

**AQMD High-Cube
Warehouse Truck Trip
Study Stakeholder
Working Group**

July 18, 2012

Study Progress Update

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

County	Count	% in Contact List	Existing Population
LA	149	38%	51%
Orange	23	6%	6%
Riverside	42	11%	17%
San Bernardino	176	45%	25%

- 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

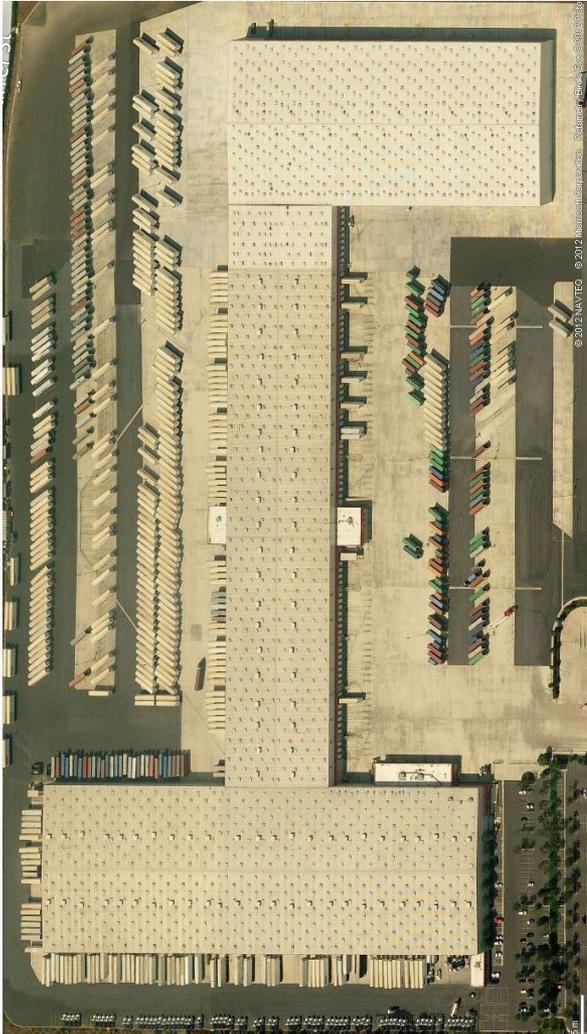
Warehouse Site Visits

- 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



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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