

Closeout and Turnover - Project Critique

Complete form by checking the applicable box. As this checklist is comprehensive it should not be expected to follow your specific contractual obligations. It is suggested that you review this checklist against your contract to verify that all aspects are considered. There are blanks at the end of the checklist to add items from that review. If the answer to any question is "NO," there should be an action item registered for follow-up.

Date:

Reviewer:

Question	Yes	No	N/A	Action Required
Did any of the holds put on drawings affect the cost or schedule of construction?	☐	☐	☐	
Did joint ventures experience effective & proper participation?	☐	☐	☐	
Did project kickoff communication regarding scope, budget, schedule, & contract set a good foundation for the project as it moved ahead?	☐	☐	☐	
Did technology work?	☐	☐	☐	
Did the contractor have an inventory of physical property belonging to the owner?	☐	☐	☐	
Did the design effort adhere to the written scope of work?	☐	☐	☐	
Did the design effort, fully support the project procurement plan?	☐	☐	☐	
Did the final project costs fall within the parameters of the original estimate?	☐	☐	☐	
Did the owner fully participate in the scheduled design reviews?	☐	☐	☐	
Did the owner have timely decision-making?	☐	☐	☐	
Did the owner have timely schedule reviews?	☐	☐	☐	
Did the owner make effective decisions and stay with them?	☐	☐	☐	
Did the owner make timely decisions?	☐	☐	☐	
Did the owner provide the right support level for the project?	☐	☐	☐	
Did the owner provide the technical details of their technology to support the overall design effort?	☐	☐	☐	
Did the owner provide timely & positive support?	☐	☐	☐	
Did the owner represent a unified direction?	☐	☐	☐	
Did the project benefit from the continuity of personnel?	☐	☐	☐	
Did the project utilize an owner survey program?	☐	☐	☐	
If the owner was a joint venture, was there good participation with all partners?	☐	☐	☐	
If the project used a website for communication, was it effective?	☐	☐	☐	
Was a complete Life Safety Analysis completed & integrated into the design?	☐	☐	☐	
Was a constructability program implemented on the project?	☐	☐	☐	
Was a formal drawing/specification quality review effectively used on the project?	☐	☐	☐	
Was a value-engineering program implemented on the project?	☐	☐	☐	
Was administrative support staff adequate?	☐	☐	☐	
Was all work adequately documented?	☐	☐	☐	
Was essential data complete?	☐	☐	☐	
Was BIM effectively used on the project?	☐	☐	☐	

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Was change management handled constructively?	☐	☐	☐	
Was communication effective?	☐	☐	☐	
Was communication of project status adequate for proactive decision making?	☐	☐	☐	
Was confidential information protected adequately throughout the project?	☐	☐	☐	
Was corrective action taken on schedule problems in a timely fashion?	☐	☐	☐	
Was cost tracking & forecasting accurate & timely?	☐	☐	☐	
Was design pressured to meet schedule over quality?	☐	☐	☐	
Was document control accurate & up to date at all times?	☐	☐	☐	
Was modeling effectively used on the project?	☐	☐	☐	
Was project leadership & coordination adequate for the project?	☐	☐	☐	
Was responsiveness to contractor questions & requests for information timely?	☐	☐	☐	
Was scope designed within the budget?	☐	☐	☐	
Was senior management support adequate in all cases?	☐	☐	☐	
Was the basic data adhered to during the project?	☐	☐	☐	
Was the completeness & quality of basic data provided by the owner adequate?	☐	☐	☐	
Was the continuity of owner personnel acceptable?	☐	☐	☐	
Was the design support for construction adequate?	☐	☐	☐	
Was the expertise of subcontractor personnel adequate for project technical needs?	☐	☐	☐	
Was the owner effective with properly communicated project objectives?	☐	☐	☐	
Was the owner manageable?	☐	☐	☐	
Was the owner responsive to the contractor's request for information in a timely fashion?	☐	☐	☐	
Was the owner very clear with the scope of services in the contract documents?	☐	☐	☐	
Was the physical property information provided by the owner adequate?	☐	☐	☐	
Was the project afforded adequate meeting rooms when needed?	☐	☐	☐	
Was the project expectation well understood?	☐	☐	☐	
Was the project scope frozen at the proper time?	☐	☐	☐	
Was the schedule aggressively managed with the information available?	☐	☐	☐	
Was the schedule comprehensively understood?	☐	☐	☐	
Was the scope frozen in a timely fashion?	☐	☐	☐	
Was the security of the building & task force area adequate?	☐	☐	☐	
Was the shop inspection function adequate?	☐	☐	☐	
Was the subcontractors' responsiveness to questions & requests for information thoughtful?	☐	☐	☐	
Was the working relationship between company & owner smooth & businesslike?	☐	☐	☐	
Was there a smooth flow of information between design, construction, & subcontractors?	☐	☐	☐	
Was there adequate administrative staffing for the project?	☐	☐	☐	
Was there an apparent team spirit on the project?	☐	☐	☐	

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Was there proactive & solid communication among the contracting groups?	☐	☐	☐	
Were all deliverables completed & issued per the project schedule?	☐	☐	☐	
Were all disciplines covered with technically competent personnel to design their respective areas?	☐	☐	☐	
Were all E&O issues confined to the rework of drawings or specifications only?	☐	☐	☐	
Were all environmental requirements met with design?	☐	☐	☐	
Were all organization issues dealt with immediately with positive outcomes?	☐	☐	☐	
Were all required deliverables completed & issued on time?	☐	☐	☐	
Were communications with the owner effective?	☐	☐	☐	
Were facility preferences adhered to during the project?	☐	☐	☐	
Were facility/plan preferences communicated in a timely fashion to support design?	☐	☐	☐	
Were internal reviews constructive with good follow-up on all open issues?	☐	☐	☐	
Were internal revisions to design managed through the change management program?	☐	☐	☐	
Were plant preferences communicated to design in a timely fashion?	☐	☐	☐	
Were project flow sheets complete?	☐	☐	☐	
Were project issues communicated and acted on promptly?	☐	☐	☐	
Were project objectives adhered to during the project?	☐	☐	☐	
Were project procedures used consistently throughout the project?	☐	☐	☐	
Were quantity differentials the reason for significant change?	☐	☐	☐	
Were relationships between contractor and design team, smooth & businesslike?	☐	☐	☐	
Were schedules prepared accurately & timely?	☐	☐	☐	
Were the 30%, 60% & 90% drawing reviews effective?	☐	☐	☐	
Were the accepted constructability issues effectively integrated into the design?	☐	☐	☐	
Were the codes & standards adhered to during the project?	☐	☐	☐	
Were the drawing transmittals made on schedule?	☐	☐	☐	
Were the materials expedited adequately?	☐	☐	☐	
Were the project objectives defined & communicated to all parties?	☐	☐	☐	
Were the project office systems (computers, software, hardware, telephones, etc.) adequate to support the project?	☐	☐	☐	
Were travel policies adequate to support the project?	☐	☐	☐	
Were value-engineering issues effectively integrated into the design?	☐	☐	☐	
When cost reductions were suggested, were they acted upon in a timely fashion?	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	

Pre - Commissioning Procedure

Purpose

The pre-commissioning and commissioning are the processes of which the requirements for, validating the function of systems and processes, completion of testing, the conclusion of the supply, construction completion, installation of equipment and systems and the validation of documentation are found to be in compliance with the specifications, design requirements and codes.

Scope

This procedure is used for all of the pre-commissioning and commissioning functions to complete the compliance verifications and testing of areas and systems within the contractor's scope of work.

Pre-commissioning / Commissioning

It is defined as the process by which the project equipment, buildings, utilities, processes, and systems are installed, erected, tested, inspected, and documented by the project specifications and applicable codes.

Acceptance Criteria

Due to the nature of this procedure and the associated activities, acceptance criteria vary depending on the scope of work. Acceptance criteria are identified for specific activities as applicable in the procedure, approved design drawings, codes, and specifications.

Responsibility

1. Project Field Engineer

- a. Coordinates with the owner, as required, issues that affect the work functions to complete the turnover needs, identify design responsibilities, monitor progress, and validate the resolution of any problems.
- b. Implementation of this procedure and associated work
- c. Maintaining the quality standards for work functions within the contractor's scope of work as applicable to the reference codes, design drawings, and specifications

2. Field Engineer

- a. Assure that third party inspection agencies are arranged for, and the inspection work is performed as required by the codes and specifications.
- b. The first level of inspection for all functions of the work and assure that items of the procedure are completed as applicable for that specific work function.
- c.

3. Pre-commissioning or Commissioning Manager

- a. Coordination of the pre-commissioning or commissioning team members functions to complete the necessary work
- b. Coordination with the project field engineer, project superintendent, quality control inspector to complete the scope of work and the pre-commissioning or commissioning function

Pre - Commissioning Procedure

- c. Development of specialized testing for equipment or systems as required to meet contract requirements
- d. Implementation of the pre-commissioning or commissioning plan as required by contract

4. Quality Control Inspector

- a. Maintain the documentation package for the turnover to the project field engineer after all work is completed.
- b. Review and inspect the work functions to assure that the field engineer and craft superintendent, as required by the codes and specifications, are meeting quality control functions.

5. Project Manager

- a. Coordinate with owner management and plant operations to assure their input and concerns are addressed consistent with defined and approved contractor scope of work
- b. Facilitate resolution of concerns requiring contractor project management action.

6. Project Superintendent

- a. Coordinate with the project field engineer and field engineers to assure that approved contractor scope of work is completed and by the applicable codes and specifications
- b. Ensure the availability, scheduling, and control of craft personnel needed to complete the **Master Punchlist** activities and for the assurance of completion of the required actions.

7. Craft Superintendent

- a. Initial inspection of work functions by the craft, assuring work is performed in a good workmanship manner, meets specifications and is by the applicable codes

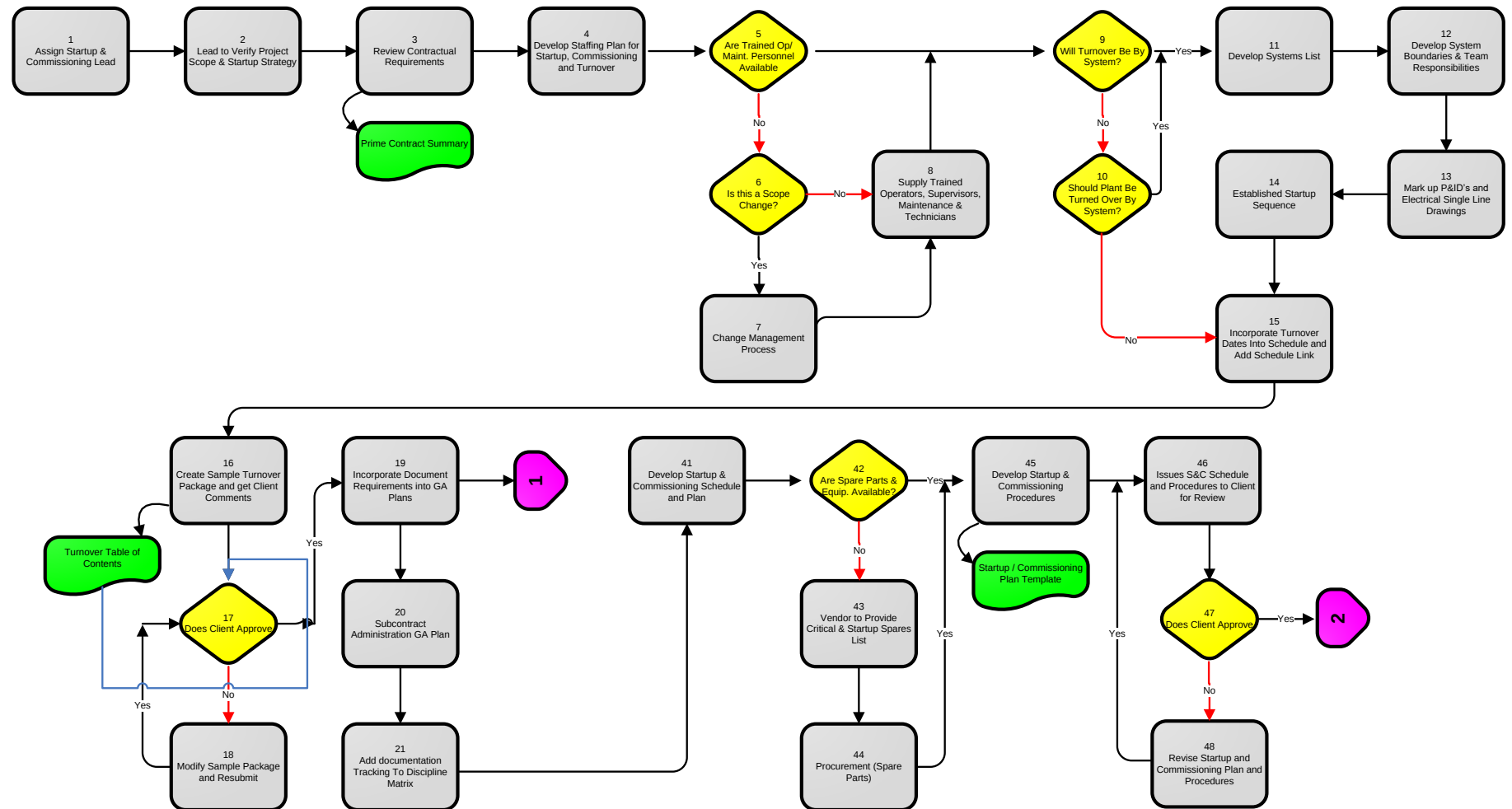
8. Project Safety Engineer

- a. Monitors each craft in preparation for a **job safety analysis** for the work being performed
- b. Monitors the compliance with the contractor, owner, Federal, State, and Local safety requirements

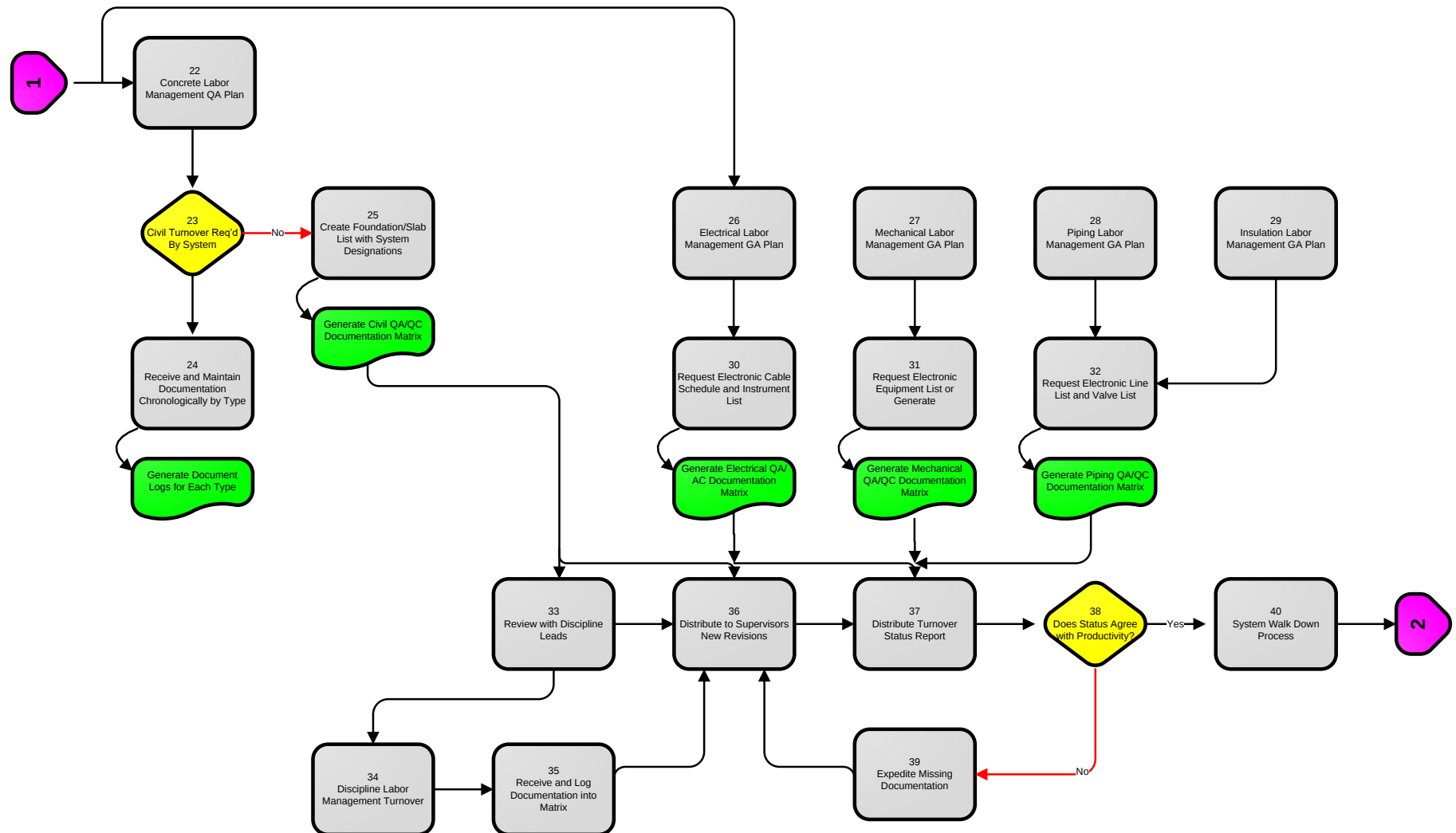
Project Commissioning Procedure

1. The development of a **startup and commissioning plan** is completed when required by the specification. This enables the commissioning team to function in an organized, efficient manner.
2. The documentation of all commissioning functions is done and included in the turnover package.
3. This procedure is worked in concert with the **Master Punchlist Procedure** and **Turnover Procedure**
4. When required, the development of testing procedures is done for specific commissioning of specialized equipment, processes, and systems.

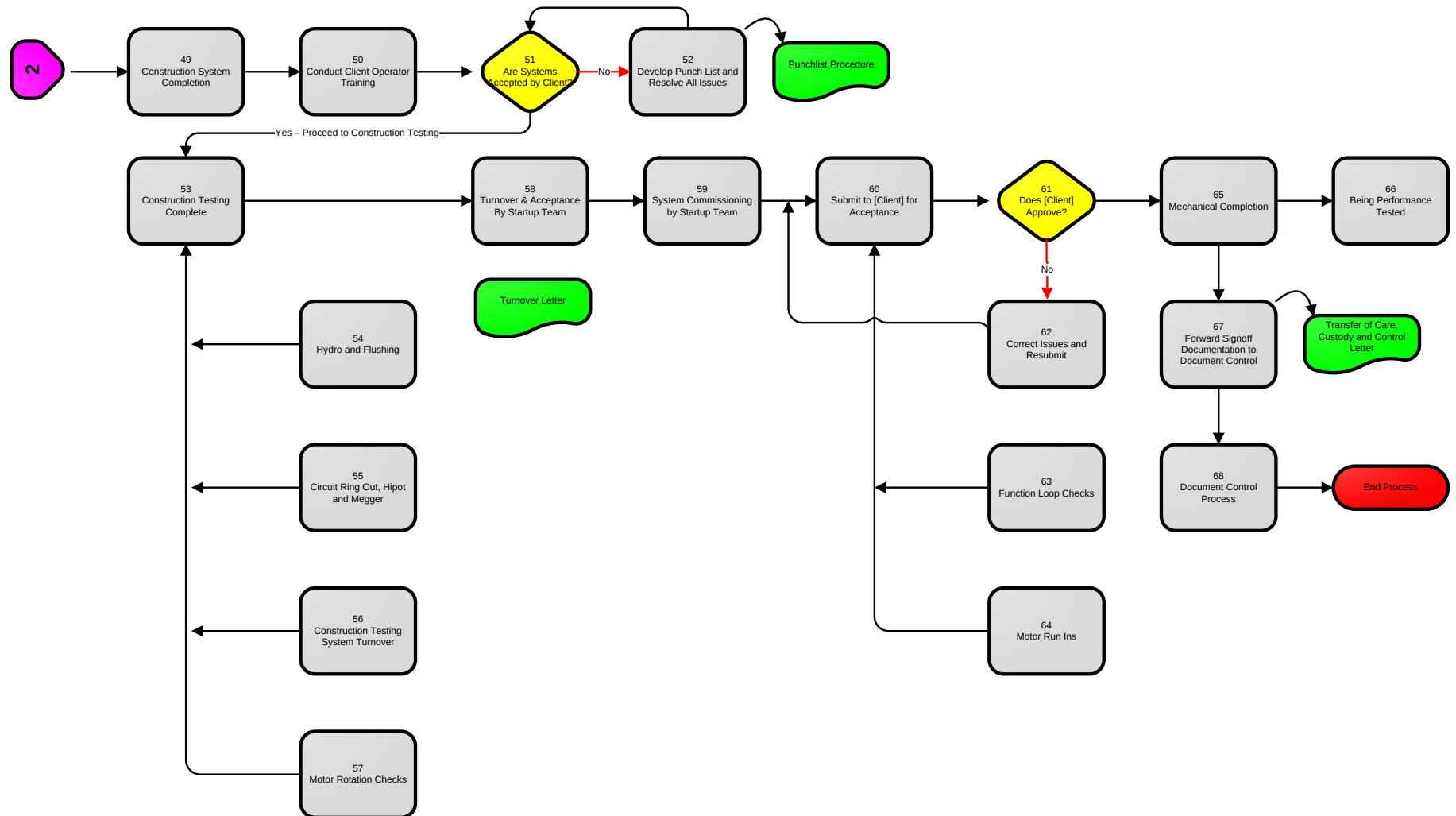
Startup and Commissioning Process Flow



Startup and Commissioning Process Flow



Startup and Commissioning Process Flow



System Description Form

Contractor	Job Site Location	Client	Project Number
Date	System Name	P&ID Numbers	Preparer

Functional Description

System Boundaries

Boundary	Boundary

Prerequisites

Prerequisite	Prerequisite

Safety Considerations

Consideration	Consideration

Equipment / Valve and Instrument Lists

Equipment	Valves / Instruments

References

Process Control I/O Diagrams

Description	Response
Digital Output Sheets	
Digital Input Sheets	
Analog Input Sheets	
Datasheet / Specification Sheets Equipment	
Electrical / Instrumentation	