like Water Sense fixtures and water capture to reduce water consumption;
- Use lighter-colored pavement where feasible;
- Recycle construction debris to maximum extent feasible;
- Protect and plant shade trees in or near construction projects where feasible; and
- Solicit bids that include concepts listed above.
Mitigate: Operational Impacts

- Measures listed in the applicable RTP/SCS EIR
- Measures to improve energy efficiency
- Measures to improve water efficiency
- Incorporation of Complete Streets components
- Installation of solar
- Installation of Zero Emission Vehicle (Zev) infrastructure (i.e. electric vehicle charging stations)
- Planting/vegetation
- Measures to reduce or support reduction of VMT
Point of Contact

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