

4. The delivered CAD/AVL scheduling system interface shall support the transfer of data for the anticipated ultimate capacities, as defined elsewhere in this Technical Specification. Further details concerning the interface to SEPTA's scheduling system are described in the sections that follow.
5. **Geographic Data** - The CAD/AVL System shall use geographic data that is required to support the proposed CAD/AVL System implementation. Geographic data available to the CAD/AVL System from the fixed-route system includes location and shape data for routes, stops, timepoints, transit centers, and major transfer points. Updates to the scheduling system geographic data will occur and shall be supported by the CAD/AVL System on an as-required basis.
6. **Service Changes** - The CAD/AVL System shall acquire from the scheduling system any and all available service changes that are required to support the proposed CAD/AVL System implementation. Service changes available to the CAD/AVL System from the scheduling system include attribute data on route patterns, stops, timepoints, blocks, runs, and trips ~~and Operator data~~. The CAD/AVL System shall support at least two service change versions, one current and one future, so that the loading of new service changes for a future date do not interrupt current CAD/AVL System operations.

H. **Real-Time Passenger Information Interfaces** - SEPTA requires that the CAD/AVL System utilize the standard GTFS and GTFS-RT interface protocol and format and RESTful APIs. The design and implementation of the interface shall be the sole responsibility of the Contractor. If the CAD/AVL System design will require modification to the standard Trapeze interface or additional Trapeze hardware or software, the Contractor shall be responsible for supplying all such modifications, hardware, software, and any associated licenses.

1. It shall be the sole responsibility of the CAD/AVL System Contractor to coordinate with the passenger information software systems vendors to obtain the information necessary to implement this function as specified, even if such coordination necessitates that the CAD/AVL System Contractor enter into a separate sub-contractor agreement with passenger information software system vendor. SEPTA involvement for coordination and management of any agreement between the CAD/AVL System Contractor and Trapeze concerning the passenger information interface shall not be required.
2. RESTful APIs:
  - a. TransitView
  - b. Routes
  - c. Routes Direction
  - d. Bus Stops
  - e. Bus Detours