Committee Report in compliance of Hon'ble NGT (CZ) order dated 04.10.2023 in the matter of OA 119/2023.

Sub: Committee report in compliance of Hon'ble NGT order dated 04.10.2023 in the matter of OA 119/2023 (CZ) of Shri Nitin Saxena (i.e., Applicant(s)) Versus Urban Development and Housing Department & Ors (i.e., Respondent(s)).

Brief introduction:

- Professors' Colony of Bhopal, so named to house teachers of several educational institutions located nearby, was developed after the formation of Madhya Pradesh in 1956. It is situated on a ridge of Shyamla Hill sloping down gradually to the Chota Talab. This Colony and the Chota Talab, therefore, have a close symbiotic relationship.
- It may be added that in 1909, the erstwhile State of Bhopal built 4 large bungalows and the present Circuit House for its officials (now with immense green cover) in the area now called Professors' Colony and the present Raj Bhawan for the residence of the Ruler.
- This Chota Talab, part of the Bhoj Wetland, was in 2002 declared as a Ramsar Site of International importance. Situated within the City, its symbiotic relation is not limited to Professors' Colony alone but to the entire City of Bhopal. This water body of around 38 ha, impacts greatly on temperature, humidity, pollution, and climate of not only the city alone but the sacred river Yamuna (its water flowing through Patra Nala to river Betwa on to Yamuna) also.
- Realising and recognising the importance of Chota Talab, way back in 1984, a project was launched to see that the quality of its water is maintained at a high level.
- Wetlands are crucial ecosystems for absorbing methane, a green-house gas and support a high level of biodiversity. Wetlands also act as 'carbon sink', regulate the Earth's climate and help avoid climatic disasters. They help remove pollutants and contaminates and keep water fit for use by both, humans, and fauna. They serve as habitats for a large variety of birds, animals, plants, and aquatic species. It is worth noting that the methane cycle in wetlands is highly sensitive to environmental conditions and human activities.

1. In the matter of OA no. 119/2023, Shri Nitin Saxena (Applicant) Vs Urban Development and Housing Department & Ors (Respondents), The Hon'ble NGT (CZ) vide order dated 04/10/2023, issued the following directions and to constitute a committee, later associating a Member of the Bhopal Citizens' Forum, to examine and submit a report within three weeks:

(a) The Committee is directed to visit the place and submit the factual and action taken report within six weeks. The committee is further directed to ensure the compliance of the Wetland Rules 2017 and the orders issued by the Hon'ble Supreme Court of India in W.P. No. (C) 230 of 2001.

(b) Applicant is directed to supply the copy of the application and relevant documents to the Committee and Respondent(s) within a week and after compliance of service, the applicant must submit an affidavit that the notice and copy of the application have been served upon the Committee and respondent(s).

(c) The report in the matter be filed by the Committee through email at ngtczbbho-mp@gov.in preferably in the form of 5 searchable PDF/OCR Support PDF and not in the form of Image PDF.

2. In compliance, a committee comprising of 5 officials from concerned Departments was constituted, the details of which are as under:

Dr. H, V.C. Chary Guntupalli, Scientist-E,	Representative of Ministry of Environment, Forest, and Climate Change (MoEFCC)
Shri, Pentani Jagan, Regional Director	Representative of Central Pollution Control Board.
Shri Anil Prakash, Retd. Professor, Barkatullah University	Representative of State Level Expert Appraisal Committee (SEAC).
Dr. Manoj Vishwakarma, Assistant Scientific Officer	Representative of State Wetland Authority (MPSWA), Environmental Planning and Coordination Organization (EPCO)
Arun Gurtoo, Retd. DGP, GoMP	Representative of Bhopal Citizens' Forum.

3. The First Meeting of the Committee was held at the EPCO Office Bhopal on 6.11.2023 (Attendance Sheet placed below). In the absence of any order of the Hon'ble NGT, the Committee Members agreed to the MoEFCC, Regional Office, to act as the Nodal Agency, to which latter agreed.

   SEIAA nominated Shri Rajesh Mishra (OIC) and Dr. Sudha Singh to assist SEAC Member Shri Anil Prakash and appraise the Committee of the background and make available documents related to granting of EC to the Project Authorities **(Annexure-**

1). Minutes of the SEAC and SEIAA meetings were also placed before the Committee **(Annexure-2).**

Attendance Sheet

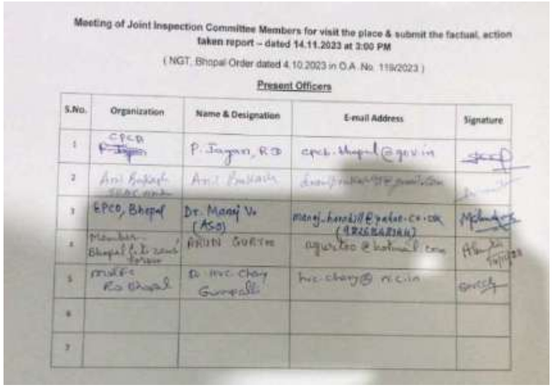
Date: 06/11/2023

S.No.	Name	Designation	Department	Contact Number	E-mail	Signature
1	ARUN GURTOO	ADP Retd	Police	9425030287		[signature]
2	ANIL PRAKASH	Profess. Retd	Microbiology [illegible]	942[illegible]		[signature]
3	[illegible]	Scientist 'E'	[illegible]	[illegible]		[signature]
4	[illegible]	RD	CPCB	[illegible]		[signature]
5	Dr. Manoj [illegible]	ASO	SWA-MP, EPCO	[illegible]		[signature]
6						
7						
8						
9						
10						

1. ARUN: agurtoo@hotmail.com
2. Anil : [illegible]
3. CHARY HVC.CHARY@NIC.IN
4. [illegible]
5. Manoj v. manoj_hornbill@yahoo.co.uk

4. Shri Avneesh Saxena, Project Architect, made a presentation on the entire Project, a copy of which is enclosed as **Annexure-3** for ready reference. The Committee was informed that no land development or construction work has been undertaken at site till date. During interaction, the Committee deliberated upon the applicability of Wetlands (Conservation and Management) Rules, 2017, in respect of said Project **(Annexure-4)** and decided to seek details of the proposed construction activity to be undertaken within 50 m of the High Flood Line of the Lower Lake. The Committee further deliberated on the criteria for grant of Environment Clearance vis e vis the proposed construction area. The Committee observed a deviation in the .kml file of the entire Project uploaded on the Parivesh portal of MoEFCC and the actual built-up area mentioned in the proposal submitted before the SEAC/SEIAA for grant of Environment Clearance. The Committee decided to seek clarification in the matter through an interactive meeting with the Project Authorities and its EIA consultant and architects.

5. A Second Meeting of the Committee was held in the Regional Office of MoEFCC, Bhopal, on 14.11.2023 (Attendance Sheet placed below). In addition, the Committee, also undertook a site visit and to areas adjoining Lower Lake on 14.11.2023. The Committee visited locations likely to fall within the 50 metres of the Lake FTL (Full Tank Level) of the proposed construction sites. Site visit photographs are enclosed at **Annexure-A.**



Meeting of Joint Inspection Committee Members for visit the place & submit the factual, action taken report – dated 14.11.2023 at 3:00 PM

(NGT, Bhopal Order dated 4.10.2023 in O.A. No. 119/2023)

Present Officers

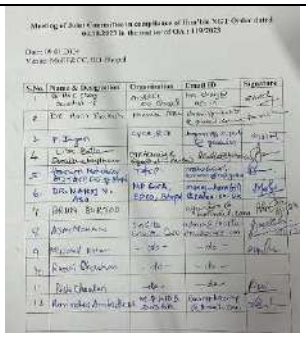
S.No.	Organization	Name & Designation	E-mail Address	Signature
1	CPCB	P. Jagan, RD	cpcb.bhopal@gov.in	[illegible]
2	[illegible]	Anil [illegible]	[illegible]	[illegible]
3	EPCO, Bhopal	Dr. Manoj V. (ASO)	[illegible]	[illegible]
4	Member Bhopal [illegible]	ARUN GURTOO	[illegible]	[illegible]
5	MoEFCC RO Bhopal	Dr. H.C. Chary Gurupalli	hc.chary@nic.in	[illegible]
6				
7				

6. During the deliberations on 14.11.2023, Representative of EPCO (representing MP State Wetland Authority) reported the non- availability of the actual kml file of the Lower Lake with EPCO as the same was finalized under the supervision of T&CP. A letter dated 22.12.2022 **(Annexure-5)** was, therefore, addressed to T&CP by MP State Wetland Authority to Environment Department, Govt. of MP, requesting T&CP to provide copies of 3 maps, shp files of Wetland boundary, 50 m from FTL, Zone of Influence and digital elevation of the Bhoj Wetland, which was awaited at that time. Therefore, the Committee decided to obtain the kml file of the Lower Lake during the third Meeting proposed in the first week of December, 2023. Meanwhile, the matter was adjourned to 23.01.2024 on the application of Shri Shantanu Saxena Learned Counsel for Respondent no. 2.

7. To gain access to the .shp files from T&CP, Bhopal, the Third Meeting was held on 02.01.2024 at MoEFCC, Regional office. During this Meeting representative of T&CP Shri Hariom Maheshwari assured the Committee to provide the .shp files, finalized by MPCST, within 3 days' time.
   During the said Meeting, the Committee also discussed deviations in the .kml file submitted to SEIAA/SEAC. The actual project conceptualized by MP Housing and Infrastructure Development Board and desired to discuss the actual proposal submitted by the Environmental Consultant of the Project (i.e., M/s. In-situ enviro care) to the SEIAA/SEAC to seek grant of Environment clearance.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	Dr. H.C. Chary [illegible]	MoEFCC RO Bhopal	hc.chary@nic.in	[illegible]
2	ARUN GURTOO	Bhopal [illegible]		[illegible]
3	Anil [illegible]	[illegible] SEAC	[illegible]	[illegible]
4	Dr. Manoj V.	SWA MP EPCO MP	manoj_hombill@yahoo.co.in	[illegible]
5	[illegible]	[illegible] T&CP [illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	Executive Engineer [illegible]	[illegible]	[illegible]
8	[illegible]	Assistant Engineer	[illegible]	[illegible]

8. Accordingly, the fourth Meeting was held on 09.01.2024, which was attended by all stakeholders including, representatives of In-situ enviro care, the Environmental Consultant of the Project. Representatives of In-situ enviro care presented a brief on the .kml file of the project furnished to the SEIAA/SEAC and the representative of T&CP provided the copies of .shp files to the Committee. The Committee, with the assistance of representative of EPCO, superimposed the .shp files of Lower Lake and the .kml files of the Project on Google Earth for further analysis. Based on the said superimposition and analysis, the distance of the boundaries of the Project from the FTL of the Lower Lake were earmarked and the same is enclosed at **Annexure-B**. Based on the Google Earth imagery data and the deliberations held with representatives of MP Housing Board, their project architect ARCONS and their environmental consultant In-situ enviro care, following emerged:



9. Section 3 (a) of Wetland (Management and Conservation) Rules, 2017 mentions that these rules shall apply to the following wetlands or wetlands complexes, namely, wetlands categorised as 'wetlands of international importance' under the Ramsar Convention. Bhoj Wetland, Bhopal comprising of Upper Lake and Lower Lake, is one of the internationally recognized Ramsar site.

   Further, Section 4 (2) (vi) of Wetland Rules, 2017 clearly indicate that "any construction of a permanent nature, except for boat jetties, within fifty metres from the mean high flood level observed in the past ten years calculated from the date of commencement of these rules; and," is one of the "Prohibited activities in a notified wetland". Accordingly, in the proposed Collectorate Complex building project, some parts of the proposed construction site falls within the 50 m distance from the mean HFL of Lower Lake of Bhoj Wetland, a Ramsar site and permanent construction of the same is a prohibited activity under Wetland Rules, 2017.

10. So far, no land development work or construction in the Project, envisaged in the Environment Clearance letter dated 17.07.2023, has been started on site. General abstract for construction and development works on 6.90 hac. land of collectorate campus and 13.00 hac. land of professor colony Bhopal under reidentification scheme is enclosed at **Annexure-6**

11. Perusal of the 654th SEAC meeting minutes dated 16.06.2023 (copy Annexure-10) reveals a submission of non-applicability of Wetland Rules, 2017 by the project proponent of the said Project. However, the geographical survey map, khasra map, proposed road map and building map **(Annexure-C)** were submitted by the Madhya Pradesh Housing and Infrastructure Development Board (MPHIDB), Bhopal vide letter dated 10.01.2024 clearly indicate that "Re-densification of Collectorate Complex and Professor's colony" developed by Madhya Pradesh Housing and Infrastructure Development Board (MPHIDB) proposed is being implemented within the 50-meter distance from High Flood Line of Lower Lake and is in contradiction with the clarification submitted by the project proponent on Parivesh portal on 12.06.2023. Further, the Committee noted that the Project site 1 is 302.55 metres and Project site 2 is 281.38 metre from the Upper Lake and the distances from the lower lake were not mentioned.

12. The Committee opines that there is a big technical lapse at the end of EIA consultant namely, M/s. In-situ enviro care, Bhopal in not assessing the Project from an environmental angle, despite knowing the international importance of a Ramsar Site and the applicable Wetland Rules.

13. Thus, the Committee finds that the environment clearance to the Project was granted based on the false/fabricated data and as per Standard Condition no. 6 of the Environment clearance dated 17.07.2023, the Environment clearance for the Project needs to be revoked and a fresh appraisal be undertaken taking into consideration the Wetlands Rules, 2017 and ensuring the surface drainage of the area is not disturbed.

14. The Committee recommends appropriate action against the EIA consultant M/s. In-situ enviro care, Bhopal for not being serious in evaluating the Project from the perspective of protection of Bhoj Wetland, which is an internationally renowned Ramsar Site and the lifeline of Bhopal. It appears that no study was conducted with regard to the impact on water-quality of the Lower Lake which is of vital importance.

15. The initial presentation made by the Project Architect envisaged a phase-wise development of the entire area around the Lower Lake, different from the project for which environmental clearance was sought. Taking into consideration the vital importance of Ramsar Site Lower Lake, the entire project needs to be comprehensively evaluated instead of piecemeal and the subsequent infrastructure development shall ensure compliance with the Wetland Rules, 2017 and the Zone of Influence.

16. Taking into consideration the vital importance of Bhoj Wetland and the enormous environmental impact from traffic and commercial activities generated around a public-oriented Collectorate/Commissionerate/UAD Complex and changes in the surface drainage pattern from the concrete structures/roads to be created as a part of the re-

densification project, the Committee is of the opinion that an alternative site away from the Bhoj Wetland may be explored by the project proponent (MPHIDC).
During the site visit, the Committee observed a large number of very old trees present in the area, which are either to be felled or transplanted. The alternative site arrangement will also save these and avoid large scale deforestation as a result of the execution of the said re-densification project.

17. The Committee also observed that the area known as the Professors' Colony where this Project is proposed has, besides Government quarters, private houses by hundreds, school, city forest, etc also. Having brought up as a residential colony, building such a project would affect their overall quality of life promised by the Government itself.

18. During its site visit, the Committee also observed several government and religious structures of a permanent nature constructed within the 50 m buffer zone from the HFL of Lower Lake. As the .shp files are made available to the EPCO, which is the state nodal agency under State Wetland Authority, high resolution satellite imagery of the 50-metre buffer zone from the mean High Flood Line needs to be obtained and frozen. Any future construction activities in the buffer zone needs to be strictly prohibited by quarterly review of high-resolution satellite imagery to be obtained in consultation with agencies like NRSA/ISRO. Dedicated cell with qualified manpower to review the satellite imagery data and appropriate budgetary allocations to strengthening remote monitoring of 50 m buffer zone needs to be created under the aegis of EPCO. This action may be complemented by erecting sign boards (currently not seen during the site visit) regarding restriction of construction activity within 50 m distance from the HFL of Upper/ Lower Lake to bring awareness among the public. Necessary action in this respect needs to be undertaken by the local authorities.

Recommendations:

Taking into consideration the observations noted above, the Committee recommends the following:

1. The Project, comprehensively examined, violates the Wetland Rules, 2017 leading to much environmental damage to a vital part of Bhoj Wetland, a Ramsar Site of International importance. Taking this into consideration, the entire Project around the lower lake, if needed, be comprehensively evaluated instead of piecemeal evaluation and the subsequent infrastructure development shall ensure compliance with the applicable Wetlands rules, 2017.
2. An alternative site away from the Bhoj Wetland may be explored by the project proponent (MPHIDC) or the appropriate/concerned authority. This alternate site arrangement will also save very old trees and avoid large scale deforestation resulting from the execution of the said re-densification project.
3. SEIAA/SEAC may take appropriate action against the EIA consultant M/s. In-situ enviro care, Bhopal for not being serious in evaluating the Project from the

perspective of protection of Bhoj Wetland, an internationally renowned Ramsar site and the lifeline of Bhopal.

4. Any construction activities in future in the buffer zone needs to be strictly prevented and monitored by quarterly reviews through high-resolution satellite imagery data, to be obtained in consultation with agencies like NRSA/ISRO. Dedicated cell with qualified manpower to review the satellite imagery data and appropriate budgetary allocations to strengthen the remote monitoring of 50 m buffer zone needs to be created under the aegis of SWA/EPCO
5. Appropriate sign boards by concerned Urban Local Body (currently not seen during site visit) be put up to ensure no construction activity of a permanent nature takes place within 50 m distance from the HFL of Upper/ Lower Lake and to bring awareness among the public of the importance of Bhoj Wetland.
6. Environment clearance for the project needs to be revoked by SEIAA/SEAC and a fresh appraisal of the project, if required, needs to be undertaken taking into consideration the Wetland Rules and ensuring the surface drainage of the area (Zone of Influence) is not disturbed.
7. As per Section XIV (70) of Guidelines issued by MoEFCC for implementation of Wetland Rules, 2017, *"A Management Plan should be in place which is duly endorsed by the Ministry for all Ramsar sites"*. Accordingly, an Integrated Management plan should be in place for Bhoj Wetland as well and SWA/EPCO needs to take appropriate action in the matter.

(Dr. Manoj Vishwakarma),
Assistant Scientific Officer, MP State Wetland Authority, EPCO, Bhopal

(Arun Gurtoo),
Member of Bhopal Citizen's forum

(Pentani Jagan)
Regional Director
Central Pollution Control Board, Bhopal

(Prof. Anil Prakash)
Expert Member, SEAC, Bhopal

(Dr. H. V. C. Chary Guntupalli)
Scientist-E,
Regional Office, MoEFCC, Bhopal

ANNEXURE-1

State Environment Impact Assessment Authority, M.P.
(Government of India, Ministry of Environment, Forests &Climate Change)

Environmental Planning Coordination Organization
Paryavaran Parisar, E-5, Arera Colony
Bhopal-4620 16
visit us http://www.mpseiaa.nic.in
Tel:0755-2466970, 2466859
Fax : 0755-2462136

No: 1907 /SEIAA/2023
Date: 3/11/23

प्रति,
प्रो. अनिल प्रकाश, सदस्य,
राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति,
मध्य प्रदेश प्रदूषण नियंत्रण बोर्ड,
पर्यावरण परिसर, ई–5, अरेरा कालोनी,
भोपाल –462016

Sub: Honb'le NGT order NO. O.A. 119/2023(CZ) titled as " Mr. Nitin Saxena Vs. Urban Development and Housing Department & Ors" में अधिकारी के नामांकन बावत

Ref: 1.आपका पत्र दिनांक 27.10.23
2. SEIAA का पत्र क्र.1827 दिनांक 23.10.23

उपरोक्त संदर्भित पत्र को राज्य स्तरीय पर्यावरण समाघात प्राधिकरण के समक्ष प्रस्तुत करने के उपरांत यह निर्णय लिया गया कि प्रकरण में माननीय राष्ट्रीय हरित अधिकरण द्वारा निर्देशित आदेश के अनुपालन में SEIAA द्वारा पूर्व में जारी उक्त पत्र दिनांक 23.10.23 के अनुसार ही आपके द्वारा प्रकरण में अग्रिम कार्यवाही सुनिश्चित की जाए।

उक्त प्रकरण में SEIAA द्वारा श्री राजेश मिश्रा कार्यपालन यंत्री को प्रभारी अधिकारी नामांकित किया गया है एवं जबावदावा में आवश्यक प्रतिवेदन तैयार करने हेतु डॉ सुधा सिंह द्वारा समन्वय एवं सहयोग प्रदान किया जायेगा।

अतः उक्त आदेश के परिपालन में अपनी उपस्थिति शामिल करते हुए अग्रिम कार्यवाही सुनिश्चित करे।

(मुजीबुर्रहमान खान)
सदस्य सचिव

पृ.क्र. /SEIAA/2023/भोपाल दिनांक
प्रतिलिपि:–

1. सदस्य सचिव,राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति, मध्य प्रदेश प्रदूषण नियंत्रण बोर्ड, पर्यावरण परिसर, ई–5, अरेरा कालोनी,भोपाल –462016
2. डॉ पी .सी. दुबे, अध्यक्ष, राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति, (MPSEAC) भोपाल की ओर सूचनार्थ।

सदस्य सचिव

ANNEXURE-2

XVIII. परियोजना प्रस्तावक द्वारा क्लस्टर के सभी खदान संचालकों के सहयोग से क्लस्टर में सम्मिलित सभी खदानों के स्थल अनुरूप (Site Specific) कलस्टर के समुचित पर्यावरणीय प्रबंधन हेतु जिला प्रशासन एवं स्थानीय निकाय से समन्वय कर कार्य योजना तैयार की जाये एवं इस कार्ययोजना का ईआईए रिपोर्ट में समावेश किया जाये।

XIX. परियोजना प्रस्तावक द्वारा इन्वायरमेन्टल कॉस्ट बेनिफिट एनालसिस का विस्तृत विवरण का समावेश ईआईए में किया जाये।

परियोजना प्रस्तावक व सर्व संबंधितों को सूचित किया जाये।

38. **Case No 9800/2023:**Prior Environment Clearance for Redensification of Collectorate Complex and Professor's colony [Total Built Up Area EC recommended in 654th SEAC meeting dated 16- 06-2023 Page no. 53 S.No. 22 1,41,545.00 Sq.mt. (1,01,609.00 Sq.mt. Site 1 + 39,936.00 Sq.mt. Site 2] at Khasra No. 106, 107, 108, 109, 1531/108, 1533/108, 1572/109, 1968/110,110, 9, 1382/1, 1382/2, 1382/4, 1383/1, 1383/3, 1383/4, 1384, 1385, 1386/1, 1386/3, 1387/2, 1424/2, 1425/2 1884/1424, 1885/1424, 1873/1383/1, 1873/1383/3, 1977/1383/2 Tehsil-Huzur, DistrictBhopal (MP)by Executive Engineer Div.3, Madhya Pradesh Housing & Infrastructure Development Board Bhopal, Amrapali Arcade, Bagmugaliya, Bhopal (MP)-462043 Envt. Consultant:M/s. Insitu Enviro Care, Bhopal

1. यह खसरा नंबर 106,107,108,109,1531/106,1533/108,1572/109, 1968/110,110, 9,1382 पर/1, 1382/2, 1382/4, 1383/1 1383/3, 1383/4, 1384, 1385,1386/1,1386/3, 1387/2, 1424/2 1425/2, 1884/1424, 1885/1424, 1873/1383/1, 1873/1383/3, 1977/1383/2 तहसील–हुजूर, जिला–भोपाल, (मप्र) में स्थित कलक्ट्रेट परिसर और प्रोफेसर कॉलोनी का पुनर्घनत्वीकरण हेतु पूर्व पर्यावरण स्वीकृति का है।

2. परियोजना का कुल निर्मित क्षेत्र 1,41,545.00 वर्ग मीटर (1,01,609.00 वर्ग मीटर साइट 1 + 39,936.00 वर्ग मीटर साइट 2) है।

3. परियोजना का विवरण निम्नानुसार है:

1.	Total Plot Area	2,35,420.00 Sq.mt. (Site 1+2)
2.	Built up area	1,41,545.00 Sq.mt. (Site 1+2)
3.	Water Consumption	395 KLD (Site 1+2)
4.	Solid Waste Generation	2.31 TPD (Site 1+2)
5.	Power Requirement	21749.6 KVA (Site 1+2)
6.	Power Backup Through DG Sets	800 KVA (2 X 400 KVA) For site 1
7.	Solar Provisions	1277.85 KW (Site 1+2)
8.	Connectivity Facilities	Project site is adjacent to Ploytechnic Kamla Park Road
9.	Parking Provided	1502 ECS (Site 1+2)

(चंद्र मोहन ठाकुर)
सदस्य सचिव

(अनिल कुमार शर्मा)
सदस्य

(अरूण कुमार भट्ट)
अध्यक्ष

4. साइट क्षेत्र 1 पर कुल 968 मौजूदा पेड़ हैं, इनमें से 317 पेड़ों को उखाड़ने का प्रस्ताव है और 80 पेड़ों को प्रत्यारोपित किया जाना है और साइट 2 पर 61 पेड़ हैं जिनमें से 16 पेड़ों को सक्षम प्राधिकारी की अनुमति से उखाड़ने का प्रस्ताव है।

Total Trees	968 nos.	100%
Tree to be cut	390 nos.	40% approx.
Tree to be save	573 nos.	59% approx.
Tree to be transplant	05 nos.	Less than 1%

5. परियोजना हेतु SEAC की 654वीं बैठक दिनांक 16.06.2023 को पर्यावरण स्वीकृति जारी किये जाने की अनुशंसा की गई है, जिसका कार्यवाही विवरण उक्त बैठक के पृष्ठ क्र.53 से 76 पर अंकित हैं।

6. प्रस्तुतिकरण के दौरान परियोजना प्रस्तावक द्वारा प्रस्तुत किया गया कि upper lake से परियोजना स्थल– 1 302.55 मीटर दूर है, और साइट 2 281.38 मीटर दूर है। भोपाल विकास योजना (बीडीपी) 2005 के अनुसार, upper lake से 50 मीटर की दूरी बनाए रखनी होगी।

राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा प्रकरण में पर्यावरणीय मुद्दों पर विस्तृत चर्चा व परामर्श उपरांत एवं SEAC की 654 वीं बैठक दिनांक 16.06.23 की अनुशंसा को मान्य करते हुए प्रकरण में निम्नलिखित अतिरिक्त शर्तों सहित पर्यावरणीय स्वीकृति प्रदान किये जाने का निर्णय लिया गया:–

i. भवन निर्माण का कार्य नगर एवं ग्राम नियोजन निदेशालय (T & CP) से स्वीकृत लेआउट के अनुसार ही किया जाना सुनिश्चित करें।

ii. स्वच्छ जल आपूर्ति की व्यवस्था नगर निगम के माध्यम से ही किया जाना सुनिश्चित करें।

iii. परियोजना प्रस्तावक को अतिरिक्त उपचारित अपशिष्ट जल के निपटान के लिए नगर निगम की सीवर लाइन के साथ लिंकेज सुनिश्चित करें।

iv. फ्लशिंग और अन्य उद्देश्यों के लिए उपचारित बहिस्राव के पुनः उपयोग के लिए दोहरी प्लंबिंग प्रणाली अनिवार्य रूप से अपनाई जाये।

v. परियोजना से निष्क्रिय अपशिष्ट को डंपिंग साइट पर भेजा जाये एवं परियोजना प्रस्तावक को नगर निगम से MSW के निष्पादन हेतु अनिवार्यरूप से अनुमति प्राप्त की जाना चाहिये।

vi. MPSEIAA द्वारा जारी कार्यालयीन ज्ञापन दिनांक 19.06.23 के अनुसार यदि परियोजना में भू जल निकासी की जाती है तो निम्नानुसार निर्देशों का पालन किया जाना सुनिश्चित करे :–

(चंद्र मोहन ठाकुर)
सदस्य सचिव

(अनिल कुमार शर्मा)
सदस्य

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अध्यक्ष

a. जिन मामलों में पानी की आपूर्ति पानी के टैंकरों के माध्यम से की जानी है, उन परियोजनाओं में परियोजना प्रस्तावक द्वारा पानी की आवश्यकता को केवल लाइसेंस प्राप्त टैंकर जल आपूर्तिकर्ताओं के माध्यम से पूरा किया जाना सुनिश्चित किया जाये।

b. सक्षम प्राधिकारी (सीजीडब्ल्यूबी / सीजीडब्ल्यूए) की पूर्व अनुमति के बिना भूजल निकासी की अनुमति नहीं दी जाएगी। तदानुसार, भूजल निकासी के लिए एनओसी की प्रति सभी नियामक प्राधिकरणों, अर्थात् प्राधिकरण (राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण), क्षेत्रीय कार्यालय, पर्यावरण वन एवं जलवायु परिवर्तन भारत सरकार, भोपाल, राज्य प्रदेश प्रदूषण नियंत्रण बोर्ड और केंद्रीय प्रदूषण नियंत्रण बोर्ड को प्रस्तुत की जाएगी।

c. परियोजना प्रस्तावक भूजल निकासी के लिए एनओसी में किए गए अनुबंधों का अनिवार्य रूप से अनुपालन सुनिश्चित करेंगे और इसकी स्थिति पर तिमाही अनुपालन रिपोर्ट के एक भाग के रूप में प्रस्तुत करेंगे।

vii. परियोजना स्थल 1 एवं 2 पर मौजूद पेड़ों को काटने की बजाय अधिक से अधिक बचाने एवं प्रत्यारोपित किये जाने का प्रयास किया जावे तथा बचाये हुए पेड़ों की संख्या अनुपालन प्रतिवेदन में अंकित करे।

viii. परियोजना स्थल 1 एवं 2 पर मौजूद पेड़ सक्षम अधिकारी के अनुमति से ही काटा जाये और प्रतिपूरक वृक्षारोपण (compensatory plantation) अनिवार्य रूप से की जावे।

ix. SEAC में परियोजना प्रस्तावक द्वारा किये गये लिखित प्रतिबद्धताओं का पालन अनिवार्य रूप से निश्चित समय सीमा में करना होगा।

x. उपरोक्त पर्यावरण स्वीकृति माननीय उच्च न्यायालय, माननीय राष्ट्रीय हरित अधिकरण एवं अन्य न्यायालयों के सभी निर्णयों एवं निर्देशों के अधीन रहेगी।

प्रकरण से संबंधित परियोजना प्रस्तावक/पर्यावरण सलाहकार द्वारा अभिप्रमाणित दस्तावेजों के आधार पर एवं राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की 654वीं बैठक दिनांक 15.05.2023 एवं 654 वीं बैठक दिनांक 16.06.23 की कार्यवाही विवरण, अनुशंसा एवं अधिरोपित शर्तों को राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा मान्य करते हुए पर्यावरणीय मुद्दों पर विस्तृत चर्चा व परामर्श उपरांत सर्व सम्मति से विशिष्ट शर्तों के साथ उपरोक्त बिंदु i से viii एवं परिशिष्ट–4 को शर्तों में शामिल करते हुए परियोजना प्रस्तावक को पूर्व पर्यावरण स्वीकृति प्रदान की जाती है।

39. **प्रकरण क्र. 9951/2023 परियोजना प्रस्तावक मेसर्स स्टोन बर्ड्स माइनिंग, पार्टनर श्री विवेक दुबे, निवासी– राम मनोहर लोहिया वार्ड, नदीपुर पाली थ्रेशर के सामने, जिला कटनी (म0प्र0) द्वारा डोलोमाइन खदान, (ओपनकास्ट सेमी मैकेनाइज्ड विधि), उत्पादन क्षमता पत्थर 51488 टन प्रतिवर्ष रकबा 3.42 हेक्टेयर, खसरा 293, 294, 295, ग्राम गल्हान, तहसील बड़वारा, जिला कटनी (म0प्र0)–की पूर्व पर्यावरणीय स्वीकृति के लिये आवेदन।**

प्रकरण में राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) द्वारा 654वी बैठक दिनांक 16.06.2023 निम्नानुसार अनुशंसा की गई है :–

(चंद्र मोहन ठाकुर)
सदस्य सचिव

(अनिल कुमार शर्मा)
सदस्य

(अरूण कुमार भट्ट)
अध्यक्ष

4. यदि भू–जल का प्रतिछेदन प्रस्तावित हो तो लीज एरिया का हाइड्रो जियोलॉजीकल अध्ययन कर ई.आई.ए. रिपोर्ट में उल्लेख करें ।
5. रेनवॉटर हार्वेस्टिंग हेतु किसी विशेषज्ञ द्वारा एक्यूफर, परकोलेशन टेंक, रिर्चाज शॉफ्ट एवं सब सरफेस डायक का अध्ययन कर प्रतिवेदन ई.आई.ए. रिपोर्ट के साथ प्रस्तुत करें ।
6. ओव्हर बर्डन एवं टॉपस्वाइल मैनेजमेंट प्लॉन, ई.आई.ए. रिपोर्ट के साथ प्रस्तुत की जाये ।
7. ई.आई.ए. रिपोर्ट के साथ जिला सर्वेक्षण रिपोर्ट जिसमें इस खदान का विवरण दर्ज हो प्रस्तुत की जाये।

सिया की 789 बैठक दिनांक 30.05.2023 द्वारा सेक को परीक्षण हेतु प्रेषित किया गया है । जिसे समिति की आज बैठक दिनांक 16/06/23 को प्रस्तुतीकरण में रखा गया, जिसमे परियोजना प्रस्तावक श्री मनोज अग्रवाल (ऑनलाईन) उनकी ओर से पर्यावरण सलाहकार श्री संचित कुमार, मेसर्स कॉग्नीजेंस रिसर्च इंडिया (प्रा. लि.) नोयडा उपस्थित हुए। प्रकरण में परीक्षण में पाया गया कि सिया कार्यालय द्वारा उल्लेख किया गया है, कि गूगल इमेज के आधार पर प्रस्तावित खदान एक अन्य खदान के साथ ओव्हर लेप होना परिलक्षित है। उक्त संबंध में परियोजना प्रस्तावक/ पर्यावरण सलाहकार द्वारा बताया गया कि दोनो खदानों का डी.जी.पी.एस. सर्वे कराकर खदान के प्रमाणित अक्षांश–देशांस प्रस्तुत करेंगे परन्तु कौन सी खदान ओव्हरलेप हो रही है इसकी जानकारी सिया द्वारा परियोजना प्रस्तावक को अवगत कराया जावें जिससे परियोजना प्रस्तावक द्वारा प्रकरण पर आगामी कार्यवाही सुनिश्चित की जा सके।

22. Case No 9800/2023 Mr. Pradeep Kumar Hedau, Executive Engineer Div.3, Madhya Pradesh Housing & Infrastructure Development Board Bhopal, Amrapali Arcade, Bagmugaliya, Bhopal (MP)-462043, Prior Environment Clearance for Re-densification of Collectorate Complex and Professor's colony [Total Built Up Area 1,41,545.00 Sq.mt. (1,01,609.00 Sq.mt. Site 1 + 39,936.00 Sq.mt. Site 2] at Khasra No. 106, 107, 108, 109, 1531/108, 1533/108, 1572/109, 1968/110,110, 9, 1382/1, 1382/2, 1382/4, 1383/1, 1383/3, 1383/4, 1384, 1385, 1386/1, 1386/3, 1387/2, 1424/2, 1425/2, 1884/1424, 1885/1424, 1873/1383/1, 1873/1383/3, 1977/1383/2 Tehsil-Huzur, District-Bhopal, (MP)

This is a case of Prior Environment Clearance Re-densification of Collectorate Complex and Professor's colony [Total Built Up Area 1,41,545.00 Sq.mt. (1,01,609.00 Sq.mt. Site 1 + 39,936.00 Sq.mt. Site 2] at Khasra No. 106, 107, 108, 109, 1531/108, 1533/108, 1572/109, 1968/110,110, 9, 1382/1, 1382/2, 1382/4, 1383/1, 1383/3, 1383/4, 1384, 1385, 1386/1, 1386/3, 1387/2, 1424/2, 1425/2, 1884/1424, 1885/1424, 1873/1383/1, 1873/1383/3, 1977/1383/2 Tehsil-Huzur, District-Bhopal, (MP).

In the SEAC 636th meeting dated 13.04.2023 the case was presented by PP Shri Pradeep Hadao, EE, Madhya Pradesh Housing & Infrastructure Development Board Bhopal and there consultant Shri Mujammil Khan, M/s. Insitu Enviro Care, Bhopal alongwith Mr. Avneesh Saxena, Project Architect.

During presentation it was observed by the committee that the project is divided in the two sites located faraway from each other and PP as per SEIAA OM no 1216 dated 20/06/19, B-2, has not furnished the T&CP approved lay out. Thus PP was asked to furnish the same. Total Excvated material 18595 Cum. out this 3719 Top soil will be used for landspcaing and 14876 cum. remaining excavted materials resued in backfilling and leveling at site but the details of area available for backfilling are not mentioned. Simillarly, the top soil shall be used for plantation. Dual plumbing is proposed to be installed at the project site for flushing but how the treated water from CETP will be bring back to the project site shall needs to be furnished. Committee also observed that some details are missing in online form submitted by PP (such as Point No. 9.2 to 9.6 & 12, 12.7) which shall be revised and submitted. After presentation, PP was asked to submit response on following issues raised during presentation:

- ✓ The project is divided in the two sites different sites located faraway from each other and PP as per SEIAA OM no 1216 dated 20/06/19, B-2, has not furnished the T&CP approval. Thus PP was asked to furnish the copy of T&CP approved lay out.
- ✓ Credible proof showing existing land use of the proposed sites as per Govt. Norms.
- ✓ Total Excvated material 18595 out this 3719 Cum., top soil will be used for landspcaing and remaining 14876 cum. excavted materials resued in backfilling and leveling at site but the details of area available for backfilling are not provided hence the same shall be furnished. Simillarly, PP's commitment that the top soil shall be used only for plantation only.
- ✓ Dual plumbing is proposed to be installed at the project site for flushing but how the treated water from CETP will be brought back to the project site shall needs to be furnished with all details.
- ✓ Details of existing water recharge potential and how it will be compensated with the proposed expansion shall be submitted.
- ✓ Committee also observed that some details are missing in online form submitted by PP (such as Point No. 9.2 to 9.6 & 12, 12.7) hence necessary corrections shall be made and submitted.
- ✓ Demolition Waste proposed to be disposed through Backfilling and leveling but the details of area available marked for backfilling and leveling are not mentioned. Thus the same shall be provided.
- ✓ PP shall also examine whether the Bhoj Wetland Rules are applicable on this project or not and shall obtained permission form the compitent authority.
- ✓ Total 968 existing tree are on site area Site 1, out of this 317 tree proposed to be uprooted and 80 trees to be transplant and 61 trees on Site 2 out of which 16 tree are proposed to be uprooted with the permission of compitent authority. The inventory presented by PP does not contain the details upto species level of all the trees proposed to be either uprooted or transplanted. Thus PP was asked to submit comprehensive inventory of all the trees with names upto species level.

- ✓ The tree canopy area shall be calculate at both the sites with the help of satellite/drone imagenary and submitted. Minimum 20% of the tree canopy area shall be ratined.
- ✓ 400 plants are proposed to be planted for this project thus details of available area and details of spacing proposed between each plants shall be calculated and submitted with estimation of its tree canopy cover after 10 years.
- ✓ 80 trees are proposed for transplantation alongwith Neem. Committee desires that PP shall provide the available literature which indicates that the transplantation of Neem is successful.
- ✓ Committee also suggested that transplantation proposal shall be re-vealuated as the success rate is very less and also not cost effective. In liew, PP can explore the 20 times commensurate plantation on other locations within the city and submit a proposal for this.
- ✓ Estimation of carbon footprint as discussed during presentation and mitigation plan shall be submitted. Renewal Energy Department shall also be consulted to harness maximum solar energy potential from this project and details shall be submitted.
- ✓ Proposed Green Building Code for this project shall be submitted.

The project proponent submitted clarification on 12.06.2023 on PARIVESH Portal, which was asked by the SEAC in the 636th meeting held on 13.04.2023. Wherein PP submitted following reply:

Hence, the case was scheduled for presentation in the SEAC 654th the meeting dated 16.06.2023. Wherein the case was presented by PP Shri Pradeep Hadao, EE, Madhya Pradesh Housing & Infrastructure Development Board Bhopal and Env. Consultant Shri Mujammil Khan, M/s. Insitu Enviro Care, Bhopal alongwith Mr. Avneesh Saxena, Project Architect. PP presented following point-wise query details:-

- **The project is divided in the two sites different sites located faraway from each other and PP as per SEIAA OM no 1216 dated 20/06/19, B-2, has not furnished the T&CP approval. Thus PP was asked to furnish the copy of T&CP approved lay out.**

  PP submitted - The modification in Land Use Change in accordance with Bhopal Development Plan 2005 is already in Process, has been undertaken on 15th June,2023, and will be finalized soon. With reference to the memo the drawing to be submitted to Town and Country planning is being attached herewith for perusal. Modification of land-use in Bhopal Development Plan is in process same is notified on 05.05.2023 in daily newspapers. **The cuttings are enclosed herewith for reference. The T&CP approved Layout will be submitted henceforth in 45 days.**
- **Credible proof showing existing land use of the proposed sites as per Govt. Norms.**

PP submitted – Modification of land use in Bhopal Development Plan is in process same is notified on 05.05.2023 in daily newspapers. The final hearing was held on 15-06-23, and will be sanctioned soon. **The same will be submitted henceforth in 45 days.**

- **Total Excvated material 18595 out this 3719 Cum., top soil will be used for landspcaing and remaining 14876 cum. excavted materials resued in backfilling and leveling at site but the details of area available for backfilling are not provided hence the same shall be furnished. Simillarly, PP's commitment that the top soil shall be used only for plantation only.** PP submitted **-** Out of 18595cu.m. excavated material available, 20% of it (i.e 3719Cu.m) will be used as Top Soil for Plantation only. 65% of the excavated material (i.e 9670Cu.m) will be used for backfilling in the foundation area of the buildings. The remaining quantity of excavated material (i.e 5206 Cu.m) will be used for leveling as marked in the attached drawing. We assure to use the top soil for plantation purpose only.
- **Dual plumbing is proposed to be installed at the project site for flushing but how the treated water from CETP will be brought back to the project site shall needs to be furnished with all details.** PP submitted - A pipeline prepared to be lay down from the CETP to the project site. Drawings of the same has been displayed during presentation.
- **Details of existing water recharge potential and how it will be compensated with the proposed expansion shall be submitted.**
  PP submitted - Total water recharge potential from site 1 and site 2 is approx. 22753.7 M3/Annum (18808.2 M3/Annum site 1 + 3945.504 M3/Annum site 2). Assuming Recharge potential is 18.75mm/hr .

  After the completion of the project and rainwater harvesting structures, the total ground water recharge would be 115783.21 cum/annum (87652.9 + 28130.4). The retention period for the rainwater was assumed 20minutes. Proposed recharge potential to be created by the project would improve ground water regime of the area and would contribute to positive groundwater environment. 20 No. of RWH pits proposed of 16 Cum each recharging capacity.

- **Committee also observed that some details are missing in online form submitted by PP (such as Point No. 9.2 to 9.6 & 12, 12.7) hence necessary corrections shall be made and submitted.**
  PP has made all desired correction under point no. **9.2 to 9.6 & 12, 12.7.**
- Demolition Waste proposed to be disposed through Backfilling and leveling but the details of area available marked for backfilling and leveling are not mentioned. Thus the same shall be provided. PP submitted following detilas in the given below table – In

this context. PP submitted that total C&D Waste 68511 cum (site- 31610.8cum + site II 36900 cum.).

DEMOLITION WASTE (DEBRIS)		68512	Cu.m	(102768 Tons)
SITE -1 PROFESSOR COLONY				
SL NO	LOCATION	AREA (IN SQM)	DEPTH (IN M)	QUANTITY (IN CU.M)
1	Location F	3418	0.85	2905.3
2	Location G	1745	0.9	1570.5
3	Location H	3097	0.9	2787.3
4	Location A (Smart Road)	18695	0.8	14956
5	Low Lying area along Banganga Nallah at Ravindra Bhawan for parking purpose (Lead 0.5km)	4943	1.9	9391.7
	TOTAL			31610.8
SITE -2 OLD SECRETARIAT				
1	PLOT -1 (CLP-1)	40000	0.8	32000
2	PLOT-2 (CLP-2)	7000	0.7	4900
	TOTAL B	47000		36900
	TOTAL A+B			68511

- PP shall also examine whether the Bhoj Wetland Rules are applicable on this project or not and shall obtained permission form the compitent authority. PP submitted - the project site 1 is 302.55 meters away, and site 2 is 281.38 meters away from the upper lake. As per the Bhopal Development Plan (BDP) 2005, we have to maintain a 50 m distance from the upper lake. Hence, our project does not fall under the wetland rule.
- Total 968 existing tree are on site area Site 1, out of this 317 tree proposed to be uprooted and 80 trees to be transplant and 61 trees on Site 2 out of which 16 tree are proposed to be uprooted with the permission of compitent authority. The inventory presented by PP does not contain the details upto species level of all the trees proposed to be either uprooted or transplanted. Thus PP was asked to submit comprehensive inventory of all the trees with names upto species level.
  PP submitted existing tree inventory with girth details, height & species. Permission to be taken for tree felling from the competent authority. The sumrized tree inventory is given below -

Total Trees	**968 nos.**	**100%**
Tree to be cut	390 **nos.**	40% approx.
Tree to be save	573 **nos.**	59% approx.
Tree to be transplant	05 **nos.**	Less than 1%

- The tree canopy area shall be calculate at both the sites with the help of satellite/drone imagenary and submitted. Minimum 20% of the tree canopy area shall be ratined.
  PP submitted that Tree Canopy area is calculated based on satellite image and AutoCad. We assure to retain more than 30% of the canopy area.The detila of Tree Canopy area are as given below:
  - Total Canopy area: 34,665sqm
  - Canopy area to be Cut: 17455sqm
  - Canopy area to be saved: 17210sqm

- 4000 plants are proposed to be planted for this project thus details of available area and details of spacing proposed between each plants shall be calculated and submitted with estimation of its tree canopy cover after 10 years. PP submitted following table in this above context .

TREE INVENTORY - PROPOSED							
LOCATION	**SCIENTIFIC NAME**	**POPULAR NAME**	**CANOPY coverage (in feet)**	**SIZE OF TREES to be selected**	**DISTANCE (in feet)**	**Maximum HEIGHT (in feet)**	**No. of trees**
ROAD SIDE	AnthocephalusKadamba	Kadamba	40' - 50'	5-6' ht plant with atleast 4 to 5 branches	20' c/c	60' & above	90
	Cassia Nodosa	Pink Cassia			20' c/c	25' & above	120
	Azadirachtaindica	Neem	As much as its height	5-6' ht plant with atleast 4 to 5 branches	20' c/c	70'-80'	100
	Delonixregia	Gulmohar	30'-40'	5-6' ht plant with atleast 4 to 5 branches	20' c/c	40' -50'	100
	Ficusvirens	White Fig	As much as its height	5-6' ht plant with atleast 4 to 5 branches	20' c/c	79'-89'	40
	Peltophorumferrugineum	Yellow Gulmohar	40'-55'		20' c/c	50'-70'	100
	PithecellobiumSaman	Raintree	60'-70'	5-6' ht plant with atleast 4 to 5 branches	20' c/c	70'-80'	40
	Pongamiaglabra	Karanj	25'-35'	5-6' ht plant with atleast 4 to 5 branches	20' c/c	40' -50'	60

	PutranjeevaRoxburghi	Putranjeeva	20'-25'		20' c/c	35'-40'	50
	Swietenia mahogany	Mehgani			20' c/c	90-115'	60
	LagerstromeaSpeciosa	Pride of India		5-6' ht plant with atleast 4 to 5 branches	15' c/c	35'-45'	60
	Bauhinia Blakeana	Kachnar		5-6' ht plant with atleast 4 to 5 branches	20' c/c	20'-25'	80
Total							**900**
URBAN FOREST							**47000 Sqm**
	Terminalia Arjuna	Arjun			8'-10'	80'-100'	50
	Salix tetrasperma	Indian Willow			8'-10'	60'-70'	25
	Pride of India	Pride of India			8'-10'	35'-45'	50
	LagerstromeaFloreginae	Jharul					40
	Canna				1½' c/c	2'	80
	Heliconia				2'-3'	3'-4'	100
	Mimusopselengi	Maulshree			8'-10'	52'	100
	Tectona Grandis	Teak		5-6' ht plant with atleast 4 to 5 branches	8'	100'	20
	Terminalia Chebula	Harad		5-6' ht plant with atleast 4 to 5 branches	8'	90'	30
	Terminalia belerica	Bahera		5-6' ht plant with atleast 4 to 5 branches	8'	90'	20
	FicusReligiosa	Peepal			8'	75'	20
	MillingtoniaHortensis	Aakash Neem		5-6' ht plant with atleast 4 to 5 branches	8'	75'	30
	Ficusbenghalensis	Bargad		5-6' ht plant with atleast 4 to 5 branches	8'	70'	40
	Bassia (Madhuca) Latifolia	Mahua		5-6' ht plant with atleast 4 to 5 branches	8'	75'	30
	Ceibapentandra	Kapok			8'	60'	50
	ErythrinaVariegata (Indica)	Pangara			8'	45'	60
	Gliricidea			5-6' ht plant with atleast 4 to 5 branches	8'	35'	75
	AcassiaAuriculiFormis			5-6' ht plant with atleast 4 to	8'	35'	100

				5 branches			
	Butea Monosperma	Palash		5-6' ht plant with atleast 4 to 5 branches	8'	35'	80
	Bauhinia Purpurea	Kachnar			8'	30'	75
	ManilkaraHxandra	Khirni			8'	30'	80
	AcassiaCuncina	Shikhakai			8'	20'	75
	DisopyrosPeregrina	Tendu			8'	20'	80
	Aegle Marmelos	Bel			8'	25'	75
	Murraya Exotica	Madhukamini			6'	15'	100
	LagerstromeaIndica	Sawni			6'	15'	90
	Tabrena Montana	Chandni			6'	10'	100
	* As guided by the Honourable Chairman						
	Schleicheraoleosa	Kusum Tree				10'	80
	Mitragynaparviflolia	Kaim tree			15'	50'	50
	Bambusa vulgaris	Bamboo			upto 1'	100'	100
	Robiniapseudoacacia	Robinia			26'	50'	50
	Total						**2000**

CENTRAL VERGE	**1180 Sq m**						
	Murraya Exotica	Madhukamini		5-6' ht plant with atleast 4 to 5 branches	2' to 2½'	Upto 15'	15
	Hamelia Patens			5-6' ht plant with atleast 4 to 5 branches	1½'-2'	4'-5'	10
	Cassia Biflora				2' to 2½'	4'-5'	15
	TecomaGaudichudi				2' to 2½'	5'-8'	20
	PuincianaPulcherima	Gulturra			2' to 2½'	5'-8'	25
	Tabrena Montana			5-6' ht plant with atleast 4 to 5 branches	1½'-2'	4'-5'	15
Total							**100**
CAMPUS	**12000 Sqm**						

	Grevillea robusta	Silver Oak		5-6' ht plant with atleast 4 to 5 branches	2' to 2½'	Upto 15'	60
	Spathodeacampanulata	Tulip tree		5-6' ht plant with atleast 4 to 5 branches	8'-10'c/c		50
	Tabebuiaavellanedae				8'-10'c/c		40
	Chukrasia				8'-10'c/c		30
	MicheliaChampaka				8'-10'c/c	50'-60'	75
	Mimusopselengi				8'-10'c/c	45'-60'	70
	Conocarpus				8'c/c		60
	Bottle Palm				15' c/c	40'-45'	80
	Foxtail palm				12' c/c	40'-45'	80
	Erica Palm				5'-6' c/c	25'-30'	80
	CycusCicinicaris					4'-5'	40
	Plumeria Alba				8'-10' c/c	5'-6'	110
	PlumeriaPudeco				3'-6' c/c	15'-20'	60
	Juniper Chinesis				5'-6'	6'-8'	60
	Topiary Casuarina				6'-8'	4'-6'	30
	Topiary golden botlle brush				6'-8'	6'-8'	75
	Total						**1000**

- 80 trees are proposed for transplantation alongwith Neem. Committee desires that PP shall provide the available literature which indicates that the transplantation of Neem is successful.
  PP submitted that As guided by the H'ble committee and after much thought and reviews we shall be transplanting only 5-10 trees of variety which are acceptable for transplantation such as Peepal, Gooler, Bargad etc.

Total Trees	**968 nos.**	**100%**
Tree to be cut	390 **nos.**	40% approx.
Tree to be save	573 **nos.**	59% approx.
Tree to be transplant	05 **nos.**	Less than 1%

- Committee also suggested that transplantation proposal shall be re-evaluated as the success rate is very less and also not cost effective. In liew, PP can explore the 20 times commensurate plantation on other locations within the city and submit a proposal for this.
  PP submitted that as guided by the H'ble committee and after much thought and reviews we shall be transplanting only 5-10 trees of variety which are acceptable for transplantation such as Peepal, Gooler, Bargad etc.
- Estimation of carbon footprint as discussed during presentation and mitigation plan shall be submitted. Renewal Energy Department shall also be consulted to harness maximum solar energy potential from this project and details shall be submitted.
  PP submitted following detatils of carbon footprint generation sources and their mitigative measures.

  CO2 Emission (Construction Phase): The total CO_2 emissions has been calculated from power requirement for both phases by assuming sources for power requirement, Vehicles & LPG requirement. Total CO_2 Generation will be 841 tonne/ Year for construction phase. CO_2 Emission has been calculated from DG operation by Diesel consumption has been calculated for each DG proposed and fuel utilized by dumpers and JCB.

Total Energy Consumption	**Grid (Electricity Company)**	**DG Set 100 kVA**	**DG Set 200 kVA**	**Units**
2000	1500	100	200	Units (kWh)
CO2 Emission Factor	0.82	3.75	3.22	kg/CO_2/kWh
Total CO2 / Day	1230	375	644	kg/CO_2 / Day
Total CO2 / Month	36900	11250	19320	kg/CO_2 / Month
CO_2 Generation for Units Consumed from Electricity Company			36900	kg/CO_2/month
CO_2 Generation for Units Consumed from DG Set			30570	kg/CO_2/month
CO_2 Emission from LPG Cylinder (50 Cylinders)			2161	kg/CO_2/month
CO_2 Emission from Personal Vehicles Considering 50 L / month Fuel			450	kg/CO_2/month
Total CO_2 Generation kg/ month			70080	kg/CO_2/month
Total CO_2 Generation tonne/ month			**70**	**t/CO_2/month**
Total CO_2 Generation tonne/ Year			**841**	**t/CO_2/year**

CO2 Emission (Construction Phase-Concrete): The total CO_2 emissions has been calculated from Cement / Concrete (PCC & RCC) quantity (51,919 cum). So, per year emission The CO_2 emission from the raw material will be 21.90 tonne / year.

TOTAL CO2 EMISSION & MITIGATION MEASURES

S. No.	Phase	CO2 Emission (ton/year)	Mitigation Measures
1	Construction Phase	853	we are providing the more than 28% green energy (solar power) 1277.85 KW which will reduce the power demand as will reduce greenhouse gas emission. Additionally, proposing the 4000 plantation which also will benefit to reduce the carbon emission.
2	Operation Phase	1780	

CO2 Emission (Operation Phase): The total CO_2 emissions has been calculated from power requirement for both phases by assuming sources for power requirement, Vehicles & LPG requirement. Total CO_2 Generation will be 1780 tonne/ Year. Coal CO_2 emissions factor is taken from the User Guide, Version 14.0, for CO_2 Baseline Database for the Indian Power Sector, December 2018 by Government of India, Ministry of Power, Central Electricity Authority. CO_2 Emission has been calculated from DG operation by Diesel consumption has been calculated for each DG proposed. Daily Diesel requirement for the DG operation will be 376 Liter / day for operation phases.

Total Energy Consumption	Grid (Electricity Company)	DG Set 400 kVA	DG Set 400 kVA	DG Set 200 kVA	Units
4500	3900	400	400	200	Units (kWh)
CO2 Emission Factor	0.82	1	1	1.04	kg/CO_2/kWh
Total CO2 / Day	3198	400	400	208	kg/CO_2 / Day
Total CO2 / Month	95940	12000	12000	6240	kg/CO_2 / Month
CO_2 Generation for Units Consumed from Electricity Company				95940	kg/CO_2/month
CO_2 Generation for Units Consumed from DG Set				30240	kg/CO_2/month
CO_2 Emission from LPG Cylinder (405 Cylinders)				17500	kg/CO_2/month
CO_2 Emission from Personal Vehicles Considering 50 L / month Fuel				4660	kg/CO_2/month
Total CO_2 Generation kg/ month				148340	kg/CO_2/month
Total CO_2 Generation tonne/ month				**148**	**t/CO_2/month**
Total CO_2 Generation tonne/ Year				**1780**	**t/CO_2/year**

Mitigation Measures to Reduce the CO_2 Emissions

Development of greenbelt will contribute in a positive manner towards mitigation of greenhouse gases. Global warming is a global concern and hence, the company will be undertaking all possible measures to minimize the CO_2 emissions. These include regular maintenance of all fossil fuel-based machinery and equipment and ensuring their emissions within limit. It will be ensured that all vehicles are having their "pollution under control (PUC)" certificates. The vehicles and machinery will be maintained periodically as per manufacturing specification to ensure optimum fuel utilization. There are several ways to control CO_2 greenhouse gas emissions. Here are some of them:

S. No.	Mitigation Measures	Remarks
1	**Increase energy efficiency**: Using energy-efficient appliances and equipment reduces the amount of energy consumed, which in turn reduces greenhouse gas emissions. This can be done at home, in businesses, and in industries.	We are proposing the National Building Code, the Energy Conservation Building Code (ECBC) for the development to reduce the energy demand. Basic features are as given below. ✓ Aluminium Weather Resistant Insulated Access Panel. ✓ Energy Efficient Windows. ✓ Green Roof. ✓ Solar Power. ✓ Water Conservation. ✓ Recycling. ✓ Landscaping.
2	**Increase the use of renewable energy sources**: Renewable energy sources like solar, wind, hydro, and geothermal are cleaner and produce fewer greenhouse gas emissions compared to fossil fuels. Governments can incentivize the use of renewable energy through tax breaks, subsidies, and other policies.	we are providing the more than 33% solar power consumption as providing the 296 KW for site 2 and 982 KW for site 1 which will reduce the power demand as will affect positive for greenhouse gas emission.
3	**Improve transportation**: Transportation is a significant source of CO_2 emissions. Promoting the use of public transportation, carpooling, and electric vehicles can reduce greenhouse gas emissions.	We are upgrading the transportation facility for the region as developing new bridge widening of road which will reduce the CO_2 emission from vehicles.
4	**Encourage afforestation and reforestation**: Trees absorb CO_2 from the atmosphere, so planting new trees and protecting existing forests can help reduce greenhouse gas emissions.	We are proposing the dense plantation of 4000 trees.
5	**Reduce waste**: Decomposing waste in landfills produces methane, another potent greenhouse gas. Recycling, composting, and reducing waste can help reduce methane emissions.	Bio-composter are being provided for the domestic waste and waste generated from the project will be disposed-off only by authorized vendors who are capable of recycling facility.
6	**Increase public awareness**: Educating people about the impact of greenhouse gas emissions and encouraging them to make lifestyle changes can also help reduce emissions.	Training sessions will be organized for the educating peoples about the greenhouse effects and mitigations.

It's important to note that a combination of these strategies will likely be necessary to effectively control CO_2 greenhouse gas emissions.

- Proposed Green Building Code for this project shall be submitted. PP submitted they are adopting green building code for gold certification from IGBC. The Consultant have successfully completed one of prestigious project of Govt. of India for ICMR New Delhi the National Institute of Research on Environmental Health at Bhouri in Bhopal, the project has been awarded with GOLD CERTIFICATION on date 08-09-2021. Same features and guideline shall be followed in the project to achieve the Gold Certification.

IGBC Green New Buildings Rating System		**Points Available (Owner- occupied Buildings)**	**Points achieved in similar nature of project (NIREH)**
Modules		**100**	
Sustainable Architecture and Design		**5**	**4**
SA Credit 1	Integrated Design Approach	1	1
SA Credit 2	Site Preservation	2	1
SA Credit 3	Passive Architecture	2	2
Site Selection and Planning		**14**	**12**
SSP Mandatory Requirement 1	Local Building Regulations	Required	**Y**
SSP Mandatory Requirement 2	Soil Erosion Control	Required	**Y**
SSP Credit 1	Basic Amenities	1	1
SSP Credit 2	Proximity to Public Transport	1	1
SSP Credit 3	Low- emitting Vehicles	1	1
SSP Credit 4	Natural Topography or Vegetation	2	2
SSP Credit 5	Preservation or Transplantation of Trees	1	1
SSP Credit 6	Heat Island Reduction, Non- roof	2	1
SSP Credit 7	Heat Island Reduction, Roof	2	1
SSP Credit 8	Outdoor Light Pollution Reduction	1	1
SSP Credit 9	Universal Design	1	1
SSP Credit 10	Basic Facilities for Construction Workforce	1	1
SSP Credit 11	Green Building Guidelines	1	1

IGBC Green New Buildings Rating System		**Points Available (Owner- occupied Buildings)**	**Points achieved in similar nature of project (NIREH)**
Water Conservation		**18**	**14**
WC Mandatory Requirement 1	Rainwater Harvesting, Roof & Non- roof	Required	**Y**
WC Mandatory	Water Efficient Plumbing Fixtures	Required	**Y**

Requirement 2			
WC Credit 1	Landscape Design	2	1
WC Credit 2	Management of Irrigation Systems	1	0
WC Credit 3	Rainwater Harvesting, Roof & Non- roof	4	4
WC Credit 4	Water Efficient Plumbing Fixtures	5	5
WC Credit 5	Wastewater Treatment and Reuse	5	2
WC Credit 6	Water Metering	1	2
Energy Efficiency		**28**	**15**
EE Mandatory Requirement 1	Ozone Depleting Substances	Required	**Y**
EE Mandatory Requirement 2	Minimum Energy Efficiency	Required	**Y**
EE Mandatory Requirement 3	Commissioning Plan for Building Equipment & Systems	Required	**Y**
EE Credit 1	Eco- friendly Refrigerants	1	0
EE Credit 2	Enhanced Energy Efficiency	15	10
EE Credit 3	On- site Renewable Energy	6	4
EE Credit 4	Off- site Renewable Energy	2	0
EE Credit 5	Commissioning, Post- installation of Equipment & Systems	2	0
EE Credit 6	Energy Metering and Management	2	1
IGBC Green New Buildings Rating System		**Points Available (Owner- occupied Buildings)**	**Points achieved in similar nature of project (NIREH)**
Building Materials and Resources		**16**	**8**
BMR Mandatory Requirement 1	Segregation of Waste, Post- occupancy	Required	**Y**
BMR Credit 1	Sustainable Building Materials	8	3
BMR Credit 2	Organic Waste Management, Post- occupancy	2	0
BMR Credit 3	Handling of Waste Materials, During Construction	1	0
BMR Credit 4	Use of Certified Green Building Materials, Products & Equipment	5	5
Indoor Environmental Quality		**12**	**7**
IEQ Mandatory Requirement 1	Minimum Fresh Air Ventilation	Required	**Y**
IEQ Mandatory Requirement 2	Tobacco Smoke Control	Required	**Y**
IEQ Credit 1	CO2 Monitoring	1	0
IEQ Credit 2	Daylighting	2	0
IEQ Credit 3	Outdoor Views	1	1
IEQ Credit 4	Minimise Indoor and Outdoor Pollutants	1	1

IEQ Credit 5	Low- emitting Materials	3	3
IEQ Credit 6	Occupant Well- being Facilities	1	1
IEQ Credit 7	Indoor Air Quality Testing, After Construction and Before Occupancy	2	0
IEQ Credit 8	Indoor Air Quality Management, During Construction	1	1

It is proposed to achieve Gold to Platinum certification in 'Green Building' and 'Green Campus' categories as per IGBC Guidelines

Certification Level	**Owner- occupied Buildings**	**Tenant- occupied Buildings**
Certified	40 - 49	40 - 49
Silver	50 - 59	50 - 59
Gold	60 - 74	60 - 74
Platinum	75 - 100	75 - 100

After discussion the PP committed to submit the non-compliance as per the following schedule:-

Sr. No.	**Point of non- compliance**	**Scheduled time for submission compliances**
1.	Final approved T&CP Layout	45 days
2.	Land Use Change in accordance with Bhopal Development Plan 2005	45 days
3.	05 Lakh for Wild life habitat Development at National Park, Bhopal under CER	45 days
4.	NOC for fire safety from Competent authority	Before CTO from MPPCB

After presentation and submissions made by the PP were found to be satisfactory and acceptable hence the case was recommended for grant of Prior Environment Clearance for Re-densification of Collectorate Complex and Professor's colony [Total Built Up Area 1,41,545.00 Sq.mt. (1,01,609.00 Sq.mt. Site 1 + 39,936.00 Sq.mt. Site 2] at Khasra No. 106, 107, 108, 109, 1531/108, 1533/108, 1572/109, 1968/110,110, 9, 1382/1, 1382/2, 1382/4, 1383/1, 1383/3, 1383/4, 1384, 1385, 1386/1, 1386/3, 1387/2, 1424/2, 1425/2, 1884/1424, 1885/1424, 1873/1383/1, 1873/1383/3, 1977/1383/2 Tehsil-Huzur, District-Bhopal, (MP) . Cat. 8(a) Building construction project subject to the approval as per vide letter no. 595 dated 16.06.2023 submitted by Executive Engineer (PP) requested conditional EC requested subject for following departments NOC's which are under process :

- T&CP Layout and Modification/conversion of land use in Bhopal Development Plan within 45 days with following special conditions:

Statutory Compliance

i. The project proponent shall obtain all necessary clearances/permissions from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
ii. The approval of the Competent Authority shall be obtained for structural safety of building due to earthquakes, adequacy of firefighting equipment etc as per National Building code including protection measures from lightening etc.
iii. The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.
iv. The project proponent shall obtain the necessary permission for drawl of ground water/surface water required for the project from the competent authority.
v. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
vi. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
vii. The provisions for the solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
viii. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power Strictly.
ix. The project area shall be secure through boundary wall and excavated top soil shall not be used in filling of low lying area. The top soil shall be used for greenery development.

II. Air Quality Monitoring and preservation

i. Notification GSR 94(E) dated: 25/1/2018 MoEF & CC regarding Mandatory implementation of Dust Mitigation Measures for Construction and Demolition Activities for project requiring Environmental Clearance shall be complied with.
ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released covering upwind and downwind directions during the construction period.

iv. 03 nos. DG sets (2X400kVA & 1X200KVA) are proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.

v. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking wills all around the site plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, Murram and other construction materials prone to causing dust polluting at the site as well as taking out debris from the site.

vi. Sand, Murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.

vii. Wet jet shall be provided for grinding and stone cutting.

viii. Unpaved surface and loose soil shall be adequately sprinkled with water to suppress dust.

ix. All construction and demolition debris shall be stored at the site (are not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016.

x. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.

xi. The gaseous emission from 03 nos. DG sets (2X400kVA & 1X200KVA) shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

xii. For indoor air quality the ventilation provisions as per National Building Code of India.

III. Water quality monitoring and preservation

i. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.

ii. Buildings shall be designed to follow the natural topography as much as possible Minimum cutting and filling should be done.

iii. The total water requirement during operation phase is 395 KLD (258 KLD site- 1+ 137 KLD site- II) out of which 346 KLD wastewater shall be generated will be disposed of into a nearby municipal sewer line, which will be treated in the CSTP of the BMC having capacity of 4 MLD for Site 1 (Near Professor's colony) and 5 MLD CSTP for Site 2 (Near Kohefiza). Treated water from CSTP will be reused in our project premises for landscaping, flushing, other purposes, etc..

iv. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF & CC along with six monthly Monitoring reports.

v. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for separately for ground water and surface water sources, ensuring that there is no impact on other users.

vi. At least 20% of the open spaces as required by the local building bye-laws shall be previous. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as previous surface.

vii. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.

viii. Use of water saving devices/fixtures (Viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.

ix. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.

x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

xi. The local bye-law construction on rain water harvesting should be followed. If local by-law provision is not available, adequate provisions for storage and recharge should be followed as per the Ministry of Urban Development Model Building bylaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.

xii. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meter of built up area and storage capacity of minimum one day of total fires water requirement shall be provided. In

areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.

xiii. For rainwater harvesting, 20 recharge pits will be constructed for harvesting rain water. The total recharge capacity of these pits is @ 16.0 m3/ pit .

xiv. Mesh will be provided at the roof so that leaves or any other solid waste/debris will be prevented from entering the pit.

xv. The RWH will be initially done only from the roof top. Runoff from green and other open areas will be done only after permission from CGWB.

xvi. All recharge should be limited to shallow aquifer.

xvii. No ground water shall be used during construction phase of the project.

xviii. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.

xix. The quality of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The recorded shall be submitted to the Regional Office, MoEF & CC along with six monthly Monitoring report.

xx. No sewage or untreated effluent water would be discharged through storm water drains.

xxi. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problems from STP.

xxii. Sludge from the onsite sewage treatment including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Control Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. **Noise monitoring and prevention**

i. Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitoring during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.

ii. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

iii. Acoustic enclosures for DG sets, noise barriers for ground run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures.

i. PP ensure that more than 33% solar power consumption as providing the 296 KW for site 2 and 982 KW for site 1 which will reduce the power demand as will affect positive for greenhouse gas emission.

ii. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured, Building in the State which have notified their own ECBC, shall comply with the State ECBC.

iii. Outdoor and common area lighting shall be LED.

iv. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.

v. Energy Conservation measures like installation of CFls/LED's for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.

vi. Solar, wind or other renewable energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level /local building bye-laws requirement, which is higher.

vii. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

VI. **Waste Management**

i. **Total solid waste generated will be around 2.31 TPD (1.27 TPD Biodegradable and 1.04 TPD Non-Biodegradable Waste for site 1 and site 2)** this consist all types of wastes and these all type of waste shall be treated/ disposed off as per provision made in the MSW Rules 2016, E-Waste (M&H) Amendment rule , 2010 & Battery (M&H) Amendment rule , 2010.

ii. Hazardous waste as used oil - 80 liter/ year this Hazardous waste shall be disposed of as per HWM rule - 2016 or sold to authorizes recyclers.

iii. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the MSW generated from project shall be obtained.

iv. Disposal of muck during construction phase shall not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for

general safety and health aspects of people, only in approved sites with the approval of competent authority.

v. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.

vi. PP has proposed 02 organic waste composter (2X1000 kg). All non-biodegradable waste shall be handed over the authorized recyclers for which a written lie up must be done with the authorized recyclers.

vii. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

viii. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction materials quantity. These include fly ash brick, hollow bricks, AACs, Fly Ash Lime Gypsum block, compressed earth blocks and other environmental friendly materials.

ix. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016 Ready mixed concrete must be used in building construction.

x. Any wastes from construction and demolition activities related thereto small be managed so as to strictly conform to the construction and Demolition Rules, 2016.

xi. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

VII. **Green Cover**

i. Total 4000 trees shall be planted in the area of **73318 Sq.mt.** m^2 **(66311 Sq.mt + 7007 Sq.mt.)** as open park/greenbelt Area and we have proposed approx. **4000 trees** of native species on site and available space. (31.14 % of total plot area) which is developed as greenbelt development.

ii. As proposed 390 trees are proposed for felled and 05 trees are transplant unless exigencies demand. tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (Planted).

iii. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should included plantation of native species. The species with heavy foliage, broad leaves

and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

iv. Where the trees need to be cut with prior permission from the concerned local Authority, Compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.

v. Topsoil should be stripped to depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stack plied appropriately in designated areas and reapplied during plantation of the proposed vegetations on site.

VIII **Transport**

i. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public and private network. Road should be designed with due consideration for environment and safety of users. The road system can be designed with these basic criteria.

a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic
b. Traffic calming measures.
c. Proper design of entry and exit points
d. Parking norms as per local regulation

ii. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

iii. Total proposed Parking's arrangement for **1502 ECS** (site-I **1163 + 339** site-II**)**.

iv. A detailed traffic management and traffic decongesting plan shall be drawn up to ensure that the current level of service of the road within a 05 Kms radius of the project as maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of the development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management and the PWD/competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

IX. Human health issues

i. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

ii. For indoor air quality the ventilation provisions as per National Building Code of India.
iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implementation.
iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile, STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
v. Occupational health surveillance of the workers shall be done on a regular basis.
vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. **EMP & Corporate Environment Responsibility**

i. For Environment Management Plan PP has proposed Rs. 112.00 Lakhs/year as capital and Rs. 8.80 Lakhs/year as recurring cost has proposed for this project.
ii. Rs. 05 Lakh is proposed for Wild life habitat Development at National Park, Bhopal under CER Activity.
iii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The Environmental policy should prescribe for standard operating procedures to have proper checks and balance and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the Environmental/forest/wildlife norms/conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six monthly reports.
iv. A separate Environmental Cell both at the project and company head quarter with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
v. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

XI. Miscellaneous

i. The project authorities must strictly adhere to the stipulation made by the MP Pollution Control Board and the State Government.
ii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the State Expert Appraisal Committee (SEAC)
iii. No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
iv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
v. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.

23. Case No 9616/2023 Shri Chandrika Verma, Divisional Project Engineer, PWD PIU, Bhind Road, DD Nagar, Gwalior (MP)-474012. Prior Environment Clearance for Construction of 1000 bedded Hospital at Khasra No. 1804/3, 1804/4, 1460, 1461, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1539, 1540, 1541, 1542, 1543, 1547, 1548, 1549/1, 1549/2, 1550, 1551/1, 1551/2, 1552, 1553, 1554, 1805, 1837/1539, Village-Lashkar, Tehsil-Gwalior, District-Gwalior M.P. Total Plot Area 86,280 Sq.Meters , Total Built-up 89270.73 Sq. Meters. Env. Cons.- M/s. In-Situ Enviro Care, Bhopal - (For Violation).

This is case of Prior Environment Clearance for Construction 1000 bedded Hospital at Khasra No. 1804/3, 1804/4, 1460, 1461, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1539, 1540, 1541, 1542, 1543, 1547, 1548, 1549/1, 1549/2, 1550, 1551/1, 1551/2, 1552, 1553, 1554, 1805, 1837/1539, Village-Lashkar, Tehsil-Gwalior, District-Gwalior Total Plot Area 86,280 Sq. Meters , Total Built-up 89,270.73 Sq. Meters.

In the SEAC 623rd dated 22.02.2023 the case was presented by PP Shri Chandrika Verma, Divisional Project Engineer, PWD PIU, Bhind and their Environmental Consultant Shri Ajay Mohan from M/s. In-Situ Enviro Care, Bhopal on dated 22/02/23. During presentation PP submitted that this is a violation project wherein the construction of the

ANNEXURE-4

म. प्र. शासन
पर्यावरण विभाग
मंत्रालय, वल्लभ भवन, भोपाल
//आदेश//

आदेश क्र 32 /233 /2022/32-3-भारत सरकार के पर्यावरण संरक्षण अधिनियम 1986 की धारा 3 की उपधारा (1) एवं उपधारा (2) के खण्ड (V) और उपधारा (3) के साथ पठित धारा 25 और धारा 23 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए वेटलैण्ड नियम 2017 अधिसूचित किये गये हैं। भोपाल,दिनांक 16 मार्च,2022

1. वेटलैण्ड नियम 2017 की धारा 3 (क) अनुसार वेटलैण्ड भोज वेटलैण्ड जो कि एक रामसर साइट है पर वेटलैण्ड नियम 2017 प्रभावशील हैं। नियमों के प्रभावी क्रियान्वयन हेतु भोज वेटलैण्ड एवं उसके Zone of Influence (ZoI) के आवश्यक – मानचित्र क्र.1, मानचित्र क्र.2 एवं मानचित्र क्र.3 जो इस आदेश के साथ परिशिष्ट अ- पर संलग्न है का अनुमोदन राज्य वेटलैण्ड प्राधिकरण की दिनांक 01 फरवरी 2022 को संपन्न बैठक में किया गया है। इन मानचित्रो के आधार पर वेटलैण्ड नियम 2017 एवं मार्गदर्शिका में उल्लेख अनुसार वेटलैण्ड के भीतर एवं वेटलैण्ड बाउण्ड्री से 50 मी. की सीमा एवं इसके ZoI में Prohibited, Regulated & Permitted गतिविधियों के निर्धारण के संबध में भी अनुशंसा की गयी है।
2. उपरोक्त के दृष्टिगत राज्य शासन द्वारा भोज वेटलैण्ड की Full Tank Level (FTL) बाउण्ड्री एवं उससे 50 मी. की सीमा को दर्शाने वाले मानचित्र एवं ZoI को दर्शानेवाले मानचित्र क्र. 1, 2 एवं 3 को प्रशासकीय स्वीकृति प्रदान की जाती है। उपरोक्त मानचित्रों के आधार पर भोज वेटलैण्ड का FTL पर क्षेत्रफल 3946.33 ha. (बड़ा तालाब 3872.43 ha. + छोटा तालाब 73.90 ha.) निर्धारित हुआ है की स्वीकृति प्रदान की जाती है।
3. भोज वेटलैण्ड एवं इसके ZoI में शहरी एवं ग्रामीण क्षेत्रों तथा कोलांस नदी एवं उनसे मिलने वाले नदी नालों (Major & Minor Streams) की दूरियों के संबंध में निम्नलिखित प्रावधान निर्धारित किये जाते हैं -
   i. शहरी क्षेत्र की ओर BWL के FTL के आसपास 50मी .का बफर – **मानचित्र क्र.1**
   ii. ग्रामीण क्षेत्र की ओर BWL के FTL के आसपास 250मी .बफर– **मानचित्र क्र. 2**
   iii. कोलांस नदी के आसपास 250मी .बफर – **मानचित्र क्र.3**
   iv. कैचमेंट प्रमुख स्ट्रीम के आसपास 50मी .बफर – **मानचित्र क्र.3**
   v. कैचमेंट के माइनर स्ट्रीम के आसपास 09मी .बफर – **मानचित्र क्र.3**
4. वेटलैण्ड के अन्दर, FTL से 50 मी. की दूरी में एवं ZoI में Prohibited, Regulated & Permitted गतिविधियों को निम्नानुसार प्रभावी किया जाता है -

A. प्रतिबंधित गतिविधियां (Prohibited Activities)

वेटलैण्ड नियम 2017 का पालन सुनिश्चित करने हेतु भोज वेटलैण्ड एवं उसके ZoI में Prohibited गतिविधियों का निम्नानुसार निर्धारण किया जाता है। भोज वेटलैण्ड के Full Tank level (FTL) से 50 मी. तक निर्माण व अन्य गतिविधियां निम्नानुसार पूर्णत: प्रतिबंधित की जाती हैं –

i. Conversion for non-wetland uses including encroachment of any kind;	i. किसी भी किस्म के अतिक्रमण सहित गैर वेटलैण्ड उपयोग हेतु परिवर्तन
ii. Setting up of any industry and expansion of existing industries;	ii. किसी भी उद्योग को स्थापित करना एवं विद्यमान उद्योगों का विस्तार करना
iii. Manufacture or handling or storage or disposal of construction and demolition waste covered	iii. निर्माण एवं अपशिष्ट प्रबंधन नियम 2016 के अंतर्गत आने वाले निर्माण

under the Construction and Demolition Waste Management Rules, 2016; hazardous substances covered under the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 or the Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms/Genetically Engineered Organisms or cells, 1989 or the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008; electronic waste covered under the E-Waste (Management) Rules, 2016; iv. Solid waste dumping; v. Discharge of untreated wastes and effluents from industries, cities, towns, villages and other human settlements; vi. Any construction of a permanent nature except for boat jetties within fifty metres (50) from the mean high flood level observed in the past ten years calculated from the date of commencement of these rules; and, vii. Poaching.	और अपशिष्ट का विनिर्माण या निपटान, परिसंकटमय रसायन के विनिर्माण, भण्डारण और आयात निर्माण नियम, 1989 या परिसंकटमय सूक्ष्म जीवों, आनुवंशिक रूप से निर्मित जीवों या कोशिकाओं का उपयोग, आयात, निर्यात, और भण्डारण संबंधी नियम, 1989 या परिसंकटमय अपशिष्ट (प्रबंधन, और सीमा पार संचालन) नियम 2008 के अंतर्गत आने वाले परिसंकटमय पदार्थ, ई- अपशिष्ट, (प्रबंधन) नियम, 2016 के अंतर्गत आने वाले ई- अपशिष्ट iv. ठोस अपशिष्ट का निष्पादन ; v. उद्योगों, शहरों, कस्बों, गांवों और अन्य मानव बस्तियों, से अशोधित अपशिष्ट और बहिस्रावों का निष्पादन vi. किसी भी स्थायी प्रकृति का निर्माण सिवाय नाव घाटों के, तालाब के 50 मीटर के भीतर प्रतिबंधित रहेंगे। vii. अवैध शिकार

B. विनियमित गतिविधियां (Regulated Activities)-

नगर निगम, भोपाल द्वारा भोज वेटलैण्ड एवं उसके Zone of Influence में मलजल उपचार संयंत्र / सीवेज पंप हाउस (STP/SPH) स्थापित किये जाने के प्रस्ताव को विनियमित गतिविधियों में सम्मलित किया जाता है। वेटलैण्ड नियम 2017 का पालन सुनिश्चित करने हेतु भोज वेटलैण्ड एवं उसके ZoI में Regulated गतिविधियों का निम्नानुसार निर्धारण किया जाता है -

i. Subsistence level biomass harvesting (including traditional practices); ii. Sustainable culture fisheries practices (in private lands); iii. Plying of non-motorized boats; iv. Desilting, in case where wetlands inflow regimes and water-holding capacity are impacted by siltation (note that 'deepening' activities are not the same as 'desilting'); & v. Construction of temporary nature vi. Construction of STP/SPH by Municipal Corporation, Bhopal	i. जीवन निर्वाह योग्य मात्रा में बायोमास निकालना (परंपरागत तरीकों सहित) ii. संधारित मछलीपालन iii. गैर – मोटर चालित नावों का संचालन iv. डीसिल्टिंग-डिवीडिंग करते समय यह ध्यान रखा जाए कि वेटलैण्ड के जल स्रोत एवं जल ग्रहण क्षमता में कोई प्रभाव न हो (नोट-तालाब गहरीकरण एवं डीसिल्टिंग दो अलग-अलग क्रियाकलाप हैं)। v. अस्थाई प्रकृति के निर्माण। vi. नगर निगम, भोपाल द्वारा मलजल उपचार संयंत्र/सिवेज पम्प हाउस का निर्माण।

C. अनुज्ञात गतिविधियां (Permitted Activities)-

वेटलैण्ड नियम 2017 का पालन सुनिश्चित करने हेतु भोज वेटलैण्ड एवं उसके ZoI में Permitted गतिविधियों का निम्नानुसार निर्धारण किया जाता है।

भारत सरकार द्वारा जारी वेटलैण्ड नियम क्रियान्वयन मार्गदर्शिका (15-क्र .पृ) 2020 अनुसार ऐसी गतिविधियां जिनके कारण वेटलैण्ड के Wise Use की परिकल्पना साकार होती है, वेटलैण्ड एवं ZoI में Permit की जा सकती हैं। उपरोक्त मार्गदर्शिका अनुसार निम्नलिखित गतिवधियां भोज वेटलैण्ड और उसके ZoI में Permitted Activities की श्रेणी में होंगी – i. Ecological rehabilitation and rewilding of nature; ii. Wetlands inventory, assessment and monitoring; iii. Research; iv. Communication, environmental education and participation activities; v. Management planning; vi. Habitat management and conservation of wetland-dependent species; vii. Community-based ecotourism (with minimum construction activities); viii. Harvesting of wetlands products within regenerative capacity; and, ix. Integrating wetlands as nature-based solutions for climate change mitigation and adaptation.	i. पारिस्थितिक पुनर्वास एवं प्रकृति का पुनर्निमाण ii. वेटलैण्ड इंवेन्ट्री मूल्यांकन एवं मॉनीटरिंग iii. शोध कार्य iv. संप्रेषण, पर्यावरण शिक्षा और जन-भागीदारी कार्यकलाप v. प्रबंधन नियोजन vi. वेटलैण्ड आधारित पक्षियों का संरक्षण एवं उनके प्राकृतिक रहवास का प्रबंधन vii. समुदाय आधारित ईको-टूरिज्म (कम से कम निर्माण गतिविधियां सहित) viii. पुनर्योजी क्षमता अनुसार वेटलैण्ड के प्राकृतिक उत्पादों का संतुलित दोहन ix. जलवायु परिवर्तन समस्या के निदान के लिए प्राकृतिक संसाधन आधारित अनुकूलन एवं शमन हेतु वेटलैण्ड का एकीकरण

भोज वेटलैण्ड परियोजना अंतर्गत मानचित्र,प्रतिबंधित गतिविधियां,विनियमित गतिविधियां एवं अनुज्ञात गतिविधियों के संबंध में प्रशासकीय आदेश जारी होने के दिनांक से प्रभावशील होंगे।

म. प्र. के राज्यपाल के नाम से
तथा आदेशानुसार

(सुप्रिया पंडके)
अवर सचिव
मध्यप्रदेश शासन,
पर्यावरण विभाग
भोपाल, दिनांक 16 मार्च,2022

पृ. क 303/ 233 /2022/32-3

1. विशेष सहायक, माननीय मंत्री पर्यावरण विभाग म. प्र. शासन
2. उपसचिव, मुख्य सचिव कार्यालय, म. प्र. शासन
3. अपर मुख्य सचिव, म. प्र. शासन, जल संसाधन विभाग
4. अपर मुख्य सचिव, म. प्र. शासन, लो. स्वा. यां. विभाग
5. अपर मुख्य सचिव, म. प्र. शासन, कृषि विभाग

6. प्रमुख सचिव, नगरीय विकास एवं आवास विभाग
7. प्रमुख सचिव, म. प्र. शासन, पंचायत एवं ग्रामीण विकास विभाग
8. प्रमुख सचिव, म. प्र. शासन, मछुआ कल्याण एवं मत्स्य विभाग
9. प्रमुख सचिव, म. प्र. शासन, पर्यावरण विभाग
10. प्रमुख सचिव, म. प्र. शासन, वन विभाग
11. प्रमुख सचिव, म. प्र. शासन, राजस्व विभाग
12. प्रमुख सचिव, म. प्र. शासन, पर्यटन विभाग
13. प्रमुख सचिव, म. प्र. शासन, खेल एवं युवा कल्याण विभाग
14. संयुक्त सचिव, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार (वेटलैण्ड डिवीजन), नई दिल्ली।
15. संभागायुक्त, भोपाल संभाग, भोपाल
16. सदस्य सचिव, राज्य वेटलैण्ड प्राधिकरण, एप्को, भोपाल
17. आयुक्त, नगरीय प्रशासन एवं विकास संचालनालय, भोपाल
18. आयुक्त, सह संचालक, नगर एवं ग्राम निवेश संचालनालय, भोपाल
19. कलेक्टर, जिला, भोपाल एवं सीहोर
20. आयुक्त, नगर पालिक निगम, भोपाल
21. नियंत्रक, शास. केन्द्रीय मुद्रणालय मैदा मिल, भोपाल की ओर आगामी राजपत्र में प्रकाशनार्थ।
22. उप संचालक, प्रेस प्रकोष्ठ, जन संपर्क, भोपाल।
23. सदस्य सचिव, म. प्र. प्रदूषण नियंत्रण बोर्ड, भोपाल।

अवर सचिव
म. प्र. शासन
पर्यावरण विभाग

ANNEXURE-5

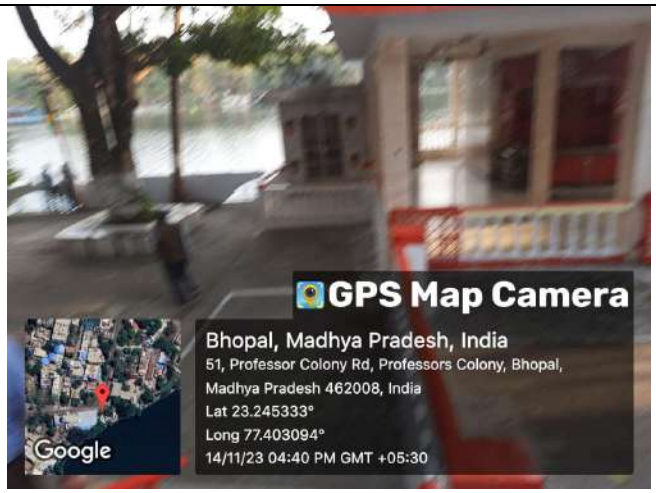
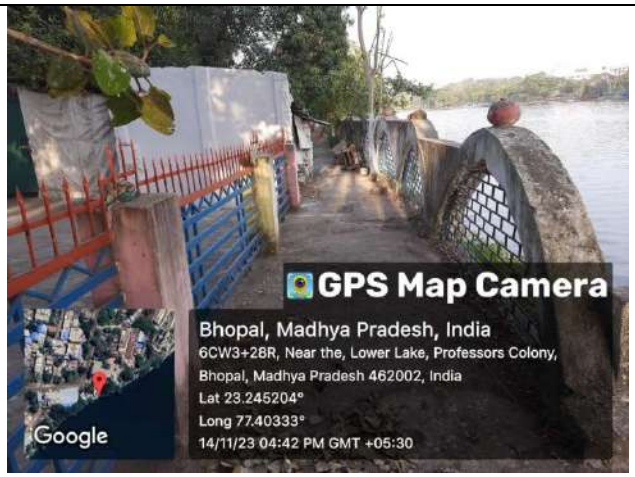
ANNEXURE-5

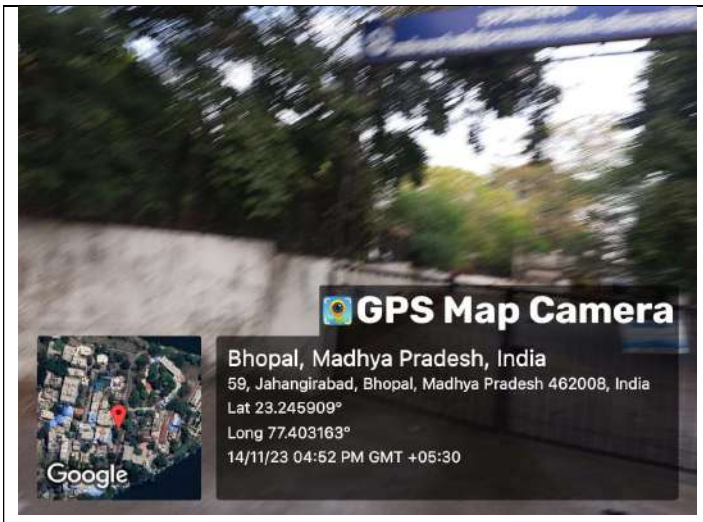
ANNEXURE-6

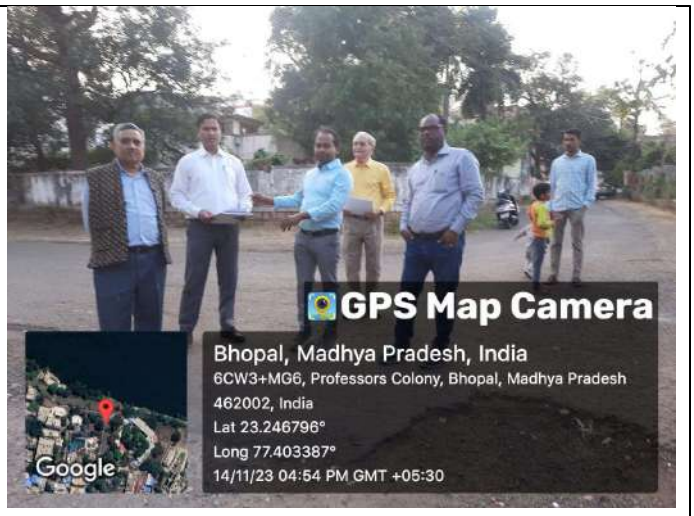
General abstract for construction and development works on 6.90 hac. Land of collectorate campus and 13.00 hac. Land of professor colony Bhopal under reidentification scheme

a) Construction of Collectorate Building at Professor Colony Bhopal
b) Construction of Commissioner Office at Professor Colony Bhopal
c) Construction of UADD Building at Professor Colony Bhopal
d) Construction of Composite Building at Professor Colony Campus-1 at Bhopal
e) Construction of Convenient Shop Campus1 Professor Colony at Bhopal
f) Development Works Campus -1at Professor Colony and Site Dev. Works at Bhopal
g) Construction and Development works of B Type Apartment at Professor Colony Bhopal
h) Construction of Sr. Jr. SC/ST Girls Hostel at Professor Colony Bhopal
i) Construction of MLB College Girls Hostel at Professor Colony Bhopal
j) Construction of Working Women Hostel at Professor Colony Bhopal
k) Construction of Govt College Girls Hostel at Professor Colony Bhopal
l) Dev. Works Campus 3 at Professor Colony Bhopal
m) Construction of Souvenir Shopping Complex at Professor Colony Bhopal
n) Construction of Podium Parking at Professor Colony Bhopal
o) No mention of shifting STP in the project although mentioned in discussions by the consultant
p) No mention of removing illegal permanent structures within 50 m of FTL
q) No consideration by environment consultant regarding water quality of lower lake in his report.

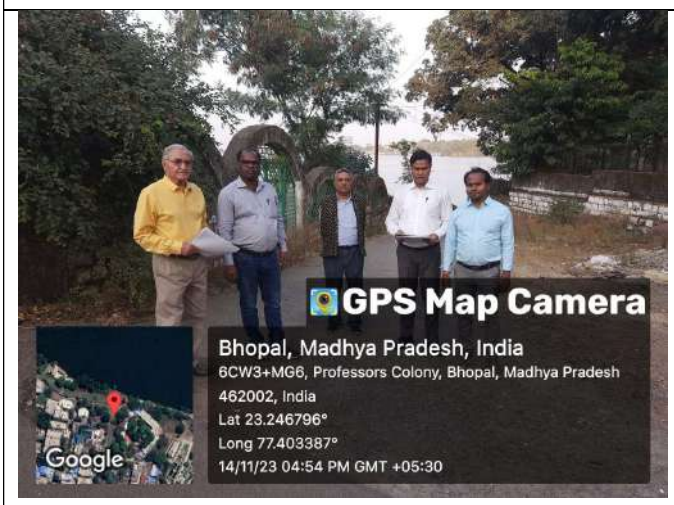
ANNEXURE-A

	
The proposed construction sites	***FTL of Lower Lake***
	
Religious place at FTL of Lower Lake	***Pathway at FTL of Lower Lake***



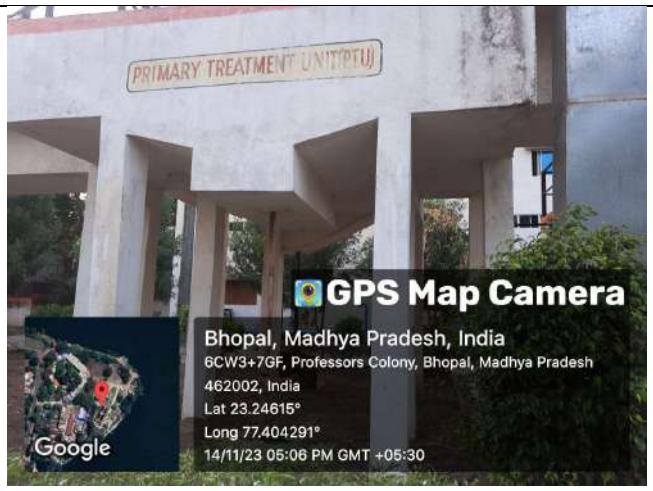


Infront of MLB girls Hostel



Near STP/Pumphouse

Religious waste at Lower Lake



STP/Pumphouse site

ANNEXURE-B

Map Showing –Distance from Lower Lake (Ramsar site) 50 meter from FTL to proposed project

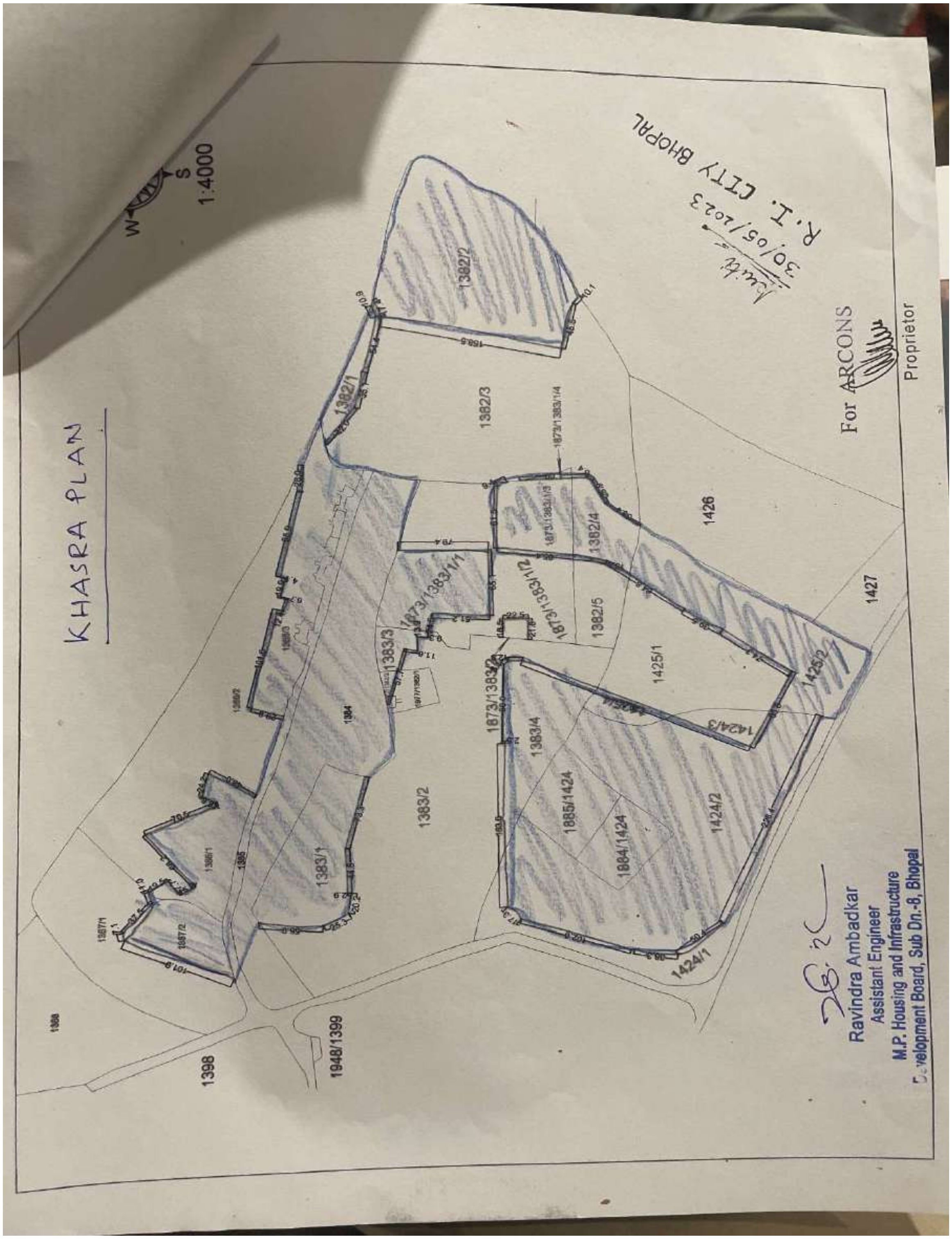
ANNEXURE-C

PROPOSED ROAD AND BUILDING MAP

SCHEME AREA


PROFESSOR'S COLONY- SCHEME AREA
KILOL UNDERPASS
KILOL PARK
CLP
B-TYPE
30M SMART ROAD
24M SMART ROAD
OFFICE CAMPUS
CLP
STP
FLYOVER
URBAN FOREST
UNDERPASS
PODIUM PARKING
HOSTEL CAMPUS
POLYTECHNIC SQUARE
SOUVENIER SHOPPING
RAVINDRA BHAWAN UNDERPASS

KHASRA MAP

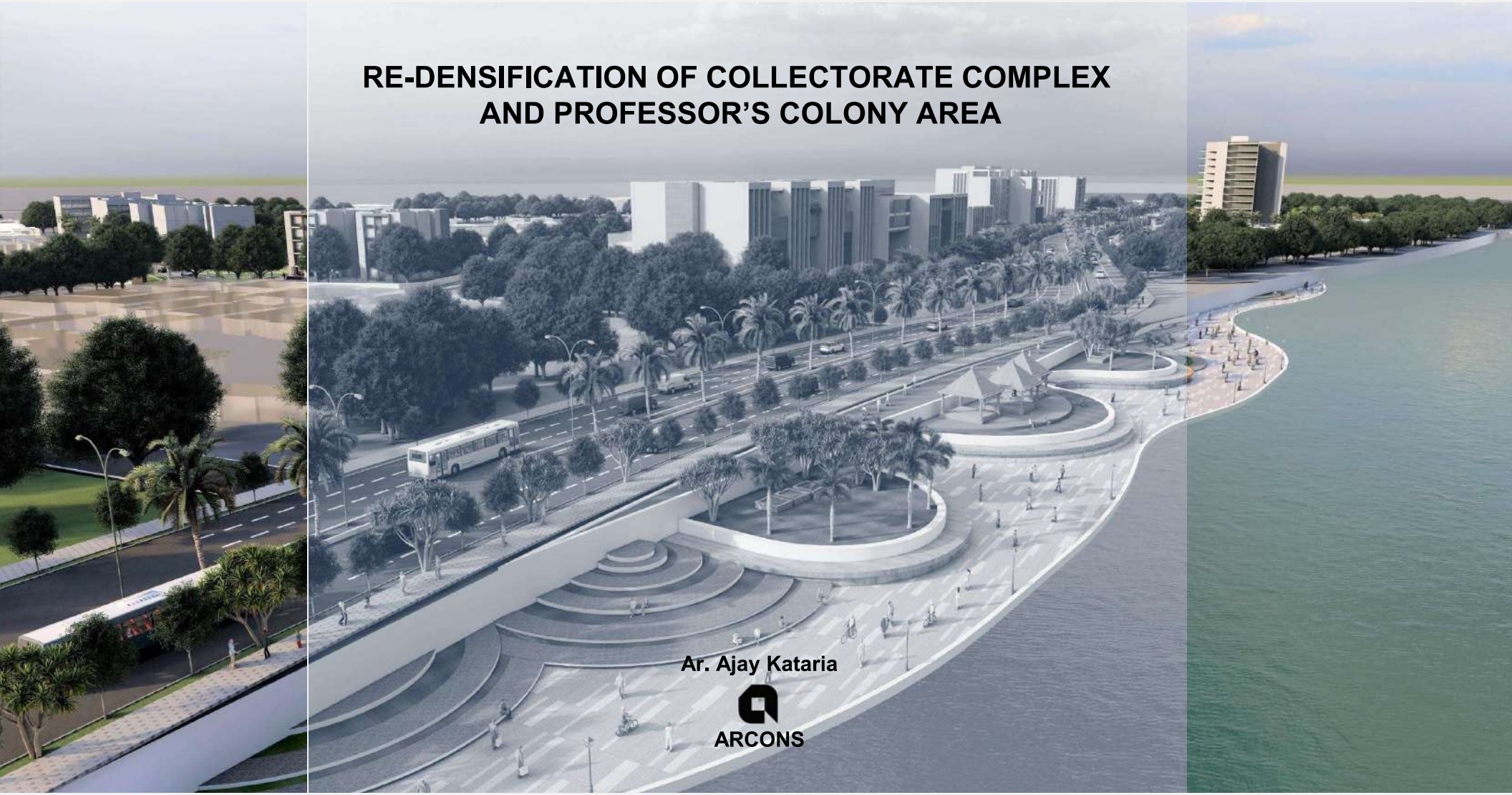


KHASRA PLAN
1:4000
1382/2
1382/1
1382/3
1382/4
1382/5
1383/1
1383/2
1383/3
1383/4
1384
1385
1398
1948/1399
1424/1
1424/2
1424/3
1425/1
1425/2
1426
1427
1885/1424
1884/1424
1873/1383/1/1
1873/1383/1/2
R.I. CITY BHOPAL
30/05/2023
For ARCONS
Proprietor
Ravindra Ambadkar
Assistant Engineer
M.P. Housing and Infrastructure
Development Board, Sub Dn.-8, Bhopal

GEOGRAPHICAL SURVEY MAP

ANNEXURE-3

RE-DENSIFICATION OF COLLECTORATE COMPLEX AND PROFESSOR'S COLONY AREA



Ar. Ajay Kataria

ARCONS

BACKGROUND OF THE PROJECT

Modern cities are perfect examples for insufficiency in surface areas, and scarce formal or functional qualities. Natural and recyclable materials have not been used in their construction and too much energy was, and is, consumed in their various phases – from construction, to operation and decommissioning.

After 1960 new constructions were increasingly built on the basis of unsuitable models with the result that they now need radical overhaul or, in some cases, replacement.

In order to make quality urban districts more “sustainable” re-densification measures, which if rationally planned, could help reduce costs determined by uncontrolled land consumption and promote a renewed and more effective functional mix. radical overhaul or, in some cases, replacement.

The adoption of integrated urban development strategies by using planning tools are required to identify:

- The strong and weak points of cities and their districts by analyzing the current situation
- Defining practical development objectives for the urban area within a city-vision
- Co-ordinating policies and sectorial and technical projects for the various districts and by ensuring that investment programs help promote a balanced development of the urban area as well as having funds from public and private actors converge upon the various urban spaces.

In order to achieve urban restoration, the involvement of all citizens and partners in order to contribute towards enhancing the economic, social, cultural and environmental quality of each area.

Re-densification is the term used to densify the area which is:

- Badly planned
- Developed with incompatible land-uses with reference to the Development plan
- Re-develop the low density area in the core of city on valuable land.

The Government of Madhya Pradesh introduced the Re-densification policy in the year 2005 to densify and use the land occupied by various Govt complexes/ buildings with old construction or under utilisation of valuable land for housing, office or/and commercial complexes.

The policy is well elaborated for functional utilisation of land for various purposes as per need and re-development of area in accordance with the respective Development Plan of the city.

Various Re-densification schemes has been launched successfully by the nodal agencies prescribed in the policy.

The policy has identified the re-densification works which can be undertaken:

- ✓ Additional construction on adjoining land with Govt offices with reference to Development plan and Bhumi Vikas Niyam 2012.
- ✓ Financially inviable Govt building and premises.
- ✓ Re-development of incompatible Govt building and premises in dense area of the city.
- ✓ New construction or extension of Govt offices/institutes with inadequate resources.

Salient features of the Policy:

- The list of the Govt Buildings/premises shall be maintained by the PWD and respective HOD.
- Housing and Urban development Deptt. of State Govt. shall be nodal department.
- MPHIDB shall be the supervising agency where as MPRDC shall be supervising agency for PWD Buildings/premises .
- The shall be approved by the Authorised Committee as constituted.
- The committee constituted at district and state level shall decide Buildings/ premises for re-densification.
- Upset value of the property shall be decided on the basis of current collector guideline rates.
- After the technical sanction tender shall be invited.
- MoU shall be executed after financial approval of the tender by committee with reference to the upset value.
- The Govt. land shall be handed over to the bidder as per condition laid in the MoU.
- The Construction agency shall not use the land other than as prescribed in the MoU without prior permission.

- The primary objective of this project is to provide functional and sustainable design keeping in mind major guiding principles such as solutions to congestion in traffic, land use regulations and green cover.

- Keeping in mind the importance of the main road from Vivekananda square to Retghat, the new office complex in Professor's colony will bring in more traffic to the already busy area and needs to be re engineered through the process of Re-densification. Through this project, many issues such as overcrowding and rush hour traffic have been addressed by introducing various solutions such as provision of a grade separator, road widening, and provision of rotaries.

- Through this project, a newer perspective of the lower lake will also be achieved by the opening up of the entire vista of the office buildings and the main connecting road to the same.

- The design of the entire project has been done keeping in mind sustainable and green building features and basic characteristics of the site have been retained to a great extent by not disturbing the natural slope and trees. In case of the major existing tree cover, transplantation has been proposed to preserve the local flora/fauna wherever need be. Other than this, green roofs have been proposed for covered parking slots especially the office building complex, to maintain the microclimate of the site.

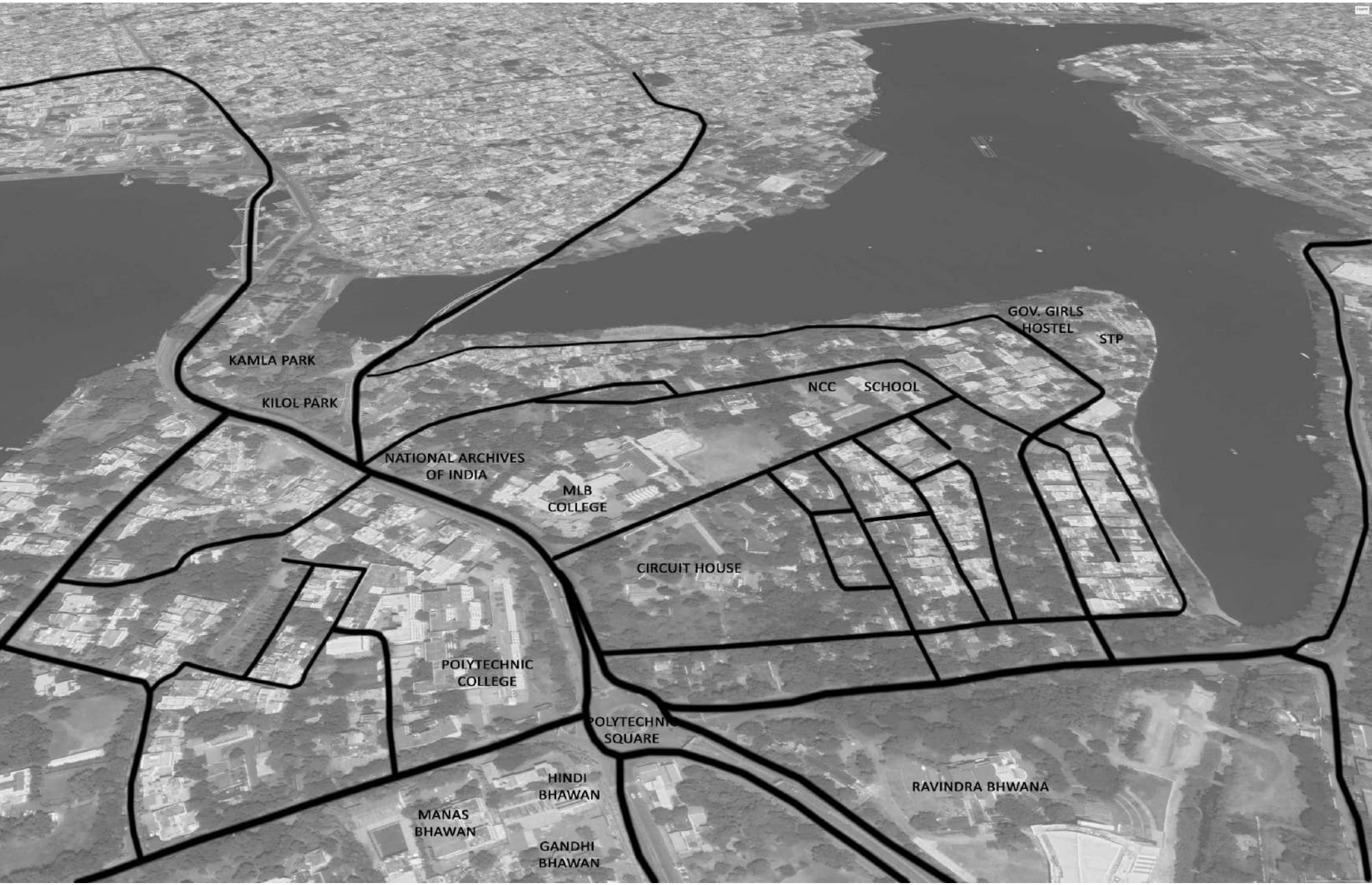
- The office complex has been designed to be a zero discharge campus, with ample natural light and ventilation. The indoor environment of the offices will mostly be through natural ventilation as only 50% of the spaces in the building will have a controlled environment through Air conditioning. The ventilation of common areas such as corridors is through the concept of 'Wind tunnels', especially in the atrium areas. All the common areas have been designed to have ample natural light by using light harvesting through skylights, throughout the day.

- The entire campus is designed to be a compact composite campus with common amenities such as Power backup, Water Supply, Fire tanks and other amenities under one roof for easy maintenance.

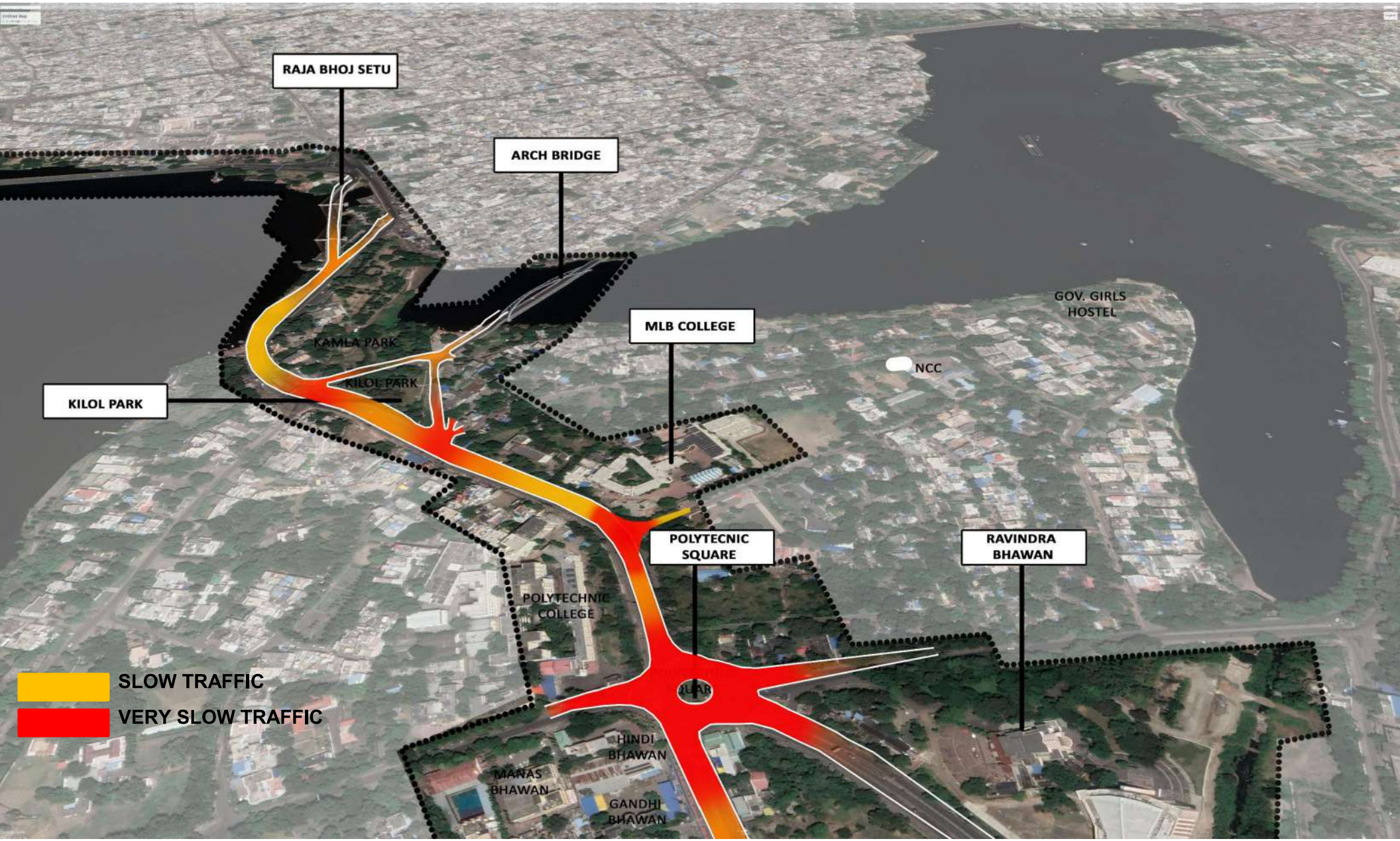
TRAFFIC ANALYSIS OF THE SCHEME AREA

- Urbanisation is a regular process, urban population is expected to have 34% share of the state‘s population by the year 2026. Bhopal the developing city shows rapid growth in automation.
- One of the major road from Retghat to New Market, spine of the Bhopal, links the old and new cultures of Bhopal.
- The Kilol park square and Vivekanand Square are important traffic junction in between.
- The Vivekanand Square connecting CM House to Raj bhavan is the busiest junction, with five exits needs to be re-engineered with the introduction of Re-densification of professor's colony area.

EXISTING ROAD NETWORK



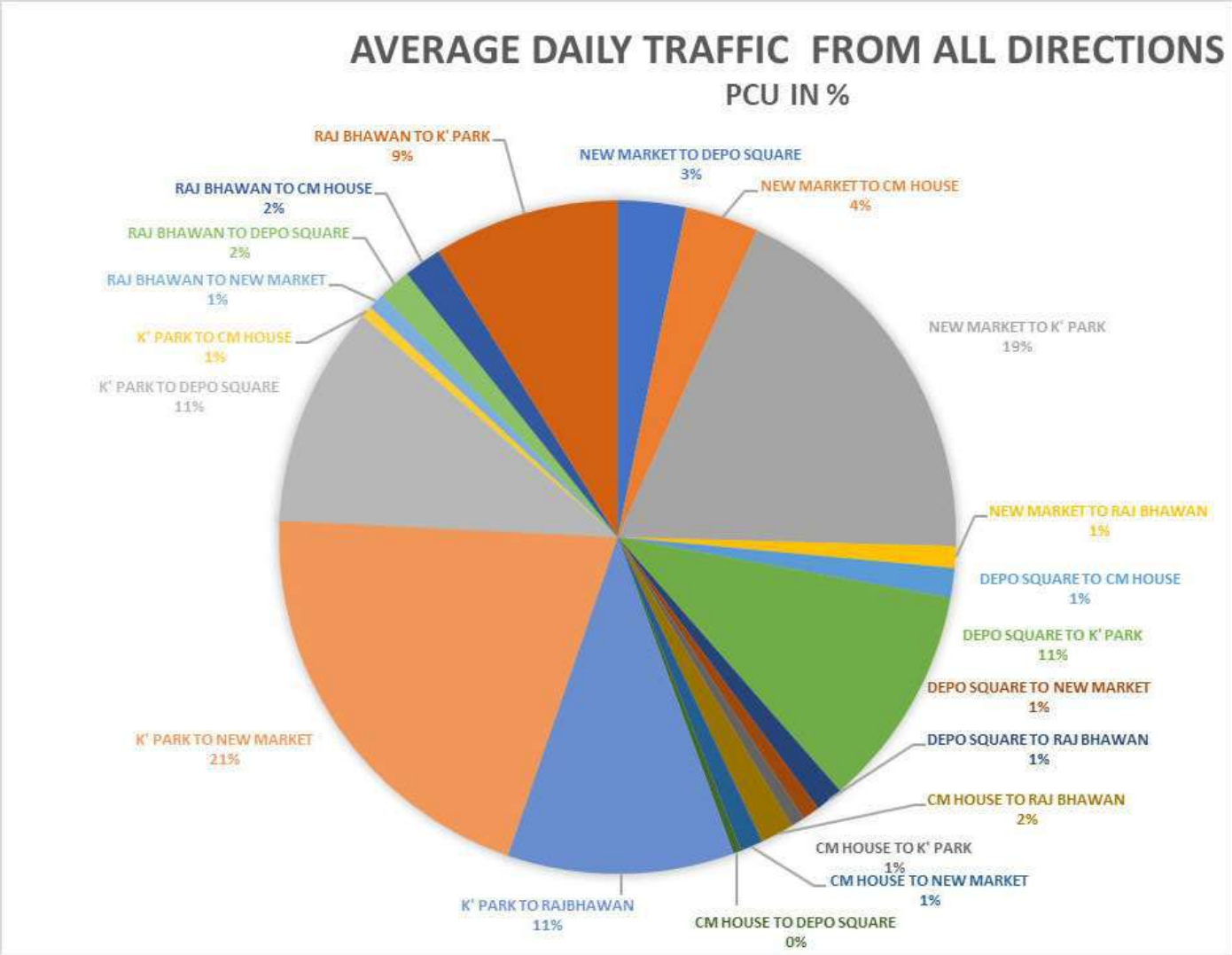
TRAFFIC ANALYSIS- CONGESTION POINTS



Distances from Proposed Administrative Complex		
S. No.	**Locations**	**Dist. in Kms**
A	Administrative Establishments	
1	Vidhan Sabha Bhawan	3.30
2	C. M. House	1.20
3	Rajbhawan	1.30
4	Secretariat Vallabh Bhawan	4.40
5	Old Collectrorate Complex	4.20
6	Police Head Quarter	1.60
B	Other Facilities	
1	RKMP Railway Station	6.50
2	Bhopal Station	4.50
3	ISBT	6.20
4	Raja Bhoj Airport	12.50
5	Hamidia Hospital	2.50
6	Maharana Pratap Nagar	4.50

To understand the actual behaviour of the two junctions namely Polytechnic, Arch bridge and Kilol park vehicle count survey was conducted on 3 days on 20th to 22nd May 2023.

Polytechnic square:
Total ADT at this survey location were recorded as 96046 in terms of number and 88228 in terms of PCU. Fast moving vehicles were recorded as 98.65% of the total traffic (in No.)



To understand the actual behaviour of the two junctions namely Polytechnic, Arch bridge and Kilol park vehicle count survey was conducted on 3 days on 20th to 22nd May 2023.

Kilol square:
Total ADT at this survey location were recorded as 93917 in terms of number and 85354 in terms of PCU. Fast moving vehicles were recorded as 98.65% of the total traffic (in No.).

TRAFFIC PROJECTION FOR 20 YEARS

The rapid global development of urbanization has significantly complicated traffic flow management, which serves to reduce congestion, traffic accidents, and the health effects of traffic-related pollution. Increasing the traffic capacity of the road network (RN) with high-density traffic flows (TF) is one of the main priorities for road traffic organization in large cities.

Projection of traffic as per current Average Daily Traffic (ADT) is as follows:

Future ADT = Current ADT x Traffic projection factor
Traffic projection factor = [1+r]n+x
Where r = traffic growth in %
(Growth rate has been taken 5%. As per circular provided by GOI, Ministry of Road Transport & Highways, dated 18th January, 2008 reference no. RW/NH-37011/57/ 2006-PIC,.)
n = year of projection say 20 years
x = year of construction say 5 years
Thirtieth Highest Hourly Volume (30HV)= 0.15 x future ADT (vpd)

On the basis of traffic projection, five yearly projection is calculated. It shows that 18 lane road shall bee required in the year 2045.

Traffic Projection Chart							
Average Daily Traffic				88228	PCU		
Year of Projection	No. of years n	Construc-tion period x	Traffic Growth as per MoRTH	Traffic projection factor	Projected Traffic in PCU	30HV Vehicle per day (0.15)	Lane required 1900 PCU/Hr per lane
2025	0		5%	1.00	88228	13234	7
2030	5		5%	1.28	112604	16891	9
2035	10		5%	1.63	143714	21557	11
2040	15		5%	2.08	183420	27513	14
2045	20		5%	2.65	234095	35114	18

KILOL PARK ROTARY

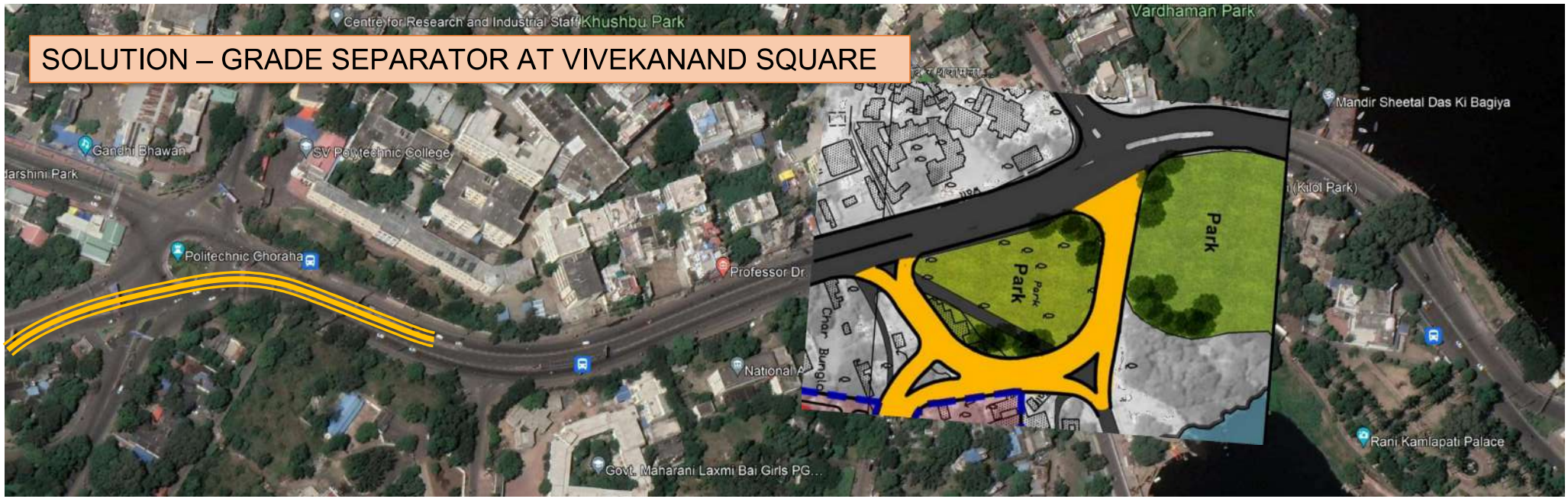
Kilol park developed as bigger rotary to connect all roads with island to control traffic speed

1. *Arch bridge road*
2. *Old dhobi ghat road*
3. *New 30 m wide proposed road*
4. *Main trunk road Retghat to New Market*


TOWARDS ARCH BRIDGE
9M WIDE ROAD
TOWARDS VIP ROAD
KILOL PARK
PROPOSED 15M WIDE ROAD
EXISTING SHOPS
30M WIDE SMART ROAD
TOWARDS POLYTECHNIC
555 sq.m(GF)

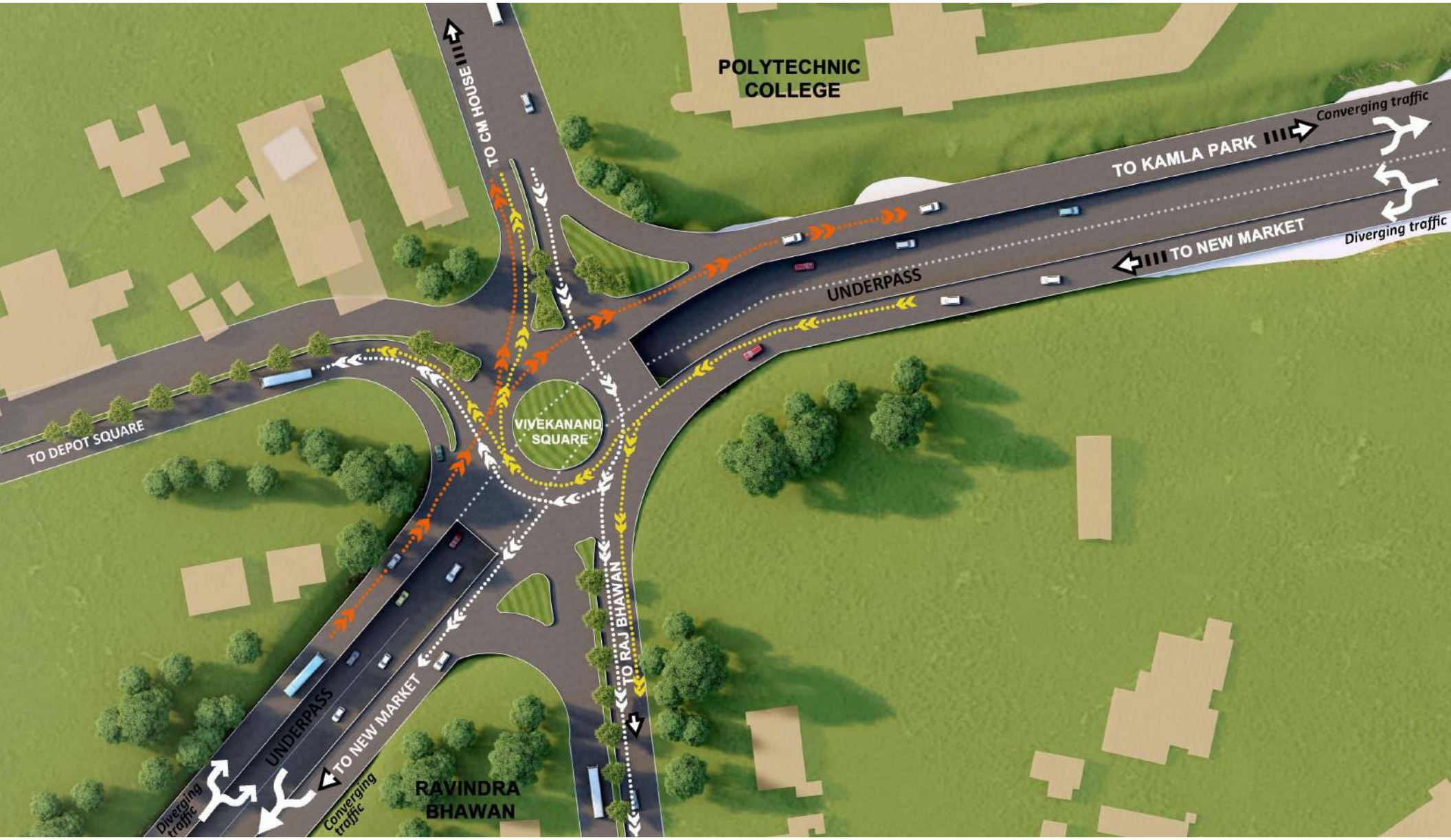
1. Connectivity of CM House to Raj Bhawan
2. Main trunk road Old Bhopal to New Bhopal
3. Smart City road to Depot Square
4. Visitors to Ravindra Bhawan
5. Residential Entry to Shyamla hills
6. Hindi Bhawan and Gandhi Bhawan
7. Polytechnic and other institutions

SOLUTION – COMBINATION OF UNDERPASS & ROTARY AT KILOL

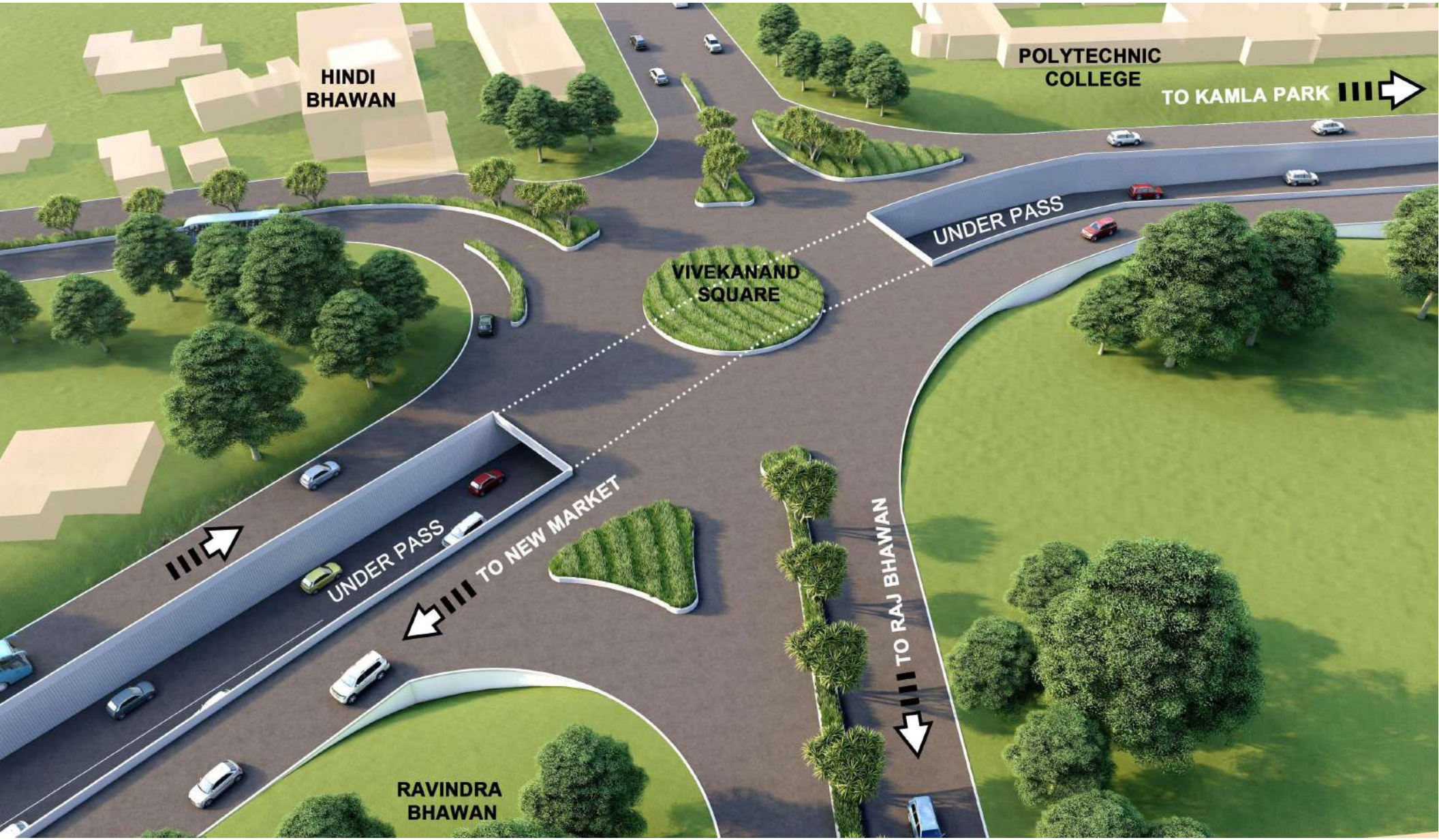


VIVEKANAND SQUARE

Without disturbing the sky line, introducing Grade Separator to regulate maximum traffic of New Market To Old City and Bairagarh

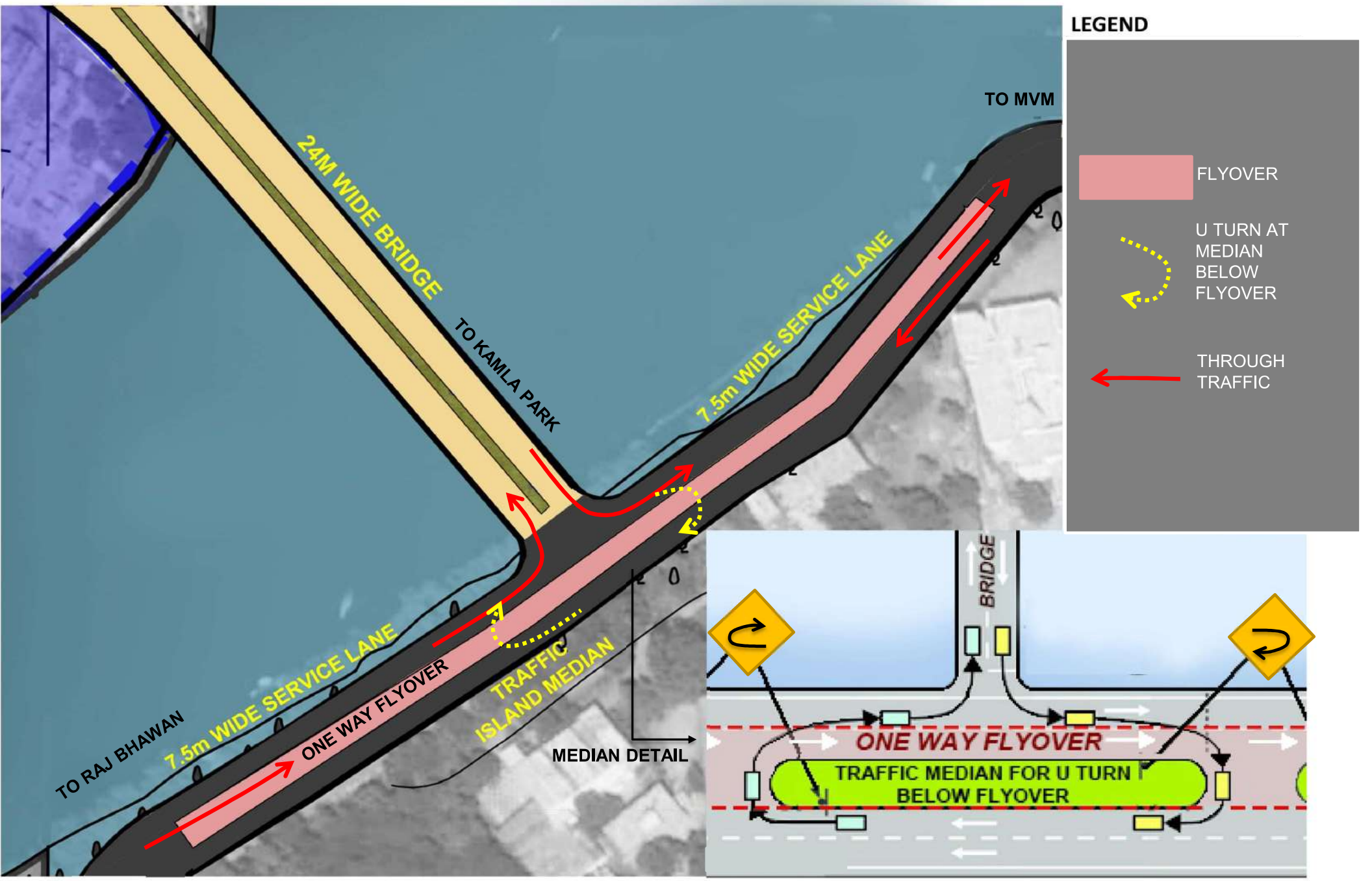


SOLUTION – CONCEPTUAL VIEW



SOLUTION – CONCEPTUAL VIEW

Part-2

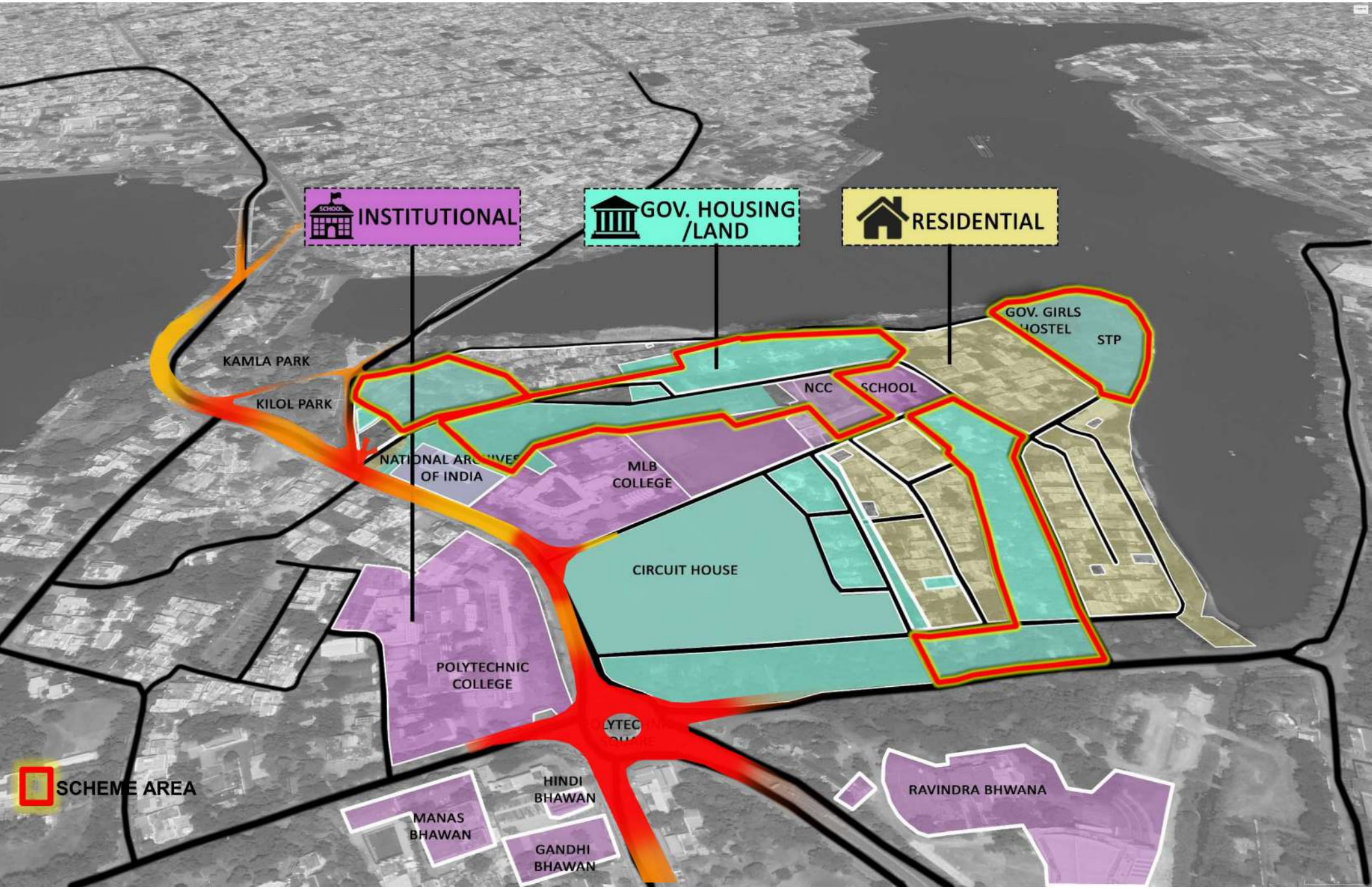

LEGEND
FLYOVER
U TURN AT MEDIAN BELOW FLYOVER
THROUGH TRAFFIC
TO MVM
24M WIDE BRIDGE
TO KAMLA PARK
7.5m WIDE SERVICE LANE
TO RAJ BHAWAN
7.5m WIDE SERVICE LANE
ONE WAY FLYOVER
TRAFFIC ISLAND MEDIAN
MEDIAN DETAIL
BRIDGE
ONE WAY FLYOVER
TRAFFIC MEDIAN FOR U TURN BELOW FLYOVER

RE-DENSIFICATION OF PROFESSORS' COLONY

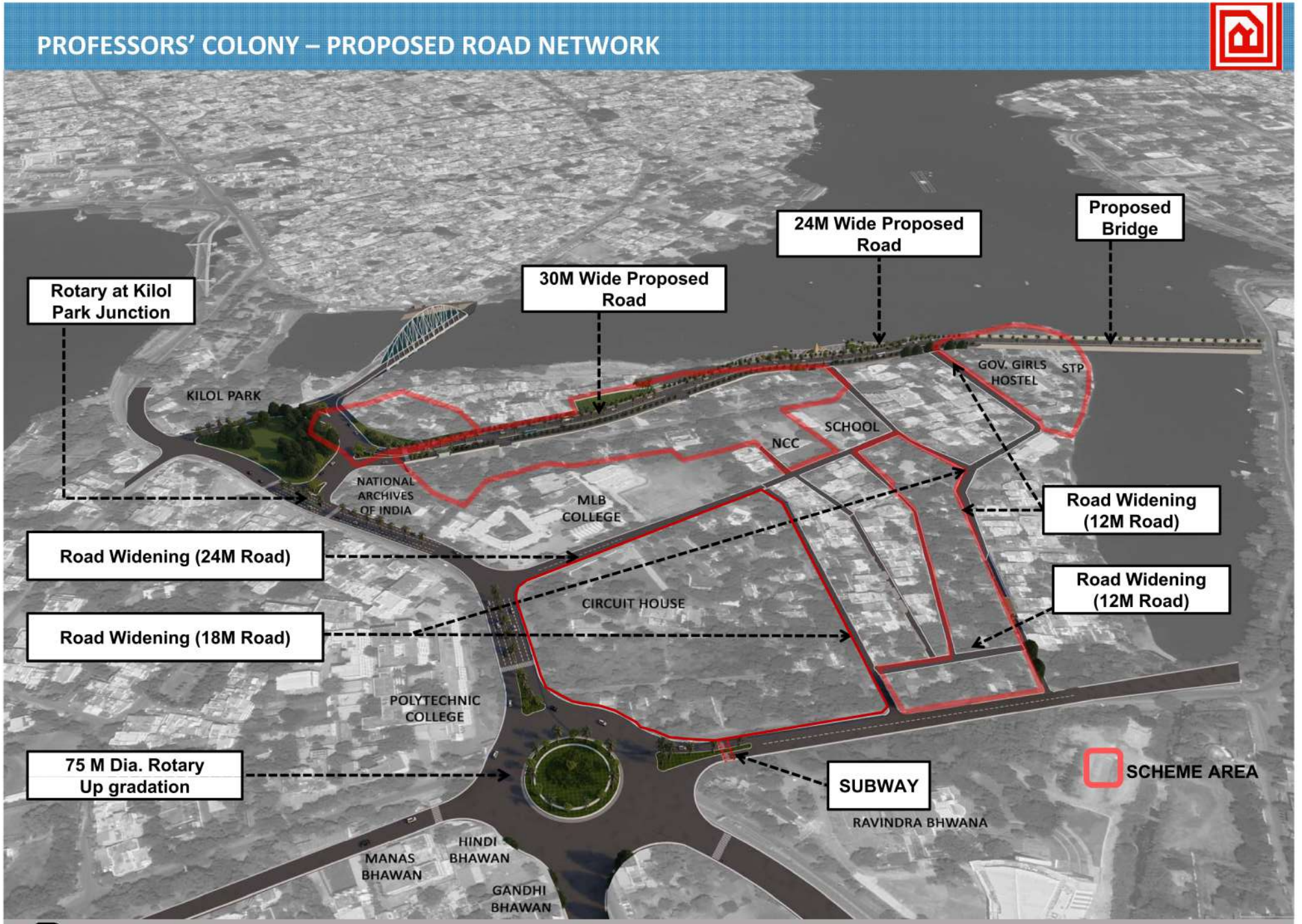
Professors' colony	
Residential Accommodation	
Quarters	**Nos.**
Type B	9
Type C	1
Type D	4
Type E	4
Type F	89
Type G	10
TOTAL	**117**

Other structures	
NCC building	1
MLB Girls Hostel	100 seats
SC ST hostel Senior and Junior girls	200 Seats
SC Govt. College Hostel Girls	50 Seats
Gitanjali Working Women Hostel	110 Seats
Sewage Treatment Plant	4.0 MLD

PROFESSORS' COLONY- IDENTIFICATION OF SCHEME AREA

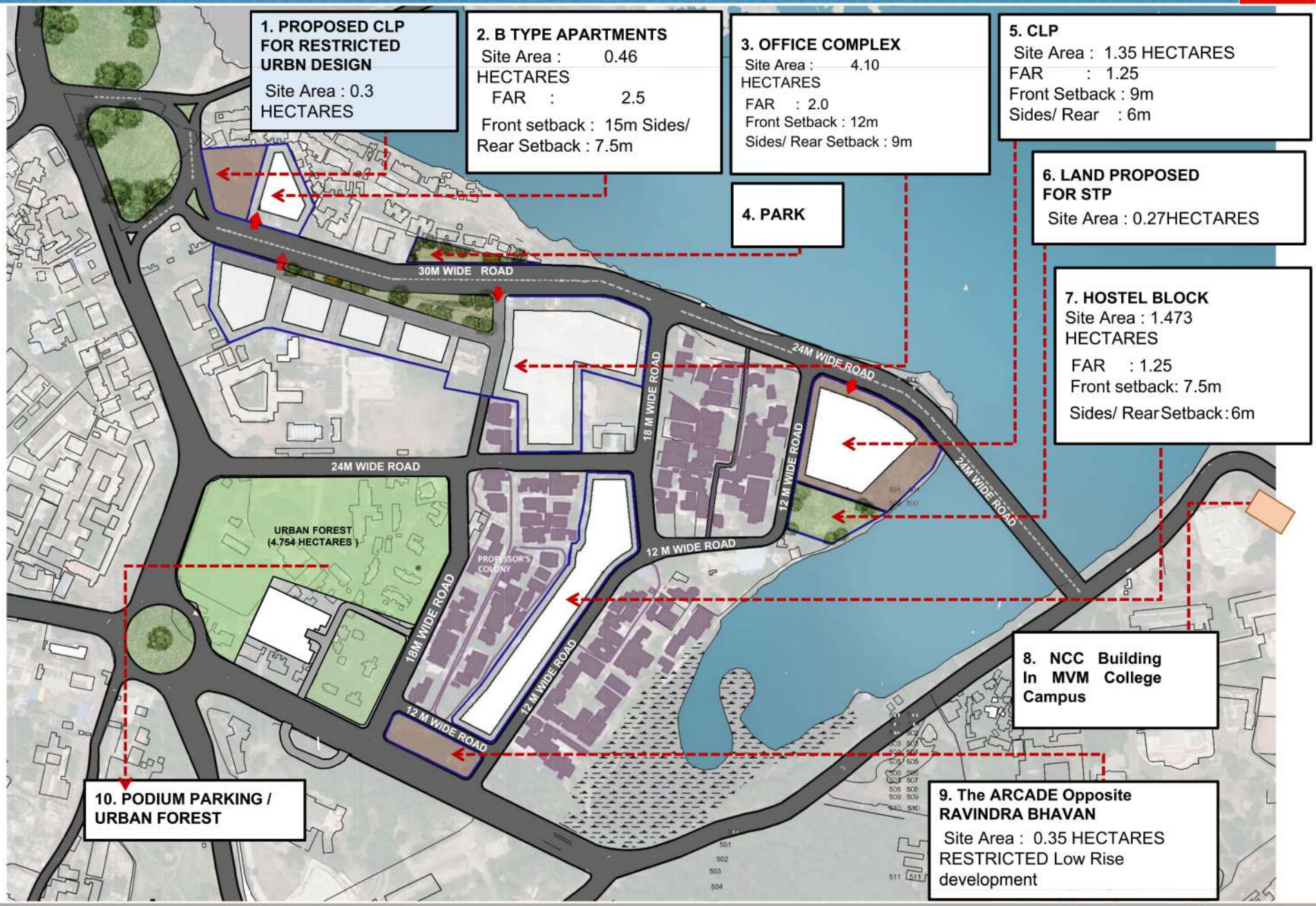


PROFESSORS' COLONY – PROPOSED ROAD NETWORK



PROFESSORS' COLONY – PROPOSED DEMARCATION OF PLOTS

PROFESSORS' COLONY – PROPOSED PLOTS WITH APPLICABLE NORMS

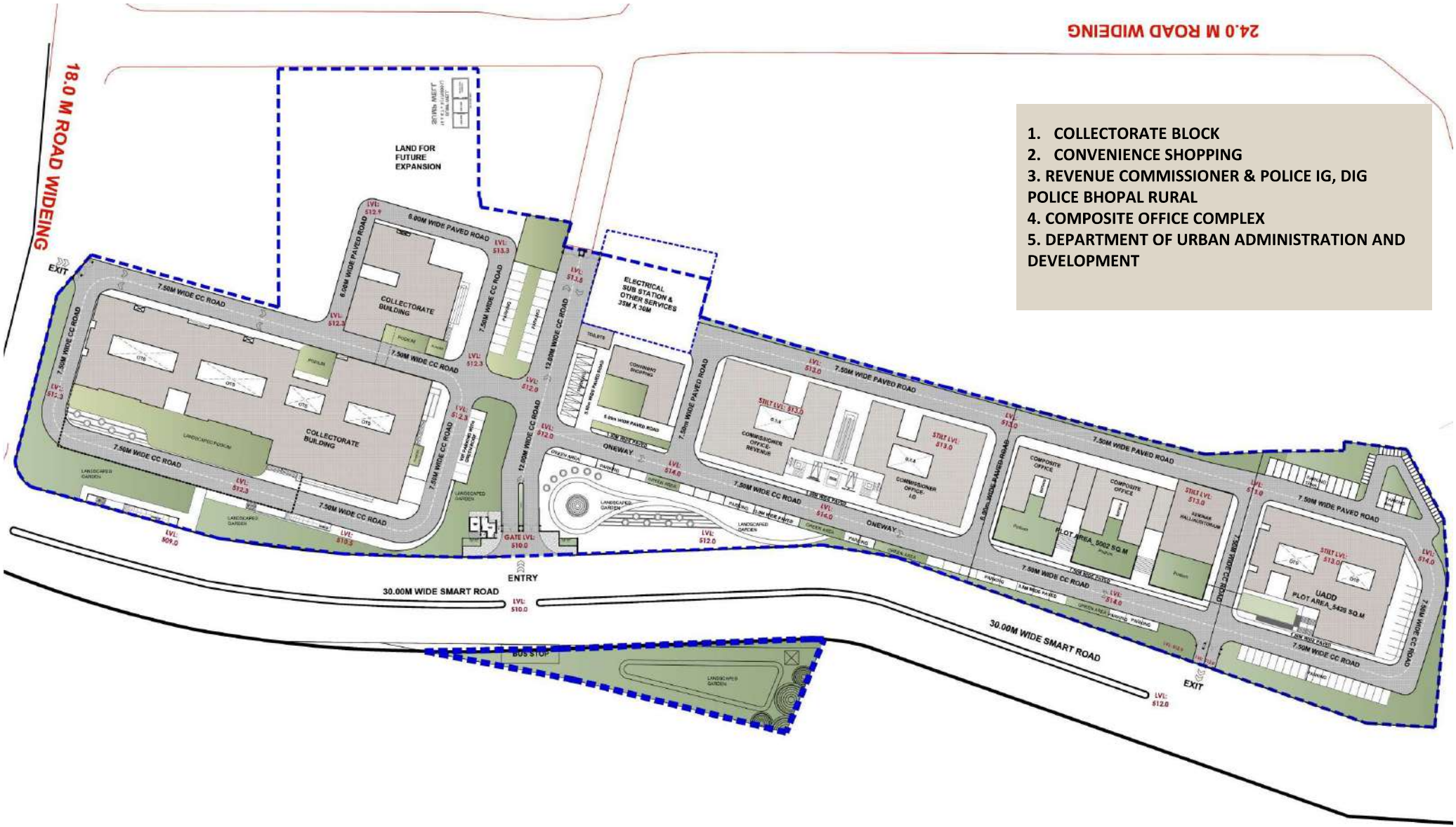


WALKTHROUGH

Click Here to Play

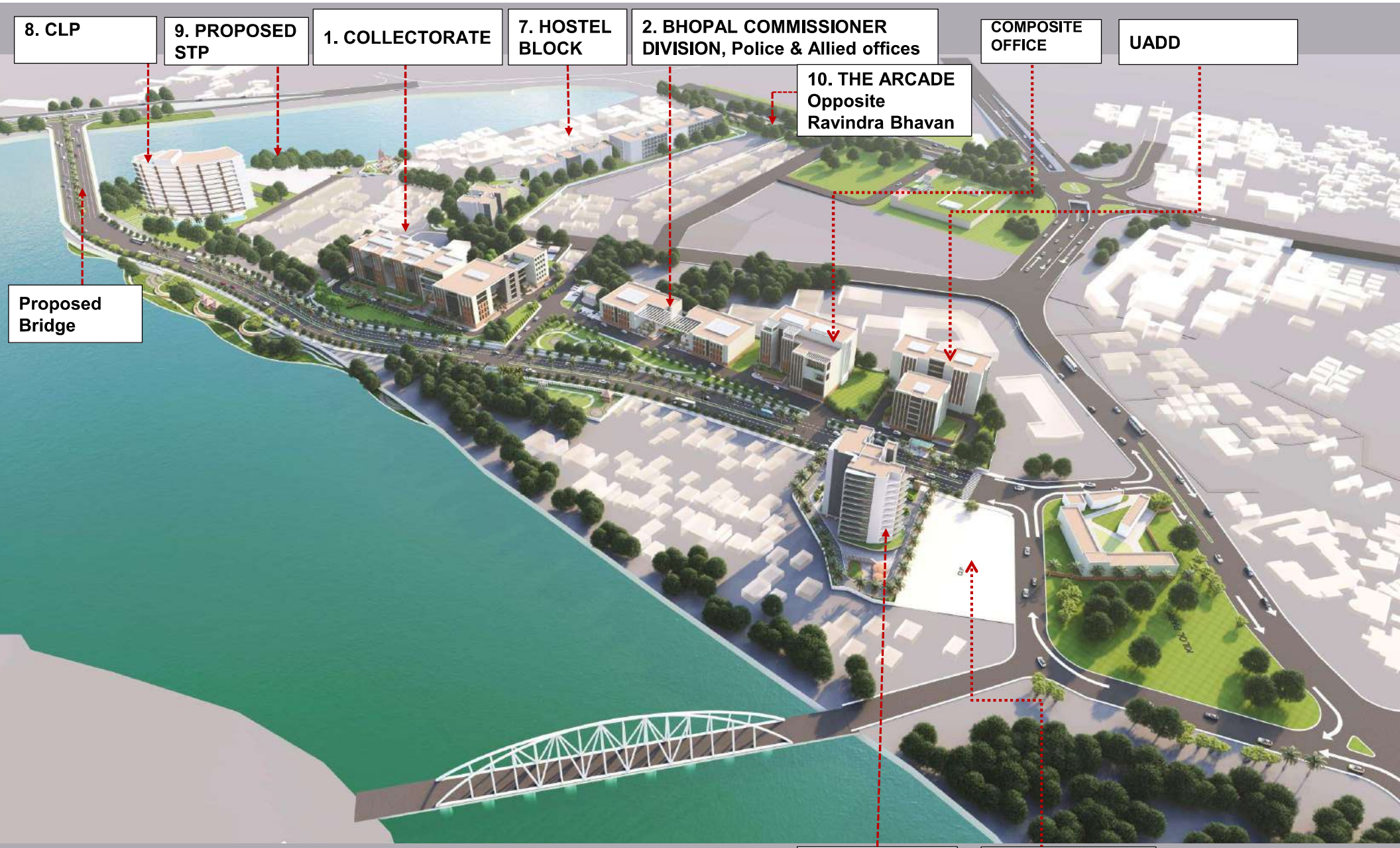
PROFESSORS' COLONY - KEY PLAN

PROFESSORS' COLONY- OFFICE COMPLEX : SITE PLAN



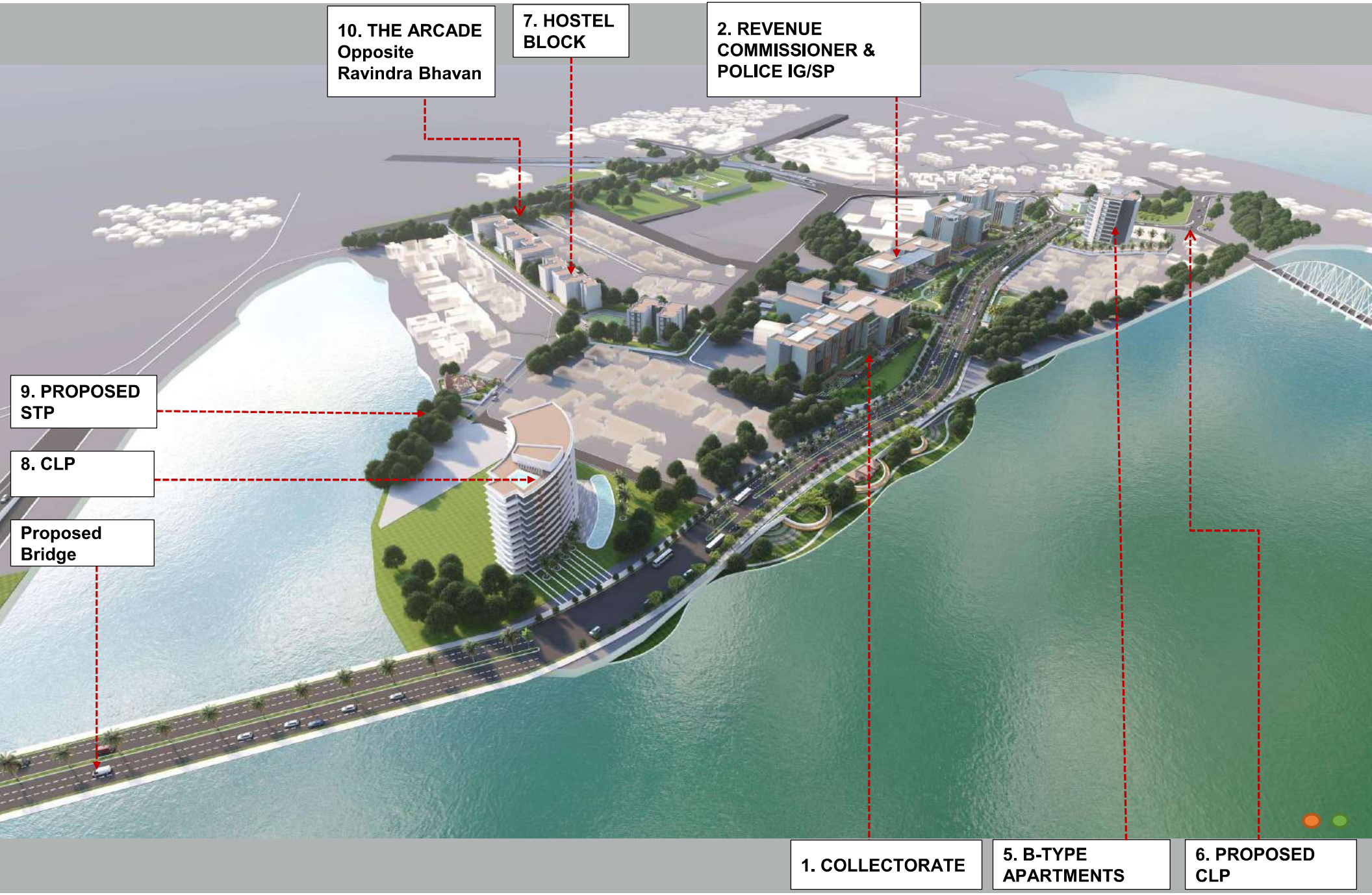
1. COLLECTORATE BLOCK
2. CONVENIENCE SHOPPING
3. REVENUE COMMISSIONER & POLICE IG, DIG POLICE BHOPAL RURAL
4. COMPOSITE OFFICE COMPLEX
5. DEPARTMENT OF URBAN ADMINISTRATION AND DEVELOPMENT

PROFESSORS' COLONY – BIRD'S EYE VIEW



WalkThrough

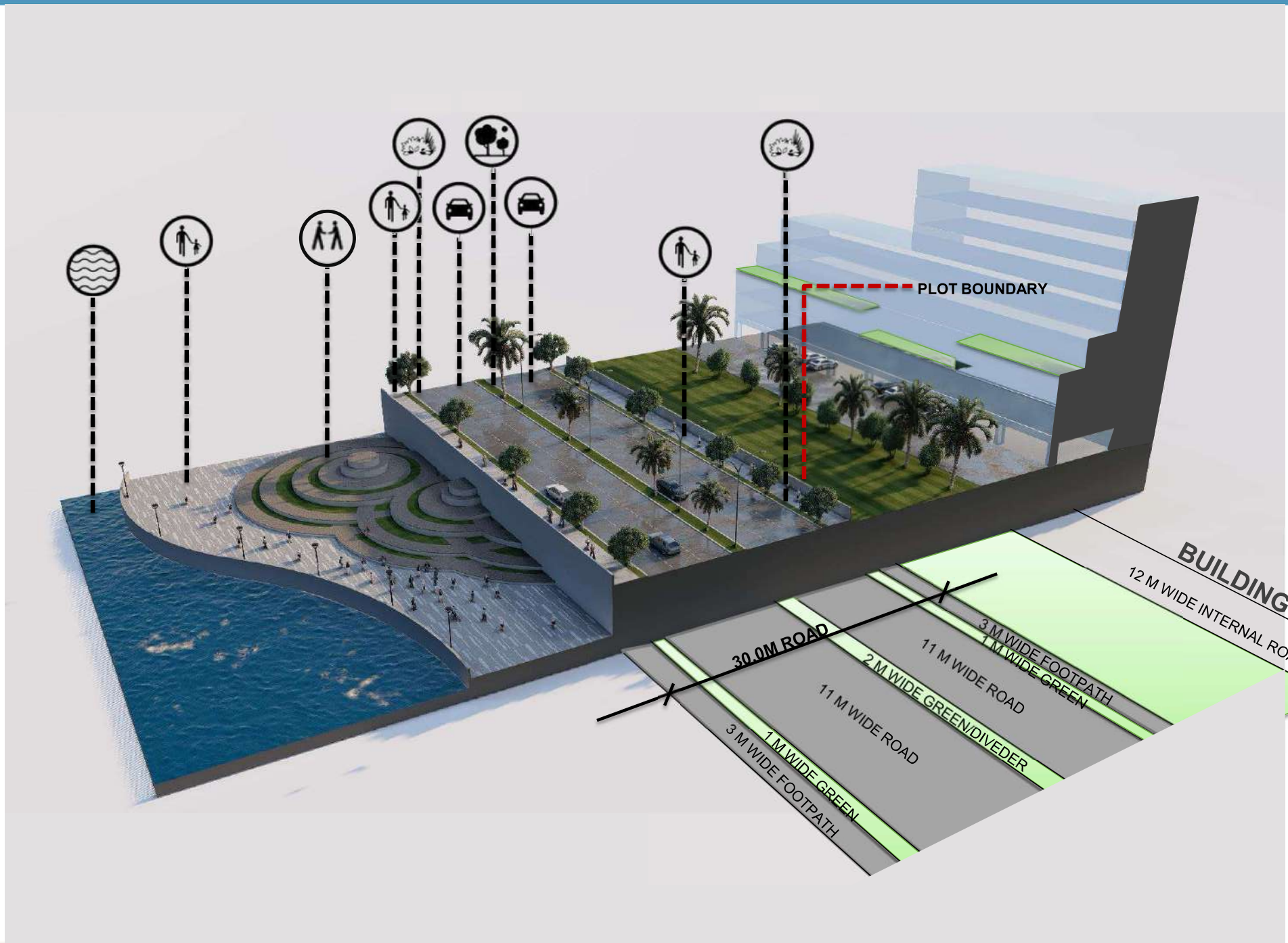
PROFESSORS' COLONY – BIRD'S EYE VIEW

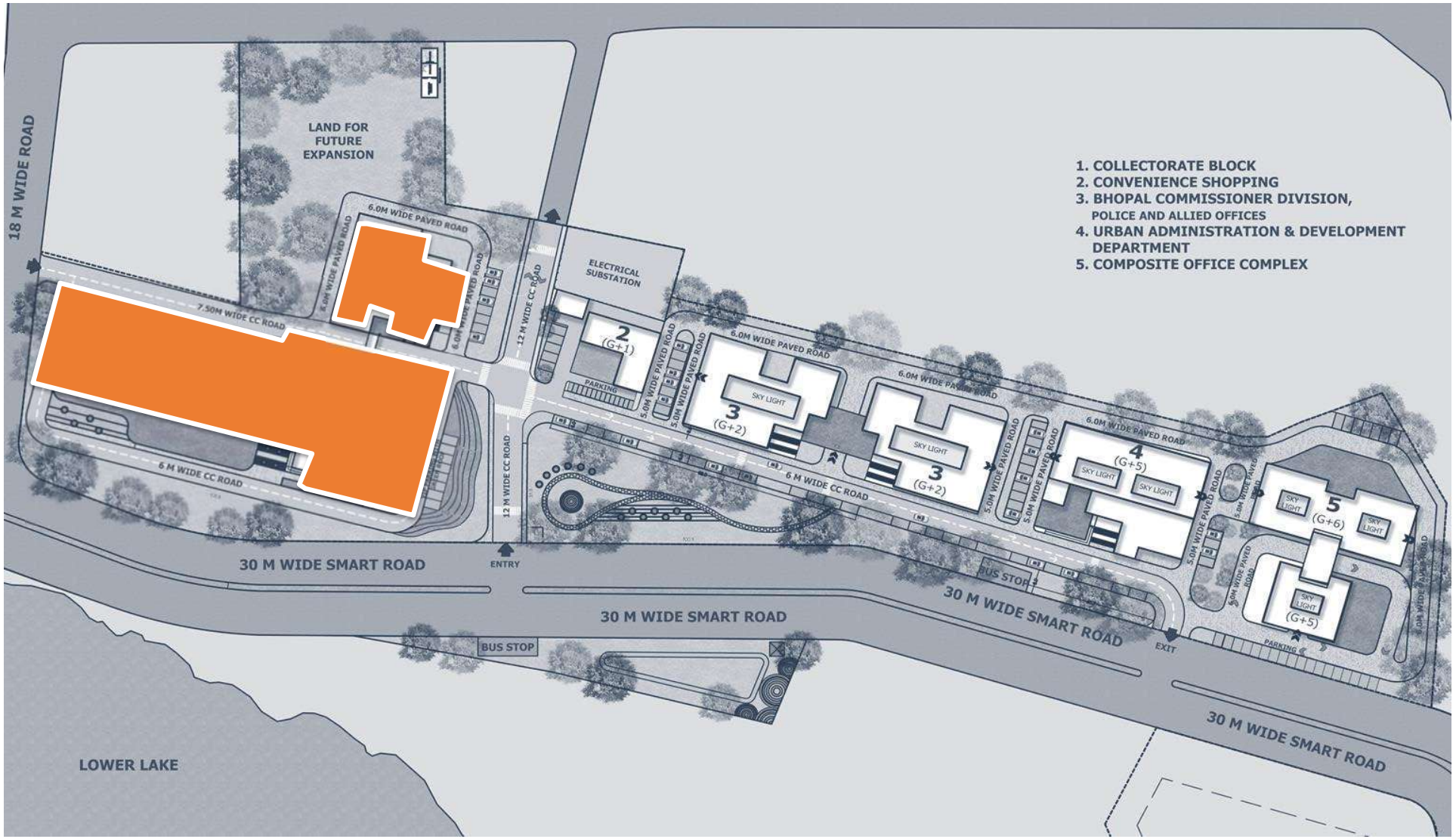


PROFESSORS' COLONY- COLLECTORATE


Collectorate Building

PROFESSORS' COLONY- ROAD SECTION 30M WIDE




1. COLLECTORATE BLOCK
2. CONVENIENCE SHOPPING
3. BHOPAL COMMISSIONER DIVISION, POLICE AND ALLIED OFFICES
4. URBAN ADMINISTRATION & DEVELOPMENT DEPARTMENT
5. COMPOSITE OFFICE COMPLEX
18 M WIDE ROAD
LAND FOR FUTURE EXPANSION
6.0M WIDE PAVED ROAD
7.50M WIDE CC ROAD
12 M WIDE CC ROAD
ELECTRICAL SUBSTATION
2 (G+1)
PARKING
5.0M WIDE PAVED ROAD
3 (G+2)
SKY LIGHT
4 (G+5)
5 (G+6)
6 M WIDE CC ROAD
30 M WIDE SMART ROAD
ENTRY
BUS STOP
EXIT
LOWER LAKE

CAMPUS_1

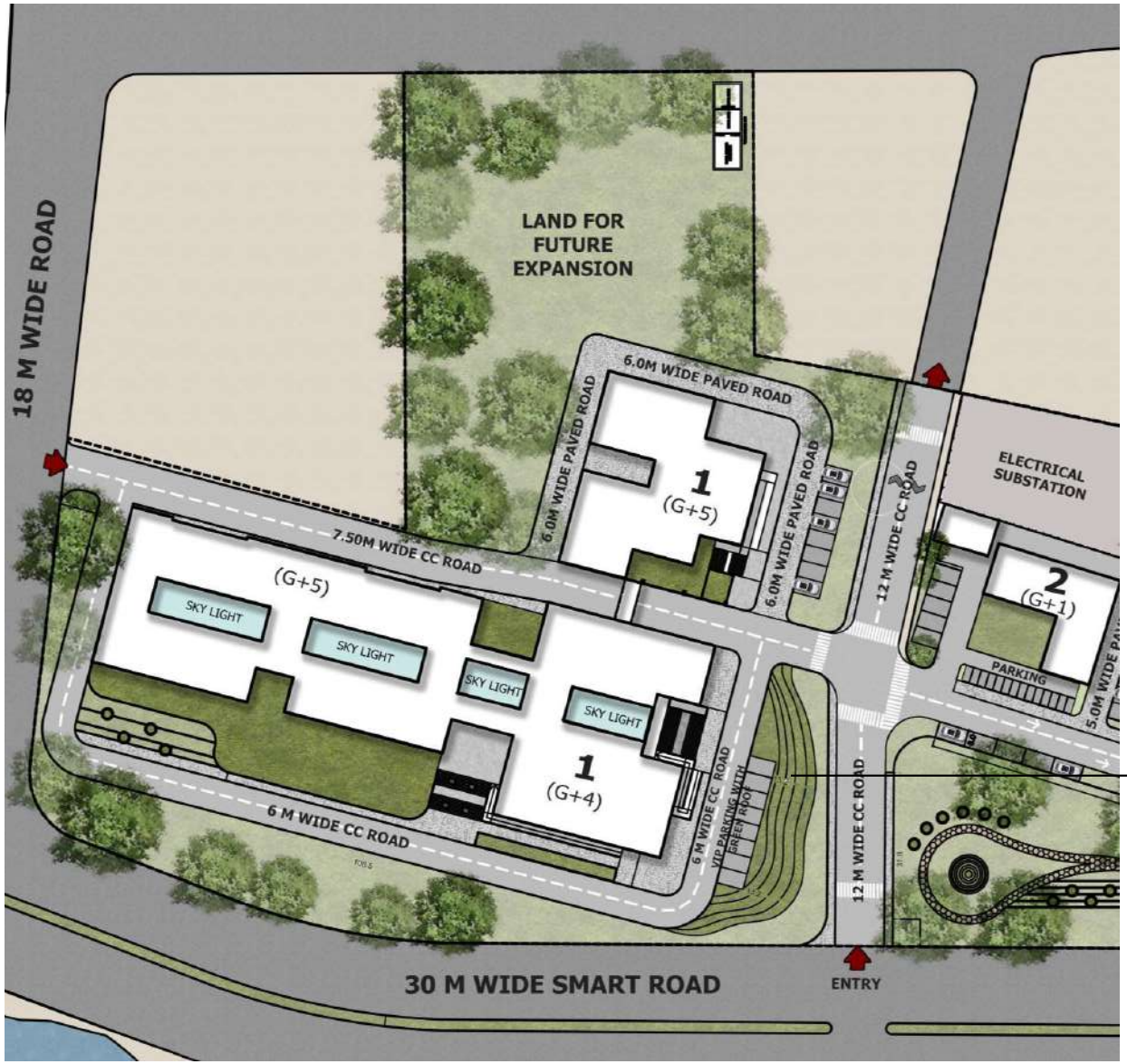
PLANNING

An analysis was conducted to understand the functionality and activities of the Collectorate by carrying out studies on the existing Bhopal and Indore Collectorate. In a Collector Office, visitors come from all over the district and sometimes they need to spend the entire day in the campus. Therefore, as much as it's an office building, it needs to have efficient public spaces and hence emphasis has been given to Plazas in our design to balance out this need.

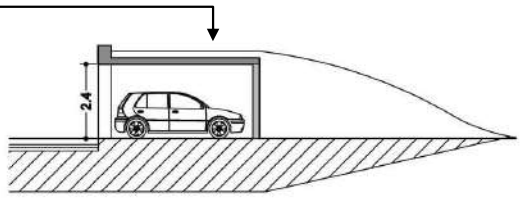
Adhering to the site conditions, the design started with the evolution of three masses – Office wing A & B and an Annexe Wing all positioned in a way as to take full advantage of the lakefront view. All the wings are connected to each other by bridges at various levels. Each of the office wings is designed with a central courtyard, to facilitate the natural light and ventilation to every nook and corner of the space.

SL NO	PARTICULARS	AREA (IN SQM)
1	Collector's office	830
2	Additional Collector's office	380
3	Deputy Collector's office	120
4	Joint collector's office	900
5	ADM's Office	200
6	Account office	120
7	Nazir section	140
8	Land Acquisition Section	312
9	DUDA	295
10	Patwari	92
11	Mining Department	345
12	Sainik Welfare	75
13	Rent Controller	170
14	Gas Rahat	50
15	Nirvachan Cell	250
16	Jan Shikayat	65
17	Lok Seva Guarantee	400
18	Stationary	230
19	License Cell	60
20	Invert cell	40
21	Dispatch Cell	40
22	Ration Card	280
23	Samadhan Kendra	55
24	Litigation Cell	55
25	Jaganna	42
26	Zila Bardar	20
27	Nazul	20
28	Food controller	75
29	Canteen	220
30	Web GIS Room	75
31	Record rooms	700

Conceptual Area Statement basis Literature study



1	Collectorate Building	29,085 SQM.
2	Divisional Revenue Commissioner and Police Allied Service Building	8,990 SQM
3	UADD	10,097 SQM
4	Composite Office Building	11,957 SQM
5	Convenient Shop	712 **SQM**



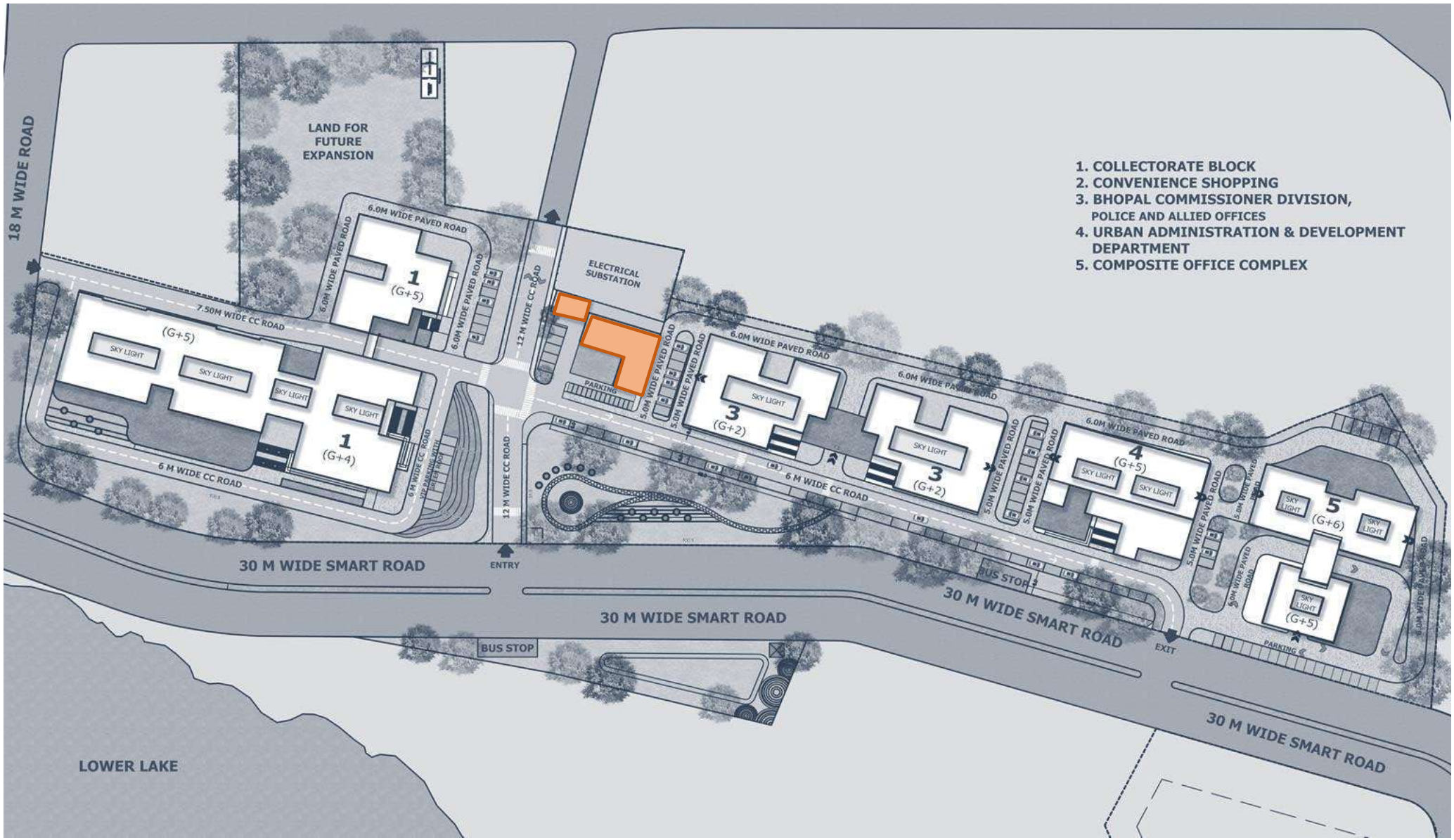
SECTION THROUGH GREEN ROOF PARKING

CAMPUS_1

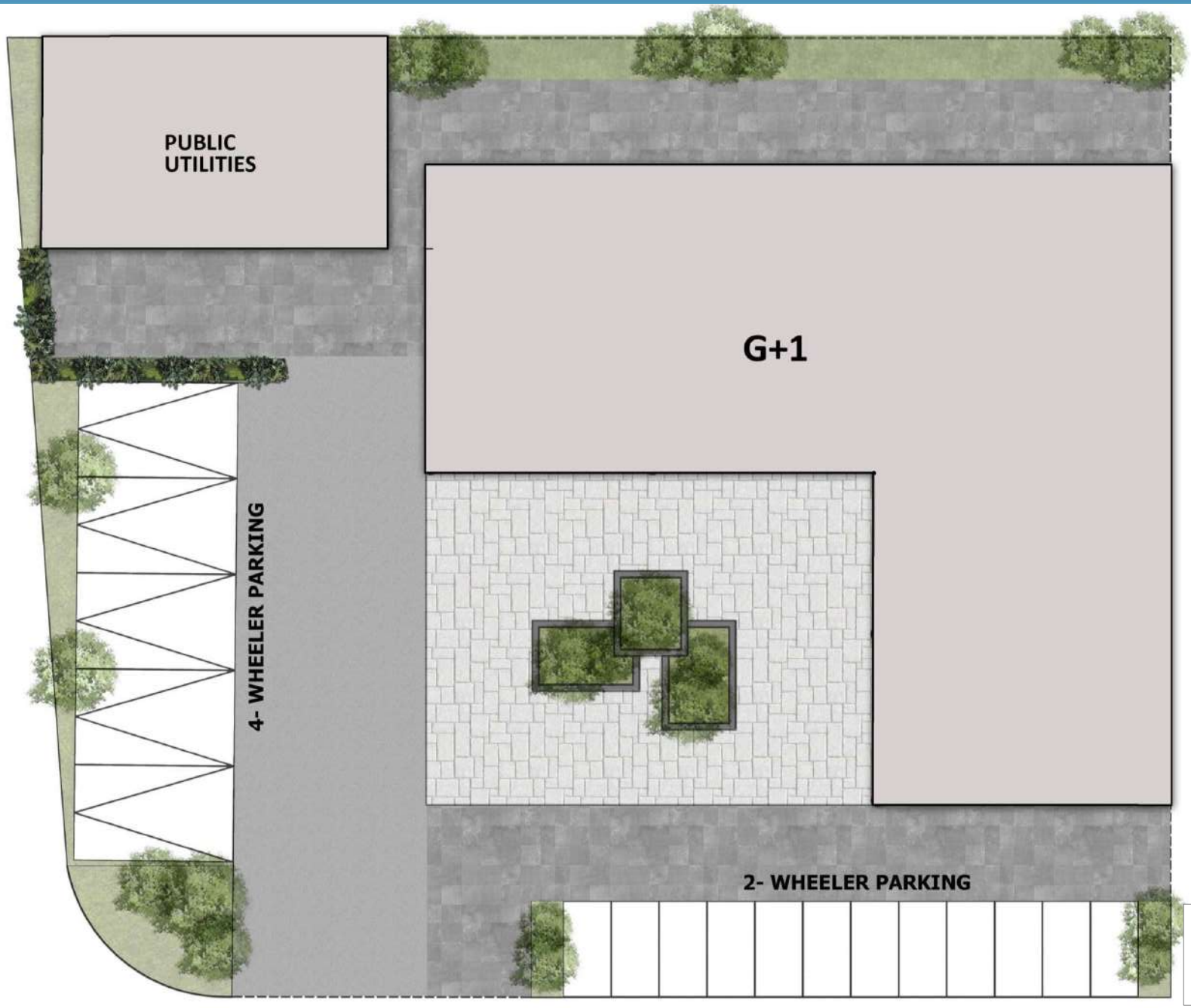
View from the main road

View from Convenient Shopping

PROFESSORS' COLONY- CONVINIENT SHOPPING



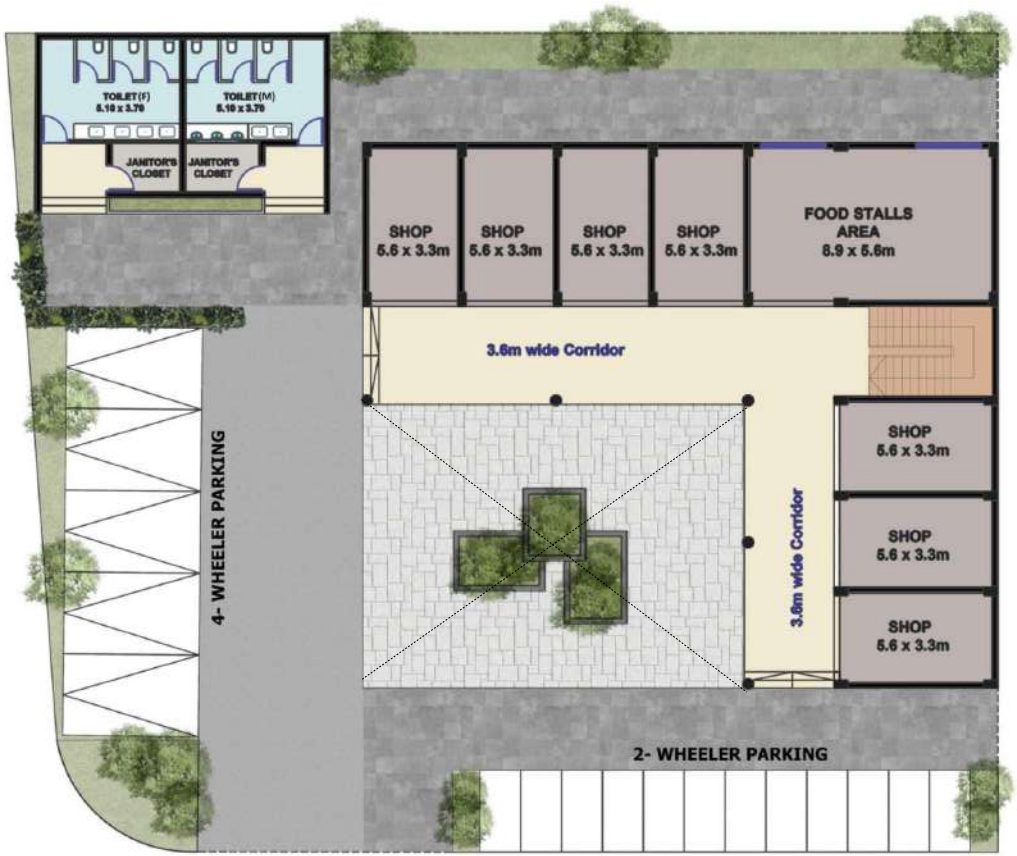
CAMPUS_1



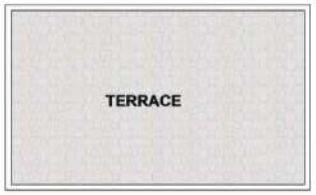
CONVINIENT SHOPPING (G+1)
Total Built Up area : 730 sqm

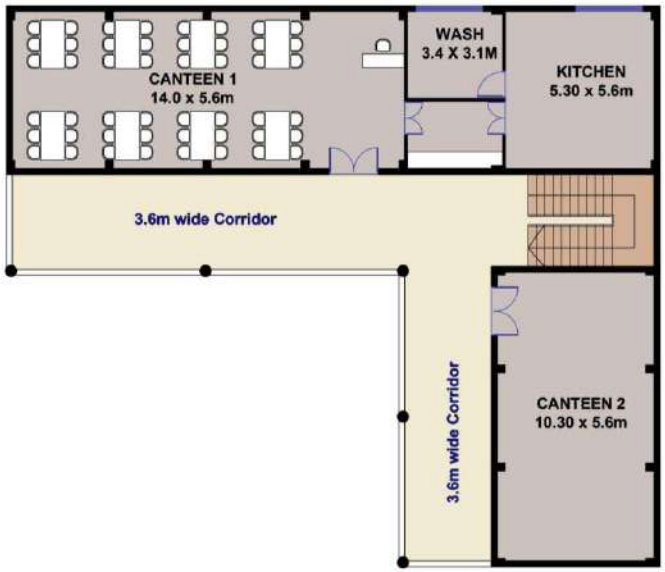
CONVINIENT SHOPPING (G+1)

Total Built Up area : 730 sqm



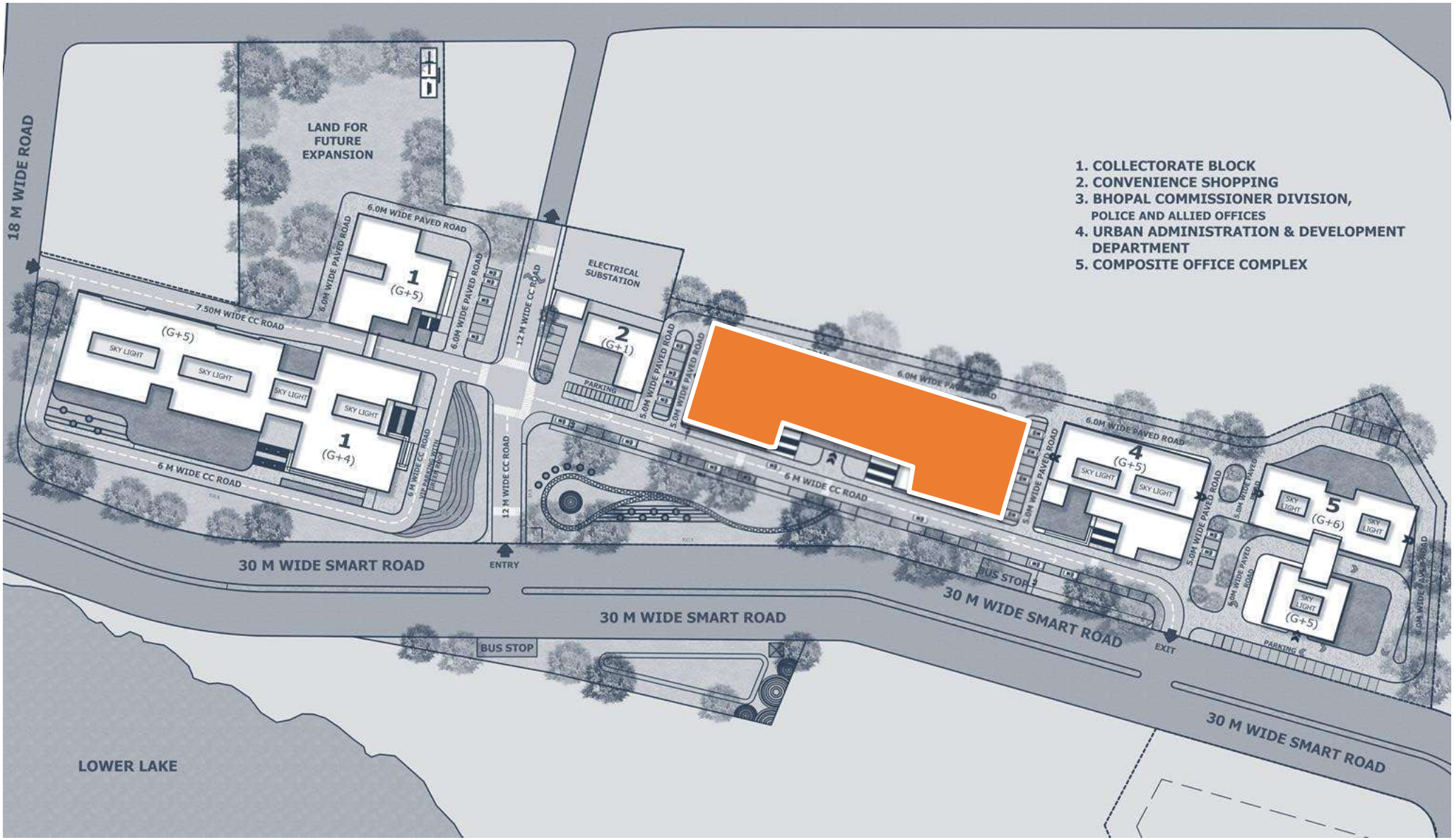
GROUND FLOOR





FIRST FLOOR

COMMISSIONER BUILDING



CAMPUS_1


Parking


Parking

PROFESSORS' COLONY – AERIAL VIEW

BIRD'S EYE VIEW – Office Complex

PROFESSORS' COLONY - B TYPE APARTMENTS

CAMPUS_2

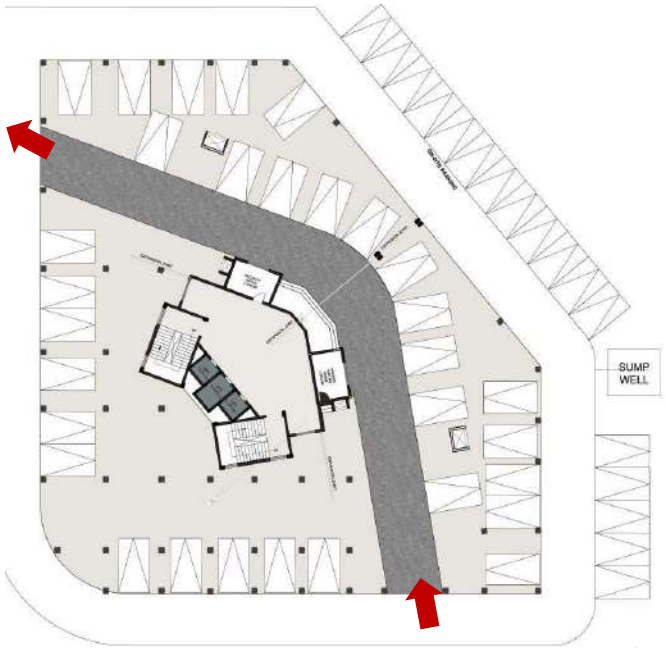
5. B TYPE APARTMENTS
STILT + 11 Floors
20 Units

Site Area : 0.45 HECTARES
FAR : 2.5
Front setback : 15m
Sides/ Rear Setback : 7.5m
Total Built up area : 10241 sqm

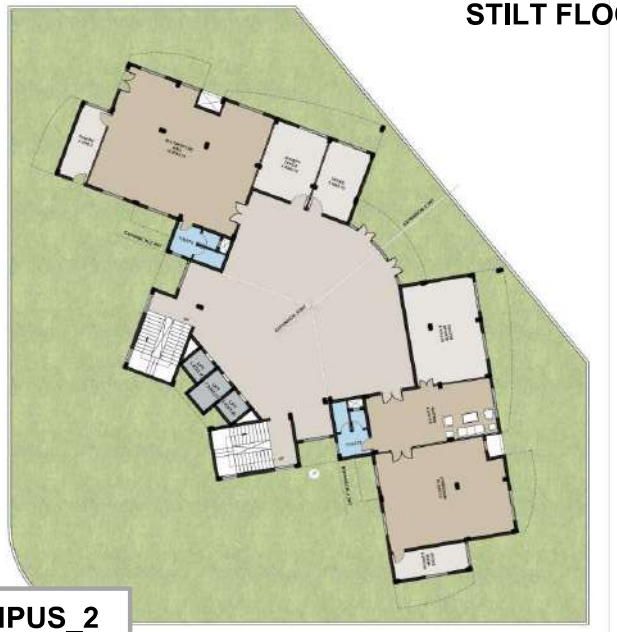
CAMPUS_2

SITE PLAN

Birds Eye View



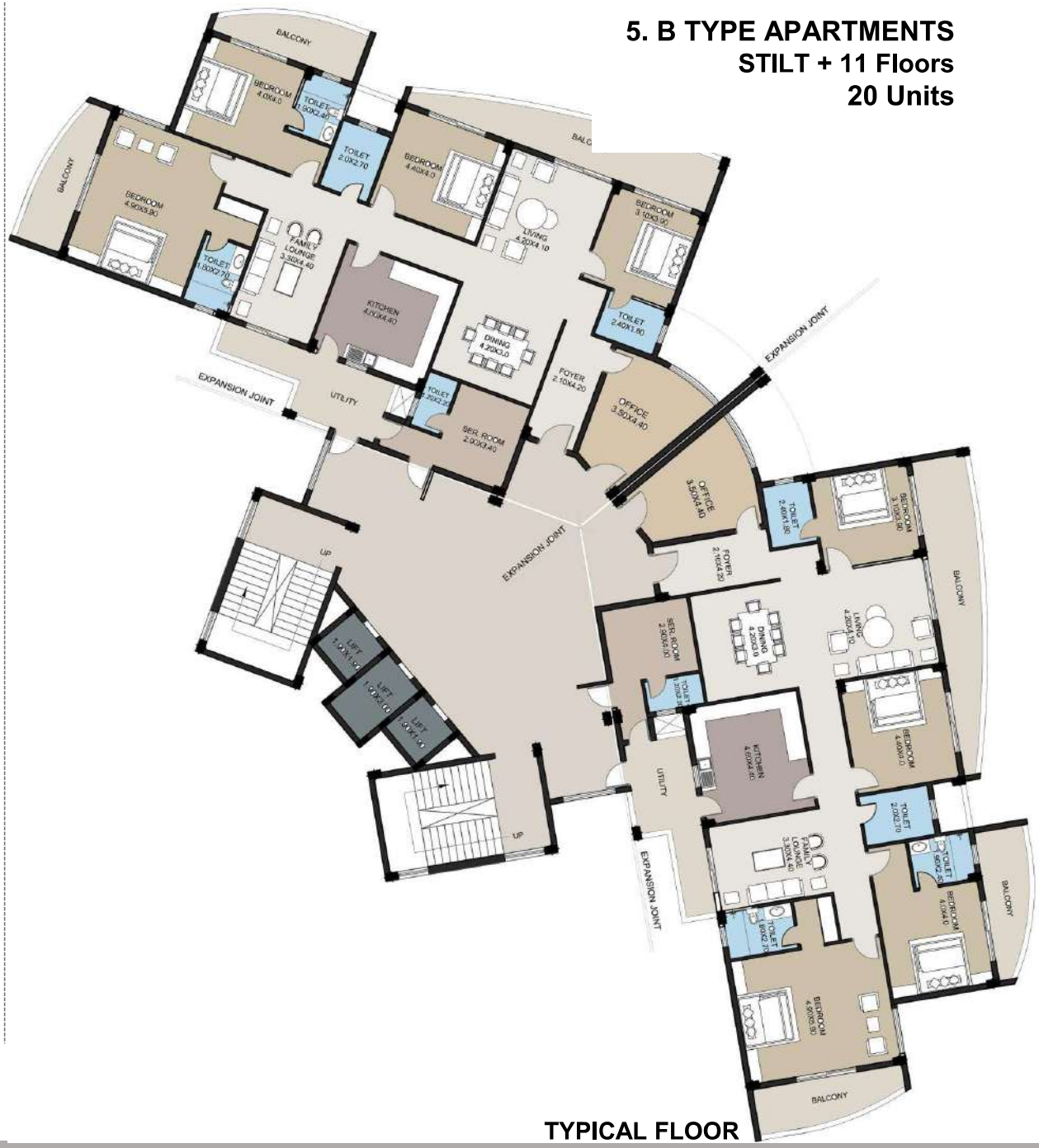
STILT FLOOR



CAMPUS_2

FIRST FLOOR

5. B TYPE APARTMENTS
STILT + 11 Floors
20 Units



TYPICAL FLOOR

PROFESSORS' COLONY – HOSTEL BLOCK

CAMPUS_3

SITE PLAN

Bird's Eye View

7. HOSTEL BLOCK

Site Area : 1.45 HECTARES
FAR : 1.25
Front setback : 7.5m
Sides/ Rear Setback : 6.0m

a. BLOCK II : MLB College Girls hostel
EXISTING 100nos
(G+4) 162 nos Capacity

Total Built up area : 3592 sqm

b. BLOCK III : Government College girls hostel
EXISTING 50nos
(G+4) 80 nos Capacity

Total Built up area : 2914sqm

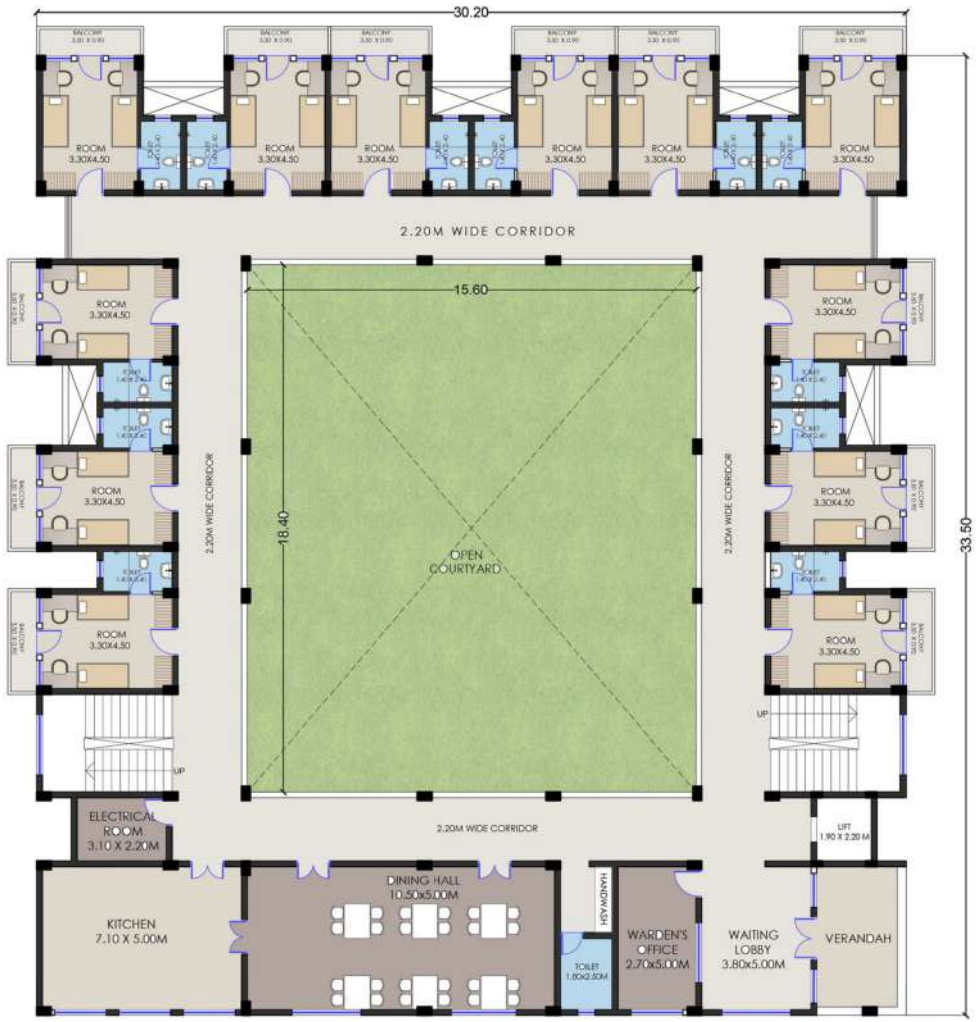
c. BLOCK IV : Govt. Senior/Junior Girls Hostel (S.C/ S.T)
EXISTING 200nos
(G+3) 352 nos Capacity

Total Built up area : 6746 sqm

d. BLOCK I : Working women's hostel
EXISTING 110nos
(G+3) 106 nos Capacity

Total Built up area : 2584sqm

CAMPUS_3

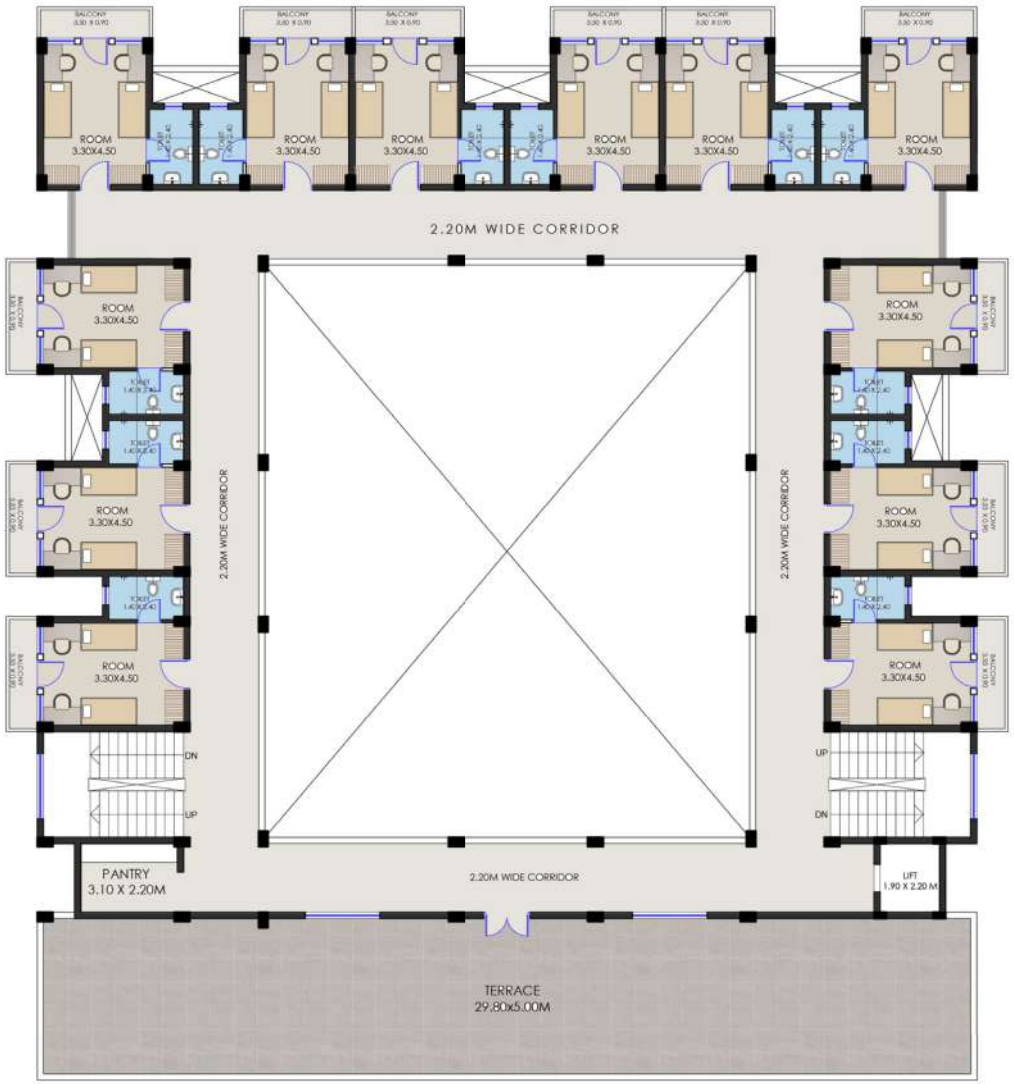


GROUND FLOOR PLAN

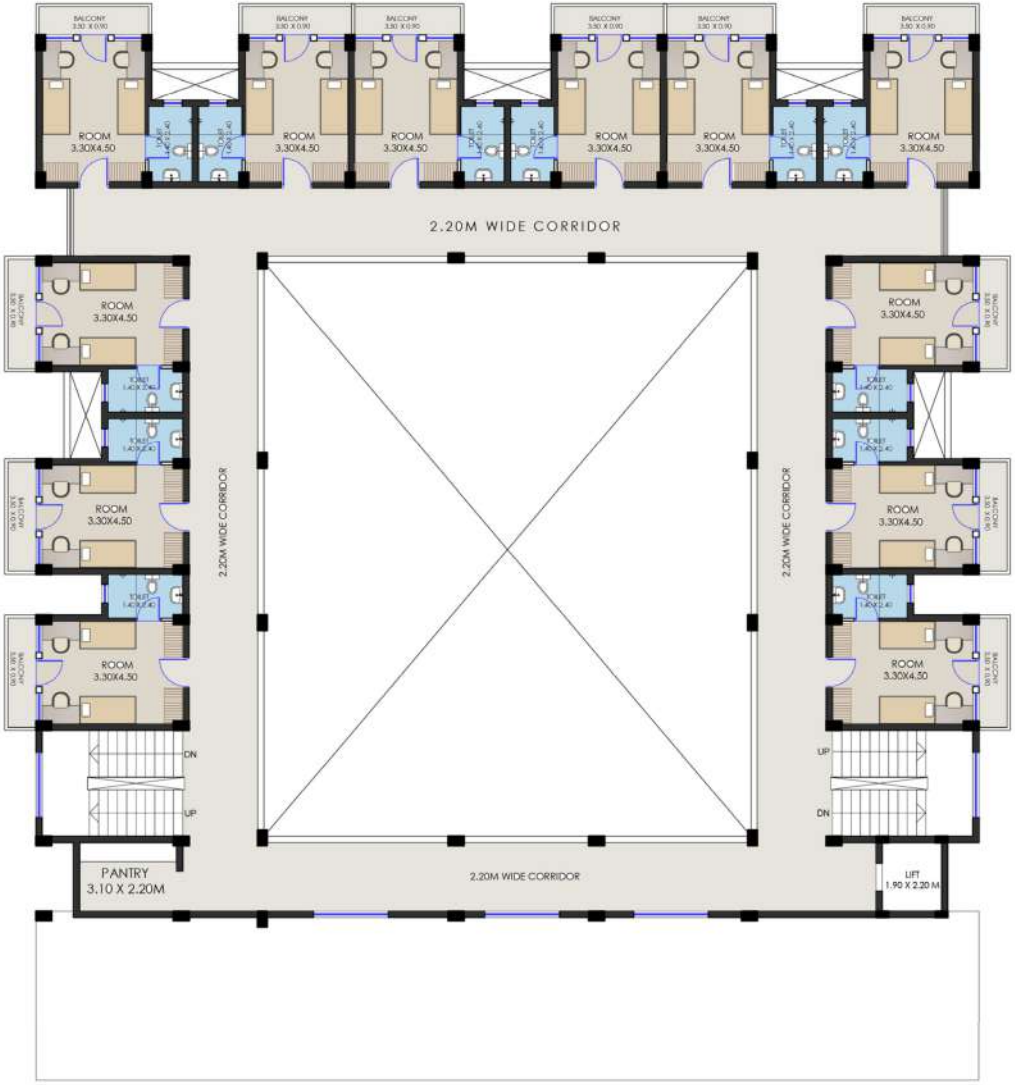
FIRST FLOOR PLAN

(G+3 FLOORS)

Total Built up area- 2584sqm
Total capacity - 125 nos



SECOND FLOOR PLAN



THIRD FLOOR PLAN

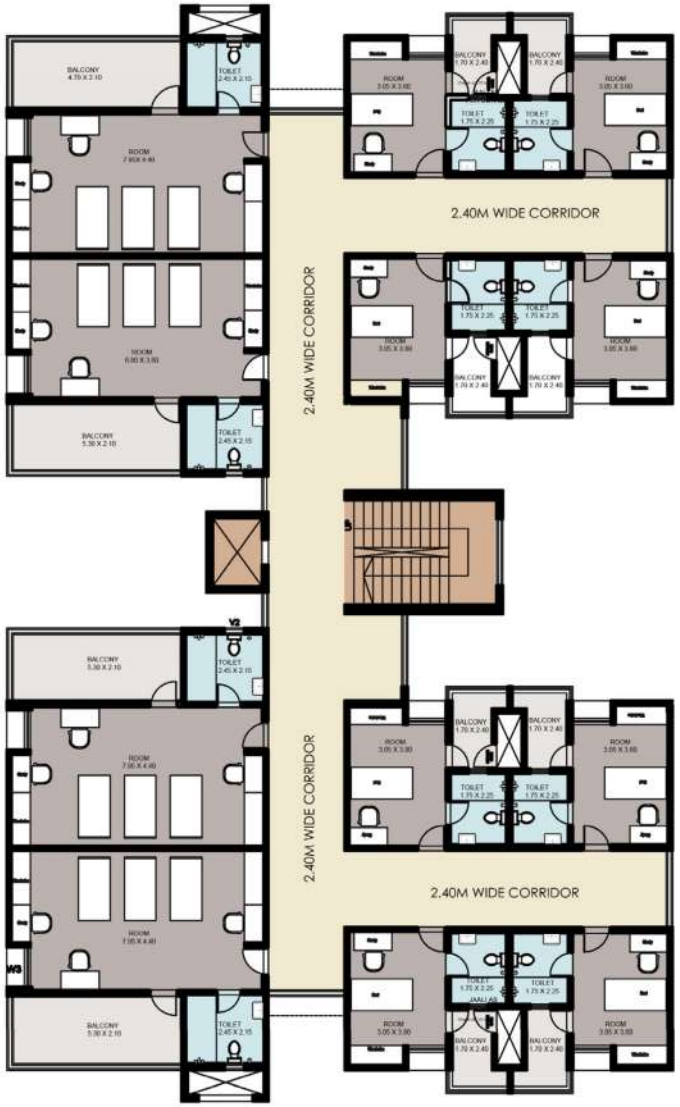
GROUND FLOOR PLAN

TYPICAL FIRST TO FOURTH FLOOR PLAN

(G+ 4 FLOORS)

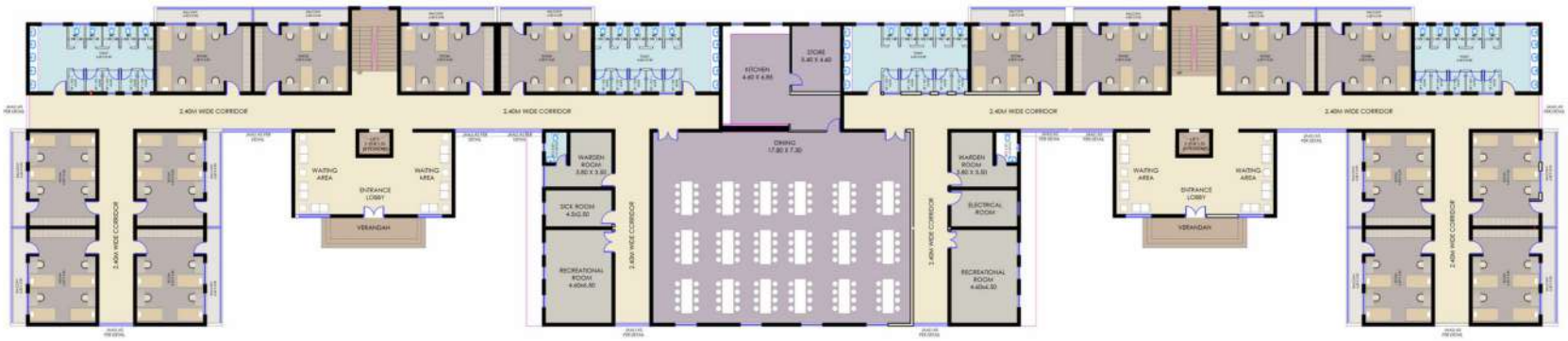
Total Built up area- 3592sqm
Total capacity - 162 nos

STILT FLOOR PLAN



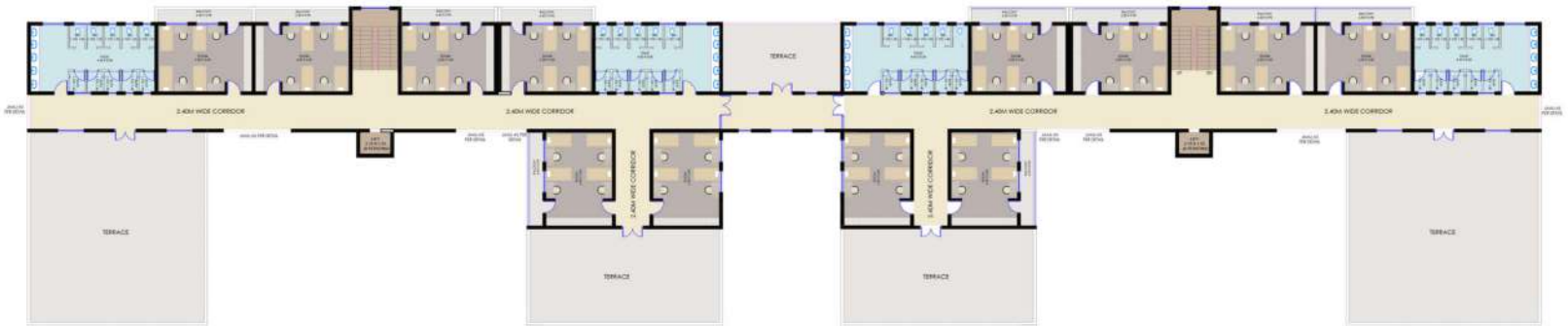
TYPICAL FIRST TO FIFTH FLOOR PLAN

(G+ 4 FLOORS)
Total Built up area- 2914 sqm
Total capacity - 80 nos



GROUND FLOOR PLAN

FIRST TO THIRD FLOOR PLAN



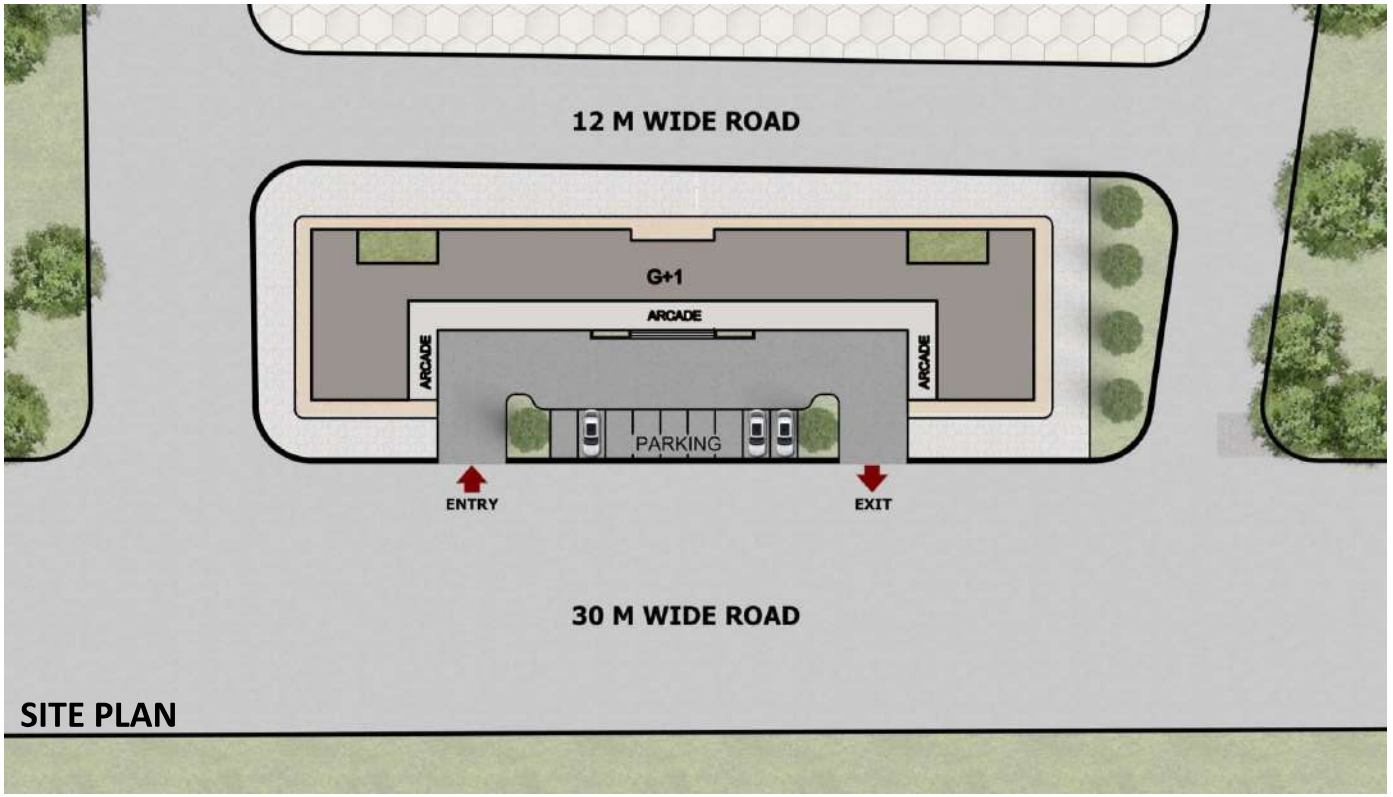
FOURTH FLOOR PLAN

G+3 FLOORS

Total Built up area- 6746sqm
Total capacity - 352 nos

PROFESSORS' COLONY – THE ARCADE/Souvenier Shopping Opp Ravindra Bhavan

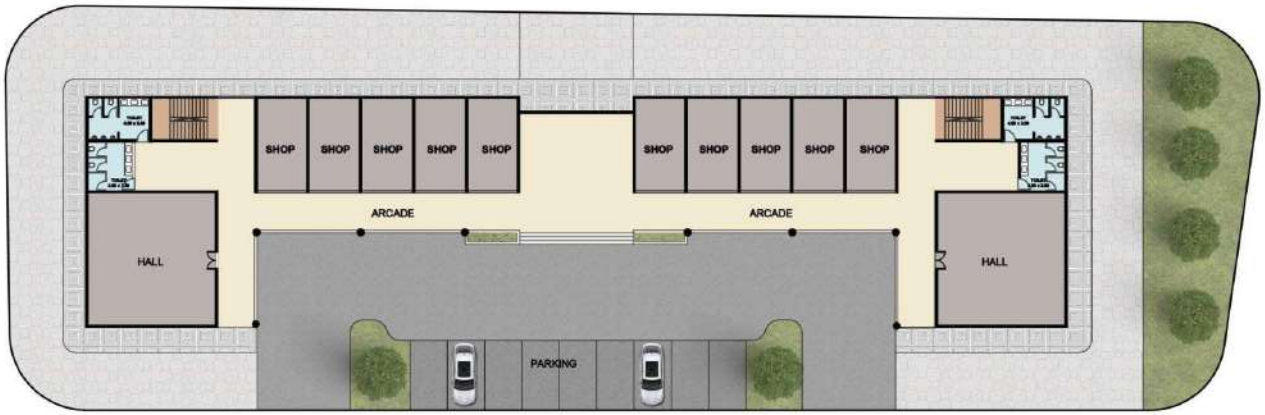
CAMPUS_4



SITE PLAN

10. THE ARCADE(G+1)

Site Area : 0.3 HECTARES
Total Built up area : 2156 sq.m
Restricted Low rise Development



TYPICAL FLOOR PLAN

PROFESSORS' COLONY – Parking and Mess Block Opp. Ravindra Bhawan

CAMPUS_1A-1 & 1B-1

CAMPUS_1A-1 & 1B-1


400 Car Parks
TO RAJ BHAWAN
TO NEW MARKET
UNDERPASS

RE-DENSIFICATION OF OLD SECRETERIAT COMPLEX

BUILDING TYPOLOGY

OLD SECRETARIAT

- Collectorate
- Office of I.G. Police
- Office of Commissioner Bhopal
- Office of Dy. Director Horticulture
- Offices of other Revenue Departments
- SDM Bairagarh
- SDM Bhopal
- Dy. Director Kisan Kalyan and Vikas etc.

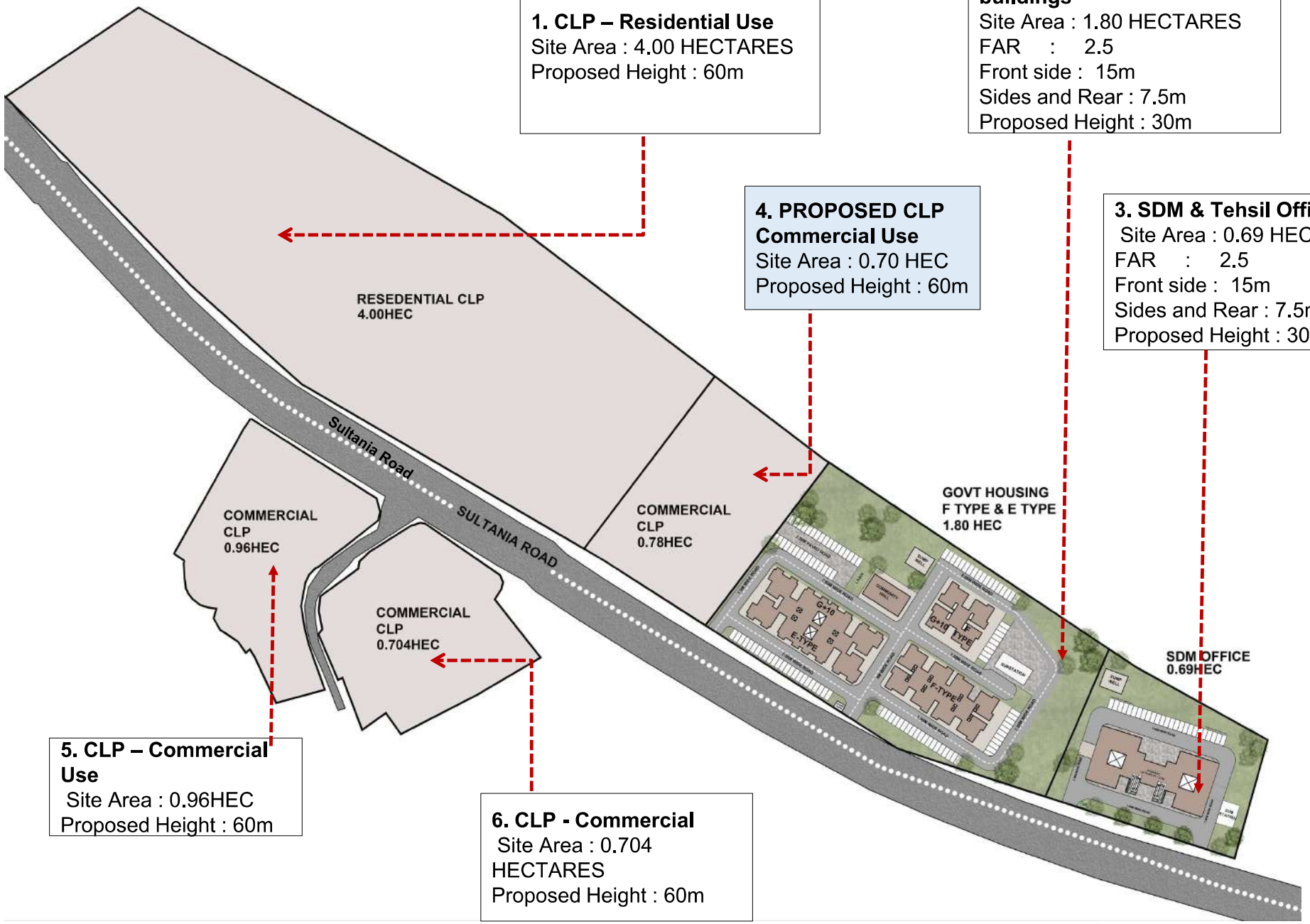
OLD SECRETARIAT – PROPOSED PLOTS WITH APPLICABLE NORMS

1. CLP – Residential Use
Site Area : 4.00 HECTARES
Proposed Height : 60m

2. E & F type residential buildings
Site Area : 1.80 HECTARES
FAR : 2.5
Front side : 15m
Sides and Rear : 7.5m
Proposed Height : 30m

4. PROPOSED CLP Commercial Use
Site Area : 0.70 HEC
Proposed Height : 60m

3. SDM & Tehsil Office
Site Area : 0.69 HEC
FAR : 2.5
Front side : 15m
Sides and Rear : 7.5m
Proposed Height : 30m



5. CLP – Commercial Use
Site Area : 0.96HEC
Proposed Height : 60m

6. CLP - Commercial
Site Area : 0.704 HECTARES
Proposed Height : 60m


SDM OFFICE
SDM OFFICE


SDM OFFICE

STATE GUEST HOUSE AT MAIN ROAD NO 2 (CHAR IMLI)

TOTAL SITE AREA = 1 HECTARE

VIP GUEST HOUSE (G+4)

Built up area : 7036 sqm

GOVERNMENT HOUSING AT CHUNABHATTI

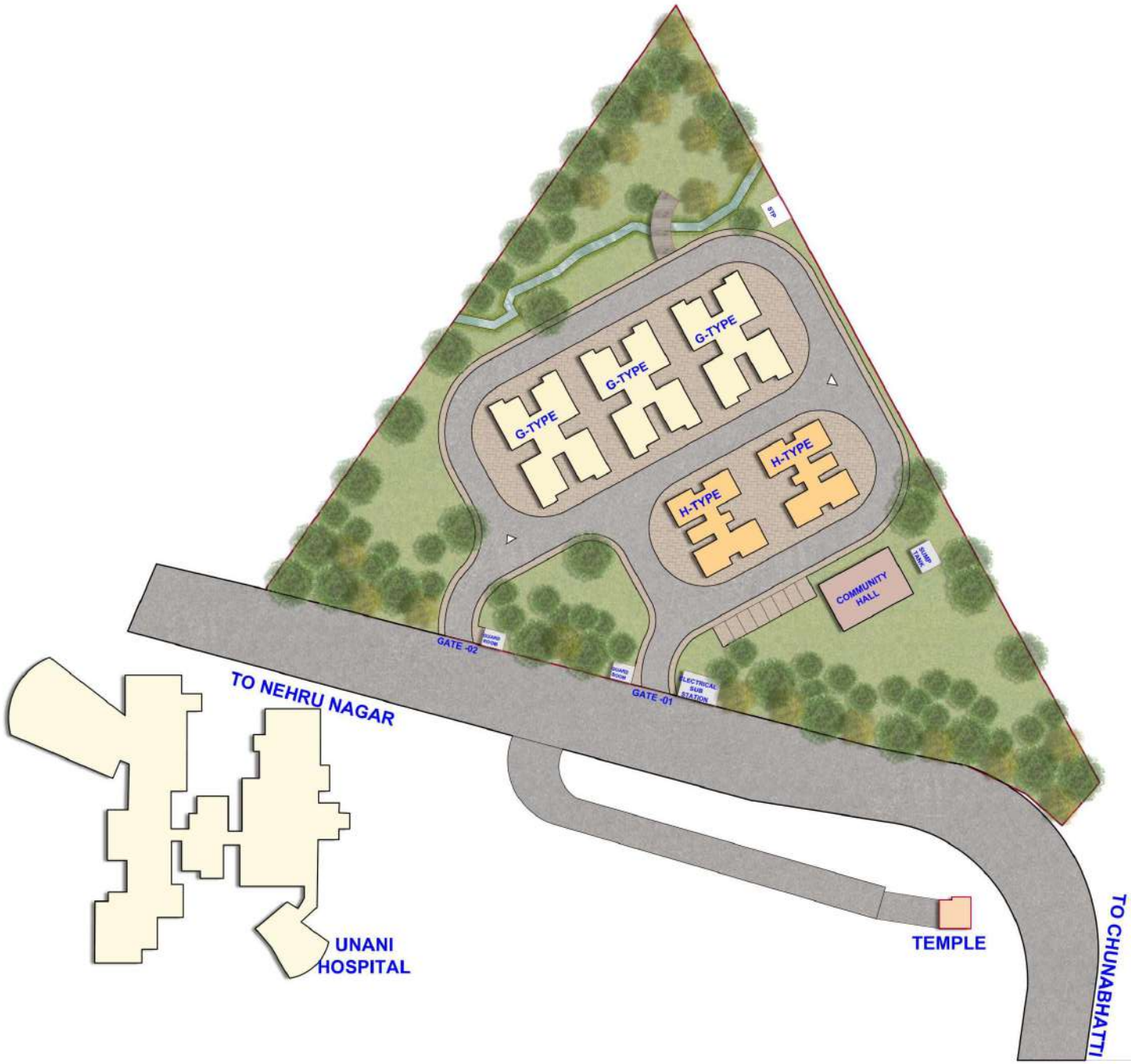
D. CHUNA BHATTI –G & H Type Residential Building

TOTAL SITE AREA =15,000 Sq.M
TOTAL GROUND COVERAGE -1500 Sq.M
TOTAL BUILT UP AREA- 9108 SQ.M.

G-TYPE (STILT+6 FLOORS)- 3 BLOCKS
ONE BLOCK =24 UNITS
24UNITS X 3 BLOCKS = 72 UNITS
Total Builtup_7413 Sq.m

H-TYPE (STILT+6 FLOORS)- 2 BLOCKS
ONE BLOCK =24 UNITS
24 UNITS X 2 BLOCK = 48 UNITS
Total Builtup_3430 Sq.m

Community Hall 201 Sq.m



Bird's eye view of the Residential block

Bird's eye view of the Residential block

3D Views

INDOOR ENVIRONMENTAL QUALITY

1. **Minimum Fresh Air Ventilation :** Provide adequate outdoor air ventilation, so as to avoid pollutants affecting indoor air quality. Provide operable windows and / or Doors to the exteriors, in all regularly occupied areas
2. **Tobacco Smoke Control**: smoking is prohibited in the building,
3. Daylighting; Ensure connectivity between the interior and the exterior environment, by providing adequate daylighting
4. **Low-emitting Materials:** use of materials and systems with low VOC emissions
5. **Occupant Well-being Facilities:** project has occupant well-being facilities (such as gymnasium, aerobics, yoga, meditation or any indoor / outdoor games) to cater to at least 5% of building occupants

BUILDING MATERIALS AND RESOURCES

1. **Segregation of Waste, Post-occupancy : Facilitate** segregation of waste at source to encourage reuse or recycling of materials, thereby avoiding waste being sent to landfills
2. **Sustainable Building Materials**: Materials with Recycled Content, Local Materials,
3. **Handling of Waste Materials,** During Construction: Facilitate segregation of construction and demolition waste at source
4. **Use of Certified Green Building Materials, Products & Equipment:**


DAY LIGHT- DGU GLAZING


COURTYARD- GREEN ROOF


SEGREGATION OF WASTE

OCCUPANT WELL-BEING FACILITIES

UNIVERSAL DESIGN