

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

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NOTES RELATED TO FIRE SAFETY

The Basic Requirements For Fire Protection Of High-Rise Buildings In A.M.C. and A.U.D.A. Area

1. HYDRANT SYSTEM

OWSP's located near the hose reel rose or hydrant outlet, at each floor the main Fire Pump at the underground tank with a capacity to discharge the 800 litres per minute at 3 bar pressure as measured at the terrace level should be installed.

The Rise for the buildings exceeding 18 meters height should not be of less than 100 mm, internal diameter. The riser should be connected to the bottom of the main Fire tank with a stop valve and a WR to act as a Down-coupler.

One riser is required for every 1000sq. meters floor area and the building is divided into two or more parts then each part should have a separate valve with 15 meters hose of each floor level.

Each floor should have one hydrant outlet with a coupling for attaching a 63 mm dia. hose 4.25 mm bore length of hose with 8m SS. Stop/nipple at each floor landing. The length of the hose reel hose should be enough to reach the farthest corner of the floor. Hose-box with 15 meters long China. dia. hose and 12.5 mm bore nipple at alternate floors. The Hose-reel hose should be coupled to the Riser.

Fire - service riser should be installed at a point near to the premises where a Fire service vehicle can conveniently connect.

The overhead tank shall be of a capacity of not less than 20,000 litres.

The Underground tanks shall be of a capacity of not less than 1,00,000 litres.

2. FIRE LIFT :

The Fire-Lift and all its lifts should have a provision to ground automatically in case of electricity failure. Each building should have at least one lift as a Fire-Lift, and the building is divided into two or more parts then each part should have a Fire-Lift. Lift well should have blowers to pressurize the lift-well, so that it remains well ventilated especially when alarm call is sounded to the floor, to avoid it from getting smoky fumes.

3. FIRE ALARM

Fire alarm call panel to be installed at each floor with sounders capable of being heard all throughout the building.

4. FIRE EXTINGUISHERS

Two Carbon Dioxide (CO₂) type extinguisher of 4.5 kg. with ISI mark, and one extinguisher of Dry Chemical Powder (DCP) type extinguisher to be installed on each floor in case of commercial building.

Two Carbon Dioxide (CO₂) type extinguisher of 2 kg. with ISI mark on alternate floor and Dry Chemical Powder (DCP) type extinguisher with ISI mark on each floor in case of residential buildings.

If the building is divided into two or more parts then each part should have these extinguishers installed.

5. STAIRCASE

The staircase has to be open from at least one or two sides but if the staircase is in the center zone of the buildings it has to be pressurized to prevent it from getting smoke lodged.

The Riser/Down-coupler should be located in the staircase or close to it in a easily accessible place in case of Fire from the floor below or above.

6. LIGHTNING ARRESTER:

A lightning arrester should also be installed and be properly braced to prevent damage to the building when the lightning strikes.

7. ELECTRIC POWER SUPPLY FOR HYDRANT LINE

An electric supply for hydrant line will be provided separately by separate electric supply from no. supply.

8. BASEMENT :

The basement of 200 sq. meters should not be protected with Automatic Sprinkler system with at least one sprinkler head for actual Car park-hose reel. Additionally be provided by a Hydrant outlet and 25 mm. bore pump-hose reel with 8 mm. bore nozzles at each basement level.

GENERAL NOTES :

- Engineer is fully responsible for leaving open space and margin.
- The depth and position of existing municipal mainline is verified on site and premises can save drainage connection.
- It is entirely certified that according to G.D.C.R-2021 all requirements of the buildings are checked and necessary actions are taken.
- It is entirely certified that according to the clause no. 4.5.3 of the G.D.C.R-2021, the structure of the building design as per the norms of the Indian standards.
- Design of staircase and railing is provided as per the provision of the clause no. 23.1.12 and 23.1.4 and 24.6 of G.D.C.R-2021.
- Pedestrians ramp is provided as per the provision of the clause no. 23.1.5 of G.D.C.R-2021.
- Lift is provided as per the provision of the clause no. 23.1.2 and 24.7 of G.D.C.R-2021.
- Water tank is provided as per the provision of the clause no. 23.6 of G.D.C.R-2021.
- Separate letter box is provided at ground level for each unit.
- Water tank for fire safety requirement provided as per chapter no. 24 of G.D.C.R-2021.
- Electrical infrastructure shall be provided as per clause no. 23.11.
- Drainage facility is provided as per the clause no. 23.10.
- Signages of the parking place is to be provided as per the clause no. 23.7 of the G.D.C.R-2021.
- Entrance of the building is provided as per the clause no. 23.1.7 of G.D.C.R-2021.
- The parking of building/unifinal plot as per the provision of the clause no. 23.1.4 of G.D.C.R-2021.
- The structure of the building is as per the norms of the specified in the Indian standard and take necessary action for the structural safety during the construction.
- Rain water storage tank and rain water harvesting system is provided as per the clause no. 27.2 of G.D.C.R-2021.
- Community bin provided as per the provision of the clause no. 27.3 of G.D.C.R-2021.
- Tree plantation is provided as per the clause no. 27.5 of G.D.C.R-2021.
- Fire safety system is provided as per chapter no. 24 of G.D.C.R-2021.
- Maintenance and upgradation of building is as per chapter no. 29 of G.D.C.R-2021.

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- Drainage facility is provided as per the clause no. 23.12
- Signages of the parking place is to be provided as per the clause no. 23.7 of the G.D.C.R-2021
- Entrance of the building is provided as per the clause no. 23.17 of G.D.C.R-2021
- The paving of building unutilized plot as per the provision of the clause no. 23.1.4 of G.D.C.R-2021
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PROP. P. AREA		CALC.		TYPICAL FLOOR:-	
(BASEMENT FLOOR)					
(1)	53.62	10.25 X 1	=	1032.18	SQ. MT.
(2)	0.4435	0.5 X 1	=	45.81	SQ. MT.
(3)	30.669	8.89+1.97/2	=	181.81	SQ. MT.
(4)	06.73	0.40 X 1	=	26.92	SQ. MT.
TOTAL				=	1286.72
NET B.A. ON BASEMENT FLOOR		= 1286.72			
FLOOR		= 1286.72			
PERMISSIBLE PARKING ON COMMON PLOT					
= 0.50 % OF COMMON PLOT AREA					
= 0.50 X 274.54 SQ.MT.					
= 137.27 SQ.MT.					
PROVIDED PARKING ON COMMON PLOT					
= 17.37(8.57+6.45)/2					
= 130.45 SQ.MT.					

	REQD.	PROVIDED		
	COMMERCIAL	GROUND FL.	1ST CELLAR	TOTAL
CAR PARKING	341.85	116.83	225.81	342.64
OTHER PARKING	205.11	160.17	48.45	208.62
VISITOR PARKING	136.74	137.39	—	137.39
	683.70	414.39	274.26	688.65
	REQD.	PROVIDED		
	RESIDENCE	GROUND FL.	1ST CELLAR	TOTAL
CAR PARKING	587.125	322.27	264.92	587.19
OTHER PARKING	470.00	—	477.84	477.84
VISITOR PARKING	117.425	123.13	—	123.13
	1174.25	445.40	742.76	1188.16

PARKING AREA TABLE SOLID PLINTH COMM.:-

USE F. S. I. AREA = 1367.41 SQ. MT.

PARKING REQD. @ 50% OF 1367.41 = 1367.41 X 0.50 = 683.705

PARKING	REQUIRED	PROVIDED	TOTAL
VISITOR	@ 20% OF 683.70	(C1) 2.37 x 1.42 = 3.37 SQ. MTS. (HOLLOWPLINTH) (C4) 1.93 x 3.26 = 6.29 SQ. MTS. (HOLLOWPLINTH) (C5) 4.82 X 3.32 = 16.00 SQ. MTS. (HOLLOWPLINTH) (C6) 4.60 X 5.02 = 23.09 SQ. MTS. (HOLLOWPLINTH) (C7) 9.58 X 3.17 = 30.37 SQ. MTS. (HOLLOWPLINTH) (C8) 7.75 X 1.48 = 11.47 SQ. MTS. (HOLLOWPLINTH) (C9) 15.60 X 3.00 = 46.80 SQ. MTS. (HOLLOWPLINTH)	
	136.74	137.39	137.39
OTHER	@ 30% OF 683.70	(B1) 38.02 X 3.00 = 114.06 SQ. MTS. (HOLLOWPLINTH) (B2) 4.12 X 5.18 = 21.34 SQ. MTS. (HOLLOWPLINTH) (B3) 6.27 X 3.95 = 24.77 SQ. MTS. (HOLLOWPLINTH) (B4) 04.35 X 5.18 = 22.53 SQ. MTS. (BASEMENT) (B5) 6.70(3.29+2.50)/2 = 19.40 SQ. MTS. (BASEMENT) (B6) 1.93 X 3.38 = 06.52 SQ. MTS. (BASEMENT)	
	205.11	208.62	208.62
CAR	@ 50% OF 683.70	(A1) 5.17 X 5.44 = 28.12 SQ. MTS. (HOLLOWPLINTH) (A2) 7.74 X 3.13 = 24.22 SQ. MTS. (HOLLOWPLINTH) (A3) 10.90 X 3.13 = 34.12 SQ. MTS. (HOLLOWPLINTH) (A4) 9.58 X 3.17 = 30.37 SQ. MTS. (HOLLOWPLINTH) (A5) 9.20 X 10.50 = 96.60 SQ. MTS. (BASEMENT) (A6) 5.57 X 11.95 = 66.56 SQ. MTS. (BASEMENT) (A7) 6.63 X 9.45 = 62.65 SQ. MTS. (BASEMENT)	
	341.85	342.64	342.64
TOTAL	683.70	688.65	688.65

PARKING AREA TABLE (RESIDENTIAL)		REQ. SQ. MTS.	TOTAL PROVI.
TOTAL USED F.S.I. AREA = 7238.65 - 1367.41 (COMM.F.S.I.)			
TOTAL USED F.S.I. AREA = 5871.24			SQ. MTS.
TOTAL REQ. PARKING AREA	REQ. @ 20%	1174.25	-----
TOTAL PROVI. PARK. AREA		-----	1188.16
REQ. CAR PARKING AREA	REQ. @ 50%	587.125	-----
PROVI. CAR PARK. AREA	(A3)	-----	587.19
REQ. OTHER PARK. AREA	REQ. @ 40%	470.00	-----
PROVI. OTHER PARK. AREA "	(B2+B3+B4+B5+B6)	-----	477.84
REQ. VISITOR'S PARKING AREA	REQ. @ 10%	117.425	-----
PROVI. VISITOR'S PARK. AREA	(C3)	-----	123.13
<u>VISITOR PARKING AREA(RESI.)</u>			
(C10) 14.74 (4.84+1.06)/2 = 43.48 SQ. MTS.	(HOLLOWPLINTH)		
(C11) 8.49 (4.20+3.13)/2= 31.12 SQ. MTS.	(HOLLOWPLINTH)		123.13
(C12) 1.94 X 3.26= 6.56 SQ. MTS.	(HOLLOWPLINTH)		
(C13) 10.93(4.97+2.71)/2 = 41.97 SQ. MTS.	(HOLLOWPLINTH)		
<u>OTHER PARKING AREA(RESI.)</u>			
(B7) 9.32(4.63+3.42)/2 = 37.51 SQ. MTS.	(BASEMENT)		477.8
(B8) 4.37 X 1.71 = 07.47 SQ. MTS.	(BASEMENT)		
(B9) 7.54 X 6.99 = 52.70 SQ. MTS.	(BASEMENT)		
(B10) 45.76 X 3.64 = 166.57 SQ. MTS.	(BASEMENT)		
(B11) 6.33 X 5.28 = 33.44 SQ. MTS.	(BASEMENT)		
(B12) 16.56 X 6.66 = 110.29 SQ. MTS.	(BASEMENT)		
(B13) 7.40 X 9.44 = 69.86 SQ. MTS.	(BASEMENT)		
<u>CAR PARKING AREA(RESI.)</u>			
(A8) 10.12 x 5.44 = 55.05 SQ. MTS.	(HOLLOWPLINTH)		587.1
(A9) 6.77 X 8.51 = 57.61 SQ. MTS.	(HOLLOWPLINTH)		
(A10) 17.37(8.57+6.45)/2 = 130.45 SQ. MTS.	(HOLLOWPLINTH)		
(A11) 9.58 x 5.53 = 52.98 SQ. MTS.	(HOLLOWPLINTH)		
(A12) 5.57 x 4.70 = 26.18 SQ. MTS.	(HOLLOWPLINTH)		
(A13) 10.69(5.13+3.12)/2 = 44.10 SQ. MTS.	(BASEMENT)		
(A14) 11.86(5.65+3.38)/2 = 53.55SQ. MTS.	(BASEMENT)		
(A15) 9.58 x 8.75 = 83.83 SQ. MTS.	(BASEMENT)		
(A16) 15.17 x 5.50 = 83.44 SQ. MTS.	(BASEMENT)		

PARKING LAYOUT PLAN SHEET NO :- 5/5

PLAN SHOWING PROPOSED RESI.+COM. (MIXED) BUILDING ON F. P. NO.38/3/2 OF T.P.S.NO:-119(NIKOL) DRAFT SANCTIONED [R.SUR. NO. 117/3 (O.P.NO-38/3/2)OF MOJE : NIKOL , TA : ASARWA, DIST:AHMEDABAD.]
ZONE AS PER RDP 2021:-RESIDETIAL-1(ONE) R1
SCALE :- 1.00 CM = 1.00 MT.
USE :RESIDENCE(DWELLING-3)+COMM.(SHOP)MIXED TYPE USE

DOOR SCHEDULE OF DOOR & WINDOW		R.C.C. STAIR DETAILS	
WINDOW / VENT			
D = 1.00 X 2.13	W = 1.83 X 1.22	WIDTH	1.50 MT.
D1 = 0.91 X 2.13	W1 = 1.31 X 1.22	TREAD	0.25 MT.
D2 = 0.76 X 2.13	W2 = 1.22 X 1.22	RISER	0.17 MT.
D3 = 0.68 X 2.13	W3 = 1.17 X 1.22	GAP BETWEEN BALUSTER -	0.15 MT.
	W4 = 1.12 X 1.22		
	W5 = 1.07 X 1.22		
	W6 = 1.01 X 1.22		
	W7 = 0.96 X 1.22		
	W8 = 0.82 X 1.22		
	D+H = 1.57 X 2.13		
	V = 0.61 X 0.81		
	V1 = 0.37 X 0.81		
	V2 = 0.29 X 0.61		
	G = OPEN GAP		

COLOUR NOTE :	LIFT DETAIL
PROP. WORK	MINIMUM CAPACITY 6 PERSONS.
PROP. DRAINAGE 	DOOR MINIMUM WIDTH 0.90 MTS.
CHARGEABLE F.S.I. 	1.00 MTS. HEIGHT OF HANDRAIL IN LIFT C

OWNER: હરેશભાઈ નાગજીભાઈ રામાણી
અરદિભાઈ કાળુભાઈ શંકર
વશરામભાઈ મોહનભાઈ બગડીયા
ધીરુભાઈ છગનભાઈ દુથાત
ના પાવર ઓફ એર્ટીનો હોલડર

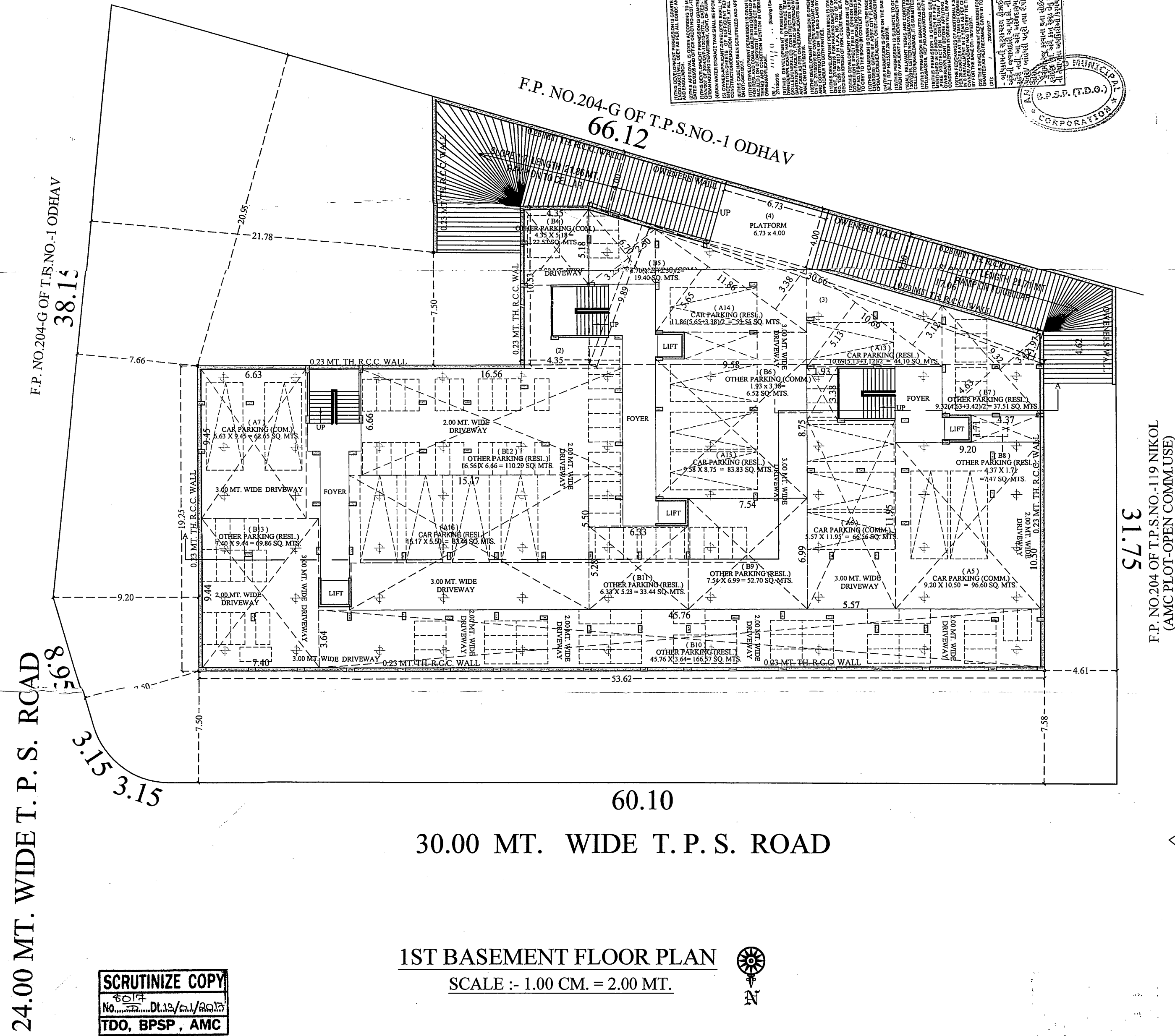
तया पात
 रमेशभाऊ पोपटभाऊ धीरपरा

 KIRAN N. PATEL
 20, RADHE TENAMENT, MARODA, A/BA/1
 AMIC LIC No. ER 0745266420 R
 AMIC LIC No. CW 0520100047 R
 AMIC LIC No. SD 0455260120
 For, ARTH DEVELOPERS
 DEV 657210221
 मरेश कुमार म्हा. धा. प.
 PARTNER

ENGINEER/C.O.W.:-	DEVELOPER:-
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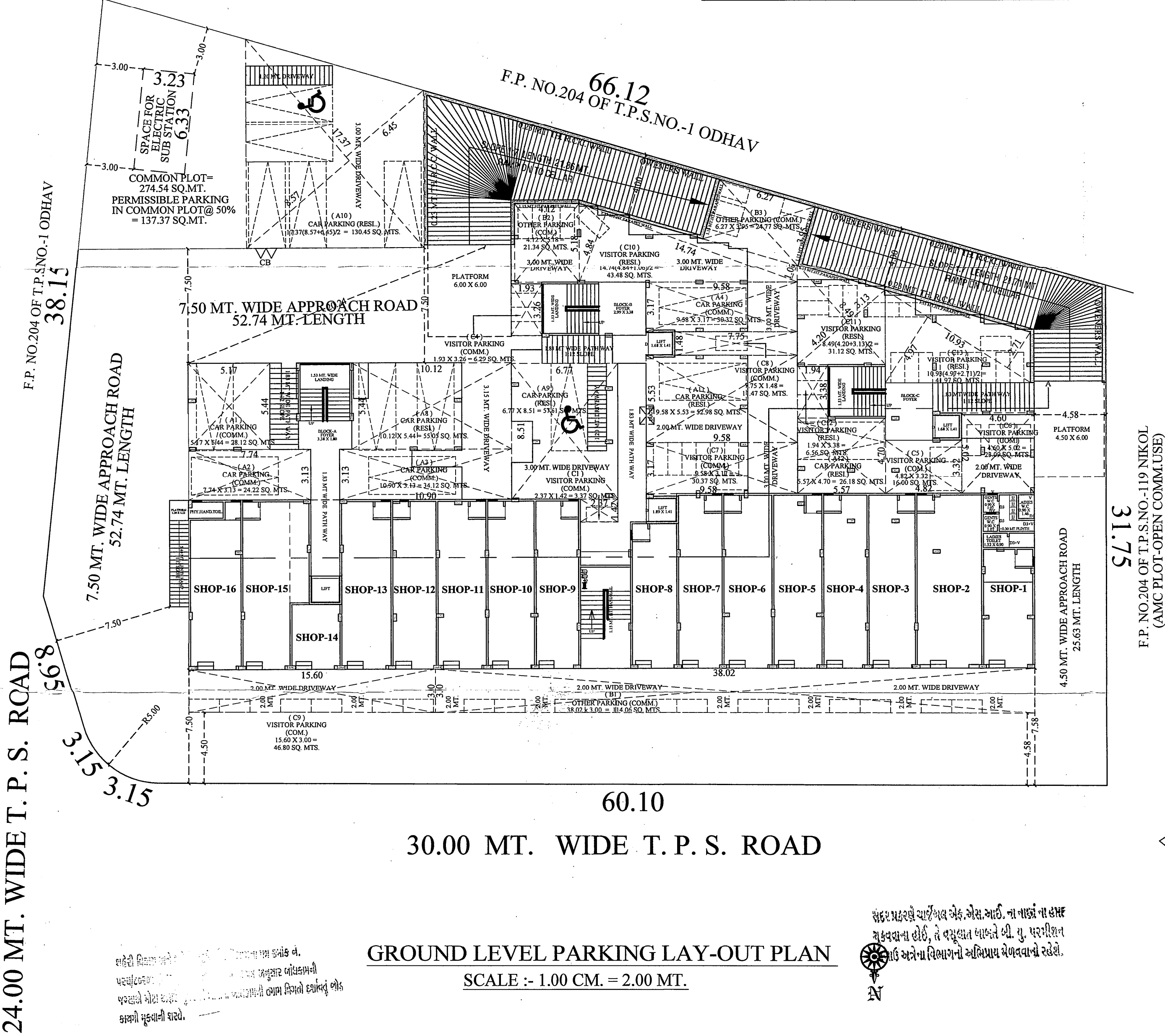
Mr. N. P. Parmar
N. P. PARMAR
B. E. (Civil)
AMC/Lic No SD-0360160921 R?
10, Pathik Society,
Naranpura, Ahmedabad-13

STR. ENGINEER:



1ST BASEMENT FLOOR PLAN
SCALE :- 1.00 CM. = 2.00 MT.

SCRUTINIZE COPY
 No. ४०१७ Dt. १३/०१/२०१७
TDO, BPSP, AMC



GROUND LEVEL PARKING LAY-OUT PLAN
SCALE :- 1.00 CM. = 2.00 MT.

સંસ્કરણ પ્રકરણે ચાઈ બલ એફ. એસ. આઈ. ના નાનાં ના હમ
ચકવવાના હોઈ, તે વસૂલાત બાબતે બી. યુ. પરમીશન
આઈ અને ના વિભાગની અભિપ્રાય મેળવવાનો રહેશે

[illegible]

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