



**A Report on Industrial Visit at
Surat Diamond Bourse, Surat on 10/02/2020**

For
Diploma 6th Semester

Organized by
DEPARTMENT OF CIVIL ENGINEERING



छोटुभाई गोपालभाई पटेल प्रौद्योगिकी संस्थान, वारडोली
Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli

CHHOTUBHAI GOPALBHAII PATEL INSTITUTE OF TECHNOLOGY

UKA TARSADIA UNIVERSITY



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Site visit is considered as one of the tactical methods of teaching. The main reason behind this: it lets students to know things practically through interaction, working methods and employment practices. Moreover, it gives exposure from academic point of view. Main aim of industrial visit is to acquaint the students about practical working environment. Through industrial visit students are acquainted about new technologies and knowledge.

Department of Civil Engineering, Chhotubhai Gopalbhai Patel Institute of Technology, Uka Tarsadia University, Bardoli organized industrial visit on Green Building at Surat Diamond Bourse, Surat on 16th February, 2020 for Diploma Civil engineering students. This visit was planned as part of curriculum requirement of the subject, Building Services. It was organized with the prior permission and guidance of honorable Director, Dr. Rajkumar V. Patil. Further, it would not been possible without sincere efforts of Dr. Manoj Gundalia, Head of Civil Engineering Department. Prof. Nikita Patel, Subject Teacher coordinated and guided the students during the visit. Faculty member and students of Diploma Civil Engineering took great interest and made this visit a grand success.

Schedule of Visit:

TIME		LOCATION
-	10:00	At Surat Diamond Bourse, Surat
10:00	11:30	Give a presentation of SBD Project in detail by Hardik Desai (Project Manager)
11:30	13:00	Give a presentation of different services included in SBD Project by Mr. Mukundbhai (EPM Services Head)
13:00	14:30	SBD Construction Site visit
14:30	14:45	Group photo

Total no. of students: 21 (Diploma 6th Semester)

Faculty Organizer: Prof. Nikita A. Patel



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BUILDING SERVICES

Building services are the systems installed in buildings to make them comfortable, functional, efficient and safe. Everything inside a building which makes it safe and comfortable comes under the title of “Building Services”.

Building services might include:

- Energy supply – gas, electricity and renewable sources such as solar, wind, geothermal and biomass
- Heating and air conditioning
- Water supply, drainage and plumbing
- Natural and artificial lighting
- Ventilation and refrigeration
- Escalators and lifts
- Communication lines, telephones and It networks
- Fire safety, detection and protection
- Security and alarm services
- Anti-termite treatment
- Damp proofing treatment
- Water proofing treatment

Objectives of building services:

1. To provide comfortable living to its occupants.
2. To improve efficiency of the user.
3. To improve functioning of building.
4. To preserve sustainability of a building.
5. To increase life of a building, e.g. anti-termite treatment.
6. To make vertical movement easy and comfortable in a building
7. To maintain health of occupants
8. To establish communication services in a building
9. To preserve air quality in a building



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10. To provide protection against weather changes
11. To provide water supply and sanitary services in a building

SURAT DIAMOND BOURSE PROJECT:

The SDB Diamond Bourse is a not for profit organization promoted by SDB Diamond Bourse, a company registered under section 8 of the Companies Act, 2013 and formed for the establishment & promotion of Diamond Bourse at Surat, Gujarat. The SDB Diamond Bourse would be India's second diamond trading hub based at Surat, Gujarat, spread across 35.54 acres with availability of 66 lakh Sq.ft. built up area encompassing 4,000 offices for national & international traders.

Objectives of Surat Diamond Bourse:

- To promote imports, exports and trading of Diamonds, Gems & Jewellery from India.
- To provide state-of-the-art infrastructure to the organizations engaged in manufacturing & trading of diamonds.
- To promote, advance, protect and develop trade, commerce and industry relating to Gems & Jewellery including cutting, polishing and processing.
- To establish and maintaining an International Trading Center in India to facilitate Diamond, Gems & Jewellery industry.
- To develop India as a modern and sophisticated Diamond, Gems & Jewellery market in the world.

Details of SDB:

- Area: 6.6 million acre sq. ft.
- 9 iconic towers, G+15 floors
- Merchant offices: 4200+ offices
- Offices ranging from 300 to 75000 sq. ft.
- Obstacle free landscape view from every offices
- Radiant cooling system in central spine corridor
- Accommodates 67000 professionals



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- Direct employment to 1.5 lakh people
- Travel time to security gate to office in 4 minutes
- 125 lifts connecting the floors with 3 m/s speed
- 24 ft. wide central spine corridor connecting all offices
- Iconic building and sustainable architecture
- Heightened security
- Platinum rated green building
- Thematic landscaping based on PANCHTATVA
- Club with conference hall, banquet hall, health club, restaurants etc

LANDSCAPE: THE PANCHTATVA

Surat diamond bourse is an integration of a high density commercial architecture amalgamated with efficacious environmental concepts. Mythological facts foster the statement: “The chakra of Universe revolves within Panchtatva”. The astonishing five elements of the nature- Air, Water, Sky, Fire, Earth, when in balance, bring in peace, prosperity, happiness and success.

GREEN BUILDING CONCEPT

SDB is setting standards in Commercial sector, with the development and maintenance of ecological standards, hence accolade with an IGBC ranking of PLATINUM RATED BUILDING. The structure design is focused on energy efficiency and sensitive to the industry's dependence upon sunlight, mainly for assorting and grading of diamonds, thus letting ample daylight in all office spaces. As proposed, all 9 buildings will be connected with 24 ft. wide spine corridor.

All Entrance Foyers, Spine Corridor, Lift Lobbies at Ground Floor are Air Conditioned, and Spine corridors at the upper floors have radiant cooling system to maintain the pleasant environment, during transit.

Further, each building will have 8 ft. wide office corridors, 13 ft. floor height and the ground floor height being gracefully, 19 ft. In total there will be 125 lifts, with speed of 3 m/sec. All the offices are centrally air conditioned, through chilled water-cooling system, with each

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sighting onto the exquisitely designed landscape courts, which are designed on the concept of “Panchtatva” (5 Elements of Nature: Air, Water, Fire, Earth, Sky) spanning almost 200 ft wide and 300 ft long. It will also have 100% power back up, for common areas and offices. SUSTAINABILITY is one of the most important aspects apart from the astonishing aesthetics & landscaping, contemplated to design this facility. Aspects, considered, for the same are MICROCLIMATE – to maintain the temperature within the confined spaces, SOLAR CONTROL – to reduce the direct heating due to sun light, WIND ANALYSIS – to evaluate and maximize natural ventilation, Orientation according to Sun and Wind direction, ENERGY PERFORMANCE – for energy efficiency and WWR.

Summary

This visit helped students to enhance their collective theoretical and practical knowledge of Building services. They can identify their prospective study areas of future work in the overall organizational function. Students can also understand detailed design of services which will be covered in the subject. Physical observation of various services will definitely be enhanced the skill and understanding of students in the Building Services.

PHOTO GALLERY:



Conference hall, SDB



Presentation given by Mr. Hardik Desai (Project Manager)



Presentation given by Mr. Mukundbhai (EPM service, Head)



Explain about different building services which installed in SDB



Radiant cooling system which is installed in central spine corridor



Group photo



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Diploma 6th Sem- 2019-20			
Sr No.	Enrl No.	Name	Attendance
1	201802100320001	PRASHANT BHAVSAR	Prashant
2	201702100310001	NEHAKUMARI CHAUDHARI	Neha
3	201702100310004	RIBDIYA DHURVIL PRAFULKUMAR	Ribdiya
4	201702100310011	GIANCHANDANI VIREN KISHOR	Viren
5	201702100310012	PATEL AKIL AHMEDHUSHAIN	Akil
6	201702100310013	SHELADIYA HARSH ATULBHAI	Harsh
7	201702100310029	SAVALIYA JEEL KIRITBHAI	Jeel
8	201702100310036	MAKHANSA KARAN	Karansha
9	201702100310056	MIHIR KISHORBHAI PARMAR	Mihir
10	201702100310058	GAMIT WILSON ARUNBHAI	Gamit
11	201702100310064	DESAI AATMAN	Aatman
12	201702100310070	LOTIA NEEL PARESHKUMAR	Neel
13	201702100310072	JARIWALA HASAN MO KASIM	Hasan
14	201702100310077	SURTI DHARMITKUMAR	Dharmit
15	201702100310078	PADSALA PRIYANS KANUBHAI	Priyans
16	201702100310081	PATHAK SAMARTH UDAYAN	Samarth
17	201702100310082	AKSHAR VASHI	Akshar
18	201702100310084	AHIR DIXITAKUMARI BHARATBHAI	Ahira
19	201702100310098	SAMYAK PRASHANTKUMAR SHAH	Samyak
20	201702100310101	PATEL DHARTI	Dharti
21	201702100310113	MO ALMAS MO SABIR MALEK	Almas

Attendance Sheet