PIMA COUNTY
PROJECT MANAGEMENT AND GATE PROCESS MANUAL

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PIMA COUNTY

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Procedure Number: 3-28

Effective Date: 07/01/2009
Revision Date: 01/31/2012

County Administrator

SUBJECT: **IMPLEMENTATON OF THE PROJECT MANAGEMENT MANUAL AND EXIT GATE PROCESS**

DEPARTMENT RESPONSIBLE: **THE OFFICE OF THE COUNTY ADMINISTRATOR**

1. STATEMENT

The Pima County Capital Improvement Program (CIP) is inclusive of all bond projects and any projects $100,000 or greater that will create or increase the life of Pima County's capital asset. An important part of a successful CIP is to establish a standard process that enables County projects to be developed and competed on time and within specification and budget. County departments are required to successfully manage the delivery of their bond and non-bond projects. The Project Management Manual contains comprehensive instructions designed to assist in the departments' project management efforts by establishing a countywide, uniformed approach to a successful CIP using a specific process. Exit Gate. The Exit Gate Process is a six-phased approach to successful project delivery. It is an effective way to assure that all stakeholder departments participate in the project development process at a time when their input is needed. This approach to effective project management also assures that all criteria are met before moving forward to the next phase of a project and avoids costly downstream project changes.

2. PROCEDURE

All County departments will deliver Pima County capital improvement projects using Pima County's Project Management Manual and Exit Gate Process. A complete copy of this manual, which provides step-by-step instructions and necessary documents to complete the process, can be found on the Capital Improvement Program's intranet website at http://www.pima.gov/cip/pmprocess/pmprocess.html.

3. DEPARTMENTAL RESPONSIBILITY

All County departments are responsible for following the established procedures to successfully manage, develop, and deliver Pima County's CIP projects. This procedure does not apply to vertical construction managed by the Pima County Facilities Management Department (PCFM) or to the acquisition, development or implementation of software managed by, or coordinated with, the Pima County Information Technology Department (ITD). Both PCFM and ITD are required to successfully manage the delivery of bond and non-bond projects and may, at their option, elect to participate in the Exit Gate process for a particular project from time to time.

PROJECT MANAGEMENT & GATE PROCESS MANUAL

PART I: THE PROJECT MANAGEMENT PROCESS

PROJECT MANAGEMENT & GATE PROCESS MANUAL

QUICK REFERENCE GUIDE

COUNTY ADMINISTRATIVE PROCEDURE 3-28

This County administrative procedure describes the authority by which our Pima County Project Management and Gate Process Manual is required for use in the delivery of capital improvement projects.

HISTORY

Our Project Management and Gate Process Manual (our Manual) is a "living document" developed around certain principles:

- We seek to provide best-in-class capital improvement project delivery
- Constant, constructive communication and collaboration among project stakeholders is a must for successful capital improvement project delivery
- Each step and tool used in our Manual must add value to capital improvement project delivery
- Application of lessons learned as a result of the ongoing delivery of capital improvement projects is our source for continual streamlining and strengthening of our Manual

The choice of the project management approach detailed in our Project Management and Gate Process Manual was not mandated to departments but rather, after consideration of alternatives, was selected by mutual agreement among representatives from all County departments responsible for capital improvement project delivery.

STRUCTURE OF OUR PROJECT MANAGEMENT MANUAL AND GATE PROCESS

There are four parts to our Project Management and Gate Process Manual:

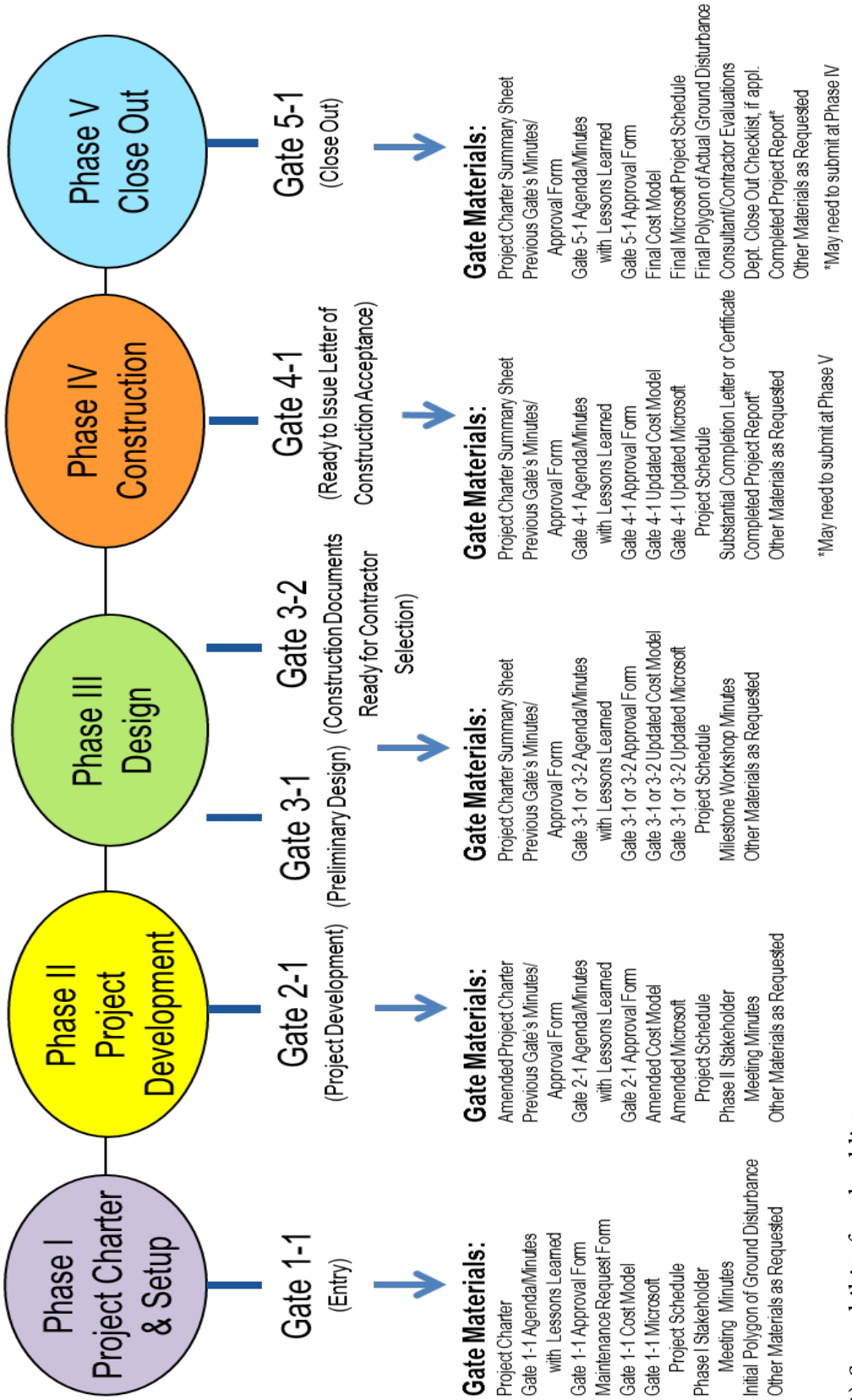
- Part I includes the process maps showing steps in capital improvement project management. Not all projects require completion of all steps. However, some steps, such as conducting stakeholders meetings prior to development of the Project Charter, are required of all projects. The decision to make some steps required is based on lessons that have been learned during ongoing project delivery. The lessons learned indicate these required steps are essential to successful project outcomes.
- Part II describes the gate meeting process. Not all projects are required to go through all gates. However, based on lessons that have been learned during ongoing project delivery, gate meetings provide an excellent forum for elevating issues for reconciliation between stakeholders and upper management so that a project can move forward. Therefore, although a gate meeting may not be required, a project team may choose to hold more than the required number of gate meetings.
- Part III provides an explanation for symbols used in process maps as well as provides definitions of terms used in our Manual.
- Part IV includes exhibits referenced in the process maps (e.g., forms and guidance).

INTERRELATIONSHIP BETWEEN PROJECT MANAGEMENT AND GATE PROCESSES

The following diagram shows the interrelationship between the project management phases mapped in Part I and the gate process detailed in Part II of our Manual.

PIMA COUNTY

Interrelationship between the Project Management Process and the Gate Process (1)



(1) See exhibits for checklists for gate meetings

PROJECT MANAGEMENT & GATE PROCESS MANUAL

MAPPING METHODOLOGY

The methodology used to create the process maps in the Project Management Manual is summarized below.

1. A process map shows in graphical form the flow of a “process” from beginning to end.

2. Process maps are useful in improving efficiency, reducing costs, setting standards, creating consistency, establishing needs and expectations, and managing information.

3. The action of creating a process map assists an organization by engaging people in a way that improves communication, develops a common foundation, and enhances awareness of a process.

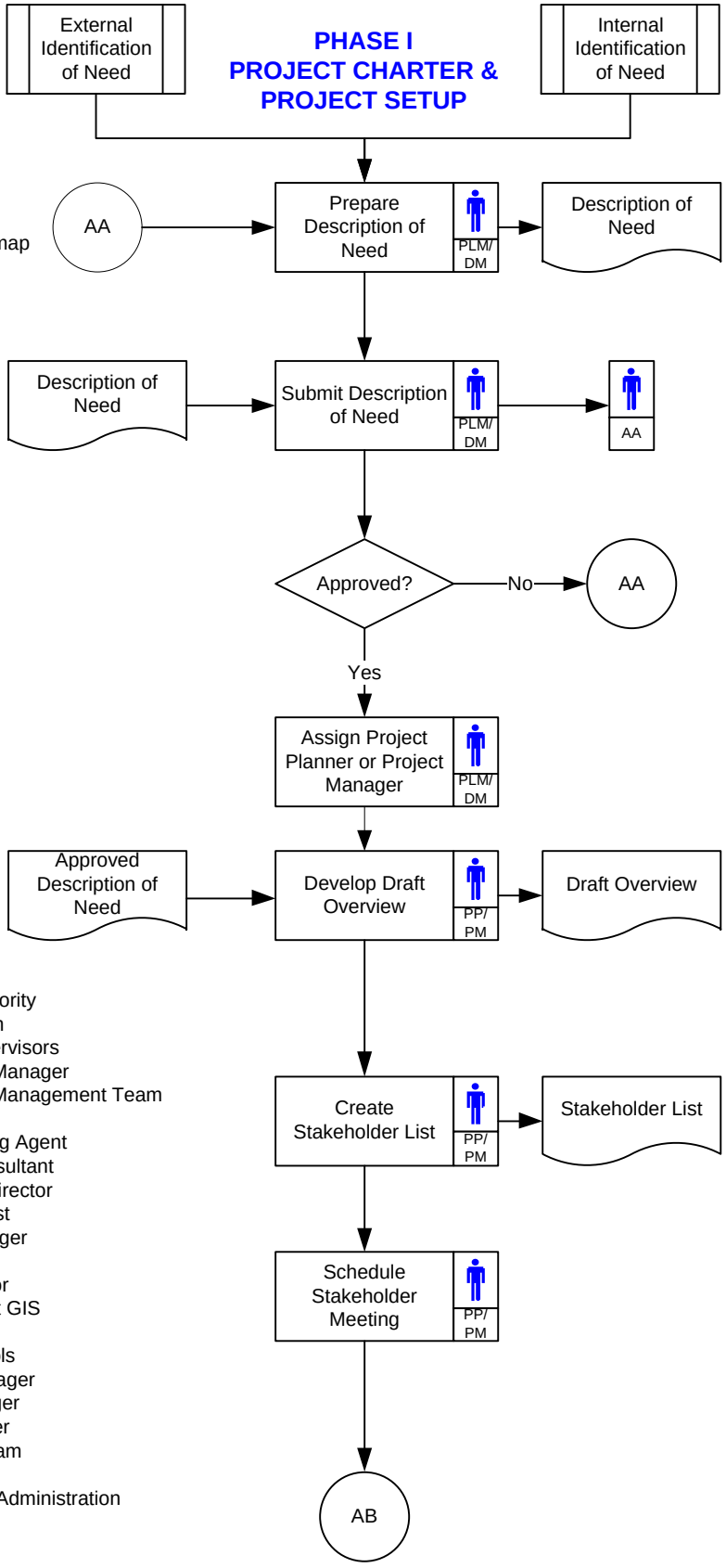
4. All process maps consist of four major fundamentals – Inputs, Tasks, Decisions, and Outputs.

5. Inputs appear to the left of a task and can be documents, reports, emails, etc. The process map shows what the input is, how it is created, and by whom.

6. Tasks appear in the center of the map. Each task is briefly described, includes an action word (verb), and shows responsibility.

7. Decisions have two exit paths. The main flow exits to the bottom and the text will include a question mark.

8. Outputs appear to the right of the task and can also be documents, reports, emails, etc. The process map shows what the output is, how it is delivered, and where it goes.



Description of Need
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Format includes location map

Polygon for GIS
All location maps in any document or meeting agenda/minutes must show a polygon for the potential area of disturbance for the project. As project progresses, polygon changes must be noted.

Stakeholder List
Refer to Exhibits Section of this Manual for Guidance

Stakeholder Meeting
THIS IS NOT OPTIONAL

KEY

Responsibilities

* AA - Approval Authority
* AT - Analysis Team
* BOS - Board of Supervisors
* CM - Construction Manager
* CMT - Construction Management Team
* CON - Contractor
* Cx - Commissioning Agent
* DES - Designer/Consultant
* DIR - Department Director
* DIST - Distribution List
* DM - Division Manager
* DST - Design Team
* GF - Gate Facilitator
* GIS - IT Department GIS
* FIN - Finance
* PC - Project Controls
* PLM - Planning Manager
* PM - Project Manager
* PP - Project Planner
* PRT - Partnering Team
* PT - Project Team
* PWA - Public Works Administration
* RVW - Reviewer
* STK - Stakeholders
* VEN - Vendors

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase I** **Project Charter & Project Setup**	Owner: PC Public Works

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Stakeholder Meeting

THIS IS NOT OPTIONAL

Date

Stakeholder Meeting
Distribute Agenda & Draft Overview to stakeholders at least 1 week prior to meeting

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

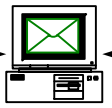
Stakeholder Review
Stakeholders have up to 2 business days to return comments on Phase I Stakeholder Meeting Minutes to PP/PM

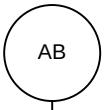
Project Charter Elements
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Project Charter Elements correspond to major headings in Table of Contents of a Project Charter

Communication with Stakeholders
Depending on the results of stakeholder meeting, additional communication with some stakeholders may be useful as the Project Charter is being drafted by the PP/PM

Stakeholders

Stakeholders





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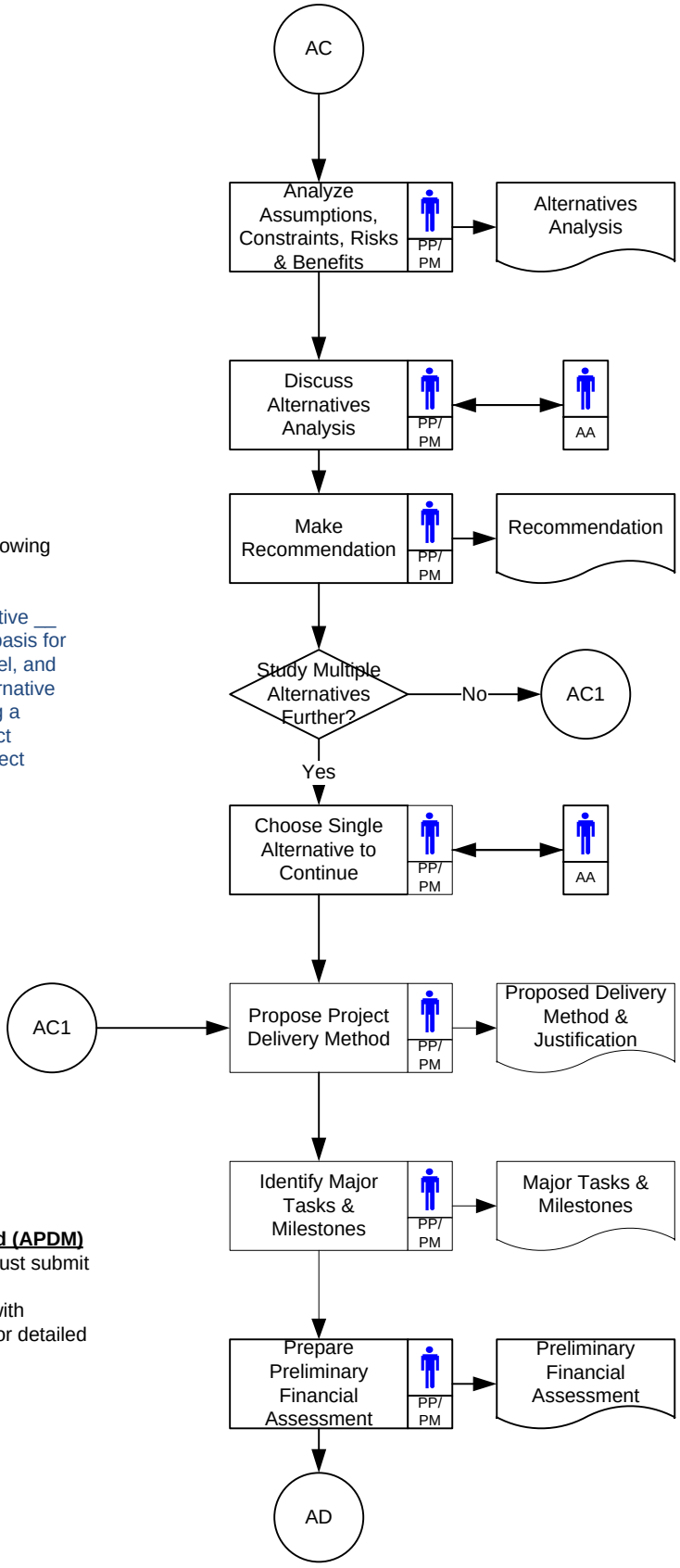

Choose Single Alternative
If this step is required, include the following sentence at the beginning of the Recommendation Section:
In order to set up this project, Alternative __ has been chosen as the preliminary basis for the Project Charter Scope, Cost Model, and MS Project Schedule. If another alternative is selected as the result of completing a Concept Analysis, per Phase II Project Development of this Manual, the Project Charter, Cost Model, and MS Project Schedule will be amended.

Project Delivery Methods
Design/Bid/Build
Construction Management at Risk
Design/Build
Design/Build/Own/Operate
Job Order Contract

Alternative Project Delivery Method (APDM)
If an APDM is chosen, the Director must submit a memo to Procurement requesting establishment of an APDM contract with justification (See BOS Policy D29-1 for detailed instructions).

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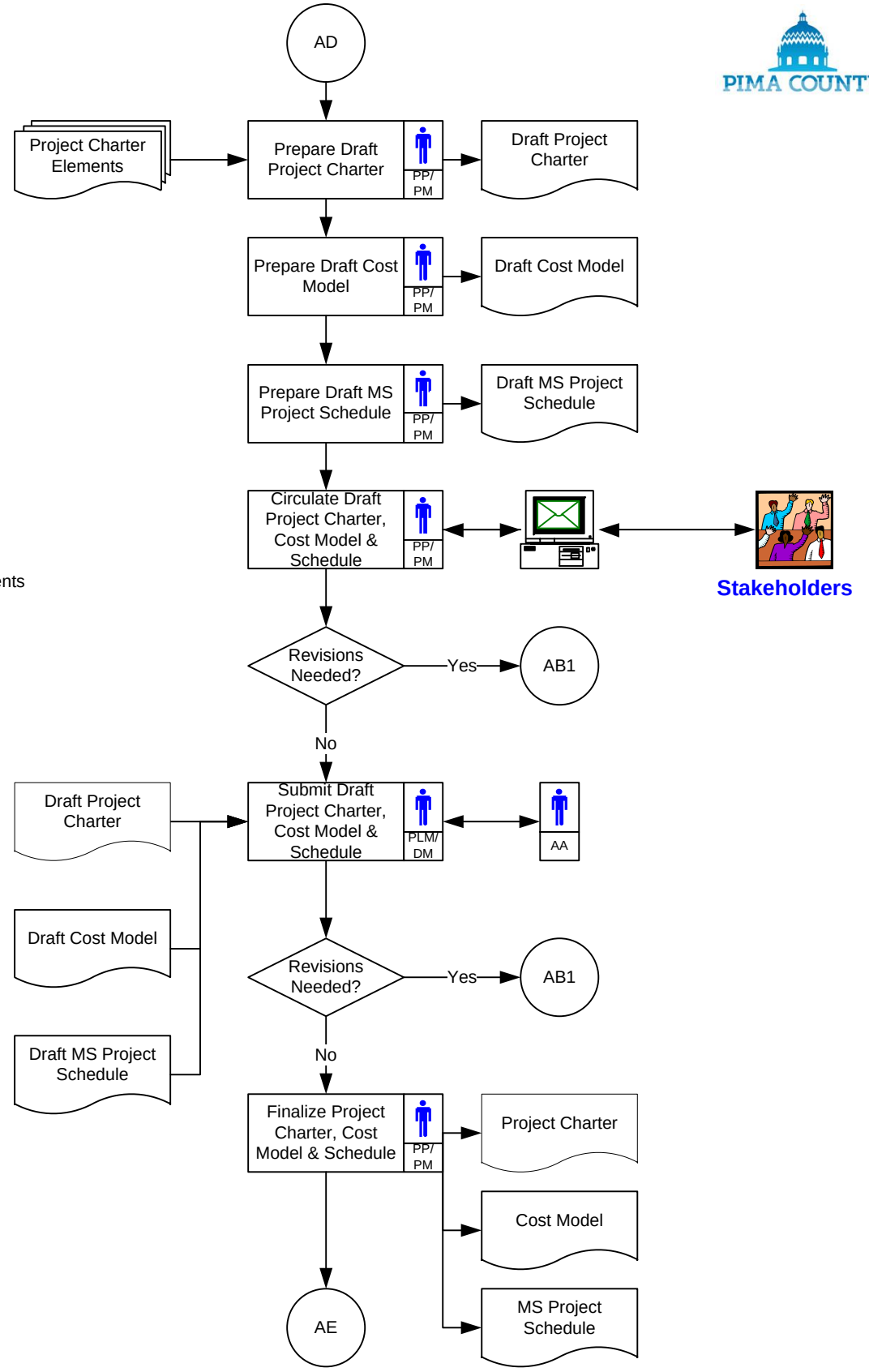

Cost Model & MS Project Schedule Templates
Most recent templates can be located via links on the Project Management Office (PMO) Intranet site.

Stakeholder Review
Stakeholders have up to 2 business days to return comments on Draft Project Charter, Draft Cost Model and/or Draft MS Project Schedule to PP/PM

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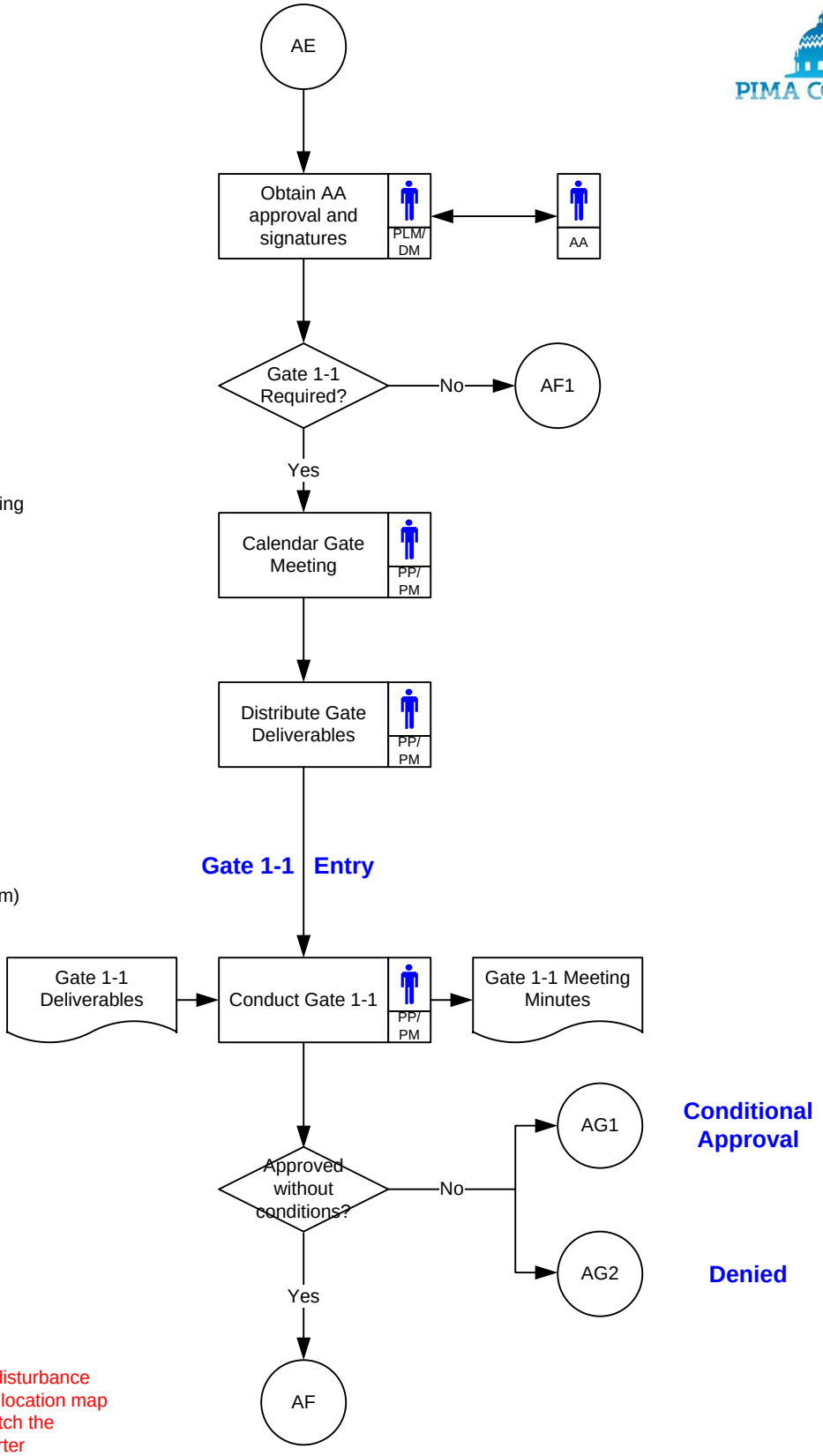

Qualifying Criteria for Gates
Refer to Exhibits Section of this Manual for Guidelines

Date

Gate Meeting
Calendar 2 weeks prior to Gate Meeting

Date

Gate Deliverables
Distribute Gate Deliverables at least 1 week prior to gate meeting

Gate 1-1 Deliverables
1) Project Charter
2) Meeting Agenda
3) Gate Approval Form
4) Maintenance Worksheet (CAS Form)
5) Cost Model
6) MS Project Schedule
7) Phase I Stakeholder Meeting Minutes
8) Other Materials as Requested

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Polygon for GIS
The polygon of the potential area of disturbance for the project must be shown on the location map attached to the agenda and must match the polygon as shown in the Project Charter

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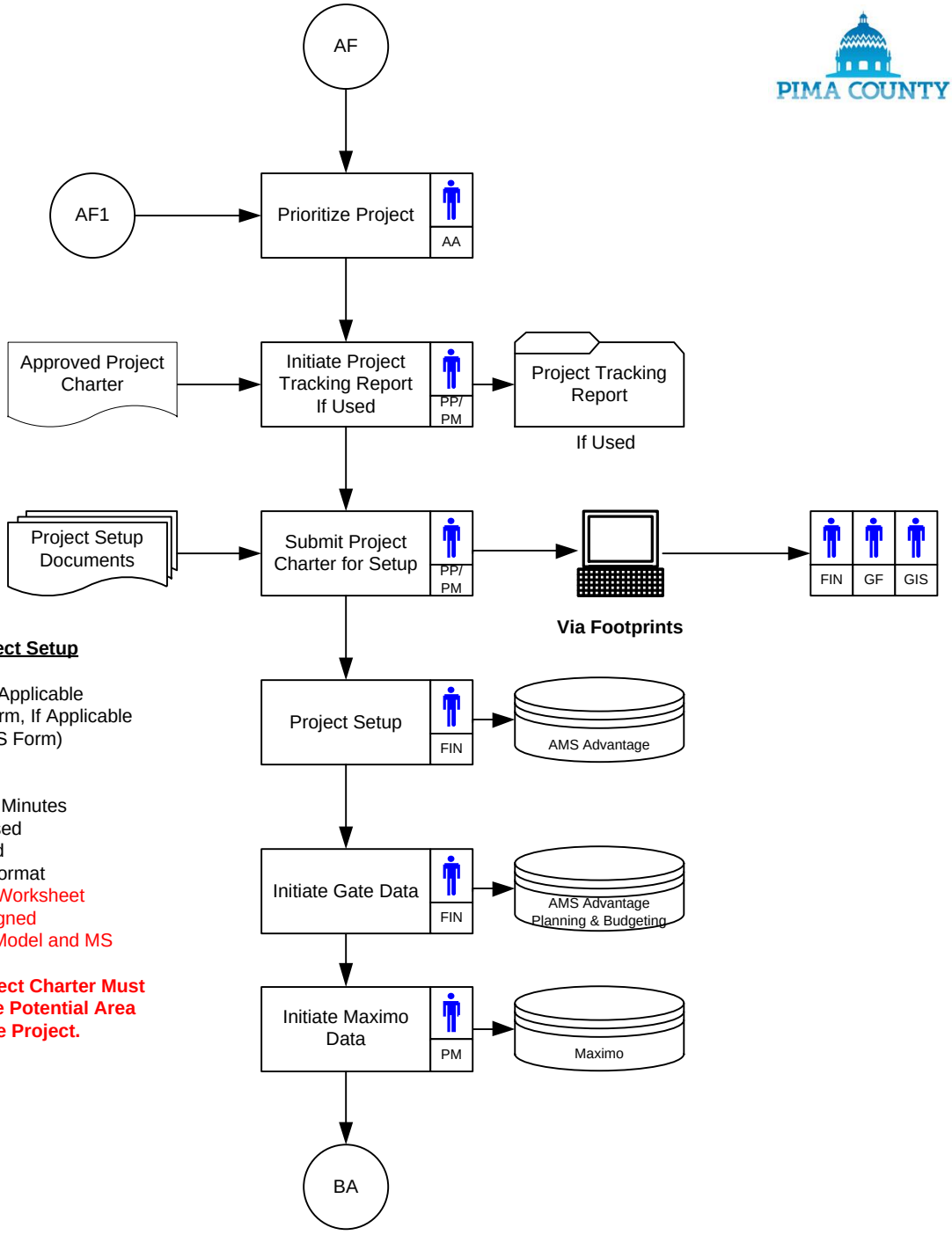

Project Tracking Report
Typically used when project is anticipated to be transferred to another department for delivery. Department may choose to use this for other reasons.

Project Tracking Report
Refer to Exhibits Section of this Manual for Form and Guidance

Documents Required for Project Setup
1) Signed Project Charter
2) Gate 1-1 Meeting Minutes, If Applicable
3) Signed Gate 1-1 Approval Form, If Applicable
4) Maintenance Worksheet (CAS Form)
5) Cost Model
6) MS Project Schedule
7) Phase I Stakeholder Meeting Minutes
8) Project Tracking Report, If Used
9) Other Materials as Requested
NOTE 1: These must be in pdf format
NOTE 2: Data on Maintenance Worksheet Must Match Data in Signed Project Charter, Cost Model and MS Project Schedule
NOTE 3: Location Map in Project Charter Must Show Polygon for the Potential Area of Disturbance for the Project.

PHASE II
PROJECT DEVELOPMENT

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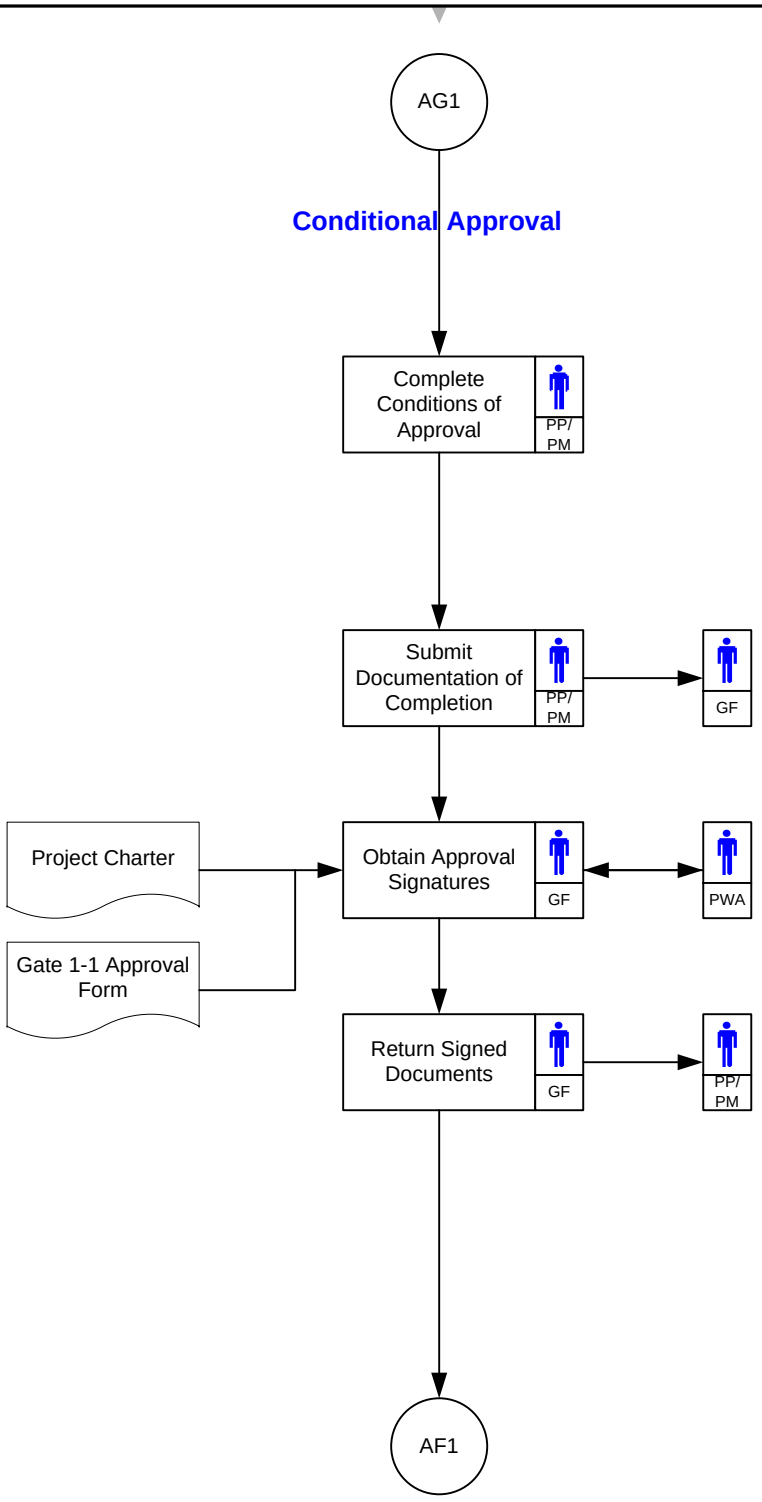
FIN



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase I** **Project Charter & Project Setup**	Owner: PC Public Works

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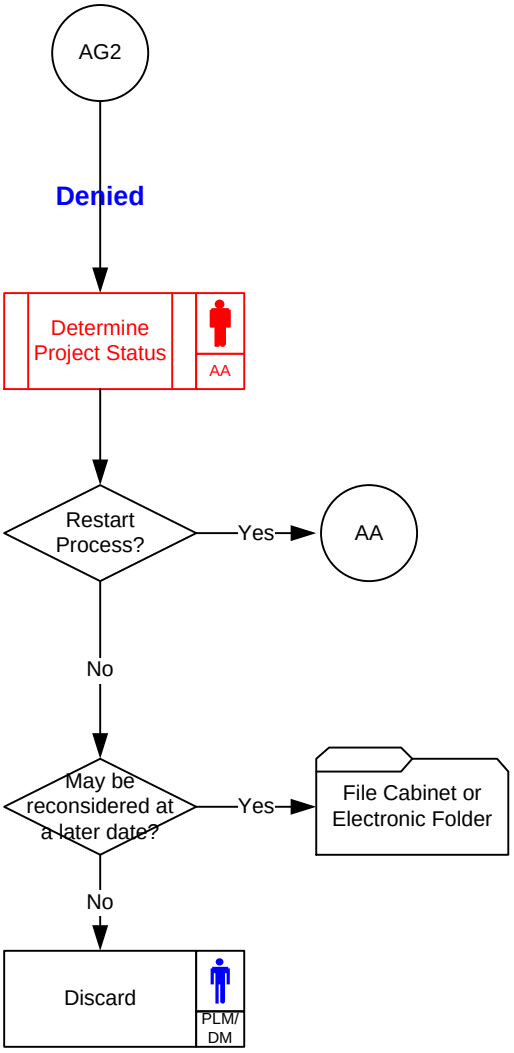
Project Status

The sponsoring department should make a determination whether the project is still active, on hold, or canceled because of a significant change in policy, scope, schedule or budget, etc.



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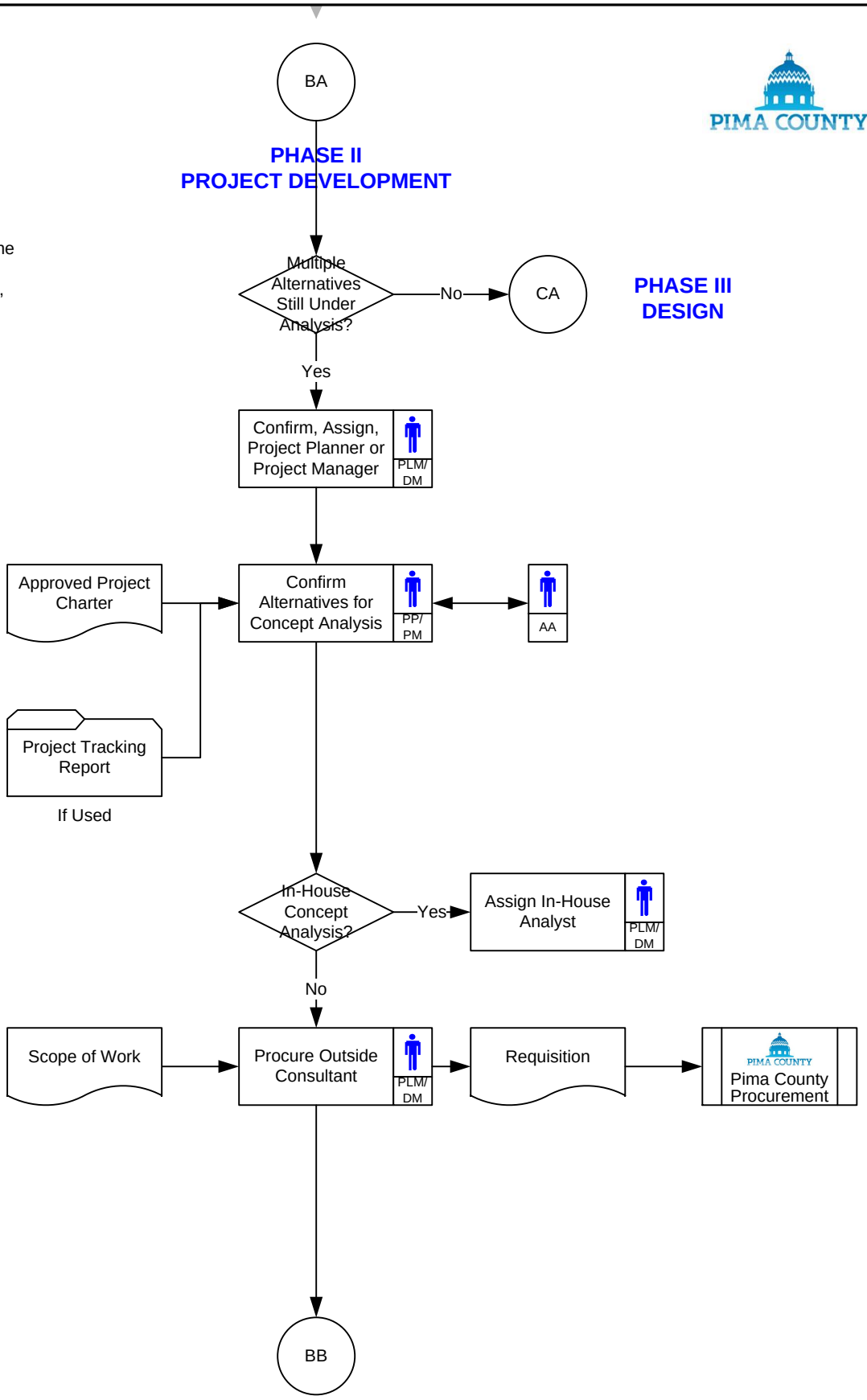
Phase II Project Development
This phase is used only if the Project Charter recommended the need for further analysis of multiple alternatives. Otherwise, proceed to Phase III Design.



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Stakeholder Meeting
THIS IS NOT OPTIONAL

Date

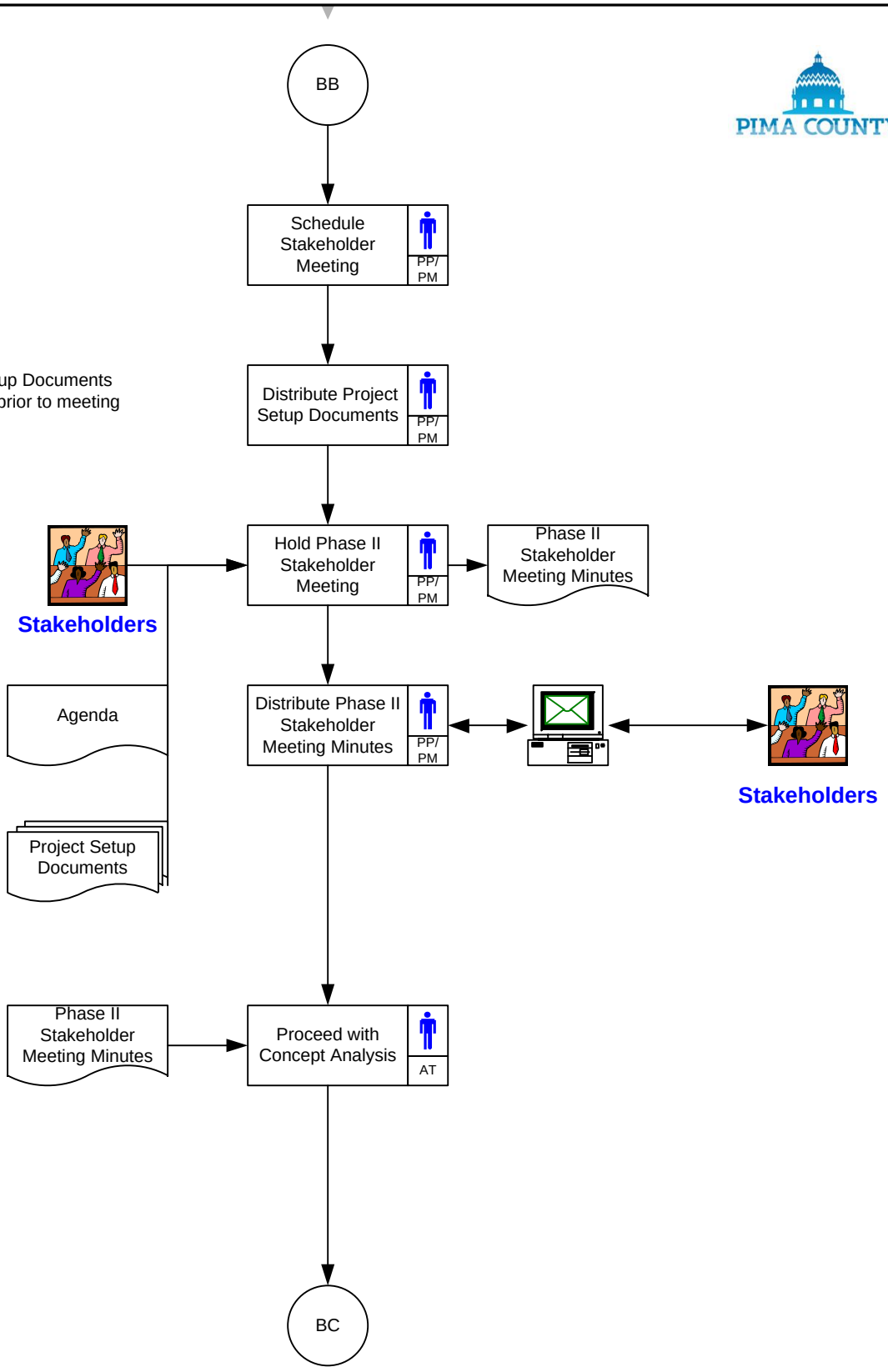
Stakeholder Meeting
Distribute Agenda & Project Setup Documents to stakeholders at least 1 week prior to meeting

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Stakeholder Review
Stakeholders have up to 2 business days to return comments on Phase II Stakeholder Meeting minutes to PP/PM

Concept Analysis
Examples of concept analysis reports are:
- Master Plan
- Location Study
- Route Study
- Schematic Design
- Watershed Study
- Alternatives Analysis

Communication with Stakeholders
Depending on the results of stakeholder meeting, additional communication with some stakeholders may be useful as Concept Analysis is being drafted.



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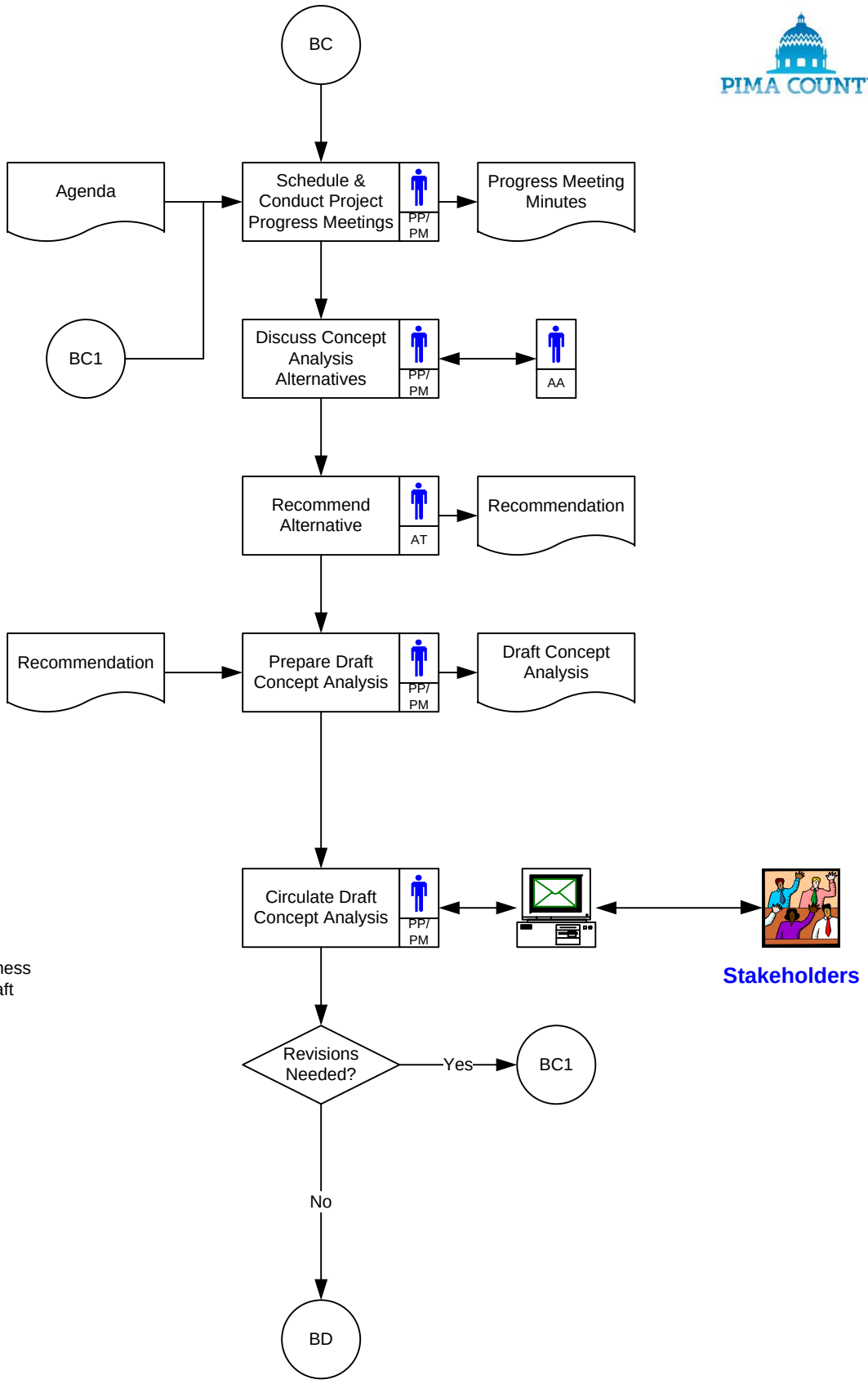
Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Date

Project Progress Meeting
Team should meet a minimum of once a month to discuss Risk Assessments, Schedule Modifications, Project Budget, Project Scope & Critical Path Issues

Stakeholder Review
Stakeholders have up to 2 business days to return comments on Draft Concept Analysis to PP/PM



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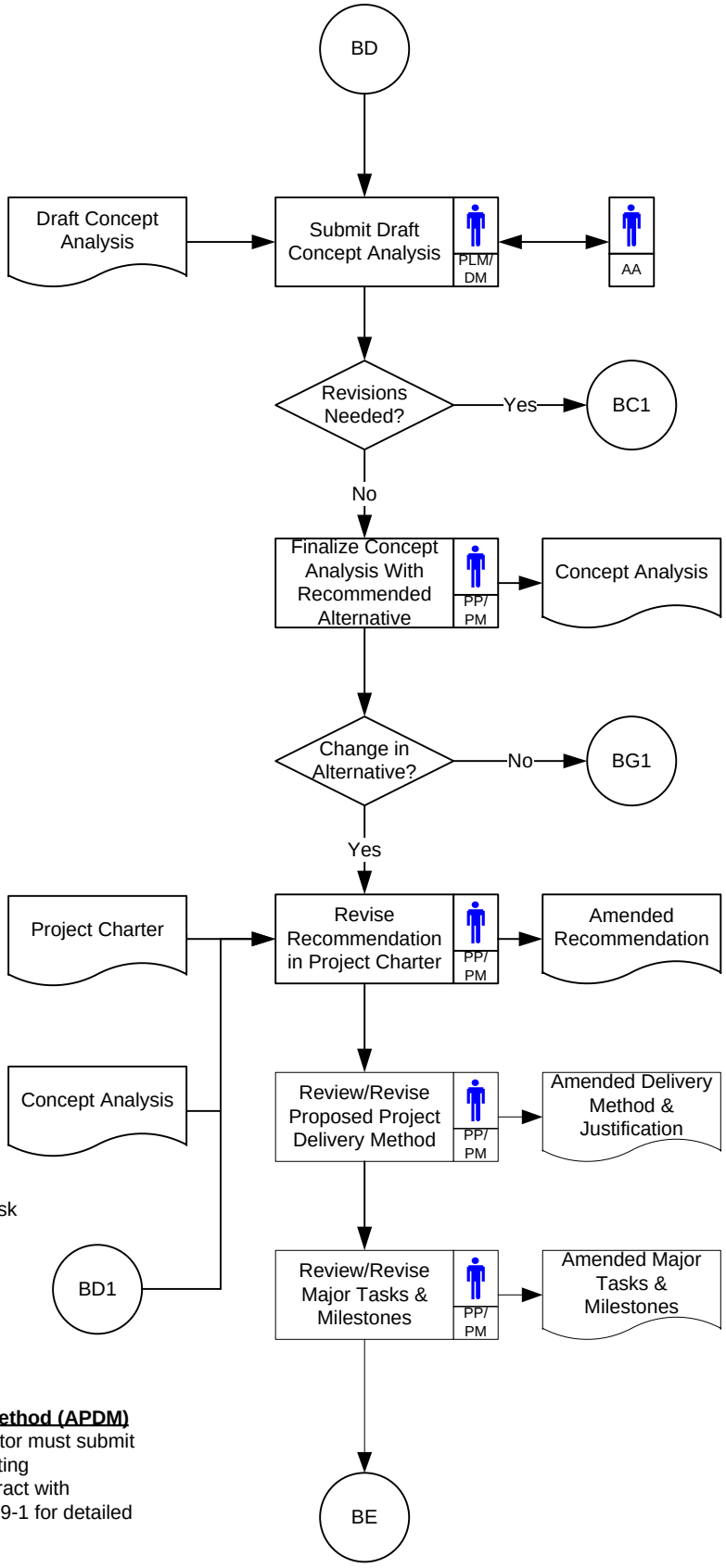

Change in Alternative
If alternative recommended in Concept Analysis differs in scope, schedule, and/or cost from alternative chosen in Project Charter as the preliminary basis for scope, schedule and cost, the Project Charter, Cost Model and/or MS Project Schedule must be amended.

Project Delivery Methods
Design/Bid/Build
Construction Management at Risk
Design/Build
Design/Build/Own/Operate
Job Order Contract

Alternative Project Delivery Method (APDM)
If an APDM is chosen, the Director must submit a memo to Procurement requesting establishment of an APDM contract with justification (See BOS Policy D29-1 for detailed instructions).

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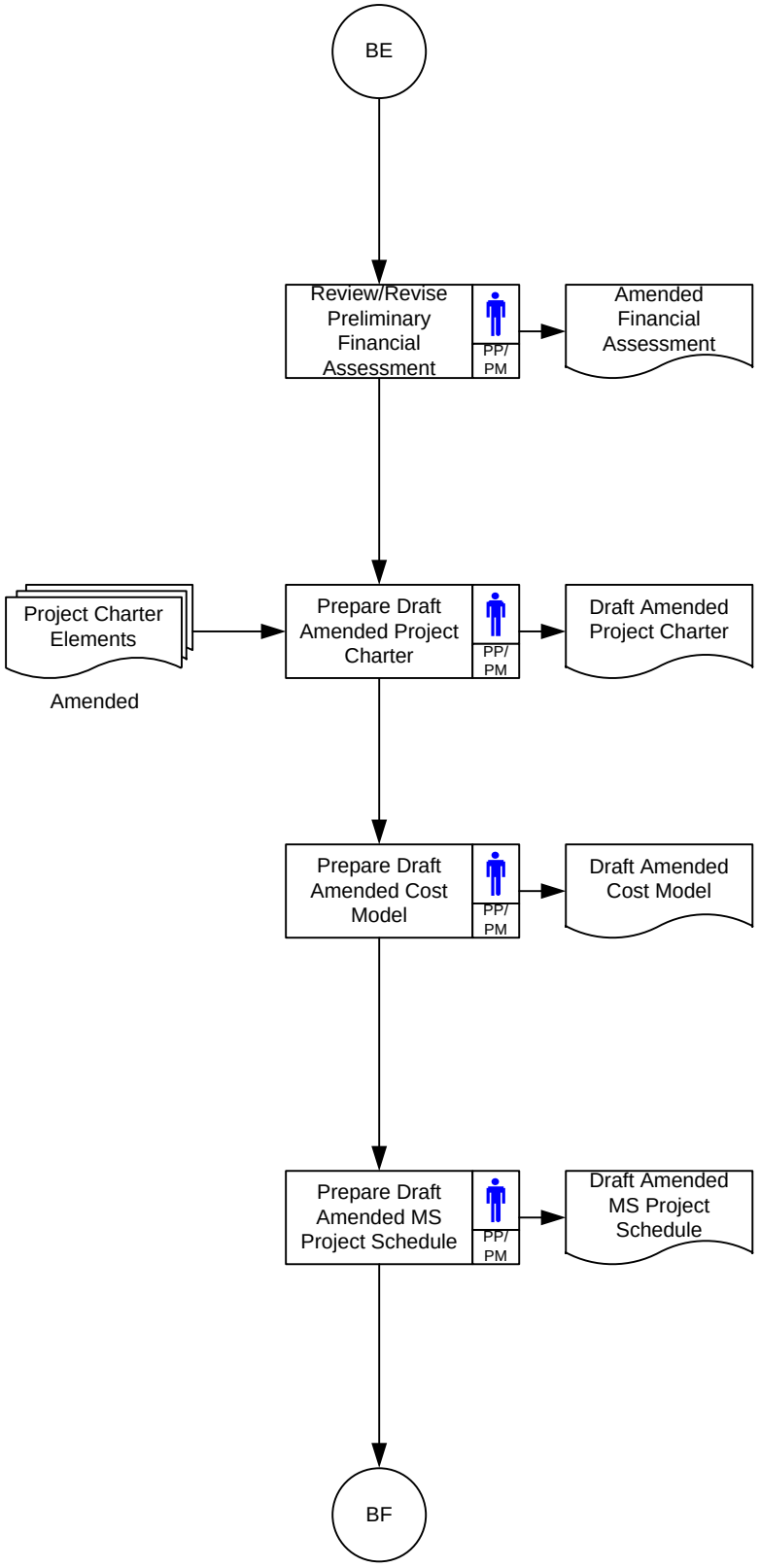

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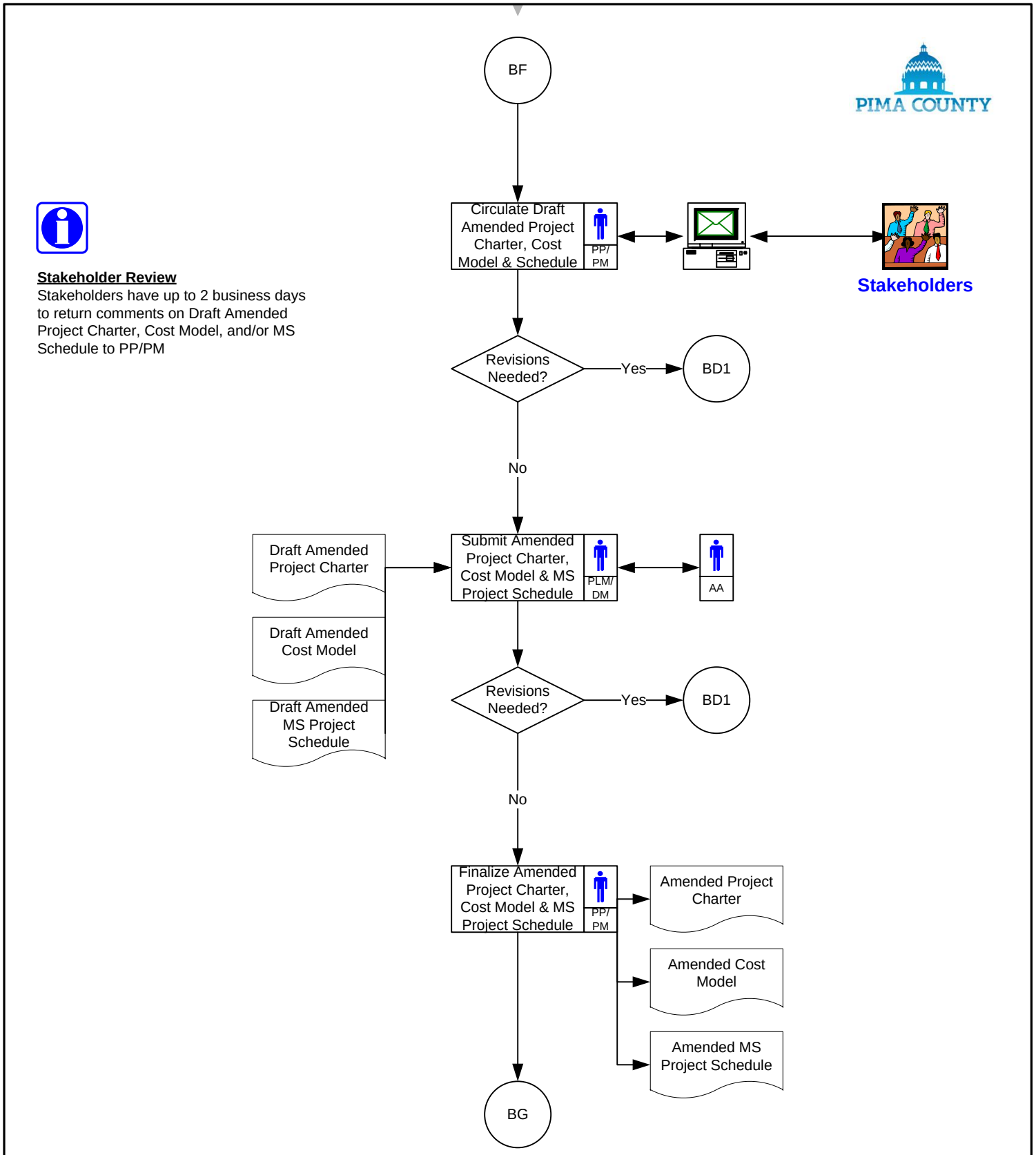

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase II** **Project Development**	Owner: PC Public Works

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Polygon for GIS
Be sure to answer the question on the agenda form indicating if the polygon has changed. If the potential area of disturbance for the project has changed, the location map attached to the agenda should show the revised area of disturbance.

Date

Gate Meeting
Calendar 2 weeks prior to Gate Meeting

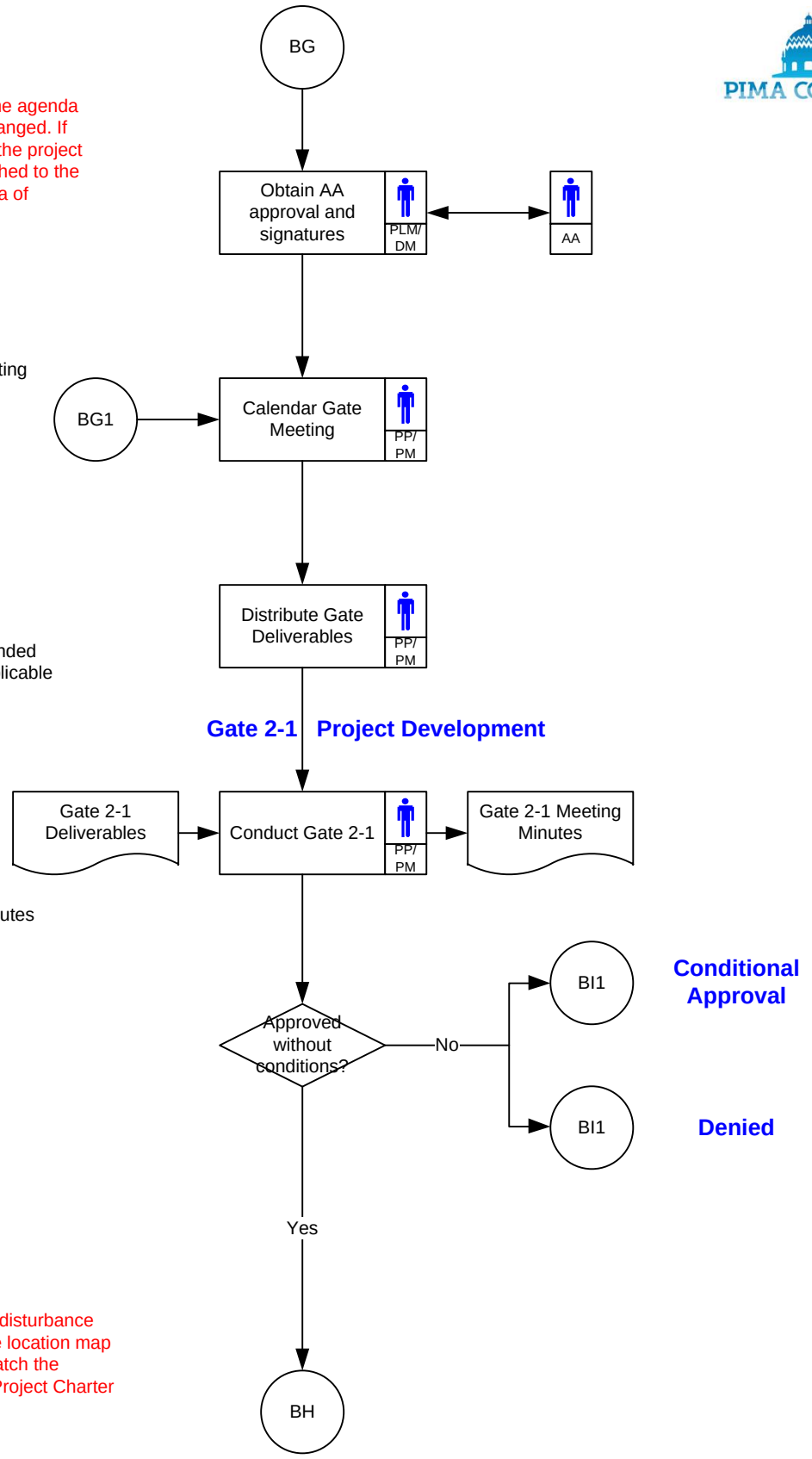
Date

Gate Deliverables
Distribute Gate Deliverables at least 1 week prior to gate meeting

Gate 2-1 Deliverables:
1) Approved Project Charter or Amended Project Charter, Whichever Is Applicable
2) Meeting Agenda
3) Gate Approval Form
4) Concept Analysis
5) Gate 1-1 Cost Model or Amended Cost Model, Whichever Is Applicable
6) Gate 1-1 MS Project Schedule or Amended MS Project Schedule, Whichever Is Applicable
7) Phase II Stakeholder Meeting Minutes
8) Other Materials as Requested

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Polygon for GIS
The polygon of the potential area of disturbance for the project must be shown on the location map attached to the agenda and must match the polygon as shown in the Amended Project Charter



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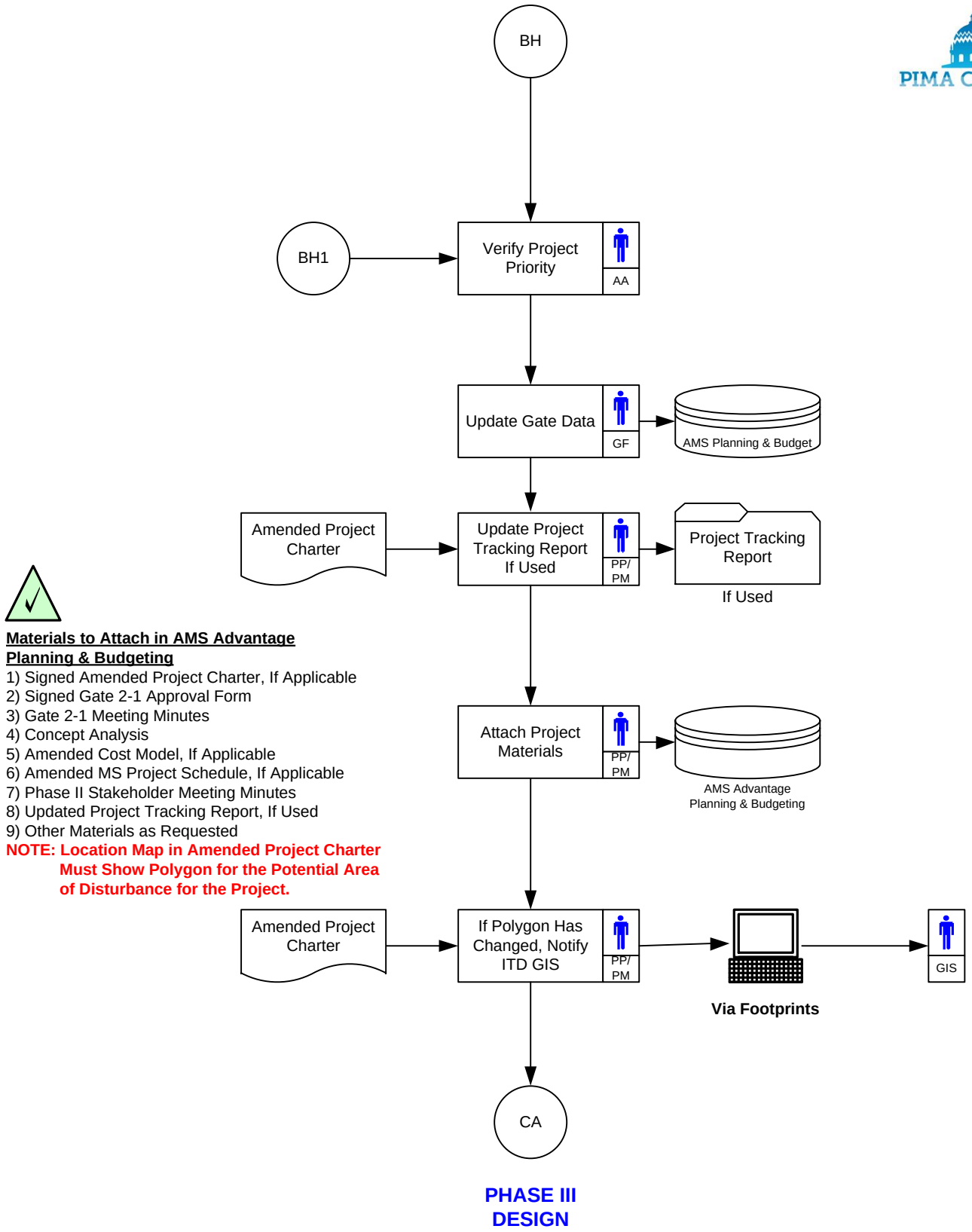

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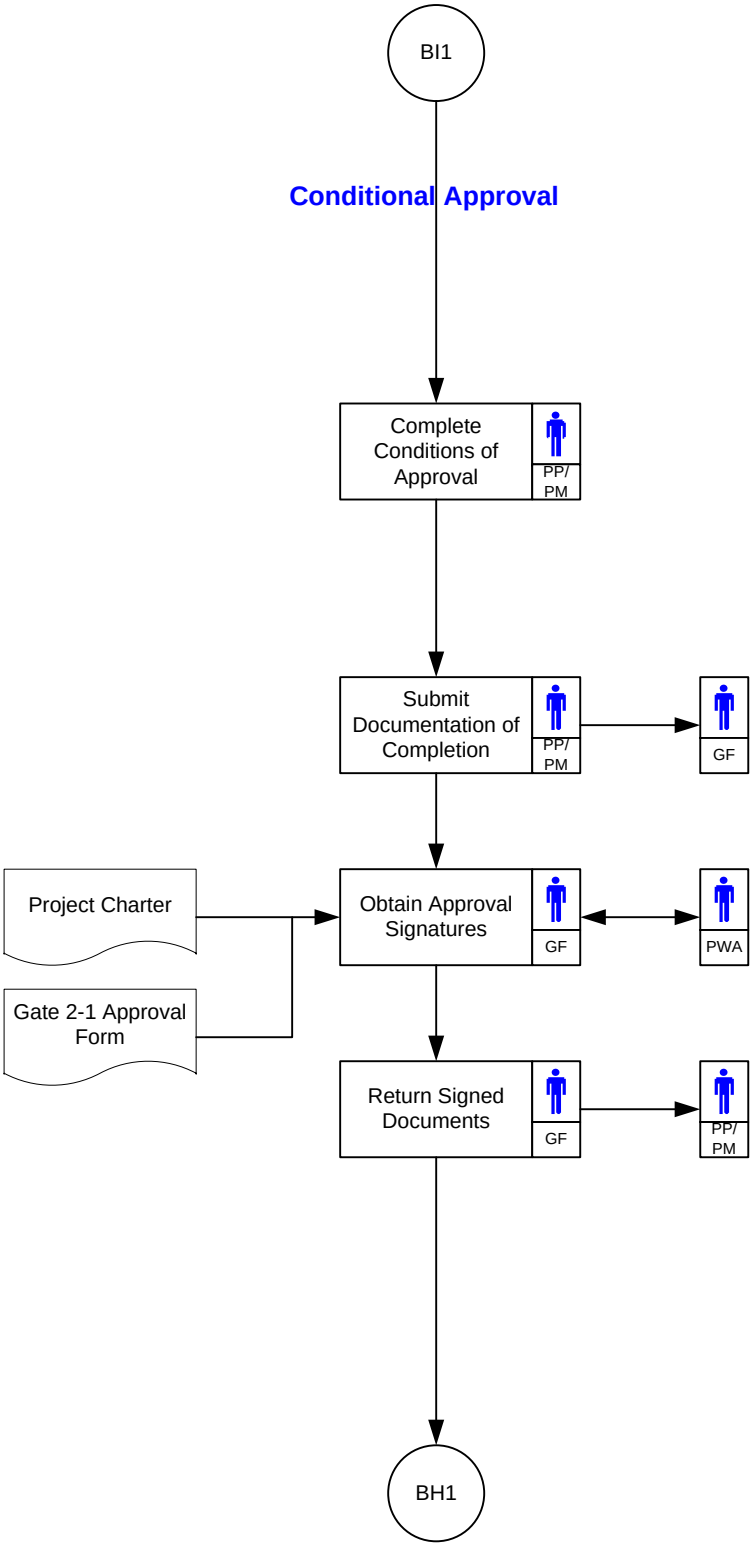

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase II** **Project Development**	Owner: PC Public Works

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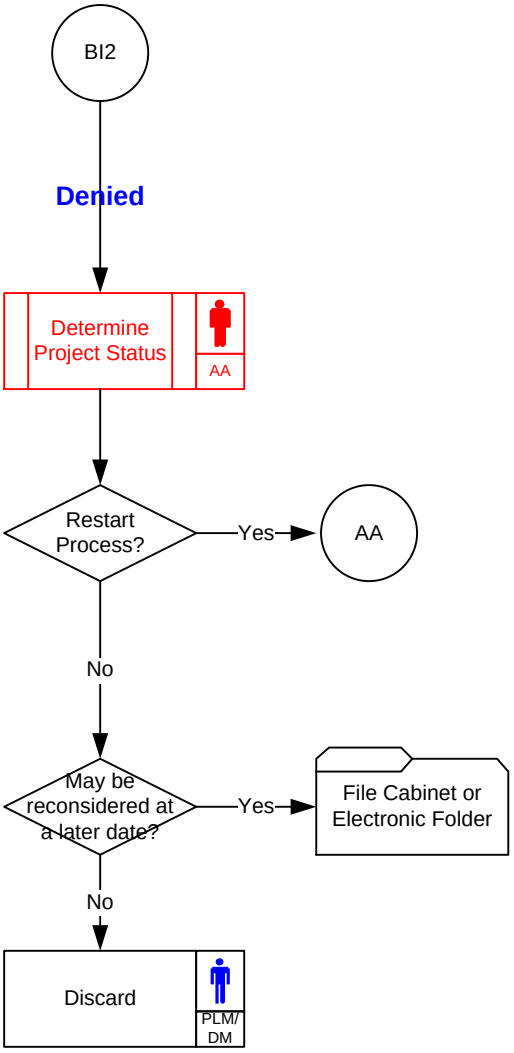
Project Status

The sponsoring department should make a determination whether the project is still active, on hold, or canceled because of a significant change in policy, scope, schedule or budget, etc.



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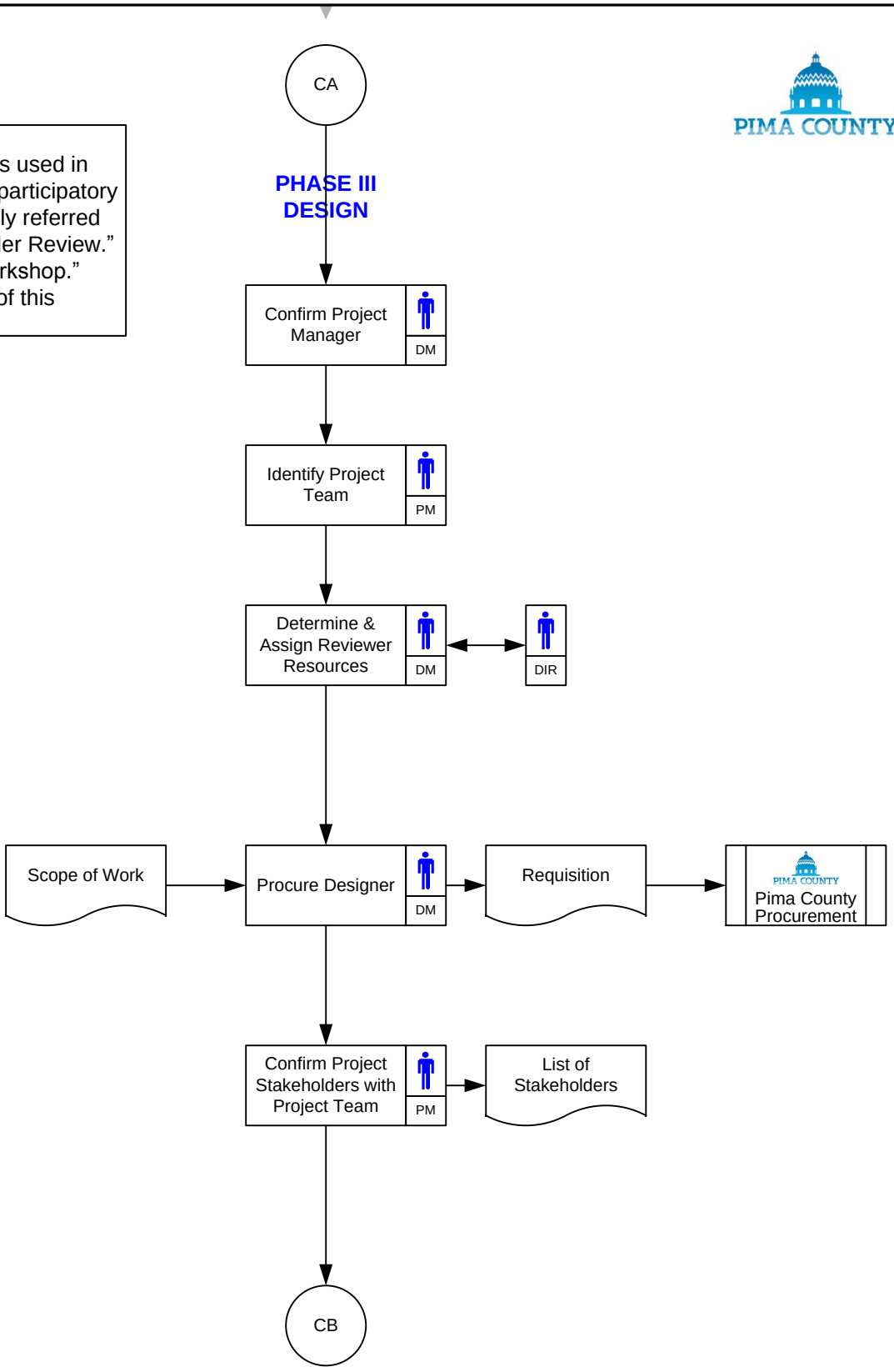
Review Process
The design review process used in this Manual is a two-step participatory review. Step 1 is commonly referred to as an "Over-the-Shoulder Review." Step 2 is a "Milestone Workshop." Refer to Exhibits Section of this Manual for Guidance.

Reviewer Resources
At times the Department Director will determine what reviewer resources are available

Procure Designer
Procurement of designer is dependent on delivery method chosen and should include Post-Design Services

Stakeholders
Stakeholders include, but are not limited to – Other County Departments, Other Jurisdictions, the Public, & Utility Companies
(Refer to Exhibits Section of this Manual for Guidelines)



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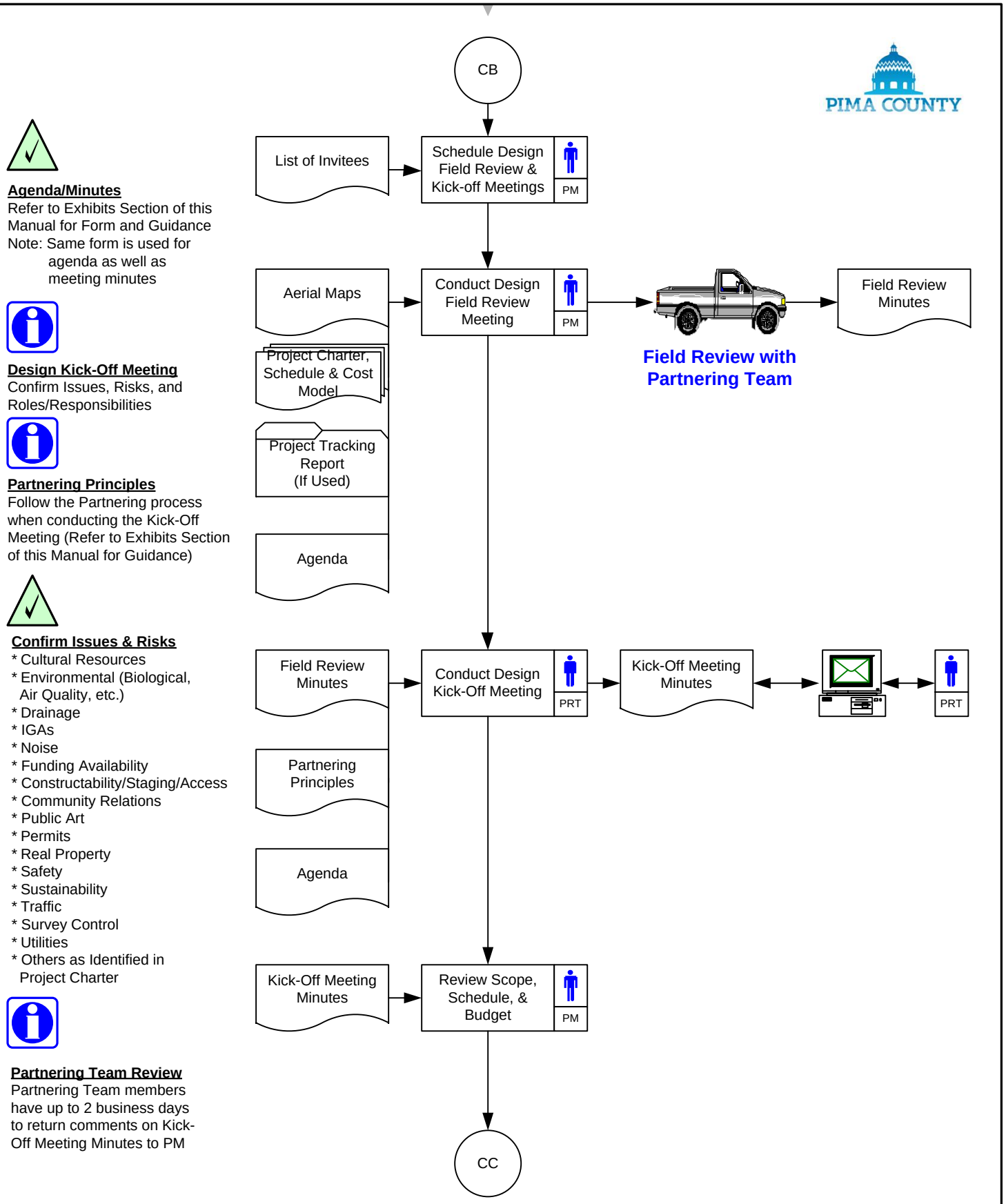

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Design Kick-Off Meeting
Confirm Issues, Risks, and Roles/Responsibilities

Partnering Principles
Follow the Partnering process when conducting the Kick-Off Meeting (Refer to Exhibits Section of this Manual for Guidance)

Confirm Issues & Risks
* Cultural Resources
* Environmental (Biological, Air Quality, etc.)
* Drainage
* IGAs
* Noise
* Funding Availability
* Constructability/Staging/Access
* Community Relations
* Public Art
* Permits
* Real Property
* Safety
* Sustainability
* Traffic
* Survey Control
* Utilities
* Others as Identified in Project Charter

Partnering Team Review
Partnering Team members have up to 2 business days to return comments on Kick-Off Meeting Minutes to PM

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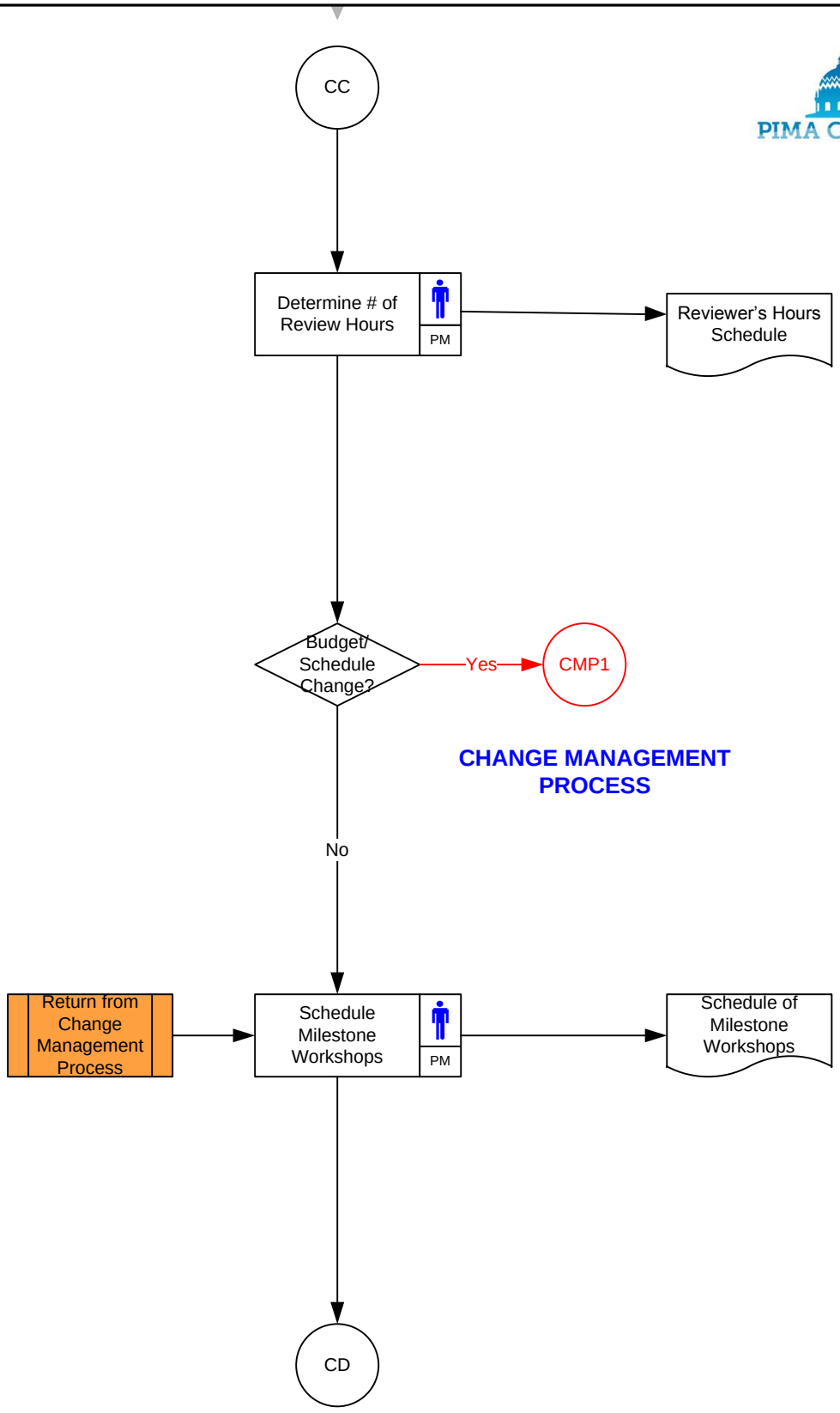
Partnering Team
Partnering Team should continually look for ways to improve the process through methods such as Value Engineering

Budget/Schedule Changes
The project should be checked periodically to determine if there are any budget/schedule changes

Milestone Workshops
Number of Milestone Workshops is dependent on the department requirements as well as the size and/or complexity of the project (Refer to Exhibits Section of this Manual for Guidance)



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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Reviewing Departments
* Cultural Resources
* Development Services
* Environmental Quality
* Other Agencies
* Other Jurisdictions
* Parks & Recreation
* Procurement
* Real Property
* Regional Flood Control District
* Regional Wastewater Reclamation
* Transportation
* Utility Companies
* Others Specific to Project

Date

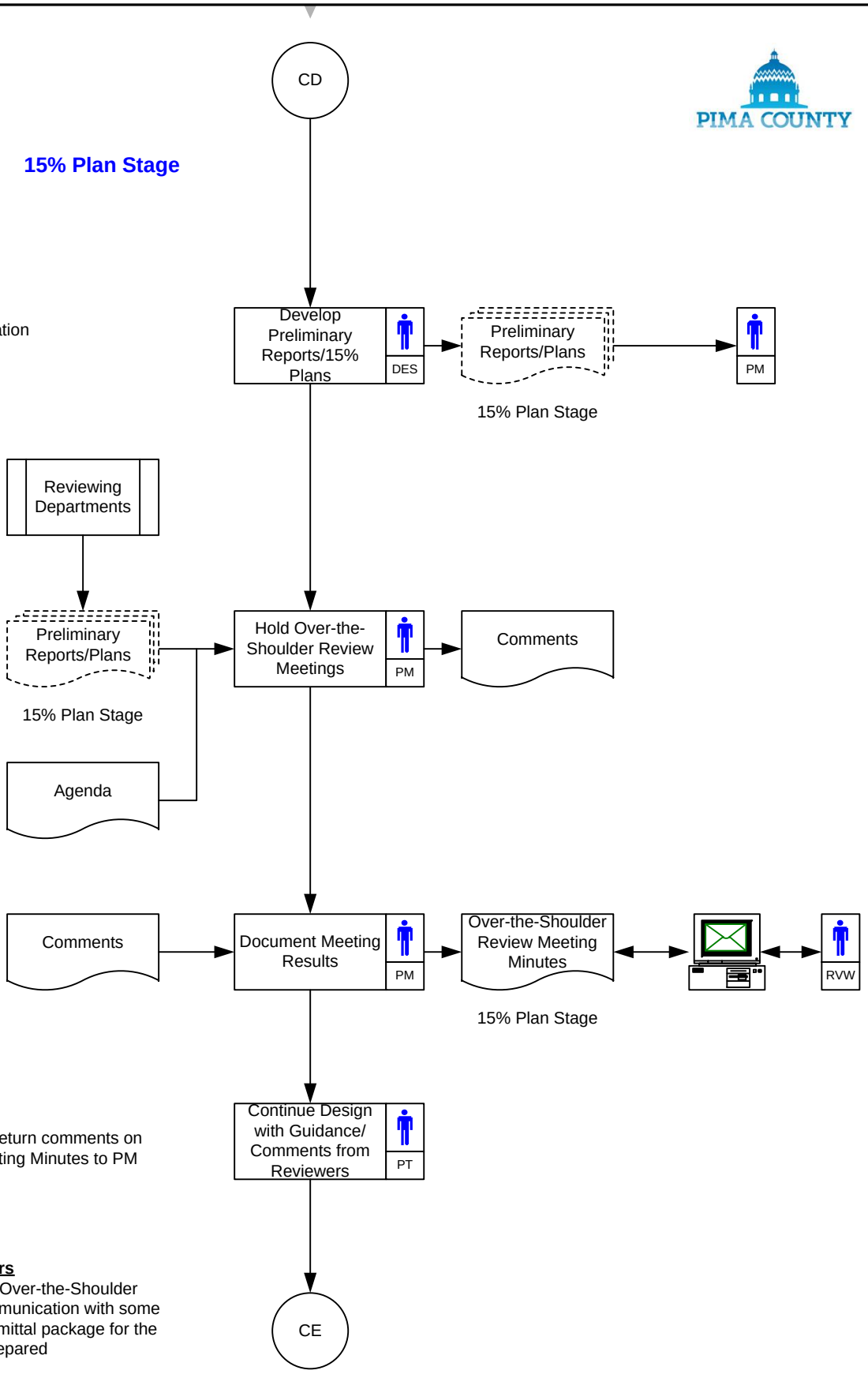
Note
Project Managers should regularly schedule progress meetings every 2-4 weeks with the "Project Management Team" to discuss issues in order to be proactive rather than reactive

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Meeting Minutes
Minutes should include reviewer comments.

Reviewers
Have up to 2 business days to return comments on Over-the-Shoulder Review Meeting Minutes to PM

Communication with Reviewers
Depending on the results of the Over-the-Shoulder Review meeting, additional communication with some reviewers may be useful as submittal package for the Milestone Workshop is being prepared



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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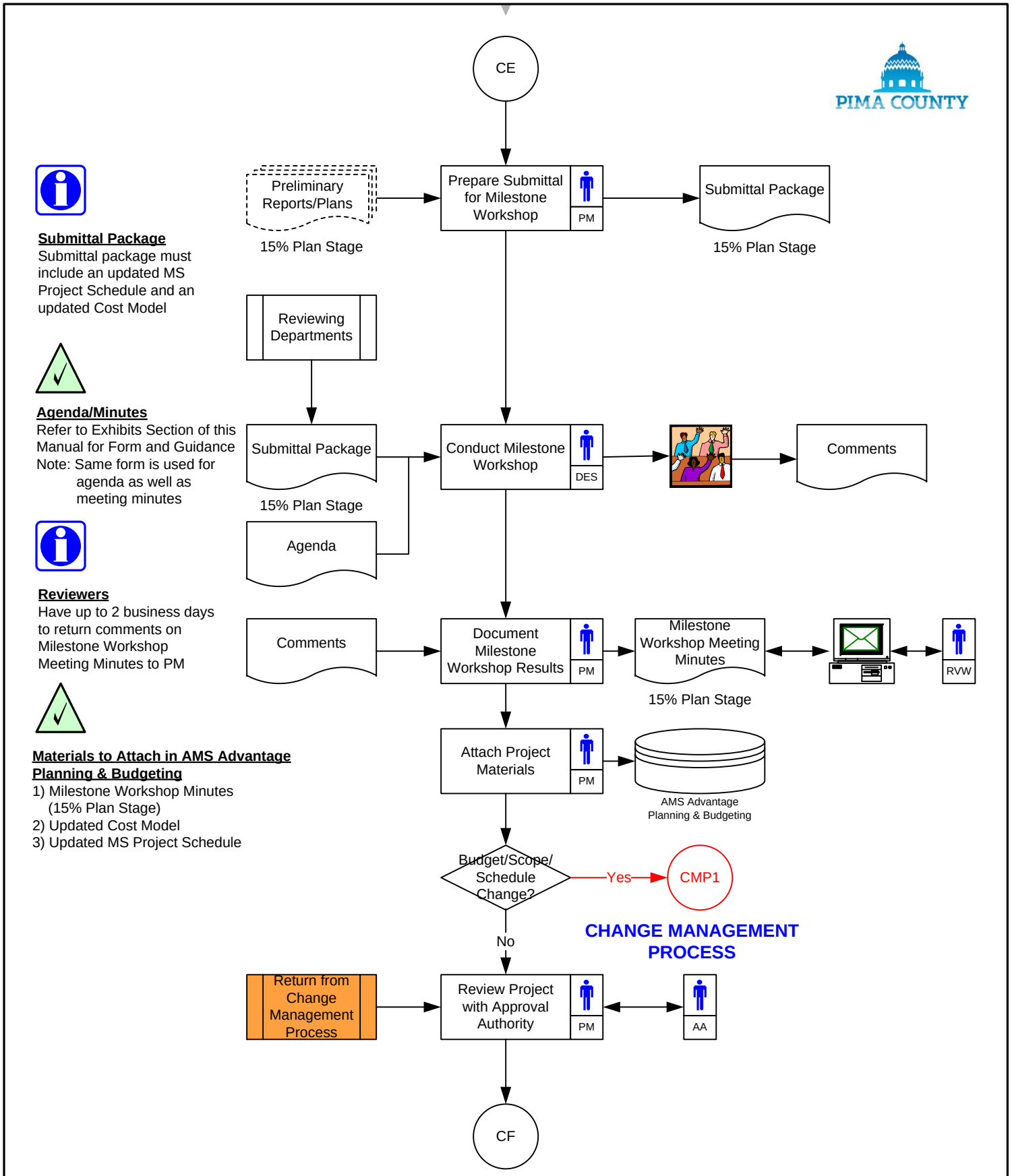

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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Project Status

The sponsoring department should make a determination whether the project is still active, on hold, or canceled because of a significant change in policy, scope, schedule or budget, etc.

30% Plan Stage

This phase follows the same review process as the 15% phase, but in more detail

Note

Project Managers should regularly schedule progress meetings every 2-4 weeks with the "Project Management Team" to discuss issues in order to be proactive rather than reactive

30% Plan Stage Recommended Requirements

* 30% Plans, Specs & Estimate
* Biological Report
* Capacity Reports
* Geotechnical Report
* Commissioning Plan
* Cultural Resources Inventory
* Phase 1 Environmental Report
* Flow Management Plan
* Formal Value Engineering Review
* Hydrology Report
* Native Plant Survey
* Legal Descriptions/Depictions
* Right of Entry
  * Ground Disturbing
  * Non-Ground Disturbing
* Right of Way Plans/Parcel Table
* Condemnation Resolution
* Survey
* Sustainability Issues
* Utilities Relocation Plan

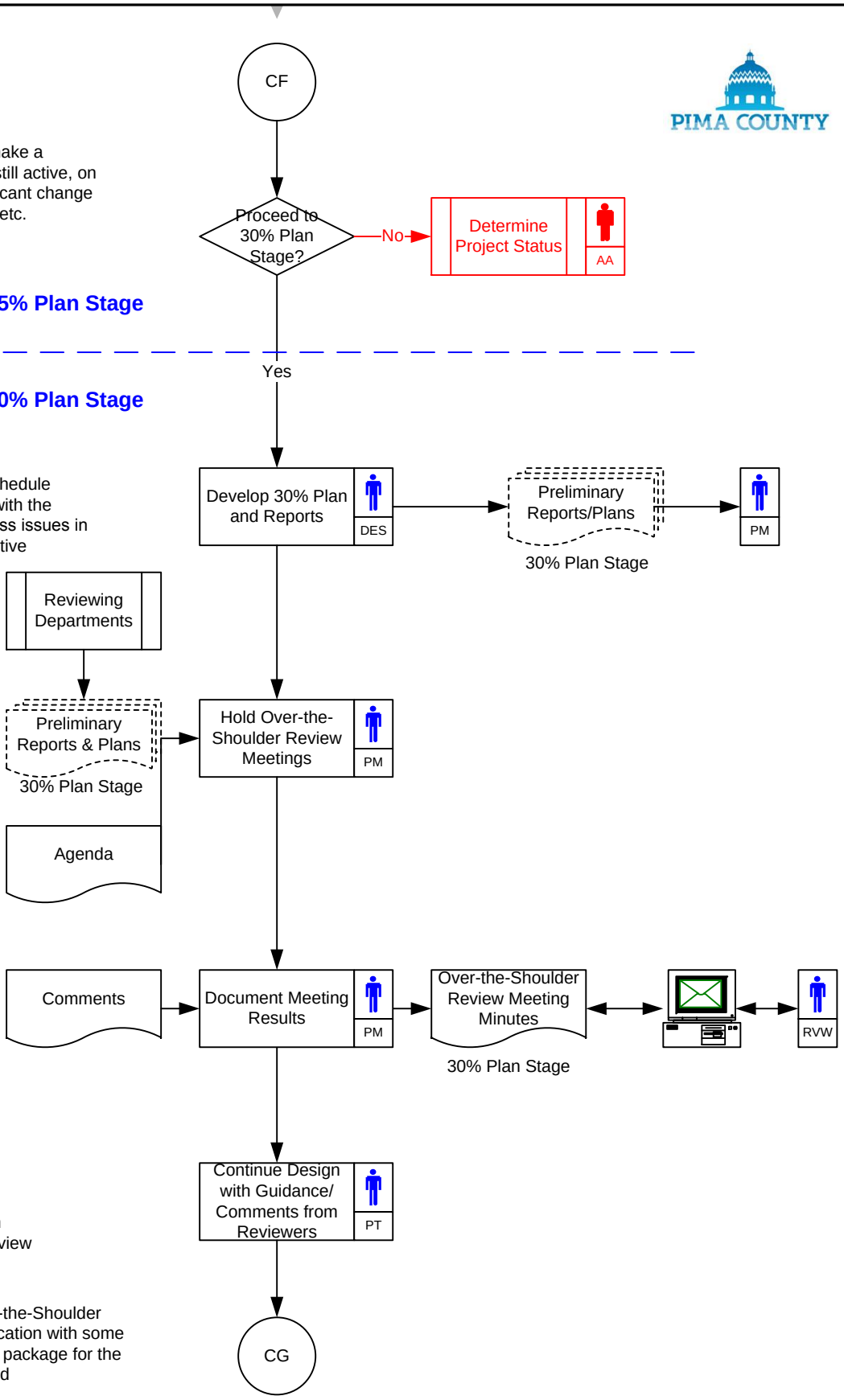
(Other Documents Per Department Requirements)

Reviewers

Have up to 2 business days to return comments on Over-the-Shoulder Review Meeting Minutes to PM

Communication with Reviewers

Depending on the results of the Over-the-Shoulder Review meeting, additional communication with some reviewers may be useful as submittal package for the Milestone Workshop is being prepared



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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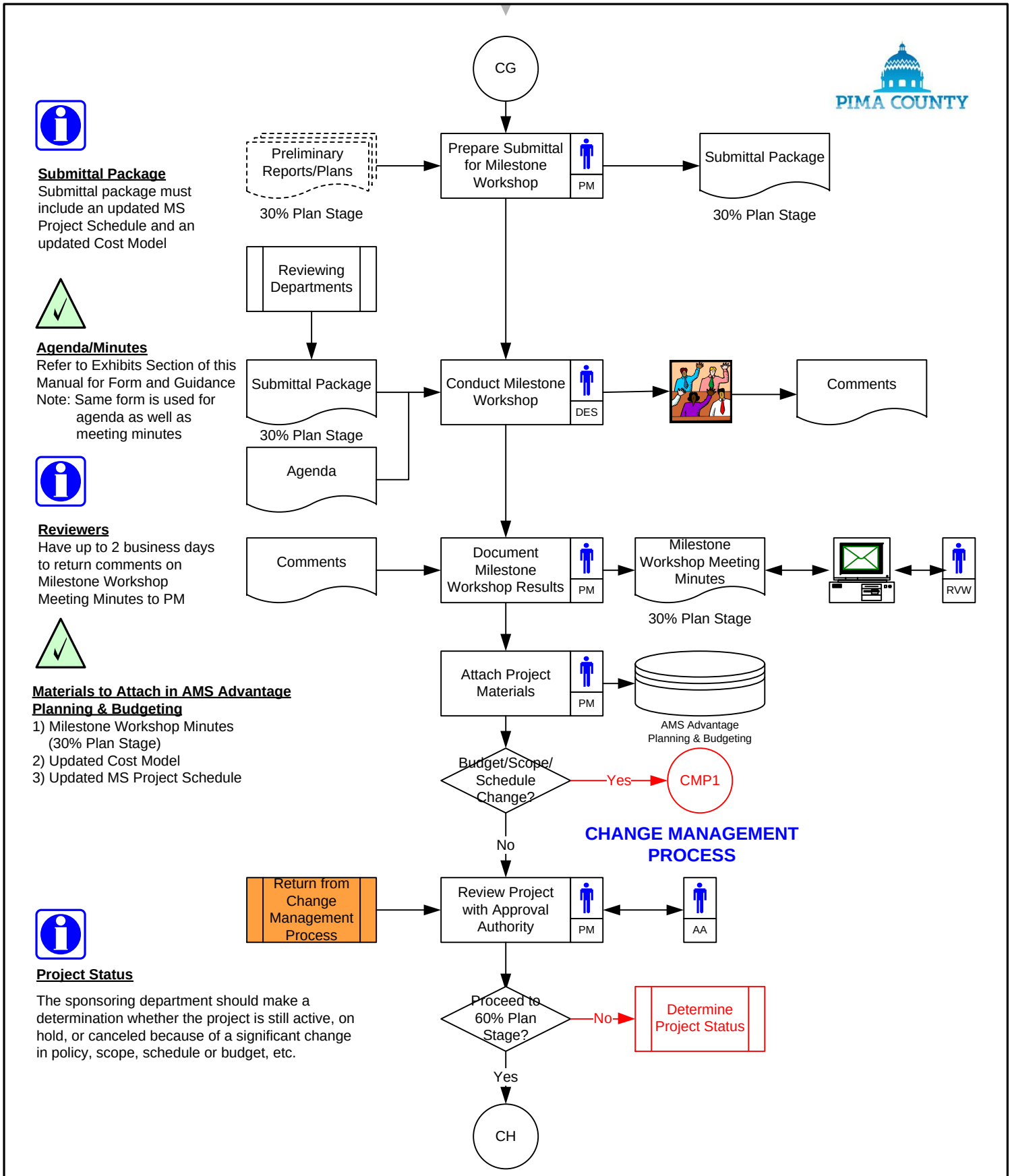

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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Polygon for GIS
Be sure to answer the question on the agenda form indicating if the polygon has changed. If the potential area of disturbance for the project has changed, the location map attached to the agenda should show the revised area of disturbance. If gate is not required, be sure to include location map with updated polygon to materials attached in AMS Advantage.

Date

Gate Meeting
Calendar 2 weeks prior to Gate Meeting

Date

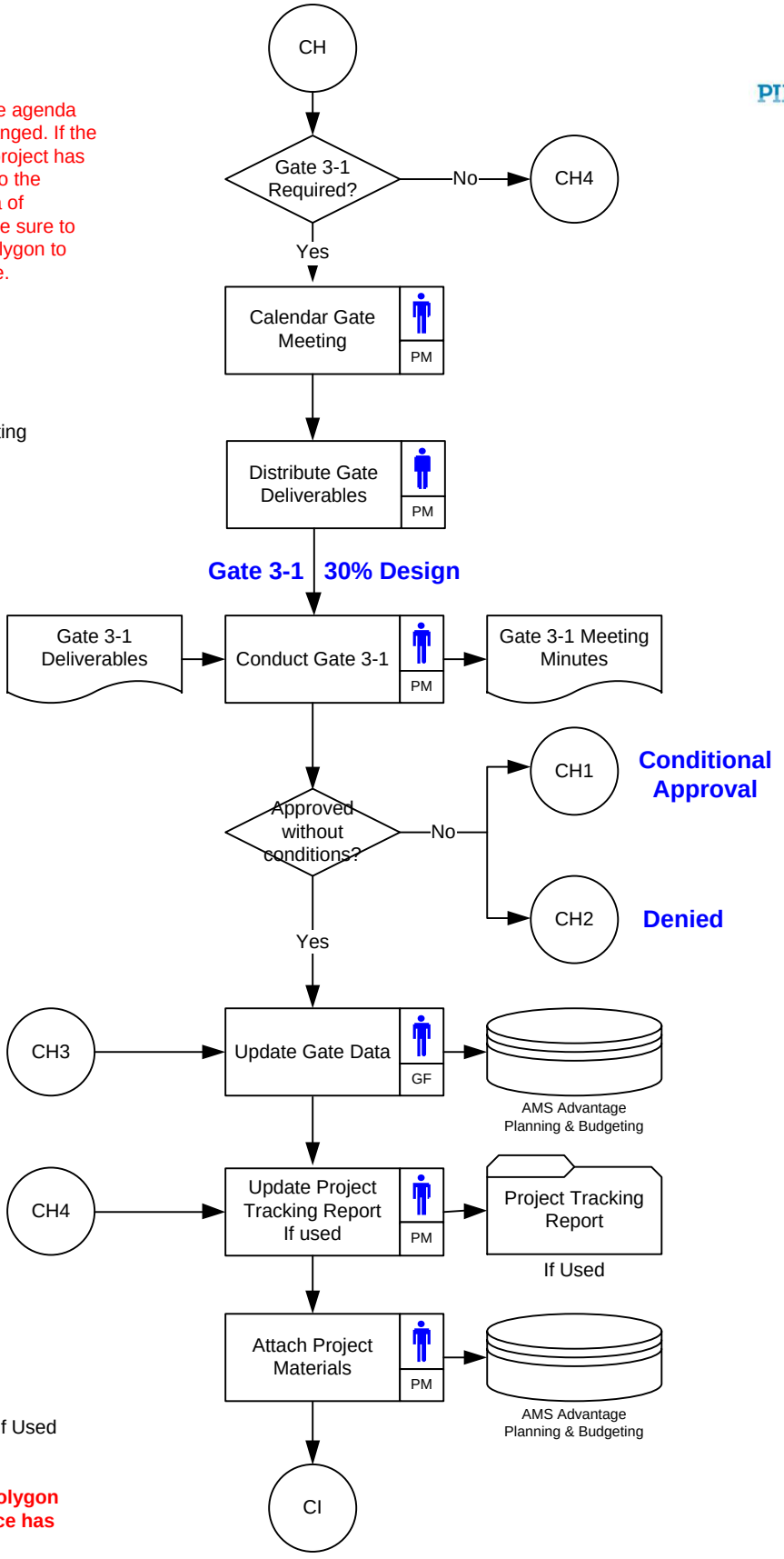
Gate Deliverables
Distribute Gate Deliverables at least 1 week prior to gate meeting

Gate 3-1 Deliverables
1) Meeting Agenda
2) Gate Approval Form
3) Updated Cost Model
4) Updated MS Project Schedule
5) Milestone Workshop Minutes
6) Other Materials as Requested

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Materials to Attach in AMS Advantage Planning & Budgeting
1) Signed Gate 3-1 Approval Form, If Applicable
2) Gate 3-1 Meeting Minutes, If Applicable
3) Updated Cost Model, If Applicable
4) Updated MS Project Schedule, If Applicable
5) Updated Project Tracking Report, If Used
6) Other Materials as Requested

Note: If no gate is required, attach location map with updated polygon if potential area of disturbance has changed.



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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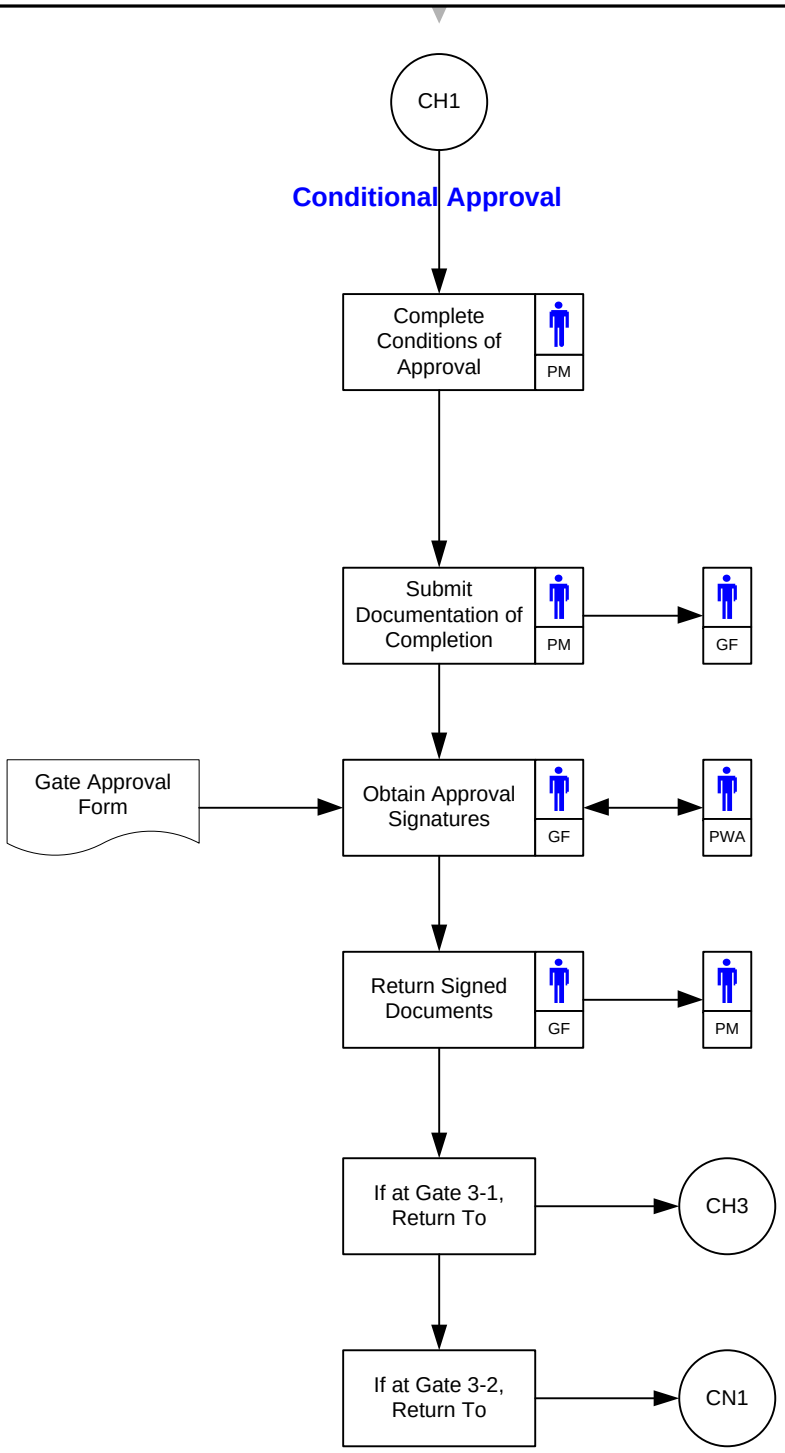

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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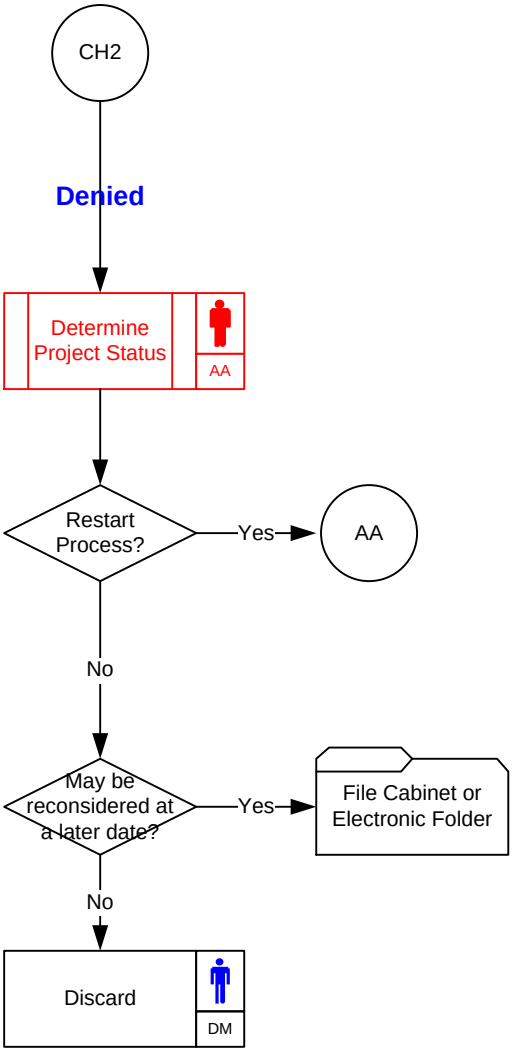
Project Status

The sponsoring department should make a determination whether the project is still active, on hold, or canceled because of a significant change in policy, scope, schedule or budget, etc.



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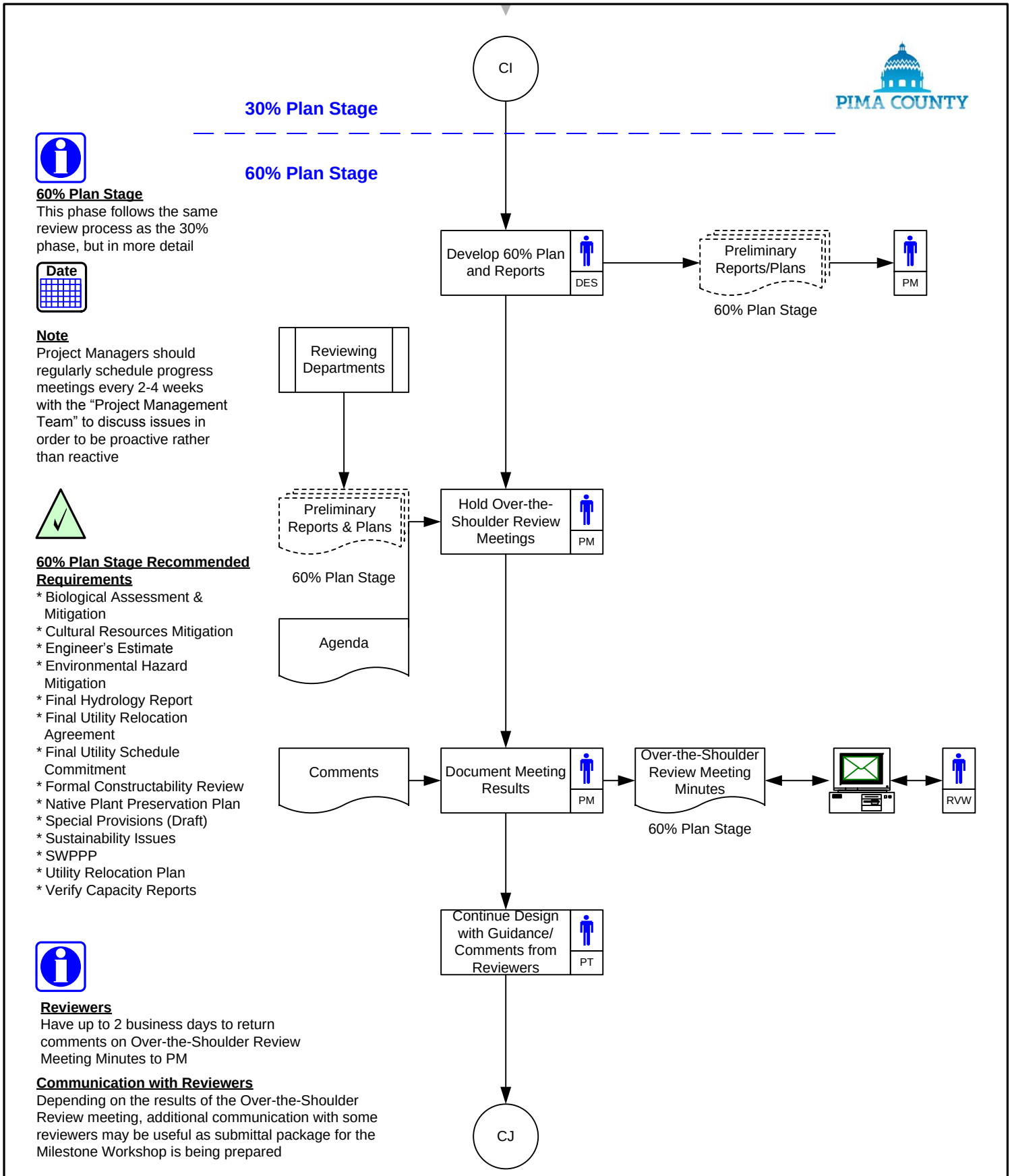

60% Plan Stage
This phase follows the same review process as the 30% phase, but in more detail

Date

Note
Project Managers should regularly schedule progress meetings every 2-4 weeks with the "Project Management Team" to discuss issues in order to be proactive rather than reactive

60% Plan Stage Recommended Requirements
* Biological Assessment & Mitigation
* Cultural Resources Mitigation
* Engineer's Estimate
* Environmental Hazard Mitigation
* Final Hydrology Report
* Final Utility Relocation Agreement
* Final Utility Schedule Commitment
* Formal Constructability Review
* Native Plant Preservation Plan
* Special Provisions (Draft)
* Sustainability Issues
* SWPPP
* Utility Relocation Plan
* Verify Capacity Reports

Reviewers
Have up to 2 business days to return comments on Over-the-Shoulder Review Meeting Minutes to PM

Communication with Reviewers
Depending on the results of the Over-the-Shoulder Review meeting, additional communication with some reviewers may be useful as submittal package for the Milestone Workshop is being prepared

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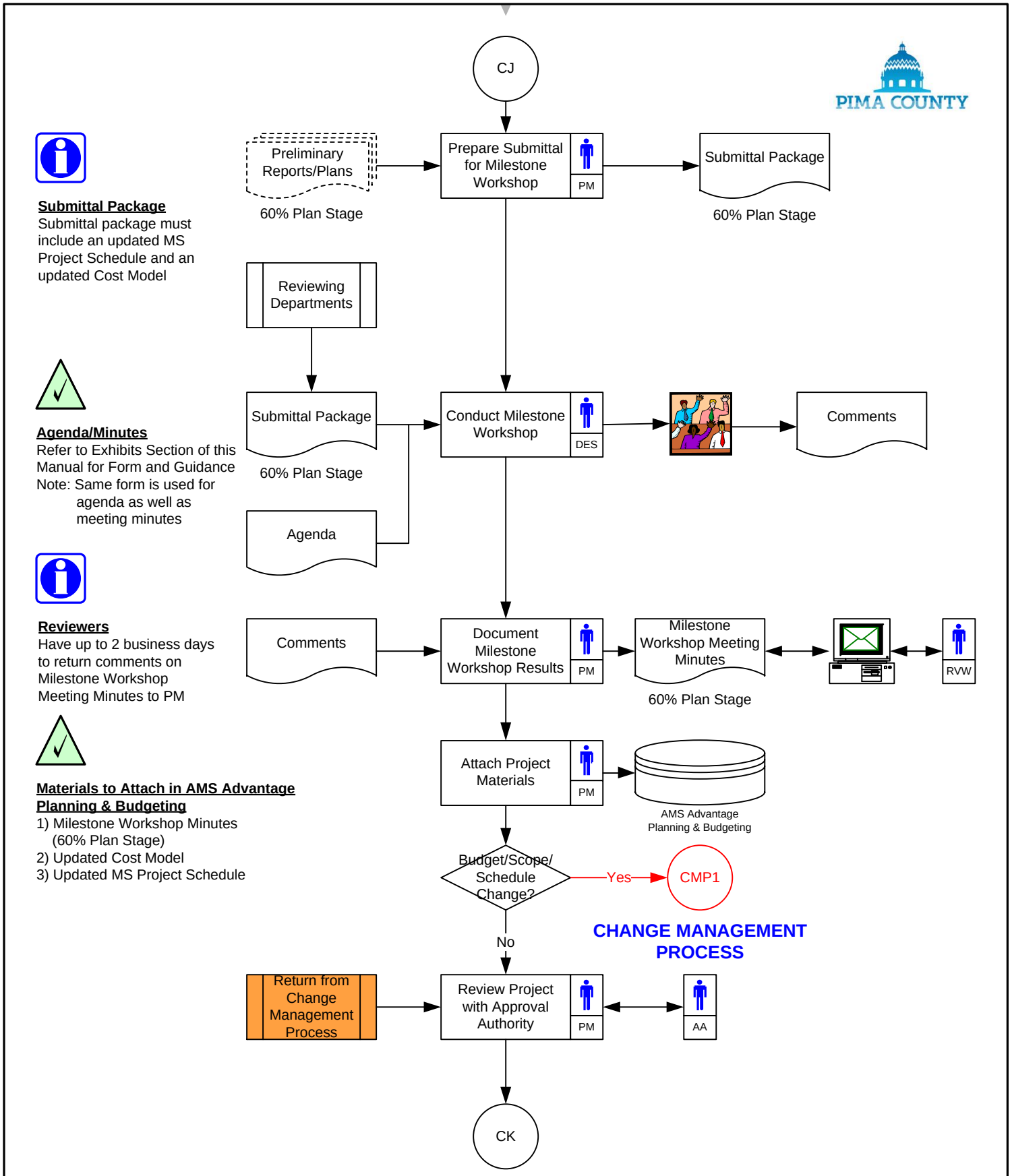

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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Project Status
The sponsoring department should make a determination whether the project is still active, on hold, or canceled because of a significant change in policy, scope, schedule or budget, etc.

Permits
* Construction
* Development Services
* Environmental
* Regional Flood Control District
* Regional Waste Reclamation
* Tucson Water

90% Plan Stage
This phase follows the same process as the 60% phase but tasks must be completed at this stage. Construction documents are prepared in this stage & quality control is performed. Everything must be in order at the end of this phase for submittal to Procurement.

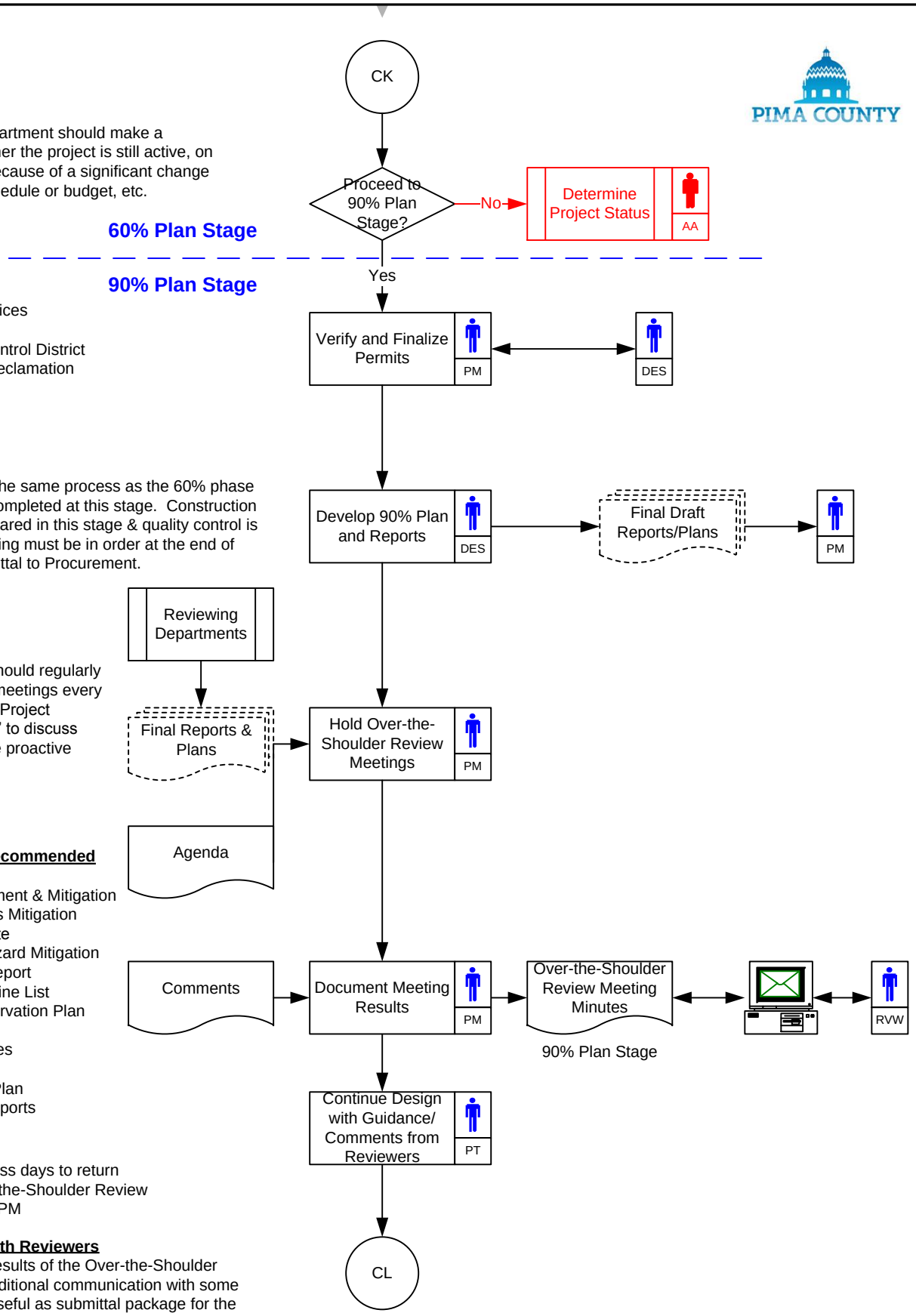
Date

Note
Project Managers should regularly schedule progress meetings every 2-4 weeks with the "Project Management Team" to discuss issues in order to be proactive rather than reactive

90% Plan Stage Recommended Requirements
* Biological Assessment & Mitigation
* Cultural Resources Mitigation
* Engineer's Estimate
* Environmental Hazard Mitigation
* Final Hydrology Report
* Land Acquisition Line List
* Native Plant Preservation Plan
* Special Provisions
* Sustainability Issues
* SWPPP
* Utility Relocation Plan
* Verify Capacity Reports

Reviewers
Have up to 2 business days to return comments on Over-the-Shoulder Review Meeting Minutes to PM

Communication with Reviewers
Depending on the results of the Over-the-Shoulder Review meeting, additional communication with some reviewers may be useful as submittal package for the Milestone Workshop is being prepared



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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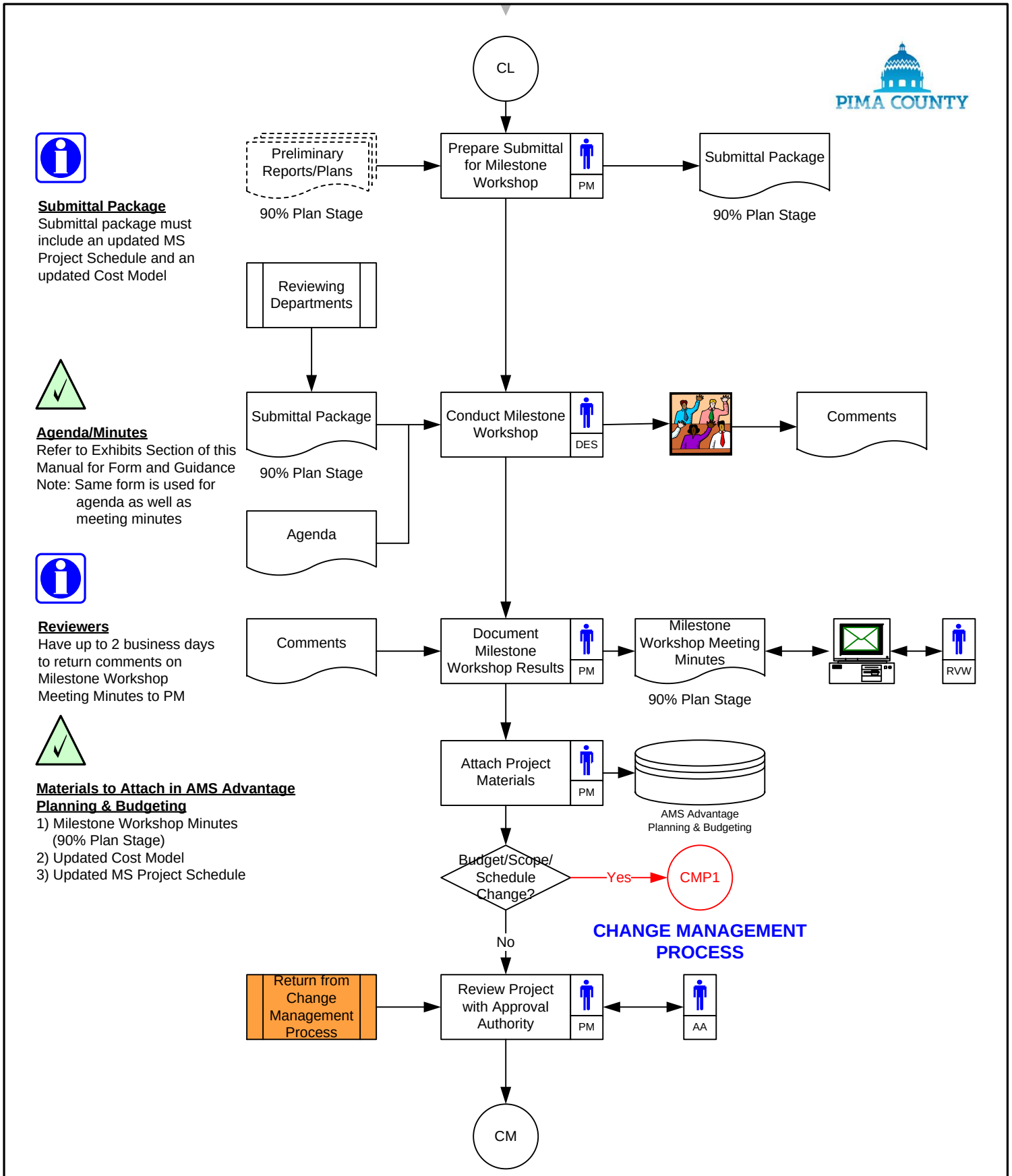

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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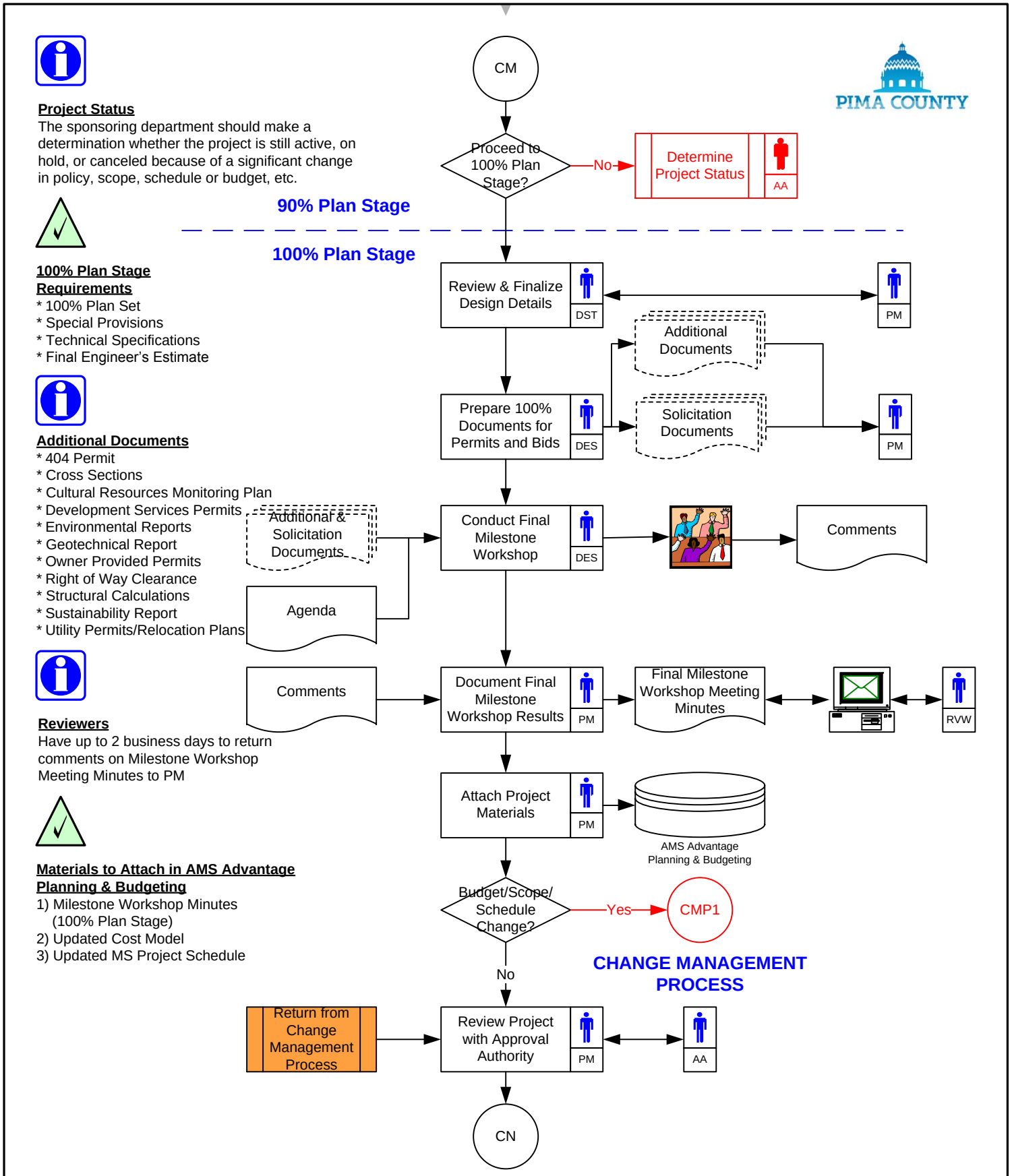

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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Polygon for GIS
Be sure to answer the question on the agenda form indicating if the polygon has changed. If the potential area of disturbance for the project has changed, the location map attached to the agenda should show the revised area of disturbance. If gate is not required, be sure to include location map with updated polygon to materials attached in AMS Advantage.

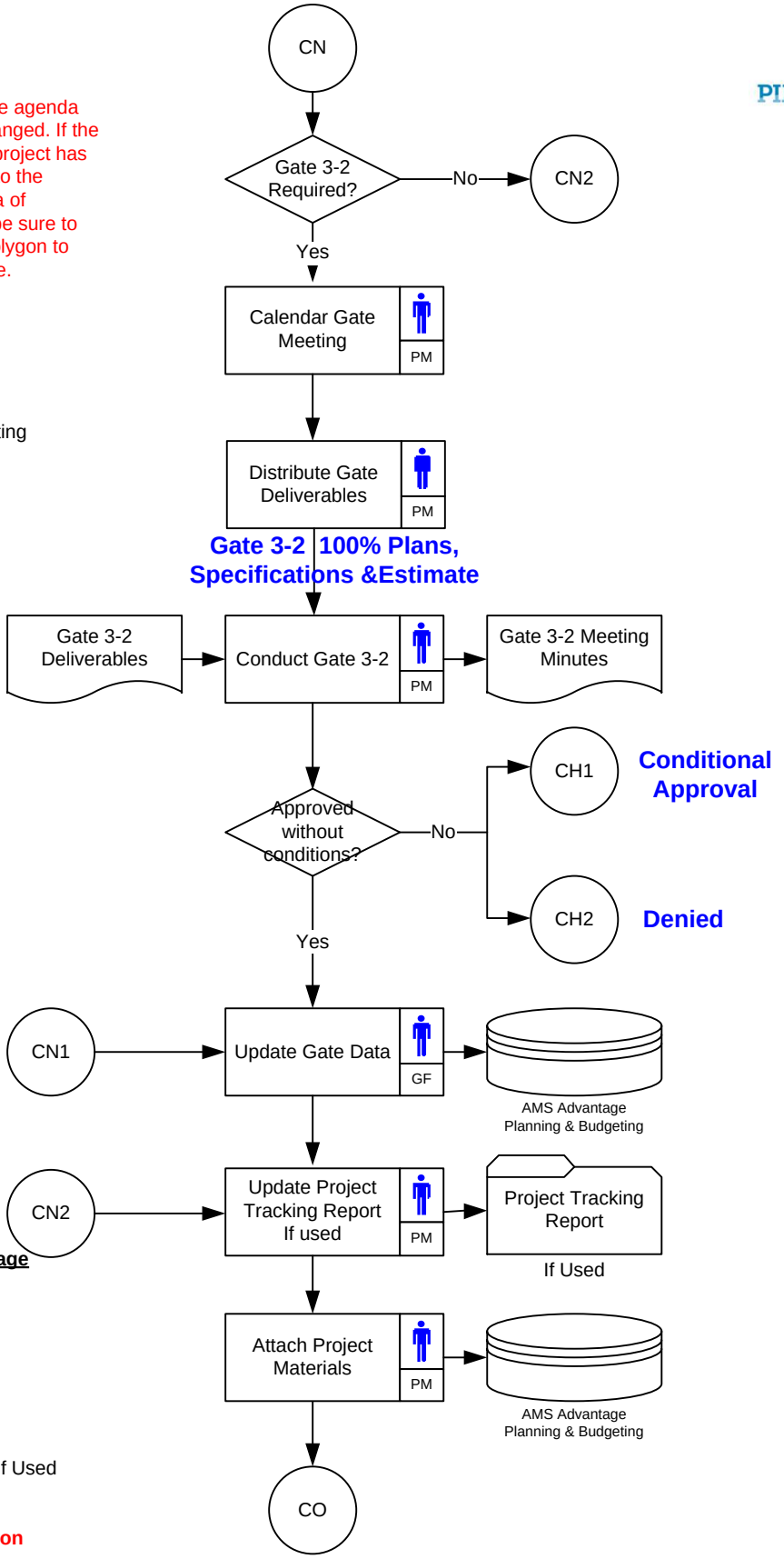
Gate Meeting
Calendar 2 weeks prior to Gate Meeting

Gate Deliverables
Distribute Gate Deliverables at least 1 week prior to gate meeting

Gate 3-2 Deliverables
1) Meeting Agenda
2) Gate Approval Form
3) Updated Cost Model
4) Updated MS Project Schedule
5) Milestone Workshop Minutes
5) Other Materials as Requested

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Materials to Attach in AMS Advantage Planning & Budgeting
1) Signed Gate 3-2 Approval Form, If Applicable
2) Gate 3-2 Meeting Minutes, If Applicable
3) Updated Cost Model, If Applicable
4) Updated MS Project Schedule, If Applicable
5) Updated Project Tracking Report, If Used
6) Other Materials as Requested
Note: If no gate is required, attach location map with final polygon



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase III Design**	Owner: PC Public Works

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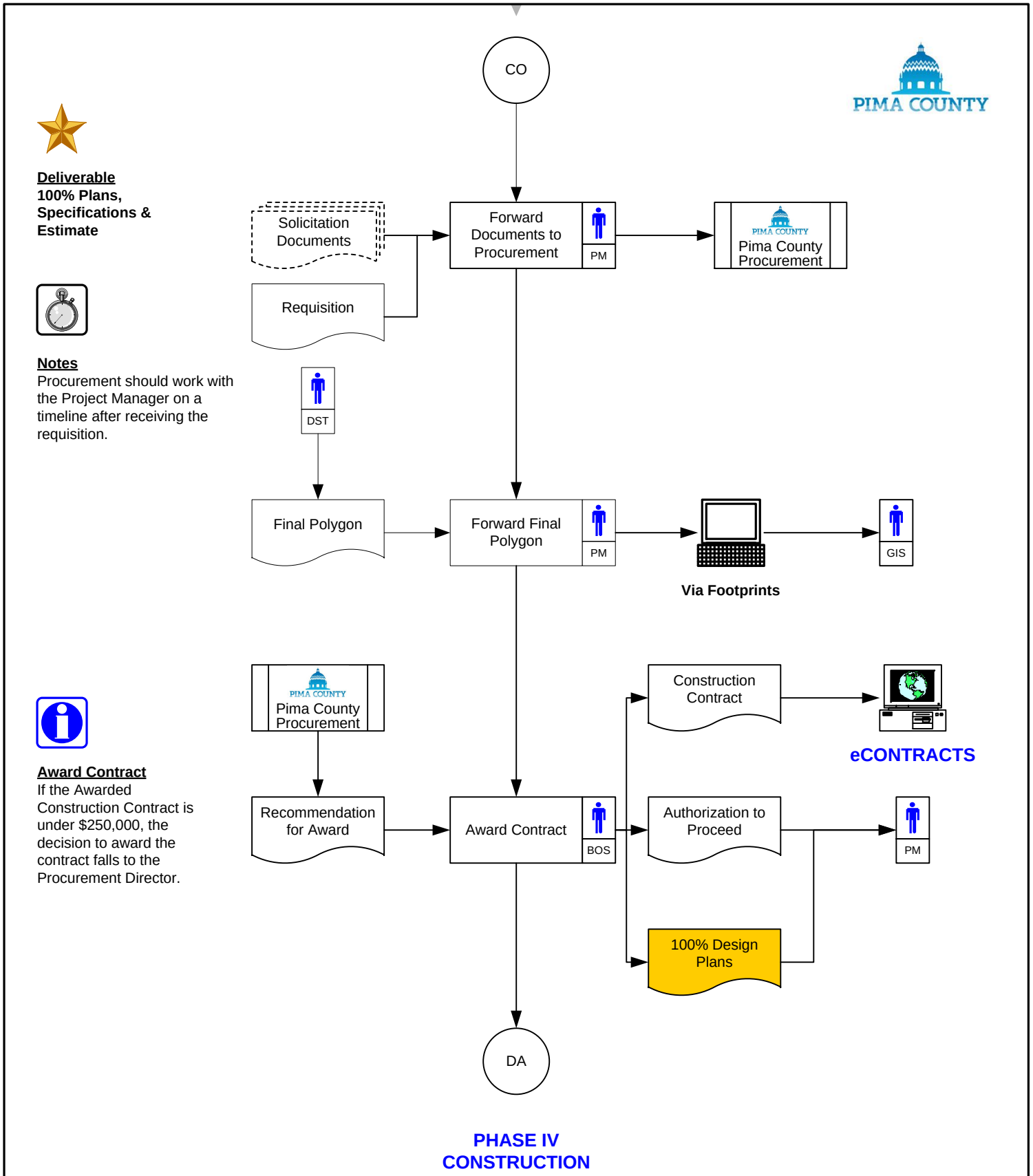

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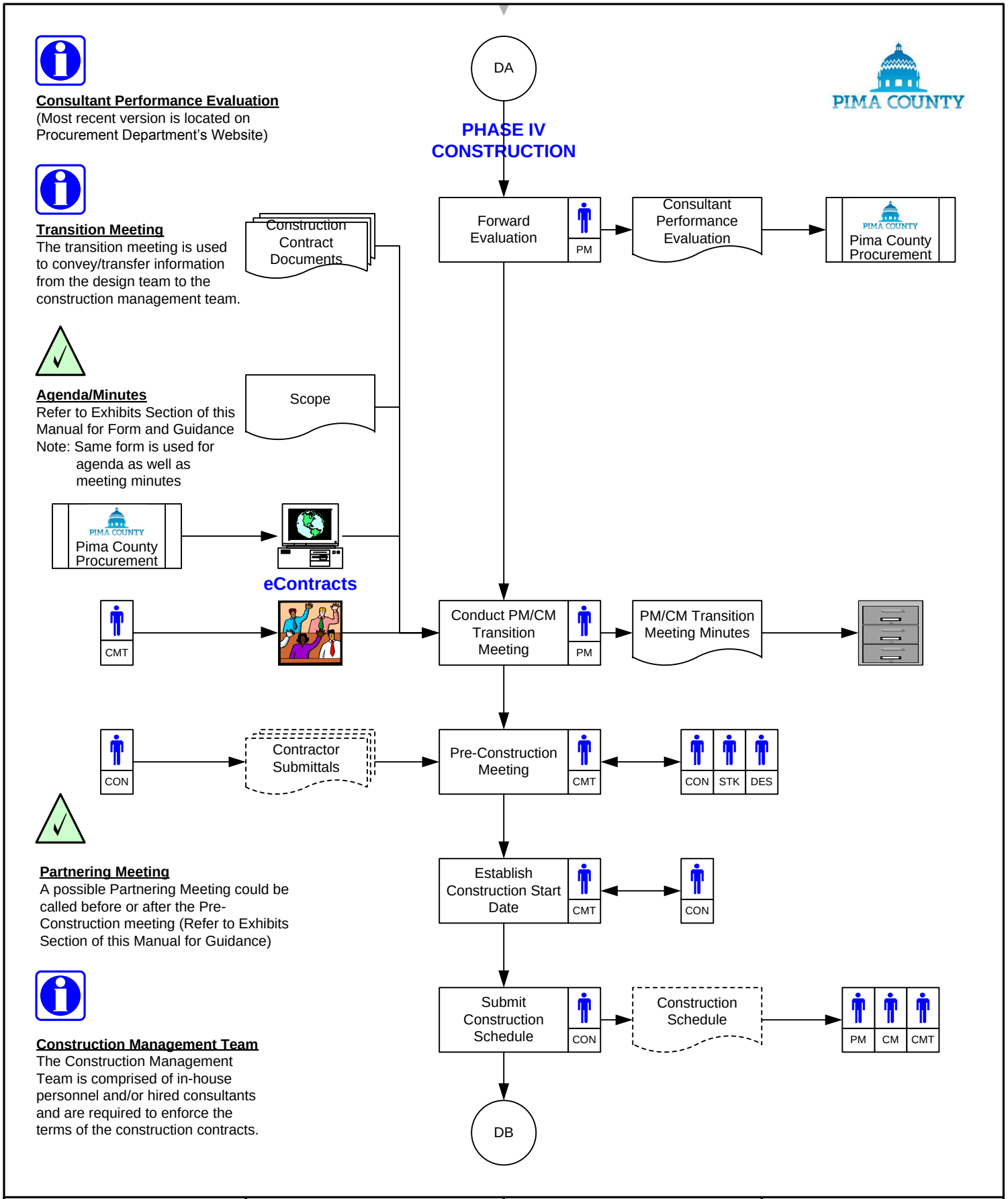

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase IV Construction**	Owner: PC Public Works

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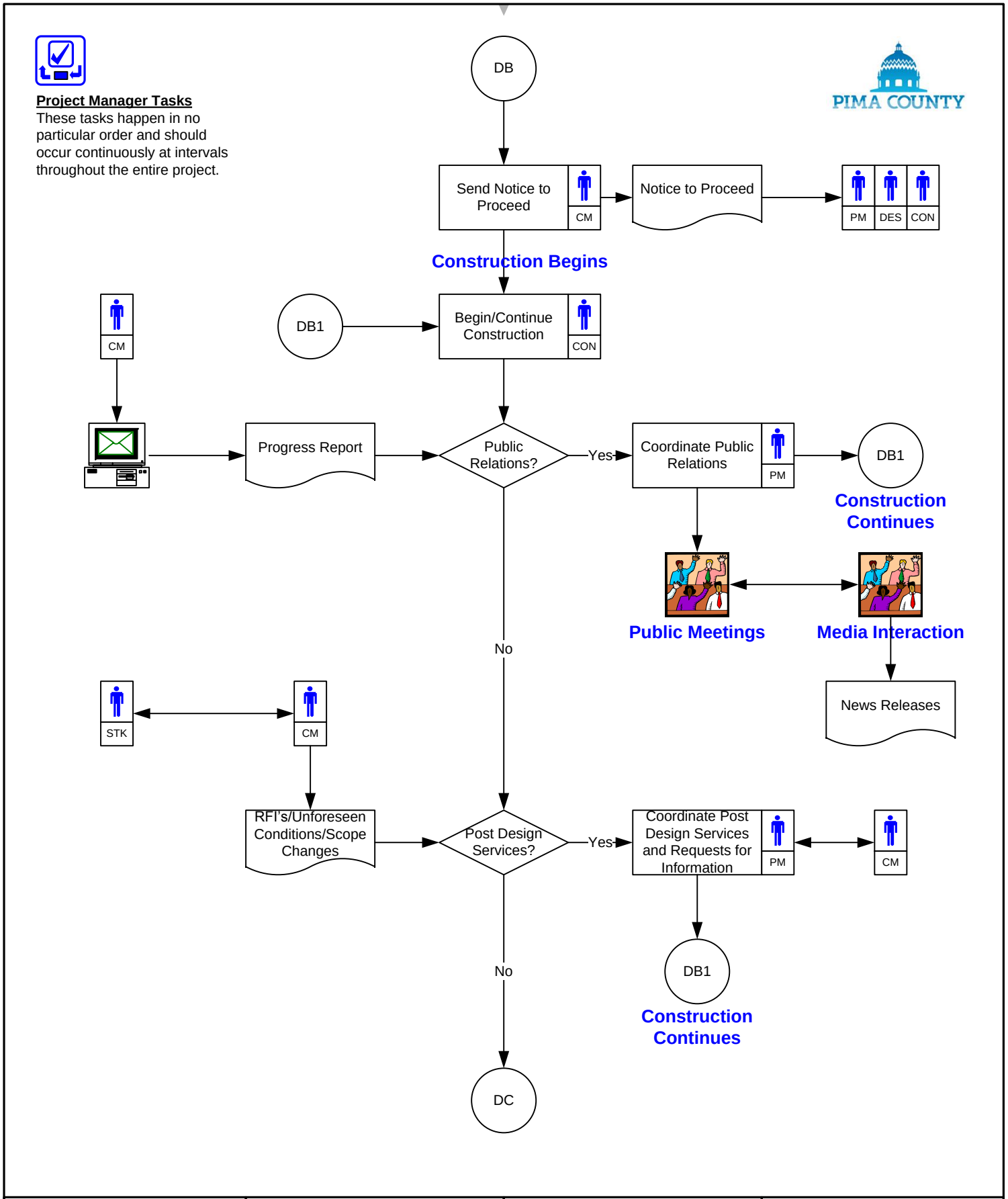

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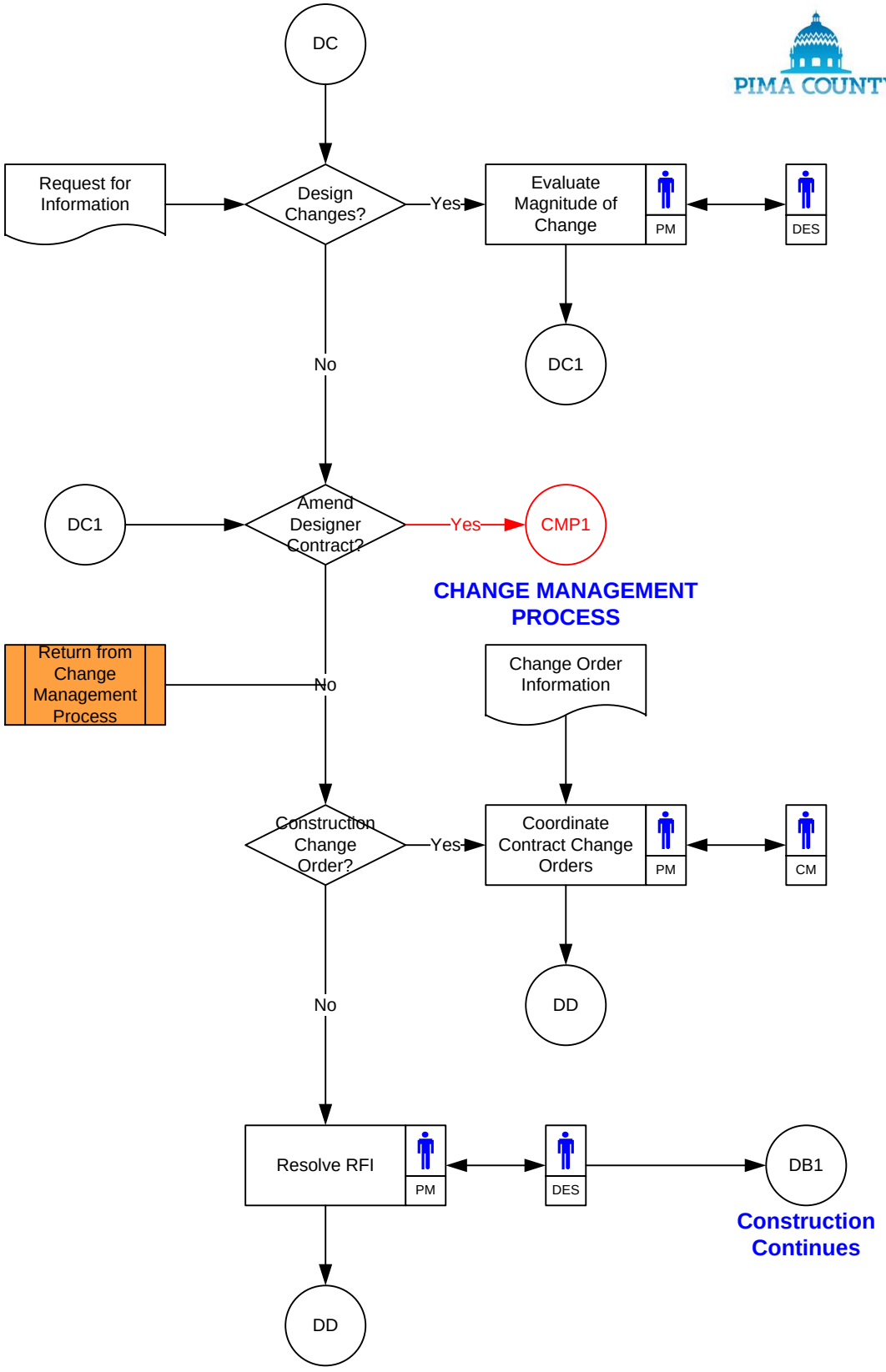

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase IV Construction**	Owner: PC Public Works

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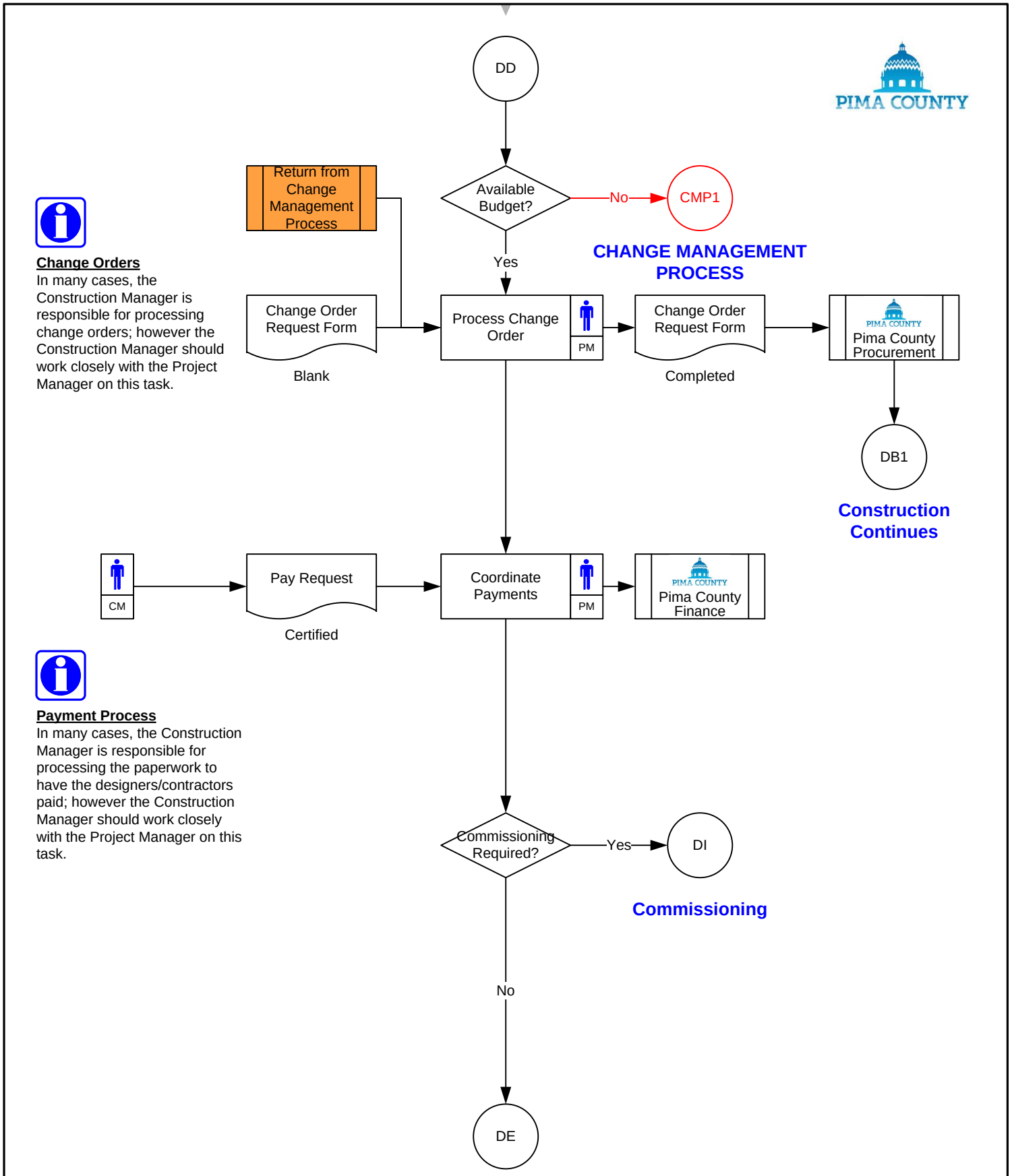

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase IV Construction**	Owner: PC Public Works

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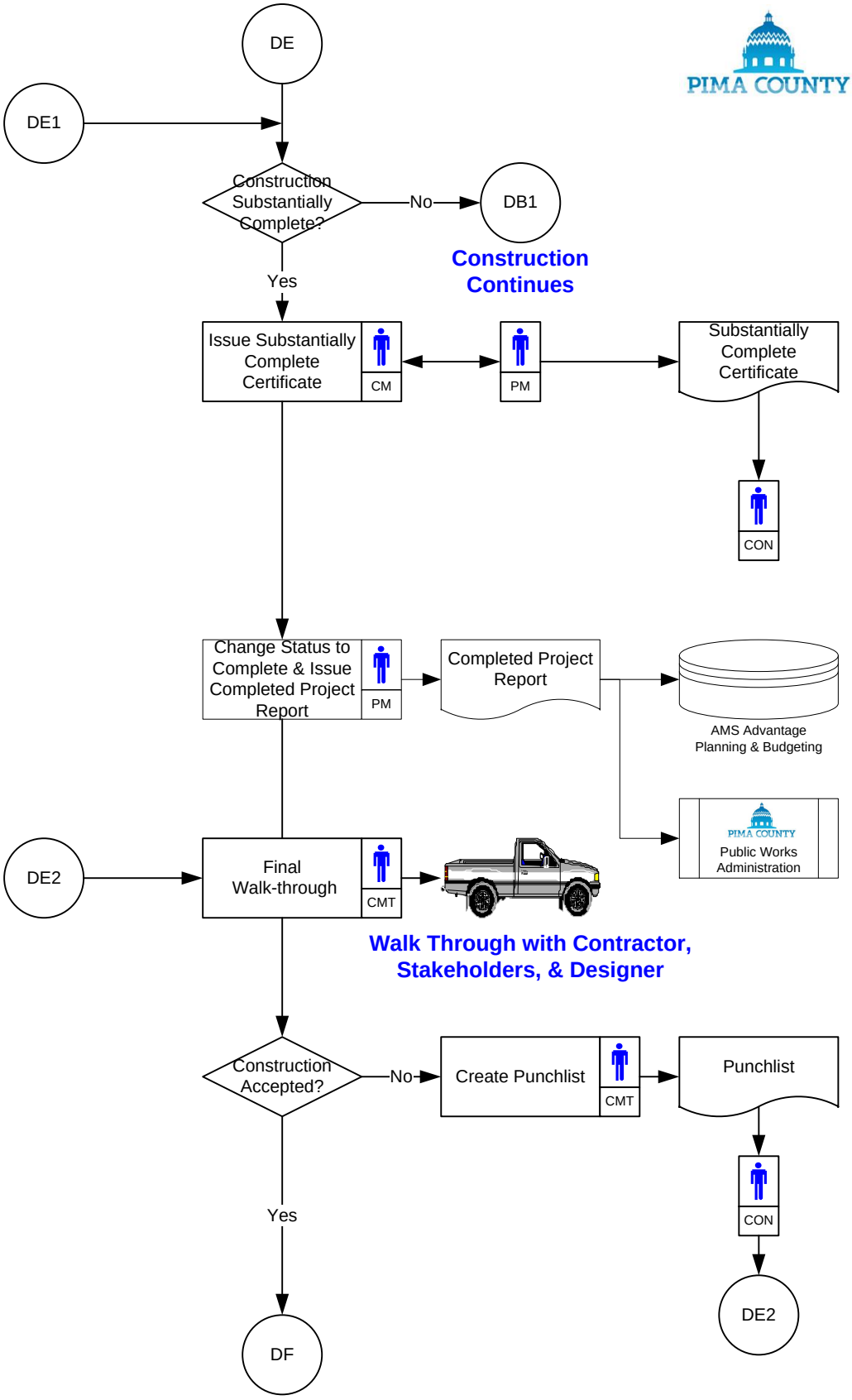

Completed Project Report
The Completed Project Report is one of the on-line forms and is an Executive Summary of the scope, schedule, and budget (estimate vs. actual).

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase IV Construction**	Owner: PC Public Works

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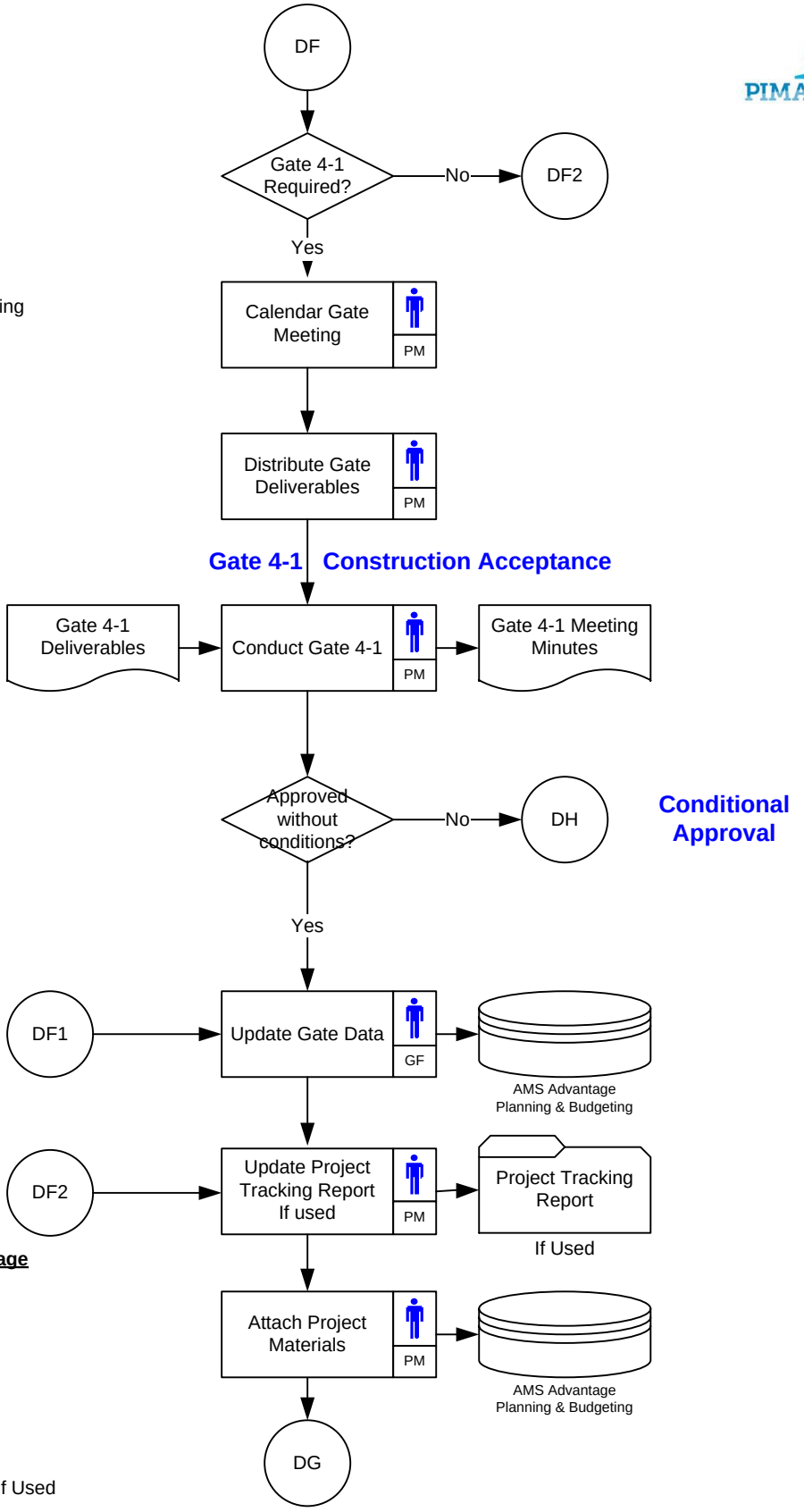

Date

Gate Meeting
Calendar 2 weeks prior to Gate Meeting

Date

Gate Deliverables
Distribute Gate Deliverables at least 1 week prior to gate meeting

Gate 4-1 Deliverables
1) Meeting Agenda
2) Gate Approval Form
3) Updated Cost Model
4) Updated MS Project Schedule
5) Substantially Complete Certificate
6) Completed Project Report
7) Other Materials as Requested

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Materials to Attach in AMS Advantage Planning & Budgeting
1) Updated Cost Model
2) Updated MS Project Schedule
3) Signed Gate 4-1 Approval Form, If Applicable
4) Gate 4-1 Meeting Minutes, If Applicable
5) Substantially Complete Certificate
6) Completed Project Report
7) Updated Project Tracking Report, If Used
8) Other Materials as Requested

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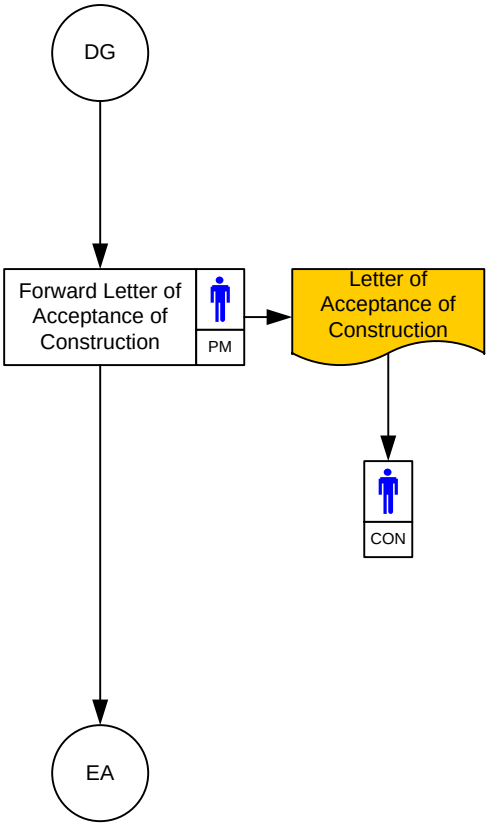
Deliverables
Letter of Acceptance of Construction

Letter of Acceptance
In many cases, the Construction Manager is responsible for forwarding the Letter of Acceptance; however the Construction Manager should work closely with the Project Manager on this task.



PHASE V
CLOSE OUT

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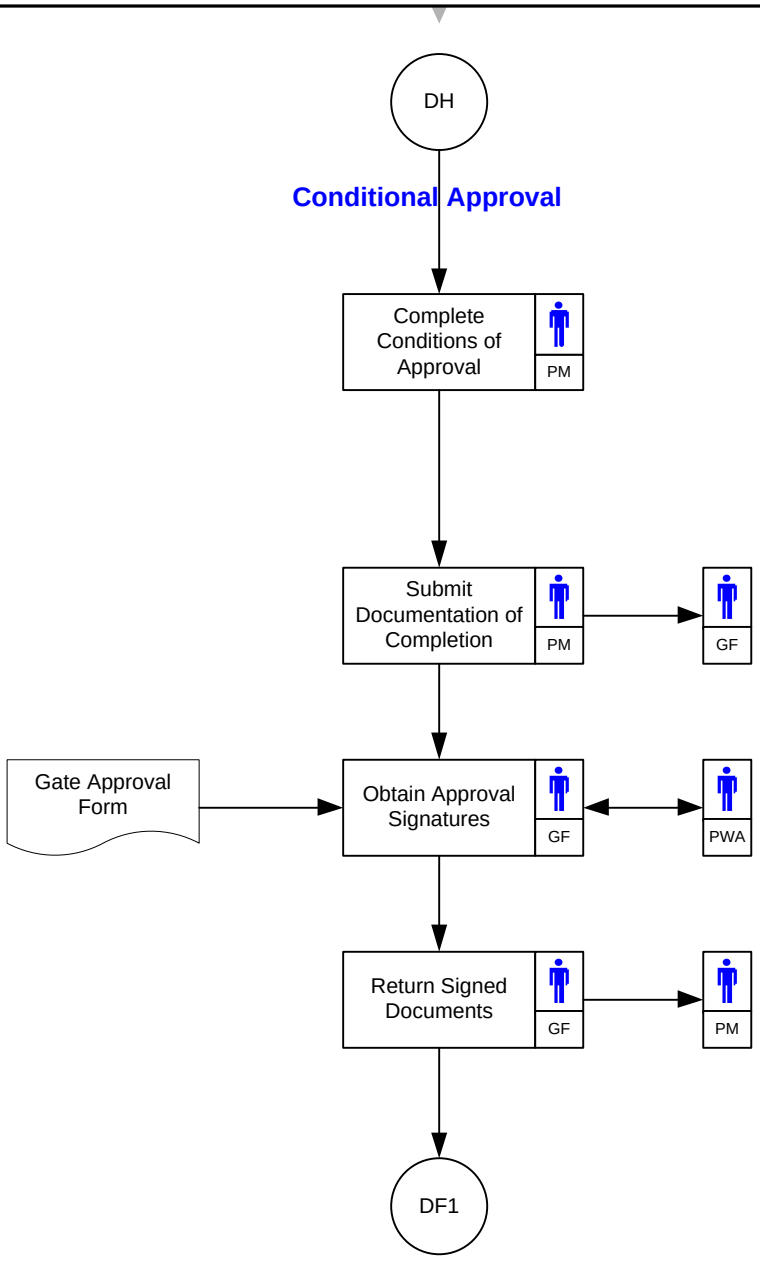

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase IV Construction**	Owner: PC Public Works

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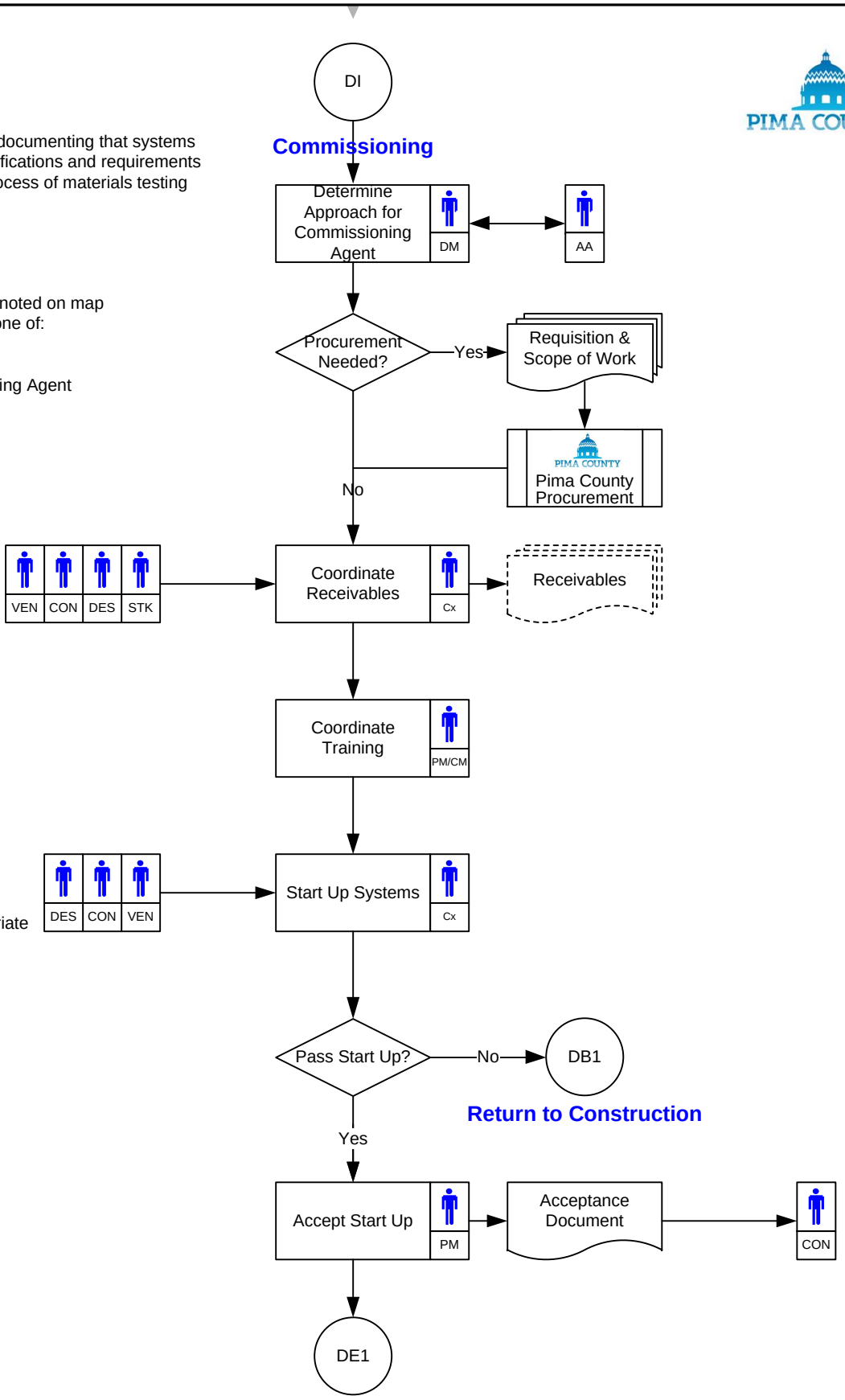
Commissioning Process
The process of verifying & documenting that systems and assemblies meet specifications and requirements
NOTE: This is NOT the process of materials testing

Commissioning Agent
Commissioning agent is denoted on map as Cx. This agent can be one of:
* In-house Team
* Design Team Consultant
* Independent Commissioning Agent

Receivables
* O & M or SOP Manual
* Performance Verification
* Permits/Certifications
* Training Manuals

Start Up Cycle
Includes training at appropriate time



Ref: 08/02/13 Rev: PR - D	Project Management	**Phase IV Construction**	Owner: PC Public Works

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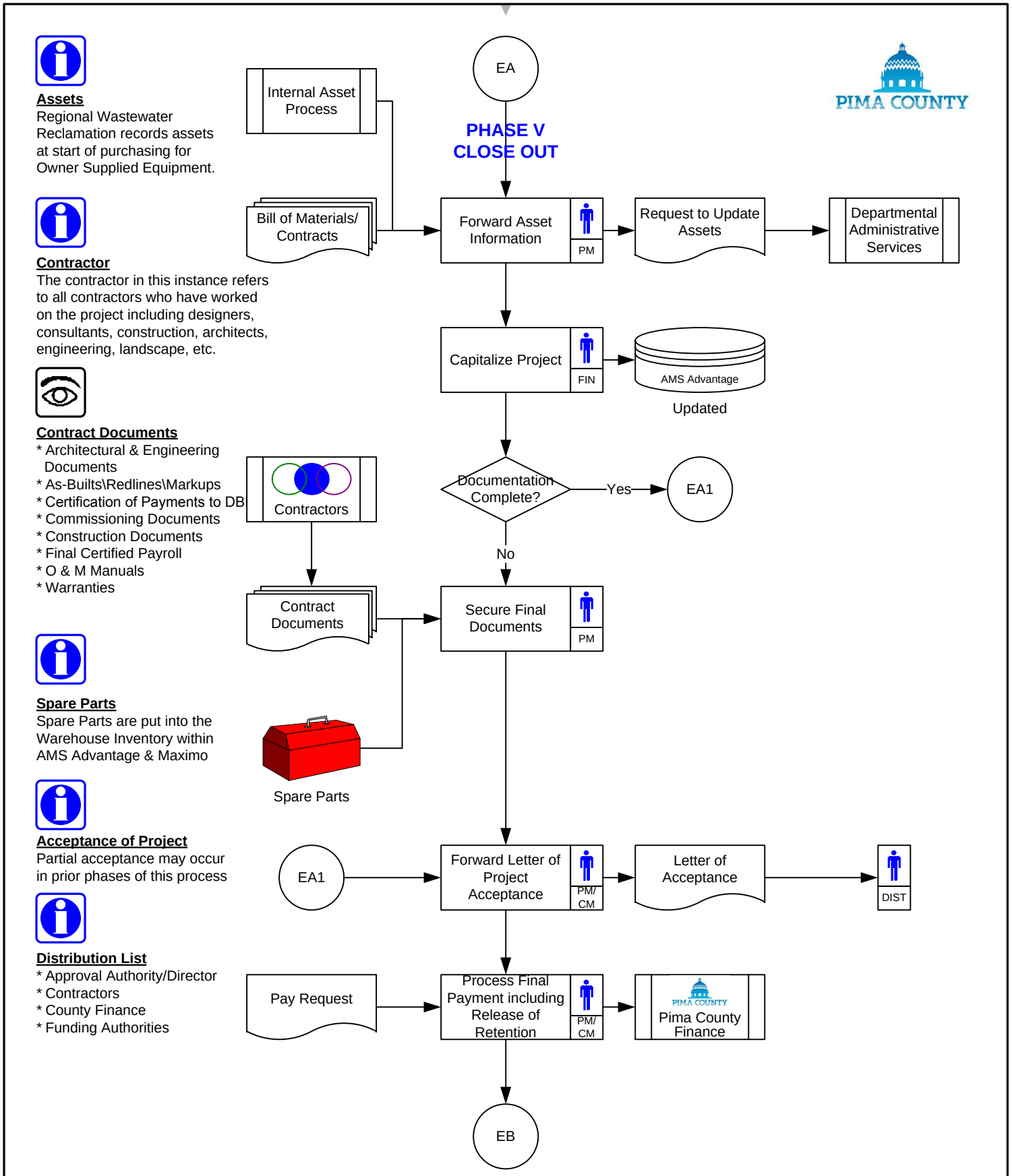

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase V Close Out**	Owner: PC Public Works

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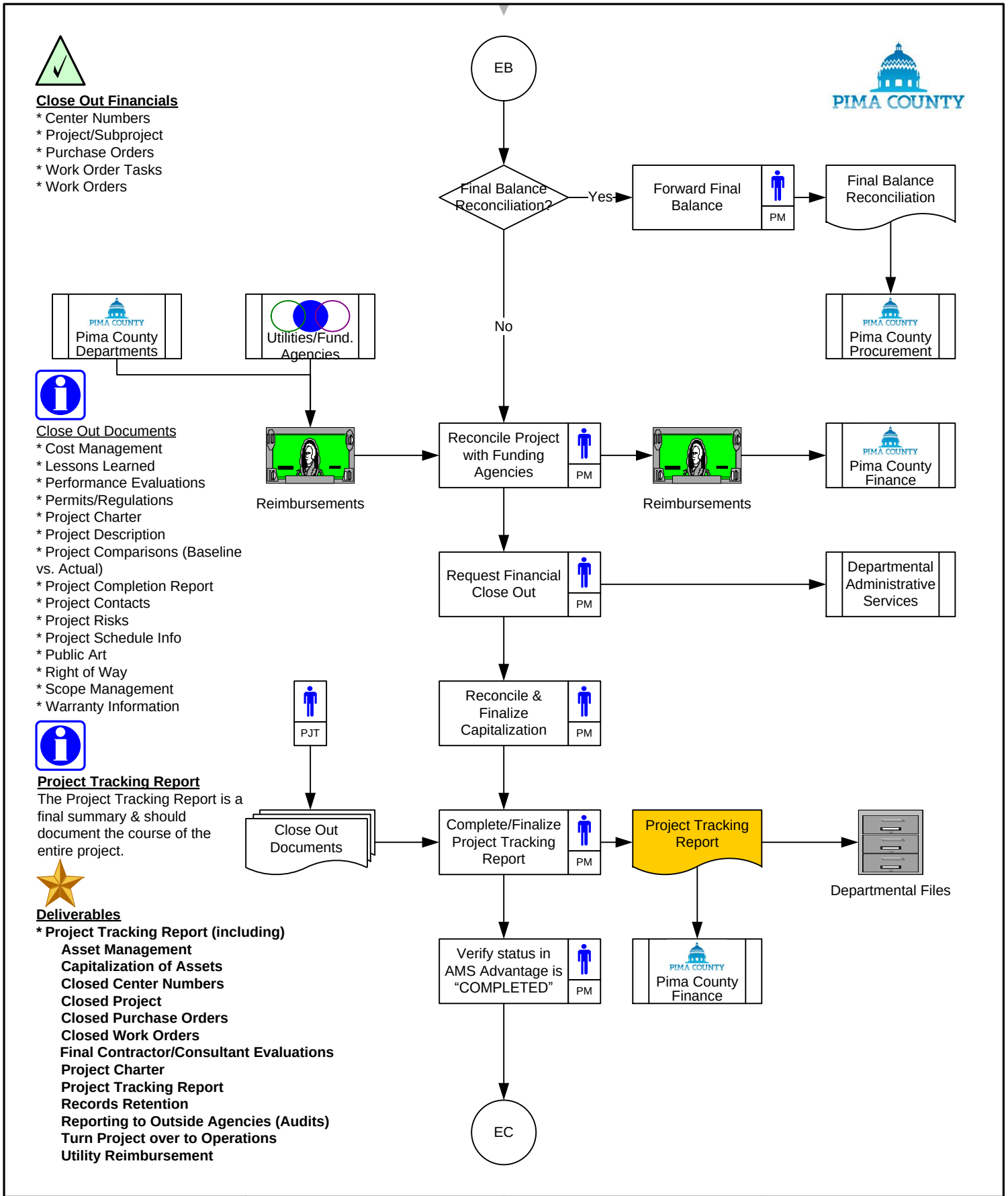

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase V Close Out**	Owner: PC Public Works

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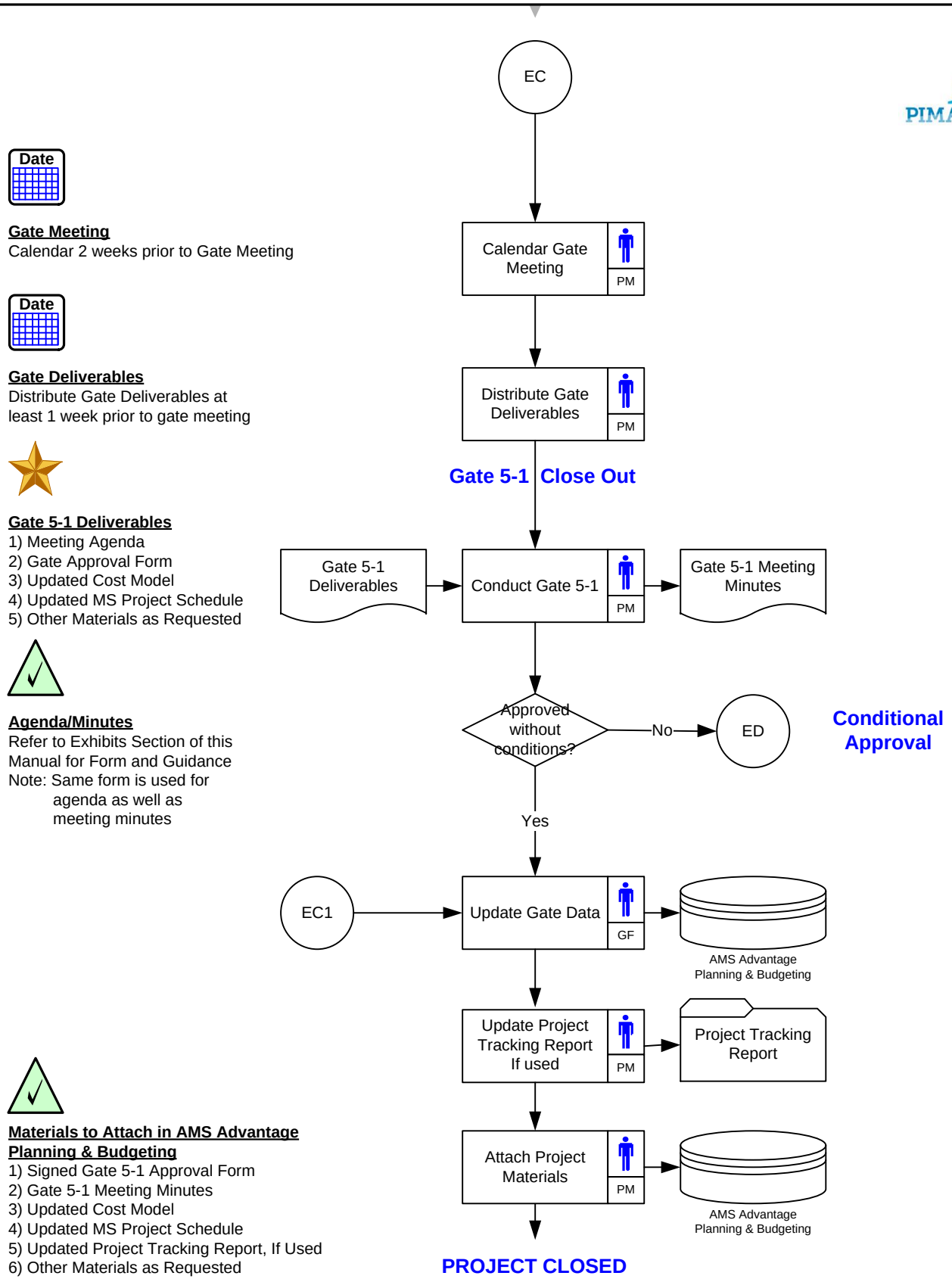

Date

Gate Meeting
Calendar 2 weeks prior to Gate Meeting

Date

Gate Deliverables
Distribute Gate Deliverables at least 1 week prior to gate meeting

Gate 5-1 Deliverables
1) Meeting Agenda
2) Gate Approval Form
3) Updated Cost Model
4) Updated MS Project Schedule
5) Other Materials as Requested

Agenda/Minutes
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

Materials to Attach in AMS Advantage Planning & Budgeting
1) Signed Gate 5-1 Approval Form
2) Gate 5-1 Meeting Minutes
3) Updated Cost Model
4) Updated MS Project Schedule
5) Updated Project Tracking Report, If Used
6) Other Materials as Requested

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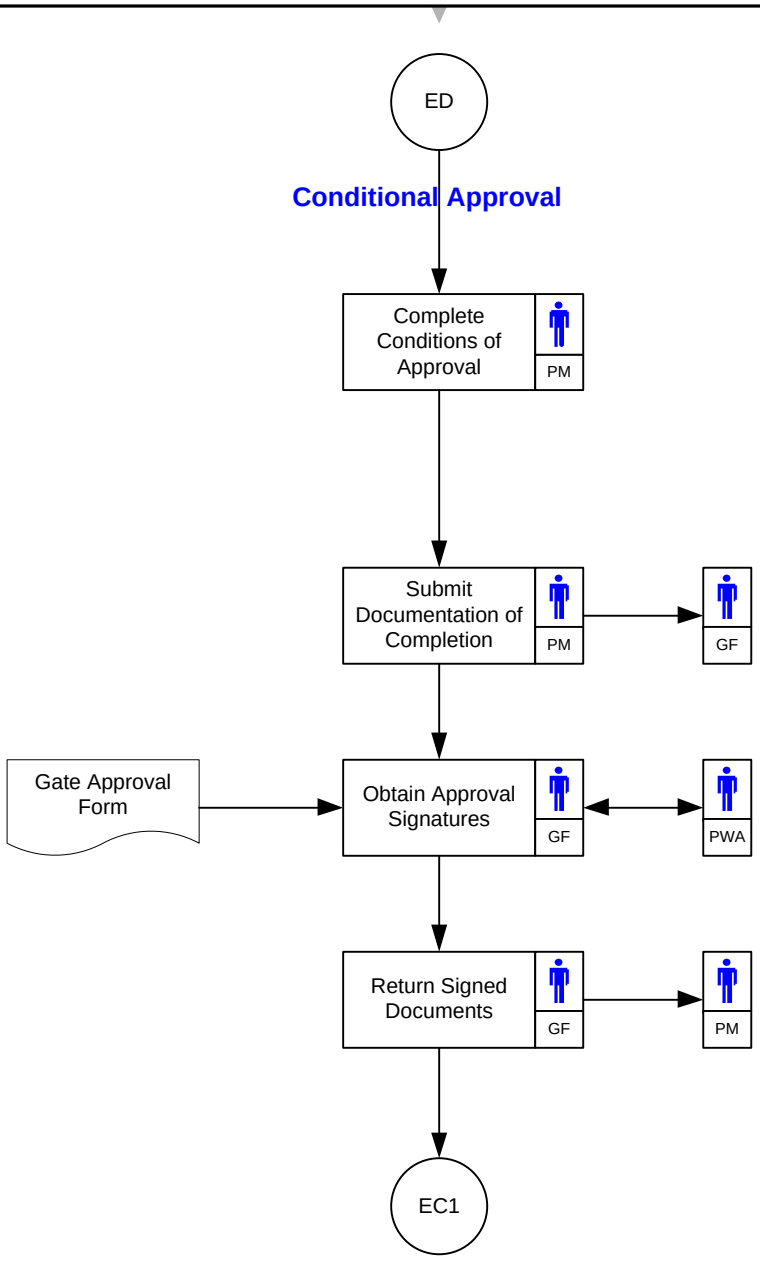

Ref: 08/02/13 Rev: PR - D	Project Management	**Phase V Close Out**	Owner: PC Public Works

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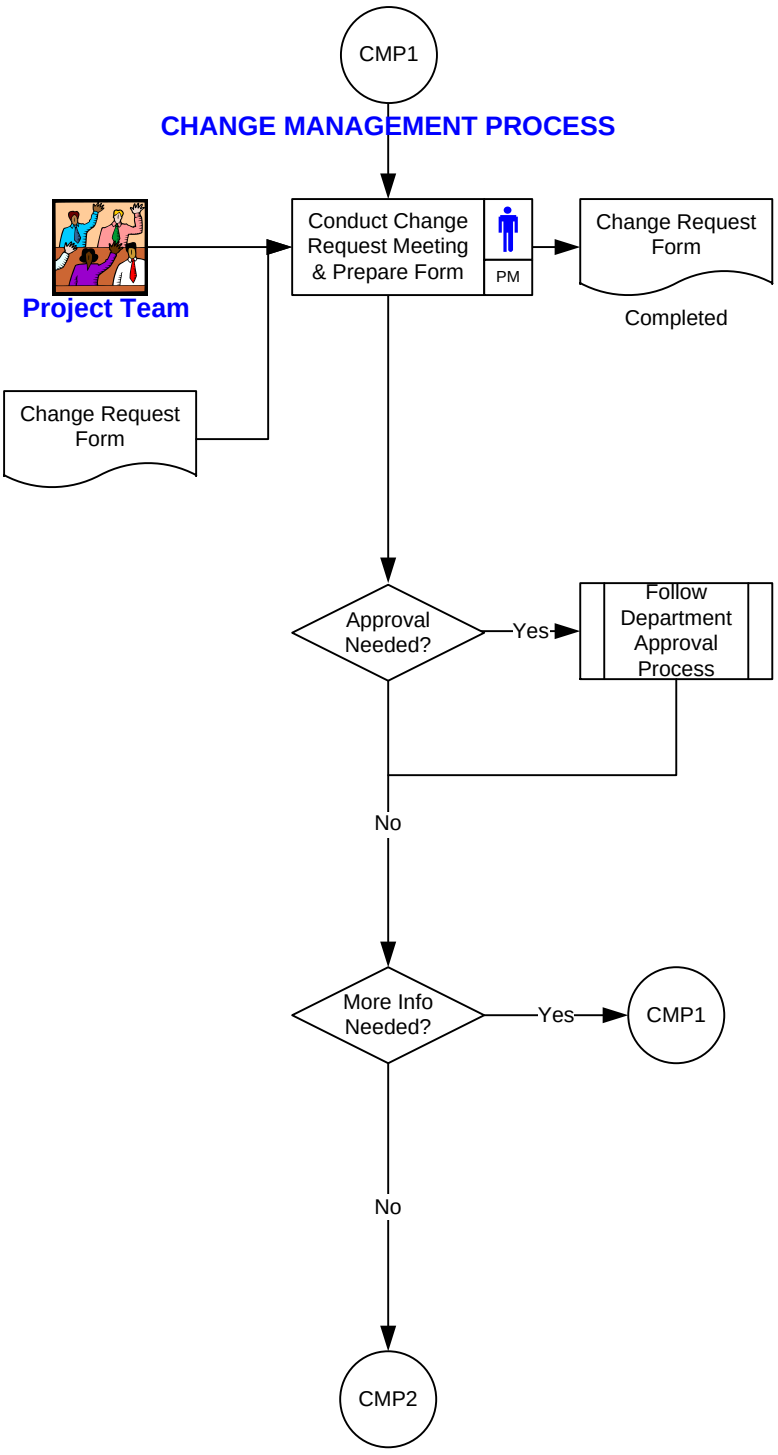
Change Request Meeting:
A Change Request Meeting can occur as an individual meeting or as part of regular project meetings

Change Request Form:
*Project Information
*Change Description
*Project Impacts
*Change Cause
*Effort Required
(Refer to Exhibits Section of this Manual)

Approval Route:
Each Department's approval route may have additional steps before reaching the Department Director. Department procedure should be followed before submitting change requests to the Department Director.



Ref: 08/02/13 Rev: PR - D	Project Management	**Change Management**	Owner: PC Public Works

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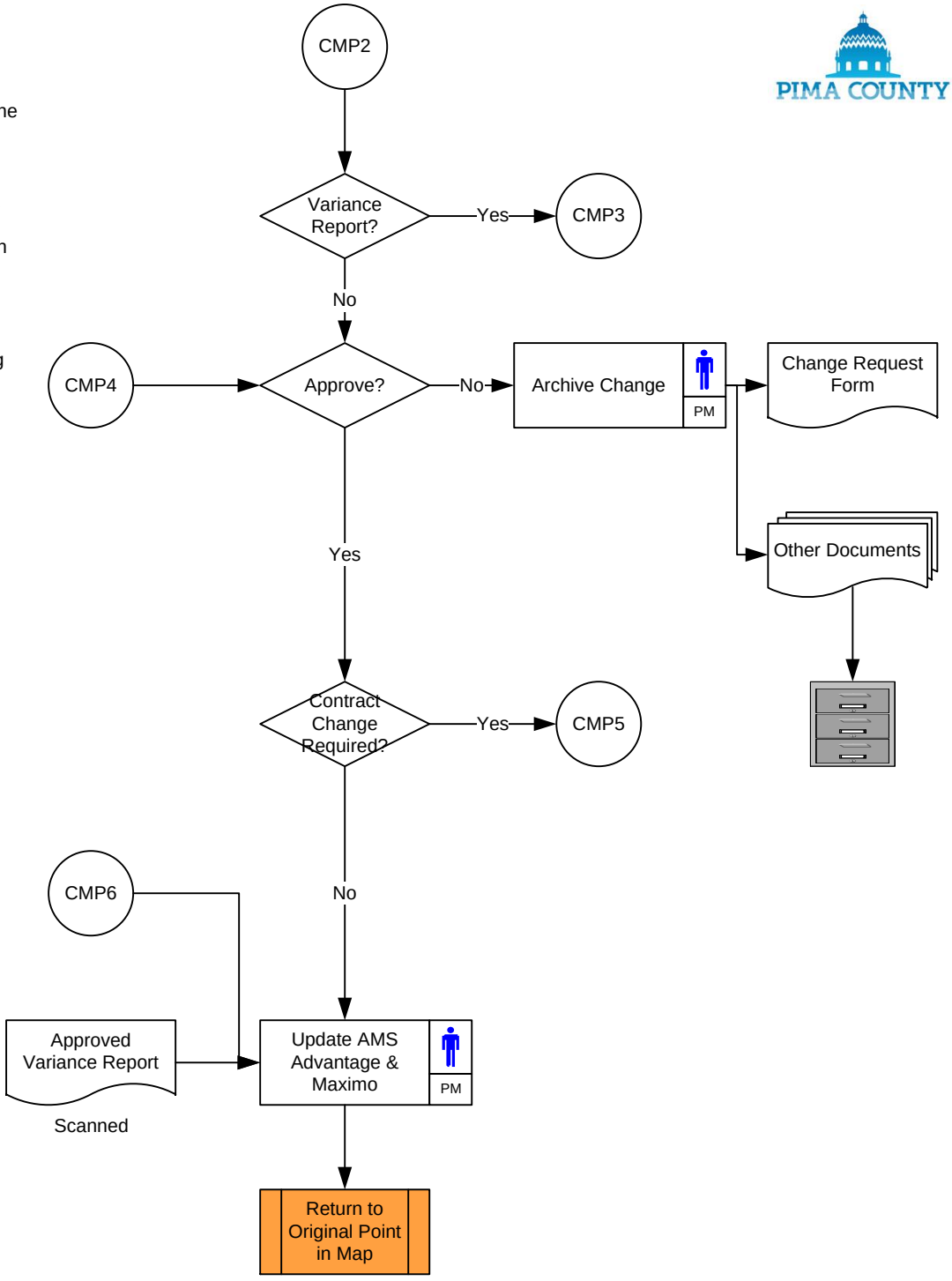
Variance Report
A Variance Report is needed if the project change meets one of the four following criteria:
*When total project costs will exceed 5% of the total approved budget.
*When construction start or finish date exceeds 60 days of the approved construction start and finish date
*When the change results in an alteration to the Truth in Bonding criteria
*Any change that results in a contract change that must go through Procurement

Procurement Process
The procurement process results in either approval by the Procurement Director or the Board of Supervisors

Procurement Process Result
A procurement process that results in an approval allows the change to continue with the process. A procurement process that results in a denial means the change process ends and the change needs to be re-evaluated.



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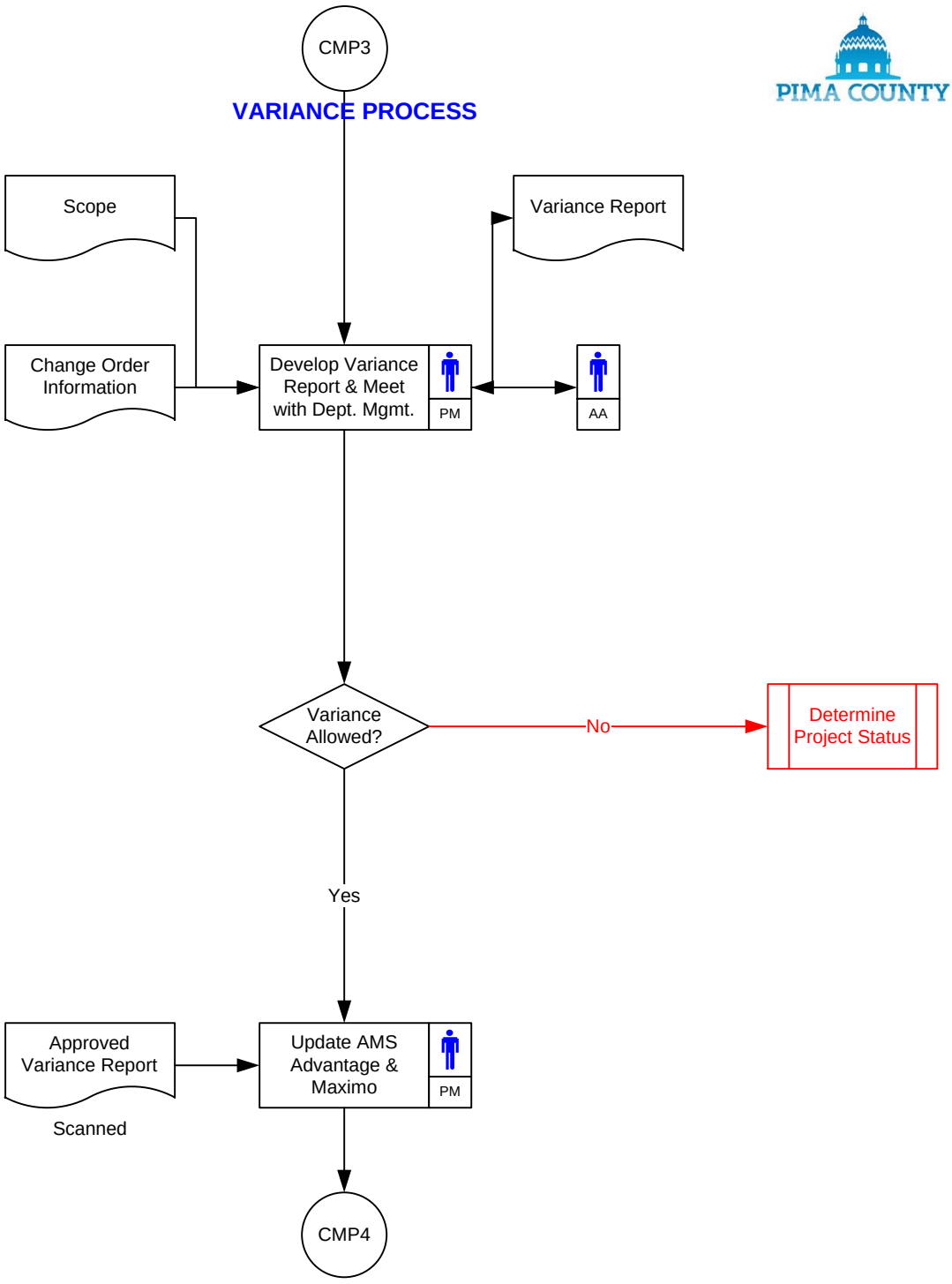
Note
* All departments should be encouraged to have a staff member who knows the status and funding of all projects

Approval Authority
* If the variance exceeds $50,000, approval is required from the Public Works Administrator. Otherwise Department Director approval is required.

AMS Advantage & Maximo
* The Project Manager should be continually updating AMS Advantage & Maximo with funding changes, schedule changes, progress of meetings, & task notes



Ref: 08/02/13 Rev: PR - D	Project Management	**Change Management - Variance**	Owner: PC Public Works

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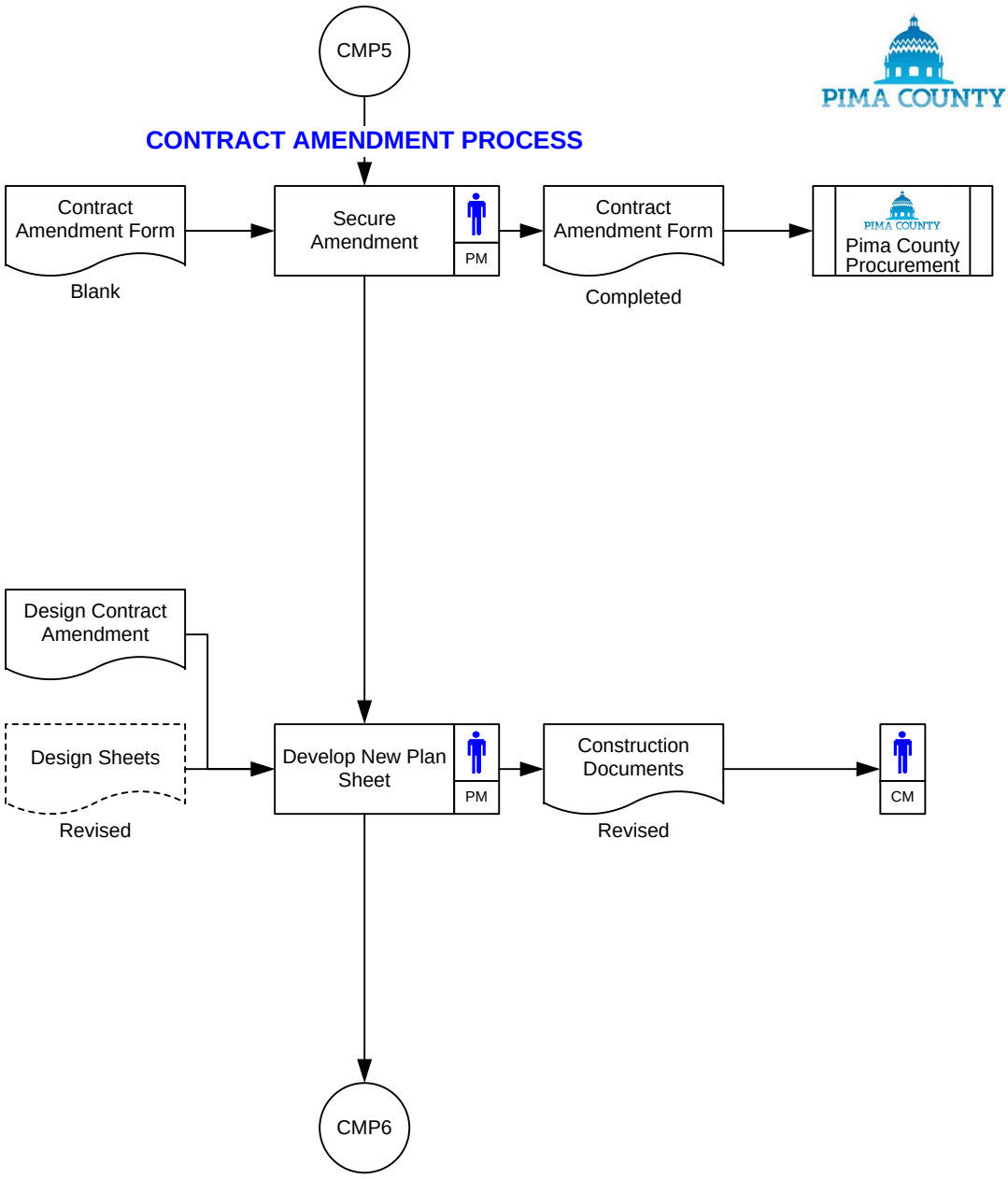

Ref: 08/02/13 Rev: PR - D	Project Management	**Change Management – Contract Amendment**	Owner: PC Public Works

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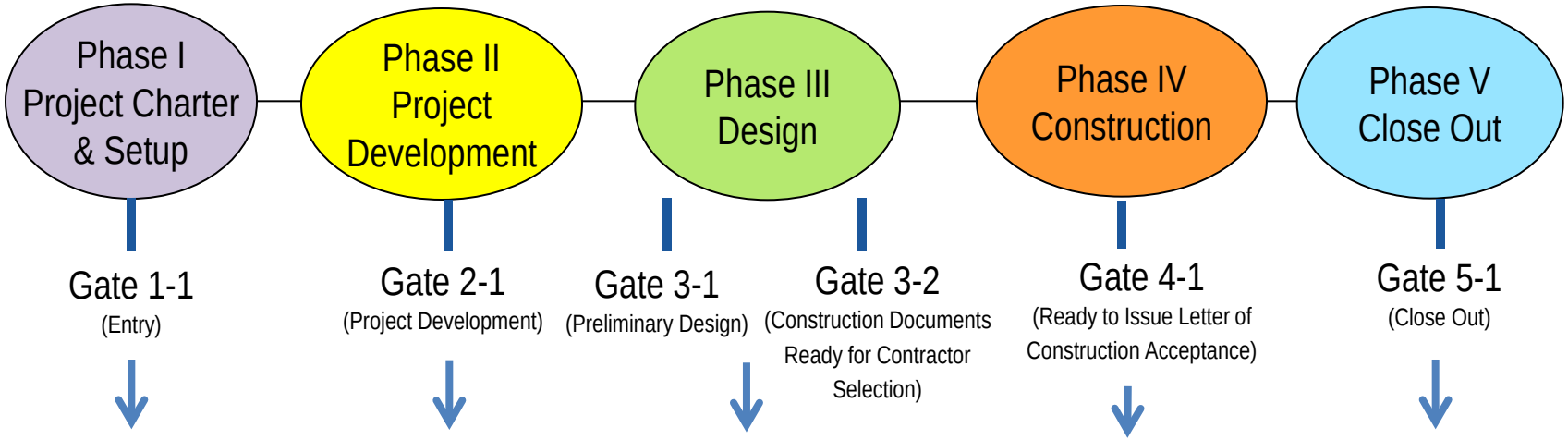
PROJECT MANAGEMENT & GATE PROCESS MANUAL

PART II: THE GATE PROCESS

PART II: THE GATE PROCESS

Interrelationship between the Project Management Process and the Gate Process (1)



Gate Materials:
- Project Charter
- Gate 1-1 Agenda/Minutes with Lessons Learned
- Gate 1-1 Approval Form
- Maintenance Request Form
- Gate 1-1 Cost Model
- Gate 1-1 Microsoft Project Schedule
- Phase I Stakeholder Meeting Minutes
- Initial Polygon of Ground Disturbance
- Other Materials as Requested

(1) See exhibits for checklists for gate meetings

Gate Materials:
- Amended Project Charter
- Previous Gate's Minutes/ Approval Form
- Gate 2-1 Agenda/Minutes with Lessons Learned
- Gate 2-1 Approval Form
- Amended Cost Model
- Amended Microsoft Project Schedule
- Phase II Stakeholder Meeting Minutes
- Other Materials as Requested

Gate Materials:
- Project Charter Summary Sheet
- Previous Gate's Minutes/ Approval Form
- Gate 3-1 or 3-2 Agenda/Minutes with Lessons Learned
- Gate 3-1 or 3-2 Approval Form
- Gate 3-1 or 3-2 Updated Cost Model
- Gate 3-1 or 3-2 Updated Microsoft Project Schedule
- Milestone Workshop Minutes
- Other Materials as Requested

Gate Materials:
- Project Charter Summary Sheet
- Previous Gate's Minutes/ Approval Form
- Gate 4-1 Agenda/Minutes with Lessons Learned
- Gate 4-1 Approval Form
- Gate 4-1 Updated Cost Model
- Gate 4-1 Updated Microsoft Project Schedule
- Substantial Completion Letter or Certificate
- Completed Project Report*
- Other Materials as Requested

*May need to submit at Phase V

Gate Materials:
- Project Charter Summary Sheet
- Previous Gate's Minutes/ Approval Form
- Gate 5-1 Agenda/Minutes with Lessons Learned
- Gate 5-1 Approval Form
- Final Cost Model
- Final Microsoft Project Schedule
- Final Polygon of Actual Ground Disturbance
- Consultant/Contractor Evaluations
- Dept. Close Out Checklist, if appl.
- Completed Project Report*
- Other Materials as Requested

*May need to submit at Phase IV

Introduction & Concept

Benefit of the Gate Process

- The gate process has proven effective in insuring the project team, stakeholders, and management work together at the times when their inputs are needed in project delivery so that costly downstream changes are avoided.

Intent of the Gate Process

- Confirms that collaborative reviews and buy-in by stakeholders is occurring as project delivery is progressing
- Brings together the project team, stakeholders and management at project milestones to discuss issues before a project moves forward
- Project status summary can be provided
- Once agreements are reached at a gate meeting and a project moves forward, requests by project team members, stakeholders and/or management to add or change project elements are too late and will not be addressed

Principles of the Gate Process

- Trust – everyone looks out for each other's best interests
- Respect – everyone listens for understanding of differing values, judgment and opinions
- Commitment – everyone upholds agreements, meets deadlines, attends meetings, participates actively, communicates actively, and follows priorities
- Communication – everyone shares information in an open and honest way
- Teamwork – everyone works together towards common goals
- Issue Resolution – problems are prevented, when possible, or are identified and resolved before related issues have a negative impact the project
- Escalation – everyone accepts this method of conflict resolution when consensus cannot be achieved

Ground Rules for Gate Meetings

- Everyone is equally responsible for the success of the project
- Everyone participates fully to the extent of their expertise
- Everyone speaks honestly and frankly
- There are no hidden agendas
- Discussions are focused on fact-based issues; not on personalities
- Understanding is the objective; issues are escalated if consensus is not reached
- All decisions made at gate meeting are final unless the attendees agree to accept a decision that will be made as a result of escalating an issue
- Meetings start and end on time
- Anyone who anticipates being late or missing a meeting will inform the Project Manager

Scheduling a Gate Meeting

- Gate meetings are scheduled per the protocol shown in the process maps found in Part I: The Project Management Process of this Manual
- A project manager, stakeholder or management has the right to request more gates than those approved in the Project Charter

Desired Outcome of a Gate Meeting

- A successful gate review provides participant's concurrence that:
  - Work to date is satisfactory
  - Risks are controlled
  - Scope, schedule, cost and quality are appropriately managed
  - The change management process is being followed
  - Implementation plans are sound
  - County and department management remain committed to the project
- Lessons learned are discussed and documented at each gate with an eye towards opportunities for strengthening project management and gate meeting processes

Objectives for Each Gate

Gates*

- Gate 1-1 Project Charter & Project Setup
- Gate 2-1 Project Development
- Gate 3-1 Preliminary Design
- Gate 3-2 Construction Documents Ready for Contractor Selection
- Gate 4-1 Ready to Issue Letter of Construction Acceptance
- Gate 5-1 Close Out

*Note: Determination of which gates a project will use is approved in the Project Charter. As a project progresses, additional gates can be added.

Gate 1-1 Project Charter & Project Setup

- Establishes joint ownership by the project team, stakeholders and management for the success of the project
- Assures the need for the project is validated and clearly understood
- Confirms that project scope, delivery method, schedule, cost and quality are reasonable and achievable and funding sources are available
- Commits necessary resources to achieve scope, schedule, budget and quality
- Initiates plan for managing potential risks to maintaining scope, schedule, cost and quality
- Provides polygon of anticipated area of ground disturbance

Gate 2-1 Project Development

- Only used when Phase 1-1 Project Charter & Project Setup results in a recommendation for further study of multiple alternatives
- Allows additional effort and analysis to be undertaken prior to committing resources to a particular recommended alternative
- Results in amended Project Charter, cost model and project schedule that clearly define recommended alternative
- Records lessons learned to date
- Achieves the same objectives as Gate 1-1

Gate 3-1 Preliminary Design

- Confirms attendees agree that current scope, schedule, cost, and quality are still reasonable and achievable
- Provides updates on:
  - Management of potential risks to maintaining scope, schedule, cost and/or quality
  - Current cost estimate or Guaranteed Maximum Price (GMP)
  - Permits submittals and approvals
  - Environmental issues
  - Cultural resources
  - Utilities
  - Land acquisition
  - Long-lead items
  - Any other critical path items
- Presents lessons learned to date

Gate 3-2 Construction Documents Ready for Contractor Selection

- Verifies that project is ready to proceed to contractor selection
  - ROW & permits are acquired, if needed
  - Environmental, utility and cultural clearances are obtained
  - Contract documents (plans, specifications and estimate) are accepted
  - All funding is secured and available
- Confirms attendees agree that current scope, schedule, cost and quality are still reasonable and achievable
- Updates management of potential risks to maintaining scope, schedule, cost and quality
- Updates polygon showing final area of ground disturbance
- Presents lessons learned to date

Gate 4-1 Ready to Issue Letter of Construction Acceptance

- Substantial completion letter has been issued
- All items on punch list have been completed
- Construction fully complete and ready for letter of acceptance to be issued
- Warranties established
- Lessons learned are updated

Gate 5-1 Close Out

- Demonstrates that project is fully completed and closed. For example:
  - Final inspection report completed
  - Record drawings completed
  - Documents are turned over to records storage
  - Project Tracking Report completed, if used
  - Completed Project Report prepared
  - Final payment issued, retention released & financial records closed
  - Permits closed
  - Engineer's certification received
  - IT Footprint request made to close project in AMS Advantage Financial System
- Discusses opportunities for strengthening the project management and gate meeting processes based on lessons learned during project delivery

Guidance for Preparing and Conducting a Gate Meeting

Role of the Project Manager

- Insures that gate materials are completed as identified in the process maps found in Part I: The Project Management Process and the Checklists for Gate Materials in this Manual
- Insures that reports and information are distributed in advance to the gate attendees using the protocols shown in the process maps - may choose to discuss gate materials with Gate Facilitator prior to distribution
- Identifies follow-up actions, if any (what, who & when) and insures actions are completed
- Distributes gate minutes to all invitees
- Posts gate materials and minutes as identified in the process maps to document management system

Role of the Gate Facilitator

- Remains neutral and objective
- Expedites adherence to the agenda and allotted meeting time
- Ensures an equal opportunity for all attendees to be heard
- Keeps group focused on project-related issues

Role of the Gate Attendees

- Represent their organization and have the authority to make decisions on behalf of their organization
- Review gate materials in advance and come to the meeting informed
- Concur with progress or raises issues
- Act on any follow-up issues requested by the Gate Facilitator or Project Manager

Example of Gate Attendees*

Exit Gate Contact by Department		
County Administration		**Sustainability & Conservation**
Gate Facilitator		Director
County Administration Approver		Cultural Resources
Transportation		**Project Management Office**
Director		Manager
Deputy Director		Program Manager
Transporation Engineering		
DOT Field Engineering		**Real Property**
Traffic Engineering		Manager
Community Relations		Real Property Agent
Utility Coordination		
CIP Funding		**Regional Flood Control District**
		Director
Facilities Management		Deputy Director
Director		Engineering
Deputy Director		
CIP Funding		**Regional Wastewater Reclamation**
		Director
Natural Resources, Parks & Recreation		Deputy Director
Director		Project Management
Operations		Project Controls
		Engineering
Environmental Quality		Planning
Environmental Clearance		

*Refer to the Project Management Manual website for current list

Typical Meeting Structure

- Using the Project Management Manual Meeting Agenda/Minutes form found on the Project Management Manual website, the discussion at the gate meeting should focus on:
  - Updates on key project issues as identified in the Project Charter and any previous gates
  - Management of and recovery plans related to potential risks to maintenance of scope, schedule, cost and/or quality
  - Updated project cost model highlighting any significant changes; in particular, changes to funding and/or soft cost percentages
  - Updated project schedule
  - Lessons learned to date – what is going well and what has been unexpected

Gate Meeting Result

- Three possible outcomes:
  - Project approved without conditions to move forward, or
  - Project is approved to move forward after conditions identified by the gate attendees are met, or
  - Project is denied approval to move forward – in this case, the sponsoring department needs to determine whether the project is still active, on hold, or cancelled

PROJECT MANAGEMENT & GATE PROCESS MANUAL

PART III: SYMBOLS, DEFINITIONS & ACRONYMS

PROJECT MANAGEMENT & GATE PROCESS MANUAL

SYMBOLS

Symbol Key	Description	Symbol Key	Description
	Macro / Micro Process - This describes the linkage to another process. Always include Map reference identifier. Color code: Black - Global / Default, Blue - Core, Green - Resource, Violet-System, Red - Improvement Management.	who?	**Task Responsibility** - Each task box must have responsibility defined. Include a meaningful abbreviation and add to the key on the background page. Qualified users must understand the abbreviation selected and be consistent throughout the system.
	Process Task - This describes "**What**" takes place within the process. Keep description within the box brief but understandable to qualified personnel. Do not change size of box to fit text, instead change text size or add notes to the side.	AUTO	**Auto Responsibility** - Placed at the side of a task box this indicates that responsibility for that particular task has been set up to be carried out automatically.
	Decision Point - Critical point in the process where a decision is made. Good practice to label flow lines: Yes/No, Pass/Fail, Accept/ Reject. Text within should include a question mark (?). Add decision criteria if required.		**Link** - Indicates a continuation of the Map on another page or area of the Map. A is allocated to the top of page 1, B top of page 2 etc. A1, A2 are other connectors used on Page 1, B1, B2 on Page 2 etc.
	Hard Copy Documentation - Can be Forms, Work Instructions, References, Standards, Information, Educational Aids, Visual Aids, Templates, etc. These are the "Children" to the Process ("Parent"). Include reference identification. These are the **"How To's"**.		**Book / Log** - Can represent a hardcopy log, a training manual, or other non-electronic records or information. May appear on left or right side of map as an input to the task or an output from the task.
	Multi-Document - Used to denote a collection of different pieces of hard copy documentation such as reports, specifications, plans, etc.		**External Book / Log** - Represents external supplier or customer information, training manual, OEM maintenance manual, etc.
1	**Document Copy** - Used to denote hard copies of a piece of paperwork, such as multi-copy forms, receipts, etc. The number references the copy number.		**Telephone** - Medium used to notify or be notified by customers and suppliers both internal and external. Can appear on left or right side of map depending on input or output respectively.
	External Document - Dotted outline denotes an external document. Supplied from a third party activity to the process, i.e. external customer or supplier.		**Data Access** - Keyboard / Keypad entry or access to a data file, spreadsheet, application or other forms of electronic information.
	Data Storage - This can be a database, data files, programs, spread sheets, etc. Good practice to identify specific name, application name, or location. Information is accessible to authorized personnel.		**Fax** - Medium used to notify or be notified by customers and suppliers both internal and external. Can appear on left or right side of map depending on input or output respectively.
	External Data - This can be a database, data files, programs, spread sheets, etc accessed directly from an external customer or supplier.		**E-mail** - Electronic medium used to notify or be notified by customers and suppliers both internal and external. Can appear on left or right side of map depending on input or output respectively.
	File or Folder Storage - Depository for hard copy information. Good practice to list all contents.		**Mail** - Medium used to notify or be notified by customers and suppliers both internal and external. Can appear on left or right side of Map depending on input or output respectively.

Ref: 2.05.P01.E05 Rev: 07	Symbols Key - Main Flow	Owner: B.E.M.

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Symbol Key	Description	Symbol Key	Description
	Visual Check - Included when a task has an associated visual check or review. Good practice to list what is being checked (less formal check).		**Business Record** - This identifies information that is to be retained. Good practice to list details. See the Records Matrix for specific details about the record, indexing, filing, retention period, etc.
	Verification - Included when a task has an associated verification or check against a more formal check list. What is being verified can be defined in the Inspection Matrix when included.	CD	**Disk Storage** - Removable data storage medium on disk. Give a meaningful name to identify. Use detailed notes to clarify.
T	**Testing** - Included when task has an associated test. Specifics on how something is tested can be found in the Test Matrix.	Date	**Calendar / Date** - Included when a date is important to the process. Answers the "when" question in the process.
	Status - Indicates the status or state of readiness of the product of the process, both physical or intellectual i.e. Good, Bad or Don't know? Etc.		**Time** - Included when a specific time of a task is important to the process. Answers the "when" question on the process.
S	**Stamp** - Used on hard copy documents to indicate date received, date processed, and other hand written notations as required.		**Cycle Time** - Included when cycle time is being measured in the process. This will be associated with the process metrics. Reference start and stop time against specific task steps.
	Training - Included when training or training material is available for an associated task. Additional details can be found in the Training Matrix if used.		**Travel** - Used to signify a person or team traveling offsite to perform some task. For example, when an inspector drives to an inspection site.
	Information - This indicates that additional information is available. It is good practice to list the details including any applicable reference numbers.		**Re-Cycle** - Used to identify when a product or other material is re-cycled. How the product is re-cycled is detailed on the left side of the map.
	"Red Cloud" - BEM terminology for business opportunity that has been identified. Indicates opportunities ranging from simplification to major process re-design. Part of continuous improvement process. (Red - Critical, Yellow - Important and Green - Improvement).		**Dispose** - Used to identify when a product or other material is disposed of. How the product is disposed of is detailed on the left side of the map or in the Information Matrix if used.
	Performance Metric - Key performance metric. All key performance metrics should report to Business Review and are referenced in the Business Scorecard. These are lagging indicators.	R	**Regulatory** - This symbol is used when a regulatory standard is applicable to a section of a process or a specific task within a process. Referencing the specific standard is required. The "R" can be replaced by an abbreviation, i.e. ISO for ISO 9000 etc.
	Process Metric - Key process metric. How the process is measured for effectiveness. Speed, quality and price are typical parameters. These are leading indicators.		**Control** - This symbol is used to indicate a critical control point in the process, usually associated with a specific set of defined criteria. This is also referenced in the Control Matrix if used.

Ref: 2.05.P01.E05 Rev: 07	Symbols Key - Detailing	Owner: B.E.M.

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PROJECT MANAGEMENT & GATE PROCESS MANUAL

DEFINITIONS AND ACRONYMS

Document Overview

This document is to serve as a source of terms commonly used by project managers and other team members within a project. The definitions here in have been pulled from multiple sources within in the Project Management community. The purpose is to add consistency to the terms we use in order to limit any confusion that may occur. This document is also a living document and will change. As new ideas, tools and methods are found; the definitions in this document will grow and expand.

I. Pima County Project Management & Gate Process Manual Definitions

A

Accountability -
The obligation to report on one's actions.

Activity -
Any work performed on a project. An activity must have duration and will result in one or more deliverables. An activity will generally have cost and resource requirements. See Task.

Actual (Cost or Schedule) -
The cost or effort incurred in the performance of tasks. Also, the date tasks have been started or completed and the date's milestones have been reached.

Alternatives -
Possible solutions to a Project Statement. Early in the planning of a project, multiple alternatives may be discussed before deciding on a final plan and moving forward.

AMS Advantage & Maximo Programs -
A series of computer systems interconnected to provide Pima County with financial accounting, procurement, budget forecasting, asset management, and task tracking. All Capital Projects are created, tracked, and maintained in these systems.

Approval Authority -
A person or group of people assigned the responsibility of approving and denying projects. The Approval Authority is usually made up of Directors and Deputy Directors.

Approval Committee -
A group of people assigned the responsibility of approving and denying projects. The Approval Committee is usually made up of Directors and Deputy Directors.

Assumption -
Something taken as true without proof. In planning, assumptions regarding staffing, complexity, learning curves and many other factors are made to create plan scenarios. These provide the basis for estimating. Remember, assumptions are not facts. Make alternative assumptions to get a sense of what might happen in your project.

B

Baseline -
A point of reference. The plan used as the comparison point for project control reporting. There are three baselines in a project—schedule baseline, cost baseline and product (scope) baseline. The combination of these is referred to as the performance measurement baseline.

Budget -
The amount allotted for the project that represents the estimate of planned expenditures and income. The budget may be expressed in terms of money or resource units (effort).

Buy-in -
Gaining the approval/acceptance of stakeholders, business users and other involved parties.

C

Capital Projects –
Capital projects are projects that meet one of the following criteria.

- Any project resulting in a total project cost in excess of $100,000.
- All Projects funded with Bonds (for any amount).

Change -
Difference in an expected value or event. The most significant changes in project management are related to scope definition, availability of resources, schedule and budget.

Change Management -
The process of making sure that all changes to the project scope are consciously evaluated and their implications to the project plan are considered in making a decision to make the change, postpone it or reject it.

Change Request -
A documented request for a change in scope or other aspects of the plan.

Commissioning -
The process of verifying and documenting that systems and assemblies meet specifications and requirements.

Communications Plan -
Mitigates communication breakdown among project participants and management by articulating how, what, when and to whom individuals will communicate, and where the information will be maintained. Effective communication allows the managers to track milestones, action items, and issues to ensure the project stays on schedule.

Concept Report (Concept Analysis) –
The Concept Report documents the processes undertaken in developing a design concept for a project, including the issues identified, design criteria employed, alternative approaches considered, public input, and the recommended concept for design. An important function of the concept report is to document the tradeoffs made between the various, sometimes disparate, elements in developing a viable overall project design. The report brings together the results of the various studies and reports, and documents the process by which the recommended concept was developed.

Consensus -
Agreement among the decision-makers that everyone can at least live with the decision (or solution). To live with the decision, one has to be convinced that the decision will adequately achieve objectives. As long as someone believes that the decision will not achieve the objectives, there is no consensus.

Constraint -
A restriction or limitation that influences the project plan. For example, a target date may be a constraint on scheduling. A schedule may be constrained by resource limitations.

Construction Manager at Risk (CMAR) –
Is a project delivery method in which the CMAR firm participates in the design phase by evaluating costs, schedule, and constructability, implications of alternative designs, systems and materials. The CMAR continuously monitors/refines costs during the design phase to help keep the design within budget. The owner and CMAR establish a negotiated Guaranteed Maximum Price (GMP) after which the CMAR assumes risk for price and schedule and constructs the project.

a) There is a separate contract for design phase services and a separate contract for construction services.
b) The contract for design phase (preconstruction) services must be entered into before the contract for construction services.
c) Design and construction of the project may be in sequential phases or concurrent phases.
d) Finance services, maintenance services, operations services, and other related services may be included.

Consultant Performance Evaluation –
A Pima County Board of Supervisors-directed Procurement form that evaluates and rates the performance of the design consultant in completing the assigned task or work. The Project Manager is required to complete this evaluation within ten days of project completion. (Form DD FORM 2631, APR 1999 available on PC Procurement intranet website)

Contingency -
A designated amount of time and/or budget to account for parts of the project that cannot be fully predicted. For example, it is relatively certain that there will be some rework, but the amount of rework and where it will occur in the project (or phase) are not known. These are sometimes called "known unknowns". The purpose of the contingency is to provide a more accurate sense of the expected completion date and cost of the project (or phase).

Critical Path -
The path(s) in a project network that has the longest duration. This represents the series of activities that determines the earliest completion of the project. There may be more than one critical path and the critical path(s) may change during the project.

Cultural Resources -
Cultural resources are those places and things that have been created by the people who have lived, over many centuries, in what is today Pima County. These resources include: archaeological resources, historic resources, historic roads, and traditional cultural places.

D

Deliverable -
Any item produced as the outcome of a project or any part of a project. The project deliverable is differentiated from interim deliverables that result from activities within the project. A deliverable must be tangible and verifiable.

Delivery Method –
The plan or method of project execution. The method by which success will be achieved. Types of delivery methods include: Design-bid-build, Design-build, Construction Manager at Risk, Job Order Contract.

Dependency -
A relationship between two or more tasks and or resources. A task dependency and be such that one cannot start or finish before another has started or finished. Resource dependent tasks can be scheduled at the same time but are limited by the availability of the shared resources.

Description of Need -
The process of describing and deciding to begin a project and authorizing the Project Manager to expend resources, effort and money for those that are initiated.

Design-Bid-Build (DBB) - REVIEW WITH PROCUREMENT
Is a project delivery method in which:

a) There is a sequential award of two separate contracts, typically to separate companies. The first contract is for design services. The second contract is for construction.
b) Design and construction of the project are in sequential phases. Construction is competitively bid, with award of contract going to the lowest responsive, responsible bidder.
c) Finance services, maintenance services and operations services are not included.

Design-Build (DB) - REVIEW WITH PROCUREMENT
Is a project delivery method in which:

a) A single contractor is responsible for design services and construction services. A fee for design and preconstruction services must be negotiated and established in a separate contract for design and preconstruction services before a separate contract for construction is established. If the Contractor is selected in a single-step qualifications-based procurement, the total compensation for the construction phase of the Project is set forth in a negotiated Guaranteed Maximum Price (GMP). If the Contractor is selected in a two-step procurement involving consideration of cost/price, then the total compensation for construction phase of the project may be either GMP or fixed-price.
b) Design and construction of the project may be in sequential phases or concurrent phases.
c) Finance services, maintenance services, operations services, and other related services may be included.

Duration -
The length of time required or planned for the execution of a project activity. Measured in calendar time units—days, weeks, months.

E

Early Start -
The earliest time a task can begin. The time at which all the tasks' predecessors have been completed and its resources are planned to be available.

Earned Value Analysis -
Earned value analysis is a method for measuring project performance. It indicates how much of the budget should have been spent, in view of the amount of work done so far and the baseline cost for the task, assignment, or resources.

Effort -
The amount of human resource time required to perform an activity. Measured in terms of person hours, person days, etc.

Environmental Report (aka EAMR) -
The Environmental Report will document the results of the assessment undertaken to identify unavoidable adverse impacts of the recommended alternative on the physical, social, and economic environment in the vicinity of the project, and to recommend measures to mitigate those adverse effects. The effect on cultural resources must also be considered in the report.

Escalation Ladder -
Is the escalation of any of a number of issues or conflicts from the staff level through the projects team members up to the Agency level if necessary.

Estimate -
An assessment of the required duration, effort and/or cost to complete a task or project. Since estimates are not actuals, they should always be expressed with some indication of the degree of accuracy.

Estimate to Completion -
The expected effort, cost and/or duration to complete a project or any part of a project. It may be made at any point in the project's life.

F

Financial Assessment -
An analysis of the financial details of a project that will include assumptions and source documentation that presents a range of costs

Float -
The amount of time available for a task to slip before it results in a delay of the project end date. It is the difference between the tasks early and late start dates.

Forecasting -
To calculate or predict a projects budget or schedule, usually as a result of study and analysis of available pertinent data. This data is usually found in either the Performance Budgeting application or in a project Microsoft Project template.

G

Gantt Chart -
A bar chart that depicts a schedule of activities and milestones. Generally activities (which may be projects, operational activities, project activities, tasks, etc.) are listed along the left side of the chart and the time line along the top or bottom. The activities are shown as horizontal bars of a length equivalent to the duration of the activity. Gantt Charts may be annotated with dependency relationships and other schedule-related information.

Geotechnical Report –
A technical engineering document of the geological and soils investigation, subsurface water, sampling and laboratory testing, and material recommendations of a project site.

H

Hydrology Report –
A technical engineering report documenting the hydrologic and hydraulic analysis, calculations, modeling and recommendations for managing storm water across a project site in the existing condition and with project conditions.

I

Impact Analysis -
No doubt your project will change the way things are done, and the costs incurred in doing it. Working out what the difference will be is impact analysis.

Implementation -
May be a phase in the project life cycle in which a product is put into use. Also a term used as a synonym for development.

Intergovernmental Agreement (IGA or JPA) –
Intergovernmental Agreement is a legal document approved by the Board of Supervisors with other state, local or federal government agencies to provide an exchange of funds or services.

J

Job Order Contract (JOC) – REVIEW WITH PROCUREMENT
Is a project delivery method in which:

a) The contract is a contract for indefinite delivery / indefinite quantities of construction.
b) The construction to be performed is specified in job orders issued during the contract.

c) Finance services, maintenance services, operations services, preconstruction services, design services and other related services may be included.

Justification -
Reason(s) for initiating a project. These can vary from regulatory requirements to long term community benefits.

K

Kick-Off Meeting -
A meeting at the beginning of the project or at the beginning of a major phase of the project to align peoples' understanding of project objectives, procedures and plans, and to begin the team-building and bonding process.

L

Late Start -
The latest time a task can start before it causes a delay in the project end date.

Level of Effort (LOE) -
Defines the amount of work performed within a period of time and is measured in man days or man hours

M

Metrics -
Metrics are quantitative measures such as the number of on time projects. They are used in improvement programs to determine if improvement has taken place or to determine if goals and objectives are met.

Milestone -
A point in time when a deliverable or set of deliverables is available. Generally used to denote a significant event such as the completion of a phase of the project or of a set of critical activities. A milestone is an event; it has no duration or effort. It must be preceded by one or more tasks (even the beginning of a project is preceded by a set of tasks, which may be implied).

Mitigation –
A process or activity to make less harsh, less hostile, or to reduce and compensate for the impact.

N

Network Diagram -
A graphic tool for depicting the sequence and relationships between tasks in a project. PERT Diagram, Critical Path Diagram, Arrow Diagram, Precedence Diagram are all forms of network diagrams.

O

Objective -
An objective is something to be achieved. In project management, the objectives are the desired outcomes of the project or any part of the project, both in terms of defined deliverables and behavioral outcomes.

Over the Shoulder Review –
A project management process where the consultant, the owner and other stake holders review plans and documents in formal and or informal meetings to expedite the review process.

P

Partnering Principles -
Partnering is a formal process which includes all Partners' input, with tangible deliverables: a Partners' communication and roles matrix, a charter (mission, goals and guidelines), issue resolution agreements, an action plan, partnering evaluation program, meeting follow-up strategies and a written report that includes all Partnership agreements. Partnering follows the following principles: Trust, Commitment, Communication, Cooperation, Teamwork Relationships, Issue Resolution, Measurement/Feedback and Continuous Improvement.

Partnering Team –
An additional project team that is directly or indirectly associated with a project. Partnering teams can be responsible for whole project tasks, or may be as simple as a source of information.

Phase -
A grouping of activities in a project that are required to meet a major milestone by providing a significant deliverable, such as a requirements definition or product design document. A project is broken down into a set of phases for control purposes, planning, design, construction, Utility Relocation, public, and contingency.

Planning -
The process of establishing and maintaining the definition of the scope of a project, the way the project will be performed (procedures and tasks), roles and responsibilities and the time and cost estimates.

Predecessor Task -
A task (or activity) that must be started or finished before another task or milestone can be performed.

Preliminary Scope Statement -
A short, high-level overview of the work to be done. Generally used early in a project's development, the preliminary scope statement is a brief description of the parameters required for design and construction of the recommended solution. The preliminary scope statement is used later to build the much more detailed Scope Of Work.

Project Close Out (review) -
The process of gaining formal acceptance for the results of a project or phase and bringing it to an orderly end, including the archiving of project information and post-project review. See Gate 6-1 in the project manual.

Problem Statement -
Describes the reason(s) for initiating the project, specifically stating the problem.

Process -
A series of steps or actions to accomplish something. A natural series of changes or occurrences.

Program -
A suite of related projects and ongoing operational activities managed as a whole.

Project -
An effort to provide a product or service within finite time and cost constraints.

Project Charter -
The Project Charter is a high-level, short document created at project initiation to communicate the major parameters of the project. The Project Charter focuses on the problem/issue and devotes little to an actual solution.

Project Life Cycle -
The full set of activities from the beginning to the end of a project. Generally associated with a set of phases, which are determined based on the major parts of project performance (e.g., requirements definition, design, construction, deployment) and the need for control by the Client organization (checkpoints for Go/No go decision-making).

Project Management -
The process and of application of planning, team-building, communicating, controlling, decision-making, and taking corrective action to ensure project objectives are met.

Project Management Plan -
A baseline tool used as a reference for managing the project. It is one of the most important documents in the overall planning, monitoring, and implementation of a project and should be "owned" by the project manager and his/her team. The plan should include: A definition of overall objectives, statements on how these should be achieved (and verified) Estimates of the time required the budget Quality policy Safety, health and environmental policies if appropriate the risk management strategy. Other items of a technical, commercial, organizational, personnel or control nature can also be included.

Project Manager -
The person responsible and accountable for managing a project's planning and performance. The single point of accountability for a project.

Q

Quality Assurance (QA) -
Making sure standards and procedures are effective and that they are complied with. Note, in some organizations QA is used to refer to the quality control function.

Quality Control (QC) -
Making sure deliverables comply with acceptance criteria. Includes testing and reviews.

R

Request for Proposal (RFP) - REVIEW WITH PROCUREMENT
A document that describes a need for products and/or services and the conditions under which they are to be provided. The purpose of the RFP is to solicit bids or proposals from prospective suppliers. Also called a Request for Quote (RFQ).

Requisition –
An electronic document electronically generated in Advantage required to begin the Procurement process.

Responsibility -
The obligation to perform or take care of something, usually with the liability to be accountable for loss or failure. Responsibility may be delegated to others but the delegation does not eliminate the responsibility.

Responsibility Assignment Matrix (RAM) -
A tool used to relate each project activity in the WBS with a responsible organization unit or individual. Its purpose is to ensure that every activity is assigned to one or more individuals (only one with primary responsibility) and that the individuals are aware of their responsibilities.

Risk (Risk Analysis) -
The likelihood of the occurrence of an event. Generally, the event is a negative one like project failure, but may also be a positive event, like the early completion of a task.

Risk Assessment -
Part of risk management in which planners identify potential risks and describe them, usually in terms of their symptoms, causes, probability of occurrence and potential impact.

Risk Management -
Is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events.

S

Schedule -
The project timeline, identifying the dates (absolute or relative to a start date) that project tasks will be started and completed, resources will be required and upon which milestones will be reached.

Scope -
Scope is defined in terms of three dimensions—product, project and impact. Product scope is the full set of features and functions to be provided as a result of the project. Project scope is the work that has to be done to deliver the product. Impact scope is the depth and breadth of involvement by, and effect on, the performing and client organizations.

Scope Change -
Any change in the definition of the project scope. Scope change can result from changes in client needs, discovery of defects or omissions, regulatory changes, etc.

Scope of Work (SOW) -
A statement describing the scope of the projects principle deliverables and constraints.

Service Level Agreement (SLA) -
A contractually enforceable agreement on the quality of service provided.

Slippage -
What you get when you start running slightly over-time or over-budget. How does a project get six months late? One hour at a time.

Solicitation Documents – REVIEW WITH PROCUREMENT
Documents that are typically the final design plans, special engineering specifications and project conditions (Special Provisions), Engineer's Estimate of probable cost, bid requirements and bid tabulations, sample construction contract, the bid tabulation, and other documents such as special permits, reports and drawings that may have an impact on the construction contract and the construction contractors' bids.

Specifications -
Detailed statements of project deliverables that result from requirements definition and design. Specifications generally describe the deliverables in terms of appearance, operational constraints and quality attributes. Specifications are the basis for acceptance criteria used in scope verification and quality control. In some organizations and industries, specifications may be qualified as requirements specifications and design specifications.

Stakeholders -
Stakeholders are the specific people or groups who have a stake, or an interest, in the outcome of the project. Normally stakeholders are from within the County, and could include internal clients, management, employees, administrators... etc

Subject Matter Expert (SME) -
An expert in some aspect of the project's content expected to provide input to the project team regarding business, scientific, engineering or other subjects. Input may be in the form of requirements, planning, resolutions to issues and/or review of project results.

Substantial Completion* –
Substantial Completion is the date on which the construction work is sufficiently complete so that the owner can use or occupy the project for its intended use. This is the date on which a letter of substantial completion is issued by the owner to the contractor, contract time is halted and liquidated damages can no longer be assessed. Contract time is defined as the number of working days or calendar days allowed for substantial completion of the work by the contractor, including authorized time extensions. Punch list items may still need to be completed after substantial completion.
*Note: For Facilities Management that does not have a Substantial Completion task in its MS Project Template, this definition of substantial completion will apply to Construction Finish on Line 34 of the MS Project Template.

Successor -
A task or milestone that is logically linked to one or more predecessor tasks.

Storm Water Pollution Prevention Plan (SWPPP) –
Storm Water Pollution Prevention Plan is required by EPA and the Arizona Department of Water Quality to mitigate the sediment and pollution impacts created by ground-disturbing activities.

T

Task -
A piece of work requiring effort, resources and having a concrete outcome (a deliverable). A task may be of any size (a project is a very large task). Sometimes the term is used to denote a piece of work at a particular level in a Work Breakdown Structure (WBS) hierarchy e.g., a phase is broken into a set of activities, and an activity into a set of tasks. Except for this hierarchical usage, activity is synonymous with task.

U

User Group-
The people within the client who will own and/or operate the system or site you're producing. Note that the client doesn't have to be an external one (you could work for the same people).

V

Variance -
The difference between estimated cost, duration or effort and the actual result of performance. In addition, can be the difference between the initial or baseline product scope and the actual product delivered.

W

Work Day/Hour -
A single work hour is one hour and a single work day is generally 8 hours. These terms are used to reference the amount of work needed to complete a task. If two people worked on a task for one hour each, they used two work hours to complete that task. The amount of time passed may have only been one hour, but two work hours were used. Work Days is used when task timeframes are of greater length.

Y

Z

II. Pima County Project Management & Gate Process Manual Acronyms

A

AA – Approval Authority
AC – Approval Committee
ADA – Americans with Disabilities Act
ADEQ – Arizona Department of Environmental Quality
AZPDES - Arizona Pollutant Discharge Elimination System

B

BAC – Budget at Completion
BOS – Board of Supervisors

C

CAC – Community Advisory Committee
CIP – Capital Improvement Program
CMAR – Construction Manager at Risk
CxA – Commissioning Agent

D

DB – Design-Build
DBB – Design-Bid-Build
DBO – Design-Build-Operate
DCR – Design Concept Reports
DD – Deputy Director
DES - Designer

DIR – Director
DM – Division Management
DOT – Department of Transportation

E

EAC – Estimate at Completion
EAMR – Environmental Assessment and Mitigation Report

F

FP – Fixed Price

G

GIS – Geographic Information Systems

H

I

IGA – Inter-governmental Agreement
IT – Information Technology

J

JOC – Job Order Contract
JPA -

K

L

LOE – Level of Effort

M

MSP - Microsoft Project

N

O

O&M – Operation and Maintenance

P

PAG – Pima Association of Governments
PC – Pima County
PDEQ – Pima County Department of Environmental Quality
PLM – Planning Manager
PLS – Planning Staff
PM – Project Manager, Program Manager, Project Management
PMCP – Project Management Communication Plan
PO – Purchase Order
PRF – Project Request Form

Q

QA – Quality Assurance
QC – Quality Control
QCL – Qualified Consultant List

R

RAM – Responsibility Assignment Matrix
RFP – Request for Proposal
ROW – Right of Way
RWRD – Regional Wastewater Reclamation Department

S

SCADA -Supervisory Control and Data Acquisition
SLA – Service Level Agreement
SME – Subject Matter Expert
SOP – Standard Operating Procedure
SOW – Scope of Work
SWPPP – Storm Water Pollution Prevention Plan

T

TAZ – Traffic Analysis Zones
TPAC – Tucson Pima Arts Council

U

USFS – United States Forest Service

V

W

X

Y

Z

III. References

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PROJECT MANAGEMENT & GATE PROCESS MANUAL

PART IV: EXHIBITS

DESCRIPTION OF NEED FORM

GUIDANCE FOR ESTABLISHING A STAKEHOLDER LIST

MEETING AGENDA/MINUTES FORM AND GUIDANCE FOR USE

GUIDANCE FOR PREPARING A PROJECT CHARTER

PROJECT CHARTER FORM

QUALIFYING CRITERIA FOR GATES

CHECKLISTS FOR GATE MATERIALS

GATE APPROVAL FORM

PROJECT TRACKING REPORT (*This exhibit is under development*)

GUIDANCE ON DESIGN REVIEW PROCESS

MISCELLANEOUS EXHIBITS

LINKS TO RELATED WEBSITES (*This section is under development*)
- Pima County Procurement Department
  - Board of Supervisors Policy D29.1 Selection and Contracting of Architectural and Engineering Related Professional Services and Alternative Project Delivery Methods
  - Consultant Performance Evaluation Form
  - Contractor Performance Evaluation Form
- PimaCore Tools/Job Aids – CIP Corner
  - MS Project Templates
  - Project Cost Model Template
  - Maintenance Request Form
  - Completed Project Report
- ADOT Partnering Principles and Process

PROJECT MANAGEMENT & GATE PROCESS MANUAL

DESCRIPTION OF NEED FORM

Project Name:			
Project ID:		Project Manager:	
Prepared By:		Phone #:	

Background:

Scope of Work:

Justification:

Attach a Map of the Area

Forecast by Phase and Fiscal Year

	FY	FY	FY	FY	FY	Total
Project Development						
Design						
Right-of-Way						
Construction						
Utility Relocation						
Public Art						
Contingency						
Total						

APPROVAL FOR PROCEEDING WITH PROJECT FORECASTING

Director Signature Date

County Administration Signature Date

PROJECT MANAGEMENT & GATE PROCESS MANUAL

GUIDANCE FOR ESTABLISHING A STAKEHOLDER LIST

Document Overview

Stakeholders provide key project input for a variety of issues during the project. The intent of defining stakeholders is to assign key staff to provide the specific input for applicable issues and risks for the development of the Project Charter, and avoid potential miscommunication or review of key project areas. This stakeholder list is intended to provide a starting point for project managers when deciding on key stakeholders appropriate for a particular project. The list below contains typical project issues which should have a stakeholder defined.

Areas of Concern Considered for Specific Stakeholder Involvement

Scope	Real Property/ROW	IGA's or Agreements	Public Outreach
Budget	Cultural Resources	Alternative Delivery	Public Art
Funding	Environmental Issues	Procurement Coord.	Political Issues
Project Status	Utility Coordination	IT Dept. Coordination	Construction Trends
Regulatory Issues	Site Constraints	Maintenance/Ops Coord.	
Design Standards/Req.	Required Permits	Field/Inspection Coord.	

Service Groups Stakeholders

Of these areas listed above, the following are handled by specific service groups, and are consistent in all departments.

Real Property/ROW	Real Property Manager (or designee)
Cultural Resources	Office of Sustainability and Conservation, Cultural Program Coord.
Utility Coordination	PCDOT, Utility Coordinator
Alternate Delivery	Procurement, Design and Construction Manager
Procurement Coordination	Procurement, Design and Construction Manager
IT Department Coordination	ITD, Relationship Manager
Public Art	TPAC, plus any internal manager as identified
Public Outreach	PCDOT, Community Relations Manager

Internal Stakeholders

The remaining areas of concern will require an internally generated list of stakeholders, dependent on the scope of work of the project. This list can be personalized specifically by each department.

Scope	Department Director (or Div Mgr)
Budget/Funding	Department Director (or Div Mgr), Project Controls staff if applicable
Regulatory Issues; Required Permits	CIP Division Manager, Development Services, or other internal contact (such as RFCD).
Environmental Issues	Department Environmental Coordinator, or PM
Design Standards/ Requirements; Site Constraints	CIP Division Manager, Planners or Technical Reviewers. May include internal specialists outside of the department depending on project scope.
IGA's or agreements	Department IGA coordinator, Department assigned Legal Rep.
Maintenance/Ops Coordination	Future Managing Department M&O Staff
Field/Inspection Coordination; Construction Trends/Issues	Field Engineering Manager or Construction Mgt Staff if internally inspected managed.
Political Issues	Department Director (and County Administration as required)

External Stakeholders

Finally, external input may be required during project development, design, and construction.

User Groups	If applicable, external users or clients for the project.
Outside Jurisdiction	Local Jurisdictions - if project is externally delivered/located
Outside Agency	If specific coordination is required, perhaps due to funding source or permits & approvals that are required.

PROJECT MANAGEMENT & GATE PROCESS MANUAL

MEETING AGENDA/MINUTES FORM & GUIDANCE FOR USE

PROJECT ID: DEPARTMENT:
PROJECT NAME: MEETING DATE:

Meeting Agenda/Minutes	Stakeholder Meeting:	Click here for menu
	Gate Meeting:	Click here for menu
	Over-the-Shoulder Review:	Click here for menu
	Milestone Workshop:	Click here for menu
	Kickoff Meeting:	Click here for menu
	Other Meeting:	Click here for menu

Meeting Date:	
Department:	
Project Manager:	
Project ID:	
Project Name:	

Invitees/Attendees: See attached list	Has GPS Polygon changed from Project Charter? Yes ☐ or No ☐

Location/Site Map (include outline of polygon)
See attached location/site map

Project Scope
Initial Project Charter Scope:
New/Proposed Scope Modifications (If any):

PROJECT ID: DEPARTMENT:
PROJECT NAME: MEETING DATE:

Construction Procurement Method: (Indicate if different from Project Charter)

Update of scope, schedule, cost, quality, risks, assumptions, constraints or procurement (Use only as many boxes as needed)

Update on: Click here for menu	Source: Click here for menu
Description:	
Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

Update on: Click here for menu	Source: Click here for menu
Description:	
Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

Update on: Click here for menu	Source: Click here for menu
Description:	
Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

Update on: Click here for menu	Source: Click here for menu
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Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

Update on: Click here for menu	Source: Click here for menu
Description:	
Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

PROJECT ID: DEPARTMENT:
PROJECT NAME: MEETING DATE:

Update on: Click here for menu	Source: Click here for menu
Description:	
Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

Update on: Click here for menu	Source: Click here for menu
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Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

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Description:	
Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

Update on: Click here for menu	Source: Click here for menu
Description:	
Status/Strategy:	
Meeting Minutes of Discussion and Any Proposed Action:	

PROJECT ID: DEPARTMENT:
PROJECT NAME: MEETING DATE:

Lessons Learned to Date (Note Project Stage)
Meeting Minutes of Discussion on Lessons Learned:

Review Project Schedule (Use Microsoft Project Schedule Template)
Meeting Minutes of Discussion on Schedule:

Review Project Cost Model (Use Cost Model Template)
Meeting Minutes of Discussion on Cost Model:

Additional Gate Minutes/Action Items
Meeting Minutes of Discussion on Additional Items:

MEETING AGENDA/MINUTES

PROJECT ID: DEPARTMENT:

PROJECT NAME: MEETING DATE:

INVITEES/ATTENDEES

NAME (Please Print)	ORGANIZATION	PHONE	EMAIL

DOCUMENT OVERVIEW

This document provides a standard tool for preparing agendas and recording minutes and invitees/attendees for all types of capital improvement project-related meetings. The major benefit of using the tool is that once the meeting has concluded, the minutes along with any proposed action items can be added directly under each agenda item. No additional form is needed. The tool also ties agenda items back to the Project Charter and prior gate meetings so that ongoing progress related to the scope, schedule, cost, quality, assumptions, constraints, risks and procurement can be tracked and monitored. The tool provides a place to record lessons learned to date so that a running record, as opposed to waiting until project completion, is maintained throughout the life of the project. This valuable information ultimately becomes the basis for strengthening the tools, techniques and processes contained in our Manual.

Guidance for Using the Form

Much of the form is self-explanatory. A few items to note when using the form are:

- The Project ID, Project Name, Department and Meeting date are part of the document header and, thus, repeated on each page
- For ease of use, many of the items have drop-down menus with pick lists
- Each project that anticipates ground disturbance must submit to IT GIS at project set up and project close out a polygon showing the limits of disturbance. This form provides a reminder in the form of a question to the Project Manager to determine if the anticipated limits of disturbance have changed. If so, the Project Manager should provide an updated polygon to IT GIS.
- The agenda format is structured to maintain continuity between the scope, schedule, cost, quality, risks, assumptions, constraints and other elements presented in the Project Charter and the current status of the project. If there are changes in scope, schedule, cost or quality, the Project Manager needs to refer to the Change Management process in our Manual to determine if a variance report is required to be completed and approved prior to any change being implemented by the project team.

PROJECT MANAGEMENT & GATE PROCESS MANUAL

GUIDANCE FOR PREPARING A PROJECT CHARTER

DOCUMENT OVERVIEW

Pima County's desired outcome resulting from project teams adhering to the Pima County standard methodology for capital improvement project delivery contained in the Pima County Project Management & Gate Process Manual is defined as follows:

> All individuals, whether internal or external to Pima County, involved at any and all levels with a capital improvement project maintain throughout project delivery the same perspective with respect to the project's definition of success. This outcome is achieved by effectively managing change as the project moves from initial concept through project close out. The project's definition of success is established by the project team with input from the project's stakeholders and agreement from senior management.

Maintaining a Consistent Definition of Success

With this desired outcome in mind, the Project Charter is the tool the project team uses to establish the project's definition of success in order to maintain the consistency from project startup to project completion. The project-specific definition of success is established by the project team through two steps in the Project Charter:

1. Constraining Factor: The project team, with input from stakeholders and approval from senior management, establishes which one of the four factors of project delivery (i.e., scope, time, cost and quality) is the least flexible to change for the specific project being initiated. Whichever constraining factor is chosen, this choice will have a direct impact on the need for flexibility in the management of the other three factors (e.g., if cost is the constraining factor, flexibility in scope management may be necessary).
2. Levels of Success: Levels of success clarify the project-specific relationships between scope, time, cost and quality and the tradeoffs between these four factors that must made during project delivery. Using the items provided in the Project Charter format, the project team, with input from stakeholders and approval from senior management, establishes the end results for scope, time, cost and quality that the project team and stakeholders consider as successful for this project.

Alignment with Project Management Industry Standards

The Pima County Project Management & Gate Process Manual seeks alignment with project management industry standards and guidelines. Whenever possible, concepts and definitions used in the Project Charter are paraphrased from A Guide to the Project Management Body of Knowledge, Project Management Institute (PMI), 5th Edition, 2013. (PMBOK Guide)

For those unfamiliar with or wanting a refresher course of the PMI guidelines, Pima County's Online Learning Source, accessible from the County's intranet home page, provides online training modules directly related to the PMBOK Guide. Instructions on how to sign up and use this online project management training are provided on the County's intranet home page.

SPECIFIC GUIDANCE FOR PREPARING A PROJECT CHARTER

The PMBOK Guide concepts and definitions referenced above as well as concepts and definitions specific to Pima County have been incorporated into the text of the Project Charter as introductions to various sections. This text provides the reader with critical information for understanding the purpose and expected content of the various sections and should remain a part of the Project Charter. Points where the author needs to insert text, check boxes or fill in data are identified in gray text. The author should delete the gray text and check boxes or fill in data as needed.

*NOTE: NOT ALL SECTIONS OF THE PROJECT CHARTER FORMAT ARE APPLICABLE TO ALL PROJECTS. TO INSURE ALL SECTIONS HAVE BEEN COMPLETED AS NEEDED, DO NOT DELETE ANY SECTIONS FROM THIS FORM. IF A SECTION IS NOT APPLICABLE TO THE PROJECT, SIMPLY NOTE "NOT APPLICABLE" AND MOVE ON TO THE NEXT SECTION. SEE "GUIDANCE FOR PREPARING A PROJECT CHARTER" AND "CHECKLISTS FOR PROJECT CHARTER & GATES" FOR ADDITIONAL INFORMATION.

PROJECT MANAGEMENT & GATE PROCESS MANUAL

PROJECT CHARTER FORMAT

Project Charter

DEPARTMENT:

PROJECT NAME:

PROJECT ID:

Prepared By: [Insert Project Charter author's name]

Date Prepared: [May be different from the approval dates below]

Approval of this Project Charter indicates 1) approval of the constraining factor and levels of success established for this project, 2) an understanding of the purpose and content as described in this document, and 3) agreement with the scope, schedule, budget and quality of the recommended alternative. By signing this document, each individual agrees that work should be initiated on this project with all necessary resources allocated and commits to fulfill his/her role and responsibilities as described herein.

Approver Name	Position	Signature	Date
	Project Manager		
	Department Director		
	County Administration		

*NOTE: NOT ALL SECTIONS OF THE PROJECT CHARTER FORMAT ARE APPLICABLE TO ALL PROJECTS. TO INSURE ALL SECTIONS HAVE BEEN COMPLETED AS NEEDED, DO NOT DELETE ANY SECTIONS FROM THIS FORM. IF A SECTION IS NOT APPLICABLE TO THE PROJECT, SIMPLY NOTE "NOT APPLICABLE" AND MOVE ON TO THE NEXT SECTION. SEE "GUIDANCE FOR PREPARING A PROJECT CHARTER" AND "CHECKLISTS FOR PROJECT CHARTER & GATES" FOR ADDITIONAL INFORMATION.

PROJECT ID: DEPARTMENT:
PROJECT NAME: DATE PREPARED:

TABLE OF CONTENTS

PROJECT CHARTER SUMMARY SHEET

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- Constraining Factor
- Background
- Need Statement
- Justification and Estimated Benefits of Project
- Map of Project Area with Polygon

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  - Constraints and Impacts
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- B. Microsoft Project Schedule
- C. Stakeholder Meeting Minutes
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PROJECT ID: DEPARTMENT:
PROJECT NAME: DATE PREPARED:

PROJECT CHARTER SUMMARY SHEET
(To be included with materials for all gates)

Scope Statement
[Copy from Scope Management: Scope Statement]

Constraining Factor
[Copy from Overview: Constraining Factor]

Levels of Success
[Copy from Quality Management: Levels of Success]

Summary Budget and Requested Funding Sources

Total Project Budget: [Copy Total from Cost Management: Financial Schedule for Requested Budget]
Requested Funding Source(s): [Copy from Cost Management: Requested Funding Sources]
Total Project Soft Cost Percentage: [Copy from Cost Management: Project Cost Model Summary]

Summary Schedule

Project Start: [Copy from Time Management: Summary Schedule]
Project Finish: [Copy from Time Management: Summary Schedule]

Risks to Achieving Project Charter's Scope, Schedule, Budget and/or Quality
[Copy Name of Each Risk from Risk Management: Risk Table]

Proposed Gate Meetings
[Copy from Communication Management: Proposed Gate Meetings]

Proposed Project Delivery Method
[Copy from Procurement Management: Proposed Project Delivery Method]

Map of Project Area with Polygon
[Copy from Overview: Map of Project Area with Polygon]

PROJECT ID: DEPARTMENT:
PROJECT NAME: DATE PREPARED:

OVERVIEW

The Pima County Project Management & Gate Process Manual seeks alignment with project management industry standards and guidelines. Whenever possible, concepts and definitions used in the Project Charter are paraphrased from A Guide to the Project Management Body of Knowledge, Project Management Institute (PMI), 5th Edition, 2013. (PMBOK Guide)

The Project Charter sets forth parameters for a project. In order for a project to be successful, a project team needs to:

- Establish and maintain appropriate communication and engagement with stakeholders starting with the preparation of the Project Charter (for details see Guidance for Establishing a Stakeholder List in the Pima County Project Management & Gate Process Manual);
- Comply with requirements of the Pima County Project Management & Gate Process Manual per County Administrative Procedure 3-28;
- Balance the competing constraints of scope, schedule, budget, and quality, and
- Manage risks that could adversely impact the project team's ability to meet scope, schedule, budget and/or quality as described in the Project Charter. (PMBOK Guide)

Constraining Factor

Scope, time, cost and quality are all important to a project. However, for each project, one of these four factors is more constrained than the others. For this project, the following factor is understood by the project team, all stakeholders and senior management to be the least flexible to change: [Check appropriate box]

☐ Scope
☐ Time
☐ Cost
☐ Quality

Background

The background is a brief synopsis of the when and how the proposed project was identified. [Insert project background]

Need Statement

The need statement is a brief description of the problem that the project will remedy. [Insert project need statement]

Justification and Estimated Benefits of Project

The justification is a statement of the reason(s) for the request to dedicate resources (financial and personnel) to the project. These reasons can vary from responding to changes in regulations, increasing system capacity to meet future needs, replacement of facilities that have reached their useful life, etc. [Insert project justification]

The table below identifies some general benefits that are applicable to most capital improvement projects. The project team, with input from stakeholders, qualitatively determines the estimated level of benefit that will be most likely achieved as a result of completing the project.

The estimated benefits of this project are as follows: [Check applicable boxes]

Benefit	Estimated Level of Benefit			
	High	Med	Low	None
Protects Health, Safety & Property	☐	☐	☐	☐

Benefit	Estimated Level of Benefit			
	High	Med	Low	None
Increases Capacity	☐	☐	☐	☐
Meets Regulatory/Mandated Requirement	☐	☐	☐	☐
Promotes Economic Development	☐	☐	☐	☐
Makes Use of Non-County Funding	☐	☐	☐	☐
Reduces Long-Term Costs to the County	☐	☐	☐	☐
Rehabilitates/Preserves/Enhances Existing Asset	☐	☐	☐	☐
Enhances Environment and/or Cultural Resource	☐	☐	☐	☐
Improves System Continuity	☐	☐	☐	☐
Meets Master/Long-Range Plan	☐	☐	☐	☐
Is Regionally Significant	☐	☐	☐	☐

Map of Project Area with Polygon

Below is a map of the area associated with this project. To meet certain Pima County requirements, any project that anticipates ground disturbance must show on this map a polygon of the limits of potential ground disturbance. [Insert project area map with limits of potential ground disturbance, if applicable]

SCOPE MANAGEMENT

Scope management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Managing the project scope is primarily concerned with defining and controlling what is and is not included in the project. (PMBOK Guide) During project delivery, if a change in scope is requested, the Project Manager will follow the Change Management process as detailed in the Pima County Project Management & Gate Process Manual in order to obtain the necessary approvals prior to committing to a change in scope. To initiate scope management, alternatives with their associated assumptions and constraints are analyzed in the Project Charter. The analysis results for these alternatives are then discussed with the department's approval authority. Based on this discussion, a recommendation and scope statement are developed.

Alternatives*
*Add as many alternatives as needed

Alternative analysis evaluates identified options in order to select which options or approaches to use to execute and perform the work of the project. (PMBOK Guide) Some projects have a pre-defined general scope description (e.g., a bond project). However, the project team should consider all viable alternatives, including any pre-defined scope, for satisfying stakeholder needs and expectations for the project. Per the Pima County Project Management & Gate Process Manual - Phase I: Project Charter & Project Setup, these alternatives are then discussed with the department's approval authority prior to finalizing the recommendation and scope statement in the Project Charter. For this project, the alternatives analyzed by the project team are:

Alternative 1: [Provide name]
Description: [Insert description]

Alternative 2: [Provide name]
Description: [Insert description]

Assumptions and Implications*
*Add as many assumptions/implications as needed

Assumptions are unknown factors that are considered, based on professional judgment and experience, to be true, real, or certain, but without proof. (PMBOK Guide) Implications are effects or consequences that may occur if assumptions prove to be incorrect. For example, one might make the assumption that obtaining a permit will take X months from the time an application is submitted. The implication is that, if obtaining this permit is on the critical path and the time to obtain the permit is longer than assumed in the Project Charter, a recovery plan will need to be implemented in order to keep the project on schedule.

Many assumptions and associated implications are common to all alternatives. Common assumptions and associated implications for this project are:

Assumption A: [Insert text]
Implication A: [Insert text]

Assumption B: [Insert text]
Implication B: [Insert text]

Some assumptions and associated implications are specific to an alternative. Assumptions and associated implications specific to an alternative are:

Alternative 1: [Insert name]
Assumption 1.1: [Insert text]
Implication 1.1: [Insert text]

Assumption 1.2: [Insert text]
Implication 1.2: [Insert text]

Alternative 2: [Insert name]
Assumption 2.1: [Insert text]
Implication 2.1: [Insert text]

Assumption 2.2: [Insert text]
Implication 2.2: [Insert text]

Constraints and Impacts *
*Add as many constraints/impacts as needed

Constraints are known limiting factors to the delivery of a project. (PMBOK Guide) Impacts are the effects on the project as a result of the constraint. For example, one constraint might be that the project's available funding cannot be increased. A corresponding impact might be that, if the estimated cost of the project scope is greater than the available funding, elements of the project scope may need to be deleted or reduced in quality.

Many constraints and associated impacts are common to all alternatives. Common constraints and associated impacts for this project are:

Constraint A: [Insert text]
Impact A: [Insert text]

Constraint B: [Insert text]
Impact B: [Insert text]

Some constraints and associated impacts are specific to an alternative. Constraints and associated impacts specific to an alternative are:

Alternative 1: [Insert name]
Constraint 1.1: [Insert text]
Impact 1.1: [Insert text]

Constraint 1.2: [Insert text]
Impact 1.2: [Insert text]

Alternative 2: [Insert name]
Constraint 2.1: [Insert text]
Impact 2.1: [Insert text]

Constraint 2.2: [Insert text]
Impact 2.2: [Insert text]

Recommendation

This section specifies the preferred alternative. Per the Pima County Project Management & Gate Process Manual, the recommendation is chosen after consultation with the department's approval authority (typically, the department director). [Insert preferred alternative]

Note: In the event there needs to be additional analysis completed prior to recommending a single alternative, the Project Charter will note that Phase II: Project Development will need to be completed along with Gate 2-1. The following specific language should be added to the recommendation: "In order to set up this project, Alternative ____ has been chosen as the preliminary basis for the Project Charter scope statement, cost model and Microsoft project schedule. If another alternative is selected as the result of completing the concept analysis, per Phase II Project Development of the Pima County Project Management & Gate Process Manual, the Project Charter, cost model and Microsoft project schedule will be amended. The results of Phase II will be presented at Gate 2-1."

Scope Statement

The scope statement is a brief description of the preliminary details of the work that has to be completed to deliver the project successfully. This includes basic scope parameters such as location and project elements such as length of roadway, square footage of building, number and types of recreation fields, length and diameter of pipes, etc. [Insert project scope statement]

COST MANAGEMENT

Costs and budgets form an important part of any project. Cost Management involves ensuring that a project meets its objectives without exceeding the budget. (PMBOK Guide) The cost is the estimated dollars required to meet the project's scope, schedule and quality. The budget is amount the project is authorized to spend. To initiate cost management, a cost estimate using the project cost model template is generated as the basis for establishing the project budget. In addition, requested funding sources are identified. During project delivery, if a change in budget is requested, the Project Manager will follow the Change Management process as detailed in the Pima County Project Management & Gate Process Manual in order to obtain the necessary approvals, including verification that monies are available to fund the increase, prior to committing to a change in the budget.

Project Cost Model Summary

This table is a summary estimated costs and soft cost percentages from the project cost model. The full project cost model is included as an appendix to this Project Charter. [Copy data from project cost model in appendix.]

Cost Model Project Line Items	Estimated Cost	Soft Cost %
Land Acquisition (RWY) - 001	$0	%
Project Development (PLN)* - 002	$0	%
Design (DES) - 003	$0	%
Construction - CON - 004	$0	%
Utility Relocation - UTL - 005	$0	%
Public Art - PRT - 006	$0	%
Contingency - CTG - 007	$0	%

TOTAL COST ESTIMATE & SOFT COST PERCENTAGE	$0	%

*Only use Project Development (PLN) if the Project Charter recommends additional analysis prior to finalizing the project scope. See note in the Pima County Project Management & Gate Process Manual – Part I, Phase I: Project Charter & Project Setup for further details.

Financial Schedule for Requested Budget

The following is the requested budget by phase and fiscal year. [Insert requested budget by phase and fiscal year]

Phase	FY XX/XX	FY XX/XX	FY XX/XX	FY XX/XX	FY XX/XX	TOTAL
Land Acquisition-RWY-001	0	0	0	0	0	*0*
Project Development-PLN-002	0	0	0	0	0	*0*
Design-DES-003	0	0	0	0	0	*0*
Construction-CON-004	0	0	0	0	0	*0*
Utility Relocation-UTL-005	0	0	0	0	0	*0*
Public Art-PRT-006	0	0	0	0	0	*0*
Contingency-CTG-007	0	0	0	0	0	*0*
TOTAL PROJECT BUDGET	*0*	*0*	*0*	*0*	*0*	*0*

Requested Funding Sources [Insert funding source data]

Funding Summary				
Funding Sources		Amount	% of Total	
A.		$	%	
B.		$	%	
C		$	%	
D.		$	%	
TOTAL FUNDING SOURCES		$	%	

TIME MANAGEMENT

Time Management is necessary to ensure that a project is completed according to its schedule. (PMBOK Guide) To initiate time management, a summary schedule and major tasks with anticipated completion dates are established. During project delivery, if a change in schedule is requested, the Project Manager will follow the Change Management process as detailed in the Pima County Project Management & Gate Process Manual in order to obtain the necessary approvals prior to committing to a change in the schedule.

Summary Schedule

This table is a summary of the specific line items (denoted by Microsoft Project as "ID") from the Microsoft Project Template used to create project work orders. The full Microsoft Project Schedule is included as an appendix to this Project Charter. [Copy data from Microsoft Project Schedule in appendix]

ID	Phase	Timeframe	Anticipated Start Date	Anticipated Completion Date
1	Project Start	1 Day	NA	
2	Land Acquisition			
16	Project Development (PLN)*			
17	Procurement (PLN)*			

31	Design (DES)			
32	Procurement (DES)			
40	Procurement Bids / Advert & Printing			
51	Construction (CON)			
55	Construction (CON)			
56	Substantial Completion Milestone**			
1	Project Finish	1 Day	NA	
	Total		NA	NA

*Project Development is used only if the recommendation of this Project Charter is to conduct further concept analyses prior to making a final recommendation. See note in the Pima County Project Management & Gate Process Manual – Part I, Phase I: Project Charter & Project Setup for further details.

**Substantial completion, as defined in the Pima County Project Management & Gate Process Manual, is the date on which the construction work is sufficiently complete so that the owner can use or occupy the project for its intended use. This is the date on which a letter of substantial completion is issued by the owner to the contractor, contract time is halted and liquidated damages can no longer be assessed. Contract time is defined as the number of working days or calendar days allowed for substantial completion of the work by the contractor, including authorized time extensions. Punch list items may still need to be completed after substantial completion.

Major Tasks and Anticipated Completion Dates*
*Add as many major tasks as needed

Major tasks are activities required to achieve the project scope statement and that have concrete deliverables. One example would be the activities and deliverables required to obtain a permit needed to complete the project scope. [Insert project major tasks]

	Major Task Description	Anticipated Completion Date
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

QUALITY MANAGEMENT

Quality Management is concerned with ensuring that a project meets the standards and requirements that were set out for it. (PMBOK Guide) To initiate quality management, the project team, with input from stakeholders, will select levels of success for scope, schedule, cost and quality

based on the constraining factor identified in the Project Charter Overview. Senior management is then responsible for approving the selected levels of success. Levels of success are a key element in the Project Charter.

Levels of Success

The success of the project should be defined in terms of completing the project within the constraints of scope, time, cost, quality, resources, and risk as approved by the Project Manager and Senior Management. (PMBOK Guide) The levels of success established by the project team clarify the project-specific relationships between scope, time, cost and quality and the tradeoffs between these four factors that must be made during project delivery. For example, if the cost cannot exceed available funding, the level of success for cost that is chosen by the project team is the one where the percent difference between the actual total cost and the proposed total cost as noted in this Project Charter is equal to or less than 0%. This may require that the level of success for scope that is chosen by the project team is the one where the project team and stakeholders consider the project to be a success even though one or more elements were deleted from the scope statement in the Project Charter.

The collective levels of success established by the project team, with input from the stakeholders and approval of senior management, are used as the vision of success - a "guiding star" per se – by which the project team can assess whether decisions during project delivery potentially move the project's end results closer to or farther from this vision of success. Levels of success, for the purposes of project management, should not be confused with a Key Performance Indicator (KPI) or other performance metrics. A KPI usually defines the overall performance targets of a capital improvement program, such as number of projects delivered within X days of proposed substantial completion date in the Project Charter.

For this project, the levels of success chosen by the project team, with input from the stakeholders, for scope, time, cost and quality are indicated below. While the project team may choose to add items, the items in the Project Charter format are required to be completed. The project team can modify the levels of success under an item (e.g., if for the project, a difference between actual project start date and the proposed project start date of 2 years is more appropriate than 1 year, this value can be changed). The levels of success chosen by the project team should be consistent with the constraining factor identified in the Project Charter Overview. [Check appropriate boxes]

Scope

1. The project team and stakeholders consider this project successful:
   - ☐ If all elements from the scope statement in the Project Charter were completed
   - ☐ Even though one or more elements were deleted from the scope statement in the Project Charter
   - ☐ Even though one or more elements were added to the scope statement in the Project Charter

Time

1. The project team and stakeholders consider this project successful if the difference between the actual project start date and the proposed project start date noted in this Project Charter is equal to or less than:
   - ☐ 0 Days
   - ☐ 6 Months
   - ☐ 1 Year

2. The project team and stakeholders consider this project successful if the difference between the actual project close out date and the proposed project close out date noted in this Project Charter is equal to or less than:
   - ☐ 0 Days
   - ☐ 6 Months
   - ☐ 1 Year

Cost

1. The project team and stakeholders consider this project successful if the percent difference between the actual total cost and the proposed total cost as noted in this Project Charter is equal to or less than:
   - ☐ 0%
   - ☐ 10%

☐ 20%

2. The project team and stakeholders consider this project successful if the final total project soft cost percentage is equal to or less than:
   ☐ 35%
   ☐ 45%
   ☐ 50%

Quality

1. The project team and stakeholders consider this project successful if the quality of the work completed is as follows:
   ☐ Quality meets the minimum functionality requirements of the project scope
   ☐ Quality is state-of-the-art/top of the line/best in class

STAKEHOLDER MANAGEMENT

A stakeholder is an individual, group, or organization who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project. Stakeholders include all members of the project team as well as all interested entities that are internal or external to the County (see Guidance for Establishing a Stakeholder List in the Pima County Project Management & Gate Process Manual). Project internal stakeholders include both those individuals within a department as well as individuals from other County departments. Identifying stakeholders, understanding their relative degree of influence on a project, and balancing their needs and expectations are critical to the success of the project. Overlooking stakeholder interests can result in an increased likelihood of failures, delays, or other unintended consequences to the project. (PMBOK Guide)

Stakeholder Roles and Responsibilities*
*Add as many boxes as needed for this project.

Stakeholders have varying levels of responsibility and authority when participating on a project. (PMBOK Guide) To initiate stakeholder management, below is a preliminary list of stakeholders for this project. Stakeholders are expected to fulfill the roles and responsibilities as indicated to insure the success of this project. [Insert project stakeholders with roles and responsibilities]

Member's Name:	[Affiliation]
Role:	
Responsibility:	

Member's Name:	[Affiliation]
Role:	
Responsibility:	

Member's Name:	[Affiliation]
Role:	
Responsibility:	

Summary of Stakeholder Meeting

Because understanding stakeholder needs and expectations is critical to the success of a project, a meeting with stakeholders is a required step, per the Pima County Project Management & Gate Process Manual-Phase I: Project Charter & Project Setup, in preparing a Project Charter. A

stakeholder meeting is held at the start of drafting the Project Charter. The following is a summary of the results of the stakeholder meeting for this Project Charter:

A summary of the stakeholder meeting held prior to development of this Project Charter is as follows:

Date of Stakeholder Meeting: [Insert date]
Invitees: [Insert list of names]
Attendees: [Insert list of names]
Summary of Meeting Minutes: [Insert brief summary]
Critical Issues and Action Items: [Insert any critical issues and action items]

RISK MANAGEMENT

Risk, in the context of project delivery, is an uncertain event or condition, which if it occurs, may have a positive or negative effect on the project team's ability to achieve the scope, schedule, budget and/or quality as described in this Project Charter. The objectives of risk management are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project. To be successful, a project team should be committed to addressing risk management proactively and consistently throughout the project. Moving forward on a project without a proactive focus on risk management is likely to lead to more problems arising from unmanaged risks. The key benefit to risk assessment is the communication with, obtaining agreement and support from all stakeholders to ensure risk management is supported and performed effectively during project delivery. (PMBOK Guide)

Assessment of Risks to Achieving Project Charter's Anticipated Scope, Schedule, Budget and/or Quality

Risk assessment, in the context of project delivery, includes identification of risks that may affect the project team's ability to achieve the project's anticipated scope, schedule, budget and/or quality as described in this Project Charter. Each risk is assessed as to its probability of occurring, the potential impact to achieving the anticipated scope, schedule, budget and/or quality if the risk occurs, the action the project team will take, and the proposed mitigation strategies that will be part of a recovery plan. The actions are defined as follows: 1) Control: reduce the probability or impact of the risk to an acceptable level; 2) Absorb: project will bear the impact, which may require a contingency reserve of time, money and/or resources; 3) Avoid: eliminate threat posed by the risk or relax the objective that is in jeopardy, such as extending schedule or reducing scope; and 4) Deflect: transfer or share risk with a third party, which may involve partnering strategies or adding elements such as insurance, bonding, contract language or a guarantee.

Risk Table*

*Add as many boxes as needed

To initiate risk management, the following risks have been identified and analyzed for this project: [Complete information for each individual risk]

1. [RISK – name]							
Alternative: 1 ☐ 2 ☐ 3 ☐							
Probability:	High ☐	Med ☐	Low ☐	Impact:	High ☐	Med ☐	Low ☐
Action:	Control ☐	Absorb ☐	Avoid ☐	Deflect ☐			
Mitigation Strategy:							

2. [RISK – name]							
Alternative: 1 ☐ 2 ☐ 3 ☐							
Probability:	High ☐	Med ☐	Low ☐	Impact:	High ☐	Med ☐	Low ☐
Action:	Control ☐	Absorb ☐	Avoid ☐	Deflect ☐			

Mitigation Strategy:

HUMAN RESOURCE MANAGEMENT

Human Resource Management is concerned with assembling and managing a project team. Roles and responsibilities are established, reporting relationships are defined, and changes in team members are processed. (PMBOK Guide)

Project Organization

To initiate human resource management, the project organization chart below depicts the roles (unless project team members have been identified) and the interrelationships of those roles for a specific project. (PMBOK Guide) [Insert preliminary project organizational chart]

COMMUNICATION MANAGEMENT

Effective communication is important to the ultimate success of any project. Inadequate communications may lead to problems such as delay in message delivery, communication of information to the wrong audience, or insufficient communication to the stakeholders and misunderstanding of the message communicated. (PMBOK Guide) One tool to assist in the communication of project status and approvals to move forward is gate meetings. Detailed information and guidance with respect to gate meetings is contained in the Pima County Project Management & Gate Process – Part II: The Gate Process. Communication management is initiated by the project team proposing which gate meetings will be held and the anticipated dates for these gate meetings. These proposed gates and dates will be entered by the Project Manager into the CIP Program/Program Phases Maintenance Request (aka CAS Form) that is used, along with the Project Charter, by Finance to set up this project in the financial system.

Proposed Gate Meetings

For this project, the following gate meetings are proposed: [Check all that apply and insert date]

Proposed Date

☐ Gate 1-1 Entry Gate .....
☐ Gate 2-1 Project Development .....
☐ Gate 3-1 Preliminary Design .....
☐ Gate 3-2 Construction Documents Ready for Contractor Selection .....
☐ Gate 4-1 Ready to Issue Letter of Construction Acceptance .....
☐ Gate 5-1 Close Out.....

PROCUREMENT MANAGEMENT

Procurement management includes the contract management and change control processes required to develop and administer contracts or Delivery Orders (DO) issued by authorized project team members. To initiate procurement management, the project manager proposes the delivery method that will likely be used for this project.

Proposed Project Delivery Method

There are a variety of project delivery methods for procurement related to capital improvement projects. The traditional method of project delivery is design-bid-build. However, there are a number of alternative project delivery methods (APDM). If an APDM is proposed, per Pima County Board of Supervisors Policy D29-1, the Department Director must submit a memorandum to Procurement requesting establishment of an APDM contract with the justification for doing so. Detailed instructions related to requesting the use of an APDM are contained in the Pima County Board of Supervisors Policy D29-1.

The proposed project delivery method for this project is: [Check appropriate box]

PROJECT ID: DEPARTMENT:
PROJECT NAME: DATE PREPARED:

- ☐ Design-Bid-Build
- ☐ Construction Management at Risk
- ☐ Design-Build
- ☐ Design-Build-Own-Operate
- ☐ Job Order Contract

APPENDICES

A. Project Cost Model
B. Microsoft Project Schedule
C. Stakeholder Meeting Minutes
D. Guidance for Preparing a Project Charter

APPENDIX D

GUIDANCE FOR PREPARING A PROJECT CHARTER

Pima County's desired outcome resulting from project teams adhering to the Pima County standard methodology for capital improvement project delivery contained in the Pima County Project Management & Gate Process Manual is defined as follows:

> All individuals, whether internal or external to Pima County, involved at any and all levels with a capital improvement project maintain throughout project delivery the same perspective with respect to the project's definition of success. This outcome is achieved by effectively managing change as the project moves from initial concept through project close out. The project's definition of success is established by the project team with input from the project's stakeholders and agreement from senior management.

Maintaining a Consistent Definition of Success

With this desired outcome in mind, the Project Charter is the tool the project team uses to establish the project's definition of success in order to maintain the consistency from project startup to project completion. The project-specific definition of success is established by the project team through two steps in the Project Charter:

1. Constraining Factor: The project team, with input from stakeholders and approval from senior management, establishes which one of the four factors of project delivery (i.e., scope, time, cost and quality) is the least flexible to change for the specific project being initiated. Whichever constraining factor is chosen, this choice will have a direct impact on the need for flexibility in the management of the other three factors (e.g., if cost is the constraining factor, flexibility in scope management may be necessary).
2. Levels of Success: Levels of success clarify the project-specific relationships between scope, time, cost and quality and the tradeoffs between these four factors that must made during project delivery. Using the items provided in the Project Charter format, the project team, with input from stakeholders and approval from senior management, establishes the end results for scope, time, cost and quality that the project team and stakeholders consider as successful for this project.

Alignment with Project Management Industry Standards

The Pima County Project Management & Gate Process Manual seeks alignment with project management industry standards and guidelines. Whenever possible, concepts and definitions used in the Project Charter are paraphrased from A Guide to the Project Management Body of Knowledge, Project Management Institute (PMI), 5th Edition, 2013. (PMBOK Guide)

For those unfamiliar with or wanting a refresher course of the PMI guidelines, Pima County's Online Learning Source, accessible from the County's intranet home page, provides online training modules directly related to the PMBOK Guide. Instructions on how to sign up and use this online project management training are provided on the County's intranet home page.

SPECIFIC GUIDANCE FOR PREPARING A PROJECT CHARTER

The PMBOK Guide concepts and definitions referenced above as well as concepts and definitions specific to Pima County have been incorporated into the text of the Project Charter as introductions to various sections. This text provides the reader with critical information for understanding the purpose and expected content of the various sections and should remain a part of the Project Charter. Points where the author needs to insert text, check boxes or fill in data are identified in gray text. The author should delete the gray text and check boxes or fill in data as needed.

*NOTE: NOT ALL SECTIONS OF THE PROJECT CHARTER FORMAT ARE APPLICABLE TO ALL PROJECTS. TO INSURE ALL SECTIONS HAVE BEEN COMPLETED AS NEEDED, DO NOT DELETE ANY SECTIONS FROM THIS FORM. IF A SECTION IS NOT APPLICABLE TO THE PROJECT, SIMPLY NOTE "NOT APPLICABLE" AND MOVE ON TO THE NEXT SECTION. SEE "GUIDANCE FOR PREPARING A PROJECT CHARTER" AND "CHECKLISTS FOR PROJECT CHARTER & GATES" FOR ADDITIONAL INFORMATION.

PROJECT MANAGEMENT & GATE PROCESS MANUAL

QUALIFYING CRITERIA FOR GATES

I. General Requirements for All Capital Improvement Projects

A. All capital improvement projects must be delivered in accordance with Pima County Administrative Procedure 3-28, Implementation of the Project Management Manual and Exit Gate Process.

B. All projects set up in the capital improvement program must have an approved Project Charter that is signed by the Department Director and County Administration.

II. Qualifying Criteria for Gates

A. All capital improvement projects equal to or greater than $100,000 require Gate 1-1 (Entry).

B. All capital improvement projects must hold a Gate 5-1 (Close Out) meeting and obtain approval to close the project, even if it is a department-only process and meeting.

C. All capital improvement projects will hold additional gates as proposed and approved in the Project Charter. These gates include Gate 2-1 (Project Development), Gate 3-1 (Preliminary Design), Gate 3-2 (Construction Documents Ready for Contractor Selection) and Gate 4-1 (Ready to Issue Letter of Construction Acceptance).

PROJECT MANAGEMENT & GATE PROCESS MANUAL

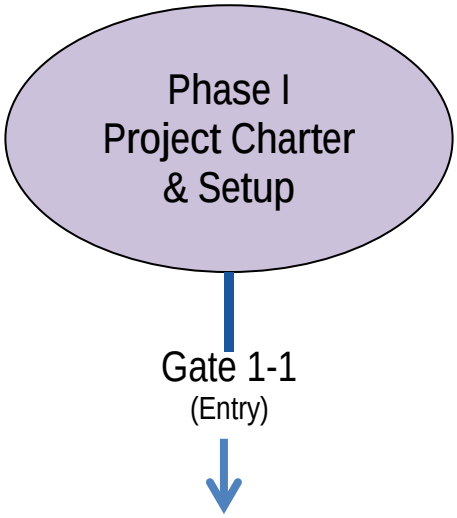
CHECKLISTS FOR PROJECT CHARTER & GATE MATERIALS

Checklist for Preparing Project Charter for Gate 1-1 (Entry)

All sections of the Project Charter must remain in the document. If a section does not apply to the project, mark the section "Not Applicable." Be aware that not completing sections such as assumptions, constraints and risks are an indication that the project team believes there no impediments to the project achieving the scope, schedule, budget and quality as detailed in the Project Charter and thus, the expectation of senior management is that the project will be delivered exactly as described in the Project Charter.

- ☐ Stakeholder meeting is complete
- ☐ Department, project name and project ID are on front page and header inside Project Charter
- ☐ Name of person who prepared the Project Charter and the date it was prepared are included
- ☐ All necessary signatures are on Project Charter front page except County Administration
- ☐ Project Charter Summary Sheet is fully complete
- ☐ Constraining factor is checked
- ☐ Background is included
- ☐ Need statement is completed
- ☐ Justification is included
- ☐ Estimated level of each benefit is checked
- ☐ Map of project area is included and shows proposed limits of ground disturbance, if applicable
- ☐ Alternatives are named and described
- ☐ Assumptions and implications common to all alternatives are identified
- ☐ Assumptions and implications specific to an alternative are described
- ☐ Constraints and impacts common to all alternatives are identified
- ☐ Constraints and impacts specific to an alternative are described
- ☐ Alternatives are discussed with approval authority prior to selection
- ☐ Recommendation of preferred alternative is described
- ☐ Scope statement briefly describing the work that has to be completed is included
- ☐ Project Cost Model Template is filled in and summarized in Project Charter
- ☐ Financial schedule for requested budget by fiscal year is complete and consistent with cost model
- ☐ Funding sources are identified.
- ☐ Microsoft Project Template is complete and specific line items are summarized in Project Charter
- ☐ Major tasks and anticipated completion dates are identified and consistent with scope statement
- ☐ Levels of success have been chosen and are consistent with the chosen constraining factor
- ☐ Stakeholder roles and responsibilities are identified
- ☐ Minutes of the stakeholder meeting are summarized in the Project Charter
- ☐ Risk table is fully complete
- ☐ Project team preliminary organization chart is provided
- ☐ Gate meetings are selected and proposed dates identified
- ☐ Proposed project delivery method is checked
- ☐ Project Cost Model is included in the appendix
- ☐ Microsoft Project Schedule is included in the appendix
- ☐ Stakeholder meeting minutes are included in the appendix

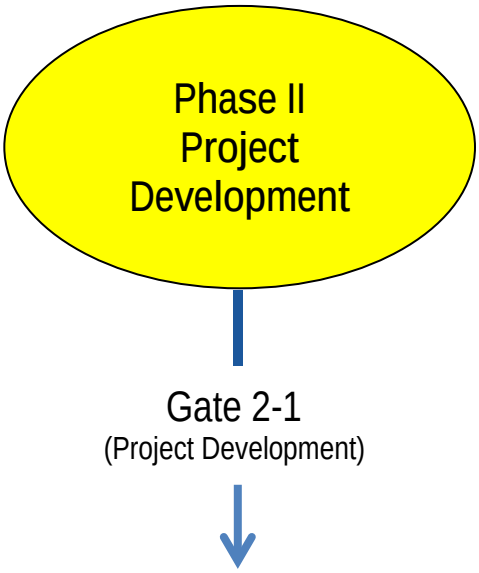
Modified from Part II: The Gate Process



Materials required to be sent out for Gate 1-1:

- ☐ Project Charter with all signatures except from County Administration
- ☐ Gate 1-1 Agenda with Lessons Learned to Date (Use Manual's Agenda/Minutes Form)
- ☐ Gate 1-1 Approval Form
- ☐ CIP Program/Program Phases Maintenance Request (aka CAS Form)
- ☐ Gate 1-1 Cost Model
- ☐ Gate 1-1 Microsoft Project Schedule
- ☐ Phase I Stakeholder Meeting Minutes (Use Manual's Agenda/Minutes Form)
- ☐ Initial Polygon for Any Project Locations Anticipating Ground Disturbance
- ☐ Other Materials as Requested

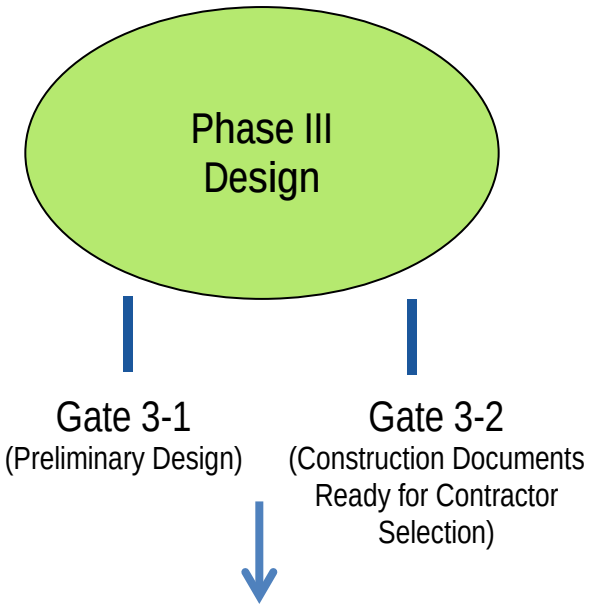
Modified from Part II: The Gate Process



Materials required to be sent out for Gate 2-1:

- ☐ Amended Project Charter with all signatures except from County Administration
- ☐ Previous Gate's Minutes and Approval Form
- ☐ Gate 2-1 Agenda with Lessons Learned to Date (Use Manual's Agenda/Minutes Form)
- ☐ Gate 2-1 Approval Form
- ☐ Amended Cost Model
- ☐ Amended Microsoft Project Schedule
- ☐ Phase II Stakeholder Meeting Minutes (Use Manual's Agenda/Minutes Form)
- ☐ Other Materials as Requested

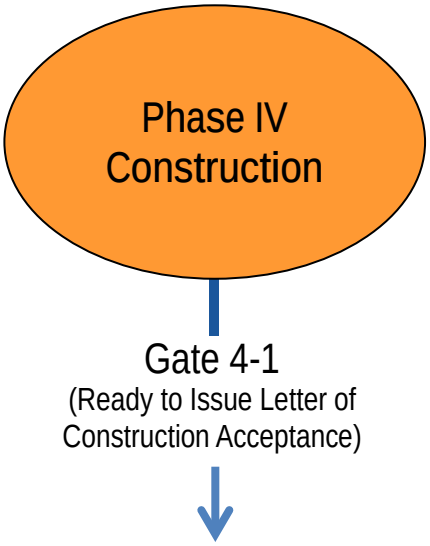
Modified from Part II: The Gate Process



Materials required to be sent out for Gate 3-1 or 3-2:

- ☐ Project Charter Summary Page
- ☐ Previous Gate's Minutes and Approval Form
- ☐ Gate 3-1 or 3-2 Agenda with Lessons Learned to Date (Use Manual's Meeting Agenda/Minutes Form)
- ☐ Gate 3-1 or 3-2 Approval Form
- ☐ Gate 3-1 or 3-2 Updated Cost Model
- ☐ Gate 3-1 or 3-2 Updated Microsoft Project Schedule
- ☐ Milestone Workshop Minutes (Use Manual's Meeting Agenda/Minutes Form)
- ☐ Other Materials as Requested

Modified from Part II: The Gate Process

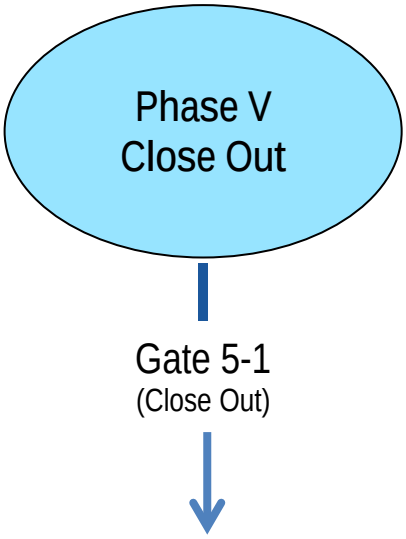


Materials required to be sent out for Gate 4-1:

- ☐ Project Charter Summary Page
- ☐ Previous Gate's Minutes and Approval Form
- ☐ Gate 4-1 Agenda with Lessons Learned to Date (Use Manual's Meeting Agenda/Minutes Form)
- ☐ Gate 4-1 Approval Form
- ☐ Gate 4-1 Updated Cost Model
- ☐ Gate 4-1 Updated Microsoft Project Schedule
- ☐ Substantial Completion Letter or Certificate
- ☐ Completed Project Report*
- ☐ Other Materials as Requested

*May need to submit at Phase V versus Phase IV

Modified from Part II: The Gate Process



Materials required to be sent out for Gate 5-1:

- ☐ Project Charter Summary Page
- ☐ Previous Gate's Minutes and Approval Form
- ☐ Gate 5-1 Agenda with Lessons Learned to Date (Use Manual's Meeting Agenda/Minutes Form)
- ☐ Gate 5-1 Approval Form
- ☐ Gate 5-1 Updated Cost Model
- ☐ Gate 5-1 Updated Microsoft Project Schedule
- ☐ Final Polygon of Actual Area of Disturbance
- ☐ Consultant/Contractor Evaluations
- ☐ Department Close Out Checklist (If department has one)
- ☐ Completed Project Report*
- ☐ Other Materials as Requested

*May need to submit at Phase IV versus Phase V

PROJECT MANAGEMENT & GATE PROCESS MANUAL

GATE APPROVAL FORM

PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL
GATE APPROVAL FORM

PROJECT ID: DEPARTMENT:
PROJECT NAME: MEETING DATE:

Gate Number: _____

Project Manager: _____

GATE DECISION:

☐ Project unconditionally approved - proceed to next Gate

☐ Project conditionally proceeds and must address open items.

Describe Conditions, using additional pages if necessary:

_____

_____

_____

_____

_____

_____

_____

☐ Project is delayed, cancelled or denied. Explain:

_____

COMMENTS (Use additional pages if necessary):

_____

_____

_____

_____

NEXT GATE: _____

ESTIMATED DATE: _____

GATE APPROVAL FORM

PROJECT ID: DEPARTMENT:
PROJECT NAME: MEETING DATE:

Gate Stakeholder Recommendation: (A – Approve, D – Deny, C – Conditional)

Signature	*Name (Print)*	*Date*	*A/D/C*

GATE APPROVAL SIGNATURES:

Signature	*Name (Print)*	*Date*	*A/D/C*
Project Manager:			
Department Management:			
County Administration:			

PROJECT MANAGEMENT & GATE PROCESS MANUAL

PROJECT TRACKING REPORT

(This exhibit is under development)

PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

GUIDANCE ON DESIGN REVIEW PROCESS

DOCUMENT OVERVIEW

Design review can be managed in a variety of ways. A two-step participatory design review process is the recommended approach for Pima County departments to follow in the review of plans, specifications, estimates, and other documents generated at each stage of design. Step 1 is referred to as an "Over-the-Shoulder Review." Step 2 is referred to as a "Milestone Workshop." (See process maps in Part I, Phase III, Design of our Manual).

Concept

This approach streamlines design review periods and paperwork while at the same time improves the quality of reviews. To achieve this, collaborative, focused discussions replace the distribution of complete submittal packages of plans, specifications, and estimates (PS&Es) and other project documents/reports. Complete submittal packages are no longer printed out and provided separately to each stakeholder for independent review and written comment during a typical two- to three-week period. It is understood that outside agencies may not accept this process and departments should keep this process flexible to accommodate them.

In this approach, stakeholders assign a reviewer to be an active member of the project team. The reviewers from various disciplines, divisions, and departments work in a team setting during over-the-shoulder project team meetings with the design team to complete the design. Over-the-shoulder reviews are typically focused on a particular element of a design. Milestone workshops, which bring together all elements of design for review, are established in the consultant's critical path method schedule. The number and timing of these workshops is determined by the Project Manager after consultation with the stakeholders. Reviewers provide guidance and direction during ongoing over-the-shoulder project team meetings or at as-needed meetings and communications with the designer. At the scheduled milestone workshops, the designer brings the most recent version of documents to be discussed with the reviewers during a workshop. At this workshop, comments and changes can be made and at the end of the workshop, if everyone is satisfied with the completion stage, the designer moves forward with the design. While PS&E packages are not printed and submitted to the reviewers, a milestone package submittal could be printed and kept with the owner department, if desired.

The emphasis of each review meeting, whether over-the-shoulder meetings or milestone workshops, is to focus on the most cost-effective combination of design elements keeping in mind what the owner department will be able to technically and financially maintain.

Process Details

1. Reviewer Selection – The reviewer selected for a project must be a design partner with the consultant and the whole project team and bring expertise and knowledge to participate in design decisions and plan development. The reviewer must be provided direction on the desired end product and must be a representative of the department with the authority to make decisions or provide direction on the behalf of his/her department. The reviewer must focus on design effectiveness and not on any personal preferences. The reviewer must become part of the design team and provide guidance on the design, not just review comments.
2. Assign a reviewer – Each department/division should assign their reviewers preferably as part of the Project Charter but no later than the start of Phase III Design. If resources are not available in-

house (lack of personnel or expertise) then the department will need to procure outside resources that can effectively contribute.

3. Assign review time – An initial estimate of level of effort and associated cost will have been included in the Project Cost Model. After the kickoff meeting and design field review are completed, the estimated review hours and associated cost should be confirmed. Should more time be needed, the reviewer should discuss this with the project manager and jointly determine if more time will be added or if less review is appropriate. The hours spent in the over-the-shoulder review meetings and milestone workshops shall be tracked by each department and tabulated at the completion of Phase III Design. The resulting quality of design will also be included in the evaluation.
4. Use Design Standards – Technical reviews are based on each department's approved design standards. The Project Manager has the responsibility to make sure the design team not only has them but understands them. If the design solutions meet the standards and meet code requirements, there shouldn't be much comment or change required on the standard design elements. Design requires professional expertise and all solutions are not likely to be described in a design manual. Standards are typically minimum design requirements and do not always result in the best design. Discussion of quality versus risks, in terms of health, safety and welfare, and costs must be part of any design review process.
5. Plan for milestone workshops – Early in the project, the project team should determine the number of submittal packages and level of participatory involvement required for the project and document and get buy-in from stakeholders. Milestone workshops will include opportunities for each impacted reviewing department to comment on issues and general approach, as well as opportunity for the design team to provide feedback on involvement and results. Documentation will be in written format for completion of gates.
    a. Suggested milestone workshops:
        i. A DCR submittal, final footprint and major elements desired by designing department are locked down
        ii. A second submittal (prior to Gate 3-1)
        iii. A third submittal (prior to Gate 3-2)

    These are suggested milestone workshops; the complexity of each project and department requirements will determine the milestone workshops needed.

6. Milestone Workshop – When submittal is complete, a milestone workshop is held (not to exceed two days) for reviewers to come in and see the total submittal package and verify that progress is being made, the design is meeting the guidance and previous direction provided, and the individual project elements are all being integrated appropriately and effectively. After the milestone workshop, the designer continues on to the next design stage. Milestone workshops will be scheduled in advance so that reviewers can adjust their schedules to participate. *The design team will provide a signed and/or sealed statement stating they have done their quality control and followed their Quality Control Plan. This could include a checklist.*
7. Regulatory reports may require a slightly different review approach that would be tailored to the nuances of that particular submittal; however, the overall concept is the same. Regulatory reviewers should hold a pre-report meeting to provide guidance on the report and inform the design team on what they expect to see in the report. The regulatory reviewer should remain involved with the report as it is being completed.

PROJECT MANAGEMENT & GATE PROCESS MANUAL

MISCELLANEOUS EXHIBITS

PROJECT CHANGE AND VARIANCE REQUEST

Project Name:		Project #:	

Project Information					
Change #:		Date:		Department:	
Project Manager:				Department Sponsor	

Part I: Change Initiation			
Initiator:		Functional Area:	
Description of Requested Change and Alternatives			
Project Impacts if Change is APPROVED		*Project Impacts if Change is DENIED*	

Cause of Change Request	
☐ Owner Requested Changes ☐ Design Document Changes ☐ Unforeseen/Changed Conditions ☐ RFI ☐ Other	*Description/Comments (be specific)*

Part II: Variance Required to Make Requested Change

Approved Budget	Proposed Budget	Variance ($)

Construction Schedule	Approved Construction Schedule	Proposed Construction Schedule	Variance (Days)
Start Date			
Finish Date			

Contract Amendment ☐ Yes ☐ No

Authorizations

Name	*Title*	*Date*	*Yes*	*Conditional*	*No*
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

Notes, Conditions and/or Reasons for Denial

Enter notes

EXHIBIT C

Partnering

Partnering is defined as "a process of collaborative teamwork to achieve measurable results through agreements and productive working relationships."

Principles of Partnering:

Trust	Knowing that another Partner will look out for the other Partner's best interests.
Commitment	Keeping agreements.
Communication	Sharing information in an open and honest way.
Cooperation, Teamwork & Relationships	Partnership members working together toward common goals.
Issue Resolution	Having agreements and a process in place so issues are prevented when possible, or are identified and resolved, before they harm the Partnership or the project.
Measurement/Feedback	Evaluating the progress of the Partnership toward goals and learning from what works and what doesn't work.
Continuous Improvement	Using the feedback to determine and make the required changes.

ADOT Partnering website:

http://www.azdot.gov/CCPartnerships/Partnering/index.asp

EXHIBIT E

Environmental Checklist

- ☐ Background
- ☐ Purpose/Need
- ☐ Location
- ☐ Proposed Project
- ☐ Environmental Screening
- ☐ Sustainability
- ☐ Biological Resources*
- ☐ Drainage
- ☐ Floodplain
- ☐ Air Quality
- ☐ Noise
- ☐ Utilities
- ☐ Hazardous Materials
- ☐ Construction
- ☐ Cultural Resources*
- ☐ Visual Resources*
- ☐ Right of Way Acquisition
- ☐ Access
- ☐ Parking Impacts
- ☐ Neighborhood Disruption
- ☐ Parks & Recreational areas
- ☐ Agency Coordination
- ☐ Public Participation
- ☐ Conclusion
- ☐ Schedule

*Roadway is ESR if one of the following is met:

- ☐ Located or crossing Biological Core
- ☐ Located or crossing Multi-Use or Recovery Area
- ☐ Located or crossing Important Riparian Area
- ☐ Located or crossing Agriculture within Recovery Area
- ☐ Located or crossing Existing Development
- ☐ Located or crossing Scientific Research Area
- ☐ Located or crossing Moderate or High Archaeological Sensitivity Zone
- ☐ Located or crossing Priority Cultural Resource
- ☐ Identified as Historic Roadway or Route
- ☐ Identified as Scenic Route

EXHIBIT E

DCR Checklist

- ☐ Project Overview
- ☐ Project Description
- ☐ Project Area Characteristics
- ☐ Traffic Data
- ☐ Accident Data
- ☐ Design Standards
- ☐ Design Criteria
- ☐ Major Design Features
- ☐ Social Considerations
- ☐ Economic Considerations
- ☐ Environmental Considerations
- ☐ Right of Way Requirements
- ☐ Public Involvement
- ☐ Agency Coordination
- ☐ Alternatives
- ☐ Conclusions & Recommendations
- ☐ Cost Estimate
- ☐ Budget
- ☐ Schedule

Phase 3-Project Manager's Design Deliverables
December 1, 2008

15% Plan Stage

- Project Scope summary for PMP
    - Identify design goals and potential hazards and risks
    - Identify potential cultural resource issues
    - Identify environmental issues
    - Identify conflicting utilities
    - Identify all potential permits
    - Identify hydrologic issues
    - Identify Right-of-way needs
    - Identify constructability issue, define staging area and points of access
    - Identify sustainability issues
    - Complete risk assessment of issue to project scope, schedule and budget.
- Develop and post a Project Schedule
- Confirm and post Project Budget.
- Consultant contract with scope and fees
- Real Property request form
- Rights-of- entries for ground disturbing investigations and non-ground disturbing surveys.
- Establish a public relationship plan, this may or may not include a Citizen's Advisory Committee

30% Plan Stage

- Environmental Assessment and Mitigation Report
    - Phase 1 Hazardous Materials survey
    - Endanger Species Surveys
    - Pygmy Owl Surveys
    - Native Plant Survey
    - 404 jurisdictional delineation
    - Sustainability Plan
- Phase 1 Cultural Resource Inventory Survey
- Survey notes, DTM and topography CAD files
- Preliminary Hydrologic and Hydraulic Report
- Preliminary Geotechnical Report
- Preliminary Utility Notification Letter
- Preliminary Capacity Reports for sewer, water, storm flow and traffic flow as applies to project.
- Permit Applications and correspondence
- Right-of-way Condemnation Resolution
- Right-of-way Map
- Right-of-way Parcel Table
- Legal Descriptions and sketches
- Design Concept Report, may or may not require BOS approval.

- 30% Plans
    - Survey Control Plan
    - Plan and Profile
    - Typical Sections
    - Utility relocations
    - Other sheet as required by project
- Engineer preliminary estimate of cost.
- CIP Ace and variance reports
- Project Meeting Minutes and correspondence
- Value Engineering meeting minutes
- Review comments and responses.

60% Plan Stage

- Environmental Assessment and Mitigation
    - Phase 2 Hazardous Material Investigation and Report with mitigation recommendations (if needed)
    - 404 Alternative Analysis (if needed)
- Cultural Resource Investigation Report and Mitigation Plan.
- Final Hydrologic and Hydraulic Report
- Final Geotechnical Investigation and Report
- Utility letters of agreement
- Structural or Bridge Alternatives Report (if needed)
- Revised Capacity Reports for sewer, water, storm flow and traffic flow as applies to project.
- 60% Plans
    - Survey Control Plan
    - Plan and Profile
    - Typical Sections
    - Project Details
    - Right-of-way Map
    - Utility relocations plans and details
    - Flow Management Plans as needed.
    - Native Plant Preservation Plan
    - Other sheet as required by project
- Engineer 60% plan estimate of cost.
- Draft Special Provisions and Material Specifications
- CIP Ace and variance reports
- Project Meeting Minutes and correspondence
- Constructability Review Meeting minutes
- Review comments and responses.

90% Plan Stage

- Final Capacity Reports for sewer, water, storm flow and traffic flow as applies to project.
- 90% Plans

    - Survey Control Plan
    - Plan and Profile
    - Typical Sections
    - Project Details
    - Right-of-way Map
    - Utility relocations plans and details
    - Flow Management Plans (as needed).
    - Landscape and irrigation Plans (as needed)
    - Native Plant Preservation Plan
    - Other sheet as required by project
- Engineer 90% plan estimate of cost.
- Special Provisions and Specifications
- CIP Ace and variance reports
- Project Meeting Minutes and correspondence
- Review comments and responses

100% Plan Stage

- Owner Provided Project Permits
    - 404 Permit or NWP (as needed)
    - Utility Permits (as needed)
    - Other project specific permits
- Intergovernmental Agreement (IGA) with other jurisdiction and Memorandum of Understanding between Departments (as needed)
- Cultural Resources Monitoring Plan or clearance letter
- Real Property clearance letter (as needed)
    - Recorded copies of deeds or
    - Rights-of-entry
    - Temporary Construction and access Easements
- 90% Plans
    - Survey Control Plan
    - Plan and Profile
    - Typical Sections
    - Project Details
    - Right-of-way Map
    - Utility relocations plans and details
    - Flow Management Plans (as needed).
    - Landscape and irrigation Plans (as needed)
    - Native Plant Preservation Plan
    - Cross-sections (as needed)
    - Other sheet as required by project
- Engineer final estimate of cost.
- Special Provisions and Specifications
- CIP Ace and variance reports
- Project Meeting Minutes and correspondence
- Review comments and responses

Procurement

- EEO and MWBE requirements
- Project Advertise and Bid schedule
- Contract Documents from Pima County Procurement
- Notice of Advertising
- Bid Tabulation
- Award of construction contract

PROJECT MANAGEMENT & GATE PROCESS MANUAL

LINKS TO RELATED WEBSITES

(This section is under development)