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|  | Florida ITS Architecture Support and Maintenance Project  Florida Turnpike Enterprise (FTE) Conversion Report (ARC-IT Version 9.3) |

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# Introduction

This Architecture Conversion Report records the Florida Turnpike Enterprise (FTE) Regional Intelligent Transportation System (ITS) Architecture (RITSA) update from its reference in the Architecture Reference for Cooperative and Intelligent Transportation (ARC-IT) Version 9.2 to ARC-IT Version 9.3. There were no updates to the FTE RITSA, so this report addresses notable results from the conversion process.

# Description of Changes

The architecture conversion process uses the Regional Architecture Development for Intelligent Transportation (RAD-IT) software Version 9.2 to convert the architecture to be compatible with ARC-IT Version 9.3. The process includes the following steps to accomplish the conversion.

* Architecture conversion: Conversion features in RAD-IT Version 9.3 convert the architecture database schema to be compatible with RAD-IT Version 9.3 and aligned to reference ARC-IT Version 9.3 content.
* Conversion analysis: Conversion information is produced by RAD-IT for the architecture conversion noting the changes made. The conversion information notes the schema and content changes, such as service splits or consolidations, element divisions, and information flow adjustments. Analysis is required for each converted item to assess the appropriateness of each change for the architecture.
* Architecture content update: The intent of the conversion process was to maintain the alignment of the converted Architecture content to the greatest extent possible with the pre-conversion Architecture content. Element physical object mapping changes, service package changes, information flow additions and adjustments, and the evolution of the standards mappings in ARC-IT Version 9.2 required changes to be made to the Architecture content. Unless it was necessary, no additional changes beyond those required to align the pre-conversion and converted architecture content were made. During the course of the Annual Architecture Maintenance Update, ARC-IT Version 9.2 features that could be considered as additional information to the Architecture will be assessed.
* Architecture website posting: The converted architecture will be posted to the Florida ITS Architecture website.

# Architecture Conversion Results

The FTE RITSA was converted to be compatible with ARC-IT Version 9.3. The following sections highlight the changes made to the architecture as a result of the conversion process.

## Architecture Inventory Elements

No architecture inventory elements were impacted by the conversion process.

## Architecture information Flows

Table 1 provides conversion results for architecture information flows impacted by the conversion process. The table information shows the architecture, source and destination elements, the old flow name, and the results of the flow conversion. As the table notes, the information flow changes resulting from conversion addressed flow renaming.

Table 1. CONVERSION ANALYSIS OF INFORMATION FLOWS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Regional** | **Architecture** | **Change** | **Source Element** | **Destination Element** | **Old Flow** | **New Flow** |
| In Region | Florida Turnpike Enterprise Regional ITS Architecture | Replaced | SunTrax CAV Field Equipment | SunTrax Field Equipment | local priority request coordination | right-of-way request coordination |
| In Region | Florida Turnpike Enterprise Regional ITS Architecture | Replaced | SunTrax Field Equipment | SunTrax CAV Field Equipment | local priority request coordination | right-of-way request coordination |
| Project | SunTrax Research, Development and Transportation Technologies Testing Facility | Replaced | SunTrax CAV Field Equipment | SunTrax Field Equipment | local priority request coordination | right-of-way request coordination |
| Project | SunTrax Research, Development and Transportation Technologies Testing Facility | Replaced | SunTrax Field Equipment | SunTrax CAV Field Equipment | local priority request coordination | right-of-way request coordination |

## Architecture Functional Requirements

Table 2 provides conversion results for architecture functional requirements impacted by the conversion process. The table information shows the element impacted, the type of change made, the old functional object, number, and requirement, along with the new functional object, number, and requirement to display the change made.

Table 2. CONVERSION ANALYSIS OF FUNCTIONAL REQURIEMENTS

| **Element Name** | **Change** | **Old Functional Object** | **Old Num** | **Old Req** | **New Functional Object** | **New Num** | **New Req** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Commercial Vehicle | Modified | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions or road hazards. | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions, road hazards, or pending/in-progress vehicle maneuvers. |
| Commercial Vehicle | Modified | Vehicle Traveler Information Reception | 1 | The vehicle shall receive traveler information including traffic and road conditions, incident information, maintenance and construction information, event information, transit information, parking information, and weather information. | Vehicle Traveler Information Reception | 1 | The vehicle shall receive traveler information including traffic and road conditions, incident information, maintenance and construction information, event information, transit information, parking information, border crossing information, and weather information. |
| Commercial Vehicle | Modified | Vehicle Traveler Information Reception | 2 | The vehicle shall receive advisory information, such as evacuation information, proximity to a maintenance and construction vehicle, wide-area alerts, work zone intrusion information, variable speed limits, tunnel entrance restrictions, and other special information. | Vehicle Traveler Information Reception | 2 | The vehicle shall receive advisory information, such as evacuation information, proximity to a maintenance and construction vehicle, wide-area alerts, work zone intrusion information, variable speed limits, tunnel entrance restrictions, border crossing advisories, and other special information. |
| FTE Maintenance and Construction Vehicles | Modified | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions or road hazards. | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions, road hazards, or pending/in-progress vehicle maneuvers. |
| Other Vehicle | Modified | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions or road hazards. | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions, road hazards, or pending/in-progress vehicle maneuvers. |
| Vehicle | Modified | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions or road hazards. | Vehicle Control Warning | 5 | The vehicle shall provide warnings to the driver based on information received from other vehicles regarding potentially hazardous road conditions, road hazards, or pending/in-progress vehicle maneuvers. |
| Vehicle | Modified | Vehicle Traveler Information Reception | 1 | The vehicle shall receive traveler information including traffic and road conditions, incident information, maintenance and construction information, event information, transit information, parking information, and weather information. | Vehicle Traveler Information Reception | 1 | The vehicle shall receive traveler information including traffic and road conditions, incident information, maintenance and construction information, event information, transit information, parking information, border crossing information, and weather information. |
| Vehicle | Modified | Vehicle Traveler Information Reception | 2 | The vehicle shall receive advisory information, such as evacuation information, proximity to a maintenance and construction vehicle, wide-area alerts, work zone intrusion information, variable speed limits, tunnel entrance restrictions, and other special information. | Vehicle Traveler Information Reception | 2 | The vehicle shall receive advisory information, such as evacuation information, proximity to a maintenance and construction vehicle, wide-area alerts, work zone intrusion information, variable speed limits, tunnel entrance restrictions, border crossing advisories, and other special information. |