

Proposals for Inspection, Testing, and Maintenance of Water Based Fire Protection Systems



Course Summary:

Explore what to consider when creating accurate and detailed proposals for the inspection, testing and maintenance (ITM) of water-based fire protection systems, based on the requirements of NFPA 25.

Objectives:

- Outline the process of pricing fire sprinkler inspections
- Explore methods of obtaining required information
- Deconstruct the general scope of work
- Calculate pricing for labor, material, and equipment
- Evaluate contract best practices
- Construct a detailed proposal for ITM

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Module 1: Process for Fire Sprinkler Inspections

Objectives: Outline the process of pricing fire sprinkler inspections
Explore methods of obtaining required information for proposal

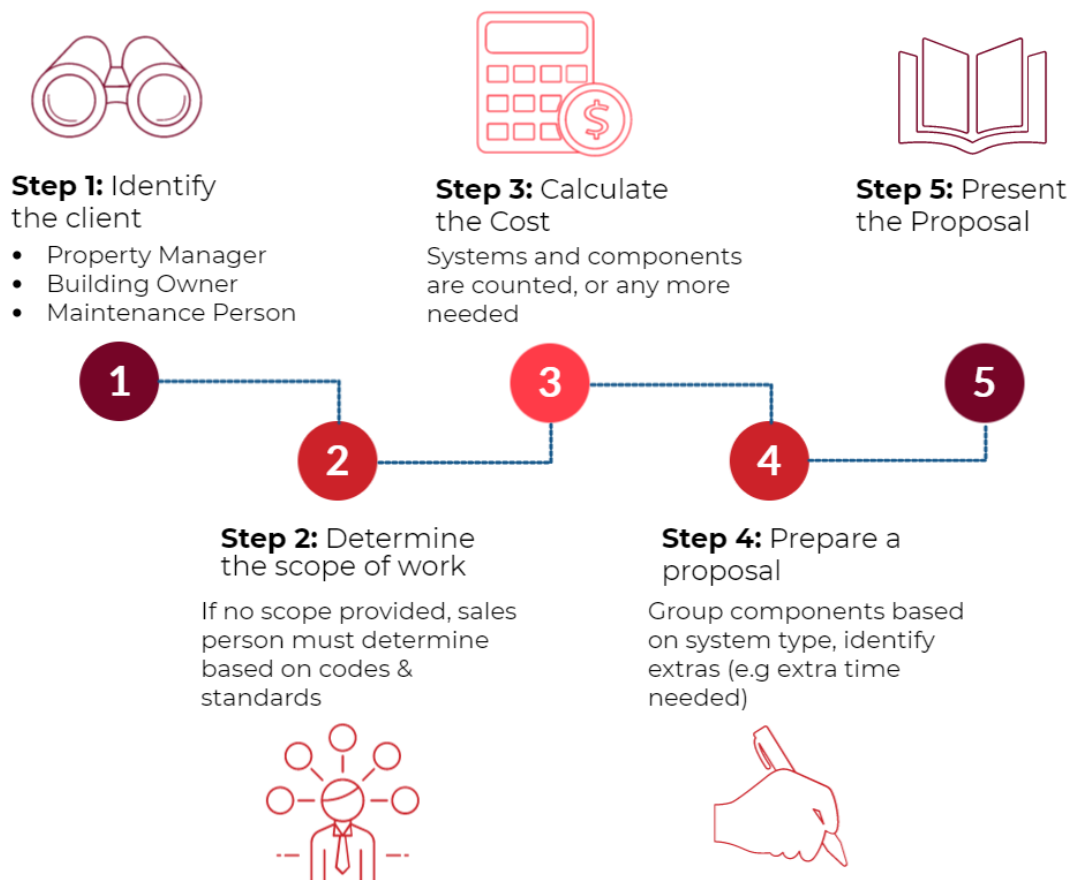
1.1 Class Introductions

1.2 Measuring a Proposal's Quality

Look over *ITM Proposal Example.docx* and complete [the survey](#). (2 minutes)

1.3 The ITM Proposal Process

Steps to the ITM Process



1.4 ITM Process Discussion

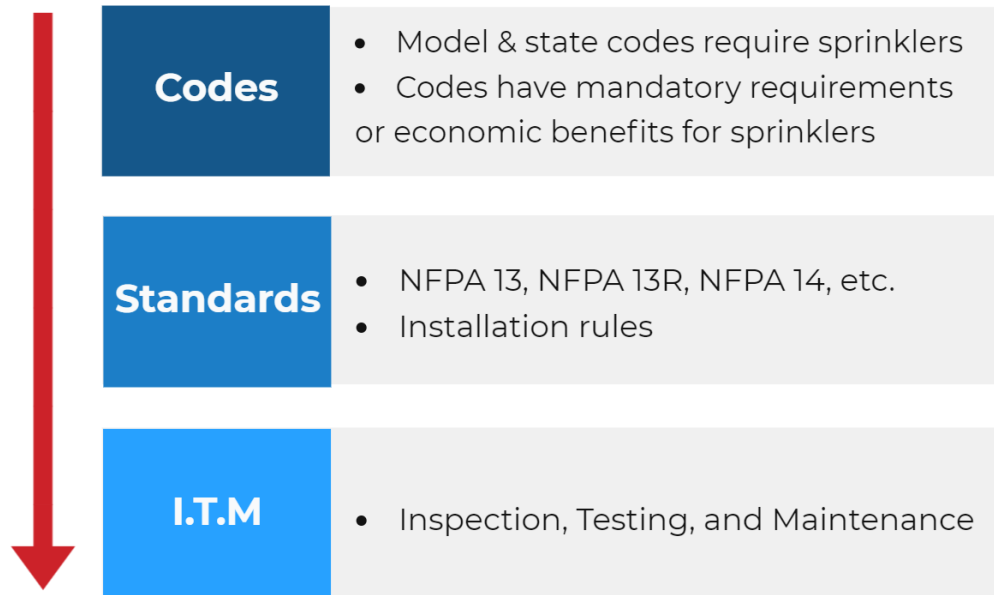
Which steps do you find the most difficult and why?

How can we develop practices and required skills to address each step?

1.5 What's the Necessary Information?

Review *RFP Example_MD Port Authority.docx*

1.6 The Codes & Standards



1. NFPA 25 overview – Follow Instructor's Screen (until 1.7)

- a. Chapter breakdown
- b. Scope and purpose
- c. Important definitions
 - i. General vs official definitions
 - ii. Sprinkler system definition
- d. How to use tables

2. **Role of AHJ** enforcement

3. **Applying the codes and standards** to determine inspection requirements

- a. Special requirements for ITM, example: [Texas Administrative Code](#)

4. Identifying **potential maintenance & repairs** items in the standards

1.7 Knowledge Check

Complete [the quiz](#) (4 minutes)

*** Continue to next page for Module 2 ***

Module 2: General Scope of Work
Objective: Deconstruct the general scope of work for inspection, testing, and Maintenance

2.1 Applying the Standards

Review: *RFP Example_MD Port Authority.docx* – Page 11 “Scope of Services”

Questions: At a glance, which codes/standards are applicable to this RFP?

Which chapters of NFPA 25, NFPA 10, and NFPA 2001 apply?

2.2 Breakout Activity (30 minutes)

Using *RFP Example_MD Port Authority.docx* – Page 26 “Equipment Description & Site Location List

- 1. Determine what systems and components are in the RFP and how many
- 2. Determine what frequencies to use for each by referring to NFPA

System or Component	Number	Frequency

*** Continue to next page for Module 3 ***

Module 3: Calculating Cost

Objective: Calculate the pricing for labor, material, and equipment

3.1 Pricing Sheet Overview

Compare: *Inspection Tally Sheet.xls* to the pricing sheet you use

3.2 Inputting Results

View Results: The table below reflects the results from Module 2's activity defining systems, components, and frequency

Activity (10 mins): Input this table into your own system.

**** Keep your system open, you will use the entered cost in a later Activity ****

<u>System or Component</u>	<u>Number</u>	<u>Frequency</u>
System – Wet	29	Monthly/Quarterly/Annual/3-year/5-year
System – Dry	124	Monthly/Quarterly/Annual/3-year/5-year
System – Fire Pump (diesel)	8	Weekly / Annual
System – Standpipe	0	
System – Extinguishers	274	Monthly/Annual/6-year/12-year
System – Hydrants	196	Annual/5-year
System – Deluge	3	Monthly/Annual
System – FM200	1	Monthly/Semi-Annual/Annual
Device – Flow	155	Quarterly/Semi-Annual
Device – Tamper	208	Quarterly/Semi-Annual
Device – Low Air	110	Quarterly/Semi-Annual (deluge/preaction)/Annual (dry)
Device – Inspector's Tests/Aux Drain	237	IT-Annual/Aux Drain – As Needed
Device – Deluge Releasing Devices	49	Annual
Device – Backflow	11	Annual

3.3 Pricing Discussion

Questions:

- Which steps do you find the most difficult and why?
- What is the difference between a partial and full trip test of a dry system? How much more work to roll 6 hoses vs 2 for fire pump?
- How to add fees for response time or should it be added?

- How to add labor for service calls?

*** Continue to next page for Module 4 ***

Module 4: Contract Best Practices

Objective: Evaluate contract best practices

4.1 Reviewing Standard Terms

1. **Survey:** Complete [the survey](#). (2 minutes)
2. Importance of contract best practices

Bid Opening	Documents to be Submitted	Required information for access to the site	Issuing Office	Time for receipt of Bids
Pre-Bid / Site Inspection	Procurement Method	Duration of bid	Communications, Questions, Interpretations prior to bid-opening	Investigation
Amendments to Invitations for Bids	Resident Business Preference	Interpretation of Quantities in Bid Schedule	Preparation and Execution of Bid	Multiple or Alternate Bids
Bid Protests and Claims	Acceptance of Terms and Conditions and Compliance with Law	Taxes Responsibility for Payment, Exemptions, Forms to File, etc.	Disclosures to the Secretary of State	Bid evaluation and Basis of Award
Minority Business Enterprises	Performance Bond & Form	Access to MPA facilities; MPA Security	Communications, Response Time, and Equipment	Extra work and Parts Allowance for Capital Improvements
Replacement Parts and Materials	Compensation to the Contractor	Shift, Weekend, Holiday Work	Records	Payment Terms
Minimum Requirements for Responsibility Determination	Insurance	Health & Safety Program (HASP)	Asbestos	Crystalline Silica
Additional Health, Safety, & Environmental Requirements	Bid/Proposal Affidavit	Contract Affidavit	MDOT's General Conditions for Service Contracts	

- Questions:**
- What are the contract terms available for your use?
 - How to review and determine which are applicable to your project and associate proposal?
 - How can not including these items result in an incomplete proposal?

4.2 Examples of Model Proposal Language

Review: Extracted model proposal language from example RFP:

Applicable Laws, Codes and Standards

1. ACCEPTANCE OF TERMS AND CONDITIONS AND COMPLIANCE WITH LAW: By submitting an offer in response to this IFB, a bidder shall: (1) be deemed to have accepted all the terms, conditions, special provisions, and requirements set forth in this IFB, including all Attachments to the IFB; and (2) if selected for award, agrees that it will comply with all Federal, State, and local laws applicable to its activities and obligations under the contract, including but not limited to, all applicable licensing requirements.
2. The inspection, repair, and maintenance for these systems must be performed and documented in accordance with but not limited to N.F.P. A 1, 10, 13, 14, 20, 24, 25, 72 and 307 as adopted by COMAR as well as any additional N.F.P.A. guidelines that may be applicable and any regulations or requirements as set forth by any Federal, State, and/or local regulatory authority (s).
3. In the event there is a conflict between these specifications and N.F.P.A., the N.F.P.A. guidelines shall prevail unless the contractor receives written authorization otherwise.
4. The Contractor shall furnish all labor, equipment, supervision, tools, insurance, and expertise to provide Inspections, testing, repairs, and maintenance to the existing fire protection sprinkler, and standpipe systems, backflow preventers, fire hydrants, fire extinguishers, and special systems as required by all National Fire Protection Association (N.F.P.A.) codes, and regulations.

Liability Limits

1. **Liability Insurance:** Occurrence forms of commercial general liability insurance covering the full scope of this agreement with limits not less than \$1,000,000 each occurrence limit for bodily injury/property damage, \$2,000,000 general aggregate limit per project, \$300,000 for Fire Legal Liability, and \$10,000 medical payments to others. The commercial general liability coverage should include blanket contractual liability covering indemnity obligations. Such insurance shall include but shall not be limited to, the following:
2. **Commercial general liability insurance** including a comprehensive broad form endorsement and covering: a) all premises-operations, b) products/completed operations, c) independent Contractors, d) liability assumed by oral or written contract or agreement, including this contract, e) additional interests of employees, f) notice of occurrence, g) knowledge of occurrence by specified official, h) unintentional errors and omissions, i) bodily injury or property damage for contamination by pollutants arising from the completed work, j) extended definition of bodily injury, k) personal and advertising injury coverage (hazards A and B) with no exclusions for liability assumed contractually or injury sustained by employees of Contractor, l) coverage for damage to property of the Maryland Department of Transportation Maryland Port Administration, as well as other third parties resulting from negligence in the completion of the Contractor's services

3. **Automobile liability insurance.** Coverage use of any motor vehicle to be used in conjunction with this contract, including owned, hired automobiles and non-owned automobiles with limits not less than **\$1,000,000 combined single limit.**
4. It is the sole responsibility of the Contractor to see that any and all of its **Subcontractors or their Subcontractors carry insurance required** herein to the extent Contractor wishes to impose on its Subcontractor such liability insurance. Automobile liability insurance required herein shall be provided by each Subcontractor: The Contractor shall be held responsible for compliance and enforcement of the Maryland Department of Transportation Maryland Port Administration's insurance requirements and its own requirements and for any modifications or waivers of these insurance requirements as they apply to Subcontractors.
5. The Maryland Department of Transportation Maryland Port Administration shall have the right to require that the limits of liability set forth in the above paragraphs hereof be raised if in its judgment economic or insurance market conditions warrant. If additional costs are incurred because of raised limits, the pre-approved additional cost shall be added to the Contract Sum.
6. Without limitation of any other provisions of this Contract, if (a) the Contractor's agreement herein to insure or to name as an **additional insured the Maryland Department of Transportation Maryland Port Administration, MDOT and the State of Maryland** with respect to contractual liability assumed by the Contractor under the terms of the Contract Documents or otherwise, or (b) any Contract of insurance between the Contractor or any Subcontractor and its insurance company, shall to any extent be or be determined to be void or unenforceable, it is the intention of the parties that such circumstances shall not otherwise affect the validity or enforceability of Contractor's agreements and obligations under the Contract Documents nor the validity or enforceability of such contract of insurance, each of which shall be enforced to the fullest extent permitted by law.
7. The **furnishing of evidence of insurance by certificate or policy copy that is not in conformance with the requirements shall not constitute a waiver of or amendment to, the aforementioned requirements.** Any modification or waiver of the requirements must be provided by the Maryland Department of Transportation Maryland Port Administration in writing to the Contractor and agreed to by signature of any authorized Officer of the Contractor.

Insurance requirements

1. The requiring of any and all insurance as set forth in these specifications, or elsewhere, shall be in addition to and not in any way in substitution for all the other protection provided under the **Contract Documents.**
2. No acceptance and/or approval of any insurance by the Maryland Department of Transportation Maryland Port Administration, shall be construed as relieving or excusing the Contractor, or the Surety of his Bonds, from any liability or obligation imposed upon either or both of them by the provisions of the Contract Documents.
3. Contractor shall at all times during the term of this Contract, and **until it has received Notice of Final Acceptance** by the Maryland Department of Transportation Maryland Port Administration, or the Engineer, **maintain in full force and effect the policies of insurance** required by this Section. The Contractor shall provide the Maryland Department of Transportation Maryland Port Administration with **evidence that the required insurance has been obtained.** Insurance companies must be rated A- VIII or better by AM Best and should be lawfully authorized to do business in the State of Maryland or in the jurisdiction where the

work is being performed. The Contractor shall name the Maryland Department of Transportation Maryland Port Administration, MDOT and the State of Maryland as additional insureds on each of the policies (except Workers' Compensation and Builders Risk Insurance, see section B7) listed in Paragraph B. The commercial general liability additional insured endorsement should include "on-going operations" and "completed operations" coverage for the additional insured and a copy should be attached to the certificate of insurance. The Contractor shall provide certificates of insurance or other evidence that it has complied with this provision before commencement of work under this contract. Certificates shall indicate effective dates and dates of expiration of policies. However, the Contractor, if requested by the Maryland Department of Transportation Maryland Port Administration, shall provide certified true copies of any and all of the policies of insurance to the Maryland Department of Transportation Maryland Port Administration.

4. The Contractor shall not commence work under this contract until all the insurance required under this section has been obtained and approved by the Maryland Department of Transportation Maryland Port Administration, nor shall the Contractor allow any Subcontractor to commence work on his subcontract until the insurance required of the Subcontractor has been so obtained and approved. Contractors of every tier should waive (and require their insurers to waive by endorsement) subrogation rights against the State for losses and damages incurred under the insurance policies required by the agreement. Contractors' general liability and automobile liability insurance should be endorsed to include Maryland Department of Transportation Maryland Port Administration, MDOT, and the State of Maryland as additional insureds and provide that such additional insured coverage be primary and no contributions shall be permitted from any insurance or self-insurance maintained by the Maryland Department of Transportation Maryland Port Administration, MDOT, or the State of Maryland.
5. All insurance policies required by this Section, or elsewhere in the Contract Documents, shall be so endorsed as to provide that the insurance carrier will be responsible for giving immediate and positive notice to the Maryland Department of Transportation Maryland Port Administration in the event of cancellation or modification of the insurance policy by either the insurance carrier or the Contractor, at least sixty (60) days prior to any such cancellation or modification. A copy of the endorsement for each insurance policy shall be submitted to the Maryland Department of Transportation Maryland Port Administration before any work under this Contract commences.
6. The Contractor shall purchase and maintain during the life of this Contract:
 - a. **Workers' Compensation:** Workers' Compensation insurance as required by the laws for the State of Maryland, which shall include Employer's Liability coverage with a minimum limit of \$500,000 each accident \$500,000 disease policy limit, and \$500,000 disease – each employee.
 - b. Such policy or policies of insurance mentioned above shall also include coverage for the benefits as set forth under the U.S. Longshoremen and Harbor Workers Compensation Act, the Jones Act and other Federal laws where applicable.

Project schedule and length of contract

1. Once awarded, the Contract shall remain in force and effect for a period of five (5) years from the date of execution by the MDOT MPA. Upon completion of this initial term the MDOT MPA

reserves the right to re-bid or, at its sole option, to renew this contract for one additional, five (5) year term. The compensation payable to the contractor during a renewal term may increase by an amount not to exceed three percent (3%) or the change in the Consumer Price Index (CPI), (U.S. Bureau of Labor Statistics- All Urban Consumers), whichever is lower. Unless otherwise stated herein, all other terms and conditions of the Agreement shall remain in full force and effect during any renewal term.

Warranty

The sample RFP does not appear to include a warranty requirement.

Questions:

- *Does your company's standard proposal include a warranty provision?*
- *If so, would you include it or removed them from your proposal and why?*
- *Is a warranty for your work already required an applicable law?*
- *Would you call out that a warranty is excluded from your proposal?*

Proposal pricing and payment terms

1. The Contractor shall be compensated on a **monthly fixed-fee basis**, which includes the routine inspections and maintenance. The monthly fixed-fee compensation includes all necessary labor, materials, overhead, profit, delivery, security badging, storage, burden, bonding, insurance, and all similar incidental costs to complete the work.
2. **Compensation for Extra Work** and Parts Allowance for Maintenance Related Issues
 - a. The Contractor shall be compensated on a **monthly basis for any repairs** performed and any authorized additional work **utilizing the Additional Work Allowance** identified on the Extra Work Proposal Form, Attachment 14.
 - b. The Contractor shall be compensated on a **per job basis using the hourly rates** as approved by the Administration.
3. The Administration reserves the right to **withhold not more than 50% of the monthly amount if work is incomplete or not properly completed** as determined by the Administration, until the work is completed and approved by the Administration.
4. The Administration shall reimburse the Contractor for all **parts needed at the purchase price** (See Attachment 14 when submitting pricing for extra work).
5. The Contractor shall be required to **submit** supporting documentation, such as parts **invoices**, with all Contractor's monthly invoices for payment.

Third party reports requirements

1. **Records shall be kept** for all inspections, tests, and maintenance. The forms attached may be used **or the Contractor may submit forms for Administration approval** prior to beginning work. The format of the forms used shall accurately reflect all visual inspections and record all tests and maintenance.
2. Each control valve shall have a tag attached which records the date it was serviced as described above. Tags found missing shall be replaced at the time of inspection.
3. Each alarm and dry pipe valve shall have a tag attached, which records the date and information on any maintenance performed on the valve.
4. Each fire extinguisher shall have a tag attached which records the data it was serviced as described above. Tags found missing shall be replaced at the time of inspection.

5. Although inspections are completed using paper forms the Administration is requiring that all **records be transferred to CD/DVD disks and submitted monthly**. These monthly reports may have an **addendum added to show the weekly work as performed**. At the end of each year all the information on the disks will be consolidated to one or more disks for easier storage. Fire Extinguisher reports must be separated by building or shed.
6. These monthly reports shall include a **separate deficiency report**. This report shall identify specific problems, and or concerns found after each monthly inspection has been completed

Question: *"How does this compare with what you're currently using?"*

*** Continue to next page for Module 5 ***

Module 5: Developing a Proposal for ITM

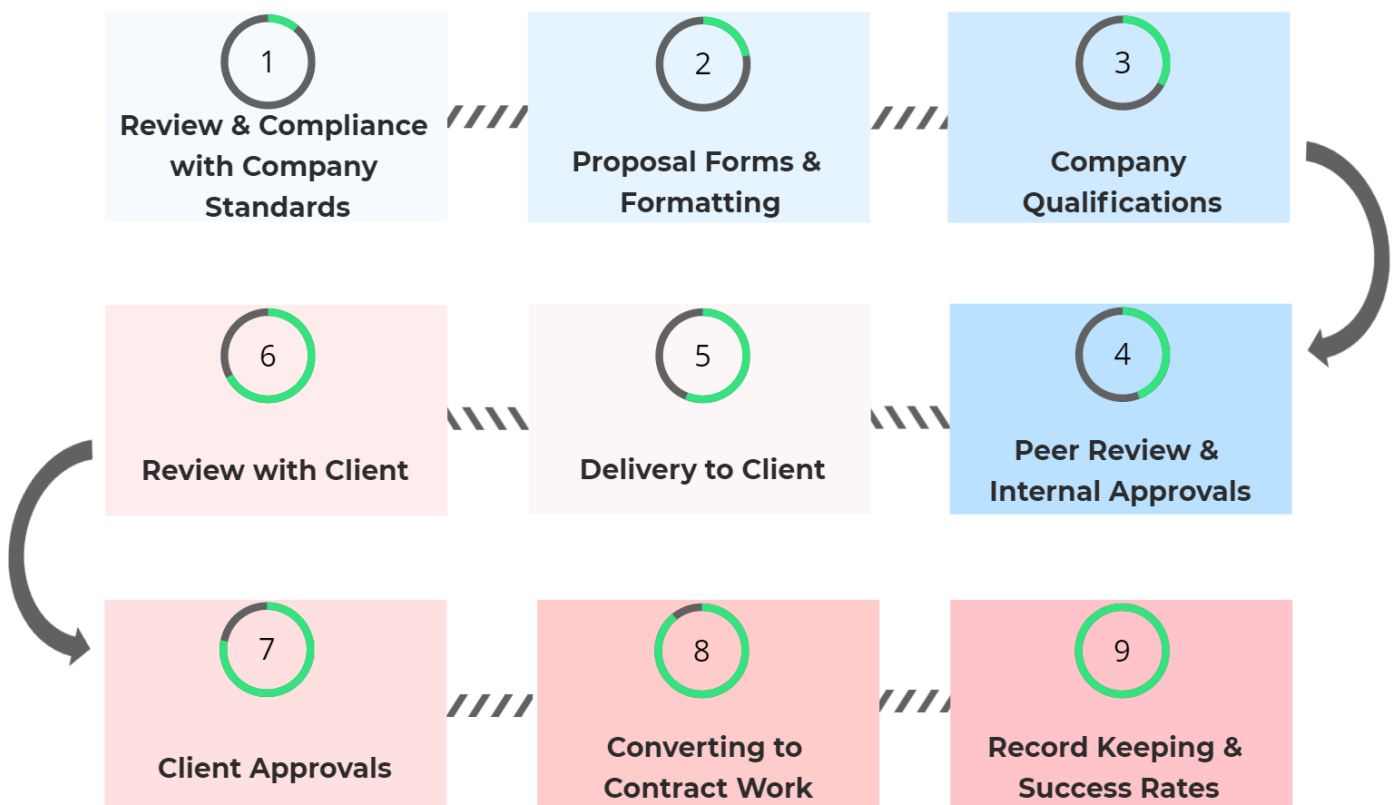
Objective: Construct a detailed proposal for ITM

5.1 Publishing a Proposal

1. **Activity (15 minutes):** Breakout into groups, and open pricing sheet from Module 3 where you calculated cost. Publish a formal proposal using *ITM Proposal Example.docx* and compare language against the *RFP Example_MD Port Authority.docx*.
 - a. What is included/not included in one vs the other as far as terms and conditions are concerned?
2. **Share & Discuss**

5.2 Requirements and Proposal Flow

Define: Each of the 9 items required for a detailed proposal and its flow



5.3 Class Survey

Thank you for participating, please complete the survey located in your course documents to receive your certificate. (5 minutes)