

**INSTRUCTIONS TO BE FOLLOWED FOR AUTOCAD DRAWING**

(Please follow the color code for each and every item)

**General:**

1. Drawing must be drawn in 1:1 scale.
2. Drawing must be saved in '*model*' space and no '*layout*' should be defined.
3. No other elements in the drawing should be drawn using the color code as specified in Annexure –II
4. All the instructions with corresponding color codes are again summarized in the Annexure III
5. Doors/ windows/ furniture/ columns/ beams/ Landscape elements if shown in the drawing should be drawn in '*block*'.
6. '*Block*' should not be used in the drawing, excepting the items mentioned above.
7. All the floors starting from ground to the last floor with the assigned color of each of the floor should be superimposed in a single drawing.
8. All the texts representing block name, building name must be drawn in single line text.
9. Each file should contain single type of block details.
10. Drawing content with assigned code should not be repeated in any of the drawing of particular premise using the same color code.
11. The folder containing all the drawings which is to be uploaded should be named as the premises no i.e. (XX-XXXX) format.
12. All the file names should start with premises No., i.e. (XX-XXXX) format.
13. Following instructions should be strictly followed in case of multiple blocks/buildings —
  - a. A master plan drawing should contain all the information details about car parking, open space, internal road, plot dimension, building names.
  - b. Block drawing details should be in a separate file and should contain the information about block height, block type and floors areas.
  - c. Buildings of similar design in all respect are termed as 'Block' which should be represented in alphabetical type order such as Block 'A', Block 'B'. The nomenclature of every block within premises should start with 'A', even if there is only single block within the premises it should also be named as 'A'. The buildings under each type of block should be represented in alpha numerical order e.g. A1, A2, A3...etc.
  - d. The name of the buildings should be mentioned in text format in color 220 on to the plan representing the building in the master plan drawing.
  - e. The block type (color 220) should be mentioned in the nameplate of the corresponding block detail drawing.
14. Drawing should be done in AUTOCAD version 4.0/ 5.0. Even if, it is drawn in any other version, other than the specified, it should be, saved as in the above mentioned version before both upload and checking.

## COLOR CODE DETAILS

<b>Plot area &amp; Ground coverage area</b>	a.	Plot area must be demarcated using poly line (enclosed) and the color of the poly line should be 240.
	b.	Ground coverage area must be demarcated using poly line (enclosed) and the color of the poly line should be 230.
<b>Plot Side Dimension</b>	c.	Front side must be drawn in color 13 and using poly line/line.
	d.	Rear side must be drawn in color 23 and using poly line/line.
	e.	Side 1. side must be drawn in color 33 and using poly line/line.
	f.	Side 2. side must be drawn in color 43 and using poly line/line.
<b>Floor Area Details</b>	Principal use	a. Must be drawn in layer named “principal”. b. Area considered as principal use ,must be drawn in poly-line and colored by the range of color from 100 to 150 <i>Ex.- the color of the poly-line representing the ground floor is 100.</i> c. Area are not to be consider or like to subtracted from principal use, to be drawn in same color as colored for the principal use, with the line thickness 0.5 d. Mezzanine floor must be drawn in color 93 and using poly line. And must be drawn in layer named “principal” e. Mezzanine floor Area are not to be consider or like to subtracted from principal use, to be drawn in same color as colored for the principal use, with the line thickness 0.5 .
	Mixed use	a. Must be drawn in layer named “mixed”. b. Other instructions are same as Principal use.
	Facility	a. Must be drawn in layer named “facility” b. Other instructions are same as Principal use.
	Utility	a. Must be drawn in layer named “utility” b. Other instructions are same as Principal use.
<b>Open Space System</b>	Open Space for single building	a. Front open space must be demarcated as a line/poly line in color 53. b. Rear open space must be demarcated as a line/poly line in color 63. c. Side 1 open space must be demarcated as a line/poly line in color 73. d. Side 2 open space must be demarcated as a line/poly line in color 83.
	Open space for multiple building	a. Front open space must be demarcated as a line/poly line in color range of 53-62. b. Rear open space must be demarcated as a line/poly line in color range of 63-72. c. Side 1 open space must be demarcated as a line/poly line in color range of 73-82. d. Side 2 open space must be demarcated as a line/poly line in color range of 83-92. e. Mention the building name (e.g. A1, A2, B3, C9...etc.) with that line/poly line representing the open spaces in same color.

	Inter space for multiple building	<ul style="list-style-type: none"> <li>a. To represent a inter space you have to draw a line between two lines.</li> <li>b. Put the names of the buildings (A1, A2, B3, C7...etc.) by the side of the building line.</li> <li>c. Make groups of these three elements (one line and two text elements representing the building names.)</li> <li>d. Do not create any other group to represent something else.</li> </ul>
<b>Building Height</b>		<ul style="list-style-type: none"> <li>a. Building height must be demarcated using line/poly line in the drawing.</li> <li>b. The color of the building height is 250.</li> <li>c. For only one block in the premises the building height must put only once.</li> <li>d. For multiple blocks in the premises the building height put in each block detail drawing with no repetition.</li> </ul>
<b>Car parking Details</b>		<ul style="list-style-type: none"> <li>a. In drawing the car must be indicated as Triangle and drawn using poly line</li> <li>b. Individual cars should be drawn in color 25.</li> <li>c. Cars within the cover region drew using line thickness 0.5.</li> <li>d. Cars within the open region drew using line thickness 0.25</li> <li>e. Covered car parking areas including driveway should be shown using enclosed poly-line in color 45 with line thickness 0.25.</li> <li>f. Any area need to be subtracted from covered car parking areas should be drawn in color 45 with line thickness 0.50.</li> <li>g. All these details should be drawn in a single file.(preferably in master plan drawing)</li> </ul>
<b>Internal Road</b>		<ul style="list-style-type: none"> <li>a. Length of the Internal Road should be drawn in color 46 using poly line along the center of the road.</li> <li>b. The width of the internal road should be demarcated as a line having color 47.</li> </ul>
<b>Basement</b>		<ul style="list-style-type: none"> <li>a. Service area in basement must be drawn in color 96 (for first level basement) and 97 (for second level basement).</li> <li>b. Parking area in basement including driveway must be drawn in color 98 (for first level basement) and 99 (for second level basement)</li> <li>c. Basement for floor must be drawn in color 200 (for first level basement) and 201 (for second level basement)</li> </ul>

**Note: - 1. AutoCAD version 2004/ 2005/ 2006 must be installed to run the OPS software.**

**2. The AutoCAD drawing when prepared for online submission should not use any color other than white for any layer.**

**3. No hatch should be done anywhere in the sanction drawing.**

**4. All the floor plans should contain detailed dimension.( mentioning room sizes only is not enough) .**

## INSTRUCTIONS AT A GLANCE

Checking Item		Category of Values	Color Code (AutoCAD color Pallet)	Selection Basis of...
Plot Area	:	Area	240	Poly Line
Front Side	:	Length	13	Line/Poly Line
Rear Side	:	Length	23	Line/Poly Line
Side 1 Side	:	Length	33	Line/Poly Line
Side 2 Side	:	Length	43	Line/Poly Line
Basement (Floor)2	:	Area	201	Poly Line
Basement(Service)2	:	Area	97	Poly Line
Basement(Parking)2	:	Area	99	Poly Line
Basement (Floor)1	:	Area	200	Poly Line
Basement(Service)1	:	Area	96	Poly Line
Basement(Parking)1	:	Area	98	Poly Line
Ground Floor Service	:	Area	95	Poly Line
Mezzanine Floor	:	Area	93	Poly Line, Layer name 'principal'
Mixed for Floor(0-50)	:	Area	100-150	Poly Line, Layer name 'mixed'
Predominant for Floor (0 – 50)	:	Area	100-150	Poly Line, Layer name 'principal'
Facility Area (0 – 50)	:	Area	100-150	Poly Line, Layer name 'facility'
Utility Area (0 – 50)	:	Area	100-150	Poly Line, Layer name 'utility'
Ground Coverage Area	:	Area	230	Poly Line
Front Open Space	:	Length, text	53(53-62)	<b>Line/Poly Line and text represent the corresponding building name.</b>
Rear Open Space	:	Length, text	63(63-72)	<b>Line/Poly Line and text represent the corresponding building name.</b>
Side 1 Open Space	:	Length, text	73(73-82)	<b>Line/Poly Line and text represent the corresponding building name.</b>
Side 2 Open Space	:	Length, text	83(83-92)	<b>Line/Poly Line and text represent the corresponding building name.</b>

Inter Space	:	Length,text	Other than mentioned color code	<b>Making groups of line and texts indicating building name.</b>
Building Height	:	Length	250	Line/Poly Line
Number of Car Parking	:	Count	25	Poly Line
Car Parking area(Covered)	:	Area	45	Poly Line
<b>Length of critical Internal Road</b>	:	Length	46	Poly Line
<b>Width of critical Internal Road</b>	:	Length	47	Poly Line
Block Name	:	Text	220	Text

**REQUIREMENTS FOR SERVICE DRAWING**

1. Water demand calculation will have to be done assuming 200 lpcd for residential population and 65 lpcd for floating population.
2. Sewerage line & drainage line will have to be shown separately in one drawing sheet and water supply line to be shown in another drawing sheet.
3. Position of departmental (P.H.E) water pipe line, manhole, master trap, sewerage line etc. to be shown in the drawings along with connection with internal service lines.
4. For plots more than 1500 sqm. where the length of sewer and drainage line are significant, invert levels at intermediate points are to be shown.
5. Capacity and dimensions of O.H.R, U.G.R and Fire Tank should be clearly given along with plan, elevation and cross section in the drawing and that should satisfy the required demand.
6. Final approval of the service drawings are to be given by the P.H.E Department.
7. Location of UGR should be such that the PHED/WBHIDCO/NKDA authorities will have free access to the said reservoir at any time.
8. Top of Manhole at least 300mm above adjacent GL, overflow line should be above GL.

## REQUIREMENT FOR WATER SUPPLY

1. Calculation of water demand:
  - a) In residential building – number of tenement per floor and total number of person in building and requirement @ 200 liter/cap/day.
  - b) For commercial building – Total carpet area of the building and number of person @10 sqm/person and 65 liter/cap/day.
2. According to the demand calculation volume of reservoir should be checked with a total capacity of one day's requirement and capacity of O.H.R is 50% of UGR.
3. Portion of ferrule connection shown in the drawing should be checked with P.H.E's water supply line or pipe line
4. Within the premises there should be at least 4" X 4" free space over the supply line for installation of water meter and that should be free approachable for any one.
5. The R.L on top of manhole covers such that there should not be any chance for contamination of UGR water by interpreting of surface run off in the UGR.
6. The overflow line from UGR should be at least 100 mm over than surrounding GL so that there would not be no chance of back flow of surface run off and contamination of UGR water.
7. There should be at least 300 mm free board in UGR from over flow line.
8. Over flow line should not be covered and while excess water from UGR drain out from the nearer saucer drain that should not covered so that its over flowing of water can be easily visible to any habitants.
9. Inlet line should be at least 50 mm above over flow line.

### **REQUIREMENT FOR SEWERAGE**

1. There should be separate line for sanitary sewage and storm drainage.
2. Sanitary sewage should be discharge in nearby plot manhole.
3. Storm drainage line should be discharge in nearby box drain.
4. Position of manhole shown in the drawing should be checked with P.H.E's drawing.
5. Invert level of the master trap should be given in the drawing and the R.L of outfall or discharge point should be same with the R.L of manhole or provision left by P.H.E.
6. Sanitary sewer line and storm sewer line should not intersect but if it is unavoidable then R.L of intersection point should be check and that should not be at same level.
7. Position of discharge point of storm drainage shown in drawing should be checked with P.H.E's drawing regarding existence of box drain at that point.