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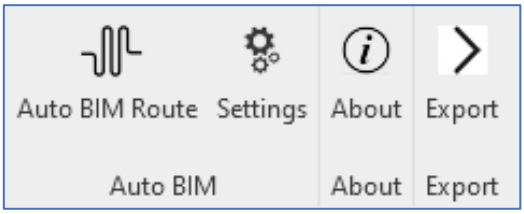
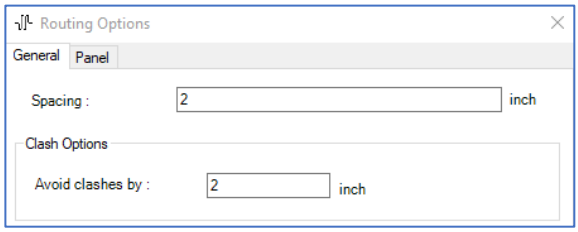
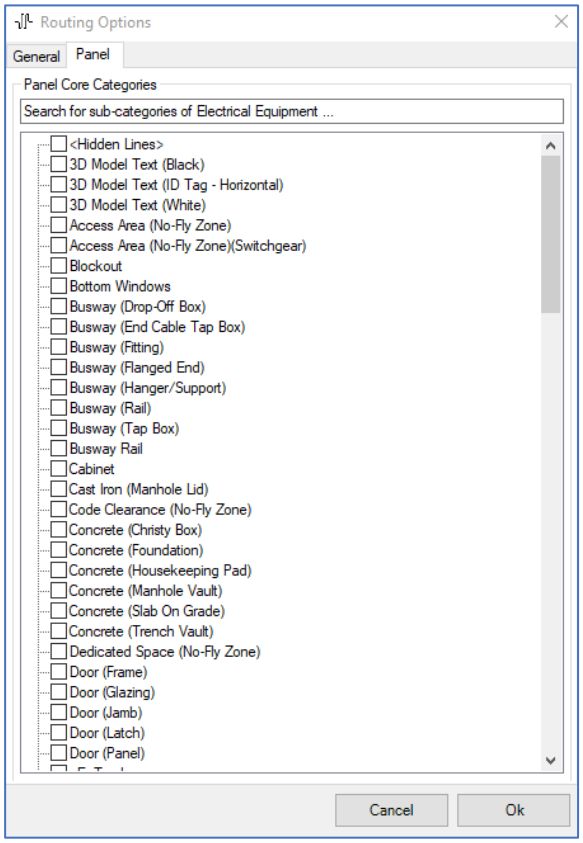
Revit Ribbon



Auto BIM Route: Open ABR with an opened 3D view.
Settings: Conduit spacing requirements, clash detection settings
About: License information
Export: System-Area-Level, Preview/Quick Export

Settings

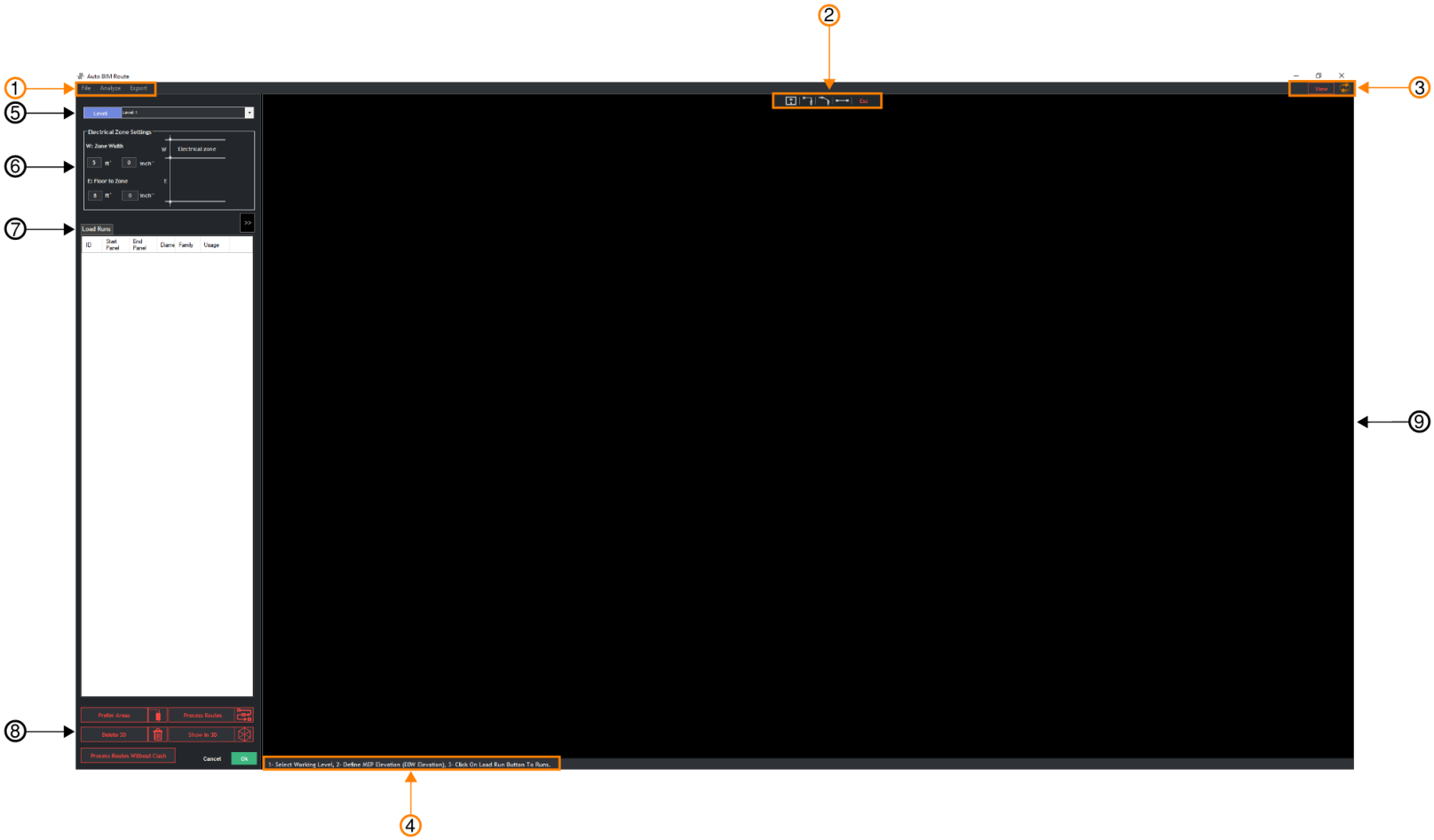




Routing Options

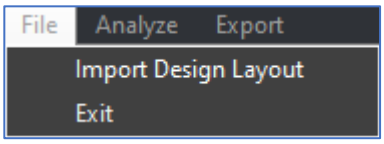
General: Conduit spacing from inside edge to inside edge (any size).
Avoid clashes by: Clash spacing requirements (any size).
Checkboxes to ignore elements during clash detection (walls, etc.)
Panel: Checking the box representing the panel's body category helps ABR AI easily define the panel's top face to avoid getting confused with the top of the panel clearance zone.

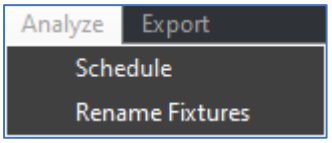
User Interface

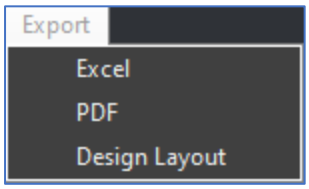


1. Tabs
2. Tool Bar
3. Hide/View, Model Status
4. Information/Instruction Bar
5. Reference Level
6. Electrical Zone Settings
7. Feeder Schedule Browser
8. View Controls
9. Drawing Area

Tabs







File: Import detailed design routes provided by the detailer. Desktop App component, which does not require Revit, allows detailer/GF to provide conduit routing to modelers.
Analyze: Schedule – Creates schedule of processed routes.
(Schedule/Quantities > Auto BIM Route Conduit Schedule)
Rename Equipment – Generates unique IDs for all elements with the "Electrical Fixture ID" parameter. Aids in generating random IDs so ABR can recognize the devices when uploading Excel files. While you still have the option to enter the ID you want manually, this feature is designed to accelerate the process.
Export: Export schedules, PDFs, and conduit routing.

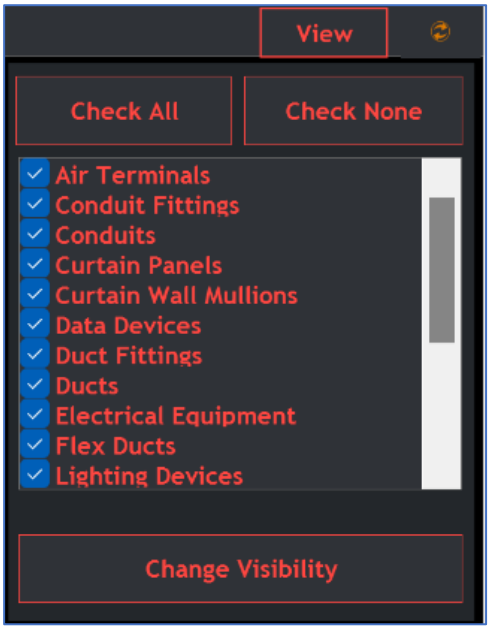
Toolbar

Panel Info | Add Run | Offset | Single Run | Escape

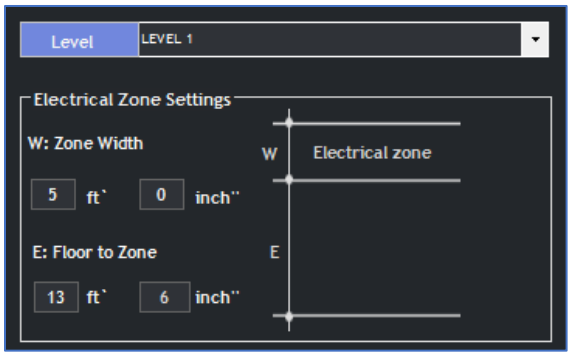
Panel Info: Select the panel to confirm the panel name.
Add Run: Select the *panel* to add new run(s) quickly.
Offset: Create conduit offsets by following prompts.
Single Run: Individually select run segment or single run(s).

Hide/View, Sync

Hide and Unhide categories on ABR UI Viewer - helps to visualize better and navigate through the 2D design layout. Uncheck items you want hidden in view. Keep ABR up to date with the orange sync button to the right of the View tab.

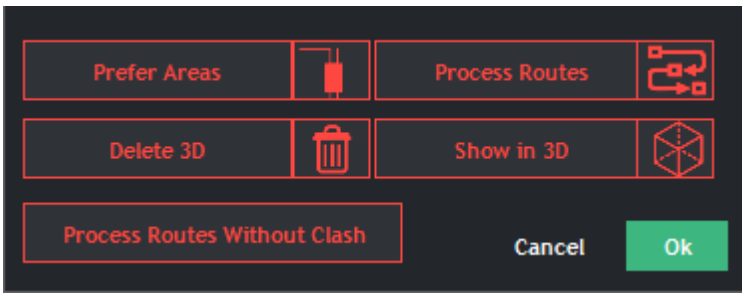


Reference Level, Electrical Zone Settings



Set the following before importing the feeder schedule:
Level
W: MEP Zone Width (above ceiling)
E: Floor to Ceiling Zone Height (below ceiling)

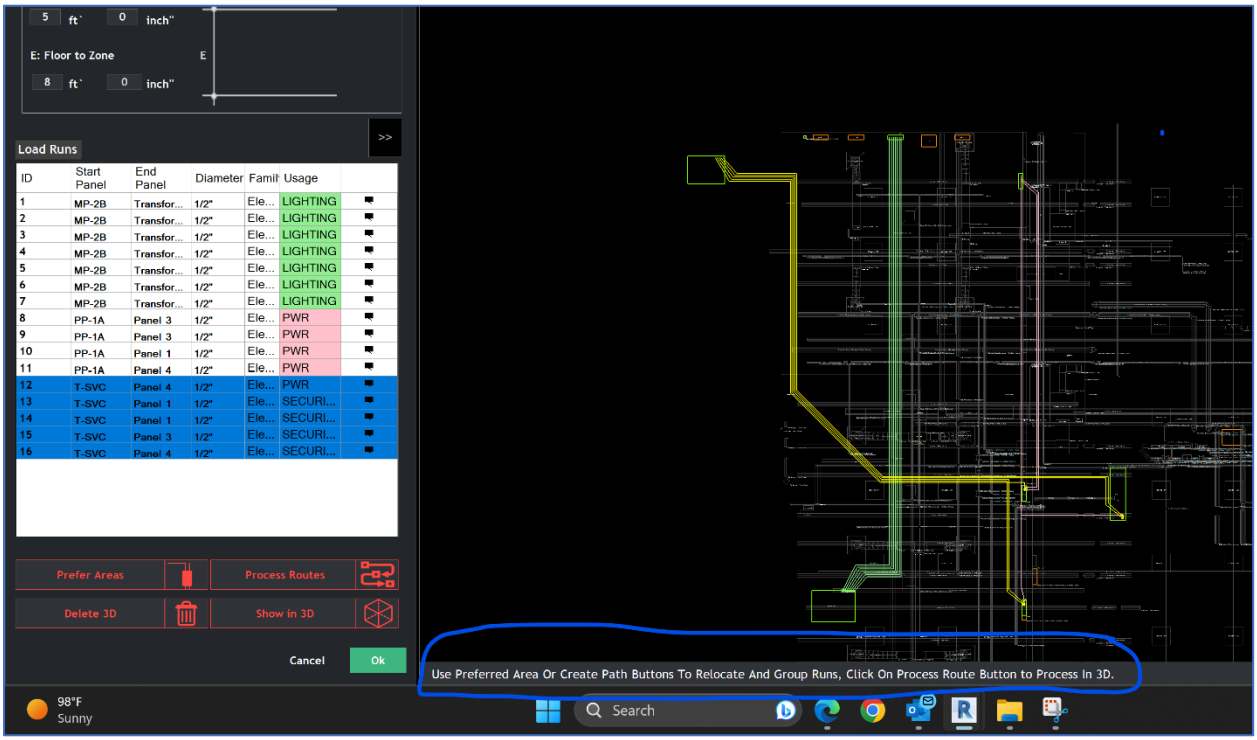
View Controls



Prefer Areas: Adjust conduit path
Process Routes: Generate routes in 3D
Delete 3D: Deletes processed routes
Show in 3D: Isolates processed routes in 3D
Process Routes Without Clash: Process routes at a specific elevation without clash detection feature.

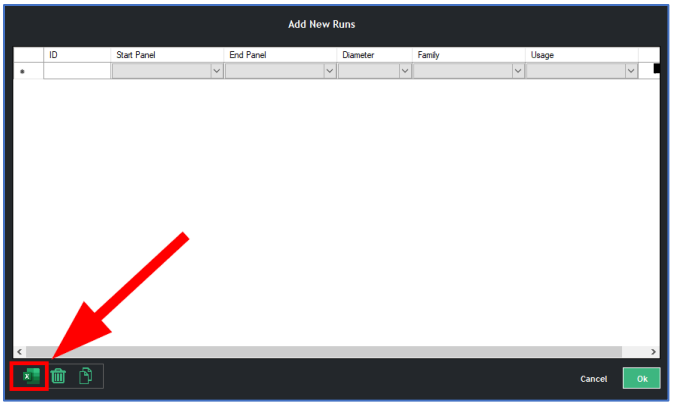
Information/Instruction Bar

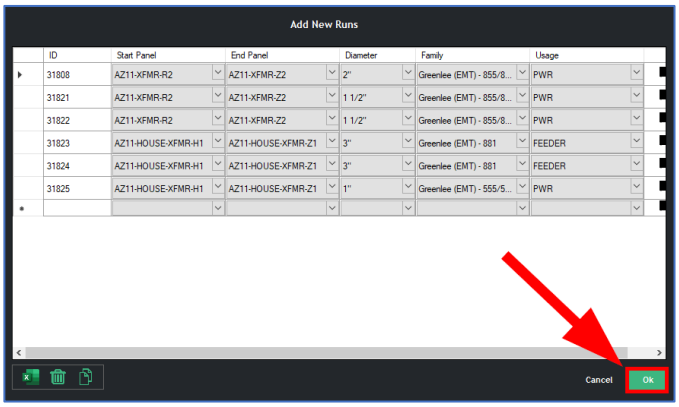
It helps to illustrate what is needed to use the software or what the software is expecting as next(s) to work properly.



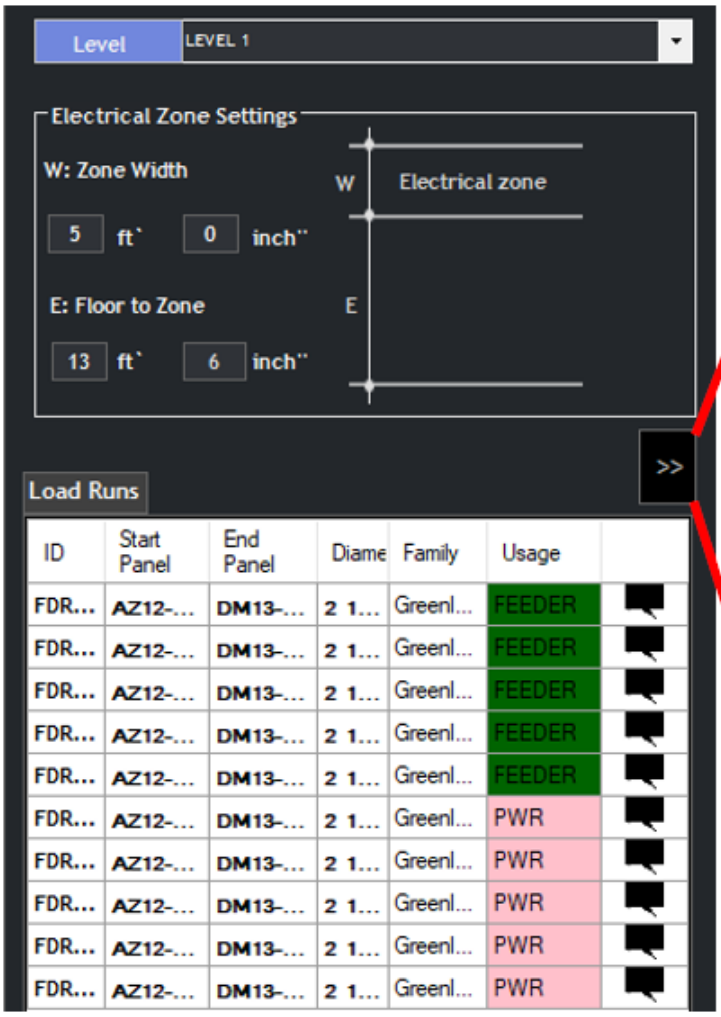
Feeder Schedule Browser

Import Feeder schedule: Feeder schedule information is used from panel to panel to determine the best possible route. Click **Load Runs** and select feeder schedule.





If multiple elevations are needed after the schedule is imported,
select **>>** to expand and change Zone Width (W'-W") and Floor to Zone elevation (E'-E").



R. ID	W '	W "	E '	E "
FDR-01	5	0	8	0
FDR-01	5	0	8	0
FDR-02	5	0	8	0
FDR-02	5	0	8	0
FDR-03	5	0	8	0
FDR-03	5	0	8	0
FDR-04	5	0	8	0
FDR-04	5	0	8	0
FDR-05	5	0	8	0
FDR-05	5	0	8	0
FDR-21	5	0	8	0
FDR-21	5	0	8	0
FDR-22	5	0	8	0
FDR-22	5	0	8	0
FDR-23	5	0	8	0
FDR-23	5	0	8	0
FDR-24	5	0	8	0
FDR-24	5	0	8	0
FDR-25	5	0	8	0
FDR-25	5	0	8	0

Parallel IDs

Before importing the conduit schedule, add a count column to include the quantity of conduit.

ID	First Panel	Last Panel	Diameter (Inch)	Type	Usage	Count
1	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH	4
2	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH	4

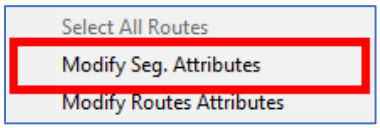
ABR will add a new row to the schedule for each parallel run and will add -1, -2, -3, etc. to the end of each conduit run ID with the same ID.

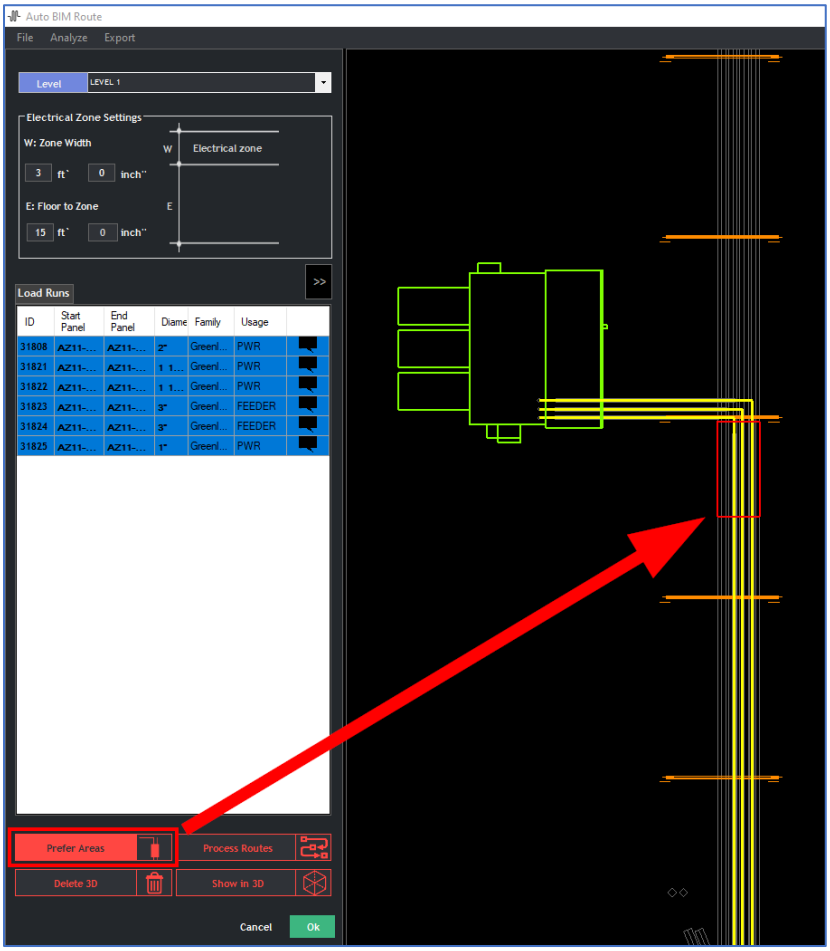
Load Runs

ID	Start Panel	End Panel	Diam	Family	Usage
1-1	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
1-2	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
1-3	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
1-4	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
2-1	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH
2-2	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH
2-3	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH
2-4	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH

Prefer Areas

Select **Prefer Area** (found in View Controls) Create rectangle shape windows in the direction you want the conduit to travel. Once preferred areas are placed, select the routes and edit elevation:
Right-click, select Modify Seg. Attributes and edit the conduit elevation (Zone Width/Floor to Zone)





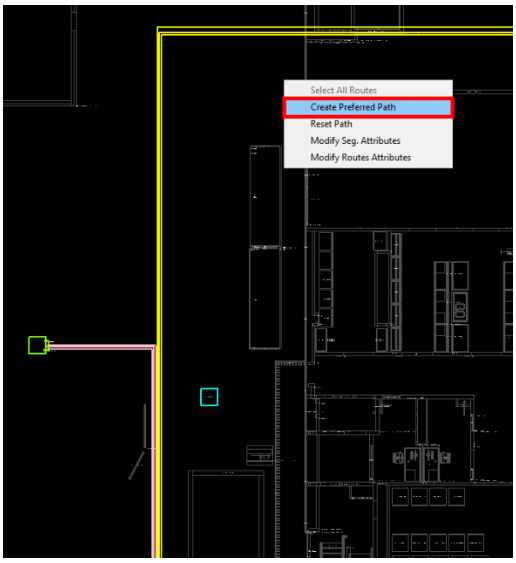
Click **Process Routes** to draw the route in your 3D model. Select **Delete 3D** to remove the route.

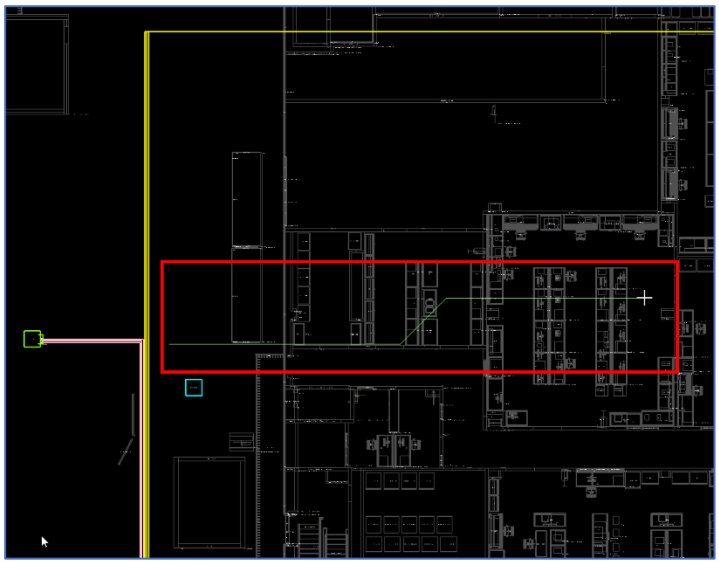
Closing ABR will keep the processed route in your model, manual changes will be required.

Preferred Path

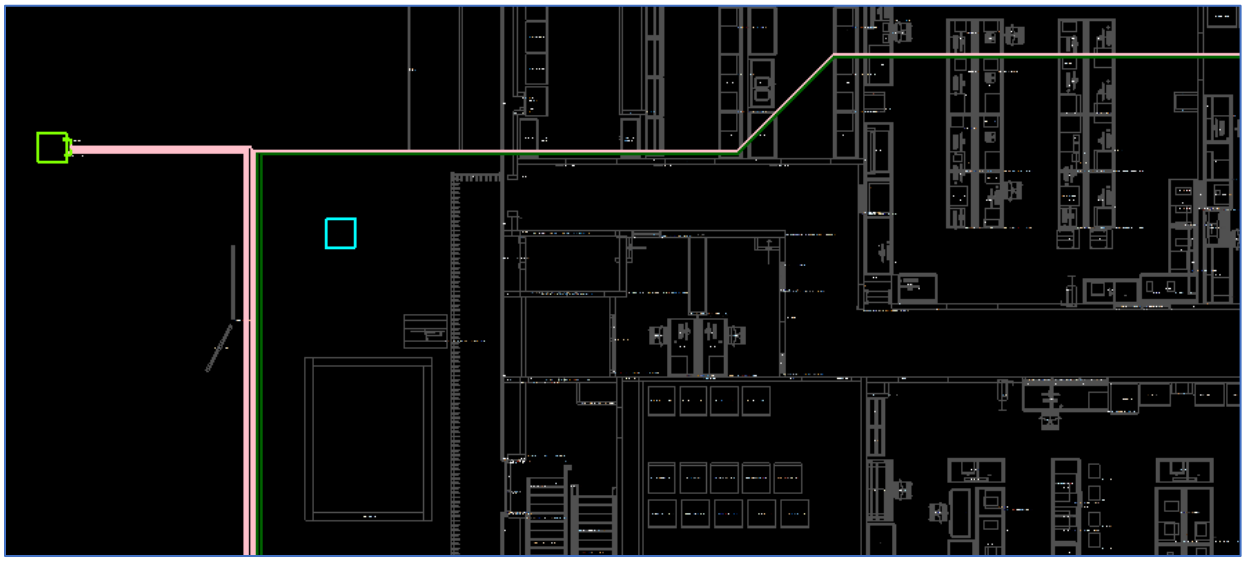
Draw a line for a selected run(s) and ABR will move the runs to mimic the drawn line.

Select runs **>** right-click **>** Create Preferred Path **>** Start drawing a path.





Draw a path **>** right-click to move the runs to mimic the drawn line.



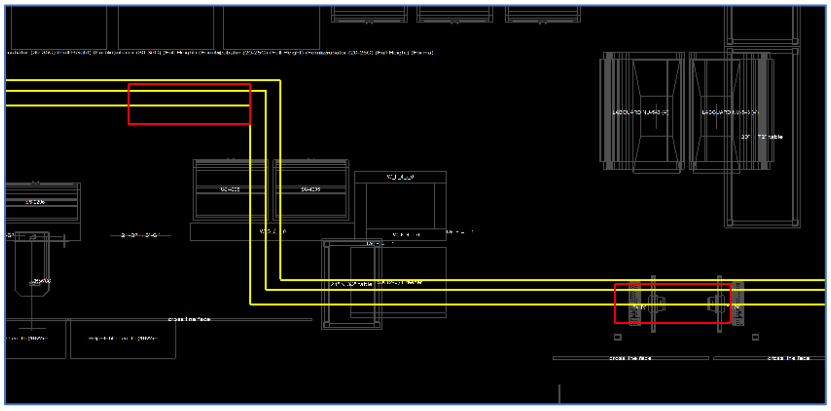
Select the runs **>** right-click **>** Reset Path to take it back to its original design.

Note:
You cannot add more than one path for runs that have already gone through this logic.
You need to select the runs and reset them first so you can create a new path.

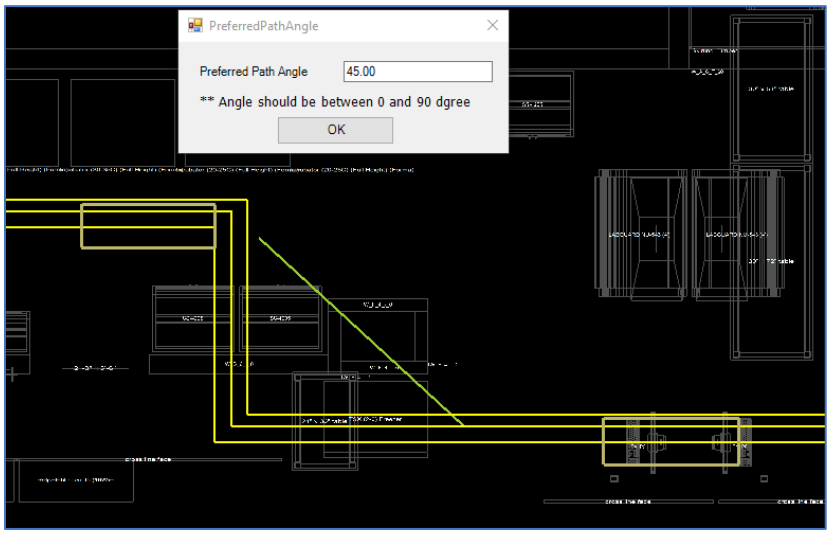
Offset

In the Tool Bar, click the Offset tool and follow the prompts to create an offset.

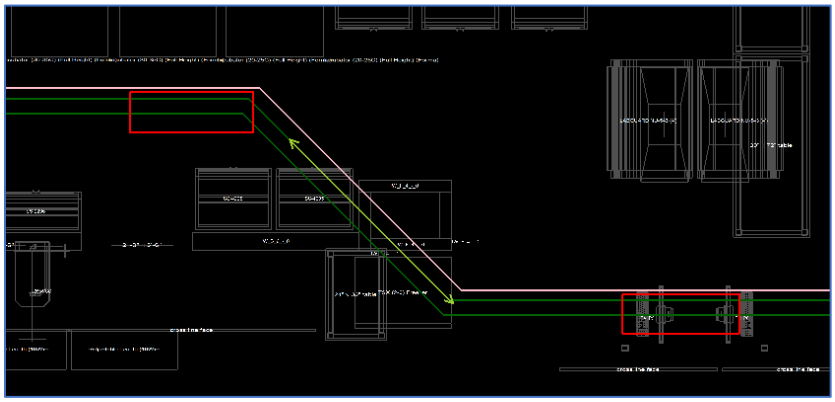
Select two preferred areas.



Draw a line for the preferred angle, set degree of angle.



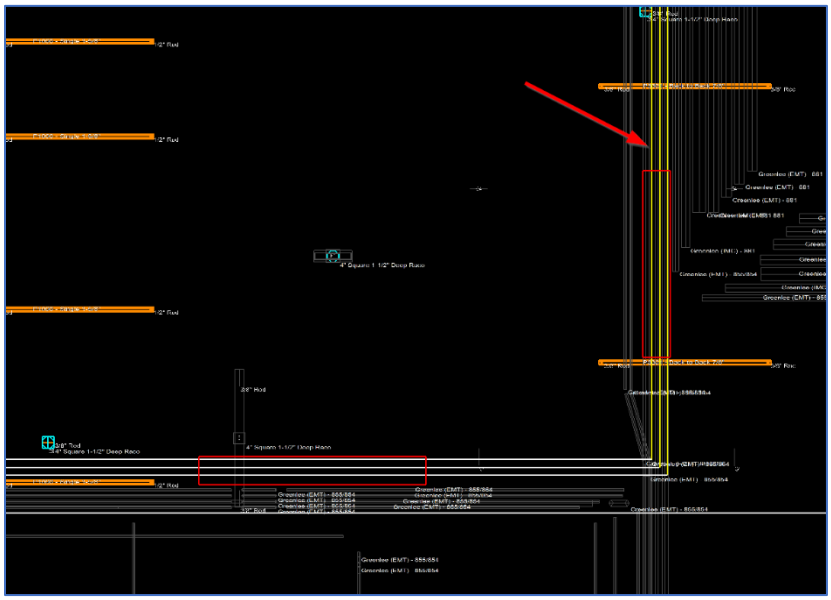
Click in view, offset created.



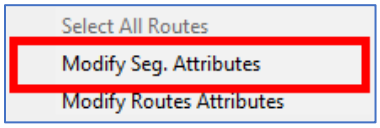
Single Run

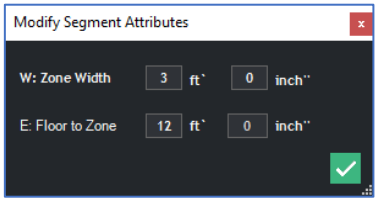
Elevation Changes: Select the Single Run tool.

Select a conduit segment (or a single conduit) for a new elevation.



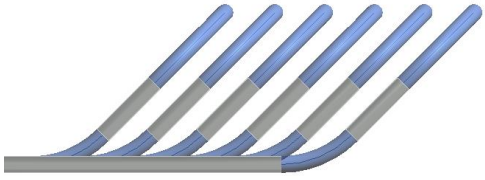
Right-click to modify elevation. Adjust Zone Width and Floor to Zone Height. Click Process Routes



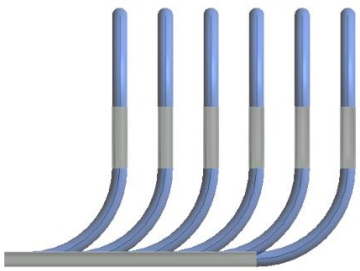


Minimizing Zone Width allows for a smoother transition (conduit kick) instead of a conduit stub up/down.

Small elevation changes will create kicks, and large elevation changes will create stubs.



Approx. 1’-6” and below

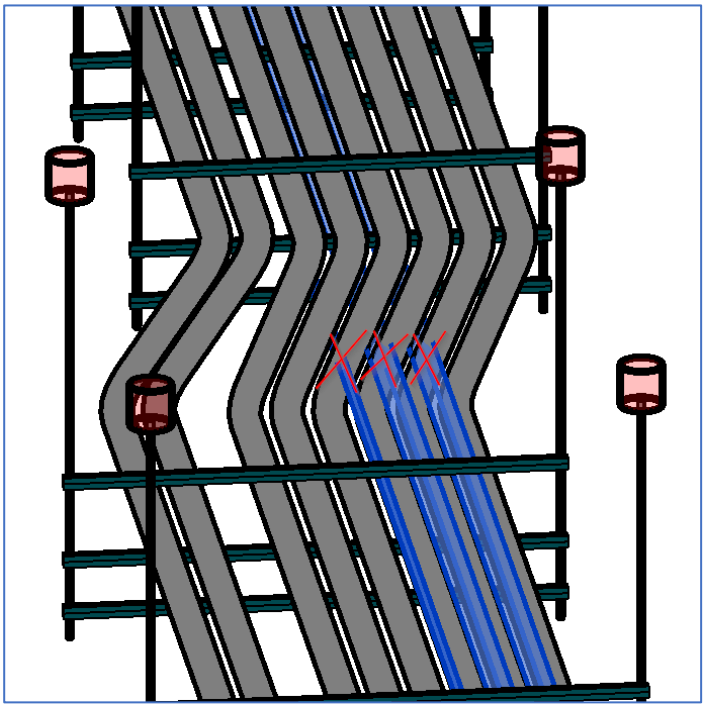


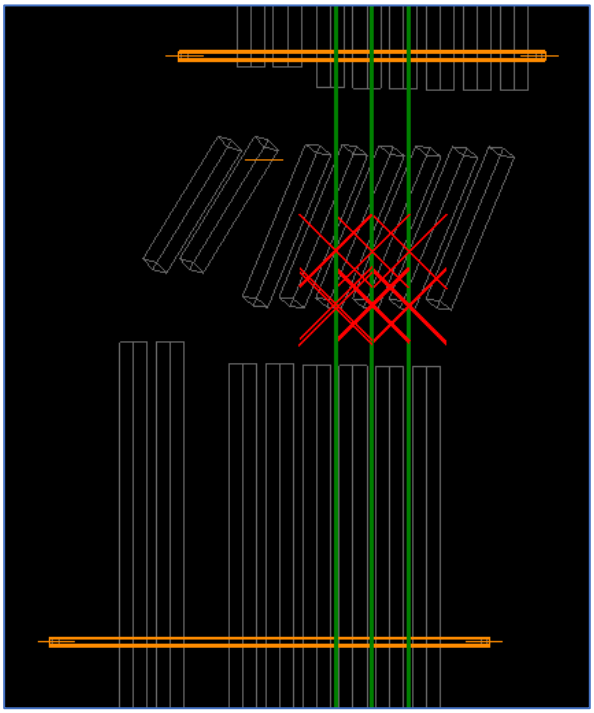
Approx. 1’-7” and above

Clash Detection

After routes are processed, a clash detection summary will be provided.
Red X's will appear in the plan view, showing where internal/external clashes were created.

Example: Internal clashes with existing conduit





Example: External clashes with steel