UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

PROJECT MANAGEMENT PLAN FOR BUILDING A CREMATORY AND
FUNERAL HOME IN BELIZE

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FINAL GRADUATION PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
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DEDICATION

This research is dedicated to my parents, Oscar, and Lesly Melgar, for giving me their unconditional support, and motivation to keep going and growing academically and professionally. For never letting me give up on my goals. Also, to my cousin Johana Melgar for staying beside me through this process.

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ABBREVIATIONS AND ACRONYMS

- AC   Actual Cost
- BPO   Business Process Outsourcing
- CBA   Central Building Authority
- CEO   Chief Executive Officer
- CFO   Chief Financial Officer
- CPI   Cost Performance Index
- CV   Cost Variance
- EV   Earned Value
- EVM   Earned Value Management
- FGP   Final Graduation Project
- GOB   Government of Belize
- PV   Planned Value
- RBS   Risk Breakdown Structure
- SPI   Schedule Performance Index
- SV   Schedule Variance
- WBS   Work Breakdown Structure

EXECUTIVE SUMMARY (ABSTRACT)

ABC Marketing Services Company has been providing marketing and Business Process Outsourcing Services for over 20 years. All these years the company has prioritized the BPO industry and has focused to grow and become a leading company in the industry by providing services specifically in Latin America, USA, Canada, and Europe. The company decided that it was time to explore and invest in a new industry, the construction industry.

The real concerned for this project was the lack of experience the company had related to constructions projects. The investment was high, and the experience in the topic extremely low, leading to a high possibility of errors if not careful. After deep analysis, the need for a private funeral home and crematory in Belize that would offer its services to the entire country (since Belize is small country and easy to travel), was pointed and evaluated. Some of the supporting points were that there was not a funeral home in Belize that offered full services and the demand in the country was high. The Chief Executive Officer along with the Chief Financial Officer and Chief Operations Officer placed high hopes on this project and considered it to be a successful investment with a high ROI.

The Final Graduation Project general objective is to elaborate a Project Management Plan for the building of a crematory and funeral home in Belize, ensuring a sustainable, efficient, and organized management of project's resources. The specific objectives were: to create the project charter and formally authorize the existence of the project, to create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work, to elaborate a Schedule Management Plan to ensure that each task is completed on time thus contributing to timely the completion of the project on time, to develop a Cost Management to ensure that project stays within budget, to create a quality management plan in order to establish specific requirements of material to meet expected quality level, to create a Resources Management Plan in order to assign different task to different teams or individuals, depending on their skills, to elaborate an effective communication management plan to define communication strategies and patterns to develop a risk management plan in order to identify the different risks that could impact their project, as well as their level of impact, to create a procurement management plan in order to select the most efficient and convenient suppliers, in order to meet project's expected quality, timeframes and budget, to elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project.

The methodology used to carry out this research was analytical and interview method. The information sources for the research were company's documents, PMI 6th edition, and information gathered from different interviews with general

manager, financial manager, and project's engineer. The information gathered was then analyzed and used to develop the different management plans for each objective, being the Project Management Plan the end product.

As a result of the Final Graduation Project, a project management plan was developed through the elaboration of ten sub-management plans that targeted each one of the objectives. The project charter was the first one developed which has the approval and authorization of the project sponsor to start project. The scope management plan detailed the scope of work for this specific project to ensure desirable deliverables and avoid doing unnecessary work. The schedule management plan and cost management plan defined the activities as well as the cost of each of these activities; thus, delivering a project schedule with time frames as well as proposed budget for the project, respectively. The quality management plan helped to establish the required quality standards to meet stakeholders' expectations. The resource management plan was developed to determine the process use to select the team, as well as to establish the authority flow during the project. The communication management plan determined what information should be shared with each stakeholder as well as the source that will be used. The risk management plan identified the different risks as well as its impact and probability it may have on the project to prepare a response plan. The procurement management plan developed the criteria to choose suppliers and subcontractors for the project. Finally, the stakeholder management plan identifies each stakeholder and their level of power and interest, to determine their involvement in the project.

As conclusion once the project charter has been authorized, the scope management plan can be used as a project map. To achieve the scope of work, the schedule management plan has identified the different activities and coordinated the sequence, assigning each activity a determined cost defined by the cost management plan. The quality management plan will ensure that stakeholders' quality is achieved. The resource management plan will ensure that the authority pattern be respected, elaborate safety and rewards measures. The communication management plan ensures the flow of the correct information. The risk management plan prepared response plans for different risks to reduce impact or eliminate it. The procurement management plan ensures that qualified suppliers and experienced subcontractors are hired. Finally, the stakeholder management plan identified project's stakeholders and designed plan to ensure satisfaction.

It is recommended that ABC Marketing Services research similar projects done in other countries to minimize risks and mistakes. It would also be of great asset to hire a full-time team based on required skills and expertise to increase success rate. Most importantly the team should document the project to use as a guide for future. The stakeholder, risk, communication, and quality plans should be constantly reviewed due to possible changes during project.

1. INTRODUCTION

1.1. Background

Belize is a small country with a rapidly growing population which is leading to the increase in demand of public facilities such as hospitals and cemeteries. Many investors and entrepreneurs have seen the business opportunity in the current situation and have invested in the building of private hospitals, which are currently operating. However not much has been done for the funeral services sector.

The country currently has only one private crematory, that also offers extremely limited funeral services, and no private cemeteries in the entire country. After analyzing such information, ABC Marketing Services, has decided to invest in the building of a Funeral home that can offer all services related to funerals including a crematory room and private cemetery.

For the past 20 years, ABC Marketing Services has specialized in the BPO industry only. This will be the first time that the company will venture in a project from a different type of industry. The idea is to create the first project of its kind in the country, and increase the company's revenues, while expanding to different industries other than the BPO industry.

1.2. Statement of the problem

ABC Marketing Services has limited to no experience at all in construction projects.
If the project is not planned and organized well, it will strongly impact the
company's finances (investment), as well as the expected quality and timeframe of
the project.

1.3. Purpose

The purpose of this project is to create a Project management Plan that will help to
efficiently and effectively manage the building of a crematory, funeral home and
private cemetery, while staying within budget, timeframe, and meet expected
quality.

Some of the expected benefits in developing a project management plan will be:

- Effective Communication

- Mitigation of Risk levels

- Defined and scheduled tasks

- Efficient utilization of resources Resourcees is that it will help to have
  defined tasks, closed monitoring of resources utilization, and risk level
  reduction.

1.4. General objective

Elaborate a Project Management Plan for the building of a crematory and funeral
home in Belize, ensuring a sustainable, efficient and organized management of
project's resources.

1.5.   Specific objectives

1. To create the project charter to formally authorize the existence of the project, as well as define specific project's outcome and project manager's authority to carry out project.

2. Create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work.

3. Elaborate a Schedule Management Planto ensure that each task is completed on time thus contributing to timely the completion of the project on time.

4. Develop e a Cost Management to ensure that project stays within budget

5. Create a quality management plan in order to establish specific requirements of material to meet expected quality level

6. Create a Resources Management Plan in order to assign different task to different teams or individuals, depending on their skills.

7. Elaborate an effective communication management plan to define communication strategies and patterns.

8. Develop a risk management plan in order to identify the different risks that could impact their project, as well as their level of impact

9. Create a procurement management plan in order to select the most efficient and convinient suppliers, in order to meet project's expected quality, timeframes and budget

10. Elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

ABC Marketing services began call center services in 1996, focusing in offering its services to help connect businesses with their English, Spanish and Portuguese markets in the U.S, Canada, Europe and abroad. Hundreds of successful campaigns have been launching in its user-friendly destinations in Mexico, Belize, El Salvador, Brazil, and other countries from Latin America.

The company has never before venture in any project that is not related to BPO, however they have seen the potential of the crematory and funeral home project and have decided to create a different department to manage the construction of the funeral home.

2.1.2 Mission and vision statements

Mission Statement

To become a leading company in the BPO industry by providing excellent and affordable call center services to our clients around the world with the effective use of innovation and technology. Through job opportunities we want to benefit our community; while motivating our employees to grow professionally and create a secured and fun environment where they can feel inspired to maximize their abilities and talents. Always ready and open to potential opportunities, thus

promoting good decision making to maximize profit and ensure company's continuity (ABC Marketing Services Corp Ltd, 2017).

Vision Statement

To provide our clients around the world with affordable and tailored services while ensuring to meet their requirements and exceed their expectations with the help of innovation and technology (ABC Marketing Services Corp Ltd, 2017).

Once the company decides to start the construction project, their Mission and Vision would need to be reviewed to include the addition of services as well the new industry addition to the company.

2.1.3 Organizational structure

ABC Marketing Services is small company with only 20 employees' total. There are two main divisions in the company the Financial Division, and the General Division. The Financial Division is represented by the CFO and managed by the Financial Manager. The Finance Division is responsible to authorize, approve or reject the different financial transactions. If he Finance division does not agree with an expense or investment, they hold full authority to reject proposal, or deny providing funds.

The General Division is represented by the COO and managed by the General Manager. Under the General Division there are 4 departments: HR Department,

Operations, Accounts, and the I.T department. The Accounts Department is responsible for the management of all the clients we represent. The accounts manager main job is to make sure that we are meeting clients' expectations and that they are happy with the service that our company provides for their business. Account manager works closely with operations manager, since the main job of the operations manager is to make sure that employees are producing and meeting expectation standard.

Below, **Figure 1** shows a visual example of the organization structure being led by the CEO, as well as the divisions and head of departments.
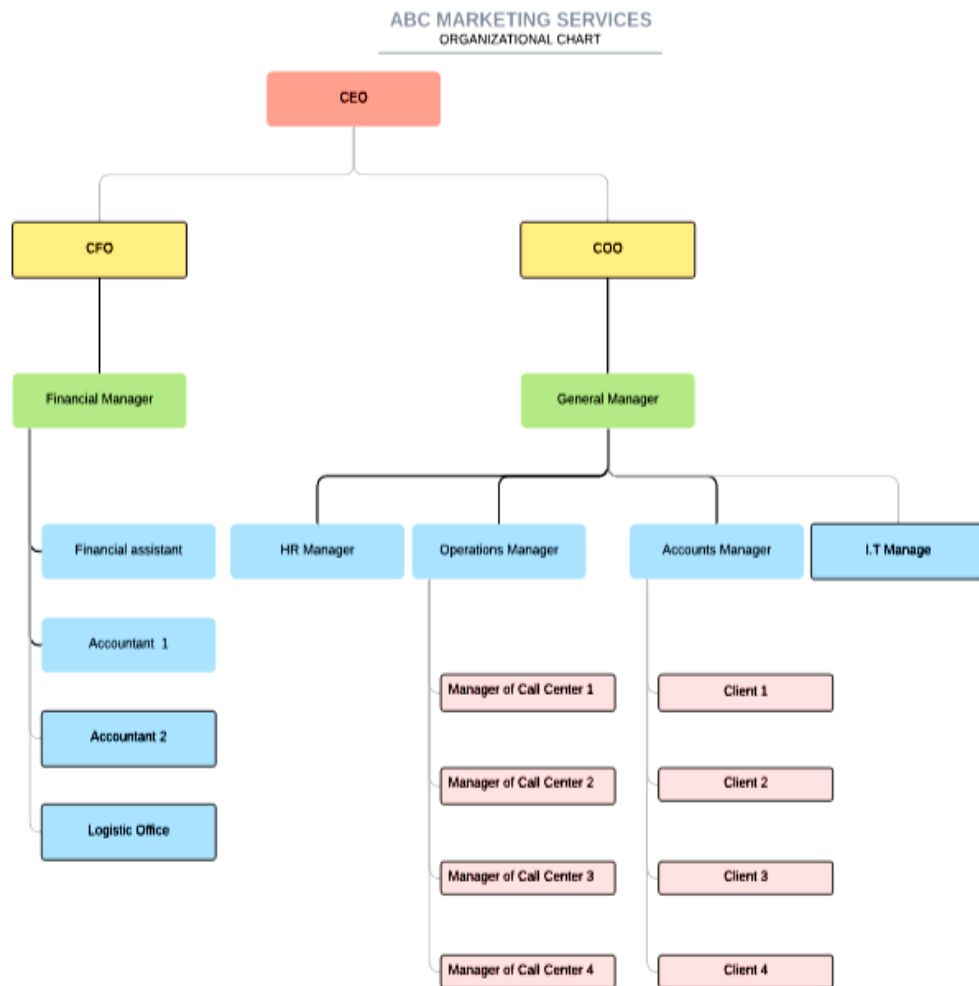
Figure 1 Organizational structure of ABC Marketing Services (Compiled by Autor)

Once the construction begins, the company is planning to add a new division to the organizational structure. However, it is still under discussion.

2.1.4 Products offered

ABC Marketing services provides call center services such as Service Desk Outsourcing, Lead Generation Services, Market research services, Outsourced customer service, and Technical support services.

It is particularly important to understand that none of the services provided by ABC Marketing Services is related to construction. Due to the limited experience in construction, careful planning and organization will need to be done before starting the project. Therefore, it is important to carry out each specific objective carefully because each management plan that will be created (such as cost, time, communication, ect) will serve as a guide for project's success.

2.2 Project Management concepts

2.2.1 Project

According to the PMI, a project can be defined as a temporary endeavor undertaken to create a unique product, service, or result (2017)

Since projects are just a temporary endeavor, it should always have a start date as well as an end date. Projects may produce deliverables of a social, economic, or environmental nature, and their deliverables may exist beyond the end of the project (PMI, 2017)

2.2.2 Project management

Project Management can be defined as the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project Management is accomplished through the appropriate application and integration of the project management processes identified for the project. Project management enables organizations to execute projects effectively and efficiently (PMI, 2017).

Project management requires the development of a project management plan in order to clearly define project's objectives and a plan to help achieve them. Since each project has a start and end date, the project must be broken down into tasks with a set timeframe and budget.

The project management plan is a formal, approved document that defines how the project is executed, monitored, and controlled; and it may be a summary or a detailed document and may include baselines, subsidiary management plans, and other planning documents (Simplilearn, 2020).

In this specific project that ABC Marketing Services wants to develop, a project management plan will be of great necessity since the company has little to no experience at all in the construction industry. A project management plan will help to efficiently and effectively manage project's budget, resources, time and quality to achieve a successful outcome.

2.2.3 Project life cycle

A Project life cycle is the series of phases that a project passes through from its start to its completion (PMI, 2017). A project. The standard framework of the project life cycle consists of four phases. **Figure 2** shows the different four phases and how each one interacts with one another.

Figure 2 Project life cycle phases (What is project life cycle and its Main Characteristics, 2020)

A project phase is a collection of logically related project activities that culminates in the completion of one or more deliverables (PMI, 2017).

Project Initiation Phase – involves defining the project as well as giving it a name. Main stakeholders and sponsors are recognized and either reject the project or

decide to come on board. During this phase, a project charter is normally created in order to get the project approved and it can formally start.

Project Planning Phase – involves developing plans for the different knowledge areas that are applicable to the specific project. These plans include, cost management plan, Time management plan, Scope management plan, communication management plan, Resources management plan, Risk Management Plan, Procurement Management plan, Stakeholder management plan, and Integration Management Plan. This phase also involves developing schedule, and Work breakdown structure.

Project Execution Phase – Here is where the actual work is carried out by following the work plan that was developed previously. At this phase deliverables will be produced and completed.

Project Closing Phase – At this phase, the closing details needs to be taken cared of, such as finalizing contract with suppliers, product, closing remarks to team ect.

Figure 3 below summarizes the information above. It shows the different activities that happen under each phase.
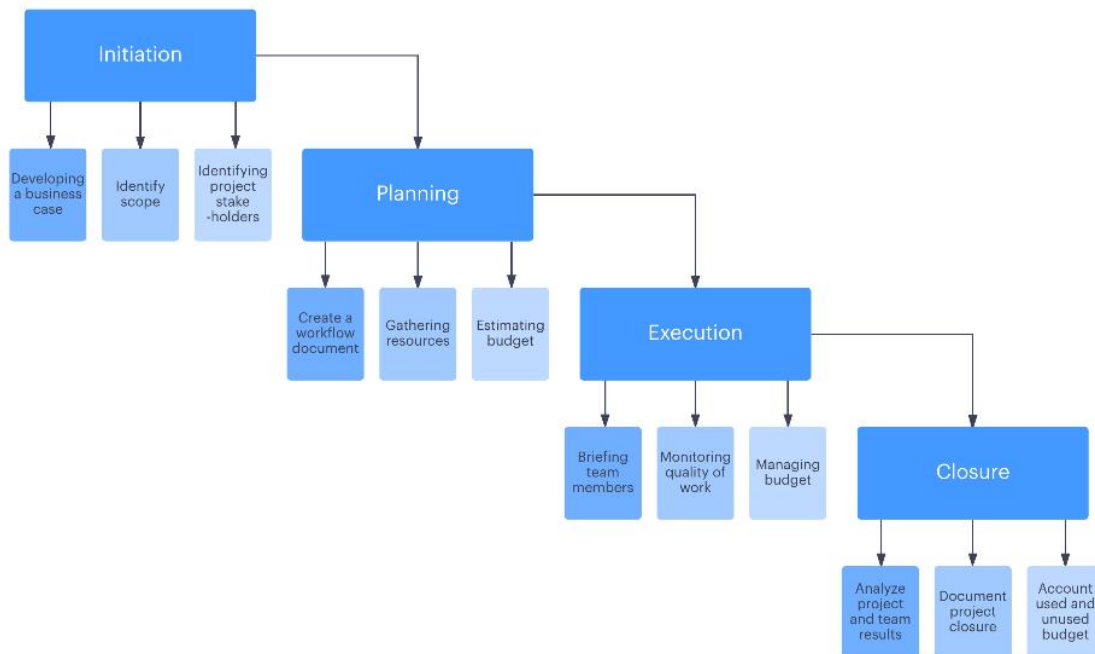
2.2.4 Project management processes

The Project life cycle is managed by executing a series of project management activities known as project management processes. Every project management process produces one or more out puts from one or more inputs by using appropriate project management tools and technique. The output can be deliverable or an outcome (PMI, 2017).

A project consists of countless processes, from defining a project, to creating a budget, to compiling statistics. There are, in fact, 49 identifiable processes, according to the PMI Guide. All these different processes, however, can be grouped into 5 categories called the 5 process groups. The 5 process groups

comprise a project's life cycle, from beginning to completion (Oxbridge Academy, 2020).

These 5 processes groups are called initiation, planning, execution, monitoring and controlling, and closure. **Figure 4** below shows the key activities under each project Management Process.
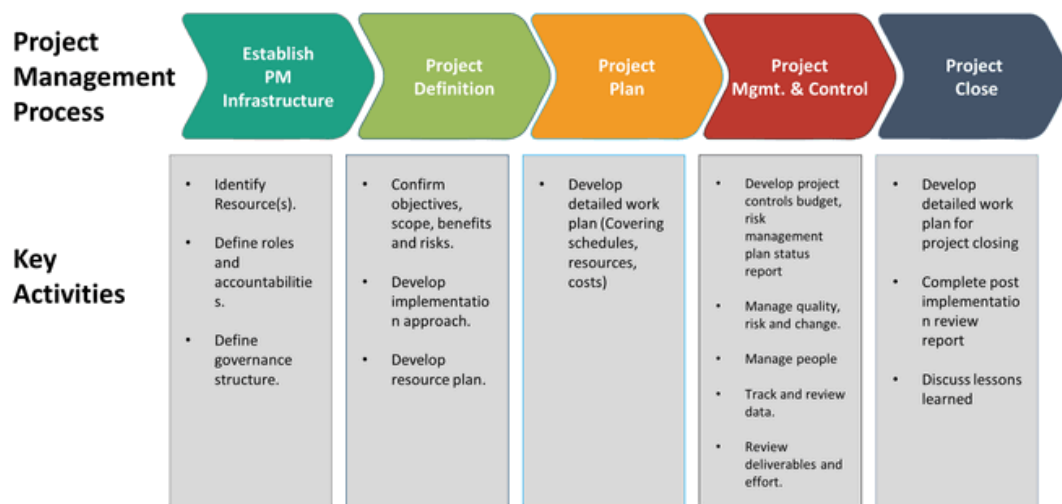
Figure 4 Key Activities Under Each Project Management Process (SketchBubble, 2020)

According to PMI Project Processes may contain overlapping activities that occur throughout the project; the output of one process generally results in either an input to another process or a deliverable of the project or project phase (2017).

Figured 5 below shows how the different process groups interact within one another in a phase or project.
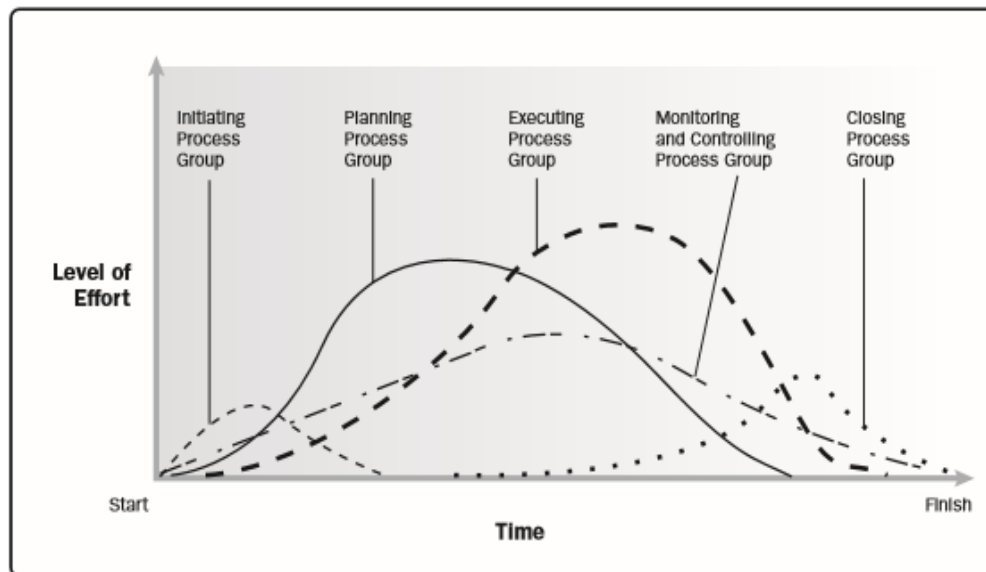
Figure 5 Process Group Interactions Within a Project or Phase (PMI, 2017)

2.2.5 Project management knowledge areas

The PMI defines project management knowledge areas as the fields of areas of specialization that are commonly employed when managing projects; and defines a knowledge area as a set of processes associated with a particular topic in project management (2017)

There are 10 knowledge areas that are used in project management. **Figure 6** shows the 10 knowledge areas as well as some of the activities that each knowledge area entails:

- ◆ **Project Integration Management.** Project Integration Management includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups.

- ◆ **Project Scope Management.** Project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.

- ◆ **Project Schedule Management.** Project Schedule Management includes the processes required to manage the timely completion of the project.

- ◆ **Project Cost Management.** Project Cost Management includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so the project can be completed within the approved budget.

- ◆ **Project Quality Management.** Project Quality Management includes the processes for incorporating the organization's quality policy regarding planning, managing, and controlling project and product quality requirements, in order to meet stakeholders' expectations.

- ◆ **Project Resource Management.** Project Resource Management includes the processes to identify, acquire, and manage the resources needed for the successful completion of the project.

- ◆ **Project Communications Management.** Project Communications Management includes the processes required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information.

- ◆ **Project Risk Management.** Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project.

- ◆ **Project Procurement Management.** Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team.

- ◆ **Project Stakeholder Management.** Project Stakeholder Management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution.

Figure 6 Ten Project Management Knowledge Areas (PMI, 2017)

2.2.5.1 Project Management Integration

includes the processes and activities to identify, define, combine, unify and coordinate the various processes and project management activities within the project management process groups (PMI, 2017).

2.2.5.2 Project Scope Management

Focuses and define only the work that needs to be done. This way the team focuses on getting done what is required, and resources and better manage this way, since there is not wasted in work that is not required.

2.2.5.3 Project Schedule Management

Applies the required processes to manage the timely completion of the project (PMI, 2017).

2.2.5.4 Project Cost Management

Makes sures that project is finished within set budget. Includes processes such as planning, estimating, budgeting, financing, funding, managing, and controlling costs so the project can be completed within the approved budget (PMI, 2017).

2.2.5.5 Project Quality Management

Focusing on meeting stakeholders' product expectation by setting quality standards.

2.2.5.6 Project Resource Management

Helps to manage resources efficiently. Its main function is to identify resources, followed by the acquisition of the selected resources and lastly managing them effectively.

2.2.5.7   Project Communication Management

It plans effective communication during project, so all stakeholders are all informed of the progress.

2.2.5.8   Project Risk Management

Focuses on using processes that will identify potential risks as we as possible opportunities. It develops a plan for the most likely risks in order to mitigate their impact or eliminate it completely.

2.2.5.9   Project Procurement Management

Project procurement management includes the processes necessary to purchase or acquire products, services or results needed from outside the project team (PMI, 2017). A plan will be built will help find the most appropriate suppliers for the construction of the funeral home.

2.2.5.10 Project Stakeholder Management

Includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution (PMI, 2017). Identifying project stakeholders and identifying their specific role in the project will help to carry it out more effectively.

Since this project is about developing a project management plan for a crematory and funeral home in Belize, the 10 knowledge areas will be applied. A management plan will be created for each one of the knowledge areas. This will ensure that each area will be properly covered in the most effective way for this specific project.

2.3 Other applicable theory/concepts related to the project topic and context

2.3.1 Construction Project Management

Construction project management is the act of planning, organizing and overseeing the various tasks involved in a construction project. It is performed by individuals known as project managers, who represent the builder or contractor hired to perform the work. Construction project management is a complex task that changes dramatically from project to project. Employees working in this field will find that the requirements and processes of management will constantly shift depending on the specifics of the project (Beach, 2017).

2.3.2 Work Breakdown Structure

The process of subdividing project deliverables and project work into smaller, more manageable concepts (PMI, 2017). It provides a clear and organized framework of each task that needs to be accomplished

2.3.3 Project Charter

Project Charter provides the high-level project description and product

characteristics, as well as project approval requirements, measurable project

objectives, and related success criteria that will influence the quality management

of the project (PMI, 2017)

3. METHODOLOGICAL FRAMEWORK

3.1 Information sources

According to the Merriam Webster dictionary, information can be defined as knowledge obtained from investigation, study, or instruction (2020). The Cambridge Dictionary defines source as the place something comes from or starts at, or the cause of something (2020). After understanding the definition of both words, it can be concluded that Information source can be anything that provides and generates knowledge.

3.1.1 Primary sources

According to Ashikuzzaman primary sources are original materials on which other research is based (2020). They represent original thinking, report a discovery, or share new information (Ashikuzzaman, 2020).

For the development of the Final Graduation Project, the primary information sources that will be used are information gathered in meetings, individual interviews to key stakeholders as well as organization's records and documents.

3.1.2 Secondary sources

Secondary sources describe, discuss, interpret, comment upon, analyze, evaluate, summarize, and process primary sources. On Occasion, a secondary source will collect, organize, and repackage primary source information to increase usability and speed of delivery (Ashikuzzaman, 2020).

For the development of the Final Graduation Project, the secondary sources that will be used are the PMBOK and the PMI website.

Chart 1 Information sources

Objectives	Information sources	
	Primary	**Secondary**
1. To create the project charter to formally authorize the existence of the project, as well as define specific project's outcome and project manager's authority to carry out project.	Organization documents.	Project Management Body of Knowledge (PMI)
2. Create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work.	Interview meeting with General Manager and Financial Manager	Project Management Body of Knowledge (PMI)
3. Elaborate a Schedule Management Planto ensure that each task is completed on time thus contributing to timely the completion of the project on time.	Interview meeting with Engineer	Project Management Body of Knowledge (PMI)

Chart 2 Information Sources, Continued		
4. Develop a Cost Management to ensure that project stays within budget	Meeting with Engineer and Financial Manager	Project Management Body of Knowledge (PMI)
5. Create a quality management plan in order to establish specific requirements of material to meet expected quality level	Meeting with General Manager and Engineer	Project Management Body of Knowledge (PMI)
6. Create a Resources Management Plan in order to assigned different task to different teams or individuals, depending on their skills.	Meeting with Human Resource Department and Engineer	Project Management Body of Knowledge (PMI)
7. Elaborate an effective communication management plan to defined communication strategies and patterns.	Meeting with Engineer and Operations Manager	Project Management Body of Knowledge (PMI)
8. Develop a risk management plan in order to identify the different	Meeting with Engineer	Project Management Body of Knowledge (PMI)

Chart 2 Information Sources, Continued		
risks that could impact their project, as well as their level of impact		
9. Create a procurement management plan in order to select the most efficient budget and convinient suppliers, in order to meet project's expected quality, timeframes and	Meeting with Financial Manager and Engineer, as well as company documents concerning previous procurements.	Project Management Body of Knowledge (PMI)
10. Elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project	Meeting with General Manager	Project Management Body of Knowledge (PMI)

(N. Melgar, The Author, July 2020)

3.2 Research methods

According to the University of Newcastle, research methods are the strategies, processes or techniques utilized in the collection of data or evidence for analysis in order to uncover new information or create better understanding of a topic (2020). The following research methods will be used in the FGP:

3.2.1 Analytical method - Which involves the careful, systematic study of something (Cambridge Dictionary, 2020).

3.2.2 Interview – a meeting in which someone asks questions to someone to get information (Cambridge Dictionary, 2020).

Chart 2 below shows how the two research methods will be used on the FGP.

Chart 2 Research methods

Objectives	Analytical Method	Interview Method
1. To create the project charter to formally authorize the existence of the project, as well as define specific project's outcome and project manager's authority to carry out project.	Organizational documents will be used to develop the project charter	

Chart 2 Research methods, Continued		
2. Create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work.		Interview meetings with General Manager and Financial Manager will be done in order to get the necessary information to develop a scope that covers only the work that needs to be done.
3. Elaborate a Schedule Management Planto ensure that each task is completed on time thus contributing to timely the completion of the project on time.		Interview with Engineer in order to get in depth information of all the tasks that need to be done and develop a successful timeline.
4. Develop a Cost Management to ensure that project stays within budget	A budget will be develop using the authorized investment amount by financial manager.	
5. Create a quality management plan in order to establish specific		The quality plan will be developed using the information

Chart 2 Research methods, Continued		
requirements of material to meet expected quality level		gathered from the interview with General Manager on expected quality level of final product.
6. Create a Resources Management Plan in order to assigned different task to different teams or individuals, depending on their skills.	The plan will be created using the requested number of people by the project's engineer	The information gathers after talking to HR will also be used to develop this plan
7. Elaborate an effective communication management plan to defined communication strategies and patterns.	Operations Manager will provide the communication structure approved by engineer, which will be used to develop the communication plan	
8. Develop a risk management plan in order to identify the different risks that could impact their project, as well as their level of impact		Will develop the risk plan after having the interview with the engineer on potential risks that may impact the project.
9. Create a procurement	Procurement plan	

Chart 2 Research methods, Continued		
management plan in order to select the most efficient budget and convinient suppliers, in order to meet project's expected quality, timeframes and	will be develop using the company database on previous providers	
10. Elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project		The stakeholder's plan will be developed after General Manager provides list of main stakeholders in this project.

(N. Melgar, The Author, July 2020)

3.3 Tools

Tool is defined by the Cambridge dictionary as something that helps you to do a particular activity (2020). The tools required to complete the FGP are shown below **on Chart 3.**

Chart 3 Tools

Objectives	Tools
1. To create the project charter to formally authorize the existence of the project, as well as define specific project's outcome and project manager's authority to carry out project.	Project Charter Template
2. Create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work.	Document Analysis, Interviews, Work Breakdown Structure, Scope Management Plan
3. Elaborate a Schedule Management Planto ensure that each task is completed on time thus contributing to timely the completion of the project on time.	Microsoft Project 2016, Schedule Management Template
4. Develop a Cost Management to ensure that project stays within budget	Excel to calculate budget, reserve Analysis, Three-point estimating, and cost baseline, cost management plan
5. Create a quality management plan in order to establish specific requirements of material to meet expected quality level	Cost Benefit Analysis, Quality Management Plan Template

Chart 3 Tools, Continued	
6. Create a Resources Management Plan in order to assigned different task to different teams or individuals, depending on their skills.	Human resource management template, Definition of team members responsibilities
7. Elaborate an effective communication management plan to defined communication strategies and patterns.	Communication Management Plan
8. Develop a risk management plan in order to identify the different risks that could impact their project, as well as their level of impact	Risk Identification, Impact Matrix, Risk Management Plan
9. Create a procurement management plan in order to select the most efficient budget and convinient suppliers, in order to meet project's expected quality, timeframes and	Expert Judgement, Data Gathering, Data Analysis, Source Selection Analysis, Meetings
10. Elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project	Expert Judgement, Data Gathering, Data Analysis, Data Representation, Meetings

(N. Melgar, The Author, July 2020)

3.4 Assumptions and constraints

According to the Cambridge Dictionary, assumption is something that is accepted
as true without questions or proof; while constraint is something that controls what
is done by keeping within particular limits (2020).

The assumptions and constraints involve in the FGP are shown below in **chart 4**.

Chart 3 Assumptions and constraints

Objectives	Assumptions	Constraints
1. To create the project charter to formally authorize the existence of the project, as well as define specific project's outcome and project manager's authority to carry out project.	The Project charter will be the first document to be created.	Milestones deadlines may change which may impact schedule
2. Create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work.	The scope of work has been clearly defined by the company	Adding the private cemetery to the project is still under discussion
3. Elaborate a Schedule Management Planto ensure that each task is completed on time thus contributing to timely the completion of the project on time.	The timeframe set for the project is reasonable	Due to current global situation with COVID, project might take longer than expected

Chart 4 Assumptions and constraints, Continued		
4. Develop a Cost Management to ensure that project stays within budget	Cost Management plan will be within budget	If project do not meet timeframe deadline it will impact the cost management plan
5. Create a quality management plan in order to establish specific requirements of material to meet expected quality level	Quality management plan will meet stakeholders' expectations	Quality may vary if stakeholders differ in opinions.
6. Create a Resources Management Plan in order to assigned different task to different teams or individuals, depending on their skills.	Team's responsibilities will be identified and assigned.	If team is working part time in the project only, it might impact schedule.
7. Elaborate an effective communication management plan to defined communication strategies and patterns.	The communication plan will define the communication flow during the project	Communication pattern may not be respected if some team members join the project part time.
8. Develop a risk management plan in order to identify the different risks that could impact their project, as well as their level of impact	Risks will be identified as well as their level of impact	What might not be a risk today, may turn into one as the project progresses.
9. Create a procurement management plan in	Suppliers will	Company may

Chart 4 Assumptions and constraints, Continued		
order to select the most efficient budget and convinient suppliers, in order to meet project's expected quality, timeframes and	be selected through a supplier criterion	decide to use previous suppliers for project to keep the business relationships
10. Elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project	Stakeholders will be involved during the project	Stakeholders may lose interest in project as time progresses

(N. Melgar, The Author, July 2020)

3.5 Deliverables

Deliverable is defined by the Cambridge dictionary as something that can be

provided or achieved as a result of a process (2020). The deliverables that will be

developed on the FGP are shown on **Chart 5** below.

Chart 5 Deliverables

Objectives	Deliverables
1. To create the project charter to formally authorize the existence of the project, as well as define specific project's outcome and project manager's authority to carry out project.	Project Charter
2. Create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work.	Scope Management Plan
3. Elaborate a Schedule Management Planto ensure that each task is completed on time thus contributing to timely the completion of the project on time.	Schedule Management Plan
4. Develop a Cost Management to ensure that project stays within budget	Cost Management Plan
5. Create a quality management plan in order to establish specific requirements of material to meet expected quality level	Quality Metrics, Quality Management Plan
6. Create a Resources Management Plan in order to assigned different task to different teams or individuals, depending on their skills.	Team Charter, Resources Management Plan

Chart 5 Deliverables, Continued	
7. Elaborate an effective communication management plan to defined communication strategies and patterns.	Communication Management Plan
8. Develop a risk management plan in order to identify the different risks that could impact their project, as well as their level of impact	Risk Management Plan
9. Create a procurement management plan in order to select the most efficient budget and convinient suppliers, in order to meet project's expected quality, timeframes and	Source Selection Criteria, Procurement Statement of Work, Make or buy Decisions, Procurement Strategy, Procurement Management Plan
10. Elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project	Stakeholder Register, Stakeholder Management plan

(N. Melgar, The Author, July 2020)

4. RESULTS

4.1. Project Charter

The main objective in developing the project charter is to present to the company the need to carry out the crematory and funeral home project, as well as to get project sponsor's authorization to start the project.

Project Purpose

The purpose of the project is to build a facility that can offer all funeral and cremation services in the country of Belize. The idea is to provide majority of the funeral services to help reduce the weight and responsibility during such difficult times. The facilities will make it possible to have all funeral related events at one place such as chapels for religious ceremonies as well as reception halls. Also offering extra comfort such as private gathering areas to relax, and meeting room when needed for discussion.

Scope Statement

To build a facility that can be used for funeral events and offer all related services including a crematory room.

Business Objectives

1. Design a funeral home plan and submit for approval

2. Purchase Land for construction

3. Get all permits and licenses related to begin construction

4. Build a funeral home facility

5. Furnish and equip the facility

6. Get all necessary inspections and operating licenses

Estimated Schedule

Milestone Title	Milestone Description	Milestone Date
Start of Project	Project Initiates, all documents to be prepared accordingly	11 January, 2021
Design facility plan and submit for approval	The design will be developed by the architect within international guidelines for funeral home services	15 February, 2021
Purchase land property for project	Appropriate land to be chosen keeping in mind location, property values, environmental factors, etc.	30 March, 2021
Get approval from local authorities along with necessary permits and licenses to begin construction	Permits from all relevant Ministries to be acquired.	15 April, 2021
Facility Building	Construction company, work force and materials to be in-place for construction to be completed	30 May, 2022

Furnish and Equipment	Equipment and furniture to be in-line with international standards for funeral homes and the specific services they offer	01 July, 2022
Get operating licenses and inspections to run business	Business registration, operating licenses, health permits and any other permits for the business to become operational need to be acquired	09 September, 2022
End of Project	Project termination actions and appropriate documentation mark the end of the project	09 September, 2022

Estimated Budget

Resource Description	Estimated Cost (USD)
Initiation Cost	$3,200
Purchase of Land and inspection	$105, 000
Permits and temporary Set up	$18,000
Construction of facility	$191,200
Equipment	$140,145
Furnish	$40, 316.01
Final Inspection, Clean up and Operating licenses	$4,350
Initial Cost	$502,211.01
Contingency Reserve	$38, 237.44
Total Cost	**$540,448.45**

Assumptions

- The project promises to be the first of its kind in the whole country of Belize.

- With the rapid growth of the population, and the number of foreigners living in Belize, it is expected that funeral services will increases in demand over the coming years.

- It will take approximately 3 years to get return of investment

- It is assumed that the project will be completed in twenty (20) months

- It is assumed that the project will cost $540,448.45 USD

Constraints

- Budget constraints due to competing projects in the company that shows a higher and faster ROI.

- Project team members are part of other departments and other projects which may lead into project delay.

- Acquiring local permits and getting inspections' approval may delay project due to the high volume of work in the governmental departments.

- Bad weather may affect and delay the schedule of the project

Stakeholders

Name	Project Role	Organization
Gary Jones	Sponsor	ABC Marketing Services
Nohelia Melgar	Project Manager	ABC Marketing Services
Project Assistant Manager	Caroline Lopez	ABC Marketing Services
Joseph Fuentes	Architect	Contractor
Harry Daniels	Engineer	Contractor
Citizens of Belize	Community	Community
Government of Belize	Permits/Inspections	Government of Belize

Project Authorization

Date:_____

By initialling each page and signing below, I _____, the Project Sponsor, approve the project described herein and authorize it to begin.

ABC Marketing Services

By: _____

    Signature of Project Sponsor

    _____

    Project Sponsor Printed Name

4.2. Scope Management Plan

The Scope Management Plan ensures that all tasks in a project are covered, and

project from stakeholders, defining a scope statement, creating a work breakdown

structure, and defining a WBS dictionary are some of the processes required for a

scope management plan.

Requirements

ABC Marketing Services' main idea is to build a funeral home, that can offer

funeral and cremation services in the country of Belize. At the moment no design

or plan has been approved, however a draft design was created by the architect to

meet the executives' expectations, which was submitted to Operations and

Finance managers. The intention of creating a draft design is help determine an

approximation of budget needed for the project, as well as to create a timetable

and have an idea of the number of resources that would be needed.

Chart 6 Project Requirements

ID	Requirement	Priority	Category	Source	Objective	WBS Deliverable	Validation
0100	Affordable Project	High	Planning	Sponsor	Stay within investment budget	1	Forecasted Cost in Management Plan
0200	Accessible Location	Medium	Planning	Sponsor	Increase business success	3.1	Land Inspection Approval
0300	Strength and Stability (construction)	High	Building	Engineer	Safe and durable investment	4.1 4.2 4.3 5.1 5.2	Design Plan presented and approved
0400	Meet Government Standards	High	Legal Activities	Government of Belize	Approval to start construction	3.2	Signed Permits to start

Chart 6 Project Requirements, Continued							
0500	Certified Cremation/Fune ral Equipment	High	Purchasing and Hiring	Government of Belize	Ensure quality and safety	6.3.4	Expert's approval on equipment quality and certification
0600	Acquire required licenses to operate	High	Legal Activities	Project Manager	Operate legally	7.3	Obtain approved licenses from government office
0700	Reliable sub-contractors	High	Purchasing and Hiring	Project Manager	Efficiency with quality, cost, and schedule	1.9	Proposal approval and Selection

(N. Melgar, The Author, July 2020)

Scope Statement

The scope statement provides a detailed description of the fundamental or the primary objective that wants to be achieved in the project. At this point, no designed has been approved yet or formally submitted. However, a draft design was presented to Operations and management to simulate the expectations of the project as well as to come up with a budget and timeline for the project. Below are the specifications and details of the project.

- **Location for the construction of the funeral home**

The crematory and funeral home is expected to be built in the capital of Belize, Belmopan. It is the most accessible location for all the other districts in the country. At the moment the land has not been purchased, but there are three options that are being evaluated. The idea is to purchase a 0.5 acres of land, located in the hills of Agua Viva Village (10 minutes away from Belmopan), given that it is a very accessible location yet very peaceful and relaxing due to the nature that surrounds the village and the low amount of population.

- **Description of the Funeral Home Facility**

    Proposed size: The size of the funeral home facility is expected to be 600m2. It shall be one floor only and it will include the following:

    - 2 small chapels
    - Family Room

o   Casket Display Room

o   2 Lounges

o   Urn Display Room

o   Lobby

o   Foyer

o   2 Office Rooms

o   3 small storerooms

o   Equipment Room

o   Restrooms

o   Crematory Room

Proposed Duration: 20 Months

Start Date: January 10, 2020

Proposed Cost: $512, 211.01

Figure 7 below shows the first layout concept submitted for review (however it is still not approved yet). The cost and time calculated for the project was based on that design and layout.

Figure 7 Architectural Layout (Fuentes, 2020)
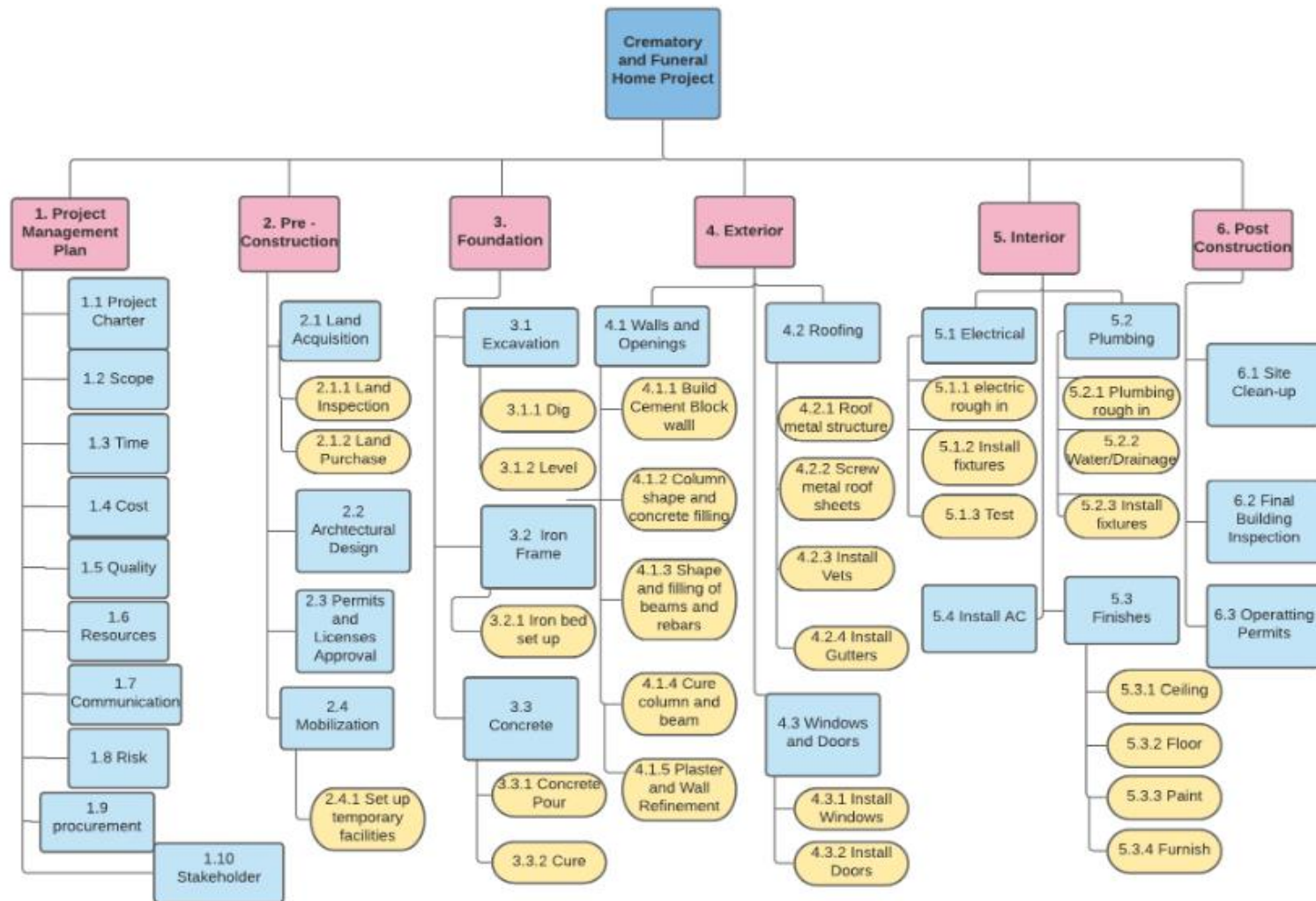
Work Breakdown Structure

WBS Dictionary

Chart 7 WBS Dictionary

Level	WBS Code	Element Name	Description of Work	Budget
1	1	**Project Management Plan**		**$1,700**
2	1.1	Project Charter	Meeting with stakeholders to define expectations of the project	$0.00
2	1.2	Scope Management Plan	Defines project's work	$1,700
3	1.3	Time Management Plan	Define activities and the length for each one	$0.00
3	1.4	Cost Management Plan	Cost of activities to carry out project	$0.00
2	1.5	Quality Management Plan	Set standards to ensure project's quality	$0.00
2	1.6	Resources Management Plan	States the resources that will be required at each stage of project	$0.00
2	1.7	Communication Management Plan	Defines the information that will be communicated as well as to whom and when	$0.00

		Chart 7 WBS Dictionary, Continued		
2	1.8	Risk Management Plan	Identifies possible risk and its level of risk	$0.00
2	1.9	Procurement Management Plan	Selects best resources for project as well as providers and sources	$0.00
2	1.10	Stakeholder Management Plan	Identify, list and prioritize stakeholders	$0.00
1	**2**	**Pre - Construction**		**$124,500**
2	2.1	Land Acquisition	Search for adequate location to start construction	
3	2.1.1	Land Inspection	Evaluate, negotiate, and choose land for project	$5,000
3	2.1.2	Land Purchase	Make payment for chosen land	$100,000
2	2.2	Architectural Design	Graphical visualization of the project	
3	2.2.1	Submit Design	Graphical visualization of the project	$1,500
3	2.2.2	Design Approval	Sponsor approves Design	$0.00
2	2.3	Permits and Licenses Approval	Submit permits and licenses applications to the Government of Belize and get approved	$1,500

		Chart 7 WBS Dictionary, Continued		
2	2.4	Mobilization	Preparation of project site before starting	
3	2.4.1	Set up temporary Facilities	Facilities to be used for toilet, office, and storeroom during construction of project	$16,500
1	**3**	**Foundation**		**$24,000**
2	3.1	Excavation	Prepare land for construction	
3	3.1.1	Dig	Dig the soil to start foundation for construction	$3,200
3	3.1.2	Level	Ensure It is all the same height and level	$2,000
2	3.2	Iron Frame	Use metal to build the structure for foundation and columns	
3	3.2.1	Iron bed set up	Make an iron bed structure for foundation	$5,800
2	3.3	Concrete	Mix cement with sand and water	
3	3.3.1	Concrete Pour	Pour cement mix into the foundation	$7,000

		Chart 7 WBS Dictionary, Continued		
3	3.3.2	Cure	Seal concrete foundation	$4,000
3	3.3.2	Water/Drainage	Pipe and dirt water drainage	$2,000
1	**4**	**Exterior**	**Framing of building**	**$90,500**
2	4.1	Walls and openings	Build walls and define the openings for windows and doors	
3	4.1.1	Build cement block wall	Use cement blocks to build construction walls	$10,500
3	4.1.2	Column shape and concrete filling	Use lumber to shape the columns and then pour cement mix until it dries	$6,000
3	4.1.3	Shape and filling of beams and rebars	Use lumber to shape and fill beams and rebars to reinforce walls	$6,000
3	4.1.4	Cure column and beam	Seal columns and beam	$2,800
3	4.1.5	Plaster Walls/Walls Refinement	Plaster walls with cement	$10,200
2	4.2	Roofing	The process of installing roof to a construction	
3	4.2.1	Roof metal structure	Use metal to build a structure where the roof	$8,500

		Chart 7 WBS Dictionary, Continued		
			sheets can be screwed on	
3	4.2.2	Screw metal roof sheets	Use screws to join the roof sheets to the metal structure	$15,000
3	4.2.3	Install Vent	Install the roof ventilation	$3,500
3	4.2.4	Install Gutters	Install gutters around the roof	$3,000
2	4.3	Windows and Doors	Install windows and door in the construction	
3	4.3.1	Install Windows	Install windows in the respective window opening	$15,000
3	4.3.2	Install Doors	Install doors in the respective door openings	$10,000
1	**5**	**Interior**	**Works on the inside of the construction**	**$257,161.01**
2	5.1	Electrical	Install wires and fixtures in the construction	
3	5.1.1	Electric Rough in	Install wires through the walls	$7,000
3	5.1.2	Install fixtures	Install electrical fixtures in the designated areas	$3,000

		Chart 7 WBS Dictionary, Continued		
3	5.1.3	Run Test	Test electric to see if it works properly	$0.00
2	5.2	Plumbing	Installing tubes for drainage and water	
3	5.2.1	Plumbing Rough in	Install pipes	$3,500
3	5.2.2	Install Fixtures	Facets, toilets, shower, hand basin, kitchen basin	$1,500
2	5.3	Finishes	Final works to beautify construction	
3	5.3.1	Ceiling	Install wood structure and drywalls	$14,000
3	5.3.2	Floor	Tile work on the floor	$22,500
3	5.3.3	Paint	Paint walls and ceiling in the chosen color	$6,500
3	5.3.4	Furnish/Equipment	Purchase and arrange furnish and equipment in the respective place	$180, 461.01
2	5.4	Install AC	Install air conditions in the building	$18,700
1	**6**	**Post - Construction**	**Final step after construction has been done**	**$4,350**

		Chart 7 WBS Dictionary, Continued		
2	6.1	Site Clean - Up	Remove waste and tools from construction site	$3,600
2	6.2	Final Building Inspection	Final inspection to ensure everything is fine	0.00
2	6.3	Operating Permits	Apply and obtain permits to start operating as a business	$750

(N. Melgar, The Author, July 2020)

Roles and Responsibilities

The following chart defines the responsibilities and roles of the main stakeholders

of the project.

Chart 8 Roles and Responsibilities

Name	Role	Responsibility
G. Jones	Project Sponsor	• Approve project start • Approve or reject any activity that may impact budget
N. Melgar	Project Manager	• Manage and document project scope • Manage scope change request process • Update stakeholders on the progress of the project • Approve/ reject any changes that may impact time, and cost. • Approve/reject procurement decisions

Chart 8 Roles and Responsibilities, Continued		
C. Lopez	Project Assistant Manager	• Assist in the documentation of project • Manage procurement activities • Keep project manager informed
J. Fuentes	Architect	• Design construction plan • Ensure results
H. Daniels	Engineer	• Lead the constructions activities and inform project manager of any necessary scope changes • Ensure construction meets quality expectations
Project Team	Project Team	• Participate in the different activities assigned • Communicate any improvements or changes required

Chart 8 Roles and Responsibilities, Continued		
		to project manager
Stakeholders	Subcontractors	• Inform to project manager any necessary changes on scope • Follow project manager's instructions

(N. Melgar, The Author, July 2020)

Deliverables

- Crematory and funeral home project charter (authorized)

- Design drawings

- Design documents

- Design reviews

- Site approval report

- Purchase of land

- Receive material on site

- Completed building

- Electrical, Plumbing and Mechanical installations reports

- Progress reports

- Inspection Report

- Furnish and Equipment

Scope Control

Any active stakeholder in the project can submit a change request if he/she

acknowledge it as important and relevant for the project.

Change Request Process

- Identify need for change and submit a change request form

- The request will be then be reviewed by project manager to identify the

  impacts the requested change will have on schedule, budget, quality, and

  scope

- The impacts identified will be then evaluated by project manager

- If after evaluating the impacts of the change request on the project, the

  project manager decides the implementation is necessary, then the change

  request will be presented to project sponsor for approval.

- If approved by project sponsor, then the project plan will be updated to show

  the change and inform the requester as well as the team.

Below is the form to be used to request a change request:

Change Request Form

Project Name:		
Request Date:		
Request Number:		
Requested Title:		
Requested By:		
Change Description		
Change Reason		
Impact of Change		
Proposed Action		
Request Status	Approved ☐	Rejected ☐

Date _____   Signed By: _____

Figure 9 Change Request Form (N.Melgar, October 2020)

Change request and project's baseline

a. Changes in scope – Any addition to project's scope will increase either the

   cost or time

- Build a crematory and funeral home in the country of Belize.

- It should be one floor building (600 square meters).

b. Changes in time – Any reduction in project's time will either reduce scope or

   increase cost

- The planning period starts from September 7, 2020 and will end November

   30. 2020.

- The executing period wills start January 11, 2021 to September 9, 2022.

c. Changes in Costs – Any reduction of project's cost will either force to reduce

   scope, or increase project's time

- Budget should not exceed $505,000.00 USD. So far, the estimated budget

   is $502,211.01 USD.

4.3. Schedule Management Plan

The schedule management plan will detail all the different tasks that will help complete the project. A timeframe will be assigned to each task as well as the relationship between each task.

Plan Schedule Management

Project Calendar and Particulars

Project Name: Crematory and Funeral Home Project
Project Manager: Nohelia Melgar
Project Sponsor: Gary Jones
Country: Belize

Project Start	Project Finish	Project Calendar
January 11, 2021	September 9, 2022	Standard
Working Days	**Working Hours**	**Lunch Hour**
Monday – Friday	8:00AM – 5:00PM	12:00 Noon – 1:00 PM

Holidays During Project Period		
Description	**Start**	**Finish**
National Heroes Day	08/03/2021	08/03/2021
Good Friday	02/04/2021	02/04/2021
Holy Saturday	03/04/2021	03/04/2021
Easter Monday	05/04/2021	05/04/2021
Labor Day	01/05/2021	01/05/2021
Sovereign's Day	24/05/2021	24/05/2021
St. George's Caye Day	10/09/2021	10/09/2021

Holidays During Project Period, Continued		
Independence Day	21/09/2021	21/09/2021
Pan American Day	03/10/2021	03/10/2021
Garifuna Settlement Day	19/11/2021	19/11/2021
Christmas Day	25/12/2021	25/12/2021
Boxing Day	26/12/2021	26/12/2021
New Year's Day	01/01/2022	01/01/2022
National Heroes Day	07/03/2022	07/03/2022
Good Friday	15/04/2022	15/04/2022
Holy Saturday	16/04/2022	16/04/2022
Easter Monday	19/04/2022	19/04/2022
Labor Day	02/05/2022	02/05/2022
Sovereign Day	10/09/2022	10/09/2022

Define and Sequence Activities

These are the milestones for this project:

- o Project Start

- o Purchase Land Property

- o Permits and Licenses

- o Facility Building Finished

- o Furnish and Equipment Set

- o End of Project

Chart 9 Activities Definition and Sequence

ID	WBS	Task Name	Predecessors
1		Funeral Home Project	
2		Project Starts	
3	1	Project Management Plan	
4	1.1	Project Charter	
5	1.1.1	Collect Business Case	2
6	1.1.2	Create Project Charter	5
7	1.1.3	Approval of Project Charter	6
8	1.2	Scope Management Plan	
9	1.2.1	Gather Project Requirements	7
10	1.2.2	Define Scope of Work	9
11	1.2.3	Create Project Charter	10
12	1.3	Schedule Management plan	
13	1.3.1	Set up a Meeting with Project Engineer	11
14	1.3.2	Identify Project Activities	13
15	1.3.3	Create Schedule Management Plan	14
16	1.4	Cost Management Plan	
17	1.4.1	Identify Activities Cost	15
18	1.4.2	Review Cost with Project Sponsor	17
19	1.4.3	Create Cost Management Plan	18
20	1.5	Quality Management Plan	
21	1.5.1	Identify Quality Requirements	19
22	1.5.2	Create Quality Management Plan	21
23	1.6	Resources Management plan	
24	1.6.1	Define Authority Chain	22

		Chart 9 Activities Definition and Sequence, Continued	
25	1.6.2	Define Materials/Supplies Management	24
26	1.6.3	Create Resource Management Plan	25
27	1.7	Communication Management Plan	
28	1.7.1	Define Channels of Communication	26
29	1.7.2	Create Communication ManagementPlan	26
30	1.8	Risk Management Plan	
31	1.8.1	Gather Possible Project Risks	29
32	1.8.2	Seek advice of Experts for Propose Response	31
33	1.8.3	Create Risk Management Plan	32
34	1.9	Procurement Management Plan	
35	1.9.1	Set Up Meeting with Engineer and Architect	33
36	1.9.2	Identify Jobs that Require Subcontractor	35
37	1.9.3	Define Suppliers Criteria	36
38	1.9.4	Create Procurement Managemetn Plan	37
39	1.1	Stakeholder Management Plan	
40	1.10.1	Identify Project Stakeholder Involvement Level	38
41	1.10.2	Create Stakeholders Management Plan	40
42	2	Pre - Construction	
43	2.1	Land Acquisition	
44	2.1.1	Land Inspection and Agreement	41
45	2.1.2	Land Purchase	44
46	0	Purchase Land Property	45
47	2.2	Architectural Design	
48	2.2.1	Submit Design	46
49	2.2.2	Design approval	48
50	2.3	Permits and Licenses Approval	49

		Chart 9 Activities Definition and Sequence, Continued	
51	0	Permits and Licenses	50
52	2.4	Mobilization	
53	2.4.1	Set - up Temporary Facilities	50
54	3	Foundation	
55	3.1	Excavation	
56	3.1.1	Dig	53
57	3.1.2	Level	56
58	3.2	Iron Frame	
59	3.2.1	Iron Bed Set-Up	57
60	3.3	Concrete	
61	3.3.1	Concrete Pour	59
62	3.3.2	Cure	61
63	4	Exterior	
64	4.1	Walls and Openings	
65	4.1.1	Build Cement Block Wall	62
66	4.1.2	Column Shape and Concrete Filling	65
67	4.1.3	Shape and Filling of Beams and Rebars	66
68	4.1.4	Cure Column and Beam	67
69	4.1.5	Plaster Walls/Walls Refinement	68
70	4.2	Roofing	
71	4.2.1	Build Metal Structure for Roof	68
72	4.2.2	Screw Roof Metal Sheets	71
73	4.2.3	Install Vents	72
74	4.2.4	Install Gutters	73
75	4.3	Windows and Doors	
76	4.3.1	Install Windows	69

		Chart 9 Activities Definition and Sequence, Continued	
77	4.3.2	Install Doors	76
78	5	Interior	
79	5.1	Electrical	
80	5.1.1	Electric Rough In	65
81	5.1.2	Install Fixtures	80
82	5.2	Plumbing	
83	5.2.1	Plumbing Rough in	65
84	5.2.2	Water/Drainage	83
85	5.2.3	Install Fixtures	84
86	5.3	Finishes	
87	5.3.1	Ceiling	
88	5.3.1.1	Install Ceiling Wood Structure	77
89	5.3.1.2	Screw on Drywall	88
90	5.3.1.3	Cover Holes, Screws and line openings	89
91	5.3.2	Floor	
92	5.3.2.1	Level floor	90,85
93	5.3.2.2	Adhere Tile to Floor	92
94	5.3.2.3	Tile Forging	93
95	5.3.3	Paint	
96	5.3.3.1	Paint Ceiling	94
97	5.3.3.2	Paint Interior Walls	96
98	5.3.3.3	Paint Exterior Walls	97
99	0	Facility Building Finished	98
100	5.3.4	Furnish/Equipment	
101	5.3.4.1	Select Furnish	98
102	5.3.4.2	Purchase Furnish	101

		Chart 9 Activities Definition and Sequence, Continued	
103	5.3.4.3	Accommodate Furnish	102
104	5.3.4.4	Order and Purchase Equipment	98
105	5.3.4.5	Install Equipment	104
106	0	Furnish and Equipment Set	105
107	5.4	Install AC	98
108	6	Post Construction	
109	6.1	Site Clean Up	107
110	6.2	Final Building Inspection	109,104
111	6.3	Operating Permits	110
112	0	End of Project	111

(N. Melgar, The Author, October 2020)

Estimate Activity Resources and Duration

Chart 10 Activity Resources and Duration

ID	WBS	Task Name	Duration	Start	Finish	Resource Names
1		Funeral Home Project	586 days	07 Sep '20	09 Sep '22	
2		Project Starts	0 days	07 Sep '20	07 Sep '20	
3	1	Project Management Plan	61 days	07 Sep '20	30 Nov '20	
4	1.1	Project Charter	7 days	07 Sep '20	15 Sep '20	
5	1.1.1	Collect Business Case	3 days	07 Sep '20	09 Sep '20	Project Manager
6	1.1.2	Create Project Charter	3 days	10 Sep '20	14 Sep '20	Project Manager
7	1.1.3	Approval of Project Charter	1 day	15 Sep '20	15 Sep '20	Project Sponsor
8	1.2	Scope Management Plan	8 days	16 Sep '20	25 Sep '20	
9	1.2.1	Gather Project Requirements	3 days	16 Sep '20	18 Sep '20	Project Manager
10	1.2.2	Define Scope of Work	3 days	21 Sep '20	23 Sep '20	Project Manager
11	1.2.3	Create Project Charter	2 days	24 Sep '20	25 Sep '20	Project Manager
12	1.3	Schedule Management plan	7 days	28 Sep '20	06 Oct '20	
13	1.3.1	Set up a Meeting with Project Engineeer	1 day	28 Sep '20	28 Sep '20	Project Manager,Engineer
14	1.3.2	Identify Project Activities	3 days	29 Sep '20	01 Oct '20	Project Manager
15	1.3.3	Create Schedule Management Plan	3 days	02 Oct '20	06 Oct '20	Project Manager
16	1.4	Cost Management Plan	7 days	07 Oct '20	15 Oct '20	
17	1.4.1	Identify Activities Cost	2 days	07 Oct '20	08 Oct '20	Project Manager
18	1.4.2	Review Cost with Project Sponsor	1 day	09 Oct '20	09 Oct '20	Project Manager,Project Sponsor
19	1.4.3	Create Cost Management Plan	4 days	12 Oct '20	15 Oct '20	Project Manager
20	1.5	Quality Management Plan	3 days	16 Oct '20	20 Oct '20	

		Chart 10 Activity Resources and Duration, Continued				
21	1.5.1	Identify Quality Requirements	1 day	16 Oct '20	16 Oct '20	Project Manager
22	1.5.2	Create Quality Management Plan	2 days	19 Oct '20	20 Oct '20	Project Manager
23	1.6	Resources Management plan	8 days	21 Oct '20	30 Oct '20	
24	1.6.1	Define Authority Chain	2 days	21 Oct '20	22 Oct '20	Project Manager
25	1.6.2	Define Materials/Supplies Management	4 days	23 Oct '20	28 Oct '20	Project Manager,Engineeer
26	1.6.3	Create Resource Management Plan	2 days	29 Oct '20	30 Oct '20	Project Manager
27	1.7	Communication Management Plan	2 days	02 Nov '20	03 Nov '20	
28	1.7.1	Define Channels of Communication	1 day	02 Nov '20	02 Nov '20	Project Manager
29	1.7.2	Create Communication ManagementPlan	2 days	02 Nov '20	03 Nov '20	Project Manager
30	1.8	Risk Management Plan	7 days	04 Nov '20	12 Nov '20	
31	1.8.1	Gather Possible Project Risks	2 days	04 Nov '20	05 Nov '20	Project Manager
32	1.8.2	Seek advice of Experts for Propose Response	3 days	06 Nov '20	10 Nov '20	Project Manager,Engineer,GOB
33	1.8.3	Create Risk Management Plan	2 days	11 Nov '20	12 Nov '20	Project Manager
34	1.9	Procurement Management Plan	8 days	13 Nov '20	24 Nov '20	
35	1.9.1	Set Up Meeting with Engineer and Architect	2 days	13 Nov '20	16 Nov '20	Project Manager, Engineer, Architect
36	1.9.2	Identify Jobs that Require Subcontractor	2 days	17 Nov '20	18 Nov '20	Project Manager
37	1.9.3	Define Suppliers Criteria	1 day	19 Nov '20	19 Nov '20	Project Manager
38	1.9.4	Create Procurement Management Plan	3 days	20 Nov '20	24 Nov '20	Project Manager
39	1.1	Stakeholder Management Plan	4 days	25 Nov '20	30 Nov '20	
40	1.10.1	Identify Project Stakeholder Involvement Level	2 days	25 Nov '20	26 Nov '20	Project Manager
41	1.10.2	Create Stakeholders Management Plan	2 days	27 Nov '20	30 Nov '20	Project Manager
42	2	Pre - Construction	95 days	11 Jan '21	27 May '21	
43	2.1	Land Acquisition	30 days	11 Jan '21	19 Feb '21	

		Chart 10 Activity Resources and Duration, Continued				
44	2.1.1	Land Inspection and Agreement	10 days	11 Jan '21	22 Jan '21	Engineer,Land Surveyor,Project Manager
45	2.1.2	Land Purchase	20 days	22 Jan '21	19 Feb '21	Project Manager,Project Sponsor
46	0	Purchase Land Property	0 days	19 Feb '21	19 Feb '21	
47	2.2	Architectural Design	27 days	22 Feb '21	31 Mar '21	
48	2.2.1	Submit Design	20 days	22 Feb '21	22 Mar '21	Architect
49	2.2.2	Design approval	7 days	23 Mar '21	31 Mar '21	Project Sponsor
50	2.3	Permits and Licenses Approval	8 days	01 Apr '21	14 Apr '21	City Council ,Project Assistant ,Project Manager
51	0	Permits and Licenses	0 days	14 Apr '21	14 Apr '21	
52	2.4	Mobilization	30 days	15 Apr '21	27 May '21	
53	2.4.1	Set - up Temporary Facilities	30 days	15 Apr '21	27 May '21	Engineer,Project Assistant
54	3	Foundation	33 days	28 May '21	13 Jul '21	
55	3.1	Excavation	15 days	28 May '21	17 Jun '21	
56	3.1.1	Dig	10 days	28 May '21	10 Jun '21	Concrete Workers Crew,Engineer
57	3.1.2	Level	5 days	11 Jun '21	17 Jun '21	Concrete Workers Crew,Engineer
58	3.2	Iron Frame	10 days	18 Jun '21	01 Jul '21	
59	3.2.1	Iron Bed Set-Up	10 days	18 Jun '21	01 Jul '21	Concrete Workers Crew
60	3.3	Concrete	8 days	02 Jul '21	13 Jul '21	
61	3.3.1	Concrete Pour	5 days	02 Jul '21	08 Jul '21	Concrete Construction Subcontractor
62	3.3.2	Cure	3 days	09 Jul '21	13 Jul '21	Concrete Construction Subcontractor
63	4	Exterior	107 days	14 Jul '21	14 Dec '21	
64	4.1	Walls and Openings	87 days	14 Jul '21	16 Nov '21	
65	4.1.1	Build Cement Block Wall	30 days	14 Jul '21	24 Aug '21	Concrete Workers Crew
66	4.1.2	Column Shape and Concrete Filling	15 days	25 Aug '21	15 Sep '21	Concrete Workers Crew

		Chart 10 Activity Resources and Duration, Continued				
67	4.1.3	Shape and Filling of Beams and Rebars	10 days	16 Sep '21	30 Sep '21	Concrete Workers Crew
68	4.1.4	Cure Column and Beam	7 days	01 Oct '21	12 Oct '21	Concrete Workers Crew
69	4.1.5	Plaster Walls/Walls Refinement	25 days	13 Oct '21	16 Nov '21	Concrete Workers Crew
70	4.2	Roofing	30 days	13 Oct '21	23 Nov '21	AC Subcontractor
71	4.2.1	Build Metal Structure for Roof	10 days	13 Oct '21	26 Oct '21	Roofing Crew
72	4.2.2	Screw Roof Metal Sheets	10 days	27 Oct '21	09 Nov '21	Roofing Crew
73	4.2.3	Install Vents	5 days	10 Nov '21	16 Nov '21	Roofing Crew
74	4.2.4	Install Gutters	5 days	17 Nov '21	23 Nov '21	Roofing Crew
75	4.3	Windows and Doors	20 days	17 Nov '21	14 Dec '21	
76	4.3.1	Install Windows	10 days	17 Nov '21	30 Nov '21	Glazier Crew
77	4.3.2	Install Doors	10 days	01 Dec '21	14 Dec '21	Glazier Crew
78	5	Interior	255 days	25 Aug '21	26 Aug '22	
79	5.1	Electrical	40 days	25 Aug '21	22 Oct '21	
80	5.1.1	Electric Rough In	20 days	25 Aug '21	23 Sep '21	Electrician Crew
81	5.1.2	Install Fixtures	20 days	24 Sep '21	22 Oct '21	Electrician Crew
82	5.2	Plumbing	46 days	25 Aug '21	01 Nov '21	
83	5.2.1	Plumbing Rough in	20 days	25 Aug '21	23 Sep '21	Plumber Crew
84	5.2.2	Water/Drainage	8 days	24 Sep '21	05 Oct '21	Plumber Crew
85	5.2.3	Install Fixtures	18 days	06 Oct '21	01 Nov '21	Plumber Crew
86	5.3	Finishes	178 days	15 Dec '21	26 Aug '22	
87	5.3.1	Ceiling	40 days	15 Dec '21	08 Feb '22	
88	5.3.1.1	Install Ceiling Wood Structure	15 days	15 Dec '21	04 Jan '22	Ceiling Crew
89	5.3.1.2	Screw on Drywall	15 days	05 Jan '22	25 Jan '22	Ceiling Crew
90	5.3.1.3	Cover Holes, Screws and line openings	10 days	26 Jan '22	08 Feb '22	Ceiling Crew

		Chart 10 Activity Resources and Duration, Continued				
91	5.3.2	Floor	55 days	09 Feb '22	29 Apr '22	
92	5.3.2.1	Level floor	10 days	09 Feb '22	22 Feb '22	Tile Setter Crew
93	5.3.2.2	Adhere Tile to Floor	30 days	23 Feb '22	06 Apr '22	Tile Setter Crew
94	5.3.2.3	Tile Forging	15 days	07 Apr '22	29 Apr '22	Tile Setter Crew
95	5.3.3	Paint	48 days	03 May '22	08 Jul '22	
96	5.3.3.1	Paint Ceiling	15 days	03 May '22	24 May '22	Paint Crew
97	5.3.3.2	Paint Interior Walls	15 days	25 May '22	14 Jun '22	Paint Crew
98	5.3.3.3	Paint Exterior Walls	18 days	15 Jun '22	08 Jul '22	Paint Crew
99	0	Facility Building Finished	0 days	08 Jul '22	08 Jul '22	
100	5.3.4	Furnish/Equipment	35 days	11 Jul '22	26 Aug '22	
101	5.3.4.1	Select Furnish	20 days	11 Jul '22	05 Aug '22	Project Manager
102	5.3.4.2	Purchase Furnish	10 days	08 Aug '22	19 Aug '22	Project Assistant
103	5.3.4.3	Accommodate Furnish	5 days	22 Aug '22	26 Aug '22	Project Assistant
104	5.3.4.4	Order and Purchase Equipment	8 days	11 Jul '22	20 Jul '22	Project Manager
105	5.3.4.5	Install Equipment	16 days	21 Jul '22	11 Aug '22	Equipment Provider Crew,Engineer
106	0	Furnish and Equipment Set	0 days	11 Aug '22	11 Aug '22	
107	5.4	Install AC	10 days	11 Jul '22	22 Jul '22	AC Subcontractor
108	6	Post Construction	35 days	25 Jul '22	09 Sep '22	
109	6.1	Site Clean Up	10 days	25 Jul '22	05 Aug '22	Project Assistant ,Comercial Cleaners Crew
110	6.2	Final Building Inspection	10 days	08 Aug '22	19 Aug '22	Engineer,Project Manager
111	6.3	Operating Permits	15 days	22 Aug '22	09 Sep '22	City Council ,Health Department ,Project Assistant ,Project Manager
112	0	End of Project	0 days	09 Sep '22	09 Sep '22	

(N. Melgar, The Author, October 2020)

Develop Schedule

The project schedule states the different works that needs to be done to complete a project, and it assigns a specific time frame which each task will be performed. It shows the different work packages and the detailed activities that should be done in each packaged.

ID	Task Name	Duration	Start	Finish
1	**Funeral Home Project**	**484 days**	**07 Sep '20**	**09 Sep '22**
2	Project Starts	0 days	07 Sep '20	07 Sep '20
3	**Project Management Plan**	**61 days**	**07 Sep '20**	**30 Nov '20**
4	Project Charter	7 days	07 Sep '20	15 Sep '20
5	Collect Business Case	3 days	07 Sep '20	09 Sep '20
6	Create Project Charter	3 days	10 Sep '20	14 Sep '20
7	Approval of Project Charter	1 day	15 Sep '20	15 Sep '20
8	Scope Management Plan	8 days	16 Sep '20	25 Sep '20
9	Gather Project Requirements	3 days	16 Sep '20	18 Sep '20
10	Define Scope of Work	3 days	21 Sep '20	23 Sep '20
11	Create Project Charter	2 days	24 Sep '20	25 Sep '20
12	Schedule Management plan	7 days	28 Sep '20	06 Oct '20
13	Set up a Meeting with Project Engineeer	1 day	28 Sep '20	28 Sep '20
14	Identify Project Activities	3 days	29 Sep '20	01 Oct '20
15	Create Schedule Management Plan	3 days	02 Oct '20	06 Oct '20
16	Cost Management Plan	7 days	07 Oct '20	15 Oct '20
17	Identify Activities Cost	2 days	07 Oct '20	08 Oct '20
18	Review Cost with Project Sponsor	1 day	09 Oct '20	09 Oct '20
19	Create Cost Management Plan	4 days	12 Oct '20	15 Oct '20

20	Quality Management Plan	3 days	16 Oct '20	20 Oct '20	
21	Identify Quality Requirements	1 day	16 Oct '20	16 Oct '20	Project Manager
22	Create Quality Management Plan	2 days	19 Oct '20	20 Oct '20	Project Manager
23	Resources Management plan	8 days	21 Oct '20	30 Oct '20	
24	Define Authority Chain	2 days	21 Oct '20	22 Oct '20	Project Manager
25	Define Materials/Supplies Management	4 days	23 Oct '20	28 Oct '20	Project Manager,Engineeer
26	Create Resource Management Plan	2 days	29 Oct '20	30 Oct '20	Project Manager
27	Communication Management Plan	2 days	02 Nov '20	03 Nov '20	
28	Define Channels of Communication	1 day	02 Nov '20	02 Nov '20	Project Manager
29	Create Communication ManagementPlan	2 days	02 Nov '20	03 Nov '20	Project Manager
30	Risk Management Plan	7 days	04 Nov '20	12 Nov '20	
31	Gather Possible Project Risks	2 days	04 Nov '20	05 Nov '20	Project Manager
32	Seek advice of Experts for Propose Response	3 days	06 Nov '20	10 Nov '20	Project Manager,Engineer,GOB
33	Create Risk Management Plan	2 days	11 Nov '20	12 Nov '20	Project Manager
34	Procurement Management Plan	8 days	13 Nov '20	24 Nov '20	
35	Set Up Meeting with Engineer and Architect	2 days	13 Nov '20	16 Nov '20	Project Manager,Engineer,Architect
36	Identify Jobs that Require Subcontractor	2 days	17 Nov '20	18 Nov '20	Project Manager
37	Define Suppliers Criteria	1 day	19 Nov '20	19 Nov '20	Project Manager
38	Create Procurement Managemetn Plan	3 days	20 Nov '20	24 Nov '20	Project Manager
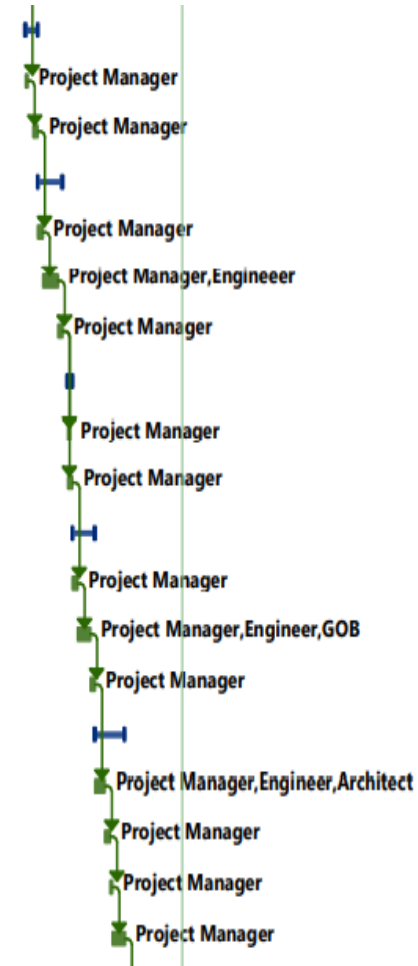
39	Stakeholder Management Plan	4 days	25 Nov '20	30 Nov '20
40	Identify Project Stakeholder Involvement Level	2 days	25 Nov '20	26 Nov '20
41	Create Stakeholders Management Plan	2 days	27 Nov '20	30 Nov '20
42	**Pre - Construction**	**95 days**	**11 Jan '21**	**27 May '21**
43	**Land Acquisition**	**30 days**	**11 Jan '21**	**19 Feb '21**
44	Land Inspection and Agreement	10 days	11 Jan '21	22 Jan '21
45	Land Purchase	20 days	22 Jan '21	19 Feb '21
46	Purchase Land Property	0 days	19 Feb '21	19 Feb '21
47	**Architectural Design**	**27 days**	**22 Feb '21**	**31 Mar '21**
48	Submit Design	20 days	22 Feb '21	22 Mar '21
49	Design approval	7 days	23 Mar '21	31 Mar '21
50	Permits and Licenses Approval	8 days	01 Apr '21	14 Apr '21
51	Permits and Licenses	0 days	14 Apr '21	14 Apr '21
52	**Mobilization**	**30 days**	**15 Apr '21**	**27 May '21**
53	Set - up Temporary Facilities	30 days	15 Apr '21	27 May '21
54	**Foundation**	**33 days**	**28 May '21**	**13 Jul '21**
55	**Excavation**	**15 days**	**28 May '21**	**17 Jun '21**
56	Dig	10 days	28 May '21	10 Jun '21
57	Level	5 days	11 Jun '21	17 Jun '21
58	**Iron Frame**	**10 days**	**18 Jun '21**	**01 Jul '21**
59	Iron Bed Set-Up	10 days	18 Jun '21	01 Jul '21

60	**Concrete**	**8 days**	**02 Jul '21**	**13 Jul '21**
61	Concrete Pour	5 days	02 Jul '21	08 Jul '21
62	Cure	3 days	09 Jul '21	13 Jul '21
63	**Exterior**	**107 days**	**14 Jul '21**	**14 Dec '21**
64	**Walls and Openings**	**87 days**	**14 Jul '21**	**16 Nov '21**
65	Build Cement Block Wall	30 days	14 Jul '21	24 Aug '21
66	Column Shape and Concrete Filling	15 days	25 Aug '21	15 Sep '21
67	Shape and Filling of Beams and Rebars	10 days	16 Sep '21	30 Sep '21
68	Cure Column and Beam	7 days	01 Oct '21	12 Oct '21
69	Plaster Walls/Walls Refinement	25 days	13 Oct '21	16 Nov '21
70	**Roofing**	**30 days**	**13 Oct '21**	**23 Nov '21**
71	Build Metal Structure for Roof	10 days	13 Oct '21	26 Oct '21
72	Screw Roof Metal Sheets	10 days	27 Oct '21	09 Nov '21
73	Install Vents	5 days	10 Nov '21	16 Nov '21
74	Install Gutters	5 days	17 Nov '21	23 Nov '21
75	**Windows and Doors**	**20 days**	**17 Nov '21**	**14 Dec '21**
76	Install Windows	10 days	17 Nov '21	30 Nov '21
77	Install Doors	10 days	01 Dec '21	14 Dec '21
78	**Interior**	**255 days**	**25 Aug '21**	**26 Aug '22**
79	**Electrical**	**40 days**	**25 Aug '21**	**22 Oct '21**
80	Electric Rough In	20 days	25 Aug '21	23 Sep '21
81	Install Fixtures	20 days	24 Sep '21	22 Oct '21
82	**Plumbing**	**46 days**	**25 Aug '21**	**01 Nov '21**
83	Plumbing Rough in	20 days	25 Aug '21	23 Sep '21
84	Water/Drainage	8 days	24 Sep '21	05 Oct '21
85	Install Fixtures	18 days	06 Oct '21	01 Nov '21
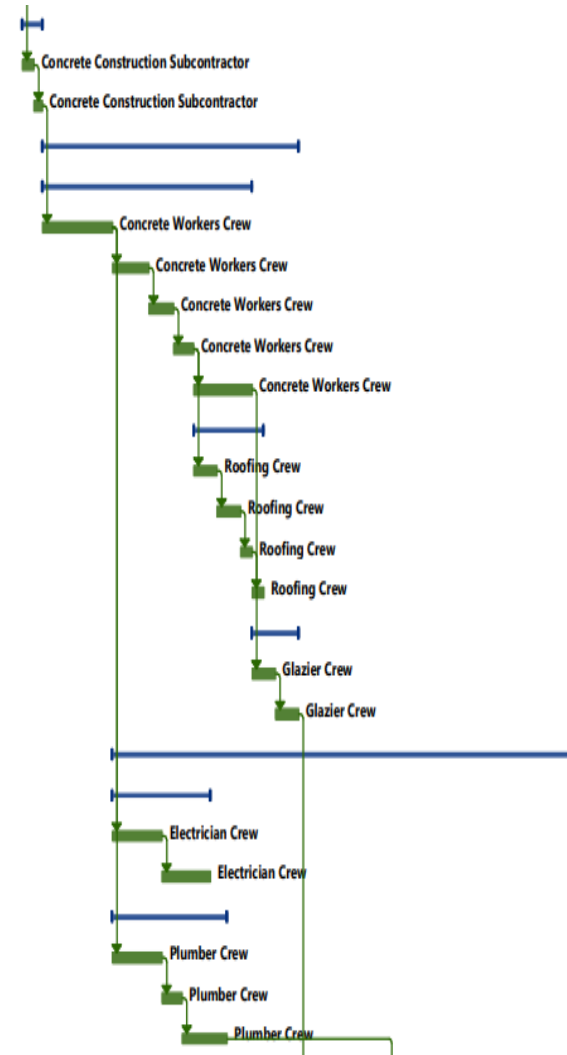
86	**Finishes**	**178 days**	**15 Dec '21**	**26 Aug '22**
87	**Ceiling**	**40 days**	**15 Dec '21**	**08 Feb '22**
88	Install Ceiling Wood Structure	15 days	15 Dec '21	04 Jan '22
89	Screw on Drywall	15 days	05 Jan '22	25 Jan '22
90	Cover Holes, Screws and line openings	10 days	26 Jan '22	08 Feb '22
91	**Floor**	**55 days**	**09 Feb '22**	**29 Apr '22**
92	Level floor	10 days	09 Feb '22	22 Feb '22
93	Adhere Tile to Floor	30 days	23 Feb '22	06 Apr '22
94	Tile Forging	15 days	07 Apr '22	29 Apr '22
95	**Paint**	**48 days**	**03 May '22**	**08 Jul '22**
96	Paint Ceiling	15 days	03 May '22	24 May '22
97	Paint Interior Walls	15 days	25 May '22	14 Jun '22
98	Paint Exterior Walls	18 days	15 Jun '22	08 Jul '22
99	Facility Building Finished	0 days	08 Jul '22	08 Jul '22
100	**Furnish/Equipment**	**35 days**	**11 Jul '22**	**26 Aug '22**
101	Select Furnish	20 days	11 Jul '22	05 Aug '22
102	Purchase Furnish	10 days	08 Aug '22	19 Aug '22
103	Accommodate Furnish	5 days	22 Aug '22	26 Aug '22
104	Order and Purchase Equipment	8 days	11 Jul '22	20 Jul '22
105	Install Equipment	16 days	21 Jul '22	11 Aug '22
106	Furnish and Equipment Set	0 days	11 Aug '22	11 Aug '22
107	Install AC	10 days	11 Jul '22	22 Jul '22
108	**Post Construction**	**35 days**	**25 Jul '22**	**09 Sep '22**
109	Site Clean Up	10 days	25 Jul '22	05 Aug '22
110	Final Building Inspection	10 days	08 Aug '22	19 Aug '22
111	Operating Permits	15 days	22 Aug '22	09 Sep '22
112	End of Project	0 days	09 Sep '22	09 Sep '22
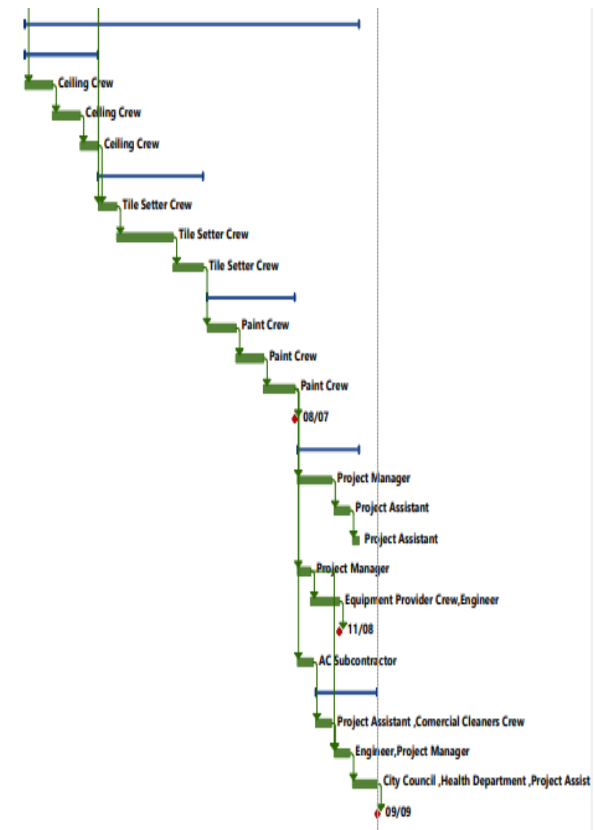
Figure 10 Crematory and Funeral Home Project Schedule (N. Melgar, The Author, October 2020)

Network Diagram

The following network diagram shows the relationship between the different project tasks as well as critical path.

Project: Crematory and Funeral Date: 04 Oct '20	Critical		Critical Marked	
	Noncritical		Marked	
	Critical Milestone		Critical External	
	Milestone		External	
	Critical Summary		Project Summary	
	Summary		Highlighted Critical	
	Critical Inserted		Highlighted Noncritical	
	Inserted			

Project Starts

Milestone Date: 07 Sep '20

ID: 2

Collect Business Case

Start: 07 Sep '20   ID: 5

Finish: 09 Sep '20   Dur: 3 days

Res: Project Manager

Create Project Charter

Start: 10 Sep '20   ID: 6

Finish: 14 Sep '20   Dur: 3 days

Res: Project Manager

Approval of Project Charter

Start: 15 Sep '20   ID: 7

Finish: 15 Sep '20   Dur: 1 day

Res: Project Sponsor

Gather Project Requirements

Start: 16 Sep '20   ID: 9

Finish: 18 Sep '20   Dur: 3 days

Res: Project Manager

Define Scope of Work

Start: 21 Sep '20   ID: 10

Finish: 23 Sep '20   Dur: 3 days

Res: Project Manager

Create Scope Management Plan
Start: 24 Sep '20   ID: 11
Finish: 25 Sep '20   Dur: 2 days
Res: Project Manager

Set up a Meeting with Project Engine
Start: 28 Sep '20   ID: 13
Finish: 28 Sep '20   Dur: 1 day
Res: Project Manager, Engineer

Identify Project Activities
Start: 29 Sep '20   ID: 14
Finish: 01 Oct '20   Dur: 3 days
Res: Project Manager

Create Schedule Management Plan
Start: 02 Oct '20   ID: 15
Finish: 06 Oct '20   Dur: 3 days
Res: Project Manager

Identify Activities Cost
Start: 07 Oct '20   ID: 17
Finish: 08 Oct '20   Dur: 2 days
Res: Project Manager

Review Cost with Project Sponsor
Start: 09 Oct '20   ID: 18
Finish: 09 Oct '20   Dur: 1 day
Res: Project Manager, Project Spon:

Create Cost Management Plan
Start: 12 Oct '20   ID: 19
Finish: 15 Oct '20   Dur: 4 days
Res: Project Manager

Create Quality Management Plan
Start: 19 Oct '20   ID: 22
Finish: 20 Oct '20   Dur: 2 days
Res: Project Manager

Define Authority Chain
Start: 21 Oct '20   ID: 24
Finish: 22 Oct '20   Dur: 2 days
Res: Project Manager

Define Materials/Supplies Manageme
Start: 23 Oct '20   ID: 25
Finish: 28 Oct '20   Dur: 4 days
Res: Project Manager, Engineeer

Create Resource Management Plan
Start: 29 Oct '20   ID: 26
Finish: 30 Oct '20   Dur: 2 days
Res: Project Manager

Define Channels of Communication
Start: 02 Nov '20   ID: 28
Finish: 02 Nov '20   Dur: 1 day
Res: Project Manager

Create Communication Management
Start: 02 Nov '20   ID: 29
Finish: 03 Nov '20   Dur: 2 days
Res: Project Manager

Gather Possible Project Risks
Start: 04 Nov '20   ID: 31
Finish: 05 Nov '20   Dur: 2 days
Res: Project Manager

Seek advice of Experts for Propose Re
Start: 06 Nov '20   ID: 32
Finish: 10 Nov '20   Dur: 3 days
Res: Project Manager, Engineer, GO

Create Risk Management Plan
Start: 11 Nov '20   ID: 33
Finish: 12 Nov '20   Dur: 2 days
Res: Project Manager

Set Up Meeting with Engineer and Arc
Start: 13 Nov '20   ID: 35
Finish: 16 Nov '20   Dur: 2 days
Res: Project Manager, Engineer, Arc

Identify Jobs that Require Subcontrac
Start: 17 Nov '20   ID: 36
Finish: 18 Nov '20   Dur: 2 days
Res: Project Manager

Define Suppliers Criteria
Start: 19 Nov '20   ID: 37
Finish: 19 Nov '20   Dur: 1 day
Res: Project Manager

Create Procurement Managemetn Pla
Start: 20 Nov '20   ID: 38
Finish: 24 Nov '20   Dur: 3 days
Res: Project Manager

Identify Project Stakeholder Involven
Start: 25 Nov '20   ID: 40
Finish: 26 Nov '20   Dur: 2 days
Res: Project Manager

Create Stakeholders Management Pla
Start: 27 Nov '20   ID: 41
Finish: 30 Nov '20   Dur: 2 days
Res: Project Manager

Land Inspection and Agreement
Start: 11 Jan '21   ID: 44
Finish: 22 Jan '21   Dur: 10 days
Res: Engineer, Land Surveyor, Proje

Land Purchase
Start: 22 Jan '21   ID: 45
Finish: 19 Feb '21   Dur: 20 days
Res: Project Manager, Project Spon:

Purchase Land Property
Milestone Date: 19 Feb '21
ID: 46

Submit Design
Start: 22 Feb '21   ID: 48
Finish: 22 Mar '21   Dur: 20 days
Res: Architect

Design approval
Start: 23 Mar '21   ID: 49
Finish: 31 Mar '21   Dur: 7 days
Res: Project Sponsor

Permits and Licenses Approval
Start: 01 Apr '21   ID: 50
Finish: 14 Apr '21   Dur: 8 days
Res: City Council , Project Assistant

Permits and Licenses
Milestone Date: 14 Apr '21
ID: 51

Set - up Temporary Facilities
Start: 15 Apr '21   ID: 53
Finish: 27 May '21   Dur: 30 days
Res: Engineer, Project Assistant

Dig
Start: 28 May '21   ID: 56
Finish: 10 Jun '21   Dur: 10 days
Res: Concrete Workers Crew, Engine

Level
Start: 11 Jun '21   ID: 57
Finish: 17 Jun '21   Dur: 5 days
Res: Concrete Workers Crew, Engine

Iron Bed Set-Up
Start: 18 Jun '21   ID: 59
Finish: 01 Jul '21   Dur: 10 days
Res: Concrete Workers Crew

Concrete Pour
Start: 02 Jul '21   ID: 61
Finish: 08 Jul '21   Dur: 5 days
Res: Concrete Construction Subcont

Cure
Start: 09 Jul '21   ID: 62
Finish: 13 Jul '21   Dur: 3 days
Res: Concrete Construction Subcont

Build Cement Block Wall
Start: 14 Jul '21   ID: 65
Finish: 24 Aug '21   Dur: 30 days
Res: Concrete Workers Crew

Column Shape and Concrete Filling
Start: 25 Aug '21   ID: 66
Finish: 15 Sep '21   Dur: 15 days
Res: Concrete Workers Crew

Shape and Filling of Beams and Rebars
Start: 16 Sep '21   ID: 67
Finish: 30 Sep '21   Dur: 10 days
Res: Concrete Workers Crew

Electric Rough In
Start: 25 Aug '21   ID: 80
Finish: 23 Sep '21   Dur: 20 days
Res: Electrician Crew

Install Fixtures
Start: 24 Sep '21   ID: 81
Finish: 22 Oct '21   Dur: 20 days
Res: Electrician Crew

Plumbing Rough in
Start: 25 Aug '21   ID: 83
Finish: 23 Sep '21   Dur: 20 days
Res: Plumber Crew

Water/Drainage
Start: 24 Sep '21   ID: 84
Finish: 05 Oct '21   Dur: 8 days
Res: Plumber Crew

Install Fixtures
Start: 06 Oct '21   ID: 85
Finish: 01 Nov '21   Dur: 18 days
Res: Plumber Crew

Cure Column and Beam
Start: 01 Oct '21   ID: 68
Finish: 12 Oct '21   Dur: 7 days
Res: Concrete Workers Crew

Build Metal Structure for Roof
Start: 13 Oct '21   ID: 71
Finish: 26 Oct '21   Dur: 10 days
Res: Roofing Crew

Screw Roof Metal Sheets
Start: 27 Oct '21   ID: 72
Finish: 09 Nov '21   Dur: 10 days
Res: Roofing Crew

Install Vents
Start: 10 Nov '21   ID: 73
Finish: 16 Nov '21   Dur: 5 days
Res: Roofing Crew

Install Gutters
Start: 17 Nov '21   ID: 74
Finish: 23 Nov '21   Dur: 5 days
Res: Roofing Crew

Plaster Walls/Walls Refinement
Start: 13 Oct '21   ID: 69
Finish: 16 Nov '21   Dur: 25 days
Res: Concrete Workers Crew

Install Windows
Start: 17 Nov '21   ID: 76
Finish: 30 Nov '21   Dur: 10 days
Res: Glazier Crew

Install Doors
Start: 01 Dec '21   ID: 77
Finish: 14 Dec '21   Dur: 10 days
Res: Glazier Crew

Install Ceiling Wood Structure
Start: 15 Dec '21   ID: 88
Finish: 04 Jan '22   Dur: 15 days
Res: Ceiling Crew

Screw on Drywall
Start: 05 Jan '22   ID: 89
Finish: 25 Jan '22   Dur: 15 days
Res: Ceiling Crew

Cover Holes, Screws and line opening
Start: 26 Jan '22   ID: 91
Finish: 08 Feb '22   Dur: 10 days
Res: Ceiling Crew

Level floor
Start: 09 Feb '22   ID: 93
Finish: 22 Feb '22   Dur: 10 days
Res: Tile Setter Crew

Adhere Tile to Floor
Start: 23 Feb '22   ID: 94
Finish: 06 Apr '22   Dur: 30 days
Res: Tile Setter Crew

Tile Forging
Start: 07 Apr '22   ID: 95
Finish: 29 Apr '22   Dur: 15 days
Res: Tile Setter Crew

Paint Ceiling
Start: 03 May '22   ID: 97
Finish: 24 May '22 Dur: 15 days
Res: Paint Crew

Paint Interior Walls
Start: 25 May '22   ID: 98
Finish: 14 Jun '22   Dur: 15 days
Res: Paint Crew

Paint Exterior Walls
Start: 15 Jun '22   ID: 99
Finish: 08 Jul '22   Dur: 18 days
Res: Paint Crew

Select Furnish
Start: 11 Jul '22   ID: 102
Finish: 05 Aug '22   Dur: 20 days
Res: Project Manager

Purchase Furnish
Start: 08 Aug '22   ID: 103
Finish: 19 Aug '22   Dur: 10 days
Res: Project Assistant

Accommodate Furnish
Start: 22 Aug '22   ID: 104
Finish: 26 Aug '22   Dur: 5 days
Res: Project Assistant

Order and Purchase Equipment
Start: 11 Jul '22   ID: 105
Finish: 20 Jul '22   Dur: 8 days
Res: Project Manager

Install Equipment
Start: 21 Jul '22   ID: 106
Finish: 11 Aug '22   Dur: 16 days
Res: Equipment Provider Crew, Engi

Furnish and Equipment Set
Milestone Date: 11 Aug '22
ID: 107

Install AC
Start: 11 Jul '22   ID: 108
Finish: 22 Jul '22   Dur: 10 days
Res: AC Subcontractor

Site Clean Up
Start: 25 Jul '22   ID: 110
Finish: 05 Aug '22   Dur: 10 days
Res: Project Assistant , Comercial C

Final Building Inspection
Start: 08 Aug '22   ID: 111
Finish: 19 Aug '22   Dur: 10 days
Res: Engineer, Project Manager

Operating Permits

Start: 22 Aug '22	ID: 112
Finish: 09 Sep '22	Dur: 15 days
Res: City Council , Health Departme	

End of Project

Milestone Date: 09 Sep '22

ID: 113

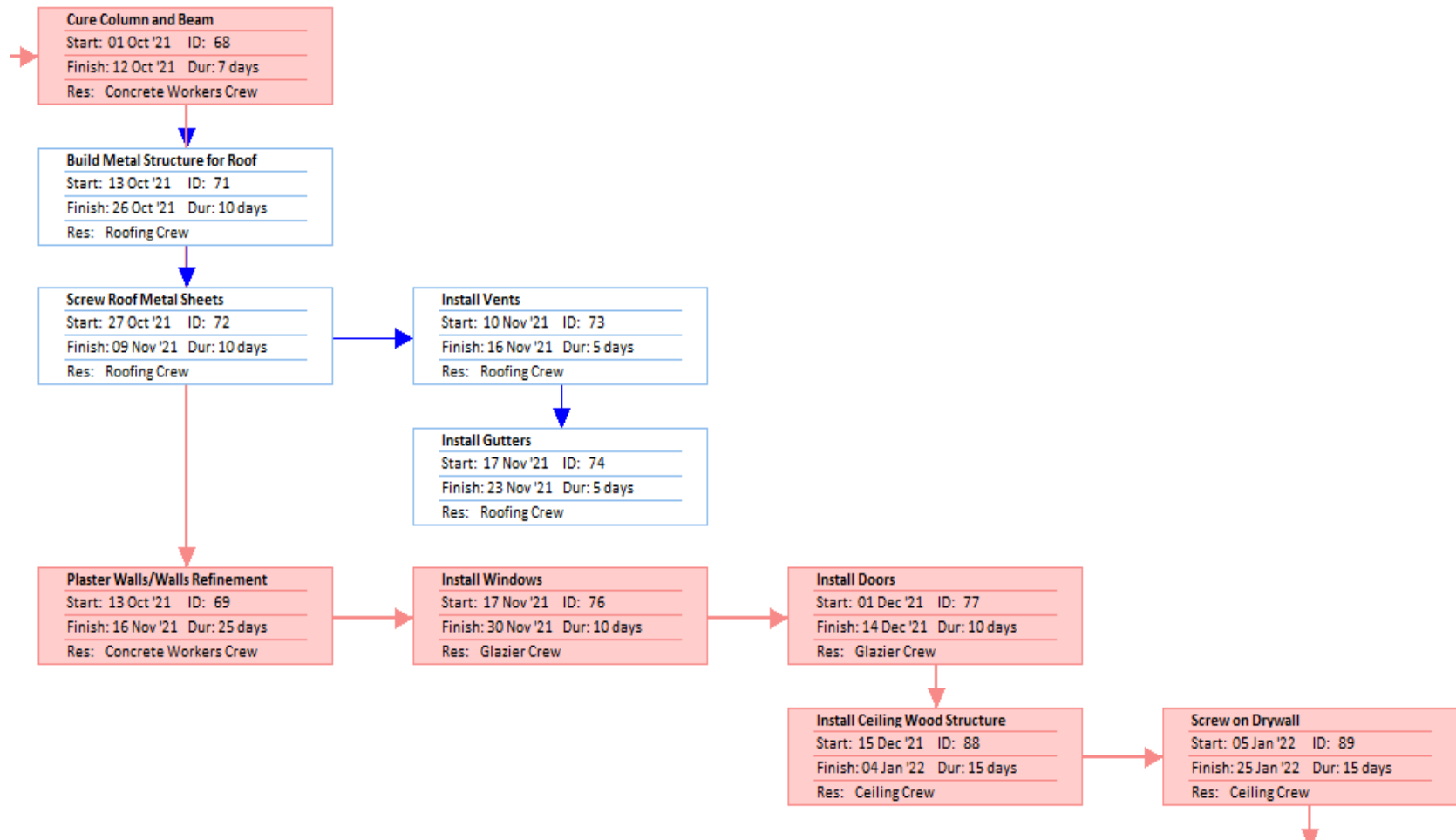**Facility Building Finished**

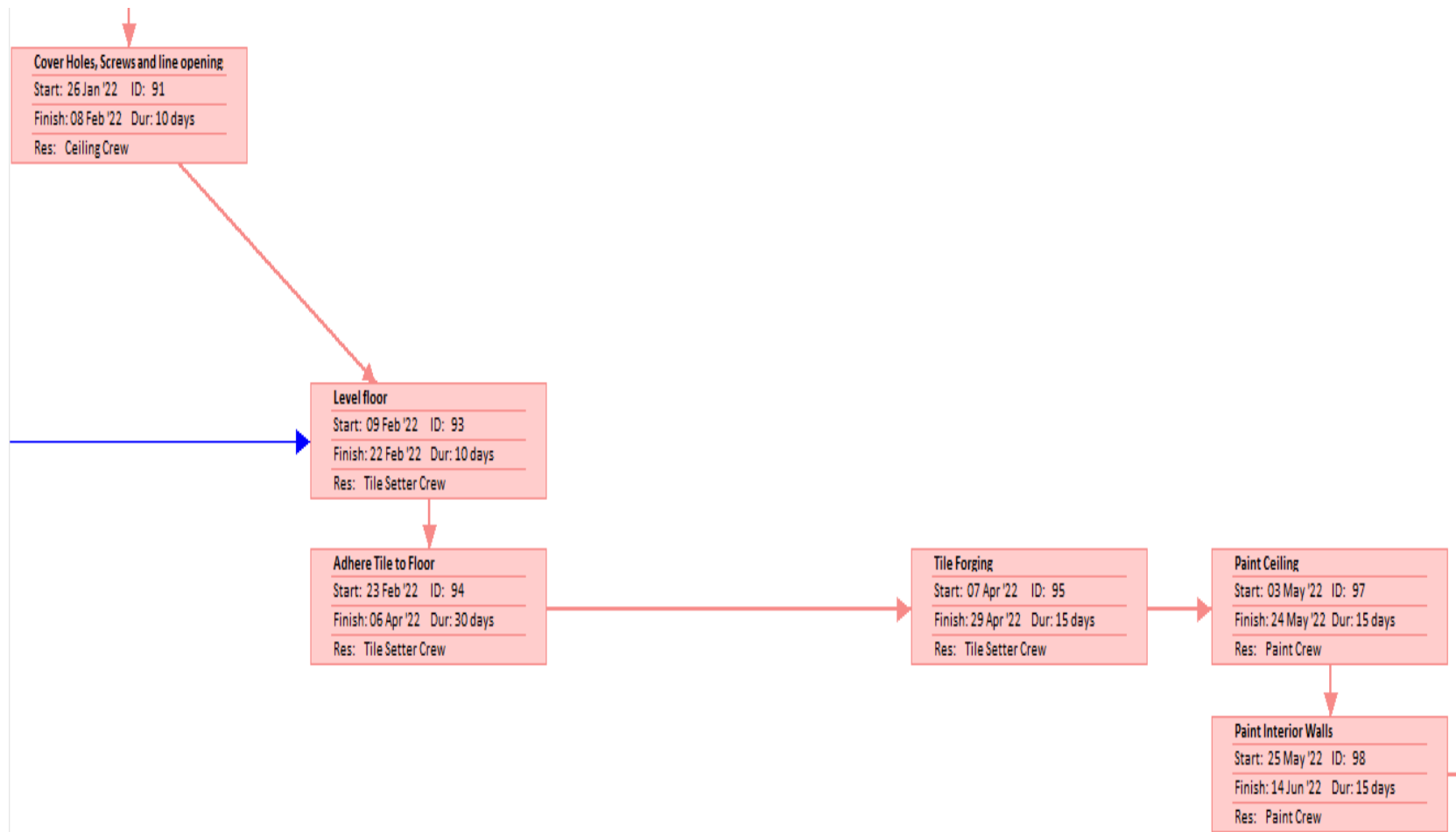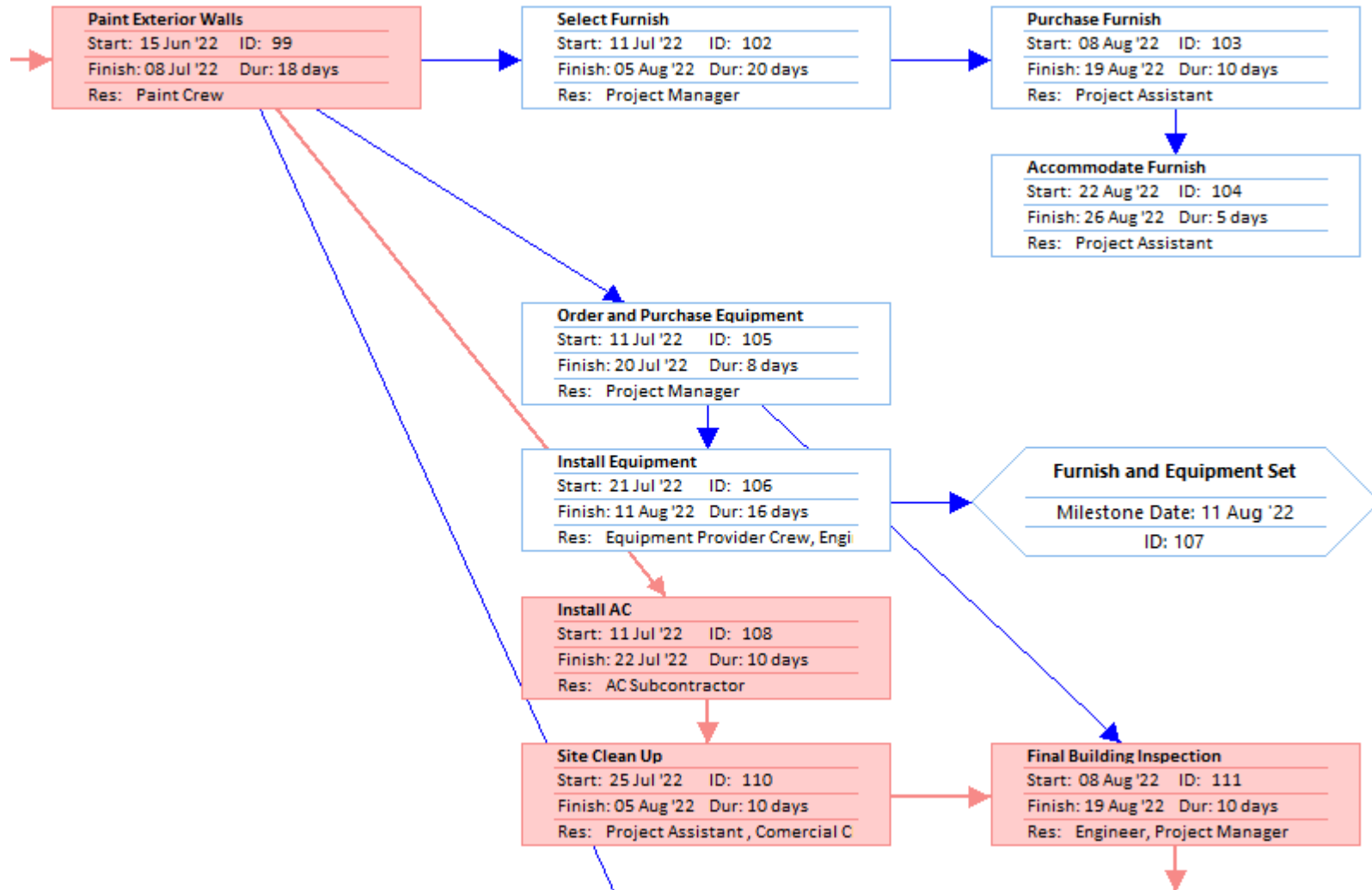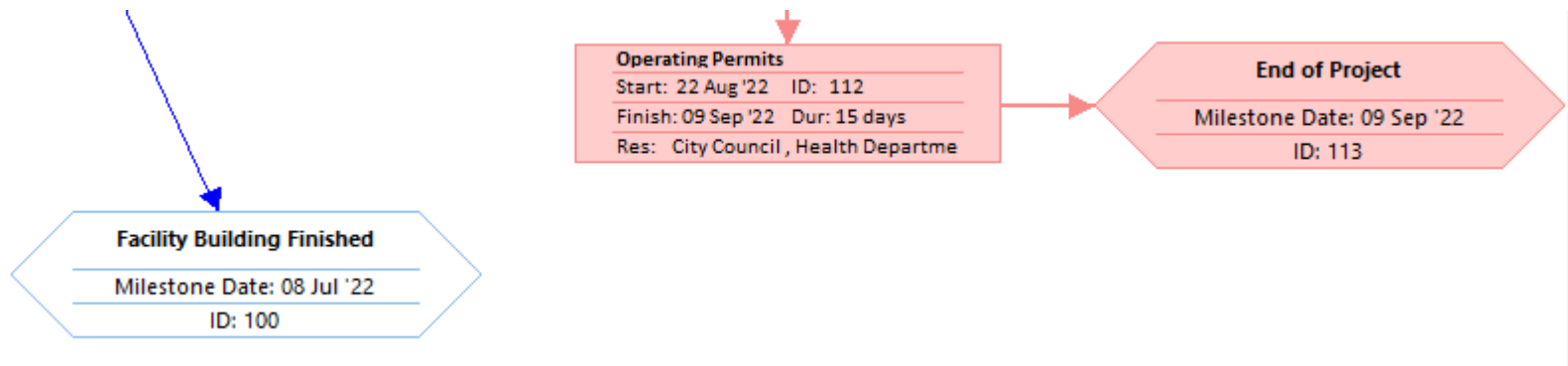Milestone Date: 08 Jul '22

ID: 100

Figure 11 Crematory and Home Funeral Network Diagram (N. Melgar, The Author, October 20

Control Schedule

Meetings – Regular meetings will be held every beginning of week with project team to update project manager of project's progress.

Schedule changes – Any change in schedule needs to be approved by Project Manager and Engineer. A change request would need to be submitted to Project Manager, and until approved the change in schedule can be done. Any change submitted will need to reflect how it will reflect schedule, and budget.

Project Schedule – It will be reviewed regularly by Project Manager and Engineer to ensure everything is going according to plan, and deadlines are being met.

Stakeholders – Every 3 weeks Project manager and Engineer will have a meeting with main stakeholders such as project sponsor, in order to update him on the progress of the project.

4.4. Cost Management Plan

Cost Management Approach

The Crematory and Funeral home project will be managed at the second level,
which means that the control accounts (CA) will be created to at this level for cost
tracking purposes.

Any variances in time and cost will affect the planned the schedule and budget.
Any variances in cost and schedule between 0.9 and 1.1 will be considered a
warning only and should be highlighted in yellow. Variances less than 0.9 and
greater than 1.1 will be considered an urgent alert which will be highlighted in red
and an immediate corrective action will be required. All corrective actions should
be submitted using the Project change request template and must be approved by
the project sponsor.

Measuring Project Costs

The Earned Value Management (EVM) method will be used to measure project
cost, and the following are the related metrics that will be used:

Schedule Variance (SV)

- SV = 0 it means project is perfectly on schedule

- SV > 0 it means project is ahead of Schedule

- SV < 0 it means project is behind schedule and needs to be

reviewed and analyzed for corrective actions

Schedule Performance Index (SPI)

- SPI = 1 it means project is perfectly on schedule

- SPI > 1 it means project is ahead of Schedule

- SPI < 1 it means project is behind schedule and the schedule

performance needs to be reviewed and corrected

Cost Variance (CV)

- CV = 0 it means project is perfectly on Budget

- CV > 0 it means project is under Budget

- CV < 0 it means project is over Budget, the cost performance

is not good and needs corrective action)

Cost Performance Index (CPI)

- SPI = 1 it means project is perfectly on Budget

- SPI > 1 it means project under budget

- SPI < 1 it means project is being completed over budget (needs corrective actions).

If there is variance in the SPI and CPI between 0.9 and 1.1 the project manager should report the reason for the variance, and it should keep monitored in case changes keep occurring. If the variance is Less than 0.9 and grater 1.1 then project manager should report the reason for variance and a corrective plan should be submitted and applied in order to improve the performance back to level.

Performance Measure	Yellow	Red
SPI	Between 0.9 and 1.1	Less than 0.9 and greater than 1.1
CPI	Between 0.9 and 1.1	Less than 0.9 and greater than 1.1

Reporting Format

A report for cost management will be included in the bi-weekly project progression report. The report will reflect the earned value metrics as well as any variance identified in cost. Any cost change request submitted and approved will also be reported as well as the corrective action plan implemented for that specific approved change.

Cost Variance Responses Process

If the SPI and/or CPI at some point shows less than 0.9 or more than 1.1 then a cost variance corrective plan should be presented by project manager to project

sponsor within 4 business days after the date the cost variance was identified and reported. After approved, the project manager should present the cost variance corrective action plan to the team and implement it. The plan should detail the steps that needs to be taken in order to improve cost performance and align it with planned cost.

Cost Change Control Process

- Identify need for change (if variance is yellow or red highlighted) and submit a change request form
- The request will be then be reviewed by project manager, who will then have to prepare a corrective plan to help improve cost/schedule performance
- Project manager will then take the change request submitted as well as the proposed corrective plan to the project sponsor to get approval.
- If approved by project sponsor, then the cost plan will be updated to show the changes then shared with team.

Project Budget

Chart 11 Project's Baseline Cost

WBS	Task Name	Cost of Labor	Materials / Licenses	Total Cost	Contingency Reserve (%)	Contingency Reserve ($)	Total
1	Project Management Plan						
1.1	Project Charter						
1.1.1	Collect Business Case	$ 50.00	$ -	$ 50.00	5%	$ 2.50	$ 52.50
1.1.2	Create Project Charter	$ -	$ -	$ -		$ -	$ -
1.1.3	Approval of Project Charter	$ -	$ -	$ -		$ -	$ -
1.2	Scope Management Plan			$ -		$ -	$ -
1.2.1	Gather Project Requirements	$ 200.00	$ -	$ 200.00	5%	$ 10.00	$ 210.00
1.2.2	Define Scope of Work	$ -	$ -	$ -		$ -	$ -
1.2.3	Create Scope Management Plan	$ -	$ -	$ -		$ -	$ -
1.3	Schedule Management plan			$ -		$ -	$ -
1.3.1	Set up a Meeting with Project Engineeer	$ 200.00	$ -	$ 200.00	5%	$ 10.00	$ 210.00
1.3.2	Identify Project Activities	$ -	$ -	$ -		$ -	$ -
1.3.3	Create Schedule Management Plan	$ -	$ -	$ -		$ -	$ -
1.4	Cost Management Plan			$ -		$ -	$ -
1.4.1	Identify Activities Cost	$ -	$ -	$ -		$ -	$ -
1.4.2	Review Cost with Project Sponsor	$ -	$ -	$ -		$ -	$ -
1.4.3	Create Cost Management Plan	$ 200.00	$ -	$ 200.00	5%	$ 10.00	$ 210.00
1.5	Quality Management Plan			$ -		$ -	$ -
1.5.1	Identify Quality Requirements	$ 100.00	$ -	$ 100.00	5%	$ 5.00	$ 105.00

Chart 11 Project's Baseline Cost, Continued

1.5.2	Create Quality Management Plan	$ 100.00	$ -	$ 100.00	5%	$ 5.00	$ 105.00
1.6	Resources Management plan			$ -		$ -	$ -
1.6.1	Define Authority Chain			$ -		$ -	$ -
1.6.2	Define Materials/Supplies Management	$ 100.00	$ -	$ 100.00	5%	$ 5.00	$ 105.00
1.6.3	Create Resource Management Plan	$ 100.00	$ -	$ 100.00	5%	$ 5.00	$ 105.00
1.7	Communication Management Plan			$ -		$ -	$ -
1.7.1	Define Channels of Communication	$ -	$ -	$ -		$ -	$ -
1.7.2	Create Communication ManagementPlan	$ 50.00	$ -	$ 50.00	5%	$ 2.50	$ 52.50
1.8	Risk Management Plan			$ -		$ -	$ -
1.8.1	Gather Possible Project Risks	$ -	$ -	$ -		$ -	$ -
1.8.2	Seek advice of Experts for Propose Response	$ 200.00	$ -	$ 200.00	5%	$ 10.00	$ 210.00
1.8.3	Create Risk Management Plan	$ -	$ -	$ -		$ -	$ -
1.9	Procurement Management Plan			$ -		$ -	$ -
1.9.1	Set Up Meeting with Engineer and Architect	$ 100.00	$ -	$ 100.00	5%	$ 5.00	$ 105.00
1.9.2	Identify Jobs that Require Subcontractor	$ -	$ -	$ -		$ -	$ -
1.9.3	Define Suppliers Criteria	$ -	$ -	$ -		$ -	$ -
1.9.4	Create Procurement Managemetn Plan	$ 100.00	$ -	$ 100.00	5%	$ 5.00	$ 105.00
1.1	Stakeholder Management Plan			$ -		$ -	$ -
1.10.1	Identify Project Stakeholder Involvement Level	$ -	$ -	$ -		$ -	$ -
1.10.2	Create Stakeholders Management Plan	$ 200.00	$ -	$ 200.00	5%	$ 10.00	$ 210.00
2	Pre - Construction					$ -	$ -
2.1	Land Acquisition			$ -		$ -	$ -
2.1.1	Land Inspection and Agreement	$ 5,000.00	$ -	$ 5,000.00	10%	$ 500.00	$ 5,500.00

Chart 11 Project's Baseline Cost, Continued

2.1.2	Land Purchase	$ -	$ 100,000.00	$ 100,000.00	8%	$ 8,000.00	$ 108,000.00
2.2	Architectural Design			$ -		$ -	$ -
2.2.1	Submit Design	$ 1,500.00	$ -	$ 1,500.00	20%	$ 300.00	$ 1,800.00
2.2.2	Design approval	$ -	$ -	$ -		$ -	$ -
2.3	Permits and Licenses Approval	$ -	$ 1,500.00	$ 1,500.00	10%	$ 150.00	$ 1,650.00
2.4	Mobilization			$ -		$ -	$ -
2.4.1	Set - up Temporary Facilities	$ 10,000.00	$ 6,500.00	$ 16,500.00	12%	$ 1,980.00	$ 18,480.00
3	Foundation			$ -		$ -	$ -
3.1	Excavation			$ -		$ -	$ -
3.1.1	Dig	$ 3,200.00	$ -	$ 3,200.00	10%	$ 320.00	$ 3,520.00
3.1.2	Level	$ 2,000.00	$ -	$ 2,000.00	10%	$ 200.00	$ 2,200.00
3.2	Iron Frame			$ -		$ -	$ -
3.2.1	Iron Bed Set-Up	$ 2,800.00	$ 3,000.00	$ 5,800.00	12%	$ 696.00	$ 6,496.00
3.3	Concrete			$ -		$ -	$ -
3.3.1	Concrete Pour	$ 3,000.00	$ 4,000.00	$ 7,000.00	12%	$ 840.00	$ 7,840.00
3.3.2	Cure	$ 1,000.00	$ 3,000.00	$ 4,000.00	10%	$ 400.00	$ 4,400.00
4	Exterior			$ -		$ -	$ -
4.1	Walls and Openings			$ -		$ -	$ -
4.1.1	Build Cement Block Wall	$ 4,000.00	$ 6,500.00	$ 10,500.00	10%	$ 1,050.00	$ 11,550.00
4.1.2	Column Shape and Concrete Filling	$ 3,000.00	$ 3,000.00	$ 6,000.00	7%	$ 420.00	$ 6,420.00
4.1.3	Shape and Filling of Beams and Rebars	$ 3,000.00	$ 3,000.00	$ 6,000.00	9%	$ 540.00	$ 6,540.00
4.1.4	Cure Column and Beam	$ 1,300.00	$ 1,500.00	$ 2,800.00	9%	$ 252.00	$ 3,052.00
4.1.5	Plaster Walls/Walls Refinement	$ 4,000.00	$ 6,200.00	$ 10,200.00	11%	$ 1,122.00	$ 11,322.00
4.2	Roofing			$ -		$ -	$ -
4.2.1	Build Metal Structure for Roof	$ 3,500.00	$ 5,000.00	$ 8,500.00	12%	$ 1,020.00	$ 9,520.00

Chart 11 Project's Baseline Cost, Continued

4.2.2	Screw Roof Metal Sheets	$ 6,000.00	$ 9,000.00	$ 15,000.00	9%	$ 1,350.00	$	16,350.00
4.2.3	Install Vents	$ 1,800.00	$ 1,700.00	$ 3,500.00	12%	$ 420.00	$	3,920.00
4.2.4	Install Gutters	$ 1,100.00	$ 1,900.00	$ 3,000.00	12%	$ 360.00	$	3,360.00
4.3	Windows and Doors			$ -		$ -	$	-
4.3.1	Install Windows	$ 4,000.00	$ 11,000.00	$ 15,000.00	11%	$ 1,650.00	$	16,650.00
4.3.2	Install Doors	$ 2,000.00	$ 8,000.00	$ 10,000.00	11%	$ 1,100.00	$	11,100.00
5	Interior			$ -		$ -	$	-
5.1	Electrical			$ -		$ -	$	-
5.1.1	Electric Rough In	$ 3,000.00	$ 4,000.00	$ 7,000.00	8%	$ 560.00	$	7,560.00
5.1.2	Install Fixtures	$ 1,750.00	$ 1,250.00	$ 3,000.00	8%	$ 240.00	$	3,240.00
5.2	Plumbing			$ -		$ -	$	-
5.2.1	Plumbing Rough in	$ 1,600.00	$ 1,900.00	$ 3,500.00	8%	$ 280.00	$	3,780.00
5.2.2	Water/Drainage	$ 800.00	$ 1,200.00	$ 2,000.00	8%	$ 160.00	$	2,160.00
5.2.3	Install Fixtures	$ 700.00	$ 800.00	$ 1,500.00	8%	$ 120.00	$	1,620.00
5.3	Finishes			$ -		$ -	$	-
5.3.1	Ceiling			$ -		$ -	$	-
5.3.1.1	Install Ceiling Wood Structure	$ 2,500.00	$ 3,000.00	$ 5,500.00	12%	$ 660.00	$	6,160.00
5.3.1.2	Screw on Drywall	$ 2,000.00	$ 4,000.00	$ 6,000.00	12%	$ 720.00	$	6,720.00
5.3.1.3	Cover Holes, Screws and line openings	$ 1,200.00	$ 1,300.00	$ 2,500.00	12%	$ 300.00	$	2,800.00
5.3.2	Floor			$ -		$ -	$	-
5.3.2.1	Level floor	$ 1,200.00	$ 3,000.00	$ 4,200.00	12%	$ 504.00	$	4,704.00
5.3.2.2	Adhere Tile to Floor	$ 8,000.00	$ 7,000.00	$ 15,000.00	12%	$ 1,800.00	$	16,800.00
5.3.2.3	Tile Forging	$ 800.00	$ 2,500.00	$ 3,300.00	12%	$ 396.00	$	3,696.00
5.3.3	Paint			$ -		$ -	$	-
5.3.3.1	Paint Ceiling	$ 900.00	$ 600.00	$ 1,500.00	12%	$ 180.00	$	1,680.00

Chart 11 Project's Baseline Cost, Continued

5.3.3.2	Paint Interior Walls	$ 1,000.00	$ 1,500.00	$ 2,500.00	12%	$ 300.00	$ 2,800.00
5.3.3.3	Paint Exterior Walls	$ 1,000.00	$ 1,500.00	$ 2,500.00	12%	$ 300.00	$ 2,800.00
5.3.4	Furnish/Equipment			$ -		$ -	$ -
5.3.4.1	Select Furnish	$ -		$ -		$ -	$ -
5.3.4.2	Purchase Furnish		$ 39,316.01	$ 39,316.01	4%	$ 1,572.64	$ 40,888.65
5.3.4.3	Accommodate Furnish	$ 1,000.00		$ 1,000.00	4%	$ 40.00	$ 1,040.00
5.3.4.4	Order and Purchase Equipment		$ 130,145.00	$ 130,145.00	4%	$ 5,205.80	$ 135,350.80
5.3.4.5	Install Equipment	$ 10,000.00		$ 10,000.00	4%	$ 400.00	$ 10,400.00
5.4	Install AC	$ 4,950.00	$ 13,750.00	$ 18,700.00	7%	$ 1,309.00	$ 20,009.00
6	Post Construction			$ -		$ -	$ -
6.1	Site Clean Up	$ 3,600.00	$ -	$ 3,600.00	10%	$ 360.00	$ 3,960.00
6.2	Final Building Inspection	$ -	$ -	$ -		$ -	$ -
6.3	Operating Permits	$ -	$ 750.00	$ 750.00	10%	$ 75.00	$ 825.00
		$ 109,900.00	$ 392,311.01	$ 502,211.01		$ 38,237.44	$ 540,448.45

(N. Melgar, The Author, October 2020)

Initial Cost: $502,211.01

Contingency Reserve: $38,237.44

Cost Baseline: $540,448.45

Management Reserve (5%): $27,022.42

Project's Budget: $567,470.87

Chart 12 Resources Baseline Cost and Duration

WBS	Task Name	Baseline Duration (Days)	Baseline Work (Hours)	Baseline Start	Baseline Finish	Total
	Funeral Home Project	586	4688	07 Sep '20	09 Sep '22	$ 540,448.45
	Project Starts	0	0	07 Sep '20	07 Sep '20	
1	Project Management Plan	61	488	07 Sep '20	30 Nov '20	
1.1	Project Charter	7	56	07 Sep '20	15 Sep '20	
1.1.1	Collect Business Case	3	24	07 Sep '20	09 Sep '20	$ 52.50
1.1.2	Create Project Charter	3	24	10 Sep '20	14 Sep '20	$ -
1.1.3	Approval of Project Charter	1	8	15 Sep '20	15 Sep '20	$ -
1.2	Scope Management Plan	8	64	16 Sep '20	25 Sep '20	$ -
1.2.1	Gather Project Requirements	3	24	16 Sep '20	18 Sep '20	$ 210.00
1.2.2	Define Scope of Work	3	24	21 Sep '20	23 Sep '20	$ -
1.2.3	Create Project Charter	2	16	24 Sep '20	25 Sep '20	$ -
1.3	Schedule Management plan	7	56	28 Sep '20	06 Oct '20	$ -
1.3.1	Set up a Meeting with Project Engineeer	1	8	28 Sep '20	28 Sep '20	$ 210.00
1.3.2	Identify Project Activities	3	24	29 Sep '20	01 Oct '20	$ -
1.3.3	Create Schedule Management Plan	3	24	02 Oct '20	06 Oct '20	$ -
1.4	Cost Management Plan	7	56	07 Oct '20	15 Oct '20	$ -
1.4.1	Identify Activities Cost	2	16	07 Oct '20	08 Oct '20	$ -
1.4.2	Review Cost with Project Sponsor	1	8	09 Oct '20	09 Oct '20	$ -
1.4.3	Create Cost Management Plan	4	32	12 Oct '20	15 Oct '20	$ 210.00
1.5	Quality Management Plan	3	24	16 Oct '20	20 Oct '20	$ -

	Chart 12 Resources Baseline Cost and Duration, Continued						
1.5.1	Identify Quality Requirements	1	8	16 Oct '20	16 Oct '20	$	105.00
1.5.2	Create Quality Management Plan	2	16	19 Oct '20	20 Oct '20	$	105.00
1.6	Resources Management plan	8	64	21 Oct '20	30 Oct '20	$	-
1.6.1	Define Authority Chain	2	16	21 Oct '20	22 Oct '20	$	-
1.6.2	Define Materials/Supplies Management	4	32	23 Oct '20	28 Oct '20	$	105.00
1.6.3	Create Resource Management Plan	2	16	29 Oct '20	30 Oct '20	$	105.00
1.7	Communication Management Plan	2	16	02 Nov '20	03 Nov '20	$	-
1.7.1	Define Channels of Communication	1	8	02 Nov '20	02 Nov '20	$	-
1.7.2	Create Communication ManagementPlan	2	16	02 Nov '20	03 Nov '20	$	52.50
1.8	Risk Management Plan	7	56	04 Nov '20	12 Nov '20	$	-
1.8.1	Gather Possible Project Risks	2	16	04 Nov '20	05 Nov '20	$	-
1.8.2	Seek advice of Experts for Propose Response	3	24	06 Nov '20	10 Nov '20	$	210.00
1.8.3	Create Risk Management Plan	2	16	11 Nov '20	12 Nov '20	$	-
1.9	Procurement Management Plan	8	64	13 Nov '20	24 Nov '20	$	-
1.9.1	Set Up Meeting with Engineer and Architect	2	16	13 Nov '20	16 Nov '20	$	105.00
1.9.2	Identify Jobs that Require Subcontractor	2	16	17 Nov '20	18 Nov '20	$	-
1.9.3	Define Suppliers Criteria	1	8	19 Nov '20	19 Nov '20	$	-
1.9.4	Create Procurement Managemetn Plan	3	24	20 Nov '20	24 Nov '20	$	105.00
1.1	Stakeholder Management Plan	4	32	25 Nov '20	30 Nov '20	$	-
1.10.1	Identify Project Stakeholder Involvement Level	2	16	25 Nov '20	26 Nov '20	$	-
1.10.2	Create Stakeholders Management Plan	2	16	27 Nov '20	30 Nov '20	$	210.00
2	Pre - Construction	95	760	11 Jan '21	27 May '21	$	-
2.1	Land Acquisition	30	240	11 Jan '21	19 Feb '21	$	-
2.1.1	Land Inspection and Agreement	10	80	11 Jan '21	22 Jan '21	$	5,500.00

	Chart 12 Resources Baseline Cost and Duration, Continued					
2.1.2	Land Purchase	20	160	22 Jan '21	19 Feb '21	$ 108,000.00
2.2	Architectural Design	27	216	22 Feb '21	31 Mar '21	$ -
2.2.1	Submit Design	20	160	22 Feb '21	22 Mar '21	$ 1,800.00
2.2.2	Design approval	7	56	23 Mar '21	31 Mar '21	$ -
2.3	Permits and Licenses Approval	8	64	01 Apr '21	14 Apr '21	$ 1,650.00
2.4	Mobilization	30	240	15 Apr '21	27 May '21	$ -
2.4.1	Set - up Temporary Facilities	30	240	15 Apr '21	27 May '21	$ 18,480.00
3	Foundation	33	264	28 May '21	13 Jul '21	$ -
3.1	Excavation	15	120	28 May '21	17 Jun '21	$ -
3.1.1	Dig	10	80	28 May '21	10 Jun '21	$ 3,520.00
3.1.2	Level	5	40	11 Jun '21	17 Jun '21	$ 2,200.00
3.2	Iron Frame	10	80	18 Jun '21	01 Jul '21	$ -
3.2.1	Iron Bed Set-Up	10	80	18 Jun '21	01 Jul '21	$ 6,496.00
3.3	Concrete	8	64	02 Jul '21	13 Jul '21	$ -
3.3.1	Concrete Pour	5	40	02 Jul '21	08 Jul '21	$ 7,840.00
3.3.2	Cure	3	24	09 Jul '21	13 Jul '21	$ 4,400.00
4	Exterior	107	856	14 Jul '21	14 Dec '21	$ -
4.1	Walls and Openings	87	696	14 Jul '21	16 Nov '21	$ -
4.1.1	Build Cement Block Wall	30	240	14 Jul '21	24 Aug '21	$ 11,550.00
4.1.2	Column Shape and Concrete Filling	15	120	25 Aug '21	15 Sep '21	$ 6,420.00
4.1.3	Shape and Filling of Beams and Rebars	10	80	16 Sep '21	30 Sep '21	$ 6,540.00
4.1.4	Cure Column and Beam	7	56	01 Oct '21	12 Oct '21	$ 3,052.00
4.1.5	Plaster Walls/Walls Refinement	25	200	13 Oct '21	16 Nov '21	$ 11,322.00
4.2	Roofing	30	240	13 Oct '21	23 Nov '21	$ -

Chart 12 Resources Baseline Cost and Duration, Continued

4.2.1	Build Metal Structure for Roof	10	80	13 Oct '21	26 Oct '21	$	9,520.00
4.2.2	Screw Roof Metal Sheets	10	80	27 Oct '21	09 Nov '21	$	16,350.00
4.2.3	Install Vents	5	40	10 Nov '21	16 Nov '21	$	3,920.00
4.2.4	Install Gutters	5	40	17 Nov '21	23 Nov '21	$	3,360.00
4.3	Windows and Doors	20	160	17 Nov '21	14 Dec '21	$	-
4.3.1	Install Windows	10	80	17 Nov '21	30 Nov '21	$	16,650.00
4.3.2	Install Doors	10	80	01 Dec '21	14 Dec '21	$	11,100.00
5	Interior	255	2040	25 Aug '21	26 Aug '22	$	-
5.1	Electrical	40	320	25 Aug '21	22 Oct '21	$	-
5.1.1	Electric Rough In	20	160	25 Aug '21	23 Sep '21	$	7,560.00
5.1.2	Install Fixtures	20	160	24 Sep '21	22 Oct '21	$	3,240.00
5.2	Plumbing	46	368	25 Aug '21	01 Nov '21	$	-
5.2.1	Plumbing Rough in	20	160	25 Aug '21	23 Sep '21	$	3,780.00
5.2.2	Water/Drainage	8	64	24 Sep '21	05 Oct '21	$	2,160.00
5.2.3	Install Fixtures	18	144	06 Oct '21	01 Nov '21	$	1,620.00
5.3	Finishes	178	1424	15 Dec '21	26 Aug '22	$	-
5.3.1	Ceiling	40	320	15 Dec '21	08 Feb '22	$	-
5.3.1.1	Install Ceiling Wood Structure	15	120	15 Dec '21	04 Jan '22	$	6,160.00
5.3.1.2	Screw on Drywall	15	120	05 Jan '22	25 Jan '22	$	6,720.00
5.3.1.3	Cover Holes, Screws and line openings	10	80	26 Jan '22	08 Feb '22	$	2,800.00
5.3.2	Floor	55	440	09 Feb '22	29 Apr '22	$	-
5.3.2.1	Level floor	10	80	09 Feb '22	22 Feb '22	$	4,704.00
5.3.2.2	Adhere Tile to Floor	30	240	23 Feb '22	06 Apr '22	$	16,800.00
5.3.2.3	Tile Forging	15	120	07 Apr '22	29 Apr '22	$	3,696.00

Chart 12 Resources Baseline Cost and Duration, Continued								
5.3.3	Paint		48	384	03 May '22	08 Jul '22	$	-
5.3.3.1	Paint Ceiling		15	120	03 May '22	24 May '22	$	1,680.00
5.3.3.2	Paint Interior Walls		15	120	25 May '22	14 Jun '22	$	2,800.00
5.3.3.3	Paint Exterior Walls		18	144	15 Jun '22	08 Jul '22	$	2,800.00
5.3.4	Furnish/Equipment		35	280	11 Jul '22	26 Aug '22	$	-
5.3.4.1	Select Furnish		20	160	11 Jul '22	05 Aug '22	$	-
5.3.4.2	Purchase Furnish		10	80	08 Aug '22	19 Aug '22	$	40,888.65
5.3.4.3	Accommodate Furnish		5	40	22 Aug '22	26 Aug '22	$	1,040.00
5.3.4.4	Order and Purchase Equipment		8	64	11 Jul '22	20 Jul '22	$	135,350.80
5.3.4.5	Install Equipment		16	128	21 Jul '22	11 Aug '22	$	10,400.00
5.4	Install AC		10	80	11 Jul '22	22 Jul '22	$	20,009.00
6	Post Construction		35	280	25 Jul '22	09 Sep '22	$	-
6.1	Site Clean Up		10	80	25 Jul '22	05 Aug '22	$	3,960.00
6.2	Final Building Inspection		10	80	08 Aug '22	19 Aug '22	$	-
6.3	Operating Permits		15	120	22 Aug '22	09 Sep '22	$	825.00

(N. Melgar, The Author, October 2020)

Chart 13 Summation of budget for scheduled activities

WBS	Task Name	Baseline Cost	Percent Weight	Start	Finish	Quarter Duration	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
1.1	Project Charter	$ 52.50	0.01%	Q1	Q1	1	$ 52.50								
1.2	Scope Management Plan	$ 210.00	0.04%	Q1	Q1	1	$ 210.00								
1.3	Time Management plan	$ 210.00	0.04%	Q2	Q2	1		$ 210.00							
1.4	Cost Management Plan	$ 210.00	0.04%	Q2	Q2	1		$ 210.00							
1.5	Quality Management Plan	$ 210.00	0.04%	Q2	Q2	1		$ 210.00							
1.6	Resources Management plan	$ 210.00	0.04%	Q2	Q2	1		$ 210.00							
1.7	Communication Management Plan	$ 52.50	0.01%	Q2	Q2	1		$ 52.50							
1.8	Risk Management Plan	$ 210.00	0.04%	Q2	Q2	1		$ 210.00							
1.9	Procurement Management Plan	$ 210.00	0.04%	Q2	Q2	1		$ 210.00							
1.1	Stakeholder Managerment Plan	$ 210.00	0.04%	Q2	Q2	1		$ 210.00							
2.1	**Land Acquisition**	$ 113,500.00	21.00%	Q3	Q3	1			$113,500.00						
2.2	**Architectural Design**	$ 1,800.00	0.33%	Q3	Q3	1			$ 1,800.00						
2.3	Permits and Licenses Approval	$ 1,650.00	0.31%	Q4	Q4	1				$ 1,650.00					
2.4	**Mobilization**	$ 18,480.00	3.42%	Q4	Q4	1				$18,480.00					
3.1	**Excavation**	$ 5,720.00	1.06%	Q4	Q4	1				$ 5,720.00					
3.2	**Iron Frame**	$ 6,496.00	1.20%	Q4	Q5	2				$ 3,248.00	$ 3,248.00				
3.3	**Concrete**	$ 12,240.00	2.26%	Q5	Q5	1					$12,240.00				
4.1	**Walls and Openings**	$ 38,884.00	7.19%	Q5	Q6	2					$24,510.00	$14,374.00			
4.2	**Roofing**	$ 33,150.00	6.13%	Q6	Q6	1						$33,150.00			
4.3	**Windows and Doors**	$ 27,750.00	5.13%	Q6	Q6	1						$27,750.00			
5.1	**Electrical**	$ 10,800.00	2.00%	Q5	Q6	2					$ 9,180.00	$ 1,620.00			
5.2	**Plumbing**	$ 7,560.00	1.40%	Q5	Q6	2					$ 4,860.00	$ 2,700.00			
5.3	**Finishes**	$ 235,839.45	43.64%	Q6	Q9	4						$ 7,840.00	$20,440.00	$18,424.00	$189,135.45
5.4	Install AC	$ 20,009.00	3.70%	Q9	Q9	1									$ 20,009.00
6.1	Site Clean Up	$ 3,960.00	0.73%	Q9	Q9	1									$ 3,960.00
6.2	Final Building Inspection	$ -	0.00%	Q9	Q9	1									$ -
6.3	Operating Permits	$ 825.00	0.15%	Q9	Q9	1									$ 825.00
	Total	$ 540,448.45	100.00%				$ 262.50	$1,522.50	$115,300.00	$29,098.00	$54,038.00	$87,434.00	$20,440.00	$18,424.00	$213,929.45

(N. Melgar, The Author, October 2020)

4.5. Quality Management Plan

Quality Management Approach

The crematory and funeral home project will be built to satisfy and meet sponsor's

quality expectations. To achieve this, the collection of requirements and/or

expected set of standards from sponsor must be collected and analyzed, to

develop a management plan and keep sponsor satisfied. In addition, the local

standards from the Central Building Authority (CBA) should be prioritize and

ensure CBA's requirements are met to ensure project's progression.

The quality plan will be designed to ensure the quality for materials, labor, and

deliverables. The quality standards will be defined by the project manager with the

help of the Engineer and will also established a metrics to define success or need

for improvement.

Quality Roles and Responsibilities

Project Manager

- Select a supervisor for project quality

- Outline quality requirements, standards as well as document it

- Review the performance of contractors

- Scheduled bi-weekly meetings to review performance quality with project team

- Be in constant contact with Engineer and quality supervisor to be updated

- Review suppliers' performance

Project Quality Supervisor

- Evaluate supplier's performance

- Evaluate and ensure subcontractors are meeting the expected quality standard

- Keep Project manager updated and informed

- Ensure timely delivery of supplies and materials

- Ensure that the exact quantity of supplies ordered is received

- Keep communication with engineer in order to track construction progress

performance

Engineer

- Inspection of materials to ensure desired quality

- Monitor inventory

- Keep project manager informed and updated on progress

- Ensure quality deliverables during construction

- Ensure that the construction deliverables meet the expected design

Subcontractors and Suppliers

- Ensure timely delivery of deliverables/materials

- Ensure to provide quality of work and supplies that was agreed during contract

- Honor prices and quotation agreed on contract

- If supplies or deliverables cannot be provided on timeline agreed due to

unexpected situations, it should be informed right away to Quality supervisor.

Quality Requirements/Standards

Building Materials

- The building materials must be durable and good quality, to ensure that the building will not deteriorate quickly. Also, it is required for the materials to be able to stand weather conditions.

- Materials should also be affordable and stay within the planned budget limits

Labor/Performance of Task

- Design details and specifications should be considered while carrying out the different activities

- Selected subcontractors and workers should be skilled and experienced in the specific areas of expertise they are hired for.

- Ensure that the area of work is safe for workers

- Inspect area of work to avoid accidents

- Appropriate work attire for workers on site

- Have appropriate and required equipment available to facilitate work

Deliverables

- Deliverables should meet design's specification

- Should be approved by Project manager and Project Sponsor

Quality Assurance

The crematory and funeral home construction project will meet the project's quality requirements by implementing the three-phase system. The three-phase system include the preparatory phase, initial phase, and follow up phase.

- Preparatory phase – Before starting the activity scheduled to start, it should be reviewed to ensure that all necessary materials have been ordered and a delivery date has been confirmed. Also, all necessary precaution should be prepared and identified to ensure workers and site safety. The list of subcontracted that will be operating during the activity should be reviewed as well.

- Initial Phase – This phase can also be called the verification phase. Here is where it will be verified that all the related workers are meeting the expected requirements. The quality of the material received should be confirmed and approved, and sub-contractors should be confirmed as ready to begin.

- Follow up Phase – During this phase, all work will be monitored continuously to ensure deadlines are met, quality deliverables, successful performance from sub-contractors and ensure requirements have been achieved successfully

Quality Control

For quality control, meetings will be held every two weeks to review progress and give feedback on work done so far. During these meetings, the inventory report will be reviewed, as well as deliverables' inspection reports, and subcontractors' performance. Quality improvements ideas will also be discussed, and the possibilities will be evaluated with the team.

For every deliverable finalized, an inspection will be carried out. This inspection will be done by the project manager and the project sponsor. If the inspection is successful, then the deliverable will be considered as finished. However, if deliverable is not approved by project manager and project sponsor, then deliverable will not be considered finished, and the working crew will have to go back and fix mistakes or apply requested changes.

If the engineer or the Project quality supervisor believes changes should be done, then the following procedure will have to be carried out:

Quality Change Control Process

- Identify need for change and submit a change request form
- The request will be reviewed by project manager, who will then have to prepare a corrective or adjustment plan

- Project manager will then take the change request submitted as well as the proposed corrective plan to the project sponsor to get approval.

- If approved by project sponsor, then the cost plan will be updated to show the changes then shared with team.

Quality Control Measurements

All deliverables for the crematory and funeral home project must be measured to ensure success. Metrics will include schedule, cost, resources, requirements, and building design. The following templates will be used for conducting measurements:

Contractor's Quality Control Report

Bi-Weekly Progress Log	
Project Name:	
Report Number:	
Date:	
Submitted By:	
Activities in Progress	
Materials Delivered	
Inspection Done	
Activities Start / Finish	
Quality Control Requirements	
Quality Assurance / Quality Control Deficiency & Proposed Correction	

Figure 12 Contractor's quality control report form (N.Melgar, November 2020)

Received Materials Forms

Project Name:	
Report Number:	
Name of Supplier:	
Purchase Order Number:	
Date Received:	
Inspected By:	

Item No	Item Description	Quantity Received	Full/ Partial	Received	Rejected

Total Items Received and Accepted
Total Items to be Replaced or Refunded
Name of Item:
Reason:

Figure 13 Received materials form (N.Melgar, November 2020)

Inspection of Deliverable Form

Project Name:	
Deliverable Name:	
Delivered By:	
Date of Inspection:	
Inspected By:	

	Yes	No	Not Sure
Does it meet the required design specifications?			
Were the pre-assigned materials used?			
Were materials tested before used?			
Were the resources assigned sufficient?			
Was there any variable on materials used?			
Were all expected installations done?			
Was it delivered within scheduled time?			
Was it delivered within assigned budget?			
Were all safety requirements followed?			
Were the tests done successful?			
Any need for improvement?			
Engineer Approval			
Quality Supervisor approval			

Project Manager Approval _____

Project Sponsor Approval _____

Figure 14 Inspection of deliverable form (N.Melgar, November 2020)

4.6. Resources Management Plan

Project Team Resource Management plan will detail the how the project's team will be managed. Highlighting team's roles and responsibilities, as well as the project hierarchy chart, rewards, and Staffing details.

Project Organization Chart

Project Organizational Chart
Crematory and Funeral Home
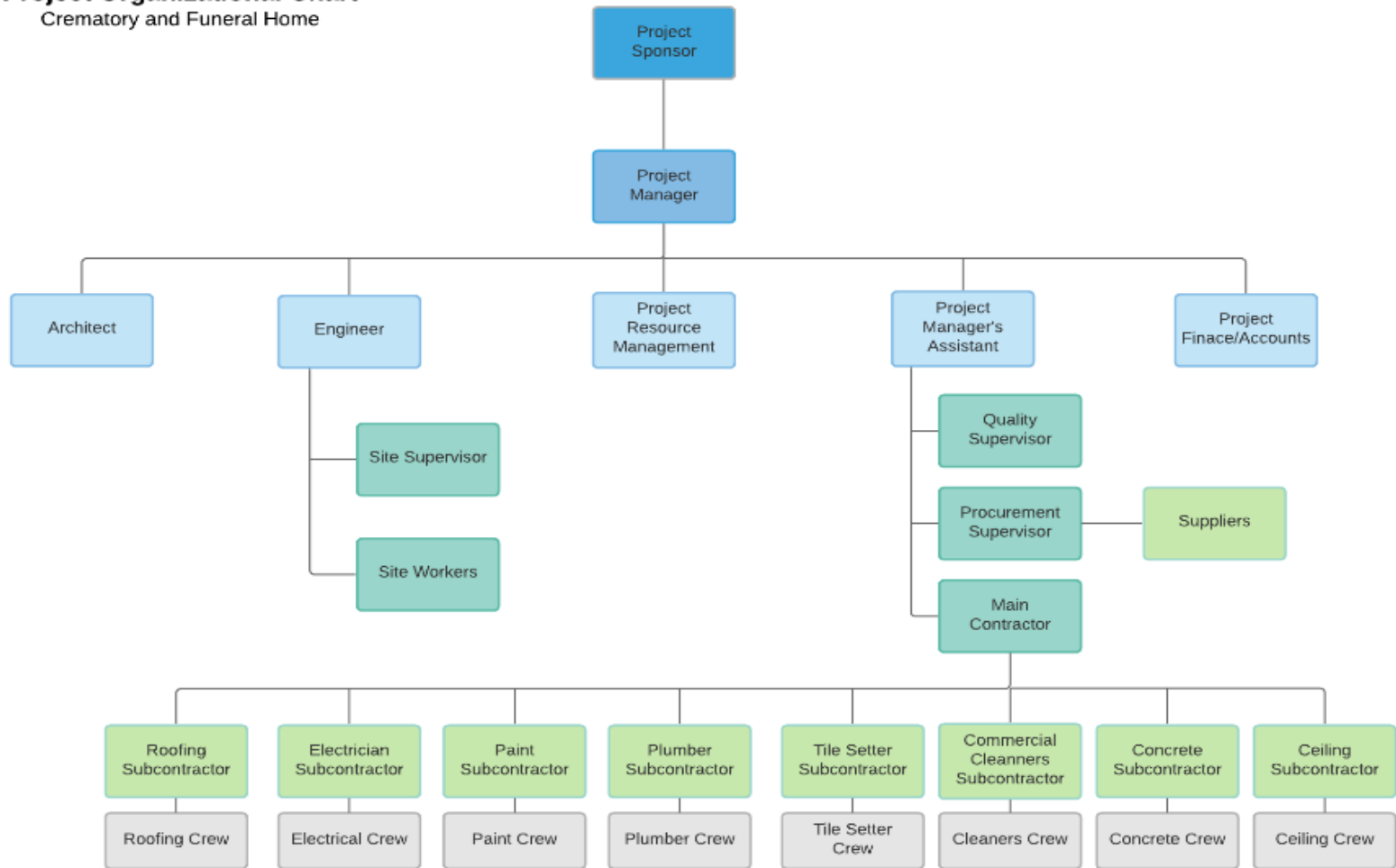
Figure 15 Project organizational chart (N.Melgar, November 2020)

Roles and Responsibilities

RACI Matrix Key Definitions:	R – Responsible	A – Accountable	C – Consulted	I – Informed

	Project Sponsor	Project Manager	Architect	Engineer	Resource Manager	Project Manager Assistant	Project Finance	Site Supervisor	Site Workers	Quality Supervisor	Procurement Supervisor	Main Contractor	Suppliers	Roofing Subcontractor	Electrician Subcontractor	Paint Subcontractor	Plumber Subcontractor	Tile Setter Subcontractor	Paint Subcontractor	Concrete Subcontractor	Ceiling Subcontractor	Commercial Cleanners Subcontractor	Glazier Subcontractor	AC Subcontractor	GOB
Land Acquisition	A	R		C			I																		
Architectural Design	AI	C	R																						
Permits and Licenses	I	A				R																			C
Mobilization	I	A		C				R																	
Excavation	I	A		C		R			R			R													
Iron Frame	I	A		C																R					
Concrete	I			C		R						R								R					
Walls and Openings	I	A		C		R						R								R					
Roofing	I	A		C		R						R		R											
Windows and Doors	I	A		C		R						R											R		
Electrical	I	A		C		R						R			R										
Plumbing	I	A		C		R						R					R								
Finishes	I	A		C		R						R				R		R	R		R				
Install AC	I	A		C		R						R												R	
Site Clean Up	I	I				A						R										R			
Final Building Inspection	I	A		RC																					
Operating Permits	I	A				R																			C
Subcontractors	I	I	I			A						R													
Materials	I	A				R					R														
Deliverable Approvals	CI	RA																							

Figure 16 Roles and Responsibilities (N.Melgar, November 2020)

Figured 16 shows the roles and responsibilities of project team members. The following are the definitions for RACI Matrix for a better understanding:

R – Responsible

The team member assigned as responsible is the one that will be in charged to carry out the specific task

A – Accountable

The accountable team member is responsible to do the last review to submitted deliverables and pronounced it as complete and approved

C – Consulted

The consulted team member is the person who is an expert in the matter/subject and can provide feedback for improvement

I – Informed

These are the team member that needs to be informed regularly of project or task progress.

Training and Development

- Subcontractor Crew – All subcontractors are responsible for training their crew depending on the required skills needed for the job.

- Site workers – will be trained properly by site supervisor to meet expected performance standard as well as carry out their tasks in a safely manner.

- Staff – Staff will be assigned to task that matches their skills, abilities, and experience. If they need a specific training for a required task, then it will be provided to them by an expert assigned by project manager.

- New hires – New staff, or workers hired during project will be selected depending on the demand for a specific task (or tasks). These new hires will have to meet the required skills and experience on demand.

Rewards and Recognition

Monetary rewards will be offered to teams that finish their tasks / deliverables before deadlines. However, to qualify for this rewards, tasks/deliverables will have to meet the following criteria:

- Meet design specifications

- Meet quality expectations

- All finishing details will have to be completely done

- Pass the deliverable inspection and get approval

If the deliverable submitted does not meet one of the above criteria, then it will be approved for reward

Supplies and Materials Management

The procurement supervisor is responsible for managing the supplies and

materials purchased for the project, supervised by the project manager assistant.

The procurement supervisor is responsible to receive all materials from suppliers

as well as to distribute them during the project. He/she will be responsible for

inventory management.

Arrival of Materials Procedure

Procurement Supervisor

- Will receive the materials/supplies

- Will verify that the ordered quantity was received

- Will inspect that supplies/materials are in good condition

- Final step, he/she will fill out the Received Materials Form (See Figure 13),
  and sign it

- The Received Materials Form will then be submitted to Project Manager
  Assistant

Distribution of Materials and Supplies

The project manager assistant will provide the procurement supervisor with a list of

names of the persons that can get materials/supplies from the inventory. The

procurement Manager will keep a log for all materials that are given to the

authorized personnel, stating the date collected, name of person, list of items collected, and the person's signature.

Change Request Process

For the resources' management plan, a change request can be submitted by the Project manager assistant, engineer, procurement supervisor, site supervisor, quality supervisor, and the main contractor.

If the subcontractors see a need to submit a change request, they need to speak with the main contractor and state the reasons to validate the submission. If the main contractor believes that the reasons are valid, then he will fill out the change request form (see figure 9) and submit to project assistant manager. The project assistant manager will then evaluate the change request, and if he/she agrees with the reasons then it will be submitted to Project Manager for approval.

If the site workers see a need to submit a change request, they need to speak with the site supervisor and state the reasons to validate the submission. If the site supervisor believes that the reasons are valid, then he will fill out the change request form and submit to project assistant manager. The project assistant manager will then evaluate the change request, and if he/she agrees with the reasons then it will be submitted to Project Manager for approval.

If the authorized personnel to collect materials from inventory see a need to submit a change request, they need to speak with the procurement supervisor and state the reasons to validate the submission. If the procurement supervisor believes that the reasons are valid, then he will fill out the change request form and submit to project assistant manager. The project assistant manager will then evaluate the change request, and if he/she agrees with the reasons then it will be submitted to Project Manager for approval

If the engineer, site supervisor, main contractor, quality supervisor, and the procurement supervisor see a need to submit a change request, then they will fill out the change request form, and submit to project assistant manager. The project assistant manager will then evaluate the change request, and if he/she agrees with the reasons then it will be submitted to Project Manager for approval

If the project assistant manager sees a need to submit a change request, then he/she will fill out the change request form and submit to Project Manager for approval.

Once a change request form is submitted, the following procedure will take place:
- Identify need for change and submit a change request form
- The request will then be reviewed by project manager to identify the impacts the requested change will have on schedule, budget, quality, and scope

- The impacts identified will be then evaluated by project manager

- If after evaluating the impacts of the change request on the project, the project manager decides the implementation is necessary, then the change request will be approved

- Once the change request has been approved, then the project plan will be updated to show the change and inform the requester as well as the team.

4.7. Communication Management Plan

The communication plan will be designed to coordinate the communication during the project within the stakeholders. For an effective communication plan, it is important to identify the persons that need to receive the communication, the methods that will be used and frequency.

Stakeholders

- Project Sponsor

- Project Manager

- Project Assistant Manager

- Engineer

- Site Supervisor

- Quality Supervisor

- Finance Officer

- Human Resource Officer

- Architect

- Main contractor

- Procurement Supervisor

- Site Workers

- Subcontractors

- Suppliers

- GOB

Communication Type	Objective of Communication	Method	Frequency	Audience	Owner	Deliverable
Project Start – Up	Officially introduce the project's objective to team	Face to Face Meeting	One time	Project Sponsor, Project assistant manager, Engineer, Project team	Project Manager	Meeting Minutes, Project Agenda
Team Start- Up	Motivate workers before the start of the day's work and give instructions if necessary	Face to Face Meeting	Daily	Site workers	Site Supervisor	Daily Agenda
Project Review	Present deliverable to team and gather feedback	Face to Face Meeting	At milestones	Project Manager, Project Assistant Manager,	Project Manager	Meeting Minutes, Feedback list

				Engineer, Project Team		on milestone
Project Status	Communicate and discuss project's progress, issues, budget, schedules	Face to Face Meeting	B-Weekly	Project Manager, Project assistant manager, Engineer, Project team	Project Manager	Meeting Minutes, Report
Task Review	Review task end product and evaluate quality and expectation goals	Face to Face Meeting	At the end of Each Task	Project Manager, Project assistant manager, Engineer, Project team	Project Manager	Minuting Minutes, Feedback List on Task End Product
Change Request Approved	Inform Project Team of the Changes Approved	Face to Face Meeting	Only When a Change Request Has	Project Manager, Project	Project Manager	Meeting Minutes and Corrective

	and Present the New Corrective Plan		Been Approved	assistant manager, Engineer, Project team		plan Report
Lessons Learned	Review project success and well as failure for future reference	Face to Face	End of Project	Project Team	Project Team, Project Assistant Manager, Project Team	Lessons Learned Document

Figure 17 Communication Matrix (N.Melgar, November 2020)

Change Request Process

- Identify need for change and submit a change request form

- Project assistant manager will then evaluate the change request and determines if it has valid reasons. If the project assistant manager considers it to be valid, it will then be submitted to project manager (if not, it will be refused by project assistant manager).

- The request will then be reviewed by project manager to identify the impacts the requested change will have on schedule, budget, quality, and scope

- The impacts identified will be then evaluated by project manager

- If after evaluating the impacts of the change request on the project, the project manager decides the implementation is necessary, then the change request will be approved

- Once the change request has been approved, then the project plan will be updated to show the change and inform the requester as well as the team.

The only stakeholder that does not need project manager's approval to implement a change is the project sponsor. However, the project sponsor needs to at least notify project manager of any changes he plans to implement before doing so.

4.8. Project Risk Management Plan

Methodology

The risk management plan will identify the different possible risks that may impact the crematory and funeral home project. To identify as much possible risks, techniques such as interviews with experts and brainstorming will be used. A risk register will then be created with all the risks identified, which then will be categorized depending on the level of probability of happening. This way a response will be developed for each risk to help mitigate or eliminate the impact all together.

Roles and Responsibilities

Project Manager

- Manage schedule, budget and expected quality throughout the project
- During bi-weekly project status meetings with team review the risk list identified during planning, and identify if new risks not yet registered have been identified
- Any new risked identified, or any risk that the impact cannot be mitigated should be informed to project sponsor
- Ensure that subcontractors submit a list of possible risks during their working period
- Identify mitigation action plan for new risks
- Manage change control process

Site Supervisor

- Ensure that all safety procedure is carried out in order to avoid accidents

- Ensure that workers have the qualification, skills, and experience for the job they will be performing

- Ensure that all tool and equipment are available and safe to use

- Identify and report risk identification to project assistant manager (who will then report it to project manager)

Main Contractor

- Ensure to gather from subcontractors a list of possible risks and their planned response in case it happens

- Ensure subcontractors and crew follow safety guidelines set by site supervisor

Risk Identification

Level 0	Level 1	Level 2	Level 3
Crematory and Funeral Home Project Risks	1.Project Management Risks	1.1 Cost	1.1.1 Taxes increment may happen in March 2021. If cost contracts (materials/labor) are not signed before that date, then the cost estimate of the project will increase and may become an urgent matter.
			1.1.2 Estimating errors may happen if the cost estimates are not done using official quotations issued by companies. Then it may lead to miscalculations.
		1.2 Schedule	1.2.1 Mismanagement of project may affect schedule. If activities are not properly monitored, then the schedule will be affected because many activities depend on the end date of other activities to start.

			1.2.2 Any changes in scope may alter the project management plan. If objectives are added to scope it will increase the time length of the project.
		1.3 Quality	1.3.1 If expected quality standards are not met then it might impact the schedule and project cost because it may lead to re-doing a deliverable.
	2.External Risk	2.1 Suppliers	2.1.1 If suppliers do not deliver on time then the project schedule will be impacted as well as the cost to meet deadline or even if schedule is extended.
			2.1.2 If requested material is exhausted then the quality of deliverable may be impacted.
			2.1.3 If supplier is unable to honor contract and does not alert project management with enough time then the project schedule will be impacted

		2.2 Sub – Contractors	2.2.1 Poor Performance on subcontractors' part may lead to increase in cost. To meet project quality then the deliverable may need to be redone.
			2.2.2 Lack of details and specifications on supplier contracts may lead to future problems with subcontractors regarding required expectations on their part.
			2.2.3 If subcontractors are unable to meet deadlines then it will impact on project's schedule
		2.3 Environmental	2.3.1 Bad weather conditions between June and November may delay the project. If the country goes under hurricane alert, then activities will stop.
		2.4 GOB Requirements	2.4.1 If permits and licenses are delayed then it will impact the start date of the project
			2.4.2 If permits and licenses are not approved then it may lead to project cancellation

			3.1.1 Team's absences may slow down the speed of the project, thus affecting the schedule
		3.1 Team and Staff	3.1.2 Project team members may quit their job while the project is still going on. If that happens, then the project may be affected due to lack of skills and expertise, and it may increase the project cost if someone else needs to be trained or hired.
	3.Internal Risks		3.1.3 If there is a lack of required skills then the project quality will be affected and cost may increase
		3.2 Work Site	3.2.1 Construction safety measures as well as covid-19 safety measures will need to be put in place. If the correct measures are not properly put in place, then accidents may happen on site or site workers may get sick due to covid-19
			3.2.2 If the required equipment is not acquired or rented, then the quality of activities may be affected.

			3.2.3 If proper supervision is not coordinated it may affect deliverables' quality and deadline.

Figure 18 Risk Breakdown Structure (N.Melgar, November 2020)

Risk Analysis and Evaluation

The risks will be analyzed and evaluated to determine the probability of the risk to happen, and the level of impact it may have on the project. The impact matrix will be used to determine the probability and impact.

For the probability and impact matrix, a scale of 1 – 5 will be used for probability, where 1 will be the lowest and 5 will be the highest; and the level of impact a scale of 1-10 will be used. Below is the breakdown:

PROBABILITY		IMPACT	
Scale	**Probability of Occurrence**	**Scale**	**Level of impact**
5	Very High	10	Very High
4	High	8	High
3	Medium	6	Medium
2	Low	4	Low
1	Very Low	2	Very Low

Chart 14 Risks' Impact and Probability Chart

Risk ID	Risk	Probability	Scale	Impact	Scale	Risk Score
1.1.1	Taxes increment may happen in March 2021. If cost contracts (materials/labor) are not signed before that date, then the cost estimate of the project will increase and may become an urgent matter.	Medium	3	Very High	10	30
1.1.2	Estimating errors may happen if the cost estimates are not done using official quotations issued by companies. Then it may lead to miscalculations	High	4	Very High	10	30

Chart 14 Risks' Impact and Probability Chart, Continued						
1.2.1	Mismanagement of project may affect schedule. If activities are not properly monitored, then the schedule will be affected because many activities depend on the end date of other activities to start.	High	4	Very High	10	40
1.2.2	Any changes in scope may alter the project management plan. If objectives are added to scope it will increase the time length of the project.	Medium	3	High	6	18
1.3.1	If expected quality standards are not met then it might impact the schedule and project cost because it may lead to re-doing a deliverable.	Medium	3	Very High	10	30
2.1.1	If suppliers do not deliver on time then the project schedule	High	4	High	8	32

	Chart 14 Risks' Impact and Probability Chart, Continued					
	will be impacted as well as the cost to meet deadline or even if schedule is extended.					
2.1.2	If requested material is exhausted then the quality of deliverable may be impacted.	High	4	High	8	32
2.1.3	If supplier is unable to honor contract and does not alert project management with enough time then the project schedule will be impacted	Low	2	Medium	6	12
2.2.1	Poor Performance on subcontractors' part may lead to increase in cost. To meet project quality then the deliverable may need to be redone	Medium	3	High	8	24
2.2.2	Lack of details and specifications on supplier contracts may lead to future	Medium	3	Medium	6	18

	Chart 14 Risks' Impact and Probability Chart, Continued					
	problems with subcontractors regarding required expectations on their part					
2.2.3	If subcontractors are unable to meet deadlines then it will impact on project's schedule	High	4	High	8	32
2.3.1	Bad weather conditions between June and November may delay the project. If the country goes under hurricane alert, then activities will stop.	Very High	5	High	8	40
2.4.1	If permits and licenses are delayed, then it will impact the start date of the project	High	4	High	8	32
2.4.2	If permits and licenses are not approved, then it may lead to project	Very Low	1	High	8	8

	Chart 14 Risks' Impact and Probability Chart, Continued					
	cancellation					
3.1.1	Team's absences may slow down the speed of the project, thus affecting the schedule	High	4	Low	4	16
3.1.2	Project team members may quit their job while the project is still going on. If that happens, then the project may be affected due to lack of skills and expertise, and it may increase the project cost if someone else needs to be trained or hired.	Medium	3	Low	4	12
3.1.3	If there is a lack of required skills then the project quality will be affected and cost may increase	Low	2	High	8	16
3.2.1	Construction safety measures as well as covid-19 safety	Low	2	High	8	16

Chart 14 Risks' Impact and Probability Chart, Continued						
	measures will need to be put in place. If the correct measures are not properly put in place, then accidents may happen on site or site workers may get sick due to covid-19					
3.2.2	If the required equipment is not acquired or rented, then the quality of activities may be affected	Low	2	Medium	6	12
3.2.3	If proper supervision is not coordinated it may affect deliverables' quality and deadline.	Medium	3	Medium	6	18

(N. Melgar, The Author, November 2020)

An impact matrix will be created using the above risks' scores. Every risk with a score greater or equal to 30 will be placed in a high priority zone (which is highlighted in color red). Risks with a score more or equal to 16 will be placed in the medium priority zones (which is highlighted in yellow). Finally, risks with a score less than 16 will be placed in the low priority zone (highlighted in green).

Risk Priority Scale	Color	Risk Score	Criteria
High Priority	🟥	≥ 30	Critical zone / Unacceptable
Medium Priority	🟨	≥ 16	A moderate risk zone / still not acceptable
Low Priority	🟩	≤ 16	Acceptable low risk zone

		Level of Impact				
		Very Low	Low	Medium	High	Very High
Probability	Very High				Risk ID 2.3.1	
	High		Risk ID 3.1.1		Risk ID 2.1.1, 2.1.2, 2.2.3, 2.4.1	Risk ID 1.1.2, 1.2.1
	Medium		Risk ID 3.1.2	Risk ID 2.2.2, 3.2.3	Risk ID 1.2.2, 2.2.1	Risk ID 1.1.1, 1.3.1
	Low			Risk ID 2.1.3, 3.2.2	Risk ID 3.1.3, 3.2.1	
	Very Low				Risk ID 2.4.2	

Figure 19 Risks' Impact Matrix (N.Melgar, November 2020)

As shown on figure 19, the following risks (risk ID) should be addressed with the highest priority:

- 1.1.1
- 1.1.2
- 1.2.1
- 1.3.1
- 2.1.1
- 2.1.2
- 2.2.3
- 2.3.1
- 2.4.1

These other risks may not be as critical as the above list, yet they are still unacceptable and should be addressed as well after the high priority list:

- 1.2.2
- 2.2.1
- 2.2.2
- 3.1.1
- 3.1.3
- 3.2.1
- 3.2.3

Chart 15 Risk Register

Risk ID	Risk	Probability	Impact	P x L	Risk Priority	Owner	Mitigation
1.1.1	Taxes increment may happen in March 2021. If cost contracts (materials/labor) are not signed before that date, then the cost estimate of the project will increase and may become an urgent matter	3	10	30	High	Project Manager	Add a contingency rate to quotations and prices.

Chart 15 Risk Register, Continued							
1.1.2	Estimating errors may happen if the cost estimates are not done using official quotations issued by companies. Then it may lead to miscalculations	4	10	30	High	Project Manager	To avoid estimating errors, ensure to get quotations from 3 different suppliers to determine estimations
1.2.1	Mismanagement of project may affect schedule. If activities are not properly monitored, then the schedule will be affected because many activities depend	4	10	40	High	Project Manager	Each task on the scheduled has been added a 20% extra time to compensate for delays so it may not affect the planned scheduled.

Chart 15 Risk Register, Continued							
	on the end date of other activities to start						
1.2.2	Any changes in scope may alter the project management plan. If objectives are added to scope it will increase the time length of the project.	3	6	18	Medium	Project Manager	When planning schedule do not be exact with estimated time but add a percent for extra time in case of delays
1.3.1	If expected quality standards are not met then it might impact the schedule and project cost because it may	3	10	30	High	Project Manager	Each task will be supervised by quality supervisor to ensure that the process is carried out following quality standards, thus ensuring quality of deliverable

Chart 15 Risk Register, Continued							
	lead to re-doing a deliverable						
2.1.1	If suppliers do not deliver on time then the project schedule will be impacted as well as the cost to meet deadline or even if schedule is extended	4	8	32	High	Main Contractor	The time of delivery for suppliers should not be the same one planned on the scheduled but a few weeks earlier in case of delays in delivery.
2.1.2	If requested material is exhausted then the quality of deliverable may be impacted	4	8	32	High	Procurement Officer	When selecting materials for tasks, there should always be an options B, in case option A goes scarce during the execution of the project.
2.1.3	If supplier is unable to honor	2	6	12	Low	Procurement Officer	For every different supplier, there should be an option B

	Chart 15 Risk Register, Continued						
	contract and does not alert project management with enough time, then the project schedule will be impacted						supplier in case a supplier needs to be replaced
2.2.1	If suppliers do not deliver on time then the project schedule will be impacted as well as the cost to meet deadline or even if schedule is extended.	3	8	24	Medium	Main Contractor	A clause should be added in the subcontractors' contract to ensure that they can be replaced for poor performance or that a penalty can be claimed in case their performance affects the quality, time and cost of the project without approved reasons.
2.2.2	Lack of details and specifications on	3	6	18	Medium	Project Manager	Subcontractors' contracts should be reviewed and

Chart 15 Risk Register, Continued							
	supplier contracts may lead to future problems with subcontractors regarding required expectations on their part						approved by Project Manager, Engineer, and Quality supervisor to ensure there are no loose ends
2.2.3	If subcontractors are unable to meet deadlines then it will impact on project's schedule	4	8	32	High	Main Contractor	For every subcontractor, there should be an option B in case a subcontractor needs to be replaced
2.3.1	Bad weather conditions between June and November may delay the project. If the country goes under hurricane	5	8	40	High	Project Manager	Each task on the scheduled has been added a 20% extra time to compensate for delays including weather conditions delays so it may not affect the planned scheduled.

Chart 15 Risk Register, Continued							
	alert, then activities will stop.						
2.4.1	If permits and licenses are delayed then it will impact the start date of the project	4	8	32	High	Project Manager	If permits and licenses are delayed, a letter of authorization will be requested to start project and avoid starting date delays
2.4.2	If permits and licenses are not approved, then it may lead to project cancellation	1	8	8	Low	Project Manager	Project manager will ensure to meet all requirements to get permits and licenses approved
3.1.1	Team's absences may slow down the speed of the project, thus affecting the	4	4	16	Medium	HR	Team should inform 1 day prior if they plan to be absent, this way everyone will be informed, and measures can be applied so that absences

	Chart 15 Risk Register, Continued					
	schedule						do not affect the project
3.1.2	Project team members may quit their job while the project is still going on. If that happens, then the project may be affected due to lack of skills and expertise, and it may increase the project cost if someone else needs to be trained or hired.	3	4	12	Low	Site Supervisor	Team member should give at least 2 weeks' notice before quitting, in order to give time to replace and train new team members without delaying the project.
3.1.3	If there is a lack of required skills, then the project	2	8	16	Medium	Site Supervisor	Team members should be hired and selected by required skills. Also, a training

Chart 15 Risk Register, Continued							
	quality will be affected and cost may increase						should be provided to ensure competence
3.2.1	Construction safety measures as well as covid-19 safety measures will need to be put in place. If the correct measures are not properly put in place, then accidents may happen on site or site workers may get sick due to covid-19	2	8	16	Medium	Project Manager	To mitigate this risk, the safety measures should be reviewed and inspected before the beginning of each task. It will reduce the level of risk.
3.2.2	If the required equipment is not	2	6	12	Low	Project Manager	Equipment needed will be review before the beginning

Chart 15 Risk Register, Continued							
	acquired or rented, then the quality of activities may be affected						of each task to ensure that the required equipment is provided.
3.2.3	If proper supervision is not coordinated it may affect deliverables' quality and deadline	3	6	18	Medium	Site Supervisor	Site workers will be supervised by groups. Each group should not have more than 10 persons.

(N. Melgar, The Author, November 2020)

Risk Monitor and Control

For risk monitor and control the project assistant manager will be responsible for reviewing and monitoring risks. During the execution phase, it will be particularly important to review the risk register in case it needs to be updated if new risks appears, or if some of the forecasted risks are no longer a threat. The risk register should be updated on a weekly basis.

During the project status bi-weekly meeting the project manager should be informed of the risks' status, and project manager will be responsible for taking important decisions regarding changes, or any other decisions that may impact the project.

Risk Change Control Process

- Identify need for change and submit a change request form
- The request will be then be reviewed by project manager, who will then have to prepare a corrective plan to respond to risk's impact
- The corrective plan will be shared with team who will then apply it in the required situation

4.9. Procurement Management Plan

Introduction

The procurement management plan will specify the different activities that will done in order to ensure the acquisition of required labor, services and materials to carry out the project. It will start by identifying the materials and services that will need to be procured as well as the potential suppliers through an established criterion. The selected suppliers will have to submit bids which will then be evaluated, and the ones with the highest score will win the bid. The next step would be to negotiate the terms of the contract with the suppliers and subcontractors.

Procurement Management Approach

The project manager assistant will work with project manager to identify all the materials and services required to carry out the project, as well as the criteria to select suppliers and subcontractors. Then project manager assistant will be responsible to work directly with procurement supervisor and main contractor to review the bids and select the best candidates for the job. Project manager will work along with project assistant manager during the contract process with selected suppliers/subcontractors.

Procurement Definition

The following are materials and services/labor that has been highlighted as
important for project completion. These are to be reviewed by project manager and
project assistant manager and add or remove, as necessary. It also includes the
dates materials are to be delivered as well as start date for subcontractors.

Chart 16 Project Supplies

Materials	Description	Delivery Date
Iron	For iron bed set up, columns	Tuesday, 08 June 2021
Cement	For blocks, columns, beams and plaster	Friday, 25 June 2021
Blocks	For walls	Friday, 25 June 2021
Metal	For roof structure	Tuesday, 05 October 2021
Roof Sheets/roof screws	Roof sheet from metal material	Tuesday, 05 October 2021
Vents	Roof	Tuesday, 05 October 2021
Gutters	Roof	Tuesday, 05 October 2021
Glass	Doors and windows	Friday, 12 November 2021
Electrical Materials	pipes, electric wires and fixtures	Monday, 16 August 2021
Plumbing Materials	pipes and fixtures	Monday, 16 August 2021
Drywall Sheet	For ceiling	Monday, 05 December 2022
Wood/screws	for ceiling structure	Monday, 05 December 2022
Tile and accessories	for floor	Tuesday, 01 February 2022
Paint/Primer	Paint for Ceiling, walls	Thursday, 28 April 2022
Furnish	For building	Wednesday, 10 August 2022
Equipment	To operate business	Friday, 15 July 2022
Air Condition	For rooms	Friday, 08 July 2022

(N. Melgar, The Author, November 2020)

Chart 17 Subcontractors List

Subcontractors	Definition	Start Date
Concrete Subcontractor	foundation, walls, plastering labor	Friday, 28 May 2021
Roofing Subcontractor	Roof labor	Wednesday, 13 October 2021
Glazier Subcontractor	Doors and Windows supply and install	Wednesday, 17 November 2021
Electric Subcontractor	Electricity labor	Wednesday, 25 August 2021
Plumber Subcontractor	Plumbery labor	Wednesday, 25 August 2021
Ceiling Subcontractor	Ceiling labor	Wednesday, 15 December 2021
Tile Setter Subcontractor	Floor labor	Wednesday, 09 February 2022
Paint Subcontractor	Paint labor	Tuesday, 03 May 2022
AC Subcontractor	Air Conditioning labor	Monday, 11 July 2022

(N. Melgar, The Author, November 2020)

Choosing Suppliers/Subcontractor

Potential suppliers will be identified depending on the demand and need to complete the project. Once the suppliers have been identified, then the suppliers will be required to submit a bid. The bids will be then evaluated through a criterion. The suppliers with the highest scored will be selected. The criteria will be developed by project manager and project assistant manager, while the bids will be evaluated by project assistant manager along with main contractor and procurement supervisor.

When selecting suppliers and subcontractors for the project the following criteria must be followed:

- Reasonable Price

- Reliable delivery of materials / labor

- Quality Standard of materials/service

- Safety Standards

- Knowledge

- Technical Skills

- Supplier's Integrity and work ethics

- Recommendation from trusted channels

- Material availability

Below is supplier evaluation form to be used to evaluate supplier and subcontractors and select the ones with the highest score. The score will range from 1 - 5, where 1 is the lowest and 5 is the highest.

1 = Very Poor	2 = Poor	3 = Satisfactory	4 = Good	5 = Excellent

Supplier Selection Form

Project Title	
Supplier Name	
Evaluation Date	
Evaluator Name	

Evaluation

Criteria	Very Poor	Poor	Satisfactory	Good	Excellent
Price					
Reliability					
Quality Material/Work					
Safety Standards					
Job Knowledge					
Technical Skills					
Integrity					
Work Ethics					
Recommendations					
Materials Availability					
Total Score					
Comments					

Figure 20 Supplier Evaluation Form (N.Melgar, November 2020)

Suppliers / Subcontractors Contract

Once the suppliers and subcontractors have been selected, the project manager and project assistant manager will work together to develop the terms of the contract. The contract will be prepared by ABC Marketing Services Corp Ltd lawyer. Terms of contract will include the following clauses:

- Purchase / Service Price

- Payment plan and terms (invoices)

- Both parties' roles and responsibilities

- Process to follow in case of item defect, job defect

- Delivery Date

- Failure to meet deadlines or delivery date

- Rewards for finishing before deadline (subcontractors)

Managing Suppliers and Subcontractors

Project manager will be responsible for ensure that suppliers and subcontractors provide high quality materials and services to ensure the project success. However, the project assistant manager will be the one working directly with suppliers and subcontractors through the main contractor. Every Friday the main contractor and procurement supervisor will meet with subcontractors to discuss the progress of their work, and review the quality, timeline, and budget thus far. Materials and labor will be evaluated on a weekly basis. The procurement

supervisor will meet with suppliers before and after every delivery to review the

materials received and verify it matches the purchase order, quality and quantity

ordered. Both the main contractor and procurement supervisor will report directly to

the project assistant manager. The project assistant manager will only step up

when complications with suppliers or subcontractors are reported.

On the other hand, the project assistant manager will meet with project manager

every week on Mondays to give an update to project manager. A report will also be

presented to show the project progress documented, requests for changes in the

procurement process or feedbacks.

Supplier / Subcontractor Performance Metrics

For the weekly evaluations for suppliers and subcontractors the following should be

used to determine the efficiency of suppliers and subcontractors. The score will

range from 1 - 5, where 1 is the lowest and 5 is the highest

1 = Unsatisfactory	3 = Satisfactory	5 = Excellent

Supplier Work / Delivery Evaluation Form			
Project Title			
Supplier Name			
Evaluation Date			
Evaluator Name			
Evaluation			
Criteria	Unsatisfactory	Acceptable	Excellent
Budget Management			
Reliability and Responsibility			
Quality Material/Work			
Safety Standards			
Work Progress			
Technical Skills			
Work Ethics			
Deadlines			
Efficiency			
Total Score			
Comments			

Figure 21 Weekly Supplier Evaluation Form (N.Melgar, November 2020)

If a task or delivery has not been done in an acceptable or excellent manner, then the subcontractor or the supplier will be notified formally through a warning letter. Then the supplier or the subcontractors should respond back with a written answer where it will specify the corrective action that will be taken to fix the poor performance or material error.

4.10. Stakeholder Management Plan

Introduction

The stakeholder management plan identifies the stakeholders directly or indirectly related to the project and the approach to manage each one of them. The roles and responsibilities for stakeholders will be identified, as well as their power/interest analysis and stakeholder management.

Roles and Responsibilities

Each stakeholder has specific roles and responsibilities during the project. Their duties are described in the table below:

Chart 18 Stakeholders Roles and responsibilities

Stakeholder	Responsibilities
Project Sponsor	• Responsible for Financing the project • Approve decisions that will impact project's time and budget • Work with project manager and should be updated constantly on project progress • Has the authority to replace project manager
Project Manager	• Manage, Monitor, and control the project • Make important decisions concerning the project • Approve or reject deliverables, change request, materials • Choose Project team • Assign roles to project members • Procure resource and have final decision on selected suppliers and subcontractors • Responsible for team rewards • Address major issues/projects • Conduct team meetings • Keep sponsor informed on progress of project • Ensure the smooth run of the project • Approve building design plan

Chart 18 Stakeholders Roles and responsibilities, Continued	
Project Assistant Manager	• Responsible to deal daily with suppliers and subcontractor • Ensure team and third parties are carrying out their duties as expected • Report to project manager any unsatisfying activity that may impact the project
Project Team	• Carry out the assigned tasks following the quality, time and budget standards set for the project • Attend meetings and give feedback that may help improve the task or deliverable results
Architect	• Design a construction plan for the crematory and funeral home • Ensure that all details on the plan are being done
Engineer	• Ensure that project team and subcontractors are working accordingly to design plan • Ensure safety for site workers • Lead the constructions and approved or disapprove daily activities to ensure team meets and delivers expected standards • Alert project manager whenever an urgent situation comes up and must be dealt with as soon as possible • Keep project manager updated
Project Accounts Manager	• Review all expenses and purchases to ensure the money is being used as planned

Chart 18 Stakeholders Roles and responsibilities, Continued	
	• Alert project manager if something is off or needs attention right away • Keep project manager updated
Project Resource Manager	• Ensure project team is being punctual and present during the project • Ensure team selected has the required skills, abilities, and experience for the job • Review team performance • Keep project manager informed
Suppliers / Subcontractors	• Provide the specific materials or deliverable as requested • Ensure to keep up with deadlines and delivery dates • Work with project assistant manager to ensure they are meeting the expected criteria • Ensure to respect time, budget and quality stated in contract.
GOB	• Approve licenses and permits
Citizens of Belize	• Support the project

(N. Melgar, The Author, November 2020)

Stakeholder Register

The stakeholder register identifies the key project's stakeholders while evaluating

the levels of influence and impact of each stakeholder. Chart 19 shows a detailed

stakeholder register

Chart 19 Stakeholders Registry

Stakeholder Name	Title	Category	Influence	Impact	Expectations	Communications
Gary Jones	Project sponsor	Internal	High	High	Approve start date and finance project	Face to Face Meetings, Reports
Nohelia Melgar	Project Manager	Internal	High	High	To carry out project within budget, time and expected quality	Face to Face Meetings, Reports, Contracts, Meetings minutes
Caroline Lopez	Project Assistant Manager	Internal	High	High	To work directly with specific task assigned by project manager	Meetings, Reports

Chart 19 Stakeholders Registry, Continued						
Team	Project Team	Internal	High	High	Carry out and complete satisfactorily tasks assigned	Face to Face Meetings
Joseph Fuentes	Architect	External	High	Low	Develop and submit a design plan	Face to Face Meetings
Harry Daniels	Engineer	Internal	High	Low	Ensure constructions is carried out as planned and meet expectations	Face to Face Meetings
Yet to be decided	Project Accounts Manager	Internal	High	Low	Monitor and Review expenses	Face to Face Meetings, Financial Reports
Yet to be decided	Project Resource Manager	Internal	High	Low	Monitor and Review team's performance	Face to Face Meetings
Yet to be decided	Suppliers	External	High	Low	Carried out	Contracts, Face

Chart 19 Stakeholders Registry, Continued						
	/Subcontractors					tasks/deliver materials as requested	to Face Meetings, Performance Report
GOB	Authorize Permits/ Licenses	External	Low	Low	Approve permits and licenses for project	Face to Face Meeting
Citizens of Belize	Community	External	Low	Low	Support the project	Social Media

(N. Melgar, The Author, November 2020)

Stakeholder Analysis: Influence / Impact

In the stakeholder analysis will identify the level of impact from each

Stakeholder as well as the level of influence.

- Project Impact – the level of impact that the stakeholder has on the project

  or the impact that the project may have on the stakeholder

- Project Influence – the level of control that the stakeholder has over the

  project (decisions, cost, schedule, success)

Below are the four main categories that a stakeholder can be categorized

	High Impact	**Low Impact**
High Influence	Keep informed and updated, managed closely, request input and participation	Meet needs, and keep informed
Low Influence	Manage but not as closely, and keep informed occasionally	Monitor occasionally

Figure 22 Stakeholder Impact and Influence Matrix Categories (N.Melgar, November 2020)

Stakeholders will be placed in the category they belong according to their level of

impact and influence, as shown below on **figure 23**.

	High Impact	Low Impact
High Influence	Project Sponsor, Project Manager, Project Assistant Manager, Project Team	Project Resource Manager, Project Accounts Manager
Low Influence	Suppliers, Subcontractors, Architect, Engineer	GOB, Citizens of Belize

Figure 23 Stakeholder Impact and Influence Matrix (N.Melgar, November 2020)

Plan Stakeholders Management

Each stakeholder should be managed and given the proper attention required depending on their level of impact and influence. The project manager will be responsible to engage or involve each stakeholder in the project. The level of impact and influence of each stakeholder will be reviewed after the end of each package in order to ensure if any changes have occurred. If at some point the level of impact and influence of a stakeholder has changed, then stakeholders' documents will have to be updated. To keep all these changes documented will help project manager to make better decisions since project manager will be able to adjust the interaction plan for stakeholders in the project to ensure their interest.

Stakeholder engagement

To determine the level of engagement for each stakeholder the stakeholder

engagement assessment matrix will be used. The engagement assessment matrix

will assess each stakeholder on their current level of engagement as well as their

desired level of engagement. Figure 24 below shows the stakeholder assessment

for the main stakeholders.

Current level of engagement will be represented by a C, and desired level of

engagement will be represented by a D.

Stakeholders	Unaware	Resistant	Neutral	Supportive	Leading
Project Sponsor					C D
Project Manager					C D
Project Assistant Manager					C D
Project Team				C D	
Architect				CD	
Engineer				C	D
Project Accounts Manager			C	D	
Project Resource Manager			C	D	
Suppliers/Subcontractors			C	D	
GOB			C	D	
Citizens of Belize	C		D		

Figure 24 Stakeholders Engagement Assessment Matrix (N.Melgar, November 2020)

Manage Stakeholder Engagement

To manage effectively the stakeholder engagement, it is important to understand

the stakeholder assessment matrix. This way project manager can understand

their current level of engagement and if its desired for that stakeholder to increase

the engagement level, decrease it or leave as it is. It will also help project manager

to understand what needs to be communicated and the tools that will be used to

effectively deliver the information. This will help for stakeholders to feel part of the

project and support it actively instead of resisting the activities, processes, and final

goal.

The idea of knowing the level of engagement for stakeholders is that it gives an

advantage to the project manager to know what to expect from each stakeholder

and how to react, as well as how to attract their support. Below are a few

guidelines that will help manage the stakeholder engagement:

- Understand the engagement level of the stakeholder from reviewing the
  engagement matrix
- Understand the ambitions of the stakeholder and their potential to increase
  their engagement level if necessary and beneficial to the project
- Use the require tools to transmit communication effectively to each
  stakeholder

Monitor Stakeholder Engagement

Stakeholder engagement will be monitor through collection of data and feedback

from other stakeholders. Data will be collected through meetings, emails sent, and

reports submitted to project management. At the end of each work package the

project manager will review the stakeholder's engagement level to determine if it

has changed and if the stakeholder holds the same current level of engagement or

if it has increased or decreased. If anything has changed then it should be

documented to help project manager make decisions to increase the effectiveness

of interaction with stakeholders.

5. CONCLUSIONS

1. The project charter was created to authorize the existence of the project-by-project sponsor. It helped to define project's objectives, purpose, initial risks, deliverables, milestones, and budget.

2. The scope management plan defines what is to be achieved with this project as well as the required work. This plan will help the project manager to constantly compare the performance and deliverables with the original project's scope to ensure that the project has not come out or deviated from the originally defined scope of work. If at any point the performance or deliverable do not match the defined scope of work, project manager will need to retrace and develop a plan that will help project go back to original scope.

3. The schedule management plan helped to identify the different activities needed to complete the project. Identifying and coordinating the sequence of the different activities serves as a guide to project manager to ensure the smooth transition between activities, thus contributing to the completion of the project on time. It also helped to reduce and/or eliminate unnecessary activities that may just increase cost and waste time.

4. The cost management plan helped to identify the different cost that will be done during the project, and to develop a budget for the project. The budget created will help to promote the company's integrity against fraud and bribes that normally takes place during this type projects. This will help

stakeholders (specially project sponsor and company's shareholders) to feel at ease regarding the investment done and how the funds will be used.

5. The quality management plan is a particularly important part during project management because it identifies the quality level requirements that stakeholders expects from the project. Identifying the quality requirements helps to create the measures that needs to be taken to achieve quality goal. In this case it will help ABC Marketing Service to save money because it will reduce or eliminate completely the need to re-do deliverables since the stakeholders' quality expectations are already known. These quality requirements will help to decide the type of materials that will be used for each activity, as well as the suppliers and subcontractors that should be contracted for the different jobs.

6. The resource management plan helped to identify the chain of authority that will take place during the project. It identified how the authority will flow throughout the project. By developing this plan, it reduces the cost of resources by identifying the needed workforce and eliminating hiring unnecessary workforce. It also helps to identify the required skills and abilities to ensure project success. To ensure resources management success, Belize's labor laws will be respected and applied during the duration of the project. The different required trainings will be identified and will be given to employees to ensure their efficiency and effectiveness in the job. Motivational packages will be created to award employees and motivate

their performance. Most importantly the safety protocol in the site will be established to avoid accidents and ensure employees' safety. The covid-19 safety protocol established by the government of Belize will be respected and reinforced to show company's respect towards its employees and subcontractors

7. Project communication plans was developed to set a guideline in how the communication will be flowing throughout the project. Tools have been identified to ensure the effective communication with the different stakeholders. This will help ensure that the correct information be delivered to the correct stakeholder at the correct time, through the correct communication method. This will help to keep stakeholders inform of project's progress, and the correct distribution of information, nothing less, nothing more.

8. The risk management plan was developed by identifying the possible risks that may impact the project through the development of a risk breakdown structure. By prioritizing the risks by impact and probability of happening, it will help project manager to focus on solutions or ways to mitigate the risk's impact. This will prepare project manager to take precautions and avoid future expense to repair damages from risks. The risk management plan will serve as a guide to project manager on to respond to different risks, considering the financial, schedule and quality impact.

9. The procurement management plan was developed to establish the criteria to be used when selecting the project suppliers and subcontractors. This way it will ensure that suppliers and subcontractors are chosen based on skills, quality, experience, and knowledge. Eliminating any possibility of committing fraud when selecting subcontractors and suppliers. Subcontractors and suppliers should be selected according to proposals submitted, weighing material/service price, quality, availability, and skills and experience. Eliminating personal preference/bias or fraudulent acts during the selecting period.

10. Finally, the last objective is the stakeholders' management plan which was developed to identify the roles and responsibilities of the main stakeholders, as well as the engagement level assessment of each stakeholder to help strategize the proper interaction of each stakeholder with the project. This will help project manager to manage stakeholders in an efficient manner depending on each stakeholder's power and interest. The stakeholder management plan developed can be used as a starting base. However, the interest and power of each stakeholder may vary, which means that the plan will need to be readjusted to meet the demands of each stakeholder.

6. RECOMMENDATION

1. Given that this project will be the first one of its kind in Belize, it is recommended that once the project charter is authorized, the project manager do some research of similar projects carried out in other countries to help verify that the correct steps are being taken and reduce the level of mistakes.

2. It is recommended to re-evaluate the proposed building design presented in the scope management plan. It would be advised to make a few changes that will enhance nature around and create a harmonious environment between the building and the natural surroundings. This will help to contribute toward the green vegetation goal of Belize.

3. For this reason, the project sponsor and project manager should consider using full time team members, so that the team can be fully focused on the project and increase productivity and efficiency. This may be expensive at the beginning but on the longer run it will help to reduce cost because it will reinforce timely deliverables.

4. The proposed project budget presented on the cost management plan shows that the investment for the project will be very high. Due to the high prices for construction materials in Belize, project sponsor and project manager should consider getting quotations from our neighbor countries and compare local prices with imported material prices. This will help to compare. Also, for integrity purposes, it is recommended that an accountant

be appointed to carry out the accounts of the project thus contributing to activity transparency. This will help to promote project accountability and integrity for Stakeholders.

5. It is recommended for project manager to constantly check if the progress of the project meets the project quality requirements (set by stakeholders) described in the quality management plan. If at any chance it is detected that a deliverable or process is not meeting one or more of the quality requirements, then re-doing a process or a deliverable will be less costly than going back when the project is further developed.

6. For the resource management plan, it is important that selection of the project team should be done objectively and not for personal reasons or favoritism; it will help increase the level of experience and skills for project success.

7. The communication management plan will need constant revision to ensure that indeed the communication is flowing as it should during the project. Also, during the project some stakeholders may not need to be informed anymore as the project progresses, so the constant update of this communication plan is necessary.

8. For the risk management plan, it is recommended to review the risk log constantly and be alert if new risks may appear during the execution of the project to register then a prepare a response plan to mitigate or eliminate impact.

9. For selection of suppliers and subcontractors for the procurement

    management plan, it is recommended that project manager seeks out other

    company's previous experience with different subcontractors and suppliers

    in order to determine the dependability of the subcontractor/supplier. This

    can help to choose reliable subcontractors and suppliers.

10. The stakeholder's management plan should be reviewed constantly to

    determine if any stakeholders' interest or power have changed during the

    project. This will help to re-evaluate the importance and involvement of each

    stakeholder and will help to make updates to the stakeholder's plan.

11. Given that this will be the first project for ABC Marketing Services, the

    project manager should ensure that this project be fully documented in order

    to be stored and use as a guideline for future projects.

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8. APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER	
Formalizes the project start and confers the project manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well defined project boundaries.	
Date	**Project Name:**
June 22, 2020	Project Management Plan for building a crematory and funeral home in Belize
Knowledge Areas / Processes	**Applicacion Area (Sector / Activity)**
Should indicate the knowledge areas and process groups which are related to the project **Knowledge areas:** Integration, Scope, Time, Cost, Quality, Human Resources, Communications, Risk, Procurement, and Stakeholders. **Process groups:** Initiating, Planning, Executing, Monitoring and Controlling, Closing	Construction
Start date	**Finish date**
June 22, 2020	December 18, 2020
Project Objectives (general and specific)	

General objective:

Elaborate a Project Management Plan for the building of a crematory and funeral home in Belize, ensuring a sustainable, efficient and organized management of project's resources.

Specific objectives:
1. To create the project charter to formally authorize the existence of the project, as well as define specific project's outcome and project manager's authority to carry out project.
2. Create a scope management plan that clearly defines exactly what it is to be achieved with this project as well as the required work.
3 Elaborate a Schedule Management Plant to ensure that each task is completed on time thus contributing to timely the completion of the project on time.
4. Develope a Cost Management to ensure that project stays within budget
5. Create a quality management plan in order to establish specific requirements of material to meet expected quality level

6. Create a Resources Management Plan in order to assigned different task to different teams or individuals, depending on their skills. 7. Elaborate an effective communication management plan to defined communication strategies and patterns. 8. Develop a risk management plan in order to identify the different risks that could impact their project, as well as their level of impact 9. Create a procurement management plan in order to select the most efficient and convinient suppliers, in order to meet project's expected quality, timeframes and budget 10. Elaborate a stakeholder management plan, so that project's stakeholders can be clearly defined as well as their level of involvement and authority in the project.

Project purpose or justification (merit and expected results)

Belize is a small country with no private cemetaries, and only one crematory unit countrywide, with very limited to no funeral services offered at all. Due to the lack of these services in the country, a business idea has been materilized to built a unit that offer all these services. The idea to built a crematory and funeral home, has opened the door to initiate a new project which is to create a project management plan to carry out the building of such said unit.The purpose of this project is to create a Project management Plan that will help to efficiently and effectively manage the building of a crematory and funeral home while staying within budget, timeframe, and meet expected qualiy. Some of the expected benefits in developing a project management plan is that it will help to have defined tasks, closed monitoring of resources utilization, and risk level reduction.

Description of Product or Service to be generated by the Project – Project final deliverables

Project Management Plan

Assumptions

- Project can be completed in 5 months and 26 days
- The cost for the project is very low
- Project will be completed with one person only which is the project manager

Constraints

Project team is limited to one person only

Preliminary risks

Deadlines are dates for milestones are subject to change. Any changes in deadlines or dates will impact and affect project schedule

Budget

Budget $150 USD
- Printing cost – Print a hard copy of project 100 USD
- Shipping Cost – Send hard copy to Costa Rica $50 USD

Milestones and dates

Milestone	Start date	End date
Graduation Seminar	June 22, 2020	July 24, 2020
Tutoring Process	July 27, 2020	October 23, 2020

Reading by Reviewers	October 26, 2020	November 13, 2020
Adjustments	November 16, 2020	December 11, 2020
Presentation to Board of Examininers	December 14, 2020	December 18, 2020

Relevant historical information
Not Available

Stakeholders

Direct stakeholders:

FGP Professor: Carlos Brenes
- Tutor
- Project Manager
- Investment Company (idea owner)

Indirect stakeholders:
- Government of Belize
- Citizens

Project Manager: Nohelia Melgar	**Signature:**
Authorized by:	**Signature:**

Appendix 2: FGP WBS

Appendix 3: FGP Schedule

Task Name	Duration	Start	Finish
Final Graduation Project	130 day	22 Jun '20	18 Dec '20
FGP Starts	0 days	22 Jun '20	22 Jun '20
1, Graduation Seminar	25 days	22 Jun '20	24 Jul '20
1.1, FGP Deliverables	15 days	29 Jun '20	17 Jul '20
1.1.1, Introduction	5 days	29 Jun '20	03 Jul '20
1.1.2, Theoretical Framework	5 days	06 Jul '20	10 Jul '20
1.1.3, Methodological Framework	5 days	13 Jul '20	17 Jul '20
1.1.4, Annexes	20 days	22 Jun '20	17 Jul '20
1.1.4.1, Charter	5 days	22 Jun '20	26 Jun '20
1.1.4.2, WBS	5 days	22 Jun '20	26 Jun '20
1.1.4.3, Schedule	5 days	29 Jun '20	03 Jul '20
1.1.4.4, Bibliography	5 days	13 Jul '20	17 Jul '20
1.2, Graduation Seminar Approval	5 days	20 Jul '20	24 Jul '20
2, Tutoring Process	65 days	27 Jul '20	23 Oct '20
2.1, Tutor	5 days	27 Jul '20	31 Jul '20
2.1.1, Communication	1 day	27 Jul '20	27 Jul '20
2.1.2, Adjustments of Previous Chapters	4 days	28 Jul '20	31 Jul '20
2.2, Development/ Resuelts	50 days	03 Aug '20	09 Oct '20
2.2.1, Project Charter	5 days	03 Aug '20	07 Aug '20
2.2.2, Scope Management Plan	5 days	10 Aug '20	14 Aug '20
2.2.3, Time Management Plan	5 days	17 Aug '20	21 Aug '20
2.2.4, Cost Managemetn Plan	5 days	24 Aug '20	28 Aug '20
2.2.5, Quality Management Plan	5 days	31 Aug '20	04 Sep '20
2.2.6, Human Resource Management Plan	5 days	07 Sep '20	11 Sep '20
2.2.7, Communication Management Plan	5 days	14 Sep '20	18 Sep '20
2.2.8 Risk Management Plan	5 days	21 Sep '20	25 Sep '20
2.2.9 Procurement Management Plan	5 days	28 Sep '20	02 Oct '20
2.2.10 Stakeholders Management Plan	5 days	05 Oct '20	09 Oct '20
2.3, Conclusion	5 days	12 Oct '20	16 Oct '20
2.4, Recommendations	5 days	19 Oct '20	23 Oct '20
Tutor Approval	0 days	23 Oct '20	23 Oct '20
3, Reading by Reviewers	15 days	26 Oct '20	13 Nov '20
3.1, Reviewers Assignment Request	5 days	26 Oct '20	30 Oct '20
3.1.1, Two Reviewers are Assigned	2 days	26 Oct '20	27 Oct '20
3.1.2, Communication	2 days	28 Oct '20	29 Oct '20
3.1.3, Submission of FGP to Reviewers	1 day	30 Oct '20	30 Oct '20
3.2, Reviewers Work	10 days	02 Nov '20	13 Nov '20
3.2.1, Reviewer 1	10 days	02 Nov '20	13 Nov '20
3.2.1.1, FGP Reading	9 days	02 Nov '20	12 Nov '20
3.2.1.2 Reader 1 Report	1 day	13 Nov '20	13 Nov '20
3.2.2, Reviewer 2	10 days	02 Nov '20	13 Nov '20
3.2.2.1, FGP Reading	9 days	02 Nov '20	12 Nov '20
3.2.2.2, Reader 2 Report	1 day	13 Nov '20	13 Nov '20
4, Adjustments	20 days	16 Nov '20	11 Dec '20
4.1, Reviewers Report	8 days	16 Nov '20	25 Nov '20
4.2, FGP Update	2 days	26 Nov '20	27 Nov '20
4.3, Second Review done by Reviewers	10 days	30 Nov '20	11 Dec '20
5, Defense to Board of Examiners	5 days	14 Dec '20	18 Dec '20
5.1, Final Review by board	2 days	14 Dec '20	15 Dec '20
5.2, FGP Grade Report	3 days	16 Dec '20	18 Dec '20
FGP Ends	0 days	18 Dec '20	18 Dec '20

Project: Project2
Date: 05 Jul '20

Task	Inactive Task	Manual Summary Rollup	External Milestone
Split	Inactive Milestone	Manual Summary	Deadline
Milestone	Inactive Summary	Start-only	Progress
Summary	Manual Task	Finish-only	Manual Progress
Project Summary	Duration-only	External Tasks	

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Appendix 4: Philology Review

Virginia Hampton, Ph.D.
The Literary Midwife
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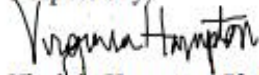vhampton@galen.edu.bz

28 November 2020

To Whom it May Concern:

I have reviewed the Final Graduation Project of Ms. Nohelia Melgar for the partial fulfillment to opt for the Master in Project Management (MPM) Degree at Universidad Para la Cooperacion Internacional (UCI).

The document has been corrected to match the form, grammar and APA style needed for this purpose.

I can be contacted to provide any further information regarding this review by email or What's App.

Respectfully,

Virginia Hampton, Ph.D.
Adjunct Assistant Professor of English Languages and Literature
University of Belize
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