



**Federal Railroad Administration
Report to
House and Senate Appropriations Committees**



Laredo, TX International Bridge (Photo Credit: FRA)

**International Border
Passenger and Freight Rail Study
June 2017**

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Executive Summary

The U.S. Department of Transportation (USDOT) and the Federal Railroad Administration (FRA) conducted an International Border Passenger and Freight Rail Study (Study) in response to the House of Representatives Appropriations Committee Report No. 114-129.¹ The report encouraged FRA to work with all relevant state and Federal agencies and their Mexican counterparts to study what standards and protocols are needed to facilitate a passenger and freight rail line between the United States (U.S.) and Mexico, in Texas, and other international land crossings.

To develop this Study, FRA identified U.S. government and industry sources from past reports and studies on international border rail crossing topics and interviewed government officials from the U.S., Canada, and Mexico, as well as industry representatives. The Study also involved a visit to Laredo, TX, where FRA observed both north and southbound freight train movements on the International Bridge in Laredo, which has the most freight rail traffic among the southern border rail ports of entry (POEs).

The Study found standards and protocols for freight rail service between Mexico and the U.S., and between the U.S. and Canada, vary and depend greatly on factors such as the characteristics of individual POEs and operating procedures of freight railroads. Regulations involving railroads and railroad safety have grown similar between the U.S. and Canada; this can be attributed to the great deal of cooperation between the two countries on regulatory and operational matters. Mexico's federal rail regulations, however, are still in development. Therefore, freight railroads operating at the U.S.-Mexico border utilize FRA's and the Association of American Railroads' (AAR) rules and standards for operation.

While there is currently no passenger rail service between the U.S. and Mexico, the Study found there have been past efforts to facilitate a passenger rail line with Mexico—most recently with the service-level Environmental Impact Statement (EIS) developed by the Texas Department of Transportation (TxDOT), connecting San Antonio to Monterrey, Mexico via Laredo, TX. However, the establishment of international passenger rail service between the U.S. and Mexico will require further environmental and feasibility studies and strong interest and funding support from both countries. Additionally, cooperation between U.S.-Mexico governmental bodies would be vital to establishing such a service and ongoing operations. For example, passenger rail service between the U.S. and Canada—which consists of four services, three operated by the National Railroad Passenger Corporation (Amtrak), and one by the White Pass and Yukon Route Railroad (WP&YR)—requires border protection agencies from both countries to coordinate on clearance of passengers. The U.S. and Canada signed the *Agreement on Land, Rail, Marine and Air Transport Preclearance Between the Government of the United States of America and the Government of Canada* (LRMA) in 2015, which, once it enters into force will allow for immigration, customs and agriculture inspections required for entry into either country to occur on foreign soil – will reduce congestion and delays at the border and increase efficiency and

¹ U.S. House. Committee on Appropriations. *Departments of Transportation, and Housing and Urban Development, and Related Agencies Appropriations Bill, 2016, (to Accompany H.R. 2277) Together with Minority Views.* (114 H. Rpt. 129).

predictability in cross-border travel, tourism and transportation. . Canada is still debating the implementing legislation (Bill C-23) necessary for the LRMA to enter into force.

Cooperative efforts between the U.S. and Mexico are underway. In part due to this Study, FRA has begun to collaborate with Mexico's newly created federal rail regulatory body, Rail Transport Regulatory Agency (Agencia Reguladora de Transporte Ferroviario – ARTF), established in August 2016, to facilitate cooperation on rail safety matters and assist with the creation of rail regulatory practices in Mexico. Due to the significant amount of freight rail traffic movement along the U.S.-Mexico border, it is extremely important to have cooperation among border services agencies including those in Canada, as freight travels via rail from Mexico to the U.S. and into Canada.

Cooperative efforts, including sharing of best practices and developing relationships within a trilateral structure, would help provide a safer and more efficient environment to improve rail operations between the U.S. and Canada, and Mexico.

Introduction

The Explanatory Statement accompanying the Consolidated Appropriations Act, 2016, directed FRA to study what standards and protocols are needed to facilitate a passenger and freight rail line between the U.S. and Mexico, in Texas and other international land crossings, and to provide the Study's findings to the House and Senate Appropriations Committees 18 months from enactment.

This report details the Study's findings and includes information gathered from independent research; interviews with railroad companies, government officials, and industry experts; and a site visit to freight operations at the international border of Laredo, TX. It provides an overview of existing and potential cross-border freight and passenger rail services between the U.S. and Canada, and Mexico; protocols and standards that facilitate existing services; current operational challenges; and opportunities to help facilitate future growth, efficiency, and safety of passenger and freight rail service along both U.S. borders. This report also presents observations and strategies that can help further assist the establishment of government relations, policies, and practices along U.S. borders to facilitate the safe and efficient movement of people and goods.

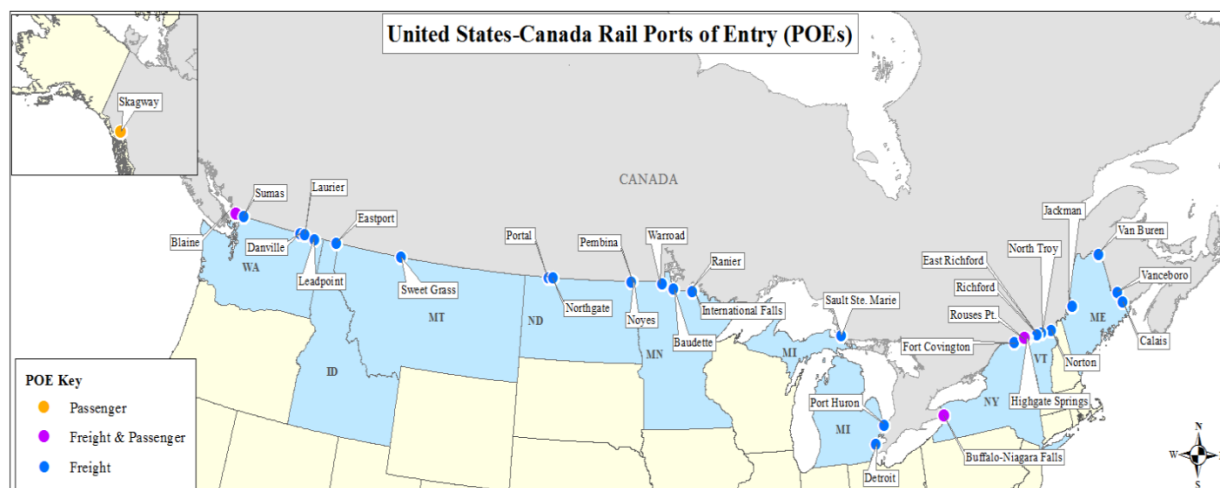
Cross-Border Freight and Passenger Rail Between the U.S. and Canada

Freight Rail Background:

There are currently 31 rail POEs that connect the U.S. with Canada, and four of these rail border crossings include passenger routes. Five Class I railroads interchange between the U.S. and Canada. This includes two Canadian freight railroads, Canadian National - North America (CN) and Canada Pacific Railway (CP); both service the U.S. and reach as far as the U.S. southern

border.² The three U.S. Class I railroads are Union Pacific Railroad Company (UP), CSX Transportation, Inc. (CSX), and BNSF Railway Company (BNSF). A map of the U.S.-Canada POEs is shown in Figure 1 below.

Figure 1. Map of U.S.-Canada POEs



Source: FRA

U.S.-Canada Freight Rail POEs

Table 1 below shows the northern border rail POEs' annual number of inbound trains and corresponding value of commodities in 2015. Port Huron, MI saw the most inbound trains from Canada at just over 4,000 trains. Detroit, MI had the highest inbound value of commodities at \$15.7 billion. The POEs are listed in geographical order from west to east.

Table 1. Annual Inbound Trains and Value of Commodities for U.S./Canada POEs (2015)³

U.S. City	Inbound Trains	Value of Inbound Commodities (Millions USD)
Skagway, AK	307	N/A
Blaine, WA	2,076	2,278
Sumas, WA	485	19
Danville, WA	N/A	N/A
Laurier, WA	124	74
Leadpoint, WA	294	599
Eastport, ID	1,389	2,055
Sweet Grass, MT	351	518
Portal, ND	1,910	3,916

² The Surface Transportation Board (STB) defines a Class I railroad as having annual carrier operating revenues of \$457,947,575 or more. This definition was last updated in 2015.

³ BTS data did not have complete information for seven POEs to include: Danville, WA; Noyes, MN; Warroad, MN; Baudette, MN; Ranier, MN; East Richford, VT; and North Troy, VT. Skagway, AK is listed as not applicable as there is only passenger rail service at that location.

Northgate, ND	7	36
Pembina, ND	1,282	3,050
Noyes, MN	N/A	N/A
Warroad, MN	N/A	N/A
Baudette, MN	N/A	N/A
Ranier, MN	N/A	N/A
International Falls, MN	3,333	7,839
Sault Ste. Marie, MI	361	437
Port Huron, MI	4,074	14,698
Detroit, MI	2,181	15,700
Buffalo-Niagara Falls, NY	2,395	7,068
Fort Covington, NY	656	818
Rouses Pt., NY	1,505	2,238
Highgate Springs, VT	334	471
Richford, VT	99	12
East Richford, VT	N/A	N/A
North Troy, VT	N/A	N/A
Norton, VT	216	194
Jackman, ME	66	40
Van Buren, ME	567	20
Vanceboro, ME	212	215
Calais, ME	153	1

SOURCE: USDOT, Research and Innovative Technology Administration, Bureau of Transportation Statistics (BTS), based on data from the Department of Homeland Security, U.S. Customs and Border Protection, Office of Field Operations.

Current Freight Rail Standards and Protocols

U.S. Customs and Border Protection (CBP) is responsible for conducting the customs, immigration, and agriculture inspections of passengers necessary for admission into the United States. In the context of freight rail crossings, CBP utilizes the following procedures, among others, to secure the border:

- **Advanced Targeting** – No later than two hours before the train arrives at the border, CBP electronically obtains the train’s manifest, which provides information on the train’s contents, from the railroad. Using CBP’s Automated Targeting System, CBP officials identify rail cars deemed high-risk, for additional inspection.
- **Rail Vehicle and Cargo Inspection System (R-VACIS)** – Requiring inbound trains to pass through R-VACIS, a machine that produces an image of the inside of railcars using gamma radiation technology. CBP officers review the scanned images for anomalies that may indicate the presence of un-manifested goods and contraband, including threats that could pose a risk to national security (see image of R-VACIS equipment below).

- Secondary Physical Inspections** – Depending on the outcome of the advanced targeting and R-VACIS scan, CBP conducts secondary physical inspections of rail cars.⁴ CBP only scans freight trains coming into the U.S. CBP does not scan trains going into Canada. Although CBP does not require POEs to scan northbound trains to Canada, individual POEs will occasionally scan northbound trains if staffing allows and/or if there are security concerns. Canada Border Services Agency (CBSA) does not currently use this technology for either incoming or outgoing movements, citing the low risk they currently assess on these movements. CBSA also noted their awareness that the U.S. scans train movements from Mexico into the U.S., meaning trains moving from Mexico to the U.S. to Canada have already been scanned by the U.S. at the border with Mexico.



Example of R-VACIS in Blaine, WA (Photo Credit: GAO)

Current Freight Rail Challenges and Opportunities

Freight rail movement between the U.S. and Canada is increasing and is very important to each country's economy. However, moving this freight, which includes hazardous materials, safely and efficiently across the border is a challenge. Fortunately, the U.S. and Canada have similar regulatory regimes that address the movement of hazardous materials. Regular communication between FRA and Transport Canada (TC) has resulted in a greater level of understanding of each other's rail safety requirements, as well as initiatives underway within each country's respective rail safety departments.

FRA's discussions with border officials indicate CBP and CBSA already cooperate on protocol and processes and have good working relationships. However, continued sharing of best practices and process improvements is needed to respond to border challenges as they arise.

Passenger Rail Background:

There are four passenger rail routes that traverse the border between the U.S. and Canada. One of the four international passenger rail routes is an excursion train in Skagway, AK operated by WP&YR. The route is known as the White Pass Summit Excursion. Amtrak provides the other three international passenger rail services between the U.S. and Canada:

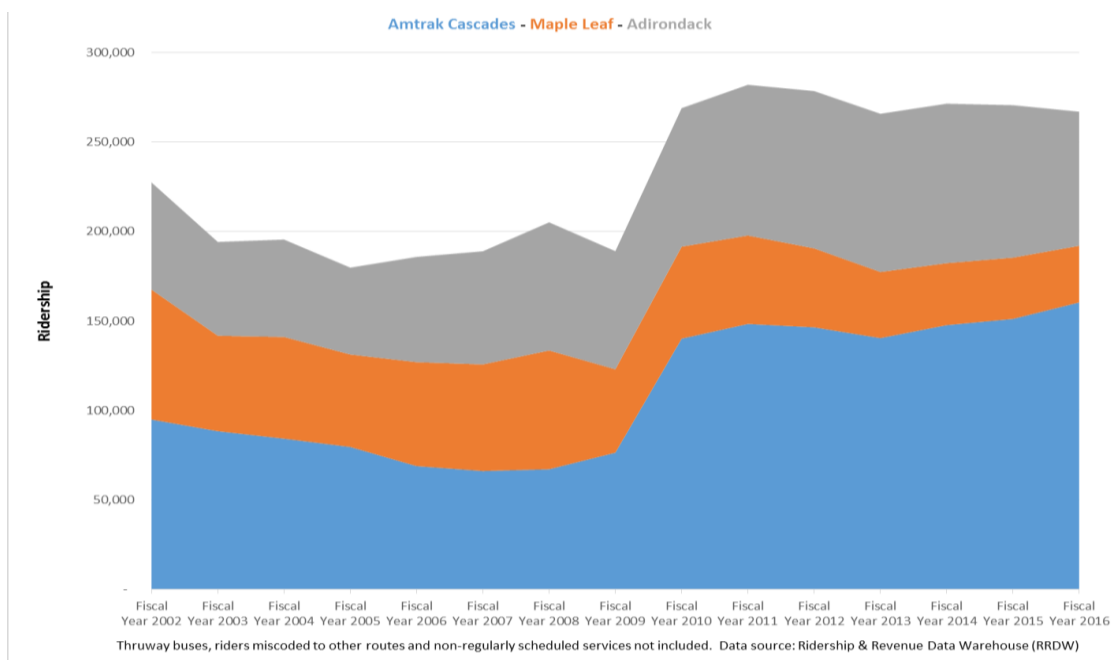
- Cascades** – service between Portland, OR and Vancouver, British Columbia

⁴ <http://www.gao.gov/products/GAO-16-274>.

- **Maple Leaf** – service between Niagara Falls, NY and Toronto, Ontario
- **Adirondack** – service between New York City, NY and Montreal, Quebec

Amtrak's international passenger rail service ridership totaled just over 267,000 in 2016. Figure 2 below depicts the overall ridership for each of the international service routes from fiscal years 2002-2016.

Figure 2. Amtrak Ridership to/from Canadian Stations, Fiscal Years 2002-2016



Source: Amtrak, Ridership, and Revenue Data



Amtrak, RRDW.

The Cascades is a joint Oregon and Washington state-supported rail service operated by Amtrak, which offers service between Eugene, OR and Vancouver, British Columbia, Canada. One way, the route covers 346 miles and takes approximately 10-11 hours. In fiscal year 2016, Amtrak's Cascades north and southbound ridership reached approximately 160,400 passengers.⁵ This is the highest ridership count for all three border rail services. Ridership from Portland and Seattle to Vancouver both increased approximately 18 percent over fiscal year 2015.⁶

Cascades Route Map (Image Credit: Amtrak)

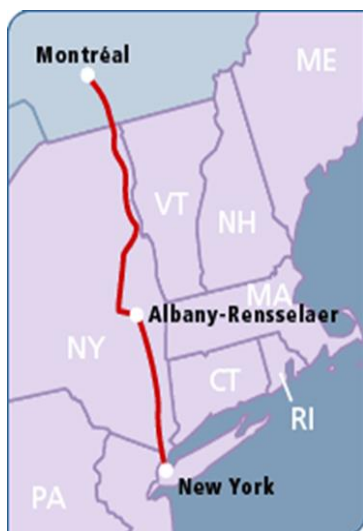
Maple Leaf

The Maple Leaf is a state-supported rail service operated by Amtrak, which offers service between New York City, NY and Toronto, Ontario, Canada. On the Canadian portion of the route, before terminating in Toronto, the train stops in Niagara Falls, St. Catharines, Grimsby, Aldershot, and Oakville. The trip from New York City to Toronto is 544 miles and takes approximately 12-13 hours. Additionally, the Empire Service runs along the same route up until Niagara Falls, NY, where the route terminates. In fiscal year 2016, Amtrak's Maple Leaf north and southbound ridership reached approximately 31,650 passengers.⁷



Maple Leaf Route Map (Image Credit: Amtrak)

Adirondack



The Adirondack is a state-supported rail service operated by Amtrak, which offers service from New York City, NY to Montreal, Quebec, Canada. One way, the route covers 381 miles and takes approximately 10 hours. In fiscal year 2016, Amtrak's Adirondack north and southbound ridership reached approximately 74,960 passengers.⁸

Adirondack Route Map (Image Credit: Amtrak)

⁷ Amtrak, RRDW.

⁸ Amtrak, RRDW

Current Passenger Rail Service Standards and Protocols

WP&YR and Amtrak passenger rail services do not share a specific set of standards and protocols at this time due to the uniqueness of each border crossing's characteristics and facilities. Each of the service lines operates differently based on its unique circumstances as it approaches the border on either side. The protocols are described below in geographical order from west to east.

White Pass Summit Excursion

The White Pass Summit Excursion passenger service, known as the "Scenic Railway of the World," operates 4-5 trains at a time with lead times of less than 10 minutes apart. In 2016, 172,400 passengers traversed the border, with the majority of those travelers making the one-way journey to Fraser, British Columbia.

The border crossing at White Pass is remote and inaccessible except by rail; therefore, there is no human presence at the actual border, but border facilities in each country are a short distance away. On the U.S. side, passengers enter Canada via the Carcross and Fraser, British Columbia service by having a CBP officer board the train north of the Shops Facility in Skagway, AK, and process the passengers as the train progresses to the Fraser station. If that process has not been completed by arrival, cars that have not been cleared are held until the officer is able to get through the entire train. If additional procedures for processing passengers are required, the officer conducts them in remote areas at the station or, in rare cases, in the border station four miles away.

For the Canadian side of the operation, the train arrives at the Fraser, British Columbia location and is boarded by CBSA to process the train. Passengers are released by car after the inspectors have passed through. Fraser is an intermodal facility with train and bus traffic; thus, roadway and rail intersect.

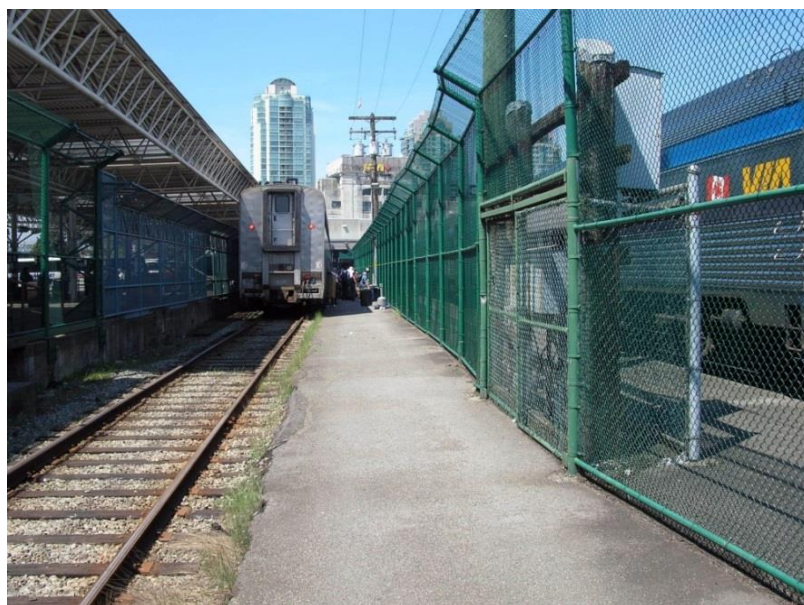




Clockwise: White Pass Service in Canada with U.S. in the background; White Pass Service; White Pass Service at Fraser multimodal facility; Flags at border crossing (Photo Credit: FRA and WP&YR)

Cascades

For northbound service to Canada, trains run in a sealed capacity across the border and into an enclosed facility in Vancouver's Pacific Central Station. CBSA administers full customs and immigration processing. The Cascades service has no scheduled stops between the station in Vancouver and the border. As a result of this procedure, the train can travel at 50 mph to the next stop without any disturbance. For southbound service to the U.S., CBP conducts immigration document pre-inspection in Vancouver's station. However, CBP conducts customs and agriculture inspections over the border in Blaine, WA.



Vancouver's Pacific Central Station is the only rail station in North America where Canadian and U.S. border security agents share the same work space. In October 2015, CBP and CBSA celebrated 20 years of safe operations at the Vancouver Station.

Vancouver's Pacific Central Station sealed facility (Photo Credit: Amtrak)

Maple Leaf

Both Amtrak and VIA Rail Canada (VIA) provide the Maple Leaf service. In 1977, the Canadian Government established VIA, the country's first national passenger rail company. For current service to Canada, the Amtrak train proceeds to the Whirlpool Rapids Bridge and then moves over the border into the first stop at Niagara Falls, Ontario Station. CBSA boards the train, conducts a sweep check, and processes passengers off the train. The VIA crew and passengers board and continue through Canada and into Toronto, Ontario. The Maple Leaf services several stops over the 80-plus miles between the border and the Toronto station. For southbound service to the U.S., VIA and Amtrak crews change at Niagara Falls, Ontario Station. The train moves over the Whirlpool Rapids Bridge and continues on to the existing clearance station in Niagara Falls, NY. The train then backs up into a sealed holding area, and CBP inspects passengers on board.



Amtrak Maple Leaf at Niagara Falls, Ontario Station (Photo Credit: Rob Archer, www.hankstruckpictures.com)

Adirondack

The northbound service crosses just over the border to a shelter station at Lacolle Route 223 in Quebec. CBSA comes on to the train to conduct inspections and uses the café car as a secondary inspection point. Scheduled stop time is one hour.

For southbound service to the U.S., trains cross just over the border to the Rouses Point, NY Station, an open-air facility. CBP enters the train and conducts the customs, immigration, and agricultural inspections necessary for admission into the U.S.





From Left: Current outdoor location at Lacolle 223, Quebec (Photo Credit: Amtrak); Current outdoor location at Rouses Point, NY (Photo Credit: Amtrak)

Provincial and state partners are working to use Montreal Central Station as a joint preclearance facility for both CBSA and CBP once the LRMA enters into force. This would replace the CBSA facility at Lacolle and CBP operations at Rouses Point. The Adirondack currently services one stop at St. Lambert, Quebec that would be eliminated to provide non-stop service between Montreal and the New York State border once the LRMA enters into force. In 2015, a Phase I planning study, seeking to develop a passenger preclearance facility for use by both the Adirondack and Vermonter trains inside the Montreal Central Station was completed. The New York State Department of Transportation, the Vermont Agency for Transportation, the Ministry of Transport Quebec, and Amtrak coordinated on the study. The facility would function as a shared-use facility with both U.S. and Canadian border security agencies conducting full customs, immigration, and agriculture inspections on-site and on trains operating in a sealed capacity between Montreal and the U.S. border.⁹ The addition of a preclearance facility would mean that the Adirondack route would no longer stop at the border for customs, immigration, and agriculture inspections, which would cut down on delays and travel time and improve customer satisfaction. However, Montreal Central Station would be required to meet all the terms and conditions of the LRMA, including the recovery of costs to CBP, in order to proceed with preclearance at this location once the LRMA enters into force.

Current Passenger Rail Challenges and Opportunities

The U.S. and Canada have been pursuing the expansion of preclearance into new modes of transportation, including rail. On March 16, 2015, the U.S. and Canada signed the LRMA. The LRMA provides officials of CBP and CBSA the requisite authorities and tools to conduct customs, immigration, and agricultural inspections, across all modes of transportation, in each other's country.¹⁰ The LRMA will reduce congestion and delays at the border and increase efficiency and predictability in cross-border travel, tourism, and transportation. The LRMA will enter into force when Canada passes its implementing legislation (Bill C-23), necessary

⁹ <http://ebtc.info/wp-content/uploads/2014/07/Annual-Report.pdf>.

¹⁰ <https://www.dhs.gov/news/2015/03/16/united-states-and-canada-sign-preclearance-agreement>.

regulations, and the United States and Canada exchange diplomatic notes. When the LRMA enters into force it will supersede the *Agreement on Air Transport Preclearance Between the Government of the United States of America and the Government of Canada* which covers only Air Transport Preclearance.

Amtrak-Specific Challenges and Opportunities

An Amtrak representative shared with FRA challenges that CBP, CBSA and Amtrak, have with the current Adirondack service to Montreal. Border agencies expressed concern over insufficient privacy for conducting traveler interviews, the risk to agents and passengers with firearms in a tight space, a lack of connectivity to agency information systems, a lack of ready access to conduct secondary inspection processes, and an inability to inspect a completely empty train. Amtrak stated their observance of issues of prolonged trip times exist due to idling for border inspections, adding travel delays due to traveler documentation issues. Amtrak stated their concern regarding customer satisfaction and financial performance measures.



Proposed underground facility location in Montreal Central Station (Photo Credit: Amtrak)

Preclearance for Montreal passenger rail service will require operational and functional improvements including a designated co-location for preclearance, as well as funding for staff and other resources to operate the preclearance facility. Funding is also required to lease space for the facility from CN and other owners of the Montreal Central Station properties and to construct the facility at the track level as well as vertical access to the concourse level. Additional infrastructure investment would also be needed to achieve sealed capacity train operations with Canada.

The Maple Leaf service has the lowest north and southbound ridership of the three Amtrak border services, with approximately 18,000 northbound and 16,400 southbound

riders in 2015.¹¹ Amtrak states this is in part due to long dwell times at the border for passenger processing.

The Niagara Falls International Railway Station and Intermodal Transportation Center in New York has been open for Amtrak service since December 2016. The new Station serves Amtrak trains and Niagara Frontier Transportation Authority buses with new station elements that include a platform, station, and site improvements for multimodal connections. Amtrak has stated that this station provides enhanced customer service for their travelers by consolidating and housing full-service CBP border inspection facilities for inspection in the U.S. before trains enter Canada. This consolidation is designed to improve the convenience of border processing and reduce border crossing processing travel times.



The Niagara Falls International Railway Station (Photo Credit: Robert Kirkham/Buffalo News)

The U.S. continues efforts to add passenger rail service with Canada. The first includes reinstating service to Montreal's Central Station with the Vermonter service, which currently travels from Washington, DC to St. Albans, VT. A second potential service would extend the Wolverine Corridor with the VIA Quebec-Windsor Corridor, connecting Chicago and Detroit to Windsor, Ontario and terminating in Toronto, Ontario. Both operations require additional planning as well as operational and infrastructure improvements, to include preclearance procedures.

¹¹ Amtrak Market Research and Analysis.

Regulatory Cooperation on Rail Between the U.S. and Canada:

The U.S. and TC enjoy a long history of collaboration on rail safety issues, as evidenced by the harmonization of many rail standards. While each country has its own regulations and rules, there are some commonalities. FRA's rail safety group regularly meets with TC's to share best practices and discuss new regulations under consideration, and personnel from both agencies work together on joint safety inspections on both sides of the border.

TC and FRA also work within various groups toward regulatory cooperation (see Appendix I for a list of such groups). Of note, the U.S.-Canada Regulatory Cooperation Council (RCC) includes a rail safety working group that has a dedicated work plan for continued interaction on harmonization of rail safety standards and collaboration on matters of mutual interest.

In addition to the regulatory work, various agreements ensure efficient movement across the border for both freight and passenger rail service. Examples of critical formal agreements regarding current freight and passenger rail operations between the U.S. and Canada include, but are not limited to, the following:

- Operating agreements between Amtrak and the Canadian railroads to operate on Canadian tracks;
- Agreements between the railroads and their respective labor unions to operate trains into either the U.S. or Canada with foreign crews;
- Agreements between the U.S. and Canadian freight railroads to operate on each other's tracks when doing cross border run-throughs (includes where the cross border run-throughs will terminate—i.e., which rail yard);
- Agreements among the freight railroads, CBP, and their Canadian counterparts to allow for run-through trains between the U.S. and Canada and to identify how shipment information will be transmitted to the inspection agencies, as well as how inspections will occur; and

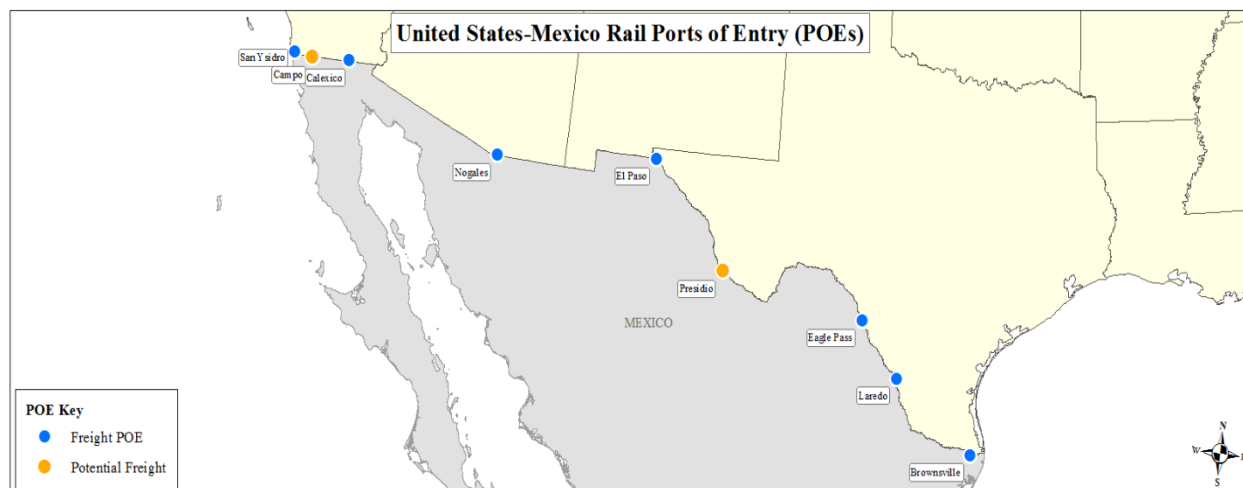
Cross-Border Freight and Passenger Rail Between the U.S. and Mexico

Freight Rail Background:

Three U.S. Class I freight rail operators interchange with Mexico at the border. These include UP, Kansas City Southern Railway Company (KCS), and BNSF. Two Mexican Class I freight rail operators interchange with U.S. freight operators. These include Ferrocarril Mexicano (Ferromex) and KCS de México (KCSM), a subsidiary of KCS. UP is a shareholder of Ferromex.

Seven rail POEs along the Mexican border currently facilitate only freight movements. Texas has the most POEs as well as the highest number of incoming trains from Mexico. Figure 2 below illustrates the U.S.-Mexico rail POEs.¹²

Figure 2. Map of U.S.-Mexico Rail POEs



Source: FRA

U.S.-Mexico Freight Rail POEs

Table 2 below shows the southern border rail POEs' annual number of inbound trains and corresponding value of commodities in 2015. Laredo, TX saw the highest number of inbound trains at around 3,700, as well as the highest inbound value of commodities at over \$18 billion. The POEs are listed in geographical order from west to east.

Table 2. Annual Inbound Trains and Value of Commodities for U.S./Mexico POEs (2015)¹³

U.S. City	Mexican State	Inbound Trains	Value of Inbound Commodities (Millions USD)
San Ysidro, CA	Tijuana	252	N/A
Calexico, CA	Mexicali	205	N/A
Nogales, AZ	Nogales	795	6,185
El Paso, TX	Ciudad Juarez	1,434	6,510
Eagle Pass, TX	Piedras Negras	2,728	12,354
Laredo, TX	Nuevo Laredo	3,758	18,375
Brownsville, TX	Matamoros	685	499

SOURCE: BTS, based on data from the Department of Homeland Security, CBP, Office of Field Operations.

¹² The POEs at Presidio, TX and Campo, CA are shown for illustrative purposes only. Currently, they are not operational but have the potential for future freight movement in the near future.

¹³ BTS did not have data for the value of inbound commodities for two POEs: San Ysidro, CA and Calexico, CA. The POEs at Presidio, TX and Campo, CA are not listed and do not have data because they are currently not operational.

Current Freight Rail Standards and Protocols

As noted above, CBP monitors freight rail crossing into U.S. borders by generally following three procedures: advanced targeting, R-VACIS, and secondary physical inspections. Generally, CBP scans freight train movements coming into the U.S.; however, in some locations, CBP scans all southbound trains going into Mexico. Mexico's border protection agency, Servicio de Administracion Tributaria (SAT), uses its own equipment to scan both incoming and outgoing trains.

The freight rail POEs along the U.S. southern border and the protocols they follow are described below. Each operating railroad works with CBP to perform their own operating procedures to ensure trains coming into the U.S. or traveling to Mexico are safe and secure. Additionally, FRA also conducts federal inspections of trains and its operations. As with Canada's freight and passenger rail operations, U.S. southern border POEs do not follow the same protocols and procedures due to the unique characteristics and challenges of each location.

San Ysidro

At the San Ysidro, CA border, northbound trains enter through the POE and into the U.S. as shown in the photo below. The train is stopped by CBP for inspection and receives a full x-ray scan. The Mexican crew continues approximately a quarter of a mile to dedicated track in San Ysidro yard, where they remove incoming cars as needed. Southbound cars are coupled with the original locomotive train that heads back to Mexico. The average is 20 cars per train set. The U.S. crew at San Ysidro yard takes the remaining cars to San Diego.



From Left: San Ysidro Border Crossing where a northbound train enters the U.S. (Photo Credit: FRA); San Ysidro Border Crossing with border patrol inspecting a locomotive (Photo Credit: FRA)

Campo

The Campo rail border crossing connects the U.S. in Campo, CA with Tijuana in Mexico via tunnel (see photo below). There are a series of tunnels at this location. One tunnel used for border crossing traffic was closed after an adjacent tunnel had a large fire on the Mexican side in 2008. After that the rail operations ceased at the crossing and much of the rail was vandalized and stolen. Interviewees shared that the Mexican government has invested in upgrades to the southern border areas at this POE. On the U.S. side, however, the track is in need of extensive repair, which will require much effort due to the track's heavy grade. The Baja California Railroad (BJRR), which is registered as a rail operator in both the U.S. and Mexico, now has trackage rights to operate between Tijuana and Plaster City, CA by way of the Campo POE. BJRR is securing private investment funding for the rail improvements necessary to reopen the line. The economic value of reopening the line is tied to the opening of large manufacturing facilities in the area that would prefer rail transportation of their goods. These facilities include a large brewery scheduled to open in 2017 and auto manufacturing plants.

In addition to rail repairs, decisions on where to locate the CBP facility and R-VACIS technology are also important for border services. The north end of the tunnel is in a difficult position, with only approximately 15 yards of land between the tunnel and the bridge into the U.S. Nearby Campo would be the closest flat area for a large facility on the U.S. side. The south side of the tunnel in Mexico also has suitable terrain for a facility.

The Pacific Southwest Rail Museum in the past had used one of the series of tunnels to run an excursion train from Campo, CA to Tecate, Mexico. Since that tunnel had burned and collapsed in mid-2009, service has been indefinitely suspended pending the clearing and reconstruction of the railroad between the border and the damaged tunnel. Due to recent efforts by the city of Tecate, construction has begun to clear the collapsed tunnel and repair the tracks. The Museum hopes to secure an operating agreement to resume operations through Mexico to Tecate once railroad reconstruction is complete.¹⁴

¹⁴ <https://www.psrn.org/tecate/>



Campo Border Crossing – view at the end of tunnel is the U.S. side (Photo Credit: International Boundary & Water Commission)

Calexico



The second rail POE in California is in Calexico. This border crossing operates from 4 a.m. to 6 a.m. during the weekdays. The protocol for interchanging trains involves the Mexican and U.S. crews taking their trains up to the gate. The crews then walk across and swap trains. The Mexican crew heads south from the U.S. side, and the U.S. crew heads north from the Mexican side. For northbound movements, the U.S. crew pulls the train for CBP review and a full x-ray scan and then to Calexico yard, about a half mile to the north side of the border. For southbound trains, another U.S. crew brings the train into El Centro, approximately six miles from the border. Trains normally consist of up to 35 cars.

Calexico Border Crossing looking south (Photo Credit: FRA)



From Left: Calexico Yard looking north; El Centro Yard (Photo Credit: FRA)

Nogales



There is one rail border crossing in Arizona at Nogales. This crossing sees approximately eight trains per day and operates all day. The protocol for a northbound train involves the Mexican crew pulling the train up to the gate at the border and the U.S. crew walking across the border and pulling the train nine miles to Rio Rico, AZ, where CBP inspects the train. The train is not inspected at the actual border because there is no physical location to park the train, and there are multiple highway grade crossings in the town of Nogales.

Nogales Border Crossing on U.S. side. The facility also has a pedestrian crossing. (Photo Credit: FRA)

El Paso

BNSF instituted a new interchange process at the El Paso POE effective June 2016. The standard protocol is a one-for-one interchange, or one northbound and one southbound train at a time.

The process is as follows: a northbound Ferromex train stops on the bridge short of the R-VACIS machine, where the track begins to split in two (shown in image below). The Ferromex crew then obtains clearance from CBP to exchange paperwork with a BNSF official. Finally, upon clearance from CBP and activation of the R-VACIS, the BNSF crew boards the train and operates it northbound past the R-VACIS machine and into their rail yard on the U.S. side.

For the southbound interchange, the BNSF crew pulls the train up to specific track clearance marks (shown in image below). The Ferromex crew then boards the train and awaits clearance from CBP before pulling the train and departing south for Mexican inspection and then to the Ferromex rail yard in Mexico.



El Paso Black Bridge (Facing south to Mexico with BNSF southbound interchange points with Ferromex) (Photo Credit: BNSF)

UP follows a similar procedure to BNSF's at the El Paso POE. First the Ferromex crew pulls up to the international gate with a northbound train, exits the train, and waits for the UP crew to arrive. The UP crew then boards the train and pulls it north, until the rear of the train reaches past the international gate where it then stops and performs a Class III brake test, performed on all northbound trains at Mexican border POEs. Next, the train is operated further north until the rear of the train clears the bridge on the U.S. side while conducting a roll by inspection for any noticeable mechanical defects. Trains are then continued onto the nearest rail yard for a full and detailed mechanical and brake inspection. Trains heading southbound receive a brake test and move the train to the international gate where they dismount. Finally, the Ferromex crew boards the southbound train and pulls it into Mexico. North and southbound train movements are not simultaneous. Once the northbound train clears, then the southbound train is picked up and moved. The interaction for crew changes is off the bridge in El Paso.



From Left: UP El Paso Bridge on Mexican Side (Photo Credit: FRA); UP El Paso Bridge on U.S. side (Photo Credit: FRA)

Presidio



In 2008, a fire damaged the former rail bridge located in Presidio, TX, and the crossing has not been operational on the U.S. side since. A strong rationale for reconstruction is that there is a possibility of running freight traffic from the Port of Topolobampo, Mexico to the border at Presidio, TX. At Presidio, freight traffic would operate across the Texas Pacific Railroad (formerly the South Orient), which is owned by the State of Texas. Texas continues to pursue funding for the reconstruction of this crossing.

Presidio-Ojinaga International Bridge – the concrete structure is on the Mexican side, while the missing section on the U.S. side was destroyed in a fire (Photo Credit: FRA)

Eagle Pass-Piedras Negras International Railway Bridge



Also known as the UP International Railroad Bridge, the Eagle Pass-Piedras Negras International Railway Bridge crosses the U.S.-Mexico border between the cities of Eagle Pass, TX and Piedras Negras, Coahuila, Mexico. The U.S. portion is owned and operated by UP, with BNSF having trackage rights. The Mexican portion is owned by the Mexican government, with its operation commissioned to Ferromex. This bridge is the second busiest international rail crossing on the southern border.

UP International Railroad Bridge in El Paso, TX (Photo Credit: FRA)



UP International Bridge (Photo Credit: FRA)

Laredo



Laredo International Bridge (Mexico on left side) (Photo Credit: FRA)

The freight railroads involved in daily operation of train movements in Laredo are KCS, KCSM, and UP. The Laredo International Bridge is utilized for an average of 23-24 trains daily and operates 24 hours each day. For purposes of operational efficiency, trains are typically run in one direction for six-hour shifts, i.e., six hours for strictly northbound trains and six hours for southbound. The railroad entities on both sides of the border are in constant communication about the order of train movements, as delays either at the border or their respective rail yards affect the timing of trains crossing over the bridge.

Prior to the train's arrival at the border, the train operator provides specific information electronically about the train to the railroad receiving it across the border. SAT scans trains traveling both north and south on each side of the border and processes fines for incorrect documentation in paper form, which can lead to delays. CBP only scans, via R-VACIS, northbound trains traveling at a speed of 5 mph. Delays occur at the border if a crew is not present on either side when the train arrives, if officials identify mechanical issues, or if CBP or SAT do not grant clearance at the moment the train arrives at the bridge. If CBP or SAT deem it necessary to conduct further inspect the train due to the results of the scan or otherwise, the train moves off the bridge and into the POE railroad's respective yard.



KCS Crew approaching stopped northbound train for crew change and mechanical inspection – Laredo (Photo Credit: FRA)

Brownsville West Rail Bypass International Bridge

After 15 years of planning, construction, and a cost of more than \$120 million, the Brownsville West Rail Bypass International Bridge opened on August 7, 2015—the first new international rail bridge into Mexico in over 100 years. This relocation project improves safety by eliminating 11 at-grade crossings and improving traffic congestion and air quality within the historical district of Brownsville, TX. The bridge facilitates economic growth and improves efficiency of rail operations in Brownsville.

On January 13, 2017, the U.S. Department of State issued a Presidential permit to UP authorizing the railroad to operate and maintain the Brownsville West Rail Bypass International Bridge. CBP has been working to improve inspections and clearance procedures in Brownsville. Due to past incidents of violence at the center of the bridge, where U.S. and Mexican crews formerly exchanged operational control, Mexican crews may bring trains to the end of the bridge on the U.S. side for crew change and inspection. CBP and SAT share R-Vacis data with each other.



Aerial view of the bridge as it crosses the Rio Grande into Mexico from the U.S. (from left to right) (Photo Credit: Cameron County, TX)

Current Freight Rail Challenges and Opportunities

FRA discussed the challenges of freight movement on the southern border between the U.S. and Mexico with experts of both countries. Various personnel from both countries listed similar concerns regarding border security, resources to develop additional security, capacity limits, and technology at the border. FRA has issued waivers where appropriate to ensure efficient but safe movement across the border. There are also options for improvement and future opportunities that include information and technology sharing, mutual planning for border improvements, and overall continued collaboration for improved efficiencies.

The Rail Safety Improvement Act of 2008 prohibits mechanical and brake inspections of rail cars performed in Mexico from satisfying U.S. rail safety laws and regulations unless certain conditions are met.¹⁵ U.S. railroads that operate along the southern border have applied for waivers from the U.S. Code of Federal Regulations (CFR) to permit the acceptance of a Class III brake inspection¹⁶ and mechanical roll-by inspection of rail cars entering into the U.S. from Mexico by qualified U.S. railroad employees. FRA has approved these waivers, typically with conditions, for purposes of operational efficiency at the border, without compromising safety.

¹⁵ Rail Safety Improvement Act, Pub. L. 110-432, Sec. 416, 122 Stat. 4848, 4890 (2008).

¹⁶ 49 CFR § 232.211, Class III brake tests – trainline continuity inspection.

Full and detailed federally-required mechanical and brake inspections are conducted at the first respective U.S. railroad's rail yard appropriate to conduct these tests. These exceptions to federal regulations must be strictly adhered to, as not doing so could lead to problems such as a broken wheel or a piece of dragging equipment, which can affect components of track infrastructure such as switches, etc. FRA's most recent observations of trains entering the U.S. from Mexico have been that the vast majority of defective conditions are minor, non-catastrophic conditions.

Crew changes along the U.S. and Mexican border are a challenge to moving goods in an efficient and safe manner. Railroad officials would like to see crews vetted and cleared in Mexico and trains scanned prior to arriving at the border. This option would maximize speeds across the bridge, but would require Mexican crews to enter the U.S. beyond the bridge. In essence, a consolidated inspection and clearance on the Mexican side of the border would improve speed and efficiency of trains entering the U.S. While railroads would like to see mutual recognition and harmonization, similar to processes in Canada, this requires significant effort from both governmental bodies.

As an example of a railroad border improvement initiative, KCS has been working with UP on interchangeable train crews, and they are in the process of certifying a group of KCSM crew members to operate trains in the U.S. KCS has spent the past three years attempting to define this process in a manner that is acceptable from a regulatory standpoint, in which FRA would approve Mexican train crew certifications without the need for a waiver. Regarding a U.S. crew being on the same train with a Mexican crew, there is concern about the possibility of contraband entering the U.S. on trains for which U.S. crews are responsible; this approach would create additional liability for them. Industry experts also noted interchangeable train crews would be difficult to implement due to differing U.S. and Mexican labor agreements.

In Laredo, both government and industry representatives assured FRA of on-going communication, and that process improvements are discussed on a frequent basis among stakeholders. Railroad entities have daily calls and process improvement teams look for opportunities to improve crossing times. SAT and CBP meet regularly to discuss issues and opportunities to improve information sharing and process improvements. Regular communication is a recurring recommendation from persons interviewed, to foster increased process improvements and optimize efficient movement at the border.

Passenger Rail Background:

Lack of Passenger Rail Service

No passenger rail service currently operates across the border between the U.S. and Mexico. Ferromex runs the passenger rail service offered in the interior of Mexico with a subsidy from the Mexican Government, and this service accounts for a small percentage of the national travel market.

In discussions with both Mexican and U.S. government personnel, any new service would require close cooperation between the governments for infrastructure planning, field operations,

and technology requirements. New protocols for clearance of passengers would need to be created on both sides of the border and would require strong commitment from each government and the railroad entity operating the service.

If such a service were to begin, reviewing the protocol currently utilized on the northern border between the U.S. and Canada would be a helpful starting point for discussions on protocol at the southern border.

Efforts to Facilitate Passenger Rail Service Between the U.S. (Texas) and Mexico (Tamaulipas and Nuevo Leon)

High-speed passenger rail has been under consideration in Texas since the late 1980s. In the 1990s, a private consortium was awarded a franchise to design, build, and operate high-speed rail in the State. Although the consortium's study of demand appeared to support the development of high-speed rail, lack of funding and other obstacles prevented that project from moving forward. Since then, other proposals for high-speed rail in Texas have been submitted to FRA, with each proposal showing revenues that exceed operating expenses but requiring funding to build. In 2000, FRA designated the South Central Corridor, including the area between San Antonio and Dallas and Fort Worth, as a future high-speed rail corridor. In 2010, TxDOT received a grant to study passenger rail in that corridor.¹⁷

As part of its Network Growth Strategy published in 2000, Amtrak considered adding passenger rail service between San Antonio and Monterrey, a route of approximately 375 miles. Amtrak had previously held discussions with Mexican authorities concerning alignment and right-of-way issues. Monterrey is a leading industrial and corporate center in Mexico with strong historic, economic, and social ties to Texas. Amtrak has taken no further action on this proposal. However, TxDOT is currently considering passenger rail service along this route as part of its Texas-Oklahoma Passenger Rail Study.¹⁸

Texas-Oklahoma Passenger Rail Study – Service-Level Draft Environmental Impact Statement¹⁹

In July 2016, TxDOT and FRA published a service-level Draft EIS to evaluate the impacts, benefits, and costs of a range of passenger rail service options in an 850-mile corridor from Oklahoma City to South Texas along the IH-35 corridor. The study considers three discrete portions of the corridor to include the Southern section from San Antonio to South Texas (Corpus Christi, Brownsville, Laredo, and the Rio Grande Valley), with the option to extend to Monterrey, Mexico. Two preferred route alternatives were considered for the Southern Section: Alternative S4, with higher-speed rail, and Alternative S6, with higher-speed or high-speed rail.²⁰

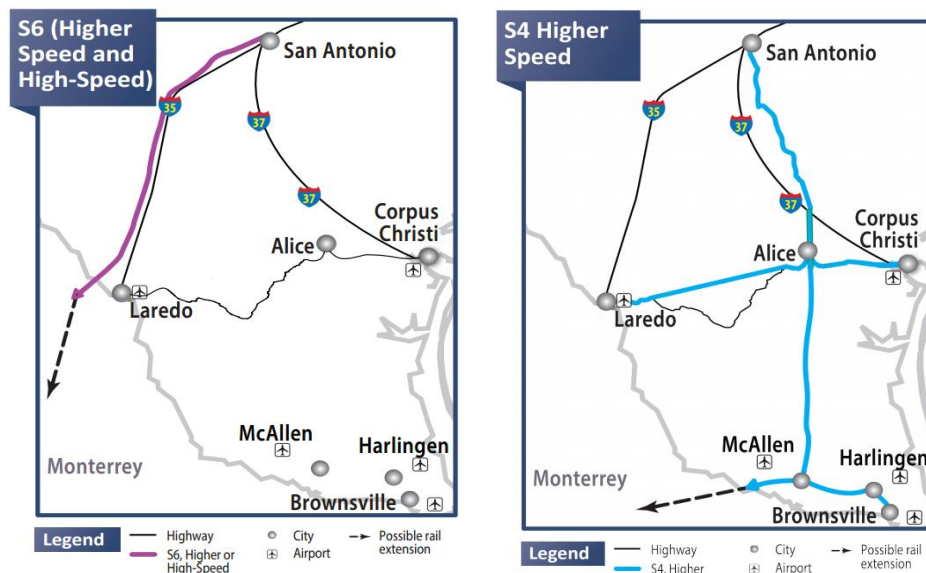
¹⁷ <http://ftp.dot.state.tx.us/pub/txdot-info/rail/txok/impact-statement.pdf>.

¹⁸ <http://ftp.dot.state.tx.us/pub/txdot-info/rail/2016-rail-plan/chapter-3.pdf>.

¹⁹ <http://ftp.dot.state.tx.us/pub/txdot-info/rail/txok/impact-statement.pdf>.

²⁰ The labels Alternative S4 and S6 refer to the route names of the two southern (S) section routes of the comprehensive impact study. Higher-speed rail refers to speeds up to 125 mph. High-speed rail refers to speeds up to 220 to 250 mph.

Alternative S4 would primarily use new tracks, beginning in San Antonio and continuing southeast along the UP rail alignment to George West and entering a new rail alignment to Alice. From Alice, trains would follow three separate routes serving different parts of South Texas, with one service that could be extended to Monterrey, Mexico via McAllen. With this scenario, trains would run at top speeds of 110-125 mph and require tracks separate from existing freight rail, whether in a shared right-of-way or along a new rail corridor.²¹ TxDOT recommended Alternative S4 Higher-Speed Rail as a preferred alternative because this alternative provides public benefits that include meeting more local transportation needs than any other alternative, which supports the Southern Section purpose and need.



Alternative S4 Route Map (Image Credit: TxDOT); Southern Section Alternative S6 Route Map (Image Credit: TxDOT)

Alternative S6 would mostly use new tracks, beginning in San Antonio and terminating at a new station near the Laredo-Colombia Solidarity Bridge. The study only examined the U.S. component of this new line, but considered ridership from a connection to Monterrey, Mexico, via the Laredo-Colombia Solidarity Bridge. One scenario would have trains run at top speeds of 110-125 mph and would require tracks separate from existing freight rail, whether in a shared right-of-way or along a new rail corridor. The other scenario would have trains run at top speeds of 180-220 mph and would require entirely new right-of-ways, as existing railroad corridors are not designed for high speeds and are not wide enough to provide required separation between freight and high-speed passenger rail.²²

TxDOT recommended Alternative S6 Higher-Speed Rail and Alternative S6 High-Speed Rail as preferred alternatives, but only if the alternatives include a connection to Monterrey, Mexico. This is because three-fourths of potential ridership on this route would occur only with the connection to Monterrey. The higher-speed versus high-speed service levels for this route cannot be further analyzed without more information about the Monterrey connection.

²¹ <http://ftp.dot.state.tx.us/pub/txdot-info/rail/txok/s4-alt-fact-sheet.pdf>.

²² <http://ftp.dot.state.tx.us/pub/txdot-info/rail/txok/s6-alt-fact-sheet.pdf>.

Once a preferred alternative is identified, TxDOT will prepare a final EIS that responds to comments received on the draft EIS. It will also include additional detail, such as mitigation measures for unavoidable impacts that might result from the preferred alternative. Once the final EIS is complete, FRA will issue a record of decision (ROD), which codifies the FRA's concurrence with the service-level NEPA process. TxDOT also will prepare a service development plan to complete the service-level final EIS. This plan will outline the passenger service concepts, public benefits and a financial plan for potential future development of the corridor based on the preferred alternatives. It will prioritize potential projects to be developed within the corridor, identify costs and potential funding sources.²³

There is currently no funding for the next level of assessment. The cost of the alternative of providing high-speed or higher-speed rail service from San Antonio to the northern part of Laredo is estimated at \$15-20 billion. This estimate does not include investments needed by Mexican counterparts to continue the new rail alignment from north of Laredo into Mexico and terminating at Monterrey.

If there were future interest in passenger rail service into Monterrey, Mexico, it is likely this environmental study would be expanded, in cooperation with the Mexican government, to review that segment.

U.S. and Mexican Bridge Approval Processes for Constructing International Bridges²⁴

The potential development of a dedicated track for border service between the U.S. and Mexico would likely necessitate a new international bridge. Regarding the potential bridge between the U.S. in Texas and Mexico in Tamaulipas, the following summarizes some of the required steps for each country.

The U.S. Federal Government and Texas approval processes to build a bridge connecting the United States to Mexico begin with the application for a Presidential Permit. Texas allows the applicant to concurrently seek approval from the Texas Transportation Commission and the U.S. Federal Government. Where a Border Master Plan has been established, the proposed project should be submitted to that entity for consideration and/or inclusion in the regional Border Master Plan, and for consideration by the U.S. State Department. The Presidential Permit process involves the collaboration of both Federal and Texas State agencies and may take several years due to environmental regulations and other issues. Some of the Federal agencies participating in this permitting process are: Department of Homeland Security (CBP and the U.S. Coast Guard), Food and Drug Administration, USDOT, Department of Commerce, Environmental Protection Agency, Department of the Interior (U.S. Fish and Wildlife Service), and the Department of Defense. The U.S. State Department invites these agencies to comment on the permit application and on the environmental and other documentation submitted by the sponsor.

²³ <http://www.txdot.gov/government/legislative/state-affairs/texas-oklahoma-rail/compliance.html>

²⁴ <https://ftp.dot.state.tx.us/pub/txdot-info/iro/international-bridges.pdf>, Appendix III.

The Mexican government employs a similar approval process for constructing international bridges. However, before any project can be considered for development, it must first be evaluated based on an established set of priorities under the advisement of the Bridges and Border Crossings Interagency Group (Grupo Intersecretarial de Puentes y Cruces Fronterizos). The proposed project should be presented for consideration to the Interagency Group, which is chaired by the Ministry of Foreign Relations, and in which the Ministry of Communications and Transportation participates. The proposed project should also be presented to the U.S.-Mexico Binational Bridges and Border Crossings Group to assess its binational feasibility and to establish a dialogue between the two countries regarding the project. Additionally, where a Border Master Plan has been established, the proposed project should be submitted to that entity for consideration and/or inclusion in the regional Border Master Plan.

Regulatory Cooperation on Rail Between the U.S. and Mexico:

As stated earlier, because Mexico's rail regulations are still in development, freight railroads operating in Mexico consistently operate in accordance with FRA's and AAR's standards. FRA has had limited interaction with the Mexican government in the past; however, recent developments discussed below have created new ability for cooperation.

In May 2015, FRA sent personnel to Mexico City to provide rail regulatory expertise and assistance to support the Mexican Transportation Ministry's efforts in establishing a new rail regulatory agency. FRA—along with the STB, Department of Justice, and Canadian rail regulators—presented before Mexican officials on the regulatory frameworks in the U.S. and Canada and the economics of the railroad industry.

Mexico's newly created Rail Transport Regulatory Agency, ARTF, began its operations in August 2016 to promote better safety and efficiency for services and operations in the national rail system. ARTF has been created as a separate entity within the Secretariat of Communications and Transport (SCT). ARTF has been mandated a) to regulate, promote, monitor, and verify the construction, operation, conservation, maintenance, interconnection in railways and railway infrastructure and the provision, the public service of rail transport, and its ancillary services, and b) to promote the interrelationship of multimodal railway terminals.²⁵

Per discussion with the FRA, ARTF's additional authorities include integrating the Mexican Railroad Register; promoting the expansion and use of the rail network; issuing, revalidating, suspending, and cancelling the federal railway license, in accordance with the applicable legal provisions; investigating railway casualties and, if applicable, integrating the commission for the investigation thereof; promoting the development of multimodal infrastructure, to increase accessibility to the transportation of cargo in the country; exercising powers regarding tariffs and prices in the public service of rail transport, its ancillary services, and other activities related to the railway service; and coordinating the National Safety Fund for Railroad Crossings in accordance with applicable legal provisions, among others.²⁶

²⁵ http://www.cofemer.gob.mx/noticia.aspx?not_id=2927.

²⁶ http://www.cofemer.gob.mx/noticia.aspx?not_id=2927.

FRA recently began communications with ARTF. Future interactions could include cooperation on regulatory practices to foster understanding and additional trilateral communication among FRA, ARTF, and TC on matters of mutual interest such as rail safety. Current bilateral interactions between FRA and TC could be expanded into trilateral structures to include ARTF/SCT, as appropriate. Modeling after the successful joint inspection program between FRA and TC, FRA could offer similar joint inspections in the U.S. to assist in training Mexican counterparts.

Interviewed sources see the value of replicating the development model of passenger rail operations and procedures with Canada for possible future passenger rail operations with Mexico; however, the existing challenges would make this a long-term goal. Issues of funding infrastructure coupled with potential dangers in border areas will require specific attention to allow for safe, secure movement of passengers across the southern border.

Conclusion

Continued cooperative efforts on rail transportation among the U.S., Canadian, and Mexican governments is paramount to ensuring the safe and efficient movement of people and goods throughout North America. Where possible, trilateral meetings to discuss rail safety standards and protocols should be encouraged to further expand harmonization efforts among all three countries—as all three can benefit from mutual understanding of each other’s regulatory environments.

FRA and TC have had long-standing working relationships with a common goal of rail safety. Based on interviews and meetings with subject matter experts, continued collaboration and regular meetings among FRA, TC, and Mexico’s ARTF and other SCT counterparts would benefit all parties, especially Mexico’s efforts in creating new rail regulations. If language becomes an obstacle for Mexican counterparts to understand U.S. or Canadian rail regulations, translation into Spanish would be recommended to ensure clear understanding.

Some items of cooperation in the near term could include expansion of joint-inspection programs to include Mexican counterparts on the U.S. side, technical exchanges on rail safety matters of mutual interest, and continued engagement in rail cooperative meetings (a short list of some of these groups is provided in Appendix I). Comments from industry indicated regular meetings between government officials and railroad industry representatives regarding border operations would be beneficial; such meetings could facilitate the exchange of information on technology, streamlining of processes where possible, and sharing of best practices.

Regarding the establishment of cross-border passenger rail service between the U.S. and Mexico, studies on the feasibility of such a rail system would be needed and would require strong interest and funding from both the U.S. and Mexico. Private funding of new transportation projects crossing the border should be encouraged to maximize potential economic benefits to both sides of the border from increased rail transportation of goods and/or people.

In conclusion, exchanging best practices along with developing relationships within a trilateral structure would help improve rail operations in the U.S., Canada, and Mexico. Continued communication and process improvements among government agencies and railroad entities will

help improve border crossing operations and provide an environment for the safe and efficient movement of people and goods.

Appendix I: Partial List of Government Sponsored U.S./Canada/Mexico Working Groups

Binational Bridges and Border Crossings Group (BBXG)

This group brings together U.S. and Mexican federal interagency and border state and municipal planning organizations to coordinate and discuss matters related to the operation and planning of existing and proposed international bridges, border crossings, and ports of entry, as well as exchange views on technical and policy information.

High Level Economic Dialogue (HLED)²⁷

The HLED, led at the cabinet level, is envisioned as a flexible platform intended to advance strategic economic and commercial priorities central to promoting mutual economic growth, job creation, and global competitiveness. It will build on, but not duplicate, a range of existing successful bilateral dialogues and working groups, and is envisioned as a mechanism to advance shared strategic priorities.

North American Transportation Statistics Working Group (NATS)

NATS is an online database containing comparable transportation-related data available from the U.S., Canada, and Mexico. The database covers subject areas ranging from demographics to domestic and international freight activity, domestic and international passenger travel, and transportation infrastructure. The NATS Online Database is co-sponsored by BTS, the U.S. Census Bureau, and the federal government-level transportation and statistical agencies of Canada and Mexico. The trilateral working group has been working to standardize data collection on freight and passenger rail activities to the best extent possible. An annual NATS Summit is held to ensure frameworks, goals, and deliverables are being met and data is added and refreshed.

Transportation Border Working Group (TBWG)²⁸

The mission of the TBWG is to facilitate the safe, secure, efficient, and environmentally responsible movement of people and goods across the Canada-U.S. border. The TBWG brings together multiple transportation and border agencies, and other organizations, to coordinate transportation planning, policy implementation, and the deployment of technology to enhance border infrastructure and operations.

U.S.-Canada Regulatory Cooperation Council (RCC)

RCC is an initiative between Canada and the U.S. with a mandate of working together "to promote economic growth, job creation, and benefits to our consumers and businesses through increased regulatory transparency and coordination" between the two countries. The 2016 RCC work plan was created to leverage respective expertise and lessons learned to harmonize the rail safety regimes to the greatest extent possible. Both the Federal Railroad Administration and Transport Canada continue to work on meeting deliverables to include attending each agency's rail safety advisory committees in consultation and development of key regulations.

²⁷ <http://trade.gov/hled/>.

²⁸ http://www.thetbwg.org/index_e.htm

U.S.-Mexico Joint Working Committee on Transportation Planning (JWC)²⁹

The JWC is a binational group whose primary focus is to cooperate on land transportation planning and facilitate efficient, safe, and economical cross-border transportation movements. The group is composed of transportation professionals from the Federal Highway Administration (FHWA) and the Mexican Secretariat of Communication and Transportation (SCT). In addition to FHWA and SCT, members of the JWC include representatives from the U.S. Department of State, the Mexican Secretariat of Foreign Relations (SRE), the four U.S. border state Departments of Transportation, and the six Mexican border states. The General Services Administration and U.S. Customs and Border Protection of the Department of Homeland Security also participate in JWC meetings.

²⁹ http://www.fhwa.dot.gov/planning/border_planning/us_mexico/.

Appendix II: List of Acronyms

Amtrak	National Passenger Railroad Corporation
ARTF	Agencia Reguladora del Transporte Ferroviario de México (Regulatory Agency for Rail Transport of Mexico)
BJRR	The Baja California Railroad
CBP	US Customs and Border Protection
CBSA	Canada Border Services Agency
CFR	US Code of Federal Regulations
CN	Canadian National
CP	Canadian Pacific
DOJ	US Department of Justice
DOS	US Department of State
DOT	US Department of Transportation
EBTC	Eastern Border Transportation Coalition
FRA	Federal Railroad Administration
GAO	Government Accountability Office
KCS	Kansas City Southern
KCSM	Kansas City Southern de México
MTQ	Ministry of Transport Quebec
NYSDOT	New York State Department of Transportation
POE	Port of Entry
RCC	Regulatory Cooperation Council
SAT	Service Tax Administration (Mexico)
SCT	Secretariat of Communications and Transport (Mexico)
STB	Surface Transportation Board
TIGER	Transportation Investment Generating Economic Recovery
TxDOT	Texas Department of Transportation
UP	Union Pacific
US	United States
VTrans	Vermont Agency for Transportation
WP&YR	White Pass and Yukon Route Railroad