

**THANE MUNICIPAL CORPORATION
FIRE BRIGADE THANE**

No. TMC/CFO/M/HR/209/246

Date: 17 / 11 /2023

SUB.:- NOC stipulating fire protection & fire-fighting requirements for proposed development of **High-Rise Residential Tower C**, Plot Bearing Survey Nos. 172/1, 175, 176/1, 176/5, 176/6, 176/7, 283/7/C, 283/8/C, At Sector 4, Village - Majiwade, District - Thane (W), For Oberoi Realty Limited. (Plot A)

REF.: 1) V.P. NO.: S04/0183/20 (PLOT -A)

2) Letter from Architect Rajesh Dighe of M/s. TUMC vide Dt. 06/10/2023

3) Date of Inspection by STO Mr. J. L. Shelke on date 12/10/2023

A.D.T.P. (THANE)

This is the proposal to develop on plot bearing Survey Nos. 172/1, 175, 176/1, 176/5, 176/6, 176/7, 283/7/C, 283/8/C, At Sector 4, Village - Majiwade, District - Thane (W). For Highrise Residential Tower C, having Basement + Lower Ground+ Ground + 1st to 5th Parking floors + 6th to 67th Upper Residential floors with total height of 208.10 Mt. from general Ground level up to terrace level.

THE FLOOR-WISE USER OF BUILDING – TOWER C

Floors	Users
Basement	Raft Foundation
Lower Ground	Parking Area
Ground Floor	Parking Area
1 st Floor	Drop off for entrance lobby and Parking Area
2 nd Floor	Electric Meter panel Room , MEP Room and Parking Area
3 rd Floor	Society office ,Driver's Room , 2 Nos of Servant toilets and Parking Area
4 th Floor	Parking Area
5 th Floor	Parking Area
6 th Floor	06 nos. of Residential Duplex flats (lower floor) with private garden, 2 Residential flats
7 th Floor	06 nos. of Residential Duplex flats (upper floor), 2 Residential flats
9 th to 12 th , 14 th to 17 th , 19 th to 22 nd , 24 th to 27 th , 29 th to 32 nd , 34 th to 37 th , 39 th to 42 nd , 44 th to 47 th , 49 th to 52 nd , 54 th to 57 th 59 th to 62 nd , 64 th & 65 th floor	08 Nos. of Residential flats on each floor
8 th , 13 th , 18 th , 23 rd , 28 th , 33 rd , 38 th , 43 rd , 48 th , 53 rd , 58 th & 63 rd floor	07 Nos. of Residential flats + 1 Refuge area on each level
66 th floor	06 Nos. of Residential duplex flats (lower floor), 02 Residential flats
67 th floor	06 Nos. of Residential duplex flats (upper duplex floor) , 2 Residential flats

Tower C

Bldg.	Staircase description	Width of staircase	Nos. of staircase
TOWER C	Staircases ST1 Leading Basement To 67 th Floor Level	1.50 m.	01 Nos.
TOWER C	Staircases ST2 Leading Basement To Terrace Level	1.50 m.	01 Nos.
TOWER C	Common staircase leading from leading from Lower Ground floor to 5 th Parking floor	1.50 M.	01 No.



	Lifts Type	Profile	Nos. of lifts
TOWER C	Passenger Lift	Leading from 1 st Podium to last 67 th floor	06 Nos.
	Passenger lift	Leading from Lower Ground Floor To 4 th Floor	01 No.
	Fire lift-07	Leading from 1 st Podium to last 67 th floor	07 No.
	Fireman's LIFT- 08	Leading from 1 st Podium to last 67 th floor	08 No.

The proposed staircases in the buildings on this plot having flight width of 1.50 M. shown in plans are enclosed type and are externally located & adequately ventilated to outside air above ground level. One of the lifts from each lift bank of each building will be converted into Fire lift. The lift lobby & common corridor at each floor level is directly ventilated to outside air as shown on plan.

REFUGE AREA:

Sr. No.	Building No.	Floor	Provided Area (In Sq. M.)	At the height from Ground Level (In M.)
1	C	8 th	69.87	25.10 MT.
		13 th	69.87	40.35 MT.
		18 th	69.87	55.60 MT.
		23 rd	69.87	70.85 MT.
		28 th	69.87	86.10 MT.
		33 rd	69.87	101.35 MT.
		38 th	69.87	116.60 MT.
		43 rd	69.87	131.85 MT.
		48 th	69.87	147.10 MT.
		53 rd	69.87	162.35 MT.
		58 th	69.87	177.60 MT.
		63 rd	69.87	192.85 MT.

In addition to that the terrace of the building will be treated as refuge area. Whether to calculate excess Refuge area in FSI or not shall be decided by A.D.T.P.

The A.D.T.P. is requested to scrutinize the plans & verify civil work and all other requirements pertaining to civil Engineering side including open spaces, R.G.s, corridors, staircases, amendments, height, refuge area in sq.mtr. & floor occupancy of the building. If any changes in the plans other than mentioned above, then A.D.T.P. shall refer the proposal to this department for revised NOC till then further process shall not be permitted.

THE OPEN SPACES:

The plot is approachable by the 40.00 M. wide Pokhran Road No2 from the South side & 40.00 M. D.P Road from the North side.

Building	North	South	East	West
TOWER C	More Than 6.00 m	More Than 12.00 m	More Than 12.00 m	More Than 12.00 m

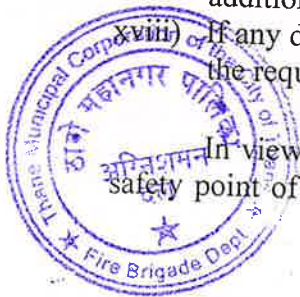
DETAILS OF RAMPS

No. of ramps	Width	Details
01	7.50 m. wide 2-way ramp for car parking	Leading from Basement floor Parking level to 5 th floor parking level
01	9.0 m. wide ramp for Fire engine movement	Leading from 40 mtr Pokhran Road No 2 to top of the landscape level 6

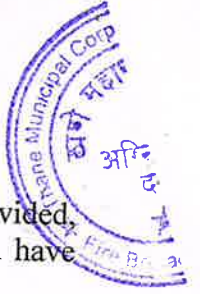
The proposal has been considered favorably in view of the fact that:

- i) There shall be no tree/car parking to be located in compulsory open spaces, no compound wall shall be constructed on all roadside and joint open spaces all around the building, if required.
- ii) The plot is approachable by the 40.00 M. wide Pokhran Road No2 from the South side & 40.00 M. D.P Road from the North side.
- iii) Architect has proposed operational area for firefighting on drop off levels & top of the podium.
- iv) The lift lobbies and staircases shall be naturally ventilated or provided with pressurized system as per NBC.
- v) Automatic sprinkler system shall be provided in entire lift lobby, common corridor of each floor level and each habitable room of each flat of each floor level, entire parking floor in such a way to cover each car parking of the building as per the standards lay down by TAC or relevant IS specification.
- vi) Automatic Drencher system should be provided in periphery of each parking floor and should be connected to the main sprinkler pump as per the standard laid down in relevant I.S. Specifications.
- vii) Automatic smoke detection systems shall be provided in lift lobby & common corridor at each floor level, entire podium, electric meter room & each lift machine room, Control / BMS Room and in electric shaft at every floor level with response indicator.
- viii) For residential occupancies above 120 M. in height the sprinkler system shall be provided as per clause E-6 of NBC 2016 part IV.
- ix) As per Annex E, clause 6 of NBC 2016, the building height is more than 150 Mt., Min. 1,00,000 Ltr. Fire water static storage tank with suitable pumps as per table No. 7 of NBC 2016 shall be provided at terrace level.
- x) Refuge area shall be provided as per 9.29.6 of UDCPR.
- xi) Fireman's lift / Fire lift shall be provided as per 9.27 of UDCPR & 7.1, 7.2 of Section 5, subsection 5A of Part VIII NBC 2016.
- xii) The staircases & lift lobby shall be provided with naturally ventilated or pressurized system as per NBC 2016.
- xiii) The fire resistances rating for staircase F.R.D., Lift lobby/protected lobby/door opening from lift lobby and common passages up to flats & the lift doors as per N.B.C provisions.
- xiv) Provision of pumps as per table no. 7 & Maharashtra Fire Prevention & Life Safety Measures (Amendment) Act, 2023 with relevant notes & Provision of pump house as per 5.1.2.2 of Part IV NBC 2016.
- xv) Fire and Life Safety Audit shall be carried out by the owner, or where the owner is not traceable, the occupier of a building as per section 45A of the Maharashtra fire Prevention and Life Safety measures (Amendment) Act (2023).
- xvi) For the building as specified under section 45, the owner, or where the owner is not traceable, the occupier of a building, shall ensure that the firefighting systems as recommended in the relevant Fire Safety Approval, is provided with automated continuous monitoring system as may be prescribed for ensuring that the firefighting systems are in good repair and efficient working condition and these shall be certified by the Licensed Agency in the prescribed form and the manner and shall submit the same to the concerned authority in the manner as may be prescribed."
- xvii) During construction stage and before the final occupation party agreed to comply additional requirement stipulated by Thane Fire Brigade Officer.
- xviii) If any discrepancies observed during construction Thane Fire Brigade officer may change the requirement as the rules.

In view of above, as far as this department is concerned there is no objection from Fire safety point of view for the construction of Highrise Residential Tower C, having Basement +



Lower Ground+ Ground + 1st to 5th Parking floors + 6th to 67th Upper Residential floors with total height of 208.10 Mt from general Ground level up to terrace level.



1. ACCESS:

- i) All access & fire tender access should be free of encumbrances.
- ii) Courtyards shall be flushed with the road levels.
- iii) Entrance gate provided shall be of not less than 6.00 meters width each shall be provided at locations marked on the plan. Archways, if any over the entrance gates, shall have height clearance of not less than 6.00 mtrs.

2. PROTECTION TO STRUCTURAL STEEL:

- i) All the structural steel members i.e. columns, beams etc., shall be protected with the 02 hours fire resisting materials and methods as stipulated under IS 1942-1960 as application for residential building.
- ii) A certificate to that effect that the fire resistance protection has been provided as above shall be furnished from the Structural Engineer as the time of application for occupying the building.

3. OPEN SPACES :

- i) The provided open space on all the sides of the building shall be paved, suitable to bear the load of fire engines having 45 ton load with point load of 10 kgs./sq. cms.
- ii) All the open spaces shall be in one plane and mandatory open space shall be clear of any obstructions including trees.
- iii) The open spaces shall be kept free from obstruction at all times.

4. STAIRCASE:

- i) The flight width of staircases shall be maintained as shown in the enclosed plans.
- ii) The layout of staircases shall be enclosed type as shown in the plan throughout its height and shall be approached (gained) at each floor level at least two hours fire resistant self-closing door placed in the enclosed wall of the staircase.
- iii) Externally located staircases and lobbies adequately ventilated to outside air.
- iv) Permanent vent at the top equal to 5% of the cross-sectional area of the staircase shall be provided.
- v) Openable sashes or R.C.C. grills with a clear opening of not less than 0.5 sq.m. per landing on the external wall of the staircase shall be provided.
- vi) No combustible material shall be kept or stored in staircase / passage and shall be kept unobstructed all time.

5. TERRACE DOOR:

- i) The terrace door shall be provided in following manners:
- ii) The top portion of the door shall be provided with louvers.
- iii) The single latch lock shall be installed from the terrace side at a height of not more than one meter.
- iv) The glass front of 6-inch dia. with the breakable glass shall be provided just above the single latch lock, so as to open the latch in emergency.
- v) The door shall either be fitted with magnetic lock or shall be synchronized with fire detection and alarm system.

6. CORRIDOR / LIFT LOBBY:

- i) The corridor / lift lobby at each floor level shall be naturally ventilated as shown in plan.
- ii) The common corridor / lift lobby at each floor level shall always be kept free from obstructions.

- iii) Self-glowing/fluorescent exit signs in green color shall be provided showing the means of escape for entire building.
- iv) Portable lights / insta lights/ UPS lights shall be provided at strategic locations in the staircase and lift lobby.

7. **STAIRCASE AND CORRIDOR LIGHTINGS:**

- i) The staircase lighting shall be on separate circuits and shall be independently connected so that they could be operated by one switch installation on the ground floor control room easily accessible to firefighting staff at any time irrespective of the position of the individual control of the light points, if any.
- ii) Staircase and corridor lighting shall also be connected to alternate supplies.
- iii) Double-throw switches should be installed to ensure that lighting in the staircase does not get connected to two sources of supply simultaneously. A double-throw switch shall be installed in the service room to terminate the stand-by-supply.
- iv) Emergency lights shall be provided in the staircases/corridors.

8. **EXIT / ENTRANCE STAIRCASE:**

- i) The fire resistance rating for staircase F.R.D., Lift lobby / protected lobby & the lift doors as per N.B.C. provisions.

9. **ELECTRIC CABLE SHAFTS, ALL SHAFTS, SERVICES & METER ROOM:**

- i) Electric cable shafts shall be exclusively used for electric cables and should not open instaircase enclosure.
- ii) Inspection doors for shafts at each floor level shall have two hours fire resistance.
- iii) Electric shafts and each shaft shall be sealed at each floor level with noncombustible materials such as vermiculite concrete. No storage of any kind shall be done in the electric shaft.
- iv) Electric wiring shall be non-toxic, non-flammable, low smoke hazard having aluminium core/copper core / fire resistance low smoke (FRLS) for the entire building with provision of ELCB/MCB.
- v) Electric meter rooms shall be provided at the location shown in the plan. It shall be adequately ventilated & easily accessible.
- vi) Low and medium voltage wiring running in shaft and in false ceiling should run in separate conduits.
- Vii) Water mains, telephone lines, intercom lines, gas pipes or any other service line should not be laid in the duct for electrical cables; use of bus bar/solid rising mains instead of cables is preferred.
- viii) Preferably the bus bar system shall be installed from the ground to all upper floors main supply.
- ix) 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 fuse 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.
- Automatic smoke detector systems shall be provided in each electric shaft on each floor along with response indicator which shall be connected to main consol panel board on ground floor level and each floor level.

- xi) Master switches/BMS controlling essential service circuits shall be clearly labeled and shall be placed in the control room on the ground floor.

10. **FALSE CEILING (if provided):**

A false ceiling if provided in the building shall be of non-combustible material. Similarly, the suspenders of the false ceiling shall be of non-combustible materials.

11. **MATERIALS FOR INTERIOR DECORATION/FURNISHING**

The use of materials which are combustible in nature and may spread toxic fumes/gases should not be used for interior decoration/furnishing, etc.

12. **LIFTS:-**

A. **PASSENGER LIFT :-**

- i) Walls enclosing lift shaft shall have a fire resistance of not less than two hours.
- ii) Shafts shall have permanent vent of not less than 0.2 sq. mtrs in a clear area immediately under the machine room.
- iii) Fire lift shown in the plan shall be as per specifications laid down under the regulations, a toggle switch shall be provided to this lift for the use of Firemen.
- iv) The threshold of noncombustible material shall be provided at the entrance of each landing door.

B. **FIRE LIFT/ FIREMAN'S LIFT/ FIRE EVACUATION LIFT:-**


- i) Fireman's lift / Fire lift is provided as per 9.27 of UDCPR & Section 5, subsection 5A of Part VIII NBC 2016
- ii) Walls enclosing lift shafts shall have two hours of fire resistance.
- iii) The shafts shall have permanent vent equal 0.2 sq.m. clear area under the Lift Machine room.
- iv) To enable fire services personnel to reach the upper floor with the minimum delay, one fire lift shall be provided and shall be available for the exclusive use of the firemen in an emergency and the directly accessible to every dwelling of each floor.
- v) There shall be an alternate electric supply of an adequate capacity apart from the normal electric supply the building and the cables run in a route safe from fire, i.e., within the lift shaft. In case of failure normal electric supply, it shall automatically trip over to alternate supply.
- vi) The operation of the fire lift should be by a simple toggle, or two button switches situated in glass-fronted box adjacent to the lift at the entrance level. When the switch is on, landing call points will become inoperative, and the lift will be on car control only or on priority control device. When the switch is off, the lift will return to normal working. This lift can be used by the occupants in normal times.
- vii) The words 'Fire lift' shall be conspicuously displayed in florescent paint on the lift landing door at each floor level & Threshold of noncombustible material shall be provided at the entrance of each landing door.
- viii) Except Service Lifts, other lifts shall be converted into Fire Lifts conforming to relevant regulations.

BASEMENT :

- i) If mechanical ventilation is not provided then Basement shall be adequately ventilated. Vents with cross, sectional area (Aggregate) not less than 2.5 percent of the floor area spread evenly around the perimeter of the basement shall be provided in the form of grills or breakable stall boards lights or pavement lights or by way of shafts. Alternatively, a system of air inlets shall be provided at basement floor level and smoke outlets at basement ceiling level. Inlets and outlets may be terminated at ground level with stall boards or pavement lights as before but ducts to convey fresh air to the basement floor level shall have to be laid. Stall boards and pavement lights



should be in position easily accessible to the fire Brigade personal and rescue teams and clearly marked 'SMOKE OUTLET' or 'AIR INLET' with an indication of area served at or near the opening.

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- ii) The basement shall be used for designated purpose only as shown in the plan.
 - iii) The basement shall be provided with natural ventilations through the ventilators, open cut outs as shown in the plan.
 - iv) The staircase of the basement shall be of enclosed type and entry to basement areas shall be through two hours fire resistance self-closing door provided in the enclosed wall of the staircase.
 - v) The ducts of the mechanical ventilations system shall be of substantial metal gauge as per the relevant I.S. standard.
 - vi) The operating switches of the mechanical ventilation shall be located in the fire control room with appropriate zonal indications.
 - vii) The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is, 250°C for 120 min.
 - viii) The smoke ventilation of the basement car parking area 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 requirements 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 provision of the jet fans.
 2. Fans shall be fire rated, that is 250°C 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)] as per NBC 2016
 - ix) Exhaust duct shall be provided to draw out exhaust at ground level of the basement.
 - x) Suitable signages shall be provided in the basement showing exit direction, way to exits etc.
 - xi) Automatic sprinkler system shall be provided in entire basement to cover entire stack car parking area. These systems shall be installed as per the standard laid down by T.A.C. and relevant I.S. specifications
 - xii) Smoke check lobby, Staircases, common passages & escape routes of the entire building shall be painted with fire retardant paint.
 - xiii) One Dry Chemical Powder fire extinguisher ABC type of 06 kgs. capacity each shall be kept for every 100 sq. mtrs. area in each basement.
 - xiv) Staircase and lift lobby shall have illuminated by fluorescent self illuminated exits signs with IP 54 enclosure. Luminance of the signage's shall be such that they are visible from a distance of 12 to 16 meters.
 - xv) The staircase of the basement & the associated lift lobbies shall be pressurized in the event of fire. The pressure in this enclosed staircase and enclosed lift lobbies shall be maintained not less than 5m.m. W.G. & 2.5 mm W.G. for lift lobbies.
 - xvi) CO Detector with audible alarm system shall be provided to all the basement areas and the circuit of the same shall be given / connected to mechanical ventilation system to start automatically on actuation of CO detector and the other detectors provided in the basement.
 - xvii) Ventilation system shall start automatically on actuation of detector provided in the basement area.
 - xviii) Exhaust duct, mechanical ventilation duct should not pass through exit or entry.
 - xix) Basement area shall be divided in compartments as per NBC regulations.
 - xx) The ventilation and area of ventilation and compartmentation if required shall be checked by ADTP.
 - xxi) The interconnectivity between (exit / entrance) between two compartments shall be protected by drencher system /fire curtain

13. FIRE FIGHTING REQUIREMENTS:

A) UNDERGROUND WATER STORAGE TANKS:

An underground water storage tank of 2,00,000 liters capacity shall be provided as per the design specified in the rules with baffle wall and fire brigade collecting breaching. The



layout of which shall be approved by the Water department prior to erection. The tanks shall be connected to a sprinkler system.

B) OVERHEAD WATER STORAGE TANK:

As per Annex E, clause 6 of NBC 2016, the building height is more than 150 Mt., Min. 1,00,000 Ltr. Fire water static storage tank with suitable pumps as per table No. 7 of NBC 2016 shall be provided at the terrace level. The tank shall be connected to the wet riser through a booster pump through a non-return valve and gate valve.

C) WET RISER CUM DOWN COMER:

Wet riser cum down comer of internal dia. of 15 cms. of G.I. 'C' Class pipe shall be provided in the duct adjoining staircase with double hydrant outlet & hose reel at each floor in such a way as not to reduce the width of the common corridor. Pressure reducing discs or orifices shall be provided at lower level, so as not to exceed the pressure of 5.5 kgs. per sq. cms. The wet risers shall be extended from basement up to terrace level. A wet riser outlet and hose reel at a distance of 100 ft. shall be provided on the periphery of all R.G. / parking floors. The wet riser extended from basement to terrace/top floor level.

D) FIRE SERVICE INLET:

- i) A fire service inlet on the external face of the building near the tank directly fronting the courtyards shall be provided to connect the mobile pump of the fire service to (a) The wet riser (b) Sprinkler system.
- ii) Breeching connection inlet shall be provided to refill U.G. tank.
- iii) Operating switches of fire pumps shall be also provided in glass fronted boxes at fire pump room.

E) AUTOMATIC SPRINKLERS SYSTEM :

Automatic sprinkler system shall be provided in entire lift lobby, common corridor of each floor level and each habitable room of each flat of each floor level of each building; entire Commercial, entire Fitness center, entire basement, entire podium, surface car parking area in such a way to cover each car parking at entire podium & Basement floor. As per the standards laid down by TAC or relevant IS specification.

F) DRENCHER SYSTEM:-

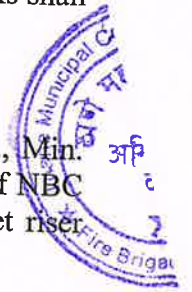
Automatic Drencher system should be provided at periphery on parking floor and should be connected to the main sprinkler pump as per the standard laid down in relevant I.S. Specifications.

G) AUTOMATIC SMOKE DETECTION SYSTEM:

Automatic smoke detection system shall be provided in lift lobby & common corridor at each floor level of each building, each electric meter room & each lift machine room, Control / BMS Room and in electric shaft at every floor level with response indicator; same should be connected to main console panel on ground floor level in BMS Room, as per IS specification.

H) FIRE PUMP, BOOSTER PUMP, SPRINKLER PUMP AND JOCKEY PUMP :

- i) Provision of pumps as per of Maharashtra Fire Prevention & Life Safety Measures (Amendment) Act, 2023 & Provision of pump house as per 5.1.2.2 of Part IV NBC 2016.
- ii) Wet-riser cum down comer shall be connected to a fire pump of capacity not less than 2850 liters/min. capable of giving a pressure of not less than 3.5 kgs/ sq. cms. at the top most hydrant.
- iii) Booster pump of 900 liters/min. capacity giving a pressure of not less than 3.5 kgs./ sq. cms. at the top most hydrant out let of the wet-riser shall be provided at the terrace level.
- iv) (Sprinkler pump of suitable capacity along with jockey pump shall be provided for automatic sprinkler system.
- v) Electric supply (normal) to these pumps shall be independent circuit.
- vi) Separate jockey pump shall be provided to Wet riser system to keep system pressurized.
- vii) Operating switches/BMS for booster pumps shall be also provided in glass fronted boxes



in lift lobbies at prominent place.

viii) Operating switches/BMS of fire pumps shall be also provided in glass fronted boxes at fire pump room.

ix) All above pumps should be surface mounted or vertical turbine type (submersible pump not permitted) pump along with adequate size of pump room

D) STAND BY PUMP:

Set of standing pump shall be provided as per Maharashtra Fire Prevention & Life Safety Measures (Amendment) Act, 2023.

J) EXTERNAL HYDRANTS.

Courtyard hydrants shall be provided at distance of 30.00 mtrs each within the confines of the site of the wet riser-cum-down comer. Hose box with two non-percolating ISI marked hoses (length not less than 15 mtrs) & branch shall be equally distributed on ground floor, R.G. floor, as well as on each floor of each wing near the wet riser outlet.

K) ALTERNATE SOURCE OF POWER SUPPLY

An alternate source of LV/HV supply from a separate substation as well as from a diesel generator with Auto/Manual changeover over switch shall be provided for fire pumps, booster pump, sprinkler pump, jockey pump, staircase and corridor lighting circuits and fire alarm system, detection system, public address system, voice evacuation system etc. It shall be housed in separate cabin.

L) PORTABLE FIRE EXTINGUISHERS:

- i) One dry chemical powder type fire extinguisher of 09 kgs. capacity having I.S.I. certification mark and two sand buckets filled with dry cleaned sand shall be kept in each electric meter room as well as in each lift machine room.
- ii) One dry chemical powder type fire extinguisher of 06 kgs. capacity having I.S.I. certification mark shall be kept on each floor level at prominent place & refuge area
- iii) All above fire extinguishers should be placed on each floor level as per IS:2190 of 1992.

M) FIRE ALARM SYSTEM / FIRE DETECTION SYSTEM:

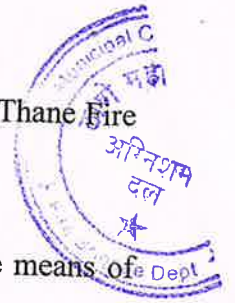
- i) Building shall be provided with intelligent analog addressable fire alarm system with microprocessor based main control panel at ground floor level and addressable call points and hooters at each floor level. The design of fire alarm system shall be in accordance with I.S. specification and based on NFPA 72 guidelines (as per 2010 edition).
- ii) The addressable fire alarm system shall be equipped with the latest evacuation features such as digital voice evacuation capabilities; fire fighters telephone system, directional sounders etc. The main entry / exit points/ Fire command room shall be provided with fire fighters interactive interface to enable viewing of critical information in event of fire.
- iii) Building shall be provided with manual fire alarm system with main control panel at ground floor level and pill-boxes and hooters at each upper floor level. The layout of fire alarm system shall be in accordance with I.S. specification.

N) PUBLIC ADDRESS & VOICE EVACUATION SYSTEM :

- i) 1) The entire building shall be provided with public address system as per the rules with main control operator at console panel at ground floor area.
- ii) 2) The voice evacuation system shall be integrated to Fire Alarm system so as to facilitate the co-ordination activities in case of fire emergencies. The actuation of the fire alarm control panel shall automatically activate the Voice Evacuation system. A pre-recorded message shall be broadcast on the affected floor, one floor below & two floors above the affected floor.

O) FIRE DRILLS / EVACUATION DRILLS:

Fire Drills and evacuation drills shall be conducted regularly in consultation with Thane Fire Brigade and log of the same shall be maintained.



P) SIGNAGES:

Self glowing/fluorescent exit signs in green color shall be provided showing the means of escape for each building.

Q) FIRE OFFICER:

A qualified Fire Officer with experience of not less than 3 years shall be appointed as per clause 4.10.1 & 4.10.2 of NBC 2016, who will be available on the premises, for large educational complexes, business buildings with height 30 m and above, residential building with height 60 m and above, institutional buildings of 15 m and above, starred hotels and D-6 occupancy.

The Fire Officer shall,

- a) maintain the firefighting equipment in good working condition at all times.
- b) prepare fire orders and fire operational plans and get them promulgated.
- c) impart regular training to the occupants of the buildings in the use of firefighting equipment provided on the premises and keep them informed about the fire emergency evacuation plan.
- d) keep proper liaison with the city fire brigade.
- e) ensure that all fire precautionary measures are observed at the times.

R) REFUGE AREA:

Refuge area shall be conforming to the following requirements:

i) Manner of refuge area

- a) The refuge area shall be so located that it shall preferably face the access road/s or otherwise face the wider open space on the side of the building perpendicular to the main access road.
- b) The refuge area shall be provided with railing / parapet of 1.20 mtrs.
- c) The cantilevered refuge area shall necessarily be of RCC Type.
- d) R.C.C. covering shall be provided above the topmost cantilever refuge area.
- e) The refuge area shall have a door which shall be painted or fixed with a sign in luminous.
paint mentioning "REFUGE AREA"
- f) The lift/s shall not be permitted to open into the refuge areas.

ii) Use of refuge area :

- a. The refuge area shall be earmarked exclusively for the use of occupants as temporary shelter and for the use of Fire Brigade Department or any other organization dealing with fire or other emergencies when occur in the building and for exercises/drills if conducted by the Fire Brigade Department.
- b. The refuge areas shall not be allowed to be used for any other purpose and it shall be the responsibility of the owner/occupier to always maintain the same clean and free of encumbrances and encroachments.

iii) Facilities to be provided at refuge area

Adequate emergency lighting facility shall be provided.

FIRE & EMERGENCY SERVICE FEE:- (Residential)

Building	Total area	0.50% of ASR	Amount Rs.
C	107767.35	133.10/-	1,43,43,834/- TMC/HQ/FIR/000893/23-24, Dt. 17/11/2023

The Licensed Engineer has certified the area & accordingly paid the various fees, Licensed Engineer has verified & submitted the table of area along with fees paid. If any differences in fee paid or any queries objected by the auditor, then balance fees to be paid by the Licensed Engineer / Developer or After payment of the said fees then only any amended NOC or final NOC for Occupation will be issued or recovered legally as per rules and Regulation. At the time of submission if any wrong or irregularity submitted and observed late on during construction, then above said NOC will be revoked by Chief Fire Officer, Thane.

The above-mentioned built-up area has been verified by Licensed engineer. However, The A.D.T.P. is requested to verify the total built-up area and inform this department, if the same is found to be more for the purpose of levying additional Scrutiny fees, if required.

Note:

1. The firefighting installation shall be carried out by licensed approved agency.
2. The area calculation shown in the enclosed plan shall be checked by the A.D.T.P.
3. The A.D.T.P. is requested to scrutinized the plans & verify civil work and all other requirements pertaining to civil Engineering side including open spaces, R.G., corridors, staircases, amendments, height, refuge area in sq. m. & floor occupancy of the building. And if these plans, given open space is not approvable then this NOC shall be refer back to this department for revised NOC also till then further process of issuing IOD & C.C. shall not be permitted.
4. This N.O.C. is issued from fire risk point of view only.
5. The schematic drawings/plans of Sprinkler system, smoke detection System, Wet riser system, Public Address system etc. shall be got approved from CFO prior to installation.
6. Necessary permission for any licensable activity shall be obtained from concerned department & T.M.C. / C.F.O.'s department till then shall not be allowed to use.
7. During construction stage and prior to final occupation party agreed to comply with additional requirements stipulated by Thane Fire Brigade Officer if any in future.
8. A qualified Fire Officer with experience of not less than 3 years shall be appointed as per clause 4.10.1 & 4.10.2 who will be available on the premises, for large educational complexes, business buildings with height 30 m and above, residential building with height 60 m and above, institutional buildings of 15 m and above, starred hotels and D-6 occupancy.
9. Fire and Life Safety Audit shall be carried out by the owner, or where the owner is not traceable, the occupier of a building as per section 45A of the Maharashtra fire Prevention and Life Safety measures (Amendment) Act (2023).
10. For the building as specified under section 45, the owner, or where the owner is not traceable, the occupier of a building, shall ensure that the firefighting systems as recommended in the relevant Fire Safety Approval, is provided with automated continuous monitoring system as may be prescribed for ensuring that the firefighting systems are in good repair and efficient working condition and these shall be certified by the Licensed Agency in the prescribed form and the manner and shall submit the same to the concerned authority in the manner as may be prescribed.”
11. Architect / Developer shall comply all the conditions laid down in environmental clearance



12. There shall be no tree/car parking to be located in compulsory open spaces, No compound wall shall be constructed on all road side and joint open spaces all around the building, if required.
13. The area, size is to be consulted as per relevant I.S. Standards and Codes with consultant for the sprinkler system, detection system, fire alarm system, wet riser system, public address system, electrical duct, etc. to be verified & examined.
11. If any discrepancies observed during construction, then above said NOC will be revoked by chief Fire Officer.



[Handwritten Signature]
17/11/2022
Chief Fire Officer (I/c)
Thane Fire Brigade

Copy To: 1. Architect Rajesh Dighe of M/s. TUMC