

Project Study Report-Project Development Support (PSR-PDS) To Request Programming for Capital Support (Project Approval and Environmental Document Phase) in the 2026 STIP

In the County of Imperial on Forrester Road between Interstate 8 (I-8) and
State Route 78 (SR 78)/State Route 86 (SR 86)



Prepared by: California Department of Transportation (Caltrans)

Prepared for: Imperial County Transportation Commission (ICTC)



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(Project Approval and Environmental Document
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07/03/2024

Date

June 2024

This **Project Study Report - Project Development Support (PSR-PDS)** has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Roy Flores
REGISTERED CIVIL ENGINEER

6-26-2024
DATE

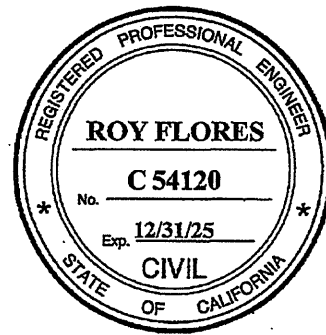


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1. INTRODUCTION

Project Description:

This PSR-PDS introduces various improvements to Forrester Road from the Interstate 8 (I-8) interchange to the SR 78/SR 86 in the City of Westmorland in Imperial County. This report takes a long term look at this segment of Forrester Road to the year 2050. Proposals range from operational improvements to a 4-lane facility that could be considered after other options are built. In this regard, the PSR-PDS acts like a Corridor Plan for this segment of Forrester Road.

Table 1.1

Project Limits - (Long Range Projects)	<i>District 11, Imperial County, Forrester Road (County Hwy 30), from I-8 to SR-78/SR- 86</i>
Number of Alternatives	3
Current Capital Outlay Support Estimate for PA&ED	\$5.3 million
Current Capital Outlay Construction Cost Range	\$ 37 million to \$61 million
Current Capital Outlay Right-of-Way Cost Range	\$9 million to \$20 million
Funding Source	Measure D, STIP, Federal, SHOPP, SCCP, TCEP
Type of Facility	<i>2-lane conventional highway</i>
Number of Structures	1
Anticipated Environmental Determination or Document	Mitigated Negative Declaration
Legal Description	<i>In the County of Imperial from I-8 to Martin Road on SR 86 within the City of Westmorland</i>
Project Development Category	4B

The remaining capital outlay support, right-of-way, and construction components of the project are preliminary estimates and are not intended for programming purposes. Either a project report or a supplemental PID following the format of a PSR will serve as the programming document for the remaining components of the project. A project report or equivalent will serve as approval of the “selected” alternative.

The improvements that will proceed to the Project Approval/Environmental Document (PAED) phase of the project consist of operational improvements and a truck bypass route that provides an alternative route for heavy vehicles through the City of Westmorland. These improvements are geared towards improving the operational efficiency of existing facilities, improving safety of the traveling public, and enhancing the quality of life for people that use or live along the route. They consist of:

Improvements #1 - Intersection Improvements:

- Evan Hewes @ Forrester Rd
- Ross Road @ Forrester Rd

Improvements #2 - Passing Lanes @ New River:

- NB and SB direction

Improvements #3 - Pavement Rehabilitation or possible Reconstruction for use as a Temporary Bypass to the City of Westmorland:

- Martin Road (SR78/SR86 to Baughman Road)
- Baughman Road (Martin Road to Forrester Road)

Improvements #4 – Pave a Dirt Road and Pavement Rehabilitation – for use as an expanded Bypass to the City of Westmorland:

- Martin Rd (Baughman Rd to Andre Rd)
- Andre Rd (Martin Rd to SR 78/86)

Other improvements discussed in the report are beyond the proposed Environmental Document. They are presented as possible future improvements.

2. BACKGROUND

Forrester Road is a two-lane rural road which begins at Wahl Road (3.5 miles south of I-8) to Walker Road (2.5 miles north of the City of Westmorland). It comprises a portion of county highway S30 which itself extends from SR 98 up to SR 111.

This portion of Forrester Road lies within the Imperial Irrigation District (IID). The IID is an agricultural area of 500,000 acres irrigated by water from the Colorado River by way of the All-American Canal and its tributaries. The Westside Main Canal and the Central Main Canal, two of the All-American Canal's main branches, provide irrigation and drinking water to the project's study area. Irrigation water is transported throughout the study area by way of smaller canals. Irrigation drainage and stormwater runoff are carried by way of earthen drains leading to the Salton Sea. IID canals and drains generally require a minimum of 20 ft clearance for maintenance issues. Any modifications of this system will require coordination with IID.

The New River has its origin just south of the Mexican City of Mexicali, crosses

the border to the west of the Calexico Port of Entry, and terminates at the Salton Sea. Forrester Road crosses it at approximately seven miles north of I-8. The entire project area has an elevation that is below sea level and ranges from approximately -35 ft near I-8 down to -160 ft. within the City of Westmorland.

Roadway Classifications

The Imperial County Public Works Department's **Circulation and Scenic Highways Element** classifies the impacted roadways in the following manner:

Table 2.1 Local Roadway Classification			
Roadway	Roadway Classification	Typical Travel way Width (ft)	Typ Paved Shoulder Width (ft)
Forrester Rd (I-8 to SR 86)	Major Collector	24' – 36' ^A	2' to 4'
Baughman Rd (SR 86 to Martin)	Minor Collector	24' +/-	0' to 2'
Martin Rd (Main Canal to SR 86)	Minor Collector	24' +/-	0' to 2' ^B
Evan Hewes	Major Collector	24'	2' to 4'
Worthington Rd	Minor Collector	24'	0' to 2'
Keystone Rd	Minor Collector	24'	0' to 2'
Cady Rd	Minor Collector	24'	0' to 2'

Notes:

A – Left Turn Pockets at Evan Hewes Highway, Worthington Road, & Keystone Road.

B – Paved portion of Martin Road is from Baughman Rd to SR 86.

According to Section 5 of the *Project Development Procedures Manual (PDPM)*, this project falls under the **Category 4B** description as it will not require substantial right-of-way and does not substantially increase traffic capacity. However, as it is a locally controlled highway and could receive federal aid, the project could also fall under **Category 7**.

Forrester Road appears in the **2008 Imperial County Circulation Element** with a long-term recommendation of converting it to a 6-lane Divided Highway. In 2009, the **Forrester Road Corridor Study** was completed. It recommended a 4/6 lane expressway. The **2024 Imperial County Regional Long Range Transportation Plan** recommends Operational improvements and a 4-lane Expressway. In 2017, ICTC entered into a Cooperative Agreement (CO-OP) with Caltrans. The main goal was to explore upgrading Forrester Road to a 4-lane expressway and to also develop a bypass to the City Westmorland.

Table 2.2 Forrester Road (I-8 to SR 78) Planning History			
Plan Year	Imperial County Plan or Study	Forrester Road Proposed Configuration	Comments
2008	Imperial County Circulation Element	6-Lane Divided Highway	Used Annual Growth Rate of 2.0%.
2009	Forrester Road Corridor Study	4/6-Lane Expressway	Based on Relinquishment of parallel portions of SR 86.
2013	Imperial County Long Range Plan	4-Lane Arterial Roadway	Lowered Annual Growth Rate to 0.5%
2017	ICTC/Caltrans Cooperative Agreement	4-Lane Expressway + Westmorland Bypass	Possible CT acquisition of Forrester Road to replace SR 86
2019	ICTC Technical Advisory Committee and Caltrans – Project Development Team Meeting	Operational Improvements + Bypass	Used a more detailed approach to address traffic needs.
2024	Imperial County Long Range Transportation Plan (LRTP)	Operational Improvements with ultimate 4-Lane Expressway	Operational Improvements match recommendations from this document

3. NEED and PURPOSE

Forrester Road is part of a system of North/South (N-S) routes crossing farmland and cities of the Imperial Valley. Both SR 86 and SR 111 function as the region's N-S anchor routes with SR 86 functioning as the main business corridor for the Cities of El Centro, Imperial, and Westmorland. Future relinquishment of SR 86 segments further strengthens the need for additional north/south regional routes. Other significant north/south roadways include SR 115 and SR 7/Orchard Road. Primary local roadways also include Dogwood Road and Austin Road.

I-8 is the primary route (and only freeway) for the region's East – West (E-W) transportation system. SR 98, SR 78, Evan Hewes Hwy, and Worthington Road comprise the other routes within the E-W system.

Forrester Road as a parallel route to SR 86 has plenty of unused capacity. The route improvements proposed will be designed to entice drivers with constructed improvements that increase driver comfort, provide more efficient freight movement, and prepare to allow for the advent of new technologies.

Forrester Road is intended to serve as a western bypass to the Cities of El Centro, Imperial, and Brawley by utilizing its unused capacity. A bypass to the City of Westmorland is also proposed. It should help alleviate traffic on SR 86 and provide a more familiar, efficient, and safe facility that increases driver comfort while serving the needs of residents and the surrounding agriculture industry. The proposed improvements should eliminate or reduce roadway traffic constraints impacting travel times, roadway safety, and the overall operational capacity. This will be implemented in an equitable manner with anticipated climate challenges in mind. As with all our projects, it should also have a positive impact on quality of life and enhance economic opportunities.

As this project will be built in phases, implementation will be done in a sustainable way that maximizes the efficiency of assets being built and reduces the amount of discarded work. Improvements will be developed and constructed with consideration to Safety, Equity, Climate Actions and considerations to include alternative forms of transportation where feasible. The project also strives to protect the rural character and natural resources while enhancing economic prosperity along the impacted communities.

Need:

A growing population and an expanding economy have led to an increase of traffic along all routes in Imperial County. It may lead to higher levels of noise and air pollution [including Greenhouse Gas (GHG) emissions]. Current vehicular growth rates are projected at approximately 2% per year. Without pollution reduction action, air contaminants could increase by 1.5% per year. This also corresponds to a potential increase of 3 decibels by the year 2050. These changes could continue to decrease pedestrian's comfort level walking along or crossing SR 86 – especially by kids going to school. SR 86 has also become the City Main Street for these communities – and a second main street for the City of Brawley. As a result, travel times have increased with cross traffic is also experiencing longer delays.

Traffic on SR 111(between I-8 and SR 78) ranges from 30,000 Average Daily Traffic (ADT) just north of I-8 to 16,000 just south of SR 78. SR 86 traffic (between I-8 and SR 78) ranges from 32,000 ADT just north of I-8 to a low of 16,000 at Keystone Road between the Cities of Imperial and Brawley. Both routes serve regional and interregional traffic. SR 115 reaches a high of 6,500 ADT and SR 7 has an ADT of 7,700.

Increases in cross traffic have led to signalization of various intersections on SR 86 and SR 111. SR 86 is also impacted by the increases in driveways and other points of access. This can affect vehicle throughput for north-south traffic and is leading to increase usage of other N-S routes in the area. It has led to traffic increases on Forrester Road and its use as a bypass to SR 86. As the surrounding parcels are almost all exclusively used for farming, the existing

route conditions result in conflicts between users as vehicular traffic must navigate the road alongside larger, slower moving agricultural equipment.

Purpose:

This project takes a fresh, holistic transportation planning look at the area's existing and planned transportation system. This approach will seek to maximize performance by enhancing efficiency and resilience of the area's transportation system. Goals of the project include:

- Maximize the System's current capacity through operational improvements, the application of technology, and incentivizing the use of underutilized assets. This should enhance short, local trips while attracting longer trips from parallel routes.
- Incorporate safety features that improve driver comfort as well as lowering the stress levels for pedestrians, cyclist, transit commuters, and rideshare users.
- Improve trip Reliability for drivers and freight transport by incorporating a system that can quickly detect incidents and determine the appropriate response.
- Develop ZEV, Compressed Natural Gas, and hydrogen fueling options. This includes a possible truck charging network to accommodate upcoming changes in fueling requirements.
- Seek opportunities to lower Vehicle Miles Traveled (VMT) and reduce GHG emissions.
- Accommodate evolving vehicular technologies such as a Vehicle to Infrastructure (V2I) system to aid autonomous vehicles (AV) and driver assistance features.
- Engage the community and agricultural industry to balance residential and driver needs with the requirements of industry.
- Provide a transportation system that enhances economic opportunities and job creation for residents, businesses, and industry while protecting Livability and the natural environment.

The Westmorland Bypass:

Need:

The City of Westmorland is a small rural community with a population of approximately 2,000 residents (2022). It is within Census Tract #6025010200 and has a CalEnviroScreen (4.0) score of 89. The SR78/86 traverses the middle of the community with most residents living within 1,200 ft of the highway. Westmorland Junior High is adjacent to SR 78/86 and Westmorland Elementary School is one block to the south. Convenience stores, restaurants, and others are situated on both sides of SR 78/86. The proximity of residences to the business area, local services, and the schools makes Active Transportation a good choice to get around the city. The presence of a high

number of heavy vehicles can limit sight distances and increase stress levels thereby discouraging active transportation trips.

Purpose:

This Westmorland Bypass looks to improve the quality of life of its residents without negatively impacting the economic vitality nor creating a burden to motorists. The project goals include:

- Reduce air pollution within the community. Particulate Matter (2.5 microns or smaller – PM_{2.5}) originates primarily from diesel powered vehicles.
- Reduce the amount of Noise close to residential areas.
- Encourage children and parents to walk or bike to school, community services, and to recreational activities.
- Improve the interconnectivity of the region. Improvements to Martin Rd and Andre Road provide more flexibility and accessibility to the region.
- Traveler services located within the city should still be accessible to motorists.

The proposed bypass alternative will add 0.5 miles of additional travel distance for traffic diverging from the Andre Road intersection @ SR 78/86. The bypass will not increase trip distances for vehicles using Forrester Road south of Andre Road.

4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT

Concept of Operations

Forrester Road operates as a part of the north-south system in conjunction with SR 86, SR 78, and other N-S routes such as SR-111 in Imperial Valley. The system has ample capacity to serve traffic demands past the year 2050. The proposed improvements in this report will help distribute traffic to better utilize the existing facilities. With near term operational improvements, Forrester Road will serve as a major component of this N-S transportation system.

Level of Service

Level of Service (LOS) is a quantitative stratification of performance measures that represent the facility's quality of service. It can also be stated as the relationship between a facility's supply (capacity) and its demand (vehicles). Depending on the type of facility being measured, it can be expressed as a volume over capacity ratio (v/c), a snapshot of the number of vehicles within

one lane mile (density), or average delay time at an intersection. For two lane rural roads it is measured as the percentage of time spent following (PTSF) a vehicle that a motorist wants to pass. Forrester Road, as a two-lane rural highway, primarily operates with uninterrupted traffic flow. However, there are also points of interrupted flow due to traffic signals and stop signs. This mix does not lend itself to determining the facilities overall LOS.

Within the project limits, Forrester Road is broken down into four segments Table 4.1 compiles the Average Daily Traffic (ADT) for the different segments. An ADT of 15,000 vehicles per day is the capacity for one direction of a two-lane roadway. Conditions such as lateral clearances, shoulder widths, and steep grades could impact the capacity. The lower limit of 7,000 ADT is a result of the interrupted flow caused by the stop signs and a traffic signal. The Table also shows the current ADT and the projected ADT for the year 2050.

Table 4.1 – Forrester Road Average Daily Traffic (ADT)							
	Route	From	To	Dir	2018 ADT	2050 ADT	Roadway Capacity (ADT) Single Lane
1	Forrester Road	I-8	Worthington	NB	5,000	9,200	7,000 to 15,000
				SB	5,500	9,400	7,000 to 15,000
2	Forrester Road	Worthington	Keystone	NB	4,400	8,400	< 15,000
				SB	4,500	8,800	< 15,000
3	Forrester Road	Keystone	Cady	NB	4,500	8,500	< 15,000
				SB	4,500	9,200	< 15,000
4	Forrester Road	Cady	Baughman	NB	4,200	8,300	7,000 to 15,000
				SB	4,200	8,900	7,000 to 15,000

Using this data, we can estimate the peak hour flow rate using 10% of the ADT. Using this rule, the peak hour rates range from 420 vehicles per hour (v/hr) in the northern segment to 550 v/hr in the southernmost segment. The maximum capacity for one direction of uninterrupted flow of a two-lane road is 1,700 v/hr (each direction) under base conditions [**2016 Highway Capacity Manual (HCM)**]. Forrester Road does have “interruptions” to free flow which adversely affect the 1,700 v/hr roadway capacity. They are listed as bottlenecks in Table 4.2. A more detailed traffic analysis will be conducted during the PA/ED phase of this project. This will show how much SR 86 traffic is shifted onto Forrester Road.

The Caltrans’ **Highway Design Manual** recommends design speeds between 55 Miles per Hour (MPH) and 70 MPH for a conventional 2-lane rural road. The existing Speed Limit on Forrester Road is 55 MPH. Typically, the design speed can be up to 15 MPH higher above the posted speed limit. The goal for Rural Routes like Forrester Road is to operate at a LOS D or better. This corresponds to traffic volumes between 1,000 v/hr and 1,200 v/hr per lane.

The average commute time in Imperial County is 21.1 minutes (Census Bureau 2019). Just over 2% of households have no personal vehicle.

Identified Bottlenecks on Forrester Road

A traffic bottleneck is a localized disruption of vehicular traffic due to a reduction of capacity at a specific point. Intersection controlled locations are included here with the intent of developing improvements that should be safer and provided greater efficiency for vehicular movement.

Table 4.2 – Forrester Road Existing Bottlenecks					
#	Description	Two-Way Stop	Four-Way Stop	Signalized Intersection	Grade Differences
1	Ross Road		X		
2	Evan Hewes Road			X	
3	New River Vicinity				X

I-8 to Worthington Road:

- 1) The four-way stop sign at the Ross Road intersection.
This intersection consists of a single lane in each direction (all four) without any turn pockets.
- 2) The Evan Hewes signalized intersection.
This intersection is signalized and has left turn pockets on Evan Hewes but none on Forrester Road.

Worthington Rd to Keystone Road:

- 3) The grade differences across the New River impacts roadway capacity.

Keystone Road to Cady Road:

No bottlenecks identified in this segment.

Cady Road to SR 86:

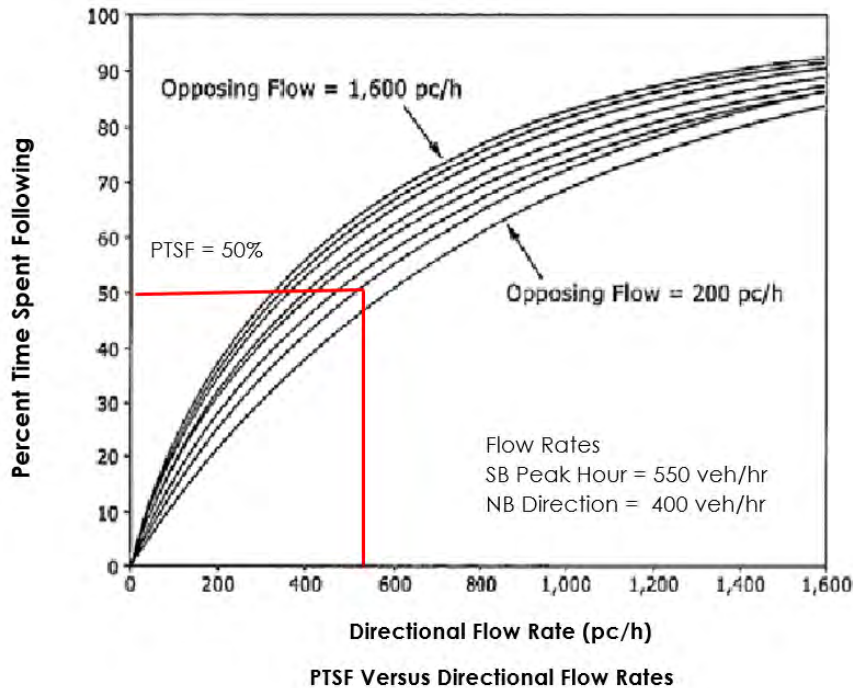
- 4) The four-way stop signs at the Baughman Road intersection was recently modified to a two-way stop intersection. This eliminated the previously identified bottleneck in this segment.

Percent of Time Spent Following

According to the *2016 Highway Capacity Manual (HCM)*, this segment of Forrester Road is a **Class 1 Two Lane Highway**. It functions as part of an adjacent intercity system connecting the Cities of El Centro, Imperial, and

Brawley with Interstate 8 and SR 86. The estimated Peak Hour flow rates of 550 vehicles per hour (based on 10% of 5,500 ADT) was determined for the peak direction (SB) and 80% of peak for the opposing direction (NB) – 400 v/h. Using the PTSF relationship graph from Figure 4.1, a PTSF of 50% is attained. (pc/h = passenger cars per hour = vehicles per hour)

Figure 4-1



The HCM uses the following chart to determine LOS:

Table 4.3 Two Lane Rd LOS		
LOS	Average Travel Speed (mi/hr)	Peak Period PTSF (%)
A	>55	<35
B	>50 - 55	>35 - 50
C	>45 - 50	>50 - 65
D	>40 - 45	>65 - 80
E	≤40	>80

As this traffic data is from 2018 and we anticipate some growth, we are confident the PTSF is now over 50%

A PTSF of just over 50% indicates a LOS C. This implies that there normally is ample passing opportunities compared to the passing demand. Vehicle platooning is more prevalent and traveling speeds are impacted by the presence of slower moving vehicles. As platooning and PTSF increases in each direction, the demand for passing increases.

Figure 4-2 Forrester Rd @ Ross Rd Looking North



However, the heavy presence of trucks and farm equipment using the roadway impacts the Average Travel Speed (ATS). Near the New River, the ATS can be reduced by just over 10 MPH during the peak hours. This indicates a LOS D for this location based on the following roadway features within the New River valley.

Table 4-4 Forrester Road @ New River		
Conditions:	NB	SB
Grades	5.0%	4.7%
Length of increased grades	1,450 ft	1,300 ft
Diff in Elevation (ft)	66 ft	68 ft
Truck %	10%	10%
Farm Vehicles per hour (estimated)	6	6

According to Chapter 3 of the **American Association of State Highway and Transportation Officials (AASHTO) -A Policy on Geometric Design of Highways and Streets** transportation guidelines, consideration of climbing lanes on two-lane highways is justified by the following criteria:

Table 4-5 AASHTO Guidelines for Implementing Climbing Lanes			
#	Conditions:	Yes	No
1	Upgrade Traffic Flow Exceeds 200 vehicles/hour	X	
2	Upgrade Truck Flow Exceeds 20 vehicles/hour	X	
One or More of the Following Should Apply:			
3a	10 MPH Speed Reduction of Typical Truck	X	
3b	LOS E or F on the Upgrade without Climbing Lane		X
3c	Reduction of Two or More LOS When Driving between Approach and Grade		X
4	Higher Crash Frequency		X
Caltrans Highway Design Manual (HDM) Requirement			
5	ADT Exceeds 5,000 vehicles	X	

Intersections with Significant Cross Street Traffic

The following intersections have been observed to operate with traffic queues of 8 vehicles or more on at least one leg:

Table 4.6 Forrester Rd Intersections with Significant Delays	
Intersection	Intersection Control Type
Ross Road @ Forrester Rd	4-way stop
Evan Hewes Hwy @ Forrester Rd	Signal
Worthington Road @ Forrester Rd	2-way stop
Keystone Road @ Forrester Rd	2-way stop
Imler Road @ Forrester Rd	Tee Intersection – one stop
Baughman Rd @ Forrester Rd	2-way stop
Martin Road @ SR 86	2-way stop

As traffic increases along Forrester Road, other strategies such as signalization, roundabouts, or the addition of turning lanes could be required so that drivers on these cross streets have an easier time accessing the highway. All intersection improvements using state or federal funds are subject to an **Intersection Control Evaluation (ICE)** which identifies an optimal solution by screening intersection alternatives using a data driven, performance-based framework. The **Intersection Safety and Operational Analysis Process (ISOAP)** could replace ICE in the near future as it incorporates more of a Safety System Approach to the analysis.

Travel Time Reliability

Travel Time Reliability (TTR) is described by the Federal Highway Administration (FHWA) as *“the consistency or dependability in travel times, as measured from day-to-day and/or across different times of day.”* Vehicle drivers, transit riders, and freight shippers value TTR because it allows for better trip planning and a better use of their time. Recurring congestion is largely anticipated and is generally incorporated into the buffer times when determining TTR. It is usually caused by bottlenecks in the transportation system. Non-recurring congestion is mainly unanticipated and can impact TTR. It can result from vehicle breakdowns, traffic collisions, construction work zones, infrastructure failures, weather, and special events.

Strategies to maintain or improve TTR include:

- The presence of a continuous data sources such as inductance loop detectors and closed-circuit television (CCTV) to provide lane volumes, traffic speeds, and the ability to detect the type of incident affecting TTR. Traffic managers can then send out the appropriate

response to lessen adverse impacts to TTR.

- The availability of wide, traversable shoulders so emergency vehicles can respond quickly and clear the travel lanes.
- Accurate and timely Information available to the public so they can make transportation decisions – take alternate routes, postpone trip, or accept additional delay.
- Develop a flexible and resilient transportation system to increase mode choice and enhance alternative routes utilizing Transportation Demand Management (TDM) strategies.

TTR makes up three of the six FHWA System Performance Measures under PM#3 - (Interstate, non-Interstate (National Highway System), Interstate Truck TTR). While Forrester Road does not fall under these criteria, it is a performance measure that is being adopted by state and local jurisdictions and should be considered when incorporating operational improvements.

Traffic Index

The Traffic Index (TI) methodology is used to determine the pavement's structural section required to handle the number of vehicles anticipated over a roadway's design life. Forecasted traffic data was used to determine the total number of Equivalent Single Axle Loads (ESAL) which are then used to determine TIs for each of the road segments.

Table 4-7 Traffic Index			
Roadway Segment	Design Life	Travel Way Traffic Index	Shoulder Traffic Index
I-8 to Baughman	20	13.0	8.0
	40	14.5	9.0
Baughman to SR 86	20	12.5	8.0
	40	13.5	8.5

Structural Cross Section

A Structural Cross Section Recommendation was not developed for this project. Work is off the state system so Caltrans would have to do exploratory drilling to determine soil resistance values (R values). We looked at Imperial County standards and compared the structural sections of various Caltrans projects. The recommendations were very similar to the County recommendations. For this document, we are using the structural cross section recommended by the County of Imperial Department of Public Works "*Engineering Design Guidelines Manual*" for additional guidance. The table

below derives a preliminary structural section based on the TI's. This is based on R values less than 5. Soil samples will be taken in the next phase of this project to determine the proper soil resistance and thereby a structural section.

Table 4-8 Forrester Road – Structural Section				
	Forrester: I-8 to Baughman		Forrester: Baughman to SR 86	
	Mainline	Shoulder	Mainline	Shoulder
HMA	9"	4"	8.5"	4"
Class 2 AB	35"	18"	34"	18"
AS	0"	0"	0"	0"

Sight Distance

While the posted speed limit on Forrester Road is 55 MPH, the design speed is likely 15 MPH higher (HDM 101.1(2)). The following sight distance observations taken with a design speed of 70 MPH.

Minimum Stopping Site Distance is the distance required by the driver to bring the vehicle to a complete stop after spotting an object 0.5 ft high on the roadway. A preliminary review of the roadway indicated there are no segments where Stopping Sight distance is below the requirements of Table 201.1 (HDM).

Minimum Corner Sight Distance provides for adequate time (7.5 seconds for passenger car) for a stopped vehicle on a minor road unsignalized intersection to cross all lanes or turn onto the major road. A preliminary review indicates that all major unsignalized intersections do provide adequate Corner Sight Distance.

Collision Information

A detailed collision investigation is outside the scope of this report. But a general overview of vehicular collisions within the segment shows that the most common type of accident (40%) involved running off the road and hitting an object – canals and drains primarily. Another 15% of accidents involved overturning of the vehicle. While there does not appear to be a concentration of collisions along the route, wider shoulders and a CRZ could help drivers regain control of errant vehicles. There currently is a requirement for Daytime Running Lights (DRL) from just North of RR Crossing to Baughman Road. DRL appears to be effective in maintaining a low rate of head on collisions.

Collision Reduction and the Safe System Approach

In February 2022, Caltrans unveiled the **Safe System Approach** which has a goal of reaching zero fatalities and serious injuries on state highways by 2050. This policy commits Caltrans to:

- Prioritizing “safety first” in highway planning, operation, construction, and maintenance.
- Focusing on eliminating the most serious crashes, rather than all crashes.
- Eliminating race-, age-, ability- and transportation mode-based disparities in road safety outcomes by addressing historic and current barriers to transportation access and safety.

The Safe System Approach is human-centric in that it acknowledges that drivers and users of the transportation systems are prone to making mistakes and implements solutions to minimize the impact of crashes on the human body. All parts of the transportation system are strengthened, so that if one part fails, the other parts still protect people. This section of the report by no means conveys all the aspects of the Safe System Approach and is intended to give a general overview.

This effort culminated in the development of the **Strategic Highway Safety Plan (SHSP)**. The SHSP has been worked on since the summer of 2020 when various California state transportation official recognized that a *“bolder and more focused approach was necessary to combat the rise in fatalities and serious injuries that have occurred on California’s public roadways”*. This refocus is known as “The Pivot”. The SHSP goal is to have zero fatalities and zero serious injuries in California. This is in line with and expands the nation’s Toward Zero Deaths (TZD) goal. The primary objective is to establish a trend to reach zero fatalities and serious injuries by the year 2050. The SHSP is derived from four guiding principles:

- Integrate Equity
- Implement Safe System Approach
- Double Down on What Works
- Accelerate Advanced Technology

The SHSP identifies Five Strategies (also known as the 5 E’s) to improve roadway safety:

- Education: Educate all road users on safe behaviors
- Enforcement: Enforce actions that reduce high-risk behavior
- Engineering: Apply effective and/or innovative countermeasures
- Emergency Response: Improve emergency response times and actions
- Emerging Technologies: Apply emerging technologies to roadway, vehicle, and users.

Five **High Priority Challenge** areas have been identified (shown along with % of collisions for each):

- **Lane Departures** (45%) – result from a vehicle leaving its intended lane. Includes run of road, hit object, head on, and overturn type of collisions. Develop a Clear Recovery Zone for vehicle recovery, improve striping/signing visibility, implement expected design features, and focus on accident hot spots.

- **Speed Management / Aggressive Driving** (34%)- the result of a specific behavior such as traveling either above the posted speed limit or too fast for roadway conditions, tailgating, disobeying traffic signals and signs, and other reckless maneuvers.
- **Impaired Driving** (28%) – Impairment due to alcohol (even if within a legal limit) or drugs (prescribed, over-the-counter, or illegal). Seriously discourage people from operating motor vehicles when impaired through enforcement, education, and incentivizing.
- **Active Transportation** (24%): Breakdown - Pedestrians (17%) & Bicyclists (7%). Improved visibility, education (pedestrian, cyclist, and driver), speed reductions, and specific designs that minimize or eliminate user exposure to moving vehicles.
- **Intersections** (23%) – each intersection can have numerous conflict points with potential for a collision. Ensure adequate sight distance, clear visibility of signs, striping, signal heads, pedestrians, and cyclists, and implement design features such as roundabouts and removal/minimize exposure of pedestrians and cyclists.

All proposed improvements should evaluate and consider all opportunities to reduce collision severity within the project limits.

Sustainability

This project implements TSMO (Transportation Systems Management and Operations) strategies that focus on operational improvements. The TSMO goal is to maintain and/or maximize performance of the existing transportation system. Improvements target bottlenecks and constraints without adding overall capacity. TSMO also helps agencies balance supply and demand and provide flexible solutions to match changing conditions. This ties into the notion of Forrester Road being a key component of the North – South roadway system in the Imperial Valley. The long-range goal should be coordination of these routes to balance out the demand and thereby increase the operational efficiency of the whole system via TSMO strategies. The possible installation of Intelligent Transportation Systems (ITS) and other technologies are further discussed in **Section 7** of this report.

5. DEFICIENCIES

Roadway Condition – The roadway pavement consists of Hot Mix Asphalt. Along Forrester Road, the pavement is generally in a good to fair condition. The segments on Andre Rd, Baughman Road, and Martin Road are in poor condition.

Shoulders and Clear Recovery Zone (CRZ) – A minimum of 8 feet of paved shoulder is the desired shoulder width. Section 309.1(2) of the Caltrans Highway Design Manual recommends a minimum CRZ of 20 ft for conventional highways with speeds over 35 miles per hour measured out from the edge of travel way. The CRZ can provide the driver of an errant vehicle the opportunity to regain control. Current shoulder width (paved) is generally 2 ft.

Manual for Assessing Safety Hardware (MASH) Compliance – Existing items are in good working order but should be upgraded when other improvements are built. This includes replacing guardrail with Midwest Guardrail System with a minimum height of 31”.

Existing Signage and Striping – As improvements are made to Forrester Road, striping, stenciling and signage should be replaced with the latest standards in regard to size and reflectivity. Highly reflective 6-inch traffic striping could be used to improve visibility and to clarify lane demarcations for autonomous vehicles.

6. CORRIDOR and SYSTEM COORDINATION

This project is in ***Imperial County's 2024 Regional Long-Range Transportation Plan*** (LRTP) and coincides with the operational improvements proposed in this report as Short Term and Near-Term improvements. The LRTP also describes a four-lane Expressway as the ultimate configuration of this segment of Forrester Road. The Operational Improvements are placed under the Regional Highways and Roadways improvements section of the LRTP. Various bridge replacements/rehabilitations along Forrester Road are also listed in the LRTP. These improvements will be covered by other Project Initiation Documents. ICTC completed the LRTP in February 2024.

Table 6-1 The Imperial County 2024 Regional Long-Range Transportation Plan			
Project ID	Jurisdiction	Rank	Project – Regional Highways and Roadways
RH-1	Caltrans	5	<i>Operational Improvements to Forrester Road from I-8 to SR 78. Passing Lanes, a bypass, shoulder widening, and intersection improvements. Ultimate configuration will be a 4-lane Expressway</i>
BE-24	County	8	<i>Replace and/or Rehabilitate Various County bridges along major corridors – including Forrester Road at Steiner Rd, Larsen Rd, I-8, and Imler Rd.</i>

Relinquishment of SR 86

Relinquishment of a state highway to a local jurisdiction delivers control to a city or county government. This provides them the opportunity to make management and design decisions about the roadway that best fit the needs of their communities. SR 86 between SR 111 (PM R 0.0) and SR 78 (PM R 24.0) primarily serves regional traffic and operates more like a collector/arterial city street instead of an interregional highway. It also serves as a *Main Street* through the communities of Heber and the Cities of El Centro, Imperial, and Brawley. The segment within the City of Imperial (PM 8.8 to 12.3) has already been relinquished to the city. Relinquishing the segment within the City El Centro (PM 5.1 to 8.8) is being considered through Project ID 11-1900-0209. Caltrans and the County of Imperial have been exploring the relinquishment of the three county segments (PM R0.0 to 5.1, PM 12.3 to 18.9, and PM 21.4 to 23.8) south of SR 78 through Project ID 11-1900-0208.

It is due to these relinquishment plans that the State could acquire Forrester Road to serve as a state highway. Forrester Road would be improved to handle interregional traffic bypassing the local main streets.

Mass Transit

Imperial Valley Transit (IVT) provides public bus service to Imperial County and is administered by ICTC. IVT operates 12 routes and serves 55,000 passengers a month. Three of the routes utilize portions of Forrester Road:

Bus Route 2 – Niland to El Centro

This route connects the Cities of El Centro, Imperial, Brawley, Westmorland, Calipatria, and the community of Niland. It also serves the Imperial Valley College (IVC) and utilizes the part of Forrester Road north of SR 78/86 (outside of the project limits). It makes 12 runs in the northbound direction and 12 in the southbound direction. The bus stops (NB & SB) in the City of Westmorland are located just north of the intersection of N. Center Street and SR 86.

Bus Route 4 – Ocotillo to El Centro

This route connects the communities of Seeley and Ocotillo with the City of El Centro. It crosses Forrester Road at the Evan Hewes Highway intersection. It makes six runs in the westbound direction and five in the eastbound direction.

Bus Route 22 IVC Express

This route provides service from the community of Niland, the cities of Calipatria, Westmorland, and Brawley to Imperial Valley College. It utilizes the part of Forrester Road north of SR 78/86 (outside of the project limits). It makes two runs in the morning and two in the evening. The bus stops (NB & SB) in the City of Westmorland are located just north of the intersection of N. Center Street and SR 86.

Bicycle and Pedestrian Facilities

According to the ***Imperial County Transportation Commission's Regional Active Transportation Plan (ICTC-ATP)*** from February 2022, there are no proposed bike facilities on Forrester Road between I-8 and SR 86. Bike facilities connecting the community of Seely with the City of El Centro are proposed. This would cross Forrester Road through the Evan Hewes Highway intersection.

Pedestrian Accommodation

This segment of Forrester Road is primarily in rural settings with a sparse residential population and very few commercial establishments. Pedestrian infrastructure is very limited with low volumes. Any improvements to the pedestrian infrastructure should be wary of urban heat islands and pedestrian comfort. Tree canopies and pedestrian shade structures should be considered to provide some relief in the high temperatures.

Alternative Fuels

For California to meet its goal of relying 100% on zero emission energy sources by the year 2045 (SB100, De Leon), alternative fueling has been considered for Forrester Road. This includes electric vehicle (EV) charging, Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG), and hydrogen fuel.

The primary component of CNG is methane (CH₄) which is usually compressed to less than 1% of its standard volume. CNG can be used as a substitute for gasoline in automobiles. LNG is chilled to liquefaction and is also made up mostly of methane. Protective equipment is needed to handle LNG due to the very low temperatures. The higher energy density of LNG is more attractive to drivers of long-haul tractor trailers. Fuel cells use hydrogen gas to produce electricity (DC current) to power vehicles. Protons and electrons are separated thereby creating a flow of electricity. After exiting an external circuit, they combine with oxygen to form water vapor as the only exhaust component. EV charging can be done through three different types of charging stations. AC Level one and Level 2 use voltage currents of 120 and 240 volts respectively. These are ideal for home use but can take from 5 hours to more than 20 hours to charge a vehicle. The EV must convert the AC

current to DC so it can be stored in the vehicle's batteries. DC Fast charging is a third type of charging station. These stations internally convert AC current into DC current thereby feeding it directly into the vehicle's batteries. The higher voltage (480 volts) provides a faster charge with an EV charge time between 15 to 45 minutes for most vehicles.

According to the FHWA's *Alternative Fuels Corridors* website, the following fuel types are recommended for each route:

Table 6.2 Alternative Fuel Types Proposed				
Route	EV	CNG	LNG	Hydrogen
I-8	X	X	X	X
SR 86	X	X		
SR 111	X	X		

As part of the Imperial Valley north-south transportation system which includes SR 86 and SR 111, it is recommended that the same alternative fuel types (EV and CNG) also be considered for this segment of Forrester Road.

Possible locations along Forrester Road have been identified for alternative fuel stations:

- 1) Martin Rd @ SR 86 (NE or SE Quadrants)
- 2) Forrester Rd @ Evan Hewes Highway (SE Quadrant)
- 3) Forrester Rd @ Worthington Rd (NE Quadrant)
- 4) Forrester Rd @ Keystone Rd (NE Quadrant)

Of these, only Location #1 has existing services that could serve drivers and passengers as they fuel their vehicles (Love's Truck Stop). Location #2 has residential lots in the vicinity, but driver/passenger services are currently not planned. The I-8/Forrester Road interchange could also provide refueling services, but all adjacent parcels are currently zoned for farmland (Attachment I).

Shared Mobility – Car Sharing and Neighborhood Electric Vehicles (NEVs)

Shared Mobility refers to the shared use of motor vehicles, bicycles, scooters, and other low speed vehicles. These Neighborhood Electric Vehicles (NEV) provide the opportunity for residents without access to a motor vehicle and/or very limited access to mass transit, to increase their mobility options without having the additional expense of owning a motor vehicle. NEV's would provide on-demand accessibility and could enhance existing transit stops or mitigate reduced mobility choice in disadvantaged communities. Specific parking/storage areas with possible charging capabilities should be considered. Within our project limits the area around the Love's Truck Stop (SR86/Martin Road) could serve such a purpose.

PUDO (Pick Up and Drop Off)

As on-line purchases continue to grow, the presence of delivery vehicles has also increased. Unattended packages are also prone to theft. This is leading to the development of PUDO designated areas where consumers can receive and leave parcels. These areas could operate within staffed counters in existing business or with unstaffed lockers. PUDO locations should be in locations with easy accessibility and where customers can feel safe. PUDO locations within or next to businesses that are open 24 hours a day are considered good locations.

Equity Considerations

The way projects benefit and burden specific populations, needs to be considered. Impacts from construction can be mitigated or scheduled during a certain time frame. Enhancements to adjoining infrastructure may also help mitigate negative impacts. As suggested earlier, upgrades to pedestrian infrastructure such as providing shade, wider sidewalks, and beautification (public art) projects can help offset impacts.

Sparse populations and less resources can limit mode choices – specifically to disadvantaged communities and those with large senior citizen populations. The availability of Shared Mobility (car sharing, bike, and scooter share) can provide equitable access to transportation. These can replace a number of vehicular trips.

Americans with Disabilities Act (ADA) Compliance

All proposed improvements should comply with the latest ADA guidelines. This applies to transit services (stops and service), curb ramps (sidewalks and trails), pedestrian signal crossings, and other types of transportation infrastructure.

7. PROPOSED IMPROVMENTS and ALTERNATIVES

This report has reviewed current and projected traffic scenarios and determined that a phased approach can be used to implement the proposed improvements. Each improvement can have different alternatives:

- A **No Build Alternative** is always considered. However, this alternative will not address the Need and Purpose, nor will it enhance the Region's transportation system.
- A **Minimum Build/Low Environmental Impact Alternative** is also considered for each of the improvements. This alternative achieves the Need and Purpose while having the smallest footprint possible and

generally has the lowest construction cost. It usually requires the least amount of right of way and has the least environmental impacts. This can be accomplished with minimum design standards and/or the implementation of design exceptions to those standards. A detailed evaluation of any nonstandard features will be conducted.

- A **Full Standard Alternative** not only meets design standard minimums but can exceed them when bringing added value to the proposed improvements. This alternative coincides with the Need and Purpose. It is generally considered when there is sufficient funding and general support from the impacted communities and transportation system users.

The Minimum Build and the Full Standard Alternatives represent the range for potential alternatives. Proposed improvements can be developed with an alternative within this range. This applies to all improvements from smaller pavement widenings to the four-lane roadway ultimate buildout. Final determination will be made during the environmental process of this project.

Improvement Implementation Strategy

Improvements to Forrester Road were based on the following criteria:

- Create a safe and familiar roadway to attract drivers. Ensure roadway pavement is in good condition. Provide adequate signage, clear stenciling/stripping, and required roadside features (guardrail, shoulders, Clear Recovery Zone, etc.).
- Maximize performance of the existing facility by implementing operational improvements to address/alleviate bottlenecks.
- Enhance livability and economic viability.

The improvements could be implemented in phases as funding is available:

Table 7.1 Implementation Phases	
Phase	Anticipated Construction
Short Term	2027 to 2030
Near Term	2030 to 2035
Mid Term	2035 to 2045
Long Term	2045 and beyond

The order of project implementation may vary and could be impacted by other factors not discussed in this report. Table 11-1 describes the time frame for each of the proposed improvements based on project need and the availability of funding. The improvements are also broken up into Group 1 (Short Term), Group 2 (Near term), Group 3 (Mid Term), and Group 4 (Long

Term) projects. Group 1 and Group 2 projects will proceed to the PAED phase.

Forrester Road Short Term Improvements (Group 1)

Group 1 projects consist of improvements to the Ross Rd/Forrester Rd Intersection and the Evan Hewes Hwy/Forrester Rd intersection. Table 4.2 identifies the bottlenecks along this segment of Forrester Road. The first two are the intersections with Ross Road and Evan Hewes Highway. While controlled intersections are technically not bottlenecks, they do negatively impact roadway capacity. An ICE study at each impacted intersection could be used to determine which improvements should be done.

Figure 7.1



Forrester Road/Ross Road Intersection Improvements.

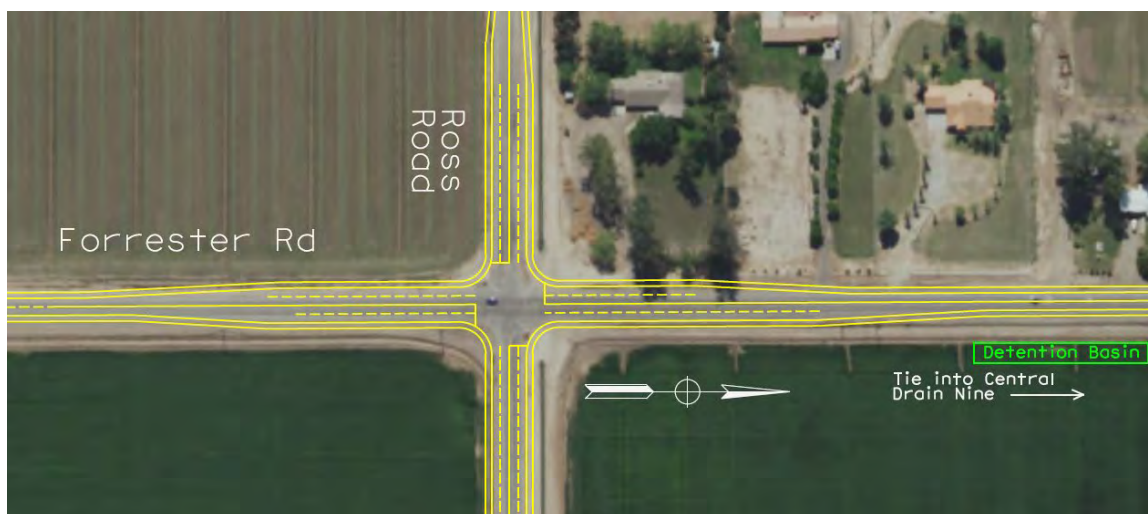
Ross Road is currently a 4-way stop controlled intersection. It was changed from a 2-way stop in 2019 for safety considerations.

Figure 7.2 - On Forrester Rd looking North.



The intersection operations can be improved through the addition of a second lane in each direction as shown below. This could nearly double the number of vehicles able to cross. The intersection might also meet the warrant requirements for signalization in the future. An ICE will be done to determine which improvements are needed. The cost range for this improvement is between \$6 million to \$10 million.

Figure 7.3 Ross Road – Intersection Widening (4-Way Stop)



Forrester Road/Evan Hewes Intersection Improvements.

The current intersection configuration consists of a single lane NB and a single lane SB. Traffic must turn left, right, or go straight from one lane at the signal.

Figure 7.4 On Forrester Rd approaching Evan Hewes Hwy looking north



Figure 7.5 On Forrester Rd approaching Evan Hewes Hwy looking north



Intersection improvements would be made to reduce vehicle delays due to the existing configuration at the signalized intersection. An ICE study will be done to determine the best improvements. Attachment B shows two possible configurations. The total project cost for these improvements ranges from \$5 million to \$11 million.

Forrester Road Near Term Improvements (Group 2)

Group 2 projects consist of passing lanes at the New River, Phase 1 of the Westmorland Bypass, Phase 2 of the Westmorland Bypass, and intersection improvements along Martin Road, Baughman Road, and Andre Road.

Passing Lanes at the New River

The Third Bottleneck identified by Table 4.2 is the grade changes at the New River. While ample passing opportunities are possible along Forrester Road, increases in traffic will be limiting them. The New River location is ideal for passing lanes. It is towards the middle of the segment and has the largest grade differentials.

Figure 7.6 Passing Lanes – Minimal Impact



This improvement would construct a northbound passing lane from the New River to the Sumac Canal (0.5 miles long). Passing opportunities will not be impacted as this segment is already striped as “No Passing” for the southbound direction.

Figure 7.7 New River Bridge Looking North



A southbound passing lane from Larsen Road (just south of the New River) to Wienert Rd (0.5 miles long) would also be constructed. Alignment will have to be partially shifted to the east by 12 feet to avoid a large cut section and to avoid the relocation of a high voltage power pole pair. Passing opportunities will not be impacted as this segment is already striped as “No Passing” for the northbound direction.

Figure 7.8 New River Bridge Looking South



The New River Bridge does not need to be widened to accommodate the passing lanes but does need to upgrade the bridge railing (Minimum Build Alternative). A preliminary review of the structure's integrity indicates that the existing bridge should be able to handle the additional dead load from upgrading to Type 836 bridge railing.

If detailed analysis shows that the bridge cannot handle the extra dead load, then the bridge might have to be replaced. Under this scenario, the new bridge could be built to the east of the existing bridge thereby minimizing road closure days due to construction. The addition of turn pockets serving Larson Road could be included in this alternative if needed. The old bridge and roadway segment could then be demolished or used for another purpose. This Full Standard Alternative is shown in Figure 7.9 below.

Figure 7.9 Passing Lanes Full Standard Alternative

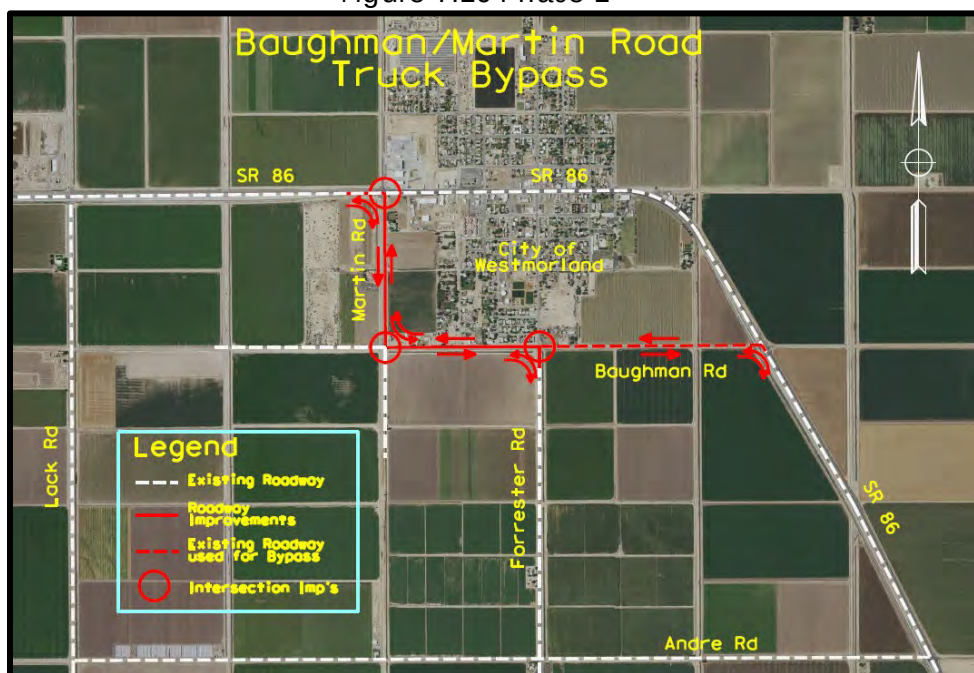


The cost range for this improvement is between \$15 million and \$25 million.

Westmorland Bypass Phase 1

This project proposal creates a truck route/bypass around the City of Westmorland. It takes heavy traffic from westbound SR 86 and directs them onto Baughman Road about half a mile south of the city limit on SR 86. Traffic proceeds past the Forrester Rd intersection to the Forrester Rd/Martin Rd intersection where a right turn is made onto Martin Road. Traffic travels half a mile north where it meets the SR 86 intersection. Forrester Rd NB traffic would also make a left on Baughman Rd and use Martin Rd to connect to SR 86. Figure 7.1 shows these traffic patterns. As previously mentioned, vehicles are currently using the Forrester Rd/Baughman Rd/Martin Rd route to bypass the City of Westmorland.

Figure 7.10 Phase 1



The eastern Baughman Rd segment between Forrester and SR 86 appears to be in good operating conditions. The deceleration lane length for the NB left turn lane is approximately 630 feet which is sufficient for SR78/86 with its speed limit of 65 miles per hour. Signage to direct traffic appears to be all that is currently needed. The western segment of Baughman Rd and Martin Rd will need substantial improvements to adequately handle the anticipated traffic.

Figure 7.11
(Martin Rd @ SR 86 – Looking North)



Minimum Impacts Improvements

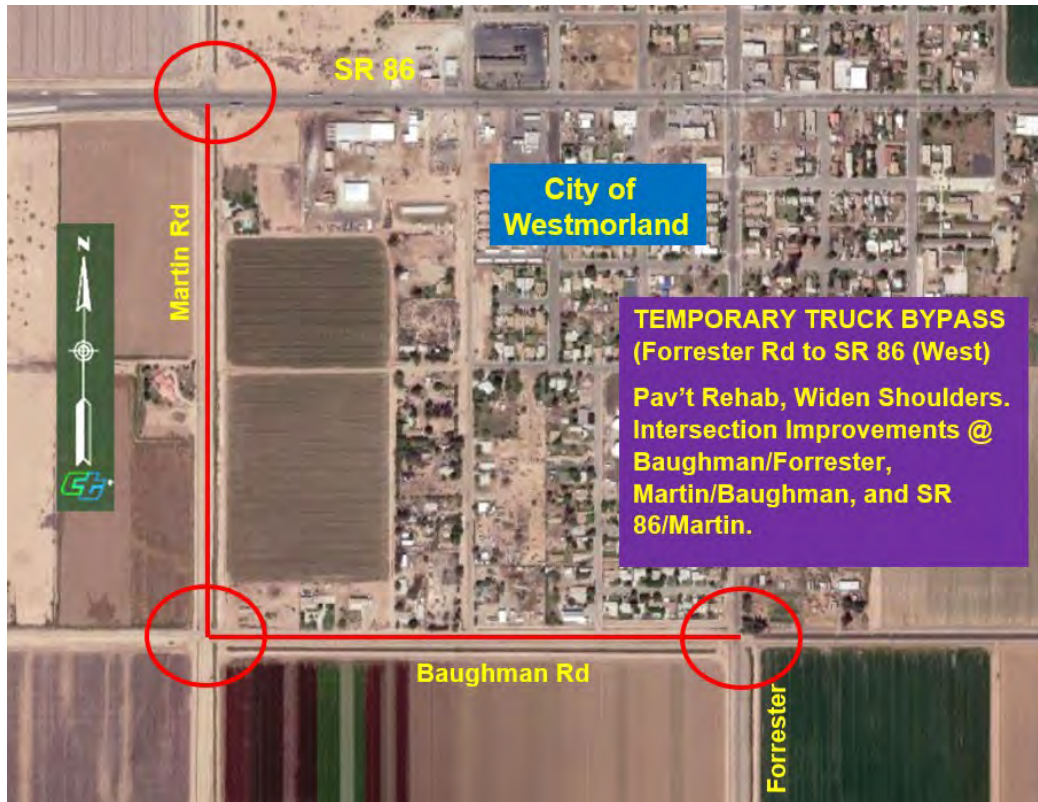
The pavement on these two local roads is in poor condition. This hinders the transport of agricultural equipment and sensitive goods and produce which are impacted by surface degradation and the presence of ruts and potholes. A reconstruction of Baughman Road and Martin Road will be required. The proposed reconstruction will build a road with two 12-foot lanes and a minimum of 2-foot shoulders. Intersection improvements to accommodate STAA turning radii will be needed at:

- Forrester Rd/Baughman Rd
- Baughman Rd/Martin Rd
- Martin Rd/SR 86

An ICE study will be conducted at the Martin Rd/SR 86 intersection as it is located on a state facility. This will determine the improvements needed. The City and County also have the option to use ICE for the other two intersections, but it is not required. The Love's Truck stop developer deposited a \$500k bond with the City of Westmorland to signalize/improve this intersection per a reimbursement agreement which expires at the end of 2033.

At least seven power poles will have to be relocated. Portions of Trifolium Lateral Five South Canal, Trifolium Five Drain South, and Trifolium Six Drain will have to be covered. Primarily to accommodate anticipated turn lanes at each of the intersections. Three homes along Baughman Rd and two along Martin Rd have driveways that could be impacted by these improvements.

Figure 7.12 Phase 1 Intersection Improvements



While each of these intersection improvements could offer independent utility and be built separately from the Temporary Bypass project, it is recommended that these intersection improvements be built concurrently or as part of the Bypass project. The cost range for each intersection improvement ranges from \$3 million up to \$10 million.

Full Standard Improvements

This variation includes the Basic improvements but enhances the streets to provide wider shoulders (8ft) and a Clear Recovery Zone of 20 ft from edge of travel way.

It will require the removal/relocation of 23 power poles and the elevation of the roadway to improve drainage. The Trifolium Lateral Five South Canal runs along the north side from Forrester to H. St. The Trifolium Lateral Five South Drain runs all along the south side of Baughman Road. About 300 ft of each would have to be covered. About 2,500 ft of Trifolium Lateral Six Canal might have to be covered. This allows the roadway to be shifted 12 feet to the west and provides sufficient area for a 20-foot clear recovery zone.

Figure 7.13 Baughman Rd/Martin Rd



A partial take of the NE parcel at the Forrester Rd/Baughman intersection will be needed. This would involve acquiring the house within the parcel.

Figure 7.14 Forrester Rd/Baughman Rd

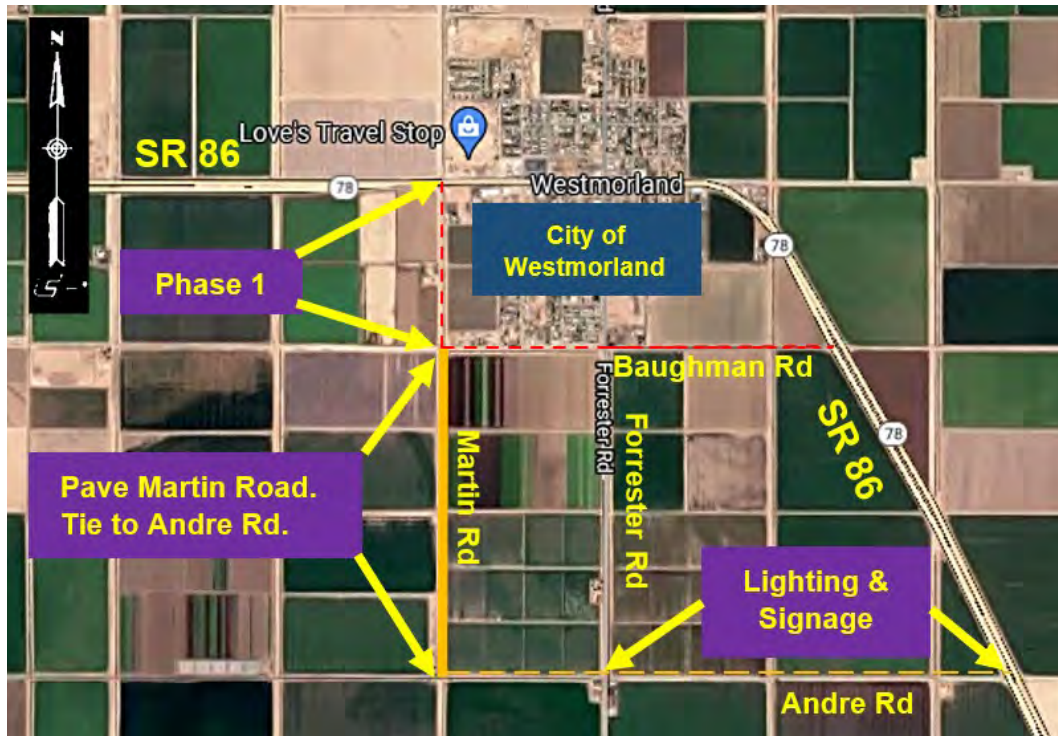


As additional pavement is added and there will be partial covering of canals and drains, it is anticipated that two or more detention basins will be required for this project. The total project cost for these improvements ranges from \$7 million to \$17 million. This cost does not include intersection improvements. If intersection improvements are included, the overall cost ranges from \$24 million to \$54 million. This will provide access and improve connectivity in the immediate area. This phase of the Bypass could be done concurrently with Phase 2.

Phase 2 (Bypass Using Martin Rd and Andre Rd):

Phase 2 uses the existing Andre Rd as a connection between Martin Rd and SR 86. Phase 2 builds on Phase 1.

Figure 7-15 Phase 2 (Martin Rd Extension)



The 1.2 mile long segment of Andre Rd between SR 86 and Forrester Rd is currently in poor condition. A pavement rehabilitation or possibly a reconstruction might be required. The one mile long segment of Martin Rd (Baughman Rd to Andre Rd) is currently a dirt road and will have to be paved. Intersection improvements and lighting will be required at Forrester/Andre, Andre/Martin, Baughman/Martin and possibly SR 78/86/Andre Rd. The deceleration lane length for the NB left turn lane is approximately 630 feet which is sufficient for SR78/86 with its speed limit of 65 miles per hour. Vehicles traveling north on Forrester Rd bypassing Westmorland, will make a left turn on Andre Rd and then a right onto Martin Rd.

Figure 7.16 Andre Rd @ Forrester Rd



The Forrester Rd/Andre Rd intersection will require the partial right of way take of the southeast parcel as widening to accommodate the left turn lanes on Forrester Rd will occur to the east. The parcel has a small office (about 50 ft from the existing travel way) and is used for equipment and feed storage. This should minimize impacts to the southwest parcel which has a two homes on it. In order to accommodate the two left turn lanes on Andre Rd, widening will occur to the north. This will involve impacts to the existing east-west canal on the north side of Andre Rd. The canal could either be covered or relocated. Partial takes and access modifications could be required of the northeast and northwest parcels. An ICE study will be done to determine the improved configuration of the Forrester Rd/Andre Rd intersection. This phase could be done concurrently with Phase 1. The only improvements needed on Baughman Road would be at the Martin Road intersection. Figure 7.17 shows a possible widening scenario at the Forrester Rd/Andre Rd intersection.

Table 7-2

Phase 2 – Andre Rd and Martin Rd	
Location	Improvements
Intersection - SR 86/Andre Rd	Add Turn Pockets on Andre Rd, add lighting, ICE study
Andre Rd – SR 86 to Forrester Rd (1.2 mile)	Pavement Rehabilitation or reconstruction, possible shoulder widening.
Intersection – Andre Rd/Forrester Rd	Add Turn Pockets on both Andre Rd and Forrester Rd, add lighting, ICE study. Possible partial take of SW and Northside properties.
Andre Rd – Forrester Rd to Martin Rd	Pavement Rehabilitation and possible shoulder widening.
Intersection – Andre Rd/Martin Rd	Add Turn Pockets on both Andre Rd and Martin Rd, add lighting.
Martin Rd – Andre Rd to Baughman Rd	Pave existing roadway.
Intersection – Martin Rd/Baughman Rd	Re-evaluate existing two way stop (N-S) and switch to two way stop (E-W)

Cost Range for Phase 2 : \$18 million to \$25 million. General schematics for this proposal are part of Attachment B.

Forrester Road Mid Term Improvements (Group 3)

Various Intersection Improvements

The intersections below are experiencing delays (primarily on the cross street to Forrester Rd). The proposed improvements below should help alleviate the situation without an immediate need for larger improvements such as signalization or the consideration of roundabouts.

Table 7.3 Forrester Rd Intersections Possible Improvements	
Intersection	Improvement Type
Worthington Road @ Forrester Rd	Left Turn Pockets on Worthington and more lighting.
Keystone Road @ Forrester Rd	Left Turn Pocket on Keystone and improve lighting
Imler Road @ Forrester Rd	Turn Pockets on Imler & Forrester. Add lighting at intersection.
Carter Road @ Forrester Rd	Turn Pockets on Carter & Forrester. Add lighting at intersection.
Cady Road @ Forrester Rd	Turn Pockets on Cady. Improve lighting at intersection.

The cost for these improvements ranges from \$5 million to \$30 million.

I-8 Interchange Improvements

The I-8/Forrester Road Interchange could eventually require operational improvements. These improvements could include:

- Westbound Off Ramp Widening – NB Right Turn Lane
- Eastbound Off Ramp Widening - SB Left Turn Lane
- Widening of the Forrester Road Overcrossing to accommodate a southbound left turn lane onto eastbound I-8.
- Signalization of the Interchange
- The Forrester Road @ I-8 Overcrossing may have to eventually be widened.

Figure 7-XX shows possible improvements that could be implemented without having to widen the structure. Caltrans, ICTC, and the County of Imperial will continue to monitor the functionality and operational capabilities of the interchange. The cost for these improvements ranges from \$5 million to \$15 million.

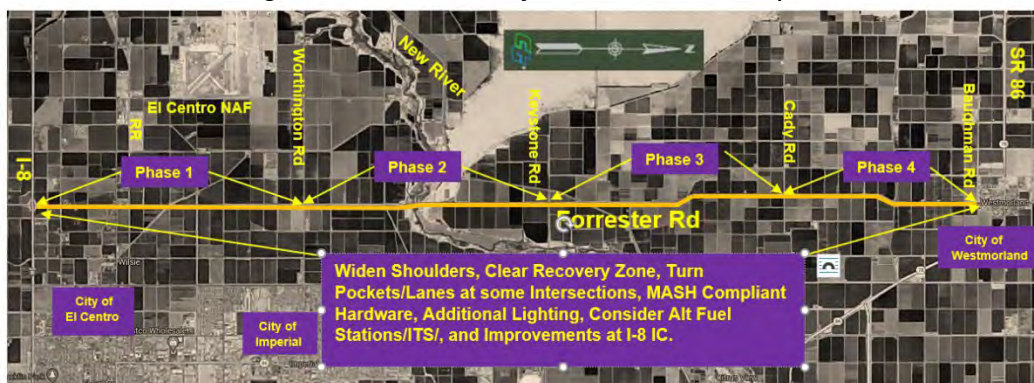
Figure 7-17



Cross Section Improvements

The presence of paved shoulders provides an all-weather storage area for temporarily disabled vehicles, helps reduce a traveler's stress level, functions as part of the CRZ, and helps to maintain a roadway's travel time reliability by providing access to first responders so they can quickly provide aid. A wide shoulder may also serve as a bike line when roadway widening is not practical. These improvements are part of Group 1.

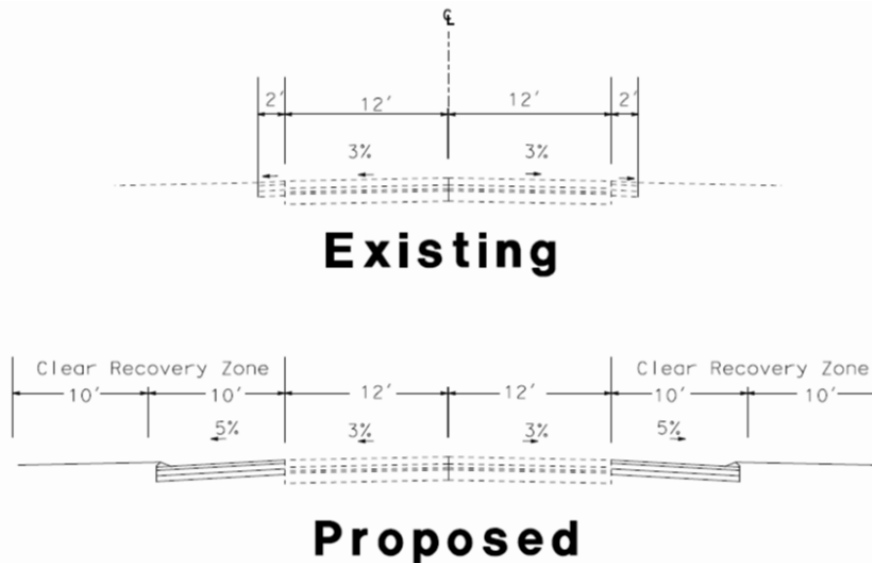
Figure 7.18 Roadway Cross Section Improvements



A Roadway Rehabilitation of Forrester Road with added 8-foot (10-foot preferred) paved shoulders is proposed when feasible considering existing utilities. This includes upgrading to the latest safety standards regarding guardrail, signage, and striping. A full review of the local road intersections will be conducted to determine if any improvements are needed. While Forrester Road's LOS is not directly impacted by the traffic on the two way and one-way (Tee) stop controlled intersections, traffic queues waiting to cross or get on Forrester Road can typically reach over 300 feet. While Signal Warrants and/or an ICE study will have to be done, it is anticipated that the addition of turn pockets (both on Forrester Road and the crossroads) could help the situation.

Some of the challenges of widening the existing paved shoulders is the proximity of power poles, irrigation canals, and drains. It is not practical nor cost effective to relocate or protect all the power poles, canals, and drains within the CRZ. In later phases of the project, these items will be reviewed to determine which may be left in place and where a wider shoulder may not be practical.

Figure 7.19



Segment A: I-8 to Worthington

This is a 4.5 mile stretch of two-lane roadway with an at grade railroad crossing 0.2 miles north of Evan Hewes Highway. The paved shoulders generally range between 2 ft and 4 ft in width. The pavement is generally in good condition.

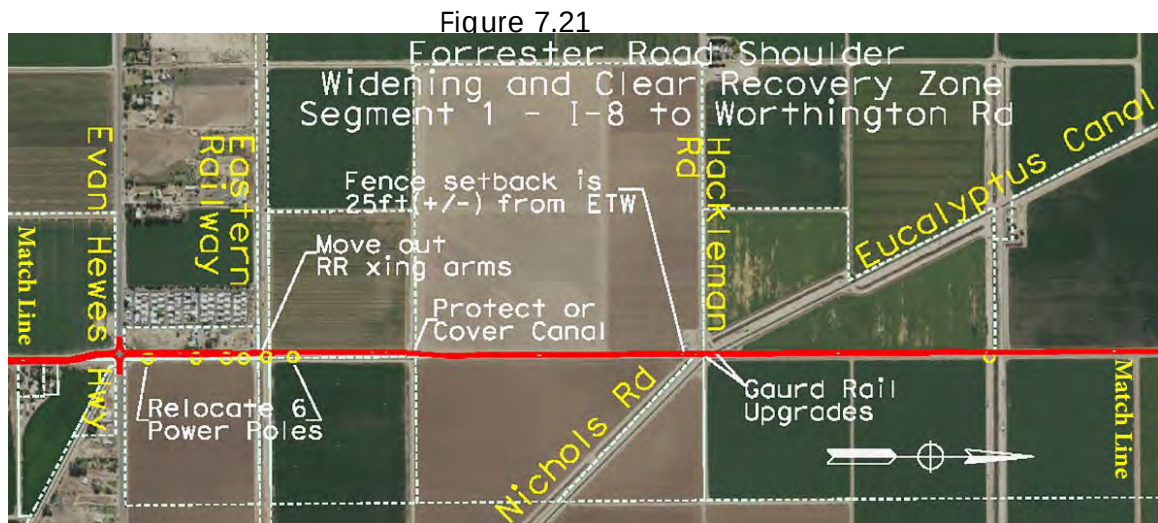
Railroad crossing arms bases are about 8 feet from the edge of travel way.

Seventeen power poles have been preliminarily identified for relocation. A Safety evaluation will be done in later phases of the project to determine which poles should be relocated.

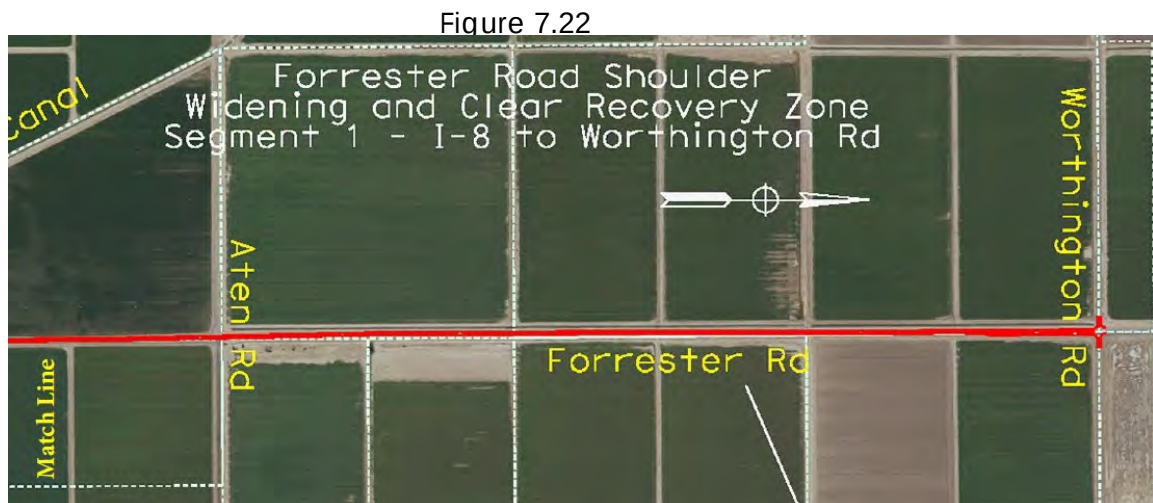
Figure 7.20



It is anticipated that the Ross Rd intersection improvements would be done prior to the construction of this proposal. Both could be constructed concurrently



As with Ross Rd, it is anticipated that the intersection improvements to Evan Hewes Highway would be done prior to this shoulder widening project. While both improvements could be built under the same project, it is expected that the operational capacity of the intersection will be reaching an unacceptable LOS by the time the shoulder improvements are implemented. The cost for this segment is between \$19 million and \$30 million.

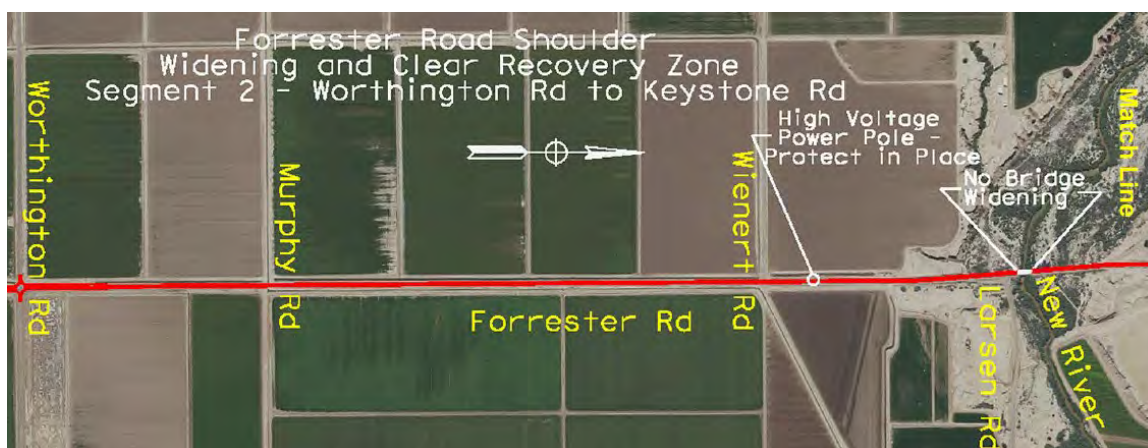


Segments A thru D will be impacted by the presence of IID canals, drains, and power poles. Additional pavement widening could also trigger the need for additional drainage storage in the form of detention basins. This will require a thorough investigation and analysis of any additional water storage due to the increase of impermeable surface as a result of the shoulder widening and turn lane additions.

Segment B: Worthington to Keystone

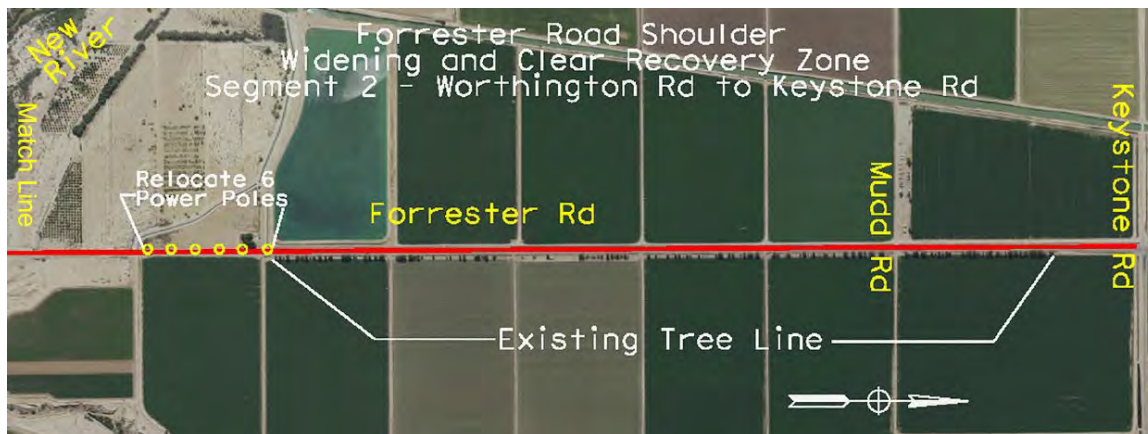
This 4.6-mile stretch includes the New River crossing. It is anticipated that the New River passing lanes will have already been added by the time this project is in construction. The six power poles identified for relocation could be addressed during the passing lanes project. There is an existing oak tree line between the New River and Keystone Road that should not be impacted.

Figure 7-23



The proposed passing lanes will most likely have already been constructed when these improvements will be scheduled for construction. The high voltage tower adjacent to the southbound travel way will be protected in place.

Figure 7-24



The existing tree line south of Keystone Road should be protected as they are an iconic feature of Forrester Rd. The cost for this segment is between \$20 million and \$30 million.

Segment C - Keystone to Cady

This segment crosses the Westside Main Canal. Six power poles have been identified for relocation.

Figure 7-25



The Westside Main Canal bridge project (see page 63 for more info) should be completed prior to the lane widening in of this segment. Two parcels just south of Donovan Rd are used for agricultural storage. Agricultural accommodations and/or intersection improvements might be justified.

Figure 17.26



There are a few locations where farming equipment is stored along Forrester Rd and certain homes are relatively close to the roadway. The cost for this segment is between \$20 million and \$30 million.

Segment D – Cady to Baughman

This segment crosses the Main Canal. Forty power poles have been identified for relocation. The Baughman intersection should be improved with the Temporary Bypass project. The cost for this segment is between \$16 million and \$27 million.

Figure 7-27



This segment of Forrester Road has six parcels with homes on them. At least three of these parcels have two or more homes in each.

Figure 7-28



Forrester Road Long Term Improvements (Group 4)

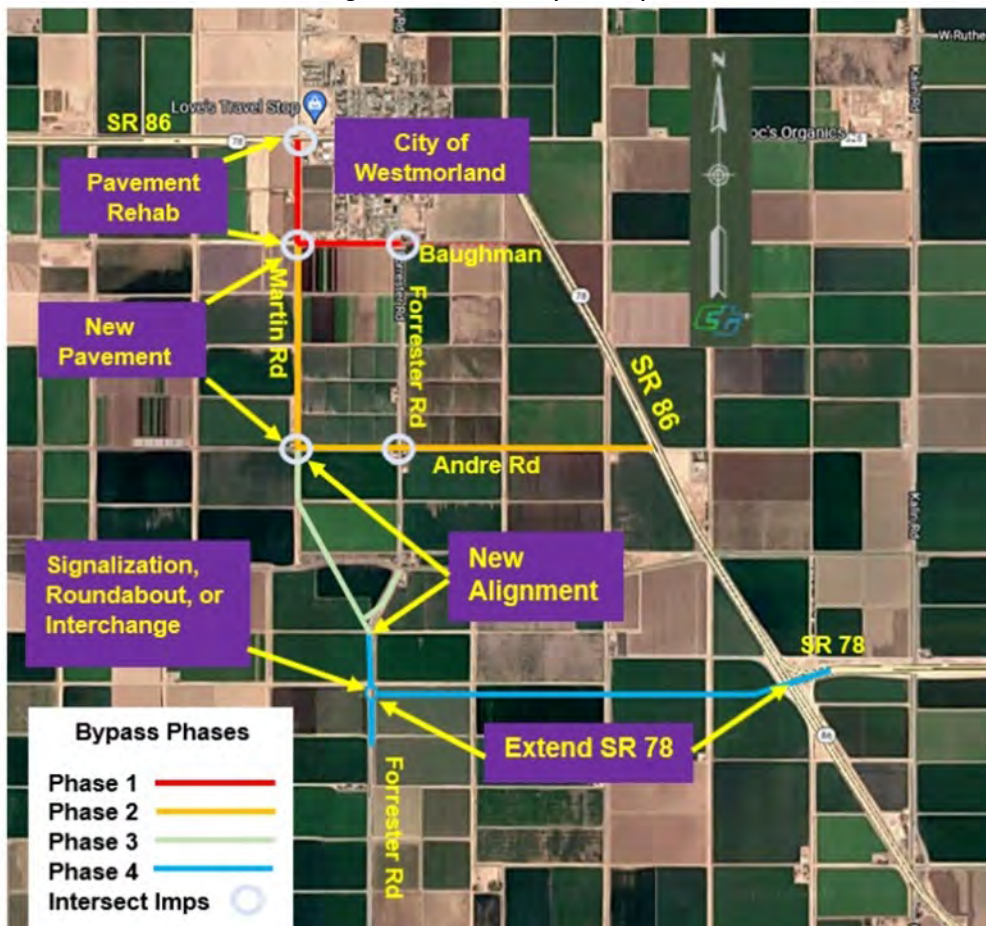
These Long Term Projects (in construction beyond year 2045) will help move freight and provide a way for heavy farm machinery to move along Forrester Rd. Phases 3 and 4 of the Westmorland Bypass complete the final alignment of the bypass. Slow vehicle lanes accommodate large agricultural equipment.

Westmorland Improvements Phasing

Increased traffic along SR 86 between I-8 and the City of Westmorland has caused heavy vehicles to use Forrester Road as an alternative. The Westmorland Bypass improvements seek to remove these heavy vehicles through the City of Westmorland. Many currently use Baughman Road and Martin Road to SR 86 to

bypass the City of Westmorland. This proposal accommodates traffic traveling on Forrester Road as well as traffic from SR 78 and from SR 86. This proposal would extend the SR 78 bypass from its current termination point at SR 86 to 2.0 miles west where it meets Forrester Road. About 0.3 miles north of Monte Road, Forrester Road would proceed straight (beyond the right curve) and then curve left to eventually tie into Martin Road in the vicinity of Andre Road.

Figure 7.29 Group 2 Improvements



Phasing allows for improvements to be made as funding becomes available. Each phase would have independent utility and serve as a modified truck route while minimizing “throw away” work.

Phase 1 – Pavement upgrades to Baughman Rd and Martin Road between Baughman and SR 86. These two roads would serve as the temporary bypass in the short term.

Phase 2 – Pave Martin Road between Andre Road and Baughman Rd. Andre Rd would now serve as part of the expanded temporary bypass along with Martin Road. Baughman could still be used as a bypass but would not be the preferred route.

Phase 3 – Realign the segment of Forrester Rd between Monte Rd and Andre Rd so it directly ties to Martin Rd. This would eliminate the stop at the intersection of Forrester Rd/Andre Rd for vehicles using Forrester Rd.

Phase 4 – This final segment of the Westmorland Bypass extends SR 78 two miles to the west so that it ties to Forrester Rd. This would take SR 78 traffic directly to Forrester Rd for those wishing to bypass the City of Westmorland.

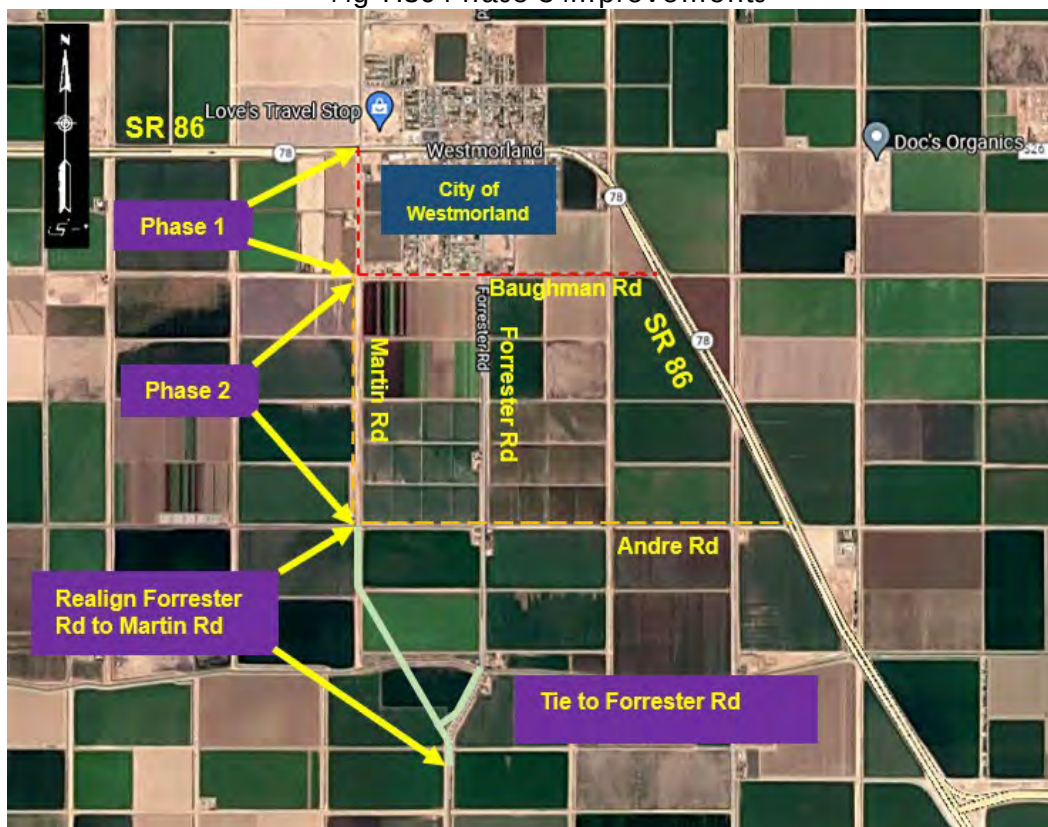
The Andre Rd/Martin Rd (Phases 1 and 2) Bypass is being considered to move forward in the Short Term or Near-Term time frame. It requires minimal amounts of right of way, would utilize much of the existing infrastructure and has fewer Environmental impacts. These Phases have independent utility and could accommodate Phases 3 and 4 in the Long Term if the region ever decides to proceed with these improvements.

Westmorland Bypass - Phase 3 (Forrester Rd Realignment)

A direct connection between Forrester Rd and Martin Rd is expected to reduce travel times and decrease trip lengths. Phase 3 eliminates two turns (Forrester Rd/Andre Rd and Andre Rd/Martin Rd) for traffic on Forrester Rd bypassing the City of Westmorland. Forrester Rd is diverted to the west approximately 1,400 ft north of Monte Rd at the point where the existing alignment turns to the east. It connects with Martin Rd just south of Andre Rd. Five parcels will be impacted requiring partial ROW takes. A new bridge over the Main Canal/Steiner Rd will have to be built and six power poles may have to be relocated. Forrester Rd (south of Steiner Rd) will be religned so that it tees up to the new realigned portion of Forrester Rd/Martin Rd. The Andre Rd/Martin Rd intersection will be modified and preference given to vehicles proceeding straight on Martin Rd.

Table 7-4 Forrester/Martin Road Realignment	
Location	Improvements
Approx 1,400 ft north of Monte Rd	Divert alignment to Northwest Direction
Forrester Rd south of Steiner	Curve segment of Forrester Rd to intersect into new alignment.
Martin Rd south of Andre Rd	Tie new alignment with Martin Rd just south of Andre Rd

Fig 7.30 Phase 3 Improvements



Cost Range: \$15 million to \$30 million

Westmorland Bypass - Phase 4 (SR 78 Extension to Forrester Road)

The SR 78/SR 86 southern junction is just south of Fredericks Road. This improvement proposes to extend SR 78 two miles to the west connecting with Forrester Rd just south of Monte Rd. Four partial parcel takes will be required with a possibility of three additional parcels impacted depending on the type of intersection at SR 78/Forrester Rd. The extension will cross four IID drains and cross four IID canals between SR 86 and Forrester Rd. At least one power pole (Loveland Rd) will have to be relocated

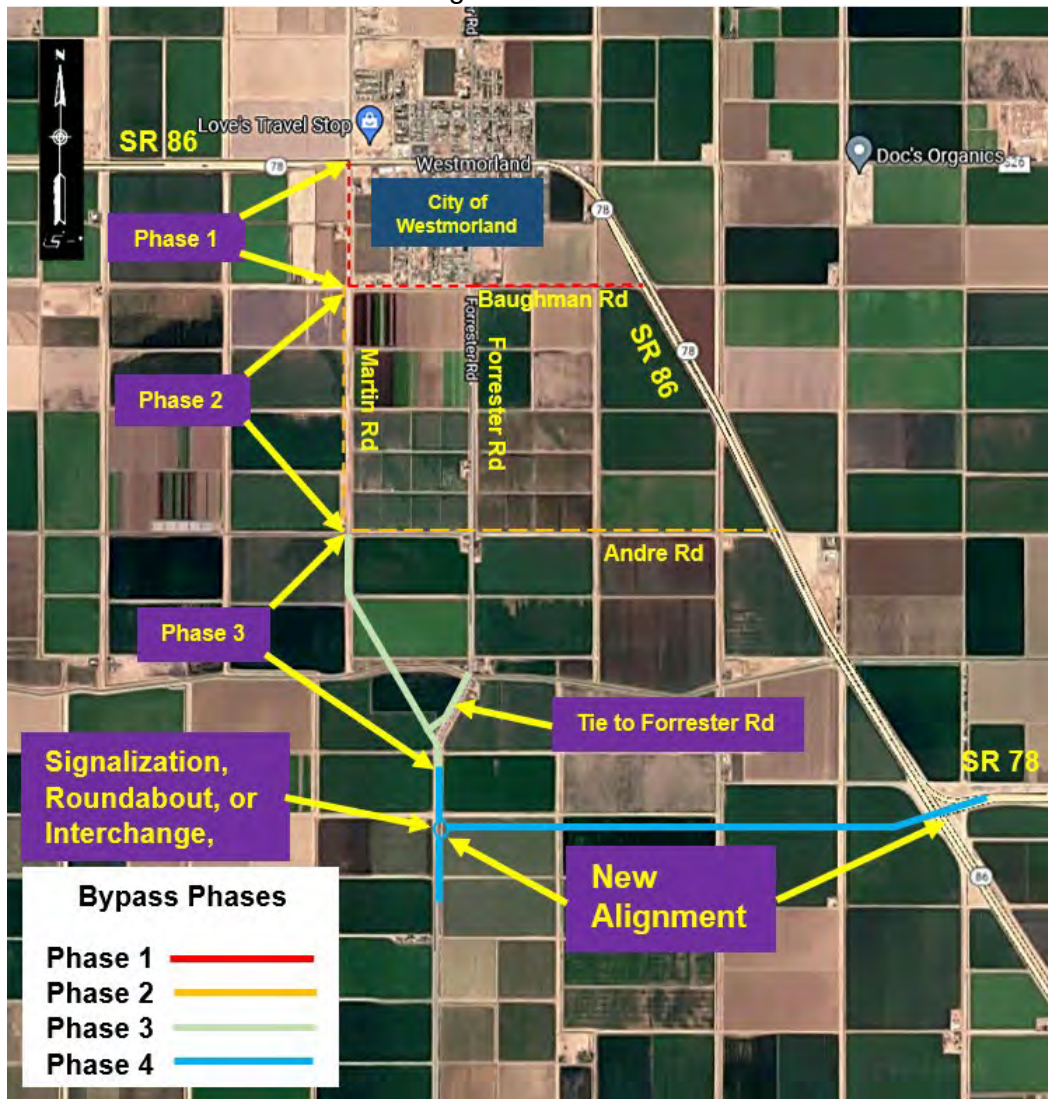
Table 7-5 SR 78 Extension Intersection Improvements		
SR 78 Extension - Cross Roads	Existing Condition	Proposed Intersection Improvement
SR 86	Signalized Intersection	Add Thru Lanes or Possible Interchange
Elder Rd	Two Lane Paved Roadway – connects to Fredericks Rd and SR86	Close off thru move across SR 78. North traffic connects through Loveland Rd and south connects via Cady Rd
Roberts Rd	Unpaved Farm Road	Right In/Right Out
Loveland Rd	Paved Roadway	Two Way Stop Controlled
Nice Rd	Unpaved Farm Road	Right In/Right Out
Forrester Rd	Two Lane Paved Roadway	Roundabout or Signalized Intersection

All intersections will be evaluated through the ICE process.

This proposal will require three centerline miles of new pavement. Alternatives will range from a two-lane SR 78 Extension to a four lane SR 78 Extension. The roadway could be built as a two-lane roadway with sufficient ROW purchased for a future four lane facility. Higher traffic on Forrester Road north of the SR 78 Extension might require a four-lane road. Fredericks Road and Monte Road could serve as frontage roads. With the construction of new roadways, improvements to active transportation and other modes of travel will be considered. Irrigation modifications and accessibility to impacted parcels will be determined during future phases.

Cost Range: \$30 million to \$60 million

Figure 7.31 Phase 4



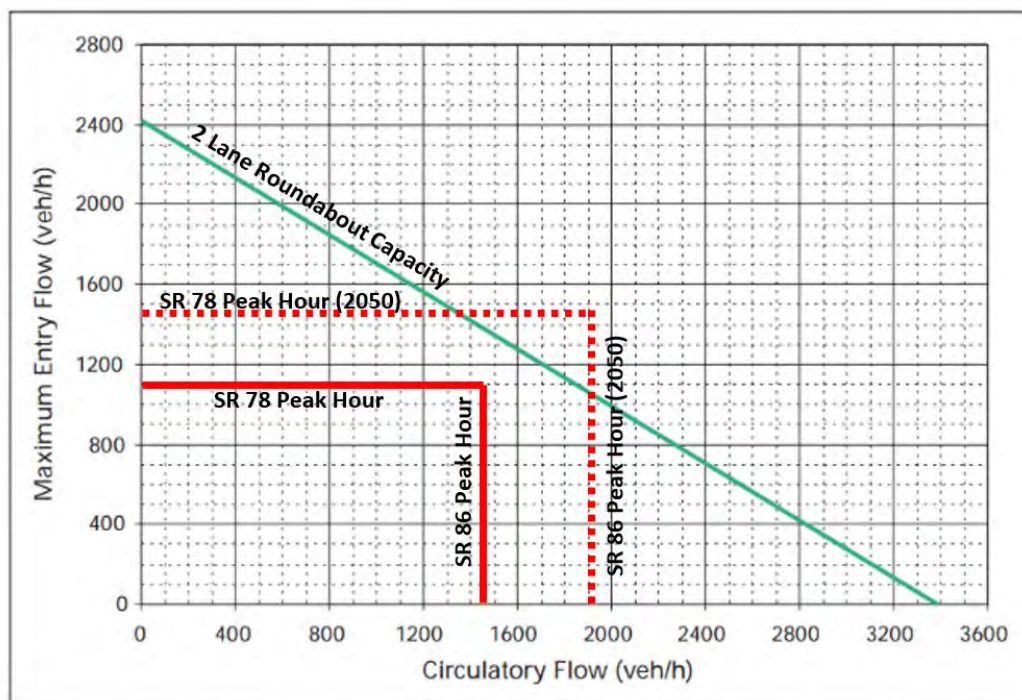
SR 78/SR 86 Junction and SR 78/Forrester Rd Intersection

The SR 78/SR 86 junction will have to be widened. As with most ICE studies, the roundabout is the top consideration. Using current traffic volumes, a preliminary traffic analysis shows that a single lane roundabout is not adequate.

Table 7.6		
SR 78/86 Intersection Peak Hour Volumes		
SR 78/SR 86 IC South Junction	2019 Vol's (veh/hr)	2050 Vol's (veh/hr)
SR 78 @ SR 86 (EB & WB)	1,100	1,450
SR 86 @ SR 78 (NB & SB)	1,450	1,900
Totals	2,550	3,350

A traffic interchange might be required to accommodate the anticipated traffic. The 2050 traffic volumes for Phase 4 were projected using a steady 1% yearly traffic increases. Current traffic volumes could be handled by a 2-lane roundabout at this intersection. However, that capacity will be surpassed prior to the year 2050 as shown in Figure 7-32.

Figure 7.32 - SR 78/SR 86 Roundabout Approach Capacity Evaluation

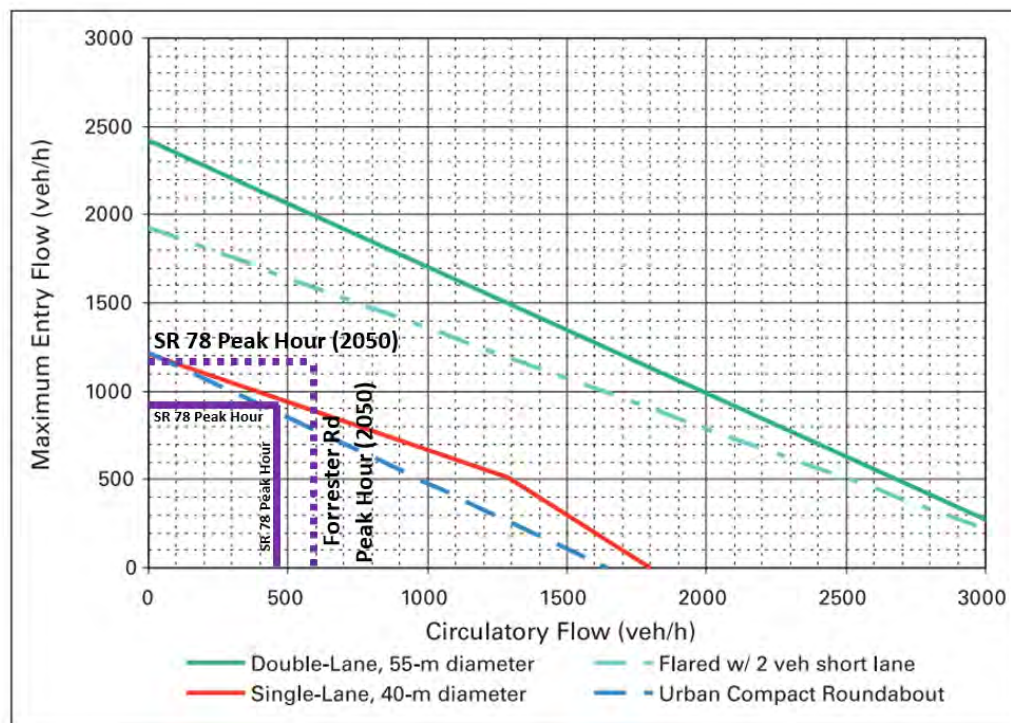


SR 78 (Extension)/Forrester Rd Intersection

The following chart shows that the future SR 78/Forrester Rd intersection could require a two lane roundabout to accommodate 2050 anticipated traffic. Current volumes are just within the limits for a single lane roundabout but a few years of growth would necessitate a two lane roundabout.

Table 7.7		
SR 78/Forrester Rd Intersection Peak Hour Volumes		
SR 78/Forrester Rd – New IC	2019 Vol's (veh/hr)	2050 Vol's (veh/hr)
SR 78 @ Forrester	900	1,200
Forrester @ SR 78	450	600
Totals	1,350	1,800

Figure 7.33 - SR 78/Forrester Rd Roundabout Approach Capacity

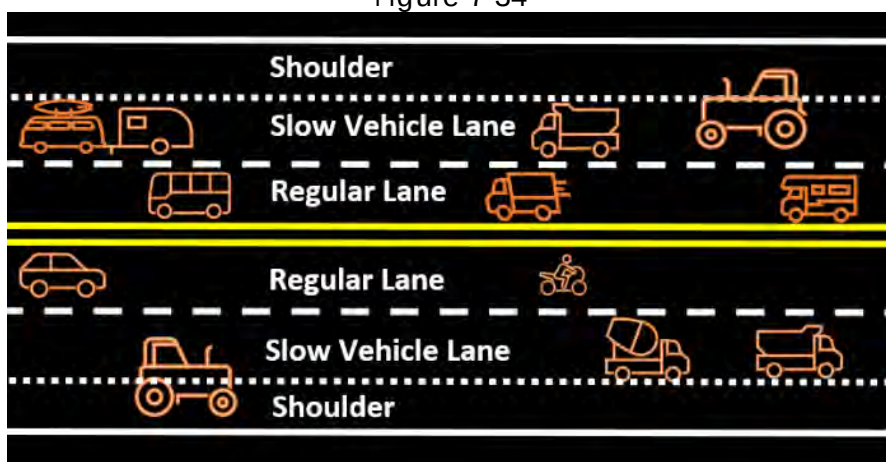


Forrester Road Four-Lane Roadway

ICTC has a general description of the proposed operational improvements for Forrester Road in their draft LRTP. A planning level traffic analysis determined that the roadway could handle anticipated traffic volumes through the year 2050 if certain operational improvements are done to address the identified bottlenecks described in Table 4-2. While the analysis does not cover traffic scenarios beyond 2050, data extrapolation indicates a need for further improvements if Forrester Road continues to attract significant volume increases from the other N-S routes. While this future scenario might not require a four-lane roadway between all of I-8 and the SR 78/86, the Region would like to have the flexibility to consider all improvements. This route also handles the transportation of both farming products and slow-moving agricultural equipment. The machinery needed for soil preparation, planting, tilling, and harvesting is usually

wider than the 8.5 ft max for most typical vehicles. There are also locations adjacent to the route where agricultural commodities and equipment (which can serve multiple farms) are stored during planting and harvesting times. These issues will require additional studies and extensive outreach to residents and industry to ensure the livability and economic viability of the area is not negatively impacted. This will be especially evident as traffic continues to increase on this segment of Forrester Road.

Figure 7-34



During the harvesting time of the year, extra wide agricultural equipment has been observed moving along Forrester Rd as frequently as every 5 minutes. One proposal would build Slow Vehicle lanes allowing oversized vehicle to straddle onto the shoulder (Figure 7-16). These lanes could also be used by regular traffic when slow and oversized vehicles are not using it.

Figure 7-35

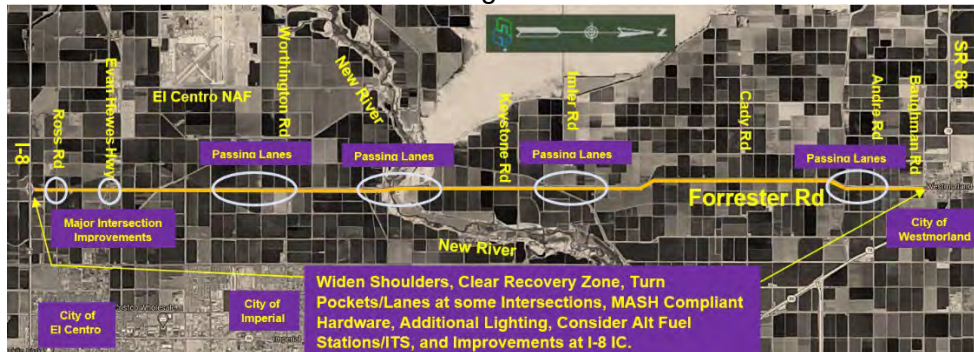


* Oversize vehicles can straddle shoulder. Can also be used by general purpose vehicles.

The preliminary cost range for the roadway widening improvement is between \$ 300 million and \$ 600 million.

Other Possible Locations for Passing Lanes

Figure 7-36

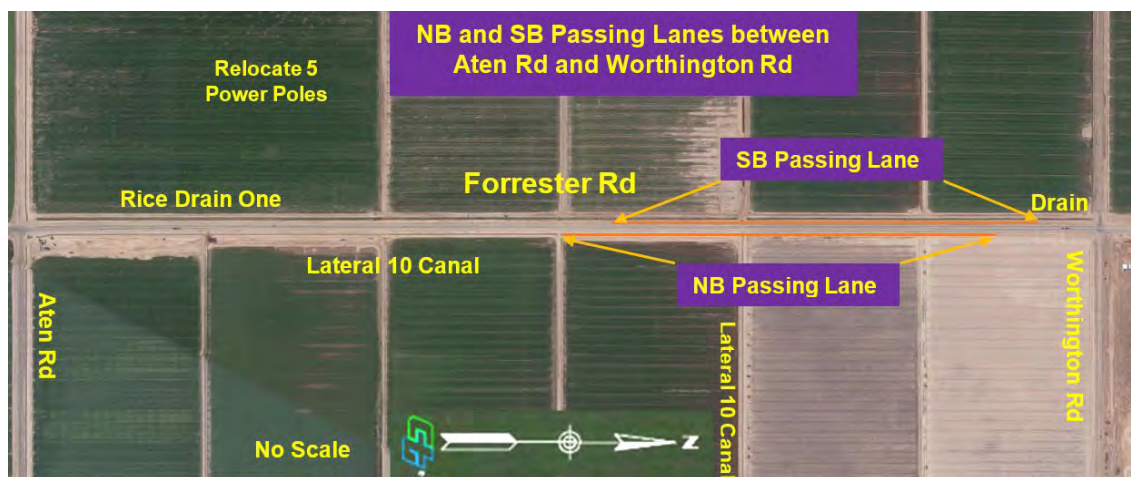


A cursory review of the route identified three other locations along Forrester Rd for passing Lanes. The main challenges are the presence of irrigation canals and drainage ditches adjacent to the roadway. At these locations, the drains and canals could be relocated or covered. Power poles would also have to be relocated to accommodate the passing lanes. The passing lane lengths shown are about 0.5 miles long (2,600ft +/-). Later phases of the project will conduct studies to address these issues.

Location #1 Aten Road to Worthington Rod

NB and a SB passing lanes could be placed between Aten Rd and Worthington Rd. The segment closer to Worthington Rd is considered as it would diminish the impact to Lateral Canal 10. The SB passing lane would not interfere with the Aten Rd and Worthington Rd intersections. The NB passing lane would terminate just south of the Worthington Rd intersection. This could result in operational issues with some vehicles having to merge at the end of the passing lane and then preparing to make a right at Worthington Rd. The NB passing lane might have to be pushed north past the Worthington Rd intersection to reduce the decisions having to be made by NB drivers on Forrester Rd. Future studies will make this determination. Widening to accommodate the two passing lanes would likely occur to the west. This would necessitate the covering or relocation of Rice Drain On. Up to five power poles running along the drain would also be relocated. Cost is between \$10 million and \$15 million.

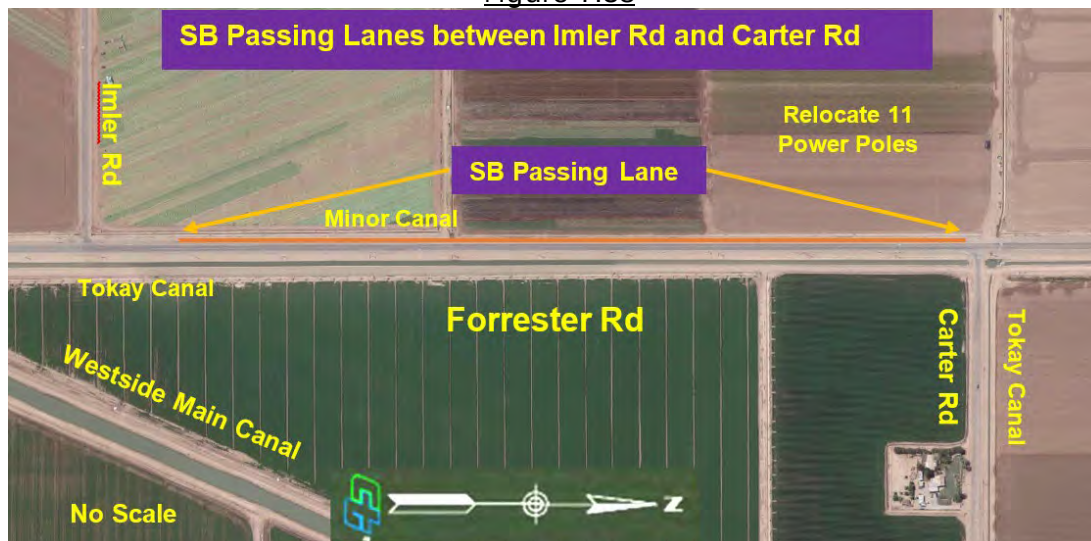
Figure 7.37



Location #2 Imler Rd to Carter Rd

A SB passing lane could be placed between Imler Road and Carter Rd. The passing lane would terminate just before Imler Road. Widening would most likely occur to the west resulting in a local irrigation canal having to be relocated. It appears too shallow to cover. About ten utility poles (west side) would also have to be relocated. As with Location #1, consideration should be given to extend the passing lane beyond the Imler Rd intersection. Cost is between \$5 million and \$10 million.

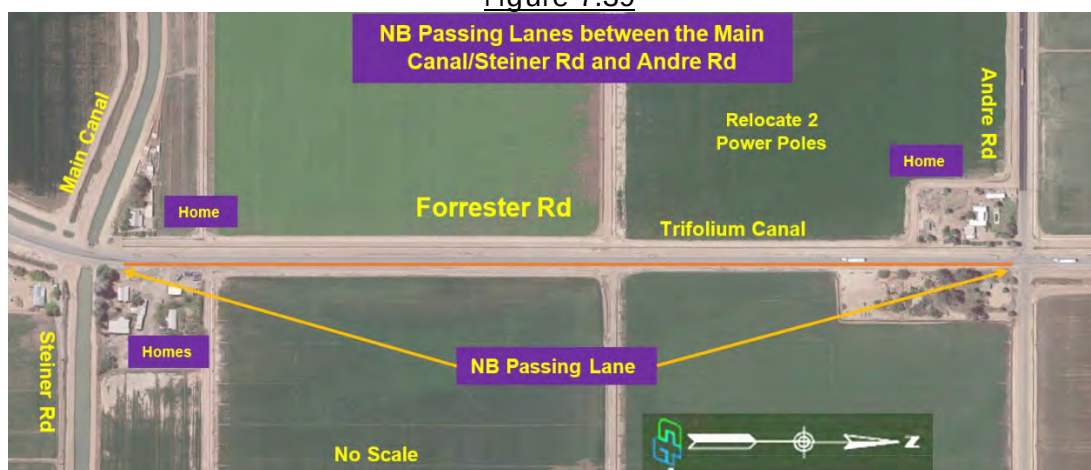
Figure 7.38



Location #3 Steiner Rd to Andre Rd

A NB passing lane could be placed between Steiner/Roberts Road and Andre Rd. Impacts to the IID irrigation system is minimized but the proximity to Andre Rd could lead to drivers having to make multiple decisions at once. The western segment of Andre Road (along with Martin Road) is being proposed by this report as part of the Westmorland bypass (Phases 1 and 2). This will include an ICE analysis to determine the most effective intersection improvements. The proximity of at least three homes will also have to be considered and would most likely require sliver takes of those properties on the east side (NB) of Forrester Rd. The proximity of power poles on the SB side of the road combined with vehicles passing on the NB direction could result in the relocation of eight power poles. Cost is between \$5 million and \$ 10 million.

Figure 7.39



ITS Elements

Forrester Road, SR 86, SR 111, and other north-south arterials function as a system. Incorporating ITS elements can distribute traffic along these routes to allow for more efficient travel through Imperial Valley. While traffic is relatively low, technology can be used to alert drivers of potential delays on SR 111 or SR 86 and offer Forrester Rd as an alternative. In order for this to happen, Forrester Rd should have some type of monitoring to ensure it can handle the additional demand in real time. Dynamic Message Signs (DMS) provide real time messaging informing drivers of traffic incidents, congestion, or recommending the best routes to take. They would make recommendations based on data gathered from CCTV, VDS, and from other sources. ITS elements could be added to other proposals identified in this document.

Table 7.8 – ITS Elements

Assets	Recommended Placement	Proposed Totals within this Project
Fiber Optic Line	Dual Use – Caltrans/County and Commercial	Approximately 20 miles
CCTV	Every 0.5 miles	41 + (more for Busy Intersections)
VDS	Every 0.5 miles	41 + Busy intersections
V2I	Every 0.25 miles	80+
DMS/CMS	Approaching major intersection	Approximately 10

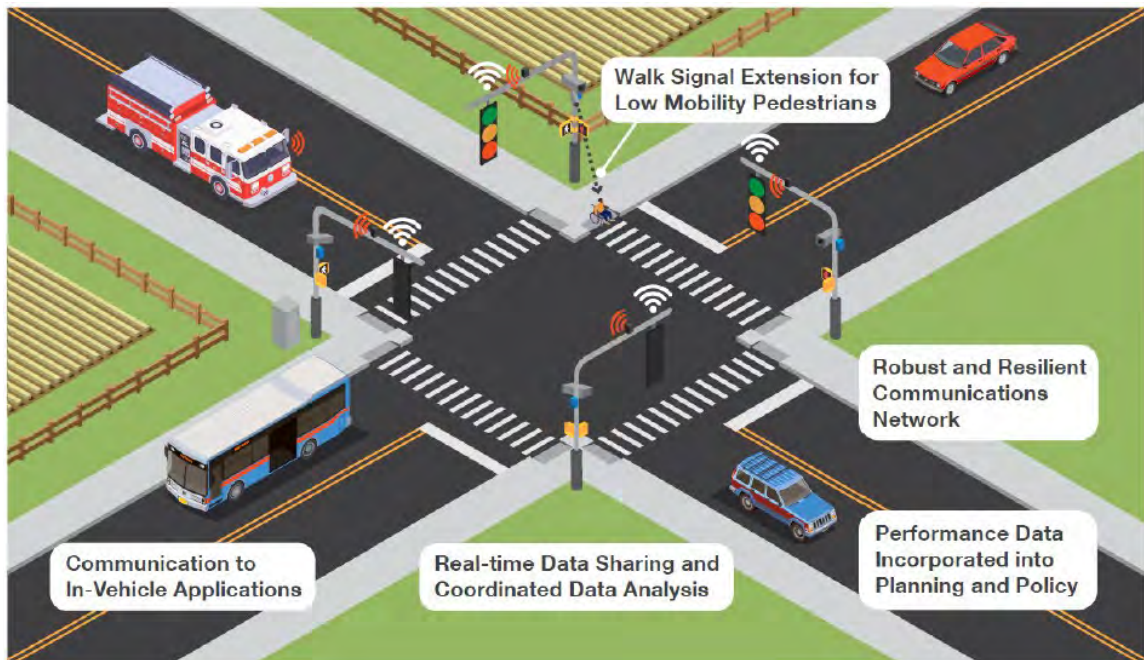
Smart Intersection Systems (SIS) for Rural Corridors

Both a dark and flashing traffic signal during power outages contribute to congestion, increases travel times, and impacts travel time reliability. Existing (@Evan Hewes) and future traffic signals could eventually be upgraded to include an Uninterrupted Power Supply (UPS) to maintain signal operations.

Incident signal timing plans consist of signal controller coding that could extend or reduce each phase as needed. These plans could help alleviate traffic during emergencies and special events. The Emergency Vehicle Preemption (EVP) Signal System which allows emergency vehicles the right of way when responding to an emergency, could be incorporated into these plans.

Real time data collection and performance analysis could be used to adjust and improve intersection operations. This could be done through the installation of Vehicle Detection Systems (VDS), closed circuit TV cameras (CCTV), Vehicle to Infrastructure (V2I) hardware, and other types of technologies. This could also provide Low Mobility Pedestrians the time needed to safely cross and lower crossing times for faster pedestrians once they have cleared the intersection. Vehicle conflict detection is a technology that could also be considered.

Figure 7.40 - SIS for Rural Intersection



Broadband

Governor Schwarzenegger's **Executive Order S-23—6** (issued November 28th, 2006) directed the establishment of the **California Broadband Task Force** to bring together public and private stakeholders to remove barriers to broadband access, identify opportunities for increased broadband adoption, and enable the access to and deployment of new advanced communication technologies. The FHWA's **Broadband Infrastructure Deployment (23CFR Part 645)** (issued December 3rd, 2021) requires similar consideration of the installation of broadband fiber optic lines in roadway projects that receive federal aid.

Even though Forrester Road is not part of the State highway System, Caltrans' Broadband Partnership Opportunity map could highlight the specific improvements moving forward. This would give broadband providers the opportunity to work with the lead agency at the project locations if they so desired.

If it is determined that a Fiber Optic Line for transportation service will be installed within the limits of the project, the option of installing a concurrent cable(s) for commercial use may also be considered. The use of 5G or other wireless technologies could also be employed to provide broadband access to underserved communities.

Consideration of Other Improvements

Hoskins/Wieman Rd via Andre Rd and Cady Rd are currently used by some vehicle to bypass Westmorland. These roads are designed and built for local traffic and not for interregional travel. While alternative routes are advantages for incident management and possible congestion, the impacted project footprint is pushed out an additional 2 miles to the west. This would require additional maintenance resources, the introduction of higher traffic volumes through a more sparse (population) agricultural area, reduced accessibility to travel amenities, and a potentially negative impact to the economic viability of the City of Westmorland. Disrupting the economic viability of the city is contrary to the Need and Purpose of this report, therefore this improvement is not recommended for further analysis.

Andre - Hoskins Rd - SR 86 Bypass

This option would direct truck traffic around the City of Westmorland by using Andre Road and Hoskins Rd. In the Northbound direction, this alternative could easily pick up traffic south of Westmorland from SR 86, SR 78 and Forrester Road. Both Andre Rd and Hoskins Rd are currently paved and generally in fair condition. This alternative could have negative impacts to the city by inconveniencing motorists to purchase services within Westmorland. Drivers would have to backtrack 2-miles each way to obtain service.

Cady Rd – Forrester Rd and Cady – Wieman Rd/Hoskins Rd Bypass

This option would serve drivers from the City of Brawley heading northwest beyond Westmorland and drivers heading in a general southwest direction. This proposal would also inconvenience drivers from and to SR 78 as they would have to back track between one and two miles to access Cady Road and connect to Forrester Road. As this alternative conveniently serves motorists to and from the City of Brawley, the County is encouraged to consider Cady Road as a main collector with Forrester Road.

STRUCTURES – New River Bridge

Figure 7-41



The New River bridge is a five-span reinforced concrete slab bridge built in 1970 with the following dimensions:

Bridge Length = 130'

Slab Width = 31'

Deck Thickness = 1.1'

Span Distance = 26' (+/-)

Column Spacing = 9'

16 Octagonal Columns @ 1.3' Diameter.

Passing lane improvements could be done without having to widen the bridge, however; the existing bridge railing should be replaced with **Concrete Barrier Type 836**. The bridge has an existing steel railing on both sides with a height of 28 inches which does not meet the current **Manual of Assessing Safety Hardware** (MASH) guidelines. The current minimum height for bridge railing is 36". A possible alternative to the Type 836 barrier is the side mounted **California ST-70 Side Mount (SM)** bridge railing with a height of 42 inches. This could provide an additional 1.5 feet of shoulder in each direction. The main concern is the uncertainty of drilling long lateral bolts into the existing slab to secure the ST 70 railing.

Figure 7-19 shows a cross section of the existing New River Bridge @ Forrester Rd. Drawing is shown with No Scale.

Figure 7-42

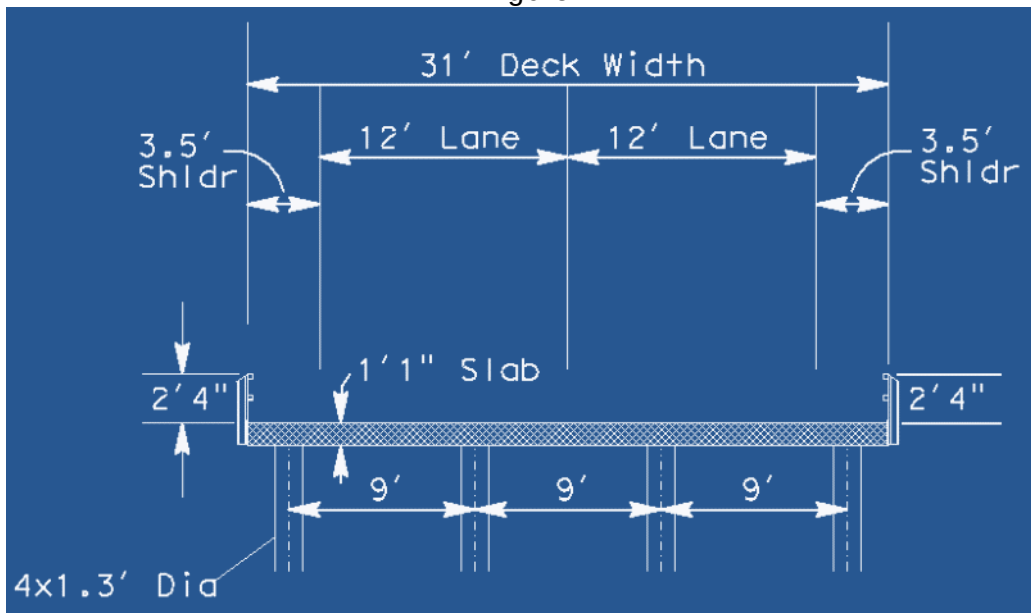


Figure 7-43

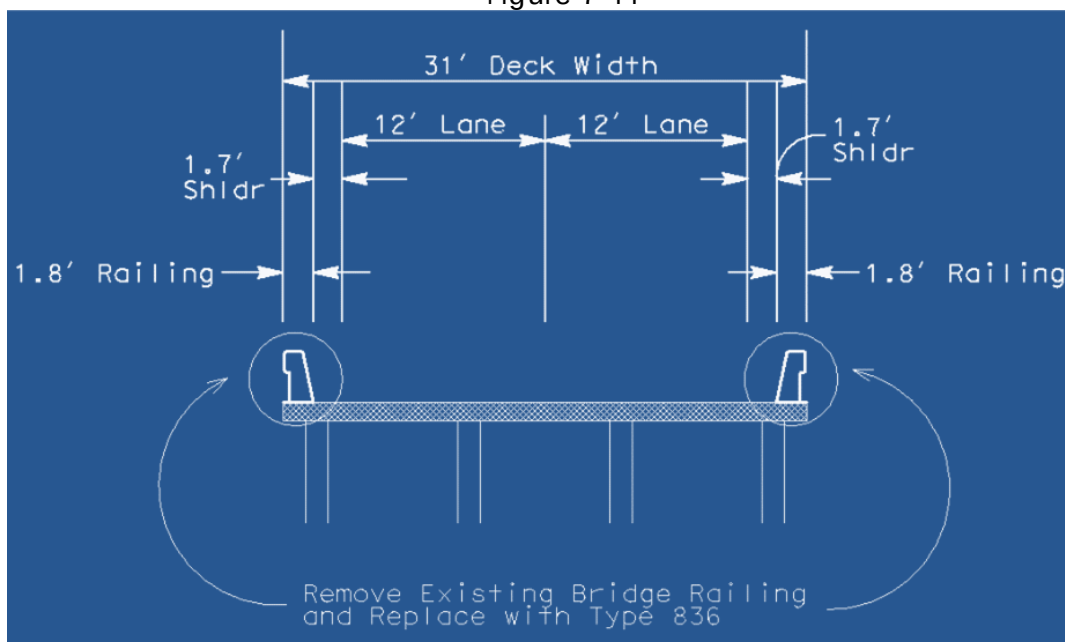


Looking North – Under

Existing Steel Railing – Looking North

Figure 7-21 shows the existing New River Bridge with Type 836 Bridge Railing. As the new bridge railing would be anchored onto the existing bridge deck, it would take up about 1.8 ft of the existing shoulder. This would reduce the current 3.5 ft shoulder down to about 1.7 ft.

Figure 7-44



A second alternative involves building a new bridge with four lanes and accommodates a bikeway. This concept provides turning lanes to Larsen Road and has a bridge length of about 166' with a width of 82'. The existing bridge could be maintained for active transportation or as a lookout. It could also be demolished, and that portion of the river restored to its natural state.

Figure 7-45

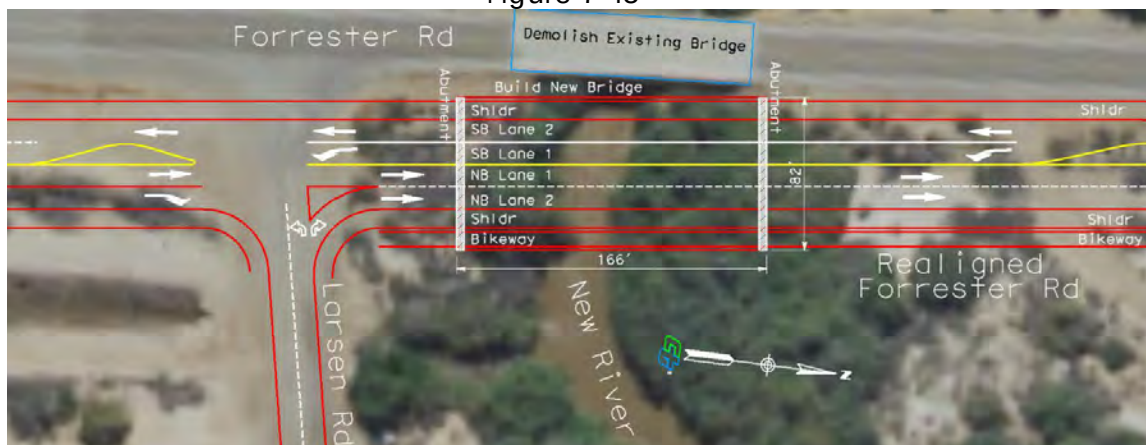


Figure 7-46



Westside Main Canal

The County of Imperial is currently exploring options to replace the Westside Main Canal bridge on Forrester Road [Initial Study (IS)#22-0025]. Project coordination could be required depending on project schedules and type of improvements done.

Canal, Drain, & Culvert Crossings

A review of the existing IID drainage infrastructure crossing under Forrester Road will be evaluated in future phases of the project. Coordination with IID will be required.

Transportation Management Plan (TMP)

Per Deputy Directive-60 (DD-60), a strategy to minimize traffic congestion during road work is required. This includes work for all planned construction, maintenance, and encroachment permit activities. A Traffic Management Plan (TMP) addresses strategy to minimize traffic delays that may result from lane restrictions or closures in a work zone.

The TMP for this project includes the use of brochures, mailers and paid advertising as recommended by the Caltrans District 11 Public Information Office (PIO). The intent is to provide notices and alerts to the general public and to emergency responders regarding any impacts to the roadway related to full or partial closures.

The use of Construction Zone Enhanced Enforcement Program (COZEEP) is also proposed for this project. It is an interagency agreement with the California Highway Patrol (CHP) that enables the use of CHP officers and vehicles to patrol project construction zones.

The use of Changeable Message Signs (CMS) forewarning road conditions is also proposed for this project.

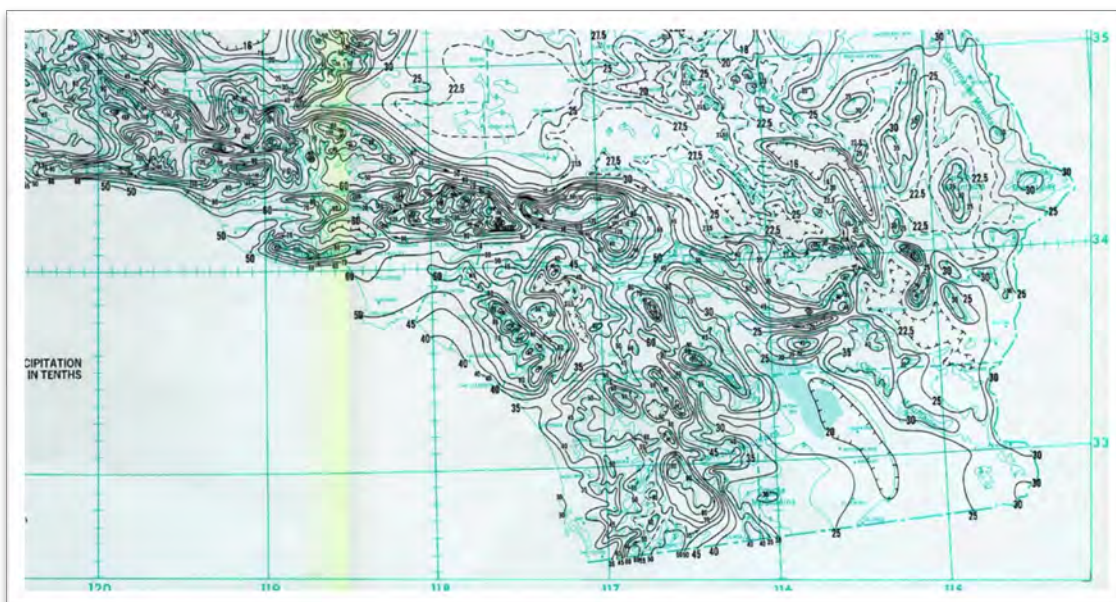
Watershed

The majority of this segment of Forrester Road lies within the HU 10 New River Watershed. The two New River sub watersheds are the HU 12 Lower New River Sub Watershed and the HU 12 Middle New River Sub Watershed. The 3.7 mile long segment between W. Hackleman Road and just south of Wienart Road is located within the HU 10 Alamo River Watershed. The Alamo River sub watershed is the HU 12 Town of El Centro Sub Watershed.

Drainage

The average rain intensity in the region for a 25-year rainfall event is 2.5 inches within a 24-hour period (See figure 7-24). Drainage capacity was preliminarily calculated using this data by determining the amount of runoff storage needed.

Figure 7-47



Source: Western Regional Climate Center.

Vulnerability Assessment

According to the Caltrans Climate Change Vulnerability Assessments for Caltrans District 11 (2019),

Temperature

The Forrester Road segment from I-8 to the New River is projected to experience up to a 2.0°F increase in Absolute Minimum Air Temperature. The Forrester Road segment from the New River to SR 86 is projected to experience up to a 4.0°F increase in Absolute Minimum Air Temperature. This is based on the

Representative Concentration Pathways (RCP) 8.5 emissions scenario for year 2025. The scenario for 2055 is a temperature increase of up to 5.9 °(F) for this portion of Imperial County. This increase might be considered in pavement design selection during future phases of the project.

Precipitation

Precipitation conditions in California are generally projected to include more frequent periods of drought but with greater rain intensities. RCP 8.5 predicts up to a 5% increase in 100-Year Storm Precipitation depth for the area that includes this segment of Forrester Road by 2025 compared to 2019 data.

Wildfire

Caltrans, US Forest Service (USFS), the Environmental Protection Agency (EPA), and CalFire have a shared interest in developing wildfire vulnerability data. Wildfire Models used in the Vulnerability Assessment include two MC2 models and one developed by UC Merced. Four different Global Circulation Models (GCM) are used (temperature changes, GHG, population density, and fire history) with RCP 8.5 to determine the outputs. Based on output from the three models, the Level of Wildfire Concern for this segment of Forrester Road is Low.

Sea Level Rise

Executive Order (EO) S-13-08 directs State agencies planning construction projects in areas vulnerable to Sea Level Rise (SLR) to plan for potential impacts by planning for a range of SLR scenarios for the years 2050 and 2100. The project is not within the area that could be impacted by sea level rise. However, the entire project limits are below sea level.

Geology

The San Andreas Fault is about 5 miles to the east at its closest. The Imperial Fault crosses Forrester Road close to the Cady Road intersection. The whole project lies completely within the limits of prehistoric Lake Cahuilla which formed the alluvial marine sedimentary rock created during the Pleistocene and Holocene epochs.

Underserved Communities

Executive Order B-30-15 (2015) set interim statewide greenhouse gas (GHG) reduction targets in the state. It also included provisions to identify impacts to the most vulnerable residents – based on pollution, socioeconomic factors, and adverse environmental conditions. The Order also states that measures be taken to protect these underserved communities when implementing our proposals.

The CalEnviroScreen (3.0) evaluates the burden of pollution from multiple sources in communities while considering their potential vulnerability due to socioeconomic factors. The Forrester Road segment between Aten Road and the New River has an impact score between 71% to 80%. The segments between I-8 to Aten Road and the New River to the City of Westmorland have impact scores between 81% to 90%. These scores indicate that the impacted communities within these project limits are vulnerable and that additional measures/considerations be taken to protect or enhance their livability when implementing any of the projects proposed by this report.

Williamson Act Program

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agriculture or related open space use in exchange for a lower property tax assessment. This determination is based on farming and open space use as opposed to full market value. As valuable farmland was being converted to urban uses primarily due to rising property tax rates in the immediate post World War II period, the Williamson Act evolved as a strategic response to these pressures. Even with the passage of Proposition 13 in 1978, the average tax savings can reach upwards of 80%. Currently, about one half of all the State's agricultural land participates in the Williamson Act Program.

There are a total of nine (9) adjacent parcels within the project limits that are participating in the Williamson Act Program. They are all north of the New River. One parcel (APN 063-010-077) could be impacted by the construction of the passing lanes in the northbound direction. Other proposed improvements that could have right of way impacts will be on parcels not currently in the program.

Design Standards

The proposed improvements are guided by the Caltrans **Highway Design Manual** (HDM). Three nonstandard design features have been identified that might not be fully remedied by these improvements. They are identified in Table 7.2 with probability ratings, justification, and a probability rating.

The standard shoulder width is 8 ft minimum. The presence of power poles, drains, and canals could limit the ability to install standard shoulders. A detail analysis of each location will be conducted to determine the best overall option between reducing shoulder widths or relocating poles/drains/canals.

Other nonstandard design features could be identified in later stages of the project development process.

Table 7.9 - Design Standards Risk Assessment			
Alternatives	Design Standard from Highway Design Manual Tables 82.1A & 82.1B	Probability of Nonstandard Design Feature Approval (None, Low, Medium, High,)	Justification for Probability Rating
All	Topic 302.1 Shoulder Widths (various locations)	High	Low Volumes, Low accident history, high costs
All	Topic 208.1 Bridge Widths	High	New River Bridge – Environmental impacts, Low Volumes, High costs
All	Topic 309.1(3C) Horizontal Clearance	Medium	Existing power poles, canals, and drains. High costs.

We are using the County of Imperial Department of Public Works “*Engineering Design Guidelines Manual*” for additional guidance.

Most of the proposed improvements are not on state highways and fall under the County’s jurisdiction.

8. RIGHT-OF-WAY

A total of 24 parcels could be impacted by this project. Twenty parcels involve partial side takes while four will be bisected and might require full takes. Various temporary construction easements will also be required. Table 8.1 estimates the anticipated right of way permanent takes for roadway improvements and for upgraded drainage facilities to accommodate additional drainage requirements.

Forrester Road Row Requirements

Table 8.1

Project	Power Poles Relocated	Electrical Line Length (feet)	ROW Req'd for Roadway Improvements	ROW Req'd for Drainage Facilities	Total ROW Required (Acres)
Ross Rd Intersection	10	1,800 ft	3.4 Acres	2.1 Acres	5.5 Acres
Evan Hewes Intersection	7	700 ft	3.4 Acres	1.1 Acres	4.5 Acres
Passing Lanes	6	1,300 ft	8.0 Acres	3.0 Acres	11.0 Acres
Temp Bypass – Baughman & Martin	13	2,200 ft	2.4 Acres	2.0 Acres	4.4 Acres
Bypass – Martin Rd & Andre Rd	18	3,000 ft	5.5 Acres	4.0 Acres	9.5 Acres
Totals	54	9,000 (ft)	Total ROW Required =		34.9 Acres

The required number of Permanent and Temporary Construction Easements (TCEs) has not been determined during this phase of the project. This will be decided during the PAED phase of the project. Conceptual Cost Estimates (CCE's) were developed for each of the proposed improvements (Attachment E). The scope of future Right of Way (ROW) analysis could include:

- Acquisition Costs
- Utility Relocations
- Railroad Involvement
- Relocation Assistance
- Clearance/Demolition
- Permits
- Title and Escrow Fees
- Construction Contract Work.

Utilities:

The Caltrans **2020 Highway Design Manual (HDM)** Section 309.1 states that discretionary fixed objects should be located at a minimum of 52 feet (horizontally) from the planned ultimate edge of traveled way for state highways. Since the improvements advocated for in this report involve local roads that could become a state highway, the power pole relocations will have to be evaluated during the PAED phase of the project.

Power Pole relocation is proposed for those that are within 13 ft of the edge of travel way. Other poles within the 52 ft from edge of travel way will be assessed to determine if they should be moved. High voltage towers are included within the project limits. They will not be relocated due to any of the improvements proposed in this report. Table 8.1 estimates the number of power poles that could be relocated for each proposed improvement along with the estimated electrical line lengths. A closer analysis of the power pole locations will be conducted in future phases of this project. The analysis will be done with IID, the County, ICTC, and other potential stakeholders. This will identify the power poles that should be relocated, and which ones can be left in their current locations. IID owns and operates the electrical grid within the project limits. Any modifications to the power poles and electrical lines or any work in proximity of the electrical infrastructure will require coordination with IID. Any relocation of the existing power poles should be done to their anticipated final location as to accommodate as many future roadway improvements as possible. This will minimize service disruptions and traffic impacts when the region decides to proceed with longer term improvements in the same area.

Railroad:

The Union Pacific (UP) Railroad operates one track (0.5 miles N of Evan Hewes) that crosses Forrester Road. It is a 17-mile spur that runs extends from the Calexico – Niland UP tracks in the City of El Centro to Plaster City in the west where it connects to the Desert Line which is currently out of service. However, studies are being conducted to determine the feasibility of repairing the Desert Line to make it operational. One train utilizes the track on a daily basis, but a functioning Desert Line would increase rail activity on the track. SANDAG (San Diego Association of Governments) has set up a technical working group and is exploring the viability of a functional Desert Line. Any improvements along or on the railroad will require an additional 18 months of project delivery. Flaggers will also be needed during construction.

9. STAKEHOLDER INVOLVEMENT

The project was set up by ICTC and asked for the following entities to be involved in the Project Development Team (PDT) meetings:

Imperial County Transportation Commission (ICTC)
County of Imperial
City of Westmorland
City of Brawley
City of Imperial
City of El Centro
Imperial Irrigation District (IID)
California Highway Patrol (CHP)

This project has had five Project Development Team (PDT) meetings and two meeting updates with the County of Imperial. On **December 16th, 2021**, the main proposals of this project were presented to the ICTC Commissioner's meeting. Over the past three years we have received a few inquiries from the public regarding this project.

10. ENVIRONMENTAL COMPLIANCE

In order to identify environmental issues, constraints, costs, and resource needs, a Mini Preliminary Environmental Assessment Report (Mini-PEAR) was prepared for the project. Potential disposal, staging, and borrow sites will need to be identified in the PA&ED (Project Approval/Environmental Document) phase for complete environmental review. Field studies were not conducted, and technical studies have been deferred to the PA&ED phase.

For the anticipated environmental documentation of a Categorical Exemption/Categorical Exclusion (CE/CE) will have much shorter Project durations. Two to five years environmental processing may become the duration for a project including the passing lanes.

Project report schedule will include the anticipated time to complete the environmental process based on the existing workload and available resources. Include any special assumptions made about the project. For example, if specific avoidance measures were to be included in the project description (such as the removal of certain work locations, removal of certain work components, and/or the inclusion of environmentally Sensitive Area (ESA) fencing), include the consequences to the project scope, schedule, and cost if those locations or work components are added back in at the PA&ED phase (e.g., additional studies, permits, a higher level of environmental document, etc.).

Executive Order B-30-15 aims to establish a Greenhouse Gas (GHG) Reduction target of 40 percent below 1990 levels by the year 2030. This applies to all state agencies (including Caltrans) with jurisdiction over sources of GHG emissions. The order requires state agencies to consider Climate Change in planning and investment decisions in all Caltrans SHOPP (State Highway Operation and Protection Program) projects. It also employs "full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives." Both climate change mitigation (GHG Reduction) and adaptation measures that respond to climate risks shall be identified and must be implemented where appropriate and feasible.

Per the *District Federal Highway Administration (FHWA) ICE Tool Guidelines*, later term improvements within this document could require an environmental evaluation higher than a Categorical Exemption/Categorical Exclusion (CE/CE). The GHG emission analysis will be included in the Environmental Document during the PA/ED phase of the project.

VMT and GHG Emissions

Reducing VMT is an official goal of US Government policy as stated in sections of the Clean Air Act (CAA), the 1993 Climate Change Action Plan (CCAP), and the Congestion Mitigation Air Quality Improvement Program (CMAQ).

California Senate Bill 743 (SB 743) changes the process in CEQA that we use to measure the environmental impacts of projects by measuring how many new miles of car travel a project's residents, visitors, consumers, and employees will produce. Measuring vehicle miles traveled (VMT) takes into account whether a new development is located close to jobs, businesses and services that enable short trips and travel choices besides driving alone. California SB 743 which took effect on July 1st, 2020, replaces level of service (LOS) with VMT as the primary CEQA metric for evaluating environmental impacts attributable to development projects and transportation projects.

Using VMT as the primary metric for determining CEQA impacts from transportation projects changes transportation analysis from measuring the impact of a proposed project on drivers (i.e., LOS), to measuring the impact of driving on the community. This change does not alter the State's commitment to the Road Maintenance and Rehabilitation program that was approved as part of Senate Bill 1.

On **August 8th, 2022**, a VMT Assessment meeting was held with Maurice Eaton (District 11 SB 743 Liaison) and his staff. After reviewing the proposed improvements, the following determination was made:

As part of the Imperial Valley North-South roadway system, operational Improvements to Forrester Road (signalization, turn pockets, and passing lanes) will not increase the total VMTs. Improvements made towards safety and reliability (shoulder widening, CRZ, ITS elements, etc.) will not increase the anticipated VMTs.

A Vehicle Miles Traveled Decision Document (VMT-DD) has been prepared. No VMT mitigation has been proposed (Attachment J).

11. FUNDING

Potential funding sources for this project are:

Measure D
TCEP, SCCP, SHOPP
State Highway Maintenance and Rehabilitation
State Transportation Improvement Program (STIP)
Infrastructure Investment and Jobs Act (IIJA)

It has been determined that this project is eligible for Federal-aid funding. A funding amount of approximately \$12 million could become available to proceed with some of the proposed improvements described in this report.

Capital Outlay Project Estimate

Table 11-1 Range of Estimate			
Improvements	Time Frame	Lower Range Cost	Upper Range Cost
Forrester Road Short Term Improvements (Group 1)			
Ross Road @ Forrester Road Intersection Improvements	Short Term	\$ 6 Million	\$ 10 Million
Evan Hewes Hwy @ Forrester Road Intersection Improvements	Short Term	\$ 6 Million	\$ 11 Million
Forrester Road Near Term Improvements (Group 2)			
Passing Lanes @ New River	Near Term	\$15 Million	\$ 25 Million
Westmorland Bypass (Phase 1) Martin Rd & Baughman Rd	Near Term	\$ 7 Million	\$ 17 Million
Baughman @ SR 86 Intersection Improvements	Near Term	\$ 3 Million	\$ 7 Million
Baughman Rd @ Forrester Rd Intersection Improvements	Near Term	\$ 7 Million	\$ 10 Million
Westmorland Bypass (Phase 2) Martin Rd & Andre Rd	Near Term	\$ 18 Million	\$ 25 Million
Forrester Road Mid Term Improvements (Group 3)			
Various Intersection Improvements – Worthington, Keystone, Imler, Carter, & Cady Roads	Mid Term	\$5 Million	\$ 30 Million
I-8 @ Forrester Rd Interchange Improvements	Mid Term	\$ 5 Million	\$15 Million
Shoulder Widening Segment 1 I-8 to Worthington Road	Mid Term	\$ 20 Million	\$30 Million
Shoulder Widening Segment 2 Worthington Road to Keystone Rd	Mid Term	\$ 20 Million	\$30 Million
Shoulder Widening Segment 3 Keystone Rd to Cady Road	Mid Term	\$ 20 Million	\$ 30 Million
Shoulder Widening Segment 4 Cady Road to Baughman Road	Mid Term	\$15 Million	\$ 30 Million

Forrester Rd Long Term Improvements (Group 4)			
Westmorland Bypass (Phase 3)– Forrester Rd Realignment to Martin Rd	Long Term	\$ 15 Million	\$ 30 Million
Westmorland Bypass (Phase 4)– SR 78 Extension	Long Term	\$ 30 Million	\$ 60 Million
Four-Lane Facility with Slow Vehicle Lanes	Long Term	\$ 300 Million	\$ 600 Million
Miscellaneous Improvements			
ITS (Broadband, Census, CCTV, CMS, V2X, etc.)	These Improv' s can be made as part of other projects	\$ 10 Million	\$ 30 Million
Alternative Fuels Stations		\$ 5 Million	\$ 10 Million
Freight Improvements (Overnight Parking, Truck Charging, etc.)		\$ 5 Million	\$ 10 Million
Active Transportation (Sidewalk, shade, etc.)		\$5 Million	\$ 15 Million

The level of detail available to develop these capital outlay project estimates is only accurate to within the above ranges and is useful for long-range planning purposes only. For Small to Midsize size projects (up to \$30 million), quantities are determined for the largest items and a then multiplied by their respective unit cost from the Caltrans Cost Data base. The 11-Page format is condensed into a single sheet showing the construction costs, ROW costs, project mark ups, and support costs. The larger projects use a lane mile cost ranging from \$8 million to \$ 17 million per lane mile.

The capital outlay project estimates should not be used to program or commit State-programmed capital outlay funds.

Capital Outlay Support Estimate

Capital outlay support estimate for programming PA&ED in the 2024 STIP for this project: **\$ 5.5 Million**. This is based on conducting a Mitigated Negative Declaration type of environmental document for the Andre/Martin Bypass improvements.

12. DELIVERY SCHEDULE

Table 12.1 – Schedule		
Project Milestones		Scheduled Delivery Date (Month/Year)
PROGRAM PROJECT	M015	12/2024
BEGIN ENVIRONMENTAL	M020	7/2025
CIRCULATE DPR & DED EXTERNALLY	M120	8/2027
PA & ED	M200	2/2028
PS&E	M380	12/2029
READY TO LIST	M460	3/2030
AWARD	M495	7/2030
CONTRACT ACCEPTANCE	M600	12/2032
END PROJECT EXPENDITURES	M800	7/2034

The anticipated funding fiscal year for construction is 2029/30.

13. Risks

A Risk Register has been prepared for this project. Bridge Capacity, Canal Drain Relocation, Partial Canal closures, additional detention basins beyond what has been calculated, fixed objects that can't be relocated, other RR crossing issues, two abandoned houses that need to be acquired. This project should coordinate with the Westside Main Canal Project if any work is proposed in that area. The Risk Register is a living document. It will be reviewed and updated at the beginning of every phase of the project.

14. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

Projects of Division Interest (PoDIs) have an elevated risk, contain elements of higher risk, or present a meaningful opportunity for FHWA involvement to meet program or project objectives. These projects could also use an alternative delivery method, innovative financing, or have a cost of over \$500 million. PoDIs are also projects where Caltrans can assume certain FHWA responsibilities. This project does not meet these criteria and, therefore, is not described as a PoDI.

ICTC and the County of Imperial will ascertain the type of Caltrans involvement in a later phase of the project.

This project does not propose the modification of access to Interstate 8 nor any other federal highway.

Project Coordination

The project requires the following coordination:

US Army Corps of Engineers

Department of the Army Permit for:

Clean Water Act Section 404

Rivers and Harbors Act of 1899 Section 9

Rivers and Harbors Act of 1899 Section 10

General Permits (Regional Permit, Nationwide Permit or Programmatic Permit)

Standard Permits (Individual Permit or Letter of Permission)

Section 9 Permit

California Department of Fish and Wildlife

California Fish and Game Code Section 1602

Lake or Streambed Alteration Agreement

15. Project reviews

Field Review -	<u>Roy Flores, Omar Bendeck</u>	Date <u>10/27/2021</u>
District Maintenance	_____	Date _____
District Traffic Safety Engineer	_____	Date _____
Headquarters Project Delivery Coordinator	_____	Date _____
Project Manager	<u>Melina Pereira</u>	Date <u>6/26/2023</u>

16. PROJECT PERSONNEL

Name	Title
Virginia Mendoza	Project Manager (Imp County)/Caltrans Planning
Melina Pereira	Project Manager (Caltrans)
Shay Lynn Harrison	Environmental Project Analysis (Supervisor)
John Slatton	Environmental Project Analysis
Jack Parker	Environmental Project Analysis
Richard Covey	Right of Way (Supervisor)
Darcy Gabel	Right of Way
Alex Mockus	Right of Way

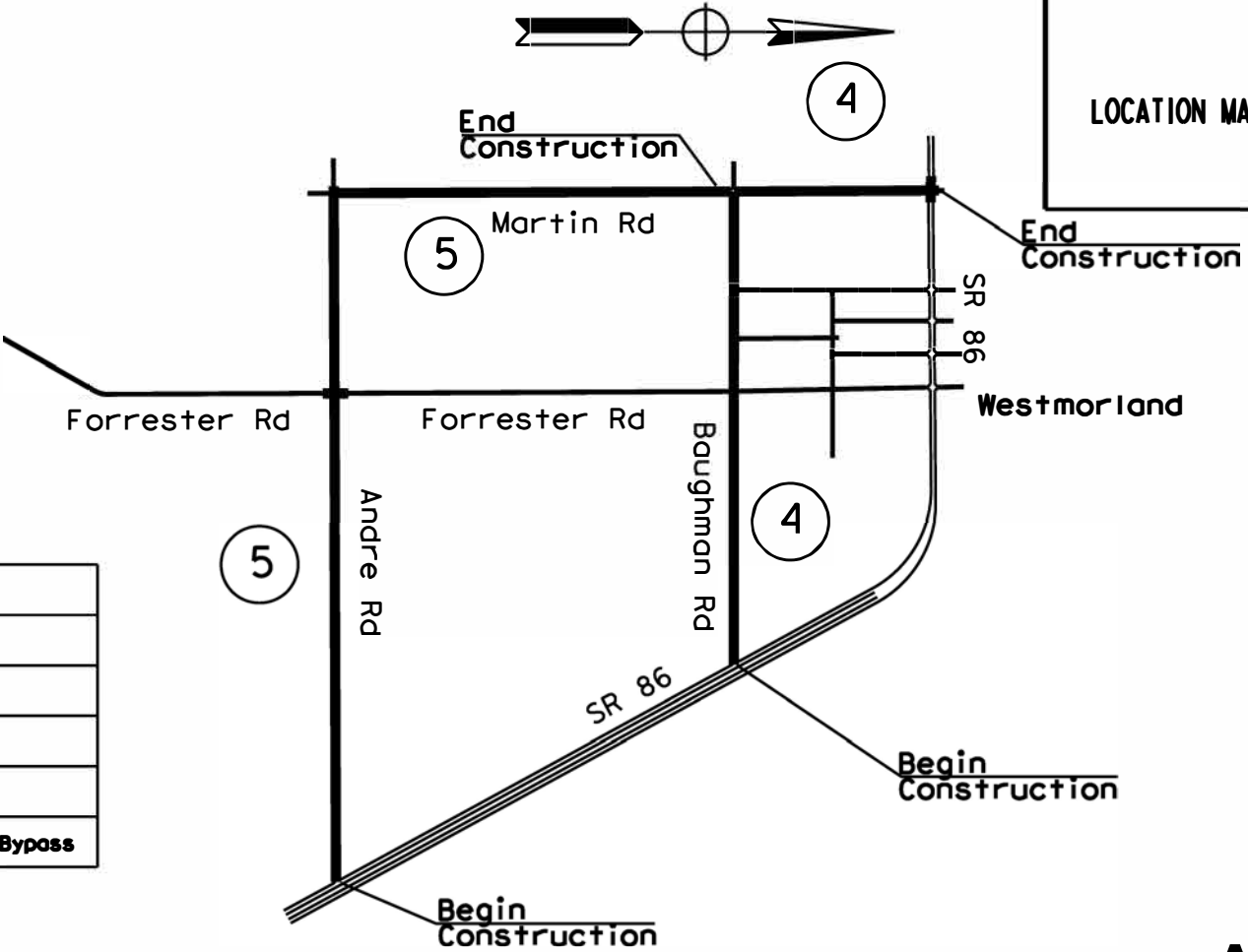
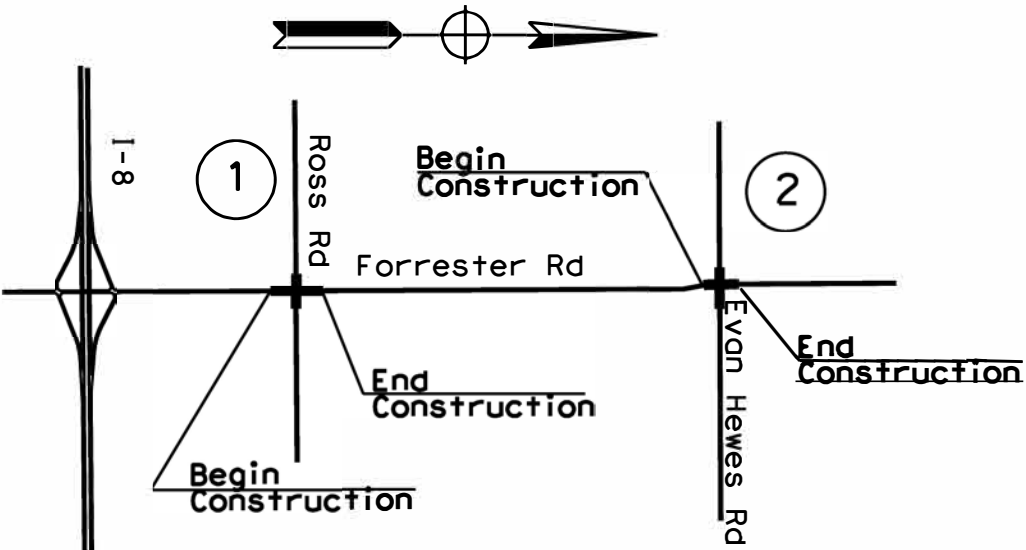
Melisa Wiedemeier	Hydraulics Engineering (Supervisor)
Maurice Eaton	Modeling/Travel Forecasting (Supervisor)
Farah Kushkaki	Modeling/Travel Forecasting
Fardad Behboody	Utilities
Shan Sandhu	Project Risk Analysis

17. ATTACHMENTS

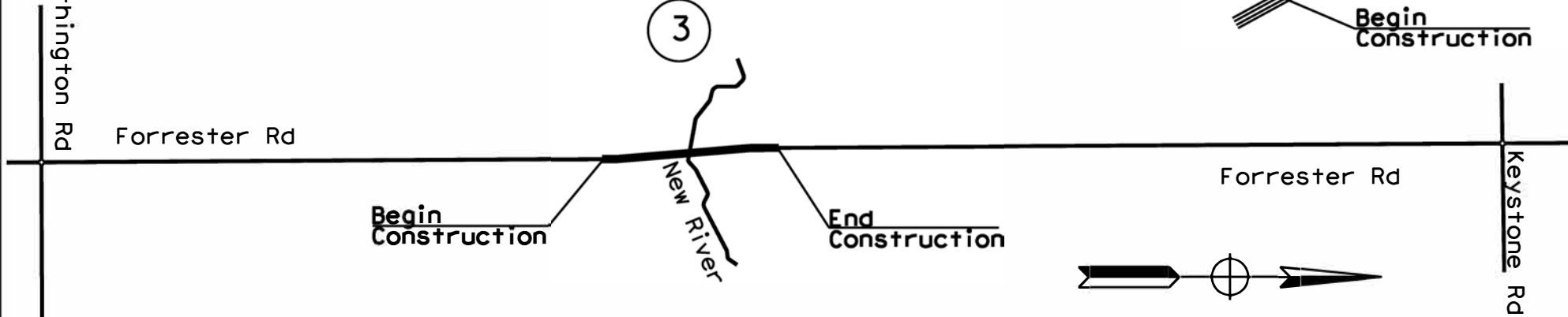
- A. Location Map (1)**
- B. Possible Improvements (12)**
- C. Planning Level Cost Estimate Sheets (4)**
- D. Transportation Planning Scoping Information Sheet (TPSIS) (13)**
- E. Right of Way Conceptual Cost Estimate Sheets (34)**
- F. New River Bridge Preliminary Cost Estimate (2)**
- G. Mini-PEAR (14)**
- H. Storm Water Data Sheet (1)**
- I. Alternative Fuel & Truck Parking Sites (5)**
- J. Vehicle Miles Traveled Decision Document (5)**
- K. Risk Register (2)**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN IMPERIAL COUNTY AT VARIOUS
LOCATIONS ALONG FORRESTER ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018



Loc #	Location	Work Description
①	Forrester Rd @ Ross Rd	Intersection Improvements
②	Forrester @ Evan Hewes	Intersection Improvements
③	New River NB & SB	Passing Lanes
④	Martin Rd & Baughman Rd	Roadway Rehab - Bypass
⑤	Martin Rd & Andre Rd	Roadway Rehab & New Const - Bypass



Attachment A

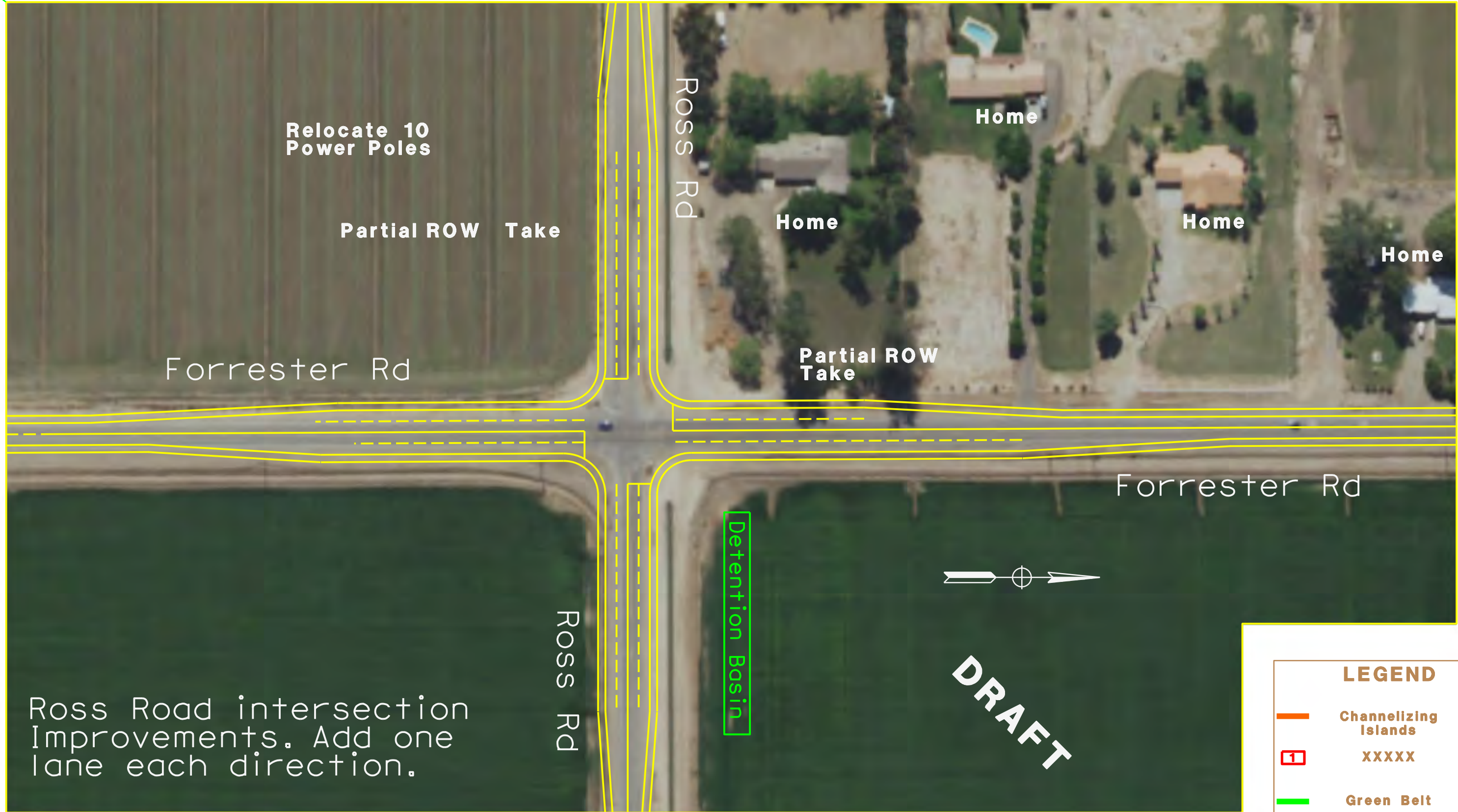
PROJECT ENGINEER _____ DATE _____
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE _____
THE STATE OF CALIFORNIA OR ITS
OFFICERS OR AGENTS SHALL NOT BE
RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
No. _____
Exp. _____
CIVIL
STATE OF CALIFORNIA

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES)
OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No.	11-42630K
PROJECT ID	1116000134



LEGEND

-  Channelizing Islands
-  XXXXX
-  Green Belt



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 11
OFFICE OF
ADVANCED PLANNING

ROSS ROAD at FORRESTER ROAD

FOR PRELIMINARY STUDY ONLY

SCALE: 1:100

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

CALCULATED-
DESIGNED BY

Roy Flores

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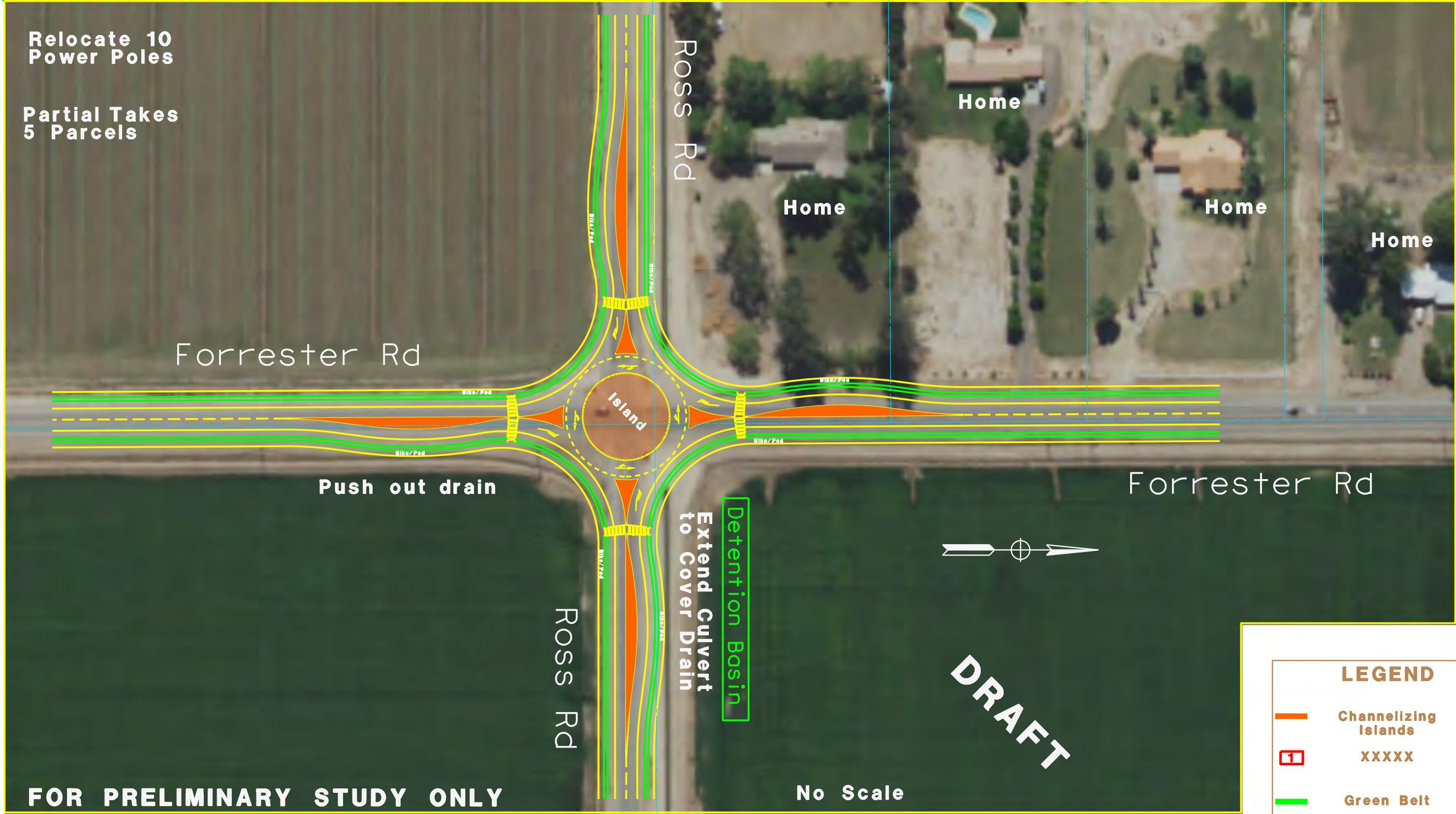


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ATTACHMENT B

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LEGEND	
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	Green Belt
	Exlst ROW



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ROSS ROAD at FORRESTER ROAD

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PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

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DESIGNED BY

Roy Flores

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LEGEND

- Channelizing Islands
- XXXXX
- Green Belt
- Exist ROW



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 11
OFFICE OF
SYSTEM PLANNING

W. Evan Hewes Roundabout Alternative

NO SCALE

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

FOR PRELIMINARY STUDY ONLY

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DESIGNED BY: Roy

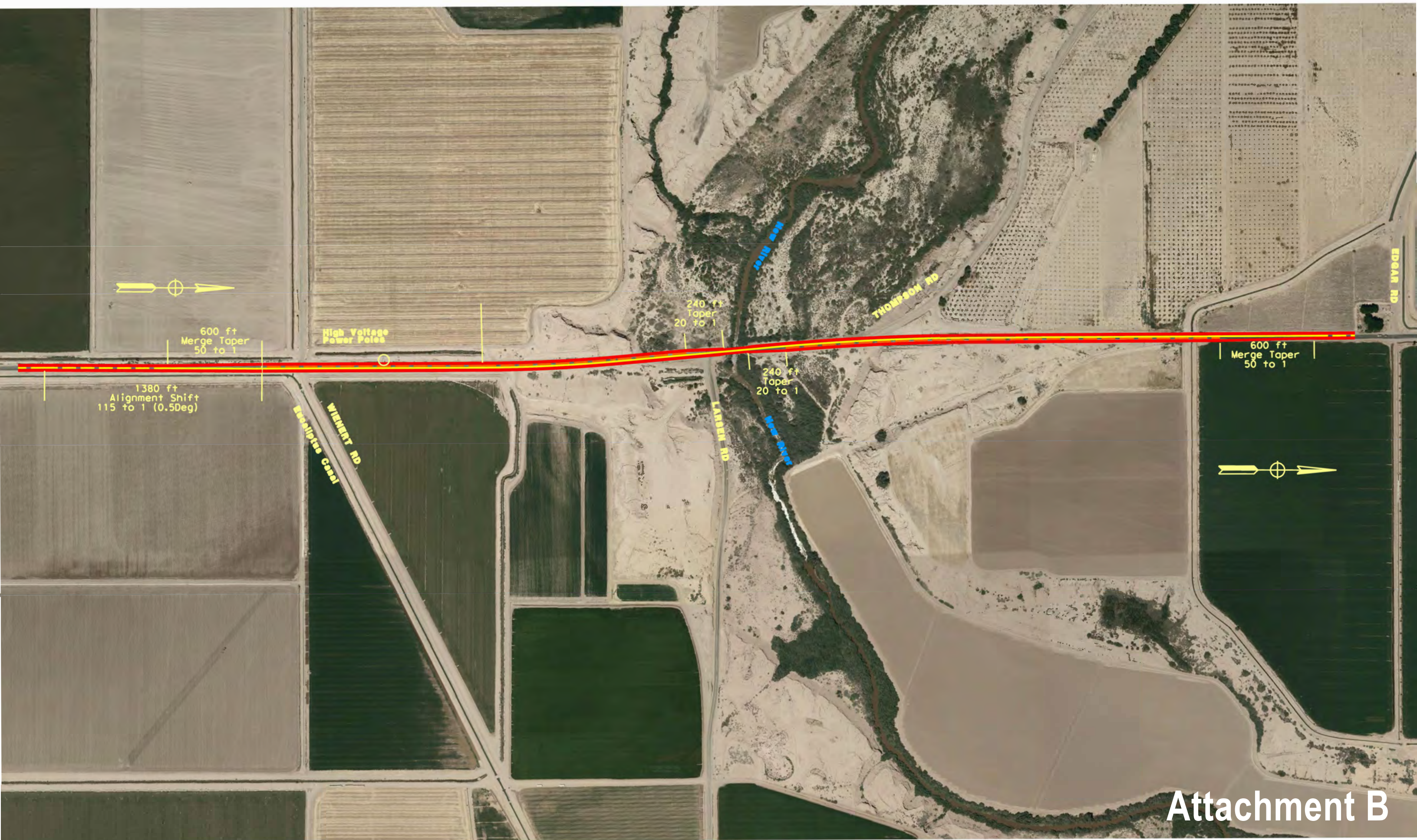
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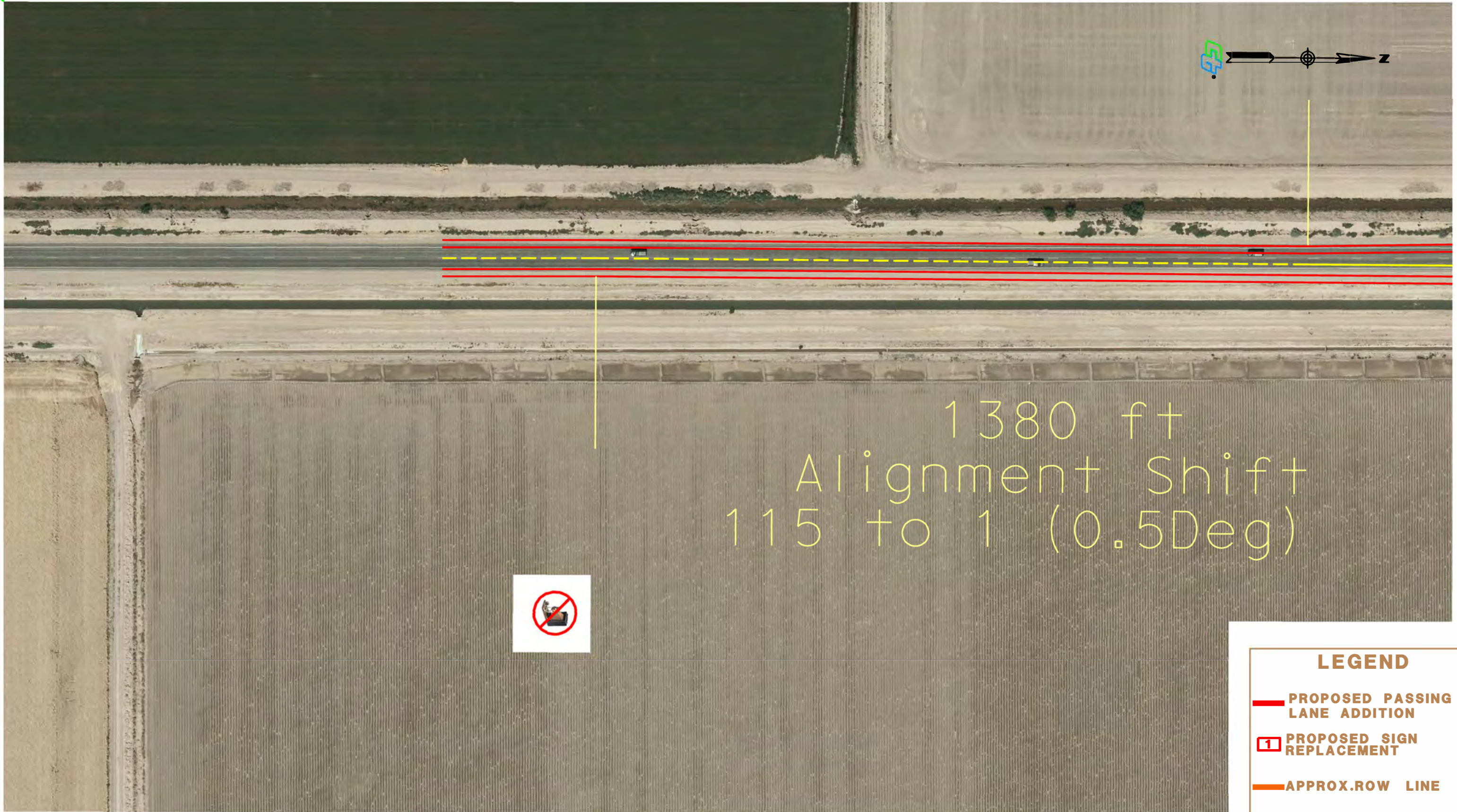


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LEGEND

-  PROPOSED PASSING LANE ADDITION
-  PROPOSED SIGN REPLACEMENT
-  APPROX. ROW LINE



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FORRESTER ROAD
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SCALE: 1:100
PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

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DESIGNED BY

LINO DELACRUZ

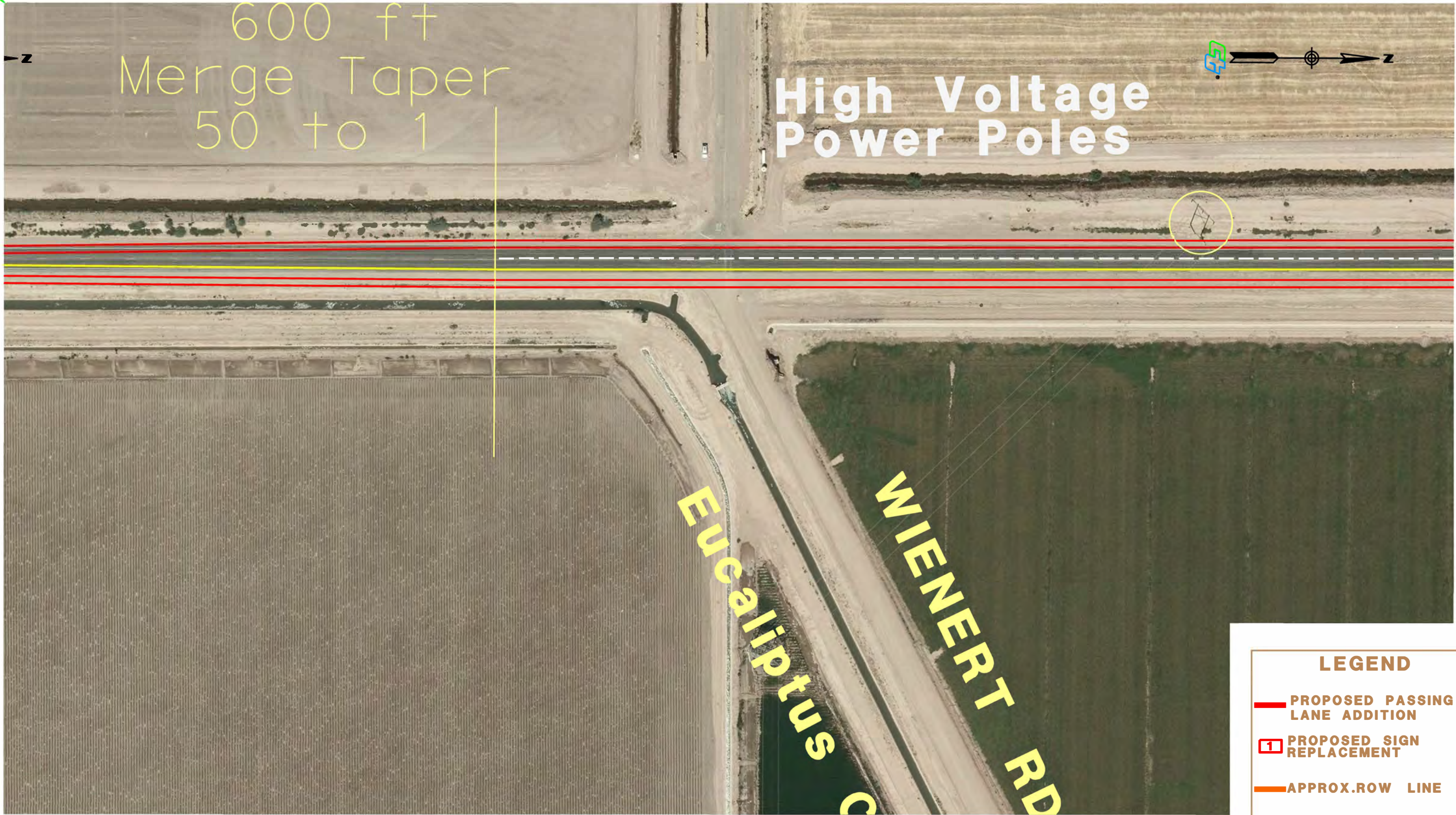
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LEGEND

-  PROPOSED PASSING LANE ADDITION
-  PROPOSED SIGN REPLACEMENT
-  APPROX. ROW LINE



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PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

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DESIGNED BY

LINO DELACRUZ

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2 OF 6

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LEGEND

- PROPOSED PASSING LANE ADDITION
- PROPOSED SIGN REPLACEMENT
- APPROX.ROW LINE



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FORRESTER ROAD

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SCALE: 1:100

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

CALCULATED-
DESIGNED BY

LINO DELACRUZ

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3 OF 6

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LEGEND

- PROPOSED PASSING LANE ADDITION
- 1 PROPOSED SIGN REPLACEMENT
- APPROX. ROW LINE



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FORRESTER ROAD

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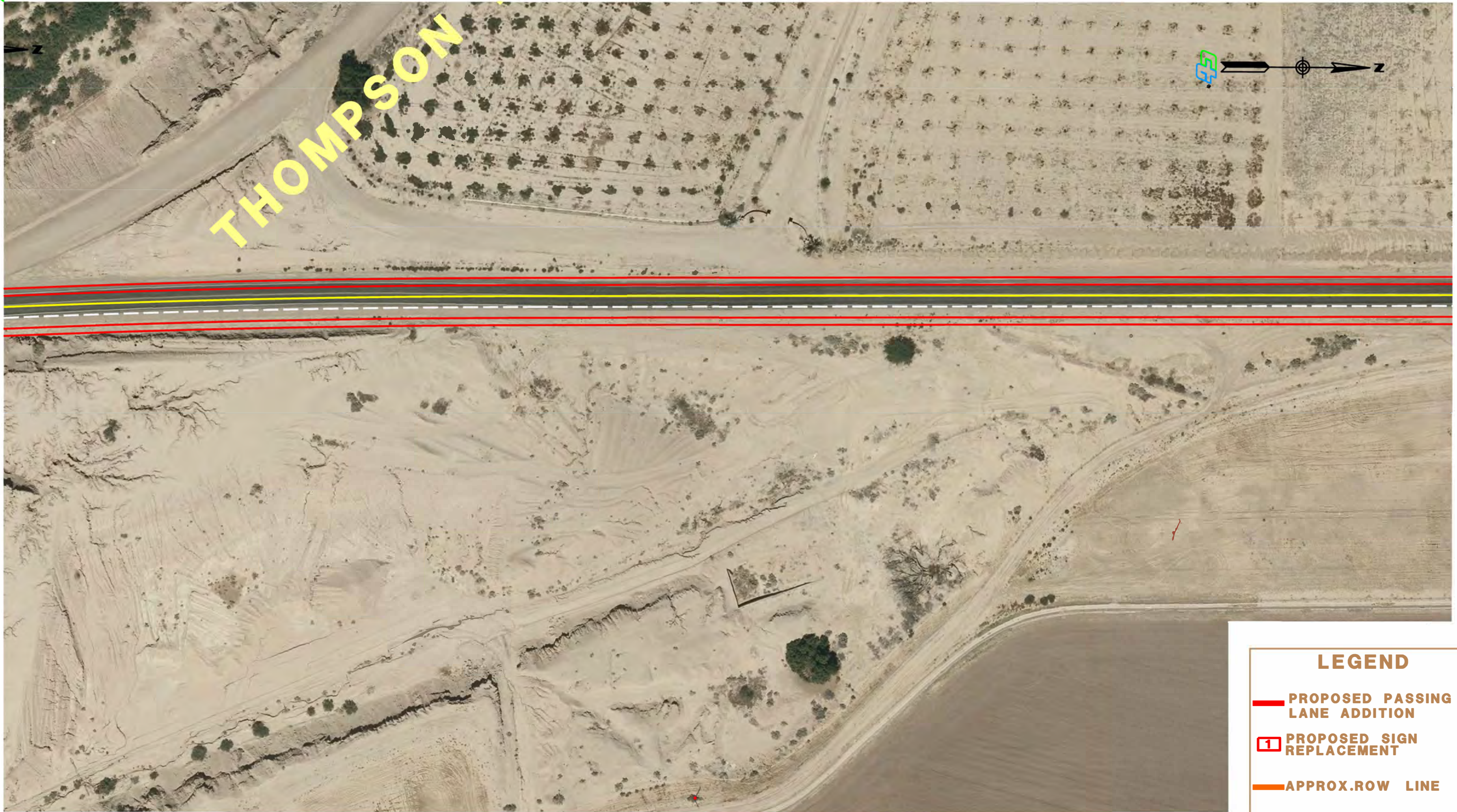
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4 OF 6

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LEGEND

- PROPOSED PASSING LANE ADDITION
- 1 PROPOSED SIGN REPLACEMENT
- APPROX.ROW LINE



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DEPARTMENT OF TRANSPORTATION
DISTRICT 11
OFFICE OF
ADVANCED PLANNING

FORRESTER ROAD

FOR PRELIMINARY STUDY ONLY

SCALE: 1:100

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

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DESIGNED BY

LINO DELACRUZ

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5 OF 6

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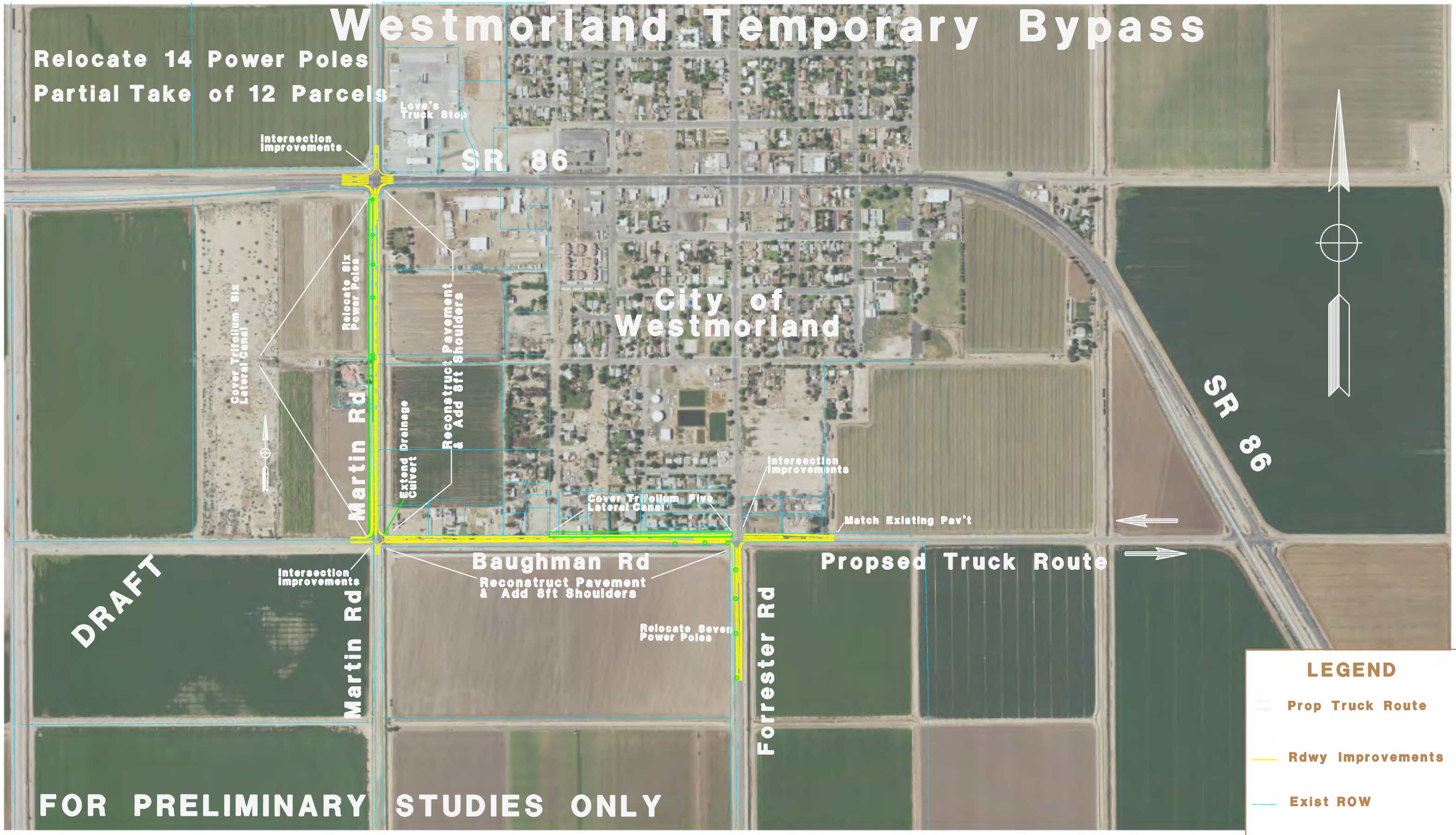
Forrester Rd Passing Lanes @ New River - Alternative 2



DRAFT

Westmorland Temporary Bypass

Relocate 14 Power Poles
Partial Take of 12 Parcels



DRAFT

FOR PRELIMINARY STUDIES ONLY



LEGEND

- Prop Truck Route
- Rdwy Improvements
- Exist ROW



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DEPARTMENT OF TRANSPORTATION
DISTRICT 11
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SYSTEM PLANNING

WESTMORLAND BAUGHMAN RD TEMPORARY BYPASS

NO SCALE

FOR PRELIMINARY STUDY ONLY

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

ATTACHMENT
1 OF 1

CALCULATED-
DESIGNED BY

Roy Flores

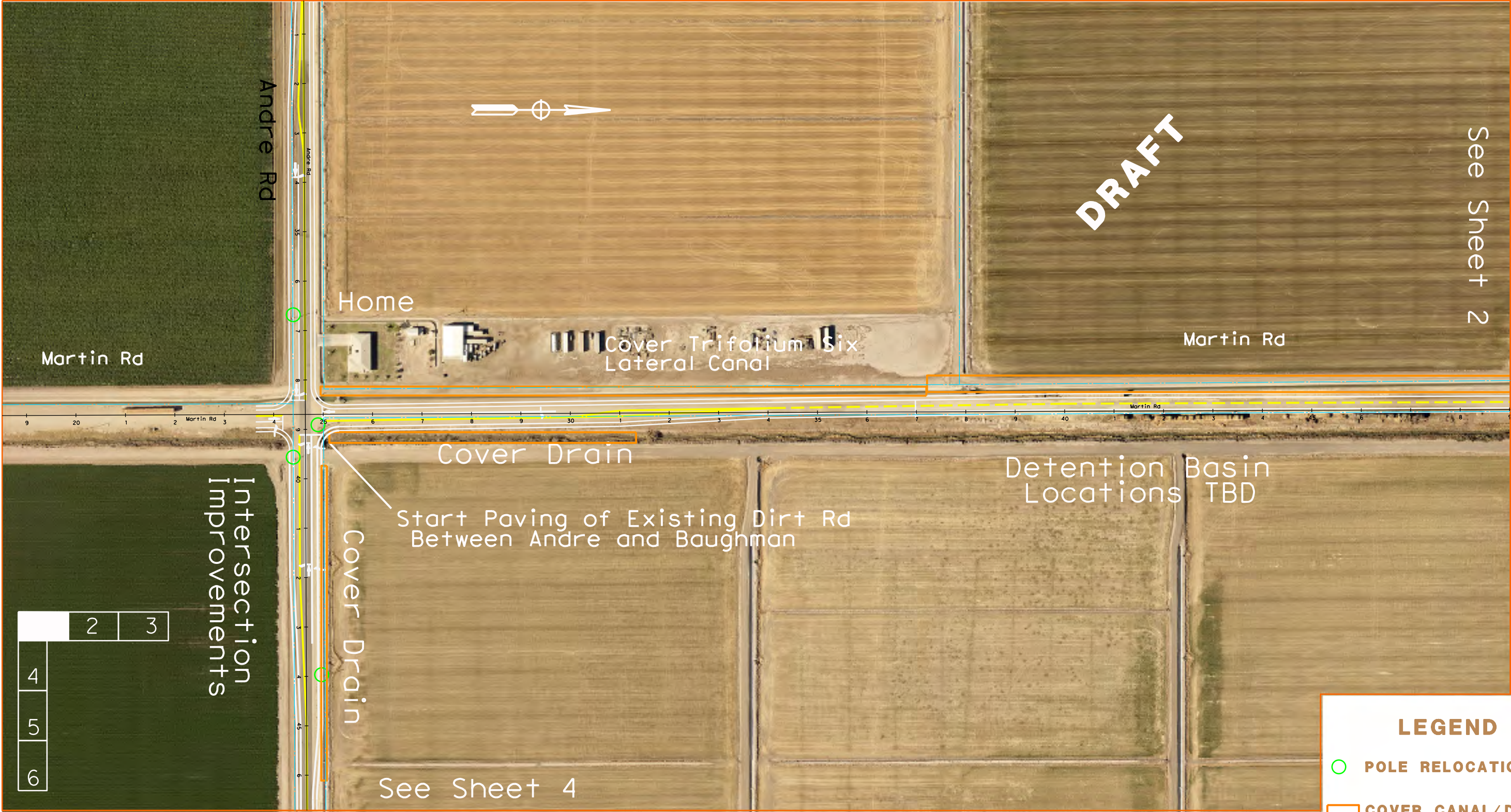
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Westmorland ByPass



LEGEND

- POLE RELOCATION
- COVER CANAL/ DRAIN
- EXISTING ROW



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DEPARTMENT OF TRANSPORTATION
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FORRESTER ROAD - Andre Road Bypass

FOR PRELIMINARY STUDY ONLY

SCALE: 1:200

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

CALCULATED-
DESIGNED BY

ROY FLORES

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ATTACHMENT 1 OF 6

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Westmorland ByPass



LEGEND

○ POLE RELOCATION

— COVER CANAL/ DRAIN



STATE OF CALIFORNIA
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DISTRICT 11
OFFICE OF
SYSTEM PLANNING

FORRESTER ROAD - Andre Road Bypass

FOR PRELIMINARY STUDY ONLY

SCALE: 1:200

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

CALCULATED-
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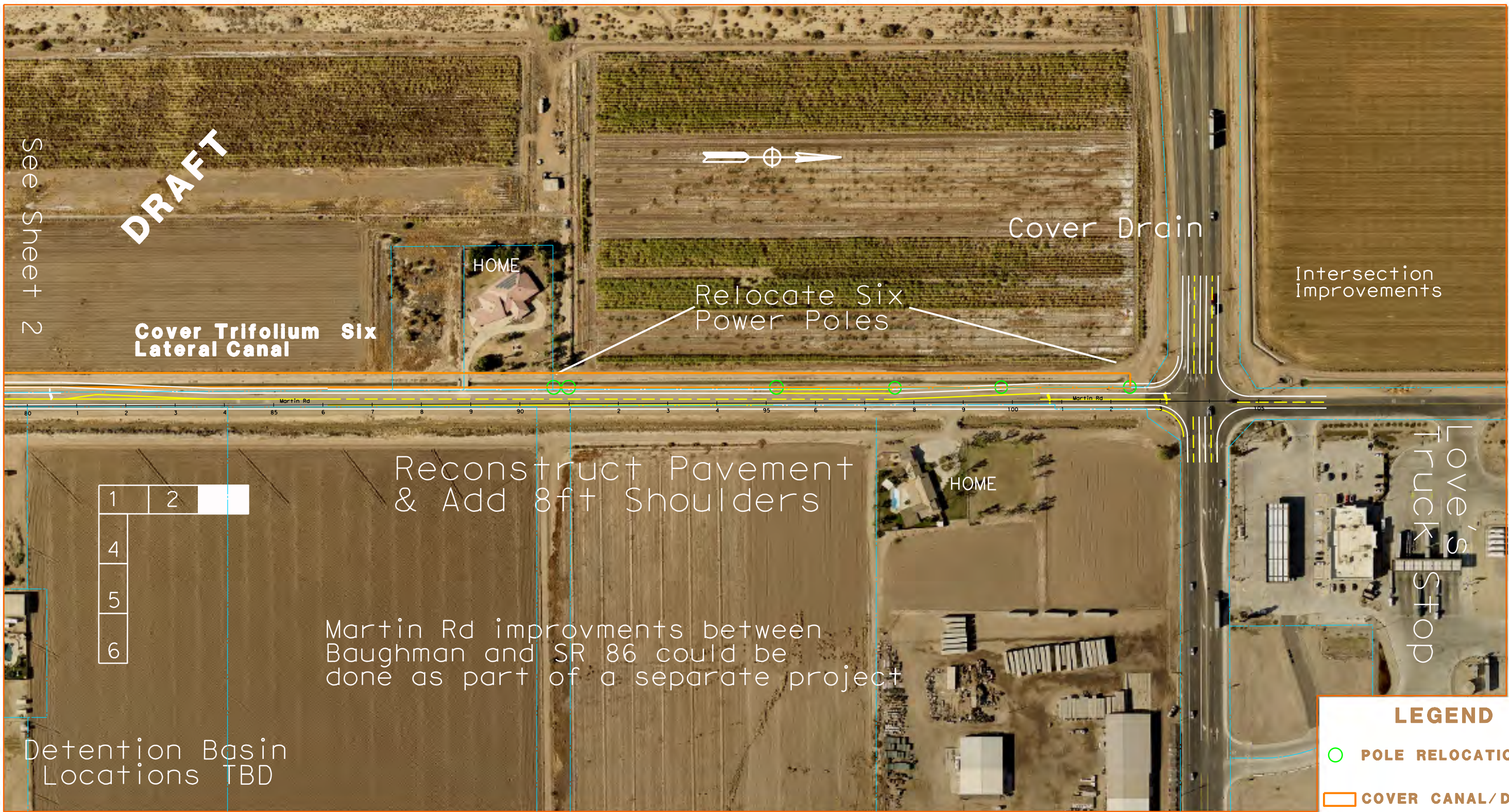


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ATTACHMENT 2 OF 6

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Westmorland ByPass



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 11
OFFICE OF
SYSTEM PLANNING

FORRESTER ROAD - Andre Road Bypass

FOR PRELIMINARY STUDY ONLY

SCALE: 1:200

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

CALCULATED-
DESIGNED BY

ROY FLORES

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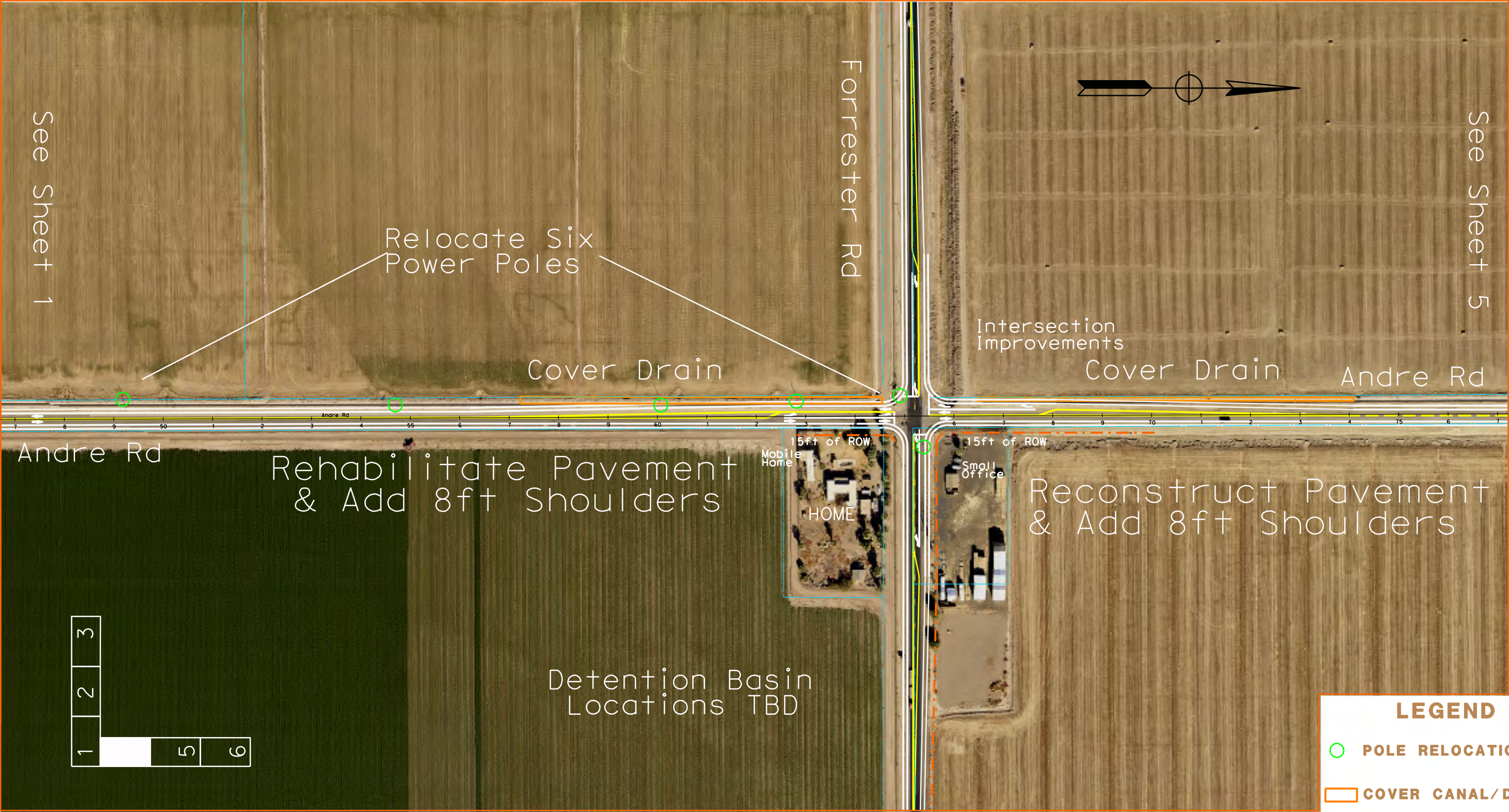


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**ATTACHMENT
3 OF 6**

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Westmorland ByPass



LEGEND

○ POLE RELOCATION

— COVER CANAL/ DRAIN

— EXISTING ROW



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 11
OFFICE OF
SYSTEM PLANNING

FORRESTER ROAD - Andre Road Bypass

FOR PRELIMINARY STUDY ONLY

SCALE: 1:200

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

CALCULATED-
DESIGNED BY

ROY FLORES

RELATIVE BORDER SCALE
IS IN INCHES

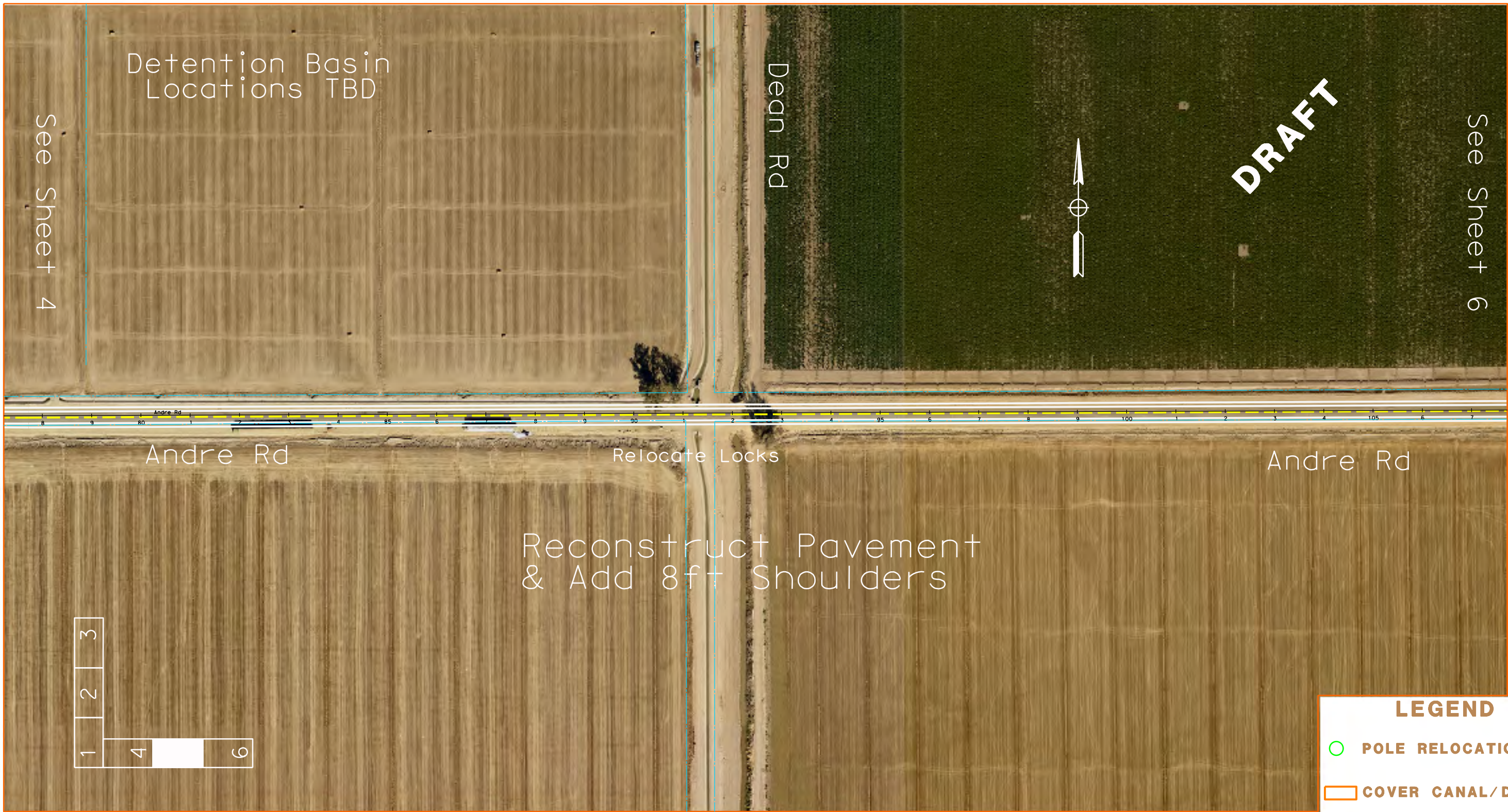


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**ATTACHMENT
4 OF 6**

ALL DIMENSIONS ARE IN FEET
UNLESS OTHERWISE SHOWN

Westmorland ByPass



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 11
OFFICE OF
SYSTEM PLANNING

FORRESTER ROAD - Andre Road Bypass

FOR PRELIMINARY STUDY ONLY

SCALE: 1:200

PROJECT EA: 42630K
EFIS NUMBER: 11-1600-0134

CALCULATED-
DESIGNED BY

ROY FLORES

RELATIVE BORDER SCALE
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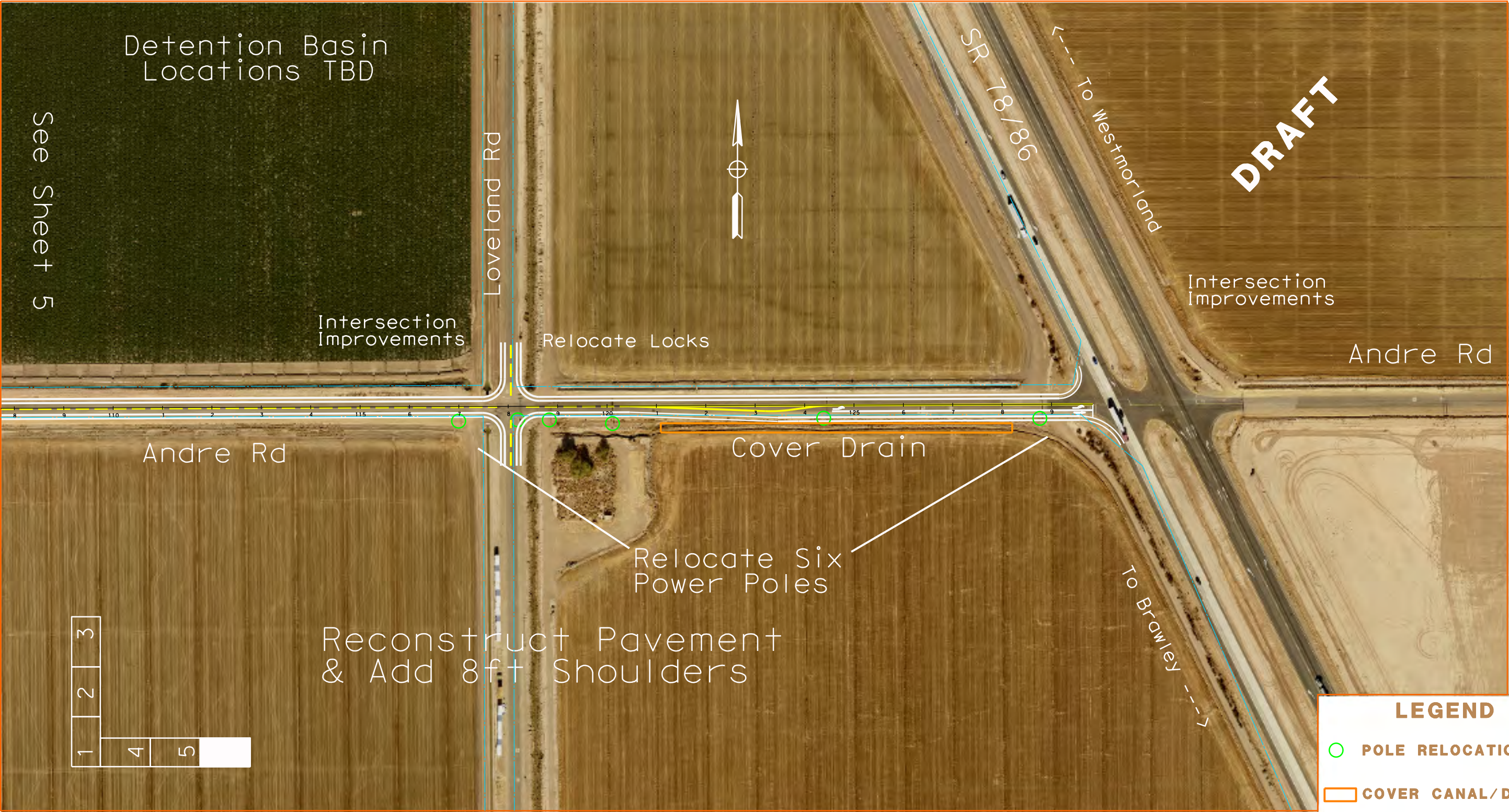


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**ATTACHMENT
5 OF 6**

ALL DIMENSIONS ARE IN FEET
UNLESS OTHERWISE SHOWN

Westmorland ByPass



Ross Rd @ Forrester Rd
Alternative 1 - Signal/Widen
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	200	
Pav't	150	
Drainage	600	
Specialty Items	150	
Environmental	150	
Traffic Items	600	
Detours	100	
Subtotal		1,950

Mark Ups

Minor Items	98	
Time Rel OH	205	
Supplemental	102	
State Furnished	200	
Mobilization	225	
Contingency	695	
Subtotal		1,525

Structures

-
Total Construction Cost 3,475

Right of Way

Acquisitions	500	
Utilities	400	
Subtotal	900	900

Total Capital Cost 4,375

Support Cost

	(1,000's)	
PA/ED	\$ 300	
PS&E	\$ 600	
ROW	\$ 100	
Const	\$ 900	
Subtotal		Total Support Cost \$ 1,900

Updated 2024/01

TOTAL PROJECT COST 6,275

Ross Rd @ Forrester Rd
Alternative 2 - Roundabout
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	500
Pav't	400
Drainage	1,000
Specialty Items	300
Environmental	300
Traffic Items	500
Detours	300
Subtotal	3,300

Mark Ups

Minor Items	165
Time Rel OH	347
Supplemental	173
State Furnished	250
Mobilization	381
Contingency	1154
Subtotal	2,470

Structures

-
Total Construction Cost 5,770

Right of Way

Acquisitions	700	
Utilities	600	
Subtotal	1,300	1,300

Total Capital Cost 7,070

Support Cost

	(1,000's)	
PA/ED	\$ 400	
PS&E	\$ 800	
ROW	\$ 200	
Const	\$ 1,100	
Subtotal		Total Support Cost \$ 2,500

Updated 2024/01

TOTAL PROJECT COST 9,570

Evan Hewes @ Forrester Rd
Alternative 1 - Signal Mod/Widen
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	200	
Pav't	150	
Drainage	700	
Specialty Items	150	
Environmental	150	
Traffic Items	600	
Detours	100	
Subtotal		2,050

Mark Ups

Minor Items	103	
Time Rel OH	215	
Supplemental	108	
State Furnished	200	
Mobilization	237	
Contingency	728	
Subtotal		1,590

Structures

-	
Total Construction Cost	3,640

Right of Way

Acquisitions	600	
Utilities	400	
Subtotal	1,000	1,000
Total Capital Cost		4,640

Support Cost

	(1,000's)	
PA/ED	\$ 400	
PS&E	\$ 600	
ROW	\$ 100	
Const	\$ 900	
Subtotal		Total Support Cost \$ 2,000

Updated 2024/01

TOTAL PROJECT COST 6,640

Evan Hewes @ Forrester Rd
Alternative 2 - Roundabout
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	500
Pav't	500
Drainage	1,200
Specialty Items	300
Environmental	300
Traffic Items	600
Detours	300
Subtotal	3,700

Mark Ups

Minor Items	185
Time Rel OH	389
Supplemental	194
State Furnished	250
Mobilization	427
Contingency	1286
Subtotal	2,731

Structures

-

Total Construction Cost	6,431
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Right of Way

Acquisitions	700	
Utilities	600	
Subtotal	1,300	1,300

Total Capital Cost	7,731
--------------------	-------

Support Cost

	(1,000's)	
PA/ED	\$ 400	
PS&E	\$ 800	
ROW	\$ 200	
Const	\$ 1,100	
Subtotal		Total Support Cost \$ 2,500

Updated 2024/01

TOTAL PROJECT COST	10,231
--------------------	--------

Baughman @ Forrester Rd
Alternative 1 - Signal
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	300	
Pav't	200	
Drainage	700	
Specialty Items	150	
Environmental	150	
Traffic Items	600	
Detours	100	
Subtotal		2,200

Mark Ups

Minor Items	110	
Time Rel OH	231	
Supplemental	116	
State Furnished	200	
Mobilization	254	
Contingency	778	
Subtotal		1,688

Structures

-
Total Construction Cost 3,888

Right of Way

Acquisitions	700	Will probably still need to take the old house
Utilities	400	
Subtotal	1,100	1,100

Total Capital Cost 4,988

Support Cost

	(1,000's)	
PA/ED	\$ 400	
PS&E	\$ 600	
ROW	\$ 100	
Const	\$ 900	
Subtotal		Total Support Cost \$ 2,000

Updated 2024/01

TOTAL PROJECT COST 6,988

Baughman @ Forrester Rd
Alternative 2 - Roundabout
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	500
Pav't	500
Drainage	1,200
Specialty Items	300
Environmental	300
Traffic Items	600
Detours	150
Subtotal	3,550

Mark Ups

Minor Items	178
Time Rel OH	373
Supplemental	186
State Furnished	250
Mobilization	410
Contingency	1237
Subtotal	2,633

Structures

-
Total Construction Cost 6,183

Right of Way

Acquisitions	800	
Utilities	600	
Subtotal	1,400	1,400

Total Capital Cost 7,583

Support Cost

	(1,000's)	
PA/ED	\$ 400	
PS&E	\$ 800	
ROW	\$ 200	
Const	\$ 1,100	
Subtotal		Total Support Cost \$ 2,500

Updated 2024/01

TOTAL PROJECT COST 10,083

SR 86 @ Baughman Rd
Alternative 1 - Signal
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	100	
Pav't	200	
Drainage	300	
Specialty Items	150	
Environmental	150	
Traffic Items	600	
Detours	100	
Subtotal		1,600

Mark Ups

Minor Items	80	
Time Rel OH	168	
Supplemental	84	
State Furnished	200	
Mobilization	185	
Contingency	579	
Subtotal		1,296

Structures

-
Total Construction Cost 2,896

Right of Way

Acquisitions	700	Will probably still need to take the old house
Utilities	400	
Subtotal		1,100

Total Capital Cost 3,996

Support Cost

	(1,000's)	
PA/ED	\$ 400	
PS&E	\$ 600	
ROW	\$ 100	
Const	\$ 900	
Subtotal		Total Support Cost \$ 2,000

Updated 2024/01

TOTAL PROJECT COST 5,996

Passing Lanes @ New River
Alternative 1 (Minimal Impact)
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	1100	Keep Bridge but upgrade Bridge Railing
Pav't	1600	
Drainage	1,100	
Specialty Items	400	
Environmental	600	
Traffic Items	500	
Detours	100	
Subtotal	5,400	

Mark Ups

Minor Items	270
Time Rel OH	567
Supplemental	284
State Furnished	400
Mobilization	624
Contingency	1886
Subtotal	4,030

Structures

400
Total Construction Cost 9,830

Right of Way

Acquisitions	600	
Utilities	400	
Subtotal	1,000	1,000
	Total Capital Cost	10,830

Support Cost

	(1,000's)	
PA/ED	\$ 650	
PS&E	\$ 975	
ROW	\$ 108	
Const	\$ 1,516	
Subtotal		Total Support Cost \$ 3,249

TOTAL PROJECT COST (\$1,000s) \$ 14,079

Updated 2024/01

Estimate Updated 1/2024 by RF

Passing Lanes @ New River
Alternative 2 (Full Standard)
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	1500	Build New Bridge and demolish existing
Pav't	2500	
Drainage	1,500	
Specialty Items	500	
Environmental	1000	
Traffic Items	500	
Detours	300	
Subtotal	7,800	

Mark Ups

Minor Items	390
Time Rel OH	819
Supplemental	410
State Furnished	600
Mobilization	901
Contingency	2730
Subtotal	5,849

Structures

5,000

Total Construction Cost 18,649

Right of Way

Acquisitions	800	
Utilities	400	
Subtotal	1,200	1,200

Total Capital Cost 19,849

Support Cost

	(1,000's)	
PA/ED	\$ 1,588	
PS&E	\$ 1,786	
ROW	\$ 198	
Const	\$ 2,382	
Subtotal		Total Support Cost \$ 5,955

Updated 2024/01

TOTAL PROJECT COST (\$1,000s) \$ 25,804

Estimate Updated 1/2024 by RF

**Baughman/Martin Temporary Bypass
Alternative 1 (Minimal Impact)
PSR (PDS) Capital Outlay Project Estimate**

Const Cost

Earthwork	200	
Pav't	1500	
Drainage	500	
Specialty Items	100	
Environmental	200	
Traffic Items	200	
Detours	50	
Subtotal		2,750

Mark Ups

Minor Items	138	
Time Rel OH	289	
Supplemental	144	
State Furnished	100	
Mobilization	318	
Contingency	935	
Subtotal		1,923

Structures

-

Total Construction Cost 4,673

Right of Way

Acquisitions	200	
Utilities	1000	
Subtotal		1,200

Total Capital Cost 5,873

Support Cost

	(1,000's)	
PA/ED	\$ 235	
PS&E	\$ 470	
ROW	\$ 59	
Const	\$ 587	
Subtotal		Total Support Cost \$ 1,351

Updated 2024/01

TOTAL PROJECT COST (\$1,000s) \$ 7,224

Estimate Updated 1/2024 by RF

**Baughman/Martin Temporary Bypass
Alternative 2 (Full Standard)
PSR (PDS) Capital Outlay Project Estimate**

Const Cost

Earthwork	700	
Pav't	3,000	
Drainage	1,800	
Specialty Items	400	
Environmental	500	
Traffic Items	600	
Detours	200	
Subtotal		7,200

Mark Ups

Minor Items	360	
Time Rel OH	756	
Supplemental	378	
State Furnished	200	
Mobilization	832	
Contingency	2431	
Subtotal		4,957

Structures

-	
Total Construction Cost	12,157

Right of Way

Acquisitions	200	
Utilities	1400	
Subtotal		1,600

Total Capital Cost	13,757
--------------------	--------

Support Cost

	(1,000's)	
PA/ED	\$ 550	
PS&E	\$ 1,238	
ROW	\$ 138	
Const	\$ 1,376	
Subtotal		Total Support Cost \$ 3,302

Updated 2024/01

TOTAL PROJECT COST (\$1,000's)	17,059
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Estimate Updated 1/2024 by RF

Martin/Andre Temporary Bypass**Alternative 1****PSR (PDS) Capital Outlay Project Estimate****Const Cost**

Earthwork	1600	
Pav't	3500	
Drainage	2,000	
Specialty Items	500	
Environmental	700	
Traffic Items	700	
Detours	300	
Subtotal		9,300

Mark Ups

Minor Items	465	
Time Rel OH	977	
Supplemental	488	
State Furnished	100	
Mobilization	1074	
Contingency	3101	
Subtotal		6,205

Structures

-

Total Construction Cost 15,505

Right of Way

Acquisitions	500	
Utilities	1500	
Subtotal		2,000

Total Capital Cost 17,505

Support Cost

	(1,000's)	
PA/ED	\$ 700	
PS&E	\$ 1,400	
ROW	\$ 175	
Const	\$ 2,626	
Subtotal		Total Support Cost \$ 4,901

Updated 2024/01

TOTAL PROJECT COST (\$1,000s) \$ 22,406

Estimate Updated 2/2024 by RF

Martin/Andre Temporary Bypass
Alternative 2
PSR (PDS) Capital Outlay Project Estimate

Const Cost

Earthwork	1800
Pav't	4000
Drainage	4,000
Specialty Items	800
Environmental	900
Traffic Items	700
Detours	300
Subtotal	12,500

Mark Ups

Minor Items	625
Time Rel OH	1313
Supplemental	656
State Furnished	100
Mobilization	1444
Contingency	4159
Subtotal	8,297

Structures

-

Total Construction Cost 20,797

Right of Way

Acquisitions	1000	
Utilities	2000	
Subtotal	3,000	3,000

Total Capital Cost 23,797

Support Cost

	(1,000's)	
PA/ED	\$ 952	
PS&E	\$ 1,904	
ROW	\$ 238	
Const	\$ 3,570	
Subtotal		Total Support Cost \$ 6,663

Updated 2024/01

TOTAL PROJECT COST (\$1,000s) \$ 30,460

Estimate Updated 2/2024 by RF

Proposed Project Summary

EA #	11-42630	AM Tool ID #	N/A	EFIS Project ID #	11-1600-0134
County-Route-PM	IMP – 086 – 6.0/28.0				
Anchor Asset	N/A		Proposed Fund Type	STIP	
Proposed Project Scope	The Forrester Road Improvements project proposes various improvements to Forrester Rd from the Interstate 8 (I-8) interchange to the City of Westmorland in Imperial County.				

Section 1: TPSIS Summary Statements & Recommended Actions

1-1 Project Needs/Opportunities: Scope, Schedule, Cost, & Funding	Refer to TPSIS Section: ☐ 2 ☒ 3 ☐ 5 ☒ 6 ☐ 7 ☐ 8 ☒ 9 ☒ 10
Pavement exhibiting degradation and rutting most notably in City of Westmorland. Shoulders lack clear recovery zones and widths in large segments cannot accommodate truck parking, staging, or recovery. Planned bike and ped facilities within scope. Proposed Class II bicycle facilities along Forrester Rd from Carter Rd to Keystone Rd. Install planned facilities; Class IV, Class II or Shoulder bike facilities, traffic calming, upgrade or install crosswalks, etc. Transit stops can be upgraded. The work creates an opportunity to incorporate the installation of broadband infrastructure.	

D11 Transportation Planning Scoping Information Sheet (TPSIS)

11-42630

1-2 Project Risks/Challenges: Scope, Schedule, Cost, & Funding		Refer to TPSIS Section: ☒ 2 ☒ 3 ☐ 5 ☐ 6 ☒ 7 ☒ 8 ☐ 9 ☒ 10	
Extreme heat may impact pavement and extreme weather events may impact the transportation infrastructure should there be large amount of water that either raises canals or causes debris flows. Materials and design should consider these climate stressors. The project is also located within disadvantaged communities. Facility improvements may lead to increase in truck VMT by diverting travel off SR-86. Intersections for Baughman and Martin Rd bypass will require further study on potential geometric constraints. As part of the approval by the City of Westmorland of the Love's Travel Center, the developer agreed to pay a bond towards a signalized intersection improvements and underground infrastructure at Martin Road and SR-78/86. This signal project is still a concept and requires a current traffic study to determine the Signal Warrants and an Intersection Control Evaluation (ICE).			
1-3 Recommended Actions:		Refer to TPSIS Section: ☐ 2 ☒ 3 ☐ 5 ☒ 6 ☒ 7 ☒ 8 ☐ 9 ☒ 10	
1-3-1 Provide justification if none of identified Complete Streets needs/opportunities are included in project scope. Resourcing for most of the Complete Streets (CS) recommended improvements may be considered assuming the additional scope is within the project's and/or District's Performance Plan budgets. All proposed CS improvements should be coordinated with the District 11 Multi-Modal Programs Branch. Any proposed improvements outside our right-of-way will be coordinated between the Project Development Team (PDT) and the respective Local Agencies. This includes determining maintenance responsibilities for any overlapping features.			
1-3-2 County-Route-PM	Description of Identified Action/Planning Consideration	Justification	
Forrester Rd from I-8 to Westmorland	Install planned bicycle and pedestrian facilities; Class IV, Class II or Shoulder bike facilities, traffic calming, upgrade or install crosswalks, etc.	Planned bike and ped facilities within scope. Proposed Class II bicycle facilities along Forrester Rd from Carter Rd to Keystone Rd.	
Forrester Rd from I-8 to Westmorland	Materials and design should consider these climate stressors, especially extreme heat and precipitation.	Extreme heat may impact pavement and extreme weather events may impact the transportation infrastructure should there be large amount of water that either raises canals or causes debris flows.	
Forrester Rd from I-8 to Westmorland	Pavement should be replaced, and shoulders widened to increase clear recovery zone.	Pavement exhibiting degradation and rutting most notably in City of Westmorland. Shoulders lack clear recovery zones and widths in large segments cannot accommodate truck parking, staging, or recovery.	
Forrester Rd from I-8 to Westmorland	An updated traffic study for Martin Rd and SR 78/86 intersection is required; this should include signal warrants sheets. An ICE Report and signal warrants need to be included along with findings which will help the Traffic Study determine the final recommendations.	As part of the approval by the City of Westmorland of the Love's Travel Center, the developer agreed to pay a bond towards a signalized intersection improvements and underground infrastructure at Martin Road and SR-78/86. This signal project is still a concept and requires a current traffic study to determine the Signal Warrants and an Intersection Control Evaluation (ICE).	
Prepared for use in Project Nomination by:  _____		Received for use in Project Nomination by: _____	
David Calkins Associate Transportation Planner, System Planning		Melina Pereira Branch Chief, System Planning	
Date 5/16/22		Date	

Attachment D

Section 2: Tribal Government, Local Partners, and Public Engagement Coordination

2-1 TRIBAL GOVERNMENT COORDINATION		
2-1-1 Tribal Lands – Is the proposed project: ☐ within or near an Indian Reservation Rancheria, or Tribal Trust Land? ☐ involves trust lands (including Tribal and individual allotted lands) outside of a reservation or Rancheria. ☒ this project is NOT near Tribal or trust lands and will have no impact.	<i>If so, indicate if:</i> ☐ Tribe(s) or individual allotment holders have been notified ☐ The Bureau of Indian Affairs (BIA) has been notified (if trust lands and/or a Reservation/Rancheria is involved) ☐ All applicable tribal laws and regulations been reviewed for required coordination	<i>Provide names of reservations, Rancherias, Tribal trust lands and describe concerns/topics discussed.</i> -----
2-1-2 Does the Tribe have a Tribal Employment Rights Office/Ordinance (TERO)? ☐ Yes ☐ No ☒ Not Applicable	<i>If so, indicate if:</i> ☐ The TERO been reviewed for required coordination ☐ There is a related Memorandum of Understanding (MOU) between District and the Tribe ☐ Caltrans has other MOUs with the Tribe; <i>Provide title and description or content</i>	
2-1-3 Have any Tribes expressed concern about areas of cultural sensitivity that may be affected by this project?	☐ Yes ☐ No ☒ Not Applicable	<i>Provide Tribal name(s) and details</i>
2-1-4 Has the Tribal Government been contacted or are you aware of any Tribal concerns related to the project?	☐ Yes ☐ No ☒ Not Applicable	<i>Who was contacted? Describe concerns/topics discussed.</i>
2-2 DISADVANTAGED COMMUNITIES		
2-2-1 Is the project located in or benefit a disadvantage community? <i>You can use these links to identify if project is located in DAC area:</i> https://map.healthyplacesindex.org/ https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30	☒ Yes ☐ No	This project is in Census Tracts 102, 110, and 111. Per the <i>Healthy Places Index</i> rankings, these tracts <u>are</u> considered Disadvantaged Communities.
2-3 LIVABILITY/SOCIAL EQUITY		
2-3-1 Will this project have any negative impacts on the surrounding community?	☐ Yes ☒ No	If yes, how will it be mitigated: Possible short-term construction impacts but no long-term negative impacts.

D11 Transportation Planning Scoping Information Sheet (TPSIS)

11-42630

2-3-2 Are there opportunities to address current social equity issues resulting from previous transportation related decisions?	☒ Yes ☐ No	Explain: A growing population and an expanding economy have led to an increase of traffic along SR 86. It has led to higher levels of noise and air pollution. This has decreased pedestrian's comfort level walking along or crossing SR 86, and SR 86 has also become the City Main Street for these communities. Forrester Road as a parallel route to SR 86 has plenty of unused capacity. The route could entice drivers with improvements that increase driver comfort, provide more efficient freight movement, and is prepared for the advent of new technologies.
2-4 IDENTIFIED LOCAL PARTNERS/STAKEHOLDERS	SOURCE/ DATE CONTACTED	COMMITMENT/OUTCOME/CONCERNS & PRIORITIES
City of Westmorland		
ICTC		
County of Imperial		
2-5 PRELIMINARY PROPOSED PUBLIC ENGAGEMENT STRATEGY	OPTIONS	
2-5-1 What is the preliminary recommended Public Engagement Strategy for this project?	☒ Inform ☐ Consult ☐ Collaborate ☐ Involve ☐ No Recommendation <u>Description:</u> At a minimum, the public should be kept informed of this project.	

Section 3: Plan and Document Review

3-1 PLANNING DOCUMENTS AND SCOPING TOOLS	SUMMARY OF RECOMMENDATIONS & CONSIDERATIONS
3-1-1 Active Transportation Plans: ☐ California Active Transportation Plan (CAT Plan) ☐ District Bike and Ped Plan ☒ Regional/Local Plans and Modal Elements	Planned bike and ped facilities within scope. Proposed Class II bicycle facilities along Forrester Rd from Carter Rd to Keystone Rd. Install planned facilities; Class IV, Class II or Shoulder bike facilities, traffic calming, upgrade or install crosswalks, etc.
3-1-2 Broadband: ☐ Priority1 ☐ Priority2 ☐ Priority3 ☒ Caltrans Broadband Partnership Opportunity Map	The work creates an opportunity to incorporate the installation of broadband infrastructure. To see if service is at an acceptable level go to (https://www.broadbandmap.ca.gov/)
3-1-3 Climate Change Planning: ☒ Caltrans District Vulnerability Assessment ☒ Caltrans Climate Change Adaptation Priority Plans ☐ Local Climate Action Plan/ GHG reduction plan ☐ Greenhouse gas section of EIR for RTP/SCS ☐ Locally Adopted Transportation Adaptation Plan ☐ Climate Action Plan for Transportation Infrastructure (CAPTI)	Since this is currently not a state-owned facility, no state assets are at risk. However, several adjacent routes have identified state-owned small and large culverts, bridges, and pavement at risk. Primarily, extreme heat may impact pavement and extreme weather events may impact the transportation infrastructure should there be large amount of water that either raises canals or causes debris flows. Materials and design should consider these climate stressors.

Attachment D

D11 Transportation Planning Scoping Information Sheet (TPSIS)

11-42630

3-1-4 Cultural/Historic Preservation Scoping Tools: ☐ Caltrans Cultural Resources Database ☐ Caltrans Historic Bridge Inventory ☐ Archaeological Site Sensitivity Model ☐ AB52 Letter ☐ Tribal Cultural Resources Studies	Env. Cultural Resource Studies (Unit 2733) should be consulted for potential impacts.
3-1-5 Freight Planning: ☒ California Freight Mobility Plan ☐ California Sustainable Freight Action Plan ☐ Caltrans Safety Roadside Rest Areas (SRRA) ☐ Truck Parking Study ☒ Regional/Local Plans	CFMP 2020 identified facility as priority off-system project (SDIC_348) for truck bypass with operational and structural improvements. 2008 Imperial County Circulation Element, 2013 Imperial County LRTP, and 2015 SANDAG Gateway Study identify facility as potential 4 to 6-lane state route connector. No current STAA or CA Legal designations. Forrester Road Interregional Corridor Study on potential transportation improvements to meet future needs of agriculture industries of Imperial and Coachella Valleys and cross-border commercial travel of SR-86 corridor.
3-1-6 Project Planning: ☒ District 10 Year Project Book ☒ MONSTER List ☐ Preliminary Investigation/Feasibility Study	This project is located in the District's MONSTER list.
3-1-7 Rail and Mass Transportation Planning: ☐ California State Rail Plan ☐ Statewide Transit Strategic Plan	No existing P&R lots in the area. Bus Green line and #2 & 3 Bus on the 86. Stops can be upgraded.
3-1-8 Regional & Local Planning: ☒ Regional Transportation Plan ☐ Sustainable Community Strategy ☒ General and Local Plans ☐ Regional Concept of Transportation Operations ☐ Local Coastal Program Plan	See ICTC Regional Active Transportation Plan 2022.
3-1-9 System Planning: ☐ Interregional Transportation Strategic Plan (ITSP) ☒ Corridor Plans (TCR, CSMP, CMCP) ☒ California Transportation Plan (CTP 2050)	The TCR for SR 86 was completed in December 2016 and this project is consistent with the recommendations put forth. This project is also consistent with the goals and objectives of the CTP 2050.
3-1-10 Tribal Planning: ☐ Tribal Transportation Plan	This area is not included in the 2018 ITTS report.
3-1- 11 Other (Identify): ☐ _____	

Attachment D

Section 4: Caltrans Stakeholder Information

4-1 Title	Name	Phone Number
4-1-1 Complete Street/Bicycle and Pedestrian Coordinator	Alex Araiza	(619) 985-1372
4-1-2 Climate Change Coordinator/Liaison	Michelle Blake	(619) 709-4345
4-1-4 District Native American Liaison (Transportation Planning)	Rafael Reyes	(619) 208-1104
4-1-5 Environmental Planner	Michelle Blake	(619) 709-4345
4-1-6 Freight Planner	Brian Miller	(619) 985-5288
4-1-7 Local Development Intergovernmental Review (LD-IGR) Planner	Mark McCumsey	(916) 985-4957
4-1-8 Park and Ride Coordinator	Liz Santucci	(619) 987-3087
4-1-9 Regional Planner	Seth Cutter	(619) 214-1534
4-1-10 Sustainable Planning Grant Coordinator	Seth Cutter	(619) 214-1534
4-1-11 System Planner / TPSIS Coordinator	Melina Pereira / David Calkins	(619) 379-7349 / (619) 985-1441
4-1-12 Rail & Transit Planner	Liz Santucci	(619) 987-3087
4-1-13 Other Coordinators	Omar Bendeck	(619) 688-3198

Section 5: System Planning

5-1 ROUTE DESIGNATIONS			
5-1-1 Freeway and Expressway	County Road	5-1-8 Scenic Highway	No
5-1-2 National Highway System	MAP-21 Principal Arterial	5-1-9 National Highway Freight Network	No
5-1-3 Federal Functional Classification	Other Principal Arterial	5-1-10 Critical Urban Freight Corridor	No
5-1-4 Strategic Highway Network	No	5-1-11 Critical Rural Freight Corridor	No
5-1-5 Strategic Interregional Corridor	No	5-1-12 NHS and STAA Route Classification	No
5-1-6 Interregional Road System	No	5-1-13 Truck Network Designation	No
5-1-7 Priority Interregional Facility	No	5-1-14 Other (e.g., Marine Highways, etc.)	
5-2 FACILITY TYPE			
5-2-1 Current	2-lane County Road		
5-2-2 Concept	2-lane County Road with intersection improvements, passing lanes, and shoulder widening		
5-2-3 Ultimate	2-lane County Road and freight corridor with operational, safety, and technology improvements		

Attachment D

5-3 VEHICLE MILES TRAVELED (VMT) REDUCTION			
5-3-1 Identify Opportunities to reduce VMT with this project.	☒ Pedestrian Facilities ☐ Rail Transit ☐ Rideshare/Carpool ☐ Car Share ☐ Aerial/Water Transport ☐ Personal Mobility Devices (electric scooters, skateboard, etc): ☐ Other: _____	☒ Bicycling Facilities ☒ Bus Transit ☒ ZEV Fueling ☒ Autonomous Vehicles ☐ Package Drop Off	☒ Walkable Communities ☐ Broadband/Innovation ☒ Personal Safety/Lighting ☐ Dynamic Parking Rates ☐ Land Use/Smart Growth
	There may be opportunities within the project limits to reduce VMT through ZEV and autonomous vehicle infrastructure. Near Westmorland, additional opportunities may include bicycle and pedestrian facilities, and transit stops.		
5-4 FHWA PERFORMANCE MEASURES			
5-4-1 Identify Performance Measure Types affected by this project (If Federal Funding is applicable).	☒ Safety Performance Management (PM#1) ☒ Pavement & Bridge Condition (PM#2) ☒ System Performance, Freight, and CMAQ (PM#3)		Performance Measures: Truck travel time reliability, total emissions reduction, pavement in good condition, number of fatalities/serious injuries

Section 6: Smart Mobility, Active Transportation and Transit

6-1 APPLICABILITY OF CHECKLIST - For future project phases, please refer to the Complete Streets Decision Document (CSDD)	
6-1-1 Is the project located entirely on a facility where bicyclists and pedestrians are legally prohibited and the project does not involve a shared use path, pedestrian/bicycle structure or work impacting a local road crossing or interchange? <i>(i.e. project including freeway mainline and ramp work where the project freeway segment legally prohibits bicyclists and pedestrians per the MUTCD.)</i> https://services1.arcgis.com/8CpMUd3fdw6aXef7/arcgis/rest/services/Bicycle_access/FeatureServer/0 If no, continue, if yes, stop here. The project is exempt from completion of this Section.	☐ Yes ☒ No
6-1-2 Is the primary project purpose to address assets that are outside of the roadbed where pedestrian and bicycle travel is not affected, and construction will not affect future pedestrian and bicycle facilities? <i>(i.e. culvert outfalls, storm water treatment facilities, bridge substructure or scour mitigation, planting or vegetation removal, retaining walls, etc.)</i> If no, continue, if yes, stop here. The project is exempt from completion of this Section.	☐ Yes ☒ No

Attachment D

6-2 PLACE TYPES		Comment/Action	
6-2-1 Identify the Smart Mobility Framework Place Type(s) surrounding the project limits.	☐ Central Cities ☒ Urban Communities ☒ Suburban Communities <u>Summary of Place Type considerations:</u>		
6-2-2 Are there any (existing or proposed) Pedestrian/ Bicyclist/ Passenger Rail/Transit Trip Generators in or adjacent to the project area?	☒ Residential Areas ☒ Parks ☒ Recreational Areas ☒ Religious Facilities ☐ Mixed-Use Development ☒ Hotels/Transient+ ☒ Schools ☒ Town Centers ☒ Shopping Centers ☒ Distribution/Process Centers ☒ Bus Stops ☒ Rural Areas ☐ Protected Lands and Special Use Areas ☒ Large Employment Businesses (Industry, Agriculture, etc.) ☒ Civic Centers/Government ☐ Shared-use trail access/parking. ☐ Public Transit /Passenger Rail Facilities ☐ Health/Medical Facilities ☐ Other: _____		
6-2-3 Check all that apply: ☒ the highway segment functions as a "Main Street" or a "Safe Route to School" ☒ the project provides unique or primary access into or out of any of the trip generators or between communities ☐ the project provides unique or primary access across a river, highway corridor or other natural and/or man-made barrier			
6-3 BICYCLE, PEDESTRIAN, RAIL AND TRANSIT CONDITIONS		Comment/Action	
6-3-1 Identify existing bicycle and pedestrian facilities within project limits.	☐ Bicycle/Pedestrian Accessibility ☐ Bicycle Lane Choose an item. ☐ Backpacking/Hiking/Equestrian Trail ☒ Shoulder ☒ Sidewalks ☐ Other: _____ ☒ Curb Ramps ☐ California Coastal Trail ☐ Signage ☐ Green Striping ☐ Bike Boxes ☐ Two-Stage Turn Boxes		
6-3-2 Identify physical and/or perceived impediments for bicyclists and pedestrians.	☒ Narrow Shoulders ☒ Narrow Sidewalks ☒ Connectivity Gaps ☒ Curbs and Gutters ☐ Utility Boxes ☒ High Vehicle Speeds ☒ AADT (High Vehicle Traffic) ☐ Other: _____		
6-3-3 Complete Street existing Asset Inventory and Condition in the project area. (Example: Bikeway Class 1, 2, 3, 4 or Sidewalk or Crosswalk)	Assets: Sidewalks Crosswalks	Assets Condition/Description/Length: Miles: _____ Poor: _____ % Fair: _____ % Good: _____ %	
6-3-4 Design Year ADT (Local Street/Conventional Highway)	☐ <2,500 ☐ 2,500-5,000 ☒ 5,000-10,000 ☐ >10,000		
6-3-5 Posted Speed (Local Street/Conventional Highway)	☐ 15-20 ☐ 25-30 ☒ 35-40 ☒ >45		

D11 Transportation Planning Scoping Information Sheet (TPSIS)

11-42630

6-3-6 Level of Traffic Stress (LTS)	Bicycle LTS: 4 Pedestrian LTS: 4
6-3-7 Identify existing Rail and transit facilities within the project vicinity/ corridor. No existing P&R lots in the area. Bus Green line and # 2 & 3 Bus on the 86.	☐ Rail and Transit Stops ☐ Active Rail/Transit Line ☐ Park and Ride Lot ☐ Connections to other services ☐ Signal Priority ☐ Seamless Transfer Opportunities ☐ Other: _____
6-4 BICYCLE, PEDESTRIAN & TRANSIT NEEDS/OPPORTUNITES	Comment/Action
6-4-1 Are there opportunities to improve safety for bicyclists and pedestrians with Complete Street features? ☒ Yes ☐ No	Yes. See ICTC Regional AT Plan 2022. Planned bike and ped facilities within scope. Proposed Class II bicycle facilities along Forrester Rd from Carter Rd to Keystone Rd.
6-4-2 Identify any pedestrian, bicycle or transit needs in/linking to the project area as identified in an existing Bicycle/Pedestrian Plan or comprehensive planning study for the corridor.	Can implement planned bike facilities, upgrade pedestrian
6-4-3 Is there a public/partner identified need for bicycle/pedestrian/ transit or "way finding" signs that could be incorporated into the project? ☒ Yes ☐ No	Yes. See ICTC Regional AT Plan 2022.
6-4-4 Provide recommendations to address physical and/or perceived impediments for bicyclists and pedestrians (identified in 6-3-2) within project limits. ☒ Yes ☐ No	Install planned facilities on SR-86; Class IV, Class II or Shoulder, traffic calming, upgrade or install crosswalks, etc.
6-4-5 Is there any opportunity to improve transit on state owned roads or improve access to transit? ☒ Yes ☐ No	Stops can be upgraded
6-4-6 Preferred Bikeway Facilities ☒ Yes ☐ No	☒ Class I ☐ Class II ☐ Class III ☒ Class IV ☐ Standard Shoulder or Shared Lane

Section 7: Local Development – Intergovernmental Review

7-1 LOCAL DEVELOPMENTS IMPACTING PROJECT	
Project Title: <i>Westmorland Travel Stop Project Signal Improvements and Street Lights Project</i> Project Location: <i>Martin Road and SR-78/86-PM 27.76; APN # 035-260-150, 035-260-010</i> GTS link: https://ld-igr-gts.dot.ca.gov/district/11/report/3364#	Encroachment Permit Required ☒
7-1-1 Project Description: <i>Love's Travel Truck Stop – Currently open for business</i>	
7-1-2 Distance to Caltrans Project: <i>On State Route 78/86 at Martin Road</i>	
7-1-3 Summary of Mitigation Measures: <i>As part of the approval by the City of Westmorland of the Love's Travel Center, the developer agreed to pay a bond towards a signalized intersection improvements and underground infrastructure at Martin Road and SR-78/86. This signal project is still a concept and requires a current traffic study to determine the Signal Warrants and an Intersection Control Evaluation (ICE).</i>	

Attachment D

D11 Transportation Planning Scoping Information Sheet (TPSIS)

11-42630

7-1-4 Mitigation Funding Source(s)	7-1-5 Amount of Available Funding	7-1-6 Summary of Caltrans Concerns: <i>The intersection currently does not meet signal warrants and cannot be done using future traffic projections. An updated traffic study is required; this should include signal warrants sheets. An ICE Report and signal warrants need to be included along with findings which will help the Traffic Study determine the final recommendations.</i>
City of Westmorland has a \$500K Bond from the developer as part of the mitigation measures.	The road and intersection improvements have already been completed.	

Section 8: Climate Change, Planning and Environmental Linkage Considerations

8-1 AIR QUALITY, WILDLIFE, AND NATURAL HABITAT CONSIDERATIONS		
8-1-1 Check all that apply: ☒ Air Quality – proposed project is located in a Federal non-attainment or attainment maintenance area ☐ Project is within identified Wildlife Corridors in a Habitat Conservation Plan, South Coast Wildlife Linkage or California Essential Habitat Connectivity Plan. ☐ Proposed project is located within or near any lands protected under a National Scenic Rivers Act, US Fish and Wildlife Services such as Critical Habitat, National Wildlife Refuge System, etc., or within the boundaries of other resource agencies such as HCPs, USFS or BLM designated critical habitat areas or Habitat Conservation Plans		
8-1-2 Are any of the following Officially Designated Habitat Types located within or near the proposed Project Location? ☐ Environmentally Sensitive Habitat Areas ☒ Wetlands ☐ Important Bird Areas ☒ Riparian or Stream Habitats ☐ Important Rare Plants Areas ☒ Jurisdictional Waters ☐ Natural Communities of Conservation Concern		If so, describe here: The project boundary crosses the New River. The project proposes construction to the bridge crossing the river and the roadway next to the river.
8-1-3 Is there an identified fish passage barrier(s)? www.cafishpac.org ☐ Yes ☒ No		There are no identified fish passage barriers.
8-1-4 Is the project located in the Coastal Zone Boundary and Local Coastal Program Area, or within the jurisdiction of the California Coastal Commission? (https://www.coastal.ca.gov/maps/) ☐ Yes ☒ No		The project is not located in the coastal zone boundary.
8-2 CLIMATE CHANGE CONSIDERATIONS		Comment/Action
8-2-1 Caltrans climate change considerations tool kit – forthcoming or remove if not relevant: <i>Attach toolkit as an appendix and check GHG reduction measures that could apply to the proposed project for consideration.</i> https://env.onramp.dot.ca.gov/downloads/env/managedfiles/caltrans-ghg-reduction-measures-jun-2021-a11y.pdf		Follow the link provided to view the Caltrans climate change considerations tool kit.

Attachment D

8-2-2 Using the District Vulnerability Assessment appropriate for the proposed project area, identify the potential climate stressors that could affect transportation assets within the project limits. <i>Using the vulnerability assessment interactive Webmap; print and attach map of potential project site vulnerability</i>	☒ Temperature ☒ Precipitation ☐ Wildfire ☒ Other: Air Quality- poor in this area and projected to get worse with climate change ☐ Sea-Level Rise ☐ Storm Surge ☐ Cliff Retreat
8-2-3 Are there potential climate risks to major assets within the project area? <i>(e.g. Bridge potentially at risk of SLR inundation, stretch of highway at risk for high temp, and wildfire- consider appropriate materials)</i> ☐ Yes ☐ No	Since this is currently not a state-owned facility, no state assets are at risk. However, several adjacent routes have identified state-owned small and large culverts, bridges, and pavement at risk. Primarily, extreme heat may impact pavement and extreme weather events may impact the transportation infrastructure should there be large amount of water that either raises canals or causes debris flows. Materials and design should consider these climate stressors.
8-3 ADVANCE BIOLOGICAL MITIGATION OPPORTUNITIES	Comment/Action
8-3-1 Identify Potential Environmental Mitigation Opportunities for the project: ☐ Mitigation bank within the project limits with available credits to purchase ☐ Mitigation Fees from existing Habitat Conservation Plan ☐ Projects timeline allows participation in the Advance Mitigation Program ☐ Any opportunities available within the project limits to offset project impacts	This information is not available at this phase of the project and will be determined at a later phase.

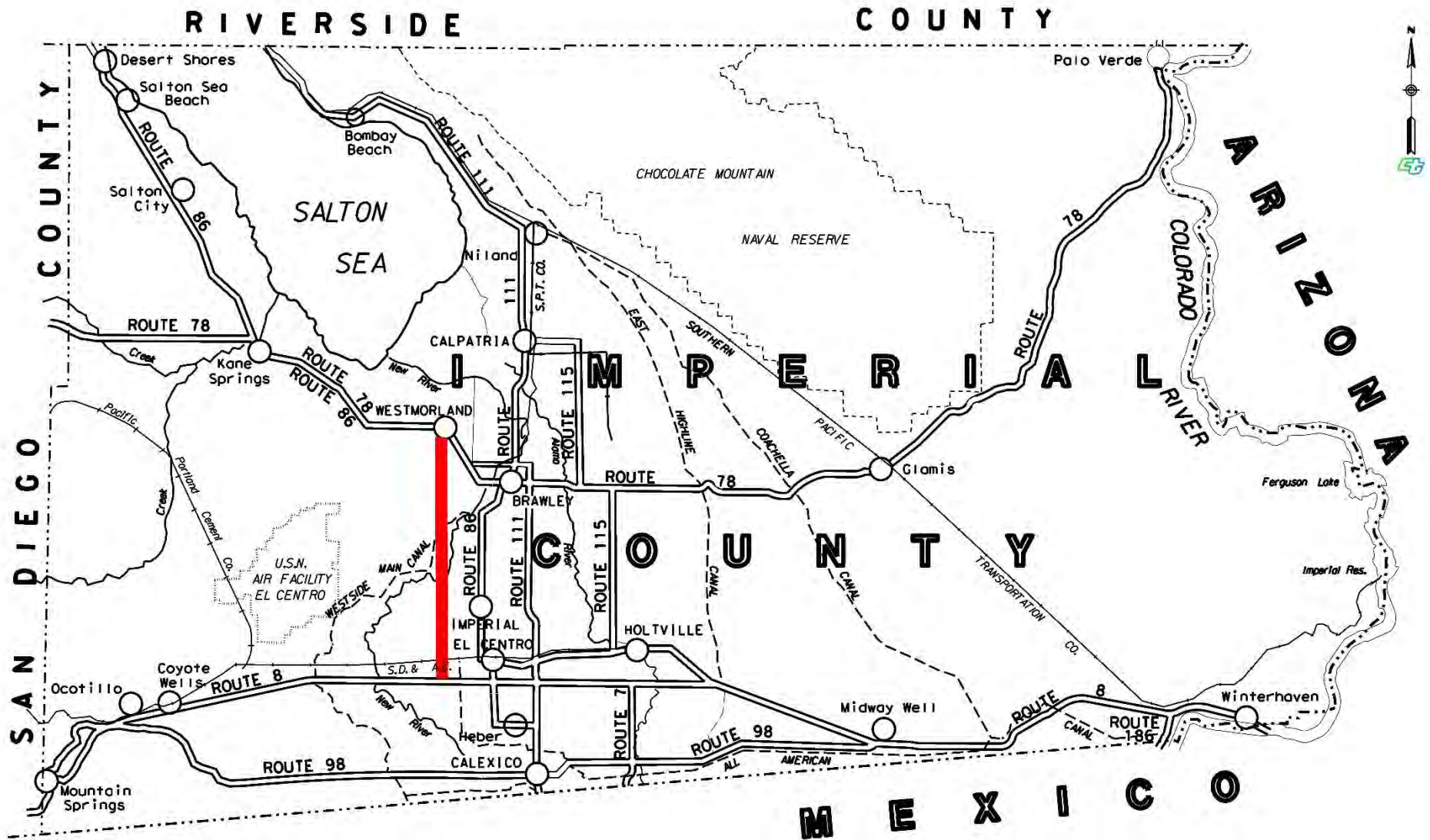
Section 9: Broadband Coordination

9-1 BROADBAND OPPORTUNITIES	
9-1-1 Does the work create an opportunity (for either Caltrans or broadband service providers) to incorporate the installation of broadband infrastructure (e.g., underground or aerial facility etc.) as part of this project for the use of either Caltrans or other public or private agencies?	Yes. The work creates an opportunity to incorporate the installation of broadband infrastructure.

Section 10: Freight Considerations

10-1 FREIGHT OPPORTUNITIES AND CONSIDERATIONS	
10-1-1 Are there any known unauthorized truck parking issues or deficiencies along the route? ☐ Yes ☒ No	Will require further study. Truck parking or staging currently unavailable along facility.
10-1-2 Are there any existing or planned restrictions/limitations pertaining to truck weight or height? ☐ Yes ☒ No	Will require further study. Facility currently not designated STAA or CA legal truck.
10-1-3 Identify truck usage impacts within the project area: ☐ Truck Bottleneck/Congestion ☒ Distressed Pavement ☐ Truck Geometric Constraints ☐ Emissions, AQ, and Public Health ☐ Noise and Visual ☐ Parking Requirements ☐ Drayage or short trips ☒ Shoulder Width ☒ Shoulder Dust Issues ☐ Bridge Conditions	Pavement exhibiting degradation and rutting most notably in City of Westmorland with produce being especially sensitive to poor pavement conditions. Shoulders lack clear recovery zones due to presence of canal and dust. Shoulder widths in large segments cannot accommodate truck parking, staging, or recovery. Facility improvements may lead to increase in truck VMT by diverting travel off SR-86. Intersections for Braughman and Martin Rd bypass will require further study on potential geometric constraints.
10-1-4 The project area contains (<i>check if apply</i>): ☐ Intermodal connections to other freight facilities (seaports, rail, airport) ☒ Freight key services along route (<i>e.g. agriculture (crops, processing, packing)</i>) ☐ POE and Gateway Facilities (Includes inland POEs) ☒ Distribution/Processing Centers ☐ Limited or restricted transport of hazardous materials	Truck usage largely consists of agriculture and produce as well as large farm equipment servicing nearby farms. Cross-border commercial travel expected to increase truck volumes in SR-86 corridor from Mexico to Coachella Valley. Distribution centers present in City of Westmorland at
10-1-5 Are there any opportunities for Truck Parking, based on SRRRA Master Plan or any relevant truck parking studies? ☐ Yes ☒ No	No known opportunities. Will require further study and evaluation.
10-1-6 Are there opportunities for zero emission fueling (electric charging, hydrogen) for vehicles including trucks? ☒ Yes ☐ No	Will require further study and evaluation.

SEGMENT MAP



Attachment D

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 1 of 5

K PHASE CONCEPTUAL COST ESTIMATE FORM - RIGHT OF WAY****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****To: **D11 SYSTEM PLANNING**

Date: June 7, 2022

(REQUESTING DIVISION)

ROY FLORES

Dist-Co-Rte-PM: 11-IMP-86 – R6/R28

(NAME OF REQUESTOR)

Project ID: 1116000134

EA: 42630

Improvement #: 1**TEMPORARY/PERMANENT
BYPASS**From: **ALEX MOCKUS** *AM***RICHARD COVEY** *RC*

RIGHT OF WAY

RIGHT OF WAY

(Estimator)

(Estimating Senior)

The Conceptual Cost Estimate Request was received for the above-referenced project on March 14, 2022 with a requested completion date of March 31, 2022.

DESCRIPTION OF REQUIRED RIGHT OF WAY:

The 1st recommended improvement is the Temporary Bypass using Baughman and Martin Rd. This would involve pavement reconstruction (or rehab), the addition of shoulders and possibly additional drainage structures. This would also include intersection improvements at the Baughman/Forrester and Martin/SR 86(78) intersections.

Potential Right of Way Impacts are based on preliminary mapping information that does not disclose the sizes, types, and durations of the potential acquisitions-It shows the locations only. The Conceptual Cost Estimate reflects the likely zoning and general land values based on the likely/potential zoning. This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

Right of Way Required: ☒ Yes ☐ No
 Number of Total Parcels: ☐ 1-10 ☒ 11-25 ☐ 26-50 ☐ 51-100 ☐ >100

Right of Way Requirements:

Number of Fee Parcels 22 Total Fee Area 4.4 acres
 Number of Permanent Easements _____ Total Permanent Easement Area _____
 Number of Temporary Easements _____ Total Temporary Easement Area _____
 Length of Term Required for Temporary Easements _____
 Number of Excess Parcels/Other _____

USA Lands:	☐ Yes	☒ No	☐ Unknown	
BIA Lands:	☐ Yes	☒ No	☐ Unknown	
Displaced Persons/Businesses:	☐ Yes	☒ No	☐ Unknown	Number of displaces
Demolition/Clearance Required:	☐ Yes	☒ No	☐ Unknown	Number of demos
Railroad Involvement:	☐ Yes	☒ No	☐ Unknown	
C&M Agreement Needed	☐ Yes	☒ No	☒ Unknown	
Utility Involvement:	☒ Yes	☐ No	☐ Unknown	Number of Utilities in Area <u>4</u>
UT Relocations Anticipated:	☒ Yes	☐ No	☐ Unknown	
Potholing Needed:	☒ Yes	☐ No	☐ Unknown	
Project Public Meetings:	☐ Yes	☐ No	☒ Unknown	Number of Meetings <u>UNKNOWN</u>
Permits To Enter ENV/ENG:	☐ Yes	☐ No	☒ Unknown	Number of Permits <u>UNKNOWN</u>
Environmental Mitigation:	☐ Yes	☒ No	☐ Unknown	Type:
Outdoor Advertising Signs:	☐ Yes	☒ No	☐ Unknown	Number of Signs

Cost Estimates

Estimate reflects Right of Way only and does not include any capital costs for Right of Way Engineering/Land Surveys.

Capital Costs-Phase 9

☐ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☒ \$1,000,001-\$2,500,000	☐ >\$100,000,000

Capital Costs-Phase 4

☒ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

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Page 3 of 5

Phase 9 - Recommended R/W Capital Cost for Programming \$1,350,000.

\$ 100,000 Acquisition

\$ 0 Permit Fees

\$ 0 Railroad Agreement

\$1,250,000 Utility Estimate

Phase 4 - Recommended R/W Capital Cost for Programming: \$0

Estimate reflects Right of Way only and does not include any support costs for Right of Way Engineering/Land Surveys.

Phase 0 Support Costs
(PA&ED)

\$13,200

Tasks: 100.10, 160.10, 160.30,
165.10, 170.10, 170.15, 170.25,
175.10, 180.05, 180.10

Phase 1 Support Costs (PS&E)

Tasks: 100.15, 185.05, 185.20,
185.25, 205.10, 205.15, 205.25,
235.05, 235.10, 255

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 2 Support Costs (RW)

Tasks: 100.25, 195.40, 195.45,
200.15, 200.20, 200.25, 200.30,
225.50, 225.60, 225.65, 225.70,
225.75, 225.80, 245.50, 245.60,
245.65, 245.70, 245.75, 245.80

- ☐ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☒ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 3 Support Costs (CON)

Tasks: 270.25, 285

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Schedule

Right of Way will require a minimum of 24 months to deliver a Right of Way Certification once final right of way requirements and mapping have been received, necessary environmental clearances have been obtained, and required freeway agreements have been approved. This schedule is based on a Right of Way Certification #1. The Certification Date is 12/01/2025.

Areas of Concern

Potential areas of concern are noted below: This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

Assumptions and Limiting Conditions/Risks

This estimate is based on the following assumptions and limiting conditions and documented project risks:

The Scope of the Right of Way analysis includes applicable:

- Acquisition Costs – **ONLY** (Potential for Excess Lands, Damages, Mitigation, etc.)
- Utility Relocation
- Railroad Involvement
- Relocation Assistance
- Clearance/Demolition
- Permits
- Title and Escrow Fees
- Construction Contract Work

Capital Costs are based on eminent domain estimating and appraisal methodologies and current market information.
Support Costs are based on district workload estimating tools and historical data from previous similar projects.

Escalation and Contingency Rates were applied based on the proposed project schedule and previous district experience to account for changes in market conditions and other unanticipated project-related costs.

Check as applicable:

- ☒ A field review was not performed as part of this estimate. **IMAGERY USED FROM APRIL 2022**
- ☒ Mapping received did not provide sufficient detail to determine the limits of the right of way requirements and/or to determine damages to the remainder parcels impacted by the project.
- ☒ Additional right of way requirements may be anticipated but are not defined due to the preliminary nature of the early design requirements.
- ☐ We have determined that there are no right of way functional involvements in the proposed project at this time as currently designed.
- ☒ Utility lead time begins after PA&ED is met and we have received conflict maps.
- ☐ Right of Way certification is at risk. The current schedule does not provide Right of Way with sufficient lead time.

Contact

For further information regarding this estimate, please contact person below:

Title: **ALEX MOCKUS**
Phone Number: **619.964.6379**

Attachment

- 1) **Conceptual Cost Estimate Request (with mapping)**

K PHASE CONCEPTUAL COST ESTIMATE REQUEST - RIGHT OF WAY

****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****

To: Richard Covey Date: February 10th, 2022
RIGHT OF WAY DIVISION

From: Roy Flores Dist-Co-Rte-PM: Forrester Rd (I-8 to SR 86)
(REQUESTOR) Project ID: 11-1600-0134 (EA 11-42630K)
Alternative #: _____

The above-referenced project will require a Conceptual Cost Estimate for Right of Way by (requested completion date).

Project Information

This project proposes improvements to Forrester Road (County Rd S30) between I-8 and the City of Westmorland. Improvements will consist of: Widening paved shoulders up to 10 feet with a 20-foot Clear Recovery Zone from ETW, pavement improvements on Baughman Rd and Martin Rd to serve as a temporary Bypass to the City of Westmorland, NB and SB Passing Lanes at the New River, and Intersection Improvements at Evan Hewes and Baughman Rd. Long term improvements (permanent Bypass) to extend SR 78 to Forrester Rd and realign Forrester so it ties into Martin Road are also included.

Project Schedule:

Number of Alternatives Being Studied 1 Environmental Document Type Pending: ND/FONSI
Environment Mitigation Anticipated: ☐ Yes (#) ☐ No ☒ Unknown
Mitigation by Credit or Acquisition
Environmental Permits: Number Permits Required Prior to PA&ED
Number of Permits to Enter for Environmental/Engineering Studies ☒ Unknown
Number of Public Meetings Anticipated Opposition: ☐ Yes ☐ No ☒ Unknown

Right of Way Requirements

Additional R/W: Number of Fee Parcels: 24 Identified Total Fee Area: 85.5 Acres
Number of Permanent Easements Unknown Total Permanent Easement Area
Number of Temporary Easements Total Temporary Easement Area
Length of Term Required for Temporary Easements
Access Points/Control: ☐ No Anticipated Change ☒ Change is Anticipated
Describe Change in Access: Only in for the long range Permanent Bypass project.
Utilities: ☐ None ☐ Minor ☒ Major Types of Utility Facilities:
☐ Potholing Needed - Number of Potholes Needed ☐ Unknown
Railroad: RR Companies in the Vicinity of the Project: Eastern Railway
Possible RR Requirements (e.g., "Flagging"): Flagging
☐ No RR Companies in the Vicinity of the Project
Existing Facilities: ☐ No Relinquishments/Vacations ☐ Relinquishments ☐ Vacations
Proposed Facilities: ☐ No Relinquishments ☐ Relinquishments
Outdoor Advertising Signs: ☐ Yes ☒ No If yes, how many?

Attachment(s)

- 1) Conceptual Cost Estimate mapping
- 2)

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

K PHASE CONCEPTUAL COST ESTIMATE FORM - RIGHT OF WAY****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****To: **D11 SYSTEM PLANNING**

Date: June 7, 2022

(REQUESTING DIVISION)

ROY FLORES

Dist-Co-Rte-PM: 11-IMP-86 – R6/R28

(NAME OF REQUESTOR)

Project ID: 1116000134

EA: 42630

Improvement #: 2**Evan Hewes intersection**From: **ALEX MOCKUS** *AM***RICHARD COVEY** *RC*

RIGHT OF WAY

RIGHT OF WAY

(Estimator)

(Estimating Senior)

The Conceptual Cost Estimate Request was received for the above-referenced project on March 14, 2022 with a requested completion date of March 31, 2022.

DESCRIPTION OF REQUIRED RIGHT OF WAY:

The Required Right of Way Includes acquisition of private property, located proximate to the existing Right of Way to be widened.

The 2nd Improvement is upgrades to the Evan Hewes intersection – determined from an ICE study.

Potential Right of Way Impacts are based on preliminary mapping information that does not disclose the sizes, types, and durations of the potential acquisitions-It shows the locations only. The Conceptual Cost Estimate reflects the likely zoning and general land values based on the likely/potential zoning. This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 2 of 5

Number of Total Parcels: ☒ Yes ☐ No
☒ 1-10 ☐ 11-25 ☐ 26-50 ☐ 51-100 ☐ >100

Right of Way Requirements:

Number of Fee Parcels 10 Total Fee Area 4.5 acres
 Number of Permanent Easements _____ Total Permanent Easement Area _____
 Number of Temporary Easements _____ Total Temporary Easement Area _____
 Length of Term Required for Temporary Easements _____
 Number of Excess Parcels/Other _____

USA Lands:	☐ Yes	☒ No	☐ Unknown	
BIA Lands:	☐ Yes	☒ No	☐ Unknown	
Displaced Persons/Businesses:	☐ Yes	☒ No	☐ Unknown	Number of displaces
Demolition/Clearance Required:	☐ Yes	☒ No	☐ Unknown	Number of demos
Railroad Involvement:	☐ Yes	☒ No	☐ Unknown	
C&M Agreement Needed	☐ Yes	☒ No	☐ Unknown	
Utility Involvement:	☒ Yes	☐ No	☐ Unknown	Number of Utilities in Area <u>4</u>
UT Relocations Anticipated:	☒ Yes	☐ No	☐ Unknown	
Potholing Needed:	☒ Yes	☐ No	☐ Unknown	
Project Public Meetings:	☐ Yes	☐ No	☒ Unknown	Number of Meetings <u>UNKNOWN</u>
Permits To Enter ENV/ENG:	☐ Yes	☐ No	☒ Unknown	Number of Permits <u>UNKNOWN</u>
Environmental Mitigation:	☐ Yes	☒ No	☐ Unknown	Type:
Outdoor Advertising Signs:	☐ Yes	☒ No	☐ Unknown	Number of Signs

Cost Estimates

Estimate reflects Right of Way only and does not include any capital costs for Right of Way Engineering/Land Surveys.

Capital Costs-Phase 9

☐ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☒ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

Capital Costs-Phase 4

☒ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 3 of 5

Phase 9 - Recommended R/W Capital Cost for Programming \$420,000.

\$ 100,000 Acquisition

\$ 0 Permit Fees

\$ 0 Railroad Agreement

\$ 320,000 Utility Estimate

Phase 4 - Recommended R/W Capital Cost for Programming \$0

Estimate reflects Right of Way only and does not include any support costs for Right of Way Engineering/Land Surveys.

Phase 0 Support Costs
(PA&ED)

\$13,200

Tasks: 100.10, 160.10, 160.30,
165.10, 170.10, 170.15, 170.25,
175.10, 180.05, 180.10

Phase 1 Support Costs (PS&E)

Tasks: 100.15, 185.05, 185.20,
185.25, 205.10, 205.15, 205.25,
235.05, 235.10, 255

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 2 Support Costs (RW)

Tasks: 100.25, 195.40, 195.45,
200.15, 200.20, 200.25, 200.30,
225.50, 225.60, 225.65, 225.70,
225.75, 225.80, 245.50, 245.60,
245.65, 245.70, 245.75, 245.80

- ☐ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☒ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 3 Support Costs (CON)

Tasks: 270.25, 285

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Schedule

Right of Way will require a minimum of 24 months to deliver a Right of Way Certification once final right of way requirements and mapping have been received, necessary environmental clearances have been obtained, and required freeway agreements have been approved. This schedule is based on a Right of Way Certification #1. The Certification Date is 12/01/2025.

Areas of Concern

Potential areas of concern are noted below: This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

Assumptions and Limiting Conditions/Risks

This estimate is based on the following assumptions and limiting conditions and documented project risks:

The Scope of the Right of Way analysis includes applicable:

- Acquisition Costs – **ONLY** (Potential for Excess Lands, Damages, Mitigation, etc.)
- Utility Relocation
- Railroad Involvement
- Relocation Assistance
- Clearance/Demolition
- Permits
- Title and Escrow Fees
- Construction Contract Work

Capital Costs are based on eminent domain estimating and appraisal methodologies and current market information.

Support Costs are based on district workload estimating tools and historical data from previous similar projects.

Escalation and Contingency Rates were applied based on the proposed project schedule and previous district experience to account for changes in market conditions and other unanticipated project-related costs.

Check as applicable:

- ☒ A field review was not performed as part of this estimate. **IMAGERY USED FROM APRIL 2022**
- ☒ Mapping received did not provide sufficient detail to determine the limits of the right of way requirements and/or to determine damages to the remainder parcels impacted by the project.
- ☒ Additional right of way requirements may be anticipated but are not defined due to the preliminary nature of the early design requirements.
- ☐ We have determined that there are no right of way functional involvements in the proposed project at this time as currently designed.
- ☒ Utility lead time begins after PA&ED is met and we have received conflict maps.
- ☐ Right of Way certification is at risk. The current schedule does not provide Right of Way with sufficient lead time.

Contact

For further information regarding this estimate, please contact person below:

Title: **ALEX MOCKUS**

Phone Number: **619.964.6379**

Attachment

- 1) **Conceptual Cost Estimate Request (with mapping)**

K PHASE CONCEPTUAL COST ESTIMATE REQUEST - RIGHT OF WAY

****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****

To: Richard Covey Date: February 10th, 2022
RIGHT OF WAY DIVISION

From: Roy Flores Dist-Co-Rte-PM: Forrester Rd (I-8 to SR 86)
(REQUESTOR) Project ID: 11-1600-0134 (EA 11-42630K)
Alternative #: _____

The above-referenced project will require a Conceptual Cost Estimate for Right of Way by (requested completion date).

Project Information

This project proposes improvements to Forrester Road (County Rd S30) between I-8 and the City of Westmorland. Improvements will consist of: Widening paved shoulders up to 10 feet with a 20-foot Clear Recovery Zone from ETW, pavement improvements on Baughman Rd and Martin Rd to serve as a temporary Bypass to the City of Westmorland, NB and SB Passing Lanes at the New River, and Intersection Improvements at Evan Hewes and Baughman Rd. Long term improvements (permanent Bypass) to extend SR 78 to Forrester Rd and realign Forrester so it ties into Martin Road are also included.

Project Schedule:

Number of Alternatives Being Studied 1 Environmental Document Type Pending: ND/FONSI
Environment Mitigation Anticipated: ☐ Yes (#) ☐ No ☒ Unknown
Mitigation by Credit or Acquisition
Environmental Permits: Number Permits Required Prior to PA&ED
Number of Permits to Enter for Environmental/Engineering Studies ☒ Unknown
Number of Public Meetings Anticipated Opposition: ☐ Yes ☐ No ☒ Unknown

Right of Way Requirements

Additional R/W: Number of Fee Parcels: 24 Identified Total Fee Area: 85.5 Acres
Number of Permanent Easements Unknown Total Permanent Easement Area
Number of Temporary Easements Total Temporary Easement Area
Length of Term Required for Temporary Easements
Access Points/Control: ☐ No Anticipated Change ☒ Change is Anticipated
Describe Change in Access: Only in for the long range Permanent Bypass project.
Utilities: ☐ None ☐ Minor ☒ Major Types of Utility Facilities:
☐ Potholing Needed - Number of Potholes Needed ☐ Unknown
Railroad: RR Companies in the Vicinity of the Project: Eastern Railway
Possible RR Requirements (e.g., "Flagging"): Flagging
☐ No RR Companies in the Vicinity of the Project
Existing Facilities: ☐ No Relinquishments/Vacations ☐ Relinquishments ☐ Vacations
Proposed Facilities: ☐ No Relinquishments ☐ Relinquishments
Outdoor Advertising Signs: ☐ Yes ☒ No If yes, how many?

Attachment(s)

- 1) Conceptual Cost Estimate mapping
- 2)

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 1 of 5

K PHASE CONCEPTUAL COST ESTIMATE FORM - RIGHT OF WAY****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****To: **D11 SYSTEM PLANNING**

Date: June 7, 2022

(REQUESTING DIVISION)

ROY FLORES

Dist-Co-Rte-PM: 11-IMP-86 – R6/R28

(NAME OF REQUESTOR)

Project ID: 1116000134

EA: 42630

Improvement #: 3**Addition of Passing Lanes**From: **ALEX MOCKUS** *AM***RICHARD COVEY** *RC*

RIGHT OF WAY

RIGHT OF WAY

(Estimator)

(Estimating Senior)

The Conceptual Cost Estimate Request was received for the above-referenced project on March 14, 2022 with a requested completion date of March 31, 2022.

DESCRIPTION OF REQUIRED RIGHT OF WAY:

The Required Right of Way Includes acquisition of private property, located proximate to the existing Right of Way to be widened.

The 3rd improvement is the addition of passing lanes in both directions from the New River.

Potential Right of Way Impacts are based on preliminary mapping information that does not disclose the sizes, types, and durations of the potential acquisitions-It shows the locations only. The Conceptual Cost Estimate reflects the likely zoning and general land values based on the likely/potential zoning. This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

Right of Way: ☒ Yes ☐ No
 Number of Total Parcels: ☒ 1-10 ☐ 11-25 ☐ 26-50 ☐ 51-100 ☐ >100

Right of Way Requirements:

Number of Fee Parcels 20 Total Fee Area 11 acres
 Number of Permanent Easements _____ Total Permanent Easement Area _____
 Number of Temporary Easements _____ Total Temporary Easement Area _____
 Length of Term Required for Temporary Easements _____
 Number of Excess Parcels/Other _____

USA Lands:	☐ Yes	☒ No	☐ Unknown	
BIA Lands:	☐ Yes	☒ No	☐ Unknown	
Displaced Persons/Businesses:	☐ Yes	☒ No	☐ Unknown	Number of displaces
Demolition/Clearance Required:	☐ Yes	☒ No	☐ Unknown	Number of demos
Railroad Involvement:	☐ Yes	☒ No	☐ Unknown	
C&M Agreement Needed	☐ Yes	☒ No	☐ Unknown	
Utility Involvement:	☒ Yes	☐ No	☐ Unknown	Number of Utilities in Area <u>1</u>
UT Relocations Anticipated:	☒ Yes	☐ No	☐ Unknown	
Potholing Needed:	☒ Yes	☐ No	☐ Unknown	
Project Public Meetings:	☐ Yes	☐ No	☒ Unknown	Number of Meetings <u>UNKNOWN</u>
Permits To Enter ENV/ENG:	☐ Yes	☐ No	☒ Unknown	Number of Permits <u>UNKNOWN</u>
Environmental Mitigation:	☐ Yes	☒ No	☐ Unknown	Type:
Outdoor Advertising Signs:	☐ Yes	☒ No	☐ Unknown	Number of Signs

Cost Estimates

Estimate reflects Right of Way only and does not include any capital costs for Right of Way Engineering/Land Surveys.

Capital Costs-Phase 9

☐ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☒ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

Capital Costs-Phase 4

☒ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 3 of 5

Phase 9 - Recommended R/W Capital Cost for Programming \$370,000.

\$ 250,000 Acquisition

\$ 0 Permit Fees

\$ 0 Railroad Agreement

\$ 120,000 Utility Estimate

Phase 4 - Recommended R/W Capital Cost for Programming \$0

Estimate reflects Right of Way only and does not include any support costs for Right of Way Engineering/Land Surveys.

Phase 0 Support Costs
(PA&ED)

\$13,200

Tasks: 100.10, 160.10, 160.30,
165.10, 170.10, 170.15, 170.25,
175.10, 180.05, 180.10

Phase 1 Support Costs (PS&E)

Tasks: 100.15, 185.05, 185.20,
185.25, 205.10, 205.15, 205.25,
235.05, 235.10, 255

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 2 Support Costs (RW)

Tasks: 100.25, 195.40, 195.45,
200.15, 200.20, 200.25, 200.30,
225.50, 225.60, 225.65, 225.70,
225.75, 225.80, 245.50, 245.60,
245.65, 245.70, 245.75, 245.80

- ☐ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☒ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 3 Support Costs (CON)

Tasks: 270.25, 285

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Schedule

Right of Way will require a minimum of 24 months to deliver a Right of Way Certification once final right of way requirements and mapping have been received, necessary environmental clearances have been obtained, and required freeway agreements have been approved. This schedule is based on a Right of Way Certification #1. The Certification Date is 12/01/2025.

Areas of Concern

Potential areas of concern are noted below: This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

Assumptions and Limiting Conditions/Risks

This estimate is based on the following assumptions and limiting conditions and documented project risks:

The Scope of the Right of Way analysis includes applicable:

- Acquisition Costs – **ONLY** (Potential for Excess Lands, Damages, Mitigation, etc.)
- Utility Relocation
- Railroad Involvement
- Relocation Assistance
- Clearance/Demolition
- Permits
- Title and Escrow Fees
- Construction Contract Work

Capital Costs are based on eminent domain estimating and appraisal methodologies and current market information.
Support Costs are based on district workload estimating tools and historical data from previous similar projects.

Escalation and Contingency Rates were applied based on the proposed project schedule and previous district experience to account for changes in market conditions and other unanticipated project-related costs.

Check as applicable:

- ☒ A field review was not performed as part of this estimate. **IMAGERY USED FROM APRIL 2022**
- ☒ Mapping received did not provide sufficient detail to determine the limits of the right of way requirements and/or to determine damages to the remainder parcels impacted by the project.
- ☒ Additional right of way requirements may be anticipated but are not defined due to the preliminary nature of the early design requirements.
- ☐ We have determined that there are no right of way functional involvements in the proposed project at this time as currently designed.
- ☒ Utility lead time begins after PA&ED is met and we have received conflict maps.
- ☐ Right of Way certification is at risk. The current schedule does not provide Right of Way with sufficient lead time.

Contact

For further information regarding this estimate, please contact person below:

Title: **ALEX MOCKUS**
Phone Number: **619.964.6379**

Attachment

- 1) **Conceptual Cost Estimate Request (with mapping)**

K PHASE CONCEPTUAL COST ESTIMATE REQUEST - RIGHT OF WAY

****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****

To: Richard Covey Date: February 10th, 2022
RIGHT OF WAY DIVISION

From: Roy Flores Dist-Co-Rte-PM: Forrester Rd (I-8 to SR 86)
(REQUESTOR) Project ID: 11-1600-0134 (EA 11-42630K)
Alternative #: _____

The above-referenced project will require a Conceptual Cost Estimate for Right of Way by (requested completion date).

Project Information

This project proposes improvements to Forrester Road (County Rd S30) between I-8 and the City of Westmorland. Improvements will consist of: Widening paved shoulders up to 10 feet with a 20-foot Clear Recovery Zone from ETW, pavement improvements on Baughman Rd and Martin Rd to serve as a temporary Bypass to the City of Westmorland, NB and SB Passing Lanes at the New River, and Intersection Improvements at Evan Hewes and Baughman Rd. Long term improvements (permanent Bypass) to extend SR 78 to Forrester Rd and realign Forrester so it ties into Martin Road are also included.

Project Schedule:

Number of Alternatives Being Studied 1 Environmental Document Type Pending: ND/FONSI
Environment Mitigation Anticipated: ☐ Yes (#) ☐ No ☒ Unknown
Mitigation by Credit or Acquisition
Environmental Permits: Number Permits Required Prior to PA&ED
Number of Permits to Enter for Environmental/Engineering Studies ☒ Unknown
Number of Public Meetings Anticipated Opposition: ☐ Yes ☐ No ☒ Unknown

Right of Way Requirements

Additional R/W: Number of Fee Parcels: 24 Identified Total Fee Area: 85.5 Acres
Number of Permanent Easements Unknown Total Permanent Easement Area
Number of Temporary Easements Total Temporary Easement Area
Length of Term Required for Temporary Easements
Access Points/Control: ☐ No Anticipated Change ☒ Change is Anticipated
Describe Change in Access: Only in for the long range Permanent Bypass project.
Utilities: ☐ None ☐ Minor ☒ Major Types of Utility Facilities:
☐ Potholing Needed - Number of Potholes Needed ☐ Unknown
Railroad: RR Companies in the Vicinity of the Project: Eastern Railway
Possible RR Requirements (e.g., "Flagging"): Flagging
☐ No RR Companies in the Vicinity of the Project
Existing Facilities: ☐ No Relinquishments/Vacations ☐ Relinquishments ☐ Vacations
Proposed Facilities: ☐ No Relinquishments ☐ Relinquishments
Outdoor Advertising Signs: ☐ Yes ☒ No If yes, how many?

Attachment(s)

- 1) Conceptual Cost Estimate mapping
- 2)

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

K PHASE CONCEPTUAL COST ESTIMATE FORM - RIGHT OF WAY****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****To: **D11 SYSTEM PLANNING**

Date: June 7, 2022

(REQUESTING DIVISION)

ROY FLORES

Dist-Co-Rte-PM: 11-IMP-86 – R6/R28

(NAME OF REQUESTOR)

Project ID: 1116000134

EA: 42630

Improvement #: 4**Widening Existing Shoulders**From: **ALEX MOCKUS** *AM***RICHARD COVEY** *RC*

RIGHT OF WAY

RIGHT OF WAY

(Estimator)

(Estimating Senior)

The Conceptual Cost Estimate Request was received for the above-referenced project on March 14, 2022 with a requested completion date of March 31, 2022.

DESCRIPTION OF REQUIRED RIGHT OF WAY:

The Required Right of Way Includes acquisition of private property, located proximate to the existing Right of Way to be widened.

The 4th improvement is widening the existing shoulders between I-8 and Baughman.

It is this proposed improvement that will be in four segments. Each segment would most likely be its own project and also include intersection upgrades (turn pockets or possible signalization).

For CCE purposes, the estimate reflects all four segments.

Potential Right of Way Impacts are based on preliminary mapping information that does not disclose the sizes, types, and durations of the potential acquisitions-It shows the locations only. The Conceptual Cost Estimate reflects the likely zoning and general land values based on the likely/potential zoning. This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

Right of Way: ☒ Yes ☐ No
 Number of Total Parcels: ☐ 1-10 ☐ 11-25 ☒ 26-50 ☐ 51-100 ☐ >100

Right of Way Requirements:

Number of Fee Parcels TBD Total Fee Area 20.9 acres
 Number of Permanent Easements _____ Total Permanent Easement Area _____
 Number of Temporary Easements _____ Total Temporary Easement Area _____
 Length of Term Required for Temporary Easements _____
 Number of Excess Parcels/Other _____

USA Lands:	☐ Yes	☒ No	☐ Unknown	
BIA Lands:	☐ Yes	☒ No	☐ Unknown	
Displaced Persons/Businesses:	☐ Yes	☒ No	☐ Unknown	Number of displaces
Demolition/Clearance Required:	☐ Yes	☒ No	☐ Unknown	Number of demos
Railroad Involvement:	☐ Yes	☒ No	☐ Unknown	
C&M Agreement Needed	☐ Yes	☒ No	☐ Unknown	
Utility Involvement:	☒ Yes	☐ No	☐ Unknown	Number of Utilities in Area <u>1</u>
UT Relocations Anticipated:	☒ Yes	☐ No	☐ Unknown	
Potholing Needed:	☒ Yes	☐ No	☐ Unknown	
Project Public Meetings:	☐ Yes	☐ No	☒ Unknown	Number of Meetings <u>UNKNOWN</u>
Permits To Enter ENV/ENG:	☐ Yes	☐ No	☒ Unknown	Number of Permits <u>UNKNOWN</u>
Environmental Mitigation:	☐ Yes	☒ No	☐ Unknown	Type:
Outdoor Advertising Signs:	☐ Yes	☒ No	☐ Unknown	Number of Signs

Cost Estimates

Estimate reflects Right of Way only and does not include any capital costs for Right of Way Engineering/Land Surveys.

Capital Costs-Phase 9

☐ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☒ \$1,000,001-\$2,500,000	☐ >\$100,000,000

Capital Costs-Phase 4

☒ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 3 of 5

Phase 9 - Recommended R/W Capital Cost for Programming \$1,740,000.

\$ 500,000 Acquisition

\$ 0 Permit Fees

\$ 0 Railroad Agreement

\$1,240,000 Utility Estimate

Phase 4 - Recommended R/W Capital Cost for Programming \$0

Estimate reflects Right of Way only and does not include any support costs for Right of Way Engineering/Land Surveys.

Phase 0 Support Costs
(PA&ED)

\$13,200

Tasks: 100.10, 160.10, 160.30,
165.10, 170.10, 170.15, 170.25,
175.10, 180.05, 180.10

Phase 1 Support Costs (PS&E)

Tasks: 100.15, 185.05, 185.20,
185.25, 205.10, 205.15, 205.25,
235.05, 235.10, 255

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 2 Support Costs (RW)

Tasks: 100.25, 195.40, 195.45,
200.15, 200.20, 200.25, 200.30,
225.50, 225.60, 225.65, 225.70,
225.75, 225.80, 245.50, 245.60,
245.65, 245.70, 245.75, 245.80

- ☐ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☒ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 3 Support Costs (CON)

Tasks: 270.25, 285

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Schedule

Right of Way will require a minimum of 24 months to deliver a Right of Way Certification once final right of way requirements and mapping have been received, necessary environmental clearances have been obtained, and required freeway agreements have been approved. This schedule is based on a Right of Way Certification #1. The Certification Date is 12/01/2025.

Areas of Concern

Potential areas of concern are noted below: This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

Assumptions and Limiting Conditions/Risks

This estimate is based on the following assumptions and limiting conditions and documented project risks:

The Scope of the Right of Way analysis includes applicable:

- Acquisition Costs – **ONLY** (Potential for Excess Lands, Damages, Mitigation, etc.)
- Utility Relocation
- Railroad Involvement
- Relocation Assistance
- Clearance/Demolition
- Permits
- Title and Escrow Fees
- Construction Contract Work

Capital Costs are based on eminent domain estimating and appraisal methodologies and current market information.
Support Costs are based on district workload estimating tools and historical data from previous similar projects.

Escalation and Contingency Rates were applied based on the proposed project schedule and previous district experience to account for changes in market conditions and other unanticipated project-related costs.

Check as applicable:

- ☒ A field review was not performed as part of this estimate. **IMAGERY USED FROM APRIL 2022**
- ☒ Mapping received did not provide sufficient detail to determine the limits of the right of way requirements and/or to determine damages to the remainder parcels impacted by the project.
- ☒ Additional right of way requirements may be anticipated but are not defined due to the preliminary nature of the early design requirements.
- ☐ We have determined that there are no right of way functional involvements in the proposed project at this time as currently designed.
- ☒ Utility lead time begins after PA&ED is met and we have received conflict maps.
- ☐ Right of Way certification is at risk. The current schedule does not provide Right of Way with sufficient lead time.

Contact

For further information regarding this estimate, please contact person below:

Title: **ALEX MOCKUS**
Phone Number: **619.964.6379**

Attachment

- 1) **Conceptual Cost Estimate Request (with mapping)**

K PHASE CONCEPTUAL COST ESTIMATE REQUEST - RIGHT OF WAY

****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****

To: Richard Covey Date: February 10th, 2022
RIGHT OF WAY DIVISION

From: Roy Flores Dist-Co-Rte-PM: Forrester Rd (I-8 to SR 86)
(REQUESTOR) Project ID: 11-1600-0134 (EA 11-42630K)
Alternative #: _____

The above-referenced project will require a Conceptual Cost Estimate for Right of Way by (requested completion date).

Project Information

This project proposes improvements to Forrester Road (County Rd S30) between I-8 and the City of Westmorland. Improvements will consist of: Widening paved shoulders up to 10 feet with a 20-foot Clear Recovery Zone from ETW, pavement improvements on Baughman Rd and Martin Rd to serve as a temporary Bypass to the City of Westmorland, NB and SB Passing Lanes at the New River, and Intersection Improvements at Evan Hewes and Baughman Rd. Long term improvements (permanent Bypass) to extend SR 78 to Forrester Rd and realign Forrester so it ties into Martin Road are also included.

Project Schedule:

Number of Alternatives Being Studied 1 Environmental Document Type Pending: ND/FONSI
Environment Mitigation Anticipated: ☐ Yes (#) ☐ No ☒ Unknown
Mitigation by Credit or Acquisition
Environmental Permits: Number Permits Required Prior to PA&ED
Number of Permits to Enter for Environmental/Engineering Studies ☒ Unknown
Number of Public Meetings Anticipated Opposition: ☐ Yes ☐ No ☒ Unknown

Right of Way Requirements

Additional R/W: Number of Fee Parcels: 24 Identified Total Fee Area: 85.5 Acres
Number of Permanent Easements Unknown Total Permanent Easement Area
Number of Temporary Easements Total Temporary Easement Area
Length of Term Required for Temporary Easements
Access Points/Control: ☐ No Anticipated Change ☒ Change is Anticipated
Describe Change in Access: Only in for the long range Permanent Bypass project.
Utilities: ☐ None ☐ Minor ☒ Major Types of Utility Facilities:
☐ Potholing Needed - Number of Potholes Needed ☐ Unknown
Railroad: RR Companies in the Vicinity of the Project: Eastern Railway
Possible RR Requirements (e.g., "Flagging"): Flagging
☐ No RR Companies in the Vicinity of the Project
Existing Facilities: ☐ No Relinquishments/Vacations ☐ Relinquishments ☐ Vacations
Proposed Facilities: ☐ No Relinquishments ☐ Relinquishments
Outdoor Advertising Signs: ☐ Yes ☒ No If yes, how many?

Attachment(s)

- 1) Conceptual Cost Estimate mapping
- 2)

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 1 of 5

K PHASE CONCEPTUAL COST ESTIMATE FORM - RIGHT OF WAY****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****To: **D11 SYSTEM PLANNING**

Date:

May 5, 2022

(REQUESTING DIVISION)

ROY FLORES

Dist-Co-Rte-PM:

11-IMP-86 – R6/R28

(NAME OF REQUESTOR)

Project ID:

1116000134

EA:

42630

Improvement #: 5**Westmoreland Bypass**From: **ALEX MOCKUS** *AM***RICHARD COVEY** *ec*

RIGHT OF WAY

RIGHT OF WAY

(Estimator)

(Estimating Senior)

The Conceptual Cost Estimate Request was received for the above-referenced project on March 14, 2022 with a requested completion date of March 31, 2022.

DESCRIPTION OF REQUIRED RIGHT OF WAY:

The Required Right of Way Includes acquisition of private property, located proximate to the existing Right of Way to be widened.

The last improvement is the construction of the Westmorland Bypass which involves extending the existing SR 78 to Forrester Rd and then realigns Forrester Rd so it joins Martin Rd.

Potential Right of Way Impacts are based on preliminary mapping information that does not disclose the sizes, types, and durations of the potential acquisitions-It shows the locations only. The Conceptual Cost Estimate reflects the likely zoning and general land values based on the likely/potential zoning. This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 2 of 5

Right of Way: ☒ Yes ☐ No
 Number of Total Parcels: ☐ 1-10 ☐ 11-25 ☐ 26-50 ☐ 51-100 ☐ >100

Right of Way Requirements:

Number of Fee Parcels TBD Total Fee Area 44.7 acres
 Number of Permanent Easements _____ Total Permanent Easement Area _____
 Number of Temporary Easements _____ Total Temporary Easement Area _____
 Length of Term Required for Temporary Easements _____
 Number of Excess Parcels/Other _____

USA Lands:	☐ Yes	☒ No	☐ Unknown	
BIA Lands:	☐ Yes	☒ No	☐ Unknown	
Displaced Persons/Businesses:	☐ Yes	☒ No	☐ Unknown	Number of displaces
Demolition/Clearance Required:	☐ Yes	☒ No	☐ Unknown	Number of demos
Railroad Involvement:	☐ Yes	☒ No	☐ Unknown	
C&M Agreement Needed	☐ Yes	☒ No	☐ Unknown	
Utility Involvement:	☒ Yes	☐ No	☐ Unknown	Number of Utilities in Area <u>1</u>
UT Relocations Anticipated:	☒ Yes	☐ No	☐ Unknown	
Potholing Needed:	☒ Yes	☐ No	☐ Unknown	
Project Public Meetings:	☐ Yes	☐ No	☒ Unknown	Number of Meetings <u>UNKNOWN</u>
Permits To Enter ENV/ENG:	☐ Yes	☐ No	☒ Unknown	Number of Permits <u>UNKNOWN</u>
Environmental Mitigation:	☐ Yes	☒ No	☐ Unknown	Type:
Outdoor Advertising Signs:	☐ Yes	☒ No	☐ Unknown	Number of Signs

Cost Estimates

Estimate reflects Right of Way only and does not include any capital costs for Right of Way Engineering/Land Surveys.

Capital Costs-Phase 9

☐ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☐ \$100,001-\$250,000	☒ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

Capital Costs-Phase 4

☐ \$0-\$100,000	☐ \$2,500,001-\$5,000,000
☒ \$100,001-\$250,000	☐ \$5,000,001-\$10,000,000
☐ \$250,001-\$500,000	☐ \$10,000,001-\$25,000,000
☐ \$500,001-\$1,000,000	☐ \$25,000,001-\$100,000,000
☐ \$1,000,001-\$2,500,000	☐ >\$100,000,000

**CONCEPTUAL COST ESTIMATE FORM -
RIGHT OF WAY**

(Form #)

EXHIBIT

4-EX-8 (REV 10/2017)

Page 3 of 5

Phase 9 - Recommended R/W Capital Cost for Programming \$8,980,000.

\$1,000,000 Acquisition

\$ 0 Permit Fees

\$ 125,000 Railroad Agreement

\$7,855,000 Utility Estimate

Phase 4 - Recommended R/W Capital Cost for Programming \$178,125.

Estimate reflects Right of Way only and does not include any support costs for Right of Way Engineering/Land Surveys.

Phase 0 Support Costs
(PA&ED)

\$20,000

Tasks: 100.10, 160.10, 160.30,
165.10, 170.10, 170.15, 170.25,
175.10, 180.05, 180.10

Phase 1 Support Costs (PS&E)

Tasks: 100.15, 185.05, 185.20,
185.25, 205.10, 205.15, 205.25,
235.05, 235.10, 255

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 2 Support Costs (RW)

Tasks: 100.25, 195.40, 195.45,
200.15, 200.20, 200.25, 200.30,
225.50, 225.60, 225.65, 225.70,
225.75, 225.80, 245.50, 245.60,
245.65, 245.70, 245.75, 245.80

- ☐ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☒ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Phase 3 Support Costs (CON)

Tasks: 270.25, 285

- ☒ \$0-\$100,000
☐ \$100,001-\$250,000
☐ \$250,001-\$500,000
☐ \$500,001-\$1,000,000
☐ \$1,000,001-\$2,500,000

- ☐ \$2,500,001-\$5,000,000
☐ \$5,000,001-\$10,000,000
☐ \$10,000,001-\$25,000,000
☐ \$25,000,001-\$100,000,000
☐ >\$100,000,000

Schedule

Right of Way will require a minimum of 24 months to deliver a Right of Way Certification once final right of way requirements and mapping have been received, necessary environmental clearances have been obtained, and required freeway agreements have been approved. This schedule is based on a Right of Way Certification #1. The Certification Date is 12/01/2025.

Areas of Concern

Potential areas of concern are noted below: This is a very preliminary estimate. The potential impacts could be Permanent Easement (s), Fee Acquisition(s), Temporary Easement(s), temporary parking needs during the construction phase, permits to enter. Likely Railroad and Utility impacts are expected and have provided estimates.

Assumptions and Limiting Conditions/Risks

This estimate is based on the following assumptions and limiting conditions and documented project risks:

The Scope of the Right of Way analysis includes applicable:

- Acquisition Costs – **ONLY** (Potential for Excess Lands, Damages, Mitigation, etc.)
- Utility Relocation
- Railroad Involvement
- Relocation Assistance
- Clearance/Demolition
- Permits
- Title and Escrow Fees
- Construction Contract Work

Capital Costs are based on eminent domain estimating and appraisal methodologies and current market information.

Support Costs are based on district workload estimating tools and historical data from previous similar projects.

Escalation and Contingency Rates were applied based on the proposed project schedule and previous district experience to account for changes in market conditions and other unanticipated project-related costs.

Check as applicable:

- ☒ A field review was not performed as part of this estimate. **IMAGERY USED FROM APRIL 2022**
- ☒ Mapping received did not provide sufficient detail to determine the limits of the right of way requirements and/or to determine damages to the remainder parcels impacted by the project.
- ☒ Additional right of way requirements may be anticipated but are not defined due to the preliminary nature of the early design requirements.
- ☐ We have determined that there are no right of way functional involvements in the proposed project at this time as currently designed.
- ☒ Utility lead time begins after PA&ED is met and we have received conflict maps.
- ☐ Right of Way certification is at risk. The current schedule does not provide Right of Way with sufficient lead time.

Contact

For further information regarding this estimate, please contact person below:

Title: **ALEX MOCKUS**

Phone Number: **619.964.6379**

Attachment

- 1) **Conceptual Cost Estimate Request (with mapping)**

K PHASE CONCEPTUAL COST ESTIMATE REQUEST - RIGHT OF WAY

****A RIGHT OF WAY DATA SHEET WILL NEED TO BE COMPLETED FOR SUBSEQUENT PHASES****

To: Richard Covey Date: February 10th, 2022
RIGHT OF WAY DIVISION

From: Roy Flores Dist-Co-Rte-PM: Forrester Rd (I-8 to SR 86)
(REQUESTOR) Project ID: 11-1600-0134 (EA 11-42630K)
Alternative #: _____

The above-referenced project will require a Conceptual Cost Estimate for Right of Way by (requested completion date).

Project Information

This project proposes improvements to Forrester Road (County Rd S30) between I-8 and the City of Westmorland. Improvements will consist of: Widening paved shoulders up to 10 feet with a 20-foot Clear Recovery Zone from ETW, pavement improvements on Baughman Rd and Martin Rd to serve as a temporary Bypass to the City of Westmorland, NB and SB Passing Lanes at the New River, and Intersection Improvements at Evan Hewes and Baughman Rd. Long term improvements (permanent Bypass) to extend SR 78 to Forrester Rd and realign Forrester so it ties into Martin Road are also included.

Project Schedule:

Number of Alternatives Being Studied 1 Environmental Document Type Pending: ND/FONSI
Environment Mitigation Anticipated: ☐ Yes (#) ☐ No ☒ Unknown
Mitigation by Credit or Acquisition
Environmental Permits: Number Permits Required Prior to PA&ED
Number of Permits to Enter for Environmental/Engineering Studies ☒ Unknown
Number of Public Meetings Anticipated Opposition: ☐ Yes ☐ No ☒ Unknown

Right of Way Requirements

Additional R/W: Number of Fee Parcels: 24 Identified Total Fee Area: 85.5 Acres
Number of Permanent Easements Unknown Total Permanent Easement Area
Number of Temporary Easements Total Temporary Easement Area
Length of Term Required for Temporary Easements

Access Points/Control: ☐ No Anticipated Change ☒ Change is Anticipated
Describe Change in Access: Only in for the long range Permanent Bypass project.
Utilities: ☐ None ☐ Minor ☒ Major Types of Utility Facilities:
☐ Potholing Needed - Number of Potholes Needed ☐ Unknown
Railroad: RR Companies in the Vicinity of the Project: Eastern Railway
Possible RR Requirements (e.g., "Flagging"): Flagging
☐ No RR Companies in the Vicinity of the Project

Existing Facilities: ☐ No Relinquishments/Vacations ☐ Relinquishments ☐ Vacations
Proposed Facilities: ☐ No Relinquishments ☐ Relinquishments
Outdoor Advertising Signs: ☐ Yes ☒ No If yes, how many?

Attachment(s)

- 1) Conceptual Cost Estimate mapping
- 2)

Memorandum

*Making Conservation
a California Way of Life.*

To: MELINA PEREIRA,
Branch Chief
District 11 System Planning

Date: April 1, 2022

File: 11-IMP-86-PM 6.0/28.0
EA 11-42630k
Project ID: 11160000134
Forrester Rd (Hwy S30)

From:  DAWIT WORKU,
Branch Chief, Bridge Design Branch 21
Office of Bridge Design South
Structure Design
Division of Engineering Services

Subject: **STRUCTURE PSR/PDS COST ESTIMATE TRANSMITTAL**

The Division of Engineering Services has prepared a structure PSR/PDS cost estimate for the above referenced project as requested by your memo dated March 21, 2022. Based on the information we received from district, this PSR-PDS will involve one bridge. The bridge work includes one (1) bridge replacement, and one (1) bridge removal.

The estimated construction costs, including 10% time-related overhead, 10% mobilization, 25% contingencies for Low cost and 40% contingencies for High cost, are as follows:

Bridge Name	Br. No.	Estimated Structure Cost Range	
		Low	High
Forrester Rd Bridge (Replace)	58C-New	\$3,600,000	\$3,900,000
Bridge Removal	58C-0075	\$281,000	\$315,000
TOTAL		\$3,881,000	\$4,215,000

The above estimates should only be used up to the Project Approval and Environmental Document stage and should not be used for programming capital costs. During the Project Report phase, District should request a formal Advance Planning Study to better define structure scope, cost, and duration for capital programming purposes.

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

This structure PSR-PDS cost estimate was prepared based on the following assumptions:

1. The PSR-PDS estimate does not account for an unidentified structure.
2. The quantity and cost estimate of the new bridge is prepared with the assumption of Cast-In-Place Prestressed Box Girder superstructure type bridge with current Item cost estimate.
3. This project might require permits, agreements and certifications from different states and local agencies and Biological Surveys. The District to coordinate and investigate.
4. Architectural treatment is not considered.
5. No utility relocation cost is included in this cost estimate. We recommend that the utilities group be contacted and coordinated this regard.
6. The provided estimate does not include cost or extended time needed for any temporary or permanent Right of Way acquisitions.
7. No information received regarding subsurface site investigation or geotechnical studies for this project. Liquefaction potential is assumed to be low for the bridge under this project at this time.

If you have any questions or if you need additional information regarding this cost estimate, please contact **Bahareh Mobasher** at Bahareh.Mobasher@Dot.Ca.gov or **Dawit Worku** at (916) 639-5965 (Telework, Cell).

c:

Roy Flores, D11 System Planning
Mina Pezeshpour, Chief, Office of Bridge Design South
Structure Design Task Management Support Unit
Abraham Magdaleno, Branch Chief, Preliminary Investigations
Li Barnard, Project Liaison Engineer
Bin Shen, Branch Chief, Bridge Design Branch 22
Jinrong Wang, Technical Liaison Engineer (Acting)
Brian Hinman, Chief, Office of Geotechnical Design – South
Hussam Buran, Area Construction Manager, Structure Construction
Ching Chao, Chief, Structure Maintenance and Investigations - Office South
Paul Cooley, Structure Maintenance and Investigations Program Advisor

Memorandum

*Making Conservation
a California Way of Life*

To: Melina Pereira
Design Manager/Project Manager
Division of Design, District 11

Date: January 23, 2024

File: 11-42630K
1116000134
11-IMP-VAR

From: Shay Lynn M. Harrison
Chief, Environmental Analysis – Branch C
Division of Environmental, District 11

Subject: Amendment for 11-42630 PEAR – Forrester Road Improvements

The PEAR for the Forrester Road Improvements project between I-8 and the City of Westmorland (11-42630K / 1116000134) remains the same. The project will be using one environmental document for all the following “projects” that will be undertaken under this EA (42630):

- Project 1 - Intersection Improvements at two Intersections:
 - o Evan Hewes @ Forrester Rd
 - o Ross Road @ Forrester Rd
- Project 2 - Passing Lanes @ New River
- Project 3 - Pavement Rehabilitation or possible Reconstruction for use as a Bypass to Westmorland.
 - o Martin Road (SR78/SR86 to Baughman Road)
 - o Baughman Road (Martin Road to Forrester Road)
- Project 4 – Pavement Rehabilitation – for use as an expanded Bypass to Westmorland
 - o Martin Rd (Baughman Rd to Andre Rd)
 - o Andre Rd (Martin Rd to SR 78/86)

This memo supplements the Mini Preliminary Environmental Analysis Report (Mini-PEAR) prepared for the project to identify the current potential environmental issues, constraints, costs, and resource needs. Due to the nature of the project and assuming minimum soil disturbance is required, there would need to be assessments for possible impacts to the following areas of concern during PA&ED, but not limited to biological resources; visual resources; cultural resources; hazardous waste; with aerially deposited lead (ADL), treated wood waste, painted traffic stripes and NPDES resources.

The CEQA/NEPA compliance remains as anticipated in the previous Mini-PEAR. Categorical Exemption (CE) and Categorical Exclusion (CE) under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) for the intersection and bypass proposed work. The passing lanes proposed work would be assessed within the recommended Initial Study/Negative Declaration and from a Routine EA/FONSI under CEQA and NEPA. Resourcing hours for the subject matter experts is estimated to stay the same as identified in the PEAR for 11-42630K. This estimate is preliminary and could be subject to augmentation as design development proceeds.

Attachment G



Mini-Preliminary Environmental Analysis Report

Project Information

DIST-CO-RTE: 11-IMP-VAR

EA: 11-42630

Project Title: Forrester Road Improvements (County Rd S30) between I-8 and the City of Westmorland.

Project Manager: Melina Pereira

Project Engineer: Roy Flores

Environmental Office Chief: Shay Lynn Harrison

PEAR Preparer: Jack Parker

PM/PM: Various

EFIS Project ID: 1116000134

Phone: (619) 379-7349

Phone: (619) 453-1953

Phone: (619) 453-8481

Phone: (858) 289-1282

Project Description

Purpose and Need

Purpose:

This Westmorland Bypass looks to improve the quality of life of its residents without negatively impacting the economic vitality nor creating a burden to motorists. The project goals include:

- Reduce air pollution within the community. Particulate Matter (2.5 microns or smaller – PM2.5) originates primarily from diesel powered vehicles.
- Reduce the amount of Noise close to residential areas.
- Encourage children and parents to walk or bike to school, community services, and to recreational activities.
- Improve the interconnectivity of the region. Improvements to Martin Rd and Andre Road provide more flexibility and accessibility to the region.
- Traveler services located within the City should still be accessible to motorists.

The proposed bypass alternative will add 0.5 miles of additional travel distance for traffic diverging from the Andre Road intersection @ SR 78/86. The bypass will not increase trip distances for vehicles using Forrester Road south of Andre Road.

Need:

The City of Westmorland is a small rural community with a population of approximately 2,000 residents (2022). It is within Census Tract #6025010200 and has a CalEnviroScreen (4.0) score of 89. The SR78/86 traverses the middle of the community with most residents living within 1,200 ft of the highway. Westmorland Junior High is adjacent to SR 78/86 and Westmorland Elementary School is one block to the south. Convenience stores, restaurants, and others are situated on both sides of SR 78/86. The proximity of residences to the business area, local services, and the schools makes Active Transportation a good choice to get around the City. The presence of a high

number of heavy vehicle can limit sight distances and increase stress levels thereby discouraging active transportation trips.

Description of work

Caltrans is proposing to build a bypass to the City of Westmorland using Martin Rd and Andre Rd. This proposal uses the existing Andre Rd as a connection between Martin Rd and SR 78/86. This second Phase includes Phase 1 – pavement rehab of Martin Road between SR 78/86 to Baughman Road.

The 1.2 mile long segment of Andre Rd between SR 86 and Forrester Rd is currently in poor condition. A pavement rehabilitation or possibly a reconstruction might be required. The one mile long segment of Martin Rd (Baughman Rd to Andre Rd) is currently a dirt road and will have to be paved. Intersection improvements and lighting will be required at Forrester/Andre, Andre/Martin, Baughman/Martin and possibly SR 78/86/Andre Rd. The deceleration lane length for the NB left turn lane is approximately 630 feet which is sufficient for SR78/86 with its speed limit of 65 miles per hour. Vehicles traveling north on Forrester Rd bypassing Westmorland, will make a left turn on Andre Rd and then a right onto Martin Rd.



The Forrester Rd/Andre Rd intersection will require the partial right of way take of the southeast parcel as widening to accommodate the left turn lanes on Forrester Rd will occur to the east. The parcel has a small office (about 50 ft from the existing travel way) and is used for equipment and feed storage. This should minimize impacts to the southwest parcel which has a two homes on it. In order to accommodate the two left turn lanes on Andre Rd, widening will occur to the north. This will involve impacts to the

existing east-west canal on the north side of Andre Rd. The canal could either be covered or relocated. Partial takes and access modifications could be required of the northeast and northwest parcels. An ISOAP study will be done to determine the improved configuration of the Forrester Rd/Andre Rd intersection. This phase could be done concurrently with Phase 1. The only improvements needed on Baughman Road would be at the Martin Road intersection. Figure 7.17 shows a possible widening scenario at the Forrester Rd/Andre Rd intersection.



Phase 2 – Andre Rd and Martin Rd	
Location	Improvements
Intersection - SR 86/Andre Rd	Add Turn Pockets on Andre Rd, add lighting, ICE study
Andre Rd – SR 86 to Forrester Rd (1.2 mile)	Pavement Rehabilitation or reconstruction, possible shoulder widening.
Intersection – Andre Rd/Forrester Rd	Add Turn Pockets on both Andre Rd and Forrester Rd, add lighting, ISOAP study. Possible partial take of SW and Northside properties.
Andre Rd – Forrester Rd to Martin Rd	Pavement Rehabilitation and possible shoulder widening.
Intersection – Andre Rd/Martin Rd	Add Turn Pockets on both Andre Rd and Martin Rd, add lighting.
Martin Rd – Andre Rd to Baughman Rd	Pave existing roadway.
Intersection – Martin Rd/Baughman Rd	Re-evaluate existing two way stop (N-S) and switch to two way stop (E-W)
Martin Rd – Baughman Rd to SR 86	Pavement Rehabilitation and possible shoulder widening.

Cost Range for Phase 2: \$20 million to \$30 million. General schematics for this proposal are part of Attachment B.

Anticipated Environmental Approval

CEQA (choose one):

- ☒ Exemption
 - ☐ Statutory
 - ☒ Categorical
 - ☐ Common Sense
- ☒ Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND
- ☐ Environmental Impact Report¹

NEPA (choose one):

- ☒ Categorical Exclusion
- ☒ Environmental Assessment with Finding of No Significant Impact
 - ☒ Routine
 - ☐ Complex
- ☐ Environmental Impact Statement¹

Summary Statement (this statement will go directly into the PSR)

The anticipated environmental compliance documentation for the proposed project is a Categorical Exemption (CE) under the California Environmental Quality Act (CEQA) from an IS/Negative Declaration and Categorical Exclusion (CE) from a Complex EAFONSI under the National Environmental Policy Act (NEPA). Caltrans will be the lead agency for both laws (NEPA lead under Caltrans assumption of responsibility pursuant to USC 23 CFR 326.) For the two intersection improvement phases, the anticipated environmental documentation of a CE/CE will have much shorter project durations. Two to five years environmental processing may become the duration for a project including the passing lanes.

A Preliminary Environmental Analysis Report (PEAR) was prepared for the project, to identify potential environmental issues, constraints, costs, and resource needs. Due to the nature of the project and assuming minimum soil disturbance is required, there would need to be assessments for possible impacts to the following areas of concern, but not limited to: biological resources, cultural resources and hazardous waste; with aerially deposited lead (ADL).

The environmental compliance is dependent on the project area to avoid impacts to biological resources due to the project area having burrowing owls. This is a state species of special concern and is protected by the Federal Migratory Bird Treaty Act. Therefore to mitigate impacts, special provisions such as designation of environmentally sensitive areas (ESAs) and installation of ESA fencing, seasonal construction

¹ If the anticipated environmental document is an EIR and/or EIS, the preparation of a standard PEAR is recommended to avoid unanticipated costs and project delays.

restrictions, obtaining an approved biologist for pre-construction surveys and construction monitoring, and implementation of a Contractor Education Program will be needed. Furthermore, the project will need to avoid animal burrows, install ESA fencing, work outside of nesting period (February 1 through August 31st) and avoid vegetation clearing during breeding season for the other birds. The compliance for hazardous waste will require following guidance for aerally deposited lead (ADL). Furthermore, a cultural resource design review will be conducted to ensure compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92 (Section 5024 MOU).

There are special considerations such as following the clean water act as this project may cause impacts to rivers, irrigation ditches and/or canals. The project may require State agency permits from the Regional Water Quality Control Board and the California Department of Fish and Wildlife. Impacts to the New River would require resource agency permits. The biology review includes specific information about impacts to species and work windows. Moreover, NPDES needs to prepare a SDWR to mitigate potential water quality impacts.

This project ranges in scope from 2 elements which require routine environmental review efforts, to the passing lane scope which impact jurisdictional waters with potential for much greater reviews and permits. While canals maintained by the Imperial Irrigation District are not under the jurisdiction of the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, they do require encroachment permits for the right to enter. The rivers, ditches and/or canals that do provide wildlife habitat value, may be under the jurisdiction of the CDFW under the California Fish and Game Code 1602 Lake and Streambed Alteration Agreement. The Regional Water Quality Control Board (RWQCB) also regulates impacts to state waters via the 401-certification program and that regulatory framework may apply to all project scope.

Review resourcing hours for the subject matter experts is estimated at 5696 hours for manpower to review, process and mitigate for an approved project. This budget is preliminary and could be subject to augmentation as design development proceeds. Less than 10% of the total project cost may be required for biological mitigation for this project should above biological concerns evolve into a requirement to mitigate.

We would recommend bifurcating this project into two CE/CE EAs, and one higher level document for the more extensive passing lane project.

*The reduction in scope for this project will retain the same resource hours and environmental commitments as the project was previous scoped and the current work is as follows:

- Baughman was discarded as part of the Bypass due to proximity to residential areas.
- Passing Lanes now considered as mid term to long term improvements.

The sole proposal expected to move forward is a Westmorland Bypass using Andre Rd and Martin Rd with the following improvement:

1. Pav't Rehab on Martin Road from Baughman Rd to SR 78/86
2. Pave dirt road – Martin Rd – from Andre Rd to Baughman Rd.
3. Pav't Rehab on Andre Rd from Martin Rd to SR 78/86
4. SR 78/86 & Martin Rd: Intersection Improvements – Signalization and turn pockets
5. Martin Rd & Andre Rd: Intersection Improvements – add turn pockets
6. Andre Rd & Forrester Rd: Intersection Improvements – add turn pockets and/or signalization
7. Andre Rd & SR 78/86: Intersection Improvements – add turn pockets and/or signalization

Special Considerations

Clean Water Act- The project would likely result in impacts to rivers, irrigation ditches and/or canals. Any irrigation ditches or canals maintained by the Imperial Irrigation District are not under the jurisdiction of the U.S. Army Corps of Engineers, under Section 404 of the Clean Water Act, but may require State agency permits from the Regional Water Quality Control Board and the California Department of Fish and Wildlife. Impacts to the New River would require resource agency permits. The biology review includes specific information about impacts to species and work windows.

Biological Resources

The land to the north and south of the project limits consists of agricultural fields and commercial and residential development of Westmorland and El Centro. Habitat in the right-of-way consists of disturbed habitat with mostly bare ground and sparse nonnative vegetation and ornamentals including eucalyptus (*Eucalyptus* spp.), athel tamarisk (*Tamarix aphylla*), and palm (*Phoenix canariensis* and *Washingtonia robusta*). CNDDDB records have shown burrowing owl (*Athene cunicularia*) occurrences at these locations. The burrowing owl is a state species of special concern and is protected by the Federal Migratory Bird Treaty Act. There are also several irrigation ditches, rivers, and canals that occur within the project limits.

Special provisions may also be included as part of the project to avoid, minimize, or mitigate for any impacts to burrowing owl. These provisions include, but are not limited to, designation of environmentally sensitive areas (ESAs) and installation of ESA fencing, seasonal construction restrictions, obtaining an approved biologist for pre-construction surveys and construction monitoring, and implementation of a Contractor Education Program.

It is likely the project will result in impacts to rivers, irrigation ditches or canals. Any irrigation ditches or canals maintained by the Imperial Irrigation District are not under the jurisdiction of the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. However, if the rivers, ditches and/or canals provide any wildlife habitat value, they may be under the jurisdiction of the CDFW under the California Fish and Game Code 1602 Lake and Streambed Alteration Agreement. The Regional Water Quality Control Board (RWQCB) also regulates impacts to state waters via the 401-certification program.

The preferred mitigation for impacts to burrowing owl would be to avoid and minimize impacts by avoiding animal burrows, designating burrows used by burrowing owls as ESAs, installing ESA fencing to protect the burrow, and working outside of the nesting period (February 1 through August 31) of the burrowing owl. Construction monitoring by an approved biologist would ensure proper implementation of these avoidance and minimization measures. Any vegetation clearing within the project limits will be limited to a time of year that is outside the breeding season to avoid impacts to nesting birds.

Disclaimer

This report is not an environmental document or determination. The above information and recommendations are based on the project description provided in this report. The discussion and conclusions provided by this Mini-PEAR are approximate and based on a cursory review of existing records, databases, and mapping tools to estimate the potential for probable environmental effects. The purpose of this report is to provide a preliminary level of environmental analysis to support the Project Initiation Document. Changes in project scope, alternatives, existing environmental conditions, and/or environmental laws or regulations will require a re-evaluation of this report.

Approval

Shay Lynn M. Harrison 

Environmental Branch Chief

Date

Melina Pereira 

Project Manager

6-30-2023

Date

- ☐ **Headquarters Coordinator's Class of Action Concurrence has been obtained (e-mail concurrence is attached)—required for environmental documents only and not CEs.**



Dist-County-Route: 11-IMP-Various, Forrester Rd

Post Mile Limits: Various

Type of Work: Operational Improvements (Forrester Road)

Project ID (EA): 1116000134 (42630K)

Phase: ☒ PID ☐ PA/ED ☐ PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 ☐ 2022 ☒

Regional Water Quality Control Board(s): Colorado River SWQCB (Region 7)

Total Disturbed Soil Area: 36.6 Acres PCTA: TBD

Alternative Compliance (acres): 0 Acres ATA 2 (50% Rule)? Yes ☐ No ☒

Estimated Const. Start Date: 08/02/30 Estimated Const. Completion Date: 03/31/32

Risk Level: RL 1 ☐ RL 2 ☒ RL 3 ☐ WPCP ☐ Other: _____

Is (M)WELo applicable? Yes ☐ No ☒

Is the Project within a TMDL watershed? Yes ☐ No ☒

Does the project require trash treatment? Yes ☐ No ☒

Notification of ADL reuse (if yes, provide date): Yes ☐ Date: _____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

Roy Flores 4-30-2024
Roy Flores, Registered Project Engineer Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Melina Pereira 5/1/2024
Melina Pereira, Project Manager Date

Krystian Fimbres 5-1-2024
Krystian Fimbres, District Maintenance Stormwater Date

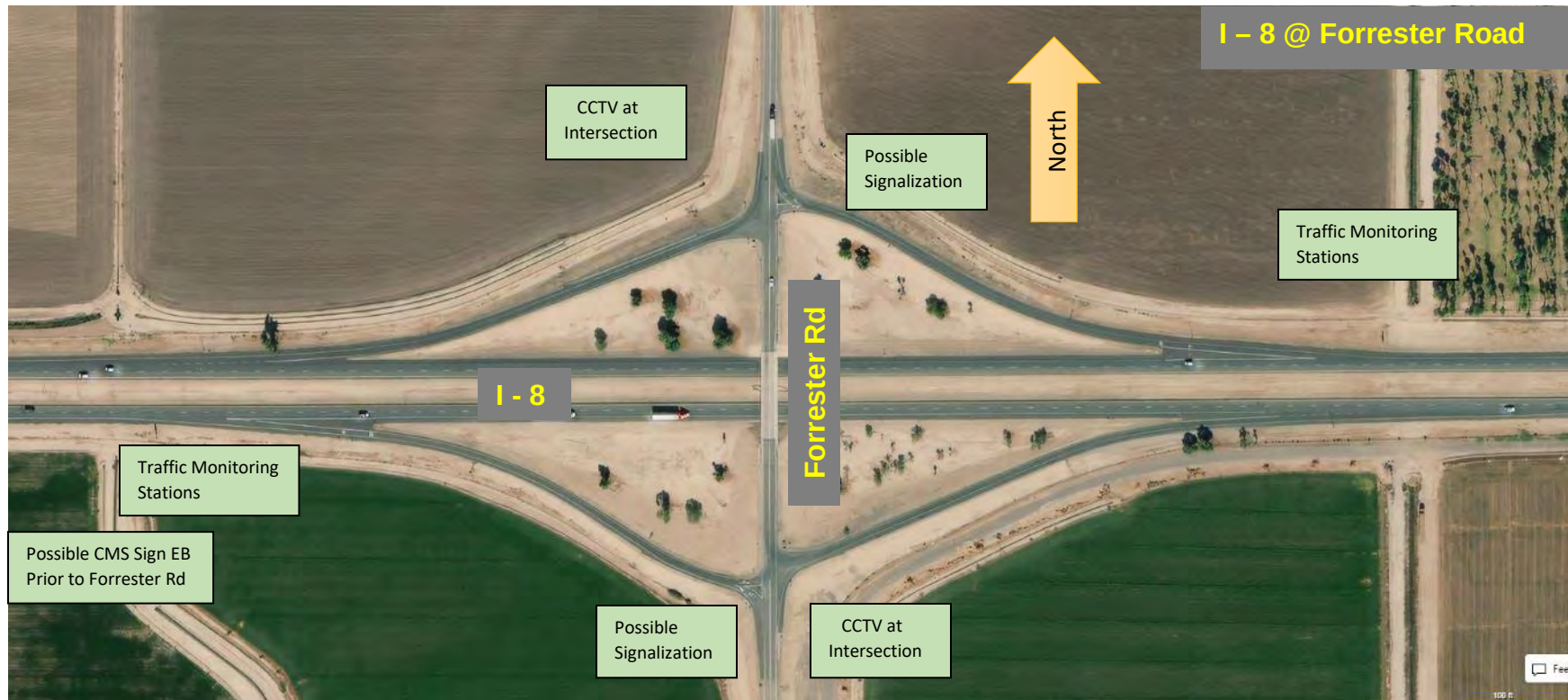
Tim Mann 5/1/2024
Tim Mann, Designated Landscape Architect Date
Representative

[Stamp Required at PS&E only] Hamzeh Ramadan 5/16/2024
Hamzeh Ramadan, NPDES/Stormwater Branch Chief Date

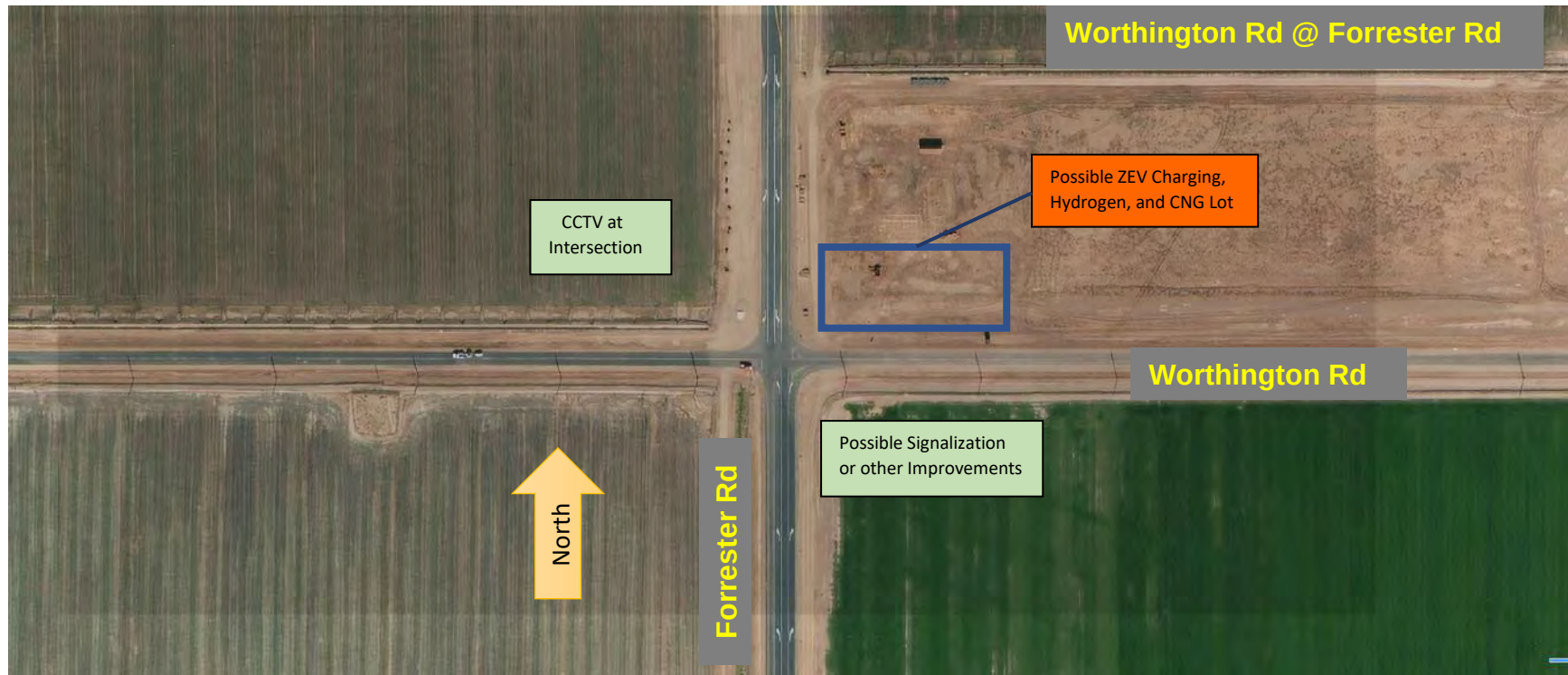
Freight and ITS Element Improvements – Forrester Road



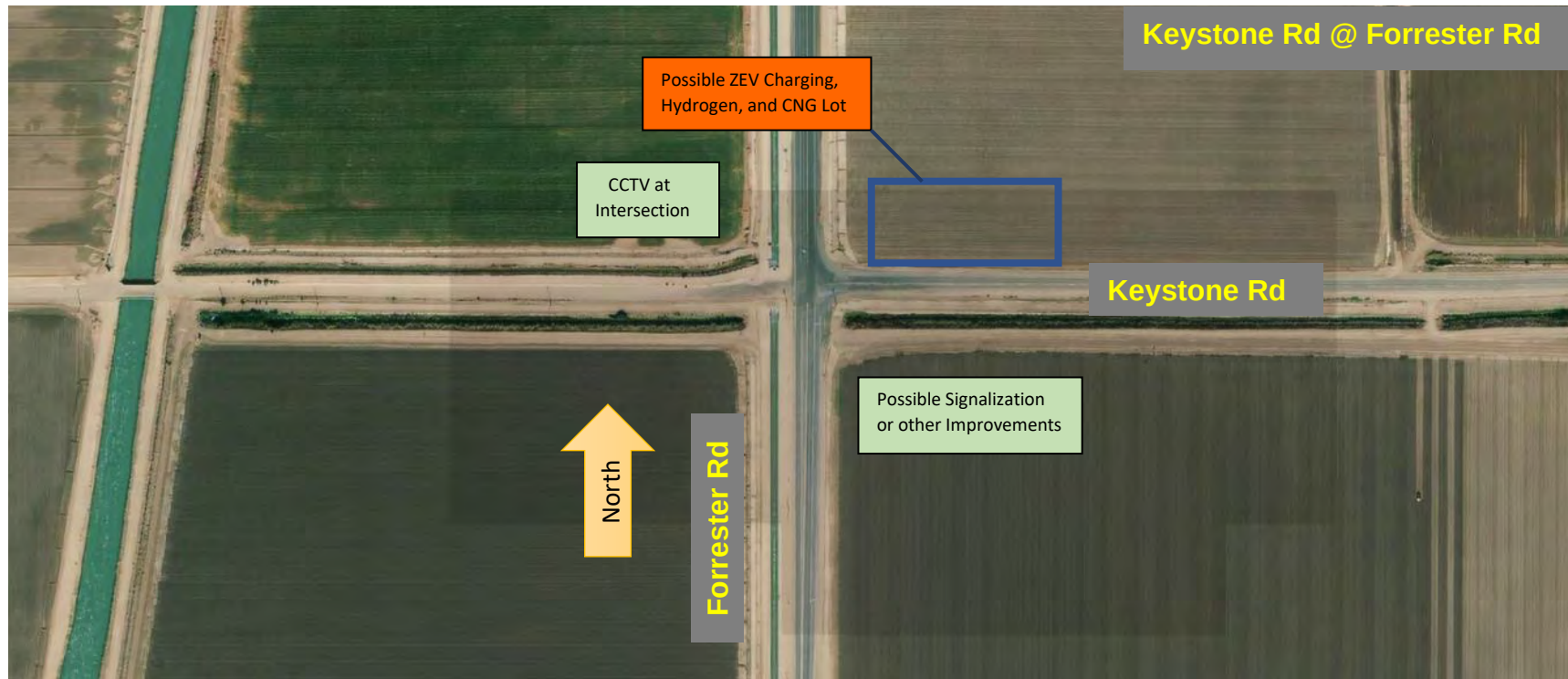
Freight and ITS Element Improvements – Forrester Road



Freight and ITS Element Improvements – Forrester Road



Freight and ITS Element Improvements – Forrester Road



Freight and ITS Element Improvements – Forrester Road



Vehicle-Miles Traveled Decision Document (VMTDD)

Applicability: This form is required for PIDs prepared by Caltrans or partners, with the following project exceptions: active transportation, transit, and most SHOPP projects.¹ Fill out the form and send it to Sustainability as a Word file. Add additional information as needed under each question. After review and agreement, e-signatures are required under Approval Recommended.

District/County/Route/PM: 11/Imperial/SR 86 (Forrester Road)/6.0 to 28.0

Project Name: Forrester Road Improvements

EA/EFIS Number: 11- 42630K/11-1600-0134

- 1) Are all project alternatives screened as not likely to induce travel per Section 5.1.1 of Transportation Analysis Under CEQA?

☒ NO - Proceed to Question 2.

☐ YES – Cite screening criterion(ia): _____

Stop here. The project is exempt from further VMT evaluation. Obtain district-level signatures and attach to the Project Initiation Document (PID). No headquarters concurrence is needed.

- 2) Do any of the project alternatives add lane-miles (mainline or aux lanes greater than 1 mile) to the State Highway System?

☒ NO - Continue to Question 3.

☐ YES – Provide estimate of new lane-miles for all alternatives and proceed to Question 4.

Alternative Number	Alternative Name	Lane-miles Added
1		
2		
3		
4		
5		
6		

- 3) Do any of the proposed alternatives add other capacity to the State Highway System (e.g., a new or widened interchange)?

☒ NO – Proceed to Question 4.

☐ YES – Describe and proceed to Question 4.

¹ This form is required for SHOPP projects that add lane-miles, including auxiliary lanes, and/or expand interchanges.

Alternative Number	Alternative Name	Capacity Added
1		
2		
3		
4		
5		
6		

- 4) Has induced VMT been estimated, as prescribed in Transportation Analysis Framework (TAF), Transportation Analysis Under CEQA (TAC), or other methods, for the project alternatives?

☒ NO – Proceed to Question 5.

☐ YES – Provide estimates and the methods from which they were obtained and proceed to Question 5.

Alternative Number	Alternative Name	VMT Estimate	Estimation Method
1			
2			
3			
4			
5			
6			

- 5) Have VMT-reducing project elements or mitigation measures have been identified?

☒ NO – Proceed to Question 6

☐ YES – Describe and proceed to Question 6: _____

- 6) What is the budget for VMT mitigation? Provide the dollar figure and rationale.

- 7) Provide estimated completion dates and points of contacts for the following technical studies to be produced in PA&ED and submitted to HQ.

Document	Contact name	Contact e-mail	Scheduled date
VMT assessment methodology*	Maurice Eaton	maurice.eaton@dot.ca.gov	9/9/2022
Draft VMT assessment*			
Final VMT assessment*			
Mitigation plan			
Draft environmental document			
Final environmental document			

* Submission not required for projects exclusively employing the NCST California Induced Travel Calculator, nor for projects located in counties outside of MPO boundaries.

To Be Completed by HQ

Recommendation(s) to Project Development Teams (PDTs), Districts, and/or Partners

Project screened as unlikely to induce VMT ☒ YES ☐ NO

This project takes a long-term view of Forrester Road and anticipates improvements that could be required by the year 2050. However, anticipated funding will only be sufficient for one or two of the Short-Term Projects.

Risk Register Certification

PID PHASE

Required for Capital Projects

Project ID 1116000134

Total Project Cost \$118,841,361.00

EA 11-42630

M010 APPROVE PID

Description IN IMPERIAL COUNTY ON FORRESTER/SR 86 FROM INTERSTATE 8 TO SR 78

Risk Summary Please see attached risk register.

Number of Risks

4

Calculated Risk Reserve				Last Run Date:	
Project Phase	Confidence Level	Resource Hours	Reserve \$'s	Confidence Level	Schedule Reserve
0 (PA&ED)	70%	72	\$11,000	70%	16 days
1 (PS&E)	70%	130	\$19,000	70%	16 days
2 (RW Sup)	70%	-	\$0	70%	days
3 (Con Sup)	70%	140	\$21,000	70%	15 days
4 (Con Cap)	70%	-	\$302,000		-
9 (RW Cap)	70%	-	\$0		-
Project Total	70%	342	\$ 353,000	70%	47 days

If project is less than \$1 million in total cost and risk register not prepared only Project Manager signs

Project Manager *Melina Pereira* 03/26/2024
MELINA PEREIRA Date

Deputy District Director, Planning *Melina Pereira* 03/26/2024

ROY ABOUD

 Date

Project Delivery Division Chief *Melina Pereira* 03/26/2024
ROY ABOUD Date

Deputy District Director, PPM *Clint Peace* 04/02/2024
CLINT PEACE Date

Project Information		
Checkpoint:	PID	Project Manager: Melina Pereira
Date:	3/21/2024	Program: STIP
EA:	11-42630	Capital Costs: \$92,091,361
EFIS ID:	11-1600-0134	Support Costs: \$26,750,000
Project Nickname:	Forrester Road Improvements	Total Costs: \$118,841,361
County/Route/PM:	IMP/86/6.0-28.0	RTL Target: 2/28/2029

Calculated Risk Reserve				Last Run Date:	
Project Phase	Confidence Level	Resource Hours	Reserve \$'s	Confidence Level	Schedule Reserve
0 (PA&ED)	70%	72	\$11,000	70%	16 days
1 (PS&E)	70%	130	\$19,000	70%	16 days
2 (RW Sup)	70%	-	\$0	70%	days
3 (Con Sup)	70%	140	\$21,000	70%	15 days
4 (Con Cap)	70%	-	\$302,000		-
9 (RW Cap)	70%	-	\$0		-
Project Total	70%	342	\$ 353,000	70%	47 days

Risk Register													version 2.02 03/01/2023	
Risk Identification			Phase	Initial Risk Assessment		Risk Response		Residual Risk		Risk Status				
RISK ID #	Risk Statement "As a result of <root cause>, <uncertain event> may occur, which would lead to <effect on objective(s)>."	Proactive Response (prior to risk occurring)		Initial Risk Probability		Response Strategy		Residual Risk Probability		Risk Assumptions and Status	Date Risk Identified			
Status		Response if Risk Occurs		Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k) (Y indicates Residual Risk will be included in Reserve Calculations)	Schedule Impact (Y indicates Residual Risk will be included in Reserve Calculations)		Anticipated Resolution Date			
Type											Date Last Updated			
RiBS Sub Category	Risk Trigger	Risk Owner												
1	As a result of the proposed widening of Forrester Road, there is a possibility that drainage capacity could be impacted, thus potentially impacting scope, cost, and schedule.	Env. and Des. will determine if covering the drains is feasible, or if other alternatives will need to be considered. If capacity is impacted, then drainage systems will need to be relocated to accommodate the widening.		2 - Low (11-30%)		Active Acceptance		2 - Low (11-30%)		[02-15-24: The project currently calls for covering the drain and canal channels to increase roadway width. Canals/drains appear to be deep enough that a structural slab could be placed over them without impacting their capacity. Channel Capacity Evaluation will occur in next phase of the project.]	2/15/2024			
Active			0-PA&ED	<\$70	0 - 30 days			\$6 - \$18 Y	0 - 30 days Y					
Threat			1-PS&E	\$20 - \$30	0 - 30 days			\$12 - \$35 Y	0 - 30 days Y					
DESIGN	Insufficient canal/drain capacity	Design will look into the possibility of using a thinner structural section in the locations of the existing drainage systems in order to avoid relocation.	2-RW Sup								2/15/2024			
			3-Con Sup	<\$30	0 - 30 days			\$12 - \$35 Y	0 - 30 days Y					
			4-Con Cap	>\$270					\$1050 - \$3150 Y					
	Design		9-RW Cap											
2	If the canals and drains are impacted during construction, then they might require temporary relocation of water flow. Local farmers would be impacted by the relocation and may request compensation. Additional support hours for design and capital cost for construction may be needed.	This risk can be mitigated by doing the work that would impact the flow of water in the canals during the off season for farming in the area.		2 - Low (11-30%)		Mitigate		2 - Low (11-30%)		[02-15-24: The canals and drains impacted will be determined during PA&ED. Closures needed will depend on the location of drainage and type of drainage.]	2/15/2024			
Active			0-PA&ED	<\$70	0 - 30 days			\$0 - \$12 Y	0 - 30 days Y					
Threat			1-PS&E	<\$20	0 - 30 days			\$0 - \$24 Y	0 - 30 days Y					
DESIGN	Canals/Drains Impacted	If the risk were to materialize, then the project will utilize contingency sources to cover the expenses.	2-RW Sup								2/15/2024			
			3-Con Sup	<\$30	0 - 30 days			\$0 - \$35 Y	0 - 30 days Y					
			4-Con Cap	>\$270					\$140 - \$420 Y					
	Design/ Construction/ Environmental		9-RW Cap											
3	As a result of a non-occupied house within a portion of right of way that will need to be acquired for the intersection widening, there is a possibility that the house could become occupied by an un-housed individual, thus potentially impacting scope, cost, and schedule.	No proactive measures have been taken.		1 - Very Low (1-10%)		Active Acceptance		1 - Very Low (1-10%)		[02-15-24: There are plans in place to acquire the right of way. This house is not currently occupied. The house is in disrepair, and there is no reason at this time to believe that it would become occupied.]	2/15/2024			
Active			0-PA&ED	<\$70	0 - 30 days			\$0 - \$12 Y	0 - 30 days Y					
Threat			1-PS&E	<\$20	0 - 30 days			\$0 - \$6 Y	0 - 30 days Y					
RIGHT OF WAY	Design/ ROW	If house is occupied during PAED and it is considered someone's home, adjustments to the ROW acquisition process will be made. The design team will look into the possibility of a realignment if feasible.	2-RW Sup	<\$70	0 - 30 days			\$0 - \$47 Y	0 - 30 days Y		2/15/2024			
			3-Con Sup											
			4-Con Cap											
			9-RW Cap	>\$0				\$0 - \$400 Y						

Risk Identification			Phase	Initial Risk Assessment		Risk Response		Residual Risk		Risk Status	
RISK ID #	Risk Statement "As a result of <root cause>, <uncertain event> may occur, which would lead to <effect on objective(s)>." 	Proactive Response (prior to risk occurring)		Initial Risk Probability		Response Strategy		Residual Risk Probability		Risk Assumptions and Status	Date Risk Identified
Status		Response if Risk Occurs		Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k)	Schedule Impact	Cost Impact (\$k) (Y indicates Residual Risk will be included in Reserve Calculations)	Schedule Impact (Y indicates Residual Risk will be included in Reserve Calculations)		Anticipated Resolution Date
Type											Date Last Updated
RiBS Sub Category	Risk Trigger	Risk Owner									
4	If chemicals for pest control, weed abatement, fertilizers, or the use of heavy farming equipment (ADL) result in concentrations of hazardous waste within the project limits, additional resourcing will be required to properly identify and deal with waste.	Detailed studies during the PAED phase will determine if there is any need to deal with hazardous waste locations. This includes ADL.		2 - Low (11-30%)		Active Acceptance		2 - Low (11-30%)		[02-15-24: Project will require soil disturbance to widen facilities. Mini-PEAR does not identify specific hazardous waste locations, but records are limited.]	2/15/2024
Active			0-PA&ED	<\$70	0 - 30 days			\$0 - \$35 Y	0 - 30 days Y		
Threat			1-PS&E	<\$20	0 - 30 days			\$0 - \$35 Y	0 - 30 days Y		
ENV: Hazardous Waste	Hazardous waste identified in environmental studies	Project does not provide the opportunity to bury/store impacted hazardous material on site. Off site removal will be required if encountered. Contingency sources will be utilized.	2-RW Sup								2/15/2024
			3-Con Sup	<\$30	0 - 30 days			\$0 - \$35 Y	0 - 30 days Y		
	4-Con Cap		>\$270					\$0 - \$200 Y			
	Environmental		9-RW Cap								