

Life Cycle of a Public Works Engineering Project

How Each Project Begins:



Needs identified

City needs are identified, including studies, high level scope of work, and budget required.



Project presented to City Manager

Proposed projects are presented to the City Manager, where needs and priorities are evaluated.



City Council approves Capital Improvement Plan (CIP) budget

The City Manager's Proposed Budget is presented to Mayor and Council for approval, which includes CIP's.



Procurement type identified

Engineering team will decide if services will be procured via CMAR, JOC, Bid, or Design Build. Projects are further carried out differently depending on the procurement type (delivery method) chosen.

Projects are then carried out in one of following ways:

Construction Manager at Risk (CMAR)

Most common delivery method utilized by the city



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Design services

Request for Qualifications (RFQ) written and published

RFQ to be published for solicitation is written. This includes scope of work (design services, in this case) and submittal requirements for firms/Contractors



Request for Council Action (RCA) submitted for approval

Approval package that includes funding source, selected firm/contractor information, and justification is sent through AgendaQuick for inter-departmental review and approval for a City Council Meeting



At approximately 30% design completion, CMAR is chosen through RFQ

At 30% completion of project design services, the RFQ process (last 4 steps) is repeated to select a contractor to serve as a CMAR. This contractor is selected based on qualifications, not price.



Pre-construction phase

Meet with stakeholders & city public works team to define priority tasks, schedules, and permits/inspections needed.



Submittals received, reviewed, & firm selected

Panel is selected to review submittals from firms/contractors that are received. Once firm has been selected, all firms are notified and a proposal is requested.

Ordinance or resolution approved & design begins

Request for approval is presented to Mayor and City Council. If approved, Contract documents sent to firm/contractor to be signed, PO is generated, and firm begins design process

CMAR develops first GMP

The CMAR will work closely with the design team and produce a GMP (guaranteed maximum price) for pre-construction services (potholing, surveying, long lead items).

GMP #2 developed & Construction phase

GMP for construction services is developed and construction on project commences. Weekly meetings & inspections with the city.

Design-Bid-Build (Hard Bid)



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Ordinance or resolution approved & design begins

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Design developed and completed

firm works with internal design team until 100% design plans reviewed by city and approved.



Project bidding

City releases bid notice with final design plans, construction contractors submit bid packages, and a contractor is selected based on lowest price

Post-construction and closeout

As-builts, final reports, inspection walk-throughs, etc.



Construction phase

Construction on the project commences and meetings are held regularly until completion.

Design-Build/Progressive Design-Build

The main difference between the two is that in DB, contractors are selected based on price, while in PDB, contractors are selected based on qualifications.



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Project Request for Qualifications (RFQ) written and published

RFQ containing a full description of the scope and goals of the project, along with any concept reports. In design build, it contains a detailed enough description or a budget for contractors to come up with a price



Request for Council Action (RCA) submitted for approval

Approval package that includes funding source, selected firm/contractor information, and justification is sent through AgendaQuick for inter-departmental review and approval for a City Council Meeting



Contractor selects firm/team for engineering & design services

Contractor will internally select a team for engineering/design services either through a subcontractor or using in-house engineers.



Construction phase

Construction on the project commences and meetings are held regularly until completion.



Submittals received, reviewed, & contractor selected

In design-build, a contractor is selected based on price. In a progressive design-build, a contractor is selected based on qualifications

Ordinance or resolution approved & project begins

Request for approval is presented to Mayor and City Council. If approved, Contract documents sent to firm/contractor to be signed, PO is generated, and contractor begins the project

Design & pre-construction phase

30%, 60%, 90% design deliverables, risk management, meeting with stakeholders, close collaboration with city, permits/inspections/surveying. In PDB, GMP is negotiated in this phase.

Post-construction and closeout

As-builts, final reports, inspection walk-throughs, etc.

Glossary

CIP: Capital Improvement Project

CMAR: Construction Manager at Risk

JOC: Job Order Contract

RFQ: Request for Qualifications

SOQ: Statement of Qualifications

RCA: Request for Council Action

NTP: Notice to Proceed

Stakeholders: Individuals/groups/businesses/etc. affected by or involved with a project (e.g. nearby businesses, farm owners, utility companies)



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AgendaQuick: Portal used to submit contracts for inter-departmental review

GMP: Guaranteed Maximum Price

Scope & Fee: Services and charges that will be done or needed for project completion

PO: Purchase Order

Procurement: How services are secured

As-Built: Drawings/outlines of the final buildup of a project.

Any Questions?



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