Cable Tray Fitting Schedule

Manufacturer	Part Number	Part Description	Fitting Radius	Fitting Angle	Configuration	Count
TechLine MFG.	Error: Check Configuration	Error: Check Configuration	6"	90°	Unavailable Tray Width Selected	1
TechLine MFG.	Error: Check Configuration	Error: Check Configuration	6"	60°	Unavailable: Maximum Bend Radius for fittings less than 12in is 90°	1
TechLine MFG.	STCC-6-2-AL-12R	6in.W x 2in.H x 12in. Radius Horizontal Cross	12"	90°	Available	3
TechLine MFG.	STCS-6-2-AL	6in.W x 2in.H Channel Union			Available	1
TechLine MFG.	STCS-6-2-AL-BK	6in.W x 2in.H Back to Back Plane Adapter			Available	2
TechLine MFG.	STCT-6-2-AL-12R	6in.W x 2in.H x 12in. Radius Horizontal Tee	12"	90°	Available	3
TechLine MFG.	STHE-6-2-AL-6R	6in.W x 2in.H x 6in. Radius 90° Horizontal Elbow	6"	90°	Available	4
TechLine MFG.	STHE-6-2-AL-12R	6in.W x 2in.H x 12in. Radius 90° Horizontal Elbow	12"	90°	Available	3
TechLine MFG.	STVI-6-2-AL-14R	6in.W x 2in.H x 14in. Radius 90° Vertical Inside Elbow	14"	90°	Available	3
TechLine MFG.	STVO-6-2-AL-12R	6in.W x 2in.H x 12in. Radius 90° Vertical Outside Elbow	12"	90°	Available	3

This is a built-in Cable Fitting Schedule specifically for SnapTrack Fittings. Each part number and its corresponding description will allocate automatically when placed in the model. Additional information is also present when there are errors in the configuration of the model. Errors may vary from width, height, radius, and angle of the fitting. A visible red error box will appear around the fitting that has the error, allowing corrections to made. In the schedule, there is a configuration tab that notifies the user if the configuration of the fitting is available, and if an error is made, specifically what needs to be corrected to make the part available. You can highlight the fitting with an error directly from the schedule.

### General Rules when designing with SnapTrack Fittings:

- Tray Widths available are 2", 4", and 6"
- Tray Height at this time is limited to 2"
- Tray Length for fittings is locked to 1/2"
- Radius available are 3", 6", 12", 24", and 36"
- Angles available are 30°, 45°, 60°, and 90°
- Fittings with a radius of less than 12" are limited to a 90° bend
- A *minimum* of 13" of Cable Tray between fittings
- Default for all fittings is a 6" Tray Width with a 12" Radius
- An option to include a cover is available
  → *Properties Tab* → *Construction* □ *Include Cover*

PART NUMBER MATRIX

STXX-X-2-AL-XR

FITTING TYPE:
HORIZONTAL ELBOW **(HE)**
HORIZONTAL TEE **(CT)**
REDUCING HORIZONTAL TEE **(RCT)**
HORIZONTAL CROSS **(CC)**
REDUCING HORIZONTAL CROSS **(RCC)**
VERTICAL INSIDE **(VI)**
VERTICAL OUTSIDE **(VO)**

TRAY WIDTH
TRAY HEIGHT
INCH RADIUS OF FITTING
MATERIAL

STVO-X-2-AL-XR
STVI-X-2-AL-XR
STHE-X-2-AL-XR
STCS-X-2-AL
STCOS-X-2-AL
STCS-X-2-AL-BK
STCT-X-2-AL-XR
STRCT-X-2-AL-XR
STCC-X-2-AL-XR
STRCC-X-2-AL-XR
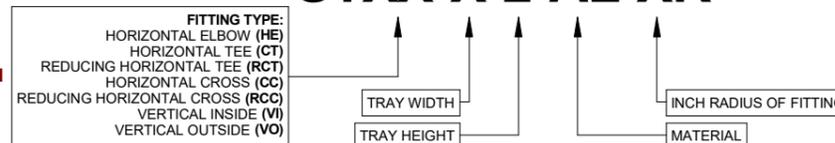
All Cable Tray between SnapTrack fittings _MUST_ be at a minimum of 13" in length

SnapTrack fittings are unique in the fact that they have a 6" insertion into the fitting end. AutoDesk Revit cable tray connections by default are at the end of the tray length, which presented a unique problem in designing the Revit Library. If the fittings were designed to connect at the end of the tray length, for each two fittings, 13" of channel would not be calculated in the Cable Tray run schedule for each fitting connection. To solve this problem, TechLine MFG. designed the fittings to connect the cable tray at the insertion point unique to SnapTrack, therefore eliminating the additional calculation for Cable Tray Runs in the schedules that would be required. However, because Revit places fittings at the connection point of the cable tray, if the 13" minimum cable tray rule between the fittings is not followed, the fittings will overlap, causing a collision interference with the SnapTrack fitting that is not detected by Revit. This poses a significant problem when the design is implemented in the field.

13" [330.2 mm]
13" [330.2 mm]
13" [330.2 mm]
13" [330.2 mm]
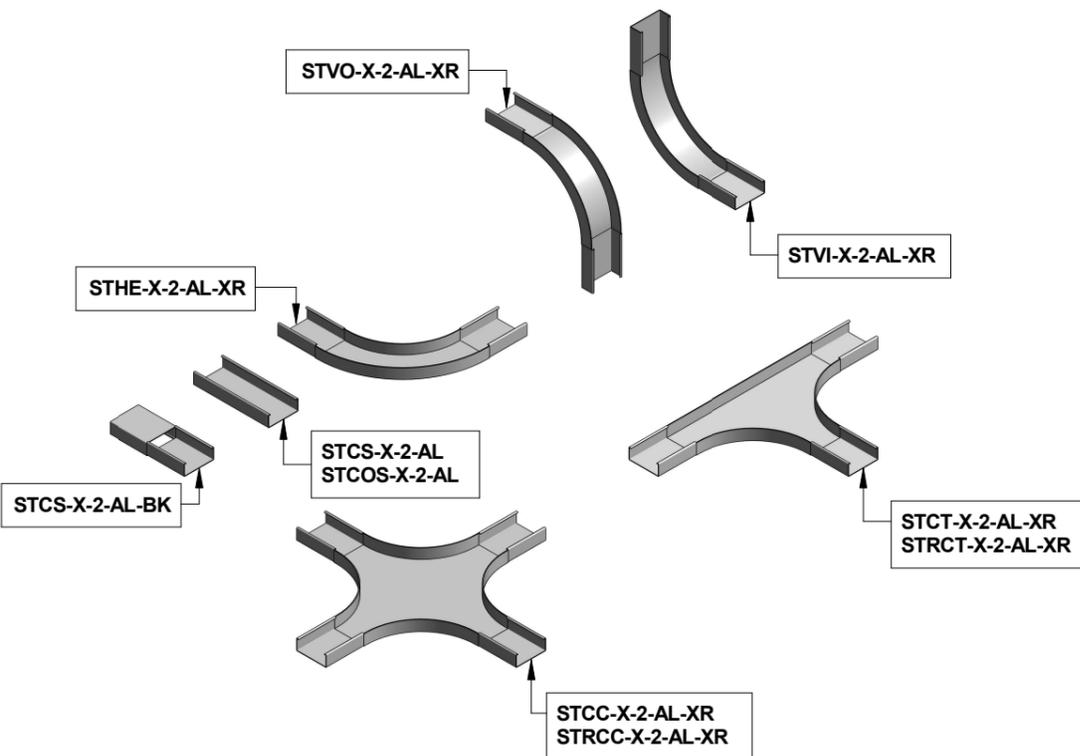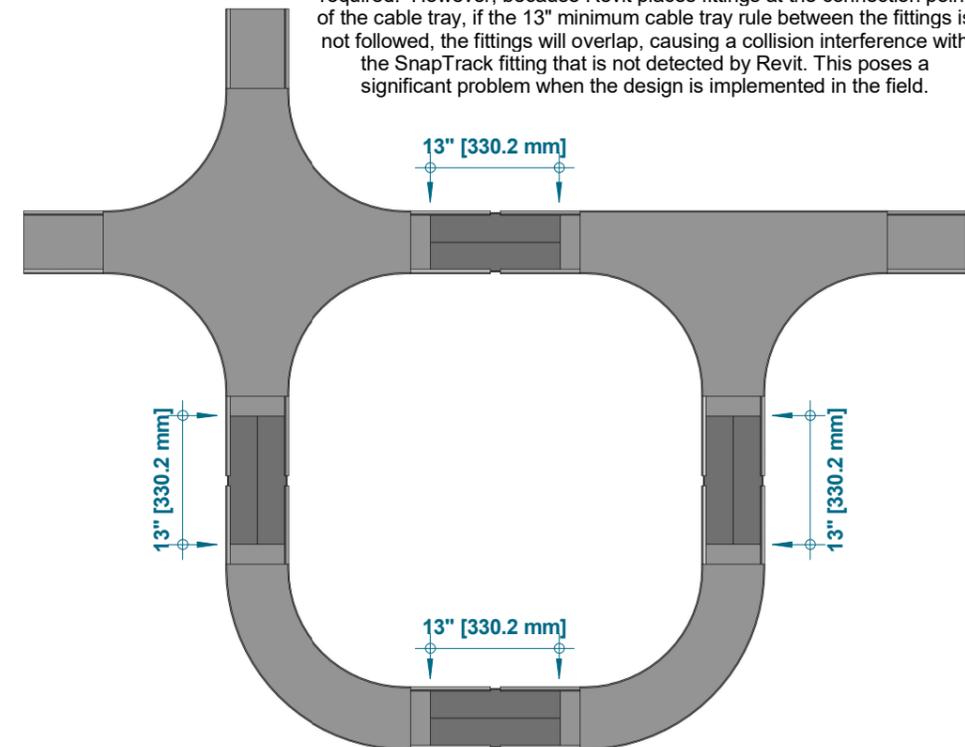
Main Installation Instruction

Family Version	Alpha 1.7	**ST-01**
Date	07 Nov 2017	
Drawn by	JPM	
Checked by	TechLine MFG.	Scale

TechLine® MFG.

SnapTrack

15-Nov-17 16:23:40
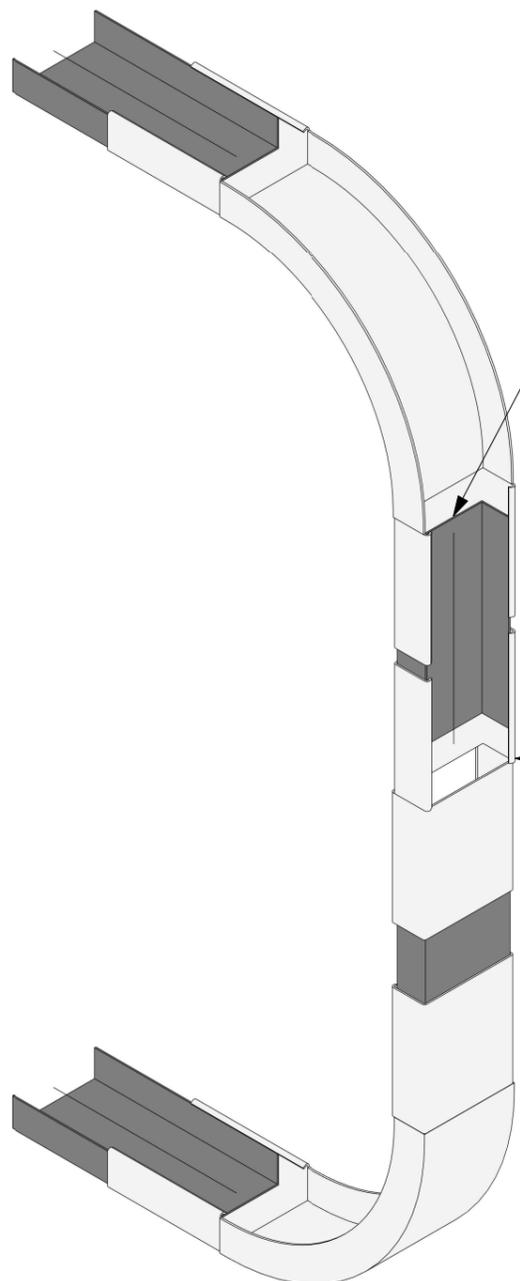
**Follow the 13" minimum Cable Tray Length between fittings. Disregarding this rule poses significant problems when implementing the design in the field.**

When using a Back to Back Plane Adapter on a section of Cable Tray that traverses vertically then back over top of the lower Cable Tray, you might need to rotate the Plane Adapter and the connected channel 180° to correctly show the channel in its respective fitting end. This is only a visual anomaly, and will not affect Cable Tray Fitting schedules or Cable Tray Run schedules.
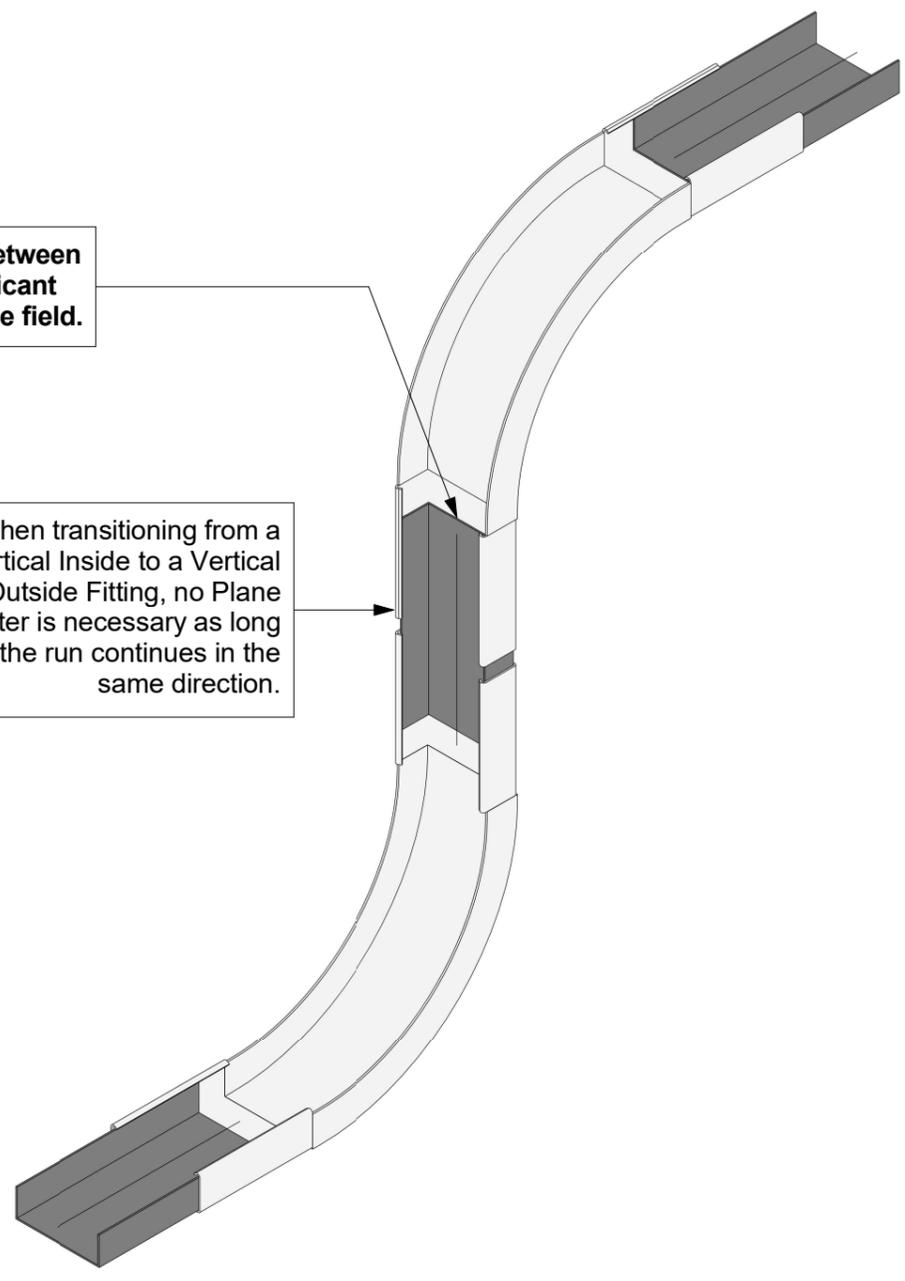
When transitioning from a Vertical Inside to a Vertical Outside Fitting, no Plane adapter is necessary as long as the run continues in the same direction.

1 VI to VO Reversing Run

2 VI to VO Continuing Run

Properties

Horizontal Cross
STCC-X-X-AL-XR

Cable Tray Fittings (1) ⛊ Edit Type

Constraints
Level	Level 1
Host	Level : Level 1
Offset	0.000"

Construction
|	
Include Cover	☐
Connecting Branch Width	6"
Main Branch Width	6"
Bend Radius	12"
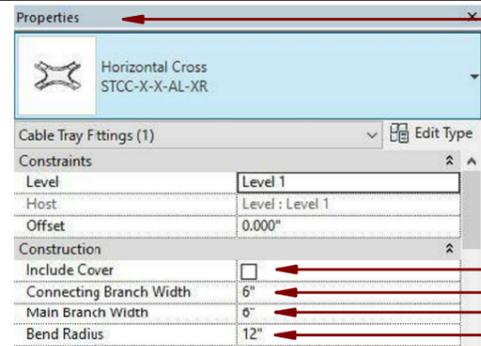
In the properties dialog, the Construction field allows for changes to the fitting that are not implemented directly in the auto-route function. By default, all fittings have a **6" Tray Width** and a **12" Radius**, with **No Cover** selected. Changes to these fittings can be made by changing the values in this field. In the cross fitting, if either the branch run or main run are less than its counterpart, it will result in a Reducing Cross Fitting. The prefix for this part number will be **STRCC**, but will always have the larger **Tray Width** as the first number in the matrix, regardless of the placement, followed by the **Tray Height**, then **Branch Run Tray Width**.
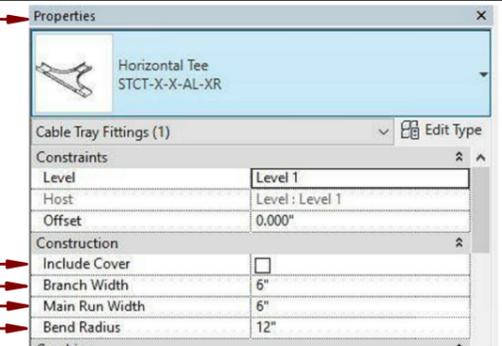
In the properties dialog, the Construction field allows for changes to the fitting that are not implemented directly in the auto-route function. By default, all fittings have a **6" Tray Width** and a **12" Radius**, with **No Cover** selected. Changes to these fittings can be made by changing the values in this field. If the Main Run or Branch run are not equal to each other, this will result in a Reducing Tee, with a part number prefix of **STRCT**. The **Main Run Tray Width** will be the first number in the matrix, followed by the **Tray Height**, then **Branch Run Tray Width**.

Properties

Horizontal Tee
STCT-X-X-AL-XR

Cable Tray Fittings (1) ⛊ Edit Type

Constraints
Level	Level 1
Host	Level : Level 1
Offset	0.000"

Construction
Include Cover	☐
Branch Width	6"
Main Run Width	6"
Bend Radius	12"

MAIN CABLE TRAY RUN

BRANCH CABLE TRAY RUN

MAIN CABLE TRAY RUN

BRANCH CABLE TRAY RUN

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SNAP TRACK
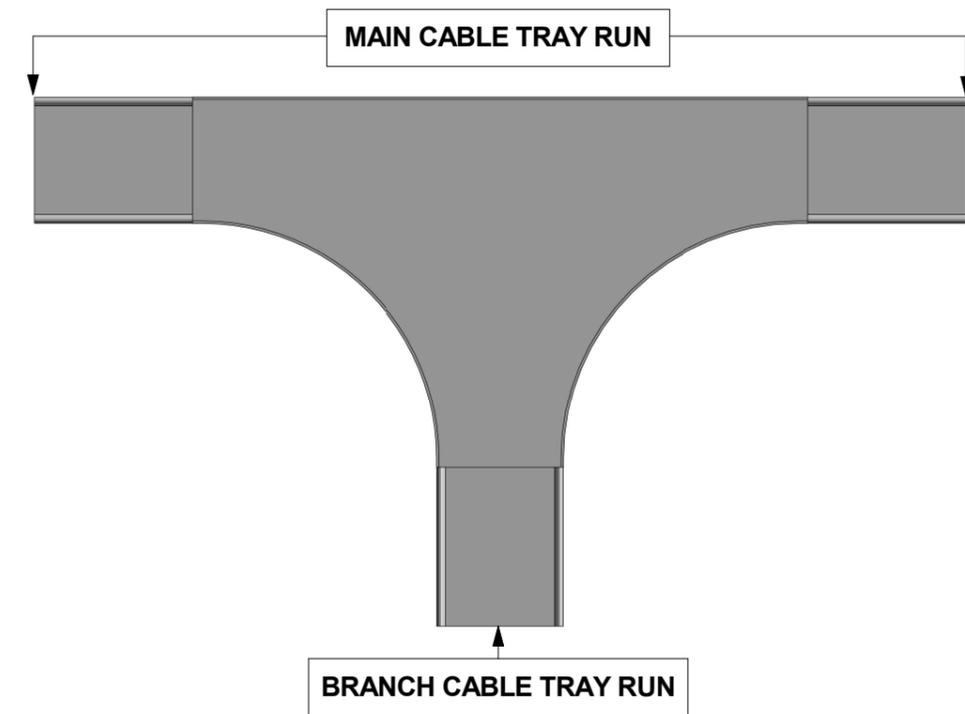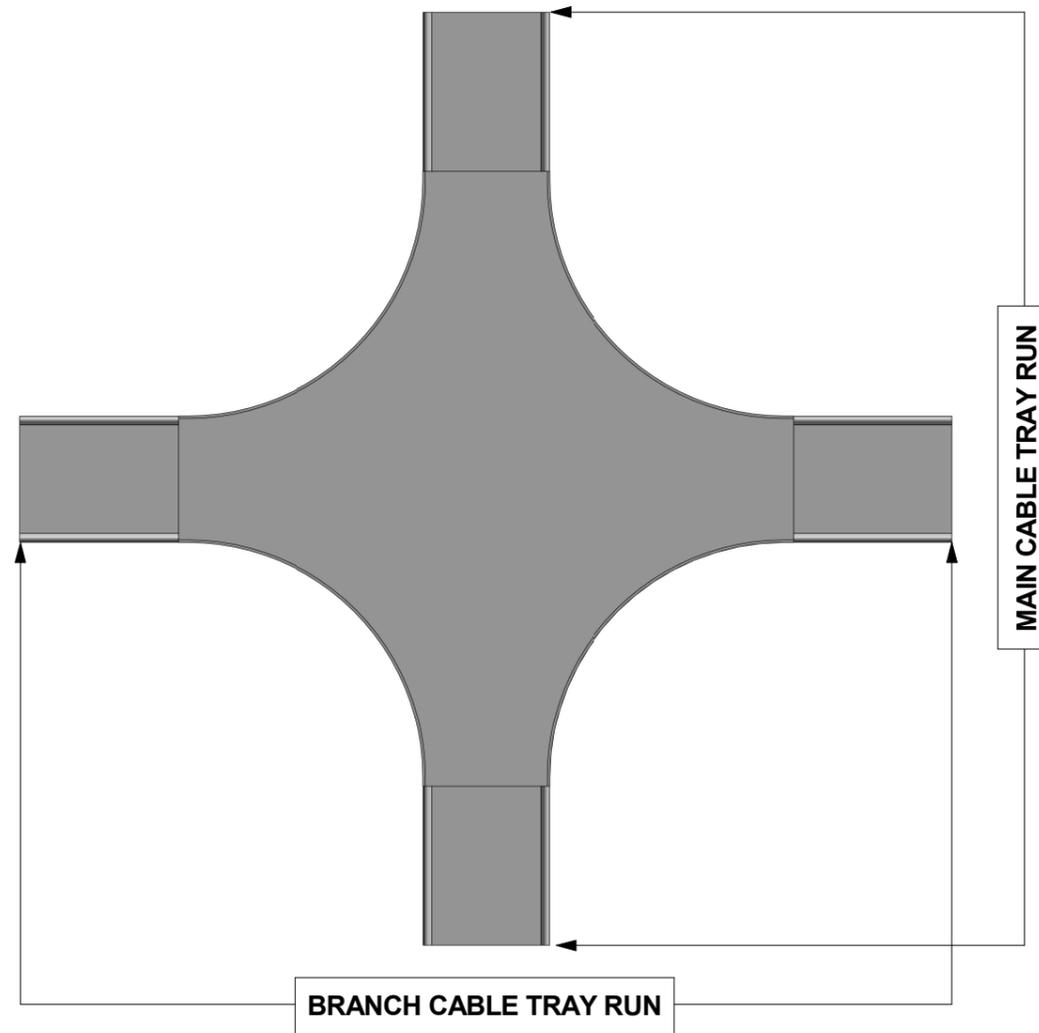
Cross and Tee Construction

Family Version	Alpha 1.7	**ST-03**
Date	07 Nov 2017	
Drawn by	JPM	
Checked by	TechLine MFG.	Scale

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Properties

Take-Off Single
STCTO-X-X-X-2-AL-XX

Cable Tray Fittings (') — Edit Type

Constraints
Level	Level 1
Host	Level : Level 1
Offset	0.000"

Construction
Single Side	☑
Right Hand	☑
Left Hand	☐
Include Cover	☐
Both Sides	☐

Graphics
Use Annotation Scale	☐

Dimensions
|	
Tray Width	6"
Tray Height	2"
Take Off Width	2"

Properties help — Apply
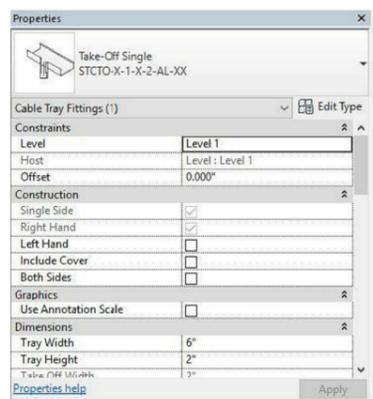
Construction of the Take-Off is determined by the fields selected. If you choose a Left Hand Orientation, the Right Hand Orientation will automatically be deselected. If you select Both Sides, the Single Side option will also be automatically deselected. If you select a Left Hand Orientation and the Both Sides selection, an error will appear and you will need to change your selection to one or the other. As with all other SnapTrack fittings, an option to Include a Cover is present.

PART NUMBER MATRIX

STCTO-X-X-X-2-AL-XX

- BASIC FITTING PREFIX
- NUMBER OF SIDES
- NUMBER OF TAKE-OFFS
- WIDTH OF MAIN RUN
- WIDTH OF TAKE-OFF FITTING
- MATERIAL
- ORIENTATION OF TAKE-OFFS (ABSENT IF BOTH SIDES)
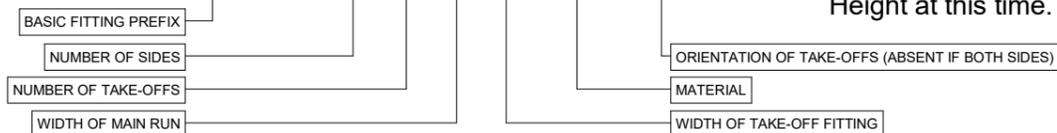
The SnapTrack Take Off Fittings have been designed as two separate fitting instances: Single Take Off, or Double Take Off. Configurations can be made to change the orientation of the take offs as either a Right Hand, Left Hand, or configured as a double sided take off fitting for each instance. They have also followed the Channel Union model, to allow for an insertion anywhere along the main Cabel Tray run. Take Off fittings are limited to a 2" Tray Width and a 2" Tray Height at this time. All Take Off fittings have a 45° angle respective to the main Cable Tray run.

BE AWARE: "GHOST CONNECTIONS" Because Revit doesn't allow a visibility option for connections, all connections will be visible regardless of the type of fitting you may have configured. These "Ghost Connections" will appear and Cable Tray can still be drawn to and from them, however, the fitting WILL NOT change unless you specify the change in the construction properties of the fitting. In this instance, a Right Hand Take Off fitting is configured, with the Left Hand connections still visible.

6" x 2"

6" x 2"

STCTO-1-1-X-2-AL-RH
STCTO-2-1-X-2-AL
STCTO-1-1-X-2-AL-LH
STCTO-1-2-X-2-AL-RH
STCTO-2-2-X-2-AL
STCTO-1-2-X-2-AL-LH

45°
TRAY OUT
TRAY IN
TRAY IN
TRAY OUT
TRAY IN
TRAY OUT
45°
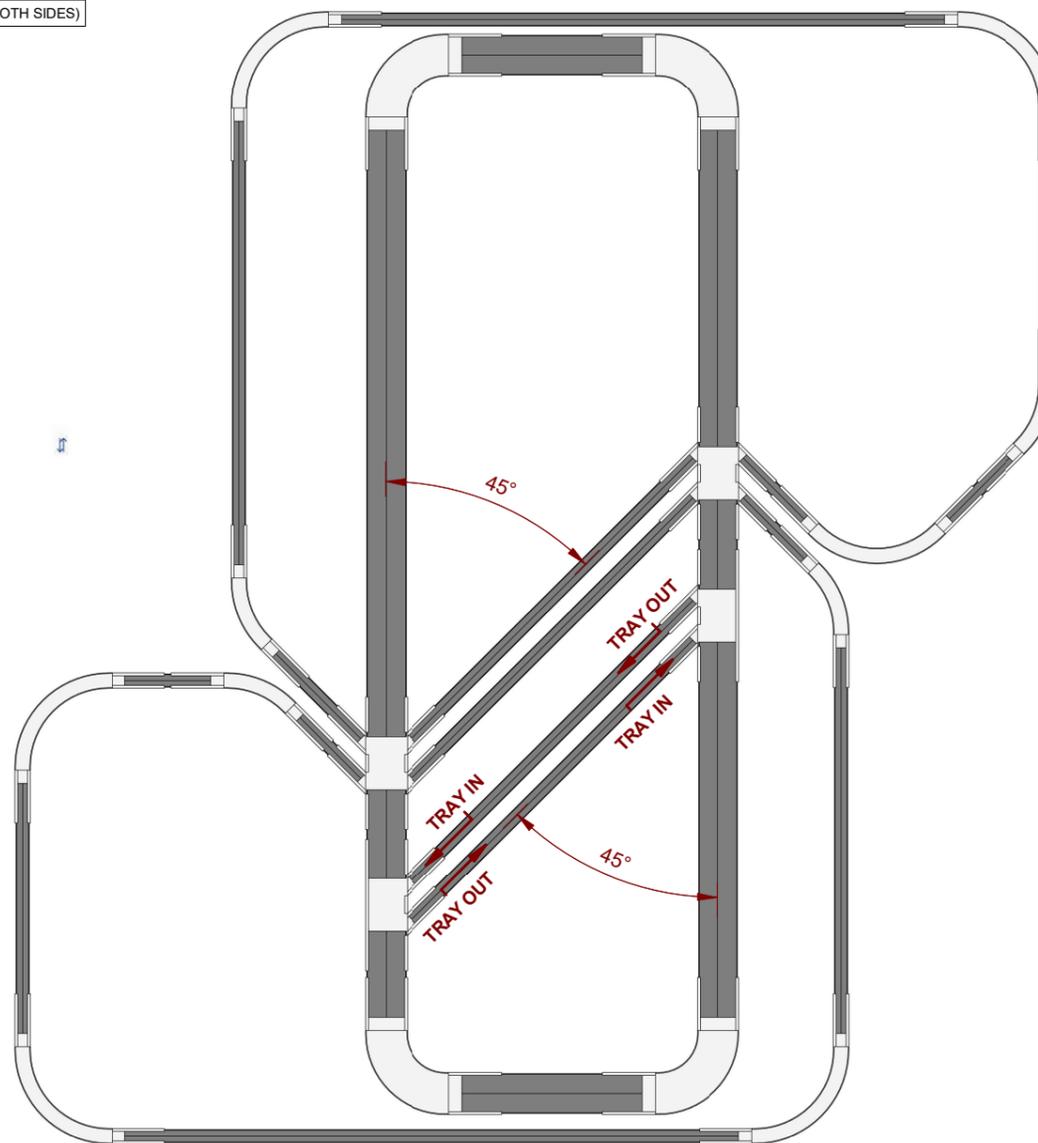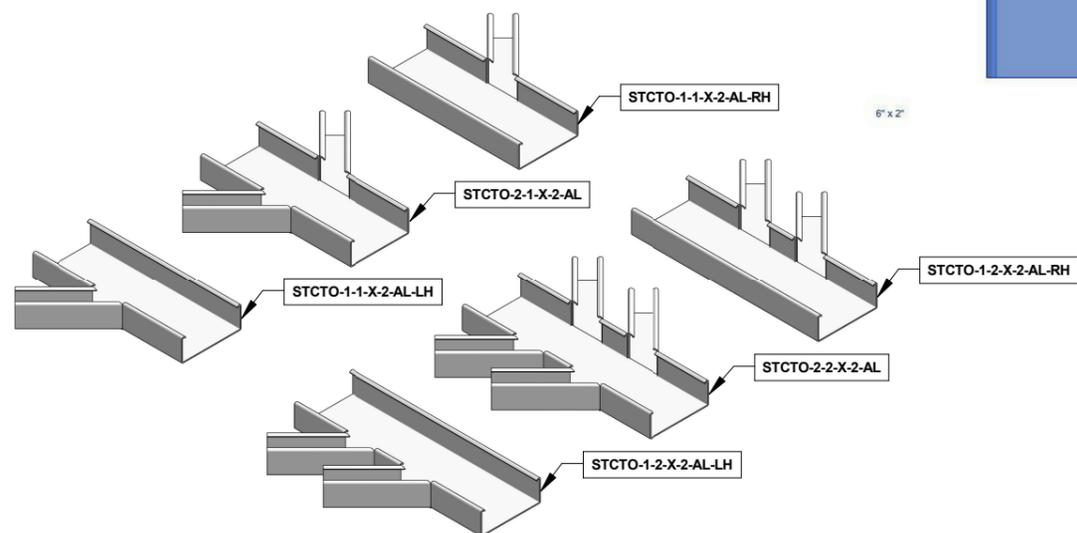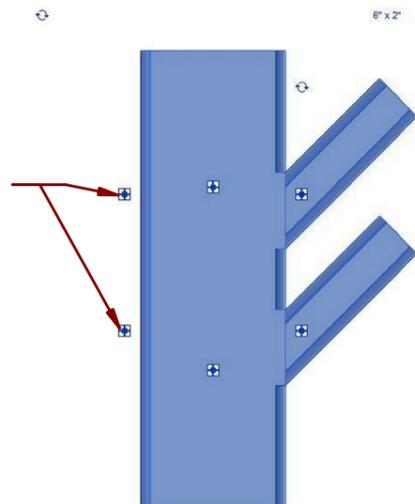
TechLine® MFG.

SnapTrack

Take-Off Fittings

|	
Family Version	Alpha 1.7
Date	07 Nov 2017
Drawn by	JPM
Checked by	TechLine MFG.

ST-04

Scale

The SnapTrack Horizontal Adjustable Splice has been modeled to work in the manner shown in the illustration below. The reference plane is the pivot point of the 5/16" slotted hole on the splice end. This reference plane is 90° to the center axis of the opposing splice. Because of this, the angle you enter in the Construction field is what will determine the angle of the splice end. You will need to determine the angle you need **BEFORE** drawing Cable Tray from the end of the splice. The Cable Tray will become disconnected if you attempt to configure the angle after the cable tray is in place.

Center Axis of Opposing Splice

Reference Plane for Angle

180°   0°

15° 30° 45° 60° 75° 90° 105° 120° 135° 150° 165°
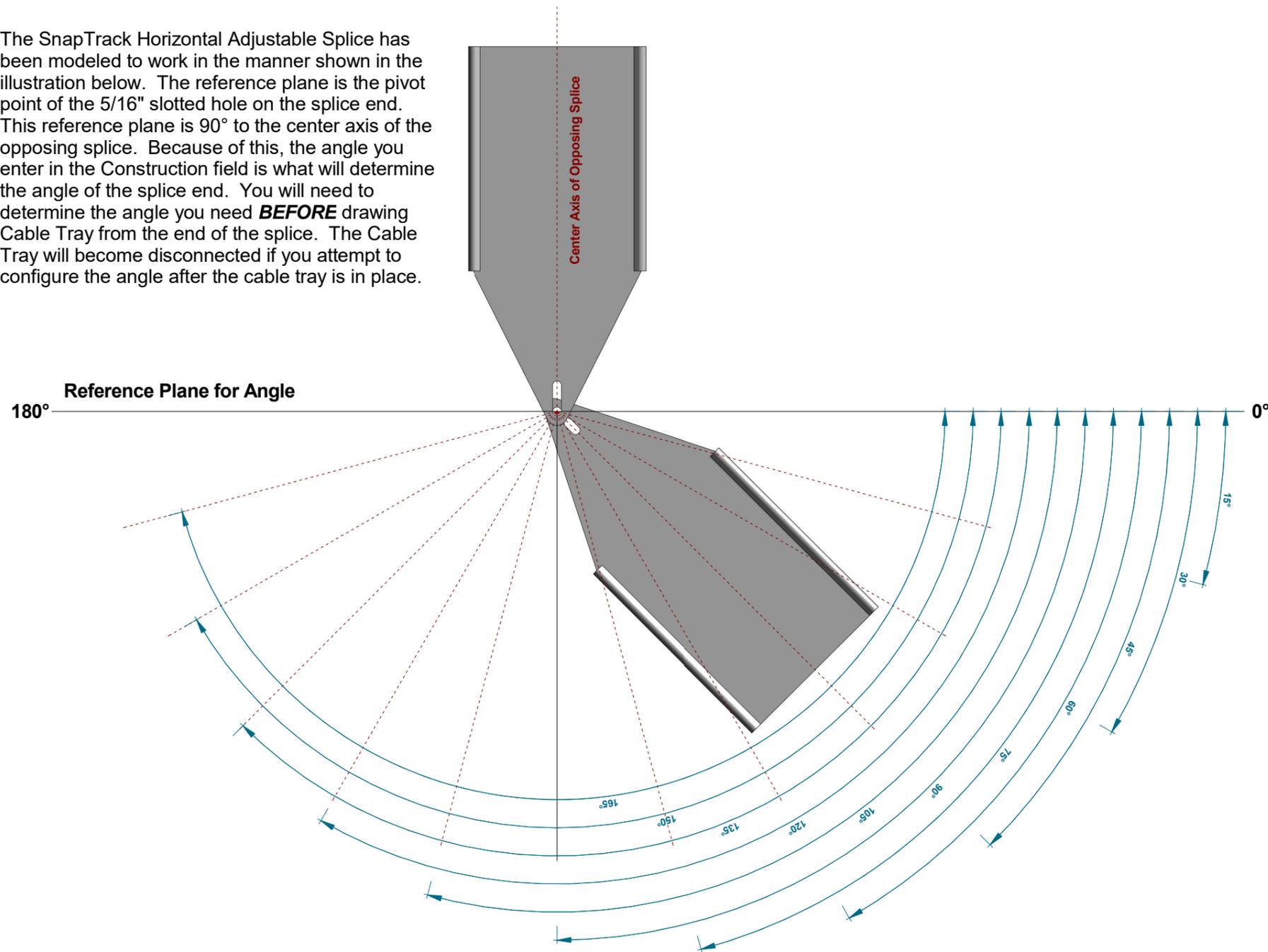
MAXIMUM ANGLES ON ADJUSTABLE SPLICES

205°   335°

6" Tray Width

198°   342°

4" Tray Width

193°   347°

2" Tray Width

TechLine® MFG.

SNAP TRACK
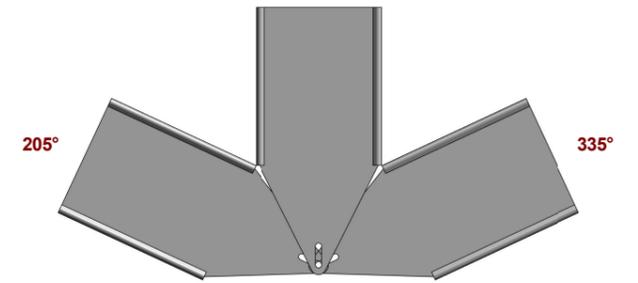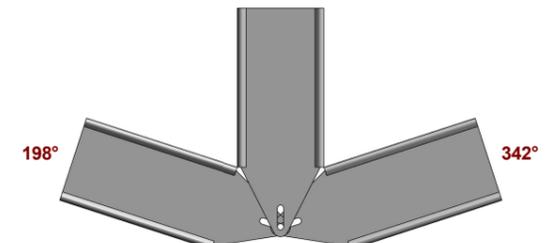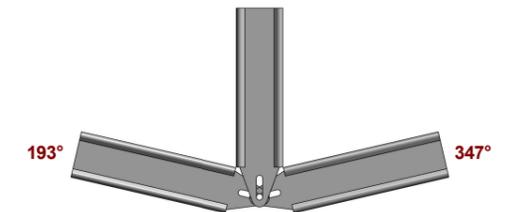
Horizontal Adjustable Fittings

		ST-05
Family Version	Alpha 1.7	
Date	07 Nov 2017	
Drawn by	JPM	
Checked by	TechLine MFG.	Scale

15-Nov-17 16:23:51

Cable Tray Fitting Schedule

Manufacturer	Part Number	Part Description	Fitting Radius	Fitting Angle	Configuration	Count
TechLine MFG.	Error: Check Configuration	Error: Check Configuration	6"	90°	Unavailable Tray Width Selected	1
TechLine MFG.	Error: Check Configuration	Error: Check Configuration	6"	60°	Unavailable: Maximum Bend Radius for fittings less than 12in is 90°	1
TechLine MFG.	STCC-6-2-AL-12R	6in.W x 2in.H x 12in. Radius Horizontal Cross	12"	90°	Available	3
TechLine MFG.	STCS-6-2-AL	6in.W x 2in.H Channel Union			Available	1
TechLine MFG.	STCS-6-2-AL-BK	6in.W x 2in.H Back to Back Plane Adapter			Available	2
TechLine MFG.	STCT-6-2-AL-12R	6in.W x 2in.H x 12in. Radius Horizontal Tee	12"	90°	Available	3
TechLine MFG.	STHE-6-2-AL-6R	6in.W x 2in.H x 6in. Radius 90° Horizontal Elbow	6"	90°	Available	4
TechLine MFG.	STHE-6-2-AL-12R	6in.W x 2in.H x 12in. Radius 90° Horizontal Elbow	12"	90°	Available	3
TechLine MFG.	STVI-6-2-AL-14R	6in.W x 2in.H x 14in. Radius 90° Vertical Inside Elbow	14"	90°	Available	3
TechLine MFG.	STVO-6-2-AL-12R	6in.W x 2in.H x 12in. Radius 90° Vertical Outside Elbow	12"	90°	Available	3

ERROR IN SCHEDULE →
ERROR IN SCHEDULE →

The Red Error Box will become visible when there is an error in the configuration of the fitting you have selected. In this instance, a **6" Radius fitting can only have a 90° bend**, therefore, the red error box will become visible, and the Cable Tray Fitting schedule will reflect the error in the Part Number, and Part Description fields. The Configuration field in the schedule will more specifically outline the errors in the fitting.
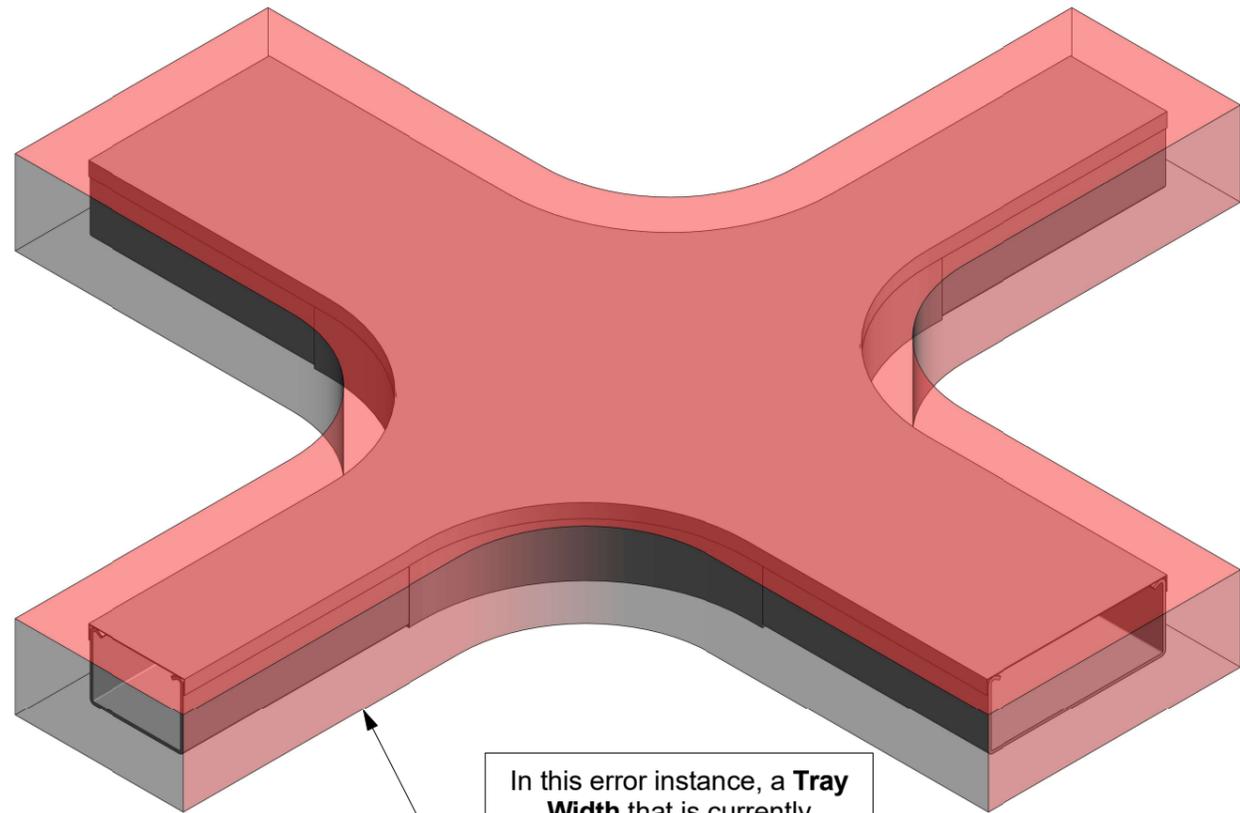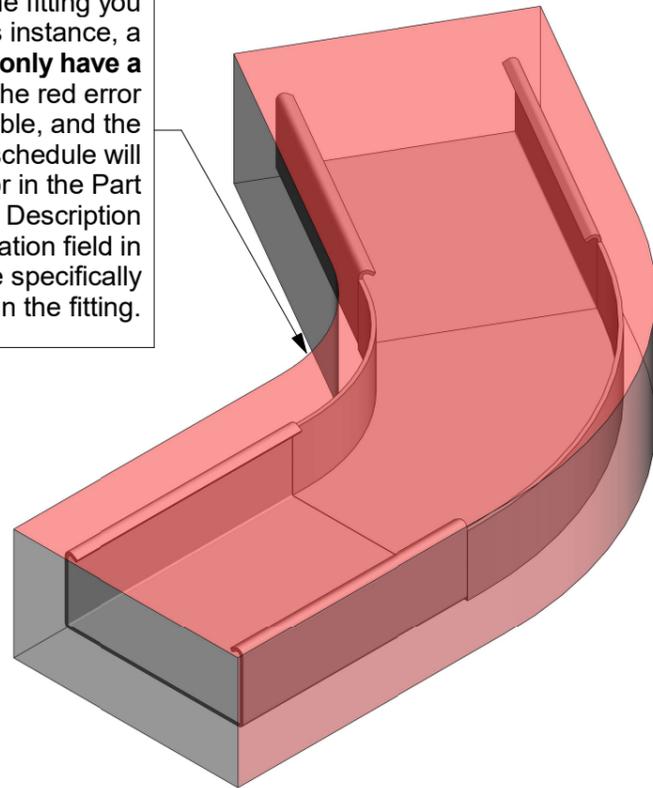
In this error instance, a **Tray Width** that is currently unavailable to SnapTrack is selected, which is not only visible in the model, but also visible in the Cable Tray Fitting schedule.

TechLine® MFG.

SNAP TRACK

Error Visibility

Family Version	Alpha 1.7	
Date	07 Nov 2017	**ST-06**
Drawn by	JPM	
Checked by	TechLine MFG.	Scale