



Transportation and Transit Subject Working Group

March 17, 2009

6:00 p.m.-8:00 p.m.

Gateway Cities Council of Governments Offices

16401 Paramount Blvd.

Paramount, CA 90723

MEETING SUMMARY

INTRODUCTIONS AND MEETING OVERVIEW

On March 17, 2009 the I-710 Project Team met with the Transportation and Transit Subject Working Group (TSWG). The purpose of the meeting was to provide an update on the technical analyses of greatest interest to the TSWG. Potential discussion topics outlined by the technical team included Alternative Technologies; Alternatives Screening Methodologies and Results; and the Multimodal Study. Meeting attendees included representatives from agencies and local corridor communities. In attendance were Jonathan Switzer of the Carson LAC, and interested members of the public including Lou Baglietto of Butterfield Communications; Candice Kim of the Coalition for Clean Air; Martha Cota and Elena Rodriguez of the Long Beach Alliance for Children with Asthma; and Isella Ramirez and Miguel Ortega of East Yard Communities for Environmental Justice. Representatives from the project team included: Pat McLaughlin (MIG), Jesse Froehlich (MIG), Dave Levinsohn (URS), Tony Torres (DSO), and Arcelia Arce (The Robert Group).

Pat McLaughlin welcomed community representatives and thanked everyone for attending the meeting. After a round of self-introductions, Ms. McLaughlin briefly reviewed the agenda for the evening, and the summary of the previous TSWG meeting on January 12, 2009, which reviewed alternatives screening methodologies and continued the discussion on alternative technologies.

Ms. McLaughlin turned the meeting over to Dave Levinsohn of URS, who briefly introduced the potential topics of discussion and allowed the group to choose their topics of greatest interest. The group expressed the most interest in Alternative Technologies, followed by Alternatives Screening. The Multimodal Study was not reviewed at the meeting.



Mr. Levinsohn distributed presentation handouts for the selected topics, and invited participants to raise questions and comments throughout his review of the handouts.

ALTERNATIVE TECHNOLOGY

Mr. Levinsohn reviewed the Alternative Technology Overview, beginning with the study's purpose, and the history of the technologies under study.

He explained that the Alternative Technology Overview presents details of two primary types of advanced technologies: (1), Automated Fixed Guideway systems, which encompass favored technologies that emerged from the 2007 Zero Emission Container Movement System Study (ZECMS); and (2), Zero Emission Trucks (electric powered), which are able to operate on truckways and on conventional highways.

The working group had general questions about how Zero Emission Trucks operated and how they related to battery powered trucks. It was expressed that battery range is currently about 40 miles, and while a trip between the ports and the Commerce/Vernon intermodal yards is 30+ miles roundtrip, trucks would draw electric power from overhead catenary wires while on the I-710 truck lanes. This would be the key aspect of a dual power mode (electric/battery) operating system. This type of technology has not been used in cargo trucks to date, however there are buses in existence that utilize this technology.

Mr. Levinsohn then gave an overview of the market analysis assumptions related to the alternative technologies under study, and described infrastructure requirements for both kinds of advanced technology. While Automated Fixed Guideway technology would require new station tracks along with main line tracks; Zero Emission Trucks would interface with port terminals and intermodal yards just as conventional trucks do today, requiring no new guideway infrastructure. Mr. Levinsohn gave a visual overview of the port terminal interfaces for the Automated Fixed Guideway technology, including loading and unloading facilities, and discussed capacity and required locations for existing crane technology (used for loading and unloading of containers onto the guideway) as the limiting factor for the amount of cargo that can pass through the facility.

Mr. Levinsohn then discussed overall system capacity, which is defined both by station capacity and line haul capacity. Although Automated Fixed Guideway freight movement systems may travel very fast, system capacity is limited by the speed at which cranes can load and unload cargo at each end. If there were station tracks connecting loading and unloading facilities, the system could handle 16,000 containers per day, handling both off-dock intermodal container demand and estimated new inland warehouse demand. The estimated cost for the Automated Fixed Guideway is between \$8.2 billion and \$11.3 billion to construct, and from \$262 million to \$367 million for first-year operation and maintenance.

Zero Emission Trucks operating on a 4 lane freight corridor would have a capacity of approximately 67,000 containers per day. The freight corridor would fit within the available I-710 right of way and would be mostly elevated. Estimated costs for this technology are between \$3.8 billion and \$3.9 billion to construct, and from \$36 million to \$41 million for first-year operations.

Lastly, Mr. Levinsohn summarized the pros and cons for each family of technologies as follows:

Fixed Guideway Advanced Technology Family

- Meets zero emissions container movement objective
- Is being promoted by a number of interested companies
- Could be driverless
- Has some political support
- Futuristic image

Zero Emission Truck Advanced Technology Family

- Meets zero emissions container movement objective
- Doesn't require new guideway and terminal facilities
- Provides greater flexibility to serve container markets
- Lower cost
- Higher capacity
- Combines "off the shelf" technologies
- Could maintain flexibility to upgrade corridor to more advanced technology in future
- Easier to expand outside of the I-710 corridor

Demand projections will need to be reviewed in the context of each technology. A meeting participant commented that one of the biggest issues to consider when reviewing advanced technologies is the potential impact of the technology. He felt that Zero Emission Trucks would have the greatest positive impact given that only 5-10% of containers are going to near-dock facilities, while the rest are going inland.

Another participant inquired as to whether a technical briefing could be provided to community members to discuss comparisons between maglev, advanced guideway and electric truck technologies, as it would be helpful to familiarize people with pros and cons of the various systems being considered. The project team agreed to organize a briefing.

INITIAL SCREENING RESULTS

Mr. Levinsohn then turned the group's attention to a handout on initial alternatives screening results. Through this first phase of the EIR/EIS, an initial set of six alternatives was proposed for analysis. The six alternatives were derived from the components of the recommended Locally Preferred Strategy, but with the addition of advanced zero emissions container movement technology. These initial six alternatives for screening are:

1. No Build
2. Transportation System Management/Transportation Demand Management/Transit
3. Goods Movement Enhancement by Railroad and/or Advanced Technology (fixed guideway)
4. Arterial Highways and I-710 Congestion Relief Improvements (includes Alternatives 2 and Alternative 3; Railroad only)

5. Mainline I-710 Improvements (includes Alternatives 2, 3 (railroad only) and 4)
 - a. 10 General Purpose Lanes or
 - b. 8 General Purpose Lanes with 1 carpool lane in each direction (total of 10)
6. Hybrid Locally Preferred Strategy (includes Alternative 5 + freight corridor of 4 truck only lanes)

The alternatives will be screened against the following criteria:

- Mobility
- Air Quality
- Traffic Safety
- Right of Way (ROW) Impacts
- Capital Costs

Mr. Levinsohn reviewed preliminary comparisons among alternatives based on how each performs with respect to measures of each screening criterion. He then presented a review of each.

Mobility

In terms of mobility, initial findings suggest that there is a substantial need for new capacity in the corridor. The top performing alternatives, in order of performance, included Alternative 6, Alternative 5A and Alternative 5B. The working group requested more detail on the assumptions and calculations used to determine the initial screening findings.

Air Quality

Air quality screening analysis metrics included criteria pollutants and air toxics. Emissions were estimated using screenline information, which estimated projected emissions for the year 2035 on the I-710, I-110, and I-605 freeways within the study area. All alternatives project emission decreases for 2035 as compared to the 2035 No Build alternative. Alternative 3 shows the greatest reductions in NO_x and DPM. Alternatives 5A, 5B and 6 show appreciable reductions, with lower emissions at higher speeds. The team anticipates that greenhouse gas emissions will have similar results as NO_x.

Traffic Safety

There are a number of existing physical design deficiencies that affect traffic safety. Proposed design improvements and heavy duty truck reductions should substantially reduce accident rates. Alternative 6 has the lowest percentage of heavy duty trucks on general purpose lanes as it separates cars and trucks. Heavy duty truck numbers may be further reduced through the inclusion of alternative technology. Alternatives 6 and 3 performed the best with respect to Traffic Safety. Alternative 5A and 5B also provide safety benefits.

A meeting attendee raised a question about induced traffic, and whether it would be evaluated as part of the analysis and what tools were available to analyze this. Mr. Levinsohn responded that despite the implication of the term 'induced traffic' (more infrastructure leads to more travel, and hence more traffic); traffic and congestion will increase dramatically in the future

due to projected increases in population, employment and economic activity. This anticipated growth must be mitigated with improvements to transportation and transit infrastructure.

Right of Way (ROW) Impacts

ROW impacts are important because the Purpose and Need states that any impacts to private properties should be minimized. Within this criterion the project team assessed the number of impacted residential properties; number of impacted non-residential buildings; and potential relocations of power transmission towers. While all alternatives are consistent with the project objective of minimizing ROW impacts, mobility and traffic safety benefits are trade-offs to residential impacts. Alternatives 3, 5, and 6 would have a substantially greater impact to regional transmission utilities than the other alternatives.. Alternatives 1, 2 and 4 have the least ROW impact.

Environmental Impacts

Environmental impact screening measures include right of way (ROW) impacts on waters of the United States, ROW impacts on Section 4(f) (park and open space) properties, and an environmental justice assessment. The initial screening results indicated that there is only one Section 4(f) property that will be impacted by the I-710 corridor improvement alternatives, Cesar Chavez Park. This property would only be impacted by Alternatives 4, 5, 6, and possibly 3. While partial acquisition of park land near the freeway would be required, additional land would be freed up so that the actual size of the park would be expanded. The environmental justice assessment was performed using demographic data, and did not distinguish substantively between alternatives at the screening level of analysis. Alternative 6 had the highest impact to the waters of the United States but may be the only practicable alternative as it meets the Purpose and Need of the project.

Capital Costs

In the Capital Costs review, the following cost components of each alternative were considered: freeway improvements, interchanges, arterials, ITS, transit improvements, and alternative technology. Alternatives 3 and 6 have the highest capital cost, however they also provide the greatest benefit.

Summary of initial alternatives screening results

- Alternative 6 (updated Hybrid LPS) is the only one to meet Mobility element of Purpose and Need
- Alternative 5A (10 General Purpose Lanes) is second best performer on Mobility element of Purpose and Need
- Alternative 6 is the best performer on Traffic Safety
- Alternative 6 reduces NOx but slightly increases freeway daytime DPM compared to No Build
- Alternative 6 impacts (affected properties, waters of the US, cost) are highest compared to other alternatives
- Alternative 3 (Alternative Technology) is the highest capital cost followed by Alternative 6

CONCLUSION

Ms. McLaughlin encouraged meeting attendees to share the information reviewed in the meeting with their LACs or representative organizations. The next meeting of the TSWG will be scheduled as additional information is developed for review by the TSWG. The committee meeting adjourned at 8:12 p.m.