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Technical Memorandum No. 3
Integration Plan

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TM3-SUMMARY

The Gateway Cities Council of Governments (GCCO G), in support of cleaner air and reduced congestion, is interested in furthering technology application and connections within the transportation system. By nurturing technology in this field, the COG believes that increased efficiencies, in the movement of goods in particular, can be realized through the southeast Los Angeles area resulting in a better quality of life for its 2.5 million residents. These technologies, known as Intelligent Transportation Systems (ITS), have been proven to work better and result in greater benefits to drivers when connected to one another to share more information. The purpose of this ITS Integration Plan for Goods Movement is to determine where technologies can have a positive impact and where they should be connected to provide a safer and more mobile transportation system for residents and business owners.

This ITS Integration Plan has a heavy emphasis on goods movement and the private sector as a critical partner in developing solutions that will be effective. Numerous regional and statewide studies and plans have looked at the specific issue of freight and the importance of freight mobility to the regional, state and national economy. Other, separate studies have examined technology as a means of improving the transportation system as a whole. This Integration Plan combines these two perspectives. It addresses technology as means of improving the transportation system from a goods movement perspective and with private industry as an integral and equal partner with the public sector in achieving these aims.

In order for technology to work effectively, it cannot be considered or applied in isolation. Critical to enhancing the benefits that can be realized by technology application, is to deploy technology in concert with coordinated operations, decision-making by the private and public sectors, and joint policy and investment approaches. Figure TM3-1 demonstrates that “the whole is greater than the sum of the parts;” the benefits cannot be achieved unless each of the five components is in place. The benefits for this ITS Integration Plan are accomplished through:

- **Coordinated, Active Operations** – The day-to-day business of both the public and private sector is improved through operations that are coordinated with the appropriate parties and actively monitored for performance and future improvements.

- **Technology Infrastructure** – The deployment of advanced technologies provides information to both the private and public sector.

- **Business Decision/Information Flow** – The private sector uses information to make more informed business decisions, which not only impact their bottom line, but increase efficiency.

- **Public Decision/Information Flow** – The public sector uses information to make decisions that impact their constituents and to guide infrastructure investments.

- **Policy and Investment Decision-Making** – Both the private and public sectors work together to make policy and investment decisions by working together toward common goals and a mutually beneficial partnership.
This technical memorandum, Technical Memorandum #3 (TM3), is the third and final deliverable comprising the ITS Integration Plan for Goods Movement for the Gateway Cities Area. TM3 outlines the concept of operations, business plan considerations, and implementation plan for the program.

**Fundamental Objectives**

The fundamental objectives outline the plan for meeting the needs identified in TM1. Solutions range from installing field infrastructure to establishing unique, cutting edge, institutionally challenging technology solutions. A summary of the fundamental objectives are shown below. Some have the potential to be met in the short-term and others require further stakeholder involvement to fully develop mutually beneficial solutions to achieve the objectives. Those objectives with short-term potential for implementation are labeled as SHORT-TERM here and projects are described in the following section.

1. **Fill Infrastructure Gaps** – SHORT-TERM completing detection and communications on freeways and arterials throughout the region. A variety of technologies will accomplish the coverage and the data will be used to develop a plethora of information to be shared with trucks, dispatchers, rail operators, public agencies, and the general public. Appendix TM3-A list the Caltrans ITS SHOPP projects that would be the start of this effort.

2. **Arterial Travel Information** – SHORT-TERM very few places in the country have attempted a full scale arterial travel time program. This concept would require extensive
detection and would be tailored to determining and sharing information regarding delays on key allowable arterial truck routes.

3. **Truck Data** – SHORT-TERM- Numerous projects are recommended to collect anonymous truck-specific data such as speeds, idling, and other related truck information (all anonymous).

4. **Freight-Focused Traveler Information** (on-board and web-based) – SHORT-TERM Several projects will provide information valuable to trucks and truck companies back to drivers and dispatchers such as real-time truck-experienced delays on freeways and arterials, turnaround times at terminals and queue times behind terminal gates, and real time dynamic routing for trucks.

5. **Drayage Turnaround Times and Queue Detection** – SHORT-TERM data collected will be used to fill in much needed gaps in information for trucks regarding how long it will take to pick-up containers at the Ports of Long Beach and Los Angeles.

6. **Comprehensive Goods Movement Scheduling System** – though likely to be institutionally challenging to deploy, a scheduling system that relies on international, real-time container tracking has the potential to improve air quality, reduce congestion, and improve the bottom line for trucking companies, terminal operators and rail companies. This objective requires further discussion among impacted stakeholders to develop an achievable solution.

7. **Strategy for Truck Safety and Credentialing** – to improve safety, stakeholders are working to revamp the truck inspection system through improved policy and increased operations in the Gateway Cities Area. Technology will likely play a major role in the solution, given the lack of real estate available for building new inspection stations in the subregion. Discussions among impacted stakeholders are currently ongoing to develop an achievable solution.

**Proposed Projects**

Projects are defined in terms of functionality to achieve the objectives outlined above. These proposed projects, combined, will achieve the short-term fundamental objectives described above. An implementation plan in this technical memorandum shows the sequencing (based on requisites and priorities) of these projects and intended implementation timeline. Business plan considerations (described later in this technical memorandum) provide a structure by which funding may be identified and applied and the potential involvement of the private and the public sector in funding such improvements.

The following list of projects is defined in this section:

1. Freeway Detection Infrastructure
2. Arterial Infrastructure
3. Arterial Travel Times
4. Queue Detection And Terminal Turn Times
5. Goods Movement Transportation Management
6. Truck Fleet Communications Program
7. Comprehensive Performance Monitoring System
8. Existing Sources – Truck Fleet Data Collection And Agreements

Further discussions and project concept development are required among impacted stakeholders to define the following long-term projects.
1. Port Reverse 911 Emergency Notification Call System
2. Comprehensive Goods Movement Scheduling System (Container Tracking)
3. Truck Parking Coordination
4. Vehicle Enforcement Strategies, Systems and Sites Study
5. Congestion Pricing Initiatives
6. Integration And Policy Task Force

**Institutional and Policy Issues**

This stage of the ITS Integration Plan defines core concepts that will shape how the Gateway Cities region better integrates freight and goods movement into all aspects of operating and planning for the regional transportation network. The following topics are for consideration in future steps and project development.

- Strong Private/Public Partnership in Developing Future Solutions
- Private sector participation/business model framework
- Data sharing/privacy issues
- Local agency ‘equity’
TM3.1 INTRODUCTION AND OVERVIEW

The Gateway Cities Council of Governments (GCCOG), in support of cleaner air and reduced congestion, is interested in furthering technology application and connections within the transportation system. By nurturing technology in this field, the COG believes that increased efficiencies, in the movement of goods in particular, can be realized through the southeast Los Angeles area resulting in a better quality of life for its 2.5 million residents. These technologies, known as Intelligent Transportation Systems (ITS), have been proven to work better and result in greater benefits to drivers when connected to one another to share more information. The purpose of this ITS Integration Plan is to determine where technologies can have a positive impact and where they should be connected to provide a safer and more mobile transportation system for residents and business owners.

TM3.1.1 Objectives and Regional Focus on Goods Movement

This ITS Integration Plan has a heavy emphasis on goods movement and the private sector as a critical partner in developing solutions that will be effective. Numerous regional and statewide studies and plans have looked at the specific issue of freight and the importance of freight mobility to the regional, state and national economy.

As agreed upon by the stakeholders discussed above, the objectives of this ITS Integration Plan for goods movement are to:

- Identify existing and planned ITS projects and systems in the region and assess their ability to meet the unique needs of freight and goods movement;
- Summarize the specific needs of freight and goods movement stakeholders;
- Identify and incorporate other appropriate stakeholders into the plan development process;
- Document key initiatives that could support safer and more efficient goods movement;
- Identify opportunities and gaps in current agency ITS plans and programs;
- Develop potential strategies and solutions for innovative applications, partnerships and projects;
- Identify where updates to regional ITS architectures should focus to best integrate freight and goods movement with transportation/traffic management; and
- Summarize in an ITS Integration Plan that identifies deployment, partnerships, business model considerations, and potential implementation timeframes to best leverage investment and involvement by the public and private sectors.

TM3.1.2 Report Contents and Organization

This technical memorandum is the third and final deliverable that comprises an ITS Integration Plan for Goods Movement for the Gateway Cities Area.

Technical Memorandum #1 summarized the current ITS initiatives in the region (and relevant statewide programs and initiatives) and where there are gaps in those programs in terms of addressing the unique needs of goods movement. A key focus of Technical Memorandum #1 was to identify the specific needs of freight and goods movement in the region – needs included both public agency transportation management/operations perspectives as well as the needs of port operations, private freight/drayage, rail, warehouses, and other important private sector perspectives.

Technical Memorandum #2 builds on the needs and gaps identified in Technical Memorandum #1 to identify specific projects and strategies to address those needs. Because this is an ITS...
Integration Plan, there is a very strong focus on technology applications, regional integration priorities, as well as some innovative applications and infrastructure that are ‘outside of the box’ of the traditional public-sector ITS and transportation management arena. The unique nature of this project will require collaboration between public sector and private industry stakeholders in order to bring these programs to fruition.

This third and final deliverable in the series is an Integration Plan that identifies coordinated operational roles and responsibilities for the program, an outline of the project implementation timeframes, and considerations for a business plan. The Implementation and Business Plans will be further developed in a subsequent effort.

This memorandum fits into the overall GCCOG ITS Integration Plan as follows:

**GCCOG ITS Integration Plan**

- Technical Memorandum 1: Inventory, Existing Conditions, and Needs Assessment
- Technical Memorandum 2: Proposed Projects
  - Gateway Cities ITS Integration Plan
    - Coordinated Concept of Operations
    - Business Plan Considerations
    - Implementation Plan Outline
    - Executive Summary

**Section 1 Introduction** – overview of TM3 and relationship of this deliverable to the overall project development.

**Section 2 Coordinated Concept of Operations** – This section describes how the program is envisioned to operate in relation to its many and varied stakeholders from private industry and the public sector.

**Section 3 Business Plan Considerations** – This section identifies several key distinctions of this program as it relates to goods movement and the integral role of the private sector in the program’s success. It outlines unique considerations to be imbibed into the Business Plan development in a subsequent effort.

**Section 4 Implementation Plan** – This section defines implementation considerations for the projects. These include preliminary schedules, project interdependencies and sequencing, and a strawman Implementation Schedule.

**Section 5 Next Steps** – This section describes the next steps toward properly developing, implementing, and continuously monitoring the program to accomplish improvements such as improved air quality, reduced congestion, and increased container throughout in the Gateway Cities region.
TM3.2  COORDINATED CONCEPT OF OPERATIONS

In order to effectively achieve the level of change in the transportation network and goods movement industry that is sought by the development of this technology-based program, many projects and programs must work together on a day-to-day basis. It is imperative that multiple public sector agencies, currently in the business of traffic operations and traveler information coordinate their efforts in a regular and proactive manner. It is also critical that private industry engage in the development of daily operating procedures in order for the program to be truly effective. Additionally, the public sector will play a major role in funding the capital and operating phases of many of these projects. As stewards of these projects, it will fall to the public sector leads to define the detailed business plan and performance plan for each individual project and then coalesce all these individual projects into a single operational system that benefits both the public and private sectors. This section describes how the program is envisioned to operate in relation to its many and varied stakeholders from private industry and the public sector in order to realize its full potential.

TM3.2.1 Public Sector Role

Numerous public sector agencies currently own and operate technology-based systems that manage traffic for example by adjusting traffic signal timing or ramp metering rates; collect and/or provide traveler information for example collecting data from freeways and calculating travel times to provide to travelers on electronic message signs; and enforce vehicle safety requirements such as overweight vehicles; and enforce security requirements related to goods movement such as checking driver credentials and customs clearances for containers. Many of these programs have developed primarily independent of each other and are now facing the need for more coordinated and cooperative operations and information sharing.

There are three primary means of sharing data and information as developed and defined by these existing systems:

- **Direct data/information sharing** – systems that provide data directly to other systems or to the general public

- **Information Exchange Network (IEN)** – a system designed to allow for exchange of traffic signal and other local data between local agencies and regional agencies throughout the County of Los Angeles

- **Regional Integration of Intelligent Transportation Systems (RIITS)** – a system designed to allow for exchange of data between larger regional projects (such as Caltrans Los Angeles area freeway operation system) as well as to provide access to local data available on the IEN (described above); this system also allows for data to be shared with private companies for traveler information and other purposes

Most existing programs currently are sharing information or have plans to share information once their systems and the connections are up and operational.

Additionally, more proactive, cooperative operations of the systems can improve the benefits being generated. For example, each agency that operates a system that manages traffic (through freeway operations or local road operations) can share their operational approaches and scenarios with neighboring agencies and interested private sector participants. These partners can then provide input and insight into how to more effectively or cooperatively operate these systems in a cohesive and mutually beneficial manner. This level of interagency (and private sector)
coordination is challenging to achieve, but can have great positive outcomes to our transportation system as a result.

In addition to the coordinated operations and data sharing described above, technology and infrastructure projects need to be planned for, designed, and operated in a manner that addresses goods movement-specific needs and issues. This should be done in close partnership with the private sector.

Projects that comprise this program will require the aforementioned roles of the public sector in providing operational insights from a coordinated, cooperative perspective; defining data sharing needs by the public sector (private sector roles defined below); and providing input to the planning and design from a goods movement perspective. As previously stated, the public sector will play a major role in funding the capital and operating phases of many of these projects. As stewards of these projects, it will fall to the public sector leads to define the detailed business plan and performance plan for each individual project and then coalesce all these individual projects into a single operational system that benefits both the public and private sectors.

**TM3.2.2 Private Sector Roles**

The private industry, primarily those companies involved in goods movement (primarily ground transport in, around, and through the Gateway Cities area) and secondarily those involved in providing travel conditions to the general public (information service providers), will play a major role in the ITS Program for Goods Movement in the Gateway Cities. Of utmost importance to the success of the program, and of the individual projects therein, is the ongoing partnership of the private sector in decision making and project development. The private sector can provide valuable insight into project planning, design, and development, but also to effective ongoing operations and fine-tuning of projects once they are up and operational.

The private sector partners involved in the goods movement industry will be primary users and beneficiaries of many or all of the projects described in this document. As such, their buy-in on the value and potential use of the projects in the planning and development stage will be critical to the projects’ successes. Their active reporting and feedback on the usage and value of the projects once they are operational will be the baseline by which future project revisions (both technological and operational) will be carried out.

**TM3.2.3 Public-Private Partnerships (P3)**

Based on the preceding discussion, a public-private partnership to implement (and operate) this system should be analyzed and developed in the next steps outlined subsequently. This plan would seem to be a good candidate for a P3 approach. This would likely give the private sector more assurances of the value to be received, as well as more control and input. Institutional arrangements need to be detailed for this partnership and any agreements clear so that commitments can be secured to not only build the system and implement it but provide “permanent” and long term funding to operate and maintain it.

**TM3.2.4 Summary**

The existing, programmed, and proposed projects that interrelate to form the ITS Plan for Goods Movement in (and around) the Gateway Cities region, have complex, and at times, overlapping
connections. While the roles and responsibilities of public sector and private sector partners are described in detail above and summarized below, it is also helpful to envision the connectivity of the projects as a means of understanding how the various systems will operate as a comprehensive program. Figure TM3-2 depicts the Integration Plan (or high level program architecture).

Public Sector Roles

- Plan for, develop and operate programs designed to address GM issues;
- Lead integrated, coordinated operations for current and future projects;
- Engage private sector as key partner in project development;
- Plan for, develop, and operate (as applicable) future projects to address goods movement issues and needs; and
- Fund (capital and operations) or facilitate funding for recommended projects.

Private Sector Roles

- Involvement in project planning and development;
- Input to operational scenarios and procedures;
- Use of programs and feedback into ongoing monitoring and adjustment of operations for more effective outputs;
- Active reporting and feedback on the use of and value gained from various projects; and
- Ongoing involvement in policy and investment decisions.
Figure TM3-2 – Integration Plan (High Level Program Architecture)

"Concept of Operations"
TM3.3 BUSINESS PLAN CONSIDERATIONS

This section identifies several key distinctions of this program as it relates to goods movement and the integral role of the private and public sectors in the program’s success. It outlines unique considerations to be imbibed into the detailed Business Plan development in a subsequent effort. Many of the priority strategies outlined in previous technical memoranda as part of this Integration Plan present some key opportunities to implement some very high impact, although ‘non-traditional’ solutions. As a result, approaches to planning, partnering, integrating and delivering those services may not fit within some of the traditional public sector processes and roles.

TM3.3.1 Business Model in the Context of the GCCOG ITS Integration Plan

A business model can be many things – a strategic planning tool, a framework for corporate or institutional organization, a value proposition (“what do we get for our investment?”), or a cost/revenue/profit plan. For public agencies that are in the business of operating and maintaining publicly-owned systems, the concept of ‘business model’ may be very new. In the case of the Gateway Cities’ partnership, GCCOG and its partners will be establishing new types of partners and focusing on key stakeholders in a new way, and with that, comes new institutional approaches and perhaps even operational strategies that are very different than what agencies in the region are accustomed to. In order to accelerate deployment and integration of key services, such as fast-tracking the installation of data collection infrastructure the following should be considered.

For the GCCOG ITS Integration Plan, the business model is intended to serve as a forward-thinking strategic partnering plan and risk management tool. The intent of providing various perspectives on the business model and potential business model frameworks is to:

- Outline potential partnering opportunities – where are their roles for the public and private sector to plan, implement, operate and successfully deliver the ‘future’ regional transportation system?
- Identify benefits and considerations of various partnering opportunities – where are there critical issues that partners will need to consider in terms of data ownership, data distribution, and how will those influence short and long term strategies?
- How will the various business model approaches work within current agency policies or practices?

TM3.3.2 Data “purchase” and use

An important short-term, high-priority strategy addressed by several of the recommended projects involves increasing the amount of real-time data on the freeway and arterial networks in the region. Building out the key data collection infrastructure to fill the data gaps (particularly on arterials) can be accomplished by the public sector, but the cost and timeframe to do so may not fit within some of the priority objectives of the GCCOG ITS Integration Plan. The public sector procurement process – particularly when the strategy involves multiple jurisdictions – may also not fit with urgent, high priority needs.

In the short term, filling the data gap can be accelerated through partnering. There are several options for partnering with the private sector to help fill the key data collection requirements, which include both infrastructure-based and non-infrastructure-based approaches. In an infrastructure-based approach, either the public sector or private sector would deploy new detection on roadways or utilize probes (cars, trucks, or transit vehicles). In the case of private sector investment in infrastructure, the private sector would own the rights to the collected data.
There is opportunity to purchase the data from the private sector, but included in the cost will be the factor of safeguarding the commercial value of the data. This means that use of the data may be restricted depending on the level of purchase price agreement (see Table TM3-1 for a demonstration of a typical data pricing structure)

**Table TM3-1 Typical Data Pricing Structure**

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<tr>
<th>Allowable Data Use</th>
<th>Data Pricing Range</th>
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<td><strong>Limited use to single agency traffic management:</strong> not allowed to be shared in any way with other public or private sector agencies (can’t be displayed on a web site or transmitted to trucks in cabs)</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Limited use and limited distribution:</strong> May be shared with other agencies for internal use only; might have limited distribution rights and may involve cost returns or other benefits back to the private company</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Wide use and distribution:</strong> full use and distribution allowable to public and private sector; resale or profit disallowed</td>
<td>High</td>
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The long-term trade-off needs to be studied in detail to determine the appropriate approach for the GCCOG plan. One option would be to purchase the use of privately collected data at a high price to achieve short-term objectives. A trade-off study may be desired to determine the most cost-effective approach over the long-term. This trade-off would consider the cost of purchasing data versus purchasing, installing, and maintaining equipment over time (usually 10 – 20 years).

A second option for data collection is the utilization of data from probe vehicles. In this option, trucking companies and drivers would be partners in allowing the collection and use of GPS-based data. The data may be collected by outfitting vehicles with new equipment or by supplementing the data pool with data already being collected by fleets. This partner group may expand over time to include additional trucking companies, shipping companies, transit agencies, and personal vehicles.

The probe data requires signed agreements outlining the use and distribution of the data. In particular, some data is considered private and/or proprietary and trucking companies require that the private and proprietary information be stripped prior to the data being shared with other agencies or private sector participants. This “anonymity” of the data is crucial to the private partners’ initial and continued involvement in the program.

In addition to the highly sensitive topic of private/proprietary data is the interest in trucks having truck-specific routing passed back to the vehicles. This functionality, by definition, would require the data to not be anonymous but to be truck-specific. For this reason, the design of the project(s) collecting this type of data needs to be sensitive to this dual-use. One approach that can address these concerns in tandem is to have a third-party, private operator to collect the data and also to provide routing information back to trucks. This may be a paid-for subscription service for some vehicles (market research and trade-off with free data collection options would come into play). Private subscriptions may offset the operations cost of the program, but may increase the capital cost of collecting the data in the first place. A separate, publicly operated system could then take anonymous data from the private operator and use and distribute it as needed. This business model would facilitate the comfort level of the private sector that their data is being protected while at the same time providing an option for the public sector to have better information for planning and operations at a low overall cost.
TM3.3.3 Public/Private Involvement in Projects

Of the varied short-term and long-term solutions being sought in the Gateway Cities areas, the majority are unique in functionality, magnitude, or business approach. There are many opportunities to engage both the public and private sectors in the ongoing planning, development and operations of the individual projects. The level of involvement of each party will vary primarily based on respective benefit. For example, a Reverse 911 concept would have a heavier public sector role in project development and funding as the greatest benefit could conceivably be to the Ports and the general public as compared to an individual vehicle receiving the notification. On the other end of the spectrum might be a project to address the container-based tracking and scheduling concepts. Any project defined to achieve this end would be benefiting primarily the private sector as trucks, shippers, terminal operators and rail would enjoy increased efficiencies and optimizations. The public sector may yet play a role in facilitating or even funding a program such as this in order to assist in bridging the challenging institutional barriers, but the primary parties to define the project and see it through into future operations would be private sector partners.

The following diagram (Figure TM3-3) depicts an estimate of where each of the short-term projects and long-term concepts (requiring further development) would fall on a sliding scale of public sector and private sector involvement. This scale can assist in further developing each project or concept into a working solution with effective outcomes and benefits to all parties.

Figure TM3-3 – Public/private Partnership Potential
TM3.4 IMPLEMENTATION PLAN

This section defines implementation considerations for the specific projects that have been recommended. These include project interdependencies and sequencing in an implementation schedule, challenges and expected program benefits.

TM3.4.1 Implementation Schedule

A conceptual implementation schedule for the potential short-term projects is shown in Figure TM3-4. The figure depicts project interdependencies and sequencing in relation to an aggressive, short-term implementation. Critical to the success of the program is collecting more data and more specific truck-related data than is currently available. The first six projects shown achieve that end. The Truck Fleet Communications Program will additionally provide information back to trucks, dispatch and to other public agencies. The Goods Movement Transportation Management and Performance Monitoring Plan will provide baseline data and ongoing data and monitoring to assess how well the projects are achieving the original objectives to assist in future project updates and investment decisions. All these individual, conceptual projects development would be preceded by feasibility studies and a business plan.

The future projects that require further definition before moving into design and implementation phases will continue concurrently and with urgency to involve the appropriate stakeholders and further define the projects functionally and conceptually to ready them for addition to the Implementation Plan. These projects include:

- Port Emergency Notification Call System
- Comprehensive GM Scheduling System
- Truck Parking Coordination
- Vehicle Enforcement
TM3.4.2 Implementation Challenges

Challenges to short-term deployment and effective ongoing operations of this program include institutional and funding challenges. These issues need to be addressed in order to effectively move the program ahead. The ITS Working Group and other interested and affected partners should develop solution-oriented approaches as a part of the detailed Implementation Plan.

- Potential Policy and Institutional Challenges – each of the recommended short-term projects and long-term concepts require multiple stakeholders working together in a coordinated partnership to achieve success. In some cases, this may mean multiple public sector agencies revising their operating strategies to achieve more output from the existing transportation network. In other cases, it may require multiple, private sector companies, with competing interests to work together to achieve greater efficiencies to each of their distinct market sectors. Other projects will require policy changes to enable more efficient operations, technology applications, and/or private sector involvement necessary to the program’s success. In all cases, a new approach to partnering will be needed to achieve results.

- Funding Challenges – while most projects may lend themselves well to current federal and local public funding for capital expenditures, operating budget sources are scarce. Operating budgets must be considered early in designing each project and a concerted focus must be applied to determining operational funding sources and operating budgets. Private funding sources or sale of services to the private sector, public sector cost-sharing (among multiple
public sector agencies) opportunities, new or unique funding sources to be used for operations, and policy change to allow public funding sources previously reserved for capital expenditures to be used for ongoing operations are several options to pursue.

**TM3.5  NEXT STEPS**

This section describes the next steps toward properly developing, implementing, and continuously monitoring the program to accomplish improvements such as improved air quality, reduced congestion, and increased container throughout in the Gateway Cities region.

- **Conduct Feasibility Studies.** The first step will be to conduct a comprehensive feasibility study that will evaluate each potential ITS project or program to determine feasibility; phasing; capital, operation, and maintenance costs; responsibilities; etc. and identify funding sources and opportunities. One of the main purposes of this comprehensive feasibility study is to provide the information so the prospective investors and partners can make well-informed decisions about their extent to participate and willingness to assist with funding and operations.

  This will include “research” with other agencies, including federal, around the country to determine their “ideas” and “concepts” to improve freight or goods movement. As previously stated, the various individual ITS projects and concepts identified herein need to “coalesce” into a single operation that provides value to both the public and private sectors.

- **Expand and Continue the ITS Working Group.** The ITS Working Group will continue to play a key role in developing projects, contributing to operational strategies, monitoring project and system performance, and advising on policy and investment. For this group of public and private partners, additional stakeholders such as terminal operators, air quality agencies (including SCAQMD and CARB), shipping companies, ground-freight companies, and potentially peer public agencies in other parts of the country would be valuable. This next phase should, once the stakeholders list is expanded, re-visit the proposed ITS projects included in the ITS Integration Plan and consider any additional (or promising) projects that this expanded group develops.

- **Update and refine recommended ITS projects.** Short-term projects require moving into the next steps of design, technology selection, and business and operations planning. Long-term concepts require further stakeholder involvement in defining functionality and performance objectives prior to moving into design and business planning steps.

- **Procurement options.** With a champion agency identified, each project requires a specific procurement approach and implementation strategy. This would include funding source identification and security for both capital and operations phases.

- **Institutional Arrangements.** Partnerships and commitments of both public agencies and private industry will be needed in order to implement the identified ITS projects. These arrangements would include intent to participate as users; business partnerships for funding, deployments, and operations; joint operational strategies; performance plans; and similar commitments to the ongoing success of the program.

  Public-private partnerships (P3) approaches, as previously discussed, need to be more thoroughly developed and evaluated to determine applicability to an integrated, goods movement ITS plan. The key to this will be the development of a business plan - outlined below - that will be developed with all applicable public and private stakeholders. This business plan will identify roles, responsibilities, benefits, etc. that will lead to funding and implementation. The business plan needs to address the disparity in needs between the public and private sector stakeholders that could then be coalesced into an operation that addresses these needs and are mutually beneficial. An operational entity for this system has to be
developed and institutional arrangements finalized (through MOU’s, contracts, JPA, agreements, etc.) that provides this entity the authority to operate and a set of expectations and outcomes that provides “results” that benefits all parties. These agreements will be the enabling legal documents for this unique partnership that will be the major “control” document(s) that, once completed, will lead to the development of the subsequent system design. The agreements will have to detail data generation, production, use and restrictions to access. These agreements will have to fine-tune all the data into a credible set of traveler information products.

The projects operational conceptualization (and individual Projects) outlined herein cannot be successfully implemented until all parties that will participate in these operations know their roles and agree to each others to make it work. To be successful, benefits to all parties must be assured. Each party will have something to contribute and all data will be “pooled” by virtue of data generation and use.

- **Business Plan.** The Business Plan discussed previously needs to be the major focus of these next steps. The information generated as a part of the other next steps tasks will be consolidated into this business plan which will serve as the foundation to move ITS projects forward. This business plan will be developed, as was the case with this ITS Integration Plan, with the ITS Working Group. This Business Plan will become the ITS Implementation Plan for Goods Movement in this area. The Business Plan, the first of it’s kind in the nation, will have to make the “case” – including costs, benefits, revenues, risks, and other key decision factors- for the proposed individual projects and the plan to coalesce them into an operational plan. This Business Plan will serve as the basis on which investors- federal, state and local agencies plus private interests- will decide whether to support individual projects as well as the entire operational concept and enable them (as well as prospective investors and partners) to make well-informed decisions about the extent of their participation. Therefore, the Business Plan will become the ITS Implementation Plan for goods movement for the Gateway Cities area. The Business Plan will include as a minimum:
  - Project Costs (capital, initial, ongoing, and life cycle) based on the comprehensive feasibility study for each of the ITS projects and programs
  - Identify and determine public and private sector lead agency (ies) to implement the business plan and contributing and beneficial stakeholders and their contributions.
  - Non-monetary benefits to the public (performance monitoring metrics previously discussed will be used)
  - Identify financial and legal responsibilities
  - Projected revenues/income and other financial incentives and benefits
  - Risks to all parties, and potential risk-management strategies
  - Detailed plan (including phasing to implement)
  - Identified benefits to all partners and schedule with set of achievable priorities, including production, use, vested interests and restrictions
  - An operational plan and facility to coalesce all the independent projects into one system that would successfully provide the required information and data in a cost-effective manner in coordination with other agencies projects and operational centers
APPENDIX

TM3-A

LIST of Planned
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315 PROJECTS
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