

KITCHEN RENOVATION PROJECT PLAN

Embry Riddle Aeronautical University – PMGT 501

TEAM 3

Final Submission

by

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1 Scope of Work

1.1 Project Objective

The kitchen renovation shall not exceed \$30,000 in total cost. All renovations and cleanup shall be completed no later than August 5, 2016.

1.2 Scope Description

Successfully and efficiently renovate an approximately 150 ft.² home kitchen bringing it in compliance with all safety regulations and standards. The customers prefer an industrial-traditional style that will accommodate their family of 5 but be able to entertain large groups of people while affording everyone the professional kitchen they desire. Goals are to stay within the budget; complete the project in 6 weeks; and use durable and energy-efficient equipment, appliances, and materials. The customers would also not like to be removed from the home during the renovation so keeping it safe and usable for them is a priority.

2 Project Charter

The project charter can be found in Appendix A.

3 Project Requirements

3.1 Overview

This home kitchen renovation will begin with a planning and design phase that will ensure all requirements for the customers, demolition, and construction are met. For every task oriented beneath the construction activity, a company or organization will have to submit a quote detailing all labor, equipment, and material required to complete that portion of the job. The general contractor chosen as the project manager will choose the most cost-efficient quotes and attempt to meet all of the customer's wishes.

All material used for installation of mechanical, electrical, plumbing, paint, cabinetry, floor, or appliances will meet safety and efficiency standards dictated by International Housing Code. The materials used for the counters, cabinets, and flooring will be durable on account of the customers having children and their enjoyment of hosting large gatherings in their kitchen.

The space will also maximize the accessible space and storage space for the family and guests but without cutting out any of the customer's requests for appliances or other equipment in the kitchen.

3.2 Project Boundaries:

Inclusions

This project includes the planning and design, demolition, construction, test and commission, clean up, and turnover to the customer.

Exclusions

This project does not include the continual maintenance of the kitchen after the turnover to the customer.

3.3 **Project Deliverables:**

- Kitchen remodel project plan and design layout
- Kitchen that includes the following:
 - Center island with room for 3 bar stools
 - Marble countertops
 - Glass tile backsplash
 - Gas range
 - Commercial grade stainless appliances
 - Recessed panel cabinets with crown molding (natural oak color)

3.4 **Product Acceptance Criteria:**

The home kitchen renovation project will be considered complete when the installation of all material and equipment is complete and meets safety standards and the customers sign off on the completion of the remodel stating it meets all requirements agreed on between the general contractor and themselves.

3.5 **Project Constraints:**

The project will not exceed the customer's budget of \$30,000, and it cannot exceed more than 6 weeks from the start of the planning and design phase to the turnover of the completed project.

3.6 **Project Assumptions:**

It is assumed that the customers will have adequate amount of funds available for the entire project and that the kitchen does not need structural or further remodel requirements other than aesthetic changes.

3.7 **Risk Management:**

A thorough risk management assessment will keep the project on track and within safety boundaries ensuring the kitchen is completed correctly. This will prohibit as many future issues as possible for the customers as well as keep workers and contractors safe throughout the renovation.

3.8 **Plan of Change:**

As with all projects, unforeseen issues and difficulties will arise throughout the process and will be addressed on a case-by-case basis. For estimates and quotes, at least 2 sources will be used, the second as a backup if the primary is unable to fulfill requirements. Any contract changes will be submitted by the general contractor to the customers in writing and will only be approved when signed off by each of the customers.

3.9 **General Schedule:**

1. Design and plan are complete and approved by customers June 7, 2016
2. Demolition is complete June 16, 2016
3. Installation of all material and equipment is complete July 26, 2016
4. All excess material and mess is cleaned up and disposed of July 29, 2016
5. All equipment is tested to ensure proper function and safety August 4, 2016
6. Kitchen renovation project is signed over to customers signaling completion August 5, 2016

3.10 Approval Requirements:

This project will be approved by the general contractor and the customers receiving the renovation after a thorough review of the produced plans and samples of materials. All adjustments will be tracked by the general contractor and will only be completed once officially signed off on by the customers.

4 Work Breakdown Structure

The work breakdown structure (WBS) below is broken down to six main tasks. Those six tasks are further broken down to sub-level tasks. Appendix B contains the WBS in a tabular layout.

Table 1: Work Breakdown Structure Root

Work Breakdown Structure
1 Kitchen Renovation Project
1.1 Planning and Design
1.1.1 Research Design Styles
1.1.2 Develop Preliminary Design
1.1.3 Secure funding source
1.1.4 RFP
1.1.5 Select subcontractors
1.1.5.1 Research and interview subcontractors
1.1.5.2 Acquire subcontractors
1.1.6 Design package
1.1.6.1 Demolition plan (existing reuse vs existing demo)
1.1.6.2 Architectural and MEP (Mechanical, Electrical, Plumbing)
1.1.6.3 Cabinetry
1.1.6.4 Appliances
1.1.6.5 Countertops
1.1.6.6 Flooring
1.1.6.7 Electrical
1.1.6.8 Lighting
1.1.6.9 Paint
1.1.7 City Permits and Inspections
1.1.7.1 Review and approval of all shop drawings
1.1.7.2 Book City Inspection (Roughed In)
1.1.7.3 Book City Inspection (Finished Product)

1.1.7.4 Perform City Inspection (Roughed In)
1.1.7.5 Perform City Inspection (Finished Product)
1.1.8 Coordinate subcontractor work
1.2 Demolition
1.2.1 Site visit
1.2.2 Create demolition plan
1.2.3 Secure demolition equipment
1.2.4 Secure waste container
1.2.5 Hire demolition team
1.2.6 Structural preperation
1.2.7 Clean and prepare site for construction
1.2.7.1 Turn off utilities
1.2.7.2 Pack and secure existing kitchen for reuse
1.2.8 Complete demolition
1.3 Construction
1.3.1 Procurement of materials
1.3.1.1 Estimate quantities
1.3.1.2 Quotes for all subcontractors
1.3.1.3 Issue contract for electrical
1.3.1.4 Issue contract for plumbing
1.3.1.5 Issue contract for mechanical
1.3.1.6 Issue contract for Painting
1.3.1.7 Issue contract for cabinets & counters
1.3.1.8 Issue contract for Kitchen Appliances
1.3.1.9 Issue contract for flooring
1.3.2 Mechanical
1.3.2.1 Rough in
1.3.2.2 Install
1.3.2.3 Test
1.3.3 Electrical
1.3.3.1 Rough in
1.3.3.2 Install
1.3.3.3 Test
1.3.4 Plumbing
1.3.4.1 Rough in
1.3.4.2 Install
1.3.4.3 Test
1.3.5 Paint
1.3.5.1 Prime
1.3.5.2 Paint ceiling
1.3.5.3 Paint walls

1.3.5.4 Finish trim
1.3.6 Cabinetry & Counters
1.3.6.1 Installation
1.3.7 Flooring
1.3.7.1 Installation
1.3.8 Installation of appliances
1.3.8.1 Refrigerator
1.3.8.2 Dishwasher
1.3.8.3 Microwave
1.3.8.4 Oven
1.4 Test and commission
1.4.1 Refrigerator
1.4.2 Dishwasher
1.4.3 Microwave
1.4.4 Oven
1.5 Clean Up
1.5.1 Remove unused material
1.5.2 Remove trash
1.6 Turnover
1.6.1 Sign off on procurement
1.6.2 Sign off from customers

5 Communications Plan

5.1 Overview

The communications plan is used to illustrate the information flow. More specifically the communication plan will define what, who, how and when the information will be shared. This section will address the key stakeholders, define pertinent information and key sources to that information, dissemination methods, and responsibilities and timelines for the information flow.

5.2 Stakeholders

The stakeholders involved in the kitchen renovation project are the homeowners, the general contractor (project manager), the designer, subcontractors, city inspector, and the loan officer from the local credit union. The general contractor is the project manager and his team will be referred to as the project office.

5.3 Information needs, sources, and dissemination methods

The information that is important to the success of this project varies for each stakeholder involved. Each stakeholder was interviewed to find out what information was important to them. The results are shown in Table 2. The general contractor has an electronic file plan that will house all pertinent information regarding the kitchen renovation. The file plan includes the home owner's requirements, designer's plans, blueprints, and email correspondence with all stakeholders. All other applicable documentation will be captured throughout the project and saved in this file plan. Finally, the dissemination of this information will be primarily by email and phone. The communication plan in Table 2 shows all of the planned communications for the project.

Table 2. Kitchen Renovation Communication Plan

INFORMATION	KEY STAKEHOLDERS	FREQUENCY / TIMING	DISSEMINATION METHOD	INFORMATION PROVIDER
Initial Consultation	Homeowners, General Contractor	Beginning of project	Meeting, Email	Project Office
Design Consultation	Homeowners, Designer	After initial consultation	Meeting, Email, Hardcopy	Design Office
Preliminary Design Review (PDR)	Homeowners, General Contractor, Designer	After initial design complete	Meeting, Email, Hardcopy	Project Office/Design Office
Design Plan	Homeowners, Designer, General Contractor	Bi-weekly until design is complete	Email	Design Office
Critical Design Review (CDR)	Homeowners, General Contractor, Designer	After final design plan is complete	Meeting, Email, Hardcopy	Project Office/Design Office
Loan Prequalification	Homeowners, Credit Union	Beginning of project	Email	Credit Union
Project Status Report	Homeowners, Project Office	Weekly	Email	General Contractor
Sub-contractor Status Report	Project Office, Sub-contractor	Weekly	Email	Sub-contractors
Supplier Performance Review	Homeowners, Project Office	Weekly	Email	General Contractor
Work Breakdown Structure (WBS)	Project Office	Anytime	Online Cloud	Project Office

7 Budget

7.1 Overview

The total budget for the kitchen renovation project is \$30,000. Each of the main levels of the WBS has been assigned a budget below.

1. Planning and Design - \$2,450
2. Demolition - \$1,000
3. Construction - \$24,200
4. Test and Commission - \$850
5. Clean-up - \$1,000
6. Turnover - \$500

Figure 1 has the budget breakdown in dollars and Figure 2 has the budget breakdown in percent of total budget.

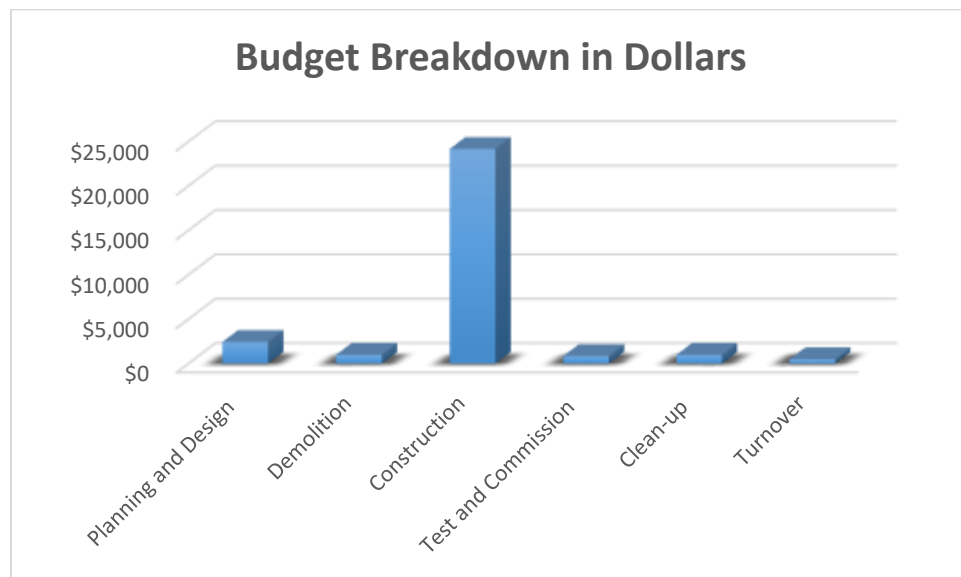


Figure 1: Budget Breakdown in Dollars

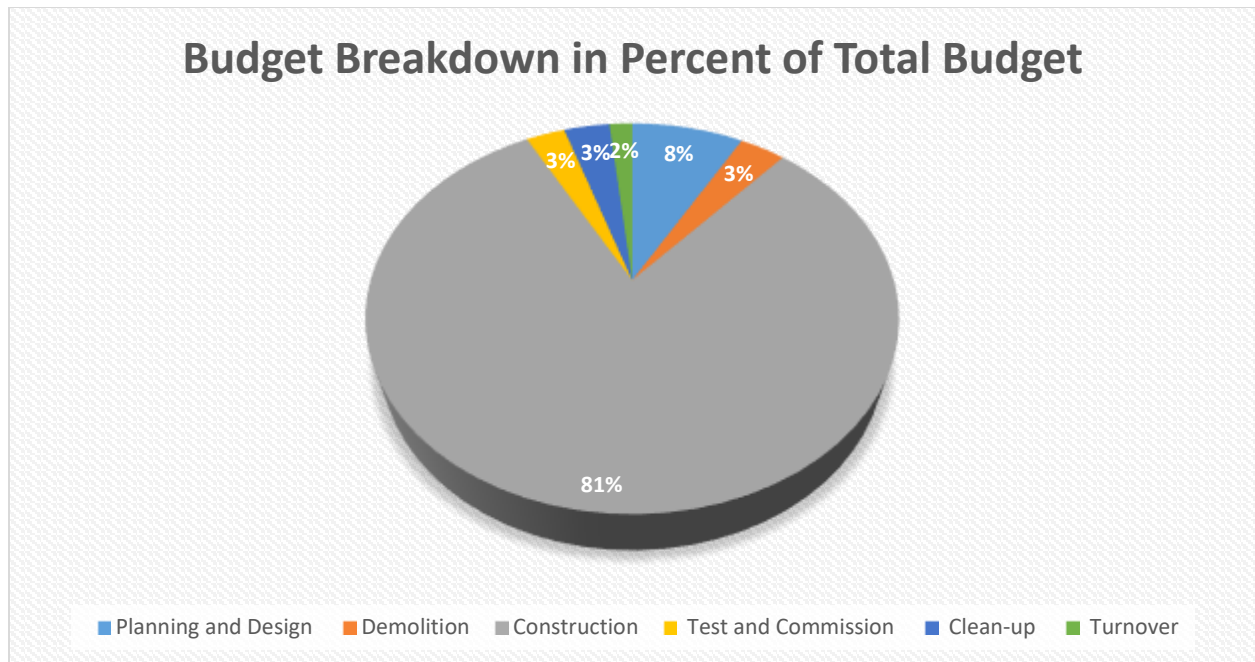


Figure 2: Budget Breakdown in Percent of Total Budget

8 Network Diagram

8.1 Overview

Table 4 below shows the network matrix diagram information. The first column describes the ID, followed by the description, then finally, the predecessors associated with the task and task duration. The network diagram and forward and backward passes are contained in Appendix C. From Figure 3, one can gather an understanding on the forward path, backward pass, activity slack and critical path. The critical path is identified by the tasks in the red text in Figure 3 and consists of tasks A, C, E, F, G, H, K, P, and Q. One can observe that only one critical path exists and there is ample slack between the project deadline of 45 days and the planned early finish time of 28.50 days. Therefore, this project is not very sensitive.

Table 4: Network Diagram Information

ID	DESCRIPTION	PREDECESSOR	TIME (DAYS)
A	Plan & Design	None	2
B	Acquire Subcontractor	A	1
C	Design Package	A	2
D	City Permit/Inspection	A,B,C	2
E	Demolition	C	2
F	Demolition Cleanup	E	1
G	Prep for Construction	E,F	1
H	Procurement of materials	G	7
I	Mechanical	D,H	3
J	Electrical	D,H	6
K	Plumbing	D,H	8
L	Paint	D,H	1.5
M	Cabinet/Countertops	D,H	3
N	Flooring	D,H	2
O	Installation of Appliances	D,H	3.5
P	Test and Commission	I, J,K,L,M,N,O	3.25
Q	Cleanup	P	1
R	Turnover	Q	1.25

9 Quality Plan

The quality plan can be found in Appendix D.

10 Risk Management Plan

10.1 Methodology

The project office and each member of team will partake as the risk management group, and will contribute to the risk matrix for any ongoing risk. The risk management group will come to a decision on who is the risk manager depending on schedule of the participants. If for some unforeseen reason a risk manager cannot be decided, then a selected member of the project office will be chosen. Once the project is executed, the risk manager will hold meetings twice a week since there is such a short timeframe on the kitchen renovation project.

10.2 Roles and Responsibilities

Risk Manager: The risk manager will be responsible to manage and control risks, and can delegate, if needed, to the rest of the project team.

- **Project Office:** Responsible for controlling risks which are assigned.
- **General Contractor:** Responsible for controlling risks which are assigned.
- **Credit Union/Loan Officer:** Responsible for controlling risks which are assigned.
- **Subcontractors:** Responsible for controlling risks which are assigned.
- **Homeowners:** Responsible for controlling risks which are assigned.
- **Designer:** Responsible for controlling risks which are assigned.
- **City Inspector:** Responsible for controlling risks which are assigned.

10.3 Risk Categories

Project risks are separated into four different sections: technical, external, organizational, and project management. The risk categories are defined below each section.

1. Kitchen Renovation Project

1.1. Technical

1.1.1. Design

1.1.2. Quality

1.2. External

1.2.1. Subcontractors

1.2.2. Homeowners

1.2.3. City Inspection/Permits

1.3. Organizational

1.3.1. Budget

1.3.2. Scope

1.3.3. Time

1.3.4. Resources

1.4. Project Management

1.4.1. Estimating

1.4.2. Planning

1.4.3. Communication

1.4.4. Sign offs

10.4 Program and Evaluation Review Technique (PERT)

Equation 1 was used to find the weighted average activity time. Equation 2 uses the weighted average activity time in the critical path to find the Z value, which allows us to calculate the probability of completing the project by a specified date. The expected project duration is 28.5 days as seen from the critical path identified in Table 5 below. The probability for completing this project in the required 45 days can be found by using Equation 2.

Equation 1: $t_e = \frac{a+4m+b}{6}$ where,

t_s = weighted average activity time

a = optimistic activity time

b = pessimistic activity time

m = most likely activity time

Equation 2: $Z = \frac{T_S - T_E}{\sqrt{\sum \sigma_{t_e}^2}}$ where,

Z = probability of meeting scheduled duration

T_E = critical path

T_S = scheduled project duration

$\sigma_{t_e}^2$ = variability in the activity time estimates

Upon entering in T_S as 45 days and T_E as the calculated 28.5 days into Equation 2, Z equals 2.56. By referencing the Z values and probabilities table in Gary & Larson (2014), one can observe that there is a 99.4 percent chance of completing the project.

Table 5: Kitchen Reno PERT

Act ID	Description	Predecessor	a	m	b	Act Time (t_e)	Var $[(b-a)/6]^2$	Critical
A	Plan & Design	None	1.5	2	2.5	2.00	0.03	YES
B	Acquire Subcontractor	A	.75	1	1.5	1.04	0.02	
C	Design Package	A	1.5	2	4	2.25	0.17	YES
D	City Permit/Inspection	A,B,C	1.5	2	3	2.08	0.06	
E	Demolition	C	1.75	2	4	2.29	0.14	YES
F	Demolition Cleanup	E	.5	1	1.5	1.00	0.03	YES
G	Prep for Construction	E,F	5	7	8.5	6.92	0.34	YES

H	Procurement of materials	G	2	3	5	3.17	0.25	YES
I	Mechanical	D,H	2	3	4	3.00	0.11	
J	Electrical	D,H	4	6	7	5.83	0.25	YES
K	Plumbing	D,H	5	8	10	7.83	0.69	
L	Paint	D,H	1	1.5	2	1.50	0.03	
M	Cabinet/Countertops	D,H	2.5	3	4	3.08	0.06	
N	Flooring	D,H	1	2	2.5	1.92	0.06	
O	Installation of Appliances	D,H	1	3.5	4	3.17	0.25	
P	Test and Commission	I, J,K,L,M,N,O	1	3.25	4	3.00	0.25	YES
Q	Cleanup	P	.75	1	3	1.29	0.14	YES
R	Turnover	Q	1	1.25	2	1.33	0.03	YES

11 Change Control Management

11.1 Change Management Approach

Any modification to the Schedule, Budget, Scope or Project Documents must be approved by the Project Office, General Contractor, and/or the Homeowners. The requested or required change must be reviewed by the Project Office so that the true effect on the Schedule and Budget can be discussed.

11.2 Definitions of Change

11.2.1 Schedule change

Any change to the project that will cause the project to be completed ahead of or behind schedule.

11.2.2 Budget change

Any change to the project that lead to an increase or decrease to the amount of funds required to complete the project.

11.2.3 Scope change

Any change in the project that will cause the project to be different than what was detailed in the project plan. A change in the project scope maybe caused by or may cause a change to the Budget and Schedule of the project.

11.2.4 Project document changes

Any changes to the controlling documents of the project that are necessitated by changes to the project budget, schedule or scope.

11.3 Change Control Board (CCB)

The CCB is made up of the project office, general contractor, and the homeowners. Table 6 below shows the role, responsibility, and authority of each individual.

Table 6: Change Control Board

Name	Role	Responsibility	Authority
Project Office	The project office must review all changes to the project.	The project office is responsible for communication all project changes to the homeowner and General Contractor. The project office must ensure that all parties have the same understanding of the project.	The project office is authorized to accept all changes to the project budget and schedule that allow the project to be completed on time and on budget.
General Contractor	The general contractor is responsible for analyzing the project changes and determining their effect on the overall budget and schedule.	The general contractor is responsible for ensuring that the work being performed matches the scope of the project. The general contractor is responsible for ensuring that all work is completed properly by all subcontractors.	The general contractor is authorized to employ all subcontractors that are needed to complete the project.
Homeowners	The homeowners are the main stakeholder in the project. The homeowner is the driving factor for the schedule and budget of the project.	The homeowners are responsible for approving all budget and schedule changes. The homeowners are responsible for ensuring that the scope of the project is being achieved.	The homeowners have the authority to approval all changes and to modify the project scope during the project.

11.4 Change Control Process

The change control process describes the submittal, tracking, review, and disposition of any and all changes. Table 7 below shows these details.

Table 7: Kitchen Reno Change Control Process

Change request submittal	The change request form must be completed for all proposed changes to the project scope, budget, and/or schedule. The change request form will be submitted to the Project Office.
Change request tracking	The Project Office will review the change request form for completeness. The project office will assign a change control number that will be present on all documents associated with the proposed change.
Change request review	The Project Review Board must review all changes with the General Contractor and Homeowners. The effect on the scope, schedule, and budget of the project must be determined.
Change request disposition	The Project Office, under the approval of the Homeowner, will inform the General Contractor of all changes to the project.

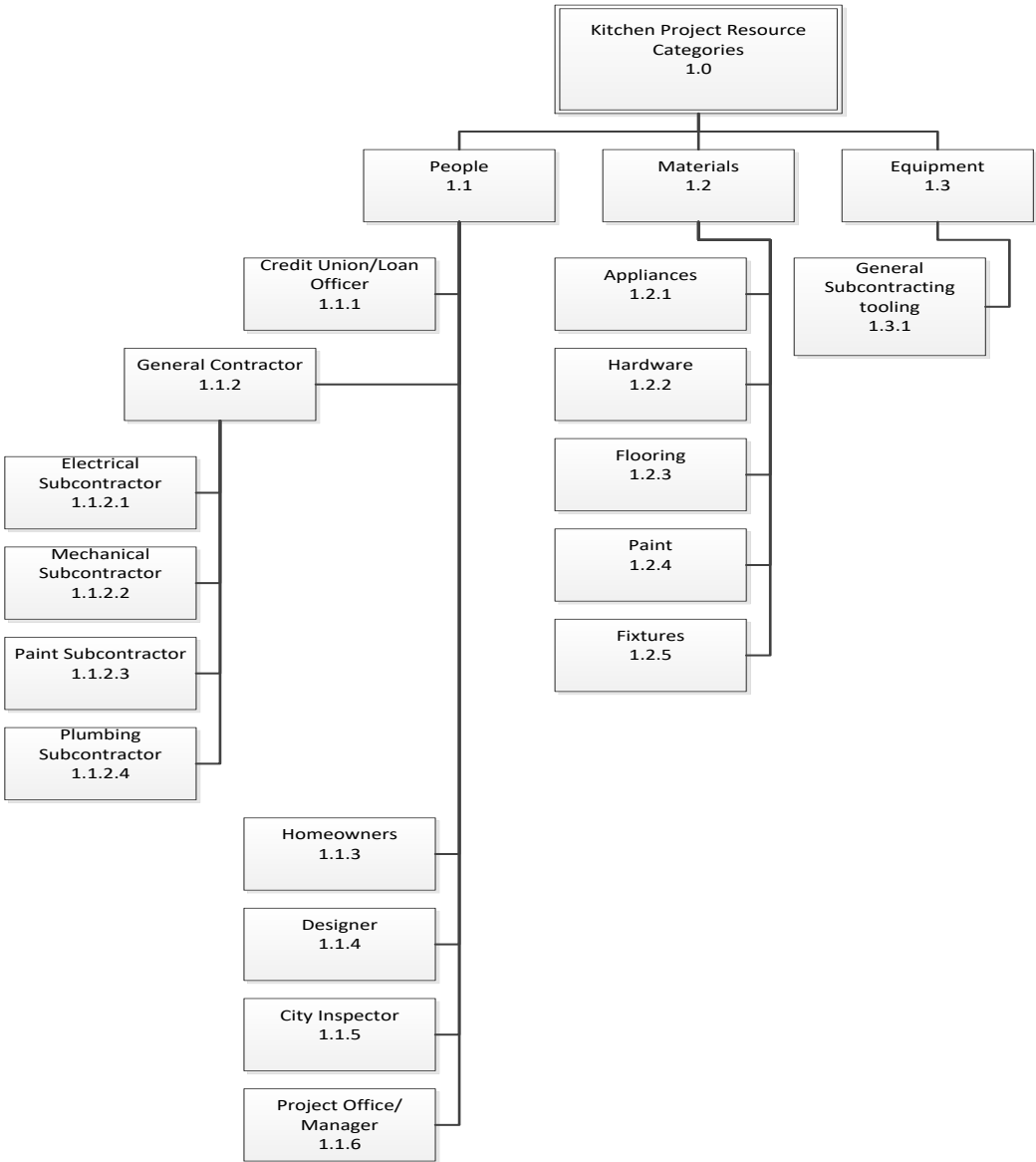
12 Resources Categories and Constraints

12.1 Overview

This project is made up of the following resource categories: people, material, and equipment.

This is an easy way to communicate how we are getting the job completed and who or what is accomplishing the task. Project constraints are anything that will confine the actions of the project team.

12.2 Resource Breakdown Structure



12.3 Constraints

- Lack of commitment from project team.
- Reorganization of project office in the midst of the project.
- Homeowners have unrealistic expectations of project outcomes.
- Lack of skilled subcontractors.
- Poor communications between project office and project team, general contractor and subcontractors, and homeowners and project office.

13 Human Resource Plan

13.1 Overview

The project team is made up of a project manager, general contractor, credit union representative, homeowner, city inspector, and multiple subcontractor. The project manager is the controlling figure for the project, the general contractor is responsible for the work being subcontracted to capable subcontractors, the credit union representative is in charge of securing the funding, the homeowners are key stakeholders in the project and steer the design decisions, and the city inspector will inspect the project to ensure compliance to local codes.

13.2 Project Organizational Structure

Figure 3 below shows the organizational chart for the kitchen renovation.

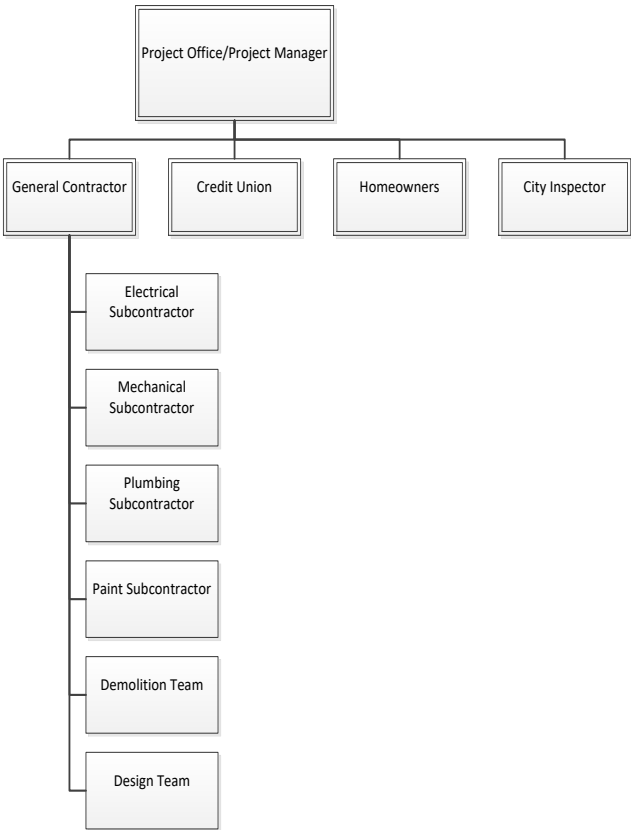


Figure 3: Organizational Chart

13.3 Responsibility Assignment Matrix

Table 8 below shows the relationship and interactions between each organization as it relates to the WBS activity. Although most activities will have one specific responsible organization, many of the other organizations may play a key role. These roles are shown in Table 8 below.

Table 8: Responsibility Assignment Matrix (RAM) using a RACI Format

[illegible]

13.4 Staffing Management Plan

13.4.1 Staff Acquisition

The general and subcontracting teams will be acquired by the project office/project management team. Once the general contractor has been hired, he will then lead the effort on finding the mechanical, electrical, plumbing, paint subcontractors and demolition teams. The homeowners will lead the effort on finding the design team for their project. The minimum amount of subcontractors will be hired if possible to save time and money. If one contractor is certified in multiple trades, then he will be hired if the schedule permits.

13.4.2 Staff Release

All subcontractors will be released at the appropriate timing when their projects are signed off. The General contractor will lead this effort. The General contractor will be released when home is signed over to homeowners.

13.4.3 Resource Calendar

See Appendix F for the resource calendar which identifies the working days of the specific resources located in the organizational structure.

13.4.4 Training Requirements

It's expected that all subcontractors hired by the general subcontractor will be fully certified in their trades and will be licensed, bonded, and insured.

14 Recommendations/Status Report Format/Closeout Checklist

14.1 Recommendations

Internal Project Team (Group 3)

- Microsoft Project Training for project team.
- Weekly collaborations via Skype or email on project status.
- Choose project lead and divvy out weekly projects based on skillsets, and cross train other members based on weaknesses.
-

14.2 Lessons Learned

Project Title: Kitchen Renovation Project **Date Prepared:** _____

Project Performance Analysis

	What Worked Well	What Can Be Improved
Requirements definition and management		
Scope definition and management		
Schedule development and control		
Cost estimating and control		
Quality planning and control		
Human resource availability, team development, and performance		
Communication management		
Stakeholder management		
Reporting		
Risk management		
Procurement planning and management		
Process improvement information		
Product-specific information		

Other		
-------	--	--

Risks and Issues

Risk or Issue Description	Response	Comments

Quality Defects

Defect Description	Resolution	Comments

Vendor Management

Vendor	Issue	Resolution	Comments

Other

Areas of Exceptional Performance	Areas for Improvement

14.3 Status Report Format

Project Baseline (PV)											
Task	DUR	ES	LF	SL	Budget (PV)	1	2	3	4	5	
A	2	0	2	0	1000	1000					
B	1	2	13	10	250	250					
C	2	2	4	0	1000	1000					
D	2	4	15	9	200	200					
E	2	4	6	0	800	800					
F	1	6	7	0	200	200					
G	1	7	8	0	1000		1000				
H	7	8	15	0	4200		3000	1200			
I	3	15	23	5	3000			3000			
J	6	15	23	2	2000			2000			
K	8	15	23	0	1000			500	500		
L	1.5	15	23	6.5	2000			2000			
M	3	15	23	5	6000			2000	2000	2000	
N	2	15	23	6	4000				2000	2000	
O	3.5	15	23	4.5	1000				1000		
P	3.25	23	26.25	0	850					850	
Q	1	26.25	27.25	0	1000						1000
R	1.25	27.25	28.5	0	500						500
Period PV Total						3450	4000	10700	5500	4850	1500
Cumulative PV Total						3450	7450	18150	23650	28500	30000

Performance Indexes Summary						
Period	EV	AC	PV	SPI	CPI	PCI-B
1			3450			
2			4000			
3			10700			
4			5500			
5			4850			
6			1500			

EV (Earned Value) = PV x % Complete

AC (Actual Cost) = determined through course of the project

PV (Planned Value) = planned cost per time period

SPI (Scheduling Performance Index) = EV / PV

CPI (Cost Performance Data) = EV / AC

PCI-B (Percent Complete Index) = EV / BAC

EAC_f (Estimated Total Cost at Completion) = [(BAC – EV) / (EV / AC)] + AC

= [(BAC – EV) / CPI] + AC

VAC_f (Cost Variance at Completion) = BAC - EAC_f

14.4 Closeout Checklist

Close-out Checklist

	Has the scope of the Kitchen Renovation Project been established
	Has the scope of the project been approved by the team members
	Kitchen renovation budget have been established and agreed upon
	Have the human resource plan been established and implemented
	Have all members or the project been identified and made of aware of their responsibilities in order to complete the kitchen renovation as scheduled
	Have all deliverables for the project been created
	Has the Kitchen Renovation project start within the guidelines of the projects scope
	Has all project deliverables been completed
	Kitchen renovation project resources and constraints have been identified
	Has the diagrams for the project (i.e. Network diagram, Forward Pass, Backward Pass, Critical path, Responsibility Matrix and PERT) been created
	Have weekly meetings been performed pertaining to the risk management plan
	Have all project deliverables been completed on time
	Were the members of the project continuously made aware of the projects status throughout the life of the project
	Has the project stayed within its budget constraints
	Has each project member been allowed to provide inputs on lessons learned while completing the kitchen renovation project
	Have all paperwork associated with the project been completed

15 References

Gray, C. F., & Larson, E. W. (2014). *Project management: The managerial process* (6th ed.). New York, NY: McGraw-Hill Education.

Institute, P. M. (2013). A Guide to the Project Management Body of Knowledge (PMBOK Guide) (PMBOK Guide). Project Management Institute.

APPENDIX A

PROJECT CHARTER

PROJECT CHARTER

Project Title: Kitchen Renovation

Project Sponsor: _____ **Date Prepared:** 6/24/2016

Project Manager: _____ **Project Customer:** _____

Project Purpose or Justification:

The purpose of the project is to complete a successful renovation of 150ft² home kitchen. The finished kitchen must meet local and state code, function for a family of 5, and be useable for large gatherings of people.

Project Description:

The project will cover all steps in the renovation of the kitchen, from design, planning, and demolition, to kitchen completion and inspection. The 150ft² kitchen will be renovated in an industrial-traditional style.

High-Level Requirements:

The requirements for the kitchen are to complete the renovation in no more than 6 weeks, and to cost no more than \$30,000.00. The kitchen must accommodate a family of 5, and use durable and energy-efficient equipment, appliances, and material.

High-Level Risks:

The high level risks include going over budget and schedule due to underlying issues in the current kitchen that are not found until after the demolition of the current kitchen.

PROJECT CHARTER

Project Objectives	Success Criteria	Person Approving
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Scope:

Kitchen Renovation	Renovation Complete	Home owner, city inspector, general contractor.
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Time:

6 weeks	Renovation complete in less than 6 weeks.	Home owner, general contractor.
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Cost:

\$30,000	Cost no more than \$30,000	Home owner, general contractor.
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Other:

Use energy efficient and durable equipment, appliances, and materials.		
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Summary Milestones	Due Date
Design Complete	6/7/16
Demolition Complete	6/16/16
New material and equipment installed	7/26/16
Excess material removed and disposed of	7/29/16
Equipment tested for proper function	8/4/16
Project signed over to customer	8/5/16

PROJECT CHARTER**Estimated Budget:**

\$30,000

Stakeholder(s)	Role
Customer	Homeowner
General Contractor	Selection of subcontractors. Tracking of schedule and budget.
Designer	Design an energy efficient and durable kitchen that is useable by a family of 5.
Subcontractor	Complete contracted work to a level that meets local and state codes
City Inspector	Ensure that the construction of the new kitchen meets all local and state codes.
Loan Officer	Determine eligibility of Homeowners for a loan for the requested budget amount.

Project Manager Authority Level**Staffing Decisions:**

The project manager is authorized to hire or release any subcontractor that is needed to complete the work as requested or the fails to meet the desired safety and quality level of their work.
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Budget Management and Variance:

The project manager is authorized to distribute funds to the subcontractors to complete their work as long as it fits in the predetermined budget. Funds may be reallocated within the budget, but additional funds must be authorized by the customer.

Technical Decisions:

The project manager is authorized to make decisions regarding the type and use of equipment that is used or purchased for the project. Changes to the design of the kitchen must be approved by the project designer.

Conflict Resolution:

The project manager is authorized to make decisions in order to alleviate any conflicts between the customers wants and the project status.

Approvals:

Project Manager Signature

Sponsor or Originator Signature

Project Manager Name

Sponsor or Originator Name

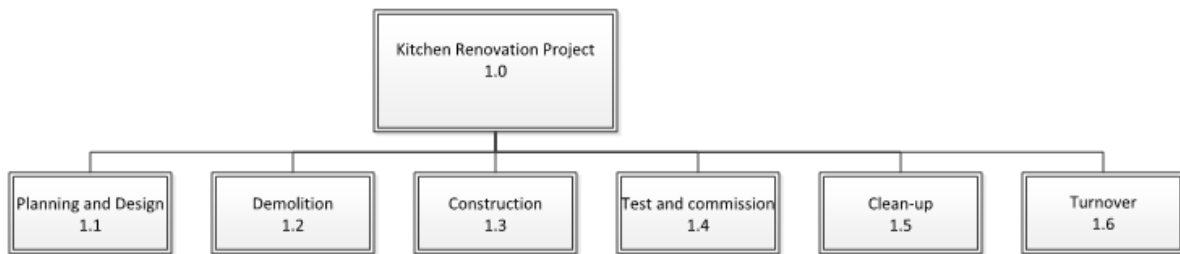
Date

Date

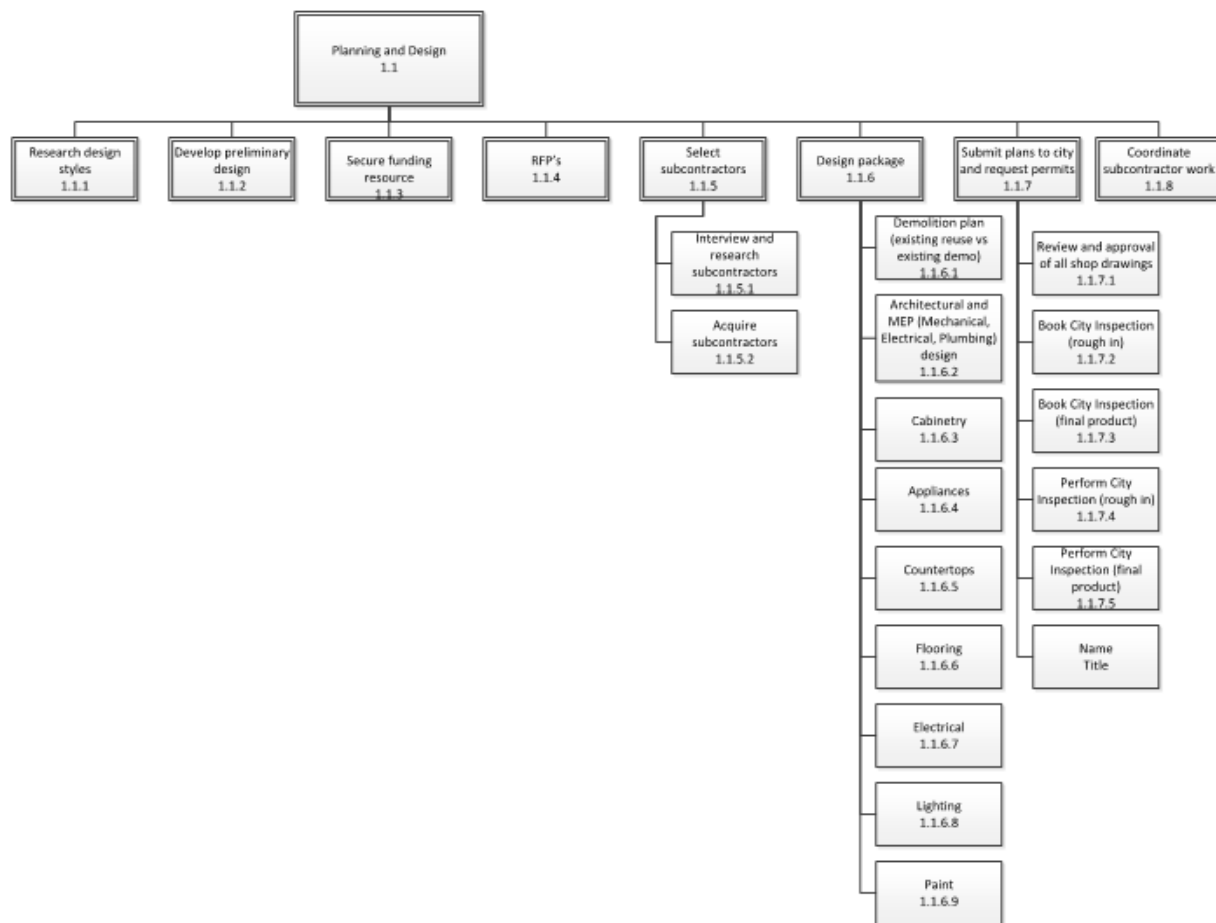
APPENDIX B

Work Breakdown Structure Tabular View

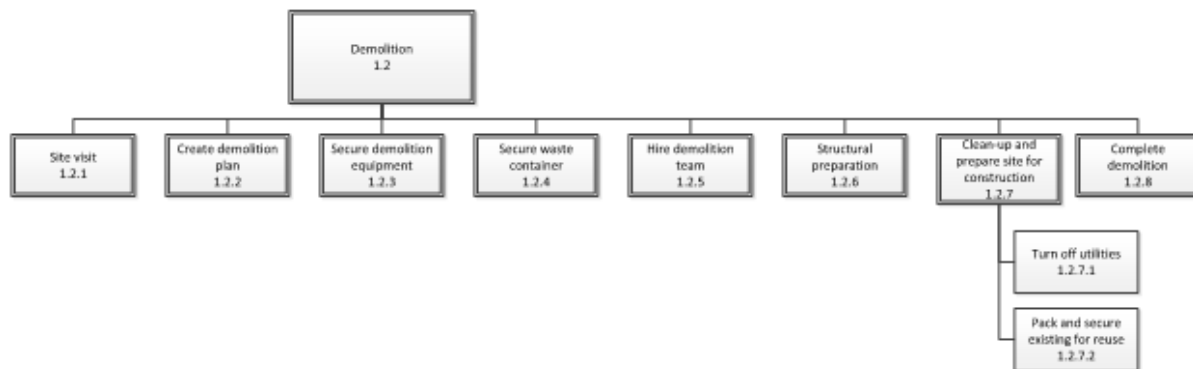
WBS Top Level:



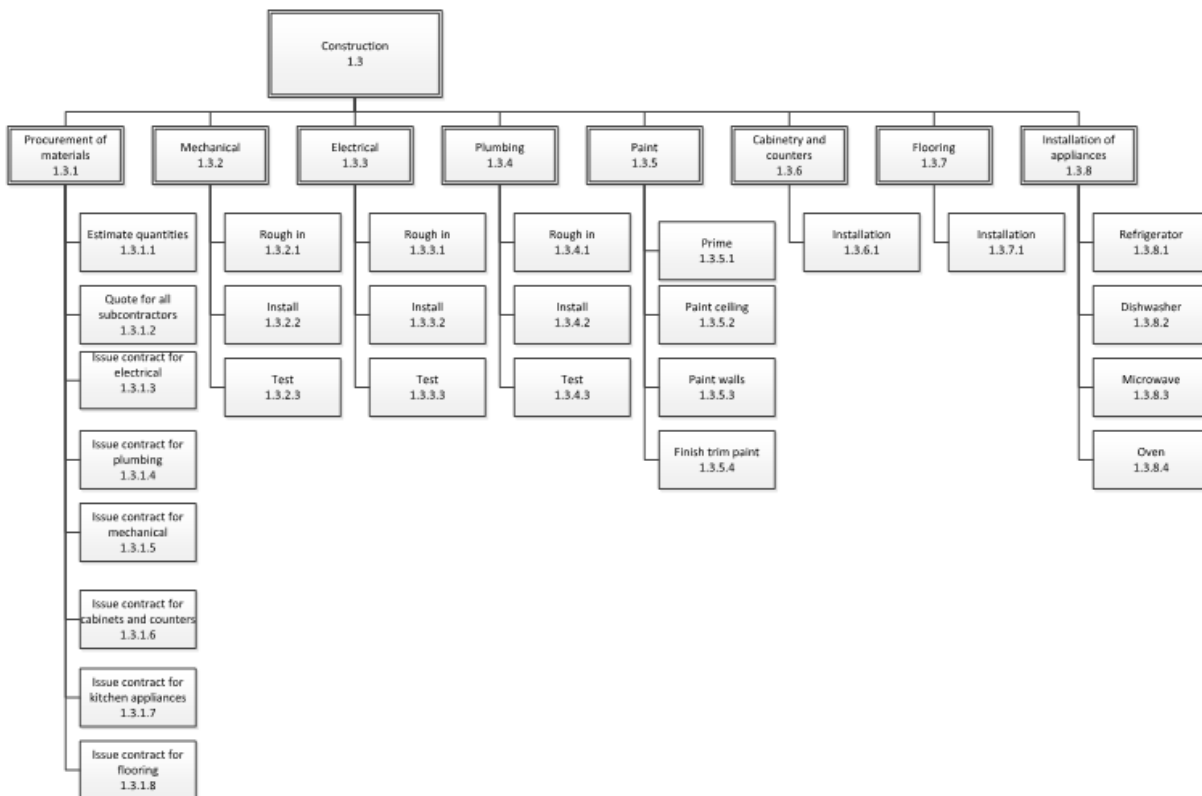
WBS Level 1.1 Planning and Design:



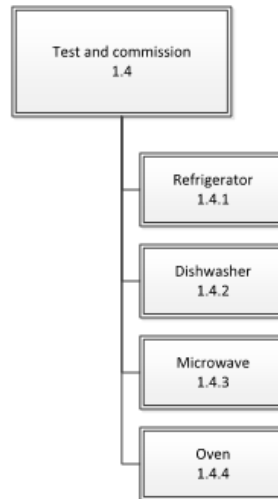
WBS Level 1.2 Demolition:



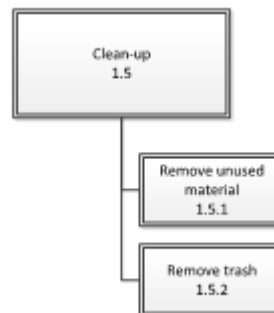
WBS Level 1.3 Construction:



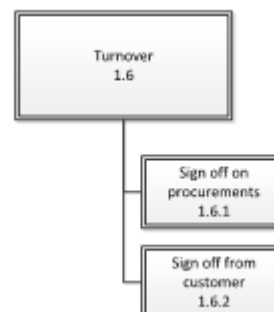
WBS Level 1.4 Test and Commission:



WBS Level 1.5 Clean-up:



WBS Level 1.6 Turnover:



APPENDIX C

Network Diagram

Network diagram Forward Pass & Backward Pass:

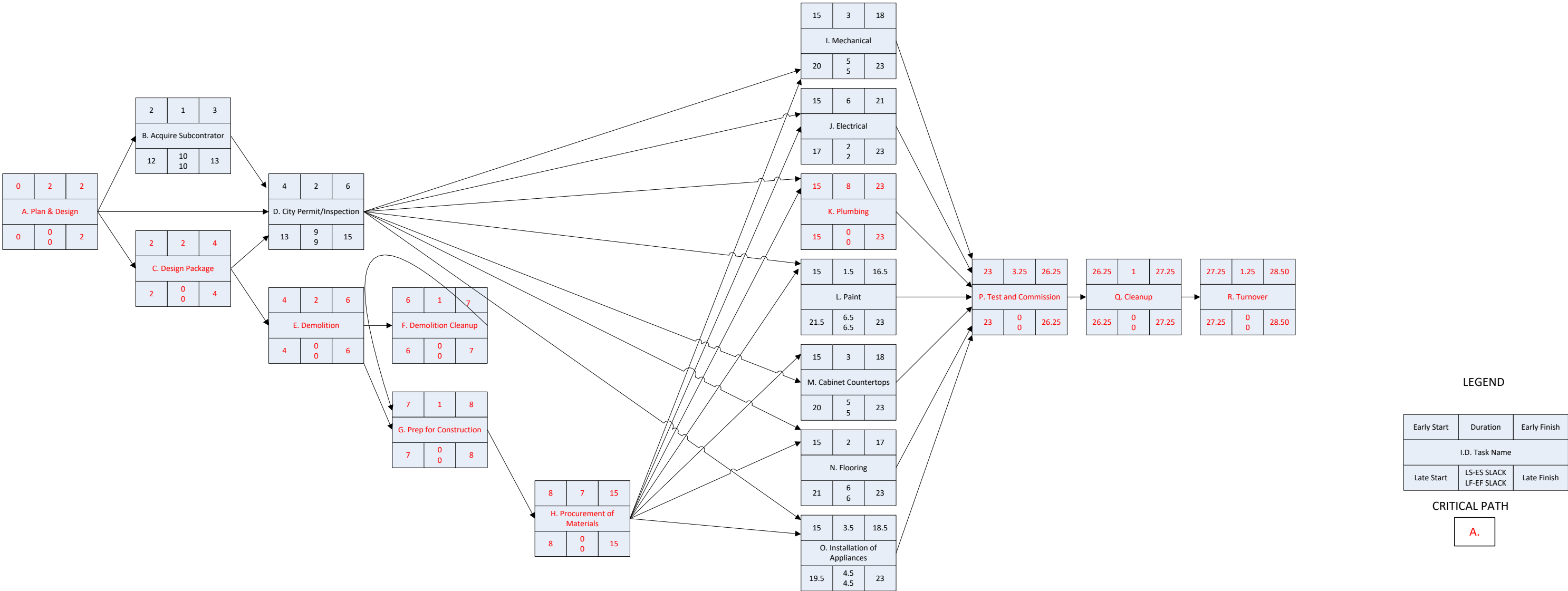


Figure 4:Network Diagram Forward Pass & Backward Pass

APPENDIX D

Quality Plan

QUALITY MANAGEMENT PLAN

Project Title: Kitchen Renovation **Date Prepared:** 06/22/2016

Table 9: Quality Program Personnel Roles, Responsibilities, and Authorities

Quality Program Roles, Responsibilities, and Authorities	
Role	Responsibilities and Authorities
Project Office	<ul style="list-style-type: none"> • Provide centralized guidance of the Quality Management Plan (QMP) • Support the general contractor in managing the project • Ensure quality management plan is developed at project inception, implemented and updated, as necessary, throughout the life of the project • Ensure verification, validation, monitoring and test activities are planned, performed, and documented, as appropriate • Ensure that project quality records are maintained and readily retrievable • Identify project resource requirements, including regulatory requirements and any additional homeowner requirements • Provide periodic checks to ensure that only appropriately qualified personnel perform or verify work • Responsible for technical approval of deliverables
General Contractor	<ul style="list-style-type: none"> • Manage subcontractors work • Implement the Quality System at the project level • Request and provide adequate resources to fulfill project requirements • Ensure homeowner requirements are understood, defined, and documented • Ensure design plan are planned, performed, and documented • Ensure that all design changes are identified, documented, reviewed, and approved • Ensure subcontractors works with latest versions of applicable documents, and that obsolete documents are retrieved and replaced or properly marked • Ensure homeowner-supplied material (product or equipment), is properly handled and maintained • Ensure that only appropriately qualified personnel perform or verify work • Ensure that each member of the project team has assigned responsibilities which contribute to fulfillment of the activities defined in the management plan

Subcontractors	<ul style="list-style-type: none"> • Perform or verify work relating to the delivery of services to the homeowner in accordance with the management plan and QMP • Share in the responsibility for the quality of those services • Responsible for technical review of work products and deliverables • Participate in or support design reviews • Initiate action to prevent the occurrence of any non-conformities relating to product, service, process, and the quality system • Identify and record any problems relating to the product, service, process, and the quality system • Initiate, recommend, or provide solutions through designated channels • Stop further processing, delivery, or installation of non-conforming products or services until the deficiency or unsatisfactory condition has been resolved
Credit Union/Loan Officer	<ul style="list-style-type: none"> • Ensure homeowners can afford renovations by completing credit checks and budget report • Provide funding for renovations • Provide financing options to borrowers • Request a copy of home inspection report
Homeowners	<ul style="list-style-type: none"> • Consult with financial advisor to evaluate cost and financing options • Hire reputable contractor who specializes in home/kitchen renovations • Ensure contractor has enough workers compensation and liability insurance in the event of unforeseen accidents • Ensure insurance covers new renovation • Research subcontractors
Designer	<ul style="list-style-type: none"> • Documents the process for design and development planning and execution • Establishes requirements with General Contractor to ensure design compatibility with house blueprints • Obtains all requirements and develops design which satisfies Homeowner's wants
City Inspector	<ul style="list-style-type: none"> • Ensure general contractor has obtained all applicable permits • Ensure work is being done according to city and state code • Point out violations • Visit site during first phase of construction to make initial inspection • Inspect structural quality and safety of building • Inspect plumbing • Examine for fire safety • Ensure alterations are performed correctly • Follow up with additional inspection during each phase

Quality Assurance Approach

The Project Office and General Contractor will ensure that the subcontractors that are selected to perform the work are capable of completing the work to a standard that is acceptable to the homeowner and city inspectors. Additionally they will ensure the processes being audited during any quality function meet all quality standards. Quality audits will be used to determine if project activities comply with the policies, processes, and procedures set out by the Project Office and General Contractor. See Table 1-2 for the Quality Audit form, and Table 1-3 for Quality Program Deficiencies/Defects to report any WBS I.D. that is having issues and the planned action to fix.

Quality Control Approach

The project office is committed to implementing a Quality Control Plan (QCP) to ensure the satisfactory completion of the homeowner requirements to build an updated kitchen. The policies set forth enable the project office to establish a measurement system to meet the homeowner's requirements and expectations.

The project office will use various methods of monitoring performance. These methods include scheduled and unscheduled Quality Control inspections and audits to ensure project team performance is maintained.

See Table 1-4 for Quality Control Inspections and Responsibilities which summarizes the areas to be inspected, performance standards, methods of surveillance, and person responsible for conducting the inspection. Records will be maintained by Project Office and The General Contractor.

Quality Improvement Approach

The project office continually improved the effectiveness of the QMP through the review of the Quality Policy and Goals. Continual improvement opportunities can result from lessons learned and best practices. The project office monitors all activities via the General Contractor through Quality Audits to evaluate the effectiveness of the results.

Table 10: Quality Audit Form

Project Auditor: _____ **Audit Date:** _____

Area Audited

<input type="checkbox"/> Project	<input type="checkbox"/> Project processes	<input type="checkbox"/> Project documents
<input type="checkbox"/> Product	<input type="checkbox"/> Product requirements	<input type="checkbox"/> Product documents
<input type="checkbox"/> Approved change implementation	<input type="checkbox"/> Corrective or preventive action implementation	<input type="checkbox"/> Defect/deficiency repair
<input type="checkbox"/> Quality Management Plan	<input type="checkbox"/> Organizational policies	<input type="checkbox"/> Organizational procedures

Good Practices to Share

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Areas for Improvement

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Table 11: Quality Program Deficiencies/Defects

ID	Defect	Action	Responsible Party	Due Date

Table 12: Quality Control Inspections and Responsibilities

Area	Performance Standards	Surveillance Method	Responsible Party
Quality Performance	All personnel performing in accordance with defined processes	<ul style="list-style-type: none"> Scheduled and unscheduled audits Periodic monitoring 	<ul style="list-style-type: none"> Project Office General Contractor
Deliverables	Weekly status and financial reports delivered IAW Statement of Work (SOW) / Request for Proposal (RFP)	<ul style="list-style-type: none"> Checklist 	<ul style="list-style-type: none"> Project Office General Contractor
Staffing	Adequate and experienced subcontractors must be maintained to assist general contractor	<ul style="list-style-type: none"> Daily Observation Checklist 	<ul style="list-style-type: none"> General Contractor
Cost	Burn rate IAW budget built on bid	<ul style="list-style-type: none"> Cost Reports Project Office reports General Contractor reports 	<ul style="list-style-type: none"> Project Office General Contractor
Schedule	Per guidance (Project template) set out from Project Office and General Contractor	<ul style="list-style-type: none"> Closely monitor that reports submitted meet proposed/ accepted WBS Adhere to Management Plan 	<ul style="list-style-type: none"> Project Office General Contractor

Table 13: Quality Program Metrics

[illegible]

APPENDIX E

Change Request Form

CHANGE REQUEST FORM

Project Title: Kitchen Renovation Project Date Prepared:

Person Requesting Change: Change Number:

Category of Change:

- ☐ Scope
- ☐ Quality
- ☐ Requirements
- ☐ Cost
- ☐ Schedule
- ☐ Documents

Detailed Description of Proposed Change

Justification for Proposed Change

Impacts of Change

Scope	<input type="checkbox"/> Increase	<input type="checkbox"/> Decrease	<input type="checkbox"/> Modify
Description:			

Requirements	<input type="checkbox"/> Increase	<input type="checkbox"/> Decrease	<input type="checkbox"/> Modify
Description:			

Cost	<input type="checkbox"/> Increase	<input type="checkbox"/> Decrease	<input type="checkbox"/> Modify
Description:			
Schedule	<input type="checkbox"/> Increase	<input type="checkbox"/> Decrease	<input type="checkbox"/> Modify
Description:			
Stakeholder Impact	<input type="checkbox"/> High risk	<input type="checkbox"/> Medium risk	<input type="checkbox"/> Low risk
Description:			

Project Documents Affected

Comments

Disposition

☐

Approve

☐

Defer

☐

Reject

Justification

Change Control Board Signatures

Name	Role	Signature

Date: _____

APPENDIX F

Resource Calendars

