



DRAFT

YMPO Rail/Heavy Freight Alignment Study

WORKING PAPER 2: ALTERNATIVES ANALYSIS

SEPTEMBER 2022

Prepared for:

*Yuma Metropolitan Planning Organization
230 West Morrison Street
Yuma, Arizona 85364*

Prepared by:

Kimley»Horn

*1001 W. Southern Ave., Suite 131
Mesa, AZ 85210*

Contents

1. Introduction.....	2
2. Conceptual Alignment Alternatives	5
3. Candidate Alignment Alternatives.....	14
4. Conclusions and Potential Future Project Phases.....	20
Appendix A. Stakeholder Engagement Summaries	27
Appendix B. Detailed Survey Results and Public Comments.....	32
Appendix C. Detailed Recommended Alternative Maps	33



1. Introduction

Project History and Overview

The Yuma Metropolitan Planning Organization (YMPO) is conducting a study to identify a preliminary alignment for a possible rail/heavy freight corridor in the Yuma region. The study builds upon the 2013 Yuma County Rail Corridor Study, which recommended multiple rail corridors options between Sonora, Mexico, and Yuma County. In addition, the study explored opportunities for freight-related economic development. Two of the study alternatives (Alternatives 6 and 7) collectively evaluated benefits of an industrial park near San Luis and a connection from the U.S./Mexico border north to the Union Pacific Railroad (UPRR) Sunset Route that runs roughly parallel to Interstate 8 (I-8). These two alternatives serve as the beginning point for this 2022 YMPO Heavy Rail/Freight Alignment Study.

Since completion of the 2013 study, the Yuma region has been increasingly pressured by development interests. Much of this new development activity is in the eastern portion of Yuma, adjacent to the unincorporated Yuma Foothills Area. Ongoing development activity places additional constraints on potential previously identified rail corridors.

Goals and Objectives

The 2022 YMPO Rail/Heavy Freight Alignment Study will build upon the 2013 analysis to define the rail corridor from the United States/Mexico border north to the UPRR. The study will identify a recommended location for a 500-foot-wide corridor, which could ultimately accommodate a freight rail facility as well as other utilities, which could co-locate within the rail corridor. Study objectives are:

- Review data, findings, and conclusions from previous plans and studies, including the 2013 Yuma County Rail Corridor Study.
- Update a commodity flow summary of existing and future freight movements by origin/destination, mode, volume, and value, with a focus on seaports in Mexico. The summary will identify economic trends and forecasts that would affect the YMPO study area.
- Identify border rail crossing opportunities that will accommodate anticipated freight flows from U.S./Mexico freight interests to the YMPO region.
- Establish the alignment for a potential regional freight rail connection between the U.S./Mexico border near San Luis and the UPRR. The freight line would support an efficient freight transportation network in Yuma County, promoting economic development. Currently, the City of Yuma and stakeholder agencies do not have the ability to preserve land for a new rail corridor because an alignment has not yet been documented. Corridor definition is necessary to allow for corridor preservation and pursuit of federal funding for construction of the rail spur corridor. The YMPO Rail/Heavy Freight Rail Study will set the stage for detailed environmental review and provide a basis for corridor preservation.
- Describe potential funding sources that may be available to implement the corridor. Summarize the project-level funding analysis and financing plan for the corridor using those funding sources deemed most viable by the project's stakeholders.

Study Area

The study area is comprised of over 240 square miles and incorporates the eastern reaches of the Cities of Yuma and San Luis, a small portion of the City of Somerton, and portions of unincorporated Yuma County as shown in **Figure 1**. The study area is bounded by:

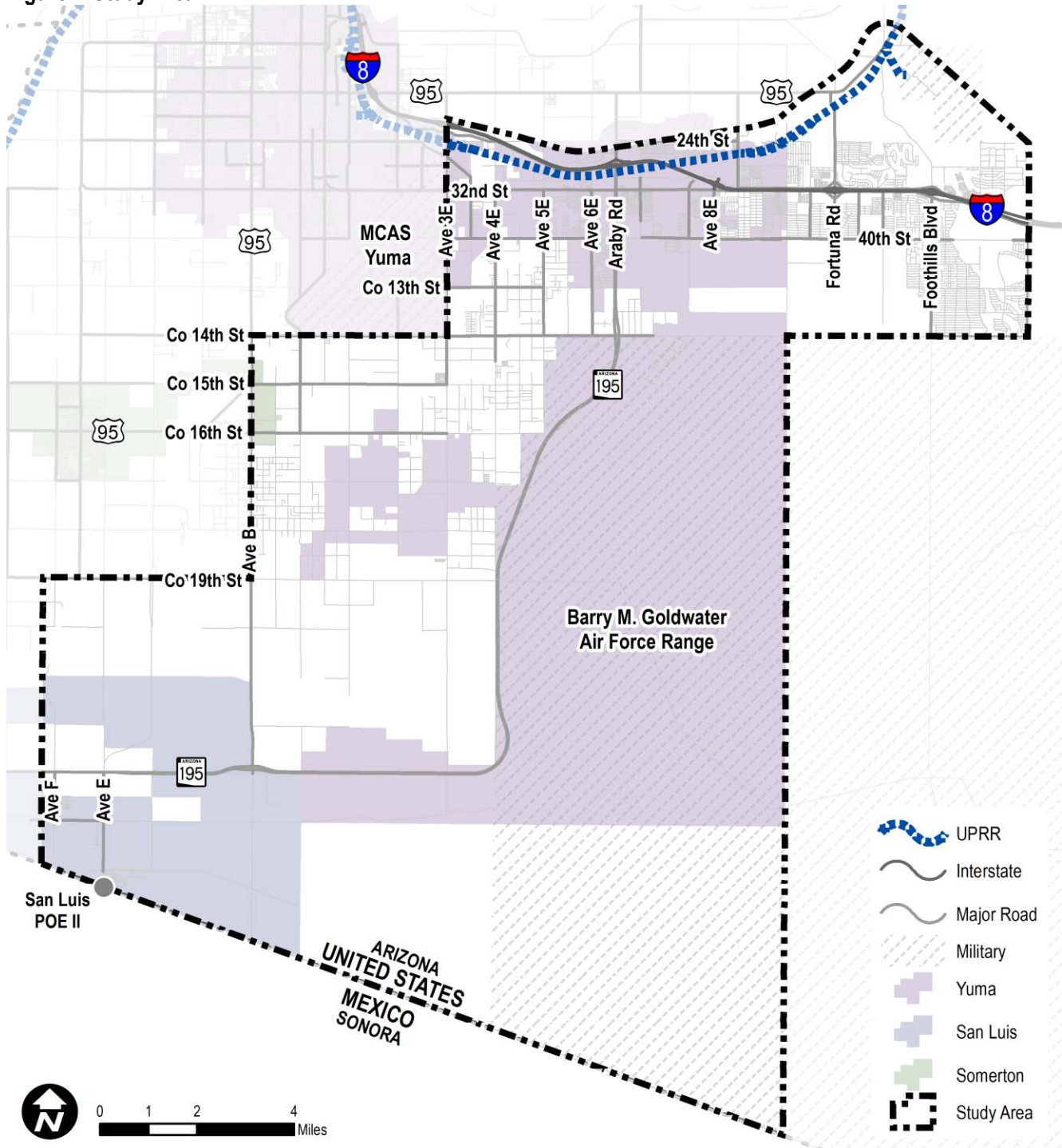
- The UPRR Sunset Route to the north.
- Avenue 15E in the Foothills area of unincorporated Yuma County and the eastern boundary of the City of Yuma in the Barry M. Goldwater Air Force Range (Goldwater AFR) to the east.

YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

- Avenue 3E near Marine Corps Air Station (MCAS) Yuma, Avenue B near Somerton, and Avenue F near San Luis to the west.
- The United States/Mexico border to the south.

Figure 1. Study Area





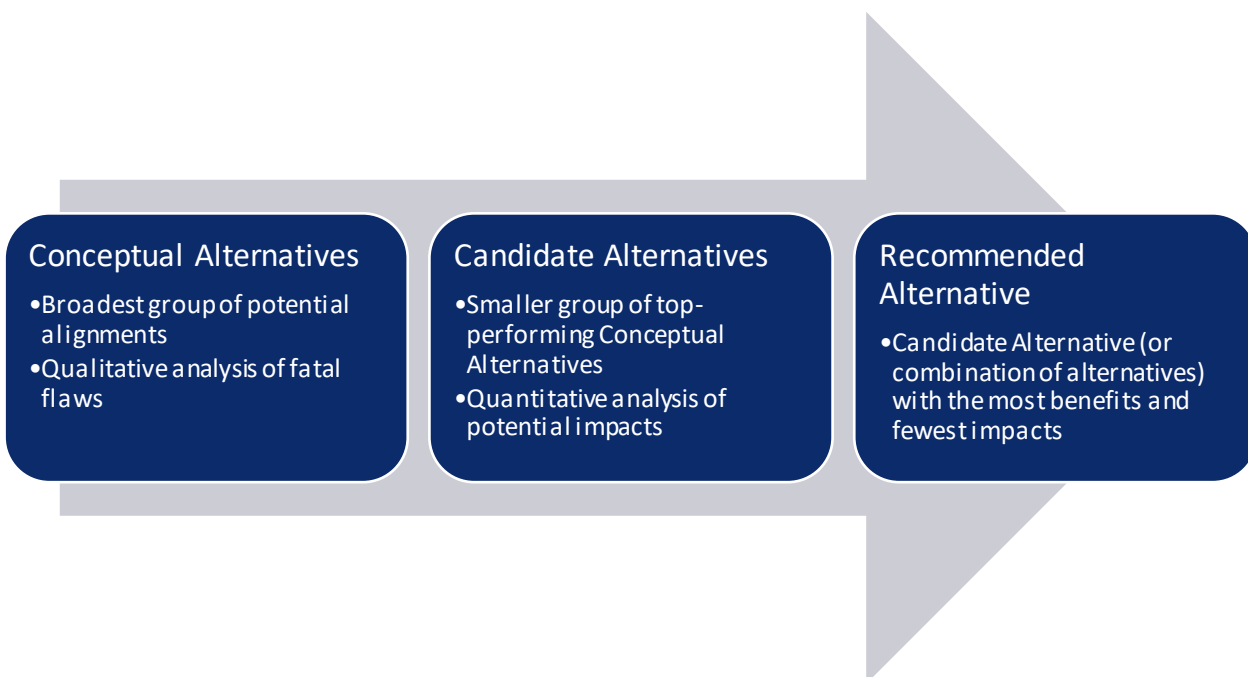
Working Paper 1 Review

Working Paper 1, entitled Current and Future Conditions, provides a comprehensive review of observable data present in the study area that have an impact on the viability and potential economic case of a north-south rail line. Major sections of Working Paper 1 include:

- **Previous Plans and Studies.** A review of pertinent recommendations from documents produced by YMPO, ADOT, or local agencies.
- **Stakeholder Engagement.** Findings from an initial round of stakeholder interviews with YMPO member agencies and other entities with a potential interest in a rail line.
- **Freight Flows.** A review of current and forecasted freight flows either starting or ending in Yuma County or traveling through Yuma County.
- **Transportation System.** A review of the existing multimodal transportation system in the study area as well as anticipated changes over the next 20 years.
- **Future Land Use.** A review of desired future land uses of YMPO member agencies present in the study area and whether those land uses are generally supportive or not supportive of a future rail alignment.
- **Environmental Overview.** An analysis of available environmental data that may impede the construction of rail in the study area.
- **Rail Alignment Opportunities and Constraints.** A summary of the existing and future conditions analysis that highlights opportunity and constraint areas for implementing rail.
- **Rail Infrastructure Planning Scenario.** Assumed standards (such as design speed, siding requirements, etc.) that were included in future phases of the study.

Working Paper 2 Overview

The Alternatives analysis is broken into three main phases, each with increasingly detailed analyses of potential alignment alternatives:

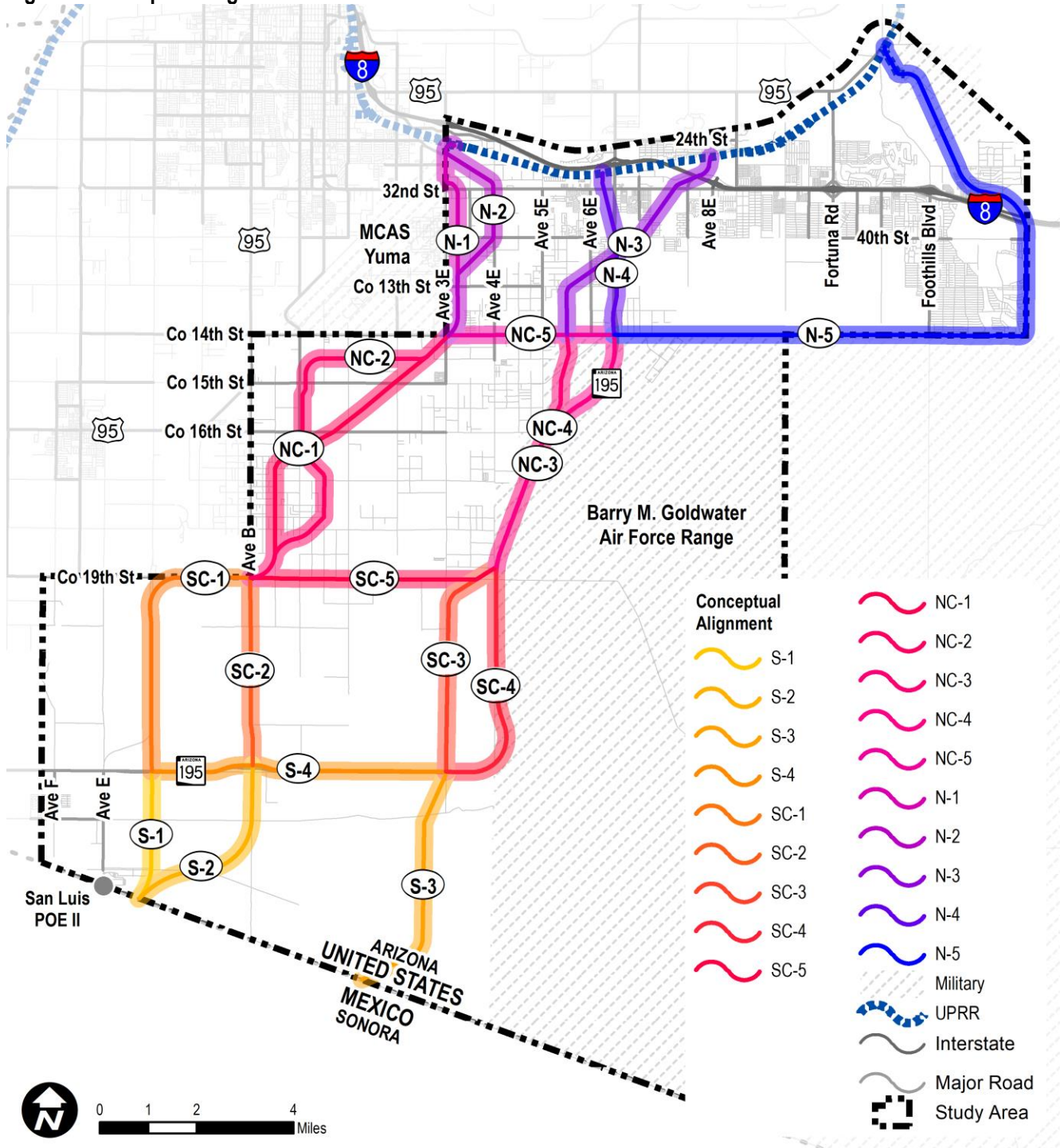


2. Conceptual Alignment Alternatives

Conceptual Alternatives

The following Conceptual Alternatives, shown in **Figure 2**, are the preliminary alternatives identified to meet the goals and objectives of the YMPO Rail/Heavy Freight Alignment study.

Figure 2. Conceptual Alignment Alternatives





YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

The process of identifying conceptual alternatives included the consideration of:

- Future land use maps from local municipalities and Yuma County
- Identified opportunities and constraints from the first round of stakeholder interviews and existing conditions research
- Existing or anticipated right-of-way availability

The Conceptual Alternatives were grouped into four categories geographically: South, South-Central, North-Central, and North.

South Alternatives

The South Alternatives are located in the portion of the study area that stretches from the U.S./Mexico border to the east-west section of SR 195. The four Southern alignment alternatives have connections to SR 195 right-of-way and provide access to Mexico just east of the San Luis II Border Port of Entry and through a site proposed for the Sonora Crossing Transmission Line Project.

- S-1 connects from the border just east of the San Luis II POE to SR 195 following the Avenue D alignment.
- S-2 connects from the border just east of the San Luis II POE to SR 195 following a future County 25th Street and Avenue B connection.
- S-3 connects from the Mexican border to SR 195 following the proposed alignment of the Sonora Crossing Transmission Line Project.
- S-4 offers connections between for the other South Alternatives via the SR 195 right-of-way

South-Central Alternatives

The five South-Central alignment alternatives provide options for connecting through the four-mile span between SR 195 and County 19th Street.

- SC-1 connects from SR 195 to County 19th Street via the Avenue D alignment, then turns eastward along the County 19th Street alignment to Avenue B.
- SC-2 connects from SR 195 to County 19th Street via the Avenue B alignment.
- SC-3 connects from SR 195 to County 19th Street just west of SR 195 following the proposed Sonora Crossing alignment.
- SC-4 follows the SR 195 right-of-way from the Sonora Crossing right-of-way to County 19th Street.
- SC-5 offers connections between the other South-Central Alternatives along the County 19th Street alignment.

North-Central Alternatives

The five North-Central alignment alternatives provide options for connecting through the five-mile span from County 19th Street to County 14th Street.

- NC-1 connects County 19th Street to County 14th Street via the B Main Lateral Canal right-of-way.
- NC-2 connects County 19th Street to County 14th Street via the A8-9 Lateral Canal right of way.
- NC-3 connects from the intersection of SR 195 and County 19th Street to County 14th Street west of Avenue 6E following the proposed Sonora Crossing alignment.
- NC-4 follows the SR 195 right-of-way from County 19th Street to County 14th Street.
- NC-5 offers connections between the other North-Central alternatives via the County 14th Street alignment.



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

North Alternatives

The five Northern Alignment alternatives connect from County 14th Street to the UPRR Sunset Line.

- N-1 travels from the intersection of County 14th Street and Avenue 3E, follows a north-south alignment just east of Avenue 3E until it intersects with an existing rail spur from the UPRR line.
- N-2 connects from the intersection of County 14th Street and Avenue 3E and follows the B Canal right-of-way to an existing rail spur from the UPRR line.
- N-3 follows right-of-way obtained by APS for a new transmission line now under construction that connects from County 14th Street west of Avenue 6E and follows the Gila Gravity Main Canal to the UPRR line.
- N-4 follows the SR 195/Araby Road alignment from County 14th Street to the UPRR line.
- N-5 connects from the intersection of SR 195 and County 14th Street to the east following the County 14th Street alignment to Avenue 15E where it turns northward and crosses I-8 to connect with an existing rail spur from the UPRR line near Rifle Range Road.

Conceptual Alternatives Screening

The screening process for the Conceptual alternatives is made up of three primary sources: TAC and stakeholder input, public input, and a high-level technical analysis to identify fatal flaws.

TAC and Stakeholder Input

The Project Team engaged regional stakeholders for the second time during this planning process to obtain specific input on the Conceptual Alternative alignments. Interview groups and dates are shown in **Table 1**. Summaries of each of the stakeholder meetings is provided in **Appendix A**.

Table 1. Stakeholder Meeting Groups

Group	Agencies/Positions	Interview Date
Arizona Farm Board	Director	June 6, 2022
Yuma County	Development Services, Multimodal Planning, County Engineering	June 8, 2022
City of San Luis	Public Works, Economic Development	June 8, 2022
City of Yuma	Multimodal Planning, Utilities, Economic Development	June 8, 14, 2022
Economic Development	Greater Economic Development Corp., YMPO	June 8, 2022
MCAS Yuma	Community Planning Liaison, Air Station Command	June 9, 2022 and July 13, 2022
ADOT	Planning	June 1, 2022
Other Mexican Stakeholders	Agency for the Promotion of Economic Development	June 15, 2022

Key takeaways from each of the stakeholder interviews include:

- **ADOT**
 - This study will need to be aware of the environmental conditions/constraints that ADOT addressed during the design concept phase of the SR 195 corridor implementation assessment process
 - The study will also need to be aware of all existing and proposed major utility corridors within the area under review for a new heavy rail facility
 - Heavy rail connectivity to a new deep-water port along the west coast of Mexico had been considered in the past, however this linkage has not been resurrected by the current administration in Mexico



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

- Land south of the airport and agricultural fields near that area appear to be more feasible
- Southern alignments are less problematic, but the “North Central” and “North” routes would have issues as they segment the denser residential areas.
- ADOT didn’t identify any other routes that should be introduced to the preliminary concepts
- Pushback should be expected from the Air Force Range due to encroachment from eastern running Conceptual Alternatives.
- ADOT felt eastern running alignment is more feasible, but discussion for potential on the west of the 195 should be considered.
- **Arizona Farm Board**
 - Standards for construction and train operations near produce crops, need to be researched and applied
 - An alignment along the eastern border of the study area would be preferred to avoid agriculture
 - Supportive of (S3, SC4, NC3, NC4, N5) as an alignment
- **Yuma County**
 - Based on previous experience, a corridor along Avenue E is unlikely to receive environmental clearance or joint right-of-way acquisition
 - The S3 corridor runs through South County Landfill parcels that are planned to be developed for industrial use
 - Bureau of Reclamation (BOR) is unlikely to grant
- **City of San Luis**
 - Main priority for the City of San Luis for this project is the Mexico connection point
 - The S3 corridor is currently being considered for an electric powerline project (Sonora Crossing). There could be potential for right of way or permit partnering.
- **Economic Development**
 - Avenue E has residential development coming in near future which will be a hindrance to rail construction.
 - Recommend alternatives along SR 195 away from residential and farmland.
- **MCAS**
 - The eastern alignments seem to be on MCAS right of way and are undesired
 - Representatives of MCAS have made it very clear that eastern alignments that use bombing range right of way are infeasible.
 - There are concerns for types of materials being transported via train near the bombing range and how incidents involving hazmat or derailment will be exasperated due to the proximity of the bombing range.
 - MCAS not only owns the right of way near the conceptual alternatives but the air rights as well.
 - Orphaned parcels near conceptual alternatives NC4 and NC3 have ordinances buried within them and would require extensive precaution measures and studies to allow any construction.
 - Would prefer alignments most west running of the bombing range.
- **City of Yuma**
 - The N5 alternative negatively impacts state lands and the residents near that alignment are very vocal when in opposition of proposals.
 - Gowan Milling and Yuma County Cotton Gin are concerned about conceptual alternative corridors disturbing operations.



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

- Utilizing 4E Street or 4 ½ E could have less impact on developed areas
- There is expected pushback from agriculture landowners for alternative corridors that utilize farmland.
- MCAS has concerns for impacts and potential development
- **Mexican Stakeholders**
 - Interest from Mexican stakeholders has been very positive, development near the American border garners interest in future freight possibilities as well as more southern connections in Mexico.
 - The Agency for the Promotion of Economic Development known as OPRODE in Mexico is a very interested stakeholder for this study however, turnover in the administration has made input meetings difficult to schedule and maintain. Once the administration personnel are solidified in their positions, more detailed input on the project will be feasible.

Public Input

Two in-person open house meetings were held, one in Yuma and one in San Luis, to allow the public to provide input on the conceptual alternatives. The San Luis public meeting was held on July 13th at San Luis City Hall and the Yuma Open House was located at the Yuma County Public Work Facility on July 14th.

In addition to the in-person open houses, a public survey was available virtually through the YMPO website and in-person at the open houses. The survey was available in both English and Spanish. The survey was available from July 6th to July 24th, 2022. A total of 262 surveys were received, 70 of which were paper surveys collected at the public open house and the remainder were submitted virtually through SurveyMonkey. The public survey results are summarized below.

How supportive are you of a future freight rail corridor in the Yuma Region?

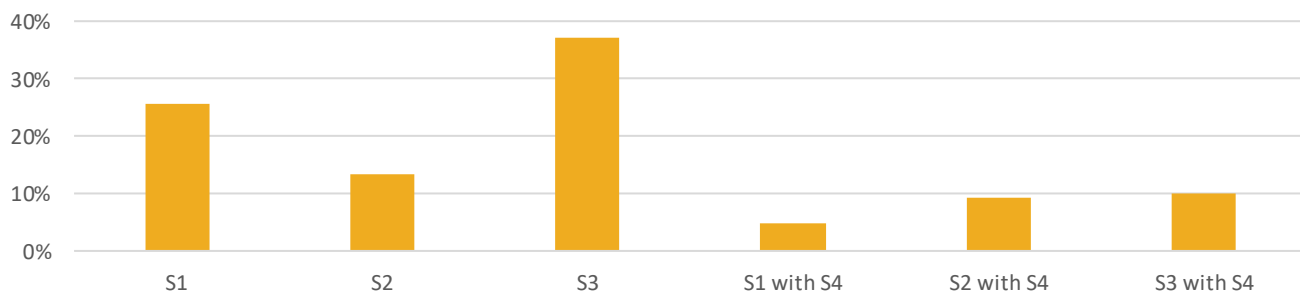




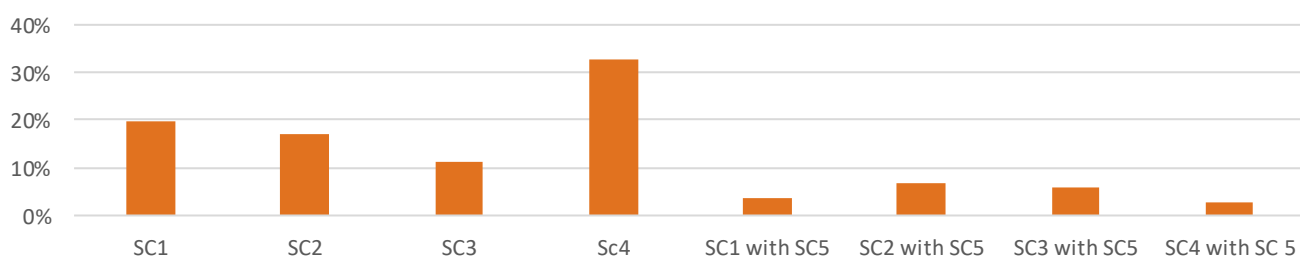
YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

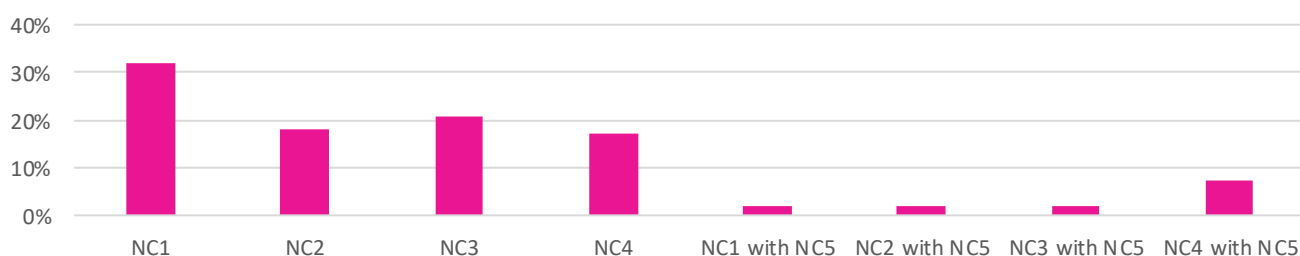
Which Southern Alternative do you feel would be best for a future rail corridor?



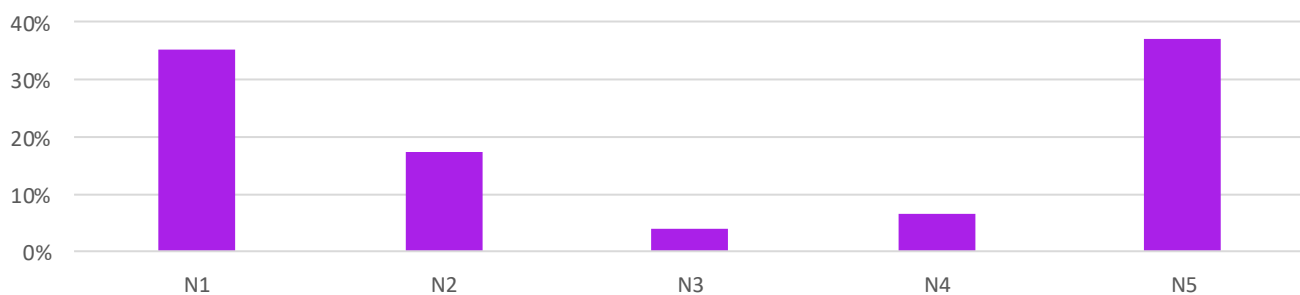
Which South-Central Alternative do you feel would be best for a future rail corridor?



Which North-Central Alternative do you feel would be best for a future rail corridor?



Which North Alternative do you feel would be best for a future rail corridor?



Detailed results from the survey and input received from the public through the survey and the YMPO project website are provided in **Appendix B**.

Screening Matrix Methodology

The Conceptual Alternatives were evaluated to identify those that are most suitable as an alignment for a possible rail/heavy freight corridor in the Yuma region. A high-level technical analysis was combined with the stakeholder and public input to identify fatal flaws with Conceptual Alignments that should be screened out before selecting Candidate Alternatives. This analysis included:



Land Use

- Land use compatibility
- Acres of public land impacted
- Acres of private land impacted
- Right-of-way availability



Roadway System Impacts

- # of classified road crossings
- # of local road crossings/closures



Environmental

- Historic property impacts
- Floodplain/waterway impacts
- Flat-Tailed Horned Lizard impact



Constructability

- Circuitry
- UPRR connection geometrics



Political Feasibility

- TAC and stakeholder input
- Public input

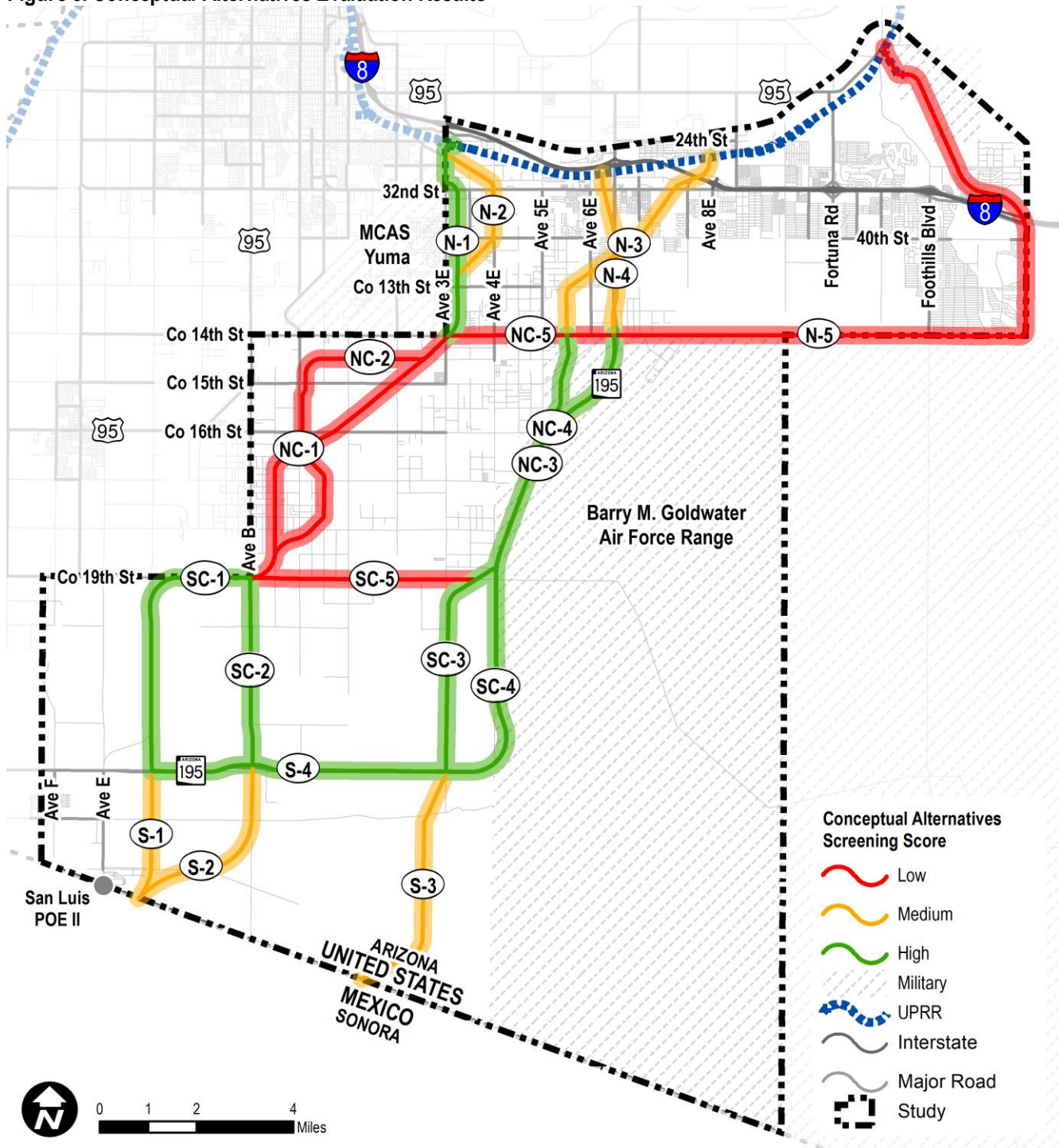
Screening Matrix Results

The assessment of Conceptual Alternatives was evaluated using the criteria categories of Land Use, Roadway System, Environmental and Constructability. The evaluation rated alternatives based on impact to the applicable category criteria with a score of poor (1), fair (2), or good (3). The scoring breakdown for each alternative is shown in **Table 2** and the results are shown graphically in **Figure 3**. Using these results, Candidate Alternatives were selected which went through a more vigorous technical analysis.

Table 2: Conceptual Alternatives Evaluation Matrix

Conceptual Alternative	Land Use				Political		Environmental			Roadway		Constructability		Total
	Compatibility	Public Land Impact	Private Land Impact	Right-of-way Impact	TAC/Stakeholder	Public Input	Historic Property Impact	Floodplain/Waterway Impact	Flat-Tail Horned Lizard Impact	Classified Road Crossings	Local Road Crossings	Circuitry	UPRR Connection	
N1	2	1	1	2	1	3	3	3	3	3	2	3	3	30
N2	2	1	1	1	1	2	3	3	3	3	3	2	3	28
N3	3	2	1	3	1	1	3	3	3	1	2	3	1	27
N4	3	1	1	2	1	1	3	3	3	1	3	2	2	26
N5	1	3	1	1	3	3	3	1	1	2	1	1	3	24
NC1	2	2	1	1	1	3	3	3	3	1	1	3	-	24
NC2	2	2	1	1	1	2	3	3	3	1	1	1	-	21
NC3	3	1	3	2	2	2	3	3	2	3	3	3	-	30
NC4	3	1	3	3	2	2	3	3	2	3	3	3	-	31
NC5	1	2	1	1	2	1	3	3	3	2	2	1	-	22
SC1	3	3	3	2	1	2	3	3	3	1	3	3	-	30
SC2	3	3	3	1	1	2	3	3	3	2	3	3	-	30
SC3	3	3	3	1	2	1	3	3	3	2	2	3	-	29
SC4	3	3	3	3	2	3	3	3	2	3	2	3	-	33
SC5	1	2	1	1	2	2	3	3	3	3	1	1	-	23
S1	3	2	1	1	2	2	3	3	3	1	2	3	-	26
S2	3	3	3	2	2	1	3	3	2	1	2	3	-	28
S3	3	1	3	1	3	3	3	3	1	1	3	3	-	28
S4	3	3	3	3	2	2	3	3	2	3	1	1	-	29

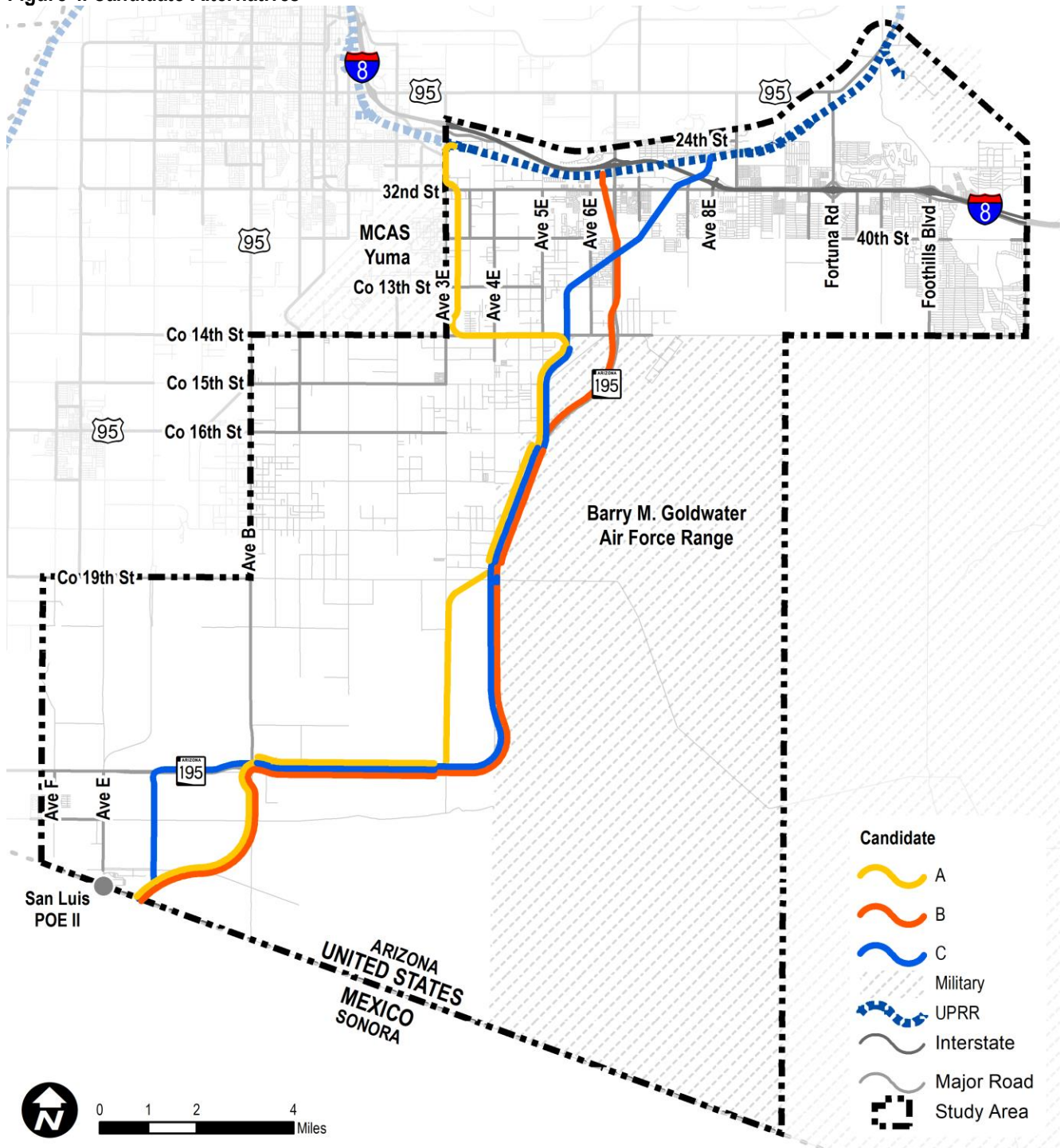
Figure 3. Conceptual Alternatives Evaluation Results



3. Candidate Alignment Alternatives

Based on the results of the Conceptual Alternatives evaluation, high-performing alignments were combined into three continuous Candidate Alternatives that run the entire length of the study area from the U.S./Mexico border to the UPRR Sunset Route. These Candidate Alternatives are shown in **Figure 4**.

Figure 4. Candidate Alternatives





Candidate Alternative Screening

Screening Methodology

A comparative analysis process was developed to quantify potential impacts of each of the three Candidate Alternatives. The evaluation criteria are listed in **Table 3**. Each of these criteria was quantified for the three Candidate Alternatives and then given a ranking of '1', '2', or '3' based on their relative impact (with '1' being the most preferable score and '3' being the least preferable score).

Table 3: Candidate Alignment Evaluation Criteria

Land Use	
Land Use Compatibility	<ul style="list-style-type: none"> Number of residential units within ¼ mile of the alignment Acreage of protected open space and prime or unique farmland within 1,000' of alignment Percentage of alignment frontage that is currently vacant land
Compatibility with Planning Policies	<ul style="list-style-type: none"> Percentage of alignment within a compatible zoning district Percentage of alignment within a compatible future land use
Land Acquisitions and Displacement	
Acquisitions Required	<ul style="list-style-type: none"> Acreage of the parcels that would need to be acquired Number of structures that would need to be acquired
Transportation	
Traffic and Safety Impacts	<ul style="list-style-type: none"> Number of assumed roadway closures Number of assumed at-grade railroad crossings (safety focus) Vehicles impacted from at-grade railroad crossings Number of anticipated grade-separated crossings
Rail Operations	<ul style="list-style-type: none"> Ease of connection to UPRR Number of opportunities for sidings Land availability for an inspection facility Track alignment geometry constraints
Environmental Impacts	
Natural Environment	<ul style="list-style-type: none"> Acreage of wetland impacted Number of historic sites impacted Acreage of flat-tailed horned lizard habitat impacted
Environmental Justice	<ul style="list-style-type: none"> Impact to Title VI populations
Hazardous Materials	<ul style="list-style-type: none"> Number of contaminated/hazardous materials sites with ¼ mile of alignment
Noise and Vibration	<ul style="list-style-type: none"> Number of residential units, hotel beds, and hospital beds within 1,600' of alignment Number of residential units within 500' of alignment
Cost	
Cost	<ul style="list-style-type: none"> Planning-level construction cost (cost per mile and grade seps). Planning-level right-of-way cost

Screening Results

A comparative evaluation of the candidate alternatives was conducted using the evaluation criteria outlined in **Table 3**. The three Candidate Alternatives were compared to each other across criteria and given a rating of 1, 2, or 3 to indicate better performing or more supportive candidates measured against one another. The

outcomes for each alternative were summarized and used to rank the alternatives. A summary of the results is shown in **Table 4** and more detailed descriptions are provided on the subsequent pages.

Table 4. Candidate Alternative Evaluation Matrix

Evaluation Criteria		Metric Description	Candidate A (24.4 miles)		Candidate B (24.2 miles)		Candidate C (22.5 miles)	
			Metric	Score	Metric	Score	Metric	Score
Land Use	Land Use Compatibility	Number of residential units within 1/4 mile	283	3	939	1	827	2
		Acreage of protected open space and prime or unique farmland within 1,000'	1,365	1	682	2	514	3
	Compatibility with Planning Policies	Percentage of alignment within a compatible zoning district	65%	3	57%	2	55%	1
		Percentage of alignment within a compatible future land use	40%	3	23%	1	29%	2
	Land Acquisitions and Displacements	Estimated acreage of the right-of-way that would need to be acquired	355	1	323	3	341	2
		Estimated number of structures that may need to be acquired	15	1	0	3	0	3
Land Use Subtotal				12		12		13
Transportation	Traffic and Safety Impacts	Number of assumed roadway closures	6	1	3	3	4	2
		Number of assumed at-grade railroad crossings	12	1	7	2	3	3
		Daily vehicles potentially impacted at an at-grade railroad crossings	56,700	1	34,800	2	15,900	3
		Number of anticipated grad-separated crossings	4	3	8	2	9	1
	Rail Operations	Ease of connections to UPRR	Uses existing spur	3	Proximity to mainline curve & development	1	Proximity to water treatment facility	2
		Number of opportunities for sidings (by milepost (MP))	MP9 to 11 MP13 to 15	2	MP7 to MP9	1	MP8 to 10 MP11 to 13 MP22 to 23	3
		Land availability for an inspection facility	MP17 to 19	2	MP15 to 17	2	MP16 to 19	3
		Track alignment geometry constraints (top: # of sharp curves, bottom: # of reverse curves)	6 5	1	2 6	2	2 5	3
Transportation Subtotal				14		15		20

Evaluation Criteria		Metric Description	Candidate A (24.4 miles)		Candidate B (24.2 miles)		Candidate C (22.5 miles)	
			Metric	Score	Metric	Score	Metric	Score
Environmental Impacts	Natural Environment	Acreage of wetland impacted	0.2 ac	2	1.5 ac	1	0.0 ac	3
		Number of historic sites impacted	0	3	0	3	0	3
		Acreage of flat-tailed horned lizard habitat impacted	152	2	71	3	317	1
	Environmental Justice	Impact to Title VI populations	Low	3	Low	3	Low	3
	Hazardous Materials	Number of contaminated/hazardous materials sites within 1/4 mile of alignment	None	3	None	3	One leaking underground storage tank	1
	Noise and Vibration	Number of residential units, hotel beds, and hospital beds within 1,600' of alignment	283	3	939	1	827	2
		Number of residential units within 500' of alignment	125	2	438	1	52	3
Environmental Subtotal				18		15		16
Cost	Cost	Planning-level construction cost	\$213M	3	\$297M	2	\$321M	1
		Planning-level right-of-way cost	\$71M	1	\$55M	3	\$57M	2
Cost Subtotal				4		5		3
Total				48		47		52

• Land Use

- **Land Use Compatibility.** Criteria considered for land use compatibility included proximity of candidate alignments to residences and proximity to protected open space and prime or unique farmland. All three candidate alignments scored similarly with Candidate B scoring slightly lower than A and C. Candidate A scored the best in this category as the land uses adjacent are more industrial, but the score was also impacted negatively due to its impact to prime or unique farmland. Candidates B and C both scored lower in this category for their potential impact to residential land uses.
- **Compatibility with Planning Policies.** All candidates align well with compatibility of existing zoning districts with Candidate A scoring slightly higher. Candidate A also scored the highest with the alignment with future land use desired by YMPO member agencies. Candidates B and C scored similarly for both criteria with Candidate C having a slightly better score of compatible future land use.
- **Land Acquisitions and Displacements.** The Candidate Alternatives performed similarly on this criterion. All three require a similar amount of acreage to be constructed, so they scored similarly for the land acquisitions criterion. Candidate A is the only alignment that requires the acquisitions of any structures, so it performed the lowest on the displacements criterion.



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

- **Transportation**

- **Traffic and Safety Impacts.** Criterion for traffic and safety impacts includes the number of assumed roadway closures, number of assumed at-grade railroad crossings, potential daily vehicles impacted, and anticipated number grade-separated crossings. Candidate A was the lowest performing alternative in this area and Candidate C scored the best. Candidate C scored well due to the lower number of potential daily vehicles impacted, fewer at-grade crossings, and assumed closures.
- **Rail Operations.** Candidate C scored the highest on this criterion with the most opportunities for sidings as well as the most optimal availability of land for a future inspection facility. It also has the fewest geometry constraints. Candidate alignment A did score higher for its connection ability to the existing UPRR, but there are fewer opportunities for sidings and land availability for the inspection facility. It also has poor track alignment geometry in comparison to the other Candidate Alternatives. Candidate B has a less optimal connection to the existing UPRR and opportunity for sidings and scored the lowest overall.

- **Environmental Impacts**

- **Natural Environment.** Candidate A and C scored similarly due to the low acreage of wetland impacted. None of the Candidate Alternatives impact any historic sites, causing them to all score evenly for the historic impact criterion. Candidate B impacts the least acreage of flat-tailed horned lizard habitat, resulting in it scoring the highest for that criterion with Candidate A and C scoring lower.
- **Environmental Justice.** Vulnerable population data was aggregated on the census tract level for analysis and observed within a quarter mile of the potential alignment. All three candidates scored similarly for the vulnerable population criterion. This is due to the low percentage of vulnerable populations near the potential candidate corridors.
- **Hazardous Materials.** No contaminated or hazardous material sites are within a quarter mile of Candidates A and B. This resulted in both candidate alignments scoring well with Candidate C scoring lower due to an identified leaking underground storage tank located within a quarter mile of the candidate alignment.
- **Noise and Vibration.** Candidate C has the least number of residential units, hotel beds, and hospital beds within 1,600 feet. Candidate B and C both scored similarly low for this criterion. Candidate C has the least amount of residential units within 500 feet of the alignment, scoring the highest for this criterion and Candidate B scoring the lowest.

- **Cost**

- **Cost.** Candidate A has the lowest planning-level construction cost at approximately \$213M whereas Candidate C has the highest at over \$320M. Candidates B and C have similar planning-level right-of-way costs at just under \$60M, while Candidate A has a higher right-of-way cost of over \$70M.

Public Input

At the request of the YMPO Executive Board, the Project Team held an extra in-person public meeting to engage the farming community within the study area who had expressed concerns about a north-south rail alignment's impact on Yuma County's valuable farmland. The meeting was held at the Yuma Civic Center on August 11th, 2022.

A formal presentation was given to the attendees that covered:

- **What is a Planning Study?** An explanation of planning studies in general, including that they look to evaluate alternatives and identify potential impacts of transportation investments. This section also



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

reinforced that the study does not look to persuade, but documents facts and analyses to inform future considerations.

- **What Prompted this Study?** A history of evaluating a north-south rail alignment in Yuma County and what has changed since the 2013 Yuma County Rail Study.
- **How Far Along is the Study?** Progress on the project to-date, the conclusions drawn from the Conceptual Alternatives screening, and the Candidate Alternative alignments.
- **What are the Next Steps?** The remaining steps in the project to come to a final recommendation.
- **Potential Future Project Steps.** Future steps that would need to be taken to advance a north-south rail alignment, including design, approvals, construction, and ongoing maintenance after construction.

After the presentation, a question-and-answer session was held to respond to any remaining concerns the attendees had. Key takeaways from the question-and-answer session include:

- Stakeholders expressed skepticism for the potential benefits of a freight rail project given the current land use and economic producers in the county, mainly agricultural production. The public was informed of potential economic development benefits coming from attracting industrial and logistics-based employers to the region, which would both benefit the employees and local agencies through increased tax receipts.
- The use of eminent domain was expressed as a concern for landowners. The attendees were informed that the project currently has no funding source identified, and in the future, it is most likely that the project will be funded privately, given the nature of the project. It is rare that privately funded projects would be granted the power to use eminent domain.
- Attendees inquired why areas to the east or west of the study area hadn't been researched as potential corridors for the freight alignments. The public was informed that east of the study area the BMGAFR extends for a very long way, and the flat-tail horned lizard habitat is also more prevalent, which make that area highly infeasible. West of the study area the soil quality is too poor to support freight rail and the cost to reinforce the soil would make the project infeasible. Additionally, there would be even more farming, residential, and transportation system conflicts as it is more heavily developed along the US 95 corridor.
- Some attendees inquired why areas outside of Yuma County were not considered. The Project Team responded that the primary task of the study is to evaluate the feasibility of a north-south rail alignment serving YMPO member agencies. Extending the study area outside of Yuma County would lessen any potential benefits to the region and would not be worth exploring for YMPO or its member agencies.
- Stakeholders inquired if investment interest in Mexico exists to support the freight rail connection south of the US/Mexico border. The public was informed that Mexican stakeholders had been engaged at multiple points during the study process and that representatives from San Luis Rio Colorado and the State of Sonora have been very interested in pursuing further investigation of a rail alignment between the US/Mexico border and a Ferromex line that runs east-west south of San Luis Rio Colorado.

TAC Input

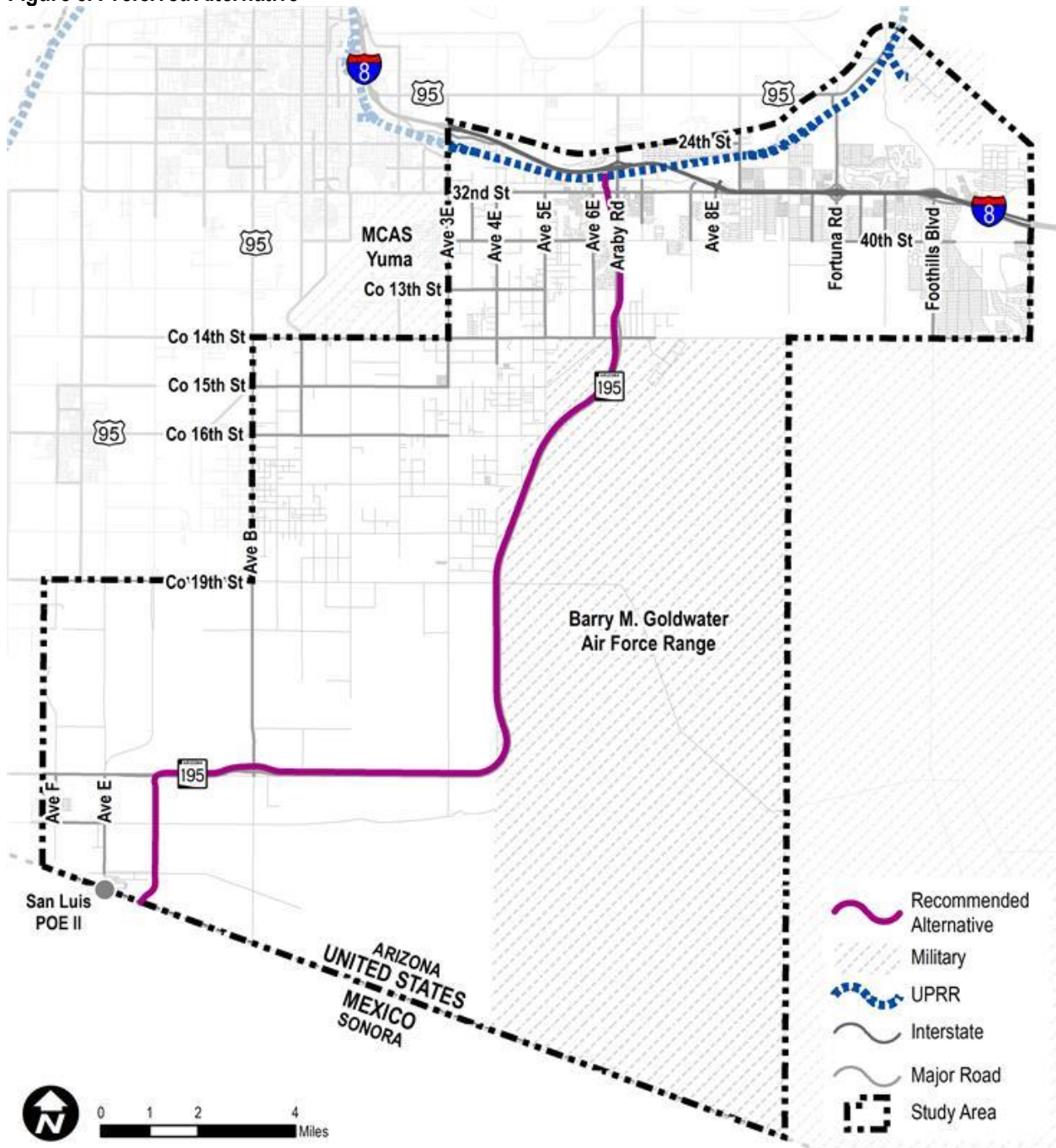
In the September 2022 TAC meeting, the TAC expressed their concern for the obstacles faced with the implementation of the Candidate Alternatives given the existing land use conditions and stakeholder inputs. The TAC agreed to acknowledge the Recommended Alternative resulting from the study but proposed conditional stipulation language be added to the recommendation stating the implementation limitations. The stipulation would acknowledge Candidate C as the recommended alternative resulting from the study as it performed the best in the Candidate Alternative screening process, but the alternative would not be considered feasible at the time of the study completion. In the future, Candidate C would be considered the Recommended Alternative, but specific conditions would have to be mitigated and or addressed to satisfy major stakeholder concerns before moving forward in the project implementation process.

4. Conclusions and Potential Future Project Phases

Recommended Alternative Alignment

The Recommended Alternative for a future north-south freight rail alignment is a slightly modified version of Candidate C. Candidate C was found to be the most feasible freight rail option based on the comparative alternatives analysis; however, the alignment at the far south end of the alignment was taken from Candidate B to avoid negative impacts to the Arizona State Prison Complex and future SR 195/Avenue B Traffic Interchange. The Recommended Alternative is shown in **Figure 5**.

Figure 5. Preferred Alternative





YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

The Recommended Alternative travels north from just east of the San Luis Port of Entry II and follows the Avenue D alignment to just south of SR 195 where it curves eastward to travel along the north side of SR 195. The alignment follows the north side of SR 195 until the road curves to the north, where it runs west of the SR 195 alignment to just north of County 14th Street. The alignment crosses to the east side of SR 195 just north of Co 14th St and runs along the east side of SR 195/Araby Rd until 40th Street where it crosses SR 195 again and follows a northwesterly path until it intersects with the UPRR ½ mile west of the SR 195/Araby Road underpass.

A 500-foot corridor has been identified as the location of the Recommended Alternative; however, the actual right-of-way requirement would only be 100 feet for the majority of the alignment. The 500-foot corridor would need to be studied in further detail in future phases of the project to determine the ideal location for the 100-foot right-of-way within the 500-foot corridor. A detailed series of maps showing the 500-foot corridor is provided in **Appendix C**.

Public Meeting Feedback

[To be completed after November Public Meeting]

Conditional Feasibility

For the Recommended Alternative to advance through the project development process in the future, there are several potentially fatal flaws that would need to be addressed:

- The Recommended Alternative would need to obtain an easement through the Goldwater AFR for much of the alignment along SR 195. MCAS is currently not supportive of implementing rail on the Goldwater AFR property, so additional engagement and detailed mitigation strategies for their concerns would need to be developed during the initial design phases of the project.
- The concept of a north-south rail line in Yuma County received largely negative feedback from the public through the multi-step public engagement process conducted during this study. For the project to move forward, efforts to mitigate negative impacts of rail, such as noise, vibration, or access issues, will need to be mitigated to the satisfaction of nearby property owners.
- Additional coordination with stakeholders in Mexico will be needed to determine a final crossing point of the US/Mexico border as well as assurances that the rail will be continued in Mexico to reach either the Ferromex line in Sonora or, ultimately, a new or expanded seaport on the Pacific Ocean to provide a viable alternative for freight bypassing California.

Inspection Facility Evaluation

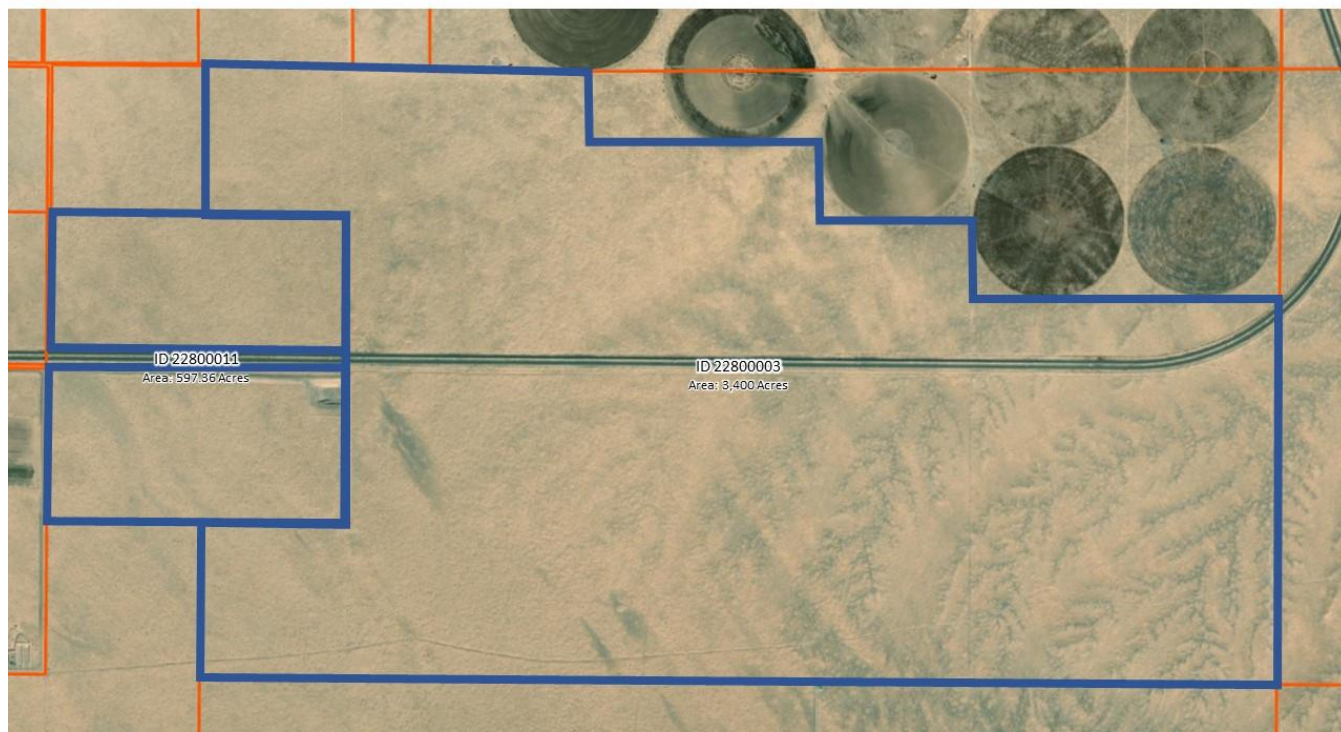
In addition to the infrastructure and right-of-way requirements for the Recommended Alternative mainline, additional infrastructure and land will be required for a border-related inspection facility. Rail cars from Mexico are required to be inspected within 35 miles of the US/Mexico border; however, most rail inspection and intermodal facilities are located within 10 miles of the border.

The specific size parcel typically needed for this international inspection facility is dependent on the number of rail cars, trucks, and lifts. Generally, these facilities tend to be approximately 230 acres in size – approximately 10,000 feet long by 1,000 feet wide running parallel to the mainline track. Parcels along the Recommended Alternative alignment were reviewed to determine if any appear to be suitable for development into the international inspection facility. A location along the east-west portion SR 195 was identified as the most suitable location for an inspection facility. Two parcels appear to be able to easily accommodate the inspection facility as shown in **Table 5** and **Figure 6**, one owned by the City of Yuma and one by the US Bureau of Reclamation (BOR). A portion of either of these parcels could be acquired for the inspection facility; in general, obtaining land from the City of Yuma would be more feasible than acquiring land from the BOR.

Table 5: Inspection Facility Opportunities

Parcel ID	Acreage	Use Code	Primary Use	Ownership
22800011	597.36	9700	Municipal, Vacant Land	City of Yuma
22800003	3,400	9400	Federal, Vacant Land	US Bureau of Reclamation

Figure 6. Inspection Facility Opportunity Parcels



Intermodal Facility Evaluation

To transfer cargo between the Recommended Alternative, which will likely be operated by a short line railroad company, and UPRR or trucks that will take cargo to its final destination, an intermodal facility will need to be constructed. The specific size needed for an intermodal facility is dependent on the number of rail cars, trucks, and lifts. Generally, 50 to 100 acres would be required to adequately house an intermodal facility. A review of parcels or groups of parcels along the UPRR within a reasonable proximity to the connection with the Recommended Alternative was performed to identify potential sites that could accommodate an intermodal facility. Three alternatives were identified:

- **Area 1.** The area south of UPRR surrounding the connection point between the Recommended Alternative and the UPRR
- **Area 2.** The area south of UPRR between I-8 and the Agua Viva Water Treatment Facility
- **Area 3.** A location in Wellton north of I-8 and the UPRR and just west of Avenue 45E

Area 1

Six parcels were identified, near the connection point between the Recommended Alignment and the UPRR, which are largely vacant or used to store vehicles. Details on these parcels are provided in **Table 6** and a map of the parcels is shown in **Figure 7**. Combined, the six parcels have a total area of 63.71 acres and provide direct access to both the UPRR and the Recommended Alignment. These parcels are located adjacent to SR

195 and very near I-8, providing strong connectivity to the regional truck network. Four of the five privately owned parcels have a single owner, theoretically allowing for easier acquisition of the property.

Table 6. Potential Intermodal Facility Area 1 Parcels

Parcel ID	Acreage	Primary Use	Ownership
69732002	4.14	Vacant Land, Undetermined Use	Private*
69732004	4.82	Vacant Land, Undetermined Use	Private
19704022	15.71	Agriculture, Field Crops	Private*
19704019	5.28	All, Limited Use Property	UPRR
19704020	10.71	Commercial, Automobile/Truck – Sales Storage Lot	Private*
19704021	23.05	Commercial, Office Building – one story	Private*
63.71	Total Acreage		

*Parcels owned by the same owner

Figure 7. Potential Intermodal Facility Area 1 Parcels



Area 2

Three parcels located south of UPRR between I-8 and the Agua Viva Water Treatment Facility were identified as another possible location for an intermodal facility. Details on these parcels are provided in **Table 7** and a map of the parcels is shown in **Figure 8**. This site was also identified during the first round of stakeholder meetings as a potentially viable location for an intermodal facility. These parcels are currently vacant, are large enough to accommodate an intermodal facility (with a combined total acreage of 103.09 acres) and are located near the I-8/Avenue 8½ E traffic interchange, which can provide direct access to the regional truck network.

Several constraints of the Area 2 site were identified. The largest parcel has a large pit in the middle which would need to be filled in, adding to the cost of constructing an intermodal facility on this site. There is no direct roadway access to the site; access would likely also require acquisition of a portion of the parcel on the south side of the canal that forms the southern boundary of the site as well as construction of a bridge over the canal itself, adding to the expense of the facility. Additionally, because the site is located approximately 1.5 miles east of the connection between UPRR and the Recommended Alternative, an agreement between the future short line operator and UPRR would need to be accepted by both companies to allow the short line operator to use UPRR's track in this area.

Parcel ID	Acreage	Primary Use	Ownership
69816002	9.7	Vacant Land, Undetermined Use	Private
69824001	10.04	Vacant Land, Undetermined Use	Private
19702001	83.35	Government, Federal Vacant Land	Federal
	103.09	Total Acreage	

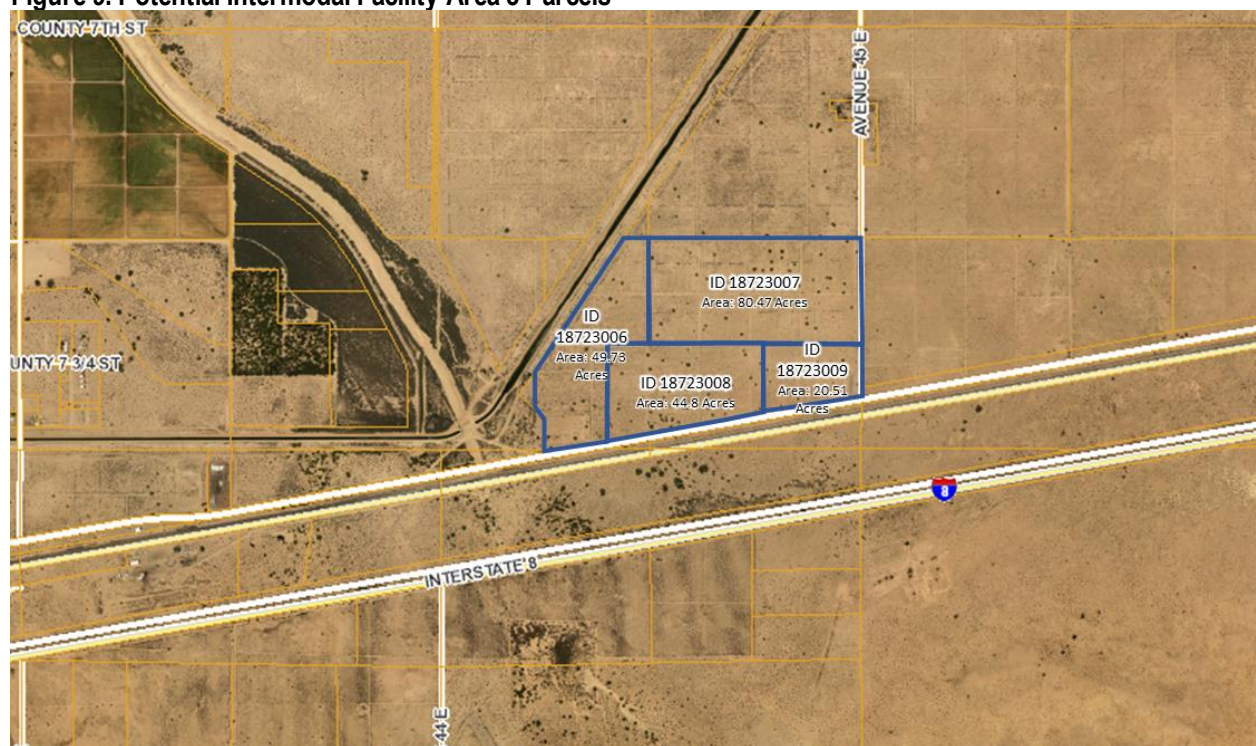
Four parcels were identified in the 2013 Yuma County Rail Plan that designated an area in Wellton for an industrial park. This site is located north of I-8 and the UPRR and west of Avenue 45E. Details on these parcels are provided in **Table 8** and a map of the parcels is shown in **Figure 9**. In total, these parcels combine to 195.51 acres. While not located in the direct proximity of the recommended alignment, this location is adjacent to the existing UPRR and near to I-8, allowing for adequate access to the regional truck network. Three of the four parcels are owned by a local utility company, with the remaining parcel being owned by a separate private owner.

24

Table 8. Potential Intermodal Facility Area 1 Parcels

Parcel ID	Acreage	Primary Use	Ownership
18723006	49.73	Vacant Land, Undetermined Use	Private
18723007	80.47	Vacant Land, Undetermined Use	Private
18723008	44.8	Vacant Land, Undetermined Use	Private
18723009	20.51	Vacant Land, Undetermined Use	Private
195.51	Total Acreage		

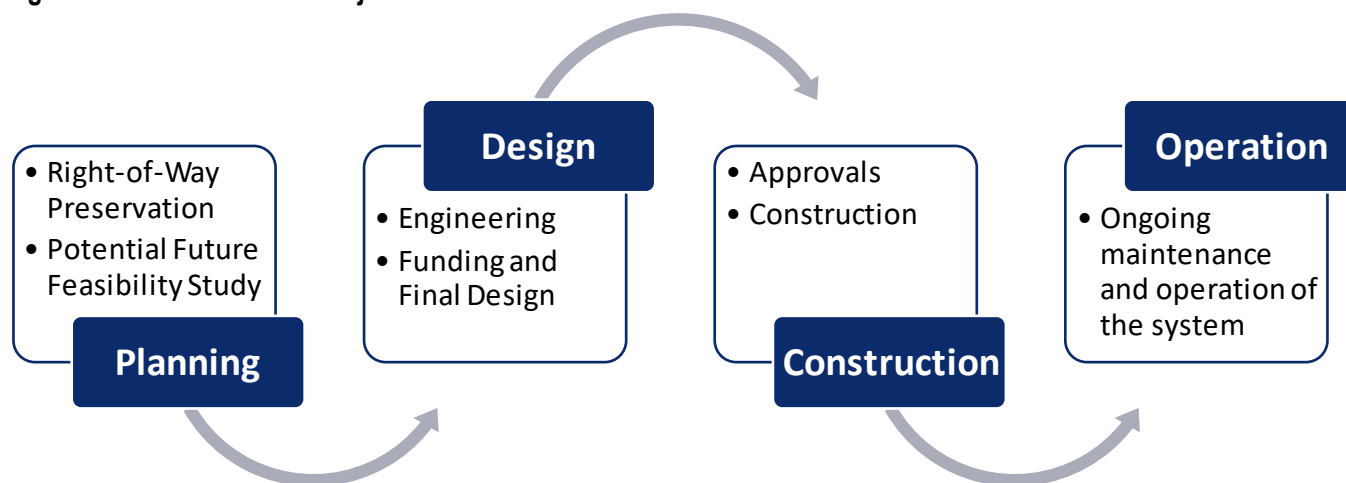
Figure 9. Potential Intermodal Facility Area 3 Parcels



Potential Future Project Phases

With a Recommended Alternative in place, YMPO and its member agencies can properly prepare for a project in the future when conditions and opportunities are right. A summary of the steps that would need to occur between this feasibility study and construction of a north-south rail alignment is shown in **Figure 10**. Each of these major phases are multi-year processes. If the project development process were to continue, it would likely take upwards of 10 years before construction would take place.

Figure 10. Potential Future Project Phases



• Planning

- **Right-of-Way Preservation.** Now that the 500' corridor for the Recommended Alternative has been established, YMPO member agencies should ensure that new development that would prevent use of this corridor for a future rail alignment does not receive a permit.
- **Potential Future Feasibility Study.** If right-of-way is not preserved or circumstances in the county change drastically from the existing conditions documented as part of this study, a follow-on feasibility study may be warranted if the Recommended Alternative becomes infeasible due to constructability constraints.

• Design

- **Engineering.** If the previously stated issues with public acceptability, MCAS objections, and assurances of stakeholders in Mexico are addressed, preliminary engineering could begin on the Recommended Alignment. The first phase of design would need to identify the specific right-of-way needs within the 500-foot corridor identified in this study and do more detailed hazard avoidance and impact mitigation investigation.
- **Funding and Final Design.** Identifying investors and a short line rail operator would be a critical step in the implementation of the Recommended Alternative as the project construction will likely need to be privately funded. Once investors are committed, final design of the rail alignment can proceed.

• Construction

- **Approvals.** After final design is complete, approvals from a variety of entities will need to be acquired, including state and federal environmental approvals and local planning and zoning approvals.
- **Construction.** If all the required approvals are obtained, right-of-way would need to be negotiated and purchased. Only after all of the preceding steps can construction of the rail alignment begin.

• Operation

- **Ongoing Maintenance and Operation of the System.** After construction, the short line rail operator will operate the system in conjunction with an operator in Mexico on the portion of the line that continues south of the US/Mexico border. They will also be required to fund and perform routine maintenance and respond to community complaints along with their investors. They will also need to coordinate with UPRR for the transfer of cargo to and from the short line.



Appendix A. Stakeholder Engagement Summaries

Arizona Department of Transportation

Stakeholder	Position	Interview Date
Bruce Fenske	Southwest District Administration	May 25, 2022
Mark Hoffman	Govt. Relations & Outreach Manager	June 1, 2022

Key takeaways and considerations resulting from discussions with ADOT Stakeholders include:

- Residents located in newer subdivisions along NC-1 and NC-2, may have issues with the construction/operation of a heavy rail facility along either of those routes
- N-1/N-2 have industrial uses (packaging plants) located within that area
- N-1/N-2 may also have a potential for adverse impact(s) to MCAS Yuma
- N-3/N-4, along the I-8 corridor, traverse the booming residential area in the Yuma Foothills region
- Construction of a new heavy rail facility along the canal alignment (N-3), will cause great concern to the owners/customers of the canal
- N-5 Alternative may have a new east-west collector or arterial roadway extension along the County 14th Street alignment to serve continuing growth and development
- N-5 and the north-south crossing of I-8 could be the easiest way to connect to UPRR Sunset Route Mainline, potentially the alternative with the least amount public resistance
- N-4 alignment had a lot of resistance in the past in relation to the construction of additional roadway capacity improvements, stakeholders along this alignment will likely not be in favor of a new heavy rail facility
- NC-1/NC-2 along with SC-1/SC-2 traverse heavy concentrations of long-time agricultural uses and newer residential subdivisions
- A new heavy rail facility following NC-1/NC-2 & SC-1/SC-2 alignments will receive mixed reviews from agricultural stakeholders
- NC-1/NC-2 and then transitioning to NC-5 will need to adhere to ADOT access control limits/restrictions when the alignment crosses the SR 195 facility, anticipate having a bridge structure to cross over ADOT's ROW
- If you follow S-2 to S-3 with a linkage to S-4 on the east side, you could avoid the need for a bridge to cross the SR 195 Surface Area Highway
- DOD leadership representing the Barry M. Goldwater Air Force Range will likely prefer locating the heavy rail facility along the west side of SR 195 (SC-4, NC-3, and NC-4), since they have some land on the east side of the highway, but not much
- This study will need to be aware of the environmental conditions/constraints that ADOT addressed during the design concept phase of the SR 195 corridor implementation assessment process
- The study will also need to be aware of all existing and proposed major utility corridors within the area under review for a new heavy rail facility
- Currently, Avenues D and E are under review/consideration for a new arterial facility to serve growing N/S travel demand
- SC-2 follows the Avenue B alignment, and this existing roadway is the primary N/S roadway in that area, serving a large amount of agricultural land
- SC-5 traverses agricultural land until you get to SR 195
- If closer to the San Luis II POE, could use monorails/truck traffic to move trailers to/from railroad
- Heavy rail connectivity to a new deep-water port along the west coast of Mexico had been considered in the past, however this linkage is not a priority of the current administration in Mexico
- The San Luis II POE and land just east of the agricultural fields may need to be avoided, land south of the airport and agricultural fields near that area appear to be more feasible



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

- Southern alignments are less problematic, but the “North Central” and “North” routes would have issues as they segment the denser residential areas.
- N5 alignment would be the best, followed by N3 and N4 on the northernmost part of the study area (the chilling plant may have some operations that might halt some western routes), but if there was intent to serve local businesses, the western routes could be more suitable.
- Mark didn't identify any other routes he thought should be introduced to the preliminary concepts
- ROW may be an issue (in ROW or outside ROW) would be a concern
- Pushback expected from Barry M. Goldwater Air Force Range on encroachment SC4, NC3 and NC4
- Mark felt an alignment on the east side would be more feasible, but discussion for potential on the west side of SR 195 should be considered
- N5 north of I-8 has a point where the alignment would be in a wash between two existing developments, this could be an issue
- Mark discussed the new rail line as a regional service that would tie into larger rail lines for distribution
- Potential for an alignment to the east of the Gila mountains suggested by people looking for routes that connect near Wellton, which would bypass Yuma entirely
 - These people are not interested in serving Yuma
 - “Alignment” would go through the bombing range
- GYPA and other agencies had meetings regarding a monorail that could take containers from the POE to another intermodal facility to the north
 - No alignment suggested
 - Above ground in theory
- Paul likes the alignments, and the thought process that went into choosing said alignments

Arizona Farm Board

Stakeholder	Position	Interview Date
Ana Kennedy	Govt. Relations & Outreach Manager	June 6, 2022

Discussion of opportunities and constraints included:

- Standards for construction and or future train operations near produce crops should be investigated.
- The Project Team requested guidance that could delineate which farmlands are dedicated (even half the year) to producing crops for human consumption. A GIS shapefile or a map or a drawing.
- Support the conceptual alignment routes furthest to the east (i.e., S-3, SC-4, NC-3, NC-4, and N-5)
 - Keeping the railway along the eastern alignment avoids the agricultural areas where produce is grown. The options avoid food safety/rail crossing issues.
- Kimley Horn had questions specific to special precautions or required distance along the rail lines, as well as visual guide delineating farmland from the Arizona Farm Board. However, the Board members did not delve into these topics because of their preference for the easternmost alignments.
- The Board members noted that alignments on the west end of the study area created serious concerns for growers in the area.
- The board expressed that alignment S-3 is preferred to S-1 or S-2, as the location of the S-3 alignment helps reduce traffic congestions by keeping the truck and rail ports separate.
- Additionally, Paul Brierley, the acting Yuma County Farm Bureau President, plans to reach out to Robby Barkley, a grower who was heavily engaged in the earlier railway discussions, because of the proximity of the then proposed railway to a large portion of his farmland.



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

Yuma County

Stakeholder	Position	Interview Date
Craig Sellers	Director of Development Services	June 8, 2022
Jason James	Multimodal Planning Division	June 8, 2022
Francisco Sanchez	Deputy County Engineer	June 8, 2022

Key takeaways and considerations resulting from discussion with Yuma County Stakeholders include:

- Avenue E corridor is highly unlikely to get environmental clearance, or a joint right of way acquisition based on previous experience.
- South County Landfill parcels are going to be developed for industrial use (near S-3)
- BOR unlikely to give up any right of way for railroad dedication (effects any potential alignments along the canal system).
- Suggested we meet with Greater Yuma Economic Development Council.

City of San Luis

Stakeholder	Position	Interview Date
Eulogio Vera	City of San Luis, Public Works	June 8, 2022
Jenny Torres	City of San Luis, Economic Development	June 8, 2022

Key takeaways and considerations resulting from discussion with City of San Luis Stakeholders include:

- Where the line connects with Mexico is main priority.
- Along the S3 corridor there have already been outreach efforts made for the electrical powerline project, could be worth more investigation to gauge efforts and response.
- More research needed on the existing powerline that moves south towards the border from the SR 195 corridor. May be a permit already for this path.

Economic Development

Stakeholder	Position	Interview Date
Julie Engel	Greater Economic Development Corp.	June 8, 2022

Discussion of economic development opportunities and constraints within the study area resulted in key takeaways shown below:

- Avenue E has residential development coming in near future which will be a hindrance to constructing rail.
- Recommend alternatives along SR 195 away from residential and farmland.

Marine Corps Air Station

Stakeholder	Position	Interview Date
Mary Ellen Finch	MCAS Representative	June 9, 2022
Randy English	MCAS Representative	June 9, 2022
Ronald Kruse	MCAS Representative	June 9, 2022
Jonathon Gordon	MCAS Representative	June 9, 2022
Jeremy Pennell	MCAS Representative	June 9, 2022
Jeffrey Ruby	MCAS Representative	June 9, 2022
Antonio Martinez	MCAS Representative	June 9, 14, 2022
Bill Sellars	MCAS Representative	June 9, 2022

Discussion of opportunities and constraints along the border of the MCAS artillery range resulted in key takeaways shown below:

- The eastern alignments seem to be on MCAS right of way and are undesired
- Representatives of MCAS have made it very clear that eastern alignments that use bombing range right of way are unfeasible.
- There are concerns for types of materials being transported via train near the bombing range and how incidents involving hazmat or derailment will be exasperated due to the proximity of the bombing range.
- MCAS not only owns the right of way near the conceptual alternatives but the air rights as well.
- Orphaned parcels near conceptual alternatives NC4 and NC3 have ordinances buried within them and would require extensive precaution measures and studies to allow any construction.
- Would prefer alignments most west running of the bombing range.
- Better efforts to include MCAS on future study findings need to be made.
- The N5 conceptual alternative would not be feasible as it traverses through planned housing developments associated with the air station.

City of Yuma

Stakeholder	Position	Interview Date
Jennifer Albers	Multimodal Planning Division	June 8, 2022
Jeremy McCall	Director of Utilities	June 8, 2022
Jeffrey Burt	Economic Development Administrator	June 14, 2022

Discussion of opportunities and constraints within the City of Yuma resulted in key takeaways shown below:

- 2022 City of Yuma plan is to develop spaceport in the area of Avenue A, adopted by council as public/quasi-public.
- S3 option has the potential to be the best location for entry into Mexico.
- There are State Lands negatively impacted by the N5 alternative to be considered
 - Public is very vocal in the Fortuna Foothills near N5 alternative
- Existing SPUT near US95 could be used for N5 option
- Gowan Milling and Yuma County Cotton Gin are concerned about potential rail corridor development and disturbing their operations.
- Using 4E street or 4 ½ E could impact less developed areas
- There is more acreage available between 3E and 5E for stations along existing rail
- State Lands has holding north of I-8 where N5 option is being evaluated.



YMPO Rail/Heavy Freight Alignment Study

Working Paper 2. Alternatives Analysis

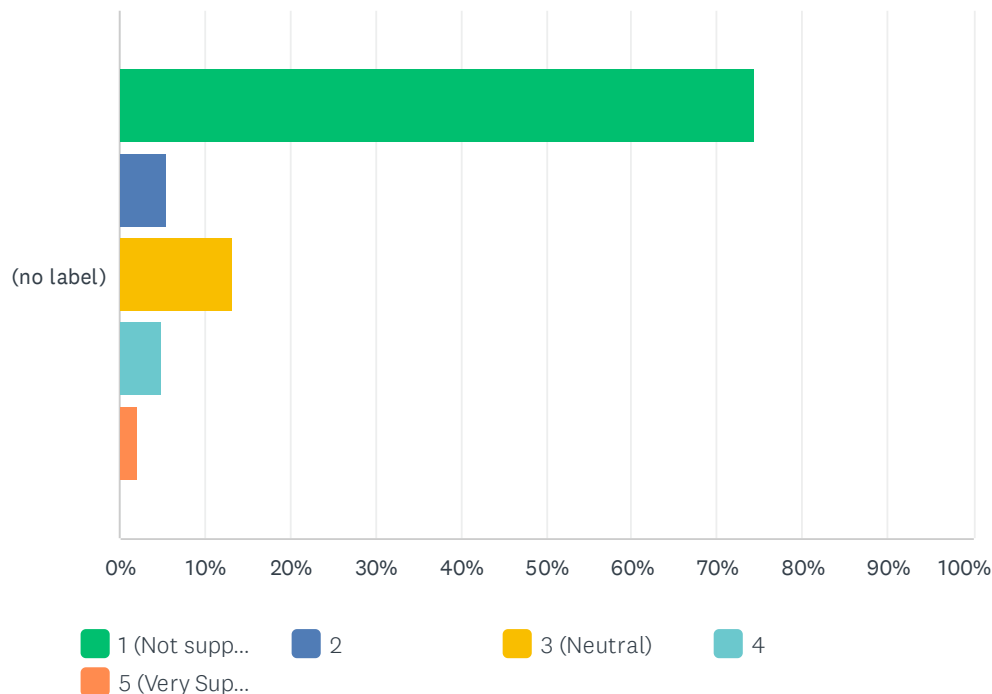
- 75 to 80 acres near Kyle and 30th Place, east of N2 option, would benefit from development with rail located in that region
- Agriculture owners may push back on railway development through their parcels.
- Agriculture fields east of Avenue 3E are mostly secured with established buildings and businesses
- There is a high sensitivity level, that has been elevated in recent years, due to discussion of potentially moving the fairground
- MCAS has concerns for impacts and potential development



Appendix B. Detailed Survey Results and Public Comments

Q1 How supportive are you of a future freight rail corridor in the Yuma Region?

Answered: 183 Skipped: 0



	1 (NOT SUPPORTIVE)	2	3 (NEUTRAL)	4	5 (VERY SUPPORTIVE)	TOTAL	WEIGHTED AVERAGE
(no label)	74.32% 136	5.46% 10	13.11% 24	4.92% 9	2.19% 4	183	1.00

#	COMMENTS:	DATE
1	I am not in support of anything that restricts traffic in Yuma. One of the great things about Yuma is that there is virtually no traffic. Also, I spent some time living in northwest Indiana where they had several of these railway Corredor's and traveling around town was absolutely awful and at times there were 30 minute delays. The only way they should even be considered is if the entire railway can be south of the city and then perhaps straight along the border fence. I live near a proposed route.	7/25/2022 3:50 PM
2	MY husband and I have NO wish to have a freight rail corridor in the Yuma region.	7/25/2022 12:51 PM
3	Absolutely not needed.	7/25/2022 2:31 AM
4	Traffic and noise mitigation have not been addressed.	7/25/2022 2:10 AM
5	When we first rented a lot in the Foothills, we asked the owner if there were any train noises with the answer being no. We have since purchased a lot and built our home in the nice quiet area a block from Avenue 15E. NO TRAINS!	7/25/2022 1:31 AM
6	I do not support this railroad because it should not be running near a growing residential/neighborhood area.	7/25/2022 12:53 AM
7	Not a good idea. Need more information	7/24/2022 9:15 PM
8	I have concerns about increased crimes and the type of railroad: either short line or UPRR	7/24/2022 8:45 PM

YMPO Rail/Heavy Freight Alignment Study | Conceptual Alternatives Survey

main line, number of dedicated crossings, need for box car transfer freight terminals, safety of rail workers on line etc. Yuma doesn't have a train freight yard like Tucson. The cost to build one might be prohibitive. There are also immigration concerns like have arisen on the short line from Nogales AZ to Tucson, AZ.

9	This is too near our neighborhood. Too dangerous and loud. This will devalue our homes and make it undesirable to buy here.	7/24/2022 7:22 PM
10	I don't want another train running near our neighborhood. Use the open desert.	7/24/2022 7:21 PM
11	You already have an existing rail line that runs to Mexico along the Levee by Colorado River. Update and use it	7/24/2022 7:13 PM
12	This will run directly behind my house! Certainly you can find a route away from neighborhoods!	7/24/2022 6:29 PM
13	The further out from town on either side would lessen the accidents that would happen at railroad crossings. Not to mention the noise going through neighborhoods. What were you thinking when you came up with this proposal? Not very much or very practical!	7/24/2022 6:08 PM
14	I am concerned with some of the facts I found on studies that were done for residential areas near rail road tracks specifically trains that produce diesel pollution, noise and uncontrolled rail crossings accidents and many more. Asthma A study completed by the Mayo Clinic measuring 3,970 people found asthma to be 40 to 70 percent more prevalent in children who lived near a railroad intersection. The pollution caused by the diesel engines permeates the air around the tracks and the homes in the nearby area. Train Track Dangers Railroad tracks are often not fenced in and many children have put themselves in danger when playing on or near the tracks. According to Operation Life Saver, "every three hours, a person or vehicle is hit by a train." Living in close proximity to railroad tracks increases the likelihood of your children walking near the tracks to get to or from school or when playing in the neighborhood. Look for tracks with fencing to ensure child safety around the railroad tracks. Cancer A study found those living near railroad tracks, especially those with high traffic volume, to have higher risk for cancer due to exposure to diesel pollution from the trains. Factors to consider are proximity to the tracks or station, volume of trains, and freight percentage. Each of the mentioned factors increases the risk. Traffic At most train intersections, a long line of cars will stop when waiting for a train to pass. These idling cars increase the pollution in the neighborhood and can contribute to impatient drivers and unsafe driving practices when the train does pass.	7/24/2022 5:35 PM
15	This is not good for housing values and safety in our communities	7/24/2022 4:45 PM
16	Without more information I question the negative impact on our growers & residential areas not to mention highways. The two recent information sessions were poorly advertised & offered limited info via storyboards. If YMPO thinks this is a viable project please schedule well publicized public meetings that would allow for questions & answers in a large enough venue to accommodate the crowd.	7/24/2022 3:47 PM
17	Should only be developed where there is no impact to current residential communities. We do not need the "710 Freeway" running through our backyards, especially with no direct economic impact to our community; as the funds will "pass by" us.	7/24/2022 3:34 PM
18	NO to N-4 because it impacts my travel and activities most. YES for N-5 because it least impacts my travel and life. NO to NC-2m NC-1, SC-1, SC-2 because they create additional opportunities for vehicle vs train accidents in this North Central and South Central road net that already sees many vehicle crashes at intersections with South County people just not paying attention. Yes to NC-4 & NC-3 because it stays near SR195 corridor. Yes to SC-3 & SC-4 because it stays near SR195 corridor. Prefer S-3 because it pulls traffic away from San Luis city congestion. Isolates illegal cross border traffic into more rural area.	7/24/2022 1:20 PM
19	The existing road infrastructure is already choked with traffic and adding more railroad crossings and intermodal freight traffic will clog up the system even more. Frequently hazardous materials in bulk quantities are transported via train. These tracks would push that material into residential neighborhoods and would cause increased risks and dangers to residents. What would Yuma get from this proposed line? How would Yuma benefit? It's commercial traffic going in and out of Mexico then to a transfer yard for distribution out. Yes there would be some (few) jobs created, but at what cost to the environment, neighborhoods, and communities.	7/24/2022 1:20 PM
20	Additional train traffics through residential neighborhoods is not something I support. Traffic is	7/24/2022 1:14 PM

YMPO Rail/Heavy Freight Alignment Study | Conceptual Alternatives Survey

already a concern at the crossings at 9E with school buses and residential traffic.

21	I live off Abe 8E. I feel a freight line running this close to a residential area, that is still expanding, would not be healthy to those residents all ready living there, but future residents that may choose to. This would lower our quality of life.	7/24/2022 12:55 PM
22	Anyway this is routed ruins someone's quality of life, and potentially our health with added pollutants. Hell no!	7/24/2022 12:33 PM
23	This project would effect the value of my home. The noise and distance from a railroad make a huge difference.	7/24/2022 12:24 PM
24	I can see it might be beneficial but do not want it anywhere near my proprty-would impact my property value negatively, and affect my health and lifestyle.	7/24/2022 12:04 PM
25	If there are to be train crossing highways, the safest equipment to keep motorist and pedestrians safe is an absolute must! ON ALL CROSSINGS!	7/24/2022 12:02 PM
26	This project will cause more unsafe areas in our city by crossing major streets. Property values will go down. Illegal immigration will increase and it's already high. Additionally, the noise and pollution this will cause for our city and agriculture is unacceptable. Do not do this to our city.	7/24/2022 11:54 AM
27	We do not want this freight line. Why cut up Yuma...	7/24/2022 11:18 AM
28	N1 and N2 go very near to the Sun Leisure Estates community which I live in and we already have enough noise from the MCAS airfield, especially in March and September during training.	7/23/2022 3:05 PM
29	Yuma, and San Luis, needs industrial growth to provide good paying jobs for our citizens. Industry often needs rail service - and Yuma has lost industrial opportunities in the past due to lack of rail service. We have much land that is zoned industrial, especially around MCAS where other development is limited by the noise zones. Let's provide rail service to this land (Routes N-2 and N-1). Let's connect commercial and industrial in San Luis near their new port of entry (Route S-1) by rail to the mainline of the UPRR. And let's extend the rail line to the border and across so that maquiladora business can thrive in SLRC. Yuma's No. 1 need is better jobs - a rail line and the industrial growth that would accompany it go a long way towards providing those better jobs.	7/23/2022 1:06 PM
30	No thank you.	7/22/2022 8:23 PM
31	Yuma plays an extremely important role in feeding our nation, removing any agriculture land would play a major role with food insecurity. Each year there is less farm ground in Yuma County for growing vegetables with some of the most productive in the Yuma Valley. Another alternative between 3E and 5 E would be disastrous, as well, with the U. S. Marine base, airport, significant number of residential housing, and again a productive farm area.	7/22/2022 8:11 PM
32	I do not want a train that close to my home.	7/22/2022 5:27 PM
33	I believe going with N-1 N-2 would be the best option as it will not interfere with local homes or subdivision in the proposed area.	7/22/2022 2:33 PM
34	I do not support any current version of this project.	7/21/2022 11:59 PM
35	The NC-1 and NC-2 and the S-1 and S-2 would destroy highly productive farmland.	7/21/2022 7:14 PM
36	Need better info before a truly informed comment can be voiced.	7/21/2022 7:07 PM
37	The concept is a giant waste of time. Mexico will never build rail to Yuma County's border. I realize we must plan ahead but we need to wait until Mexico actually begins construction then the chances of it becoming a reality will rise from 0% to 15%. We will be boarding cruise ships in Rocky Point well before this happens. lol	7/21/2022 5:11 PM
38	We as long time yuma, Arizona residents 23 years do not want to ruin our beautiful city by a stinking RR blocking traffic and disrupting our peace send it back to mexacali calif.another costly govt.trying to screw yumans.	7/21/2022 2:04 PM
39	Araby roundabouts do not support large container trucks. Araby has new hospital and major access to schools K through College.	7/21/2022 12:46 PM
40	Any route chosen will be very expensive to build. Why did you not include the old rail route that is on the levee and was operational until the mid 90's ? It extends to County 18th and would	7/21/2022 12:00 PM

YMPO Rail/Heavy Freight Alignment Study | Conceptual Alternatives Survey

require only a few miles of disruption to existing property. It connects with the UPRR at there old downtown yard. You would eliminate having to go under I-8, and significantly reduce the need for road crossing's. Apparently I am not able to submit my opinion without selecting preferred routes. I will check the boxes but not in support of any route. Just as a way to submit my opinion. Michael Edgar

41	The amount of lines that are purposed is extreme and goes through too many residential areas.	7/21/2022 11:35 AM
42	We don't need the mess and disruption. Also it will cause traffic congestion. Are RR crossings going to underpass's or overpass's? Put it somewhere else.	7/21/2022 11:19 AM
43	How many times do we have to say NO! There currently is nothing to transport by rail, previous studies by GYEDC have demonstrated that. Is the port in Mexico ever going to happen? Do you think letting it lie for 9 years and then bring it back will change anything? Kill it and forget it	7/20/2022 9:49 PM
44	popop	7/20/2022 12:55 PM
45	Blah Blah blah	7/20/2022 12:54 PM
46	Depends on the final location of the rail corridor.	7/20/2022 11:46 AM
47	It would be very disruptive to agricultural production and resident travel, not to mention decrease home values.	7/20/2022 1:15 AM
48	But NOT NC2! It runs smack next to our Sun Leisure Estates development. We get enough noise from the air base. We should NOT have to put up with freight train noise as well! Please avoid going so close to residences. Thank you.	7/19/2022 9:24 PM
49	While I am open for the expansion of business to Yuma/Yuma county. I'm not supportive of taking or relocating businesses or home owners when there is already a service provided. In this case there is already a rail line that pretty much runs from the U.S./Mexico boarder. Located in the west county running north bound then east bound along the northern boundary of the city/county. This line already ties into the UPRR near the Ocean to Ocean bridge. It makes better business since to reuse this route. The land is already purposed for this situation. It wouldn't take as much to bring it up to modern standards.	7/19/2022 5:38 PM
50	No. No. No. No to all if it.	7/19/2022 2:39 PM
51	We don't support this project. Take it off the table.	7/19/2022 11:25 AM
52	Property values will suffer If a corridor must be built it should not be run through the city or it's rural communities.	7/18/2022 6:33 PM
53	I am all for commerce. However, commerce should occur in the most commercial zones. Commerce (trains) and residence's do not mix! Against plan N5	7/18/2022 5:57 PM
54	None of the proposed pathways near residential areas is a good option. You are going to rattle manufactured homes off their foundations.	7/18/2022 4:38 PM
55	Border security is paramount. No corridor should be considered until the border crisis is resolved and even then, a heavy rail connector should be located outside the metropolitan areas.	7/18/2022 4:33 PM
56	No one wants their property value destroyed by installing tracks through neighborhoods. There is enough open desert where there are not existing neighborhoods	7/17/2022 4:02 PM
57	I don't support this because it will devastate area farm land.	7/16/2022 2:09 AM
58	It is right next serval neighborhood and hundreds of families. Not only will be a noise factor, but not mention property will depreciate. The list go on from there.	7/15/2022 10:39 PM
59	There is already enough traffic, both rail and road, coming through Yuma	7/15/2022 1:52 PM
60	The Foothills is growing rapidly and in a good way. This proposed railway will be horrible for us residents and depreciate the value of our homes. I do NOT want this!	7/14/2022 11:42 PM
61	Freight rail will kill property values. The Foothills are growing in a good way and this will end that.	7/14/2022 11:36 PM
62	As a property owner, I am not for this at all. Thus, I am not choosing 'best choices' below, as	7/14/2022 9:05 PM

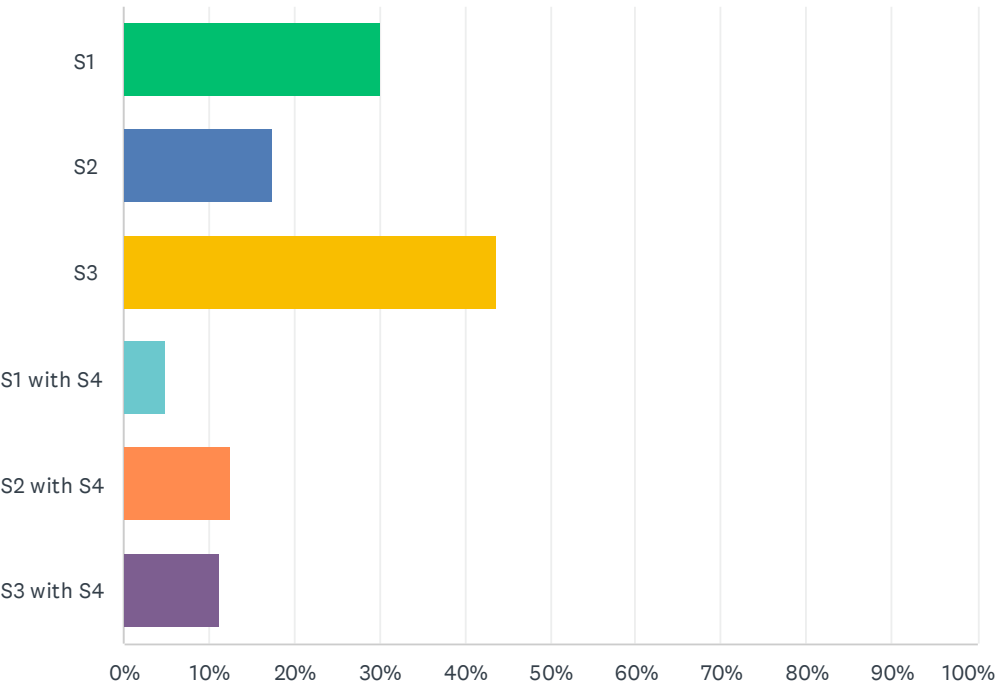
YMPO Rail/Heavy Freight Alignment Study | Conceptual Alternatives Survey

the only choice is a big NO to this idea. Most if us came to the foothills to get away from city life. Unfortunately, the city keeps trying to cram itself down our throats.

63	Terrible idea running heavy trains through these neighborhoods that I just bought an expensive retirement home in the serene foothills	7/14/2022 7:55 PM
64	These are residential areas.	7/14/2022 7:41 PM
65	just go ave F all the way north or just run it along the levee road. then just jump across freeway and connect in winterhaven ca.	7/14/2022 5:49 PM
66	The Foothills is for the most part residential, not commercial and I do not believe citizens want to have to listen to and deal with this in our area	7/14/2022 5:25 PM
67	N5 would impact the least, N4 would be 2nd choice. NC 3 & 4 are about equal. SC4 seems the best way to connect S4 and then S2. This seems to equal the fewest crossings and disruption of vehicular travel.	7/14/2022 5:15 PM
68	This would be very noisy and intrusive to the homeowners here as we are no where near the tracks now and do not want to be either. Too many homes and outdoor activities in this area for this. Keep it on existing rails or away from homes that are not near tracks.	7/14/2022 4:21 PM
69	Will drop our property values.	7/14/2022 3:48 PM
70	I live off of 6e and DO NOT WANT THIS RUNNING PAST MY HOME	7/14/2022 1:53 PM
71	Routes are too close to residential neighborhoods	7/14/2022 1:37 PM
72	Not interested in having a freight line so close to my residence. Other routes can be created that will not affect so many home owners.	7/14/2022 11:23 AM

Q2 Which Southern Alternative do you feel would be best for a future rail corridor? You can select up to two.

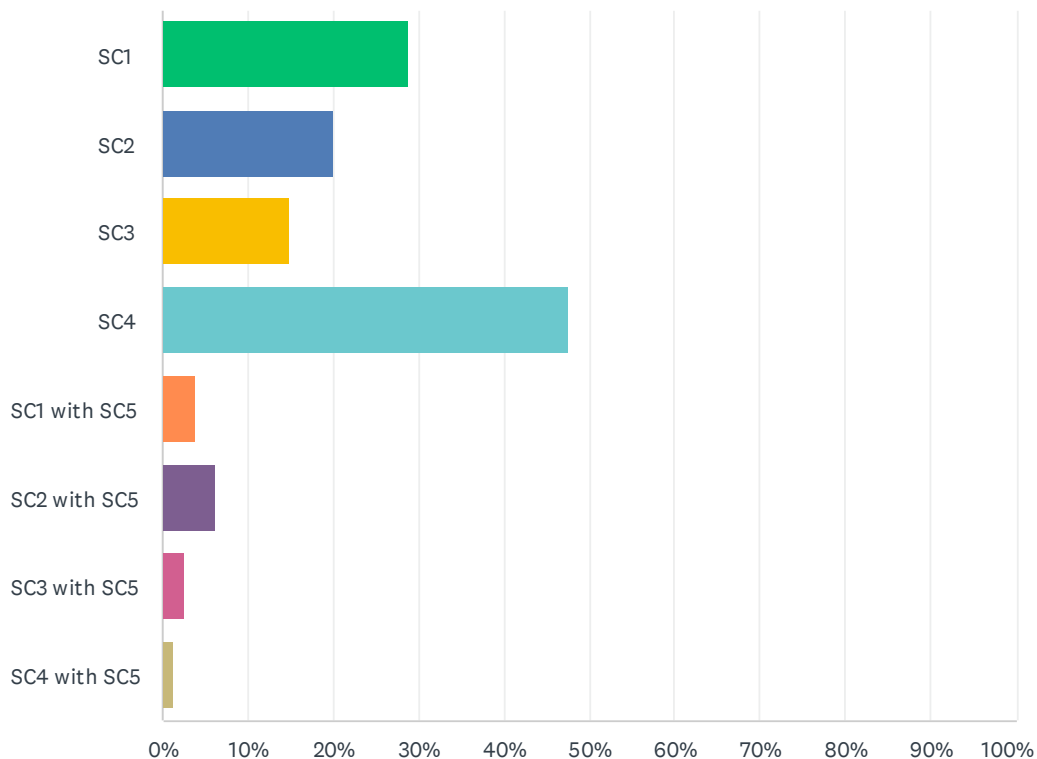
Answered: 80 Skipped: 103



ANSWER CHOICES	RESPONSES	
S1	30.00%	24
S2	17.50%	14
S3	43.75%	35
S1 with S4	5.00%	4
S2 with S4	12.50%	10
S3 with S4	11.25%	9
Total Respondents: 80		

Q3 Which South-Central Alternative do you feel would be best for a future rail corridor? You can select up to two.

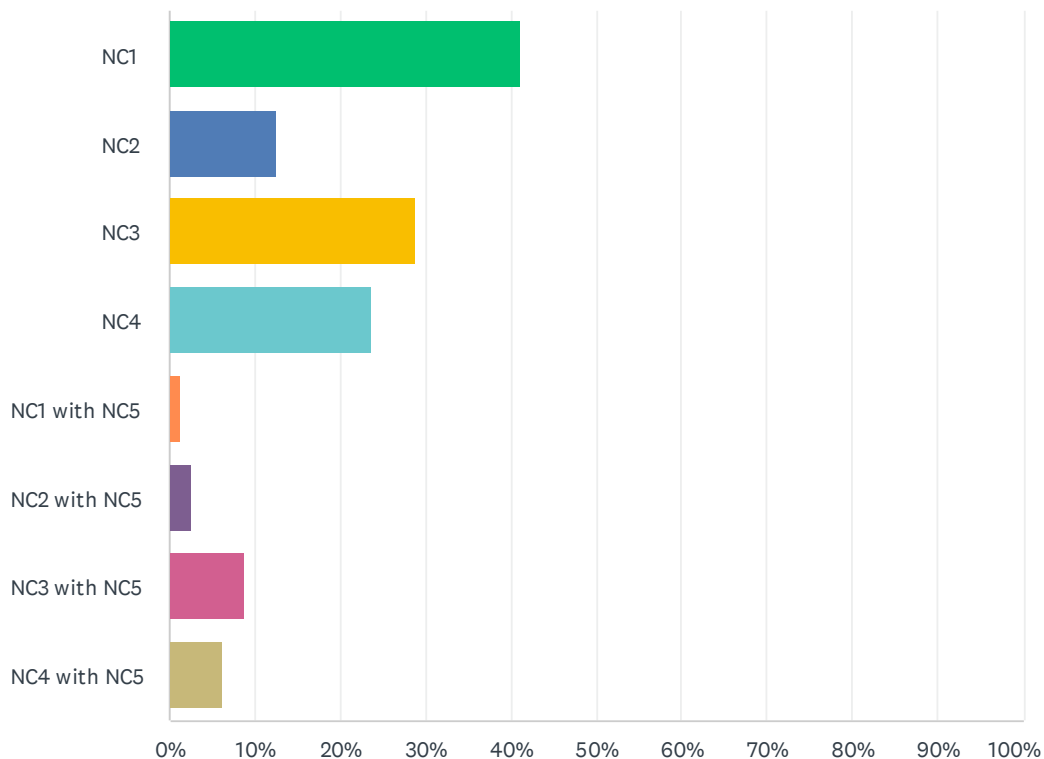
Answered: 80 Skipped: 103



ANSWER CHOICES	RESPONSES	
SC1	28.75%	23
SC2	20.00%	16
SC3	15.00%	12
SC4	47.50%	38
SC1 with SC5	3.75%	3
SC2 with SC5	6.25%	5
SC3 with SC5	2.50%	2
SC4 with SC5	1.25%	1
Total Respondents: 80		

Q4 Which North-Central Alternative do you feel would be best for a future rail corridor? You can select up to two.

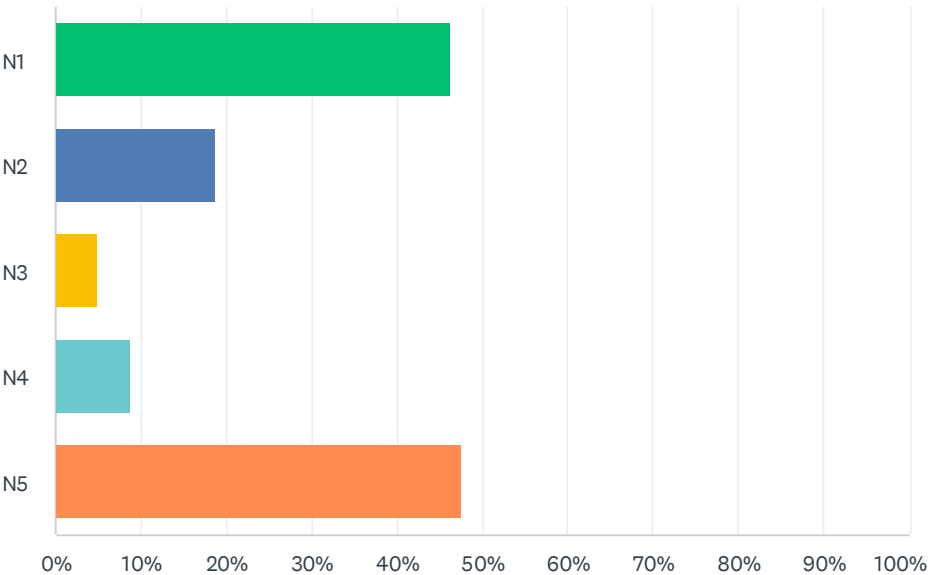
Answered: 80 Skipped: 103



ANSWER CHOICES	RESPONSES	
NC1	41.25%	33
NC2	12.50%	10
NC3	28.75%	23
NC4	23.75%	19
NC1 with NC5	1.25%	1
NC2 with NC5	2.50%	2
NC3 with NC5	8.75%	7
NC4 with NC5	6.25%	5
Total Respondents: 80		

Q5 Which North Alternative do you feel would be best for a future rail corridor? You can select up to two.

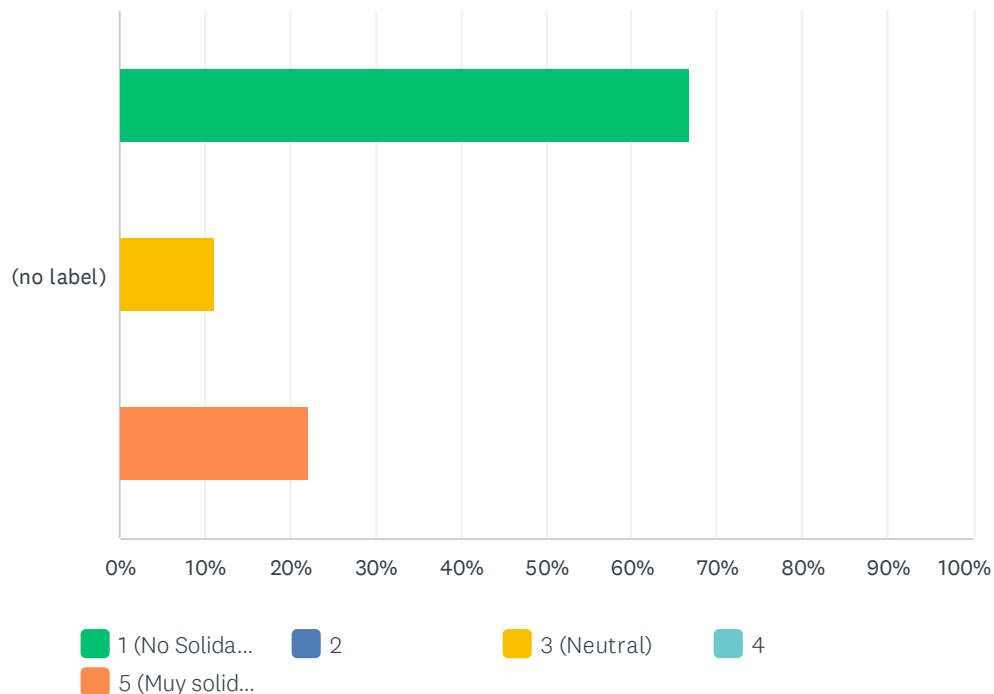
Answered: 80 Skipped: 103



ANSWER CHOICES	RESPONSES	
N1	46.25%	37
N2	18.75%	15
N3	5.00%	4
N4	8.75%	7
N5	47.50%	38
Total Respondents: 80		

Q1 ¿Cuánto apoya usted a un futuro corredor ferroviario de carga en la región de Yuma?

Answered: 9 Skipped: 0

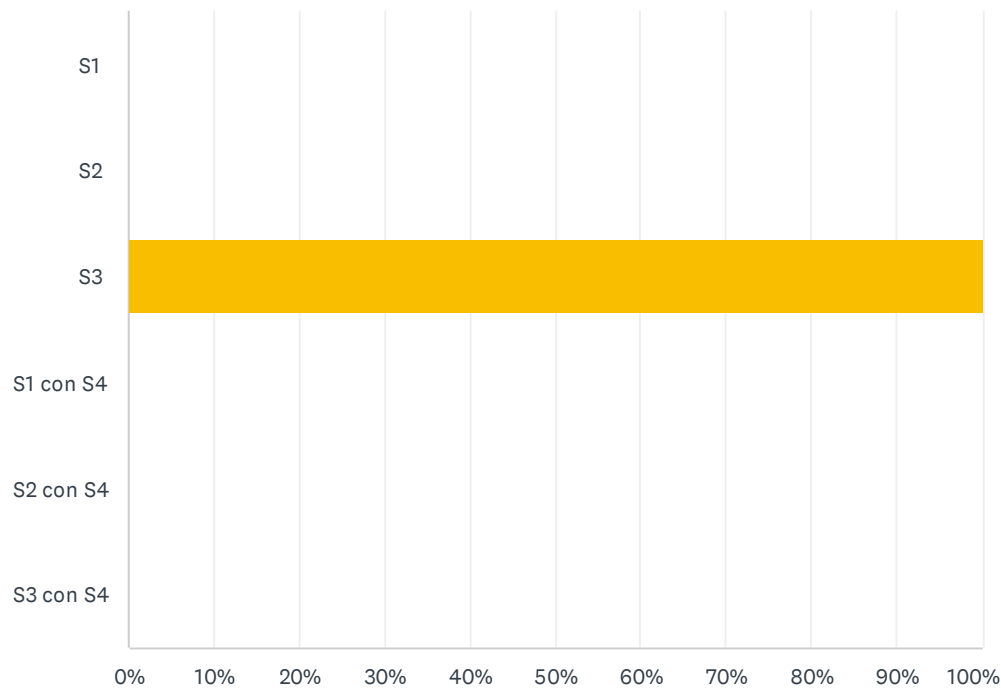


	1 (NO SOLIDARIO)	2	3 (NEUTRAL)	4	5 (MUY SOLIDARIA)	TOTAL	WEIGHTED AVERAGE
(no label)	66.67%	0.00%	11.11%	0.00%	22.22%	9	1.00
	6	0	1	0	2		

#	COMENTARIOS:	DATE
1	bueno	7/20/2022 1:07 PM
2	This is a test	7/19/2022 10:23 AM

Q2 ¿Qué Alternativa del Sur cree que sería mejor para un futuro corredor ferroviario? Puede seleccionar hasta dos.

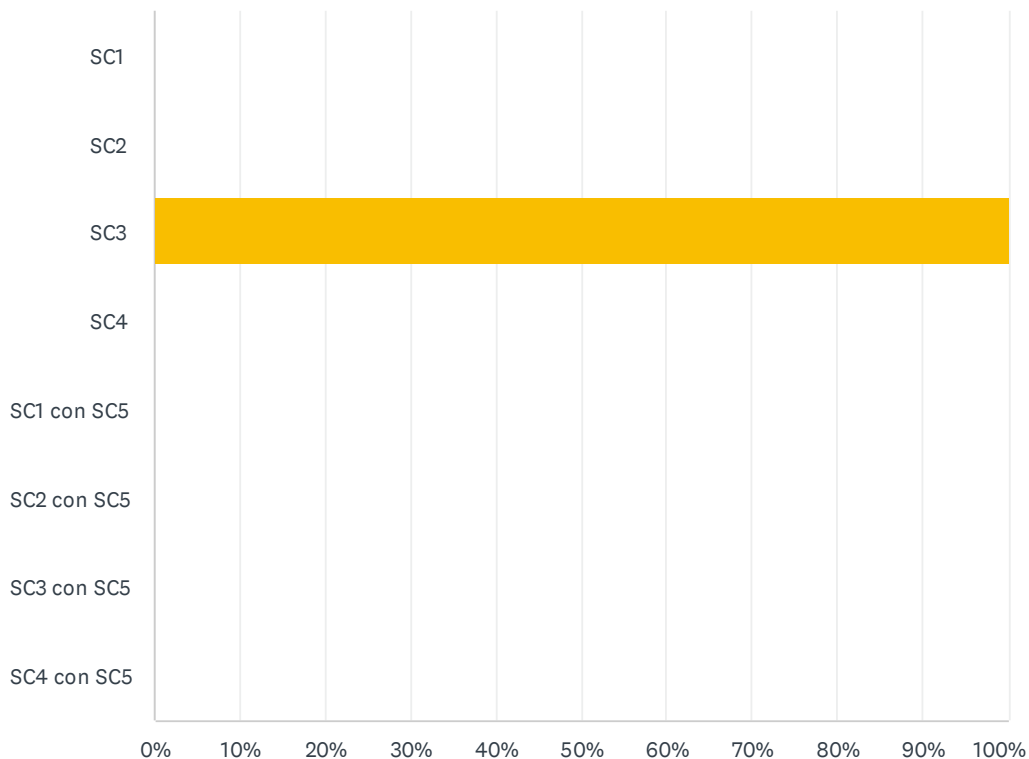
Answered: 1 Skipped: 8



ANSWER CHOICES	RESPONSES	
S1	0.00%	0
S2	0.00%	0
S3	100.00%	1
S1 con S4	0.00%	0
S2 con S4	0.00%	0
S3 con S4	0.00%	0
Total Respondents: 1		

Q3 ¿Qué alternativa centro-sur cree que sería mejor para un futuro corredor ferroviario? Puede seleccionar hasta dos.

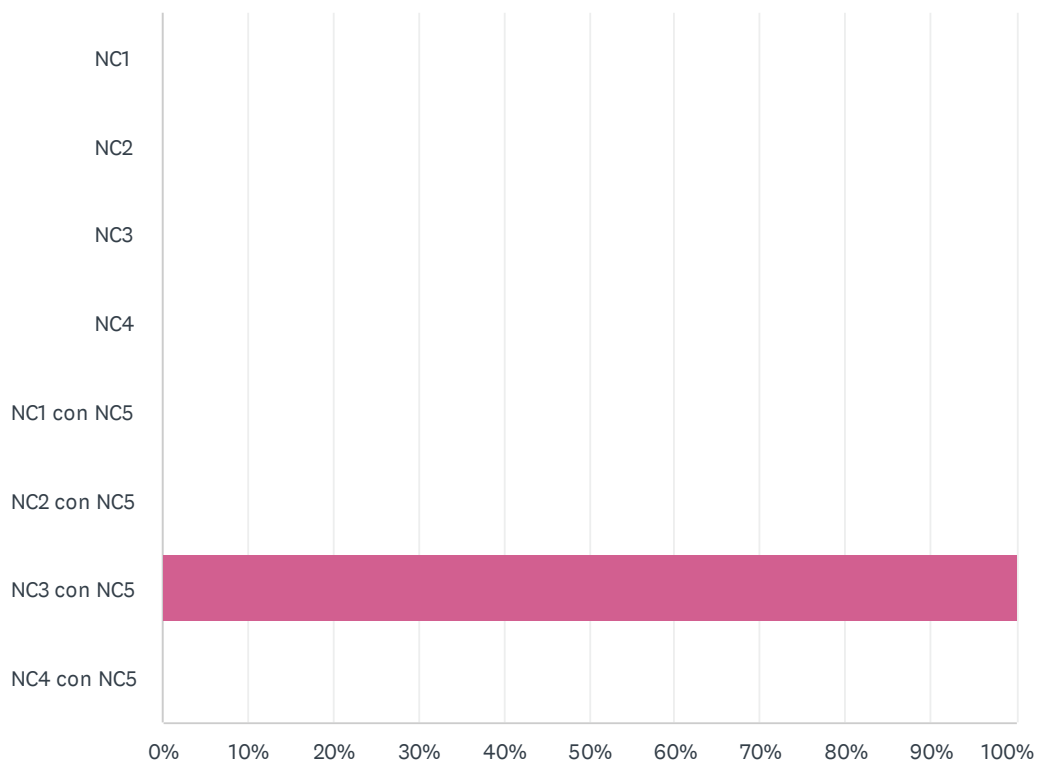
Answered: 1 Skipped: 8



ANSWER CHOICES	RESPONSES	
SC1	0.00%	0
SC2	0.00%	0
SC3	100.00%	1
SC4	0.00%	0
SC1 con SC5	0.00%	0
SC2 con SC5	0.00%	0
SC3 con SC5	0.00%	0
SC4 con SC5	0.00%	0
Total Respondents: 1		

Q4 ¿Qué Alternativa Norte-Central cree que sería mejor para un futuro corredor ferroviario? Puede seleccionar hasta dos.

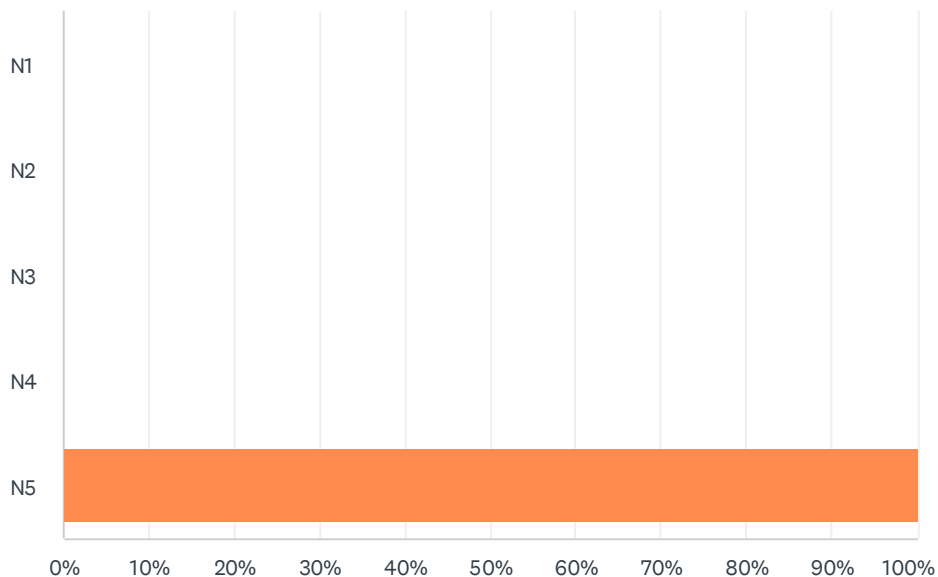
Answered: 1 Skipped: 8



ANSWER CHOICES	RESPONSES	
NC1	0.00%	0
NC2	0.00%	0
NC3	0.00%	0
NC4	0.00%	0
NC1 con NC5	0.00%	0
NC2 con NC5	0.00%	0
NC3 con NC5	100.00%	1
NC4 con NC5	0.00%	0
Total Respondents: 1		

Q5 ¿Qué alternativa del norte cree que sería mejor para un futuro corredor ferroviario? Puede seleccionar hasta dos.

Answered: 1 Skipped: 8



ANSWER CHOICES	RESPONSES	
N1	0.00%	0
N2	0.00%	0
N3	0.00%	0
N4	0.00%	0
N5	100.00%	1
Total Respondents: 1		

Emailed Comments

Comment: 1

7/24/2022

Unbelievable! All involved in approving, purchasing, developing, selling, and buying finished homes near this proposed rail line should have been informed before they developed, sold, or purchased real estate anywhere near it. Had these plans been disclosed before I purchased my home at 7853 E 36th Place in 2018, I definitely would have looked and purchased elsewhere. Please consider your own reaction to news that a rail line was being considered in an area close to your own residence, before you propose the heavy freight/rail routes outlined to those who will have to live with the noise, traffic and all other aspects associated with implementation of this project.

Comment: 2

7/11/2022

Perhaps you should start with the findings of the 2013 study.
Present what the findings were with that study and build on that.
Any rail corridor should be outside any agricultural area or irrigation district.
Any rail corridor should be outside any residential area or potential residential area.
The result would be to locate on the BMGR and located as far east as possible.

Comment: 3

8/9/2022

As a property owner in the N5 region I am adamantly opposed to placing the proposed Rail/heavy freight corridor in this area. Not only will this proposal have a direct impact on property values, it will bring additional excessive traffic into an area that already experiences a massive influx of traffic during the winter months. Additionally, I am concerned about the increase in pollution and toxic chemicals into the area. Lastly, I find it conspicuous that Yuma County is holding public meetings during the summer months when 85% of the property owners are not available to attend.

Comment: 4

8/17/2022

I attended the August 11th community meeting regarding the Rail/Heavy Freight. After following along with the PowerPoint presentation and listening carefully during the question/answer period I have come to the conclusion that the benefits for our county and its citizens will not outweigh the concerns.

I plead with the YMPO Board and the county to drop this plan and NOT BUILD THE RAIL/HEAVY FREIGHT LINE.

Comment: 5

8/18/2022

Dear to whom it may concern, I highly oppose the new train. I do not want the train to run thru Yuma anywhere. It will disrupt traffic, farming and our irrigation systems. Please do our City a service and stop this train proposal.

Comment: 6

7/28/2022

I sent a message regarding route N1 and N2 close to Sun Leisure Estates. Please correct or edit my prior message that referred to N3. Thankyou

Comment: 7

7/21/2022

To the extent that the rail/heavy freight line enters the United Staes through the San Luis Port II vicinity, the rail way line should be routed through the Avenue C corridor or further east (Ave B). The east San Luis sub-market should see continued growth over the next five to 10 years and a rail/heavy freight line through or adjacent to Ave D will impede growth and cause quality of life issues adjacent to proposed residential neighborhoods.

Comment: 8

8/18/2022

Dear Sirs: I am writing as a Yuma native and concerned citizen regarding this railroad being built. I am totally against this decision. I have several friends and family who are connected with Agricultural companies. This is not a great idea. Who is funded this railway? How are we going to prevent drug cartel from having open door to transporting drugs across this train. Who will provide security that coyotes will use this transportation to import more illegal immigration. I am concern for railway staff safety too. We need to use our local farmers not import Mexico foods where there is no safety net of how it is processed Thank you very much.

Comment: 9

8/15/2022

Would this be for citizen transportation or resource transportation?

Comment: 10

7/11/2022

I tried my best to use your form.

I recall at one point there was discussion of the old border/levy route – this still seem least disruptive other than going through the range on CO 24th – CO 19 and all the way to Welton. Just seems like a super noisy thing to run through the heart of our community with very limited potential use – I would say SL 2 is a good example, doesn't get half the truck traffic that it was supposed to (thank goodness).

I live by CO 14th and Araby (195) I want it as far away from me as possible.

Last thing – if constructed, it must have sound walls – especially if going down 14th and 195s.

Comment 11:

7/7/2022

The Yuma Metropolitan Planning Organization is conducting OPEN house for the Rail/Heavy Freight Alignment Study. We are looking at alternative options for a possible north-south rail from Mexico to the US UP RR line I would like to call in or come in and talk about it briefly. The open house engagement are July 13 & 14 South County and Yuma

Comment 12:

7/17/2022

The online survey for the train tracks is very unfair. On the paper survey, we are able to choose not supportive and choose none of the proposed tracks. But on the online survey, they are forcing us to choose at least two of the proposed routes. I told them at the open house that they needed to change it to either let people leave them blank or to have an option that says none, But they haven't done so. There are many mad people that want to fill out the survey online without supporting any of the tracks but the survey is not fair and it's not letting them choose the correct answer. Is there anyway that you can contact the gentleman that you interviewed and

ask him to make the change? I have left him a voicemail at his office, but he probably won't get that until Monday. Thank you.

Comment: 13

7/21/2022

Please keep the railway away from the canals. Derailments happen more frequently than many think and one near a canal would pollute the water or damage the canal, thereby destroying crops by polluting the soil (perhaps permanently) before the water could be shut off and/or through dehydration in the case of mere damage. Contaminated water could also flow into Mexico, creating more issues.

Comment: 14

7/12/2022

I am very unhappy with the proposed N5 route for a railroad spur. We purchased our home on Onammi Ave with the knowledge that 15E bordered state land and BLM land and that County 14 bordered the Barry Goldwater Range belonging to the Military. We currently don't have street lights or noise from traffic or railroads and really enjoy our quite nights. I do believe a route from the Union Pacific to San Luis would be beneficial, just not where it impacts so many homes.

Comment: 15

7/27/2022

No no no it is of no benefit to the railroad to in any way help Tuma with traffic crossing and no less than 10 up to 23 intersections will be compromised and that is the right word this project will completely compromise transportation in Yuma and the railroad does NOT CARE and

Comment: 16

7/28/2022

Dear YMPO: Your proposed NC-2 route runs directly by the Sun Leisure Estates development at County 14th St and 4th Ave Extension. We implore you not to run a heavy freight rail line so close to our homes. We already experience noise from MCAS, but at least that is mostly during the day. Heavy freight trains often run late at night, and they are loud. They may also be carrying toxic materials that could be dangerous so close to residences. Thank you for not building a heavy freight line near Sun Leisure Estates

Comment: 17

7/28/2022

I am a resident of Sun Leisure Estates at county 14th and 4th Ave Extension. In reviewing the proposed Routes for the heavy rail line study, I want to strongly voice my objections to n1 and especially n2 as these two would severely adversely affect our entire community of mostly elderly retirees.

Comment: 18

7/11/2022

A new rail spur from San Luis is a good idea. It should be far east side of the city of Yuma. The spur should connect with the UP main between 7E, and 9E on the NS of Interstate 8. There is an industrial park between Araby, and 8E. We need to start utilizing that space for warehousing, and Distribution centers for retail and service corporations.

If at anytime that the ports on the west coast are at capacity, then another port in Mexico, could bring freight up here. Autonomous trucks, and trucks with alternative sources of power are coming, so we need to start to plan our logistics and supply chain accordingly. Over the road freight is on its way out. The new generation of driver doesn't like the lifestyle. So a perfect

storm of new truck technology, and a new driver dynamic, should come a new logistics model to do the business of moving freight.

The time has come for more distribution centers, and intermodal yards. Intermodal freight can be transported quicker by train, than over the road. The need for drivers would be more middle mile, and last mile, rather than just middle mile. Make middle mile regional. With an enhanced intermodal, and distribution infrastructure logistics logjams can be averted. All the elements come back to rail. With a global economy, we as a country must learn to compete in a global economy. Rail is the answer. This is a good idea.

We also need to not put rail where it interferes with homes, businesses, or agriculture. Those are needed in our society also. So as far east as this can go once the rail enters the U.S. will be good for everyone. Maybe if we bring in some of our imports through Mexico, and bring them up here to Yuma, and then dispatch them to other parts of the US, then maybe we can clear this logjam in logistics.

Comment: 19

7/21/2022

I believe your survey is flawed. If you strongly disagree with the rail you are required to choose a route to complete the survey. In the various routes choices they should have included the choice of 'None of the above'

You will receive false positives.

Comment: 20

7/28/2022

Please do not build you R R line close to our community, Sun Leasure. With the Marine air base and race track so close, the added noise would be horable. Thanks

Comment 21:

7/11/2022

After seeing the announcement in the Yuma Sun, I went to your website to look at the conceptual alternatives survey.

1. It is not designed in a format a user can input. One cannot write on it nor check off any of the boxes.
2. The print is too small and has no option for enlargement.
3. The justification for this corridor is not written in laymen's language on the survey nor in the Sun article. I have no real idea what's going on now, what's inadequate about the present and why this is better.
4. As someone who personally writes for a mass audience, nothing here is written for a mass audience. Its transportation specialists writing for transportation specialists.
5. In neither the Sun article nor anywhere else is the cost of construction involved, the rights-of-way. Just a bland map.

At the very least the survey should be redesigned for size, readability and input. One should not have to work hard to read and respond to this.

I am going to visit an open house, then give my perceptions at a Yuma City Council meeting.

Yuma Councilmember _____

Comment 22:

7/13/2022

Dear Charles, Chris, and Peter

I represent Adrienne McLaughlin and Saint Isidore's LLC who are significant farm land owners in the Yuma valley.

I cannot attend the public open house today in Yuma, but I would like to go on record.

We would oppose any rail line that goes through any of the very fertile and productive farm land in the Yuma valley.

In years past, the Union Pacific proposed a multi-track rail line that connected Mexico to their main line in the Yuma area.

At that time, farmers and farm land owners objected to this rail line for primarily 3 reasons:

1. the lines would take farm ground out of production, for the line itself and the buffer on either side
2. the lines would create interruptions in traffic flow at each road/rail crossing, especially critical during produce harvest times.
3. the diesel locomotive exhaust put into the air would fall on the crops, contaminating the crops, and rendering the crops un-marketable.

Please seriously consider these objections and chose routes that avoid the Yuma valley farm ground.

Comment 23:

7/28/2022

Comment:

Regarding the plans for a rail system running through the county from Mexico to Yuma, I am very much opposed to it.

Regrettably, YMPO has chosen to not be completely transparent with such plans to completely disrupt and fundamentally alter rural life as we have now in the county. Notifying those that are potentially affected was insufficient. Not everyone follows local newspapers, and as such, myself and many neighbors I spoke with were completely unaware of the meetings being held in July. We also were completely unaware of the rail system being planned!

Most of us living in the county of Yuma are living here expressly because we desire a quiet, peaceable, minimally occupied community in order to live life at a slower pace compared to "city living".

Running a freight rail system through here would ruin this community in multiple aspects. Property values would decrease significantly thereby reducing tax income for the county; congestion on MANY levels would drastically increase; trash, waste and unaccountable debris would increase significantly. Agricultural properties stretching all along the proposed system would be ruined. We need agricultural land to grow cotton, alfalfa, & citrus. What about increased illegal human trafficking brought about by a rail that would destabilize our county in many ways, civilly and criminally?

As the desire for rural living increases, and more individuals buy ranchettes here in the county, it seems like a slap in the face to many residents that YMPO would consider running a rail track through or near many of our back yards!

I implore you to reconsider your plans. Put the track out in an undeveloped area like dateland or Wellton, or even the Winterhaven/Algodones/Felicity CA area that can bear the impact of a rail system without disrupting numerous individual lives and their properties!

Comment: 24

8/1/2022

Dear YMPO: Your proposed NC-2 route runs directly by the Sun Leisure Estates development at County 14th St and 4th Ave Extension. We implore you not to run a heavy freight rail line so close to our homes. We already experience noise from MCAS, but at least that is mostly during the day. Heavy freight trains often run late at night, and they are loud. They may also be carrying toxic materials that could be dangerous so close to residences. Thank you for not building a heavy freight line near Sun Leisure Estates.

Thanks for participating,

Comment: 25

7/24/2022

No to anymore train tracks through Yuma, NADA!

Comment 26:

7/12/2022

The rail should not be anywhere near homes or residential neighborhoods, and especially not near any schools. N-1 or N-2 makes the most sense, connected to NC-1 or NC-2.

Survey Comments

Comment: 27

7/25/2022

I am not in support of anything that restricts traffic in Yuma. One of the great things about Yuma is that there is virtually no traffic. Also, I spent some time living in northwest Indiana where they had several of these railway Corredor's and traveling around town was absolutely awful and at times there were 30 minute delays. The only way they should even be considered is if the entire railway can be south of the city and then perhaps straight along the border fence. I live near a proposed route.

Comment: 28

7/25/2022

MY husband and I have NO wish to have a freight rail corridor in the Yuma region.

Comment: 29

7/25/2022

Absolutely not needed.

Comment: 30

7/25/2022

Traffic and noise mitigation have not been addressed.

Comment: 31

7/25/2022

When we first rented a lot in the Foothills, we asked the owner if there were any train noises with the answer being no. We have since purchased a lot and built our home in the nice quiet area a block from Avenue 15E. NO TRAINS!

Comment: 32

7/25/2022

I do not support this railroad because it should not be running near a growing residential/neighborhood area.

Comment: 33

7/24/2022

Not a good idea. Need more information

Comment: 34

7/24/2022

I have concerns about increased crimes and the type of railroad: either short line or UPRR main line, number of dedicated crossings, need for box car transfer freight terminals, safety of rail workers on line etc. Yuma doesn't have a train freight yard like Tucson. The cost to build one might be prohibitive. There are also immigration concerns like have arisen on the short line from Nogales AZ to Tucson, AZ.

Comment: 35

7/24/2022

I don't want another train running near our neighborhood. Use the open desert.

Comment: 36

7/24/2022

This is too near our neighborhood. Too dangerous and loud. This will devalue our homes and make it undesirable to buy here.

Comment: 37

7/24/2022

You already have an existing rail line that runs to Mexico along the Levee by Colorado River. Update and use it

Comment: 38

7/24/2022

This will run directly behind my house! Certainly you can find a route away from neighborhoods!

Comment: 39

7/24/2022

The further out from town on either side would lessen the accidents that would happen at railroad crossings. Not to mention the noise going through neighborhoods. What were you thinking when you came up with this proposal? Not very much or very practical!

Comment: 40

7/24/2022

I am concerned with some of the facts I found on studies that were done for residential areas near rail road tracks specifically trains that produce diesel pollution, noise and uncontrolled rail crossings accidents and many more. Asthma A study completed by the Mayo Clinic measuring 3,970 people found asthma to be 40 to 70 percent more prevalent in children who

lived near a railroad intersection. The pollution caused by the diesel engines permeate the air around the tracks and the homes in the nearby area. **Train Track Dangers** Railroad tracks are often not fenced in and many children have put themselves in danger when playing on or near the tracks. According to Operation Life Saver, "every three hours, a person or vehicle is hit by a train." Living in close proximity to railroad tracks increases the likelihood of your children walking near the tracks to get to or from school or when playing in the neighborhood. Look for tracks with fencing to ensure child safety around the railroad tracks. **Cancer** A study found those living near railroad tracks, especially those with high traffic volume, to have higher risk for cancer due to exposure to diesel pollution from the trains. Factors to consider are proximity to the tracks or station, volume of trains, and freight percentage. Each of the mentioned factors increases the risk. **Traffic** At most train intersections, a long line of cars will stop when waiting for a train to pass. These idling cars increase the pollution in the neighborhood and can contribute to impatient drivers and unsafe driving practices when the train does pass.

Comment: 41

7/24/2022

This is not good for housing values and safety in our communities

Comment: 42

7/24/2022

Without more information I question the negative impact on our growers & residential areas not to mention highways. The two recent information sessions were poorly advertised & offered limited info via storyboards. If YMPO thinks this is a viable project please schedule well publicized public meetings that would allow for questions & answers in a large enough venue to accommodate the crowd.

Comment: 43

7/24/2022

Should only be developed where there is no impact to current residential communities. We do not need the "710 Freeway" running through our backyards, especial with no direct economic impact to our community; as the funds will "pass by" us.

Comment: 44

7/24/2022

NO to N-4 because it impacts my travel and activities most. YES for N-5 because it least impacts my travel and life. NO to NC-2m NC-1, SC-1, SC-2 because they create additional opportunities for vehicle vs train accidents in this North Central and South Central road net that already sees many vehicle crashes at intersections with South County people just not paying attention. Yes to NC-4 & NC-3 because it stays near SR195 corridor. Yes to SC-3 & SC-4 because it stays near SR195 corridor. Prefer S-3 because it pulls traffic away from San Luis city congestion. Isolates illegal cross border traffic into more rural area.

Comment: 45

7/24/2022

The existing road infrastructure is already choked with traffic and adding more railroad crossings and intermodal freight traffic will clog up the system even more. Frequently hazardous materials in bulk quantities are transported via train. These tracks would push that material into residential neighborhoods and would cause increased risks and dangers to residents. What would Yuma get from this proposed line? How would Yuma benefit? It's commercial traffic going

in and out of Mexico then to a transfer yard for distribution out. Yes there would be some (few) jobs created, but at what cost to the environment, neighborhoods, and communities.

Comment: 46

7/24/2022

Additional train traffics through residential neighborhoods is not something I support. Traffic is already a concern at the crossings at 9E with school buses and residential traffic.

Comment: 47

7/24/2022

I live off Abe 8E. I feel a freight line running this close to a residential area, that is still expanding, would not be healthy to those residents all ready living there, but future residents that may choose to. This would lower our quality of life.

Comment: 48

7/24/2022

Anyway this is routed ruins someone's quality of life, and potentially our health with added pollutants. Hell no!

Comment: 49

7/24/2022

This project would effect the value of my home. The noise and distance from a railroad make a huge difference.

Comment: 50

7/24/2022

I can see it might be beneficial but do not want it anywhere near my proprty -would impact my property value negatively, and affect my health and lifestyle.

Comment: 51

7/24/2022

If there are to be train crossing highways, the safest equipment to keep motorist and pedestrians safe is an absolute must! ON ALL CROSSINGS!

Comment: 52

7/24/2022

This project will cause more unsafe areas in our city by crossing major streets. Property values will go down. Illegal immigration will increase and it's already high. Additionally, the noise and pollution this will cause for our city and agriculture is unacceptable. Do not do this to our city.

Comment: 53

7/24/2022

We do not want this freight line. Why cut up Yuma...

Comment: 54

7/23/2022

N1 and N2 go very near to the Sun Leisure Estates community which I live in and we already have enough noise from the MCAS airfield, especially in March and September during training.

Comment: 55

7/23/2022

Yuma, and San Luis, needs industrial growth to provide good paying jobs for our citizens. Industry often needs rail service - and Yuma has lost industrial opportunities in the past due to lack of rail service. We have much land that is zoned industrial, especially around MCAS where other development is limited by the noise zones. Let's provide rail service to this land (Routes N-2 and N-1). Let's connect commercial and industrial in San Luis near their new port of entry (Route S-1) by rail to the mainline of the UPRR. And let's extend the rail line to the border and across so that maquiladora business can thrive in SLRC. Yuma's No. 1 need is better jobs - a rail line and the industrial growth that would accompany it go a long way towards providing those better jobs.

Comment: 56

7/22/2022

No thank you.

Comment: 57

7/22/2022

Yuma plays an extremely important role in feeding our nation, removing any agriculture land would play a major role with food insecurity. Each year there is less farm ground in Yuma County for growing vegetables with some of the most productive in the Yuma Valley. Another alternative between 3E and 5 E would be disastrous, as well, with the U. S. Marine base, airport, significant number of residential housing, and again a productive farm area.

Comment: 58

7/22/2022

I do not want a train that close to my home.

Comment: 59

7/22/2022

I believe going with N-1 N-2 would be the best option as it will not interfere with local homes or subdivision in the proposed area.

Comment: 60

7/21/2022

I do not support any current version of this project.

Comment: 61

7/21/2022

The NC-1 and NC-2 and the S-1 and S-2 would destroy highly productive farmland.

Comment: 62

7/21/2022

Need better info before a truly informed comment can be voiced.

Comment: 63

7/21/2022

The concept is a giant waste of time. Mexico will never build rail to Yuma County's border. I realize we must plan ahead but we need to wait until Mexico actually begins construction then the chances of it becoming a reality will rise from 0% to 15%. We will be boarding cruise ships in Rocky Point well before this happens. lol

Comment: 64

7/21/2022

We as long time yuma, Arizona residents 23 years do not want to ruin our beautiful city by a stinking RR blocking traffic and disrupting our peace send it back to mexacali calif.another costly govt.trying to screw yumans.

Comment: 65

7/21/2022

Araby roundabouts do not support large container trucks. Araby has new hospital and major access to schools K through College.

Comment: 66

7/21/2022

Any route chosen will be very expensive to build. Why did you not include the old rail route that is on the levee and was operational until the mid 90's ? It extends to County 18th and would require only a few miles of disruption to existing property. It connects with the UPRR at there old downtown yard. You would eliminate having to go under I-8, and significantly reduce the need for road crossing's. Apparently I am not able to submit my opinion without selecting preferred routes. I will check the boxes but not in support of any route. Just as a way to submit my opinion. Michael Edgar

Comment: 67

7/21/2022

The amount of lines that are purposed is extreme and goes through too many residential areas.

Comment: 68

7/21/2022

We don't need the mess and disruption. Also it will cause traffic congestion. Are RR crossings going to underpass's or overpass's? Put it somewhere else.

Comment: 69

7/20/2022

How many times do we have to say NO! There currently is nothing to transport by rail, previous studies by GYEDC have demonstrated that. Is the port in Mexico ever going to happen? Do you think letting it lie for 9 years and then bring it back will change anything? Kill it and forget it

Comment: 70

7/20/2022

popop

Comment: 71

7/20/2022

Blah Blah blah

Comment: 72

7/20/2022

Depends on the final location of the rail corridor.

Comment: 73

7/20/2022

It would be very disruptive to agricultural production and resident travel, not to mention decrease home values.

Comment: 74

7/19/2022

But NOT NC2! It runs smack next to our Sun Leisure Estates development. We get enough noise from the air base. We should NOT have to put up with freight train noise as well! Please avoid going so close to residences. Thank you.

Comment: 75

7/19/2022

While I am open for the expansion of business to Yuma/Yuma county. I'm not supportive of taking or relocating businesses or home owners when there is already a service provided. In this case there is already a rail line that pretty much runs from the U.S./Mexico boarder. Located in the west county running north bound then east bound along the northern boundary of the city/county. This line already ties into the UPRR near the Ocean to Ocean bridge. It makes better business since to reuse this route. The land is already purposed for this situation. It wouldn't take as much to bring it up to modern standards.

Comment: 76

7/19/2022

No. No. No. No to all if it.

Comment: 77

7/19/2022

We don't support this project. Take it off the table.

Comment: 78

7/18/2022

Property values will suffer If a corridor must be built it should not be run through the city or it's rural communities.

Comment: 79

7/18/2022

I am all for commerce. However, commerce should occur in the most commercial zones. Commerce (trains) and residence's do not mix! Against plan N5

Comment: 80

7/18/2022

None of the proposed pathways near residential areas is a good option. You are going to rattle manufactured homes off their foundations.

Comment: 81

7/18/2022

Border security is paramount. No corridor should be considered until the border crisis is resolved and even then, a heavy rail connector should be located outside the metropolitan areas.

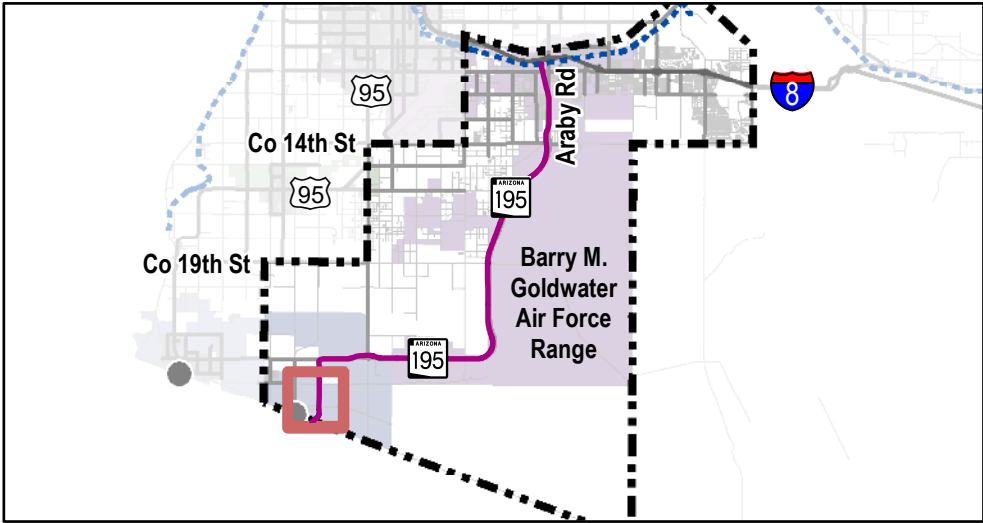
Comment: 82

7/17/2022

No one wants their property value destroyed by installing tracks through neighborhoods. There is enough open desert where there are not existing neighborhoods

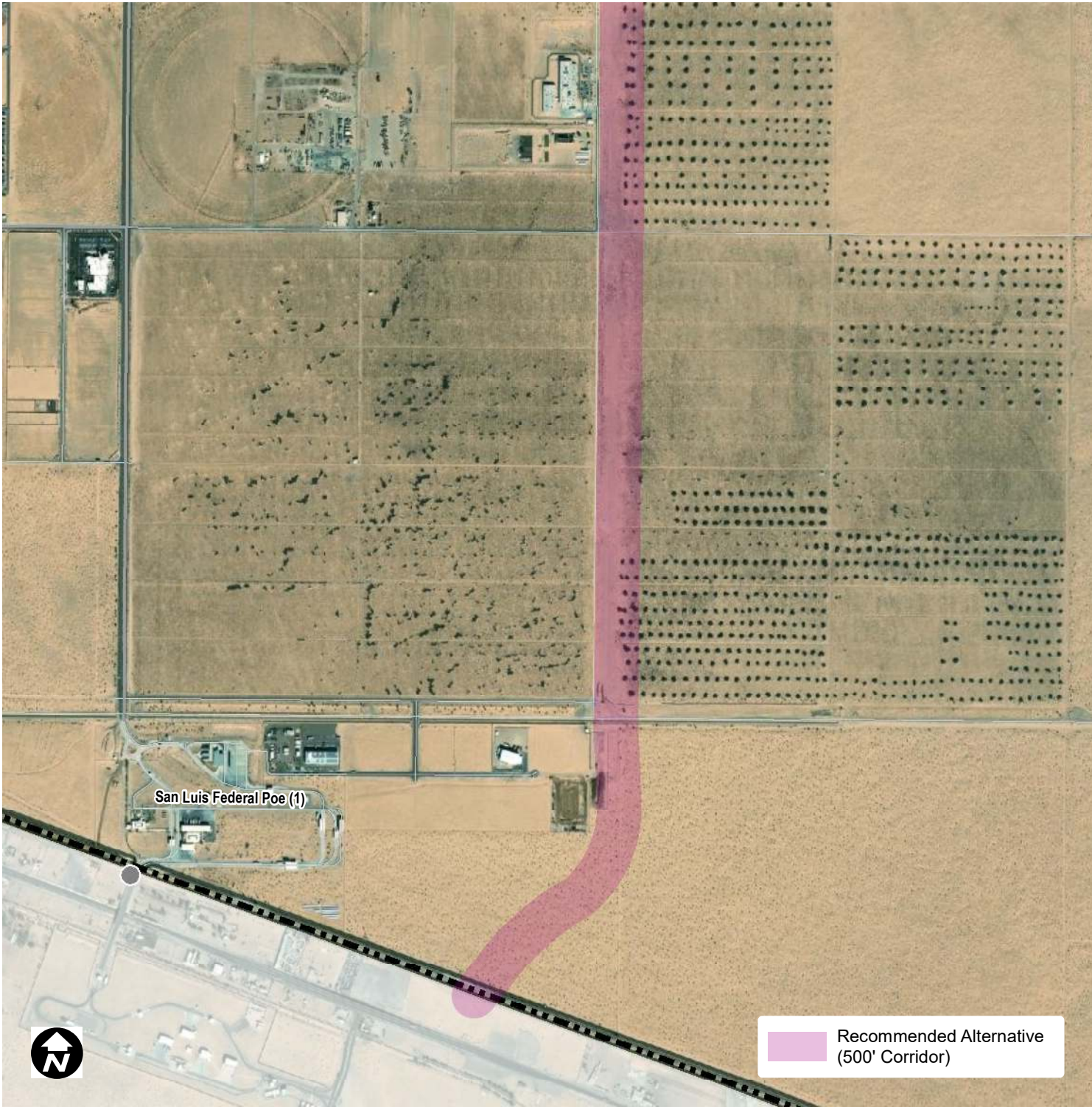
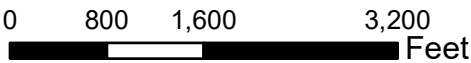


Appendix C. Detailed Recommended Alternative Maps

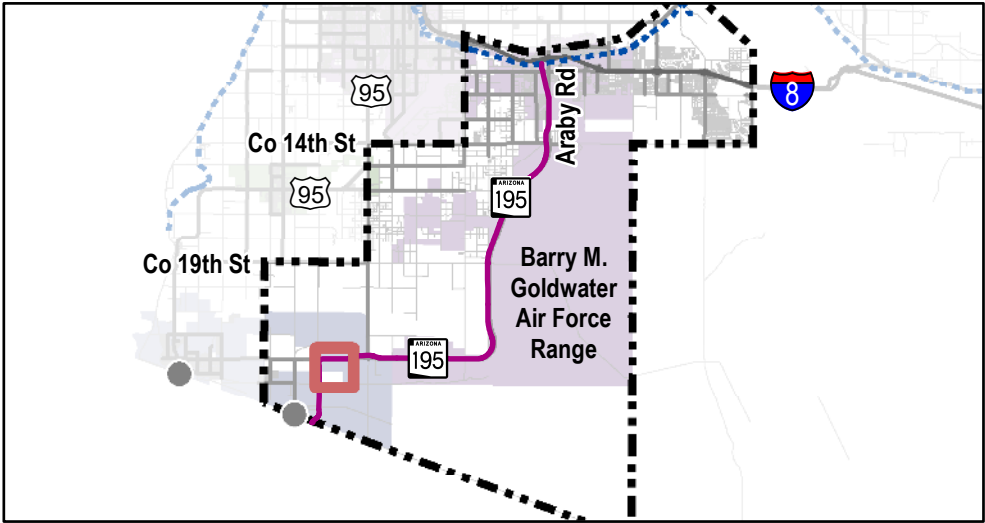


Recommended Alternative

Page 1 of 12



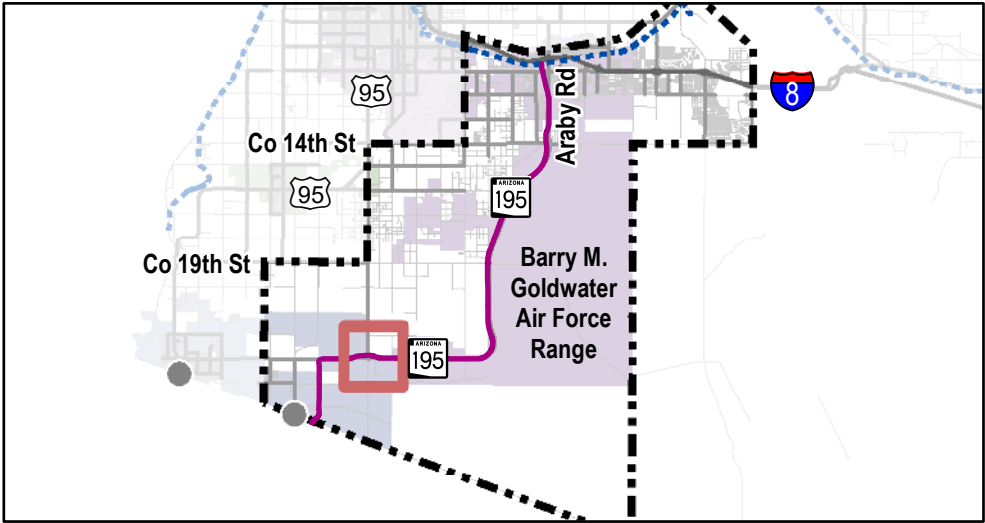
Recommended Alternative
(500' Corridor)



Recommended Alternative

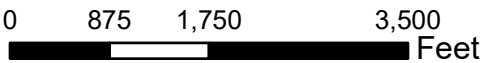
Page 2 of 12



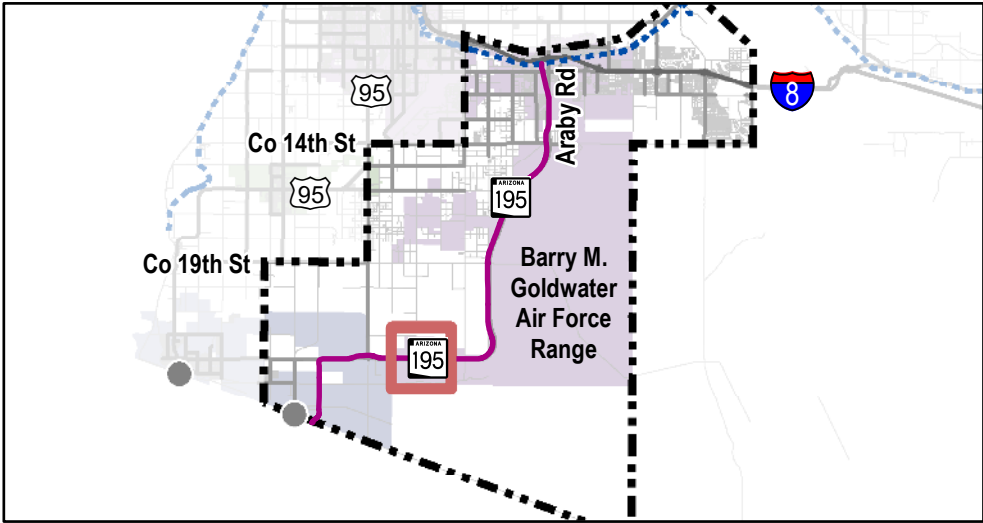


Recommended Alternative

Page 3 of 12

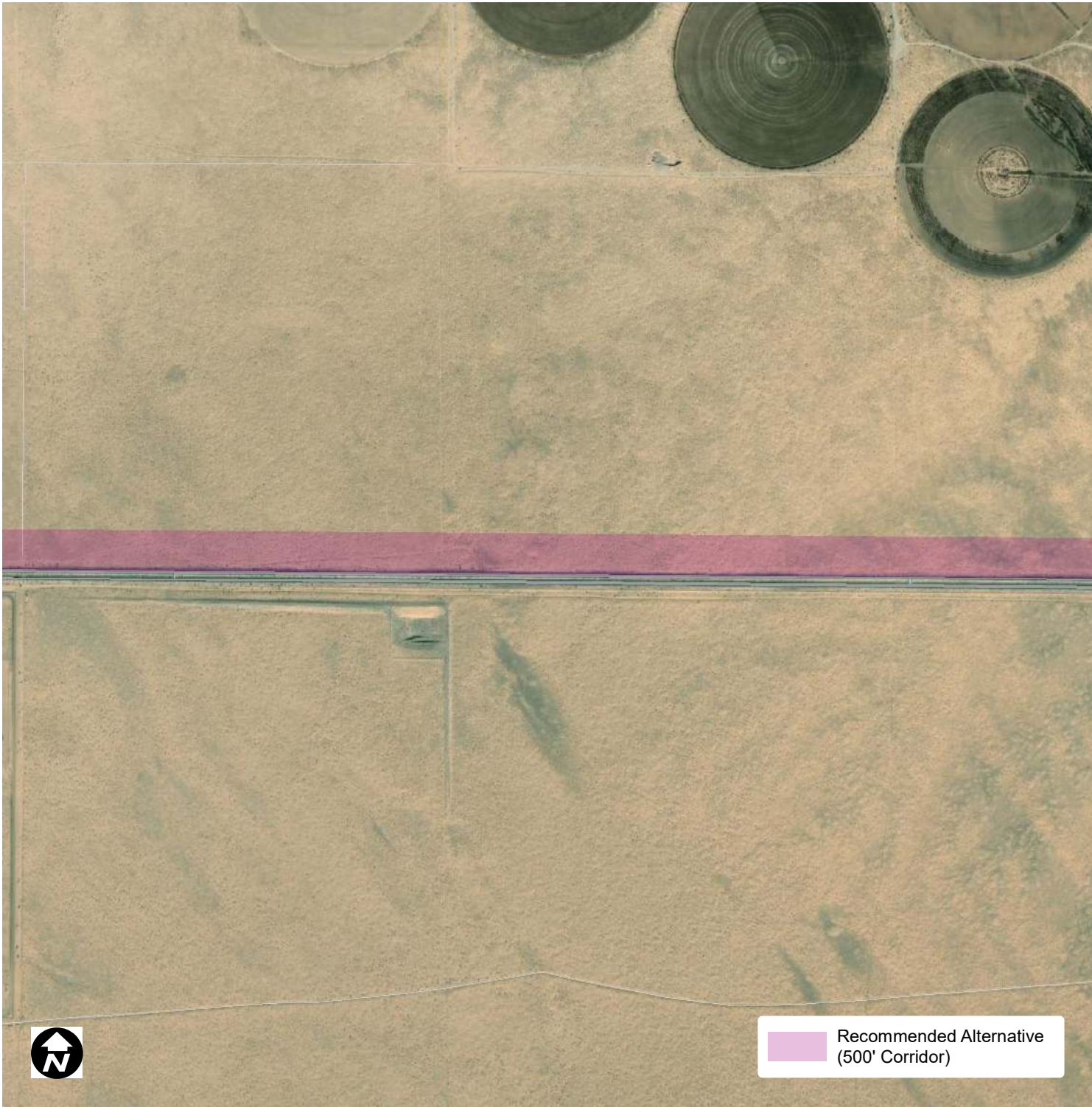
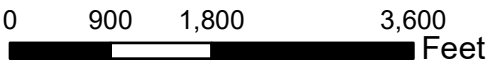


Recommended Alternative
(500' Corridor)

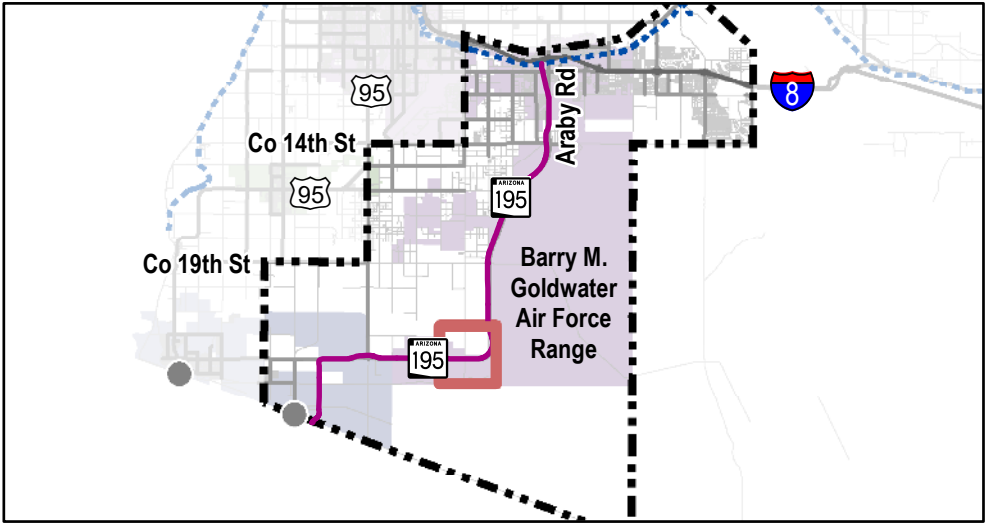


Recommended Alternative

Page 4 of 12

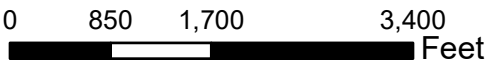


Recommended Alternative
(500' Corridor)

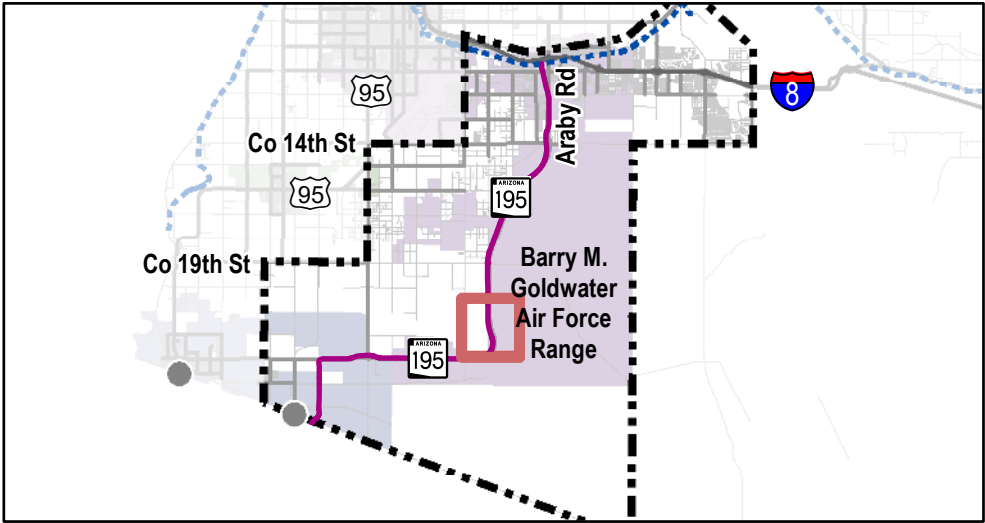


Recommended Alternative

Page 5 of 12

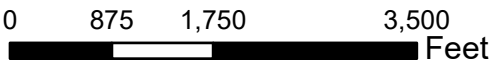


Recommended Alternative
(500' Corridor)

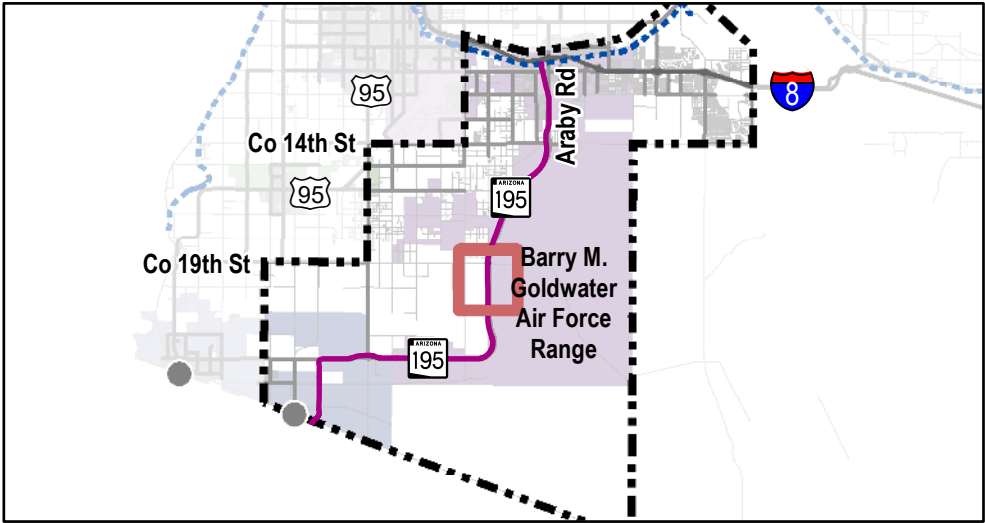


Recommended Alternative

Page 6 of 12

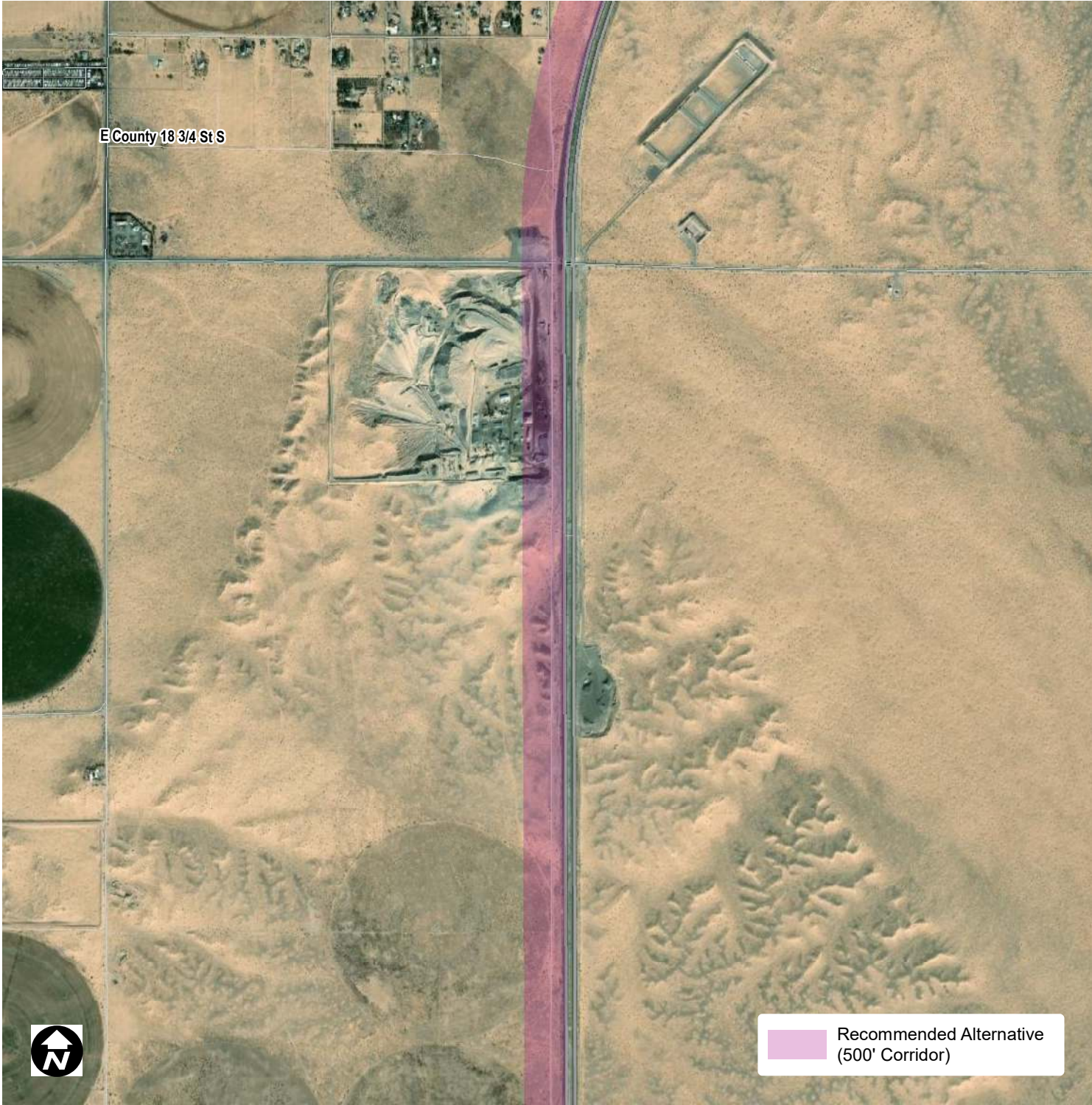
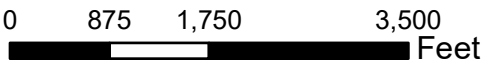


Recommended Alternative
(500' Corridor)

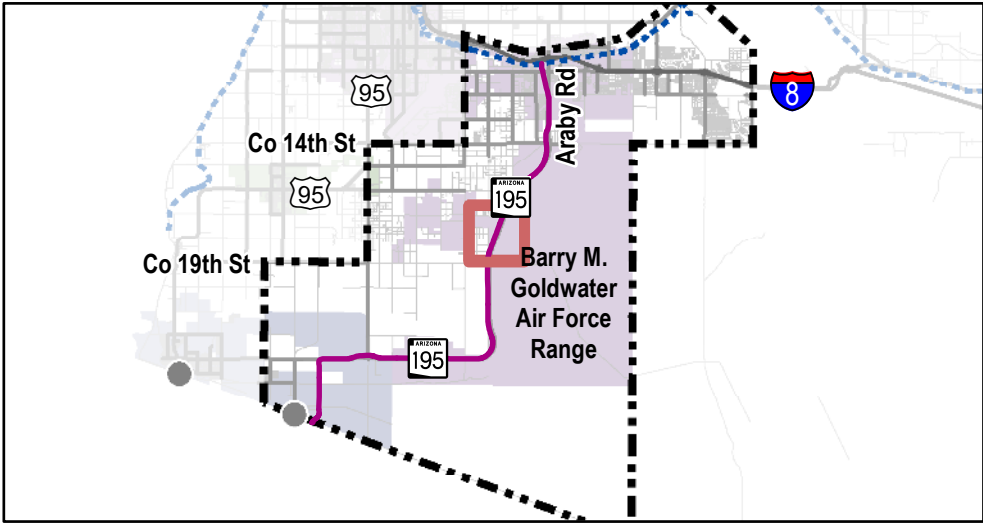


Recommended Alternative

Page 7 of 12

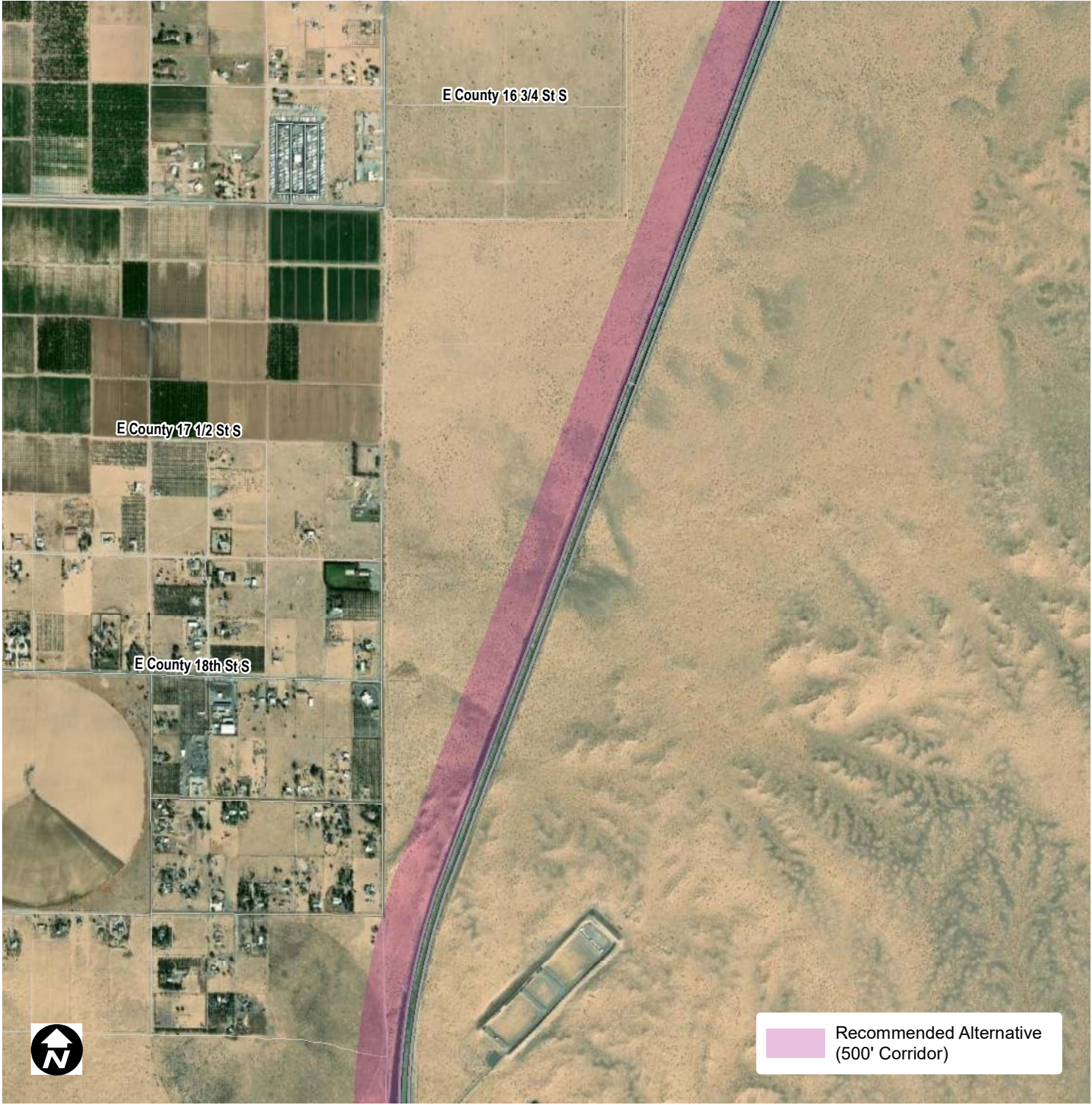


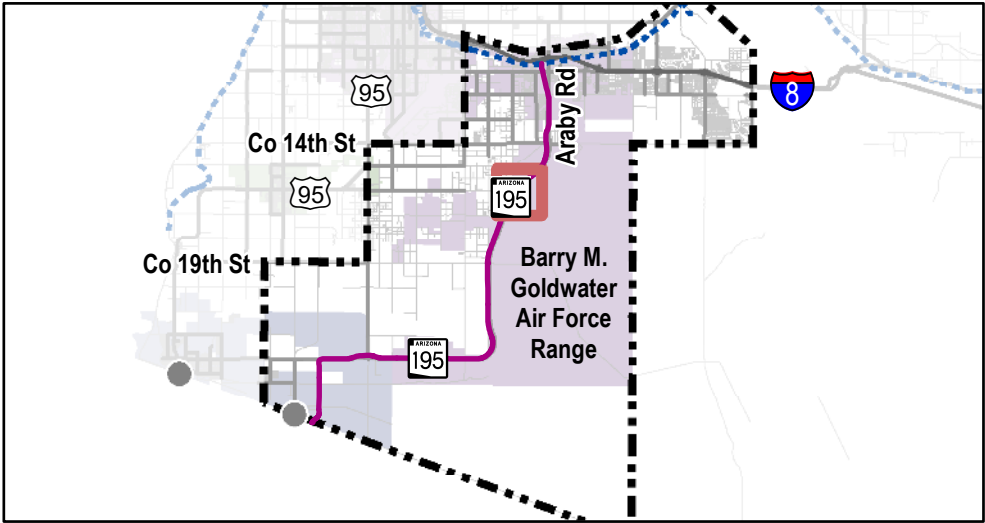
Recommended Alternative
(500' Corridor)



Recommended Alternative

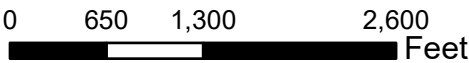
Page 8 of 12



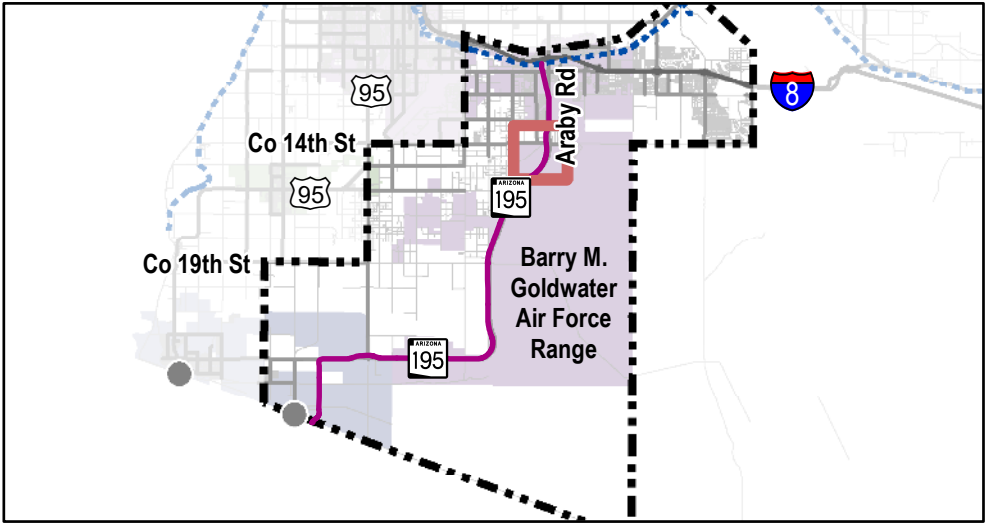


Recommended Alternative

Page 9 of 12

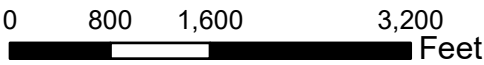


Recommended Alternative
(500' Corridor)

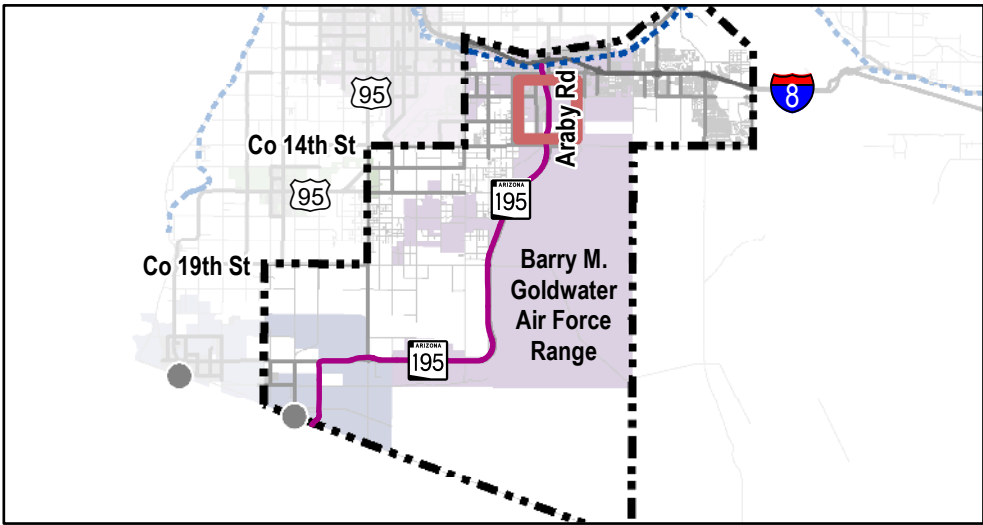


Recommended Alternative

Page 10 of 12

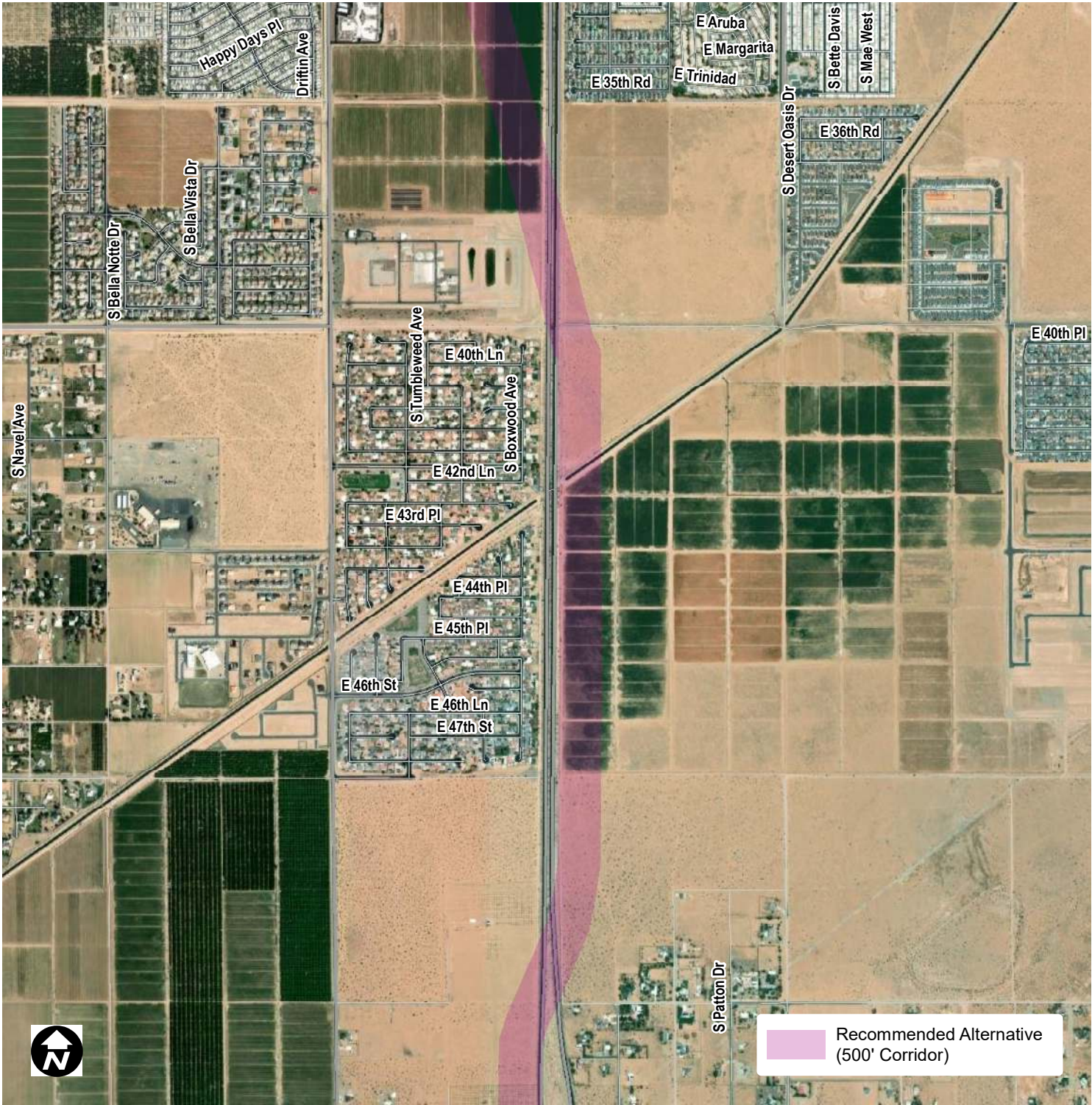
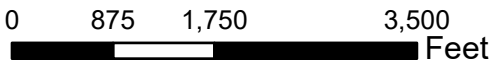


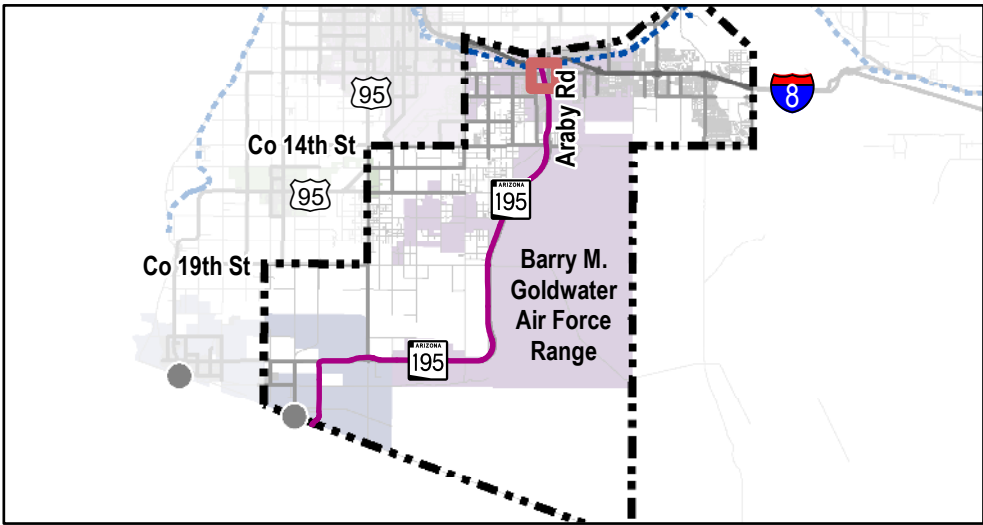
Recommended Alternative
(500' Corridor)



Recommended Alternative

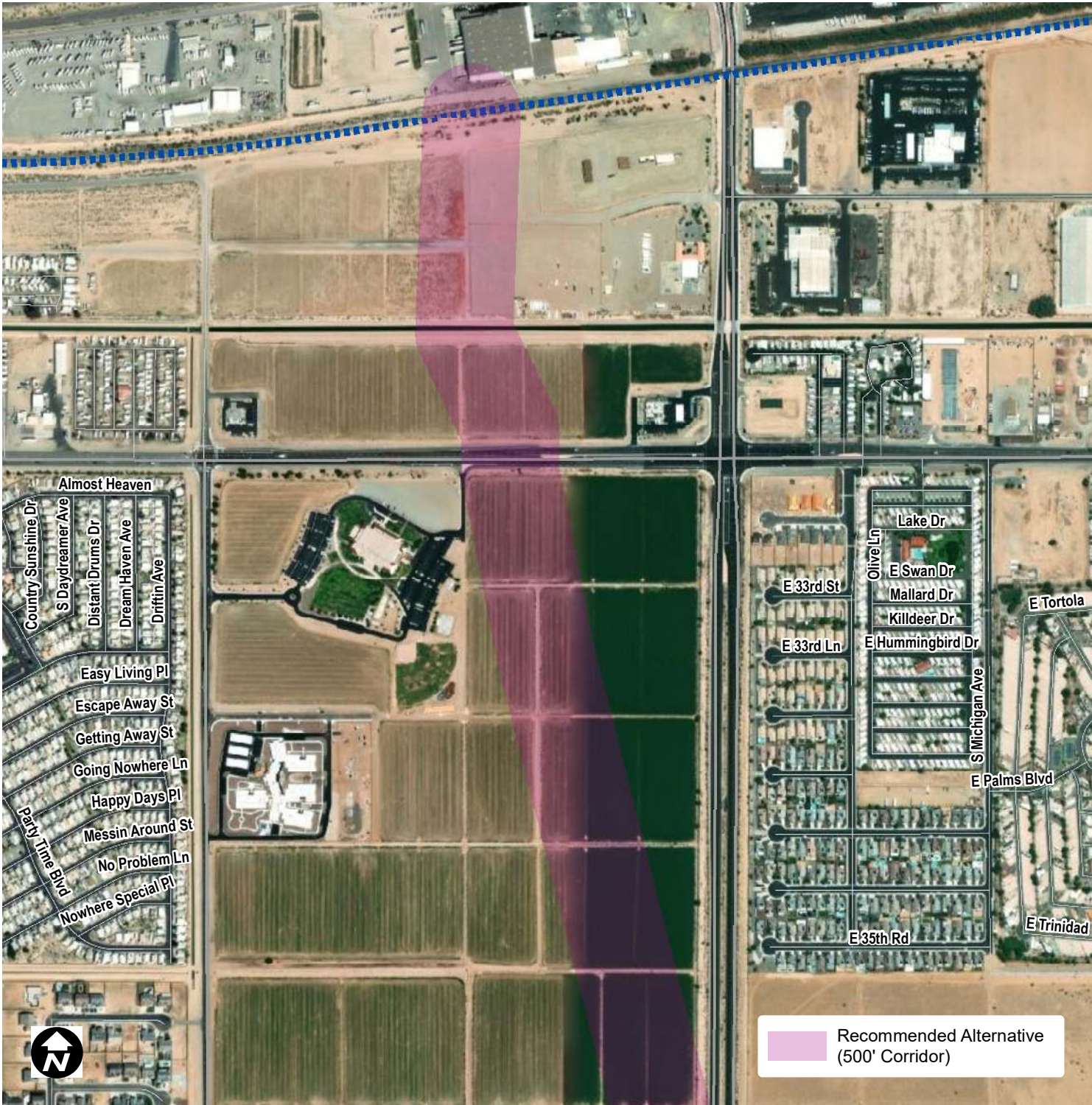
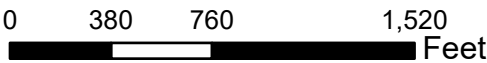
Page 11 of 12





Recommended Alternative

Page 12 of 12



Recommended Alternative
(500' Corridor)