

What is new in PTV Vistro 2022

The background of the lower half of the page features abstract, overlapping geometric shapes in shades of red and orange, creating a dynamic, modern aesthetic against the black background.

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Preamble

This document provides an overview of PTV Vistro's important updates from version 2021 to version 2022. The functionality previously added before version 2022, in version 2021, and service packs are not included in this document. Please see the prior release notes for these features. The release notes future versions of 2022.00-xy include additional new features that are not covered in this highlight document.

Detailed descriptions of how to use the new functionality can be found in the Vistro 2022 online help and in the document "Vistro 2022 - Manual.pdf".

Release Highlight Summary

PTV Vistro 2022 rethinks agency workflows and provides targeted enhanced integrations centered around the [urban mobility system](#) concept. Entangled layers of mobility change the focus from macroscopic overviews to pinpointed meso- and microscopic urban planning. To address modern challenges, agencies need a regular supply of detailed engineering data fed to sophisticated model resolutions.

PTV Vistro 2022 answers the call by bridging the gap between an agency's Traffic Operations and Planning Teams. Fueled by PTV Vistro, Traffic Operations teams can create large PTV Visum planning models and maintain them with engineering-level data like updated traffic signal timings and coordination, and up-to-date roadway improvements.

Build your traffic network in PTV Vistro and experience accurate out-of-the-box microscopic simulations in PTV Vissim, utilizing Vistro's new model junction design features and tools upgraded export functionality. Create the most powerful microsimulation of urban corridor and alternative and innovative intersection designs with a click of a button.

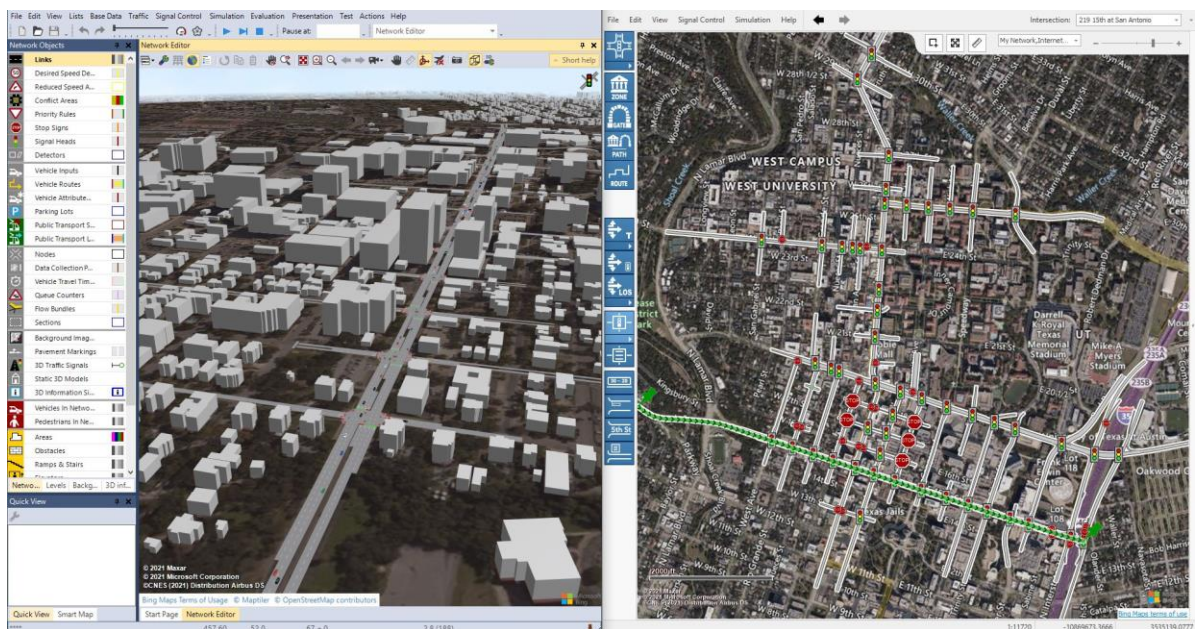
1 File Import / Export

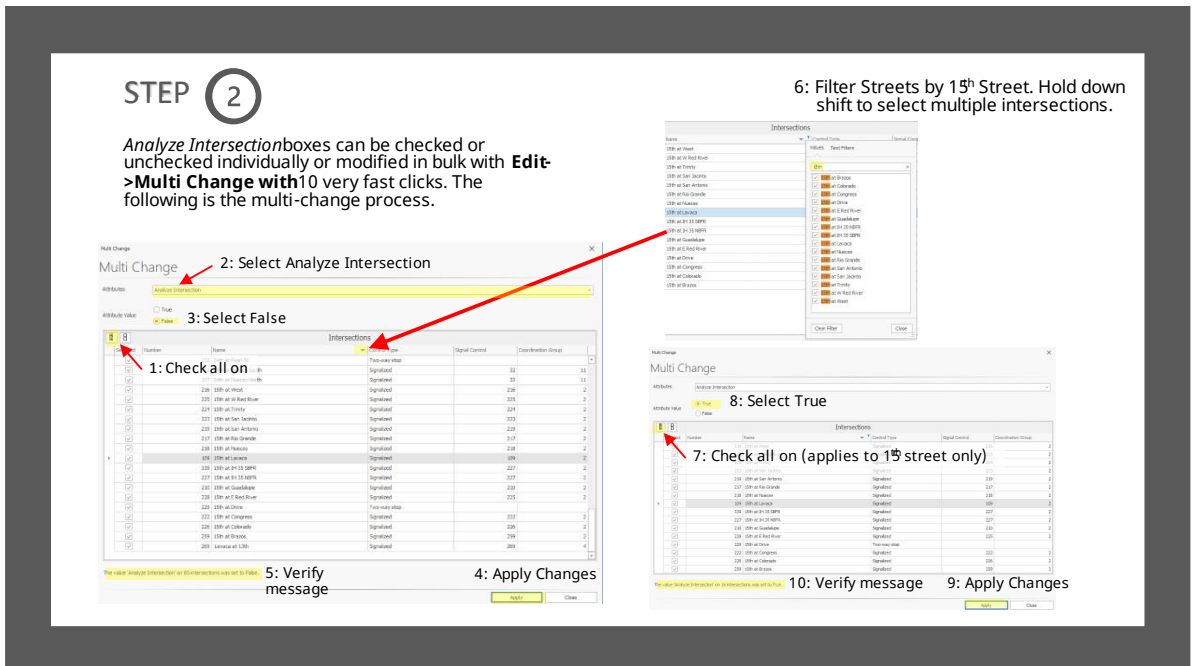
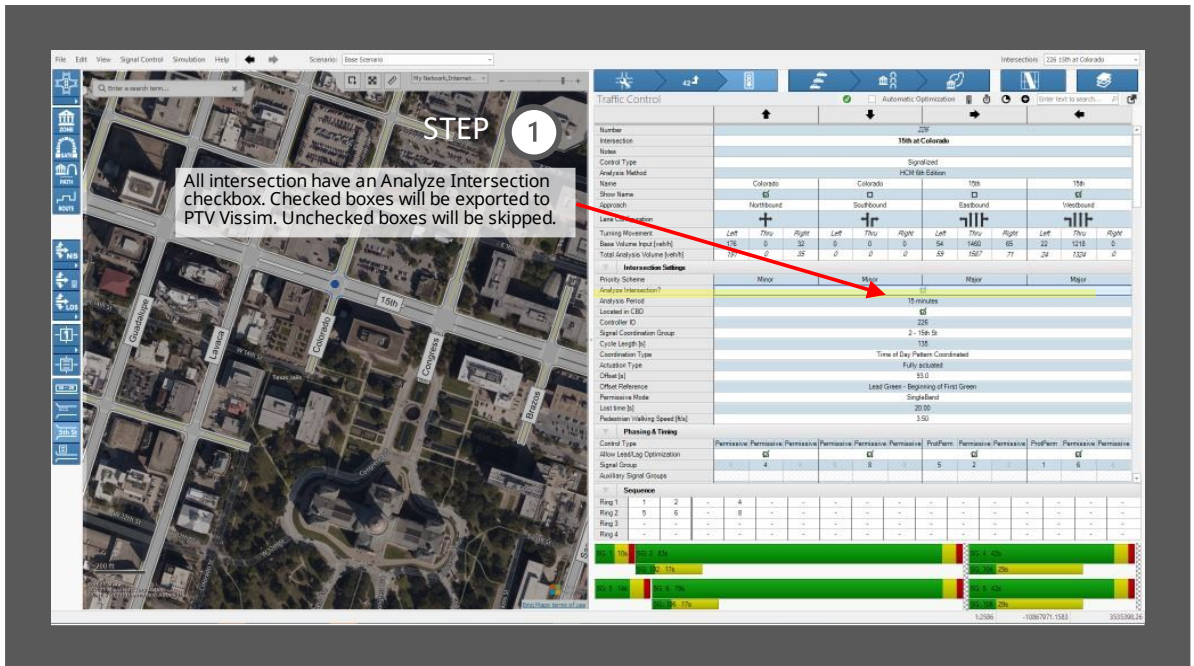
1.1 Select Intersections to export to PTV Vissim

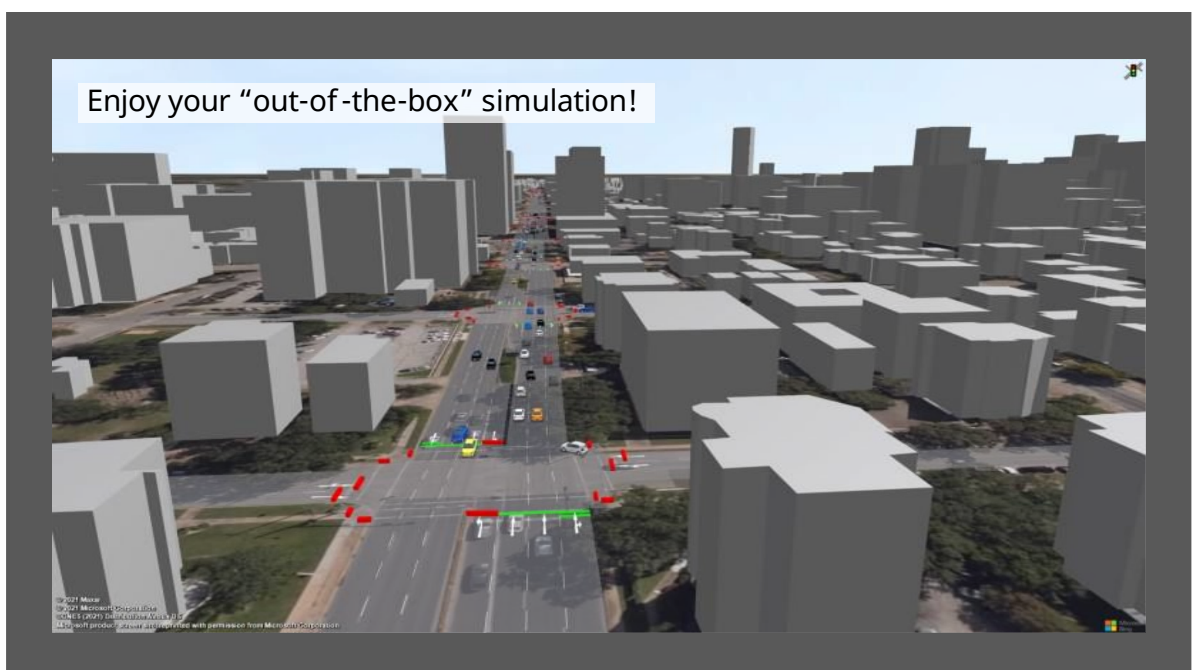
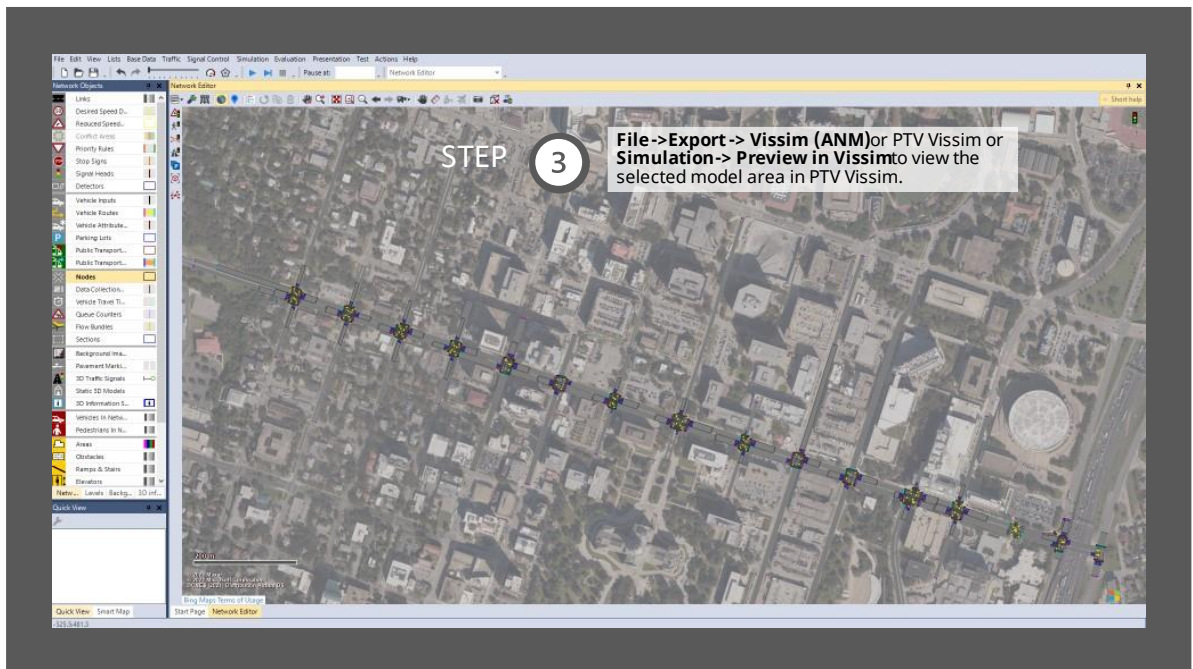
PTV Vistro 2022 has improved the workflow and streamlined how you build microsimulation models in PTV Vissim. Now, if you have a large city or regional project in PTV Vistro, you can select all or only the necessary intersections and corridors needed for “out-of-the-box” simulation.

This feature enables you to easily supplement your traffic operations study with detailed and cost-effective microsimulation. Add additional urban mobility elements, such as pedestrians reacting to transit platforms, bus stops and schedules, bicycles, curbside drop-offs, and autonomous vehicle simulations.

Additionally, use PTV Vistro to grow your Vissim model study area PTV Vistro’s precise export and placement centralized around PTV’s native coordinate system. Streamline your model creating process with PTV Vistro 2022.







For more information see Chapter xx of the User Manual for ANM exports.

1.2 Export Trip Distribution Matrix to PTV Vissim

PTV Vistro 2022 now enables you to take your trip distribution data from the Trip Distribution table and import this as a matrix in PTV Vissim. This process provides the opportunity for you to take collected *background* or *proposed* origin-destination data in your project and create a PTV Vissim model with an “out-of-the-box” dynamic assignment. Additionally, using O-D data and trips assignments in PTV Vistro enables you to quickly create balanced background turn-movement count data across many intersections. For

example, this technique saves time for alternative and innovative intersections. The Net Site Trips generated from the trip generation process can be exported as value tables and then reimported as background traffic.

| No | Name | Land Use Variables | Land Use Code | Data On/Off | Independent Variable | Trip Generation Rate | Quantity | % In | % Out | Trip Generated | Trips In | Trips Out | Trip Type | Analysis | Comment |
|----|------|--------------------|---------------|-------------|----------------------|----------------------|----------|--------|--------|----------------|----------|-----------|-----------|----------|---------|
| 1 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 522 | 688 | 915 | Added | + | |
| 2 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 522 | 66 | 117 | Added | + | |
| 3 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 239 | 221 | 38 | Added | + | |
| 4 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 639 | 217 | 111 | Added | + | |
| 5 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 857 | 333 | 818 | Added | + | |
| 6 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 297 | 247 | 464 | Added | + | |
| 7 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 126 | 123 | 77 | Added | + | |
| 8 | Zone | | | Trips | + | 0.220 | 9,490 | 38.88% | 55.00% | 214 | 146 | 69 | Added | + | |

| From Zone | | To Zone | | Share | Trips |
|-----------|---------|---------|-----|---------|-------|
| 1: Zone | 2: Zone | 0.52% | 30 | 0.52% | 3 |
| 1: Zone | 3: Zone | 0.87% | 5 | 11.00% | 69 |
| 1: Zone | 4: Zone | 5.51% | 33 | 14.90% | 85 |
| 1: Zone | 5: Zone | 53.26% | 287 | 44.80% | 287 |
| 1: Zone | 6: Zone | 30.33% | 209 | 28.30% | 194 |
| 1: Zone | 7: Zone | 4.76% | 27 | 8.80% | 59 |
| 1: Zone | 8: Zone | 3.04% | 17 | 8.90% | 5 |
| Total | | 100.00% | 680 | 100.00% | 679 |

STEP 3 Use PTV Vistro's Trip Assignment Table to visualize zone pairs along a corridor. Use the "Net Site Trips" volume graphic to visualize aggregated turn volumes.

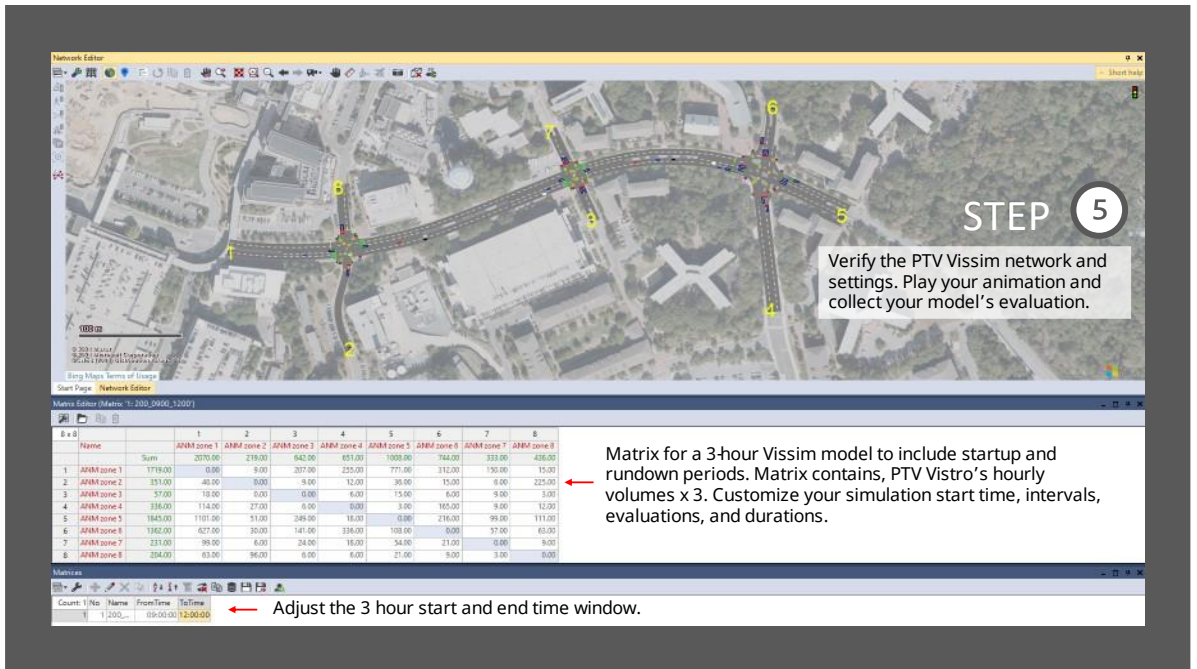
| Origin | Destination | Volume | Volume Share | Yield | Length (ft) | WT |
|--------------|-------------|--------|--------------|-------|-------------|--------|
| Automobile 1 | Zone 2 | 2 | 100.00% | 7 | 1052.68 | 0.4 |
| Automobile 1 | Zone 3 | 2 | 100.00% | 69 | 1586.76 | 20.08 |
| Automobile 1 | Zone 4 | 2 | 100.00% | 80 | 2547.56 | 41.81 |
| Automobile 1 | Zone 5 | 2 | 100.00% | 267 | 2445.22 | 112.5 |
| Automobile 1 | Zone 6 | 2 | 100.00% | 104 | 2228.42 | 45.62 |
| Automobile 1 | Zone 7 | 2 | 100.00% | 30 | 1637.41 | 19.51 |
| Automobile 1 | Zone 8 | 2 | 100.00% | 5 | 360.36 | 0.94 |
| Automobile 2 | Zone 1 | 2 | 100.00% | 16 | 1885.64 | 2.18 |
| Automobile 2 | Zone 3 | 2 | 100.00% | 2 | 1052.68 | 0.09 |
| Automobile 2 | Zone 4 | 2 | 100.00% | 4 | 2547.56 | 1.8 |
| Automobile 2 | Zone 5 | 2 | 100.00% | 12 | 2304.09 | 5.42 |
| Automobile 2 | Zone 6 | 2 | 100.00% | 3 | 1591.62 | 0.93 |
| Automobile 2 | Zone 7 | 2 | 100.00% | 3 | 1885.64 | 1.81 |
| Automobile 2 | Zone 8 | 2 | 100.00% | 2 | 1052.68 | 0.61 |
| Automobile 3 | Zone 1 | 2 | 100.00% | 28 | 354.68 | 12.56 |
| Automobile 3 | Zone 2 | 2 | 100.00% | 6 | 1592.76 | 1.62 |
| Automobile 3 | Zone 3 | 2 | 100.00% | 2 | 1591.62 | 0.93 |
| Automobile 3 | Zone 4 | 2 | 100.00% | 3 | 1885.64 | 1.81 |
| Automobile 3 | Zone 5 | 2 | 100.00% | 2 | 1204.68 | 0.61 |
| Automobile 3 | Zone 6 | 2 | 100.00% | 3 | 655.66 | 0.34 |
| Automobile 3 | Zone 7 | 2 | 100.00% | 7 | 1469.71 | 0.26 |
| Automobile 3 | Zone 8 | 2 | 100.00% | 3 | 1885.64 | 1.81 |
| Automobile 4 | Zone 1 | 2 | 100.00% | 26 | 2547.56 | 12.5 |
| Automobile 4 | Zone 2 | 2 | 100.00% | 3 | 2547.56 | 4.26 |
| Automobile 4 | Zone 3 | 2 | 100.00% | 2 | 1518.62 | 0.37 |
| Automobile 4 | Zone 4 | 2 | 100.00% | 1 | 1132.71 | 0.27 |
| Automobile 4 | Zone 5 | 2 | 100.00% | 55 | 1885.64 | 10.84 |
| Automobile 4 | Zone 6 | 2 | 100.00% | 2 | 1062.66 | 0.68 |
| Automobile 4 | Zone 7 | 2 | 100.00% | 4 | 2442.57 | 1.85 |
| Automobile 4 | Zone 8 | 2 | 100.00% | 367 | 2472.22 | 168.08 |
| Automobile 5 | Zone 1 | 2 | 100.00% | 17 | 2304.09 | 7.62 |
| Automobile 5 | Zone 2 | 2 | 100.00% | 62 | 1885.64 | 31.76 |
| Automobile 5 | Zone 3 | 2 | 100.00% | 6 | 1152.71 | 1.29 |
| Automobile 5 | Zone 4 | 2 | 100.00% | 32 | 811.68 | 12.43 |
| Automobile 5 | Zone 5 | 2 | 100.00% | 33 | 1425.11 | 8.91 |
| Automobile 5 | Zone 6 | 2 | 100.00% | 37 | 2312.22 | 16.26 |
| Automobile 5 | Zone 7 | 2 | 100.00% | 200 | 2328.42 | 62.09 |
| Automobile 5 | Zone 8 | 2 | 100.00% | 10 | 2282.78 | 4.36 |
| Automobile 6 | Zone 1 | 2 | 100.00% | 47 | 1204.68 | 11.52 |
| Automobile 6 | Zone 2 | 2 | 100.00% | 152 | 1469.71 | 22.98 |
| Automobile 6 | Zone 3 | 2 | 100.00% | 172 | 1469.71 | 25.98 |
| Automobile 6 | Zone 4 | 2 | 100.00% | 172 | 1469.71 | 25.98 |

STEP 4 Export PTV Vistro to PTV Vissim for an "Out-of-the-box" simulation model with dynamic assignment.

In PTV Vistro, export the Vissim ANM.

Select the type of PTV Vissim traffic signal controllers.

Open PTV Vissim and select **File->Import -> ANM** and your .ANM and . ANMRoutes files.



STEP 5
Verify the PTV Vissim network and settings. Play your animation and collect your model's evaluation.

Matrix for a 3-hour Vissim model to include startup and rundown periods. Matrix contains, PTV Vistro's hourly volumes x 3. Customize your simulation start time, intervals, evaluations, and durations.

Adjust the 3 hour start and end time window.

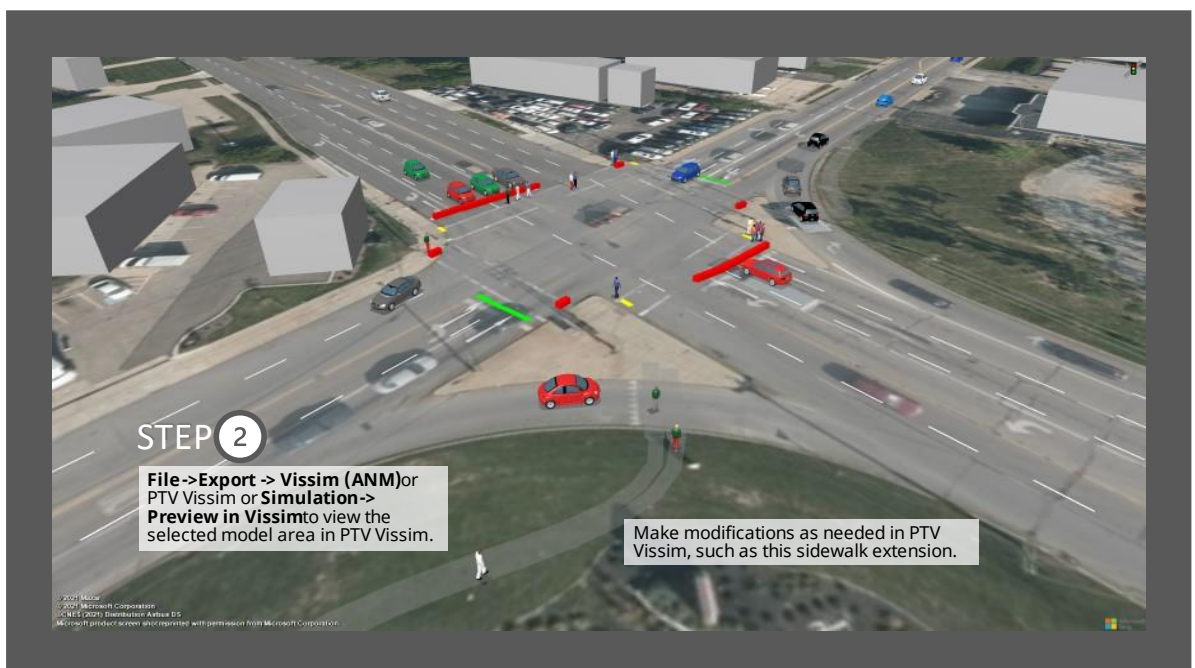
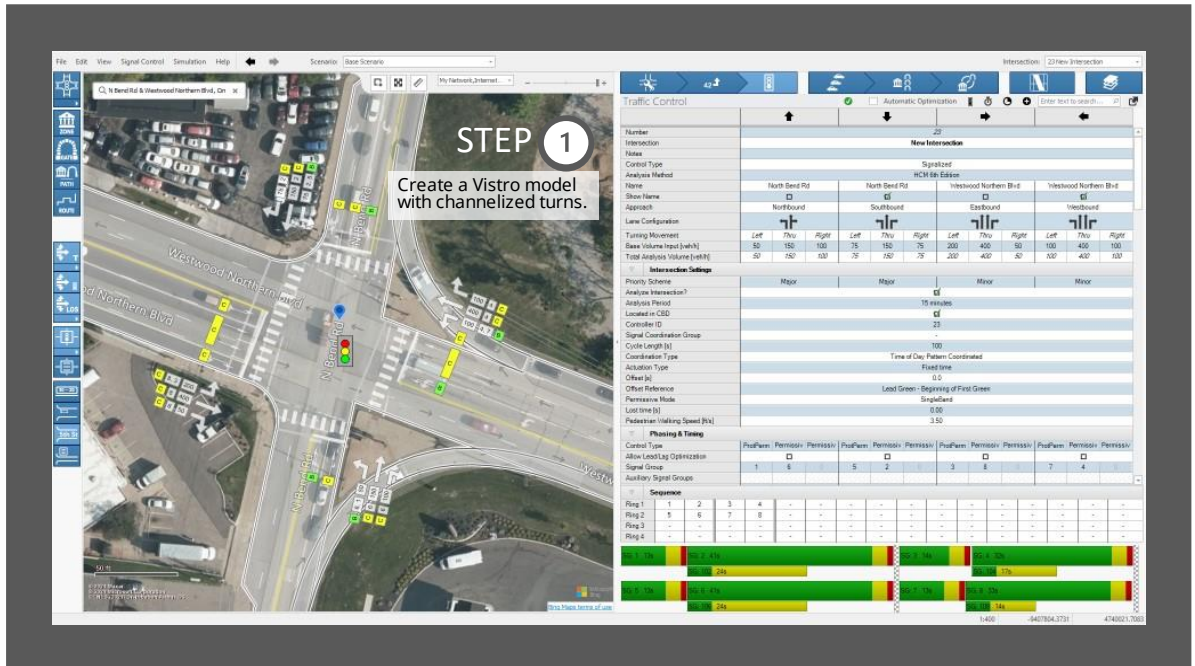
| Name | Sum | ANM zone 1 | ANM zone 2 | ANM zone 3 | ANM zone 4 | ANM zone 5 | ANM zone 6 | ANM zone 7 | ANM zone 8 |
|--------------|---------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 ANM zone 1 | 1718.00 | 2070.00 | 0.00 | 9.00 | 207.00 | 255.00 | 771.00 | 312.00 | 150.00 |
| 2 ANM zone 2 | 351.00 | 40.00 | 9.00 | -9.00 | 12.00 | 30.00 | 15.00 | 0.00 | 225.00 |
| 3 ANM zone 3 | 57.00 | 18.00 | 0.00 | 0.00 | 0.00 | 13.00 | 0.00 | 9.00 | -3.00 |
| 4 ANM zone 4 | 336.00 | 114.00 | 27.00 | 0.00 | 0.00 | 3.00 | 105.00 | 9.00 | 12.00 |
| 5 ANM zone 5 | 1845.00 | 1101.00 | 51.00 | 348.00 | 18.00 | 0.00 | 216.00 | 99.00 | 111.00 |
| 6 ANM zone 6 | 1362.00 | 627.00 | 30.00 | 141.00 | 336.00 | 100.00 | 0.00 | 57.00 | 63.00 |
| 7 ANM zone 7 | 231.00 | 99.00 | 0.00 | 24.00 | 18.00 | 54.00 | 21.00 | 0.00 | 0.00 |
| 8 ANM zone 8 | 204.00 | 63.00 | 96.00 | 0.00 | 0.00 | 21.00 | 9.00 | 3.00 | 0.00 |

| Count | No | Name | FromTime | ToTime |
|-------|-------|------|----------|----------|
| 1 | 1,200 | | 09:00:00 | 12:00:00 |

2 Intersection Setup and Graphical Features

2.1 Improved channelized turn radii and crosswalk visualization.

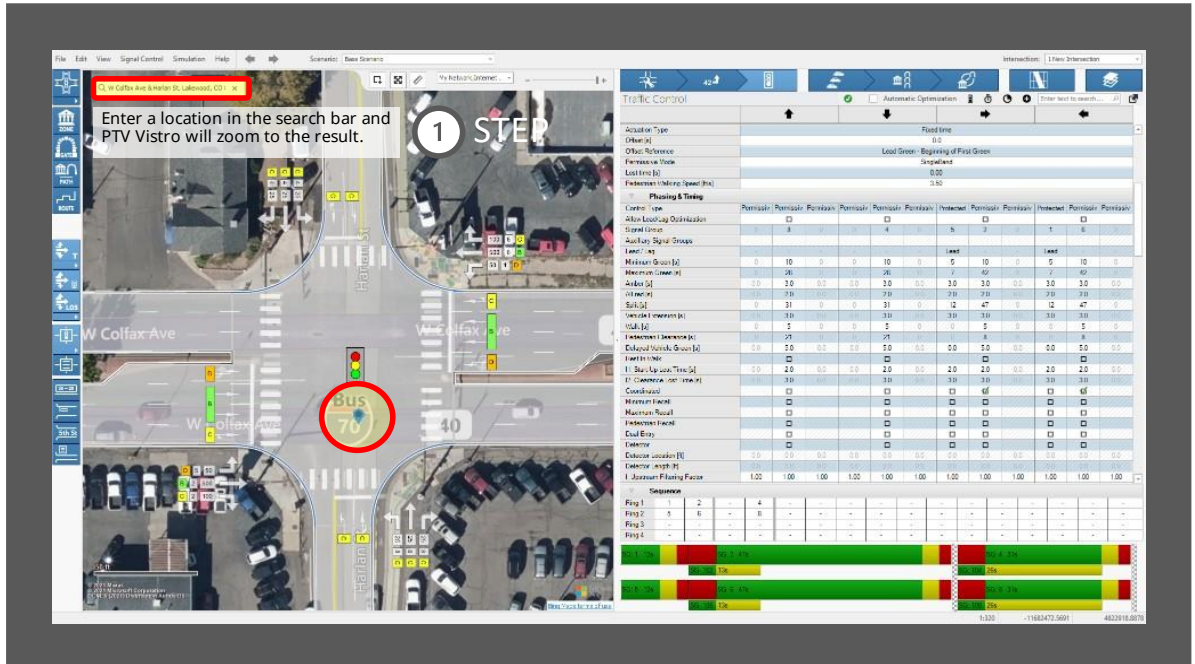
Channelized Radii have been improved to visually show more realistic curvature based on entry and exit angles. In addition, crosswalks are now visualized on the channelized turn. In addition, the export to PTV Vissim produces more realistic geometry and includes the crosswalk.



3 Usability Improvements

3.1 Address search bar

The *address search bar* enables you to find locations, such as cities, intersections, and some points-of-interest places in your PTV Vistro model. This enables quicker speeds when finding locations in larger models or getting started.



4 New Examples

In general, all Vistro examples and documentation have been updated to showcase the Vistro 2022 new features and improved simulation capabilities in PTV Vissim.

Also, the following are new Examples under **Help->Open Example Directory**:

| New Examples | Folder | Summary |
|---|--------|---|
| Matrix import into PTV Vissim | Export | This example show the process to export Trip Distribution Tables to a PTV Vissim Matrix |
| Selecting Inersec- tion for PTV Vis- sim | Export | This example demonstrates how to export a corridor from a larger PTV Vistro export to PTV Vissim. |

5 Technical Changes

5.1 CodeMeter Runtime

The CodeMeter Runtime deployed with PTV Vistro has been updated to CodeMeter 7.21a.

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