



ODISHA FIRE SERVICE
FIRE SAFETY RECOMMENDATION
FORM-II
[Under Rule-12 (5)]



RECOMMENDATION No:	RECOMM110312 0012022000621	APPLICATION No:	FSR110312 0012022000748
Date of Issue:	27-05-2022	Date of Receipt of Application:	20-05-2022

1.	Name & Address of the proposed Building/Premises:	SIDHIVINAYAK SOLARIS, MOUZA- SUNDARPUR, BHUBANESWAR, DIST-KHURDA.
2.	Name and Address of the Applicant(s):	Aditya Kumar Nayak, Managing Director, M/s Sidhivinayak Infrastructure and Developers Pvt Ltd.
3.	Proposed Occupancy (Type of Building):	Proposed B+G+9 Storied Residential Apartment (MIG) Building is coming under "Residential Building" as per Odisha Development Authorities (Planning and Building Standards) Rules, 2020 and "Residential building, (Group-A, Sub-Division A4, Apartment houses)" as per NBCI-2016.
4.	Area with Plot Number and Khata Number:	Plot Area- 3627.111Sqm Plot No- 2355/2982, 2357/ 2983, 2359 & others, Khata No- 890/135, 890 /122 , 890/ 136 & others
5.	Date of Inspection:	26-05-2022

6. Recommendation:



The Fire Safety Recommendation for the following building(s) is/are as follows: -

A.	Structural and construction site requirements:	
i.	Details of the building(s) like height, no. of floors, area on each floor, built up area, etc	<p>Floor wise occupancy with area B+G+9 Storied Apartment Building Basement Floor- 2767.841 Sqm-usage-Parking. Ground Floor- 1443.55 Sqm-usage- Parking, Swimming pool, Society room, Gym, Club house, Commercial space (319.675 sqm) 1st to 9th Floor (Typical floor) -1431.123 Sqm each. Sqm-usage- Residential units/ Apartment Houses. Terrace Floor- usage –Open terrace Height :- The height of the proposed building as per plan shall be 29.95 meters.</p>
ii.	Parking	<p>Provisions of parking at Basement & Ground have been shown in the proposed plan. Provision of parking shall be made in accordance to Rule-37 ODA (P&BS) Rules-2020. The parking space to be provided shall be in addition to the minimum setbacks as required under Regulation-33 of ODA (P&BS) Rules, 2020.</p>
iii.	Access To The Building	<p>As shown in the plan there is an abutting road or means of access to the plot having width 19.20 mtrs. The means of access shall be made as per Rule-31 of Odisha Development Authorities (Planning and Building Standards) Rules, 2020. Two numbers of Boundary gate have been shown in the plan. The width of main entrance gate shall not be less than 06(six) meters in width in order to allow easy access to fire engine. The main gate shall fold back against the compound wall of the premises, thus leaving the exterior access way, within the plot, free for the movement of fire service vehicle. If archway is provided over the main entrance gate, the height of the archway shall not be less than 05 (five) meters. Provisions for access to the building as shown in the plan satisfy the requirement of Regulation-31 & 71 of Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p>
iv.	Open spaces (In Mtrs.)	<p>As per the plan, provision of the following minimum setbacks has been proposed: - Front – 06 meters, Rear – 6.02 meters, Left – 7.50 meters, Right – 06 meters, Provision of open space proposed in the plan satisfies the requirement as per Regulation-33 (1) Table-6 of Odisha Development Authorities (Planning and Building Standards) Rules, 2020. The drive way has not been shown in the plan. The minimum Driveway shall not be less than 06 mtrs & 09 mtrs turning radii shall be provided around the building. The drive way shall be made hard surface capable of taking the mass of fire tender, weighing 45 ton minimum and the same shall be kept un built. The covering slabs of underground water tank, soak pit, recharge tank, septic tank etc, if any which are proposed to be positioned in the compulsory open space area must have appropriate load bearing capacity. The clear open space around the building and driveway shall be made as per Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p>
v.	Exits (Type, Number, Dimension & Ramp Arrangement)	<p>As shown in the plan there is provision of 03 Nos. of Main staircases in the proposed building. The clear width of the stairway of the staircases shall not be less than 1.25 mtrs. The minimum width of treads without nosing shall be 250 mm. The maximum height of riser shall be 190 mm and shall be limited to 12 risers per flight. The travel distance to an exit on any floor shall be made as per Clause-72 of Odisha Development Authorities (Planning and Building Standards) Rules, 2020. All the exits required to be accessible from the entire floor area at all floor levels. No exit doorway shall be less than 01 meter in width. Doorways shall be not less than 02 meter in height. Doorways for bathrooms, water closet and stores shall be not less than 0.75 meter wide. The minimum number of exit and their width required on every floor of the buildings and their dimensions must be in accordance to Clause-4.2.1 to 4.4.2.4.2 of Part-IV, NBCI-2016 and exit requirements of Annexure-IX of Odisha Development Authorities (Planning and Building Standards) Rules, 2020. The escape routes should be well ventilated and provided with safety lighting and free from obstructions. Exits must be clearly visible and all routes to reach the exit have to be clearly marked and sign posted to guide the population of the floor concerned. Signages required to be illuminated and wired to an independent electrical circuit on an alternative source of supply. Staircases landing segregation and pressurization shall be provided for staircases in building those are proposed to communicate from ground to</p>



		<p>basement. Pressurization shall be done as per the provisions given in Clause-4.4.2.5 of Part-IV, NBCI-2016. The staircase is required to be pressurized or provision of natural ventilation be made at each floor landing. 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.</p> <p>External exit door of staircase enclosure at ground level shall open directly to the open spaces or can be reached without passing through any door other than a door provided to drought lobby.</p> <p>The exit sign with arrow indicating the way to the escape route shall be provided at all conspicuous places and shall be illuminated by electric light connected to corridor circuits.</p> <p>All landings of floor shall have floor indication boards indicating the number of floor.</p> <p>In addition to above all other provisions for exits/doorways/stairways shall be made as per clause-4.2 to 4.6.2 of NBCI-2016 and Annexure-IX of Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p>
vi.	Firefighting Shaft	<ol style="list-style-type: none"> 1) Firefighting shaft shall be provided as per compartment for proposed building. 2) The protected area of the firefighting shaft shall have 120 min. Fire resistance rating & comprising of protected lobby, staircase & fireman's lift. 3) It shall have connectivity directly to exit discharge or through exit passageway with 120 min fire resistance walls at the level of exit discharge to exit discharge. 4) Besides, it shall have provision of fireman talk back, wet riser & landing valve in its lobby. Staircase & fire lift lobby of firefighting shaft shall be smoke controlled. 5) Firefighting shaft (fire tower) shall be made as per Clause-2.24 & Annexure-E-2 of Part-IV, NBCI-2016.
vii.	Lifts	<p>As shown in the plan there is provision of 05 nos. of lifts in the building. Provision of lifts as proposed in the building satisfies the requirement as per Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p> <p>The capacities of lift shall not be less than 08 passenger's i.e 544 kg and at least 01 lift shall be a stretcher lift. Grounding switch at ground floor level shall be provided. Lift car door shall have a fire resistance rating of 01 Hr. Walls of lift enclosures shall have a fire rating of 02 (two) hrs. Lift shafts shall have vent at the top of area not less than 0.2 sqm. Telephone/talk back communication facilities may be provided in lift cars for communication system and lifts shall be connected to the fire control room of the building. Photo luminescent safety signs shall be posted and maintain on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. Lift wells shall be pressurized. Lift lobby shall be cross ventilated or pressurized as per Clause-4.4.2.5 of Part-IV, NBCI-2016. The mechanism for pressurization shall act automatically with the fire alarm, it shall also be possible to operate this mechanically. The lift lobbies at basement floor shall be pressurized with self-closing fire rated doors. In addition to above, other provisions of lift shall comply to the requirements as specified in Building Services, Section 5 Installation of Lifts, Sub-Section 5-A Lifts of Part-8 of National Building Code of India, 2016, Regulations-42 and Annexure-III, IX of Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p>
viii.	Building Services	
	Electrical Service	<p>A stand-by electric generator shall be installed to supply power to staircase and corridor lighting circuits, fire lifts, the stand-by fire pumps, pressurization fans and blowers, smoke extraction and damper system in case of failure of normal electric supply.</p> <p>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. Staircase and corridor lighting shall also be connected to alternate supply from parallel high-tension supply or to the supply from the stand-by generator. All wires and other accessories used for emergency light shall have fire retardant property.</p> <p>The electric distribution cables or wiring shall be laid in separate duct which 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. Water mains, telephone cables, intercom cables, gas pipes or any other service line shall not be laid in the duct for electric cables.</p> <p>Transformer if housed in the building below the ground level shall be separated from the other portion of premises by Fire Resisting Walls of 4 hours rating.</p> <p>Electrical Installations in the building shall comply to the provisions given in Clause 3.4.6 to 3.4.7.4 of part-4 NBCI-2016 and Annexure-IV of Odisha Development Authority (Planning and Building Standards) Regulations, 2020.</p> <p>Provision for lightning protection shall be made in the proposed building as per IS/IEC 62305-4:2010.</p>



Air Conditioning	If Air Conditioning system provided in the building shall comply to the provisions given in Clause 3.4.8 to 3.4.8.4.2 of part-4 NBCI-2016 and Annexure- IV of Odisha Development Authority (Planning and Building Standards) Regulations, 2020.
Gas supply	If Gas pipe line provided, construction and provision of fire safety measures and firefighting measures shall be as per relevant BIS.
Others	<p>Construction :- The minimum fire resistance ratings of structural and non-structural Elements (minute) shall be as given in Table-1 of NBCI-2016. The false ceiling, including all fixtures used for its suspension shall be of non-combustible material and shall provide adequate fire resistant to the ceiling in order to prevent spread of fire across ceiling. All floors shall be compartmented/zoned with area of each compartment being not more than 750 m² for both the Residential Building. In addition, there shall be requirement of a minimum of two compartments if the floor plate size is equal or less than the areas mentioned above. However, such requirement of minimum two compartments shall not be required, if the floor plate is less than 750 m². The structural safety design and construction of the building shall be done as per Clause-3.3 & 3.4 of NBCI-2016 and Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p> <p>Service Ducts and Shafts: - Openings in walls or floors which are necessary to be provided to allow passages of all building services like cables, electrical wirings, telephone cables, plumbing pipes, etc. shall be protected by enclosure in the form of ducts / shafts and such shaft and inspection doors fitted there to shall have fire resistance rating not less than as specified in Clause 3.4.5.4 of NBCI-2016 and Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p> <p>Lightning Protection: - Provision for lightning protection shall be made in the proposed building as per NBCI-2016 and in corporate to relevant BIS specifications. Routing down of conductors (Insulated or Un-Insulated) of lightning protection shall not be made through electrical or other service shafts.</p> <p>Stand-By Source Of Power Supply: - There shall be provision for dedicated emergency power supply to fire pumps, lifts, fire alarm system, pressurization system, emergency lighting, escape route lighting, exit signage, public address system, lighting in fire command centre, magnetic door hold open devices, etc. The power supply to the panel /distribution board of these fire and life safety systems shall be through fire proof enclosures or circuit integrity cables or through alternate route in the adjoining fire compartment to ensure supply of power is reliable to these systems and equipment. Cables for fire alarm and PA system shall be laid in metal conduits or armoured to provide physical segregation from the power cables.</p> <p>Basement:- As shown in the plan there is provision of one ramp of width 06 meter connectivity from basement to ground floor. Which satisfies the requirement as per Regulation-37(table-10) & Annexure-IX (table-02) of ODA (P&BS) Rules, 2020. The width of the ramp shall be 03 mtrs for one way & 06 mtrs for two ways for LMV.</p> <p>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 shall be provided so as to permit 12 air changes per hour in case of fire or distress call. Ventilation system shall start automatically on actuation of detector provided in the basement area in addition to provision of manual control. Doors provided in such exit passageway shall be fire rated doors of 2 hrs rating. Smoke exhaust and pressurization of areas shall be done as per the provisions given in clause- 4.6 of part-4, NBCI-2016.</p> <p>The basement shall be used for designated purpose only. Adequate provision of exits and ramps shall be made in the basements as per Odisha Development Authorities (Planning and Building Standards) Rules, 2020 and NBCI-2016. The ramp providing access to basement shall be constructed leaving required open space around the building. Door openings leading from upper floors to basement shall need to be protected with fire doors with 120 min. fire rating except for exit discharge doors from the basements. Adequate arrangement shall be made, so that surface drainage does not enter the basement. The wall and floors of the basement shall be water-tight and be so designed that the effect of the surrounding soil and moisture, if any, are taken in to account in design and adequate damp proofing treatment is given. The use and construction of the basement shall confirm to the provisions given in Regulation-37(10), 41, Annexure-III of Odisha Development Authorities (Planning and Building Standards) Rules, 2020 and Clause-4.6.2, 4.2.19 & 4.4.2.4.3.5 of Part-4, NBCI-2016.</p>



ix.	Fire Command Centre	There must be a Fire Command Centre on entrance floor of the building having direct access. The Fire Command Centre must have the main fire alarm panel with communication system (suitable public-address system). All controls and monitoring of fire alarm systems, Detection system, pressurization systems, smoke management systems must be operated from this room. Integrated building management system must be provided for Fire Command Centre. Fire Command Centre must have provisions in accordance with Clause-3.4.12 of Part-4, NBCI-2016.
x.	Other requirements	The owner/occupier shall provide any additional fire requirements in future if the recommendation is issued by this department.
B.	Fixed Fire Fighting Installations :	
i.	Fire Extinguisher	Provision of fire extinguishers shall be made in the building and shall be in accordance to BIS: 2190:2010.
ii.	First- Aid Hose Reel	The distribution of first-aid hose reel installation in the proposed building shall be so situated as not to be farther than 30 mtrs. From any point in the area covered and first-aid hose reels shall not be more than 50 mtrs. apart in horizontal. Installation of the First-Aid hose reel shall be in accordance to BIS 884:1985 & BIS 3844:1989.
iii.	Down Comer	Down Comer shall be provided in each floor of the Building. The distribution of down comer installation in the proposed building shall be so situated as not to be farther than 30 meters from any point in the area covered and shall not be more than 50 meters apart in horizontal. At each floor landing there shall be provision of hose box to accommodate 02 Nos. RRL Delivery Hoses of 15 meters length each of 63 mm dia and 01 no. branch pipe. Installation of down comer shall be in accordance to BIS 3844:1989.
iv.	Automatic Sprinkler System	Automatic water sprinkler system with sprinkler heads shall be provided in Society room, Gym, Club house, Commercial space both below & above the false ceiling (where void space exceeds 800 mm) along with basement area at suitable intervals and height in accordance to BIS specification 15105:2002 and 9972:2002. Sprinkler shall be fed water from both underground static water storage tank and terrace tank.
v.	Manually Operated Electronic Fire Alarm System	Manually Operated fire alarm system at conspicuous places in each floor of the proposed Building shall be provided Manually operated electric fire alarm system shall also include talk-back and Public Address System shall be installation in accordance to IS/ISO 7240-11:2011.
vi.	Automatic Detection Alarm System	Automatic Detection and alarm system shall require to be provided in Society room, Gym, Club house, Commercial space, Basement both below and above the false ceiling (if void space exceeds 800mm) in entire building including inside the electrical shafts & lift machine rooms etc. Electrical rooms, cabins & other areas in car parking shall have also provision of fire detection system. Installation of automatic fire detection and alarm system shall be accordance with relevant BIS specifications (IS/ISO 2189:2008).
vii.	Terrace Tank	Dedicated Terrace Tank for fire fighting purpose of capacity-25,000 ltrs per compartment shall be provided at the top of the building for fire fighting purpose. It should be ensured that water in the tank is not utilized for any other purpose other than fire fighting.
viii.	Pump At Terrace Tank Level With Minimum Pressure Of 3.5 Kg/Cm2	Provision of dedicated terrace pump of capacity 900 LPM per compartment shall be provided having connectivity to terrace tank and down comer pipes shall be made in the proposed building. The pump to be automatic in action.
ix.	Refuge area	1) Refuge area shall be provided in buildings of height more than 24 meters. Refuge area shall be approachable from the space they serve by an accessible means of egress. Refuge areas shall be provided at/or immediately above 24 mtrs and thereafter at every 15 mtrs or so. Refuge area shall be approachable from the space they serve by an accessible means of egress. 2) Refuge area shall be made as per Annexure-E-4 of Part-IV, NBCI-2016.



C.

Opinion :

The site is suitable for construction of above proposed structure subject to condition that the owner/occupier shall provide any additional fire requirements in future if the recommendation is issued by this department.

After completion of the construction work including installation of fixed firefighting measures as suggested, the applicant shall be required to apply for Fire Safety Certificate as per Rule 13 (1) of Odisha Fire Prevention and Fire Safety Rules, 2017, along with following documents: -

i. The applicant shall produce a certificate to be issued by the person concerned to the effect that all the provisions of Bye-Laws / Regulations of Odisha Development Authority and Recommendations issued from this office have been incorporated in the building.

ii. The applicant shall produce a certificate of the Competent Authority concerned to the effect that electrical installations have been done as recommended and as per provisions given in Part-8 "Building Services, Section-2 Electrical and allied installations" of NBCI-2016 and Section-7 of National Electrical Code, 2011.

iii. The applicant shall produce a certificate of the agency concerned to the effect that installation of firefighting measures has been done as recommended and as per provisions given in Part-4 of National Building Code of India – 2016 and relevant BIS specifications.



Range Fire Officer, Central
Range-II, Bhubaneswar

NOTE

(i) It is a digitally signed electronically generated certificate and therefore needs no ink-signed signature.

(ii) This Certificate is issued as per section 4, 5, & 6 of Information Technology Act 2000 and its subsequent amendments in 2008.

(iii) For any Query or Verification, Agency / Department / Office may visit <http://agnishamaseva.odisha.gov.in>



(iv) Tampering of this Certificate will attract penal action.

