Quality Management

Quality management is ensuring that all project participants are completing activities and tasks in alignment with the goals, requirements and performance standards of the project to meet the expectations of both the client and the project team.

Why Important

- Quality is a direct reflection on how well our customers' expectations are met in the services and project deliverables provided to them.
- Demonstrates a strong commitment to improving the organization's products, customer satisfaction and objectives for continuous improvement.
- Helps avoid costly errors, rework, and scheduling delays by ensuring project deliverables are of the highest quality and meet project objectives, as well as federal and state regulations/standards.
- There is a strong correlation between quality management and claims during construction. High quality projects help minimize claims, construction delays and addendums.
- Quality is about prevention rather than correction. (making corrections to prevent significant cost and schedule issues later)

Key PM Responsibilities

QC Oversight
Perform cursory review to ensure submittal meets expectation & QC checks are complete.

QA Oversight
Cross reference comments, address inconsistencies, and ensure QA expectation are met.

Quality Expectations
ACTively engage team members to perform quality work.

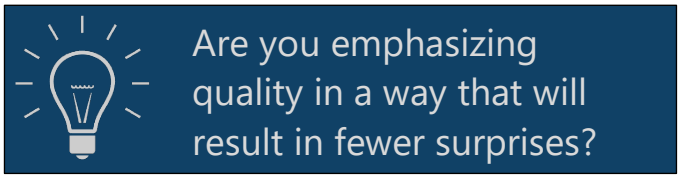
Constructability Review
Determine if a constructability review would be beneficial to producing quality deliverables.

Be the Quality Champion
Communicate when quality deficiencies may impact project cost and schedule.

Continuous Improvement
Utilize CLEAR & PS&E comments to incorporate lessons learned to reduce issues & risks.

Key Things to Consider

Quality Culture



- Is quality a core value on your project team?
- Are you stressing quality in a way that will minimize rework?
- How can you make quality more than a paperwork activity?
- Are there items/design components beyond the checklist that need to be considered?
- Are quality roles and expectations clearly communicated?
- Are we setting our teams up for on-time PS&E?

Designing with Construction in Mind

- Is this going to cause a quality issue during construction?
- Do plans from each discipline align with each other, both in phasing and completion?
- When are multidisciplinary reviews occurring?
- Are quantities reasonable and are non-participating quantities well communicated?

Best Practices & Common Pitfalls

Best Practices	Common Pitfalls
Culture of Quality:	Culture of Quality:
✓ Make Quality a core value.	× Viewing quality as a checklist versus a culture of quality.
✓ Encourage peer involvement- increase employee ownership and empowerment.	× Poorly communicated roles.
✓ Ensure review comments and responses are clearly documented.	× Handing off plans to other units or GESC without cursory review.
✓ Screen submittals for completeness before forwarding on for technical review (are QC checklists included, etc.).	× Not right sizing the review team. The right people are not involved in the review process.
✓ Right size the review and provide adequate time for review.	× Assuming all comments have been addressed if a formal resubmittal was not requested.
✓ Follow up on review prior to deadline.	
✓ Ensure your quality message is sincere and credible.	Designing with Construction in Mind:
	× Assuming that Contract Standards and Development will catch items that "fell through the cracks".
Designing with Construction in Mind:	× Not considering construction operation needs.
✓ Cross reference comments from multiple disciplines for inconsistencies and hold a meeting if needed to resolve comments.	× Not considering adjacent project tie-in phasing and schedules.
✓ Holding multidisciplinary review meetings.	

Resources

NCDOT Quality Guide & Checklists

Continuous Improvement using NCDOT's CLEAR program.

Definitions

ACT	*QA/QC program should follow 3 core principles: Accountability, Communication, Teamwork.*
Quality Control	*An accuracy review on products to ensure that all applicable State and Federal regulations, standards, and policies are met and all calculations, designs, reports, etc. are complete, accurate and reasonable.*
Quality Control reviewer	*An experienced subject matter expert with sufficient knowledge in the discipline of the work being reviewed. Responsible for performing a detailed review using the QC checklist.*
Quality Assurance	*This review is two part: 1 - It ensures the appropriate QC process took place. 2 – it includes performing a high-level fatal flaw review to ensure the deliverable was developed using the appropriate standards, specifications, and policies.*
Quality Assurance reviewer	*The NCDOT subject matter expert or designated GESC responsible for performing the quality assurance review. For projects developed by NCDOT staff, another team within the discipline or a Professional Service Firms not involved in the project can perform the QA review.*
Preferential Comments	*Comments that reflect aesthetic or habitual desires, rather than pertaining to noncompliance with standards, policies, regulations, or intent of an identified concept or design component.*
Subject Matter Expert	*An individual who has advanced knowledge in a particular area and is qualified to provide guidance and strategy in that area.*