Draft Evaluation of Alternatives

TECHNICAL MEMORANDUM NO. 2

YUMA COUNTY RAIL CORRIDOR STUDY

July 3, 2012

Submitted to

Yuma Metropolitan Planning Organization

Submitted by

PARSONS BRINCKERHOFF

Contents

Introduction 1
Background – Findings of Technical Memorandum #1 1
Types of Rail Service 2
Types of Potential Improvements 4
New Rail 4
Terminal Facilities 6
Intermodal 6
Transload Facilities 8
Industrial Parks 9
Central Arizona Commerce Park 9
Kingman Industrial Park 10
Usage of Rail by Current and Prospective Industries 11
Produce/Frozen Food 11
Other Agricultural Products 13
Manufacturing 14
Construction Materials 14
Logistics and Distribution 15
Alternatives to Improve Rail in Yuma County 16
Evaluation of Alternatives 17
Evaluation Criteria 17
Alternative #1 – Unit Refrigerated Train Service 17
Discussion 17
Scoring 19
Alternative #2 – Industrial Park in Wellton 19
Discussion 19
Scoring 19
Alternative #3 – Transload Railport 19
Discussion 19
Scoring 20

Alternative #4 – Distribution Hub at Wellton 20
Discussion 20
Scoring 23
Alternative #5 – Punta Colonet Connection 23
Discussion 23
Scoring 25
Alternative #6 – Industrial Park in San Luis with New Rail Line 25
Discussion 25
Scoring 26
Alternative #7 – New Rail Alignment to Connect to Ferromex 26
Discussion 26
Scoring 28
Conclusion and Next Steps 28

Introduction

The goal of the Yuma County Rail Corridor Study is to recommend ways to improve freight rail service access within the Yuma County region and to identify rail infrastructure improvements that would support freight mobility improvements and economic development within the region. The project also investigates whether regional rail initiatives could provide an efficient means of improving freight mobility for Yuma County. This could involve rail connections to adjacent areas in Mexico or California.

This is the second of four technical memoranda that for this study as follows:

- Tech Memo 1: Yuma County Economic and Freight Profile
- Tech Memo 2: Evaluation of Rail Alternatives
- Tech Memo 3: Implementation Plan for Preferred Alternative
- Tech Memo 4: Economic Impact

The purpose of this technical memorandum is to present potential alternatives that could address the needs of Yuma's current and prospective industries. Industries that could benefit from improved rail infrastructure were identified in Tech Memo #1. This technical memorandum will then evaluate alternatives and provide one or multiple preferred alternatives. The evaluation of alternatives is performed at a "sketch level" in that this technical memorandum will not present detailed cost development, nor full benefit/cost analyses, nor full economic impact analyses for each alternative. Rather, general "ball park" ranges of investment requirements will be considered, as well as general assessments of likely benefits, impacts, barriers to implementation. A more detailed consideration of the preferred alternative(s) will be presented in a subsequent technical memorandum.

Background – Findings of Technical Memorandum #1

Technical Memorandum #1 considered the industries that are most prominent in the Yuma County economy, industries that are targeted for economic development initiatives, industries that generate significant quantities of traffic that might divert to rail. For each of these industries, Technical Memorandum #1 considered the likely usage of rail. Specific areas that appeared to warrant investigation as identified in Technical Memorandum #1 are as follows:

- Rail improvements that benefit the transportation of Yuma County produce
- Rail improvements that benefit the transportation of other Yuma County agricultural products
- Rail improvements that benefit the transportation of Yuma County food products
- Rail improvements that will benefit future economic development initiatives, particularly in food manufacturing and industrial manufacturing
- Rail improvements that improve transportation to/from Phoenix
- Rail improvements that benefit the transportation of construction materials, such as gravel, non-metallic minerals, etc.
- Rail improvements that benefit Yuma's ability to serve as a logistics and distribution hub

In addition, because this project has a subfocus on building a rail line to Mexico, this technical memorandum will specifically evaluate alternatives for building a rail line to Mexico. Among the alternatives to be considered will be Yuma County's role if Punta Colonet is constructed and a land bridge rail line is constructed into Yuma County.

Types of Rail Service

Railroad transportation service consists of several distinct types of service that differ widely in the level of commitment from the railroad required, as well as the cost and speed of service. The primary types of rail service are:

- Carload
- Unit train
- Intermodal

Carload rail is the traditional service that was once the primary freight service that railroads provided. Individual or groups of railcars are be gathered by local trains, and are then brought to classification yards. Next they are sorted into long distance trains at classifications yards. Carloads may be sorted into multiple trains during their journey. Trains consisting of cars with multiple origins/destinations are referred to as "manifest trains" (**Figure 1).**

Figure 1: Manifest Train

Source: Ben Lee

As described in Technical Memorandum #1, this type of service is more expensive on a per ton-mile basis than shipping complete trainloads of products from origin to destination due to the expense of sorting cars into and out of trains.

Another type of service is unit train service, whereby an entire trainload of product is shipped in a single train from one origin to one destination. This type of service is often used for as coal, grain, automotive (**Figure 2)**.

Figure 2: Unit Coal Train

Source: Wikipedia

The final type of rail service is intermodal **(Figure 3)**, which involves the movement of containers or trailers on flatcars/well cars. It is the fastest growing freight rail service and competes most directly with truck. Intermodal containers/trailers are generally carried in trainload quantities from one origin to one destination. Trucks carry the containers/trailers to/from their final origins and destinations. Rail intermodal is usually the fastest service and is to some extent the most resource-intensive. Railroads must commit to filling trainloads of intermodal boxes and to adhere to schedules. The terminals are expensive to build and operate.

Figure 3: Intermodal Rail

Source: William Grimes

One of the more comprehensive studies to compare transit times and reliability of rail services was conducted in 1995.[1] Although the data is about two decades old, the study's comparisons are likely to be valid today. The study used the Association of American Railroads' Car Cycle Analysis System (CCAS) for 1990 to estimate various transit time and reliability statistics. The study found that the typical boxcar in carload service required an average of 7.16 days to travel an average of 788.1 miles, so about 110 miles per day, including dwell time at rail yards. Covered hoppers carrying grain in unit train service had an average trip length of 831 miles with an average transit time of 5.25 days, so about 158 miles per day, including time at intermediate rail yards. The arrival times for unit train service were somewhat more consistent with a transit time standard deviation of 2.04 days compared to 2.62 days for carload service. The study found that intermodal rail transit times were far lower than those for other rail services, requiring on average 2.52 days. The standard deviation of transit times for intermodal was 0.50 days. Differences in total cycle time, including not just the loaded transit, but time for loading, unloading, loaded transit, empty transit were more striking. The average boxcar had a cycle time from loading to empty arrival back at origin of about 27 days, whereas covered hoppers in unit train service would cycle in 15 days, and intermodal containers would cycle in about six days.

This analysis also points to some limitations of rail service. For boxcar service, the average shipment requires an entire week's transit time to cover the same distance that a truck could cover one or two days. Furthermore, while a truck could promise delivery within a window of several hours, the delivery window for boxcar rail extends for days. For the shipper who requires just-in-time delivery, rail may not be an option. The relative transportation costs between rail and truck as discussed in Technical Memorandum #1 will need to be highly favorable to rail for a shipper to use carload rail service. Generally, these will be shipments that do not require rapid, reliable service, shipments delivered long distances, shipments that would be costly to ship by truck (e.g. grain, coal), or shipments that can be delivered in trainload quantities.

Types of Potential Improvements

It is also useful to consider some of the general types of improvements that could be made to the rail network in Yuma County.

New Rail

New railroad tracks could consist of a new rail alignment, a rail spur or siding, new tracks within a rail terminal, or a new rail yard. The determination of whether a rail line is a spur or a new alignment has ramifications for the environmental process that will be required prior to constructing the line. The U.S. Surface Transportation Board (STB) has jurisdiction over the construction of a new "railroad line," which the STB defines as trackage that extends substantially into new territory. By contrast the STB does not have jurisdiction over the construction of rail spurs "commonly constructed either to improve the facilities required by shippers already served by the carrier or to supply the facilities to others, who

[1] Kwon, O.K., C.D. Martland, J.M. Sussman and P. Little (1995), "Origin-to-Destination Trip Times and Reliability of Rail Freight Services in North American Railroads, *Transportation Research Record 1489*, pp. 1 – 8.

being within the same territory and similarly situated are entitled to like service from the carrier."[2] Construction of a "rail line" is subject to the STB's environmental process under the National Environmental Policy Act (NEPA) while construction of a spur is not. A new rail alignment to Mexico would likely require a full NEPA process.

As discussed in Technical Memorandum #1, any rail spur or line built within Yuma County would need to connect with the Union Pacific Railroad (UP), and the connection would be subject to UP's requirements. Because the UP Sunset Route is the railroad equivalent of an interstate highway, any connection directly to the Sunset Route would require substantial running track to serve as ramps by which trains could enter or exit the Sunset Route at speed. A connection to the UP Wellton Branch or one of the existing railroad spurs may be subject to lower requirements.

The Federal Railroad Administration requires that rail lines be subject to varying levels of maintenance and inspection depending upon the speed of trains that will cross over that line **(Figure 4)**.

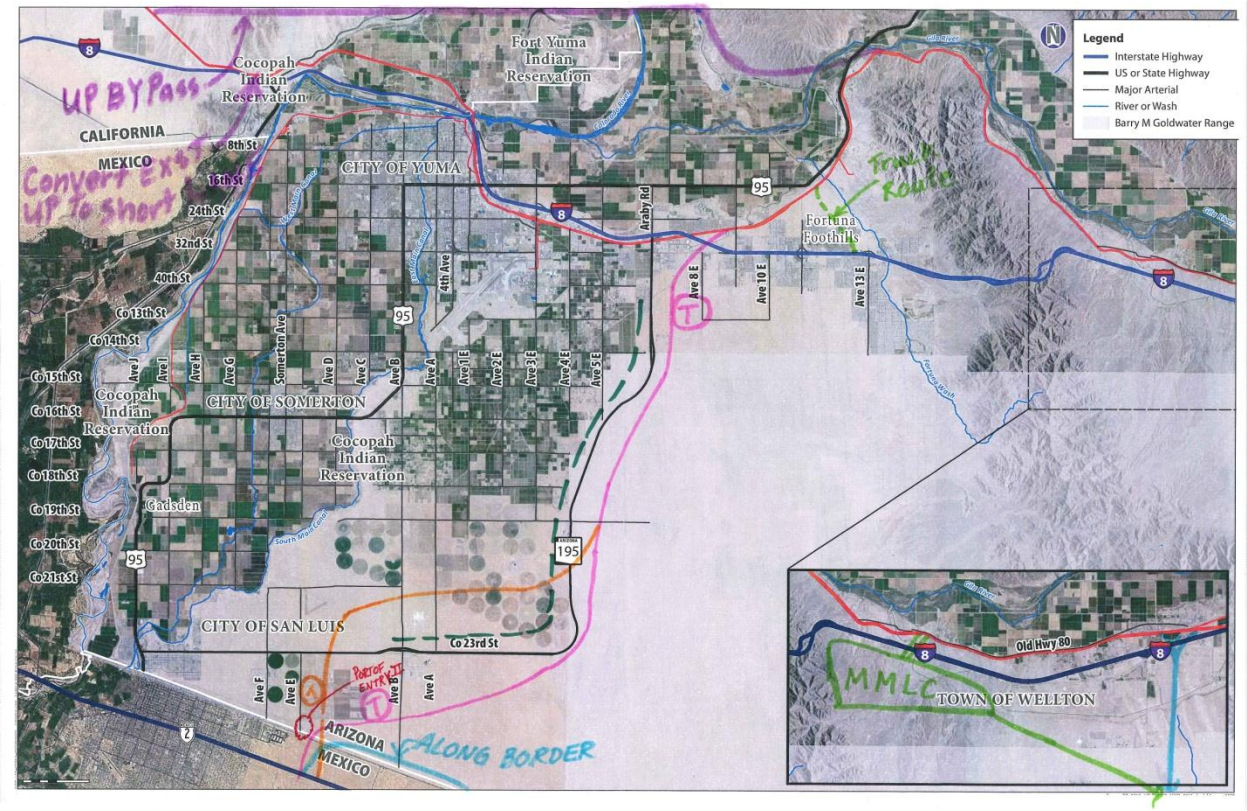
Figure 4: FRA Track Classification and Typical Uses

FRA Class	Maximum Speeds	Typical Uses
Excepted	10 mph freight, no passenger	Track in poor state of repair
1	10 mph freight, 15 mph passenger	Yards, branch lines, industrial spurs
2	25 mph freight, 30 mph passenger	Branch lines, secondary mainlines
3	40 mph freight, 60 mph passenger	Regional railroads, Class I secondary mainlines
4	60 mph freight, 80 mph passenger	Mainline track used for long haul freight, passenger
5	80 mph freight, 90 mph passenger	High speed mainline track
6 - 9	High speed passenger rail	Amtrak Northeast Corridor, high speed passenger

As part of the outreach process for this project, stakeholders within Yuma County were asked to recommend potential rail alignments at public meetings that would improve rail transportation in the Yuma region. Participants were not influenced the project team in regards to what might or might not be feasible. The most commonly proposed rail alignment was to the Mexican border near the San Luis II Port of Entry along the Area Service Highway (SR195) **(Figure 5)**. Another proposed alignment was to create a bypass for the UP Sunset route north of the existing alignment through Yuma. The existing alignment would then be converted to a short line railroad which could provide local switching for Yuma businesses.

[2] U.S. Surface Transportation Board decision in Finance Docket 35181, *Indiana Rail Road – Petition for Declaratory Order*, April 15, 2009.

Figure 5: Proposed Rail Alignments from Public Meetings



Terminal Facilities

Yuma County would derive only limited economic benefit from rail improvements that improve the performance of trains that pass through Yuma County without stopping. To benefit the county, rail improvements would logically be associated with a terminal facility by which cargo can be loaded onto or off of railcars. The type of terminal facility would depend upon the nature of the cargo handled. Terminal facilities that would potentially benefit a range of shippers would fall into a number of different categories.

Intermodal

Intermodal terminals handle either containerized or trailer truck/rail transfers. Intermodal terminals have garnered significant interest among communities across the United States as drivers of economic development. Intermodal facilities are often accompanied by logistics and distribution developments. Intermodal ramps generally constitute large investments. **Figure 6** displays the capacity, investment, and acreage of a sampling of intermodal terminals that were recently completed, planned, or under construction. These results suggest that even small intermodal terminals typically cost somewhere in excess of $20 to $30 million to construct.

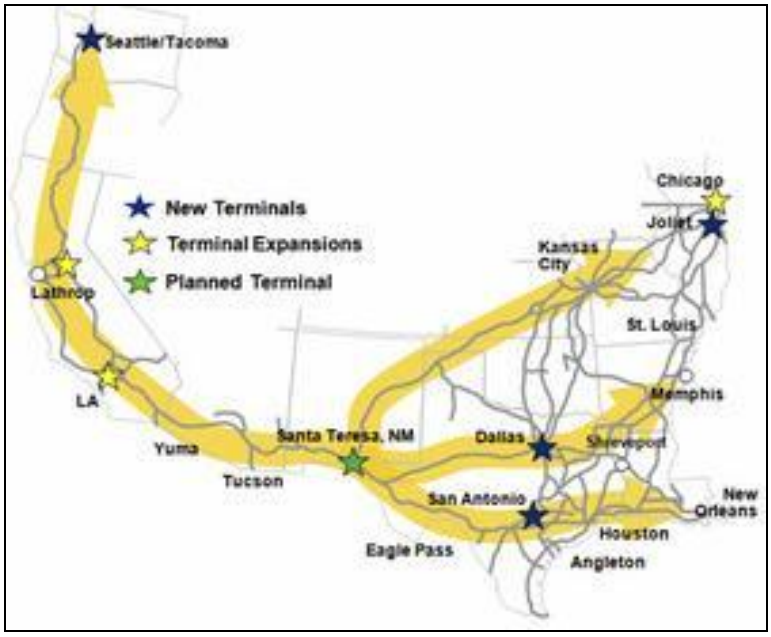
Figure 6: Summary of Intermodal Facilities Planned, Recently Constructed or Under Construction

Facility	Carrier	Acreage	Lift Capacity	Investment
Prichard, WV	NS	100	30,000 (est. usage)	$35 million
Greencastle, PA	NS	200	85,000	$95 million
Roanoke, VA	NS	65+	30,000 (est. usage)	$35.5 million
San Antonio, TX	UP	300	180,000, expandable to 250,000	$100 million
Tacoma, WA (TacSim)	UP	40	150,000	

Intermodal terminals are not scalable. They generally require a minimum volume of freight, measured in container lifts, to be viable. A "lift" refers to the lifting of a container on or off of a train. Intermodal terminals are subject to economies of scale, so that terminals which handle a larger number of containers typically have a lower operating cost per container. If container volumes become too low, the fixed cost of the terminal per container becomes prohibitively high. Intermodal terminals must also generate sufficient volume of traffic to justify trainloads of freight. While some intermodal terminals such as Prichard, WV and Roanoke, VA are forecasted to handle less than trainload volumes initially, western rail carriers such as UP generally require that new facilities generate adequate volumes to fill entire trains. The minimum threshold will vary by carrier and specific circumstances. However, if one were to assume that a train carries 140 containers, the minimum number of trains per week is two in each direction, and the terminal operates 52 weeks per year, the minimum number of containers would be 140 x 2 x2 x 52 = 29,120 containers per year.

Intermodal terminals are best thought of as portals to an intermodal service. But it is the railroad and its customers that decide whether the terminal is added to the carrier's network of intermodal services. The carrier must agree to serve a terminal. UP's intermodal expansion plans have generally focused on much larger facilities than would be feasible in Yuma County. **Figure 7** displays UP's intermodal expansion plans. Of the new or planned terminals, the smallest is the Tacoma South Intermodal Terminal (TacSim) which has a capacity of 150,000 lifts. Twenty-four intermodal facilities are located within the 23 states where UP operates.

Figure 7: UP Intermodal Expansions



Source: UPRR

Transload Facilities

Transload refers to a broad array of truck/rail transfer facilities. Similar to intermodal terminals, transload facilities allow shippers to use rail without having direct rail service at their facilities. Trucks carry product to and from the transload facility, while rail provides the long distance, line haul transportation. Transload is oriented toward carload rail service, rather than unit train or intermodal. Several types of transload operations include:

- Bulk. These facilities are used for transferring fertilizers, plastics, chemicals, petroleum, ethanol, clays, aggregates, cement, minerals, agricultural, and other bulk products. Most items move in hopper or tank cars **(Figure 8)**.
- Warehouse. Paper, consumer products, food, and beverage is stored and/or transferred within a warehouse. For food and other perishable commodities, warehouses can be refrigerated or freezer.
- Dimensional. Lumber, panel, structural steel, machinery is transferred either within a covered area or in the open. These items move in flatcars, gondolas, or boxcars.

A wide range of equipment is used to load cars, including,

- Various vehicles, such as backhoes, excavators, front end loaders, forklifts, platform loaders, etc.
- Bulk transfer equipments such as air compressors, augers, pneumatic equipment, cranes, etc.
- Ramps, including end ramps, side ramps, portable ramps, etc.

Figure 8: Bulk Transload

Source: Distribution Unlimited

The study team spoke with an economic development representative from Southeast Kentucky Economic Development, which opened a carload rail park in 2007, the Somerset Rail Park. The Somerset Rail Park is a 34 acre facility with warehousing space and six tracks capable of handling up to 72 rail cars. It is a transload facility. This individual commented that to be considered successful, a rail park such as his needs to handle at least 300 to 500 carloads per year. So the threshold level of traffic for the facility to be successful is much lower than that required for an intermodal terminal. Prior to developing a rail park, this individual suggests that shippers need to be identified who would derive significant cost savings from using the park or that must ship by rail. It is also helpful to have available adjacent property for companies that could use the rail park to locate and drive demand for the rail service.

Industrial Parks

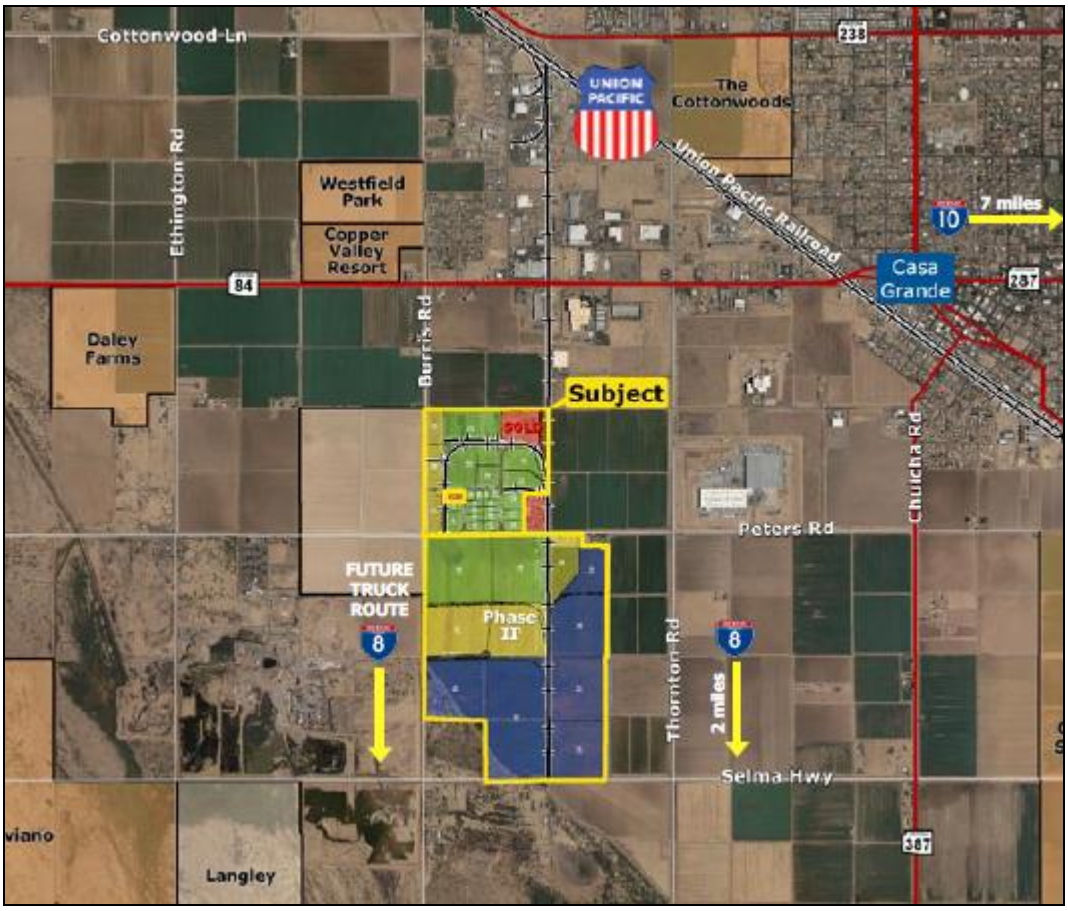
Rail-served industrial parks allow shippers to share transportation infrastructure. Rail and roadways into the park are shared by the park's shippers. Unlike transload, tenants in rail parks are directly rail-served, although rail parks sometimes include transload facilities as well. Often industrial parks are served by small, switching railroads which can move railcars around the park at less expense than if a Class I railroad were providing the service. The two primary examples of rail-served industrial parks in Arizona are the Central Arizona Commerce Park in Casa Grande and the Kingman Arizona Industrial Park.

Central Arizona Commerce Park

The Central Arizona Commerce Park is relatively new and has not been fully developed **(Figure 9)**. It is privately owned by Jackob Andersen. It consists of 580 acres that are zoned for industrial uses. Rail, roadway, and utilities are available for prospective tenants. It is one of the few locations within Arizona that have signed an industrial trackage agreement with the Union Pacific Railroad, an arrangement by which UP agrees to provide service to an industrial park. Rail service within the park is provided by the San Pedro & Southwestern (SPSR), a subsidiary of ARG Trans. One of the park's first tenants is Casa

Grande Valley Newspapers, which receives newsprint by boxcar. The park received a $190,000 grant through the Arizona Commerce Authority from the federal American Recovery Reinvestment Act grant program. The park was established due to its strategic location between Phoenix and Tucson. The park is located in close proximity to I-8 and I-10. The rail line into the park connects to the UP Sunset Route.

Figure 9: Central Arizona Commerce Park



Source: Pinal County Economic Development

Kingman Industrial Park

Kingman Industrial Park has been in existence for more than 30 years **(Figure 10)**. As its name suggests, the Kingman Industrial Park is located in Kingman, AZ. It is owned by the Kingman Airport Authority and is located on a former military base. The park consists of 1,100 acres, of which over 250 acres are available for further development. The park is located near to U.S. 66 (the famous Route 66), I-40, U.S. 93. The rail line into the park connects to the BNSF mainline, the "Transcon." The park recently signed an agreement with Patriot Rail Corp. to provide local switching. Previously, BNSF had provided service within the park. The park been obligated to pay an average of $50,000 per year for maintenance of the five mile industrial lead to the park. Under the agreement with Patriot Rail, the carrier will be responsible for maintaining the rail line.

According to documents associated with the solicitation for a rail operator within the park, BNSF handled on average 1,267 carloads per year at the park between 2008 and 2011. About 20 percent of the park's tenants use rail service. Commodities handled include inbound plastic pellets for a variety of manufacturing companies. Most of these businesses manufacture basic building products, such as pipes, wiring, etc. Several shippers receive lumber, including one manufacturer of trusses, and a lumber distributer. Other commodities shipped by rail include silica, sealants, steel wire, industrial gas, steel, diesel fuel, and glass. According to an individual familiar with the park, most commodities shipped by rail originate in Texas, the Midwest, or the Northwest (lumber). The primary market for most of the park's tenants is California, and secondarily Las Vegas. Rail is used to transport inbound raw materials and seldom used for outbound finished products. Rail service is not the park's top selling point, but is important to some tenants. The park caters to companies that would like to distribute to California but do not want to locate in California. The park markets itself to companies that are establishing a new presence in the West and would like to serve California.

Figure 10: Kingman Industrial Park Rail Layout

Kingman Airport Authority

Usage of Rail by Current and Prospective Industries

In identifying potential rail measures for Yuma County, it is useful to consider the type of rail services and facilities used by current and prospective industries in Yuma County.

Produce/Frozen Food

As pointed out in Technical Memorandum #1, about 19,720 carloads of fresh vegetables were shipped nationwide by rail in 2010. To put this into perspective, it is equivalent to about 2.5 percent of the

carloads of corn that were shipped by rail nationally. Rail shipments of other types of produce are less common. The same year about 1.5 million tons of frozen vegetables nationwide were shipped by rail or one percent of food products shipped by rail.

In years past, rail had a larger share of produce shipments. Sunkist is a good example. Sunkist Growers Inc., a high-volume shipper of perishable citrus products, once moved 70 percent of its traffic by rail in the early 1970s. By 2000, Sunkist shipped 90 percent of its cargo by truck, only 1 percent in rail carloads and 9 percent intermodally. Rail has a low market share for produce because these products are perishable and rail service is relatively slow. In order to deliver products to market fresh, shippers tend to use truck rather than rail. The study team spoke with a representative of the Western Growers Association who generally had a low opinion of rail's prospects for shipping produce. That said, the study team spoke with a representative from a citrus packing company who expressed significant interest in rail improvements and a rail facility in Yuma. The company currently delivers citrus products to Los Angeles where it is loaded onto rail. It would save the company money to load product directly onto rail at Yuma rather than shipping by truck first. It is uncertain whether this company ships citrus by carload, unit train, or intermodal.

There recently have been new and innovative developments in rail shipping of produce and refrigerated/frozen food products that have made rail a more compelling alternative in certain circumstances. As mentioned previously, rail service is much faster if trains can move from a single origin to a single destination in a unit train. A company called RailEx **(Figure 11)** provides a service whereby produce and other refrigerated products are shipped in 55 car unit trains of refrigerated boxcars from Delano, CA and Wallula, WA to Rotterdam, NY, near Schenectady. The rail transit time is less than five days. The company can provide door-to-door service. Shipments are sorted, consolidated, and distributed at RailEx's refrigerated facilities. The company draws from a 250 mile catchment area around Delano and Wallula for produce and food products. The company distributes within 250 mile catchment area of Rotterdam, probably the most densely populated consumer market in the nation. The company seeks backhaul movements that travel east to west, but the predominant focus of the service is bringing western produce and food products to the East Coast.

RailEx currently serves Yuma by truck. A significant number of trucks per week carry Yuma products to its facility in Delano, CA. These products are then shipped by rail to Rotterdam for furtherance to consumption points on the East Coast. But RailEx generally does not serve Yuma's main agricultural commodity, highly perishable winter crops such as leafy greens. According to a Yuma grower, these crops should be on retail shelves within seven days of harvest. While RailEx service is fast, it is not currently that fast. However, RailEx is considering a new service by which shipments would be loaded into trailers which would then be either loaded onto trains or, if bimodal equipment is used, the trailers would become part of the train. This would save a day, since shipments would no longer need to be unloaded from trucks and reloaded onto trains. With the time savings, RailEx could be a feasible alternative.

Figure 11: RailEx Loading Operation

Source: RailEx Website

Another company called RRLX Cold Train provides a service along the same concept **(Figure 12)**. But instead of refrigerated boxcars, RRLX ships refrigerated intermodal containers. The service operates between Quincy, WA and Chicago, IL.

Figure 12: RRLX Cold Train

Source: RRLX Cold Train Website

Other Agricultural Products

As mentioned in Technical Memorandum #1, most current rail traffic in Yuma County consists of inbound shipments of grain to the McElhaney Cattle Company feedlots in Wellton. Because the company already owns rail assets, it would be somewhat unlikely to use publicly available rail terminals, such as transload facilities, etc. By value of harvested crops, the main growing season in Yuma County is

between November and April. These crops mostly consist of leafy greens and other vegetables. On the off season, other crops are grown, such as grains and melons. But these are a lower source of income to growers in the area. Those companies that market and ship grain within the Yuma region generally own their own facilities and would be unlikely to use a publicly available facility such as a transload terminal. The study team spoke with a major grain shipper, who indicated that transferring grain from his location to another facility would add cost and render his grain uncompetitive. A rail transload facility could save local grain producers money if it allowed them to ship in unit train quantities, but it is uncertain if the region generates enough grain volume to make such a service feasible. Growers of agricultural products may use public transload facilities.

One grain marketer did indicate that an intermodal rail service would save the company money. Currently, the company loads trailers of grain that are then trucked to Los Angeles for export. It would be cheaper for the company to rail grain containers from Yuma to Los Angeles. UP Railroad at one point considered establishing a container stuffing facility in Yuma County to load otherwise empty containers returning to Asia with grain to export through the Port of Los Angeles/Long Beach.

Manufacturing

As mentioned in Technical Memorandum #1, the applicability of rail to manufacturing depends upon what is being manufactured. The study team spoke with a Yuma County manufacturer of paper products who currently ships paper rolls. A representative indicated that he would likely use a transload facility if it were available in Yuma County. He also has car availability problems. Railcars pass his facility to California. There is no pool of railcars for him to draw upon nearby. If manufacturers of plastic products or manufacturers of steel products were to locate in Yuma County, similar to the case with Kingman, AZ, shippers may prefer to bring in plastic pellets and steel by rail. These shippers could benefit from a transload facility or could benefit from a location in a rail-served industrial park.

Construction Materials

The study team spoke with a representative from a company that manufactures building materials such as cement and concrete. His responses were likely fairly representative of the industry. The company occasionally uses rail. Most of the aggregate used in the company's products originates at a nearby source, only 15 miles away, and would never be shipped by rail. Sometimes the company requires specialty aggregate which must be shipped from more distant origins. These shipments are brought in by rail. The company would use more rail if the service were more reliable, but the company has had bad experiences with rail in the past. There is a possibility of using rail for inbound shipments of fly ash, but the service would need to be reliable. There is also the possibility of shipping aggregates to areas that do not have ready sources of aggregate, but the transportation cost would need to be cheaper than other alternatives. The company was enthusiastic about the possibility of a transload facility, since it would represent a dedicated location where the company could receive and deliver shipments by rail.

Lumber products could potentially be shipped into Yuma County by rail.

Logistics and Distribution

One of the target industries for economic development in Yuma County is logistics and distribution. Most consumer products that are shipped by rail are shipped by intermodal service. There are a number of high profile logistics hubs around the country where truck/rail intermodal facilities are combined with logistics/distribution developments. In some cases, truck/rail intermodal service is combined with good highway connections and air cargo, to provide tenants of logistics parks with a full suite of transportation alternatives. These frequently serve as inland ports, whereby imported products are brought inland by rail, truck or air cargo. Several examples of these types of developments are,

- Alliance Texas is one of the largest and most successful master planned developments in the country. It is located 15 miles west of the Dallas/Fort Worth International Airport. It covers 17,000 acres. It is home to 265 companies which have built 32 million square feet, created 30,000 jobs, and have generated $41 billion in economic impact to the North Central Texas economy. Transportation is a major selling point for the development, including good highway connections, BNSF's Alliance Intermodal Center and the Alliance Global Logistics Hub, and the Fort Worth Alliance Airport.
- Norfolk Southern Corporation (NS) recently opened the Rickenbacker Intermodal Terminal near Columbus, OH. The terminal in its initial phase occupies approximately 175 acres and has the capacity to handle more than 250,000 containers and trailers annually. NS expects 20,000 jobs to be created over the next 30 years as a result of the new intermodal facility. The new terminal is part of the Rickenbacker Inland Port, which also includes the cargo focused Rickenbacker International Airport and the Rickenbacker Global Logistics Park, managed by the Columbus Regional Airport Authority. The Rickenbacker Global Logistics Park consists of over 40 million square feet of space, and is expandable by another 29 million square feet.
- The Joliet Arsenal Development Authority (JADA) was established to promote the redevelopment of 3,000 acres that were formerly part of a military base near Joliet, IL. The key part of the redevelopment is a complex of over 2,000 acres developed by CenterPoint Properties, a large industrial real estate developer. The CenterPoint Intermodal Center (CIC) includes a Burlington Northern Santa Fe (BNSF) transportation complex named Logistics Park Chicago. Also within the development is the Union Pacific-Joliet Intermodal Terminal. The development includes 6,500 acres oriented toward industrial and distribution development.

While these logistics parks represent impressive economic development initiatives, there are major questions as to how transferrable these types of initiatives would be to Yuma County. For example, both Alliance and Joliet are situated within immense metropolitan areas that already function as regional distribution hubs for the nation. Columbus differs, acting as a key jumping off point for the Heartland Corridor, by which full trainloads of imported goods arriving in Virginia ports are distributed throughout the dense Midwestern consumer and industrial markets. None of these market conditions is duplicated in Yuma County.

Alternatives to Improve Rail in Yuma County

Given the findings of Technical Memorandum #1, rail usage by current and prospective industries in Yuma County, typical rail-served publicly available terminals, and this study's requirement to consider rail options to Mexico, several alternatives logically follow:

1. Unit refrigerated train service. Because of the importance of produce and food products to the Yuma Region's economy and the potential of unit train services such as RailEx and RRLX Cold Train to serve as growth business models for shipping produce by rail, this would be a logical alternative to consider for Yuma County. According to local representatives, some discussions have already occurred between local farmers and transportation providers about the possibility of such a service.
2. Rail served industrial park in Wellton. Industrial parks have become a compelling mechanism by which shippers can share the costs of infrastructure, including roadway, rail, and utilities. Due to the relative lack of developable land in Yuma County, two logical locations for such a development would be large enough for such a new business park. One is in Wellton and would be relatively close to existing rail infrastructure, so no more than a short spur track would need to be built.
3. Transload railport facility. This facility would include "team tracks" by which trucks could drive next to railroad cars for truck/rail tranfer. It would also include open air and warehouse storage space. Some warehouse space could be refrigerated while other space would not. Because these types of facilities do not require a large area, this facility could be situated at a range of potential locations. One area that has been mentioned is a 700 acre parcel that UP previously used as a rail yard between Redondo Drive and Arizona Avenue.
4. Distribution hub in Wellton. At the location in Wellton discussed in Alternative #2 would be built a logistics hub centered on an intermodal terminal. In addition to the intermodal terminal would be distribution and other development. The focus of the park would be on providing retail distribution services to Southern California and other parts of Arizona.
5. Punta Colonet is built. A rail connection is built, and Yuma County attempts to position itself economically.
6. Rail served industrial park with connecting rail line in San Luis. The other potential location for a rail served industrial park is a 1,000 acre area near the border at San Luis. This would require the construction of a rail line to San Luis. A rail line to the border could also support industrial development in San Luis south of the border and could serve as a first phase in building a rail line to Mexico.
7. New rail alignment to connection between the Sunset Route and the Ferromex Calexico subdivision which crosses the border at a location near to the current San Luis II Port of Entry.
8. No build

Evaluation of Alternatives

Evaluation Criteria

Each alternative will be evaluated in the technical memorandum based upon the following criteria:

1. Risks of failure. This criterion considers alternatives that are only feasible under certain conditions, and whether there is a risk that those conditions may never materialize or may disappear.
2. Likely benefits to Yuma County. This criterion considers whether current Yuma County industries would be impacted by the project, whether much of the impact would be located in Yuma County or outside of Yuma County, whether the industry currently exists in Yuma County or is speculative.
3. Size of investment required. The primary focus of this assessment will be on the required public sector investment.
4. Negative impacts, such as the necessity to acquire properties.
5. Obstacles to successful implementation, likelihood of gaining necessary agreements. By their nature, rail projects require the agreement of private companies, starting with rail carriers themselves. In many cases, a private investor would be required to make the project a reality.

Each criterion will be scored based upon High, Medium or Low where High is favorable and Low is Unfavorable.

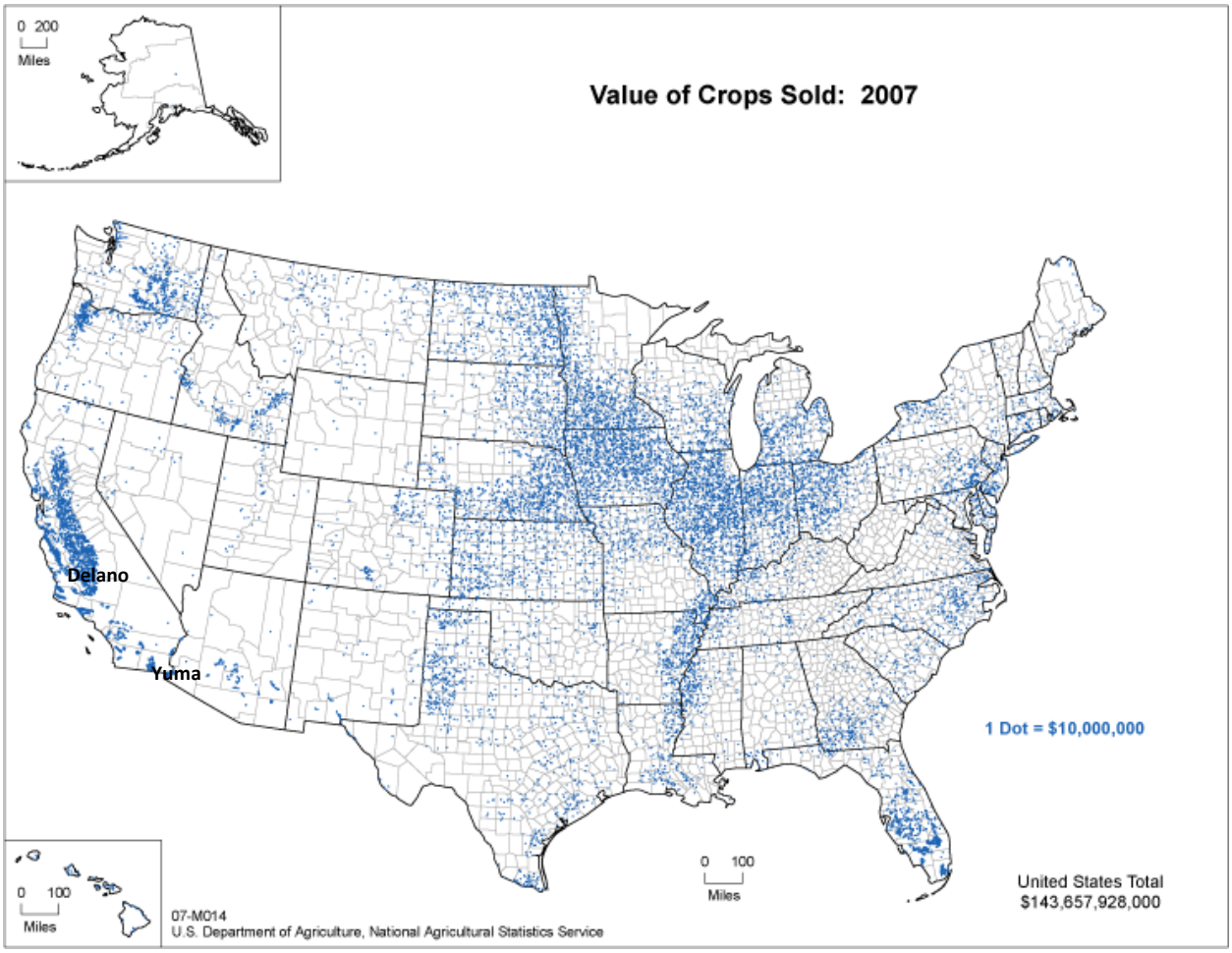
Alternative #1 – Unit Refrigerated Train Service

Discussion

TRANSEARCH data obtained by the Yuma Metropolitan Planning Organization suggests that outbound freight from Yuma County which might use a refrigerated rail service totaled about 114,000 truckloads in 2009. Of this, the Northeast Region was the largest single consumer market outside of Southern California and Arizona. Total truckloads of perishable freight from Yuma County to the Northeast were about 15,000 in 2009. Assuming that each railcar holds the equivalent of three truckloads of produce and there are 55 cars per train, this would fill only 45 trains in a year if rail captured half of the market.

The study team spoke with a person familiar with RailEx who expressed concern about the seasonality of Yuma County produce if one were to attempt to replicate the RailEx model in Yuma County. Because Yuma County's main harvest is between November and April, trains could be filled during this time, but it may be difficult to fill trains at other times of the year. Because of its location in the Central Valley of California, RailEx draws from a range of agricultural crops that have different seasons. The issue of seasonality is less of a problem in Delano, CA than it would be for Yuma County. Yuma County is not as centrally located among agricultural producing regions (**Figure 13)**.

Figure 13: Location of Delano, CA and Yuma, AZ Relative to Crop Production Areas



The initiation of a new unit train refrigerated service in Yuma County would not necessarily require any major new rail alignment. However, the terminal could be costly. If the cost were similar to the RailEx facility in Walllula, WA, the total cost would be around $34 million with around $8 million in public sector funding. The Cold Train service received about $2 million in public sector funding, although the infrastructure used by the service at the Port of Quincy had previously received $5.7 million in public sector funding.

Establishing a refrigerated unit train service would require the agreement of numerous parties. RailEx, for example, took five years to obtain a service agreement with the UP Railroad. It may be a difficult and complicated process, although not unsurmountable. A private entrepreneur would need to spearhead the effort.

The largest impediment to establishing a terminal to ship unit trains of refrigerated products from Yuma County will be the ability to generate adequate volumes during the peak growing season. The service would need to operate every day if not nearly every day. Shippers will not wait days for trains to leave if they require a seven day transit from field to grocery shelf. If the service operated seven days per week during peak growing season with 55 car trains, and an equivalent of 3 truckloads of produce per train,

the number of diverted trucks would need to be 7 days per week x 26 weeks per year x 55 cars per train x 3 truckload per car = 30,030 diverted truckloads. As mentioned earlier, total Yuma County deliveries to the largest single market, the Northeast, over the entire year is equivalent to about 15,000 truckloads. Yuma County shipments could be combined with shipments from Imperial County, CA and Mexico, but it would be difficult to generate enough traffic for daily service.

On the plus side, a unit train refrigerated service would serve an important and established industry within Yuma. It would not bring a new industry to the region but would boost the competitiveness of an existing industry. The project would likely have relatively few negative impacts.

Scoring

Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
High	High	Medium	Low	Medium

Alternative #2 – Industrial Park in Wellton

Discussion

In this alternative, rail would only be one of a series of infrastructure improvements to support an industrial park. Roadway improvements, utility services, zoning would also be important components. The experience of Kingman Industrial Park is encouraging, since Kingman's location is analogous to that of Yuma County. If the prime selling point of Kingman is the ability to serve the California market without being located in California, this could also be a marketing point for Yuma County.

The initial rail investment for building a spur to an industrial park in Wellton would not be excessive. Much of the cost could potentially be covered by a private investor. If successful, the park could have a significant benefit to the local area. In terms of rail infrastructure, building an industrial park in Wellton would face relatively few obstacles. However, the success of the project would likely depend upon a private investor being willing to purchase and take responsibility for marketing the property. In discussions, the UP Railroad has been supportive of the concept of a rail served industrial park.

Scoring

Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
Medium	High	Medium	Low	Low

Alternative #3 – Transload Railport

Discussion

Interviews with shippers suggest that a transload facility in Yuma County would not have an enormous usage by any one shipper, but that a range of shippers could use the facility, shipping a carload here and a carload there. Based upon TRANSEARCH data obtained for this study, if a transload facility were to induce two percent of truckloads to shift to rail for the following commodities:

- Gravel and Sand

- Broken Stone and Rip Rap
- Industrial Organic Chemicals
- Petroleum Refining Products
- Miscellaneous Plastic Products
- Lumber or Dimensional Products

If one were to assume that the average railcar holds the equivalent of four truckloads of freight, the total carload volume would be 575 based upon 2009 traffic levels. At 575 carloads, a transload facility would be feasible.

It would probably be most prudent to phase the construction of a transload facility. At first the facility would consist solely of team tracks where a truck could drive next to a railcar and transfer dry bulk, wet bulk, or dimensional cargo between truck and rail. A private company would operate the facility and provide lifting and transfer equipment. If the terminal is successful, additional features could be added, such as truck scales, warehousing, refrigerated warehousing, etc. The initial investment would be low, perhaps less than $2 million. Because the terminal would primarily rely on existing rail infrastructure, the disruption to the community would not be very high. This project would provide local shippers with transportation options that they did not have before and could save shippers money by making rail service more accessible. But it would not be a major economic driver. It would be unlikely to attract new employers to Yuma County.

Scoring

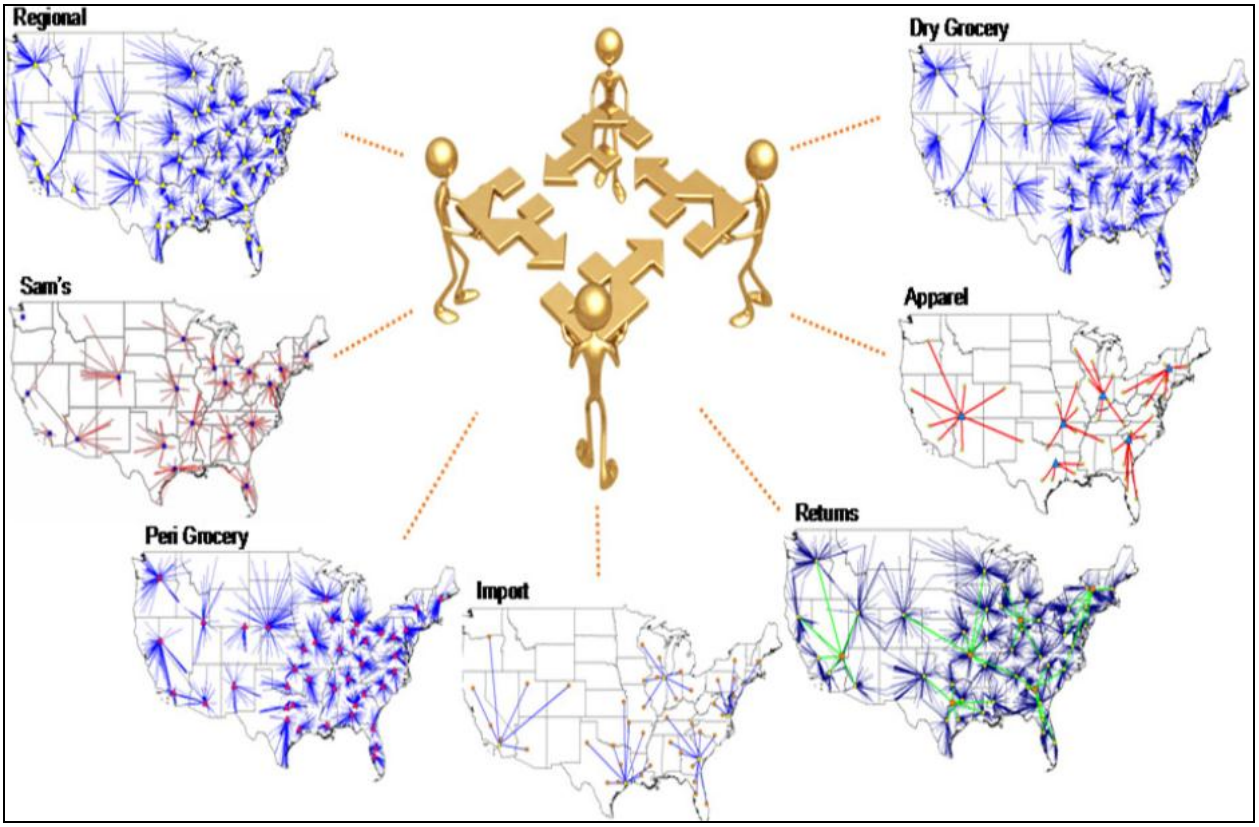
Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
Low	Low	Low	Low	Low

Alternative #4 – Distribution Hub at Wellton

Discussion

It is difficult to determine with certainty whether retailers would use Yuma Countyas a distribution hub. Each retailer would have different needs depending upon the markets served and the nature of products to be distributed. The logic of locating in Yuma would be to avoid the congestion of more densely populated areas. Yuma could serve markets in California, Mexico, and Arizona. As mentioned previously, Yuma County occupies a situation similar to that of Kingman, AZ in that it is close geographical proximity to California without being in California. If businesses locate in Kingman, AZ for this reason, presumably they would locate to Yuma County for similar reasons. But retail distribution appears to follow a slightly different pattern at least some of the time. Anecdotal evidence can be derived from considering the Walmart distribution network as shown in **Figure 14**.

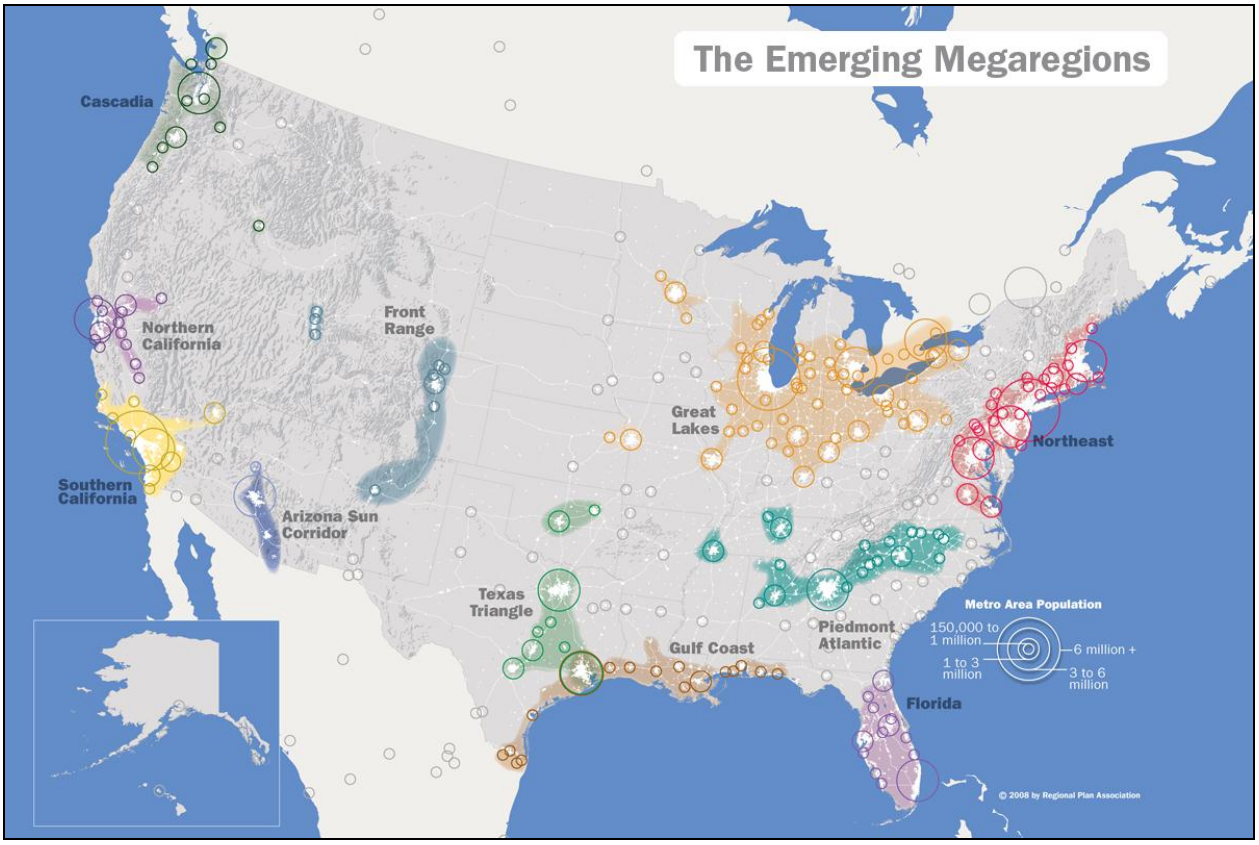
Figure 14: Walmart Distribution Network



Source: Walmart Private Fleet

The logic of Walmart's distribution center locations in California and Arizona becomes more apparent when one considers the Megaregions as identified in America 2050 as shown in **Figure 15**. Megaregions are areas of high growth and high population density. For most products such as dry grocery, perishables, and Sam's clubs, distribution centers are located within or on the outskirts of megaregions. For example, southern California distribution is handled by distribution centers in the Inland Empire area, such as near Bakersfield, CA. The Arizona Sun Corridor is distributed by distribution centers in Phoenix or Casa Grande. Apparel has a much larger distribution area, including the entire western United States. Apparel is distributed from a central location in southwestern Utah. This location can serve the Southern California, Northern California, Arizona Sun Corridor, Front Range, and Cascadia megaregions. Yuma County would be somewhat at a disadvantage in this distribution network because it is not located within a megaregion. However, Yuma County could play a role in retail distribution.

Figure 15: Megaregions from America 2050



Source: America 2050

According to stakeholders in the Yuma region, there have been discussions of establishing distribution hubs in Yuma County. It will be important to discriminate between discussions that are likely to come to fruition and those that used for bargaining with other regions. Several years ago, a study was prepared under the U.S. National Academies National Freight Cooperative Research Program (NCFRP) entitled NCFRP 13 *Freight Facility Location Selection: A Guide for Public Officials.* The team was led by Chris Steele of CWS Consulting Group LLC, a company that consults to private sector clients on facility location. The study found that negotiations with local officials typically occur at the very end of the process for site selection. Companies have already identified whether they will move into a given location or not before they enter negotiations. Usually the process is as follows:

1. Define a network strategy and evaluation criteria
2. Use network modeling to develop a universe of potential locations
3. Develop a short list of potential locations based on location screening
4. Conduct field validation and cost modeling to select preferred and alternative
5. Conduct final negotiations and location selection

The study found that access to key markets and customers was the most important consideration for location decisions. The ranking of criteria by importance for logistics facility location is as follows:

1. Ability to access key markets or customers
2. Interaction with transportation network
3. Labor and workforce
4. Total cost environment
5. Availability and cost of suitable facilities
6. Utilities
7. Permitting and regulation
8. Tax environment
9. Public sector assistance and incentives
10. Climate and natural hazards

In terms of building a retail distribution hub in conjunction with an intermodal terminal in Yuma County, a few factors could challenge the success of this endeavor. The UP Railroad would need to be willing to add the facility to its intermodal network. A terminal within Yuma County would compete with established nearby terminals in Tucson, Phoenix, and Los Angeles. Yuma occupies an awkward location for handling imported goods coming through the Ports of Los Angles and Long Beach, since it is only about 270 miles from Long Beach. This distance is highly truck competitive, and is much shorter that the typical distance over which UP Railroad is usually willing to provide intermodal service.

A logical progression would be to establish a truck-served distribution hub. Once the distribution hub is well established and appears to be generating large volumes of freight, intermodal rail service could be added. An intermodal terminal would be costly. Based upon other intermodal terminals around the country, the cost would be at least $25 or $30 million. It is likely that this investment would be borne by the public sector.

Scoring

Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
High	Medium	Medium	Low	High

Alternative #5 – Punta Colonet Connection

Discussion

A key question was raised during this study regarding the extent to which economic development in Yuma County would benefit if a rail connection were built through Yuma County between a new megaport at Punta Colonet, Mexico and the UP Sunset Route. The issue hinges upon whether trains would stop in Yuma County and whether containers would be unloaded in the county. If trains were to pass from Punta Colonet and points east without stopping in Yuma County, the rail connection would provide negligible economic benefit to the county. However, if trains were to stop and containers were unloaded in Yuma County, it may make sense to unload containers bound for the Southwest in Yuma County. Once containers are unloaded it may be logical that companies establish a distribution presence in Yuma. The rail connection would probably be an economic benefit to the county, at least in terms of jobs associated with transportation and logistics.

The study team has spoken with in expert on cross border logistics and a representative from U.S. Customs and Border Protection (CBP). Based upon these discussions, it is probable that value added activities would occur in Yuma County if the existing Port of Entry II were expanded in Yuma County to serve a Punta Colonet rail connection. Several activities would have to be performed at Yuma County: 1) there would have to be a crew change between Mexican and U.S. train crews and 2) there would have to be a safety inspection of the rail equipment. The CBP would need to scan all railcars **(Figure 16)**. The process can be thought of a similar to that of the TSA scanning passengers' belonging at an airport, but on a much larger scale. CBP uses non-intrusive scanning equipment, much like x-ray machines at an airport. CBP removes and visually inspects any railcars or containers that contain suspicious looking items. Some commodities such as auto parts are easy to inspect by scanner, while others such as textiles are more difficult and are more often removed for inspection. Some shippers have made specific arrangements with the CBP whereby containers can be checked at destination, but others do not have this type of arrangement. The CBP would also not likely be the only organization inspecting railcars at the station. For agricultural products, the USDA may be inspecting railcars as well. Some railcars and containers would need to be inspected.

Figure 16: Cross Border Scanning Equipment

Source: CBP Document, Photo Courtesy of SAIC

At Laredo, UP has built a rail yard within a mile or two of the border where railcars are inspected. Intermodal terminals are located at both Nogales and Laredo, the two primary rail intermodal border crossings. At these locations, containers are often unloaded because it makes more sense to truck

certain containers across the border if the origin or destination in Mexico or the United States is close to the border. If a rail connection were established through Yuma County, a similar phenomenon may occur where containers destined for relatively nearby markets are unloaded at a facility in Yuma County. Since some containers would need to be unloaded for inspection anyway, it would probably make sense to establish an intermodal terminal in Yuma County.

Although the construction of the rail connection and Port of Entry II expansion would be highly expensive, face numerous obstacles and involve significant risk, much of this would be borne by other parties instead of Yuma County. Yuma may need to help find funding for an intermodal terminal. The project could be disruptive in that it would involve the acquisition of land.

Scoring

Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
Low	High	Medium	High	High

Alternative #6 – Industrial Park in San Luis with New Rail Line

Discussion

Logically, San Luis could be a relatively promising location within Yuma County for a rail line and for an industrial park. Large parcels of land are available. A rail line could support not only companies on the U.S. side of the border, but also provide raw materials to maquiladoras on the Mexican side of the border. The City of San Luis has been discussing the development of the Gary Magrino Industrial Park near to the San Luis II Port of Entry. The International Industrial Park in San Luis Rio Colorado is planned on the Mexican side of the border.

This alternative would require building about 22 miles of new rail line. When asked to propose a rail alignment to Mexico during this project's outreach sessions, most stakeholders recommended an alignment along the Area Service Highway. A conceptual alignment is presented in **Figure 17**. This alignment is presented to provide a concept only. An actual alignment could be located within a number of different areas. The conceptual alignment has been presented so that no curve is tighter than four degrees, the typical maximum curvature for trains to travel 45 miles per hour. The greatest logistical challenge posed by this conceptual alignment would be I-8. If the alignment were to miss most development, the alignment would need to cross the interstate on the eastern portion of the Y before crossing I-8.

This alternative would require that at least 22 miles of rail line be built. In recent cases before the U.S. Surface Transportation Board, the estimated Railroad Property Investment for standalone cost cases has been around $2 million per mile.[3] In practice, this represents a floor for estimated cost per mile. Since 2007, costs have increased significantly, and a number of proposed and actual new rail alignments have cost significantly more than $2 million per mile. A minimum cost of building a rail line to San Luis would

[3] U.S. Surface Transportation Board decision, Ex Parte 646 (Sub-No. 1) Simplified Standards for Rail Rate Cases, September 4, 2007.

have a minimum cost of about $44 million. If the alignment shown in **Figure 17** were adopted, a major grade separation project would be required for the alignment to cross I-8. A study by the California State Auditor in 2007 found that the average grade separation project cost $26 million.[4] This was the average of all grade separation projects none of which involved the separation of a rail line from an entire interstate highway. But $26 million will be considered the minimum cost of separating a rail line from I-8. The total cost of building a new rail alignment to San Luis has a minimum cost of $70 million and will likely cost significantly more than that. Private entities would be unlikely to fund much of the cost of building the rail alignment, so the project would primarily be funded by the public sector.

The construction of a rail line to San Luis as shown in **Figure 17** will require agreements with the U.S. Department of Defense. The U.S. Department of Defense would need to agree to further encroachment upon the Barry M. Goldwater Bombing Range. Other properties would likely need to be seized. Any objections would be brought forth during the NEPA process before the STB. If the alignment shown in **Figure 17** were adopted, a major reconstruction of a section of I-8 would need to occur. For this project, failure would be defined as rail service not being provided on the alignment. By this definition, the risks of failure are low.

Figure 17: Northern Portion of Conceptual Rail Alignment to Mexico

GRAPHIC PREPARATION IN PROCESS

Scoring

Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
Low	High	High	High	High

Alternative #7 – New Rail Alignment to Connect to Ferromex

Discussion

This alternative would be an extension of Alternative #6 in that a new rail port of entry would be built across the U.S./Mexico border. The new rail alignment would be extended into Mexico and would connect to the Ferromex Calexico subdivision at a point southeast of San Luis Rio Colorado. The extension is shown in **Figure 18** and **Figure 19**.

[4] California State Auditor, *Grade Separation Program: An Unchanged Budget and Project Allocation Levels Established More than 30 Years Ago May Discourage Local Agencies from Taking Advantage of the Program,* September 2007.

Figure 18: Border Crossing of Conceptual Rail Alignment to Mexico

GRAPHIC PREPARATION IN PROCESS

Figure 19: Connection to Ferromex of Conceptual Alignment to Mexico

GRAPHIC PREPARATION IN PROCESS

Adding the rail alignment to Mexico and the new port of entry would add significantly to the costs described in Alternative #6. An additional distance of about 24 miles in track would need to be constructed, so the track construction would add at least another $48 million in costs. There would also be significant cost added associated with the new port of entry, both in terms of capital investment and operating costs. Scanning equipment would need to be installed as would a new rail yard for crew changes, equipment inspections, CBP and USDA border inspections. The required investment associated with the port of entry could easily exceed $30 million. The total cost, including investments discussed in Alternative #6 would likely exceed $148 million.

A major question in regards to this alternative relates to the nature of the rail traffic that would use the new alignment. If Punta Colonet were built, this would not be an issue because port traffic would drive usage of the rail line. However, under the scenario of Alternative #7, Punta Colonet is assumed not to be built. If the border crossing at San Luis were to handle the same number of carloads as the border crossing at Calexico, the total would be in the neighborhood of 25,000 carloads per year. However, San Luis is a smaller crossing than Calexico. If the San Luis had the same ratio of truck/rail as Calexico, but with the current volume of traffic, the number of carloads handled per year would only be about 5,500. The study team has performed a diversion analysis, similar to that performed in Technical Memorandum #1 to estimate divertible truck traffic through San Luis based upon expected distance travelled and the types of commodities crossing the border. This analysis estimated that based upon 2009 truck volumes, the divertible traffic would be roughly equivalent to 8,000 carloads. At these volumes, the rail line would be considered to have relatively low traffic density.

One possibility is that another Mexican port could generate rail traffic **(Figure 20)**. Another port could fill a similar role to Punta Colonet, and Yuma County's rail link to Mexico could still serve as a land bridge. There are significant issues with this concept. Because of its location in the Gulf of California, the Port of Guaymas is poorly positioned to handle cargoes to and from Asia. Accessing the Port of Guaymas would add significantly to shippers' transit times relative to simply calling on the Port of Los Angeles or Long Beach as ships navigate around the Baja Peninsula. Even if Guaymas were better positioned, entering the United States at Yuma from Guaymas would in most cases be circuitous relative to entering the United States at Nogales.

Figure 20: Mexican Rail Network

Source: Wilbur Smith Associates, Master Plan for the Multimodal Corridors in Mexico

Scoring

Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
Low	Low	High	High	High

Conclusion and Next Steps

Based upon the evaluation of alternatives developed in this Technical Memorandum, Alternatives #2 and #3 appear the most compelling in terms of return on investment **(Table 1)**. However, the impact of Alternative #3 would likely be limited. Alternative #2 should be investigated further. Because building a

rail line to Mexico was the initial focus of this study, Alternative #6 in conjunction with Alternative #7 would warrant further investigation to the point of connection for a rail line crossing from Mexico to Yuma County. A full evaluation of Alternative #7 would primarily be the responsibility of jurisdictions within Mexico, it is recommended that this alternative not be investigated further at this time. Contingent upon stakeholder feedback, Technical Memorandum #3 could provide implementation steps for Alternatives #2 and #6, while Technical Memorandum #4 will provide a more complete economic analysis of these two alternatives.

Table 1: Summary of Scoring of Alternatives

Alternative	Risk of Failure	Economic Benefit	Size of Investment	Negative Impacts	Obstacles
#1 Unit Refrigerated Train Service	High	High	Medium	Low	Medium
#2 Industrial Park in Wellton	Medium	High	Medium	Low	Medium
#3 Transload Railport	Low	Low	Low	Low	Low
#4 Distribution Hub at Wellton	High	Medium	Medium	Low	High
#5 Punta Colonet Connection	Low	High	Medium	High	High
#6 Industrial Park in San Luis with New Rail Line	Low	High	High	High	High
#7 New Rail Alignment to Connect to Ferromex	Low	Low	High	High	High
#8 No Build	NA	NA	NA	NA	NA