I-81 Corridor Freight Information System (CFIS) FHWA Grant Application

In coordination with the Virginia Department of Transportation and with support from the Pennsylvania Department of Transportation, the I-81 Corridor Coalition would like to submit the GO-81 initiative. The I-81 Corridor Coalition envisions GO-81, as a public private partnership to develop a MAP-21 compliant freight framework to measure performance across the corridor, to help identify specific opportunities to divert truck traffic to rail lines, and to aid in the development of a limited pilot program that will provide freight users with access to incident, weather, congestion, and truck parking information in real time.

Beginning in 2011, six states, Virginia, New York, Pennsylvania, Maryland, West Virginia, and Tennessee, committed to working together to improve freight and passenger movement along the I-81 corridor by the forming of the I-81 Corridor Coalition. The I-81 Corridor Coalition was formed with a mission to bring together local, regional, state, federal, and private organizations to accomplish coordinated decision making, management and operations among the six states along the corridor. Through the sharing of information and coordinated decision making a large part of the Coalition's interest is researching issues of importance in the corridor to include freight movement, intermodal relationships, environmental planning, ITS, incident management and corridor wide information and coordination efforts.

Interstate 81 supports the movement of commercial vehicles and goods along the eastern half of the United States and connects Tennessee to the Canadian border. The corridor connects the urban markets in the northeastern Unites States to the agricultural markets and manufacturing areas of the South and Midwest and provides direct connections to the eastern deep-water ports. The I-81 Corridor is a major freight and truck route and is increasingly relied upon as an alternate to Interstate 95, for a more reliable movement of freight for businesses and consumers in many parts of the country.

Developing and operating this complex system of facilities and services falls mainly on the responsibility of Virginia and Pennsylvania, who together operate over 500 miles of the corridor. This grant application intends to capitalize on partnering with federal, state, local governments and private companies to, ***Improve Safety, Reduce Congestion***, ***Improve System Reliability, Improve Truck Parking Availability, Promote Economic Vitality, and Improve the Environment*** along the I-81 Multi-State Corridor.

INTERSTATE 81: MILEAGE

TN – 76 miles (9%)

VA – 325 miles (38%)

WV – 26 miles (3%)

MD – 12 miles (1%)

PA – 233 miles (27%)

NY – 184 miles (22%)

The I-81 Corridor is a key part of the nation's freight backbone and the national freight network. This corridor is the primary north-south freight corridor along the eastern part of the US, handling more truck traffic than I-95 does south of Washington DC. Almost half the truck traffic along I-81 in central Virginia (near Roanoke) is through traffic and fully 70 percent is interstate freight. More than 40 major distribution centers are located along the roadway. Major distribution centers within a one hour drive include the Allentown-Lehigh Valley region that handles much of the freight traffic to and from the Port of NY/NJ and the NY metropolitan area and the distributions centers in and around Baltimore. To the south, I-81 provides access for the Atlanta metropolitan region (from I-75 and I-40) and Birmingham, while I-40 provides direct access to Memphis and Nashville. The growth of freight volumes in the I-81 Corridor are influenced by a variety of factors for each of the six states. These factors include population growth, changes in national and global logistics patterns, and the evolution of the Corridor's industry structure. Industries, ranging from manufacturing to construction have specific freight needs, and their growth will affect freight demand on the I-81 Corridor. On the supply side, I-81 represents a crucial component of the nation's transportation system and its ability to carry freight efficiently will affect, positively or negatively, the overall competitiveness of the nation's economy.

Figure 1: I-81 Corridor: Tennessee through New York



Source: Google Earth
Interstate 81 is 855 miles long and travels through 6 states: TN, VA, WV, PA, MD, and

GO-81 begins with a MAP-21 focused freight framework to measure performance across the corridor; to help identify specific opportunities to track truck parking occurrences, shortages and violations; divert truck traffic to rail lines; and help design and implement an information system that provides freight users with access to incident, weather, congestion, and truck parking information in real time. This multi-state planning framework will offer a model for other national freight corridors as well.

GO-81 will then build on best practices and lessons learned in other parts of the country to develop a Corridor Freight Information System (CFIS). This will not be a test of technology, but rather a process to develop a pilot implementation framework of an integrated information system that will allow freight stakeholders to make real-time decisions, about where to stop for rest and when to travel in order to avoid delays caused by incidents, weather, or simply too much traffic.

CFIS will be deployed by a public-private partnership effort that is committed to finding a long-term sustainable solution. The public- private partnership anticipated in the development of GO-81, is unique because the CFIS system will be the first to integrate real-time parking information with 511 information and other data to support a safe and efficient movement of goods along a major freight corridor. GO-81 includes data-oriented planning phases which will take less than a year to complete.

VISION

The GO-81 vision is to become the national model for applied truck information systems. This model will begin with a MAP-21 compliant framework built, in part, around current freight waybill data. It will include the framework for a pilot project that integrates existing I-81 corridor data on travel times, incidents, and weather and adds real-time information on truck parking. GO-81 will also prepare a business model that will guide other corridors on how to implement a similar public-private partnership and thus speed deployment of the national freight information system.

From a planning perspective, the Coalition and its member jurisdictions envision having access to a consistent information set that allows them to more effectively identify current planning needs related to freight movement. This will provide an analytical foundation upon which to establish investment priorities that are logical, practical, and that reflect MAP-21 national goals for efficient freight movement. The first portion of the work plan addresses this component through a combination of innovative and time-tested multi-modal freight planning actions. This effort will:

- Develop a comprehensive picture of demand, origins and destinations for freight movements;
- Assess the degree to which existing truck parking facilities can meet the needs of the trucking community;
- Formulate a picture of the portions of the corridor that warrant public investment to better facilitate efficient Goods movement;
- Identify specific opportunities where diversion of freight from truck to rail can benefit all users of the corridor
- Reflect current data on freight movement.

The remaining components of the GO-81 project address the operational component of our vision. The CFIS will provide freight trucks and State DOTs with an affordable means to extract the maximum productivity from operations on the corridor. For example, if an incident occurs along the corridor, CFIS will:

- notify truck drivers and dispatchers of the incident;
- provide additional detail upon demand (i.e., location, severity, likely delay effects, etc.);
- inform them of options, such as alternate routes, truck stops and rest stops nearby (including available parking, services and fuel prices); and
- provide navigation to the option of their choosing.

Incidents could include traffic congestion, weather events, crashes or other events that would result in travel delays. The ultimate goal is to provide the trucking community with targeted, high-quality information that can boost efficiency, reliability, and safety. Once deployed, CFIS will provide a cohesive, integrated access point to information necessary for truckers to enhance efficiency while simultaneously making the corridor safer and more reliable for all users. To make this possible, the GO-81 CFIS will incorporate data elements into a decision-making tool that is easy to access, and can be delivered inexpensively.

The I-81 Corridor Coalition and its partners intend to apply a number of key principles in the design and implementation of GO-81:

- ***Leverage Proven Technology.*** GO-81 is not solely a research project. As such, it is structured as a public-private partnership that will integrate proven systems and leverage advancements in data communications to deliver an affordable solution that can be easily transferred to other corridors.
- ***Take Full Advantage of Multiple Modes.*** In addition to supporting a network of Interstate routes, the I-81 corridor benefits from rail freight capacity that parallels much of its length. GO-81 will actively seek specific, tangible and viable opportunities to divert traffic to this network, thus improving the overall efficiency of the corridor.
- ***Improve Regional and National Economic Competitiveness.*** This scale helps generate transportation benefits and GO-81 is built around a six-state, 855 mile multi-modal corridor.

- ***Plan for Self-Sufficiency.*** The Coalition member jurisdictions and our partners in the business community recognize that success depends upon a long-term commitment to deliver the services described in this proposal. We will prepare a business model that aims to minimize the need for ongoing public financial support.
- ***Support Planning Consistent with MAP-21.*** The GO-81 work plan calls for developing a model for how a multi-state corridor can meet MAP-21 goals. This will be a joint effort with FHWA.

I-81: Performance Issues and Transportation Assets

The Freight Analysis Framework (FAF) shows that I-81 is among the most intensive truck corridors in the nation. Trucks account for more than 30 percent of traffic for more than half the corridor and serve customers well beyond the six states that Interstate 81 travels through. Indeed, the corridor functions as a distribution center that helps to link the deep-draft ports along the East coast with markets and manufacturing centers in the East, Midwest and South.

In addition, Interstate 81 parallels the I-95 corridor, providing freight traffic a convenient alternative to a corridor congested with heavy urban traffic. A series of direct Interstate linkages to major economic and freight centers along I-95 make the I-81 corridor a practical alternative. In addition, most of I-81 is paralleled directly by Norfolk Southern rail lines and numerous east-west rail lines cross the corridor. I-81 is a part of 14 Metropolitan Planning Organizations (MPOs) and regional planning jurisdictions. These are listed in Appendix A along with the urban areas located on the corridor.

Truck traffic continues to grow faster than the national average and congestion is a growing problem. Despite having 31 commercial truck stops with more than 4,800 truck parking spaces and 47 rest areas, truck parking is at a premium, along the corridor. Budget constraints as well as local conditions mean the states and private firms that depend on I-81, could greatly benefit from an ITS-based information system to improve the efficiency of the existing infrastructure. Changes that improve the safety and efficiency of freight movements will benefit all travelers along the corridor.

Intelligent Transportation Systems (ITS)

Given the proximity and access that the I-81 corridor has to major eastern sea ports and to the northeastern metropolitan areas, it is no surprise that Interstate 81 is an important freight corridor for the United States. The six states along the I-81 Corridor are all active in ITS deployments. Each has a statewide 511 system in place; each has deployed cameras, sensors, and RWIS systems and each has traffic management systems that coordinate traffic information within their state. The corresponding 511 systems and real time travel information dissemination practices vary across and within the six states. Table 1 highlights Intelligent Transportation Systems (ITS) currently in place on Interstate 81. Maps of the 511 and Traffic Operation coverage areas along Interstate 81 are included in Appendix E.

INTERSTATE CONNECTIONS

I-81 has interstate connections to the following interstate highways.

- I-40 in TN
- I-26 in TN*
- I-77 in VA
- I-581 in VA
- I-64 in VA*
- I-66 in VA*
- I-70 in MD*
- I-76 in PA*
- I-83 in PA*
- I-78 in PA*
- I-80 in PA*
- I-84/I-380 in PA
- I-88 in NY*
- I-90 in NY*
- Highway 401 in Ontario

** Identifies those interstates that have connection to an eastern seaport*

Table 1 I-81 Corridor ITS Facilities

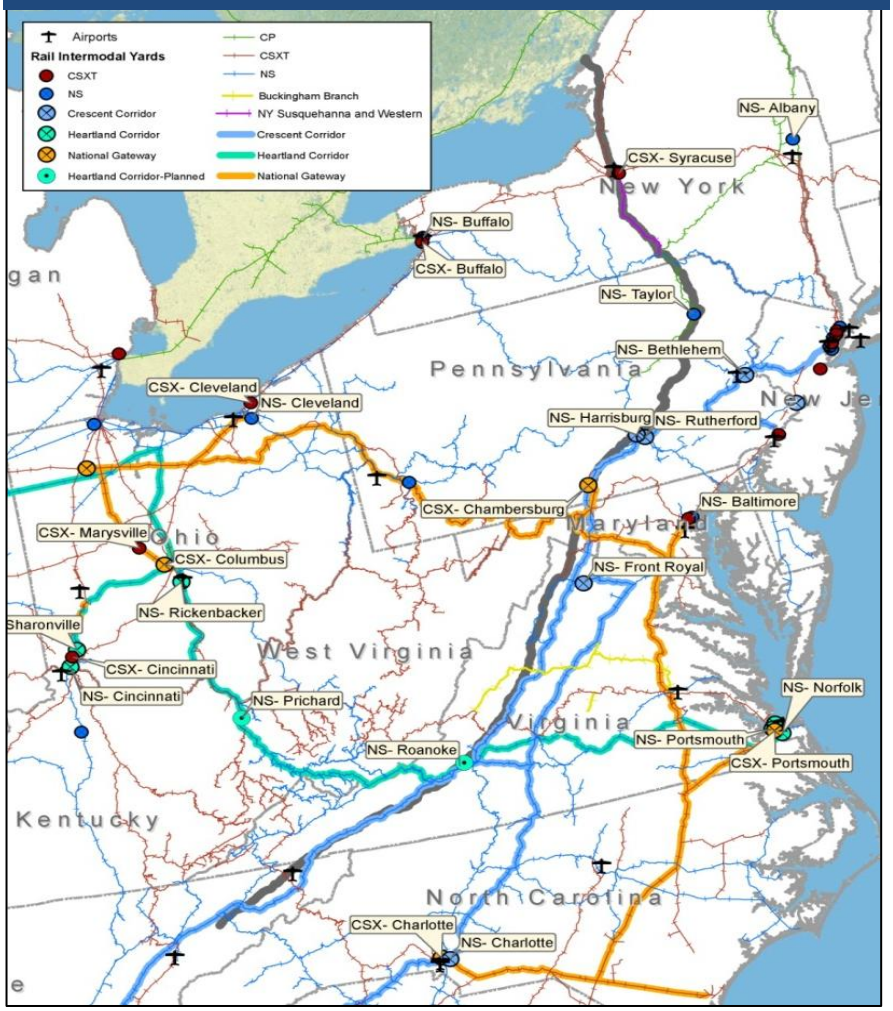
State DOT	I-81 Mileage	511 Site	CCTV Cameras	Dynamic Message Signs (DMS)	Road Weather Information Systems (RWIS)	Highway Advisory Radio (HAR)
TN	76	www.tn511.com	6	4	1	2
VA	325	www.511virginia.com	95	26	12	6
WV	26	www.wv511.org	4	1	-----	------
MD	11	www.md511.org	0	0	1	
PA	233	www.511pa.org	48	52	--------	14
NY	184	www.511.ny.org	14	29	2	-----

I-81 CORRIDOR RAIL NETWORK

In addition to supporting ITS freight movement operations, the I-81 corridor has an extensive network of rail lines and rail intermodal facilities throughout its 855 miles. The Norfolk Southern Crescent Corridor parallels I-81 from east Tennessee north until reaching Harrisburg, PA, where it heads east to the NY/NJ Ports. There are numerous rail lines running in an east-west pattern crossing the corridor throughout its length, including the CSX National Gateway. Rail intermodal yards within close proximity to I-81 are located primarily in the northern half of the Interstate 81 corridor, beginning with the Norfolk Southern Crescent Corridor intermodal yard at the Virginia Inland Port in Front Royal.

This extensive rail network provides the potential for long-haul truck to rail diversion to help address congestion and safety issues on the interstate itself. This is an issue that all six State Departments of Transportation recognize and have committed to working together to better understand the potential long term implications of rail diversion.

Figure 2: Rail Network Connectivity



Interstate 81 Multistate Corridor Study, 2012 Bureau of Transportation Statistics (BTS), Norfolk Southern and CSX

As part of this project, GO-81 will identify near term opportunities that can drive planning and investment decisions regarding such issues as intermodal connectors, terminal location decisions, and opportunities to work hand-in-hand with railroads to establish long-term solutions. Key to this is the identification and characterization of commodity movements that pass through the corridor that meet criteria for viability as diversion targets. Newly available freight waybill information offers an opportunity to make significant progress in this area. Appendix F provides an example of this data and possible applications.

PERFORMANCE CHALLENGES

According to 2007 Freight Analysis Framework (FAF) data, trucks account for at least 21% of all traffic on the interstate with Average Annual Daily Truck Traffic of more than 11,000 through many urbanized areas. This traffic is concentrated, with trucks accounting for more than 31% of traffic between Knoxville and south central Pennsylvania. Figure 3 illustrates AADT for trucks on the I-81 corridor, as indicated by FAF.

With the high volume of truck traffic on Interstate 81, truck parking is a critical issue with respect to goods movement, traffic safety in general, and the need to meet new federal rules regarding hours of service for drivers. Further, given the anticipated increase in truck traffic and the reliance on freight and freight-related industries by local economies, local concerns surrounding truck parking are especially pressing. The demand for additional truck parking and the efficient use of current truck parking capacity is a critical issue recognized in the recent I-81 Multistate Corridor Study and is a high priority along much of the corridor. The I-81 Corridor Coalition in partnership with Shippensburg University has prepared an inventory of the current supply of truck parking along Interstate 81: Preliminary Truck Parking Inventory of the Interstate 81: A Cataloging of Commercial Truck Stops and Public Rest Areas. In total, there are 31 commercial truck stops with more than 4,800 truck parking spaces adjacent to the corridor and 47 public rest areas with truck parking.

Figure 3: Truck Volume



Interstate 81 Multistate Corridor Study, 2012 FHWA FAF data, 2007

Figure 4: I-81 Corridor Truck Safety Summary



Interstate 81 Multistate Corridor Study, 2012

Interstate 81 is primarily 2 lanes in each direction with some urban areas having additional lanes to accommodate the increase in traffic moving through those regions and/or to provide truck climbing lanes as needed. Interstate 81 primarily follows the Appalachian mountain range and also follows a major corridor for troop movement during the Civil War. The mountainous terrain makes it difficult and costly to provide needed capacity to address bottlenecks and congestion. Historical preservation goals also make it difficult in some places to add capacity. For example, U.S. 11 parallels Interstate 81 from east of Knoxville, TN, north to Watertown, New York. However, due to the mountainous terrain and the primary use of U.S. 11 for local traffic movement, large portions of U.S. 11 are not suitable to be designated as a truck route. In addition, weather conditions, ranging from rain, ice, snow, fog, to high winds, exacerbate operational issues along the entire route.

Figure 4 shows truck safety data for 2008-2010, from the National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS). The crash sites are fairly evenly distributed along the entire length of Interstate 81, with less frequency on the northern most section where overall traffic and truck volumes decline.

Proposed Use of Funds

Overview

The GO-81 project is principally about developing and implementing user-focused technology applications that are driven by the unique multi-modal nature of goods movement along the corridor. GO-81 intends to establish a business model for service delivery that can translate directly to other corridors. This business model will apply the principles enumerated in MAP-21:

- ***Improve Safety*** by providing comprehensive, timely information to truck drivers regarding how to avoid incidents and to identify opportunities to rest and refuel at parking facilities along the corridor;
- ***Reduce Congestion*** by gathering and distributing information about truck-specific traffic, weather and incident information that will allow corridor freight users to avoid congestion delays and reduce concentrations of demand on the corridor, and by identifying specific opportunities to divert truck freight to rail;
- ***Improve System Reliability*** by capturing and sharing information related to demand "hot spots" along the corridor, affording corridor users the option of modifying trip parameters to achieve a more predictable arrival time;
- ***Promote Economic Vitality*** by enhancing freight operations along the length of the corridor so business entities will be able to see the benefits of locating job centers on or near it.
- ***Improve the Environment*** by reducing idling stemming from avoidable congestion and by providing the data needed to support truck to rail diversions.

Throughout the project we will hold periodic and ad hoc stakeholder meetings—many of them using Web conferencing and teleconferencing—to ensure that the project produces information of value for multi-modal planning across the corridor and generates results that are applicable across the country. These sessions will be tailored to accomplish specific outcomes, and will include sessions aimed at the various stakeholder groups, including:

- Coalition member State DOTs;
- freight transportation providers (i.e., road and rail);
- freight service providers (fuel and rest stop operators, warehouses/distribution centers, etc.)
- planning agencies (MPOs, Regional Transportation Authorities, etc.)
- economic development groups; and
- FHWA staff.

The project consists of two phases, with each phase building on previous efforts. Phase 1 will prepare a framework and related data set to support MAP-21 freight plans along the corridor. This will also provide a comprehensive and detailed understanding of freight flows along the corridor—both by truck and by rail. This information will also support Phase 2—the design of the CFIS pilot program. Phases 1 and 2 will take 10 months.

PHASE 1: PROVIDE A FRAMEWORK FOR FREIGHT PLANNING AND PERFORMANCE MEASUREMENT CONSISTENT WITH MAP-21

The first phase of the project will conduct a multi-modal planning study to clearly define freight movements along the corridor. The intent is to facilitate the identification of specific service needs and locations—information that will be essential to defining and developing cost-effective, sustainable solutions.

The Coalition proposes to complete six subtasks under this phase of the GO-81 project. The first two will complete an inventory of the existing studies and relevant freight data. Subtask 3 will summarize the freight related requirements of MAP-21. Subtask 4 then prepares a freight planning framework that can be used by the six states. Subtask 5 provides a summary of current freight movements along the corridor and Subtask 6 will summarize the current baseline of information that will support Phase 2.

Subtask 1: Update and Combine Existing Freight Planning Studies by States and Others Along the Corridor. The I-81 Multistate Corridor Study completed in 2012 is a collection and summary of existing data and studies concerning the I-81 corridor. It was undertaken as a pooled fund effort by the six State DOTs along Interstate 81. Based on this study we will contact the states and MPOs to learn of any efforts undertaken since the study was completed. These studies are valuable sources of information related to trip origins and destinations, available facilities and services, and efforts outside the immediate corridor that may affect the Coalition's proposed pilot project. Studies to incorporate into the inventory include but are not limited to the following:

- detail on trucks stops and rest areas;
- port related plans that may affect the corridor;
- multi-State pooled fund studies;
- NHS Connectors and Intermodal Facilities Inventory:
- private plans – such as for freight railroads; and
- air quality studies along the corridor (with an emphasis on non-attainment areas).

Subtask 2: Inventory Existing Travel Related Information. The second step in the process of characterizing the corridor is the collection of available information regarding how the transportation network is performing, and the factors that may affect it. This subtask will assemble information regarding system conditions and performance including:

- travel speeds, including freight bottlenecks;
- incident types, locations and frequencies;
- Congestion Management Process (CMP) data;
- weather events and conditions; and
- characteristics of existing 511 systems in each State.

Subtask 3: Summarize Corridor Freight Requirements from MAP-21, with an Emphasis on Data Needed for Effective Planning. The Coalition members are committed to freight planning and performance measures consistent with the principles enumerated in MAP-21 and anticipate leveraging this project to advance these efforts. Subtask 3 will identify existing and new data sources for planning, including:

- State and Federal databases such as the Commodity Flow Survey (CFS);
- widely available private data sources such as TranSearch;
- fixed infrastructure data such as the lane configuration, slope and curvature, and posted physical and legal restrictions;
- dynamic content such as real-time traffic and incident data available from both private and public sector sources;
- new sources of freight information; and
- typical (historic) speeds and speed variances observed from several years of Nokia's aggregated vehicle probe data.

Subtask 4: Prepare a Data-Based Framework that can be Broadly Deployed by States Along the Corridor. This subtask will provide Coalition member States a means to evaluate and measure corridor level freight and traffic conditions to support MAP-21. Because the I-81 corridor carries a significant amount of freight traffic, it is considered by the Coalition members as a critically important corridor and will figure prominently in the freight planning efforts in each State. As such, this subtask is focused on preparing a framework for corridor-wide data collection for the conduct of freight planning.

It is generally recognized that commodity-based freight information necessary for freight planning should be as current as possible and should include, but not necessarily be limited to:

- origin/destination information;
- shipment routing;
- shipment value and weight; and
- mode.

Traditionally, these data are extracted from a combination of public (e.g., CFS) and private (e.g., TranSearch) datasets. These data are useful and represent what, over time, has become the standard approach to goods movement data for planning purposes. While these are likely to continue to be foundational sources, they offer limited geographic detail regarding origins and destinations, rely on older source data, and do not contain the actual costs associated with freight movement.

Subtask 4 will also consider non-traditional data sources to develop a more complete picture, such as data available from private vendors, including Delcan Corporation's proprietary waybill-based freight payment information, referred to as Real-Time Freight Intelligence (RTFI). RTFI describes freight movement from 2008 through the current month at the zip code or county level and includes actual shipment costs. These data provide a valuable input for state and regional freight planning and can help identify the potential for truck to rail diversion.

These data will be used to formulate an analytic framework that establishes the essential link between these sources and the performance measures necessary to address MAP-21 objectives. For instance, we propose to define economic vitality measures that incorporate the true costs associated with goods movement on the corridor—by mode and commodity—and correlate them to other corridor parameters, such as congestion, incidents and weather events. Performance measures developed within the framework will also take into account the volume of freight that could be diverted from truck to rail, with the attendant costs savings and reductions in truck vehicle miles traveled and reductions in delay. This framework will be coordinated with FHWA and other freight planning stakeholders in order to assure its transferability to other regions.

Subtask 5: Prepare a Summary of Current Freight Movements Along the Corridor. Within the analytical framework defined in Subtask 4, freight movement data for the corridor will be assembled into a comprehensive summary that identifies patterns of concentrated goods and bottlenecks organized by commodity and further grouped by route, mode, and cost of transport.

This will be done by drawing on the data sources identified above, focused on capturing corridor-specific commodity-based freight information, including but not limited to:

- origin/destination information;
- shipment routing and length of haul;
- shipment value and weight;
- shipment costs (base, surcharges and accessorial); and
- mode and carrier type.

Subtask 6: Prepare a Summary Report that Provides an Analytic Baseline. The final subtask under Phase 1 will develop a summary report that sets the stage for the rest of work and that provides guidance regarding how to carry out MAP-21 compliant freight studies. We will rely on the input gained from GO-81 stakeholders and FHWA staff to compile and validate the findings from the earlier subtasks into a comprehensive discussion of how the information gathered can support MAP-21 freight planning. This will include an assessment of the value and methodology for applying the framework defined in Subtask 4 based on its ability to provide for useful performance measures that are practical to employ.

The final product from this task will serve as a foundational document for future regional and Statewide transportation planning efforts along the corridor and as an indicator of priorities for the remainder of the project. It will also highlight the planning possibilities associated with our proposed comprehensive approach for other corridor-wide and regional freight planning activities. Our findings will discuss the transferability of these methods to other parts of the US.

PHASE 2: DEVELOP A PLAN FOR A NEAR REAL-TIME CORRIDOR FREIGHT INFORMATION SYSTEM

In recent years an increasing amount of awareness has developed around the need to provide freight transportation providers with timely access to information about travel conditions on major freight networks. Service providers have begun to commercialize systems that provide information to truckers regarding roadways that are suitable for use by commercial vehicles, and this information has found its way into systems that allow drivers to identify routes that can safely and efficiently accommodate their vehicles. Additionally, research projects sponsored by FHWA have sought to develop prototype systems for providing truckers with dynamic route guidance (DRG) that monitors traffic conditions and provides alternate routing to save time. Such systems, should they reach the market, offer truckers valuable information to avoid congestion and the economic penalties that accompany it.

In the interim, the opportunity exists to exploit existing ITS applications and datasets to provide useful information to drivers without relying on complex—and potentially costly—systems like DRG. This phase of the GO-81 project focuses on the identification of services that will provide drivers with important information about traffic congestion, incidents, weather and truck services that are targeted and inexpensive to deploy and use. This effort will define how Coalition members can collaborate with private sector partners to implement an affordable, scalable and flexible tool to aid truckers in negotiating the corridor safely and efficiently. The subtasks below describe how the Coalition partners propose to develop a plan for implementing such a solution on a pilot basis.

Subtask 1: Identify Target Service Areas. Interstate 81 has become an increasingly busy freight corridor. Freight transportation providers, shippers, distribution centers and ultimately consumers are increasingly reliant upon the efficient operation of the corridor. There are, however, portions of the corridor that present significant challenges to this ideal—sections that exhibit elevated levels of congestion and higher crash rates.

Such characteristics arise from the convergence of a large number of commercial vehicles and automobiles in areas where capacity is limited. Vehicle counts and FHWA's Freight Analysis Framework (FAF) offer useful insights. However, in order to develop a full picture of the forces behind such "hot spots," it is essential to define operational and logistical factors that shape this convergence and to quantify their effects. This subtask will focus on the application of information assembled under Phase 1 to identify and characterize:

- freight hot spots (i.e., places with high volumes; incident issues, etc.);
- traffic bottlenecks by location and time of day;
- key freight intersections, such as:
  - Interstates interchanges,
  - intermodal facilities, and
  - distribution centers;
- truck stops, services and rest areas; and
- truck-specific legal and physical restrictions (e.g., weight, height, HAZMAT, etc.).

This inventory of issues is the first step in the process of identifying key stakeholder needs across the corridor, which will drive the formulation of a solution set to address them. By identifying these concentrations of congestion, incidents, shipment drivers and support facilities, the Coalition will be able to define the geographical and functional focal points.

For this subtask, the Coalition team will examine the data and information gathered in Phase 1, supplement it with information from FAF and other State and Federal databases, and compile the inventory in a geographic information system (GIS) dataset. This will allow the Coalition to identify and communicate the high need areas along the corridor in a clear, concise manner.

Subtask 2: Summarize Existing Sources of Data on Incidents and Weather. Crashes involving commercial vehicles are a critical concern for Coalition members—particularly in the areas in Virginia and Pennsylvania where there is a relatively high concentration of truck-involved crashes. The Coalition partners also share concern over the implications of weather events on the ability of the corridor to function properly. Given that significant segments of the corridor pass through rural, mountainous areas, it is essential that information regarding weather conditions and anticipated effects be made available to users—particularly the freight users.

For incidents on I-81, states can use a variety of data sources to collect and disseminate information. These sources include, but are not limited to, traffic operation center observations (CCTV cameras and vehicle detection systems), and computer aided dispatching. For weather related events, states may use a variety of internal and external data sources. Internal data sources include road weather information system (RWIS) units that are strategically placed

within the right of way of I-81 and from direct observation sources. External data sources include, but are not limited to meteorological weather forecasting services the National Weather Service, Meridian, and local services.

This task will consist of an inventory of assets for capturing and communicating crash and weather incident information. The inventory will include all State, County and Local resources, as well as any private sources of information, and will encompass all detection and reporting capabilities. Information gathered will include technical capabilities, geographic scope, communications channels, and operations and maintenance responsibilities. The inventory information will be used to establish both input sources and distribution channels for information related to incidents along the corridor. As with the data discussed in Subtask 1, all information will be geocoded into a GIS dataset for use in subsequent analyses.

Subtask 3: Identify Lessons Learned and Best Practices from Recent Experience with Truck Parking Deployments: Over the past 10 years data has been available to focus on improving parking asset utilization by integrating the information about scattered parking assets into one unified source. Many lessons are now being applied through customization, deployment, and integration of systems and services in Michigan on I-94 (with 15 truck stops), California on I-5 (with six truck stops), as well as early stage efforts in Wisconsin, Minnesota and I-95. The process of capturing, relaying, storing and distributing parking information in a cost effective and sustainable method is now available and can be leveraged by I-81. Additionally, the software network has been designed to allow integration of other stakeholder needs (e.g., alternative fuel location information and additional services that truckers, truck stop operators and shippers need to more effectively perform their jobs). Perhaps the most important lesson is that the private truckers and operators of truck stops see value in the availability information and reservation capabilities.

Under this task, the Coalition team will inventory and catalogue lessons learned from these and other deployments (including I-95) and prepare a summary analysis of implications for the GO-81 pilot project. After coordination with FHWA and the Coalition members, the Coalition team will provide a summary of actions to be taken to apply these lessons to the GO-81 deployment.

Subtask 4: Define Data Requirements and Related Technologies Needed to Monitor Truck Parking Availability. The capture of reliable space and service availability data is essential for an effective truck parking solution. Truckers must be able to rely upon the information provided from the system or they will not use it. A single bad experience can have a lasting effect on their willingness to use such a system again. Whether the facilities are publicly- or privately-owned, considerable effort is necessary to accurately determine space availability. GO-81 will develop a multi-state business model and demonstrate how parking data can be integrated into a corridor freight information system.

Technically, each parking site needs a low impact installation of sensing equipment to capture and relay availability counts to a central server for aggregation of counts, manipulation with other data such as weather and traffic, and storage. Ultimately, all GO-81 services—including those that provide information to external sources—must be designed such that complete leverage can be applied to existing systems and user interfaces. Truck parking is no exception, since access to the information should not be limited to only those vehicles within the vicinity of I-81. This is particularly true of long-haul fleets that have trips originating at points distant to the corridor. Additionally, counts can be efficiently reviewed for accuracy and recalibration so the availability information is maintained as accurate.

During this subtask, the Coalition team will conduct a technical assessment of all candidate sites (presumed to be at least six at the time of this application) to determine viable options for the measurement of available parking. This will include a review of the data capabilities, strengths, weaknesses and costs for each technology option, and recommendations regarding the most appropriate implementation for each site. The findings from this subtask will be delivered in a summary document that includes relevant technical and functional detail to allow the Coalition to render a decision regarding sensor deployment.

Subtask 5: Identify Key Parameters for Corridor Freight Information System. In order to assess the efficacy of the GO-81 CFIS concept, it must be deployed at a level that permits capture and delivery of a significant quantity of information regarding its capabilities and utility for users. Further, it needs to be placed in the hands of users that regularly pass through segments of the corridor defined in Subtask 1 as corridor hot spots. Finally, it must encompass a broad cross-section of freight users, to allow for an accurate characterization of the degree to which it can support achievement of MAP-21 objectives.

Based upon the information gathered and the analysis completed in the subtasks preceding this one, the Coalition partners will define an appropriate deployment level and distribution to meet Coalition and FHWA expectations regarding valuation of the CFIS capabilities. This will include decisions regarding proposed:

- data sources,
- information content,
- geographic footprint,
- data delivery mechanisms (DMS, IVR, mobile/wireless, Web, broadcast, etc),
- data formats and channels (radio, satellite, telecom, Internet, etc),
- number and types of facilities, and
- number and types of users.

In order to define these parameters, the Coalition project partners will develop rough order of magnitude estimates for deployed costs on a per-user or per-unit basis. Once estimates are defined, the partners will examine budget available to maximize deployment.

Subtask 6: Develop a Concept of Operations. The findings of Subtasks 2 through 5 in Phase 2 will drive the essential characteristics of the GO-81 CFIS pilot. From these characteristics, the Coalition team will develop a concept of operations that will describe what will be delivered and the framework within which delivery will take place.

A concept of operations is an essential foundational guidance document for any significant information technology initiative. By providing stakeholders—both those leading a system development effort and those that will use the resulting system—with a touchstone regarding the fundamental intent of and approach toward meeting specifically identified needs, a concept of operations fills several important program needs. Specifically, it:

- ***Articulates an overall vision for the future –*** by examining the differences between the current state and the desired outcome of the effort, the actions necessary to advance the goals of the project come into clearer focus;
- ***Provides important context –*** the implementation environment is operationally and institutionally complex—multiple actions are executed by numerous stakeholders—and in proposing changes, consideration must be given regarding the potential effects;
- ***Exposes potential issues –*** a critical examination of expectations and methods offers the opportunity to mitigate, or possibly avoid, issues that may cause delay or result in technically or operationally incompatible systems;
- ***Promotes disciplined planning –*** the concept ensures that user needs drive the development process and identifies parameters against which proposed actions can be evaluated to ensure all necessary programmatic considerations are met; and
- ***Identifies critical roles and responsibilities –*** all interested and involved stakeholders should be able to clearly identify how they may fit in to the proposed solutions, and how their operations may be affected.

The Coalition proposes to apply the framework delineated in Institute of Electrical and Electronics Engineers (IEEE) Standard 1362, “Guide for Information Technology—System Definition—Concept of Operations (ConOps) Document,” to develop the CFIS Concept of Operations. At a basic level, the ConOps will describe the following:

- Basic ATIS services (e.g., travel speeds, general congestion areas, delays, etc.);
- Freight congestion information (i.e., specific effects on freight movements in the corridor);

- Incident info (location, status, expected delay);
- Weather condition information;
- Freight routing and rest stop options information (i.e., options for avoiding delays and utilizing services);
- Roles & responsibilities of stakeholders;
- Technical design and architecture; and
- Benefits and costs.

The resulting GO-81 CFIS ConOps will serve as a guide for the finalization of the functional requirements and the design, development, and deployment of a pilot program. The approach to pilot deployment is outlined here.

This will serve as important input for the development of a CFIS business model.

Project Management Plan

The Virginia Department of Transportation will first enter into an agreement with the Federal Highway Administration which outlines the necessary details of the project for which grant funds have been awarded. VDOT will then enter into an agreement with the Virginia Tech Transportation Institute, located within Virginia Polytechnic Institute and State University, and where the I-81 Corridor Coalition is housed. VTTI then becomes the managing and contracting agency.

A Memorandum of Understanding (MOU) between the I-81 Corridor Coalition and VTTI is in place that relates to the administration and hosting of the I-81 Corridor Coalition. The MOU states that all fiscal matters and procurement activities shall follow Virginia Tech policies, Virginia law, and requirements of the procurement sponsors. The MOU further states that VTTI will collect, manage, and safeguard all funds of the Coalition received from federal, state, local, and private sources. A copy of the MOU between VTTI and the I-81 Corridor Coalition is included in Appendix C to this application.

VTTI, as the contracting and managing agency, will enter into subcontract agreements, on behalf of the I-81 Corridor Coalition, with private entities, and individual State Departments of Transportation as necessary. VTTI will work with the FHWA VA Division and VDOT staff to ensure that all subcontracts follow Federal Aid requirements. In addition, some funding will go directly to the I-81 Corridor Coalition for labor and other costs associated with the execution of the scope of work contained in this application.

TIMELINE

Table 3 describes the proposed schedule and deliverables for each phase and subtask.

Table 3 Schedule of Projected Implementation Timeline

Phase	Project Activity	From	To	Duration (months)	Deliverables
Phase 1: Provide a Framework for Freight Planning and Performance Measurement Consistent with MAP-21	Subtask 1: Inventory Existing Freight Planning Studies by States and Others Along the Corridor	6/2/14	7/1/14	1	Planning Study Inventory
	Subtask 2: Inventory Existing Travel Related Information	6/2/14	7/1/14	1	Traveler Information Inventory
	Subtask 3: Summarize Corridor Freight Requirements from MAP-21	7/1/14	8/4/14	1	Map-21 Freight Requirements and Data Sources Summary
	Subtask 4: Prepare a Data-Based Framework that can be Broadly Deployed by States Along the Corridor	7/15/14	8/29/14	1.5	Planning Framework
	Subtask 5: Prepare a Summary of Current Freight Movements Along the Corridor	7/15/14	9/15/14	2	Current Freight Summary
	Subtask 6: Prepare a Summary Report that Provides an Analytic Baseline	9/15/14	11/3/14	1.5	Phase 1 Report
Phase 2: Develop a Plan for a Near Real-Time Corridor Freight Information System	Subtask 1: Identify Target Service Areas	8/18/14	9/19/14	1	Map(s) of target service areas
	Subtask 2: Summarize Existing Sources of Data on Incidents and Weather	9/19/14	10/10/14	0.75	Incident and Weather Source Summary
	Subtask 3: Identify Lessons Learned and Best Practices from Recent Experience with Truck Parking Deployments	9/19/14	10/10/14	0.75	Truck Parking Lessons Learned and Best Practices Summary
	Subtask 4: Define Data Requirements and Related Technologies Needed to Monitor Truck Parking Availability	10/13/14	12/23/14	2.5	Corridor Freight Information System (CFIS) Requirements Summary
	Subtask 5: Identify Key Parameters for Corridor Freight Information System	1/5/15	2/20/15	1.5	CFIS Parameter Summary
	Subtask 6: Develop a Concept of Operations	2/20/15	4/24/15	2	Concept of Operations

The funding requested for each phase of the proposal is outlined in the following table. The total project cost is estimated to be $545,500, including $109,200 in matching funds. Developing key parameters for the project such as defining stakeholder groups, developing meeting schedules, defining project performance measures, and preparing a project plan are all included as Project Management activities with responsibility belonging to the I-81 Corridor Coalition. For both phases, a lead organization will be identified with key support from all project team members - Nokia, Truck Smart Parking Services, Delcan Corporation, I-81 Corridor Coalition, and State Departments of Transportation. For Phase 1, development of an I-81 multi-modal freight plan, the estimated cost is $219,620. For Phase 2, development of a Corridor Freight Information System, the cost is estimated at $305,930.

The GO-81 project team will be led by a highly-qualified group of transportation professionals with considerable freight planning and ITS deployment experience. Brief biographies for key project personnel are provided in Appendix G.

Table 2 Funding by Phase

Budget Line Item	Total Budget			
	Project Management	Phase 1	Phase 2	Total
I-81 Coalition Labor	$9950	$19,550	$24,955	$54,475
I-81 Coalition Travel		$6,000	$6,000	$12,000
Delcan Labor		$125,250	$127,000	$252,250
Nokia Costs		$20,000	$40,000	$60,000
Truck Smart Parking Services Costs			$40,000	$40,000
Travel for Private Partners		$7,000	$10,595	$17,575
Funding Totals	9,950	$177,820	$248,530	$436,300

Budget Line Item	Total Budget			
	Project Management	Phase 1	Phase 2	Total
I-81 Corridor Coalition	$10,000	$11,800	$12,400	$34,200
Truck Smart Parking Services			$5,000	$5,000
Nokia		$20,000	$30,000	$50,000
Delcan Corporation		$10,000	$10,000	$20,000
Total Match	$10,000	$41,800	$57,400	$109,200

The I-81 Corridor Coalition will provide match funds through revenue provided to the Coalition from VTTI, as outlined in the MOU between the I-81 Corridor Coalition and VTTI (Appendix C). Delcan Corporation, Nokia, and Truck Smart Parking Services are also providing matching funds, totaling up to $75,000, in the form of reduced licensing fees, rates, and labor charges. The exact amount of matching funds will be determined once an award is made, and will total a minimum of 20% of the total project budget.

The commitments from each State DOT, the I-81 Corridor Coalition and the other partnering organizations are detailed in letters included in Appendix D of this application.

This application meets the intent of the grant because as a multi-state corridor with ITS deployments in place, parallel Class I rail lines, and direct links to major ports, I-81 offers an ideal pilot site for real-time freight information systems with truck parking systems and data integration.

Project Team

I-81 Corridor Coalition

The Coalition is structured to allow for the management and sharing of ideas and best practices, including the results of this research and deployment initiative, in that it offers a practical and achievable solution to stakeholders along the corridor in helping to develop and address the reliability of passenger and freight movement.

The I-81 Corridor Coalition is housed at the Virginia Tech Transportation Institute, (VTTI), and an additional important source of funding comes from VTTI through a 20% match for each dollar received by the Coalition. This funding source is outlined and governed by a Memorandum of Understanding (MOU) between the Coalition and VTTI. A copy of the MOU is included in Appendix C.

The Coalition Steering Committee includes representatives from each of the six states in the Corridor Coalition, including one senior policy or technical representative from each of the six Departments of Transportation. Steering Committee membership may also include representatives from regional transportation related organizations (e.g., rural planning organizations, local development districts, metropolitan planning organizations, etc.) whose jurisdiction is wholly or partially within the I-81 corridor. Membership on the Steering Committee includes participation from political leaders such as Congressional Representatives, State Delegates, and County Commissioners.

Program track committees are established for focus areas as determined by the Steering Committee. Program track committees guide the Coalition activity within their area of emphasis and expertise. Participation can include public agencies with jurisdiction outside of the I-81 corridor, educational institutions, and private sector businesses. This also includes transportation partner agencies such as State Police, other law enforcement organizations, and transportation industry associations, such as trucking and rail associations. Currently there are three active program track committees: The Procedural Guidelines governing the I-81 Corridor Coalition, as adopted in December 2012, are included in Appendix B.

Private Partners

Go-81 is a public-private partnership that includes a team of transportation technology and services companies that provides a combination of technical expertise and systems design and deployment experience.

Delcan is an international transportation consultancy that is a recognized leader in transportation planning, technical and operational analysis, and ITS deployment and integration. Based in Virginia, Delcan has conducted multi-modal freight analysis in multiple States, including Virginia, New York and Pennsylvania, has supported multiple efforts at defining and deploying technology concepts to advance freight efficiency goals. For the State of Texas, Delcan supported the development of the Long Range Transportation Plan (LRTP)—specifically the components dealing with freight—and the Statewide Rural Transportation Plan, and conducted a study to examine the potential to divert freight from trucks to the State's extensive regional and short-line rail network. Additionally, Delcan staff are responsible for the development of the Penske Logistics-sponsored CSCMP Annual State of Logistics Report.

Delcan has a long track record of implementing technology for traffic management systems of all sizes, from local traffic departments to major toll agencies. Among its more notable projects was the development of a Concept of Operations, system development and stakeholder coordination for the Kansas City Cross-Town Improvement Project (C-TIP). This pilot project provided railroads and trucking companies with a technology-based system to collaborate on moves to and from rail ramps, reducing empty trips and providing dynamic route guidance to allow truckers to avoid congestion. Delcan's current work includes data integration to support Truck Smart Parking Services's deployment of truck stop information in Michigan. Delcan's Advanced Traffic Management Systems (ATMS) experts are familiar with complex system designs in all operating environments, and can provide phased deployments to smoothly transition an operation from a legacy system to a full deployment of a new ATMS. Delcan also provides full design and build services for 511 and Advanced Traveler Information Systems (ATIS) that have the ability to integrate with both public and private sources of data.

Truck Smart Parking Services™ is pioneering new ground by using technology to improve quality of life and the environment, while solving one of today's largest transportation issues: Parking. SmartParking is the application of information technology to improve parking, thereby mitigating the environmental impact of vehicles. Truck Smart Parking Services™ relies on a patented SmartParking Information
Network (SPIN) that enables SmartParking and other services. The network uses wireless sensors and interfaces to gather, organize, analyze, and process parking information from parking facilities, and then distribute it to drivers and local organizations in a convenient, easy-to-use manner. The firm has deployed proven truck parking information systems along I-5 in California and I-94 in Michigan. The I-5 system is in operation now and will expand to cover six truck stops over the summer. The I-94 system will have a 15 truck stop network in place this summer.

Nokia is the largest aggregator/disseminator of commercial automotive and truck-grade navigation data and related traveler information products. Nokia maintains the borderless and seamless data sets needed to understand lane level details about the I-81 corridor and calculate vehicle routes and travel times for corridor dependent travelers. Based in Chicago, IL, Nokia's product portfolio is embedded in thousands of navigation, telematics and internet applications worldwide. Nokia also works extensively with state governments to deliver real-time traffic and incident data, and currently partners with CalTrans, FHWA, and Truck Smart Parking Services on the I-5 Smart Truck Parking project. Nokia's position as the preferred data provider for some of the largest trucking and logistics companies in the world offers a key opportunity to connect commercial fleet operators with multi-state traveler information.

Support from a Broad Array of Organizations

A key part of this project will involve stakeholder meetings with public and private entities. As a sign of interest in GO-81 project, public and private entities have provided letters of support. These can be found in Appendix D.

SUPPORT

We have gathered many letters of support, (located in Appendix D) from the following public and private sector stakeholders, including:

PUBLIC SECTOR

- ✓ PennDOT
- ✓ TDOT
- ✓ Appalachian Regional Commission
- ✓ Berkeley County, WV
- ✓ Hagerstown Eastern Panhandle MPO
- ✓ Senator Mikulski, Maryland
- ✓ Senator Cardin, Maryland
- ✓ Congressman Shuster, Pennsylvania 9th District
- ✓ Congressman Barletta, Pennsylvania 11th District
- ✓ Senator Toomey, PA
- ✓ Cumberland County, PA
- ✓ Northeastern Pennsylvania Alliance

PRIVATE SECTOR

- ✓ . Con-Way . Logistics Terminals, Inc. . N
- ✓ Logistics Terminals, Inc

Appendix A

MPOs and Urban Areas

Metropolitan Planning Organizations and Urban Areas Along I-81 Corridor

Metropolitan Planning Organizations along the I-81 Corridor

- Lakeway Area MTPO
- Bristol MPO
- Kingsport Area MPO
- Blacksburg-Christiansburg Montgomery MPO
- Roanoke Valley Area MPO
- Harrisonburg-Rockingham MPO
- Win Fred MPO
- Hagerstown Eastern Panhandle MPO
- Harrisburg Area Transportation Study
- Lebanon County MPO
- Lackawanna Luzerne MPO
- Northern Tie Regional PDC
- Binghamton MPC
- Syracuse MTC

Cities and Towns along the I-81 Corridor

- Bristol, TN-VA
- Blacksburg, VA
- Roanoke, VA
- Lexington, VA
- Staunton, VA
- Harrisonburg, VA
- Winchester, VA
- Martinsburg, WV
- Hagerstown, MD
- Chambersburg, PA
- Harrisburg, PA
- Wilkes-Barre, PA
- Scranton, PA
- Binghamton, NY
- Syracuse, NY
- Watertown, NY

Appendix B

I-81 Corridor Procedural Guidelines

I-81 Corridor Coalition

Procedural Guidelines

Prepared by:

Steering Sub-Committee

November 2012

Preface

The I-81 Corridor Coalition does not have a formal set of By-laws. These written guidelines were produced based upon a review of current I-81 Corridor Coalition standards of practice in addition to a review of the structure of similar organizations. These guidelines are consistent with existing Memorandum of Agreements between the I-81 Corridor Coalition and the Virginia Tech Transportation Institute and the I-81 Corridor Coalition and State Departments of Transportation. The guidelines clarify committee membership eligibility, terms of leadership positions, and other basic operating practices of the I-81 Corridor Coalition.

It is anticipated that these guidelines will be updated and expanded on a regular basis.

Any comments should be addressed to the current I-81 Corridor Coalition staff.

Original Adoption Date December 3, 2012

Revision Date _____

I. Organization and Management

Membership Guidelines

Executive Membership entitles an organization to a seat on the Executive Board, along with representation on the Steering Committee, Program Track Committees, and/or any special task force. Executive Membership, with voting rights, applies to a State Department of Transportation that contains a portion of I-81 as part of its responsibility. Ex-officio Executive Membership may include state delegates and congressmen/congresswomen representing jurisdictions partially or wholly within the boundaries of the I-81 Corridor and representatives from the United States Department of Transportation. The I-81 Corridor is described as I-81 and the highways intersecting with or running parallel to I-81 and the rail network serving the Corridor. Ex-officio members should be part of all discussions, policy guidance, and consensus processes but are not entitled to a vote should a vote be necessary.

Steering Membership entitles an organization to representation on the steering committee, program track committees, and/or any special task force. This category includes local and regional transportation related organizations created by governmental action whose jurisdiction is wholly or partially within the I-81 Corridor.

General Membership entitles an organization to representation on the program track committees. This category includes Departments of Transportation and other organizations that are otherwise eligible to be an Executive or Steering member but for which the jurisdiction falls outside of the I-81 Corridor. In addition, local governments, regional governments and agencies, federal agencies, non-profit and non-government entities, educational institutions, and private sector organizations and citizens are entitled to general membership. The general membership category can further include partner agencies, such as State Police, other law enforcement organizations, public motor vehicle agencies, and transportation industry associations.

Process for Adding New Members

Organizations interested in Membership can submit a request in writing or a verbal inquiry to a current Steering or Executive member. The leadership of the Steering Committee must approve all requests for Steering and General Membership.

New Member Packages

Any new member will receive a welcome package that includes a welcome letter, copy of the latest guidelines, and any current reports and publications.

Committee Membership and Participation

Program Track Committees – Membership consists of representatives from Executive, Steering, and General Members. The Program Track Committee leadership is designated and approved by the Steering Committee leadership.

Policy and Strategic Planning Committee – Membership on this committee consists of individuals with a broad perspective on Coalition and member agency needs, covering policy development, planning, finance, investment, operations, and technology. Individuals with multi-modal, regional and multi-state experience are critical. Executive Board and Steering Committee members make-up and/or designate members of the Policy and Strategic Planning Committee.

Steering Committee – Membership consists of 1 senior policy or technical representative from each of the 6 Departments of Transportation that contain a portion of I-81 and, in an ex-officio capacity, chairs of the Program Track Committees. Membership may also include 1 representative from each local and regional transportation related organization created by governmental action whose jurisdiction is wholly or partially within the I-81 Corridor. Ex-officio members with Executive Membership may also choose to have a representative on the Steering Committee.

Executive Board – Membership is available to each Chief Executive Officer of the organizations eligible for Executive Membership, usually a Commissioner, Executive Director, Secretary, or Administrator. Membership is also available in an ex-officio capacity to Congressman, State Delegates, and other federally elected officials whose jurisdiction contains a portion of I-81, and to representatives of the United States Department of Transportation.

Core Organizational Structure

The Coalition's core structure includes the Executive Board, the Steering Committee, the Policy and Strategic Planning Committee, and the Program Track Committees. This section provides a description of each Committee, guidelines for leadership, and leadership succession planning.

Executive Board

The Executive Board is the policy guiding body for the Coalition. The Executive Board looks at the implication of long-term trends and helps frame the Coalition's long term goals accordingly.

The Executive Board meets annually at the I-81 Corridor Coalition annual conference or other appropriate venue.

Decision process - Consensus, as outlined in Memorandum of Agreements between Executive Membership organizations and the Coalition, is the priority of the Executive Board. However, when consensus cannot be reached, each executive member is accorded 1 vote. In the event of a tie, the Executive Board commits to thoroughly discussing the issue in a timely manner to allow for additional data gathering and reflection until a consensus can be reached or to allow for a simple majority vote by Executive members with voting rights.

Steering Committee

The Steering Committee meets as needed, at a minimum quarterly, and deals with all aspects of the Coalitions activities including technical, institutional, organizational, program, funding, policy and internal and external relations. The Steering Committee coordinates and manages Coalition programs, gives guidance on activities that cut-across Program Track Committees, and oversees policy development.

The Steering Committee is led by a chair and vice-chair or 2 co-chairs. At least one leadership position must be filled by a state DOT representative. The leadership of the Steering Committee participates in guiding the day to day management of the Coalition. The leadership decides what issues must go to the full Committee for consideration.

Decision Process - The Steering Committee operates by and is committed to consensus agreement. However, when consensus cannot be reached, votes can be used to set priorities or to take specific action. Each Executive Member agency representative with voting authority on the Steering Committee shall have one vote. In the event of a tie, the Steering Committee commits to thoroughly discussing the issue in a timely manner to allow for additional data gathering and reflection until a consensus can be reached or to allow for a simple majority vote by the voting members of the Steering Committee.

Program Track Committees

Program Track Committees are established for focus areas as determined by Steering leadership, in consultation with Executive member guidance. The role of the program track committee is to guide the Coalition activity within that area of program emphasis and expertise. These committees meet on a frequency determined by need with the Committee.

The committee may have co-chairs, but at least half the leadership must be from a State Department of Transportation member agency. The leadership of the Steering Committee approves the selection of Program Track Chairs.

Committee Leadership Succession

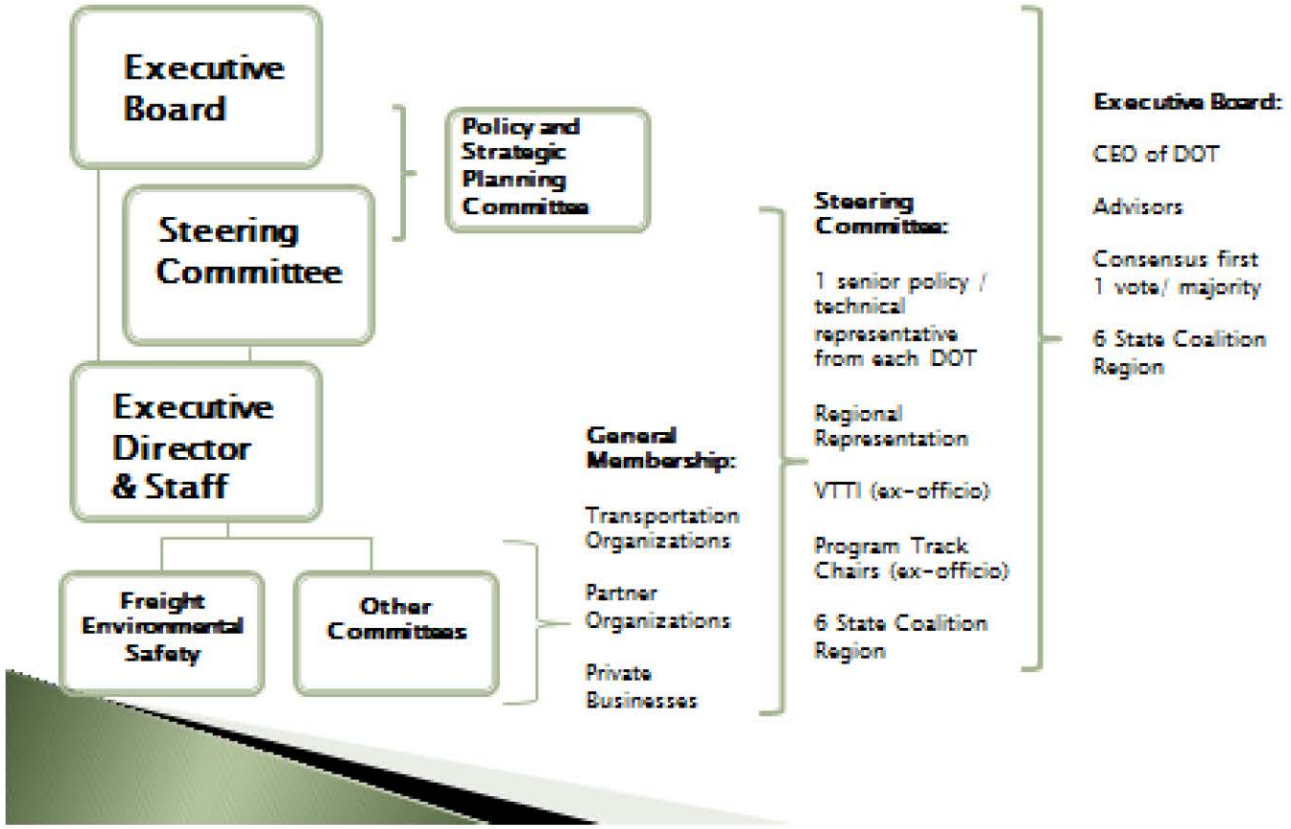
The term for leadership of the Steering Committee and Program Track Committees is 2 years, with a maximum of 4 years. As part of succession planning, the committees should conduct a leadership review every 2 years. Additional guidance is provided for the Steering committee leadership succession:

- Steering Committee – The combined time in service for any of the leadership positions should not exceed 4 years. One of the 2 members of the leadership team will continue their term after the other has left to provide continuity. Either 2 co-chairs or a Chair and a Vice Chair could serve as the leadership.

Succession will take place at 2-year intervals with the changeover occurring during the first meeting of the Steering committee in the calendar year. Nominations and elections will occur during the last meeting of the appropriate calendar year. Prior to the last meeting, nominations may be made to the Executive Director or Coalition staff, who will forward recommendations to the Steering Committee. Nominations should take into account equitable rotation of leadership positions along the I-81 Corridor.

Mid-term Appointments – Where circumstances do not permit normal succession guidelines to be implemented, the remaining Steering Committee leadership may hold nominations at any time to fill vacant positions. One such case is when one or both of the current Steering Committee leadership resign or are no longer able to serve.

I-81 Corridor Coalition



Appendix C

MOU Between I-81 Corridor Coalition and VTTI

I-81 Corridor Coalition MOU
March 14, 2011

This Memorandum of Understanding (MOU) establishes the administrative relationship between the Steering Committee of the I-81 Corridor Coalition (Coalition) and the Virginia Tech Transportation Institute (VTTI), located within Virginia Polytechnic Institute and State University (Virginia Tech). This MOU is intended to further the goals of the Coalition in making the I-81 Corridor a safe, efficient, and environmentally sound transportation system through a collaborative and cooperative relationship among the states of New York, Pennsylvania, Maryland, West Virginia, Virginia, Tennessee, and other member jurisdictions and member organizations.

This MOU relates to the administration and hosting of the I-81 Corridor Coalition. Additional MOU's or agreements shall be required for specific projects authorized by the Coalition. Such MOU's or agreements, must be consistent with Virginia Tech's procurement processes and with any particular legal requirements of sponsoring Coalition members.

1. Overall policy direction and institutional guidance will be the responsibility of the Coalition's Steering Committee, consisting of representatives from federal, state, and local government members. The Steering Committee will meet as needed and will review, approve, and set direction for all aspects of the Coalition's activities, including technical, organizational, program, funding, policy, and internal and external relations.

2. VTTI will have an "ex-officio" non-voting seat on the Steering Committee.

3. VTTI will provide a 20% match (up to $2,000,000) of Coalition funding tasked to Virginia Tech and will administer all Coalition funding, including new revenue acquired by the Coalition after the execution of this MOU. On all subcontracts above $25,000, the 20% match provision will flow down to the subcontract agreements.

4. All fiscal matters and procurement activities shall follow Virginia Tech policies, Virginia law, and requirements of the project sponsors.

5. All Coalition funding will be subject to Virginia Tech overhead policies (a statement of which is annexed hereto and made a part hereof). VTTI will not charge the Coalition for normal administrative services. Normal administrative services include, without limitation, fiscal, communication, and proposal services. VTTI may charge if exceptional services are required and authorized by the Steering Committee.

6. VTTI will house the Coalition. VTTI will administer the following activities pursuant to the Coalition budget:

    a. Collect, manage and safeguard all funds of the Coalition received from federal, state, local, and private sources.
    b. House all personnel and material resources of the Coalition.
    c. Maintain the Coalition's web site through an MOU (if no cost is incurred) or otherwise by agreement with Shippensburg University.
    d. Administer the Coalition's outreach program and project research to include the following activities:

i. Subject to Steering Committee approval, execute any necessary outside subcontracting and/or consulting service agreements, including ownership, acquisition, and protection or licensing of intellectual property rights.
ii. Provide Coalition administration services as necessary to develop and coordinate the Coalition activities.
iii. Hire an Administrative Assistant, upon recommendation of the Executive Director, to manage Coalition files and routine office services such as reception, phone, word processing and preparation of PowerPoint materials. The Administrative Assistant will also disseminate, collect and redistribute project quarterly report data.
iv. Develop and maintain a project database.
v. Collect, file, and track the Coalition's federal, state, and local partnership agreements.
vi. Perform other duties as required.

7. The Coalition's paid employees will consist of an Executive Director, an Administrative Assistant a GIS Coordinator, and Program Coordinators. Duties of the Program Coordinators will be assigned by the Steering Committee. VTTI will appoint one of the Program Coordinators to serve as program liaison between the Coalition and VTTI, to supervise support consultants, and to provide staff support for one or more Coalition committees. Duties of the program liaison, except those required of the program liaison as a Program Coordinator, will be assigned by VTTI in consultation with the Steering Committee. The Executive Director will be hired by the Coalition's Steering Committee, which will also assign all duties and responsibilities of the Executive Director. All Coalition employees will be employees of Virginia Tech and as such The Commonwealth of Virginia. VTTI will follow the hiring policies established by Virginia and therefore to insure compliance with these policies have final approval on candidates for all coalition employees. As all employee positions are contingent on multiple funding streams, VTTI at its discretion, shall have the authority to terminate any of the employee positions with or without cause.

8. All staff of the Coalition will be employees of or consultants under contract to VTTI.

9. The Executive Director will assemble an annual work plan and project development process with the collaboration of the VTTI program liaison.

10. Program Track Committees may be established as part of the core structure through which the Coalition's program will be implemented.

11. This MOU may be terminated by either party on 90 days written notice. An earlier termination may be allowed by mutual written consent of the Steering Committee. Following such termination, any ongoing contractual agreements will stay in effect until completed.

Tom Dingus, Executive Director
Virginia Tech Transportation Institute
Sworn to and subscribed before me, this 22nd day of March 2011.
Kathy Whitlock Oliver
Notary Public # 296643

Richard Rovegno, Chairman
I-81 Corridor Coalition, Steering Committee
Sworn to and subscribed before me this 15th day of March 2011.
Heather R. Ilgenfritz
Notary Public

Commonwealth Of Virginia
Kathy Whitlock Oliver - Notary Public
Commission No. 296643
My Commission Expires 10/31/2013

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Heather R. Ilgenfritz, Notary Public
Carlisle Boro, Cumberland County
My Commission Expires Nov. 13, 2013
Member, Pennsylvania Association of Notaries

Appendix D

Letters of Commitment and Support

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
HARRISBURG, PENNSYLVANIA

OFFICE OF
SECRETARY OF TRANSPORTATION

March 28, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Mr. Arnold:

I am pleased to support the I-81 Corridor Coalition application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. As a member of the I-81 Corridor Coalition Steering Committee, I strongly support the efforts in this proposal, as they are an important first step in an effort to help shape a solution that could span the corridor as well as provide valuable data to help **shape PennDOT's Long Range Transportation Plan update** with an emphasis on comprehensive freight planning.

The I-81 Corridor has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in truck traffic in three key ways:

- A framework for **Freight Corridor Planning**, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of **Freight Hot Spots** where there are high freight volumes in combination with a high frequency of traffic incidents.
- Implement a **Corridor Freight Information System Pilot** project to provide traveler information related to incident and congestion management in combination with truck routing and parking.

I believe this proposal addresses many critical components dealing with highway safety, the efficient use of the interstate corridor, and develops the tools necessary to plan for freight growth along a corridor that crosses many jurisdictional boundaries. Once an award is made, PennDOT intends to contribute a soft match to the project. The exact amount of staff resource time will be dependent upon the receipt of a more detailed scope of work.

Sincerely,

James D. Ritzman, P.E.
Deputy Secretary for Planning

3500 Transportation Research Plaza (0536)
Blacksburg, Virginia 24061
540/231- 4008 Fax: 540/231-1555
www.i-81coalition.com

March 26, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Mr. Arnold:

I am writing this letter to support the I-81 Corridor Coalition application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. The Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate 81 travels through, including representation from each State Department of Transportation. As Director of the I-81 Corridor Coalition, I strongly support the efforts in this proposal as they are an important first step in an effort to help shape a solution that could span the corridor.

Further Virginia Tech Transportation Institute (VTTI), an entity of Virginia Tech, will provide $330,000 in matching funds through in-kind contributions for sub-contractors or pay directly. In addition, the I-81 Corridor Coalition will contribute $60,000 match funds through revenue provided to the Coalition from VTTI, as outlined in the MOU between the I-81 Corridor Coalition and VTTI. We will provide documentation of match funds on a regular basis, with invoices as appropriate.

Sincerely,

Rachel Cogburn
Director
I-81 Corridor Coalition

540.315.5967

Virginia Tech Transportation Institute

VirginiaTech
TRANSPORTATION
INSTITUTE

3500 Transportation Research Plaza (0536)
Blacksburg, Virginia 24061
540/231-1500 Fax: 540/231-1555
www.vtti.vt.edu

April 1, 2013

Dear Ms. Busher:

The purpose of this letter is to alleviate VDOT concerns regarding the committed cost share on our MCOM grant proposal submitted on behalf of the I 81 Corridor Coalition. In our role as the managing partner of the grant activity on behalf of VDOT, we will ensure that all of the cost share requirements are met, should the grant be awarded. This commitment would include providing necessary cash and in-kind cost share to the project should one of the other team members fail to meet their cost-share commitments.

Thank you for your willingness to lead this important effort. Please contact me if I can be of further assistance.

Sincerely,

Tom Dingus

Director, VTTI

8618 Westwood Center Drive, Suite 450, Tysons, VA 22182
Tel: 703.752.6060 ● Fax: 703.752.6059
www.delcan.com

April 2, 2014

Mr. Kevin Cole
Executive Director
I-81 Corridor Coalition
3500 Transportation Research Plaza
Blacksburg, Virginia 24061
United States of America

Delcan Corporation, which is now a wholly-owned subsidiary of Parsons, is pleased to be part of the GO-81 project managed by the 1-81 Corridor Coalition under FHWA's Multimodal Corridor Operations and Management (MCOM) Program. We believe this concept has regional and national implications by providing practical information that will improve freight operations along the corridor. The first two phases of this project will set the stage for providing integrated real-time information on available truck parking space with data on traffic conditions, weather, and incidents. This combination will result in the more efficient movement of goods along the corridor and improve safety for the trucking community and all users of I-81. The project will provide a freight planning framework for the six states on the corridor that supports MAP-21 requirements.

Delcan will support both of the awarded phases of GO-81. This includes help in preparing the multi-state freight planning framework that takes advantage of the latest sources of freight data including commodity flow data and costs by mode and commodity. We will help coordinate the public-private team that will design the GO-81 pilot program by leading the development of the Concept of Operations.

Delcan understands that its budget for Phases 1 and 2 will be $250,000, which consists of $230,000 provided from the MCOM grant and a match of $20,000 in the form of additional labor hours by Delcan staff.

Mr. Paul Belella (p.belella@delcan.com, 571.425.4921) will be the Principal Investigator for the project, and will also serve as the Administrative Contact.

We look forward to work with the Coalition to advance its important goals of enhancing safety and efficiency on the I-81 Corridor.

Very truly yours,

Nigel Astell
Vice President, Infrastructure Business (US)

TSPS™
TRUCK SMART PARKING SERVICES

Kevin Cole
Interim Executive Director
I-81 Corridor Coalition

Dear Mr. Cole
Truck Smart Parking Services Inc. (TSPS, Inc.) is pleased to be part of the GO-81 project. We believe the concept proposed by the Corridor offers an important step forward in providing practical information for trucks along the corridor. Integration of real-time truck parking availability information with data on traffic conditions and incidents will provide a strong information combination that will result in the more efficient movement of goods along the corridor and improve safety for the trucking community and all users of the I-81 corridor.
TSPS will lead the truck parking information network portion of the system. During the first two phases of the project, we will work with Delcan to use data on truck movements along the corridor and information regarding truck stops to develop a plan to implement a truck smart parking availability information service network. This effort will leverage the software that we have already developed. We will also work with Delcan to design how to integrate existing data on traffic information and incidents into a state of the art information system for the trucking community. Further, Truck Smart Parking Services will support this project by providing $5,000 of in-kind support for this phase of the project.
TSPS is a new firm established to focus on expanding Truck Smart Parking Service. ParkingCarma Inc. no longer exists in a capacity to service this market place and TPS acquired the exclusive rights to the enabling commercial vehicle smart parking patents. TSPS has developed the operating truck smart parking operating system in Michigan.

Sincerely,
Frederick M. Warner IV
Frederick M. Warner IV
CEO TSPS, Inc.

HERE Chicago
425 West Randolph St
Chicago, IL 60606 USA

T 1 303 543 4218
F 1 303 543 4219

here.com

April 2, 2014

Kevin Cole
Interim Executive Director
I81 Corridor Coalition
3500 Transportation Research Plaza
Blacksburg, VA 24061
United States of America

Dear Mr Cole:

Nokia/HERE (formerly NAVTEQ), is pleased to be part of the GO-81 application by the I-81 Corridor Coalition under FHWA's Multi-state Corridor Operations and Management (MCOM) Program. We believe the concept proposed by the Corridor offers an important step forward in providing practical information for trucks along the corridor. The project will contribute to the more efficient movement of goods along the corridor and improve safety for the trucking community and all users of the I-81 corridor.

Nokia/HERE will provide traffic speed, map and truck navigation data for the corridor to support analysis and real-time information. These data enable analysis of corridor infrastructure and capacity, as well as vehicle route calculations, historic traffic patterns, and real-time dynamic traffic conditions. All Nokia data is built to automotive-grade standards and proven effective for supporting thousands of transportation related applications. Nokia/HERE also works extensively with Truck Smart Parking Solutions and Delcan Corporation on development and deployment of real-time traffic and truck information systems that could provide a model for other parts of the country. Furthermore, Nokia/HERE will support this project by providing $50,000 of in-kind support for this project, through discounted product fees.

Please note that Nokia renamed our division to "HERE" over the course of this proposal process. All business for this project will be conducted under our new official name of "HERE North America, LLC".

Please let me know if you have questions or need anything else from my end.

Best Regards,

Keith Hangland
Enterprise Solutions
303-974-8111

here

March 28, 2013

Ms. Rachel Cogburn
Executive Director
I81 Corridor Coalition
3500 Transportation Research Plaza
Blacksburg, VA 24061

Dear Ms. Cogburn:

NATSO is pleased to support I-81 Corridor Coalition's application to the Federal Highway Administration for truck parking grant monies. NATSO believes that the trucking industry needs real-time information on the availability of truck parking along the Interstate Highway System. We believe that technology that provides access to real-time parking information will assist drivers to locate safe parking along their routes, as well as enable both industry and government to identify both where and when there may be parking shortages, ensuring that resources are allocated where most needed.

The pilot project proposed by the I-81 Corridor Coalition builds on previous deployments in California and Michigan. This proposal offers an important advance in terms of the multi-state nature of the corridor and the plans to integrate traffic information and incident data into the information system. This offers an important step forward from previous system and represents a potential national model for similar truck information systems.

I've attached a short issue brief describing how NATSO believes technology can address issues related to truck parking. We look forward to participating in stakeholder review groups for this project. Please feel free to contact me at 703-739-8501 or halfano@natso.com if you need additional information.

Sincerely,

Holly Alfano
Vice President, Government Affairs

ISSUE *brief*

Data and Technology Could Improve Truck Parking Availability, Better Allocate Resources

In MAP-21, Jason's Law established that certain monies could be utilized for truck parking. In addition to construction of truck parking at public and private facilities, the legislation also allows funding to be used to promote availability of publicly or privately-provided truck parking on the National Highway System. We believe this creates an opportunity to utilize technology to assist drivers in locating truck parking, as well as to ensure that monies for construction of new parking spaces is utilized where it is needed most.

The legislation also requires that FHWA conduct a truck parking survey and comparative assessment including: an evaluation of each state's capability to provide adequate parking and rest facilities for commercial motor vehicles engaged in interstate transportation; an assessment of commercial motor vehicle traffic volumes in each state; and the development of a system of metrics to measure the adequacy of commercial motor vehicle parking facilities in each state. We believe this directive creates an opportunity to conduct a comprehensive truck parking census, that ultimately could be transferred to a real-time database on truck parking availability with the ability to push that information out to drivers.

To date, many of the studies that have addressed the issue of truck parking have relied heavily on anecdotal information or on surveys that were very limited in scope. With limited dollars to spend on building additional truck parking, the federal government, state governments and private interests could utilize data to help resolve truck parking issues. With relevant data pinpointing areas where truck parking shortages exist and when, the limited resources can be more strategically allocated. The ultimate goal would be the development of a system to assist drivers in locating available parking.

Truck Parking Census - To develop the needed data, a comprehensive census of truck parking should be conducted. The census should conducted by location (exit and interstate) and include the following:

- Type of location (rest area, truckstop, commercial rest area, other)
- Name and address of entity providing parking.
- Number of spaces available.
- Number of spaces vacant on each day of the week.
- Expansion plans at facility, if any.
- Available land for expansion or available nearby facilities that could provide "overflow" parking (i.e. park and ride facilities, etc.)
- Illegal parking occurring at or near the location with average number of vehicles

by weekday.

The data for the census should be collected with the goal of converting the information into a live database, that ultimately would be utilized to provide real-time parking information to drivers.

Live database accessible by drivers and law enforcement - The data base would provide truck parking information, communicated to drivers through a smart phone application or other means that is developed with the goal of minimizing driver distraction. Drivers could have the option of reserving spaces in advance or simply be provided with the knowledge of where open parking is available. Likewise, law enforcement could access the database to assist drivers when an officer encounters an illegally parked vehicle.

Census data would be utilized to determine where and when truck parking shortages occur. The information would ensure that limited funds for construction of additional truck parking is deployed where it is most needed. Additionally, the data would provide intelligence to determine if a truck parking shortage exists along specific corridors OR if is consistent with traffic patterns during certain days of the week or times of the year. That information could also be utilized to develop solutions to problems that may occur less frequently.

LOGISTICS TERMINALS, INC.

Ms. Rachel Cogburn
Executive Director
I81 Corridor Coalition
3500 Transportation Research Plaza
Blacksburg, VA 24061
United States of America

Dear Ms. Cogburn,

Logistics Terminals, Inc. is pleased to support the innovative application to FHWA by the I-81 Corridor Coalition. The motor carrier industry needs real-time information on the availability of truck parking at commercial truck stops and rest areas. Such information improves our ability to schedule driver rests that meet federal requirements and to do so in ways that are safe and efficient. The result improves the services that we can provide our customers.

The pilot project proposed by the I-81 Corridor Coalition builds on previous deployments in California and Michigan. This proposal offers an important advance in terms of the multi-state nature of the corridor and the plans to integrate traffic information and incident data into the information system. This offers an important step forward from previous system and represents a potential national model for similar truck information systems.

We look forward to participating in stakeholder review groups for this project and expect to be customers of the resulting system. Please feel free to contact me at 510 654-6654 if you need additional information.

Yours truly,

J.F. Sells

James F. Sells
President Northwest Region

12920 EAST IMPERIAL HIGHWAY
SANTA FE SPRINGS, CALIFORNIA 90670
PHONE: (562) 864-3333
FAX: (562) 864-0013

227 SCENIC AVENUE
PIEDMONT, CALIFORNIA 94611
PHONE: (510) 654-6654
FAX: (510) 601-8220

www.logisticsterminals.com

Con-way

C. Randal Mullett
Vice President Government Relations
and Public Affairs

March 20, 2013

Ms. Rachel Cogburn
Executive Director
I81 Corridor Coalition
3500 Transportation Research Plaza
Blacksburg, VA 24061

Dear Ms. Cogburn:

Con-Way, Inc. is pleased to support the innovative application to FHWA by the I-81 Corridor Coalition. The motor carrier industry needs real-time information on the availability of truck parking at commercial truck stops and rest areas. Such information improves the ability to schedule driver rests that meet federal requirements and to do so in ways that are safe and efficient. The result improves the services that we can provide our customers and the quality of life and safety of our drivers.

The GO-81 pilot project proposed by the I-81 Corridor Coalition builds on previous deployments in California and Michigan. This proposal offers an important advance in terms of the multi-state nature of the corridor and the plans to integrate traffic information and incident data into the information system. This offers an important step forward from previous system and represents a potential national model for similar truck information systems.

We look forward to participating in stakeholder review groups for this project and expect to be customers of the resulting system. Please feel free to contact me at 202-637-0994 if you need additional information.

Sincerely

C R Mullett

575 7th Street, NW, Washington, DC 20004-1601 (202) 637-0994 (202) 368-4912 Fax

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
Bureau of Environment and Planning
Suite 700, James K. Polk State Office Building
505 Deaderick Street
Nashville, Tennessee 37243-0349

March 19, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Mr. Arnold:

I am writing this letter in support of the I-81 Corridor Coalition application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. The Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate 81 travels through, including representation from each State Department of Transportation. As a member of the I-81 Corridor Coalition Steering Committee, Tennessee strongly supports the efforts in this proposal, as they are an important first step in an effort to help shape a solution that could span the corridor.

The I-81 Corridor has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in truck traffic in three key ways:

- **Freight Corridor Planning**, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of **Key Priority Areas** where there are high freight volumes in combination with a high frequency of traffic incidents.
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

I believe this proposal addresses many critical components dealing with highway safety, the efficient use of the interstate corridor, and develops the tools necessary to plan for freight growth along a corridor that crosses many jurisdictional boundaries.

Thank you for your consideration of this application.

Sincerely,

Ralph E. Comer

Ralph E. Comer
Assistant Bureau Chief

APPALACHIAN REGIONAL COMMISSION

A Proud Past, A New Vision

March 21, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Mr. Arnold:

As an economic development partnership between the federal government and our thirteen member-states, the Appalachian Regional Commission (ARC) recognizes the importance of developing and maintaining reliable, safe, and cost efficient transportation access for the Region to both domestic and global markets. Consistent with these interests, ARC has formally designated a network of key Intermodal Corridors of Commerce (ICCs) that are critical to the economic future of Appalachia. This network includes the I-81 Corridor. As participants in and supporters of the I-81 Corridor Coalition, we share their interest in better understanding the unique and often-complex challenges faced by this corridor and we intend to work closely with our partners to identify opportunities that can assure the corridor's continued viability in the years ahead.

The I-81 Corridor Coalition has developed a proposal that addresses many critical components dealing with highway safety and the efficient use of the interstate corridor, including its connections with key segments of the Appalachian Development Highway System (ADHS). The proposal also develops important tools that will help us plan for continued corridor freight growth in the future. The I-81 Corridor Coalition, working with and through the Virginia Department of Transportation, is seeking support through the Multistate Corridor Operations and Management Program (MCOM). We are encouraged with their proposal and look forward to continuing to work with the Coalition to help assure that I-81 provides reliable, safe, and cost-efficient access to our Appalachian communities and businesses in the years to come. I hope that you will carefully evaluate and consider their application and work with us and others to address both the challenges and opportunities of this important multi-state corridor

Sincerely,

Ken Wester
Manager, Appalachian Development
Highway System

1666 CONNECTICUT AVENUE, NW, SUITE 700 WASHINGTON, DC 20009-1068 (202) 884-7700 FAX (202) 884-7691 www.arc.gov

Berkeley County Council

400 W. Stephen Street, Suite 201
Martinsburg, WV 25401
Phone: (304) 264-1923

www.berkeleywv.org

The Council

Anthony J. "Tony" Petrucci
Douglas E. Copenhaver, Jr.
Elaine C. Mauck, M.A.
Jim Whitacre
James R. Barnhart

March 8, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Ref: I-81 Corridor Coalition Application – Multi-State Corridor Operations and Management Program

Dear Mr. Arnold:

We are writing this letter in support of the I-81 Corridor Coalition application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. The Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate 81 travels through, including representation from each State Department of Transportation. As a member of the I-81 Corridor Coalition Steering Committee, we strongly support the efforts in this proposal, as they are an important first step in an effort to help shape a solution that could span the corridor.

The I-81 Corridor has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in truck traffic in three key ways:

- **Freight Corridor Planning**, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of **Key Priority Areas** where there are high freight volumes in combination with a high frequency of traffic incidents.
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

We believe this proposal addresses many critical components dealing with highway safety, the efficient use of the interstate corridor, and develops the tools necessary to plan for freight growth along a corridor that crosses many jurisdictional boundaries.

Thank you for your consideration of the submitted I-81 Corridor Coalition application for funding under the Multistate Corridor Operations and Management Program.

Sincerely,

Anthony J. Petrucci, President
Berkeley County Council

Douglas E. Copenhaver, Jr., Vice President

Elaine C. Mauck, Councilperson

James P. Whitacre, Councilperson

James R. Barnhart, Councilperson

Doc: ltrmcom

Hagerstown/Eastern Panhandle Metropolitan Planning Organization
33 W. Washington St., 4th Floor, Suite 402, Hagerstown, MD 21740
Phone: 240-313-2080, Fax: 240-313-2084
www.hepmpo.net

March 21, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Multistate Corridor Operations & Management Program (MCOM)
Virginia DOT & Interstate 81 Corridor Coalition Application

Mr. Arnold:

On behalf of the Hagerstown/Eastern Panhandle Metropolitan Planning Organization (HEPMPO), I am writing this letter to support the I-81 Corridor Coalition application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. As a participant of the I-81 Corridor Coalition, HEPMPO strongly supports the efforts in this proposal as they are an important first step in an effort to help shape a solution that could span the corridor.

The I-81 Corridor has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in three key ways:

- **Freight Corridor Planning**, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of **Key Priority Areas** where there are high freight volumes in combination with a high frequency of traffic incidents.
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

We believe this proposal addresses many critical components dealing with highway safety, the efficient use of the interstate corridor, and develops the tools necessary to plan for freight growth along a corridor that crosses many jurisdictional boundaries.

Sincerely,

Robert S. Gordon
Director

Cc: HEPMPO Interstate Council
File

BARBARA A. MIKULSKI
MARYLAND

COMMITTEES:

APPROPRIATIONS

HEALTH, EDUCATION, LABOR, AND PENSIONS

United States Senate

WASHINGTON, DC 20510-2003

IN REPLY PLEASE REFER TO OFFICE INDICATED:

☑ 901 SOUTH BOND STREET, SUITE 310
BALTIMORE, MD 21231
(410) 962-4510
VOICE/TDD: (410) 962-4512

☐ 60 WEST STREET, SUITE 202
ANNAPOLIS, MD 21401-2448
(410) 263-1805
BALTIMORE: (410) 269-1650

☐ 6404 IVY LANE, SUITE 406
GREENBELT, MD 20770-1407
(301) 345-5517

☐ 32 WEST WASHINGTON STREET
ROOM 203
HAGERSTOWN, MD 21740-4804
(301) 797-2826

☐ THE PLAZA GALLERY BUILDING
212 MAIN STREET, SUITE 200
SALISBURY, MD 21801-2403
(410) 546-7711

March 20, 2013

Ms. Rachel Cogburn
Executive Director
I-81 Corridor Coalition
Virginia Tech Transportation Institute
3500 Transportation Research Plaza
Blacksburg, Virginia 24060-6647

Dear Ms. Cogburn:

Thank you for contacting me and sending me a copy of your proposal to the Federal Highway Administration (FHA) for funding consideration under the Multistate Corridor Operations and Management Program (MCOM). It's great to hear from you.

In response to your request, I was pleased to write to Mr. Robert Arnold, Director of the Office of Transportation Management, to draw attention to the merits of this proposal and to request that he give it every favorable consideration. I am enclosing a copy of my letter.

I wish you the best of success with this proposal, and I appreciate the opportunity to be of service. I will keep you posted as soon as I hear anything further.

Sincerely,

Barbara A. Mikulski
United States Senator

BAM:wbk
Enclosure(s)

BARBARA A. MIKULSKI
MARYLAND

COMMITTEES:

APPROPRIATIONS

HEALTH, EDUCATION, LABOR, AND PENSIONS

United States Senate

WASHINGTON, DC 20510–2003

March 20, 2013

IN REPLY PLEASE REFER TO OFFICE INDICATED:

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SALISBURY, MD 21801–2403
(410) 546–7711

Mr. Robert Arnold
Director, Office of Transportation Management
Federal Highway Administration
1200 New Jersey Ave., SE
Washington, DC 20590-0001

Dear Mr. Arnold:

Your agency will soon be receiving a grant application from the Virginia Department of Transportation for funding consideration of the I-81 Corridor Coalition's proposal under the Multistate Corridor Operations and Management Program (MCOM). I am writing to draw your attention to the merits of this application and to urge you to give it every favorable consideration.

The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. The Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate SI travels through, including representation from each State Department of Transportation.

The 1-81 Corridor, which runs through Washington County, has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in truck traffic in three key ways:

- Freight Corridor Planning, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of Key Priority Areas where there are high freight volumes in combination with a high frequency of traffic incidents.
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

I very much appreciate your attention and your consideration of this matter. Please keep me posted as these grant awards are made.

Sincerely,

Barbara A. Mikulski
United States Senator

BAM:wbk

BENJAMIN L. CARDIN
MARYLAND

www.cardin.senate.gov

509 HART BUILDING
WASHINGTON, DC 20510–2004
(202) 224–4524

TOWER 1, SUITE 1710
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BALTIMORE, MD 21201
(410) 962–4436

United States Senate

COMMITTEES:
ENVIRONMENT AND PUBLIC WORKS
FINANCE
FOREIGN RELATIONS
BUDGET
SMALL BUSINESS

COMMISSION ON SECURITY
AND COOPERATION IN EUROPE

March 19, 2013

Mr. Robert Arnold
Director
Office of Transportation Management
Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Dear Mr. Arnold:

It has come to my attention that Virginia Department of Transportation and the I-81 Corridor Coalition have recently submitted a proposal for funding under the Multistate Corridor Operations and Managemetn Program (MCOM).

I-81, which runs through Washington County in Western Maryland, is a growing trucking route and requires planning to cope with present and future increases in associated traffic. The I-81 Corridor Coalition proposes to use MCOM funds in three areas:

- Freight Corridor Planning, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of Key Priority Areas where there are high freight volumes in combination with high frequency of traffic incidents.
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

I respectfully request that you give all due consideration to this application, in accordance with established policies and procedures. Thank you very much.

Sincerely,

Benjamin L. Cardin

Benjamin L. Cardin
United States Senator

BLC:ab

10201 Martin Luther King Jr. Highway, Suite 210
Bowie, Maryland 20720

129 East Main Street, Suite 115
Salisbury, Maryland 21803

451 Hungerford Drive, Suite 230
Rockville, Maryland 20850

13 Canal Street, Room 305
Cumberland, Maryland 21502

BILL SHUSTER
9TH DISTRICT, PENNSYLVANIA

DEPUTY REPUBLICAN WHIP

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEES:
CHAIRMAN
RAILROADS, PIPELINES AND HAZARDOUS MATERIAL
HIGHWAYS AND TRANSIT
WATER RESOURCES AND ENVIRONMENT

Congress of the United States
House of Representatives
Washington, DC 20515–3809

COMMITTEE ON ARMED SERVICES
SUBCOMMITTEES:
TACTICAL AIR AND LAND FORCES
EMERGING THREATS AND CAPABILITIES

CONGRESSIONAL RURAL CAUCUS

RURAL HEALTH CARE COALITION

CONGRESSIONAL SPORTSMEN'S CAUCUS

MILITARY DEPOT CAUCUS

March 21, 2013

The Honorable Ray LaHood
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary LaHood:

I am writing you to express my support for the I-81 Corridor Coalition's application for funding under the Multistate Corridor Operations and Management Program (MCOM). MCOM was authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (P.L. 109-59) to promote regional cooperation, planning, and shared project implementation for programs and projects that improve multimodal transportation system management and operations.

The I-81 Corridor Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate 81 travels through, including representation from each State Department of Transportation. Over the decades, the I-81 corridor has seen a steady increase in truck volume and is one of the primary freight corridors that connect the south and southwest with the northeastern United States.

It is my understanding that the Coalition's proposal would address the I-81 corridor's many challenges by implementing freight corridor planning, identifying priority safety areas, and deploying congestion management information systems. These activities are closely aligned with the MCOM's goals. I believe this proposal is an excellent candidate for the MCOM and I hope you will give their application your full and fair consideration.

Sincerely,

Bill Shuster
Member of Congress

cc: The Honorable Victor Mendez

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WASHINGTON, DC 20515–3809
(202) 225–2431
FAX: (202) 225–2486

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827 WATER STREET
SUITE 3
INDIANA, PA 15701
(724) 463–0516
FAX: (724) 463–0518

118 WEST MAIN STREET
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FAX: (814) 443–6373

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www.shuster.house.gov
www.facebook.com/rep.shuster
www.twitter.com/repbillshuster
www.youtube.com/repshuster

LOU BARLETTA
11TH DISTRICT, PENNSYLVANIA

TRANSPORTATION AND
INFRASTRUCTURE COMMITTEE

EDUCATION AND THE WORKFORCE
COMMITTEE

HOMELAND SECURITY COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515–3811

WASHINGTON, DC OFFICE:
115 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-6511 PHONE
(855) 241-5144 TOLL-FREE
(202) 226-6250 FAX

HAZLETON, PA OFFICE:
1 SOUTH CHURCH STREET, SUITE 100
HAZLETON, PA 18201
(570) 751-0050 PHONE
(570) 751-0054 FAX

SUNBURY, PA OFFICE:
106 ARCH STREET
SUNBURY, PA 17801
(570) 988-7801 PHONE
(570) 988-7805 FAX

CARLISLE, PA OFFICE:
59 WEST LOUTHER STREET
CARLISLE, PA 17013
(717) 249-0190 PHONE
(717) 218-0190 FAX

HARRISBURG, PA OFFICE:
4813 JONESTOWN ROAD, SUITE 101
HARRISBURG, PA 17109
(717) 526-7002 PHONE
(717) 695-6794 FAX

March 12, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Mr. Arnold:

I am writing this letter to support the I-81 Corridor Coalition application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. The Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate 81 travels through, including representation from each State Department of Transportation. As a member of the I-81 Corridor Coalition Steering Committee, I strongly support the efforts in this proposal, as they are an important first step in an effort to help shape a solution that could span the corridor.

The I-81 Corridor has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in truck traffic in three key ways:

- **Freight Corridor Planning**, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of **Key Priority Areas** where there are high freight volumes in combination with a high frequency of traffic incidents.
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

PRINTED ON RECYCLED PAPER

LOU BARLETTA
11TH DISTRICT, PENNSYLVANIA

TRANSPORTATION AND INFRASTRUCTURE COMMITTEE

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HOMELAND SECURITY COMMITTEE

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HARRISBURG, PA OFFICE:
4813 JONESTOWN ROAD, SUITE 101
HARRISBURG, PA 17109
(717) 525–7002 PHONE
(717) 695–6794 FAX

I believe this proposal addresses many critical components dealing with highway safety, the efficient use of the interstate corridor, and develops the tools necessary to plan for freight growth along a corridor that crosses many jurisdictional boundaries.

Sincerely,

Lou Barletta

Lou Barletta
Member of Congress

PRINTED ON RECYCLED PAPER

PATRICK J. TOOMEY
PENNSYLVANIA

COMMITTEES:
BANKING, HOUSING, AND URBAN AFFAIRS
COMMERCE, SCIENCE, AND TRANSPORTATION
BUDGET
JOINT ECONOMIC COMMITTEE

United States Senate

WASHINGTON, DC 20510

March 12, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Mr. Arnold:

I am pleased to provide this support letter for the I-81 Corridor Coalition's application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. The Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate 81 travels through, including representation from each State Department of Transportation.

The I-81 Corridor has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in truck traffic in three key ways:

- Freight Corridor Planning, consistent with and supporting MAP-21, for the entire length of Interstate 81.
- Identification of Key Priority Areas where there are high freight volumes in combination with a high frequency of traffic incidents.
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

In order to assist in these efforts with this project, I respectfully request that you give their application all due consideration. Thank you for your attention to this matter.

Sincerely,

Pat Toomey
United States Senator

COMMISSIONERS OF CUMBERLAND COUNTY

Barbara B. Cross
Chairman

Jim Hertzler
Vice Chairman

Gary Eichelberger
Secretary

March 14, 2013

Mr. Robert Arnold
Federal Highway Administration
Director, Office of Transportation Management
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Mr. Arnold:

We are writing this letter to support the I-81 Corridor Coalition application, submitted by the Virginia Department of Transportation, for funding under the Multistate Corridor Operations and Management Program (MCOM). The Coalition has adopted clear program priorities that are reflected in the MCOM proposal such as public safety, freight movement, and protection of the environment. The Coalition is guided by a Steering Committee comprised of representatives from each of the six states that Interstate 81 travels through, including representation from each State Department of Transportation. Cumberland County is member of the I-81 Corridor Coalition and we strongly support the efforts in the proposal, as they are an important first step in an effort to help shape a solution that could span the corridor.

The I-81 Corridor has seen a steady increase in truck volume for decades, and is known to be a primary freight corridor that is increasingly serving the south and southwestern freight movement to the northeastern mega region. This proposal helps address this growth in truck traffic in three key ways:

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- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

We believe this proposal addresses many critical components dealing with highway safety, the efficient use of the interstate corridor, and develops the tools necessary to plan for freight growth along a corridor that crosses many jurisdictional boundaries.

Sincerely,

CUMBERLAND COUNTY BOARD OF COMMISSIONERS

Barbara Cross Jim Hertzler Gary Eichelberger

One Courthouse Square ◆ Room 200 ◆ Carlisle, PA 17013 ◆ 717.240.6150 ◆ Fax: 717.240.6448
E-mail: commissioners@ccpa.net ◆ Web: www.ccpa.net

Northeastern Pennsylvania Alliance
NEPA

March 22, 2013

Mr. Robert Arnold, Director
Office of Transportation Management
U.S. Department of Transportation
Federal Highway Administration
HOTM-1, E86-306
1200 New Jersey Ave, SE
Washington, DC 20590

RE: Multistate Corridor Operations and Management Program:
- I-81 Multistate Corridor Coalition

Dear Director Arnold:

This letter is in support of the I-81 Multistate Corridor Coalition's application for funding through the Multistate Corridor Operations and Management Program.

Created as a Local Development District under the Appalachian Development Act of 1965, the Northeastern Pennsylvania Alliance (NEPA) is one of seven sub-state regional agencies that assist with the coordination of economic development, community development, transportation and a variety of other programs and services utilizing federal, state and local resources in the Commonwealth of Pennsylvania. NEPA is also designated by the Commonwealth as the Rural Planning Organization (RPO) for five counties and convenes the Northeastern Pennsylvania Rural Transportation Planning Organization (NPRTPO) Committee, formed to assist and advise with assessing the transportation needs of these rural counties.

In the Spring of 2003, NEPA convened the Focus 81 Committee following discussions with numerous officials in Northeastern Pennsylvania regarding overall safety and congestion issues along Interstate 81. The Focus 81 Committee undertakes short, mid and long term initiatives to improve safety and reduce congestion along Interstate 81 in a targeted 24 mile corridor traversing the cities of Wilkes-Barre and Scranton stretching from Nanticoke in Luzerne County to Waverly in Lackawanna County.

NEPA has also been involved with the development of the I-81 Multistate Corridor Coalition since its inception in 2007. Since then, the I-81 Multistate Corridor Coalition has cultivated a partnership of transportation, environmental and local government organizations from six states along the I-81 corridor from Tennessee to the Canadian border and is dedicated to disseminate information corridor-wide; develop communication protocols; study and address transportation system issues throughout the corridor; and enhance safe travel for passengers and freight movers.

Northeastern Pennsylvania Alliance
1151 Oak Street • Pittston • Pennsylvania • 18640-3726
www.nepa-alliance.org • ph: (570) 655-5581 • fax: (570) 654-5137
TTY: 711 • "An Equal Opportunity Lender"

In the coming year, the I-81 Multistate Corridor Coalition intends to build upon its successes and work to address major freight issues within the corridor. Specifically funding through the Multistate Corridor Operations and Management (MCOM) Program will allow the I-81 Multistate Corridor Coalition to accomplish three major tasks:

- Freight corridor planning consistent with MAP-21, for the entire length of Interstate 81;
- Identification of key priority areas where there are high freight volumes in combination with a high frequency of traffic incidents; and
- Limited pre-deployment of services for traveler information related to incident and congestion management in combination with truck routing and parking.

Implementation of these initiatives will allow the I-81 Multistate Corridor Coalition to continue to work toward enhancing safety for the traveling public and freight movers within the corridor. I urge your support for its application and request for funding.

In closing, thank you for your consideration of my comments. Please feel free to contact me at 570-655-5581, or by email at abaranski@nepa-alliance.org with any questions or concerns.

Sincerely,

Alan S. Baranski, AICP
Vice President, Community and Government Services

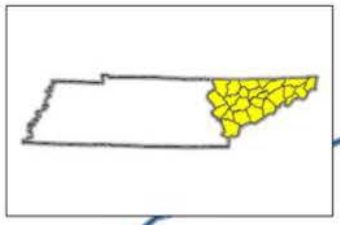
cc: Rachel Cogburn, Ex. Dir., I-81 Corridor Coalition

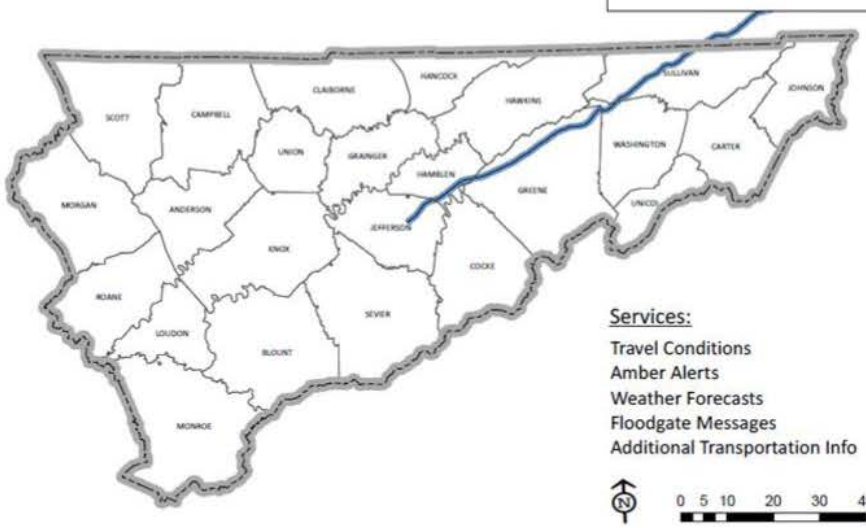
Appendix E

511 and Traffic Operation Coverage Areas

Tennessee 511 Area

Region One





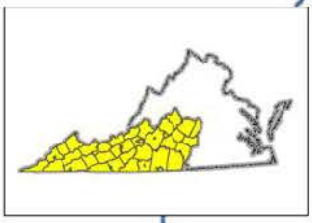
Services:

Travel Conditions
Amber Alerts
Weather Forecasts
Floodgate Messages
Additional Transportation Info

0 5 10 20 30 40 Miles

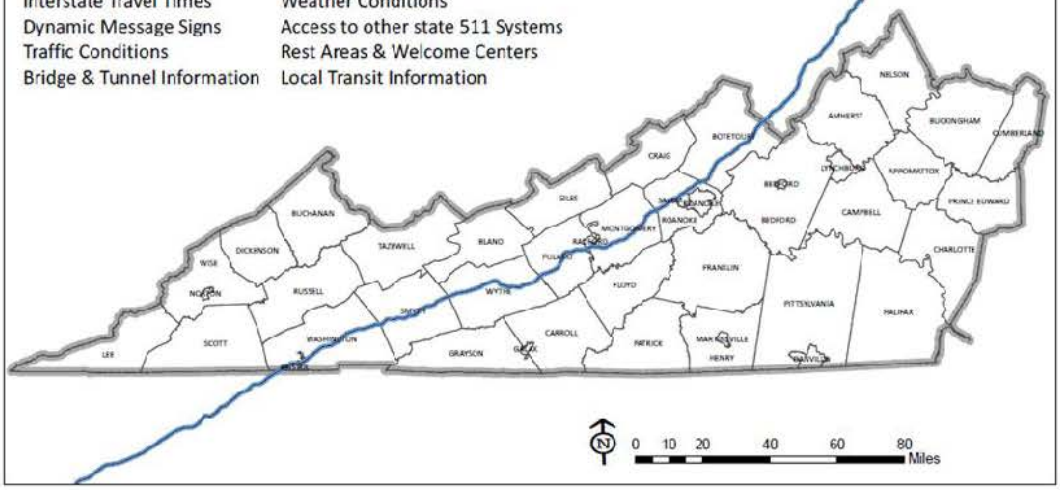
Virginia 511 Area

Southwestern Region



Services

Emergency Alerts	Reach the Beach Information
Interstate Travel Times	Weather Conditions
Dynamic Message Signs	Access to other state 511 Systems
Traffic Conditions	Rest Areas & Welcome Centers
Bridge & Tunnel Information	Local Transit Information



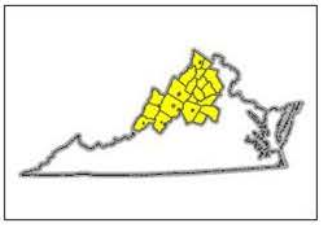
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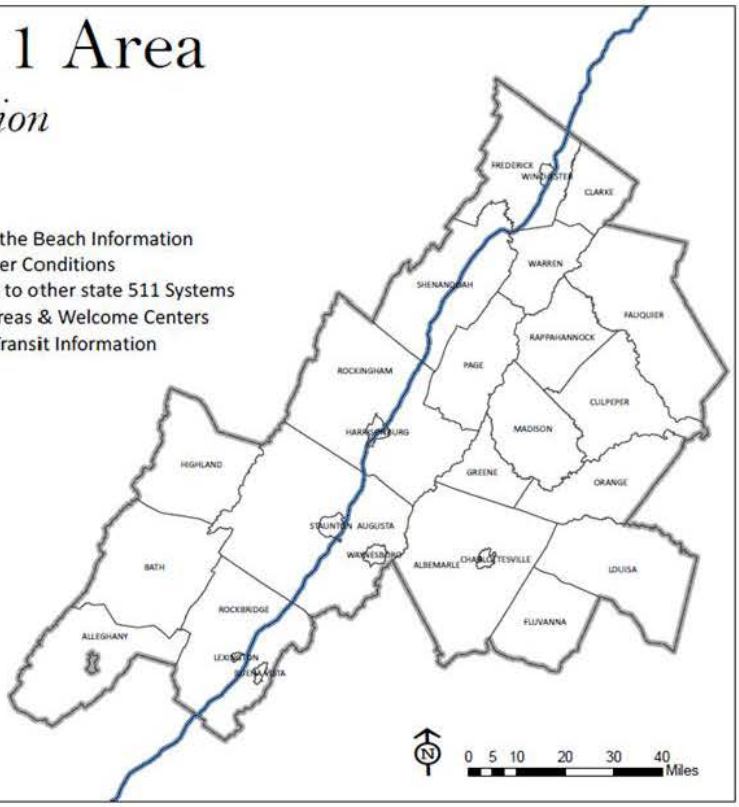
Virginia 511 Area

Northwestern Region

Services

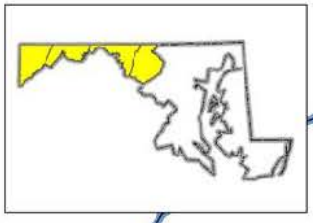
Emergency Alerts
Interstate Travel Times
Dynamic Message Signs
Traffic Conditions
Bridge & Tunnel Information
Reach the Beach Information
Weather Conditions
Access to other state 511 Systems
Rest Areas & Welcome Centers
Local Transit Information





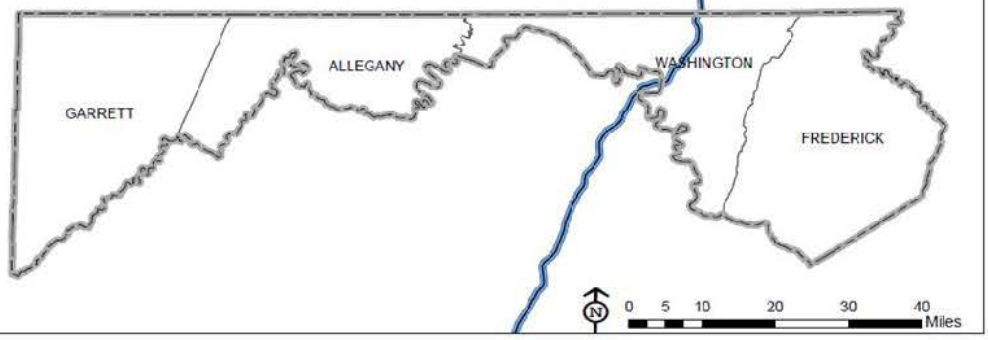
Maryland 511 Area

Western Region



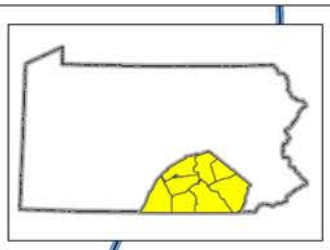
Services:

Traffic Conditions
Live Traffic Camera Feeds
Construction Updates
Highway Speed Conditions
Weather Forecasts
Transit & Airport Information
Toll Facility Information



Pennsylvania 511 Area

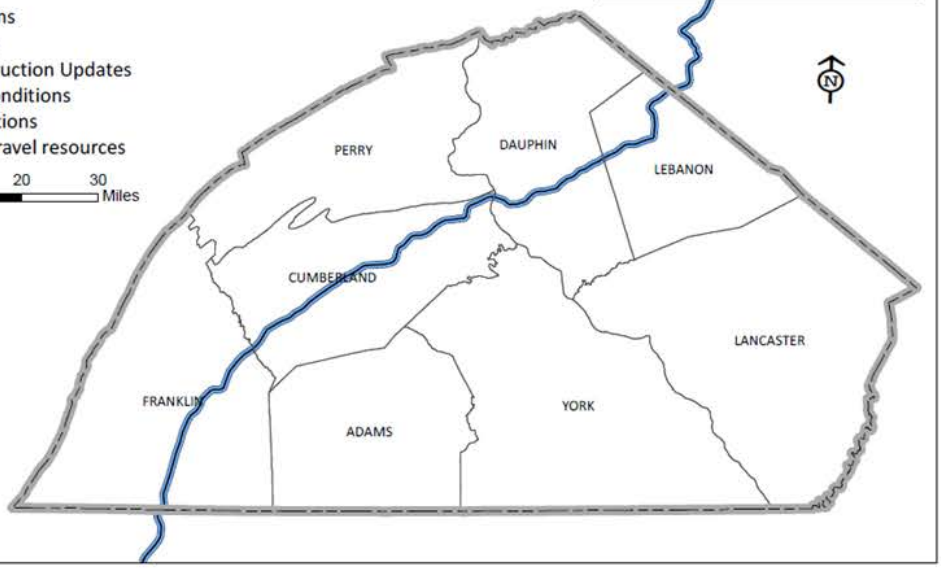
Harrisburg / Lancaster / York



Services

Traffic Conditions
Traffic Cameras
Highway Construction Updates
Winter Road Conditions
Weather Conditions
Links to other travel resources

0 5 10 20 30 Miles

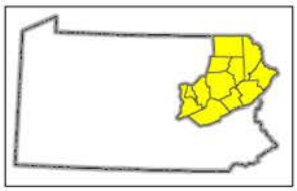


Pennsylvania 511 Area

Scranton / Wilkes-Barre / Poconos

Services

Traffic Conditions
Traffic Cameras
Highway Construction Updates
Winter Road Conditions
Weather Conditions
Links to other travel resources

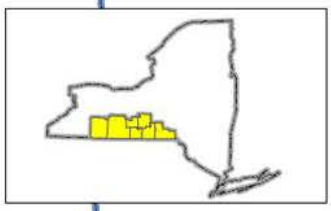




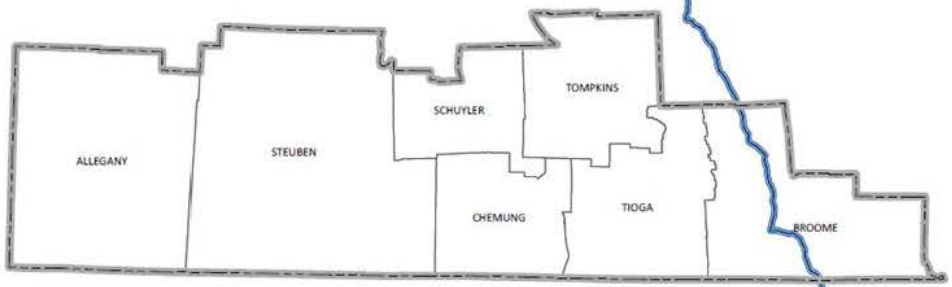
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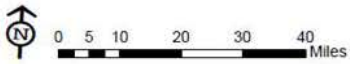
New York 511 Area

Southern Tier / Hornell / Elmira / Binghamton



Services:
Road Conditions / Traffic & Transit / Transit Trip Planner / Traffic Cameras / Personal Alert





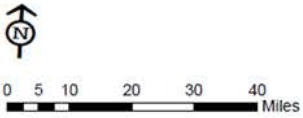
New York 511 Area

Central / Syracuse / Utica



Services:
Road Conditions / Traffic & Transit / Transit Trip Planner / Traffic Cameras / Personal Alert





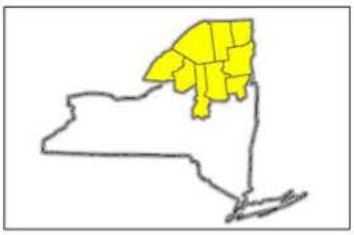
New York 511 Area

Adirondack / Watertown / Plattsburgh



Services:

Road Conditions / Traffic & Transit / Transit Trip Planner / Traffic Cameras / Personal Alert



Appendix F

Delcan RTFI Waybill Data Example

Delcan RTFI Waybill Data Example

One innovative element of our proposed approach comes from the availability of current and recent cost information. By examining relative transport costs within commodity groups, across haul lengths that are viable for rail moves and between points near existing rail lines, RTFI allows for a direct examination of diversion options not possible using traditional datasets. A brief sample of the information available from RTFI is shown in the tables below.

The tables show comparative rate data for shipments between Harrisburg, PA and Atlanta, GA, in both directions, for a couple of commodities currently transported by both rail and truck in 2011. The first table provides the data from Atlanta to Harrisburg, and the second shows data for the other direction, from Harrisburg to Atlanta.

Table 2a: Shipments from Atlanta CSA to Harrisburg CSA, Truck (Truckload, Temp. Controlled and Bulk) vs Rail (Rail and Intermodal)

Mode	Average cost per ton-mile	Average ton per shipment	Average total shipping cost per shipment	Average linehaul cost per shipment	Average accessorial cost per shipment
Rail	$0.11	17.5	$1,241	$1,020	$221
Truck	$0.15	19.4	$1,705	$1,315	$390

Table 2b: Shipments from Harrisburg CSA to Atlanta CSA, Truck (Truckload, Temp. Controlled and Bulk) vs Rail (Rail and Intermodal)

Mode	Average cost per ton-mile	Average ton per shipment	Average total shipping cost per shipment	Average linehaul cost per shipment	Average accessorial cost per shipment
Rail	$007	18.2	$700	$4500	$200
Truck	$0.22	12.8	$1,044	$718	$325

Even given the relatively small number of commodities and the limited geographic scope of this preliminary analysis, a clear advantage emerges for rail transportation. On a ton-mile basis, rail is 27% cheaper than truck per ton-mile moving North, and 69% less expensive moving South. While the information does not adjust for service requirements, and the commodity sets are limited, it is clear that an economic case exists for diverting at least a portion of these commodities from truck to rail.

In addition to the ability to assist in the identification of diversion options, the detailed data regarding the breakdown of costs offers significant additional value by allowing the State DOTs along the route to understand transport costs at a level not previously possible. With this information, States can begin to correlate the direct cost impact of various factors, including those costs imposed by travel conditions along the route, such as fuel costs, which can be a valuable indicator of the cost of delay.

Appendix G

Bios of Key Personnel

GO-81 Key Personnel Biographies

Kevin Cole (I-81 Corridor Coalition). Kevin is the Executive Director of the I-81 Corridor Coalition under the direction of Dr. Tom Dingus at the Virginia Tech Transportation Institute (VTTI). Prior to joining VTTI, Mr. Cole served on and is presently a member of the I-81 Corridor Coalition Steering Committee appointed by Congressman Phil Roe. In this capacity, Mr. Cole was involved with the formation of the Strategic Plan and mission statement for the Coalition. Additionally, Kevin's lengthy tenure with the Johnson City, Tennessee Regional Planning Commission along with his business acument obtained through owning and managing a business provide for a diverse and enhanced background of expertise.

In his current role as Executive Director of the I-81 Corridor Coalition, Mr. Cole manages the day-to-day activities of the Coalition. His management responsbilities include coordinating and overseeing 3 program track committees, promoting the mission of Coalition to the broader community and seeking funding for the Coalition and its projects. Kevin will oversee all GO-81 project activities on behalf of the I-81 Corridor Coalition and will He will have responsibility for all administrative oversight.

Paul Belella (Delcan). Paul is a principal with Delcan Corporation. Paul has more than 28 years of experience in the development, evaluation and testing of complex technology systems—including 18 years with ITS. Paul is also an experience freight analyst and planner, and counts among his more significant work assignments the Kansas City Cross-Town Improvement Project (C-TIP). For this important mutli-modal freight technology pilot, Paul developed the concept of operations, managed all stakeholder outreach and consensus-building, and oversaw the development of the real-time traffic management (RTTM) and dynamic route guidance (DRG) components of the pilot system deployment. Paul also served as the primary author for the Smart Roadside Initiative (SRI) concept of operations. For both initiatives, Paul led the development of user needs, crafted use cases and supported the development of system architectures.

Paul's freight analysis and planning experience includes managing the Texas DOT Statewide Truck Diversion Study, where he evaluated opportunities to divert truck traffic to rail, and supporting the Texas DOT Statewide Long Range Transportation Plan, where he was responsible for the development of the surface freight component. Paul also served as the technical and management support lead for the FHWA Intermodal Freight Technology Working Group (IFTWG), where he conducted operations analysis and technology assessment, and coordinated the efforts of the private- and public-sector members in the development of technology-based solutions to important intermodal freight transportation challenges.

Paul is a previous vice chair of the Transportation Research Board Intermodal Freight Transportation Committee, and currently leads the Highways and Freight Business Unit at Delcan. Paul will be the GO-81 Project technical lead, and will also lead Phase 3.

Dick Mudge (Delcan). Dr. Mudge is a vice president with Delcan Corporation. Dr. Mudge is a recognized expert in the economics and finance of all modes of transportation. He has held a series of management positions as a transportation consultant. These include co-founder, President, and Chairman of the Board for Apogee Research. Previously he directed the transportation policy group for the Congressional Budget Office and worked in applied research at the RAND Corporation. He currently serves as Vice President for Delcan and helps to lead the firm's work in economics, finance, technology and strategy.

Dr. Mudge's consulting clients are usually decision makers, whether from public agencies or private firms. Much of his work covers technology -- including the development of market forecasts and business strategies. Dr. Mudge's work often involves the changing market place for transportation, including forecasts for future markets. When prepared for public sector clients, they usually assess the economic and social impacts. When performed for the private sector, they incorporate forecasts of profits and return on investment as well as competitive market assessments.

Dr. Mudge's more relevant recent includes a National Transportation Policy project for the Bi-Partisan Policy Center, where he a led a team to develop performance metrics to evaluate programs of transportation projects and then to track performance over time. Dr. Mudge also conducted key analyses for the Texas DOT Statewide Long-Range Transportation Plan and Statewide Rural Transportation Plan. Dr. Mudge also prepared a review of the management implications from full deployment of ITS as well as other technologies (telecommunications etc.) for NCHRP, led a comprehensive assessment of how to reduce traffic congestion for the Washington State Audit Office, and prepared several sets of evaluation tools that take a comprehensive look at the potential benefits and costs of new transportation investment. His most recent work on this topic was prepared for Transport Canada and has been issued as national guidance. Dr. Mudge has been a leader in assessing developing applications for probe data, whether from GPS or cellular systems. He currently leads research for FHWA on how to integrate these data into traffic simulation models. He has led similar efforts to develop regional performance measures based on probe systems.

Dr. Mudge evaluated a proposal to extend double stack coverage in the Commonwealth of Pennsylvania. This work assessed the likely economic impacts and the value to the nation and to the Commonwealth. The results were used to negotiate a cost-sharing arrangement between the state DOT and several railroads. For the FHWA, he also led a team to assess the current and future demand for truck parking on Interstate Highways relative to available space. This work relied on original market research (focus groups and field surveys) on the factors that shaped where and when truck drivers would stop for rest, including advantages and disadvantages of commercial truck stops versus public rest areas. Dr. Mudge will lead Phases 1 and 2 of the GO-81 project.

Rick Warner (TruckSmartParkingServices). Rick is the founder of ParkingCarma, and veteran innovator of usable technology in the transportation industry draws on extensive knowledge from multiple industries and leadership roles. As a business development leader in the broadest sense, Rick has guided new businesses and products to market for over 25 years. Successfully operating as an entrepreneur in both established corporate environments and lean start-up environments, Rick's business development expertise has been brought to bear in the aerospace, transportation, marine, renewable energy, applied industrial materials, and the wireless Internet fields. Rick serves on the Transportation Research Board's New Transportation Systems And Technology committee and focuses his skills on bringing sustainable value to users of technology.

Rick is a Year 2000 ComputerWorld Smithsonian Laureate and is a 2008 Lawrence Tech innovator of the year nominee. This prestigious honor was awarded to Rick and two of his Action Engine colleagues for their efforts in developing a consumer-oriented mobile-services platform. Prior to Action Engine, and setting the standard for his work there, Rick trained and worked with industry leaders such as Boeing, McDonnell Douglas, Mitsubishi Heavy Industries, Hexcel, British Telecom, Palm, General Motors, and Paccar.

Harry Voccola (Independent Consultant). Harry currently serves as Executive Advisor to Nokia Location & Commerce. Previously he was Senior Vice President for NAVTEQ. Harry, who joined the Company in 1995, has over 30 years of experience developing state and local marketplace transportation technology opportunities, including over twenty-five years in transportation technology services, mapping and dynamic content solutions, and Intelligent Transportation Systems (ITS).

From 1995 -1997 he was instrumental in defining data requirements for the emerging vehicle and internet navigation markets. From 1997-98 he managed the North American sales department for the Company. From 1999-2001 he directed the real time traffic deployment strategy in the US. From 1980-1995, he was Senior Vice President and General Manager of Lockheed's Transportation Systems and Services. He designed and implemented HELP, Inc. – the first Intelligent Transportation Systems (ITS) public/private partnership that successfully evolved from a federally funded test to a self-funding service for the trucking industry and state departments of transportation (DOTs).

Harry has been active nationally and internationally in ITS initiatives, including as past Chairman of the Board of the Intelligent Transportation Society of America (ITSA), where he served on its Board of Directors for its first 12 years. He also is a Member of the Board of Directors of ITS California (Chair for 2 years), the World Congress for Intelligent Transport Systems (Chair for 3 years during which he oversaw the successful ITS World Congress in San Francisco.