

AECOM Technical Services, Inc. (AECOM)
Quality Assurance/Quality Control (QA/QC) Plan
Policies and Procedures for the
Wisconsin Department of Transportation
Division of Transportation System Development
Bureau of Structures
Madison, Wisconsin 53707-7916
August 2010

Effective September 1, 2010, the Wisconsin Department of Transportation (WisDOT), Bureau of Structures (BOS) mandates all bridge consultants demonstrate that structure design and structure plans are designed adequately and accurately, to appropriate requirements, standards, and policies, and that structure plans are complete, constructible, and are in accordance with approved details. This demonstration applies to all aspects of transportation and structure work and specifically applies to hydrology and hydraulic analyses, structure sizing, preliminary structure plans, final structure design and plans, load ratings, special provisions, and associated studies and reports submitted to BOS. All consultants working for BOS must certify they have an adequate Quality Assurance/Quality Control (QA/QC) policy and appropriate procedures in place to ensure a quality product. BOS requires all consultant design firms that provide structure design services for WisDOT have their own customized QA/QC plan and procedures. The QA/QC plan must demonstrate the following:

- Procedures to verify design activities and plan details are correct and portrayed properly prior to the final submittal to BOS.
- Verification that the appropriate design calculations and analyses have been performed, that the calculations are accurate, and that the capacity of the load-carrying members is adequate with regard to the expected service loads of the structure.
- Verification that the structure plan is complete, accurate, and constructible.
- Verification that independent checks, reviews, and ratings were performed.

AECOM has a corporate Quality Management System (QMS) which addresses the policies and procedures for quality assurance and quality control that are required by the BOS memorandum dated June 1, 2010. On February 1, 2010, all Wisconsin offices of AECOM, including the Bridge Group, implemented the policies and procedures of the QMS. Both internal and external (third-party) audits of our quality policies and procedures are required as an integral part of the

QMS. All Wisconsin offices received satisfactory reports for both internal and external audits performed during the summer of 2010. Additional office audits are scheduled on an annual basis.

The AECOM QMS was developed to be in compliance with the ISO 9001:2008 standard for Quality Management Systems. The manual, and related procedures, is web based, which assures that the current version, and only the current version, of each document is available for use by staff. A snapshot view of our intranet based QMS homepage is attached for your reference and review. The QMS Project Delivery System (PDS) is broken down into four distinct phases of project development including

- Proposal Phase
- Initiation & Planning Phase
- Execution Phase
- Closure Phase

Each phase is further broken down into well defined tasks to cover all aspects of the project development process.

AECOM considers its ISO-certified QMS and Implementing Procedures to be proprietary information and, as such, direct release outside the company is strongly discouraged for competitive and document control reasons as general policy. In lieu of direct release, AECOM would like to make arrangements for BOS representatives to review the documents on-line so that you may verify that the AECOM QMS is responsive to your requirements.

The QMS PDS describes quality planning activities as well as quality control and quality assurance requirements. The applicable quality procedures are used by project managers, task managers, design engineers and CADD staff (called Originators), checkers, and quality assurance staff.

The AECOM QMS is organized using a hierarchical document structure, with the first tier being the Quality Manual, which provides an overview of the corporate commitment, quality philosophy, high level quality objectives, organizational structure, and reporting requirements. Our Quality Manual meets the BOS requirement that AECOM has QA/QC policies and procedures in place to ensure quality.

The second tier includes the Implementing Procedures, of which the Engineering and Design Control Implementing Procedures address the specific requirements of the BOS. Procedures are the written processes and procedures that each staff member follows to comply with the QMS. These procedures describe the way that AECOM staff complies with the multiple requirements of the ISO standard.

The third tier is comprised of Work Instructions and technical guidance required to share best engineering practices, to comply with local or regional standards, or to address particular requirements of individual clients that are not consistent with or included in the Implementing Procedures. Based on a review of the referenced memo, AECOM believes that our current implementing procedures address all BOS requirements. Details are provided below.

The procedures required by the BOS as shown on Page 1 of this plan are covered in Section 4 – Technical Procedures of AECOM’s QMS as follows:

- 4-1 QMS Flexibility
- 4-2 Initiating Technical Work
- 4-2/1 Technical Task Protocol
- 4-3 Preparation and Review of Calculations
- 4-4 Preparation and Review of Drawings
- 4-5 Preparation and Review of Specifications
- 4-6 Preparation and Review of Studies and Reports
- 4-7 Review and Release of Deliverables
- 4-8 Software Validation

Procedure 4-1, QMS Flexibility, provides specific information needed to meet the AECOM quality goals in the design development process. This procedure defines the roles and requirements of AECOM and the specific task responsibilities for the project staff to meet the QMS policies. Any deviation from the technical requirements of the QMS must be submitted to the AECOM Director of Quality for written approval.

Procedures 4-2 and 4-2/1, Initiating Technical Work and Technical Task Protocol (TTP) respectively, describe requirements for planning all technical work activities, including the assignment of qualified individuals to the tasks, identifying the required design input documents (including design criteria, references, standards, codes, and design data), describing acceptable methods of solution, and specifying appropriate software. The Technical Director, Department Manager or Task Managers are responsible for the development and implementation of the TTPs. Standard TTPs may be used and are especially applicable for clients such as the BOS where design methodologies are consistent from project to project, such as for the design of pier bents, superstructure elements, and other repetitive design procedures. Standard formats (provided as part of the procedure) are used for all TTPs. These procedures are the foundation of the QMS process and provide the initial step to a quality product.

Procedures 4-3, 4-4, and 4-5, Preparation and Review of Calculations, Preparation and Review of Drawings, and Preparation and Review of Specifications respectively, address the majority of the BOS requirements. As the names imply, the procedures address both the preparation of the design products and their review or checking. Specifically, the procedures address the first bullet point of the BOS requirements by requiring independent reviews of calculations, prior to the calculations being used to develop drawings, and the independent reviews of the plans and specifications before submission to the client. The procedures describe Discipline Reviews

addressing and verifying the completeness, constructability, and accuracy of the structure design and plans with regard to the intended function.

The above procedures address the second bullet point of the BOS requirements by including a specific check-off on the Drawing Review Checklist for the Reviewer to verify that the drawings are consistent with the design calculations. By examining the Calculation Review Checklist, those responsible for the preparation and review of plans will know that the calculations have been reviewed for completeness, accuracy, and appropriateness, and if there are any exceptions noted.

The third bullet point is addressed by Procedure 4-4, Preparation and Review of Drawings, and documented on the Drawing Review Checklist. This checklist verifies that plans were prepared to meet the requirements of BOS, including incorporation of all details and standard procedures.

Procedure 4-6, Preparation and Review of Studies and Reports, establishes the requirements for the preparation, review, approval, and control of technical studies and reports. This procedure is used to provide the appropriate review for the Structure Survey Report, Hydrology Report, Hydraulic Report and Structure Sizing, and other related documents.

All procedures include a checklist form for documenting the identities of the Originator, Reviewer, Technical Discipline Leader, Project Manager, and other discipline reviewers participating in reviews as a method of certifying their role in the design process. Ultimately the Technical Discipline Lead must verify that the proper review has been conducted by the appropriate personnel and in accordance with the QMS.

In addition, more in-depth Technical Peer Reviews would be implemented on higher technical risk assignments. The need for additional in-depth reviews would be identified in the initial scope development and contract negotiation and with approval from the client and BOS.

Procedure 4-7, Review and Release of Deliverables, provides for independent oversight of the quality review process by a Project Quality Representative (PQR) who independently verifies that the required quality procedures, including reviews and resolution of comments, have occurred. Both the PQR or Technical Director and the Project Manager sign and date the Deliverable Release Record confirming that the quality procedures have been implemented prior to submission of deliverables to the client. These procedures address the fourth bullet listed in the BOS Memorandum, and in addition with the requirements of the following paragraph address the successful implementation of the AECOM quality control and quality assurance.

The checklists associated with the procedures described above are attached for reference, including:

- 4-3_2 Calculation Review Checklist
- 4-4_1 Drawing Review Checklist
- 4-5_1 Specification Review Checklist
- 4-6_1 Study Report Checklist

4-7_1 Deliverable Release Record

To meet your specific requirements, a WisDOT QA/QC Verification Summary Sheet will be prepared for submittal with the final structure design, plans, and specifications, demonstrating the appropriate AECOM QMS and WisDOT BOS QA/QC Plan procedures were followed. This summary sheet includes the signoff or initializing by each individual that performed the tasks documented in the QMS and WisDOT BOS QA/QC Plan process. The WisDOT QA/QC Verification Summary Sheet is attached for reference.

This Quality Assurance/Quality Control (QA/QC) Plan is respectfully submitted by

AECOM Technical Services, Inc. (AECOM)

James R. Lucht PE (electronic signature 8/27/10)

James R. Lucht, PE
Technical Director
Midwest Transportation – North District

AECOM Technical Services, Inc. (AECOM)
Exhibits to the
Quality Assurance/Quality Control (QA/QC) Plan
Policies and Procedures for the
Wisconsin Department of Transportation
Division of Transportation System Development
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**SNAPSHOT VIEW OF
AECOM TECHNICAL SERVICES, INC. (AECOM)
INTERNET BASED
QUALITY MANAGEMENT SYSTEM (QMS)
HOMEPAGE**

Welcome to the AECOM USIG QMS site

AECOM USIG maintains and implements an efficient and effective Quality Management System (QMS) bolstered by the unwavering commitment of management. The policies and procedures provided within the QMS provide a consistent platform for operations and a framework to manage change, adversity and continual improvement.

This site is the home and controlled location for the USIG QMS Project Delivery System (PDS) and other system tools for your day to day activities.

AECOM USIG Quality Policy

AECOM USIG is committed to:

- performing quality work
- providing high-value services to our clients
- developing our staff, and
- always getting better

Key Quality Documents and Links

- [QMS Tiered Documentation Structure](#)
- [QMS Tier I - Quality Manual](#)
- [QMS Tier II - Implementing Procedures and Attachments](#)
- [Legacy AECOM USIG ISO 9001 Certificate](#)

QMS Project Delivery System (PDS)

GETTING STARTED

1. Select your current stage of work from the PDS Flow Chart below
2. Clicking on the phase headings provides general information about work in that phase
3. If you know which activity you want information on (e.g. Prepare Project Approach under Execution Phase), click directly on that link to go to the appropriate information and procedures

NOTE

This Project Delivery System (PDS) provides the basic requirements of the AECOM USIG Quality Management System and is structured to ensure we consistently manage and achieve the desired level of quality for all AECOM USIG services and deliverables. Project Managers (PMs) are expected to apply their knowledge and experience to implement and build upon this system in order for their specific project to best meet the need of the client and our quality goals. See AECOM USIG's Quality Policy and Objectives and Quality Manual for additional information.

Proposal Phase	Initiation & Planning Phase	Execution Phase	Closure Phase
Opportunity (RFQ, RFP, etc.)	Initiate Project Work Plan, Do Preliminary Risk Review	Prepare Project Approach	Confirm Contractual Obligations Completed
Opportunity Risk Review	Determine QC Level Required According to Risk Level	Project Approach Review	Financial
Prepare Bid/Proposal	Appoint Project Team	Project Implementation and Monitoring	Subconsultants
Subconsultant Assessment	Project Team Kickoff Meeting	Checking/Discipline Reviews	Human Resources
Bid/Proposal Review	Finalize Subconsultant Agreements	Verification/Quality Assurance	Client
Submit Proposal	Project Kickoff Meeting with Client	Deliverable Approved for Issue and Issued to Client	Lesson Learned/Post Mortem
Final Agreement/Contract Review	Detailed Risk Review		Administration
Debrief of Bid/Proposal Phase	Execute and Distribute Project Work Plan		

QMS Feedback And Tools

- [USIG Audit Program Schedule](#)
- [USIG QMS Training Modules](#)
- [QMS objectives, results, and metrics](#)
- [Staff Comments and Suggestions](#)
- [Central Technical Library \(Water\)](#)
- [USIG QMS Management Review Presentation \(01/26/10\)](#)
- [Quality Assurance Client Surveys](#)
- [Quality Management on NYC DEP BEDC Projects](#)
- [QMS Overview for Proposal/Marketing Purposes](#)

AECOM USIG Quality Contacts

Corporate	Contact	Business Phone	Email
Director of Quality, North America	Enrico T. Bruschi, PE, CQM Vice President	412.316.3507	enrico.bruschi@aecom.com
Region	Contact	Business Phone	Email
Northeast	Tom Spearin, Regional Quality Manager Dennis Miller, Regional Quality Support	781.224.6237 212.973.3063	thomas.spearin@aecom.com dennis.miller@aecom.com
Mid-Atlantic	Steve Biuso, Regional Quality Manager Jim Klug, Regional Quality Support	732.564.3903 312.373.6608	steve.biuso@aecom.com jim.klug@aecom.com
Midwest	Jim Klug, Regional Quality Manager Dean Schmidtke, Regional Quality Support	312.373.6608 312.373.6907	jim.klug@aecom.com dean.schmidtke@aecom.com
Southeast	Bijoy Ghosh, Regional Quality Manager Buddy Hudson, Regional Quality Support	404.965.9686 954.745.7258	bijoy.ghosh@aecom.com buddy.hudson@aecom.com
SW/Mountain	Shelby Eckols, Regional Quality Manager Buddy Hudson, Regional Quality Support	512.457.7715 954.745.7258	shelby.eckols@aecom.com buddy.hudson@aecom.com
West	Camelia Davis, Regional Quality Manager Glen Hille, Regional Quality Support	213.330.7212 805.644.9704	camelia.davis@aecom.com glen.hille@aecom.com

AECOM TECHNICAL SERVICES, INC. (AECOM)
QUALITY MANAGEMENT SYSTEM (QMS)

REVIEW CHECKLISTS

- **CALCULATION REVIEW CHECKLIST**
- **DRAWING REVIEW CHECKLIST**
- **SPECIFICATION REVIEW CHECKLIST**
- **STUDY/REPORT REVIEW CHECKLIST**

CALCULATION REVIEW CHECKLIST			
PROJECT	JOB NO.	CALCULATION NO. _____ REVISION NO. _____	
CLIENT	DEPARTMENT/DISCIPLINE	TTP NO. (if used) _____	
SUBJECT/ TITLE			
TECHNICAL DISCIPLINE LEAD		ORIGINATOR	
REVIEWER		INDEPENDENT CALC. ENG.(if used)	
TECH PEER REVIEWER (if used)			
Department/Discipline Review			
1. Is the calculation in accordance with a standard approach to preparing the design? 2. Have assumptions requiring follow-up confirmation been addressed and closed? 3. Is the mathematics correct? 4. Are results and conclusions consistent and reasonable considering the inputs and approach? 5. Have the originator and the reviewer signed and dated the calculation? 6. Have all previous internal review comments been addressed and closed out? 7. Have all previous client review comments been addressed and closed out?		YES ☐ ☐ ☐ ☐ ☐ ☐ ☐	NO ☐ ☐ ☐ ☐ ☐ ☐
Explain "No" responses: Department/Discipline Reviewer _____ Signature / Date			
☐ Independent Calculations (in lieu of Discipline Review) A separate independent set of calculations has been prepared validating the original calculations.			
Independent Calculation Reviewer _____ Signature / Date			
Technical Peer Review (if required)			
All comments, issues, and concerns of this special Technical Peer Review have been addressed and closed out in accordance with the requirements of Procedure 4-3.			
Technical Peer Reviewer _____ Signature / Date			
The Originator, the Discipline Reviewer (or Independent Calculation Reviewer), and the Technical Peer Reviewer (if required) are the appropriate departmental staff for development of this calculation.			
Technical Discipline Lead _____ Signature / Date			

DRAWING REVIEW CHECKLIST																																																																																			
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REVIEW LEVEL ☐ FINAL SUBMISSION ☐ PRE-FINAL SUBMISSION ☐ OTHER: _____ % SUBMISSION																																																																																			
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DISCIPLINE REVIEWER		TECHNICAL PEER REVIEWER (IF REQUIRED)																																																																																	
Discipline Review																																																																																			
1. Is the set of drawings consistent with the design intent and the calculation output? 2. Do the drawings meet the percent (%) completion for this submission level? 3. Is there a consistent presentation within the discipline? 4. Have drawings been initialed/signed? 5. Are the materials properly coordinated with the specifications at this submission level? 6. Are the items constructible as shown? 7. Have the appropriate CAD Standards been followed? 8. Have duplications and redundancy of information, data and dimensions been eliminated? 9. Are drawing titles and numbers consistent and agree with cover sheet index of drawings? 10. Have sheet cross references been verified? 11. Have all previous internal review comments been addressed and closed out? 12. Have all previous client review comments been addressed and closed out? <table style="border-collapse: collapse;"> <tr> <th style="padding: 2px 5px;">YES</th> <th style="padding: 2px 5px;">NO</th> <th style="padding: 2px 5px;">N/A</th> </tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> </table>						YES	NO	N/A	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																																										
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<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Initial</th> <th style="width: 20%; text-align: center;">Date</th> <th style="width: 10%; text-align: center;">OK</th> <th style="width: 20%; text-align: center;">Comments on Drawing or Attached</th> <th style="width: 20%; text-align: center;">Comments Resolved</th> </tr> </thead> <tbody> <tr><td>☐ Mgr. Civil Dept.</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr. Structural Dept</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr. Electrical Dept</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr. Mechanical Dept</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr. Environmental Dept</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr. Geotech Dept</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr. Architecture Dept</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr.</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr.</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr.</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐ Mgr.</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> <tr><td>☐</td><td>_____</td><td>_____</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td><td style="text-align: center;">☐</td></tr> </tbody> </table>							Initial	Date	OK	Comments on Drawing or Attached	Comments Resolved	☐ Mgr. Civil Dept.	_____	_____	☐	☐	☐	☐ Mgr. Structural Dept	_____	_____	☐	☐	☐	☐ Mgr. Electrical Dept	_____	_____	☐	☐	☐	☐ Mgr. Mechanical Dept	_____	_____	☐	☐	☐	☐ Mgr. Environmental Dept	_____	_____	☐	☐	☐	☐ Mgr. Geotech Dept	_____	_____	☐	☐	☐	☐ Mgr. Architecture Dept	_____	_____	☐	☐	☐	☐ Mgr.	_____	_____	☐	☐	☐	☐ Mgr.	_____	_____	☐	☐	☐	☐ Mgr.	_____	_____	☐	☐	☐	☐ Mgr.	_____	_____	☐	☐	☐	☐	_____	_____	☐	☐	☐
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Technical Peer Review (if required in PWP or as determined subsequently to be necessary)																																																																																			
All comments, issues, and concerns of this special Technical Peer Review have been addressed and closed out in accordance with the requirements of Implementing Procedure 4-4. Technical Peer Reviewer _____ Signature / Date																																																																																			
A proper review has been conducted by the appropriate personnel in accordance with this procedure and all review comments have been addressed and closed out. Technical Discipline Lead _____ Signature / Date																																																																																			

Specification Review Checklist									
PROJECT					JOB NO.				
REVIEW LEVEL ☐ FINAL SUBMISSION ☐ PRE-FINAL SUBMISSION ☐ OTHER: _____ % SUBMISSION									
CLIENT			DEPARTMENT/DISCIPLINE			SPECIFICATION SECTIONS			
TECHNICAL DISCIPLINE LEAD						ORIGINATOR			
DISCIPLINE REVIEWER						SPECIFICATION COORDINATOR			
Discipline Review									
General:					YES		NO		N/A
1. Has the correct specification format been used?					☐		☐		☐
2. Is the specification section coordinated with applicable General and Special Provisions?					☐		☐		☐
3. Have duplications or variances between drawings and specifications been eliminated?					☐		☐		☐
4. Is nomenclature and item numbering used in specifications exactly as used on drawings and other contract documents?					☐		☐		☐
5. Are requirements for shop drawings specified, both as to content and timely submission?					☐		☐		☐
6. Have cited products and equipment been checked for updates and availability?					☐		☐		☐
7. Have all previous internal review comments been addressed and closed out?					☐		☐		☐
8. Have all of the Client's review comments to previous drafts been closed out?					☐		☐		☐
Answer the following additional questions for Non-standard Specifications*:									
9. Are material/equipment identification requirements properly identified?					☐		☐		☐
10. Are appropriate codes, standards, processes, etc. referenced and dated?					☐		☐		☐
11. Are measurement units and basis of payment properly specified?					☐		☐		☐
12. Are shipping, cleaning, storage and handling requirements properly specified?					☐		☐		☐
13. Are provisions made for the qualification and approval of special construction processes?					☐		☐		☐
14. Are the acceptance criteria tests (tolerances, etc.) specified and are they adequate, realistic, and in line with industry practice?					☐		☐		☐
15. Is test and inspection documentation properly specified?					☐		☐		☐
16. Have Client's sole source requirements been followed?					☐		☐		☐
17. Are manufacturer's installation requirements referenced?					☐		☐		☒
*Non-Standard Specifications are defined as those specifications which have not been created and maintained as a company or client standard.									
Explain any "No" responses: Discipline Reviewer _____ Signature / Date Technical Discipline Lead _____ Signature / Date									
Specification Coordinator Review (To be completed on Lead Discipline Checklist only)									
					YES		NO		N/A
Is the specification format, type, nomenclature, item numbering, and level of detail consistent for all specification sections?					☐		☐		☐
Have required Discipline Reviews been completed and documented for all specification sections?					☐		☐		☐
Have all specification sections been reviewed for interdisciplinary conflicts?					☐		☐		☐
Have methods and measurements of payment been checked for consistency and conflicts?					☐		☐		☐
Explain any "No" responses: Specifications Coordinator _____ Signature / Date									

STUDY/REPORT REVIEW CHECKLIST			
PROJECT		JOB NO.	
REVIEW LEVEL ☐ FINAL SUBMISSION ☐ PRE-FINAL SUBMISSION ☐ OTHER: ____% SUBMISSION			
CLIENT	DEPARTMENT/DISCIPLINE	STUDY/REPORT TITLE/CHAPTER	
TECHNICAL DISCIPLINE LEAD		ORIGINATOR	
DISCIPLINE REVIEWER		PROJECT MANAGER	
Discipline Quality Control Review			
Project Manager - Identify Department / Discipline to Review ☐ Civil ☐ Structural ☐ Electrical Dept. ☐ Architectural ☐ Geotechnical ☐ Mechanical ☐ Environmental ☐ Planning ☐ Other Dept./Disc. ☐ Traffic ☐ Drainage ☐			
		YES	NO
		N/A	
1. Does the discipline portion of the study / report meet or support the stated objectives of the project?		☐	☐
2. Are assumptions, criteria, or bases for evaluation of alternatives clearly described?		☐	☐
3. Is supporting material identified and appropriate?		☐	☐
4. Have backup calculations been checked in accordance with Procedure 4-3?		☐	☐
5. Have backup drawings and graphics been checked in accordance with Procedure 4-4?		☐	☐
6. Are results logical and reasonable and are they stated accurately?		☐	☐
Explain any "No" responses: Discipline Reviewer _____ Technical Discipline Lead _____ Signature / Date _____ Signature / Date _____			
Project Manager Review (To be completed on Lead Discipline Checklist only)			
		YES	NO
		N/A	
1. Is the study or report format consistent with the Client's requirements?		☐	☐
2. Are all conclusions and recommendations fully supported and explained in the text?		☐	☐
3. Has the report been completed in accordance with the scope of work?		☐	☐
4. Is the Index or Table of Contents complete and accurate?		☐	☐
5. Is tense consistent and has the text been spell/grammar checked?		☐	☐
6. Has the report been properly titled and dated?		☐	☐
7. Have all contractually specified alternatives been addressed?		☐	☐
8. Have all previous internal review comments been addressed and closed out?		☐	☐
9. Have all previous Client review comments been addressed and closed out?		☐	☐
Explain any "No" responses: Project Manager _____ Signature / Date _____			
Technical Peer Review (if required in PWP or as determined subsequently to be necessary)			
If required			
Technical Peer Reviewer (sign on Lead Discipline Checklist only) _____		Signature / Date _____	

AECOM TECHNICAL SERVICES, INC. (AECOM)
QUALITY MANAGEMENT SYSTEM (QMS)

DELIVERABLE RELEASE RECORD

DELIVERABLE RELEASE RECORD

1. PROJECT INFORMATION

Project:		Job No.:
Client:		Date:
Project Principal:	Project Manager:	Project Quality Representative:

2. DELIVERABLE INFORMATION

Deliverable Description:	
Submit to:	Submittal Date:

3. REVIEW LEVEL

☐ Final Submission
 ☐ Pre-Final Submission
 ☐ Other: _____ % Submission

4. CONFIRMATION OF PROJECT QUALITY CONTROL ACTIVITY (DISCIPLINE REVIEWS)

Drawings

Were the Drawings completed in accordance with the current version of Procedure 4-4?	Yes ☐	No ☐	NA ☐
Are approvals by all applicable originating Technical Discipline Leads documented on the Drawing Review Checklists?	Yes ☐	No ☐	NA ☐

Specifications

Were the Specifications completed in accordance with the current version of Procedure 4-5?	Yes ☐	No ☐	NA ☐
Have the appropriate Discipline Reviews been completed for each discipline and documented on the Specification Review Checklists?	Yes ☐	No ☐	NA ☐
Has the Specifications Coordinator reviewed the submittal and documented approval on the Specifications Review Checklist?	Yes ☐	No ☐	NA ☐

Study/Report

Was the study or report completed in accordance with the current version of Procedure 4-6?	Yes ☐	No ☐	NA ☐
Have the appropriate Discipline Reviews been completed for each discipline and documented on the Study/Report Review Checklist?	Yes ☐	No ☐	NA ☐
Has the Project Manager reviewed the document and is his or her approval documented on the Lead Discipline Study/Report Review Checklist?	Yes ☐	No ☐	NA ☐

Calculations

Calculations are completed consistent with 4-3?	Yes ☐	No ☐	NA ☐
Are approvals by the originating Department Manager(s) documented on the Calculation Review Checklist?	Yes ☐	No ☐	NA ☐

If "no" to any of the above, describe specific deficiency and necessary action to be taken:

The above listed deliverables and components issued under Section 4 have been checked, reviewed and amended as required and are authorized for submittal.	Yes ☐	No ☐	NA ☐
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Project Quality Representative, TAT Chair, or Technical Director	Date
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5. RELEASE AUTHORIZATION

The deliverable package has been reviewed for overall completeness, compatibility, and conformance with scope and other contract requirements, all applicable reviews have been completed, and the deliverable package is ready for submission to the client.

Project Manager	Date
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6. ROUTING

☐ Project Quality Representative	☐ Project Manager	☐ Project File (original)
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AECOM TECHNICAL SERVICES, INC. (AECOM)
QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN
WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION SYSTEM DEVELOPMENT
BUREAU OF STRUCTURES

WISDOT QA/QC VERIFICATION SUMMARY SHEET

WisDOT QA/QC VERIFICATION SUMMARY SHEET			
WisDOT Project Information		AECOM Project Information	
Project ID		Project Number	
Project Title		Client Name	
Project Title		Project Name	
Project Title		Project Manager	
County		Submittal Date	
Structure Number			

CALCULATION REVIEW (All calculations, analyses, load rating, etc.)			
Task	Staff Verification		
Hydrology			
Hydraulics			
Design			
Design Check			
Quantities			
Load Rating			
Technical Review			

DRAWING REVIEW (Structure plans, details, standards, constructability, etc.)			
Prelim. Plan Prep.			
Prelim. Plan Check			
Final Plan Prep.			
Final Plan Check			
Technical Review			

SPECIFICATION REVIEW (Special Provisions, etc.)			
Preparation			
Review			
Technical Review			

STUDY and REPORT REVIEW (Structure Sizing, Hydrology, Hydraulic, SSR, etc.)			
Preparation			
Review			
Technical Review			

DELIVERABLE RELEASE (Meets AECOM QMS & WisDOT QA/QC Plan)	
Project Quality Representative	
Project Manager	
Technical Director	