



# Research Project Statement 24-040 FY 2024 Annual Program

<b>Title:</b>	Determine Effectiveness of Construction Management Plans
<b>The Problem:</b>	<p>The March 2016 Ready to Let Memo clarified the definition and requirements for a project that is considered ready to let. The memo highlighted the need to have 100 percent PS&amp;E, environmental approval and mitigation complete prior to the letting. In addition, project certifications, environmental permits, project agreements, railroad coordination, right-of-way acquisition, and utility agreements/relocations should also be clear by letting. The memo further clarified that if the required certifications and permits were not complete by letting, they must be cleared within 3 months after letting.</p> <p>If estimates for certification/permit clearance extend beyond the 3-month time frame, TxDOT districts must submit a construction management plan (CMP) describing the sequence of highway construction that can be completed in conjunction with the outstanding certification/permit items. CMPs are applicable to any certifications or permits needing to be cleared after letting that will not be incorporated into the project construction but will be completed by a third party. CMPs must demonstrate that the highway construction activities can proceed without delay due to these outstanding certification/permit items or due to conflicting work zones between the construction contractor and the third party. CMPs currently address conflicts due to the following certifications: right-of-way (ROW) acquisitions, ROW relocations, ROW encroachments, utility conflicts, and railroad agreements. CMPs currently do not include environmental permits. CMPs require administrative approval due to the increased risk if pending items remain during construction. Design Division and Right of Way Division staff members conduct the review before CMPs are submitted for administrative approval.</p> <p>With a goal of eliminating highway construction delays due to unclear certifications/permits at letting, it is time to review what has worked and identify recommendations to make CMPs more effective. Anecdotal experience suggests the following:</p> <ul style="list-style-type: none"> <li>• CMPs have resulted in fewer change orders for delays due to unclear certifications.</li> <li>• Projects with unclear Environmental permits after letting have resulted in change orders for construction delays.</li> <li>• Some projects with a CMPs have actual certification clearance dates that are extending beyond the estimated clearance dates resulting in change orders for delays.</li> <li>• Some projects with certifications scheduled to clear during the first 3 months of construction resulted in actual clearance dates extending beyond the first 3 months resulting in change orders for project delays.</li> </ul>
<b>Technical Objectives:</b>	<p>This research will conduct a thorough review of the effectiveness to date of TxDOT CMPs with a focus on what has worked, the identification any recommendations to make CMPs more efficient. To accomplish the research objectives, the research team shall:</p> <ul style="list-style-type: none"> <li>• Review a significant sample of CMPs and companion project information and records during design and construction.</li> <li>• Conduct a historical analysis of change orders and claims to extract before-and-after trends related to the use of CMPs and their effectiveness.</li> <li>• Conduct an analysis of estimated clearance dates from CMPs and the actual clearance dates during project execution looking for a correlation to change orders.</li> <li>• Conduct an analysis of projects let with unclear Environmental permits looking for a correlation to change orders.</li> <li>• Examine each area that CMPs currently address or should address and prepare a list of recommended elements.</li> </ul> <p>The expected technology readiness level (TRL) for this project is 8.</p>

<b>Anticipated Deliverables:</b>	<ol style="list-style-type: none"> <li>1. Technical memorandum for each task completed.</li> <li>2. Monthly progress reports.</li> <li>3. Value of Research (VoR) that includes both qualitative and economic benefits, to be included in the final research report. This is not a stand-alone deliverable.</li> <li>4. Product P1: Guidebook or similar material for use by districts, divisions, consultants, and contractors.</li> <li>5. Product P2: Training materials to teach project managers, designers, utility coordinators, consultants, contractors, and utility owners on how to prepare and use CMPs.</li> <li>6. Research report documenting the findings of the research, including recommendations to make CMPs stronger.</li> <li>7. Project Summary Report.</li> </ol>
<b>Proposal Requirements:</b>	<ol style="list-style-type: none"> <li>1. Proposal Deadline: 12:00 p.m. Central Time, <b>Monday, March 6, 2023.</b></li> <li>2. RFP#1 Q&amp;A Deadline: 12:00 p.m. Central Time, <b>Wednesday, February 1, 2023.</b></li> <li>3. Use the current “ProjAgre” and “PA Forms” templates located at the <a href="#">RTI Forms webpage</a>.</li> <li>4. Proposals will be considered non-responsive and will not be accepted for technical evaluation if they are not received by the deadline or do not meet the requirements stated in RTI's <a href="#">University Handbook</a>.</li> <li>5. Proposals should be submitted in PDF format; (1) PDF file per proposal. File name should include project name and university abbreviation.</li> <li>6. This project will be tracked during the life of the project using the Technology Readiness Level (<a href="#">TRL</a>) scale.</li> <li>7. The 2021 Texas Legislative Session requires that universities be in compliance with Senate Bill 475 by submitting a completed and signed TxDOT Security Questionnaire (TSQ) to <a href="mailto:RTIMAIN@txdot.gov">RTIMAIN@txdot.gov</a> in advance of a proposal submission. Universities found to not submit a completed and signed TSQ in advance of proposal submitting will be held in non-compliance and unable to participate in the Program.</li> </ol>