Welcome to the Gateway Cities AQAP

Environmental Committee

October 26, 2011
AQAP Six Month Outlook

July
- Compendium Update
- I-710 HIA Scope

August
- Draft Community Medical Needs Assessment
- Draft I-710 Near Roadway Modeling (Ultrafines)
- AQ/HRA Protocol
- Draft I-710 Construction Staging and Phasing Analysis

September
- Final Community Medical Needs Assessment
- Final I-710 Near Roadway Modeling
- Final Ultrafines Research

October
- I-710 HIA
- Final I-710 Construction Staging and Phasing Analysis

November - December 2011
- Early Action Projects
- New Air Quality Measures and Various AQAP Products

November 2012
- Early Action Projects
- New Air Quality Measures and Various AQAP Products

Note: Tasks shown in gold are scheduled to be completed in time for consideration in the I-710 EIR/EIS.
# AQAP Task Update

<table>
<thead>
<tr>
<th>Technical Tasks</th>
<th>Status</th>
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<tbody>
<tr>
<td>Comm. Medical Needs Assessment</td>
<td>Completed</td>
</tr>
<tr>
<td>I-710 Near Roadway Modeling</td>
<td>Completed</td>
</tr>
<tr>
<td>I-710 Ultrafines</td>
<td>Completed</td>
</tr>
<tr>
<td>Air Quality Protocol</td>
<td>Completed</td>
</tr>
<tr>
<td>Compendium Update</td>
<td>Completed</td>
</tr>
<tr>
<td>Quantitative Air Quality Analysis</td>
<td>In process</td>
</tr>
<tr>
<td>I-710 Construction Staging and Phasing Assessment</td>
<td>Final findings presented today</td>
</tr>
<tr>
<td>The I-710 Health Impact Assessment</td>
<td>Final findings presented today</td>
</tr>
<tr>
<td>Health Risk Assessment</td>
<td>In Process</td>
</tr>
<tr>
<td>Develop Air Quality Strategies</td>
<td>Task starts in 2012</td>
</tr>
<tr>
<td>Analysis of New Air Quality Measures</td>
<td>Task starts in 2012</td>
</tr>
<tr>
<td>Early Action Support</td>
<td>In Process</td>
</tr>
<tr>
<td>Develop AQAP Report</td>
<td>Task start in April 2012</td>
</tr>
<tr>
<td>Public Outreach</td>
<td>In Process</td>
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</table>
### AQAP Project Overview Schedule

<table>
<thead>
<tr>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
</table>

- **Task 1:** Project Plans, Schedule, Management
  - Data Collection

- **Task 2:** Compendium Update
  - Comm. Medical Needs
  - Near Roadway Modeling Evaluation
  - Completed

- **Task 3:** Quantitative AQ Analysis
  - 710 Construction Staging and Phasing Impacts

- **Task 4:** 710 Health Impact Assessment
  - 710 Draft EIR/EIS Released

- **Task 5:** Health Risk Assessment for the AQAP Study Area

- **Task 6:** AQ Strategies
- **Task 7:** New AQ Measures
- **Task 8:** Early Action Items
- **Task 9:** AQAP Development
- **Task 10:** Community and Public Outreach

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**Notes:**
- Specific tasks and their statuses are shown across different years and months.
- Highlighted tasks indicate key milestones and outcomes.
Thank You

Questions / Comments?
Item VII C – I-710 Construction Staging and Phasing Emissions Final Report

Environmental Committee
October 26, 2011
Objectives

Estimate emissions for:

- A reasonable foreseeable concept of construction staging and phasing of the I-710 corridor improvements
- Duration of construction 17 years (2018 – 2034)
Key Assumptions

• Criteria and MSAT air pollutants
• Alternative 6 – 4 freight corridor and 10 general purpose lanes were evaluated.
• Daily and monthly emissions at location of activity
• GHG (on-site and tailpipe only – not life cycle)
• Construction fleet changes every year
  • Reasonable give long duration of project
Key Assumptions continued

- Freight corridor built first – funding available as one project
  - Start north and south segment at same time
- Average of 20 working days per month
- Construction phases are sequential within segment
- Construction schedule follows late finish
- LACMTA “Green” Construction Policy not included in analysis
- No onsite concrete or asphalt batch plants
Approach

1. Use construction data from GCCOG Construction Staging/Phasing concept report for each segment
   a. Area disturbed, project length and/or area, project duration, soil hauling, acres disturbed per day,
   b. duration of each stage and phase within segment

2. Input construction data into the enhanced Roadway Construction Emissions Model

3. Output daily emissions on a month by month basis for each of seven construction phases
Approach continued

4. Develop monthly emissions for each segment

5. Sum daily and monthly emissions across all segments over entire project time frame (2018-2034)

6. Also report peak daily emissions for each segment (2018-2034)
Methodology: Overview

• Based on GCCOGs concept report (April 2011) for information on:
  • Location (segment) and duration (phases) of construction activity
  • Type of construction activity (%roadways, %bridge)
• Enhanced version of Roadway Construction Emissions Model (originally developed for Sacramento AQMD)
  • OFFROAD emission factors extended to 2035
  • Now includes mobile source air toxic and all GHG’s
  • For EMFAC, uses South Coast air basin fleet
Methodology: Overview

- On-road Activity (e.g., watering trucks)
  - CARB EMFAC2007 model – South Coast Air Basin
- Off-road Activity
  - Construction equipment based on statewide fleet
  - Updated with new CARB model (August 2011)
    - Equipment population post recession and slower growth projection
    - Updated average load factors by equipment type
- MSAT speciated from VOC and PM via CARB speciation database
Methodology: Modifications to Inputs

Activity Data provided by GCCOG

• Data Organization
  – Segment → Sub-segment → Multiple stages and Multiple phases
  – Model timeline and location provided on a stage/phase level

• Bridge (overpass) and Roadway Data
  – Data combined both bridge and roadway construction data on Sub-Segment level
Methodology: Roadway Construction Emission Model Output

- Four outputs are given in mass per day.
  - By type of construction activity
    - Grubbing/land clearing
    - Grading/excavation
    - Drainage/utilities/sub-grade
    - Paving
  - Since inputs are by sub-segment, outputs from model apply to the entire sub-segment
    - Daily emissions applied to the stage-phases within each sub-segment.
### Methodology: RCEM Output (continued)

### Allocation of emission factors by construction phase

#### SEGMENT 2

<table>
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<tr>
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<td><strong>Stage 1 Phase 1</strong></td>
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<td>GLC</td>
</tr>
<tr>
<td>ROG (lbs/month)</td>
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<tr>
<td>NOX (lbs/month)</td>
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<tr>
<td><strong>Stage 2 Phase 1</strong></td>
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<tr>
<td>NOX (lbs/month)</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<tr>
<td>ROG (lbs/month)</td>
<td>8.5</td>
</tr>
<tr>
<td>NOX (lbs/month)</td>
<td>2.5</td>
</tr>
</tbody>
</table>

GLC = Grubbing/Land Clearing  
GEX = Grading/Excavation  
DUS = Drainage/Utilities/Sub-Grade  
Pav = Paving
Methodology: Roadway Construction Emission Model Output (continued)

- Apply either bridge or roadway daily emission factors to individual stage-phases.

- Allocation of daily emission factors to construction schedule

- Daily emissions are multiplied by 20 for monthly emissions
Findings

**Peak NO\textsubscript{x} Emissions (lbs/day)**

Peak NO\textsubscript{x} Daily Emissions for Any One Segment\textsuperscript{1}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{peak_nox_emissions.png}
\end{figure}

\textsuperscript{1} If LACMTA green policy was applied during the 2019-2020 construction period peak daily emissions would be reduced by approximately 39% and would then be below the 100 lbs per day SCAQMD regional significance threshold.
Most PM$_{10}$ generated from construction fugitive dust
Findings continued

Peak PM$_{2.5}$ Emissions (lbs/day)

Peak PM$_{2.5}$ Daily Emissions for Any One Segment$^3$

$^3$ If LACMTA green policy was applied during the 2019-2020 construction period diesel particulate emissions (DPM) would be reduced by approximately 44% but would reduce total PM$_{2.5}$ emissions by less than 10%.

Most PM$_{2.5}$ generated from construction fugitive dust
Findings continued

• Only NO$_x$ and PM show exceedance of AQMD regional significance thresholds.

• PM$_{2.5}$ and PM$_{10}$ from diesel emissions (associated with construction equipment exhaust) do not exceed the AQMD regional thresholds of significance.

• Exceedances are generated primarily by fugitive dust from construction activities.
## Findings continued

<table>
<thead>
<tr>
<th>Segment</th>
<th>Total Months of Construction (per Segment)</th>
<th>Total Months the Emissions Threshold is Exceeded</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td>CO</td>
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<tr>
<td>7</td>
<td>60</td>
<td>none</td>
</tr>
</tbody>
</table>

Note: Bold values indicate exceedances are due primarily from fugitive dust.
Conclusions

\[ \text{NO}_x, \ PM_{10} \ and \ PM_{2.5} \]

- Only segments 1, 3-6 show periods with exceedance of regional significance threshold, but only 0-27% of the construction period

- Analysis is developed for each segment and changes at the local scale (geometry, interchanges) will not impact the emission findings

Robust analysis is useful for air quality modeling and health risk assessment

- Detailed info for specific times and locations
Possible Mitigation Measures

Emission reductions for PM$_{10}$ and PM$_{2.5}$ fugitive dust

- Implicit in RCEM (50% efficiency 4-hr watering cycle)
- More frequent watering (2.1-hr 74% efficiency)
- Smaller disturbance areas
- Use of surfactants
  - chemical stabilizers such as calcium chloride
  - Increases surface tension of water molecules between dust particles leads to slower evaporation and further binds dust particles to soil.
Possible Mitigation Measures continued

Emission reductions for NO\textsubscript{x} and diesel PM

- If LACMTA “Green construction policy” implemented:
  - Requires use of Tier 4 equipment
    - large emission reduction in 2019-2020 period for segment 4 & 6 and is estimated to have:
      - 39% reduction in NO\textsubscript{x} emissions and reduced below NO\textsubscript{x} regional significance threshold
      - 44% reduction in diesel PM
  - Modify construction duration to manage activity at a less intensive use over a longer period
Thank You

Questions / Comments?
Item VII B – AQAP Participation
Framework Committees Reports

Environmental Committee
October 26, 2011
Participation Framework

Oct/Nov

- I-710 HIA Draft Findings & Recommendations

- I-710 Project Team
  - GCCCOG Board
  - Transportation Committee
  - Environmental Committee
  - AQAP Roundtables
  - AQAP Technical Working Groups

- October 12/13 Roundtable Meetings
- October 24th SPECIAL ROUNDTABLE MEETING
- October 5th
- October 26th
- November 2nd

I-710 HIA September 26th & October 3rd
Thank You

Questions / Comments?
Item VII D – I-710 HIA Final Draft Report

Environmental Committee
October 26, 2011
Agenda

- Presentations & Discussion of HIA Chapters:
  - Mobility
  - Air Quality
  - Traffic Safety
  - Jobs & Economy
  - Access to Neighborhood Resources
  - Noise
HIA Goals

• Provide I-710 Corridor Project decision-makers and other stakeholders with positive and negative health effects, findings, and recommendations for alternatives being considered;

• Increase stakeholder participation and understanding of the I-710 Corridor Project;

• Identify community health concerns/issues within the Gateway Cities and their relationship to the I-710 Corridor Project;

• Provide a model for future transportation and infrastructure HIAs (including evidence and utility of doing an HIA);

• Add value to the I-710 related analyses while utilizing the I-710 Corridor Project EIR/EIS technical data in the HIA to the greatest extent possible to reduce redundancy.
This document is a preliminary draft representing the opinions of Human Impact Partners, and does not represent the opinions (or endorsement) the GCCOG. This AQAP study is not part of the I-710 Corridor Project studies, but upon completion, it will be submitted to Caltrans for review and consideration for use in preparing the I-710 Corridor Project EIR/EIS.
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Mobility Literature Review

• Active Transport – Walking & Biking
  o Lack of physical activity is associated with many diseases (incl. heart disease, diabetes, obesity, depression) and mortality. Even small amounts of physical activity can have a large impact on health outcomes. (CDC)
  o Traffic volume and speed have been shown to explain most of the variation in perceived safety for pedestrians (Landis 2000)

• Public Transit
  o Public transit users spend a median of 19 minutes daily walking to and from transit; 29% achieve recommended physical activity (Besser 2005)

• Driving
  o Faster driving times can allow people to spend more time with their families, getting physical activity, or doing other things that are beneficial for health
  o Improvements in automobile level of service have been associated with harmful health impacts related to traffic injury rates & physical activity for local residents
Existing Conditions Related to Mobility

- Vehicle availability: approx. 9% of the population does not have access to a vehicle
- Community has significant concerns regarding mobility
- Walkability/Bikeability conditions are excellent in some areas of the Gateway Cities and not good in other areas
- Heart disease and diabetes rates appear to be similar to county levels near the I-710; diabetes and obesity rates are higher near the I-710
Despite proposed infrastructure improvements (Alts 5A, 6A/B/C), research indicates:

- Walking and biking rates are likely to decrease under all the alternatives being considered due to:
  - Increased traffic volumes on arterials (Alts 1, 5A, 6A/B/C)
  - Increased traffic speeds on arterials (Alts 5A, 6A/B/C) due to intersection changes

- Public transit usage likely to
  - Increase under Alts 1 & 5A due to congestion
  - Decrease under Alt 6A/B/C due to faster traffic speeds

The magnitudes of these changes are not possible to predict quantitatively because many factors influence these rates.

Source: HIP
Impact Assessment Terms

**Impact** - refers to whether the alternative will improve health (+), harm health (-), or not impact health (~).

**Magnitude** – Reflects a qualitative judgment of the size of the anticipated change in health effect (e.g., the increase in the number of cases of disease, injury, adverse events (Negligible, Minor, Moderate Major))
Impact Assessment Terms

Severity – Reflects the nature of the effect on function and life-expectancy and its permanence
(High = intense/severe; Moderate; Low)

Strength of Causal Evidence – Refers to the strength of the research/evidence showing a causal relationship between noise and the health outcome (♦ = plausible but insufficient evidence; ♦♦ = likely but more evidence needed; ♦♦♦♦ high confidence in causal relationship). Causal effect means, the effect is likely to occur irrespective of the magnitude and severity
Summary of Health Outcomes (2035)

Mobility

- Health outcomes due to changes in active transport primarily as well as social cohesion and stress

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Disease (e.g., cardiovascular disease, diabetes and Decreased Lifespan (e.g., from changes in active transportation, social cohesion, &amp; stress)</td>
<td>~ / - Potentially significant, non-quantifiable</td>
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<td>4 4 4</td>
</tr>
<tr>
<td>Alt 1</td>
<td>Project will have multiple impacts, some of which offset others.</td>
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<tr>
<td>Alt 5A</td>
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<td>Alt 6A</td>
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<td>Alt 6C</td>
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Mental Illness (e.g., depression; from changes in active transportation, social cohesion, & stress)

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
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<th>Uncertainties</th>
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<tbody>
<tr>
<td>Alt 1</td>
<td>~ / - Potentially significant, non-quantifiable</td>
<td>Mod-High</td>
<td>4 4</td>
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<tr>
<td>Alt 5A</td>
<td>Project will have multiple impacts, some of which offset others.</td>
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Injuries and Fatalities Related to Delayed Emergency Response

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt 1</td>
<td>-</td>
<td>Minor</td>
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<tr>
<td>Alt 5A</td>
<td>~</td>
<td>Negligible</td>
<td>Mod-High</td>
</tr>
<tr>
<td>Alt 6A</td>
<td>+</td>
<td>Minor</td>
<td></td>
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<tr>
<td>Alt 6B</td>
<td>+</td>
<td>Minor</td>
<td></td>
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<tr>
<td>Alt 6C</td>
<td>+</td>
<td>Minor</td>
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</tbody>
</table>

Data in the literature is not conclusive regarding the impact of response time on health outcomes: Emergency response time changes roughly estimated.

Explanations:
- Impact refers to whether the alternative will improve (+), harm (-), or not impact health (*).
- Magnitude reflects a qualitative judgment of the size of the anticipated change in health effect (e.g., the increase in the number of cases of disease, injury, adverse events): Negligible, Minor, Moderate, Major.
- Severity reflects the nature of the effect on function and life-expectancy and its permanence: High = intense/severe; Mod = Moderate; Low = not intense or severe.
- Strength of Causal Evidence refers to the strength of the research/evidence showing causal relationship between mobility and the health outcome: ♠ = plausible but insufficient evidence; ♦ ♦ = likely but more evidence needed; ♦ ♦ ♦ ♦ = high degree of confidence in causal relationship. A causal effect means that the effect is likely to occur, irrespective of the magnitude and severity.
Mobility Recommendations (Example)

- Support policies and mechanisms to reduce speeds on targeted residential roads and arterials using traffic calming for safety and to encourage bicycling and walking. For any alternative selected, fully fund and if necessary strengthen enforcement of truck route regulations.

- In targeted areas, using physical engineered measures, reduce traffic speeds and volumes on streets with restaurants, stores, and services so that safety and walkability are improved. Examples include chicanes, lateral shifts, reduced lane width, pedestrian refuges and narrower lane width.

- Adopt or advocate for policies to reduce automobile and truck usage including, for example, increasing use of best available rail technologies to transport freight.
HIA PART 2: Air Quality

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Air Quality: Pathways to Health

1. Air Quality Effects

- **AQ1**: Δ in vehicle emissions due to technology
  - **CQ1**: Δ in # of vehicles (by type) on freeways and arterials
  - **CQ2**: Δ in vehicle speeds on freeways
  - **AO2**: Δ in air pollution due to Δ in use of goods movement facilities

- **AQ2**: Δ in exposure to air pollutants
  - **AQ1, AQ2, AQ10, AQ11**: Δ in environmental quality
    - (see Neighborhood Resources)

- **AQ12**: Climate change
  - (change in rainfall, sea-level rise, marine life)

- **AQ13**: Δ in heat related illness, water-, food-, vector-, or rodents-borne disease

- **AQ4**: Δ in attendance at school or work

- **AQ4**: Δ in education, employment, and income & associated health outcomes

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Scientific evidence in the public health literature firmly establishes the relationship between traffic-related air pollution and numerous negative health impacts. Traffic-related air pollutants known to impact health include:

- **Pollutants:** ozone, PM10, PM2.5, ultrafines, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead; benzene, 1,3-Butadiene, formaldehyde, acrolein, acetaldehyde and diesel particulate matter (DPM)
- **Health outcomes:** asthma and other respiratory diseases, cardiovascular disease, cancer, premature death, mortality, and preterm and low birth weight births
- **Sources:** Traffic is a major source
- **Exposure:** Those living near busy roadways have higher exposure
Existing Conditions Related to Air Quality

• Los Angeles air basin has the worst air quality in the nation
• Primary source of air pollution is traffic
• Air quality is the primary concern of the residents of the I-710 Corridor
• Levels of some air pollutants currently exceed standards
• Air quality related health status near the I-710 similar to health status in LA County
HIP analysis shows:

• Air quality will improve in 2035 due to cleaner fuels and more efficient technologies despite increases in traffic volumes in all I-710 Corridor Project Alternatives.

• Because of differences in the distribution of vehicles (i.e., whether they will use the I-710, other freeways, or the arterials) and differences in speeds (e.g., due to congestion), the alternatives impact different air pollutants by varying amounts.

We caution that our conclusions are based on preliminary data contained in an early version of the draft I-710 Corridor Project Draft AQ/HRA.

Source: HIP/Draft I-710 Corridor Project Draft AQ/HRA
### Summary of Health Outcomes (2035)

**Air Quality**

General air quality will improve under any of the alternatives, resulting in a high likelihood that health of children, adults, and seniors throughout the corridor will improve.

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### Health Impact 

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Impact</td>
<td>Magnitude</td>
<td>Severity</td>
</tr>
<tr>
<td><strong>Asthma</strong></td>
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</tr>
<tr>
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<td>Alt 6C</td>
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**Mortality**

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
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<th>Health Outcome</th>
<th>Uncertainties</th>
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</thead>
<tbody>
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<td>Minor</td>
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**Cancer Risk (from Mobile Source Air Toxics from the I-710 Corridor)**

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<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Impact</td>
<td>Magnitude not estimated</td>
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</tr>
<tr>
<td>Alt 1</td>
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<td>High</td>
</tr>
<tr>
<td>Alt 5A</td>
<td>+</td>
<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td>Alt 6A</td>
<td>-</td>
<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td>Alt 6B</td>
<td>+</td>
<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td>Alt 6C</td>
<td>+</td>
<td>Not available</td>
<td>High</td>
</tr>
</tbody>
</table>

**Low birth weight and pre-term births**

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impact</td>
<td>Magnitude not estimated</td>
<td>Mod</td>
</tr>
<tr>
<td>Alt 1</td>
<td>+</td>
<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td>Alt 5A</td>
<td>+</td>
<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td>Alt 6A</td>
<td>-</td>
<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td>Alt 6B</td>
<td>+</td>
<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td>Alt 6C</td>
<td>+</td>
<td>Not available</td>
<td>High</td>
</tr>
</tbody>
</table>

**Explanations:**

- **Impact** refers to whether the alternative will improve (+), harm (-), or not impact health (*").
- **Magnitude** reflects a qualitative judgment of the size of the anticipated change in health effect (e.g., the increase in the number of cases of disease, injury, adverse events): Negligible, Minor, Moderate, Major.
- **Severity** reflects the nature of the effect on function and life-expectancy and its permanence: High = intense/severe; Mod = Moderate; Low = not intense or severe.
- **Strength of Causal Evidence** refers to the strength of the research/evidence showing causal relationship between air quality and the health outcome: = plausible but insufficient evidence; = likely but more evidence needed; = high degree of confidence in causal relationship. A causal effect means that the effect is likely to occur, irrespective of the magnitude and severity.
Air Quality Recommendations (Example)

- Planning departments should ensure that all local land use planning improves the separation of residential and other sensitive uses from the goods movement infrastructure.

- Clean truck accountability: If cleaner trucks or zero emission trucks are adopted as a strategy, ensure that proper regulatory and enforcement actions maintain emissions reduction goals over time and that such efforts are fully funded.

- Monitor and mitigate air quality at sensitive receptor sites: After the project is completed, regularly monitor air quality at sensitive receptors such as schools, community centers, libraries, and senior facilities and commit to retrofit these facilities (e.g., providing upgrades to building thermal performance and ventilation systems) to keep indoor air pollutant levels below that which is considered harmful to human health and the environment.
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Traffic Safety Literature Review

Collision Frequency:

• Increased volume, number of lanes, and truck share results in increased collision frequency in proportion to volume

• Freeway design treatments and lower vehicle densities will decrease collision frequency

Collision Severity:

• Reductions of speed could reduce the frequency of fatal collisions

• Increased truck share will increase the share of collisions that are fatal

Pedestrian & Bicyclist Injuries:

• Vehicle-ped/bike collisions increase with pedestrian/bike and vehicle volume
Existing Conditions Related to Traffic Safety

- Truck-related collisions are a substantial share of all collisions on the I-710
- Many more car-collisions occur off the freeway than on the freeway
- Between 2006 and 2008, there were 36 pedestrian fatalities and 108 severe pedestrian injuries within 1 mile of the I-710
- Between 2006 and 2008, there were 5 bicyclist fatalities and 35 severe bicyclist injuries within 1 mile of the I-710
- Collisions tend to occur in areas with higher car volumes and ped/bike volumes
- Traffic safety is of great concern to residents in the corridor
Predicted Impacts Related to Traffic Safety: I-710 General Purpose Lanes

Compared to 2008 levels:

• Non-truck collisions on general purpose lanes:
  o Alt 1: higher volumes, lower speeds $\rightarrow$ increased collisions, lower severity
  o Alt 5A: slightly higher volumes and speeds $\rightarrow$ small increase in the number of collisions and a proportional increase in number of severe collisions
  o Alt 6A/B/C: higher volumes and speeds $\rightarrow$ increase in the number of collisions and the severity of collisions

• Truck collisions on general purpose lanes:
  o GP lane truck volumes increasing for all alternatives
  o Increases in number of severe collisions expected in all alternatives
  o Volumes and number of collisions correlates as follows: Alt 5A > Alt 1 > Alt 6A/B

Source: HIP
Predicted Impacts Related to Traffic Safety: Arterials

Compared to 2008 levels:

• Non-truck collisions:
  o Alt 1: higher volumes, lower speeds $\Rightarrow$ increased collisions, lower severity
  o Alt 5A and Alt 6A/B/C: higher speeds (LOS) and volumes $\Rightarrow$ increase in the number of collisions and the number of severe collisions

• Truck collisions:
  o ~40% increase in volumes under all alternatives $\Rightarrow$ increase in number and severity of collisions

• Ped/bike collisions:
  o Under all alternatives, future growth in population and traffic volume $\Rightarrow$ increase in number of collisions, which are disproportionately severe
  o Potential changes in ped/bike volumes specific to each alternative could change number of collisions (see Mobility chapter)

Source: HIP
Summary of Health Outcomes (2035)

Traffic Safety

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impact</td>
<td>Magnitude</td>
<td>Severity</td>
</tr>
<tr>
<td>Non-truck Vehicle-Vehicle Fatalities and Injuries</td>
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<td>Minor</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Alt 5A</td>
<td>Minor-Med</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6A</td>
<td>Minor-Med</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6B</td>
<td>Minor-Med</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6C</td>
<td>Minor-Med</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Truck-Auto Fatalities and Injuries</td>
<td>Alt 1</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Alt 5A</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6A</td>
<td>Minor-Med</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6B</td>
<td>Minor-Med</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6C</td>
<td>Minor-Med</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vehicle-Pedestrian/Bicycle Fatalities and Injuries</td>
<td>Alt 1</td>
<td>Minor-Med</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Alt 5A</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6A</td>
<td>Minor</td>
<td></td>
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<tr>
<td></td>
<td>Alt 6B</td>
<td>Minor</td>
<td></td>
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<tr>
<td></td>
<td>Alt 6C</td>
<td>Minor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hazardous Materials Exposure from Releases</td>
<td>Alt 1</td>
<td>Negligible</td>
<td>Typically low, but infrequently high</td>
</tr>
<tr>
<td></td>
<td>Alt 5A</td>
<td>Negligible</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alt 6A</td>
<td>Negligible</td>
<td></td>
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<tr>
<td></td>
<td>Alt 6B</td>
<td>Negligible</td>
<td></td>
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<tr>
<td></td>
<td>Alt 6C</td>
<td>Negligible</td>
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<td>~/-</td>
<td>-</td>
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</tr>
</tbody>
</table>

Explanations:
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- Strength of Causal Evidence refers to the strength of the research/evidence showing causal relationship between traffic safety and the health outcome: = plausible but insufficient evidence; ••• = likely but more evidence needed; •••• = high degree of confidence in causal relationship. A causal effect means that the effect is likely to occur, irrespective of the magnitude and severity.

Source: HIP

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Traffic Safety Recommendations (Example)

- Arterial speeds should be limited via traffic controls and traffic calming measures in order to reduce the number and severity of collisions and to encourage traffic to remain on the freeway.

- Supplement the intersection improvements outlined in the draft I-710 Corridor Project EIR/EIS with pedestrian-level improvements that increase their visibility and safety. Such improvements include, for example, clearly marked and protected crosswalks (e.g., with laddered crosswalks and pedestrian countdown signals).

- Starting with existing residential streets that are walkable/bikeable, expand the network of walkable/bikeable streets throughout the I-710 corridor to provide safe and pleasant streets that can be used for active transportation. This could include implementing “bicycle boulevards” (i.e., limited-access, low speed streets that have traffic calming features such as mid-block diverters with bicycle cut-outs) in local streets.
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• Socioeconomic Status (SES) including education, income, and “job control” is associated with (Bravemen 2011):
  o Lifespan
  o Overall health
  o Chronic disease

• Unemployment is associated with mortality, cardiovascular disease, depression, suicide, and access to health insurance (Kroll 2011, Roelfs 2011, Fronstin 2010, Voss 2004)
Existing Conditions Related to Jobs & Economic Development

• Jobs in LA County account for over ¼ of jobs in the state
• Transportation and warehousing jobs are an important and growing sector in LA County
• Many of the new jobs in this sector are likely to not pay a living wage that can support a family
• Residents are concerned about job growth in the I-710 corridor, support ‘new’ and ‘proactive’ economic approaches, and are concerned about wages
• Lifespan, one health indicator related to jobs, is similar in the Gateway Cities to LA County
Predicted Impacts Related to Jobs & Economic Development

• All I-710 Corridor Project EIR/EIS alternatives assume that the ports expand their operations to process approximately 42 million twenty-foot-equivalent units (TEUs) annually in 2035 (compared to approximately 13 million TEUs in 2008).

• In making this assumption, the EIR/EIS also assumes that, under any alternative, the regional goods movement sector will grow the same (substantial) amount.

• Local job growth in each alternative varies due to changes specific to each alternative (e.g., congestion?). Economic modeling has not been done, so it is difficult to say how increasing the number of lanes will impact the number of local vs. regional jobs.
Predicted Economic Impacts

Changes difficult to predict, have not been modeled elsewhere in the I-710 Corridor Project analyses

→Not enough information to make specific justifiable predictions, however we can say:

• Very likely that total goods movement jobs will increase in the I-710 Corridor (e.g., some industries like transloading are highly unlikely to be able to move further from the ports)

• Alternative 6B may potentially create and foster a new sector of jobs in the research, development and manufacturing of zero emission technologies. This may help to increase employment rates in the study area, assuming that the education and skills required for these jobs either match the education and skill base of the local population or that a significant investment in local job-training is made.

Source: HIP
Summary of Health Outcomes (2035)

Jobs & Economic Development

- Alt 6B could stimulate greater benefits if “green jobs” are attracted and filled by local residents

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Disease (e.g., cardiovascular disease, diabetes) and Decreased Lifespan (e.g., from changes in income, employment, and access to health benefits)</td>
<td>+ Potentially significant, non-quantifiable</td>
<td>High</td>
<td>★★★ Distribution of new jobs between I-710 Corridor Communities and greater region uncertain.</td>
</tr>
<tr>
<td>Alt 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 5A</td>
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<td></td>
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<tr>
<td>Alt 6A</td>
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<td></td>
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<td>Alt 6B</td>
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<tr>
<td>Alt 6C</td>
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</tr>
</tbody>
</table>

- Alt 6B could stimulate greater benefits if “green jobs” are attracted and filled by local residents

Mental Illness (e.g., depression; from changes in income and employment)

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt 1</td>
<td>+ Potentially significant, non-quantifiable</td>
<td>Mod-High</td>
<td>★★ Distribution of new jobs between I-710 Corridor Communities and greater region uncertain.</td>
</tr>
<tr>
<td>Alt 5A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6A</td>
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<td></td>
<td></td>
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<tr>
<td>Alt 6B</td>
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<tr>
<td>Alt 6C</td>
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- Strength of Causal Evidence refers to the strength of the research/evidence showing causal relationship between mobility and the health outcome: ★ = plausible but insufficient evidence; ★★★ = likely but more evidence needed; ★★★★ = high degree of confidence in causal relationship. A causal effect means that the effect is likely to occur, irrespective of the magnitude and severity.

Source: HIP
Jobs & Economic Development

Recommendations (Example)

• Measure and track the proportion of local jobs in each industry that are filled by local residents. This data would allow policymakers to make informed decisions regarding strategies to enhance and stimulate local economies.

• Increase job-training opportunities for residents in the study area to better prepare the workforce for the employment opportunities in the region and reduce unemployment. Training should target jobs that pay a living wage and provide benefits such as health insurance.

• The green and sustainable technology jobs created locally (e.g., through Alternative 6B or projects at the Ports) could be a strong source of employment, training opportunities, and improved health outcomes for residents in the study area. We recommend that jobs in this relatively new industry be encouraged to move into the I-710 study area regardless of the build alternative chosen, and that government agencies and employers should be encouraged to train local workers in skills that will allow them to succeed in this field.
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Access to Neighborhood Resources

Literature Review

• Research exists on how freeways are good for mobility and funneling people/goods through an area but how this makes them bad for “place-making” (Cervero 2009, Burden 2007)

• Access to a mix of retail is important for health and quality of life: increases walking and biking, possibilities for healthful and meaningful work, and interactions among neighbors; reduces daily vehicle trips and miles traveled, air and noise pollution.

• Perceptions of environmental quality influence health-related decisions.

• After a freeway expansion, property values for residences nearest to the freeway (e.g., with more environmental impacts) decrease, while those further away (e.g., that may gain better access to the freeway or benefit from reduced commute times) increase.
Neighborhood Completeness: Existing Conditions

• Some neighborhoods (e.g., Long Beach and East LA) are more complete than others (e.g., Compton) in that they have a greater number of goods and services available.

• Residents have significant concerns regarding environmental quality and this could impact their use of neighborhood resources.

• Measures of social cohesion (e.g., crime rates, voting registration) indicate that social cohesion is good but not excellent in the area.

• Corridor residents have less wealth (as measured by income, poverty, property values) than others in the county.

• Health outcomes related to neighborhood completeness (e.g., those related to physical activity) are similar to the county.

Source: HIP
Predicted Impact Related to Access to Neighborhood Resources

- Displacement will be minimal
- Access to goods and services will not improve under Alt 1; will improve for transit users under Alt 5A; and will improve for drivers and transit users under Alt 6A/B/C
- Difficult to predict how perceptions of environmental quality will change and how usability of existing resources will change
- The extent of government and business investment that will result from any proposed alternative is unknown. Significant investment could lead to improved neighborhood completeness.
- Social cohesion likely to stay the same or decrease for those living closest to freeway, while for those further away social cohesion may not be impacted
- Neighborhood wealth not likely to improve, especially for those closest to the freeway

Source: HIP
## Summary of Health Outcomes (2035)

### Access to Neighborhood Resources

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impact</td>
<td>Magnitude</td>
</tr>
<tr>
<td>Chronic Disease (e.g., cardiovascular disease, diabetes; from changes in physical activity, social cohesion, &amp; stress)</td>
<td>Potentially significant, non-quantifiable</td>
<td>Mod-High</td>
</tr>
<tr>
<td>Alt 1</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 5A</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6A</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6B</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Mental Illness (e.g., depression; from changes in physical activity, social cohesion, &amp; stress)</td>
<td>Potentially significant, non-quantifiable</td>
<td>Mod-High</td>
</tr>
<tr>
<td>Alt 1</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 5A</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6A</td>
<td>+/−</td>
<td></td>
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<tr>
<td>Alt 6B</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Decreased Lifespan (e.g., from changes in physical activity, social cohesion &amp; stress)</td>
<td>Potentially significant, non-quantifiable</td>
<td>High</td>
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<tr>
<td>Alt 1</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 5A</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6A</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6B</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Injury and fatality (e.g., from crime)</td>
<td>Potentially significant, non-quantifiable</td>
<td>Mod-High</td>
</tr>
<tr>
<td>Alt 1</td>
<td>+/−</td>
<td></td>
</tr>
<tr>
<td>Alt 5A</td>
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<tr>
<td>Alt 6A</td>
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<tr>
<td>Alt 6B</td>
<td>+/−</td>
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<tr>
<td>Alt 6C</td>
<td>+/−</td>
<td></td>
</tr>
</tbody>
</table>

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- **Strength of Causal Evidence** refers to the strength of the research/evidence showing causal relationship between access to neighborhood resources and the health outcome: ♣ = plausible but insufficient evidence; ♣ ♣ = likely but more evidence needed; ♣ ♣ ♣ = high degree of confidence in causal relationship. A causal effect means that the effect is likely to occur, irrespective of the magnitude and severity.

Source: HIP

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Neighborhood Resources Recommendations (Example)

- In order to at least partially offset any negative impacts on access to neighborhood resources, the I-710 Corridor Project could include additional improvements to neighborhood resources that are currently available. Local jurisdictions could each be given funding as part of the project to invest in the neighborhood resources (e.g., libraries, schools, parks, community centers) that are likely to be impacted by the project or by future changes in the community that may result from the project.

- Increase direct government investment in community infrastructure and services to ensure that people have access to the goods and services they need to live healthy lives and to improve social cohesion in local communities.

- Recommendations contained in the Air Quality, Noise, and Traffic Safety Chapters of this HIA, including those related to future land use, would help ensure improvements to environmental quality. Improved perceptions of environmental quality are likely to follow actual improvements and lead to more investment in the corridor communities, improve social cohesion, increase physical activity, and lead to other neighborhood improvements.
HIA PART 6: Noise

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Noise: Pathways to Health

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The literature contains significant evidence on causal links between noise and the following conditions:

- Sleep disturbance
- Annoyance
- Speech interruption
- Learning & educational outcomes
- Stress
- Cardiovascular disease
Federal (23 CFR 772) and state policy:

- Traffic noise prediction
- Traffic noise analysis
- Analysis of noise abatement
- Informing local officials

Simplest summary: keep noise levels below 67 dBA
<table>
<thead>
<tr>
<th>Environment</th>
<th>Health effect</th>
<th>Sound level (dBA)</th>
<th>Time (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedrooms</td>
<td>Sleep disturbance</td>
<td>30</td>
<td>8</td>
</tr>
<tr>
<td>Inside dwellings</td>
<td>Speech intelligibility</td>
<td>35</td>
<td>16</td>
</tr>
<tr>
<td>School classrooms, indoors</td>
<td>Disturbance of communication</td>
<td>35</td>
<td>School hours</td>
</tr>
<tr>
<td>Outdoor living areas</td>
<td>Annoyance</td>
<td>50-55</td>
<td>16</td>
</tr>
<tr>
<td>Industrial, commercial and traffic areas</td>
<td>Hearing impairment</td>
<td>70</td>
<td>24</td>
</tr>
<tr>
<td>Music through earphones</td>
<td>Hearing impairment</td>
<td>85</td>
<td>1</td>
</tr>
<tr>
<td>Ceremonies and entertainment</td>
<td>Hearing impairment</td>
<td>100</td>
<td>4</td>
</tr>
</tbody>
</table>

http://www.who.int/docstore/peh/noise/guidelines2.html

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Existing Conditions

• Noise is a significant concern of residents in the I-710 corridor
• Existing noise levels near the I-710 are mostly between 50 and 70 dBA
• Based on Caltrans noise measurements and our calculations, between 22,000 and 35,000 people would currently be expected to report being highly annoyed and between 5,000 and 7,500 people would be expected to report experiencing highly disturbed sleep due to noise near the southern portion of the I-710; Cardiovascular disease rates are not higher in the study area.
### Change in Noise Emissions (2035): Summary

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Freeway</th>
<th>Arterials</th>
<th>Other Goods Movement Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt 1</td>
<td>↑↑</td>
<td>↑↑↑</td>
<td>↑↑</td>
</tr>
<tr>
<td>Alt 5A</td>
<td>↑↑↑</td>
<td>↑↑↑↑</td>
<td>↑↑</td>
</tr>
<tr>
<td>Alt 6A</td>
<td>↑↑↑</td>
<td>↑↑</td>
<td>↑↑</td>
</tr>
<tr>
<td>Alt 6B</td>
<td>↑↑↑</td>
<td>↑</td>
<td>↑↑</td>
</tr>
<tr>
<td>Alt 6C</td>
<td>↑↑↑</td>
<td>N.D.</td>
<td>↑↑</td>
</tr>
</tbody>
</table>

*Other goods movement infrastructure refers to warehouses, intermodal facilities and similar noise-producing that may be located near sensitive receptors.*

Source: HIP

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Freeway Noise Exposure

- No noise modeling data available yet from Caltrans

- Alternative 6:
  - High truck volumes & speeds
  - Freight Corridor further from residences on same side of LA river and closer to residences on opposite side;
  - Some areas with existing soundwalls, some with proposed soundwalls

→ HIA can’t predict changes in noise or compare to other alternatives (but modeling in process as part of EIR/EIS)
### Summary of Health Outcomes (2035)

Even if noise is reduced to 67 dBA by new soundwalls, the following health outcomes are anticipated:

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annoyance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 1</td>
<td>-</td>
<td>Low</td>
<td>***</td>
</tr>
<tr>
<td>Alt 5A</td>
<td>Estimates pending noise modeling data from Caltrans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td>Estimates pending noise modeling data from Caltrans</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Sleep Disturbance**     |                         |                |               |
| Alt 1                     | -                       | Mod-High       | ***           |
| Alt 5A                    | Estimates pending noise modeling data from Caltrans |                |               |
| Alt 6A                    |                          |                |               |
| Alt 6B                    |                          |                |               |
| Alt 6C                    | Estimates pending noise modeling data from Caltrans |                |               |

| **Cardiovascular Disease (including hypertension and myocardial infarction)** | | | |
| Alt 1 | - | Estimates pending noise modeling data from Caltrans | High | ** |
| Alt 5A | Estimates pending noise modeling data from Caltrans | | |
| Alt 6A | Estimates pending noise modeling data from Caltrans | | |
| Alt 6B | Estimates pending noise modeling data from Caltrans | | |
| Alt 6C | Estimates pending noise modeling data from Caltrans | | |

| **Cognitive Impairment and Academic Achievement** | | | |
| Alt 1 | - | Estimates pending noise modeling data from Caltrans | Mod-High | *** |
| Alt 5A | Estimates pending noise modeling data from Caltrans | | |
| Alt 6A | Estimates pending noise modeling data from Caltrans | | |
| Alt 6B | Estimates pending noise modeling data from Caltrans | | |
| Alt 6C | Estimates pending noise modeling data from Caltrans | | |

| **Hearing Impairment** | | | |
| Alt 1 | ~ | None | Mod | *** |
| Alt 5A | None | | |
| Alt 6A | None | | |
| Alt 6B | None | | |
| Alt 6C | None | | |

**Explanations:**

- **Impact** refers to whether the alternative will improve (+), harm (-), or not impact health (•).
- **Magnitude** reflects a qualitative judgment of the size of the anticipated change in health effect (e.g., the increase in the number of cases of disease, injury, adverse events): Negligible, Minor, Moderate, Major.
- **Severity** reflects the nature of the effect on function and life-expectancy and its permanence: High = intense/severe; Mod = Moderate; Low = not intense or severe.
- **Strength of Causal Evidence** refers to the strength of the research/evidence showing causal relationship between noise and the health outcome: • = plausible but insufficient evidence; ♦️ = likely but more evidence needed; ♦️♦️♦️ = high degree of confidence in causal relationship. A causal effect means that the effect is likely to occur, irrespective of the magnitude and severity.

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Source: HIP

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Noise Recommendations (Example)

- After the project is completed, regularly monitor noise levels at schools, community centers, libraries, and senior facilities and commit to retrofit these facilities (e.g., providing upgrades to windows and ventilation systems) to keep indoor noise below levels considered harmful by the World Health Organization standards.

- If Alternative 6C is adopted, use revenue from tolling to fund mitigations to noise impacts. Funds could be used, for example, for enforcement of truck routes, parking, idling regulations, and speed limits; installation of truck noise reduction technology; sound insulation at schools; and vegetative buffers between freeways and parks.

- Construct sound walls in all locations in the corridor that are adjacent to a residential area, school, or park. For these soundwalls, use greening and aesthetic principles found in the project’s Urban Design and Aesthetics Toolbox Report.

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Thank You

Questions / Comments?

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Item VII B – AQAP Participation Framework Committees Reports

Environmental Committee
October 26, 2011
AQAP Participation Framework - Update

I-710 Health Impact Assessment (HIA)
Technical Working Group (TWG)
September 26th Meeting:
HIA Report:
Draft Chapters on Mobility and Air Quality

October 3rd Meeting:
HIA Report:
Draft Chapters on Traffic Safety; Neighborhood Cohesion; Jobs and Economic Development

Previous Meetings:
May 12th, May 26th, July 11th, August 29th
Comment: Need to see a closer nexus between the negative health impacts of the 710 expansion and the recommendations in the HIA.

Response: Where available, additional data was added and research cited. In the absence of specific data, some of the recommendations in the HIA are of a general nature. Some health questions require additional study by public health experts.
Comment:
Concern over some of the language used to describe causal relationships, magnitude, and severity of health outcomes as described in summary tables.

Response:
Wording was edited to reflect the variation of possible health outcomes.
Comment:
Concern over data used in the traffic analysis because it is difficult to discern which accidents within the study area are attributable to I-710.

Response:
A TWG member suggested an additional data source that more clearly distinguishes collisions on the I-710 from others in the study area. Further research revealed additional relevant literature that is now included in the HIA.
Comment:
TWG Members pressed for the inclusion of projected job growth in the HIA.

Response:
Projections are at the regional level and their locations cannot be pinned down; however, Members are confident that some of those jobs are tied to port and rail access, which only exists within the Gateway Cities. Job growth projections have been added to the HIA.
Comment:
Questions over the “competing priorities” of the I-710 freeway and active transportation such as walking, biking, and public transit.

Response:
The 2012 RTP and the Gateway Cities SCS are better suited to address funding needs and priorities for the I-710 and these active transit modes. Funding for pedestrian walkways, bike and bus lanes associated I-710 Project should be consistent with RTP.
Comment:
Some of the concerns and recommendations identified in the HIA go beyond the scope of the I-710 Project and the purview of Caltrans to address them.

Response:
*Issues beyond the scope of the Project will be identified within the HIA. Their inclusion is important as it provides a more complete picture of health concerns in the I-710 Corridor, helping to avoid fragmented decision making.*
Comment:
The HIA falls short of its goal to provide decision-makers with distinct guidance on the build alternatives being considered.

Response:
Some health questions have limited data available. Differences between alternatives are not significant enough to generate distinct health effects. These challenges have been summarized in preamble to the HIA report authored by the TWG.
AQAP Participation Framework - Update

AQAP Technical Roundtable (TRT)
Participation Framework

- I-710 Project Team
- GCCOG Board
- I-710 Related Elements
- Transportation Committee
- Environmental Committee
- AQAP Roundtables
- AQAP Technical Working Groups

- October 5th
- November 2nd
- October 26th
- October 12/13 Roundtable Meetings
- October 24th SPECIAL ROUNDTABLE MEETING
- I-710 HIA September 26th & October 3rd
Comment:
General concern that the recommendations set forth do not differentiate between settings. For example, traffic calming measures are not appropriate for arterial roads but should be used in residential areas.

Response:
The Project Team agrees and will revise the recommendations and target them to specific urban environments.
Comment:
Concern that health outcomes are not categorized consistently throughout the HIA.

Response:
Not all health outcomes have been equally researched. For those with little reliable data, the decision was made to eliminate them from the tables summarizing health outcomes across the build alternatives. They have been included in the report narrative and are reflected in other parts of the tables.
Comment:
Questions about which data set should serve as the baseline for measuring projected changes resulting from the I-710 expansion.

Response:
There are two possible baselines for comparison: current conditions and conditions under the “No Build” Alternative. An underlying question is whether growth in the Region will be spurred by expansion of the I-710, or if it will happen regardless. The HIA will consider both.
AQAP Participation Framework - Update

AQAP Advisory Roundtable (ART)
Participation Framework

- AQAP Technical Working Groups
- AQAP Roundtables
- I-710 Project Team
- GCCOG Board
- I-710 Related Elements
- Transportation Committee
- Environmental Committee

**October 12/13 Roundtable Meetings**
**October 24th SPECIAL ROUNDTABLE MEETING**
**October 5th**
**October 26th**
**November 2nd**

I-710 HIA  September 26th & October 3rd
There is support for recommendations that contribute further to the already improving air quality.

A few ART Members asked why are further recommendations needed if air quality improves under all alternatives.

Many expressed concern that expansion of the I-710 could make future air quality worse; they want the I-710 Project to fund recommendations that can counter anticipated negative impacts, such as on-site air monitoring along the I-710 and zero-emission technology studies.
Some ART Members identified safety as another factor that determines a person’s travel mode.

Some see recommendations for improvements to public transit, bicycle and pedestrian infrastructure are not as effective if they are not also accompanied by increased funding for police and safety improvements.

While these safety improvements are necessary, other members have a difficult time finding the nexus between the I-710 expansion and increased police presence on city streets, busses and trains.
Members identified recommendations that advocate for policy change versus those that require adoption for the recommendation to take effect.

While Caltrans does hold much of the decision-making power for the EIR, members recognized that local and regional policy makers will make their own decisions for localized improvements.

They were optimistic that if local and regional decision makers such as Gateway Cities, Metro, SCAG and municipal governments could plan together, then future Caltrans projects could be developed consistent with the regional vision.
There was acknowledgement of:

- the extensive work done by Jonathan Heller and HIP.

- that this HIA is the state-of-the-art; “This is how HIAs are done at this time.”

- that progress was being made in understanding health issues and HIAs; "The ball was moved down the field."

Still, it is clear that ART Members continue to struggle with how the HIA fits in with other conventional environmental assessments.
Thank You

Questions / Comments?
Item VII E – COG Engineers Report

Environmental Committee

October 26, 2011
Thank You

Questions or Comments