



**Section 2B**  
**Design Process**  
**(Through Construction Documents)**

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**(Through Construction Documents)**

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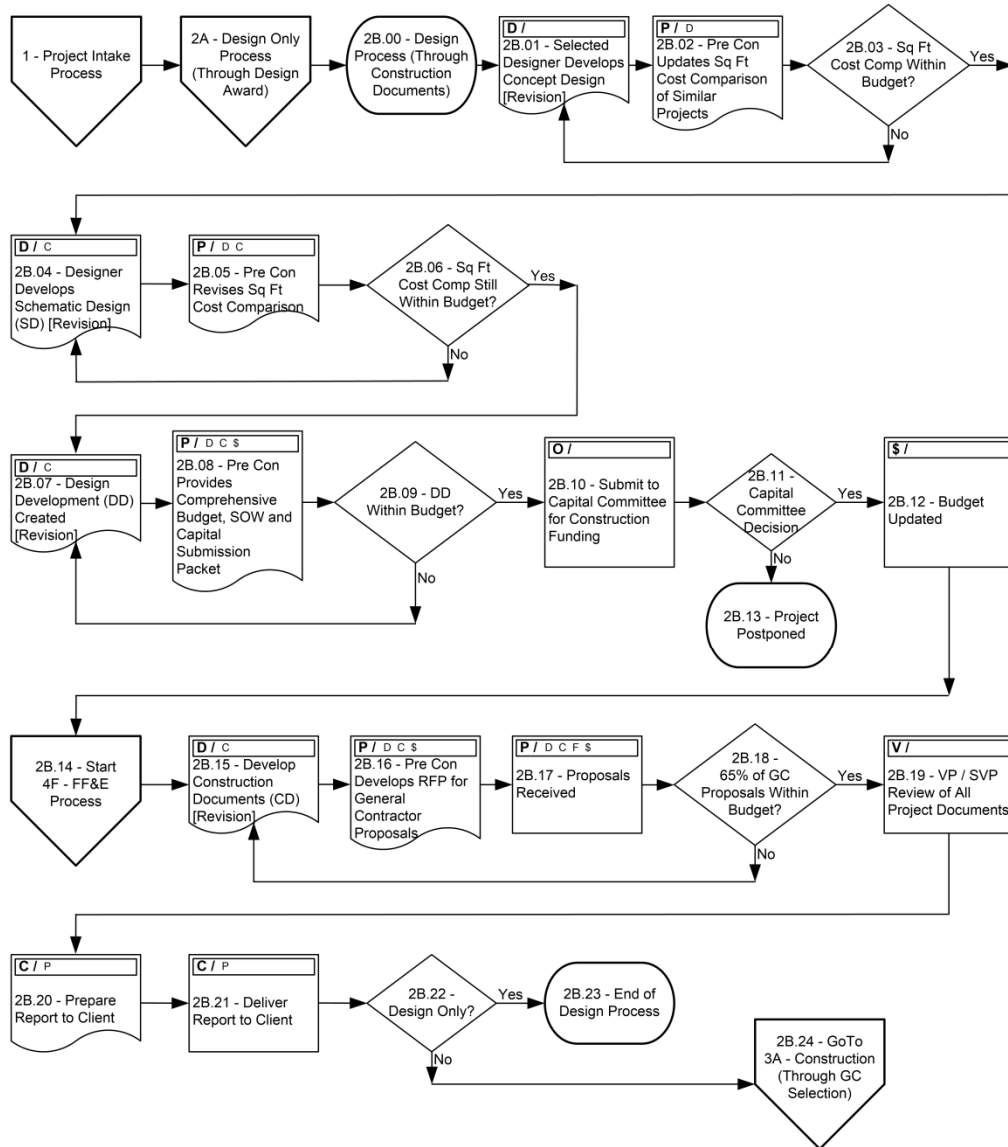
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## 2B.00 - Design Process (Through Construction Documents) Flow-Chart

### 2B - Design Process (Through Construction Documents)



<b>Symbol Legend</b>	Terminator for This Page	Process	Decision	Document	Reference to Other Flowcharts		
<b>Responsibility Codes:</b>	V/D&C VP / SVP	P/Pre Construction	D/Design	C/Construction	F/FF&E	\$/Construction Controls	O/Other Dept


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## 2B.0B - Design Process (Through Construction Documents) Responsibility Matrix

<b>2B - Design Process (Through Construction Documents) Responsibility Matrix</b>  <input checked="" type="checkbox"/> Primary / <input type="checkbox"/> Secondary	D&C VP / SVP (V)	Pre Construction (P)	Design (D)	Construction (C)	FF&E (F)	Construction Controls (\$)	Other Dept. (O)
2B.01 - Selected Designer Develops Concept Design [Revision]			<input checked="" type="checkbox"/>				
2B.02 - Pre Con Updates Sq Ft Cost Comparison of Similar Projects		<input checked="" type="checkbox"/>	<input type="checkbox"/>				
2B.03 - Sq Ft Cost Comp Within Budget?	(Yes / No)						
2B.04 - Designer Develops Schematic Design (SD) [Revision]			<input checked="" type="checkbox"/>	<input type="checkbox"/>			
2B.05 - Pre Con Revises Sq Ft Cost Comparison		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
2B.06 - Sq Ft Cost Comp Still Within Budget?	(Yes / No)						
2B.07 - Design Development (DD) Created [Revision]			<input checked="" type="checkbox"/>	<input type="checkbox"/>			
2B.08 - Pre Con Provides Comprehensive Budget, SOW and Capital Submission Packet		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2B.09 - DD Within Budget?	(Yes / No)						
2B.10 - Submit to Capital Committee for Construction Funding							<input checked="" type="checkbox"/>
2B.11 - Capital Committee Decision	(Yes / No)						

<p align="center"><b>2B - Design Process (Through Construction Documents) Responsibility Matrix</b></p> <p align="center"> <input checked="" type="checkbox"/> Primary / <input type="checkbox"/> Secondary         </p>	D&C VP / SVP (V)	Pre Construction (P)	Design (D)	Construction (C)	FF&E (F)	Construction Controls (\$)	Other Dept. (O)
2B.12 - Budget Updated						<input checked="" type="checkbox"/>	
2B.13 - Project Postponed	(Terminator for This Page)						
2B.14 - Start 4F - FF&E Process	(Reference to Other Flowchart)						
2B.15 - Develop Construction Documents (CD) [Revision]			<input checked="" type="checkbox"/>	<input type="checkbox"/>			
2B.16 - Pre Con Develops RFP for General Contractor Proposals		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
2B.17 - Proposals Received		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2B.18 - 65% of GC Proposals Within Budget?	(Yes / No)						
2B.19 - VP / SVP Review of All Project Documents	<input checked="" type="checkbox"/>						
2B.20 - Prepare Report to Client		<input type="checkbox"/>		<input checked="" type="checkbox"/>			
2B.21 - Deliver Report to Client		<input type="checkbox"/>		<input checked="" type="checkbox"/>			
2B.22 - Design Only?	(Yes / No)						
2B.23 - End of Design Process	(Terminator for This Page)						
2B.24 - GoTo 3A - Construction (Through GC Selection)	(Reference to Other Flowchart)						



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## 2B.02 - Pre Con Updates Sq Ft Cost Comparison of Similar Projects


**Procedure** Pre-construction updates the Sq Ft Cost Comparison, of similar Projects, by using the Initial Square Foot Cost Comparison table (see below).

**Responsibilities** **Primary:** Pre-Construction  
**Secondary:** Design

### Acronyms

- Notes**
1. Concept – Square Foot Cost Comparison
    - a. Project will be compared to other past projects that appear to be similar in anticipated size and scope
    - b. Presented in table form showing;
      - i. Use
      - ii. Square Footage

Initial Square Foot Cost Comparison				
	Project 1	Project 2	Project 3	Proposed Project
<b>Project Name</b>				
<b>Square Footage</b>				
<b>Overall As Built Cost</b>				
<b>Cost per Square Foot</b>				
	Project 1 Scope	Project 2 Scope	Project 3 Scope	Anticipated Scope

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## 2B.03 - Sq Ft Cost Comp Within Budget?

**Procedure** This is a decision tree determined by whether the Sq Ft Cost Comp is within budget.

If Yes then GoTo step 2B.04.

If No then GoTo revisiting step 2B.01.

**Responsibilities** Primary:


Secondary:

### Acronyms

**Notes** Yes / No Decision Tree

If still within defined cost parameters continue with Design.



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## 2B.04 - Designer Develops Schematic Design (SD) [Revision]

**Procedure** If the Sq Ft Cost Comp is within budget then continue with the Designer developing the Schematic Design (SD) [or a Revision if after step 2B.06].

**Responsibilities** **Primary:** Design  
**Secondary:** Construction

**Acronyms** SD Schematic Design

**Notes**

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## 2B.05 - Pre Con Revises Sq Ft Cost Comparison

**Procedure** After the Designer develops the Schematic Design, Pre-Con updates the Square Foot Cost Comparison.

**Responsibilities** **Primary:** Pre-Construction  
**Secondary:** Design Construction


### Acronyms

**Notes** SD – Schematic Design - Updated Square Foot Cost Comparison. At this stage Pre Con will verify that the SD's match up to the stated scope, square footage, location, fit and finish

Schematic design is the first phase of basic services for project design. At this stage in a project, the design professional describes the project three-dimensionally. A range of alternative design concepts are explored to define the character of the completed project and an optimum realization of the project program.

SD – Cost comparison update to concept matrix (Pre-construction deliverable)

- i. STOP for a moment and evaluate if project is still feasible
- ii. If not, why?
  1. Did scope grow? Was scope modified?
  2. Did square footage grow?
  3. Were the quality expectations off?
  4. New or added external factors such as landlord conditions

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## 2B.06 - Sq Ft Cost Comp Still Within Budget?

**Procedure** This is a decision tree determined by the updated Sq Ft Cost Comp.

If Yes then GoTo step 2B.07.

If No then GoTo revisiting step 2B.04.


**Responsibilities** **Primary:**

**Secondary:**

**Acronyms**

**Notes** Yes / No Decision Tree

If still within defined cost parameters continue with Design.

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## 2B.07 - Design Development (DD) Created [Revision]


**Procedure** If the Sq Ft Cost Comp is still within budget then continue with the Designer creating the Design Development (DD) [or a Revision if after step 2B.09].

**Responsibilities** **Primary:** Design  
**Secondary:** Construction

**Acronyms** **DD** Design Development

**Notes** DD - Design Development – At completion of DD Pre Con will Develop actual capital committee budget for funding request. Pre Con will again verify scope, engage the various entities for their input (IT, OS&E, FF&E, Surveillance) OS&E number is responsibility of property or stakeholder

During the design development phase, the project design is further refined. Plan arrangements, specific space accommodations, equipment and furnishings, building design, materials and colors, and complete definitions of all systems serving the project are developed. All design decisions are completed during this phase in order to prepare the subsequent construction documents.

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## 2B.08 - Pre Con Provides Comprehensive Budget, SOW and Capital Submission Packet

### Procedure

Pre-con provides a comprehensive Budget, SOW and Capital Submission Packet.

At the same time as the construction budget is being prepared the following groups should be contacted for their budgets. These are to be complete budgets. If the project is approved through Capital Committee then these will become the official budgets for the project:

- a. FF&E – Solicit a company for budgeting
- b. OS&E – Request a detailed budget from the property for inclusion in the Capital Committee budget
- c. IT – Request a detailed budget from the property for inclusion in the Capital Committee budget
- d. Construction Controls – Audit Budget
- e. D&C – Request probable hours from Project Manager, Project Director, and Vice President. This can also include the internal construction budget if applicable

### Responsibilities

**Primary:** Pre-Construction

**Secondary:** Design Construction Construction Controls


### Acronyms

### Notes

Creation of Project Budget

- a. Budget will developed with the assistance of General Contractor/s
- b. Budget will include input from all interested parties;
  - i. D&C
  - ii. Property for OS&E
  - iii. IT
  - iv. Surveillance
  - v. General Contractor
  - vi. D&C Project Management
  - vii. D&C Project Controls
- c. Budget to be reviewed by.....

- i. Director of Pre Construction
    - ii. Regional Vice President of Design and Construction
    - iii. Senior Vice President of Design and Construction
  - d. If budget is beyond amount allotted for in plan
    - i. Discuss with stakeholder
    - ii. If budget variance is 10% or less of overall project value begin a selected value engineering process
    - iii. If budget variance is greater than 10% of overall project value, the project gets re-designed

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## 2B.09 - DD Within Budget?

**Procedure** This is a decision tree determined by whether the Design Development is within the budget.

If Yes then GoTo step 2B.10.

If No then GoTo revisit step 2B.07.


**Responsibilities** Primary:

Secondary:

### Acronyms

**Notes** Yes / No Decision Tree

If still within defined cost parameters continue with Design.

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## 2B.10 - Submit to Capital Committee for Construction Funding


**Procedure**                      Submission to Capital Committee for approval by stakeholders.

**Responsibilities**    **Primary:**            Other Depts  
**Secondary:**

**Acronyms**

**Notes**



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## 2B.11 - Capital Committee Decision

**Procedure** This is a decision tree determined by whether the Design Development is within budget.

If Yes then GoTo step 2B.12.


If No then GoTo step 2B.13 where the project is postponed.

**Responsibilities** Primary:

Secondary:

### Acronyms

**Notes** Yes / No Decision Tree

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## 2B.12 - Budget Updated


**Procedure** After the Designer develops the Design Development documents, and the project is submitted to the Capital Committee (for construction funding) and approved, Pre-Con again updates the Square Foot Cost Comparison.

**Responsibilities** **Primary:** Construction Controls  
**Secondary:**

### Acronyms

**Notes** Project is approved

1. At requested amount
  
2. At reduced amount – what do we do if this happens? **WARNING FLAGS!!!**
  - a. Re-design if it is a significant change in dollar value
  - b. This should result in a return trip to the committee to finalize scope and budget

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## 2B.13 - Project Postponed

**Procedure** If the Capital Committee’s decision is No, then the project is postponed.

**Responsibilities** **Primary:**  
**Secondary:**

**Acronyms**

**Notes** Terminator for This Page

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## 2B.14 - Start 4F - FF&E Process

**Procedure** At this point the FF&E process is started.


GoTo flowchart 4F – FF&E Process.

**Responsibilities** **Primary:**

**Secondary:**

**Acronyms**

**Notes** Reference to Other Flowchart

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## 2B.15 - Develop Construction Documents (CD) [Revision]

**Procedure** If the Capital Committee decision is Yes, then continue with the Designer developing the Construction Documents (CD) [or a Revision if after step 2B.18].


**Responsibilities** **Primary:** Design  
**Secondary:** Construction

**Acronyms** **CD** Construction Documents

**Notes** When Construction Documents are submitted for permit Pre Con will put the project out to bid for general contractors. Also at this time bid packages will be sent out for 3rd party testing, hazardous material testing, signage, etc. As needed

Construction document phase consists of preparation of drawings and specifications establishing the requirements for the construction of the project. The construction documents describe the quality, configuration, size, and relationship of all components to be incorporated into the project. Construction documents must be consistent with the project program, the construction budget, and the project schedule.

The construction documents serve as a basis for obtaining bids from contractors and are used by contractors to obtain price quotes from subcontractors.

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## 2B.16 - Pre Con Develops RFP for General Contractor Proposals

**Procedure** Pre-construction develops the RFP for General Contractor proposals.

**Responsibilities** **Primary:** Pre-Construction  
**Secondary:** Design Construction Construction Controls

**Acronyms** **RFP** Request for Proposal

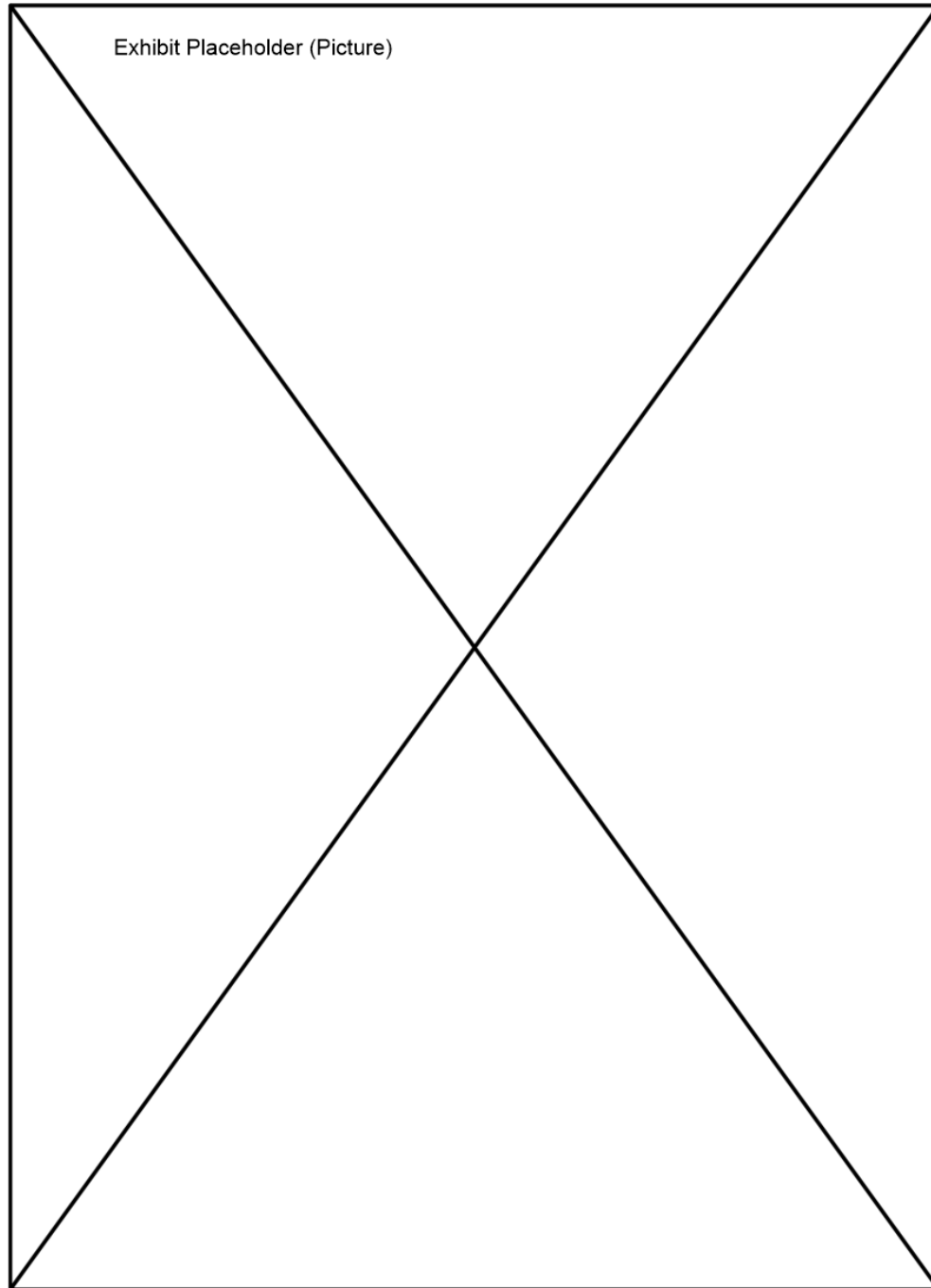
### Notes **General Contractor RFP Template**


- Property name
- Project name
- Project summary (3-4 sentences)
- Scope of work (to be designed)
  - Existing building information
  - Program tables (area, room matrix, etc.)
  - Links to drawings on Box or other service
  - Attachment of or link to standard scope checklist, when applicable
- Design scope (of services to be provided)
  - Standard deliverable requirements by stage
  - Comprehensive checklist of disciplinary services to be provided (design manager to remove irrelevant services)
- Statement of licensure and insurance requirements
- Weblink to standard design contract, which bidders implicitly accept
- Fee proposal breakdown requirements
  - Discipline
  - Phase
- Site walk date and procedures
- Notification of intent to bid requirement and deadline
- Proposal submission procedure and deadline
- Contact information of design manager

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## 2B.16A - General Contractor RFP Template



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## 2B.17 - Proposals Received

**Procedure** Receive all bids on the designated bid day and time.


**Responsibilities** **Primary:** Pre-Construction  
**Secondary:** Design Construction FF&E Construction Controls

### Acronyms

**Notes** **Design proposal leveling template**

- Cost comparisons by:
  - Discipline
  - Phase
- Proposed schedule comparison
  - Comparison consultant firms proposed by discipline
  - Who should approve formally?



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## 2B.18 - 65% of GC Proposals Within Budget?

### Procedure

This is a decision tree determined by at least 65% of GC proposals being within budget.

This will determine if the budget is reasonable and can be performed by a majority of GC bidders.

If Yes then GoTo step 2B.19.

If No then GoTo revisit step 2B.15.


**Responsibilities** Primary:

Secondary:

### Acronyms

### Notes

Yes / No Decision Tree

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## 2B.19 - VP / SVP Review of All Project Documents

**Procedure** All project documents are reviewed by the VP / SVP of D&C.

**Responsibilities** Primary: D&C VP / SVP  
 Secondary:

**Acronyms**

**Notes**

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## 2B.20 - Prepare Report to Client


**Procedure**                      After the VP / SVP review, a report is prepared for the client.

**Responsibilities**    **Primary:**            Construction  
**Secondary:**            Pre-Construction

**Acronyms**

**Notes**



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## 2B.22 - Design Only?

### Procedure

This is a decision tree determined by whether this project was for the Design only.

If Yes then GoTo step 2B.23 which concludes the Design process.

If No then GoTo step 2B.24 and continue with construction.


### Responsibilities Primary:

Secondary:

### Acronyms

### Notes

Yes / No Decision Tree

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## 2B.23 - End of Design Process

**Procedure**                    If the project was for Design only then that concludes the project.

**Responsibilities**    **Primary:**  
**Secondary:**

**Acronyms**

**Notes**                        Terminator for This Page

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## 2B.24 - GoTo 3A - Construction (Through GC Selection)

**Procedure** If the project was for Design and Construction then continue onto flowchart 3A - Construction (Through GC Selection).

**Responsibilities** **Primary:**  
**Secondary:**

### Acronyms

**Notes** Reference to Other Flowchart

