GOVERNMENT OF WEST BENGAL
OFFICE OF THE DIRECTOR GENERAL
WEST BENGAL FIRE & EMERGENCY SERVICES
13-D Mirza Ghalib Street, Kolkata- 700 016

Memo No : IND/WB/FES/20182019/42084 DATE: 01/01/2020

From :
The Director
Fire Prevention Wing,
West Bengal Fire & Emergency Services.

To :
PRM Real Estate pvt ltd and others
R.S. PLOT NO.2143(P),2155(P),2156(P),2159(P): R.S. Khatian No. 180/1,182,1142,1143;at Ganganagar, Burdwan Road, Mouza- Siligurri; J.L.NO. 110(88); Paragana : Baikunthapur. Ward No. 5
Siliguri F.S., Darjeeling,
Darjeeling - 734005 .

Sub :Fire Safety Recommendation for a proposed construction of B + G + 5 storied building under group Assembly at the premises no.- R.S. PLOT NO.2143(P),2155(P),2156(P),2159(P): R.S. Khatian No. 180/1,182,1142,1143;at Ganganagar, Burdwan Road, Mouza- Siligurri; J.L.NO. 110(88); Paragana : Baikunthapur, P.0,P.S,SUB-DIVN& A.D.S.R.O=SILIGURI, Ward No- 5(SMC), Dist- Darjeeling.

This is in reference to your Application No. IND/WB/FES/20182019/42084,dated 01/01/2020, regarding the Fire Safety Measure for a proposed construction of B + G + 5 storied building under group Assembly at the premises no.- R.S. PLOT NO.2143(P),2155(P),2156(P),2159(P): R.S. Khatian No. 180/1,182,1142,1143;at Ganganagar, Burdwan Road, Mouza- Siligurri; J.L.NO. 110(88); Paragana : Baikunthapur, P.0,P.S,SUB-DIVN& A.D.S.R.O=SILIGURI, Ward No- 5(SMC), Dist- Darjeeling..

The plan submitted by you was scrutinized and marked as found necessary from Fire Safety point of view. In returning one set of plan with recommendation, this is issuing Fire Safety Recommendation in favour of the aforesaid building subject to the compliance of the following fire safety measure.

Recommendation:

1. Recommendation: A) Construction Part:-i) The whole construction of the proposed building shall be carried out as per approved plan & conforming all the relevant building rules of local authority. ii) The floor area exceeds 500 sq. meter shall be suitably compartmented by separation walls up to ceiling level having at least two hrs. fire resisting capacity. iii) The interior finish decoration of the building shall be made of low flame spread materials conforming I.S Specification. iv) All construction materials should be of four hrs. Fire resisting type. v) Door and windows should be of at least 2 hrs. fire resisting type. vi) All opening of service ducts, void, gap, and joints should be sealed with fire check materials. B) Open Space & approach:- i) The open space surrounding the building shall conform the relevant building rules as well as to permit the accessibility and maneuverability of fire appliance to turning facility. The minimum open space surrounded the building should be at least six miters and it should be free from any obstruction at all times. ii) The approach roads shall be sufficiently strong to withstand the load of fire engine weighting up to 45 M.T. iii) The width and height of the access gates into the premises shall not be less than 4.5 miters & 5 miters respectively abutting the roads. C) Means of escape: - i) The Staircases of the building shall be enclosed type & construction shall be made of bricked/RCC type having fire resistance capacity not less than 4 hrs. ii) The staircase of the building shall have permanent vents at the top and open able sashes at each floor level in the external wall of the building. iii) The width of the staircase shall be 2 miters. Corridors of the building and the exit doors shall conforming the relevant building rules. iv) All the staircase shall be extended up to terrace of the building and shall be negotiable to each other entering into any room. v) Fire & Smoke doors at the entrance of all the staircases enclosures at each floor level shall be provided. The F.C.D shall be at least two hour fire resisting type & fitted with self closing type open able in the direction of the escape. vi) There should be minimum two staircases from the terrace of the building and in no way the travel distance from any point of the building exceeds the limit of 30 miters . vii) Horizontal exits should be given priority. viii) Time of evacuation should be as per IS:-1644-1988 i.e.2.5 minutes. ix) Minimum two exits shall be provided from every floor of the building. x) Separate entrance and exit shall be provided to every room in the building. D) Lift:-i) The walls of the enclosures shall be at least two hrs. fire resisting type and collapsible gate shall not be permitted. Lift materials shall be 4 hrs. fire resisting type. ii) The door of the lift should be 1 hr fire resisting type. iii) The landing door should be 30 minute fire resisting type. iv) The area of the lift shall be minimum 1.4 sq.mtr. and the load bearing capacity should be minimum 554 kg. v) In case of failure of normal power supply it shall automatically trip over to alternate power supply. This change over of supply could be done through manually operated change over switch .Alternatively; the lift shall be so wired that in case of any power failure, it comes down at the ground level and comes to stand still with door open. E) Banquet Hall: The doors/aisles/gangway/cross

gangways/ seating arrangement/corridors in hall etc. shall be made as per good practices of National Building Code, Part-IV. Fire protection as well as the conforming norms of cinematograph Act. With upto date amendment. F) Basement:-i) The Basement shall be adequately ventilated.(ii) Additional staircase from the open air should be provided along with the ramps conforming the relevant rules.(iii) The basement shall be protected with auto sprinkler system and hose reel system.(iv) Mechanical Extractor for smoke venting system shall also be provided. v) Available passage shall be kept in the basement for easy access of the fire fighter. vi) The slope of the ramp should not exceed 1 : 10 as laid down in the NBC. vii) Basement should not be used as storage of any combustible articles. G) Sprinkler installation: The automatic sprinkler installation shall be provided in the Basement and all floor areas of each Block, as per I.S 9972 and alarm to be incorporated along with the sprinkler system. H) Multi layer Automated Mechanized Car Parking System: 1) Structural design:- The M.LC.P shall be constructed of structural steel construction. Ii) Vertical Deck Separation :- For M.L.C.P having Multi car parking level, vertical Fire separation between the upper and lower decks by using a non-perforated and non-combustible materials (structural steel plate) shall be provided. Proper drainage system shall have to be provided for accidental leaking of oil from the car and sand bed shall be provided at the ground level.iii) Fire Engine access way:- Access way shall be provided for the Fire Engine to gain access to the car park entrance and exit. Iv) Fire Hydrant- Fire Hydrant are to be provided in accordance with the provision of NBC Part IV, 2016 and relevant I.S. specification) Natural Ventilation- Each car parking deck shall be provided with at least 50% external ventilation opening of the perimeter wall areas and uniformly distributed. vi) Sprinkler & Detection system- Open Modular type sprinkler along with detectors shall be provided in all M.L.C.P areas as per relevant I.S Specification. viii) Cross zone wise sprinkler system shall have to be implemented. Viii) Operating system- Both Mechanical and Manual type operating system for M.L.C.P shall have to be provided. I) Electrical installation & Distribution (IS-694:1946-1982) :- (i) All electrical installation should be done in accordance with N.B. Code & Part-VIII “ Building Service” Section-2 “Electrical installation” good practice.[4(10)]. (ii) The electrical installation including transformers, switch gears, main and meter etc. and The distribution system of the premises shall be made satisfying the code of practice for Fire Safety in general building as laid down in I.S Specification. (iii) The vertical and horizontal electrical ducts shall be sealed at each floor level by fire resisting materials and the electrical installation shall be adequately protected with ABC & CO-2 type extinguisher. (iv) All cable should be of FRLS type & all wiring should be done by copper wire along with appropriate gauge such as 1.2 mm. for light, fan ,bulbs etc, 2.5 mm for television, freeze & washing machine etc. 4 mm for geezer, air condition machine etc. (v) The indoor Transformer shall be protected with high-velocity water spray projector system. J) Alternate power supply :- Arrangement shall be made to supply power with the help of a Generator to operate at least the fire pump, pump for deep tube-well ,Fire alarm system, Fire Lift ,illuminating the passages, basement , escape routes etc. in case of normal power failure. K) In case of Air

Condition:-IS: 659-1991:- i) Regular check up of all split type window A/C machine to prevent dust, foreign materials in the air inlet should be maintained to prevent spontaneous combustion. ii)In case of central A/C system ,the same shall be incorporated with automatic damper with fusible link with a view to shut down the system automatically. iii) Regular checking, testing, cleanings the air inlets is must. iv) Escape routes like corridors, lift lobbies etc. shall not be used as return air passage. v) AHU shall not be used for storage of combustible articles. L) Fire Fighting Water:- The building should be provided with 200000 liters capacity of underground stored water with replenishing arrangement @ 1000 liters of water per minutes preferably from two different sources. The height of the reservoir should not be exceed 30 cm from the ground level .Fire water reservoir shall have overflow and connected with domestic water reservoir as well as to avoid stagnancy of water. The water reservoir shall be kept full at all times. The location of the U/G water reservoir should be such so that Fire Service Vehicles may get access to the site of the reservoir with a view to draw the water from the said reservoir. One Terrace Tank of capacity Minimum 20000 liters should be installed in the building . M) Small gears:-IS:903-1993:-Hose box, 15 miter length per Moline delivery hose, gunmetal short branch of half inch dia @ one set each at or near all the pillar hydrants, landing valves on floors should be installed. N) Hose Reel System:-IS 884-1985, the building should be equipped with Hose reel hose system at each floor as per the IS Code of practice. The internal dia of the said hose reel shall be 19 mm to 32 mm and the discharge capacity not less then 22.5 LPM. While the length of the hose reel not more then 36.5 miters. The distance of such installation should be in such a way that no part of the floor is more than 6 miters distance from a hose nozzle when fully extended. O)Internal Hydrant System: - IS-3844:1989. Minimum two pressurized risers of 150 mm dia each should be provided at each staircase with provision of landing and half landing valves @ one such riser for each 1000 sq. miter of floor area or as per the vulnerability of the area. This system shall be designed in such a manner that it should be kept charged with water at all times and capable of discharge 2850 liters of water per minute at the ground level & 900 liters per minutes at the top most outlets of the building. In both the cases, the running pressure at the ground level shall be 3.5 kg/sq.cm & 2.5 kg/sq.cm at the top most landing valves should be ensured. P) External Hydrant System:-IS-13039-1991:-The whole area of your building is to be protected by adequate no. of pillar type hydrants system i.e. @ one pillar hydrant per 1000 sq. miters of area or as per the vulnerability of the place. Q) Pumps for firefighting Installation:-(IS-12469-1988) i) The pump should be installed and arranged in such a manner so that it will start automatically due to fall in pressure as prefixed in the installation by installing a jockey pump. ii) All the pumps shall be so designed as to supply water at the designed pressure and discharge into the water based system which shall be installed in the building. iii) One such pump shall always be kept on stand-by preferably be of diesel driven type. All such arrangement shall be made as per the code of practice. R) Detection & Alarm System:-IS 2189-1988. i) Sufficient Nos. of manually operated electrical fire alarm system of break glass type call boxes and fitted with alarm like hooters with public address system, talk

back system at different places of the building shall be installed and connecting with audio visual panel board shall be made in control room as per the IS Code of practice. The control Room shall be located in the entrance of the ground floor of the building. S) First aid fire fighting system:-IS 2190-1992. Sufficient Nos. of Portable fire extinguishers of DCP type, Water type and Sand and water bucket should be provided at different places of the building area and it should be within the reach of all concern as per the I.S Code of practice. T) Lighting protection of the building:-This protection for the building shall be provided as given Part:-VIII of building services, Section -2 of Electrical installation. U) Gas Bank:-IS6044-2000:-In case of any cooking gas bank, the same should be installed conforming serial No.4.1.5 & 4.1.6 of the aforesaid I:S code of practice & and after obtaining Fire Service license u/s 12 of W.B F.S(license) rules-2004 V) General recommendations: - i) Fire notice for fire fighting and evacuation from the building should be provided and shall be displayed at all places of the building as per clause 5.5 of N.B Code. ii) Floor No. and Directional Sign of escape route should be displayed prominently as per clause 5.5 of the N.B Code.(Auto glow type) iii) All the staffs and others shall be conversant with the installed fire fighting equipments of the building so that they can operate the same in case of exigency. iv) Arrangement shall be made for regular checking, testing and proper maintenance of all fire fighting equipments and keep them in good working condition at all times.(v) Mock fire drill and evacuation drill should be done periodically with participation of all employees and others and in this regard in each year a Certificate is to be obtained from this end as laid down in the norms.(vi) A register for the recording of Mock fire drill, Evacuation drill, Testing & Checking of whole Fire fighting installation, Electrical installation should be maintained and shall be liable to produce the same to the authorized Officer of this department on demand. vii) Good housekeeping should be maintained. viii) Bulk storage of flammable materials such as chloroform, ethyl, alcohol, spirit etc. will be governed by relevant rules and safe practices. ix) close circuit T.V shall have to be provided for the entire floor area including the basement area of the building. A certificate is to be obtained from the Director General, West Bengal Fire & Emergency Services certifying about the satisfactory services, performances of all Fire Safety arrangement and installation of the building. On compliance of all the above Fire Safety Recommendation, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of the installation before occupancy of the building; Fire Safety Certificate in favour of the occupancy shall be issued on being satisfied with the tests and performances of safety of installation f the building. N.B: 1) Any deviation and changes the nature of use of the buildings in respect of the approved plan drawings, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled. /

Director

Signature Not Verified
Digitally signed by TARUN KUMAR SINHA
Date: 2020.01.01 13:04:17 IST