

Flow Chart for Designing and Constructing Public Facilities

Awarding Authority – Town of Boxborough

STEP 1 – Preliminary Planning – Feasibility Study Phase: local jurisdictions are not legally required to complete a study but as a practical matter the State suggests the completion of one:

- Confirms and explains the owner's requirements i.e. a Program
- Identifies and evaluates alternative solutions
- Recommends and defines a solution
- Summarizes the proposed scope of work
- Provides a detailed cost estimate

STEP 2 – Obtain Funding for the Project

- Municipalities handle this in different ways:
 - Obtain Funding for a Portion of the Estimated Total Project Costs:
 - Obtain funds for a portion of the design phase including an estimate at one Town Meeting. Then go to a later Town Meeting requesting the balance of estimated total project costs (hard construction and soft costs) based on the additional design work completed and an updated construction estimate.
 - Obtain funds for design fees for Schematic Design through Bidding (including some other soft costs for work required during design). Then go to a later Town Meeting with a bid in hand to request construction funds and funds for the balance of anticipated soft costs.
 - Request Total Project Costs (hard and soft costs) based on early estimates completed during the feasibility study.

STEP 3 – Hire OPM (if required or desired)

- Selection of Owners Project Manager: Projects estimated to cost over \$1.5 million
 - Requirements outlined in M.G.L. c. 149 §44 A 1/2

STEP 4 – Selection of Design Team after selection of OPM

- Per the Office of the Inspector General, "Awarding authorities may contract with the same designer for feasibility study and final design services provided that the original solicitation for feasibility study services indicates that the contract scope may include final design services, or the awarding authority has procured the final design services in accordance with the designer selection law."
 - Awarding authorities may commission an independent peer review of the feasibility study, but are not required to do so. Selection of a contractor for the peer review is not subject to the designer selection law.

STEP 5 – Design Phase: Translate the functional requirements established in the program into a set of biddable construction documents

- Complete gathering all site documentation that may be lacking including but not limited to surveys, wetlands delineation, geotechnical evaluation, hazardous material assessment. This work may be done prior to the design phase, but should not be delayed past very early schematic design.
- Consultation with Users, abutters and other affected individuals and groups
- Preparation of schematic drawings
- Analysis of major building components
- Preparation of final plans, specifications and other bid documents

- Updated project cost estimates based on final plans and specifications
- Determine Project Delivery Method early in Design Phase
 - Design Bid Build: Typical process used by Municipalities on similar projects
 - Governed by M.G.L. c. 149 Public Construction Law which defines roles of the:
 - Public Owner with Owners Project Manager (OPM) owners representative
 - Designer
 - Contractor
 - Alternate Delivery Method – Construction Management at Risk (CM at Risk or CMR)
 - Possible for projects over \$5 million per M.G.L. c. 149A
 - Approval must be obtained from the Office of the Inspector General
- Prequalification of General and Sub-Bid Contractors is required for projects estimated to cost over \$10 million
 - Establish a Pre-Qualification Committee: one representative of the project designer, the OPM, and two other representatives of your jurisdiction
 - Prepare and advertise RFQ and receive Statements of Qualification (SOQ) for evaluation
 - Evaluate and prequalify General Contractors and Sub-Bid Contractors who will be eligible to bid on the project

STEP 6 – Bidding

- Public projects in Massachusetts must pay Prevailing Wages – Requirements outlined in M.G.L. c. 149, §§ 26-27
- Filed Sub-Bidding Requirements: There are 18 categories of work subject to the filed sub-bid laws. If work in a category is estimated to exceed \$20,000, that category of work must be bid separately from the General Contract as a Filed Sub-Bid. General Contractors must select their sub-contractors from the Filed Sub-Bidders in these categories.
- Bidding Process:
 - Prepare invitation for bid (IFB)
 - Advertise and post IFB
 - Receive, open and review filed sub-bids
 - Distribute filed sub-bidder list to everyone who received the IFB
 - Receive, open and review general bids
 - Award the contract to the lowest “responsible and eligible” bidder
 - Obtain bonds and execute the contract
 - Return bid deposits and publicize the contract

STEP 7 – Construction Phase

- The General Contractor’s job is to complete the project in accordance with the plans and specifications prepared by the designer.
- The Architect and Design Team is responsible for periodic observation of the construction for general compliance with the plans and specifications.
- Awarding Authority should hire a Clerk of the Works who serves as the public owner’s representative at the project site. The Clerk’s function is to observe and record the progress of construction. The Clerk is a full-time position and should be someone who has substantial construction experience.