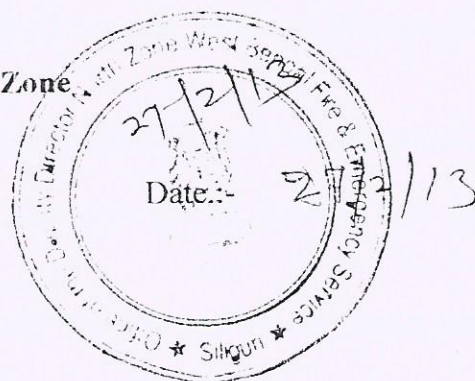


Govt. of West Bengal,
Office of the Dy. Director, North Zone,
Siliguri.



Memo No:- WBFES/NZ/FP/ 1290 /13

From: - The Dy. Director,
North Zone, Siliguri.

To: - M/S Fabulos Builders,
Sri Sandeep Goyal & Others,
For proposed B+LG+UG+IX storied Residential cum Commercial Building,
At Hill Cart Road, Dagapur, Mouza-Daknikata, RS Plot.215-19, LR.plot.484, JL-83,
LR/Kh.432-33, PS-Matigara, Dist:-Darjeeling.

Sub:- Fire Safety Recommendations for the proposed B+LG+UG+IX Storied Residential Cum Commercial building

Ref.:- Your letter No.-Nil, Date.18/2/13

Sir,

With reference to the letter noted above regarding the Provisional NQC for the Proposed Residential cum Commercial building, you have submitted different documents inter alia the Building Plans. After scrutinizing the same from fire and life safety points of view, the **fire safety recommendations** as well as the conditionally approved building plans are here by issued as per the direction of the authority subject to the compliance of the same before occupancy.

Recommendations:- In all the cases National building Code, BIS, etc. should be implemented strictly.

A) Construction Part:-

i) **The whole construction of the proposed building shall be carried out as per approved plan of the Corporation/Municipality/Gram Panchayat/Local Authority & maintained the relevant building rules.**

ii) **The floor area exceeds 750 sq.meters (for Community hall & Commercial area it will be 500 sq.m) 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) **Doors & windows should be of at least 2 hrs. of fire resisting type.**

vi) **All opening of services ducts, void, gap, joints etc. should be sealed with fire check materials.**

vii) **The building shall be earth quake resistant design and structure (follow-BIS-1893-2002).**

viii) **The building shall be earth quake resistant design and construction (follow-BIS-4326-1993) and quality of materials shall be as per BIS.**

B) Open Space & approach:-

i) **The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of fire appliance with turning facility. The minimum open space surrounded the building should be at least six meters 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 meters & 5 meters respectively abutting the roads.

iv) The drive way surrounding the building shall be sufficient wide for easy movement of Fire vehicles and shall be free from any obstruction.

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 escape routes from the basement as well as from the staircases should be free from any obstruction.

iii) Time of evacuation should be as per I:S 1644-1988 i.e. 2.5 minutes.

iv) The width of the staircases shall be 1.5 meters. Corridors of the building and the exit doors shall conforming the relevant building rules.

v) All the staircases shall be extended up to terrace of the building and shall be negotiable to each other without entering into any room.

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 22.5 meters. (for commercial area it will be 30 meters).

vii) 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.

viii) The entrance of staircases and lifts in the basement /LG/UG/ shall be protected by FCD and all opening /duct etc. from that area shall be sealed to prevent fire/heat/smoke etc. from the basement /LG/UG or from the car parking area or from Commercial area to upper floors residential area of the buildings otherwise it will enhance the vulnerability of the building.

ix) There shall be separate entrance and exit in the conference hall and Commercial area and other vulnerable area of the building.

More over FCD shall also be provided in the pantry/Kitchen/Switch gear room etc. which are fire prone area.

D) Ventilation:-

i) Sufficient ventilation shall be provided in every places of the building in this case Mechanical ventilation shall be preferable particularly, in the below GL.

E) Lift:-

i) The walls of the lifts enclosures shall be at least two hour fire resisting type and collapsible gate shall not be permitted (the door shall be enclosed type with FR door). The lifts materials should be 4 hrs fire resisting type, the door of the lifts should be 1 hr fire resisting type, the landing door should be ½ hr fire resisting type & Area of the lift car should be minimum 1.4 sq.meters.

ii) The load bearing capacity of the lifts should be minimum 554 kg each.

iii) 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.

iv) A sign shall be posted and maintained on every floor at or near the lifts indicating **that in case of fire, occupants shall use the stairs** unless instructed otherwise. The sign shall also contain a plan for each floor showing the locations of the stairways.

F) Basement & below GL area:-

i) The Basement shall be adequately ventilated. (Mechanical shall be preferable)

ii) Additional staircase from the open air should be provided.

iii) The basement/LG/UG shall be protected with auto sprinkler system.

iv) Mechanical Extractor for smoke venting system shall be provided with alternate power supply.

v) The slop of the ramps shall not exceed 1 in 10 as laid down in the NBC.

vi) Ramps shall comply with all the applicable requirements of the related rules. Emergency lighting should be provided in the basement, ramps and in the stairways.

- v) Basement/LG should not be used as storage of any combustibles articles.
- vi) Available passage shall be kept in the basement/LG for easy excess of fire fighter.
- ix) Arrangement of stall board light, pavement light & sky lark in the basement & at a strategic location shall be installed.

G) Electrical Installation: 1946:1982:-(I:S-694)

- i) All electrical installation should be done in accordance with National Electrical code & part -viii "Building Service" section -2 "Electrical installation" good practice.[4(10)].
- ii) All cable should be of FRLS type & all wiring should be done by the copper wire along with appropriate gauge such as 1.2 sq. mm for light , fan, bulbs etc. 2.5 sq. mm for freeze , TV & 4 sq. for geezer, washing machine etc.
- iii) Electrical installation/wiring/switch gear/starter etc. shall be tested and maintained by the licensed electricians.

H) In case of Air Condition:-I:S 659-1991:- It shall conform to the following:-

- i) Escape routes like corridors, lift lobbies etc. shall not be used as return air passages.
- ii) Regular checkup of all split type window machine to prevent dust, foreign materials in the air inlet should maintained to prevent spontaneous combustion.
- iii) In case of central A.C. system , the same shall be incorporated with automatic dampers with fusible link with a view to shut down the system automatically in case of any fire in AC system.
- iv) Regular checking, testing, cleaning the Air inlet is must.
- v) AHU room shall not be used for storage of combustible articles.

I) 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 , illumination of basement, LG, stairs, corridors, means of escape etc. in case of normal power failure.

J) Fire Fighting Water: -The building should be provided with 100000 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 exceeding 30 cm from the ground level. Fire water reservoir shall have overflow and connected with the domestic water reservoir as well as to avoid stagnancy of water. The water reservoir shall be kept full at all times.

ii) The location of the underground reservoir should be such so that the Fire Service vehicle may get access to the site of the reservoir with a view to drawn the waters from said reservoir.

K) Internal Hydrant System:-IS:3844:1989:- Pressurized wet risers of 150 mm dia each should be provided at each staircases with provision of landing valve at each landing and half landing @ one such riser for each 1000 sq.meters of floor area of the building. This system shall be designed in such a manner that it should be kept charged with water at all time and capable of discharge 2850 liters of water per minutes at the ground level & minimum 900 liters per minutes at the top most out lets. In both the cases, the running pressure at the ground level shall be 3.5 kg/esq.cm & 2.5 kg/esq.cm at the top most landing valves should be ensured.

L) External Hydrant System:-IS: 13039:1991:-The surrounding of the building should be protected by adequate no. of pillar type yard hydrants system as per the IS code of practice. **i.e. @ one pillar hydrant per 1000 esq. miters of floor area or as per the vulnerability of the area.**

M) Terrace Tank:-One Terrace Tank of capacity 30000 liters should be installed in the building.

N) Hose Reel System:-IS 884-1985, the Hose reel hose system should be provided at each floor of the building. The internal dia of the said hose reel shall be 19 mm to 32 mm and the discharge capacity not less than 22.5 LPM. While the length of the hose reel not more than 36.50 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) Sprinkler Installation.-I.S:9972:2002:-The automatic sprinkler installation shall be provided in the basement/LG/UG (Car Parking area and Conference hall/community hall commercial area etc.) and other vulnerable areas of the building as per the I.S Code of practice.

Pumps for Firefighting Installation. IS-12469-1988.

- i) The pumps should be installed and arranged in such 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.
- iv) An independent identical pump for the purpose of sprinkler installation shall be made available. All such arrangement shall be done as per above code of practice.
- v) Provision of Jockey pump shall also be made to keep the water based system under pressurized condition at all times
- vi) All the pumps shall be incorporated with both normal and auto starting facilities, the suction of the pump shall preferably of positive type or in case of negative suction the system shall be wet riser-cum-down comers with suitable terrace pump fitted with over head tank.

Q) Small gears:- I:S 903-1993:- Hose box, 15 miters Permaline delivery hose & gun metal short branch half inch dia @ one set each at or near all the pillar hydrant, landing valve on all floors of the building should be installed.

R) Detection & Alarm System, Suppression system & Public address 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 should be installed & connecting with audio visual panel board shall be made in Control Room as per the IS Code of practice.
- ii) Automatic fire detection system with the help of smoke & heat detectors (by cross zoning system) shall be installed at all places of below and preferably above false ceiling of the Conference hall and Commercial area of the building. This system shall also be made available in places of rooms where valuables have been kept.

Other requirements shall be made in accordance with the IS code of practice.

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 and it should be within the reach of all concern as stated in the IS Code i.e. one **no.**@ 1000 sq. miters floor area or as per the vulnerability of the area.

T) Fire control Room:- The Control room shall be located on the entrance of the building with communication system /suitable public address system. Details of all floor plans, different facilities, fire fighting equipments, installations shall be maintained in the control room. The panel board shall also to be installed in the control room for the purpose of the detection of the location of particular detectors; sprinklers etc. of the building in case any fire accident.

U) Lighting Protection of the Building: - This protection for buildings shall be provided as given in Part-VIII building services, Section-2 Electrical installation.

V) Gas Bank-I:S 6044-2000:-

In case of any cooking gas bank, the same should be installed conforming S/L 4.1.5 & 4.1.6 of the aforesaid I:S code & Fire license to be obtained u/s 12 of W.B.Fire & Emergency Services Act. & W.B.F.E.S. (license) Rules 2004. The Gas bank area shall be in isolated place and blast proof wall shall be provided in the gas bank for the safety of the residential part of the building.

W) Refuge area:- Within the travel distance,

- i) It shall be provided in the external wall with cantilever projection and the such area shall be provided in the height of 18 meters and 27 miters but in this case as per your building plan it may be in the height of 17.5 miters, 26.5 meters levels of the building.
- ii) The refuge area shall be provided on the periphery of the floor and open to air at least to one side protected with suitable railings in order to rescue the inmates assemble there.
- iii) The area of the refuge area shall be 15 sq.meters or an equivalent to 0.3 sq.meters per person to accommodate the occupants of two consecutive floors, whichever is higher.

X) Electrical Transformer:-it shall not be allowed to install in the basement or above ground floor level. the same shall be installed in safe distance within a room of fire resisting wall, soak pit, sufficient wide entrance and shall follow the related rules.

HT line, Sub-Station etc, shall be provided in a place where the related rules will permit.

Y) General recommendations: -

- i) A fire crew under a Fire Officer or supervisor with experience at least 3 years should be available at all times in the building for checking, testing, maintenance, to conduct different drills and for other safety purposes.
- ii) A register for the recording of mock fire drill, evacuation drill, testing and checking of whole fire fighting installation, electrical installation should be maintained & shall be liable to produce the same to the authorized Officer of this department on demand.
- iii) Fire notice should be provided and shall be displayed at all places of the building as per clause 5.5 of N.B.C.
- iv) Floor No. and Directional Sign of escape route should be displayed prominently as per clause 5.5 of the N.B Code. In case of entrance /exit etc. it will be marked as per the said norms.
- v) All the occupants and other peoples shall be conversant with the installed fire fighting equipments of the building so that they can operate the same in case of exigency.
- vi) 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 time it should be written in the Register.
- vii) Good house keeping should be maintained.
- viii) Mock fire drill and evacuation drill should be done periodically with participation of all occupants.

Note: -i) After issuing the work orders of the said recommendations to any authorized agency from your side for the installations of the same, a primary clearance to the style of provisional NOC for such installations shall be issued from this end.

ii) On compliance of the aforesaid recommendations up to the satisfactions of this department & as per the scale as advised from this end, Final Fire Safety Certificate (NOC) shall be issued.

iii) The Fire Service recommendations are issued subject to the free from any Court Case or legal re-encumbrances.

27/2/13
Dy. Director,

North Zone, Siliguri.

DEPUTY DIRECTOR

NORTHERN ZONE, SILIGURI

BENGAL FIRE & EMERGENCY SERVICES

T. R. FORM NO.-7

[See sub-rule (2) (b) of T.R.3.06]

Challan for Deposit of money in the account of GOVERNMENT OF WEST BENGAL

1. Name of the Bank & Branch: SBI. Siliguri

2. (a). Name of the Treasury: Siliguri

(b). Treasury Code: D A D

3. Account Code: 00706010900114 (14-Digits must be filled up properly)

4. Detail Head of Account:

5. (a) Amount : Rs. 43254

(b) In Words: Rupees: Forty three thousand two hundred and fifty four only

6. By whom tendered - Name & Address: Matiganga

7. Name / Designation & Address of the Departmental Officer on whose behalf / favour money is paid: FABULOUS BUILDERS, Patharghata, Dt. Darjeeling

The D. G. W. B. Fire & Emergency Services

8. (a) Particulars & Authority of Deposit:

For prov. NOC of the proposed Residential cum Commercial plot at Matiganga, Dt. Darjeeling. Accountant General (A & E), West Bengal.

1* (b) T.V. No. & Date of A.C. Bill:

9. Accounts Officer by whom adjustable:

Verified

Signature of Departmental / Treasury Officer

Date:

Received payment.

Receipt by Bank / Treasury

Date:

Treasury Received Challan No.

Bank Scroll Serial No.

Stamp: H. SILIGURI (DIN) KANCHAN GUPTA 27 FEB 2013 ID: 12 2799

*In respect of Challan relating to refund of unspent amount of A.C. Bill