

Project Report

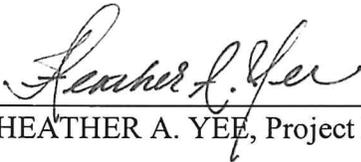
For Project Approval

On Route Watt Avenue

Between Orange Grove Avenue / I-80 westbound ramps

And Roseville Road

APPROVAL RECOMMENDED:



HEATHER A. YEE, Project Manager

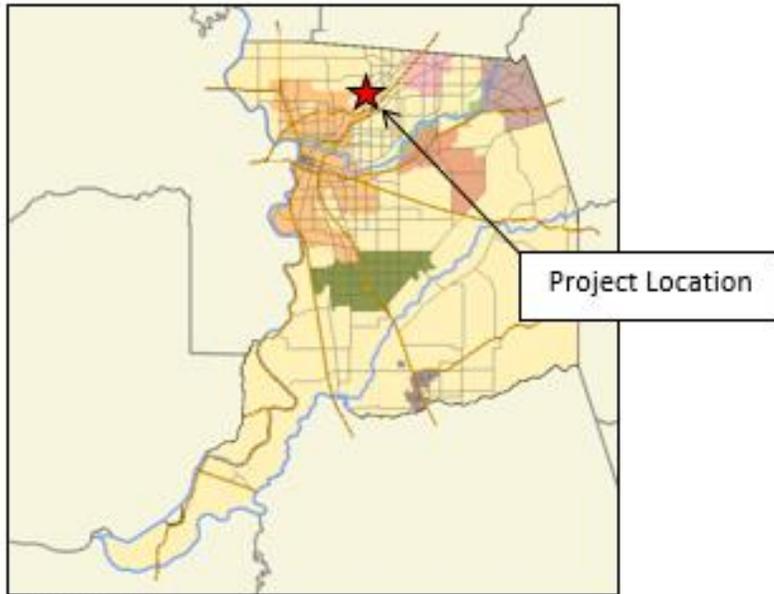
PROJECT APPROVED:



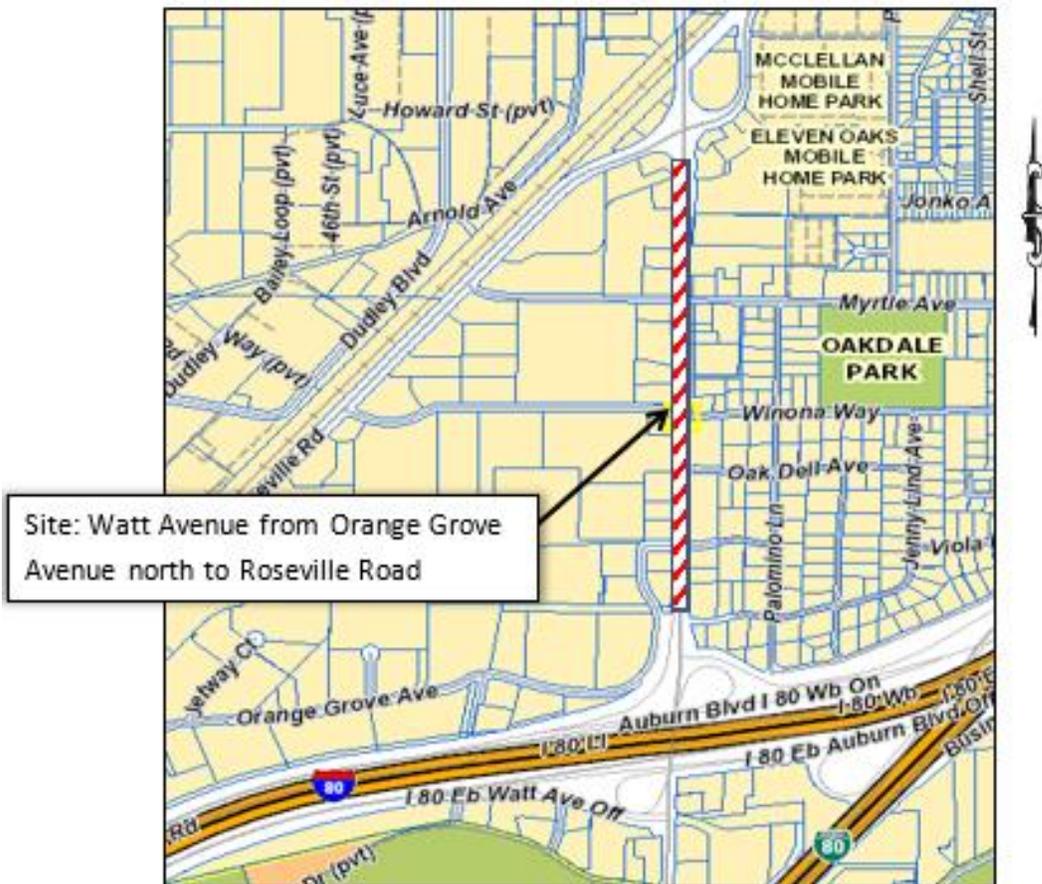
STEVE WHITE, Chief of Engineering and Planning

4/22/21
DATE

Vicinity Map



NOT TO SCALE



NOT TO SCALE

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

4/21/2021

DATE



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1. INTRODUCTION

The Watt Avenue Complete Street Improvements, Phase 1 is the first phase of the multi-phase project of improving pedestrian and bicycle connectivity, mobility, and safety on Watt Avenue between Orange Grove Avenue and Roseville Road. The project will:

- Construct buffered bike lanes and separated pedestrian-friendly sidewalks on Watt Avenue between Winona Way and Roseville Road
- Construct disability access features and ADA upgrades
- Add bicycle detection, new crosswalks, ADA ramps, and audible and countdown pedestrian heads at signalized intersections
- Rehabilitate and resurface the existing pavement
- Upgrade Intelligent Transportation System (ITS) features throughout the project segment
- Construct improved transit stops with bus turnouts and provisions for shelters
- Install landscape and streetscape enhancements

Between Orange Grove Avenue to the I-80 westbound ramps, the Class II bike lanes will be extended and sidewalk improvements will be constructed. This project will provide community enhancements for a route that parallels I-80 and that experiences commute overflow traffic from the freeway.

2. RECOMMENDATION

It is recommended that project be approved, as included in this Project Report, and that the project proceed to the design and right of way acquisition phase

3. BACKGROUND

Watt Avenue is a primary north/south regional corridor connecting US 50 to the south with Interstate 80 to the north. It extends from Sacramento County to Placer County, connecting multiple communities. Watt Avenue provides one of the few crossings of the American River in the Sacramento area making it a critical and heavily used corridor for commuters, local traffic circulation, pedestrians, bicyclist, and transit. Within the project segment, Watt Avenue has six lanes and carries 53,000 vehicles per day with a posted speed limit of 45 MPH.

The Watt Avenue corridor is a significant component of the County’s transit, bicycle, and pedestrian network as it serves residential, commercial and employment areas, and provides a direct connection to the Watt Avenue Light Rail Station and the American River Parkway trail system.



The primary causes of collision along this segment have been bicycles getting rear-ended or bicyclists riding on the wrong side of the road.

Watt Avenue serves a combination of residential, office, industrial, and commercial uses and is a major access route to McClellan Business Park and Airfield. McClellan Business Park is the former McClellan Air Force Base that is now a growing business enclave that hosts a diverse mix of companies spread across more than 8 million square feet of space. The former military facility is now home to hundreds of private companies, as well as state, federal and local government agencies.

Watt Avenue between Interstate 80 and McClellan Business Park is a designated STAA truck route. The Surface Transportation Assistance Act (STAA) allows large trucks to operate on the Interstate and certain primary routes called collectively the National Network. These trucks, referred to as STAA trucks, are longer than California legal trucks. Watt Avenue carries significant volumes of commercial and truck traffic.



Watt Avenue carries significant volumes of commercial and truck traffic

4. PURPOSE AND NEED

Purpose:

The purpose of the Watt Avenue Complete Street Improvements project is to directly and effectively address the significant active transportation needs as well as safety concerns that exist along this segment. The project aims to not only reduce collisions between pedestrians, cyclists, and motor vehicles, but also to create a safer and more pleasant active transportation network, leading to more walking and biking trips between the adjacent neighborhood and employment and commercial sites.

Need:

The Watt Avenue Complete Streets Project is needed to address the following corridor deficiencies and challenges:

The project segment of Watt Avenue lacks bike lanes which discourages cycling and limits travel opportunities. Those who do ride, often ride on sidewalks or in the gutter. The existing sidewalk is attached and mostly with rolled curbs and is not ADA compliant. There are missing crosswalks at intersections which increases travel distance and decreases safety.

There have been 10 reported pedestrian- and bicycle-related accidents along this segment that resulted in injuries in the past five years. The majority (7) of the accidents involved bicyclists. The primary causes of collision have been bicycles getting rear-ended or bicyclists riding on the wrong side of the road.

The project is within a disadvantaged area where residents often rely on walking, biking, and transit for their main form of transportation. Despite the accidents and lack of facilities, community members are actively biking and walking along this segment. However, the area ranks lower than the state and national averages for commuting to work via active transportation.



There are no bike lanes along this segment and existing sidewalk is attached and mostly with rolled curbs and is not ADA compliant.

The project will improve Watt Avenue to a Complete Street that fully supports bicycle and pedestrian mobility and safety and expand transportation options in the corridor. The project will:

- Reduce greenhouse gases by expanding mode choice, and contributing to a regional VMT reduction
- Improve traffic safety for all travel modes
- Provide a safe and convenient connection for area residents to shopping, services, and employment centers
- Provide a buffer between pedestrians and the vehicle traffic on Watt Avenue, reducing conflict and increasing pedestrian safety
- Reduce bicycle/motor vehicle collision and lower the rate of wrong-way riding by installing bike lanes
- Improve transit access and operations, and facilitate connection to the light rail transit system
- Improve safety for local students and encourage more students to use alternative modes.
- Provide long-term sustainability and a state of good repair for all transportation infrastructure in the corridor
- Enhance aesthetics and livability within the surrounding community

5. CONSIDERATIONS REQUIRING DISCUSSION

A. Right-of-Way Issues

Right of way acquisition will be required for the project as well as temporary construction easements.

B. Environmental Compliance

The project received CEQA clearance (MND) in 7/13/2018. The Project received federal grant funds in 2018 and 2019 to construct a subsection of the project (I-80 ramps and Winona Way) which will be incorporated into this larger project because the requested Solutions for Congested Corridor funds were awarded. Minor scope changes resulted in an updated CEQA document (MND) being approved on 7/14/2020. The NEPA CE for the full project length was approved July 21, 2020.

C. Life-Cycle Cost Analysis

The project's benefits and cost-effectiveness have been modeled using Caltrans' California Life-Cycle Benefit/Cost Analysis Model Active Transportation Version 6.2. The project has a benefit/cost (B/C) ratio of 1.7, with life cycle benefits of \$10.3 million, and a rate of return on investment of 15.5%.

3		INVESTMENT ANALYSIS			
		SUMMARY RESULTS			
Life-Cycle Costs (mil. \$)				Total Over	Average
Life-Cycle Benefits (mil. \$)	\$6.1			20 Years	Annual
Net Present Value (mil. \$)	\$10.3			\$0.4	\$0.0
	\$4.2			\$0.9	\$0.0
Benefit / Cost Ratio:	1.7			\$2.1	\$0.1
Rate of Return on Investment:	15.5%			\$6.9	\$0.3
Payback Period:	11 years			\$0.0	\$0.0
NON-INFRASTRUCTURE IMPLEMENTATION COST				TOTAL BENEFITS	
Per Bike Program Impact Score	N/A			\$10.3	\$0.5
Per Ped Program Impact Score	N/A				
				SRTS-SPECIFIC BENEFITS (mil. \$)	
				N/A	N/A
				N/A	N/A
				N/A	N/A
				N/A	N/A
Factors that Differentiate Benefits and Performance Measures		Tons		Value (mil. \$)	
Safe Route to School	No	Total Over	Average	Total Over	Average
Intersection Improvements on SRTS	No	20 Years	Annual	20 Years	Annual
Programmatic Initiatives	No	1	0	\$0.0	\$0.0
Recreational Benefits	0	333	17	\$0.0	\$0.0
<i>(enter 1 for Yes, 0 for No)</i>		0	0	\$0.0	\$0.0
		0	0	\$0.0	\$0.0
		0	0	\$0.0	\$0.0
		0	0	\$0.0	\$0.0
		0	0	\$0.0	\$0.0
		0	0	\$0.0	\$0.0

The proposed improvements directly and effectively address the significant active transportation needs that exist along this segment of Watt Avenue. The project will expand mode choice and reduce VMT in the corridor by over 1,000,000 miles over 20 years.

The project will improve safety along the corridor by installing bike lanes and separated sidewalks. The accident rate is expected to be reduced along the corridor resulting in \$2.1 million in safety benefits over 20 years.

The project is also expected to result in \$6.9 million of additional health benefits. According to data provided by the Sacramento County Department of Health and Human Services as well as the California Health Interview Survey, residents within the 95660 project area zip code rank higher than state averages for asthma, diabetes, heart disease, obesity, and lack of regular physical activity. Currently, Watt Avenue acts as a high speed barrier for active transportation users, limiting opportunities for more regular physical activity. This project seeks to address safety and security as well as high rates of chronic diseases related to inactivity by providing lower-stress, safer, and more connected active transportation facilities for those of all ages and abilities. Users who currently do not feel safe accessing destinations along the corridor on foot or by bike may be more encouraged to do so with lower-stress facilities, leading to increased active transportation and decreased rates of inactivity.

The proposed project, by facilitating and encouraging more walking and biking trips, will improve rates of daily physical activity amongst community members and employees of the adjacent job centers. Additionally, lower stress alternative

transportation facilities can encourage a mode shift toward more active transportation, helping to improve local and regional air quality. Community greening has also been shown to have positive impacts on mental health factors such as mood and stress.

In addition to new infrastructure improvements, the project will also rehabilitate the existing roadway. The proposed improvements are intended to provide long-term sustainability for all transportation infrastructure in the corridor, and maintain the system in a state of good repair for at least 20 years.

6. FUNDING, PROGRAMMING AND ESTIMATE

Funding

It has been determined that this project is eligible for Federal-aid funding.

Programming

Funding for the project includes \$944,000 in Community Development Block Grant (CDBG) funding, \$816,000 in Congestion Mitigation and Air Quality (CMAQ) funds, \$1,984,000 in Regional Surface Transportation Program (RSTP) funds, \$8,100,000 in Solution for Congested Corridor Program (SCCP) funds, with the balance of funding paid from local transportation sales tax (Measure A) funds.

Programming of funds is as proposed in the following Project Programming Request (PPR) tables.

Existing Total Project Cost (\$1,000s)									Implementing Agency
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	
E&P (PA&ED)	144							144	Sacramento County
PS&E	1,540							1,540	Sacramento County
R/W SUP (CT)									Sacramento County
CON SUP (CT)									Sacramento County
R/W	1,216							1,216	Sacramento County
CON			12,840					12,840	Sacramento County
TOTAL	2,900		12,840					15,740	
Proposed Total Project Cost (\$1,000s)									Notes
E&P (PA&ED)	144							144	
PS&E	1,540							1,540	
R/W SUP (CT)									
CON SUP (CT)									
R/W	1,216							1,216	
CON			12,840					12,840	
TOTAL	2,900		12,840					15,740	

Sacramento County – Watt Avenue – Orange Grove Avenue/ Roseville Road

Fund #1:	State SB1 SCCP - Solution for Congested Corridors Program (Committed)								Program Code
	Existing Funding (\$1,000s)								20.30.210.350
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			8,100					8,100	
TOTAL			8,100					8,100	
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			8,100					8,100	
TOTAL			8,100					8,100	

Fund #2:	RSTP - STP Local (Committed)								Program Code
	Existing Funding (\$1,000s)								20.30.010.810
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Sacramento Area Council of Govern
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			1,984					1,984	
TOTAL			1,984					1,984	

Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			1,984					1,984	
TOTAL			1,984					1,984	

Fund #3:	Other Fed - Surface Transportation Program (Committed)								Program Code
	Existing Funding (\$1,000s)								20.30.010.300
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)	144							144	Funding from Sacramento Housing and Redevelopment Agency's allocation of HUD funding
PS&E	400							400	
R/W SUP (CT)									
CON SUP (CT)									
R/W	400							400	
CON									
TOTAL	944							944	

Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)	144							144	
PS&E	400							400	
R/W SUP (CT)									
CON SUP (CT)									
R/W	400							400	
CON									
TOTAL	944							944	

Sacramento County – Watt Avenue – Orange Grove Avenue/ Roseville Road

Fund #4:	Local Funds - Local Measure (Committed)								Program Code	
	Existing Funding (\$1,000s)								20.10.400.100	
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency	
E&P (PA&ED)									Sacramento Transportation Authority Measure A	
PS&E	640							640		
R/W SUP (CT)										
CON SUP (CT)										
R/W	500							500		
CON			2,756					2,756		
TOTAL	1,140		2,756					3,896		
Proposed Funding (\$1,000s)										Notes
E&P (PA&ED)										
PS&E	640							640		
R/W SUP (CT)										
CON SUP (CT)										
R/W	500							500		
CON			2,756					2,756		
TOTAL	1,140		2,756					3,896		
Fund #5:	CMAQ - Congestion Mitigation (Committed)								Program Code	
	Existing Funding (\$1,000s)								20.30.010.820	
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency	
E&P (PA&ED)									Sacramento Area Council of Governm	
PS&E	500							500		
R/W SUP (CT)										
CON SUP (CT)										
R/W	316							316		
CON										
TOTAL	816							816		
Proposed Funding (\$1,000s)										Notes
E&P (PA&ED)										
PS&E	500							500		
R/W SUP (CT)										
CON SUP (CT)										
R/W	316							316		
CON										
TOTAL	816							816		

Estimate

See Attachment B for the Engineers Cost Estimate for the Watt Avenue Complete Streets Project – Phase 1.

7. DELIVERY SCHEDULE

The following project milestone schedule is proposed for programming purposes:

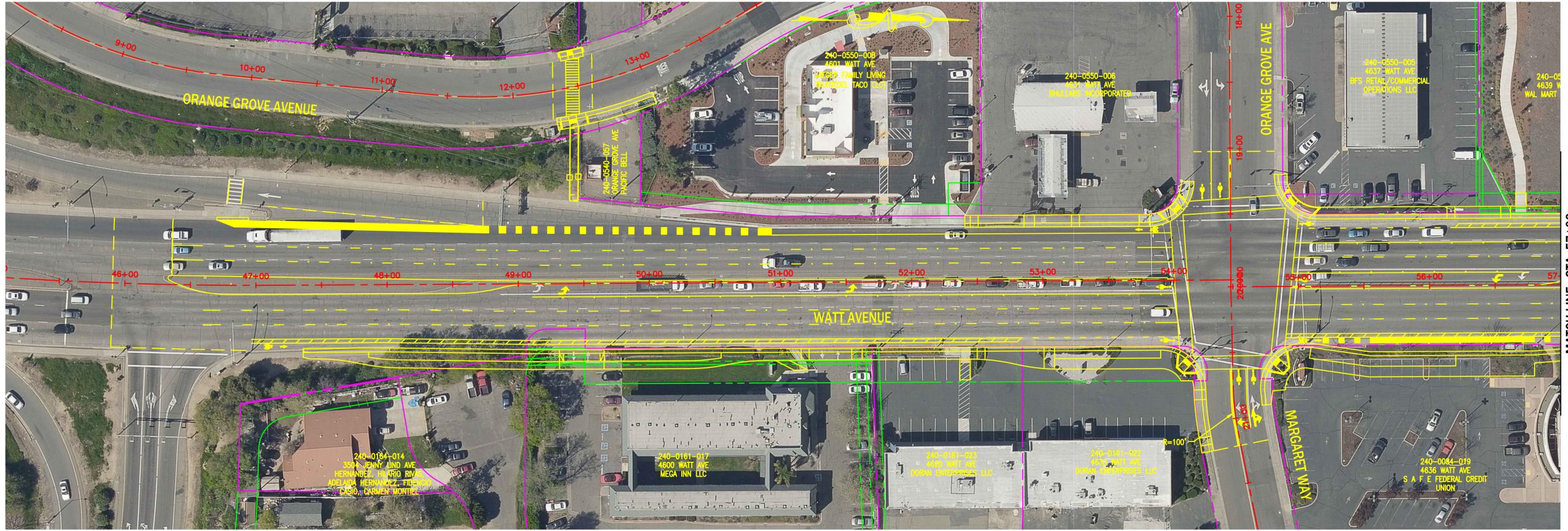
Project Milestone			Existing	Proposed
Project Study Report Approved				
Begin Environmental (PA&ED) Phase				
Circulate Draft Environmental Document	Document Type	ND/CE		04/01/20
Draft Project Report				04/23/20
End Environmental Phase (PA&ED Milestone)				07/21/20
Begin Design (PS&E) Phase				08/01/20
End Design Phase (Ready to List for Advertisement Milestone)				12/31/22
Begin Right of Way Phase				09/01/20
End Right of Way Phase (Right of Way Certification Milestone)				10/30/22
Begin Construction Phase (Contract Award Milestone)				04/01/23
End Construction Phase (Construction Contract Acceptance Milestone)				12/31/24
Begin Closeout Phase				01/01/25
End Closeout Phase (Closeout Report)				12/31/25

8. PROJECT PERSONNEL

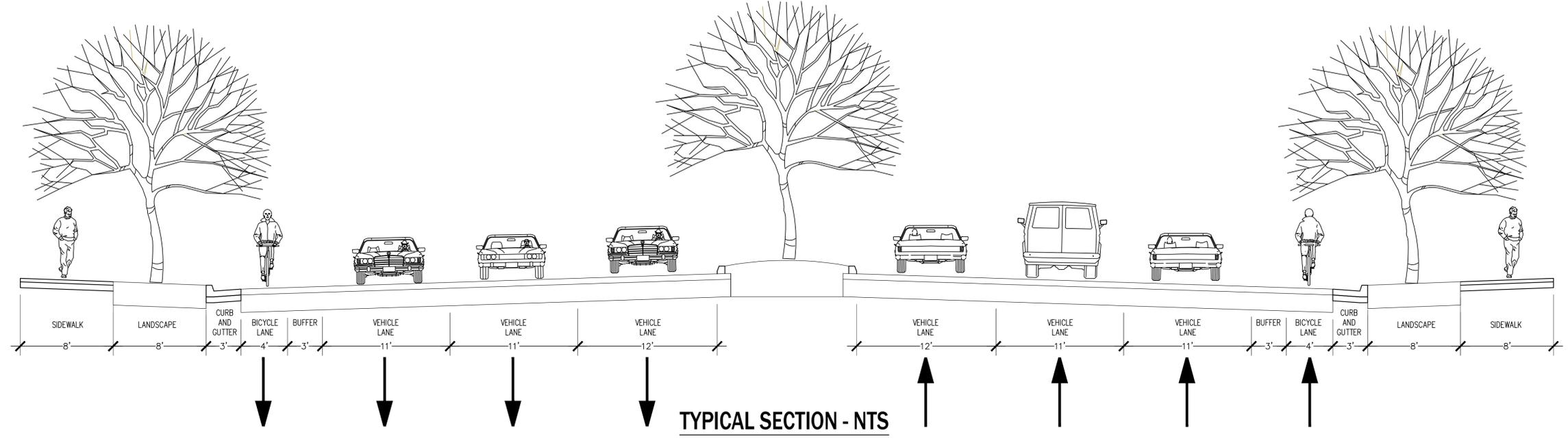
This project will be completed by the County of Sacramento, Department of Transportation, Capital Improvement Section. The current project manager is Heather Yee, yeeh@saccounty.net , Phone: 916-874-9182

9. ATTACHMENTS

- A. Project Layout and Typical
- B. Cost Estimate



MATCH LINE STA. 57+00
SEE SHEET 2



PUBLIC WORKS & INFRASTRUCTURE AGENCY

SACRAMENTO COUNTY
 DEPARTMENT OF TRANSPORTATION

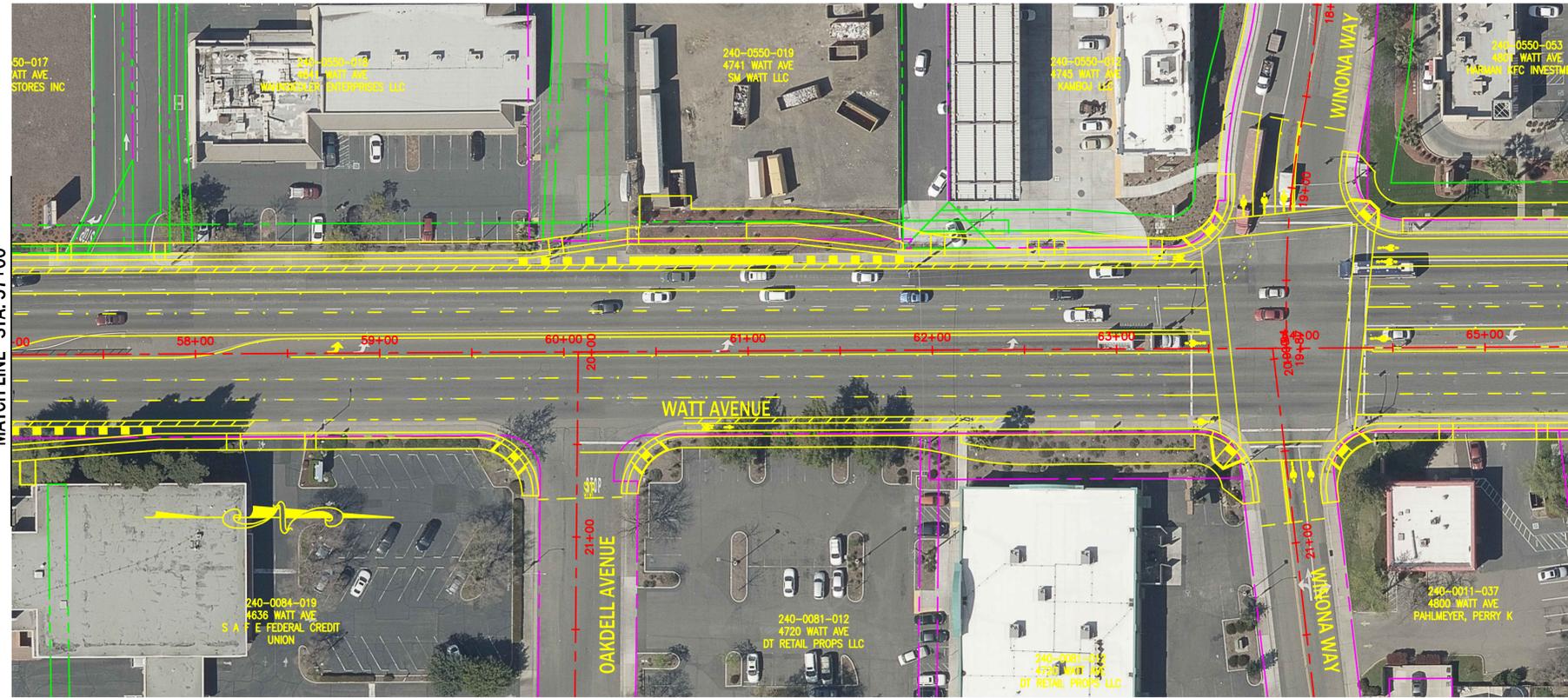
STRIPING PLAN
 WATT AVENUE COMPLETE STREET IMPROVEMENTS
 INTERSTATE 80 TO ROSEVILLE ROAD

DATE: APRIL 20, 2021	HORIZONTAL SCALE: 1"=40'	VERTICAL SCALE: NONE	DRAWN BY: KRG	DESIGN BY: KRG	CHECK BY: HY	DWG 1 OF 3
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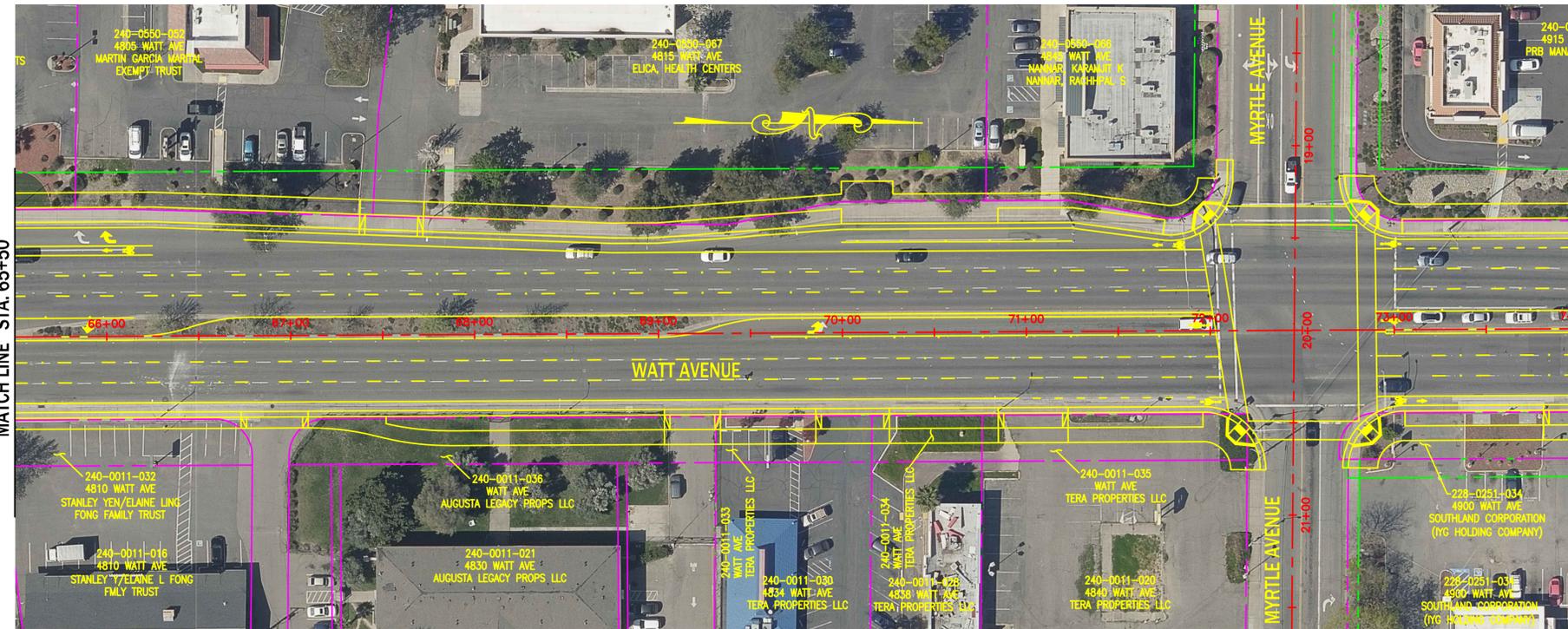
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SEE SHEET 1
MATCH LINE STA. 57+00



MATCH LINE STA. 65+50
SEE BELOW

SEE ABOVE
MATCH LINE STA. 65+50



MATCH LINE STA. 74+00
SEE SHEET 3



STRIPING PLAN

WATT AVENUE COMPLETE STREET IMPROVEMENTS

INTERSTATE 80 TO ROSEVILLE ROAD

DATE: APRIL 20, 2021

HORIZONTAL SCALE: 1"=40'

VERTICAL SCALE: NONE

DRAWN BY: KRG

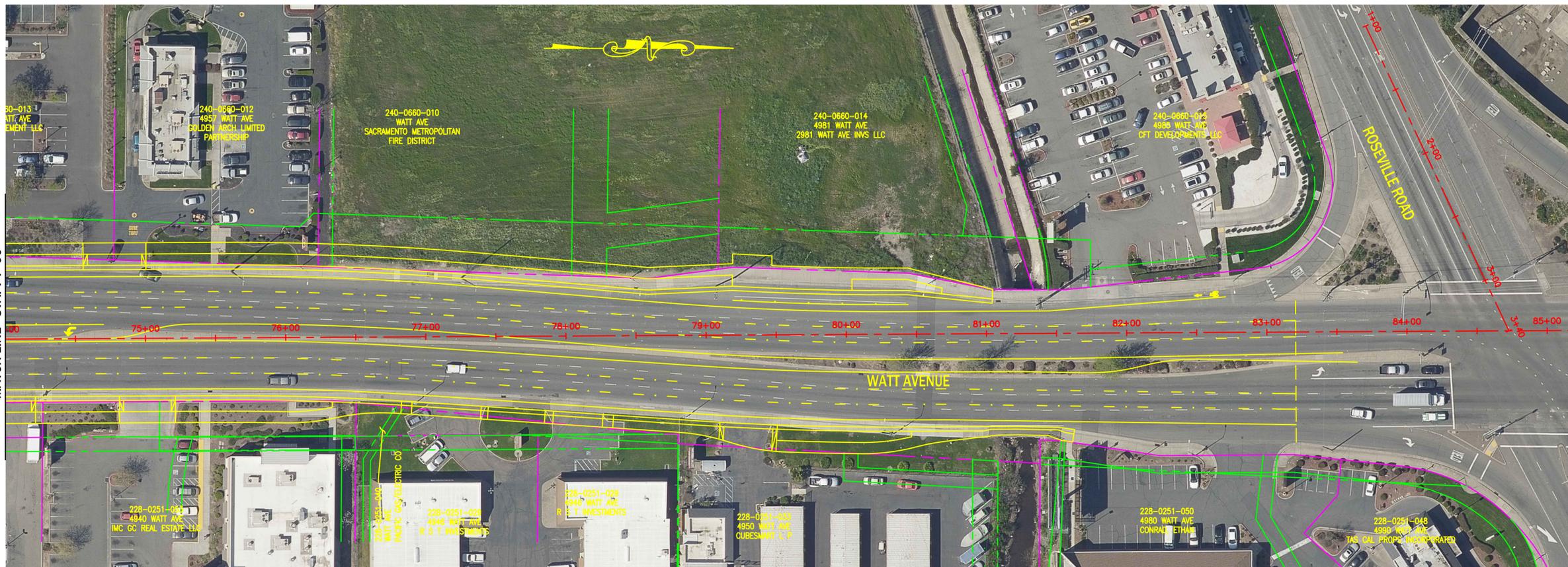
DESIGN BY: KRG

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DWG 2 OF 3

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SEE SHEET 2
MATCH LINE STA. 74+00



STRIPING PLAN

WATT AVENUE COMPLETE STREET IMPROVEMENTS
INTERSTATE 80 TO ROSEVILLE ROAD

DATE: APRIL 20, 2021

HORIZONTAL SCALE: 1"=40'

VERTICAL SCALE: NONE

DRAWN BY: KRG

DESIGN BY: KRG

CHECK BY: HY

DWG **3** OF **3**

COUNTY OF SACRAMENTO
DEPARTMENT OF TRANSPORTATION
PRELIMINARY ENGINEER'S ESTIMATE

Project: **Watt Avenue Complete Street Project**
Limits: **I-80 to Roseville Rd**

Date: April 2021
Prepared By: KRG

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
ROADWAY					
1	Clearing and Grubbing	1	LS	\$450,000.00	\$ 450,000.00
2	SWPPP Preparation	1	Allowance	\$10,000.00	\$ 10,000.00
3	Water Pollution Control	1	Allowance	\$75,000.00	\$ 75,000.00
4	Roadway Excavation	8,564	CY	\$90.00	\$ 770,760.00
5	Aggregate Base, Class 2	10,003	TN	\$75.00	\$ 750,225.00
6	Asphalt Concrete, Type A	3,413	TN	\$90.00	\$ 307,170.00
7	Asphalt Rubber Hot Mix-Gap Graded (ARHM-GG)	11,132	TN	\$110.00	\$ 1,224,520.00
8	Cold Plane Asphalt Concrete Pavement	40,766	SF	\$1.00	\$ 40,766.00
9	Type II Slurry Seal	38,513	SF	\$1.00	\$ 38,513.00
10	Asphaltic Emulsion Seal Coat	10,145	SF	\$0.50	\$ 5,072.50
11	PCC Curb and Gutter (Type 2)	6,407	LF	\$35.00	\$ 224,245.00
12	PCC Curb (Type 3)	4,010	LF	\$35.00	\$ 140,350.00
13	PCC Curb (Type 4/4A)	6,892	LF	\$25.00	\$ 172,300.00
14	PCC Sidewalk	54,055	SF	\$8.00	\$ 432,440.00
15	Adjust Storm Drain Manhole to Grade	8	EA	\$1,500.00	\$ 12,000.00
16	Adjust Sanitary Sewer Manhole to Grade	10	EA	\$1,500.00	\$ 15,000.00
17	Relocate/Adjust Sanitary Sewer Cleanout to Grade	3	EA	\$1,000.00	\$ 3,000.00
18	Adjust Utility Box/Vault to Grade	9	EA	\$700.00	\$ 6,300.00
19	Detectable Warning Surface	14	EA	\$800.00	\$ 11,200.00
20	Striping	27,864	LF	\$1.00	\$ 27,864.00
21	Stripe Removal	1,249	LF	\$2.00	\$ 2,498.00
22	Handrail	1	LS	\$10,000.00	\$ 10,000.00
23	Gate Relocation	1	EA	\$7,500.00	\$ 7,500.00
24	Drainage Pipes	780	LF	\$340.00	\$ 265,200.00
25	Storm Drain Manholes	11	EA	\$19,000.00	\$ 209,000.00
26	Drainage Inlet	16	EA	\$7,500.00	\$ 120,000.00
27	Street Light (Type A)	34	EA	\$15,000.00	\$ 510,000.00
28	Traffic Signal Modification - Watt Ave & Margaret/Orange Grove	1	LS	\$280,000.00	\$ 280,000.00
29	Traffic Signal Modification - Watt Ave & Winona Way	1	LS	\$280,000.00	\$ 280,000.00
30	Traffic Signal Modification - Watt Ave & Myrtle Avenue	1	LS	\$280,000.00	\$ 280,000.00
31	Signal Interconnect	1	LS	\$100,000.00	\$ 100,000.00
32	Tree Removal (3" to <6")	1	EA	\$1,000.00	\$ 1,000.00
33	Tree Removal (6" to <12")	17	EA	\$1,250.00	\$ 21,250.00
34	Tree Removal (12" to <18")	12	EA	\$1,500.00	\$ 18,000.00
35	Tree Removal (24" and Larger)	4	EA	\$2,000.00	\$ 8,000.00
36	Landscape & Irrigation	1	LS	\$800,000.00	\$ 800,000.00
<i>Construction Subtotal</i>					\$ 7,629,173.50
<i>Contingency (10%)</i>					\$ 762,917.35
CONSTRUCTION TOTAL					\$ 8,392,090.85
SOFT COSTS					
	Environmental	1	LS	\$760,000.00	\$ 760,000.00
	ROW Services	1	LS	\$875,000.00	\$ 875,000.00
	ROW Acquisitions and Easements	1	LS	\$1,400,000.00	\$ 1,400,000.00
	Engineering	1	LS	\$1,100,000.00	\$ 1,100,000.00
	Construction Management	1	LS	\$1,100,000.00	\$ 1,100,000.00
GRAND TOTAL					\$ 13,627,090.85