Study Progress Update

- Consultant gathering warehouse contact info
  - Goal is 500 warehouses
  - Approximately 400 warehouses to date

- Technical Working Group met June 28th
  - Updated group on study design and population data
  - Asked group to provide feedback on Questionnaire for Business Survey
  - NAIOP 2011 Warehouse Truck Study

<table>
<thead>
<tr>
<th>County</th>
<th>Count</th>
<th>% in Contact List</th>
<th>Existing Population</th>
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</thead>
<tbody>
<tr>
<td>LA</td>
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<td>38%</td>
<td>51%</td>
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<tr>
<td>Orange</td>
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<td>San Bernardino</td>
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<td>45%</td>
<td>25%</td>
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Warehouse Site Visits

- AQMD staff has visited seven warehouses
  - TTSI, Stater Brothers, Skechers, New Balance, Jaxx Toys, Costco, and CalCartage
- Activities observed at warehouses
  - Distribution Center
  - Cross-docking
  - Refrigeration
  - Onsite and offsite trucking
  - Automation
  - Supporting activity
Distribution Center
Cross Dock
Refrigeration
Onsite and Offsite Trucking
Automation
Supporting Activity
Warehouse Business Survey Process

- Gather input from Working Groups on the “Working Group Questionnaire”
- Distribute Draft Warehouse Business Survey to Working Groups
- Conduct small pilot of Warehouse Business Survey
- Changes to Warehouse Business Survey, if needed
- Send out Warehouse Business Survey to “500 warehouses”
Warehouse Business Survey

“Standard Questions”
- Building dimensions (sq. ft., height, etc.)
- Truck trips
- Operating hours
- Number of employees
- Rail service
- Type of product
- Percent of building owned/operated
- Amount of refrigeration

Additional questions – Working Group Questionnaire
Purpose of Working Group Questionnaire for Business Survey

- Working Group Questionnaire focused on items where feedback from SWG would be helpful
- The Working Group Questionnaire will help determine parameters other than warehouse size to estimate truck trip rates
  - Existing data showed poor correlation between truck trip rate and warehouse size
Working Group Questionnaire for Business Survey

- Sent Working Group Questionnaire to both groups about Warehouse Business Survey
- Goal of Working Group Questionnaire is to get feedback about warehouse activities that relate to trucking beyond “Standard Questions”
- Five responses to date
Working Group Questionnaire

1. Physical characteristics of a high-cube warehouse
   - Building square footage
   - Building height
   - Height of stored goods
   - Number of dock doors

2. Amount of automation
   - Miles of conveyor track
   - Number of forklifts / pallet jacks
   - Use of bar codes or RFID
   - Robotics
Working Group Questionnaire

3. High-cube warehouse categories
   - Cross-dock
   - Transload
   - Distribution Center
   - Long-term storage
   - Value added service
   - Parcel

4. How to measure categorization
   - Square footage dedicated to activity
   - Percent of throughput
Working Group Questionnaire

5. Trucking activity
   - Number/types of daily truck trips
   - Destinations / Origins
   - Less than Truckload
   - Turns per year
   - Ability to expand business within existing facility
   - Variation of daily trip rate through the year
   - Duration of each truck visit
Next Steps

- Distribute draft Business Survey to TWG and SWG for review and feedback
- Continue site visits
- Finalize contact list for Business Survey
- Next SWG meeting on August 1