**Regulation:** 940.11(c)(3) - Requirements Definition

**Purpose:** Each applicable service package from the [CDOT ITS Architecture Plan](https://www.codot.gov/programs/intelligent-transportation-systems/architecture) establishes the required elements that will make up the system. An element can be thought of as components of the system. Each element is then broken out in functional requirements. All elements and their functional requirements must be fulfilled by a project implementing the applicable service package(s). This document will focus on detailing how the project specific elements and each functional requirement will be fulfilled on the project. Should a project not be able to fulfill an element or a functional requirement per the service package(s), the project will have to document why. Projects may also add project specific elements and/or functional requirements. This document will also tie together the requirements in the [Concept of Operations](https://www.codot.gov/programs/intelligent-transportation-systems/systems-engineering-analysis-sea/sea-documents) with the Functional Requirements.

**Benefits to CDOT:** By using the [CDOT ITS Architecture Plan](https://www.codot.gov/programs/intelligent-transportation-systems/architecture) to guide technology projects, CDOT is ensuring technology is installed consistently and able to properly integrate into our existing systems. Additionally, using the applicable service package(s) will save significant time for the PM since they will have clear expectations for what the project must achieve.

1. General Information:

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| --- | --- |
| Project: |  |
| Project Subaccount Number: |  |
| PM Name: |  |
| PM Email: |  |
| PM Phone: |  |
| Applicable Service Package(s) |  |

1. **Implementing Service Package Functional Requirements:** The applicable service package(s) contains the minimum functional requirements that the system must achieve to operate consistently across CDOT. To complete the below table, pull all of the elements and functional requirements from the service package(s). This will also include the elements and functional requirements that will not be implemented on the project as well because it needs to be documented why those are not being implemented. The right two columns will go into project specific details on how the service package will be implemented as part of the project. Items in blue are examples and are intended to be overridden by project specific details.

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| --- | --- | --- | --- |
| Service Package Functional Requirements | | | |
| Element | Service Package Functional Requirement | How will this be implemented and fulfilled on this project? If it won’t be, provide a reason. | Verification that the functional requirement is integrated in the project. This could be a specification, plan sets, or other similar locations. |
| ITS Roadway Device | Roadway Traffic Information Dissemination: The field element shall include dynamic message signs for dissemination of wrong way entry to drivers. | DMS at exit 150 | Need to draft a DMS SPEC |
| Roadway Traffic Information Dissemination: The field element shall include dynamic message signs for dissemination of traffic and other information to drivers, under center control; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close). | DMS / Operations center displays messaging | DMS SPEC  DMS Messaging Guidelines |
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1. Projects may have additional functional requirements to existing elements or may have additional elements (and therefore functional requirements) than what was established in the service package(s). The applicable service package(s) was drafted to be high level so particularly complex projects will likely need more elements and functional requirements. In the below table add any additional functional requirements that will be needed.

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| --- | --- | --- | --- |
| Additional Project Specific Functional Requirements | | | |
| Element | Project Functional Requirement | How will this be implemented and fulfilled on this project? | Verification that the functional requirement is integrated in the project. This could be a specification, plan sets, or other similar locations. |
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