U.S. DOT Federal Railroad Administration

Office of Passenger and Freight Programs

Monitoring Procedure 21 – Management & Technical Capacity/Capability (MTCC)

# PURPOSE

This Monitoring Procedure (MP) describes FRA expectations for the Monitoring and Technical Assistance Contractor (MTAC) on how to evaluate the Grantee’s management, organization, and capability to effectively and efficiently plan, develop, manage, and complete a major federally-assisted capital rail project.

# KEY PRINCIPLES

A high level of management expertise and technical capacity and capability to conduct the work are fundamental building blocks for project success.

MTAC areas of focus on the Grantee:

1. The MTAC evaluation will cover the Grantee’s “extended team” -- executive leadership, project team, host railroads, consultants and contractors on the Grantee’s team, other partners, and third-party contributors.
   1. Organization
   2. Personnel qualifications and experience
   3. Team members’ understanding of their project roles and the project’s critical issues
2. Grantee’s overall approach to the work
   1. Policies and procedures
   2. Use of project control methods
      1. developing and updating cost estimates and schedules
      2. collecting costs and measuring against WBS; forecasting cost-to-complete
      3. identifying, managing, and mitigating risks; identifying variances
      4. developing recovery plans

# REQUIRED DOCUMENTS

In addition to the conduct of interviews, the MTAC will obtain and review the following documents from the Grantee:

1. Management & Technical Capacity and Capability Plan (MTCC)
   1. MTCC is the PMP Sub-Plan that is the subject of this Monitoring Procedure. The MTCC document or plan is prepared by the Grantee before each project phase begins, or at least, very early in each project phase. See MTCC Table of Contents in Appendix A.
   2. Grantee’s agreement(s) / draft agreements with FRA, contracts with consultants and contractors, railroads and other parties.
2. Project Management Plan (PMP) and other Sub-plans
   1. To provide context, these plans are necessary for the MTAC’s evaluation of the Grantee’s management and technical capacity and capability.

# scope of work

If the MTAC determines that the Grantee is inadequate or weak because of its organization, personnel qualifications, and experience, or approach or ability to perform the work, the MTAC should make recommendations for corrective action and a time frame for the action.

### 4.1 Description of Grantee's Approach to Project

Evaluate the Grantee’s approach to the following:

1. Management of professional staff and construction contractors to progress the work
2. Management of third-party contracts in compliance with Federal requirements
3. Compliance with FRA grant provision and reporting requirements
   * 1. Compliance with federal grant provisions, for example:
     2. Title VI of Civil Rights Act of 1964, Disadvantaged Business Enterprise (DBE)
     3. Americans With Disabilities Act
     4. Uniform Property Acquisition and Relocation Act of 1970
     5. Construction program assurances as described in SF424-d
     6. Requirement for matching funds and related intergovernmental/local agreement
4. Management and technical capacity and capability to perform specific aspects of the work, such as:
   1. Conducting planning analyses for corridor and train capacity, operations, ridership, infrastructure
   2. Designing and engineering the project
   3. Developing/delivering the project so that it meets goals, objectives, and outcomes
   4. Responding in a timely manner to RFIs from Congress, FRA, MTAC, etc.
   5. Developing/implementing a sound community relations program
   6. Accounting for real estate acquisitions and relocations; maintenance of a project property inventory
   7. Developing/implementing safety and security measures
   8. Cost estimating and scheduling

## Organization, Personnel Qualifications, and Experience

1. Evaluate the completeness of the organizational information provided and assess whether the organizational structures are conducive to effective and efficient project implementation.
2. Evaluate the roles, responsibilities, and interfaces among the Grantee’s team.
   1. Assess the effectiveness of the lines of authority and responsibility between the executive leadership and the project team, and between the project team and partners and third-parties. Include the:
      1. Executive leadership
      2. Project team of staff, consultants, and contractors
      3. Partners including host railroads, other transportation entities, as well as state, regional, and local jurisdictions
      4. Third party contributors to the project program
   2. Evaluate the staff qualifications and experience (see Appendix B of this MP for a sample) and assess whether the Grantee possesses the appropriately qualified staff and/or third-party consultants to:
      1. Obtain support and incorporate requirements from jurisdictions through which the project passes; from third parties including railroads, utility companies, and adjacent parcel owners
      2. Secure and administer the required local funding
      3. Conduct planning, feasibility studies, alternatives analyses, as well as environmental reviews
      4. Design, and manage the project construction using appropriate delivery method(s), e.g. design/bid/build, design/build, construction management/general contractor (CM/GC), etc.
      5. Maintain operations on the existing rail system at the same time as adding infrastructure and service
      6. Acquire and commission vehicles
3. Assess the agency’s history of performance, financial stability, adequacy of management systems, and conformance with the terms of previous awards, etc.
4. Review the Grantee’s agreements / draft agreements with FRA, as well as its contracts, and agreements with railroads, and other parties.
5. Evaluate the Labor Hour Distribution and Staffing Plan over the project life (see Appendix C and Appendix D for examples), and assess the adequacy of staffing and project budget for staffing.
6. Evaluate the adequacy of the Grantee’s physical resources to effectively advance the project, such as office space, equipment, and furnishings.

## Description of Management Processes and Procedures

Evaluate the Grantee’s processes and procedures related to:

1. Agency board decision-making authority
2. Agency and Project leadership and executive staff decision-making authority
3. Legal services
4. Procurement services
5. Financial planning and management such as developing budgets for capital projects and operations; securing matching funds; managing cash flow
6. Community outreach

## Resumes of Project Team Members

1. Evaluate the resumes of project team members.
2. Conduct personal interviews of Grantee leadership and key staff (See Appendix E for Sample Questionnaire)

# REFERENCES – See MP 01

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A graph showing sample FTE for different staff categories between 2007 and 2016

Figure . Sample Staffing Plan Over Project Life

## Organizational Experience- AGENCY Project History

Agency to describe all projects in the last 5 years with a construction cost of $100M or more - provide description, cost, schedule, project delivery methods, issues, personnel, etc.

1. Questions for Key Individuals within AGENCY and on Project Team – note that the questions are tailored to the position within the organization.

AGENCY EXECUTIVE DIRECTOR and other AGENCY LEADERSHIP

Similar to below.

VP / DIRECTOR OF CAPITAL PROJECTS

1. What is your educational background? Do you have a copy of your resume?
2. Briefly describe your work experience prior to coming to AGENCY, especially on rail projects. On projects of comparable dollar volume. On projects in similar municipalities.
3. Describe AGENCY experience on large dollar projects in the last 5 years. Budget performance. Schedule performance.
4. How long have you worked with AGENCY and what positions have you held?
5. Briefly describe your role and responsibilities as VP/Director of Capital Projects as they relate to the AGENCY’s Project.
6. Describe actions taken by you to complete other similar sized projects on budget and schedule. What actions would you take if you saw the project overrunning the project budget and schedule?
7. Describe your working relationship with other AGENCY Departments. What resources, if any are available for this project from the AGENCY’s Capital Projects Group?
8. What level of personal involvement do you anticipate in the following project activities?
9. Project management
10. Financial management
11. Design and engineering
12. Environmental monitoring and reporting
13. ROW acquisition
14. Grants administration
15. Project Controls
16. QA/QC
17. Safety and security
18. Change order negotiation
19. Dispute resolution
20. Final acceptance
21. Who do you report to and how do you interface with your boss? Did you work with your boss prior to this project?
22. Who reports to you, what are their responsibilities and how do you interface with each? Did you work with them prior to this project?
23. Who has the authority to make personnel changes on this project?
24. What additional AGENCY staff will be required beyond that described in PMP dated \_\_\_\_\_\_\_\_\_\_\_\_ (or the current staffing plan)? When do you plan to bring on the additional staff?
25. Please describe your interface with:
26. Project Director (AGENCY)
27. Chief Operating Officer (AGENCY)
28. Manager of Project QA QC and Safety (AGENCY)
29. Dep. Director Project Development (AGENCY)
30. Dep. Director Design (AGENCY)
31. Dep. Director Construction (AGENCY)
32. Manager of Rail Communications (AGENCY)
33. Dep. Director Project Finance (AGENCY)
34. Contracting Officer (AGENCY)
35. Project Manager
36. Other parties as required
37. What do you see as the main challenges to completing the project on schedule and within budget?
38. What do you see as the greatest engineering challenge and how would you address it?
39. What do you see as the greatest construction challenge and how would you address it?
40. What is your role in addressing those challenges?
41. Describe AGENCY management approach to limit scope increase changes to the project. How will scope issues (scope creep) generated by Third Parties or Operating Entity review/technical support involvement be managed?
42. If you had to start over again, what would you do differently?

PROJECT DIRECTOR

1. What is your educational background? Do you have a copy of your resume?
2. Briefly describe your work experience prior to coming to AGENCY, especially on rail projects. On projects of comparable dollar volume.
3. How long have you worked with AGENCY and what positions have you held?
4. Briefly describe your role and responsibilities as Project Director.
5. Describe your prior project experience that gave you the skills to perform the duties of project director on a project of this size.
6. Do you have a copy of the PMP? Do you have any concerns about assigned responsibilities?
7. What are your personal responsibilities and what AGENCY resources are available to assist you to fulfill your assigned responsibilities in following areas?
8. What key support staff are assigned to assist in specific disciplines.
   1. Design and engineering
   2. Environmental monitoring and reporting
   3. IGA interpretation/compliance
   4. Third Party coordination (treat these individually)
   5. ROW acquisition
   6. Grants administration
   7. PMP updating
   8. Project Controls (AGENCY staff)
   9. Contract administration
   10. Estimating
   11. CO/Claims
   12. Consultant oversight
   13. DBE monitoring
   14. Document control
   15. Reporting
9. Who do you report to and how do you interface with your boss? Did you work with your boss prior to this project?
10. Who reports to you, what are their responsibilities and how do you interface with each? Did you work with them prior to this project?
11. Describe your working relationship with the AGENCY Operations? Engineering? Procurement?
12. Do you envision AGENCY staff beyond that described in PMP (or current staffing plan)? Will this be adequate?
13. Please describe your interface with: (go up a level and down two levels on org chart)
14. What do you see as the main challenges to completing the project on schedule and within budget?
15. What is your role in addressing those challenges?
16. Describe role of Operating Agency or Other Third Party Agency in submittal review/approval process. How will scope issues (scope creep) generated by them, review/technical support involvement be managed?
17. What do you see as the greatest engineering challenge and how would you address it?
18. What is your role in addressing those challenges?
19. What do you see as the greatest construction challenge and how would you address it?
20. What is your role in addressing those challenges?
21. Were you involved in the development of the Quality Assurance Program Plan? If so what was your responsibility?
22. If you had to start over again, what would you do differently?

PROJECT QA/QC MANAGER

1. What is your educational background? Do you have a copy of your resume?
2. Briefly describe your work experience prior to coming to AGENCY, especially on rail projects. What is your experience on projects of comparable dollar volume?
3. How long have you worked with AGENCY, and what positions have you held?
4. Briefly describe your role and responsibilities as Project QA/QC & Safety Manager.
5. What AGENCY resources are available to assist you to fulfill your assigned responsibilities in following areas?
6. Preparation of AGENCY Quality Program Plan (QPP)
7. Implementing and maintaining QPP
8. Preparation of AGENCY Safety and Security Management Plan (SSMP)
9. Implementing and maintaining SSMP
10. Review of DESIGNER OR CONSTRUCTION CONTRACTOR OR DESIGN BUILD CONTRACTOR System Safety/Security Certification Management Plan
11. DESIGNER OR CONSTRUCTION CONTRACTOR OR DESIGN BUILD CONTRACTOR Environmental, Safety and Health Plan
12. DESIGNER OR CONSTRUCTION CONTRACTOR OR DESIGN BUILD CONTRACTOR procedures related to system and construction safety
13. Audits/reviews of AGENCY and consultants
14. Whom do you report to, and how do you interface with them? Did you work with this individual prior to this project?
15. Who reports to you, what are their responsibilities and how do you interface with each other? Did you work with them prior to this project?
16. When will the Project QA/QC Supervisor and Project Safety Supervisor be hired?
17. Do you envision the need for additional AGENCY staff beyond that described in PMP? Or do you believe staffing is adequately addressed?
18. Please describe your interface with: VP/Director of Capital Projects, Project Director, all Deputy Directors
19. What do you see as the main challenges to completing the project on schedule and within budget?
20. What do you see as the greatest engineering challenge and how would you address it?
21. What do you see as the greatest construction challenge and how would you address it?
22. What was your responsibility in the development of the Quality Program Plan (QPP)?
23. Were you involved in the development of the PMP? Does it reflect the appropriate QPP commitments?
24. Are you satisfied with the consultants and AGENCY Quality Plans? What improvements would you like to see?
25. Have you prepared a safety certification checklist and schedule? How is it updated?
26. Audits
27. Who is audited?
28. Construction safety?
29. Frequency?
30. Who assists?
31. Follow up on findings?
32. Does AGENCY management support this process?
33. Are you satisfied with the audit process?
34. How can the process be improved?
35. What do you see as the main challenges to obtaining safety certification?
36. How do you interface with the Operating Agency on this issue?
37. What is your recruitment plan for the “QA Specialist” and “Project Safety Supervisor”?
38. Describe the process you envision to interface with the Contractor’s Safety and Security Manager.
39. Has AGENCY provided training to AGENCY and consultant staff on the Project’s QPP and AGENCY’s Project Management Procedures in accordance with the QPP? If so, is there documentation of training sessions (attendee sign-in sheets, training agenda and materials, etc.)?
40. Has the QPP been distributed to all personnel assigned to the Project (AGENCY, THE OPERATING AGENCY, CONSULTANTS, etc.)? Is there documentation for which Project staff members have received the QPP?
41. Have the Project Management Procedures established for this Project been distributed to all assigned project personnel (AGENCY, THE OPERATING AGENCY, CONSULTANTS, etc.)? Is there documentation of which Project staff members have received the procedures?

PROJECT SAFETY AND SECURITY MANAGER

1. What is your educational background? Do you have a copy of your resume?
2. Briefly describe your work experience prior to coming to AGENCY, especially on rail projects. What is your experience on projects of comparable dollar volume?
3. How long have you worked with AGENCY, and what positions have you held?
4. Briefly describe your role and responsibilities as Project Safety & Security Manager.
5. What AGENCY resources are available to assist you to fulfill your assigned responsibilities in following areas?
6. Preparing AGENCY Safety and Security Program Plan (SSPP)
7. Implementing and maintaining SSPPP
8. Preparing AGENCY Safety and Security Management Plan (SSMP)
9. Implementing and maintaining SSMP
10. Reviewing DESIGNER OR CONSTRUCTION CONTRACTOR OR DESIGN BUILD CONTRACTOR System Safety/Security Certification Management Plan
11. DESIGNER OR CONSTRUCTION CONTRACTOR OR DESIGN BUILD CONTRACTOR Environmental, Safety and Health Plan
12. DESIGNER OR CONSTRUCTION CONTRACTOR OR DESIGN BUILD CONTRACTOR procedures related to system and construction safety
13. Audits/ reviews of AGENCY and consultants
14. Whom do you report to and how do you interface with them? Did you work with this individual prior to this project?
15. Who reports to you, what are their responsibilities and how do you interface with each other? Did you work with them prior to this project?
16. When will Project Safety & Security Supervisor be hired?
17. Do you envision the need for additional AGENCY staff beyond that described in PMP? Or do you believe staffing is adequately addressed?
18. Please describe your interface with: VP/Director of Capital Projects, Project Director, all Deputy Directors
19. What do you see as the main challenges to completing the project safely and securely?
20. What do you see as the greatest engineering challenge and how would you address it?
21. What do you see as the greatest construction challenge and how would you address it?
22. What was your responsibility in the development of the SSPP and SSMP?
23. Were you involved in the development of the PMP? Does it reflect the appropriate SSPP and SSMP commitments?
24. Are you satisfied with the consultants and AGENCY SSPP and SSMP? What improvements would you like to see?
25. Have you prepared a safety certification checklist and schedule? How is it updated?
26. Audits
27. Who is audited?
28. Construction safety?
29. Frequency?
30. Who assists?
31. Follow up on findings?
32. Does AGENCY management support this process?
33. Are you satisfied with the audit process?
34. How can the process be improved?
35. What do you see as the main challenges to obtaining safety certification?
36. How do you interface with the Operating Agency on this issue?
37. What is your recruitment plan for the “Project Safety Supervisor”?
38. Describe the process you envision to interface with the Contractor’s Safety and Security Manager.
39. Has AGENCY provided training to AGENCY and consultant staff on the Project’s SSPP and SSMP and AGENCY’s Project Management Procedures in accordance with the SSPP and SSMP? If so, is there documentation of training sessions (attendee sign-in sheets, training agenda and materials, etc.)?
40. Have the SSPP and SSMP been distributed to all personnel assigned to the Project (AGENCY, THE OPERATING AGENCY, CONSULTANTS, etc.)? Is there documentation of which Project staff members have received the SSPP and SSMP?

DEPUTY DIRECTOR OF PROJECT FINANCE

1. What is your educational background? Do you have a copy of your resume?
2. Briefly describe your work experience prior to coming to AGENCY, especially on rail projects. In addition, what is your experience on projects of comparable dollar volume?
3. How long have you worked with AGENCY, and what positions have you held?
4. Briefly describe your role and responsibilities as Deputy Director Project Finance. Are you assigned to the Project full time?
5. Do you have a copy of PMP? Do you have any concerns about assigned responsibilities?
6. What are your personal job responsibilities and what AGENCY resources are available to assist you to fulfill your assigned responsibilities in following areas?
7. Development of detailed financial plan
8. Development of financial documentation in support of New Starts submittal
9. Development of financial documentation in support of FFGA
10. Development of project funding agreements
11. Maintaining cash flow requirements based on contract need
12. Management of capital funding sources to ensure funding matches construction draw down schedule
13. Coordination with AGENCY Financial Management Division on finance and accounting support
14. Coordination with funding partners to identify funding and support debt issuances
15. Whom do you report to, and how do you interface with them (AGENCY VP of Finance)? Did you work with this individual prior to this project?
16. Explain your indirect reporting relationship with the Project Director. Do you foresee any problems arising due to this relationship structure? If so, please explain.
17. Who reports to you, what are their responsibilities and how do you interface with each other? Did you work with them prior to this project?
18. Do you envision the need for additional AGENCY staff beyond that described in PMP, or is it adequate?
19. Please describe your interface with: VP/Director of Capital Projects, Project Director, all Deputy Directors, etc.
20. What do you see as the main challenges to completing the project on schedule and within budget?
21. Describe the process of obtaining funding for THE OPERATING AGENCY or local municipality imposed preferential (out of scope) changes.
22. Describe the process of obtaining funding required beyond the budget.
23. Describe how the financial reporting/aspects of the project can be improved.

MANAGER OF PUBLIC AFFAIRS & COMMUNICATIONS

1. What is your educational background? Do you have a copy of your resume?
2. Briefly describe your work experience prior to coming to AGENCY, especially on rail projects, as well as, on projects of comparable dollar volume.
3. How long have you worked with AGENCY and what positions have you held?
4. Briefly describe your role and responsibilities as Manager of Rail Communications.
5. Do you have a copy of PMP dated \_\_\_? Do you have any concerns about assigned responsibilities?
6. What are your personal responsibilities and what AGENCY resources are available to assist you to fulfill your assigned responsibilities in following areas?
7. Press Releases
8. News Conferences
9. Ground breaking events
10. Town meetings
11. Management of Arts In Transit Program
12. Communications with public officials
13. Communication of traffic impacts (planned and unplanned)
14. Media relationships
15. Online communications
16. Whom do you report to and how do you interface with them? Did you work with your boss prior to this project?
17. Who provides you with the approval and/or direction to share information with the public?
18. How do you ensure that a consistent message is sent to community/media from the Project team?
19. Who reports to you, what are their responsibilities, and how do you interface with each other? Did you work with them prior to this project?
20. Do you envision the need for additional AGENCY staff beyond that described in PMP? Or is this adequate?
21. Please describe your interface with: VP/Director of Capital Projects, Project Director , all Dep. Directors
22. What do you see as the greatest community impact and how will you address it?
23. Do you have a copy of the Communications and Outreach Plan? Have you reviewed it?
    1. Has this Plan been shared with the Project team (AGENCY, CONSULTANTS, etc.)? How often will this Plan be updated?
    2. Who is the individual responsible for the oversight and execution of this Plan?
24. How often is the Project’s website updated? Who is responsible for ensuring the content on the website is accurate and up-to-date?
25. What is the protocol for responding to a media inquiry concerning the Project?
26. Are there strategies/protocols for emergency situations (i.e., construction accident requiring closure of a major roadway)? If so, where can they be found, and is the Project Team (AGENCY, CONSULTANTS, etc.) aware of these protocols?

DEPUTY DIRECTOR OF PROJECT DEVELOPMENT

1. What is your educational background? Do you have a copy of your resume?
2. Briefly describe your work experience prior to coming to AGENCY, especially on rail projects. On projects of comparable dollar volume. On projects in same municipalities.
3. How long have you worked with AGENCY and what positions have you held?
4. Briefly describe your role and responsibilities as Deputy Director of Project Development. How much time do you expect to devote to this project?
5. Do you have a copy of the PMP? Do you have any concerns about your assigned responsibilities?
6. Describe your prior project experience that gave you the skills to perform the duties of Deputy Director Project Development on a project of this size.
7. At the current stage of the project, please describe the different responsibilities of Project Development and Project Design?
8. What are your personal responsibilities and what AGENCY resources are available to assist you to fulfill your assigned responsibilities in following areas?
9. Development of planning analyses, PE and FD drawings and specifications, cost estimates, schedules, and risk assessments
10. Management of environmental mitigation compliance during design and construction
11. Management of coordination with local, state and federal agencies.
12. Management of ROW acquisitions and relocations; identify personnel to assist you.
13. Management of “Before and After Study.”
14. Development and execution of project agreements. Identify major agreements that you would be responsible for developing and executing.
15. Coordination with state transportation plans, state rail plans, multi-state rail network plans. What are your responsibilities in this area?
16. Coordination with other active Federal, State, and county projects.
17. Coordination of permit applications including environmental.
18. Who do you report to and how do you interface with your boss? Did you work with your boss prior to this project?
19. Who reports to you, what are their responsibilities, and how do you interface with each? Did you work with them prior to this project?
20. Describe your working relationship with the AGENCY Engineering Dept.
21. Do you envision AGENCY staff beyond that described in PMP? Is this adequate?
22. Please describe your interface with Project Director, all Dep. Directors, the Operating Agency, other third parties.
23. What do you see as the main challenges to completing the project on schedule and within budget?
24. What is your role in addressing those challenges?
25. Describe role of THE OPERATING AGENCY in submittal review/approval process. How will scope issues (scope creep) generated by THE OPERATING AGENCY review/technical support involvement be managed?
26. What do you see as the greatest engineering challenge and how would you address it?
27. What do you see as the greatest construction challenge and how would you address it?
28. Were you involved in the development of the Quality Assurance Program Plan? If so what was your responsibility?
29. If you had to start over again, what would you do differently?

For all of the following positions, ask similarly tailored questions:

* Deputy Director Design/Engineering
* Deputy Director of Construction
* Contracting Officer
* Manager of Real Estate