

STUDENT INTERNSHIP PROGRAM (SIP)

REPORT

Sanghvi Realty



Submitted By
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SCHOOL OF CIVIL ENGINEERING

MIT ACADEMY OF ENGINEERING

ALANDI (D), PUNE

CERTIFICATE

This is to certify that the “**Student Internship Program (SIP)**” **report** submitted by **Shambhuraj Patil PRN 0120190514** is work done by him/her and is submitted during 2021-22 academic year.

Faculty Mentor

Prof.Nikhil Bhalerao Sir

School - Internship Coordinator

Prof. Dhananjay Bhosale Sir

School Dean

Prof.S.N.Shukla Sir



Where dreams come true

SANGHVI PREMISES PRIVATE LIMITED

(An ISO 9001:2008 Certified Company)

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CIN - U45200MH1992PTC064965

INTERNSHIP CERTIFICATE

This is certify that Mr. Shambhuraaj Ramkrushna Patil studying in 3rd year of BE(Civil), For pusuing his degree in civil engineering from **MIT Academy of Engineering, Alandi, pune.**

successfully completed his Internship at our organization **Sanghvi Premises Pvt. Ltd.** From 13th june 2022 to 9th July 2022.

The work entrusted to him was construction of footing ,beam, column ,retaining wall and compound wall etc. as per site requirement. Which he completed successfully and diligently. Which he completed successfully and diligently.

We found him hardworking, trustworthy and loyal to his work during the course of his association with our organization.

We wish him a bright future in his career in the years in come.



ACKNOWLEDGEMENT

I am grateful to the Dean of School of Mechanical and Civil Engineering for arranging the internship program for us. I am thankful to the faculty of the Civil Engineering department for Supporting and helping us.

I want to thank Project Coordinator of Sanghvi Realty Mr. Yogesh Pawar for providing internship to me and giving us knowledge about practical things required for civil engineers.

Shambhuraj Patil

List of Figure

Figure No.	Name	Page No.
1	Isolated Footing	5
2	Foundation Level Plan	8
3	Plinth Level Plan	8
4	Ground Level Plan	9
5	Typical Floor Plan	10
6	Foundation of Tower Parking	10
7	Tanks	11
8	Geotag Photo	12
9	Waterproofing	13
10	Site Office	14
11	Temporary Houses For Workers	14
12	Toilets for workers	14
13	Foundation of Tower Parking	18

Table of Contents

Sr. No	Contents	Page no.
1	Introduction	1
1.1	Topic of internship	1
1.2	Details of Industry	1
1.3	Scope of Work	3
1.4	Background knowledge	3
2	Internship Discussions	4
2.1	Site Work	4
2.2	Knowledge acquired	12
2.3	Skills Learned	13
2.4	Observed attributes and gained values	14
2.5	The most challenging task performed	16
3	Conclusion	17
4	Bibliography	18

1.Introduction

1.1 The details of topic of internship :

On site learning through ongoing project of High rise building in Mumbai.

1.2 Details of Industry :

Sanghvi Premises Private Limited company is a very well-known developer-firm in real estate market in Mumbai. The company has went on to build Residentials buidings apartments. Their ongoing project (internship site) located in prominent suburbs of Mumbai are close by to Santacruz East opposite to Mumbai University. Sanghvi Realty is a reputed company in the acquisition, development, construction and management of residential and commercial real estate. At Sanghvi, service, quality and value are important to them. Sanghvi Realty aims to promise value for money property to its valued customers, backed by a dedicated customer-care team. With some prestigious projects in the heart of the city, Sanghvi Realty is moving to the lead confidently to construct beyond expectations. Based in Nation's financial hub Mumbai, Sanghvi Realty is a reputed company in the acquisition, development, construction and management of residential and commercial real estate.

At Sanghvi Realty, we know that the real estate industry is a service business, and we remain committed to the ideal of service excellence in all our activities. Because of this focus, our employees are encouraged to take the initiative in giving an extra measure of helpfulness, involvement and concern, making Sanghvi Realty the trademark associated with customer satisfaction.. We know how important these ideals are to the potential resident searching for his next home, to the prospective commercial tenant looking for a new site, and to the investor researching a new opportunity. At Sanghvi, service, quality and value are important to us because we know how important they are to you.

We join 4 weeks internship programme from 13 June 2022 – 9 July 2022. We joined this internship to utilize technical knowledge learned through academics for understanding various practical knowledge on site, to understand working and usage of various machinery, to learn various construction techniques.

- **Completed Projects of Company:**
 - 1)Sanghvi Nisarg, At Lonavala
 - 2)Sanghvi Valley, At Parsik,Thane
 - 3)Shree Mohan Kheda, At Ghodepdeo,Mumbai
 - 4)Sanghvi Eco city ,Mira Bhayandar
 - 5)Sanghvi Hills ,Thane West(Project of 300 flats)

- **Industry Mentor:**

Mr. Yogesh Pawar
Project Coordinator
Contact details:9773986911

- **Faculty Mentor:**

Mr. Nikhil Bhalerao

- **Site Location-**

Sanghvi Infenia
Opposite Mumbai University Main gate
Kalina
Santacruz East

- **Platform :** On Site Physical Work.

- **Starting Date of Internship :** 13th June 2022

- **Ending Date of Internship :** 9th July 2022.

1.3 Scope of the work completed during the internship :

- To know all activities related to construction like planning, execution, monitoring and maintenance.
- Task performing with supporting the day-to-day operations of their company or organization.
- To utilize technical knowledge learned through academics for understanding various practical knowledge on site.

1.4 Background Knowledge:

- Autocad Drawings: It helps me to understand drawings of plans on site.
- Design reinforced of Concrete structure: Through this course whatever I learned in the last semester I got chance to apply that knowledge on site while designing beam and column.
- This site located in prime location of Mumbai in front of Mumbai University gate. So before starting the construction company needs to take many approvals for construction from BMC and various department.
 - Copy of allotment letter
 - Copy of lease plan
 - Copy of N.O.C. form Pollution department
 - Soft copy of drawings (in Auto CAD)
 - "no-objection certificate" NOC from the Traffic and Coordination Department (Municipal)
 - Obtain "no-objection certificate" NOC from the Tree Authority (Municipal)
 - NOC from Airport Authority of India

This were the documentation required for company to start construction.

2. INTERNSHIP DISCUSSION

2.1 Site Work:

In this section of my report, I will try to describe activities and practices that were done on site during my internship time. During my internship time I was able to see the practical works starting from excavation of foundation for Tower parking to some substructure working. I used observation method in all activities that have done in the site to achieve my task and to find out the practical knowledge.

2.1.1 Substructure works

Sub structure is a part of the building located below the ground level. By the time I arrived at the site, 60-70 % foundation work was completed. Ongoing work was excavation of foundation for Tower parking and foundation making, casting column above the plinth level.

Work done before I joined the site was,

- **Preparation of the project site:**

This is the first stage in construction work. At this stage the site is prepared as follows:

- **Documentation:**

Various permissions from Government Authority

- **Clearing the site:**

After getting the permission from government authority, site has been cleared with the help of JCB. At site location there was an old building and an open place was there.

- **Earth work :**

Any work related with excavation, backfill, carting away of surplus material and the others which are carried out in the site where the building will be constructed is known as earth work.

- **Excavation:**

Removal of soil from the construction site to specified depth to provide space for the intended work

- **Foundation:**

Foundation is the lowest part of the structure which transmits the weight of the structure, together with the effect of live loads and pressure, to the material on which the structure rests, soil strata. Generally, the foundation is placed below the ground level to increase the stability of a structure or building. Thus the objective of providing foundations is as follows:

- To distribute and transmit the total load coming on the structure or building to a large area of underlying support.
 - To prevent excessive settlement and differential settlement of the structure
 - To provide stability to the structures against many disturbing dynamic forces, i.e., wind, rain, earth quake.
- **Footing Work:**
- Footings are the most important part of foundation construction. The purpose of footings is to support the foundation and providing the proper support for the foundation and to the whole structure



Fig.1 Isolated Footing

- **Foundation Wall:**
- RCC Wall: RCC stands for Reinforced Cement Concrete, which has steel bars, around which the cement-concrete matrix is poured.
- Masonry wall: Using bricks.
- **Back fill soil filling:**
- After the formwork of the foundation column has been removed, the space around the footing was filled with soil and rocks that was bringing from outside of the site up to the depth where foundation wall is to be constructed. At the mid part of foundation back filling was not complete. Because there was a another foundation for tower parking.

2.1 Project Information:

- **Site Location-**
Sanghvi Infenia
Opposite Mumbai University Main gate
Kalina
Santacruz East

- **Project:** G+12 High Rise Residential Building.

- **AMENITIES**

- **General**
 - Wide full height French windows
 - Wooden frame door with both side veneers
 - Vitrified marble flooring in living room & Passage
 - Premium quality textured paint finish on the walls
 - Premium quality branded Switches
 - Internet, TV & telephone connection
 - Provision for Split AC
- **Kitchen**
 - Premium quality Granite Kitchen platform
 - With stainless steel sink
 - Dado tiles up to beam bottom
 - PVC body anti-rust exhaust fan
 - Vitrified marble flooring in Kitchen
- **Bathroom & Toilet**
 - Anti skid flooring tiles
 - Designer full height DADO
 - FRP water proof doors
 - Designer tiles / Mosaic tiles in all bathrooms
 - Jaguar of equivalent sanitary fitting in bathroom
 - Branded sanitary wares
 - (Hindware / Roca or equivalent)
 - Storage water geyser
 - Bathrooms with dry and wet area separated

- **Bedroom**
 - Wooden laminated flooring in Master bedroom
 - Anodized aluminium sliding windows with granite framing
 - POP / Gypsum finish and elegantly painted interiors
- **Electrical Fittings**
 - Fire resistance electric wire (Finolex, Anchor or equivalent)
 - Elegant designer Switches (Legrand, Anchor or equivalent)
 - Provision for split AC points and pipes
 - Safety features like MCB and ELCB
 - Pre-Wired TV, internet & telephone onnectivity
- **Electrical Fittings**
 - Intercom systems for flats
 - Modern fire fighting system
 - 24x7 CCTV Surveillance
 - Smart ready homes
 - Video door phone in each apartment
 - Automated fire detection and sprinklers in common areas
 - Well planned emergency exit in case of fire.

Drawings and Photos:



Fig.2-Foundation Level Plan



Fig.3-Plinth Level Plans

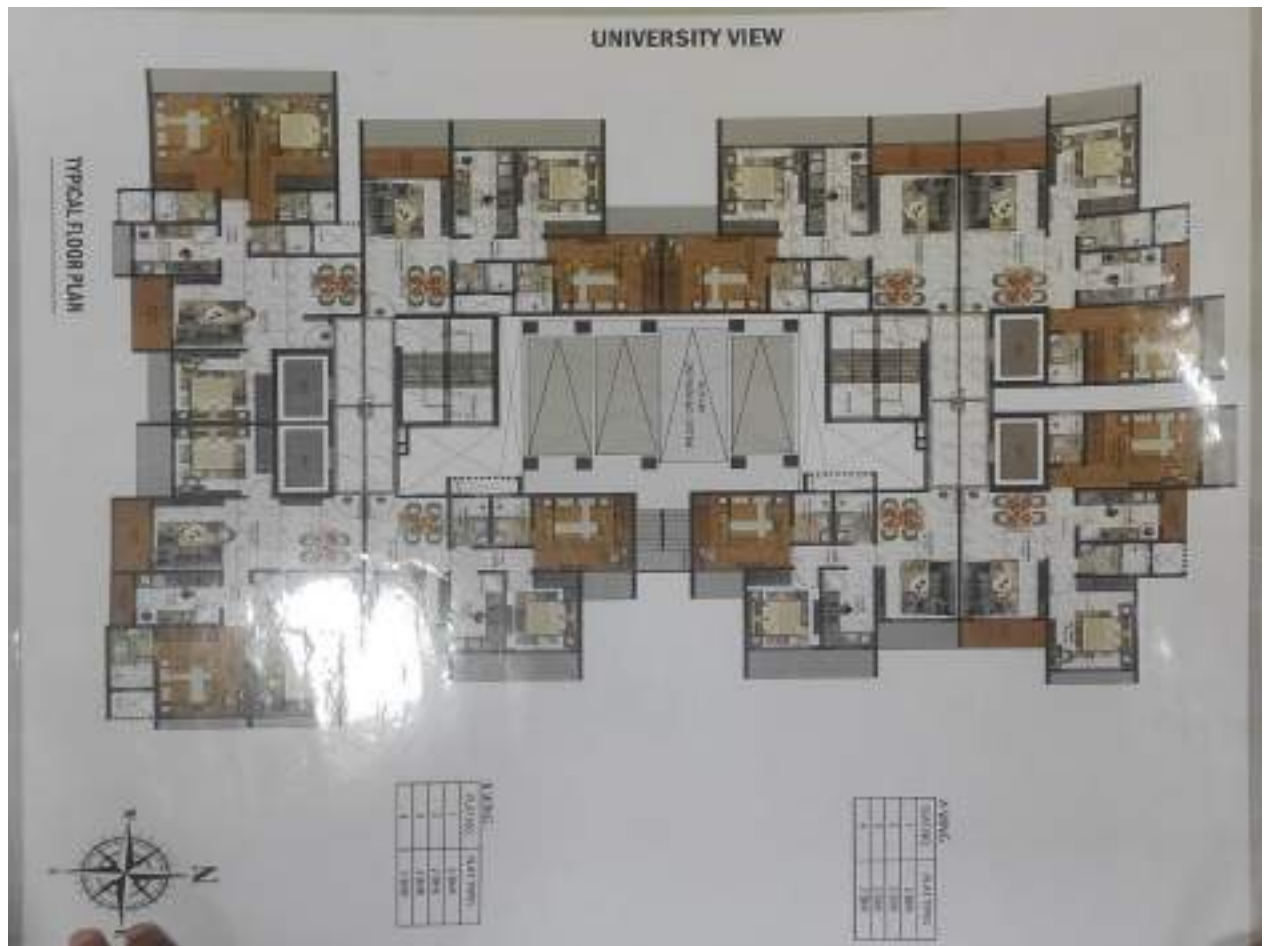


Fig.5-Typical Floor Plan



Fig.6-Foundation of Tower Parking

Tanks:

- 1) Domestic
- 2) Flushing
- 3) Fire



Fig.7-Tanks

Geotag Photo at site Location:



Fig.8-Geotag Photo

Waterproofing

Shabad Ladi : To resist the water to entering into foundation



Fig.9-Waterproofing

Amentities available at site location:



Fig.10-Site Office



Fig.11-Temporary houses for workers



Fig.12-Toilet for workers

2.2 Knowledge Acquired :

- **Government rules and regulations regarding construction**
Before starting the construction main phase of construction is documentation. We joined this site too late plinth level construction near about to complete. Company Documentation was done already, One day of our internship programme A BMC officer comes to visit site and took lookout of approvals documentations, On this day we ask all the documentation required for starting construction And how to get approval from BMC.
- **How to deal with peoples.**
The second thing I learned throughout the internship is, How to deal with people. Before that I was not having any experience about to deal with people on site or how to talk with them. But during this I learned how to talk with peoples, contractors on site as well taking the information about the work from them Evaluating it with actual work performed by him.

2.3 Skills learned:

- **How work is carried on site:**
Generally Supervisor and site engineers operate the site, the most significant role is of site engineer. The work on site is carried out as per the plan provided by structural engineer. On this site They have many copies of foundation plan. So whenever they casted the beam or column they noted down date of casting that particular column. From this we can effectively manage ongoing work.
- **Dividing work in phases :**
With the help of scheduling company divided all the work in phases, When I joined the internship Scheduling First Phase was ongoing. In this first phase they have to complete all the foundation work and construction till the plinth level. And they were about to complete Phase 1 in given timeline.
- **Safety Procedure:**
Main factor on construction site is safety factor. Using PPE kits and safety measures we can eliminate the accidents from happening on site. This will help us stay free from injury and benefit to all workers as well, since Whenever project manager visit the site he always told to all workers and engineers to follow all safety guidelines.

- **Time Management :**
Whenever client give us a project so he expect his home or building should be completed in time .So its engineer/company responsibility to complete project in time. I work on site for four weeks , In this duration they completed all the work as they planned before . So knowing how to manage your time wisely on the site is a good way to show initiative and complete tasks efficiently and effectively.

2.4 Observed attitudes and gained values:.

- Always be a student and try to learn different things from any person whoever is ready to teach you no matter what the position of that person.
- Always consider your worker as your partner, always try to think from their perspective and also give them the freedom to work in whichever manner they want.
- Person with knowledge is always welcomed in every project. Every day is different and challenging so instead of focusing on theories try to understand its practical application.

OVERALL INTERNSHIP BENEFITS

2.4.1 Improvement of Practical Skills

In the last four weeks, I was able to improve my practical skills and understand how works are executed on the construction sites. Below are practical skills I gained during the internship program:-

- Formwork making
- Concrete casting
- The meaning of the term 1:2:3 in concrete mix
- Reinforcement Placement, bars
- Casting of column, beam
- Floor systems and the reasons behind reinforcement mesh of ground floors
- Development length in foundation works
- Construction Equipment and physical observation in line with engineering perspectives
- Designing in Autocad, ETABS
- Theoretical Knowledge Upgrading

- Practical skills on the construction sites upgraded my theoretical knowledge as I came across new components in construction industry, for example:
- Construction Equipment and Materials
- Reading and Understanding working drawings

2.4.2 Communication

The site is far more different as it located in prime location. I managed to interact with many people with different backgrounds and languages. I had a working relationship with supervisors, office engineers, project managers, foremen and even construction workers.

Benefits of communication skills on the site:

- Suggestions and orders for foremen and construction workers
- Sharing ideas
- Co-managing daily activities
- Respects for attitudes
- Decision-making while resolving engineering problem

2.4.2 Leadership Skills

During the internship program, I benefited from many leadership skills from the construction sites. While performing an task or while planning a design of structure coordination between engineers, workers is very important .If everyone want different design is not possible but if they work on only one design as a team so they should get benefit of that . If they working as a team so they will carry out all the problems arising in between work. I learned this Teamwork Attitude from our Project Coordinator.He always in discussion with workers,engineers related to work and he also show some good kind of leadership quality .This kind of values I definitely wants to add in my strength

2.4.3 Work Ethics

In construction industry, you need to develop healthy working environment and double productivity through punctuality, honesty by avoiding corruption and bias, cooperation ,office discipline without disturbing working condition and reliability

2.5 The most challenging task performed:

Most challenging work was reinforcement making for the foundation of Parking tower .

This is G+12 structure so they provided a Parking Tower because of parking place efficiency on ground floor . The made an arrangement for parking of 54 cars in this Parking tower . So making of Parking towers are one of the heavier and more costly foundation structures of the building. So for this using rock breaker and excavator below the footing (5 metres from plinth level beam) they created hollow square of 20 x 20 feet and then the make hard surface using PCC and then provided a reinforcement for foundation.



Fig.13-Foundation of Tower Parking

3.Conclusion:

Working with Sanghvi realty gave me experience of dealing with difficulties. I have found the internship program interesting as it provided me with the necessary skills required by civil engineers at site and in office. It was an opportunity for me to interact with different people including professional engineers who at least contributed their guidance to me. I gained not only practical but also theoretical knowledge by perceiving different challenges on site and putting what I studied at class into practice. At least, if you go on internship with high-class company or institution, you will get acquainted with the translation of something in books into action .I learned what do self-confidence, team playing, organizational skills, upgrade of theoretical knowledge mean to the engineer. Once and for all, let me say internship is far more fascinating than many things and complies with real life situation.

4. Bibliography

- Government documents(NOC's).
- Drawings Available at Site
- Contract Specifications and Formwork Drawings.