PreDCR User Guide (ZWCAD)

An Automatic solution for Approval of Building Proposal and Work Flow Management

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About the drawing protocol document

Municipal Corporation has planned to automate the building plan approval process by introducing AutoDCR system. AutoDCR software reads the CAD drawings submitted by architects and automatically produce the deviation report based on the control regulations prescribed by corporation.

The purpose of this document is to establish a set of guidelines to Architects for preparation of drawings to be submitted for taking Building Permission from corporation, Uniformity in the process of drafting of the drawings to be submitted for approval is required for automation of building approval system by introducing AutoDCR system.

The consultants/Architects should prepare the drawings keeping specific objects in specific layers with specific colors and text. The layers required to be generated with explanation of what is required to be drawn on which layer is described in this document. This document serves as a source of information on obtaining level of consistency in drafting and approval process focuses on both the theoretical and practical description of process flow and protocol to be used while preparing drawings for submission at corporation for Building Permission. The document explains use of PreDCR utility.

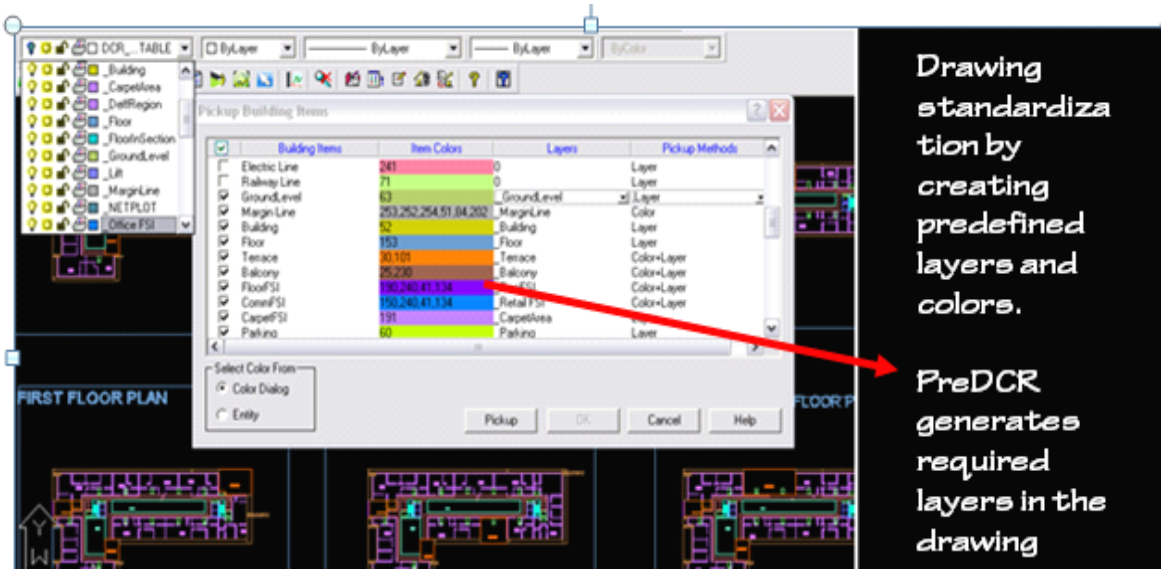
How to read this drawing protocol document?

This document should be read in conjunction with the building bye-laws which will be applicable for approval of a proposal. The reader of this document should have understood the applicable bye laws for scrutiny of a proposal. The reader should also be familiar with ZwCAD terminology and environment for better understanding of the system. It is more exploratory in nature than the specifications and contains sections to explain particular aspect of planning and designing.

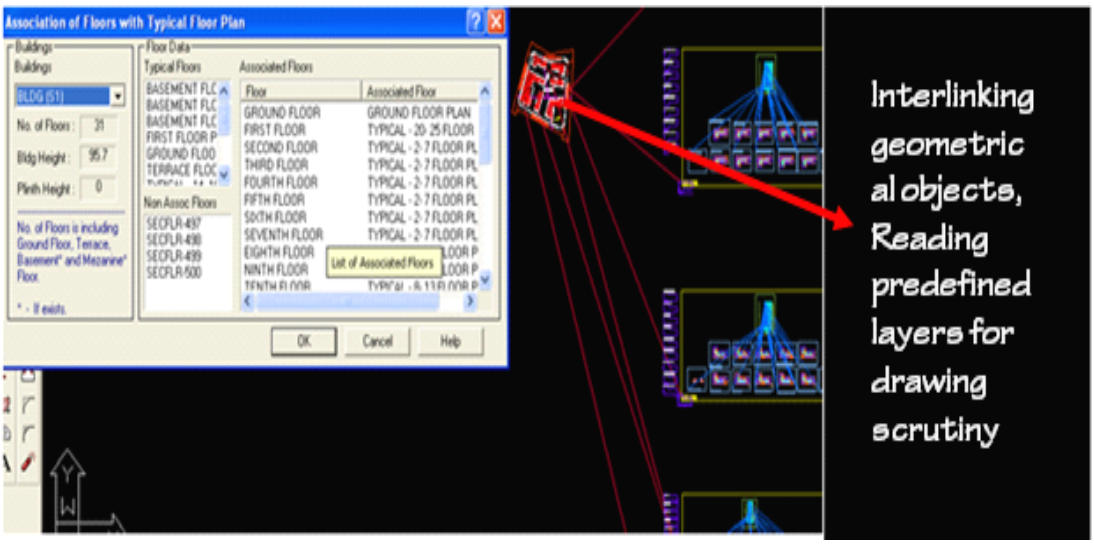
- ( )

Overview

AutoDCR is a unique and innovative approach to automate scrutiny of building proposals by reading CAD drawings. AutoDCR software needs preformatted drawings with some specifications. PreDCR is a software application used to create the architectural plan as per AutoDCR software requirements. It helps in standardization of drawings and helps in reducing time required for preparing submission drawings. It works under ZwCAD environment with additional menu & toolbar.



Using PreDCR commands user can create all the required layers in one click. Once all the layers are created in the drawing user can use ZwCAD commands to draw entities on the corresponding layers with the help of PreDCR software. Short commands are provided to activate any layer in PreDCR. PreDCR also helps in correcting drafting errors in the drawing. At any time user can verify if the drawn entities are properly closed or not, if proper name text has been written inside all closed poly or not etc. PreDCR will highlight all the failed entities if any.



Aims & objectives

To bring uniformity and standardization in submission drawing format.

To create error free drawing by auto-correction of drafting errors.

To Increase drafting speed and efficiency

To reduce drawing data redundancy.

To remove dimensioning and area calculation requirements from submission drawing format and auto-calculating areas in AutoDCR automatically.

Benefits of PreDCR

1) Standardization of submission drawings-Brings uniformity & standardization in submission drawing format. This software will correct some minor drafting errors and also provide list of failed entities with Auto-zooming facility so that user can easily locate the failed entities in the drawing.

2) Operational ease and convenience-Data redundancy is eliminated from the drawing. Only minimum required entities are to be drawn in the drawing as most of the data will be auto detected by the system from existing available data.

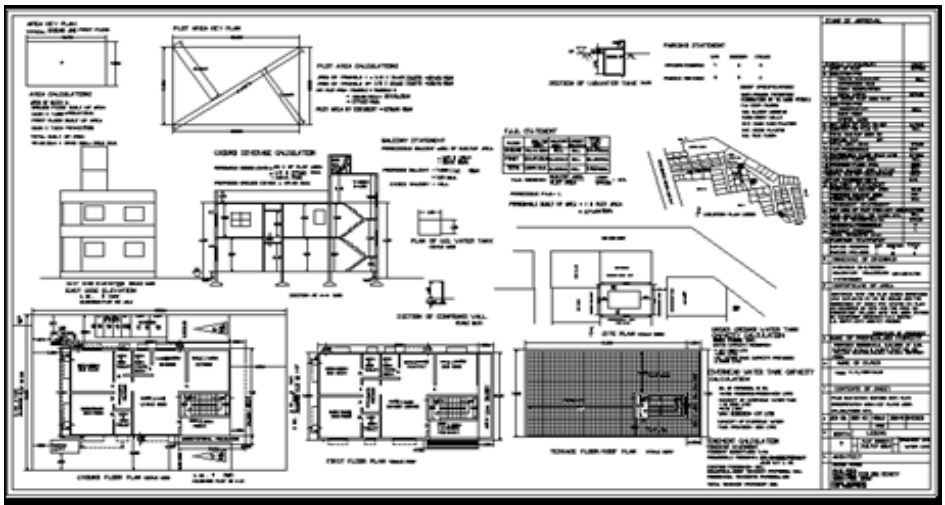
3) Increased speed and efficiency-PreDCR facilitates Auto insertion of many drawing entities like parking, door windows etc of required size and number. Test auto-insertion facility saves text typing

efforts. Auto-dimensioning and auto-calculation facility saves calculation efforts. Using this software user can create all the required layers at one click.

4) Accuracy - Accuracy in area calculations is achieved. Preparing Calculation tables, showing dimensions in the drawing is not required**.**

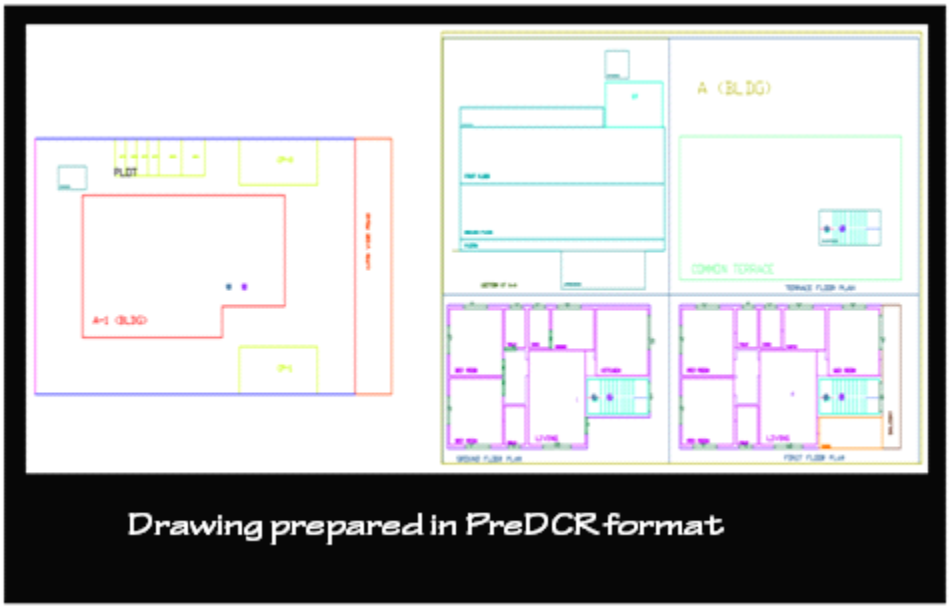
Drawing Formats

1) Conventional submission drawing format

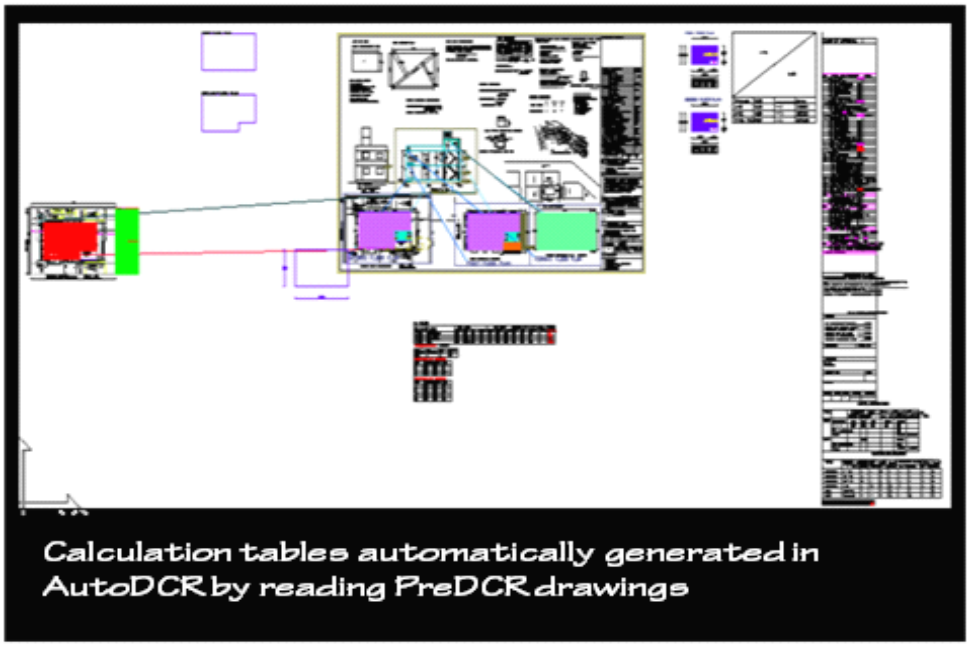


Conventional drawing submission format

2) As per PreDCR format specified by PreDCR



3) After scrutiny of drawing using AutoDCR-



Protocol Details

PreDCR is a **software** application used to create the architectural plan as per **AutoDCR** software requirements. It works under ZwCAD environment with additional menu & toolbar.

Using PreDCR commands user can create all the required layers in one click. Once all the layers are created in the drawing user can use ZwCAD commands to draw layout plan.

As per AutoDCR requirement all building items like proposed plot, proposed work should be drawn on the corresponding layers. Short commands are provided to activate any layer in PreDCR

At any time user can verify if the drawn entities are properly closed or not, if proper name text has been written inside all closed poly or not etc. PreDCR will highlight all the failed entities if any.

PreDCR can be used to modify/make and verify the existing or new architectural plan as per **AutoDCR** software requirements. Users are free to use ZwCAD commands and or PreDCR commands to achieve the main purpose which is.

System Requirements

- *Pentium IV or better (or compatible processor)*
- *1GB RAM(Minimum)*
- *USB Port*
- *Windows 98/2000/XP(32bit or 64bit)/Vista/Windows7(32bit or 64bit)*
- ZwCAD+ 2012 [version: 2013.03.31(11367)] Or ZwCAD+ 2014 [Version: 2013.10.25(17150)].

Installation

Installation of PreDCR software on your computer please follows the process given below.

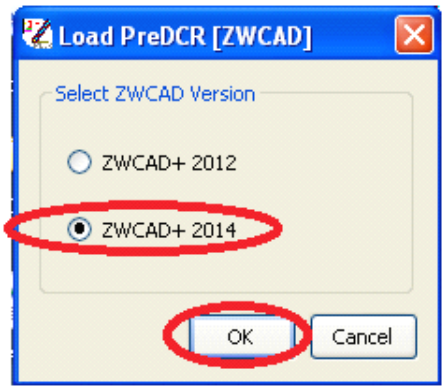
Download PreDCR (ZwCad) from online application, once you download, you will get zip file, you need to unzip that first and you will get “PreDCR_ (corporation name) [ZWCAD] _ (date).exe” file.

To start installation, double click on set up file, and follow the next steps in installer wizard to complete installation.

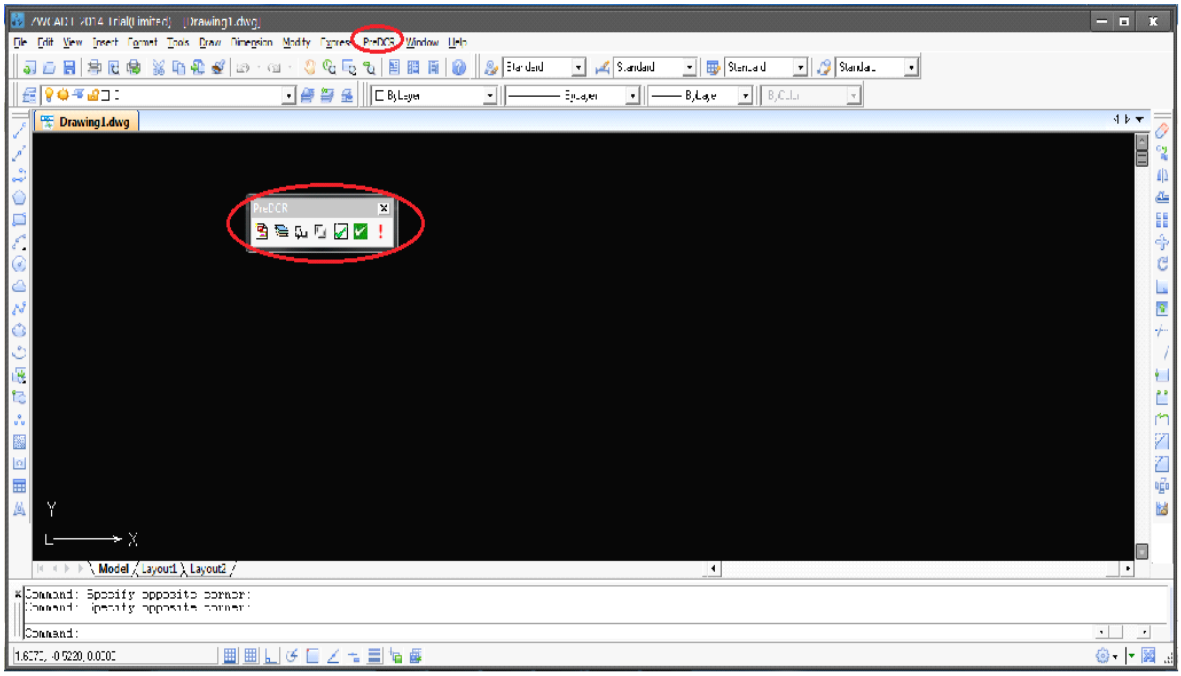
After successful installation, PreDCR shortcut would be placed on your computer desktop as shown below.

Figure 1: PreDCR shortcut on desktop

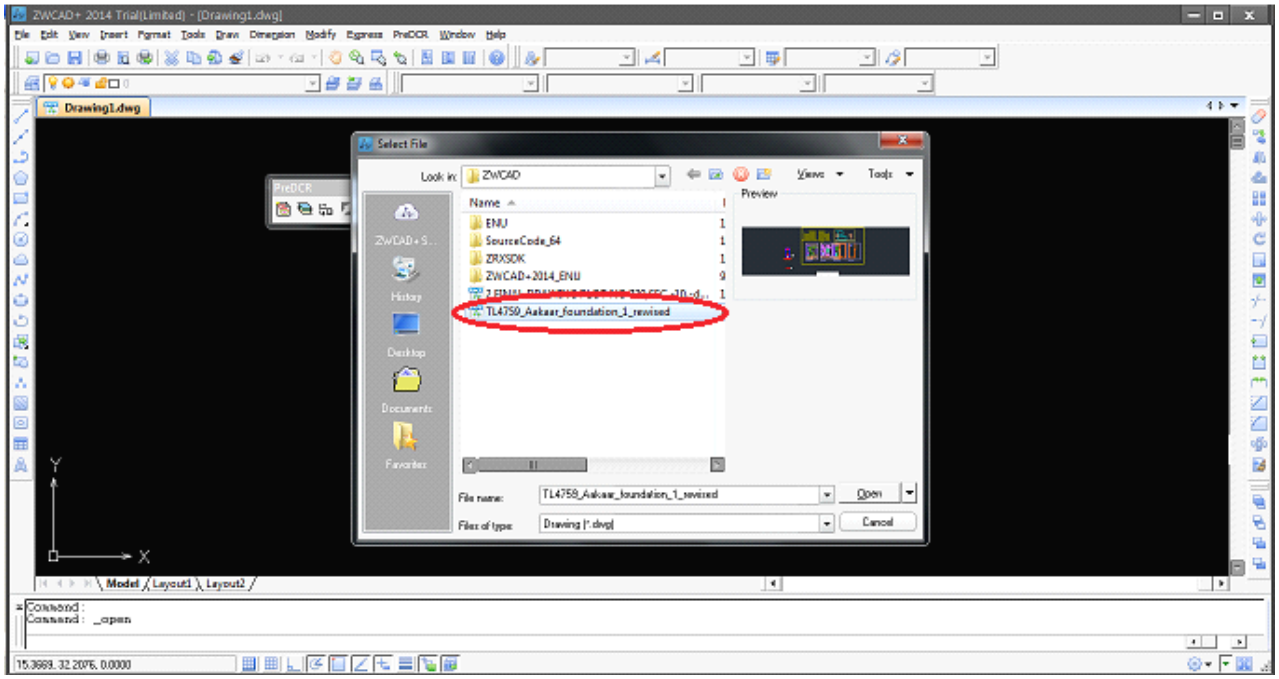
1) Open the PreDCR software for clicking on PreDCR menu on your desktop & select the ZwCad version & "OK".



2) After clicking on ok button, ZwCAD will be appeared on your screen with additional toolbar (i.e. PreDCR toolbar, see the screen below.)



3) Open the drawing file which you wish to convert in PreDCR format by open button. (See screen below)

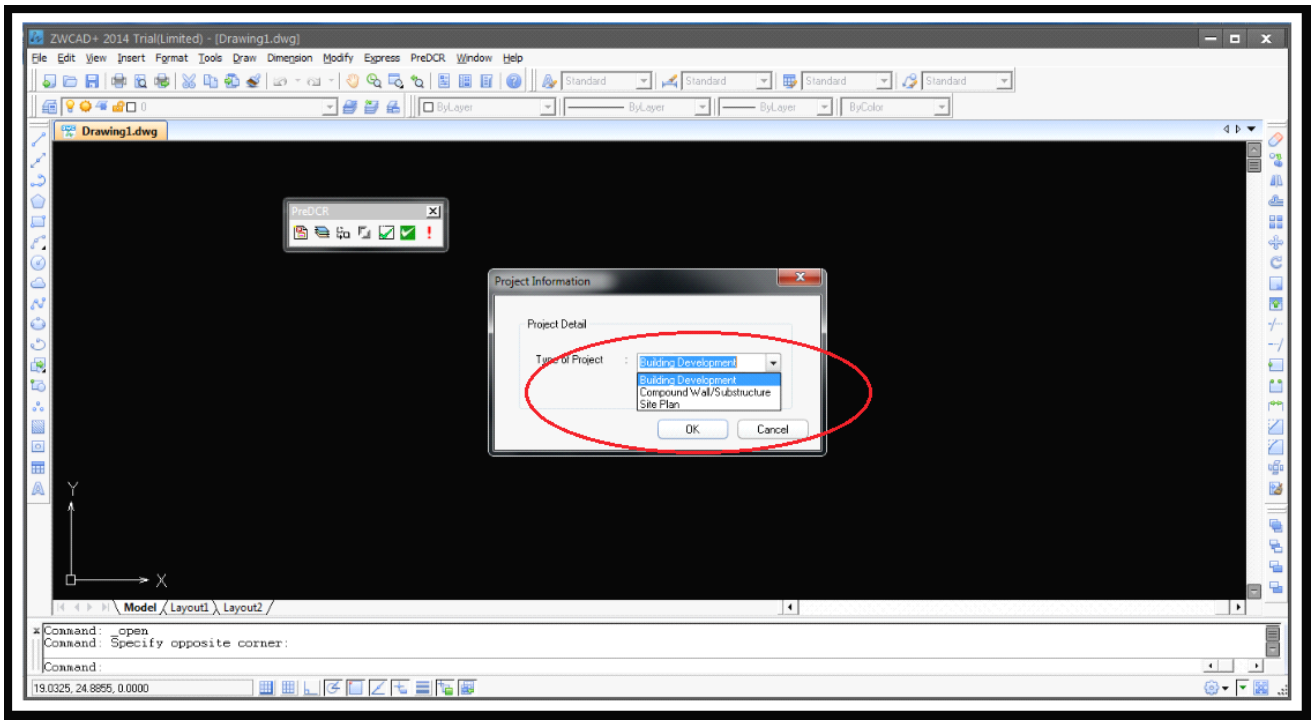


6) By using PreDCR toolbar first select the Type of Project that is "Building Development or Compound Wall/Substructure or Site Plan"

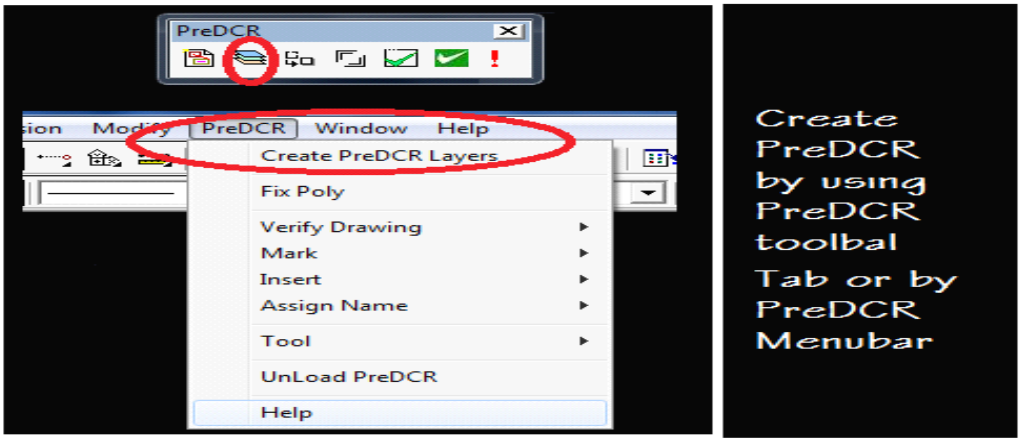
a) If Plot is already sanctioned & user have to take permission for the buildings only then select "Proposed Development."

b) If Proposal having only compound wall approval or only subsidiary structure approval without any main building then select that "Compound Wall/Substructure" option from the list.

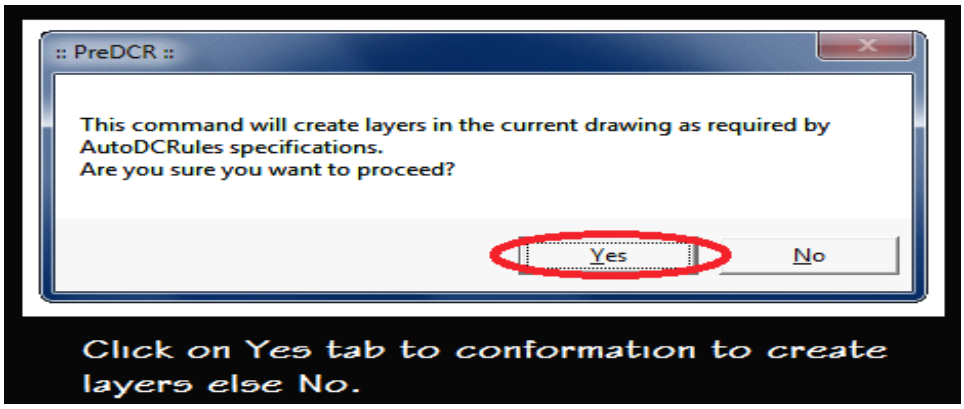
c) Only want site plan approval then select Site Plan option.



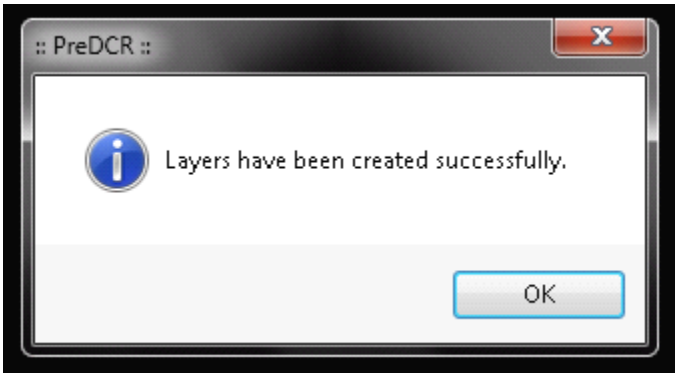
7) By using PreDCR toolbar "Create a PreDCR layer" that is second option in PreDCR toolbar.



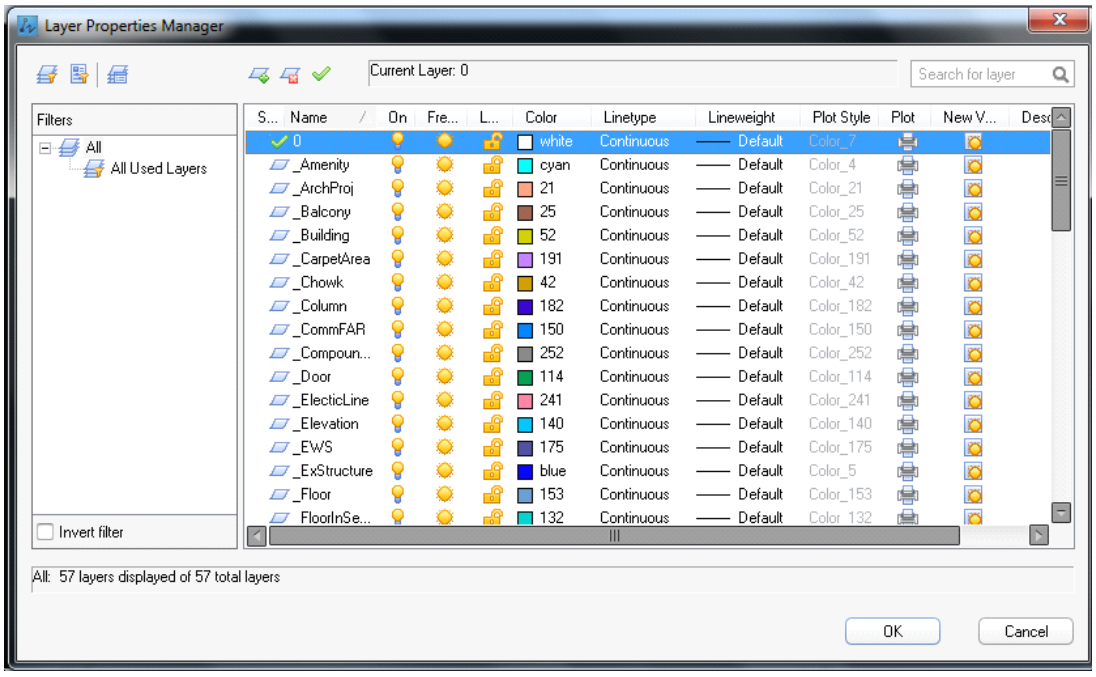
After clicking on Ok you will appear conforming massage to create layer, click on “Yes” tab to conform else “No”.



8) Once clicking on Yes button, layers have been created massage would come.



All layers would be automatically created in layer properties. You can see them by using layer command.



Now you can start the drawing conversion in PreDCR format.

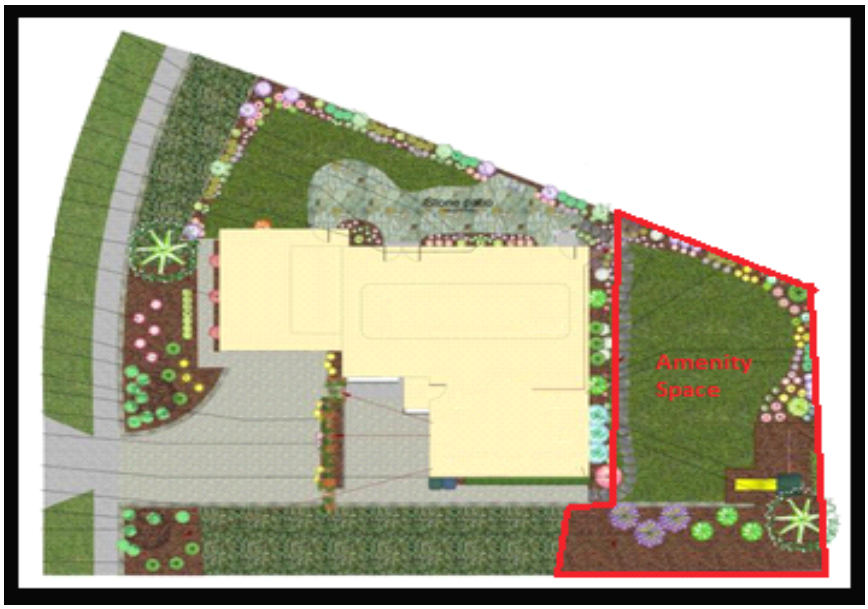
For Ex. Select current Layer “_ MainPlot" and draw plot boundary on same layer with poly line, also provide proper text for that. Next layer will be “_MainRoad” make it current and draw main access road on same with text. Now go to building line draw a building line on “_PropWork” layer. Next will be building level layer, i.e. “_ResiFAR” layer, draw BUA area on same layer, then carpet area on “_Carpetarea” layer and rooms on “_Room” layer. Assign room names by using assign name option from PreDCR. Then after insert Doors and Windows from Insert option and then next would be “_Floor” all floor area should on same layer, Floor sections on “_FloorInSection” layer, Stair area on “_Staircase” layer with trades, mark landings from mark option, etc. Draw all other layers on respectively on same portions.

:

Layer: _Amenity

Description:

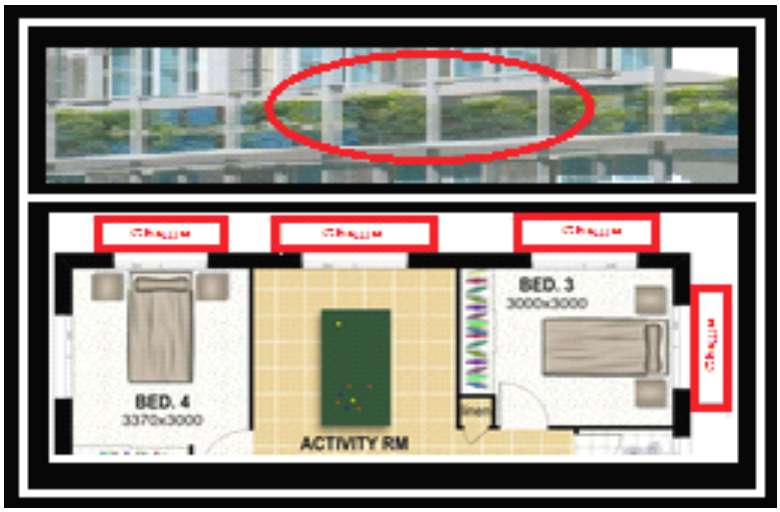
Amenity area can be defined as an open space that is used for active or passive recreational purpose. It must be inside plot. Show area which is reserve for utilities, services and conveniences inside Plot boundary.



Layer: _ArchProj:

Description :

This layer is used to represent various Architectural Projections in your Plan. Draw a Plotline on "_ArchProj" layer, and mark it according to specifications.



Layer: _Balcony

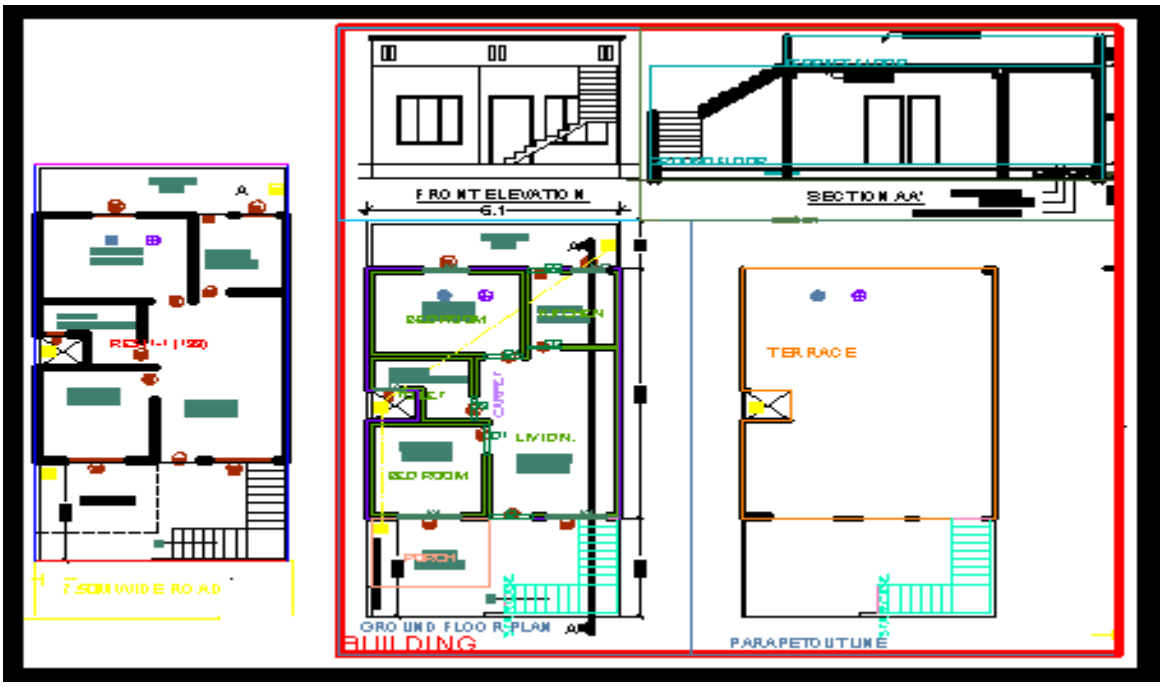
Description :

Draw balcony on "_balcony" layer which is a horizontal projection including parapet to serve as a sitting out place. Access to be provided each balcony. Name of balcony must be inside poly line on same layer.

Layer:_Building

Description :

All the entities related to building details should be grouped and drawn inside the polyline. As written above, dimension or area of this polyline has no meaning in AutoDCR. Unique text should be assigned to each building and footprints. You can specify identical buildings or wings by assigning same name to multiple footprints/wings.



Layer:_Carpet area

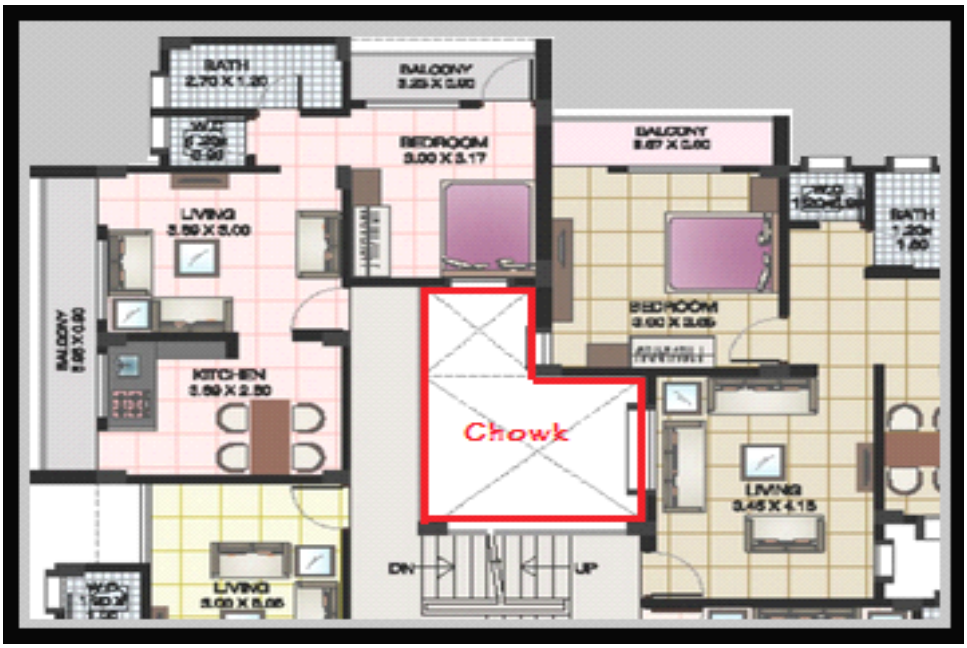
Description :

Draw carpet area as polyline which is a net usable floor area within a building excluding areas specifically exempted from floor area ratio, and provide text on same layer. Split tenements can be marked by prefixing 'split' word. In slum development project, carpet can be marked as slum and rehab tenements.

Layer:_Chowk

Description :

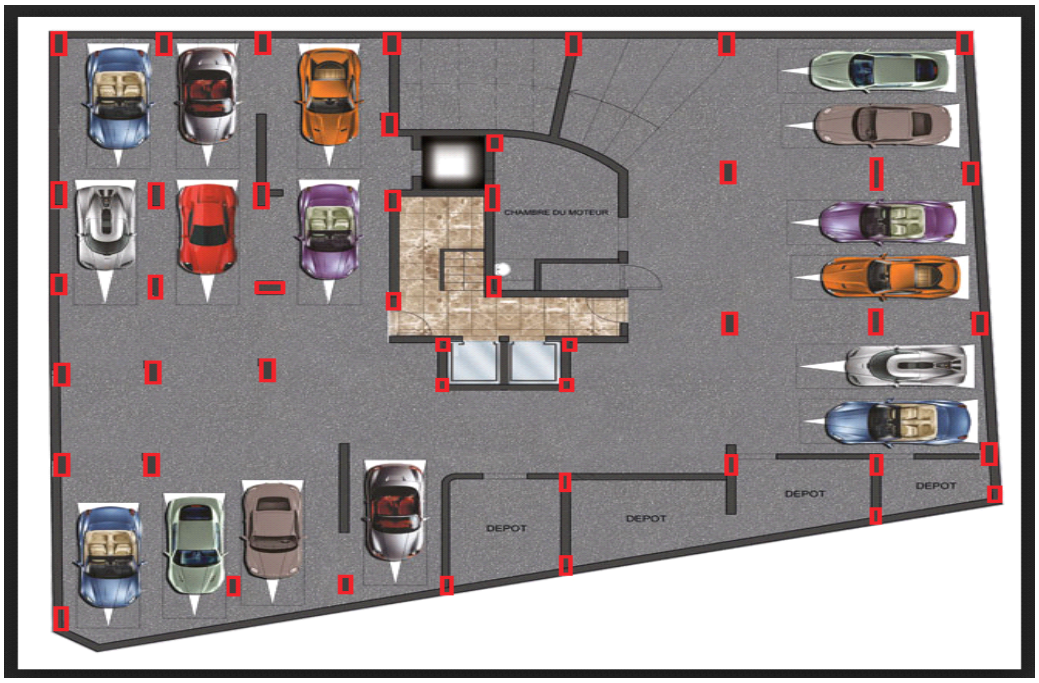
Draw a chowk as a polyline which is an enclosed space permanently open to the sky within a building at any level. From chowk we take ventilation to rooms. Provide text inside it on same layer, chowk should be inside building.



Layer:_Column

Description :

Column shall be drawn as closed polyline on "_Column" layer inside of parking floor.



Layer:_CommFAR

Description:

Draw a "_CommFAR" which is a area covered by a building on all the floors. This FAR layer is mainly used for commercial use building. Existing areas can be marked separately to differentiate them from proposed areas.

Layer: _Compound Wall

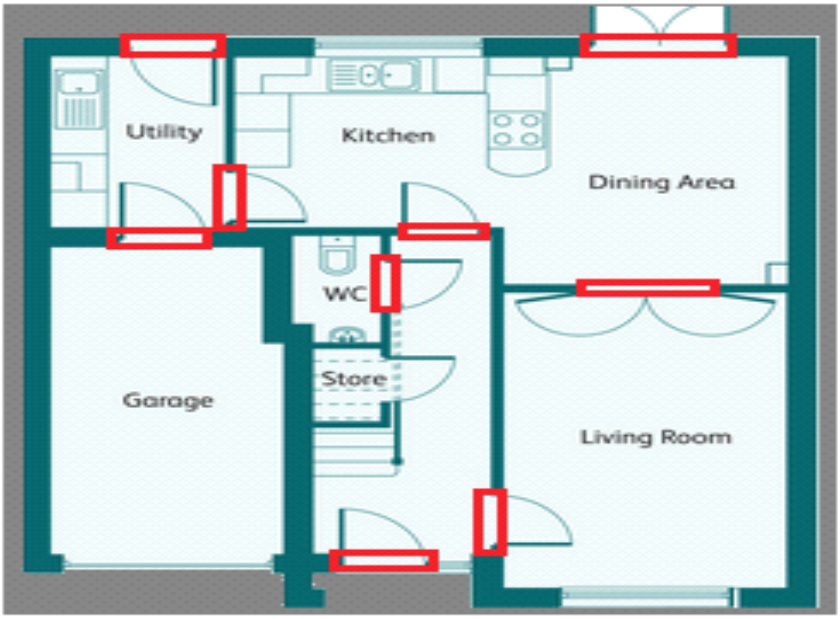
Description :

Draw a polyline on "_Compound Wall" layer with its text started with compound wall height, It should be inside or overlapping with Plot boundary.

Layer:_Door

Description :

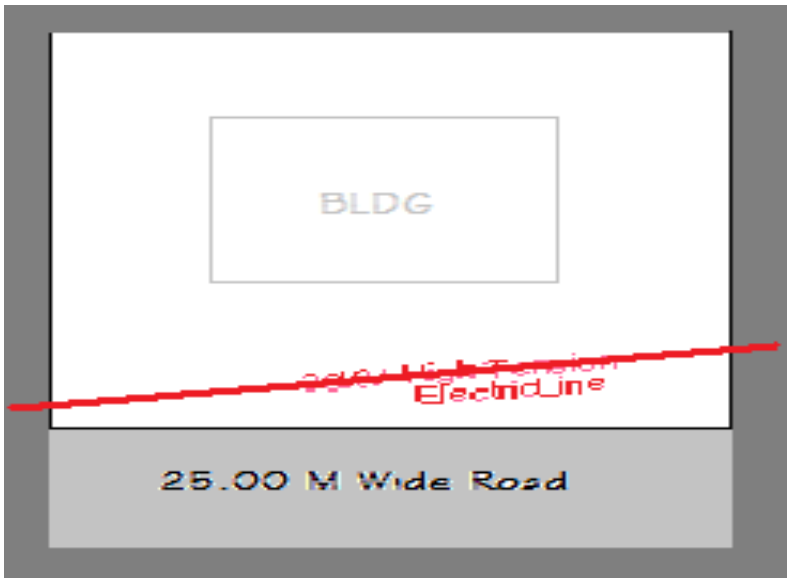
A door is an opening/closing structure used to block off an entrance, draw it as Polyline which is on "_Door" layer. Also you can define particular size and insert it.



Layer:_Electric Line

Description :

Electric line will be present in the layout plan and shall pass through plot entity as open polyline. Name of electric line shall start with its voltage capacity and text insertion point shall lies on its polyline.



Layer: _Elevation

Description :

Elevation to be drawn on "_Elevation" layer only for printing purpose. No regulations will be checked by reading this layer. The drawings on this layer need not to be drawn using poly lines.

Layer: _EWS

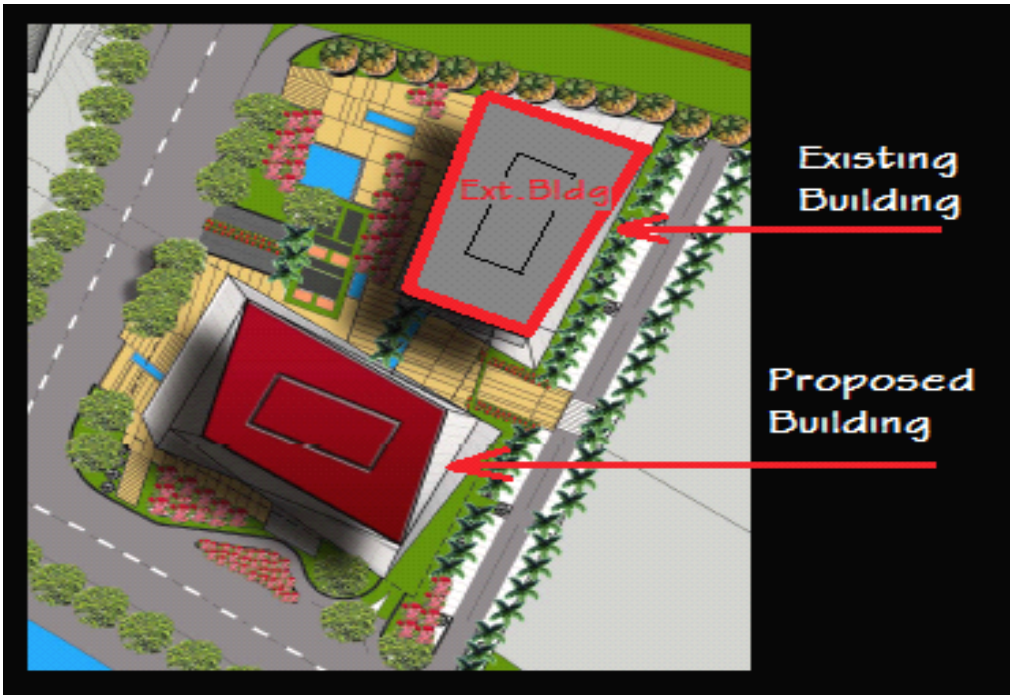
Description :

Draw "_EWS" layer as poly line to define area of individual EWS units.

Layer: _ExStructure

Description :

Draw an Existing structure/ancillary structure as polyline on "_ExStructure" layer and provide text on same layer, you can mark it as Existing structure as 'To be demolished' or 'to be retained and also as building or sub-structure'.

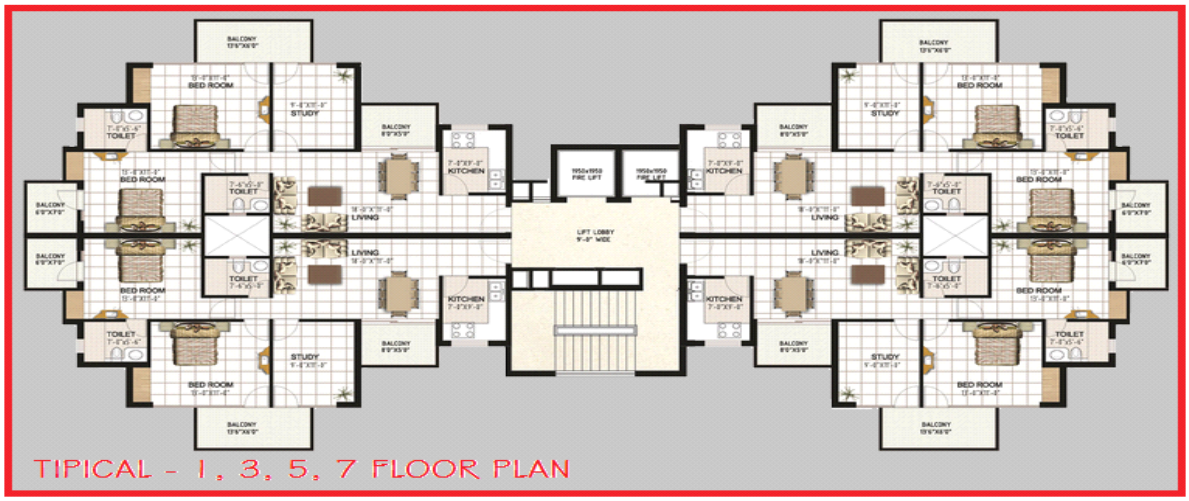


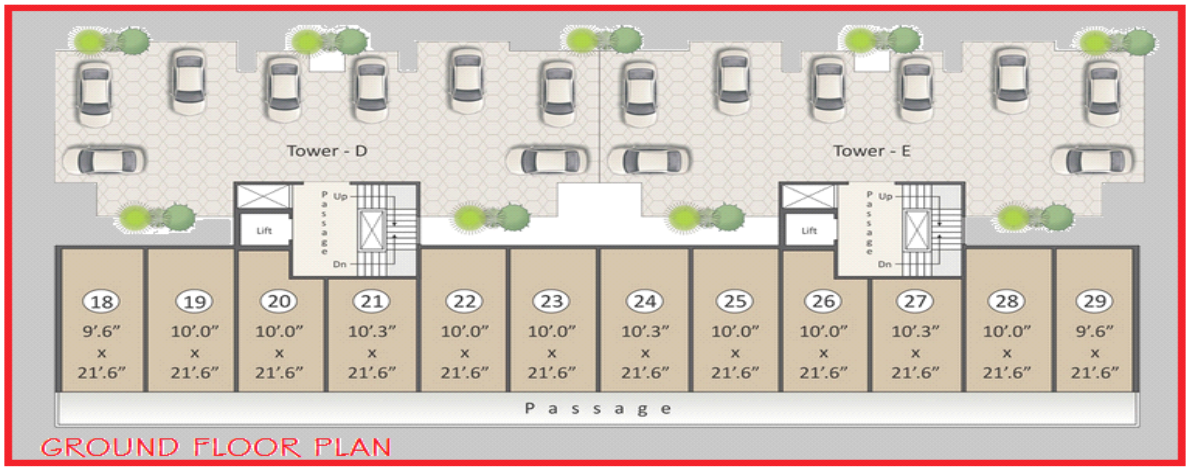
Layer: _Floor

Discription:

Draw a Floor as a polyline to show various floors including mezzanine and parapet wall outline. The floor at ground level with a direct access to a street or open space shall be called the

ground floor; the floor above it shall be termed as Floor 1 with the next higher floor being termed as Floor 2 and so on upward. Fllor names to be assigned to each floor and section of the floor. Separate polyline to be drawn to show each floor separately. While giving name to the typical floor then use a typical option from Assigned name.

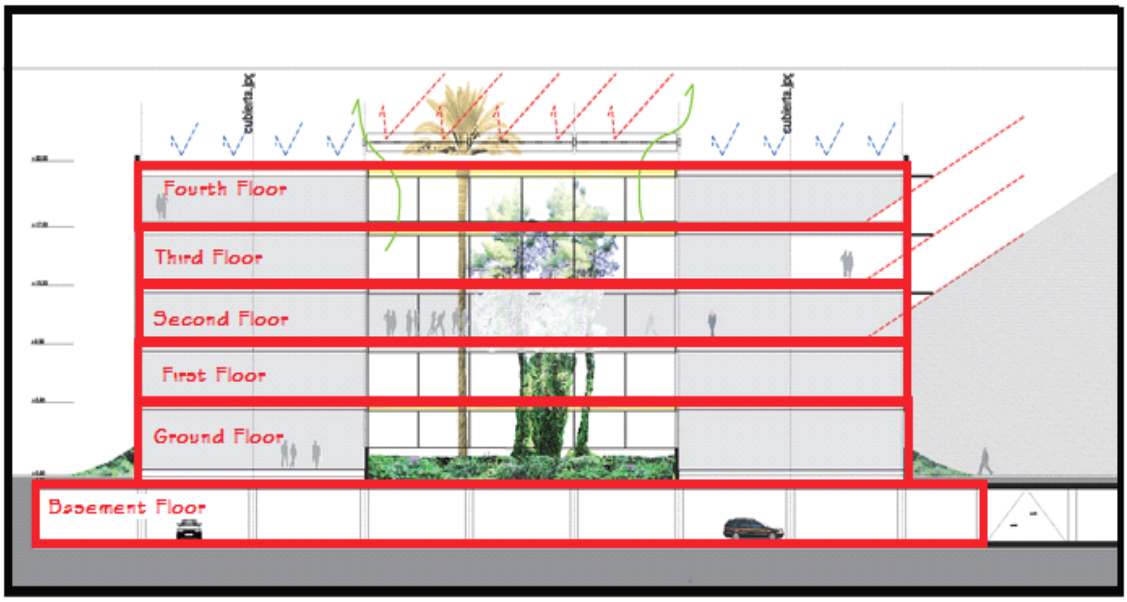




Layer: _FloorInSection

Description :

Draw floors on "_ FloorInSection" layer inside section, showing the height of that floor (slab top to slab top). Assign floor name to each floor in section. Parking Beam can be drawn on same layer. Inner entities no need to draw on PreDCR layers.



Layer: _Ground Level

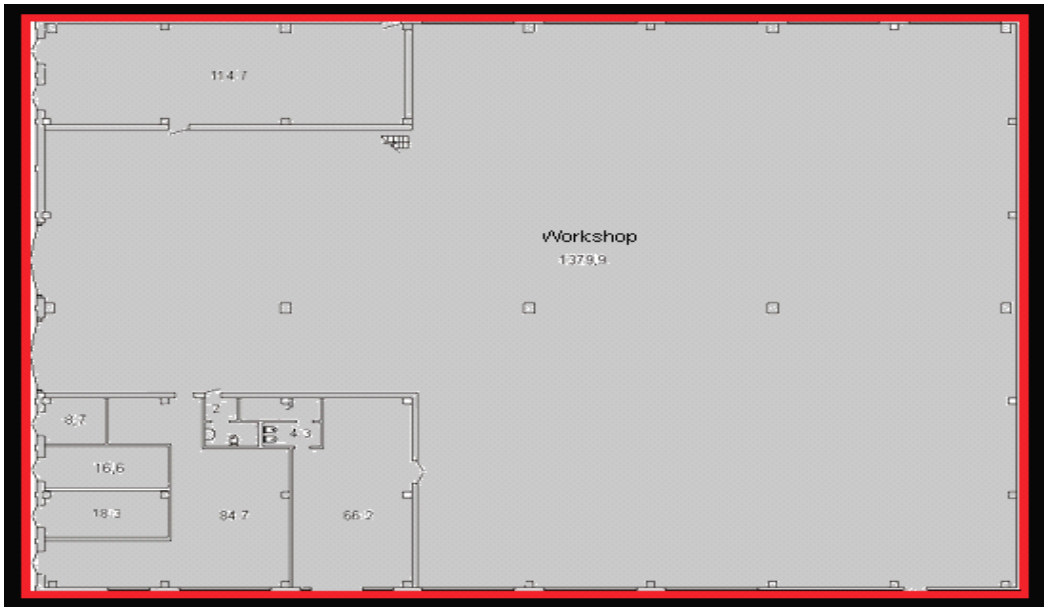
Description :

Draw the Ground level in section

Layer: _IndFAR

Description :

Draw a "_IndFAR" which is a area covered by a building on all the floors. This FAR layer is mainly used for industrial use building to demarcate floor area except projections area. Existing areas can be marked separately to differentiate them from proposed areas. Industrial building means building or part thereof wherein products or material are fabricated, assembled or processed such as workshops, factories, gas plants, mills, etc.



Layer: _Internal Road

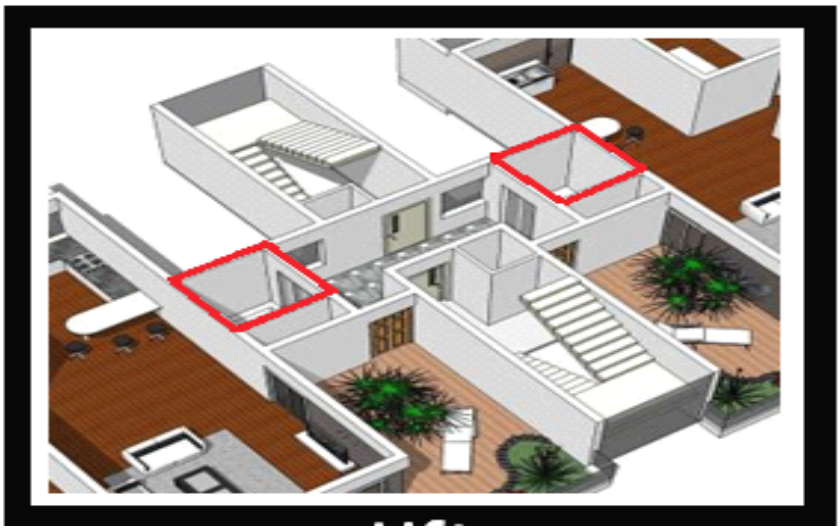
Description :

Draw internal road with text specifying its width on "_InternalRoad" layer, and draw a center line also with line type centre. It should be inside of Plot.

Layer: _Lift well

Description :

Lift is a type of vertical transport equipment that efficiently moves people or goods between floors of a building, so draw it on "_Liftwell" layer as polyline. User can mark fire lift or hydraulic lift. Lift machine room to be drawn on same layer in floor plan as well as in section with text and line type 'dashed'.



Layer:_LIG

Description :

Draw a "_LIG" layer as poly line to show area of LIG units.

Layer:_Location Plan

Description :

Locations plan if any to be drawn on this layer. This is only for reference. No verifications are done by AutoDCR for this layer.

Layer: _Main Plot

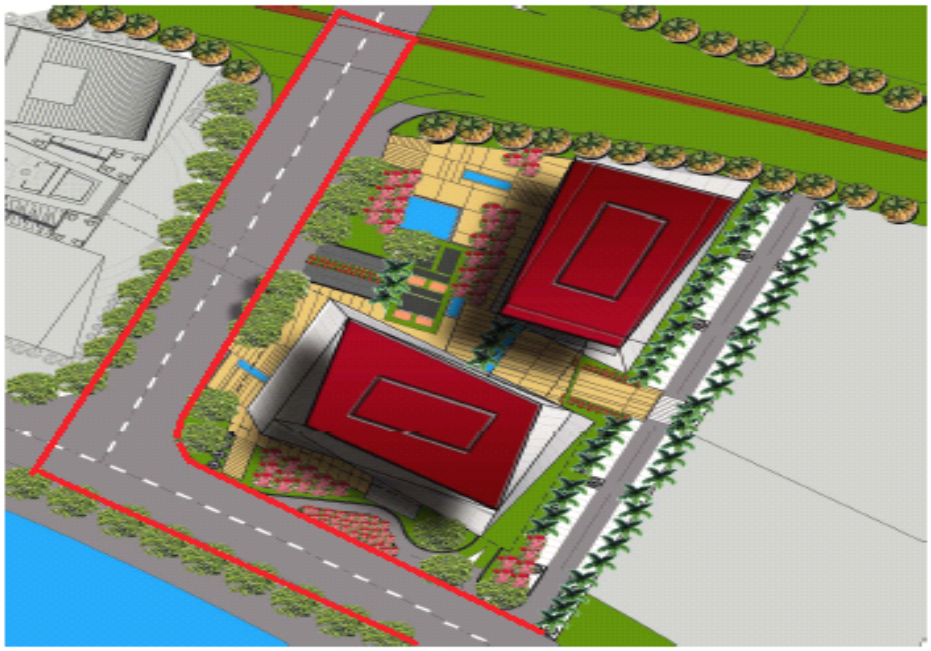
Description:

Draw plot on "_MainPlot" layer which is a parcel or piece of land enclosed by definite boundaries. A Plot will contain all buildings, open space, Internal Roads, Parking etc. The overall Plot Entity represent a Plan, AutoDCR refers it as 'Layout Plan'.

Layer:_Main Road

Description :

Draw a Main Road on '_MainRoad' layer which is abutting the plot. This road can be any type of road such as any highway, street, lane, etc. over which the public have a right of passage or access or have passed and had access uninterruptedly for a specified period, whether existing or proposed in any scheme, road text should be start with width of road.



Layer: _Margin Line

Description :

No need to draw Margin Line, This layer is not provided for users. AutoDCR uses '_Margin Line' layer for its own internal use.

Layer: _NETPLOT

Description :

No need to draw NETPLOT. This layer is not provided for users. AutoDCR uses '_NETPLOT ' layer for its own internal use.

Layer: _NotInPossession

Description :

Area which is not in possession to be drawn as a closed polyline with text on "_NotInPossession" layer.

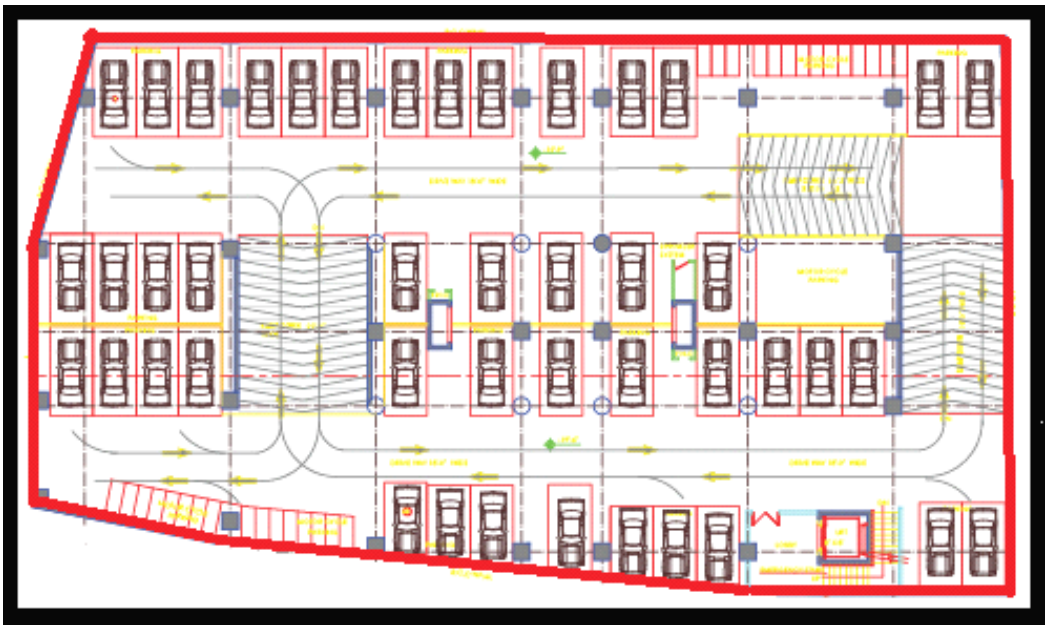
Layer: _Parking

Description :

Draw a "_parking" layer as closed polyline which is an enclosed covered or open area sufficient in size to park vehicles. This polyline shall contain a text on same layer.

Individual parking can be inserted from PreDCR -

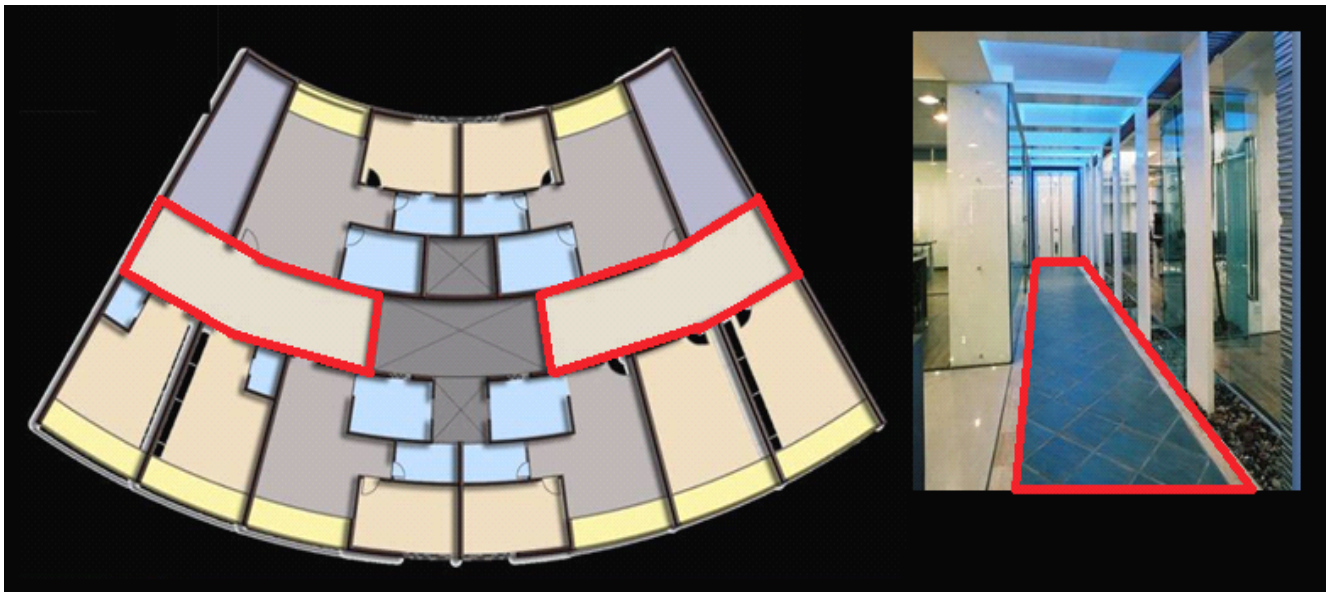
Parking	Name
Car	CP
Scooter	SC
Cycle	CY



Layer: _Passage

Description :

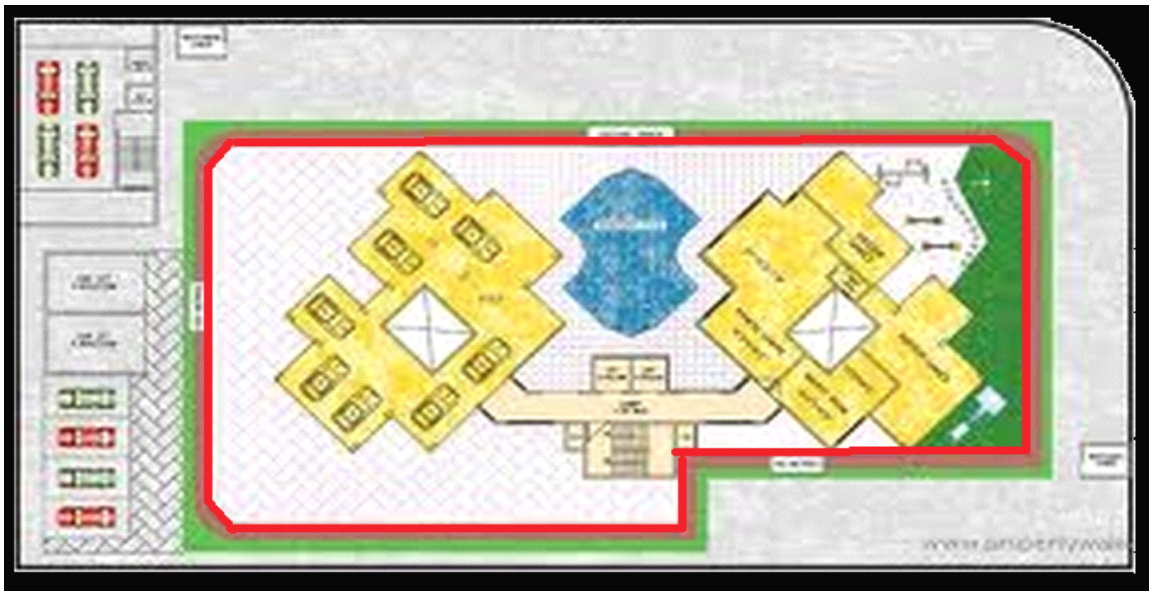
A closed polyline inside the building on "_Passage" represents passage area. It is a common passage or circulation space. This closed polyline must contain a text on same layer. This text is treated as name of closed polyline. Also need to draw a centre line on same layer as open poly with line type centre.



Layer: _Podium

Description:

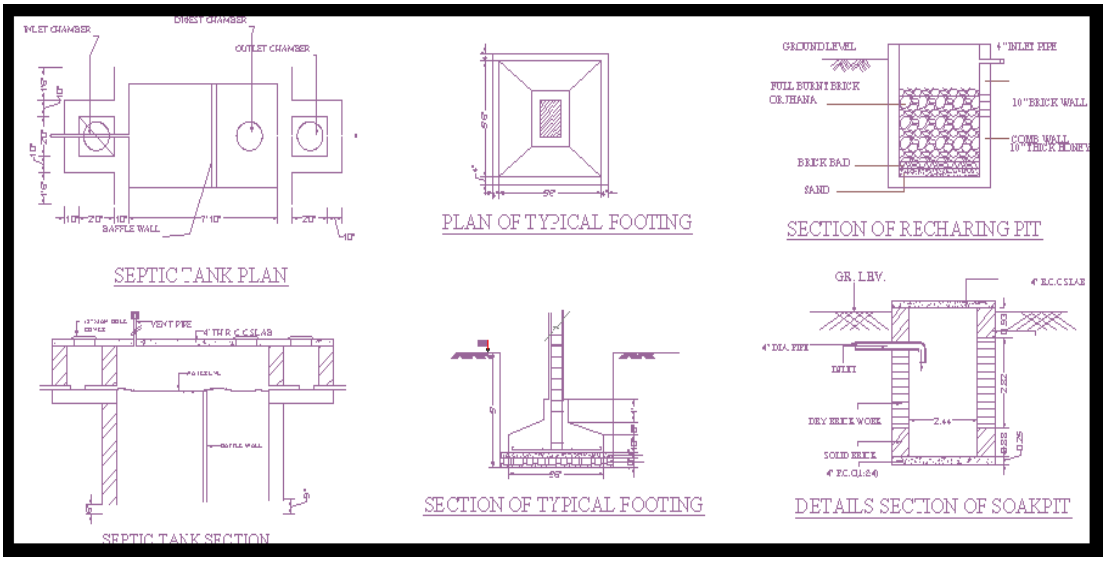
Draw area on "_Podium" layer which is covering to buildings, it should as closed poly line with text on same layer.



Layer: _PrintAdditionalDetail

Description:

Apart from the layers specified by PreDCR, any other information which user wants to print in final approval drawing shall be drawn on "_PrintAdditionalDetaillayer" for example: Footing detail, septic tank section, etc. There is no verification provided for the same layer.

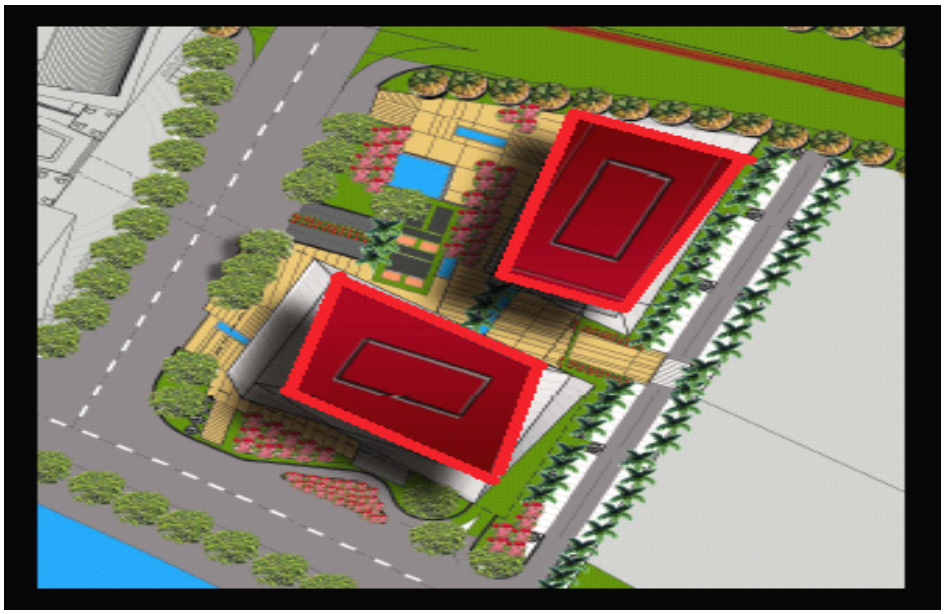


Layer: _PropWork

Description :

Draw a "_PropWork" layer which area is representing building line from layout plan/Plot.

Assign name to the proposed work.



Layer: _Ramp

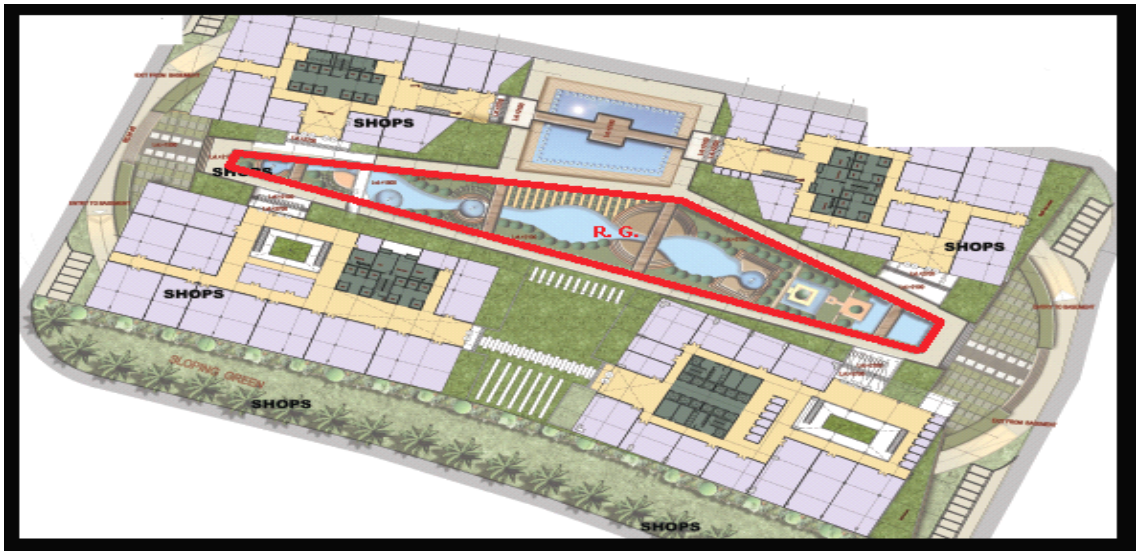
Description :

Draw "_Ramp" layer as a polyline in floor plans and/or in plot area, with containing centre line, also provide text on same layer.

Layer: _RecreationalGnd

Description :

Draw Recreational Ground area on "_RecreationalGnd" layer as polyline which is reserved for recreation purpose, with text on same layer. It should be inside of main plot or floor.



Layer: _Refuge Area

Description :

An area of refuge is a location in a building designed to hold occupants during a fire or other emergency, when evacuation may not be safe or possible. Occupants can wait there until rescued or relieved by firefighters. Refuse area to be drawn in plan as a polyline with text on this layer.

Layer: _RefugeChute

Description :

Draw "_RefugeChute" layer as poly line on refuge chute area with text.

Layer: _ResiFAR

Description :

Draw "_ResiFAR" layer as a polyline which covered by a building on all the floors. This FAR only use for residential building. Existing FAR can be marked to differentiate existing area from proposed area.

Layer: _RoadWidening

Description :

Draw road widening area on "_Roadwidening" layer as a closed polyline. Text should be inside it on same layer, also it should be overlapping with Plot.

Layer: _Room

Description :

A polyline on "_Room" layer represents a room area inside building. To be provided text on same layer by assigning from PreDCR.

Layer: _Right-of-Way

Description :

Draw a closed polyline on "_RightOfWay" layer to represent of Right Of way area with text. Layer should be inside or intersecting with Plot.

Layer: _SectionLine

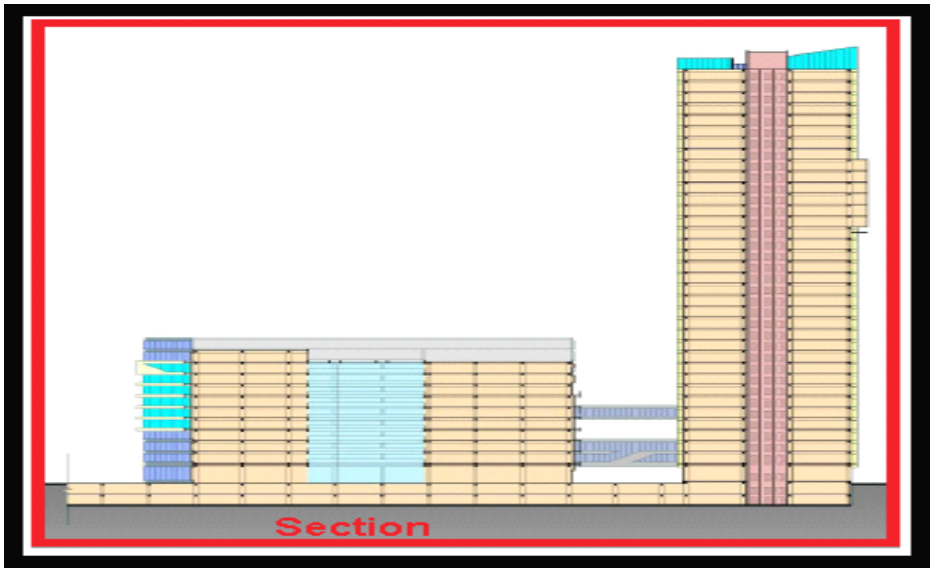
Description :

Draw a Section line in plot as well as in floor on "_Section Line" layer.

Layer: _Section

Description :

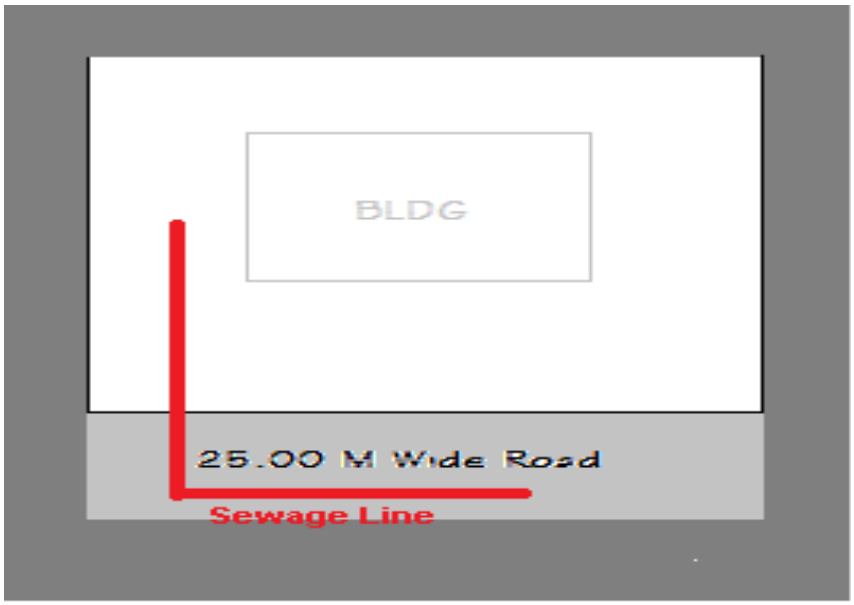
Draw a Section polyline of section boundary which contain all floor in sections with stair cabin, Lift machine room, water tanks etc. Also provide the text as "Section".



Layer: _Sewage Line

Description:

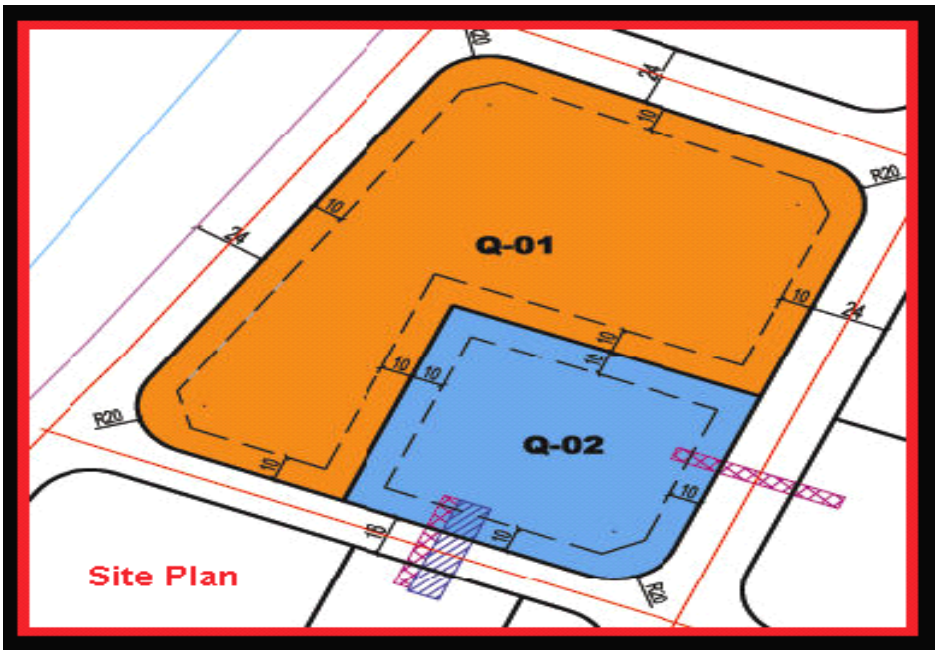
Drain Line shall be drawn as open polyline on "_Sewage Line" layer with text. It should inside/intersecting with Plot, main road.



Layer: _Site Plan

Description:

Reference of the site, to be shown on "_Site Plan" layer, with text inside it. Plot boundary, Main road should be inside it.



Layer: _Skyway

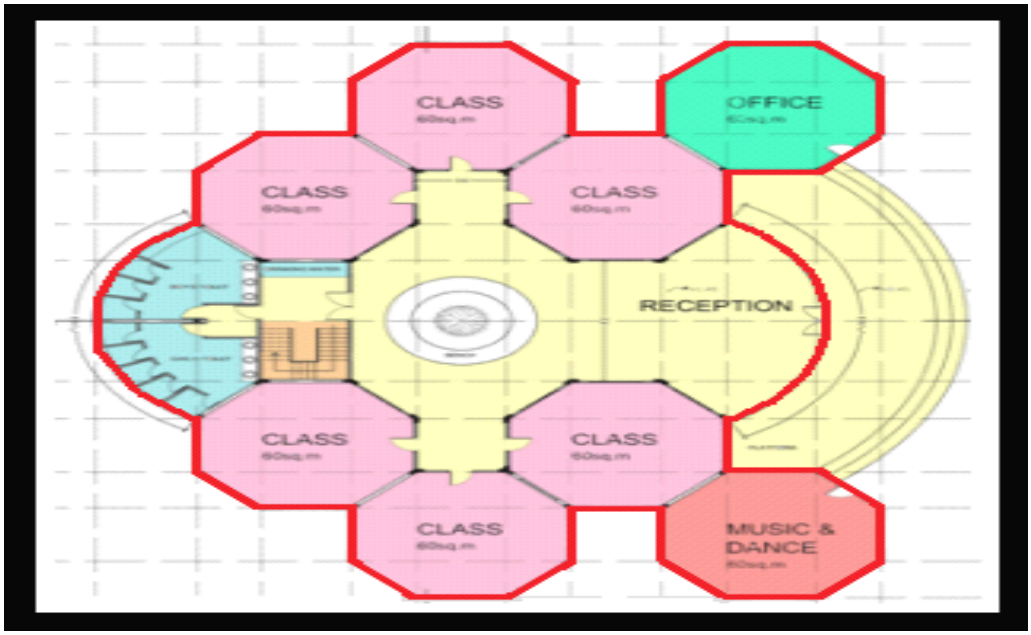
Description :

Skyway means a structure built over ground, whether covered or uncovered, which connects two or more buildings and is used for pedestrian movement. Draw a "_Skyway" layer as polyline on corresponding area.

Layer: _SpecialUseFAR

Description :

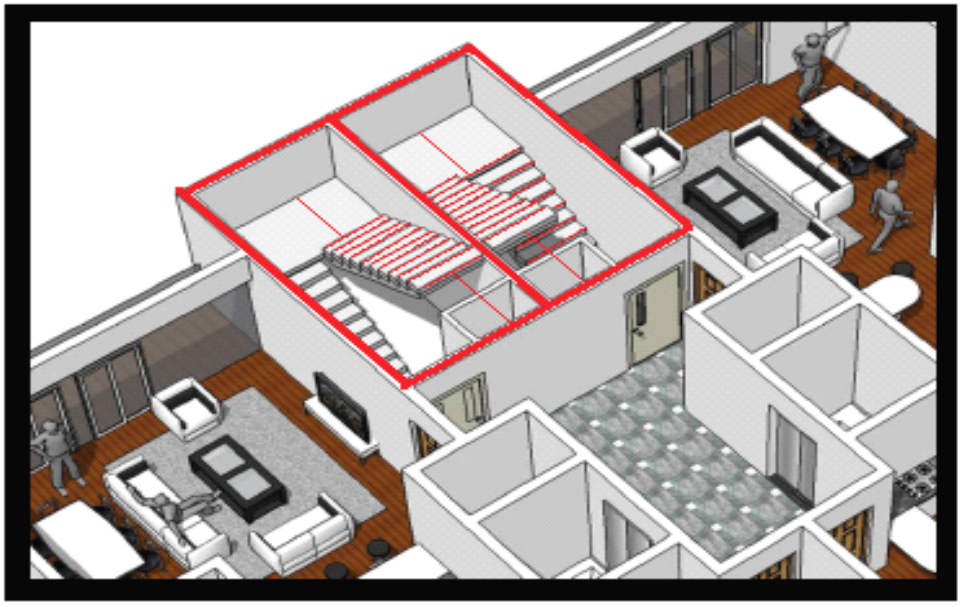
FAR ploy for all other building uses like educational, institutional, hospital, etc should be drawn on "_SpecialUseFAR" layer. This polyline should be excluding projection, balcony & terraces area. User can be marked as existing FAR if any existing part of building.



Layer: _Staircase

Description :

Staircase area to be drawn on "_Staircase" layer as a poly line, with inside treads, and landings. flight width and respective landings to be marked in PreDCR. Staircase can be marked stair case as open stair or Fire stair or Escalator. If more than two flights are in stair then can be marked three flight or four flights.



Layer: _Substructure

Description :

Ancillary structures to be drawn and marked on "_Substructure" layer.

Layer: _Subway

Description :

Draw a polyline on '_Subway' layer with text which represented area as subway.

Layer: _Tank

Description :

Water area representing from building to be drawn on "_Tank" layer as polyline. It can be overhead water tank or underground water tank. Assign name for overhead as well as underground tank.

Layer: _Terrace

Description:

Draw a Terrace as a polyline on "_Terrace" layer which is including parapet wall, with text inside it. Common terrace should be inside of top floor/parapet out line floor.

Layer: _Tree

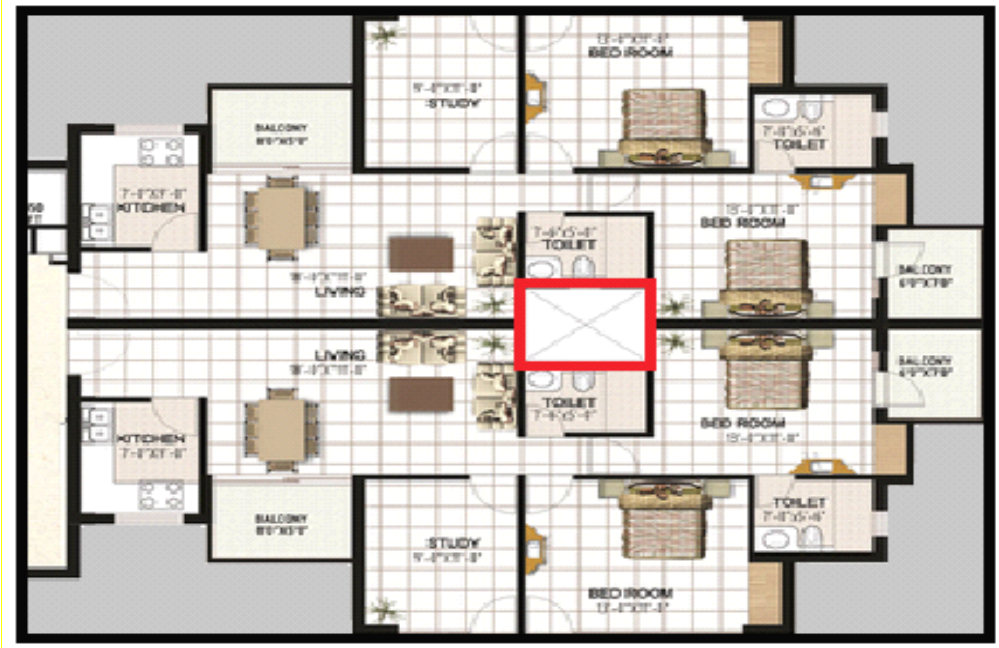
Description :

A tree in the plot to be show on "_Tree" layer.

Layer: _Ventilation Shaft

Description :

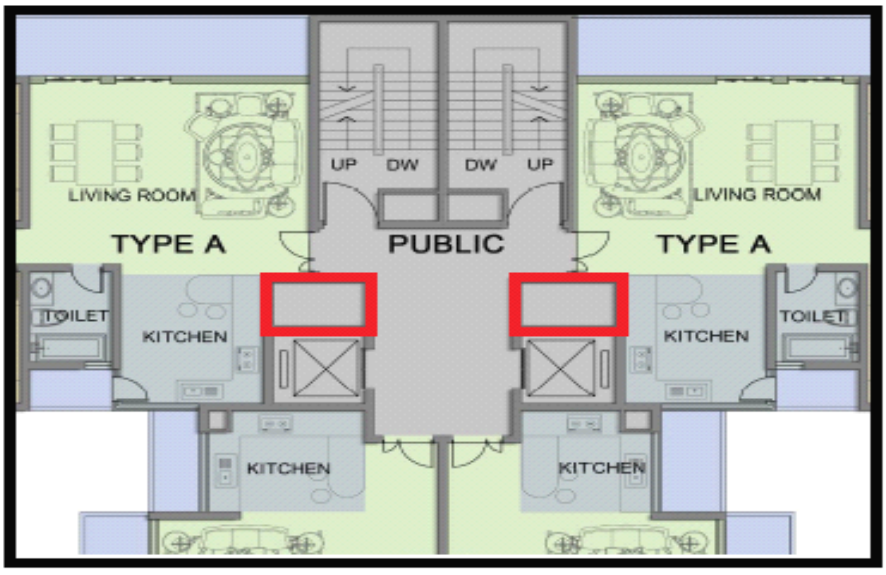
Draw a ventilation shaft as a polyline which is an enclosed space permanently open to the sky within a building at any level. From ventilation shaft we take ventilation for room. Provide a text inside it on same layer.



Layer: _Void

Description :

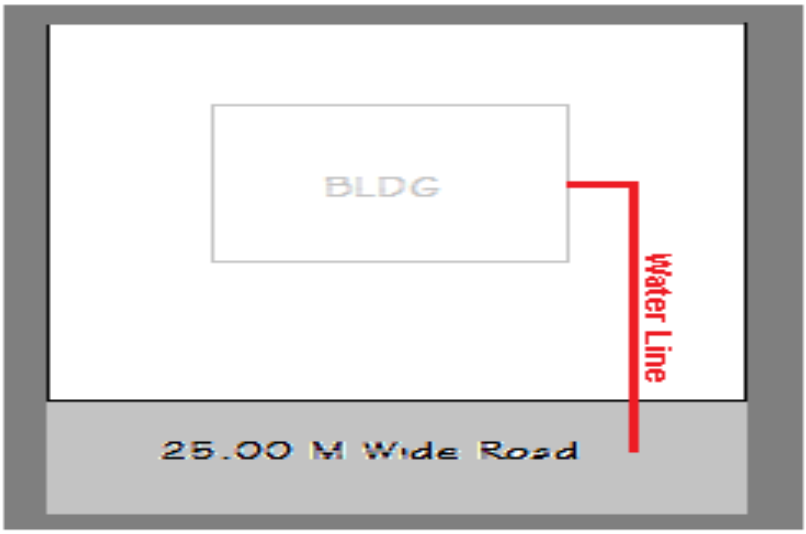
All ducts and double height rooms can be drawn on "_Void" layer, with text inside it. Void should be inside of any FAR polyline.



Layer: _Waterline

Description :

Draw a water line on "_WaterLine" layer as open polyline to show Water supply to the building with text. It should inside/intersecting with Plot, main road.



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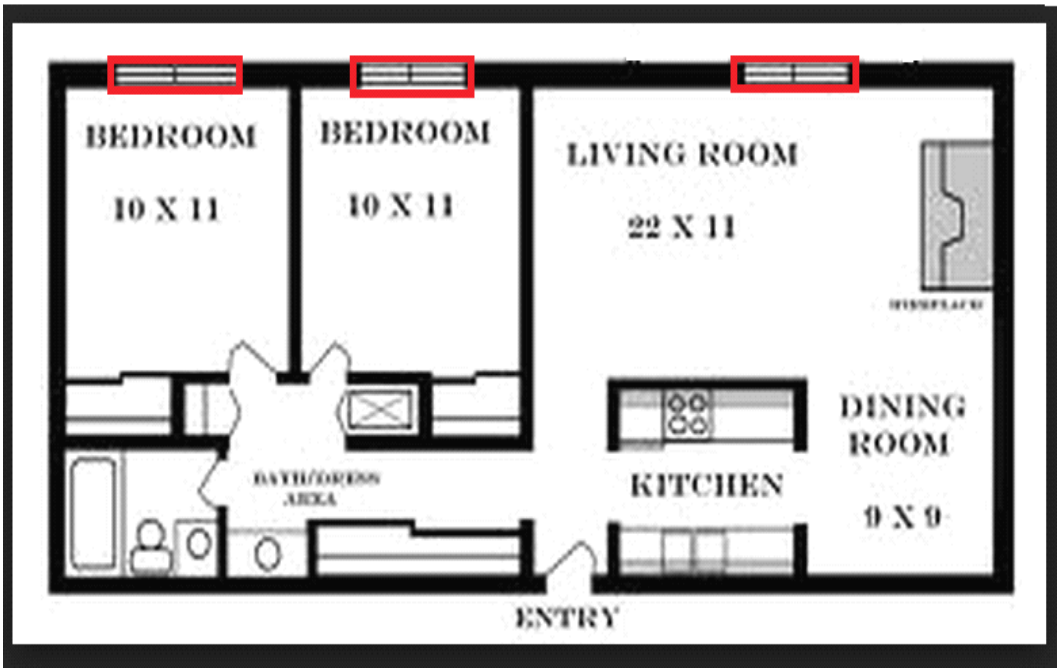
Layer: _Window

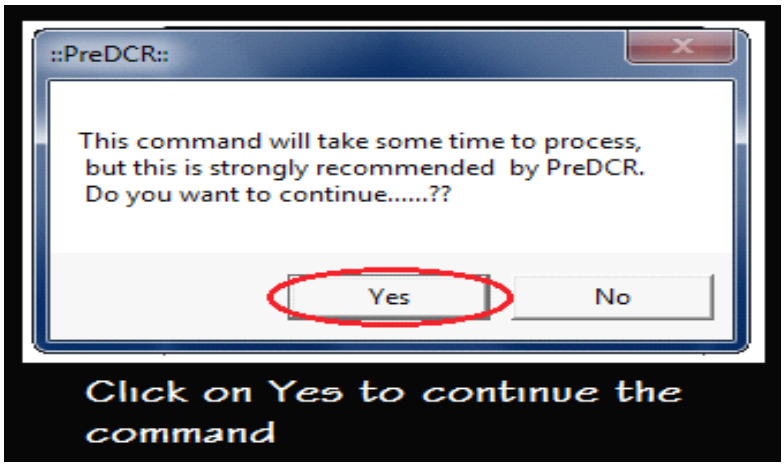
Description :

Ventilation to be provided on "_Window" layer Polyline with text. You can insert window of any size and angle in PreDCR. Usually window is provided to room, staircase etc. for ventilation purpose.

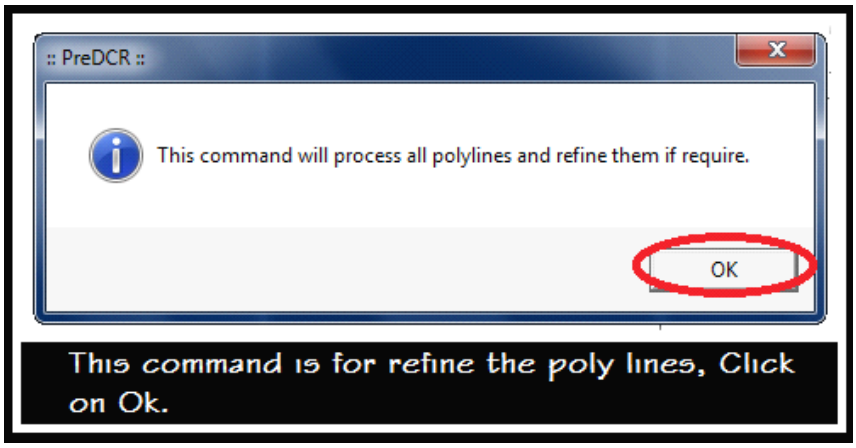


Once drawing have been done then need to click third button on tool bar i.e. Fix Poly.

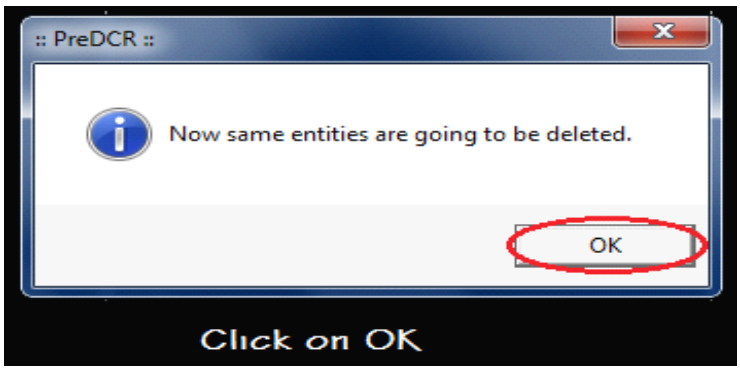
After converting all the Layers use the "Fix poly" option from PreDCR menu bar.



This command will be refine all poly lines, so it's compulsory to click "OK"



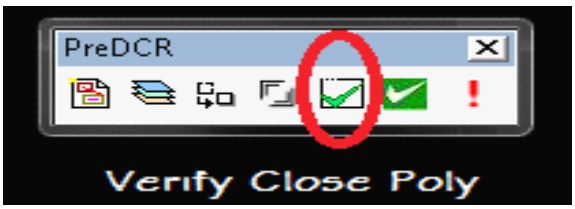
After clicking on above dialog duplicate entity will be deleted, so click on "OK" again



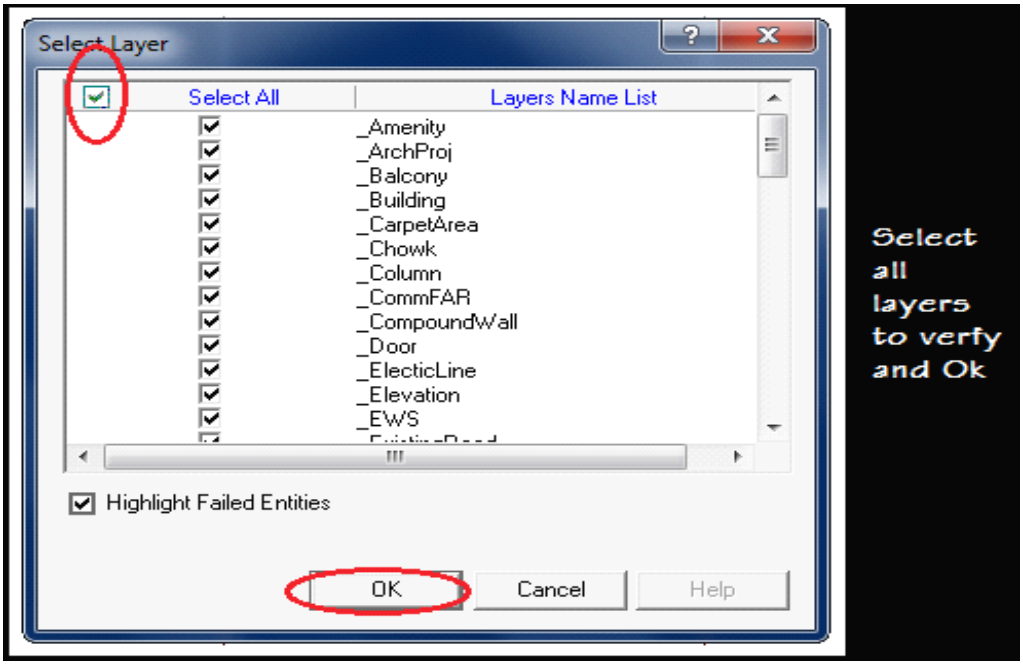
Once clicking on Ok, will appear massage "Refinement of Poly Line is done". Again you will have to click on OK to complete the command.

Now the next would be Mark Margin command, by this command need to mark Plot margins (MOS) i.e. Front, rear, Side, etc.

After that click on “Verify Close Poly” command, in this command all text will be checked which are required for every layer.

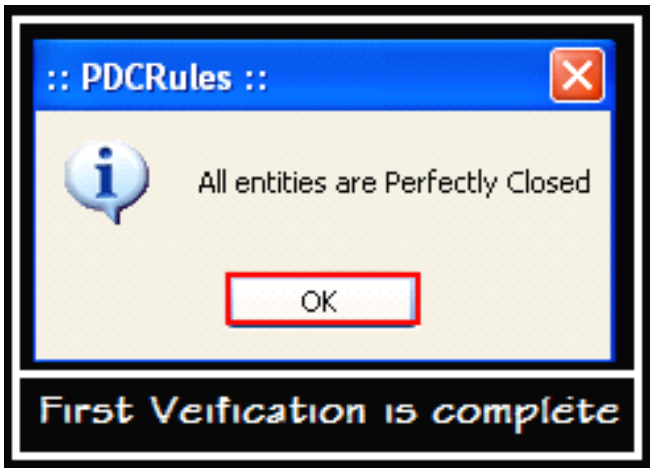


Clicking on “Verify close Poly” command, will appear layer dialog, select all layers.

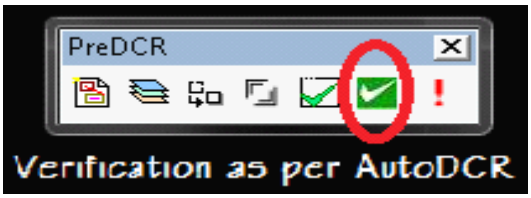


Once clicking on Ok button verification will start, and will appear Process bar.

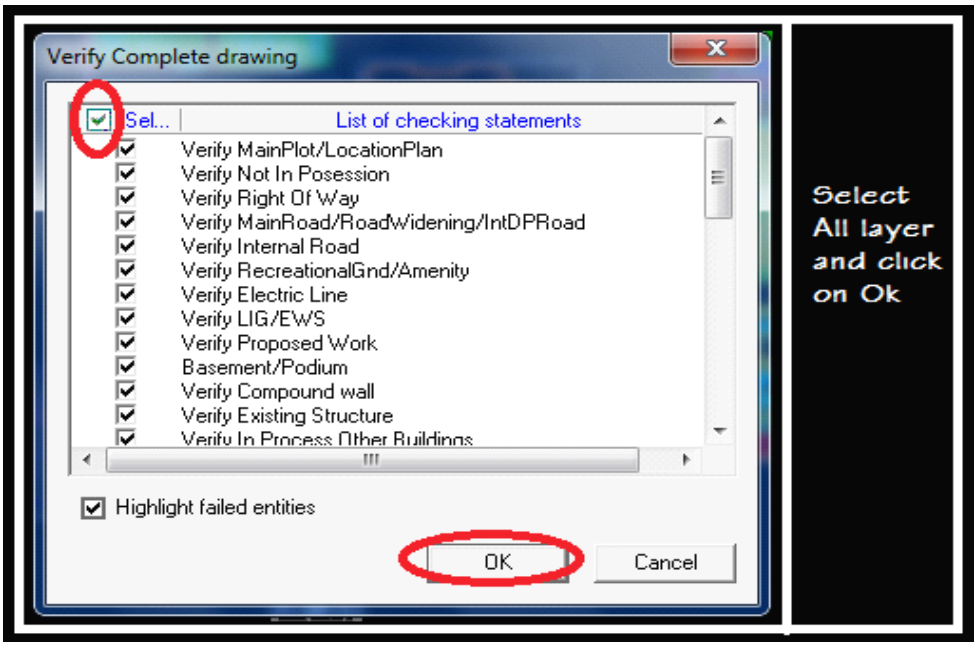
After completing process will appear massage “All Entities are perfectly closed”, else will show failed entity list those need to correct until the massage come.



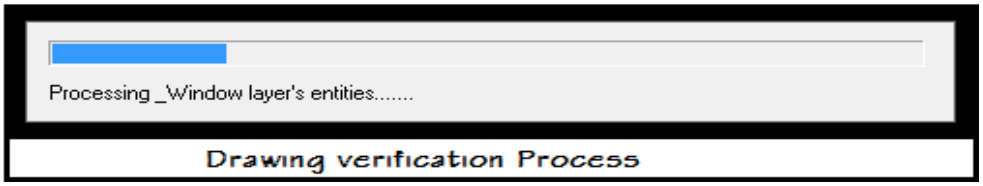
Once above massage come, need to process second verification, i.e. drawing as per AutoDCR requirement.



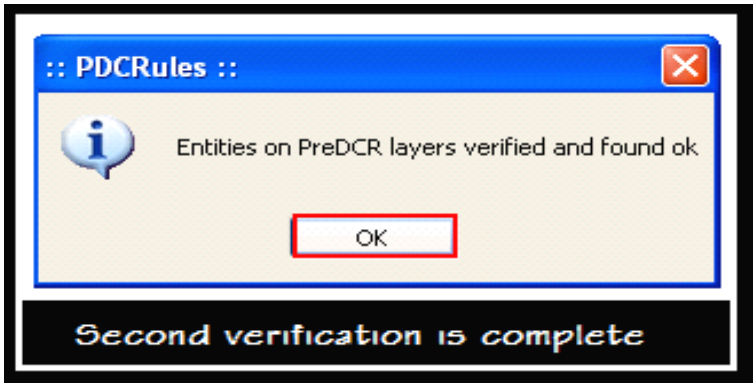
After clicking on Second verification, will appear layer dialog, select all layers.



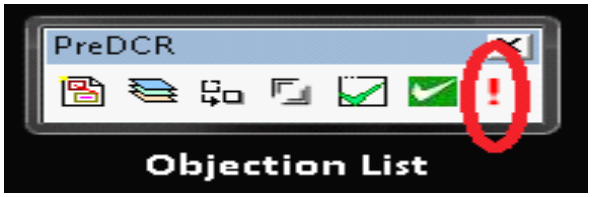
Once clicking on Ok button verification will start, and will appear Process bar.



After completing process will appear massage “Entities on PreDCR layers verified and found ok”, else will show failed entity list, those need to correct until the massage come.



Clicking on objection list user can be seen objections from drawing, which are not fulfilled.



Markings are provided in PreDCR menu for different entity:

Proposed Work: by using this command, proposed work can be marked as centrally air-conditioned., Normal (Default): by using this command, user can mark proposed work poly as Normal.

Floor in Section: by this command, user can mark parking beam, Normal (Default): by using this command mark floor in section poly as Normal.

Stair Case: No of flight: If more than two flights are available in staircase then can be marked it as three flights or four flights, Staircase {Default}:stair case which is not fire, fabricated, spiral, etc. can be mark it as Staircase {Default}, Fire Escape Staircase: Stair case which is fire escaped marks it as fire escape staircase, Open Staircase: Stair case which is totally open can be marked it as Open Stair, Feb. /Spiral Staircase: Staircase which is precast or fabricated can be marked as Fabricated or spiral staircase.

Escalators: escalators which are drawn on staircase layer can be marked it by this tool.

Staircase Landings: Intermediated Landings: Mark the intermediated landing by this option for staircase, Flight width: Mark the flight width by this option for staircase, Floor Landing: mark floor landing by this option for staircase.

Lift: Default: Lift which is not hydraulic or fire can be mark as default, Hydraulic: lift which is hydraulic cab be mark as hydraulic, Fire Lift: Lift which fire requirement can be mark as Fire lift.

FAR: Existing FAR: Mark FAR as Existing FAR, if any existing part of building present in drawing, Normal (Default): Mark FAR poly as Normal FAR.

Carpet Area: Spitted Tenement: Mark Carpet Area as Spitted tenement, if single tenement is present in drawing, Slum Development: Sale or rehab Mark Carpet Area as a slum development sale or rehab Normal, Normal (default): Mark Carpet Area as Normal (default).

Parking: Two Stacked: Mark Parking as two stacked, Three Stacked: Mark Parking as three stacked, Four Stacked: Mark Parking as four stacked.

Projection: Chhajja: Mark Projection as Chhajja, Cornice/Whether shade: Mark Projection as Cornice/Whether shade, Loft: Mark Projection as Loft in floor plan as well as in section, Canopy: Mark Projection as Canopy, Porch: Mark Projection as Porch, Verandah: Mark Projection as a Verandah, Otta: Mark Projection as a Otta as a provided, Steps: Mark Projection as a Steps as a provided.

Existing Structure: To Be Retained: Building or Substructure: Mark Existing structure as to be Retained Building or Substructure, To be Demolish (Default): Mark Existing structure as to be Demolish.

Substructure: Electric Meter Room: Mark Substructure as an Electric meter room, Electric Sub-Station: Mark Sub Structure as an electric Sum-Station, Watchman Cabin: Mark Sub Structure as a watchman cabin, Society Office: Mark Sub Structure as a Society office. Servant Quarter: Mark Sub Structure as a servant quarter, Sanitary Block: Mark Sub Structure as a sanitary block, Covered Garage: Mark Sub Structure as a covered garage when garage is covered, Open Garage: Mark Sub Structure as a Open garage, Rain Water Harvesting: Mark Sub Structure as a Rain Water harvesting, A.C Plant Room: Mark Sub Structure as a A.C Plant Room, AHU: Mark Sub Structure as a AHU, Swimming Pool: Mark Sub Structure as a Swimming Pool , Septic Tank/Soak Pit: Mark Sub Structure as a Septic Tank/Soak pit, Pump House: Mark Sub Structure as a Pump House, Effluent Treatment Plant/ STP: Mark Sub Structure as a Effluent Treatment Plant /STP, Dish Antenna room: Mark Sub Structure as a Dish Antenna room, Well: Mark Sub Structure as a Well, Telephone Installation Room: Mark Sub Structure as a Telephone Installation room, Entrance gate: Mark Sub Structure as a Entrance gate, Fitness centre: Mark Sub Structure as a Fitness center, Suction Tank: Mark Sub Structure as a Suction tank, Pavilion: Mark Sub Structure as a Pavilion, Gymnasium: Mark Sub Structure as a Gymnasium, Club-House: Mark Sub Structure as a Club-House, Dust bin: Mark Sub Structure as a Dust bin, Milk/ Telephone booth: Mark Sub Structure as a Milk/ Telephone booth, Letter Box: Mark Sub Structure as a Letter Box, Chimney: Mark Sub Structure as a Letter Box.

Special use FAR: If building use is educational/Institutional/Assembly/ Public-Semipublic/ Recreational or transport then can be marked Special use FAR.

Margin: Use this command to define or mark the front, sides and rear margins of the plot.

Few entities can be inserted automatically:

Parking: Car: Use this command to insert car-parking poly of at selected point, Scooter: Use this command to insert Scooter parking poly at selected point, Cycle: Use this command to insert Cycle parking poly at selected point, Loading/Unloading: Use this command to insert Loading/Unloading parking at selected point.

Door: Use this command to insert door poly at selected point and with specified size given by user. As soon as you use this command the following Dialog appears.

Window: Use this command to insert window poly at selected point and with specified size given by user.

Common Reference Circle: Use this command to insert common reference circle.

Direction Reference Circle: Use this command to insert direction reference circle

Tree: Use this command to insert Tree. Insert Trees showing location of Trees in your plot.

North Direction: Use this command to insert North Direction. Insert North Direction indicating the sides of your plot. You have to rotate this as per North Side.

Stair case up/Down Direction: Use this command to insert Up and down direction.

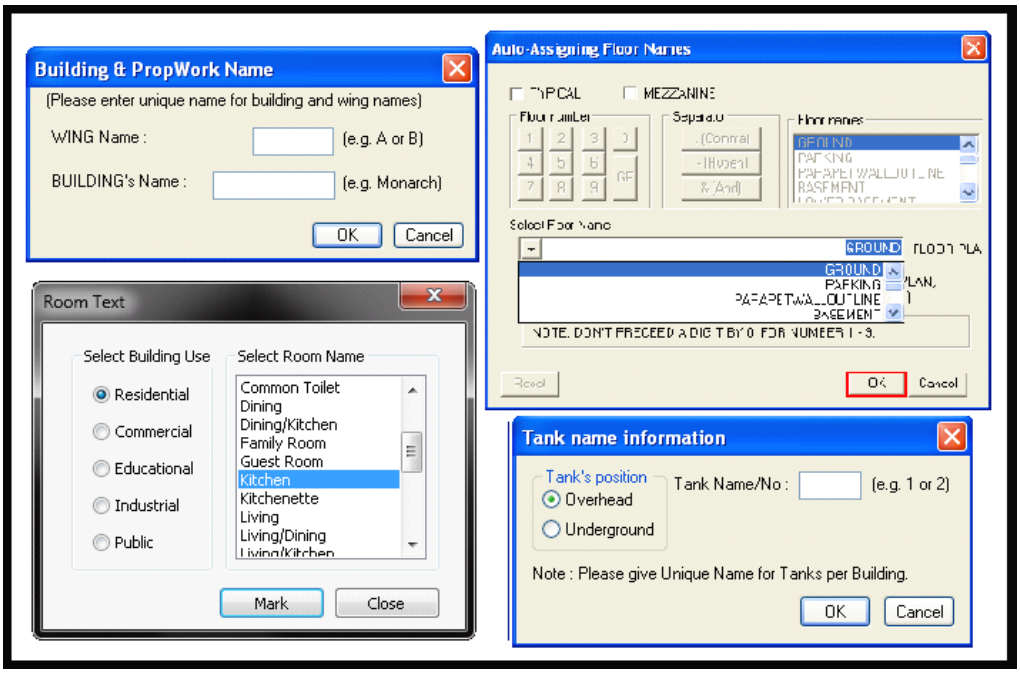
Names can be assigned to the entities:

Building and proposed works: Use this command to give name for building poly and its associated proposed works.

Tank: Use this command to give name for Tank poly and its corresponding tanks.

Room: Use this command to give different names for multiple uses Room poly.

Floor Name: Use this command for assigning name to a floor poly and its corresponding floor in section poly in section.



<u>Drawing the architectural plan in DWG format as per AutoDCR software requirements.</u>

For automating the process of Development Control Regulations user/draughtsman/architect have to follow some specifications. The following are the list of specifications that the user should follow.

Plot layout, detailed floor plan and building section for all the floors should be there in one ZwCAD drawing file.

All building items like proposed plot, proposed work, proposed parking etc must **<u>be drawn using closed polyline</u>**.

(i.e. Every entity must be closed LWPOLYLINE except Sewage line, Water Line, Electric Line, Dead Wall

and Ground level.).

Building Sub-Items must be exactly inside of outer closed polygon as per their place in architectural plan.

This means none of the edge or vertex of inside entity should be drawn outside its container entity.

For example Parking or Open Space poly must be exactly inside the main plot poly.

Tools are provided in **PreDCR** to verify this check.

Every Building Sub-Items should be given a specific/unique name (Text or MText entity) on the same layer & inside the entity poly. If name not found then PreDCR will show error.

e.g. Each Room should be given the concerned name Using <Assign Name> function of PreDCR Living, Kitchen, and Bedroom. Etc.

Floor Name: GROUND FLOOR; TYPICAL FLOOR 1*, 2* & 5-8

Floor Items: Room Names should be given properly without using abbreviations so the software can identify perfect entity. This can be done by Assign name facility provided by the software.

User shall use only following kind of entities for Building Items: -

LWPOLYLINE / TEXT / MTEXT

If in a plan two proposed work are mirrored in that case user should provide two separate building plans. For each proposed work.

- Before you start conversion, check the scale by using Scale command. If drawing is not in 1: 100 scale then covert into the 1:100 scale. & then make that drawing in metric scale if it is in other than meter units.
- Also make the site plan in 1:100 scales.

Some additional futures are provided in tools:

Show Only PreDCR Layers:

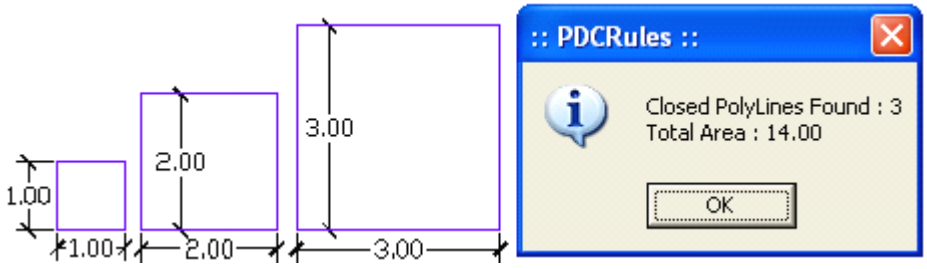
Once click on this command this will show only PreDCR layer, and others will go turn off.

Show all layers:

Once activated this command you will get turn on all layers which area present in the drawing.

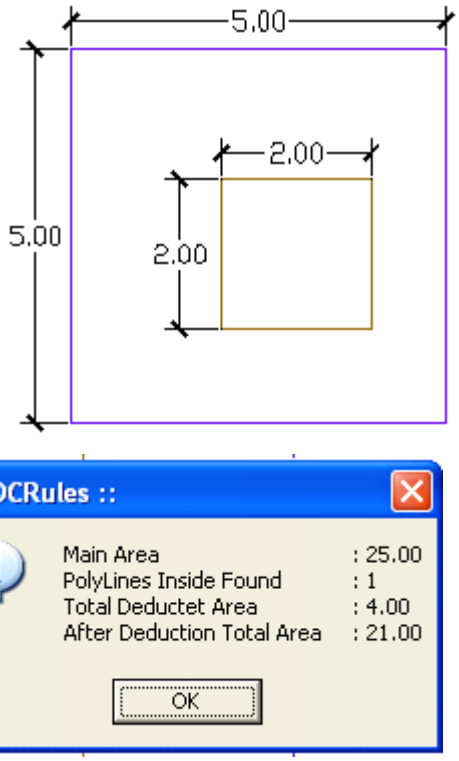
Calculate Total Area:

This command will compute the total area of all selected closed polygons.



Calculate Deducted Area:

This command will compute the area of closed polygon after deducting closed polygons found inside.



Get All Inside Poly:

This command will highlight all polygons, which found exactly inside selected polygon under test.

Get All Overlapping Poly:

This command will highlight all polygons, which are overlapping with selected polygon under test.

Get All Intersecting Poly:

This command will highlight all polygons, which are intersecting with selected polygon under

test.

Find Open Entities:

Highlight open entities on PreDCR layers.

Find Closed Entities:

Highlight closed entities on PreDCR layer.

Shortest distance:

This command will find the shortest distance between two entities.

Spelling check:

This tool is used for spelling checking.

Find Object:

This command zoom & highlight object of a given handle.

Set Default ACAD Version:

By this command you can select/deselect default ZwCAD version.

Layer name	Short command
Amenity	AMN
Arch. Projection	AP
Balcony	BL
Building	BLD
Carpet area	CPT
Chowk	CWK
Comm. FAR	CMFS
Compound Wall	CW
Door	DR
Elect line	L1
Elevation	EL
Existing road	R3
ExStructure	ES
Floor In Section	SECF
Floor	FLR
Ground Level	GL
Ind. FAR	IFAR
Internal Road	R2
Lift Well	LFT
Location plan	LCP
Margin line	L3
Main Plot	PLT
Main Road	R1
Net Plot	NPLT
Not In Possession	NIP
Parking	PK
Passage	PAS

Print Additional Detail	ADET
Podium	POD
Prop. Work	PW
Ramp	RP
Recreational Ground	OPS
Refuge Area	RFG
Resi FAR	MFS
Right-Of-Way	ROW
Road Widening	R5
Room	RU
Sewage line	L5
Section	SEC
Site Plan	STP
Staircase	STR
Special Use FAR	SUF
Substructure	SSTR
Subway	SBW
Tank	TNK
Terrace	TER
Ventilation Shaft	AVS
Void	VD
Water Line	L4
Window	WND
Markings:	
Centrally Air-Conditioned (Prop. Work)	PDCRMPWAC
Normal (Default): (Prop. Work)	PDCRMPWU
Parking Beam: (Floor in Section)	PDCRMPKB

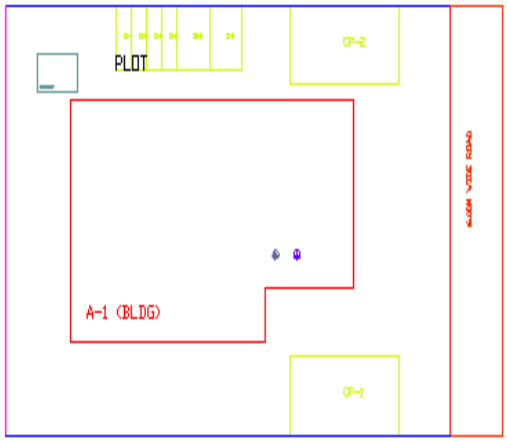
Normal (Default): (Floor in Section)	PDCRUM
Stair Case: No of Flights 3 flights	PDCRSC3F
No of Flights 4 flights	PDCRSC4F
Stair Case (Default)	PDCRSCUP
Fire Escape Staircase	PDCRSFES
Feb. /Spiral Staircase	PDCRSCFAB
Open Stair	PDCRSCO
Escalators	PDCRSCES
Intermediate Landing	PDCRMIL
Flight Width	PDCRMFW
Floor Landing	PDCRMFL
Lift (Default)	PDCRLTUP
Hydraulic	PDCRLTHUP
Fire Lift	PDCRFL
Existing FAR	PDCRCONES
Normal (Default) FAR	PDCRUMFSI
Spitted Tenement (Carpet Area)	PDCRMSPLTT
Slum Development: Sale(Carpet Area)	PDCRMCAS
Slum Development: Rehab (Carpet Area)	PDCRMCAR
Normal (Carpet Area)	PDCRMNT
Two Stacked	PDCRMTWSP
Three Stacked	PDCRMTSP
Four Stacked	PDCRMFSP
Unmark (Default): Balcony	PDCRUMENCBL
Chhajja	PDCRMCJPROJ
Cornice/Weather Shade	PDCRMCRPROJ
Loft	PDCRMLPROJ

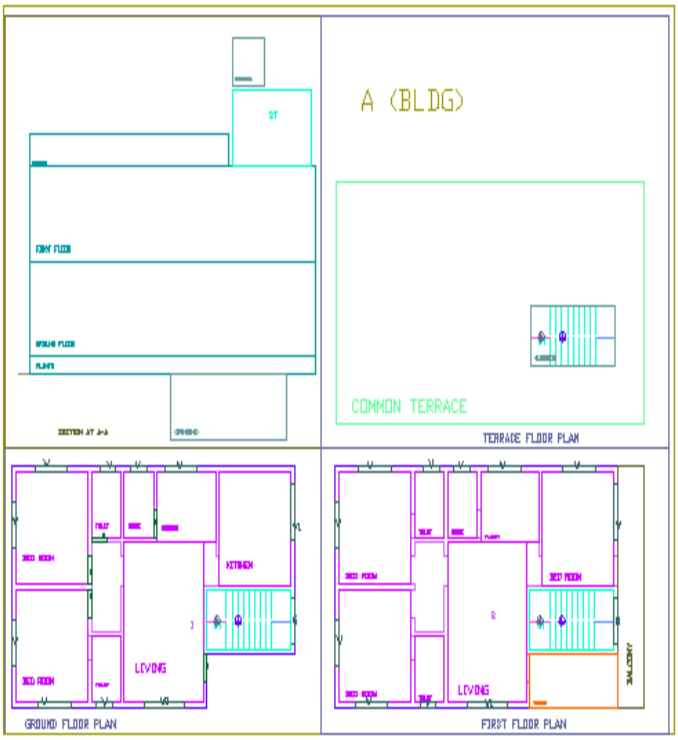
Canopy	PDCRMCPROJ
Porch	PDCRMPPROJ
Verandah	PDCRMVPROJ
Otta	PDCRMOSPROJ
Steps	PDCRMSPROJ
Normal (Default) (Arch. Projection)	PDCRUMPROJ
Existing Structure: To be Demolished	PDCRMREXWD
To be Retained: Building	PDCRMREXBL
To be Retained: Substructure	PDCRMREXSS
Substructures: Electric Meter Room	PDCRMER
Electric Sub-Station	PDCRMTRAN
Watchman Cabin	PDCRMWMC
Society Office	PDCRMOR
Servant Quarter	PDCRMSQ
Sanitary Block	PDCRMSB
Covered Garage	PDCRMGRJ
Open Garage	PDCRMGRJO
Rain Water Harvesting	PDCRMRWH
A. C. Plant Room	PDCRMACR
AHU	PDCRMAHU
Swimming Pool	PDCRMSWP
Septic Tank / Soak pit	PDCRMSPT
Pump House	PDCRMPRA
Effluent Treatment Plant/STP	PDCRMETP
Dish Antenna Room	PDCRMDA
Well	PDCRMWELL
Telephone Installation Room	PDCRMGTIR
Entrance Gate	PDCRMEG

Fitness Center	PDCRMFS
Suction Tank	PDCRMST
Pavilion	PDCRMPAV
Gymnasium	PDCRMGM
Club House	PDCRMCH
Dust Bin	PDCRMDB
Milk / Telephone Booth	PDCRMGTM
Latter Box	PDCRMSLB
Chimney	PDCRMSCH
Special Use FAR: Educational	PDCRMSUFED
Institutional	PDCRMSUFIST
Assembly	PDCRMSUFAS
Public/Semipublic	PDCRMSUFPSP
Recreational	PDCRMSUFREC
Transport	PDCRMSUFTS
Margin	PDCRMRGN
Assign Name	
Floor Name	PDCRASFLRNAM
Building and Prop. Work	PDCRBLDPWNL
Tank	PDCRASRUN
Room	PDCRASRUN
Insert	
Car	PDCRICPA
Scooter	PDCRISP
Cycle	PDCRICY
Door	PDCRIDRNAM
Window	PDCRIWNDNAM
Direction Reference Circle	PDCRICPP

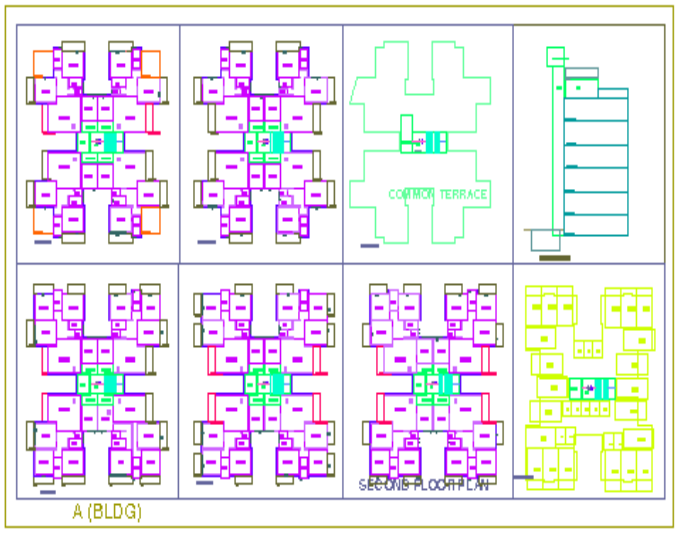
Tree	PDCRINTR
North Direction	PDCRINND
Up directions	PDCRISDAUP
Down Direction	PDCRISDADN

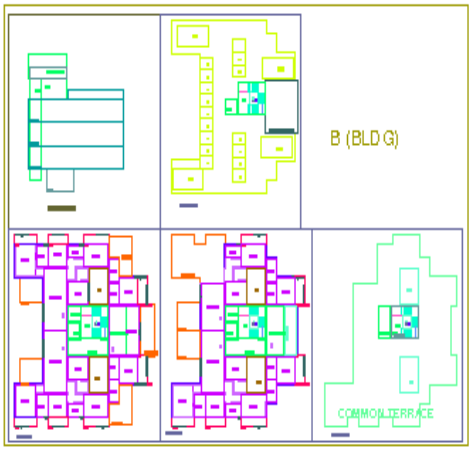
Residential Bldg (Row house)

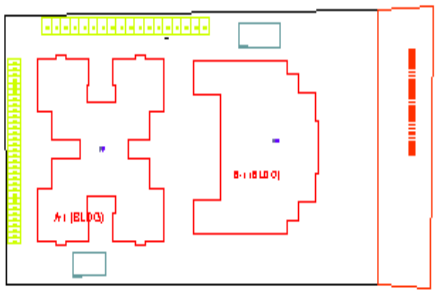




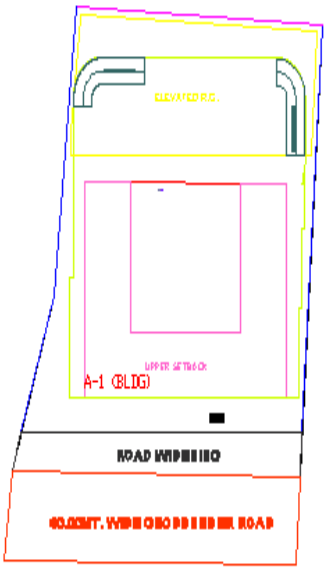
Residential bldg. (Single Detached with two buildings)

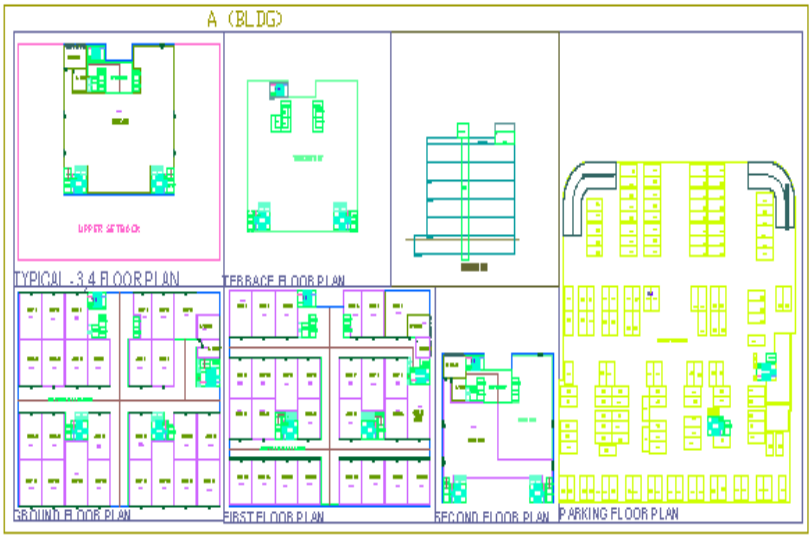




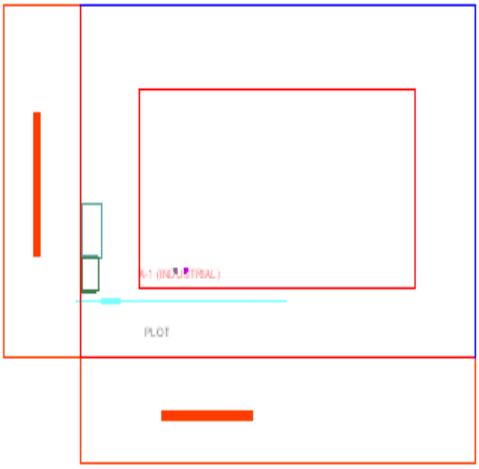


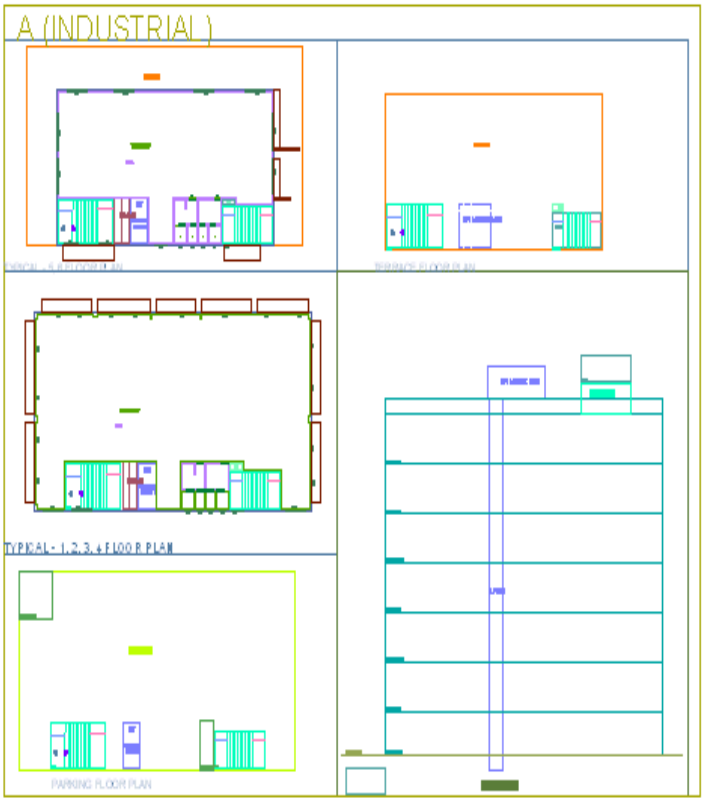
Commercial building



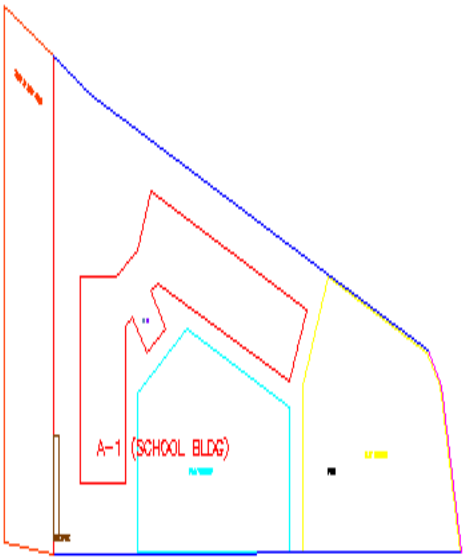


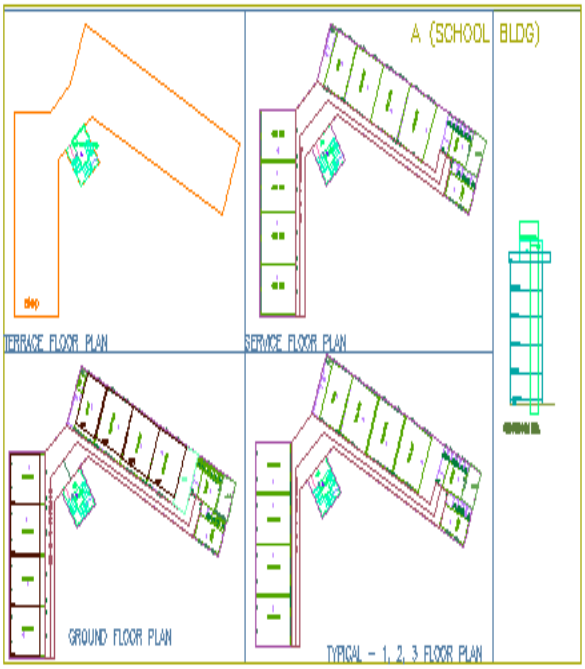
Industrial Building





Special building (School bldg)





- **ZwCad Settings:**

1. If you do not see PreDCR toolbar in ZWCAD environment, then type TOOLBAR command on ZWCAD command line and check PreDCR checkbox from the toolbar list.
2. PreDCR menu is not getting inserted properly in Ribbon view.
   So, do not change the view of ZwCAD from Classic to Ribbon.
3. Always install ZWCAD first and then install the PreDCR set.
4. In case, if ZWCAD is re-installed, then PreDCR should also be installed again.

This is the last page of the document