GENERAL

A. Project Description and Location

The I-87/Autoroute 15 corridor provides a direct international connection between the largest metropolitan area in the United States (New York City) and the second largest metropolitan area in Canada (Montreal) through the Lacolle/Champlain border crossing. The corridor, through its connections to crossing highways, and to other modes, serves a broader area including the Mid-Atlantic states, New England and Eastern Canada; with a population of 80 million people.

Growth in trade (truck traffic at the US-Canada border crossing increased 40% between 1996 and 1999) and in tourism have placed increased demands on this vital corridor. Nearby rail border crossings carried nearly $2 billion value of freight in 2000. This growth in traffic has occurred during a period in which security concerns have led to slower processing of vehicles at the border, and extended delays. This situation presents problems both for the growth of economic activity and for security.

In order to realize the potential growth in the economy of the corridor and of the region, a comprehensive study has been initiated to identify and assess initiatives and opportunities to improve modal services and facilities for commercial and private users of the corridor. This transportation study will integrate with the findings and results of the ongoing study, “New York and the New World Economy”. The intent is for this study to analyze recommended initiatives and rank them in terms of economic impact potential, feasibility, and the ability to meet other goals and objectives.

B. Project Classification

A Design Report/Environmental Impact Statement (DR/EIS) will not be required.

C. Policy and Procedures

The design of this project shall be progressed in accordance with the most current Design Procedure Manual (DPM) and appropriate sections of the Federal Aid Policy Guide (FAPG).

1. Compliance with documents

All work shall conform to the most current versions of the following NYSDOT documents. Where necessary the State shall provide or make available to the Consultant either the full document or guidance extracted from it.
In addition, all work shall be designed in accordance with the following documents or their current replacement policy:

- A Policy on Geometric Design of Highways, AASHTO
- A Policy on Design Standards. Interstate System, AASHTO
- Manual for Condition Evaluation Of Bridges AASHTO
- Highway Capacity Manual, Special Report 209, Transportation Research Board
- Guide Specification for Evaluation of Existing Bridges, AASHTO
- FHWA Technical Advisory T6640.8A, 10/30/87 (environmental analyses)
- ADA Accessibility Guidelines for Buildings Facilities
- Eminent Domain Procedure Law And Guidelines
- 2002 Roadside Design Guide

Compliance with the following applicable documents pertaining to railroad construction shall be required:

- American Association of Railroads Specifications
- American Railway Engineering and Maintenance Association, “Manual for Railway Engineering”
- Federal Railroad Administration Rules and Standards
2. Compliance with Environmental Laws, Regulations and Permits

At this planning stage of work, there are a number of environmental laws and regulations that are relevant to the project. All Consultant work shall meet the requirements of all relevant and applicable state and federal environmental laws, regulations and policy (specified in Appendix A of the Design Procedure Manual), including but not limited to:

**STATE AUTHORITY**

<table>
<thead>
<tr>
<th>Farmlands Protection</th>
<th>Agriculture and Markets Law, §305</th>
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<tbody>
<tr>
<td>Freshwater Wetlands Act</td>
<td>Article 24 of Environmental Conservation Law (6 NYCRR Parts 662, 663, 664)</td>
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<tr>
<td>Adirondack Park Agency Act</td>
<td>Section 814 of Executive Law (9 NYCRR Part 579)</td>
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<tr>
<td>Historic Preservation Act</td>
<td>Parks, Recreation and Historic Preservation Law, Section 14.09</td>
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<tr>
<td>Wild, Scenic &amp; Recreational Rivers Act &amp; Regulations</td>
<td>Article 15, Title 27 of Environmental Conservation Law (6 NYCRR Part 666)</td>
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<tr>
<td>Waterfront Revitalization &amp; Coastal Resources Act</td>
<td>Article 34 of Environmental Conservation Law</td>
</tr>
<tr>
<td>State Environmental Quality Review (SEQR) Act</td>
<td>Article 8 of Environmental Conservation Law (17 NYCRR Part 15)</td>
</tr>
<tr>
<td>Floodplain Management Criteria for State Projects</td>
<td>Article 36 of Environmental Conservation Law (6 NYCRR Part 502)</td>
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<tr>
<td>Endangered and Threatened Species Protection</td>
<td>Article 11, Title 5 of Environmental Conservation Law</td>
</tr>
</tbody>
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**FEDERAL AUTHORITY**

| Farmland Protection Policy Act | 7 USC 4201-4209 (7 CFR 658) |
| Floodplain Management Executive Order 11988 | 42 USC 4001 *et seq.*, 44 CFR 60.3, 23 CFR 650A; see also Executive Order 11988 and DOT Order 5650.2 |
| Protection of Wetlands Executive Order 11990 | DOT Order 5660.1A (8/24/78); 23 CFR 777 |
| National Historic Preservation Act, Section 106 | 16 USC 470f |
| Rivers and Harbors Act, Section 10 (U.S. Army Corps of Engineers Permit) | 33 USC 403 |
| National Environmental Policy Act (NEPA) | 42 USC 4321; 23 CFR 771 (FHWA Regulations) |
3. All work shall conform to the CADD requirements stated in Consultant Instruction 00-01 (or current superseding policy). The Consultant shall work continuously within the required software applications.

4. The Consultant shall prepare for and attend all meetings as directed by the State's Consultant Manager. The Consultant will be responsible for the preparation of all meeting minutes and the minutes shall be submitted to the State within one (1) week of the meeting date.

5. The Consultant shall prepare and the State will publish all required legal notices.

6. When specifically authorized in writing to begin work, the Consultant shall render all services and furnish all materials and equipment necessary to provide the State with reports, plans, estimates, and other data specifically described herein under the individual work categories listed below under “D. Categorization of Work”.

7. Before transmitting each product to the State, the Consultant shall review it to ensure its conformity to all applicable State requirements.

8. The Consultant shall coordinate the scheduling and technical compatibility of prime consultant and subconsultant work.

D. Categorization of Work

Work on this project shall be categorized as follows:

PHASE 1: DEFINITION OF STUDY PARAMETERS AND INITIAL FINDINGS
PHASE 2: PROPOSED DEVELOPMENT STRATEGIES AND RECOMMENDATIONS

PHASE 1: DEFINITION OF STUDY PARAMETERS AND INITIAL FINDINGS

Meetings Tasks for Phase 1

For estimating purposes, it is assumed a total of 12 technical review meetings and meetings to preview the presentation materials /visual aids will be necessary, as part of Phase 1. This is in addition to the meetings described in Task A with the Study Advisory Group.
Project Study Area

One of the initial tasks for the Consultant will be the detailed definition of the Study Area for this project. For estimating purposes the following study area limits are assumed for the project.

**Primary Study Area**

- **Vehicular Traffic** – I-87, from Exit 21A through Albany to the Northway terminus at the Champlain border crossing, along with the “international zone” extending roughly one mile on the Canadian side, and including the following major intersecting highways:
  - I-90 Berkshire Spur (Exit 21A - Exit B1)
  - I-90 (I-787 - I-87)
  - I-90 (Exit 25A - Exit 24)
  - Route 396 (CR53 - Route 144)
  - Route 149 (Route 9 - Vermont State Line)
  - Route 74 (I-87 - Route 22)
  - Route 73 (Lake Placid - I-87)
  - Route 3 (Route 374 - Route 9)

The study area will also include Route 9 and Route 22 from Route 7 to the Canadian border.

- **Rail Traffic** – Rail links between New York City and Montreal, including the CSX lines east and west of the Hudson River between the Capital District and New York City, and the Canadian Pacific right-of-way between the Capital District and Montreal.

- **Marine Traffic** – Hudson River transport north of New York harbor, including the Port of Albany and potential intermodal sites at intersections of the Hudson River and major highways; the Champlain Canal/Lake Champlain waterway system.

- **Air Traffic** – The following airports:
  - Albany International Airport
  - Glens Falls/Floyd Bennett Memorial Airport
  - Plattsburgh International Airport
  - Round Lake Airport
  - Saratoga County Airport
  - Schroon Lake Airport
  - Westport Airport

- **Environmental** - The same limits as for the vehicular, rail, and marine traffic study areas described above.

**Secondary Study Area**

- **Vehicular Traffic** – I-87 from Exit 9 to Exit 21A and Autoroute 15 from Lacolle to Montreal will be reviewed for potential constraints on I-87 traffic and for secondary impacts of development in the Primary Study Area.
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- **Rail Traffic** – Potential impacts on regional movement by rail of proposed projects between New York City and Montreal, including intersecting rail lines and both freight and passenger movement in the corridor will be considered.

- **Marine Traffic** – Secondary impacts of Hudson River transport on water transport from New York Harbor through Lake Champlain will be considered including the ports of Montreal, New York, and Newark.

- **Air Traffic** – Potential growth of air traffic at airports in the Hudson Valley north of Albany will be considered in terms of its interactions with vehicular and rail traffic, and in relation to economic growth in the Secondary Study Area for Vehicular Traffic.

Community Outreach

Outreach will include all public and private entities included in the Study Advisory Group including interested parties from Federal agencies, New York State and Quebec.

**Task A: Agency and Public Outreach Program**

The goals of the Outreach Program are to:

- Maximize the involvement of all interested parties (stakeholders) – agencies, business groups, elected officials, etc. – in the planning process so that representatives work together for the successful progression and completion of the project.

- Obtain the information regarding needs, opportunities, and local conditions that only the individual stakeholders can add to the planning process.

The public involvement program shall be an integral part of the entire process from the selection of goals and objectives, the development of potential concepts, the evaluation/analysis of the potential concepts, and the selection of the proposed strategies.

**A1. Development of the Public Outreach Plan**

The Consultant shall be responsible for creation of a draft Public Outreach Plan (POP) that will guide the process. The draft POP will delineate the decision making process, the critical decision points, and the responsible parties in making these decisions. The draft shall be reviewed by NYSDOT and revised into a final version. At various points during the project, it may be important to revisit the POP and adjust it to reflect changes in emphasis, timing or techniques.

Communication of report submissions and permit requests to State and Federal agencies will be the responsibility of the State. Communication with the public by means of press releases and legal notices will also be the responsibility of the State.

The POP shall detail the full set of expected meetings and presentations, but a proposed list of meetings during Phase 1 is provided in the following sections.
A2. Study Advisory Group Meetings

The State shall invite all interested parties to participate in the project’s Study Advisory Group (SAG). The State shall decide the mix of groups, organizations, agencies, officials and individuals that should be represented, and send invitations to those parties. The mix shall include: officials of New York State, Province of Quebec, and municipalities; Canadian and U.S. border agencies, FHWA, Federal Motor Carrier Safety Administration, Quebec-New York Corridor Coalition, MPOs, New York and Quebec Transportation Agencies, and other interest and trade groups. The State expects to hold at least one meeting with the SAG prior to the start of the Multimodal Corridor Study, and the Consultant shall review the results of those meetings during its development of the POP.

The Consultant shall secure appropriate meeting sites; provide adequate advance notice of and agenda for meetings for distribution as directed by the State, and provision of all presentation materials.

The Consultant would make presentations to the SAG, at the direction of the State, and produce minutes of each meeting, which would be provided to all SAG members and posted on the study website.

A total of six (6) SAG meetings will be held – two (2) during the process of selection of Goals and Objectives and establishing and assessing existing conditions, and four (4) during the remainder of the study. Meetings would be informal, with an emphasis on bringing the group up to date on the study and getting members’ input on and assistance with project issues and activities.

It is projected that two (2) of the SAG meetings would be held in the Plattsburg area and four (4) in the Albany area. The actual location of meetings may be revised based on discussions with SAG members. It is also assumed that one (1) public meeting will be held in connection with one or more of the proposed improvement alternatives identified in Phase II of the study.

A3. Mailing List

For this effort a mailing list of an estimated 200 individuals names and associated organizations shall be compiled and updated on a regular basis. It shall be provided in a database format and shall be directly linked to the Issues Log.

A4. Public Information Meeting Fact Sheets

One fact sheet shall be produced to coincide with the SAG meeting to set Goals and Objectives discussed above. A second fact sheet shall be prepared prior to completion of Phase 1, and two additional sheets during Phase 2. These are expected to be 2-3 page, black and white, one-sided documents. It is assumed that 500 copies of each fact sheet shall be produced.
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A5. Newsletter

It is assumed that two newsletters shall be published during the study. The newsletter is expected to be a 4-page document (most likely an 11” x 17” folded and double-sided), highlighting project results, schedule, next steps and public involvement opportunities. The newsletters shall be in color. It is assumed that 500 copies of the newsletter shall be produced.

A.6. Issues Log

An Issues Log shall be prepared throughout the course of the study. It shall catalog unresolved issues and agency commitments. When appropriate, responses shall be prepared by the Consultant for review by the State.

A.7. Web Page

A web page shall be hosted by the State, with information (text, graphics, etc.) provided by the Consultant, to disseminate information. The web page shall be linked to NYSDOT's web site and developed consistent with NYSDOT’s website guidelines as established by NYSDOT’s Information Service Bureau. The website shall contain all relevant project documentation produced under this study, including fact sheets, newsletters, minutes of the SAG meetings, and other information as determined in consultation with the State.

A.8. E-Mail

The Consultant will create and maintain an E-Mail mailing list. E-mails will be sent to all involved parties announcing upcoming events, meetings, open houses, etc.

Task B: Study Goals and Objectives

The Consultant shall develop the Goals and Objectives of the Study, including transportation, socioeconomic, and environmental considerations and input from the public process described in Task A. Performance measures will be either qualitative or quantitative measures of effectiveness, and will be modified as necessary during the Study.

B.1. Goals, Objectives, and Performance Measures

The Consultant shall develop Study goals that include, but are not limited to, the following areas.

- Infrastructure and resources
- Mobility, goods movement and intermodal operations
- Safety and security issues
- Economic Development plans and projections: trade, technology, tourism
- Environmental, scenic and natural resources in the corridor
- Requirements for community acceptance of development in the corridor
- Cost effectiveness requirements for developments in the corridor
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The Consultant shall develop criteria to be used to assess the attainment of these goals, and shall create performance measures to objectively define the extent to which each criterion has been met. Performance measures should allow for clear assessment of each strategy in terms of addressing identified needs and definition of the strengths and weaknesses of each strategy.

B.2. Technical Memorandum #1: Goals and Objectives

A draft technical memorandum shall be prepared documenting the proposed goals, objectives and performance measures. Following review and incorporation of comment from the State, the draft will be circulated to the SAG and discussed at a meeting with that group, as described in Task A. The Consultant shall modify the goals and objectives as needed to reflect the consensus of the SAG, and submit the revised draft to the State.

Modifications to the draft will be received from the State, and the Consultant shall then produce a final version of Technical Memorandum #1. The Consultant shall distribute Technical Memorandum #1 as directed by the State.

Task C: Determination and Evaluation of Existing Conditions

The Consultant shall collect all relevant data required to establish existing and future conditions in the corridor. The State shall be responsible for providing records maintained by NYSDOT to the Consultant, with these data expected to meet the majority of the study’s data requirements. The State will be responsible for coordinating with other agencies, such as the Thruway Authority, Adirondack Park Agency, various bridge authorities, and MPO’s in the collection of the data from those agencies.

C.1. Data Collection

The Consultant shall thoroughly review the preliminary list of project-related information to be supplied by the State. The Consultant shall discuss with State representatives as needed to confirm the nature, extent and applicability of these data sources, and shall maximize the use of the “New York and the New World Economy” study as a source of data for demographic, socioeconomic and goods movement.

The Consultant shall assemble and submit to the State a plan for collection and management of all data needed for the completion of this project. Data not provided by the State as described above will be obtained by the Consultant in coordination with the State. The Consultant shall assemble data in the following categories.

- Highway/Bridge data
- Demographic and socioeconomic data
- Rail and public transportation
- Tourism data
- Freight data
- ITS/CVO features
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- Intermodal facilities data
- Traffic and operations data

C.2. Geographic Information System

The Consultant shall develop and implement a Geographic Information System (GIS) for the project using ESRI's ArcView and Arc/Info GIS software. The Consultant shall compile GIS data from existing City, State, Federal and private sector sources, and shall integrate these data with those collected specifically for the project. GIS data sources that shall be investigated and, as necessary, incorporated into the GIS database include:

- NYS DOT GIS base-maps (the Consultant shall obtain approval from the Department for the use of these GIS database sources for this study)
- Transportation inventory and planning data including traffic volumes, accident data/rates, congestion/level of service, pavement conditions
- Socio-economic and demographic data
- Environmental data, including wetlands, coastal zones, floodplains,
- Historic and cultural data
- Other data as appropriate and necessary.

C.3. Origin-Destination Study

A recent truck origin-destination study is available for the Champlain border crossing. The Consultant shall develop and conduct a complementary survey for non-commercial vehicles at the Champlain border crossing. The Consultant shall develop a safe and efficient plan for performing this survey, including time, place and survey method. After approval of a survey plan, the Consultant shall execute the plan and prepare and submit to the State a summary of results that highlights the key findings. It is assumed that (a) on-site survey methods can be utilized, with staff handing out questionnaires to travelers at the site, and possibly asking questions in the field rather than via mail-back; and (b) a relatively limited number of questions will be asked of travelers, focusing on origin-destination, purpose(s) and frequency of trip and mode choice. The exact method of survey implementation will be subject to final approval of the Federal Inspection Services and could result in modifications to these assumptions.

Task D: Technical Memorandum #2: Documentation of Existing Conditions

The Consultant shall draft a report to document the results of Task C in text with supporting tables, maps, and graphs. The Consultant shall submit a draft technical memorandum to the State with all supporting graphics and appendices. Following incorporation of comments, the Consultant shall distribute copies of the final Technical Memorandum #2 to the SAG, and provide 10 copies to the State for distribution.

Task E: Key Corridor Issues and Opportunities

The Consultant shall catalog key corridor issues and emerging opportunities, expanding on the “New York and the New World Economy” study’s preliminary assessment of the transportation
systems needs relative to the emerging trends in the corridor. These issues should relate to the study’s goals and objectives and be multimodal in scope, and should include relevant system-wide, economic and modal and institutional concerns. To the extent possible, except the High Speed Rail initiative, these tasks should be completed using existing reports and studies. These issues shall include, but not be limited to:

- **High Speed Rail pre-feasibility study initiative** – High speed rail (Albany/Saratoga and Montreal) – Assess the issues and impediments (double tracking needs, freight/passenger conflicts, grade crossing elimination, etc.) that must be addressed if high speed rail service is to be implemented in the corridor between Albany/Saratoga and Montreal. Deviations from the existing route along new track should also be considered as should methods to significantly decrease the lost time that occurs at the border due to inspection needs. Work tasks to be completed under this study will include:
  - Review Previous Studies, Proposals and Rail Freight Initiatives
  - Review Existing Physical & Operational characteristics of rail infrastructure *
  - Identify Physical & Operational requirements for HSR
  - Identify Impediments to HSR operations
  - Assess feasibility of new corridor alignments
  - Identify state-of-the-art HSR infrastructure needs
  - Evaluate diesel & electric rail technologies
  - Identify fatal flaws, major challenges & key constraints
  - Assess ITS opportunities
  - Develop ridership estimates & market profile
  - Environmental & Community benefits & impacts
  - Order of Magnitude Cost Estimates
  - Draft Technical Report
  - Final Technical Report
  * Expanding on the data collection efforts performed under Task C

- **Highway infrastructure and operations** (congestion, bridge clearance, weight restrictions).
- **Rest stops and designated parking areas**, particularly as they relate to truck facilities, and how these facilities fit into a cohesive and supportive network.
- **Border crossings and security issues**, reflecting the results of the Lacolle/Champlain Border Crossing Port of Excellence Study and the Northern New York Border Crossing Study, in consultation with the SAG.
- **Rail infrastructure and operations** – Freight and passenger infrastructure and operations (improvement needs, capacity and operational constraints, new service opportunities).
- **Non-commercial airport service**, including the ability of potential users to access these facilities and the constraints, bottlenecks, etc. that restrict their usefulness, as well as potentially needed on-site improvements (runways, landing/instrument systems, etc.). Key facilities to be reviewed include:
  - Glens Falls/Floyd Bennett Memorial Airport
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- Plattsburgh International Airport
- Round Lake Airport
- Saratoga County Airport
- Schroon Lake Airport
- Westport Airport
- **Interurban passenger services** (Albany/Saratoga)
- **Future Northway infrastructure issues** – physical requirements of future I-87/Northway service options (transit, rail, highway), particularly in the I-87/Northway alignment in Albany County and southern Saratoga County.
- **Intermodal operations**, both at existing sites and undeveloped sites potentially viable for rail-truck, water-to-rail/truck freight operations and other intermodal upgrades that could improve goods movement efficiency.
- **Improved highway access to the Northway**, including movement of people and goods along connecting east-west highways, and how the lack of good east-west access limits off-corridor economic opportunities.

**Task F: Technical Memorandum #3: Key Corridor Issues and Opportunities**

The Consultant shall prepare a report that documents the analysis of trends and corridor strengths and weaknesses and the results of Task E in text with supporting tables, maps, and graphs. Based on the identified problems and the opportunities initially identified under Task E, the Consultant shall indicate whether the study’s goals and objectives should be revised prior to the start of Phase 2. The Consultant shall submit a draft technical memorandum to the State with all supporting graphics and appendices. Following incorporation of comments, the Consultant shall provide copies of the Final Tech Memo #3 to the SAG, and 10 copies to the State for distribution.

The Consultant shall also produce a brief memorandum that incorporates all information from Phase 1 of the study that would support designation of the I-87 corridor as a high-priority corridor under the next USDOT funding authorization legislation. This memo would focus on those issues identified in Sections 1118 and 1119 of the Federal Highway Administration’s guidance on TEA-21 programs, particularly the National Corridor Planning and Development (NCPD) program and the National Coordinated Border Infrastructure (CBI) program. The Consultant shall work with the State to insure that the content and timing of this memo is helpful to the State in its legislative efforts.

**PHASE 2: PROPOSED DEVELOPMENT STRATEGIES AND RECOMMENDATIONS**

**Task G: Refined Project Study Elements**

The Consultant, based on the results of Phase 1 and input from the SAG, shall prepare a refined list of transportation development strategies to advance study goals and objectives. The goal of this selection is to identify those actions most likely to address the identified infrastructure, intermodal connectivity, and technological and economic opportunity needs of the corridor.
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Starting with the “long list” of potential improvements identified in the New York and the New World Economy study and any other feasible improvements identified in Task E, the Consultant shall develop a prioritized ranking of those possible initiatives, using the selection criteria and measures of effectiveness established under Task B with the SAG. Based on this ranking, the Consultant shall work with the State to define those strategies to be defined and further analyzed during this phase. For each initiative, short- and long-term improvements needed to achieve them will be identified.

Those strategies advanced to this stage will be analyzed at a pre-conceptual design stage, with critical environmental issues identified and qualitatively described. It is assumed that approximately ten (10) strategies shall be analyzed under this task. The Consultant shall confirm the appropriate level of analyses for these potential improvements in consultation with the SAG and the State. It is assumed that one public information meeting would be held in the Albany area in addition to consultation with the SAG members and their staff.

Task H: Supplemental Data Collection

Data requirements for those potential improvements identified under Task G will likely exceed the inventory prepared for Phase 1. The Consultant shall discuss these data needs with the State and with members of the SAG and other government agencies. Based on these efforts, the Consultant shall define a data collection plan outlining the needed data and methods of collection. The scope of this effort will be defined upon completion of Task G. For costing purposes, it is assumed that 15% of the initial data collection cost under Task C will be required for the supplemental data collection. The Consultant shall not initiate data collection efforts under this task until the State has approved a supplemental data collection work plan.

Task I: Development of Short and Long Term Improvement Alternatives

I.1. Develop Improvement Alternatives

The Consultant shall prepare improvement alternatives, both system-wide and local, based on the ranking process completed under Task G, for two time horizons: short-term (2010) and long-term (2020). The level of detail shall be sufficient to understand the general physical features, service characteristics and other factors necessary to assess and screen these alternatives, and to prepare a technical, financial and environmental assessments sufficient to evaluate performance measures. This level of detail shall be consistent with the Scoping Procedure Manual, pending any further guidance from the State. The extent to which individual improvement alternatives are developed in more detail, and the level of the initial environmental assessment for each, will be determined in consultation with the State at the start of this task.

I.2. Evaluation of Proposed Alternatives

For each proposed improvement alternative, the Consultant shall identify the benefits and impacts, strengths and weaknesses based on their ability to meet the project’s goals and objectives. The Consultant shall address for each alternative its engineering and environmental feasibility, regional and local acceptability, and financial viability, and shall develop an
alternatives analysis summary matrix that displays in comparative formats the relative strengths and weaknesses of these alternatives.

I.3. Technical Memorandum #4: Economic Development and Transportation System Improvement Initiatives

The Consultant shall prepare a report that documents the analysis of trends and corridor strengths and weaknesses and the results of Tasks G, H, I.1 and I.2 in text with supporting tables, maps, and graphs. The completed product should enable the SAG to evaluate the initiatives advanced from Task G and the range and magnitude of improvements necessary for the initiatives to come to fruition.

The Consultant shall submit a draft technical memorandum to the State with all supporting graphics and appendices for review and comment. Following revisions to the document based on those comments, the Consultant shall provide copies of the final Technical Memorandum #4 to the SAG, and 10 copies to the State for distribution.

I.4. Recommendations and Alternatives

The Consultant shall prepare an outline of the final report for the overall study. After review and approval of the outline by the State, the Consultant shall prepared a preliminary Draft Corridor Study Report that details the recommended set of alternatives that meet study goals and objectives, and identify areas or alternative that deserve more detailed consideration under separate studies. The Consultant shall submit fifty (50) copies of the preliminary draft report to the State for review and comment, and shall revise the report and submit a Draft Corridor Study Report to the State. After approval by the State, the Consultant shall provide copies of the Draft Corridor Study Report to the SAG and other agencies and interested parties as agreed to with the State.

Based on comments received on the Draft Corridor Study Report, the Consultant shall revise the report and submit it to the State for review and comment. After revising the report as needed based on the State’s review, the Consultant shall submit one hundred (100) copies of the Final Corridor Study Report for distribution by the State.

Task J: Consultant Management

J.1. Project Reporting

For the duration of work under this agreement, the Consultant shall prepare and submit to the State on a monthly basis a Cost Control Report, a Progress Report, and a Project Schedule in a format approved by the State. The beginning and ending dates defining the reporting period shall wherever applicable correspond to the beginning and ending dates for billing periods, so that this reporting process can also serve to explain billing charges. (In cases where all work under this contract is officially suspended by the State, this task will not be performed during the suspension period.) For estimating purposes assume 12 invoices and 12 progress reports will be submitted to the State in Phases 1 and 2.
The monthly progress reports shall include the following.

- Description of work completed this month
- Schedule status
- Budget status
- Description of work to be completed during the next month
- Required items from the Department

**J.2. Quality Assurance Review**

Before transmitting each major product to the State, the Consultant shall review it for quality assurance regarding overall compliance with State requirements. This shall be a peer review performed by someone independent of the individual or team that developed the product.