



## I-10 Corridor Coalition Truck Parking Availability System (TPAS)

### THE COALITION

The California, Arizona, New Mexico and Texas Departments of Transportation recognize the importance of a unified approach to addressing the need to safely and efficiently move freight along the Interstate 10 (I-10) national trade corridor. In 2016, they formed the I-10 Corridor Coalition (I-10 CC) to work together to create safer, reliable and more efficient movement of people and freight along the I-10 corridor.

The I-10 segment from California to Texas connects the ports of Los Angeles, Long Beach, Houston, and Beaumont, 4 of the 10 largest U.S. seaports. Truck drivers along the I-10 corridor can spend over an hour looking for parking, only to resort to parking in unauthorized or unsafe locations such as highway shoulders, on and off ramps, or local streets. The I-10 CC proposed a Truck Parking Availability System (TPAS) that utilizes technology to improve truck parking efficiency at public rest areas along the corridor.

The I-10 CC was awarded a \$6.85 million U.S. Department of Transportation (USDOT) Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant in April 2019 to implement an I-10 TPAS along the corridor in the coalition states. The four states have agreed to match the grant 1:1, bringing the total project funding to \$13.7 million over the four-year project implementation period.

### TPAS AT A GLANCE

- Will monitor truck parking availability and provide real-time information to truck drivers.
- Will be deployed on I-10 in California, Arizona, New Mexico and Texas.
- Funded through \$6.85 M ATCMTD Grant and 1:1 state matching funds.
- System will “Go Live” in 2023 and track performance measures during ongoing operations.



### PROJECT PURPOSE

The purpose of the I-10 Corridor Coalition TPAS project is to implement a truck parking availability detection and information dissemination system at 37 public truck parking locations along the I-10 Corridor from California to Texas. This system will provide real time truck parking information to assist truck drivers and dispatchers in making informed parking decisions, and improve safety, mobility, operational and environmental elements.

### PROJECT BENEFITS

The I-10 Freight Corridor Study estimated the economic impact of freight moving along the I-10 Corridor at \$1.38 trillion annually. The I-10 Corridor Coalition TPAS project can help support the economic productivity of this critical commerce route by:

- Improving mobility and safety along this critical freight Corridor;
- Reducing infrastructure damage and diesel emissions; and
- Saving commercial truck drivers thousands of dollars a year in lost earnings and productivity.

The implementation of TPAS can also serve as the foundation for future technology implementation along the Corridor, including integration of weather or other alert systems, a truck parking reservation system, and automated and connected vehicle and infrastructure technology.



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## PROJECT VISION

The vision, goals and objectives of the I-10 Corridor Coalition TPAS align with and will support the overarching I-10 Corridor Coalition goal- working together to create safer and more efficient travel, both personal and commercial, along the I-10 Corridor. Truck drivers, dispatchers and public officials in the I-10 Corridor will have real-time access to accurate and reliable information about truck parking availability through an advanced, coordinated and intelligent transportation information system.

## PROJECT GOALS AND OBJECTIVES

| Goals   | Objective  |
|---|--|
| Reduce fatigue-related truck-involved crashes.  | Allow truck drivers to readily identify parking spaces and reduce the chances of operating while fatigued.   |
| Reduce emissions associated with excess driving while searching for parking.  | Enable truck drivers to readily identify parking spaces and reduce travel searching for parking.   |
| Reduce public infrastructure degradation from vehicles parking in unauthorized locations.   | Enable truck drivers to readily identify parking spaces and reduce parking along highway shoulders, ramps, or other unauthorized locations.  |
| Create an information technology platform that can be expanded in future deployments to serve other Corridors within the four States, other States along I-10, and/or other ITS needs in the I-10 Corridor. | Create a system that can be expanded elsewhere in the member States, possibly expanded to adjacent States, and deliver other truck-related travel information such as weather advisories and incident management alerts. |
| Increase driver efficiency by reducing time spent looking for parking.  | The I-10 Corridor Coalition TPAS will reduce the amount of time spent looking for parking, which will increase the time traveled towards a destination.  |

## PROJECT PARTNERS AND STAKEHOLDERS

The I-10 Corridor Coalition is a multistate partnership that includes California, Arizona, New Mexico and Texas that will oversee the implementation of the TPAS Project. The Texas Department of Transportation (TxDOT) is the designated recipient for the ATCMTD grant and has entered into a Cooperative Agreement with the Federal Highway Administration (FHWA). The Partner States are cooperating under the I-10 Corridor Coalition Charter and Operating Agreement.

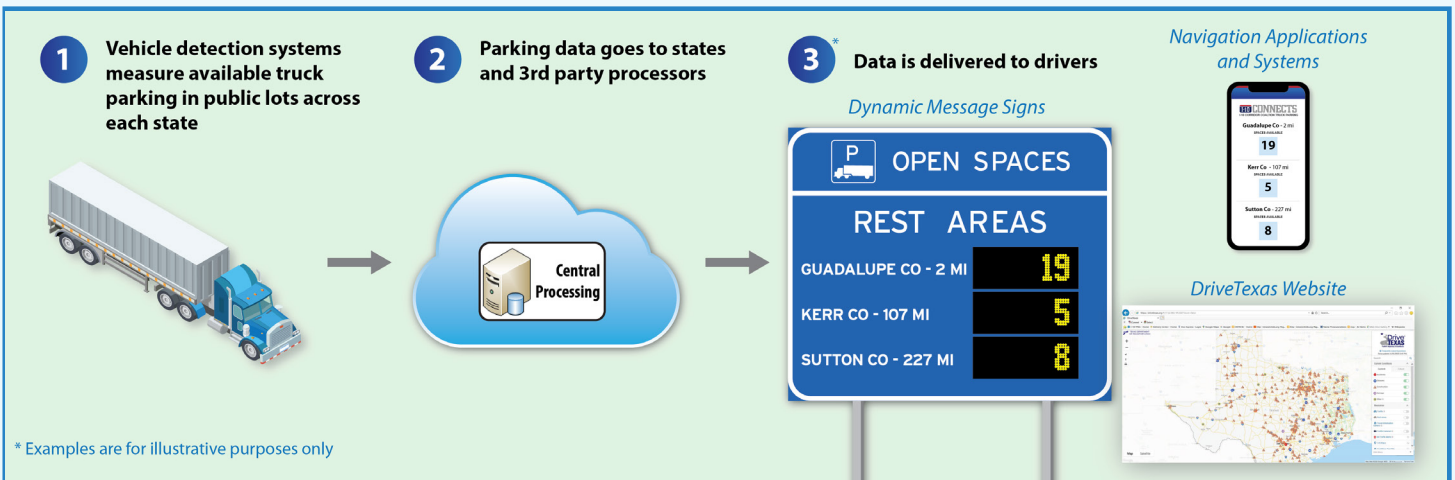
Additionally, the Coalition will collaborate with trucking industry stakeholders at the state and national level.



## I-10 CORRIDOR COALITION TPAS TRUCK PARKING SITES



## POTENTIAL TPAS TECHNOLOGY



There are two potential technical approaches to determine truck parking space utilization and availability:

- 1. Entrance/Exit Counting Technology:** A site counting approach using in-group loop sensors to measure the number of trucks entering and exiting a site.
- 2. Space Occupancy Counting Technology:** A vehicle occupancy detection approach using in-ground magnetic sensors to detect if a space is occupied.

The choice of deployment between these two technologies at each parking site will be determined during the Systems Engineering phase of the project.

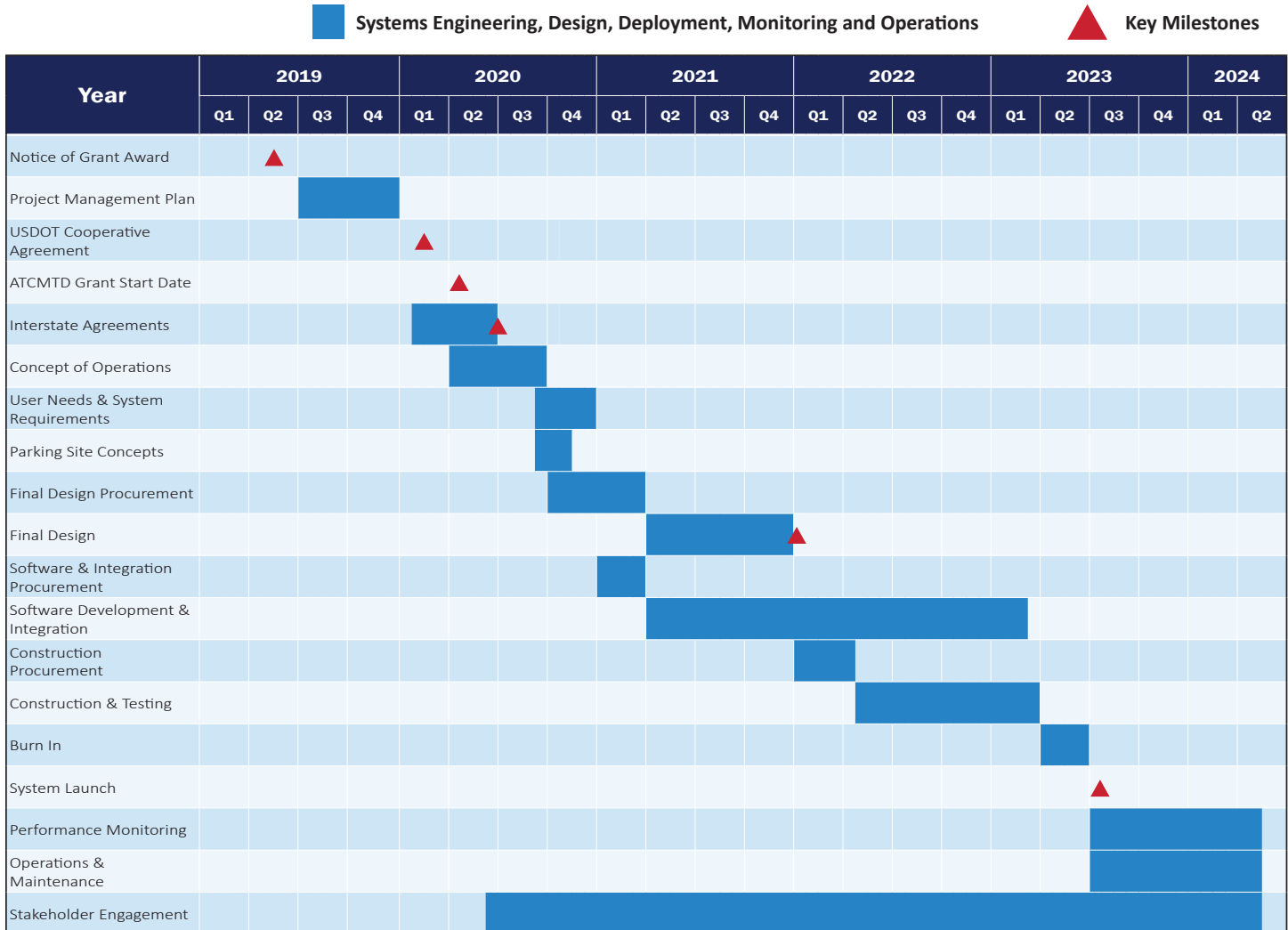
## INFORMATION DISSEMINATION

Dynamic Parking Availability Signs (DPAS) will be placed upstream from the parking areas. These signs will provide drivers with real-time advanced warning ahead of the parking site to allow drivers to consider alternate plans if a location is full.

Smartphone and web-based services may also be used to provide data to drivers and dispatchers. The Coalition will work with application developers to integrate the feed into existing applications.

## PROJECT SCHEDULE

The I-10 Corridor Coalition TPAS project will be fully deployed and operating within four years from the ATCMTD grant filing date of April 20, 2020. The tentative deployment date is scheduled for June 2023 to allow for performance monitoring and operations maintenance for a year after the launch.



## PROJECT ACTIVITIES

- Planning:** The project team will assess detection methodologies/technologies to determine what will work best with each site based on the site parking configures. The team will also assess sign location spacing and determine the best locations for Dynamic Parking Availability Signs (DPAS).
- Systems Engineering:** During the planning and design phase of the project, the TPAS concept of operations (ConOps) will be developed to identify user needs and system requirements and serve as a guide for the design, locations, and function of the TPAS technology.
- Parking Site Concepts:** Each state will develop conceptual parking site layouts showing technology types and locations to help inform the design process.
- Stakeholder Engagement:** Stakeholder engagement will be conducted throughout all phases of development to gather industry input and ensure the industry meets the needs of the end users. Outreach efforts will continue to raise awareness of the I-10 TPAS and promote its benefits.

For More Information Contact:

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