

I95 Express Lanes Best Practices

During the Design-Build Phase

NO.	ISSUE	PROCESS	PURPOSE OF PROCESS OR PROJECT ISSUE AS OBSERVED BY KEY PERSONNEL	RECOMMENDATIONS	WHERE REQUIRED BASED UPON THE I95 HOT LANES CONTRACT	DISPOSITION
1	Risk Management Staffing	Staffing	Establish critical support staff, including experienced risk management and claims avoidance staff.	<p>The Department recommends that large scale programs (or projects) consider the inclusion of risk management staff who are qualified and experienced in the specific areas of program oriented risk management. For example, the Department GEC team employed the use of a paralegal staffer who had significant legal experience in the areas of contracts. This person enabled the Department to handle in a more appropriate and efficient manner issues such as change orders, Freedom of Information requests, correspondence responses, interaction with FHWA on various risk oriented issues, and the like. This type of staffing capability afforded the Department the ability to exhibit greater strengths in these work focus areas and gain competitive footing with the Concessionaire and Design-Build team.</p>		<p>No Comprehensive Agreement or Technical Requirements change required</p> <p>Policy Issue</p>
2	Safety (Culture of Safety / Weekly Meetings)	Safety Management	Established a safety culture on the program/project that truly results in a zero tolerance for safety incidences.	<p>On the I-95 Project the Department made a conscious effort to increase its safety profile by endorsing and advocating the Concessionaire/Design-Build team's safety program, while also demanding that its own safety practices be realized. The combination of these two cultures resulted in a significant focus on the safe practice of every person touching the project for the sake of the workers and the traveling public. The Department recommends establishing a very high standard for safety excellence through the unification of safe work practices brought about by the endorsement of all safety plans and measures that prove to be beneficial.</p> <p>For example, on the I-95 project it was common practice to implement proven safety communication trees, to do root cause analysis on near miss events, to over communicate to the public and team members on safety hazards present, and to avoid all unnecessary risks. Another example that demonstrates the Best Practice safety methodology was a "stand down" technique employed by the Contractor. This "stand down" technique was used every time there was some type of safety incident including near misses. Every time there was a safety incident, the Contractor temporarily ceased work operations, gathered all crew members involved in the incident or related to the incident, performed a review of the incident including a root cause analysis, performed re-training of crews and staff if necessary to modify the process or safety protocol, and then followed up with an evaluation to make sure the new behavior/procedure truly fixed the problem that generated the safety issue in the first place. This type of review and correct methodology had a positive impact on improving the safety culture of the project.</p>		<p>No Comprehensive Agreement or Technical Requirements change required</p> <p>Policy Issue</p>

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3	Lessons Learned	Program Management	Establishing protocols for development of a Lessons Learned Program while construction is underway. Waiting until the end of the construction period risks loss of the issue, and loss of the source to develop the issues and a proposed resolution.	Start the process of gathering the Lessons Learned at the beginning of the project and maintain / update throughout the life of the project in order to more readily capture pertinent / contemporaneous lessons and recommendations. Add to the agenda of all risk meetings.		No Comprehensive Agreement or Technical Requirements change required Policy Issue
4	Nighttime/ Weekend Inspection/Effective Communication of Field Activities at Night and on the Weekends	Program Communication	The project benefitted from tactical application of inspection personnel for night work activities and weekend work activities. Specifically, a communication protocol was established whereby the inspector communicated on a bi-hourly basis to a preselected leadership team by email on all key field work activities.	This constant communication allowed the team leadership and other key individuals to have near real time intelligence about ongoing field activities. This intelligence allowed project leadership the luxury of knowing what was happening in the field without actually having to be there. In turn, project leadership was able to stay in a state of readiness to make decisions regarding traffic operations as it related to construction activities if necessary. Further the presence of the Department inspectors created an atmosphere of accountability for the Design-Builder. Recommend implementing similar actions on other Design-Build projects for the benefit of the Department.		No Comprehensive Agreement or Technical Requirements change required Policy Issue
5	Project Documentation	Photographic/ Video Documentation	Newer technologies will afford the Department better options in terms of project photographs and video. The advances in video technology have made it easier and less expensive to do.	The Department should consider Department policy changes that requires the Department to budget for the provision of using drone technology to periodically record the Project As-Built condition for the project records, and for the Department to self-perform this work.		No Comprehensive Agreement or Technical Requirements change required Policy Issue
6	Traffic Management Plan/Speed Limit Sign Efficacy	Operational Traffic Management	The efficacy of trailer mounted mobile speed limit signs used to regulate speed limits in construction zones was proven ineffective.	The I-95 project implemented several trailer mounted mobile speed limit signs in order to advise the traveling public to reduce speed through the construction corridor. The Department did not realize any measurable reduction in speed by the traveling public. Therefore, the implementation of these signs did not show any measurable value to the Department. The Department does not recommend the use of these signs as a standard best practice. There may be situations where these signs actually reduce speed on an interstate but those applications should be evaluated on a case-by-case basis.		No Comprehensive Agreement or Technical Requirements change required Policy Issue

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7	Allowances in the contract in order to mitigate contingencies	Contract Allowances	Allowances were used successfully on the I-95 Express Lanes, and should be considered a standard requirement in P3s, to a varying degree with project requirements.	<p>Continue the use of Allowances to afford the Department flexibility and leverage in which to manage changed conditions.</p> <p>An example pertains to the sound attenuation line associated with the sound wall design. The final noise analysis determines the final noise wall design but this is not known when the project price is determined. Thus, the Design-Builder places contingency costs for the sound wall, but there are many times when the wall design economizes the size of the walls such that the Design-Builder can realize a windfall. Therefore a sound wall allowance will allow both parties to avoid costly losses or gains in the cost of the sound walls because the allowance removes the contingency cost element.</p>	<p>TR Exhibit C 1.8.8: Law Enforcement; 1.8.6: Time Bank; 3.5.1 B: undercut; 3.5.2: Fuel;</p> <p>CA 8.05 (d): ROW; 8.16: (a) sign foundations, electric service panel feeds, undercut excavation; (b) landscaping; (c) fuel price adjustment; (d) acquisition of stream and wetland credits; sound walls.</p>	No Comprehensive Agreement or Technical Requirements change required.
8	Co-Location of Staff/Effective Cooperation of Design and Construction Staff	Program Staffing	The project benefitted from co-locating some design staff and most of the construction staff with the Design-Builder. The Department construction inspection team members were strategically located in two offices of the Design-Builder in order to be close to the field work and to be able to collaborate face-to-face with their Design-Build team counterparts.	The Department should continue co-locating design and certain construction staff for certain stages with the Design-Build team, and even the project leadership as well, in order to leverage the face-to-face human element that benefits a project. The Department will be able to maintain firewall and privacy issues in these environments with the correct planning. Being able to resolve design and construction issues around the table in person creates greater solutions in a timelier fashion. The Department will have to guard against doing the Design-Builder's work for them but that concern can be mitigated by implementing certain decision making protocols that dictate what the Department staff can say and do with regard to proposing or creating solutions. Further, visual observation of Design-Build team work habits provides insight into the commitment of the Design-Build team to the project success.		<p>No Comprehensive Agreement or Technical Requirements change required.</p> <p>Policy Issue</p>