

California I-710:

Nationally important, Community initiated, and Redirected

EXECUTIVE SUMMARY

The I-710 is a heavily congested 28-mile freeway that connects the Ports of Los Angeles and Long Beach to East Los Angeles and the rest of the national interstate system. Located in one of the most urban parts of Los Angeles County, the I-710 is essential both to the communities that it traverses and to the national freight distribution network. In recent years, ever increasing traffic from the ports has combined with local population growth and aging infrastructure to create serious safety and mobility problems on the I-710, as well as quality of life issues for local communities. The corridor's national, regional, and local importance has made upgrading of the freeway mandatory.

Four stakeholder agencies initiated a major corridor study (MCS) on the I-710 in 2000 to draft a Locally Preferred Strategy (LPS). The Los Angeles County Metropolitan Transportation Authority (MTA), the Southern California Association of Governments (SCAG), Caltrans, and the Gateway Cities Council of Governments (GCCOG) entered into a unique partnership. The partnership funded and directed a study to assess alternatives to address safety, congestion, and environmental problems on the I-710. MTA served as the study coordinator. The partners agreed on a decision-making process that included a wide range of stakeholders serving on two committees, an Oversight Policy Committee (OPC), and a Technical Advisory Committee (TAC). The process was intended to be collaborative and inclusive, with a significant public involvement component.

In 2003, midway through the process, a public outcry regarding the proposed alternatives significantly changed the course of the process. Citizens expressed alarm at the perceived additional impacts that changes to the I-710 would have on their communities. Major points of concern included air quality impacts and taking of residential properties. In response to this outcry, the study sponsors dynamically adapted the public involvement component of the study. The agency formed a system of Community Advisory Committees (CACs) to give local jurisdictions an official voice in the process. These CACs would provide input directly to the OPC. The new structure would help to regain the trust and buy-in of the local communities.

With the new structure in place, the process of alternatives development began again. Under the direction of the CACs, the decision-makers developed a new hybrid alternative. The hybrid minimized right-of-way takings and separated truck traffic from general traffic on key segments of the I-710. The decision-makers eventually adopted the hybrid strategy as the LPS.

The I-710 MCS is an example of a planning effort that encountered major obstacles but was able to redirect and arrive at a solution supported by all stakeholders. The initial public outreach process, though thorough, was not enough to ensure the support of the public. The revised outreach process fully enfranchised local communities and overcame an initial atmosphere of mistrust. It integrated the public involvement process with the decision-making process. It also went beyond the typical scope of a corridor study to introduce public health among the principal planning factors. This innovative framework was supported by the original emphasis on collaborative, bottom-up decision making which allowed the process to remain open and

flexible. A strong partnership among the four planning agencies also helped to overcome the complex framework of agency jurisdictions. In light of these solutions, the study serves as a model of flexible, collaborative decision making in transportation corridor planning.

BACKGROUND

Project Overview

I-710 is a major north-south freeway section of the Los Angeles County highway network. The I-710 corridor study area stretches for 18 miles through the most heavily urbanized portion of the county. Figure 1 shows the layout of the corridor. At the southern end sit the Ports of Long Beach and Los Angeles. Combined, these ports represent the world's fifth-busiest port complex and occupy 7,500 acres of Los Angeles County.¹ The economic impact of these two ports is significant not only to Los Angeles County, but to the rest of the United States. At the northern end of the corridor is East Los Angeles.

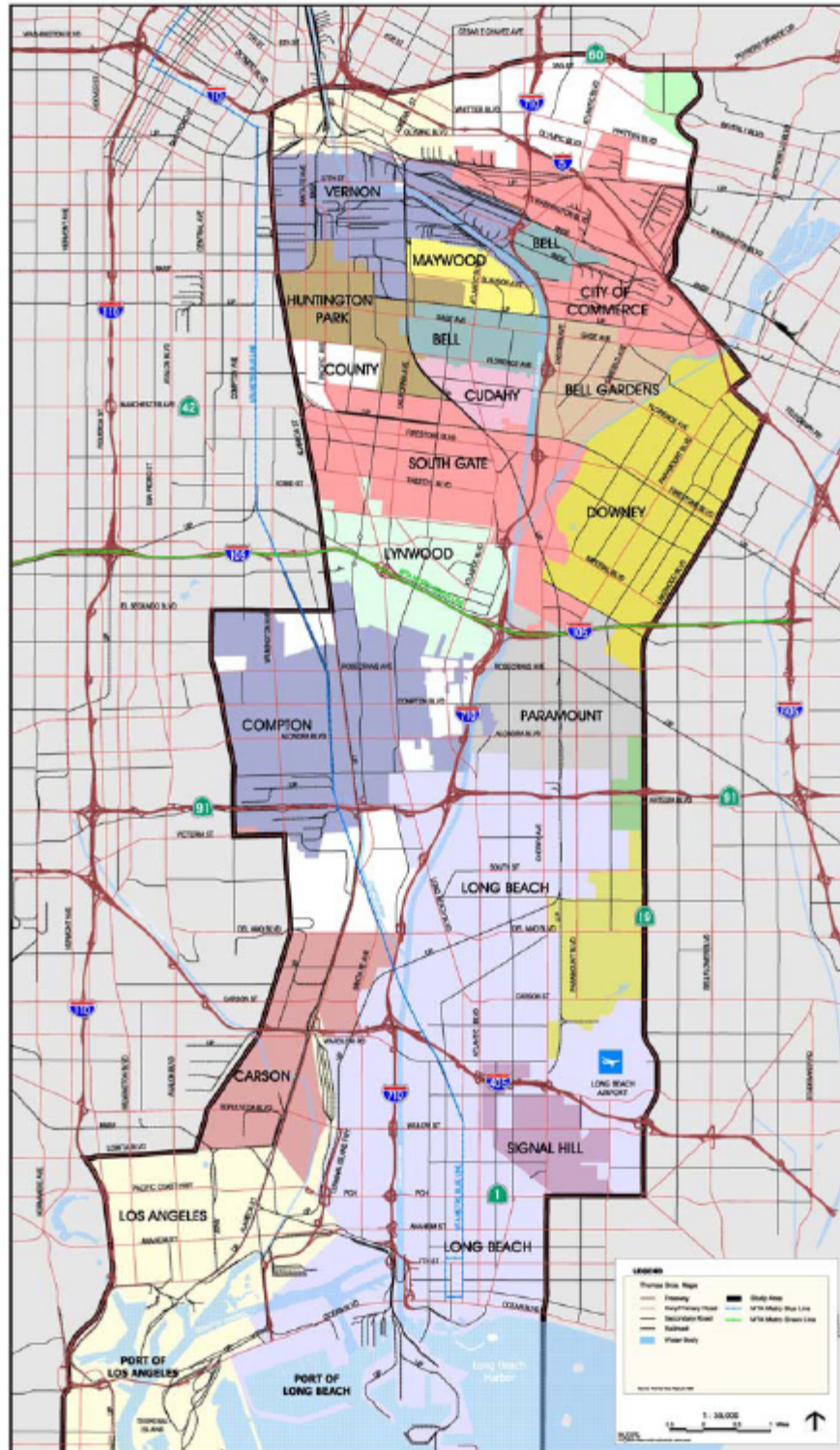
The I-710 freeway is heavily congested with both passenger and freight traffic. Rapid growth in freight traffic from the ports and local population growth has led to increasing congestion, safety, and mobility problems in the corridor. Traffic volumes have overwhelmed the existing design capacity of the interstate, particularly at the interchanges. By 1995, portions of the freeway were experiencing delays of three or more hours per day. The situation threatened the local and regional economies as well as the health and quality of life of area residents, including many minority and disadvantaged populations. The ports are the economic lifeblood of the region, but local communities are increasingly impacted by air quality, noise, aesthetic, and congestion concerns along the freeway.

In response to these issues, Caltrans, the Los Angeles County Metropolitan Transportation Authority (MTA), the Southern California Association of Governments (SCAG), and the Gateway Cities Council of Governments (GCCOG) initiated the I-710 major corridor study (MCS) in 2000. The purpose of the study was to analyze traffic congestion, mobility issues, and quality-of-life concerns along the corridor. The study would ultimately recommend a Locally Preferred Strategy (LPS) for improving the facility. The study followed a new bottom-up approach to planning established by SCAG. This approach enabled all stakeholders and interest groups to identify needs and sponsor projects.

Initial Concept and Planning

The I-710 MCS was the result of several political and planning influences that put corridor improvements high on the planning partners' agendas. The I-710 was not originally part of the interstate system. First designated as California Route 15, the highway was re-designated as Route 7 in 1964 and then as I-710 in 1984. In 1999, the City of Long Beach owned segments of the road and Caltrans owned the remainder of the facility. This ownership situation complicated any attempts to improve the I-710. To overcome this barrier, GCCOG urged the California General Assembly to require Long Beach to turn over its portions of the freeway to Caltrans. Caltrans was then able to take responsibility for improving the corridor.

Figure 1. Map of the I-710 Corridor Study Area



Source: Parsons Brinckerhoff, June 2001.

Caltrans examined the needs of the corridor in detail. Updating the Transportation Concept Report (TCR) for the corridor in 2000, Caltrans documented current conditions and anticipated future traffic demands. The agency also provided recommendations for corridor improvements. This report provided the deficiency analysis to support a more detailed study. The TCR compared policy recommendations with practical limitations for the corridor. It considered additional lanes for increasing capacity as well as identified transit needs and transportation system management (TSM) options.

In 1998, additional legislative action by Los Angeles County affected MTA's interests in the I-710 corridor. The MTA Reform and Accountability Act of 1998 discontinued funding for all future rail projects.² As a result, MTA moved to expand and enhance bus service. The agency adjusted both the Short Range Transportation Plan and budget to increase fleet size by almost 2,100 buses by 2004. The I-710 freeway had the potential to be a major north-south conduit for buses.

As the Metropolitan Planning Organization (MPO) for the six-county region, SCAG provides the transportation planning process that guides investment studies. In 1998, that process underwent a significant shift as a part of the update of the Regional Transportation Plan (RTP). SCAG designed a new collaborative approach to planning that greatly expanded the involvement of stakeholder groups. The new process is known as the Regionally Significant Transportation Investment Studies (RSTIS) process. In order to be included in the RTP, the I-710 MCS had to comply with the requirements for RSTIS.

INSTITUTIONAL FRAMEWORK FOR DECISION MAKING

In May 2000, MTA, GCCOG, Caltrans District 7, and SCAG executed a memorandum of understanding to guide the preparation of a MCS for I-710.³ The four partners collectively provided \$4 million for the study. SCAG's RSTIS process provided the model for the MCS. To make decisions throughout the study, MTA established a system of committees including an Oversight Policy Committee (OPC) and a Technical Advisory Committee (TAC). MTA eventually also established a system of Community Advisory Committees (CACs) to inform the process.

Description of Partners

The four planning partners in the MCS each had separate, though overlapping, roles.

MTA is a public agency responsible for transportation planning and funding for Los Angeles County. A board of directors representing all jurisdictions in Los Angeles County governs the agency. MTA also operates passenger rail and bus services.

Caltrans is the owner-operator of the state highway transportation system in California. The agency is ultimately responsible for planning, construction, and maintenance of the interstate system. Specific project control is provided at the district level for planning, environmental review, project development, and construction.

SCAG is the designated MPO for a six-county area that includes Los Angeles County. SCAG is responsible for the metropolitan transportation planning process in the region. The agency submits regional funding priorities to Caltrans for inclusion in California's Transportation Improvement Program (TIP).

GCCOG represents 27 cities in Southeast Los Angeles County with a total population of 2 million. GCCOG performs transportation planning and funding services for the member jurisdictions. These services include participation in review, study, and development of transportation plans, and recommendation of policies and plans that support the sub-region.

Regionally Significant Transportation Investment Studies

The RSTIS process is a bottom-up, collaborative decision-making process. RSTIS applies to all sub-areas or corridors where capacity improvements are needed and where federal funds will be allocated.

The RSTIS approach enables all transportation alternatives to be considered rather than just alternative alignments. It further requires a proactive public involvement process throughout the evaluation. The RSTIS allows study sponsors to choose one of two options for the process:

- Incorporation of the selected alternative into the TIP after incorporation into the RTP; or
- Preparation of a draft National Environmental Policy Act (NEPA) document as a part of the process; this option allows RSTIS and NEPA processes to begin simultaneously.

A peer review group comprised of Caltrans, FTA, the Federal Highway Administration (FHWA), county transportation commissions, state resource agencies, and SCAG guides the RSTIS process. All stakeholders for the proposed study are invited to attend the peer review group meeting.

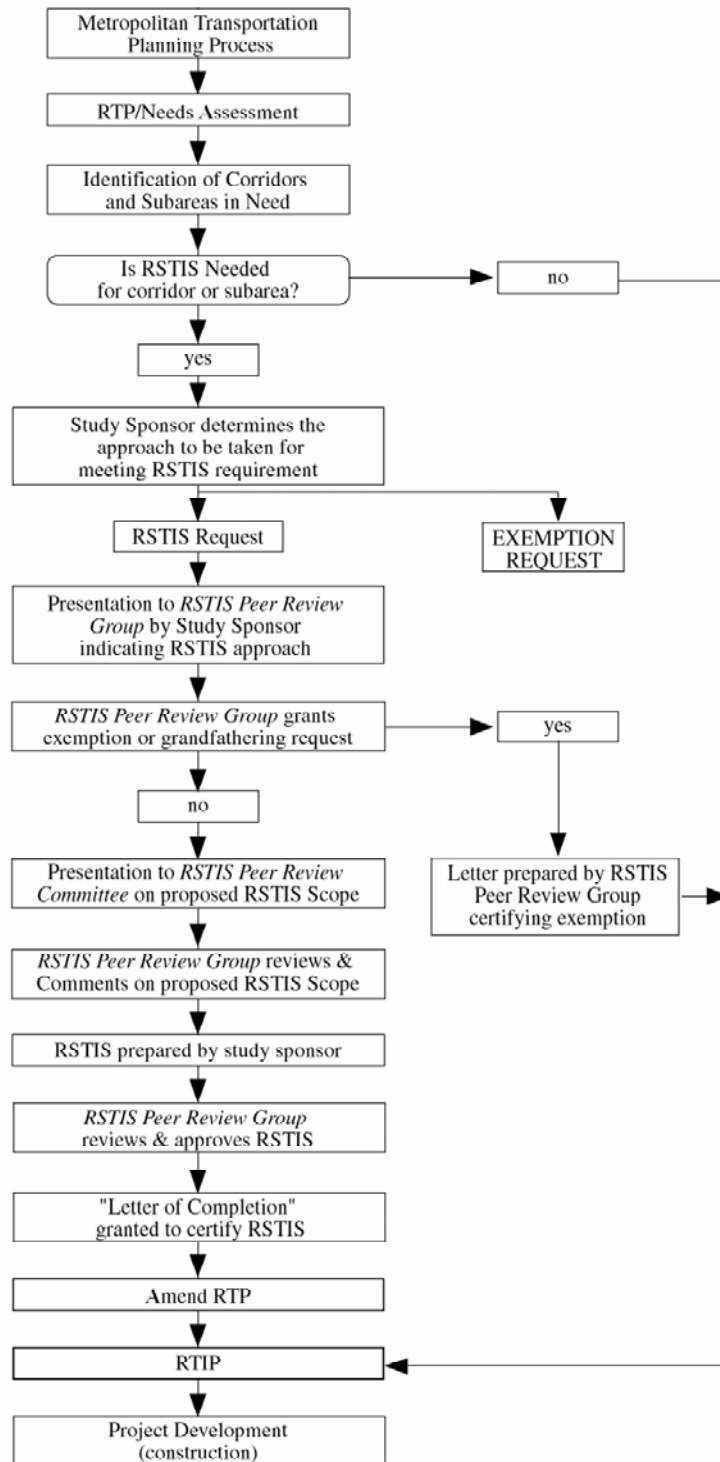
The RSTIS process provides a detailed design that can allow the selected alternative to be advanced to preliminary engineering and to the environmental process. It also provides for consideration of direct and indirect costs; social, economic, and environmental effects; safety; air quality; operational strategies; land use; financing; and energy consumption. The process is both cooperative and collaborative. Consensus, rather than competition, determines the outcome. Strong documentation of alternatives considered enhances later stages of the project development process. The resulting major corridor study report and the environmental documentation provide the necessary information for the project to enter the SCAG Regional Transportation Plan (RTP) and the Caltrans environmental impact report/environmental impact study (EIR/EIS) process. Figure 2 illustrates the steps in the RSTIS process.

I-710 Corridor Study Organization

MTA served as the lead coordinator for the I-710 MCS. At both the policy and technical level, MTA worked in partnership with the three other principal agencies: Caltrans, GCCOG, and SCAG. As the RSTIS study sponsor, MTA provided daily project management and oversight of the study. The MTA board was the ultimate decision-making authority for the I-710 MCS. A policy committee and an advisory committee provided ongoing administration of the study effort.

The OPC was comprised of elected officials from 14 participating cities and the County of Los Angeles; executive managers or senior staff from three of the principal partners (MTA, Caltrans, and SCAG); and a Commissioner from each of the Ports of Long Beach and Los Angeles. The four planning partners vested the OPC with the ability to make decisions at key decision points (KDPs) throughout the study, including selection of the LPS.

Figure 2. RSTIS Process Map⁴



The TAC included technical staff from the 14 cities, the four planning partners, the County of Los Angeles, the Ports of Long Beach and Los Angeles, the South Coast Air Quality Management District (SCAQMD), the California Highway Patrol, and the Federal Highway Administration (FHWA). The Automobile Club was an *ex officio* member. The TAC guided the

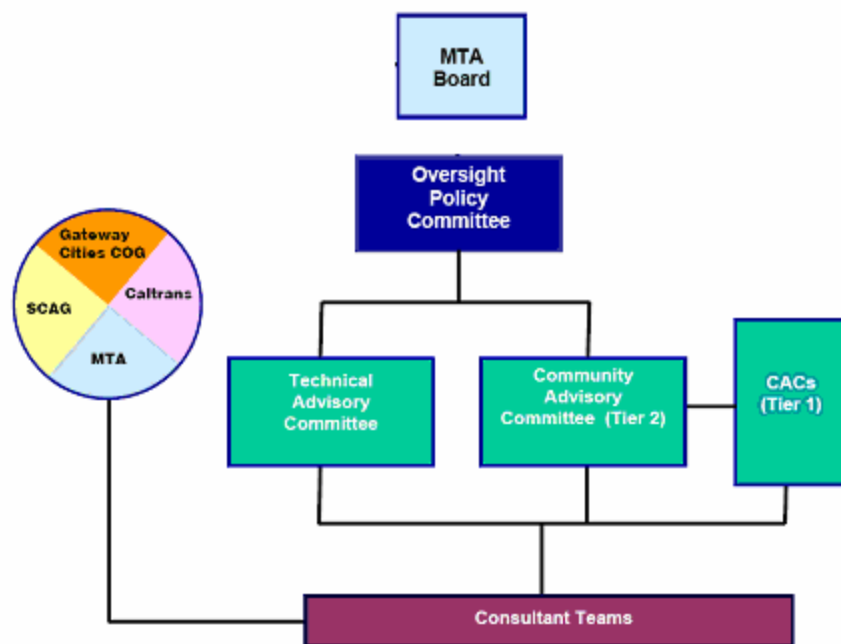
consultant study team in engineering, environmental analysis, and public involvement. The TAC provided oversight of study methods, assumptions and findings, and recommendations to the OPC.

In 2003, the OPC established a system of Community Advisory Committees (CACs). Each of the eight participating cities that immediately bordered the I-710, with the exception of the City of Long Beach, established its own Tier 1 CAC. The City of Long Beach formed a separate I-710 Oversight Committee. The Tier 1 CACs primarily focused on key issues that affected their communities. These key issues included health, environment and quality-of-life issues, safety and mobility issues, economic development, and land use issues. The Tier 1 CACs were direct links to their respective communities. They disseminated information and solicited input from the community. The Tier 1 CACs provided input to the Tier 2 CAC.

The Tier 2 CAC was a broader, corridor-wide body. Its membership included the chair of each Tier 1 CAC and representatives from other communities in the corridor area. The Tier 2 CAC also included representation from the environmental community, business, labor, institutions, and academia. The Tier 2 CAC worked to develop a corridor-wide consensus among the Tier 1 CACs. The Tier 2 CAC provided input directly to the OPC.

Figure 3 presents the decision-making framework for the corridor study process.⁵

Figure 3. I-710 Study Organization Chart



The layers of approval shown in this graphic allowed decisions to be made in a carefully vetted decision-making process. Consultant teams provided technical analyses and facilitation to the advisory committees. The Tier 1 CACs provided input to the Tier 2 CAC. Both the Tier 2 CAC and the TAC issued recommendations directly to the OPC. The MTA Board ultimately adopted the LPS, prior to submittal to SCAG. The other planning partners exerted their influence both through representation on the OPC and TAC and through their official planning powers.

Consensus decisions were a unique feature of the decision-making process for the I-710 study. All representatives had an equal vote in the selection process regardless of size or specific interests. Although this arrangement sometimes required several meetings to reach a decision, the entire group endorsed the final selection.

The complex decision-making framework for the I-710 was carefully constructed to allow for collaborative involvement of all stakeholders. The funding partnership, bottom-up decision-making process, and heavy public involvement allowed for consensus decisions.

MAJOR PROJECT ISSUES

Major local community concerns included congestion, air quality, and right-of-way takes. Environmental justice concerns presented an additional complication.

Congestion was a root issue of concern for local communities near the I-710. Congestion contributes to noise, mobility problems, and air quality problems for people living in the area. There was a general public perception that the ports were a primary source of the congestion and related issues.

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Poor air quality, a direct result of congestion, was a predominant issue. The SCAG region is designated as an air quality non-attainment area for both ozone and fine particulate matter (PM 2.5) by the U.S. Environmental Protection Agency (USEPA). In early 2003, the University of Southern California (USC) School of Public Health and the local media elevated public awareness of USEPA studies concerning the health risks associated with diesel emissions. Many citizens were concerned that improvements to the I-710 corridor would increase diesel truck traffic to and from the ports and directly threaten public health.

In addition to air quality issues, private property takings were a nearly fatal obstacle in finding I-710 solutions. Freeway expansion would require the removal of some existing houses. The number of people affected depended in large part on the design adopted. Outcry regarding potential residential takings proved very influential on the course of the process.

Environmental justice concerns exacerbated the basic community issues. Los Angeles County boasts a unique ethnic diversity (49% white, 45% Hispanic or Latino descent). The median household income is \$42,189 with 14.4 percent below the poverty line. The communities surrounding the I-710 corridor contain a particular concentration of minority and economically disadvantaged populations. The presence of these groups inevitably raised questions about the fairness of the decision-making process and local community impacts.

These concerns presented significant obstacles to the I-710 MCS, but they also helped to shape constructive solutions.

TRANSPORTATION DECISION-MAKING PROCESS AND KEY DECISIONS

The I-710 major corridor study evolved from a fairly standard corridor study to one with dramatically increased attention to stakeholders' concerns. In recent years, particularly since the enactment of SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A

Legacy for Users), FHWA has moved toward the consideration of transportation solutions that are more sensitive to the context of the area. This broader perspective includes consideration of the area’s economic well-being and provides for full participation of all affected groups and individuals. The I-710 MCS process began in 2001 in a traditional manner but ultimately responded to the new paradigm which began emerging in 2003. The study refocused on the expressed goals of the affected communities. The new process formed strong bonds between stakeholders through innovative use of citizen committees and decision-making partnerships.

The I-710 major corridor study began with the first meeting of the OPC in September 2000. The MTA Project Manager was granted the authority to retain a consultant to provide technical development of the corridor study. The selected consultant team, under the direction of Parsons Brinkerhoff (PB),⁶ provided technical and environmental expertise as well as a public outreach strategy. In March 2001, the TAC began guiding the MCS progress through regular monthly meetings. The consultant team attended meetings every other month, or more frequently when a decision was needed.

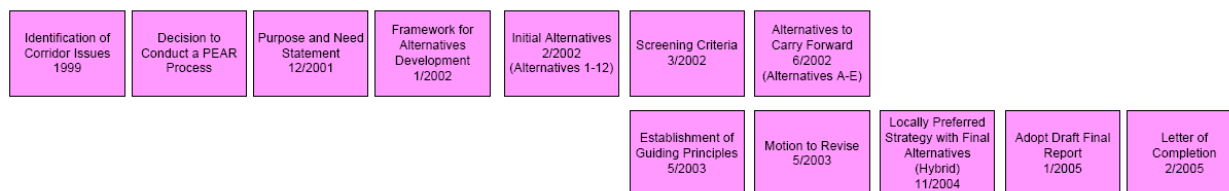
From the outset of the corridor study, consultant Consensus Planning Group managed the public involvement process. Consensus Planning Group developed a full strategy to interview stakeholders identified by the members of the TAC. Additionally, local meetings were held to solicit public input and concerns about the project. Between 2000 and 2003 a strong effort was made to involve the public.

Key Decision Points

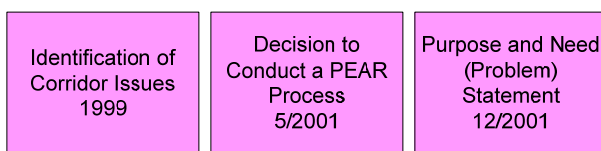
The following graphic represents the key decision points in the development of the I-710 MCS. The regional dynamics in 2003 resulted in a repeat of some of the steps in the process. Figure 4 illustrates the repeated steps in a second row, underneath the corresponding steps in the first attempt. Although this “redo loop” delayed the completion of the study, those involved agree that the outcome reached was a significant improvement over the traditional process. There is a local, commonly held belief that the changes made in the redesigning and repeating these steps represent the future of the transportation planning process. Major decisions are described below.

In 2001 the I-710 MCS began in a traditional manner but ultimately responded to the new paradigm which began emerging in 2003. This new focus centered on the expressed goals of the affected communities and a technical process that allowed innovation. The MCS was further enhanced by the strong partnership formed.

Figure 4. Key Decision Points in I-710 MCS



Identification of Deficiencies



Caltrans established the need for improvements to the I-710 corridor from Route 1 in Long Beach to I-210 in Pasadena as early as 1999. The I-710 required upgrading to meet current federal standards. Additionally, the projected traffic

demand for 2020 far exceeded the facility's capacity. Growth at the Ports of Long Beach and Los Angeles would result in increased truck traffic and would lead to even greater congestion, especially in the evening peak period.⁷ Without facility improvement, 2020 traffic volumes could result in more than 7,000 hours of delay in some segments during the peak period.⁸

The MCS was intended to provide sufficient technical detail and public involvement to make the project eligible for funding and to advance it to the environmental review phase. In order for the study outcome to meet the Caltrans requirement to enter the environmental review process under the California Environmental Quality Act (CEQA)⁹, a Tier 1 EIR/EIS or a preliminary environmental assessment report (PEAR) document was required.

The Tier 1 EIR/EIS is a NEPA document, defined by federal statute, which analyzes a corridor plan on a programmatic basis. The PEAR is a document unique to Caltrans. It provides only preliminary environmental review in advance of a full NEPA document. The consultant team recommended delaying this decision until more detail concerning the alternatives was available. However, in May 2001, at the recommendation of the MTA Project Manager, the OPC voted unanimously to proceed with a PEAR document. The rationale for this decision at this point in the process involved three primary factors:

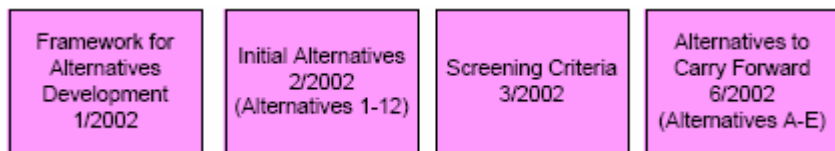
- Funding for right-of-way acquisition was not immediately available
- The PEAR document is not required to meet full CEQA or NEPA standards
- The PEAR process would save seven or eight months in the environmental process¹⁰

The development of the I-710 MCS followed the major steps of the environmental review process. The development of purpose and need was partially dependent on traffic analysis using the travel demand model.

The consultant team effort entailed development of a corridor sub-area model consistent with the SCAG 2001 RTP model. This model would be used to test the different alternative recommendations. In August 2001, the consultant team reported problems associated with the RTP travel demand forecasts and socio-economic data that would delay development of the sub-area model. This technical difficulty resulted in a four-month delay and highlighted a potential barrier for the acceptance of the study results. The study team adjusted the schedule, and in December 2001, the OPC and the TAC approved the purpose and need report.

The adopted purpose and need for the I-710 MCS is a list of problem statements. The problems and needs identified include recurrent and non-recurrent traffic congestion, safety, goods movement, design deficiencies, land use constraints, air quality/public health, environmental justice, aesthetics/noise, cost effectiveness, and transit.

Solutions Screening



The study team devoted the first months of 2002 to identifying potential solutions for the I-710 corridor issues identified in the purpose and

need. The team reviewed technical information, previous studies, and planning efforts for land use and transportation, and considered input from various stakeholders and the general public. Public involvement activities at this stage included traditional community roundtables, questionnaires, open houses, and interviews with city staff and officials.¹¹ The public outreach activities occurred concurrently with discussions in the TAC and OPC meetings.

The consultant established a framework for alternatives development from a two-day project team workshop early in January 2002. Using the purpose and need for guidance, the team developed a full range of transportation options that had a reasonable chance of becoming the LPS. In addition to providing a “No Build” and Transportation System Management (TSM) alternative, the following framework was proposed

The build alternatives are structured according to three levels of capital investment: (1) low, (2) medium, and (3) high. The build alternatives also consist of a design concept and scope that emphasize different trip types or purposes: (a) general purpose trips; (b) truck trips; (c) High Occupancy Vehicle (HOV); and (d) goods movement.¹²

From this framework the consultant team identified 10 initial alternatives for consideration. The TAC meeting used a workshop format to review these alternatives and reach consensus. Based on this discussion, on February 20, 2002, the TAC adopted the final list of 12 alternatives with some detailed modification. On February 28, the OPC revised the TAC-adopted alternatives, replacing Alternative 12 (High General Purpose/High HOV Alternative) with a high rail alternative. The initial set of alternatives for the project, by level of investment and mode, was:

- Alternative 1 – No Build Alternative
- Alternative 2 – Transportation System Management (TSM)/Transportation Demand Management (TDM) Alternative
- Alternative 3 – Low General Purpose Alternative
- Alternative 4 – Low Truck Alternative
- Alternative 5 – Medium HOV Alternative
- Alternative 6 – Medium General Purpose Alternative
- Alternative 7 – Medium Truck Alternative
- Alternative 8 – High General Purpose Alternative
- Alternative 9 – High Truck Alternative
- Alternative 10 – High Goods Movement Alternative
- Alternative 11 – High HOV Alternative
- Alternative 12 – High Rail Alternative¹³

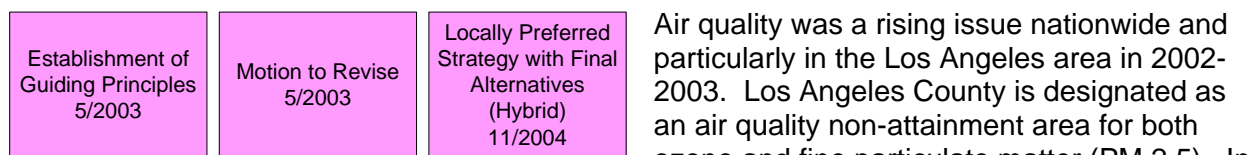
At the February meeting of the TAC, the consultant introduced a screening process for use in narrowing the list to four or five alternatives for detailed study. The TAC discussed the proposed screening process in detail at the March and April meetings. They affirmed use of an array of quantitative and qualitative screening criteria and measures to apply to the initial alternatives. These criteria and measures included those relating to mobility, safety, cost, right-of-way impact, environmental concerns, and public/community support. Additional detail for the screening methodology can be found in the technical memorandum provided.¹⁴ The TAC discussions refined the criteria and enhanced the application of the screening process, however, no formal adoption of this process occurred. Figure 5 lists the final screening criteria used in the study.¹⁵

Beginning May 15, 2002, the TAC met weekly to review the technical information gathered from the screening process. The purpose of these meetings was to determine the final alternatives to be carried forward. At the third weekly meeting, the TAC conducted a preliminary vote to assess the three best “design concepts and scope”¹⁶ based on consideration of the alternatives developed to date. A final vote the following month determined the options members would support as the LPS. The TAC reached consensus on the final set of alternatives, including a complete set of design elements to be included in each of the three build alternatives. The OPC adopted the alternatives at the June meeting. The final alternatives carried forward were:

- Alternative A: No-Build Alternative
- Alternative B: TSM/TDM Alternative
- Alternative C: Medium General Purpose/Medium Truck Alternative
- Alternative D: High General Purpose/High HOV Alternative
- Alternative E: High Truck Alternative

In determining the final list of alternatives, TAC members representing all stakeholders met for five consecutive weeks. The discussions were highly technical and detailed, and straw votes helped identify issues for further discussion. This group was committed to the process and believed that a reasonable set of alternatives had been selected. While right-of-way impacts were recognized as an issue, the committee did not see them as a barrier for a project of this magnitude. The OPC concurred with this perspective. Decision makers did not highlight diesel emissions as a key issue even though air quality considerations were part of the environmental review and the purpose and need.

Development of the Hybrid Alternative



Air quality was a rising issue nationwide and particularly in the Los Angeles area in 2002-2003. Los Angeles County is designated as an air quality non-attainment area for both ozone and fine particulate matter (PM 2.5). In the summer of 2002, citizens of Southern California were becoming more concerned about air quality. USEPA was in the process of changing the 1-hour ozone standard to the new 8-hour standard, and designated non-attainment areas were considering the new early action compact process. Although USEPA had established standards for PM in 1997, the monitors were placed in 1999 and 2000 to obtain the required three-year averages. By mid-2002 some areas of the country were recording their first three-year average. Designations for PM 2.5 non-attainment were anticipated in 2003-2004.

Figure 5. I-710 Screening Criteria

Mobility
% Vehicles Shifted from I-710 Mixed Flow Lanes in the AM Peak Period (% PCEs Shifted) <i>compared to No Build Alternative, (+) quantitative measure</i>
% Persons Shifted from I-710 Mixed Flow Lanes in the AM Peak Period <i>compared to No Build Alternative, (+) quantitative measure</i>
Average V/C Ratio in the AM Peak Period, I-710 SB Mixed Flow Lanes <i>(-) quantitative measure</i>
Minutes Saved, Average Vehicle Travel Time, I-710 SB Mixed Flow Lanes, AM Peak Period <i>compared to No Build Alternative, (+) quantitative measure, in minutes</i>
Reduction in Recurrent Vehicle Hours of Delay, I-710 SB Mixed Flow Lanes, AM Peak Period <i>compared to No Build Alternative, (+) quantitative measure, in thousands of hours, annualized</i>
Reduction in Non-Recurrent Vehicle Hours of Delay, I-710 SB Mixed Flow Lanes, Daily <i>compared to No Build Alternative, (+) quantitative measure, in thousands of hours, annualized</i>
Average V/C Ratio in the AM Peak Period, Screenline of North-South Arterials in the Study Area <i>(-) quantitative measure</i>
Average V/C Ratio in the AM Peak Period, Screenline of East-West Arterials in the Study Area <i>(-) quantitative measure</i>
Safety
Reduction in Annual Number of Accidents on I-710, All Lanes (% Reduction of Accidents) <i>compared to No Build Alternative, (+) quantitative measure</i>
Qualitative Safety Assessment (Design Perspective) <i>(+) qualitative measure</i>
Environment
Total ROW Impact, in Acres <i>(-) quantitative measure</i>
Residential ROW Impact, in Acres <i>(-) quantitative measure</i>
Commercial/Industrial ROW Impact, in Acres <i>(-) quantitative measure</i>
Section 4(f)/Community Resource ROW Impact, in Acres <i>(-) quantitative measure</i>
Water/Los Angeles River ROW Impact, in Acres <i>(-) quantitative measure</i>
Assessment of Relative Visual Impact <i>(-) qualitative measure</i>
Assessment of Relative Noise Impact <i>(-) qualitative measure</i>
Assessment of Relative Environmental Justice Impact <i>(-) qualitative measure</i>
Assessment of Relative Community Cohesion Impact <i>(-) qualitative measure</i>
Cost
Total Estimated Cost (\$ millions) <i>compared to No Build Alternative, (-) quantitative measure</i>
Average Cost per Mile (\$ millions) <i>compared to No Build Alternative, (-) quantitative measure</i>
Constructability
Qualitative Assessment of Ease of Construction <i>(+) qualitative measure</i>

This period also saw rising awareness of the health risks associated with diesel emissions. Technical reports and news articles were circulating widely regarding the toxic effects of diesel exhaust. The U.S. Department of Energy held the 8th Diesel Emissions Reduction Conference in August 2002 in San Diego. The University of Southern California's School of Medicine became involved in this issue through their Master of Public Health program. The Los Angeles Times published an article about diesel emissions, "Finally Tracking LA's Worst Air Polluter," which pointed to the ports as significant contributors to air pollution of the region. In the minds of many Los Angeles County residents, a highway to support growth at the ports would support the further deterioration of air quality and health of the population. This significant public concern resulted in the withdrawal of a similar study in the region on a segment of Highway 101. The leaders of the I-710 MCS encountered the same risk for their project.

Following the June 2002 agreement on the alternatives to be carried forward, the consultant team began a detailed technical analysis of each option. Through the remainder of 2002 and into 2003, the TAC met as often as necessary to consider information provided by the consultant team. These meetings were poorly attended by the public. The TAC received regular reports from PB relating to the public involvement process, which the consultant team was conducting as a separate but concurrent process. The reports did not highlight any significant controversy or strong interest from the public or stakeholders. The TAC members prepared for a series of public workshops in anticipation of the selection of an LPS as early as May 2003.

The May 1, 2003 TAC meeting was far from routine. The meeting was attended by representatives from several state and local government agencies, homeowners, representatives from environmental groups, and representatives of legal aid groups. Although there had been almost no public comment in previous meetings, five individuals presented public comments. The comments indicated a strong concern with air quality and port expansion along with criticism of the public outreach process as inadequate.

In the minds of many Los Angeles County residents, a highway to support growth at the Ports was supporting a further deterioration of the air quality and health of the population... Five individuals presented public comment, addressing the concerns of the larger group in attendance. The comments indicated a strong concern with air quality and Port expansion along with criticism of the public outreach process as inadequate.

The meeting began with a report on the public outreach process. Although more than 58,000 bilingual (English and Spanish) letters and notices had been mailed to announce multiple meetings to be held in Commerce, Bell Gardens, Long Beach, and East Los Angeles, fewer than 1,200 people had attended. The study team received fewer than 200 comment sheets. The combined population of these communities is more than 600,000.

The project team understood that there was a great deal of public confusion and distrust with regard to the intent and projected impacts of the project. Additional community meetings were scheduled for May.

MTA's Project Manager, Ernest Morales, suggested that the public input could be summarized in "four guiding principles."¹⁷

- Minimize right-of-way impacts
- Minimize pollution and environmental impacts
- Improve safety
- Relieve congestion

On May 28, 2003 the Oversight Policy Committee met and adopted citizens' concerns as the guiding principles for the I-710 Corridor Study and further voted to form a citizen's advisory committee.

The TAC unanimously decided to discuss these principles with the OPC members. The TAC would act on them at the next TAC meeting. On May 28, 2003, the Oversight Policy Committee met and adopted an expanded version of Morales' principles as the guiding principles for the I-710 MCS. The OPC further voted to form a citizen's advisory committee and asked the TAC to develop recommendations for structuring this

committee. The TAC unanimously adopted the guiding principles at their June 11 meeting.¹⁸

I-710 Corridor Guiding Principles

1. Minimize right-of-way acquisitions with the objective being to preserve existing houses, businesses, and open space.
2. Identify and minimize both immediate and cumulative exposure to air toxics and pollution with aggressive advocacy and implementation of diesel emissions reduction programs and use of alternative fuels as well as in project planning and design.
3. Improve safety by considering enhanced truck safety inspection facilities and reduced truck/car conflicts and improved roadway design.
4. Relieve congestion and reduce intrusion of traffic into communities and neighborhoods by employing a comprehensive regional systems approach that includes adding needed capacity as well as deploying Transportation Systems Management and Transportation Demand Management technologies and strategies (TSM/TDM) to make full use of freeway, roadway, rail, and transit systems.
5. Improve public participation in the development and consideration of alternatives and provide technical assistance to facilitate effective public participation.

Source: Oversight Policy Committee Meeting Minutes, May 28, 2003

Following the TAC and OPC action, the MTA Board addressed public concerns and study progress at their May meeting. Board member Molina made a motion to change the direction of the I-710 MCS. This action reinitiated the selection of an LPS and initiated a new public outreach protocol. The motion was as follows:¹⁹

I move that the MTA staff express their preference for Alternative B, the TSM/TDM alternative, to the I-710 Corridor Technical Advisory Committee (TAC) and the Oversight Policy Committee (OPC) and work with the various entities to develop a hybrid alternative using elements from Alternative C, D, and E that results in meaningful improvements to the corridor without impacting residences and businesses.

Furthermore, I move that the staff urge the TAC and OPC to remove from consideration the design elements of Alternatives C, D and E that result in acquisition of business and residential parcels. Staff should continue working with the TAC, OPC and Gateway Cities COG to identify improvements to the I-710 freeway that do not rely solely on cost and that explore non-standard design methods.

Additionally:

- 1) Form advisory committees in key areas along the Corridor where current design alternatives require the acquisition of large amounts of private property. These committees should be comprised of residents and business owners and staff should work with local jurisdictions to identify members. The establishment of these committees should begin immediately.*
- 2) And report back on the use of rail, specifically the Alameda Corridor, as a method of moving cargo to and from the ports. The report should include possible policies and incentives in order to further promote rail usages as the preferred method of transportation to and from the ports.*

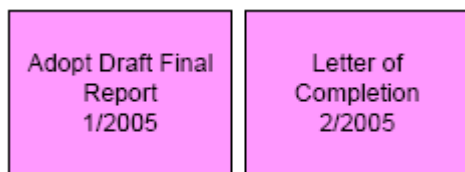
The study team devoted the following year to developing the new alternative, which became known as the hybrid strategy. The MTA Board re-scoped the project, but the project budget remained the same. GCCOG hired a new consulting engineer, and MTA hired a new public outreach facilitator. The study team formed two types of Community Advisory Committees. Tier 1 CACs represented each of those communities adjacent to the I-710. The Tier 2 CAC represented all communities in the corridor area. Building on the technical information developed by the original consultant team, and guided by the engineer provided by GCCOG, the Tier 1 CACs began to construct an LPS that addressed the community concerns and the mobility needs of the corridor. The Tier 2 CAC then responded to this proposal and provided additional safeguards for their concerns. The formation of these committees integrated the public involvement process with the decision-making process.

MTA provided additional support to secure right-of-way needed through negotiations with Southern California Edison (SCE). SCE agreed to allow MTA to purchase 80 feet of right-of-way. MTA also incurred the additional expense of moving utility towers in this easement. This purchase allowed a shift in the freeway alignment to significantly reduce the property impacts of the expansion.

The decision makers considered Caltrans standards in development of the hybrid strategy; however, the team identified design exceptions. The hybrid design represented the greatest construction cost of the alternatives with the lowest right-of-way cost. This was due to the significant reduction in residential, commercial, and industrial impacts. Federal and state funding is required to implement the I-710 draft hybrid strategy improvements, and access to

these funds will depend in part on the extent to which local matching funds can be raised. The project team considered several conventional and innovative funding sources.²⁰ Options included charging tolls in the truck-only lanes and container fees for all non-rail borne containers. Analysis showed that these options could provide between \$80 million and \$1.4 billion in capital.

Adoption of the Locally Preferred Strategy



On November 18, 2004, the OPC considered the recommendation of the TAC as well as those of the Tier 1 and Tier 2 CACs to adopt the LPS for the I-710 MCS. In addition, the committee adopted four recommendations providing direction and guidance for the future of the corridor.²¹ These recommendations

included developing a corridor-level air quality action plan and a process and structure for continuing community participation through the project environmental analysis.

The LPS includes all transportation projects scheduled to be completed by 2025 in the I-710 Corridor. Additional elements of the LPS are:

- Hybrid Design Concept, consisting of 10 mixed-flow lanes, specified interchange improvements, and four truck lanes between the inter-modal rail yards in Vernon/Commerce and Ocean Boulevard in Long Beach;
- Alternative B – Transportation System Management/Transportation Demand Management (TSM/TDM) improvements;
- Improvement to arterial highways within the I-710 corridor; and
- Construction of truck inspection facilities to be integrated with the selected overall design concept.

Alternative B, the TSM/TDM alternative, is intended to make use of all operational technologies available at the time of construction. Consideration was given to ramp metering and ITS strategies.

On January 27, 2005, the MTA Board adopted the draft final report of the I-710 Major Corridor Study.²² In addition, the Board authorized the MTA Chief Executive Officer to begin preparing a scope of work and funding plan, to include funding commitments from multiple partners, for the environmental phase of the project. The final step of the planning process following the RSTIS procedure was the letter of completion granted by the peer review group. The SCAG transportation and communications committee issued this letter in February 2005, allowing the project to be entered into the RTP and made eligible for federal funds.

The Future

In September 2004, GCCOG submitted the LPS to Caltrans for review and comment by District 7 and FHWA on behalf of the major corridor study participants. Caltrans accepted the PEAR document and the project is currently entering into the environmental review phase. The identified cost of the environmental review process and the preparation of an EIR/EIS is \$30 million. To support immediate action on the project, seven funding partners have contributed resources: Caltrans, SCAG, MTA, Ports of Long Beach and Los Angeles, GCCOG, and the I-5 Joint Powers Authority (JPA). Additionally, MTA will lead the engineering consultant

contract for this phase and an additional contract for public outreach. The successful process used in the planning study serves as a model for the next phase of the project development.

LESSONS LEARNED

Success Factors

The parties involved with this project agree that the single greatest achievement of the I-710 MCS was the degree of public involvement and participation toward the end of the process. This project highlights the strategy the region adopted in 2003, to provide a bottom-up approach to transportation planning. All planning partners were supportive of this approach.

The inclusive nature of the planning process began at the six-county regional level with the RSTIS process adopted by SCAG. The peer review group mandated an open process by requiring engagement of all those affected by the proposed project. The I-710 MCS process began with a strong decision-making structure and public involvement process mandated by the RSTIS procedure. However, the study and the ensuing controversy regarding local health effects from traffic and exhaust in the corridor ignited extensive public outreach and provided new lessons regarding public involvement.

Public Outreach

In 2001, the MCS began as a traditional, engineering-led transportation planning process. The selected consultant identified a sub-consultant to specifically engage and advise the public and identify stakeholders as the technical process unfolded. The original public involvement process, which was parallel but separate from the decision-making process, failed to produce acceptable solutions. The revised outreach process, as established in 2003, integrated public involvement with decision making.

The change in public involvement approach began at the TAC meeting on May 1, 2003. The committee members guiding the study recognized and validated the views expressed by community representatives and various stakeholders. The committee shaped these concerns into guiding principals, first at this meeting and subsequently at the OPC meeting. The strategy shifted from an outreach process delivered by a consultant to one engaging the communities by the people chosen to represent their interests. As a direct result of this change in course, the OPC and MTA Board directed the TAC to form a community advisory committee. This committee was charged with guiding the development of a new alternative for the corridor. In addition to responding to community concerns, these actions enabled the project to continue to advance despite controversy over impacts.

The Tier 1 and Tier 2 CACs began in an environment of skepticism and distrust. The study leaders tried to overcome this obstacle in several ways. First, elected officials from each community selected Tier 1 committee members. Then, members of the Tier 1 committee selected a chairperson who became a member of the Tier 2 committee. This ensured that the views and interests of the Tier 1 communities were carried into the Tier 2 deliberations. Secondly, an engineer and an outreach consultant that had not been involved in the previous process facilitated the CAC meetings. From the outset the OPC assured the CAC members that the new process had no preconceived outcome. However, community members did not initially trust this assertion. Through continued meetings the project team reinforced the concept of a “blank slate” and established trust. The study team used the available technical information from the initial alternatives study to facilitate discussions rather than to guide them. This

method of decision making did not provide support for any particular special interest; instead the group worked by consensus similar to the MCS process. Another supportive aspect of this effort was the time allowed for consideration and decision making; the perspective became “let’s do it right no matter how long it takes.”²³

The revised public outreach process set the following goals:

- Create a defensible and inclusive community outreach process that allows those with a relevant stake in the I-710 MCS to participate in its development;
- Emphasize coordination among all the parties responsible for execution of the I-710 MCS and, at the same time, maximize public involvement throughout the planning process;
- Implement a public outreach program that responds to public concerns and works actively with agencies and stakeholders involved in the I-710MCS to identify transportation solutions;
- Assist in obtaining a consensus on a locally preferred strategy; and
- Document results and findings from the outreach program.²⁴

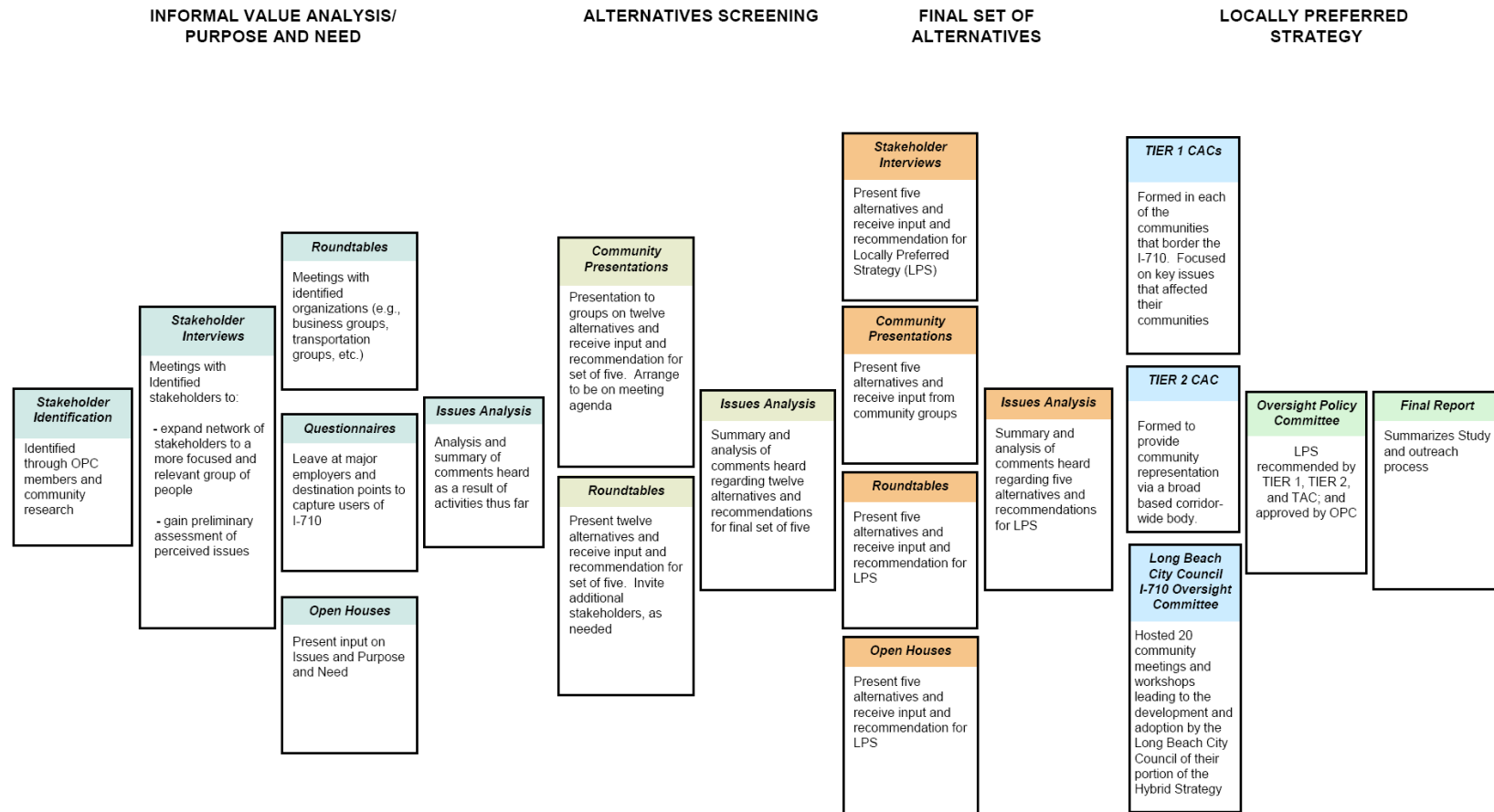
Figure 6 illustrates a structure level and goal orientation in the final public involvement strategy that goes beyond typical transportation planning processes in the United States.

The impact of this level of public involvement was meaningful to policy makers who safeguarded the process from returning to the traditional approach in the next phase. Along with a process to adopt an LPS, the OPC recommended developing a process and structure for continuing community participation through the project environmental review. MTA will establish and lead a consultant contract for public outreach throughout the preparation of the environmental impact report.

Financial Contribution

The joint funding arrangement for the I-710 MCS was a significant step forward in collaborative decision making. While MTA was responsible for managing the overall study and hiring consultants, all four planning partners contributed to the \$4 million study budget. The shared financial contributions reflect a level of trust and shared objectives among the partners. Additionally, the commitment of funds ensures the buy-in of all partners to the study’s results.

Figure 6. I-710 MCS Outreach Process Flowchart²⁵



The proposed project has recently entered the environmental review stage to prepare the EIR/EIS. Planning partners in the region have committed additional financial support, demonstrating the degree of collaboration attained through the study process. At the adoption of the LPS, MTA earmarked \$5 million of the required \$30 million for developing the EIR/EIS. MTA directed staff to build a funding partnership to cover the remaining costs. In addition to the \$5 million provided by Caltrans for the EIR development, five additional stakeholders provided major funding or in-kind services to meet the estimated document cost of \$30 million:

Agency	In-kind Funding	% of Total Funding	Value of additional work that supports the I-710 EIR/EIS Project
GCCOG	\$5,000,000	18.52%	
MTA	\$5,000,000	18.52%	
Port of Los Angeles	\$5,000,000	18.52%	
Port of Long Beach	\$5,000,000	18.52%	
Caltrans	\$5,000,000	18.52%	
SCAG	\$2,000,000	7.41%	\$1,000,000
I-5 JPA			\$2,000,000
TOTAL	\$27,000,000	100%	\$3,000,000

Financial collaboration presents an additional set of obstacles on any project of this magnitude. The local area, however, sees this degree of partnership as an innovation that supports the future of transportation improvements.

Focus on Public Health

The Tier 2 CAC report identifies the priorities for the project from the perspective of all affected communities. These priorities are:

1. This is a corridor – considerations go beyond the freeway and infrastructure.
2. Health is the overriding consideration.
3. Every action should be viewed as an opportunity for repair and improvement of the current situation.²⁶

The hybrid strategy and the purpose and need for the project reflect these priorities. The problem statements from the planning phase will influence the environmental process, assisting in the development of a project-level purpose and need. Although air quality is typically addressed in environmental considerations, the I-710 MCS problem statement is:

Air Quality/Public Health As shown by recent Air Quality Management District (AQMD) studies, populations within the I-710 Study Area are regularly exposed to toxic air contaminants that increase carcinogenic risk. A major source of these air toxins is diesel particulates, which is considered to be a local source air pollutant. About half of the diesel particulate matter in the South Coast Air Basin as reported by AQMD (1998) is caused by emissions from vehicles using the freeway and roadway system. Heavy-duty diesel trucks are the leading contributor to on-road sources of diesel particulates.²⁷

As the corridor study progressed, TAC members asked the Southern California Air Quality Management District (SCAQMD) to join their committee. SCAQMD advocates for air quality science and health concerns and was the only resource agency represented in the study leadership. As part of the final recommendations, along with the LPS, the oversight policy committee included the Tier 2 report “in its entirety.” The Tier 2 report became pre-scoping guidance for the preparation of the EIR/EIS.²⁸

Regionally Significant Transportation Investment Studies: A Key Innovation

“Bottoms-up” Approach: Any Agency Can Initiate a Study to Examine the Largest Projects

The Regionally Significant Transportation Investment Studies procedure is a major shift from traditional transportation planning strategy. It centers on a “bottoms-up” process to identify and fund transportation improvements using federal funds. As the statewide lead planning agency, Caltrans is ultimately responsible for improvements to the highway network. Under RSTIS, any agency can propose and sponsor a project at the MPO level. Improvement consideration, therefore, begins at the lowest level for the largest projects in the region.

Decisions Reached by Consensus

The second innovation of the RSTIS procedure is consensus decision making. All affected parties must be included in this procedure. Once a study has begun, the selection of an LPS is not complete until consensus has been reached. This procedure applies to all projects that are considered “regionally significant.” (This designation means that the project is eligible to use state or federal funds.) The final step for an LPS to be entered into the SCAG regional transportation plan is a “Letter of Completion” from the RSTIS peer group. This procedure restricts the use of federal funds to those projects where a broad level of agreement has been reached.

The RSTIS procedure is an adopted SCAG procedure; however, it is not a legislated mandate. The procedure’s lack of “teeth” means that some project planning studies do not initiate within the procedure, but rather make an effort to “check off the box” at the end of a planning effort thereby risking difficulty in reaching consensus and experiencing a more lengthy process.

Option for Planning Study to be Completed Concurrent with NEPA

RSTIS provides an option for the planning study to be conducted concurrently with the NEPA process. This would be a major innovation, but it appears not to have been attempted. Several obstacles to success have been identified:

- Geographic Information System (GIS) data may not be common to all planning partners and may not meet Caltrans requirements;
- A lead agency or sponsor other than Caltrans, the typical lead for the environmental process, may be designated; and
- Lack of available resource agency time for a study that has not been sufficiently vetted to support a project outcome.

Barriers Encountered and Solutions

Structural Complexity

The California structure for transportation planning and improvement is unique in regard to the level of authority delegated below the state level. It establishes a regional, multi-county MPO framework supported by county-level implementing agencies. Both federal and state funds are sub-allocated to the county-level transportation agency. The detail of this funding structure and decision-making responsibility is established by general statute.

For the Los Angeles region, SCAG acts as the metropolitan planning organization, and MTA is the Los Angeles County implementing agency. Both SCAG and MTA develop a long-range transportation plan for their respective areas: a regional transportation plan for SCAG and long-range transportation plan (LRTP) for MTA. Within Los Angeles County, MTA and GCCOG share jurisdictional area. MTA is granted funding authority through legislation and GCCOG maintains a close relationship with the individual municipalities. The result is a healthy tension of competing interests and perspectives. It also promotes a process that is closer to the public and promotes the type of outreach this study used. Decisions made at this level can be carried into the regional framework simply by following the established RSTIS procedure.

Although this structure is well suited to the population densities of California and supports the RSTIS process approach, the issue of transferability may be a barrier in other areas. Issues that must be carried through a chain of command and established policy requirements routinely require more decision-making time. Additionally, the number of competing interests becomes greater and consensus becomes more difficult to achieve.

The use of sub-committees below the technical committee level could allow a tiered decision-making structure where funding limits or jurisdictional boundaries are applied.

Technical Consistency

The transportation planning structure in California adds another layer of complexity in the technical process as well. Travel-demand models at both the county and regional levels support analysis of the system. In addition, the Port of Long Beach Transportation Master Plan provides projections regarding trucks. There must be consistency among the different types and levels of traffic data to ensure a defensible technical conclusion.

For the comparison of alternative solutions in the I-710 MCS, the consultant team created a sub-area model to ensure an “apples to apples” comparison of the alternatives. However, this model development was the basis for a four-month project delay because of discrepancies observed in the SCAG regional model. Ultimately, the consultant team used the MTA long-range model as the primary basis for traffic forecasts along with the Port and SCAG model for truck forecasts. The sub-area model validation using local traffic counts provided a level of comfort despite larger issues.²⁹

On September 1, 2004 Caltrans and FHWA provided comments on the I-710 LPS. Caltrans observed a disagreement between the original 1999 TCR and the traffic analysis provided by MTA in the traffic-modeling report. Caltrans also cited insufficient detail to allow a true comparison between the two analyses. Caltrans further requires “the full traffic modeling analysis” to fully assess the LOS for the proposed alignment.³⁰ Although these comments relate to comparing a travel-demand model analysis to a sketch-planning analysis, they raise potential issues for the proposed alternative. The final report acknowledges that the hybrid design

requires special treatment and design exceptions. The analysis necessary to support incorporation of these exceptions, will require fully substantiated traffic forecasts.

The technical analysis has not been a significant issue in the I-710 MCS to date. MPO areas across the country vary greatly in the sophistication of their technical analysis tools and local credibility issues. Technical analysis consistency can become a barrier in advancing projects and should be carefully reviewed.

Considerations for Future Studies

Although this process is considered a significant achievement by all study participants, the case offers some lessons to be considered in future planning efforts. The public outreach process sought full engagement. Greater communication was needed to achieve success and was eventually incorporated. Outreach coordinators for technical teams should enhance communication during the study process. “Branding” of the planning process as a means to establish common understanding of the process may be beneficial. In a branding effort, study proponents develop clear symbols and consistent messages to foster widespread recognition and communicate with stakeholders and the public. The participants in the I-710 MCS effort claimed there will not be a return to the “old way of doing things.” The agencies learned valuable lessons via this process and will continue to seek new means of collaboration and shared decision making.

CONCLUSIONS

The I-710 MCS concluded in 2005 with the adoption of the locally preferred strategy into SCAG’s RTP. Beyond successfully developing a solution for the corridor, the MCS represented a significant step forward for collaborative decision making. The community advisory committees were essential to the study’s success. MTA will carry this committee structure forward into the environmental review process for the Locally Preferred Strategy.

More generally, the MCS offers lessons to planners regarding the importance of establishing partnerships between agencies and building trust among all stakeholders. These elements are important in complex situations where the stakes are high for all parties involved. The emphasis on quality of life for the local communities surrounding the I-710 was essential. This emphasis resulted in the “buy-in” of these groups who may have otherwise stopped the planning process.

Both the strong original commitment to collaboration and the demonstrated flexibility of the study team contributed to the eventual success of the MCS. Planners should seek to repeat these elements in similar studies.

ENDNOTES

¹ <http://www.portoflosangeles.org> ; <http://www.polb.com>

² TCR, p. 121.

³ I-710 Major Corridor Study Final Report, Introduction, 2005 (*Final Report*).

⁴ “Procedures Manual for Regionally Significant Transportation Investment Studies” (RSTIS), March 2001, SCAG Transportation and Communications Committee

⁵ I-710 Major Corridor Study Final Report, Section 1, p.6.

⁶ For a complete list of project consultants refer to Appendix A of the Final Report.

⁷ TCR, 2000.

⁸ TCR, Congestion Measures, p. V-5.

⁹ CEQA represents the legislative guidance for the environmental review process in California. It is equivalent to the NEPA process and adopted at the same time as the national legislation. For additional information see http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/.

¹⁰ I-710 Major Corridor Study Final Report, Appendix B, OPC Minutes, May 24, 2001, p. 12.

¹¹ I-710 Major Corridor Study Final Report, Section 4, p. 1.

¹² I-710 Major Corridor Study Final Report, Appendix C, TAC Minutes, January 30, 2002, p. 73.

¹³ Ibid, February 20, 2002, p. 80-86.

¹⁴ I-710 Major Corridor Study Final Report, Section 4, p. 17.

¹⁵ I-710 Major Corridor Study Final Report, Section 4, Table 4.3-2, p.4

¹⁶ I-710 Major Corridor Study Final Report, Appendix C, TAC Minutes, May 29, 2002, p.5.

¹⁷ I-710 Major Corridor Study Final Report, Appendix C, TAC Minutes, May 1, 2003, p.7.

¹⁸ I-710 Major Corridor Study Final Report, Appendix C, TAC Meeting Minutes, June 11, 2003, p.3.

¹⁹ I-710 Major Corridor Study Final Report, Section 6, p. 1.

²⁰ I-710 Major Corridor Study Final Report, Section 6, p.29.

²¹ I-710 Major Corridor Study Final Report, Section 9, p.2.

²² Ibid, p.7.

²³ I-710 Major Corridor Study Final Report, Appendix B, OPC Minutes, May 28, 2003, p.11

²⁴ I-710 Major Corridor Study Final Report, Section 2, Public Involvement, 2005.

²⁵ Ibid, p. 2-2.

²⁶ Major Opportunity / Strategy Recommendations and Conditions, I-710 Major Corridor Study, 2004, Tier 2 CAC, p.7

²⁷ I-710 Major Corridor Study Final Report, Section 3, Purpose and Need, p. 3-16.

²⁸ I-710 Major Corridor Study Final Report, Section 9, p.7

²⁹ I-710 Major Corridor Study Report, Appendix C, TAC Minutes, August-November 2001.

³⁰ I-710 Major Corridor Study Report, Appendix V, p.4.