



II OM SAI RAM II



**PLUTONIUM
GROUP**

Date:

PLUTONIUM BUSINESS SOLUTION PVT. LTD.

Registered Office: Plot No. 7 & 7A, C Zone, Turbhe, MIDC, Thane-Belapur Road, Near Turbhe Railway Station, Taluka & District - Thane, Navi Mumbai - 400 703.

CIN : U24239MH1983PTC030195 **Email :** plutoniumbs@gmail.com

Mob.: +91 93725 13985 / 93725 90653

Date : 21/10/2022

To,

**Ministry of Environment, Forests & Climate Change,
Integrated Regional Offices,
Ground Floor, East Wing, New Secretariat Building,
Civil Lines, Nagpur – 440 001. Maharashtra.**

Sub : Submission of six-monthly compliance status report as per terms & Conditions stipulated in Environment clearance letter for the proposed 'Plutonium Business Park', at Plot No. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane-Belapur Road, Turbhe, Navi Mumbai. Maharashtra.'

Ref. No. : Environmental clearance no. SEIAA-EC-0000002317, dated: 22/01/2020.

Respected Sir/Madam,

In reference to the above referred letter of your highly revered office we would like to submit the current status of construction work and point-wise compliance status to various stipulations laid down in environmental clearance letter no. **SEIAA-EC-0000002317, dated: 22/01/2020** along with the necessary annexure.

This compliance report is submitting for the period from **April 2022 to September 2022.**

This is for your kind consideration and records, please. Kindly acknowledge the same.

Thanking You,

With warm regards,

For, **Plutonium Business Solutions Pvt. Ltd. (Mr. Ratilal Patodia – Director)**

Authorized Signatory  **Director / Authorised Signatory**

**Encl : Part A: Current status of construction work.
Part B: Point-wise compliance status.
Datasheet & Annexure.**

Copy to Regional Office, MPCB, CBD Belapur, Navi Mumbai.
Department of Environment, Mantralaya, Mumbai.
Regional Office, CPCB, Vadodara.

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PART A:

Current Status of Work

Status of construction work	:	Total construction work done till September 2022 is 36084.638 Sq.meters. <ul style="list-style-type: none">➤ Box 1 - 8th floor Slab completed.➤ Box 2- 8th floor Slab Completed.➤ Box 3- 8th floor Slab Completed.
a.	Date of commencement (Actual and/or planned)	: 25/07/2020 (Actual)
b.	Date of completion (Actual and/or planned)	: 31/12/2026 (Planned)

PART B:

Compliance status of conditions stipulated in Environmental clearance letter for proposed 'Plutonium Business Park', at plot no. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane-Belapur Road, Turbhe, Navi Mumbai. Maharashtra granted by SEIAA, Govt. of Maharashtra vide EC no. SEIAA-EC-0000002317, dated: 22/01/2020 are as follows:

Sl. No.	Stipulated Clearance Conditions	Compliance Status															
Specific conditions:																	
i.	PP to explore the possibility that demolition waste and concrete debris can be recycled for making paver blocks and use these to the extent possible in the project itself.	<ul style="list-style-type: none"> ❖ Concrete debris that will be generated from the demolition of existing structure which shall be recycled by Techno Precast for manufacturing of paver blocks and same shall be used to the extent possible in the project itself. ❖ Please refer Annexure - 1 for Letter received from Techno Precast regarding manufacturing of paver blocks. 															
ii.	As shown during the presentation, PP to upload the Layout showing location of services including environmental infrastructure on the website immediately. PP to produce the same to SEIAA.	<ul style="list-style-type: none"> ❖ We have uploaded the layout showing location of services on ec-mpcb portal. Snapshot of ec-mpcb portal showing uploaded documents. ❖ Please refer Annexure – 2 for Snapshot of upload. 															
iii.	PP to ensure that Derbies management should be as per Construction and Demolition Waste Management Rules 2016. Also, the Derbies management plan should approve by local planning authority.	<p>Detailed Construction & Demolition waste management plan is given below;</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center">No.</th> <th align="center">Item</th> <th align="center">Reuse/ Recycle/ Disposal</th> </tr> </thead> <tbody> <tr> <td align="center">1</td> <td>Concrete/ Brick/ block</td> <td>Shall be recycled by Techno Precast for manufacturing of paver blocks and same shall be used to the extent possible in the project itself. Quantity: 3250 Cum</td> </tr> <tr> <td align="center">2</td> <td>Steel</td> <td>To scrap dealer for recycling. Quantity: 125 MT</td> </tr> <tr> <td align="center">3</td> <td>Asbestos sheet</td> <td>To Common Hazardous Waste Treatment, Storage and Disposal Facility Quantity: 500 nos.</td> </tr> <tr> <td align="center">4</td> <td>Aluminum scrap</td> <td>To authorized Recyclers Quantity: 1.7 MT</td> </tr> </tbody> </table>	No.	Item	Reuse/ Recycle/ Disposal	1	Concrete/ Brick/ block	Shall be recycled by Techno Precast for manufacturing of paver blocks and same shall be used to the extent possible in the project itself. Quantity: 3250 Cum	2	Steel	To scrap dealer for recycling. Quantity: 125 MT	3	Asbestos sheet	To Common Hazardous Waste Treatment, Storage and Disposal Facility Quantity: 500 nos.	4	Aluminum scrap	To authorized Recyclers Quantity: 1.7 MT
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		6	Cables and wires	To scrap dealer for recycling Quantity: 1.5 MT
		CONSTRUCTION WASTE MANAGEMENT PLAN		
		No.	Item	Reuse/Recycle/Disposal (Details)
		1	Bolder/ Rock	Partly for soiling/ plump concreting and partly to authorized landfill site with prior permission of MIDC
		2	Concrete Waste	To authorized landfill site with prior permission of MIDC
		3	Steel	Partly for Raft / PCC / Concrete walls. Partly to scrap dealer
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		5	Ceramic Tiles	To authorized landfill site with prior permission of MIDC
		6	Marble/Granite	To authorized landfill site with prior permission of MIDC
		Demolition & Construction waste collection & storage shall be done as per C & D Waste Management Rules, 2016.		
iv.	PP to ensure that, E-waste management should be as per E-waste management rule, 2016	❖ E-waste management and disposal shall be done as per E-Waste Management Rule, 2016.		
v.	PP to provide adequate (1:5) electric charging points/ stations in parking area.	❖ We have provided 5 nos of electric charging points each at 2 nd to 5 th Parking floor i.e., total 20 nos of electric charging points in parking area. ❖ Please refer Annexure -3 for parking plans indicating electric charging points.		
vi.	PP to upload CFO NOC. Also, PP to provide Fire hydrants along with necessary equipment on top of the podium and separate stair case which go direct to the podium for fire man.	❖ Chief Fire Officer & Fire Advisor, Maharashtra Industrial Development Corporation (MIDC) granted Provisional Fire NOC for the project vide letter no. MIDC/Fire/D-88955, dated: 28/11/2019. ❖ Please refer Annexure - 4 for Fire NOC. ❖ Plan indicating provision of Fire hydrants		

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		<p>along with necessary equipment on top of the podium.</p> <ul style="list-style-type: none"> ❖ Please refer Annexure -5 for Fire Hydrant. ❖ We would also like to mention here that point regarding provision of separate staircase for direct access to podium was not discussed during the meeting. Hence this is not applicable to our project. But please note that there is provision of 3 nos of staircases at a distance of 21.60 mt. for access to the podium for fire man.
vii.	PP to explore the possibility to increase the solar energy saving from 2 % to 3%.	<ul style="list-style-type: none"> ❖ The saving due to solar energy has been increased from 2% to 3.01%. ❖ Please refer Annexure - 6 for Revised Energy saving calculations.
viii.	PP to ensure ECBC norms are complied with.	<ul style="list-style-type: none"> ❖ ECBC analysis is carried out. ❖ Please refer Annexure -7 for Detailed ECBC Report.
ix.	PP to obtain the NOC from Petroleum and Explosives Safety Organization (PESO) for DG set, if required.	<ul style="list-style-type: none"> ❖ In this project PESO license is not applicable as the DG sets with inbuilt-up storage for Diesel having capacity less than 990 lit shall be provided as a backup for emergency services during power failure.
x.	The PP to get NOC from competent authority with reference to Thane creek flamingo sanctuary if the project site falls within 10 Km radius from the said sanctuary boundary. The planning authority to ensure fulfillment of this condition before granting CC.	<ul style="list-style-type: none"> ❖ We have applied for NOC with reference to Thane Creek Flamingo Sanctuary to the Forest Officer, Forest Department, Teen-Hath Naka, Louise Wadi, Thane (West), Thane. ❖ Please refer Annexure - 8 for Acknowledgement copy of same.
xi.	PP to submit CER (as per green field) prescribed by MoEF & CC circular dated 1.5.2018 relevant to the area and people around the project. The specific activities to be undertaken under CER to be carried out in consultation with Municipal Corporation or collector or Environment Department.	<ul style="list-style-type: none"> ❖ We hereby commit to provide cost of Rs. 4.63 Crores i.e., 1.5% of project cost (Rs. 308.70 Cr) towards CER activities. ❖ Please refer Annexure – 9 for letter stating CER detail. ❖ We have Submitted the CER Commitment Letter to The District Collector; Thane Municipal Corporation (TMC), ❖ Please refer Annexure - 10 for Acknowledgement copy of same.
xii.	PP to ensure that CER plan gets approved from Municipal Commissioner/District Collector.	<ul style="list-style-type: none"> ❖ We have Submitted the CER Commitment Letter to The District Collector; Thane Municipal Corporation (TMC).
xiii.	PP Shall comply with Standard EC conditions mentioned in the Office Memorandum issued	<ul style="list-style-type: none"> ❖ Noted.

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	by MoEF& CC vide F.No.22-34/2018-IA.III dt.04.01.2019.	
xiv.	SEIAA decided to grant EC for –FSI:8357.28 m2, non-FSI: 27727.358 m2 and Total BUA: 36084.638 m2 (Plan Approval no-EE/DN. II/MHP/SPA/E08456, Date-10.02.2019)	❖ Noted.
General conditions:		
i	E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.	❖ E-waste management and disposal shall be done as per E-Waste Management Rule, 2016.
ii	The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.	❖ Agreed to comply with.
iii	This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life as if applicable & this environment clearance does not necessarily imply that Forestry & Wild life clearance granted to the project which will be considered separately on merit.	<ul style="list-style-type: none"> ❖ NOC from Wild Life Board is Not Applicable as per Final Notification reg. ESZ of SGNP published by MoEF & CC u/no. S.O.3645 (E), dated: 05/12/2016 as our project site is not affected by the ESZ belt. ❖ We have applied for NOC with reference to Thane Creek Flamingo Sanctuary to the Forest Officer, Forest Department, Teen-Hath Naka, Louise Wadi, Thane (West), Thane.
iv	PP has to abide by the conditions stipulated by SEAC & SEIAA.	❖ Agreed to comply with.
v	The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.	<ul style="list-style-type: none"> ❖ Height of the building is as per the Approved building plan. ❖ MIDC approved building plan vide letter dated: 10/12/2019. ❖ Please refer Annexure - 11 for MIDC approved plan. ❖ MIDC issued commencement certificate for the project vide letter no. EE/DN. II/MHP/SPA/E08456/2019, dated: 10/12/2019. ❖ Please refer Annexure - 12 for Commencement Certificates. ❖ Airport Authority of India issued Height Clearance (Civil Aviation NOC) for the projects vide NOC no. NAVI/WEST/B/060119/402248, dated: 18/06/2019. ❖ Please refer Annexure – 13 for Height

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vi	If applicable Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.	<ul style="list-style-type: none"> ❖ MPCB granted consent to establish for the projects vide order no. Format1.0/BO/JD (WPC)/UAN No. 00000086136/CE/CC-2006001020, dated: 23/06/2020. ❖ Please refer Annexure - 14 for Consent to Establish.
vii	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.	<ul style="list-style-type: none"> ❖ All necessary facilities have been provided on site for the construction. ❖ 40 nos of temporary accommodation have been provided for 160 nos of Residential workers and 15 nos of Non Residential workers. ❖ Site sanitation like safe & adequate Municipal water for drinking and domestic purpose, 10 nos of toilets, 05 nos of bathing area have been provided. First Aid and periodical medical checkup facilities have been provided. ❖ Proper housekeeping & regular pest control have been carried out.
viii	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.	<ul style="list-style-type: none"> ❖ All necessary facilities have been provided on site for the construction. ❖ 40 nos of temporary accommodation have been provided for 160 nos of Residential workers and 15 nos of Non Residential workers. ❖ Site sanitation like safe & adequate Municipal water for drinking and domestic purpose, 10 nos of toilets, 05 nos of bathing area have been provided. First Aid and periodical medical checkup facilities have been provided. ❖ Proper housekeeping & regular pest control have been carried out.
ix	The solid waste generated should be properly collected and segregated. Dry/inert solid waste should be disposed-off to the approved sites for land filling after recovering recyclable material.	<ul style="list-style-type: none"> ❖ Concrete debris that will be generated from the demolition of existing structure which shall be recycled by Techno Precast for manufacturing of paver blocks and same shall

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		<p>be used to the extent possible in the project itself.</p> <p>❖ Detailed Construction & Demolition waste management plan is given below;</p> <table border="1" data-bbox="858 421 1476 1211"> <thead> <tr> <th>No.</th> <th>Item</th> <th>Reuse/ Recycle/ Disposal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Concrete/ Brick/ block</td> <td>Shall be recycled by Techno Precast for manufacturing of paver blocks and same shall be used to the extent possible in the project itself. Quantity: 3250 Cum</td> </tr> <tr> <td>2</td> <td>Steel</td> <td>To scrap dealer for recycling. Quantity: 125 MT</td> </tr> <tr> <td>3</td> <td>Asbestos sheet</td> <td>To Common Hazardous Waste Treatment, Storage and Disposal Facility Quantity: 500 nos.</td> </tr> <tr> <td>4</td> <td>Aluminum scrap</td> <td>To authorized Recyclers Quantity: 1.7 MT</td> </tr> <tr> <td>5</td> <td>Wooden Scrap</td> <td>To scrap dealer for recycling Quantity: 7 MT</td> </tr> <tr> <td>6</td> <td>Cables and wires</td> <td>To scrap dealer for recycling Quantity: 1.5 MT</td> </tr> </tbody> </table> <table border="1" data-bbox="858 1249 1476 2000"> <thead> <tr> <th colspan="2">CONSTRUCTION WASTE MANAGEMENT PLAN</th> <th></th> </tr> <tr> <th>No.</th> <th>Item</th> <th>Reuse/Recycle/Disposal (Details)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Bolder/ Rock</td> <td>Partly for soiling/ plump concreting and partly to authorized landfill site with prior permission of MIDC</td> </tr> <tr> <td>2</td> <td>Concrete Waste</td> <td>To authorized landfill site with prior permission of MIDC</td> </tr> <tr> <td>3</td> <td>Steel</td> <td>Partly for Raft / PCC / Concrete walls. Partly to scrap dealer</td> </tr> <tr> <td>4</td> <td>Brick/Block</td> <td>To authorized landfill site with prior permission of MIDC</td> </tr> <tr> <td>5</td> <td>Ceramic Tiles</td> <td>To authorized landfill site with prior permission of MIDC</td> </tr> <tr> <td>6</td> <td>Marble/</td> <td>To authorized landfill site with</td> </tr> </tbody> </table>	No.	Item	Reuse/ Recycle/ Disposal	1	Concrete/ Brick/ block	Shall be recycled by Techno Precast for manufacturing of paver blocks and same shall be used to the extent possible in the project itself. Quantity: 3250 Cum	2	Steel	To scrap dealer for recycling. Quantity: 125 MT	3	Asbestos sheet	To Common Hazardous Waste Treatment, Storage and Disposal Facility Quantity: 500 nos.	4	Aluminum scrap	To authorized Recyclers Quantity: 1.7 MT	5	Wooden Scrap	To scrap dealer for recycling Quantity: 7 MT	6	Cables and wires	To scrap dealer for recycling Quantity: 1.5 MT	CONSTRUCTION WASTE MANAGEMENT PLAN			No.	Item	Reuse/Recycle/Disposal (Details)	1	Bolder/ Rock	Partly for soiling/ plump concreting and partly to authorized landfill site with prior permission of MIDC	2	Concrete Waste	To authorized landfill site with prior permission of MIDC	3	Steel	Partly for Raft / PCC / Concrete walls. Partly to scrap dealer	4	Brick/Block	To authorized landfill site with prior permission of MIDC	5	Ceramic Tiles	To authorized landfill site with prior permission of MIDC	6	Marble/	To authorized landfill site with
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x	Disposal of muck during construction phase should 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.	<ul style="list-style-type: none"> ❖ Demolition & Construction waste collection & storage shall be done as per C & D Waste Management Rules, 2016. ❖ Concrete debris that will be generated from the demolition of existing structure which shall be recycled by Techno Precast for manufacturing of paver blocks and same shall be used to the extent possible in the project itself. ❖ Detailed Construction & Demolition waste management plan is given below; 																						
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		<table border="1"> <tr> <td data-bbox="853 212 922 257"></td> <td data-bbox="922 212 1050 257"></td> <td data-bbox="1050 212 1485 257">dealer</td> </tr> <tr> <td data-bbox="853 257 922 342">4</td> <td data-bbox="922 257 1050 342">Brick/Block</td> <td data-bbox="1050 257 1485 342">To authorized landfill site with prior permission of MIDC</td> </tr> <tr> <td data-bbox="853 342 922 427">5</td> <td data-bbox="922 342 1050 427">Ceramic Tiles</td> <td data-bbox="1050 342 1485 427">To authorized landfill site with prior permission of MIDC</td> </tr> <tr> <td data-bbox="853 427 922 512">6</td> <td data-bbox="922 427 1050 512">Marble/Granite</td> <td data-bbox="1050 427 1485 512">To authorized landfill site with prior permission of MIDC</td> </tr> </table> <ul style="list-style-type: none"> ❖ Demolition & Construction waste collection & storage shall be done as per C & D Waste Management Rules, 2016. 			dealer	4	Brick/Block	To authorized landfill site with prior permission of MIDC	5	Ceramic Tiles	To authorized landfill site with prior permission of MIDC	6	Marble/Granite	To authorized landfill site with prior permission of MIDC
		dealer												
4	Brick/Block	To authorized landfill site with prior permission of MIDC												
5	Ceramic Tiles	To authorized landfill site with prior permission of MIDC												
6	Marble/Granite	To authorized landfill site with prior permission of MIDC												
xi	Arrangement shall be made that waste water and storm water do not get mixed.	<ul style="list-style-type: none"> ❖ Minimizing the incremental runoff from the site with the help of rain water harvesting tank of capacity 70 KL. ❖ Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of adequate capacity. ❖ Use of screens and silt traps to SWD. ❖ Proper maintenance of storm water drainage to avoid choking of drains and flooding. ❖ Existing external drain of adequate capacity. ❖ STP of capacity 140 KLD will be provided based on MBBR technology for the treatment of waste water. 												
xii	All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.	<ul style="list-style-type: none"> ❖ As there was a pharmaceutical industry on the project site; top soil will be negligible. 												
xiii	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	<ul style="list-style-type: none"> ❖ Concrete debris that will be generated from the demolition of existing structure which shall be recycled by Techno Precast for manufacturing of paver blocks and same shall be used to the extent possible in the project itself. ❖ Part of Excavation material has been disposed to Authorized landfill site. 												
xiv	Green Belt Development shall be carried out considering CPCB guidelines including selection of plant	<ul style="list-style-type: none"> ❖ Green area will be developed on ground: 1106.36 Sq. mt. and on podium: 2152.96 Sq. mt. with new tree plantation: 133 nos. 												
xv	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	<ul style="list-style-type: none"> ❖ The use of ground water is prohibited under MIDC TTC area and no extraction of ground water for construction as well in operation purpose. ❖ Comparative account of onsite monitoring and analysis shows, there is no soil 												

Sl. No.	Stipulated Clearance Conditions	Compliance Status
		<p>Contamination. Results of water analysis show that water is not potable but it is not intended to withdraw the ground water for any purpose.</p> <p>❖ Please refer Annexure - 15 for Monitoring Reports.</p>
xvi	Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.	❖ No generation of hazardous waste during construction.
xvii	Any hazardous waste generated during construction phase should be disposed-off as per applicable rules and norms with necessary approvals of the MPCB Board.	❖ No generation of hazardous waste during construction.
xviii	The diesel generator sets to be used during construction phase should be low Sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.	❖ No use of DG sets during construction.
xix	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.	❖ No use of DG sets during construction.
xx	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 and should be operated only during non-peak hours.	<p>❖ Vehicles with valid PUC are allowed during construction to enter the site. Vehicles are operated only during non-peak hours. Records of PUC maintained at main gate.</p> <p>❖ Please refer Annexure - 16 for PUC Certificate.</p>
xxi	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.	<p>❖ Ambient air and Noise levels monitoring is being carried out.</p> <p>❖ Green area will be develop on site to mitigate noise pollution and to maintain noise levels within permissible standards.</p> <p>❖ Please refer Annexure - 15 for Monitoring Reports.</p>
xxii	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. (The above condition is applicable only if the project site is	<p>❖ 2582 MT of fly ash has been use in building material for construction.</p> <p>❖ We are using OPC 53 grade cement containing Fly Ash in building construction.</p>

Sl. No.	Stipulated Clearance Conditions	Compliance Status
	located within the 100 Km of Thermal Power Stations).	
xxiii	Ready mixed concrete must be used in building construction.	❖ We are using Ready Mixed Concrete in building construction.
xxiv	Storm water control and its re-use as per CGWB and BIS standards for various applications.	<ul style="list-style-type: none"> ❖ Minimizing the incremental runoff from the site with the help of rain water harvesting tank of capacity 70 KL. ❖ Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of adequate capacity. ❖ Use of screens and silt traps to SWD. ❖ Proper maintenance of storm water drainage to avoid choking of drains and flooding. ❖ Existing external drain of adequate capacity.
xxv	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	❖ We are using Ready Mixed concrete in building construction.
xxvi	The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.	<ul style="list-style-type: none"> ❖ The use of ground water is prohibited under MIDC TTC area and no extraction of ground water for construction as well in operation purpose. ❖ Comparative account of onsite monitoring and analysis shows, there is no soil Contamination. Results of water analysis show that water is not potable but it is not intended to withdraw the ground water for any purpose. ❖ Please refer Annexure - 15 for Monitoring Reports.
xxvii	The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/refused to the maximum extent possible. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treatment of 100% gray water by decentralized treatment should be done. Necessary measures should be made to mitigate	<ul style="list-style-type: none"> ❖ STP of capacity 140 KLD will be provided based on MBBR technology for the treatment of waste water. ❖ Treated sewage will be re-used for flushing and gardening.

Sl. No.	Stipulated Clearance Conditions	Compliance Status
	the Odour problem from STP.	
xxvii i	Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project	❖ The use of ground water is prohibited under MIDC TTC and no extraction of ground water for construction purposes also we are not planning to withdraw ground water for any purpose in future. Hence, permission from CGWA is not applicable.
xxix	Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.	❖ Dual plumbing lines will be provided for using the treated waste water for gardening and flushing.
xxx	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor-based control.	❖ Low flow fixtures will be provided for showers, toilets & in kitchen.
xxxii	Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.	❖ We are planning to choose Window Glass with visual light transmission of 45%.
xxxiii	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.	❖ China mosaic tiles will be used for roof insulation.
xxxiii i	Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use 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. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.	Energy conservation measures to be provided are as follows; ❖ Provision of LED lights. ❖ Use of VFDs. ❖ Energy efficient system. ❖ Use of solar power for external lighting, lift lobby passage and staircases lighting, parking lights.
xxxiv v	Diesel power generating sets proposed as source of backup power for elevators and common area Illumination during operation phase 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	❖ CPCB approved enclosed type D.G. sets will be provided.

Sl. No.	Stipulated Clearance Conditions	Compliance Status
	to the height needed for the combined capacity of all proposed DG sets. Use low Sulphur diesel. The location of the DG sets may be decided with in consultation with MPCB.	
xxxv	Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	<ul style="list-style-type: none"> ❖ Green area will be developed on ground: 1106.36 Sq. mt. and on podium: 2152.96 Sq. mt. with new tree plantation: 133 nos. ❖ Also, the proposed DG sets will be acoustic enclose type. ❖ Please refer Annexure - 15 for Monitoring Reports.
xxxv i	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	<ul style="list-style-type: none"> ❖ Proper traffic management for the construction vehicles. ❖ Vehicles having valid pollution under control certificate shall be allowed to ply on site. ❖ Regular maintenance of vehicles with suitable enclosures and intake silencers. ❖ Planning and ensuring effective implementation of the waste movement plan for loading and offsite movement in non-traffic hours.
xxxv ii	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspiration for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.	<ul style="list-style-type: none"> ❖ Agreed to comply with.
xxxv iii	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	<ul style="list-style-type: none"> ❖ Only one building; ❖ IT supports services and IT offices.
xxxv x	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.	<ul style="list-style-type: none"> ❖ Regular supervision of the above measures is being monitored by competent person.
xli	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	<ul style="list-style-type: none"> ❖ Obtained Environmental clearance from SEIAA, Govt. of Maharashtra vide letter no. SEIAA-EC-0000002317, dated: 22/01/2020. ❖ Please refer Annexure - 17 for Environmental clearance.
Xli	Six monthly monitoring reports should be submitted to the regional office MoEF, Bhopal with copy to this department and MPCB.	<ul style="list-style-type: none"> ❖ Six-monthly monitoring reports are being submitted.

Sl. No.	Stipulated Clearance Conditions	Compliance Status
Xlii	Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line. No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.	<ul style="list-style-type: none"> ❖ STP of capacity 140 KLD will be provided based on MBBR technology for the treatment of waste water. ❖ Treated sewage will be re-used for flushing and gardening. ❖ Biodegradable waste: Treatment by Organic Waste Converter (OWC). ❖ Non-biodegradable waste will be handed over to NMMC on daily basis. ❖ Green area will be developed on ground: 1106.36 Sq. mt. and on podium: 2152.96 Sq. mt. with new tree plantation: 133 nos.
xliii	Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.	<ul style="list-style-type: none"> ❖ Biodegradable waste: Treatment by Organic Waste Converter (OWC). ❖ Treated waste (manure) will be utilized in the existing premises for gardening.
Xliv	Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.	<ul style="list-style-type: none"> ❖ STP of capacity 140 KLD will be provided based on MBBR technology for the treatment of waste water. ❖ Treated sewage will be re-used for flushing and gardening. ❖ Biodegradable waste: Treatment by Organic Waste Converter (OWC). ❖ Non-biodegradable waste will be handed over to NMMC on daily basis. ❖ Green area will be developed on ground: 1106.36 Sq. mt. and on podium: 2152.96 Sq. mt. with new tree plantation: 133 nos.
Xlv	A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.	❖ A complete set of all the documents has been submitted to MPCB along with consent to establish application.
Xlvi	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.	❖ Noted.
Xlvii	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	❖ A separate Environment management cell with qualified staff will be established under competent person for the implementation of the stipulated environmental safeguards.
Xlvii i	Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up.	❖ Separate funds have been allocated for implementation of Environmental protection measures;

Sl. No.	Stipulated Clearance Conditions	Compliance Status
	This cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department.	<p>During construction phase;</p> <ul style="list-style-type: none"> ❖ Capital Cost: Rs. 10.17 Lakhs have been allocated for the entire construction period. <p>During operation phase;</p> <ul style="list-style-type: none"> ❖ Set up Cost: Rs. 836.88 Lakhs & ❖ O & M Cost: Rs. 54.22 Lakhs / Annum.
Xlix	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://ec.maharashtra.gov.in .	<ul style="list-style-type: none"> ❖ After getting Environment clearance from SEIAA, Govt. of Maharashtra, we published Public Notice in Navshakti (Marathi) and Free Press Journal (English) local newspapers. ❖ Please find Annexure – 18 for Advertisement Copy.
1	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1 st June & 1st December of each calendar year.	<p>Submitting six-monthly compliance reports to;</p> <ul style="list-style-type: none"> ❖ RO, MPCB, CBD, Belapur, Navi Mumbai. ❖ RO, CPCB, Vadodara. ❖ RO, MoEF & CC, Nagpur. ❖ Environment Department, Mantralaya.
li	A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	<ul style="list-style-type: none"> ❖ Environmental clearance copy submitted to NMMC.
lii	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM. SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sector parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	<ul style="list-style-type: none"> ❖ Noted.
liii	The project proponent shall also submit six monthly reports on the status of compliance of	<p>Submitting six-monthly compliance reports to;</p> <ul style="list-style-type: none"> ❖ RO, MPCB, CBD, Belapur, Navi Mumbai.

Sl. No.	Stipulated Clearance Conditions	Compliance Status
	the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	<ul style="list-style-type: none"> ❖ RO, CPCB, Vadodara. ❖ RO, MoEF & CC, Nagpur. ❖ Environment Department, Mantralaya.
lix	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	❖ Environmental statement (Form-V) will be submitted on MPCB web portal.
4	The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.	❖ Noted.
5	In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.	❖ Noted.
6	The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.	❖ Noted.
7	Validity of Environment Clearance: The environmental clearance accorded shall be valid as per EIA Notification, 2006, and amended time to time.	❖ Noted.

Sl. No.	Stipulated Clearance Conditions	Compliance Status
8	In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.	❖ Noted.
9	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	❖ Noted.
10	Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1stFloor, D-, Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	❖ Noted.

Compliance as per

Monitoring the Implementation of Environmental Safeguards

Ministry of Environment, Forests & Climate Change

Regional Office (WCZ), Nagpur

Monitoring Report

DATA SHEET

1	Project type: River - valley/ Mining / Industry / Thermal / Nuclear / Other (specify)	:	Construction Project.
2	Name of the project	:	'Plutonium Business Park', at Turbhe, Navi Mumbai.
3	Clearance letter (s) / OM No. and Date	:	Obtained Environmental clearance from SEIAA,

			Govt. of Maharashtra vide letter no. SEIAA-EC-0000002317, dated: 22/01/2020.			
4	Location :-					
	a.	District (S)	: Navi Mumbai.			
	b.	State (S)	: Maharashtra.			
	c.	Latitude/ Longitude	: Latitude: 19° 4'58.67"N Longitude: 73° 1'5.29"E			
5	Address for correspondence :					
	a.	Address of Concerned Project Chief Engineer (With pin code & Telephone / telex / fax numbers)	: Mr. Ratilal Patodia, 'Plutonium Business Park', at plot no. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane-Belapur Road, Turbhe, Navi Mumbai. Tel: 9322513115.			
	b.	Address of Executive Project: Engineer/Manager (With pin code/ Fax numbers)	: Mr. Mahesh A. Bagade, 'Plutonium Business Park', at plot no. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane-Belapur Road, Turbhe, Navi Mumbai. Tel: 8879448865.			
6	Salient features:					
	a.	of the project	: <table border="1"> <thead> <tr> <th>Building No.</th> <th>Number of buildings</th> </tr> </thead> <tbody> <tr> <td>One building</td> <td>Ground + 1st floor + 2nd to 5th Parking floor + 6th Podium + 7th to 18th floors.</td> </tr> </tbody> </table>	Building No.	Number of buildings	One building
Building No.	Number of buildings					
One building	Ground + 1 st floor + 2 nd to 5 th Parking floor + 6 th Podium + 7 th to 18 th floors.					
	b.	of the environmental management plans	: Separate funds have been allocated for implementation of Environmental protection measures; During construction phase; ❖ Capital Cost: Rs. 10.17 Lakhs have been allocated for the entire construction period. During operation phase; ❖ Set up Cost: Rs. 836.88 Lakhs & ❖ O & M Cost: Rs. 54.22 Lakhs / Annum.			
7	Breakup of the project area					
	a.	submergence area forest & non-forest	: Not Applicable			
	b.	Others	: ❖ FSI area: 30,785.60 Sq. mt. ❖ Non-FSI area: 36,908.05 Sq. mt. ❖ Total BUA area: 67,693.65 Sq. mt.			
8	Breakup of the project affected Population with enumeration of that losing houses/dwelling unit's Only agricultural land only, both Dwelling units & agricultural Land		: Not Applicable			

	& landless laborers/artisan.		
	a. SC, ST/Adivasis	:	Not Applicable
	b. Others (Please indicate whether these Figures are based on any scientific and systematic survey carried out or only provisional figures, if a Survey is carried out give details and years of survey)	:	Not Applicable
9	Financial details		
	a. Project cost as originally planned and subsequent revised estimates and the year of price reference.	:	Rs. 308.70 Cr.
	b. Allocation made for environmental management plans with item wise and year wise Break-up.	:	Separate funds have been allocated for implementation of Environmental protection measures; During construction phase; ❖ Capital Cost: Rs. 10.17 Lakhs have been allocated for the entire construction period. During operation phase; ❖ Set up Cost: Rs. 836.88 Lakhs & ❖ O & M Cost: Rs. 54.22 Lakhs / Annum.
	c. Benefit cost ratio/Internal rate of Return and the year of assessment	:	--
	d. Whether (c) includes the Cost of environmental management as shown in the above.	:	--
	e. Actual expenditure incurred on the project so far	:	Rs. 58.63 Cr.
	f. Actual expenditure incurred on the Environmental Management plans so	:	Rs. 59.96 Lakhs
10	Forest land requirement		
	a. The status of approval for diversion of forest land for non-forestry use	:	Not Applicable
	b. The status of clearing felling	:	Not Applicable
	c. The status of compensatory afforestation, if any	:	Not Applicable
	d. Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far.	:	Not Applicable
11	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	:	--
12	Status of construction	:	Total construction work done till September

			2022 is 36084.638 Sq.meters.
			<ul style="list-style-type: none"> ➤ Box 1 - 8th floor Slab completed. ➤ Box 2- 8th floor Slab Completed. ➤ Box 3- 8th floor Slab Completed.
	a.	Date of commencement (Actual and/or planned)	: 25/07/2020 (Actual)
	b.	Date of completion (Actual and/or planned)	: 31/12/2026 (Planned)
13		Reasons for the delay if the Project is yet to start	: --
14		Dates of site visits	
	a.	The dates on which the project was monitored by the Regional Office on previous Occasions, if any	: --
	b.	Date of site visit for this monitoring report	: --
15		Details of correspondence with Project authorities for obtaining Action plans/information on Status of compliance to safeguards Other than the routine letters for Logistic support for site visits) (The first monitoring report may contain the details of all the Letters issued so far, but the Later reports may cover only the Letters issued subsequently.)	: --



TECHNO PRECAST

Mfr. of All Type of C.C. Blocks & other R.C.C. Precast Products

Plot No. D-222/50, T.T.C. Industrial Area, M.I.D.C., Shirvane, Navi Mumbai - 400 706

27/12/2019

To,
The Director,
M/S Plutonium Business Solution Pvt. Ltd.,
Plot NO, 7, Thane Belapur Road,
Turbhe Navi Mumbai. 400 705.

Sub:- Reuse of serviceable concrete debris

Dear Sir,

We can use recycle Serviceable pure concrete debris which will be generated from demolition of existing structure at your Plutonium Business Park Site.

We can use this serviceable concrete debris for Mfg. of concrete blocks and other cement concrete product.

Thanking You,

Yours Faithfully,

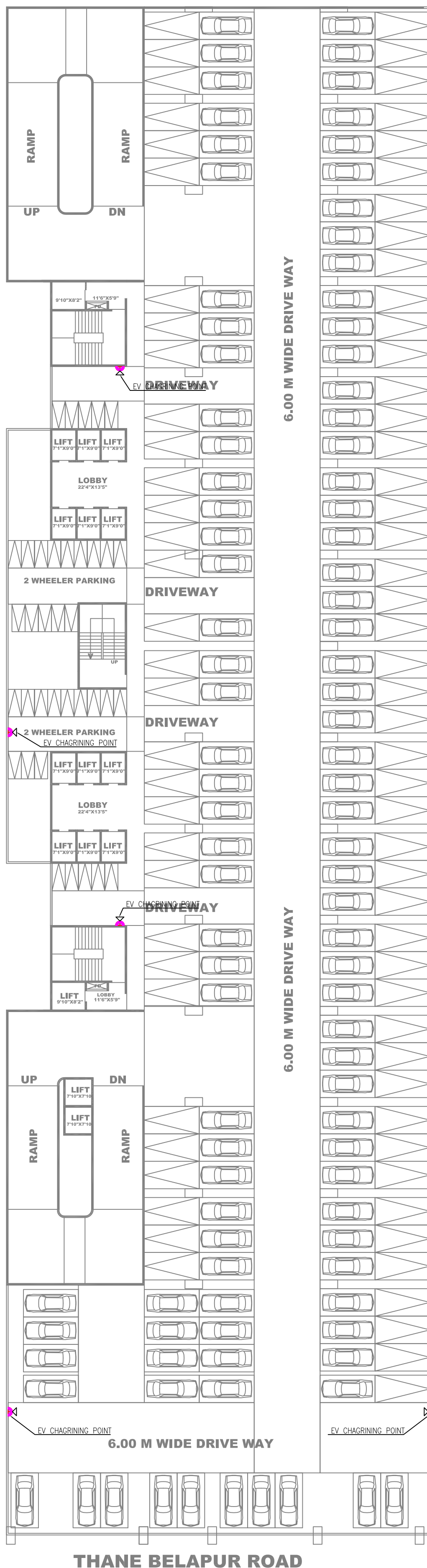
for Techno Precast


27/12/19.
Authorized signatory

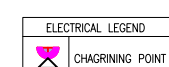
Submit

Uploaded Documents

Sr No.	Document Category	Document Name	Uploaded Date	Actions
1	Others	Form 1	April 16, 2019	Download
2	Others	Form 1a	April 16, 2019	Download
3	Others	EIA Report	April 16, 2019	Download
4	Others	Revised Form 1 and Form 1A	October 9, 2019	Download
5	Others	Site Contamination Report	October 10, 2019	Download
6	Others	Services Layout	October 11, 2019	Download



ADJOINING IKEA, NAVI MUMBAI



INDEPENDENT PARKING = 101
DEPENDENT PARKING = 78
TOTAL CAR PARKS = 179

* PLANS FOR REVIEW AND SURVEY ONLY.

THANE BELAPUR ROAD

PLUTONIUM BUSINESS PARK
 PLOT NO.7&7A,ADJOINING IKEA
 NEAR TURBHE RAILWAY STATION
 THANE BELAPUR ROAD
 TURBHE,NAVI MUMBAI



**PLUTONIUM
GROUP**
**PLUTONIUM BUSINESS
 SOLUTION PVT LTD**

MARKETING BY
YOGESH JHAWAR
 9820054280

2ND FLOOR PLAN
 (FLOOR HEIGHT-3.15 M)



stapl
 soyuz talib architects
 1406, Kesar Solitaire, Palm Beach Road
 plot no. 5, sector 19, Sanpada, Navi Mumbai
 Ph. No. 27810762 / 63

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION
(A Government of Maharashtra Undertaking)

HEAD OFFICE : "Udyog Sarthi", Mahakali Caves Road,
Andheri (E), Mumbai – 400 093.
Tele: (022) 26870052/54/27/73 Fax: (022) 26871587
PRINCIPAL OFFICE : 4,4 (A), 12th Floor, World Trade Centre, Complex-1,
Cuffe Parade, Mumbai – 400 005
Tele: (022) 22151451/52/53 Fax: (022) 22188203



No. MIDC/Fire/D-88955
Date: 28/11/2019.

**M/s, Plutonium Business
Solution Pvt. Ltd.,
Plot No: 7 and 7A, MIDC
TTC Indl. Area.**

**Sub: Grant of "Provisional No-Objection Certificate" to your
proposed construction of I.T. Building, on plot No, 7 and 7A at
MIDC, TTC Indl. Area.**

Ref: Your application vide no. SWC/14/521/20190408/625263.

Dear Sir,

This has reference to your application under reference above. This office has **"NO Objection (Provisional)"** for your proposed construction; on plot No, 7 and 7A at MIDC, TTC Indl. Area. The details of the constructions as per the Drawing submitted by you are as mapped under your BPAMS application. The plot area is **10,268.00 Sq. mtrs** & proposed built up area is **30,635.25 Sq. mtrs**. The height of the proposed structure is **75.70 mtr**. The details of the proposed construction are as under;

Floor Name	Proposed FSI Area	Bal	Stair	Lift	Pass	Lift Lobby
	Spec.	Spec				
Eighteenth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Seventeenth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Sixteenth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Fifteenth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Fourteenth Floor	1812.23	204.08	102.65	101.49	53.02	192.94
Thirteenth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Twelfth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Eleventh Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Tenth Floor	1812.23	204.08	102.65	101.49	53.02	192.94
Ninth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Eighth Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Seventh Floor	2047.17	225.08	100.22	101.49	53.02	192.94
Sixth Floor	577.75	0.00	102.65	115.66	0.00	0.00
Fifth Floor	0.00	0.00	0.00	114.82	0.00	0.00
Fourth Floor	0.00	0.00	0.00	114.82	0.00	0.00
Third Floor	0.00	0.00	0.00	114.82	0.00	0.00
Second Floor	0.00	0.00	0.00	115.66	0.00	0.00
First Floor	2775.82	264.58	111.11	115.19	305.54	186.53
Ground Floor	2936.18	0.00	113.06	115.59	675.54	429.51
Grand Total :	30385.94	2923.48	1534.32	2024.40	1617.26	2931.33

- The occupant load should not exceed in any case as prescribed in Table – 3 of NBC 2016 part IV.

This N.O.C. is valid subject to fulfillment of the following conditions:

1. The plans (adhering to the D.C. Rules of MIDC & National Building Code-2016 where necessary,) of the proposed construction should be approved by The Deputy Engineer, Mahape Sub-Division (Special Planning Authority)
2. The Drainage Competition certificate & Occupation certificate should be obtained from The Deputy Engineer, (SPA) MIDC, Sub-Division Mahape. **The B.C.C. shall be issued subject to "Final N.O.C." from this Department.**
3. **Under Section 3 of Maharashtra Fire Prevention and Life Safety Measures Act, 2006 (hereinafter referred to as "said Act")** The applicant (developer, owner, occupier by whatever name called) shall comply with all the Fire and Life

- Safety measures adhering to National Building Code of India, 2016 and as amended from time to time failing which it shall be treated as a violation of the said Act.
4. **As per the provision as under: - 10 of the said Act.** No person other than the License Agency shall carry out the work of providing Fire Prevention and Life Safety Measures or performing. Such other related activities required to be carried out in any place or building or part thereof:
A list of License Agency is available on Maharashtra Fire Services website www.mahafireservice.gov.in. No Licensed Agency or any other person claiming to be such Licensed Agency shall give a certificate under sub-section (3) of section 3 regarding the compliance of the fire prevention and life safety measures or maintenance thereof in good repair and efficient condition, without there being actual such compliance or maintenance.
 5. **Under Section 11 of the said Act,** the fire service fees shall be assessed and the same shall be payable after serving the notice to that effect or prior to issue of the building completion certificate or occupancy certificate whichever is earlier.
 6. **Under Section 45 of the said Act,** the owner/occupier or developer shall appoint Fire Officer/Officers and staff for taking adequate Fire and Life Safety Measures, qualifications and experience of such persons be got approved from the Chief Fire Officer & Fire Advisor, MIDC Fire Services.
 7. Though certain conditions are stipulated from the said Act and the National Building Code of India, it is obligatory on part of the applicant that is developer, builder, occupier, owner, tenant, by what so ever named called to abide with the provisions of the said Act failing which it shall be actionable under the provisions of said act.
 8. Proper roads around the building should be provided for easy mobility of the Fire Brigade Appliance for carrying out fire fighting and rescue operations Marginal spaces around the building should be kept free from obstructions & open to sky at all the time. Minimum marginal spaces should be confirming with **Table No.10 of D.C. Rules of MIDC, 2009**. The side roads around the building should have the capacity to withstand the load of **45 tones** of fire appliances.
 9. All portable fire fighting equipments installed at various locations as per local hazard such as Co2-DCP, Foam as per **IS: 15683**, & it must be strictly confirming to relevant IS specification. It is recommended for every 100 Sq. Meter one fire extinguisher should be provided for electrical installation Co2 extinguisher of 4.5 Kg should be provided.
 10. All the firefighting equipment shall be well maintained and should be easily accessible in case of emergency.
 11. Emergency Telephone numbers like **“Police”, “Fire Brigade”, “Hospital”, “Doctors”,** and **“Responsible persons of the office”** should be displayed in Fire Control Room, Security Office and in Reception area.
 12. It shall be ensured that security staff & every employee of the office, security are trained in handling **firefighting equipment & in fire fighting**.
 13. The Fire Exit Drill or Evacuation Drill should be plan and instruction should be given to the staff minimum **four times in a year** and drill should be carried out **twice in a year**.
 14. Cautionary boards such as **"DANGER", "NO SMOKING", "EXIT", "FIRE ESCAPE", "EXTINGUISHER", "FIRE HYDRANT"** etc. should be displayed on the strategic location to guide the occupants in case of emergency. The signs should be of florescent type and should glow in dark.
 15. **“On-Site” & “Off-Site”** emergency plan shall be prepared & mock drills shall be conducted twice a year & instructions to every employee shall be given once in three months.
 16. The use of combustible surface finishes on walls (including facade of the building) and ceiling affects the safety of the occupants of the building. Such finishes tend to spread the fire and even though the structural elements may be adequately fire resistant, serious danger to life may result. It is therefore, essential to have adequate precautions to minimize spread of flame on wall, façade of building and ceiling surfaces.
 17. The finishing materials used for various purposes and décor shall be such that it shall not generate toxic fumes / smoke.

18. Automatic smoke venting facilities shall be provided for safe use of exits in windowless buildings.
19. Natural draft smoke venting shall utilize roof vents in walls at or near the ceiling level, such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.
20. Where smoke venting facilities are installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served, using available exit facilities with a margin of safety to allow for unforeseen contingencies.
21. The fluorescent glow signs like **“Staircase”, “Extinguisher”, “Fire Escape” “Hydrant Point”, Manual Call Point” “Exit”, “Lift”** shall be installed on strategic locations in all common areas of the building like passages, Corridors etc.
22. Fire evacuation orders & exit map shall be provided in every floor & in lobbies of the buildings.
23. LPG banks should not be stored on upper floor for cooking etc. The kitchen for commercial purpose on upper floors is not permitted.
24. The Glassing and facade other Glasses should have at least one hour fire resistance and should be UL approved and in accordance with NFPA requirements.
25. The glass faced should be protected with coating film so that in case of breaking of glass the glass can remain in its place for some hours before replacement. This will reduce the risk of injuries to occupants and fire & rescue personal. In the event of blast the shock wave created which creates the damage to glass faced the use of film will help to reduce the damages due to glass breaking.
26. This being a very special type of building if any additional recommendations to be added or deleted depending upon the need of the fire safety requirement of buildings.
27. The Chief Fire Officer & Fire Advisor, M.I.D.C. reserves all right to modify the fire safety recommendations and it shall be responsibility of company authorities to maintained close liaison with fire department.
28. **A high rise building during construction shall be provided with the following fire protection measures, which shall be maintained in good working condition at all times:**
29. **Dry riser of minimum 100 m.m. dia. Pipe with hydrant outlets on the floors constructed with a fire service inlet.**
30. **The use of combustible surface finishes on walls (including facade of the building) and ceiling affects the safety of the occupants of the building. Such finishes tend to spread the fire and even though the structural elements may be adequately fire resistant, serious danger to life may result. It is therefore, essential to have adequate precautions to minimize spread of flame on wall, façade of building and ceiling surfaces.**
31. **The finishing materials used for various purposes and décor shall be such that it shall not generate toxic fumes / smoke.**
32. **Automatic smoke venting facilities shall be provided for safe use of exits in windowless buildings.**
33. **Natural draft smoke venting shall utilize roof vents in walls at or near the ceiling level, such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.**
34. **Where smoke venting facilities are installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served, using available exit facilities with a margin of safety to allow for unforeseen contingencies.**
35. **If the building or part of building is Sub-leased, sold to some other company then the prospective buyer / sub-leased must obtain “No – Objection Certificate” form this office before occupying the building / floors. You are hereby informed to incorporate suitable clause to that effect in sub-leases agreement or agreement for sale.**
36. **Permission from civil aviation for height clearance shall be obtained.**

37. Pressurization should be provided to the either of the staircase and Lift Shaft and Lift lobby of the building. The mechanism for the pressurization shall act automatically with the fire alarm/ sprinkler system and it shall be possible to operate this mechanically also.
38. You are hereby informed that the proposed building or part of building or floor or part of floor shall not be occupied without obtaining "Final No-Objection Certificate" from this office and without obtaining "Occupation certificate" from concerned Special Planning Authority of MIDC failing which you will be fully responsible for consequences, if any, which may please be noted.

Standard Specifications and Regulations to be followed: -

- a. D.C. Rules of MIDC & Part-3 & 4 National Building Code: 2016,
- b. **IS : 3844** – for installation and maintenance of internal fire hydrants and hose reels on premises.
- c. **IS : 2189** – for selection, installation and maintenance of automatic fire detection and alarm system.
- d. **IS : 15683** – for selection, installation and maintenance of portable first aid fire extinguishers.
- e. **IS : 9583 : 1981** Emergency lighting units.
- f. **IS 12456 : 1988** Code of practice for fire protection of electronic data processing installation.
- g. **IS 4963 : 1987** Recommendations for buildings and facilities for physically handicapped.
- h. **IS 3614 (Part I) :1966** Specification for fire check doors.

Other Important Codes & Standards:-

1. Code of practice for Fire Safety Buildings IS-1642 – for Details of Construction.
2. Code of Practice of Fire Safety of Buildings IS-1643– Exposure Hazard.
3. Code of Practice of Fire Safety of Buildings IS-1644 – Exit requirement and Personal Hazard.
4. IS : 1646 :2015 : Code of practice for Fire Safety of Buildings (general) : Electrical installations.
5. IS : 15105 – Design and installation of fixed automatic sprinkler fire extinguishing system.
6. IS 9668 : 1990 Code of practice for provision and maintenance of water supplies and fire fighting.
7. IS 2175 : 1988 Specification for heat sensitive fire detectors for use in automatic fire alarm system.
8. IS 11360 : 1985 Specification for smoke detectors for use in automatic electrical fire alarm system.
9. IS 9457 : 1980 Safety colours and safety signs.
10. IS 12349 : 1988 Fire protection – Safety sign
11. IS 12407 : Graphic symbols for fire protection plan.

FIRE PREVENTION

Passive Fire protection required.

Requirement and Provision: - The following passive fire protection systems will have to be followed and installed for the Life Safety of the building as per Part 3 & 4 of National Building Code 2016:-

Sr. No.	Clause Number	Description.
1.	Clause NO: 3.3.1 & 3.3.2	Fire Test General Requirement: Element / Component shall have the requisite fire resistance performance when tested in accordance with the accepted standards.
2.	Clause NO: C-9	Compartmentation: The building shall be suitably compartmentalized so that the fire & smoke remain confined to the area where the fire incident has occurred & does not spread to other part of the building.
3.	Clause NO: 4.10.5	Smoke Extraction System: The exhaust system may be continued, provided the construction of the ductwork & fans is such that it will not be rendered inoperable by hot gases & smoke & there is no danger of spread of smoke to

		other floors via the path of extraction system.
4.	Clause NO: 3.4.12.3	Smoke management: Where smoke venting facilities are installed for the purpose of exit safety these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served using available exit facilities, with margin of safety to allow for unforeseen contingencies.
5.	Clause NO: C-1.17	Fire rated ducts: Where the ducts passes through fire walls, the opening around the duct shall be sealed with fire resisting materials having the fire resistant rating of the compartment. Where the duct crosses the compartment which is fire rated for same fire rating. Depending on the services passing around the duct work, which may be affected in case of fire temperatures rising, the ducts shall be insulated
6.	Clause NO: C-1.12 a	Cable ducts: The electric distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every floor with non-combustible material having the same fire resistance as the fire rating of the duct.
7.	Clause NO: C-1.12 e	Fire rated ceilings: The exhaust system may be continued, provided the construction of the ductwork & fans is such that it will not be rendered inoperable by hot gases & smoke & there is no danger of spread of smoke to other floors via the path of extraction system.
8.	Clause NO: 3.3.3	Steel protection: Load bearing steel beams & columns of building having total covered area of 500Sq.Mtrs. and above shall be protected against failure collapse of structure in case of fire. This could be achieved by using appropriate methodology using suitable fire rated materials as per the accepted standards.
9.	Clause NO: 4.13	Fire escape enclosure: Fire towers shall be constructed of walls with a 2 hours fire rating without openings other than the exit doorway, with platforms, landings & balconies with the same fire rating of 2 Hours.
10.	Clause NO: C-1.4	Glazing: If glazing or glass bricks are used in a stair case shall have fire rating of minimum 2 hours.
11.	Clause NO: 3.4.19	Glazing: If glass is used as a façade for building it shall have minimum 1 hour fire rating.
12.	Clause NO: 3.4.8.3	Fire stopping: Every vertical opening between the floors of a building shall be suitably enclosed or protected as necessary to provide reasonable safety to the occupants while using the means of egress by preventing spread of fire, smoke or fumes through vertical openings from floor to floor, which will allow the occupants to complete their safe use of means of egress.
13.	Clause NO: 3.4.8.4	Fire Stopping: Openings in the walls or floors which are provided for the passage of all building services like cables, electrical wiring & telephone cables etc. Shall be protected by the enclosure in the form of Ducts/shafts with a fire resistance of not less than 2 Hours.
14.	Clause NO: C-1.9	Fire stopping service ducts & shafts: Service ducts & shafts shall be enclosed by walls of 2 hours & doors of 1 hour fire rating. All such ducts/shafts shall be properly sealed & fire stopped at all floors.
15.	Clause NO: C-1.12	Fire stopping cable ducts penetration: The electrical distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every floor with non-combustible materials having the same fire resistance as the fire rating of the cable duct.

REQUIREMENT AND PROVISION: - The following Fire Protection System is required for the fire safety of the building:-

Sr. No.	FIRE FIGHTING INSTALLATION	Requirements	Provision	Remarks
1.	Portable Fire Extinguishers	Required	IS: 15683 & 2190.	Portable Fire Extinguisher should be installed confirming to IS 15683 & other I.S. codes
2.	Hose Reel	Required at prominent places.	At Various strategic Locations.	On each floor in the Staircase landing for Fire Fighting. The first aid hose reel shall be connected directly to riser/down comer main and diameter of the hose reel shall not be less than 19mm confirming to IS 884:1985
3.	Wet Risers & Down Comers	Required in entire Bldg.	In all staircases & fire escape staircases	Required to provide in the Staircase and Fire Escape Staircase. Landing of Valve should be installed confirming to IS:5290.
4.	Court Yard Hydrant or Ring hydrant system around the building.	Required around all proposed buildings.		Fire Brigade Inlet connection should be provided. Hydrant points should be provided with 2 Nos. of Delivery Hose confirming to IS-636 along with Standard Branch (Universal) confirming to IS-2871. The distance between 2 Hydrants should not be more than 30 Mtrs. The guidelines should be followed as per IS 3844:1989 & IS 13039:2012.
5.	Manually Operated Fire Alarm System	Required in entire building	At every floor on strategic location	Manually Operated Fire Alarm should be provided; it should be connected to alternate power supply.
6.	Underground Static Storage Tank	Required 2,00,000 liters		This water storage should be exclusively for Fire Fighting.
7.	Terrace Level Tank	Required 20,000 Ltrs.		For wet riser cum down comer. On each terrace of building
8.	Fire Pump	2 No. 2850 lpm electrical driven main pumps 1 No. 2850 lpm Diesel driven stand by pump 2 No. 180 lpm electric driven jockey pump 900 lpm electric driven Booster Pump on terrace tank.		Fire Fighting pumps shall be well maintained. A separate arrangement of pumping should be done for sprinkler system. All the fire pumps must be centrifugal pumps only Booster pump should be provided on terrace.
9.	Automatic smoke Detection System & Fire alarm system.	Required in entire building at all floors (If false ceiling voids exceeding 800mm of height above false Detection System should be provided)		Automatic Smoke Detection system should be provided. Standards and guidelines given in IS-11360-1985 specification for Smoke Detectors for use in Automatic Electrical Fire Alarm system & IS 2189:2008 Selection, Installation and Maintenance of Automatic Fire-Detection and Alarm System should be followed.

Sr. No.	FIRE FIGHTING INSTALLATION	Requirements	Provision	Remarks
10.	Automatic Sprinkler system.	Required in entire building at all floors and Fire Pump Room (If false ceiling voids exceeding 800mm of height above false ceiling sprinkler should be provided)		Separate Pumping arrangement should be provided for the Sprinkler system. Guidelines are given in IS 15105 Design and installation of Fixed Automatic sprinkler fire Extinguishing system
11.	Sign Indicators for all fire safety, safe evacuation of occupants in case of emergency signs	Required at Prominent Places in all buildings.	Sign indicators should provided at prominent places as per the guidelines given in IS:9457 for Safety colour and Safety IS:12349 for Fire Protection Safety Signs IS:12407 for Graphics symbols for Fire Protection Plan.	
12.	Fire Doors	Required for all staircases. it should be self closing type.	Fire Doors of 2 hrs. Fire Resistance Rating should be provided in all buildings at the entrance of all the staircases on all floors. Certification from the Competent Authority shall be obtained & submitted to this office for record.	
13.	Manual Call Point	Required	Manual Call Point should be provided at prominent places in all buildings	
14.	Emergency Lights	Required in escape routes.	For speedy evacuation in case of emergency. With alternate power backup.	
15.	Pressurization	Required	In all staircase, Lobbies & Lift shaft in Bldg.	
16.	PA System with Talk Back Facility	Required	To guide the occupants in case of emergency.	
17.	Auto D.G. Backup	Required	Required for all fire safety systems.	
18.	Gas flooding system	Required	Gas flooding system should be provided below false ceiling & flooring for server room & Hub / Switch room. Guidelines are given in IS:15517 :2004 /ISO 14520-9	
19.	Fire Lift	Required	50% of total lift shall be fire lift.	
20.	Fire Brigade Connection- For Static Water Tank and For Hydrant System	Required at the Main Gate and on fire water tank		

***Guidelines for Refuge Area:-

Refuge Area: Horizontal Exits/Refuge Area :-

A horizontal exit shall be through a fire door of 120 min rating in a fire resistance wall. Horizontal exit require separation with the refuge area or adjoining compartment through 120 min fire barrier. The adjoining compartment of the horizontal exit should allow unlocked and ease of egress and exits for the occupants using defend in place strategy.

- Requirements of horizontal exits are as under:
 - a) Width of horizontal exit doorway shall be suitable to meet the occupant load factor for egress.
 - b) Doors in horizontal exits shall be openable at all times from both sides.
 - c) All doors shall swing in the direction of exit travel. For horizontal exits, if a double leaf door is used, the right hand door leaf shall swing in the direction of exit travel.
 - d) Refuge area shall be provided in buildings of height more than 24 m. Refuge area provided shall be planned to accommodate the occupants of two

consecutive floors (this shall consider occupants of the floor where refuge is provided and occupants of floor above) by considering area of 0.3 m² per person for the calculated number of occupants and shall include additionally to accommodate one wheelchair space of an area of 0.9m² for every 200 occupants, portion thereof, based on the occupant load served by the area of refuge or a minimum of 15 m², whichever is higher, shall be provided as under:

- 1) The refuge area shall be provided on the periphery of the floor and open to air at least on one side protected with suitable railings.
- 2) Refuge area(s) shall be provided at/or immediately above 24 m and thereafter at every 15 m or so.
The above refuge area requirement for D-6 occupancy requirement shall however be in accordance with 6.4.2.2.
- e) A prominent sign bearing the words 'REFUGE AREA' shall be installed at entry of the refuge area, having height of letters of minimum 75 mm and also containing information about the location of refuge areas on the floors above and below this floor. The same signage shall also be conspicuously located within the refuge area.
- f) Each refuge area shall be ventilated and provided with first aid box, fire extinguishers, public address speaker, fire man talk back, and adequate emergency lighting as well as drinking water facility.
- g) Refuge areas shall be approachable from the space they serve by an accessible means of egress.
- h) Refuge areas shall connect to firefighting shaft (comprising fireman's lift, lobby and staircase) without having the occupants requiring to return to the building spaces through which travel to the area of refuge occurred.
- i) The refuge area shall always be kept clear. No storage of combustible products and materials, electrical and mechanical equipment, etc. shall be allowed in such areas.
- j) Refuge area shall be provided with adequate drainage facility to maintain efficient storm water disposal.
- k) Entire refuge area shall be provided with sprinklers.
- l) Where there is difference in level between connected areas for horizontal exits, ramps of slope not steeper than 1 in 12 shall be provided (and steps should be avoided).

NOTE – Refuge area provided in excess of the requirements shall be counted towards FAR.

High rise apartment buildings with apartments having balcony, need not be provided with refuge area; however apartment buildings without balcony shall provide refuge area as given above. Refuge area for apartment buildings of height above 60 m while having balconies shall be provided at 60 m and thereafter at every 30 m. The refuge area shall be an area equivalent to 0.3 m² per person for accommodating occupants of two consecutive floors, where occupant load shall be derived on basis of 12.5 m² of gross floor area and additionally 0.9 m² for accommodating wheel chair requirement or shall be 15 m², whichever is higher.

GUIDELINES FOR INTERNAL STAIRWAYS as per NBC 2016:

- a) Stairways shall be constructed of non-combustible materials throughout. Hollow combustible construction shall not be permitted. Width of Staircase should be **1.5 M.**
- b) **No Gas piping shall be laid down in the stairway.**
- c) Internal staircase shall be constructed as a self-contained unit with at least one side adjacent to an external walls and shall be completely enclosed.
- d) Internal staircase shall not be arranged around lift shaft unless the later is entirely enclosed by material of fire resistance rating as that for type of construction itself.
- e) The access to main staircase shall be gained through at least half-an-hour fire resisting automatic closing doors, placed in the enclosing walls of the staircase. They shall be swing type doors opening in the direction of the escape.
- f) No living space, store or other space, involving fire risk, shall open directly in to staircase.
- g) The external exit door of a staircase enclosure at ground level shall open directly to the open space or should be accessible without passing through any door other than a door provided to form a draught lobby.

- h) The exit signs with arrows indicating the escape routes shall be provided at a height of 1.5 m. from the floor level on the wall and shall be painted with fluorescent paint. All exit signs should be flush with the wall and so designed that no mechanical damage to them can result from the removing furniture, material or any other equipment.
- i) **Exits shall be so located that it will not be necessary to travel more than 30 Mtrs. from any point to reach the nearest exit.**

Staircase Design requirement:

1. The minimum headroom in a passage under the landing of a staircase and under the staircases shall be **2.2 Mtrs.**
2. Access to main staircase shall be through a fire / smoke check door of a minimum 2 hours fire resistance rating.
3. No living space, store or other fire risk shall open directly in to the staircases. The main and external staircases shall be continuous from ground floor to the terrace level.
4. No electrical shafts, A/c ducts or gas pipe etc. shall pass through or open in the staircases. Lifts shall not open in staircases.
5. The width of the staircase shall not be less than **1.5 Mtrs.**
6. **All the staircases shall be provided with mechanical Pressurization devices, which will inject the air in to staircase, lobbies or corridors to raise their pressure slightly above the pressure in adjacent parts of the building so the entry of toxic gases or smoke in to the escape routes is prevented.**

Staircase Enclosures:-

1. The external enclosing walls of the staircase shall be of the brick or the RCC construction having the fire resistance of not less than two hours. All enclosed staircases shall have access through self-closing door of one hour fire resistance. These shall be single swing doors opening in the direction of escape. The door shall be fitted with the check action door closers.
2. The staircase enclosures on the external wall of the building shall be ventilated to the atmosphere at each landing.
3. Permanent vent at the top equal to the 5% of the cross section area of the enclosure and openable sashes at each floor level with area equal to 1 to 15 % of the cross sectional area of the enclosure on external shall be provided. The roof of the shaft shall be at least 1 meter above the surrounding roof. There shall be no glazing or the glass bricks in any internal closing wall of staircase. If the staircase is in the core of the building and cannot be ventilated at each landing a positive pressure of 5 mm w.g. by an electrically operated blower/ blowers shall be maintained.
4. The mechanism for pressurizing the staircase shaft shall be so installed that the same shall operate automatically on fire alarm system/ sprinkler system and be provided with manual operation facilities.

FIRE ESCAPE: (ENCLOSED TYPE) SHALL COMPLY THE FOLLOWING: -

1. **Travel Distance should be maintained as per the guidelines given in D.C. Rules of MIDC. Exits and staircase guidelines should be followed as per MIDC's DC Rules and National Building Code-2016.**
2. **Fire escape constructed of M.S. angles, wood or glass is not permitted.**
3. **Opening of the Fire Escape Staircase should be from outside.**
4. Fire Escape staircase should be enclosed type. These should always be kept in sound operable condition .
5. Fire Escape Staircase shall be directly connected to the ground.
6. Entrance to the Fire Staircase shall be separate and remote from the internal staircase.
7. Care shall be taken to ensure that no wall opening or window opens on to or close to Fire Escape Stairs.
8. The route to the external staircase shall be free of obstructions at all times.
9. The Fire Escape stairs shall be constructed of non-combustible materials, and any doorway leading to it shall have the required fire resistance.
10. No Staircase, used as a fire escape, shall be inclined at an angle greater than 45^o from the horizontal

11. **The width of the staircase should as given in DC Rules of MIDC. The other detailed provision for exits in accordance with National building code - 2016.**
12. Fire Staircase shall have straight flight not less than **150 c.m. wide** with 20 c.m. treads and risers not more than 19 c.m. The number of risers shall be limited to 15 per flight.
13. Handrails shall be of a height not less than 100 c.m. and not exceeding 120 c.m.
14. **All the staircase doors on every floor shall be provided with two hours fire resistive doors having panic bars at both the sides.**

FIRE PROTECTION REQUIREMENTS FOR LIFTS:

(Fire Protection Requirements of Lifts in High Rise Buildings) For Building of Height 15 m and Above

Following requirements over and above those specified in 6 and 8 and in Part 4 'Fire and Life Safety' of the Code are applicable to all lifts provided in buildings having height more than 15 m:

- a) All materials of constructions in load bearing elements, stairways and corridors and facades shall be non-combustible.
- b) The interior finishing materials shall be of very low flame spread type.
- c) Walls of the lift shall have a fire rating of 120 min. The lift well shall have a vent at the top, of area not less than 0.2 m² per lift.
- d) Landing doors – Lift landing doors shall be imperforate. Collapsible doors shall not be permitted. Lift landing doors provided in the lift enclosure shall have a minimum fire resistance rating of 60 min.
- e) Lift car door – Lift car doors shall be imperforate. Collapsible car doors shall not be permitted.
- f) Telephone or other communication facilities shall be provided in the lift car and the lift main lobby. Communication system for lifts shall also be connected to the fire control room of the building if provided. For lifts for use by persons with disabilities, the facilities shall be provided in accordance with 13 of Part 3 'Development Control Rules and General Building Requirements' of the Code.
- g) Photo luminescent safety signs shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall have the plan of the respective floor showing location of the stairways. The plan shall also indicate the direction to and maintained on every floor of buildings open to and used by the public shall comply with the requirements of accessible signage given in 13 of Part 3 'Development Control Rules and General Building Requirements' of the Code.
- h) All lifts (fireman's lifts/non fireman's lifts) shall be provided with Phase I operation and per 7.1.1(k)(x) (grounding operation).
- j) The grounding operation may be initiated by individual switches for lifts or a common switch for a group of lifts or by a signal from fire alarm system of the building if available.
- k) Fireman lift – The fireman's lift is provided in a building for the purpose of aiding firefighters in evacuating trapped persons in the building and to take a equipments for fighting fire to upper levels with minimum delay. Some lifts out of all the lifts shall be identified as fireman's lifts.
The number of required fireman's lifts and their locations in a building will vary depending on the size, design, complexity of the building. Some considerations are as follows:
 - 1) There shall be at least one fireman's lift per building.
 - 2) If there are multiple wings in the building, there shall be at least one fireman's lift per wing.
 - 3) If there are multiple banks of lifts in the building there shall be at least one fireman's lift per bank of lift.
 - 4) If the building height is up to 60 m and it is zoned height-wise and it does not have single fireman's lift serving every floor of the building, then there shall be at least one fireman's lift per zone which shall serve the main level/fire access level and shall serve all the landings in the respective zone.

- 5) If the building height is more than 60 m and it does not have any single fireman's lift serving all the floors, that is, it has all lifts serving only respective zones, the fireman's lift shall be provided in each zone separately, serving all landings in respective zone, with transfer landing transferring from one zone to another.

Considering all the above, the fireman's lift(s) shall be identified on the building plan and duly displayed in Fire Command Centre.

To be effective in firefighting operation, the fireman's lift shall have following requirements:

- i) The fireman's lift may be used by the occupants in normal times.
- ii) The fireman's lift shall be provided with a fireman's switch. The switch shall be a two position (ON/OFF) switch fixed at the evacuation floor (normally main entrance floor) for enabling the lift to be put into fireman's mode. The switch shall be situated in a glass-fronted box with suitable label and fixed adjacent to the lift at the entrance level. When the switch is on, landing call-points shall become inoperative and the lift shall be on the car control only or on a priority control device. When the switch is off, the lift will return to normal working.
- iii) The fireman's lift shall be provided with an audio and visual signal in the car.
- iv) The fireman's lift shall have a floor area of minimum 1.43 m². It shall have loading capacity of not less than 544 kg (8 persons lift).
- v) The fireman's lift shall be provided with power operated (automatic) doors of minimum 0.8 m width.
- vi) The speed of the fireman's lift shall be 1.0 m/s or more such that it can reach the top floor from main floor/ firefighting access level within 1 min. In case the building is zoned, the fireman's lift shall operate from the lowest served landing to the topmost served landing in 1 min.
- vii) Reliable alternative source of power supply should be provided for all fireman lifts through a manually/automatically operated changeover switch. The route of wiring shall be safe from fire.
- viii) Suitable arrangements such as providing slope in the floor of lift lobby shall be made at all the landings to prevent water used during firefighting from entering the lift shafts.
- ix) The words 'Fireman Lift' shall be conspicuously displayed in fluorescent paint on the lift landing.
- x) Operational requirement of fireman's lift- The lift shall be provided with the following operational control, Phase I and Phase II.

Phase I – Return to evacuation floor –

- Shall start when the fireman's switch at the evacuation floor is turned to the 'ON' position or the signal from smoke detector (if provided by the Building Management System) is on. All lifts controlled by this switch shall cancel all existing car calls and separate from landing calls and no landing or car calls shall be registered. The audio and visual signal shall be turned on. All heat and smoke sensitive door reopening devices shall be rendered inoperative.
- If the lift is travelling towards the evacuation floor, it shall continue driving to that floor.
- If the lift is travelling away from the evacuation floor, it shall reverse its direction at the nearest possible floor without opening its door and return non-stop to the evacuation floor.
- If the lift is standing at a floor other than the evacuation floor, it shall close the doors and start travelling non-stop to the evacuation floor.
- When at the evacuation floor, the lift shall park with doors open.
- The continuous audio signal is turned off after this return drive.

Note – If the building is designed for alternative evacuation floor, in case of fire at main floor the lifts shall park at the alternative evacuation floor with doors open.

Phase II – Operation of the lift shall be as defined below –

- The phase 2 is started after phase 1, if the fireman's switch is 'ON'.
- If the lifts are grounded by the smoke detector signal, for phase II to begin it shall be necessary to turn the fireman's switch 'ON'.
- The lift does not respond to landing call but registered car calls. All heat and smoke sensitive door reopening devices are rendering inoperative.

- When the car call button is pressed, the doors start closing. If the button is released before the doors are fully closed, they re-open. The car call is registered only when the doors are fully closed. After registering a car call the lift starts driving to the call. If more than one car call is registered, only the nearest call is answered and the remaining call will be cancelled at the fire stop.
- At the floor the doors are opened by pushing the door open button. If the button is released before the doors are fully open, they re-close.
- The lift returns to normal service when it stands at the evacuation floor with doors open and the switch is turned 'OFF' thereafter.
- The operation of fireman's lift shall be by means of a full set of push buttons in the car. Other operating systems shall be rendering inoperative.

Building of Height 60 m and above

The following requirements over and above those specified in guidelines mentioned in **Building of Height 15 m and above** are applicable to the lifts and lift enclosures provided in buildings having height more than 60 m.

- a) Fireman's lifts – Following additional requirements apply to all fireman's lifts in the building.
 - 1) The fireman's lift shall have loading capacity of not less than 1000 kg and floor area not less than 2.35 m².
 - 2) Electrical equipment within the fireman's lift well and on the car, located within 1.0 m of any wall containing a landing door, shall be protected from dripping and splashing water or provided with enclosures classified to at least IPX3 according to good practice [8-5A(9)].
 - 3) The electrical switchgear placed less than 1 m above lift pit floor shall be protected to IP 67 as per to good practice [8-5A(9)]. The socket outlet and lowest lamp shall also be located at least 0.5 m above the highest permissible water level in the pit.
 - 4) Suitable means shall be provided in the lift pit to ensure that water will not rise above the level of the fully compressed car buffer.
 - 5) Means shall be provided to prevent the water level in the pit from reaching equipment which could create an malfunction of the fireman's lift.
 - 6) Alternative source of power supply shall be provided for all fireman's lifts through automatically operated changeover electric supply, it shall automatically trip over to alternative supply. The route of wiring shall be safe from fire.
- b) There shall be Fire Command Centre (FCC) and/or Building Management System (BMS) room in the building CCTV cameras shall be fixed in the lift lobbies and the display screen(s) shall be placed in the FCC or BMS room.

FIRE FIGHTING SHAFT (FIRE TOWER) :-

- An enclosed shaft having protected area of 120 min fire resistance rating comprising protected lobby, staircase and fireman's lift, connected directly to exit discharge or through exit passageway with 120 min fire resistance wall at the level of exit discharge to exit discharge.
- These shall also serve the purpose of exit requirement / strategy for the occupants.
- The respective floors shall be approachable from fire-fighting shaft enabling the fire fighters to access the floor and also enabling the fire fighters to assist in evacuation through fireman's lift.
- The firefighting shaft shall be equipped with 120 min fire doors.
- The firefighting shaft shall be equipped with firemen talk back, wet riser and landing valve in its lobby, to fight fire by fire fighters

Staircase and Corridor Lightings:

- a) The staircase and corridor lighting shall be on separate service and shall be independently connected so as it could be operated by one switch installation on the ground floor easily accessible to firefighting staff at any time irrespective of the position of the individual control of the light points, if any. It should be of miniature circuit breaker type of switch so as to avoid replacement of fuse in case of crisis.

- b) Staircase and corridor lighting shall also be connected to alternate source of supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains.
- c) Suitable arrangements shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor do not get connected to the sources of supply simultaneously. Double throw switch shall be installed in the service room for terminating the stand by supply.
- d) Emergency lights shall be provided in the staircase/corridor.
- e) All wires & other accessories used for emergency lights shall have fire retardant property.
- f) A stand-by electric generator shall be installed to supply power to staircase and corridor lighting circuits, fire lifts, the stand-by fire pump, pressurization fans & blowers, smoke extraction and damper system in case of failure of normal electric supply. The generator shall be capable of taking starting current of all the machines & circuits stated above simultaneously. If the stand-by pump is driven by diesel engine, the generator supply need not be connected to the stand-by pump or parallel HV/LV supply from a separate substation shall be provided with appropriate transformer for emergency. If this arrangement is provided then the arrangement of generator is not mandatory.

Emergency and Escape Lighting :-

1. Emergency lighting shall be powered from a source independent of that supplying the normal lighting.
2. Escape lighting shall be capable of
 - A) Indicating clearly and unambiguously the escape routes.
 - B) Providing adequate illumination along such routes to allow safe movement of persons towards and through the exits.
 - C) Ensuring that fire alarm call points and firefighting equipment's provided along the escape routes can be readily located.
3. The horizontal luminance at floor level on the centerline of an escape route shall be not less than 10 lux. In addition, for escape routes up to 2 m wide, 50 percent of the route width shall be lit to a minimum of 5 lux.
4. The emergency lighting shall be provided to be put on within 1 s of the failure of the normal lighting supply.
5. Escape lighting luminaries should be sited to cover the following locations
 - a) Near each intersection of corridors
 - b) At each exit door
 - c) Near each change of direction in the escape route
 - d) Near each staircase so that each flight of staircase receives direct light.
 - e) Near any other change of floor level.
 - f) Outside each final exit and close to it
 - g) Near each fire alarm call point.
 - h) Near firefighting equipment, and
 - i) To illuminate exit and safety signs as required by the fire department.
6. Emergency lighting systems shall be designed to ensure that a fault or failure in any one luminaire does not further reduce the effectiveness of the system.
7. The luminaries shall be mounted as low as possible but at least 2 m above the floor level.
8. Signs are required at all exits, emergency exits and escape routes, which should comply with the graphic requirements of the relevant Indian Standard.
9. Emergency lighting luminaries and their fittings shall be of nonflammable type.
10. It is essential that the wiring and installation of the emergency lighting system are of high quality so as to ensure their perfect serviceability at all times.
11. The emergency lighting system shall be capable of continuous operation for a minimum duration of 1 hour and 30 minutes even for the smallest premises.
12. The emergency lighting system shall be well maintained by periodical inspections and tests so as to ensure their perfect serviceability at all times.

Illumination of Means of Exit :-

Staircase and corridor lights shall conform to the following:-

- a) The staircase and corridor lighting shall be on separate circuit and shall be independently connected so that it could be operated by one switch installation on the ground floor easily accessible to firefighting staff at any time irrespective of the position of the individual control of the light points, if any. It should be of miniature circuit breaker type of switch so as to avoid replacement of fuse in case of crises.
- b) Staircase and corridor lighting shall also be connected to alternative supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains; and
- c) Suitable arrangements shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor does not get connected to two sources of supply simultaneously. Double throw switch shall be installed in the service room for terminating the stand by supply.

Exit Requirement:

1. An exit may be doorway, corridor, Passageway(s) to an internal staircase, or external staircase, or to a verandah or terrace(s), which have access to the street, or to the roof of a building or a refuge area. An exit may also include a horizontal exit landing to an adjoining building at the same level.
2. Every exit, exit access or exit discharge shall be continuously maintained free of all obstructions or impediments to full use in the case of fire or other emergency.
3. Exits shall be clearly visible and the route to reach the exits shall be clearly marked and signs posted to guide the occupants of the floor concerned. Signs shall be illuminated and wired to an independent electric circuit on an alternative source of supply.
4. To prevent spread of fire and smoke, fire doors with 2 hours fire resistance shall be provided at appropriate places along the escape routes and particularly at the entrance to lift lobby and stair well where a 'funnel or flue effect' may be created inducing an upward spread of fire.
5. All exits shall provide continuous means of egress to the exterior of a building or to an exterior open spaces leading to the street.
6. Exits shall be so arranged that they may be reached without passing through another occupied unit.

Glass Facade

1. If the glass cladding is used / provided to the building the glass used for the cladding must be toughened glass.
2. The use of combustible surface finishes on walls (including facade of the building) and ceiling affects the safety of the occupants of the building. Such finishes tend to spread the fire and even though the structural elements may be adequately fire resistant, serious danger to life may result. It is therefore, essential to have adequate precautions to minimize spread of flame on wall, façade of building and ceiling surfaces.
3. The finishing materials used for various purposes and décor shall be such that it shall not generate toxic fumes / smoke.
4. Automatic smoke venting facilities shall be provided for safe use of exits in windowless buildings.
5. Natural draft smoke venting shall utilize roof vents in walls at or near the ceiling level, such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.
6. **Where smoke venting facilities are installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served, using available exit facilities with a margin of safety to allow for unforeseen contingencies.**

GLAZING:-

The glazing shall be in accordance with Part 6 'Structural Design, Section 8 Glass and Glazing' of the Code. The entire glazing assembly shall be rated to that type of construction as given in Table 1. This shall be applicable along with other provisions of this Part related to respective uses as specified therein. The use of glass shall not be permitted for enclosures of exits and exit passageway.

Glass facade shall be in accordance with the following:

- a) For fully sprinklered building having fire separation of 9 m or more, tempered glass in a non-combustible assembly, with ability to hold the glass in place, shall be provided. It shall be ensured that sprinklers are located within 600 mm of the glass facade providing full coverage to the glass.
NOTE- In case of all other buildings, fire resistance rating of glass facade shall be in accordance with Table 1.
- b) All gaps between floor-slabs and facade assembly shall be sealed at all levels by approved fire resistance sealant material of equal rating as that of floor slab to prevent fire and smoke propagation from one floor to another.
- c) Openable panels shall be provided on each floor and shall be spaced not more than 10 m apart measured along the external wall from centre-to-centre of the access openings. Such openings shall be operable at a height between 1.2 m and 1.5 m from the floor, and shall be in the form of openable panels (fire access panels) of size not less than 1000 mm X 100 mm opening outwards. The wordings, '**FIRE OPENABLE PANEL OPEN IN CASE OF FIRE, DO NOT OBSTRUCT**' of at least 25 mm letter height shall be marked on the internal side. Such panel shall be suitably distributed on each floor based on occupant concentration. These shall not be limited to cubicle areas and shall be also located in common areas/corridors to facilitate access by the building occupants and fire personnel for smoke exhaust in times of distress.

Smoke Control of Exits :-

- a) In building design, compartmentation plays a vital part in limiting the spread of fire and smoke. The design should ensure avoidance of spread of smoke to adjacent spaces through the various leakage openings in the compartment enclosure, such as cracks, openings around pipes ducts, airflow grills and doors. In the absence of proper sealing of all these openings, smoke and toxic gases will obstruct the free movement of occupants of the building through the exits. Pressurization of staircases is of great importance for the exclusion of smoke and toxic gases from the protected exit.
- b) Pressurization is a method adopted for protecting the exits from ingress of smoke, especially in high-rise buildings. In pressurization, air is injected into the staircases, lobbies, etc., as applicable, to raise their pressure slightly above the pressure in adjacent parts of the buildings. As a result, ingress of smoke or toxic gases into the exits will be prevented. The pressurization of staircases and lift lobbies shall be adopted as given in Table 6. The pressure difference for staircases shall be 50 Pa. Pressure difference for lobbies (or corridors) shall be between 25 Pa and 30 Pa. Further, the pressure differential for enclosed staircase adjacent to such lobby (or corridors) shall be 50 Pa. For enclosed staircases adjacent to non-pressurized lobby (or corridors), the pressure differential shall be 50 Pa.

Pressurization of Staircases and Lift Lobbies

(Clause 4.4.2.5 (b) and E-2)

Sr. No.	Component	Height of Building		
		Less than 15 m	15 m to 30 m	More than 30
(1)	(2)	(3)	(4)	(5)
i)	Internal staircases not with external wall	Pressurized except for residential buildings (A-2 and A-4)	Pressurized	Pressurized
ii)	Internal staircase with external wall	Pressurized except for residential buildings (A-2 and A-4) or Naturally ventilated	Naturally ventilated or Pressurized	Cross-ventilated or Pressurized
iii)	Lift lobby	Not required at ground and above. However lift lobby segregation and	Naturally ventilated or Pressurized ¹⁾	Cross-ventilated or Pressurized ¹⁾

		pressurization is required for lift commuting from ground to basement		
NOTES :				
<ol style="list-style-type: none"> 1. The natural ventilation requirement of the staircase shall be, achieved through opening at each landing, of an area 0.5 m² in the external wall. A cross ventilated staircase shall have 2 such openings in opposite/adjacent walls or the same shall be cross-ventilated through the corridor. 2. Enclosed staircase leading to more than one basement shall be pressurized. 				
¹⁾ Lift lobby with fire doors (120 min) at all levels with pressurization of 25-30 PA is required. However, if lift lobby cannot be provided at any of the levels in air conditioned buildings or in internal spaces where funnel/flue effect may be created, lift hoistway shall be pressurized at 50 Pa. For building greater than 30 m, multiple point injection air inlets to maintain desired pressurization level shall be provided. If the lift lobby, lift and staircase are part of firefighting shaft, lift lobby necessary has to be pressurized in such case, unless naturally ventilated.				

- c) Equipment and ductwork for staircase pressurization shall be in accordance with one of the following:
 - 1) Directly connected to the stairway by ductwork enclosed in non-combustible construction.
 - 2) If ducts used to pressurize the system are passed through shafts and grills are provided at each level, it shall be ensured that hot gases and smoke from the building cannot ingress into the staircases under any circumstances.
- d) The normal air conditioning system and the pressurization system shall be designed and interfaced to meet the requirements of emergency services. When the emergency pressurization is brought into action, the following changes in the normal air conditioning system shall be effected:
 - 1) Any re-circulation of air shall be stopped and all exhaust air vented to atmosphere.
 - 2) Any air supply to the spaces/areas other than exits shall be stopped.
 - 3) The exhaust system may be continued provided
 - i) The positions of the extraction grills permit a general air flow away from the means of egress;
 - ii) The construction of the ductwork and fans is such that, it will not be rendered inoperable by hot gases and smoke; and
 - iii) There is no danger of spread of smoke to other floors by the path of the extraction system which can be ensured by keeping the extraction fans running.
- e) For pressurized stair enclosure systems, the activation of the systems shall be initiated by signalling from fire alarm panel.
- f) Pressurization system shall be integrated and supervised with the automatic/manual fire alarm system for actuation.
- g) Wherever pressurized staircase is to be connected to unpressurized area, the two areas shall be segregated by 120 min fire resistant wall.
- h) Fresh air intake for pressurization shall be away (at least 4 m) from any of the exhaust outlets/grille.

Smoke Control:-

Smoke Exhaust and Pressurization of Areas above Ground -

Corridors in exit access (exit access corridor) are created for meeting the requirement of use, privacy and layout in various occupancies. These are most often noted in hospitality, health care occupancies and sleeping accommodations. Exit access corridors of guest rooms and indoor patient department/areas having patients lacking self-preservation and for sleeping accommodations such as apartments, custodial, penal and mental institutions, etc., shall be provided with 60 min fire resistance wall and 20 min self-closing fire doors along with all fire stop sealing of penetrations. Smoke exhaust system having make-up air and exhaust air system or alternatively pressurization system with supply air system for these exit access corridors shall be required. Smoke exhaust system having make-up and exhaust air system shall also be required for theatres/auditoria. Such smoke exhaust system shall also be required for large lobbies and which have exit through staircase leading to exit discharge. This would enable eased exit of people through smoke controlled area to exit discharge. All

exit passageway (from exit to exit discharge) shall be pressurized or naturally ventilated. The mechanical pressurization system shall be automatic in action with manual controls in addition. All such exit passageway shall be maintained with integrity for safe means of egress and evacuation. Doors provided in such exit passageway shall be fire rated doors of 120 min rating. Smoke exhaust system where provided, for above areas and occupancies shall have a minimum of 12 air changes per hour smoke exhaust mechanism. Pressurization system where provided shall have a minimum pressure differential of 25-30 Pa in relationship to other areas. The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is, 250⁰C for 120 min. For naturally cross-ventilated corridors or corridors with operable windows, such smoke exhaust system or pressurization system will not be required.

Smoke Exhaust and Pressurization of Areas below Ground –

Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills, or breakable stall board lights or pavement lights or by way of shafts. Alternatively, a system of mechanical ventilation system may be provided with following requirements:

- a) Mechanical ventilation system shall be designed to permit 12 air changes per hour in case of fire or distress call. However, for normal operation, air changes schedule shall be as given in Part 8 'Building Services, Section 3 Air Conditioning, Heating and Mechanical Ventilation' of the Code.
- b) In multi-level basements, independent air intake and smoke exhaust shafts (masonry or reinforced concrete) for respective basement level and compartments therein shall be planned with its make-up air and exhaust air fans located on the respective level and in the respective compartment. Alternatively, in multi-level basements, common intake masonry (or reinforced cement concrete) shaft may serve respective compartments aligned at all basement levels. Similarly, common smoke exhaust/outlet masonry (or reinforced cement concrete) shafts may also be planned to serve such compartments at all basement levels. All supply air and exhaust air fans on respective levels shall be installed in fire resisting room of 120 min. Exhaust fans at the respective levels shall be provided with back draft damper connection to the common smoke exhaust shaft ensuring complete isolation and compartmentation of floor isolation to eliminate spread of fire and smoke to the other compartments/floors.
- c) Due consideration shall be taken for ensuring proper drainage of such shafts to avoid insanitation condition. Inlets and extracts may be terminated at ground level with shall board or pavement lights as before. Stall board and pavement lights should be in positions easily accessible to the fire brigade and clearly marked '**AIR INLET**' or '**SMOKE OUTLET**' with an indication of area served at or near the opening.
- d) Smoke from any fire in the basement shall not obstruct any exit serving the ground and upper floors of the building.
- e) The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is, 250⁰c for 120 min.
- f) The smoke ventilation of the basement car parking areas shall be through provision of supply and exhaust air ducts duly installed with its supports and connected to supply air and exhaust fans. Alternatively, a system of impulse fans (jet fans) may be used for meeting the requirement of smoke ventilation complying with the following:
 - 1) Structural aspects of beams and other down stands/services shall be taken care of in the planning and provisions of the jet fans.
 - 2) Fans shall be fire rated, that is, 250⁰C for 120 min.
 - 3) Fans shall be adequately supported to enable operations for the duration as above.
 - 4) Power supply panels for the fans shall be located in fire safe zone to ensure continuity of power supply.
 - 5) Power supply cabling shall meet circuit integrity requirement in accordance with accepted standard [4(13)].

The smoke extraction system shall operate on actuation of flow switch actuation of sprinkler system. In addition, a local and/or remote 'manual start-stop control/switch' shall be provided for operations by the fire fighters. Visual indication of the operation status of the fans shall also be provided with the remote control. No system relating to

smoke ventilation shall be allowed to interface or cross the transformer area, electrical switchboard, electrical rooms or exits. Smoke exhaust system having make-up air and exhaust air system for areas other than car parking shall be required for common areas and exit access corridor in basements/underground structures and shall be completely separate and independent of car parking areas and other mechanical areas. Supply air shall not be less than 5 m from any exhaust discharge openings.

CAR PARKING FACILITIES: GENERAL

- a) Where both parking and repair operations are conducted in the same building, the entire building shall comply with the requirements for group G occupancies, unless the parking and repair sections are effectively separated by separation walls of 120 min.
- b) Floor surface shall be non-combustible, sloping towards drains to remove accumulation of water.
- c) Those parts of parking structures located within, immediately above or below, attached to, or less than 3 m away from a building used for any other purpose shall be separated by fire resistant walls and floors having fire resistance rating not less than 120 min. This shall exclude those incidental spaces which are occupied by cashier, attendant booth or those spaces used for toilets, with a total area not exceeding 200 m².
- d) Vehicle ramps shall not be considered as exists unless pedestrian facilities provided.
- e) Other occupancies like fuel dispensing, shall not be allowed in the building. Car repair facilities, if provided, shall be separated by 120 min fire resistance construction.
- f) In addition to fire protection requirements as per table 7, appropriate fire detection and suppressions systems shall be provided for the protection of hydraulic oil tank and pumps located below ground level for operation of car lifts.
- g) Means of egress shall meet the requirements specified

OPEN PARKING STRUCTURES (INCLUDING MULTY-LEVEL PARKING AND STILT PARKING)

- a) The term of open parking structure specifies the degree to which the structures exterior walls must have openings. Parking structures that meet the definition of the term open parking structure provide sufficient area in exterior walls to vent the products of combustion to a greater degree than enclosed parking structure.
- b) A parking structure having each parking level wall openings open to the atmosphere, for an area of not less than 0.4 m² for each linear meter of its exterior perimeter shall be constructed as open parking structure. Such openings shall be distributed over 40 percent of the building perimeter or uniformly over two opposing sides. Interior wall lines shall be at least 20 percent open, with openings distributed to provide ventilation, else, the structure shall be deemed as enclosed parking structures.

NOTE :- A car park located at the stilt level of a building (not open to sky) can be considered an open or an unenclosed car park if any part of the car park is within 30 m of a permanent natural ventilation opening and any one of the following is complied with towards the permanent natural ventilation requirement :-

- i. 50 percent of the car park perimeter shall be open to permanent natural ventilation.
 - ii. At least 75 percent of car park perimeter is having the 50 percent natural ventilation opening.
- c) All stilt parking are required to be provided with sprinkler system where such buildings are required to be sprinklered.
 - d) Open parking structures are not required to be provided with compartmentation.
 - e) Open car parking (open to sky) within building complex having fire hydrant systems shall also need to be protected with yard hydrant installation system in accordance with good practice. [4(29)].

ENCLOSED PARKING STRUCTURES

- a) Those car parking structures which are enclosed on all sides and on top, not falling within the definition of open car parking [see H-3 (b)] and also those situated in the basements shall be known as enclosed car parking structures.
- b) All sprinklers in car parking shall be standard response type with minimum K-Factor of 80, area coverage of 9 m² and designed as per good practice [4(20)].

- c) For the basement car parking, compartmentation can be achieved, with fire barrier or with water curtain nozzle (K-23) or with combination thereof. Automatic deluge system comprising deluge valve, piping, nozzles, etc shall be used to zone the compartment in case of water curtain system. In case of water curtain, existing water storage shall be supplemented by water demand for water curtain nozzles for 60 min considering the largest compartments perimeter out of all compartments of car parking in any of the basements.
- d) The water supply for the water curtain nozzles shall be through independent electric pump of adequate capacity (flow and head) with piping/riser for the water supply to the nozzles.
- e) The water curtain shall be operated by the actuation of flow switch actuating sprinkler system.
- f) For smoke ventilation requirement of car parking.
- g) All fire exit doors from the car parking to exits shall be painted green and shall display exit signage.

Automated Car Parking Utilizing Mechanical or Computerized /Robotic Means

- a) Automated car parking structure can be of open parking type or enclosed types.
- b) Automated car parking facilities pose more hazard compared to manual parking due to following reasons:-
 - 1) High density of cars due to close stacking-one over another.
 - 2) Lack of provision on fire separation/compartmentation-horizontal or vertical leading to rapid fire spread.
 - 3) Non availability of any person to notice/control the fire in initial stages.
 - 4) Limited access to firefighting personnel.
 - 5) Extensive height and depth involved with highly combustible load.
- c) Fire escape staircases, at least 1250 mm wide shall be provided at appropriate locations so that no place is more than 45 m from the nearest staircase. Horizontal walkways, at least 1000 mm wide for access to all the areas shall be provided at every parking level.
- d) Travel distance and means of egress shall be governed by the respective sections of this code.
- e) The hazardous areas like DG sets, transformers, HT/LT panels for the parking lot shall be suitably segregated from the other areas as per requirements given this code and all such areas shall be protected by suitable automatic fire suppressions systems.

SERVICE DUCTS / REFUGE CHUTE:

1. Service duct shall be enclosed by walls and door, if any, of two hours fire rating. If ducts are larger than 10 Sq. Meters the floor should seal them, but provided suitable opening for the pipes to pass through, with the gaps sealed.
2. A vent opening at the top of the service shaft shall be provided between one fourth and one half of the area of the shaft. Refuge chutes shall have an outlet at least of wall of noncombustible material with fire resistance of not less than two hours. They shall not be located within the staircase enclosure or service shafts or air conditioning shafts. Inspection panel and door shall be tight fitting with one hour fire resistance; the chutes should be as far away as possible from exits.
3. Refuge Chutes shall not be provided in staircase walls and A/C shaft etc.

ELECTRICAL SERVICES:

1. For the requirements regarding installations from the point of view of Fire Safety, guidelines should be followed as mentioned in **IS Standard :1646 Code of practice for Fire safety Buildings : Electrical Installations.**
2. The electric distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every alternate floor with non-combustible materials having same fire resistance as that of the duct.
3. **Water mains, telephone lines, intercom lines, gas pipes or any other service lines shall not be laid in the duct of electric cables.**
4. Separate circuits for water pumps, staircase & corridor lighting shall be provided directly from the main switch gear panel and these circuits shall be laid in separate conduit pipes so that fire in one circuit will not affect the others.
5. The inspection panel doors and any other opening in the shaft shall be provided with **air tight doors having fire resistance of not less than 2hrs.**

6. Medium & low voltage wiring running in shaft and within false ceiling shall run in metal conduit.
7. An independent & well-ventilated service room shall be provided on the ground floor with direct access from outside or from the corridor for the purpose of termination of electric supply. **The doors provided for the service room shall have fire resistance of not less than two hours.**

Electrical services shall conform to the following: (High Rise building)

- a) The electric distribution cables/wiring shall be laid in a separate duct. The duct shall be sealed at every floor with non-combustible materials having the same fire resistance as that of the duct. Low and medium voltage wiring running in shaft and in false ceiling shall run in separate conduits;
- b) Water mains, telephone lines, intercom lines, gas pipes or any other service line shall not be laid in the duct for electrical cables; use of bus ducts/solid rising mains instead of cables is preferred;
- c) Separate circuits for firefighting pumps, lifts, staircases and corridor lighting and blowers for pressurizing system shall be provided directly from the main switch gear panel and these circuits shall be laid in separate conduit pipes, so that fire in one circuit will not affect the others. Such circuits shall be protected at origin by an automatic circuit breaker with its no-volt coil removed. Master switches controlling essential service circuits shall be clearly labeled;
- d) The inspection panel doors and any other opening in the shaft shall be provided with air-tight fire doors having fire resistance of not less than 2 h;
- e) Medium and low voltage wiring running in shafts, and within false ceiling shall run in metal conduit. Any 230 V wiring for lighting or other services, above false ceiling, shall have 660 V grade insulation. The false ceiling, including all fixtures used for its suspension, shall be of non-combustible material and shall provide adequate fire resistance to the ceiling in order to prevent spread of fire across ceiling reference may be made to good practice.
- f) An independent and well ventilated service room shall be provided on the ground level or first basement with direct access from outside or from the corridor for the purpose of termination of electric supply from the licensees' service and alternative supply cables. The doors provided for the service room shall have fire resistance of not less than 2 h;
- g) If the licensees agree to provide meters on upper floors, the licensees' cables shall be segregated from consumers' cables by providing a partition in the duct. Meter rooms on upper floors shall not open into stair case enclosures and shall be ventilated directly to open air outside; and
- h) Suitable circuit breakers shall be provided at the appropriate points.

Guidelines for Substation/Transformers

- Areas in substation shall not be used as storage/dump areas or for other utility purposes other than those required for the functioning of the substation.
- The substation area should be adequately ventilated.
- An independent, ventilated or air conditioned MV panel room shall be provided on the ground level or first basement. This room shall be provided with access from outside (or through exit passageway accessible from outside). The MV panel room shall be provided with fire resistant walls and doors of fire resistance of not less than 120 min.
- If the licensees agree to provide meters on upper floors, the licensees cables shall be segregated from consumers cables by providing a partition in the shaft.
- Meter rooms on upper floors shall not open into staircase enclosures and should be ventilated directly to open air outside or in electrical room of 120 min fire resistant walls.
- Electrical MV main distribution panel and lift panels shall be provided with CO₂/inert gas flooding system for all panel compartments with a cylinder located beside the panel.

Oil filled substation

- A substation or a switch-station with oil filled equipment shall be limited to be installed in utility building or in outdoor location. Such substation/utility building shall be at least 7 m away from the adjoining building(s).

- Substation equipment (exceeding oil capacity of 2 000 litre) in utility building shall have fire rated baffle walls of 240 min rating constructed between such equipment, raised to at least 600 mm above the height of the equipment (including height of oil conservators) and exceeding 300 mm on each side of the equipment.
- All transformers where capacity exceeds 10 MVA shall be protected by high velocity water spray systems or nitrogen injection system.

Dry type substation

- Transformers located inside a building shall be of dry type and all substation/switch room walls, ceiling, floor, opening including doors shall have a fire resistance rating of 120 min.
- Access to the substation shall be provided from the nearest fire exit/exit staircase for the purpose of electrical isolation.

In addition to the above, all provision under the D.C. Rules of MIDC and N.B.C. shall be strictly adhered, also if any change in activity or Proposed expansion or Subletting of Plot or Transfer of Plot, NOC from this department is essential.

This is a **Provisional No Objection Certificate**. After providing the above fire prevention and protection system and after compliance of above recommendations inspection of the premises & fire prevention & protection arrangements will be carried out by this department and after satisfactory compliance “**Final No Objection Certificate**” will be issued. **This “Provisional No-Objection Certificate” will be treated valid for the period of one year from the date of issue.**

Details of “Fire Protection Fund Fees” are as follow:

	Total Amount	Advance “Fire Protection Fund fees” paid by M/s. Plutonium Business Solution Pvt. Ltd. vide receipt no. : GL20075276 Dt.13/05/2019	Balance “Fire Protection Fund fees” needs to be recovered by SPA
(i)	(ii)	(iii)	(iv)
Initial “Fire Protection fees”	Rs. 13,00,359.20/-	Rs. 5,61,825.3/-	Rs. 7,38,533.9/-
Additional “Fire Protection fees”	Rs. 1,52,30,085.30/-	Rs. 0.00/-	Rs. 1,52,30,085.30/-
Total	Rs. 1,65,30,444.50/-	Rs. 5,61,825.3/-	Rs. 1,59,68,619.20/-

The undersigned reserves the right to amend any additional recommendations deemed fit during the stage wise inspection due to the statutory provisions amended from time to time and in the interest of the protection of the company.

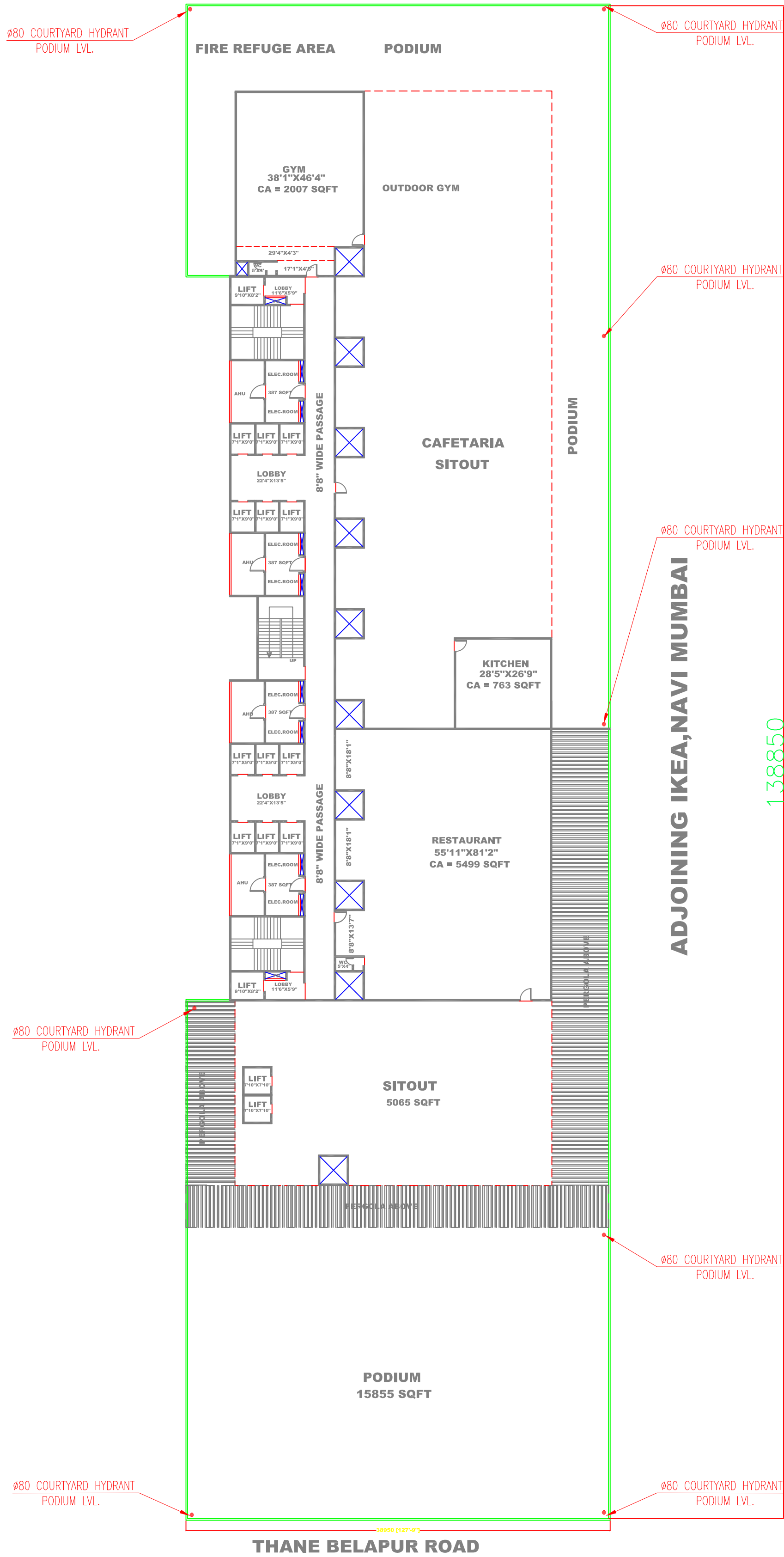
Thanking you.

Yours faithfully,

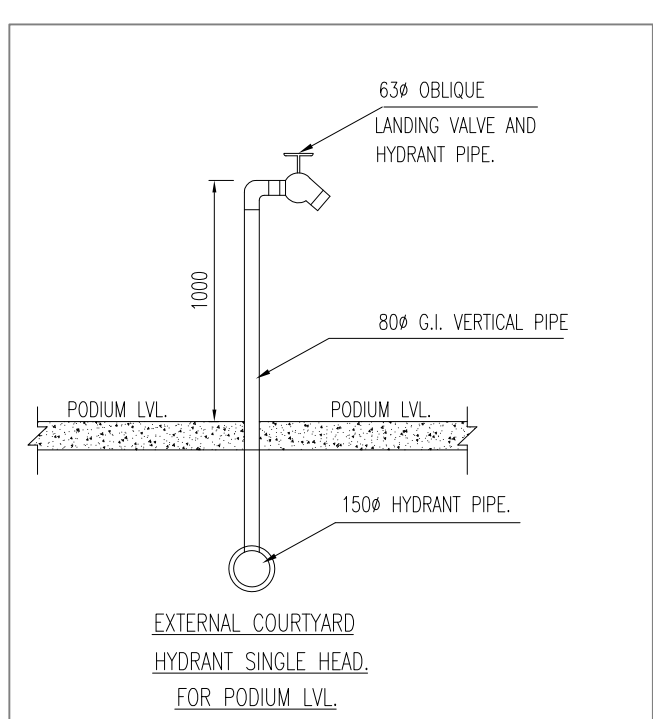
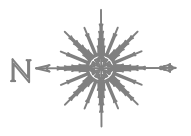
Santosh S Warick
Digitally signed by Santosh S Warick
Date: 2019.11.28 16:17:47 +05'30'

(S. S. Warick)
Chief Fire Officer & Fire Advisor,
MIDC, MUMBAI 400 093,

Copy to the Deputy Engineer, MIDC, Mahape Sub-Division (SPA), for information. He is requested to recover the Balance fees mentioned in column no.(iv) of above table before issuing work commencement certificate/plan approval.



6TH FLOOR PLAN
FLOOR HEIGHT - 4.05 M



REV.	DATE	DESCRIPTION		
ARCHITECT:- stapl soyuz talib architects 1406, Kesar Solitaire, Palm Beach Road Plot no. 5, sector 19, Sanpada, Navi Mumbai Ph. No. 27810762 / 63				
PLUMBING & FIRE FIGHTING CONSULTANT:- ENGINEERING CREATIONS PUBLIC HEALTH CONSULTANCY (P) LTD. Office No. 703, 8th Floor, Ecstasy Business Park Near Mulund East-West Flyover, Jatashankar Dosa Road, Mulund (West), Mumbai-400080 Tel. 022 25918279/25918227 TELE-FAX. 25918203 E-mail : engcreat@vsnl.com				
PROJECT:- PLUTONIUM BUSINESS PARK PLOT NO.7&7A ADJOINING IKEA NEAR TURBHE RAILWAY STATION THANE BELAPUR ROAD TURBHE, NAVI MUMBAI				
TITLE:- COURTYARD HYDRANT LAYOUT AT PODIUM FLOOR				
DATE	SCALE	REV. NO.	DRAWN BY	CHKD. BY
11.11.19	1:325	R-0	ROHINI	KAVI
DRG. No. 926/MILLENNIUM IT PARK TURBHE/ECPH/		CAD. No. D/MILLENNIUM IT PARK TURBHE/ECPH/		
COURTYARD HYDRANT AT PODIUM FLOOR		COURTYARD HYDRANT AT PODIUM FLOOR		



Energy Savings, Solar Panel Layout

**Plutonium Business Park,
Mumbai**

Energy Calculation – Against Conventional Case

Sr. No.	Building Parameters	Maximum Demand Load in kW		Energy Conservation Measures	% Savings
		Standard Base Case	Efficient Proposed Case		
A) Commercial					
1)	Internal Lighting	817	449	# LED Tubes & Lamps for all habitable areas	45.00
2)	Air Conditioning	1248	998	# Energy Efficient VRV System with High COP	20.00
3)	Equipments	599	599	# 5 A Load - TV, Telephone, Fans, Plug Points etc. # 15 A Load - Fridge, Microwave, Printers etc.	0.00
B) Infrastructure					
1)	Common Area Lighting	153	75	# LED Tubes for Stairs, Stores, MEP Rooms, Toilets, Lobbies	51.00
2)	External / Landscape Area Lighting	98	50	# LED Lamps with Timer Based Controls	49.00
3)	Parking (Basement + Stilt) Area Lighting	100	50	# LED Tubes for Parking Spaces	50.00
4)	Plumbing, Fire, Equipment & Ventilation	210	175	# Pumps & Motors with Premium Efficiency of 80%	17.00
5)	Lifts & Escalators	112	100	# Energy Efficient Lifts with VVVF Lift Drive	11.00
#	Grand Total	3336	2495	Total Savings in Energy Demand - 841 kW	25.21

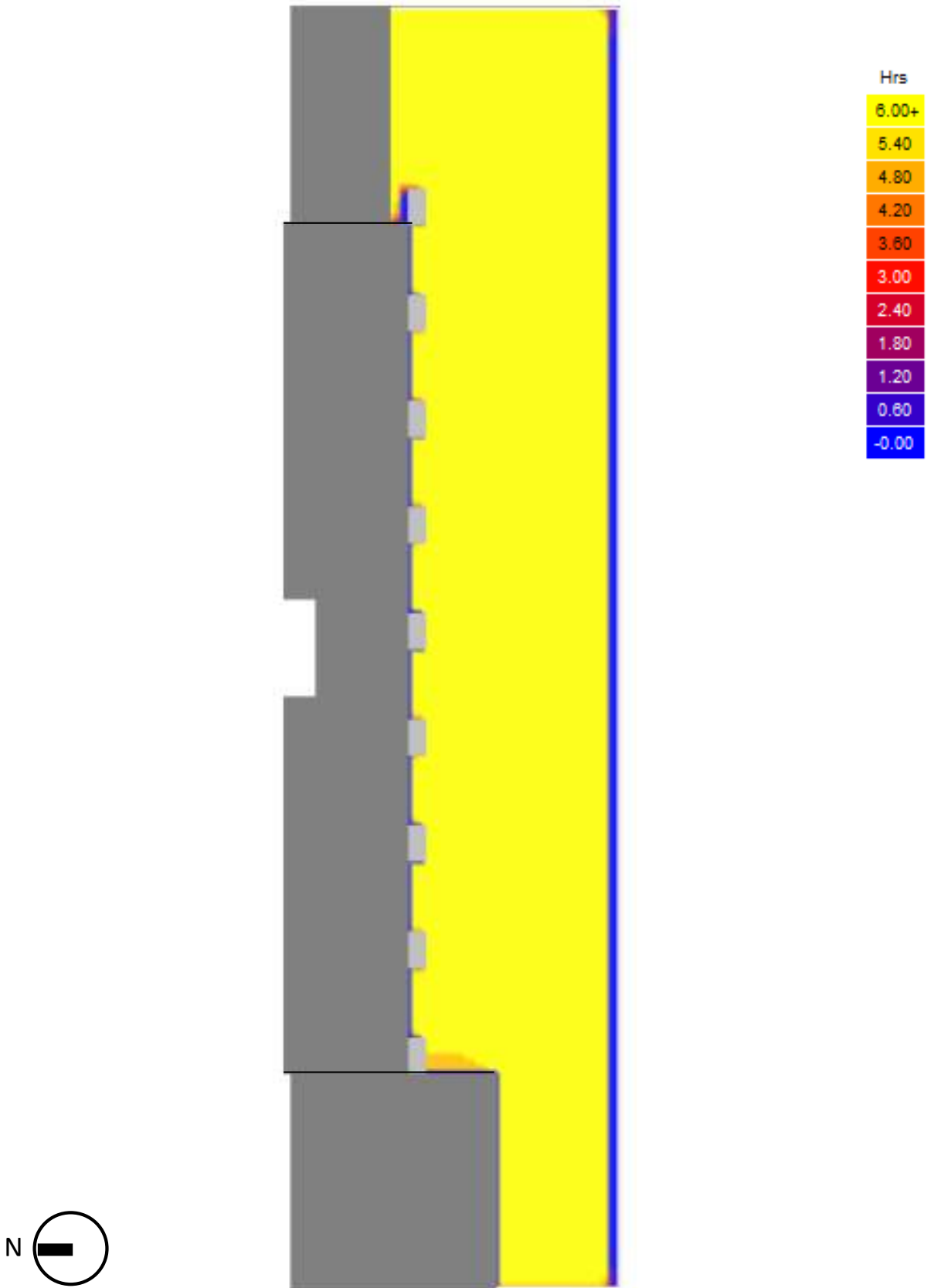
Sr. No	Energy Conservation Measures	Savings %
1	Better Envelope Design	25.21% energy saved as per Conventional Base Case.
2	Lower Lighting Loads	
3	Efficient Air Conditioning System	
4	Efficient Pumps and Motors	5.45% energy saved as per ECBC 2017 Base Case.
5	Solar PV System	3.01 % of demand load (75 kW)

Demand Load – 2495 kW

Solar PV – 75 kW

Total % of Savings due to Renewable Energy – 3.01%

Shadow Analysis

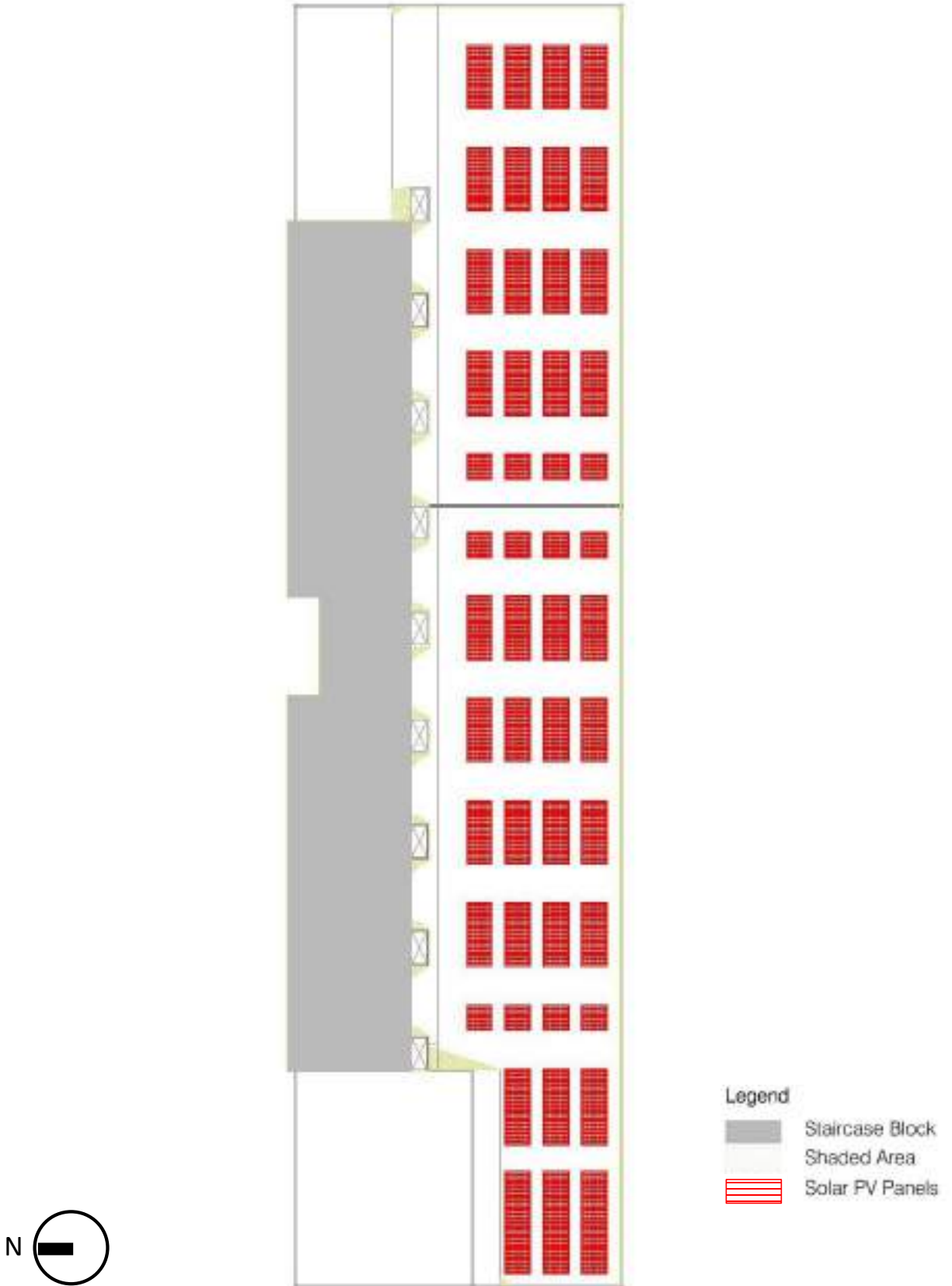


Terrace Area Calculations

For the Proposed Project, Solar PV panels are proposed to encourage the Renewable Energy use and also to encourage sustainable development.

Total Roof Area	-	2307 Sq.m.	
Service Area and Shaded Area on Terrace	-	860 Sq.m.	
Available Roof Area	-	1447 Sq.mt.	(Excluding Services and Shaded Area)
Solar PV can be accomodated	-	121 kW	(@ 12 sq.m. / kW)
Solar PV Considered	-	75 kW	

Solar Panel Layout





ECBC
COMPLIANCE
ANALYSIS
REPORT

Plutonium Business Park

Mumbai

Submitted on: 06 November 2019

**For
Millennium Group**

By

KDS

KAIZEN DESIGN SOLUTIONS

INDEX

1	Executive Summary	3
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3	Climate Analysis	5
4	ECBC Compliance	7
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Disclaimer:

This report has been prepared based on information that we believe to be reliable and accurate. We do not warrant the accuracy or completeness of the assumptions made. This report has been prepared for the exclusive use and benefit of the addressee(s) and solely for the purpose for which it is provided. Unless we provide prior written consent, no part of this report should be reproduced, distributed or communicated to any third party. We do not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report.

1. Executive Summary

This report has been prepared for Plutonium Business Park, Mumbai. This report is part of a process towards obtaining Environmental Clearance. The specific objective of this report is to evaluate annual energy usage and apply various energy efficiency measures for ECBC Compliance for maximum Energy Efficiency.

The building was analyzed using hourly energy simulation to evaluate the performance in terms of energy consumption and thermal comfort of the occupants. The purpose of this report is to present the performance of the design building in comparison to a baseline budget building based on ECBC 2017.

It is observed via various analysis tools that the building has efficient envelope and is equipped with efficient air-conditioning system & has sufficient Daylight. Following are the final outcome of energy simulation of the proposed building.

		ECBC 2017	Proposed Case	Proposed Case + Solar PV
EPI	(kWh/sm/yr)	138.0	130.5	128.7
Energy Consumption	(MWh)	9,342	8,832	8,713
Energy Saving			5.45%	6.73%

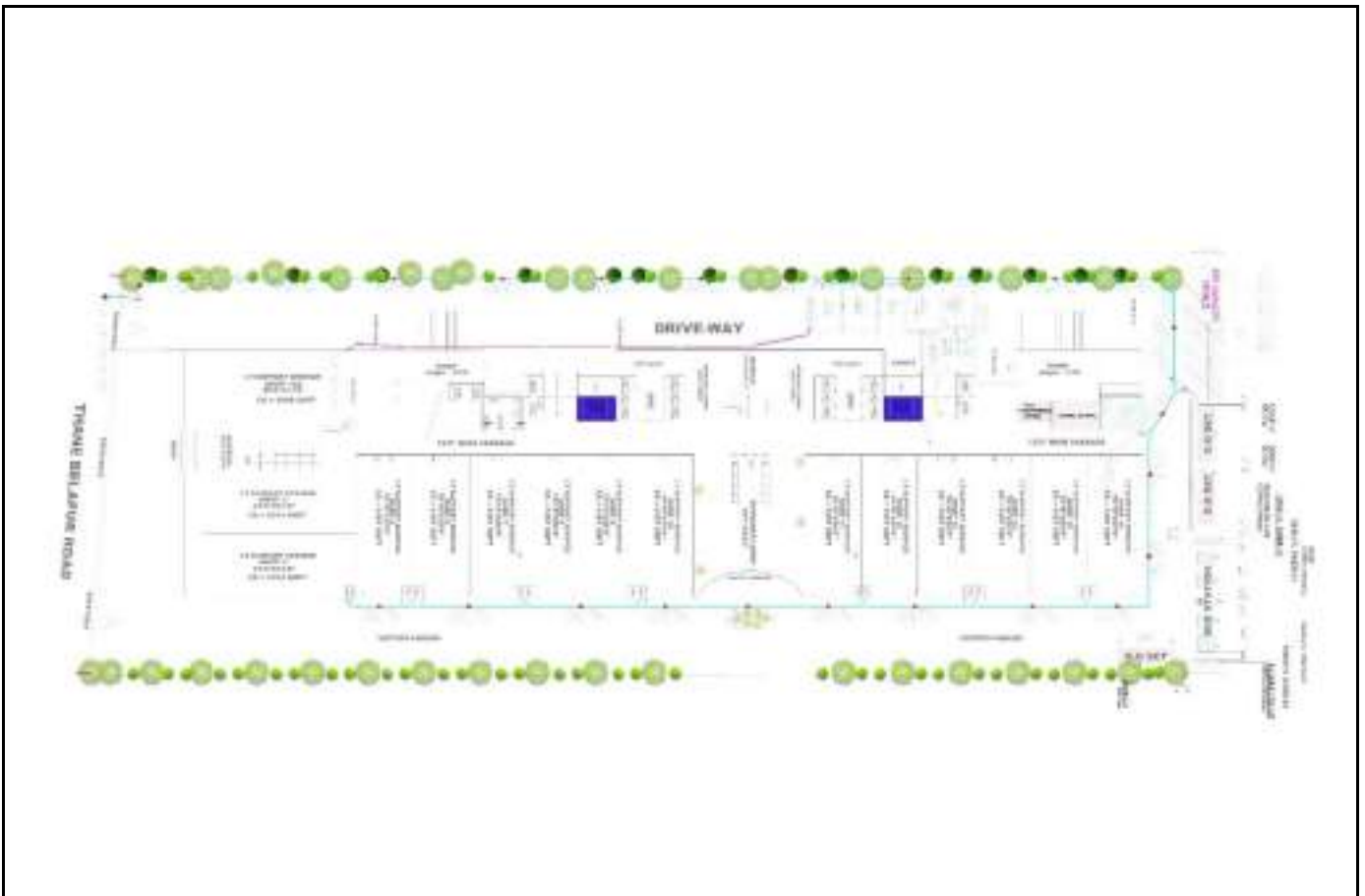
2. Project Description

This report has been prepared for Plutonium Business Park, Mumbai. This report is part of a process towards obtaining Environmental Clearance from MOEF. The specific objective of this report is to evaluate annual energy usage and apply various energy efficiency measures for ECBC Compliance for maximum Energy Efficiency.

The building comprises following space types

- 1 Commercial Building

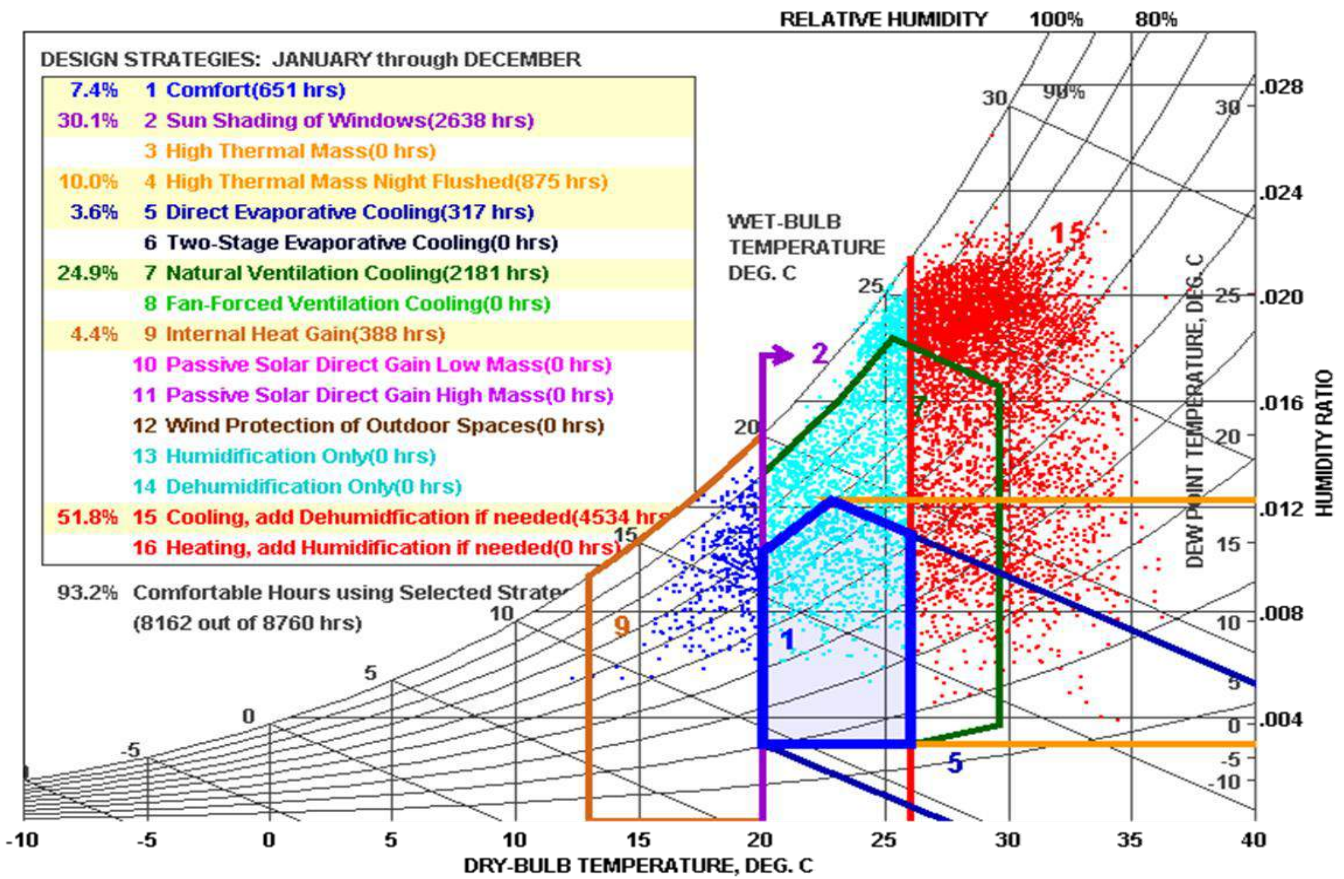
SITE LAYOUT



PROJECT DETAILS

1	Total Site Area	10,268.00 sq.m.
2	Total Built-up Area	67,693.65 sq.m.
3	WWR	42%
4	Total Connected Load	4,158 kW
5	Total Demand Load	2,495 kW
6	Solar PV Capacity	75 kW

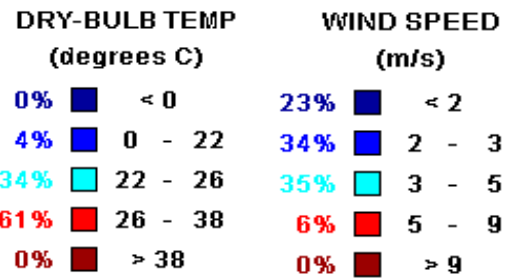
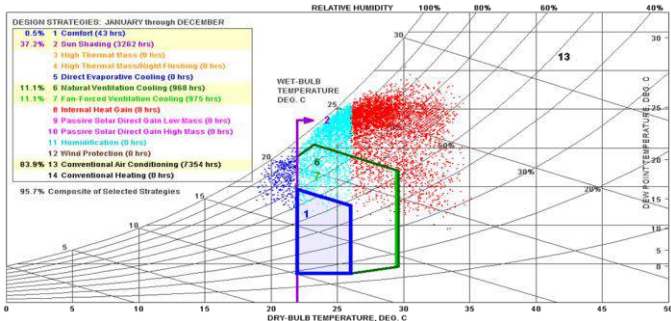
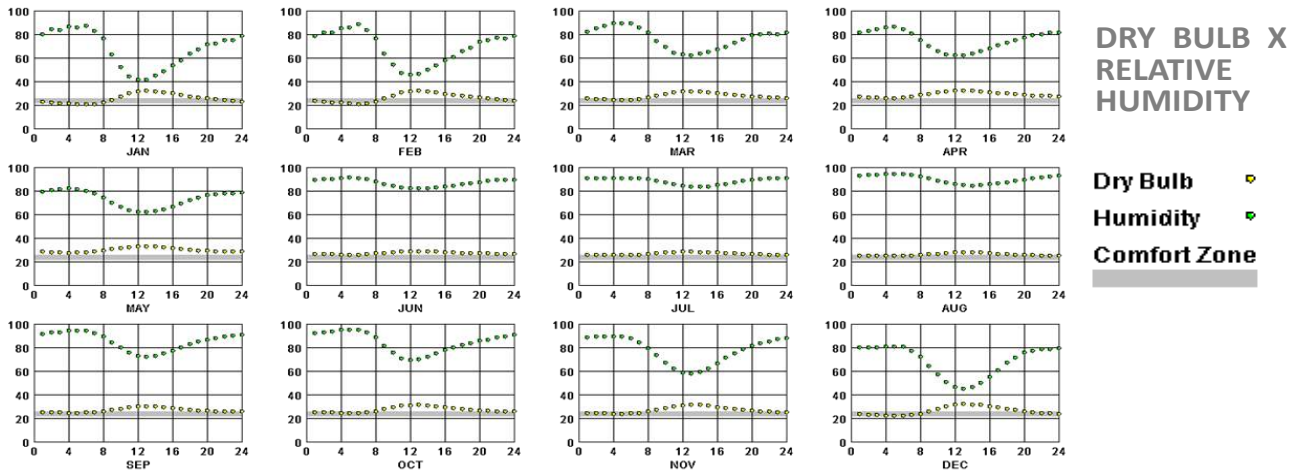
3. Climate Analysis



Psychrometric Chart above explains that, no other strategy is effective for passive comfort except Solar Shading & Natural Ventilation. Strategies like direct evaporative cooling, internal heat gain and High thermal mass are also effective, but for a lesser period. Around 30% of total comfort hours can be achieved by Sun Shading. Around 27% of total comfort hours can be achieved by Natural Ventilation. From all the above strategies around 50 % of total comfort hours can be achieved by Sun Shading and Natural Ventilation & for the rest 50% of the time air conditioning may be required. For this analysis, the Comfort Criterion was set at 20 to 26 degree C for dry bulb temperature & relative humidity to 70%.

The Psychrometric Chart above confirms that the four effective strategies are Shading, Ventilation, Internal heat gain and Evaporative cooling. The graph plot on next page shows the degree difference between the Dry Bulb Temperature & Relative Humidity. As per the legend, at least 30% of the total hours are in comfort range with an effective wind speed of 3 to 5 m/s. Fan forced ventilation is also an effective strategy during monsoon period.

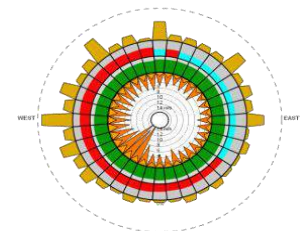
Next is the annual wind pattern of Mumbai city. The purpose is to understand this Wind Pattern. If you observe the legend carefully, you will understand that, 22% of the total annual wind is flowing from West direction, which has a temperature around 20 to 26 degree C, with a humidity around 70% & maximum wind speed is 6 m/s at one point of time. The predominant wind direction in Monsoon Period is west.



TEMPERATURE (Deg. C)



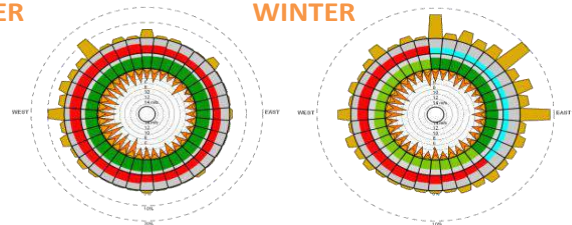
RELATIVE HUMIDITY (%)



ANNUAL WIND PATTERNS

SUMMER

WINTER

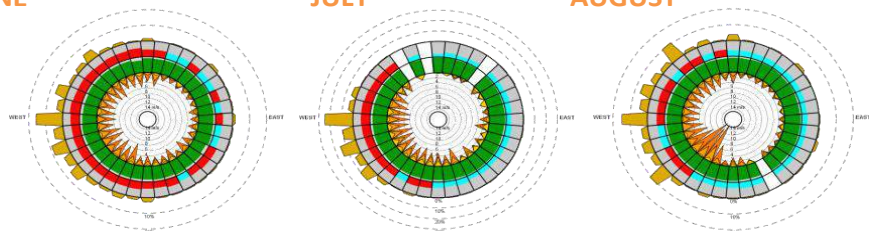


SEASONAL WIND PATTERNS

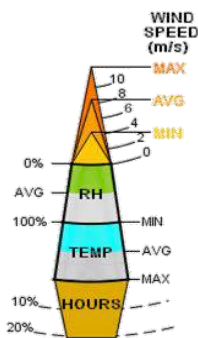
JUNE

JULY

AUGUST



MONTH WISE DETAILS



4. ECBC 2017 Compliance

SECTION 4 - BUILDING ENVELOPE

4.2.1 Fenestration: The vertical fenestration of the project is labelled by manufacturer. The following values has been considered for the same

U-value:	4.60	W/sm.K
SHGC:	0.42	
VLT:	45%	

4.2.2 Opaque Construction: The U-value of roof and wall assembly are calculated and provided in Appendix II.

4.2.3 Building Envelope Sealing: The project is air-conditioned and the building envelope sealing has been provided as per Annexure IV.

SECTION 5 - COMFORT SYSTEM AND CONTROLS

5.2.1 Ventilation: The project building is ventilated using a mechanical system and outdoor air change rate has been designed as per NBC. CO sensors will be provided.

Demand Control Ventilation: The project has not any spaces served by air side economizer and/or automatic outdoor modulating control of outdoor air damper. Hence, the clause is not applicable for this project.

5.2.2 Minimum Space Conditioning Equipment Efficiencies: The space conditioning equipment meets minimum requirement of both COP and IPLV requirement under ANSI / AHRI 550 / 590 conditions. The chiller capacity of standard design and its efficiency have been mentioned in the next section.

5.2.3 Controls: The controls like timelock, temperature controls, occupancy controls, fan controls, dampers etc. have been provided in the project as and where applicable, as per ECBC 2017.

5.2.4 Piping & Ductwork: Piping for HVAC system will meet insulation requirement as per Table 5-8 in ECBC 2017. Wherever the insulation will be kept exposed to weather, it will be protected by either painted canvas or plastic cover.

5.2.5 System Balancing: The project has total conditioned area exceeding 500 sq.m. Air system balancing and hydronic system balancing will be performed to reduce difference losses.

5.2.6 Condensers: Condensers will be located to make heat sink free of interference from heat discharge by devices located in adjoining spaces, and not to interfere with other such systems installed nearby.

5.2.9 Service Water Heating: The project building's type is commercial and the location doesn't fall under cold climate zone. Hence, clause does not apply to this project.

SECTION 6 - LIGHTING AND CONTROLS

6.2.1.1 Automatic Controls: The project has interior lighting fittings for more than 300 sq.m., hence automatic controls have been provided.

The project's built-up area is 67693.65 sq.m., which is more than 20,000. Hence, occupancy sensors have been provided in non-habitable spaces like storage, corridors, etc. as applicable.

6.2.1.2 Space Controls: Each enclosed space will have at least one control device to independently control the general lighting within the space.

6.2.1.3 Control in Daylight Areas: All the luminaires installed within daylighted area will be equipped with manual control device to shut off them.

6.2.2 Exit Signs: Internally illuminated exit signs will be less than 5 watts per face.

SECTION 8 - ELECTRICAL & RENEWABLE ENERGY SYSTEM

7.2.1 Transformers: The transformer will satisfy minimum acceptable efficiency at 50% and full load rating. Permissible total loss values will be within limit specified under this clause.

Recording of losses will be carried out by use of calibrated digital meters having minimum class 0.5 accuracy and certified by the manufacturer.

Voltage drop will not exceed 2% and 3% for feeders and branch circuit respectively.

7.2.2 Energy-efficient Motors: The pumps and motors will be used for water pumping and confirm to relevant IS standards. The efficiency of the motors is IE3 class and which meets the ECBC requirement.

7.2.3 DG Sets: The project will have BEE star rated DG sets in all compliant buildings. Total built-up area of the project is 67693.65 sq.m. and the DG set will be of BEE 3 star rating at minimum.

7.2.4 Check-Metering and Monitoring: The project will have permanently installed electrical metering to record demand (kVA), energy (kWh), and total power factor. The metering will also display current, voltage and total harmonic distortion (THD) as a percentage of total current.

7.2.5 PF Correction: The Power factor would be maintained in the project with the help of Automatic Power Factor Correction (APFC) system. The system is designed to maintain the power factor of 0.98.

7.2.6 Power Distribution Systems: The power cabling has been designed which limit distribution losses upto 3% of the total power usage.

7.2.7 Uninterruptible Power Supply (UPS): The power cabling has been designed which limit distribution losses upto 3% of the total power usage.

7.2.8 Renewable Energy Systems: The project has decided to install roof top Solar PV panels of at least 3.01% of total demand load of the building. The area is free of any obstruction within its boundaries and shadows by objects adjacent to the zone.

RENEWABLE ENERGY CALCULATION

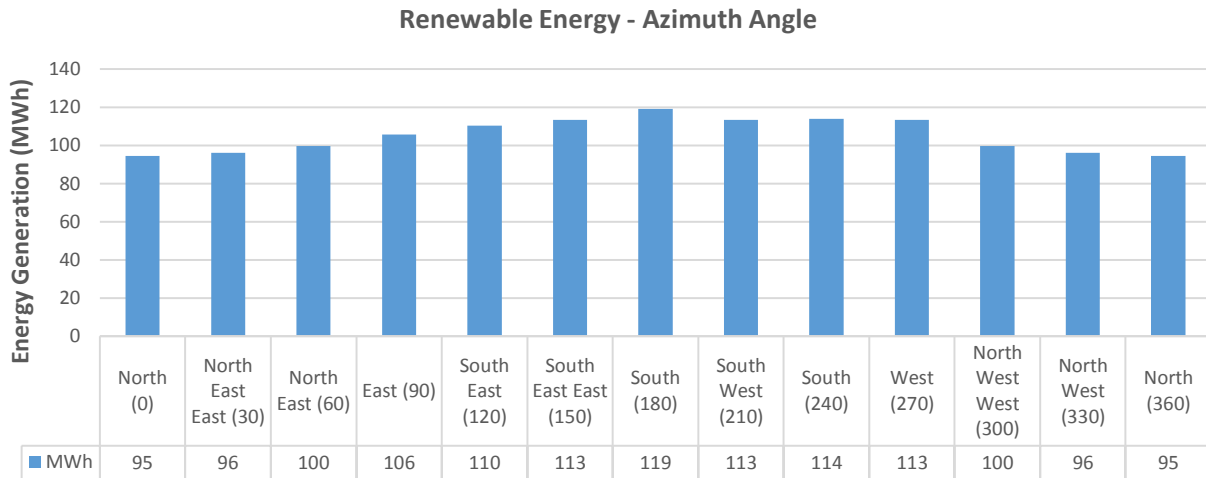
Virtual analysis tool – Retscreen has been used as a basis for the commentary provided in this report. To determine Orientation and Slope of the proposed Solar Panel actual location Mumbai was used for the simulation.

Total Connected Load for Proposed Project	4158	kW
Maximum Demand for load of proposed project	2495	kW
1% of demand load	24.95	kW
Renewable energy proposed for the Project	75	kW

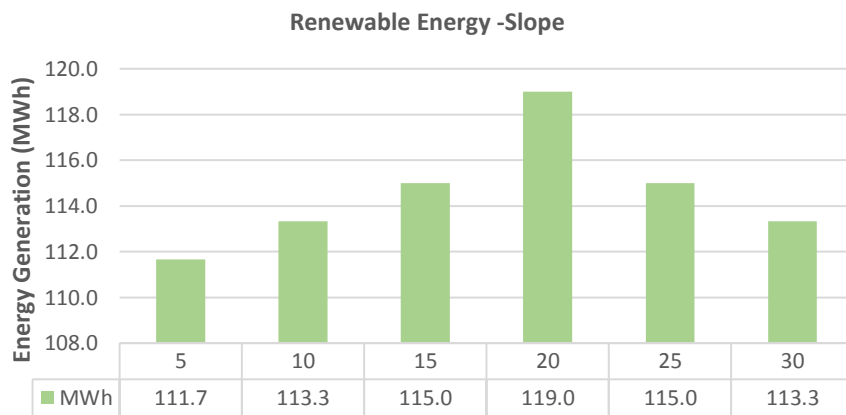
It is determined through simulation that the solar panels of 75 kWp capacity will generate 119 MWh electricity annually. The desired Solar Panel locations are proposed considering right Orientation (Azimuth Angle) and Slope (Altitude Angle) of Solar Panel.

RET Screen Calculation		
Solar tracking mode		Fixed
Slope		20
Azimuth		180
Solar Data		
Photovoltaic		
Type		poly - Crystalline
Power Capacity	kW	75
Manufacturer		Canadian Solar
Model		CS6U - 325P
Number of Units		231
Efficiency	%	16.7%
Nominal operating cell temperature	° C	43
Temperature coefficient	% / ° C	0.4
Solar collector area	m ²	462
Miscellaneous losses	%	5%
Summary		
Electricity generated	MWh	119

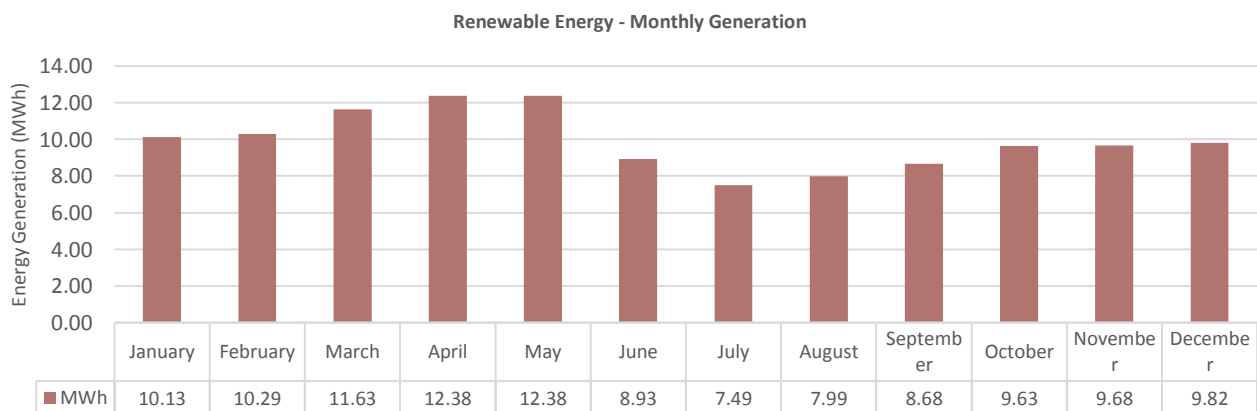
Parametric Study - Azimuth Angles



Parametric Study - Altitude Angles



Monthly Solar Generation



Terrace Area Calculation

For the Proposed Project, Solar PV panels are proposed to encourage the Renewable Energy use and also to encourage sustainable development.

Total Roof Area	-	2307 Sq.m.	
Service Area and Shaded Area on Terrace	-	860 Sq.m.	
Available Roof Area	-	1447 Sq.mt.	(Excluding Services and Shaded Area)
Solar PV can be accommodated	-	121 kW	(@ 12 sq.m. / kW)
Solar PV Considered	-	75 kW	

WHOLE BUILDING PERFORMANCE METHOD

Project: Plutonium Business Park, Mumbai, which lies in Western India.

Zoning: A zoning plan was developed for each floor & entered into the simulation model. Each zone was assigned a set of properties including lighting power density, equipment power density, occupancy rate, outside air requirement etc. Each zone was also assigned physical properties of floor-to-floor height, material conductivity & fenestration area etc.

Modelling: A baseline building as per the properties stated in ECBC 2017 was modelled. The Building was simulated with actual orientation and again after rotating the entire Building by 90, 180 & 270 Degrees and then the annual energy consumption results were averaged out to get the ECBC 2017 Baseline Building Energy consumption in kilowatt hours. As per ECBC 2017, the average base case energy consumption does not consider the effect of building shades & overhangs.

A wide range of actual as-designed parameters such as Envelope (roofs, walls), Windows (type of window glass), Lighting (lighting power density), reduced Exterior Lighting, efficient system design were added to the Baseline case to simulate the performance of the designed building.



The project has been modelled with the e-QUEST energy analysis software that uses the DOE 2.2 Building energy simulation engine. The e-QUEST energy modelling software allows for a graphical display of all the 3-dimensional geometry entered in the application to describe the building. As per the view shown, the Building has been modelled in detail to improve the accuracy of analysis work.

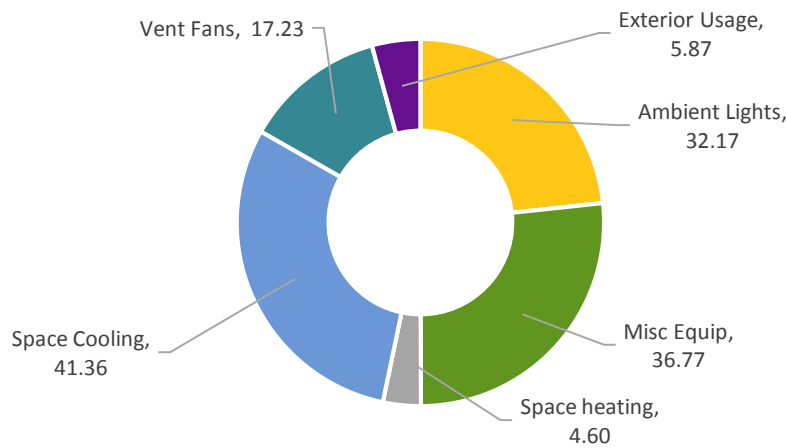
The project objective is to evaluate energy use and the energy efficiency performance of the Building

DETAILED COMPARISON BETWEEN BASE CASE & PROPOSED CASE

Sr. No.	Model Input Parameter	Baseline Case as per ECBC 2017 Parameters		Proposed Case	
		1	Exterior Wall Construction	U Value: 0.40	W/sm.K
2	Roof Construction	U Value: 0.33	W/sm.K	U Value: 0.47	W/sm.K 6" RCC Slab with 2" XPS insulation
3	Glazing	U Value: 3.00	W/sm.K	U Value: 4.60	W/sm.K
		SHGC: 0.25	Non-north	SHGC: 0.42	
		0.50	North	VLT: 45%	
4	WWR	40%		42%	
5	Shading Devices	Not Considered		As per Design	
6	Equ Power Density	10	W/sm	10	W/sm
7	Lighting Power Density	As per Building Area Method		As per Building Area Method	
		LPD: 11.2	W/sm	LPD: 7.5	W/sm
8	Pumps & Motors	IE 2		IE 3	
9	Occupancy Sensors	Applicable		Considered	
10	Daylight Sensors	Applicable		Not Considered	
11	Ext. Lighting Load	As per Annexure III		30% lesser than Annexure III	
12	Domestic Hot Water	No Hot Water Requirement		No Hot Water Requirement	
13	Process Load	As per design		As per Design	
14	Renewable Energy	1% of Peak Demand (25 kW)		Complied with (75 kW)	
15	Data Server Loads	Not Applicable		Not Applicable	
16	Ventilation Requiremnt	10 CFM / person ASHRAE 62.1 2010		13 CFM / person ASHRAE 62.1 2010 + 30%	
17	Chiller Parameter	Not Applicable		Not Considered	
18	VSD's on Chiller	Not Applicable		Not Considered	
19	VFD's on Cooling Tower	Not Applicable		Not Considered	
20	Primary, Fire, Condenser Pump	Standard – 60%		Premium – 70%	
21	Primary, Fire, Condenser Motor	Standard – 70%		Premium – 85%	
22	HVAC System	System A: Split AC		Varial Refrigerant Volume - COP 4.5	
23	VFD in AHU's & Secondary Pumps	Not Applicable		Not Considered	
24	Demand Control Ventilation	Not Applicable		Not Considerd	
25	Heat Recovery Wheel	Not Applicable		Not Considered	
26	Airside Economizer	Not Applicable		Not Considered	
27	CO Sensors	Not Applicable		Considered	
28	DG Set	BEE 3 Star Rated		BEE 3 Star Rated	
29	PF Correction	0.97		0.97	
30	Power Dist. Loss	< 3%		< 3%	

BASELINE MODEL - AS PER ECBC 2017

The ECBC 2017 Minimally Compliant Baseline model is used to benchmark the design case. This model geometry is based upon the design case, but the performance parameters listed below are defined to reflect the minimum efficiency levels that ECBC 2017 defines for various building components.

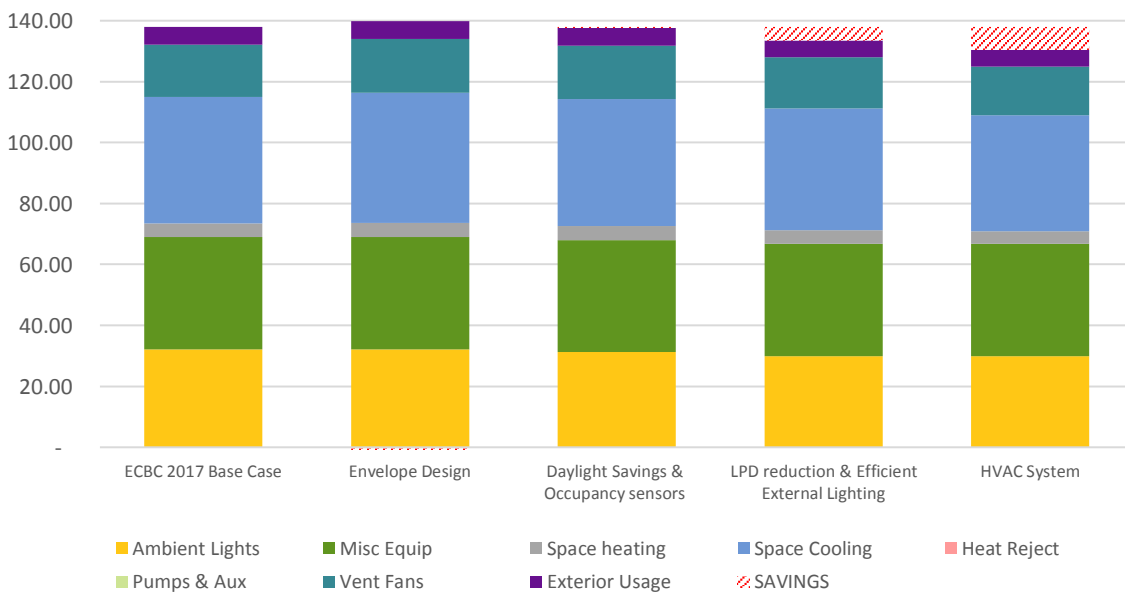


Based on the above paramters,
The average base-case consumption
The EPI is

9,342 MWh
138.0 kWh / sq.m. / yr

PROPOSED CASE MODEL

Proposed case assumptions are based on project drawings and operating parameters assumptions based on experiance and standards.



Based on the above paramters,
The average proposed-case consumption
The EPI is

8,832 MWh
130.5 kWh / sq.m. / yr

SUMMARY

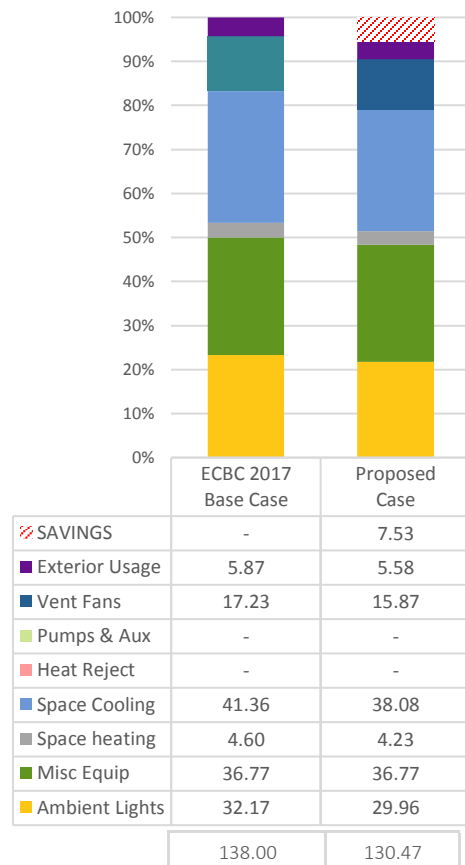
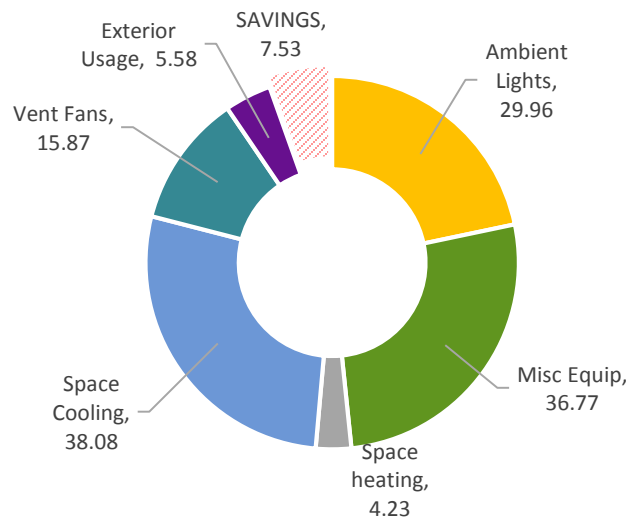
The Proposed case model shows significant savings in internal lighting as well as space cooling energy consumption as compared with the ECBC 2017 stipulated baseline model. These energy reductions can primarily be attributed to improved lighting power density and reduction in cooling loads due to improved envelope and glazing specifications.

For the purposes of determining energy savings in rupees, the energy costs for the proposed case model are compared to the energy costs for the ECBC 2017 minimally-compliant model

Based on the final design considerations for building envelope and equipment, it is noted from the results of energy simulation that by using efficient envelope and lighting, the total per year energy required for the project - Plutonium Business Park are as under:

Proposed project	8,832 MWh
Base line - ECBC 2017	9,342 MWh

Saving over ECBC 2017 - MWh	509	5.45%
------------------------------------	------------	--------------



Annexure I: Schedules

COMMERCIAL BUILDINGS

Hrs	Occupancy		Lighting		Equipment		HVAC	
	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends
00:00	0%	0%	5%	5%	5%	5%	0%	0%
01:00	0%	0%	5%	5%	5%	5%	0%	0%
02:00	0%	0%	5%	5%	5%	5%	0%	0%
03:00	0%	0%	5%	5%	5%	5%	0%	0%
04:00	0%	0%	5%	5%	5%	5%	0%	0%
05:00	0%	0%	5%	5%	5%	5%	0%	0%
06:00	0%	0%	5%	5%	5%	5%	0%	0%
07:00	0%	0%	5%	5%	5%	5%	0%	0%
08:00	0%	0%	45%	5%	5%	5%	75%	0%
09:00	50%	0%	45%	5%	25%	5%	75%	0%
10:00	100%	15%	60%	5%	75%	15%	95%	15%
11:00	100%	15%	60%	5%	90%	15%	95%	15%
12:00	100%	15%	60%	5%	90%	15%	95%	15%
13:00	25%	15%	60%	5%	90%	15%	95%	15%
14:00	100%	15%	60%	5%	90%	15%	75%	15%
15:00	100%	15%	60%	5%	90%	15%	95%	15%
16:00	100%	15%	60%	5%	90%	15%	95%	15%
17:00	100%	15%	75%	10%	90%	15%	95%	15%
18:00	100%	15%	90%	10%	90%	15%	95%	15%
19:00	75%	15%	90%	10%	50%	15%	95%	5%
20:00	25%	0%	75%	10%	25%	5%	75%	0%
21:00	0%	0%	75%	5%	5%	5%	0%	0%
22:00	0%	0%	5%	5%	5%	5%	0%	0%
23:00	0%	0%	5%	5%	5%	5%	0%	0%

Annexure II: U-value Calculations

Building Envelope

Calculation Of 'U' Value For A Wall Section

Material Specification	'R' Value (sq.ft.degF/btu)
1 Outside Air Film	0.34
2 1" Cement Plaster	0.2
3 6" AAC Wall	5.4
4 0.5" Cement Plaster	0.1
5 Inside Wall Air Film	0.68
Total	6.72

Therefore,

R' Value of Vertical surface (Wall)	6.72 sq.ft.degF/btu
U Value (I-P Unit) :	0.15 btu/sq.ft.degF
(SI Unit) :	0.85 W/sm.degK

Calculation Of 'U' Value For A Roof Section

Material Specification	'R' Value (sq.ft.degF/btu)
1 Outside Air Film	0.17
2 Floor Finish	0.15
3 1" Screed	0.2
4 2" XPS Insulation	10.14
5 1" Screed	0.2
6 6" Concrete Slab	0.6
7 ½" Cement Plaster	0.1
8 Inside Ceiling Air Film	0.61
Total	12.17

Therefore,

R' Value of Vertical surface (Roof)	12.17 sq.ft.degF/btu
U Value (I-P Unit) :	0.08 btu/sq.ft.degF
(SI Unit) :	0.47 W/sm.degK

Annexure III: Exterior Building Lighting Power

ECBC 2017 - Table 6-7 Exterior Building Lighting Power for ECBC Buildings

Exterior lighting application	Power limits
Building entrance (with canopy)	10 W/m ² of canopied area
Building entrance (w/o canopy)	90 W/ linear m of door width
Building exit	60 W/lin m of door width
Building façade	5.0 W/m ² of vertical façade area
Emergency signs, ATM kiosks, Security areas façade	1.0 W/m ²
Driveways and parking (open/ external)	1.6 W/m ²
Pedestrian walkways	2.0 W/m ²
Stairways	10.0 W/m ²
Landscaping	0.5 W/m ²
Outdoor sales area	9.0 W/m ²

Annexure IV: Building Sealing Requirement

Following areas of the building envelope, of all except naturally ventilated buildings or spaces, shall be sealed, caulked, gasketed, or weather-stripped:

- (a) Joints around fenestration, skylights, and door frames
- (b) Openings between walls and foundations, and between walls and roof, and wall panels
- (c) Openings at penetrations of utility services through roofs, walls, and floors
- (d) Site-built fenestration and doors
- (e) Building assemblies used as ducts or plenums
- (f) All other openings in the building envelope
- (g) Exhaust fans will be fitted with a sealing device such as a self-closing damper
- (h) Operable fenestration should be constructed to eliminate air leakages from fenestration frame and shutter frame

Annexure VI: Electrical Wires

It is recommended to use copper wires with high rating to reduce resistance, which would result in energy efficiency. Copper has the highest electrical conductivity of any metal, after silver, with this property accounting for over 50% of its use. As the best, economically affordable conductor of electricity, using copper can reduce electrical energy losses and improve overall energy efficiency.

O/c



PLUTONIUM GROUP

PLUTONIUM BUSINESS SOLUTION PVT. LTD.

Registered Office: Plot No. 7 & 7A, C Zone, Turbhe, MIDC, Thane-Belapur Road, Near Turbhe Railway Station, Taluka & District - Thane, Navi Mumbai - 400 703.
CIN : U24239MH1983PTC030195 **Email :** plutoniumbs@gmail.com
Mob.: +91 93725 13985 / 93725 90653

Date: 09.11.2019

To,
The Forest Officer,
Forest Department,
Teen-Hath Naka, Louise Wadi,
Thane (West), Thane

Subject : Application for Wildlife NOC with reference to Thane creek flamingo sanctuary

Reference: : Application for Environmental Clearance (EC) for "Plutonium Business Park" project at Plot No. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane Belapur Road, Turbhe, Navi Mumbai

Dear Sir,

This is with reference to above mentioned subject we are developing "Plutonium Business Park" project near Turbhe Railway Station, Thane Belapur Road, Turbhe, Navi Mumbai. We have submitted Application for obtaining Environmental Clearance from SEIAA, Maharashtra.

We would like to bring to your notice that, our projects falls within 10 Km radius from the Thane Creek Flamingo Sanctuary.

The project is in well- developed locality and also separated from Thane Creek Flamingo Sanctuary by other urban settlement.

We are submitting herewith our application for grant of Wildlife NOC for the above mentioned project

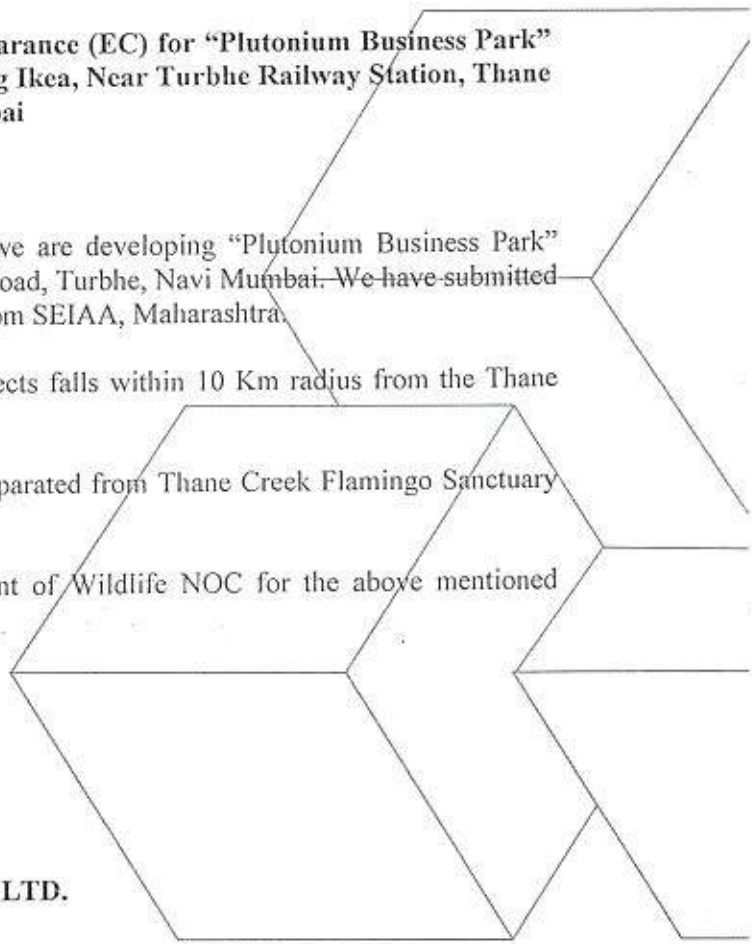
Please do the needful and oblige

Thanking you,

Yours faithfully

For PLUTONIUM BUSINESS SOLUTIONS PVT. LTD.

AUTHORIZED SIGNATORY
Encl.: Google image of the project site



13/11/2019
श्री वनसंरक्षण
श्री वनसंरक्षण

Corporate Environmental Responsibility

In accordance with the circular issued by Ministry of Environment, Forest and Climate Change (MoEF & CC) dated May 01, 2018 and subsequent circular of June 19, 2018 on Corporate Environment Responsibility we hereby submit out plan as below;

A. Basic Information of the Project

No.	Description	Details
1	Name of the Project	"Plutonium Business Park" at Turbhe, Navi Mumbai.
2	Location of the project	Plot No. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane Belapur Road, Turbhe, Navi Mumbai.
3	Project type (green/brown field)	Green field
4	Cost of the project as mentioned in CS (Rupees in Crores)	Rs. 308.70 Crores
5	Any previous EC and Completion certificate of the part of the project before May 01, 2018, if yes give the details with date and reference number	--
6	Cost of the part completed project (as per details given at Sr. No. 5)	--
7	Effective cost of the project for CER consideration (4-6) (Rupees in Crores)	Rs. 308.70 Crores
8	Applicable norms in terms of % of the project cost for CER and amount	1.5 % Rs. 4.63 Crores
9	Expected duration for completion of the project (Years)	5 Years
10	Implementing Agency Identified (NGO/Trust/ULB) give name and details.	Yet to be identified
11	Please attached agreement with implementing agency	--

B. CER Activities Proposed: (please propose as per the suggested list given in table below)

No.	Description	Details
1	Any issues raised during the public hearing, social need assessment, R & R plan, EMP, etc.	Not Applicable
2	If Yes Please give details	Not Applicable
3	CER activities proposed to be from suggested activities as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas, community level sewage treatment plant, solid waste (composter or Biogas plants), air quality	CER Activities identified are as follows: <ul style="list-style-type: none"> • Avenue plantation • Skill development • Education • Infrastructure creation for health

M/s PLUTONIUM Business Solution Pvt. Ltd.


Director /Authorised Signatory



PLUTONIUM — GROUP —



PLUTONIUM BUSINESS SOLUTION PVT. LTD.

Registered Office: Plot No. 7 & 7A, C Zone, Turbhe, MIDC, Thane-Belapur Road,
Near Turbhe Railway Station, Taluka & District - Thane, Navi Mumbai - 400 703.
CIN : U24239MH1983PTC030195 **Email :** plutoniumbs@gmail.com
Mob.: +91 93725 13985 / 93725 90653

No.	Description	Details
	monitoring, research activities on environmental aspects, training programmes on waste management including skill development, studies related to environmental aspects for town/city/village, pilot projects on clean energy/ environment, etc.	
4	Consent of implementing agency (NGO etc.) and local authority to accept the CER in case of environmental infrastructure project	--
5	Year wise activity indicating the detail of plan and cost (as applicable for duration of the project) attach separate sheet with Gnat Chart which will be useful for monitoring.	
	First Year (indicate year)	92.60 Laes
	Second Year	92.60 Laes
	Third Year	92.60 Laes
	Fourth	92.60 Laes
	Fifth	92.60 Laes

We undertake to complete the work with our CER commitment as per this plan.

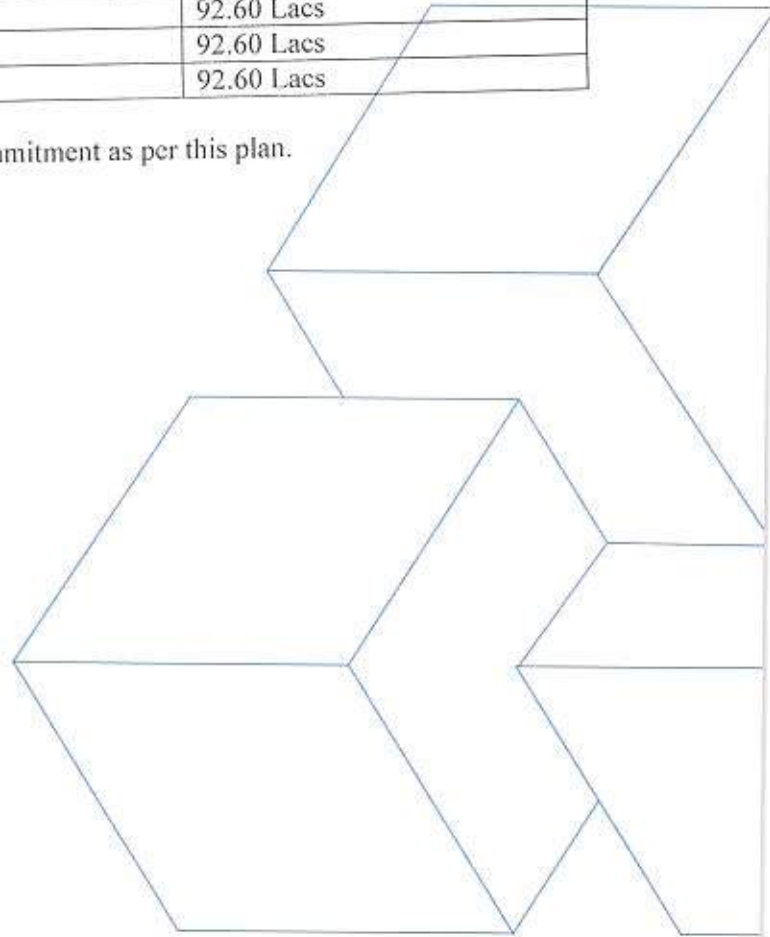
M/s PLUTONIUM Business Solution Pvt. Ltd.

Director /Authorised Signatory

(Authorized Signatory)

Place:

Date:13.11.2019





PLUTONIUM GROUP

Date: 13.11.2019

To,
The District Collector,
Thane Collector Office,
Court Naka, Thane

Subject : Contribution towards CER for the "Plutonium Business Park"
project at Turbhe, Navi Mumbai.

Reference : Office Memorandum regarding Corporate Environment
Responsibility (CER) dt. 1st May 2018 by Ministry of Environment,
Forest and Climate Change (MoEF & CC), New Delhi.

Respected Sir,

With reference to above mentioned subject, we are developing a Commercial Building
"Plutonium Business Park" at Turbhe, Navi Mumbai that is under process for Environmental
Clearance NOC.

As per the guidelines given by the MoEF & CC we are required to provide upto 1.5 % of the
Capital Investment towards CER.

We have identified certain activities to be carried out in immediate neighborhood which
when implemented shall be beneficial to the environment and the general public at large. The
activities identified are as follows:

- Avenue plantation
- Skill development
- Education
- Infrastructure creation for health


We intend to spend approximately Rs. 4.63 Crores on the CER activities

We request you to kindly evaluate the above plan and grant your consent to undertake these
activities under CER.

Thanking you,

Yours Faithfully,

For PLUTONIUM BUSINESS SOLUTIONS PVT. LTD.


Authorized Signatory
Enclosed: CER Letter

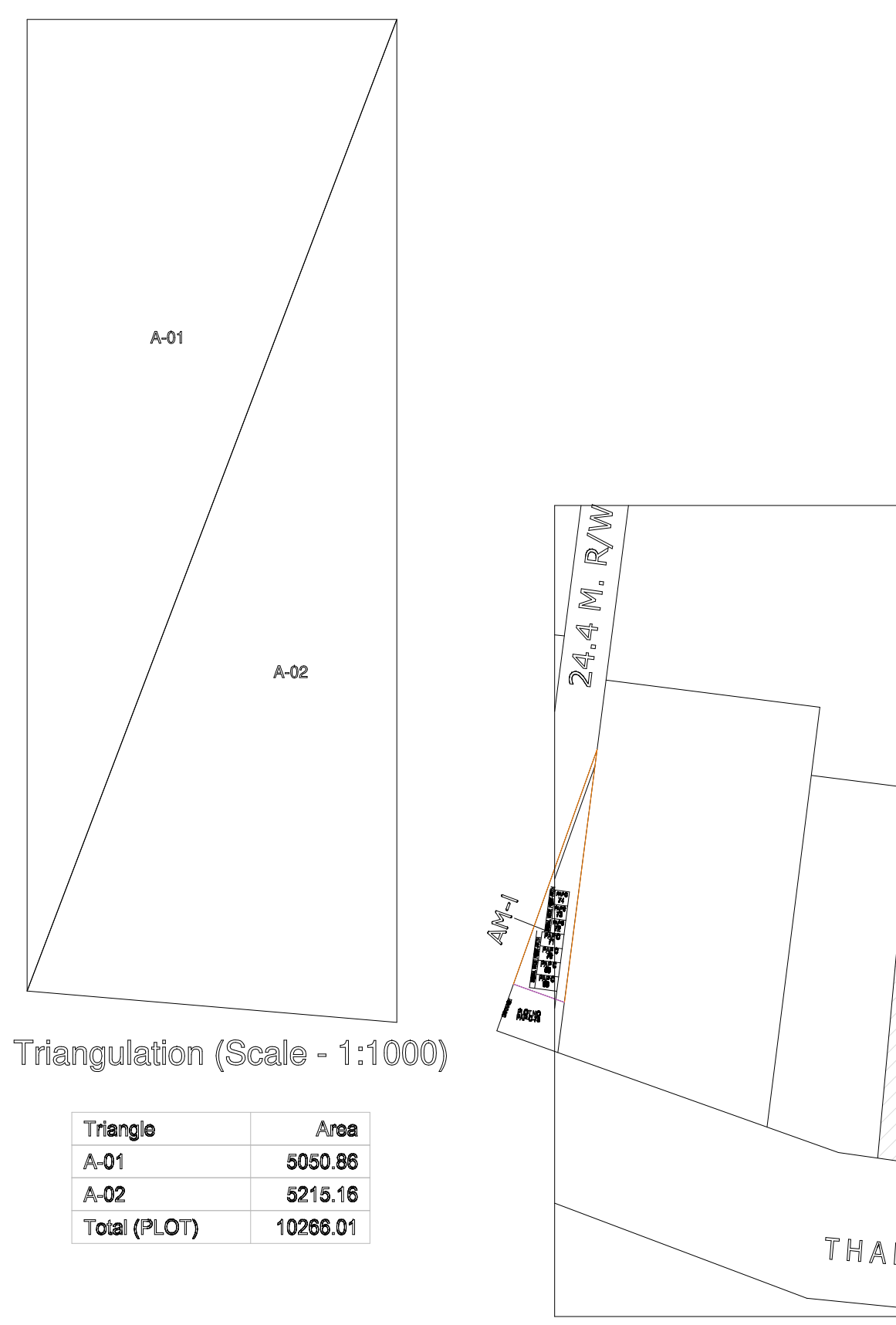
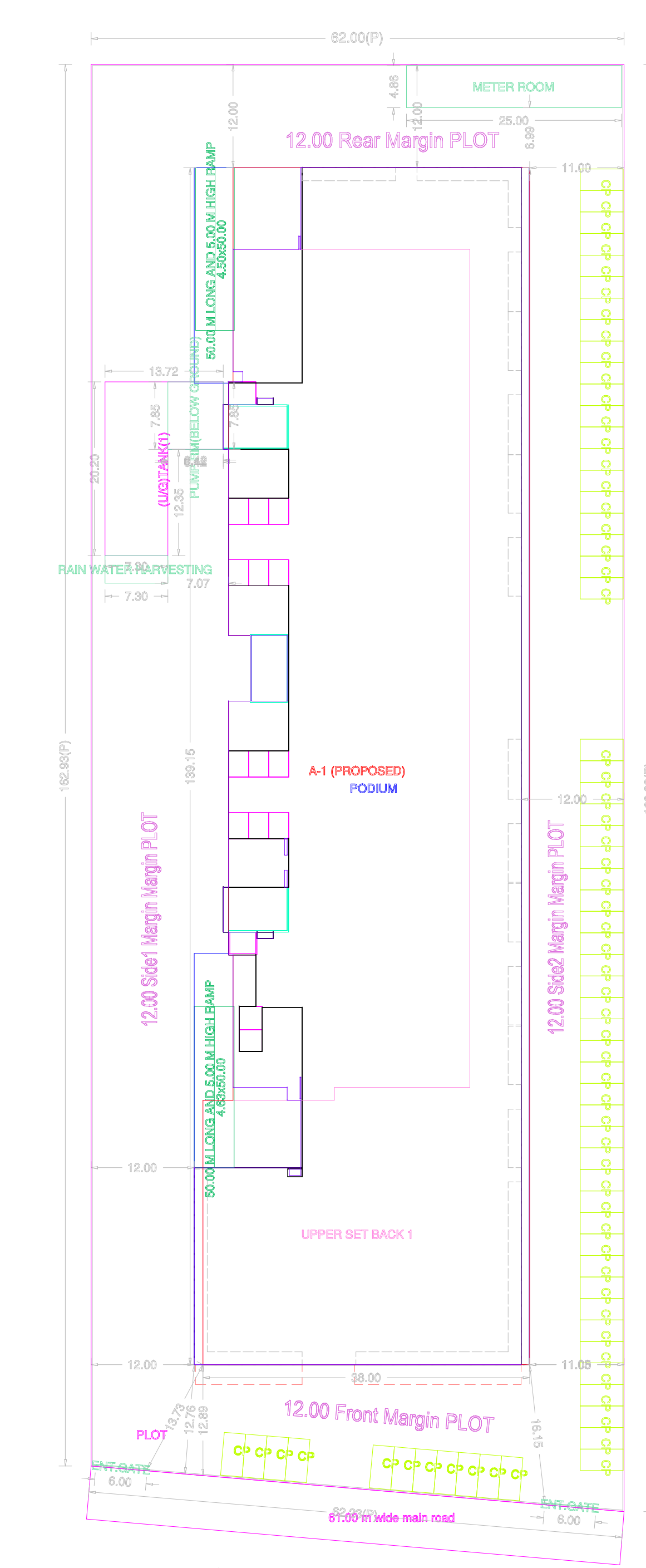


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Mob.: +91 93725 13985 / 93725 90653

o/c

3/11/19
आवक लिपिक
मिहिराधिकारी कार्यालय ठाणे



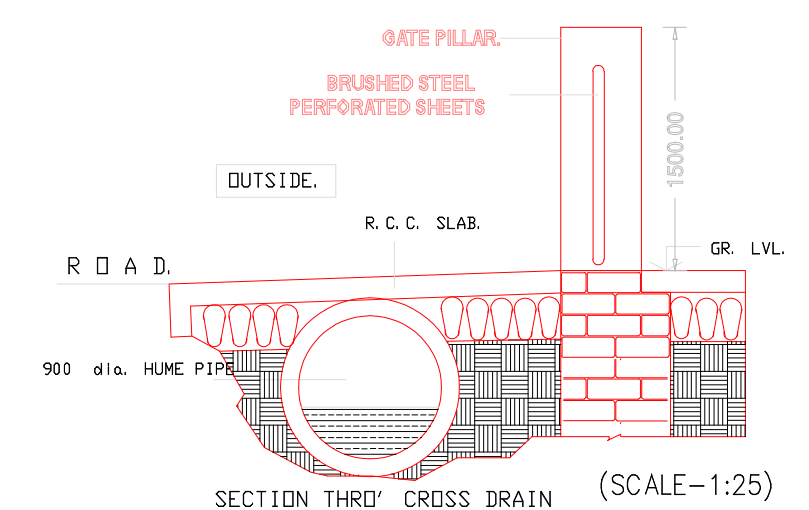
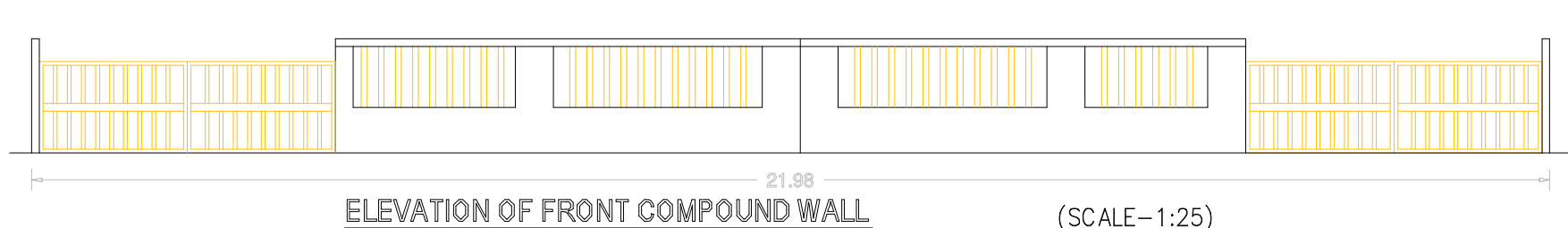
Triangle	Area
A-01	5050.86
A-02	5215.16
Total (PLOT)	10266.01

FLOOR	COMPL.	RESI.	IND.	SPEC.	DOUBLE HT.	PERM.	PROPR.	EXCESS	PASSAGE	LIFT LOBBY	STAIR	LIFT	TERRACE	TENEMENTS	TOTAL
GROUND FLOOR	0.00	0.00	0.00	2938.18	0.00	0.00	0.00	0.00	875.94	129.81	113.08	115.59	0.00	0.00	2938.18
FIRST FLOOR	0.00	0.00	0.00	2775.82	0.00	277.58	284.98	0.00	305.54	186.53	111.11	115.19	0.00	0.00	2775.82
SECOND FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.88	0.00	0.00	0.00
THIRD FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.82	0.00	0.00	0.00
FOURTH FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.82	0.00	0.00	0.00
FIFTH FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.82	0.00	0.00	0.00
SIXTH FLOOR	0.00	0.00	0.00	877.75	0.00	0.00	0.00	0.00	0.00	0.00	102.85	115.98	0.00	0.00	877.75
SEVENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
EIGHTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
NINTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
TENTH FLOOR	0.00	0.00	0.00	1812.23	0.00	181.22	204.08	22.85	192.94	102.85	101.49	0.00	0.00	0.00	1812.23
ELEVENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
TWELFTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
THIRTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
FOURTEENTH FLOOR	0.00	0.00	0.00	1812.23	0.00	181.22	204.08	22.85	192.94	102.85	101.49	0.00	0.00	0.00	1812.23
FIFTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
SIXTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
SEVENTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
EIGHTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
TERRACE FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	30385.94	0.00	2887.20	2923.48	249.30	1617.26	2931.33	1534.32	2024.44	0.00	0.00	30385.94 + 249.30

BUILDING	COMPL.	RESI.	IND.	SPEC.	DOUBLE HT.	PERM.	PROPR.	EXCESS	PASSAGE	LIFT LOBBY	STAIR	LIFT	TERRACE	TENEMENTS	TOTAL
A-1 (PROPOSED)	0.00	0.00	0.00	30385.94	0.00	2887.20	2923.48	249.30	1617.26	2931.33	1534.32	2024.44	0.00	0.00	30385.94 + 249.30
Total	0.00	0.00	0.00	30385.94	0.00	2887.20	2923.48	249.30	1617.26	2931.33	1534.32	2024.44	0.00	0.00	30385.94 + 249.30

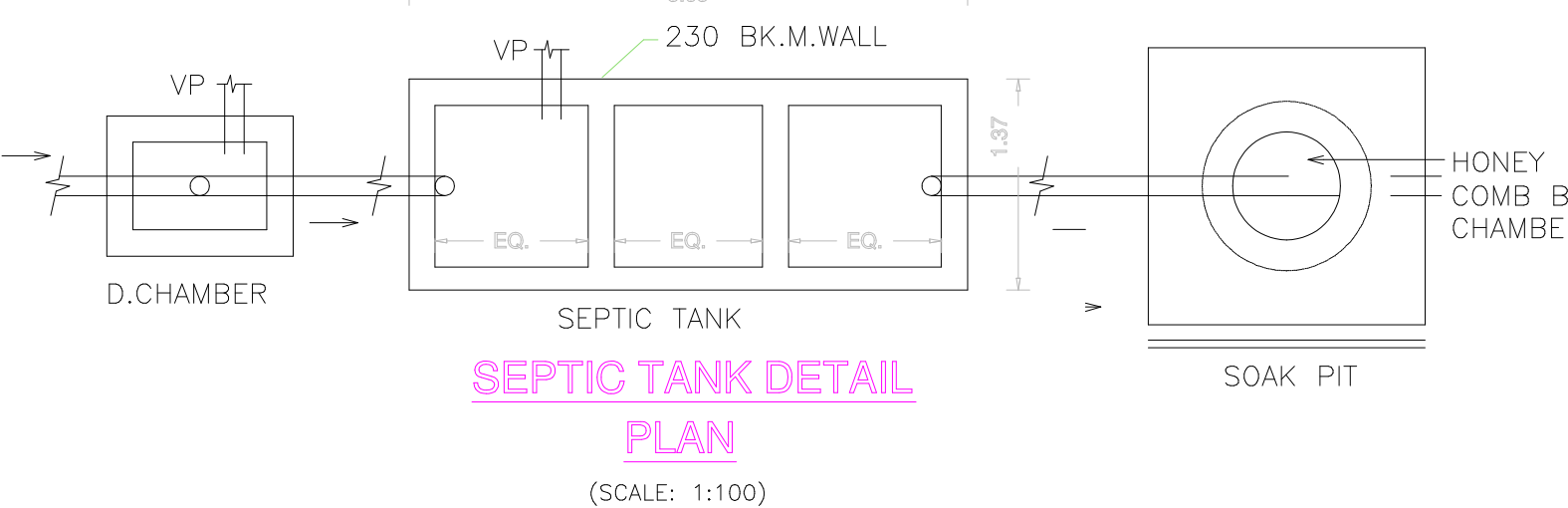
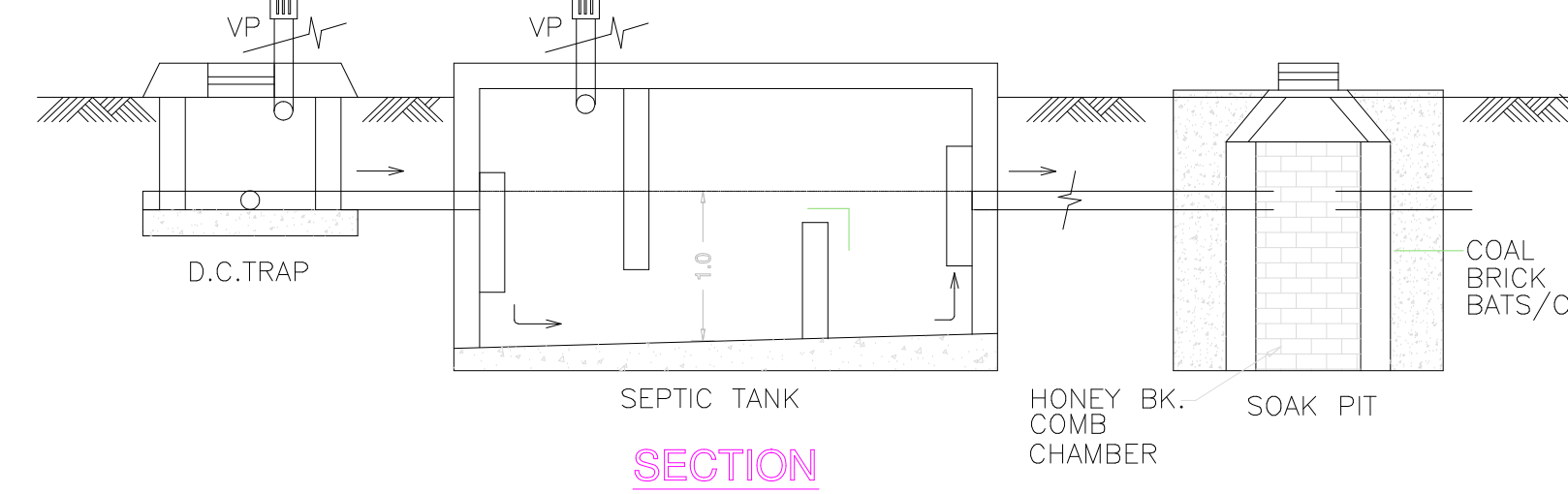
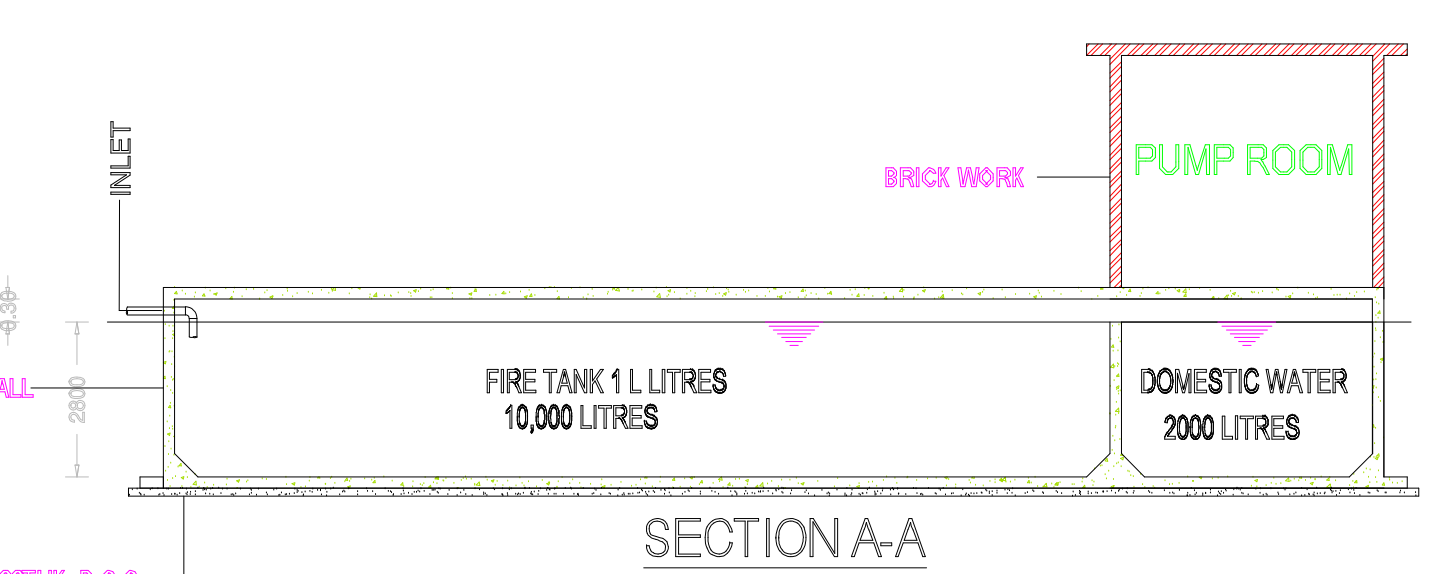
NOTE: NOW APPROVE F.S.I. ONLY
 TOTAL BUA (GROUND + 7TH FLOOR) = 3381.84 + 2036.84 = 5418.68
 FSI CONSUMED = 1837.20 / 10266.01 = 0.181 - 1.00

TANK	THRESHOLD	OCCUPANT LOAD (NOS.)	CONSUMPTION PER DAY (LIT)	REQUIRED CAPACITY (LIT)	PROPOSED CAPACITY (LIT)
TRBT	NA	0.00	NA	0.00	NA
OHWT	00.00	00.00	00.00	00.00	00.00
FIRE REQUIREMENT					NA
TOTAL					0.00
UCWT		1.5			NA
FIRE REQUIREMENT					NA
TOTAL					563662.00

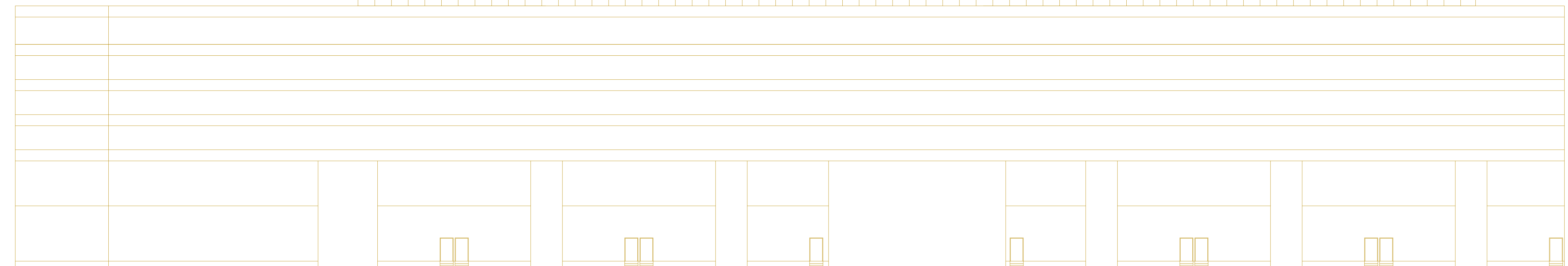
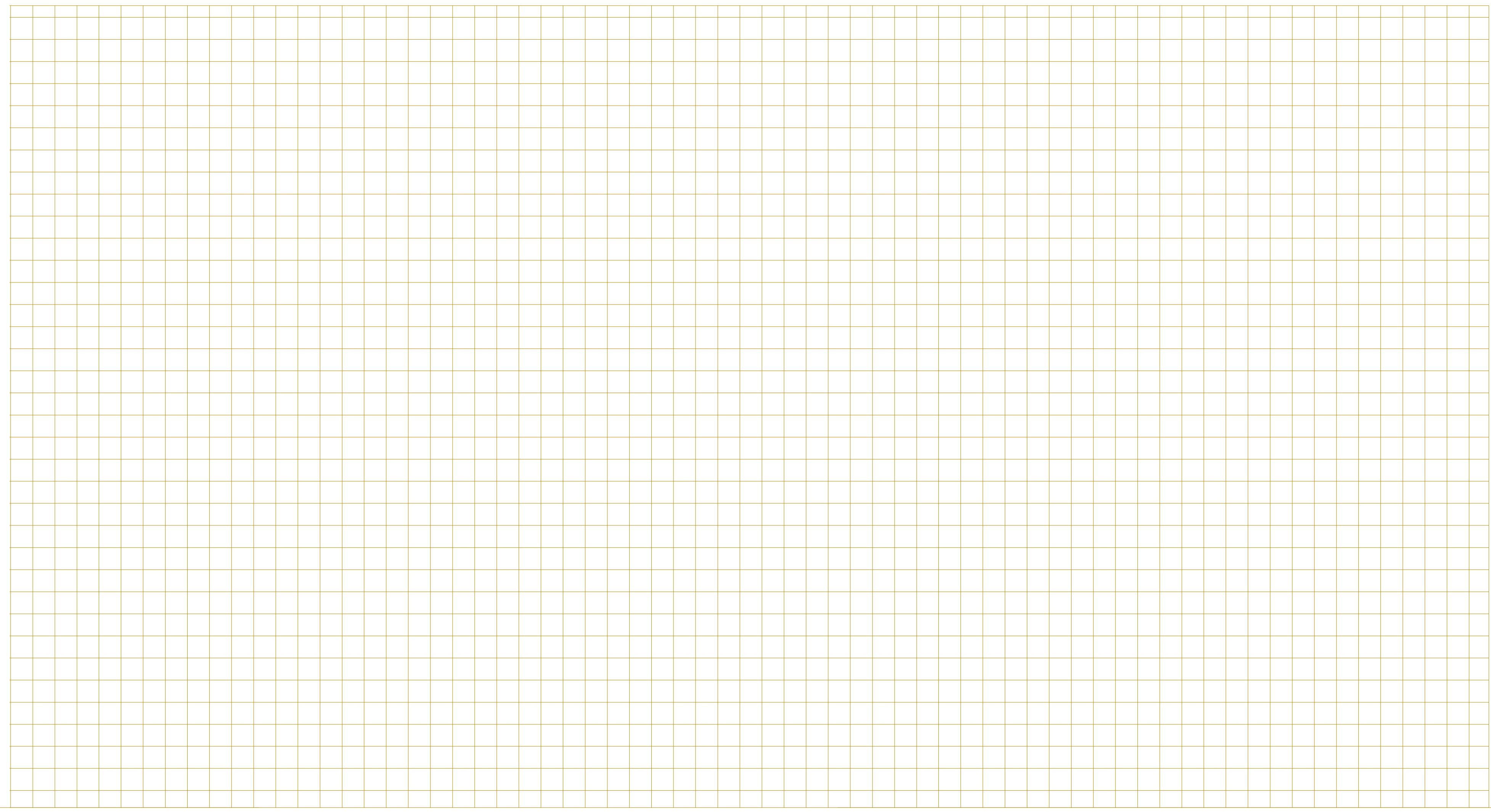


NAME	WIDTH	HEIGHT	NOS.
D	0.75	2.10	133
D	1.00	2.10	01
D	1.20	2.10	123
FRD	1.20	2.10	12
D	1.50	2.10	14
D	2.40	2.10	12
D	4.10	2.10	02

NAME	WIDTH	HEIGHT	NOS.
V	0.80	0.90	12
W	24.75	0.90	01



FLOOR	SIZE	AREA	TOT. AREA
EIGHTEENTH FLOOR	18.93 X 21.25 X 1	55.01	225.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.25 X 1	49.24	
	1.50 X 7.80 X 1	11.70	
	1.50 X 8.30 X 1	9.45	
EIGHTH FLOOR	18.93 X 21.25 X 1	55.01	225.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.25 X 1	49.24	
	1.50 X 7.80 X 1	11.70	
	1.50 X 8.30 X 1	9.45	
ELEVENTH FLOOR	18.93 X 21.25 X 1	55.01	225.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.25 X 1	49.24	
	1.50 X 7.80 X 1	11.70	
	1.50 X 8.30 X 1	9.45	
FIFTEENTH FLOOR	18.93 X 21.25 X 1	55.01	225.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.25 X 1	49.24	
	1.50 X 7.80 X 1	11.70	
	1.50 X 8.30 X 1	9.45	
FIRST FLOOR	6.95 X 12.08 X 1	28.31	284.61
	1.50 X 8.95 X 3	31.29	
	1.50 X 8.80 X 8	81.60	
	19.20 X 21.25 X 1	58.43	
	12.85 X 22.75 X 1	50.70	
	1.50 X 10.85 X 1	16.28	
FOURTEENTH FLOOR	18.93 X 21.30 X 1	59.09	204.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.30 X 1	49.31	
	1.50 X 7.30 X 1	11.10	
	1.50 X 8.30 X 1	9.45	
NINTH FLOOR	18.93 X 21.25 X 1	55.01	225.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.25 X 1	49.24	
	1.50 X 7.80 X 1	11.70	
	1.50 X 8.30 X 1	9.45	
SEVENTEENTH FLOOR	18.93 X 21.25 X 1	55.01	225.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.25 X 1	49.24	
	1.50 X 7.80 X 1	11.70	
	1.50 X 8.30 X 1	9.45	
SEVENTH FLOOR	18.93 X 21.25 X 1	55.01	225.08
	1.50 X 8.30 X 6	74.70	
	1.50 X 8.33 X 2	24.98	
	17.08 X 17.25 X 1	49.24	
	1.50 X 7.80 X 1	11.70	
	1.50 X 8.30 X 1	9.45	



FLOOR	COMPL.	RESI.	IND.	SPEC.	DOUBLE HT.	PERM.	PROPR.	EXCESS	PASSAGE	LIFT LOBBY	STAIR	LIFT	TERRACE	TENEMENTS	TOTAL
GROUND FLOOR	0.00	0.00	0.00	2938.18	0.00	0.00	0.00	0.00	875.94	129.81	113.08	115.59	0.00	0.00	2938.18
FIRST FLOOR	0.00	0.00	0.00	2775.82	0.00	277.58	284.98	0.00	305.54	186.53	111.11	115.19	0.00	0.00	2775.82
SECOND FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.88	0.00	0.00	0.00
THIRD FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.82	0.00	0.00	0.00
FOURTH FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.82	0.00	0.00	0.00
FIFTH FLOOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.82	0.00	0.00	0.00
SIXTH FLOOR	0.00	0.00	0.00	877.75	0.00	0.00	0.00	0.00	0.00	0.00	102.85	115.98	0.00	0.00	877.75
SEVENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
EIGHTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
NINTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
TENTH FLOOR	0.00	0.00	0.00	1812.23	0.00	181.22	204.08	22.85	192.94	102.85	101.49	0.00	0.00	0.00	1812.23
ELEVENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
TWELFTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
THIRTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
FOURTEENTH FLOOR	0.00	0.00	0.00	1812.23	0.00	181.22	204.08	22.85	192.94	102.85	101.49	0.00	0.00	0.00	1812.23
FIFTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00	204.72	225.08	33.02	192.94	100.22	101.49	0.00	0.00	0.00	2047.17
SIXTEENTH FLOOR	0.00	0.00	0.00	2047.17	0.00										

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION
(A Government of Maharashtra Undertaking)

Phone: 27781602



No.EE/DN.II/MHP/SPA/**E08456**/of 2019,
Office of the Executive Engineer &
Special Planning Authority,
MIDC Division No.II, Mahape.
Date:- 10 / 12 /2019.

To,
M/s. Plutonium Buisines Solution Pvt. Ltd.,
Plot No. 7 and 7A,
TTC Industrial Area,
Navi-Mumbai.

Sub: COMMENCEMENT CERTIFICATE

Sir,

With reference to your architect's online submission through SWC vide tracking I.D. No. SWC/14/521/20190408/625263 & complied on 09/12/2019, for grant to sanction of commencement certificate to carry out development work and Building Permit under section 45 of MR&T.P. Act, 1966 to erect Proposed Construction of Private IT Park on Plot No. 7 and 7A, in T.T.C. Indl. Area, the commencement/ Building permit is granted subject to the following condition & for total B.U.A. as per the approval to the plans attached.

1. The land vacated in consequence of the enforcement of the set-back rule part of the public street.
2. No new building or part thereof shall be occupied or allowed to be occupied or use or permitted to be used by any person until occupancy permission has been granted.
3. The commencement certificate/building permit shall remain valid period of one year commencing from the date of its issue.
4. This permission does not entitle you to develop the land which does not vest in you.
5. Minimum two trees in plots of 200.00 sqm. & such No. of trees at the rate of one tree per 100.00 sqm. for plots more than 200.00 sqm. in area shall be planted & protected.
6. In case of group housing, minimum two trees per tenement shall be planted and protected.
7. The party should inform the commencement of work as per the approval issued by this office.
8. Temporary labour camps, Toilet blocks & Water tanks within the site are allowed only during the phase of construction period of 1 years only.
9. The work of construction of temporary structure shall be executed under qualified structural engineer/Architect.
10. Allottee has to pay temporary construction fees at the rate of Rs. 50/- per Sqm. of such covered area of temporary structures.
11. Equal amounts as fees should be paid as deposit, which will be refundable at the end of the two years, or on completion of project whichever is earlier after removal of by the Allottee / Licensee / Lessee / Owner.
12. Failure to remove such temporary sheds will be liable for forfeiture of the deposit and any such failure continuing beyond stipulated period shall be liable for imposition of penalty which will be 3 times the rate of Rs. 50/- per Sqm.

Yours faithfully,

Maruti S
Kalkutaki
Executive Engineer &
Special Planning Authority
MIDC Division No.II, Mahape

Digitally signed by Maruti S Kalkutaki
DN: c=IN, o=Government Of Maharashtra,
ou=Maharashtra Industrial Development
Corporation, postalCode=400710,
st=Maharashtra,
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serialNumber=#6228485b2c6184491b58784f78
ca1d6e637059ceef2d9acc3f8616909e6a20,
cn=Maruti S Kalkutaki
Date: 2019.12.10 17:16:43 +05'30'

Copy submitted to :

1. The Collector, District Thane, for information.
2. The Municipal Commissioner, N.M.M.C. for information.
3. The Chief Fire Officer, MIDC, Andheri for information.

Copy f.w.c.'s to

1. The Regional Officer, MIDC Mahape, for information.
- Architect Mr. Soyuz Talib, for information & further needful please.

Copy to;

1. The Deputy Engineer, MIDC, Sub Dn.I, Mahape, Navi Mumbai, for information.
2. Guard File

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION

(A Government of Maharashtra Undertaking)



No.EE/DN.II/MHP/SPA/ E08456/2019
Office of the Executive Engineer &
Special Planning Authority,
MIDC Division No.II, Mahape , Navi Mumbai.
Date: - 10 / 12 /2019.

To,
M/s. Plutonium Buisness Solution Pvt. Ltd.
Plot No. 7 and 7A,
TTC Industrial Area,
Navi-Mumbai.

Sub.:- TTC Industrial Area.

Building Plan Approval proposed IT Industry Building on Plot No. 7 and 7A in TTC Industrial Area for M/s. Plutonium Business Solution Pvt. Ltd.

Ref.: 1) Tracking Id No. SWC/14/521/20190408/625263.

2) Provisional Fire NOC For FSI 3 Vide No. MIDC/Fire/D88955
dtd. 28/11/2019.

3) Addl FSI 3.0 approved by Hon. CEO vide no. D36188
dtd. 13/11/2019.

4) Complied on 09/12/2019.

Dear Sir,

You have submitted application for Approval to Building Plan for proposed IT Industry Building. Above applications are examined and following approvals are hereby granted...

A] Building Plan Approval

Since you have paid following

I) **Development charges**, amounting Rs.48,48,697.35 vide Receipt No. GL20075276 dtd. 13/05/2019. **Labour cess charges** amounting Rs.78,87,500 vide Provisional Receipt No. MCH/8889/2019 dtd. 07/12/2019.

II) **Scrutiny fees**, amounting to Rs. 88,500.00 vide Receipt No. GL20075276 dtd. 13/05/2019 & amounting to Rs. 88,500.00 vide Provisional Receipt No. MCH/8889/2019 dtd. 07/12/2019.

III) **Excess Enclosed Balcony premium** amounting Rs. 1,08,41,875.00 paid vide Provisional Receipt No. MCH/8889/2019 dtd. 07/12/2019.

The set of plans, received from you vide your letter cited above, is hereby approved subject to acceptance and follow up of following conditions by you.

1) You had submitted plans and drawings for **4601.63 m²** of plinth area for the plot area of **10268.00 m²**, at present this office has approved plans for **8357.28 m²** of built up area (Gr.+ 7 upper floors). This office has approved **05 Nos. (Gr.+ 7 upper floors)** of drawing details of which are mentioned on the accompanying below statement.

2. In addition, to this approval the plot holder shall obtain approval for plans from other requisite authorities as per necessity, such as from :-

The building plans needs to be got approved from :

i) Directorate of Industrial Safety & Health.

ii) Any other Govt. authorities which may be mandatory.

Certificate copies of plans along with a letter for approval from the above authorities in triplicate shall be submitted/to the EE & SPA , before starting the work. This building plan approval is with respect to planning point of view and in accordance to MIDC's Development Control Rules, since MIDC is Special Planning Authority (SPA) for this Area.

In case of approval to the modified plans, the earlier BCC to the building plans granted vide letter No. DE/MHP(C)/7&7A/4015 dt 07/10/2004 for BUA of 2639.829 sq.mt. issued by this office is treated as cancelled. The drawings approved now supersede previously approved drawings. You are requested to return the cancelled plans to this office for cancellation and record.

3. You will obtain Environment Clearance Certificate before Commencement of any construction activities, if applicable to their project as per the notification issued by MoEF, Govt. of India vide Notification issued by MoEF, New Delhi dtd.14. 09. 2006 and its subsequent amendments'.
4. You are requested to submit certified copies of above approvals from the concerned authorities to this office, in triplicate before any work is started OR within three months from the date of issue of this letter whichever is earlier.
5. For the sanitary block, overhead water storage tank shall be provided at the rate of 500 liter per W.C. or Urinal.
6. For necessary approach road to the plot from the edges of MIDC. Road, 900 mm dia CD works or a slab drain of required span and size shall be provided.
7. Temporary structures shall not be allowed except to during construction period (after obtaining prior approval from Executive Engineer.) and the same shall be demolished immediately after building work is completed.
8. During the period of construction, stacking of materials shall be done only in the area of plot allotted. In no case, material be stacked along MIDC, road land width/open plot area.
9. The marks demarcating boundary of the plot shall be preserved properly and kept in good condition and shown to department staff as and when required.
10. No tube well, bore well or open well shall be dug.
11. Plans for any future additions, alterations or extensions will have to be get approved from this office, as well as from concerned competent authority.
12. The present approval to the plans does not pertain to approval to the structural design, RCC members, foundations etc. It is only locational approval to the layout of various structures & floors with reference to the plot, in accordance to MIDC DCR.
13. In case any power line is passing through the plot, the plot holder should approach MSEDCL and obtain their letter specifying the vertical and horizontal clearance to be left and plan his structures accordingly.
14. The compound wall gate should open inside the plot and if the plot is facing on two or more sides of the road then gate shall be located at least 15 m. away from the corner of junction or roads.
15. Plot holders shall make his own arrangement for 24 hours of storage of water, as uninterrupted water supply cannot be guaranteed.
16. In case, water stream/ nallah is flowing through the allotted plot, the plot holder has to ensure that the maximum quantity of rain water that flows at the point of entry of stream is allowed to flow uninterruptedly through the plot and upto the point of out flow of the original stream. The points of entry and exit of the natural stream shall not be changed. The detailed plans section and design for allowing maximum expected discharge of rain water through the plot have to be furnished to this office and no filling of plot and diversion of nalla is allowed unless a written permission is obtained from the Executive Engineer/SPA.
17. This permission stands cancelled, if no construction work is started within twelve months from the date of issue of this letter or the date given in the agreement to lease to start construction work whichever is earlier. The date of starting construction work and date of completion shall be informed to the Executive Engineer in charge immediately. The construction shall be completed within the given stipulated time limit as per the lease agreement.
18. Breach of any rules stipulated will render the plot -holder liable for action as provided in MIDC., Act 1961 (II of 1962 and regulations made there under) and also terms of lease agreement and schedule of penalties prescribed by the Corporation for this purpose.

19. This office is empowered to add, amend, vary or rescind any provisions of Building Rules & regulations from time to time as it may deem fit, and the plot-holder has to be abide by these rules and regulations.
19. As soon as the building work is completed, the plot-holder shall approach to the concerned Deputy Engineer/Executive Engineer, to get the work verified and building shall not be occupied unless building completion certificate and occupancy certificate is obtained from this office.
21. The basement if provided is to be used only for storage purpose. No. manufacturing activates are allowed, similarly toilet is not allowed at the Basements.
22. The Name and plot number shall be displayed at main entrance of plot.
23. The plot holder shall construct STP treat & dispose effluent in main drainage lines.
24. The plot holder shall ensure that, the foundation of the building / structure shall rest on the firm strata and not on made up / filled ground. The Architect and structural consultant appointed by the owner will be solely responsible for this condition.
25. MIDC issues permission for development of plots which are situated on river Banks, adhering to the contents of the River Policy dt. 13th July 2009 and as per category of Industries. PIL No. 17 of 2011 is filed against this policy at the Hon'ble High Court Bombay. It is clarified that, grant of any permission by the MIDC to any new industry in industrial estate situated on river banks will be subject to any further orders which may be passed by Hon'ble High Court, Bombay under PIL No. 17 of 2011.
26. Since you have consumed 0.81 of FSI as per the approved plan, you are requested to utilize remaining FSI as per agreement to lease.
27. Terms & Conditions as per ITpolicy-2016 will be applicable.

B] Drainage

i) Drainage Plan Approval (Internal Works)

The set of plans in triplicate received along with the letter under reference for the above work is scrutinized the proposal is approved subject to condition as follows:

The work of internal and external water supply and sanitary fittings etc for the Above building shall be carried out through the a licensed plumber registered at local Authority or of Environmental Engineering Department, or Govt. of Maharashtra.

- 1) The work should be carried out as per specifications confirming to I.S.S. In case they are not covered under I.S.S. then standard practice allowed by Municipal Corporation / or Local Council shall be followed.
- 2) The wastewater from water closets and urinals shall be passed through a septic tank of standard design.
- 3) The present approval to the plans does not pertain to the design of septic tank, effluent treatment plant etc. It is only location approval to these structures with reference to the plot.
- 4) You will be allowed to join your effluent to MIDC's common effluent collection system only after obtaining of necessary N.O.C. from M.P.C. Board and actual commissioning of pretreatment activity the factory effluent will be allowed to connect to MIDC system.
- 5) Overhead water tank shall be provided at the rate of 500 Litters per W.C. / Urinal provided.
- 6) The waste water from the closets and Urinals shall be passed through the septic Tanks, which is to be adequate to meet the requirements of the persons working in the factory and process waste if any, prior to septic tank in series with suitable size of 100 mm dia sewer trap, inspection chamber with 80 mm dia vent pipe shall be provided.
- 7) All vent pipes shall be minimum 80 mm dia size.

8) All rain water down take pipes shall be minimum 100 mm dia and should be provided at the rate of 1 Nos. Per 25 Sq. m. of roof area.

9) All S.W. pipes shall be minimum of 150 mm dia size.

10) It should be seen that no overflow of water from the soak pit or any process waste Enters in to adjoining property or road.

11) Rain water pipes are not to be connected to underground effluent collection system. Separate drainage system shall be provided for collection of Industrial and Domestic wastes. Manholes shall be provided at the end of collection system with arrangements for measurement of the flow.

12) In case any of the requirements, stated as above is violated by the plot holder then he is liable for disconnection of water supply and is liable for action provided under\ MIDC., Act and various regulations and as per provision in the lease agreement.

13) The completion of work as per above requirements, it shall be jointly, inspected by the concerned Deputy. Engineer, of MIDC and your representative who has designed and executed work, without which drainage completion certificate will not be issued.

14) The waste water after treatment shall be soaked in a soak pit, if sewer line is not Available for the plot; whereas if effluent collection system, of MIDC is functioning, then effluent shall be connected to the same after getting drainage plans approved from this office. The effluent shall be out letter only after pretreatment confirming to the standards stipulated by Maharashtra Pollution Control Board of Govt. of Maharashtra and after obtaining their consent under water Act 1974, Air Act 1981, & Hazardous waste Rules 2008 and subsequent amendments.

Thanking you,

Yours faithfully,
Maruti S
Kalkutaki
Executive Engineer &
Special Planning Authority
MIDC Division No.II, Mahape

Digitally signed by Maruti S Kalkutaki
DN: c=IN, o=Government Of Maharashtra,
ou=Maharashtra Industrial Development Corporation,
postalCode=400710, st=Maharashtra,
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Kalkutaki
Date: 2018.12.10 17:17:06 +05'30'

DA:- 1. One Statement showing details of drawings and built up area approved.
(Ground + 7 upper floors)
2. Copy of approved drawing/plan.

Copy submitted to :

- The Collector, District Thane, for information.
- The Municipal Commissioner, N.M.M.C. for information.
- The Chief Fire Officer, MIDC, Andheri for information.

Copy f.w.c.'s to

- The Regional Officer, MIDC Mahape, for information.
- Architect Mr. Soyuz Talib.

Copy to;

- The Deputy Engineer, MIDC, Sub Dn.I, Mahape, Navi Mumbai, for information.
- Guard File.

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION

(A GOVERNMENT OF MAHARASHTRA UNDERTAKING)

This statement is accompaniment to letter No. EE/DN.II/SPA/ E08456 / Of 2019 dtd. 10 / 12 /2019 issued by M.I.D.C. Addressed to M/s. Plutonium Buisness Solution Pvt. Ltd. for Plot no. 7 & 7A in TTC Industrial Area. Tracking ID. SWC/14/521/20190408/625263.

Allottees Name: M/s. Plutonium Buisness Solution Pvt. Ltd.

Plot no. :- 7 and 7A

Sr. No	Dr. No.	Name of Architect	Description	Ground Floor	1st Floor	2nd Floor	3rd Floor	4th Floor	5th Floor	6th Floor	7th Floor	8th & 9th Floor	10th & 14th Floor	11th to 13th and 15th to 18th Floor	7th floor Excess Balcony area (COUNT IN FSI)	Total BUA
				Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.
1			Existing BCC vide DE/MHP(C)/7&7A /4015 dt 07/10/2004	1930.982	708.237	---	---	---	---	---	---	---	---	---	---	2639.829
2	---		Demolition Permission vide EE/Dn.II/SPA/D059 91 / of 2019 dt. 16/09/2019	(-)1930.982	(-)708.237	---	---	---	---	---	---	---	---	---	---	(-)2639.829
3	1 to 5	M/s. Soyuz Talib, Architect CA/94/17095	Now proposed Gr. Floor to 7th floor Plans, Elevations, Sectional Views, Area Statement etc.	2936.18	2775.82	4452.11 (FREE OF FSI)	4274.71 (FREE OF FSI)	4274.71 (FREE OF FSI)	4274.71 (FREE OF FSI)	577.75	2047.17	---	---	---	20.36	8357.28
4			Total =	2936.18	2775.82	4452.11 (FREE OF FSI)	4274.71 (FREE OF FSI)	4274.71 (FREE OF FSI)	4274.71 (FREE OF FSI)	577.75	2047.17	---	---	---	20.36	8357.28

- | | | |
|------------------------------------|----|--------------------------------|
| 1. Plot Area | :- | 10268.00 sq.mt. |
| 3. 10% open space | :- | N.A. |
| 4. Explosive Area | :- | N.A. |
| 5. Plot Area (Net) | :- | 10268.00 sq.mt. |
| 6. Upto date ground coverage in m2 | :- | 4438.88 sq.mt. |
| 7. FSI in ground coverage | :- | 4601.63/10268.00 = 0.45 < 0.50 |
| 8. Total Built up area in m2 | :- | 8357.28 sq.mt. |
| 9. Total F.S.I. consumed | :- | 8357.28/10268.00 =0.81 < 3.00 |

Maruti S
Kalkutaki

Digitally signed by Maruti S Kalkutaki
DN: cn=Maruti S Kalkutaki, o=Government of Maharashtra, ou=Maharashtra Industrial Development Corporation, postalCode=400710, st=Maharashtra, 2.5.4.20=0236465466766678254865232c7b441d358b6b50b8d394cb815f78ee5a7f536
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**Executive Engineer & SPA
MIDC, Sub-Division No. II,
Mahape, Navi Mumbai.**



भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

Mr. Mansukh Tejabhai Timbadia Director of M/s. Plutonium Business Solution Pvt. Ltd.

Date: 18-06-2019

Plot No. 7 and 7A, Turbhe MIDC, Thane -
Belapur Road, Opposite Turbhe Railway
Station, Taluka & Dist - Thane, Navi
Mumbai, Maharashtra-400203

Valid Up to: 17-06-2027

No Objection Certificate for Height Clearance

1. This NOC is issued by Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations.

2. This office has no objection to the construction of the proposed structure as per the following details:

NOC ID :	NAVI/WEST/B/060119/402248 ✓
Applicant Name*	Md Zeyaal Imam
Site Address*	Plot No 7 and 7A Turbhe MIDC Thane Belapur Road Opposite Turbhe Railway Station Taluka and Dist Thane Navi Mumbai, Turbhe, Navi Mumbai, Maharashtra ✓
Site Coordinates*	73 01 2.36-19 04 59.32, 73 01 2.48-19 04 57.50, 73 01 7.64-19 05 00.03, 73 01 7.97-19 04 58.21
Site Elevation in mtrs AMSL as submitted by Applicant*	9.71 M ✓
Permissible Top Elevation in mtrs Above Mean Sea Level(AMSL)	88.39 M (Restricted) ✓

*As provided by applicant

3. This NOC is subject to the terms and conditions as given below:

a. Permissible Top elevation has been issued on the basis of Site coordinates and Site Elevation submitted by Applicant. AAI neither owns the responsibility nor authenticates the correctness of the site coordinates & site elevation provided by the applicant. If at any stage it is established that the actual data is different, this NOC will stand null and void and action will be taken as per law. The office in-charge of the concerned aerodrome may initiate action under the Aircraft (Demolition of Obstruction caused by Buildings and Trees etc.) Rules, 1994"

b. The Site coordinates as provided by the applicant in the NOC application has been plotted on the street view map and satellite map as shown in ANNEXURE. Applicant/Owner to ensure that the plotted coordinates corresponds to his/her site. In case of any discrepancy, Designated Officer shall be requested for cancellation of the NOC.

c. Airport operator or his designated representative may visit the site (with prior coordination with applicant or owner) to ensure that NOC terms & conditions are complied with.

d. The Structure height (including any superstructure) shall be calculated by subtracting the Site elevation in AMSL from the Permissible Top Elevation in AMSL i.e. Maximum Structure Height = Permissible Top Elevation minus (-) Site Elevation.

e. The issue of the 'NOC' is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft (Demolition of Obstruction caused by Buildings and Trees etc.) Rules, 1994.



क्षेत्रीय मुख्यालय, विमान क्षेत्र पोर्टा केबिंस, नई एयरपोर्ट कॉलोनी, हनुमान रोड के सामने, विलेपारले ईस्ट
मुंबई- 400099 दूरभाष संख्या : 91-22-28300606

Regional headquarter Western Region, Porta Cabins, New Airport Colony, Opposite Hanuman Road, Vile Parle East
Mumbai-400099 Tel. no. 91-22-28300606



भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

- f. No radio/TV Antenna, lighting arresters, staircase, Muntree, Overhead water tank and attachments of fixtures of any kind shall project above the Permissible Top Elevation of 88.39 M (Restricted) (AMSL), as indicated in para 2.
- g. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.
- h. The certificate is valid for a period of 8 years from the date of its issue. One time revalidation without assessment may be allowed, provided construction work has commenced, subject to the condition that such request shall be made within the validity period of the NOC and the delay is due to circumstances which are beyond the control of the developer.
- i. No light or a combination of lights which by reason of its intensity, configuration or colour may cause confusion with the aeronautical ground lights of the Airport shall be installed at the site at any time, during or after the construction of the building. No activity shall be allowed which may affect the safe operations of flights.
- j. The applicant will not complain/claim compensation against aircraft noise, vibrations, damages etc. caused by aircraft operations at or in the vicinity of the airport.
- k. Day markings & night lighting with secondary power supply shall be provided as per the guidelines specified in chapter 6 and appendix 6 of Civil Aviation Requirement Series B Part I Section 4, available on DGCA India website: www.dgca.nic.in
- l. The applicant is responsible to obtain all other statutory clearances from the concerned authorities including the approval of building plans. This NOC for height clearances is to ensure the safe and regular aircraft operations and shall not be used as document for any other purpose/claim whatsoever, including ownership of land etc.
- m. This NOCID has been assessed w.r.t Juhu, Navi Mumbai, Santa Cruz Airport(s). NOC has been issued w.r.t. the AAI aerodromes and other licensed civil aerodromes as listed in Schedule-III, Schedule-IV(Part-1), Schedule-IV(Part-2; RCS Airports Only) and Schedule-VII of GSR751(E).
- n. Applicant needs to seek separate NOC from Defence, if the site lies within the jurisdiction of Defence Aerodromes as listed in Schedule-V of GSR751(E). As per Rule 13 of GSR751(E), applicants also need to seek NOC from the concerned State Govt. for sites which lies in the jurisdiction of unlicensed aerodromes as listed in Schedule-IV (Part-2: other than RCS airports) of GSR751(E).
- o. In case of any discrepancy/interpretation of NOC letter, English version shall be valid.
- p. In case of any dispute w.r.t site elevation and/or AGL height, top elevation in AMSL shall prevail.

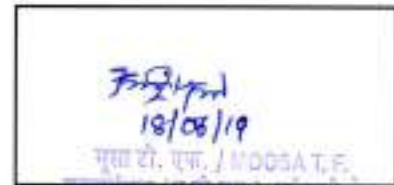
Chairman NOC Committee

Region Name: WEST

Address: General Manager Airports Authority of India, Regional Headquarter, Western Region, Opp. Parsiwada, Sahar Road, Vile Parle (E) MUMBAI-400099

Email ID: nocwr@aaiaero

Contact No: 022-28300656



पूरुषोत्तम ए.एम. / NOOSA T.F.
General Manager (A.T.M.), Western Region
भारतीय विमानपत्तन प्राधिकरण Airports Authority of India

Name / Designation / Sign with Date	
Prepared By :	<i>NJRAS GUPTA</i> NJRAS GUPTA MGR(ATM) 18/08/19
Verified By :	<i>P.K. SINGH</i> P.K. SINGH AGM(ATM-DOAS) 18/08/19

क्षेत्रीय मुख्यालय पश्चिमी क्षेत्र पोर्टा केबिंस, नई एयरपोर्ट कॉलोनी, हनुमान रोड के सामने, विलेपारले ईस्ट
मुंबई- 400099 दूरभाष संख्या : 91-22-28300606

Regional headquarter Western Region, Porta Cabins, New Airport Colony, Opposite Hanuman Road, Vile Parle East
Mumbai-400099 Tel. no. 91-22-28300606

Distance From Nearest Airport And Bearing

Airport Name	Distance (Meters) from Nearest ARP	Bearing (Degree) from Nearest ARP
Juhu	19367.73	95.3
Navi Mumbai	11187.19	330.95
Santa Cruz	15957.67	93.91
NOCID	NAVI/WEST/B/060119/402248	

Street view



June 1, 2015

1:1,600
0 500 1,000 1,500
0 500 1,000 1,500
Scale: 1:1,600. © 2015 Google. All rights reserved. Google, the Google logo, and Street View are trademarks of Google Inc. All other marks are the property of their respective owners.

Satellite View



June 1, 2015

1:1,600
0 500 1,000 1,500
0 500 1,000 1,500
Scale: 1:1,600. © 2015 Google. All rights reserved. Google, the Google logo, and Street View are trademarks of Google Inc. All other marks are the property of their respective owners.

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/ 24010437
Fax: 24023516
Website: <http://mpcb.gov.in>
E-mail: jdwater@mpcb.gov.in



Kalpataru Point, 2nd - 4th Floor
Opp. Cine Planet Cinema,
Near Sion Circle, Sion (E)
Mumbai-400 022.

Infrastructure /RED/LSI

Date: 23/06/2020
103/2020

Consent Order No: - Format 1.0/BO/JD (WPC)/UAN No.00000086136/CE/CC-2006001020

To,

M/s. Plutonium Business solutions Pvt. Ltd.
"Plutonium Business Park",
Plot No. 7 & 7A , At Adjoining Ikea,
Near Turbhe Railway Station,
Thane - Belapur Road, Turbhe, Navi Mumbai

Sub: Grant of Consent to Establish for IT Park Cum Commercial Project in Red Category.

Ref.: 1. Environmental Clearance obtained vide No. (SEIAA Meeting No.184 meeting SEIAA -EC- 0000002317, dtd. 22/01/2020.
2. Minutes of Consent Committee meeting held on 06/03/2020.

Your application No. 0000086136, Dated 02/01/2020.

For: Grant of Consent to Establish under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. The Consent to Establish is valid for period up to commissioning or up to 5 year whichever is earlier.
2. The capital investment of the project is Rs.308.70 Crs as per undertaking submitted by P.P.
3. The Consent to Establish is valid for construction of IT park cum Commercial project of M/s. Plutonium Business solutions Pvt. Ltd. "Plutonium Business Park", Plot No. 7 & 7A , At Adjoining Ikea, Near Turbhe Railway Station, Thane - Belapur Road, Turbhe, Navi Mumbai, on total plot area of 10268.00 Sq. Mtrs. for total construction BUA of 67693.65 Sq. Mtrs.
4. Conditions under Water (P&CP), 1974 Act for discharge of effluent:

Sr. no.	Description	Permitted quantity of discharge (CMD)	Standards to be achieved	Disposal
1.	Trade effluent	NIL	NA	NA
2.	Domestic effluent	127	As per Schedule -I	The treated domestic effluent shall be 60% recycled for secondary purposes and remaining shall be utilized on land for gardening and connected to sewerage system provided by Local Body.

5. Conditions under Air (P& CP) Act, 1981 for air emissions:

Sr. No.	Description of stack/ source	Number Of Stack	Standards to be achieved
1	D. G. Set (750 & 1000*2 KVA)	1	As per Schedule -II

6. Conditions under Municipal Solid Waste (Management and Handling) Rule, 2000:

Sr. no.	Type Of Waste	Quantity	Treatment	Disposal
1	Biodegradable	174 Kg/D	OWC	Used as Manure
2	Non-Biodegradable	261 Kg/D	Segregate	Hand over to Local Body for recycling
3	STP Sludge	19 Kg/D	Drying	Used as Manure
4	E-Waste	222 Kg/M	--	Sale to reprocessor

7. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for treatment and disposal of hazardous waste

Sr. No.	Type Of Waste	Quantity	UOM	Treatment	Disposal
NIL					

- The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.
- Project Proponent shall provide adequate capacity of sewage treatment plant so as to achieve treated domestic effluent standard for the parameter BOD- 10 mg/lit.
- Project Proponent shall comply with the conditions stipulated in Environmental Clearance granted by SEIAA vide No. (SEIAA Meeting No.184 meeting SEIAA -EC-0000002317, dtd. 22/01/2020.**
- The treated domestic effluent shall be 60 % recycled for secondary purpose such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body.
- Project Proponent shall install online monitoring system for pH, SS and flow at the outlet of Sewage Treatment Plant.**
- Project Proponent shall submit an affidavit in Board's prescribed format within 15 days regarding the compliance of conditions of EC /CRZ clearance and C to E.**
- Project Proponent shall install organic waste converter along with composting facility for the treatment of wet garbage.

For and on behalf of the
Maharashtra Pollution Control Board

(E. Ravendiran, IAS)
Member Secretary

Received Consent fee of -

Sr. No.	Amount	DR/ DD/ RTGS/ NEFT/ TXN No.	Bank Name	Date
1	Rs. 6,17,414/-	5458557(RTGS)	IDBI Bank	24/01/2020

Copy to:

- Regional Officer (Navi Mumbai)/ Sub-Regional Officer (NM-II), M.P.C. Board.
-They are directed to ensure the compliance of the consent conditions.
- Chief Accounts Officer, MPCB, Mumbai.
- CC/CAC desk- for record & website updating purposes.

Schedule-I

Terms & conditions for compliance of Water Pollution Control:

- 1) A] As per your application, you have proposed to provide Sewage Treatment Plants of designed capacity **140 CMD** based on MBBR technology for the treatment of **127 CMD** of domestic sewage.
- B] The Applicant shall operate the Sewage Treatment Plant (STP) to treat the sewage so as to achieve the following standards/ prescribed under EP Act, 1986 and Rules made there under from time to time, whichever is stringent:

Sr. No.	Parameters	Standards prescribed by Board
		Limiting Concentration in mg/l, except for pH
01	pH	6.5-9.0
02	BOD	Not more than 10
03	TSS	Not more than 20
04	COD	Not more than 50
05	NH ₄ N	Not more than 5
06	N-total	Not more than 10
07	Fecal Coliform (MPN/100 ml)	Less than 100

C] The treated domestic effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time. Project proponent shall provide flow meter to ensure 60% recycling of treated sewage and shall maintain the record with data logging system. PP shall achieve the treated domestic effluent standard for the parameter BOD- 10 mg/lit. The online monitoring data of the parameters Flow, BOD, TSS at the STP outlet shall be connected to MPCB Server.

- 1) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system and/ or extension or addition thereto.
- 2) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
- 3) The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, and other provisions as contained in the said act.

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1	Industrial Cooling, spraying in mine pits or boiler feed	NIL
2	Domestic purpose	142
3	Processing whereby water gets polluted & pollutants are easily biodegradable	NIL
4	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	NIL

Schedule-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have proposed to installed the Air pollution control (APC) system and also erected following stack (s) and to observe the following fuel pattern-

Sr. No.	Stack Attached To	APC System	Height in Mtrs.	Type of Fuel	Quantity & UoM	SO ₂ Kg/D
1	D. G. Set (750 KVA)	Acoustic Enclosure	5.5	HSD	201 Kg/hr	--
2	D. G. Set (1000*2 KVA)	Acoustic Enclosure	6.5	HSD	268 Kg/hr	--

2. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Total Particulate matter	Not to exceed	150 mg/Nm ³
--------------------------	---------------	------------------------

3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

Schedule-III

Details of Bank Guarantees

Sr. No.	Consent (C to E)	Amt of BG Imposed	Submission Period**	Purpose of BG	Compliance Period	Validity
1	C to E	Rs.10 Lakh	15 Days	Towards compliance of Consent to Establish conditions	COU	COU

* The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional Office within 15 days of the date of issue of Consent.

Schedule-IV

General Conditions:

- 1) The applicant shall provide facility for collection of samples of sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
- 2) The firm shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act 1986 and Municipal Solid Waste (Management & Handling) Rule 2000, Noise (Pollution and Control) Rules, 2000 and E-Waste (Management & Handling) Rule 2011.
- 3) Drainage system shall be provided for collection of sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No sewage shall be admitted in the pipes/sewers downstream of the terminal manholes. No sewage shall find its way other than in designed and provided collection system.
- 4) Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- 5) Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Applicant should make efforts to bring down noise level due to DG set, outside their premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel.
- 6) Solid Waste - The applicant shall provide onsite municipal solid waste processing system & shall comply with Municipal Solid Waste (Management & Handling) Rule 2000 & E-Waste (M & H) Rule 2011.
- 7) Affidavit undertaking in respect of no change in the status of consent conditions and compliance of the consent conditions the draft can be downloaded from the official web site of the MPCB.
- 8) Applicant shall submit official e-mail address and any change will be duly informed to the MPCB.
- 9) The treated sewage shall be disinfected using suitable disinfection method.
- 10) The firm shall submit to this office, the 30th day of September every year, the environment statement report for the financial year ending 31st march in the prescribed Form-V as per the provision of rule 14 of the Environmental (Protection) Second Amended rule 1992.
- 11) **The applicant shall obtain Consent to Operate from the Board prior to commissioning of the Project.**

TEST REPORT

ISSUED TO: M/s. PLUTONIUM BUSINESS SOLUTION PVT. LTD. **REPORT NO. :** UT/ELS/REPORT/C-124/05-2022
Plot No.7 & 7A ,C Zone ,Turbhe ,MIDC ,Thane Belapur Road, **ISSUE DATE :** 23/05/2022
Near Turbhe Railway Station, Navi Mumbai-400 703. **YOUR REF. :** PBSPL/MoEFCC/2020-21
REF. DATE : 06/02/2020

SAMPLE PARTICULARS : **AMBIENT AIR QUALITY MONITORING**
Sampling Plan Ref. No.: C-06/04-2022 **Location Code :** 01
Sample Registration Date : 04/04/2022 **Sample Location :** At Project Site
Date of Sampling : 02/04/2022 to 03/04/2022
Time of Sampling : 14:30 Hrs. to 14:30 Hrs.
Analysis Starting Date : 04/04/2022 **Collected By :** ULTRA-TECH
Analysis Completion Date : 06/04/2022 **Height of Sampler :** 1.0 Meter
Sample Lab Code : UT/ELS/C-032/04-2022 **Sampling Duration :** 24 Hours
Ambient Air Temperature : 28.6⁰C to 34.3⁰C **Relative Humidity :** 52.0 % to 66.0 %

Sr. No.	Test Parameter	Test Method	Test Result	Unit
1.	Sulphur Dioxide (SO ₂)	IS 5182 (Part 02) : 2001	14	µg/m ³
2.	Oxides of Nitrogen (NO _x)	IS 5182 (Part 06) : 2006	25	µg/m ³
3.	Particulate Matter (PM ₁₀)	EPA/625/R-96/010a Method IO-2.1	79	µg/m ³
4.	Particulate Matter (PM _{2.5})	CPCB Guidelines, Vol-I, NAAQMS/36/2012-13	27	µg/m ³
5.	Carbon Monoxide (CO) †	IS 5182 (Part 10): 1999	1.2	mg/m ³

†: Sampling Period 1 Hr.

Opinions / Interpretations: National Ambient Air Quality Monitoring Standard, Part III- Section IV is provided as Annexure-I for your reference. (Turnover to find Annexure).

Sampling Equipment Details	Instrument Used	Make & Model	Calibration Status
	Respirable Dust Sampler	Make - Politech; Model - PEM-RDS 8NL; Sr. No. 3213	Valid up to - 05/01/2023
Fine Dust Sampler	Make - Netel; Model - NPM FDS2.5/10µ (A); Sr. No. 222	Valid up to - 27/09/2022	

- Note:**
1. This test report refers only to the sample tested.
 2. Monitoring area coming under Residential & Commercial areas and observed values are relevant to sample collected only.
 3. This test report may not be reproduced in part, without the permission of this laboratory.
 4. Any correction invalidates this test report.
 5. Weather was Sunny & clear during sampling period.

- END OF REPORT -

For ULTRA-TECH,

(Authorized Signatory)

ANNEXURE-I

NATIONAL AMBIENT AIR QUALITY STANDARDS, PART III-SECTION IV
The Gazette of India with Effect from Wednesday, November 18, 2009/KARTIKA 27, 1931

Sr. No.	Pollutants	Time Weighted Average	National Ambient Air Quality Standards	
			Industrial, Residential, Rural and Other Area	Ecological Sensitive Area (Notified by Central Government)
01.	Sulphur Dioxide (SO ₂), µg/m ³	Annual*	50	20
		24 Hours**	80	80
02.	Oxides of Nitrogen (NO _x), µg/m ³	Annual*	40	30
		24 Hours**	80	80
03.	Particulate Matter (PM ₁₀), µg/m ³	Annual*	60	60
		24 Hours**	100	100
04.	Particulate Matter (PM _{2.5}), µg/m ³	Annual*	40	40
		24 Hours**	60	60
05.	Carbon Monoxide (CO), mg/m ³	08 Hours*	02	02
		01 Hours**	04	04

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

NOTE: Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further.

Lab : Survey No. 83/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.

Tel : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

TEST REPORT

ISSUED TO: M/s. PLUTONIUM BUSINESS SOLUTION PVT. LTD.

Plot No.7 & 7A ,C Zone ,Turbhe ,MIDC ,Thane Belapur Road,
Near Turbhe Railway Station, Navi Mumbai-400 703.

REPORT NO. : UT/ELS/REPORT/C-125/05-2022

ISSUE DATE : 23/05/2022

YOUR REF. : PBSPL/MoEFCC/2020-21

REF. DATE : 06/02/2020

SAMPLE PARTICULARS

Sampling Plan Ref. No. : C-06/04-2022

Date of Monitoring : 02/04/2022 to 03/04/2022

NOISE LEVEL QUALITY MONITORING

Sample Lab Code : UT/ELS/C-033/04-2022

Survey Done By : ULTRA TECH

Sr. No.	Location	Noise Level Reading in dB(A)			
		Time (Hrs)	Day dB(A)	Time (Hrs)	Night dB(A)
01.	Near Main Gate	17:00 to 17:05	54.3	00:00 to 00:05	44.3
02.	Near Site Office	17:10 to 17:15	53.8	00:10 to 00:15	43.3

Opinions / Interpretations: *The Noise Pollution (Regulation And Control) Rules, 2000: Is Provided as Annexure II for Your Reference.
(Turnover to find Annexure).*

Note:
1. Monitoring area coming under Residential & Commercial Area.
2. Noise level monitored is an average for period as stated above, the permissible sound pressure level is to be determined with respect to the total time a workman is being exposed (continuously or a number of short term exposures per day) in Hrs.

Sampling Equipment Details	Instrument Used	Make & Model	Calibration Status
	Sound Level Meter	Make - Casella; Model - CEL-633C; Sr. no. 2382959	Valid up to - 10/12/2022

Note:
1. This test report refers only to the monitoring conducted.
2. This test report may not be reproduced in part, without the permission of this laboratory.
3. Any correction invalidates this test report.

- END OF REPORT -



ANNEXURE-II

THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000

(The Principal Rules were published in the Gazette of India, vide S.O. 123(E), dated 14.2.2000 and subsequently amended vide S.O. 1046(E), dated 22.11.2000, S.O. 1088(E), dated 11.10.2002, S.O. 1569 (E), dated 19.09.2006 and S.O. 50 (E) dated 11.01.2010 under the Environment (Protection) Act, 1986.)

• SCHEDULE

(See rule 3(1) and 4(1))

Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

- Note:
1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
 2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
 3. Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
 4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is energy mean of the noise level over a specified period.

• CONSTRUCTION ACTIVITIES

The maximum noise levels near the construction site should be limited to 75 dB(A) Leq(5 min.) in industrial areas and to 65 dB(A) Leq(5 min.) in other areas.

• THE PERMISSIBLE LEVELS FOR NOISE EXPOSURE FOR WORK ZONE

(The Model Rules Of The Factories Act, 1948)

Peak sound pressure level in dB	Permitted number of impulses or impact/day
140	100
135	315
130	1000
125	3160
120	10000

- Notes:
1. No exposure in excess of 140 dB peak sound pressure level is permitted.
 2. For any peak sound pressure level falling in between any figure and the next higher or lower figure as indicated in column 1, the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis.

Total time exposure (continuous or a number of short term exposures per day) in Hrs	Sound Pressure Level in dB(A)
8	90
4	93
2	96
1	99
1/2	102
1/8	108
1/16	111
1/32 (2 minutes) or less	114

- Notes:
1. No exposure in excess of 115 dB(A) is to be permitted.
 2. For any period of exposure falling in between any figure and the next higher or lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extrapolation on a proportionate basis.

TEST REPORT

ISSUED TO: M/s. PLUTONIUM BUSINESS SOLUTION PVT. LTD. **REPORT NO. :** UT/ELS/REPORT/C-126/05-2022
Plot No.7 & 7A ,C Zone ,Turbhe ,MIDC ,Thane Belapur Road, **ISSUE DATE :** 23/05/2022
Near Turbhe Railway Station, Navi Mumbai-400 703. **YOUR REF. :** PBSPL/MoEFCC/2020-21
REF. DATE : 06/02/2020

SAMPLE PARTICULARS : **SOIL QUALITY MONITORING**
Sampling Plan Ref. No. : C-06/04-2022 **Sample Type :** Surface Soil (at 15cm depth)
Sample Registration Date : 04/04/2022 **Sample Location :** Near Site Office
Date & Time of Sampling : 03/04/2022 at 11:00 Hrs.
Analysis Starting Date : 04/04/2022 **Sample Quantity :** 1kg in Plastic Bag Contained in Zip
Analysis Completion Date : 11/04/2022 **& Packing Details :** Lock Bag
Sample Collected By : ULTRA-TECH
Sample Lab Code : UT/ELS/C-034/04-2022

Sr. No.	Test Parameter	Test Methods	Test Result	Unit
1.	Colour	-	Brown	-
2.	Moisture Content	IS:2720 (Part 2) : 1973	4.4	%
3.	Bulk Density	UT/LQMS/SOP/S03	1216	kg/m ³
4.	Organic Matter	IS:2720 (Part 22) : 1972	1.0	%
5.	Total Organic Carbon	IS:2720 (Part 22) : 1972	0.6	%
6.	pH	IS:2720 (Part 26) : 1987	8.3	-
7.	Conductivity(1:2soil:Water Extract)	IS:14767- 2000	0.812	mS/cm
8.	Sodium as Na (Water Extractable)	UT/LQMS/SOP/S19	99	mg/kg
9.	Magnesium as Mg (Water Extractable)	UT/LQMS/SOP/S22	66	mg/kg
10.	Chlorides as Cl (Water Extractable)	UT/LQMS/SOP/S23	186	mg/kg
11.	Salphate as SO ₄ ²⁻ (Water Extractable)	UT/LQMS/SOP/S24	172	mg/kg
12.	Sodium Adsorption Ratio	UT/LQMS/SOP/S26	1.0	(meq/kg) ^{1/2}
13.	Cation Exchange Capacity	UT/LQMS/SOP/S18	28.1	meq/100g
14.	Water Holding Capacity	UT/LQMS/SOP/S12	53.1	%
15.	Available Boron as B (Available)	UT/LQMS/SOP/S27	0.8	mg/kg
16.	Phosphorous as P ₂ O ₅ (Available)	UT/LQMS/SOP/S28	89	kg/ha
17.	Potassium as K ₂ O (Available)	UT/LQMS/SOP/S29	237	kg/ha
18.	Nitrogen as N (Available)	UT/LQMS/SOP/S30	201	Kg/ha
19.	Iron as Fe	UT/LQMS/SOP/S35 & S37	56214	mg/kg
20.	Zinc as Zn	UT/LQMS/SOP/S35 & S37	99	mg/kg

Opinions / Interpretations: NIL

Note:
 1. This test report refers only to the sample tested.
 2. This test report may not be reproduced in part, without the permission of this laboratory.
 3. Any correction invalidates this test report.

- END OF REPORT -





[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Maharashtra

Date : 27/09/2021
Time : 13:50:32 PM
Validity upto : 26/09/2022



Certificate SL No. : MH04300260001736
Registration No. : MH46BF0564
Date of Registration : 25/Apr/2018
Month & Year of Manufacturing : January-2018

Fuel : DIESEL
PUC Code : MH0430026
GSTIN :
Fees : Rs.110.0(GST as applicable)
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	2	3	4	5
Idling Emissions	Carbon Monoxide (CO)	percentage (%)		
	Hydrocarbon, (THC/HC)	ppm		
High idling emissions	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	1.62	0.45

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://vahan.parivahan.gov.in>

60 mm x 20 mm



STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

Environment department,
Room No. 217, 2nd floor,
Mantralaya, Annexe,
Mumbai- 400 032.
Date: January 22, 2020

To,
M/s. Plutonium Business solutions Pvt. Ltd. (Mr. Ratilal Patodia -Director)
at Plot No. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane Belapur Road, Turbhe, Navi Mumbai.

Subject: Environment Clearance for Environment Clearance for IT Park

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification - 2006, by the State Level Expert Appraisal Committee-II, Maharashtra in its 116th meeting and recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 184th meetings.


2. It is noted that the proposal is considered by SEAC-II under screening category 8 (a) B2 as per EIA Notification 2006.

Brief Information of the project submitted by you is as below :-

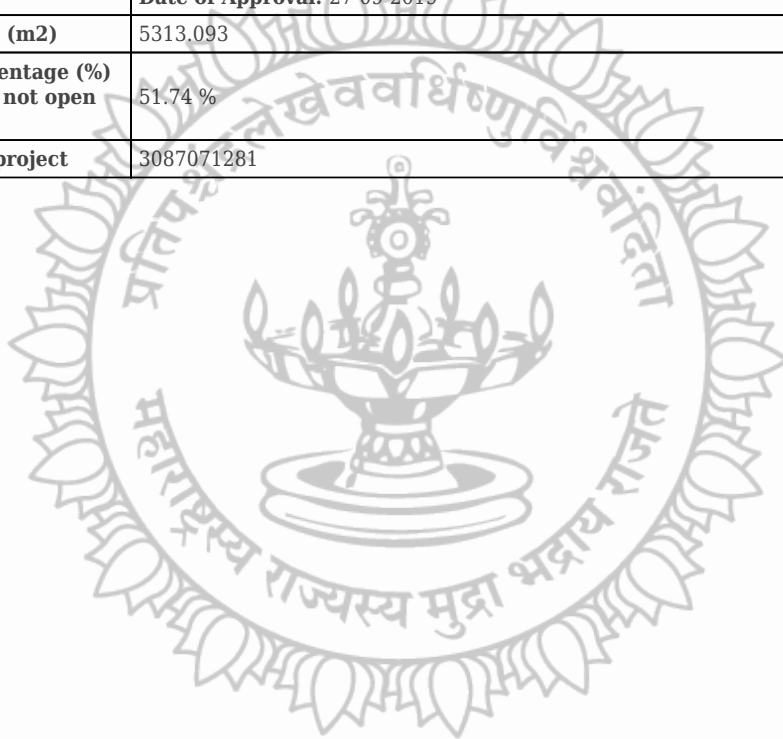
1.Name of Project	"Plutonium Business Park" at Turbhe, Navi Mumbai.
2.Type of institution	Private
3.Name of Project Proponent	M/s. Plutonium Business solutions Pvt. Ltd. (Mr. Ratilal Patodia -Director)
4.Name of Consultant	M/s. ULTRA TECH
5.Type of project	IT Park
6.New project/expansion in existing project/modernization/diversification in existing project	New Project
7.If expansion/diversification, whether environmental clearance has been obtained for existing project	Not Applicable
8.Location of the project	Plot No. 7 & 7A adjoining Ikea, Near Turbhe Railway Station, Thane Belapur Road, Turbhe, Navi Mumbai.
9.Taluka	Navi Mumbai
10.Village	Turbhe
Correspondence Name:	M/s. Plutonium Business Solutions Pvt. Ltd. (Mr. Ratilal Patodia -Director)
Room Number:	--
Floor:	Plot No.7
Building Name:	--
Road/Street Name:	Turbhe-Thane Belapur Road
Locality:	Belapur Road
City:	Navi Mumbai
11.Whether in Corporation / Municipal / other area	Maharashtra Industrial Development Corporation (MIDC)
12.IOD/IOA/Concession/Plan Approval Number	Application No.: SWC/14/521/20190408/625263 Dated 27.09.2019 IOD/IOA/Concession/Plan Approval Number: Application No.: SWC/14/521/20190408/625263 Dated 27.09.2019 Approved Built-up Area:

SEIAA Meeting No: 184 Meeting Date: December 30, 2019 (
SEIAA-STATEMENT-000003335)
SEIAA-MINUTES-000002876
SEIAA-EC-000002317

Page 1 of 15


Shri. Anil Diggikar (Member Secretary
SEIAA)

13.Note on the initiated work (If applicable)	Not Applicable
14.LOI / NOC / IOD from MHADA/ Other approvals (If applicable)	Not Applicable
15.Total Plot Area (sq. m.)	10268.00 Sq. mt.
16.Deductions	--
17.Net Plot area	10,268.00 Sq. mt.
18 (a).Proposed Built-up Area (FSI & Non-FSI)	FSI area (sq. m.): 30,785.60 Sq. mt.
	Non FSI area (sq. m.): 36,908.05 Sq. mt.
	Total BUA area (sq. m.): 67693.65
18 (b).Approved Built up area as per DCR	Approved FSI area (sq. m.): --
	Approved Non FSI area (sq. m.): --
	Date of Approval: 27-09-2019
19.Total ground coverage (m2)	5313.093
20.Ground-coverage Percentage (%) (Note: Percentage of plot not open to sky)	51.74 %
21.Estimated cost of the project	3087071281



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22. Production Details

Serial Number	Product	Existing (MT/M)	Proposed (MT/M)	Total (MT/M)
1	Not applicable	Not applicable	Not applicable	Not applicable

23. Total Water Requirement

Dry season:	Source of water	M.I.D.C.
	Fresh water (CMD):	74 KLD
	Recycled water - Flushing (CMD):	68 KLD
	Recycled water - Gardening (CMD):	15 KLD
	Swimming pool make up (Cum):	NA
	Total Water Requirement (CMD) :	157 KLD
	Fire fighting - Underground water tank(CMD):	2 tanks with combine capacity of 200 KL
	Fire fighting - Overhead water tank(CMD):	30 KL
	Excess treated water	31 KLD
Wet season:	Source of water	M.I.D.C./ Partly by RWH in monsoon season
	Fresh water (CMD):	74 KLD (53 from MIDC + 21 KLD from RWH)
	Recycled water - Flushing (CMD):	68 KLD
	Recycled water - Gardening (CMD):	NA
	Swimming pool make up (Cum):	NA
	Total Water Requirement (CMD) :	142 KLD
	Fire fighting - Underground water tank(CMD):	2 tanks with combine capacity of 200 KL
	Fire fighting - Overhead water tank(CMD):	30 KL
	Excess treated water	46 KLD
Details of Swimming pool (If any)	NA	

24.Details of Total water consumed

Particulars	Consumption (CMD)			Loss (CMD)			Effluent (CMD)		
	Existing	Proposed	Total	Existing	Proposed	Total	Existing	Proposed	Total
Domestic	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

25.Rain Water Harvesting (RWH)	Level of the Ground water table:	Details shall be submitted
	Size and no of RWH tank(s) and Quantity:	RWH Tank of Capacity 70 KL
	Location of the RWH tank(s):	Underground
	Quantity of recharge pits:	Nil
	Size of recharge pits :	Not applicable
	Budgetary allocation (Capital cost) :	Rs. 8.00 Lacs
	Budgetary allocation (O & M cost) :	Rs. 0.31 Lacs/annum
	Details of UGT tanks if any :	Location of UG tanks: Underground

26.Storm water drainage	Natural water drainage pattern:	The storm water collected through the storm water drains of adequate capacity will be discharged in to the municipal SWD.
	Quantity of storm water:	0.23 m3/sec
	Size of SWD:	450 mm X 600 mm channel with slope 1:300

27.Sewage and Waste water	Sewage generation in KLD:	127 KLD
	STP technology:	MBBR (Moving Bed Bio Reactor)
	Capacity of STP (CMD):	STP of Capacity 140 KL
	Location & area of the STP:	Location: Ground; Area: 113 Sq. mt.
	Budgetary allocation (Capital cost):	Rs. 52.95 Lacs
	Budgetary allocation (O & M cost):	Rs. 12.59 Lacs/annum

28.Solid waste Management

Waste generation in the Pre Construction and Construction phase:	Waste generation:	Excavation material shall be disposed to Authorized landfill site.
	Disposal of the construction waste debris:	Construction waste material shall be partly reused/ recycled and remaining shall be disposed to the authorized site.
Waste generation in the operation Phase:	Dry waste:	261 Kg/day
	Wet waste:	174 Kg/day
	Hazardous waste:	Not applicable
	Biomedical waste (If applicable):	Not applicable
	STP Sludge (Dry sludge):	19 kg/day
	Others if any:	E-waste: 222 kg/month
Mode of Disposal of waste:	Dry waste:	To Authorized recyclers
	Wet waste:	Treatment in Organic Waste Converter
	Hazardous waste:	Not applicable
	Biomedical waste (If applicable):	Not applicable
	STP Sludge (Dry sludge):	Use as manure
	Others if any:	E- Waste: To Authorized recyclers
Area requirement:	Location(s):	Ground
	Area for the storage of waste & other material:	13 Sq. mt.
	Area for machinery:	12 Sq. mt.
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	Rs. 9.00 Lacs
	O & M cost:	Rs. 0.81 Lacs/annum

Government of
Maharashtra

29. Effluent Characteristics

Serial Number	Parameters	Unit	Inlet Effluent Characteristics	Outlet Effluent Characteristics	Effluent discharge standards (MPCB)
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Amount of effluent generation (CMD):		Not applicable			
Capacity of the ETP:		Not applicable			
Amount of treated effluent recycled :		Not applicable			
Amount of water send to the CETP:		Not applicable			
Membership of CETP (if require):		Not applicable			
Note on ETP technology to be used		Not applicable			
Disposal of the ETP sludge		Not applicable			



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30.Hazardous Waste Details							
Serial Number	Description	Cat	UOM	Existing	Proposed	Total	Method of Disposal
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

31.Stacks emission Details						
Serial Number	Section & units	Fuel Used with Quantity	Stack No.	Height from ground level (m)	Internal diameter (m)	Temp. of Exhaust Gases
1	DG Set	--	--	--	--	--

32.Details of Fuel to be used				
Serial Number	Type of Fuel	Existing	Proposed	Total
1	HSD	Not applicable	--	--
33.Source of Fuel		--		
34.Mode of Transportation of fuel to site		--		

35.Energy

Power requirement:	Source of power supply :	MSEDCL
	During Construction Phase: (Demand Load)	150 KW
	DG set as Power back-up during construction phase	As per requirement
	During Operation phase (Connected load):	4158 KW
	During Operation phase (Demand load):	2495 KW
	Transformer:	4 nos. of 1000 kVA
	DG set as Power back-up during operation phase:	1 no. of 750 kVA and 2 nos. of 1000 kVA each
	Fuel used:	HSD
	Details of high tension line passing through the plot if any:	No

Energy saving by non-conventional method:

- Provision of LED lights
- Use of VFDs
- Energy efficient system
- Use of Solar power for external lighting, lift lobby passage and staircase lighting, parking lights

36.Detail calculations & % of saving:

Serial Number	Energy Conservation Measures	Saving %
1	Overall energy saving	25 %
2		

37.Details of pollution control Systems

Source	Existing pollution control system	Proposed to be installed
Sewage	--	STP
Solid waste	--	Organic Waste Converter
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	Rs. 26.00 Lacs
	O & M cost:	Rs. 1.00 Lac/annum

38.Environmental Management plan Budgetary Allocation

a) Construction phase (with Break-up):

Serial Number	Attributes	Parameter	Total Cost per annum (Rs. In Lacs)
1	Air Environment	Cost for Dust Suppression	0.72
2	Air Environment	Air and Noise Monitoring: On site Sensors	2.50
3	Air Environment	Air and Noise Monitoring: By outside MoEF & CC Approved Laboratory	0.22
4	Water Environment	Drinking water analysis	0.03
5	Land Environment	Site Sanitation	1.00
6	Health & Hygiene	Disinfection at site - Pest Control	1.20
7	Health & Hygiene	Health Check-up of workers	4.50

b) Operation Phase (with Break-up):

Serial Number	Component	Description	Capital cost Rs. In Lacs	Operational and Maintenance cost (Rs. in Lacs/yr)
1	AIR & NOISE ENVIRONMENT - Cost for Ambient Air quality & Noise Monitoring:On site sensors	On site sensors	No set up cost is involved as already considered Construction Phase	0.50

2	AIR & NOISE ENVIRONMENT - Cost for Ambient Air quality & Noise Monitoring: On site sensors	By outside MoEF & CC Approved Laboratory	*No set up cost is involved	0.22
3	AIR & NOISE ENVIRONMENT - Cost for DG Stack Exhaust Monitoring	2 nos. of stacks	*No set up cost is involved	0.10
4	AIR & NOISE ENVIRONMENT - Cost for Plantation	3259.33 Sq.mt. of Green area	17.93	1.20
5	WATER ENVIRONMENT - Cost for Waste water treatment	Cost for sewage Treatment Plant	34.95	11.59
6	WATER ENVIRONMENT - Cost for water & waste water Monitoring	On site sensors	18.00	1.00
7	WATER ENVIRONMENT - Cost for water & waste water Monitoring	By outside MoEF & CC Approved Laboratory	*No set up cost is involved	0.03
8	WATER ENVIRONMENT - Water Conservation (Cost for Rain Water Harvesting System & Monitoring)	Cost for RWH Tank	5.00	0.25
9	WATER ENVIRONMENT - Water Conservation (Cost for Rain Water Harvesting System & Monitoring)	Cost for treatment unit for rain water tanks	3.00	0.01
10	WATER ENVIRONMENT - Water Conservation (Cost for Rain Water Harvesting System & Monitoring)	By outside MoEF & CC Approved Laboratory	*No set up cost is involved	0.05
11	LAND ENVIRONMENT - (Cost for Solid Waste Management)	Cost for Treatment of biodegradable garbage in OWC	9.00	0.73
12	LAND ENVIRONMENT - (Cost for Solid Waste Management)	Cost for Manure Monitoring	*No set up cost is involved	0.08
13	ENERGY CONSERVATION - Use of renewable energy	Solar system	26.00	1.00
14	Cost towards disaster management	--	723.00	37.46

39.Storage of chemicals (inflammable/explosive/hazardous/toxic substances)

Description	Status	Location	Storage Capacity in MT	Maximum Quantity of Storage at any point of time in MT	Consumption / Month in MT	Source of Supply	Means of transportation
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

40.Any Other Information

No Information Available



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	CRZ/ RRZ clearance obtain, if any:	Not Applicable
	Distance from Protected Areas / Critically Polluted areas / Eco-sensitive areas/ inter-State boundaries	Not Applicable
	Category as per schedule of EIA Notification sheet	8 (a) B2
	Court cases pending if any	Not Applicable
	Other Relevant Informations	--
	Have you previously submitted Application online on MOEF Website.	No
	Date of online submission	-

3. The proposal has been considered by SEIAA in its 184th meeting & decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:

Specific Conditions:

I	PP to explore the possibility that demolition waste and concrete debris can be recycled for making paver blocks and use these to the extent possible in the project itself.
II	As shown during the presentation, PP to upload the Layout showing location of services including environmental infrastructure on the website immediately. PP to produce the same to SEIAA.
III	PP to ensure that Derbies management should be as per Construction and Demolition Waste Management Rules 2016. Also the Derbies management plan should approved by local planning authority.
IV	PP to ensure that, E-waste management should be as per E-waste management rule, 2016
V	PP to provide adequate (1:5) electric charging points/ stations in parking area.
VI	PP to upload CFO NoC. Also PP to provide Fire hydrants along with necessary equipment on top of the podium and separate stair case which go direct to the podium for fire man.
VII	PP to explore the possibility to increase the solar energy saving from 2 % to 3%.
VIII	PP to ensure ECBC norms are complied with.
IX	PP to obtain the NoC from Petroleum and Explosives Safety Organisation (PESO) for DG set, if required.
X	The PP to get NOC from competent authority with reference to Thane creek flamingo sanctuary if the project site falls within 10 Km radius from the said sanctuary boundary. The planning authority to ensure fulfilment of this condition before granting CC.
XI	PP to submit CER (as per green field) prescribed by MoEF&CC circular dated 1.5.2018 relevant to the area and people around the project. The specific activities to be undertaken under CER to be carried out in consultation with Municipal Corporation or collector or Environment Department.
XII	PP to ensure that CER plan gets approved from Municipal Commissioner/District Collector.
XIII	PP Shall comply with Standard EC conditions mentioned in the Office Memorandum issued by MoEF& CC vide F.No.22-34/2018-IA.III dt.04.01.2019.
XIV	SEIAA decided to grant EC for -FSI:8357.28 m2, Non-FSI: 27727.358 m2 and Total BUA: 36084.638 m2 (Plan Approval no-EE/DN.II/MHP/SPA/E08456, Date-10.02.2019)

General Conditions:

I	E-waste shall bedisposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.
II	The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.

III	This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life as if applicable & this environment clearance does not necessarily implies that Forestry & Wild life clearance granted to the project which will be considered separately on merit.
IV	PP has to abide by the conditions stipulated by SEAC& SEIAA.
V	The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.
VI	If applicable Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.
VII	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
VIII	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
IX	The solid waste generated should be properly collected and segregated. dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
X	Disposal of muck during construction phase should 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.
XI	Arrangement shall be made that waste water and storm water do not get mixed.
XII	All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
XIII	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
XIV	Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
XV	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
XVI	Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.
XVII	Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.
XVIII	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.
XIX	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.
XX	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 and should be operated only during non-peak hours.
XXI	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.
XXII	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. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).
XXIII	Ready mixed concrete must be used in building construction.
XXIV	Storm water control and its re-use as per CGWB and BIS standards for various applications.
XXV	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
XXVI	The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.

XXVII	The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/refused to the maximum extent possible. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treatment of 100% gray water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP.
XXVIII	Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.
XXIX	Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.
XXX	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
XXXI	Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
XXXII	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
XXXIII	Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use 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. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.
XXXIV	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase 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 low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.
XXXV	Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
XXXVI	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
XXXVII	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspiration for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.
XXXVIII	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.
XXXIX	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.
XL	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.
XLI	Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.
XLII	Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.
XLIII	Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.
XLIV	Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.
XLV	A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.
XLVI	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.
XLVII	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.

XLVIII	Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department.
XLIX	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://ec.maharashtra.gov.in .
L	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1st June & 1st December of each calendar year.
LI	A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
LII	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sector parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
LIII	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
LIV	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

Government of Maharashtra

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.

5. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.

6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.

7. Validity of Environment Clearance: The environmental clearance accorded shall be valid as per EIA Notification, 2006, and amendments by MoEF&CC Notification dated 29th April, 2015.

8. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

9. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

10. Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D- Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.


Shri. Anil Diggikar (Member Secretary SEIAA)

Copy to:

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2. SHRI UMAKANT DANGAT, CHAIRMAN-SEAC-I
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