



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in

**SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE
M. Arch (Building management)**

**PROFESSIONAL TRAINING (S84APT)
JUL 2022 - AUG 2022**

Name of the Student : Swetha Gopalakrishnan

Semester : III

Reg No. : 41840017

Batch : 2021-2023



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DEPARTMENT OF ARCHITECTURE

M. Arch (Building management)

VIVA-VOCE EXAMINATION

This is to certify that the Professional Training Report (S84APT) is the work of **SWETHA GOPALAKRISHNAN** who had undergone training in **EPMCR Pvt. Ltd.** and has been monitored by the continuous assessment during Jul 2022 to Aug 2022.

Dr. Devyani Gangopadhyay
HOD AND DEAN

Submitted for Viva voce Examination held on 20-12-2022

Internal Examiner

External Examiner



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DECLARATION

I **SWETHA GOPALAKRISHNAN** hereby declare that this Professional Training Report for **30 Days (from July 11th to August 13th)** done by me under the guidance of **MR. KAVIN KUMAR. S** is submitted in partial fulfillment of the requirements for the completion of practical training session.

DATE : 20/12/2022

PLACE : Chennai

A handwritten signature in blue ink, appearing to read 'Swetha', is written over the signature line.

SIGNATURE OF CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. Devyani Gangopadhyay, Dean, School of building and Environment** for providing me necessary support and details at the right time during the progressive reviews.

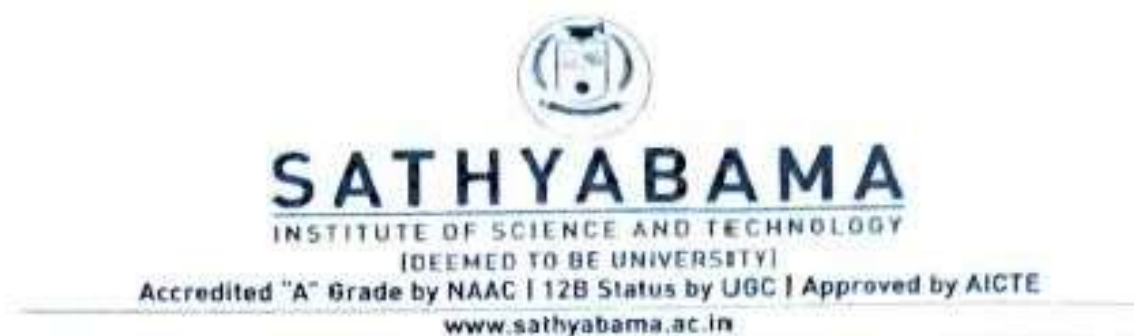
I would like to express my sincere and deep sense of gratitude to the director of EPMCR, **Mr. Kavın Kumar.S** for his valuable guidance, suggestions and constant encouragement paved way for the successful completion of my Training.

I would also like to express my sincere thanks to our Internal coordinator **Ar. Surya Rajkumar** for her valuable guidance, during the entire Professional Training period.

I wish to express my thanks to all Teaching and Non-teaching staff members of the Department of Architecture who were helpful in many ways for the completion of the project.

I would also like to express my gratitude to **Mr. Vınoth Kumar, Mr. Durairajan and others in the firm** for their guidance, knowledge sharing and encouragement throughout the training period.

BONAFIDE CERTIFICATE

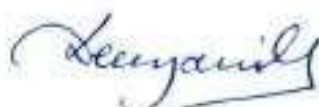


Date: 11.05.2022

TO WHOMSOEVER IT MAY CONCERN

SWETHA GOPALAKRISHNAN (Reg No- 41840017) is a bonafide student of our institution pursuing Masters in Architecture in Building Management (Batch 2021-2023). As part of the curriculum the students are required to undergo Professional Training for a minimum period of 30 working days. Kindly grant permission for the same in your esteemed organization. We also assure that information collected about any project will be used for academic purpose only.

Thanking You,


Dr. Devyani Gangopadhyay
Dean, School of Building & Environment



CONFIRMATION LETTER



Reference no. EPMCR/Internship/2022-23/07/07
Date: 05th July 2022

To

Ms. Swetha Gopalakrishnan
No. 17/2, Tank Square Street
Saidapet
Chennai - 600 015
Mail Id: swethagopal5997@gmail.com
Mobile: 98404 57450

Subject: Confirmation of Internship in our organization - 2022-23 - reg.
Ref: Your Reg. No. 41840017 Sathyabama Campus, Chennai

Dear Ms. Swetha G,

This is to confirm you that, you are selected for the Internship Program in our organization from 11.07.2022 to 13.08.2022 (4 Weeks).

The period of internship contains the subject of Advance Construction Management and Project Management Consultancy and others which relates.

The internship period will be completed on submission of Report based on your learning through the internship. This report should submit to our Director and the completion certificate will be issued based on his approval.

Thanks & regards,
for Engineering Project Management Consultancy & Research Pvt. Ltd.,



Engineering Project Management Consultancy and Research Pvt. Ltd.



No. 2B, 1st Floor, Balaji Nagar Main Road, Bharathi Avenue, New Perungalathur, Chennai - 600 063.

MONTHLY REPORT

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SCHOOL OF BUILDING & ENVIRONMENT, DEPARTMENT OF ARCHITECTURE
M. Arsh (Building management)
Continuous Assessment Report for Professional Training
(Continuous progress report of the trainee architect/Project Manager for the period of 15 working days in the office to be submitted to HOD by the Trainee in Charge of the Organization)

Name of the office / organization :	EPNCR PVT. LTD
Address & Contact Number :	24 Rajaji road, Main Rd, Bhokkaling, Hengulur
Name of the student :	Sushma C. Srinivasan
Duration :	From 11-07-2022 To 27-07-2022
Total No. of days :	15 days
Evaluation of Performance criteria shall be on	

* Note: Kindly grade the student as per teacher overall performance in the office during the assessment month.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture	✓				
Skills related to project management	✓				
Design Management					✓
Understanding the Triple Constraints	✓				
Observation during Site Visits	✓				
Understanding of construction details	✓				
Understanding of Construction sequences	✓				
Site Supervision / Discussion with clients	✓				
Adherence to Time schedule	✓				
Quantitative aptitude	✓				
Documentation skills	✓				
Coordination with other consultants	✓				

Overall Grading*	A
------------------	---

(A - 80, B - 70, C - 60, D - 55, E - 50, F - <50)

7. Any other Remarks

8. Signature of the Head of the Office / Organization (With Seal)

S. Srinivasan



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Name of the office / organization :	EPNCR PVT. LTD
Address & Contact Number :	24 Rajaji road, Main Rd, Bhokkaling, Hengulur
Name of the student :	Sushma C. Srinivasan
Duration :	From 28-07-2022 To 13-08-2022
Total No. of days :	15 days
Evaluation of Performance criteria shall be on	

* Note: Kindly grade the student as per teacher overall performance in the office during the assessment month.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture	✓				
Skills related to project management	✓				
Design Management	✓				✓
Understanding the Triple Constraints	✓				
Observation during Site Visits	✓				
Understanding of construction details	✓				
Understanding of Construction sequences	✓				
Site Supervision / Discussion with clients	✓				
Adherence to Time schedule	✓				
Quantitative aptitude	✓				
Documentation skills	✓				
Coordination with other consultants	✓				

Overall Grading*	A
------------------	---

(A - 80, B - 70, C - 60, D - 55, E - 50, F - <50)

7. Any other Remarks

8. Signature of the Head of the Office / Organization (With Seal)

S. Srinivasan



WORK DIARY

DAY	PROJECT NAME	WORK DONE	DAY	PROJECT NAME	WORK DONE
11.07.2022	RMKV Residence RA Puram.	Studied Drawings	26.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.
12.07.2022	Lean Management, Rmkv Residence, RA Puram.	Attended Meeting, Attended Seminar on Lean Management	27.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.
13.07.2022	Polyhose, Gummidipoondi.	Site Visit, Attended Meeting.	28.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.
14.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.	29.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.
15.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.	30.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.
16.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.	31.07.2022	Sewerage Scheme to Manali, Chinnasekkadu, Karambakkam, Marapakkam.	Delay Analysis.
18.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.	02.08.2022	Sewerage Scheme to Manali, Chinnasekkadu, Karambakkam, Marapakkam.	Delay Analysis.
19.07.2022	Polyhose, Sunguvar chatiram.	Attended Meeting on Design Thinking	03.08.2022	Sewerage Scheme to Marapakkam.	Delay Analysis, Delay Mapping.
20.07.2022	IIT Madras, Research Park.	Site Visit	04.08.2022	Sewerage Scheme to Marapakkam.	Delay Analysis, Delay Mapping.
21.07.2022	Polyhose, Sunguvar chatiram.	Trends & Technologies - Design Thinking	05.08.2022	Pattayabaram - Auditorium.	Site Visit.
22.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.	06.08.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.
23.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.	08.08.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.
25.07.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.	09.08.2022	Polyhose, Gummidipoondi.	Tracking & Monitoring Site Work Progress.

Chief Architect Signature:

Office seal:



DAY	PROJECT NAME	WORK DONE	DAY	PROJECT NAME	WORK DONE
10.08.2022	Polyhase, Gummidiipoondi	Tracking & Monitoring Site Work Progress.			
11.08.2022	Polyhase, Gummidiipoondi	Tracking & Monitoring Site Work Progress.			
12.08.2022	Polyhase, Gummidiipoondi	Tracking & Monitoring Site Work Progress.			
13.08.2022	Polyhase, Gummidiipoondi	Tracking & Monitoring Site Work Progress.			

Chief Architect Signature:

Office seal:



COMPLETION CERTIFICATE



August 19, 2022

Ref: EPMCRPL/22-23/HR/INTERN/08-12



CREATING VALUES FOR YOUR INVESTMENT
An IIT Madras Incubated
Construction Technology Company

INTERNSHIP CERTIFICATE

Ms. Swetha Gopalakrishnan, pursuing her Masters in Architecture in Building Management (Reg. No: 41840017) at Sathyabama Institute of Science & Technology, Chennai has completed an internship training at our company, from 11.07.2022 to 13.08.2022.

Main Tasks accomplished:

- Learned the importance of triple constraints.
- Learned site monitoring.
- Learned the importance of lean management.
- Learned the hardships faced during project execution.
- Prepared last planner based on lean management.
- Prepared trends and technologies for a project in design thinking stage.
- Prepared fortnight schedule based on works to be accomplished on site.
- Analysed the reasons for delay of a project.
- Prepared delay mapping.
- Delay analysis done based on the clauses given in the general conditions of contract.

Involved project during the Internship Period:

- Warehouse building for Polyhose, Gummidipoondi
- Polyhose, Sunguvachathram - Proposal
- IIT Research Park – Proposed interior works
- Providing comprehensive sewerage scheme to manali, chinnasekkadu, karambakkam and manapakkam in Chennai city

During the internship she was found to be Highly Logical, Inquisitive & Hard Working.

For ENGINEERING PROJECT MANAGEMENT CONSULTANCY & RESEARCH PVT LTD.,


S SEKAR MAHALINGAM
HR & ADMN



Engineering Project Management Consultancy and Research Pvt. Ltd.



No. 2B, 1st Floor, Balaji Nagar Main Road, Bharathi Avenue, New Perungalathur, Chennai - 600 063.

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1. ABOUT THE ORGANISATION:

Engineering Project Management Consultancy and Research Private limited (EPMCR(P)LTD) is a professional Engineering and Project Management Consultancy company incubated by IIT Madras and formed with a vision “to enable a quality Indian Infrastructure development within time and budget through our Engineering, Project Management, Research and Training Services.

1. VISION:

- To become world class Engineering & Project Management consultants and professional trainers.
- Enabling high quality Indian infrastructure development within time and budget.
- Create innovation in construction technology and Management techniques through our continuous research.
- Strengthen Indian construction work force through our skill training.

1.2 MISSION:

- Provide Value creation for our client’s Infrastructure Investment through our Engineering, Project Management Consultancy, Research and Training services.

1.3 OBJECTIVE:

- To help our client to realize the optimum value & quality for their investment in infrastructure projects within the time and budget.
- Bring innovative & cost effective solution to improve productivity through waste reduction and other new technologies.
- Offer professional training to young engineers on construction management.

1.4 PROJECTS:

1. Structural design and Project Management for Construction of Caustic Soda production plant, Ongole, 2011
2. Structural design and Project Management for Construction of Warehouse, Pondicherry, 2011
3. Plumbing Design for IIT Madras Hostel Building, 2011

2. Warehouse building for Polyhose.Gummidipoondy

2.1 Fortnight Plan

PHASE -01 WORK		DAY-01	DAY-02	DAY-03	DAY-04	DAY-05	DAY-06	DAY-07
SI.NO.	DESCRIPTION	15-Jul-22	16-Jul-22	17-Jul-22	18-Jul-22	19-Jul-22	20-Jul-22	21-Jul-22
1	Excavation Work	Road Area -01	Road Area -01,02	Road Area -02	Road Area -02,03	Road Area -03	Road Area -03,04	Road Area -04
2	Pipe Laying work	Dock Leveler Platform	Road Area -01		Road Area -02		Road Area -03	
3	Soil Dressing & Compaction work		Road Area -01		Road Area -02		Road Area -03	
4	GSB Filling & Compaction work	Dock Leveler Platform		Road Area -01		Road Area -02		Road Area -03
5	WMM Filling & Compaction work				Road Area -01		Road Area -02	
6	LDPE Sheet Laying work	Dock Leveler Platform				Road Area -01		Road Area -02
7	Rebar Work	Dock Leveler Platform				Road Area -01		Road Area -02
8	Shuttering work	Warehouse Building-B (12 No's)	Dock Leveler Platform					
9	GP2 Grouting work	Warehouse Building-B (6 No's)	Warehouse Building-B (6 No's)					
10	Concrete work				Dock Leveler Platform, Warehouse Building-B (42 No's)		Road Area -01	
11	Groove cutting & Sealant packing							

2. Warehouse building for Polyhose.Gummidipoondy

2.1 Fortnight Plan

PHASE -01 WORK		DAY-08	DAY-09	DAY-10	DAY-11	DAY-12	DAY-13	DAY-14
Sl.NO.	DESCRIPTION	22-Jul-22	23-Jul-22	24-Jul-22	25-Jul-22	26-Jul-22	27-Jul-22	28-Jul-22
1	Excavation Work	Road Area -04,05	Road Area -05	Road Area -05				
2	Pipe Laying work	Road Area -04			Road Area -05	Road Area -05		
3	Soil Dressing & Compaction work	Road Area -04			Road Area -05	Road Area -05		
4	GSB Filling & Compaction work		Road Area -04			Road Area -05	Road Area -05	
5	WMM Filling & Compaction work	Road Area -03		Road Area -04			Road Area -05	Road Area -05
6	LDPE Sheet Laying work		Road Area -03		Road Area -04			Road Area -05
7	Rebar Work		Road Area -03		Road Area -04			Road Area -05
8	Shuttering work							
9	GP2 Grouting work							
10	Concrete work	Road Area -02		Road Area -03		Road Area -04		
11	Groove cutting & Sealant packing	Groove Cutting & Sealant work						

2. Warehouse building for Polyhose.Gummidipoondy

2.1 Fortnight Plan

PHASE -01 WORK		DAY-01	DAY-02	DAY-03	DAY-04	DAY-05	DAY-06	DAY-07
SI.NO.	DESCRIPTION	1-Aug-22	2-Aug-22	3-Aug-22	4-Aug-22	5-Aug-22	6-Aug-22	7-Aug-22
1	Excavation Work	Road Area -05	Road Area -05		Road Area -03 - 1 Panel, Road Area -04-1 Panel	Road Area -05 SWD	Road Area -05 SWD	
2	Pipe Laying work	Road Area -02 & 03	Dock Leveler Platform-02		Road Area -03 - 1 Panel, Road Area -04-1 Panel			
3	Soil Dressing & Compaction work		Dock Leveler Platform-02	Road Area -05	Road Area -03 - 1 Panel, Road Area -04-1 Panel		Road Area -05 SWD	Road Area -05 SWD
4	GSB Filling & Compaction work			Dock Leveler Platform-02	Road Area -05	Road Area -03 - 1 Panel, Road Area -04-1 Panel		Road Area -05 SWD
5	WMM Filling & Compaction work			Dock Leveler Platform-02		Road Area -05	Road Area -03 - 1 Panel, Road Area -04-1 Panel	
6	LDPE Sheet Laying work				Dock Leveler Platform-02	Road Area -05	Road Area -03 - 1 Panel, Road Area -04-1 Panel	
7	Rebar Work	Dock wall -Edge Angle Fixing		SWD Road Area -02 & 03	Dock Leveler Platform-02	Road Area -05	Road Area -03 - 1 Panel, Road Area -04-1 Panel	
8	Shuttering work	Dock wall -03 Nos		SWD Road Area -02 & 03				
9	GP2 Grouting work							
10	Concrete work		Dock wall -03 Nos		SWD Road Area -02 & 03	Dock Leveler Platform-02	Road Area -05, Road Area -03 & 04 -1 Panel	Road Area -05
11	Groove cutting & Sealant packing		Groove cutting & Sealant Packing					

2. Warehouse building for Polyhose.Gummidipoondy

2.1 Fortnight Plan

PHASE -01 WORK		DAY-08	DAY-09	DAY-10	DAY-11	DAY-12	DAY-13	DAY-14
Sl.NO.	DESCRIPTION	8-Aug-22	9-Aug-22	10-Aug-22	11-Aug-22	12-Aug-22	13-Aug-22	14-Aug-22
1	Excavation Work							
2	Pipe Laying work							
3	Soil Dressing & Compaction work							
4	GSB Filling & Compaction work	Road Area -05 SWD						
5	WMM Filling & Compaction work							
6	LDPE Sheet Laying work							
7	Rebar Work		Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD	
8	Shuttering work			Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD
9	GP2 Grouting work							
10	Concrete work				Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD	Road Area -05 SWD
11	Groove cutting & Sealant packing							

2. Warehouse building for Polyhose. Gummidipoondy

2.2 Last Planner

ROAD AREA 01		ACTIVITY NAME: GSB Filling & Compaction (200mm)		ACTIVITY NAME: WMM Filling & Compaction		ACTIVITY NAME: RCC (200mm)	
		LOCATION : Exterior	SCOPE QTY 60 sqm	LOCATION : Exterior	SCOPE QTY 60 sam	LOCATION: Exterior	SCOPE QTY 60 sam
		RESOURCES: Barbender, Roller, Mason, Backhoe		RESOURCES:Barbender, Roller, Mason, Backhoe		RESOURCES: Barbender, Roller, Mason, Backhoe	
		PREDECESSOR ACTIVITY: Excavation		PREDECESSOR ACTIVITY: GSB Filling & Compaction		PREDECESSOR ACTIVITY: WMM Filling & Compaction	
ROAD AREA 02		ACTIVITY NAME: GSB Filling & Compaction (200mm)		ACTIVITY NAME: WMM Filling & Compaction		ACTIVITY NAME: RCC (200mm)	
		LOCATION : Exterior	SCOPE QTY 60 sam	LOCATION : Exterior	SCOPE QTY 60 sqm	LOCATION: Exterior	SCOPE QTY 60 sam
		RESOURCES: Barbender, Roller, Mason, Backhoe		RESOURCES:Barbender, Roller, Mason, Backhoe		RESOURCES: Barbender, Roller, Mason, Backhoe	
		PREDECESSOR ACTIVITY: Excavation		PREDECESSOR ACTIVITY: GSB Filling & Compaction		PREDECESSOR ACTIVITY: WMM Filling & Compaction	
ROAD AREA 03		ACTIVITY NAME: GSB Filling & Compaction (200mm)		ACTIVITY NAME: WMM Filling & Compaction		ACTIVITY NAME: RCC (200mm)	
		LOCATION : Exterior	SCOPE QTY 60 sam	LOCATION : Exterior	SCOPE QTY 60 sam	LOCATION: Exterior	SCOPE QTY 60 sam
		RESOURCES: Barbender, Roller, Mason, Backhoe		RESOURCES:Barbender, Roller, Mason, Backhoe		RESOURCES: Barbender, Roller, Mason, Backhoe	
		PREDECESSOR ACTIVITY: Excavation		PREDECESSOR ACTIVITY: GSB Filling & Compaction		PREDECESSOR ACTIVITY: WMM Filling & Compaction	

2. Warehouse building for Polyhose.Gummidipoondy

2.3 Site Visit



2. Warehouse building for Polyhose.Gummidipoondy

2.4 Daily Progress Tracking:

S.no:	Actual Plan	Date	Location	Equipments used	No. of Labours	Original Plan
1	Isolation Joint cleaning	14/7/2022		Back hoe - 1 no. with loader	Total - 19	
2	Shuttering	(Thursday)		Earth Compactor - 1 no.	Dock leveler works -8	
3	Gp2 Grouting work				Shuttering work -3	
4	Dock leveler - Soil dressing				Barbending -3	
5	Dock leveler - Soil compaction				Welding -2	
6	Angle Fixing for Dock leveler				Road work -3	
7	Shuttering for Dock leveler					
8	Road work - Pipe Laying					
1	Road Area 01 Excavation	15/7/2022	Road Area 01	Backhoe - 2 no. with loader	Total - 19	Excavation Work - Road Area -01
2	Dock Leveler - GSB Laying	(Friday)		Tipper - 1 no.	Skilled labours -8	Pipe Laying work - Dock Leveler Platform
3	Compaction work				Unskilled labours -11	GSB Filling & Compaction work - Dock Leveler Platform
4	GP2 shuttering and grouting				Barbender -3	LDPE Sheet Laying work - Dock Leveler Platform
					Carpenter -5	Rebar Work - Dock Leveler Platform
					Mason -2	Shuttering work - Warehouse Building-B (12 no's)
					Helpers -9	GP2 Grouting work - Warehouse Building-B (6 no's)
1	Dock Leveler - GSB Filling and Leveling	16/7/2022	Road Area 01	Back hoe = 2 with 1 Loader	Total Manpower= 32 Nos	Excavation Work - Road Area -01,02
2	Dock wall Shuttering work	(Saturday)		Earth Rammer = 1 no.	Barbender = 6 Nos	Pipe Laying work - Road Area -01
3	Dock wall Concrete				Carpenter = 7 Nos	Soil Dressing & Compaction work - Road Area -01
4	Road - Work Area 01 Excavation				Electrician = 1 Nos	Shuttering work - Dock Leveler Platform
					Unskilled = 18 Nos	GP2 Grouting work - Warehouse Building-B (6 no's)
17/7/2022 - SUNDAY						
1	Road Area -01 GSB Filling & Compaction	18/7/2022	Road Area 01	Back hoe = 2 with 1 Loader	Total Manpower= 43 Nos	Excavation Work - Road Area - 02,03
2	Road Area-02 Earthwork Excavation	(Monday)	Road Area 02	Roller = 1 no.	Barbender = 12 Nos	Pipe Laying work - Road Area -02
3	Dock Leveler - Rebar work/ Cleaning of Dock Level				Carpenter = 4 Nos	Soil Dressing & Compaction work - Road Area -02
4	Isolation joint - Edge cutting and Cleaning work				Mason = 4 Nos	WMM Filling & Compaction work - Road Area -01
					Unskilled = 23 Nos	Concrete work - Dock Leveler Platform, Warehouse Building-B (42 No's)
1	Road Area -01 GSB Filling & Compaction	19/7/2022	Road Area 01	Back hoe = 2 with 1 Loader	Total Manpower= 47 Nos	Excavation Work - Road Area -03
2	Road Area-02 Earthwork Excavation	(Tuesday)	Road Area 02	Roller = 1 no.	Barbender = 12 Nos	GSB Filling & Compaction work - Road Area -02
3	Dock Leveler - Cleaning of Dead mortar				Carpenter = 5 Nos	LDPE Sheet Laying work - Road Area -01
4	Isolation joint - Edge cutting and Cleaning work				Mason = 5 Nos	Rebar Work - Road Area -01
5	Road - Rebar work				Unskilled = 25 Nos	

2. Warehouse building for Polyhose.Gummidipoondy

2.4 Daily Progress Tracking:

S.no:	Actual Plan	Date	Location	Equipments used	No. of Labours	Original Plan
1	Road work -Area 01 Rebar checking, Concrete - 70 Cum.	21/7/2022 (Thursday)	Road Area 01 Road Area 02		Total Manpower= 47 Nos Barbender = 11 Nos	Excavation Work - Road Area -04 GSB Filling & Compaction work - Road Area -03
2	Road Work -Area 02 GSB Filling and Compaction		Dock Level-01		Carpenter = 5 Nos	LDPE Sheet Laying work - Road Area -02
3	Dock -01 Outer plastering work				Mason = 5 Nos	Rebar Work - Road Area -02
4	Floor Rectification work				Unskilled = 26 Nos	
1	Road Work Area -02 (200 sqm) -GSB Filling & Compaction work	22/7/2022 (Friday)	Road Area 02 Dock Level-01 (South)	Back hoe = 4 with 1 Loader Roller = 1 no	Total Manpower= 46 Nos Barbender = 8 Nos	Excavation Work - Road Area -04,05 Pipe Laying work - Road Area -04
2	Drain Demolition work - To lay Electrical pipes below SWD (Nearby work area-02)		Dock Level-02		Carpenter = 10 Nos Mason = 6 Nos	Soil Dressing & Compaction work - Road Area -04 WMM Filling & Compaction work - Road Area -03
3	Dock Level-01 (South)- Outer Plastering work		(North)		Unskilled = 22 Nos	Concrete work - Road Area -02
4	Dock Level-02 (North)-Excavation work					
5	Isolation Joint -Correction work					
1	Dock Leveler 01 -Plastering work	23/7/2022 (Saturday)	Road Area 03	Back hoe = 2 with 1 Loader	Total Manpower= 34 Nos	Excavation Work - Road Area -05
2	Dock Leveler 02 -Excavation work		Road Area 04	Roller = 1 No	Barbender = 4 Nos	WMM Filling & Compaction work - Road Area -04
3	Road Work Area-03 -Hume pipe rectification work		Road Area 05		Carpenter = 5 Nos	Concrete work - Road Area -03
4	Road work Area-04 Excavation work		Dock Leveler 01		Mason = 4 Nos	
5	Road work Area-05 Excavation work		Dock Leveler 02		Unskilled = 21 Nos	
24/7/2022 - SUNDAY						
1	Dock Leveler -01 Outer plastering work	25/7/2022 (Monday)	Road Area 02	Back hoe = 3 with 1 Loader	Total Manpower= 31 Nos	Pipe Laying work - Road Area -05
2	Road work Area-02 GSB Filling & Compaction, LDPE Sheet Laying & Rebar work		Road Area 03 Road Area 04	Roller = 1 No	Barbender = 2 Nos Carpenter = 2 Nos	Soil Dressing & Compaction work - Road Area -05 LDPE Sheet Laying work - Road Area -04
3	Road work Area-03 Hume Pipe Correction work		Road Area 05		Mason = 7 Nos	Rebar Work - Road Area -04
4	Road work Area-04 GSB Filling & Compaction		Dock Leveler -01		Unskilled = 20 Nos	
5	Road work Area-05 Excavation work		Dock Leveler -02			
6	Dock Leveler -02 Excavation work					
1	Road work Area -02 Rebar and concrete	26/7/2022 (Tuesday)	Road Area 02	Back hoe = 3 with 1 Loader	Total Manpower= 34 Nos	Pipe Laying work - Road Area -05
2	Road work Area -03 HDPE Pipe laying work, GSB Filling and Compaction work		Road Area 03 Road Area 04	Roller = 1 No	Barbender = 3 Nos Carpenter = 2 Nos	Soil Dressing & Compaction work - Road Area -05 GSB Filling & Compaction work - Road Area -05
3	Road work Area-04 WMM Filling, LDPE Sheet laying and rebar work		Road Area 05 Road Area 06		Mason = 7 Nos Unskilled = 22 Nos	Concrete work - Road Area -04
4	Road work Area -05 Excavation work.		Dock Area -02			
5	Dock Area -02 Excavation work					
6	Road work area -06 Excavation work					
1	Road work area 04 - 100% concrete	27/7/2022 (Wednesday)	Road Area 02	Back hoe = 3 with 1 Loader	Total Manpower= 36 Nos	GSB Filling & Compaction work - Road Area -05
2	Road work area 05- Excavation work		Road Area 04	Roller = 1 No	Barbender = 3 Nos	WMM Filling & Compaction work - Road Area -05
3	Dock Leveler -02 Soil Filling and Leveling work		Road Area 05		Carpenter = 2 Nos	
4	Road work area 06 -Excavation work		Road Area 06		Mason = 7 Nos	
			Dock Leveler -02		Unskilled = 24 Nos	
1	Dock Level - 02 Excavation, Inspection Chamber work In progress	28/7/2022 (Thursday)	Road Area 06 Dock Level - 02	Back hoe = 3 with 1 Loader Roller = 1 No	Total Manpower= 42 Nos Barbender = 3 Nos	WMM Filling & Compaction work - Road Area -05 LDPE Sheet Laying work - Road Area -05
2	Ramp - Excavation and Block work in progress				Carpenter = 2 Nos	Rebar Work - Road Area -05
3	Floor cleaning work in progress				Mason = 10 Nos	

2. Warehouse building for Polyhose.Gummidipoondy

2.4 Daily Progress Tracking:

S.no:	Actual Plan	Date	Location	Equipments used	No. of Labours	Original Plan
1	Road work area 04 - 3rd panel- LDPE sheet laying, Rebar and concrete	29/7/2022 (Friday)	Road area 04 Road area 06	Back hoe = 3 with 1 Loader Roller = 1 No	Total Manpower= 39 Nos Barbender = 3 Nos	LDPE Sheet Laying work - Road Area -05 Rebar Work - Road Area -05
2	Road work area 06 - GSB Filling and Compaction work		Dock Leveler -02 Road work 05		Carpenter = 2 Nos Mason = 09 Nos	Concrete work - - Road Area -05
3	Dock Leveler -02 Drain pipe laying work, Dock Leveler raft GSB Filling and PCC				Unskilled = 23 Nos FC= 4 Nos	
4	Road work area 05 Excavation work.					
1	Road work Area 06 - Concrete	30/7/2022	Road area 06	Back hoe = 3 with 1 Loader	Total Manpower= 39 Nos	Concrete work - Road Area -05
2	Road work area 05 - GSB Filling and Compaction	(Saturday)	Road area 05	Roller = 1 No	Barbender = 3 Nos	
3	Road work area 04 - 3rd channel concrete		Road area 04		Carpenter = 2 Nos	
4	Dock Leveler - Raft concrete				Mason = 09 Nos	
					Unskilled = 23 Nos	
					FC= 4 Nos	
31/7/2022 - SUNDAY						
1	Dock platform 02 - Angle fixing work	1/8/2022	Dock platform 02		Total Manpower= 44 Nos	Excavation Work - Road Area -05
2	Dock wall concrete work	(Monday)	Road area 05		Barbender = 3 Nos	Pipe Laying work - Road Area -02
3	Pipe Laying work- B/w road 2 and 3				Carpenter = 2 Nos	Pipe Laying work - Road Area -03
4	Road work Area -05 Excavation				Mason = 09 Nos	Rebar Work - Dock wall -Edge Angle Fixing
5	STP line cleaning work				Unskilled = 23 Nos	Shuttering work - Dock wall -03 Nos
					FC= 4 Nos	
					Welder = 3+2 Nos	
1	Dock Area -02 Excavation, Soil dressing, GSB Filling work	2/8/2022 (Tuesday)	Dock Area -02 Road Area 05	Backhoe - 3 + 1 Loader	Total Manpower= 44 Nos	Excavation Work - Road Area -05
2	Road between 2&3 - Pipe laying work				Carpenter - 2Nos	Pipe Laying work - Dock Leveler Platform-02
3	Road Area -05 Soil dressing, GSB filling work				Barbender - 3 Nos	Soil Dressing & Compaction work - Dock Leveler Platform-02
					Mason -10 Nos	Concrete work - Dock wall -03 Nos
					Unskilled - 26 Nos	
					Welder - 2+1 Nos	
	Dock Area -02	3/8/2022	Dock Area -02	Backhoe - 3 + 1 Loader	Total Manpower= 46 Nos	Soil Dressing & Compaction work - Road Area -05
1	WMM filling & compaction work	(Wednesday)			Carpenter - 2Nos	GSB Filling & Compaction work - Dock Leveler Platform-02
2	LDPE sheet Laying				Barbender - 3 Nos	WMM Filling & Compaction work - Dock Leveler Platform-02
3	Rebar work				Mason -10 Nos	Rebar Work - SWD Road Area -02 & 03
4	Concrete (Night)				Unskilled - 26 Nos	Shuttering work - SWD Road Area -02 & 03
					Welder - 2+1 Nos	
					Painter- 2 Nos	
1	Dock Area -02 - Rebar and concrete work.	4/8/2022	Dock Area -02	Backhoe - 2 + 1 Loader	Total Manpower= 44 Nos	Excavation Work - Road Area -03 - 1 Panel
2	Road work Area -04 nearby Dock Area.	(Thursday)	Road Area 03		Carpenter - 2Nos	Excavation Work - Road Area -04-1 Panel
3	Road work Area -03 - 3rd panel - Rebar & Concrete work		Road Area 04		Barbender - 3 Nos	Pipe Laying work - Road Area -03 - 1 Panel
4	Road work area -06 GSB filling and compaction work				Mason -10 Nos	Pipe Laying work - Road Area -04-1 Panel
					Unskilled - 26 Nos	Soil Dressing & Compaction work -Road Area -03 - 1 Panel
					Welder - 2+1 Nos	Soil Dressing & Compaction work - Road Area -04-1 Panel
					Total Manpower= 44 Nos	GSB Filling & Compaction work -Road Area -05

STAKEHOLDERS

Stakeholders Involved:

Classification:

- Bodies that are internal stakeholders but not directly involved in the construction
- Internal stakeholders and directly involved in construction, design, planning
- Supporting bodies for internal stakeholders
- Governing bodies, lawmakers

External Stakeholders:

- Arbitrators
- Special Interest Groups
- Environmental Authority - To check the disposal and storage of scrap
- Town Planning Board - To confirm with the minimum standards required for interiors
- Local public & Neighbours
- Other Competitors
- Marketing

STAKEHOLDERS

INTERNAL STAKEHOLDERS:

- Polyhouse (Top Management)
- Polyhouse staffs
- Interior Designer
- EPMCR Pvt Ltd (Architecture, Structural Consultant)
- PMC & Quality
- Interior Partition Consultant
- HVAC Consultant
- MEP Consultant
- Fire Consultant
- Lighting Consultant
- Estimation Consultant

- Contractors - Civil/Interior
- Sub Contractors
- Vendors
- Material Suppliers
- Equipment Suppliers
- Manufacturers
- Logistics
- Maintenance workers
- Security

TRENDS AND TECHNOLOGIES

1.BIM in Construction:

Need for Implementation of BIM in Construction:

- Improve Onsite Collaboration and Communication.
- Model-Based Cost Estimation.
- Visualize Projects in Preconstruction.
- Better Coordination and Clash Detection.
- Mitigate Risk and Reduce Cost.
- Improved Scheduling/Sequencing.
- Increase Productivity with Prefabrication

2.Lean Management:



TRENDS AND TECHNOLOGIES

2. Lean Management:

Principles of Lean Management:

- Highlight what the client values
- Map the value stream
- Minimise waste accumulation
- Streamline work process flow
- Implement Pull Scheduling
- Keep Improving

Benefits of Lean Management:

- Decreased process waste
- Reduced monetary loss
- Increased capacity for innovation
- Enhanced adaptability to challenges
- Improved employee morale

TRENDS AND TECHNOLOGIES

3. Insulation of Warehouses:

Reasons for insulation:

Reduce heating & Cooling costs

Enhance HVAC system performance

Reduce unwanted noise

Comfortable & Safe Working Conditions

Types of suitable warehouse insulations:

- **Cellulose Insulation:**

- It consists of about 80% recycled materials and is environmentally friendly. You can use cellulose to insulate the walls for your commercial buildings or warehouses.

- **Fiberglass Insulation:**

- Fiberglass sandwiched between two layers of foil is effective in providing heat insulation. They are installed below the roof deck for achieving better insulation. Fiberglass insulation is available in either loose-fill or blanket form.

TRENDS AND TECHNOLOGIES

- **Radiant Barrier Insulation:**

- Radiant barrier offers a great reflection to the radiant heat coming from the sun. It helps to keep the warehouse cool as it doesn't absorb the heat but reflect it back to space. Installing on the warehouse roof, radiant barriers are very useful if you utilize your warehouse for storing things that require low temperature. It consists of reflective material like foil.

- **Spray Foam Insulation:**

- The liquid of Polyurethane is sprayed evenly on the walls or attic, it expands as it is applied and peeks into the cracks and unreachable places. It blocks each and every crack, gaps, etc. which lets air exchange between the exterior and interior spaces.

- **Vinyl insulation:**

- It is a synthetic plastic consisting of polyvinyl chloride. It is a versatile material which is used for making seat covers, window frames, phonograph records, etc. Vinyl insulation is moisture and humidity resistant. It is durable and strong insulation material for commercial metal buildings

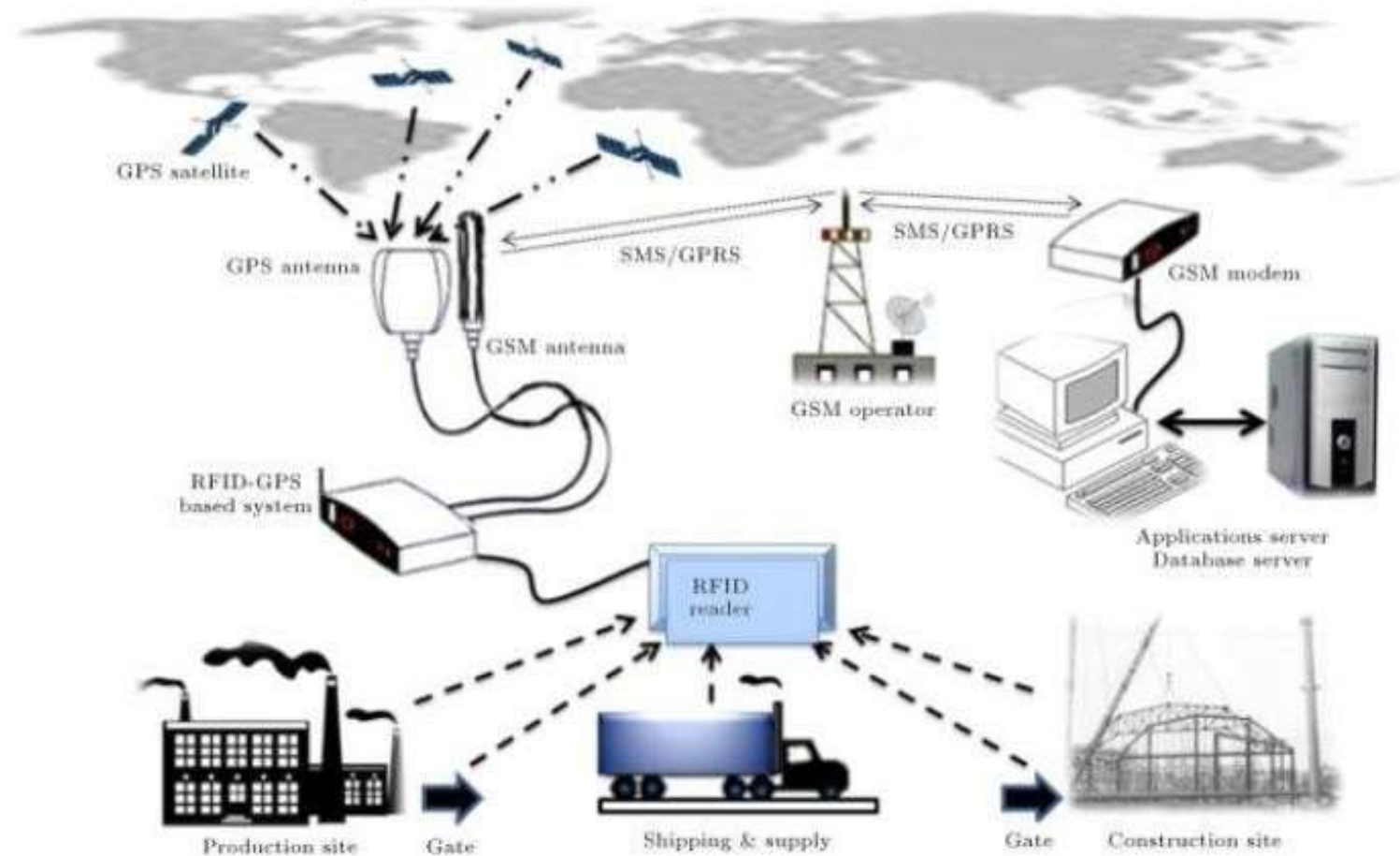
TRENDS AND TECHNOLOGIES

4. RFID (Radio Frequency Identification) in Construction sites:

RFID automates the task of identifying and tracking materials used in construction tools, such as those used for building, paving, remodeling, and roofing. It can help with the estimation process as well.

Need for RFID:

- Keeping track of tools
- Improving Safety
- Eliminating Timecards
- Managing Building materials & supply
- Building Maintenance & Inspection



TRENDS AND TECHNOLOGIES

5.Net- Zero Energy Buildings:

A Net Zero Energy building, is a building with net zero energy consumption, meaning the total amount of energy used by the building on an annual basis is equal to the amount of renewable energy created on the site or in other definitions by renewable energy sources offsite, using technology such as heat pumps, high efficiency windows and insulation, and solar panels.

How to?:

- Apply the concepts of Bioclimatic Architecture
- Provide renewable energy on site whenever possible
- Use efficient equipment and lighting
- Pay attention to the building envelope
- Invest in windows and doors
- Eliminate fossil fuels
- Consider embedded carbon

4. IIT Madras -Proposed interiors works

4.1 Fortnight Plan:

Client: IIT Madras Architect: Varsha & Pradeep PMC: EPMCR Pvt Ltd					
DURATION - 90 days					
FORTNIGHT 1	FORTNIGHT 2	FORTNIGHT 3	FORTNIGHT 4	FORTNIGHT 5	FORTNIGHT 6
18/07/22 to 02/08/22	03/08/22 to 18/08/22	19/08/22 to 03/09/22	04/09/22 to 19/09/22	20/09/22 to 05/10/22	06/10/22 to 21/10/22
Ceiling paint (zone 1 & 2) (5+5d) Drop Partition 50% Screed Concrete (Zone1) (29,30,31) Electrical Conduit (Zone1 - Raceway) (Zone2 - Ceiling) Modular Furniture marking	FAs, sprinkler and PAs (zone 1) Screed concrete (zone2) Cold water line (zone 1) Electrical Conduit(Zone2 - Raceway) (Zone1 - Ceiling) Electrical wiring (Zone 2) CCTV HVAC (zone 2)	FAs, sprinkler and PAs (zone 2) Cold water line (zone 2) CSU HVAC Module 1,2,3,4 Electrical wiring (Zone 1) CCTV HVAC Duct (zone 1)	CSU HVAC Module 5,6,7,8,9 HVAC Insulation cladding Aerocon partition		

5. Providing comprehensive sewage scheme

5.1 Delay Interpretation:

Interpretation of Project schedule based on milestones given in the contract document:

Site - MANAPAKKAM

SCHEDULE INTERPRETATION		START	FINISH
MILESTONE - 1		1/May/2019	31/Oct/2019
COLLECTION SYSTEM		1/May/2019	31/Oct/2019
PE /PP PIPE LAYING INCLUDING MANHOLES	15.00%	1/May/2019	31/Oct/2019
CI PIPE LAYING INCLUDING MANHOLES	5.00%	1/May/2019	31/Oct/2019
PUMPING STATION	5.00%	1/May/2019	31/Oct/2019
PUMPING MAIN	0.00%	1/May/2019	31/Oct/2019
MILESTONE - 2		1/Nov/2019	30/Apr/2020
COLLECTION SYSTEM		1/Nov/2019	30/Apr/2020
PE /PP PIPE LAYING INCLUDING MANHOLES	40.00%	1/Nov/2019	30/Apr/2020
CI PIPE LAYING INCLUDING MANHOLES	30.00%	1/Nov/2019	30/Apr/2020
PUMPING STATION	25.00%	1/Nov/2019	30/Apr/2020
PUMPING MAIN	10.00%	1/Nov/2019	30/Apr/2020
MILESTONE - 3		1/May/2020	31/Oct/2020
COLLECTION SYSTEM		1/May/2020	31/Oct/2020
PE /PP PIPE LAYING INCLUDING MANHOLES	65.00%	1/May/2020	31/Oct/2020
CI PIPE LAYING INCLUDING MANHOLES	65.00%	1/May/2020	31/Oct/2020
PUMPING STATION	60.00%	1/May/2020	31/Oct/2020
PUMPING MAIN	40.00%	1/May/2020	31/Oct/2020
MILESTONE - 4		1/Nov/2020	30/Apr/2021
COLLECTION SYSTEM		1/Nov/2020	30/Apr/2021
PE /PP PIPE LAYING INCLUDING MANHOLES	85.00%	1/Nov/2020	30/Apr/2021
CI PIPE LAYING INCLUDING MANHOLES	85.00%	1/Nov/2020	30/Apr/2021
PUMPING STATION	90.00%	1/Nov/2020	30/Apr/2021
PUMPING MAIN	90.00%	1/Nov/2020	30/Apr/2021
MILESTONE - 5		1/May/2021	30/Sep/2021
COLLECTION SYSTEM		1/May/2021	30/Sep/2021
PE /PP PIPE LAYING INCLUDING MANHOLES	100.00%	1/May/2021	30/Sep/2021
CI PIPE LAYING INCLUDING MANHOLES	100.00%	1/May/2021	30/Sep/2021
PUMPING STATION	100.00%	1/May/2021	30/Sep/2021
PUMPING MAIN	100.00%	1/May/2021	30/Sep/2021

5. Providing comprehensive sewage scheme

5.2 Delay Analysis:

MANAPAKKAM					MANAPAKKAM				
Site Locations:					Site Locations:				
Delay due to site handover:					Delay due to site handover:				
	Date as per schedule	Date of hand over without clearace	Date of hand over with clearace	Delay in number of days		Date of hand over of drawings	Delay in number of days	Delay without overlap	
Indra nagar - SPS	1/5/2019	4/7/2019	20/11/201	204	Indra nagar - SPS	12/3/2020	316		
Macromarvel nagar - LS	1/5/2019	4/7/2019	20/11/201	204	Macromarvel nagar - LS	12/3/2020	316		
River view colony - SPS	1/5/2019	5/8/2019	18/9/2019	141	River view colony - SPS	15/10/2020	523	51	
Shahej enclave - LS	1/5/2019	7/12/2020	Not yet	221& abv	Shahej enclave - LS	6/1/2020	250		
Sethulakshmi nagar -LS	1/5/2019	20/11/2019	Not yet	204 & abv	Sethulakshmi nagar -LS	16/10/2020	524	52	
Sathya nagar - LS	1/5/2019	4/7/2019	4/2/2020	280	Sathya nagar - LS	16/10/2020	524	52	

MANAPAKKAM								
Delay due to GFC drawings handover:								
Site Locations:		Sewer network drawings:			Structural drawings:			
		Date as per schedule	Date of hand over of drawings	Delay in number of days	Date as per schedule	Date of hand over of drawings	Delay in number of days	Delay without overlap
Indra nagar - SPS		1/5/2019	25/8/2020	483	1/5/2019	20/7/2020	447	243
Macromarvel nagar - LS		1/5/2019	25/8/2020	483	1/5/2019	20/7/2020	447	243
River view colony - SPS		1/5/2019	25/8/2020	483	1/5/2019	20/7/2020	447	306
Shahej enclave - LS		1/5/2019	29/5/2020	395	1/5/2019	25/1/2021	636	41
Sethulakshmi nagar -LS		1/5/2019	25/8/2020	483	1/5/2019	20/7/2020	447	243
Sathya nagar - LS		1/5/2019	25/8/2020	483	1/5/2019	20/7/2020	447	167

5. Providing comprehensive sewage scheme

5.3 Clauses as per GCC:

Ø Delayed Drawings or Instructions :

- The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable.
- The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.
- **If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:**

(a)an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]

(b)payment of any such Cost plus profit, which shall be included in the Contract Price. After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters. However, if and to the extent that the Engineer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

Ø Right of Access to the Site :

- The Employer shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the Contract Data.
- The right and possession may not be exclusive to the Contractor. If, under the Contract, the Employer is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Employer shall do so in the time and manner stated in the Specification.

5. Providing comprehensive sewage scheme

5.3 Clauses as per GCC:

- **If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:**

(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]

(b) payment of any such Cost plus profit, which shall be included in the Contract Price. After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters. However, if and to the extent that the Employer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

Ø Unforeseeable Physical Conditions :

- In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.
- If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Engineer as soon as practicable.
- This notice shall describe the physical conditions, so that they can be inspected by the Engineer, and shall set out the reasons why the Contractor considers them to be Unforeseeable.
- The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

5. Providing comprehensive sewage scheme

5.4 Delay Mapping:

		Providing comprehensive sewage scheme to Manali, Chinnasekka du, Karambakkam and Manapakkam in Chennai city													
		Project Original Start and end date - 30/04/2019 to 12/10/2021													
Duration		May-19	Sep-19	Jan-20	May-20	Sep-20	Jan-21	May-21	Sep-21	Jan-22	May-22	Sep-22	Jan-23	May-23	Sep-23
		M J J A	S O N D	J F M A	M J J A	S O N D	J F M A	M J J A	S O N D	J F M A	M J J A	S O N D	J F M A	M J J A	S O N D
Location - Manapakkam															
Indra nagar - SPS															
	Scheduled start & finish														
	Delay due to site hand over														
	Delay due to drawings														
	Delay due to pandemic														
Macromarvel nagar - LS															
	Scheduled start & finish														
	Delay due to site hand over														
	Delay due to drawings														
	Delay due to pandemic														
River view colony - SPS															
	Scheduled start & finish														
	Delay due to site hand over														
	Delay due to drawings														
	Delay due to pandemic														
Shahej enclave - LS															
	Scheduled start & finish														
	Delay due to site hand over														
	Delay due to drawings														
	Delay due to pandemic														
Sethulakshmi nagar -LS															
	Scheduled start & finish														
	Delay due to site hand over														
	Delay due to drawings														
	Delay due to pandemic														
Sathya nagar - LS															
	Scheduled start & finish														
	Delay due to site hand over														
	Delay due to drawings														
	Delay due to pandemic														

REMARKS:

- The delay due to the pandemic, elecction, monsoon & scarcity of pipes has not been updated by the contractor for the sites in Manapakkam.
- Dates of the site handover after clearance has not been updated for Shahej enclave - LS & Sethulakshmi nagar -LS.
- The contractor should have sent letters to the client for each delay, as per general conditions of contract.
- The letters/mails sent to the client by the contractor needs to be checked for verification.
- As per the latest schedule given by the contractor, a number of activities have been completed, but the start date of activities for each site and the works completed as per each site has to be updated.

REMARKS:

- The delay due to the pandemic, election, monsoon & scarcity of pipes has not been updated by the contractor for the sites in Manapakkam.
- Dates of the site handover after clearance has not been updated for Shahej enclave - LS & Sethulakshmi nagar -LS.
- The contractor should have sent letters to the client for each delay, as per general conditions of contract.
- The letters/emails sent to the client by the contractor needs to be checked for verification.
- As per the latest schedule given by the contractor, a number of activities have been completed, but the start date of activities for each site and the works completed as per each site has to be updated.

6. CONCLUSION - EXPERIENCE IN THE FIRM:

- Understood the importance of project management in construction.
- Understood the multi facets of a PMC.
- Got introduced to Lean Management, Design Thinking, Delay Analysis, Planned percent Complete.
- Learned the importance of triple constraints.
- Learned site monitoring.
- Learned the importance of lean management.
- Learned the hardships faced during project execution.
- Understood how to prepare a last planner based on lean management.
- Learned the importance of design thinking.
- Learned how to prepare fortnight schedule based on works to be accomplished on site.
- Understood how reasons for delay is analysed
- Understood the importance of general conditions of contract
- Understood the coordination necessary between different contractors