03 - BUT - 70 PM 5.6/12.1
EA 03-3F280 - Project ID 0312000155
EA 03-3F281 – Project ID 0314000057
EA 03-3H720 – Project ID 0318000054
EA 03-3H710 – Project ID 0318000053

State Route 70 Improvements, Segment 1 & 2
October 2018

Project Report

For Project Approval

On Route State Route 70

Between Post Mile 5.6, 0.3 miles north of Cox Lane

And Post Mile 12.1, 0.3 miles north of Ophir Road

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current and accurate:

JOHN BALLANTYNE, CHIEF, NORTH REGIN RIGHT OF WAY

APPROVAL RECOMMENDED:

Sukhwinder S. Bajwa

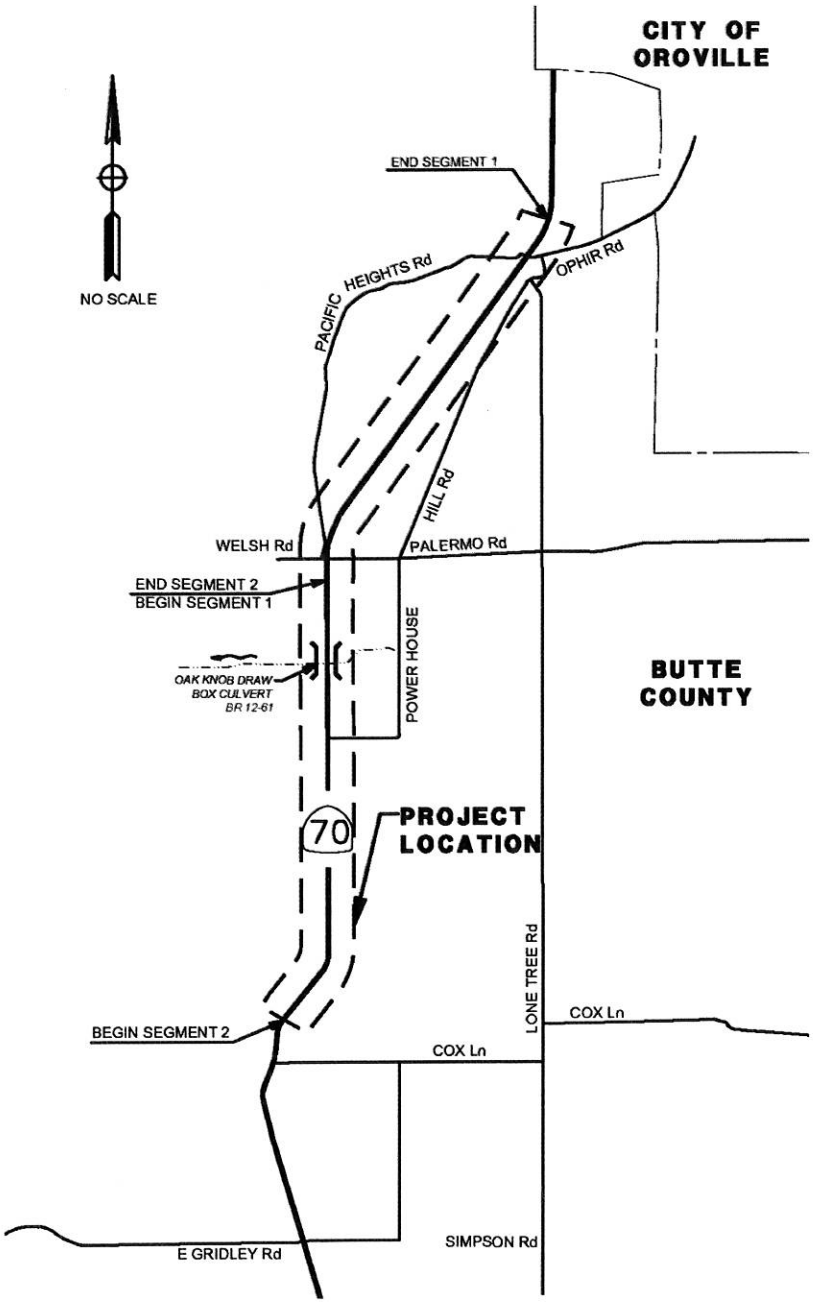
SUKHWINDER S. BAJWA, PROJECT MANAGER

APPROVED:

Amarjeet S. Benipal 10-19-2018

AMERJEET S. BENIPAL *DATE*
DISTRICT DIRECTOR, DISTRICT 03

Vicinity Map



This project report 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.

REGISTERED CIVIL ENGINEER

10/16/18
DATE

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Table of Contents

1. INTRODUCTION

Project Description:

The project proposes to widen State Route 70 (SR 70) from 2-lanes to 4-lanes to increase capacity, reduce travel times and provide opportunities for passing from 0.3 miles north of Cox Lane to 0.3 miles north of Ophir Road. For funding purposes, the project has been separated into two segments. Segment 1 is from 0.16 miles south of Palermo Road (PM 8.84) to 0.5 miles north of Ophir Road. Segment 2 is from 0.3 miles north of Cox Lane to 0.16 miles south of Palermo Road. Both segments of SR 70 will be improved to a conventional 4-lane highway with a 14-foot paved median. Portions of the median will operate as a two-way left turn lane. SR 70 is one of two primary north-south transportation corridors through Butte County and provides a link between the major population centers in Sacramento, northern Placer County, Yuba County, Marysville, and Oroville. SR 70 is one of 34 High Emphasis Routes that are of importance from a statewide perspective. Project funding is expected to come from state and federal funds. This project is a combination of two SHOPP safety projects (EA 3H710 & 3H720), and two STIP projects (3F280 & 3F281). The SHOPP Safety projects propose widening SR 70 to include a 14-foot center median and standard shoulders. The project will be constructed in 3 construction packages. The first package (Phase 1, segment 1) will construct mainline SR 70 improvements within Segment 1. The second construction package will construct the mainline improvements within Segment 2. A third package (Phase 2, segment 1) will construct frontage road improvements at Ophir Road and Palermo Road intersections. This third package will be deferred until the improvements are warranted by traffic operations and will be funded by others.

Preferred Alternative:

The preferred alternative is alternative 1 as described below. This alternative holds the existing edge of pavement along the east side of SR 70 and widens to the west. The improvements include widening SR 70 to include four 12-foot travel lanes, a 14-foot paved median, 8-foot shoulders, and clear recovery zone. Alternative 1 is preferred because it is the least impactful alternative from an environmental and right of way perspective. By widening to the west and minimizing grading on the east side, several wetlands and vernal pools were avoided. Right of way impacts were minimized with the preferred alternative as well, mainly due to the size and number of parcels required for the project. The west side includes larger parcels, typically with agricultural uses. Parcels on the east side are generally smaller with and have residential uses. Given this alternative presented the least environmental and right of way impacts, and will require the least cost to construct, this project will move forward with Alternative 1 as the preferred alternative.

The tables below summarize the general project information, cost estimates and programmed funds.

Project Information Summary Table

Project Limits	03-70-BUT; PM 5.6/ 12.1
Number of Alternatives (4)	1. Widen Segment 1 & 2 to the west 2. Widen Segment 1 to the west and Segment 2 to the east 3. Widen Segment 1 to the west and Segment 2 symmetrically around existing centerline 4. No Build
Funding Sources	STIP (RIP/IIP); Federal Demonstration Funds, SHOPP Safety (010 Program)
Funding Years	Segment 1 (FY 19/20); Segment 2 (FY 19/20 & 20/21)
Type of Facility	PM 5.6 to 8.8 Conventional Highway PM 8.8 to 12.1 Conventional Highway (Access Controlled)
Number of Structures	None
Environmental Document	IS/EA
Legal Description	Widen to a 4-lane conventional highway on existing alignment from 0.3 miles north of Cox Lane to 0.3 miles north of Ophir Road. Segment 1 (PM 8.85-12.10) shall be designated as an access controlled conventional highway.
Project Development Category	4

Project Cost Estimate and Funding Summary Table – Preferred Alternative

Capital Outlay(Current)	**Seg 1:**	**Seg 2:**
Support	$11,039,000	$9,781,000
Construction	$28,704,000	$19,988,000
Right-of-Way	$2,000,000*	$3,245,850
Total	**$41,743,000**	**$33,014,850**
Capital Outlay(Escalated)	**Seg 1:**	**Seg 2:**
Support	$11,810,000	$10,893,000
Construction	$31,167,000	$22,615,000
Right-of-Way	$2,011,000*	$3,425,000
Total	**$44,988,000**	**$36,933,000**
Funding Sources	STIP (50% RIP/ 50% IIP); Federal Demonstration Funds, SHOPP Safety (010 Program)	
Funding Years	Segment 1 (FY 19/20); Segment 2 (FY 19/20 & 20/21)	
Programmable Project Alternative	TBD	

*Right of Way Capital Costs shown here are for Segment 1 permits and mitigation and are consistent with the programmed funds.

2. RECOMMENDATION

It is recommended that the project be approved using the preferred alternative, and that the project proceed to the next phase. The affected local agencies, including Butte County and the City of Oroville have been consulted with respect to the recommended plan. These agencies views have been considered, and are in general accord with the plan as presented.

3. BACKGROUND

3A. Project History

SR 70 was originally comprised of Route 232, Route 87, and Route 21. The segment between Marysville and Oroville (Route 87) was added to the State Highway System in 1933. SR 70, in its entirety, was adopted into the Freeway and Expressway System in 1959. However, SR 70 currently operates as a conventional highway within the project limits.

SR 70 is one of two primary north-south transportation corridors through Yuba and Butte Counties. Along with SR 99, it provides a link between the major population centers in Sacramento, northern Placer County, Yuba City, Marysville, and Oroville. SR 70 is a 4-lane facility between the SR 99 and SR 20 junctions in Marysville and between Ophir Road and the SR 149 junction north of Oroville. The concept for a new expressway or freeway alignment east of the existing alignment (known as the Marysville By-Pass) was previously studied and publicly reviewed, however, this concept has no funding and is not deemed a viable project.

The need for highway improvements along this segment of SR 70 has been known for many years and numerous studies have been prepared to address and support that need. These studies include:

- *State Routes 70 and 99 Corridor Study (1990)* following which the California Transportation Commission (CTC) determined future mainline improvements would be focused on SR 70 as opposed to SR 99.
- *Marysville By-pass to Oroville Freeway Project (PSR – 1992).* Construct 4 – lane freeway in Yuba and Butte Counties from proposed Marysville By-pass on Route 20 to 0.4 miles south of Route 162 in Oroville.
- *Marysville By-pass to Oroville Freeway Project (PSR – 1993).* Construct 4 -lane freeway on new alignment in Yuba and Butte Counties from Jct. Routes 65/70 south of Marysville to Route 70 south of Route 162 in Oroville.
- *State Routes 70 and 99 Major Investment Study (1995).*
- *Marysville By-pass Value Analysis Study (2001).*
- *Route 70/99 Corridor Business Plan (2006).*
- *SR 70 Economic Transportation Study (2013).*

Several alternatives have been considered through the course of these studies, including highway widening, highway realignment, and new freeway construction. The Transportation Concept Report (TCR) was approved in August 2014 and identifies a 4-lane Conventional Highway between Ophir Road and East Gridley Road (MP 4.06/ 11.55) following along the existing alignment. In considering the results of all studies, Caltrans District 03, in consultation with the Butte County Association of Governments (BCAG),

the City of Oroville, Butte County and Yuba County, it has been determined all improvements on SR 70 will likely be along the existing alignment.

The Project Study Report-Project Development Support (PSR-PDS) was prepared in cooperation with the BCAG, and was approved in December 2013. The PSR-PDS identified six segments of SR 70 from Ophir Road (PM 11.8) in Butte County to 14th Street in Marysville (Yuba County PM 14.9). BCAG recommended the first two segments from approximately 0.3-mile north of Cox Road to 0.3-mile north of Ophir Road proceed as funding has been identified.

The Draft Project Report was prepared based on the recommendations for improvements identified in the PSR-PDS. The Draft Project Report was approved on August 3, 2018.

3B. Community Interaction

During the circulation of the Draft Environmental Document, BCAG and Caltrans held a series of public meetings, stakeholder presentations, and attended community events. A summary of these events are as follows:

- August 22, 2018 – An informational public meeting was held at the Southside Community Center in Oroville. The project team presented a short slide presentation followed by question and answer period.
- September 16, 2018 – Members from BCAG and Caltrans attended a community event celebrating Mexico's Independence Day at the Yuba / Sutter County Fairgrounds. Feedback regarding the recommended plan was gathered through surveys.
- Various Dates in August 2018 – BCAG staff presented at various stakeholder groups, including the local rotary clubs.
- September 27, 2018 – The BCAG held a hearing considering the adoption of the environmental document. No public comments were received at the hearing.

3C. Existing Facility

This segment of SR 70 is a 2-lane conventional highway with a posted speed limit of 55 mph. There are limited driveways north of Palermo Road and numerous driveways south of Palermo Road. The existing right of way width varies from 92 to 200 feet, with most of the right of way at approximately 100-feet. There is partial control of access between Palermo Road and Ophir Road. The existing horizontal alignment and vertical profiles meet the design standards for 75 mph. The route was constructed in many locations with near zero longitudinal grade and without curbs or dikes. Drainage is accommodated by sheet flow into roadside ditches. Side slopes vary from flat (4:1 or flatter) to steep (1.5:1) generally at the location of cross culverts or where the roadway profile was raised to accommodate cross drainage.

South of the project limits, for approximately 2 miles, SR 70 was widened to a 4 - lane conventional highway with a 12-foot median, known as the East Gridley passing lanes project. South of the passing lane project, SR 70 continues as a 2 - lane conventional highway for approximately 15 miles, without passing opportunities, until entering the City of Marysville.

North of the project limits SR 70 becomes an access controlled freeway for 9.3 miles until the junction of SR 149. From the junction with SR 149, SR 70 heads north continuing as a 2 -lane conventional highway until it reaches its terminus at SR 395 in Plumas County.

4. PURPOSE AND NEED

Purpose:

The purpose of the proposed project is to address safety concerns along the corridor and ultimately provide continuous passing opportunities between Marysville and Oroville. This project will provide passing opportunities within the segments identified as Segment 1 (PM 8.8 to 12.1) and Segment 2 (PM 5.6 to 8.8). The project will also provide additional capacity to support approved and planned development in Butte County. It will also support the growing economic sectors along the SR70 Corridor. Improved travel times along the corridor will result in greater reliability and efficiencies for goods movements, provide better connectivity between Butte County and the Sacramento Valley, and will support the overall economic viability of the Butte County region. The project will improve traffic operations and safety in these segments of the highway.

A widened facility will decrease travel times between Oroville and Marysville, and provide improved reliability for regional and local users. Improved reliability along SR 70 will improve the connectivity between Butte County and the greater Sacramento Valley, and support the growing economic sectors in Oroville and the surrounding areas. As determined in the "Economic Transportation Study" prepared in tandem with the PSR-PDS document, this project will help sustain the economic growth in Oroville and will improve the overall economic viability of the Butte County region.

Need:

The project is needed due to significant operational and safety concerns along the corridor. Portions of the corridor show higher than average accident rates, and higher accident densities have been observed at major intersections. There have been 35 fatal accidents along this segment of SR 70 between Marysville and Oroville since January 2010, 13 of which happened in 2017 alone. Within the limits of Segments 1 and 2 there have been 17 fatal accidents since January 2010. Most of the accidents are attributed to the lack of passing opportunities between Marysville and Oroville, except for the recently completed East Gridley passing lane project. The highway is currently operating at a Level of Service (LOS) A, except for the intersection of Ophir Road that is operating at LOS D in the AM peak and LOS C in the PM peak. Anticipated population growth and development along the corridor is anticipated to increase traffic levels which will degrade the operations and safety along SR 70. The LOS for both the Palermo and Ophir Road intersections is projected to degrade to LOS F in both the AM and PM peaks by 2040 if the project is not implemented.

An additional project need is based upon economics and goods movement along the corridor. The largest industries in the Oroville area are "highway dependent," and require reliable access to and from SR 70. It has been observed that goods movement within the regional and local supply chain is heavily affected by the highway conditions. Improved reliability of the SR 70 corridor is needed to prevent lost revenues of local industries due to accidents or operational deficiencies. Furthermore, improved travel times are needed to

improve regional connectivity and the overall economic viability of the Butte County region.

4A. Problem, Deficiencies, Justification

Several driveways exist along the highway, which serve residential, industrial and agricultural properties. A majority of the land use along this segment of SR 70 consists of agricultural uses. Dingerville USA is a small golf course located just north of Palermo Road, and represents the only recreational use along the corridor. The project currently does not fall within any incorporated Cities. The City of Oroville has anticipated annexing large portions of the areas both west and east of SR 70 between Ophir Road and Palermo Road.

The existing condition of SR 70 does not provide formal passing opportunities for a majority of the corridor, which results in potential operational and safety issues. For SR 70, passing opportunities are effective and useful when provided approximately every 5-7 minutes. Caltrans recently completed construction of a project near the intersection of East Gridley Road that provides passing lanes in both directions within the limits of that project. (PM 3.8 to 5.6) Two-way left turn lanes are provided for approximately 3,000-feet south of Palermo Road.

The growth in traffic volume along the SR 70 corridor is predominately influenced by the assumed and accrued growth within Butte and Yuba Counties together with significant traffic volumes to and from the City and County of Sacramento. According to BCAG, population and employment is expected to increase in Butte County by 50 and 57 percent, respectively, between 2010 and 2035. Specifically, the Rio d' Oro Specific Plan, located southwest of Oroville and adjacent to SR 70, is expected to generate a significant number of daily trips that will trigger unacceptable traffic conditions and is expected to move forward in phases beginning in 2018 and extending through the next 20 years.

4B. Regional and System Planning

Systems - SR 70 is identified as 1 of 34 High Emphasis Routes of importance from a statewide perspective. As a subset of High Emphasis Routes, SR 70 is further designated as 1 of 10 Focus Routes in California. A Focus Route designation represents the Interregional Road System (IRRS) corridors of the highest priority for upgrading freeway or expressway standards during the 20-year planning horizon of the Interregional Transportation Strategic Plan (ITSP). Focus Routes serve as a grid network of north-south and east-west state highways that connect all of California's major urban areas and regions. The ITSP identifies specific projects, such as the SR 70 project, which are necessary to bring the Focus Route up to concept standard.

State Planning - Caltrans approved the Transportation Corridor Concept Report (TCCR) for SR 70 in August 2014. This section of SR 70 was identified as a 4-lane conventional highway southerly of Ophir Road and a freeway/expressway northerly of Ophir Road. The prior 2009 SR70 TCCR identified segment 9, (But P.M. 0.00-13.51) as a two-lane conventional highway for existing, and a two lane conventional with passing lanes for the concept facility.

Local Planning - The project is consistent with local planning. In 2008 RTP BCAG programmed Segment 1 for construction in 2020 and Segment 2 for 2025. BCAG intends to advance Segment 2 to 2022, depending on the availability of funding.

The Rio d' Oro Specific Plan, located in southwest Oroville, is a 689-acre planned development with 2,700 proposed residential units and other commercial uses. This development will generate a significant increase in traffic as the project proceeds, in planned stages. The first stage of development will allow the existing intersection at Ophir Road to remain be signalized and require a new traffic signal at Palermo Road. While the lane configurations will be set up for the future signal, a traffic signal is not part of this project since it is a developer traffic mitigation. As the Rio d'Oro approaches buildout, well past the 2040 planning horizon, will eventually trigger upgrading Ophir Road to a full interchange and Palermo Road to a signalized intersection. The Ophir Road interchange is identified in the 2014 TRC. The ultimate traffic mitigations for the Rio d' Oro development are considered separate projects.

Transit Operator Planning – BCAG is the project sponsor and the regional transit operator. Coordination with BCAG staff was conducted during the plan development, and it was concluded that the plan doesn't conflict with current or planned routes.

4C. Traffic Operations

Current and Design Year Volumes

The forecasted traffic growth used the BCAG traffic model and is consistent with the 2012 BCAG Metropolitan Transportation Plan (MTP). The forecasts assume 35% build-out of the Rio d'Oro Specific Plan development.

Peak Hour Volumes for Current and Projected Design Year Forecasts

Segment Limits	Post Miles	Existing Volumes (2015)		Design Year Volumes (2040)	
		Peak Hour	AADT	Peak Hour	AADT
N. of Ophir Road	11.9/14.0	1,470	10,000	3,460	23,500
Ophir Road to Palermo Road	9.0/11.9	1,375	10,500	2,895	22,600
Palermo Road to Power House Road	7.8/9.0	1,230	10,600	2,840	24,500
Power House Road to Cox Road	5.5/7.8	1,270	11,200	2,790	24,600

Level of Service (LOS)- LOS is shown for the total intersection operational delay, including the side roads. Delay for individual movements on side roads is higher.

Intersection Location	Existing Control*	Existing LOS		Future No-Build LOS 2040		Future with Project Control*	Future with Project LOS 2040	
		AM	PM	AM	PM		AM	PM
Cox Lane	SSS	A	A	A	A	SSS	A	A
Power House Road	SSS	A	A	A	A	SSS	A	A
Palermo Road	SSS	A	A	**F**	**F**	TS	C	C
Ophir Road	TS	D	C	**F**	**F**	TS	C	C

* SSS- Side-Street Stop TS-Traffic Signal

4D. Collision Analysis

TASAS

The table below summarizes traffic collision data on SR 70 through the limits of the proposed project. The data was obtained from the Traffic Accident Surveillance and Analysis System (TASAS) –Transportation Systems Network (TSN) database maintained by Caltrans. The data shown is for the three-year period between July 1, 2012 and June 30, 2015.

Butte County / State Route 70 / PM 5.6-12.1

Dates: *07/01/2012 to 06/30/2015*		Actual Rates (Collisions / million vehicles)			Average Rates (Collisions / million vehicles)		
Location (Post Miles)	**Total Collisions**	**Fatal**	**Fatal + Injury**	**Total**	**Fatal**	**Fatal + Injury**	**Total**
SR 70 (PM 5.6 – 8.8)	21	**0.053**	0.29	0.56	0.018	0.35	0.83
SR 70 (PM 8.8 – 12.1)	29	**0.049**	0.27	**0.71**	0.008	0.27	0.65
Notes: Bold and underline font indicate actual accident rates that are higher than the statewide average for similar facilities.							

Butte County / State Route 70 / PM 5.6-12.1

Primary Collision Factor	Type of Collision							
	Head On	**Sideswipe**	**Rear End**	**Broadside**	**Hit Object**	**Over Turn**	**Other**	**Not Stated**
Influence of Alcohol		2	3		2			
Failure to Yield		2		3				
Improper Turn	1	1		1	5	2		
Speeding			15	1			1	
Other Violation	2	1		3				
Other than Driver	1				1		2	1
Total	**4**	**6**	**18**	**8**	**8**	**2**	**3**	**1**

Rear end collision accounted for 18 of the 50 accidents on the SR 70 corridor. Most rear end collisions are due to speeding. The next most frequent are sideswipe collision followed hit object collisions. Out of the 50 accidents, there was 35 multi car collisions, 18 injuries and 4 fatalities. The Ophir Road signalized intersection is associated with a high number of sideswipe, rear end, and broadside collisions. The accident rates for the SR 70 study locations show a higher than state wide average for the severity (i.e. fatality rate) and combination of severity plus injured (i.e. fatal + injured) are approaching the state average for a 2-lane freeway facility in the State of California.

SWITRS

In addition to TASAS, more recent data was pulled from the Statewide Integrated Traffic Records System (SWITRS) for 2015, 2016, and partially for 2017 (up to April 25th). The total accidents during this date range came to be 61, with 5 fatalities and 18 injuries. Three of the five fatalities happened within 2017 alone. The SR 70 corridor has recently come under public scrutiny with the frequency of fatalities continuing to increase. With collision data collected over the past 6 years, accidents are continuing to trend upward in frequency.

Additional Collision Data

In addition to the fatal accidents shown in the TASAS and SWITRS databases, there were 8 fatal accidents in 2017 (from April to November). The total fatal collisions using all available data sources is summarized below.

Fatal Collision Summary

Date Range	Data Source		
	TASAS	SWITRS	BCAG Records
July 2012 to June 2015	4		
June 2015 to April 2017		5	
April 2017 to November 2017			8
Total	**17**		

5. ALTERNATIVES

5A. Viable Alternatives

The discussion below summarizes the three alternatives analyzed during the PA&ED phase. Given the roadway configuration, available right of way, and environmental constraints, Segment 1 was analyzed for Alternative 1 only. For Segment 2, all three alternatives were analyzed.

Alternative 1:

This alternative holds the easterly edge of pavement and widens to the west. New pavement construction would occur primarily on the west side of the existing lanes, and therefore, a majority of environmental and right of way impacts would occur on this side. Within segment 2, the easterly roadside area will be regraded to provide the standard hinge points, side slopes and clear recovery areas. Right of way acquisitions would be required on both sides of SR 70. The right of way acquisitions are minimized with this alternative. In Segment 1, the existing slope conditions on the east side will be maintained. Alternative 1 is the preferred alternative.

Alternative 2:

This alternative holds the westerly edge of pavement and widens to the east. New pavement construction would occur primarily on the east side of the existing lanes, and therefore, a majority of environmental and right of way impacts would occur on this side. Within segment 2, the roadside will be regraded to provide the standard hinge points, side slopes and clear recovery areas. Right of way acquisitions would be required on both sides of SR 70. Alternative 2 is not preferred due to the increased right of way and environmental impacts as compared to alternative 1.

Alternative 3:

This alternative widens symmetrically on both sides of SR 70. Right of way and environmental impacts would be similar along both sides. The roadsides will be regraded to provide the standard hinge points, side slopes and clear recovery areas. Alternative 3 is not preferred due to the increased right of way and environmental impacts as compared to alternative 1.

Common Elements to All Alternatives

The three build alternatives all share the following features:

	Segment 1	Segment 2
Post Mile Limits	8.8 to 12.1	5.6 to 8.8
Design Speed	75 MPH	75 MPH
Access Control	Partial (Maintain Existing)	None
# Lanes	4@12'	4@12'
Classification	Conventional Highway (Access Controlled)	Conventional Highway
Outside Shoulder	10'	10'
Inside Shoulder	N/A	N/A
Median Width/ Type	14' paved*	14' paved*

**No left turn access will be allowed in Segment 1. Portions of Segment 2 will include Two-way-left-turn lanes.*

5B. Preferred Alternative

The preferred alternative is alternative 1 as described below. This alternative holds the existing edge of pavement along the east side of SR 70 and widens to the west. The improvements include widening SR 70 to include four 12-foot travel lanes, a 14-foot paved median, 8-foot shoulders, and clear recovery zone. Alternative 1 is preferred because it is the least impactful alternative from an environmental and right of way perspective. By widening to the west and minimizing grading on the east side, several wetlands and vernal pools were avoided. Right of way impacts were minimized with the preferred alternative as well, mainly due to the size and number of parcels required for the project. The west side includes larger parcels, typically with agricultural uses. Parcels on the east side are generally smaller with and have residential uses. Given this alternative presented the least environmental and right of way impacts, and will require the least cost to construct, this project will move forward with Alternative 1 as the preferred alternative.

Existing Drainage Pattern

Most of the surface water typically sheet flows directly into roadside ditches or overland to adjacent farmlands without any direct outfall to any receiving water bodies. Dikes are not present to concentrate flows except where the roadway profile has been raised to accommodate box culverts. The longitudinal grade for the highway and slopes of the roadside ditches are relatively flat, typically less than 0.20%. There is an existing bridge at Oak Knob Draw crossing SR 70 near the community of Oak Grove that ends before

reaching Feather River and two unnamed ephemeral drainages. There are approximately 20 cross culverts that vary in size from 18-inch pipe to 9'x 4' double reinforced concrete box culvert, plus pipe culverts crossing each driveway. Caltrans Hydraulics Engineer Dennis Jagoda, described recorded overtopping of the highway in 1983 and 1986 before two box culverts were placed in 2000/2001. Mr. Jagoda identified there is no Caltrans record of flooding between Arjay Ranch Road and Power House Hill Road. There are however known instances of flooding at Oak Knob Draw.

Flood Plain

The project area lies within the floodplains currently shown in Federal Emergency Management Agency (FEMA) Flood Insurance Studies and the associated Flood Insurance Rate Map (FIRM) panels [06007C (0980E and 0990E)] dated January 6, 2011. There are three (3) sections of SR 70 within FEMA identified 100-year floods having the designation FEMA Zone A, "No base flood elevations determined." The first section is located just north of the beginning of Segment 2 (PM 5.74) where approximately 700 feet of SR 70 is within the FEMA Zone A floodplain. In this section, the existing 5'x 3' double reinforced concrete box (RCB) passes surface runoff from the west side to the east side of the highway and into Wyman Ravine. The second section is located just north of SR 70/Arjay Ranch Road intersection (PM 7.21) where the existing 9'x 4' double RCB at Oak Knob Draw Bridge (BR-12-61) is located. The third section is near PM 11.8, north of Ophir Road, where backwater from the Feather River floodplain appears to encroach onto the highway right of way.

The FEMA maps show the 100-year floodplain designated as Zone A. Zone A is described as the flood insurance rate zone corresponding to a 1-percent annual chance of flooding as determined by FEMA.

The roadway profile grade will be maintained at the current elevation within floodplain locations to not increase upstream backwater elevations. Pavement rehabilitation within the floodplain will need to be performed by grinding and overlaying to not increase the elevation of the roadway.

Drainage Design Features

Roadside swales will be relocated due to the widening. These swales will be sized within the new right of way to provide bio-filtration and to accommodate the Water Quality Volume (WQV). Within Segment 1, the roadside ditches also serve a dual purpose as access to overhead utility lines.

Nonstandard Design Features

It is planned that the following non-standard features are required for the preferred alternative:

- Longitudinal Grade
- Side Slope
- Super-elevation

5C. Rejected Alternatives

Alternatives that would hold either the easterly or westerly ROW limits and acquire ROW only from the opposite side were rejected due to higher construction costs and the disproportional impact to property owners.

The Marysville By-Pass alternative was also rejected because it was economically infeasible.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

An Aerially Deposited Lead (ADL) assessment was performed. Although individual samples exceeded the standard Soluble Threshold Limit Concentration (STLC) of 5.0 mg/l, soil within the project limits is not classified as hazardous waste when taken as a whole. No other types of hazardous waste were identified within the project limits.

6B. Value Analysis

No Value Analysis study was conducted. However, a VA study will be completed in the subsequent project development phases.

6C. Resource Conservation

The proposed build alternatives would improve traffic operations and facilitate better traffic movements on SR 70 and public road intersections. The improvement in traffic delay is associated with the opportunities for the passing of slower moving vehicles and a general increase in travel speeds with more efficient vehicle operation as compared to the no-build alternative. Delay will also be reduced at the signalized intersections. Improved operations are likely to reduce vehicle energy use, whether in the form of petroleum fuels or alternative energy sources. It is anticipated this project would have a beneficial, or at a minimum, a neutral effect on direct energy use.

By utilizing the existing state right of way and widening the existing highway, the amount of impacts to jurisdictional waters and endangered species habitat are greatly reduced when compared to a new alignment.

6D. Right-of-Way

Right of Way Acquisitions

The following chart summarizes the total right of way needs and estimated costs, including environmental mitigation.

Parcel Type	Segment 1 (Phase 1)	Segment 2 Alternative 1	Segment 2 Alternative 2	Segment 2 Alternative 3
X	0	0	0	0
A	0	24	0	0
B	0	17	35	34
C	0	6	13	14
D	0	0	1	1
Total Parcels	0	47	49	49
Cost (Current)	$2,000,000	$3,245,850	$5,374,240	$5,389,481
Cost (Escalated)	$2,011,000	$3,425,000	$5,919,000	$5,936,000
Acres	0	14.3	27.61	37.83
TCE (Acres)	0	.37	3.17	7.95
No. RAP Parcels	0	1	13	16

Note: Alternative 1 has the least cost, least number of relocations, and the least area of new right of way acreage required.

Right of Way Phasing Discussion

The proposed realignment of Pacific Heights Road will be deferred to a later date, so Segment 1(Phase 1) contains no right of way acquisitions and requires no utility relocations. There are project permit fees and mitigation that will be paid out of right of way (Phase 9) funds that are programmed under the two associated projects. Segment 2 has a considerable right of way acquisition effort, utility relocations and some residential displacements. There are also project permit fees and mitigation expenses.

Relocation Impact Studies

No relocations are anticipated with this project.

Access Control

The segment of SR 70 between Palermo Road and the northerly conform will remain access controlled. Permitted private access points will remain open. The existing driveway at station 514+50 (4288 SR 70 – Bamford Parts and Equipment) will remain a right-in / right out driveway, and will be maintained at this location to prevent the need for major investments in Power House Hill Road to provide an alternative access.

Utility and Other Owner Involvement

Utilities present within the Segment 1 are overhead electrical, telephone and cable television sharing a pole line that will require relocation to near the new right of way line in Phase 3. The ultimate Segment 1 project will require three pole relocations, located south of Palermo Road. The Phase 1 project will not require utility relocations.

Within Segment 2, there are continuous overhead electrical, telephone and cable television sharing a pole line that will require relocation to near the new right of way line. Between Cox Lane and Le Fever Road the pole line is located on the westerly side of the road and crosses to the easterly right of way line. The pole line continues on the Easterly Right of

Way line until Arjay Ranch Road where the Pole line crosses once again to the westerly Right of Way line where it remains until Palermo Road (1.8 miles). In general, 60% of the pole line is west of the roadway and 40% is easterly of the roadway. Opposite of the pole line, at approximately every two parcels, there is an overhead lateral crossing SR 70 to providing service to individual parcels.

6E. Environmental Compliance

The Initial Study/Environmental Assessment (EA) has been prepared in accordance with Caltrans' environmental procedures, as well as State and federal environmental regulations. The attached Negative Declaration is the appropriate document for the proposal.

6F. Air Quality Conformity

FHWA and the Federal Transit Administration require a Metropolitan Transportation Plan (MTP)/ Sustainable Communities Strategy (SCS). The BCAG Regional Transportation Plan/ SCS was approved in 2016 and meets this requirement. Accordingly, the regional emissions modeling was conducted for the 2016 RTP/SCS to ensure that, prior to preparation of the final environmental document for the project, the design, concept, and scope for the project will be consistent with the description in the 2016 RTP/SCS and the "open to traffic" assumptions in BCAG's regional emissions analysis. Therefore, each project alternative is expected to be fully compatible with the design concept and scope described in the regional transportation plan. The preferred alternative is fully compatible with the design concept and scope described in the current regional transportation plan.

6G. Title VI Considerations

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans commitment to upholding this policy was reaffirmed in October 2016 with an update of the Title IV Program Plan.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title IV of the Civil Rights Act (42 USC 2000d, et seq).

The preferred alternative widens the existing highway and does impact low mobility and minority groups. Existing bus-stops will be maintained with the project to continue serving mobility groups such as the young, aged, handicapped, economically disadvantaged, and minority groups. The preferred alternative does not effect local street traffic within adjacent minority communities as well as regarding the impacts on minority communities that are being bypassed.

6H. Noise Abatement Decision Report

Segment 1 has no sensitive receptors. Therefore, noise barriers were not considered.

Segment 2 has isolated residential land uses on both sides of SR 70. A noise barrier was determined to not be feasible due to driveway access requirements that will be preserved and improved as part of the project.

6I. Biological Impact and Mitigations

The proposed project would have direct and indirect effects on vernal pools in the study area, which could impact three special status species that are known to occur or are likely to occur: slender Orcutt grass (threatened), vernal pool fairy shrimp (threatened), and vernal pool tadpole shrimp (endangered). Approximately 4.66 acres of vernal pool habitat would be directly affected, and approximately 2.02 acres would be indirectly affected. Avoidance, minimization, and mitigation measures include construction BMPs such as installing temporary high visibility fencing, worker awareness training, biological monitoring, preconstruction surveys, and avoiding/minimizing potential effects to vernal pool branchiopods. Compensatory mitigation would include purchasing credits for slender Orcutt grass habitat at a 2:1 ratio, and preservation credits equivalent to 13.36 acres and creation credits equivalent to 4.66 acres of listed branchiopod habitat.

7. OTHER CONSIDERATIONS AS APPROPRIATE

7A. Public Hearing Process

The Draft Environmental Document and DPR will be made available for public review and comment. A public meeting will be held during the circulation of the DED.

Give the date of the public hearing, if held, and the general tenor of comments. State the positions of local agencies. Refer to outline item 5A, "Viable Alternatives" for a discussion of any changes in the project design or mitigating features resulting from the environmental document circulation and the public hearing process. If an opportunity for a hearing was offered in lieu of scheduling a hearing directly, include copies of all correspondence received in response to the notice and of any replies. If requests were received and subsequently withdrawn, summarize the events that resulted in the withdrawal. If the requests were not withdrawn, state as factually as possible what useful purpose the hearing may have served or not, as the case may be.

7B. Route Matters

No new freeway agreements or revised freeway agreements will be required. No change in access control is proposed.

7C. Permits

The following permits are anticipated to be required prior to construction of the proposed improvement Project:

Agency	Permit/Approval	Status
U.S. Army Corps of Engineers	Section 404 Individual Permit for filling or dredging waters of the United States.	Pending completion of the Project Specifications and Estimates phase of the process.
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification. Waste Discharge Permit Review and approval of stormwater discharge treatments.	Pending completion in the Project Specifications and Estimates phase of the process.
California Department of Fish and Wildlife	Section 1602 Lake or Streambed Alteration Agreement.	Pending completion in the Project Specifications and Estimates phase of the process.

7D. Transportation Management Plan (TMP)

TMP elements would include a Public Awareness Campaign, press releases to notify and inform motorists, business community groups, local entities, emergency services, and elected officials of upcoming lane closures. Various TMP elements such as changeable message signs and CHP Construction Zone Enhances Enforcement Program (COZEEP) will be used to minimized delay to the traveling public.

A detailed TMP for the project will be developed during the PS&E phase. The detailed TMP will also address pedestrian and bicycle access during construction. Because the project widens the existing roadway from one lane in each direction to two lanes, it is expected limited lane closures will be required together with lane closures during off-peak hours. These closures are anticipated to occur at night.

7E. Accommodation of Oversize Loads

Proposed improvements will not reduce the vertical clearance or affect the ability for oversized loads to use SR70 during or following construction.

7F. Graffiti Control

For potential graffiti-prone areas along bicycle/pedestrian walkways or access areas, aesthetic or fractured texturing with graffiti coat may be considered to discourage vandals from "tagging" bridges, signs, and walls. Texturing or planting vines may be employed on walls to avoid providing a canvas for graffiti vandals.

7G. Phase Construction

The project would be constructed in two phases, Segment 1 followed by Segment 2. Because the Segment 1 limits south of Palermo road involve utility relocations during phase 3, the exact extent of Segment 1 construction may change to accelerate Segment 1 construction.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding - It has been determined this project is eligible for Federal-aid funding. According to the BCAG 2012 Metropolitan Transportation Plan (MTP) Segments 1 & 2 will be funded by both the Regional Improvement Program (RIP) and the Interregional Improvement Program (IIP) funds of the State Transportation Improvement Program (STIP) fund split equally amongst the two funding sources.

The construction and support costs listed below for Segments 1 and 2 include all roadway, and structures work related to the new intersection and local roadway extension described above are escalation costs. The STIP projects are being combined with SHOPP 010 Safety projects as follows:

- Segment 1: STIP (03-3F280) programmed in Fiscal Year 2019/2020 and SHOPP (03-3H710) programmed in Fiscal Year 2019/2020.
- Segment 2: STIP (03-3F281) programmed in Fiscal 2020/2021 and SHOPP (03-3H720) programmed in Fiscal Year 2019/2020.

Programming - The tables provided in attachment F provides the proposed Capital and Support Cost for the Proposed Project.

Programmed Capital Outlay Support and Project Estimates – STIP (03-3F280, Segment 1)

Fund Source	Fiscal Year Estimate							
20.XX.201.700	Prior	2018/19	2019/20	2020/21	2021/22	Future	Total	Program
Component	In thousands of dollars ($1,000)							
PA&ED Support	731	87					818	100
PS&E Support		820					820	900
Right-of-Way Support		316	149	155	161	291	1,072	1,100
Construction Support			1,061	238	8	2	1,309	1,400
Right-of-Way Cap		1,600					1,600	1600
Construction Cap			8,727				8,727	9,400

Note: BCAG is the lead agency for phase 0. The expenditures are over the programmed amount. No action is needed since Caltrans has oversight responsibilities.

Programmed Capital Outlay Support and Project Estimates – STIP (03-3F281, Segment 2)

Fund Source	Fiscal Year Estimate							
20.XX.201.700	Prior	2018/19	2019/20	2020/21	2021/22	Future	Total	Program
Component	In thousands of dollars ($1,000)							
PA&ED Support								786
PS&E Support	4	575	207				786	800
Right-of-Way Support		52	151	172	180	434	990	1,000
Construction Support				525	546	129	1,200	1,200
Right-of-Way Cap		1,800					1,800	1,800
Construction Cap				5,891			5,891	8,400

Note: PA&ED is funded from BCAG Highway 70 Demonstration Funds.

Programmed Capital Outlay Support and Project Estimates – SHOPP (03-3H710, Segment 1)

Fund Source	Fiscal Year Estimate							
20.XX.201.010	Prior	2018/19	2019/20	2020/21	2021/22	Future	Total	Program
Component	In thousands of dollars ($1,000)							
PA&ED Support*	1,087	46					1,133	850
PS&E Support		1,459					1,459	2,240
Right-of-Way Support		1,375	132	137	143	258	2,046	2,320
Construction Support			2,342	758	43	9	3,153	3,700
Right-of-Way Cap			480				480	480
Construction Cap			23,130				23,130	23,130

*Estimated PA&ED cost is over the programmed budget. G-12 has been processed for additional funds

Programmed Capital Outlay Support and Project Estimates – SHOPP (03-3H720, Segment 2)

Fund Source	Fiscal Year Estimate							
20.XX.201.010	Prior	2018/19	2019/20	2020/21	2021/22	Future	Total	Program
Component	In thousands of dollars ($1,000)							
PA&ED Support*	1,026	238					1,264	980
PS&E Support		1,286	691				1,978	2,180
Right-of-Way Support		323	721	89	92	238	1,464	1,590
Construction Support				1,066	1,188	934	3,188	3,540
Right-of-Way Cap			3,220				3,220	3,220
Construction Cap				17,673			17,673	25,350

*Estimated PA&ED cost is over the programmed budget. G-12 has been processed for additional funds

Estimate

Segment 1 preliminary cost estimate is $41,743,000 for current total project cost and $44,988,000 for escalated total project cost (based on the Caltrans 11-Page Preliminary Cost Estimate Template).

Segment 2 preliminary cost estimate is $33,014,850 for current total project cost and $36,933,000 for escalated total project cost.

9. DELIVERY SCHEDULES

Project Milestones		Milestone Date (Month/Day/Year) Segment 1	Milestone Date (Month/Day/Year) Segment 2	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	1/28/14	1/28/14	Actual
BEGIN ENVIRONMENTAL	M020	2/14/14	2/14/14	Actual
CIRCULATE DED EXTERNALLY	M120	8/3/18	8/3/18	Actual
PA & ED	M200	11/1/2018	11/1/2018	Target
PS&E TO DOE	M377	10/5/2018	2/1/2019	Target
RIGHT OF WAY CERTIFICATION	M410	11/20/2018	12/1/2019	Target
READY TO LIST	M460	12/5/2018	1/02/2020	Target
FUND ALLOCATION	M470	1/30/2019	3/1/2020	Target
HEADQUARTERS ADVERTISE	M480	3/1/2019	4/01/2020	Target
AWARD	M495	4/1/2019	6/1/2020	Target
APPROVE CONTRACT	M500	5/1/2019	7/1/2020	Target
CONTRACT ACCEPTANCE	M600	3/15/2021	12/1/2022	Target
END PROJECT	M800	3/15/2024	12/1/2024	Target

10. RISKS

High Risk Issues - Because the project involves construction in wetlands and vernal pools, the project requires an approved wetland delineation from the USACE and a Biological Opinion from the USFWS. Obtaining these items could delay the delivery of PA&ED, and subsequent construction permits. This is being mitigated by holding advanced meetings with the resource agencies and utilizing technical assistance with agency staff to resolve issues prior to formal consultations.

Acquisition of right of way and utility relocations are also high-risk issues for the segment 2 project.

Medium/ Low Risk Issues - There are many normal medium and low risk issues. Other medium and low risk issues relate to the availability of staffing to complete the work on time.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

This project is an Assigned Project in accordance with the current Federal Highway Administration (FHWA) and Department of Transportation (Caltrans) Joint Stewardship and Oversight Agreement.

Permits and Approvals Needed

Agency	Permit/Approval
U.S. Army Corps of Engineers	Section 404 authorization for fill of waters of the United States
U.S. Fish and Wildlife Service	Coordination and Section 7 consultation regarding threatened and endangered species
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification and coverage under the existing Caltrans National Pollutant Discharge Elimination System Permit (Order No. 00-06-DWQ)
Butte County Air Quality Management District	Formal notification prior to construction
Local Agency	Possible Cooperative Agreements with Butte County Association of Governments, Butte County and/or the City of Oroville

12. PROJECT REVIEWS

Type of Review	Reviewer	Date
Scoping team field review	-	March 2015
District Program Advisor	-	
Headquarters SHOPP Program Advisor	-	
Headquarters Project Delivery Coordinator	Chris Alppers	June 2018
Project Manager	Winder Bajwa	June 2018
FHWA		
District Safety Review	Fernando Rivera	June 2018
Constructability Review	Rudolfo Avila	June 2018

13. PROJECT PERSONNEL

Name:	**Title:**	**Telephone Number:**
Winder Bajwa	Caltrans, Project Manager	530-741-4432
Andy Newsum	BCAG	530-809-4616
Matt Brogan	Mark Thomas, Principal	916-381-9100
James Pangburn	Mark Thomas, Project Manager	916-381-9100
Fred Choa	Fehr and Peers, Traffic	916-773-1900
Sue Bushnell-Bergfalk	ICF International, Environmental	916-737-3000
Lindsay Christensen	ICF International, Environmental	916-737-3000
Kelli McNally	Caltrans, Environmental	530-741-4134
Rodolfo Avila, Jr	Caltrans, Design	530-741-5114
Mundeep Purewal	Caltrans, Environmental	530-741-4590
Fernando Rivera	Caltrans, Traffic	530-741-5712
Hardeep Pannu	Caltrans, Right of Way	530-740-4916
Douglas Bortz	Caltrans, Right of Way	530-741-4419
Scott Mann	Caltrans, Design	916-274-0560
Christine Zdunkiewicz	Caltrans, Design	916-274-0627
Jalwat Ahmad	Caltrans, Design	530-741-4360
Juan Rodriguez	Caltrans, Design	530-741-4421
Manpreet K. Ark	Caltrans, Project Management	530 741-4181
Mary Ann Hudspeth	Caltrans, Traffic – Electrical	530-634-7622
Teresa Limon	Caltrans, Traffic Operations	530-741-5745
Joyce Loftus	Caltrans, Traffic Management Systems	530-741-5411
Chris Alpers	Caltrans, Maintenance	530-895-4022

14. ATTACHMENTS

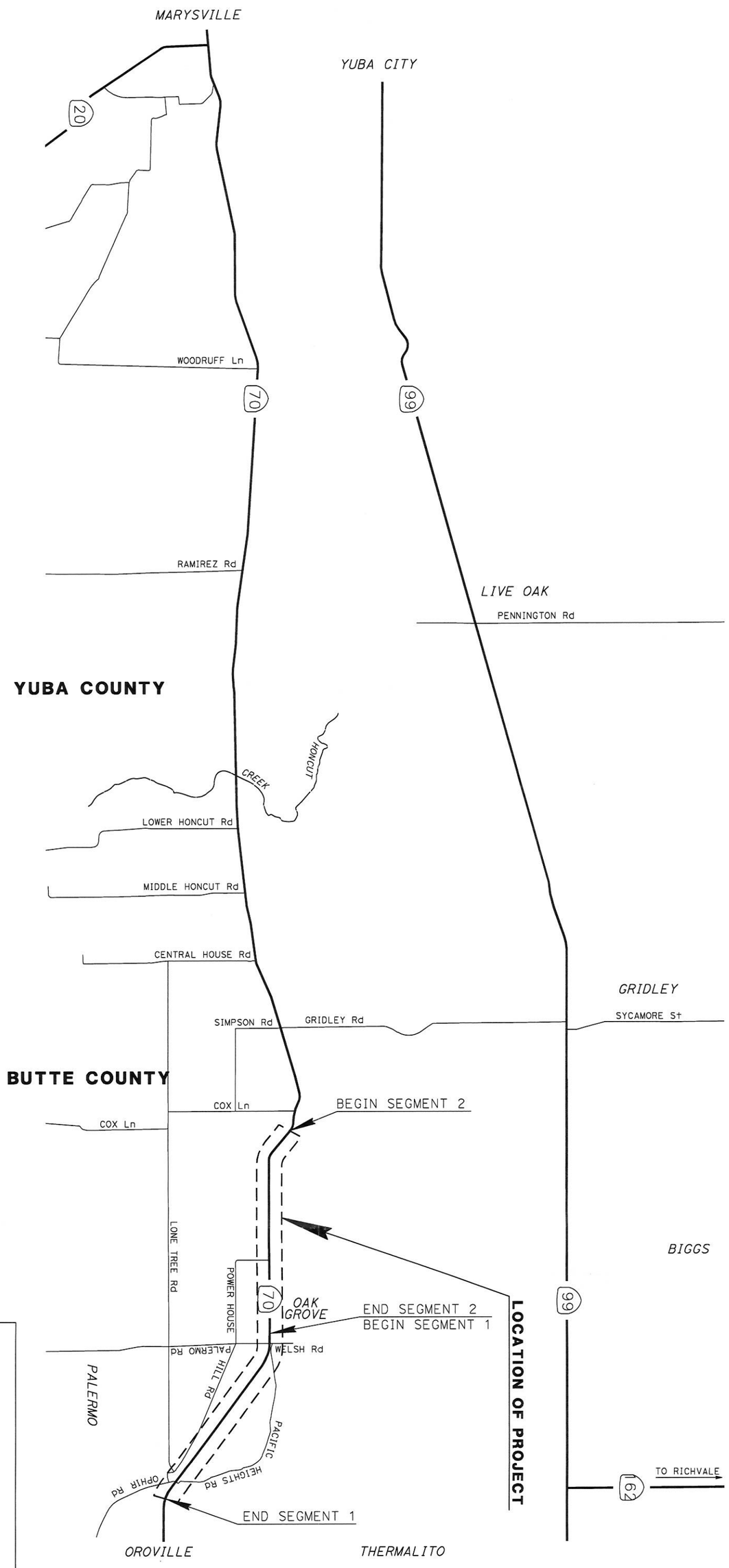
A. Location Map (1)
B. Preliminary Cost Estimate (36)
C. Right of Way Data Sheet / Utility Information Sheets (20)
D. Risk Register (2)
E. Storm Water Data Report- Signed Cover Sheet (1)
F. Design Exception Fact Sheets (49)
G. Programming Sheet

The following attachments are bound separately

H. Alternative Geometrics (115)
I. Final Environmental Document (250)

Attachment A

Location Map



ATTACHMENT A

VICINITY MAP

DESIGNED BY _____
CHECKED BY _____
SCALE NOT TO SCALE
APPROVED BY _____
RCE No. _____

MARK THOMAS & COMPANY, INC.
QUINCY ENGINEERING, INC.
7300 FOLSOM BOULEVARD
SUITE 203
SACRAMENTO, CA 95826

BUTTE COUNTY ASSOCIATION OF GOVERNMENTS
2580 SIERRA SUNRISE TERRANCE
SUITE 100
CHICO, CA 95928

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70		1	

LAST REVISION
00-00-00

DATE PLOTTED =>9/16/16
TIME PLOTTED =>4:38:22 PM

USERNAME => mokeefe
DGN FILE => SR70-Vicinity Map Exhibit.dwg

Attachment B

Preliminary Cost Estimate

Preliminary Cost Estimate

Combined Project ID: 03-3F280 (STIP); 3H710 (SHOPP)

Type of Estimate : Final Project Report
Program Code :
Project Limits : 03 - BUT - 70 - PM 8.8/12.1
Description: SR70 Corridor Improvements
Scope: Widen Highway from 2 to 4 lanes
Alternative : ***Preferred Alternative - Alternative 1 (Segment 1)***

	Current Cost	Escalated Cost
ROADWAY ITEMS	$ 28,704,400	$ 31,166,204
STRUCTURE ITEMS	$ -	$ -
SUBTOTAL CONSTRUCTION COST	$ 28,704,400	$ 31,166,204
RIGHT OF WAY	$ 2,000,000	$ 2,011,000
TOTAL CAPITAL OUTLAY COST	**$ 30,705,000**	**$ 33,178,000**
PR/ED SUPPORT	$ 1,946,000	$ 1,951,000
PS&E SUPPORT	$ 2,187,000	$ 2,279,000
RIGHT OF WAY SUPPORT	$ 2,838,000	$ 3,118,000
CONSTRUCTION SUPPORT	$ 4,068,000	$ 4,462,000
TOTAL CAPITAL OUTLAY SUPPORT COST*	**$ 11,039,000**	**$ 11,810,000**
TOTAL PROJECT COST	**$ 41,750,000**	**$ 45,000,000**

If Project has been programmed enter Programmed Amount $ -

Date of Estimate (Month/Year) Month / Year: 10 / 2018

Estimated Date of Construction Start (Month/Year): 5 / 2019

Number of Working Days: 220 Working Days

Estimated Mid-Point of Construction (Month/Year) Month / Year:

Number of Plant Establishment Days: 90 Days

Estimated Project Schedule

PID Approval
PA/ED Approval
PS&E
RTL
Begin Construction

Approved by Project Manager

James Pangburn	10/16/2018	(916) 381-9100
Project Manager	**Date**	**Phone**

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	$ 2,916,600
2	Pavement Structural Section	$ 8,598,900
3	Drainage	$ 843,300
4	Specialty Items	$ 4,371,500
5	Environmental	$ 1,344,600
6	Traffic Items	$ 1,005,800
7	Detours	$ -
8	Minor Items	$ 954,100
9	Roadway Mobilization	$ 2,003,500
10	Supplemental Work	$ 1,042,100
11	State Furnished	$ 878,100
12	Contingencies	$ 3,744,100
13	Overhead	$ 1,001,800
	TOTAL ROADWAY ITEMS	**$ 28,704,400**

Estimate Prepared By	Jon Hernandez	10/12/2018	(916) 381-9100
	Name and Title	Date	Phone
Estimate Reviewed By	James Pangburn	10/12/2018	(916) 381-9100
	Name and Title	Date	Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
160101	Clearing & Grubbing	LS	1	x	29,000.00	=	$	29,000
170101	Develop Water Supply	LS	1	x	75,000.00	=	$	75,000
190101	Roadway Excavation	CY	124,000	x	15.00	=	$	1,860,000
190103	Roadway Excavation (Type Y) ADL	CY		x		=	$	-
190105	Roadway Excavation (Type Z-2) ADL	CY		x		=	$	-
192037	Structure Excavation (Retaining Wall)	CY		x		=	$	-
193013	Structure Backfill (Retaining Wall)	CY		x		=	$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		=	$	-
194001	Ditch Excavation	CY		x		=	$	-
198010	Impored Borrow	CY	62,000	x	15.00	=	$	930,000
198007	Imported Material (Shoulder Backing)	TON	265	x	85.00	=	$	22,525

TOTAL EARTHWORK SECTION ITEMS	$	2,916,600

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
150771	Remove Asphalt Concrete Dike	LF		x		=	$	-
150860	Remove Base and Surfacing	CY		x		=	$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD	14,600	x	2.50	=	$	36,500
153139	Remove Concrete (Sidewalk)	LF	260	x	35.00	=	$	9,100
153215	Remove Concrete (Curb and Gutter)	LF	340	x	30.00	=	$	10,200
260201	Class 2 Aggregate Base (2.1')	CY	80,000	x	40.00	=	$	3,200,000
290201	Asphalt Treated Permeable Base	CY		x		=	$	-
365001	Sand Cover	TON		x		=	$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		=	$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		=	$	-
3750XX	Screenings (Type XX)	TON		x		=	$	-
377501	Slurry Seal	TON		x		=	$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		=	$	-
390132	Hot Mix Asphalt (Type A) (0.4')	TON	32,000	x	90.00	=	$	2,880,000
390136	Minor Hot Mix Asphalt	TON		x		=	$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	12,400	x	100.00	=	$	1,240,000
393003	Geosynthetic Pavement Interlayer	SQYD		x		=	$	-
394051	Shoulder Rumber Strip *(HMA, Type XX Inden*	STA	589	x	25.00	=	$	14,725
394071	Place Hot Mix Asphalt Dike	LF	3,600	x	2.30	=	$	8,280
394090	Place Hot Mix Asphalt (Misc. Area)	SQYD		x		=	$	-
397005	Tack Coat	TON		x		=	$	-
401000	Concrete Pavement	CY		x		=	$	-
401108	Replace Concrete Pavement (Rapid Strength	CY		x		=	$	-
404092	Seal Pavement Joint	LF		x		=	$	-
404094	Seal Longitudinal Isolation Joint	LF		x		=	$	-
413112A	Repair Spalled Joints (Polyester Grout)	SQYD		x		=	$	-
413115	Seal Existing Concrete Pavement Joint	LF		x		=	$	-
420102	Groove Existing Concrete Pavement	SQYD		x		=	$	-
420201	Grind Existing Concrete Pavement	SQYD		x		=	$	-
731502	Minor Concrete (Misc. Const)	CY		x		=	$	-
731530	Minor Concrete (Textured Paving)	SQFT		x		=	$	-
390132	HMA Overlay	TON	10,000	x	120.00	=	$	1,200,000
150305	Obliterate Surface	CY		x		=	$	-

TOTAL STRUCTURAL SECTION ITEMS	$	8,598,900

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
150206	Abandon Culvert	LF		x		=	$	-
150805	Remove Culvert	LF	295	x	45.00	=	$	13,275
150820	Modify Inlet	EA		x		=	$	-
152430	Adjust Inlet	LF		x		=	$	-
155003	Cap Inlet	EA		x		=	$	-
510502	Minor Concrete (Minor Structure)	CY	24	x	1,800.00	=	$	43,200
510090	Structural Concrete (Box Culvert)	CY	110	x	1,200.00	=	$	132,000
620180	30" APC Pipe	LF	2,000	x	140.00	=	$	280,000
650010	12" Reinforced Concrete Pipe	LF	20	x	100.00	=	$	2,000
650014	18" RCP Pipe	LF	50	x	110.00	=	$	5,500
650017	24" RCP Pipe	LF	455	x	120.00	=	$	54,600
650019	27" RCP Pipe	LF	140	x	140.00	=	$	19,600
650022	30" RCP Pipe	LF	330	x	150.00	=	$	49,500
650017	36" RCP Pipe	LF	170	x	175.00	=	$	29,750
650017	42" RCP Pipe	LF	140	x	250.00	=	$	35,000
705201	12" Concrete Flared End Section	EA	2	x	940.00	=	$	1,880
705204	18" Concrete Flared End Section	EA	2	x	1,070.00	=	$	2,140
705206	24" Concrete Flared End Section	EA	3	x	1,110.00	=	$	3,330
705208	30" Concrete Flared End Section	EA	8	x	1,350.00	=	$	10,800
707117	36" Precast Concrete Pipe Inlet	LF	23	x	620.00	=	$	14,260
707125	48" Precast Concrete Pipe Inlet	LF	21	x	720.00	=	$	15,120
721420	Concrete (Ditch Lining)	CY		x		=	$	-
729009	Rock Slope Protection (Facing, Method B)	CY	220	x	230.00	=	$	50,600
729010	Rock Slope Protection Fabric	SQYD	270	x	7.00	=	$	1,890
750001	Miscellaneous Iron and Steel - Grate Type 24	LB	1,410	x	2.70	=	$	3,807
XXXXXX	Additional Drainage (Palermo Intersection)	LS	1	x	30,000.00	=	$	30,000
XXXXXX	Additional Drainage (Ophir Intersection)	LS	1	x	30,000.00	=	$	2,500
XXXXXX	Inlet Type G2	CY	17	x	2,500.00	=	$	42,500

TOTAL DRAINAGE ITEMS $ 843,300

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
070012	Progress Schedule (Critical Path Method)	LS	1	x	3,000.00	=	$	3,000
150662	Remove Metal Beam Guard Railing	LF	160	x	12.00	=	$	1,920
150668	Remove Terminal Systems	EA		x		=	$	-
800001	Remove Fence (Type BW))	LF	17,000	x	2.50	=	$	42,500
153250	Remove Sound Wall	SQFT		x		=	$	-
190110	Lead Compliance Plan	LS	1	x	2,000.00	=	$	2,000
49XXXX	CIDH Concrete Piling *(Insert Diameter)*	LF		x		=	$	-
510060	Retaining Wall	SF	27,000	x	150.00	=	$	4,050,000
510133	Class 2 Concrete (Retaining Wall)	CY		x		=	$	-
510524	Minor Concrete (Sound Wall)	CY		x		=	$	-
5110XX	Architectural Treatment *(Insert Type)*	SQFT		x		=	$	-
511048	Apply Anti-Graffiti Coating	SQFT		x		=	$	-
5136XX	Reinforced Concrete Crib Wall *(Insert Type)*	SQFT		x		=	$	-
518002	Sound Wall (Masonry Block)	SQFT		x		=	$	-
520103	Bar Reinf. Steel (Retaining Wall)	LB		x		=	$	-
80XXXX	Fence (*Insert Type*)	LF		x		=	$	-
832005	Midwest Guardrail System	LF	160	x	50.00	=	$	8,000
839310	Double Thrie Beam Barrier	LF		x		=	$	-
839521	Cable Railing	LF		x		=	$	-
83954X	Transition Railing *(Insert Type)*	EA		x		=	$	-
8395XX	Terminal System (Type CAT)	EA		x		=	$	-
8395XX	Alternative Flared Terminal System	EA		x		=	$	-
8395XX	End Anchor Assembly (*Insert Type*)	EA		x		=	$	-
839561	Rail Tensioning Assembly	EA		x		=	$	-
839XXX	Crash Cushion *(Insert Type)*	EA		x		=	$	-
83XXXX	Concrete Barrier *(Insert Type)*	LF		x		=	$	-
800006	Fence (Type BW, Metal Post))	LF	16,500	x	16.00	=	$	264,000

TOTAL SPECIALTY ITEMS $ 4,371,500

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost
	Biological Mitigation	LS	1	x	100,000.00	=	$	100,000
071325	Temporary Silt Fence	LF	28,100	x	3.50	=	$	98,350
071325	Temporary Fence (Type ESA)	LF	2,000	x	6.50	=	$	13,000

Subtotal Environmental $ 211,350

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost
200001	Highway Planting	LS		x		=	$	-
20XXXX	XXX" (*Insert Type*) Conduit *(Use for*	LF		x		=	$	-
20XXXX	Extend XXX" *(Insert Type)* Conduit	LF		x		=	$	-
201700	Imported Topsoil	CY		x		=	$	-
210430	Erosion Control (Hydroseed)	SQYD	1,650,000	x	0.15	=	$	247,500
203021	Fiber Rolls	LF		x		=	$	-
203026	Move In/ Move Out (Erosion Control)	EA		x		=	$	-
204099	Plant Establishment Work	LS		x		=	$	-
204101	Extend Plant Establishment (X Years)	LS		x		=	$	-
208000	Irrigation System	LS		x		=	$	-
208304	Water Meter	EA		x		=	$	-
209801	Maintenance Vehicle Pullout	EA	4	x	5,000.00	=	$	20,000

Subtotal Landscape and Irrigation $ 267,500

5C - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost
074016	Construction Site Management	LS	1	x	10,000.00	=	$	10,000
074017	Prepare WPCP	LS	1	x	120,000.00	=	$	120,000
074019	Prepare SWPPP	LS	1	x	20,000.00	=	$	20,000
074023	Temporary Erosion Control	SQYD		x		=	$	-
074027	Temporary Erosion Control Blanket	SQYD		x		=	$	-
074028	Temporary Fiber Roll	LF	97,700	x	3.00	=	$	293,100
074032	Temporary Concrete Washout Facility	LS	1	x	15,000.00	=	$	15,000
074033	Temporary Construction Entrance	EA	8	x	4,350.00	=	$	34,800
074035	Temporary Check Dam	LF		x		=	$	-
074037	Move In/ Move Out (Temporary Erosion Cont	EA	21	x	380.00	=	$	7,980
074038	Temp. Drainage Inlet Protection	EA		x		=	$	-
074041	Street Sweeping	LS	1	x	30,000.00	=	$	30,000
074042	Temporary Concrete Washout (Portable)	LS	1	x	2,000.00	=	$	2,000
130520	Temporary Hydraulic Mulch	SQYD	1,664,250	x	0.20	=	$	332,850

Supplemental Work for NPDES

(These costs are not accounted in total here but under Supplemental Work on sheet 7 of 11).

066595	Water Pollution Control Maintenance Sharing	LS	1	x	40,000.00	=	$	40,000
066596	Additional Water Pollution Control**	LS	1	x	55,000.00	=	$	55,000
066597	Storm Water Sampling and Analysis Day***	EA	22	x	1,500.00	=	$	33,000
130310	Rain Event Action Plan	EA	50	x	650.00	=	$	32,500
130330	Storm Water Annual Report	EA	3	x	3,000.00	=	$	9,000

Subtotal NPDES (Without Supplemental Work) $ 865,730

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL $ 1,344,600

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
150760	Remove Sign Structure	EA		x		=	$	-
151581	Reconstruct Sign Structure	EA		x		=	$	-
152641	Modify Sign Structure	EA		x		=	$	-
5602XX	Furnish Sign Structure	LB		x		=	$	-
5602XX	Install Sign Structure	LB		x		=	$	-
56XXXX	XXX" CIDHC Pile (Sign Foundation)	LF		x		=	$	-
860090	Maintain Existing Traffic Management	LS	1	x	50,000.00	=	$	50,000
860810	Inductive Loop Detectors	EA		x		=	$	-
86055X	Lighting & Sign Illumination	LS		x		=	$	-
8607XX	Interconnection Facilities	LS		x		=	$	-
8609XX	Traffic Monitoring Stations	LS		x		=	$	-
860XXX	Traffic Signals (Ophir Rd)	LS	1	x	400,000.00	=	$	400,000
860XXX	Traffic Signals (Palermo Rd)	LS		x		=	$	-
8611XX	Ramp Metering System (Location X)	LS		x		=	$	-
8611XX	Ramp Metering System (Location X)	LS		x		=	$	-

Subtotal Traffic Electrical $ *450,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
120090	Construction Area Signs	LS	1	x	3,350.00	=	$	3,350
150701	Remove Yellow Painted Traffic Stripe	LF		x		=	$	-
150710	Remove Traffic Stripe	LF	49,300	x	1.50	=	$	73,950
150713	Remove Pavement Marking	SQFT		x		=	$	-
150742	Remove Roadside Sign	EA	42	x	98.00	=	$	4,116
152320	Reset Roadside Sign	EA		x		=	$	-
152390	Relocate Roadside Sign	EA		x		=	$	-
566011	Roadside Sign (One Post)	EA	22	x	320.00	=	$	7,040
566012	Roadside Sign (Two Post)	EA	8	x	580.00	=	$	4,640
560XXX	Furnish Sign Panels	SQFT	380	x	350.00	=	$	133,000
560XXX	Install Sign Panels	SQFT	380	x	350.00	=	$	133,000
5660XX	Additional Roadside Signs	LS	1	x	50,000.00	=	$	50,000
840501	Thermoplastic Traffic Stripe	LF	115,000	x	0.50	=	$	57,500
840515	Thermoplastic Pavement Marking	SQFT	2,220	x	4.80	=	$	10,656

Subtotal Traffic Signing and Striping $ *477,252*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120100	Traffic Control System	LS	1	x	13,500.00	=	$	13,500
120120	Type III Barricade	EA		x		=	$	-
120143	Temporary Pavement Delineation	LS	1	x	10,000.00	=	$	10,000
12016X	Channelizer	EA		x		=	$	-
128650	Portable Changeable Message Signs	LS	2	x	10,000.00	=	$	20,000
129000	Temporary Railing (Type K)	LS	1	x	20,000.00	=	$	20,000
129100	Temp. Crash Cushion Module	LS	1	x	15,000.00	=	$	15,000
129099A	Traffic Plastic Drum	EA		x		=	$	-
839603A	Temporary Crash Cushion (ADIEM)	EA		x		=	$	-

Subtotal Stage Construction and Traffic Handling $ *78,500*

TOTAL TRAFFIC ITEMS $ **1,005,800**

SECTION 7: DETOURS

Include constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)		Cost
0713XX	Temporary Fence (Type X)	LF		x		= $	-
07XXXX	Temporary Drainage	LS		x		= $	-
120143	Temporary Pavement Delineation	LF		x		= $	-
1286XX	Temporary Signals	EA		x		= $	-
129000	Temporary Railing (Type K)	LF		x		= $	-
190101	Roadway Excavation	CY		x		= $	-
198001	Imported Borrow	CY		x		= $	-
198050	Embankment	CY		x		= $	-
250401	Class 4 Aggregate Subbase	CY		x		= $	-
260201	Class 2 Aggregate Base	CY		x		= $	-
390132	Hot Mix Asphalt (Type A)	TON		x		= $	-

TOTAL DETOURS $ -

SUBTOTAL SECTIONS 1-7 $ 19,080,700

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items						
ADA Items				0.0%	$	-
8B - Bike Path Items						
Bike Path Items				0.0%	$	-
8C - Other Minor Items						
Other Minor Items				0.0%	$	-
Total of Section 1-7	$	19,080,700	x	5.0%	= $	954,035

TOTAL MINOR ITEMS $ 954,100

SECTIONS 9: MOBILIZATION

Item code							
999990	Total Section 1-8	$	20,034,800	x	10%	= $	2,003,480

TOTAL MOBILIZATION $ 2,003,500

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)		Cost
066015	Federal Trainee Program	LS		x		= $	-
066063	Traffic Management Plan - Public Informati	LS	1	x	50,000.00	= $	50,000
066090	Maintain Traffic	LS	1	x	100,000.00	= $	100,000
066094	Value Analysis	LS		x		= $	-
066204	Remove Rock & Debris	LS		x		= $	-
066222	Locate Existing Cross-Over	LS		x		= $	-
066670	Payment Adjustments For Price Index Fluct	LS	1	x	98,000.00	= $	98,000
066700	Partnering	LS	1	x	50,000.00	= $	50,000
066866	Operation of Existing Traffic Management S	LS		x		= $	-
066920	Dispute Review Board	LS	1	x	15,000.00	= $	15,000

*Cost of **NPDES** Supplemental Work specified in Section 5C* = $ 128,000

Total Section 1-8 $ 20,034,800 3% = $ 601,044

TOTAL SUPPLEMENTAL WORK $ 1,042,100

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066063	Public Information	LS		x		=	$0
066105	RE Office	LS	1	x	17,000.00	=	$17,000
066803	Padlocks	LS		x		=	$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	$0
066901	Water Expenses	LS		x		=	$0
066062A	COZEEP Expenses	LS	1	x	240,000.00	=	$240,000
06684X	Ramp Meter Controller Assembly	LS		x		=	$0
06684X	TMS Controller Assembly	LS		x		=	$0
06684X	Traffic Signal Controller Assembly	LS	1	x	20,000.00	=	$20,000

Total Section 1-8	$	20,034,800	3%	= $	601,044

TOTAL STATE FURNISHED	**$878,100**

SECTION 12: TIME-RELATED OVERHEAD

Estiamted Time-Releated Overhead (TRO) Percentage (0% to 10%) = 5%

Item code		Unit	Quantity		Unit Price ($)		Cost
070018	Time-Related Overhead	WD	280	X	$3,577.86	=	$1,001,800

TOTAL TIME-RELATED OVERHEAD	**$1,001,800**

SECTION 13: CONTINGENCY

(Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	$	24,960,300	x	15%	=	$3,744,045

TOTAL CONTINGENCY	**$3,744,100**

II. STRUCTURE ITEMS

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	0 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0.00	$0.00	$0.00
COST OF EACH STRUCTURE	**$0.00**	**$0.00**	**$0.00**

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	0 SQFT	0.00 SQFT	0.0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0.00	$0.00	$0.00
COST OF EACH STRUCTURE	**$0.00**	**$0.00**	**$0.00**

TOTAL COST OF BRIDGES	**$0.00**
TOTAL COST OF BUILDINGS	**$0.00**
TOTAL COST OF STRUCTURES[1]	**$0.00**

Estimate Prepared By: _____ Date: _____
XXXXXXXXXXXXXXXX ------ Division of Structures

[1]Structure's Estimate includes Overhead and Mobilization.
Add more sheets if needed. Call them 9a, 9b, 9c, ..., etc

Preliminary Cost Estimate

Combined Project ID: 03-3F281 (STIP); 3H720 (SHOPP)

Type of Estimate : Final Project Report
Program Code :
Project Limits : 03 - BUT - 70 - PM 5.6/8.8
Description: SR70 Corridor Improvements
Scope : Widen Highway from 2 to 4 lanes.
Alternative : ***Preferred Alternative - Alternative 1 (Segment 2)***

	Current Cost	Escalated Cost
ROADWAY ITEMS	$ 19,987,600	$ 22,614,595
STRUCTURE ITEMS	$ -	$ -
SUBTOTAL CONSTRUCTION COST	$ 19,987,600	$ 22,614,595
RIGHT OF WAY	$ 3,245,850	$ 3,425,000
TOTAL CAPITAL OUTLAY COST	**$ 23,234,000**	**$ 26,040,000**
PR/ED SUPPORT	$ 1,255,000	$ 1,264,000
PS&E SUPPORT	$ 2,617,000	$ 2,764,000
RIGHT OF WAY SUPPORT	$ 2,161,000	$ 2,454,000
CONSTRUCTION SUPPORT	$ 3,748,000	$ 4,411,000
TOTAL CAPITAL OUTLAY SUPPORT COST*	**$ 9,781,000**	**$ 10,893,000**
TOTAL PROJECT COST	**$ 33,050,000**	**$ 36,950,000**

If Project has been programmed enter Programmed Amount $ -

	Month / Year
Date of Estimate (Month/Year)	10 / 2018
Estimated Date of Construction Start (Month/Year)	5 / 2021
Number of Working Days	220 Working Days
Estimated Mid-Point of Construction (Month/Year)	1 / 2022
Number of Plant Establishment Days	90 Days

Estimated Project Schedule

PID Approval
PA/ED Approval
PS&E
RTL
Begin Construction

Approved by Project Manager

James Pangburn	10/16/2018	(916) 381-9100
Project Manager	**Date**	**Phone**

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	$ 1,060,000
2	Pavement Structural Section	$ 8,616,900
3	Drainage	$ 1,142,800
4	Specialty Items	$ 580,800
5	Environmental	$ 1,106,600
6	Traffic Items	$ 712,300
7	Detours	$ -
8	Minor Items	$ 661,000
9	Roadway Mobilization	$ 1,388,100
10	Supplemental Work	$ 815,200
11	State Furnished	$ 602,700
12	Contingencies	$ 2,607,100
13	Overhead	$ 694,100
	TOTAL ROADWAY ITEMS	**$ 19,987,600**

Estimate Prepared By	Jose Bygoytia Name and Title	10/12/2018 Date	(916) 381-9100 Phone
Estimate Reviewed By	James Pangburn Name and Title	10/12/2018 Date	(916) 381-9100 Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
160101	Clearing & Grubbing	LS	1	x	250,000.00	=	$	250,000
170101	Develop Water Supply	LS	1	x	75,000.00	=	$	75,000
190101	Roadway Excavation	CY	10,000	x	15.00	=	$	150,000
190103	Roadway Excavation (Type Y) ADL	CY		x		=	$	-
190105	Roadway Excavation (Type Z-2) ADL	CY		x		=	$	-
192037	Structure Excavation (Retaining Wall)	CY		x		=	$	-
193013	Structure Backfill (Retaining Wall)	CY		x		=	$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		=	$	-
194001	Ditch Excavation	CY		x		=	$	-
198001	Impored Borrow	CY	39,000	x	15.00	=	$	585,000
198007	Imported Material (Shoulder Backing)	TON		x		=	$	-

TOTAL EARTHWORK SECTION ITEMS	$	1,060,000

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
150771	Remove Asphalt Concrete Dike	LF		x		=	$	-
150860	Remove Base and Surfacing	CY		x		=	$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD	7,575	x	2.50	=	$	18,938
1532XX	Remove Concrete (type)	CY		x		=	$	-
250401	Class 4 Aggregate Subbase	CY		x		=	$	-
260201	Class 2 Aggregate Base (2.1')	CY	94,000	x	40.00	=	$	3,760,000
290201	Asphalt Treated Permeable Base	CY		x		=	$	-
365001	Sand Cover	TON		x		=	$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		=	$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		=	$	-
3750XX	Screenings (Type XX)	TON		x		=	$	-
377501	Slurry Seal	TON		x		=	$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		=	$	-
390132	Hot Mix Asphalt (Type A) (0.4')	TON	25,000	x	90.00	=	$	2,250,000
390136	Minor Hot Mix Asphalt	TON		x		=	$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	9,000	x	120.00	=	$	1,080,000
393003	Geosynthetic Pavement Interlayer	SQYD		x		=	$	-
39405X	Shoulder Rumber Strip *(HMA, Type XX Indenta*	LF	31,835	x	25.00	=	$	795,875
394071	Place Hot Mix Asphalt Dike	LF		x		=	$	-
394090	Place Hot Mix Asphalt (Misc. Area)	SQYD		x		=	$	-
397005	Tack Coat	TON		x		=	$	-
401000	Concrete Pavement	CY		x		=	$	-
401108	Replace Concrete Pavement (Rapid Strength (	CY		x		=	$	-
404092	Seal Pavement Joint	LF		x		=	$	-
404094	Seal Longitudinal Isolation Joint	LF		x		=	$	-
413112A	Repair Spalled Joints (Polyester Grout)	SQYD		x		=	$	-
413115	Seal Existing Concrete Pavement Joint	LF		x		=	$	-
420102	Groove Existing Concrete Pavement	SQYD		x		=	$	-
420201	Grind Existing Concrete Pavement	SQYD		x		=	$	-
731502	Minor Concrete (Misc. Const)	CY		x		=	$	-
731530	Minor Concrete (Textured Paving)	SQFT		x		=	$	-
390132	HMA Overlay	TON	8,900	x	80.00		$	712,000
150305	Obliterate Surface	SQYD		x			$	-

TOTAL STRUCTURAL SECTION ITEMS	$	8,616,900

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
150206	Abandon Culvert	LF		x		=	$	-
150805	Remove Culvert	LF	3,350	x	45.00	=	$	150,750
150820	Modify Inlet	EA		x		=	$	-
152430	Adjust Inlet	LF		x		=	$	-
155003	Cap Inlet	EA		x		=	$	-
193114	Sand Backfill	CY		x		=	$	-
510502	Minor Concrete (Minor Structure)	CY		x		=	$	-
510090	Structural Concrete (Box Culvert)	CY	110	x	1,500.00	=	$	165,000
62XXXX	XXX" APC Pipe	LF		x		=	$	-
64XXXX	XXX" Plastic Pipe	LF		x		=	$	-
650014	18" RCP Pipe	LF	1,500	x	110.00	=	$	165,000
650017	24" RCP Pipe	LF	2,600	x	120.00	=	$	312,000
650017	36" RCP Pipe	LF		x		=	$	-
650017	42" RCP Pipe	LF		x		=	$	-
66XXXX	XXX" CSP Pipe	LF		x		=	$	-
68XXXX	Edge Drain	LF		x		=	$	-
69XXXX	XXX" Pipe Downdrain	LF		x		=	$	-
70XXXX	XXX" Pipe Inlet	LF		x		=	$	-
70XXXX	XXX" Pipe Riser	LF		x		=	$	-
70XXXX	XXX" Flared End Section	EA		x		=	$	-
703233	Grated Line Drain	LF		x		=	$	-
72XXXX	Rock Slope Protection (Type and Method)	CY		x		=	$	-
721420	Concrete (Ditch Lining)	CY		x		=	$	-
721430	Concrete (Channel Lining)	CY		x		=	$	-
729010	Rock Slope Protection Fabric	SQYD		x		=	$	-
750001	Miscellaneous Iron and Steel	LB		x		=	$	-
XXXXXX	Additional Drainage	LS	1	x	350,000.00	=	$	350,000
XXXXXX	Some Item			x		=	$	-

TOTAL DRAINAGE ITEMS $ 1,142,800

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
070012	Progress Schedule (Critical Path Method)	LS	1	x	3,000.00	=	$	3,000
150662	Remove Metal Beam Guard Railing	LF	250	x	12.00	=	$	3,000
150668	Remove Terminal Systems	EA		x		=	$	-
800001	Remove Fence (Type BW)	LF	30,200	x	2.50	=	$	75,500
1532XX	Remove Barrier (*Insert Type)*	LF		x		=	$	-
153250	Remove Sound Wall	SQFT		x		=	$	-
190110	Lead Compliance Plan	LS	1	x	2,000.00	=	$	2,000
49XXXX	CIDH Concrete Piling *(Insert Diameter)*	LF		x		=	$	-
510060	Structural Concrete (Retaining Wall)	CY		x		=	$	-
510133	Class 2 Concrete (Retaining Wall)	CY		x		=	$	-
510524	Minor Concrete (Sound Wall)	CY		x		=	$	-
5110XX	Architectural Treatment *(Insert Type)*	SQFT		x		=	$	-
511048	Apply Anti-Graffiti Coating	SQFT		x		=	$	-
5136XX	Reinforced Concrete Crib Wall *(Insert Type)*	SQFT		x		=	$	-
518002	Sound Wall (Masonry Block)	SQFT		x		=	$	-
520103	Bar Reinf. Steel (Retaining Wall)	LB		x		=	$	-
80XXXX	Fence (*Insert Type*)	LF		x		=	$	-
832001	Midwest Guardrail System	LF	250	x	50.00	=	$	12,500
839310	Double Thrie Beam Barrier	LF		x		=	$	-
839521	Cable Railing	LF		x		=	$	-
83954X	Transition Railing *(Insert Type)*	EA		x		=	$	-
8395XX	Terminal System (Type CAT)	EA		x		=	$	-
8395XX	Alternative Flared Terminal System	EA		x		=	$	-
8395XX	End Anchor Assembly (*Insert Type*)	EA		x		=	$	-
839561	Rail Tensioning Assembly	EA		x		=	$	-
839XXX	Crash Cushion *(Insert Type)*	EA		x		=	$	-
83XXXX	Concrete Barrier *(Insert Type)*	LF		x		=	$	-
800006	Fence (Type BW, Metal Post)	LF	30,300	x	16.00	=	$	484,800

TOTAL SPECIALTY ITEMS $ 580,800

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost
	Biological Mitigation	LS	1	x	10,000.00	=	$	10,000
130680	Temporary Silt Fence	LF	33,755	x	3.50	=	$	118,143
071325	Temporary Fence (Type ESA)	LF	21,025	x	6.50	=	$	136,663

Subtotal Environmental $ 264,805

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost
200001	Highway Planting	LS		x		=	$	-
20XXXX	XXX" (*Insert Type*) Conduit *(Use for*	LF		x		=	$	-
20XXXX	Extend XXX" *(Insert Type)* Conduit	LF		x		=	$	-
201700	Imported Topsoil	CY		x		=	$	-
2030XX	Erosion Control (Hydroseed)	SQYD	112,000	x	0.15	=	$	16,800
203021	Fiber Rolls	LF		x		=	$	-
203026	Move In/ Move Out (Erosion Control)	EA		x		=	$	-
204099	Plant Establishment Work	LS		x		=	$	-
204101	Extend Plant Establishment (X Years)	LS		x		=	$	-
208000	Irrigation System	LS		x		=	$	-
208304	Water Meter	EA		x		=	$	-
209801	Maintenance Vehicle Pullout	EA	6	x	5,000.00	=	$	30,000

Subtotal Landscape and Irrigation $ 46,800

5C - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost
074016	Construction Site Management	LS	1	x	10,000.00	=	$	10,000
074017	Prepare WPCP	LS	1	x	120,000.00	=	$	120,000
074019	Prepare SWPPP	LS	1	x	20,000.00	=	$	20,000
074023	Temporary Erosion Control	SQYD		x		=	$	-
074027	Temporary Erosion Control Blanket	SQYD		x		=	$	-
074028	Temporary Fiber Roll	LF	108,548	x	3.00	=	$	325,644
074032	Temporary Concrete Washout Facility	LS	1	x	15,000.00	=	$	15,000
074033	Temporary Construction Entrance	EA	12	x	4,350.00	=	$	52,200
074035	Temporary Check Dam	LF		x		=	$	-
074037	Move In/ Move Out (Temporary Erosion Con	EA	21	x	380.00	=	$	7,980
074038	Temp. Drainage Inlet Protection	EA		x		=	$	-
074041	Street Sweeping	LS	1	x	30,000.00	=	$	30,000
074042	Temporary Concrete Washout (Portable)	LS	1	x	2,000.00	=	$	2,000
130520	Temporary Hydraulic Mulch	SQYD	1,060,400	x	0.20	=	$	212,080

Supplemental Work for NPDES

(These costs are not accounted in total here but under Supplemental Work on sheet 7 of 11).

066595	Water Pollution Control Maintenance Sharing	LS	1	x	40,000.00	=	$	40,000
066596	Additional Water Pollution Control**	LS	1	x	55,000.00	=	$	55,000
130320	Storm Water Sampling and Analysis Day***	EA	22	x	1,500.00	=	$	33,000
130310	Rain Event Action Plan	EA	50	x	650.00	=	$	32,500
130330	Storm Water Annual Report	EA	10	x	3,000.00	=	$	30,000

Subtotal NPDES (Without Supplemental Work) $ 794,904

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL $ 1,106,600

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
150760	Remove Sign Structure	EA		x		=	$	-
151581	Reconstruct Sign Structure	EA		x		=	$	-
152641	Modify Sign Structure	EA		x		=	$	-
5602XX	Furnish Sign Structure	LB		x		=	$	-
5602XX	Install Sign Structure	LB		x		=	$	-
56XXXX	XXX" CIDHC Pile (Sign Foundation)	LF		x		=	$	-
860090	Maintain Existing Traffic Management	LS		x		=	$	-
860810	Inductive Loop Detectors	EA		x		=	$	-
86055X	Lighting & Sign Illumination	LS		x		=	$	-
8607XX	Interconnection Facilities	LS		x		=	$	-
8609XX	Traffic Monitoring Stations	LS		x		=	$	-
860XXX	Traffic Signals	LS		x		=	$	-
8611XX	Ramp Metering System (Location X)	LS		x		=	$	-
8611XX	Ramp Metering System (Location X)	LS		x		=	$	-
86XXXX	Fiber Optic Conduit System	LS		x		=	$	-

Subtotal Traffic Electrical $ -

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
120090	Construction Area Signs	LS	1	x	50,000.00	=	$	50,000
150701	Remove Yellow Painted Traffic Stripe	LF		x		=	$	-
150710	Remove Traffic Stripe	LF	66,000	x	2.50	=	$	165,000
150713	Remove Pavement Marking	SQFT		x		=	$	-
150742	Remove Roadside Sign	EA	24	x	100.00	=	$	2,400
152320	Reset Roadside Sign	EA		x		=	$	-
152390	Relocate Roadside Sign	EA		x		=	$	-
566011	Roadside Sign (One Post)	EA	19	x	320.00	=	$	6,080
566012	Roadside Sign (Two Post)	EA	3	x	580.00	=	$	1,740
560XXX	Furnish Sign Panels	SQFT	260	x	350.00	=	$	91,000
560XXX	Install Sign Panels	SQFT	260	x	350.00	=	$	91,000
5660XX	Additional Roadside Signs	LS	1	x	50,000.00	=	$	50,000
84XXXX	Thermoplastic Traffic Stripe	LF	100,000	x	0.50	=	$	50,000
840515	Thermoplastic Pavement Marking	LS	1	x	25,000.00	=	$	25,000

Subtotal Traffic Signing and Striping $ *532,220*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120100	Traffic Control System	LS	1	x	45,000.00	=	$	45,000
120120	Type III Barricade	EA		x		=	$	-
120143	Temporary Pavement Delineation	LS	1	x	25,000.00	=	$	25,000
12016X	Channelizer	EA		x		=	$	-
128650	Portable Changeable Message Signs	LS	2	x	10,000.00	=	$	20,000
129000	Temporary Railing (Type K)	LS	1	x	50,000.00	=	$	50,000
129100	Temp. Crash Cushion Module	LS	1	x	40,000.00	=	$	40,000
129099A	Traffic Plastic Drum	EA		x		=	$	-
839603A	Temporary Crash Cushion (ADIEM)	EA		x		=	$	-

Subtotal Stage Construction and Traffic Handling $ *180,000*

TOTAL TRAFFIC ITEMS $ **712,300**

SECTION 7: DETOURS

Include constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)		Cost
0713XX	Temporary Fence (Type X)	LF		x		=	$ -
07XXXX	Temporary Drainage	LS		x		=	$ -
120143	Temporary Pavement Delineation	LF		x		=	$ -
1286XX	Temporary Signals	EA		x		=	$ -
129000	Temporary Railing (Type K)	LF		x		=	$ -
190101	Roadway Excavation	CY		x		=	$ -
198001	Imported Borrow	CY		x		=	$ -
198050	Embankment	CY		x		=	$ -
250401	Class 4 Aggregate Subbase	CY		x		=	$ -
260201	Class 2 Aggregate Base	CY		x		=	$ -
390132	Hot Mix Asphalt (Type A)	TON		x		=	$ -

TOTAL DETOURS $ -

SUBTOTAL SECTIONS 1-7 $ 13,219,400

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items							
	ADA Items				0.0%	$	-
8B - Bike Path Items							
	Bike Path Items				0.0%	$	-
8C - Other Minor Items							
	Other Minor Items				10.0%	$	1,321,940
	Total of Section 1-7	$	13,219,400	x	5.0%	= $	660,970

TOTAL MINOR ITEMS $ **661,000**

SECTIONS 9: MOBILIZATION

Item code							
999990	Total Section 1-8	$	13,880,400	x	10%	= $	1,388,040

TOTAL MOBILIZATION $ **1,388,100**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)		Cost
066015	Federal Trainee Program	LS		x		=	$ -
066063	Traffic Management Plan - Public Informati	LS	1	x	50,000.00	=	$ 50,000
066090	Maintain Traffic	LS	1	x	100,000.00	=	$ 100,000
066094	Value Analysis	LS		x		=	$ -
066204	Remove Rock & Debris	LS		x		=	$ -
066222	Locate Existing Cross-Over	LS		x		=	$ -
066670	Payment Adjustments For Price Index Fluct	LS	1	x	88,700.00	=	$ 88,700
066700	Partnering	LS	1	x	50,000.00	=	$ 50,000
066866	Operation of Existing Traffic Management S	LS		x		=	$ -
066920	Dispute Review Board	LS	1	x	15,000.00	=	$ 15,000

*Cost of **NPDES** Supplemental Work specified in Section 5C* = $ 95,000

	Total Section 1-8	$	13,880,400		3%	= $	416,412

TOTAL SUPPLEMENTAL WORK $ **815,200**

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066063	Public Information	LS		x		=	$0
066105	RE Office	LS	1	x	25,000.00	=	$25,000
066803	Padlocks	LS		x		=	$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	$0
066901	Water Expenses	LS		x		=	$0
066062A	COZEEP Expenses	LS	1	x	300,000.00	=	$300,000
06684X	Ramp Meter Controller Assembly	LS		x		=	$0
06684X	TMS Controller Assembly	LS		x		=	$0
06684X	Traffic Signal Controller Assembly	LS		x		=	$0

Total Section 1-8	$	13,880,400	2%	= $	277,608

TOTAL STATE FURNISHED	**$602,700**

SECTION 12: TIME-RELATED OVERHEAD

Estiamted Time-Releated Overhead (TRO) Percentage (0% to 10%) = 5%

Item code		Unit	Quantity		Unit Price ($)		Cost
070018	Time-Related Overhead	WD	220	X	$3,155.00	=	$694,100

TOTAL TIME-RELATED OVERHEAD	**$694,100**

SECTION 13: CONTINGENCY

(Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	$	17,380,500	x	15%	=	$2,607,075

TOTAL CONTINGENCY	**$2,607,100**

II. STRUCTURE ITEMS

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	0 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0.00	$0.00	$0.00

COST OF EACH STRUCTURE	**$0.00**	**$0.00**	**$0.00**

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0.00 LF	0.00 LF	0.00 LF
Total Length (Feet)	0.00 LF	0.00 LF	0.00 LF
Total Area (Square Feet)	0 SQFT	0.00 SQFT	0.0 SQFT
Structure Depth (Feet)	0.00 LF	0.00 LF	0.00 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0.00	$0.00	$0.00

COST OF EACH STRUCTURE	**$0.00**	**$0.00**	**$0.00**

TOTAL COST OF BRIDGES	**$0.00**
TOTAL COST OF BUILDINGS	**$0.00**

TOTAL COST OF STRUCTURES[1]	**$0.00**

Estimate Prepared By: _____ Date: _____

XXXXXXXXXXXXXXXX ------ Division of Structures

[1]Structure's Estimate includes Overhead and Mobilization.
Add more sheets if needed. Call them 9a, 9b, 9c, ..., etc

Attachment C

Right of Way Data Sheet / Utility Information Sheets

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Making Conservation a California Way of Life.

To: JALWAT AHMAD
Design Engineer
Department of Transportation

Date: October 11, 2018

File: 03-BUT-70-PM 8.8/12.1

From: JANEL D. WILSON
Assistant Division Chief
North Region Right of Way
Marysville

Subject: **BUT 70 SEGMENT 1 RIGHT OF WAY DATASHEET (3F280/3H710)**

State Route (SR) 70 in Butte County will be widened from 2-lanes to 4-lanes. The project has been divided into two segments. Segment 1 will be from approximately Ophir Road to Palermo Road. Segment 2 will be from approximately Palermo Road to Cox Lane.

Each segment is funded with a mixture of STIP and SHOPP funds. Segment 1 contains project EAs 3F280 (STIP) and 3H710 (SHOPP). Segment 2 contains project EAs 3F281 (STIP) and 3H720 (SHOPP).

The attached Right of Way Datasheet contains the estimate for Segment 1 of the project to widen SR 70 in Butte County. All property rights needed for Segment 1 are currently owned by the State. Right of Way involvement in Segment 1 involves Project Development Permit Fees and Mitigation only.

Segment 2 is primarily widening to the west and contains Acquisitions, Relocation Assistance, and Utility Relocations along with Project Development Permit Fees and Mitigation.

When the four project EAs that encompass Segment 1 and 2 were programmed, the project footprint and Right of Way impacts were different than they are now. Programming amounts for the projects will not change because of the updated RW Datasheets for Segments 1 and 2. However, the Datasheets reflect a current estimate of Right of Way impacts in each Segment based on the data presented at this point in time.

A spending plan has been developed and approved by HQ programming to spend the funds while preserving the integrity of the existing funding sources. The STIP funding on Segment 1 will cover mitigation and the SHOPP funding will cover Project Development Permit Fees and any overages on Mitigation. If Mitigation exceeds the available programming in Segment 1, the balance will be paid for by the STIP funds in

Segment 2. Segment 2 SHOPP funds will cover Project Development Fees and Utility Relocation costs. The STIPP funds will cover any mitigation expenses. Acquisition and Relocation Assistance expenses will be covered by a mixture of SHOPP and STIPP funds.

A third project, Phase 3, not estimated for at this time, will construct local road improvements dependent on land development of the area.

Attachment(s)
(1) 3F280/3H710 Right of Way Datasheet

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

MEMORANDUM

Making Conservation a California Way of Life.

To: JALWAT AHMAD
Design Engineer
Department of Transportation

Attention: JUAN RODRIGUEZ
Project Engineer

Date: October 11, 2018

File: 03-BUT-70-PM 8.8/12.1
EFIS No.: 0312000155/0318000053
EA: 3F280/3H710

From: JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

Project Description: Improve highway to a conventional 4-lane highway with a 14-foot paved median. Portions of the median will operate as a two-way left turn lane.

We have completed an estimate of the right of way costs for the above referenced project based on information received from you on August 17, 2018.

Right of Way Lead Time will require a minimum of 3 months after receipt of appraisals maps, utility conflict maps, environmental clearances (HMDD) and Certificate of Sufficiency (COS) to complete the Right of Way Certification. Shorter lead times may require additional support resources and may adversely affect delivery of Right of Way Certification.

Attachment:
Right of Way Data Sheet

cc. Winder Bajwa

California State Transportation Agency

RIGHT OF WAY DATASHEET

EA: 3F280/3H710
PROJECT NO.: 0312000155/0318000053
LOCATION: 03-BUT-70-PM 8.8/12.1
DESCRIPTION: Improve highway to a conventional 4-lane highway with a 14-foot paved median. Portions of the median will operate as a two-way left turn lane.

DATE: 10/11/2018
DATASHEET TYPE: Revision

---

1. Right of Way Cost Estimate:

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost	$0		$0
B. Appraisal Fees Estimate	$0	N/A	$0
C. Mitigation Acquisition & Credits	$1,967,500	5%	$1,978,048
D. Project Development Permit Fees	$32,500	5%	$32,674
Subtotal	$2,000,000		$2,010,722
E. Utility Relocation (State's Share)	$0		$0
(Owner's Share: $0)			
F. Relocation Assistance (RAP)	$0		$0
G. Clearance/Demolition	$0		$0
H. Title & Escrow	$0		$0
I. Total Estimated Right of Way Cost	$2,000,000	**Rounded**	**$2,011,000** *
J. Phase 4 estimated expenses			
Railroad	$0		
Construction Contract Work	$0		

2. Current Date of Project Approval (PA&ED) October 1, 2018
Current Date of Right of Way Certification November 20, 2018

3. Parcel Data:

Type		Dual/Appr	Utilities		Railroad	
X	0		U4 - 1	0	C&M Agreement	0
A	0		- 2	0	Service Contract	0
B	0		- 3	0	Easements	0
C	0	0	- 4	0	Rights of Entry	0
D	0	0	U5 - 7	8	Clauses	0
RR	0		- 8	0		
Total	**0**		- 9	0		
Excess	0					

Areas:		Mitigation		Misc. R/W Work	
R/W	N/A	Impacts	2	RAP Displacees	N/A
TCE	N/A	Parcels	0	Clear/Demo	N/A
Excess	N/A	Credits	0	PTE Construct	N/A
Mitigation	N/A	Lump Sum	2	Condemnation	N/A
		Env PTE	0	USA Involvement	No

4. **Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).**
All work will be performed within the existing RW.

5. **Are any properties acquired for this project expected to be rented, leased, or sold?**
Yes _____ No X

6. **Are RAP displacements required?**
Yes _____ No X

No. of single family N/A — No. of business/nonprofit N/A
No. of multi-family N/A — No. of farms N/A

Based on Draft/Final Relocation Impact Statement/Study dated N/A
N/A Sufficient replacement housing will be available without last resort housing.
N/A Sufficient replacement housing will not be available without last resort housing.

7. **Is there an effect on assessed valuation?**
Yes _____ No X Not Significant _____

8. **Are there any items of Construction Contract Work?**
Yes _____ No X
There is no Construction Contract Work associated with the project.

9. **Are utility facilities or rights of way affected?**
Yes _____ No X

Names of Utility Companies requiring verification only.
PG&E - Gas, PG&E - Electric, AT&T, Comcast, City of Oroville, CA H2O Service, Oroville Sewage Commission, South Feather Water & Power.

Names of Utility Companies requiring involvements.
None.

Additional information concerning Utility Involvement on this project.
According to PDT, there will be no Utility Involvement on this project.

10. **Are railroad facilities or rights of way affected?**
Yes _____ No X Phase 4 Capital $0

11. **Are USA Lands or Rights Affected?**
Yes _____ No X Phase 4 Capital $0

Agencies Involved:

US Forest Service _____	BLM _____	Army Corps of Engineers _____
National Parks _____	BIA _____	Veterans Administration _____
US Fish & Wildlife _____	GSA _____	_____

Rights or Permissions to acquire:

Easement	_____	Special Use Permit	_____	Courtesy Letter	_____
Right of Way Grant	_____	Cooperative Work Agreement	_____	Cost Recovery	_____
Mineral Agreement	_____	Letter of Concurrence	_____	Timber Sale	_____

No Federal Lands on this project.

12. **Is an RE Office required for the project?**
Yes X No _____

13. **Were any previously unidentified sites with hazardous waste and/or material found?**
Yes _____ None Evident X

14. **Are there material borrow and/or disposal sites required?**
No X Optional _____ Mandatory _____

15. Are there potential relinquishments and/or abandonments?

Yes _____ No __X__

16. Are there any existing and/or potential airspace sites?

Yes _____ No __X__

17. What type of mitigation is required for the project?

Wetland, riparian, and vernal pool mitigation anticipated.

18. Is it anticipated that Caltrans will perform all Right of Way work?

Yes __X__ No _____

19. Indicate the anticipated Right of Way schedule and lead time requirements.

Right of Way Lead Time will require a minimum of **3** months after we receive final appraisal maps, utility conflict maps, necessary environmental clearances, and freeway agreements have been approved and obtained, to complete the Right of Way Certification process.

20. Assumptions and limiting Conditions: (Check boxes that apply.)

- ☑ Design will secure necessary encroachment permits from local agencies, Reclamation Districts, Central Valley Flood Protection Board, etc. in advance of construction.
- ☑ Environmental mitigation costs currently estimated reflect projects impact to the environment and have yet to be confirmed by the regulatory agencies.
- ☑ All work and access will be within the State's current Right of Way.
- ☑ If the contractor requires a staging area, Standard Specifications (Sections 5-1.32) indicates that the contractor will be responsible for securing locations for staging and storage.

Evaluation Prepared By:

Right of Way: _____ Date 10/11/2018

PATRICK REGO
Right of Way Agent

Recommended: _____ Date 10/11/18

DOUGLAS BORTZ
Senior Right of Way Agent
Project Coordination Branch
Marysville

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates and assumptions are reasonable and proper, subject to the limiting conditions set forth, and I find this Data Sheet to be complete and current.

_____ Date 10-11-18

JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Reviewed By

RW Planning & Management: _____ Date 10-12-18

ERIC YBARRA

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Making Conservation a California Way of Life.

MEMORANDUM

To: WINDER BAJWA
Project Manager

Attention: MANPREET ARK
Assistant Project Manager

From: JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Date: October 11, 2018

File: 03-BUT-70-PM 8.8/12.1
EFIS: 0312000155/0318000053
EA: 3F280/3H710

Project: Improve highway to a conventional 4-lane highway with a 14-foot paved median. Portions of the median will operate as a two-way left turn lane.

Subject: PRSM Resource Hours for Right of Way

Task	Task Description	ETC	ACTUAL	EAC
K Phase (PID)				
100.05	Project Management-PID Component	-	14	14
150	Develop Project Initiation Document (PID)	-	0	-
0 Phase (PA&ED)				
100.10	Project Management-PA&ED Component	-	34	34
160.10	Engineering Studies	4	915	919
160.30	Environmental Study Request (ESR)	-	-	-
165.10	General Environmental Studies	-	-	-
170.10	Permits	4	-	4
170.15	Railroad Agreements	4	-	4
170.25	Agreement for Non Commercial Material Sites	-	-	-
175.10	Public Hearings	-	-	-
180.05	Final Project Report	-	-	-
180.10	Final Environmental Document	-	-	-
1 Phase (PS&E)				
100.15	Project Management-PS&E Component	10	-	10
185.05	Update Project Information	15	-	15
185.20	Engineering Reports	60	-	60
185.25	Right of Way Requirements Determination	4	-	4
205.10	Permits	12	-	12
205.15	Railroad Agreements	-	-	-
205.25	Agreement Material Sites	-	-	-
235.05	Environmental Mitigation	146	-	146
235.10	Detailed Site Investigation for Hazardous Waste	13	-	13
255	Circulate, Review and Prepare Final District PS&E Package	5	-	5
2 Phase (R/W)				
100.25	Project Management-RW Component	12	-	12
195.40	Property Management	-	-	-
195.45	Excess Land	-	-	-
200.15	Approve Utility Relocation Plan	-	-	-
200.20	Utility Relocation Package	-	-	-
200.25	Utility Relocation Management	-	-	-
200.30	Utility Close Out	20	-	20
225.50	Parcel and Project Documentation	20	-	20
225.60	RW Appraisals	-	-	-
225.65	RW Acquisitions	8	-	8
225.70	RW Relocation Assistance	-	-	-
225.75	RW Clearance	-	-	-
225.80	RW Condemnation	-	-	-
245.50	Parcel and Project Documentation	12	-	12
245.60	RW Appraisals	-	-	-
245.65	RW Acquisitions	-	-	-
245.70	RW Relocation Assistance	-	-	-
245.75	RW Clearance	-	-	-
245.80	RW Condemnation	-	-	-
3 Phase (CONSTRUCTION)				
270.25	Construction Contract Administration Work	60	-	60
285	Contract Change Order Administration	-	-	-
	Total Hours for This Project:	409	962	1,371

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Making Conservation a California Way of Life.

To: JALWAT AHMAD
Design Engineer
Department of Transportation

Date: October 11, 2018

File: 03-BUT-70-PM 5.4/9.1

From: JANEL D. WILSON
Assistant Division Chief
North Region Right of Way
Marysville

Subject: **BUT 70 SEGMENT 2 RIGHT OF WAY DATASHEET (3F281/3H720)**

State Route (SR) 70 in Butte County will be widened from 2-lanes to 4-lanes. The project has been divided into two segments. Segment 1 will be from approximately Ophir Road to Palermo Road. Segment 2 will be from approximately Palermo Road to Cox Lane.

Each segment is funded with a mixture of STIP and SHOPP funds. Segment 1 contains project EAs 3F280 (STIP) and 3H710 (SHOPP). Segment 2 contains project EAs 3F281 (STIP) and 3H720 (SHOPP).

The attached Right of Way Datasheet contains the estimate for Segment 2 of the project to widen SR 70 in Butte County. Segment 2 is primarily widening to the west and contains Acquisitions, Relocation Assistance, and Utility Relocations along with Project Development Permit Fees and Mitigation.

All property rights needed for Segment 1 are currently owned by the State. Right of Way involvement in Segment 1 involves Project Development Permit Fees and Mitigation only.

When the four project EAs that encompass Segment 1 and 2 were programmed, the project footprint and Right of Way impacts were different than they are now. Programming amounts for the projects will not change because of the updated RW Datasheets for Segments 1 and 2. However, the Datasheets reflect a current estimate of Right of Way impacts in each Segment based on the data presented at this point in time.

A spending plan has been developed and approved by HQ programming to spend the funds while preserving the integrity of the existing funding sources. The STIP funding on Segment 1 will cover mitigation and the SHOPP funding will cover Project Development Permit Fees and any overages on Mitigation. If Mitigation exceeds the

available programming in Segment 1, the balance will be paid for by the STIP funds in Segment 2.

Segment 2 SHOPP funds will cover Project Development Fees, Utility Relocation and Title expenses. Mitigation, Acquisition, Relocation Assistance, and Clearance and Demolition expenses will be covered by a mixture of SHOPP and STIP funds; the percentage split is 36% SHOPP and 63% STIP.

A third project, Phase 3, not estimated for at this time, will construct local road improvements dependent on land development of the area.

Attachment(s)
(1) 3F281/3H720 Right of Way Datasheet

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

MEMORANDUM

Making Conservation a California Way of Life.

To: JALWAT AHMAD
Design Engineer
Department of Transportation

Attention: JUAN RODRIGUEZ
Project Engineer

Date: October 11, 2018

File: 03-BUT-70-PM 5.4/9.1
EFIS No.: 0314000057/0318000054
EA: 3F281/3H720

From: JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

Project Description: Improve highway to a conventional 4-lane highway with a 14-foot paved median. Portions of the median will operate as a two-way left turn lane.

We have completed an estimate of the right of way costs for the above referenced project based on information received from you on August 17, 2018.

Right of Way Lead Time will require a minimum of 21 months after receipt of appraisal maps, utility conflict maps, environmental clearances (HMDD) and Certificate of Sufficiency (COS). A minimum of 20 months prior to certification will be required from submittal of the last map or revision. Shorter lead times may require additional support resources and may adversely affect delivery of Right of Way Certification.

Right of Way Certification is at risk. The current project schedule does not provide Right of Way with sufficient lead time.

Attachment:
Right of Way Data Sheet

cc. Winder Bajwa

California State Transportation Agency
RIGHT OF WAY DATASHEET

EA: 3F281/3H720
PROJECT NO.: 0314000057/0318000054
LOCATION: 03-BUT-70-PM 5.4/9.1
DESCRIPTION: Improve highway to a conventional 4-lane highway with a 14-foot paved median. Portions of the median will operate as a two-way left turn lane.

DATE: 10/11/2018
DATASHEET TYPE: Revision

---

1. Right of Way Cost Estimate:

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost	$946,850	5%	$1,000,993
B. Appraisal Fees Estimate	$120,000	N/A	$120,000
C. Mitigation Acquisition & Credits	$1,967,500	5%	$2,080,007
D. Project Development Permit Fees	$32,500	5%	$34,358
Subtotal	$3,066,850		$3,235,358
E. Utility Relocation (State's Share)	$70,000	5%	$74,003
(Owner's Share: $1,785,000)			
F. Relocation Assistance (RAP)	$20,000	5%	$21,144
G. Clearance/Demolition	$40,000	5%	$42,287
H. Title & Escrow	$49,000	5%	$51,802
I. Total Estimated Right of Way Cost	$3,245,850	**Rounded**	**$3,425,000** *
J. Phase 4 estimated expenses			
Railroad	$0		
Construction Contract Work	$130,000		

2. Current Date of Project Approval (PA&ED) October 1, 2018
Current Date of Right of Way Certification December 1, 2019

3. Parcel Data:

Type		Dual/Appr	Utilities		Railroad	
X	0		U4 - 1	3	C&M Agreement	0
A	24		- 2	1	Service Contract	0
B	17		- 3	0	Easements	0
C	6	0	- 4	0	Rights of Entry	0
D	0	0	U5 - 7	1	Clauses	0
RR	0		- 8	0		
Total	**47**		- 9	4		

Excess 0

Areas:		Mitigation		Misc. R/W Work	
R/W	14.3 AC	Impacts	2	RAP Displacees	1
TCE	0.37 AC	Parcels	0	Clear/Demo	3
Excess	N/A	Credits	0	PTE Construct	10
Mitigation	N/A	Lump Sum	2	Condemnation	5
		Env PTE	0	USA Involvement	No

4. **Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).**

Acquisition of fee, temporary construction easements (TCEs), utility easements, and drainage easements are assumed to be required from residential, agricultural, and state land.

5. **Are any properties acquired for this project expected to be rented, leased, or sold?**

Yes _____ No X

6. **Are RAP displacements required?**

Yes X No _____

No. of single family 1 No. of business/nonprofit 0

No. of multi-family 0 No. of farms 0

Based on Draft/Final Relocation Impact Statement/Study dated N/A

X Sufficient replacement housing will be available without last resort housing.

_____ Sufficient replacement housing will not be available without last resort housing.

7. **Is there an effect on assessed valuation?**

Yes _____ No X Not Significant _____

8. **Are there any items of Construction Contract Work?**

Yes X No _____

Thirty-eight (38) driveway conforms assumed.

9. **Are utility facilities or rights of way affected?**

Yes X No _____

Names of Utility Companies requiring verification only.

PG&E - Gas

Names of Utility Companies requiring involvements.

PG&E - Electric, AT&T, Comcast

Additional information concerning Utility Involvement on this project.

Fifty-two (52) Overhead Electrical Poles have been called in conflict involving PG&E, AT&T, and Comcast. The majority of these poles are assumed to be owned by PG&E (AT&T and Comcast are joint tenants) and are currently located within the state's right of way. Estimator assumes the majority of poles are in by encroachment permit and thereby 100% owner expense. PG&E has noted at least one pole which appears to be located on private property. Estimator is assuming a potential of two pole relocations at state expense. All land rights to be verified upon receipt of Claim of Liability. Relocation Plans have also been requested from all utility owners.

10. **Are railroad facilities or rights of way affected?**

Yes _____ No X Phase 4 Capital **$0**

11. **Are USA Lands or Rights Affected?**

Yes _____ No X Phase 4 Capital **$0**

Agencies Involved:

US Forest Service _____ BLM _____ Army Corps of Engineers _____

National Parks _____ BIA _____ Veterans Administration _____

US Fish & Wildlife _____ GSA _____ _____

Rights or Permissions to acquire:

Easement _____ Special Use Permit _____ Courtesy Letter _____

Right of Way Grant _____ Cooperative Work Agreement _____ Cost Recovery _____

Mineral Agreement _____ Letter of Concurrence _____ Timber Sale _____

No Federal Lands on this project.

12. **Is an RE Office required for the project?**

Yes X No _____

13. **Were any previously unidentified sites with hazardous waste and/or material found?**

Yes _____ None Evident X

14. **Are there material borrow and/or disposal sites required?**

No X Optional _____ Mandatory _____

15. Are there potential relinquishments and/or abandonments?

Yes _____ No **X**

16. Are there any existing and/or potential airspace sites?

Yes _____ No **X**

17. What type of mitigation is required for the project?

Wetland, riparian, and vernal pool mitigation anticipated.

18. Is it anticipated that Caltrans will perform all Right of Way work?

Yes **X** No _____

19. Indicate the anticipated Right of Way schedule and lead time requirements.

Right of Way Lead Time will require a minimum of **21** months after we receive first appraisal maps, utility conflict maps, necessary environmental clearances and freeway agreements have been approved and obtained. Additionally a minimum of **20** months will be required after receiving the last appraisal map to Right of Way for certification.

20. Assumptions and limiting Conditions: (Check boxes that apply.)

- ☑ Transportation facilities have not been sufficiently designed to determine the damages to any of the remainder parcels affected by the project.
- ☑ Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.
- ☑ Design will secure necessary encroachment permits from local agencies, Reclamation Districts, Central Valley Flood Protection Board, etc. in advance of construction.
- ☑ Environmental mitigation costs currently estimated reflect projects impact to the environment and have yet to be confirmed by the regulatory agencies.
- ☑ Utility lead time begins after PA&ED is met and Right of Way has received conflict maps.
- ☑ Right of Way Certification is at risk. The current project schedule does not provide Right of Way with sufficient lead time.
- ☑ If the contractor requires a staging area, Standard Specifications (Sections 5-1.32) indicates that the contractor will be responsible for securing locations for staging and storage.
- ☑ One proposed parcel acquisition from California Fish and Wildlife involves re-establishment of a public entrance to the recreation area, and signage.
- ☑ Current schedule does not allow time for condemnation process to secure effective Orders for Possession.
- ☑ If condemnation becomes necessary to secure parcels, District Right of Way will be requesting approval of a Certification 3W from Headquarters.

Evaluation Prepared By:

Right of Way: _____ Date 10/11/2018

PATRICK REGO
Right of Way Agent

Recommended: _____ Date 10/11/18

DOUGLAS BORTZ
Senior Right of Way Agent
Project Coordination Branch
Marysville

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates and assumptions are reasonable and proper, subject to the limiting conditions set forth, and I find this Data Sheet to be complete and current.

_____ Date 10-11-18

JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Reviewed By

RW Planning & Management: _____ Date 10/12/18

ERIC YBARRA

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Making Conservation
a California Way of Life.

MEMORANDUM

To: WINDER BAJWA
Project Manager

Attention: MANPREET ARK
Assistant Project Manager

Date: October 11, 2018

File: 03-BUT-70-PM 5.4/9.1
EFIS: 0314000057/0318000054
EA: 3F281/3H720

From: JANEL D. WILSON
Assistant Chief
North Region Right of Way
Marysville

Project : Improve highway to a conventional 4-lane highway with a 14-foot paved median. Portions of the median will operate as a two-way left turn lane.

Subject: PRSM Resource Hours for Right of Way

Task	Task Description	ETC	ACTUAL	EAC
K Phase (PID)				
100.05	Project Management-PID Component	-	-	-
150	Develop Project Initiation Document (PID)	-	1	1
0 Phase (PA&ED)				
100.10	Project Management-PA&ED Component	30	100	130
160.10	Engineering Studies	4	334	338
160.30	Environmental Study Request (ESR)	-	-	-
165.10	General Environmental Studies	6	73	79
170.10	Permits	4	-	4
170.15	Railroad Agreements	4	2	6
170.25	Agreement for Non Commercial Material Sites	-	-	-
175.10	Public Hearings	7	-	7
180.05	Final Project Report	15	-	15
180.10	Final Environmental Document	33	-	33
1 Phase (PS&E)				
100.15	Project Management-PS&E Component	265	2	267
185.05	Update Project Information	231	-	231
185.20	Engineering Reports	-	-	-
185.25	Right of Way Requirements Determination	194	-	194
205.10	Permits	12	-	12
205.15	Railroad Agreements	-	-	-
205.25	Agreement Material Sites	-	-	-
235.05	Environmental Mitigation	146	-	146
235.10	Detailed Site Investigation for Hazardous Waste	13	-	13
255	Circulate, Review and Prepare Final District PS&E Package	5	-	5
2 Phase (R/W)				
100.25	Project Management-RW Component	397	-	397
195.40	Property Management	1,080	-	1,080
195.45	Excess Land	-	-	-
200.15	Approve Utility Relocation Plan	230	-	230
200.20	Utility Relocation Package	80	-	80
200.25	Utility Relocation Management	150	-	150
200.30	Utility Close Out	40	-	40
225.50	Parcel and Project Documentation	359	-	359
225.60	RW Appraisals	3,407	-	3,407
225.65	RW Acquisitions	3,747	-	3,747
225.70	RW Relocation Assistance	78	-	78
225.75	RW Clearance	153	-	153
225.80	RW Condemnation	330	-	330
245.50	Parcel and Project Documentation	352	-	352
245.60	RW Appraisals	87	-	87
245.65	RW Acquisitions	87	-	87
245.70	RW Relocation Assistance	12	-	12
245.75	RW Clearance	90	-	90
245.80	RW Condemnation	550	-	550
3 Phase (CONSTRUCTION)				
270.25	Construction Contract Administration Work	60	-	60
285	Contract Change Order Administration	-	-	-
	Total Hours for This Project:	12,258	512	12,769

Attachment D

Risk Register

EA 03-3H720 03-3H720 Palermo Cox Safety - ACTIVE RISK REGISTER

Risk 001 Hazardous Material — RBS: Environmental Owner: Kelly McNally — Updated: 10-02-2018

Description: If the potential for Hazardous material exist within ROW being proposed for acquisition more testing would be required on the parcel. Note: Could cause several delays in the Environmental Clearance process.

Status:

Response Options: Accept risk or modify the project scope to avoid contaminated area.

Impacts:

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con

Assessment Notes: Capital Cost Optimistic $2,640,000/ Pessimistic $5,280,00/Priority Zone H

Risk 005 Wetlands — RBS: Environmental Owner: Kelly McNally — Updated: 10-02-2018

Description: There is potential impact to wetlands. Could cause several delay in the Environmental Clearance process.

Status: Capital cost optimistic $1,320,000/Pessimistic $2,640,000/Priority Zone M

Response Options: Technical studies to be completed during PA&ED phase

Impacts:

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
High	High	Moderate	High	High	H	H	H	H

Assessment Notes:

Risk 006 Relocation — RBS: R/W — Owner: Hardeep Pannu — Updated: 10-02-2018

Description: Public controversy on property acquisition. Could cause several delays in the Environmental Clearance process.

Status: Capital Cost Optimistic $1,320,000/Pessimistic $2,640,000/Priority Zone H

Response Options: Get the public involved early in the process.

Impacts:

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con

Assessment Notes

Risk 007 Paleontological Resources RBS: EnvironmentalOwner: Kelly McNally Updated: 10-02-2018

Description If fossil is found during construction, certain protocol must be followed to salvage and curate the remain and/or trace. Could cause several delays in the Environmental Clearance process.

Status

Response Options

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
Moderate	Moderate	Moderate	Moderate	Moderate	M	M	M	M

Assessment Notes Capital Cost Optimistic $1,320,000/Pessimistic $2,640,000/Priority Zone L

Risk 009 Required use of RW Certification 3W (Work-Around) due to Condemnati RBS: R/W Owner: Hardeep Pannu Updated: 10-03-2018

Description As a result of a moderate probability for Condemnation, a RW Cert 3W may be required, which could impact schedule and increase RW and construction costs. A RW Cert 3W requires HQ approval.

Status Past history on the project indicates high probability for condemnation

Response Options Mitigate-If value objection: 1) reconsider value if appropriate; 2) consider administrative solution; 3) work through 1st and 2nd level reviews to avoid or mitigate impacts to property.

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
Moderate	Moderate	Moderate	Moderate	Moderate	M	M	M	M

Assessment Notes

Risk 011 Condemnation RBS: R/W Owner: Hardeep Pannu Updated: 12-07-2017

Description Property owners have objected to the appraisal findings, resisted acquisition, and/or objected to the project. If condemnation is necessary it may delay RW Cert and the start of construction, thus, increasing construction costs and support costs

Status Past history on the project indicates high probability for condemnation

Response Options Mitigate-If value objection: 1) reconsider value if appropriate; 2) consider administrative solution; 3) work through 1st and 2nd level reviews to avoid or

mitigate impacts to property.

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con

Assessment Notes

Risk 012 Permits RBS: EnvironmentalOwner: Kelly McNally Updated: 7-27-2018

Description As a result of the need for permits and long review times at resource agencies, delays in the permitting process may occur, which would lead to failure to meet RTL

Status

Response Options

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
High	High	High	High	High	H	H	H	H

Assessment Notes

Risk 013 SFWS Consultation- species/habitat RBS: EnvironmentalOwner: Kelly McNally Updated: 10-02-2018

Description As a result of direct impacts to protected species, the need for formal consultation with USFWS, which is currently understaffed, may occur, which would lead to cost increases and failure to meet PA&ED

Status

Response Options

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
High	High	High	High	High	H	H	H	H

Assessment Notes

Risk 014 Wetlands/Vernal Pools RBS: EnvironmentalOwner: Kelly McNally Updated: 7-27-2018

Description As a result of impacts to more than 0.5 acre of wetlands/vernal pools, the need for additional consultation and mitigation may occur, which would lead to

failure to meet PA&ED and RTL

Status

Response Options

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
High	High	High	High	High	H	H	H	H

Assessment Notes

Risk 016 Wetlands/Vernal Pools RBS: EnvironmentalOwner: Kelly McNally Updated: 7-27-2018

Description As a result of impacts to more than 0.5 acre of wetlands/vernal pools, the need for additional consultation and mitigation may occur, which would lead to failure to meet PA&ED and RTL

Status

Response Options

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
High	High	High	High	High	H	H	H	H

Assessment Notes

Risk 017 Potential Utility Easements for Overhead Electrical Conflicts RBS: R/W Owner: Curtis Davidson Updated: 10-19-2018

Description As a result of utility relocation plans, new utility easements may be identified. RW certification could be delayed due to preparation of appraisal mapping, appraisals, acquisitions and condemnation for UT easements.

Status Updated Conflict Maps have been provided to PG&E, AT&T, and Comcast. Caltrans will work with utility companies to encourage early relocation design submittal. Early identification of required land rights will be needed to coincide with the state acquisition process.

Response Options Continual coordination with utility companies to examine relocation design.

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con

	Moderate	Moderate	Moderate	Moderate	Moderate	M	M	M	M

Assessment Notes

Risk 018 Lead time RBS: R/W Owner: Douglas Bortz Updated: 10-19-2018

Description: As a result of insufficient lead time, condemnation may be required to secure property rights.

Status:

Response Options: The current schedule does not afford time to secure effective orders of possession, only resolutions of necessity which will further delay utility relocations and construction of the project on certain parcels.

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
High	High	High	High	High	H	H	H	H

Assessment Notes

Risk 019 Cert 3W RBS: R/W Owner: Douglas Bortz Updated: 10-19-2018

Description: RW specific lead time is 60% of what was requested in RW datasheet. As a result of this insufficient lead time, RW may need to seek approval from Headquarters on use of a Cert 3W. This type of Certification delays construction's ability to work on certain parcels until effective possession is granted.

Status:

Response Options: District RW staff will advocate for the use of a 3W Cert from HQ based on what Construction identifies as buildable project elements in the first season. If HQ denies approval of 3W, then District RW has to delay certification of the project until the Order for Possession(s) become effective.

Impacts

	Cost Impact		Delay Impact		Risk Zone			
Probability	Cap	Sup	Dev	Con	Cap	Sup	Dev	Con
High	High	High	Very High	High	H	H	H	H

Assessment Notes

Attachment E

Storm Water Data Report - Signed Cover Sheet

Dist-County-Route: 03-BUT-70
Post Mile Limits: PM 5.69/11.85
Type of Work: Corridor Improvement
Project ID (EA): 03-3F280
Program Identification: 0312000155
Phase: ☐ PID ☒ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Central Valley Regional Water Control
Total Disturbed Soil Area: 119 acres Post Construction Treatment Area: 40.6 acres
Alternative Compliance (acres):
Estimated Const. Start Date: 2019 Estimated Const. Completion Date: 2025
Risk Level: RL 1 ☐ RL 2 ☒ RL 3 ☐ WPCP ☐ Other:
Is the Project within a TMDL watershed? Yes ☐ No ☒
TMDL Compliance Units (acres):
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.

James Pangburn, Registered Project Engineer Date

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

John Holder, Project Manager *Date*

Jeffery Jewitt, Designated Maintenance Representative *Date*

Jeff Pietrzak, Designated Landscape Architect Representative *Date*

Wes Faubel, District/Regional Design SW Coordinator or Designee *Date*

[Stamp Required at PS&E only]

Attachment F

Design Exception Fact Sheets

Fact Sheet
Exceptions to Caltrans Design Standards

Prepared by:

James Pangburn
REGISTERED CIVIL ENGINEER

Submitted by:

SCOTT MANN, *DESIGN ENGINEER* — *DATE* — (530) 741-5181 *TELEPHONE*

Recommended for Approval by:

SUKHWINDER BAJWA, *PROJECT MANAGER* — *DATE* — (530) 741-4432 *TELEPHONE*

District Approval by:

LAURIE J. LAMMERT, P.E., *OFFICE CHIEF* — *DATE* — (530) 741-4587 *TELEPHONE*

HQ DOD Exceptions Approved by:

TIMOTHY B. SOBELMAN, P.E. — *DATE*
PROJECT DELIVERY COORDINATOR, Division of Design

1. PROPOSED PROJECT

A. Project Description:

Project Type:	Corridor Improvement - Highway Widening		
Proposed Facility:	Segment 1: 4 Lane Access Controlled Conventional Highway, Segment 2: 4 Lane Conventional Highway		
County:	Butte	**Route:**	70
Begin PM:	5.7	**End PM:**	11.8
Design Vehicle:	STAA	**Design Period:**	20 years

The project is located in Butte County on State Route 70 (SR 70) from 0.3 miles north of Cox Lane to 0.3 miles north of Ophir Road, see Attachment A – Project Location Map. Known as the SR 70 Corridor Improvement Project, the proposed project will widen the existing highway from 2-lanes to 4-lanes. This project is divided into two parts with the northern Segment 1 and southern Segment 2. Both segments are being designed to conventional highway standards, including a 14-foot median, 12-foot travel lanes, and 10-foot shoulders.

The SR 70 corridor is designated as Butte County Association of Government's (BCAG's) highest priority for completion. The improvements will make SR 70 a 4-lane facility, have a 20-year life period, accommodate Surface Transportation Assistance Act (STAA) truck systems, and provide improvements for future development.

Currently BCAG has a Co-op Agreement in place through Project Approval and Environmental Document (PA&ED) for the interim. A separate construction and maintenance cooperative agreements will be executed prior to construction. It is anticipated that Segment 1 and Segment 2 will be constructed under separate contracts.

Segment 1:
Improvements to Segment 1 will maintain the easterly lanes and widen to the west. Existing pavement will be overlaid to fix the crown and new pavement section will be constructed for the southbound lanes. The proposed widening will generally stay within the existing right of way. Walls are proposed in areas where cut and fill extend beyond the existing right-of-way lines or cross culvert locations. All proposed work will provide standard hinge points, side slopes and clear recovery areas.

Segment 2
Improvements to Segment 2 hold the easterly edge of pavement and widens to the west. New pavement construction would occur mostly on the west side of the existing lanes, and therefore, a majority of environmental and right-of-way impacts would occur on this side. Along the east side of SR 70, the roadside grading will provide standard hinge points, side slopes, and clear recovery areas. Right-of-way acquisitions would be required on both sides of SR 70.

B. Existing Highway:

Butte County / State Route 70 / PM 5.67-11.83

Existing Facility:	Conventional Hwy	**Design Speed:**	75
Setting	Rural Highway	**Terrain**	Level
Truck Route Network:	Terminal Access (STAA)	**Climate Region:**	11
Number of Lanes:	2C	**Posted Speed:**	55
Lane Width:	12	**Sidewalk Width:**	None
Shoulder Width:	10 feet	**Median Width:**	None
Concept Facility:	4C	**Ultimate Facility:**	4C

SR 70 is an Interregional Road System (IRRS) route providing access to, and a link between, urban and rural regions; economic centers, and major recreational areas. Most of SR 70 is a high-emphasis route extending from SR 149 to the Butte/Plumas County boundary.

This section of SR 70 is a 2-lane conventional highway. Both Segment 1 and Segment 2 have a posted speed limit of 55 mph. Most of Segment 2 has driveways and intersection connecting to SR70. Currently, Segment 2 does not provide a two way left turn lane (TWLTL) to allow vehicle turning movements.

Several areas within Segment 2 have very flat longitudinal grade curbs or dikes. Drainage is accommodated by sheet flow into roadside ditches. Side slopes vary from flat (4H:1V or flatter) to steep (1.5H:1V). The steeper slope are generally located near cross culverts.

South of the project limits, SR 70 was previously widened to a 4 lane conventional highway with a 12-foot TWLTL, known as the East Gridley passing lanes. The northbound passing lane begins at PM 3.74 and the southbound passing lane ends at PM 2.94. South of the East Gridley Passing Lanes, SR 70 continues as a two lane conventional highway for approximately 15 miles until entering the City of Marysville.

North of the Ophir Road intersection past the project limits SR 70 becomes an access controlled freeway for 9.3 miles until the junction with SR 149. From the junction with SR 149, the freeway continues north as a 2 lane conventional highway.

C. Safety Improvements:

The SR 70 Corridor Improvement Project will improve traffic operation and safety for Segment 1 and 2 by:

- Adding an additional lane in each direction to provide continuous passing opportunities,
- Adding a paved center median,
- Increasing the outside shoulder to 10 feet.

- Improving at-grade intersections to current standards.
- Flattening side slopes where feasible. At cross culvert locations head walls will be placed outside the clear recovery zone and provide standard slopes.
- Eliminating roadside obstructions and providing clear recovery zones by relocating utility poles and extending culverts

D. Total Project Cost:

The corridor improvement project estimates are summarized in the table below:

	Estimated Cost	
	Segment 1:	**Segment 2:**
Capital Outlay Support	$13,100,000	$11,100,000
Capital Outlay Construction	$31,400,000	$22,500,000
Capital Outlay Right-of-Way	$8,200,000	$4,800,000
Total Capital Outlay	**$52,700,000**	**$38,400,000**
Total Capital Outlay (Segments 1 & 2)	**$91,100,000**	

2.0 FEATURES REQUIRING AN EXCEPTION

Approval of the following design exceptions are in accordance with the Design Stewardship Agreement dated January 20, 2015.

2.1 FEATURES REQUIRING AN ADVISORY EXCEPTION

HDM Section	Description of Design Standard	Minimum Standard	Comments
204.3	Longitudinal Grade Standard	Minimum grades should be 0.5 percent in snow country and 0.3 percent at other locations.	Existing conditions do not meet standard for longitudinal grade.
304.1	Side Slope Standard	Embankment slopes 4H:1V or flatter.	Existing locations have embankment slopes that are steeper than 4H:1V.

A. Advisory Design Exception Feature #1: Longitudinal Grade

Nonstandard Feature(s):
The proposed profile grade of SR 70 will maintain the existing longitudinal grade. Several existing segments have longitudinal slopes less than 0.3 percent within project limits. An exception is requested to maintain the existing profile grade for Segments 1 & 2.

Standard for Which Exception Is Requested:
Chapter 200 – Geometric Design and Structure Standards - HDM Index 204.3 Standards for Grades: "Minimum grades should be 0.5 percent in snow country and 0.3 percent at other locations."

Reason for Requesting Exception:
This advisory design exception is requested to avoid additional costs, prevent additional environmental impacts and impacts to the floodplain; and limit right-of-way acquisition that is considered excessive for the benefit obtained. The project proposes to overlay the existing pavement and maintain the existing profile grade, which ranges from 0% to 3.92%. Maintaining the existing profile allows for highway widening while maintaining the existing pavement, will reduce materials required for construction, reduce construction related emissions, and minimize public inconvenience during construction.

Longitudinal slopes are need for proper drainage in area using dikes or gutters to channel the flows from the roadway. The existing roadway drainage does not channel flows but instead sheet flows off the roadway onto flat side slopes. Because no historical drainage issues occur with the current drainage designs, conditions do not warrant longitudinal slopes for proper roadway drainage.

One approach to correct the longitudinal slopes to meet standards would be to "saw tooth" the profile; this would be undesirable based on design speed and driver comfort. Alternatively, generally raising the profile grade could correct the longitudinal grade, but since SR 70 alignment is within a FEMA 100-year floodplain, raising the profile could also affect local 100-year flood conditions. To minimize these impacts, the roadway profile within floodplains would need to match the existing corridor crown elevation expected to overtop during 100-year storm events.

Between January 1, 2012 and December 31, 2014, there were no collisions attributed to the non-standard longitudinal grade along SR70. The majority of collisions that were reported are due to congestion and lack of passing lanes.

The locations of the longitudinal grade design exceptions vary along Segments 1& 2. See the table below for the Longitudinal Grade Design Exception Locations.

Alignment	Begin Station	End Station	Longitudinal Grade	
			Standard	Proposed
A1	238+08.56	243+39.15	0.3 %	0.05 %
A1	251+34.14	259+47.37	-0.3 %	-0.05 %
A1	259+47.37	261+03.50	0.3 %	0.20 %
A1	268+11.23	284+24.31	-0.3 %	-0.01 %
A1	311+96.19	313+24.38	0.3 %	0.10 %
A1	338+12.47	359+14.46	-0.3 %	-0.05 %
A1	420+38.21	426+57.42	0.3 %	0.25 %
A1	481+99.27	504+27.14	0.3 %	0.19 %
A1	553+28.09	555+44.33	-0.3 %	-0.10 %

Added Cost to Make Standard:
The cost to make the longitudinal grades standard will require adjusting the profile grade of the roadway, which would, have impacts to the construction cost, right-of-way acquisition and the environmental mitigation. This will require additional construction items including Import / Borrow, Aggregate Base Class 2, HMA Type-A, and Rubberized HMA Type-G. The additional construction cost would be approximately $9,050,000. The additional right-of-way acquisition would cost approximately $490,000. The additional environmental mitigation would cost $1,180,000. See Attachment D for cost backup information.

B. Advisory Design Exception Feature #2: Side Slope

Nonstandard Feature(s):
The proposed project for Segment 1 widens to the west and maintain the existing on the east. The proposed widening will stay within the existing right-of-way to avoid right-of-way acquisitions and minimize impacts to environmentally sensitive areas. From station 406+00 to 524+00, the existing side slopes on the east side range from

2.2:1 to 4:1 and do not meet the standard 4H:1V or flatter slopes. See Attachment C for specific location identified to have nonstandard existing side slopes.

Standard for Which Exception Is Requested:
Chapter 300 – Geometric Cross Section – HDM Index 304.1 Side Slopes Standards:
"Slopes should be designed as flat as is reasonable. For new construction, widening, or where slopes are otherwise being modified, embankment (fill) slopes should be 4:1 or flatter."

Reason for Requesting Exception:
The substandard side slopes are an existing condition that will be maintained. Maintaining the existing side slopes will prevent right-of-way acquisition and reduce environmental impacts on the east side. The environmental mitigation identified in the "Delineation of Potential Waters of the United States" report papered March 2016 would be for branchiopods, emergent wetlands, and riparian habitat. In areas with nonstandard side slopes near existing cross culverts, the cross culvert would be modified, and connecting drainage ditches would be regraded. The existing slopes have well-established vegetation that are currently performing well for erosion control. The collision data does not show that the side slope are creating an unsafe motorist environment. Additional right-of-way acquisition is unnecessary to achieve the safe improvement needed for the corridor.

Between January 1, 2012 and December 31, 2014, there were no collisions attributed to the non-standard side slopes along SR70. The majority of collisions that were reported are due to congestion and lack of passing room.

The locations of the side slope design exceptions vary along Segment 1. See the table below for the Side Slope Design Exception Locations.

			Side Slope	
Alignment	**Begin Station**	**End Station**	**Standard**	**Maintained Exist Slope**
A1	428+50.00	432+00.00	4 to 1	2.7 to 1
A1	433+00.00	434+50.00	4 to 1	2.9 to 1
A1	435+50 .00	437+50.00	4 to 1	3.0 to 1
A1	443+50.00	445+50.00	4 to 1	3.1 to 1
A1	455+00.00	460+00.00	4 to 1	3.5 to 1
A1	472+00.00	475+00.00	4 to 1	2.5 to 1
A1	486+00.00	500+50.00	4 to 1	2.2 to 1
A1	516+00.00	517+00.00	4 to 1	3.5 to 1
A1	546+50.00	550+00.00	4 to 1	2.5 to 1

Added Cost to Make Standard:
The current right-of-way was set by the original fill slopes. To flatten the slopes to achieve the 4H:1V standard, additional embankment fill and right-of-way would

need to be acquired. The slopes would also require additional embankment and grading. The additional cost would be $690,000 for the grading and drainage work. The additional right-of-way acquisition would cost approximately $110,000. The additional environmental mitigation would cost $1,630,000. See Attachment D for cost backup information.

2.2 FEATURES REQUIRING A DISTRICT DELEGATED MANDATORY EXCEPTION

District delegated mandatory exception are not requested for the SR 70 Corridor Improvement Project.

2.3 FEATURES REQUIRING A HEADQUARTERS APPROVED MANDATORY EXCEPTION

HDM Section	Description Of Design Standard	Minimum Standard	Comments
202.2	Superelevation rates from Table 202.2D shall be used within the given range of curve radii.	Radii under 500' – e = 0.12 V_d=70 mph	See table below for non-standard locations

A. HQ Mandatory Design Exception Feature #1: Superelevation

Nonstandard Feature(s):
In Segment 1 where the project conforms to the freeway segment to the north, the existing curve has a superelevation of 4% and does not meet current standards. Within Segment 2, the first and second curves (Sta 222+38.67 to 234+62.00 and 249+69.75 to 263+43.33 respectively) have existing superelevations of 5% and 6% which do not meet current standards. The project will overlay the existing pavement and will maintain the existing nonstandard superelevation. The locations of the nonstandard superelevations are included in the table below.

Alignment	Station Range	Minimum Standard	Comments
SR 70 Mainline Segment 2	230+50 to 234+62	R=2497', e_{max}=10% e = 9.0%	Maintain existing 5% superelevation.
SR 70 Mainline Segment 2	249+69 to 263+43	R=2019', e_{max}=10% e = 10.0%	Maintain existing 6% superelevation.
SR 70 Mainline Segment 1	554+73 to 555+44	R=3000', e_{max}=10% e = 7.6%	Proposed improvements will conform to the existing 4% .

Standard for Which Exception Is Requested:
Chapter 200 – Geometric Design and Structure Standards – HDM Index 202.2 Standards for Superelevation:"**...superelevation rates from Tables 202.2 through 202.2 shall be used with the minimum curve radii and design speed (V_d). If less than standard superelevation rates are approved, Figure 202.2 shall be used to determine superelevation based on the curve radius and maximum comfortable speed.**"

Reason for Requesting Exception:
The substandard superelevation is an existing condition that will be maintained. The exception to standard is requested to minimize the right-of-way and environmental impacts. Maintaining the existing super elevations allows the highway widening with the existing pavement remaining in place, and reduces construction costs by eliminating the buildup of the pavement section over the existing section. Additional benefits of maintaining the existing superelevation are reductions in fill requirements, distance to slope catch points, additional right-of-way requirements, and reduced impacts to the environmentally sensitive areas.

Between January 1, 2012 and December 31, 2014, there were no collisions attributed to the non-standard superelevation along SR70. The majority of collisions that were report are due to congestion and lack of passing room.

Added Cost to Make Standard:
Rebuilding the curves to have the standard superelevation would require additional construction cost, increased right-of-way acquisition and environmental impacts. The additional construction cost would be an additional $3,760,000. It was assumed that there would not be a need to acquire right-of-way to make standard. Therefore, the cost to make standard for right-of-way is $0. The additional environmental mitigation would cost $80,000. See Attachment D for cost backup information.

3. TRAFFIC DATA

A Traffic Operations Analysis Report (TOAR), dated September 2015, was prepared by Fehr & Peers to document the traffic forecasts and operations analysis based on updated traffic counts (both SR 70 corridor and surrounding intersections). The forecasted traffic growth used the BCAG traffic model and is consistent with the 2012 BCAG Metropolitan Transportation Plan (MTP). The forecasts assume 35% build-out of the Rio d'Oro Specific Plan development.

Butte County / State Route 70 / PM 5.5 - 14.0

Segment Limits	Post Miles	Existing Volumes (2015)	Design Year Volumes (2040)

		Peak Hour	AADT	Peak Hour	AADT
North of Ophir Road	11.9/14.0	1,470	10,000	3,460	23,500
Ophir Road to Palermo Road	9.0/11.9	1,375	10,500	2,895	22,600
Palermo Road to Power House Road	7.8/9.0	1,230	10,600	2,840	24,500
Power House Road to Cox Road	5.5/7.8	1,270	11,200	2,790	24,600

4. COLLISION ANALYSIS

TASAS

The table below summarizes traffic collision data on SR 70 through the limits of the proposed project. The data was obtained from the Traffic Accident Surveillance and Analysis System (TASAS) –Transportation Systems Network (TSN) database maintained by Caltrans. The data shown is for the three-year period between July 1, 2012 and June 30, 2015.

Butte County / State Route 70 / PM 5.7-11.8

Dates: *07/01/2012 to 06/30/2015*		Actual Rates (Collisions / million vehicles)			Average Rates (Collisions / million vehicles)		
Location (Post Miles)	Total Collisions	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
SR 70 (PM 5.7 – 8.8)	21	0.053	0.29	0.56	0.018	0.35	0.83
SR 70 (PM 8.8 – 11.8)	29	0.049	0.27	0.71	0.008	0.27	0.65
Notes: Bold and underline font indicate actual accident rates that are higher than the statewide average for similar facilities.							

Butte County / State Route 70 / PM 5.7-11.8

Primary Collision Factor	Type of Collision							
	Head On	Sideswipe	Rear End	Broadside	Hit Object	Over Turn	Other	Not Stated
Influence of Alcohol		2	3		2			
Failure to Yield		2		3				
Improper Turn	1	1		1	5	2		
Speeding			15	1			1	
Other Violation	2	1		3				
Other than Driver	1				1		2	1

Total	4	6	18	8	8	2	3	1

Rear end collision accounted for 18 of the 50 accidents on the SR 70 corridor. Most rear end collisions are due to speeding. The next most frequent are sideswipe collision followed hit object collisions. Out of the 50 accidents, there was 35 multi car collisions, 18 injuries and 4 fatalities. The Ophir Road signalized intersection is associated with a high number of sideswipe, rear end, and broadside collisions. The accident rates for the SR 70 study locations show a higher than state wide average for the severity (i.e. fatality rate) and combination of severity plus injured (i.e. fatal + injured) are approaching the state average for a 2-lane freeway facility in the State of California.

SWITRS

In addition to TASAS, more recent data was pulled from the Statewide Integrated Traffic Records System (SWITRS) for 2015, 2016, and partially for 2017 (up to April 25th). The total accidents during this date range came to be 61, with 5 fatalities and 18 injuries. Three of the five fatalities happened within 2017 alone. The SR 70 corridor has recently come under public scrutiny with the frequency of fatalities continuing to increase. With collision data collected over the past 6 years, accidents are continuing to trend upward in frequency.

Additional Collision Data

In addition to the fatal accidents shown in the TASAS and SWITRS databases, there were 8 fatal accidents in 2017 (from April to November). The total fatal collisions using all available data sources is summarized below.

Fatal Collision Summary

Date Range	Data Source		
	TASAS	SWITRS	BCAG Records
July 2012 to June 2015	4		
June 2015 to April 2017		5	
April 2017 to November 2017			8
Total	17		

5. INCREMENTAL IMPROVEMENTS

No feasible incremental improvements have been identified that are intermediate in scope between the proposed project and an alternative that meets design standards.

6. FUTURE CONSTRUCTION

Butte County has approved the Rio D'Oro Specific Plan, which anticipates development of roughly 689 acres west of SR 70 in the area between Ophir Road and Palermo Road. Due to the development, there is a potential for the SR 70 / Ophir Road intersection to be modified into an interchange.

7. PROJECT REVIEWS, CONCURRENCE

Jesse Garcia (District 3 Design Liaison), Rodolfo Avila (District 3 Design Oversight Engineer), Jeffrey Pietrzak (Landscape Architect), Darryl Chambers (Traffic Safety), Sergio Aceves (Maintenance), concur with the exception being requested.

8. FEDERAL ACTION

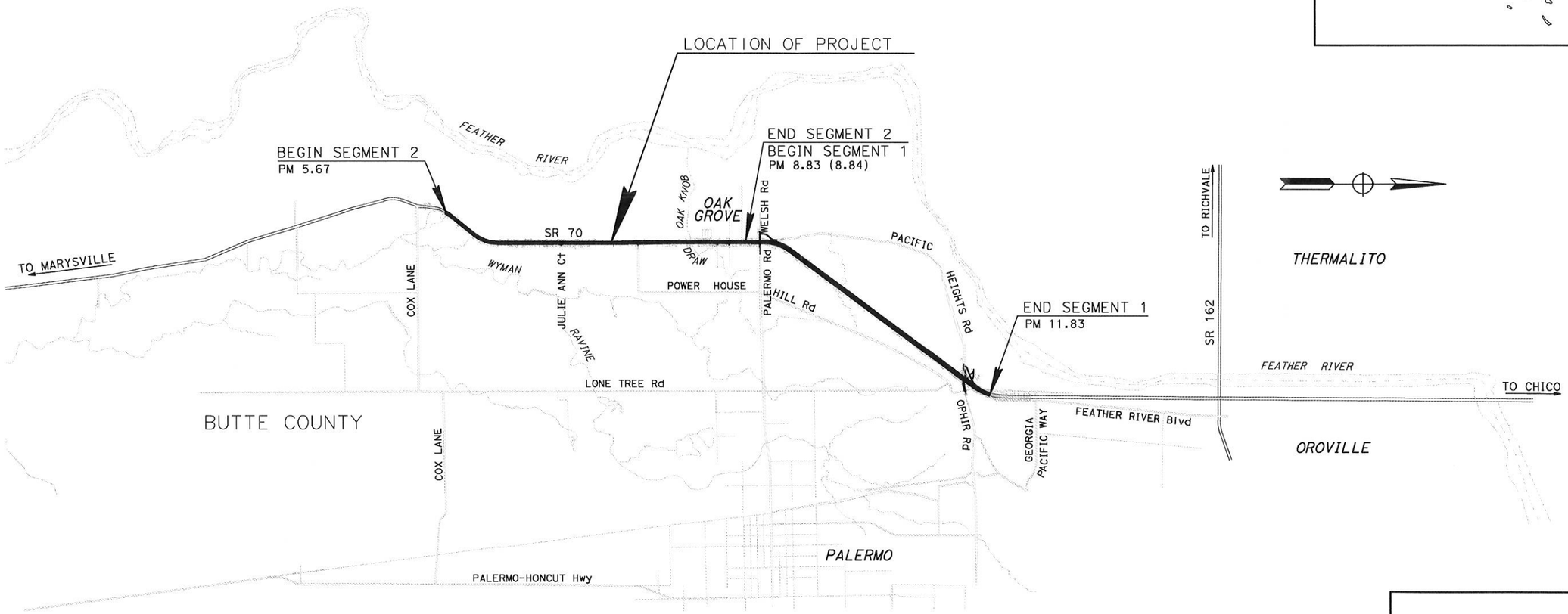
This project is part of the National Highway System and fact sheet approval is not the only federal administration action on this project. The project will use federal-aid funding and a federal environmental determination/document will be approved specifically for this project.

9. ATTACHMENTS

Attachment A: Location Map
Attachment B: Exception Locations
Attachment C: Justification for Design Exceptions
Attachment D: Costs to Make Standard

Attachment A:

Location Map



ATTACHMENT A

PROJECT LOCATION

DESIGNED BY_____
CHECKED BY_____
SCALE NOT TO SCALE
APPROVED BY_____
RCE No. _____

MARK THOMAS & COMPANY, INC. QUINCY ENGINEERING, INC. 7300 FOLSOM BOULEVARD SUITE 203 SACRAMENTO, CA 95826	BUTTE COUNTY ASSOCIATION OF GOVERNMENTS 2580 SIERRA SUNRISE TERRANCE SUITE 100 CHICO, CA 95928

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70		1	

LAST REVISION 00-00-00

DATE PLOTTED => 7/12/17
TIME PLOTTED => 8:48:09 AM

USERNAME => mokeefe
DGN FILE => SR70-Project Location Exhibit.dwg

Attachment B:

Exception Locations

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was California State Plane II FIPS 0402. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from multiple sources. Street centerlines and political boundaries were provided by Butte County Development Services – GIS Division. This information was derived at a scale of 1:24,000 and was adjusted to fit digital orthophotos created by Butte County Association of Governments in 2002 and 2004 respectively. Additional information was derived from Federal Emergency Management Agency FIRM maps dated 1998 or later.

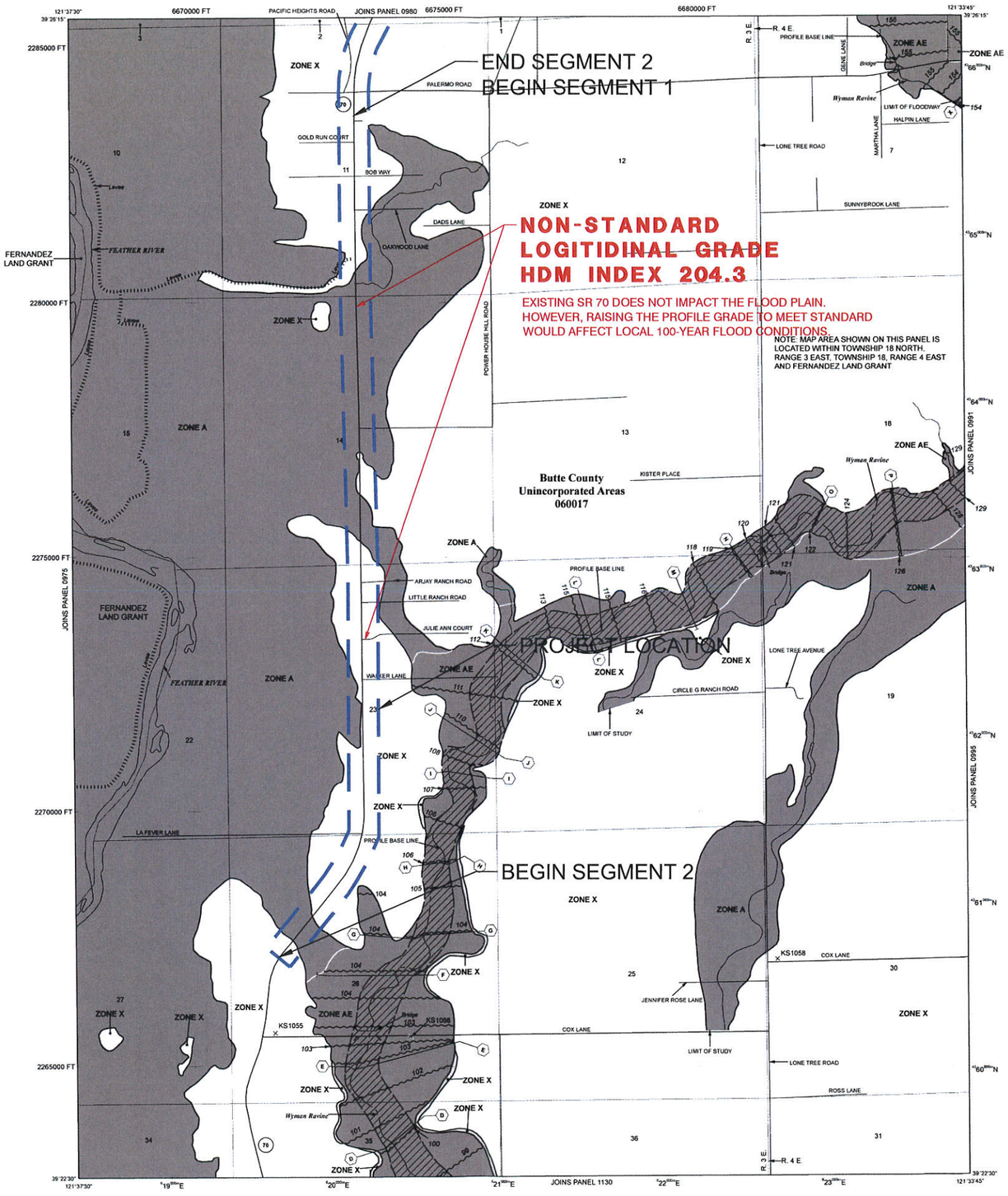
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to confirm to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	Floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
	Limit of Moderate Wave Action
513 (EL 987)	Base Flood Elevation line and value; elevation in feet*
	Base Flood Elevation value where uniform within zone; elevation in feet*
	* Referenced to the North American Vertical Datum of 1988
A — A	Cross section Line
D — D	Transect line
87°07'45", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4376000 mN	1000-meter Universal Transverse Mercator grid values, zone
600000 FT	NAD 1983 UTM Zone 10N 5000-foot grid values: California State Plane coordinate system, zone II (FIPSZONE 0402), Lambert Conformal Conic projection
DX5510	Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5	River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
June 8, 1998

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

April 20, 2000 -
January 6, 2011 - to change Base Flood Elevations, to add Base Flood Elevations, to add Special Flood Hazard Areas, to change Special Flood Hazards Areas, to change zone designations, to add roads and road names, to incorporate previously issued Letters of Map Revision

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET
300 0 300 600 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0990E

FIRM

FLOOD INSURANCE RATE MAP

BUTTE COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 990 OF 1200
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUTTE COUNTY	060017	0990	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06007C0990E

MAP REVISED
JANUARY 6, 2011

Federal Emergency Management Agency

LAST REVISION 11/16/17 4:11:42 PM

mokeefe
FEMA Maps.dwg

NOTE:

FOR COMPLETE RIGHT OF WAY DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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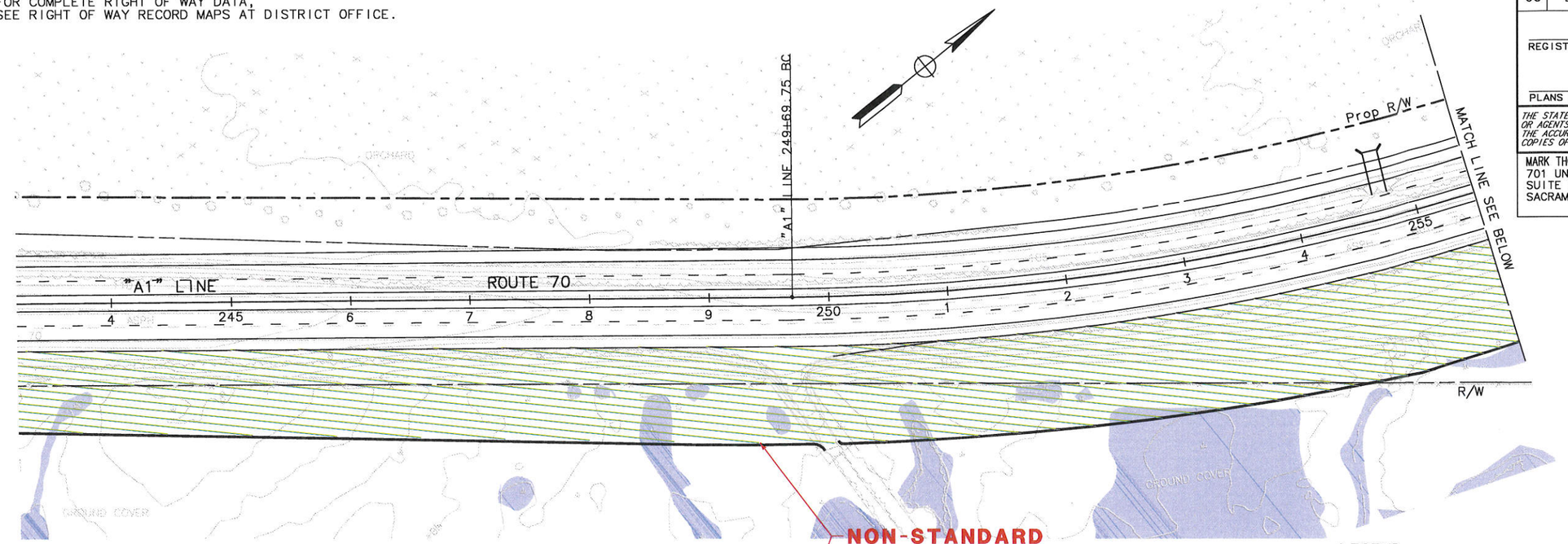
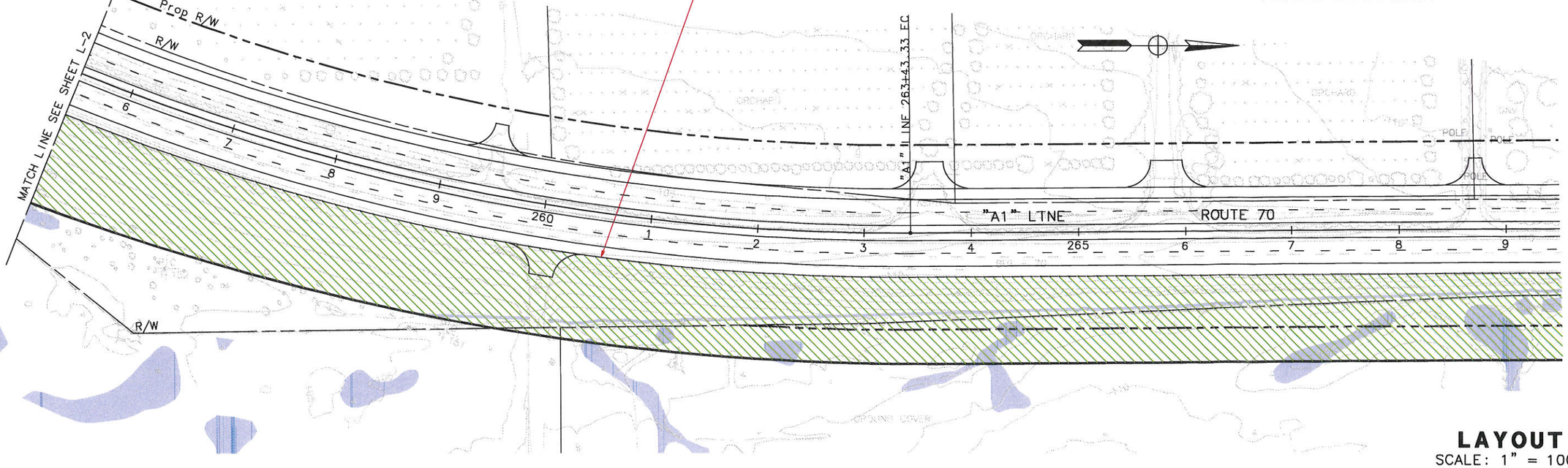


NON-STANDARD SUPERELEVATION HDM INDEX 202.2

REDUCED ENVIRONMENTAL IMPACTS AREAS BY MAINTAIN EXISTING SUPERELEVATION.

LEGEND:

- LARGER PROJECT FOOTPRINT TO ACHIEVE DESIGN STANDARDS
- VERNAL POOLS AND ENVIRONMENTALLY SENSITIVE AREAS
- ------F— PROPOSED GRADING LIMITS



LAYOUT
SCALE: 1" = 100'
SHEET 1

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NOTE:

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SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85		

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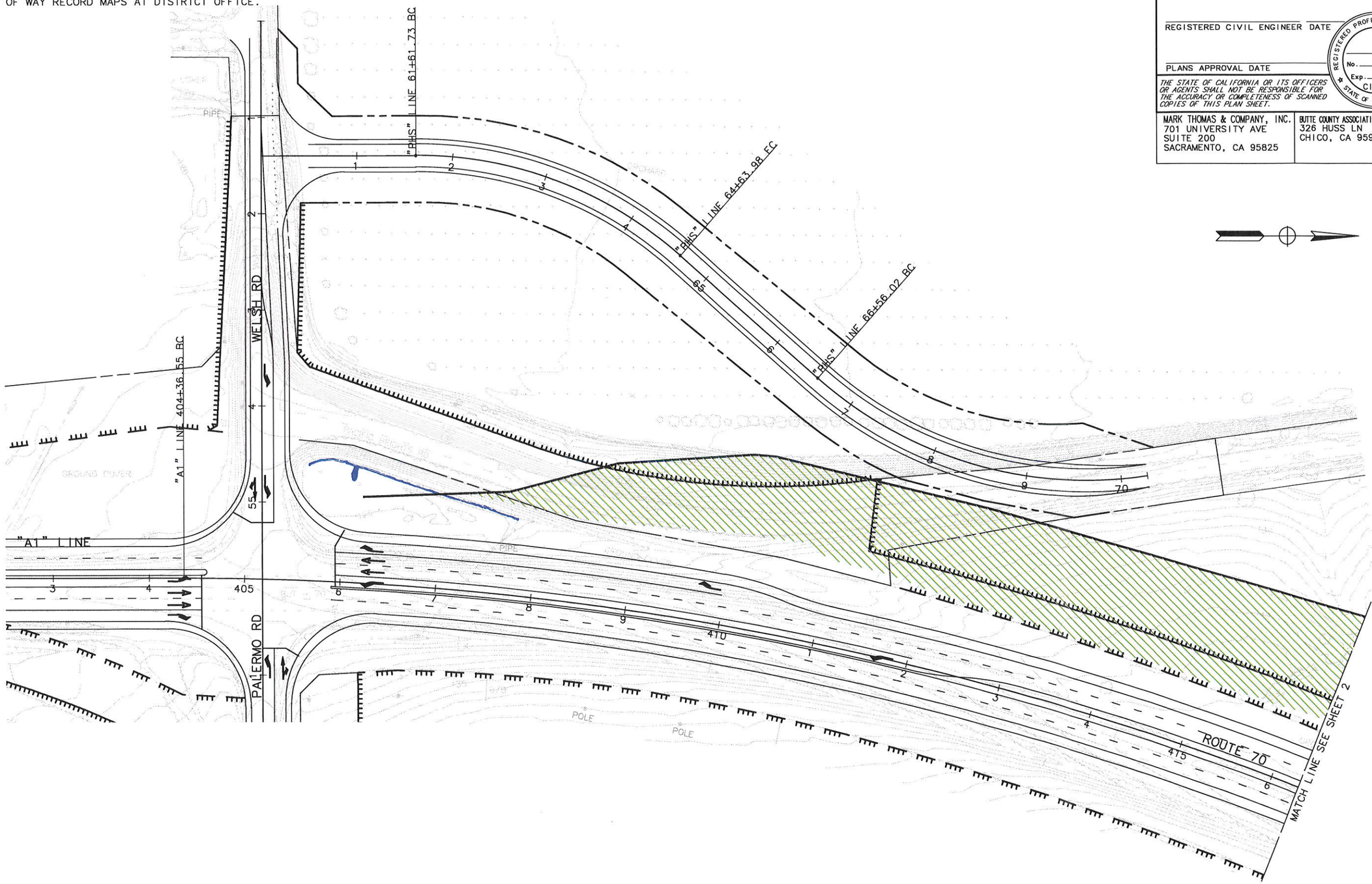

LAYOUT
SCALE: 1" = 100'
SHEET 2

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY
CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION
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NOTE:

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	20	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
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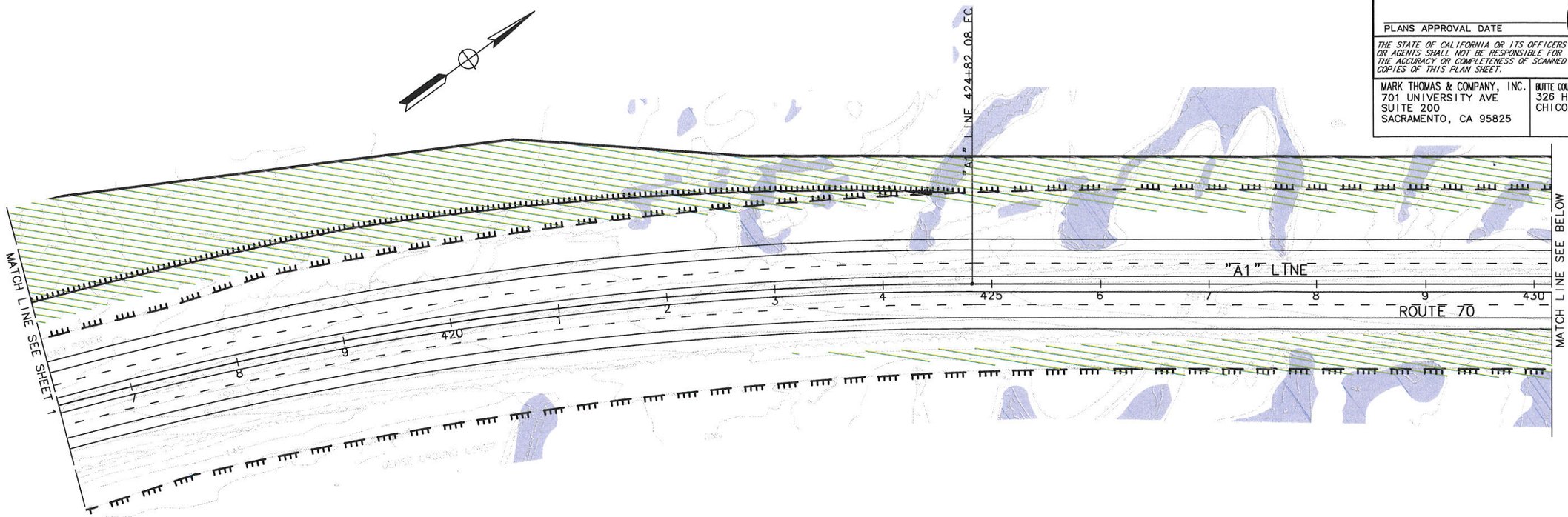

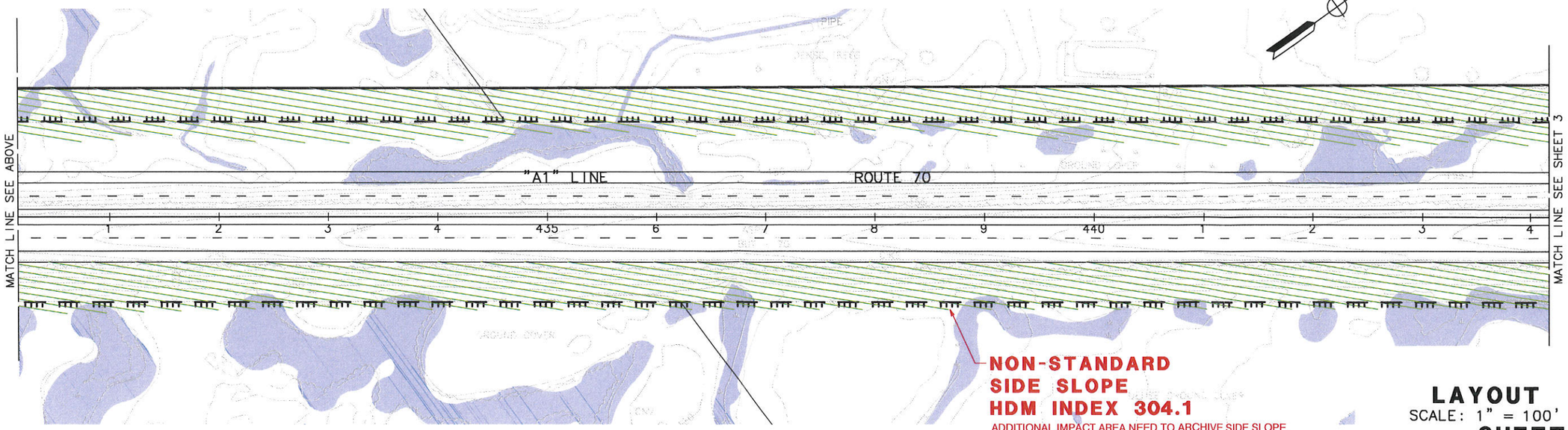

LAYOUT
SCALE: 1" = 100'
SHEET 3

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00-00-00 | TIME PLOTTED => 3:14:57 PM

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NOTE:

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	22	

REGISTERED CIVIL ENGINEER DATE

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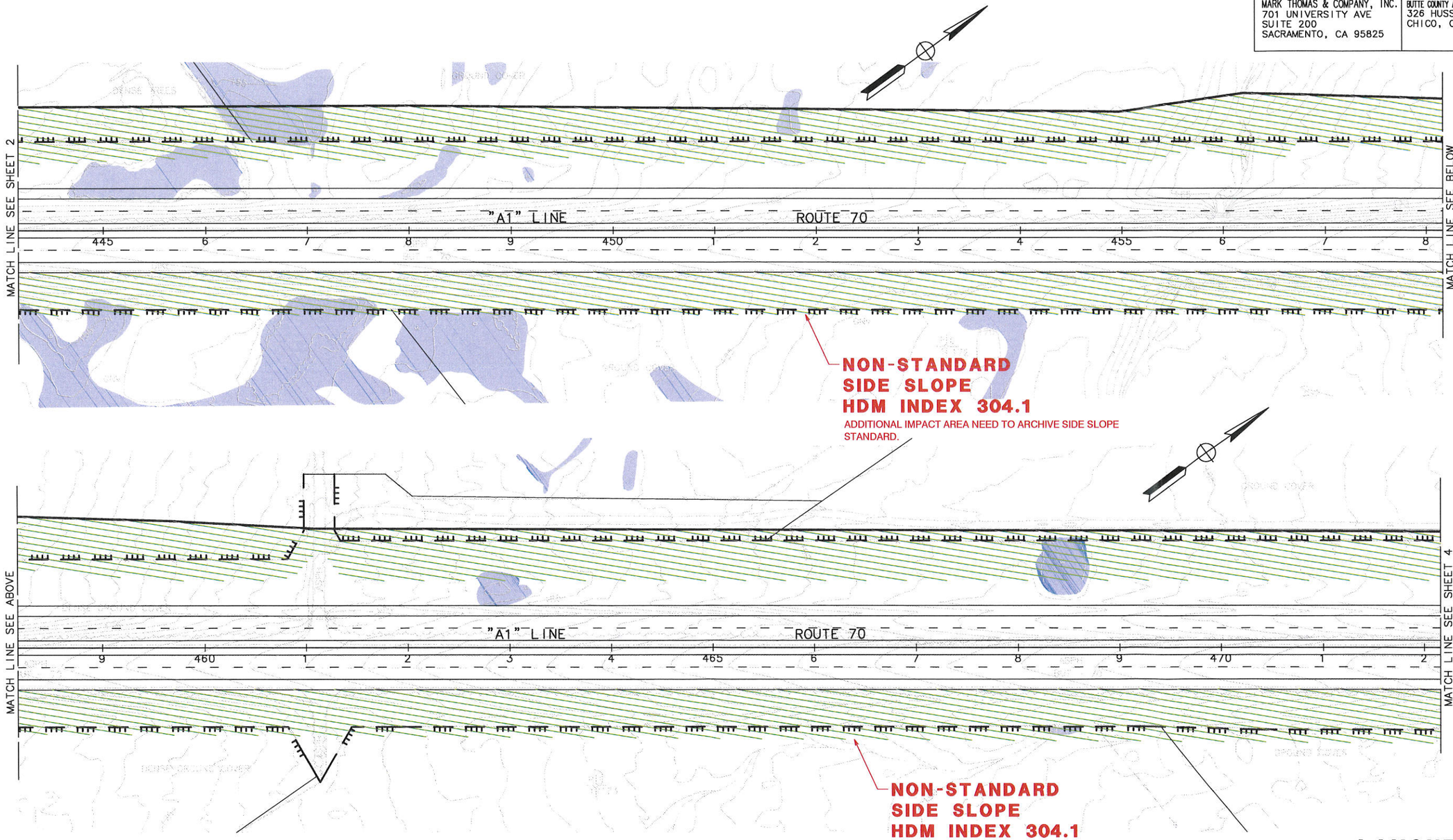

LAYOUT
SCALE: 1" = 100'
SHEET 4

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03	BUT	70	PM 5.69/11.85	24	

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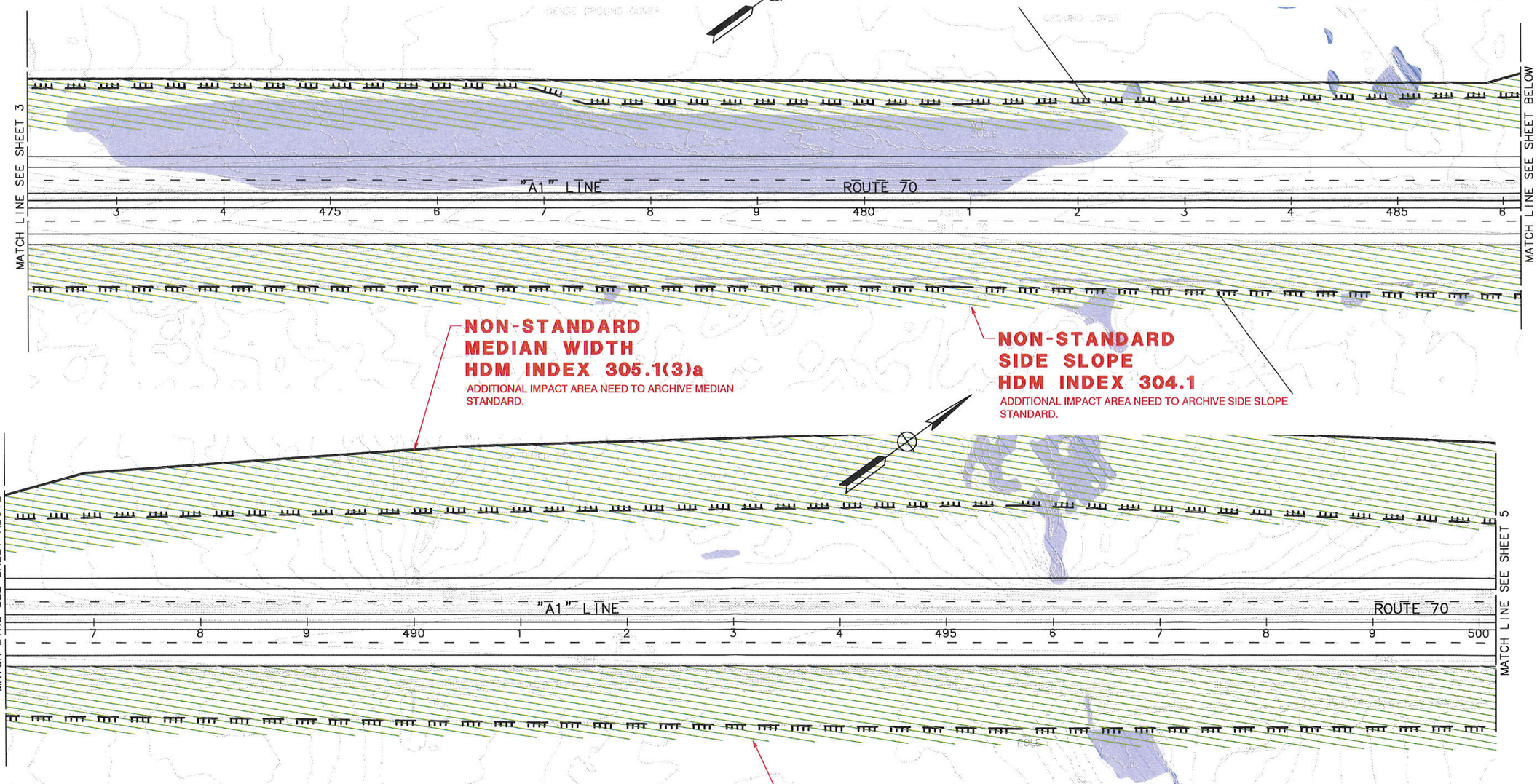

LAYOUT
SCALE: 1" = 100'
SHEET 5

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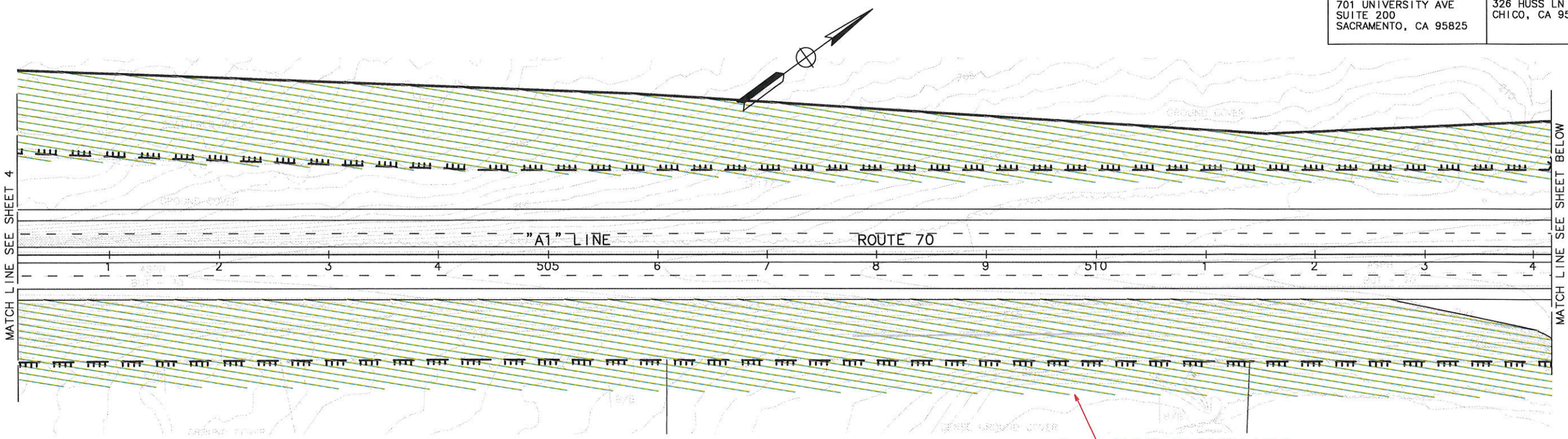
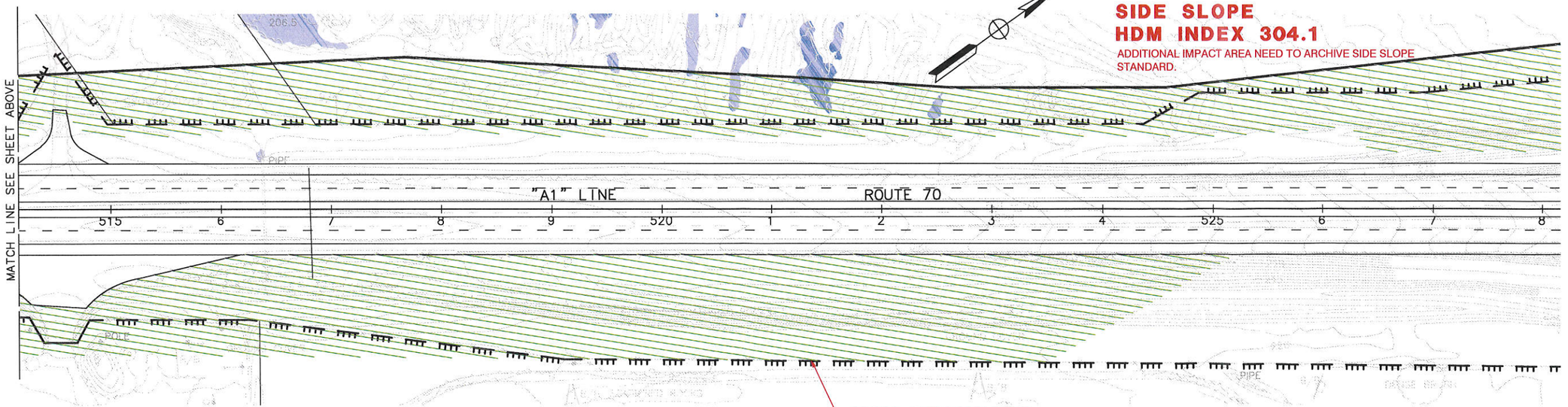


NON-STANDARD
SIDE SLOPE
HDM INDEX 304.1
ADDITIONAL IMPACT AREA NEED TO ARCHIVE SIDE SLOPE STANDARD.



NON-STANDARD
SIDE SLOPE
HDM INDEX 304.1
ADDITIONAL IMPACT AREA NEED TO ARCHIVE SIDE SLOPE STANDARD.

LAYOUT
SCALE: 1" = 100'
SHEET 6

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Attachment C:

Justification For Design Exceptions

NOTE:

FOR COMPLETE RIGHT OF WAY DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

ABBREVIATIONS:

SR – SUPERELEVATION RATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	3	57

REGISTERED CIVIL ENGINEER DATE

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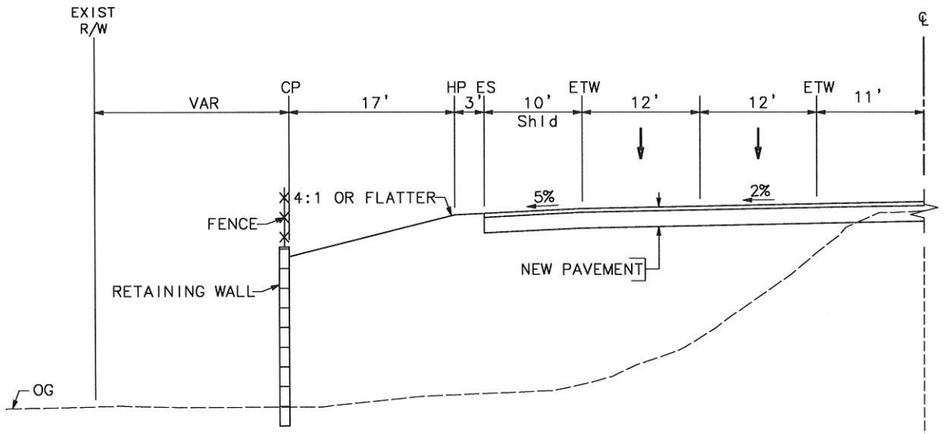
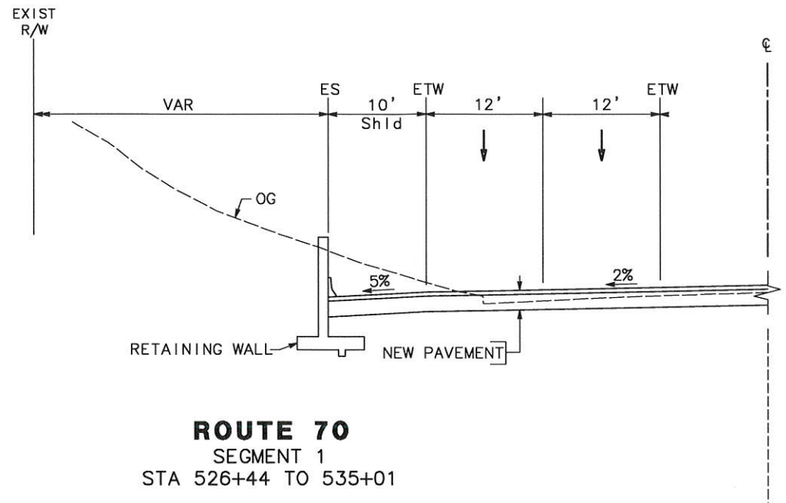
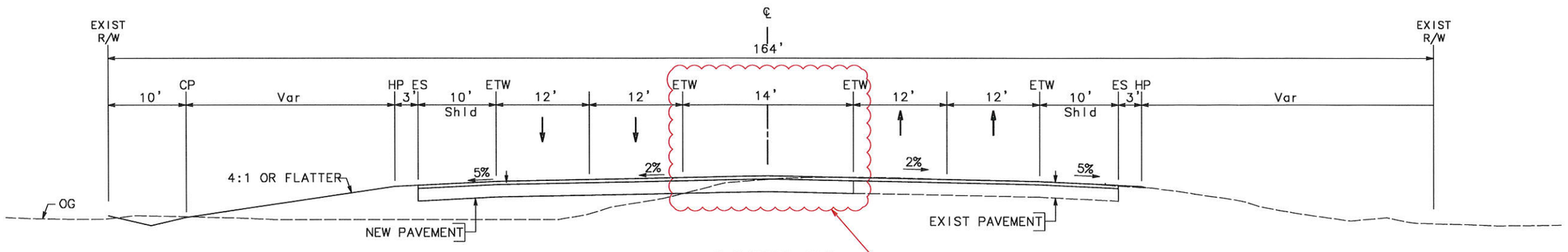


ROUTE 70
SEGMENT 1
489+06 TO 491+15
495+26 TO 506+47



ROUTE 70
SEGMENT 1
STA 526+44 TO 535+01



ROUTE 70
SEGMENT 1
STA 397+00 TO 555+44

NON-STANDARD MEDIAN WIDTH HDM INDEX 305.1(3)a

TYPICAL SECTION

NO SCALE

X-2

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LAST REVISION 00–00–00 | DATE PLOTTED => 11/6/2017 | TIME PLOTTED => 4:44:43 PM

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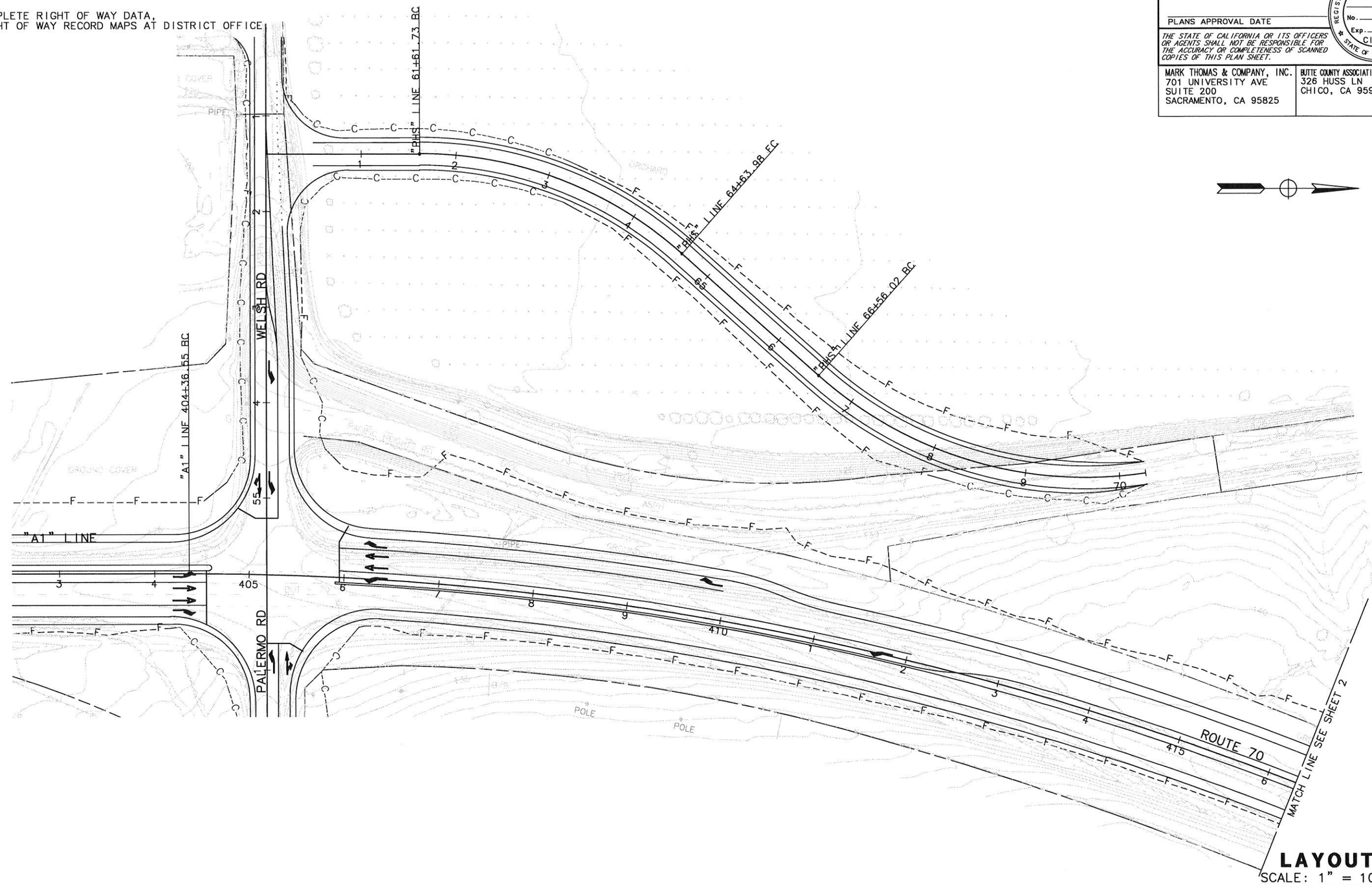
LEGEND:

REFERENCE: HDM SECTION 304.1
ADVISORY STD: FOR NEW CONSTRUCTION, WIDENING, OR WHERE SLOPES ARE OTHERWISE BEING MODIFIED, EMBANKMENT (FILL) SLOPES SHOULD BE 4:1 OR FLATTER.
PROPOSED: 4:1 EMBANKMENT (FILL) SLOPES.

NOTE:

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE



LAYOUT
SCALE: 1" = 100'
SHEET 1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85		

REGISTERED CIVIL ENGINEER DATE

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TIME PLOTTED => 3:04:57 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-Segment1-Side Slope Standards_4_23_18.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

NOTE:

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	20	

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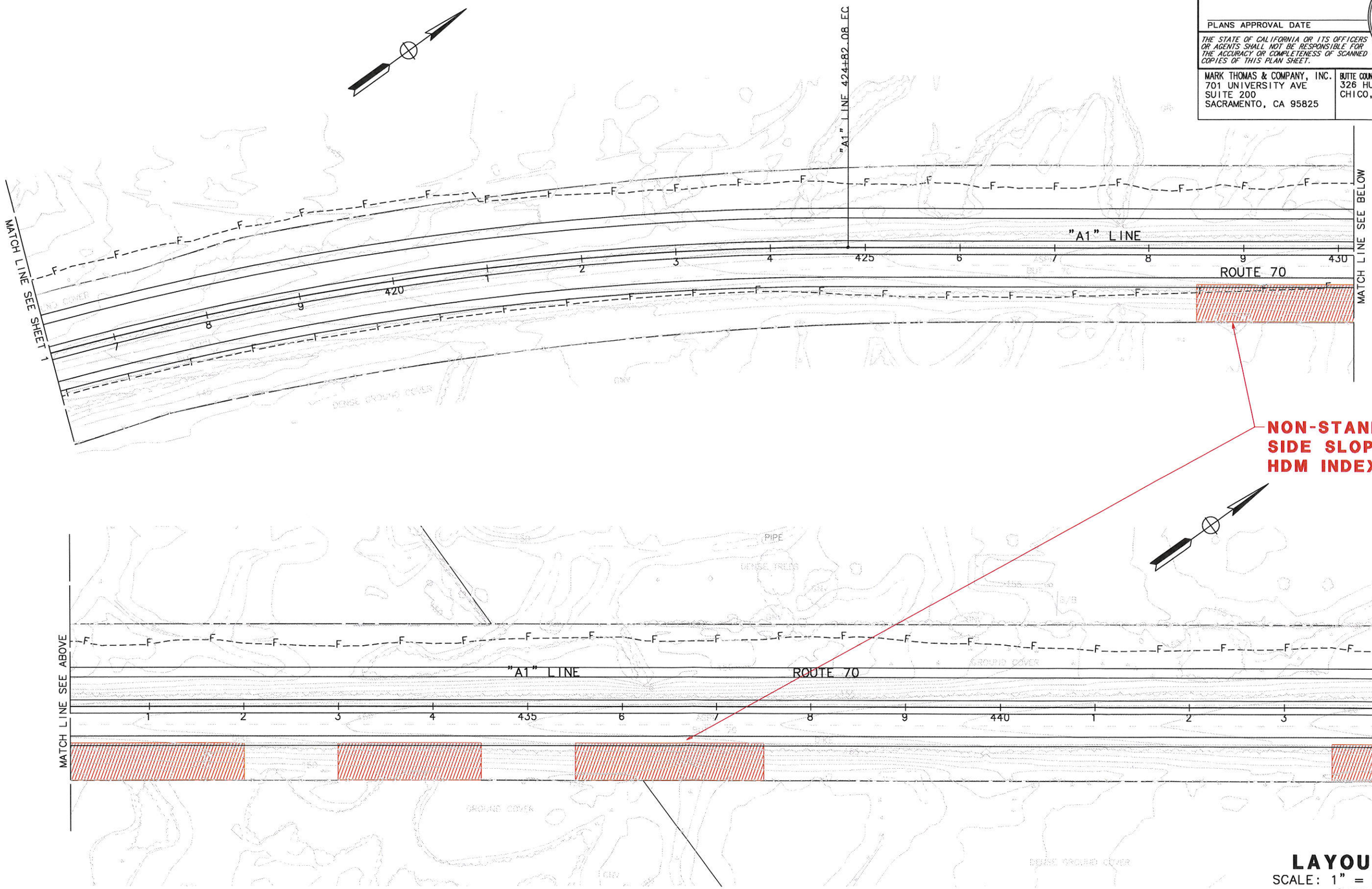

LAYOUT
SCALE: 1" = 100'
SHEET 2

REVISED BY | DATE REVISED
CALCULATED–DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 3:04:57 PM

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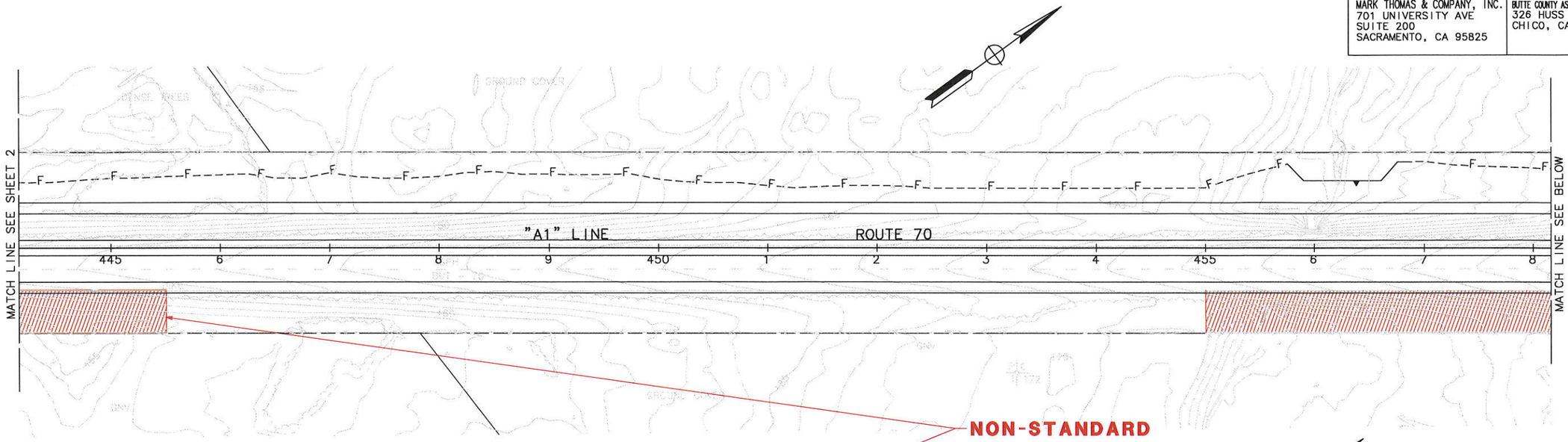

LAYOUT
SCALE: 1" = 100'
SHEET 3

REVISED BY | DATE REVISED
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STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 4/25/2018
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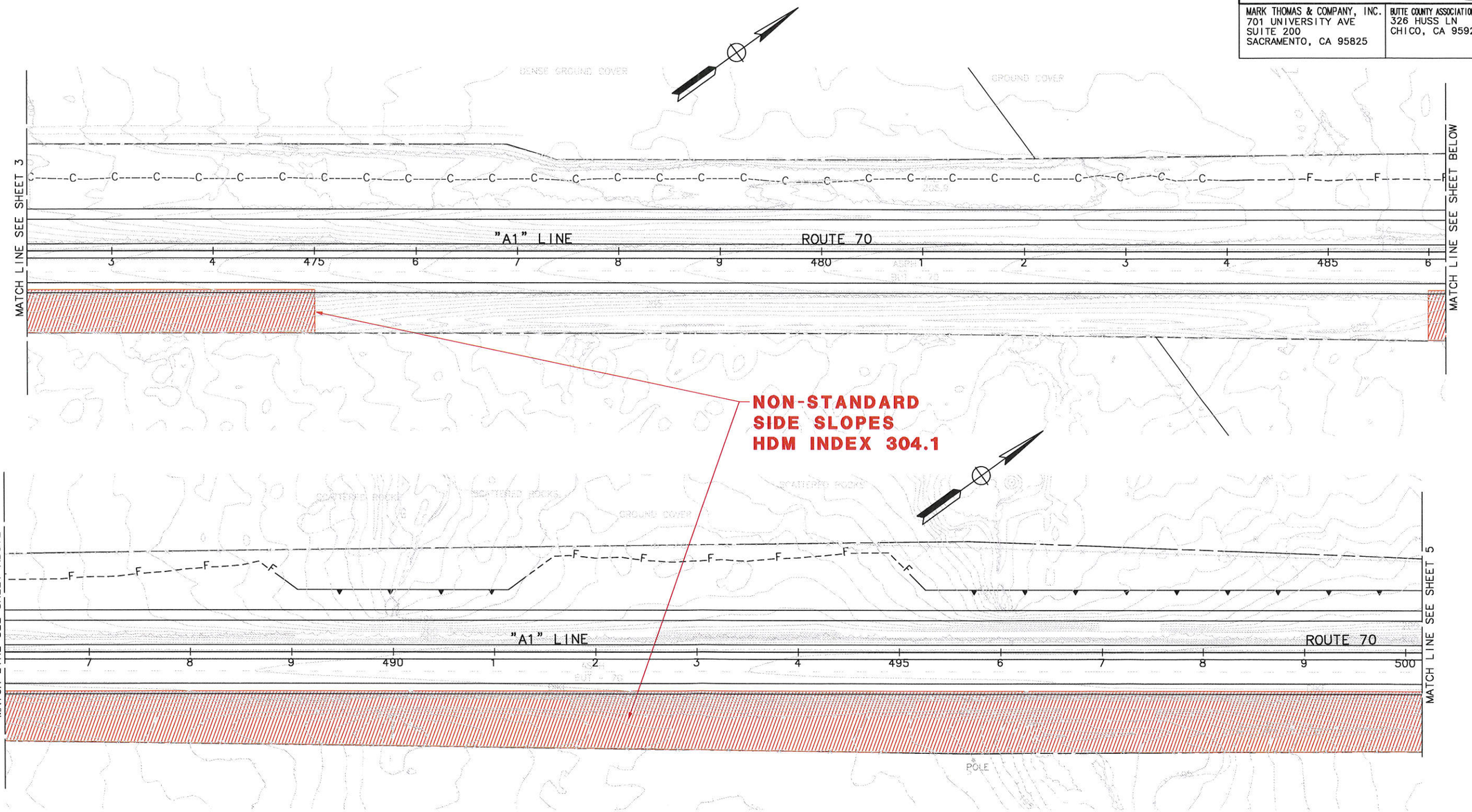

LAYOUT
SCALE: 1" = 100'
SHEET 4

REVISED BY | DATE REVISED
CALCULATED–DESIGNED BY | CHECKED BY
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BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-Segment1-Side Slope Standards_4_23_18.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

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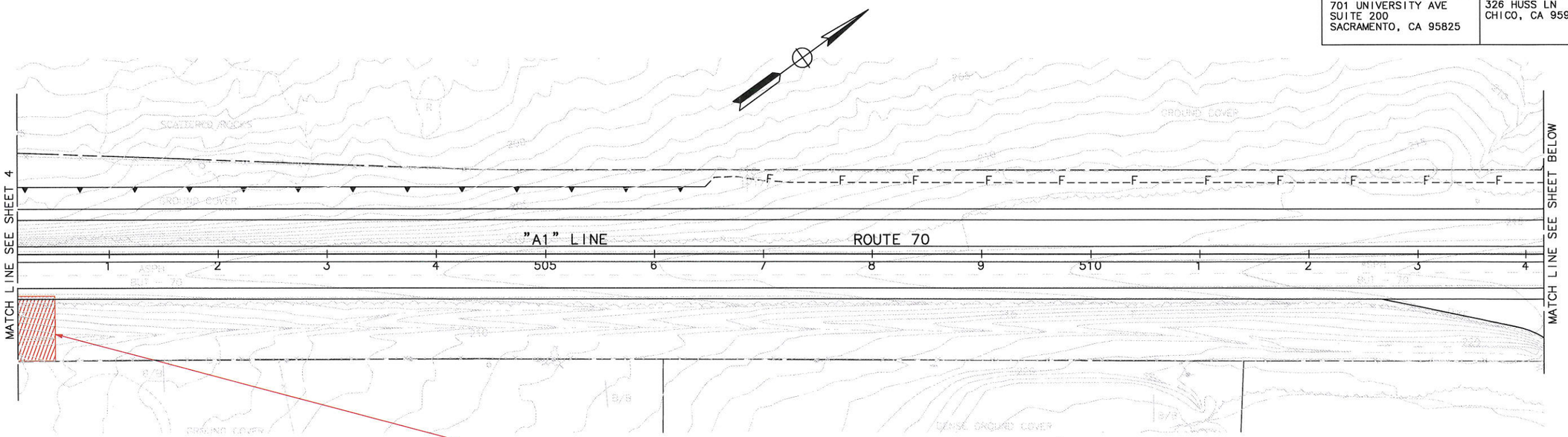

LAYOUT
SCALE: 1" = 100'
SHEET 5

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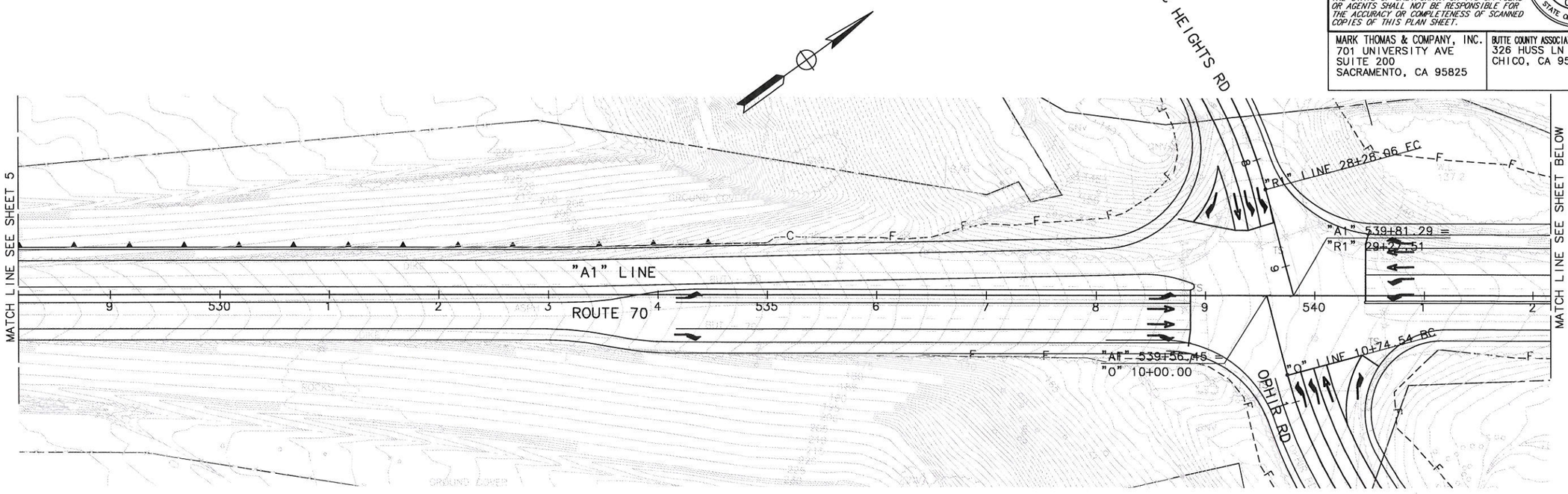
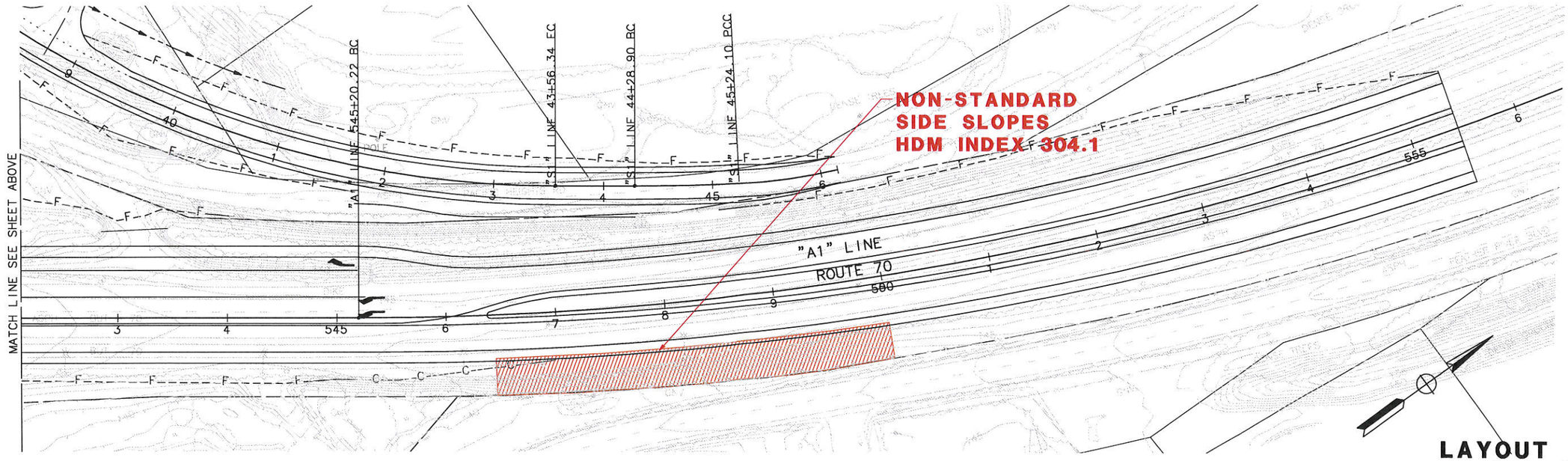
CHICO, CA 95928





LAYOUT
SCALE: 1" = 100'
SHEET 6

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR

CALCULATED–DESIGNED BY

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LAST REVISION 00-00-00
DATE PLOTTED => 4/25/2018
TIME PLOTTED => 3:04:57 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-Segment1-Side Slope Standards_4_23_18.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	33	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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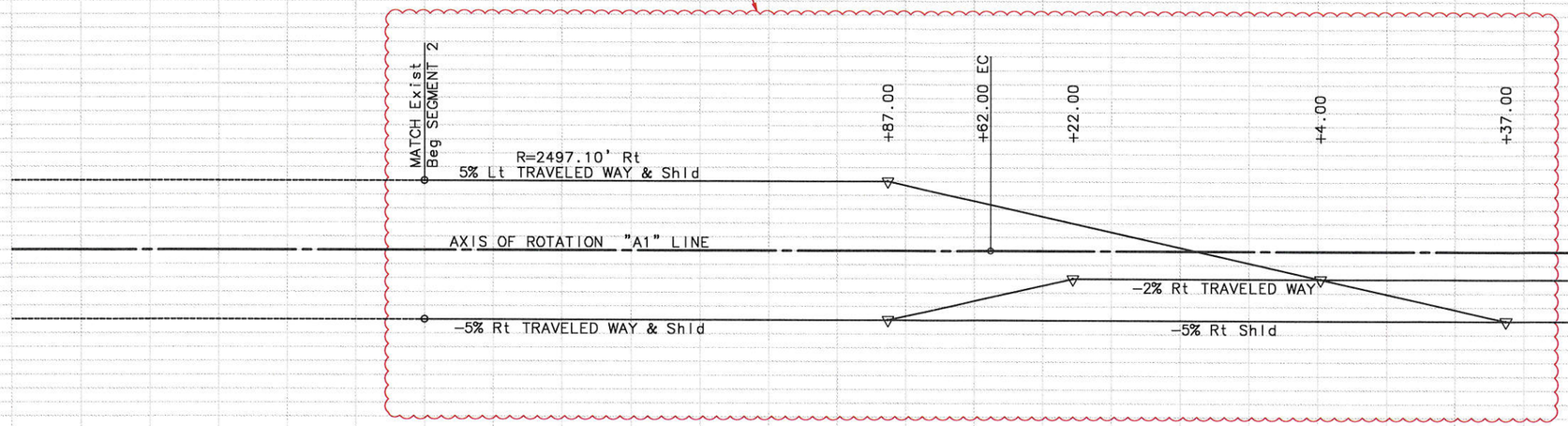
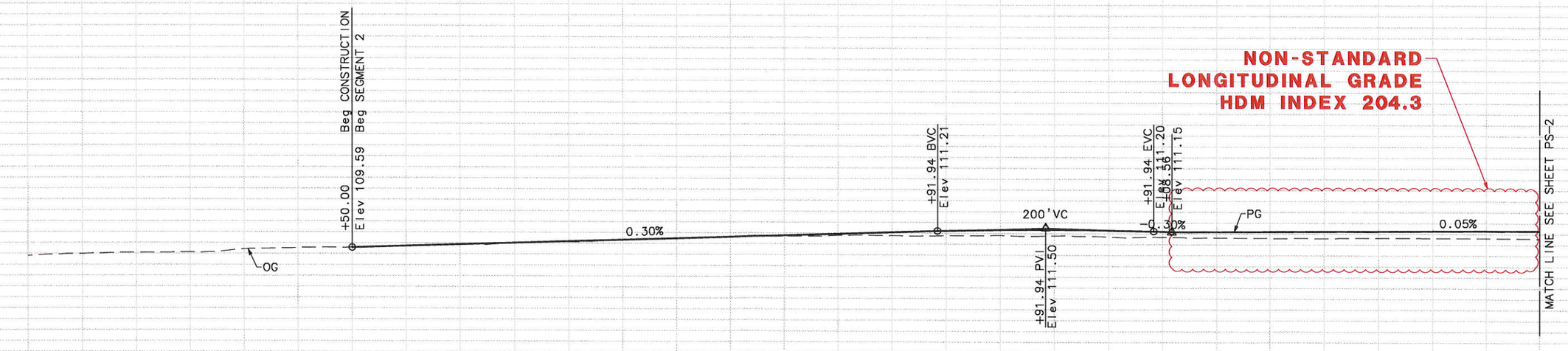
SUITE 100
CHICO, CA 95928

NON-STANDARD SUPERELEVATION HDM INDEX 202.2



SUPERELEVATION DIAGRAM

NON-STANDARD LONGITUDINAL GRADE HDM INDEX 204.3



PROFILE
ROUTE 70
"A1" LINE

ALTERNATIVE 1 PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-1

STATION	8	9	230	1	2	3	4	235	6	7	8	9	240	1	TOTAL
CY Exc															
CY Emb															

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LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 4:20:34 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-GAD_Alt1_Profile_Segment2_4_25.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	34	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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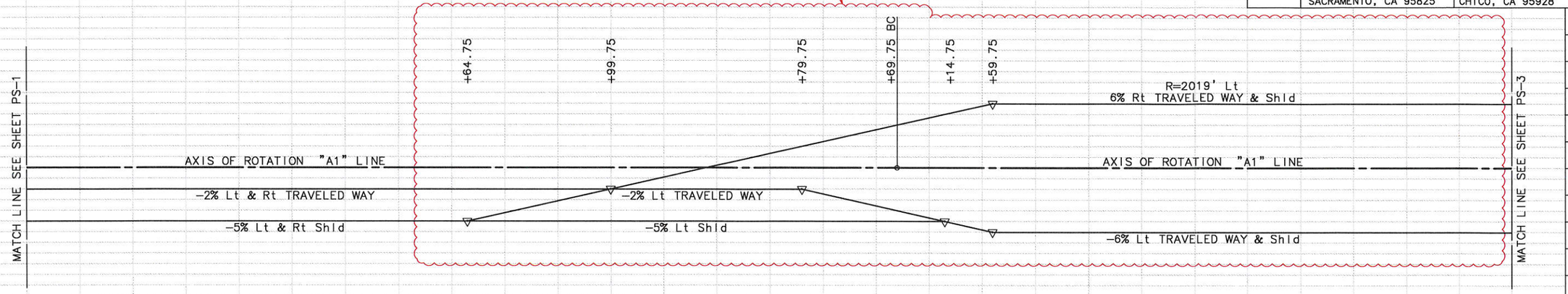
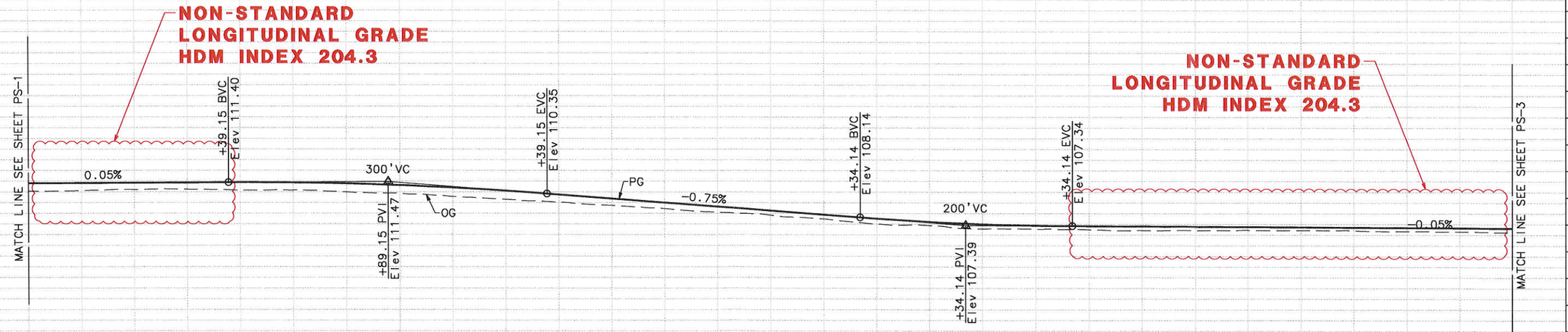
NON-STANDARD SUPERELEVATION HDM INDEX 202.2



SUPERELEVATION DIAGRAM

NON-STANDARD LONGITUDINAL GRADE HDM INDEX 204.3



PROFILE
ROUTE 70
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM
SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-2

STATION	2	3	4	245	6	7	8	9	250	1	2	3	4	255	TOTAL
CY Exc															
CY Emb															

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	35	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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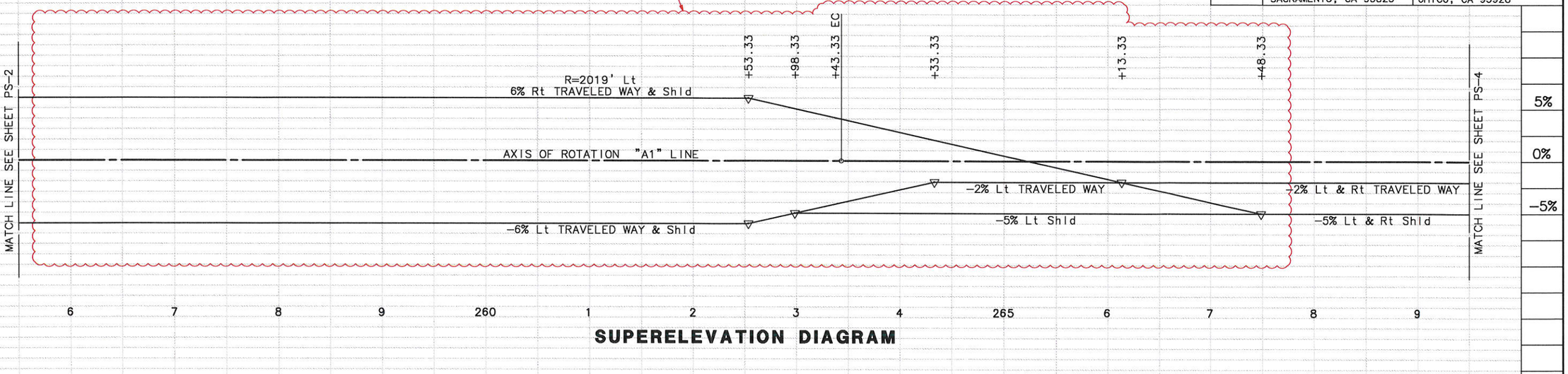
CHICO, CA 95928

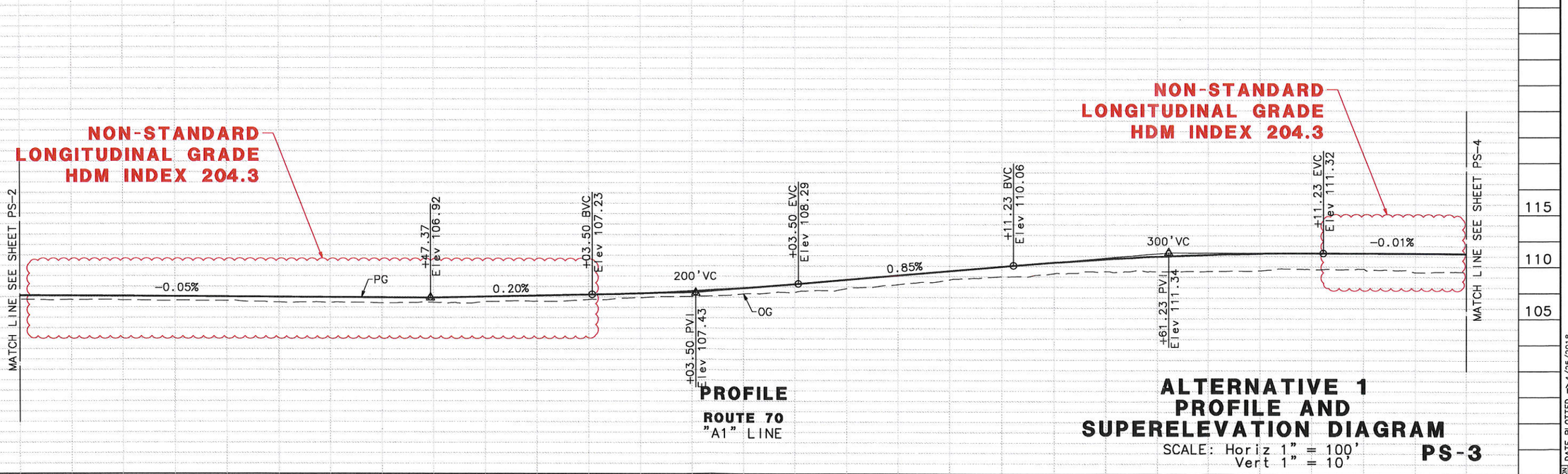
NON-STANDARD
SUPERELEVATION
HDM INDEX 202.2



SUPERELEVATION DIAGRAM

NON-STANDARD
LONGITUDINAL GRADE
HDM INDEX 204.3

NON-STANDARD
LONGITUDINAL GRADE
HDM INDEX 204.3



PROFILE
ROUTE 70
"A1" LINE

ALTERNATIVE 1
PROFILE AND
SUPERELEVATION DIAGRAM
SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-3

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BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-GAD_Alt1_Profile_Segment2_4_25.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	36	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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SUITE 100
CHICO, CA 95928

MATCH LINE SEE SHEET PS-3

MATCH LINE SEE SHEET PS-5

5%

0%

−5%

AXIS OF ROTATION "A1" LINE

−2% Lt & Rt TRAVELED WAY

−5% Lt & Rt Shld

270 1 2 3 4 275 6 7 8 9 280 1 2 3

SUPERELEVATION DIAGRAM

NON-STANDARD LONGITUDINAL GRADE HDM INDEX 204.3

115

110

105

PG

−0.01%

OG

PROFILE

ROUTE 70
"A1" LINE

ALTERNATIVE 1 PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-4

STATION 270 1 2 3 4 275 6 7 8 9 280 1 2 3 TOTAL

CY Exc

CY Emb

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BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment2_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	37	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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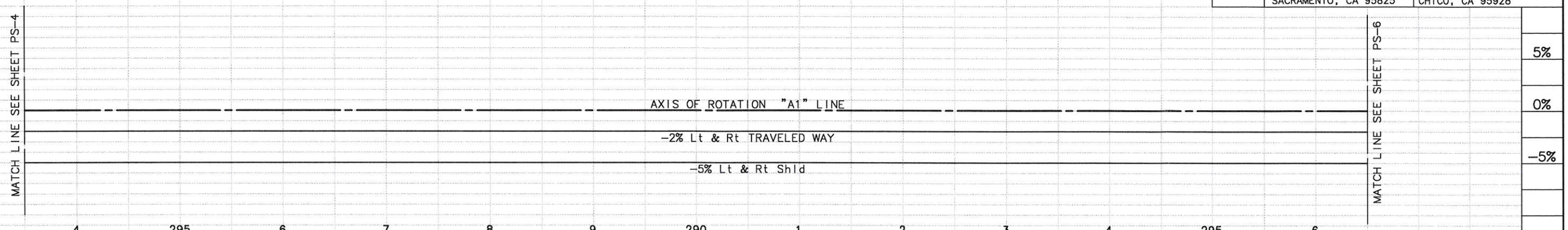
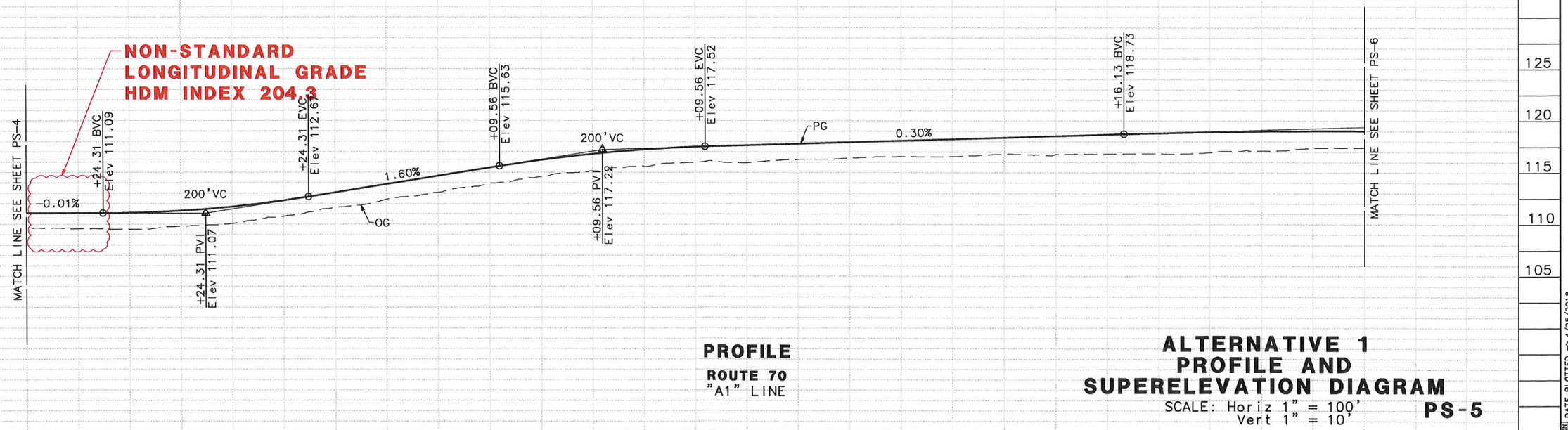


SUPERELEVATION DIAGRAM



PROFILE

ROUTE 70
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-5

STATION	4	285	6	7	8	9	290	1	2	3	4	295	6	TOTAL
CY Exc														
CY Emb														

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LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 4:20:34 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-GAD_Alt1_Profile_Segment2_4_25.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	39	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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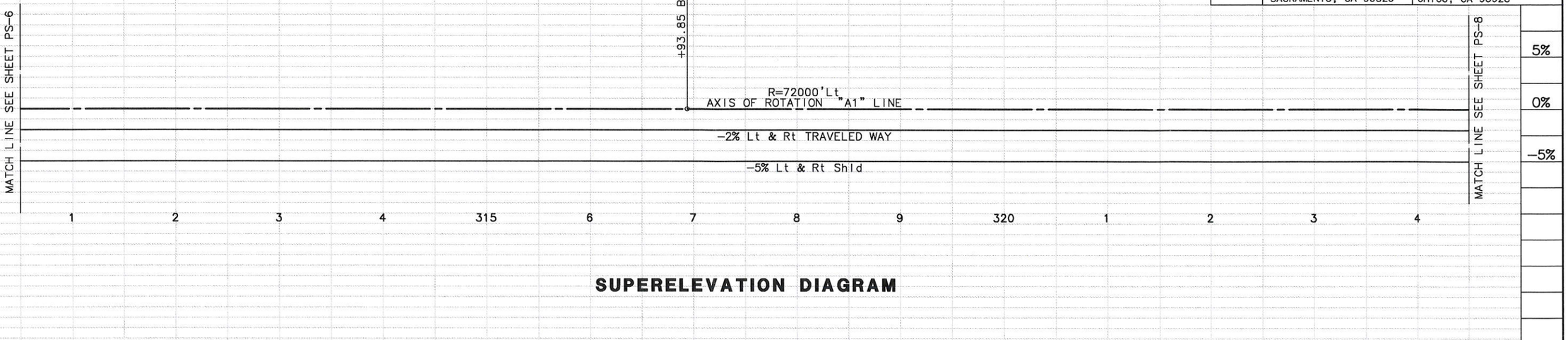
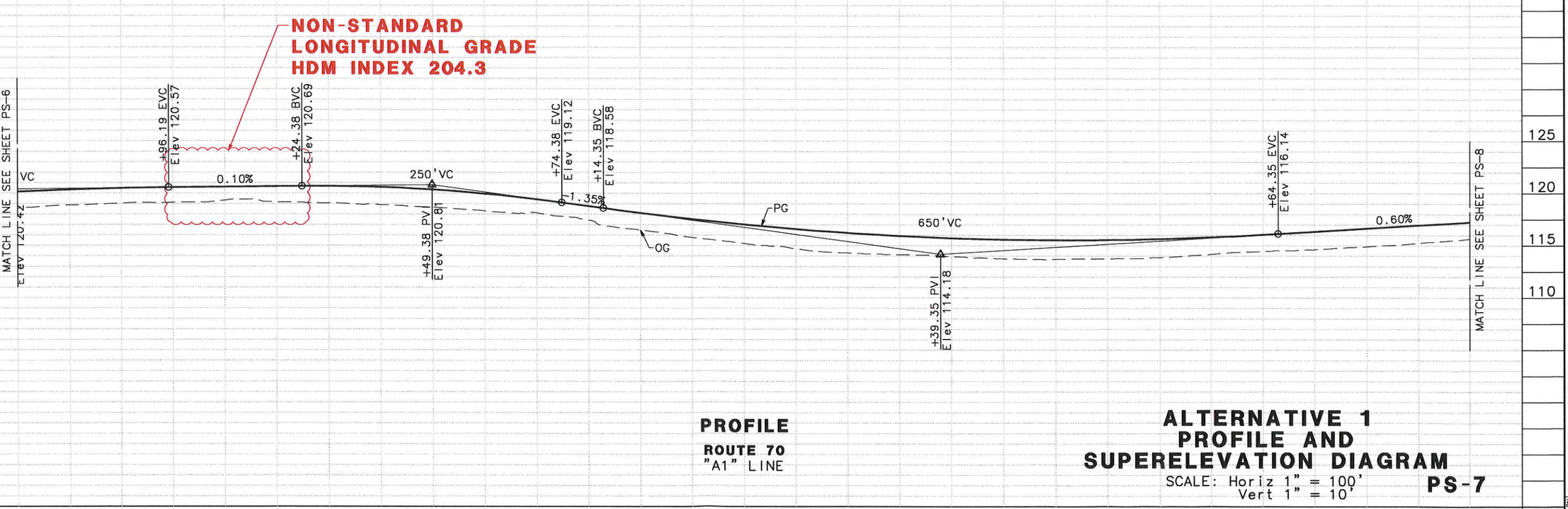


SUPERELEVATION DIAGRAM



PROFILE

ROUTE 70
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-7

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR
CALCULATED–DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
LAST REVISION 00-00-00
DATE PLOTTED => 4/25/2018
TIME PLOTTED => 4:20:34 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-GAD_Alt1_Profile_Segment2_4_25.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	41	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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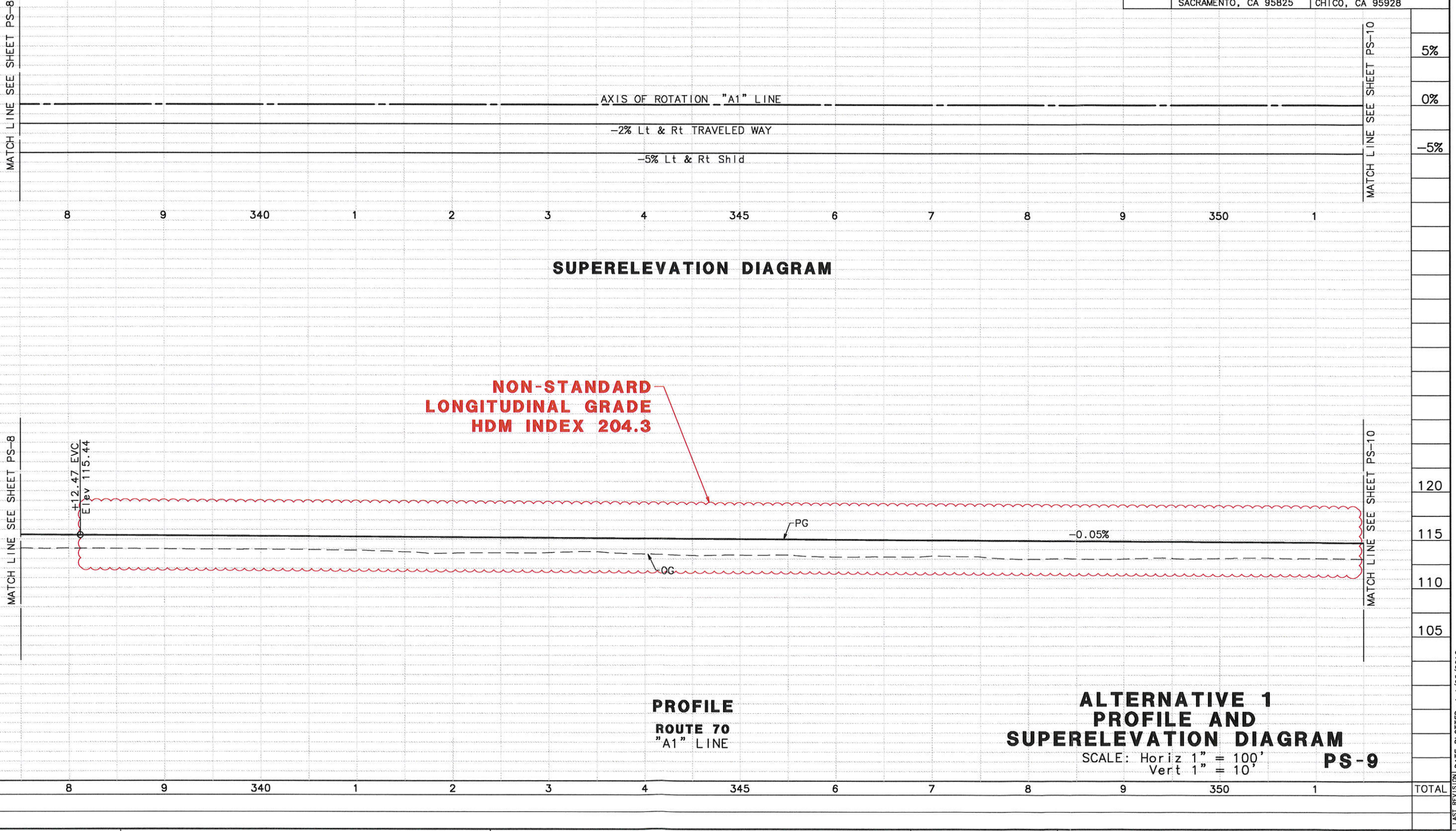

SUPERELEVATION DIAGRAM

PROFILE

ROUTE 70
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-9

STATION	8	9	340	1	2	3	4	345	6	7	8	9	350	1	TOTAL
CY Exc															
CY Emb															

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STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION | Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 4:39:38 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-GAD_Alt1_Profile_Segment2_4_25.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	42	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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Caltrans

MATCH LINE SEE SHEET PS-9

+66.32 BC

R=67000' Rt
AXIS OF ROTATION "A1" LINE

5%

0%

−5%

−2% Lt & Rt TRAVELED WAY

−5% Lt & Rt Shld

MATCH LINE SEE SHEET PS-11

2 3 4 5 355 6 7 8 9 360 1 2 3 4

SUPERELEVATION DIAGRAM

NON-STANDARD LONGITUDINAL GRADE HDM INDEX 204.3

MATCH LINE SEE SHEET PS-9

120 115 110

−0.05%

PG

+14.46 BVC
Elev 114.31

200'VC

+14.46 PVI
Elev 114.26

OG

+14.46 EVC
Elev 114.86

0.60%

+85.77 BVC
Elev 115.29

300'VC

+35.77 PVI
Elev 116.20

+85.77 EVC
Elev 115.53

−0.45%

MATCH LINE SEE SHEET PS-11

PROFILE

ROUTE 70
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-10

STATION	2	3	4	355	6	7	8	9	360	1	2	3	4	365	TOTAL
CY Exc															
CY Emb															

LAST REVISION 00-00-00
DATE PLOTTED => 4/25/2018
TIME PLOTTED => 4:39:38 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment2_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	45	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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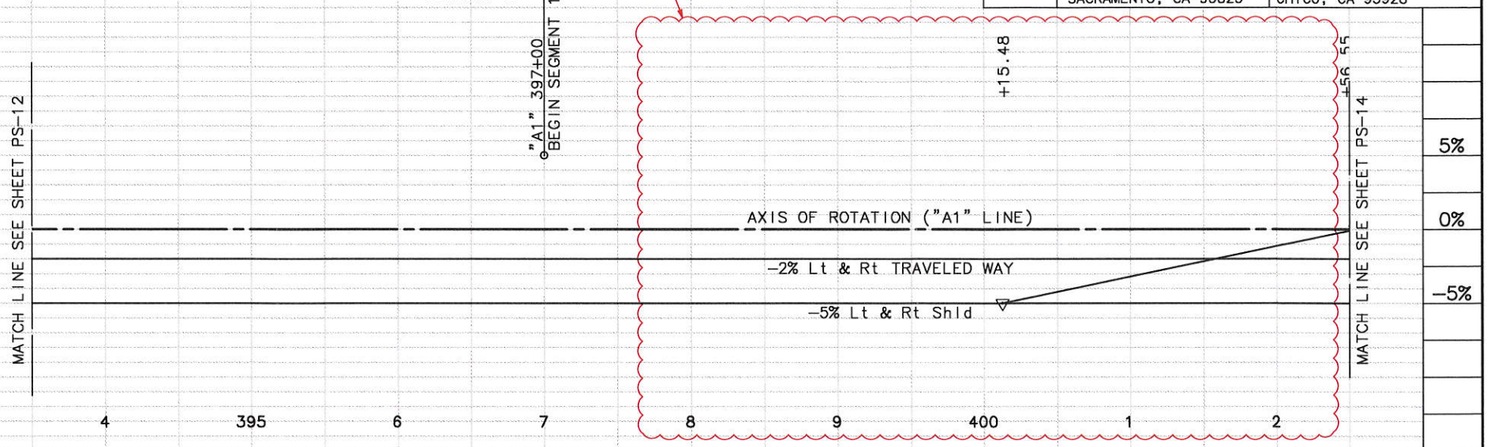
NON-STANDARD SUPERELEVATION HDM INDEX 202.2



SUPERELEVATION DIAGRAM

PROFILE

ROUTE 70
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-13

STATION	9	390	1	2	3	4	395	6	7	8	9	400	1	2	TOTAL
CY Exc															
CY Emb															

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Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 3:43:08 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	46	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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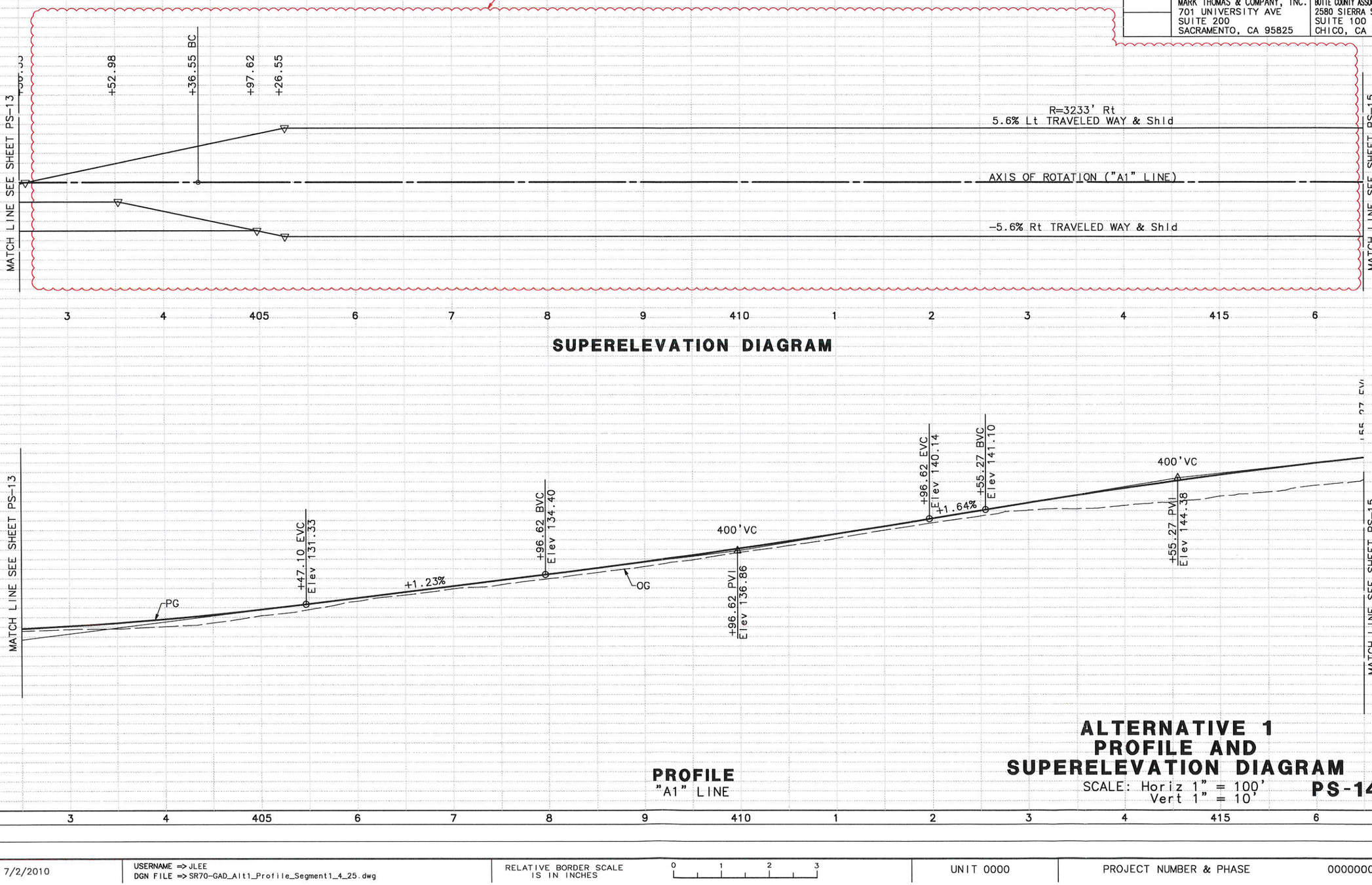
NON-STANDARD
SUPERELEVATION
HDM INDEX 202.2



PROFILE
"A1" LINE

ALTERNATIVE 1
PROFILE AND
SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-14

STATION	3	4	405	6	7	8	9	410	1	2	3	4	415	6	TOTAL
CY Exc															
CY Emb															

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Caltrans

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BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	47	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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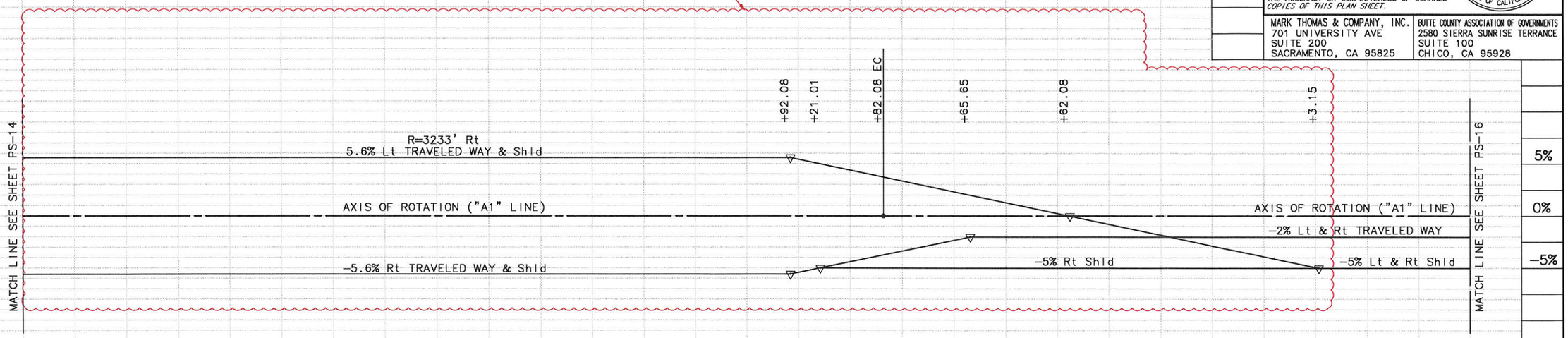
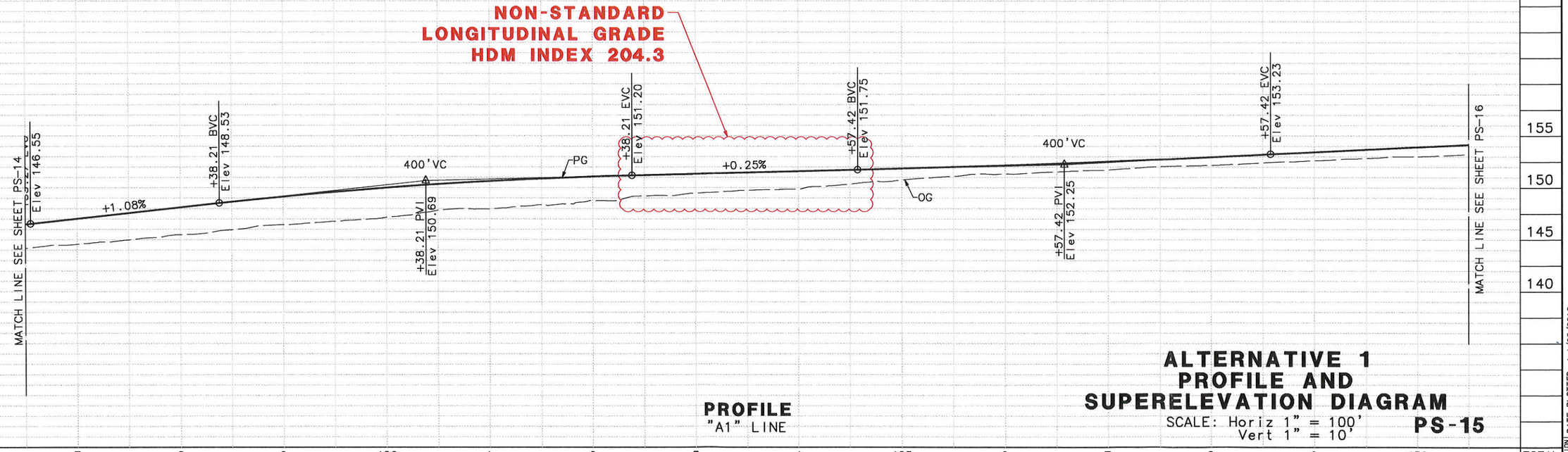
NON-STANDARD SUPERELEVATION HDM INDEX 202.2



SUPERELEVATION DIAGRAM

NON-STANDARD LONGITUDINAL GRADE HDM INDEX 204.3



PROFILE
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-15

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

STATION	7	8	9	420	1	2	3	4	425	6	7	8	9	430	TOTAL
CY Exc															
CY Emb															

LAST REVISION
00-00-00 DATE PLOTTED => 4/25/2018
TIME PLOTTED => 3:43:08 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	51	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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BUTTE COUNTY ASSOCIATION OF GOVERNMENTS
2580 SIERRA SUNRISE TERRANCE
SUITE 100
CHICO, CA 95928

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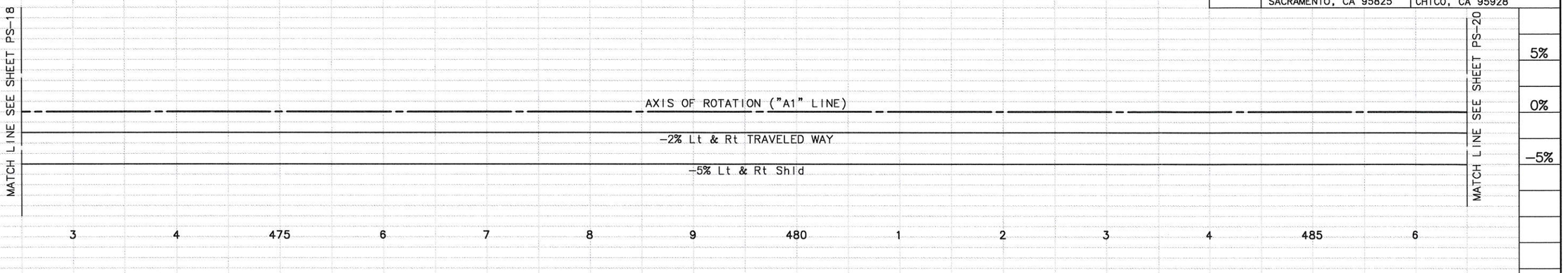
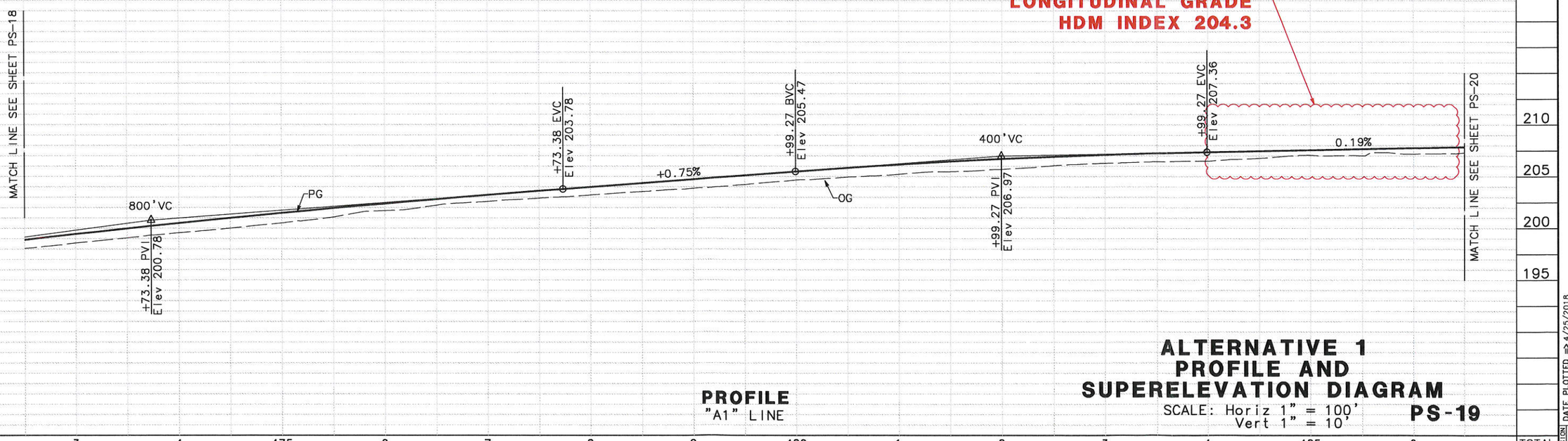
Caltrans

SUPERELEVATION DIAGRAM



PROFILE
"A1" LINE



ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-19

LAST REVISION 00-00-00
DATE PLOTTED => 4/25/2018
TIME PLOTTED => 3:43:08 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	52	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

MATCH LINE SEE SHEET PS-19

AXIS OF ROTATION ("A1" LINE)

−2% Lt & Rt TRAVELED WAY

−5% Lt & Rt Shld

MATCH LINE SEE SHEET PS-21

5% 0% −5%

STATION: 7 8 9 490 1 2 3 4 495 6 7 8 9 500

SUPERELEVATION DIAGRAM

NON-STANDARD LONGITUDINAL GRADE HDM INDEX 204.3

MATCH LINE SEE SHEET PS-19

PG

+0.19%

OG

+27.14 BVC
Elev 210.53

MATCH LINE SEE SHEET PS-21

215 210 205

PROFILE
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-20

STATION: 7 8 9 490 1 2 3 4 495 6 7 8 9 500 TOTAL

CY Exc

CY Emb

LAST REVISION DATE PLOTTED => 4/25/2018
00-00-00 TIME PLOTTED => 3:43:08 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	55	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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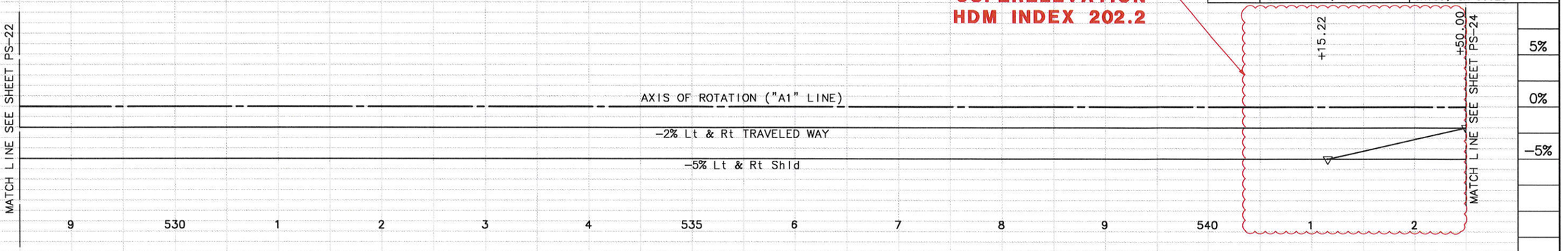
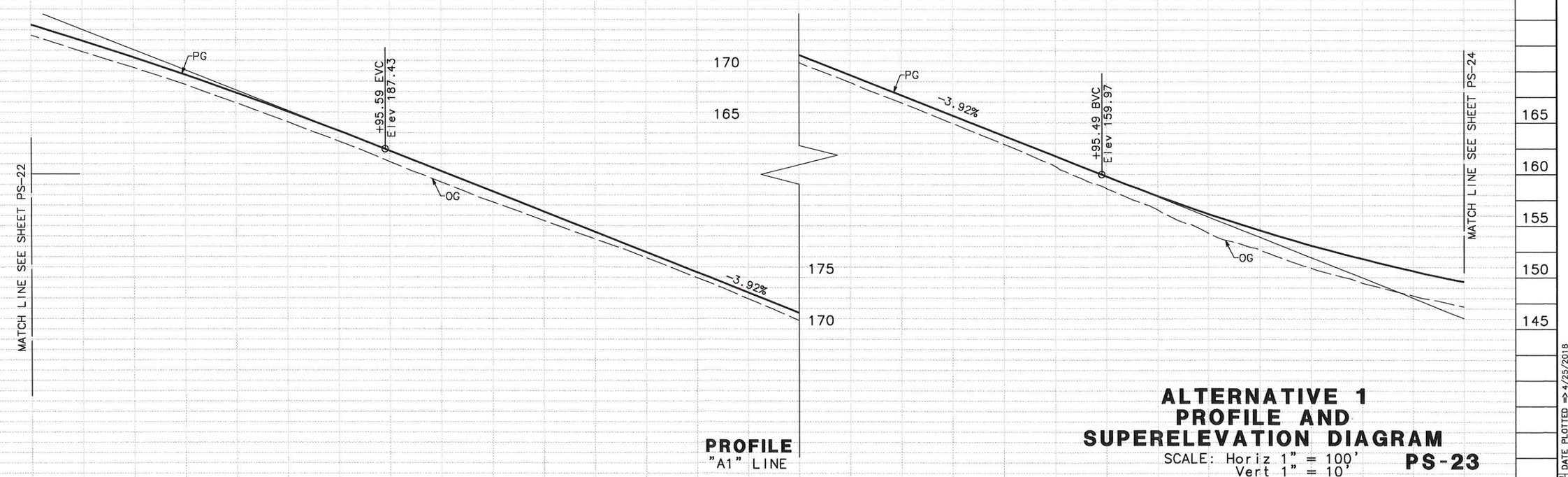
CHICO, CA 95928

NON-STANDARD SUPERELEVATION HDM INDEX 202.2



SUPERELEVATION DIAGRAM



ALTERNATIVE 1 PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-23

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CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 3:43:08 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	56	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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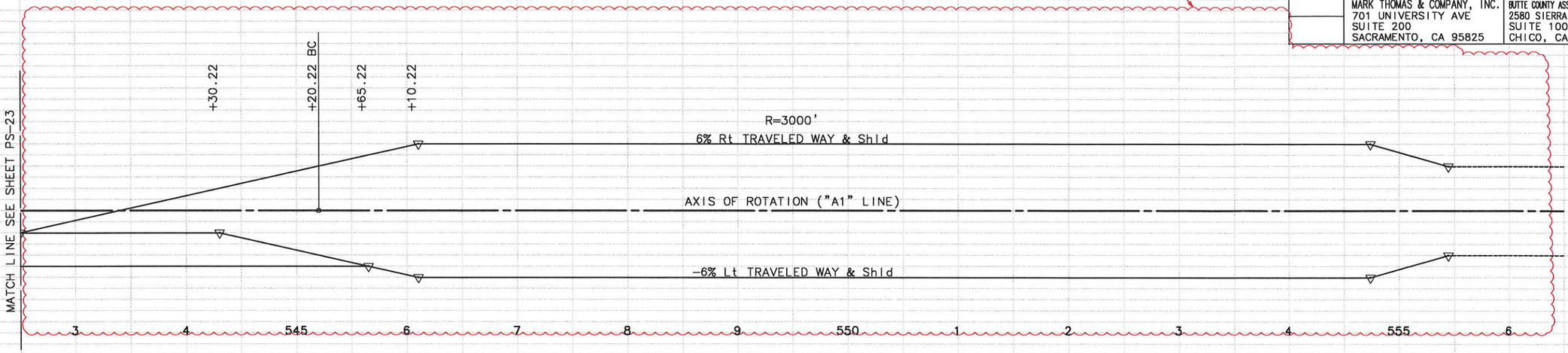
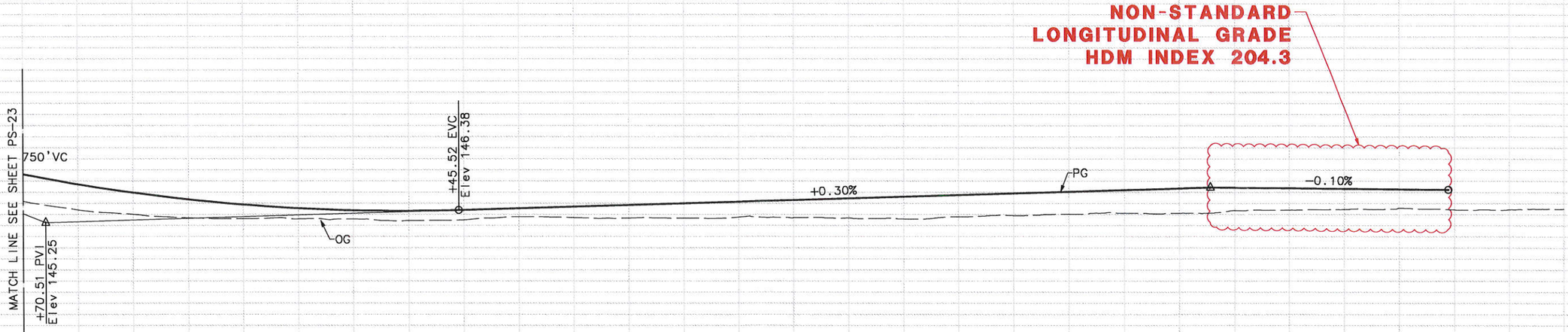
NON-STANDARD
SUPERELEVATION
HDM INDEX 202.2



SUPERELEVATION DIAGRAM

NON-STANDARD
LONGITUDINAL GRADE
HDM INDEX 204.3



PROFILE
"A1" LINE

ALTERNATIVE 1
PROFILE AND
SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-24

STATION	3	4	545	6	7	8	9	550	1	2	3	4	555	6	TOTAL
CY Exc															
CY Emb															

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 3:42:10 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => JLEE | DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	PM 5.69/11.85	57	56

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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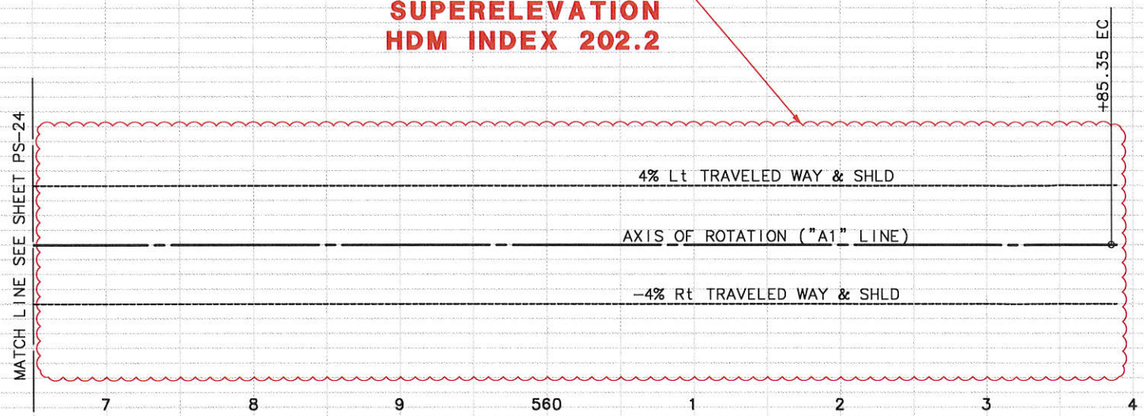
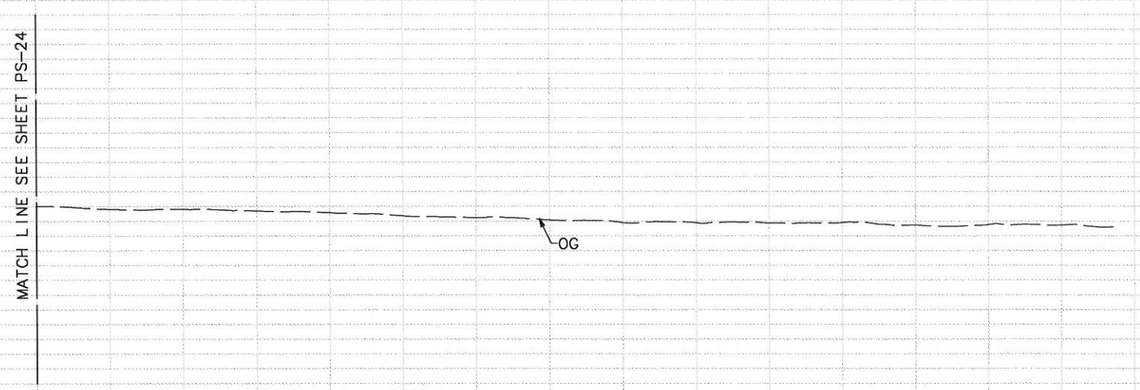
STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

NON-STANDARD SUPERELEVATION HDM INDEX 202.2



SUPERELEVATION DIAGRAM



PROFILE
"A1" LINE

ALTERNATIVE 1
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 100'
Vert 1" = 10'

PS-25

STATION	7	8	9	560	1	2	3	4	565	6	7	8	9	570	TOTAL
CY Exc															
CY Emb															

LAST REVISION 00-00-00 | DATE PLOTTED => 4/25/2018 | TIME PLOTTED => 3:42:10 PM

BORDER LAST REVISED 7/2/2010

USERNAME => JLEE
DGN FILE => SR70-GAD_Alt1_Profile_Segment1_4_25.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 00000000001

Attachment D:

Cost to Make Standard

Advisory Design Exception Feature #1: Longitudinal Grade - Cost to Make Standard				
Item Description	Unit	Estimated Quantity	Unit Price	Total Amount
ROADWAY ITEMS				
CLASS 2 AGGREGATE BASE	CY	54100	$ 75.00	$ 4,057,500.00
HOT MIX ASPHALT (TYPE A)	TON	21600	$ 105.00	$ 2,268,000.00
RUBBERIZED HOT MIX ASPHALT (GAP GRADED)	TON	11000	$ 110.00	$ 1,210,000.00
TRAFFIC CONTROL / GRADING	LS	1	$ 1,508,000.00	$ 1,508,000.00
			SUBTOTAL	**$ 9,050,000.00**
RIGHT-OF-WAY ITEMS				
RIGHT OF WAY	Ac	3.8	$ 128,000.00	$ 489,000.00
			SUBTOTAL	**$ 490,000.00**
ENVIRONMENTAL ITEMS				
CREATION COST	Ac	5.2	$ 140,000.00	$ 725,620.00
PRESERVATION COST	Ac	4.5	$ 100,000.00	$ 453,000.00
			SUBTOTAL	**$ 1,180,000.00**
			TOTAL	**$ 10,720,000.00**

Advisory Design Exception Feature #2: Side Slope - Cost to Make Standard				
Item Description	Unit	Estimated Quantity	Unit Price	Total Amount
ROADWAY ITEMS				
IMPORTED BORROW	CY	8100	$ 85.00	$ 688,500.00
			SUBTOTAL	**$ 690,000.00**
RIGHT-OF-WAY ITEMS				
RIGHT OF WAY	Ac	0.8	$ 128,000.00	$ 106,000.00
			SUBTOTAL	**$ 110,000.00**
ENVIRONMENTAL ITEMS				
CREATION COST	Ac	11.5	$ 140,000.00	$ 1,607,000.00
PRESERVATION COST	Ac	0.2	$ 100,000.00	$ 17,000.00
			SUBTOTAL	**$ 1,630,000.00**
			TOTAL	**$ 3,220,000.00**

Mandatory Design Exception Feature #1: Superelevation - Cost to Make Standard				
Item Description	Unit	Estimated Quantity	Unit Price	Total Amount
ROADWAY ITEMS				
CLASS 2 AGGREGATE BASE	CY	23000	$ 75.00	$ 1,725,000.00
HOT MIX ASPHALT (TYPE A)	TON	9200	$ 110.00	$ 1,012,000.00
RUBBERIZED HOT MIX ASPHALT (GAP GRADED)	TON	4600	$ 115.00	$ 529,000.00
TRAFFIC CONTROL / GRADING	LS	1	$ 490,000	$ 490,000.00
			SUBTOTAL	$ 3,760,000.00
RIGHT-OF-WAY ITEMS				
RIGHT OF WAY	Ac	0	$ 128,000.00	$ -
			SUBTOTAL	$ -
ENVIRONMENTAL ITEMS				
CREATION COST	Ac	0.52	$ 140,000.00	$ 73,220.00
PRESERVATION COST	Ac	0	$ 100,000.00	$ -
			SUBTOTAL	$ 80,000.00
			TOTAL	**$ 7,590,000.00**

Note: Subtotals were rounded up to be conservative.

Attachment G:

Programming Sheets

Programming Sheet

Caltrans

AMS ID: 0312000155 EA: 03-3F280 COUNTY: BUT ROUTE: 070 POSTMILE: 8.8/12.1

Project Manager: BAJWA, SUKHWINDER S PM Assistant: ARK, MANPREET K Project Nickname: BUT 70 Four Lane Widening (Seg 1
Project Description - Long: IN BUTTE COUNTY NEAR ORVILLE ON ROUTE 70 FROM 0.1 MILE SOUTH OF PALERMO ROAD TO 0.5 MILE NORTH OF OPHIR ROAD
Work Description - Long: FOUR LANE WIDENING
PPNO: 9801 Program: STIP RPT: No Funding No PROGRAM YR: 2019 Working Days: 220
Open for Time: Yes Subprogram: CT Status: APL RMP: RMP Date:
10 Yr SHOPP: No AADD: Yes Dist Category: STIP FULLY FED Aid Eligible: YES

MS	MS Description	MS Date	
M000	ID NEED	10/31/2012	(A)
M010	APPROVE PID	12/02/2013	(A)
M015	PROG PROJ	01/28/2014	(A)
M020	BEGIN ENVIRO	02/14/2014	(A)
M040	BEGIN PROJ	02/14/2014	(A)
M120	CIRC DPR & DED EXT	08/03/2018	(A)
M200	PA & ED	10/01/2018	(T)
M300	CIRC PLANS IN DIST	08/01/2018	(A)
M377	PS&E TO DOE	10/05/2018	(A)
M380	PROJ PS&E	12/01/2018	(T)
M410	R/W CERT	11/20/2018	(T)
M430	DCR	11/23/2018	(T)
M460	RTL	12/05/2018	(T)
M470	FUND ALLOCATION	01/23/2019	(T)
M480	HQ ADVERT	02/06/2019	(T)
M490	BIDS OPEN	03/06/2019	(T)
M495	AWARD	04/01/2019	(T)
M500	APPROVE CONTRACT	05/01/2019	(T)
M600	CONTRACT ACCEPT	03/15/2021	(T)
M700	FINAL REPORT	03/15/2022	(T)
M800	END PROJ EXP	03/15/2024	(T)
M900	FINAL PROJ	03/15/2026	(T)

Capital Cost Estimates ($k)

	Amount $k	EST Date
Roadway	8727	10/12/18
Structures	0	
Const Total	8727	
ROW	1600	10/11/18
Total	10327	

Env Doc: CE (NEPA), IS

Funding Info ($k)

Fund Source	PA&ED	PS&E	ROW	CON	ROW Cap	CON CAP
2020025.700	0	0	0	0	800	4700
2010075.600	0	450	550	700	0	0
2010800.100	100	0	0	0	0	0
2010025.700	0	450	550	700	0	0
2020075.600	0	0	0	0	800	4700
Grand Total:	**100**	**900**	**1,100**	**1,400**	**1,600**	**9,400**

Capital Cost Estimates ($k)

	2019
CC Escalation %:	4.20%
CC Escalated $:	8,727
ROW CAPITAL:	1,600
TOTAL:	10,327

PROJECT SUPPORT COSTS ($k)

Phase Escalation	PRIOR ACT $	2019 ETC	2020 (4.20%)	2021 (4.20%)	2022 (4.20%)	2023 (4.20%)	Future (4.20%)	Total	Sup/Cap%
0	**731**	**87**	**0**	**0**	**0**	**0**	**0**	**818**	**7.92%**
1	**0**	**820**	**0**	**0**	**0**	**0**	**0**	**820**	**7.94%**
2	**0**	**316**	**149**	**155**	**161**	**168**	**123**	**1,072**	**10.38%**
3	**0**	**0**	**1,061**	**238**	**8**	**2**	**0**	**1,309**	**12.68%**
							TOTAL SUPPORT COSTS:	4,019	38.92%
							TOTAL PROJECT COSTS:	14,346	

PROJECT SUPPORT PYs

	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
03	ADMN	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02
03	CONS	0.03	0.09	3.66	0.67	0.01	0.00	0.00	4.45
03	ENVM	0.79	2.49	0.01	0.02	0.01	0.01	0.00	3.32
03	ESRV	0.21	0.15	0.01	0.00	0.00	0.00	0.00	0.37
03	PPM	0.30	0.35	0.29	0.36	0.22	0.21	0.15	1.87
03	PRJD	1.52	0.80	0.03	0.01	0.00	0.00	0.00	2.36
03	RWLS	0.43	1.32	0.32	0.32	0.32	0.32	0.23	3.25
03	SURV	0.33	0.66	0.11	0.10	0.10	0.10	0.07	1.47
03	TPLN	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.07
03	TROP	0.07	0.10	0.01	0.00	0.00	0.00	0.00	0.18
03	TOTALS :	3.74	5.98	4.44	1.48	0.66	0.64	0.45	17.36
	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
59	GS	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.07
59	METS	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.04
59	PPM	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.14
59	SDSN	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
59	TOTALS :	0.07	0.16	0.03	0.00	0.00	0.00	0.00	0.27
	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
		0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	TOTALS :	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04

Programming Sheet

AMS ID: 0312000155 EA: 03-3F280 COUNTY: BUT ROUTE: 070 POSTMILE: 8.8/12.1

PROJECT TOTALS:	3.85	6.14	4.47	1.48	0.66	0.64	0.45	17.67

Comments:

Programming Sheet

AMS ID: 0318000053 EA: 03-3H710 COUNTY: BUT ROUTE: 070 POSTMILE: 8.8/11.8

Project Manager: BAJWA, SUKHWINDER S PM Assistant: ARK, MANPREET K Project Nickname: Ophir Palermo Safety, (Seg 1 SHOPP)
Project Description - Long: In Butte County on Route 70 between Palermo Rd and Ophir Rd.
Work Description - Long: Construct two-way left turn lane/left turn pockets, widen shoulders to improve access for bicyclists and pedestrians, and establish
PPNO: 2294 Program: shopp RPT: No Funding No PROGRAM YR: 2020 Working Days: 220
Open for Time: Yes Subprogram: Safety Improvements CT Status: APL RMP: RMP Date:
10 Yr SHOPP: Yes AADD: Yes Dist Category: SHOPP MAJOR FED Aid Eligible: YES

MS	MS Description	MS Date	
M000	ID NEED	08/14/2017	(A)
M010	APPROVE PID	08/25/2017	(A)
M015	PROG PROJ	10/25/2017	(A)
M020	BEGIN ENVIRO	10/25/2017	(A)
M040	BEGIN PROJ	10/25/2017	(A)
M120	CIRC DPR & DED EXT	08/03/2018	(A)
M200	PA & ED	10/01/2018	(T)
M300	CIRC PLANS IN DIST	08/01/2018	(A)
M377	PS&E TO DOE	10/05/2018	(A)
M380	PROJ PS&E	12/01/2018	(T)
M410	R/W CERT	11/20/2018	(T)
M430	DCR	11/23/2018	(T)
M460	RTL	12/05/2018	(T)
M470	FUND ALLOCATION	01/23/2019	(T)
M480	HQ ADVERT	02/06/2019	(T)
M490	BIDS OPEN	03/06/2019	(T)
M495	AWARD	04/01/2019	(T)
M500	APPROVE CONTRACT	05/01/2019	(T)
M600	CONTRACT ACCEPT	03/15/2021	(T)
M700	FINAL REPORT	03/15/2022	(T)
M800	END PROJ EXP	03/15/2024	(T)
M900	FINAL PROJ	03/15/2026	(T)

Capital Cost Estimates ($k)

	Amount $k	EST Date
Roadway	22440	10/12/18
Structures	0	
Const Total	22440	
ROW	480	10/11/18
Total	22920	

Env Doc: EA, IS

Funding Info ($k)

Fund Source	PA&ED	PS&E	ROW	CON	ROW Cap	CON CAP
2010201.010	1136	2240	2320	3700	0	0
2020201.010	0	0	0	0	480	23130
4050201.010	0	0	0	0	0	0
Grand Total:	**1,136**	**2,240**	**2,320**	**3,700**	**480**	**23,130**

Capital Cost Estimates ($k)

	2019
CC Escalation %:	4.20%
CC Escalated $:	22,440
ROW CAPITAL:	480
TOTAL:	22,920

PROJECT SUPPORT COSTS ($k)

Phase Escalation	PRIOR ACT $	2019 ETC	2020 (4.20%)	2021 (4.20%)	2022 (4.20%)	2023 (4.20%)	Future (4.20%)	Total	Sup/Cap%
0	**1,087**	**46**	**0**	**0**	**0**	**0**	**0**	**1,133**	**4.94%**
1	**0**	**1,459**	**0**	**0**	**0**	**0**	**0**	**1,459**	**6.37%**
2	**0**	**1,375**	**132**	**137**	**143**	**149**	**109**	**2,046**	**8.93%**
3	**0**	**0**	**2,342**	**758**	**43**	**8**	**1**	**3,153**	**13.76%**
							TOTAL SUPPORT COSTS:	7,791	34%
							TOTAL PROJECT COSTS:	30,711	

PROJECT SUPPORT PYs

	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
03	ESR	0.13	0.28	0.00	0.00	0.00	0.00	0.00	0.42
03	CONS	0.00	0.00	8.83	2.39	0.09	0.00	0.00	11.31
03	ENVM	0.30	0.43	0.03	0.05	0.05	0.05	0.00	0.90
03	ESRV	0.59	0.85	0.01	0.01	0.00	0.00	0.00	1.46
03	MTCE	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.03
03	PPM	0.17	0.39	0.36	0.56	0.17	0.14	0.10	1.89
03	PRJD	3.11	3.68	0.00	0.01	0.00	0.00	0.00	6.79
03	RWLS	0.12	6.80	0.41	0.41	0.41	0.41	0.29	8.85
03	SURV	0.77	1.35	1.04	0.24	0.07	0.07	0.05	3.59
03	TPLN	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.15
03	TROP	0.51	0.67	0.01	0.00	0.00	0.00	0.00	1.20
03	TOTALS :	5.88	14.46	10.69	3.67	0.79	0.67	0.44	36.59
	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
59	GS	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
59	PPM	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.11
59	TOTALS :	0.02	0.11	0.00	0.00	0.00	0.00	0.00	0.13
	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
		0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05
	TOTALS :	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05
PROJECT TOTALS:		5.95	14.57	10.69	3.67	0.79	0.67	0.44	36.77

AMS ID: 0318000053 EA: 03-3H710 COUNTY: BUT ROUTE: 070 POSTMILE: 8.8/11.8

Comments:

Programming Sheet

AMS ID: 0314000057 EA: 03-3F281 COUNTY: BUT ROUTE: 070 POSTMILE: 5.6/8.8

Project Manager: BAJWA, SUKHWINDER S PM Assistant: ARK, MANPREET K Project Nickname: SR 70 Passing Lanes (Seg 2 STIP)
Project Description - Long: IN YUBA AND BUTTE COUNTIES ON ROUTE
Work Description - Long: PASSING LANES AT VARIOUS LOCATIONS
PPNO: 9801a Program: stip-rip RPT: No Funding No PROGRAM YR: 2020 Working Days: 220
Open for Time: Yes Subprogram: CT Status: APL RMP: RMP Date:
10 Yr SHOPP: No AADD: Yes Dist Category: STIP FULLY FED Aid Eligible: YES

MS	MS Description	MS Date	
M000	ID NEED	10/31/2012	(A)
M010	APPROVE PID	12/02/2013	(A)
M015	PROG PROJ	01/28/2014	(A)
M120	CIRC DPR & DED EXT	08/03/2018	(A)
M200	PA & ED	10/01/2018	(T)
M224	R/W REQTS	08/15/2018	(A)
M225	REGULAR R/W	10/01/2018	(T)
M300	CIRC PLANS IN DIST	12/15/2018	(T)
M377	PS&E TO DOE	02/01/2019	(T)
M380	PROJ PS&E	09/01/2019	(T)
M410	R/W CERT	12/01/2019	(T)
M430	DCR	12/15/2019	(T)
M460	RTL	01/02/2020	(T)
M470	FUND ALLOCATION	03/01/2020	(T)
M480	HQ ADVERT	04/01/2020	(T)
M490	BIDS OPEN	05/01/2020	(T)
M495	AWARD	06/01/2020	(T)
M500	APPROVE CONTRACT	07/01/2020	(T)
M600	CONTRACT ACCEPT	12/01/2022	(T)
M700	FINAL REPORT	12/01/2023	(T)
M800	END PROJ EXP	12/01/2024	(T)
M900	FINAL PROJ	12/01/2025	(T)

Capital Cost Estimates ($k)

	Amount $k	EST Date
Roadway	5654	10/12/18
Structures	0	
Const Total	5654	
ROW	1800	10/11/18
Total	7454	

Env Doc: CE (CEQA), IS

Funding Info ($k)

Fund Source	PA&ED	PS&E	ROW	CON	ROW Cap	CON CAP
2010400.200	0	-3026	0	0	0	0
2020025.700	0	0	0	0	900	4200
2010075.600	0	400	500	600	0	0
2010025.700	0	400	500	600	0	0
2030010.600	0	2533	0	0	0	0
2030010.680	0	493	0	0	0	0
2020075.600	0	0	0	0	900	4200
Grand Total:	**0**	**800**	**1,000**	**1,200**	**1,800**	**8,400**

Capital Cost Estimates ($k)

	2020
CC Escalation %:	4.20%
CC Escalated $:	5,891
ROW CAPITAL:	1,800
TOTAL:	7,691

PROJECT SUPPORT COSTS ($k)

Phase Escalation	PRIOR ACT $	2019 ETC	2020 (4.20%)	2021 (4.20%)	2022 (4.20%)	2023 (4.20%)	Future (4.20%)	Total	Sup/Cap%
1	**4**	**575**	**207**	**0**	**0**	**0**	**0**	**786**	**10.21%**
2	**0**	**52**	**151**	**172**	**180**	**187**	**247**	**990**	**12.87%**
3	**0**	**0**	**0**	**452**	**481**	**246**	**43**	**1,223**	**15.89%**
							TOTAL SUPPORT COSTS:	2,999	38.97%
							TOTAL PROJECT COSTS:	10,690	

PROJECT SUPPORT PYs

	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
03	ESR	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.11
03	CONS	0.00	0.01	0.00	1.50	1.53	0.73	0.06	3.84
03	ENVM	0.00	0.82	0.15	0.00	0.00	0.01	0.00	0.98
03	ESRV	0.00	0.52	0.27	0.01	0.01	0.00	0.00	0.81
03	PPM	0.00	0.02	0.21	0.09	0.09	0.09	0.09	0.59
03	PRJD	0.00	0.38	0.08	0.00	0.00	0.00	0.00	0.46
03	RWLS	0.00	0.41	0.85	0.91	0.91	0.91	1.22	5.21
03	SURV	0.00	0.21	0.02	0.24	0.24	0.11	0.00	0.82
03	TROP	0.00	0.34	0.02	0.00	0.00	0.00	0.00	0.36
03	TOTALS :	0.00	2.82	1.60	2.75	2.78	1.85	1.37	13.18
	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
59	PPM	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.13
59	TOTALS :	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.13
PROJECT TOTALS:		0.00	2.82	1.73	2.75	2.78	1.85	1.37	13.31

Comments:

Programming Sheet

Caltrans

AMS ID: 0318000054 EA: 03-3H720 COUNTY: BUT ROUTE: 070 POSTMILE: 5.6/8.8

Project Manager: BAJWA, SUKHWINDER S PM Assistant: ARK, MANPREET K Project Nickname: Palermo Cox Safety (Seg 2 SHOPP)
Project Description - Long: In Butte County on Route 70 east of Cox Lane to Palermo Road.
Work Description - Long: Construct two-way left turn lane/left-turn pockets, widen shoulders, provide improved access for bicyclists/pedestrians, and
PPNO: 2295 Program: shopp RPT: No Funding No PROGRAM YR: 2020 Working Days: 220
Open for Time: Yes Subprogram: Safety Improvements CT Status: APL RMP: RMP Date:
10 Yr SHOPP: Yes AADD: Yes Dist Category: SHOPP MAJOR FED Aid Eligible: YES

MS	MS Description	MS Date	
M000	ID NEED	08/14/2017	(A)
M010	APPROVE PID	08/25/2017	(A)
M015	PROG PROJ	10/25/2017	(A)
M020	BEGIN ENVIRO	10/25/2017	(A)
M040	BEGIN PROJ	10/25/2017	(A)
M120	CIRC DPR & DED EXT	08/03/2018	(A)
M200	PA & ED	10/01/2018	(T)
M224	R/W REQTS	08/15/2018	(A)
M225	REGULAR R/W	10/18/2018	(T)
M300	CIRC PLANS IN DIST	12/15/2018	(T)
M377	PS&E TO DOE	02/01/2019	(T)
M380	PROJ PS&E	09/01/2019	(T)
M410	R/W CERT	12/01/2019	(T)
M430	DCR	12/15/2019	(T)
M460	RTL	01/02/2020	(T)
M470	FUND ALLOCATION	03/01/2020	(T)
M480	HQ ADVERT	04/01/2020	(T)
M490	BIDS OPEN	05/01/2020	(T)
M495	AWARD	06/01/2020	(T)
M500	APPROVE CONTRACT	07/01/2020	(T)
M600	CONTRACT ACCEPT	12/01/2022	(T)
M700	FINAL REPORT	12/01/2023	(T)
M800	END PROJ EXP	12/01/2024	(T)
M900	FINAL PROJ	12/01/2025	(T)

Capital Cost Estimates ($k)

	Amount $k	EST Date
Roadway	16961	10/12/18
Structures	0	
Const Total	16961	
ROW	3220	10/11/18
Total	20181	

Env Doc: EA, IS

Funding Info ($k)

Fund Source	PA&ED	PS&E	ROW	CON	ROW Cap	CON CAP
2010201.010	1278	2180	1590	3540	0	0
2020201.010	0	0	0	0	3220	25350
4050201.010	0	0	0	0	0	0
Grand Total:	**1,278**	**2,180**	**1,590**	**3,540**	**3,220**	**25,350**

Capital Cost Estimates ($k)

	2020
CC Escalation %:	4.20%
CC Escalated $:	17,673
ROW CAPITAL:	3,220
TOTAL:	20,893

PROJECT SUPPORT COSTS ($k)

Phase Escalation	PRIOR ACT $	2019 ETC	2020 (4.20%)	2021 (4.20%)	2022 (4.20%)	2023 (4.20%)	Future (4.20%)	Total	Sup/Cap%
0	**1,026**	**238**	**0**	**0**	**0**	**0**	**0**	**1,264**	**6.05%**
1	**0**	**1,286**	**691**	**0**	**0**	**0**	**0**	**1,978**	**9.46%**
2	**0**	**323**	**721**	**89**	**92**	**96**	**142**	**1,464**	**7.01%**
3	**0**	**0**	**0**	**1,066**	**1,188**	**710**	**224**	**3,188**	**15.26%**
						TOTAL SUPPORT COSTS:		7,894	37.78%
						TOTAL PROJECT COSTS:		28,787	

PROJECT SUPPORT PYs

	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
03	ESR	0.17	0.14	0.01	0.00	0.00	0.00	0.00	0.32
03	CONS	0.00	0.00	0.00	3.19	3.39	1.80	0.23	8.60
03	ENVM	0.25	2.60	0.54	0.10	0.23	0.27	0.09	4.09
03	ESRV	0.14	1.17	0.77	0.00	0.01	0.01	0.00	2.11
03	MTCE	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.06
03	PPM	0.16	0.18	0.10	0.36	0.36	0.36	0.51	2.04
03	PRJD	3.32	1.00	0.23	0.00	0.00	0.00	0.00	4.55
03	RWLS	0.30	0.59	3.24	0.15	0.15	0.15	0.22	4.81
03	SURV	0.99	2.71	1.58	0.70	0.70	0.36	0.15	7.19
03	TPLN	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07
03	TROP	0.11	0.62	0.17	0.00	0.00	0.00	0.00	0.90
03	TOTALS :	5.54	9.04	6.64	4.50	4.84	2.95	1.20	34.74
	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
59	PPM	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.26
59	TOTALS :	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.26
	Division	PRIOR ACT PYS	2018 ETC PYs	2019 ETC PYs	2020 ETC PYs	2021 ETC PYs	2022 ETC PYs	Future ETC PYs	Total ETC PYs
		0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05
	TOTALS :	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05

Programming Sheet

AMS ID: 0318000054 EA: 03-3H720 COUNTY: BUT ROUTE: 070 POSTMILE: 5.6/8.8

PROJECT TOTALS:	5.59	9.04	6.90	4.50	4.84	2.95	1.20	35.05

Comments: