



## TEMPORARY STRUCTURES

ORB uses the Temporary Structures category in Revit to create small, light, and efficient families that represent units, stair and elevator shafts, storage, commons spaces, etc. These provide a quick and efficient way to lay out the architectural program requirements without having to constantly re-draw geometry heavy Revit elements or having to constantly count units over and over after each new iteration.

### TEMPORARY STRUCTURES CATEGORY

All Temporary Structures are based on a Generic Model Family that is Two Level Based. This allows us to set lower and upper limits to all of these families, thus being able to extract unit information per level. Another advantage is that if we need to modify a level height, all families will automatically follow suit.

ORB Temporary Structures will be divided into different categories themselves:

- A) Units
- B) Vertical Circulation
- C) Commons Elements

### ORB UNITS

ORB unit families catalogued per their shape.

#### BALCONY LOCATION

Unit No Balcony  
Unit Middle Balcony  
Unit Edge Balcony  
Unit Inside Corner  
Unit Outside Corner at Dead End

#### SPECIAL CONDITIONS

Unit Interlocking  
Unit Interlocking Outside Corner  
Unit A under B Edge Balcony

### UNIT PARAMETERS

#### UNIT INFO

UNIT NAME	TEXT BASED	UNIT S2, UNIT
UNIT NUMBER	NUMBER BASED	0 for studios, 1 for 1 bedroom, 2, for 2 bedrooms, etc.
UNIT TYPE	TEXT BASED	STUDIO / 1 BEDROOM / 2 BEDROOM



UNIT COUNT	NUMBER BASED	ALWAYS SET TO 1 FOR ANY DWELLING UNIT
UNIT MATERIAL	MATERIAL BASED	SET PER THE BEDROOM COUNT OR SPECIAL USE
UNIT GROSS AREA	AREA	TYPICALLY CALCULATED AUTOMATICALLY
UNIT NET AREA	AREA	TYPICALLY CALCULATED AUTOMATICALLY
UNIT BALCONY AREA	AREA	TYPICALLY CALCULATED AUTOMATICALLY
# OF BEDROOMS	NUMBER BASED	SET PER THE BEDROOM COUNT
# OF BATHROOMS	NUMBER BASED	SET PER THE BATHROOM COUNT

#### GEOMETRY PARAMETERS

Base Level	Family is inserted at this level. This parameter is used for schedules.
Top Level	Typically assigned automatically as the level above the level of insertion.
UnitD	Overall unit depth
UnitW	Overall unit Width
BalD	Balcony depth
BalW	Balcony Width
EntryD	Entry recess distance from corridor wall
EntryW	Overall entry recess width
EntryO	Entry recess offset from edge of unit
WT	Wall Thickness (typically set for 6" wood studs w/ 1 layer of gypsum wall board)
POD	Pop-out Depth
POW	Pop-out Width

Other parameters may be present depending on specific circumstances for each unit.

#### SITE PARAMETERS

BUILDING #	TEXT BASED	ASSIGN BUILDING NUMBER
PARKING DWELLING UNIT RATIO	NUMBER BASED	ASSIGN PER MUNICIPALITY
BICYCLE PARKING RATIO	NUMBER BASED	ASSIGN PER MUNICIPALITY
GUEST PARKING RATIO	NUMBER BASED	ASSIGN PER MUNICIPALITY

Other parameters may be present depending on specific circumstances for each project / municipality.

**All of these elements must have the UNIT COUNT parameter set to 1, to accurately represent the unit count.**

#### VERTICAL CIRULATION & OTHER USES

Stair / Elevator



Typically used for vertical circulation. These families are set from the ground floor to the top of the vertical shaft they represent. Use the top and bottom offsets to set depths and heights accordingly, i.e. -5'-0" from level 1 for elevator pits or + 8'-0" from top level for Stair / Elevator shaft.

Width and depth parameters are set as type parameters. If you have multiple stair shafts or elevator shafts, you want to make sure they all have the same dimensions and they are not easily changed by accident.

### Commons Rectangle

Typically used for uses other than residential or vertical circulation. Uses are assigned but not limited to:

- a) Leasing
- b) Offices
- c) Storage
- d) Electrical Rooms (Meters, IDF, enclosed SES, etc)
- e) Bike Storage
- f) Retail spaces
- g) Specific Conditions
  - a. Commons L-Shape
  - b. Commons Corner Corridor – typically used adjacent to Unit A inside Corners for storage, electrical, mechanical, etc.

These families will have the width and depth as instance-based parameters. Be mindful of how you move these because it may affect your calculations.

**All of these elements must have the UNIT COUNT parameter set to 0, otherwise they will start to affect your unit count.**

**All temporary structures must be kept in the BUILDING UNIT FAMILIES workset.**

### PRELIMINARY DATA

This will be used by the client to determine if the proposed design complies with the architectural program as well as their financial pro-forma. These schedules are not intended for city submittal. You will need to verify the submittal requirements for each municipality and determine if these schedules will need to be revised or duplicated to provide the information in a format that is acceptable or requested by the authority having jurisdiction.

### SCHEDULES

### UNIT MIX BY BEDROOM



<UNIT MIX BY BEDROOM>		
A	B	C
UNIT TYPE	# OF UNIT	PERCENT
STUDIO	12	33%
1 BEDROOM	6	17%
2 BEDROOM	18	50%
TOTAL	36	100%

# OF BEDROOM PARAMETER (hidden) sets the order so STUDIOS are set at the top of the list. # OF BEDROOM PARAMETER must be set to 0. This can also be further divided by the proposed buildings in the case of multiple buildings on site.

#### UNIT MIX BY TYPE

<UNIT MIX BY TYPE>								
A	B	C	D	E	F	G	H	I
UNIT NAME	BED/BATH	# OF UNIT	UNIT LIVABLE	UNIT BALCONY	UNIT TOTAL	PROJECT LIVABLE	PROJECT BALCONY	PROJECT TOTAL
STUDIO								
UNIT S1	0/1	12	595 SF	62 SF	657 SF	7,144 SF	745 SF	7,889 SF
		12				7,144 SF	745 SF	7,889 SF
1 BEDROOM								
UNIT A3	1/1	6	771 SF	62 SF	833 SF	4,624 SF	374 SF	4,998 SF
		6				4,624 SF	374 SF	4,998 SF
2 BEDROOM								
UNIT B	2/2	3	1,114 SF	0 SF	1,114 SF	3,343 SF	0 SF	3,343 SF
UNIT B2	2/2	9	1,089 SF	65 SF	1,154 SF	9,802 SF	584 SF	10,386 SF
UNIT B3	2/2	6	1,020 SF	111 SF	1,131 SF	6,117 SF	666 SF	6,784 SF
		18				19,262 SF	1,250 SF	20,512 SF
TOTAL		36				31,031 SF	2,369 SF	33,400 SF

The unit mix schedule sorts the provided units by the UNIT TYPE parameter. This can also be further sorted or filtered by the proposed buildings in the case of multiple buildings on site.

#### PARKING REQUIRED

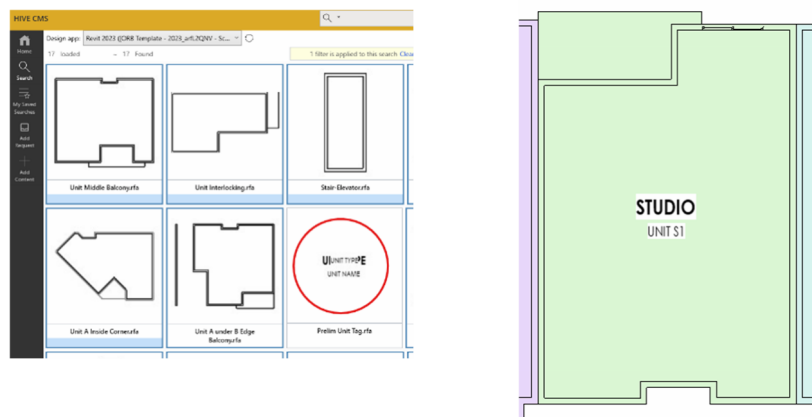
<PARKING REQUIRED>				
A	B	C	D	E
UNIT TYPE	# OF UNITS	PARKING UNIT RATIO	GUEST PARKING RATIO	PARKING REQUIRED
STUDIO	12	1	0.2	14
1 BEDROOM	6	1.5	0.2	10
2 BEDROOM	18	1.75	0.5	41
TOTAL	36			65



Parameters for required parking are set per the municipality. Each city will be different; always verify city requirements prior to filling out this table. Confirm with your BIM manager that the parameters are correct for your specific project or if they need to be adjusted.

### TEMPORARY STRUCTURES TAG

Download from HIVE. Typically, no unit addressing happens at this stage. Unit tags will show only the unit type and/or the unit name.



### SCHEMATIC DESIGN TO DESIGN DEVELOPMENT TO CONSTRUCTION DOCUMENTS

#### WALL ALIGNMENT

Exterior edges of the unit families are intended to be aligned with the interior face of our Exterior Finish Walls in our double wall systems. At DD phase, we will be able to provide exterior elevations. The exterior walls provided at this phase will provide:

- a) Exterior finish system (stucco, stone veneer, concrete panel, etc.)
- b) Doors, windows
- c) Building Pop-outs
- d) Parapet height / design

#### POP-OUT ADJUSTMENTS / STANDARDIZATION

In the same manner that model groups were used for stack layout, model groups can be created for each unit type. You will have the ability to move, copy, rotate and mirror these groups to match the unit stacks you have throughout the project.

### SITE DESIGN

You will receive the preliminary design and building layout from the project designer.

1. Confirm site information prior to placing unit families, this includes but is not limited to:



- a. Property boundaries
  - b. Setbacks
  - c. Easements
  - d. Topographical information (washes, large height differences in the lot, etc.)
  - e. Intended / proposed vehicle access points
  - f. Minimum size requirements for drives, parking spaces, landscape islands, etc.
2. Set up your working site plan view with Project North assigned to that view. **Site Plan views intended for documentation must always be in the True North orientation.**
3. Confirm with the project manager / client the required sizes for your amenity space, intended storage areas and preliminary unit mix that is intended for the project.
4. Create levels for the project.
  - a. All Floor levels.
  - b. Half levels if you have a garage.
  - c. Top Plate for highest story level.
5. Use already predetermined unit sizes from previous client modules; think product not project.
6. Try to coordinate all pop out dimensions throughout the project. It will help with standardization.
7. Use copy and paste items to selected levels. Create Model Groups of each stack type. You will be able to move, copy and rotate these stacks to set up your layout.
8. Keep watch on the schedules as you refine the preliminary design. Verify that you don't have units off to the side that may impact your unit count.
9. If dealing with multiple proposals in the same file, be sure to assign values to the Building # parameter for each scheme. This will allow you to sort and filter design proposals as needed.
- 10. Always verify your data before printing or sending out to clients. The information is only useful if it is true.**