



MEMORANDUM

Date: September 4, 2013

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

A handwritten signature in black ink, appearing to be "CHH", is written over the printed name "C.H. Huckelberry".

Re: **Project Management and Implementation in Pima County**

Pima County has delivered \$2.9 billion in capital projects since 1997. Historically, all projects were planned, designed and delivered by the individual capital departments. Following the Arizona Benchmarking Study and numerous internal analyses of project delivery alternatives, the Project Management Office (PMO) was established based on a centralized project delivery approach.

The main goal of the PMO is to improve overall project performance Countywide. Working collaboratively with other capital departments, the PMO took the lead in establishing best management practices for project delivery and monitoring, creating the Pima County Project Management and Gate Process Manual and providing project delivery resources for a wide variety of projects spanning multiple disciplines from the Public Works, Neighborhood Reinvestment, and Facilities Management Departments.

Attached is the first annual report showing the performance of projects managed by the PMO. As noted in the report, the PMO has only four staff members and works concurrently on an average of 20 projects per year. The annual dollars spent compares favorably with other capital departments. The majority of completed projects were delivered under or within budget (54 percent and 34 percent, respectively) and on or ahead of schedule by 71 percent. Actual soft costs related to project delivery is 24.4 percent, well under the 35-percent target sought by my office.

Also attached is the revised Project Management and Gate Process Manual. This manual provides detailed project delivery guidance to all Pima County project delivery staff and lays the foundation for continual improvement of project delivery performance Countywide. The manual forms the nucleus of County project delivery resources for our ongoing capital improvement program, as well as all future bond programs. Other jurisdictions in Arizona and the Regional Transportation Authority have implemented a variety of Pima County tools to improve their programs, further evidence of their effectiveness.

The continued emphasis on best management practices and meeting or exceeding industry standards as they relate to project delivery are essential to maintain community trust and foster support for Pima County's voter-approved bond programs and all publicly funded

The Honorable Chairman and Members, Pima County Board of Supervisors
Re: **Project Management**
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capital improvements. Reporting these activities and specific project performance outcomes demonstrates Pima County's ongoing commitment to accountability and transparency.

CHH/mjk

Attachments

c: John Bernal, Deputy County Administrator for Public Works
Nanette Slusser, Assistant County Administrator for Policy, Public Works



Project Management Office Update

Purpose

Public Works Administration developed the Project Management Office (PMO) as a group wholly focused on project delivery. The PMO provides an opportunity to resource balance and cross-train among capital departments while focusing solely on project management.

Innovative Vision

Pima County's Project Management Office expects all projects will be successful.

A successful project starts with project definition—understanding the challenges clearly. Charter development and project owner/stakeholder input are critical steps, ensuring not only scope identification but other areas of impact, such as lifecycle costs, permit requirements, code impact, cultural or environmental concerns, engineering efficiencies and construction delivery type. Project delivery must focus on scope, schedule and budget, defining parameters for all three and monitoring progress throughout the process. Some projects may have an area with no room for change—whether a critical delivery date or a limited funding source. Correctly understanding which risks are likely to occur and where flexibility exists in the program results in a successful project.

The following report highlights the PMO's philosophy, work ethic, and the benefits it provides to Pima County.

Proven Results

The PMO is building a résumé of successfully delivered projects using best management practices.

Efficient Delivery

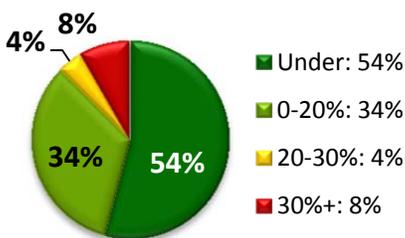
The office has two full-time project managers and two full-time field coordinators who work on as many as 20 active projects with 10 more projects in closeout or planning stages. The PMO delivers a yearly average expenditure of \$10 million, similar in size to some departments' entire annual capital program. The delivered projects range from \$20,000 to \$15 million with an average project budget of \$1.5 million.

Effective Delivery

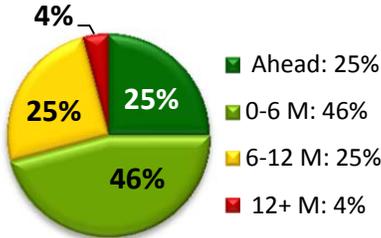
Twenty-four completed projects were reviewed for conformance to original charters or project definition, if initiated prior to the project manual process inception. Of these, 88 percent of the projects met or exceeded budget performance goals, and 71 percent met or exceeded schedule performance goals.

Of the 24 completed projects, four had soft cost percentages above the target of 35 percent; most started before the soft cost goal initiation. The highest percentages were on redesigned projects. The average soft cost percentage was 24.4 percent, well under the performance goal.

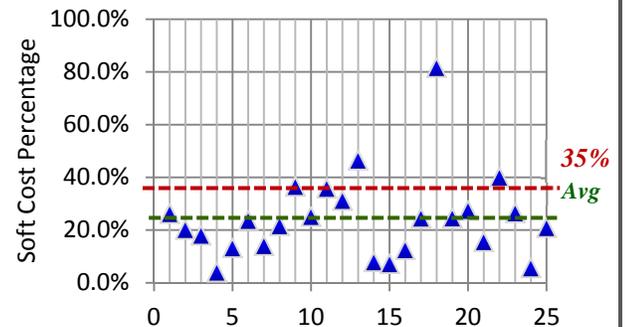
Original Budget Performance



Original Schedule Performance



Soft Cost % for Completed Projects



Areas of Expertise

Outcomes

Planning & Development

Define and develop the project that the community wants and needs

Project Management

Deliver the scope, on time and on budget

Team Project Management

Cooperative teamwork using the right resource at the right time.

Contract Management

Oversight and reporting for projects managed by outside jurisdictions

Intangibles

Best management practices and process improvement

PMO Team

Nancy Cole, Architect, PMO Manager

Joanne Homer, PE, Program Manager

Sandi J. Garrick, Project Manager

Arthur Gibbs, Project Coordinator

Curt Rice, Project Coordinator

Project Management

Summary

This work effort reviews projects run directly by the PMO. These projects require extensive effort and understanding of good project management principles. Many of the projects delivered by the PMO are considered complex, and may be either new or older projects with issues requiring resolution.

The PMO works toward meeting all project management benchmarks, focusing on scope, schedule and budget.



Schedule / +0-6 M
Budget / Under Budget

Tanque Verde Road: Catalina Highway to Houghton Road

The project included the widening of 1.67 miles of the existing two-lane Tanque Verde Road, including four travel lanes with a curbed median, paved shoulder, outside curbs, storm drains, roadway landscaping, public art and pedestrian facilities. This project benefitted from significant coordination with the Community Advisory Committee regarding public art, commercial property access and landscaping. This is particularly evident in the location of the Safeway Center's main access onto Tanque Verde which currently aligns with the small shopping center on the south side of the road. This solved many local concerns with a creative and cooperative approach not previously considered.

Tanque Verde Road was originally designed as a part of the 1997 HURF Bond Program and underfunded in 2001 when the project was shelved for future development. When taken by the PMO in 2007, the project charter developed estimated project costs at \$16 million with construction scheduled from January 2010 to July 2011. The final project cost was \$14 million and was substantially completed in October 2011. In addition to saving \$2 million in total project costs, the construction contract had five change orders totaling \$278,000, significantly less than typical projects.

Tanque Verde Road also served as a learning tool for project management countywide. This project brought to light issues with the implementation of the Roadway Design Manual with respect to overall soft costs. Review of this project has brought positive changes to the way projects are delivered. Another outcome of this process was the Regional Transportation Authority's adoption of the Pima County Charter as a tool to improve project delivery regionally.

"Project Complete!"



Schedule / +0-6 M
Budget / Under Budget

Example Projects

Pantano River Park: Michael Perry to Kenyon

The project included installation of 2.2 miles of divided urban path on the east side of the Pantano Wash from Michael Perry Park north to Kenyon Road. This project included underpasses at 22nd Street and Golf Links. Work at Michael Perry Park included parking improvements, a main plaza for the Memorial Tree Park, and a Children's Memorial garden.

The project is physically within the City of Tucson and required high-level design coordination with the Tucson Parks and Recreation Department. The design was complete but significantly over budget when assigned to the PMO. The project was streamlined, and construction costs came in below project budget, allowing delivery of another underpass further north at Speedway, extending the path another half-mile south to Sellarole Road.

The construction bid received by the PMO was \$1 million below the engineer's estimate for base bid. This allowed all three alternates to be included within the construction contract. The project was completed \$500,000 below the base bid estimate.

Team Project Management

Summary

This effort involves projects affecting multiple departments and/or jurisdictions. These team-managed projects include a hand off at key departmental or jurisdictional milestones to best utilize County staff. This approach allows support from the PMO when resources are most needed. This is one way to resource balance across Pima County.

*“There is always a solution...
you just have to find it.”*

Project Examples:

Canoa Preserve BAJA Softball Complex

The award-winning Canoa Preserve Green Valley Community Park is the first public park in Green Valley. Installation included two senior-sized softball fields with fencing, parking, entry drive, and ADA access to the fields. Continuous value engineering and private fundraising efforts resulted in building the base scope of two senior softball fields plus a ramada and storage unit for a project value of \$1,095,000 at a cost of only \$327,000 of County funds. This facility, which includes new water and electrical services, was constructed and ready for use in just three months. Similar park facilities normally take six to eight months to construct.

Canoa Preserve Park was planned and coordinated with NRPR as lead. With a five-month deadline for operation, the PMO teamed with NRPR to value engineer and streamline construction. This project received both local- and state-level awards this year from the APWA Arizona Chapter, in addition to rave reviews from the BAJA Sporting Club players.



*“MISSION IMPOSSIBLE”
Canoa Preserve Green Valley Community Park BAJA Softball Fields, Opening Day
January 2013 \$487,000*

*Schedule | Ahead of Schedule
Budget | +0-20% (scope increased to add fencing)*

Santa Cruz Interceptor Phase III

The award-winning Santa Cruz Interceptor, Prince to Franklin, included installation of more than a mile of large diameter (+60”) pipe along a narrow, fully developed corridor on the Santa Cruz River.

The original design drawings were completed in 2006 but did not adequately address a myriad of challenges, such as NPPO and river park coordination, right-of-way access/easements, 404 permitting, ADOT permitting, ADEQ permitting, etc.

The PMO worked with RWRD to resolve these issues with a permitted, bid-ready package by 2009. The bids were \$1 million (10%) below the estimate with RWRD taking the project lead during construction. Construction issues were limited to unforeseen boring conditions (hard rock), substantially different from earlier phases. This additional cost fit well within the current project budget of \$15 million, a reduction from the original \$20 million during design.



*Santa Cruz Interceptor PIII, Prince to Franklin
June 2012 \$11,727,000*

*Schedule | N/A
Budget | Under Budget*

*“It is not the problem, but how you solve
the problem that matters.”*

Contract Management

Summary

The PMO's contract management efforts focus on projects managed by an external entity or jurisdiction. These require outreach and coordination with the lead team and have the same reporting requirements as any internally managed projects. Some projects may have grant funding, requiring assistance to ensure compliance with state and local procurement policies, as well as federal grant requirements. Good coordination is required to budget the funding properly and work with the jurisdiction for timely reimbursement.

Project Example:

Joint Projects with the Town of Sahuarita

Having already established communication lines with the Town of Sahuarita for the \$1,495,000 Sahuarita Road Bike Lane Improvements project, the PMO successfully negotiated the salvaging of bridge girders for the new Sahuarita Road bridge in a short timeframe to avoid monsoon rains in the Santa Cruz River. This project salvaged 30 concrete box beams, 70 feet in length, for future re-use in pedestrian bridges along The Loop. Fifteen of these beams were incorporated in the design of another PMO-managed project within 60 days of salvage, confirming it is possible to "Go Green" and save taxpayer money simultaneously. This effort required coordination with the RTA as a funding partner, further stretching local dollars.

"Management is doing things right..."



*"THE GREEN MILE"
Salvage of existing Sahuarita Road Bridge Girders
May 2013 \$228,000*

*Schedule / Ahead of Schedule
Budget / Under Budget*



*"BACK TO THE FUTURE"
Northside Community Park Master Plan
June 2013*

Planning & Development

Summary

Planning & Development skills are critical to project definition and a key to delivering project with appropriate solutions to challenges. Understanding the site constraints, scoping projects to budget and projecting reasonable delivery timeframes result in successful delivery of a project plan that meets the various stakeholder goals.

Project Planning: Northside Community

The PMO worked with NRPR to ensure the next project phase is designed to allow continued use of racing facilities while adding three new soccer fields. This solution shows a balanced, practical approach that benefits multiple users.

*"Efficiency is doing things right.
Effectiveness is doing the right thing."*

Intangibles

Summary

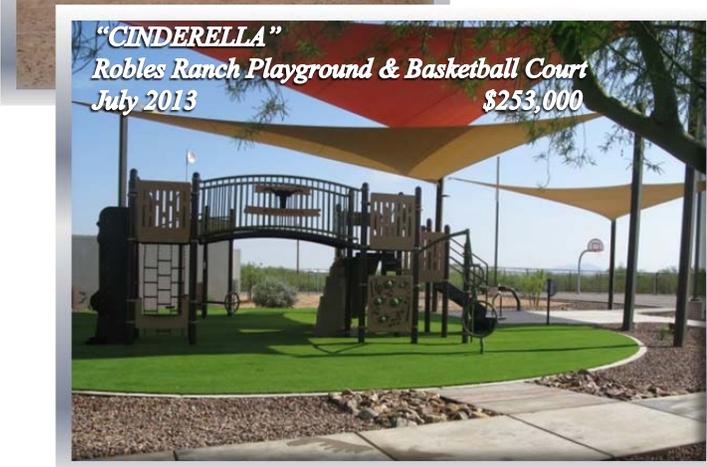
The PMO works directly with Public Works Administration (PWA) to support County-wide goals and initiatives relating to Pima County's Capital Improvement Program. From a measurement perspective, these intangible goals are not necessarily related directly to project delivery. This measurement includes reporting, metrics, or benchmarking required by PWA to evaluate the capital program. The ultimate goal of any metric applied is to increase performance, both within the PMO and all project delivery departments. The PMO also helps develop streamlined processes and best practices, often through the CIP Advisory Council, an internal forum of departmental CIP representatives.

The Project Manual Process

Working with the CIP Advisory Council is one way to continue process improvement. The PMO has been instrumental in the development of the Project Management Manual, Charters, and the Exit Gate system. These are the best management practices for project delivery and, if fully used by project managers, give the best foundation for successful project delivery. Much of the information in this report has been developed by using an initial Charter for project definition and comparing this initial plan to the final outcome. The PMO demonstrates that using these tools to their potential increases understanding of projects and communication of issues, resulting in finding the best solution for projects.



Schedule | +0-6M
Budget | On Budget



Robles Ranch Community Development Grant

The PMO worked with the local Picture Rocks Community, Community Services, and NRPR to deliver three different block grants. Some of the grant money was awarded several years prior, resulting in a long overdue project. Grouping the projects allowed for economy of scale with construction of a lit basketball court, shaded playground, picnic ramada, water fountain, and associated ADA walks and landscaping.

This project transformed the existing community center from a barren area to a fabulous functional recreational space.



Schedule | +6-12 M
Budget | +30%(scope increased to separate path from road)

Team Program Development: The Loop

The PMO has been a key delivery partner in the completion of 100+ paved miles of multi-use path along, and connecting to, the Julian Wash, Rillito River, Pantano River and Santa Cruz River Parks. The projects typically led by the PMO are smaller extents packaged for a fast-tracked ("short") design-build using the JOC approach. Using the existing river park standard details and specifications, the projects concentrate design efforts on engineering issues, not alignment or landscaping. This reduces upfront costs and reserves additional engineering time for the field installation. These projects are bid to pre-qualified contractors, resulting in quicker completion times with the team's proven ability to construct river parks. This delivery method is also applicable to other types of small projects using grants.

These projects are often a challenge; users find the path the minute grading starts and begin accessing the paths during construction activities. Some projects were installed purposefully keeping the paths open on weekends, requiring extra time and effort. Many river parks include drainage installations. The goal is to keep water off of the paths, routing it safely around or under the area, and reducing long-term maintenance costs.

Financial System: Developed for Capital Projects Metrics

The PMO spent significant time working with the PimaCore team to replicate previous project reporting systems, transfer data correctly, and create new reporting tools in the new financial accounting system development. These efforts also included development of training documents and support to resolve ongoing issues within the system. Providing these services from the Public Works Department helped to focus on the workload and lessened the direct burden on individual departments. The PMO allocated Nancy Cole, one of the two full-time project staff, to PimaCore, in addition to fulfilling her regular project management duties. Nancy Cole was recognized for her efforts through the Southern Arizona APWA Award of Merit for Public Works Professionals in January 2012.

Project Management Office

Projects List – Ongoing projects shown in italics not yet measured

Done	PROJ ID	Project Name	Project Value	Budget Performance	Schedule Performance (Days)	Soft Cost Performance
<i>Other</i>						
Y	XAMAD2	Amado Food Bank Phase 2 CDBG 2008	\$338,000	22%	314	26.2%
Y	XAMDHC	Amado - UC Health Clinic CDBG 2010	\$138,000	9%	88	20.2%
Y	XPATHS	Pathway Maintenance Program	\$1,010,000	-1%	60	18.0%
Y	XPLAYS	Playground Maintenance Program	\$106,000	-10%	(3)	4.0%
Y	*CDBG	Ellie Towne Basketball & Misc. CDBG 2008	\$68,000	-9%	N/A	13.2%
Y	*CDBG	Picture Rocks Playground Upgrades CDBG 2008	\$66,000			
Y	*CDBG	High Chaparral Water System CDBG 2013	\$14,000			
Y	*CDBG	Picture Rocks Storage System CDBG 2013	\$5,000			
N	*CDBG	Casa Community HVAC CDBG 2012	\$18,000			
N	*CDBG	Arivaca Basketball Lighting CDBG 2013	\$29,000			
N	*CDBG	Emerge HVAC & Fire Sprinkler CDBG 2013	\$25,000			
N	*CDBG	Our Family Services Landscaping CDBG 2013	\$7,000			
N	*CDBG	Dunbar Remedial Work CDBG 2013	\$32,000			
N	*CDBG	SAAF Window Upgrades CDBG 2013	\$6,000			
		subtotal	\$1,862,000			
<i>Parks & Recreation</i>						
Y	PATH10	Multi-use Paths along I-10 Frontage Road	\$485,000	32%	179	23.6%
Y	PHA1RR	PR4.33 Harrison Greenway at Rita Ranch	\$640,000	-9%	363	14.1%
Y	PHA3IP	PR4.33 Harrison Greenway: Irvington to Pantano	\$830,000	44%	251	21.6%
Y	PMEHPK	PR4.25 Mehl-Foothills Park	\$1,775,000	-11%	(27)	36.5%
Y	PPANTP	4.37 Pantano River Park: 22nd to Michael Perry Park	\$4,132,000	-13%	165	25.1%
Y	PPANT2	4.37 Pantano River Park: Michael Perry to Sellarole	\$610,000	14%	418	35.8%
Y	PRP511	P-51 Lawrence Park Infrastructure Improvements	\$635,000	0%	(161)	31.2%
Y	PRLCCD	PR4.20 Lawrence Park Softball Lighting*	\$300,000			
Y	PSHRNG	PR4.19 Southeast Regional Park/Shooting Range**	\$3,086,000			46.5%
Y	PSPNET	Sports Park Netting	\$97,500	-21%	(40)	7.9%
Y	XETHAN	Rillito Trailhead at Ethan's Crossing	\$230,000	15%	21	7.2%
Y	PCDRRB	Robles Ranch Basketball/Playground (CDBG)	\$253,000	0%	28	6.0%
Y	CPGVCP	Canoa Preserve Green Valley Community Park	\$487,000	6%	(345)	12.5%
N	PRP361	Santa Cruz River Park: Irvington to Valencia	\$930,000			
N	PAN5TH	Pantano Riverpath: Infill Speedway to 5th Street	\$819,000			
N	PCCPRK	Catalina Community Park	\$1,000,000			
N	PNCMPK	Northside Community Park	\$5,500,000			
N	PSCOMP	South East (SE) Community Park—Esmond Station	\$6,000,000			
		subtotal	\$27,809,500			
<i>Transportation</i>						
Y	4INCRI	Canoa Road Interchange	\$5,880,000	-6%	14	24.5%
Y	4TVCHH	DOT-31 Tanque Verde Road: Catalina to Houghton	\$14,150,000	-9%	96	81.6%
Y	4CCMIL	Country Club: Drexel to Milber, Tucson to Country Club	\$1,167,000	-1%	189	24.6%
Y	4DREXL	Drexel: Country Club to I-10	\$1,024,000	2%	219	27.4%
Y	4JWK2W	Julian Wash: Kolbe Road to Wilmot Road	\$575,000	-10%	49	15.6%
Y	4JWV2D	Julian Wash: Valencia Road to Drexel Road	\$678,000	-15%	66	40.0%
Y	4JWW2V	Julian Wash: Wilmot Road to Valencia Road	\$609,000	-14%	(16)	26.5%
Y	4TDCAV	Tucson Diversion Channel: Country Club to Aviation	\$438,000	-2%	177	5.6%
N	4HA2DM	Harrison Greenway at DMAFB	\$850,000			
N	4JLEST	Julian Wash: I-10 to Campbell EAST	\$718,000			
N	4JLMID	Julian Wash: I-10 to Campbell MIDDLE	\$1,507,000			
N	4JLRMP	Julian Wash: I-10 to Campbell RAMPS	\$2,184,000			
N	4JLWST	Julian Wash: I-10 to Campbell WEST	\$752,000			
N	4RRVPA	Rillito Riverpath: CDLT Bicycle and Pedestrian Bridge	\$905,000			
N	4JWPK6	Julian Wash Greenway (AJO): Park to 6th Ave	\$1,000,000			
		subtotal	\$32,437,000			
<i>Wastewater</i>						
Y	3MVW01	Mission View Wash—Southeast Interceptor	\$7,007,000	16%	193	20.9%
Y	3ULP12	Ina Security Road—Widening phase**	\$620,000			
Y	3SCP04	Santa Cruz Interceptor, Phase 3***	\$11,727,000			
N	3ULP14	Ina Security Road—Bypass Route	\$205,000			
		subtotal	\$19,559,000			

Completed Project Value \$47,453,500
 Total Project Value \$143,776,000

Color Key	Budget	Schedule	Soft Cost
	Under	Ahead	<35%
	0-20%	0-6 M	
	20-30%	6-12 M	
	+30%	+12 M	>35%

*PRLCCD delivered as a joint project with PRP511

**Projects delivered with multi-phases, metrics unavailable

***Project team delivered, metrics unavailable

PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

January 30, 2009
Document Revision Date: August 2, 2013



**Ally Miller, District 1
Ramón Valadez, District 2
Sharon Bronson, District 3
Raymond Carroll, District 4
Richard Elías, District 5**

**C.H. Huckelberry
County Administrator**

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 - Change Management
-

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-

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SYMBOLS, DEFINITIONS & ACRONYMS

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EXHIBITS

ADMINISTRATIVE PROCEDURES



Procedure Number: 3-28

Effective Date: 07/01/2009

Revision Date: 01/31/2012

C. D. Melton
County Administrator

SUBJECT: **IMPLEMENTATION 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 completed 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.



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

PART I: THE PROJECT MANAGEMENT PROCESS



PIMA COUNTY PROJECT MANAGEMENT AND 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).

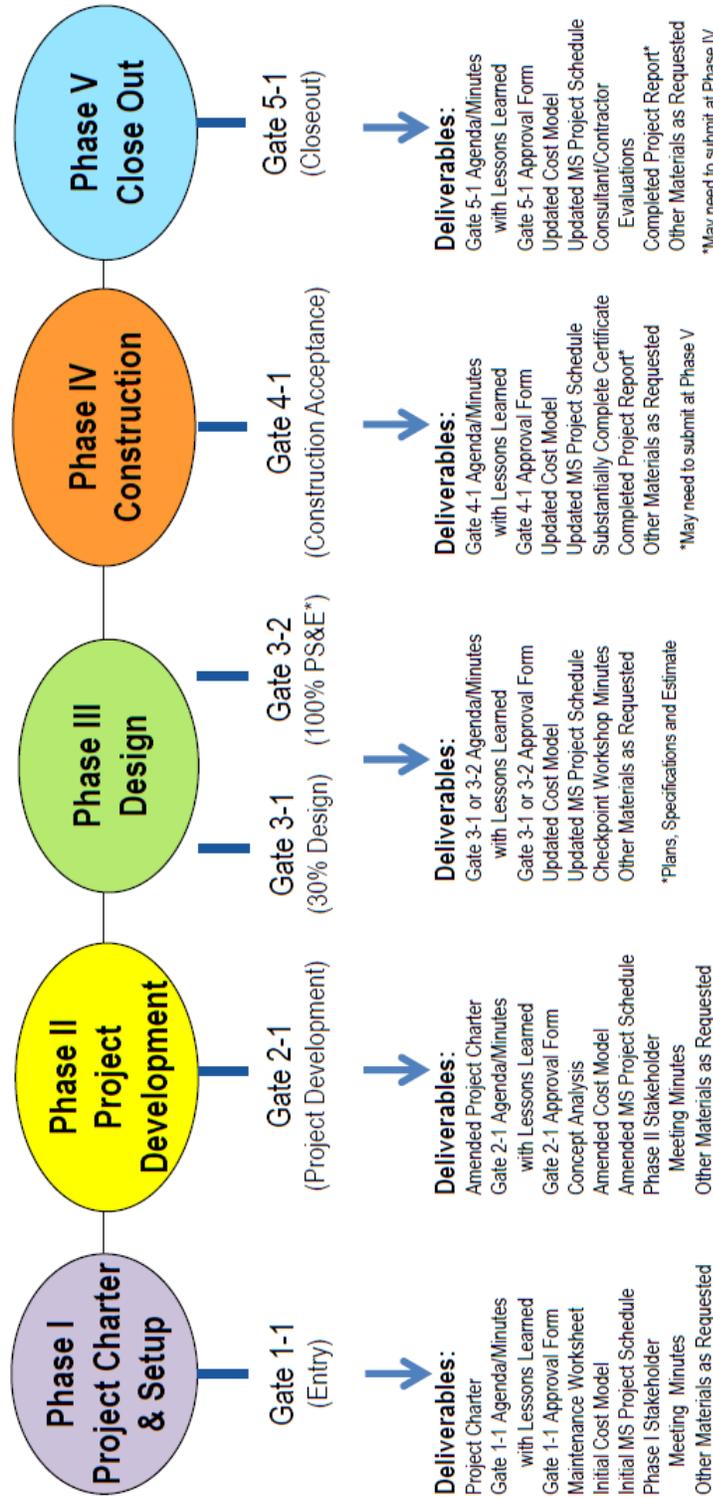
INTERRELATIONSHIP BETWEEN PROJECT MANAGEMENT AND GATE PROCESSES

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 PROJECT MANAGEMENT & GATE PROCESS MANUAL
 PART II: THE GATE PROCESS**

Interrelationship between the Project Management Process and the Gate Process





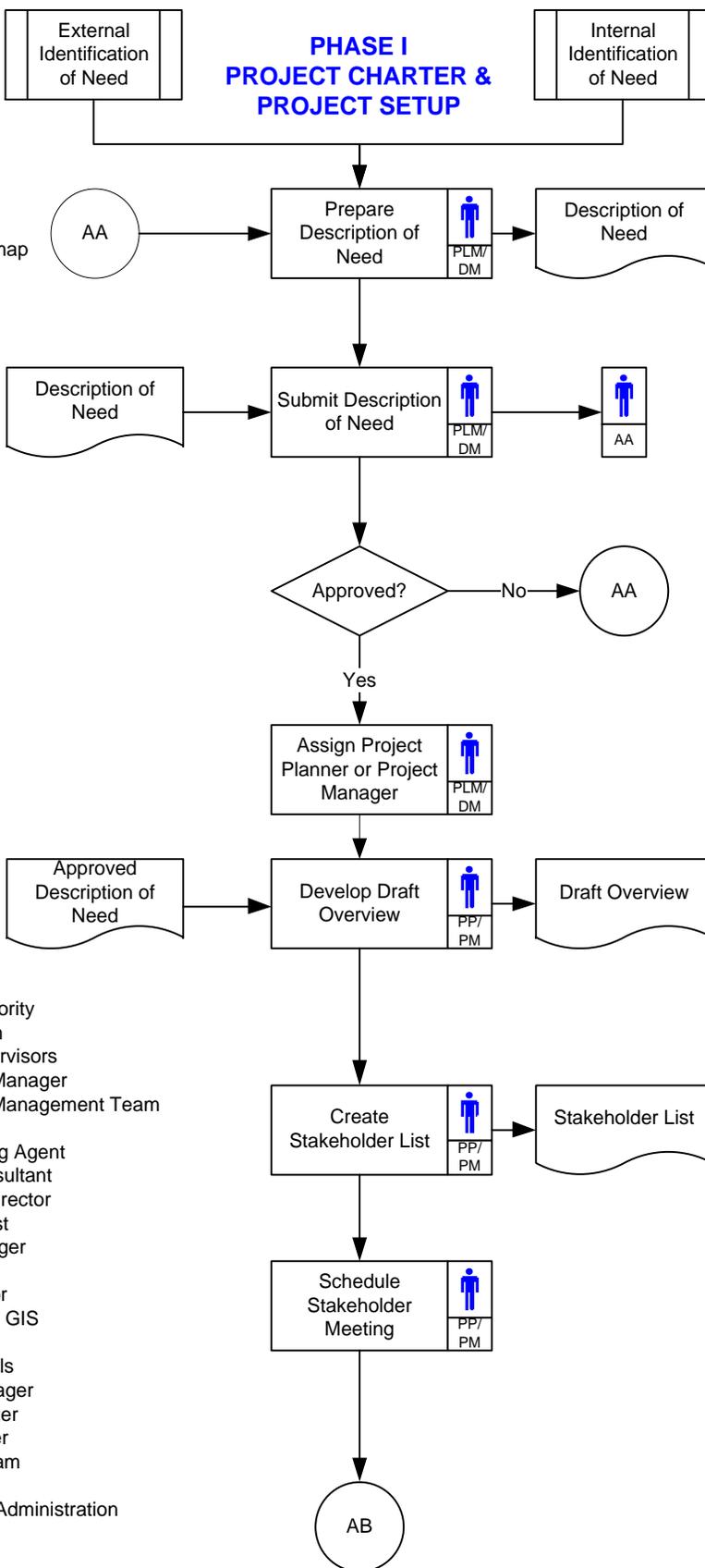
PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

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.

PHASE I PROJECT CHARTER & PROJECT SETUP



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



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



Stakeholder Meeting
THIS IS NOT OPTIONAL



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



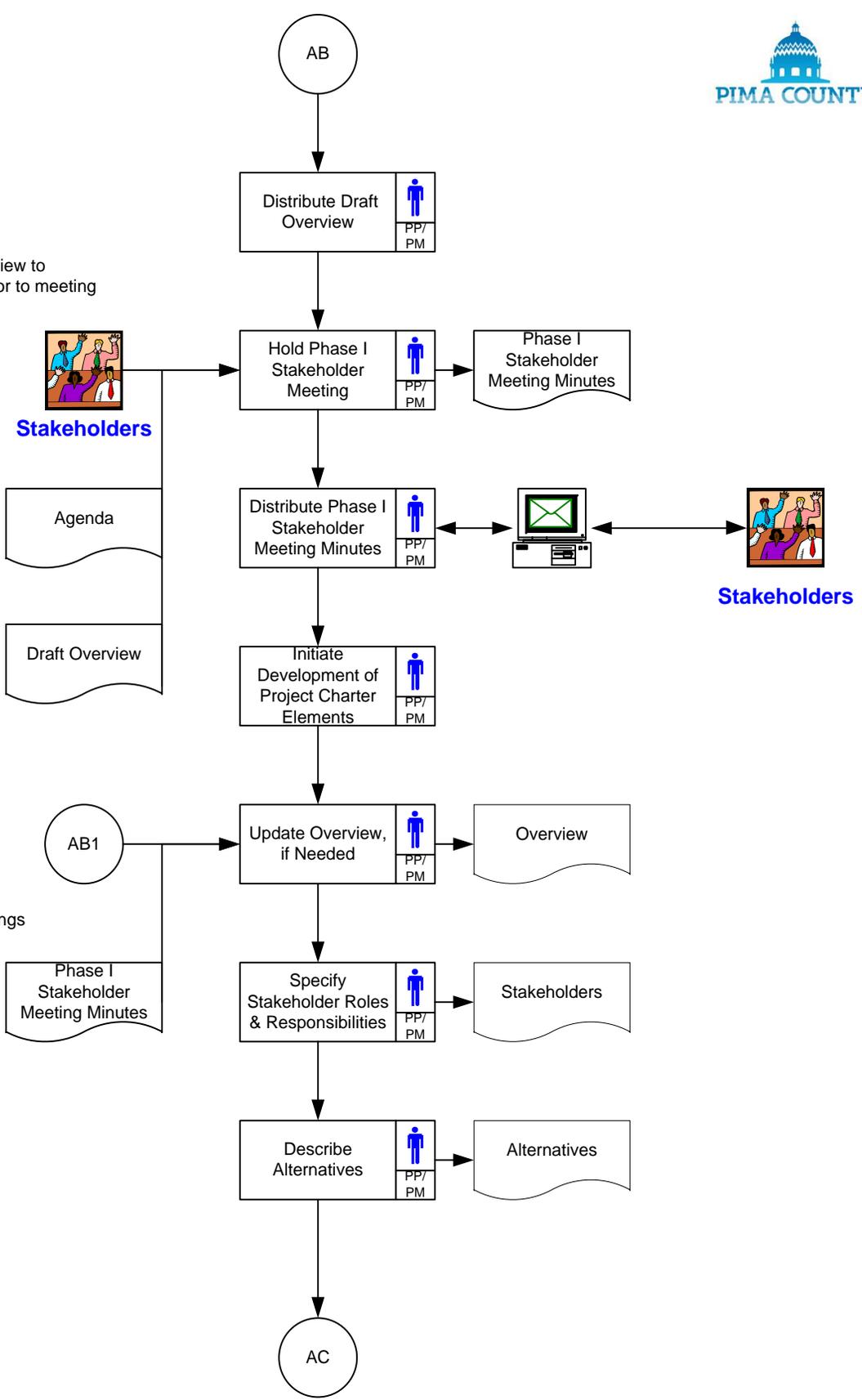
Stakeholder Review
Stakeholders have up to 2 business days to return comments on Phase I Stakeholder Meeting Minutes to PP/PM

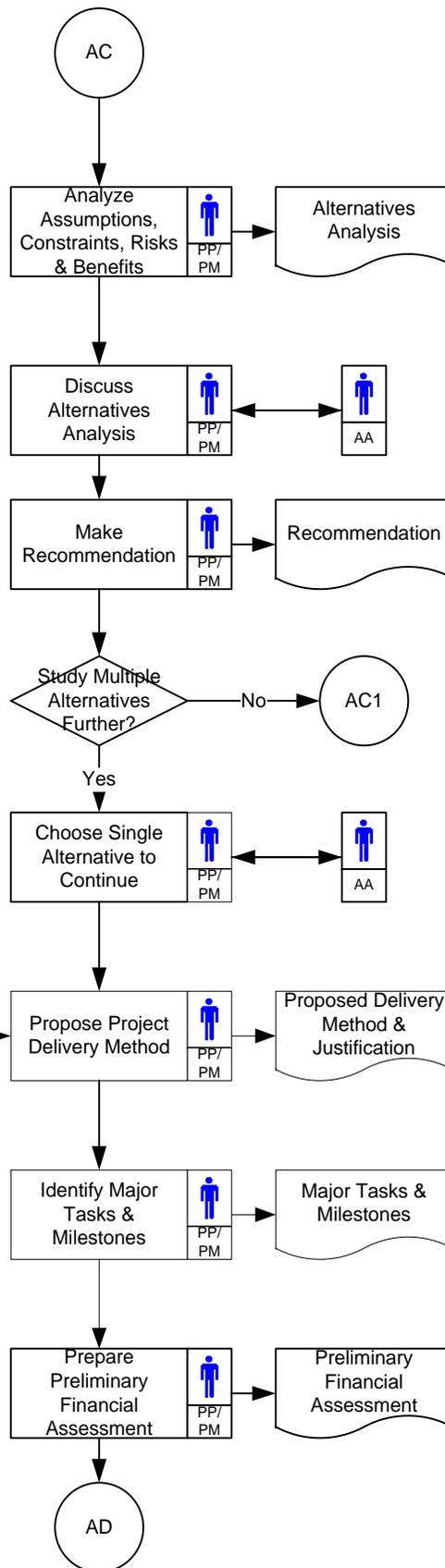


Project Charter Elements
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Project Charter Elements correspond to major headings in Table of Contents of a Project Charter



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





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).



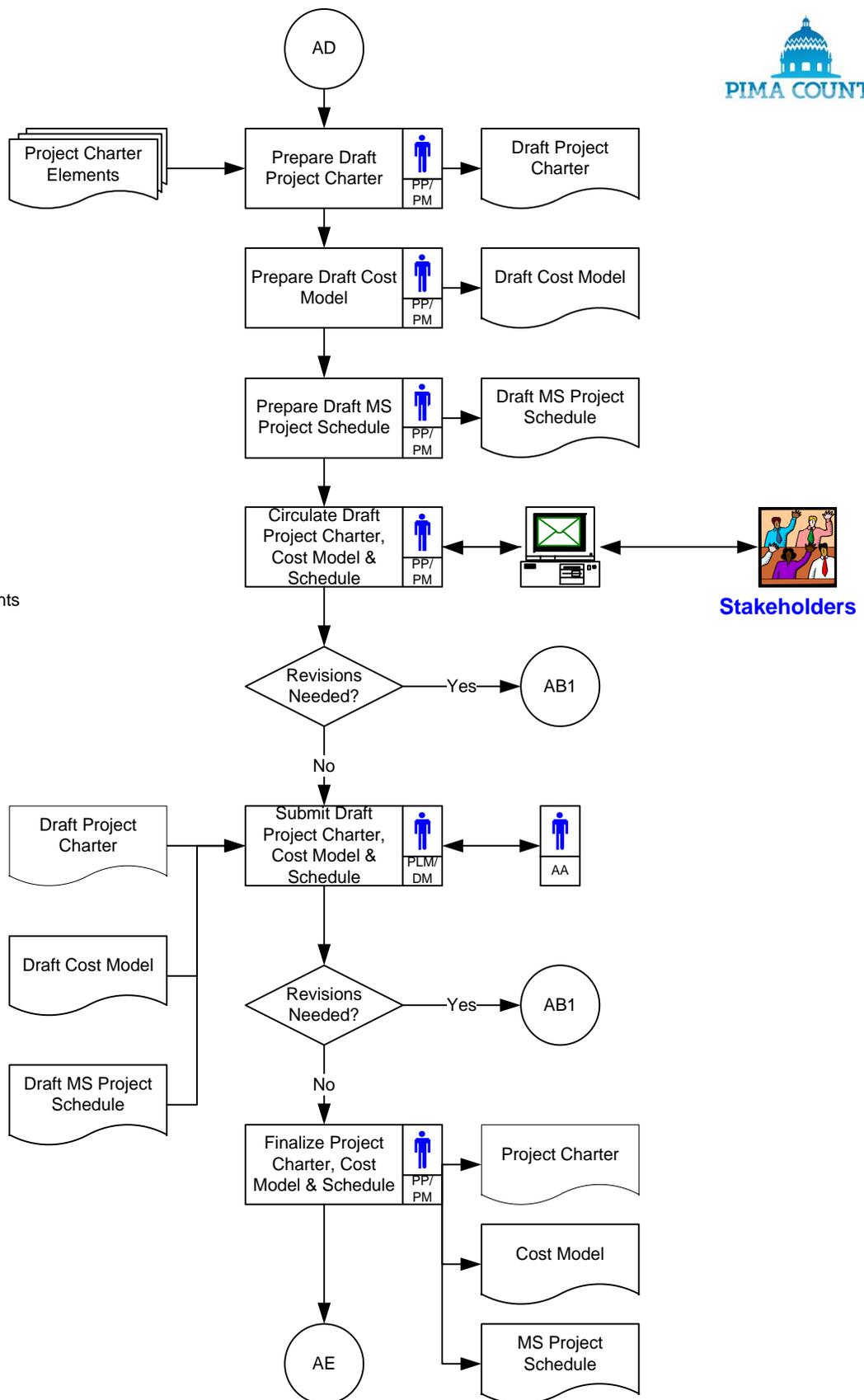
Cost Model & MS Project Schedule Templates

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



AE

Obtain AA approval and signatures

PLM/DM

AA

Gate 1-1 Required?

AF1

Calendar Gate Meeting

PP/PM

Distribute Gate Deliverables

PP/PM

Gate 1-1 Entry

Gate 1-1 Deliverables

Conduct Gate 1-1

Gate 1-1 Meeting Minutes

Approved without conditions?

AG1

AG2

AF

Conditional Approval

Denied



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



Gate Meeting
Calendar 2 weeks prior to Gate Meeting



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



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



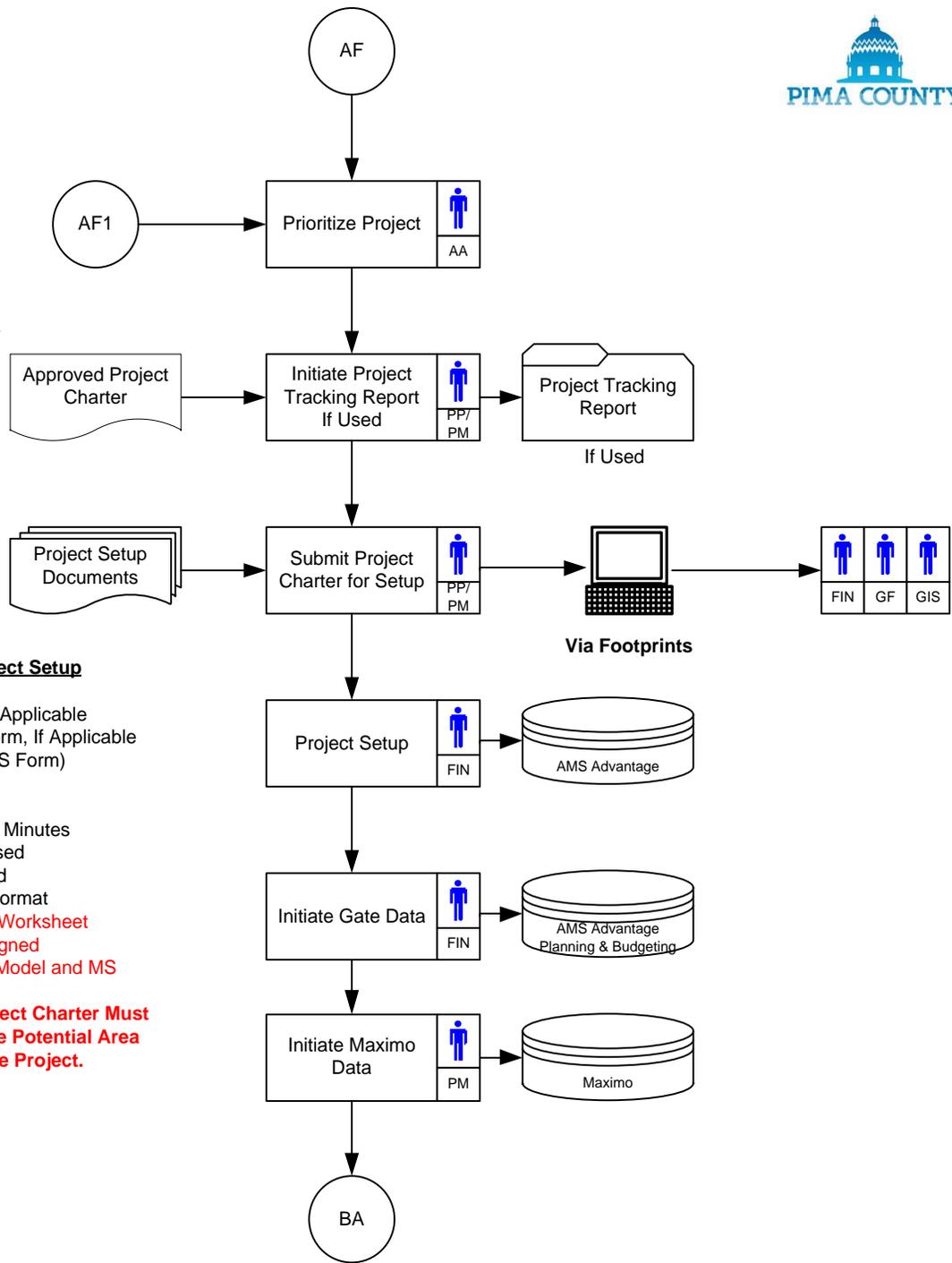
Documents Required for Project Setup

- 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

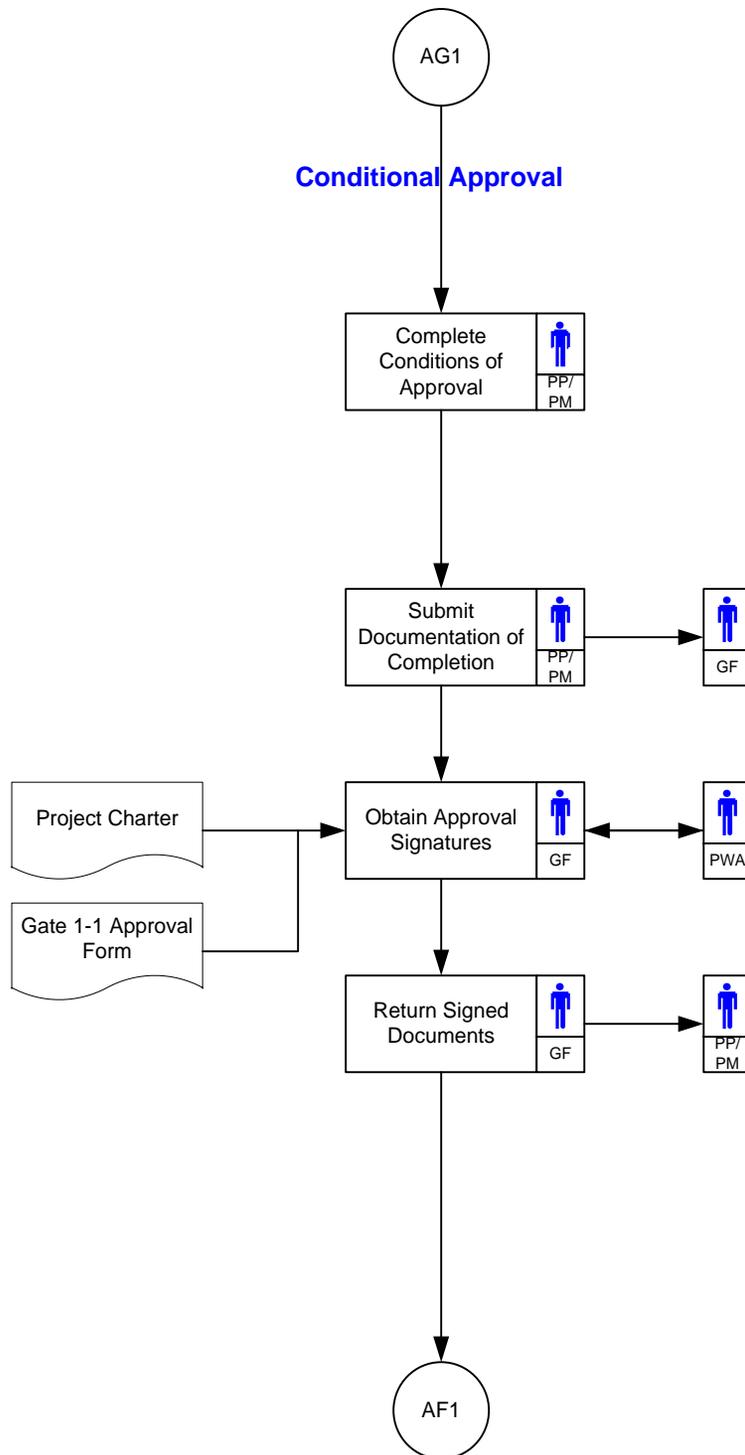
NOTE 1: These must be in pdf format

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.



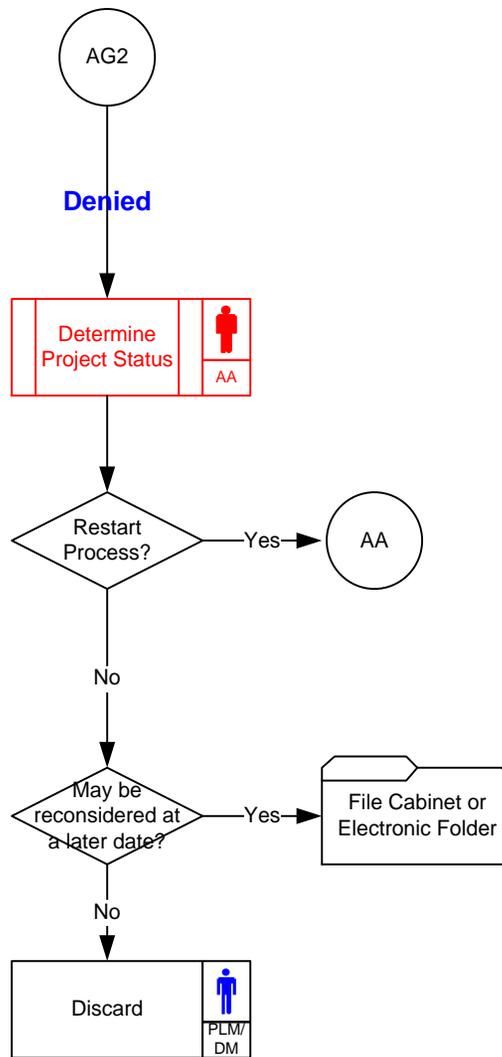
**PHASE II
PROJECT DEVELOPMENT**





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.

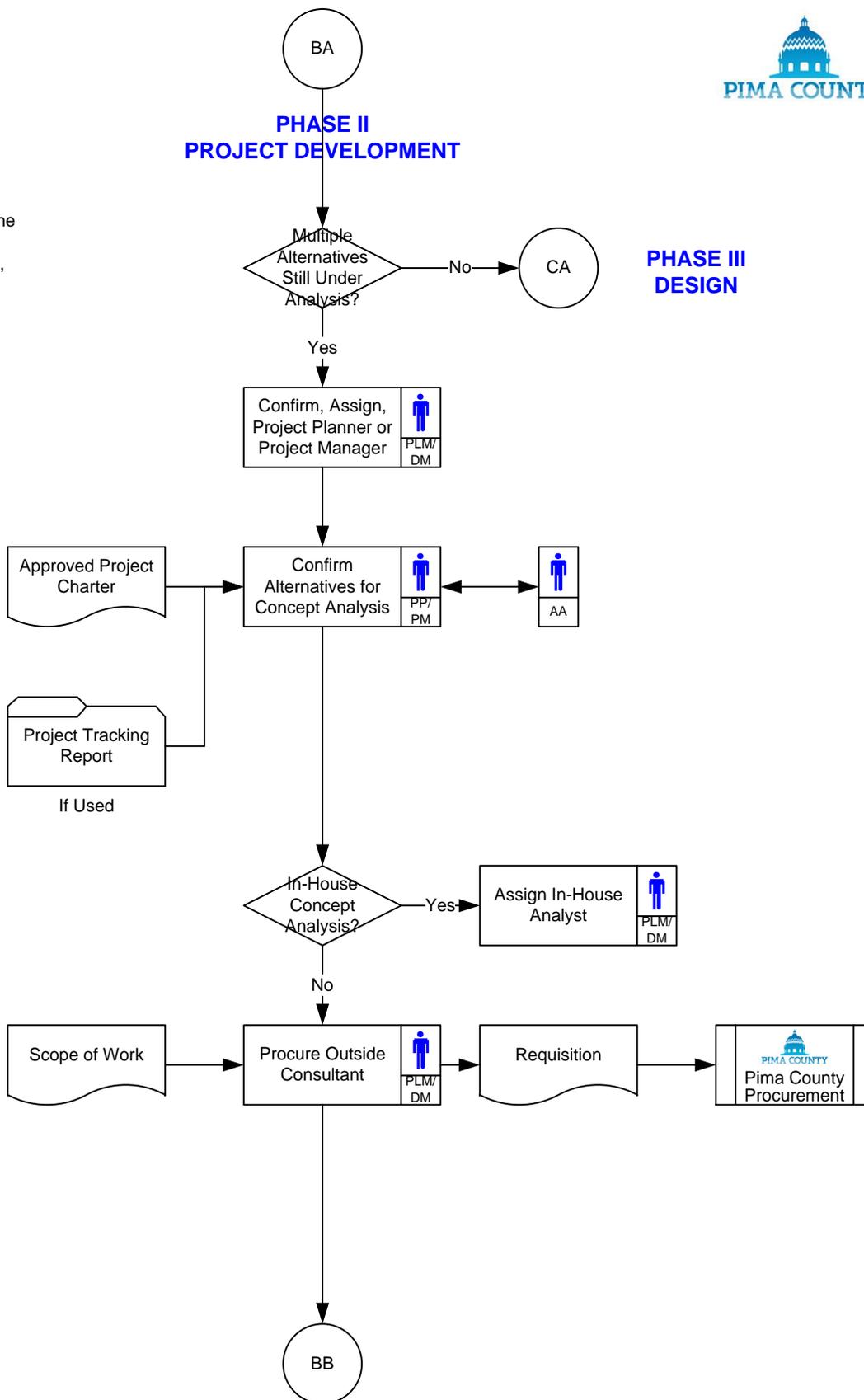




Phase II Project Development
 This phase is used only if the Project Charter recommended the need for further analysis of multiple alternatives. Otherwise, proceed to Phase III Design.

PHASE II PROJECT DEVELOPMENT

**PHASE III
DESIGN**





Stakeholder Meeting
THIS IS NOT OPTIONAL



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



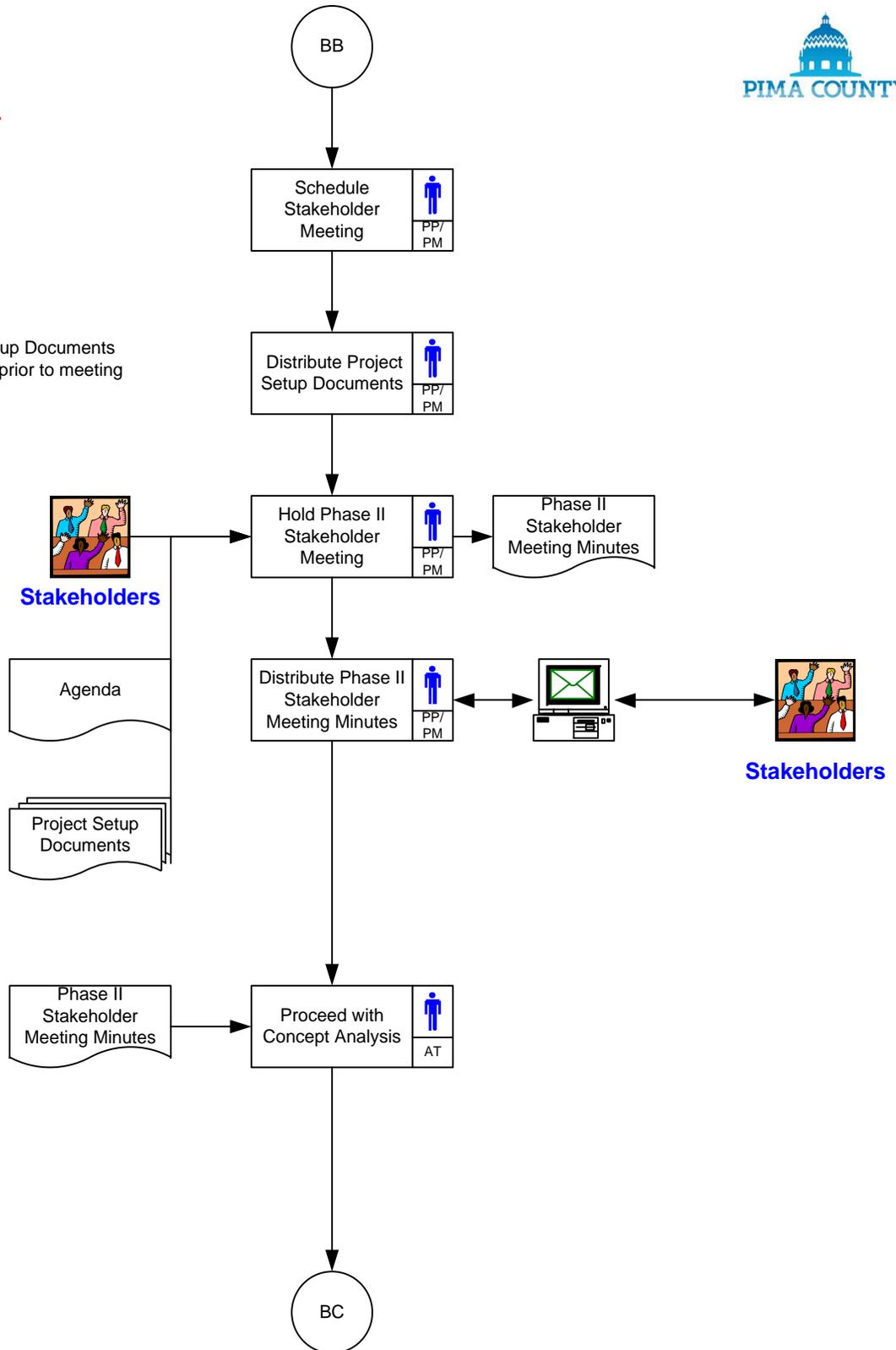
Stakeholder Review
Stakeholders have up to 2 business days to return comments on Phase II Stakeholder Meeting minutes to PP/PM



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.





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



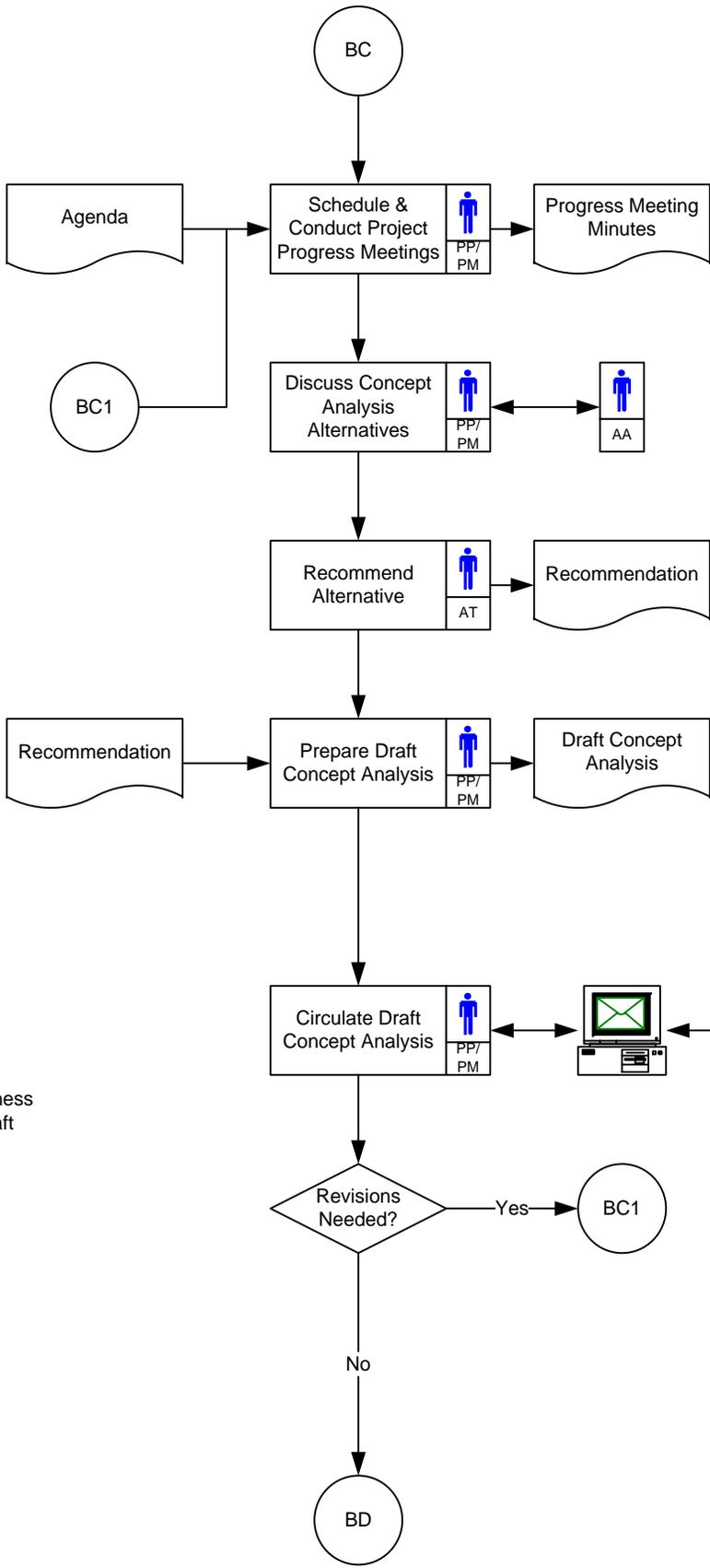
Project Progress Meeting

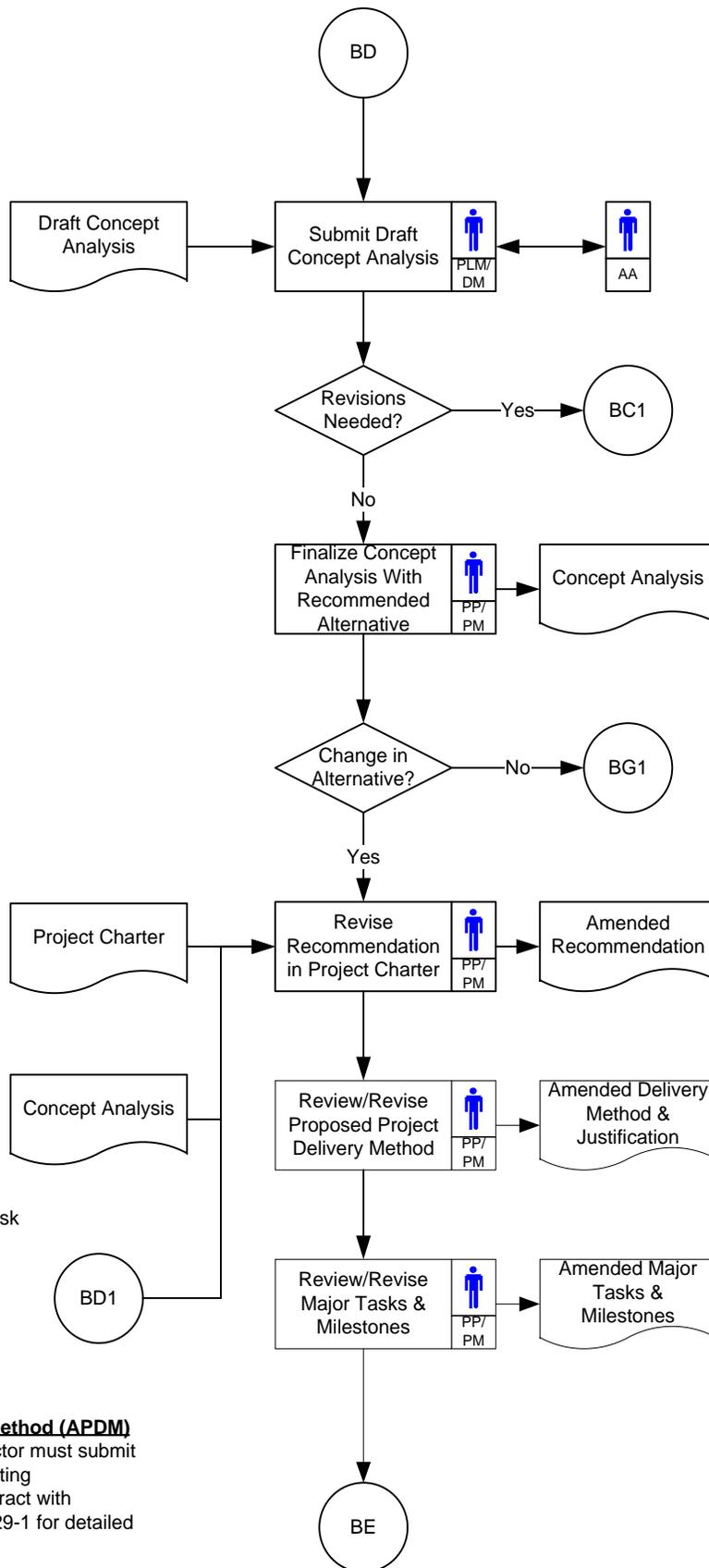
Team should meet a minimum of once a month to discuss Risk Assessments, Schedule Modifications, Project Budget, Project Scope & Critical Path Issues



Stakeholder Review

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





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.



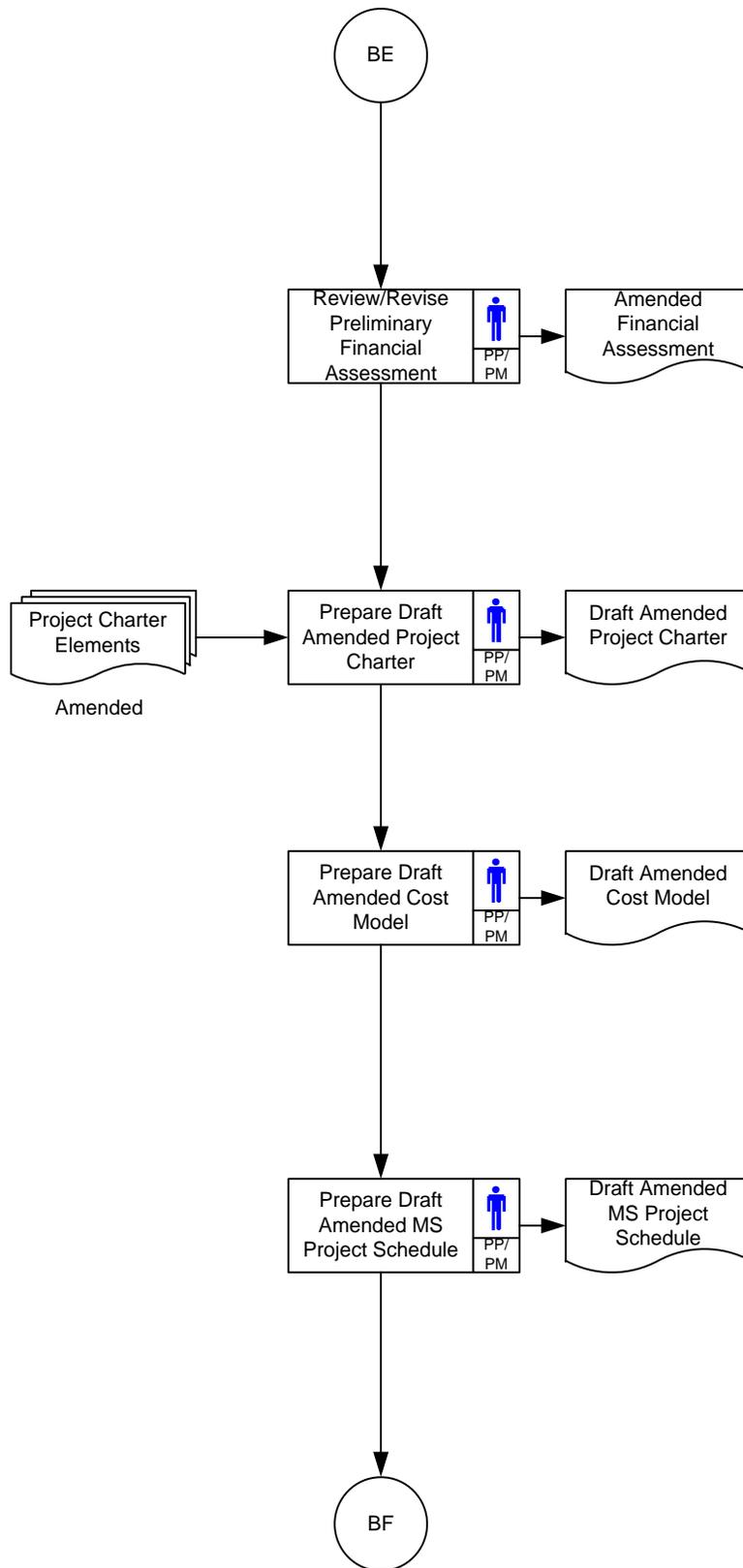
Project Delivery Methods

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



Alternative Project Delivery Method (APDM)

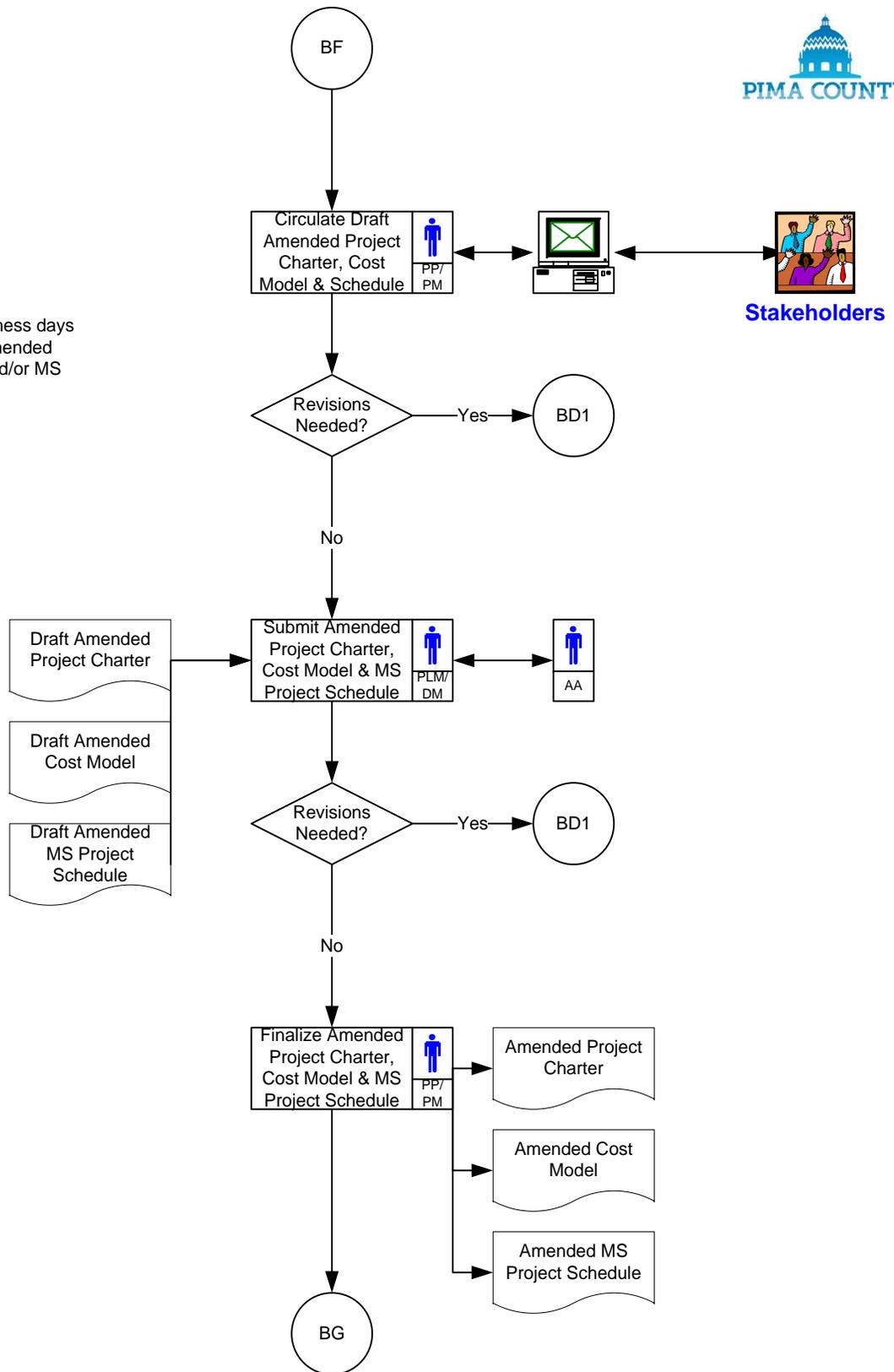
If an APDM is chosen, the Director must submit a memo to Procurement requesting establishment of an APDM contract with justification (See BOS Policy D29-1 for detailed instructions).





Stakeholder Review

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





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.



Gate Meeting

Calendar 2 weeks prior to Gate Meeting



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



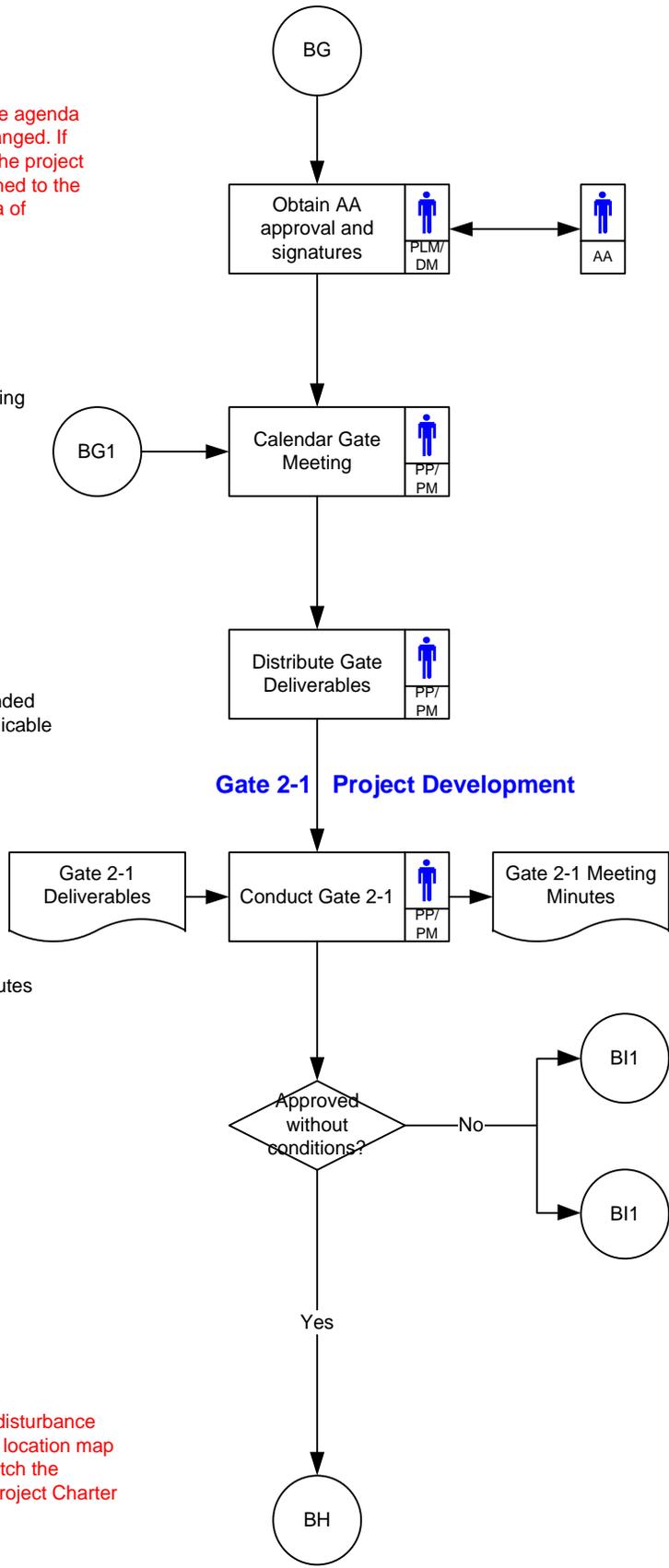
Agenda/Minutes

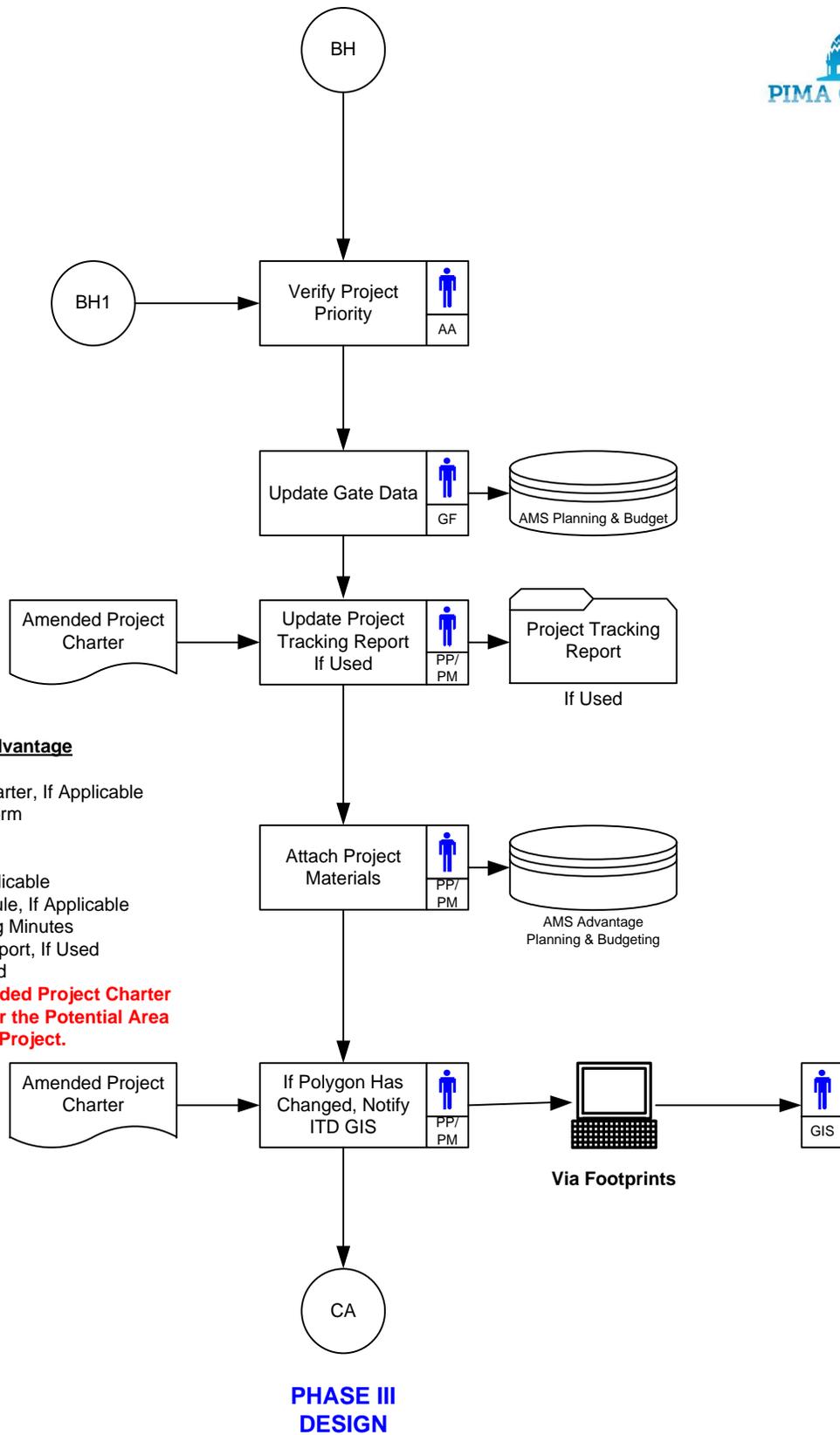
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes



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



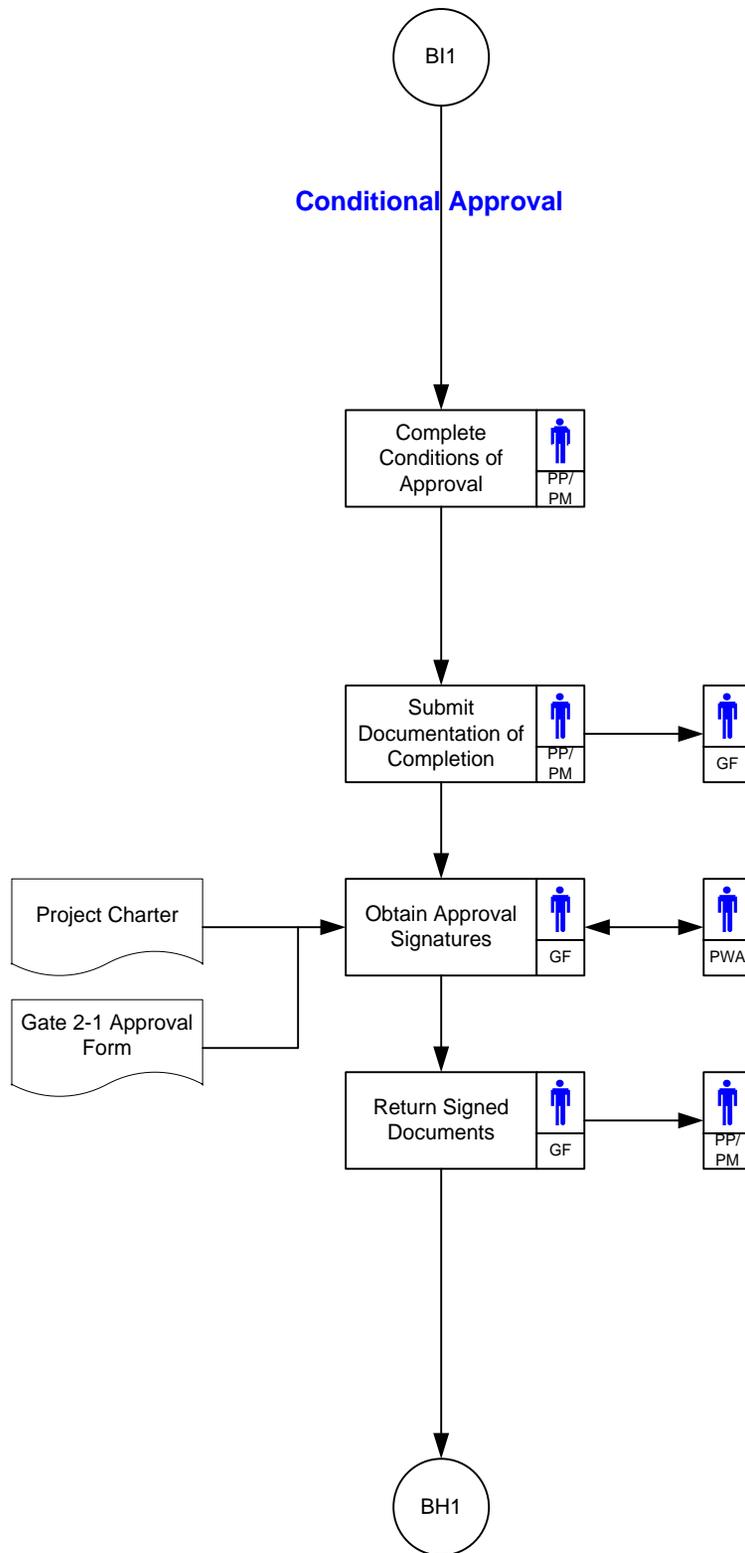


**Materials to Attach in AMS Advantage
Planning & Budgeting**

- 1) Signed Amended Project Charter, If Applicable
- 2) Signed Gate 2-1 Approval Form
- 3) Gate 2-1 Meeting Minutes
- 4) Concept Analysis
- 5) Amended Cost Model, If Applicable
- 6) Amended MS Project Schedule, If Applicable
- 7) Phase II Stakeholder Meeting Minutes
- 8) Updated Project Tracking Report, If Used
- 9) Other Materials as Requested

**NOTE: Location Map in Amended Project Charter
Must Show Polygon for the Potential Area
of Disturbance for the Project.**

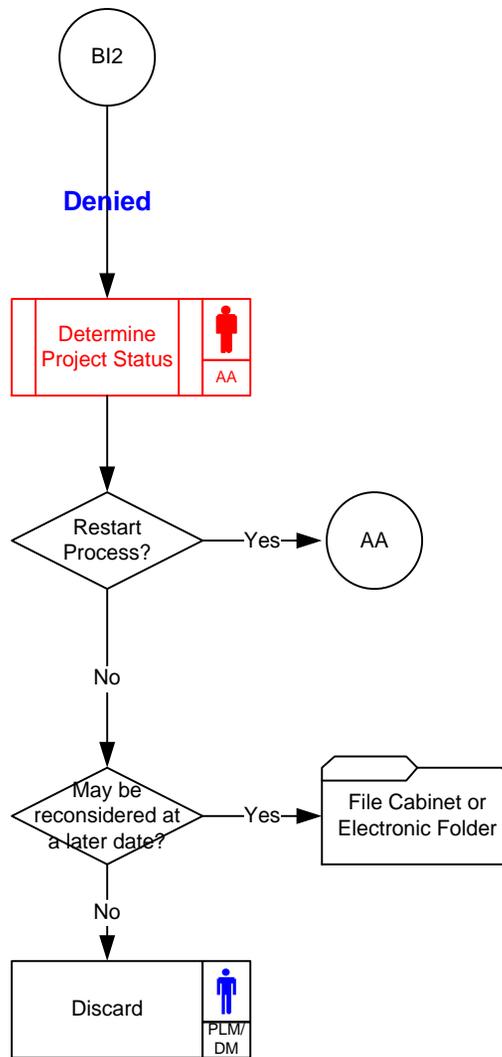
**PHASE III
DESIGN**





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.





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



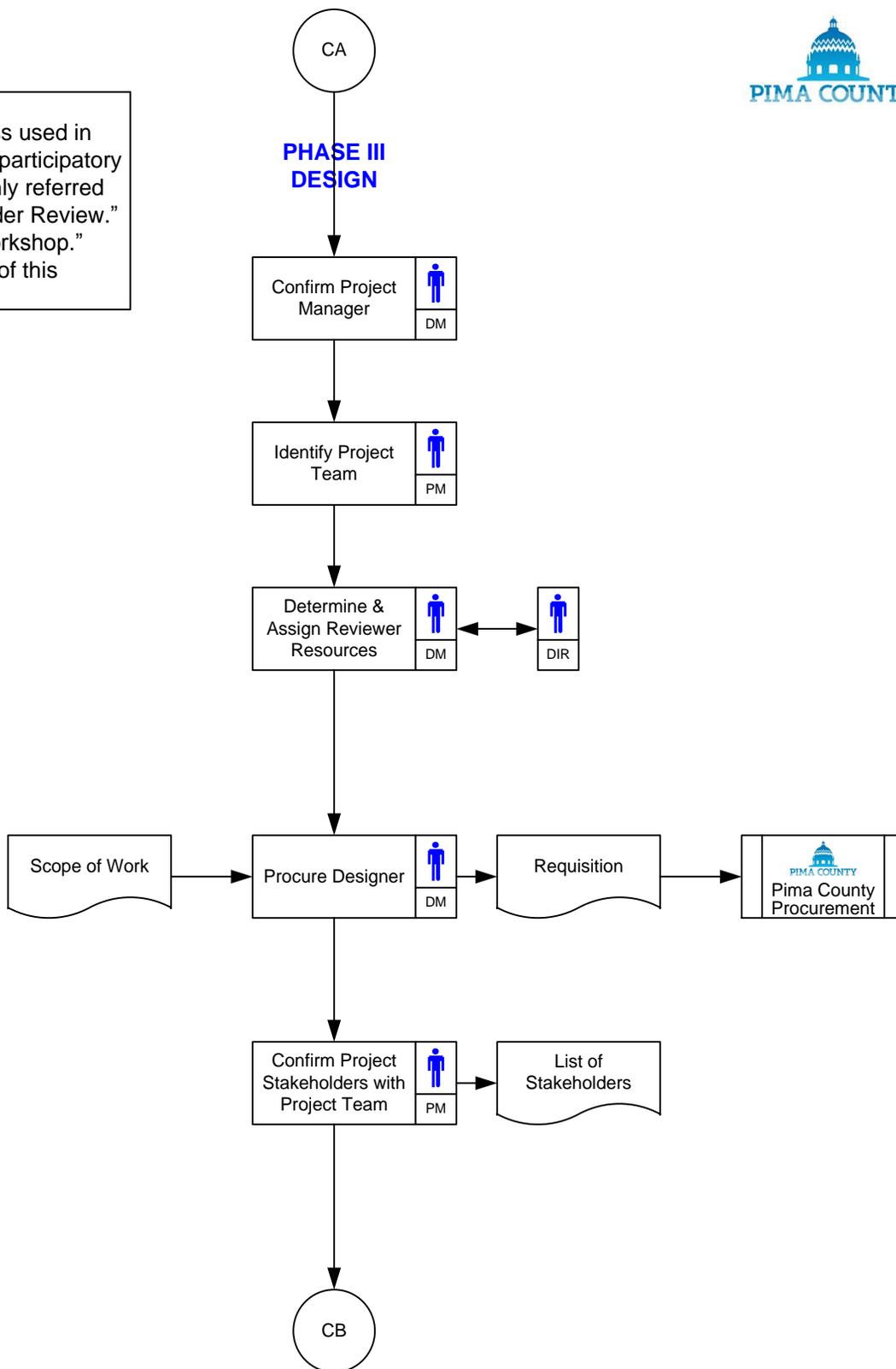
Procure Designer

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)





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)



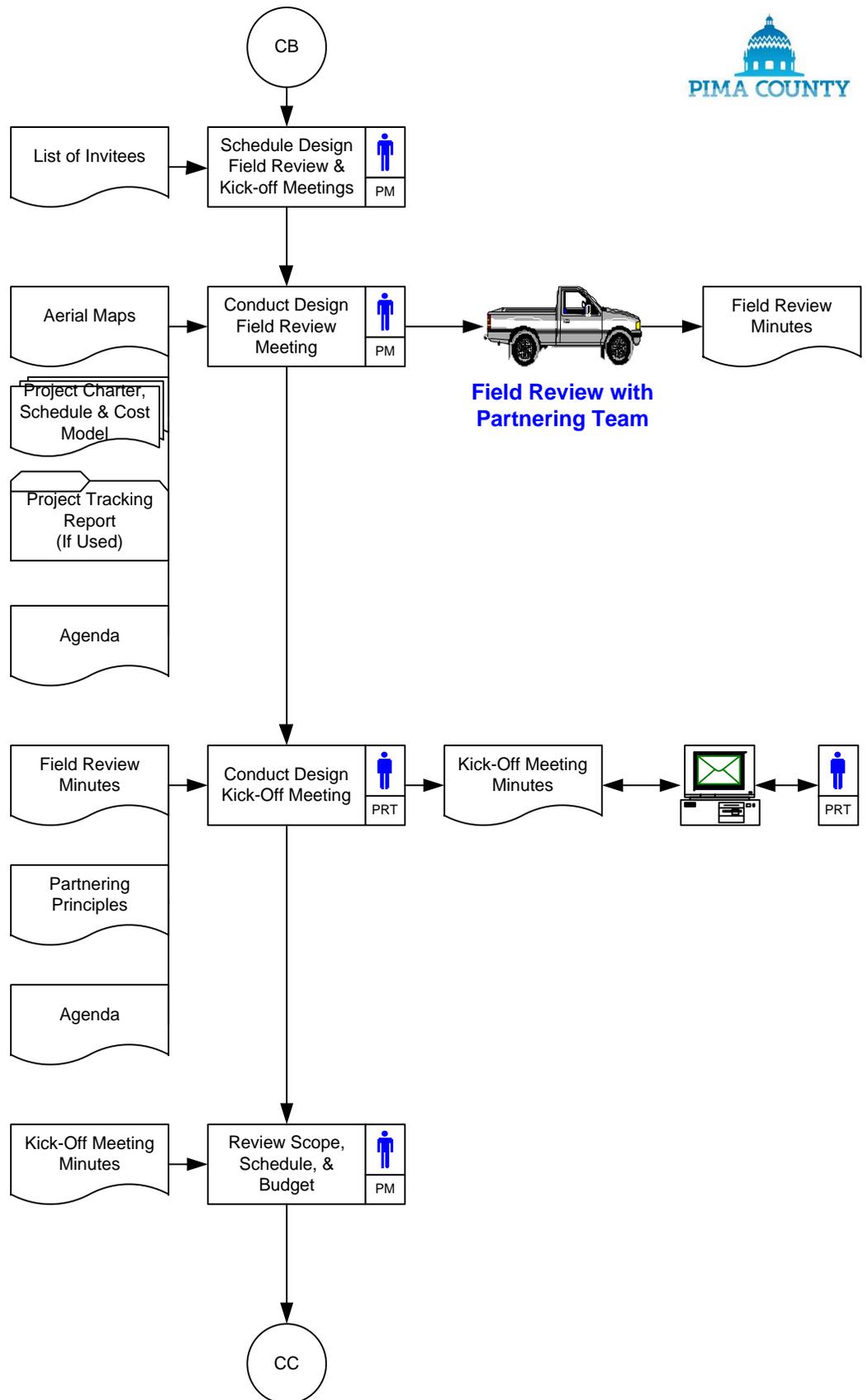
Confirm Issues & Risks

- * 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





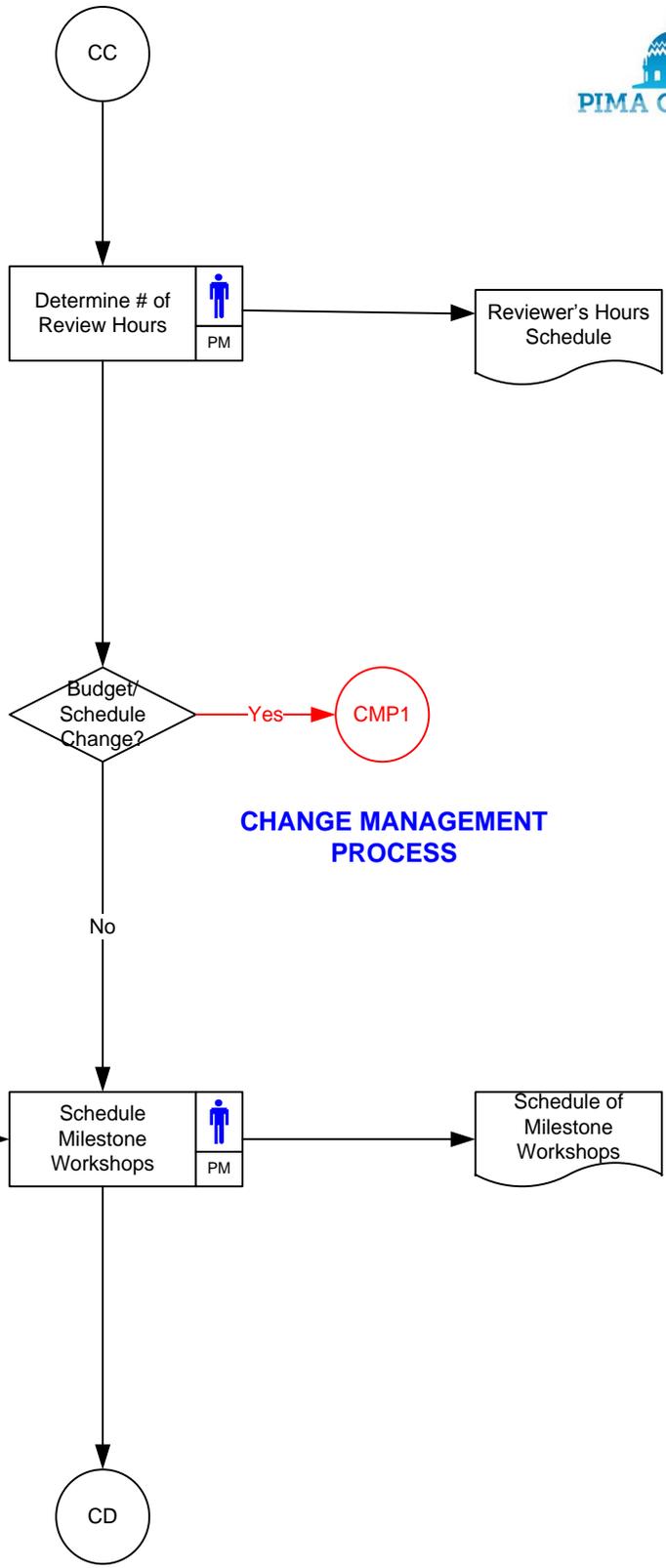
Partnering Team
Partnering Team should continually look for ways to improve the process through methods such as Value Engineering



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)



CHANGE MANAGEMENT PROCESS



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



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

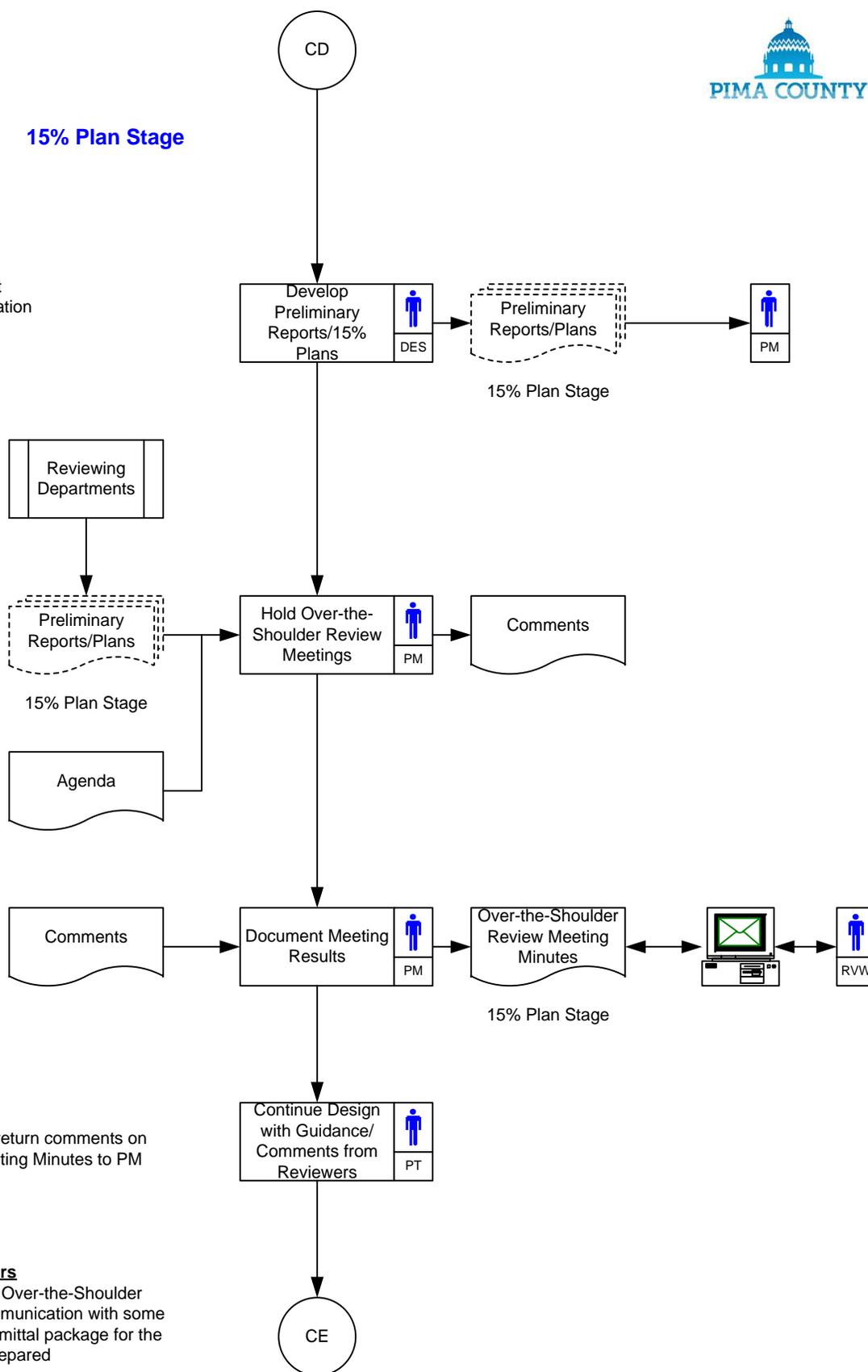
Have up to 2 business days to return comments on Over-the-Shoulder Review Meeting Minutes to PM

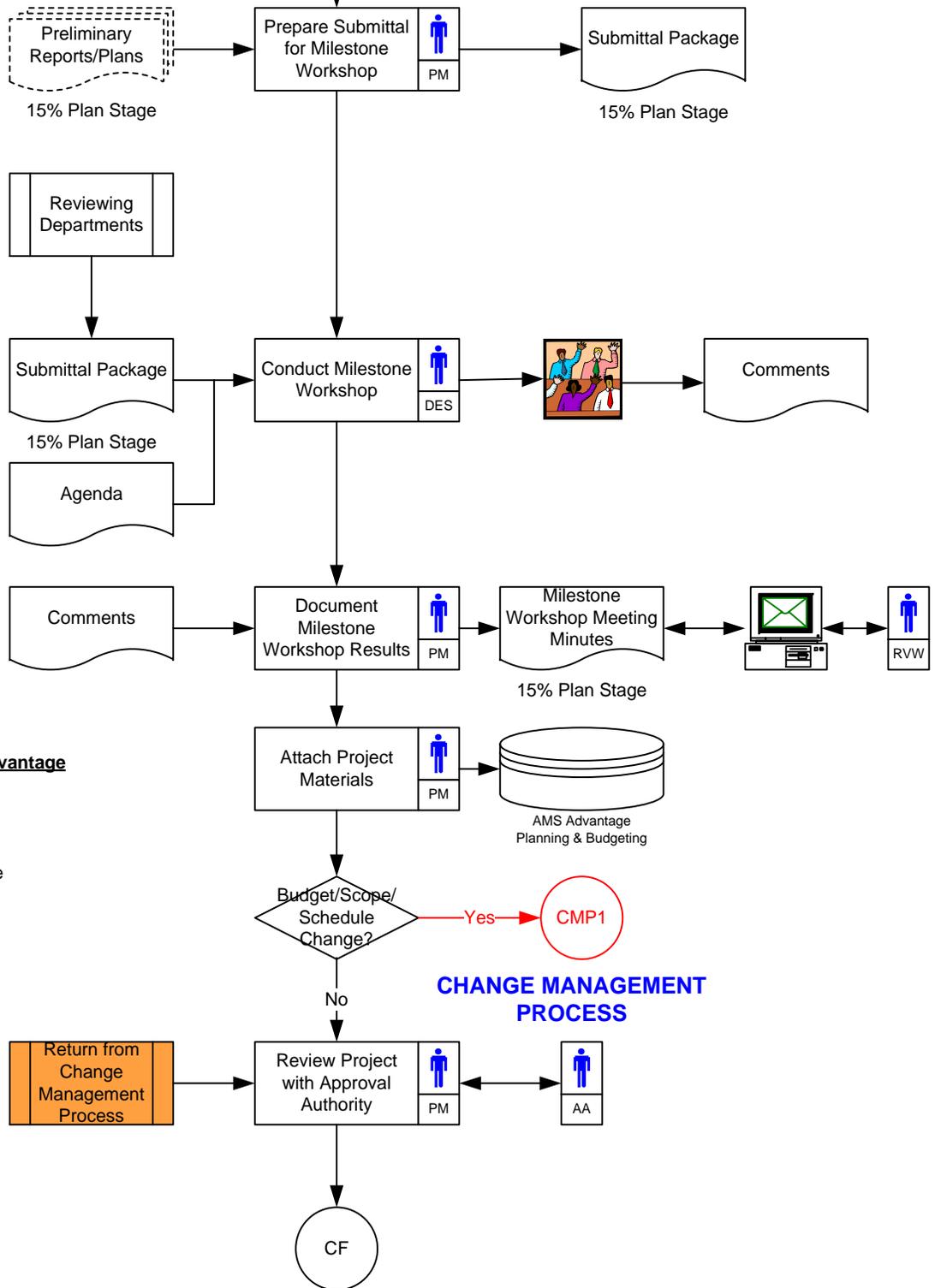
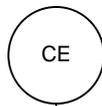


Communication with Reviewers

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

15% Plan Stage





Submittal Package

Submittal package must include an updated MS Project Schedule and an updated Cost Model



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



Reviewers

Have up to 2 business days to return comments on Milestone Workshop Meeting Minutes to PM



Materials to Attach in AMS Advantage

Planning & Budgeting

- 1) Milestone Workshop Minutes (15% Plan Stage)
- 2) Updated Cost Model
- 3) Updated MS Project Schedule



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

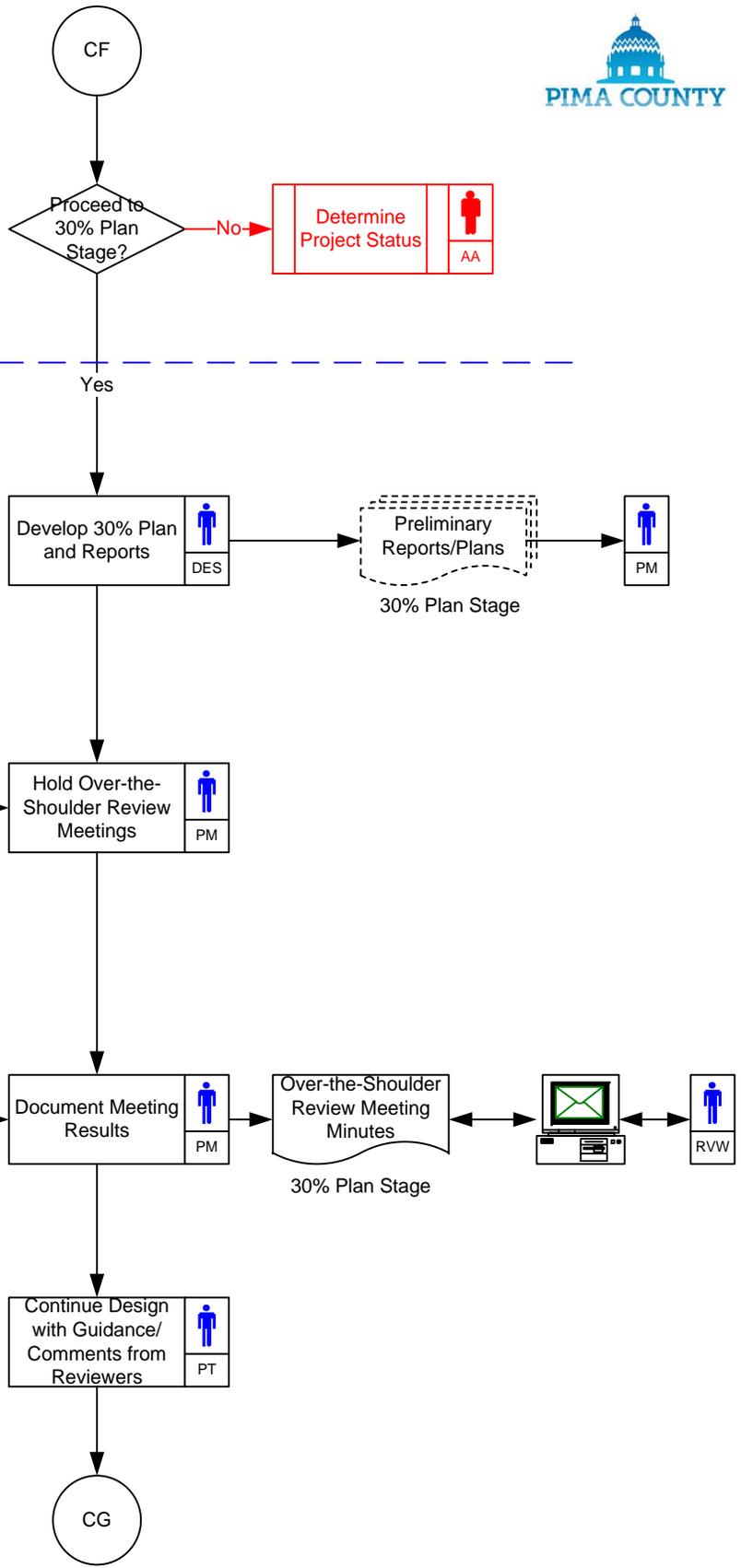
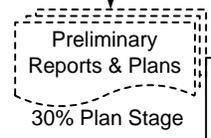
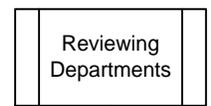
Have up to 2 business days to return comments on Over-the-Shoulder Review Meeting Minutes to PM

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

15% Plan Stage

30% Plan Stage





Submittal Package

Submittal package must include an updated MS Project Schedule and an updated Cost Model



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



Reviewers

Have up to 2 business days to return comments on Milestone Workshop Meeting Minutes to PM



Materials to Attach in AMS Advantage

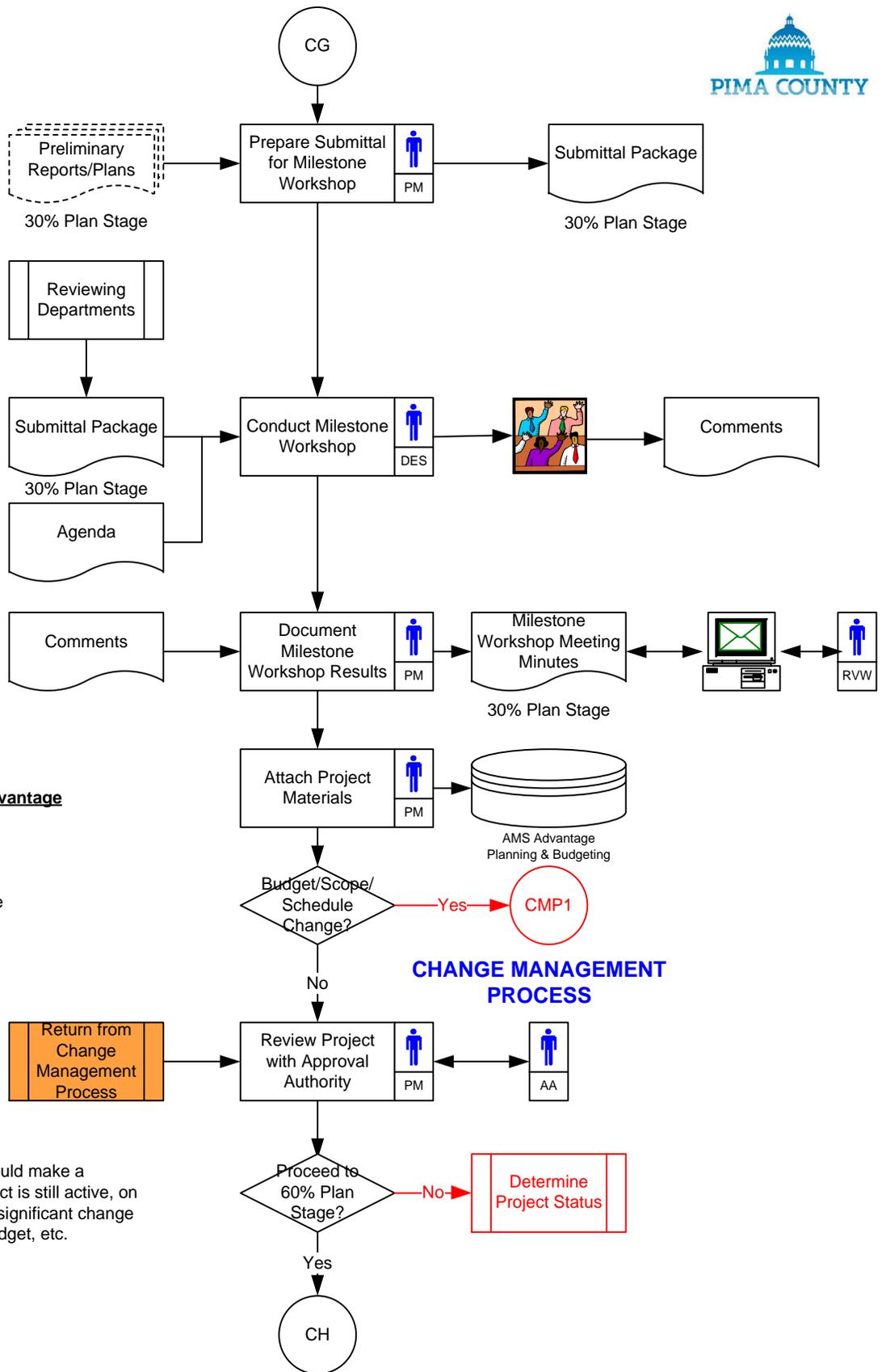
Planning & Budgeting

- 1) Milestone Workshop Minutes (30% Plan Stage)
- 2) Updated Cost Model
- 3) Updated MS Project Schedule



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.





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 3-1 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

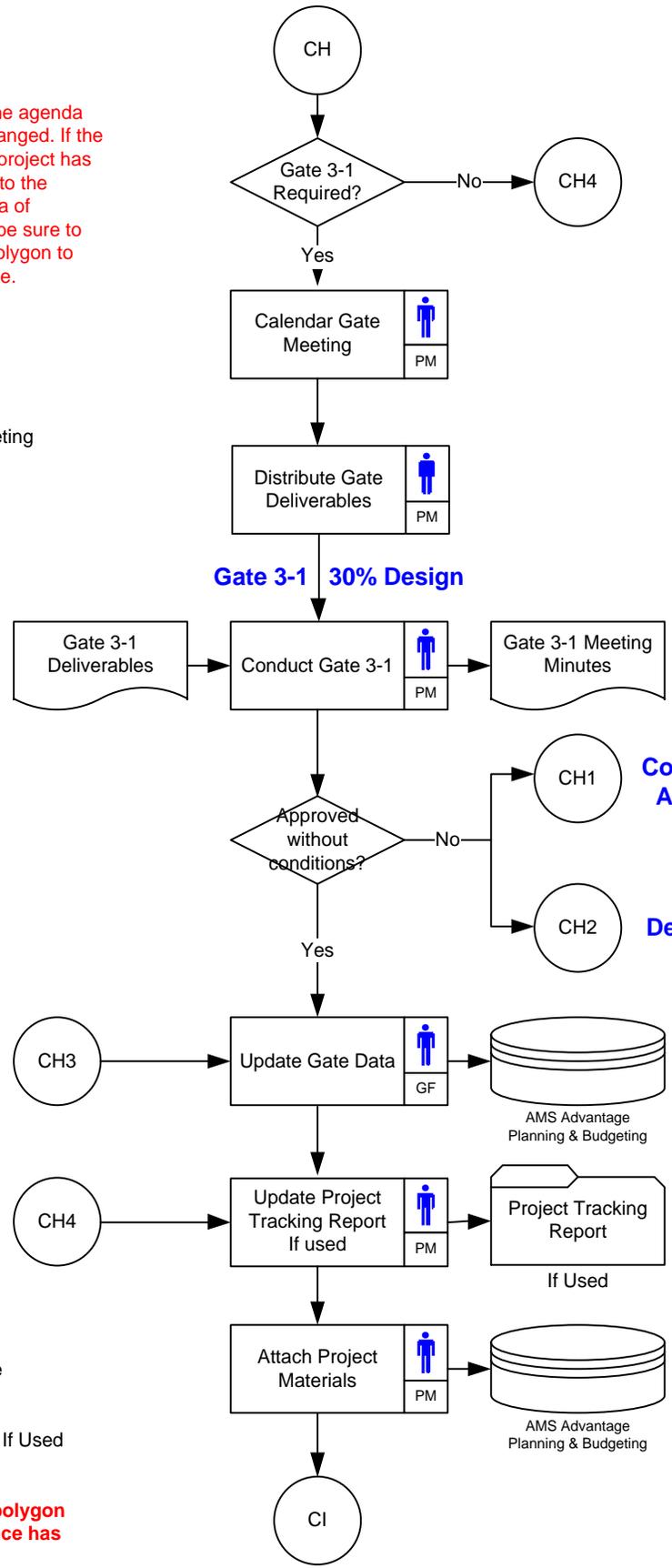
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes

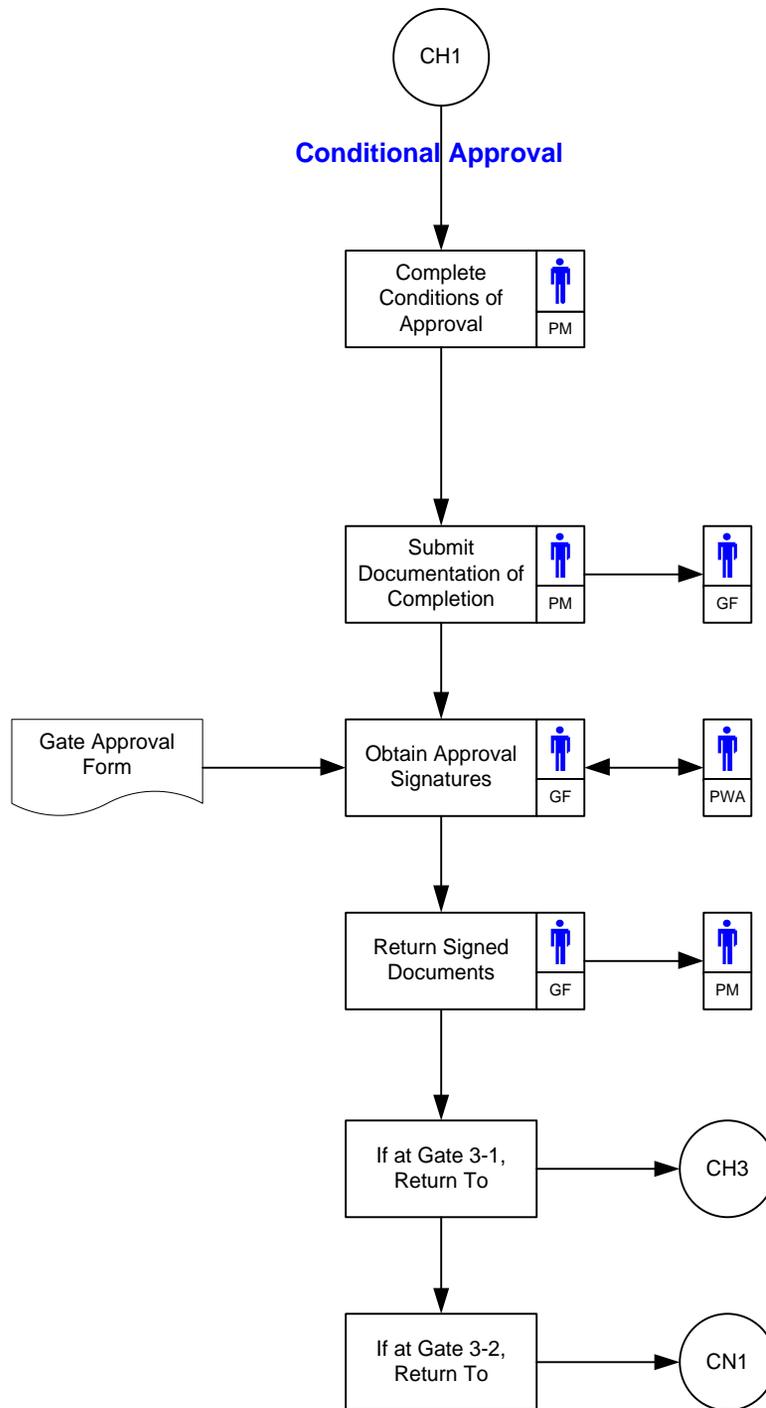


Materials to Attach in AMS Advantage Planning & Budgeting

- 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.

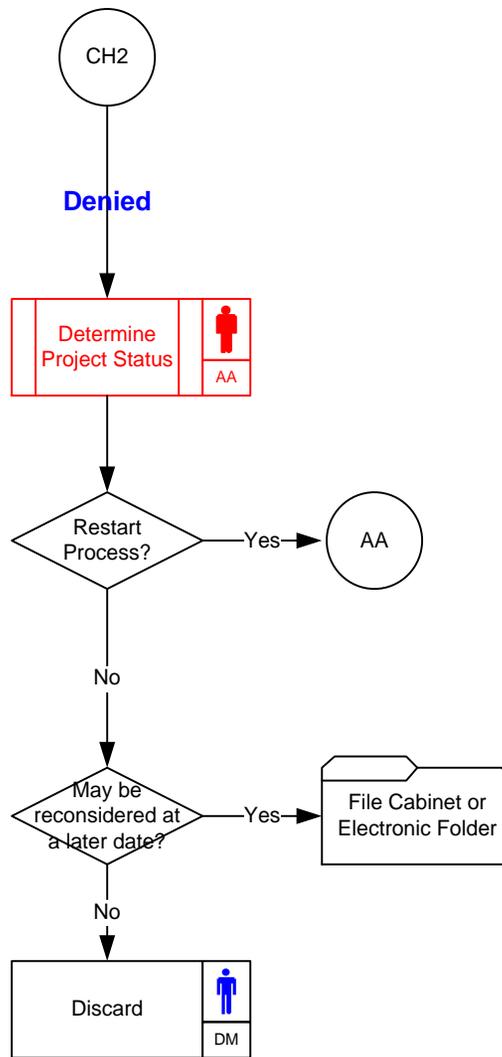






Project Status

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

60% Plan Stage



60% Plan Stage

This phase follows the same review process as the 30% 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



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

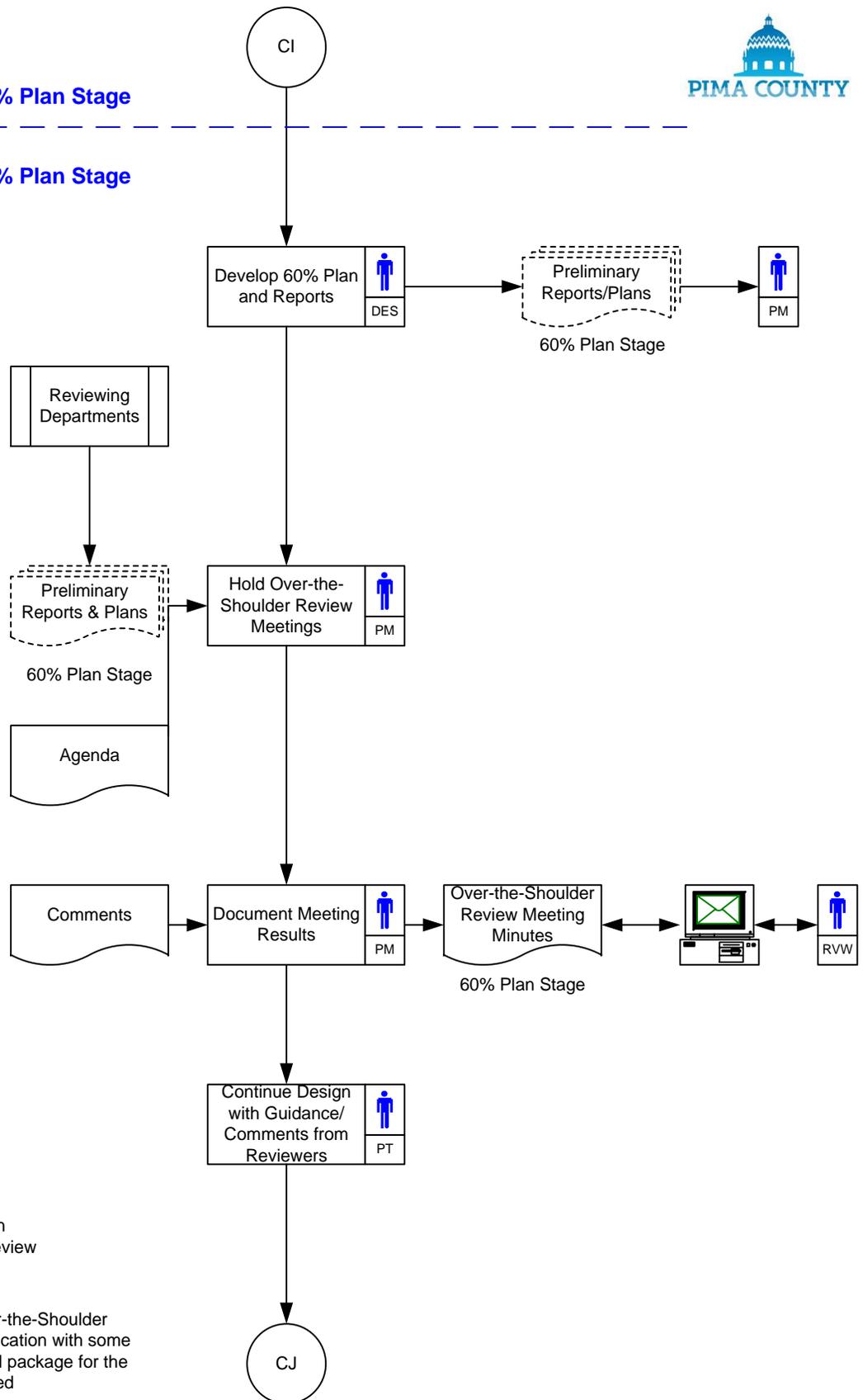


Reviewers

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





Submittal Package

Submittal package must include an updated MS Project Schedule and an updated Cost Model



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



Reviewers

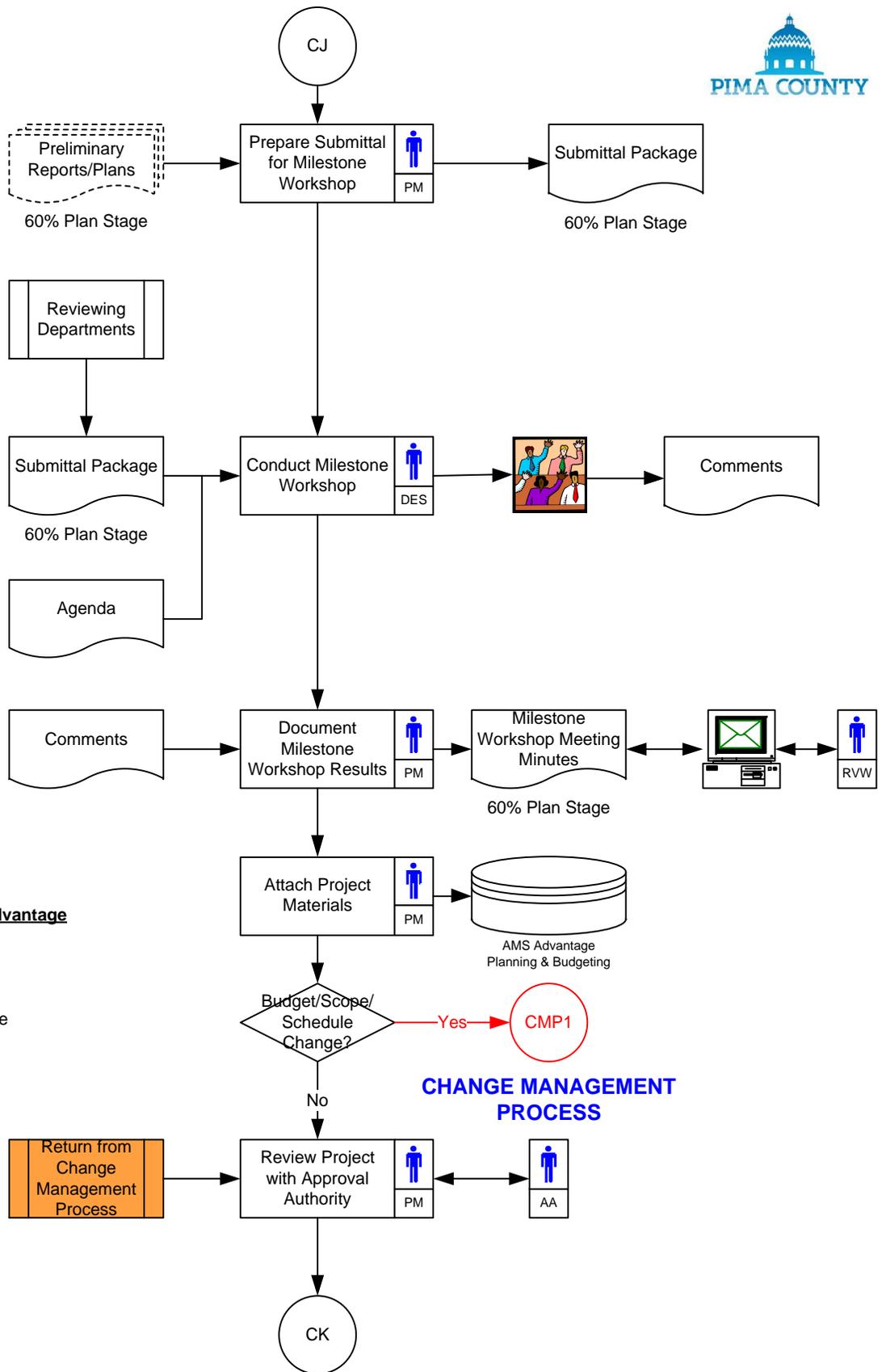
Have up to 2 business days to return comments on Milestone Workshop Meeting Minutes to PM



Materials to Attach in AMS Advantage

Planning & Budgeting

- 1) Milestone Workshop Minutes (60% Plan Stage)
- 2) Updated Cost Model
- 3) Updated MS Project Schedule





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.



60% Plan Stage

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.



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

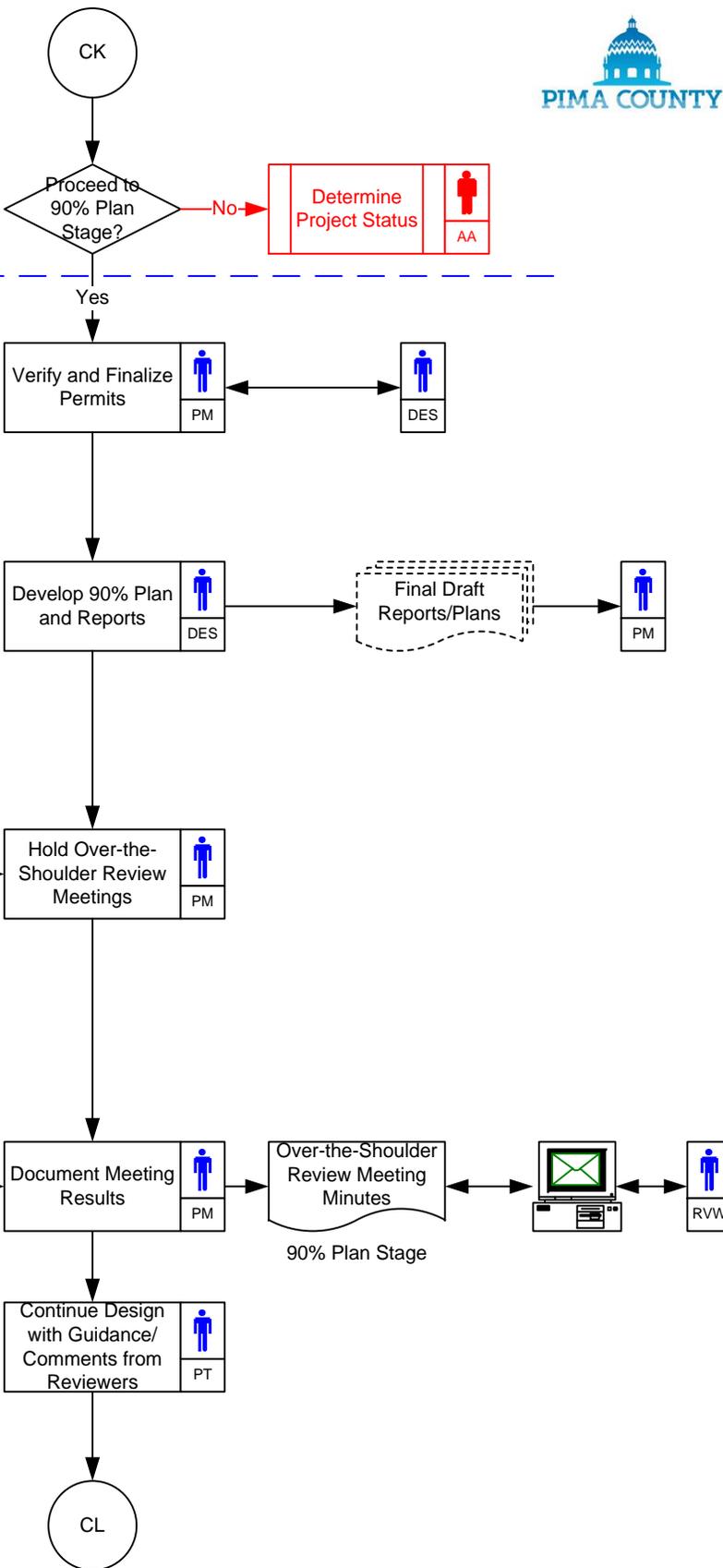
- * Biological Assessment & Mitigation
- * Cultural Resources Mitigation
- * Engineer's Estimate
- * Environmental Hazard Mitigation
- * Final Hydrology Report
- * Land Acquisition Line List
- * Native Plant Preservation Plan
- * Special Provisions
- * Sustainability Issues
- * SWPPP
- * Utility Relocation 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





Submittal Package

Submittal package must include an updated MS Project Schedule and an updated Cost Model



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



Reviewers

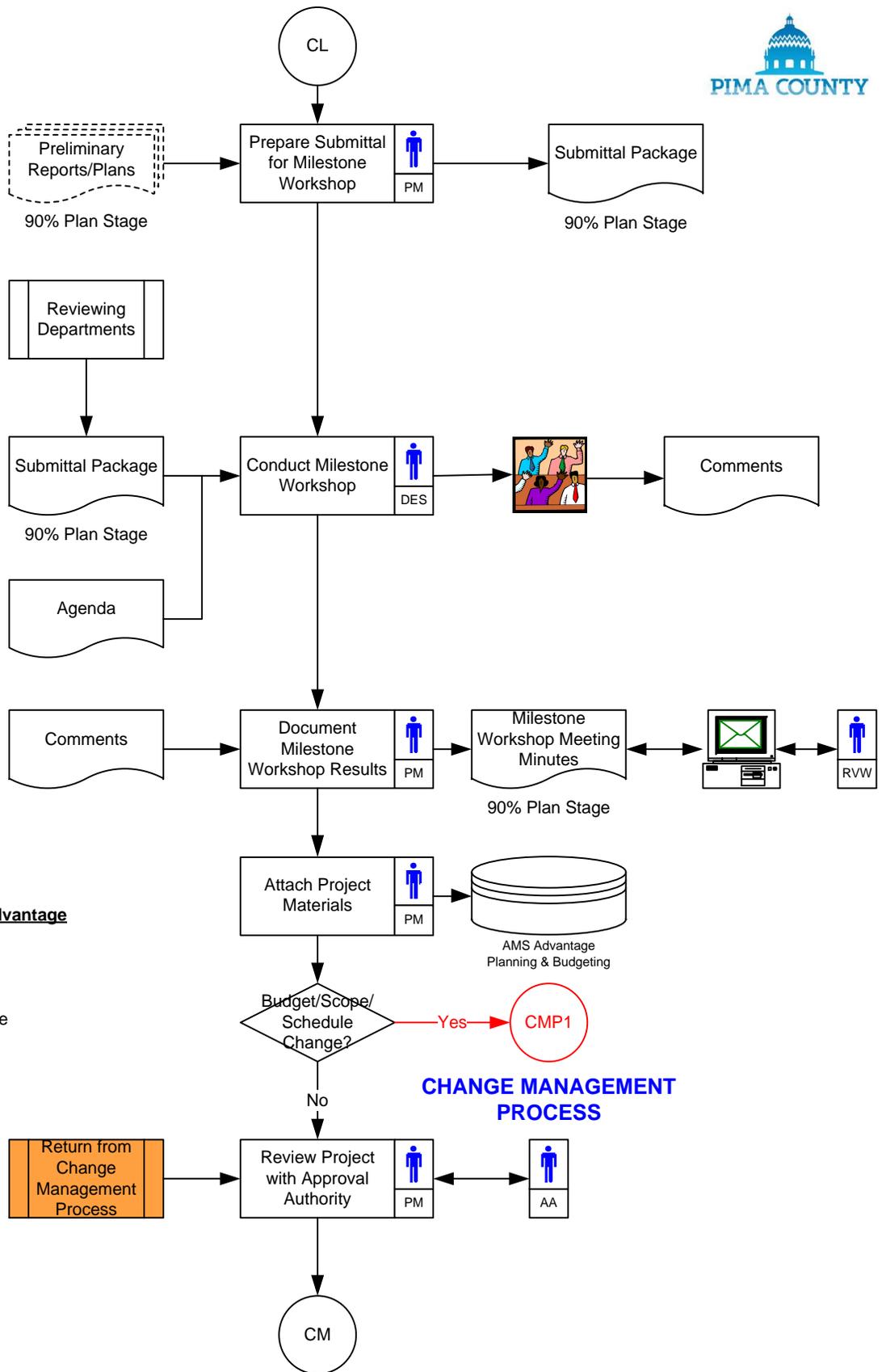
Have up to 2 business days to return comments on Milestone Workshop Meeting Minutes to PM



Materials to Attach in AMS Advantage

Planning & Budgeting

- 1) Milestone Workshop Minutes (90% Plan Stage)
- 2) Updated Cost Model
- 3) Updated MS Project Schedule





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.



90% Plan Stage

100% Plan Stage

100% Plan Stage Requirements

- * 100% Plan Set
- * Special Provisions
- * Technical Specifications
- * Final Engineer's Estimate



Additional Documents

- * 404 Permit
- * Cross Sections
- * Cultural Resources Monitoring Plan
- * Development Services Permits
- * Environmental Reports
- * Geotechnical Report
- * Owner Provided Permits
- * Right of Way Clearance
- * Structural Calculations
- * Sustainability Report
- * Utility Permits/Relocation Plans



Reviewers

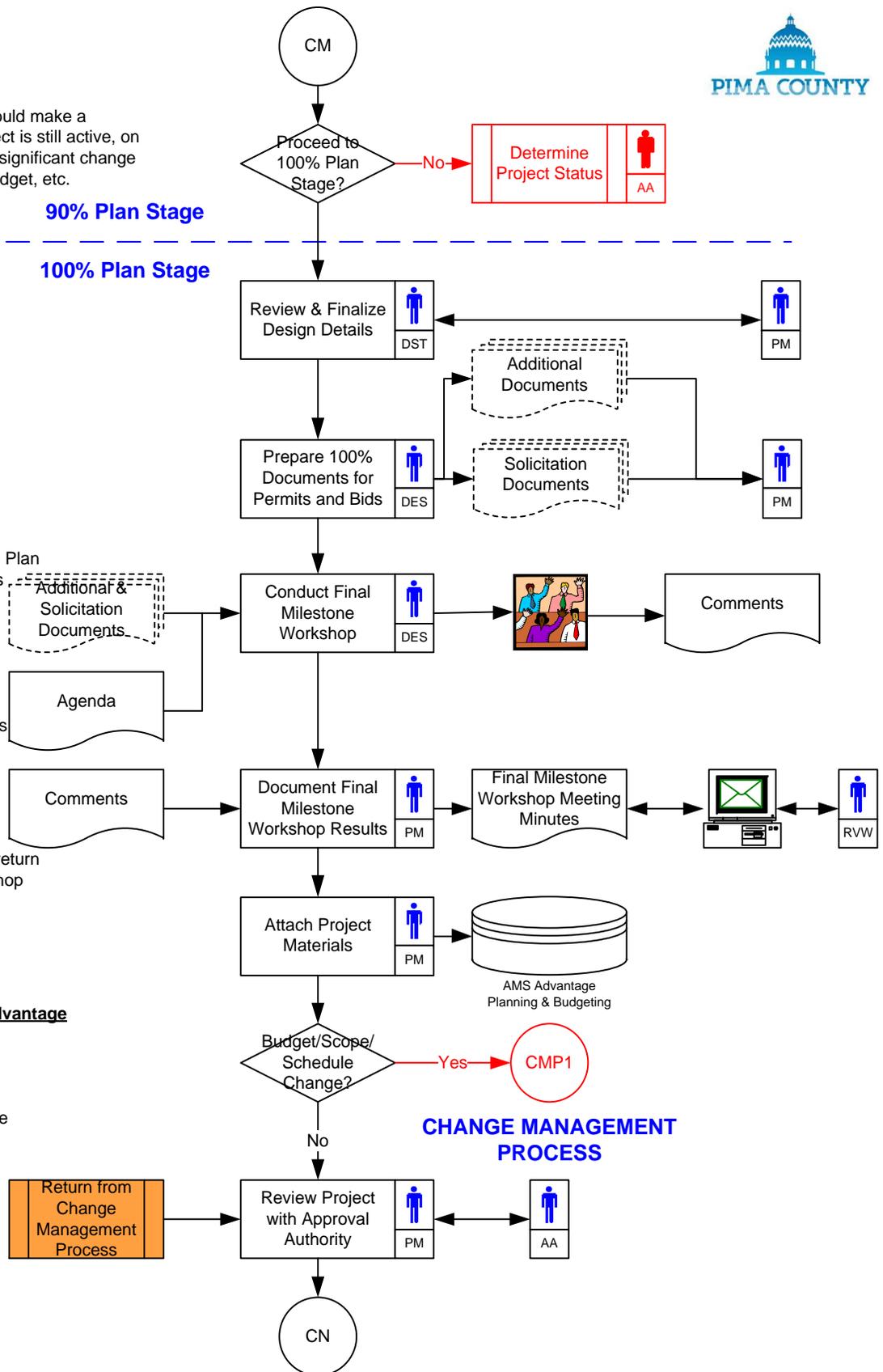
Have up to 2 business days to return comments on Milestone Workshop Meeting Minutes to PM



Materials to Attach in AMS Advantage

Planning & Budgeting

- 1) Milestone Workshop Minutes (100% Plan Stage)
- 2) Updated Cost Model
- 3) Updated MS Project Schedule





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

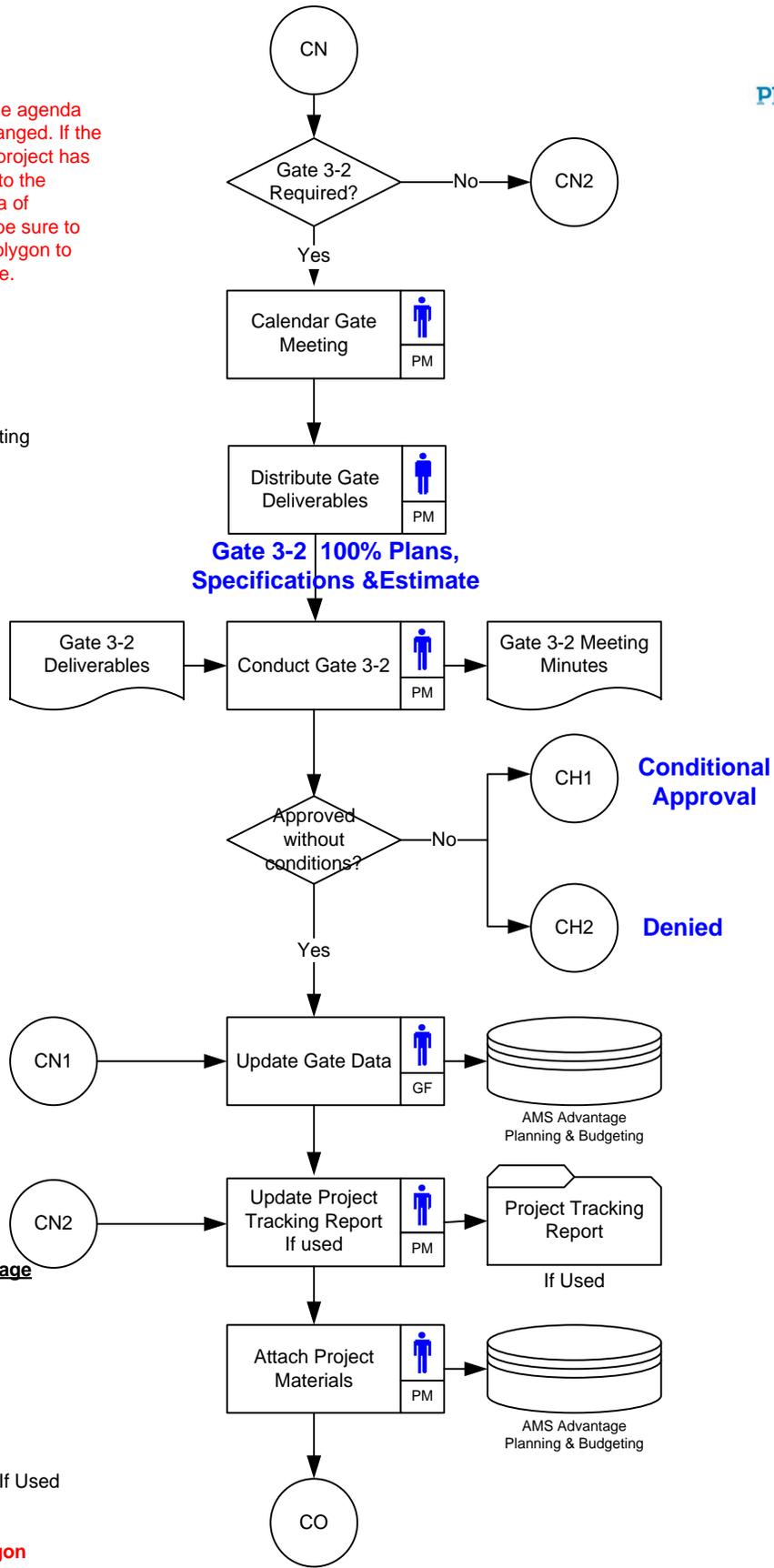
Refer to Exhibits Section of this Manual for Form and Guidance
Note: Same form is used for agenda as well as meeting minutes



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





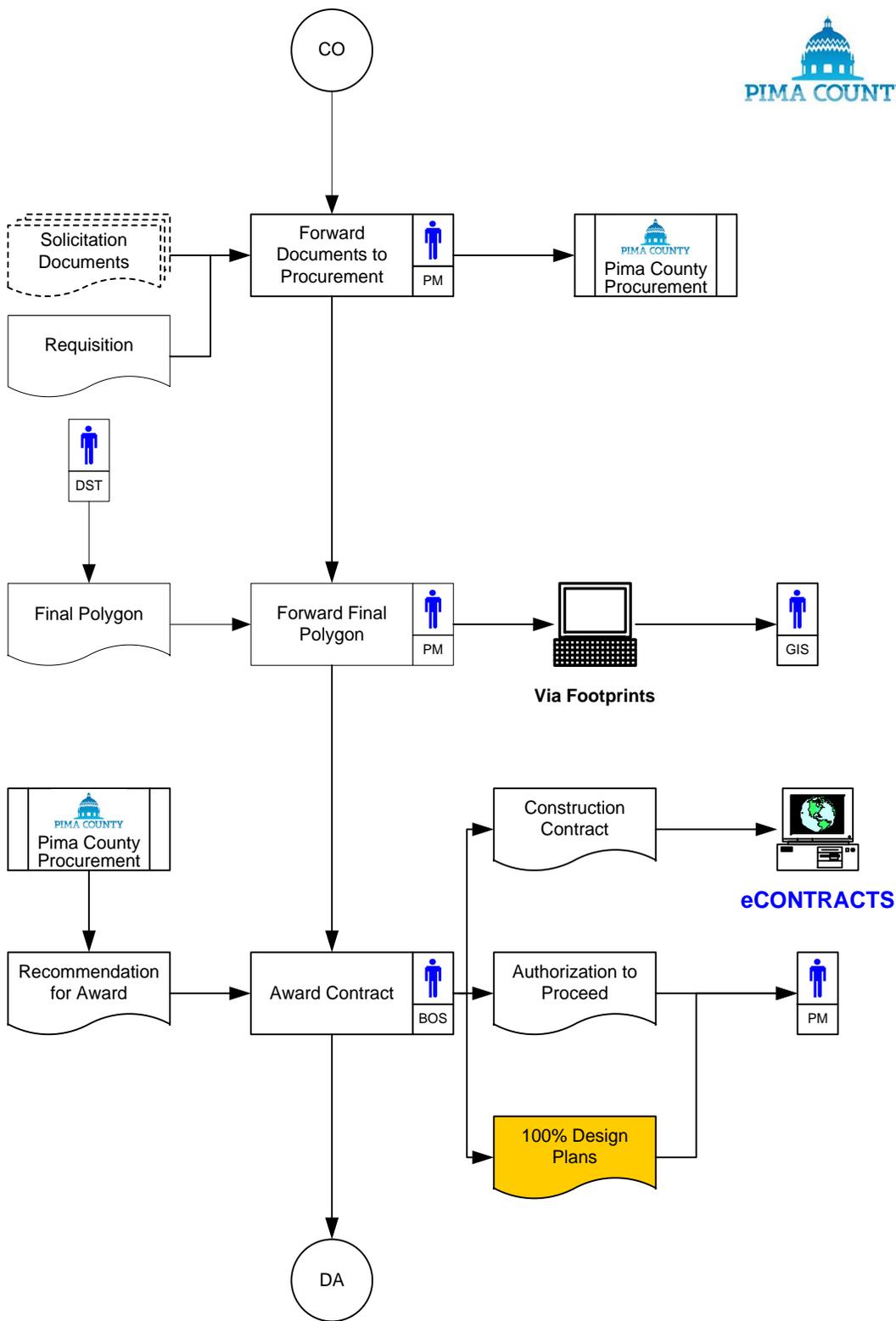
Deliverable
100% Plans,
Specifications &
Estimate



Notes
Procurement should work with the Project Manager on a timeline after receiving the requisition.



Award Contract
If the Awarded Construction Contract is under \$250,000, the decision to award the contract falls to the Procurement Director.



**PHASE IV
CONSTRUCTION**



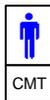
Consultant Performance Evaluation
 (Most recent version is located on Procurement Department's Website)



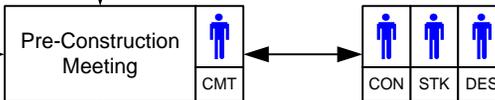
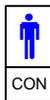
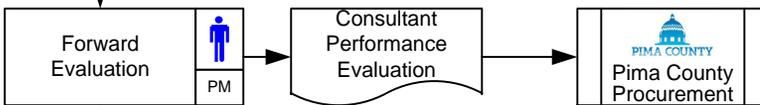
Transition Meeting
 The transition meeting is used to convey/transfer information from the design team to the construction management team.



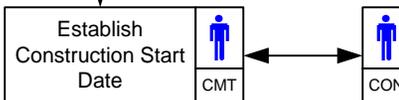
Agenda/Minutes
 Refer to Exhibits Section of this Manual for Form and Guidance
 Note: Same form is used for agenda as well as meeting minutes



DA
**PHASE IV
 CONSTRUCTION**



Partnering Meeting
 A possible Partnering Meeting could be called before or after the Pre-Construction meeting (Refer to Exhibits Section of this Manual for Guidance)



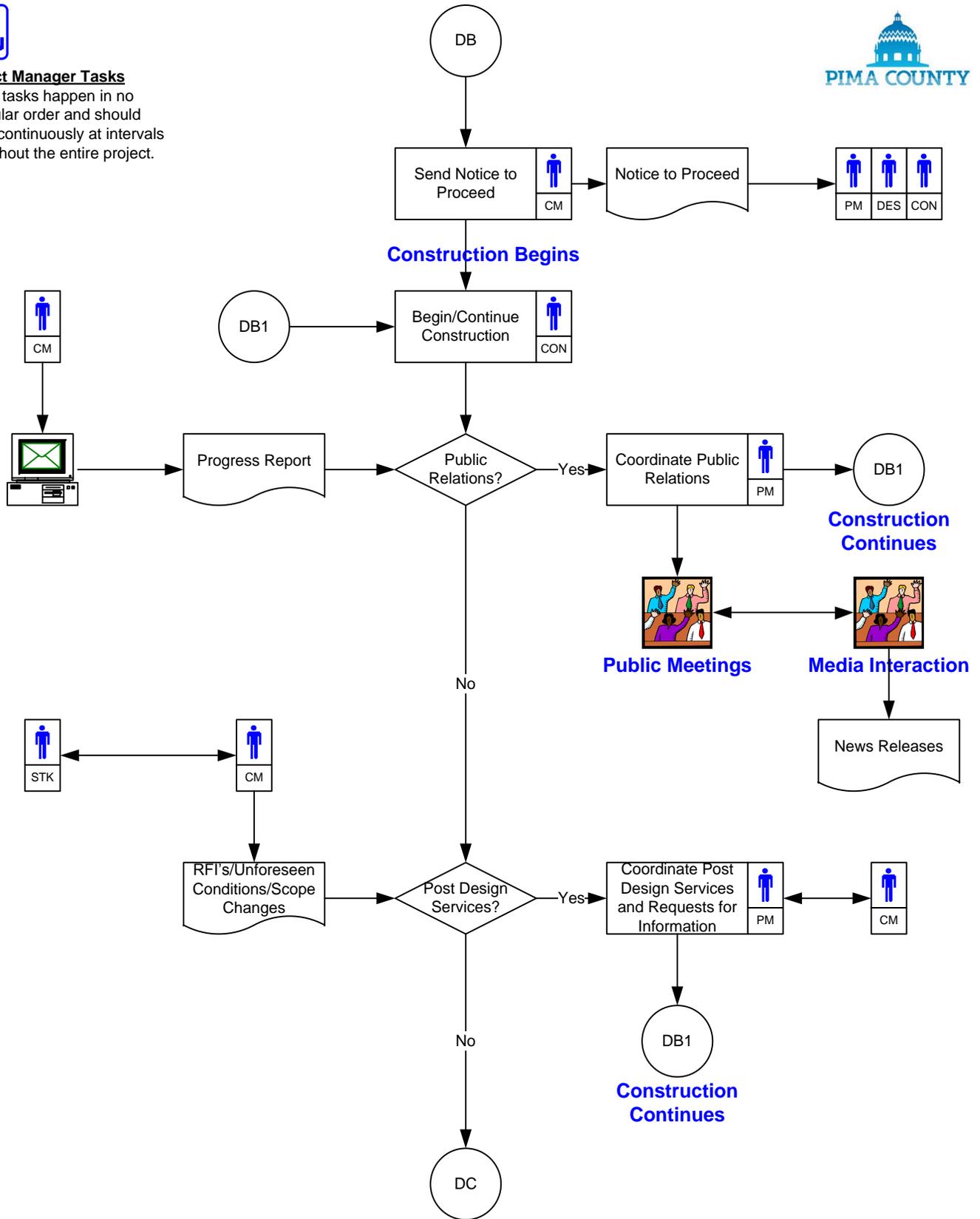
Construction Management Team
 The Construction Management Team is comprised of in-house personnel and/or hired consultants and are required to enforce the terms of the construction contracts.

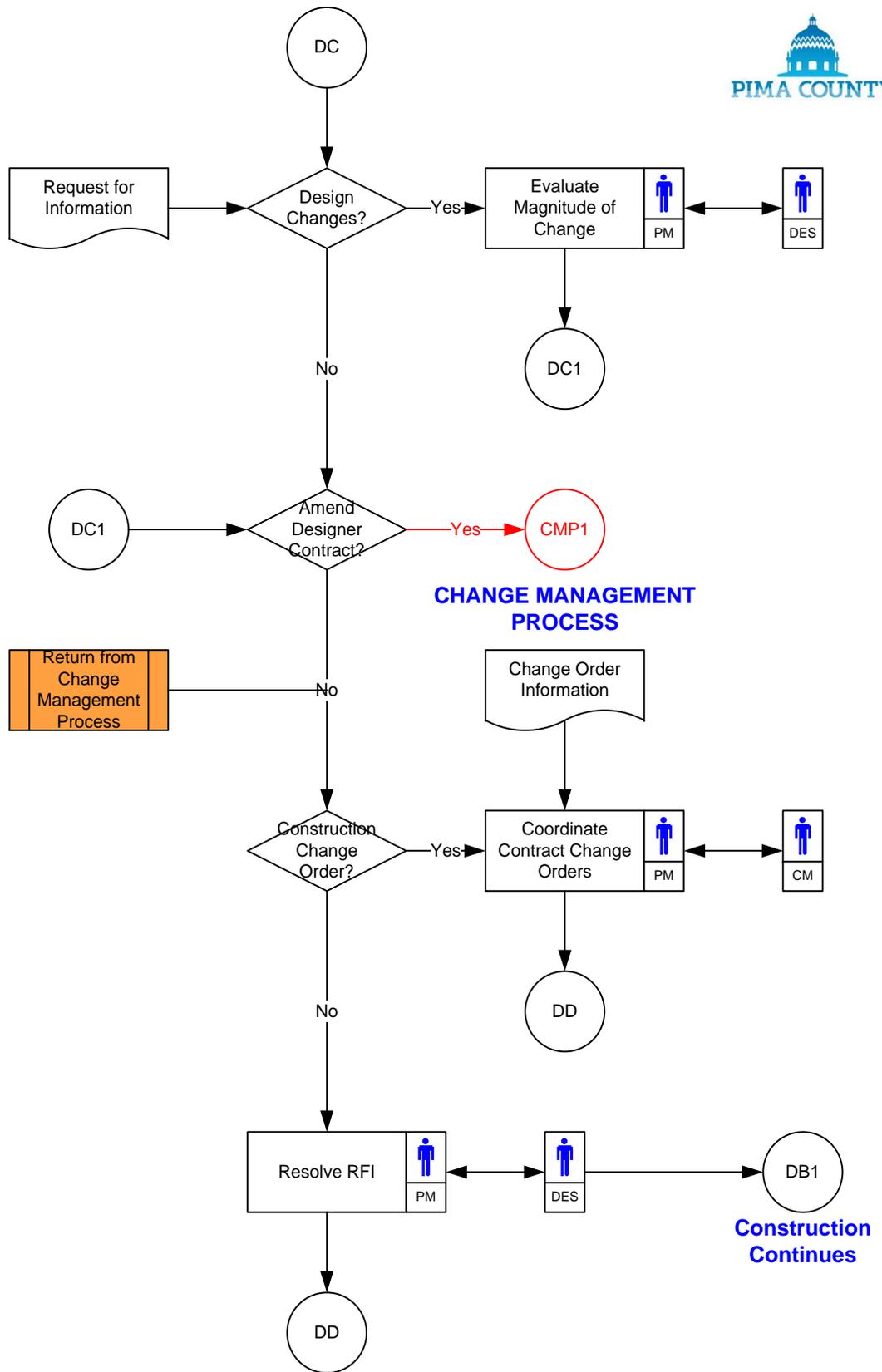


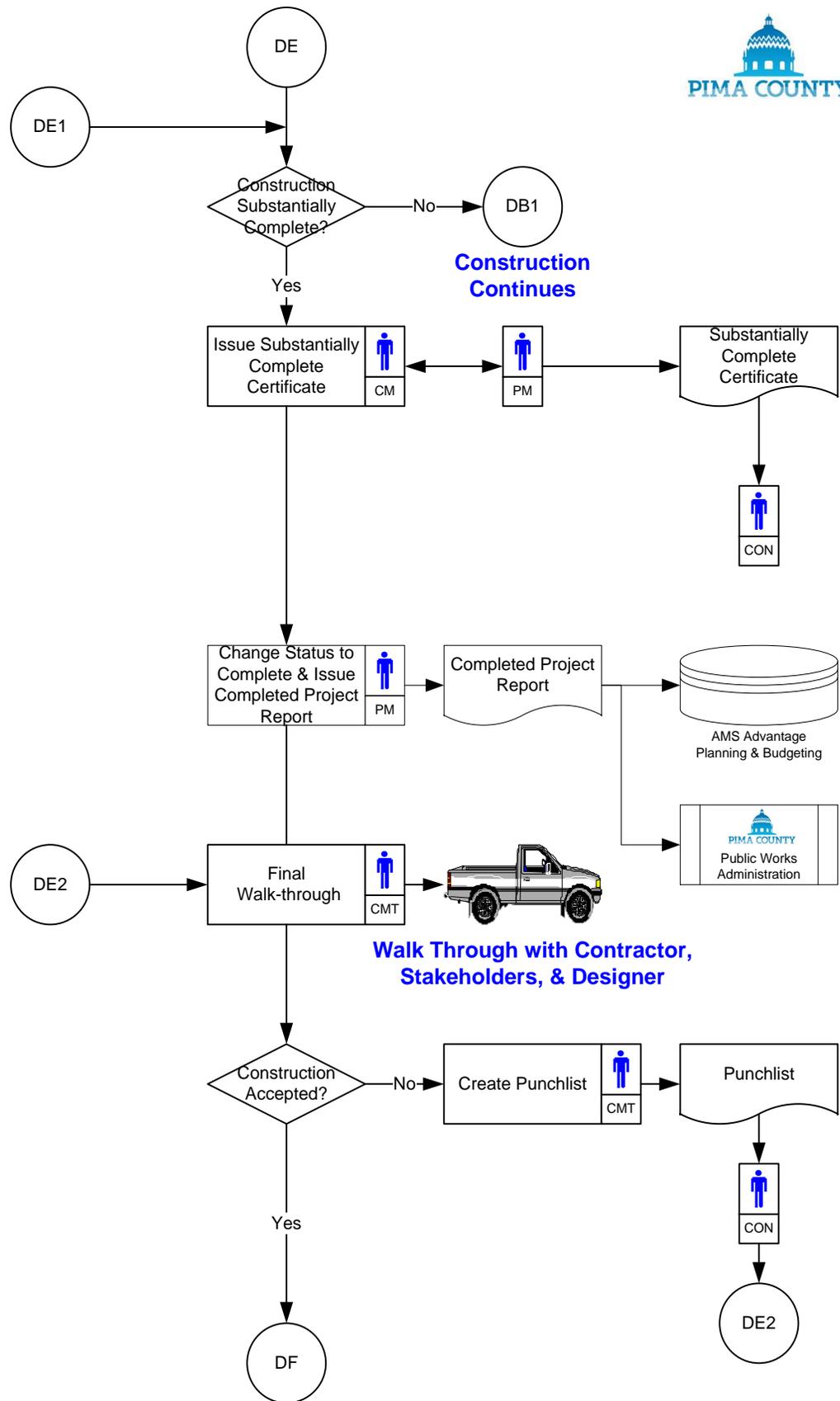


Project Manager Tasks

These tasks happen in no particular order and should occur continuously at intervals throughout the entire project.







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).



Gate Meeting

Calendar 2 weeks prior to Gate Meeting



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



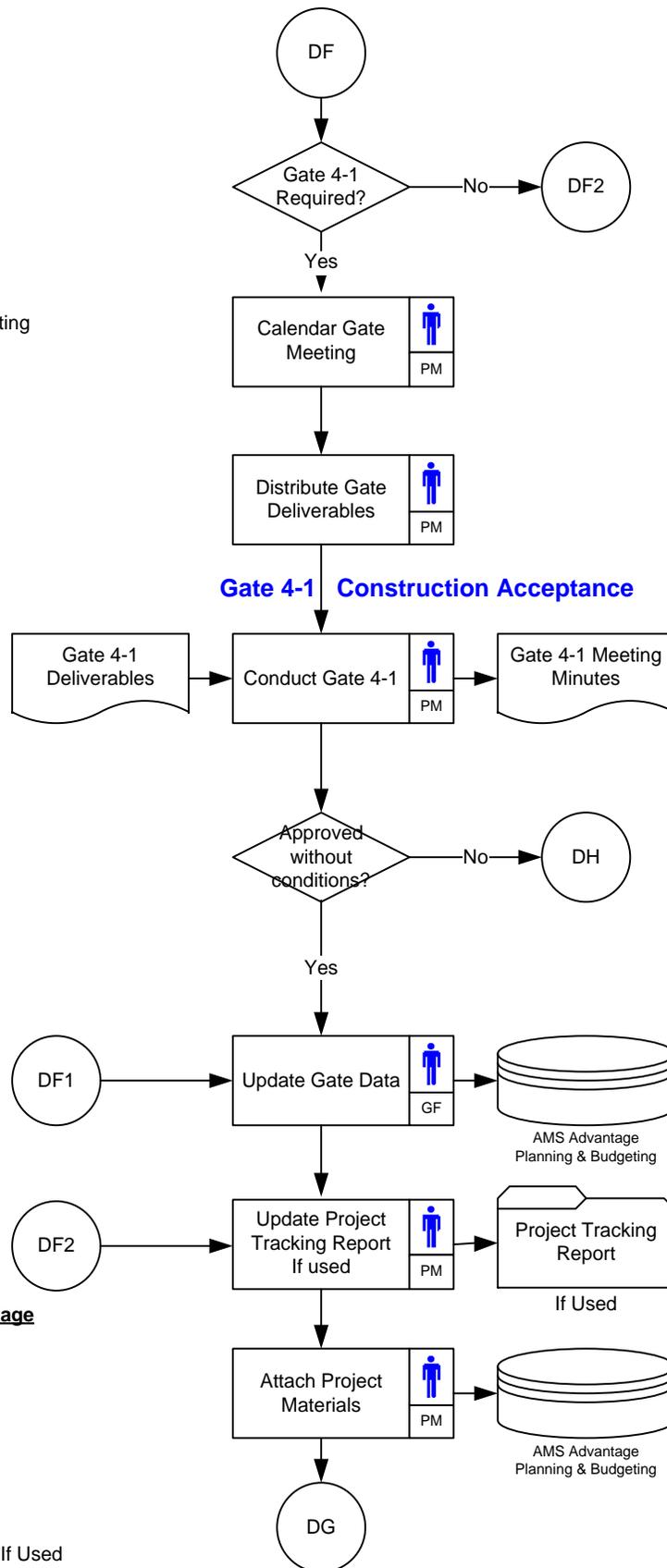
Agenda/Minutes

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



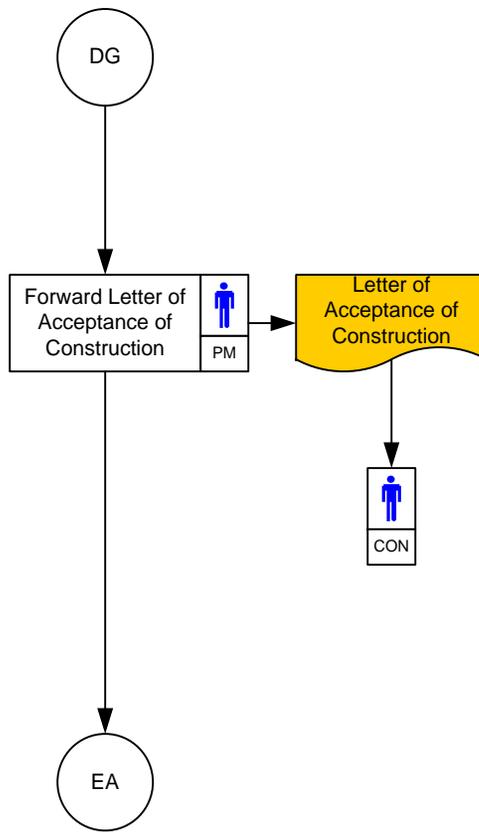
Conditional Approval



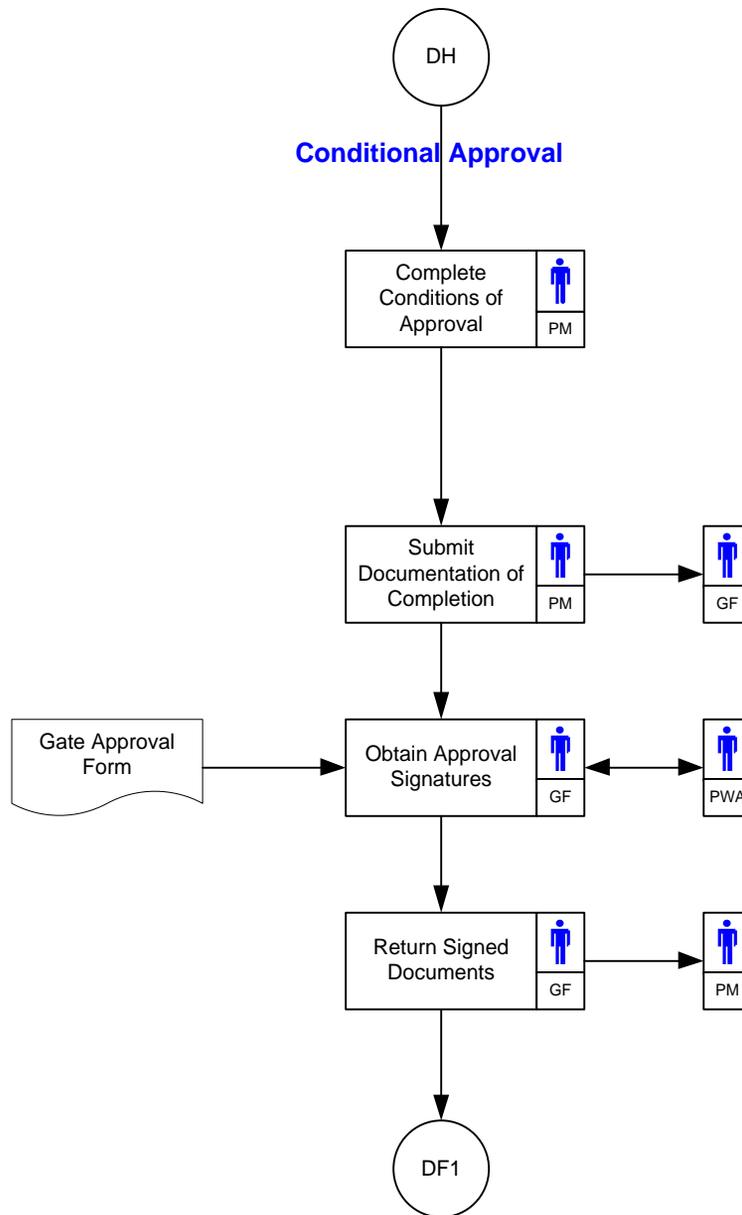
Deliverables
Letter of Acceptance of Construction



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**





Commissioning Process

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



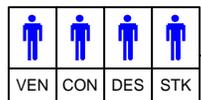
Commissioning Agent

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



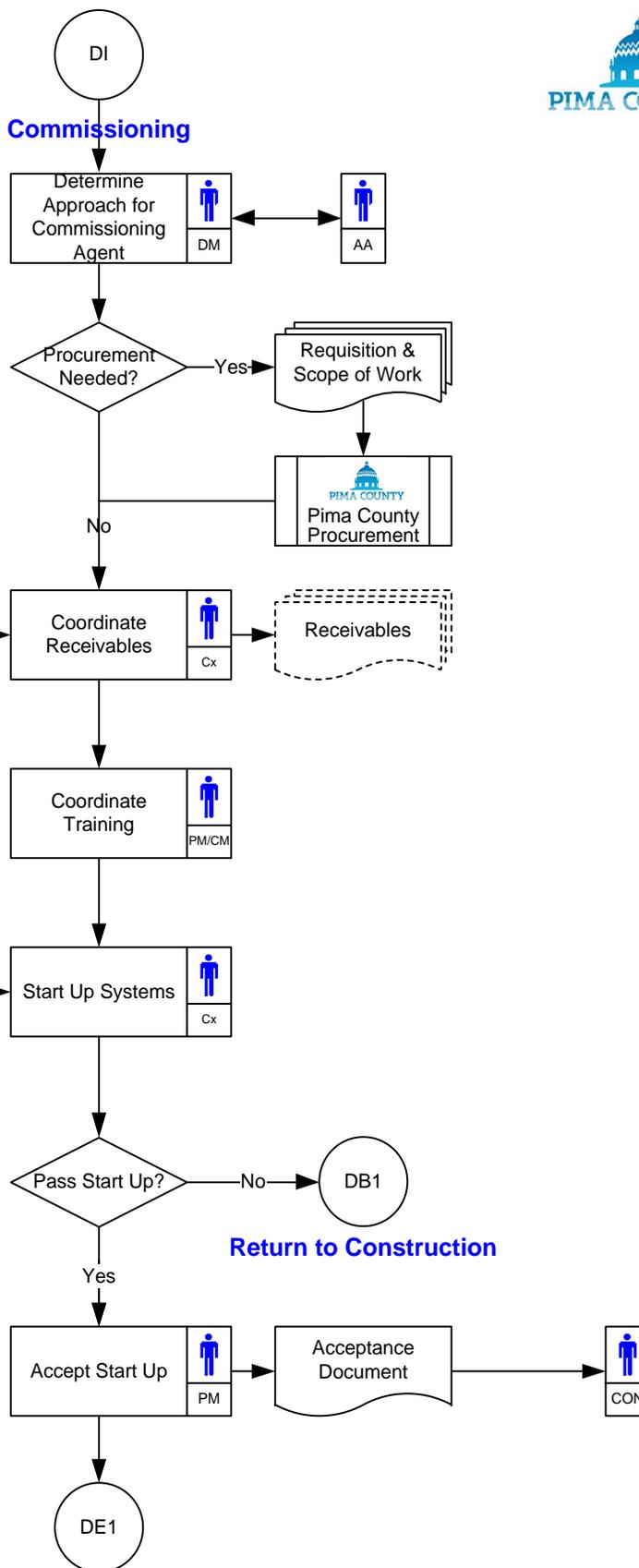
Receivables

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



Start Up Cycle

Includes training at appropriate time



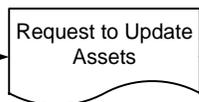
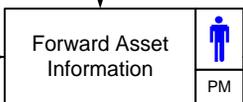
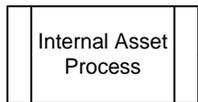
EA

**PHASE V
CLOSE OUT**



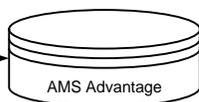
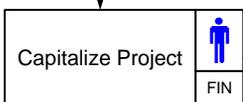
Assets

Regional Wastewater Reclamation records assets at start of purchasing for Owner Supplied Equipment.



Contractor

The contractor in this instance refers to all contractors who have worked on the project including designers, consultants, construction, architects, engineering, landscape, etc.

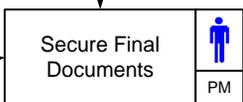
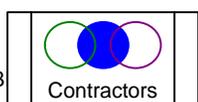


Updated



Contract Documents

- * Architectural & Engineering Documents
- * As-Builts/Redlines/Markups
- * Certification of Payments to DB
- * Commissioning Documents
- * Construction Documents
- * Final Certified Payroll
- * O & M Manuals
- * Warranties

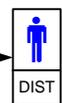
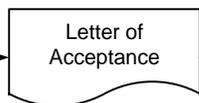
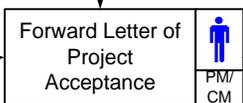


Spare Parts

Spare Parts are put into the Warehouse Inventory within AMS Advantage & Maximo

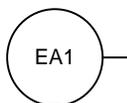


Spare Parts



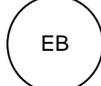
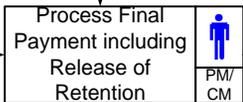
Acceptance of Project

Partial acceptance may occur in prior phases of this process



Distribution List

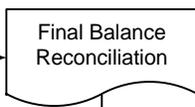
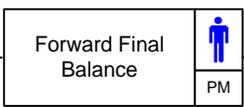
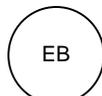
- * Approval Authority/Director
- * Contractors
- * County Finance
- * Funding Authorities





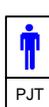
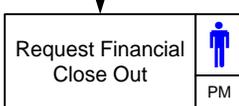
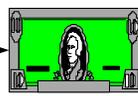
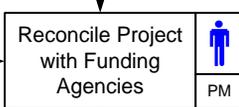
Close Out Financials

- * Center Numbers
- * Project/Subproject
- * Purchase Orders
- * Work Order Tasks
- * Work Orders



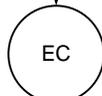
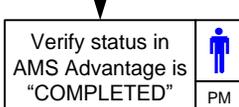
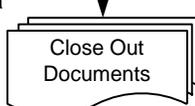
Close Out Documents

- * Cost Management
- * Lessons Learned
- * Performance Evaluations
- * Permits/Regulations
- * Project Charter
- * Project Description
- * Project Comparisons (Baseline vs. Actual)
- * Project Completion Report
- * Project Contacts
- * Project Risks
- * Project Schedule Info
- * Public Art
- * Right of Way
- * Scope Management
- * Warranty Information



Project Tracking Report

The Project Tracking Report is a final summary & should document the course of the entire project.



Deliverables

- * **Project Tracking Report (including)**
 - Asset Management
 - Capitalization of Assets
 - Closed Center Numbers
 - Closed Project
 - Closed Purchase Orders
 - Closed Work Orders
 - Final Contractor/Consultant Evaluations
 - Project Charter
 - Project Tracking Report
 - Records Retention
 - Reporting to Outside Agencies (Audits)
 - Turn Project over to Operations
 - Utility Reimbursement



Gate Meeting

Calendar 2 weeks prior to Gate Meeting



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



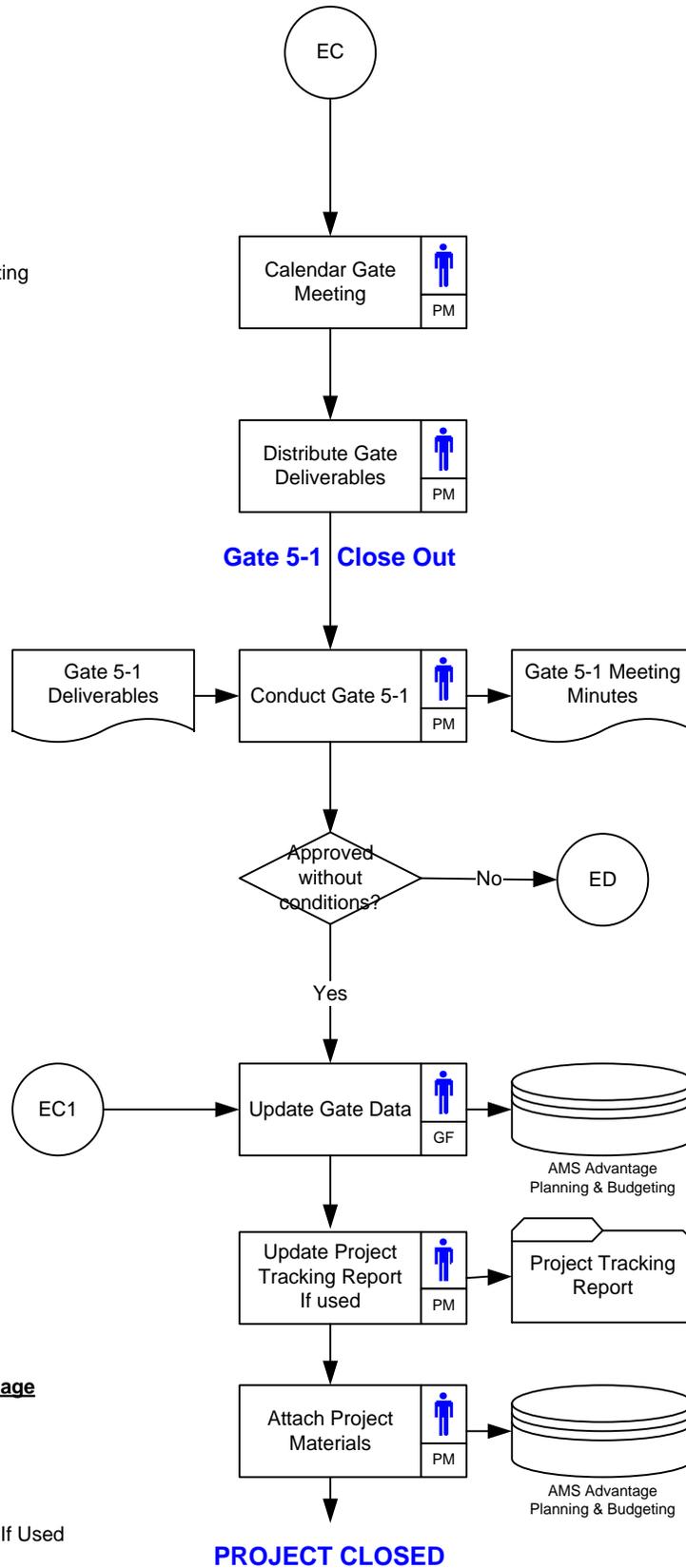
Agenda/Minutes

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



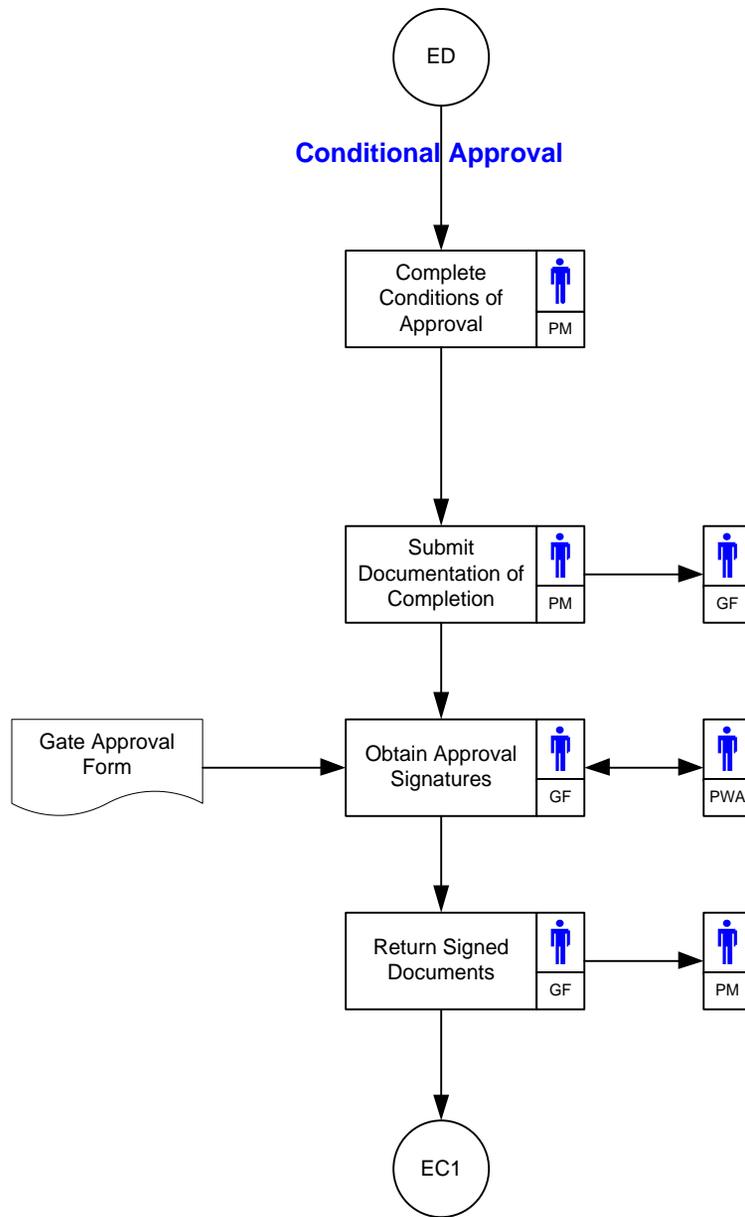
Materials to Attach in AMS Advantage Planning & Budgeting

- 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



Conditional Approval

PROJECT CLOSED





Change Request Meeting:

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



Change Request Form:

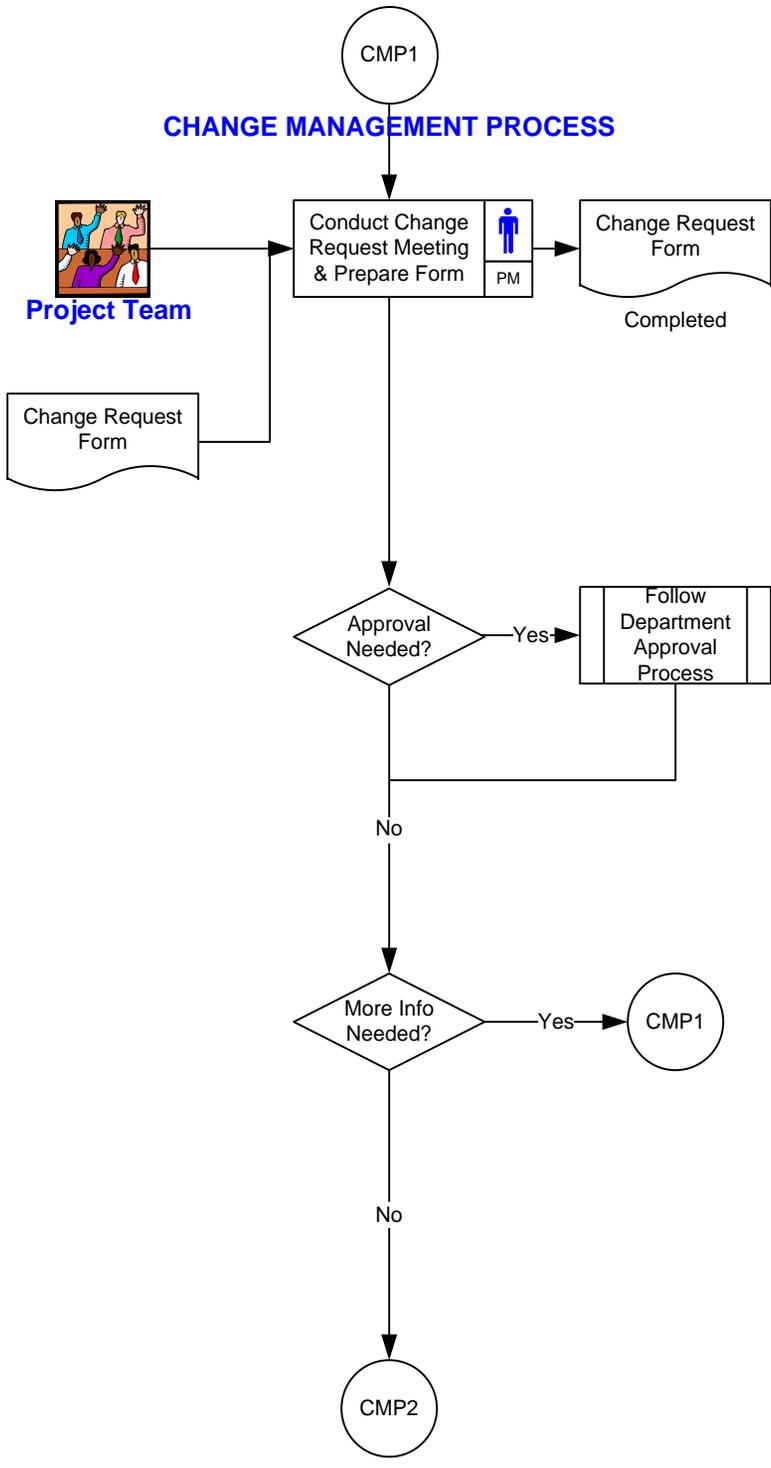
- *Project Information
 - *Change Description
 - *Project Impacts
 - *Change Cause
 - *Effort Required
- (Refer to Exhibits Section of this Manual)



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.

CHANGE MANAGEMENT PROCESS





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



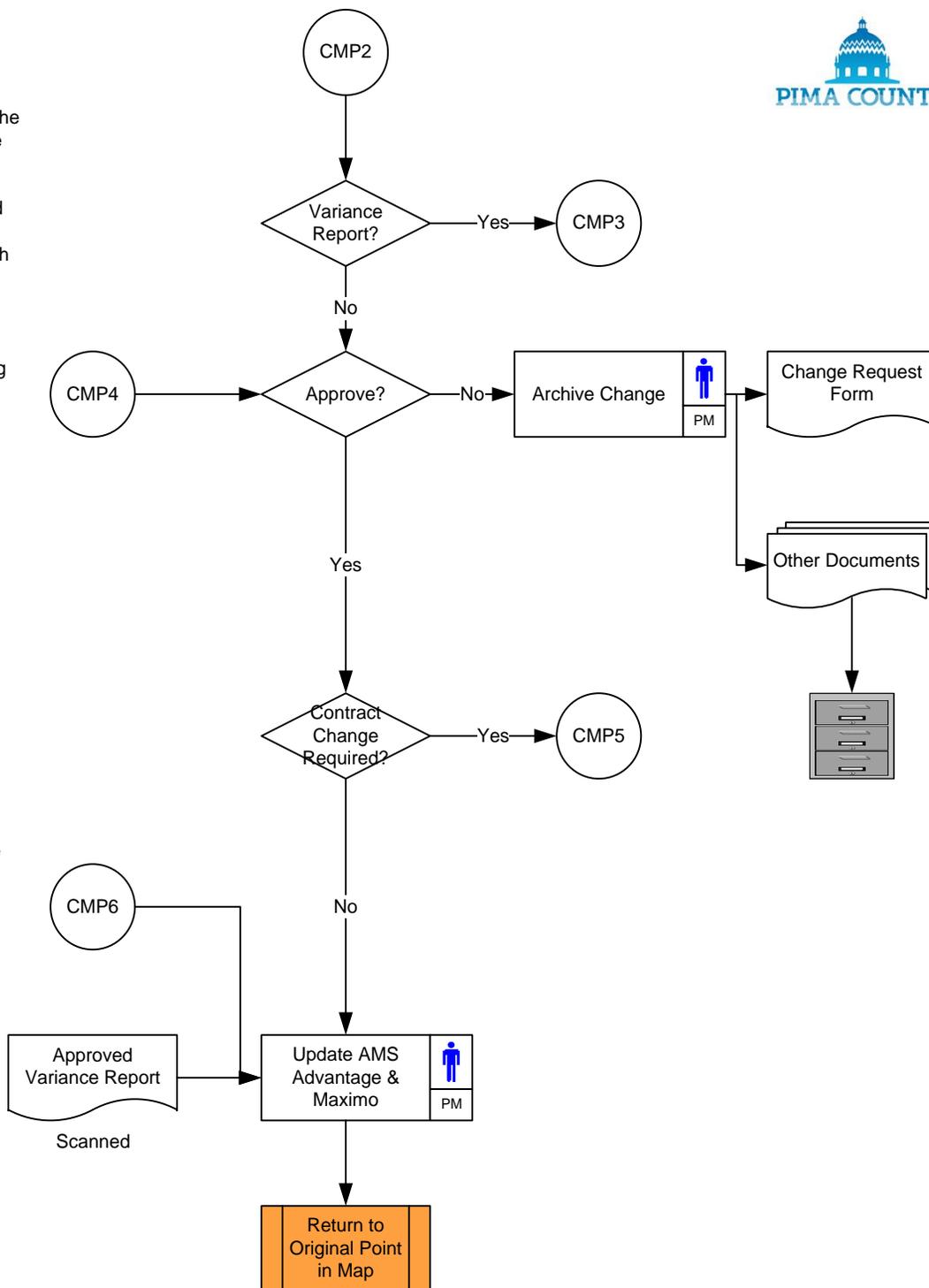
Procurement Process

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

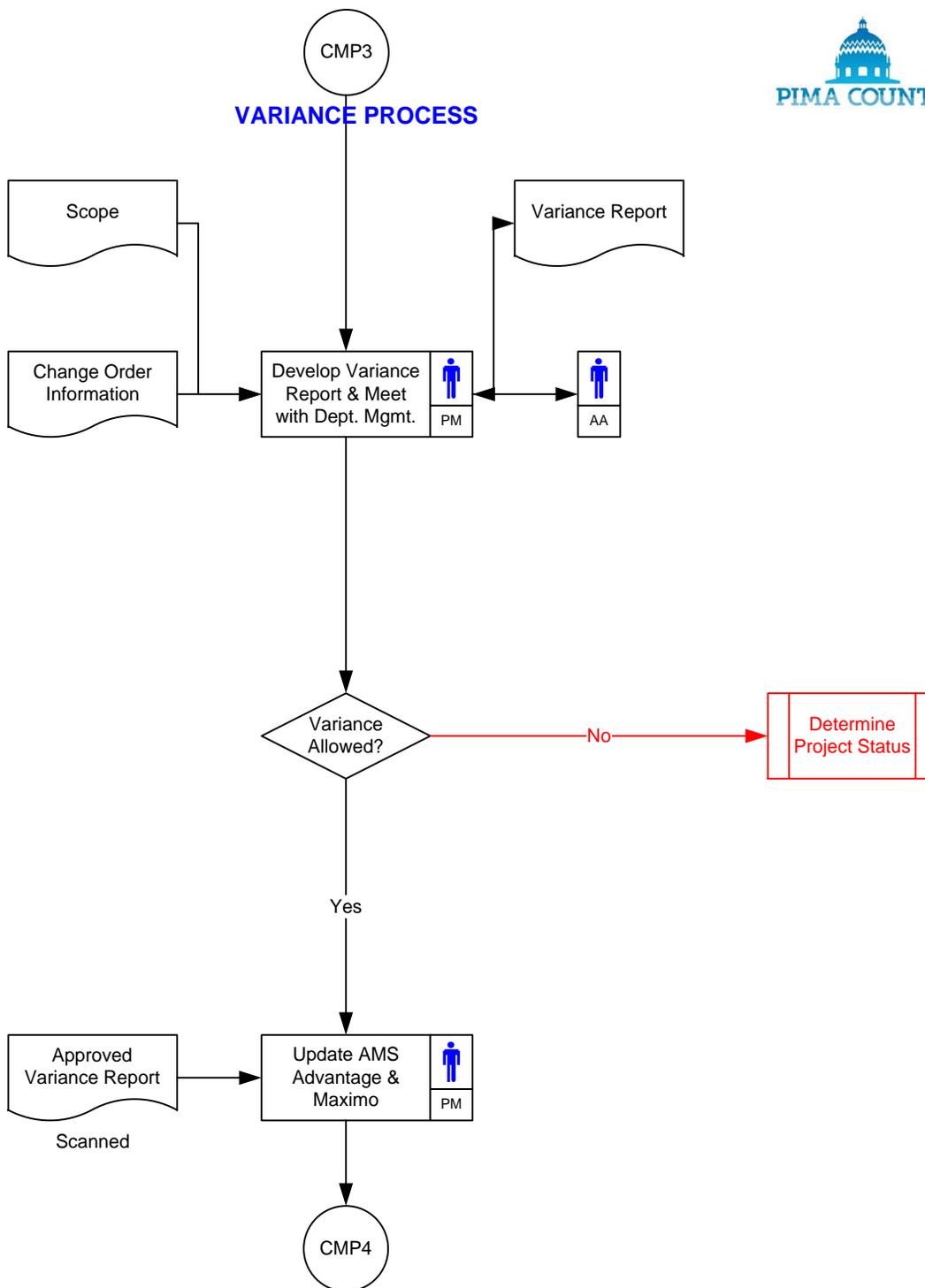


Procurement Process Result

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.



VARIANCE PROCESS



Note

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



Approval Authority

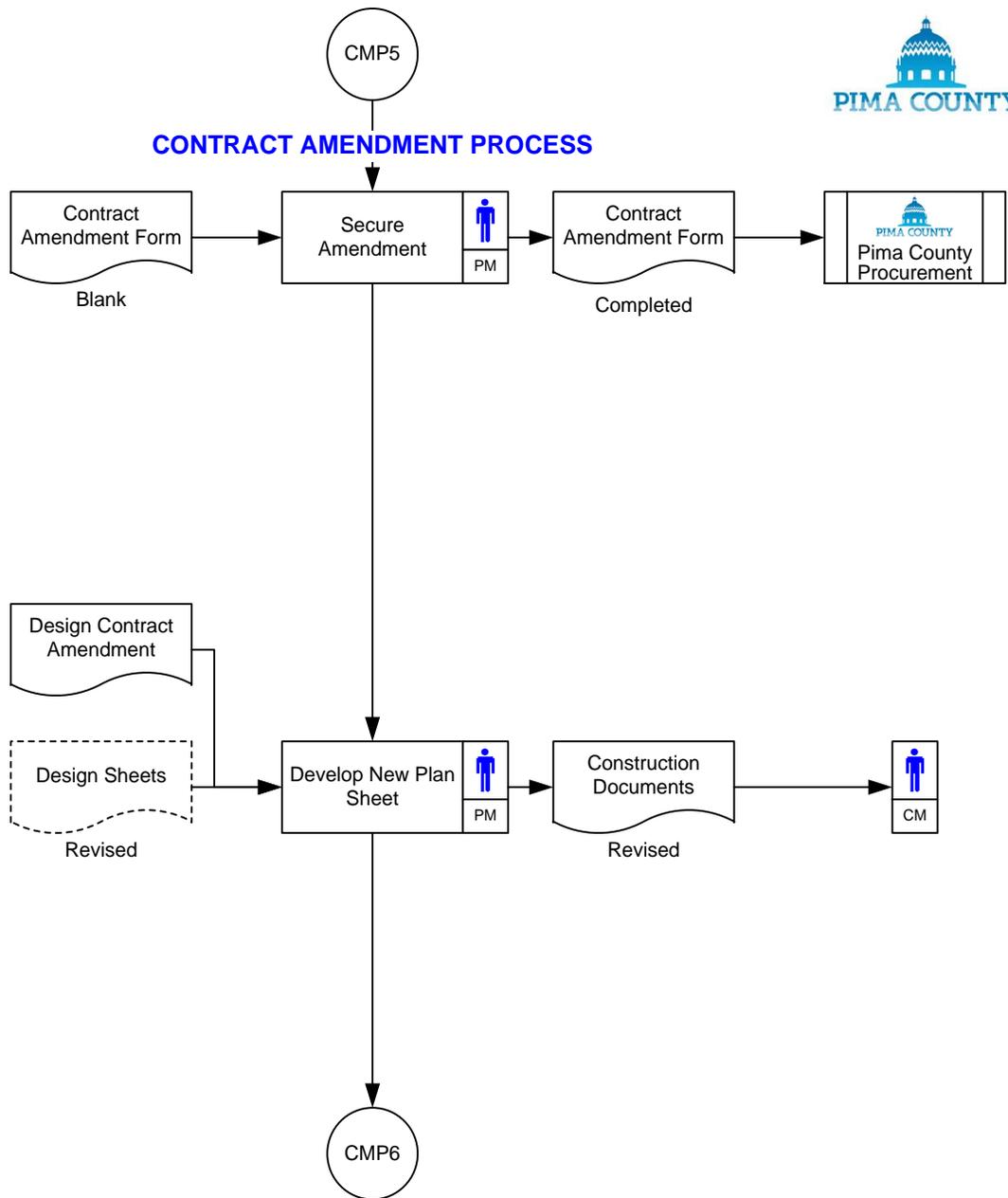
* If the variance exceeds \$50,000, approval is required from the Public Works Administrator. Otherwise Department Director approval is required.



AMS Advantage & Maximo

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

CONTRACT AMENDMENT PROCESS





PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

PART II: THE GATE PROCESS

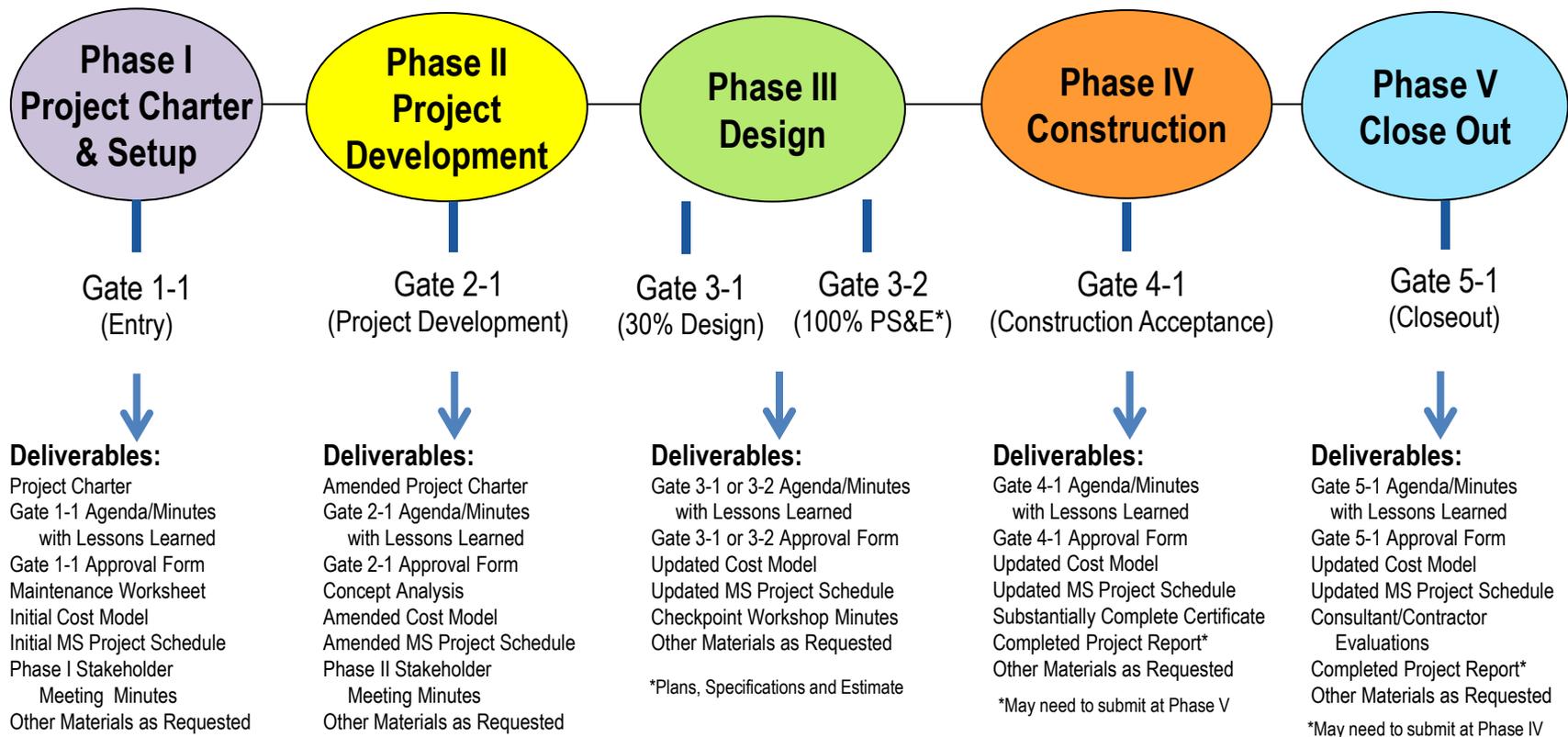
PART II: THE GATE PROCESS

PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL

PART II: THE GATE PROCESS



Interrelationship between the Project Management Process and the Gate Process





Introduction & Concept

Benefit of the Gate Process

- The gate process has proven effective in insuring project staff, 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 development is progressing
- Brings together key project staff, stakeholders and management at project milestones to discuss and resolve issues at the gate meeting before a project moves forward
- Once agreements are reached at a gate meeting and a project moves forward, requests by project staff, 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 – issues are prevented, when possible, or are identified and resolved before they harm anyone or 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; no one is allowed to “torpedo” a project
- Discussions are focused on fact-based issues; not on personalities
- Understanding is the objective; consensus is not required
- 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 Project Management Manual
- A project manager has the right to schedule more gates than the minimum required for the size and type of project

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 and budget are appropriately managed
 - 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 the project management and gate processes



Objectives for Each Gate

PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL

PART II: THE GATE PROCESS



Gates*

- Gate 1-1 Project Charter & Project Setup
- Gate 2-1 Project Development
- Gate 3-1 30% Design
- Gate 3-2 100% Design
- Gate 4-1 Construction Acceptance
- Gate 5-1 Close Out

*Note: Determination of which gates a project will use is made at Phase I Project Charter & Project Setup. As a project progresses, additional gates can be added.

Gate 1-1 Project Charter & Project Setup

- Establishes joint ownership by staff, 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, and budget are reasonable and achievable and funding sources are available
- Commits necessary resources to achieve scope, schedule and budget
- Initiates plan for managing potential risks to maintaining scope, schedule and budget
- Identifies 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 project approach
- Results in amended Project Charter that clearly defines selected alternative
- Records lessons learned to date
- Achieves the same objectives as Gate 1-1

Gate 3-1 30% Design Stage

- Confirms attendees agreed that current scope, schedule, budget and resources are still reasonable and achievable
- Provides updates on:
 - Management of potential risks to maintaining scope, schedule and/or budget
 - Current estimate or 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 3-2 100% Plans, Specifications & Estimate

- Verifies that project is ready to proceed to procurement
 - ROW & permits are acquired
 - Environmental and cultural clearances are obtained
 - Bid documents (plans, specifications and estimated) are accepted
 - All funding is secured and available
- Confirms attendees agreed that current scope, schedule, budget and resources are still reasonable and achievable
- Updates management of potential risks to maintaining scope, schedule & budget
- Updates polygon showing final area of ground disturbance
- Presents lessons learned to date

Gate 4-1 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
 - Final inspection report completed
 - Record drawings completed
 - Documents are turned over to records storage
 - Facility maps completed
 - Project Tracking Report completed
 - 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 processes based on lessons learned during the delivery of this project



Guidance for Preparing and Conducting a Gate Meeting

Role of the Project Manager

- Insures that gate deliverables are completed as identified in the process maps found in Part I: The Project Management Process of this Project Management 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 deliverables 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 stakeholders
- Posts gate deliverables 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 Attendee

- Represents organization and has the authority to make decisions on behalf of their organization
- Reviews gate deliverables in advance and comes to the meeting informed
- Concurs with progress or raises issues
- Acts on any follow-up issues requested by the Gate Facilitator or Project Manager

PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL

PART II: THE GATE PROCESS



Example of Gate Attendees*

Exit Gate Contact by Department	
County Administration	SUS
Joanne Homer	Linda Mayro
Nanette Slusser	Loy Neff
	Roger Anyon
DOT	PMO
Ana Olivares	Nancy Cole
Karla Reeve Wise	Sandi Garrick
Robert Johnson	
Sal Caccavale	
Tom Kilargis	RP
Rick Ellis	Neil Konigsberg
Bill (William) Strickler	Rex Dutcher
Annabelle Valenzuela	
	RFCD
FM	Bill Zimmerman
John F. Duke	Larry Robison
Lisa Josker	
Reid Spaulding	RWRD
	Carol Johnson
NRPR	Mary Hamilton
Chris Cawein	Michael Kostrzewski
George Kuck	Merva Douglas-Bridges
	Adam Bliven
	Souren Naradikian

*Go to the Project Management Manual website for current list

Typical Meeting Structure

- Using the Project Management Manual Agenda/Meeting 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 and/or budget
 - 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



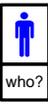
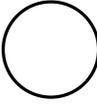
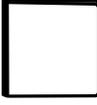
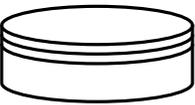
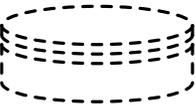
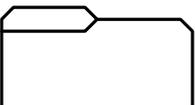
PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

PART III: SYMBOLS, DEFINITIONS & ACRONYMS



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

SYMBOLS

 Symbol Key	 Description	 Symbol Key	 Description
	<p>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.</p>		<p>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.</p>
	<p>Process Task - This describes "What" takes place within the process. Keep description within the box brief but understandable to qualified personnel. <u>Do not</u> change size of box to fit text, instead change text size or add notes to the side.</p>		<p>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.</p>
	<p>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.</p>		<p>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.</p>
	<p>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".</p>		<p>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.</p>
	<p>Multi-Document - Used to denote a collection of different pieces of hard copy documentation such as reports, specifications, plans, etc.</p>		<p>External Book / Log - Represents external supplier or customer information, training manual, OEM maintenance manual, etc.</p>
	<p>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.</p>		<p>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.</p>
	<p>External Document - Dotted outline denotes an external document. Supplied from a third party activity to the process, i.e. external customer or supplier.</p>		<p>Data Access - Keyboard / Keypad entry or access to a data file, spreadsheet, application or other forms of electronic information.</p>
	<p>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.</p>		<p>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.</p>
	<p>External Data - This can be a database, data files, programs, spread sheets, etc accessed directly from an external customer or supplier.</p>		<p>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.</p>
	<p>File or Folder Storage - Depository for hard copy information. Good practice to list all contents.</p>		<p>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.</p>
<p>Ref: 2.05.P01.E05 Rev: 07</p>	<p align="center">Symbols Key - Main Flow</p>		<p>Owner: B.E.M.</p>

 Symbol Key  Description	 Symbol Key  Description	
 <p>Visual Check - Included when a task has an associated visual check or review. Good practice to list what is being checked (less formal check).</p>	 <p>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.</p>	
 <p>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.</p>	 <p>Disk Storage - Removable data storage medium on disk. Give a meaningful name to identify. Use detailed notes to clarify.</p>	
 <p>Testing - Included when task has an associated test. Specifics on how something is tested can be found in the Test Matrix.</p>	 <p>Calendar / Date - Included when a date is important to the process. Answers the "when" question in the process.</p>	
 <p>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.</p>	 <p>Time - Included when a specific time of a task is important to the process. Answers the "when" question on the process.</p>	
 <p>Stamp - Used on hard copy documents to indicate date received, date processed, and other hand written notations as required.</p>	 <p>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.</p>	
 <p>Training - Included when training or training material is available for an associated task. Additional details can be found in the Training Matrix if used.</p>	 <p>Travel - Used to signify a person or team traveling offsite to perform some task. For example, when an inspector drives to an inspection site.</p>	
 <p>Information - This indicates that additional information is available. It is good practice to list the details including any applicable reference numbers.</p>	 <p>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.</p>	
 <p>"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).</p>	 <p>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.</p>	
 <p>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.</p>	 <p>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.</p>	
 <p>Process Metric - Key process metric. How the process is measured for effectiveness. Speed, quality and price are typical parameters. These are leading indicators.</p>	 <p>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.</p>	
Ref: 2.05.P01.E05 Rev: 07	Symbols Key - Detailing	Owner: B.E.M.



PIMA COUNTY PROJECT MANAGEMENT AND 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

PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL

DEFINITIONS AND ACRONYMS



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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PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

PART IV: EXHIBITS

PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL

LIST OF EXHIBITS



DESCRIPTION OF NEED

GUIDANCE FOR ESTABLISHING A STAKEHOLDER LIST

AGENDA/MINUTES FORM

GUIDANCE FOR PREPARING A PROJECT CHARTER (*This exhibit is under development*)

PROJECT CHARTER FORMAT

QUALIFYING CRITERIA FOR GATES

CHECKLISTS FOR PROJECT SETUP AND GATE DELIVERABLES (*This exhibit is under development*)

GATE APPROVAL FORM

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

GUIDANCE ON DESIGN REVIEW PROCESS (*This exhibit is under development*)

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



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

DESCRIPTION OF NEED



Project Name:			
Project Location:			
Prepared By:		Phone #:	

Background:

Need Statement:

Justification:

Attach a Map of the Area

Estimated Total Cost: \$ _____

APPROVAL FOR PROCEEDING WITH PROJECT CHARTER

Director Signature

Date



PIMA COUNTY PROJECT MANAGEMENT AND 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.



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

AGENDA/MINUTES FORM



<h1>Agenda/Minutes</h1>	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 Number:		
Project Name:		
		Has GPS Polygon changed from Project Charter? Yes <input type="checkbox"/> or No <input type="checkbox"/>

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

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

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

Update of risks, assumptions, constraints and/or scope elements contained in Project Charter as well as any that are new

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
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:	

**PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL
AGENDA/MINUTES**



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
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:	

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:



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

GUIDANCE FOR PREPARING A PROJECT CHARTER

(This exhibit is under development)



**PIMA COUNTY PROJECT MANAGEMENT AND
GATE PROCESS MANUAL**

PROJECT CHARTER FORMAT



PIMA COUNTY PROJECT CHARTER

**[Department]
[Project Name]
Project ID:**

Prepared by:

Approval of the Project Charter indicates an understanding of the purpose and content as described in this document. By signing this document, each individual agrees work should be initiated on this project and necessary resources should be committed as described herein.

Approver Name	Title	Signature	Date

TABLE OF CONTENTS

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- Need Statement
- Justification
- Map of the Area with Polygon

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- Constraints and Impacts Unique to Each Alternative
- Assessment of Risks to Achieving Scope, Schedule and/or Budget as Presented in this Project Charter
- Estimated Benefits of Each Alternative

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- Forecast by Phase and Fiscal Year
- Funding Sources

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Delivery Method

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Project Cost and Funding Sources

Risks to Achieving Charter's Scope, Schedule and/or Cost

Estimated Benefits of Project

OVERVIEW

Background

Need Statement

Justification

Map of the Area with Polygon

(Insert Map)



STAKEHOLDERS

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

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

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

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

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

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

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



ALTERNATIVES

Alternative 1

Alternative 2

Alternative 3 (*Possibly "Do Nothing" – May or May Not Apply*)



ALTERNATIVES ANALYSIS

Assumptions and Implications for Each Alternative

Alternative 1: <i>(Insert Name)</i>	
Assumption:	
Implication:	
Assumption:	
Implication:	
Assumption:	
Implication:	

Alternative 2: <i>(Insert Name)</i>	
Assumption:	
Implication:	
Assumption:	
Implication:	
Assumption:	
Implication:	

Alternative 3: <i>(Insert Name)</i>	
Assumption:	
Implication:	
Assumption:	
Implication:	



Constraints and Impacts for Unique to Each Alternative

Alternative 1: <i>(Insert Name)</i>	
Constraint:	
Impacts:	
Constraint:	
Impacts:	
Constraint:	
Impacts:	

Alternative 2: <i>(Insert Name)</i>	
Constraint:	
Impacts:	
Constraint:	
Impacts:	
Constraint:	
Impacts:	

Alternative 3: <i>(Insert Name)</i>	
Constraint:	
Impacts:	
Constraint:	
Impacts:	



Assessment of Risks to Achieving Scope, Schedule and/or Budget as Presented in this Project Charter

1. [RISK – name or description]							
Alternative: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>							
Probability:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input type="checkbox"/>	Absorb <input type="checkbox"/>	Avoid <input type="checkbox"/>	Deflect <input type="checkbox"/>			
Mitigation Strategy:							

2. [RISK – name or description]							
Alternative: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>							
Probability:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input type="checkbox"/>	Absorb <input type="checkbox"/>	Avoid <input type="checkbox"/>	Deflect <input type="checkbox"/>			
Mitigation Strategy:							

3. [RISK – name or description]							
Alternative: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>							
Probability:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input type="checkbox"/>	Absorb <input type="checkbox"/>	Avoid <input type="checkbox"/>	Deflect <input type="checkbox"/>			
Mitigation Strategy:							

4. [RISK – name or description]							
Alternative: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>							
Probability:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input type="checkbox"/>	Absorb <input type="checkbox"/>	Avoid <input type="checkbox"/>	Deflect <input type="checkbox"/>			
Mitigation Strategy:							

5. [RISK – name or description]							
Alternative: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>							
Probability:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input type="checkbox"/>	Absorb <input type="checkbox"/>	Avoid <input type="checkbox"/>	Deflect <input type="checkbox"/>			
Mitigation Strategy:							



Estimated Benefits of Each Alternative

Alternative 1	Estimated Level of Benefit			
Protects Health, Safety & Property	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Increases Capacity	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Meets Regulatory/Mandated Requirement	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Promotes Economic Development	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Makes Use of Non-County Funding	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Reduces Long-Term Costs to the County	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Rehabilitates/Preserves/Enhances Existing Asset	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Enhances Environment and/or Cultural Resource	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Improves System Continuity	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Meets Master/Long-Range Plan	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Is Regionally Significant	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>

Alternative 2	Estimated Level of Benefit			
Protects Health, Safety & Property	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Increases Capacity	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Meets Regulatory/Mandated Requirement	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Promotes Economic Development	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Makes Use of Non-County Funding	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Reduces Long-Term Costs to the County	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Rehabilitates/Preserves/Enhances Existing Asset	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Enhances Environment and/or Cultural Resource	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Improves System Continuity	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Meets Master/Long-Range Plan	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Is Regionally Significant	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>

Alternative 3	Estimated Level of Benefit			
Protects Health, Safety & Property	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Increases Capacity	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Meets Regulatory/Mandated Requirement	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Promotes Economic Development	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Makes Use of Non-County Funding	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Reduces Long-Term Costs to the County	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Rehabilitates/Preserves/Enhances Existing Asset	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Enhances Environment and/or Cultural Resource	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Improves System Continuity	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Meets Master/Long-Range Plan	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>
Is Regionally Significant	High <input type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	None <input type="checkbox"/>



RECOMMENDATION(S)

Scope Statement

PROPOSED DELIVERY METHOD AND JUSTIFICATION



MAJOR TASKS AND MILESTONES

Task 1
Approach:
Deliverables:

Task 2
Approach:
Deliverables:

Task 3
Approach:
Deliverables:

Task 5
Approach:
Deliverables:

Task 6
Approach:
Deliverables:



PRELIMINARY FINANCIAL ASSESSMENT

Forecast by Phase and Fiscal Year

	FY	FY	FY	FY	FY	TOTAL
Planning	0	0	0	0	0	0
Design	0	0	0	0	0	0
Right-of-Way	0	0	0	0	0	0
Utilities	0	0	0	0	0	0
Construction	0	0	0	0	0	0
Art Work	0	0	0	0	0	0
Contingency	0	0	0	0	0	0
Total	0	0	0	0	0	0

Funding Sources

Funding Summary			
Funding Sources	Amount	% of Total	Source
A.		%	<i>project number</i>
B.		%	<i>project number</i>
C.		%	<i>project number</i>
D.		%	<i>project number</i>
TOTAL		%	

APPENDICES

Append Cost Model and MS Project Schedule



PIMA COUNTY PROJECT MANAGEMENT AND 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 capital improvement projects must have an approved Project Charter that is: 1) signed by the Department Director, at a minimum, if the total project cost is less than \$500,000 or 2) signed by the Department Director and Public Works Administration, at a minimum, if the total project cost is equal to or greater than \$500,000.

II. Qualifying Criteria for Gates

- A. All capital improvement projects must hold a Gate 6-1 (Closeout) meeting and obtain approval to close the project, even if it is a department-only process and meeting.
- B. All capital improvement projects equal to or greater than \$3 million, unless listed as exempt in II.D below, require approval through all gates; although, the Gate Committee may grant a “pass” for the next gate.
- C. All capital improvement projects equal to or greater than \$500,000 and up to \$3 million, unless listed as exempt in II.D below, require Gate 1-1 (Entry) approval as well as Gate 3-2 (100% PS&E) approval and Gate 4-1 (Substantially Complete) approval, or as determined by the Gate Committee at Gate 1-1 (Entry).
- D. The types of capital improvement projects listed below are exempt from Gate 1-1 (Entry) through Gate 5-1 (Construction Acceptance), unless: 1) the department elects for a project hold some or all of the gates; 2) Public Works Administration requires a project to hold some or all of the gates, and/or 3) a project is funded partially or fully with federal funds, in which case II.C, above, applies.
 - ✓ Capital improvement project with a total project cost of less than \$500,000
 - ✓ Capital improvement project funded by Pima County but managed by other jurisdictions (IGA’s)
 - ✓ Projects not considered capital improvements
 - ✓ Tenant improvement projects not considered capital improvement projects
 - ✓ Planning studies that do not anticipate proceeding to design and/or construction
 - ✓ On-hold projects
 - ✓ Floodprone land acquisitions
 - ✓ Property acquisitions only (no engineering or construction)
 - ✓ SCADA (Supervisory Control and Data Acquisition) projects
 - ✓ Major (funding) programs
 - ✓ Equipment upgrades and replacements
 - ✓ Conveyance rehabilitation projects less than \$1 million
 - ✓ Pavement preservation projects



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

CHECKLISTS FOR PROJECT SETUP AND GATE DELIVERABLES

(This section is under development)



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

GATE APPROVAL FORM

**PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL
GATE APPROVAL FORM**



Project Name: _____

Project ID: _____

Project Manager: _____

Meeting Date: _____

Gate Number: _____

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: _____



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

PROJECT TRACKING REPORT

(This exhibit is under development)



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

GUIDANCE ON DESIGN REVIEW PROCESS

(This exhibit is under development)



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

MISCELLANEOUS EXHIBITS



PROJECT CHANGE REQUEST FORM AND VARIANCE REPORT

Pima County Public Works



Project Name:		Project #:	
Project Information			
Change #:		Date:	Department:
Project Manager:		Department Sponsor	
Change Initiation			
Initiator:		Functional Area:	
<i>Description of Requested Change and Alternatives</i>			
<i>Project Impacts if Change is APPROVED</i>		<i>Project Impacts if Change is DENIED</i>	
Cause of Change Request			
<input type="checkbox"/> Owner Requested Changes <input type="checkbox"/> Design Document Changes <input type="checkbox"/> Unforeseen/Changed Conditions <input type="checkbox"/> RF1 <input type="checkbox"/> Other		<i>Description/Comments (be specific)</i>	
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 <input type="checkbox"/> Yes <input type="checkbox"/> No			
Authorizations			
<i>Name</i>	<i>Title</i>	<i>Date</i>	<i>Yes</i> <i>Conditional</i> <i>No</i>
			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Notes, Conditions and/or Reasons for Denial			

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 EEnvironmental 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



PIMA COUNTY PROJECT MANAGEMENT AND GATE PROCESS MANUAL

LINKS TO RELATED WEBSITES

(This section is under development)