

High Speed & Passenger Rail (HS&PR)
Program Management Consultant (PMC)
Scope of Work

- I. ORGANIZATION AND PROTOCOL REVIEW AND/OR DEVELOPMENT -Agencies
 - A. IDOT Interface - Establish points of contact between IDOT and the PMC Team for formal and informal contact. Establish a system of reports to the client to document progress, problems and resolutions and other issues that arise in the conduct of the HS&PR programs. Establish periodic program review protocol.
 - B. Railroad Interfaces - In a similar context, establish points of contact with participating railroads for formal and informal contact.
 - C. Federal Railroad Administration and Illinois Commerce Commission Interfaces - Establish points of contact with the regulatory agencies having jurisdiction will serve the program well over the duration of the assignment. In addition, to ensure that coordination is expedited with these agencies, the PMC Team should include personnel experienced in dealing with these matters, which will review applicable regulations and establish compliance standards and expectations. Establish protocol for periodic or milestone compliance and issues review.
 - D. Program Management Plan - Prepare detailed plan for the PMC Team's organization necessary to achieve the goals of the program. This can also be used by IDOT and the regulatory agencies as a tool to measure the PMC Team's progress over the duration and to schedule key coordination activities, design review participation, etc.
 - 1. Project Management Plan - Review and/or develop specific documents that will set forth requirements for sub-consultants, specialty consultants, vendors and contractors to review and/or develop plans to deliver their respective product or service to the program in a timely manner and within budget. Periodic reporting requirements will be clearly identified to ensure that the PMC Team is aware of progress and issues and can take remedial action in a proactive manner.
 - 2. Public Involvement Plan - Engage the public and stakeholders to advance the acceptance and success of the program. The public involvement plan will encompass the planning, execution and inauguration of service aspects of the HS&PR program. Establish a system for communicating news to the appropriate outlets. Maintain a program website timely communication program goals and progress.

3. Organization Chart - It is important that organizational roles and relationships are identified and understood by project personnel. Keeping organization chart(s) current will aid all parties concerned – IDOT, the members of the PMC Team and all stakeholders.
4. Document Management Standards - Establish the parameters of a Document Control System. Define methods and location of storage and recall.
5. Communication Protocol - Specify office and field communication systems to assure timely control and command of the program. Establish methods of communication acknowledgement and methods to store and recall vital program communications. Advanced information dissemination and document control tools can be used to expedite the flow of documents between IDOT, the PMC Team, the rail carriers and regulatory agencies in a secure (password-protected, etc.) manner.
6. Information Technology Protocol - In conjunction with Document Management and Communications Protocol, establish and implement an information technology system suitable to support management of the program in accordance with the standards and protocols established.
7. Quality Assurance/Quality Control Plan - Ensure that all work and deliverables prepared by the PMC Team conforms to IDOT or other regulatory agency standards of Quality Assurance and Quality Control. Specialty subcontractors will be required to conform to and maintain their certification in applicable ISO Standards. Towards that end, the PMC Team's QA/QC program will include regular review and periodic audit requirements to ensure that standards are being maintained.
8. Program Safety Plan - For a major construction undertaking such as the Chicago-St. Louis Corridor, it is essential to establish a program-wide safety program. Key components of this program will include training and reinstruction provisions, regular monitoring, corrective actions and a reporting program. Establish methods to instill a culture of safety throughout the construction, inauguration and operational phases of the program. Provide for the review and/or development of operational phase safety and security plans. Throughout the duration of the program, it is imperative that the PMC Team Safety Officer work with the responsible safety officials of IDOT, Amtrak, FRA, ICC, and affected railroads and agencies to ensure that agency and carrier standards and practices are respected. Given the need to work in close proximity to active rail lines and/or near crossing rail lines, contractors and their personnel will be required to attend or take rail carrier safety programs and to maintain current safety certification. Contractor selection criteria will include that the contractor has worked successfully around active rail tracks and facilities and has a demonstrated record of positive performance in this area.

9. Sustainability Plan – A Sustainability Plan will be review and/or developed to ensure the consideration of the economic, community and environmental impacts and benefits of the investment. A sustainable approach incorporates these considerations into all phases of the process and will include the issues of energy and power, water, environmental conditions, community review and/or develop costs and benefits, materials, design and construction practice. The sustainability plan will include a common understanding of what sustainability means, how it will be used, at what level of detail, and how progress will be measured. The affected railroads will be key stakeholders in the process. A review of the resources, the proposed guidelines and final progress measures will be review and/or developed. A reporting system and periodic sustainability evaluations will be implemented, so that progress can be measured. 10Dispute Resolution - Establish methods and protocols to resolve disputes between PMC Team members. These methods can also be applied to disputes between the team and external entities.

II. ORGANIZATION AND PROTOCOL REVIEW AND/OR DEVELOPMENT-Activities

- A. Document Control - Implement the requirements of the Document Management Standards including the establishment of, training on and testing of the systems necessary to assure secure storage and convenient recall of critical program information.
- B. Scheduling and Project Control - Implement a system of program scheduling that includes the incorporation of the entire universe of program execution. Provide for the regular periodic update of schedules, the monitoring of progress, the review and/or development of recovery schedules, “what-if” scenarios and the reporting of schedule progress to PMC Team management staff.
- C. Cost Control – Implement a system and organization to accumulate, monitor and forecast program related costs. Review and/or develop budgets and report variances against budget established for the program as well as determine estimated cost at completion based on performance indices. The system should also be responsive to reporting specific funding allocations of the work and the distribution of agency or funding sources as they relate directly or through those funding sources. Provide for the periodic update of cost and the monitoring of cost trends, as well as methods and procedures to enact corrective action when overages are identified. This is especially important given the FRA requirements with regard to fiscal responsibility for overruns, etc. Establish budgets for program execution and track progress against the budget.
- D. Scope and Change Control – Review and/or develop a system for documenting scope and relating budgeted cost and schedule properties to the Program scope. As a function of that scope, the need to review and/or develop a change management system is necessary to review and/or develop trends and forecasts in the schedule and cost performance of the program. Additionally, the system will provide insight into the allocated costs and report the performance

of those funds as they are distributed to the various contracts, contractors or agencies charged with the delivery of the work.

- E. Cost Estimating - Provide an organization to estimate expected program construction or assembly costs and review the accuracy of estimates or proposals provided by other companies.
- F. Cost Accounting - Establish a system of cost accounting to apprise IDOT of program costs vs. program progress. Provide for the review of PMC Team invoices and the review of deliverable status. Provide for payment of invoices or transmittal of reviewed invoices to IDOT. Provide periodic reports on cost and budget compliance to program managers. Prepare PMC Team invoices to IDOT. All invoices and program progress reporting would conform to IDOT and/or FRA/ARRA requirements.
- G. Public Involvement - Establish a public involvement office to track and disseminate program information to the media and directly to the public, as well as maintain communications with principle stakeholders. This office will have a coordinated working relationship with the IDOT and State Government public information services/staffs. Speakers' Bureaus and other program-tested methods will be employed to ensure that a consistent and positive message is available to the media, to local governments and to the general public. Establish and maintain a program website. Establish points of contact with local governments and elected officials in the on-line towns and cities on the program route. Implement public involvement strategies included in the Public Involvement Plan.

III. CONTRACTING

- A. Contract Standards - In accordance with IDOT requirements, establish contracting standards for the engagement of outside consultants, review and/or developers, vendors, equipment suppliers and contractors ('the program team'). Compose 'boilerplate' contractual provisions to enforce the requirements and protocols of the Program Management Plan including but not limited to DBE, prevailing wage & Brooks Act.
- B. Professional Services Procurement - In conformance with IDOT and FRA requirements, procure those professional services necessary to execute the program, including but not limited to the procurement of the General Engineering Consultant (GEC). The GEC will be responsible for specification review and/or development and design of civil and roadway facilities, communication and signal systems, operating and maintenance facility architecture, station architecture and oversight of rolling stock design, manufacture and delivery.
- C. Contractor Procurement - In accordance with the requirements of IDOT, procure the services, including as appropriate, the supply of material for the construction of fixed facilities.
- D. Equipment Procurement Coordination - In conformance with IDOT, FRA and Amtrak requirements, assure the coordination with the GEC to procure the 110 MPH-capable and

certified rolling stock including passenger cars and motive power to be used on HS&PR Corridors. Also included in this area of responsibility are units of maintenance equipment, both mobile and fixed, and automatic reservation and ticketing devices, if required.

- E. Right-of-Way Acquisition - In accordance with the requirements of IDOT, provide for the coordination of acquisition of any necessary right of way required for establishment of the transportation system. This function must be coordinated with the railroads real estate group and must be fully compliant with the Uniform Act.
- F. Railroad Agreements - Establish agreements with each of the host/owning railroads for access to the railroad property and for all other facets of the program which require the sign-off and/or permission of the rail carriers (access to drawings and data, etc.). Review and/or develop Memoranda of Understanding (MOU) with each of the railroads including Amtrak, UPRR, CN, Metra, NS, TRRA and others to outline the roles and responsibilities of the each of the parties. Make provisions for the assignment of liability and risk, provide for indemnity as permitted, and establish standards and provisions for maintenance, standards for dispatch, establish Force Account Agreements for cost reimbursement and incentives for exemplary performance. Provide for timely communication during operations and methods for the resolution of disputes.
- G. Contract Administration - under the Cost Accounting provision, review contract invoices and provide for the accounting and control of deliverables. Provide protocols for contract change management, contract termination, review and settlement of claims, and provide for contract closeout and audit.

IV. ENVIRONMENTAL

- A. NEPA Documents - Preparation of environmental documentation, anticipated to be in the form of a Categorical Exclusion (CE), for track, structure and signal improvements on the HS&PR routes, and also for the preparation of environmental documentation, anticipated to be in the form of a an Environmental Assessments (EA). Work may include preparation of draft CE and EA documents, collection of environmental supporting information, special waste coordination, floodplain/Section 404/wetland coordination, exhibit preparation, state and federal resource agency coordination, and preparation of final environmental documents.
- B. Assist in the preparation of Tier 1 NEPA Documentation for Chicago-St. Louis Double Track (CHISL) - Preparation of a Tier 1 Environmental Impact Statement (EIS) and submission for future HSIPR applications. IDOT'S Context Sensitive Solutions policy will be followed. Organization of the EIS will fulfill legal sufficiency requirements and meet the technical demands of regulatory agencies. The document is also anticipated to include the final recommendations of a current EIS by the city of Springfield and Sangamon County with IDOT and the FRA to consolidate the rail lines through Springfield, which may affect the final location of HSR and freight rail facilities within that municipality.
- C. Grade Crossing Treatments: This task includes the re-examination of road closures, at-grade crossings, and the grade separation previously studied in Environmental documents to

determine the type of treatment each should receive and the environmental consequences of such actions.

- D. Preparation and/or Management of Tier 2 Additional Environmental Studies. Preparation and/or oversight of NEPA clearance documents. The level of environmental documentation required will be dependent on FRA guidance. IDOT'S Context Sensitive Solutions policy will be followed. The environmental studies may be in the form of a single Tier 2 EIS, EAs, or CEs, dependent on how the project is federally approved and sequenced.

V. FINANCIAL

- A. Funding Sources - Identify, track and as required, tap sources of capital funds for the establishment of the transportation system. The sources of capital funds may be equity, debt, bonds and grants (including unobligated FTA funds for related transportation improvements, etc.). In accordance with IDOT, FRA, FTA, and other federal and state requirements, the use of Public-Private Partnerships may be investigated and established. Sources and uses of capital funds shall be identified and reported to IDOT, FRA, FTA., and other agencies as required
- B. Risk Management
 - 1. Identification and Assignment of Risks Identify risks inherent in the establishment and operation of the high-speed rail corridor and assign responsibility for the risk to those parties best positioned to control or mitigate the risk.
 - 2. Insurance Program Review and/or development define a program of insurance to mitigate certain risks and liabilities both for the establishment and operation of the high-speed rail corridor.
 - 3. Insurance Program Oversight Provide for the oversight of the insurance program to assure that responsible parties establish and maintain their insurance program requirements.
- C. Ridership, Economic Review and/or development, and Revenue Assessments
 - 1. Ridership Estimates and Surveys - Conduct ridership surveys, and performs investment-grade ridership forecasts and revenue estimates. Forecasts must meet the expectations of the financial marketplace. Conduct focus group and other investigations to provide IDOT with realistic insight into the demographic of the customer base and trip purposes serviceable by the system. Market research is to be used as the basis for train sizing and schedule review and/or development
 - 2. Preparation of projections of economic review and/or development and creation of jobs as a direct and indirect consequence of the HS&PR program. This information would support funding applications, public involvement, and project reporting requirements.

3. Pricing Plan - Results of ridership investigations shall be used to define a pricing plan for ticketing and the provision of other customer services on new or existing routes.

VI. SYSTEM STANDARDS AND INTEGRATION

- A. System Vision - In conjunction with IDOT and using the Service Review and/or development Plan as the basis, review and/or develop a Vision Statement for high speed rail routes and enhanced passenger services to be offered and the configuration of the transportation system necessary to deliver that service. Address issues of service branding and brand management. Using Public Involvement resources, vet the initial vision with the potential customer base (the public) to refine the Vision Statement. Provide for periodic review of the vision statement and the service program which delivers on the vision. Include liaison with the immediately adjacent states and Amtrak in this iterative process.
- B. System Concept and Integration Plan - In accord with the System Vision, establish a plan for system configuration, including but not limited to station locations, platform types, track configuration, train speeds, signal and communication system configuration including Positive Train Control, motive power and passenger equipment configuration, maintenance standards and methods. Provide a plan to assure all system components function as a unit, including training and certification requirements for system operation.
- C. Operating Plan - Establish a desired timetable based on the results of train simulation modeling and the service goals. This should include an evaluation of desired service frequencies, express vs. all stop services, provision for coordination with key connecting services under various freight train scenarios. Coordinate acceptance of the train schedules by, IDOT, Amtrak and the host railroads. Ensure that is reflected in the simulation, and that these connections are optimized. Technical Standard Review and/or development - Establish technical standards, and detailed specifications for track construction and maintenance (suitable for sustained HS&PR passenger train operation, but also recognizing the requirements of the various types of freight services which will continue to operate on the Corridors). These ranges of capital investments affect the layout and design of the physical plant and the station facilities. For example, in double-track projects, many stations will have second platforms installed, each of which must have the full range of amenities installed (consistent with Amtrak guidelines and standards). The platforms themselves will be ADA compliant, and will have grade-separated, ADA-compliant passenger access provisions installed at that time.
- D. Operating Standards
 1. Operating and Safety Rule Integration - In cooperation with Amtrak, the host railroads and the FRA, review and supplement as appropriate for passenger operations, the Operating and Safety Rules. This effort may include provision for the acceptance of changes and

modification of Rules by the host railroads. The implementation of high-speed passenger train operation, double-tracking of the complete corridor and the consequent increase in the volume of high-speed passenger train movements, may introduce new and/or unique rules and operating procedures requirements.

This effort will include a joint PMC Team, Amtrak and host railroads rules and procedures committee (or similar) to review and/or develop and refine the rules and procedures required to safely conduct Corridor operations.

2. Training Standards - In cooperation with Amtrak, the host railroads and the FRA, establish a program of training for operating personnel to assure a safe operation in compliance with the Operating and Safety Rules established. This effort will include the necessary certification, licenses and permits needed to safely and reliably operate this joint-use, high-speed corridor and to ensure that a high standard of customer service is delivered by all crews, each and every day. As with the rules and procedures committee, a training standards committee approach may be used as the delivery method.
- E. Railroad Interface - Provide for the review, comment and acceptance of the system configuration, technical standards and specifications, system integration and operating standards by Amtrak, the host railroads and the FRA.
 - F. FRA and ICC Interface - Provide for the review, comment and acceptance of system configuration, technical standards and specifications, system integration and operating standards and rules by regulatory agencies with jurisdiction. Note that direct FRA involvement in the rules and procedures process is proposed in Section D.1, above Provide for early input from the ICC on grade crossing treatments and potential operating restrictions.
 - G. Customer Service Standards - Establish train schedules that provide transportation service optimized to the dominant trip purposes as identified by the ridership forecasting exercise.

Specify desired standards for station operations and convenience, including personnel, cleanliness, ticketing and reservation access, security provisions, platform pedestrian controls, sanitary provisions, parking, baggage handling, ADA provisions, groundside transportation, food service, sundry service and other foreseeable customer amenities.

Establish standards for the provision of on-board customer services as are necessary or customary to passenger transport on a high-density corridor operation. These standards shall include but not be limited to baggage provisions, environmental control, sanitary facilities, food service, internet access, ticket validation, emergency communication and egress, and on-board announcements.

H. Engineering Consultant Oversight

1. Design Reviews - Provide for periodic review of standards and designs being review and/or developed by the section or facility design teams, whether contracted by IDOT, Amtrak, the host railroads or other entities. Establish formal standards of review and reporting of findings, comments, corrections and recording of final designs and modifications. Establish a system of configuration control and design acceptance.
2. QA/QC Audits - The PMC Team's project implementation plan will establish that all subcontractors shall have a conforming QA/QC plan for their specific assignments. The default position will be that the subcontractor will adopt all requirements of the PMC Team's QA/QC Plan for their work.

Regardless of the source of the QA/QC Plan governing the work of an individual subcontractor, the PMC Team will require periodic audits on the QA/QC plan implemented by the subcontractor. These audits will consider preparation of plans and other documents, as well as manufacturing and construction activities, depending on the specific role and responsibility of the subcontractor. The audit procedures will be set forth, along with the process for identifying such occurrences and non-conformances, the review and reporting of same and the method for resolving these occurrences.

- I. Value Engineering Establish a system of value engineering reviews jointly between the PMC Team and the designers/other subcontractors to assure that the technical standards of all elements of the program are being met at a minimum life cycle cost and a view towards program sustainability. A requirement for certified value engineering personnel to be part of the PMC Team will be included in the scope of services. The roles and responsibilities of the subcontractors in the achievement of these value engineering goals will be established in their subcontractor agreements with the PMC Team.

Provide for the period review of design and manufacturing/construction cost estimates to ensure that sound value engineering principles are being applied throughout the process. The process for identifying cost reductions/method changes will be identified, along with reporting procedures and the method for resolving discrepancies.

VII. PROGRAM EXECUTION –Track/Signal/Crossings/Stations

- A. Environmental Clearance and Compliance Oversight - With the appropriate agencies (IDOT, etc.), scope and obtain the necessary environmental clearances and permits as required by the National Environmental Protection Act. and other state and local requirements

Conduct oversight of the program team to assure compliance with the requirements of the environmental clearance.

- B. Design - With the assistance of the GEC, the PMC Team will review designs for compliance with the technical standards and the ability of the design to meet the expectations of the system plan and the expectations of IDOT, Amtrak, the host railroads and the FRA, as appropriate.
- C. Right of Way Acquisition - Assure compliance with IDOT and host railroad requirements for right of way acquisition and compliance with federal and state rules regarding right of way.
- D. Utility Relocation – Verify that utility relocations are accomplished in accordance with the design and are compliant with all agreements and other procedures the host railroad may have in place governing utility location on the right of way.
- E. Roadway Projects - Provide for field inspection, progress meetings, QA/QC audits, safety reviews and invoice reviews to assure that the design and construction of roadway facilities, grade crossing, and road closures meet the contractual requirements and technical standards of the PMC Team, IDOT-Highways, the host railroads, the FRA and the ICC.

Construction Staging – Provide for continued operation of existing UP freight and Amtrak passenger services during the implementation of roadway, communication and signal improvements. Where possible the construction of new and extended passing sidings and double track should be completed to permit operation while the existing single track is upgraded. Coordination with Amtrak is required to adjust scheduled services during the construction phase. May need to consider trans-loading or other options for on-line shippers if sidings are not accessible or otherwise have to be removed from service to facilitate construction. Consider night time construction with rail service suspended. Consider use of bus substitute service for mid-day passenger trains to increase work windows.

- F. Communication & Signal Projects - Provide for field inspection, progress meetings, QA/QC audits, safety reviews and invoice reviews to assure that the installation and testing of all communications and signal systems meet the contractual requirements and technical standards of the PMC Team, IDOT, Amtrak, the host railroads, the FRA and the ICC.
- G. Hoop rating and Maintenance Facility Projects - Provide for field inspection, progress meetings, QA/QC audits, safety reviews and invoice reviews to assure that the design, construction, equipping and testing of operating and maintenance facilities meet all contractual requirements and technical standards of the PMC Team, IDOT, Amtrak, the host railroads, the FRA and the ICC.
- H. Station Facility Projects - Provide for field inspection, progress meetings, QA/QC audits, safety reviews and invoice reviews to assure that the design, construction, equipping and testing of

station facilities meet all contractual requirements and technical standards of the PMC Team, IDOT, Amtrak, the host railroads, the FRA and the ICC.

- I. Schedule and Budget Coordination - Monitor schedule and budget adherence by its management and staff and by all other program team members. This review shall identify any non-conforming results along with a plan for corrective action. Follow-up review and reporting shall ensure that the correct actions have brought the result back into conformance/expectations.

All PMC Team members shall be fully cognizant of schedule and budget review, coordination and reporting requirements, as well as any updated/modifications. The PMC Team shall regularly report to IDOT on schedule and budget adherence and progress. The PMC Team shall establish schedule recovery plans with program team members as may be required to ensure that all scheduling objectives in this program are met.

VIII. PROGRAM EXECUTION-Equipment Coordination

- A. Equipment Testing and Acceptance - As set forth in VI.III, above, establish and conduct a program of equipment testing and acceptance, including as applicable, acceptance and conformation that equipment is in compliance with requirements of regulatory agencies with jurisdiction. Equipment includes rolling stock and motive power including on-board equipment, maintenance equipment, communication and train-control systems, ticketing and reservation systems (as applicable).
- B. Final Inspections and Acceptance - Establish and conduct a program of final inspection, testing, and acceptance of fixed facilities including roadway signals and communications, operating and maintenance facilities and stations. Furnishings shall be inspected for compliance with all technical requirements and in appropriate condition.
- C. Training - Establish and conduct a program of training of operating, maintenance and customer-service personnel to meet any certification and licensing requirements, become proficient in the execution of emergency procedures and to meet customer service expectations. Review the training program and seek acceptance from IDOT, Amtrak, the host railroads and regulatory agencies with jurisdiction.
- D. System Testing - As described in Section VI.III, above, and in accordance with the requirements of IDOT, Amtrak, the host railroads, the FRA and the ICC, conduct a program of pre-revenue service testing with successful completion of the test program being a mandatory step prior to commencing full revenue operations as the necessary improvements are completed, staged implementation of higher speeds should be planned and put into place.

- E. Regulatory Authority Acceptance - Seek and obtain all required regulatory agency acceptances, permits, licenses and certifications.
- F. Owner Acceptance - As required in the PMC Team agreement, seek and obtain acceptance of the Rail Corridor by IDOT, Amtrak and the host railroads.
- G. Ready for Operation Declaration - upon obtaining all required acceptances and when meeting its own satisfaction, the PMC Team, IDOT, Amtrak, the host railroads, the FRA and the ICC shall declare the Rail Corridor Ready for Operation.

IX. ENTERPRISE MANAGEMENT

The PMC Team shall establish a plan for the management of the revenue operations phase of the Corridor. The plan will provide for the procurement of an Operator (this is assumed to be Amtrak, the operator of the existing passenger rail service, but a formal process will be required). The revenue service management plans should account for the following major expense categories: General & Administrative costs; Marketing and Sales; Ticketing and Reservations; Security and Safety Management; Insurance Program and Claims Settlement; Legal Representation; Facility and Asset Management; Revenue and Cost Accounting; Operating Department Management; On-Board Service; Maintenance of Equipment; Maintenance of Way; Customer Service Department Management; Internal Auditing and Quality Management; and on-going interface with the service operator, the host railroads and other key entities.

X. TRANSITION PLAN

Develop a Transition Plan to assure a seamless hand-off from existing conditions which has been approved by IDOT, FRA ICC, and other stakeholders.

XI. Other Duties as assigned by Work Order.