SCM - 656 PROJECT MANAGEMENT

Final Project

<u>Instructor - Prof. Gary La Point.</u>

Submitted By:

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EXECUTIVE SUMMARY

Syracuse university is the established private university which offers diversified courses that has multiple enrollments. In this sense, the institution must make sure that students have access to high-quality services which includes different kinds of options in terms of books and facilities to improve their skills. Due to the acquisition of new materials as well as the need for more care and restoration expertise for currently existing rare and unusual objects in the university collection, the library's current infrastructure is already at capacity.

The library also needs additional space for a new digital lab in order to digitize all its resources. Hence Syracuse University library at south campus is to be expanded and the project is to be scheduled to begin on March 6, 2023.

The library expansion begins with two major additions, The current facility is known to as Mod1, and the first part is a 14,400 square foot extension for the rare and special collections. The second is a distinct 5,000 square foot extension that will house the brand-new Digital Production Lab, often known as DPL, as well as office space. Additionally, the project includes more parking spaces to accommodate the facility's expanded staff. To mirror the current steel-framed facilities, Mod2 will also be steel-framed. Instead of using the conventional fixed aisle storage raking, the facility will have mobile shelving to enhance space utilization. The library expansion includes archive storages/cold storage, which accommodates a frozen storage "vault" used to store film and nitrate and acetate photographic negatives, each DPL area will have specialized construction to satisfy the needs of the functional requirements, the expansion also includes Material Prep room, Clean room, moving Image Studio, Still Image lab, Audio Studios, Repair, Post Digital Production, Support Spaces(office, Conference, and IT, Fire Protection Systems Description(Processing area, Telecommunications, Video Surveillance, Exterior).

To begin with the project, we will be drafting a project plan and plan in such a way that the project will begin on March 6, 2023. Project plan will be drafted in such a way that first we will start with preparing the construction area and completing all the pre- construction procedure, we will be requesting all the required resources and review the resources and proceed with work site preparation, followed by construction, final testing and closing of project. We will be having milestone reviews at every step.

PROJECT CHARTER

PROJECT NAME:	PROJECT NUMBER:
SU Library Warehouse Expansion	PN-001
PROJECT MANAGER:	PROJECT SPONSOR:
Rishi Siddanth Yaga	Syracuse University
Harshitha Reddy	

PROJECT TEAM

The following members will be part of the team to expand SU Library:

- Architect
- Interior Designer
- Civil Engineer
- Electrician
- Plumber
- Mason
- Labor
- Contractor
- Carpenter
- Vendors
- SU Construction representatives' team
- Painters
- Sub-contractors

PROBLEM STATEMENT

The current library facilities are under strain due to the addition of new materials as well as the requirement for greater care and restoration skills for already-existing rare and special objects in the university collection. In order to digitize all the library's materials, the library also needs more room for a new digital lab.

BUSINESS CASE

Due to the acquisition of new materials as well as the need for more care and restoration expertise for currently existing rare and unusual objects in the university collection, the library's current infrastructure is already at capacity.

The library also needs additional space for a new digital lab in order to digitize all of its resources. Hence Syracuse University library at south campus is to be expanded and the project is to be scheduled to begin on March 6,2023.

HIGH LEVEL SCOPE

The high-level scope requirements for the project include the following:

- 14,400 square foot addition for the rare and unique collections
- A separate 5,000 square foot addition that will house the new Digital Production Lab
- The above 5000 square foot addition should also include office area.
- Steel should be used to frame the new addition. As opposed to the facility's current fixed aisle storage system, movable shelving will be used to maximize space use.
- The project should also contain additional parking area.
- A cold storage vault will also be a part of the Mod2 area, and it will be utilized to keep film, nitrate, and acetate negatives.
- The storage and frozen storage will also require blowout wall.
- The archival storage space should have gypsum finish to allow a clean surface for perimeter shelving.
- For the material prep room UV control windows will be required.
- For movie image studio the door to the room should have specialized acoustic door maintaining a minimum STC-51 rating when installed per manufacturer's directions.
- Walls should be primed and painted with a water based latex paint matching the 18% neutral gray in the Kodak Gray Card Plus.
- A new sprinkler main should be routed from the existing fire service to the DPL and storage facility addition.
- The cold storage room will be equipped with a chemical agent fire protection system.
- Installing walls and wall systems.

PROJECT GOAL

The aim of the project is to expand the Syracuse University library warehouse and to start the project by March 6,2023.

PROJECT OBJECTIVES

From the above defined goal, the following are the objectives that will lead to success of the project:

- To begin the project by March 6, 2023
- To get all the permissions and approvals required to begin the project
- Addition of office and digital production lab
- Expansion of warehouse
- To construct additional parking area
- The expanded library warehouse should be equipped with all the required amenities like cold storage, heating systems, electricity.
- To add security system to the library.
- Addition of exteriors to the warehouse while maintaining the rules

SUCCESS CRITERIA

For the project to be successful, the following criteria should be satisfied:

- Project should be started by March 6, 2023
- 14400 square foot addition of unique pieces should be added
- a separate 5,000 square foot that will house the new Digital Production Lab should be added
- additional parking area should be added.
- All the interiors should be designed in such way that it meets all the requirements
- Office area must be added
- All the exterior finishings to be done according to the plan which complements the previous structure.
- All the walls and wall systems to be constructed according to the mentioned measurements.
- The project must be finished as per the expected budget.

ASSUMPTIONS

The following assumptions are made in this project:

- work is being done 8 hours a day, 5 days a week. The workday begins at 7am and ends at 4pm including 1 hour for lunch.
- Considering that floor plan and spatial requirements have been met.
- There will be enough resources to perform every objective.
- There will be no weather affected days to perform the objective.
- Working with University Representatives is clear and smooth.
- All the legal permits from the University are issued.
- New wall packs shall match existing building wall packs in appearance and functionality.
- All the construction shall match the given standards.

RISKS/CONSTRAINTS

The following are the risks/constraints that may affect the project:

- Library expansion should meet all the construction standards according to the Syracuse and university rules
- According to the plan few space designs should meet NC-25 rating
- Constructing all the materials according to the given requirements like maintaining the same structures and colors
- Acoustic construction is very important to minimize the interruption of other facility for certain spaces
- While the construction proper measures are to be taken so that there are no emergencies occurred during the execution.
- Lack of skilled labor can affect the estimated time of the project.

STAKEHOLDERS

The following are the stakeholders for the project:

- Project Manager
- Project Sponsor
- Architect
- Contractor
- Interior Designer
- Civil Engineer
- University
- Representatives from campus planning, design and construction
- Government
- Project Workers
- Quality manager

STAKEHOLDER REGISTER

	STAKE HOLDER REGISTER							
ID	NAME	CONTACT	CATEGORY	INFLUENCE	INTEREST			
xxx01	Project Manager	xxx-xxx-0001	Internal	High	High			
xxx02	Project Sponsor	xxx-xxx-0002	Internal	High	High			
xxx03	Architect	xxx-xxx-0003	Internal	High	High			
xxx04	Contractor	xxx-xxx-0004	Internal	High	High			
xxx05	Interior Designer	xxx-xxx-0005	Internal	Medium	Medium			
xxx06	Civil Engineer	xxx-xxx-0006	Internal	Medium	Medium			
xxx07	University	xxx-xxx-0007	Internal	High	Low			
xxx08	University representatives	xxx-xxx-0008	Internal	High	Medium			
xx09	Government	xxx-xxx-0009	External	Medium	Low			

xxx10	Project Workers	xxx-xxx-0010	Internal	Low	Medium
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ENTERPRISE ENVIRONMENTAL FACTORS

The following are the potential environmental factors that could affect the project:

- Climate Conditions: Bad weather conditions can be a potential risk to the project.
- Legal Authorities: all the standards of university and Syracuse are met
- Safety Standards: The equipment used to build the house must be of high quality for safety.

Milestone reviews

The following are the milestone reviews that are to be included in this project:

- 1) After pre-construction phase
- 2) After Review quotes
- 3) After Fabrication and lead time
- 4) After site work preparation
- 5) After construction and final review

EXPERTISE

We might need the following expertise in this project:

- Expertise of carpentry, plumbing and masonry.
- Expertise of a contractor.
- Expertise of a project manager.
- Expertise of a Architect.
- Expertise of interior designer.
- Expertise of university Representatives

DATA/INFORMATION

I would have gathered the following information before the project began:

- Gathered the information about the University timings to avoid construction at busy times.
- Gathered Information about the skillset of the labor, so that there won't be any risk of delay due to lack of skillset.
- Gathered data about the additional space which is being added.

PROJECT AUTHORIZATION		
CREATED BY:	DATE:	
RISHI SIDDANTH YAGA & YERRAMORRUSU HARSHITHA REDDY	12-14-2022	

APPROVED BY:	DATE:

SCOPE:

As part of expanding library to accumulate additional space, The following requirements have been identified as the high-level requirements:

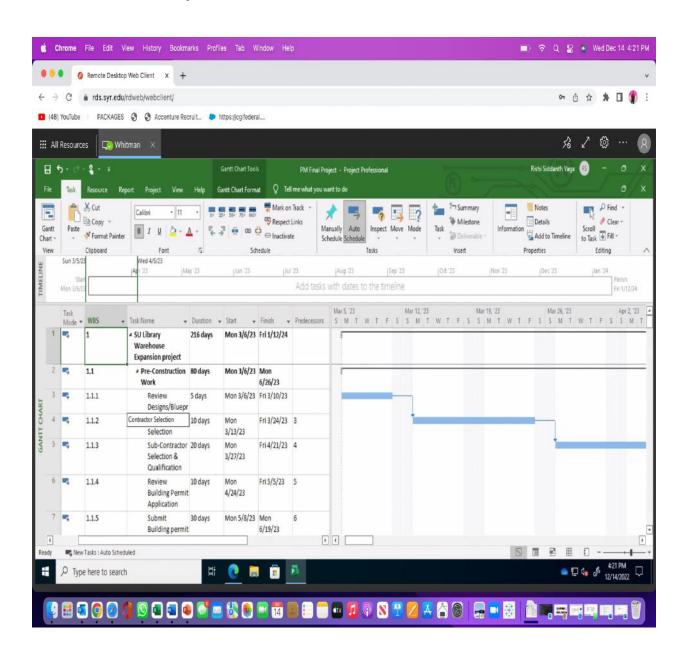
- The first addition to the library warehouse expansion is 14450 square foot space where rare and unique collections are going to be displayed which is referred to as mod 2 and the existing library is called mod 1.
- A separate 5,000 square foot addition, that will house the new Digital Production Lab and office area.
- Steel should be used to frame the new addition to match the existing steel facility (mod 1). The facility will include movable shelving to maximize space utilization instead of traditional fixed aisle storage raking.
- The project should also contain additional parking area that will accommodate the staff working at the facility.
- A cold storage vault will also be a part of the Mod2 area, and it will be utilized to keep film, nitrate, and acetate negatives with its own dedicated HVAC (heating, Ventilation and Air-Conditioning).
- The storage and frozen storage will also require blowout wall that is to be included in the design.
- The archival storage space should have gypsum finish to allow a clean surface for perimeter shelving and movable shelves are used to utilize the spacing.
- For the material prep room UV control is required for any windows, including vision panels and lighting.
- For movie image studio the door to the room should have specialized acoustic door maintaining a minimum STC-51 rating when installed per manufacturer's directions.
- Walls should be primed and painted with a water based latex paint matching the 18% neutral gray in the Kodak Gray Card Plus.
- A new sprinkler main should be routed from the existing fire service to the DPL and storage facility addition.
- The cold storage room will be equipped with a chemical agent fire protection system.
- Installing walls and wall systems.

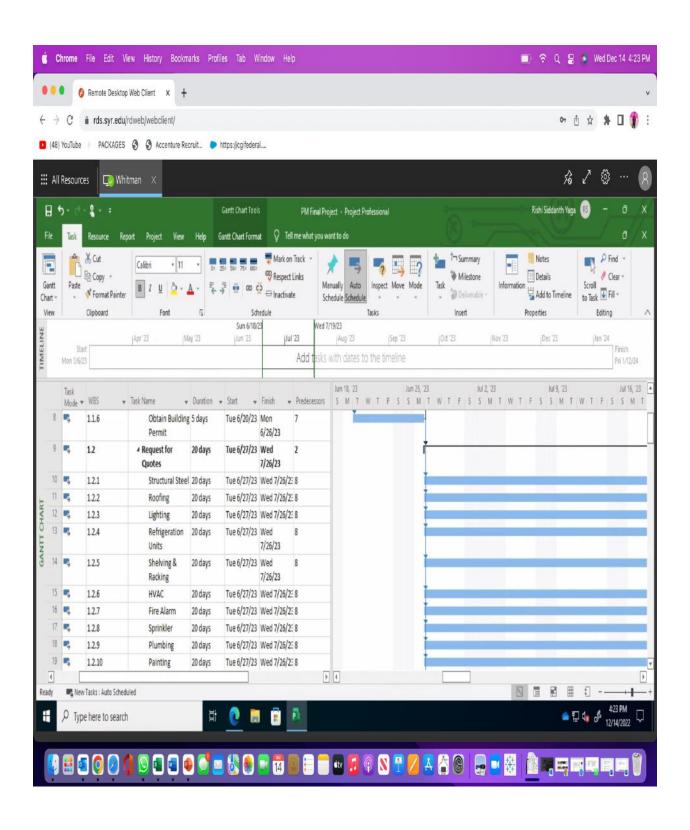
WORK BREAKDOWN STRUCTURE:

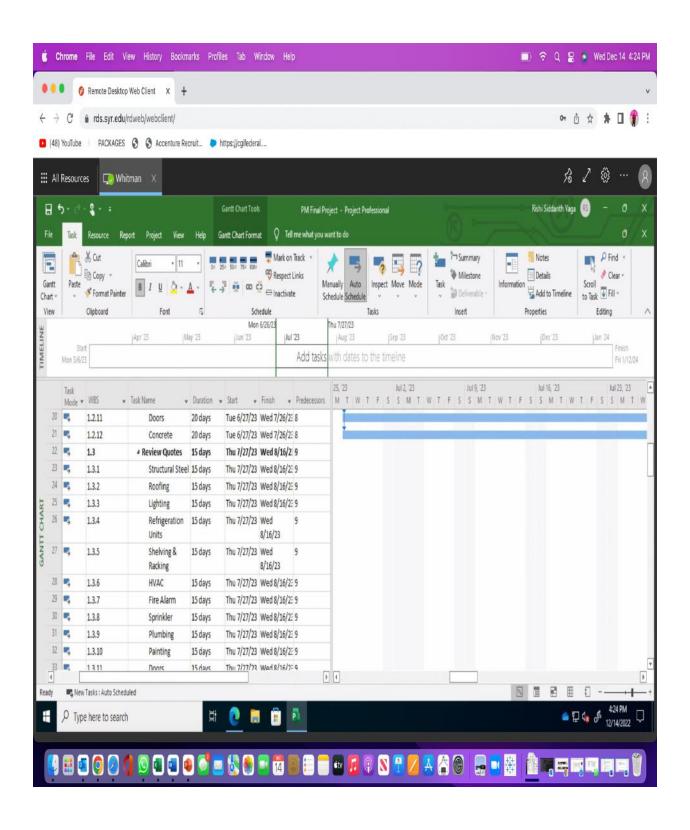
Work Break-Down Structure helps you to estimate about how much work is to be done by dividing the tasks into sub-tasks. Here, we have divided the project into various sub-tasks as mentioned in the requirements.

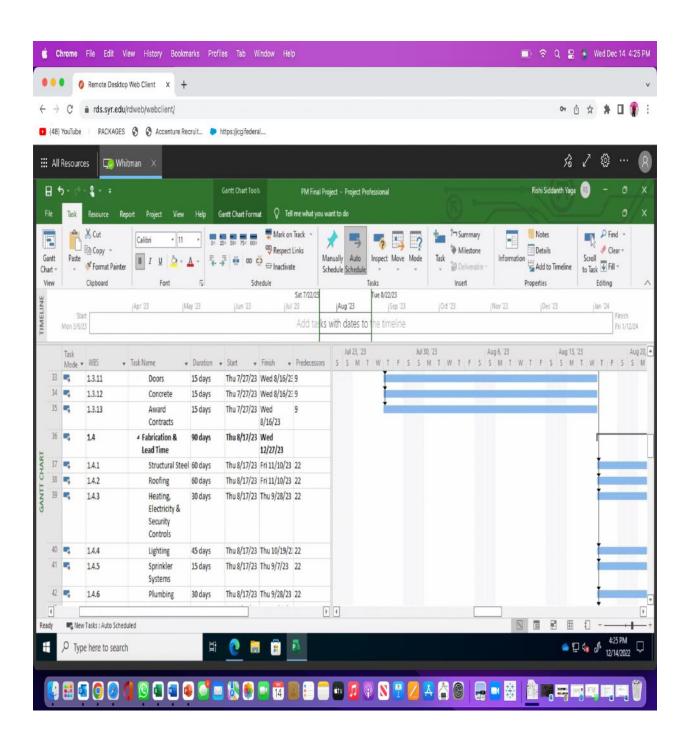
Here in the project, after creating in the work break-down structure we see that this project takes about a year to complete.

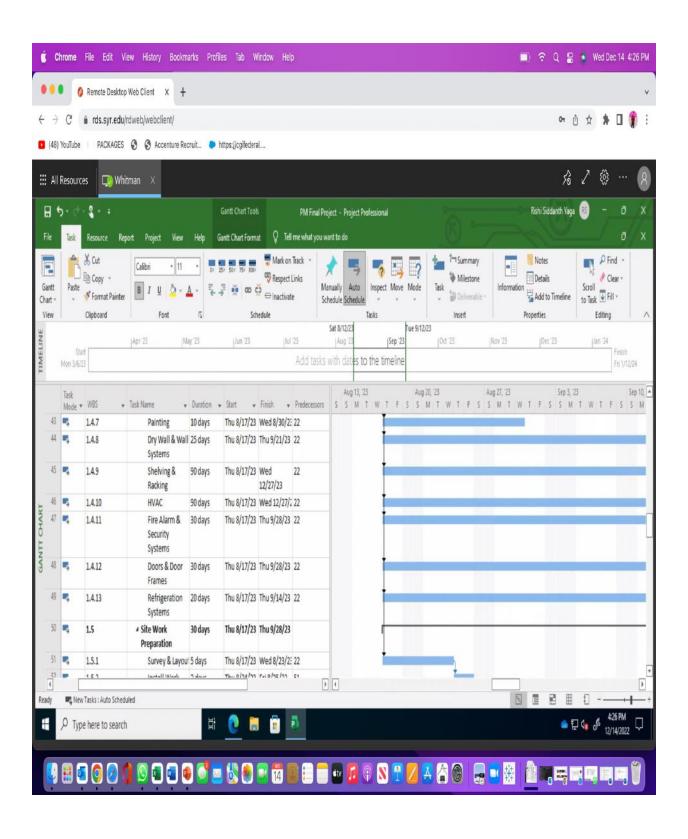
The following Screenshots below show the Work break-down Structure with Gantt charts which is created in the MS-Project.

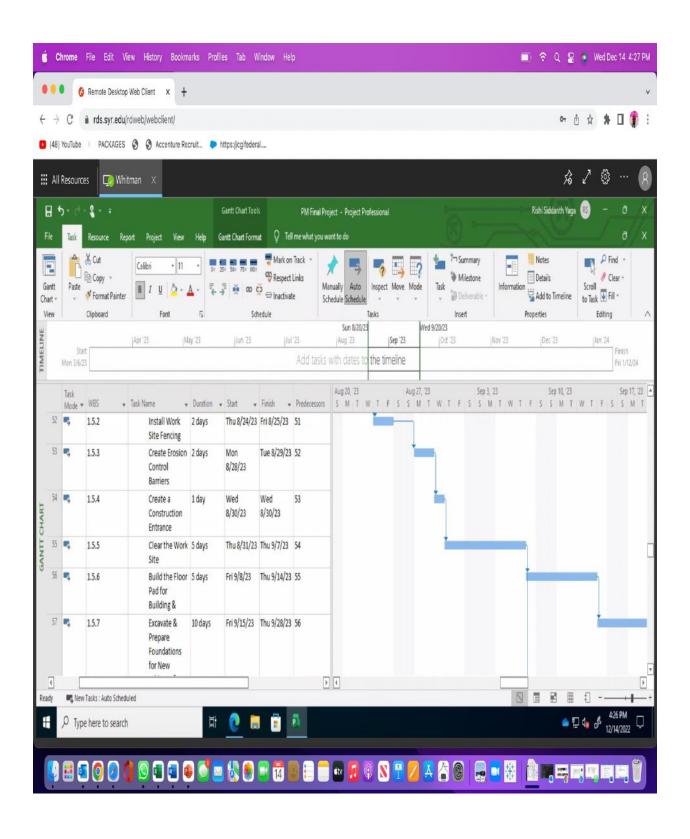


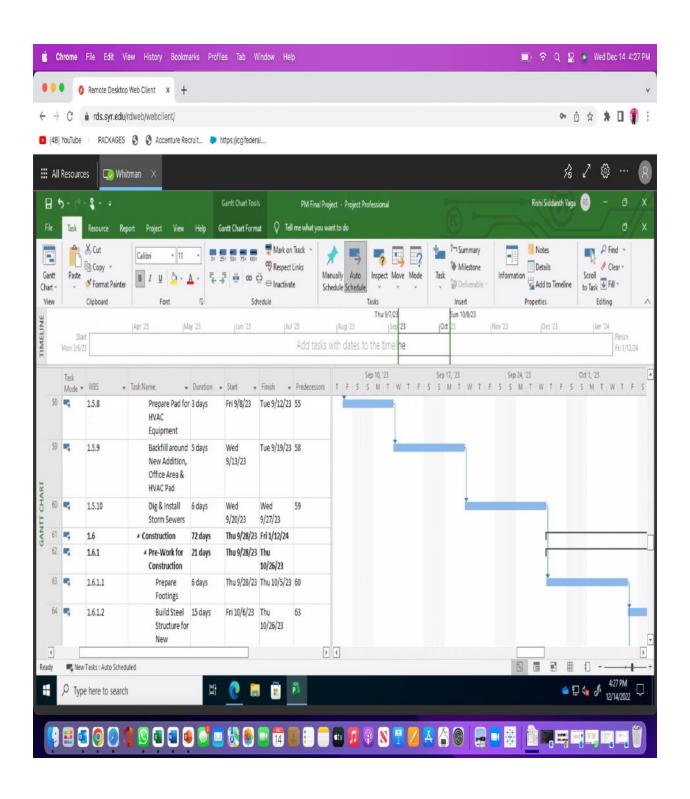


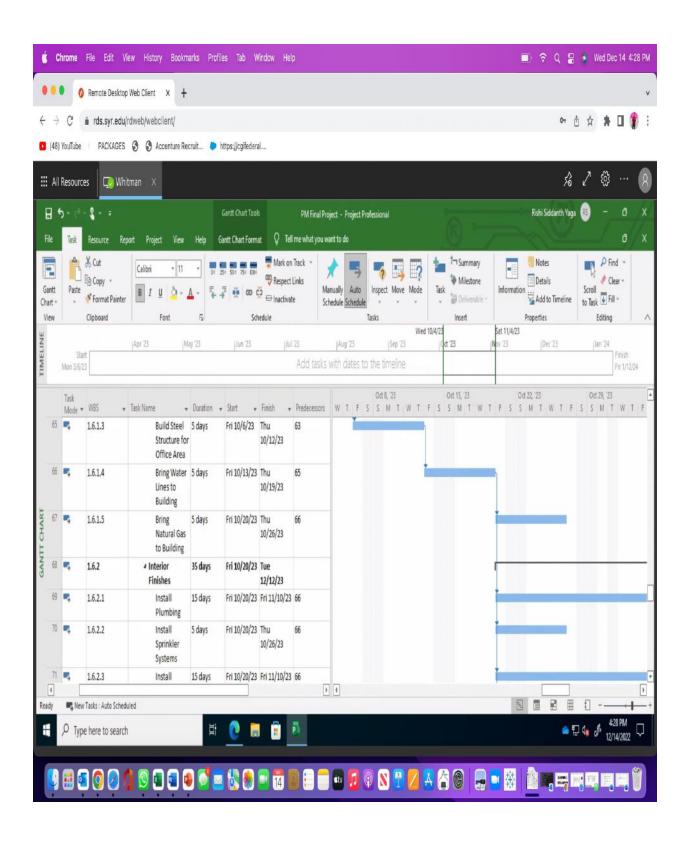


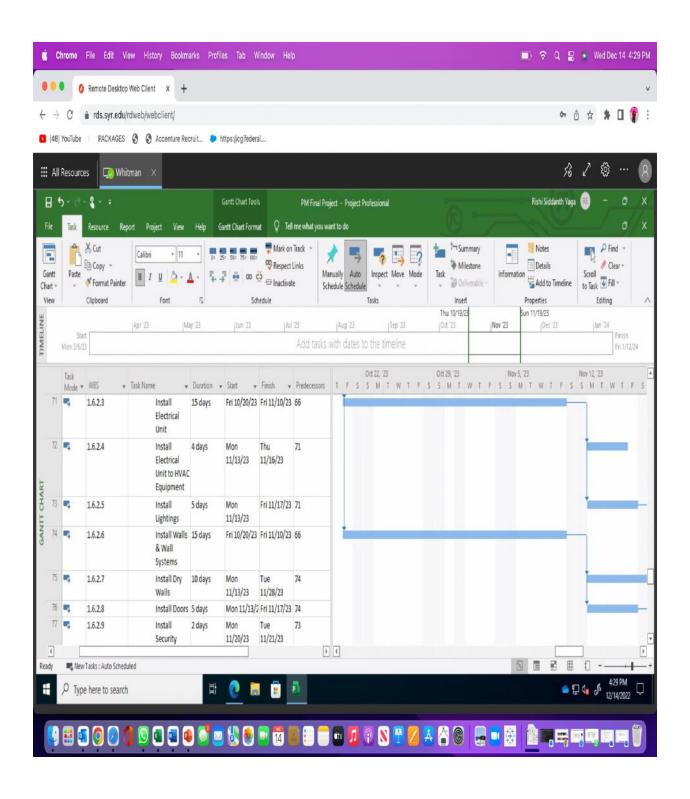


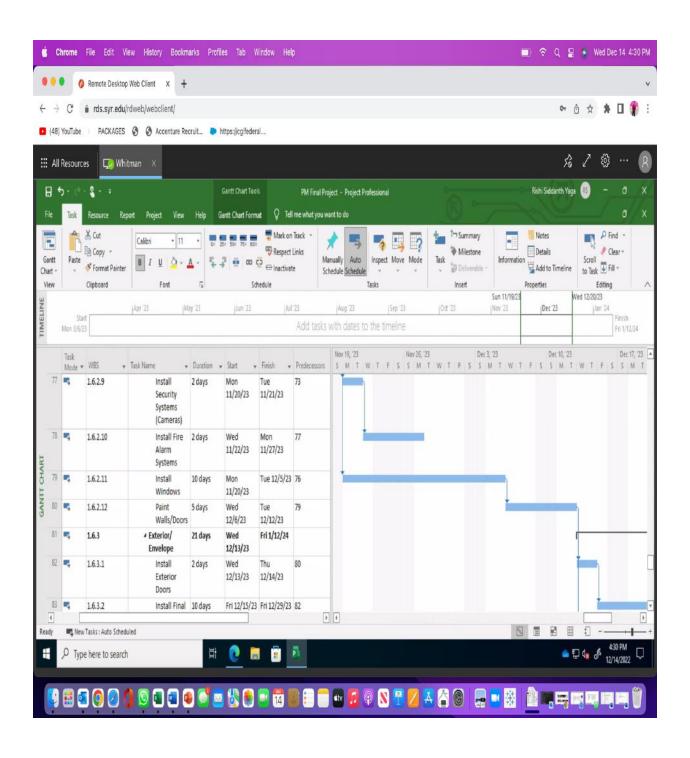


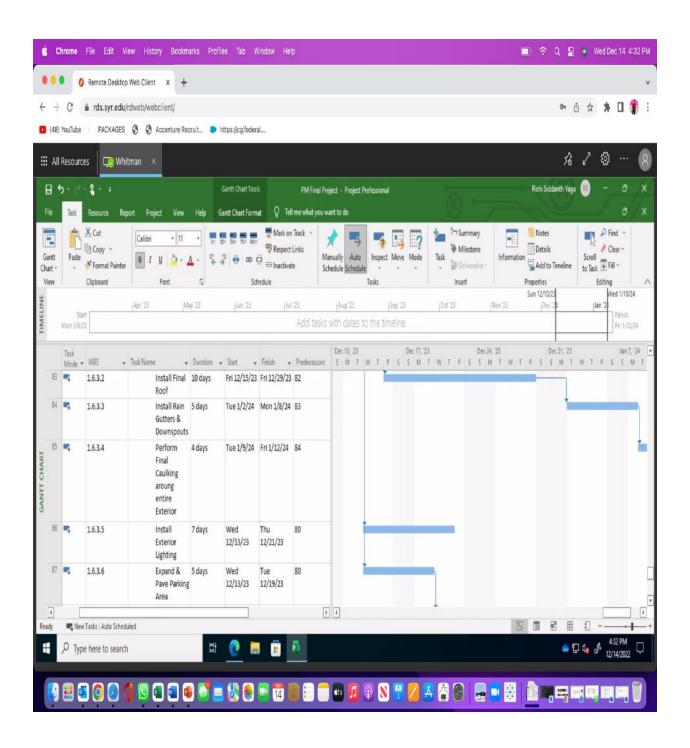


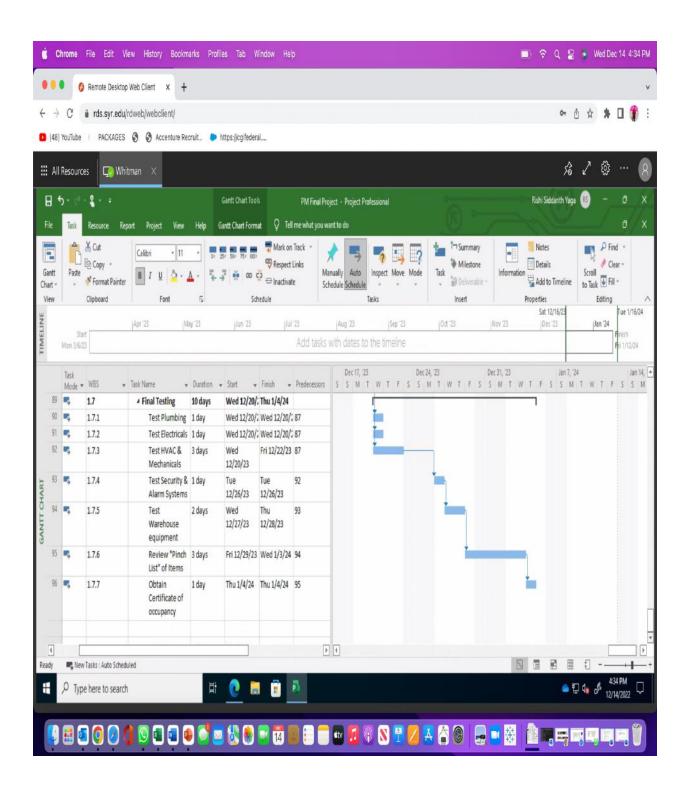


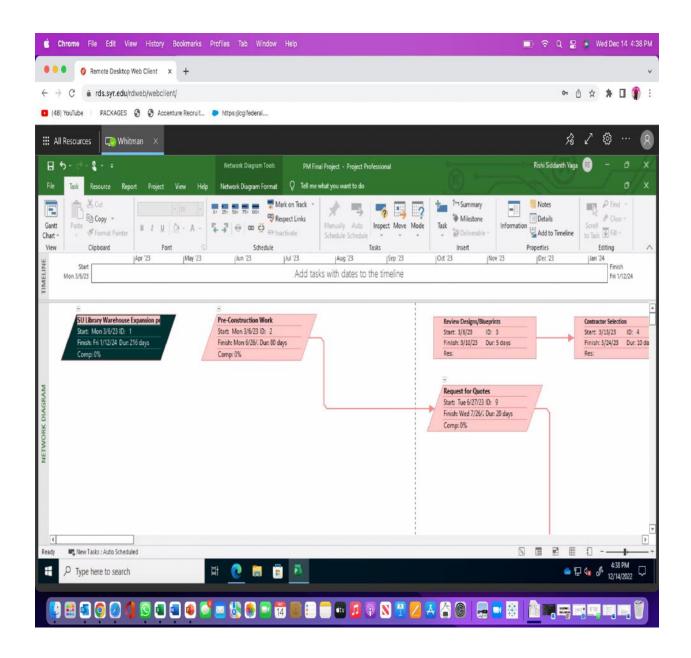


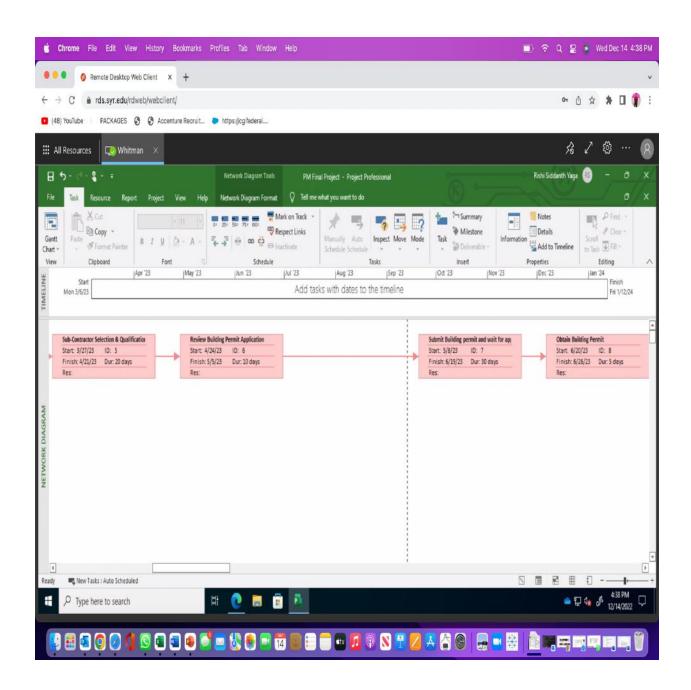


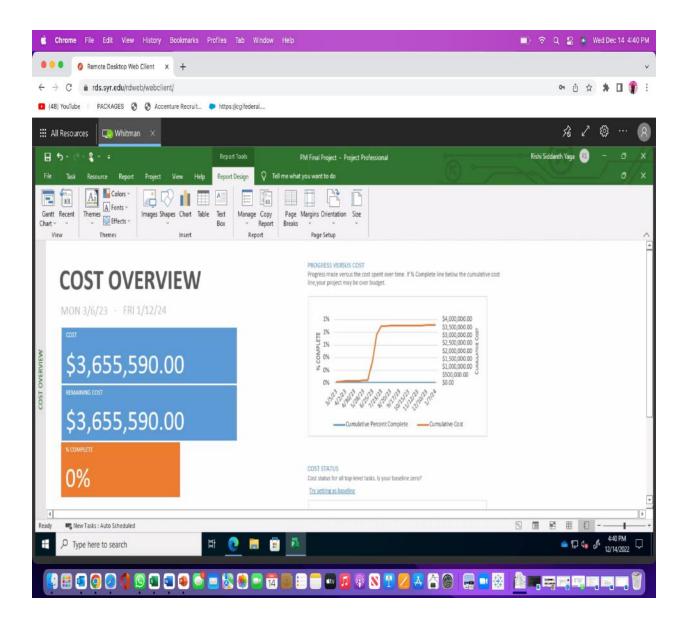


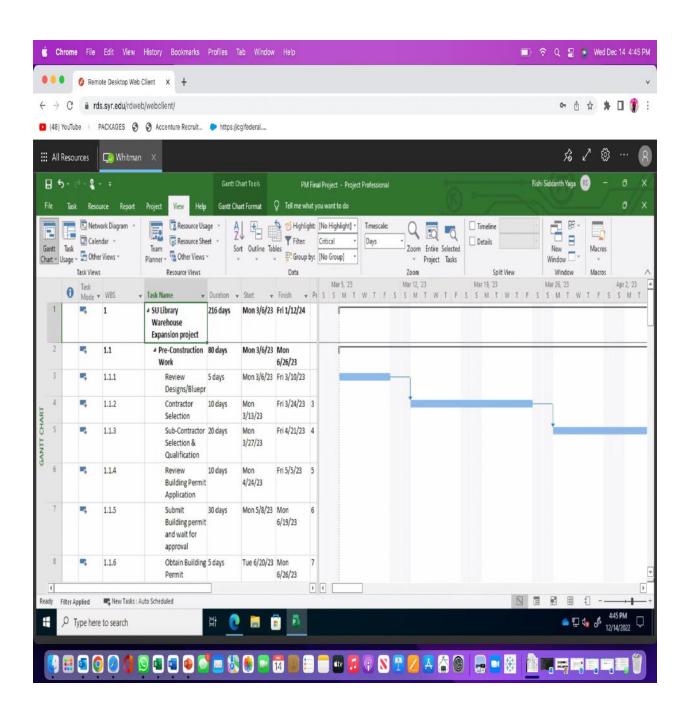












RISK MANAGEMENT PLAN:

The following Risks have been identified as part of the risk management plan:

Potential Risks	Mitigate	Contingency Plan
Library expansion should	If the expansion is unable to	Compromising on such a
meet all the standards raised	meet the standards, then	structure which is unable to
by the university and	finding the alternatives that	meet the requirements and
according to the Syracuse	meets the standards will be	moving on with the rest.
terms and conditions	viable	
acoustical ceiling tile system	Usage of soundproof ceiling	If the ceiling tile system is not
will be used such as the Noise	that will meet the NC-25	available probably making
S.T.O.P. Ultra-San Sanitary	rating requirements is to be used	sure we are going to arrange it
Ceiling Panels, to meet NC-25 ratings.	used	from other nearest places as soon as possible and work on
ratings.		it.
The house is just on the street	Try to complete all the work	If the work is being delayed
the school is, so it kind of gets	before the school year starts so	and cannot help continuing the
busy when the school year	that there won't be any issues	work after the school year,
starts and there is risk of		then we would be having the
accidents if the construction is continued.		warning or precaution sign around the place
What if the house is not	Negotiating with the village	Maybe elevating the places or
remodeled according to the	heads and getting permissions	restricting the construction
exact village rules because of	means and geomig permissions	according to the rules and
budget or place constraints.		restricting
Costs for expansion increased	Finding alternatives for the	If the expansion is going over
	materials which will be less	the budget may be
	expensive	compromising on few stuffs
	A1 1 1	which is rather important.
Constructing all the materials	Already there is structure	Arranging the required
according to the given	being constructed so matching	equipment for the required
requirements like maintaining the same structures and colors	the new expansion to the old one is quite difficult as there is	design from the nearest possible store.
the same structures and colors	chance of unavailable	possible store.
	resources then we can	
	consider making slight	
	changes in the design while	
	discussing with the university	
	deign representatives	
Acoustic construction is very	Using ultra soundproof	If they are not available in the
important to minimize the	materials that will help solve	nearest store trying to arrange
interruption of other facility	the issue	them from other nearby stores.
for certain spaces		

While the construction proper measures are to be taken so that there are no emergencies occurred during the execution.	Using caution boards at the construction places	Separating the area near the construction or diverting the path so that there would not be ant emergencies
Weather conditions while the entire expansion of library	Starting and planning the process according to the weather conditions like making a schedule so that if there are any conditions which effect the process then they will be considered as buffer and will act accordingly	If there is any extreme rain or something will be swapping tasks where on the extreme rainy days, we can work on interiors rather than exteriors
Lack of skilled labor can affect the estimated time of the project.	Testing the labor before starting the project and choosing the effective one.	Consider hiring the labor on temporary basis and decide.

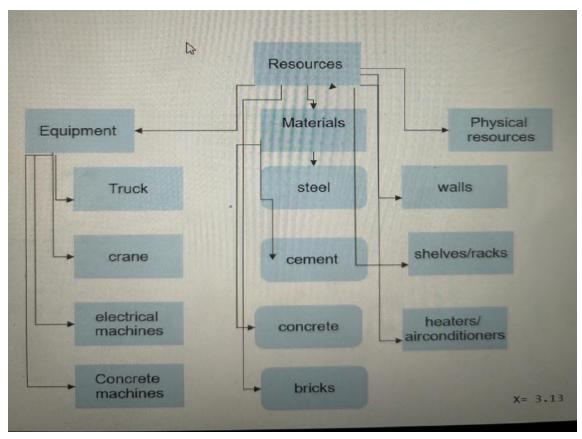
RESOURCE MANAGEMENT PLAN:

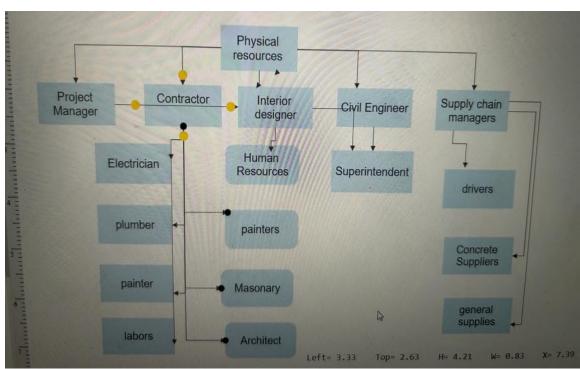
Resource management plays an important role in project planning as it gives information on what resources are required for the project.

Is the section of the project management plan that offers instructions on how project resources should be organized, controlled, distributed, and released.

The procedures for locating, obtaining, and managing the resources required for the project's successful completion are included in project resource management.

The process of determining how to estimate, obtain, manage, and use physical and team resources is known as plan resource management.

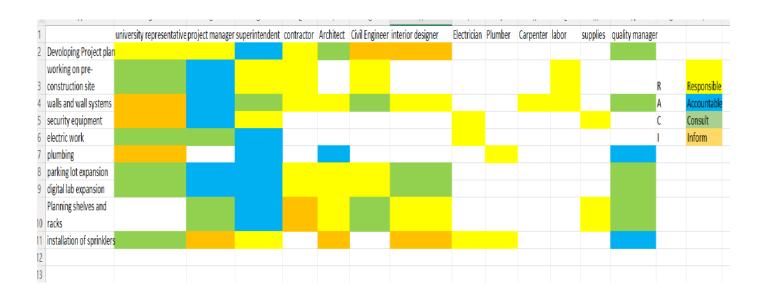




The following resources are identified as part of project plan:

- 1. Project Manager Will be key for project planning and execution.
- 2. Architect Will be key for the overall planning of the library expansion
- 3. Contractor Will be key in managing the human resources and equipment.
- 4. Supplies All the supplies will be used in the project.
- 5. Construction Equipment Will be key for executing the changes to the library expansion.
- 6. Human Resources Human labor is required to conduct work as per the requirements.
- 7. Plumbing Equipment the new additions in the library are to be equipped with all the plumbing equipment
- 8. Electric Equipment the library expansion also includes providing electricity supplies
- 9. Painting The expanded library needs a new paint, for which we need a painter and a paint equipment.
- 10. Quality Manager- The one responsible for the quality inspection during the construction.

RACI Chart:



PROCUREMENT PLAN:

Procurement Plan helps us to estimate about what resources need to be procured based on RFP (Request for Proposal), RFQ (Request for Quote), or a RFI (Request for Information).

The following resources are to be procured as part of successful completion of project.

Product	Issue Type	Contract Type	Controlling Method	Status
Project Manager	N/A	N/A	Has overall Project Control	Assigned
Architect	RFP	FPC	To manage the building the house	Assigned
Contractor	RFP	FPC	Review the Execution Phase	Assigned
Interior Designer	RFP	FPC	Designs the blueprint plan for the house	Assigned
Human Labor	RFP	T&M	Need Labor for Construction of the house	Assigned
Electrician	RFP	FPC	Takes care of the electric work in the house	Assigned
Plumber	RFP	FPC	Takes care of Plumbing work in the house.	Assigned
Construction Equipment	RFQ	РО	Need Equipment for construction of house.	Delivered
Superintendent	RFQ	PO	Manages all the works that are ongoing	Assigned
Raw Materials	RFQ	PO	Need Raw materials such as cement, brick for construction of the house	Delivered

COMMUNICATION PLAN:

Stake Holders	Communication	Purpose	Frequency
University	Face to face	To get the project	weekly
Representatives		approval and discuss	
		about the design	
Syracuse city	Email	To get permissions	Monthly
		required for the	
		project done and if	
		any issues hindered	
		in between the	
		project	
University	Email	Permission regarding	Monthly
·		construction and	•
		budget approvals,	
		etc.	
Government	Email	Permissions	Monthly
		regarding	J
		construction, land.	
Architect	Telephone	Discussions	Daily
	1	regarding changes,	J
		construction,	
		planning, etc.	
Contractor	Face to face	Plumbing,	Daily
		electricity, carpentry,	J
		trades, etc.	
Owner	Email or Face to face	Regarding important	Weekly
		documentation,	· · · ·
Interior designer	Face to Face, video		Twice in week
	(20011)		
Superintendent	Email or Telephone		Daily
Supermicinaent	Zimin of Telephone		Duily
Civil engineer	Face to Face	ž	Daily
Civii diigiliodi	1 400 10 1 400		Dully
Interior designer Superintendent Civil engineer	Face to Face, video call (zoom) Email or Telephone Face to Face	Discussion regarding interiors, how can we plan changing interiors in minimum budget Regarding the dayto-day activities Regarding the construction	Twice in week Daily Daily

QUALITY MANAGEMENT PLAN:

Task	Allocated	Objective	Best	Better	Basic Quality
	~	261	Quality	Quality	
Plumbing	Contractor	Make sure this			
		set up lasts for-			
		ever because this			
		should always			
		be one time set-			
		up			
Interior	Interior	Setting up the			
Designing	Designer	interiors in the			
		budget			
Electricity	Contractor	Setting up			
		wiring			
		connections			
		which is long			
		lasting			
Design and	Architect	All the water			
layout	and	supply and			
-	Contractor	connections will			
		be taken care by			
		contractor and			
		rest by architect			
		should last for			
		quite an amount			
		of time			
Walls set-up	Interior	Can be			
and	Designer	remodeled			
alignment		according to the			
and also		trends but			
meeting		should last for a			
university		while			
standards					
Heaters and	Contractor	Should be long			
Air		lasting but under			
Conditioners		budget			
Digital lab	Interior	Living space			
construction	Designer	should consists			
	/Civil	of modern			
	Engineer	interiors and			
		should also be			
		spacious			
Parking lot	Architect	Should be long			
		lasting			

Office area	Interior	Should be long		
	designer/	lasting		
	architect			
Painting	Contractor	Should meet the		
		standards		
Flooring/	Civil	Should be of		
Walls	Engineer	proper		
	& designer	investment		

Execution:

In this phase we will investigate the work packages (the given work is divided into multiple packages):

- 1) Planning and design package:
 - Plan and design the structure
 - Review the plan
 - Obtain approval

2) Procurement:

- Steel finishings
- Roofing and lighting
- Shelving and racking
- Security units
- Fire extinguishers and alarms
- Plumbing
- Painting
- Walls and wall systems
- Doors
- Concrete

3) Site Preparation:

- Before beginning the work, fencing should be placed at the construction area
- Install erosion control barriers
- Prepare pad for HVAC evacuation
- Build the floor pad for office and HVAC pad
- Clear the work site
- Build the site to create foundations
- Storm sewers need to be installed

• Create construction entrance

4) Construction:

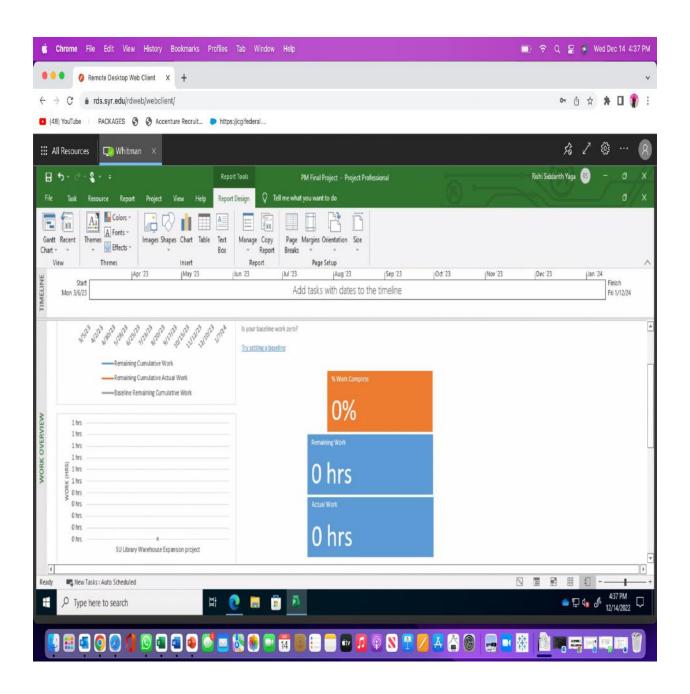
- Building foundation for digital lab and office
- Installation of all the interiors
- Installation of security measures
- Installation of sprinklers, fire alarms, fire extinguishers
- Painting, plumbing, carpentry, etc.
- Working on exterior finishings
- Bringing waterlines to the building
- Bringing natural gas to the building
- Build steel structure for the new addition

5) Final Testing:

- Test plumbing, electrical, HVAC, Mechanicals
- Test security and alarm systems
- Test warehouse equipment
- Review all the list of items and obtain the certificate.

Monitor and control:

Control implies to compare anything to a baseline or a plan. Here, we are comparing to the project management plan and figure out if the work is done accordingly or not or take the possible measures to get project on track. Before you meet with the customer, the work must always be finished and verified. "Deliverables must be validated," Have the University Representatives evaluate the scope management plan, which lists the previously agreed-upon deliverables. We should have Requirements documented and outlined all the specifics of the project requirements. We also have data on work performance to demonstrate how successfully work has been executed. Measurement and evaluation of work performed in comparison to the scope baseline and management of modifications to the scope baseline constitute control scope. As the project manager, it is our responsibility to manage the project in accordance with the project management plan and to fulfill all baselines. Control is more than just following a plan when measuring. Control also includes adopting preventative measures and corrective measures when measurements compared to the plan reveal a deviation. Analyze recent work performance information. estimate the remaining project components and conduct performance reviews by formally evaluating the project's performance. Reporting on progress as appropriate and adjusted. Determine what needs to be changed (i.e., preventive & corrective). Adjust metrics as needed that aren't giving you the data you need to manage the timetable. In order to avoid having to prolong the project, future project components should be adjusted to account for any delays. In this phase we check the quality, quantity and how are we managing the resources of the project and correct if any disruption.



Closeout:

Closeout is the final stage of the project. This phase begins when all the deliverables have been achieved:

- 1) final review meeting here it will be reviewed whether all the requirements and deliverables promised to have been delivered are not. If there is anything missing them will be working on it and complete it.
- 2) all the financial settlements will be cleared.
- 3) certificate of completion will be given after completing all the above phases.
- 4) all the documentation will be preserved for future references.
- 5) final audit and checklist will be drafted by the university.

Zonal Requirements:

It is hereby allowed for the Town Board to establish the Office of the Codes Enforcement Officer and to choose, hire, and manage the Codes Enforcement Officer. The code enforcement officer must have prior knowledge in building construction or fire prevention shall, within the time allowed by law, obtain the basic training, in-service training, and other training that the State of New York shall require for codes enforcement personnel. The codes enforcement officer shall also obtain certification from the Department of State in accordance with the Executive Law and the rules established thereunder. Such a Codes Enforcement Officer may work full- or part-time, and the Codes Enforcement Officer's pay will occasionally be decided by the Town Board shall appoint a replacement to serve as Acting Codes Enforcement Officer if the Codes Enforcement Officer is unable to do so for any reason. During the duration of their appointment, the Acting Codes Enforcement Officer shall exercise all authority and perform all obligations placed upon the Codes Enforcement Officer by this local ordinance.

The Town Board may appoint one or more Inspectors to work under the Codes Enforcement Officer's supervision and direction and to support the Codes Enforcement Officer in carrying out the responsibilities and exercising the authority granted to the Codes Enforcement Officer by this local law. Each Inspector is required to acquire within the legal timeframe.

OTHER PLANS:

The following plans are also identified as part of the project plan:

- Project should also contain a place where people can rest like a mini longue because after studying for hours people might need a break and a place to relax.
- Project must also include insurance to the Human Resources as it is a construction site, there might be a slight chance of injury to the resource working on the project. It can be called "Health & Safety Plan".