CBP Secondary X-ray Scanning of Occupied Commercial Vehicles at World Trade Bridge

U.S. Customs and Border Protection (CBP) will use a new drive-through X-ray system approved to scan occupied commercial vehicles at the World Trade Bridge, as part of a new Non-Intrusive Inspection Concept of Operation. Trucks entering the port will proceed to the bridge primary booths per the current process and may encounter these X-ray systems in secondary, if and when referred by a CBP primary officer. This method of inspection will expedite CBP’s search of each vehicle, minimize delays, and requires the cooperation and assistance of the trade stakeholders. Although all X-ray scans conducted by CBP are safe and do not pose any threat to the public’s health, CBP gives the driver and any other occupants of the vehicle the option to bypass the X-ray system, though they are still subject to other forms of inspection including a stationary vehicle X-ray scan with the tractor cab unoccupied. We encourage the trade community to study this information sheet and other related reference material to become familiar with the new procedures. Figure 1 provides an image of the overall bridge secondary area layout, including drive-through X-ray location and traffic flow pattern before and after the X-ray.

Figure 1. Cargo X-ray Drive-Through Portal at World Trade Bridge
Concept of Operations

Trucks referred to secondary X-ray scanning by the primary officer will proceed from the primary booth (Area A) past the DOT canopy (Area B) and enter secondary from the left-hand POE exit lane. After entering secondary, trucks will pass the secondary main building and proceed to Area C, where they will pass through the mechanical oversize gauges to determine whether the conveyance can safely pass through the drive-through X-ray system. If a truck hits the gauge, such over-width and over-height conveyances will be directed to the secondary dock (Area H) and will be processed manually. See Figure 2.

![Figure 2. Oversize Gauges and Initial Traffic Control](image)

All other trucks will proceed to the “Early Read” check-in (Area D), where they will pass several pole-mounted cameras and sensors that are used to collect identifying information about each vehicle. This data is then associated with the entry trip and manifest data that shipping companies or a Customs broker pre-filed with CBP’s Automated Commercial Environment (ACE) system prior to the truck’s departure from Mexico. The CBP system will automatically read the truck and trailer license plates and the windshield-mounted CBP Decal and Transponder Online Procurement (DTOPS) RFID transponder tag, which is obtained through online payment of user crossing fees. All trucks entering the U.S. should have a CBP-issued DTOPS transponder tag installed on the truck windshield. See Figure 3.
Before proceeding to the X-ray portal, trucks will come to a stop at the end of the entry queue lane so the driver can present a QR code to a second pole-mounted camera on the left side of the lane. Drivers may proceed toward the X-ray portal after a successful QR code read and/or when the traffic light turns green. The QR and DTOPS RFID tag are to be coded with the CBP ACE trip number, date of arrival and license plate information for tractor and trailer. A two-way intercom system is also available to allow direct verbal communications with a CBP officer. See Figure 4.
Trucks will advance from Area D to Area E where the X-ray system is located. See Figure 6. Once the X-ray traffic light turns green, trucks must pass continuously through the portal at no more than 5 mph without stopping and then proceed to the Adjudication Area F. See Figure 7.

In the post X-ray adjudication lanes the driver will again present QR code to the pole mounted reader and license plates and CBP DTOPS RFID transponder tag will be read once again. Once the X-ray images are adjudicated, the truck driver will be instructed to proceed to either the secondary dock (Area H/I) or to exit via the Area G roadway. See Figure 8.
Encoding DTOPS RFID and QR Code Creation

In order for CBP to quickly identify each truck and associated ACE trip information for a given border crossing, the QR and/or the CBP DTOPS RFID tag will need to be coded with ACE trip number, date of arrival, tractor license plate and trailer license plate for each individual time a truck crosses the border. The QR code is printed on the ACE cover sheet provided via the ACE Trade portal, and it can also be created using a CBP-provided smartphone application as described below. CBP DTOPS tags have programmable memory that is used to store the same trip information. CBP expects that drivers will either display a coded QR to the camera system as shown above, or that the CBP DTOPS RFID tag on the truck windshield will be coded with the necessary information for CBP systems to then read automatically. The trade community has the option to use either QR or RFID as they choose, properly coded, when crossing the border at the POE. Detailed instructions regarding the process for creating QR and coding RFID can be found at https://www.cbp.gov/document/guides or https://www.cbp.gov/trade/ace/training-and-reference-guides

CBP has developed an application, “CBP Truck QR,” now available for both Android and Apple smartphones via their respective app stores, which the trade community can download to their personal smartphones and use, to create the QR or perform the RFID coding of the CBP DTOPS tag. In order to code the DTOPS RFID tag, the trade community will also need to acquire a handheld RFID read/write programming device that can be paired with their personal smartphone hosting the RFID/QR application. The RFID programming device is available through various vendors via Amazon or other online outlets but does not include the smartphone. An example of the device is shown in Figure 7. Other RFID encoding devices with enterprise software systems that can encode the DTOPS windshield tag may become available from other industry sources.

Figure 9. TSL 1128 Bluetooth UHF RFID Reader