

**THE RESURFACING OF PORTIONS OF VARIOUS ROADWAYS
IN THE EDEN AREA OF
ALAMEDA COUNTY, CALIFORNIA
SPECIFICATION NO. 2497**

This addendum is issued by the County of Alameda, Public Works Agency, Construction and Development Services Department, 399 Elmhurst Street, Hayward, CA 94544.

TO ALL PROSPECTIVE BIDDERS for the above project, notice is hereby given that the following changes, modifications, corrections, clarifications, and additions as hereinafter set forth shall apply to the plans and specifications described herein and shall be made part thereof and subject to all requirements as if originally specified or drawn.

Receipt of this Addendum No. 1 must be acknowledged on the form in the bid proposal in writing.

CHANGES TO THE BID BOOK

1. Replace pages BB-1a and BB-1b with BB-1a (Addendum 1) and BB-1b (Addendum 1)
2. Add pages BB-1c (Addendum 1) and BB-1e (Addendum 1)
3. Replace Signature Page BB-7 with BB-7 (Addendum 1)

CHANGES TO THE PROJECT SPECIFICATIONS

1. Replace SPECIAL NOTICES with SPECIAL NOTICES (Addendum 1)
2. Add Location Map L-4 (Addendum 1)
3. Replace Table of Contents page iii with iii (Addendum 1)
4. Replace Project Specification page 84 with attached Project Specification page 84 (Addendum 1)
5. Replace Project Specification pages 146 and 147 with attached Project Specification pages 146 (Addendum 1) and Project Specification pages 147 (Addendum 1)
6. Replace Project Specification page 646 with attached Project Specification page 646 (Addendum 1)
7. Replace Information Handout J: Eden Area Overlay Resurfacing Street Summary with Eden Area Overlay Resurfacing Street Summary (Addendum 1)
8. Add Information Handout N: Striping Plan (Sheets 1 thru 3) – Grant Avenue (Addendum 1)
9. Add Information Handout O: (Annual) Community Events
10. Add Information Handout P: 84-2.03C(1) Preformed Thermoplastic Bike Lane Symbols Pavement Markings (Addendum 1) and 84-2.03C(2) Preformed Thermoplastic Bike Green Pavement Markings (Addendum 1)
11. Add Information Handout Q: PCMS Sign Placement Location Map

END OF ADDENDUM NO. 1
OFFICE OF THE COUNTY ENGINEER

BID ITEM LIST

Base Bid

No.	Sec/Code	Bid Item Description	Qty	Unit	Unit Cost	Total Cost
PREPATORY WORK						
1*	<u>§5-1.36D</u> 050000-A	Monument Preservation (Pre-Construction)	28	EA	\$	\$
TEMPORARY TRAFFIC CONTROL						
2	<u>§12</u> 120100	Traffic Control System	1	LS	\$	\$
WATER POLLUTION CONTROL WORK						
3	<u>§13-2</u> 130200-E	Prepare Water Pollution Control Plan – CGP Exempt	1	LS	\$	\$
4	<u>§13-4</u> 130100	Job Site Management	1	LS	\$	\$
5	<u>§13-6.03C</u> 130620	Temporary Drainage Inlet Protection	65	EA	\$	\$
6	<u>§13-7.02</u> 130730	Street Sweeping	1	LS	\$	\$
7	<u>§13-9</u> 130900	Temporary Concrete Washout	1	LS	\$	\$
CLEARING / RELOCATING IMPEDIMENTS						
8	<u>§17-2</u> 170103	Clearing and Grubbing (LS)	1	LS	\$	\$
LANDSCAPE						
9*	<u>§20-10</u> 202028-A	Adjust/Modify/Reset Irrigation System Components	50	LF	\$	\$
SURFACINGS AND PAVEMENTS						
10	<u>§39-2.01</u>	Geosynthetic Pavement Interlayer (Paving Fabric) Pavement Tack Coat	59,500	SY	\$	\$
11	<u>§39-3.04</u> 394080-A	Speed Humps (3-inch)	150	LF	\$	\$
12*	<u>§39-2.09</u> 390132-LV	Hot Mix Asphalt – Low Volume (HMA-LV)	7,750	TON	\$	\$
13*	<u>§39-3.02</u> 390095-A	Replace Failed Sections of AC Surfacing & Base w/Full Depth HMA	1,180	TON	\$	\$
14	<u>§39-3.04</u> 398200	Cold Plane Asphalt Concrete Pavement	59,500	SY	\$	\$
LOCAL INFRASTRUCTURE						
15	<u>§77</u> 780258	Adjust Manhole Frame and Cover	5 28	EA		
16*	<u>§78-2</u> 810111	Locate Monument	4 14	EA	\$	\$

*Contingent item under section 2-1.09B

No.	Sec/Code	Bid Item Description	Qty	Unit	Unit Cost	Total Cost
17*	<u>\$78-2</u> 780250-A	Adjust Monument Cover to Grade	1 28	EA	\$	\$
CONCRETE CURBS & SIDEWALKS						
18	<u>\$73</u> 730070-A	Detectable Warning Surface (Yellow)	43	EA	\$	\$
19	<u>\$73</u> 731504-A	Minor Concrete (Curb and Gutter – Standard or Rolled)	50	LF	\$	\$
20*	<u>\$73</u> 731623-A	Minor Concrete (Curb Ramp & Sidewalk)	5,500	SF	\$	\$
21*	<u>\$73</u> 731623-A	Minor Concrete (6" Apron or Valley Gutter)	1,350	SF		
TRAFFIC STRIPES AND PAVEMENT MARKINGS						
22*	<u>\$84-2</u> 840502	Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	40,500 29,600	LF	\$	\$
23*	<u>\$84-2</u> 840516	Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	6,500 7,200	SF	\$	\$
ELECTRICAL SYSTEMS						
24	<u>\$87-1.03V</u> 870111-D	Inductive Loop Detector – Type D	5	EA	\$	\$
25	<u>\$87-1.03V</u> 870111-E	Inductive Loop Detector – Type E	20	EA	\$	\$
PROJECT WRAP-UP						
26*	<u>\$5-1.36D</u> 050000-B	Survey Monument Preservation (Post-Construction)	28	EA	\$	\$
27	<u>\$22</u> 220101	Finishing Roadway	1	LS	\$	\$
						
28*	<u>\$77</u> 710228-O	<u>Adjust Manhole Frame and Cover (Sanitary)</u>	45	EA	\$	\$
29*	<u>\$77</u> 710220-E	<u>Adjustment of Existing Water Valve Frame and Cover (EBMUD)</u>	87	EA	\$	\$
30*	<u>\$77</u> 710220-P	<u>Adjustment of Existing Gas Valve Frame and Cover (PG&E)</u>	3	EA	\$	\$
31*	<u>\$84-2.03C</u>	<u>(Green) Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)</u>	2,000	LF	\$	\$
32*	<u>\$81-3.02C</u> 810230	<u>Blue Pavement Marker</u>	11	EA	\$	\$

*Contingent item under section 2-1.09B

No.	Sec/Code	Bid Item Description	Qty	Unit	Unit Cost	Total Cost
33	<u>§12-3.32</u> 126851	<u>Portable Changeable Message Sign (PCMS) – Grant Avenue</u>	1	EA	\$	\$

Total "Base" Bid: _____ Dollars \$ _____
(in words)

Additional Bid Items

Except as noted otherwise, Additional Bid Items are subject to the same requirements as the Total Base Bid.

Bidders that fail to furnish prices for the Additional Bid Items, the bid shall be rejected as non-responsive. An Additional Bid of One Dollar (\$1.00) shall be considered responsive.

No.	Sec/Code	Bid Item Description	Qty	Unit	Unit Cost	Total Cost
TEMPORARY TRAFFIC CONTROL						
A1	<u>§12</u> 120100	<u>Traffic Control System (Location L-4)</u>	1	LS	\$	\$
WATER POLLUTION CONTROL WORK						
A2	<u>§13-2</u> 130200-E	<u>Prepare Water Pollution Control Plan – CGP Exempt (Location L-4)</u>	1	LS	\$	\$
A3	<u>§13-4</u> 130100	<u>Job Site Management (Location L-4)</u>	1	LS	\$	\$
A4	<u>§13-6.03C</u> 130620	<u>Temporary Drainage Inlet Protection (Location L-4)</u>	1	EA	\$	\$
A5	<u>§13-7.02</u> 130730	<u>Street Sweeping (Location L-4)</u>	1	LS	\$	\$
A6*	<u>§13-9</u> 130900	<u>Temporary Concrete Washout (Location L-4)</u>	1	LS	\$	\$
CLEARING / RELOCATING IMPEDIMENTS						
A7	<u>§17-2</u> 170103	<u>Clearing and Grubbing (LS) (Location L-4)</u>	1	LS	\$	\$

*Contingent item under section 2-1.09B

No.	Sec/Code	Bid Item Description	Qty	Unit	Unit Cost	Total Cost
SURFACINGS AND PAVEMENTS						
A8*	<u>\$39-2.01</u>	<u>Pavement Tack Coat (Location L-4)</u>	<u>950</u>	<u>SY</u>	<u>\$</u>	<u>\$</u>
A9*	<u>\$39-2.09</u> <u>390132-LV</u>	<u>Hot Mix Asphalt – Low Volume (HMA-LV) (Location L-4)</u>	<u>110</u>	<u>TON</u>	<u>\$</u>	<u>\$</u>
A10*	<u>\$39-3.02</u> <u>390095-A</u>	<u>Replace Failed Sections of AC Surfacing & Base w/Full Depth HMA (Location L-4)</u>	<u>60</u>	<u>TON</u>	<u>\$</u>	<u>\$</u>
A11*	<u>\$39-3.04</u> <u>398200</u>	<u>Cold Plane Asphalt Concrete Pavement (Location L-4)</u>	<u>950</u>	<u>SY</u>	<u>\$</u>	<u>\$</u>
LOCAL INFRASTRUCTURE						
A12	<u>\$77</u> <u>780258</u>	<u>Adjust Manhole Frame and Cover (Location L-4)</u>	<u>3</u>	<u>EA</u>		
A13	<u>\$77</u> <u>710228-O</u>	<u>Adjust Manhole Frame and Cover (Sanitary) (Location L-4)</u>	<u>1</u>	<u>EA</u>	<u>\$</u>	<u>\$</u>
A14	<u>\$77</u> <u>710220-E</u>	<u>Adjustment of Existing Water Valve Frame and Cover (EBMUD)</u>	<u>1</u>	<u>EA</u>	<u>\$</u>	<u>\$</u>
CONCRETE CURBS & SIDEWALKS						
A15*	<u>\$73</u> <u>731504-A</u>	<u>Minor Concrete (Curb and Gutter – Standard or Rolled) (Location L-4)</u>	<u>50</u>	<u>LF</u>	<u>\$</u>	<u>\$</u>
PROJECT WRAP-UP						
A16	<u>\$22</u> <u>220101</u>	<u>Finishing Roadway (Location L-4)</u>	<u>1</u>	<u>LS</u>	<u>\$</u>	<u>\$</u>

Total “Additional” Bid: _____ **Dollars \$** _____
 (in words)

The bidder should understand that the ranking of the “Actual Lowest Bid” received shall be established based on the lowest Total Base Bid plus all Additional Bid Items, which shall be the basis for award of contract per Public Contact Code. Upon determination of the lowest responsible bidder based on the Total Base Bid plus all Additional Bid Items, the County shall determine whether to include any of the Additional Bid Items to the Total Base Bid. If the County elects to include any of the Additional Bid Items, then the final contract award shall be the Total Base Bid plus the selected Additional Bid Items; if the County elects not to include any of the Additional Bid Items, then the final contract award shall be the Total Base Bid.

The prices bid include furnishing the resources and activities required to complete the work. Payment is full compensation for furnishing the resources and activities as described under section [9-1.03](#).

*Contingent item under section 2-1.09B

Links to section numbers are provided for convenience only. Specifications found under the referenced sections are not the only specification that apply to the Bid Item as described under section [1-1.01](#).

Most bid Item codes (without the hyphenated suffix) and descriptions are similar to, but not necessarily the same as, Caltrans Standard Bid Item codes and descriptions. This information when queried at the following webpage may be useful for estimating costs: <http://sv08data.dot.ca.gov/contractcost>

DO NOT MARK BELOW. FOR COUNTY USE ONLY.

BID SUMMARY	\$ AMOUNT
TOTAL BASE BID	\$
TOTAL ADDITIONAL BID	\$
FINAL TOTAL	\$

*Contingent item under section 2-1.09B

SIGNATURE PAGE

The Bidder has verified the total number of addenda issued prior to bid submittal and has listed them all below. The Bidder acknowledges the changes made in these addenda and that this Bid is made with consideration of these changes. Failure to acknowledge all issued addenda may result in finding the Proposal to be non-responsive, subject to the Board of Supervisors' determination.

Addendum No. _____ Date _____

The undersigned:

Is currently licensed by the State Contractor's License Board of the State of California to perform the work hereinbefore described and holds

State Contractor's License No. _____ Classification _____ Expiration Date _____

Shall be properly licensed by the State Contractor's License Board of the State of California at the time the Project is to be awarded.

By my signature on this proposal, I certify, under penalty of perjury under the law of the State of California, that:

- The foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232 and 10285.1 are true and correct, and
- I have complied with the requirements of Section 8102 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code).

I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that :

- The Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and
- The Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Signature

Date

Printed Name

Bidder's Business Name

Title

Business Street Address

Phone

Email

Business City and Zip

SPECIAL NOTICES

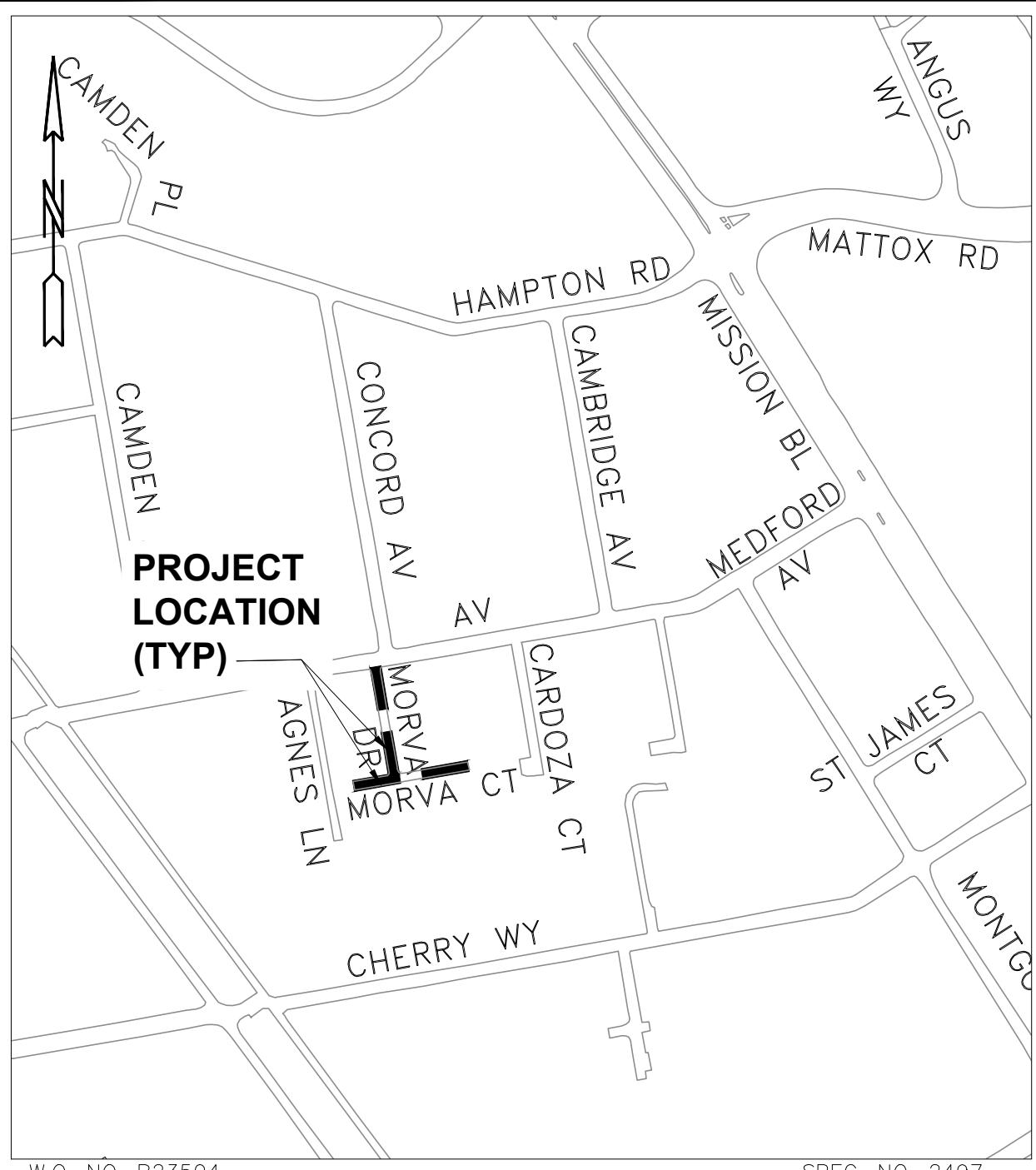
- See section [1-1.07](#) for definitions and glossary terms pertaining to this contract
- See section [2-1.09B](#) for **contingent item(s)**
- See section [2-1.04](#) for required attendance of the **pre-bid outreach meeting**
- See section [3-1.09A](#) for requirements pertaining to **trucking work and the Project Stabilization/Community Benefits Agreement**
- **See section 3-1.09B for requirements pertaining to the California Air Resources Board (CARB) In-use Off-use Road Diesel-Fueled Fleets Regulation Compliance**
- See section [3-1.10](#) for requirement to utilize **Elations Systems** online contract and labor compliance management system.
- See section [5-1.02](#) for governing **ranking of Contract parts** should there be a discrepancy
- See section [5-1.20A](#) for concurrent work by others
- See section [6-1.02](#) for Special Funding Signs to be installed at work locations
- See section [5-1.20B\(5\)](#) for possible postponement of work at properties where permission to enter to perform work has not been obtained at the time of bid solicitation.
- See section [5-1.36D](#) for protecting existing monuments in place
- See section [7-1.03](#) for requirements to notify and coordinate with local **residents, schools, businesses** so as not to inhibit access or operations **and to accommodate Community Events.**
- See section [8-1.09](#) for requirement to utilize **Virtual Project Manager**
- See section [10-1.02A](#) for **work sequencing** constraints
- See section [10-1.03](#) for **time** constraints
- See section [12-4.01A\(1\)](#) for **traffic control plan** requirement
- See section [13-1.01](#) for the **Construction General Permit Project Classification**

Submit prebid questions by email at least April 22, 2025. five business days before the bid opening date on April 29, 2025, to both: bond@acpwa.org and JielinP@acpwa.org

Questions received and the corresponding answers will be posted online at: <https://www.acpwa.org/bidder-information>

<https://www.acpwa.org/business/add-bidder-info.page>

One or more addendums that clarify or revise contract documents may be issued.



W.O. NO. R23504

SPEC. NO. 2497

COUNTY OF ALAMEDA ★ PUBLIC WORKS AGENCY

**2024-2025
THE RESURFACING OF PORTIONS OF VARIOUS ROADWAYS
IN THE EDEN AREA OF ALAMEDA COUNTY
LOCATION MAP**

DRAWN BN	CHECKED BN	DATE MARCH 2025	SCALE NONE	FILE NO. -	SHEET NO. 1 OF 1
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REVISED STANDARD SPECIFICATIONS WITH SPECIAL PROVISIONS – TABLE OF CONTENTS

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SECTION 8

PROSECUTION AND PROGRESS

Construction activities must ~~not limit~~ inconvenience to the public ~~or and~~ abutting property owners. Schedule and conduct work to avoid unnecessary inconvenience to the public and abutting property owners. Avoid undue delay in construction activities to reduce the public's exposure to construction.

Work cooperatively with administrators of local schools to schedule work in a manner that avoids conflict with school operations, especially access and testing.

Notify residents of unavoidable inconveniences. Use templates provided in Information Handout D.

In addition, the Contractor must temporarily suspend all construction activities during Community events, including the annual events shown in the Information Handout.

Where possible, route traffic on new or existing paved surfaces.

Maintain convenient access to driveways, houses, and buildings. When an abutting property owner's access across the right-of-way line is to be eliminated or replaced under the Contract, the existing access must not be closed until the replacement access facility is usable. Construct temporary approaches to a crossing and an intersecting highway.

Provide a reasonably smooth and even surface for use by traffic at all time during the excavation of a roadway and construction of an embankment. Before other grading activities, place fill at culverts and bridges to allow traffic to cross. If ordered, excavate a roadway cut in layers and construct an embankment in partial widths at a time alternating construction from one side to the other and routing traffic over the side opposite the one under construction. Install or construct culverts on only 1/2 the width of the traveled way at a time; keep the traveled way portion being used by traffic open and unobstructed until the opposite side of the traveled way is ready for use by traffic.

Upon completion of rough grading or placing any subsequent layer, bring the surface of the roadbed to a smooth and even condition, free of humps and depressions, and satisfactory for the use of the public.

After subgrade preparation for a specified layer of material has been completed, repair any damage to the roadbed or completed subgrade, including damage caused by public use.

While subgrade and paving activities are underway, allow the public to use the shoulders. If half-width paving methods are used, allow the public to use the side of the roadbed opposite the one under construction. If enough width is available, keep open a passageway wide enough to accommodate at least 2 lanes of traffic at locations where subgrade and paving activities are underway. Shape shoulders or reshape subgrade as necessary to accommodate traffic during subgrade preparation and paving activities.

Apply a dust palliative for the prevention or alleviation of dust nuisance.

If a height differential of more than 0.04 foot is created by construction activities at a joint transverse to the direction of traffic on the traveled way or a shoulder subject to public traffic, construct a temporary taper at the joint with a slope complying with the requirements shown in the following table:

Temporary Tapers

Height differential (foot)	Slope (horizontal:vertical)	
	Taper use of 14 days or less	Taper use of more than 14 days
Greater than 0.08	100:1 or flatter	200:1 or flatter
0.04–0.08	70:1 or flatter	70:1 or flatter

For a taper on existing asphalt concrete or concrete pavement, construct the taper with minor HMA under section 39-2.07.

Grind existing surfaces to accommodate a minimum taper thickness of 0.10 foot under either of the following conditions:

1. HMA material such as rubberized HMA, polymer-modified bonded wearing course, or open-graded friction course is unsuitable for raking to a maximum 0.02 foot thickness at the edge
2. Taper will be in place for more than 14 days

12-3.32C Construction

Use a PCMS with characters:

1. At least 18 inches in height where the useable shoulder area is 15 feet wide or more
2. At least 12 inches in height where the useable shoulder area is less than 15 feet wide
3. At least 10 inches in height if the PCMS is:
 - 3.1. Mounted on a service patrol truck or incident response vehicle
 - 3.2. Used for traffic control where the posted speed limit is less than 40 mph

Place a PCMS as far from the traveled way as practicable where it is legible to approaching traffic without encroaching on the traveled way. Where the vertical roadway curvature restricts the sight distance of approaching traffic, place the sign on or before the crest of the curvature where it is most visible to the approaching traffic. Where the horizontal roadway curvature restricts the sight distance of approaching traffic, place the sign at or before the curve where it is most visible to approaching traffic. Where practicable, place the sign behind guardrail or Type K temporary railing.

If multiple signs are needed, place each sign on the same side of the road at least 1,000 feet apart on freeways and expressways and at least 500 feet apart on other types of highways.

Operate the PCMS under the manufacturer's instructions.

When in operation, place the bottom of a PCMS at least 7 feet above the roadway in areas where pedestrians are anticipated and 5 feet above the roadway elsewhere. Place the top of the PCMS no more than 14.5 feet above the roadway.

If more than one PCMS is simultaneously visible to traffic, only one sign may display a sequential message at any time. Do not use dynamic message displays, such as animation, rapid flashing, dissolving, exploding, scrolling, horizontal movement, or vertical movement of messages. The message must be centered within each line of the display.

You may use an additional PCMS if more than 2 phases are needed to display a message.

Display only messages shown or ordered.

Repeat the entire message continuously in not more than 2 phases of at least 3 seconds per phase. The sum of the display times for both of the phases must be a maximum of 8 seconds. If more than 2 phases are needed to display a message, use an additional PCMS.

You must be available by cell phone during activities that require a sign. Be prepared to immediately change the displayed message if ordered. You may operate the sign with a 24-hour timer control or remote control if authorized.

Keep the PCMS clean to provide maximum visibility

If Portable changeable message signs (PCMS) are specified in the bid list, then the following provisions apply:

PCMS must be placed and operated in advanced (for 14 consecutive calendar days) prior to start of construction.

The portable changeable message signs shall read*:

"Project Road Name"

SUBJCT TO DELAYS

date to date

time to time

***message subject to change: confirm final messaging with the Engineer before sign placement**

After the initial placement, move a sign from location to location as ordered **and/or change messages as ordered. The Contractor shall provide and situate portable changeable message signs as designated by the Engineer. The Contractor shall confirm with the Engineer, the final PCMS sign messaging and sign locations prior to situating the PCMSs on the specified road and at other locations.**

12-3.32D Payment

Not Used

12-3.33 PORTABLE SIGNAL SYSTEMS**12-3.33A General**

Section 12-3.33 includes specifications for installing, maintaining, and removing portable signal systems, including installing lighting and flashing beacons for traffic control. A portable signal system must comply with section 87-20, except it must be trailer mounted.

12-3.33B Materials

Not Used

12-3.33C Construction

If the portable signal system is out of operation, provide flaggers to control the traffic until the traffic signals are in operation.

12-3.33D Payment

Not Used

12-3.34 TEMPORARY FLASHING BEACON SYSTEMS**12-3.34A General**

Section 12-3.34 includes specifications for installing, maintaining, and removing temporary flashing beacon systems. A temporary flashing beacon system must comply with section 87-20.

12-3.34B Materials

The sign panels installed on a temporary flashing beacon system must comply with section 12-3.11.

12-3.34C Construction

Not Used

12-3.34D Payment

Not Used

12-3.35 AUTOMATED WORK ZONE INFORMATION SYSTEMS**12-3.35A General****12-3.35A(1) Summary**

Section 12-3.35 includes specifications for installing automated work zone information systems.

12-3.35A(2) Definitions

Reserved

12-3.35A(3) Submittals

Reserved

12-3.35A(4) Quality Assurance

Assign an on-site system coordinator. The coordinator must be available locally to service, maintain, and relocate system components as necessary. The coordinator must be accessible 24-7 while the system is deployed. If the system fails to perform as specified, perform any necessary remedial work and replace any failed components within 24 hours of notification of a system or component failure.

12-3.35B Materials**12-3.35B(1) General**

The AWIS must be a proven system that has been successfully deployed and operated in actual work zones or congested areas. The system must acquire traffic data throughout the work zone and automatically display predetermined information to motorists without operator intervention after system initialization. Real-time information must be displayed to motorists using a PCMS. The sign must comply with section 12-3.32. The system must be controlled either locally or remotely by a dedicated controller or computer. Authorized users must be able to both locally and remotely override motorist information messages. Traffic sensors must not require adjustments after the initial deployment.

12-3.35B(2) General System Function Requirements

The general system functions of the AWIS must be capable of:

1. Preventing any unauthorized users or systems from gaining access to the PCMSs through an industry authentication and encryption standard level of security.

The Resurfacing of Portions of Various Roadways in the Eden Area

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147 (Addendum 1)

SECTION 84**MARKINGS**

3. Apply the 2nd coat of centerline striping in the opposite direction of the 1st coat

Apply glass beads at an approximate rate of 5 lb of beads per gallon of paint.

Verify the application rate of paint by stabbing the paint tank with a calibrated rod. If the striping machine has paint gauges, the Engineer may measure the volume of paint using the gauges instead of stabbing the paint tank with a calibrated rod.

84-2.03B(7) Contrast Striping

Contrast striping consists of black striping placed on each side of a white stripe.

You may use permanent tape instead of paint or thermoplastic.

Apply contrast stripe paint in one coat.

Do not use glass beads or other reflective elements in contrast striping material.

84-2.03B(8)–84-2.03B(10) Reserved

84-2.03C(1) Preformed Thermoplastic Bike Lane Symbols Pavement Markings (Addendum 1) - see Information Handout

84-2.03C(2) Preformed Thermoplastic Bike Green Pavement Markings (Addendum 1) - see Information Handout

84-2.04 PAYMENT

The payment quantity for a traffic stripe is the length measured along the line of the traffic stripe without deductions for gaps in the broken traffic stripe.

The payment quantity for a pavement marking is the area covered.

A double traffic stripe consisting of two 6-inch-wide yellow stripes are measured as 2 traffic stripes except for painted traffic stripes and sprayable thermoplastic traffic stripes. A double sprayable thermoplastic traffic stripe consisting of two 6-inch-wide yellow stripes are measured as single traffic stripe.

A double painted traffic stripe consisting of two 6-inch-wide yellow stripes separated by a 3-inch-wide black stripe is measured as a single traffic stripe.

The payment quantity for contrast striping is the length measured along the line of the traffic stripe without deductions for gaps in the broken traffic stripe.

The payment quantity for a curb marking is the length measured along the curb portion that is painted.

84-3 CONTRAST TREATMENT**84-3.01–84-3.10 RESERVED****84-4–84-7 RESERVED****84-8 RUMBLE STRIPS****84-8.01 GENERAL****84-8.01A Summary**

Section 84-8 includes specifications for constructing rumble strips.

84-8.01B Definitions

rumble strip: Band of raised material or indentations formed or grooved in the traveled way on the centerline or shoulders that is used to alert or warn drivers.

84-8.01C Submittals

Reserved

84-8.01D Quality Assurance

Reserved

84-8.02 MATERIALS

Not Used

The Resurfacing of Portions of Various Roadways in the Eden Area

Spec 2497 - Eden Area OL 2025 04-16-2025 Addendum 1

646 (Addendum 1)

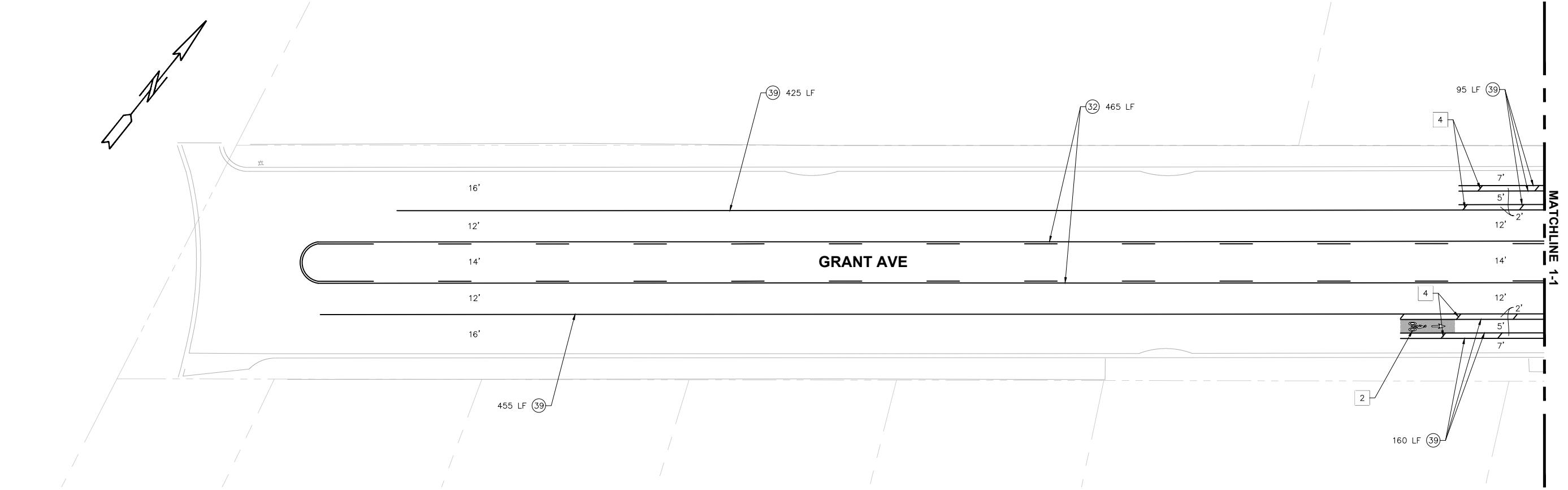
**2024-2025 ROADWAY REHABILITATION PROGRAM (RRP)
EDEN AREA OVERLAY RESURFACING STREET SUMMARY**

Project : R 23504 SPEC. 2497

Locations	No.	Street Name	From	To	Street ID - Section ID	Length (ft)	Width (ft)	Area (Yd ²)	Fabric	Base Repair			Mill (2") (Yd ²)	Mill (3") (Yd ²)	AC OL thickness (ft)	(ton)	COMMENTS	# Lanes	Road Miles	Lane Miles
										Area	ft	Ton								
L-1	1	Grant Avenue	Southern Pacific RR	W End	GRA783-010	2345	67	157115	17457	10%	0.33	389		17457	0.250	2946	MILL 3" AC AND REPLACE 3" AC	2	0.44	0.89
L-2	2	Maubert Avenue	159th Avenue	163rd Avenue	MAU603-020 & 025	2440	26	63440	7049	10%	0.33	157	7049		0.166	790	MILL 2" AC AND REPLACE 2" AC	2	0.46	0.92
	3	162nd Avenue	East 14th Street	Liberty Street	162214-010	2094	36	75384	8376	10%	0.33	187	8376		0.166	939	MILL 2" AC AND REPLACE 2" AC	2	0.40	0.79
	4	Los Banos Street	165th Avenue	170th Avenue	LOS508-010	1757	30	52710	5857	10%	0.33	130	5857		0.166	656	MILL 2" AC AND REPLACE 2" AC	2	0.33	0.67
	5	Esteban Street	N End	S End	ES1031-020	1135	22	24970	2774	10%	0.33	62	2774		0.166	311	MILL 2" AC AND REPLACE 2" AC	2	0.21	0.43
	6	Saint Johns Drive	Paseo Grande	NW End	ST3462	686	32	21952	2439	10%	0.33	54	2439		0.166	273	MILL 2" AC AND REPLACE 2" AC	2	0.13	0.26
L-3	7	Saint Johns Court	Saint Johns Drive	NE End	ST3463	253	32	8096	900	10%	0.33	20	900		0.166	101	MILL 2" AC AND REPLACE 2" AC	2	0.05	0.10
	8	Colonial Drive	Saint Johns Drive	NE End	CO0564	155	32	4960	551	10%	0.33	12	551		0.166	62	MILL 2" AC AND REPLACE 2" AC	2	0.03	0.06
	9	Pasco Grande	Meekland Avenue	Via Granada	PGI138-01- & 020	1990	39	77610	8623	10%	0.33	192	8623		0.166	966	MILL 2" AC AND REPLACE 2" AC	2	0.38	0.75
	10	Morva Drive	Medford Avenue	Morva Court		230	17	3910	434	25%	0.33	24	434		0.166	49	MILL 2" AC AND REPLACE 2" AC	2	0.04	0.09
L-4	11	Morva Ct	West End	East End		255	17.3	4412	490	25%	0.33	27	490		0.166	55	MILL 2" AC AND REPLACE 2" AC	2	0.05	0.10

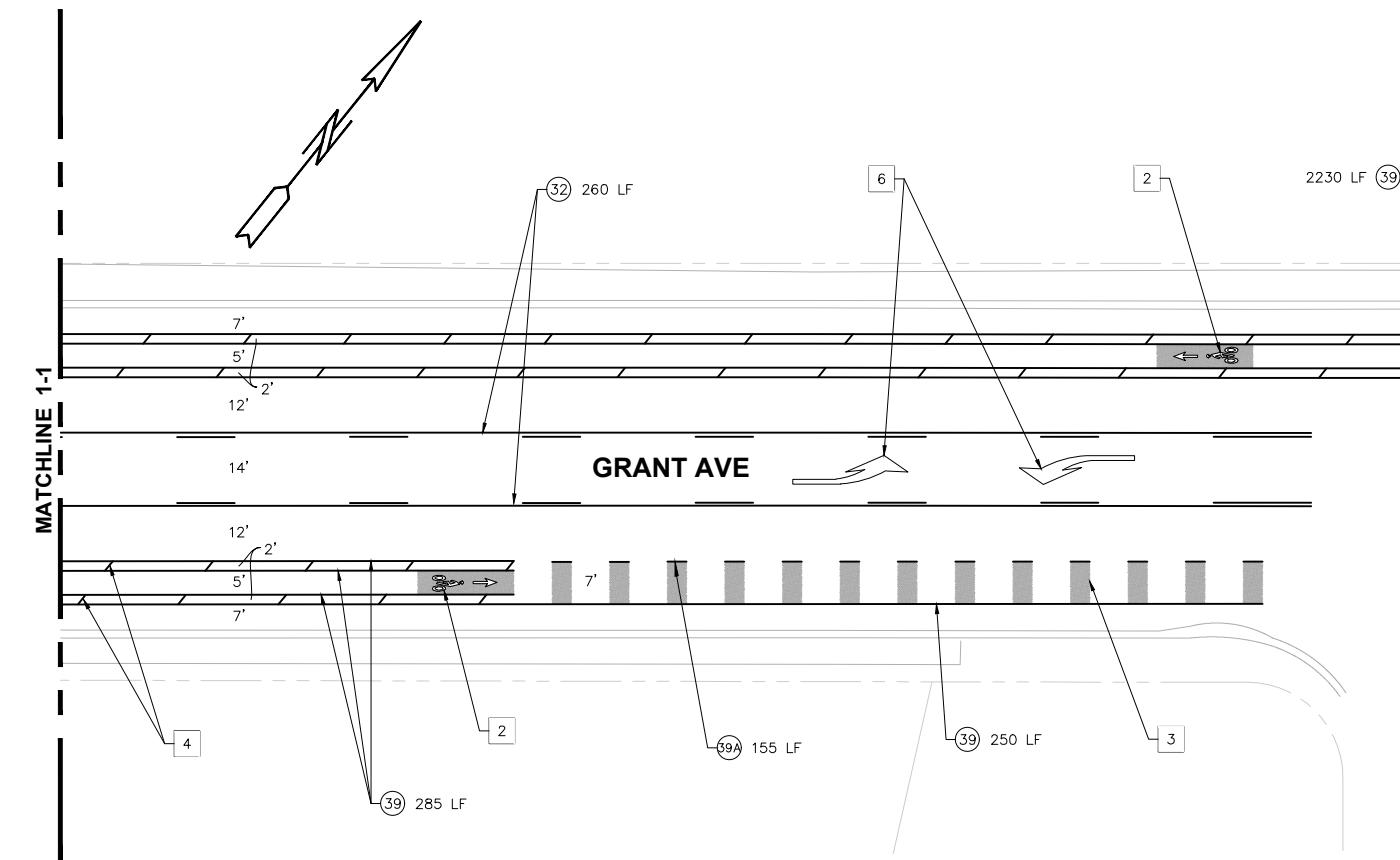
Information Handout N: Striping Plan – Grant Avenue

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



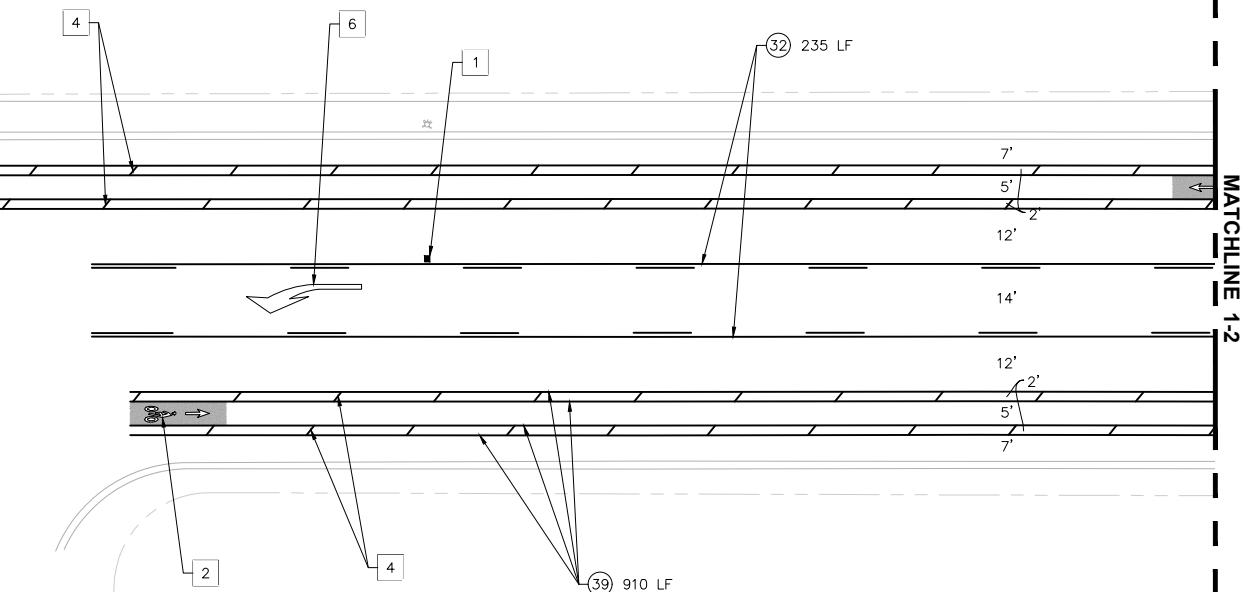
PLAN

SCALE: 1"=20'



PLAN

SCALE: 1"=20'



NOTES

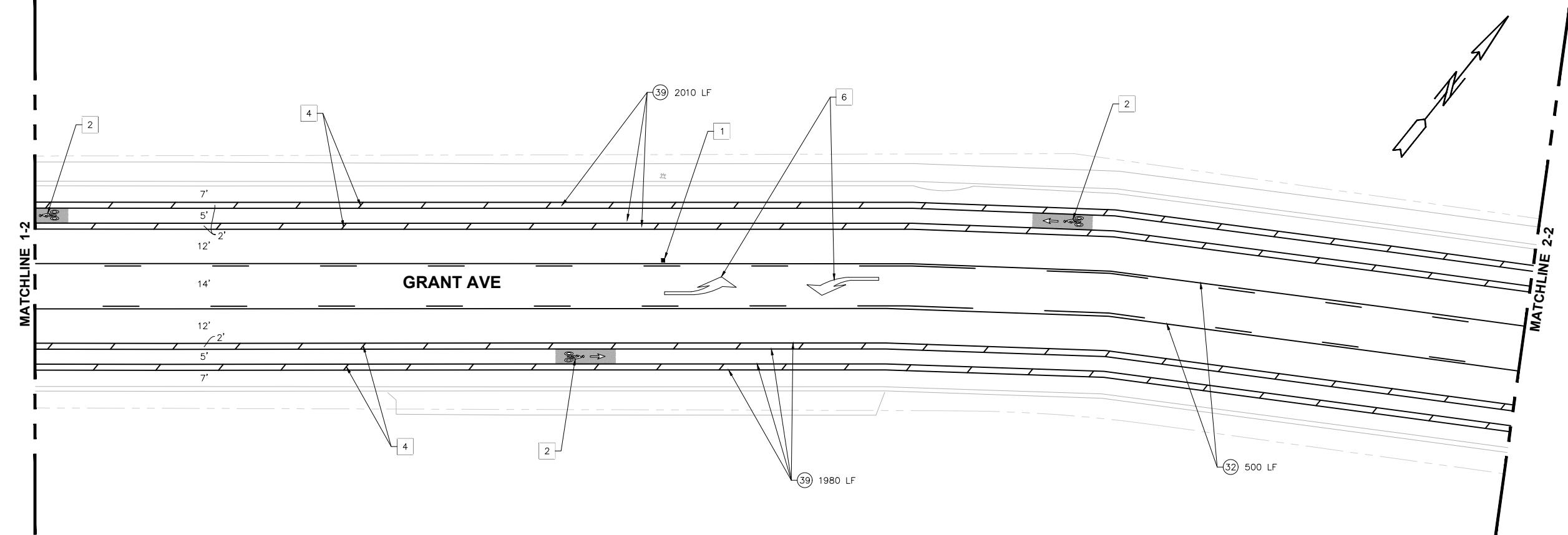
1. SEE SHEET 3 FOR SIGNING AND STRIPING DETAILS, LEGEND, AND NOTES.



COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY	
IMPROVEMENTS OF GRANT AVENUE FROM END OF ROAD TO RAILROAD AVE	
SIGNING AND STRIPING PLAN	
WORK ORDER NO.	R23504
SPECIFICATION NO.	2497
SHETT NO.	01 OF 03
FILE NO.	U-783-8

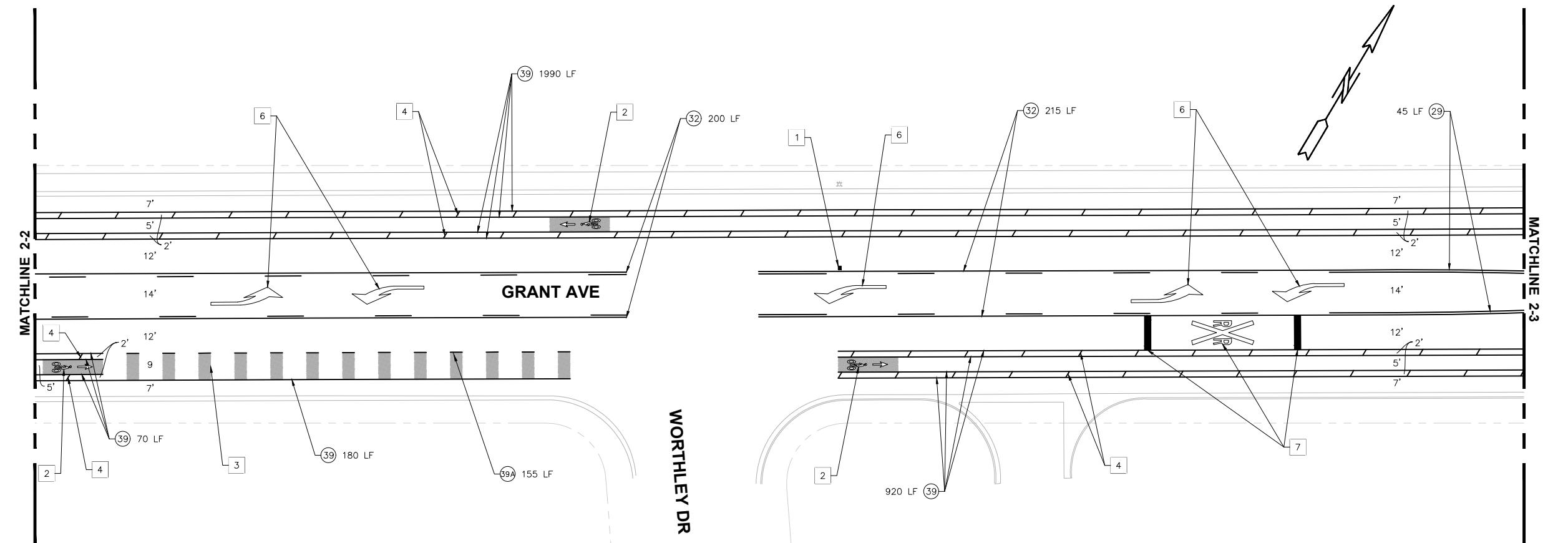
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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PLAN

SCALE: 1"=20'

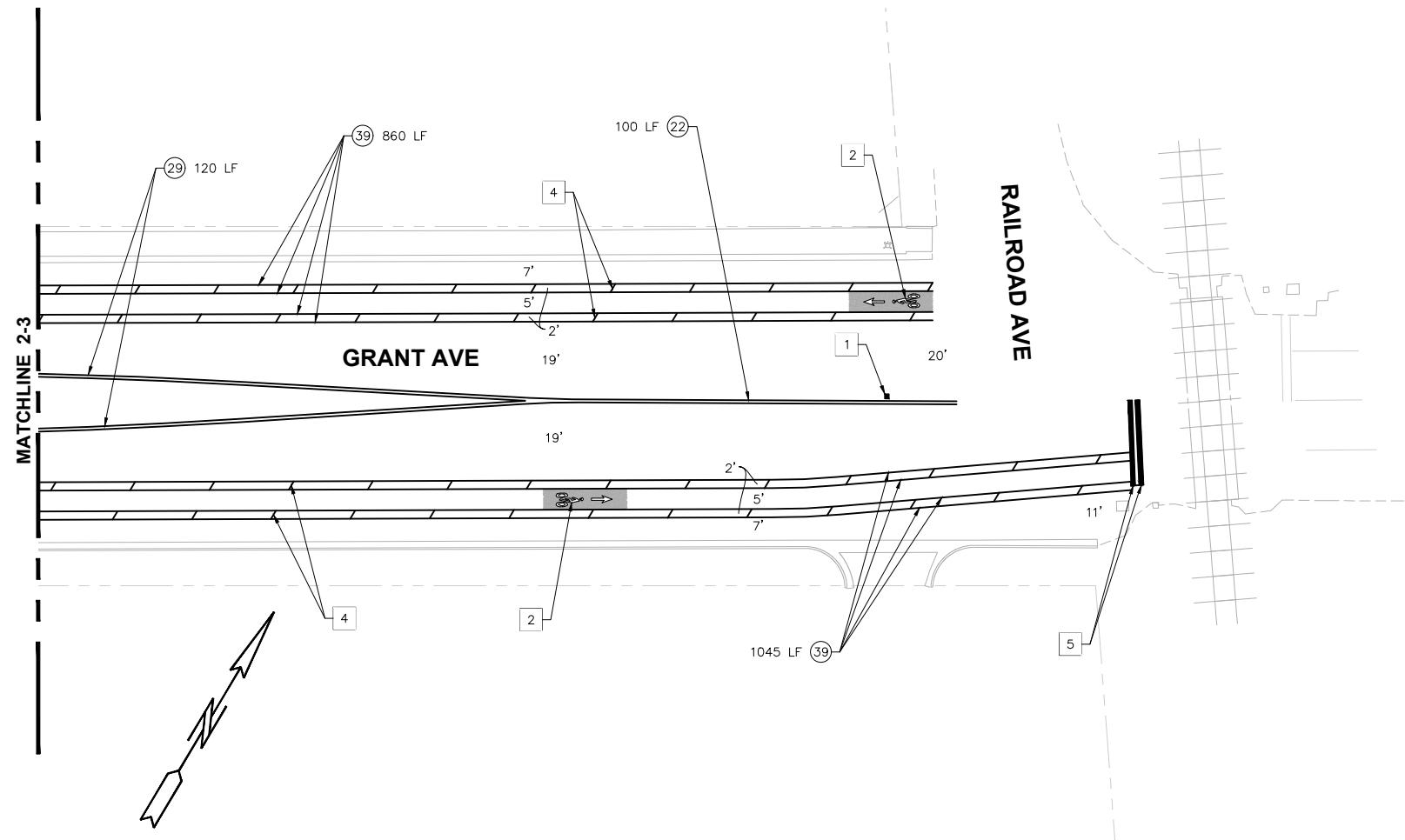


PLAN

SCALE: 1"=20'

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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PLAN

LEGEND

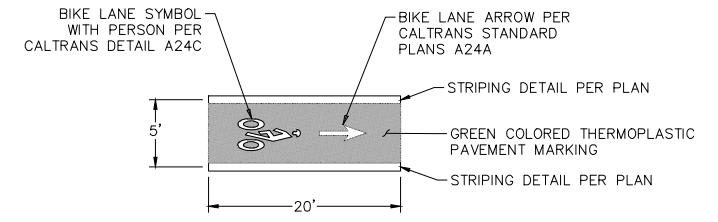
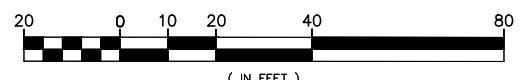
INSTALL NEW PAVEMENT MARKING
PROPOSED STRIPING
BLUE HYDRANT PAVEMENT MARKER
EXISTING FIRE HYDRANT
STRIPING TO BE INSTALLED PER DETAIL NUMBER "X"
PFR. CALTRANS STANDARD PLANS

SIGNING AND STRIPING NOTES

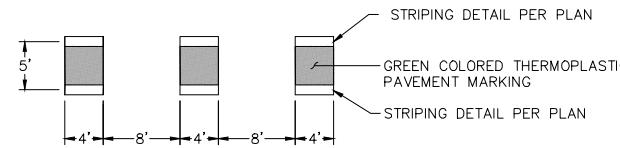
1. ALL EXISTING STRIPING, PAVEMENT MARKINGS AND MARKERS BEYOND PROJECT LIMITS ARE TO REMAIN UNLESS OTHERWISE SPECIFIED. IF DAMAGED, CONTRACTOR MUST RESTORE OR REPLACE AT THEIR OWN EXPENSE.
2. ALL MARKINGS SHALL BE IN CONFORMANCE WITH LATEST CALTRANS STANDARD PLANS.
3. ALL STRIPING SHALL BE THERMOPLASTIC.
4. ALL ROAD SIGNS SHALL BE IN CONFORMANCE WITH LATEST CALIFORNIA MUTCD.
5. BLUE RETROREFLECTIVE PAVEMENT MARKER(S) MUST BE PLACED 6 INCHES FROM THE CENTERLINE STRIPE ON THE SIDE NEAREST TO THE FIRE HYDRANT PER LATEST CALIFORNIA MUTCD.
6. RETROREFLECTIVE PAVEMENT MARKERS FOR THE VARIOUS TRAFFIC (LINES) STRIPING ARE NOT SHOWN REFER TO THE CALTRANS STANDARD PLANS FOR THE TYPES AND PLACEMENTS OF THE RETROREFLECTIVE PAVEMENT MARKERS FOR EACH TYPE OF TRAFFIC LINES.

KEY NOTES

- 1 INSTALL BLUE RETROREFLECTIVE PAVEMENT MARKER
- 2 INSTALL BIKE LANE SYMBOL, BIKE ARROW, AND GREEN COLORED THERMOPLASTIC. SEE DETAIL 1 ON THIS SHEET.
- 3 INSTALL GREEN COLORED BIKE LANE TREATMENT. SEE DETAIL 2 ON THIS SHEET.
- 4 INSTALL 4" WIDE WHITE DIAGONAL MARKING BUFFER AT 20' SPACING.
- 5 INSTALL 12" WHITE LINE (THERMOPLASTIC)
- 6 INSTALL TYPE III(L/R) ARROW PER CALTRANS DETAIL A24B
- 7 INSTALL WHITE RAILROAD CROSSING SYMBOL PER CALTRANS DETAIL A24R



GREEN BIKE LANE PAVEMENT MARKING DETAIL



GREEN COLORED PAVEMENT FOR BIKE LANES

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY		REVISIONS													
IMPROVEMENTS OF GRANT AVENUE FROM END OF ROAD TO RAILROAD AVE SIGNING AND STRIPING PLAN		<table border="1"> <thead> <tr> <th colspan="2">APPROVAL RECOMMENDED</th> </tr> </thead> <tbody> <tr> <td>DRAWN GINA SAECHAO</td> <td>---</td> </tr> <tr> <td>DESIGNED GINA SAECHAO</td> <td>---</td> </tr> <tr> <td>CHECKED AMBER K. LO / YELIN PAN</td> <td>---</td> </tr> <tr> <td>DATE MAR 2025</td> <td>SCALE 1"=20'</td> </tr> <tr> <td colspan="2">DESCRIPTION NO.</td> </tr> </tbody> </table>		APPROVAL RECOMMENDED		DRAWN GINA SAECHAO	---	DESIGNED GINA SAECHAO	---	CHECKED AMBER K. LO / YELIN PAN	---	DATE MAR 2025	SCALE 1"=20'	DESCRIPTION NO.	
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FILE NO. U-783-8	APPROVAL DATE BY	APPROVAL DATE BY	APPROVAL DATE BY												

Information Handout O: (Annual) Community Events

The Contractor must temporarily suspend all construction activities during Community events within a 5 mile proximity of a project location, including the following annual events:

	<u>EVENT</u>	<u>DURATION</u>	<u>MONTH*</u>
1.	<u>Annual Ashland/Cherryland Famfest event.</u>	<u>1 day</u>	<u>June</u>
2.	<u>San Lorenzo Village HOA Halloween Parade</u>	<u>1 day</u>	<u>October</u>

***Actual Date(s) to be determined at a later date**

In preparation of these events, the contractor must comply with the following:

- All traffic lanes must be made safe and open to all traffic (including vehicular, bicycle, and transit)
- All onsite street parking (on the non-construction properties) must be restored
- All sidewalks, walkways, and pathways must be made accessible on both sides
- All entrances to private property must be restored and made accessible (and ADA compliant)
- All entrances to private property must be secured and/or locked
- All temporary removed fences and gates must be re-installed
- All work areas must be cleaned and all debris removed
- All equipment and materials must be secured and made safe from the public

**Information Handout P: 84-2.03C(1) Preformed Thermoplastic Bike Lane
Symbols Pavement Markings and 84-2.03C(2) Preformed Thermoplastic Bike
Green Pavement Markings**

84-2.03C(1) Preformed Thermoplastic Bike Lane Symbols Pavement Markings (Addendum 1)

1. USE: A durable, high skid resistant, retroreflective pavement marking material suitable for use as bike lane, roadway, intersection, airport, commercial or private pavement delineation and markings. For use on asphalt or Portland cement concrete pavement surfaces.

1.1. The material shall be a resilient white (traffic symbols) and light green color (background) thermoplastic product, the surface of which must contain glass beads and abrasives in an alternating pattern optimizing both skid resistance and retro reflectivity.

1.2. The material shall be resistant to the detrimental effects of motor fuels, antifreeze lubricants, hydraulic fluids etc.

1.3. The material shall be capable of being affixed to bituminous and/or Portland cement concrete pavements by the use of the normal heat of a propane torch.

1.4. The material shall be capable of conforming to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures. The markings shall have resealing characteristics, such that it is capable of fusing with itself and previously applied thermoplastic.

1.5. The material shall not have minimum ambient and road temperature requirements for normal application, storage, or handling. When manufacturer's standard application procedures require the use of a 2-component sealer, the material shall be capable of being applied with a compatible 2-component sealer recommended by the manufacturer, at minimum ambient and surface temperatures of 45°F without any special storage, preheating or treatment of the material before application.

2. MANUFACTURING CONTROL AND ISO CERTIFICATION: The manufacturer must be ISO 9001:2008 certified and provide proof of current certification. The scope of the certification shall include manufacture of reflective highway markings.

3. MATERIAL: Must be composed of an ester modified rosin resistant to degradation by motor fuels, antifreeze, lubricants, etc. in conjunction with aggregates, pigments, binders, abrasives, and glass beads which have been factory produced as a finished product, and meets the requirements of the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. The thermoplastic material conforms to AASHTO designation M249-79 (98), with the exception of the relevant differences due to the material being supplied in a preformed state.

3.1. Graded Glass Beads:

3.1.1. The material must contain a minimum of thirty percent (30%) intermixed graded glass beads by weight. The intermixed beads shall be clear and transparent. Not more than twenty percent (20%) consists of irregular fused spheroids, or silica. The index of refraction shall not be less than 1.50.

3.1.2. The material must have factory applied coated surface beads and abrasives in addition to the intermixed beads at a rate of 1/2 lb. (+ 20%) per 11 sq. ft. The surface beads and abrasives must be applied in an alternating arrangement across the surface of the material so that the surface is covered in what is best described as a “checkerboard” pattern of glass beads and abrasive materials. The abrasive material must have a minimum hardness of 8 (Mohs scale). These factory applied coated surface beads shall have the following specifications:

<u>Size Gradation</u>			
<u>US Mesh</u>	<u>Um</u>	<u>% Retained</u>	<u>% Passing</u>
<u>12</u>	<u>1700</u>	<u>0 – 2%</u>	<u>98 – 100%</u>
<u>14</u>	<u>1400</u>	<u>0 – 6%</u>	<u>94 – 100%</u>
<u>16</u>	<u>1180</u>	<u>1 – 21%</u>	<u>79 – 99%</u>
<u>18</u>	<u>1000</u>	<u>28 – 62%</u>	<u>38 – 72%</u>
<u>20</u>	<u>850</u>	<u>62 – 71%</u>	<u>29 – 38%</u>
<u>30</u>	<u>600</u>	<u>67 – 77%</u>	<u>23 – 33%</u>
<u>50</u>	<u>300</u>	<u>86 – 95%</u>	<u>5 – 14%</u>
<u>80</u>	<u>200</u>	<u>97 – 100%</u>	<u>0 – 3%</u>

3.2. Pigments:

3.2.1. White: The material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected

3.2.2. Light Green: The material shall be manufactured with appropriate pigment to ensure that the resulting colors complies with the Light Green color as specified in the FHWA Memorandum dated April 15th, 2011: Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14).

Daytime chromaticity coordinates for the color used for green colored pavement shall be as follows:

<u>1</u>		<u>2</u>		<u>3</u>		<u>4</u>	
<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>
<u>0.230</u>	<u>0.754</u>	<u>0.266</u>	<u>0.500</u>	<u>0.367</u>	<u>0.500</u>	<u>0.444</u>	<u>0.555</u>

Nighttime chromaticity coordinates for the color used for green colored pavement shall be as follows:

<u>1</u>		<u>2</u>		<u>3</u>		<u>4</u>	
<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>
<u>0.230</u>	<u>0.754</u>	<u>0.336</u>	<u>0.540</u>	<u>0.450</u>	<u>0.500</u>	<u>0.479</u>	<u>0.520</u>

3.2.3. The pigments shall contain no lead chromate.

3.3. Heating indicators: The top surface of the material shall have regularly spaced indents. The closing of these indents during application, shall act as a visual cue that the material has reached a molten state allowing for satisfactory adhesion and proper bead embedment, and as a post-application visual cue that the application procedures have been followed.

3.4. Skid Resistance: The surface of the preformed retroreflective marking materials, wherein every other shaped portion contains glass beads, or abrasives with a minimum hardness of 8

(Mohs scale), shall upon application provide a minimum skid resistance value of 60 BPN when tested according to ASTM: E 303.

3.5. Thickness: The material must be supplied at a minimum thickness of 90 mils (2.29 mm) or 125 mils (3.15mm).

3.6. Retroreflectivity: The preformed retroreflective marking materials, upon application, shall exhibit the following uniform nighttime retro reflectivity using a Delta LTL 2000 or LTL-X Retroreflectometer using the ASTM E1710 method:

- White preformed reflective marking materials—minimum of 275 mcd·m-2·lx-1
- Green preformed reflective marking materials of 50 mcd·m-2·lx-1

Note: Initial retroreflection and skid resistance are affected by the amount of heat applied during installation. When ambient temperatures are such that greater amounts of heat are required for proper installation, initial retroreflection and skid resistance levels may be affected.

3.7. Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

3.8. Abrasives: The abrasives and surface beads must be applied in an alternating arrangement across the surface of the material so that the surface is covered in what is best described as a "checkerboard" pattern of glass beads and abrasive materials. The abrasive material must have a minimum hardness of 8 (Mohs scale).

4. APPLICATION:

4.1. Asphalt: The material shall be capable of being applied using the propane torch method recommended by the manufacturer, without minimum requirements for ambient and road temperatures down to 45°F, and without any preheating of the pavement to a specified temperature. The material shall be capable of being applied without the use of a thermometer. The pavement shall be clean, dry and free of debris. Supplier must enclose application instructions with each box/package.

4.2. Portland Concrete: The same application procedure shall be used as described under Section 4.1, however, a compatible primer sealer, recommended by the manufacturer, shall be applied to the surface prior to the application of material to ensure proper adhesion.

5. PACKAGING: The preformed thermoplastic markings shall be placed in protective plastic film with cardboard stiffeners where necessary to prevent damage in transit. Linear material must be cut to a maximum of 3' long pieces. Legends and symbols must also be supplied in flat pieces. The cartons in which packed shall be non-returnable and shall not exceed 40" in length and 25" in width, and be labeled for ease of identification. The weight of the individual carton must not exceed seventy (70) pounds. A protective film around the box must be applied in order to protect the material from rain or premature aging.

6. TECHNICAL SERVICES: The successful bidder shall provide technical services as required.

7. PERFORMANCE: The preformed thermoplastic markings shall meet state specifications and be approved for use by the appropriate state agency.

84-2.03C(2) Preformed Thermoplastic Bike Green Pavement Markings (Addendum 1)

1. USE: A durable, high skid and slip resistant pavement marking material suitable for use as, bike lane, roadway, intersection, airport, commercial or private pavement delineation and markings. For use on asphalt or Portland cement concrete pavement surfaces.

1.1. The material shall be a resilient light green color thermoplastic product containing a minimum thirty percent (30%) intermix of anti-skid/anti-slip elements and where the top surface contains anti-skid/anti-slip elements. These anti-skid/anti-slip elements must have a minimum hardness of 8 (Mohs scale).

1.2. The material shall be resistant to the detrimental effects of motor fuels, antifreeze, lubricants, hydraulic fluids etc.

1.3. The material shall be capable of being affixed to bituminous and/or Portland cement concrete pavements by the use of the normal heat of a propane torch, infrared heater, or a blue radiant heater.

1.4. The material shall be capable of conforming to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures (i.e. without preheating the application surface to a specific temperature). The markings shall have resealing characteristics, such that it is capable of fusing with itself and previously applied thermoplastic.

1.5. The material shall not have minimum ambient and road temperature requirements for normal application, storage, or handling. When manufacturer's standard application procedures require the use of a 2-component sealer, the material shall be capable of being applied with a compatible 2-component sealer recommended by the manufacturer, at minimum ambient and surface temperatures of 45°F without any special storage, preheating or treatment of the material before application.

1.6. The material shall contain heating indicators evenly distributed on the surface that shall act as visual cues during both the application process and post-application.

2. MANUFACTURING CONTROL AND ISO CERTIFICATION: The manufacturer must be ISO 9001:2008 certified for design, development and manufacturing and provide proof of current certification. The scope of the certification shall include the design, development, and manufacture of preformed thermoplastic reflective highway markings.

3. MATERIAL: Must be composed of an ester modified rosin resistant to degradation by motor fuels, antifreeze, lubricants, etc. in conjunction with aggregates, pigments, binders, abrasives, and anti-skid/anti-slip elements (uniformly distributed throughout the material) which have been factory produced as a finished product, and meets the requirements of the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. The thermoplastic material conforms to AASHTO designation M249-79 (98), with the exception of the relevant differences due to the material being supplied in a preformed state.

3.2. Pigment: 3.2.2. Light Green: The material shall be manufactured with appropriate pigment to ensure that the resulting colors complies with the Light Green color as specified in the FHWA Memorandum dated April 15th, 2011: Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14).

Daytime chromaticity coordinates for the color used for green colored pavement shall be as follows:

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.230	0.754	0.266	0.500	0.367	0.500	0.444	0.555

Nighttime chromaticity coordinates for the color used for green colored pavement shall be as follows:

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.230	0.754	0.336	0.540	0.450	0.500	0.479	0.520

3.3. The pigments shall contain no lead chromate nor heavy metals or any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

3.4. Heating indicators: The top surface of the material shall have regularly spaced indents. The closing of these indents during application, shall act as a visual cue that the material has reached a molten state allowing for satisfactory adhesion and proper bead embedment, and as a post-application visual cue that the application procedures have been followed.

3.5 Skid Resistance: The surface of the preformed thermoplastic marking materials shall contain factory applied elements with a minimum hardness of 8 (Mohs scale). Upon application, the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM: F 303.

3.6. Slip Resistance: The surface of the preformed thermoplastic marking materials shall contain factory applied anti-skid elements with a minimum hardness of 8 (Mohs scale). Upon application, the material shall provide a minimum static coefficient of friction of 0.6 when tested according to ASTM: C 1028 (wet and dry), and a minimum static coefficient of friction of 0.6 when tested according to ASTM: D 2047.

3.7. Thickness: The material must be supplied at a minimum thickness of 90 mils (2.29 mm).

3.8. Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

4. APPLICATION:

4.1. Asphalt: The material shall be capable of being applied using the propane torch method recommended by the manufacturer, without minimum requirements for ambient and road temperatures down to 45°F, and without any preheating of the pavement to a specified temperature. The material shall be capable of being applied without the use of a thermometer. The pavement shall be clean, dry and free of debris. Supplier must enclose application instructions with each box/package.

4.2. Portland Concrete: The same application procedure shall be used as described under Section 4.1, however, a compatible primer sealer, recommended by the manufacturer, shall be applied to the surface prior to the application of material to ensure proper adhesion.

5. PACKAGING: The preformed thermoplastic markings shall be placed in protective plastic film with cardboard stiffeners where necessary to prevent damage in transit. Linear material must be cut to a maximum of 3' long pieces. Legends and symbols must also be supplied in flat pieces. The cartons in which packed shall be non-returnable and shall not exceed 40" in length and 25" in width, and be labeled for ease of identification. The weight of the individual carton must not exceed fifty (50) pounds. A protective film around the box must be applied in order to protect the material from rain or premature aging.

6. TECHNICAL SERVICES: The successful bidder shall provide technical services as required.

7. PERFORMANCE: The preformed thermoplastic markings shall meet state specifications and be approved for use by the appropriate state agency.

Information Handout O: PCMS Sign Placement Location Map

GRANT AVENUE

