

Feb. 5, 2024, 4 p.m.

## Welcome to Your Traffic Safety & Mobility Commission Meeting

We welcome your interest and involvement in the city's legislative process. This agenda includes informationabout topics coming before the Traffic Safety & Mobility Commission and the action recommended by city staff. You can read about each topic in the staff reports, which are available on the city website and in the Office of the City Clerk. The Minutes Clerk is also available to answer any questions you have about Traffic Safety & Mobility Commission meeting procedures.

#### How to watch

In Person



City Council Chamber 1200 Carlsbad Village Drive



Online

Watch the livestream at carlsbadca.gov/watch

#### How to participate

If you would like to provide comments to the Traffic Safety & Mobility Commission, please:

- Fill out a speaker request form, located in the foyer.
- Submit the form to the Minutes Clerk before the item begins.
- When it's your turn, the Chair will call your name and invite you to the podium.
- Speakers have three minutes, unless the presiding officer (usually the Chair) changes that time.
- You may not give your time to another person, but groups can select a single speaker as long as threeother members of your group are present. Group representatives have 10 minutes unless that time is changed by the presiding officer or the Commission.
- In writing: Email comments to <a href="mailto:traffic@carlsbadca.gov">traffic@carlsbadca.gov</a>. Comments received by 2 p.m. the day of the meeting will be shared with the Traffic Safety & Mobility Commission prior to the meeting. When emailing comments, please identify in the subject line the agenda item to which your comments relate. All comments received will be included as part of the official record.

#### Written comments will not be read out loud.

#### **Reasonable Accommodations**

Persons with a disability may request an agenda packet in appropriate alternative formats as require by theAmericans with Disabilities Act of 1990. Reasonable accommodations and auxiliary aids will be provided to effectively allow participation in the meeting. Please contact the City Manager's Office at 442-339-2821 (voice), 711 (free relay service for TTY users), 760-720-9461 (fax) or manager@carlsbadca.gov by noon on the Monday before the meeting to make arrangements. City staff will respond to requests by 2 p.m. on Monday, the day of the meeting, and will seek to resolve requests before the start of the meeting in order to maximize accessibility.

More information about Traffic Safety & Mobility Commission meeting procedures can be found at the end ofthis agenda and in the Carlsbad Municipal Code chapter 1.20.

## CALL TO ORDER:

ROLL CALL:

#### **PLEDGE OF ALLEGIANCE:**

#### **APPROVAL OF MINUTES:**

Minutes of the Regular Meeting held on Dec. 4, 2023

**PUBLIC COMMENT:** In conformance with the Brown Act, no Commission action can occur on items presented during Public Comment. A total of 15 minutes is provided so members of the public can address the Commissioners on items that are not listed on the Agenda. Speakers are limited to three (3) minutes each. If you desire to speak during Public Comment, fill out a SPEAKER CARD and submitit to the Minutes Clerk. If there are more than five (5) speakers, the remaining speakers will be heardat the end of the agenda just prior to Commissioners Reports.

**CONSENT CALENDAR**: The items listed under Consent Calendar are considered routine and will be enacted by one motion as listed below. There will be no separate discussion on these items prior to the time the Commission votes on the motion unless members of the Traffic Safety & Mobility Commission, the Liaison or the public request specific items be discussed and/or removed from the Consent Calendar for separate action. A request from the public to discuss an item must be submitted to the Minutes Clerk in writing prior to Traffic Safety & Mobility consideration of the Consent Calendar.

 <u>2023 SLURRY SEAL PROJECT, CAPITAL IMPROVEMENT PROJECT NO. 6001-23SS</u> - Support staff's recommendation to the City Council to approve the plans for the 2023 Slurry Seal Project, Capital Improvement Project No. 6001-23SS, as a part of the Pavement Management Program. (Staff Contact: Eric Zielke, Public Works Department).

## **DEPARTMENTAL REPORTS**:

 POLICE REPORT REGARDING TRAFFIC & MOBILITY-RELATED MATTERS DURING THE MONTHS OF NOVEMBER AND DECEMBER 2023, INCLUDING NOTABLE NEWS FOR THE MONTH OF JANUARY 2024 - Receive a presentation from a representative of the City of Carlsbad's Police Department that will provide an overview of traffic and mobility-related police matters during the month of November and December 2023, including notable news for the month of January 2024. (Staff Contact: Lieutenant Alonso DeVelasco, Police Department).

Staff's Recommendation: Receive the presentation.

<u>COMPLETE STREETS BEST PRACTICES: NEW BIKEWAY TREATMENTS AND ROADWAY WIDTHS</u>

 Receive an informational presentation on Complete Streets Best Practices including an overview of recent bike lane design treatments and roadway travel lane widths. (Staff Contact: Nathan Schmidt and Tom Frank, Public Works Department).

## Staff's Recommendation: Receive the presentation.

## **CITY TRAFFIC ENGINEER COMMENTS:**

**COMMISSION COMMENTARY AND REQUESTS FOR CONSIDERATION OF MATTERS**: This portion of the agenda is for the Commission Members to make brief announcements, brief reports of their activities and requests for future agenda items.

#### **PUBLIC COMMENTS:** Continuation of the Public Comments

This portion of the agenda is set aside for continuation of public comments, if necessary, due to exceeding the total time allotted in the first public comments section. When you are called to speak, please come forward to the podium and state your name. The remainder of the categories are for reporting purposes. In conformance with the Brown Act, no public testimony and no Commission action can occur on these items.

#### **ADJOURNMENT:**

#### ABOUT THE TRAFFIC SAFETY & MOBILITY COMMISSION AGENDA

Per Carlsbad Municipal Code 2.28.050 the Traffic Safety & Mobility Commission is an advisory commission to the City Council directed to study all matters referred to it concerning traffic safety and pedestrian safety and to make written recommendations to the city council regarding traffic and pedestrian safety within the city.

The Ralph M. Brown Act (commonly referred to as the "Brown Act") governs open meetings for local government bodies in the state of California. The Brown Act guarantees the public's right to attend and participate in meetings of local legislative bodies and is contained in section 54950 et seq. of the Government Code. The Brown Act also includes requirements for the distribution of agendas for these public meetings.

#### TRAFFIC SAFETY & MOBILITY COMMISSION PROCEDURE

For each item on the agenda, City of Carlsbad staff will present a report to the Traffic Safety & Mobility Commission. The Traffic Safety & Mobility Commissioners may then ask clarifying questions about the staff report in advance of the public outreach. The audience will then be asked for comment. The Traffic Safety & Mobility Commission is interested to hear all persons wishing to give testimony. Please file a **"Request to Speak"** formto speak on items listed on the agenda. Persons not desiring to speak but, wishing to be recorded as proponents or protesters of record, may do so by submitting their name and address to the minutes clerk. If anyone wishes to question a Traffic Safety & Mobility Commission recommendation, they may contact the Traffic Safety & Mobility Division at 1635 Faraday Avenue, between the hours of 7:30 a. m. and 5:30 a.m., Monday through Thursday, and 8 a.m. to 5 p.m. on Friday.

Visual materials should be submitted to the Transportation Department at 1635 Faraday Avenue no later than noon the Friday before the meeting. Please label all materials with the agenda item number you are representing. All materials exhibited to the Traffic Safety & Mobility Commission during the meeting (slides, maps, photos, etc.) are part of the public record and must be kept by the Traffic Safety & Mobility Division for at least 60 days after final action on the matter. Your materials will be returned upon written request.

#### Video clips cannot be accommodated.

The Public Comment portion of the Agenda allows community members to speak on items that are not on the agenda. If you desire to speak about an item not listed on the agenda, a **"Request to Speak"** form shouldbe filed with the Minutes Clerk. In conformance with the Brown Act, no action can occur on items presentedduring Public Comment.

Any agenda related writings or documents provided to the majority of the Traffic Safety & Mobility Commission after distribution of the Agenda packet will be available for public inspection at the Transportation Department located at 1635 Faraday Avenue, Carlsbad, CA 92008. In addition, a binder containing all agendarelated writings and documents will be held by the Minutes Clerk at each Traffic Safety & Mobility Commission meeting and available for public review.

Those wishing to speak to the Traffic Safety & Mobility Commission are asked to come forward, speak into the microphone, and give their name and address for the taped record. A time limit of three minutes is allotted to each speaker. Members of the public are asked to observe order at this meeting and to conduct themselves in a courteous and respectful manner.



Council Chamber 1200 Carlsbad Village Drive Carlsbad, CA 92008

CALL TO ORDER: 4:00 p.m.

<u>ROLL CALL</u>: Coelho, Fowler, Penseyres, Proulx, Newlands, and Kohl. Absent: Garcia.

**PLEDGE OF ALLEGIANCE:** Chair Coelho led the Pledge of Allegiance.

## **APPROVAL OF MINUTES:**

Minutes of Regular Meeting held on Nov. 6, 2023

Motion by Commissioner Kohl, seconded by Commissioner Newlands, to approve the minutes of the Regular Meeting held on Nov. 6, 2023, as presented. Motion carried, 6/0/1 (Garcia – Absent).

## PUBLIC COMMENT:

Jim Powers spoke about a sidewalk that impedes the entrance at Amberwood Court that causes cars to slow down and makes the entrance too narrow. He further added that the striping on El Camino Real closer to Amberwood Court nearing Tamarack Avenue has made the lanes too narrow, causing people who are turning left onto Amberwood Court to stop in the middle lane, blocking traffic. He further spoke about concerns regarding the speed bumps on Tamarack Avenue, explaining that the speed bump on Sunnyhill Drive, specifically, is too high in comparison to the other speed bumps and recommends lowering it.

Commissioner Garcia joined the meeting at 4:05 p.m.

Neil Bradley spoke about the planned time-limited parking restrictions on State Street with the threehour parking limit and no overnight parking and he suggested that the residents should have a permit for guest parking that would allow guests to park overnight or for a weekend. He further mentioned his concerns regarding the amount of congestion and speeding on State Street.

## CONSENT CALENDAR: None.

#### **DEPARTMENTAL REPORTS**:

1. <u>POLICE REPORT REGARDING TRAFFIC & MOBILITY-RELATED MATTERS DURING THE MONTH OF</u> <u>OCTOBER 2023, INCLUDING NOTABLE NEWS FOR THE MONTH OF NOVEMBER</u> – Receive a presentation from a representative of the City of Carlsbad Police Department that will provide an overview of traffic and mobility-related police matters during the month of October 2023, including notable news for the month of November. (Staff Contact: Lieutenant Alonso DeVelasco, Police Department).

Staff's Recommendation: Receive the presentation.

Lieutenant Alonso DeVelasco presented the report and reviewed a PowerPoint presentation (on file in the Office of the City Clerk).

The Commission received the PowerPoint presentation by Lieutenant DeVelasco.

In response to Commissioner Kohl's inquiry regarding the Police Department's policy for selecting which intersections to monitor and enforce, Lieutenant DeVelasco explained that they do not have a policy and confirmed that they will respond to intersections that received a high number of complaints.

In response to Vice-Chair Fowler's inquiry regarding when a pedestrian would be at fault in a traffic collision involving a vehicle, Lieutenant DeVelasco explained that pedestrians cannot impede the flow of a vehicle already occupying the lane. He further explained that pedestrians still have an obligation to ensure that they will not impede the flow of traffic.

In response to Chair Coelho's inquiry regarding the Police Department's ability to examine what time of day the accidents are occurring and if there is an increase in collisions at different times of the day after the time change, Lieutenant DeVelasco responded that he and a crime analyst would look into the data and see if there is any correlation.

In response to Commissioner Penseyres' inquiry regarding the extent of the Police Department's follow-up on non-injury hit and run to identify the drivers, Lieutenant DeVelasco explained that the Police Department investigates hit and run collisions just like any other crime.

In response to Commissioner Penseyres' inquiry regarding whether the Police Department requires drivers who damage city property to pay for the repairs, Lieutenant DeVelasco explained that the city has cost recovery if it is Driving Under the Influence, or DUI, related and will prosecute them for the collision. He further explained that the Police Department only focuses on the criminal aspect related to the collision and another department oversees the cost recovery aspect.

2. <u>SEMIANNUAL TRANSPORTATION REPORT</u> – Receive the Semiannual Transportation Report. (Staff Contact: Tom Frank, Public Works Department).

## Staff's Recommendation: Receive the report.

Transportation Director/City Engineer Tom Frank presented the report and reviewed a PowerPoint presentation (on file in the Office of the City Clerk).

The Commission received the PowerPoint presentation by Transportation Director/City Engineer Frank.

In response to Chair Coelho's inquiry regarding the average economic impact of a traffic collision, Transportation Planning & Mobility Manager Nathan Schmidt responded that he would be able to provide further information. In response to Commissioner Penseyres' inquiry regarding if the Transportation Department will be providing post project results, Transportation Director Frank confirmed that the Transportation Department would be providing results from recent projects at a later date.

Motion by Commissioner Newlands, seconded by Commissioner Proulx to appoint Commissioner Kohl to represent at the Jan. 9, 2024, City Council Meeting. Motion carried, 6/0/1 (Kohl – Abstain). Motion by Commissioner Newlands, seconded by Commissioner Kohl to appoint Vice-Chair Fowler to be the backup representative at the Jan 9, 2024, City Council Meeting. Motion carried, 7/0.

#### **CITY TRAFFIC ENGINEER COMMENTS:**

Transportation Planning & Mobility Manager Schmidt commented that the SANDAG Vision Zero and Regional Active Transportation Plan is out for public review and in the initial phases of collecting preliminary comments.

Transportation Planning & Mobility Manager Schmidt also spoke about the commission commentary portion of the agenda and explained that, per the Brown Act, comments made during that time should be brief and staff will respond briefly to avoid extended conversation about non-agenda items. He further explained that if anyone would like to discuss the item more, to make a request to have it placed on a future agenda.

#### COMMISSION COMMENTARY AND REQUESTS FOR CONSIDERATION OF MATTERS:

In response to Commissioner Penseyres' inquiry regarding the possibility of adding a permissive left turn on Avenida Encinas and whether it will be brought to the Traffic Safety & Mobility Commission for approval before it is brought to City Council, Transportation Director Frank explained that it is park of a development project and he would have to confirm with the Traffic Division if they have the opportunity to bring it to the Commission, or if it will even go to City Council, for any type of approval.

<u>ADJOURNMENT</u>: Chair Coelho adjourned the Traffic Safety & Mobility Commission Regular Meeting on Dec. 4, 2023, at 5:12 p.m.

Eliane Paiva Secretary



Meeting Date:	Feb. 5, 2024
То:	Traffic Safety & Mobility Commission
Staff Contact:	Eric Zielke, Senior Engineer Eric.Zielke@carlsbadca.gov, 442-339-2230
	Hossein Ajideh, Engineering Manager Hossein.Ajideh@carlsbadca.gov, 442-339-2756
Subject:	2023 Slurry Seal Project, Capital Improvement Project No. 6001- 23SS

## **Recommended Action**

Support staff's recommendation to the City Council to approve the plans for the 2023 Slurry Seal Project, Capital Improvement Project No. 6001-23SS, as a part of the Pavement Management Program.

#### **Background**

The City of Carlsbad has an ongoing Pavement Management Program, Capital Improvement Program No. 6001, that resurfaces and restripes Carlsbad roads to keep streets in top condition, free of distress and potholes, which lengthens the road's useful life and saves money in the long run. While this work is being done, the city also restripes the roadways to provide additional traffic safety benefits and address unsafe speeds, which is the number one cause of injury collisions in Carlsbad.

#### Addressing unsafe speeds

Speeding has become a bigger problem nationwide in recent years. In Carlsbad, speeding is the number one contributing factor in injury collisions. Slowing traffic down even five mph can make a difference in the severity and survivability of collisions. Research shows that speed limits are not effective in reducing speeding, and even unenforceable if set too low for the conditions, so slowing down drivers requires actual changes to the road.

- Changing lanes to more appropriate widths encourages drivers to pay more attention and slow down
- The extra space can then be used to create bike lanes and safety buffers between sidewalks, bike lanes and car lanes, where appropriate and sufficient space exists
- There are national industry standards for lane widths, and all our streets meet those standards even after lane restriping
- The lane width is based on several factors, including traffic volume, speed, type of street and location
- Designing appropriate vehicle lane widths also results in lower long-term maintenance costs for the city's pavement infrastructure and creates a steadier and improved flow of traffic with less delay at traffic signals and improved opportunities for cars turning right

• These changes support the goals of the Sustainable Mobility Plan and the Safer Streets Together plan as shown in Exhibit 3.

Streets in the 2023 Slurry Seal Project are selected for resurfacing based on their existing pavement conditions, computerized pavement condition modeling and analysis, as well as visual evaluations by staff.

As shown in Exhibit 1 and Exhibit 2, the following arterial and collector streets, encompassing approximately 10.7 centerline miles, will be resurfaced and restriped with either new and/or enhanced bicycle lanes as described above:

- El Camino Real between Levante Street and Olivenhain Road; between Marron Road and Chestnut Avenue
- Paseo Del Norte between Cannon Road and Palomar Airport Road, and between Camino de las Ondas and Poinsettia Lane
- The Crossings Drive between Palomar Airport Road and the end of the street
- El Fuerte Street between Faraday Avenue and approximately 1,000 feet south of Rancho Pancho
- Bressi Ranch Way between El Fuerte Street and Paradise Road
- Batiquitos Drive between Kestrel Drive and Aviara Parkway
- Calle Barcelona between the Encinitas city limit (on the west side) and Calle Acervo
- Rancho Sante Fe Road between Camino Alvaro and Calle Barcelona
- Camino De Los Coches between Rancho Santa Fe Road and La Costa Avenue
- Harding Street between Grand Avenue and Oak Avenue
- Tamarack Avenue between Knollwood Drive and Saddle Drive
- Faraday Avenue between El Camino Real and Orion Way

Additionally, the project will reconfigure a road segment on El Fuerte Street, as explained in the Reconfigure Arterials section of the Safer Streets Together plan, as shown in Exhibit 3 – Options Worksheet and of which was previously discussed and presented to the Traffic & Mobility Commission on Jan. 3, 2023, approved minutes shown in Exhibit 4. Reconfiguring the street includes reducing the number of vehicle lanes that can improve safety, calm traffic, and provide better mobility and access for all road users. Reconfiguring roadways also reduces the long-term pavement maintenance costs and improves the line of sight for users approaching arterials from side streets. The specific limits of this road segment reconfiguration where 2 lanes in each direction will reduce to 1 lane in each direction are:

• El Fuerte Street - between Faraday Avenue and Loker Avenue and between Bressi Ranch Way to approximately 1,000 ft. south of Rancho Pancho (northbound only from Bressi Ranch Way and Greenhaven Drive)

Staff conducted roadway segment Level of Service, or LOS, analysis on the existing and the proposed reconfigured segment and concluded that the proposed roadway reconfiguration will not have an adverse impact on the LOS for these segments. In addition, and more specifically, city staff conducted traffic counts and intersection LOS analyses at the intersections where intersection lane geometry is proposed to be modified on El Fuerte Street.

The results of this intersection analysis were concluded that minimal increases in delay with the lane reduction (i.e., the LOS designation doesn't change, nor does it indicate any condition below a C).

Additionally, this project was presented as a draft to the Traffic & Mobility Commission on June 5, 2023, approved minutes shown in Exhibit 5, but the project was later placed on hold due to a fiber optic company known as Ubiquity planning to do a large amount of trenchwork throughout the city over the next three years. Staff have coordinated with Ubiquity on the streets selection for resurfacing and have readjusted many of the locations of resurfacing because city staff do not want to resurface on the same street that is scheduled for trenchwork only one or two years later.

For this reason, city staff are working closely with the fiber optic company and came up with a new plan to resurface the streets that either no trenchwork is proposed or trenchwork has been completed. At this moment, the fiber optic company is currently working in the southernmost part of the city and working their way northward over the next three years. For this reason, the majority of streets being resurfaced as a part of this 2023 Slurry Seal project are located in the southern portion of the city as shown in Exhibit 1.

## Next Steps

Following the Traffic Safety & Mobility Commission's review, staff will finalize the project construction plans and specifications. Staff will then bring a staff report to the City Council in March 2024 and recommend that the City Council approve the project plans and specifications and authorize the City Clerk to advertise for construction bids for the project.

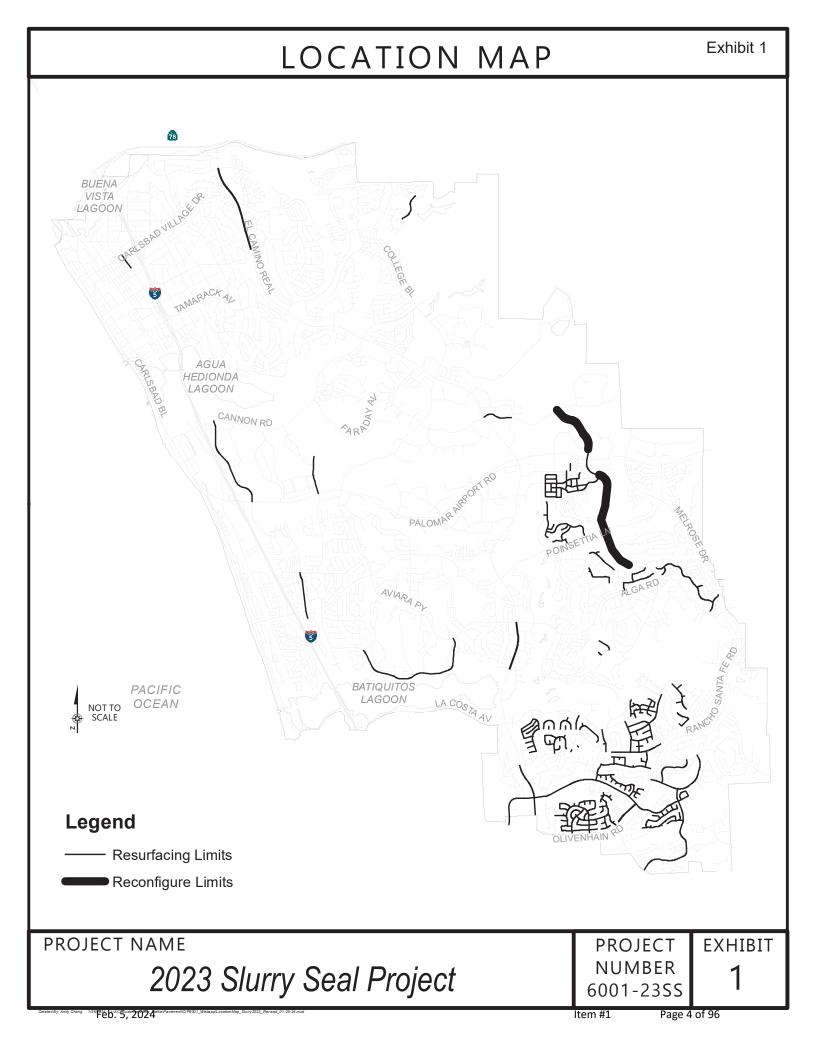
After the bidding process is complete, staff will return to the City Council with a recommendation to award a construction contract to the lowest responsive and responsible bidder. The construction is targeted to begin in mid-2024 and complete by late 2024.

## Public Notification

This item was noticed in keeping with the Ralph M. Brown Act and it was available for public viewing and review at least 72 hours before the scheduled meeting date.

## **Exhibits**

- 1. Location Map for the 2023 Slurry Seal Project
- 2. Striping Plans
- 3. Safer Streets Together draft plan including Options Worksheet
- 4. Approved minutes of the Jan. 3, 2023, Traffic & Mobility Commission Meeting
- 5. Approved minutes of the June 5, 2023, Traffic & Mobility Commission Meeting



# WORK TO BE DONE

THE SIGNING AND STRIPING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS, CURRENT AT THE TIME OF CONSTRUCTION, AS DIRECTED BY THE CITY ENGINEER.

- 1. CARLSBAD MUNICIPAL CODE
- 2. CITY OF CARLSBAD ENGINEERING STANDARDS
- 3. THIS SET OF PLANS
- 4. THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK)
- 5. THE SAN DIEGO REGIONAL STANDARD DRAWINGS AND AS MAY BE MODIFIED BY THE CITY OF CARLSBAD STANDARDS.
- 6. THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA
- MUTCD)
- 7. CALTRANS STANDARD PLANS 8. CALTRANS STANDARD SPECIFICATIONS.

# SHEET INDEX

IEET NO	DESCRIPTION
	TITLE SHEET
-6	SLURRY SEAL BOUNDARY
-43	SIGNING & STRIPING PLANS

# **PROJECT LOCATION**

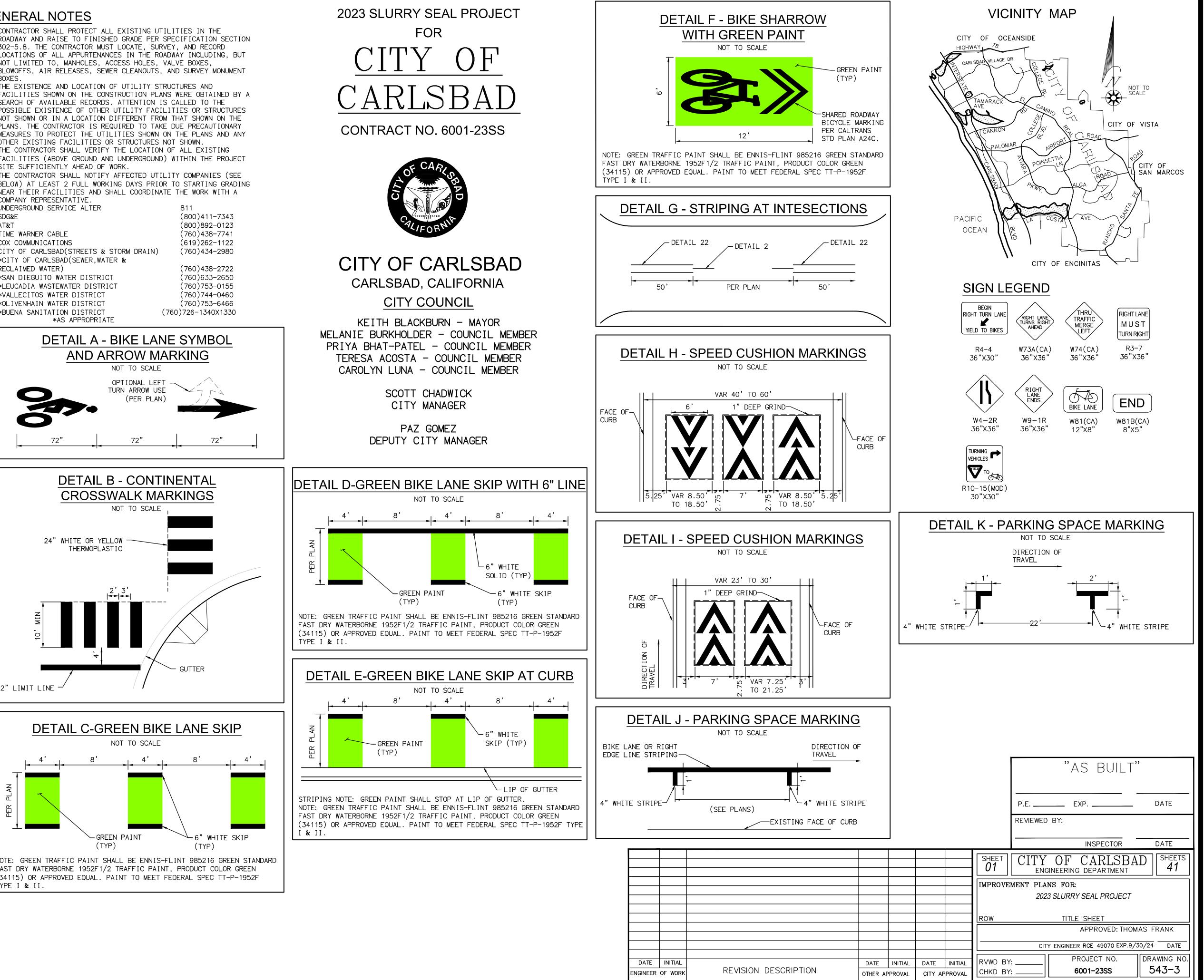
THIS PROJECT IS LOCATED ON VARIOUS RESIDENTIAL STREETS AND CORRIDORS THROUGHOUT THE CITY OF CARLSBAD

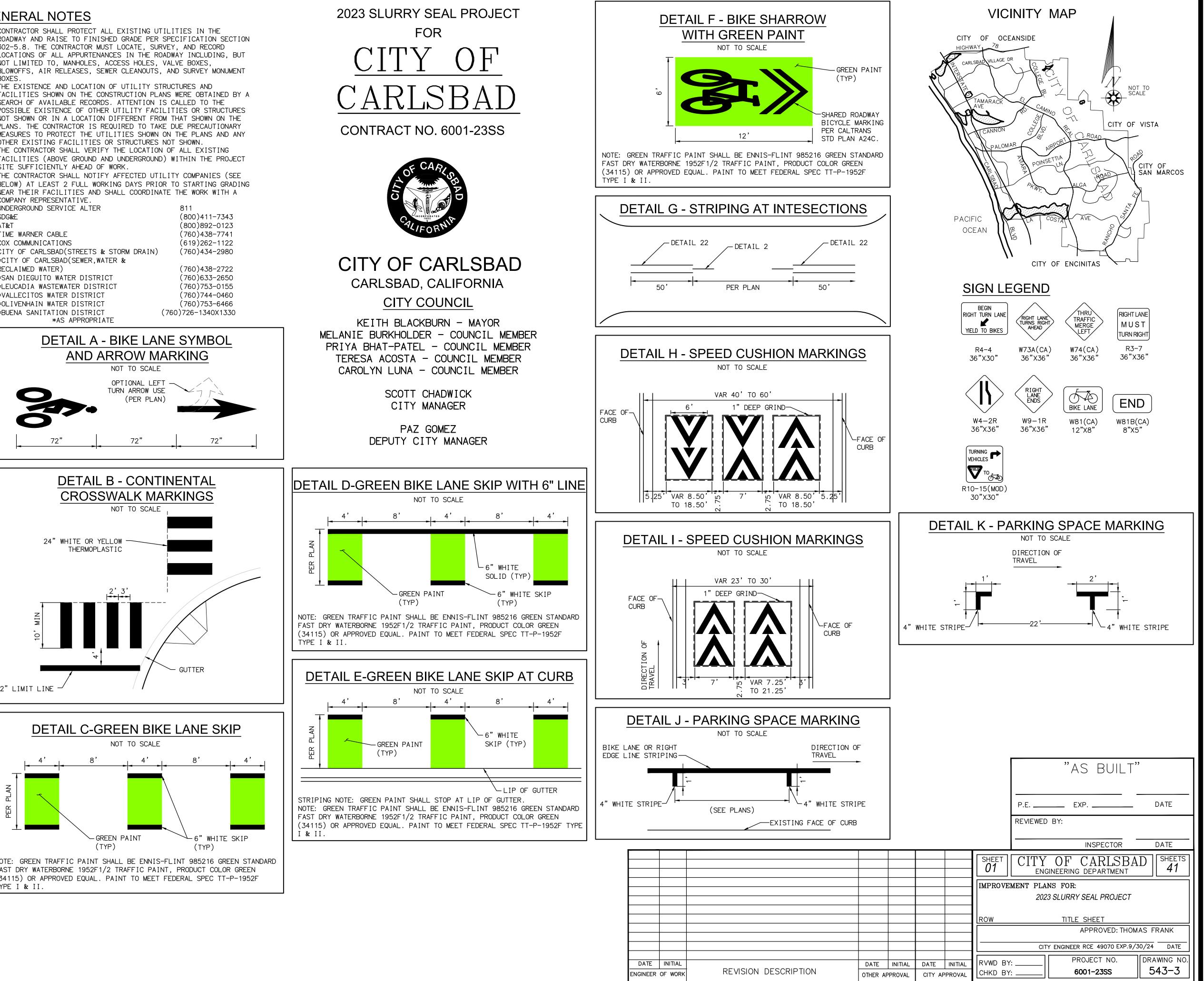
# SIGNING AND STRIPING NOTES

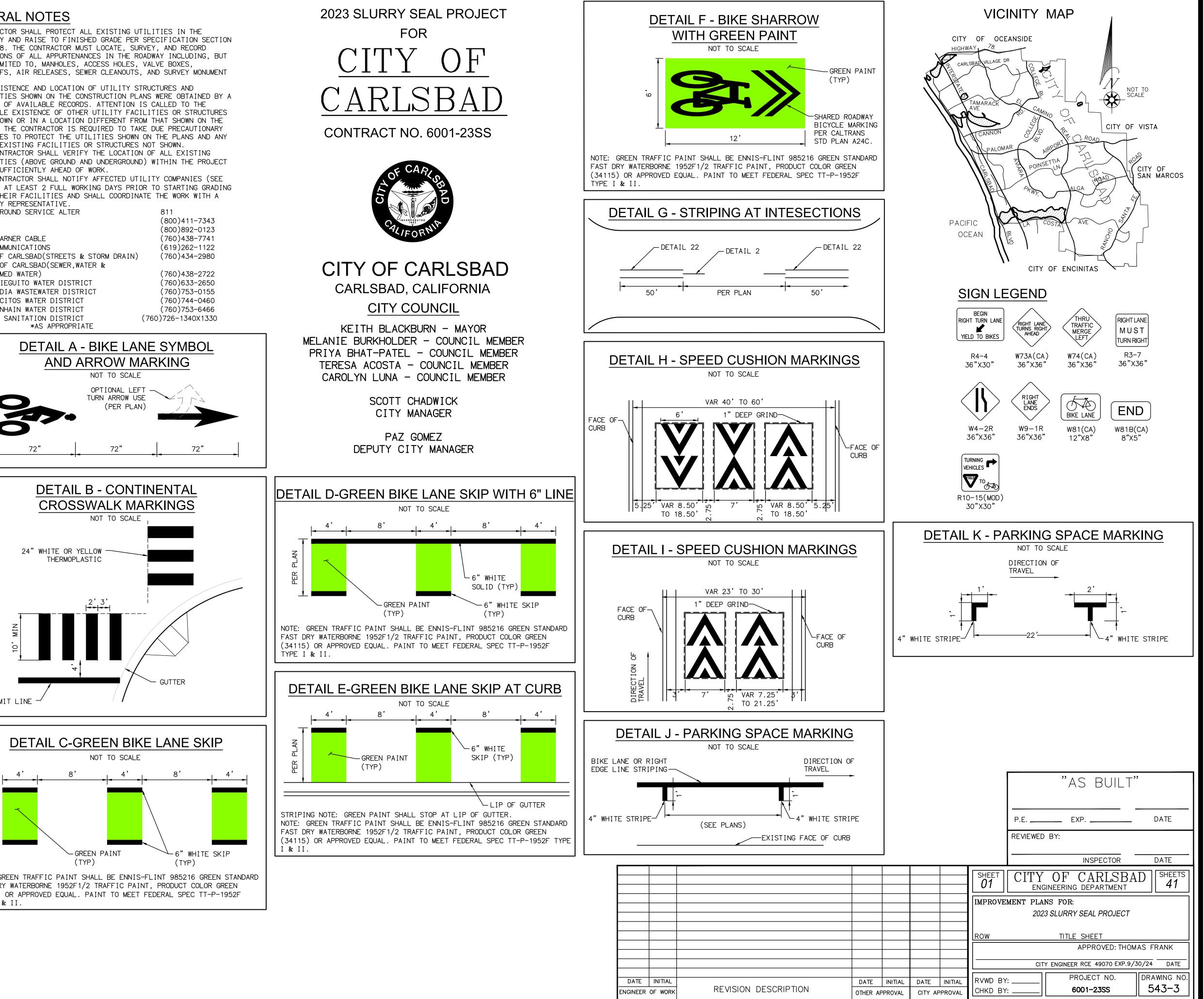
- 1. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ALL SIGNING AND STRIPING.
- 2. ALL SIGNING, STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST VERSION), THE CALTRANS STANDARD PLANS AND SPECIFICATIONS (LATEST VERSION), THESE PLANS AND THE SPECIAL PROVISIONS
- 3. ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE TRANSPORTATION DIRECTOR OR THEIR REPRESENTATIVE. PRIOR TO INSTALLATION.
- 4. ANY DEVIATION FROM THESE SIGNING AND STRIPING PLANS SHALL BE APPROVED BY THE TRANSPORTATION DIRECTOR OR THEIR REPRESENTATIVE PRIOR TO ANY CHANGE IN THE FIELD.
- 5. ALL STRIPING SHALL BE REFLECTIVE PER CALTRANS SPECIFICATIONS STRIPING SHALL BE REPAINTED TWO WEEKS AFTER INITIAL PAINTING
- ALL PERMANENT SIGNAGE SHALL BE REFLECTIVE PER ASTM DESIGNATION D4956 AND SHALL USE TYPE IV PRISMATIC REFLECTIVE SHEETING (HIGH INTENSITY PRISMATIC OR EQUAL) UNLESS OTHERWISE SPECIFIED. R1-1 "STOP", R1-2 "YIELD", R2-1 "SPEED LIMIT" AND STREET NAME SIGNS SHALL USE TYPE IX PRISMATIC CUBE-CORNER REFLECTIVE SHEETING (DIAMOND GRADE VIP OR EQUAL)
- 7. PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, ALL STREET STRIPING AND MARKINGS WITHIN A 500' PERIMETER OF THE CONSTRUCTION PROJECT WILL BE RESTORED TO A "LIKE NEW" CONDITION, IN A MANNER MEETING THE APPROVAL OF THE CITY INSPECTOR.
- EXACT LOCATION OF STRIPING AND STOP LIMIT LINES SHALL BE APPROVED BY THE TRANSPORTATION DIRECTOR OR THEIR REPRESENTATIVE PRIOR TO INSTALLATION.
- CONTRACTOR SHALL REMOVE ALL CONFLICTING PAINTED LINES, MARKINGS AND PAVEMENT LEGENDS BY GRINDING. DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- 10. ALL PAVEMENT LEGENDS SHALL BE THE LATEST VERSION OF THE CALTRANS STENCILS.
- 11. LIMIT LINES AND CROSSWALKS SHALL BE FIELD LOCATED. CROSSWALKS SHALL BE HIGH VISIBILITY "CONTINENTAL" STYLE AND SHALL HAVE 10' INSIDE DIMENSION UNLESS OTHERWISE SPECIFIED. CONTINENTAL CROSSWALK MARKINGS SHALL BE PARALLEL TO THE DIRECTION OF VEHICULAR TRAVEL.
- 12. ALL CROSSWALKS, LIMIT LINES, STOP BARS, PAVEMENT ARROWS AND PAVEMENT LEGENDS SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED PREFORMED THERMOPLASTIC ARROWS AND LEGENDS SHALL NOT BE ACCEPTABLE.
- 13. ALL BIKE LANE LEGENDS SHALL BE HELMETED BICYCLIST SYMBOL AND ARROW PER CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FIGURE 9C-3 AND PAINTED, UNLESS OTHERWISE SPECIFIED
- 14. SIZE OF SIGNS SHALL BE BASED UPON THE RECOMMENDED SIGN SIZES FOUND IN THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES UNLESS OTHERWISE SPECIFIED.
- 15. SIGN POSTS SHALL BE SQUARE PERFORATED STEEL TUBING WITH BREAKAWAY BASE PER SAN DIEGO REGIONAL STANDARD DRAWING M-45.
- 16. WHEN A SIGN IS ATTACHED TO A POLE, IT SHALL BE MOUNTED USING A
- STANDARD CITY OF CARLSBAD APPROVED MOUNTING BRACKET WITH STRAPS. 17. EXISTING SIGNS REMOVED BY THE CONTRACTOR SHALL BE DELIVERED BY THE CONTRACTOR TO THE CITY OF CARLSBAD PUBLIC WORKS YARD AT 405 OAK AVENUE.
- 18. ALL SIGNS SHOWN ON THESE PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR EXCEPT THOSE SIGNS SPECIFICALLY SHOWN AS EXISTING TO BE RELOCATED OR TO REMAIN.
- 19. FIRE HYDRANT PAVEMENT MARKERS SHALL CONFORM TO THE CALIFORNIA MUTCD AND SAN DIEGO REGIONAL STANDARD DRAWING M-19.
- 20. ALL NEW AND RELOCATED SIGNS SHALL BE CLEARLY VISIBLE, NOT BLOCKED BY ANY OBSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO TRIM OR REMOVE ANY VEGETATION BLOCKING THE NEW AND RELOCATED SIGNS.

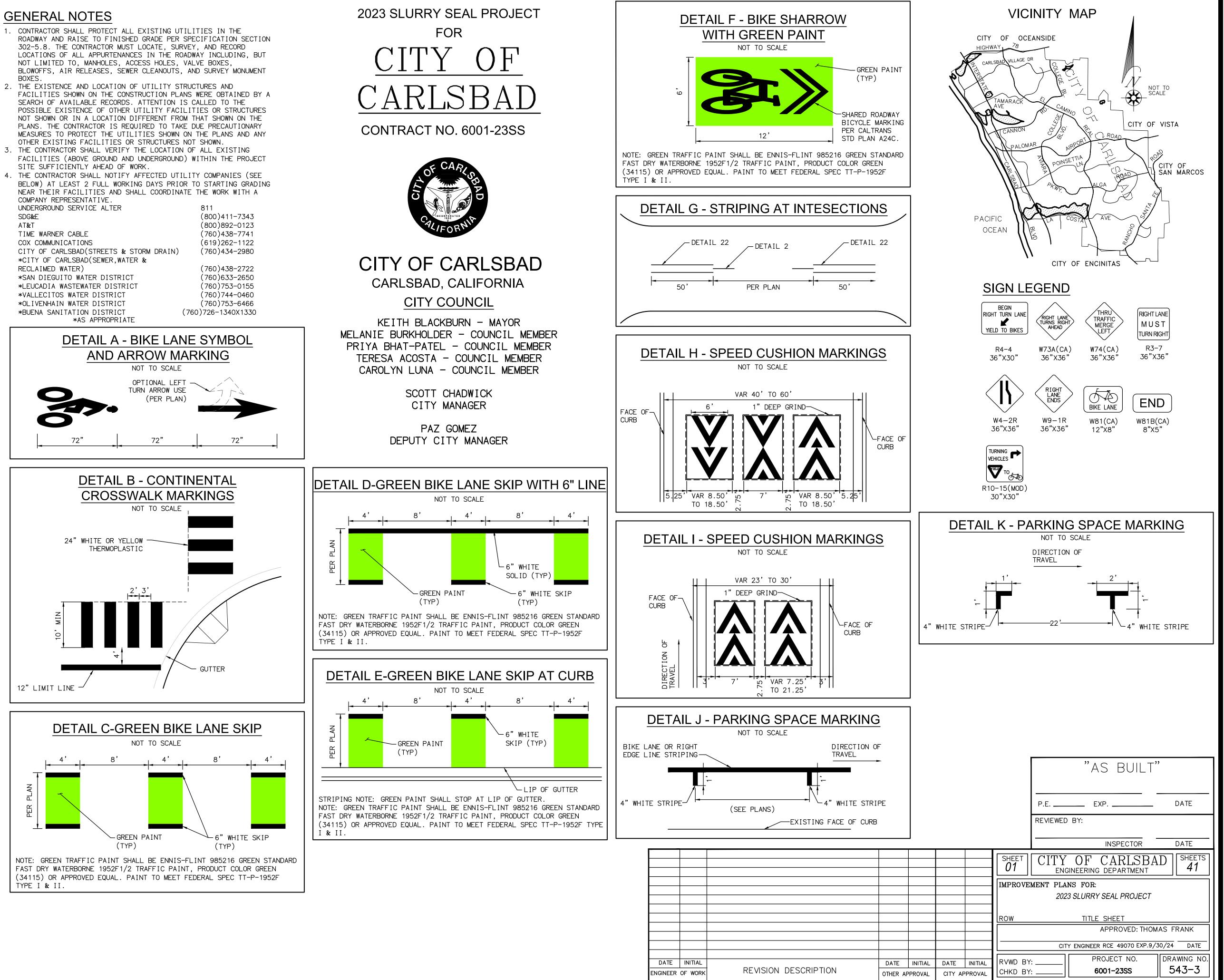
# **GENERAL NOTES**

- SITE SUFFICIENTLY AHEAD OF WORK
- COMPANY REPRESENTATIVE. UNDERGROUND SERVICE ALTER SDG&E AT&T TIME WARNER CABLE COX COMMUNICATIONS CITY OF CARLSBAD(STREETS & STORM DRAIN)
- RECLAIMED WATER) \*SAN DIEGUITO WATER DISTRICT \*LEUCADIA WASTEWATER DISTRICT **\*VALLECITOS WATER DISTRICT \*OLIVENHAIN WATER DISTRICT**
- \*BUENA SANITATION DISTRICT \*AS APPROPRIATE











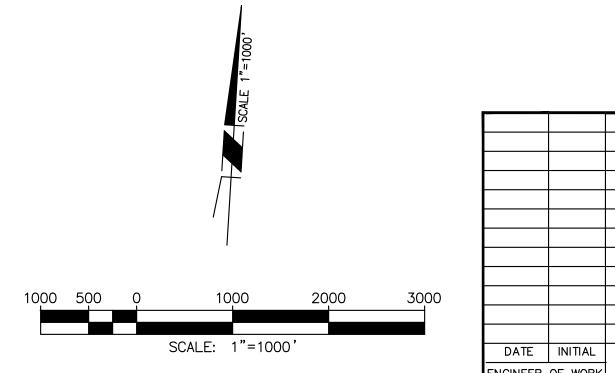
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Exhibit 2

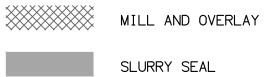




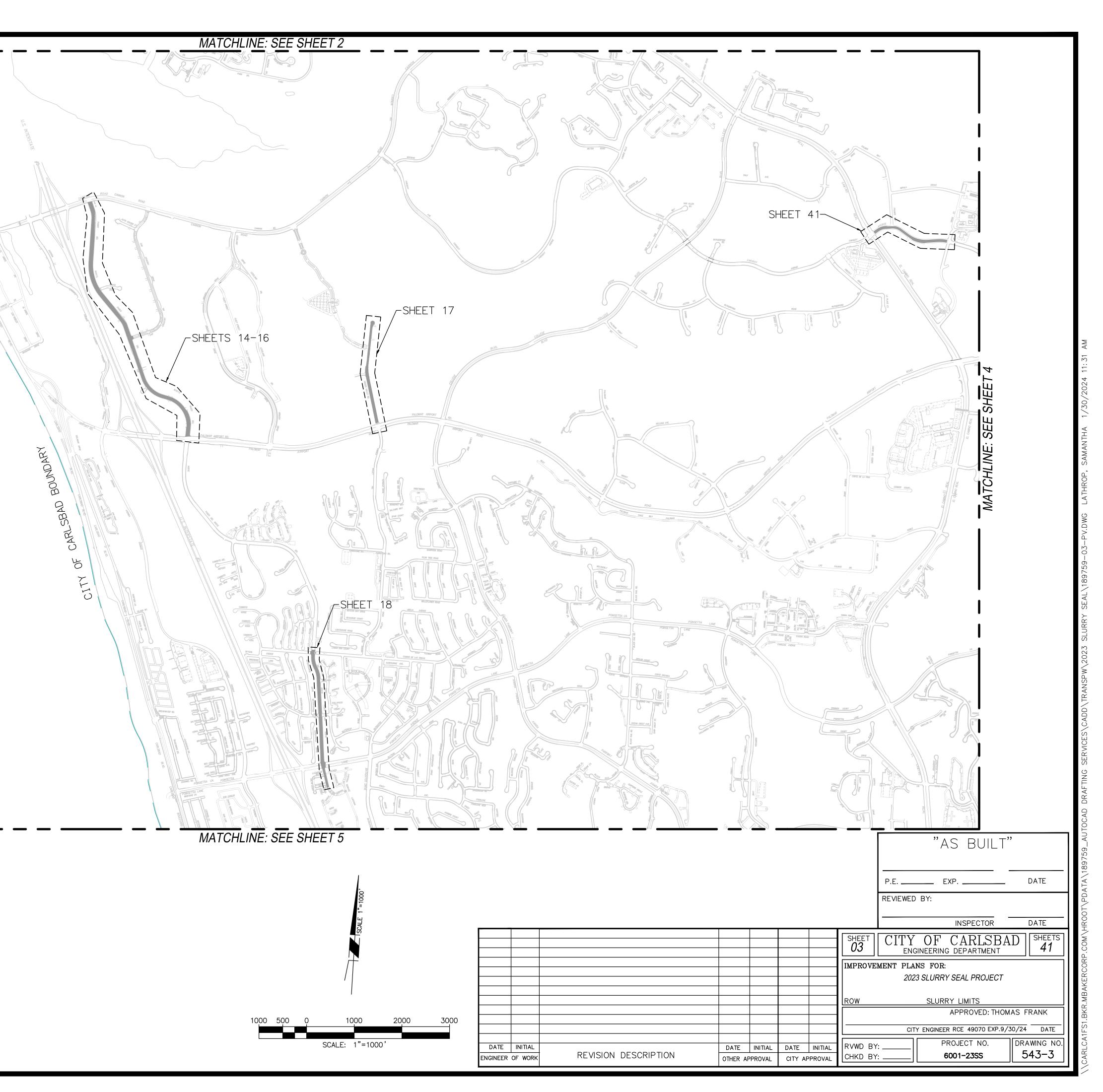


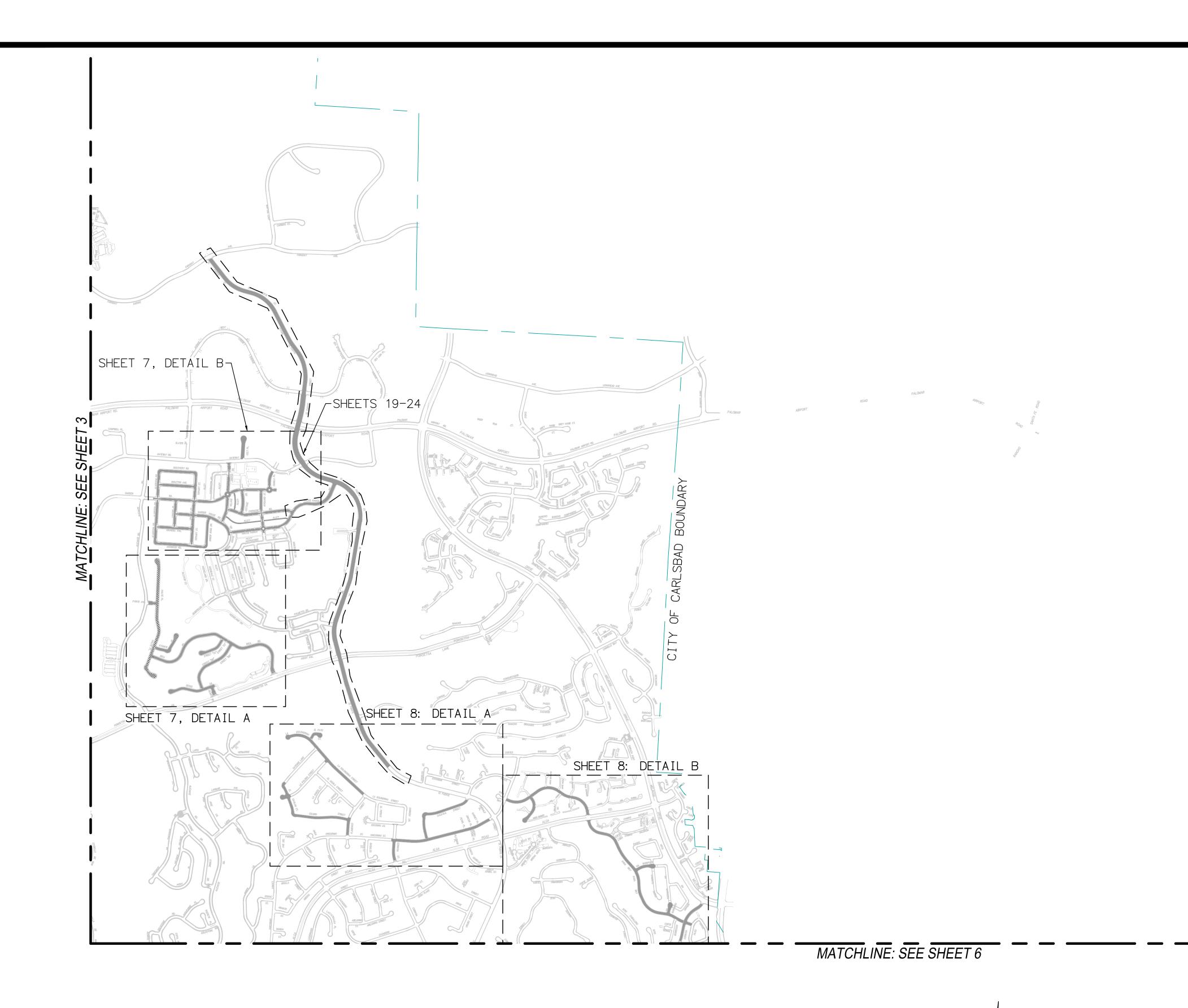






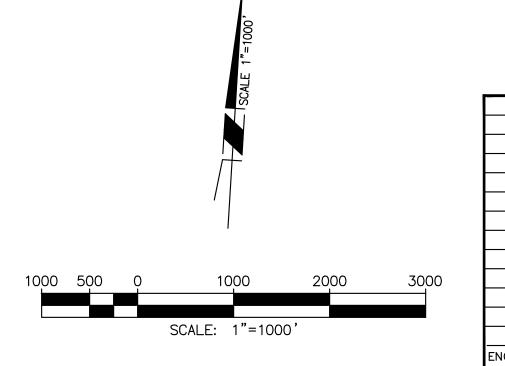












DATE	INITIAL	
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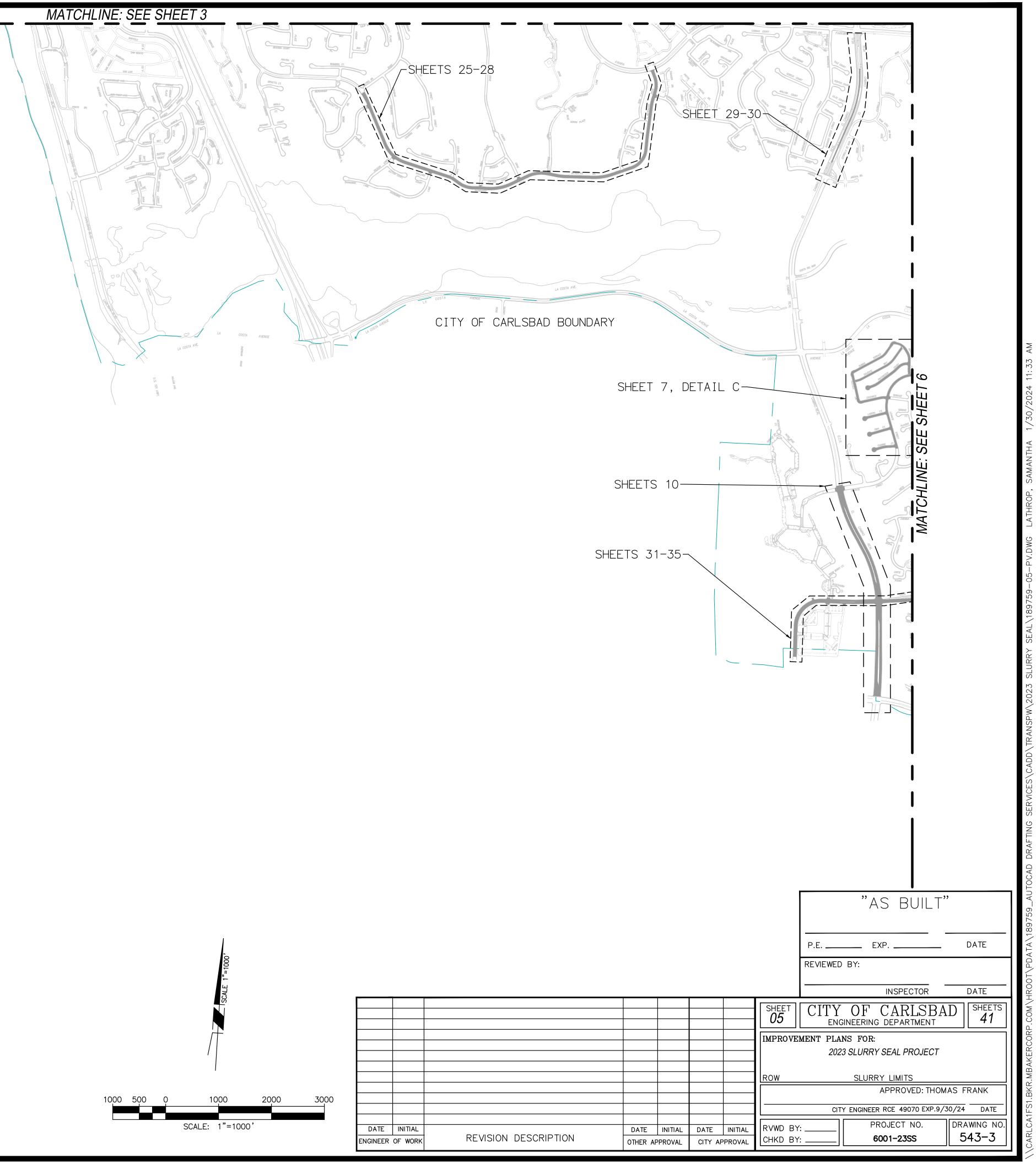
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					ROW	SLURRY LIMITS	
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ON DESCRIPTION	DATE OTHER AF	INITIAL PROVAL	DATE CITY AF	INITIAL PROVAL	RVWD BY:	PROJECT NO. 6001-23SS	drawing no. 543-3

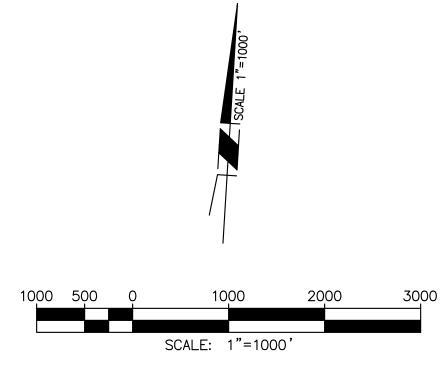
# LEGEND:



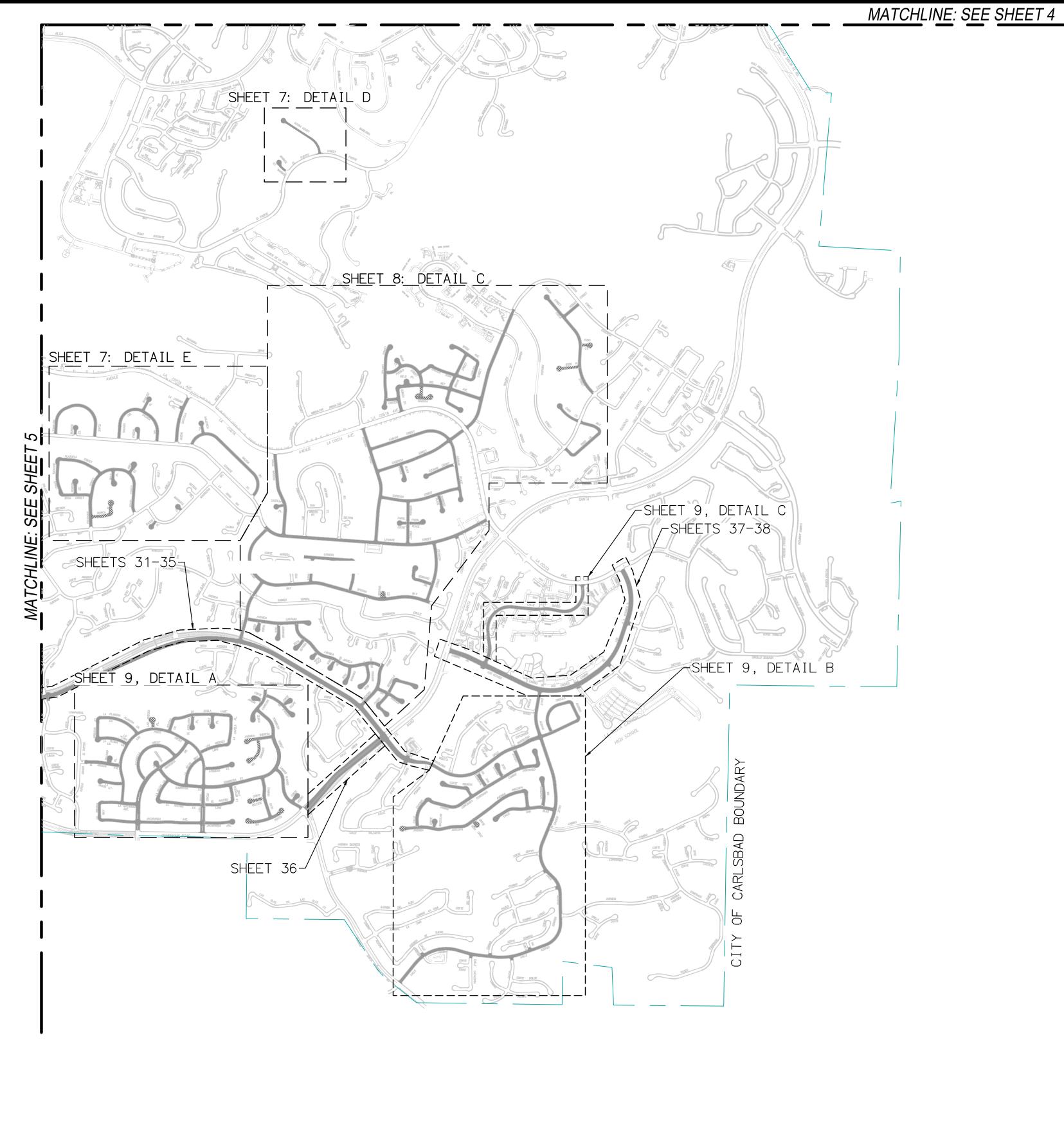


Feb. 5*,* 2024



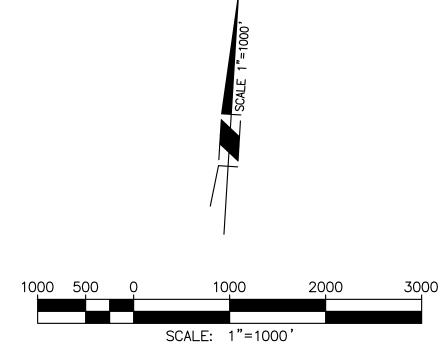


	INITIAL	DATE
REVISIO	OF WORK	ENGINEER



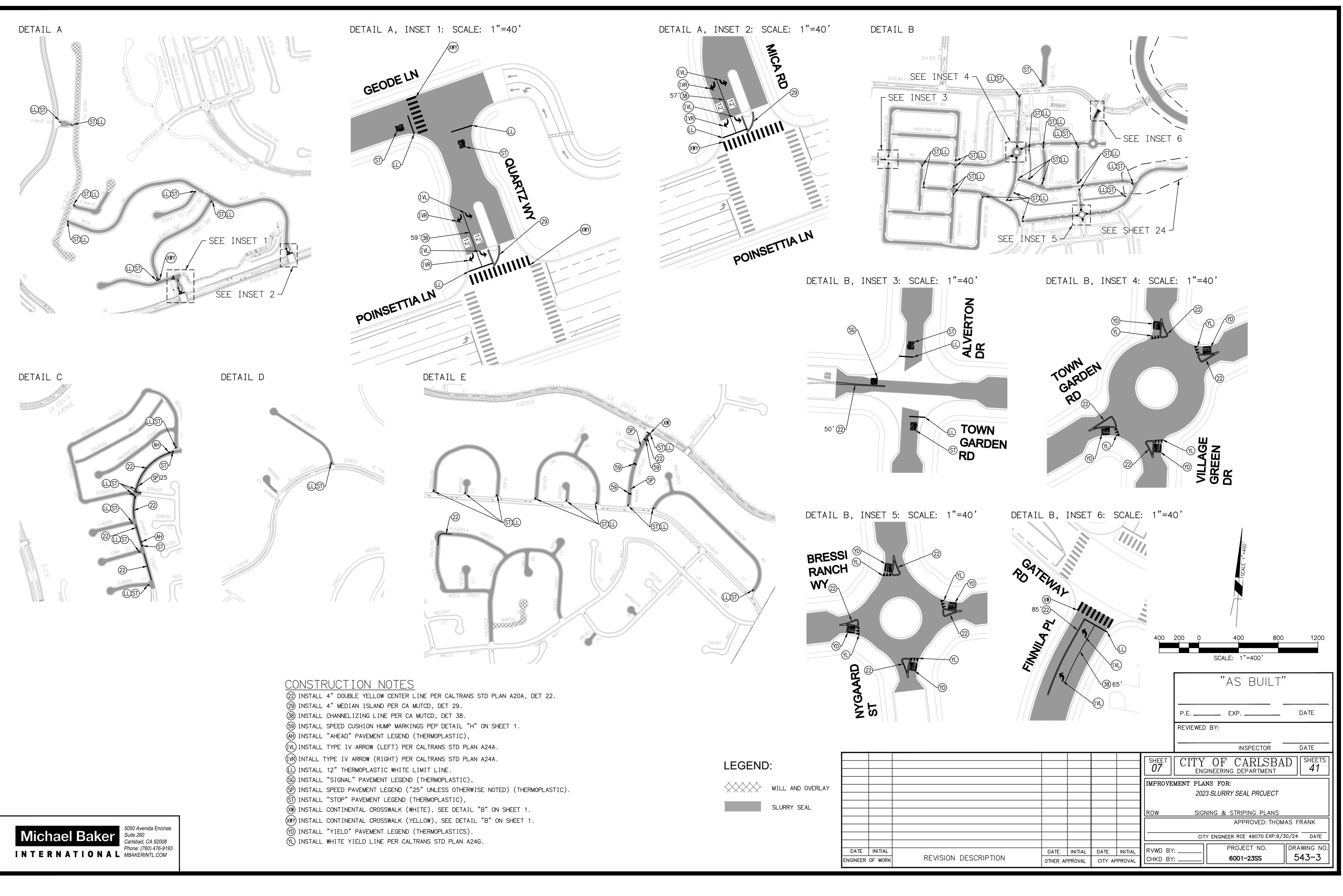


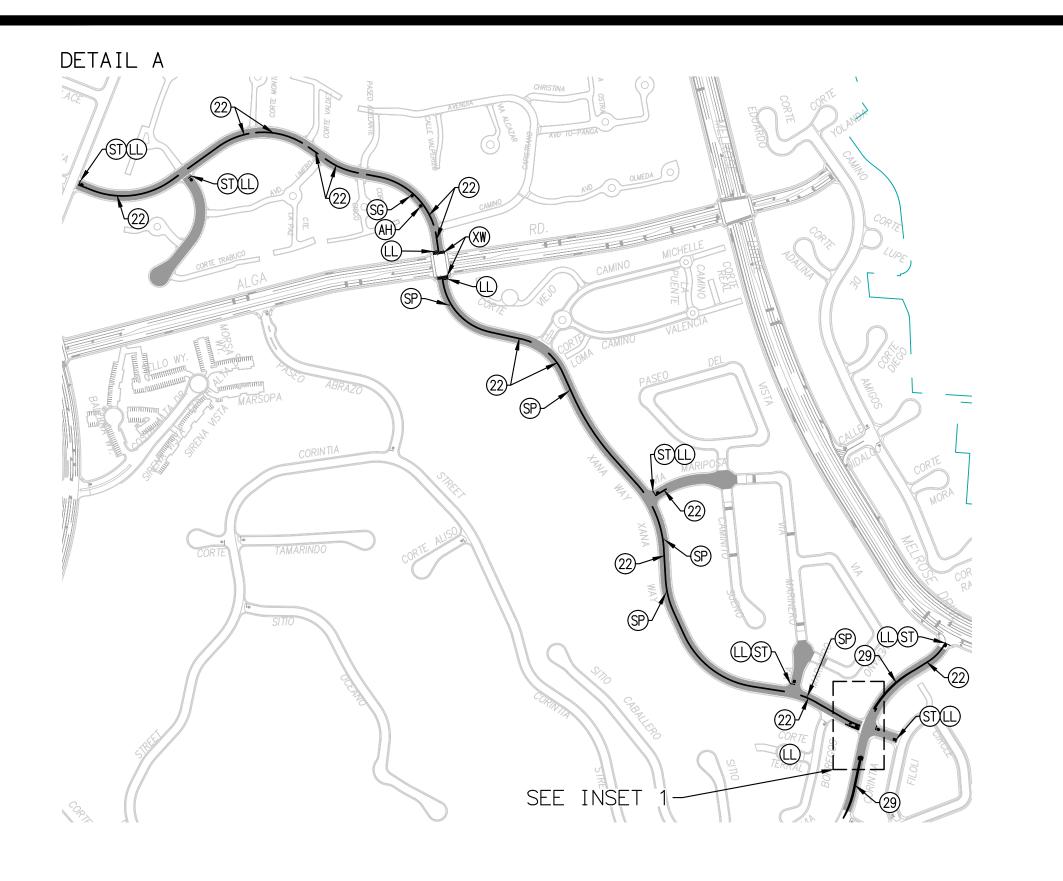


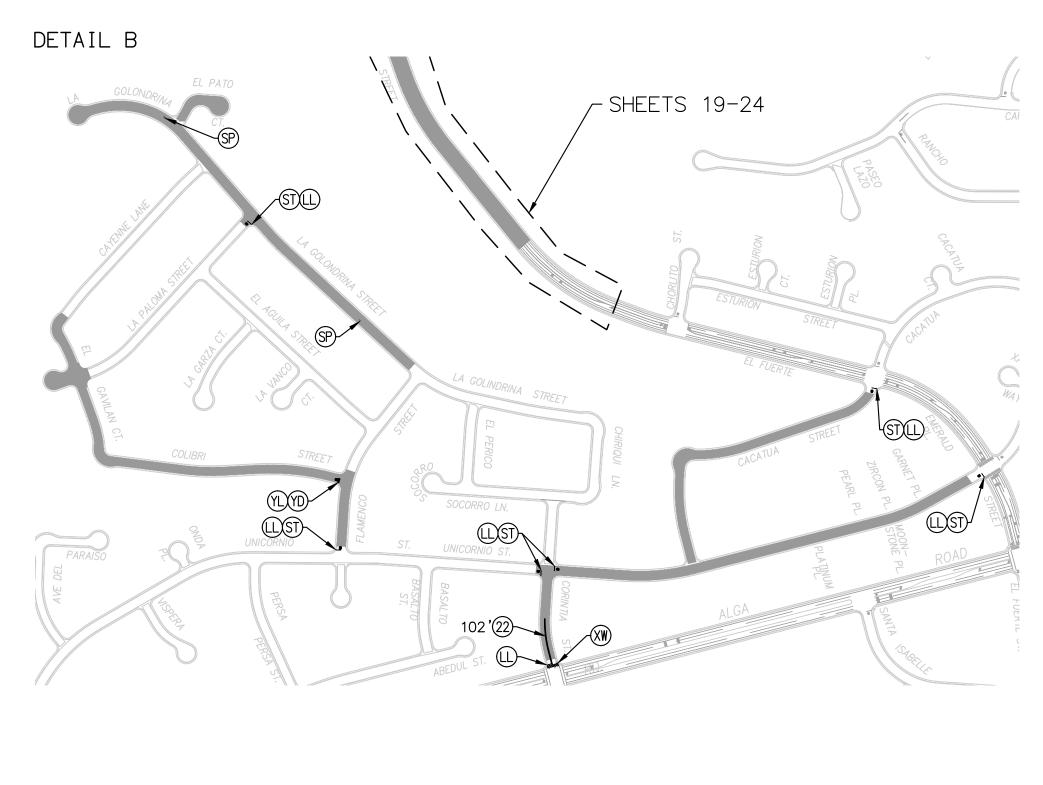


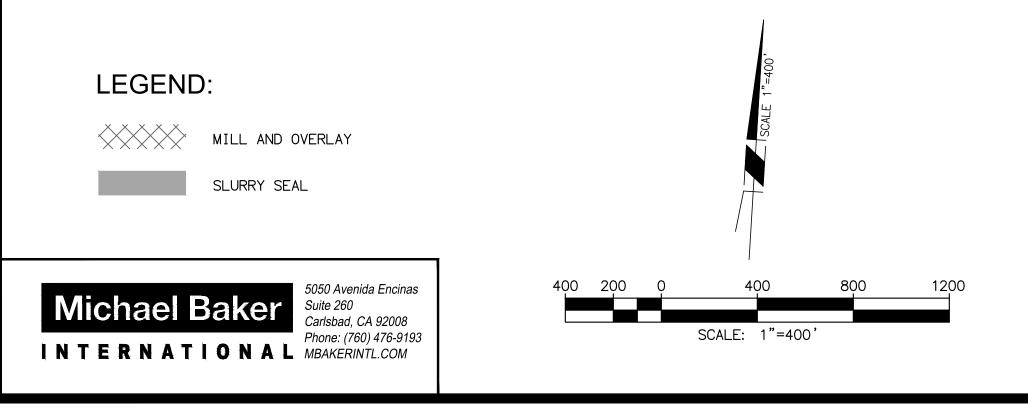
DATE	INITIAL	
ENGINEER	OF WORK	REVISIO

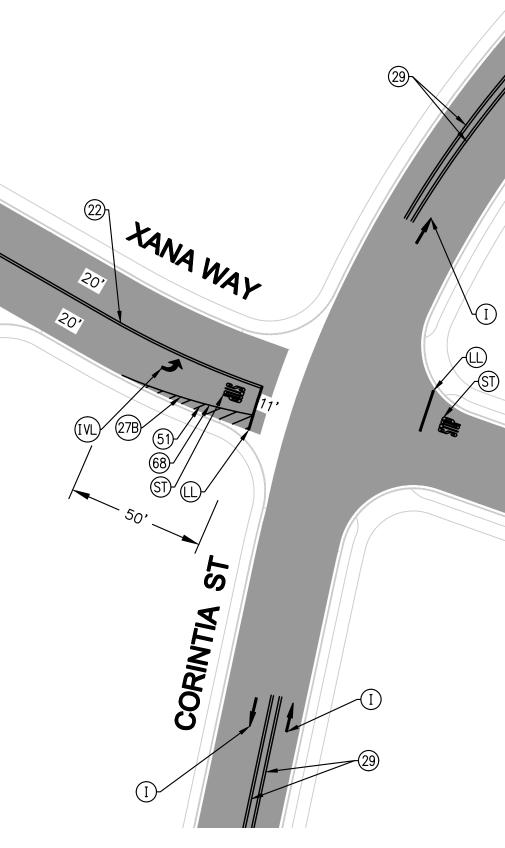
							"AS BUILT"	,
						P.E	EXP	DATE
						REVIEWED	BY:	
							INSPECTOR	DATE
					sheet <i>06</i>	CITY	OF CARLSBA	D SHEETS 41
					IMPROVE	MENT PLAT	NS FOR: 3 SLURRY SEAL PROJECT	
					ROW		SLURRY LIMITS	
							APPROVED: THOM	AS FRANK
						CIT	Y ENGINEER RCE 49070 EXP.9/3	0/24 DATE
ON DESCRIPTION	DATE OTHER A	INITIAL PPROVAL	DATE CITY AI	INITIAL PPROVAL	RVWD BY CHKD BY		PROJECT NO. 6001-23SS	DRAWING NO. <b>543–3</b>
							<u></u>	L

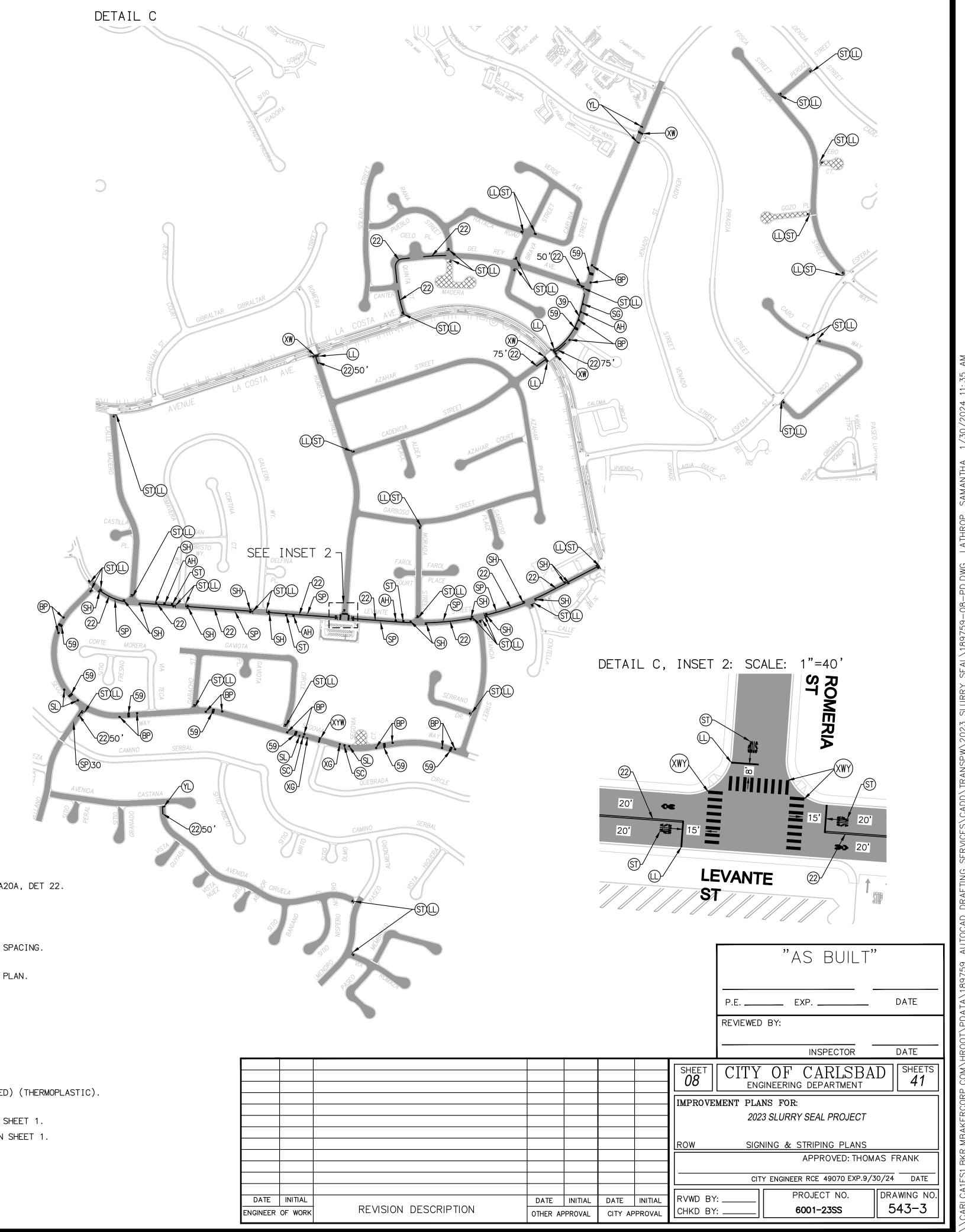






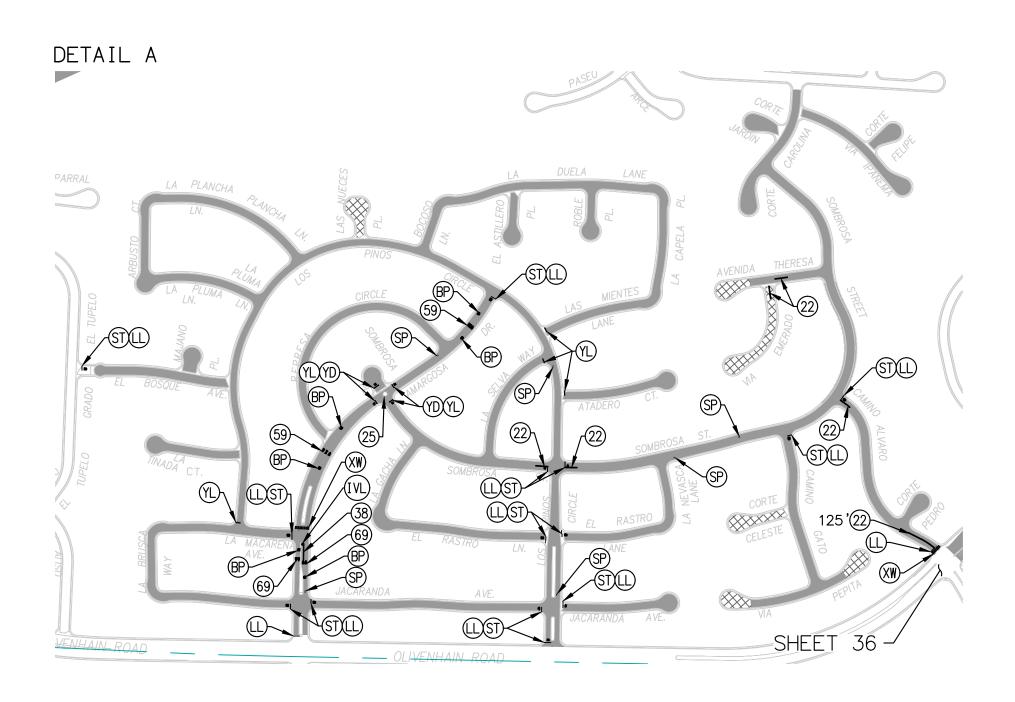


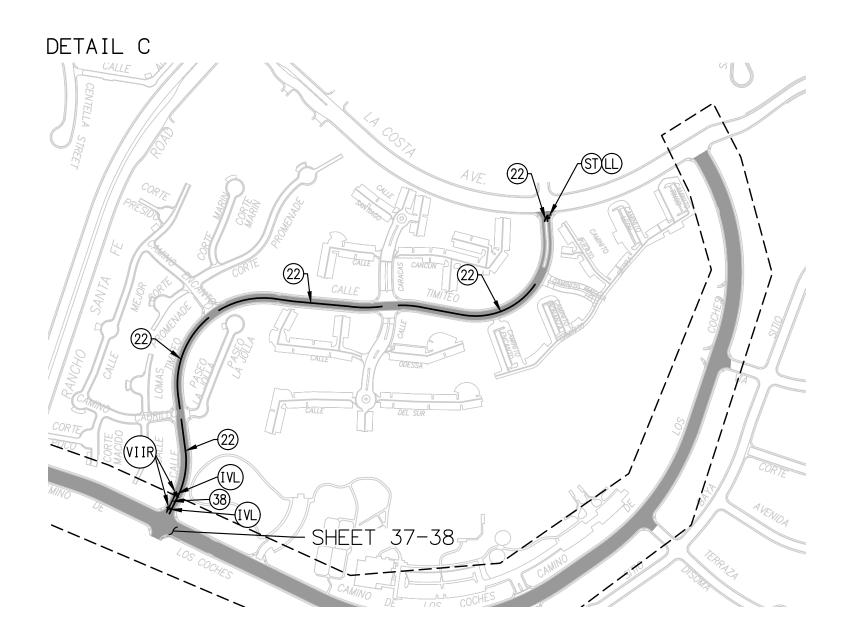




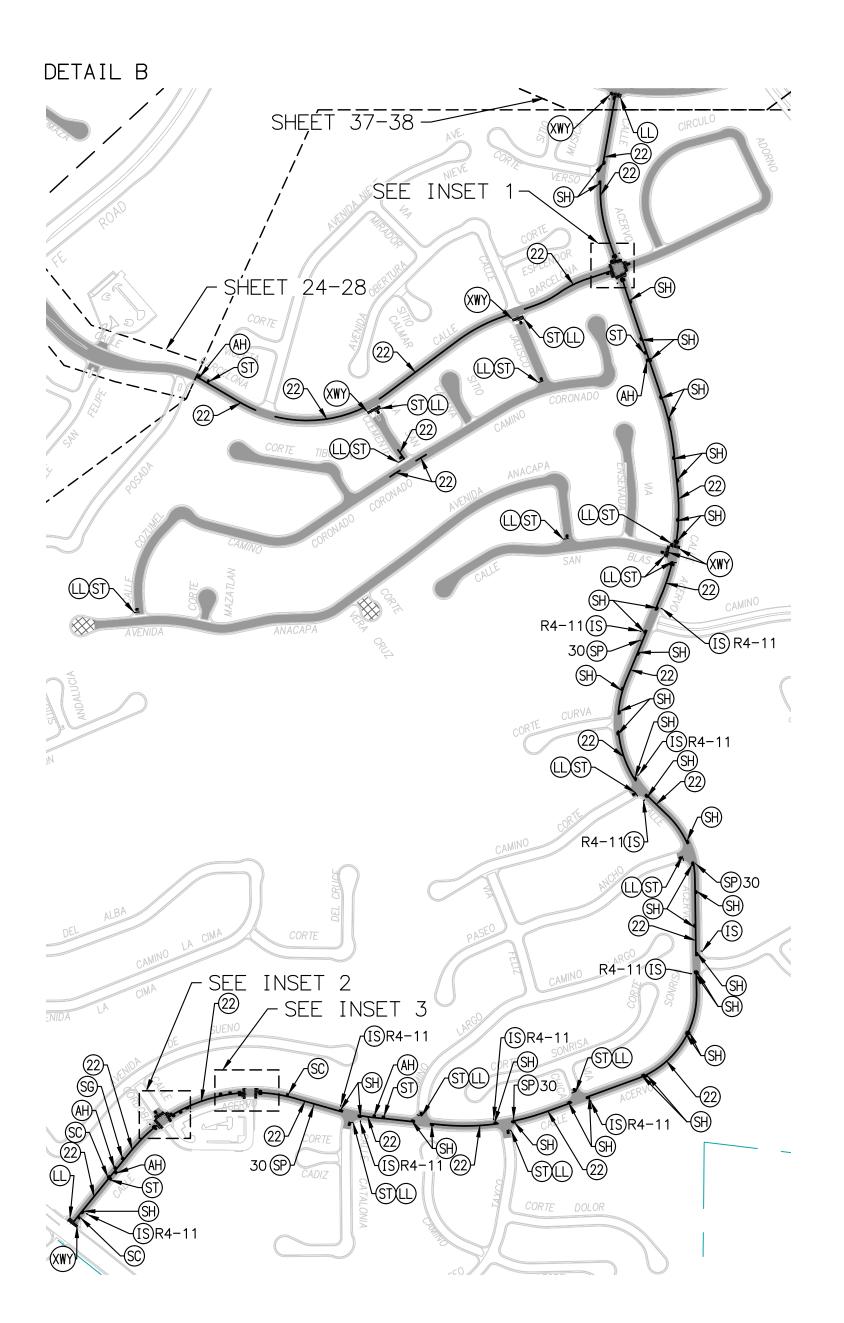
# <u>CONSTRUCTION NOTES</u> (2) INSTALL DOUBLE YELLOW CENTER LINE PER CALTRANS STD PLAN A20A, DET 22.

27B INSTALL 4" RIGHT EDGE LINE PER CA MUTCD, DET 27B.
29 INSTALL MEDIAN ISLAND PER CA MUTCD, DET 29.
(39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
(51) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 6' SPACING.
(59) INSTALL SPEED HUMP MARKINGS PEP DETAIL "H" ON SHEET 1.
(68) INSTALL 12" WHITE THERMOPLASTIC STRIPE PER DIMENSIONS ON PLAN.
(AH) INSTALL "AHEAD" PAVEMENT LEGEND (THERMOPLASTIC),
(BP) INSTALL "BUMP" PAVEMENT LEGEND (THERMOPLASTIC).
(I) INSTALL TYPE I ARROW PER CALTRANS STD PLAN A24A.
(IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
L INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.
SC INSTALL "SCHOOL" PAVEMENT LEGEND (THERMOPLASTIC).
(SG) INSTALL "SIGNAL" PAVEMENT LEGEND (THERMOPLASTIC),
(SP) INSTALL SPEED PAVEMENT LEGEND ("25" UNLESS OTHERWISE NOTED) (THERMOPLASTI
(ST) INSTALL "STOP" PAVEMENT LEGEND (THERMOPLASTIC),
(XW) INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.
(XWY) INSTALL CONTINENTAL CROSSWALK (YELLOW), SEE DETAIL "B" ON SHEET 1.
(YD) INSTALL "YIELD" PAVEMENT LEGEND (THERMOPLASTICS).
(I) INSTALL WHITE YIELD LINE PER CALTRANS STD PLAN A24G.
(G) INSTALL "XING" PAVEMENT LEGEND (THERMOPLASTIC),
(SL) INSTALL "SLOW" PAVEMENT LEGEND (THERMOPLASTIC),

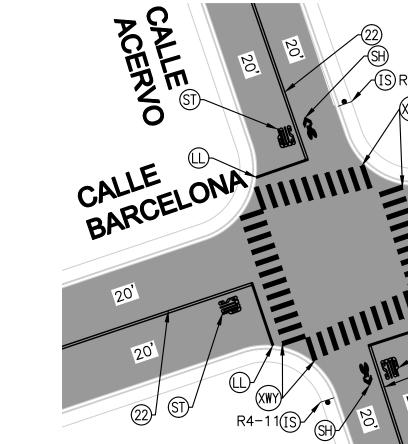




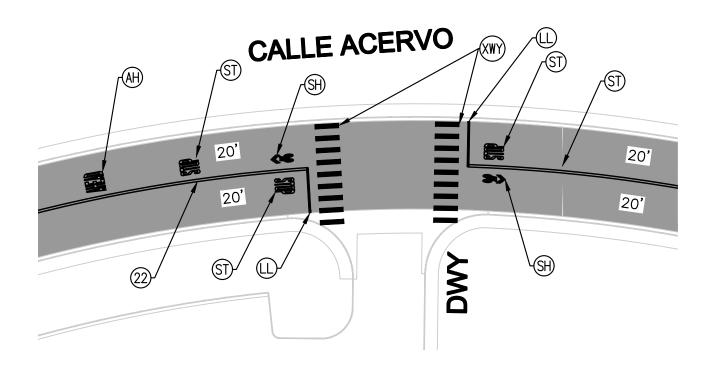




DETAIL B, INSET 1: SCALE: 1"=40'

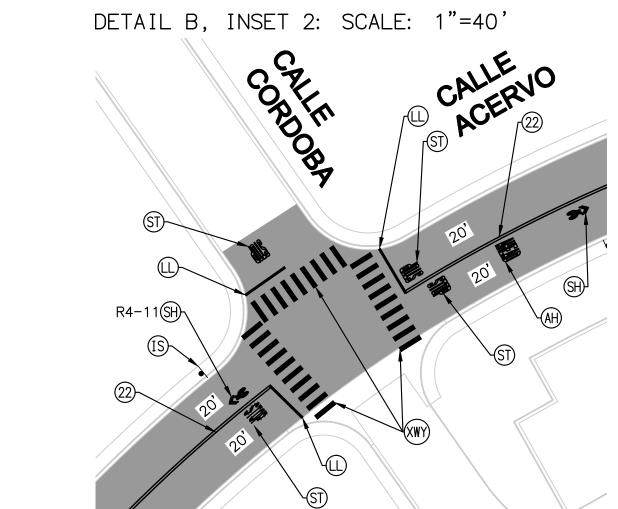


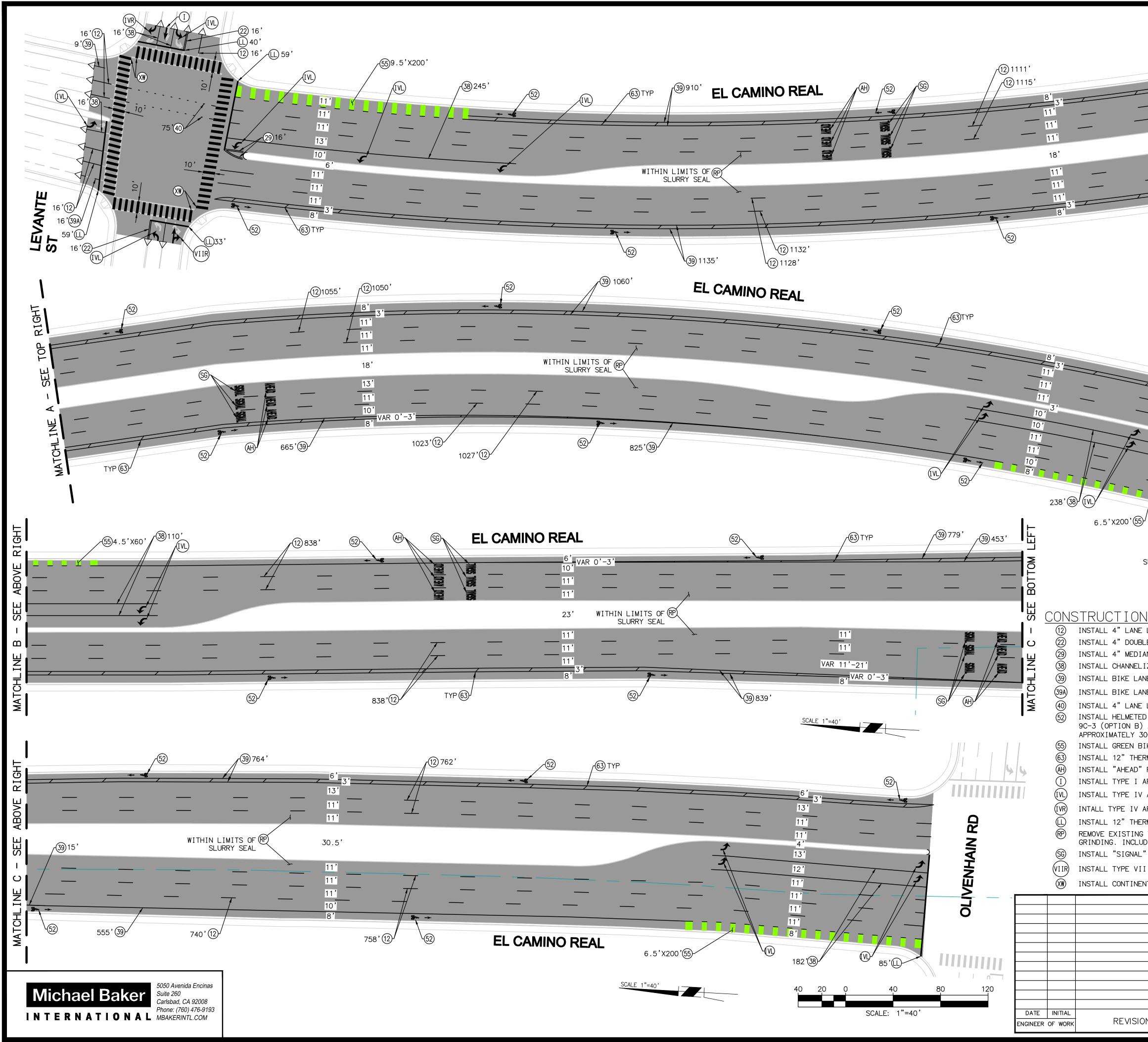
DETAIL B, INSET 3: SCALE: 1"=40'



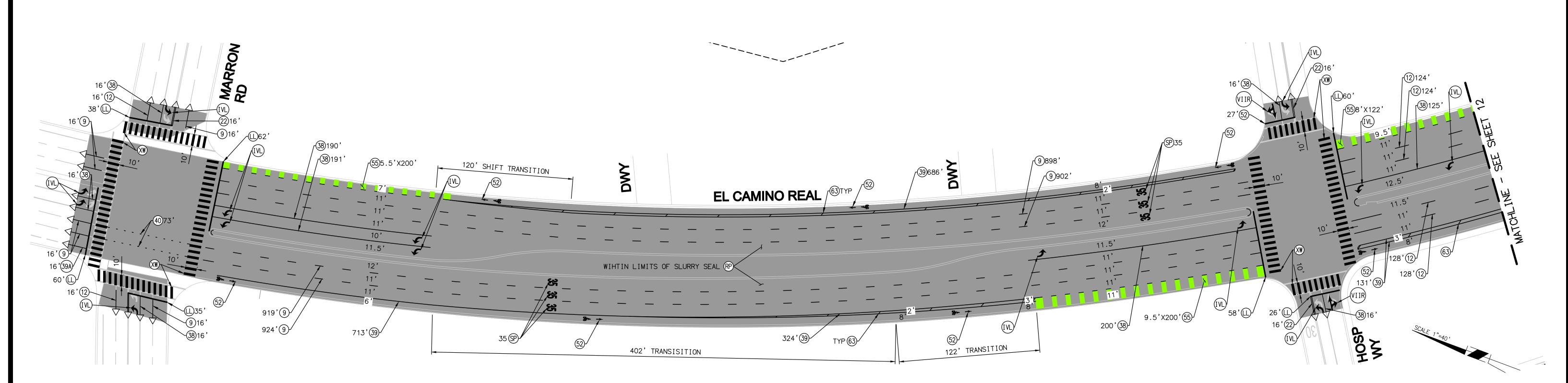
CONSTRUCTI	ON NOTES			
(22) INSTALL 4" DOUBL	E YELLOW CENTER LINE PER CA MUTCD, DET 22.			
25) INSTALL 4" LEFT	EDGE LINE PER CA MUTCD, DET 25.			
38 INSTALL CHANNEL	ZING LINE PER CA MUTCD, DET 38.	LE	GEND	):
59 INSTALL SPEED CU	SHION HUMP MARKINGS PER DETAIL "H" ON SHEET 1.			
69 INSTALL SPEED CU	SHION MARKINGS PEP DETAIL "I" ON SHEET 1.	$\langle \rangle \rangle$		MILL AND OVER
(AH) INSTALL "AHEAD"	PAVEMENT LEGEND (THERMOPLASTIC),	/ / / / /	/ / / / / / / / / / / / / / / / / / / /	
(BP) INSTALL "BUMP" F	AVEMENT LEGEND (THERMOPLASTIC).			SLURRY SEAL
(IS) INSTALL SIGN(S)	AND POST IF REQUIRED AS NOTED.			
(IVL) INSTALL TYPE IV	ARROW (LEFT) PER CALTRANS STD PLAN A24A.			
INSTALL 12" THEF	MOPLASTIC WHITE LIMIT LINE.			
SC INSTALL "SCHOOL"	PAVEMENT LEGEND (THERMOPLASTIC).			
SG INSTALL "SIGNAL'	PAVEMENT LEGEND (THERMOPLASTIC),			
(SH) INSTALL SHARED F	OADWAY BICYCLE MARKING PER CALTRANS STD PLAN A24C.			
SP INSTALL SPEED P	VEMENT LEGEND ("25" UNLESS OTHERWISE NOTED) (THERMOPLASTIC).			
ST INSTALL "STOP" F	AVEMENT LEGEND (THERMOPLASTIC),			
VIIR INSTALL TYPE VI	ARROW (RIGHT) PER CALTRANS STD PLAN A24A.			
WW INSTALL CONTINEN	TAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.			
(WY) INSTALL CONTINE	TAL CROSSWALK (YELLOW), SEE DETAIL "B" ON SHEET 1.			
(D) INSTALL "YIELD"	PAVEMENT LEGEND (THERMOPLASTICS).	DATE	INITIAL	
(YL) INSTALL WHITE Y	ELD LINE PER CALTRANS STD PLAN A24G.	IGINEER (	OF WORK	REVISIO

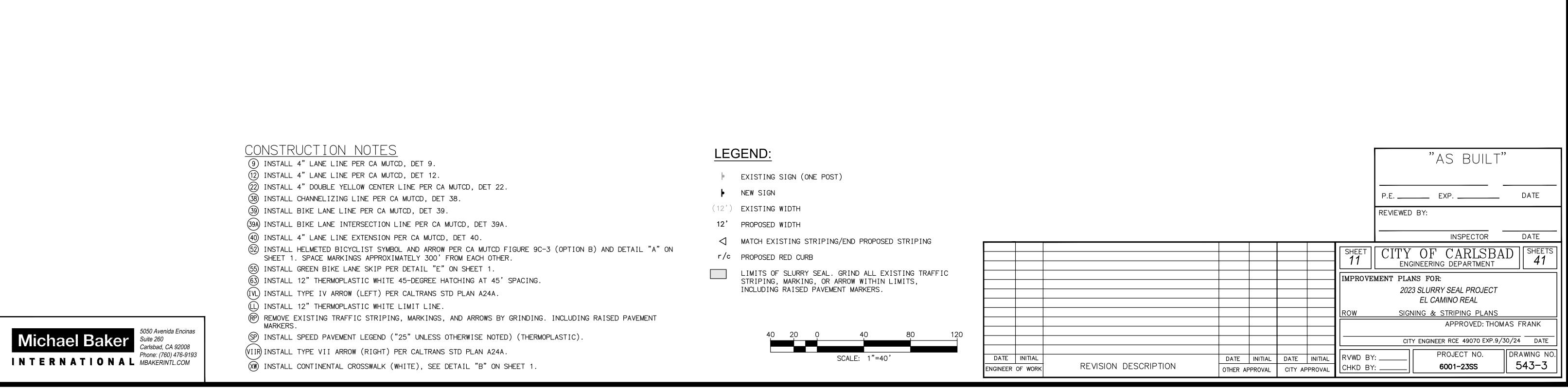
				SCALE 1"=400'				
RLAY 400 200 0		400	800		1200	 P.E	"AS BUILT" 	, DATE
	SCALE:	1"=40	0'			REVIEWEI	) BY: INSPECTOR	DATE
					SHEET <i>09</i>	CITY	OF CARLSBA	D SHEETS 41
					IMPROVE	MENT PLA 202	INS FOR: 23 SLURRY SEAL PROJECT	
					ROW	SIG	NING & STRIPING PLANS APPROVED: THOM	IAS FRANK
						CI	TY ENGINEER RCE 49070 EXP.9/	30/24 DATE
ON DESCRIPTION	DATE OTHER AP	INITIAL PROVAL	DATE CITY AP	INITIAL PROVAL	RVWD BY CHKD BY		PROJECT NO. 6001-23SS	DRAWING NO. 543-3

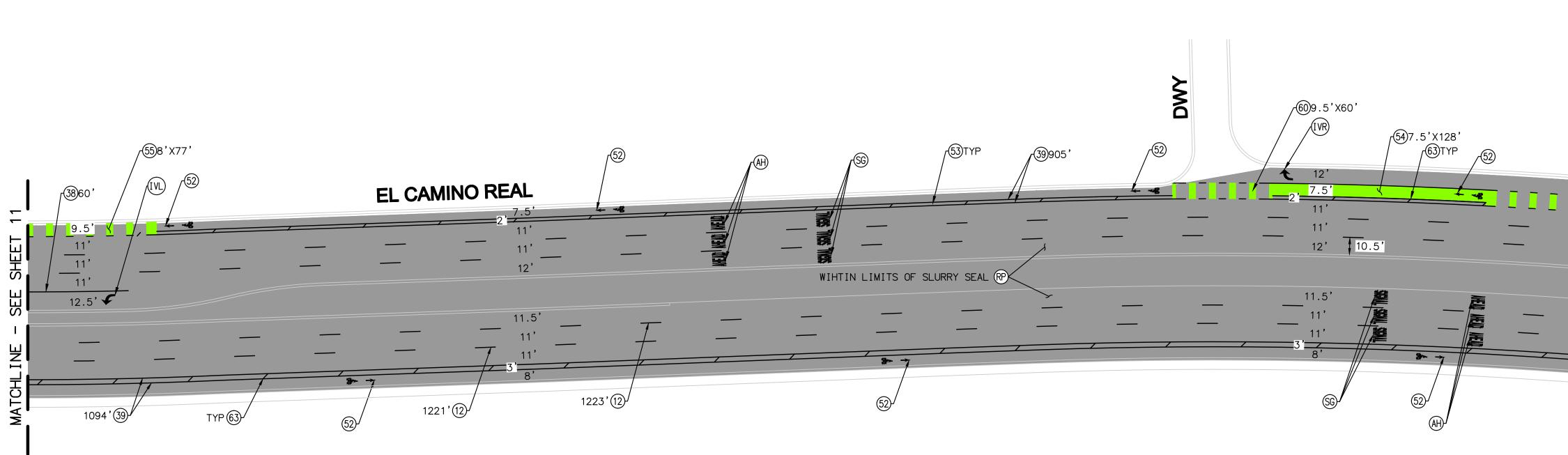


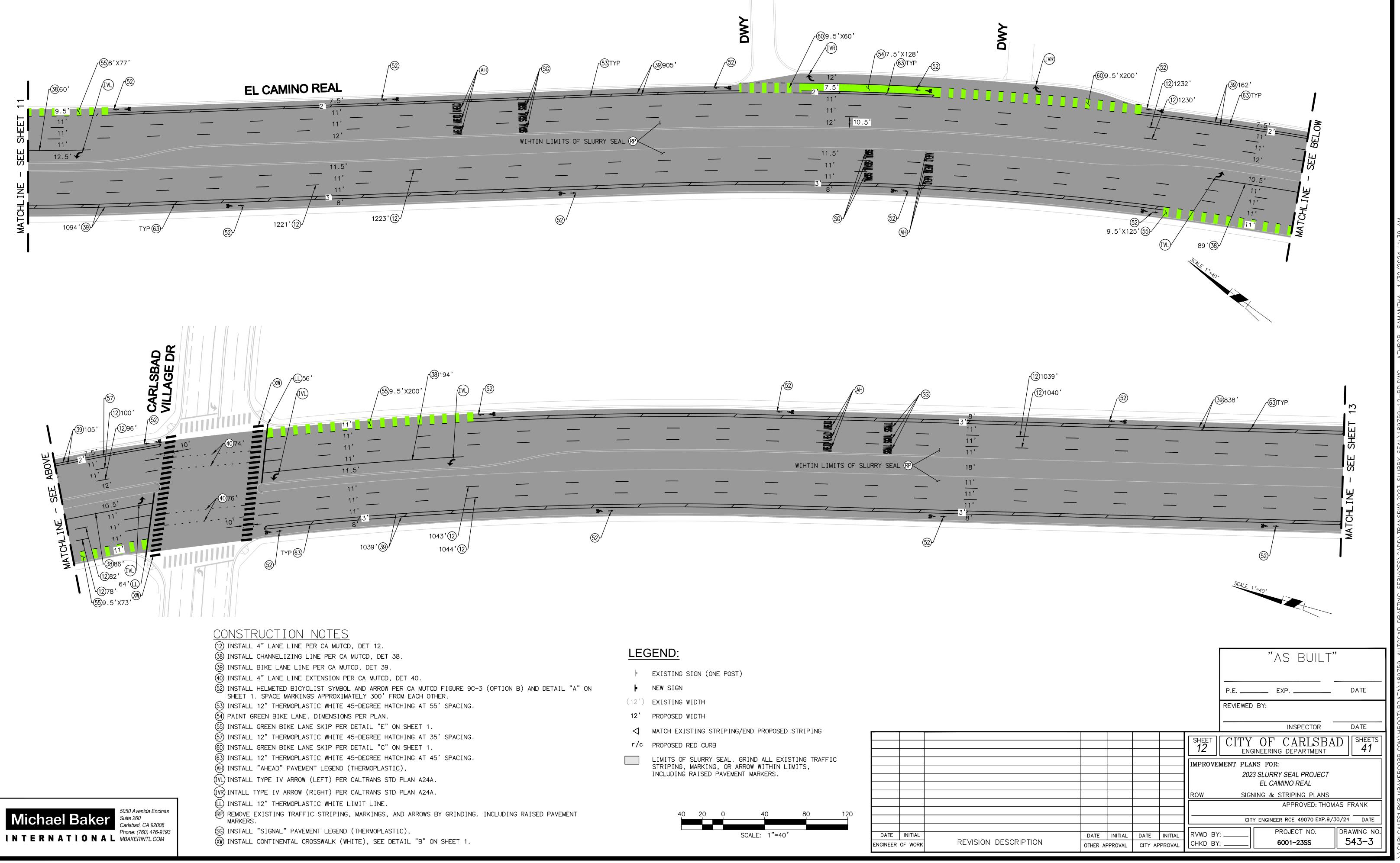


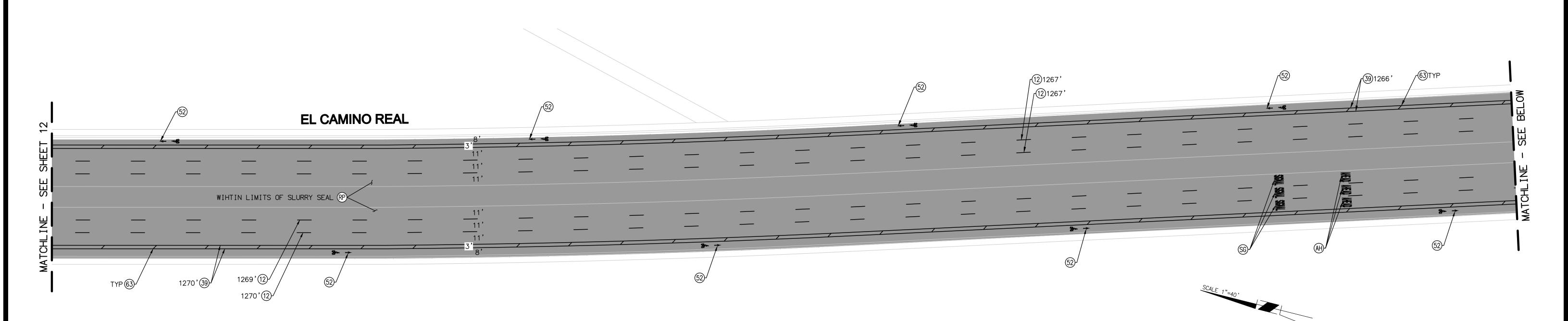
				- - - - - - - - - - - - - - - - - - -	SCALE	1"=40.	MATCHLINE A - SEE BELOW
		10		GALE	59'	$ \begin{array}{c} SCALE 1''=40, \\ \hline 10, \\ \hline 10, \\ \hline 11, \\ \hline 1, \\ \hline 4, \\ \hline \end{array} $	
SEE SHEETS 31-35 NOTES LINE PER CA MUTCD, DET 12 E YELLOW CENTER LINE PER IN ISLAND PER CA MUTCD, DE ZING LINE PER CA MUTCD, DE E LINE PER CA MUTCD, DET	2. CA MUTCD, I T 29. DET 38.		XW	LEGE	11' 8' 3' 35' 39 140'(12)	Ber 1	<i>,</i>
LINE FER ON MOTOD, DET IE INTERSECTION LINE PER O DEICYCLIST SYMBOL AND ARF AND DETAIL "A" ON SHEET OO' FROM EACH OTHER. KE LANE SKIP PER DETAIL " RMOPLASTIC WHITE 45-DEGREE PAVEMENT LEGEND (THERMOPL ARROW (LEFT) PER CALTRANS RROW (RIGHT) PER CALTRANS MOPLASTIC WHITE LIMIT LIN TRAFFIC STRIPING, MARKING DING RAISED PAVEMENT MARKE PAVEMENT LEGEND (THERMOP	CA MUTCD, DE TCD, DET 40 COW PER CA N I. SPACE MA (E" ON SHEE HATCHING / ASTIC), N A24A. STD PLAN / STD PLAN / E. SS, AND ARR ERS. PLASTIC),	MUTCD FIGU RKINGS T 1. AT 45' SPA A24A. A24A.		<ul> <li>▶ N</li> <li>(12') E</li> <li>12' P</li> <li>⊲ M</li> <li>r/c P</li> <li>□ L T</li> </ul>	EW SIGN XISTING W ROPOSED W ATCH EXIS ROPOSED R IMITS OF RAFFIC ST IMITS, IN	IDTH IDTH TING STRIPING/END P ED CURB SLURRY SEAL. GRIND RIPING, MARKING, OR CLUDING RAISED PAVE "AS BUIL	ALL EXISTING ARROW WITHIN MENT MARKERS.
ITAL CROSSWALK (WHITE), SE			T 1.			INSPECTOR	DATE
				sheet 10		OF CARLSE	
				IMPROVE	MENT PLA	NS FOR: 3 SLURRY SEAL PROJEC	ст
				ROW		EL CAMINO REAL	
						APPROVED: TH	IOMAS FRANK
	DATE INIT	TIAL DATE	INITIAL	RVWD BY		Y ENGINEER RCE 49070 EXF	DRAWING NO.
N DESCRIPTION	OTHER APPRO			CHKD BY		6001-23SS	543-3

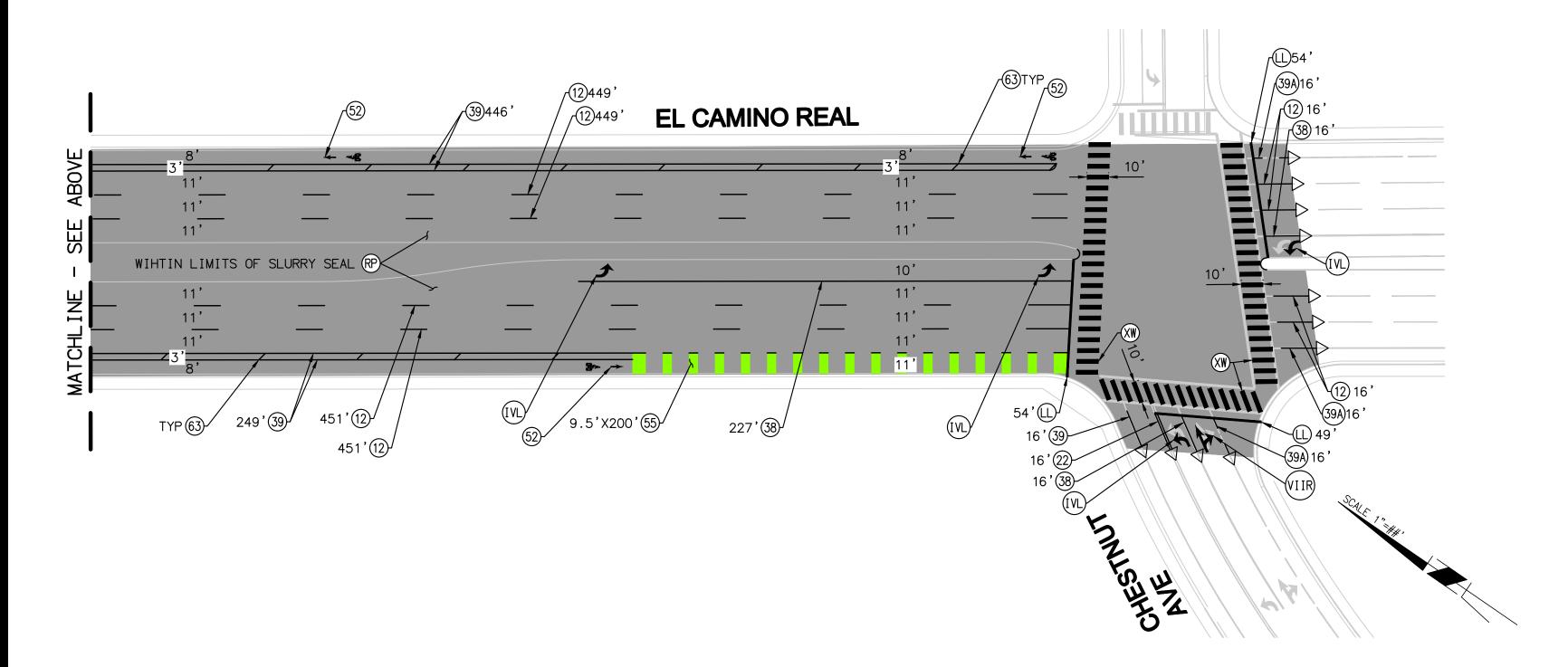












CONSTRUCTION NOTES

- (12) INSTALL 4" LANE LINE PER CA MUTCD, DET 12.
- (22) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
- (38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
- (39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
- (39A) INSTALL BIKE LANE INTERSECTION LINE PER CA MUTCD, DET 39A.
- (52) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON
- SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
- (55) INSTALL GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1.
- (63) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 45' SPACING.
- (AH) INSTALL "AHEAD" PAVEMENT LEGEND (THERMOPLASTIC),
- (IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
- (L) INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE. (RP) REMOVE EXISTING TRAFFIC STRIPING, MARKINGS, AND ARROWS BY GRINDING. INCLUDING RAISED PAVEMENT MARKERS.
- (SG) INSTALL "SIGNAL" PAVEMENT LEGEND (THERMOPLASTIC),
- (VIIR) INSTALL TYPE VII ARROW (RIGHT) PER CALTRANS STD PLAN A24A.
- (XW) INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.

**Michael Baker** 

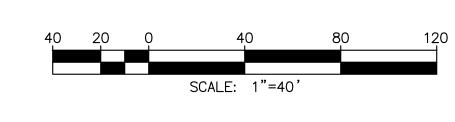
INTERNATIONAL MBAKERINTL.COM

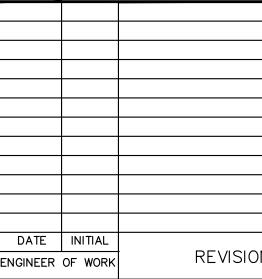
5050 Avenida Encinas

Carlsbad, CA 92008 Phone: (760) 476-9193

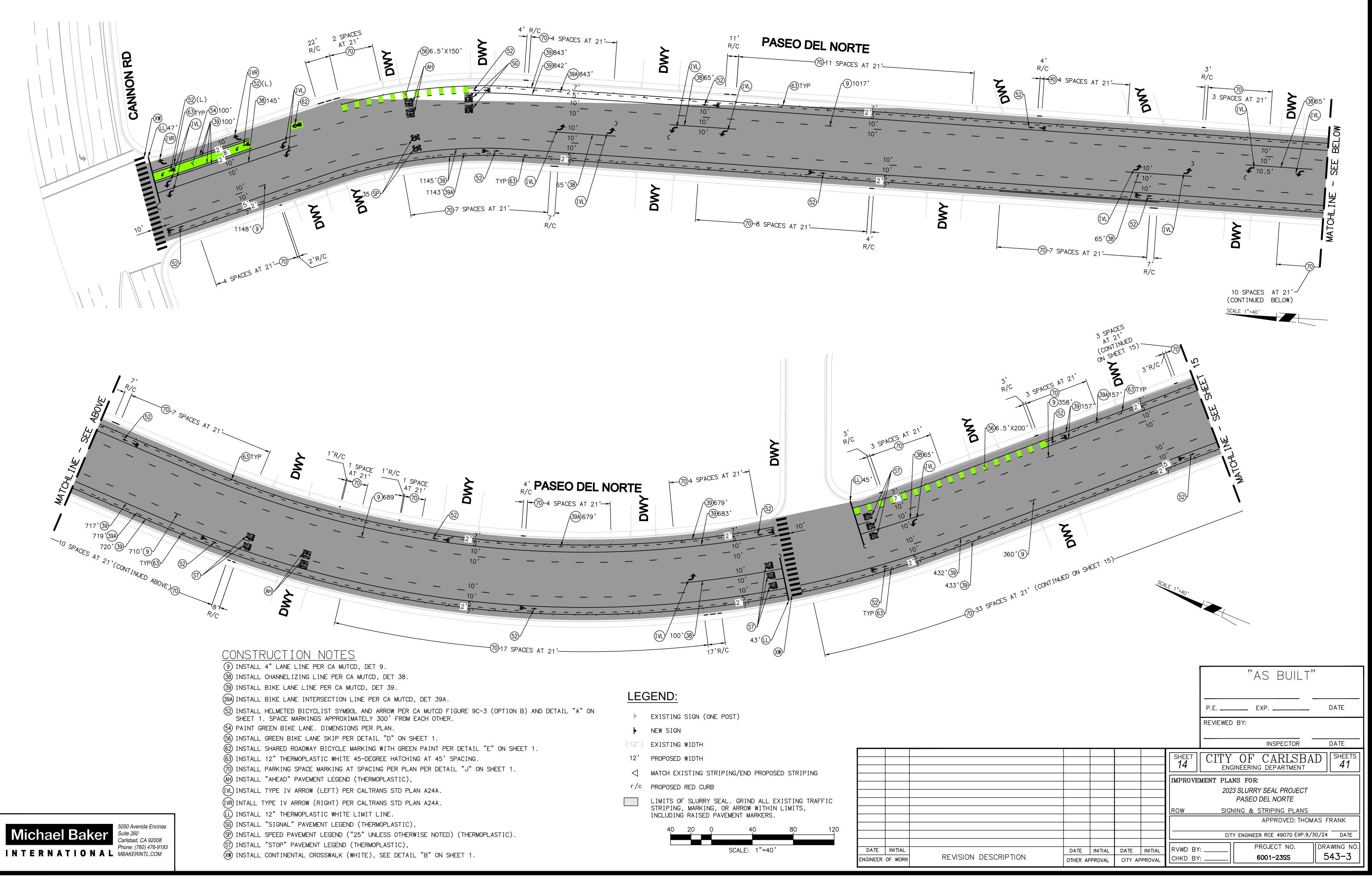
Suite 260

- EXISTING SIGN (ONE POST)
- NEW SIGN
- (12') EXISTING WIDTH
- 12' PROPOSED WIDTH
- ✓ MATCH EXISTING STRIPING/END PROPOSED STRIPING R/C PROPOSED RED CURB
- LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS.

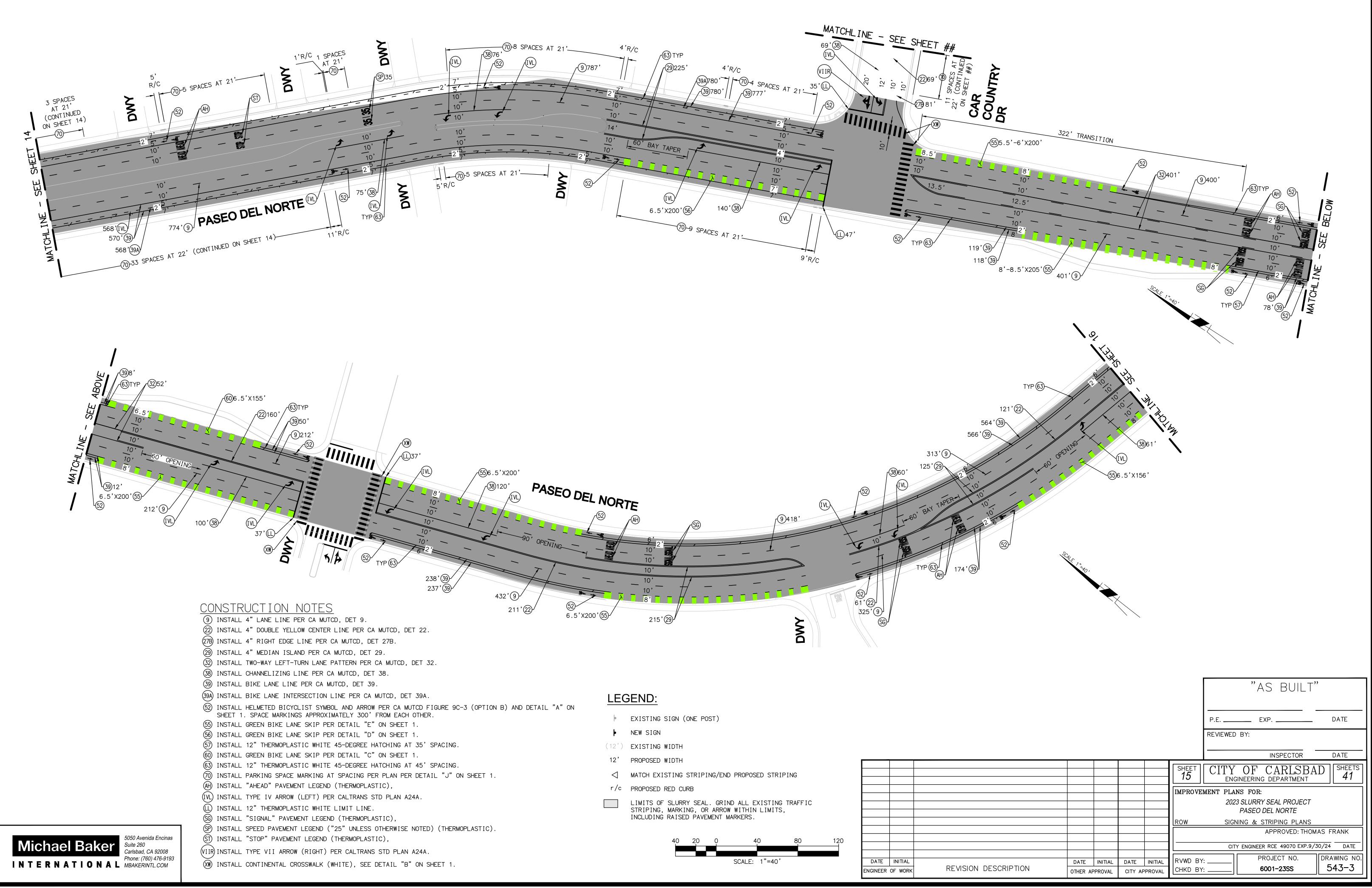


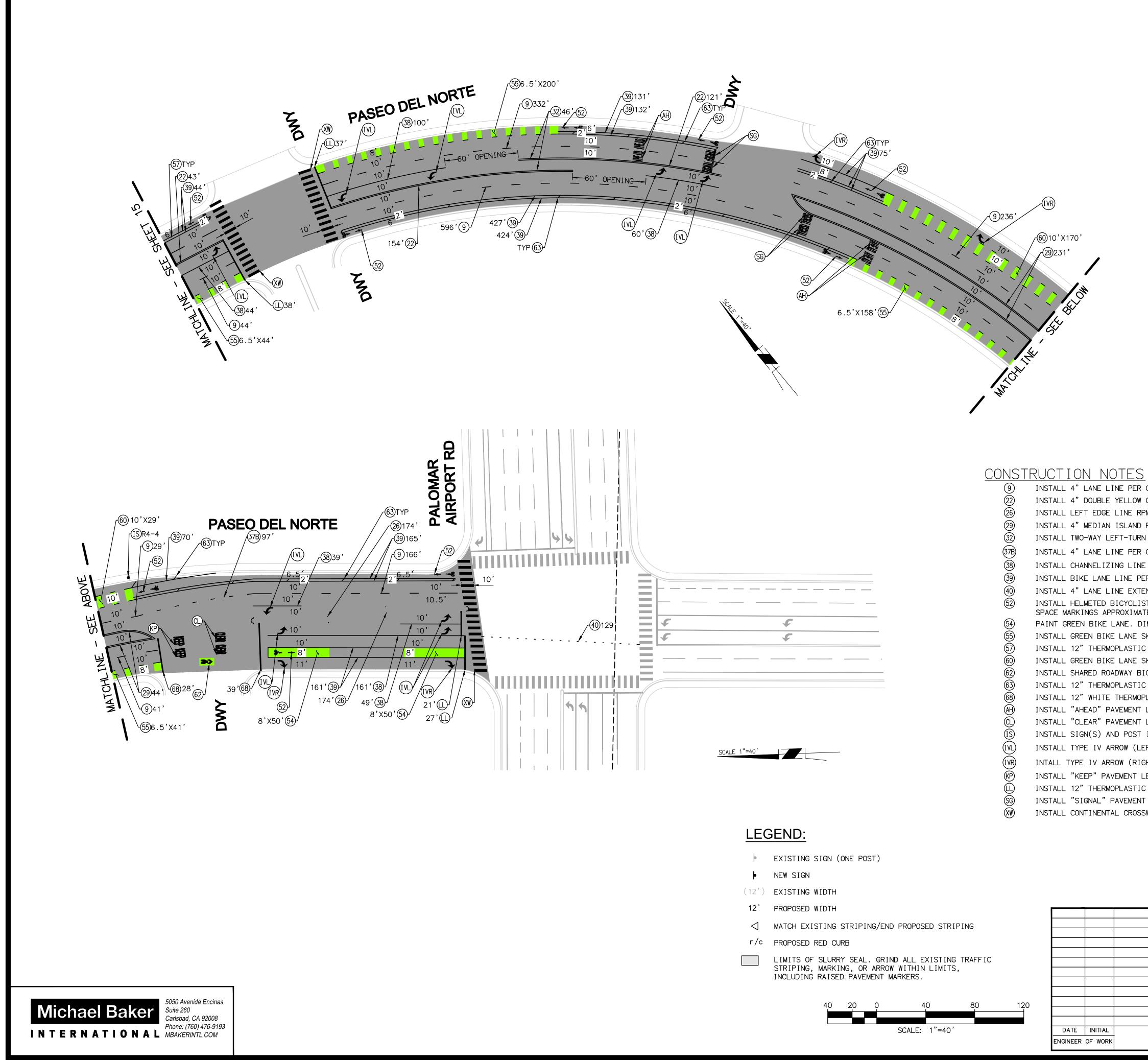


							"AS BUILT"	,
						P.E	EXP	DATE
						REVIEWED	BY:	
					_		INSPECTOR	DATE
					SHEET 13	CITY	OF CARLSBA	D SHEETS 41
					IMPROVE	MENT PLA	NS FOR:	
						202	3 SLURRY SEAL PROJECT EL CAMINO REAL	
					ROW	SIG	NING & STRIPING PLANS	
							APPROVED: THOM	AS FRANK
						CIT	Y ENGINEER RCE 49070 EXP.9/	30/24 DATE
	DATE	INITIAL	DATE	INITIAL	RVWD BY	·]	PROJECT NO.	DRAWING NO.
ON DESCRIPTION	OTHER AF			PROVAL	CHKD BY		6001-23SS	543-3
	I							



	LEC	GEND:			
IGURE 9C-3 (OPTION B) AND DETAIL "A" ON	  0	EXISTING SIGN (ONE POST)			
	Þ	NEW SIGN			
R DETAIL "E" ON SHEET 1.	(12')	EXISTING WIDTH	r		
SPACING.	12'	PROPOSED WIDTH			
IL "J" ON SHEET 1.	$\triangleleft$	MATCH EXISTING STRIPING/END PROPOSED STRIPING			
	r/c	PROPOSED RED CURB			
		LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS.			
) (THERMOPLASTIC).					
HEET 1.		SCALE: 1"=40'	DATE ENGINEER (	INITIAL DF WORK	RE

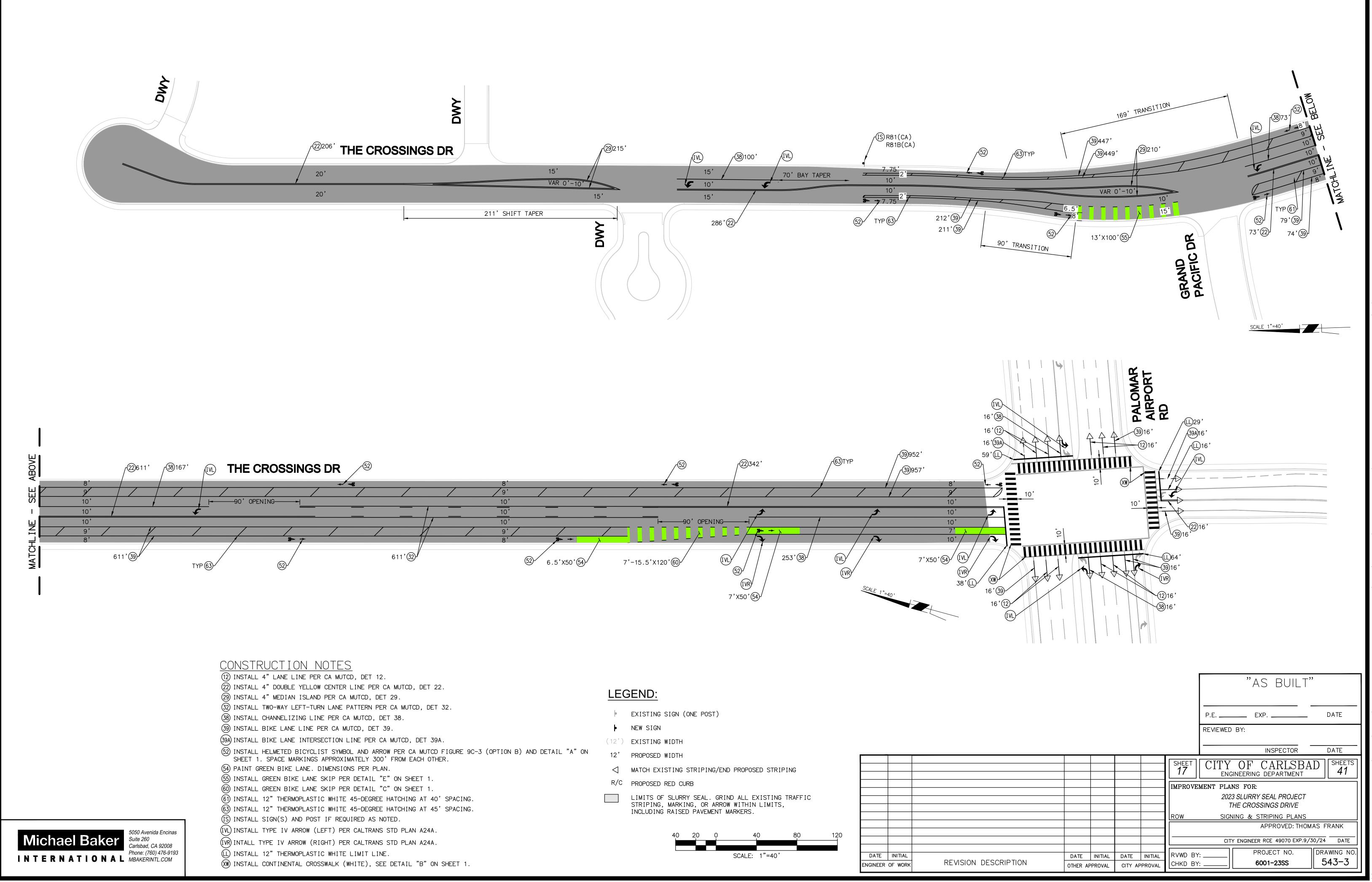


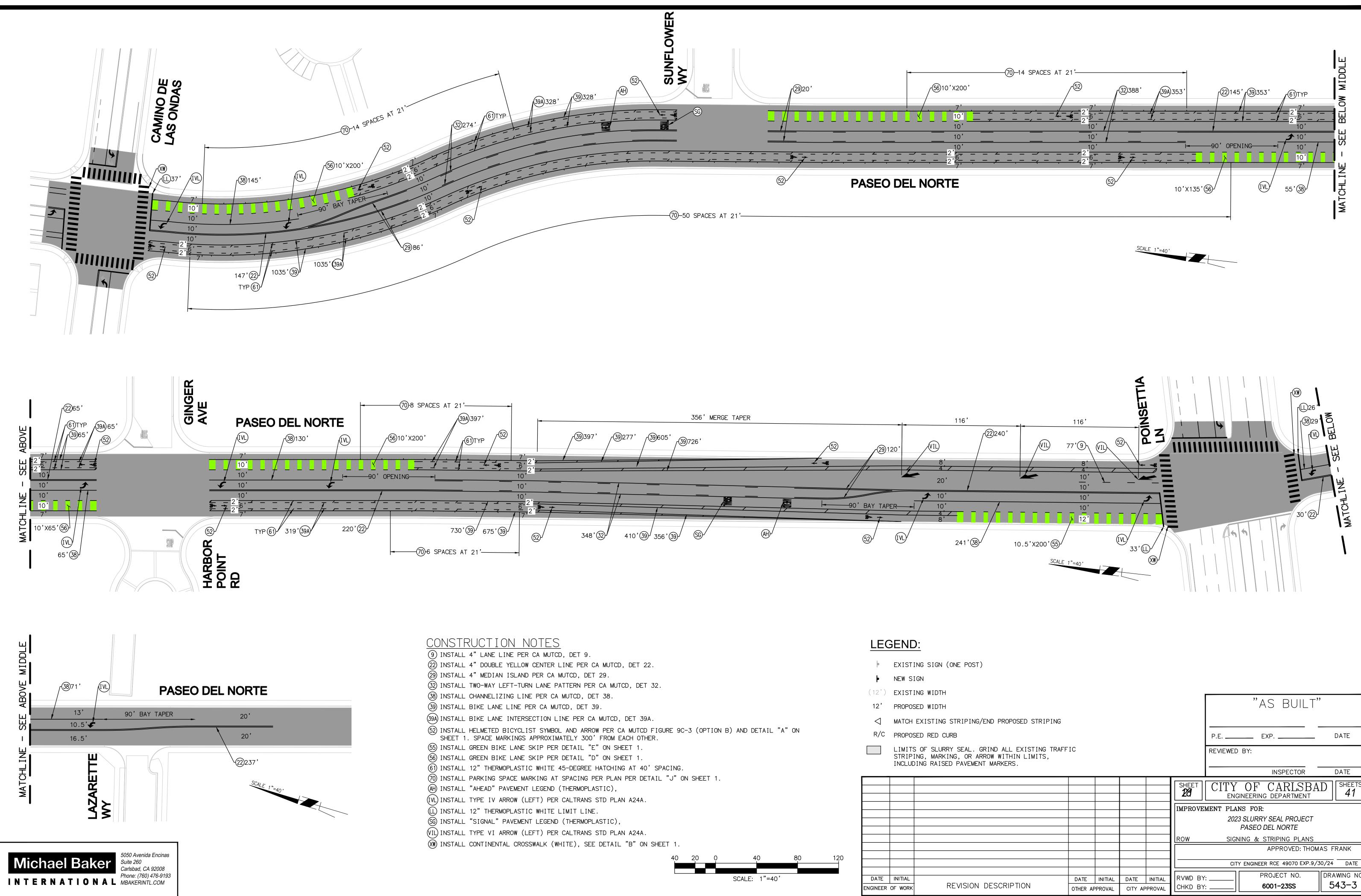


9	INSTALL 4" LANE LINE PER CA MUTCD, DET 9.
22	INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
26	INSTALL LEFT EDGE LINE RPMS PER CA MUTCD, DET 26.
29	INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.
32	INSTALL TWO-WAY LEFT-TURN LANE PATTERN PER CA MUTCD, DET 32.
37B	INSTALL 4" LANE LINE PER CA MUTCD, DET 37B.
38	INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
39	INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
(40)	INSTALL 4" LANE LINE EXTENSION PER CA MUTCD, DET 40.
52	INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGU SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
54)	PAINT GREEN BIKE LANE. DIMENSIONS PER PLAN.
(55)	INSTALL GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1.
55 57 60	INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 35' SPA
60	INSTALL GREEN BIKE LANE SKIP PER DETAIL "C" ON SHEET 1.
62 63	INSTALL SHARED ROADWAY BICYCLE MARKING WITH GREEN PAINT PER D
63	INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 45' SPA
68	INSTALL 12" WHITE THERMOPLASTIC STRIPE PER DIMENSIONS ON PLAN
(AH)	INSTALL "AHEAD" PAVEMENT LEGEND (THERMOPLASTIC),
(H) (L) (L)	INSTALL "CLEAR" PAVEMENT LEGEND (THERMOPLASTIC).
(IS)	INSTALL SIGN(S) AND POST IF REQUIRED AS NOTED.
(IVL)	INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
(IVR)	INTALL TYPE IV ARROW (RIGHT) PER CALTRANS STD PLAN A24A.
(KP)	INSTALL "KEEP" PAVEMENT LEGEND (THERMOPLASTIC).
	INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.
(SG)	INSTALL "SIGNAL" PAVEMENT LEGEND (THERMOPLASTIC),
Ň	INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEE

DATE	INITIAL	
ENGINEER	OF WORK	REVISIO

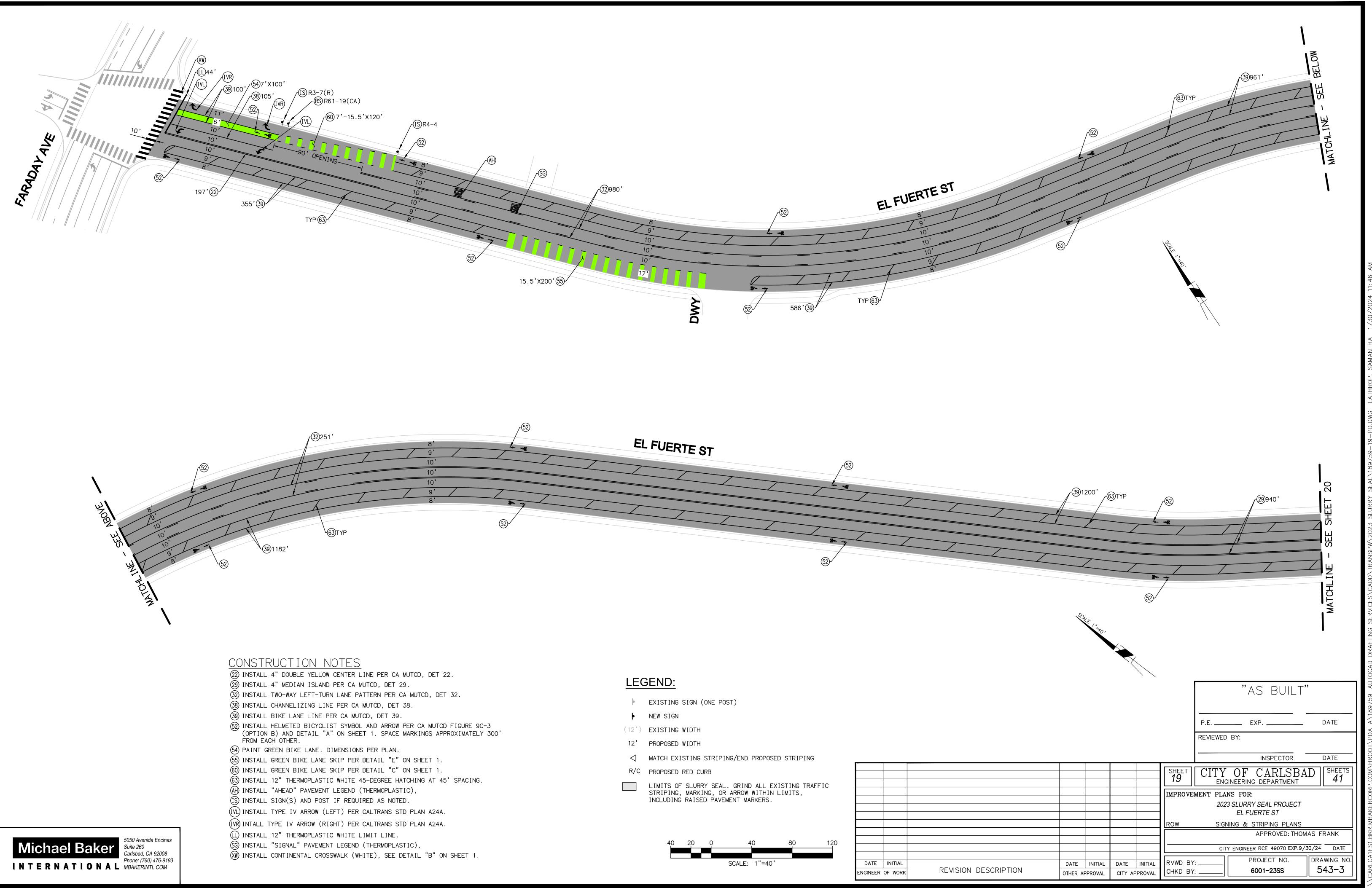
TCD, DET 39.								
ER CA MUTCD, DET 40.								
AND ARROW PER CA MUTCD FI	GURE 9C-3	(OPTIO	NB) A	AND DET	AIL "A" O	N SHEET 1		
S PER PLAN.								
DETAIL "E" ON SHEET 1.								
45-DEGREE HATCHING AT 35' S	PACING.							
DETAIL "C" ON SHEET 1.								
ARKING WITH GREEN PAINT PER	DETAIL "	E"ON S	HEET '	1.				
45-DEGREE HATCHING AT 45' S	PACING.							
STRIPE PER DIMENSIONS ON PL	AN.							
(THERMOPLASTIC),								
(THERMOPLASTIC).								
IRED AS NOTED.								
CALTRANS STD PLAN A24A.								
CALTRANS STD PLAN A24A.								
THERMOPLASTIC).								
IMIT LINE.								
(THERMOPLASTIC),								
HITE), SEE DETAIL "B" ON SH	EET 1.						"AS BUILT"	,
							AS DUILT	
						P.E	EXP	DATE
						F.E		DATE
						REVIEWED	BY:	
	<del>,                                    </del>	<u> </u>					INSPECTOR	DATE
					SHEET	CITY	OF CARLSBA	D
					16	ENC	BINEERING DEPARTMENT	<u>41</u>
					IMPROVE	MENT PLA	NS FOR:	
	<u>├</u> ───┼─					202	3 SLURRY SEAL PROJECT	
	+						PASEO DEL NORTE	
					ROW	SIG	NING & STRIPING PLANS	
	-						APPROVED: THOM	AS FRANK
						CIT	Y ENGINEER RCE 49070 EXP.9/3	30/24 DATE
	DATE II	NITIAL I	DATE	INITIAL	RVWD BY		PROJECT NO.	DRAWING NO.
ON DESCRIPTION	OTHER APP		CITY AP		CHKD BY		6001-23SS	543-3
	=				L			

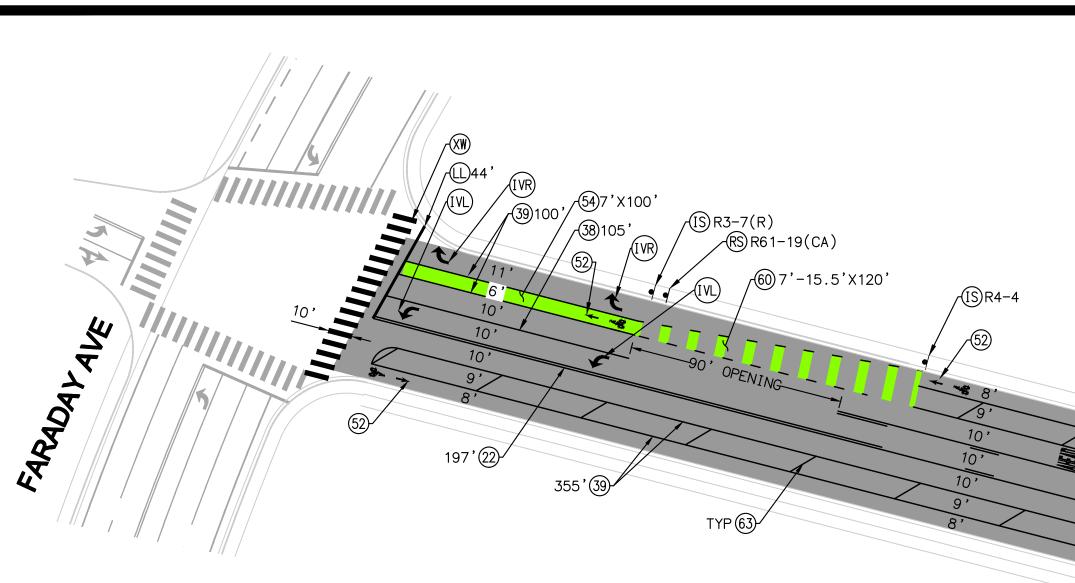


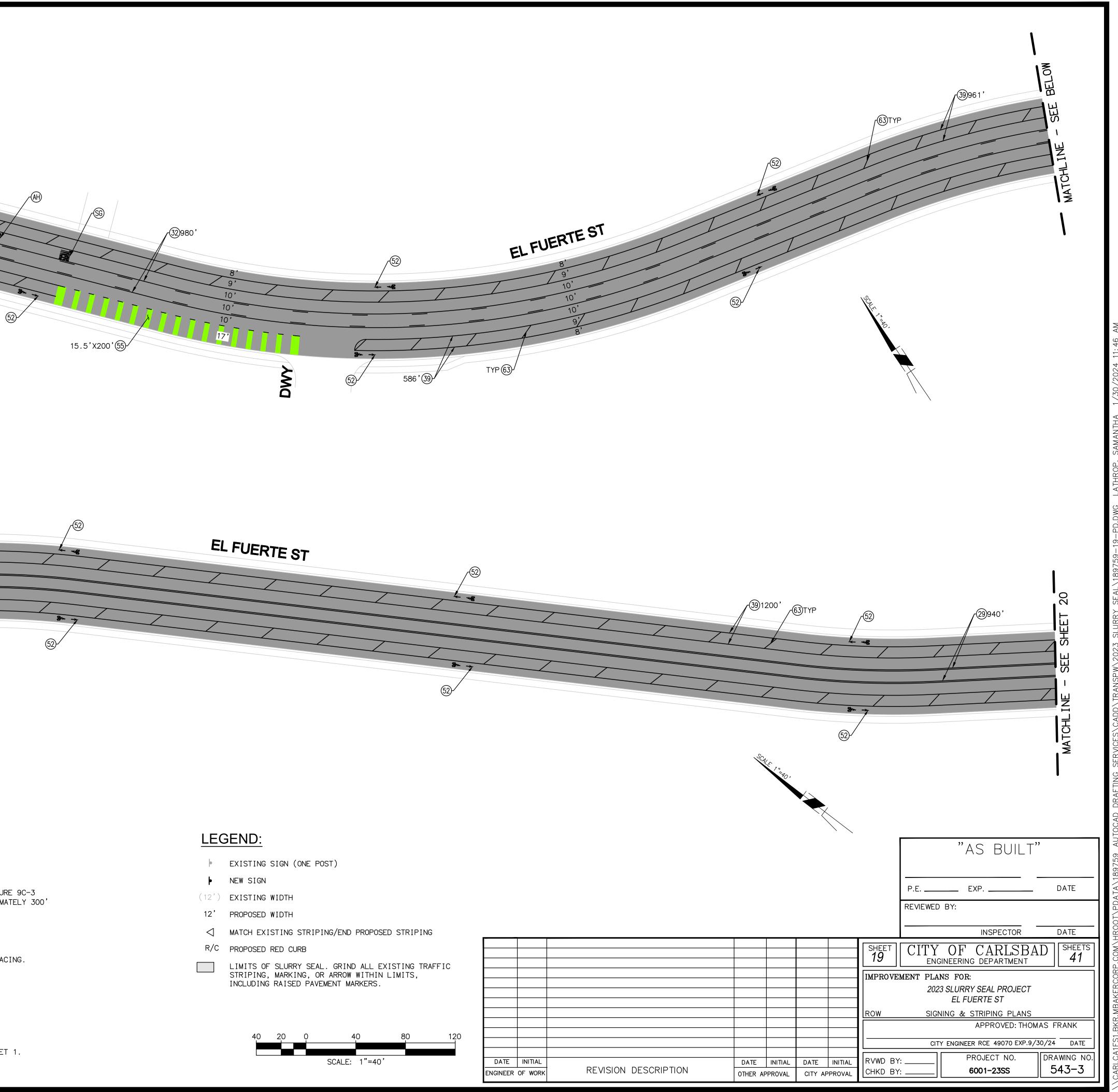


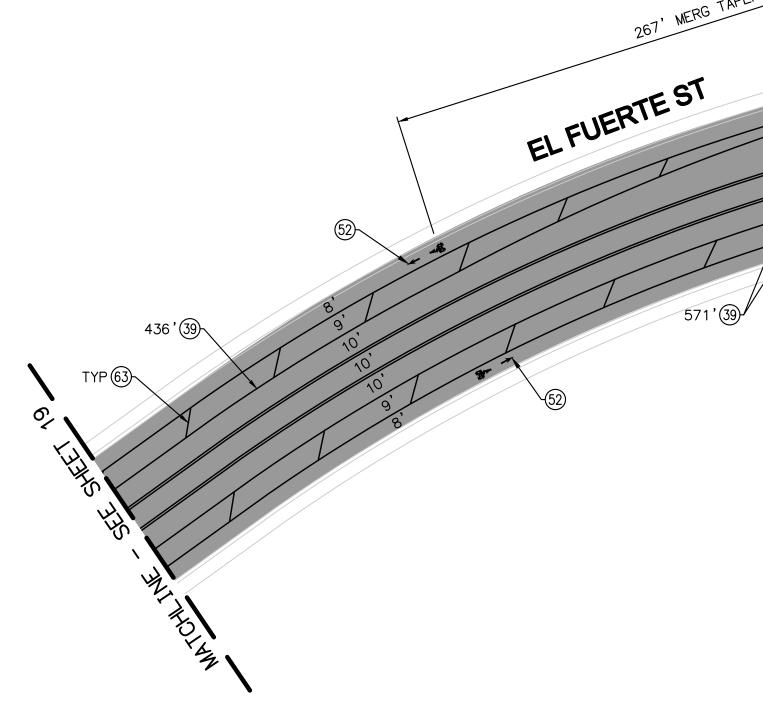
RUCTION NOTES	LEG	GEND:	
L 4" LANE LINE PER CA MUTCD, DET 9.			,
L 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.	þ	EXISTIN	G SIGN (ONE POST)
L 4" MEDIAN ISLAND PER CA MUTCD, DET 29.	þ	NEW SIG	N
L TWO-WAY LEFT-TURN LANE PATTERN PER CA MUTCD, DET 32.			
L CHANNELIZING LINE PER CA MUTCD, DET 38.	(12')	EXISTIN	G WIDTH
L BIKE LANE LINE PER CA MUTCD, DET 39.	12'	PROPOSE	D WIDTH
L BIKE LANE INTERSECTION LINE PER CA MUTCD, DET 39A.	$\triangleleft$	MATCH E	XISTING STRIPING/
L HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.	R/C	PROPOSED RED CURB	
L GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1.		LIMITS	OF SLURRY SEAL. G
L GREEN BIKE LANE SKIP PER DETAIL "D" ON SHEET 1.			G, MARKING, OR AR
L 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 40' SPACING.		INCLUDI	NG RAISED PAVEMEN
L PARKING SPACE MARKING AT SPACING PER PLAN PER DETAIL "J" ON SHEET 1.			
L "AHEAD" PAVEMENT LEGEND (THERMOPLASTIC),			
L TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.			
L 12" THERMOPLASTIC WHITE LIMIT LINE.			
L "SIGNAL" PAVEMENT LEGEND (THERMOPLASTIC),			
L TYPE VI ARROW (LEFT) PER CALTRANS STD PLAN A24A.			
L CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.			
40 20 0 40 80 120			
SCALE: 1"=40'	DATE	INITIAL	

							"AS BUILT"	,	
IG/END PROPOSED STRIPING									
						P.E	EXP	DATE	
GRIND ALL EXISTING TRAFF ARROW WITHIN LIMITS,	IC					REVIEWED	) BY:		
ENT MARKERS.							INSPECTOR	DATE	
					SHEET	CITY	OF CARLSBA	D SHEETS 41	
					IMPROVEMENT PLANS FOR: 2023 SLURRY SEAL PROJECT PASEO DEL NORTE				
					<u>ROW</u>		NING & STRIPING PLANS APPROVED: THOM Y ENGINEER RCE 49070 EXP.9/3		
	DATE	INITIAL	DATE	INITIAL	RVWD BY:		PROJECT NO.	DRAWING NO.	
N DESCRIPTION	OTHER AF			PROVAL	CHKD BY:		6001-23SS	543-3	

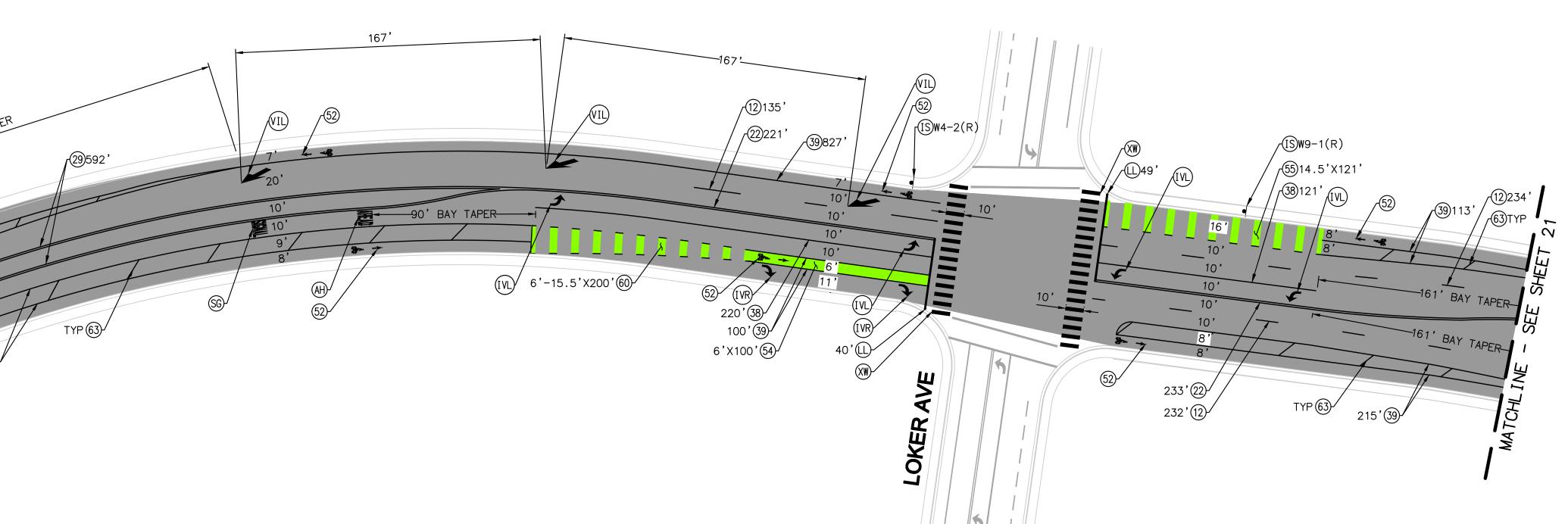








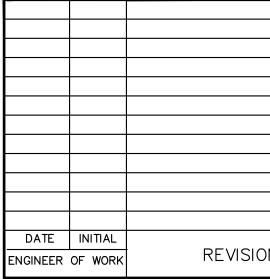
	CONSTRUCTION NOTES
	(12) INSTALL 4" LANE LINE PER CA MUTCD, DET 12.
	22) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
	29 INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.
	(38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
	(39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
	52 INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C- SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
	54 PAINT GREEN BIKE LANE. DIMENSIONS PER PLAN.
	(55) INSTALL GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1.
	(60) INSTALL GREEN BIKE LANE SKIP PER DETAIL "C" ON SHEET 1.
	(63) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 45' SPACING.
	(AH) INSTALL "AHEAD" PAVEMENT LEGEND (THERMOPLASTIC),
	(IS) INSTALL SIGN(S) AND POST IF REQUIRED AS NOTED.
	(IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
	(IVR) INTALL TYPE IV ARROW (RIGHT) PER CALTRANS STD PLAN A24A.
	U INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.
	SG INSTALL "SIGNAL" PAVEMENT LEGEND (THERMOPLASTIC),
5050 Avenida Encinas Michael Bakor Suite 260	(VIL) INSTALL TYPE VI ARROW (LEFT) PER CALTRANS STD PLAN A24A.
MIGHAELDANEL Carlsbad, CA 92008	$\widetilde{XW}$ INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.
Phone: (760) 476-9193 INTERNATIONAL MBAKERINTL.COM	





- EXISTING SIGN (ONE POST)
- NEW SIGN
- (12') EXISTING WIDTH
- 12' PROPOSED WIDTH
- MATCH EXISTING STRIPING/END PROPOSED STRIPING
- R/C PROPOSED RED CURB
- LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS.

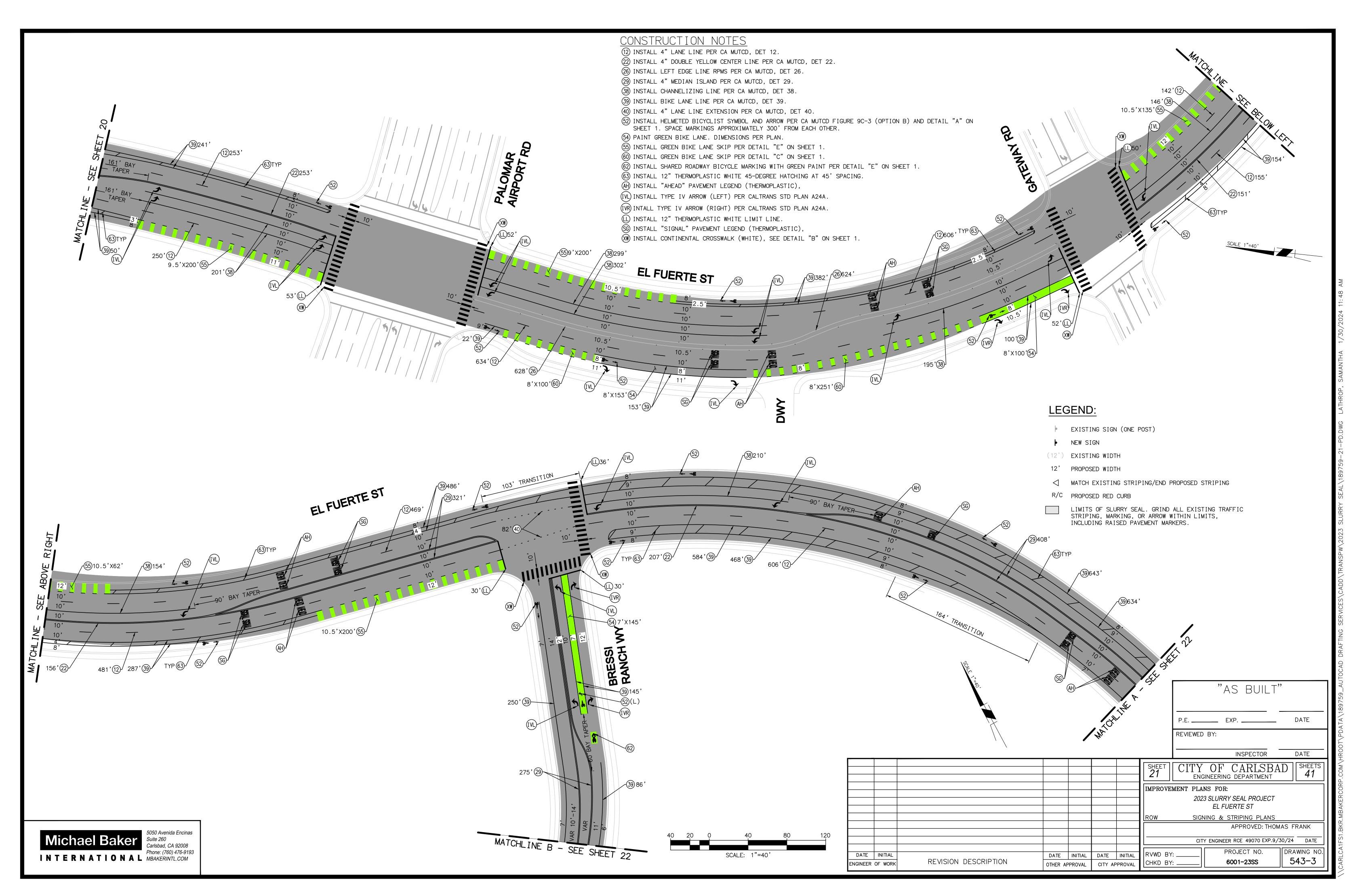


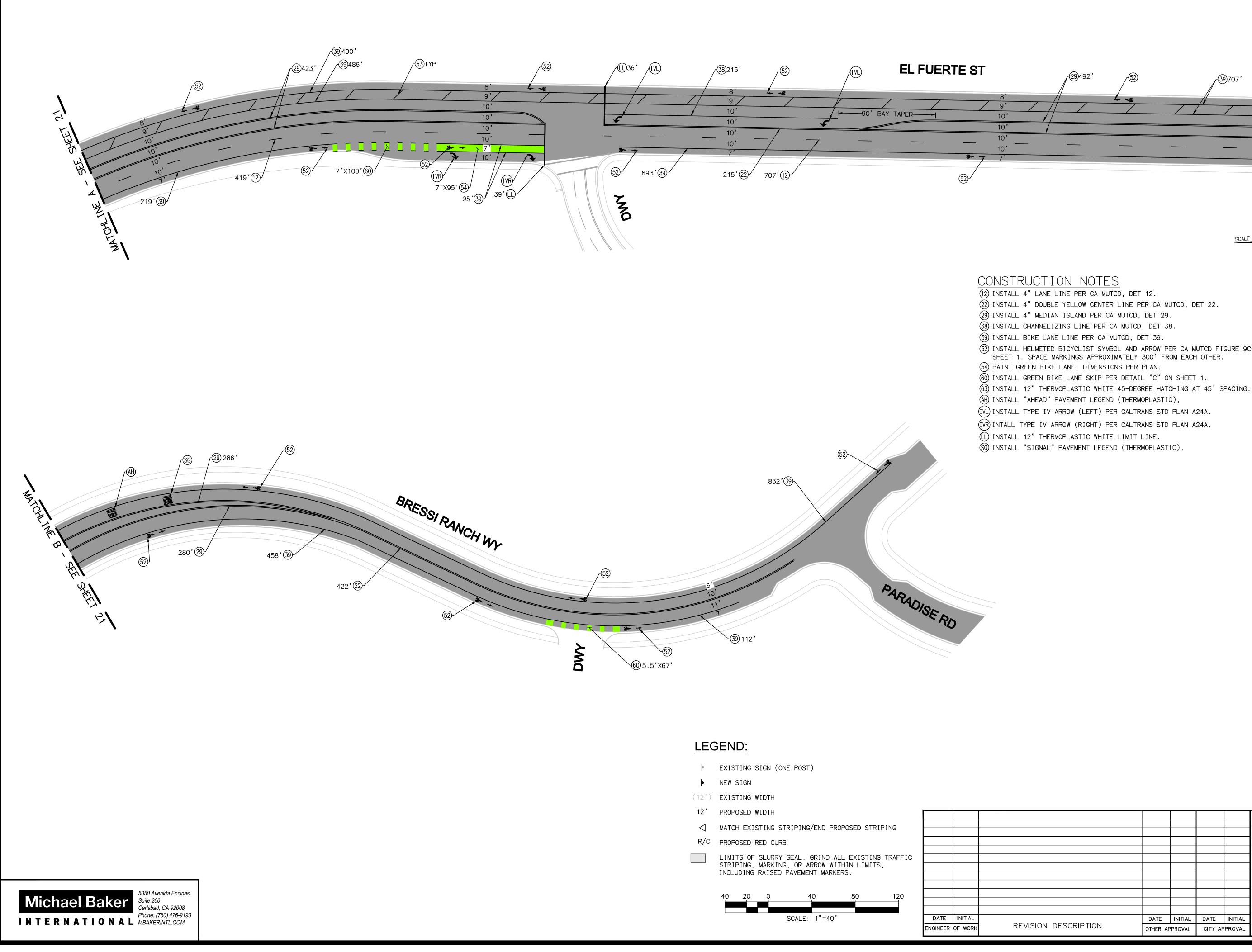


E 9C-3 (OPTION B) AND DETAIL "A" ON

ING.

						SCAL E	1"=40'	
								_
								,
							"AS BUILT	
						P.E REVIEWED	EXP BY:	DATE
							INSPECTOR	DATE
					sheet <b>20</b>	CITY	OF CARLSBA	D SHEETS 41
					IMPROVE	MENT PLA	3 SLURRY SEAL PROJECT	
					ROW		EL FUERTE ST	
							APPROVED: THOM	
						CIT	Y ENGINEER RCE 49070 EXP.9/	
ON DESCRIPTION	DATE OTHER A	INITIAL PPROVAL	DATE CITY A	INITIAL PPROVAL	RVWD BY CHKD BY		PROJECT NO. 6001-23SS	DRAWING NO. <b>543–3</b>





DATE	INITIAL	
ENGINEER	OF WORK	REVISION

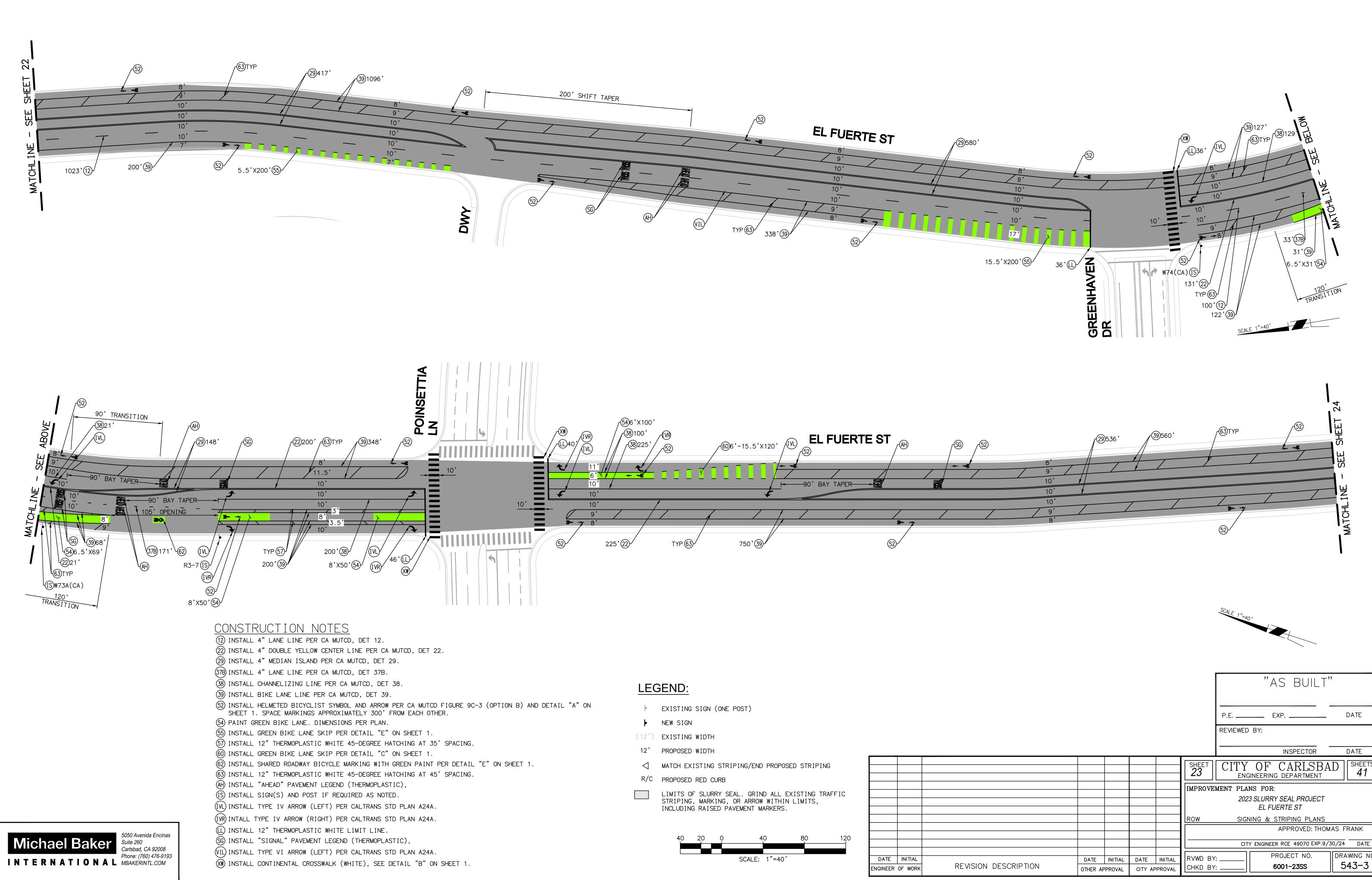
					-			
							"AS BUILT"	,
						P.E		DATE
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					SHEET 22	CITY	OF CARLSBA	D SHEETS 41
							3 SLURRY SEAL PROJECT EL FUERTE ST	
					ROW	5161	NING & STRIPING PLANS APPROVED: THOM	AS FRANK
							Y ENGINEER RCE 49070 EXP.9/3	
N DESCRIPTION	DATE OTHER AF	INITIAL PPROVAL	DATE CITY A	INITIAL PPROVAL	RVWD BY: CHKD BY:		PROJECT NO. 6001-23SS	drawing no. 543–3

(52)

# CONSTRUCTION NOTES

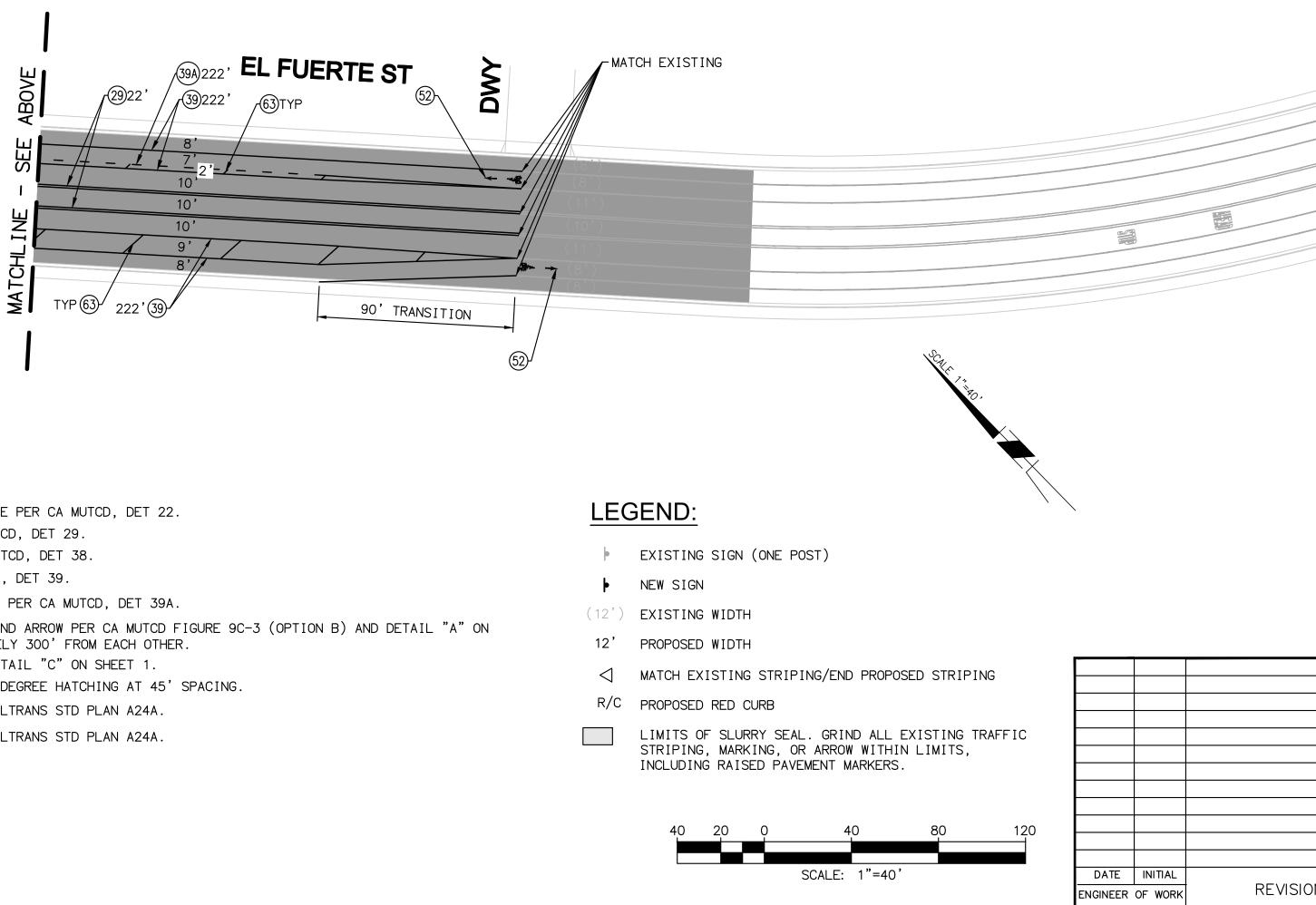
(12) INSTALL 4" LANE LINE PER CA MUTCD, DET 12. (22) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22. (29) INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29. (38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38. (39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39. 52) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON

<u>(29</u>492' (39)707 SCALE 1"=40'



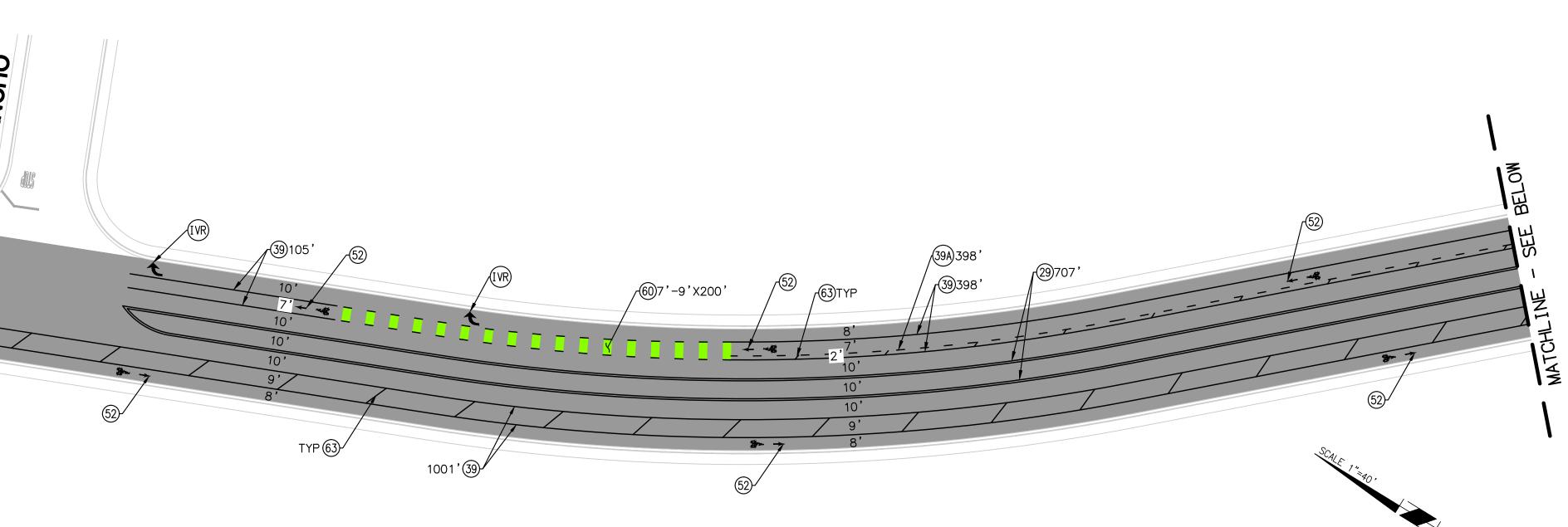
						SCALE 1"=40		
							"AS BUIL	┬"
						P.E	EXP	DATE
						REVIEWED	BY: INSPECTOR	DATE
					SHEET 23	CITY	OF CARLSE	BAD SHEETS
					IMPROVE	MENT PLA 202	NS FOR: 3 SLURRY SEAL PROJEC EL FUERTE ST	 T
					ROW		IING & STRIPING PLAN APPROVED: TH	OMAS FRANK
						CIT	Y ENGINEER RCE 49070 EXP.	9/30/24 DATE
DESCRIPTION	DATE OTHER A	INITIAL	DATE	INITIAL PPROVAL	RVWD BY CHKD BY		PROJECT NO. 6001-23SS	DRAWING NO 543-3

**RANCHO** PANCHO 23 EE 1 (39)288 <sup>•</sup> r<del>(</del>22)205 <sup>63TYP</sup> EL FUERTE ST <sup>52</sup> BAY TAPER (IVL) 205'38⁄ (52) (IVL)

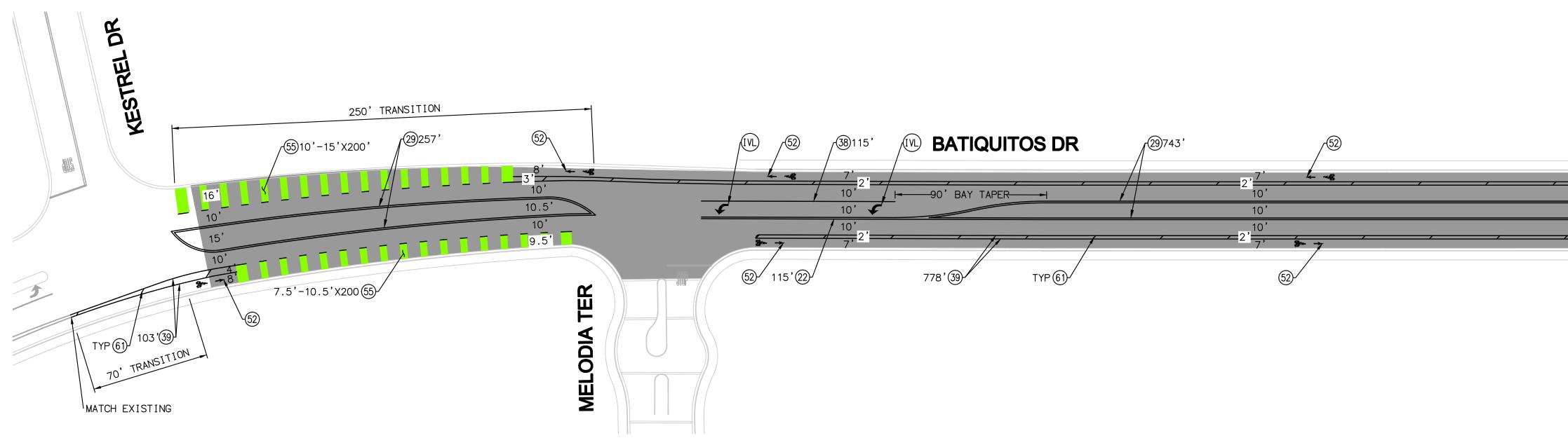


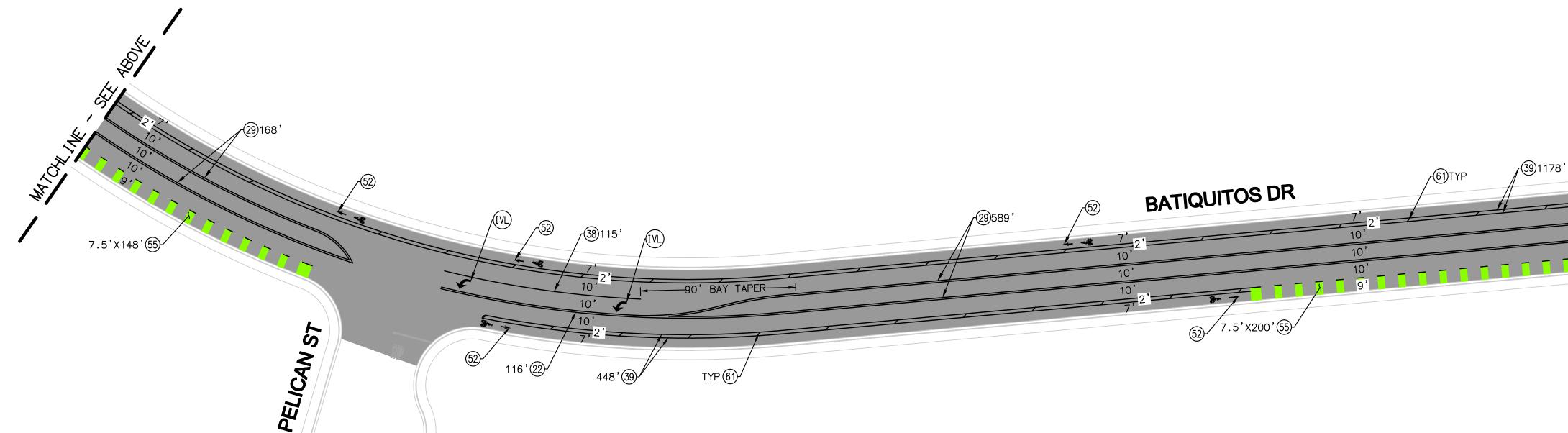
ONSTRUCTION NOTES
2) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
9) INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.
8) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
A) INSTALL BIKE LANE INTERSECTION LINE PER CA MUTCD, DET 39A.
2) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIG SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
) INSTALL GREEN BIKE LANE SKIP PER DETAIL "C" ON SHEET 1.
3) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 45' SP.
) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
R INTALL TYPE IV ARROW (RIGHT) PER CALTRANS STD PLAN A24A.





						<b></b>	" • • • • • • • • • • • • • • • • • • •		
							"AS BUILT"		
						P.E	EXP	DATE	
						REVIEWED	BY:		
							INSPECTOR	DATE	
					sheet <b>24</b>	CITY	OF CARLSBA	D SHEETS 41	
					IMPROVE	IMPROVEMENT PLANS FOR: 2023 SLURRY SEAL PROJECT EL FUERTE			
					ROW	SIG	NING & STRIPING PLANS		
							APPROVED: THOM	AS FRANK	
						CIT	Y ENGINEER RCE 49070 EXP.9/3	0/24 DATE	
	DATE	INITIAL	DATE	INITIAL	RVWD B	Y:	PROJECT NO.	DRAWING NO.	
ON DESCRIPTION			CITY APPROVAL		CHKD B	Y:]	6001-23SS	543-3	





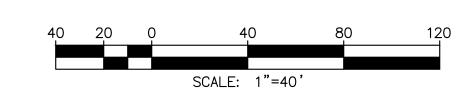
# CONSTRUCTION NOTES

- (22) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
- (29) INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.
- (38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
- (39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
- (52) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
- (55) INSTALL GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1.
- (61) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 40' SPACING.
- (IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.

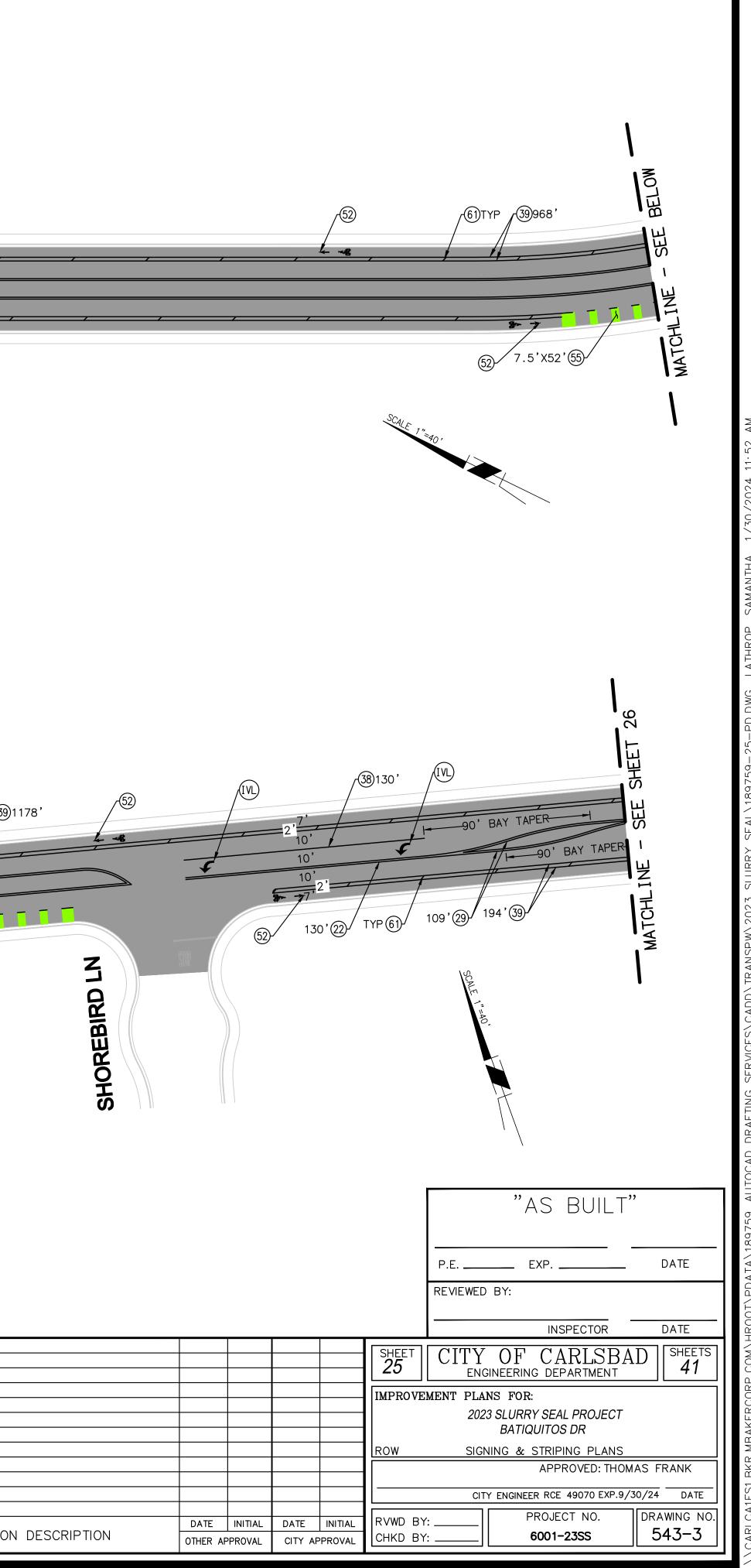


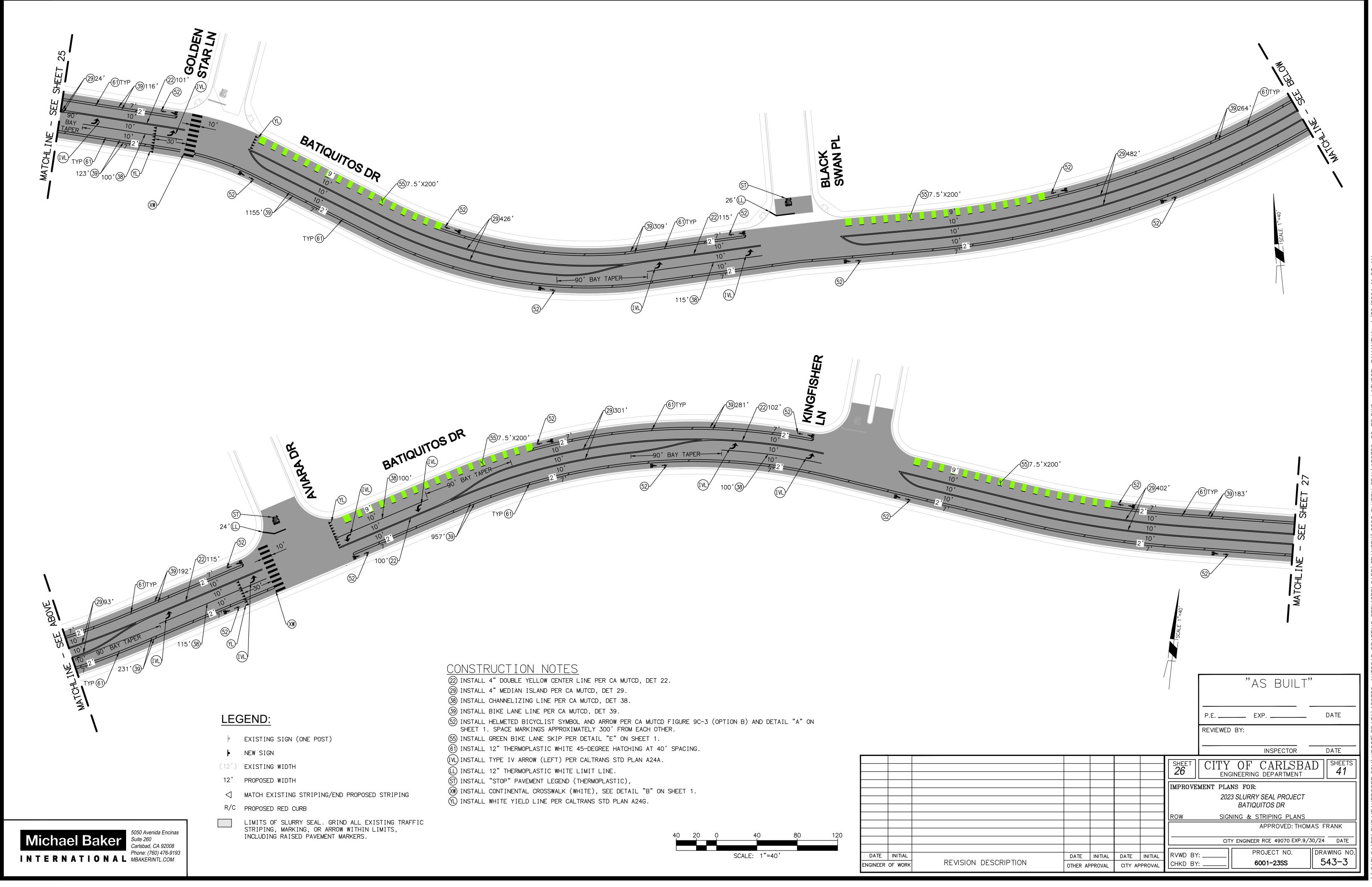
5050 Avenida Encinas Suite 260 Carlsbad, CA 92008 Phone: (760) 476-9193

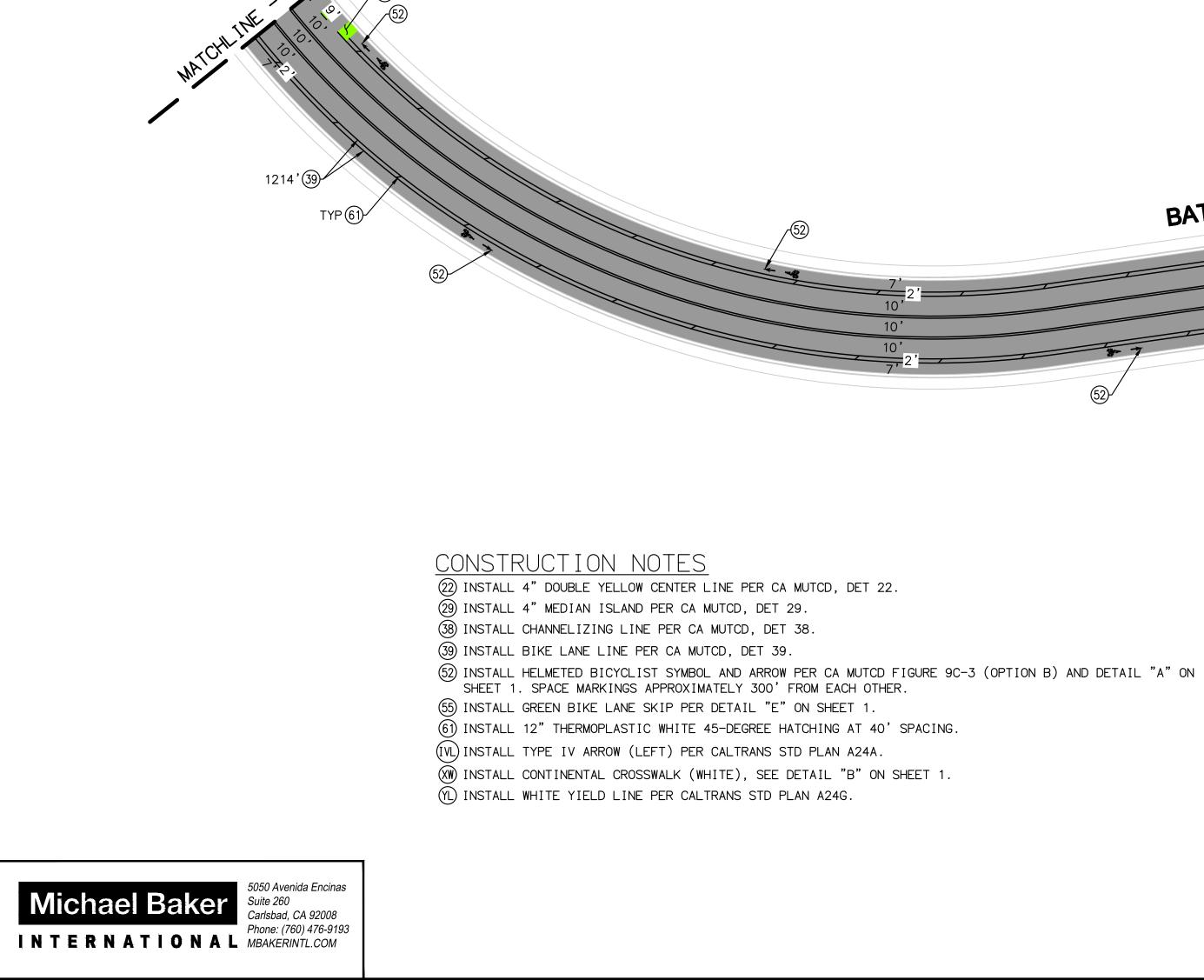
- EXISTING SIGN (ONE POST)
- NEW SIGN
- (12') EXISTING WIDTH
- 12' PROPOSED WIDTH
- ✓ MATCH EXISTING STRIPING/END PROPOSED STRIPING
- R/C PROPOSED RED CURB
- LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS.

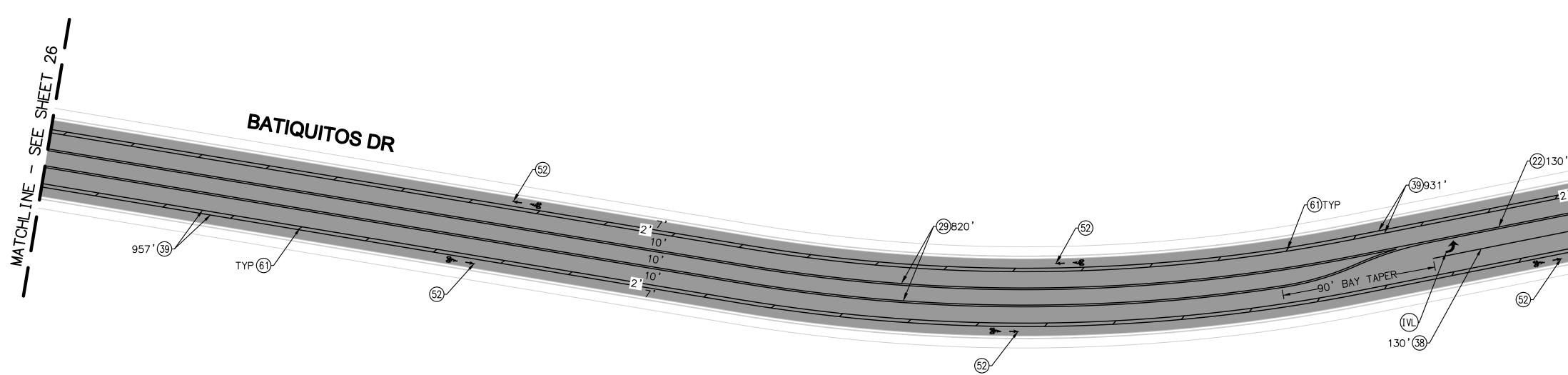


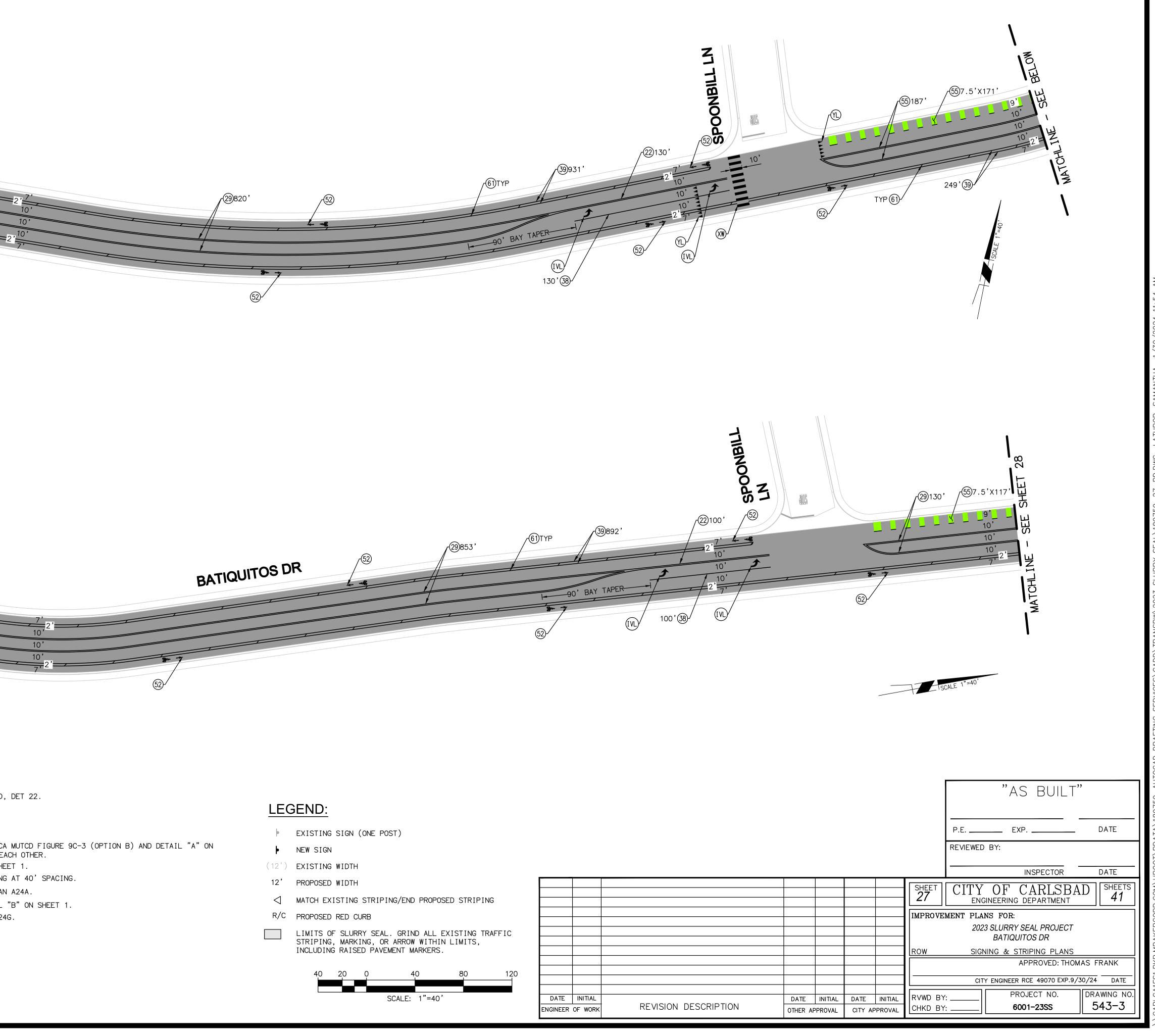
DATE INITIAL	_
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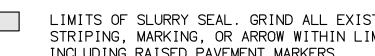


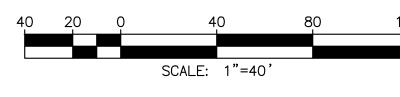








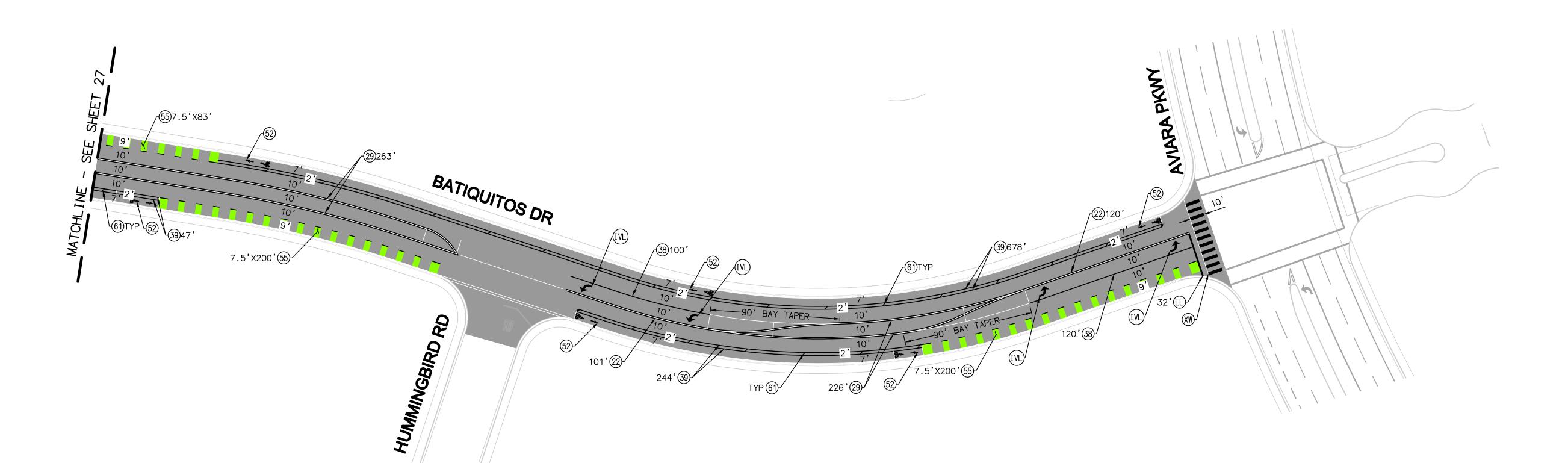




DATE	INITIAL	
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# Michael Baker Suite 260 Carlsbad, CA 92008 Phone: (760) 476-9193 INTERNATIONAL MBAKERINTL.COM

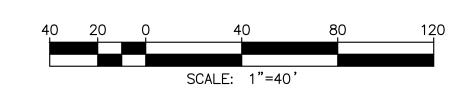
- (XW) INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.
- (L) INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.
- (IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
- (55) INSTALL GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1. (61) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 40' SPACING.
- SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
- (39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39. 52) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON
- (38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
- (29) INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.
- (22) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
- CONSTRUCTION NOTES



# LEGEND:

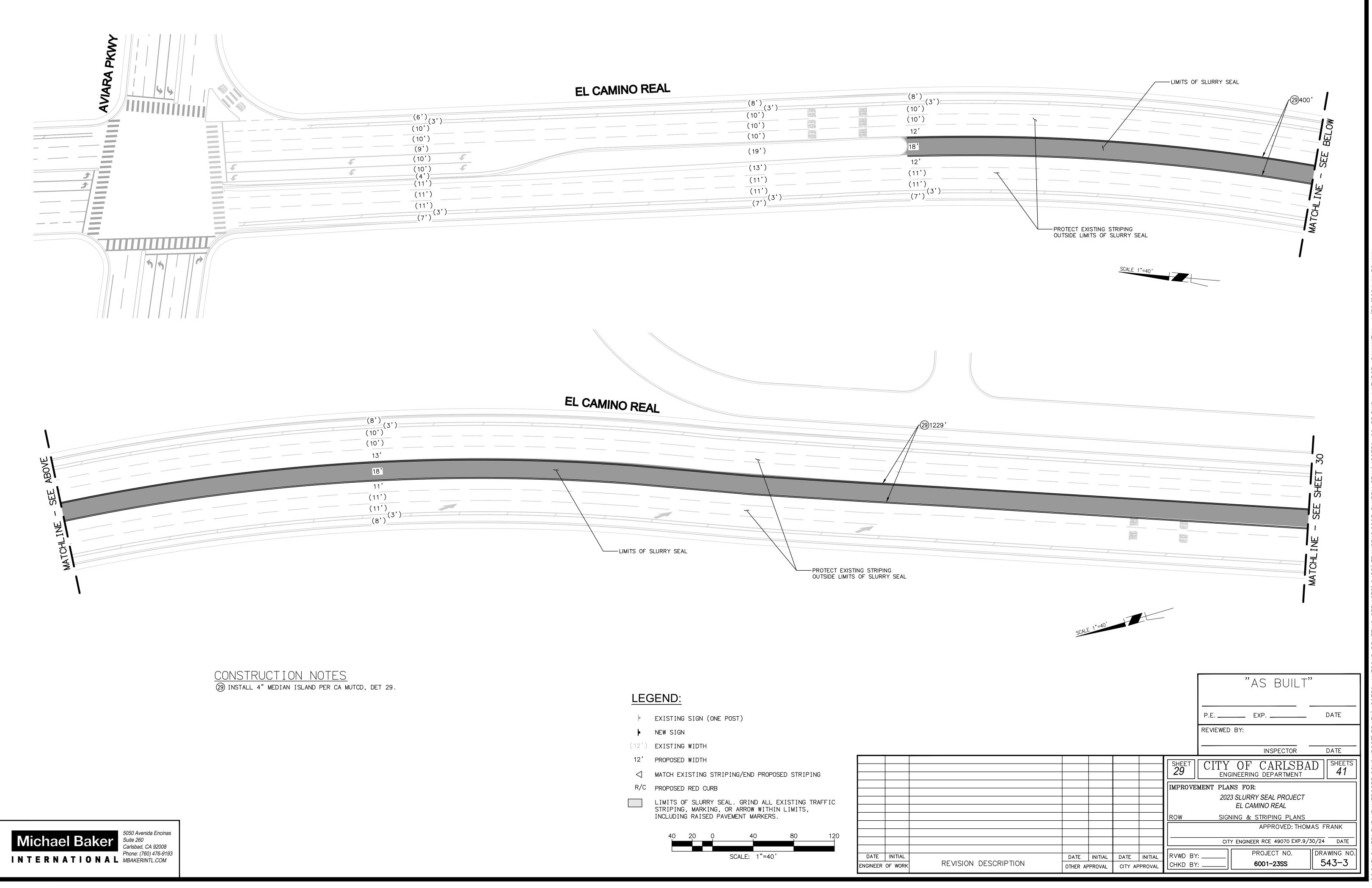
- EXISTING SIGN (ONE POST)
- NEW SIGN
- (12') EXISTING WIDTH
- 12' PROPOSED WIDTH
- ✓ MATCH EXISTING STRIPING/END PROPOSED STRIPING
- R/C PROPOSED RED CURB

LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS.



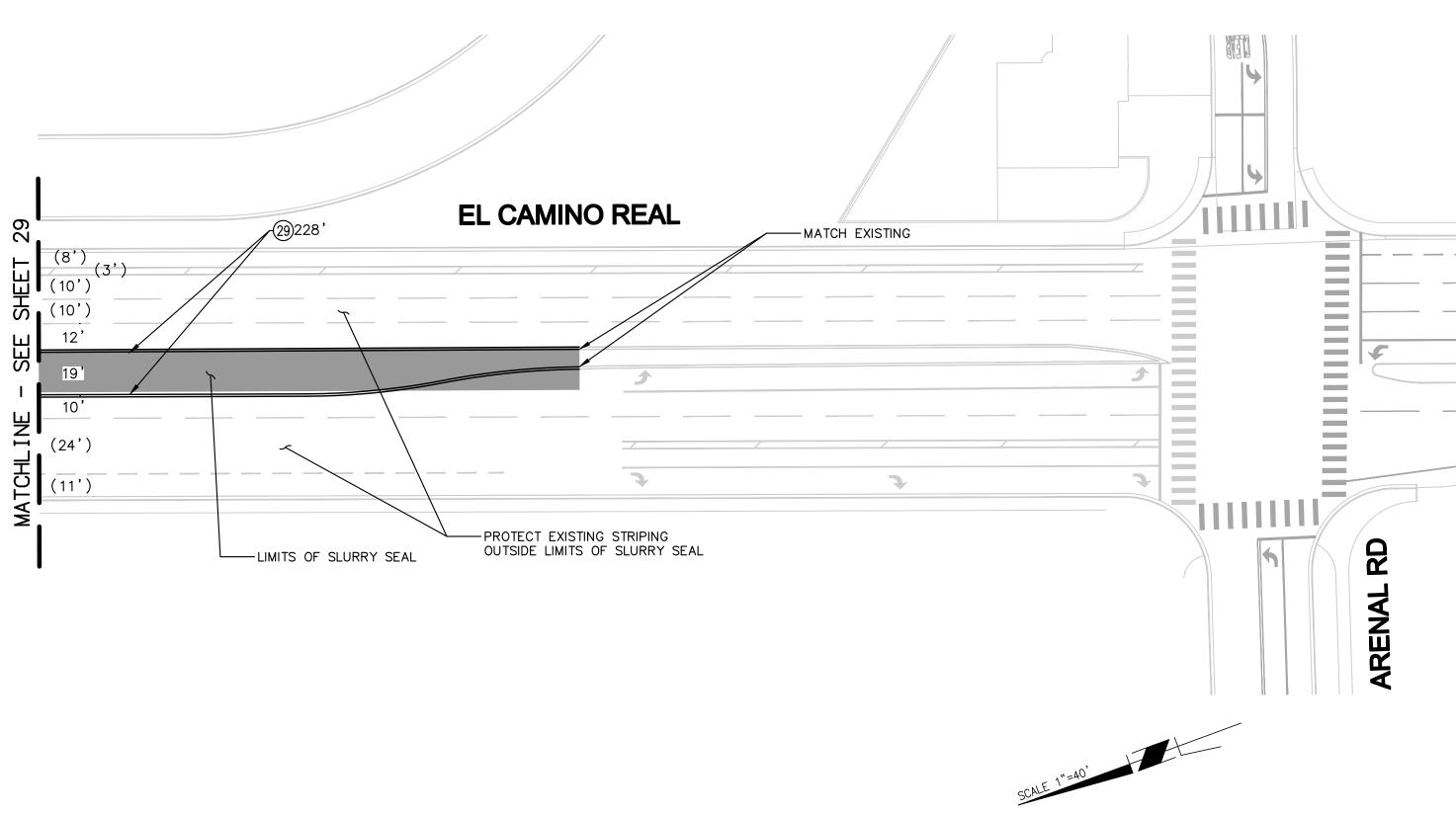
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							-	P.E EXP REVIEWED BY:		DATE
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							SHEET <b>28</b>	CITY OF CAR	LSBAD TMENT	SHEETS <b>41</b>
							IMPROVEN	ENT PLANS FOR: 2023 SLURRY SEAL PI BATIQUITOS DF		
							ROW	SIGNING & STRIPING APPROV	PLANS ÉD: THOMAS	FRANK
								CITY ENGINEER RCE 490		
DATE	INITIAL		DATE	INITIAL	DATE	INITIAL	RVWD BY:	PROJECT	11	RAWING NO.
ENGINEER	OF WORK	REVISION DESCRIPTION	OTHER AF	PROVAL	CITY AF	PROVAL	CHKD BY:	6001-235	s	543-3





(8') (10') (10') (10')	(8) (10') (10') 12'
(19')	18'
(13')	12'
(11') (7') $(3')$	(11') (7')

DATE	INITIAL	
ENGINEER	OF WORK	REVISION

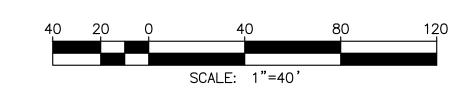


# <u>CONSTRUCTION NOTES</u> ② INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.



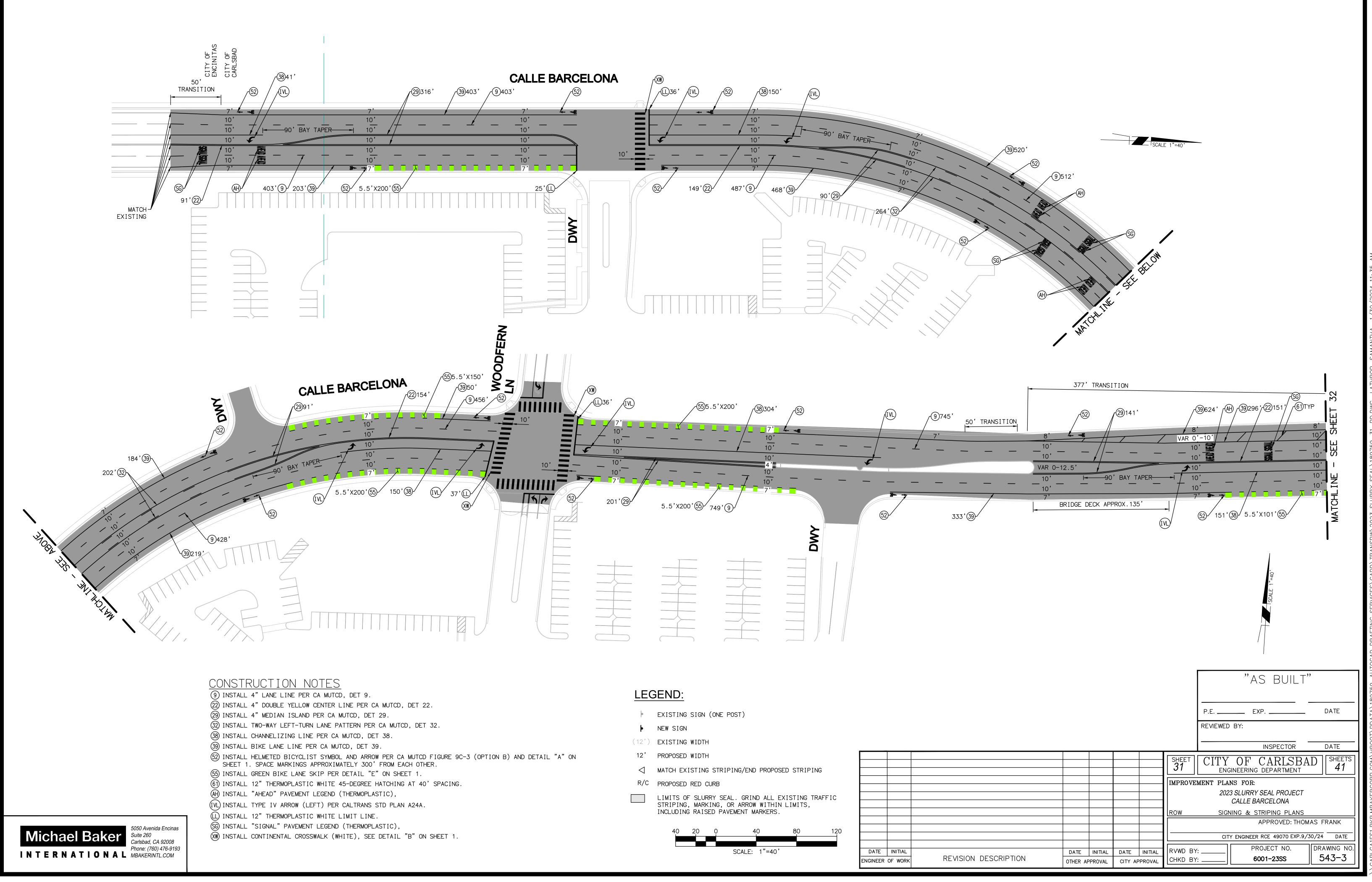
# LEGEND:

- EXISTING SIGN (ONE POST)
- NEW SIGN
- (12') EXISTING WIDTH
- 12' PROPOSED WIDTH
- ✓ MATCH EXISTING STRIPING/END PROPOSED STRIPING
- R/C PROPOSED RED CURB
- LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS.

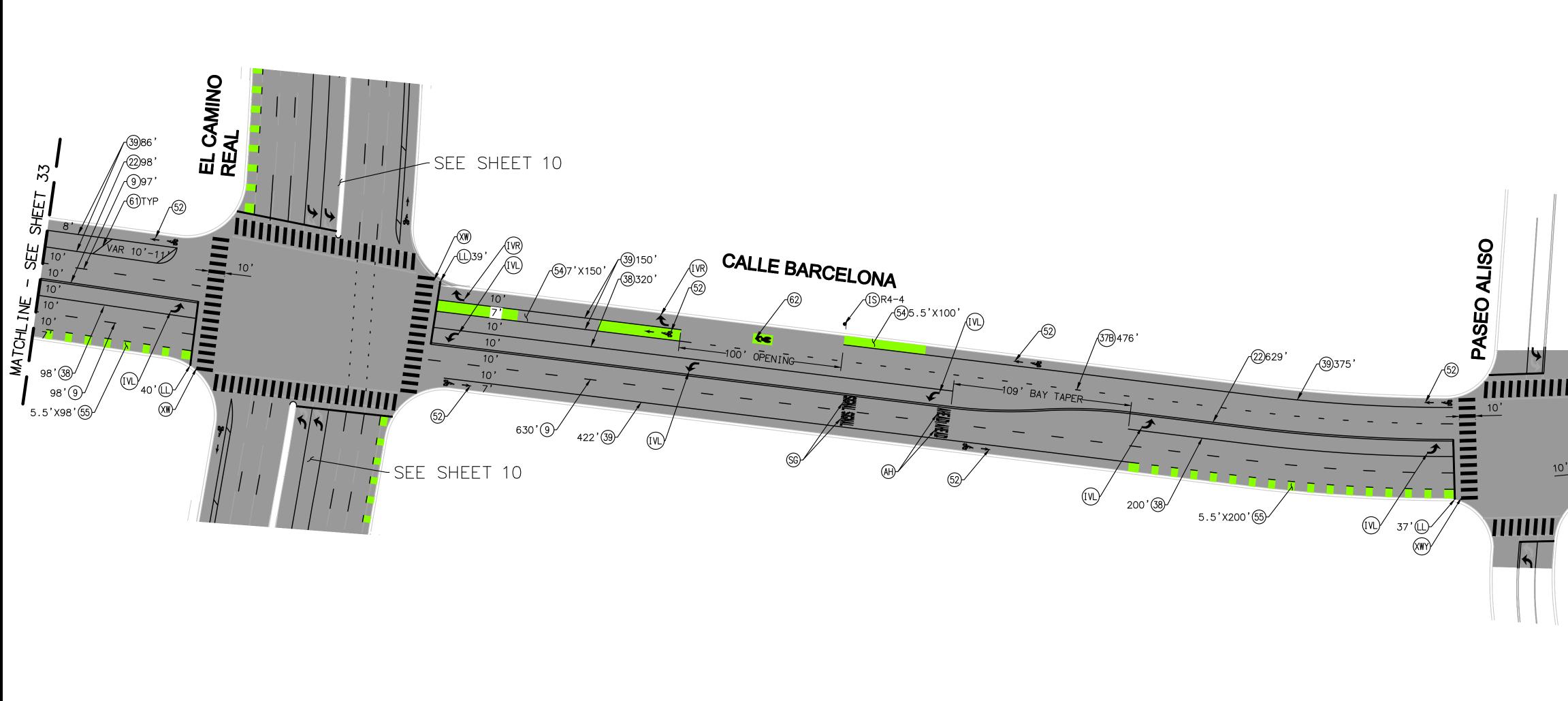


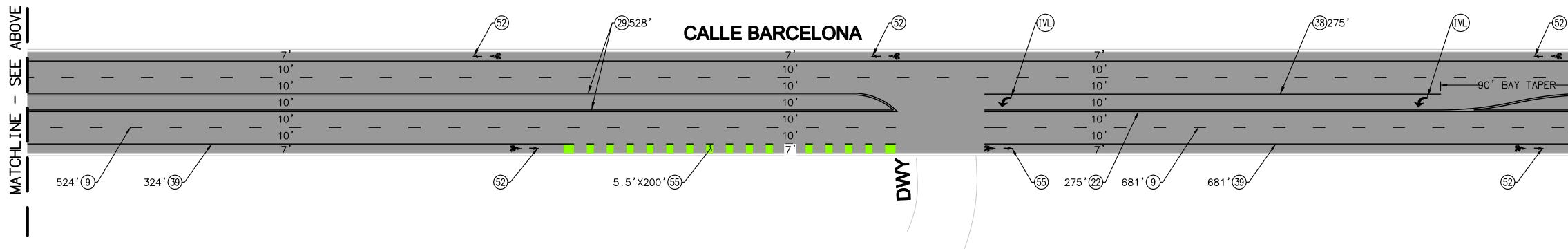
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INEER OF WORK REVISIO	OF WORK	ENGINEER

							"AS BUILT"	•
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						REVIEWED	BY:	DATE
					SHEET 30	CITY	OF CARLSBA	D SHEETS 41
					IMPROVE		NS FOR: 3 SLURRY SEAL PROJECT EL CAMINO REAL NING & STRIPING PLANS	
							APPROVED: THOM Y ENGINEER RCE 49070 EXP.9/3	
ON DESCRIPTION	DATE OTHER A	INITIAL PPROVAL	DATE CITY AF	INITIAL PPROVAL	RVWD BY CHKD BY		PROJECT NO. 6001-23SS	DRAWING NO. 543-3



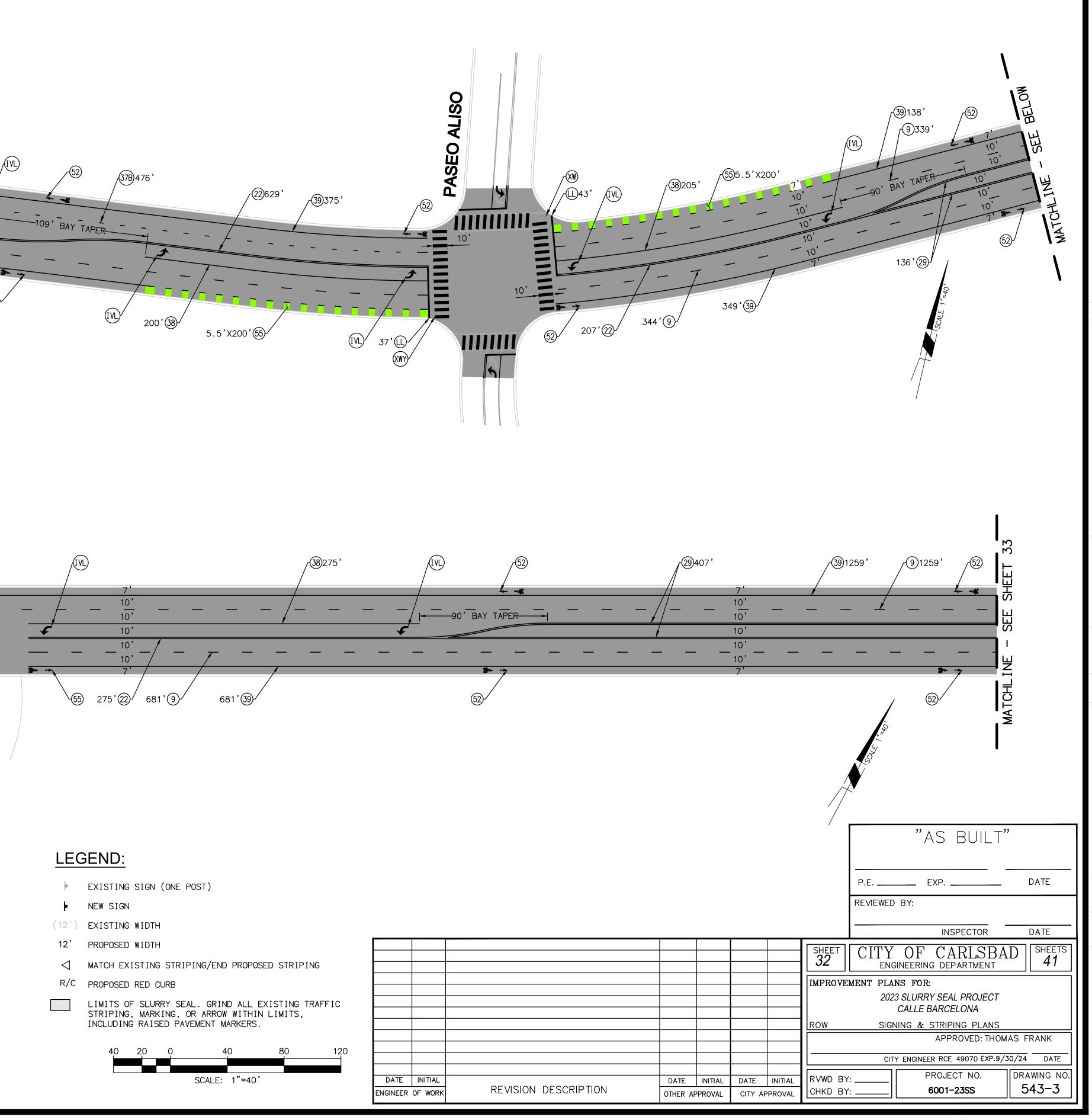
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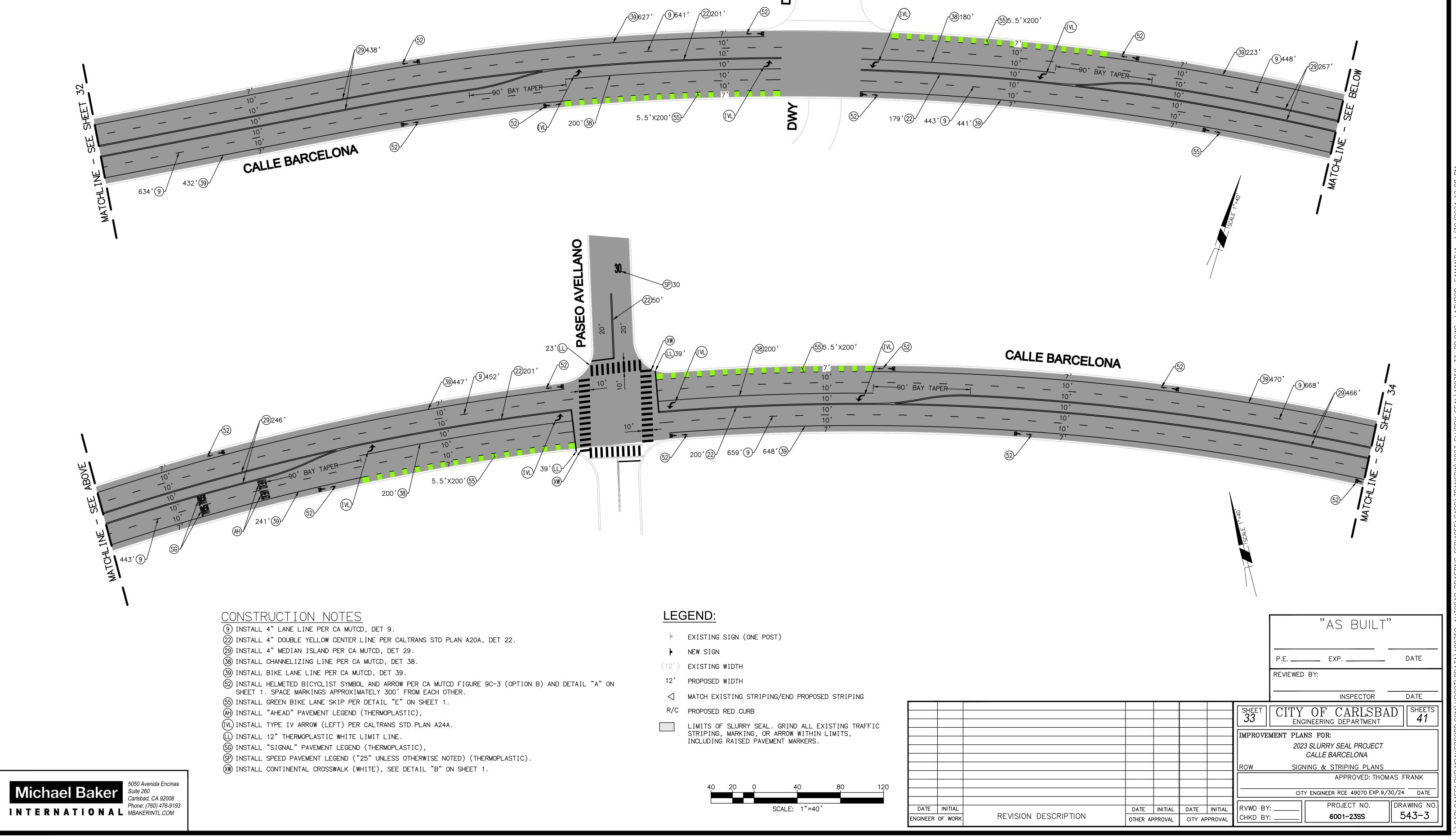


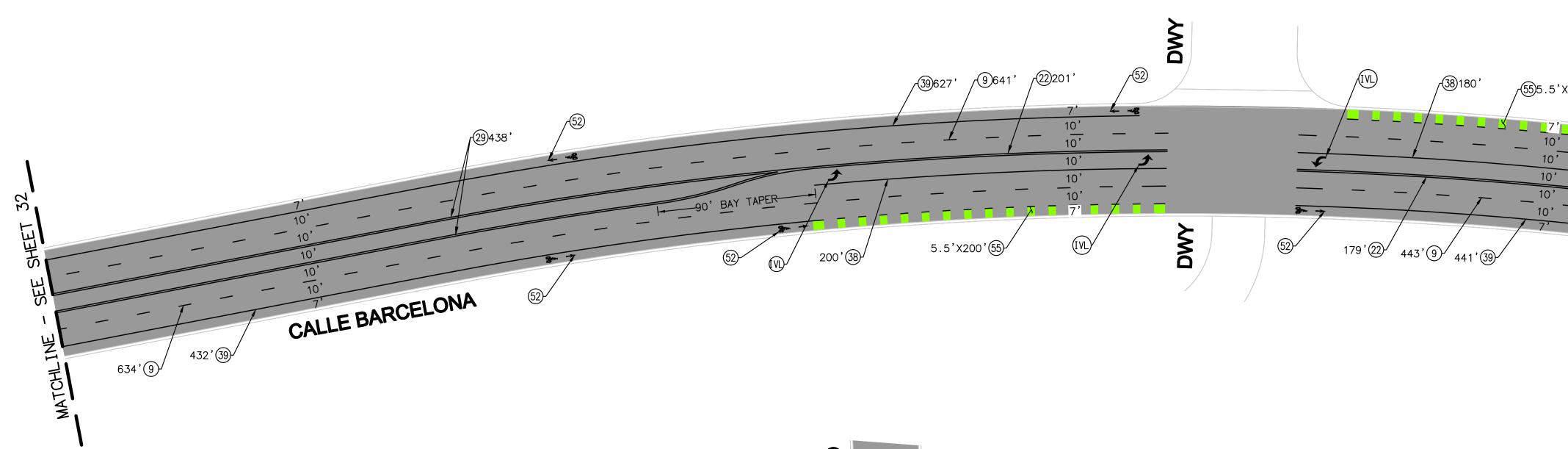
	CONSTRUCTION NOTES
	9 INSTALL 4" LANE LINE PER CA MUTCD, DET 9.
	2) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CALTRANS STD PLAN A20A, DET 22.
	29 INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.
	(37B) INSTALL 4" LANE LINE PER CA MUTCD, DET 37B.
	38 INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
	39 INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
	(52) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
	54) PAINT GREEN BIKE LANE. DIMENSIONS PER PLAN.
	(55) INSTALL GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1.
	6) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 40' SPACING.
	62) INSTALL SHARED ROADWAY BICYCLE MARKING WITH GREEN PAINT PER DETAIL "E" ON SHEET 1.
	(AH) INSTALL "AHEAD" PAVEMENT LEGEND (THERMOPLASTIC),
	(IS) INSTALL SIGN(S) AND POST IF REQUIRED AS NOTED.
	(IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
	(IVR) INTALL TYPE IV ARROW (RIGHT) PER CALTRANS STD PLAN A24A.
	(L) INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.
5050 Avenida Encinas	(SG) INSTALL "SIGNAL" PAVEMENT LEGEND (THERMOPLASTIC),
Michael Baker Suite 260 Carlsbad, CA 92008	(W) INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.
NTERNATIONAL MBAKERINTL.COM	(XWY) INSTALL CONTINENTAL CROSSWALK (YELLOW), SEE DETAIL "B" ON SHEET 1.

IN



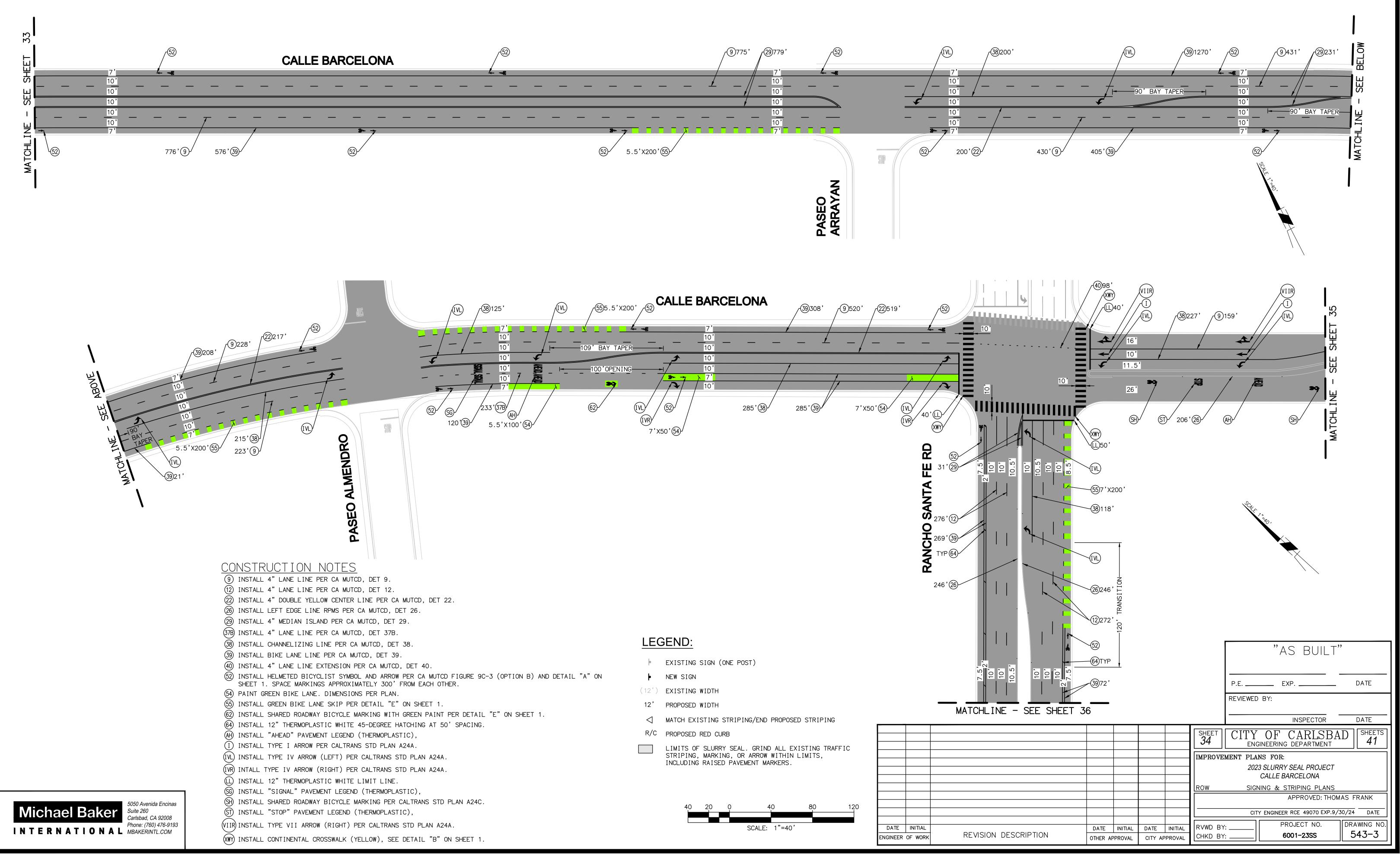


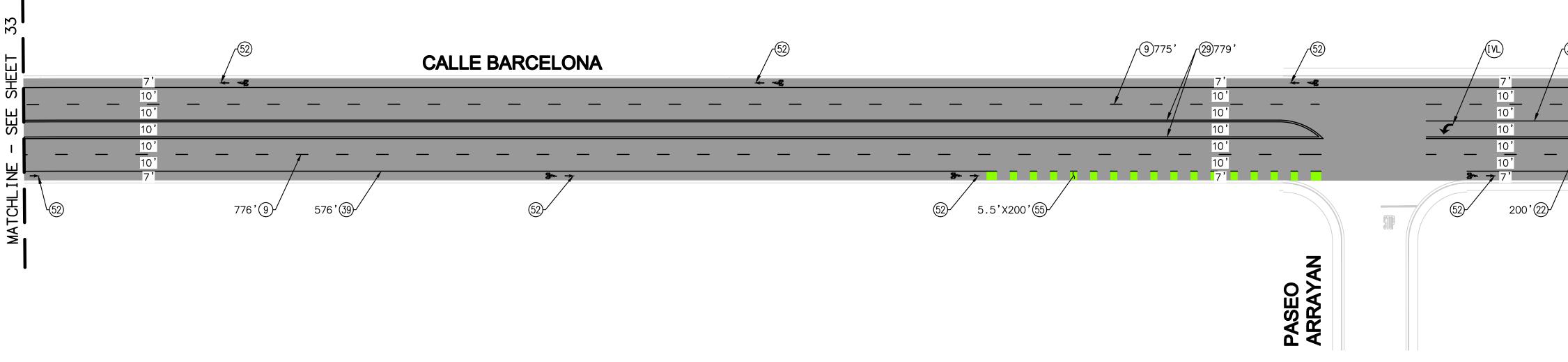


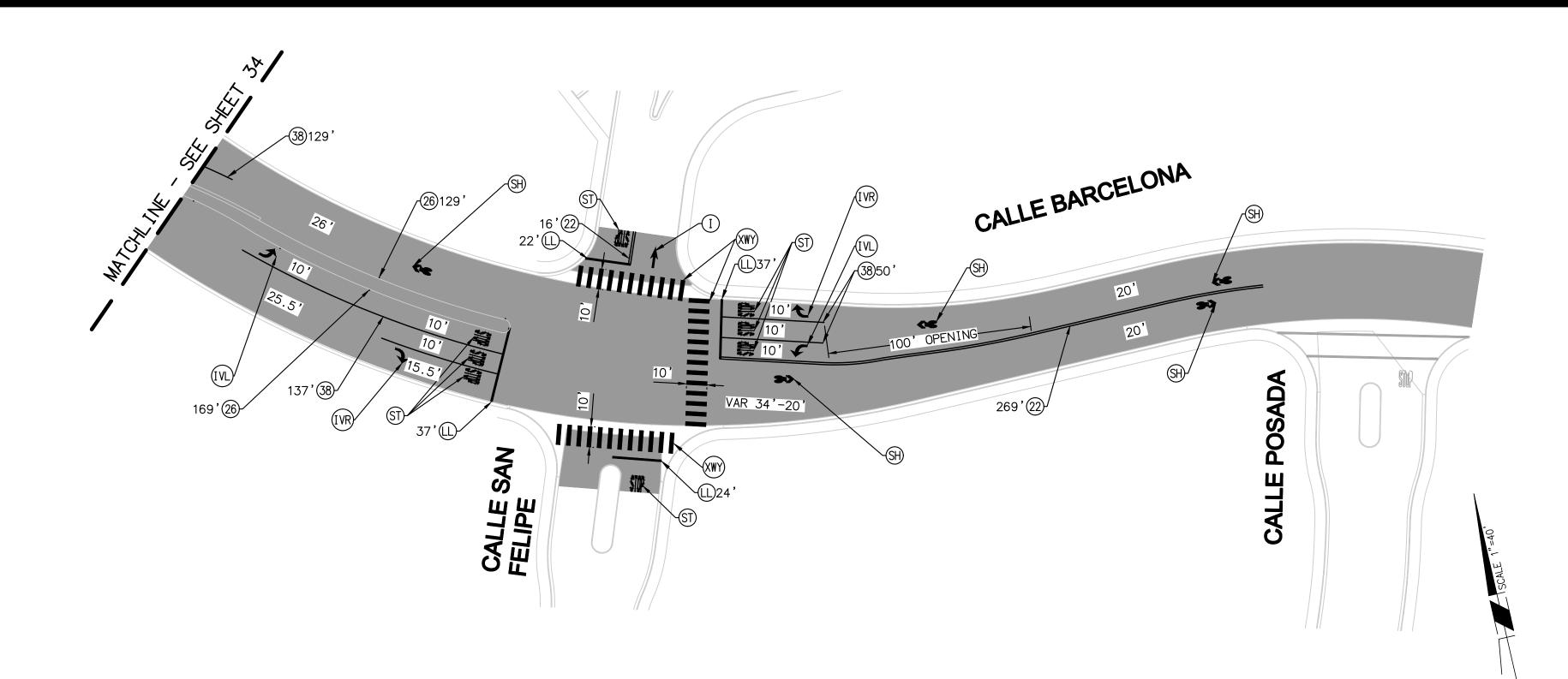


	LEG	<u>SEND:</u>			
DET 22.	þ	EXISTING SIGN (ONE POST)			
	•	NEW SIGN			
	(12')	EXISTING WIDTH			
C-3 (OPTION B) AND DETAIL "A" ON	12'	PROPOSED WIDTH			
	$\triangleleft$	MATCH EXISTING STRIPING/END PROPOSED STRIPING	ř		 
	R/C	PROPOSED RED CURB			 
		LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS.			 
MOPLASTIC).					 
		40 20 0 40 80 120			
		SCALE: 1"=40'	DATE	INITIAL	 

Feb. 5*,* 2024







## CONSTRUCTION NOTES

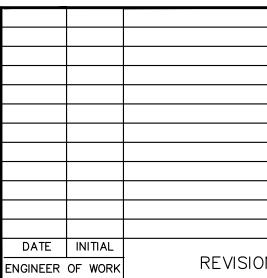
- (22) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
- (26) INSTALL LEFT EDGE LINE RPMS PER CA MUTCD, DET 26.
- (38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
- (I) INSTALL TYPE I ARROW PER CALTRANS STD PLAN A24A.
- (IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
- (IVR) INTALL TYPE IV ARROW (RIGHT) PER CALTRANS STD PLAN A24A.
- (L) INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.
- (SH) INSTALL SHARED ROADWAY BICYCLE MARKING PER CALTRANS STD PLAN A24C.
- ST INSTALL "STOP" PAVEMENT LEGEND (THERMOPLASTIC),
- (XWY) INSTALL CONTINENTAL CROSSWALK (YELLOW), SEE DETAIL "B" ON SHEET 1.



# LEGEND:

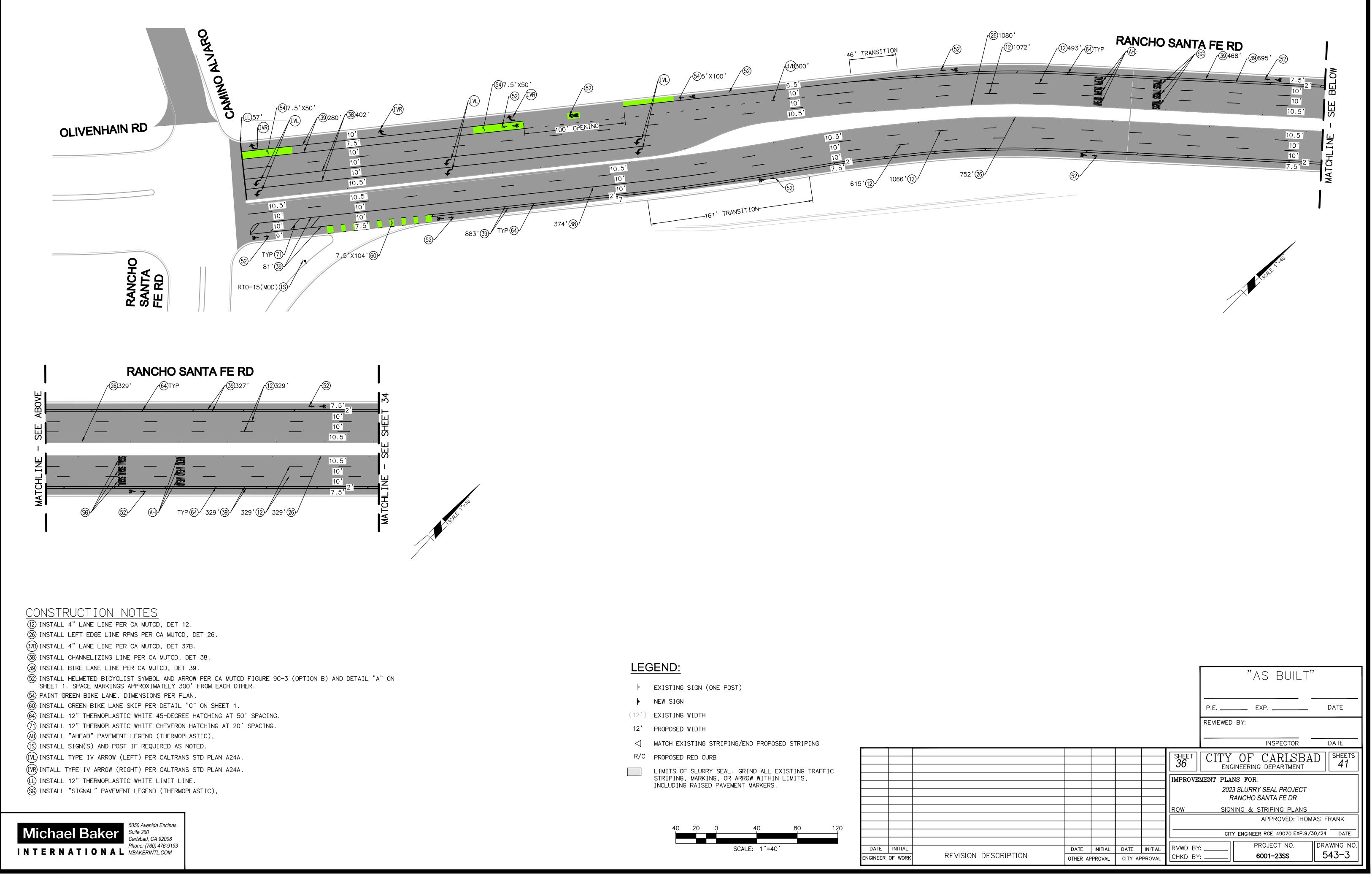
EXISTING SIGN (ONE POST) NEW SIGN (12') EXISTING WIDTH 12' PROPOSED WIDTH MATCH EXISTING STRIPING/END PROPOSED STRIPING R/C PROPOSED RED CURB LIMITS OF SLURRY SEAL. GRIND ALL EXISTING TRAFFIC STRIPING, MARKING, OR ARROW WITHIN LIMITS, INCLUDING RAISED PAVEMENT MARKERS. 40 20 

SCALE: 1"=40'

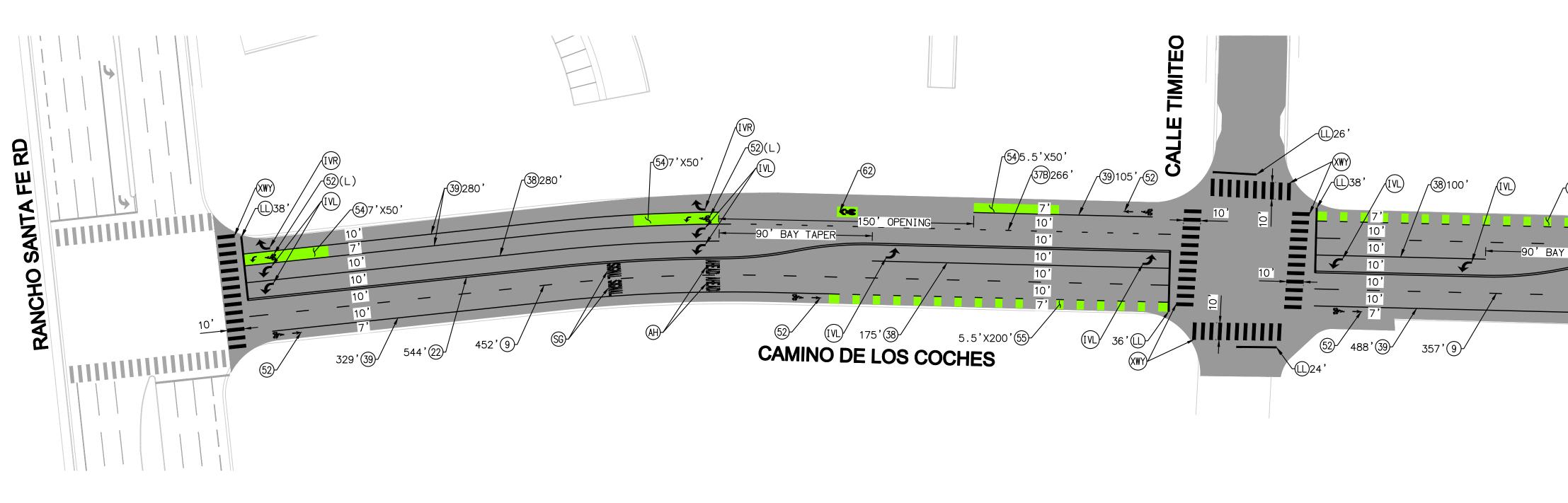


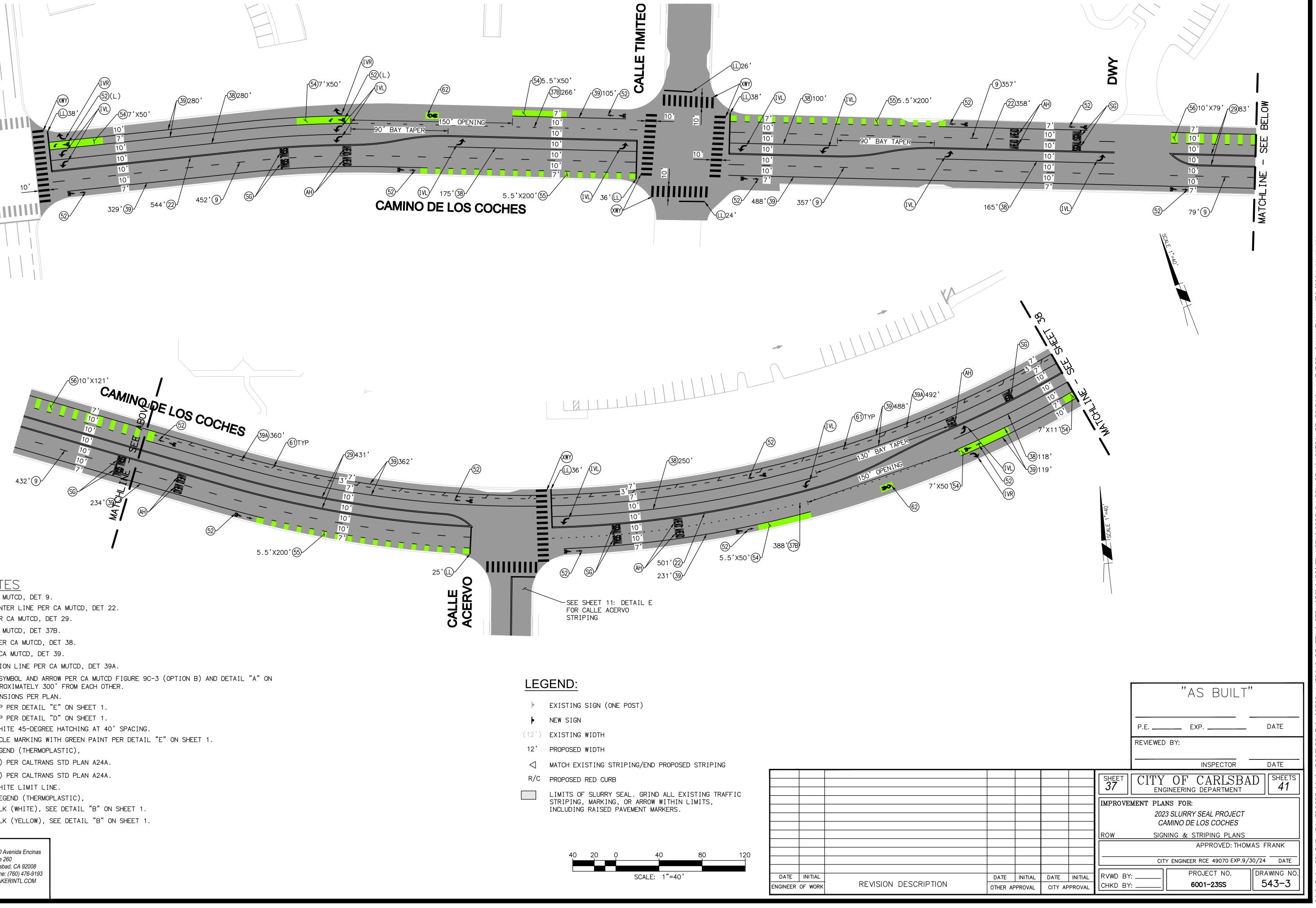
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							"AS BUILT"	2
						P.E	EXP	DATE
						REVIEWED	BY: INSPECTOR	DATE
					sheet <b>35</b>		OF CARLSBA	D 41
					IMPROVE	MENT PLA	NS FOR:	
						202	3 SLURRY SEAL PROJECT CALLE BARCELONA	
					ROW	SIG	NING & STRIPING PLANS	
							APPROVED: THOM	AS FRANK
						CIT	Y ENGINEER RCE 49070 EXP.9/3	30/24 DATE
	DATE	INITIAL	DATE	INITIAL	RVWD BY	·:	PROJECT NO.	DRAWING NO.
ON DESCRIPTION	OTHER AF			PROVAL	CHKD BY		6001-23SS	543-3



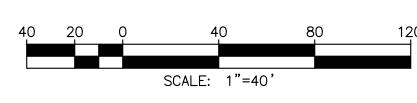
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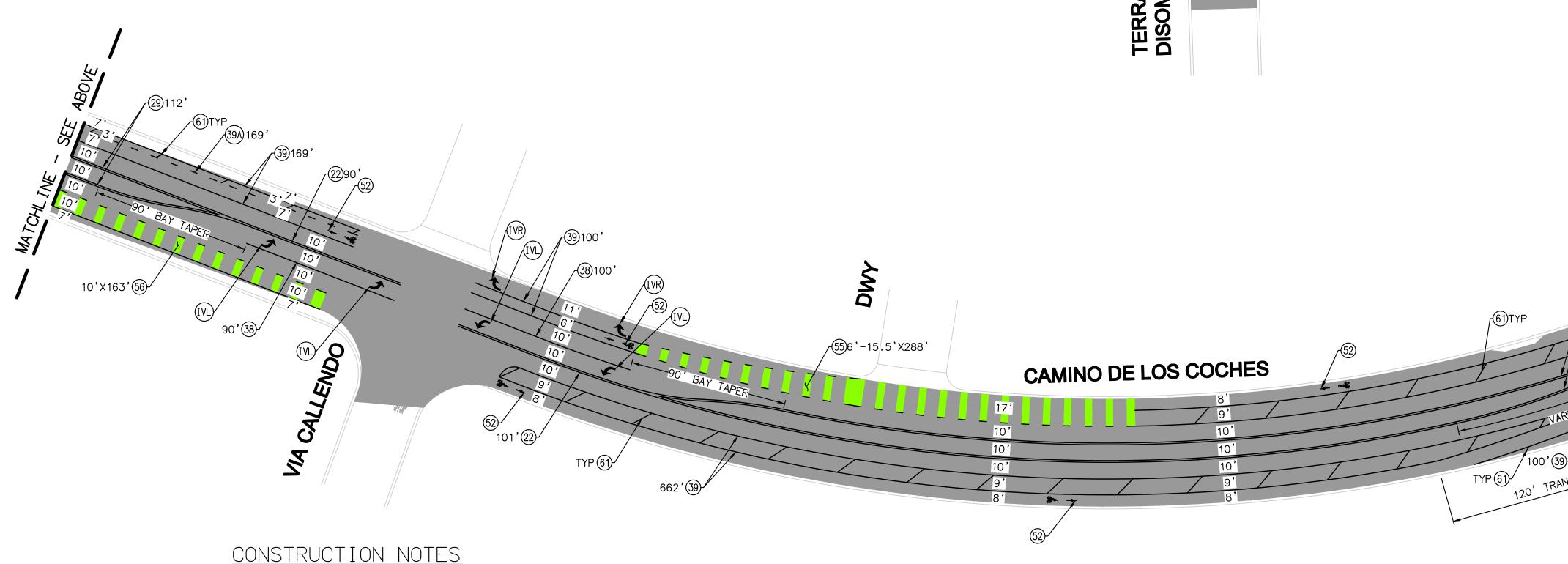
CONSTRUCTION NOTES
(9) INSTALL 4" LANE LINE PER CA MUTCD, DET 9.
2) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.
29 INSTALL 4" MEDIAN ISLAND PER CA MUTCD, DET 29.
(37B) INSTALL 4" LANE LINE PER CA MUTCD, DET 37B.
(38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.
(39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.
(39A) INSTALL BIKE LANE INTERSECTION LINE PER CA MUTCD, DET 39A.
52) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.
54) PAINT GREEN BIKE LANE. DIMENSIONS PER PLAN.
(55) INSTALL GREEN BIKE LANE SKIP PER DETAIL "E" ON SHEET 1.
(56) INSTALL GREEN BIKE LANE SKIP PER DETAIL "D" ON SHEET 1.
(61) INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 40' SPACING.
62) INSTALL SHARED ROADWAY BICYCLE MARKING WITH GREEN PAINT PER DETAIL "E" ON SHEET 1.
(AH) INSTALL "AHEAD" PAVEMENT LEGEND (THERMOPLASTIC),
(IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.
(IVR) INTALL TYPE IV ARROW (RIGHT) PER CALTRANS STD PLAN A24A.
L INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.
SG INSTALL "SIGNAL" PAVEMENT LEGEND (THERMOPLASTIC),
(XW) INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.
(XWY) INSTALL CONTINENTAL CROSSWALK (YELLOW), SEE DETAIL "B" ON SHEET 1.

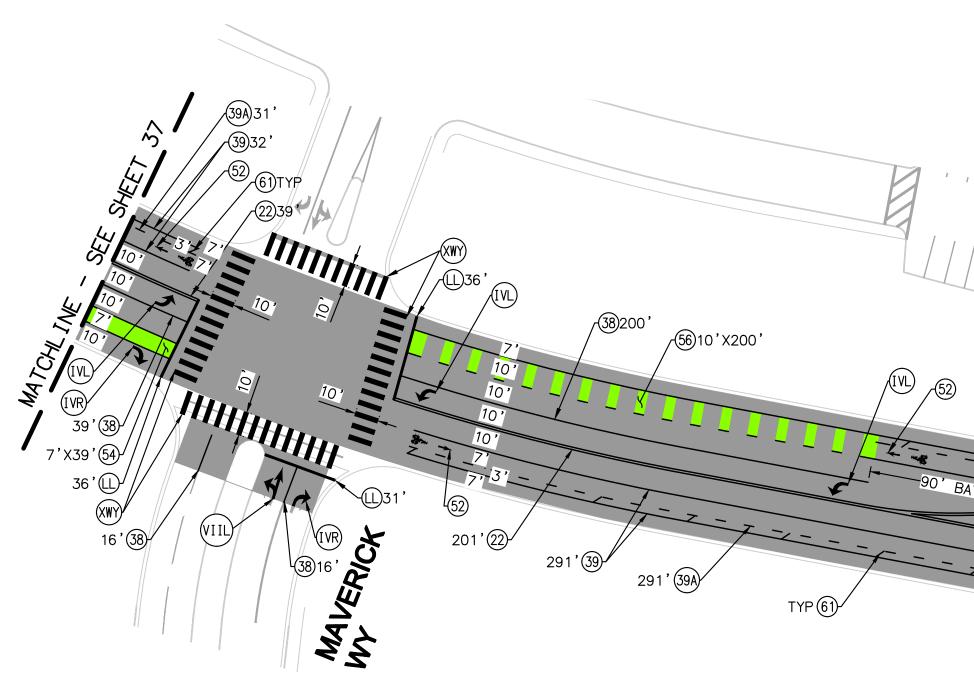


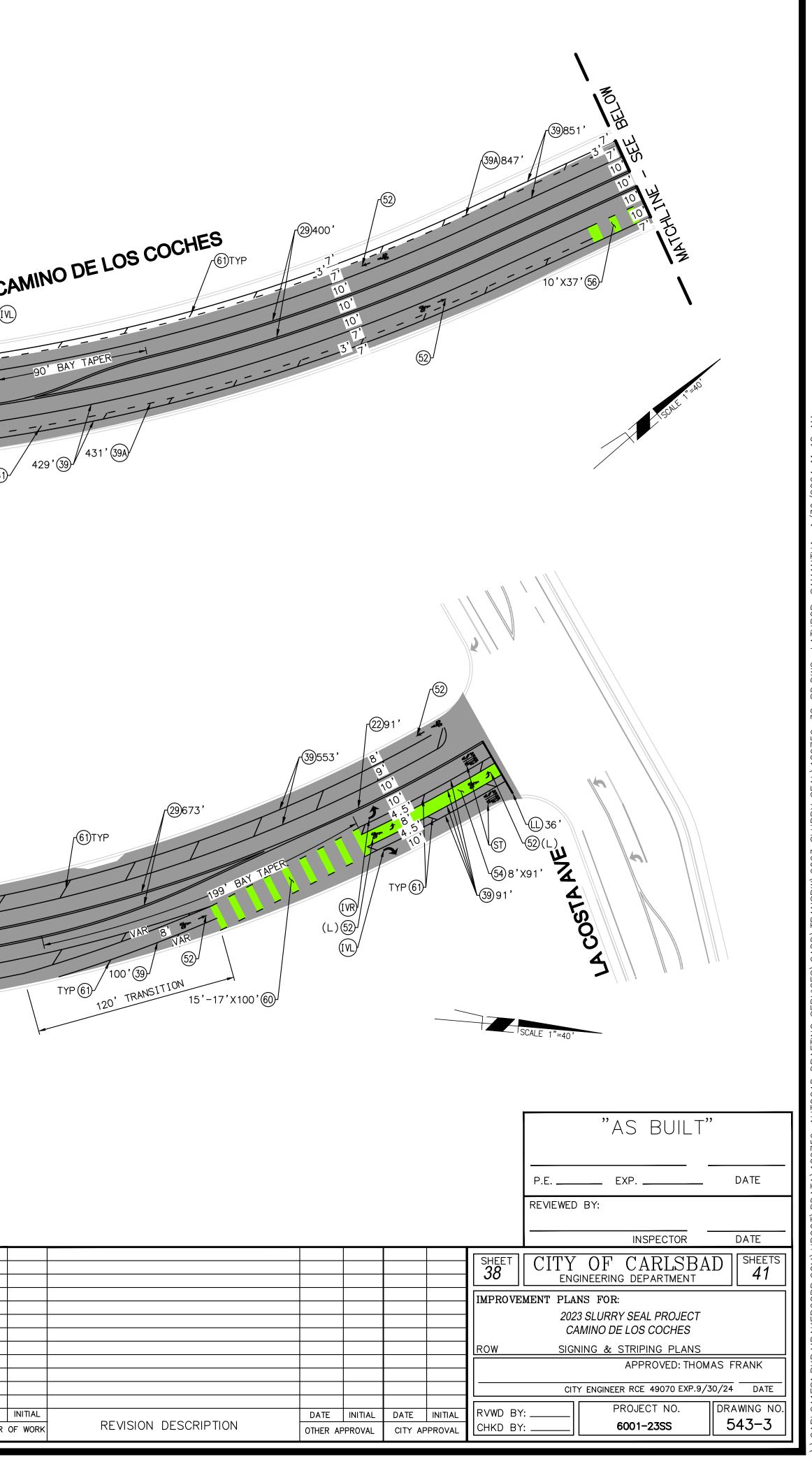


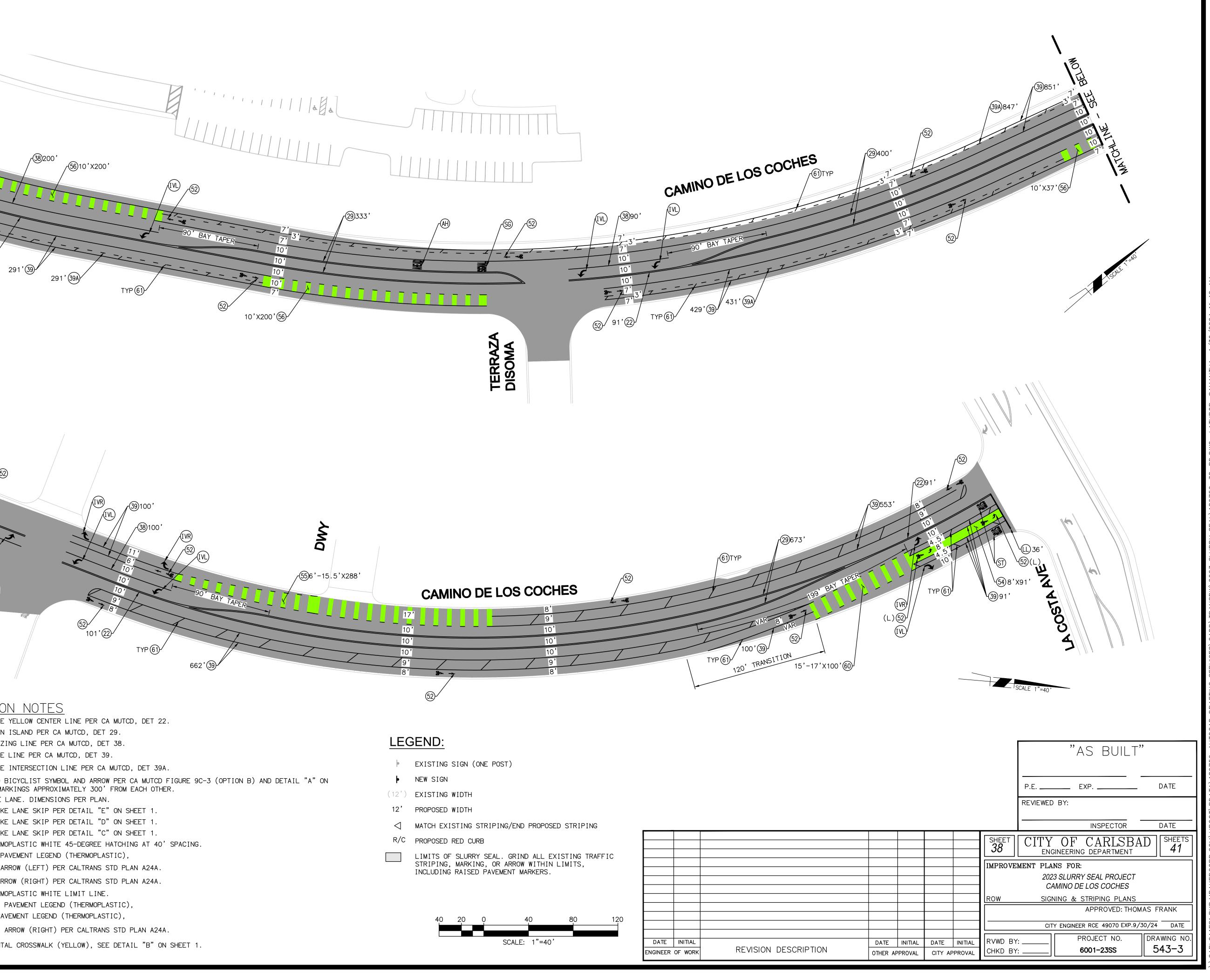
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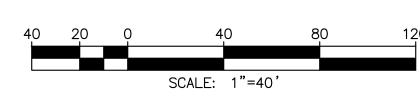
U X163'56	10' 10' 10' 10'
S050 Avenida Encinas	<ul> <li>CONSTRUCTION NOTES</li> <li>install 4" double yellow center line per ca mutcd, det 22.</li> <li>install 4" median island per ca mutcd, det 29.</li> <li>install channelizing line per ca mutcd, det 38.</li> <li>install bike lane line per ca mutcd, det 39.</li> <li>install bike lane line per ca mutcd, det 39.</li> <li>install bike lane intersection line per ca mutcd, det 39a.</li> <li>install helmeted bicyclist symbol and arrow per ca mutcd figure sheet 1. Space markings approximately 300' from each other.</li> <li>install green bike lane. Dimensions per plan.</li> <li>install green bike lane skip per detail "e" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install green bike lane skip per detail "c" on sheet 1.</li> <li>install 12" thermoplastic white 45-degree hatching at 40' spacin white install "ahead" pavement legend (thermoplastic),</li> <li>install 12" thermoplastic white limit line.</li> <li>install 12" thermoplastic white limit line.</li> <li>install "signal" pavement legend (thermoplastic),</li> <li>install "signal" pavement legend (thermoplastic),</li> <li>install "signal" pavement legend (thermoplastic),</li> </ul>
Michael Baker INTERNATIONAL BAKERINTL.COM	(VIIL) INSTALL TYPE VII ARROW (RIGHT) PER CALTRANS STD PLAN A24A.



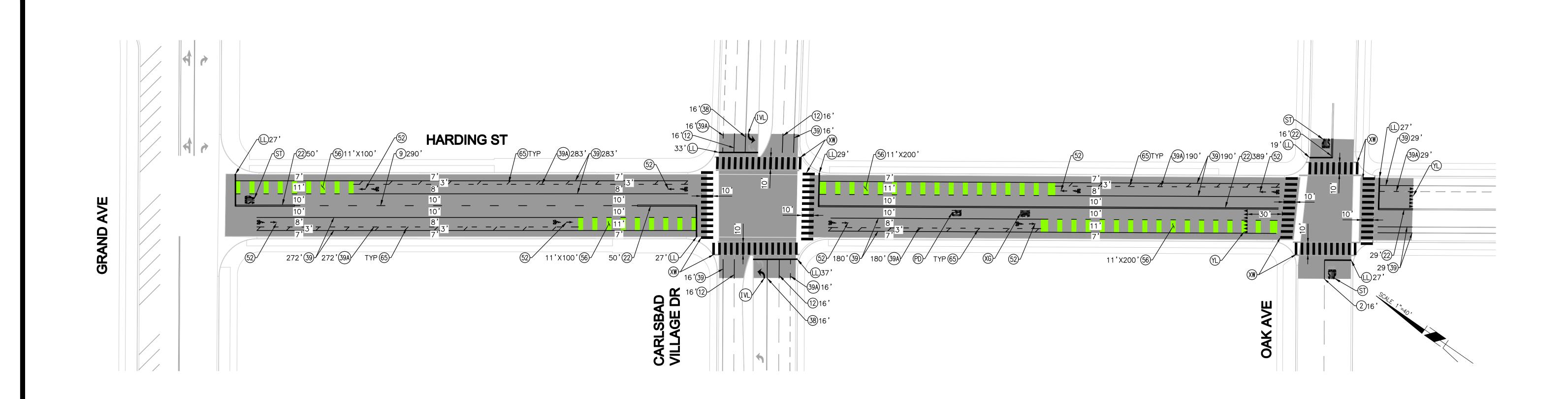








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# CONSTRUCTION NOTES

(2) INSTALL 4" CENTERLINE PER CA MUTCD, DET 2. UNLESS OTHERWISE NOTED, DET 2 SHALL FOLLOW 50' OF DETAIL 22 AT THE INTERSECTION PER DETAIL "G" ON SHEET 1.

(52) INSTALL HELMETED BICYCLIST SYMBOL AND ARROW PER CA MUTCD FIGURE 9C-3 (OPTION B) AND DETAIL "A" ON

- (9) INSTALL 4" LANE LINE PER CA MUTCD, DET 9.

(22) INSTALL 4" DOUBLE YELLOW CENTER LINE PER CA MUTCD, DET 22.

(39A) INSTALL BIKE LANE INTERSECTION LINE PER CA MUTCD, DET 39A.

56 INSTALL GREEN BIKE LANE SKIP PER DETAIL "D" ON SHEET 1.

(IVL) INSTALL TYPE IV ARROW (LEFT) PER CALTRANS STD PLAN A24A.

SHEET 1. SPACE MARKINGS APPROXIMATELY 300' FROM EACH OTHER.

65 INSTALL 12" THERMOPLASTIC WHITE 45-DEGREE HATCHING AT 25' SPACING.

(XW) INSTALL CONTINENTAL CROSSWALK (WHITE), SEE DETAIL "B" ON SHEET 1.

5050 Avenida Encinas

Phone: (760) 476-9193

- (12) INSTALL 4" LANE LINE PER CA MUTCD, DET 12.

(38) INSTALL CHANNELIZING LINE PER CA MUTCD, DET 38.

(39) INSTALL BIKE LANE LINE PER CA MUTCD, DET 39.

(LL) INSTALL 12" THERMOPLASTIC WHITE LIMIT LINE.

Michael Baker Suite 260 Carlsbad, CA 92008

INTERNATIONAL MBAKERINTL.COM

(PD) INSTALL "PED" PAVEMENT LEGEND (THERMOPLASTIC).

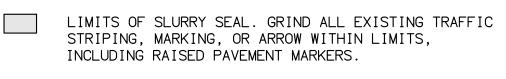
(ST) INSTALL "STOP" PAVEMENT LEGEND (THERMOPLASTIC), (C) INSTALL "XING" PAVEMENT LEGEND (THERMOPLASTIC),

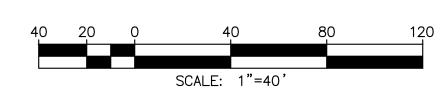
(YL) INSTALL WHITE YIELD LINE PER CALTRANS STD PLAN A24G.

Feb. 5*,* 2024

# LEGEND:

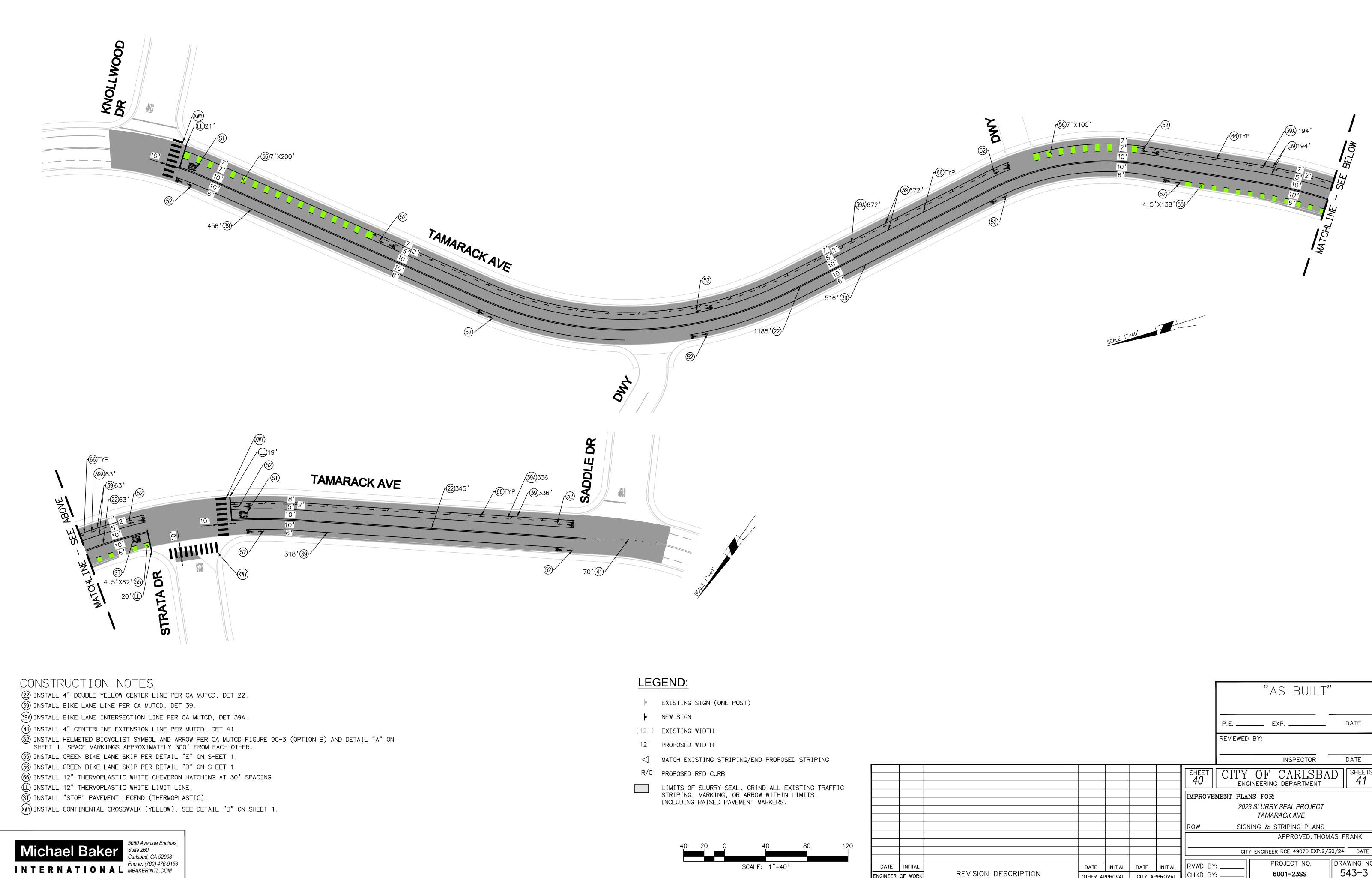
- EXISTING SIGN (ONE POST)
- NEW SIGN
- (12') EXISTING WIDTH
- 12' PROPOSED WIDTH
- ✓ MATCH EXISTING STRIPING/END PROPOSED STRIPING
- R/C PROPOSED RED CURB



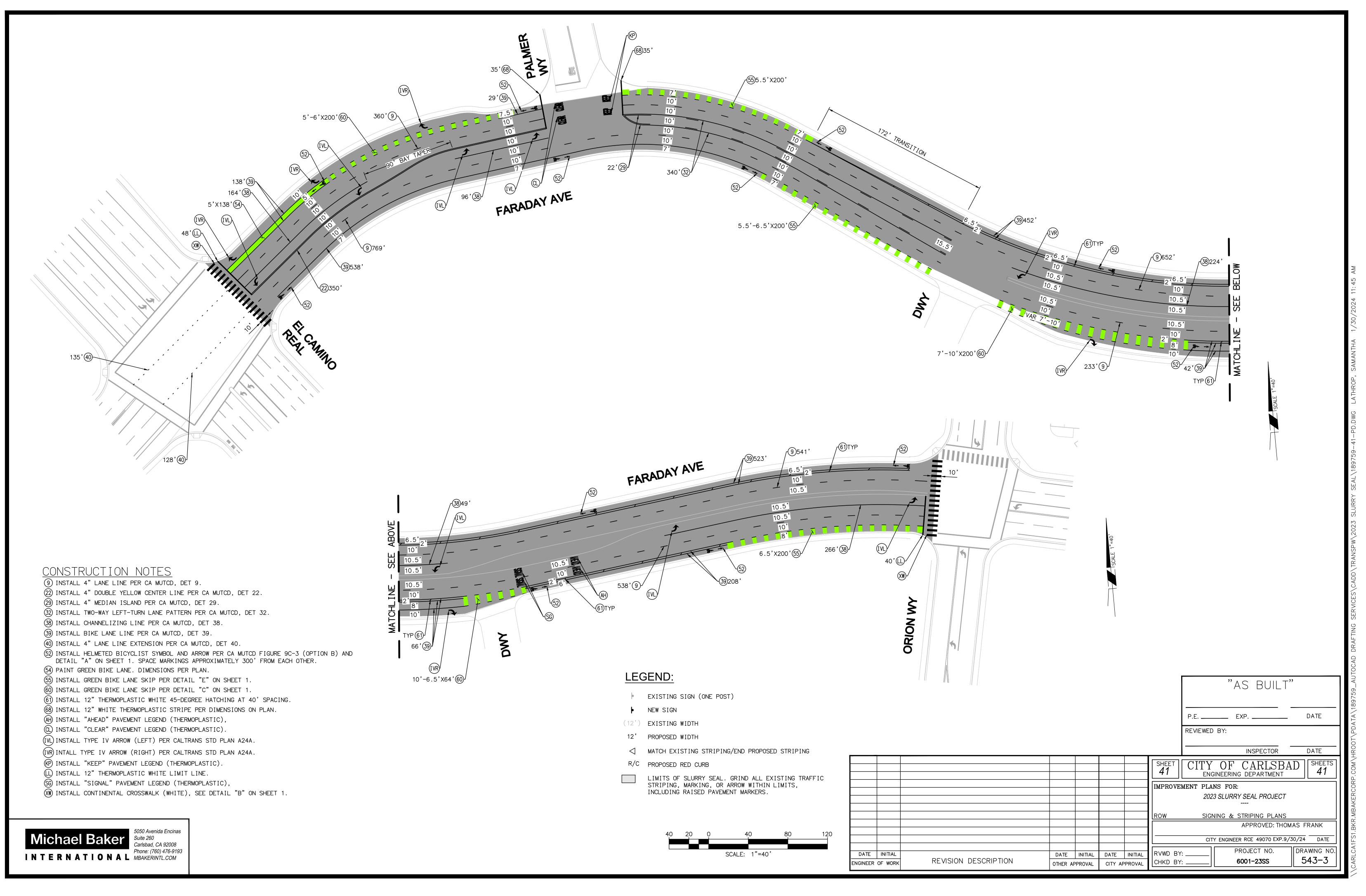


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# SAFER SAFER STREETS TOGETHER

# DRAFT OPTIONS SEPT. 27, 2022



Item #1

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## Introduction

National traffic safety trends show a dramatic increase in traffic-related deaths, with the first quarter of 2022 showing the highest number of deaths in two decades. Here in Carlsbad, injury collisions involving bikes and e-bikes have increased over 200% since 2019, with roughly half of those being e-bikes in 2022. Community members have requested more neighborhood traffic calming, more enforcement, stricter laws and faster implementation of the city's program to adapt local streets to current and future uses, which include more biking and walking.

The city has recently taken several steps to address these concerns:

- Approved a new comprehensive plan to transform the city's road network to one that prioritizes moving people, not just cars, and prioritized implementation in the city's annual budget
- Completed dozens of projects to slow traffic and expand bike lanes and sidewalks
- Passed stricter rules for e-bikes and similar motorized mobility devices
- Implemented a public education program focused on safe biking, including e-bikes
- Increased enforcement related to roadway safety and traffic violations

Despite these efforts, collisions involving bikes and e-bikes in 2022 are tracking at the same unprecedented rate as last year's high of one collision nearly every three days. With children throughout Carlsbad returning to school in August and given the significant increase in bike and e-bike collisions, the City of Carlsbad declared a local emergency on Aug. 23, 2022, to immediately provide more options, tools and resources to reverse this trend.

## About this plan

This plan provides potential immediate and longer-term actions to address traffic safety in three main areas, often referred to as the three Es of traffic safety:



#### **EDUCATION**

Raise awareness of traffic safety rules and create a strong social norm around traffic safety behaviors.



#### **ENGINEERING**

Design roads and other infrastructure to support the safe movement of people through all modes of travel.

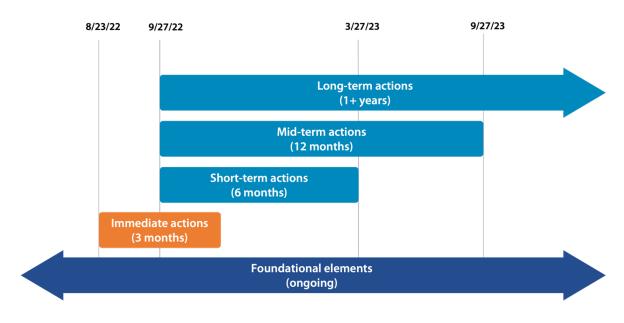


#### **ENFORCEMENT**

Hold all users accountable for following the rules of the road and engaging in safe behaviors.

#### Strategies and actions

Specific strategies, policies and approaches are presented as options according to the following timeframes:



#### **Estimated costs**

Many initiatives in this plan are already funded and able to move forward. Others have funding sources identified in the Capital Improvement Program but require City Council to appropriate funding in this fiscal year. Finally, some options do not yet have funding identified. In these cases, the City Council may choose to appropriate funding from one of the city's fund balances, seek grant funding, appropriate funding from the General Fund reserve or seek other funding sources.

## **Foundational elements**

The City of Carlsbad has already prioritized traffic safety through its policies, projects, services and special initiatives. Some of these foundational elements include:

#### **General Plan Mobility Element**

Approved by the City Council in 2015, the Mobility Element guides future decisions related to how the city plans the connectivity of the city's transportation system by identifying the preferred attributes of various street types found in Carlsbad. It incorporates a "complete streets" approach to designing city streets that balances the needs of all users on the street including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods and users of public transportation. It is complementary to other elements within the General Plan.



#### **Planned projects**

The city's Capital Improvement Program includes 40 planned traffic and mobility related projects to be completed over the next 15 years. Other projects are planned as part of the city's Sustainable Mobility Plan implementation and the Carlsbad Residential Traffic Management Program. In all the city is currently working on over 100 projects related to traffic and mobility improvements at a cost of about \$350 million. Funding for these projects has been appropriated from various sources including gas tax, the TransNet transportation sales tax, and the city's traffic impact fees. Some of the main projects are listed below in order of the expected completion date.

- Tamarack Traffic Calming Skyline Drive to Adams Street
- Tyler Street Traffic Circulation Study
- Safe Routes to School Plan Hope Elementary
- Installation of permanent speed feedback signs at 8 locations in the Barrio
- Carlsbad Blvd pedestrian improvements between Mountain View Drive and Tamarack Avenue
- Melrose Drive right turn lane to westbound Palomar Airport Road
- Palomar Airport Road and College Boulevard improvements
- El Camino Real widening Poinsettia Lane to Camino Vida Roble
- Kelly Drive and Park Drive complete street improvements
- Palomar Airport Road and Avenida Encinas improvements
- Traffic signal Maverick Way and Camino De Los Coches
- Las Flores Street at I-5 Traffic Calming
- Barrio traffic circles
- Village decorative lighting
- Beach access repair & upgrades Pine to Tamarack
- Avenida Encinas Coastal Rail Trail and Pedestrian Improvements
- El Camino Real right turn lane to eastbound Alga Road
- El Camino Real widening Arenal Road to La Costa Avenue
- Terramar Area coastal improvements
- Carlsbad Boulevard and Tamarack pedestrian improvements
- El Camino Real widening Sunny Creek to Jackspar
- Valley and Magnolia complete streets

- ADA beach access Pine to Tamarack
- Avenida Encinas and Palomar Airport Road pedestrian access improvement
- Camino De Los Coches and La Costa Avenue intersection control
- Carlsbad Boulevard pedestrian lighting Tamarack Avenue to State Street
- Carlsbad Village Drive and Grand Avenue pedestrian improvements
- Christiansen Way improvements
- Valley Street traffic calming
- Barrio street lighting
- Chestnut Avenue complete street improvements Valley Street to Pio Pico
- Chestnut complete street Interstate 5 to railroad
- Grand Avenue Promenade
- La Costa Avenue traffic improvements
- State Street and Grand Avenue road improvements
- Poinsettia Lane and Oriole Court traffic control improvements
- Trail connectivity to Tamarack State Beach
- Carlsbad Boulevard realignment- Manzano Drive to Island Way
- College Boulevard extension
- South Carlsbad Coastline: Road Realignment and Public Spaces

#### **Sustainable Mobility Plan**

Approved by the City Council in January 2021, the Sustainable Mobility Plan implements the Mobility Element of the city's General Plan and guides the city in expanding and improving safe, healthy and convenient travel options for people of all ages and abilities. It combines projects and programs from 12 previous planning documents into a single strategic plan that includes:

#### Safe Routes to School

An approach that includes infrastructure improvements, enforcement tools, safety education and incentives to promote walking, bicycling and carpooling to school.

#### **Transportation Demand Management**

Strategies to encourage Carlsbad workers and residents to walk, bike, ride transit and carpool instead of driving alone. This approach helps the city achieve its sustainability and mobility goals while mitigating congestion and increasing access and connectivity in the transportation network.

#### Local Roadway Safety Plan

A framework to systematically analyze and identify areas where transportation safety can be improved and recommend specific safety improvements for all road users.

#### **Street Design Guidelines**

Provides a set of best practices that can be incorporated by the City of Carlsbad to create streets that will serve all users. These guidelines were developed using best practices in street design from Carlsbad, San Diego County, the state of California and around the world. They are intended to evolve and adapt to incorporate new treatments and techniques as they are developed and proven successful.

#### **Carlsbad Residential Traffic Management Program**

This program provides a way for city staff to work directly with neighborhoods that have concerns about traffic safety. Based on an initial assessment, staff can utilize one or more approaches to slow down speeds, discourage cut-through traffic, enhance pedestrian and bike safety, and make other changes. Solutions include traffic circles, speed cushions, extending curbs and other measures. Eleven neighborhoods are a part of the program this fiscal year:

- Victoria Avenue from Pontiac Drive to Haverhill Street
- Highland from Carlsbad Village Drive to Buena Vista Way
- Nueva Castilla from La Costa Avenue to Levante Street
- Monroe Street from Basswood Avenue to Carlsbad Village Drive
- Circulo Sequoia from Camino Junipero to Avenida Diestro
- Celina Drive from Carlsbad Village Drive to Chestnut Avenue
- Park Drive from Tamarack Avenue to Monroe Street
- Hummingbird Road from Sanderling Court to Rock Dove Street
- Black Rail Road from Poinsettia Lane to Northern Terminus
- Plum Tree Road from Hidden Valley to Aviara Parkway
- Carrillo Way from Rancho Brasado to Rancho Caballo

#### Annual streets maintenance projects

The city repaves dozens of streets annually, based on conditions, to ensure the 350 miles of cityowned roads are properly maintained. During construction, the city also updates the striping to best serve all the users of the streets.

#### Customized traffic control plans for large events

The city minimizes the traffic impact of large events through the coordinated deployment of traffic control devices and special events personnel.

#### **Regional coordination and advocacy**

The city collaborates with agency partners at Caltrans, the San Diego Association of Governments and the North County Transit District on regional projects and long-term planning studies.

#### **Public education**

The city promotes safe driving, cycling and walking through an ongoing public education program that includes social media, videos, workshops and partnerships with mobility groups.

#### **Engineering design standards**

Establishes uniform and best practice policies and procedures for the design and construction of public improvements, which promote safety for all infrastructure users.

#### **E-bike ordinance**

In April 2022, the City Council made Carlsbad the first city in the region with a law specific to e-bikes, e-scooters and other similar mobility devices. The law makes it easier to enforce safe e-bike riding behaviors and includes a provision that allows people to take a safety class in lieu of paying a fine for their first citation.

#### School crossing guard program

The City of Carlsbad funds 36 school crossing guards who serve 14 schools in the city, under the supervision of the Carlsbad Police Department.

#### **Traffic enforcement**

There is a dedicated Traffic Division within the Carlsbad Police Department to enforce the rules of the road.

#### Immediate actions (completed in 3 months) \_\_\_\_\_

Since the emergency proclamation on Aug. 23, 2022, the city has taken more than a dozen actions. Many are funded through a \$2 million budget appropriation made by the City Council when it ratified the emergency on Aug. 30. Others are funded through existing budget appropriations for fiscal year 2022-23. In these cases, staff have accelerated the timing of implementation or temporarily reprioritized other work.



#### Safer Streets Together roll out

Developed and implemented a short-term campaign to introduce the community to the Safer Streets Together initiative, including the following activities:



- Created Safer Streets Together website within the city's site to provide campaign information and resources.
- Developed traffic safety related messages and engaged with followers on all city social media channels.
- Worked with school districts serving Carlsbad and private schools to distribute traffic safety messages to students and parents via email newsletters and school site banners.
- Posted campaign banners along city streets and in city parks.
- Created displays for city libraries and community centers with QR codes linking to traffic safety related content.
- Developed Spanish-language materials and distributed them through the Library Learning Center and school district programs for Spanish-speaking parents.

6

- Sent targeted information to large employers in Carlsbad with information to share with employees.
- Attended community events, including Back to School nights, Family Movie Night and the farmer's market to distribute traffic safety information and engage with community members.





#### **Bike lane enhancements**

Painted about 20 potential conflict points with high visibility green paint at road segments with higher collision activity.



#### Digital roadway messaging

Installed 12 digital message boards and 17 speed feedback signs along streets and intersections with higher collision rates.



## **Immediate actions**

The map below shows locations of safety banners, speed feedback signs, digital message boards and green bike lane treatments installed since Aug. 23, 2022.





#### **Enhanced enforcement**

Redeployed Police Department personnel to increase traffic enforcement around schools during beginning weeks of classes. Reassigned two detectives to work overtime each Friday, specifically to conduct traffic enforcement. Diverted one sergeant and two officers from their normal duties to specifically supplement the Traffic Division (to deploy on ebikes and in a vehicle). Purchased two additional e-bikes for police officer use.

Since the emergency was proclaimed and up to Sept 21, 2022, the Police Department has issued a total of 253 warnings and 558 traffic citations, including:

- 136 citations and 51 warnings to e-bike users ٠
- 22 citations and 32 warnings to bicyclists •
- 397 citations and 170 warnings to motorists •

Three citations to pedestrians ٠

Police have also made:

25 DUI arrests, five involving collisions 

## **Immediate actions Cost estimates**

cost cotimates				
Funded and underway	Category	Est. 1-time cost	Ongoing cost	Estimated completion
Safer Streets Together roll out		\$30,000	No	10/23
Bike lane enhancements		\$421,000	Yes	11/23
Digital roadway messaging		\$215,000	No	Completed
Enhanced enforcement		\$635,000	No	6/23

### Short-term (completed in 6 months)

City staff have developed the following potential actions for the City Council's consideration. These actions could be completed within six months. Some would require new funding while others could be funded through existing department budgets by accelerating the timing of planned work.



#### Adopt a Vision Zero resolution

#### No cost

Vision Zero is a strategy to eliminate traffic fatalities and severe injuries, while increasing safe, healthy and equitable mobility for all. Vision Zero recognizes that the goal of zero roadway fatalities and severe injuries among all road users is bold and daunting, yet setting that goal publicly is important to making real change. To date, 54 cities and counties across the nation have adopted Vision Zero, including Encinitas, La Mesa and San Diego in the local region.

#### Vision Zero strategies

The following strategies are part of the Vision Zero approach:

- Building and sustaining leadership, collaboration, and accountability especially among a diverse group of stakeholders to include transportation professionals, policymakers, public health officials, police, and community members
- Collecting, analyzing, and using data to understand trends and potential disproportionate impacts of traffic deaths on certain populations
- Prioritizing equity and community engagement
- Managing speed to appropriate levels
- Setting a timeline to achieve zero traffic deaths and serious injuries, which brings urgency and accountability, and ensuring transparency on progress and challenges

Although the City of Carlsbad is already following many of the policies recommended in the Vision Zero strategy, making a formal resolution would elevate the importance of these policies and provide a framework for the actions already underway and any additional actions the City Council chooses to add from this plan.



#### Community commitment campaign

#### \$42,000 Funded

Launch a campaign that creates opportunities for the community to publicly commit to safe roadway behaviors and help promote the social norm around traffic safety to other community members. Encourage participation by providing visual symbols of commitment to reinforce bike, pedestrian and vehicle awareness and safety.

- Pledge campaign
- Yard signs
- Window clings
- Video testimonials
- Neighborhood "pace" car
- Campaign stickers
- Other promo items
- Testimonials on social media posts and videos

City of Carlsbad Safer Streets Plan Feb. 5, 2024



#### **School collaboration**

#### \$27,000 Funded

Develop partnerships with all districts and schools serving Carlsbad to raise awareness of traffic safety. Opportunities could include student rallies, traffic safety night at sporting events, chalk art interactive events and curriculum opportunities such as the Sage Creek Genius Project. Partnerships could also include a student ambassador program, a more in-depth program working with school broadcast programs, tie-ins with the speech and debate clubs and twice-yearly presentations by Carlsbad police officers. Another option is to engage elementary school students in a contest to choose an official traffic safety mascot for the City of Carlsbad, which once produced could appear at schools, libraries and other community events to share traffic safety messages in an engaging way.



#### Business/non-profit partnership program

### \$22,000 Funded

Work with businesses, such as bike shops, and local nonprofit organizations to spread the message about traffic safety by displaying posters or window clings and sharing the message to their networks through social media or other methods. Encourage campaign promotion and encourage third-party engagement and support through posters, reciprocal linking program and in-kind donations to be used as incentives for other campaign components. Reach out to potential partners, including:

- Driving schools
- Insurance companies
- Bike shops
- Health care providers
- Apparel stores
- Local civic-minded businesses



#### Mobility organization partnership program

#### \$12,000 Funded

Create partnerships with local and regional organizations focused on mobility, DUI awareness and other issues related to traffic safety. Engage these groups in sharing messages to the Carlsbad community, co-hosting events, providing workshops and other outreach. This could include outreach to businesses with large employee bases, residents, seniors, teens and other audiences.



#### Video public service announcements

#### \$20,000 Funded

Develop a series of public service announcements that reinforce safe roadway behaviors utilizing testimonials, graphics and other visuals targeting different audiences and modes of travel. These videos will be adapted for multiple social media channels and could be utilized as part of a paid advertising campaign.



#### Upgrade high-pedestrian signal locations

Reduce vehicle-pedestrian conflicts by allowing pedestrians to begin crossing while vehicles still face a red signal. Countdown pedestrian indications clarify pedestrian crossing times and reduce confusion and ambiguity. Initial phase would include approximately 30 locations.



#### School e-bike certification/permit program

Work with the school districts within the city to explore creation of a certification requirement for students to ride their bikes to campus. Students would need to upload proof of attendance at a bike safety class to be able to ride their bicycles to school.



#### **Carlsbad Village Faire outreach**

Create an engaging booth and display for the twice-yearly Carlsbad Village Faire to share information on traffic safety.



#### Police officer Smart Cycling instructor program

#### \$2,000 Not funded

\$60,000 Funded

No cost

\$5,000 Not funded

Police Department will explore with the San Diego County Bicycle Coalition training and certifying police officers in the Smart Cycling program so the Police Department can hold training courses for residents.



#### Install high-visibility crosswalks near schools

#### \$800,000 Not funded

\$50,000 Not funded

Address speeding concerns around school areas by making crosswalks more prominent on all city streets designated as "School Streets" by the General Plan Mobility Element and other school-designated (yellow) crosswalks. Will highlight pedestrian crossings at school locations by upgrading marked crosswalks to highvisibility continental or ladder style at approximately 140 locations throughout the city.



#### **Evaluate roadway design treatments**

This strategy would analyze the physical placement of speed control treatments or rumble strips ahead of residential intersections to change drive behavior to be alert when approaching residential intersections, and along the inside buffer area of Class II buffered bicycle lanes. These proposed analyses would include outreach to active transportation user groups and other stakeholders. To address design immunity issues, initial installations would be pilots conforming to the experimental treatments in the California Manual on Uniform Traffic Control Device.



#### Explore opportunities to obtain real time data

#### \$100,000 Not funded

Understanding Carlsbad roadways and the types of vehicles on the road is an important component of traffic safety and adapting the city's approach to education, enforcement and engineering. This includes information like traffic flow, speed and mode of transportation. The city is developing an active transportation monitoring report to fulfill the 2019 Sustainable Mobility Plan recommendation to launch the program. The plan is organized around three dimensions of mobility – travel demand, mode share and safety. Reports like this are usually a snapshot in time and provide the city with valuable data. There are new data products that may provide similar data but on a more frequent and closer to real-time basis. Staff proposes to explore opportunities to acquire products that could provide accurate mobility data on a more frequent basis to inform city actions and public education.



#### **E-citation expansion**

#### \$55,000 Not funded

Building on the existing use of electronic citations by the traffic division, the Police Department can complete its digital transformation related to writing, tracking, and reporting citations. The technology has proven to increase citation writing speed, improve efficiency and reduce the chance for human error when issuing paper citations and entering them into a database. The acquisition of e-cite printers will allow the remaining patrol officers who manually write paper tickets to use software they already have to write the citation, print it in the field, and give it to the person receiving the ticket. Data is transmitted electronically removing the potential for human error from keying paper citations into a database. This will improve data quality and will help the city in analyzing citation data to support safer streets.



#### Juvenile traffic safety incentive program

#### \$1,000 Not funded

Create a program in which police officers contact juveniles who are obeying the laws while riding their bikes and e-bikes and reward them with donated gift cards, ice cream, etc. This positive reinforcement program will continue the positive relationships the Police Department has with residents in our city even during times of heavy enforcement. Potential to eliminate cost by engaging business partners who may want to contribute incentives.

## Short-term actions Cost estimates

Funded	Category	Est. 1-time cost	Ongoing cost	Est. completion
Adopt a Vision Zero resolution	Cutegory Contegory	n/a	n/a	10/22
Community commitment campaign		\$42,000	No	3/23
School collaboration		\$27,000	No	3/23
Business/non-profit partnership program		\$22,000	No	3/23
Mobility organization partnership program		\$12,000	No	3/23
Video public service announcements		\$20,000	n/a	3/23
Upgrade high-pedestrian signal locations		\$60,000	No	1/23
School e-bike certification/permit program		n/a	n/a	4/23
Not funded Carlsbad Village Faire outreach		\$5,000	No	5/23
Police officer Smart Cycling instructor program		\$2,000	No	4/23
Install high-visibility crosswalks near schools		\$800,000	Yes	1/23
Evaluate roadway design treatments		\$50,000	No	12/22
Explore opportunities to acquire more real-time data		\$100,000	TBD	11/22
E-citation expansion		\$55,000	No	4/23
Juvenile traffic safety incentive program		\$1,000	No	4/23

## Mid-term (completed in 12 months)



#### Expanded street resurfacing and restriping

#### \$3.7 million Funded

Accelerated slurry seal and restriping of major east/west arterial corridors to balance the needs of the users of the streets. Will seal the roadways to improve pavement condition as part of our pavement management program and improve conditions for all the users on the road. The first phase of this strategy includes:

- La Costa Avenue from western city border near I-5 to Fairway Lane
- Poinsettia Lane from Carlsbad Boulevard to Melrose Drive
- Cannon Road from Avenida Encinas to Faraday Avenue
- Carlsbad Village Drive from Interstate 5 to College Boulevard

This strategy will reduce the long-term maintenance costs of the restriped road segments by reducing the width of the vehicular travel lanes. The strategy will also include coordinating with Caltrans to improve the road markings for all users through the state highway interchanges.

Received and deployed a new striper truck to assist with road striping maintenance efforts.



#### **Tamarack Avenue traffic calming**

#### \$200,000 Funded

Kicked off work with community members to identify short-term traffic calming strategies for Tamarack Avenue, between Skyline Drive and Adams Street. Curb extensions were installed and a pedestrian hybrid beacon signal is in the process of being installed at the intersection of Tamarack Avenue and Valley Street. The intersection project is scheduled to be completed in October 2022.





#### **Reconfigure arterials**

### \$2 million Funded

Reconfigure arterial streets including vehicular lane reductions and seal the roadways to improve pavement condition as a part of our Pavement Management Program and enhance conditions for all users of the road. Reconfiguring roadways also reduces the long-term pavement maintenance costs and improves the line of sight for side street users approaching the arterial. This program would be phased, with the first phase including:

- Carlsbad Boulevard from Pine Avenue to southern border near La Costa Avenue
- El Fuerte Street from Faraday Avenue to tie into the existing one vehicular lane in each direction south of Rancho Pancho, excluding the segments approaching Loker Avenue to Bressi Ranch Way
- Grand Avenue from Ocean Street to Hope Way. This would be the first phase to the Grand Avenue Promenade Project to provide short-term benefits until the ultimate promenade improvements are completed.
- Poinsettia Lane from Avenida Encinas to Carlsbad Boulevard
- Cannon Road Avenida Encinas to El Arbol Drive



#### Expand street resurfacing and restriping

#### \$2 million Funded

Accelerate slurry seal and restriping major east/west arterial corridors to balance the needs of the users of the streets. Seal the roadways to improve pavement condition as part of our pavement management program and improve conditions for all the users on the road. This second phase will include:

- Palomar Airport Road from Avenida Encinas to eastern city border
- Rancho Santa Fe Road and Olivenhain Road from eastern city border to western city border

This strategy will reduce the long-term maintenance costs of the restriped road segments by reducing the width of the vehicular travel lanes.

Continue to use the new striper truck to assist with road restriping maintenance efforts.



#### Review citywide speed limits for potential reduction

\$40,000 Funded

Review speed limits citywide to determine whether speed limit reductions should occur, in accordance with Assembly Bill 43 (2021).



#### Legislative advocacy for e-bike licensing requirement No additional cost

Utilize the city's existing contracts with legislative affairs specialists to advocate for California Legislature to enact a statute that requires a licensing process and training to ride an e-bike.



### **Complete Vision Zero plan**

The Vision Zero Action Plan would formalize the city's existing and planned actions into actionable, measurable strategies, emphasizing design and policy solutions, including designing Complete Streets and lowering speeds for safety. Each strategy would identify the lead agency responsible, along with supporting and partner agencies, a projected timeline and budget needs.



#### Paid advertising campaign

#### \$105,000 Not funded

\$150,000

Not funded

Prepare and implement a multi-media ad campaign that could include public service announcements placed on local cable and streaming services, intro video ads on YouTube, social media advertising, digital banner ads, a mobile digital billboard and print placements.



#### Teen engagement program

#### \$34,000 Not funded

\$16,500

Not funded

Effectively reaching the teen audience requires a customized approach that focuses on peer-to-peer communication and engagement. This program will use Office of Traffic Safety research specific to teens to tailor a Carlsbad program that encourages and reinforces safe roadway behaviors.



#### Messages on city assets

Utilize city buildings, banner holders and vehicles to display traffic safety messages, including banners, murals and vehicle wraps – all focused on keeping traffic safety at the forefront throughout the city.



#### **Travel Safe visitors program**

\$34,000 Not funded

\$15,000 Not funded

Work with Visit Carlsbad, hotel properties, vacation rental owners and local attractions to provide traffic safety information to visitors. Approach LEGOLAND with a potential partnership utilizing the LEGO driving attractions (show your LEGO driver's license and get a Carlsbad traffic safety promo item at City Hall). Program could include a video public service announcement aimed at visitors that play on in-house hotel TV channels.



#### Mobile digital signage

Place safety messages on a mobile digital billboard that can be moved around the city and placed at community events.



#### Expedite infrastructure projects

#### \$620,753 (annually) Not funded

In June 2022, the City Council directed staff to expedite the following traffic-safety related projects:

- Barrio Traffic Circles Project
- Village and Barrio Lighting Project
- Evaluation of making Tyler Street one-way only
- Grand Avenue Promenade
- Sustainable Mobility Plan projects

With additional staff capacity, additional projects could be expedited, including:

- Terramar Area Coastal Improvements.
- Tamarack Avenue and Carlsbad Boulevard
- Kelly Drive and Park Drive Complete Streets Project
- Valley Street and Magnolia Avenue Complete Streets Project

#### **Resourcing**

To expedite more traffic-safety related projects, the city could consider delaying projects with objectives other than promoting multimodal safety benefits.

Alternatively, the city could expand the size of its engineering staff to increase the city's capacity to complete projects sooner. Costs listed for this option include the new annual cost of the following positions:

- 2 Associate Engineers
- 1 Assistant Engineer
- 1 Municipal Project Manager
- 1 Reclassified Senior Inspector from Inspector



#### **Develop access plans for all schools**

#### \$150,000 Not funded

Working with the school districts and administrations, develop access plans for all schools. This strategy will focus on improving safety and efficiency for all modes of travel entering the schools, including the pick-up and drop-off process. Plans are typically led by the parent and teacher associations and the city in an advisory role. The implementation is led by the schools' PTAs to get ownership and buy-in from parents.



#### Safer Streets data analytics and visualization program

#### \$50,000 Not funded

Reports on traffic volumes and speeds are usually a snapshot in time and done on an annual basis. This strategy would use existing data to create a way to visualize data so the city could adapt to changing conditions to support enforcement, traffic calming and infrastructure improvements more rapidly. Additional data sources may be necessary to create a robust data product so the acquisition of more accurate and frequent information is included earlier in this plan.



#### Speed cushions on streets around schools

\$1.3 million Not funded

Assess speeds on all streets designed as "School Streets" in the General Plan's Mobility Element and install speed cushions as needed.



#### Update Carlsbad Residential Traffic Management Program

\$150,000 Not funded

Update the Carlsbad Residential Traffic Management Program, including removal of the stop sign option, re-evaluation of qualification criteria and reduction of the number of phases from three to two. The goal of the update is to align it with best industry practices including the recommendations found in the California Manual on Uniform Traffic Control Devices and other applicable city and industry guidelines.

#### Mid-term actions Cost estimates

		Est. 1-time	Ongoing	Est.
Funded	Category	cost	cost	completion
Expanded street resurfacing and restriping		\$3,700,000	No	10/23
Tamarack Avenue traffic calming		\$200,000	No	3/23
Reconfigure arterials		\$2,000,000	No	10/23
Expanded street resurfacing and restriping (Palomar Airport Road, Rancho Santa Fe/Olivenhain Road)		\$2,000,000	No	10/23
Review citywide speed limits for potential reduction		\$40,000	Yes	Ongoing
Legislative advocacy for e-bike licensing requirement Not funded		None	No	7/23
Complete Vision Zero plan	×	\$150,000	No	3/23
Paid advertising campaign		\$105,000	No	4/23
Teen engagement program		\$34,000	No	4/23
Messages on city assets		\$16,500	No	4/23
Travel Safe visitors program		\$34,000	No	4/23
Mobile digital signage		\$15,000	No	4/23
Expedite infrastructure projects		\$620,753	Yes	Ongoing
Develop access plans for all schools		\$150,000	No	12/23
Safer Streets data analytics and visualization program		\$50,000	No	11/31
Install speed cushions on streets around schools		\$1,300,000	No	10/23
Update Carlsbad Residential Traffic Management Program		\$150,000	No	10/23

#### Long-term (completed in 1+ years)



#### **Community service project plan**

\$20,000 Not funded

Work with community service groups to engage them in the traffic safety issue. This could include Boy Scout Eagle projects, Girl Scouts Gold Award, and Rotary and Kiwanis club programs. Each would be approached with the challenge and asked to develop or participate in community-based programs to support a strong social norm around traffic safety in Carlsbad.



#### Entry signage

#### \$2,500 to \$250,000 Not funded

The City of Carlsbad is one of the few cities in the region without monument signs at the city's main entrances. The city could commission entryway signage and include the expectation that all road users practice good traffic safety behaviors. Alternatively, signage could be placed on existing smaller "Welcome to Carlsbad" street poles with a similar message.



#### Activate CERT, Citizens Academy alumni, trail volunteers \$12,000

## Not funded

Connect with volunteers on the Community Emergency Response Team and Citizens Academy graduates to develop a traffic safety ambassador program in which, after undergoing training, they could serve as neighborhood leads to help promote traffic safety best practices and help educate neighbors on various engineering solutions, such as roundabouts.



#### **Experiential community art**

#### \$38,000 to \$150,000 Not funded

Partner with artists to develop safety-related murals, chalk art or temporary art exhibits throughout the city, such as:

- Mobile art show
- Mural project on city-owned buildings, schools or private property • participants
- Partnership with the cultural arts office for a Cannon Art Gallery exhibit related to traffic safety (the gallery has an existing program with all third grade classes in Carlsbad)
- Creative video contest



#### Update the Mobility Element in the General Plan

#### \$150,000 Not funded

Consider revisions to the Mobility Element to emphasize slower vehicle speeds and increased bike and pedestrian safety.



#### Explore school busing program

\$44,000,000\* Not funded

Work with North County Transit District and school districts serving Carlsbad to explore opportunities for school busing programs, including potential partnerships to use innovative transit solutions and a seasonal beach shuttle program.



#### **Construct Transformative Corridor Projects**

#### \$TBD Not funded

Transformative Corridors will provide a multi-modal, backbone network of high-quality bikeways, pedestrian facilities and transit services so that Carlsbad residents and visitors have an array of travel options that do not require driving.



#### New community-oriented policing team

#### \$914,484 (annually) Not funded

Request additional permanent staffing for the Police Department to implement a fulltime Community-Oriented Policing Team that would also serve as an e-bike team. This would include four new officers and one new sergeant.

#### Long-term actions Cost estimates

		Est. 1-time		Est.
Not funded	Category	cost	Ongoing	completion
Community service project plan		\$20,000	No	10/23
Entry signage		\$2,500 - \$250,000	No	10/23
Activate Community Emergency Resource Team, Citizens Academy alumni, trail volunteers		\$12,000	No	12/23
Experiential community art		\$38,000 - \$150,000	No	12/23
Update the Mobility Element in the General Plan		\$150,000	No	12/23
Explore school busing program*		\$44 million	Yes	12/25
Construct Transformative Corridor Projects		TBD	TBD	TBD
New community-oriented policing team		\$914,484 Annually	Yes	12/23

\* Cost for 110 electric buses. Does not include administration, staffing, other costs.

Location	Travel mode	Торіс	Idea
Terramar	Bike/e-bike	Bike lane	Widen bike lane closer to downtown, going
			south by Terramar
N/A	Bike/e-bike	Bike lane	Start a quick build bikeways program
N/A	Bike/e-bike	Bike lane	Build more bike lanes with barriers
N/A	Bike/e-bike	Bike lane	Learn about quick-build protected bike lanes
N/A	Bike/e-bike	Bike lane	More green bike lanes
Chestnut	Bike/e-bike	Bike lane	We suggest Chestnut between El Camino Real and the Coastal Rail Trail be designated as an official bike route. This is a huge area of opportunity for Carlsbad. This portion of
			Chestnut is a literal bike highway for parents riding their children to school, Valley MS and Carlsbad HS students, as well as other Carlsbadians and visitors/tourists accessing the Village and beaches. Currently, cars drive much too fast down Chestnut and consistently cut into the bike lane on the curves between El Camino Real and Monroe. Major traffic calming should be installed, including but not limited to: Removing all parallel parking lanes; Adding protected, raised bike lanes; Raised crossings and continuous sidewalks; Added chicanes and/or narrowed driving lanes; Roundabouts to replace stop signs; Increased tree and other landscaping planted near roads; Reduced speed limits
N/A N/A	Bike/e-bike Bike/e-bike	Bike lane Bike lane	Install dividers, paint bike lanes, post signs Add bike lane improvements: adding quick build materials such as flexible delineator posts to existing bike lanes (without decreasing width of bike lane) to increase awareness, raised bike lanes, protected bike lanes, in order of   car lane   parallel parking lane    raised bike lane   sidewalk, painting entire bike lanes green
N/A	Bike/e-bike	Bike lane	Prefers lanes marked in middle
Village	Bike/e-bike	Bike lane	Widen bike lane on ease side of CVD in village
Highland Dr. south from			Sharrow lanes painted on northbound and
Buena Vista	Bike	Bike lane	south bound lanes

Pio Pico Dr			
from Las			
Flores heade	d		Needs bike lanes northbound and south bound,
south	Bike	Bike lane	or sharrows at minimum
Ambrosia			Add bike lanes, also there are parked cars along
lane	Bike	Bike lane	Ambrosia lane and a dangerous blind curve
Carlsbad			
Village Drive			Bike lanes are very narrow and are not wide
west of I-5	Bike	Bike lane	enough to provide safe passage
Poinsettia/Av	/i		Use "dutch-style" intersections or "protected-
ara Parkway			intersection" at Poinsettia/Aviara Parkway
intersection	Bike/e-bike	Bike lane	intersection and others.
N/A	Bike/e-bike	Bike racks	Increase bike rack access across the city
N/A	Bike/e-bike	Bike racks	Require bicycle parking as part of building
			codes/development plans on any new or
			renovated commercial building
N/A	Bike/e-bike	Change laws	Require e-bike/bike annual registration fee
N/A	Bike/e-bike	Change laws	Put bikes on the sidewalk
N/A	Bike/e-bike	Change laws	Bikes lanes should be for bikes not e-bikes,
			reckless kids, license and treat like cars
N/A	Bike/e-bike	Change laws	License for all bikes and education in order to
			receive license
N/A	Bike/e-bike	Change laws	Mandatory safety course and license before
			they ride
N/A	Bike/e-bike	Change laws	Mandatory training for all bikes, license
			required
N/A	Bike/e-bike	Change laws	Insurance requirements for e-bikers, bring back
			school buses
N/A	Bike/e-bike	Change laws	First violation needs to be ticketed and
			mandatory safety course
N/A	Bike/e-bike	Change laws	Allow the Idaho Stop:
			https://en.wikipedia.org/wiki/Idaho_stop

N/A	Bike/e-bike	Change laws	Adding rules/laws regarding riding bicycles with
.,,,			passengers: Riders under 16 may not carry
			passengers; Riders operating the bicycle must
			wear a helmet, regardless of age, if they are
			carrying passengers 17 and under, and can be
			cited/issued warning if they aren't wearing a
			helmet; Riders with passengers on a bike not
			intended to carry passengers can be cited/issue
			warning (i.e. seating a child on the top tube of a
			bike with parent sitting behind on seat)
			bike with parent sitting benind on seaty
N/A	E-bikes	Change laws	Allow kids ride on sidewalk
N/A	E-bikes	Change laws	Require safety lessons
N/A	E-bikes	Change laws	Require permits
N/A	E-bikes	Change laws	Require driver's license
N/A	E-bikes	Change laws	Age limit
N/A	E-bikes	Change laws	Should be under same motorcycle law
N/A	E-bikes	Change laws	Require classes
N/A	E-bikes	Change laws	Require League of American Bicyclists Certified
			training
N/A	E-bikes	Change laws	Treat e-bikes like motorcycles
N/A	E-bikes	Change laws	Require mandatory class and license e-bikes
N/A	E-bikes	Change laws	Require mandatory class before being licensed,
			require licenses
N/A	E-bikes	Change laws	Treat bikes like a motorcycle and require a
			license at 16
N/A	E-bikes	Change laws	Require mandatory class before getting a bike,
			need licenses, prevention
N/A	E-bikes	Change laws	Need licensing and proper education (esp. kids)
N/A	E-bikes	Change laws	Need licensing and proper education (esp. kids)
N/A	E-bikes	Change laws	Education course mandatory for under 18,
			should not be allowed on sidewalks or walking
			paths
N/A	E-bikes	Change laws	Minimum age limit and certificate of rules and
			driving ability
N/A	E-bikes	Change laws	License required for bikes
N/A	E-bikes	Change laws	E-bikes should be classified as motorcycles and
			require license
N/A	E-bikes	Change laws	Minimum age limit, safety class before
			purchase,

N/A	E-bikes	Change laws	Certify riders under 18, should have to carry liability insurance
N/A	E-bikes	Change laws	E-bikes need a safety course and permit to ride/ license for e-bikes, ongoing safety courses
N/A	E-bikes	Change laws	Do not reallocate money from PD, min age 16 and license req
N/A	E-bikes	Change laws	Reckless kids cau sing most problems, min ag 16, license required, treat as motorcycle
N/A	E-bikes	Change laws	Institute a license for e-bikes
N/A	E-bikes	Change laws	Min age 16
N/A	E-bikes	Change laws	E-bikes are motorcycles and should follow the same rules
N/A	E-bikes	Change laws	Min age should be required
N/A	E-bikes	Change laws	Talk with e-bike companies to put max speed limit on e-bikes for under 16 years
N/A	Bike/e-bike	Change laws	License for all bikes and educate in order to receive license
N/A	Bike/e-bike	Change laws	Fine parents with kids breaking rules
N/A	E-bikes	Change laws	Driver license required for e-bikes
N/A	E-bikes	Change laws	E-bikes for 21 years and older only
N/A	E-bikes	Change laws	E-bikes should require insurance and license
N/A	Drivers	Control speeding	Lower speed limit
N/A	Drivers	Control speeding	Slow car traffic and provide safer avenues for navigation
Chinquapin	Drivers	Control speeding	Speed bumps in speeding areas (esp. Chinquapin), educate e-bikes, but speeding cars main prob
Skyline	Drivers	Control speeding	Reduce speed on skyline to 25 mph all way to coast
Madison and Grand	Drivers	Control speeding	Four-way stop at Madison and Grand
Valley	Drivers	Control speeding	More paint, speedbumps and stop signs overall
N/A	Drivers	Control speeding	Add a stop sign to turn left off of Valley
Chestnut & Madison, Chestnut & Roosevelt	Drivers	Control speeding	Add stop signs at Chestnut & Madison, Chestnut & Roosevelt
N/A	Drivers	Control speeding	Use traffic circles
James & Basswood	Drivers	Control speeding	Stop sign at corner of James & Basswood

Terramar	Drivers	Control speeding	Slow down cars and motorcycles speeding
			through Terramar
Chestnut &	Drivers	Control speeding	Clear bushes at stops signs on corners of
Valley			Chestnut & Valley
Sage Creek	Drivers	Control speeding	Area around Sage Creek HS needs traffic
High School			calming
N/A	Drivers	Control speeding	Slower speeds overall
N/A	Drivers	Control speeding	Speed bumps around schools
Camino de los Coches	Drivers	Control speeding	Slow down speed on Camino de los Coches
Carlsbad Blvd.	Drivers	Control speeding	Keep the speed limit lowered to 35 mph on
			Carlsbad Blvd. until light at Island way
Levante &	Drivers	Control speeding	Flashing lights or something to draw attention
Estancia			to the stop sign on the corner of Levante and
			Estancia
N/A	Drivers	Control speeding	Traffic calming by road and bike lane
,			improvements, evaluate for hazards, encourage
			biking and more conveniences aimed at biking
			vs driving, educate via classes and campaigns,
			enforce and add new laws increasing the
			minimum age to ride
N/A	Drivers	Control speeding	Make traffic calming so prevalent that it
,			becomes second nature to drivers. Look to the
			Netherlands and sustainable safety.
Village, Barrio	Drivers	Control speeding	Add traffic calming examples throughout
and Olde			Carlsbad, specifically the Village, Barrio and
Carlsbad			Olde Carlsbad neighborhoods: one-way streets,
			raised crossings, continuous sidewalks, rough
			road surfaces, narrowed lanes, chicanes, street
			cuts, roundabouts
			Install speed humps to force drivers to slow
Cassia Rd.	Drivers	Control speeding	down and discourage use as a short cut
N/A	All	Control speeding	Traffic slowed down, new bike lanes, and one
			way streets
N/A	All	Control speeding	Traffic light sensors to be installed
N/A	Drivers	Control speeding	Make entire coastline 35 mph and enforce
, Valley and	Drivers	Control speeding	Traffic light on Valley and Chestnut
Chestnut		0	
N/A	Drivers	Control speeding	Use one consistent speed on coast highway
, Coast	Drivers	Control speeding	Reduce speed to 25 mph all along coast
N/A	Drivers	Control speeding	Lower speed limits using assembly bill 43
Tamarack	Drivers	Control speeding	Install speed bumps on Tamarack by schools
Tamarack &	Drivers	Control speeding	Sign or light at Tamarack & Pontiac

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N/A	Bike/e-bike	More education	CUSD to add bicycle education as part of the PE
			curriculum beginning in elementary school
N/A	Drivers	More education	Drivers need the education since they seem to
			be at fault
N/A	Drivers	More education	Educate car drivers more
N/A	Drivers	More education	Create flyer to educate drivers
N/A	Drivers	More education	Campaign to educate drivers on bicycle-friendly
			driving: Information provided via city websites,
			flyers in the libraries and community centers,
			newsletter articles/features, street pole
			banners, message board street signage, TV and
			radio advertisements
N/A	Drivers	More education	Educate drivers about traffic laws
N/A	E-bikes	More education	Remind no text and ride on e-bikes
N/A	All	More enforcement	More safety patrols
N/A	All	More enforcement	Better rules and enforcement within our
			contractors as bike lines are being obstructed
			causing dangerous situations
N/A	All	More enforcement	Need proactive law enforcement
N/A	All	More enforcement	Enforcement needed at Tamarack & Highland
Ambrosia &	All	More enforcement	Officer be assigned to the intersection at
Blackbird			Ambrosia and Blackbird Circle to monitor the
Circle			school traffic and children crossing, no parking
NI / A	Bike	More enforcement	signs Give bike riders more tickets
N/A		More enforcement	
N/A	Bike/e-bike		Cyclists to follow the rules of the road like
NI / A	Dika /a bika	Mara anfaraamant	motorists
N/A	Bike/e-bike	More enforcement	More enforcement (start ticketing)
N/A	Bike/e-bike	More enforcement	More enforcement, safety courses for kids at elementary age
N/A	Bike/e-bike	More enforcement	Enforce the kids leave the experienced cyclists alone
Tamarack &	Bike/e-bike	More enforcement	More walking police on boardwalk between
Carlsbad			Tamarack & Carlsbad Village Dr.
Village Dr.			
N/A	Drivers	More enforcement	More enforcement, reduce speed limits, add
IN/ <i>I</i> N			speed traps and speed signs
NI / A	Drivors	More enforcement	
N/A	Drivers	More enforcement	Go after drivers who text and drive

Tamarack &	Drivers	More enforcement	Enforce stop sign use Tamarack & Highland
Highland			
N/A	Drivers	More enforcement	Increased enforcement in regards to distracted driving, speeding, red-light and stop sign running, and general reckless endangerment.
N/A	E-bikes	More enforcement	Enforce class 3 e-bikes - no one under 16 years
N/A	All	More enforcement	Add more police presence near schools
N/A	Bike	More enforcement	Wants more police enforcement on cyclists
Aviara Oaks	Pedestrians	More enforcement	an officer be assigned to the intersection at Ambrosia and Blackbird Circle to monitor the school traffic and children crossing the street before and after school and citate those drivers making illegal U-turns and other violations.
N/A	Drivers	New signage	Use a banner similar to San Marcos "Honk less Wave more"
N/A	All	New signage	Put up signs saying walk bikes in crosswalks
N/A	Drivers	New signage	Digital sign suggestion: share the road with cyclist
N/A	Pedestrians	New signage	Signage for sidewalks indicating it's for pedestrian use only
El Camino Real from Costa Del Mar		Other/Address	Work on Fire Station 2 has created obstruction of NB bike lane on ECR from Costa Del Mar to past Arenal Road. Set up signage so it doesn't block traffic. Better rules and enforcement for traffic management contractors regarding
to past Arenal	Bike	hazards in roadway	signage that adds to safety.
N/A	Bike/e-bike	Other/Address hazards in roadway	Evaluate all current bike lanes for hazards, width requirements, etc.
Harding St.	Bike/e-bike	Other/Address hazards in roadway	3635 and 3675 Harding Street residents (among others) put their trash, recycling and compost bins in the bike lane, forcing bikes into the car lane right before a blind curve in the road.
N/A	All	Other/community engagement	Implement a resident committee, Education, training, and enforcement are starting points
N/A	All	Other/construction around schools	No construction around schools during school
Avocet	Pedestrians	Other/Less street	"no parking signs" could be placed on the streets of Avocet nearest the entrance at Ambrosia for the hours children are let out and picked up from school.

N/A	Pedestrians	Other/More crossing guards	Add more crossing guard hours
N/A	All	Other/No car days	City-hosted once-monthly Sunday Streets—where a street is closed to car traffic to encourage walking, biking and sense of
Village	All	Other/No car days	community No-car days in the Village to promote walking and bike riding
N/A	Bike/e-bike	Other/Reduce vehicle traffic	Offer incentives to Carlsbad city employees and CUSD students to ride bikes rather than drive
N/A	Pedestrians	Other/Walking audit	Consider Circulate SD ideas walking audit, mapping, open house, technical memo
N/A	Bike/e-bike	Partnerships	Require all events held within city limits to partner with the San Diego County Bicycle Coalition (or similar) to provide bike parking
N/A	All	Partnerships	Reach out to other city's leaders too
N/A	All	Partnerships	Watch Strong Town Videos for ideas to adopt
N/A	All	Partnerships	Give \$10K to Carlsbad kid to design and build crowd source app for residents to submit traffic safety ideas
N/A	Bike/e-bike	Partnerships	City of Carlsbad will partner with the San Diego County Bicycle Coalition (or similar) to provide bicycle education for all riders, regardless of age and experience, as to be part of the Parks and Recreation community service class offerings
N/A	E-bikes	Reckless users	Teens too reckless on e-bikes
N/A	E-bikes	Reckless users	Don't allow kids on e-bikes
, N/A	Bike	Risky behavior	Bikes going too fast
N/A	Drivers	Risky behavior	Cyclists not at fault, reckless drivers are
N/A	Drivers	Risky behavior	Drivers parking in bike lane
La Gran Via	Drivers	Risky behavior	Traffic and speeding, major problem
N/A	E-bikes	Risky behavior	Reckless kids are the problem
N/A	E-bikes	Risky behavior	Outreach to schools to not allow kids to ride if have a citation

N/A	E-bikes	Risky behavior	Need heavy enforcement (ticketing) not
			education, outreach to schools to not allow kids to ride if have a citation
Poinsettia	All	Road improvements	Fix roads in Poinsettia area too not just village
Basswood,	All	Road improvements	One way streets-From Basswood to Magnolia to
Magnolia,			Highland to Monroe
Highland,			
Monroe			
N/A	All	Road improvements	Allocate more resources to infrastructure and
			less to enforcement
Alicante &	All	Road improvements	Alicante & Alga needs to be addressed
Alga			Alleunte & Alguneeus to be dudressed
N/A	All	Road improvements	Hire traffic engineers that live in Carlsbad
N/A	All	Road improvements	Put money used for LPR towards better
		Roud improvements	infrastructure
Village	All	Road improvements	Re-routing roads around the Village into one-
			way streets are an area of concern.
Village	All	Road improvements	Consider shutting down blocks to thru traffic
			completely within the Village.
La Costa &	All	Road improvements	Study La Costa & Ranch Sante Fe
Ranch Sante			
Fe			
			Damage increased on Christiansen Way from
Christiansen			April to now. Concern over potholes and road
Way	All	Road improvements	damage in rain.
		·	Remove street parking from Jefferson to
			improve visibility. Need bike lanes. Crosswalk at
Jefferson St			Carol Place should be elevated, continuous
between			sidewalk, forcing cars to slow down before
Magnolia and			approaching. Need police officer to direct traffic
Tamarack	Bike	Road improvements	on school days.
N/A	Drivers	Road improvements	Add traffic light sensors that detect cyclists
Roosevelt	Drivers	Road improvements	Roosevelt between Jefferson and Chestnut—the
			driving lane gets very narrow at the curve and
			cars consistently cut into the bike lane.
La Costa Ave	Pedestrians	Road improvements	Install crosswalk at La Costa Ave & Maverick
& Maverick			Way
Way			
			Add a pedestrian overpass or underpass similar
			to Leucadia and Oceanside so that we don't
			have to drive unnecessarily to get to the beach
Chestnut	Pedestrians	Road improvements	and find parking
N/A	Pedestrians	School bussing	Invest in school bus service

#### Public input on traffic safety

N/A	All	School bussing	Use school busing	
N/A	Pedestrians	School bussing	School buses are safer	
N/A	Bike/e-bike	Wear helmets	Kids not wearing helmets	
N/A	Bike/e-bike	Wear helmets	Helmet straps tightly under chin	
N/A	E-bikes	Wear helmets	Kids should wear motorcycle helmets on e-bikes	

# **Options Worksheet**

City staff have provided 44 potential actions for the City Council's consideration, along with preliminary cost estimates. Additional background about each action is included in the draft Safer Streets Together plan.

		Funded	Potential Action	Est. 1-time cost	A No new	<b>В</b> \$2.2 М	<b>С</b> \$48 М
Immediate actions	1.		Safer Streets Together roll out	\$30,000	0	0	0
	2.	~	Bike lane enhancements	\$421,000	0	0	0
	3.	~	Digital roadway messaging	\$215,000	0	0	0
	4.	~	Enhanced enforcement	\$635,000	0	0	0
Short-term actions	5.	~	Adopt a Vision Zero resolution	n/a	0	0	0
	6.	~	Community commitment campaign	\$42,000	0	0	0
	7.	~	School collaboration	\$27,000	0	0	0
	8.	~	Business, non-profit partnership program	\$22,000	0	0	0
	9.		Mobility organization partnership program	\$12,000	0	0	0
	10.		Video public service announcements	\$20,000	<b>O</b>	0	0
	11.	~	Upgrade high-pedestrian signal locations	\$60,000	. 💿	0	0
	12.	~	School e-bike certification/permit program	n/a	0	0	0
	13.	-	Carlsbad Village Faire outreach	\$5,000		0	
	14.		Police officer Smart Cycling instructor program	\$2,000		0	
	15.	6	Install high-visibility crosswalks near schools	\$800,000		0	0
	16.		Evaluate roadway design treatments	\$50,000		0	0
	17.		Explore opportunities to acquire real-time data	\$100,000		0	
	18.		E-citation expansion	\$55,000		0	
	19.		Juvenile traffic safety incentive program	\$1,000		0	

Education

Enforcement

0

Item #1

All 3 Es

0

		Funded	Potential Action	Est. 1-time cost	A No new	<b>В</b> \$2.2 М	С \$48 М
	20.	~	Expanded street resurfacing and restriping	\$3,700,000	0	0	0
	21.		Tamarack Avenue traffic calming	\$200,000	0	0	0
	22.		Reconfigure arterials	\$2,000,000	0	0	0
	23.		Expanded street resurfacing and restriping (Palomar Airport Road, Rancho Santa Fe/Olivenhain Road)	\$2,000,000	0	0	0
	24.	$\checkmark$	Review citywide speed limits for potential reduction	\$40,000	0	0	0
	25.	$\checkmark$	Legislative advocacy for e-bike licensing requirement	None	0	0	0
Mid-term actions	26.		Complete Vision Zero plan	\$150,000		0	0
acti	27.		Paid advertising campaign	\$105,000		0	
srm	28.		Teen engagement program	\$34,000		0	
d-te	29.		Messages on city assets	\$16,500			0
Ш	30.		Travel Safe visitors program	\$34,000			0
	<b>31.</b>		Mobile digital signage	\$15,000			0
	32.		Expedite infrastructure projects	\$620,753 Annually	×		0
	33.		Develop access plans for all schools	\$150,000			0
	34.		Safer Streets data analytics and visualization program	\$50,000			0
	35.		Speed cushions on streets around schools	\$1,300,000			. 💿
	36.		Update Carlsbad Residential Traffic Management Program	\$150,000			0
Long-term actions	37.		Community service project plan	\$20,000			0
	38.	0	Entry signage	\$2,500 - \$250,000			0
	39.		Activate Community Emergency Response Team, Citizens Academy alumni, trail volunteers	\$12,000			0
	40.		Experiential community art	\$38,000 - \$150,000			0
	41.		Update the Mobility Element in the General Plan	\$150,000			0
	42.		Explore school busing program*	\$44,000,000			0
1	43.		Construct Transformative Corridor projects	TBD		0	0
	44.		New community-oriented policing team	\$914,484 Annually		0	

\* Cost for 110 electric buses. Does not include administration, staffing, other costs



#### TRAFFIC AND MOBILITY COMMISSION

Minutes

Council Chambers 1200 Carlsbad Village Drive Carlsbad, CA 92008

Jan. 3, 2023, 4:00 p.m.

CALL TO ORDER: 4:04 p.m.

ROLL CALL: Perez, Linke, Penseyres, Fowler, and Coelho Absent: Proulx and Newlands

PLEDGE OF ALLEGIANCE: Chair Perez led the Pledge of Allegiance

#### **APPROVAL OF MINUTES:**

Minutes of the Regular Meeting held Dec. 5, 2022.

Motion by Vice-Chair Linke, seconded by Commissioner Coelho to approve the minutes of Dec. 5, 2022, regular meeting as amended. Motion carried 5/0/2 (Absent: Proulx and Newlands)

Chair Perez made a correction on the title for Jason Geldert as Engineering Manager, pages 11 and 12.

#### **PUBLIC COMMENT:**

Kirsten Ludwig spoke about the lane width reduction along Cannon Road and also said that the right-hand turn lane from northbound El Camino Real to eastbound Cannon Road is now too small. Residents feel that the changes were made to enhance safety for the cyclists but now the entire road is safety compromised. Residents would like the lanes to be restriped to the width they were prior to this project. She suggested that staff could shrink the median to make enough space for the wider lanes.

Lori Robin spoke about pedestrian safety along the railroad in Carlsbad. She said that there are no pedestrian warning gates at the railroad surface crossings in Carlsbad. She believes that these types of gates can be installed with federal funds that are available for this type of improvement. Carlsbad should be working on obtaining these types of federal grants.

Chair Perez left the meeting at 4:15 p.m.

#### CONSENT CALENDAR: None

#### **DEPARTMENTAL REPORTS:**

 <u>POLICE REPORT REGARDING TRAFFIC & MOBILITY-RELATED MATTERS DURING THE MONTH OF</u> <u>DECEMBER 2022</u> – Receive a presentation from a representative of the City of Carlsbad's Police Department that provide an overview of traffic and mobility-related police matters during the month of December 2022. (Staff Contact: Sergeant Scott Meritt, Police Department).

#### Staff's Recommendation: Receive a presentation

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Sergeant Meritt presented the report and reviewed a PowerPoint presentation (on file in the Office of the City Clerk)

Vice-Chair Linke stated that the significant reduction in serious collisions of the past few months has been great. He emphasized that the bicycle injuries are very low, but we still have vehicle collision injury. We need to focus on these vehicle injuries as well as the bicycle injuries.

#### Commissioner Proulx joined the meeting at 4:25 p.m.

 <u>2022 EAST-WEST CORRIDORS EMERGENCY RESURFACING AND RESTRIPING, CAPITAL IMPROVEMENT</u> <u>PROGRAM PROJECT NO. 6001-22E</u> – Support staff's recommendation to the City Council to approve plans and specifications for the 2022 East-West Corridors Emergency Resurfacing and Restriping Project, Capital Improvement Project No. 6001-22E, as part of the Pavement Management Program. (Staff Contact: Tom Frank and Eric Zielke, Public Works Department)

#### Staff's Recommendation: Support staff's recommendation.

Transportation Director Frank presented the report and reviewed a PowerPoint presentation (on file in the Office of the City Clerk).

#### **PUBLIC COMMENT:**

Kurt Bantle spoke about the street re-striping and resurfacing project which has created an unsafe situation on Cannon Road. He would like to be able to map out the collisions and injuries and see where they are located. Cannon Road has become unsafe. There are now more cars in the bicycle lane then there were previously. He understands the need to create balance for road usage, but he would like to know that we are taking everything into a holistic view.

Vice-Chair Linke clarified that the setting of the speed limit is based on an engineering survey that the city completes to analyze a specific number of cars during non-rush hour and finding the 85th-percentile speed. The road hasn't been restriped long enough for staff to do that type of analysis.

Transportation Director Frank said that this is correct.

Commissioner Coelho inquired about what determines median width and what goes into determining how wide it is during design and construction?

Transportation Director Frank said that median width is determined by city standards in place when the plans were approved. The median at Cannon Road was built to city standards.

Commissioner Coelho said that he did some research into the California Vehicle Code and found that the widest vehicle allowed on the road without flags is 130 inches wide. The widest fire trucks are 120 inches wide.

Transportation Director Frank said that he believed the legal limit for a width of a vehicle on the road is eight feet with the exception of the side view mirrors.

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Vice-Chair Linke said that he believes the legal limit for width of a vehicle is eight and a half feet plus one foot per side for the mirrors. This would make buses and trucks reach out to ten and a half feet. Transportation Director Frank said that he will verify the legal limits and send out the information.

Commissioner Fowler asked if Carlsbad Village Drive east of El Camino Real would look like Cannon Road as you drive up the hill. Right now, it is two lanes on each side. These two roads are comparable. It looks like the lane width will be reduced, and buffered bike lanes will be added.

Transportation Director Frank said that is correct, this road will be like Cannon Road and will have eight foot bike lanes.

Commissioner Fowler said that further to the east, starting at Pontiac Drive there is a segment that is two lanes with sharrows. Will staff consider widening this area at some point?

Transportation Director Frank answered that coming down from Pontiac Drive going east there is over 32 feet, and as it goes down to the east it narrows. Where it is 26 feet width, we propose to leave sharrows in this segment until we can do further widening.

Commissioner Fowler said previously there had been a proposal to widen that segment. However, there are eucalyptus groves in this segment. There was community pushback about cutting down these trees to widen the road. Would it be possible to widen this street without cutting down the trees?

Transportation Director Frank said that they don't have the footprint developed but it would take retaining walls to do this type of improvement. Some of the trees would have to be removed in order to widen that roadway. This would include sidewalks on each side, bike lanes on each side plus a retaining wall.

Commissioner Fowler said that he rides his bicycle on this segment of roadway close to the sidewalk and cars still swerve into the opposing lane to get around. He is skeptical of putting a sharrow in this area because he can't imagine riding down the middle of the lane going 12 mph leading a parade of cars that want to travel faster.

Transportation Director Frank said that staff believe it is a better use of the space to keep a sharrow condition as exists today with thirteen feet on each side. Staff believe this is the best option until we can widen the roadway and provide adequate bike lanes.

Commissioner Penseyres commented that he believes that we should track the crashes before and after to determine if what we are doing is the right thing for the existing conditions. Carlsbad has many hills and this makes a big difference for a cyclist.

Commissioner Penseyres said that he has ridden the narrow section on Carlsbad Village Drive and the sharrows allow the cyclists to control the lane to the point where cars come up behind you, they slow down and then the cyclist can move over to allow the car to pass. Leaving the road as is with the sharrows would be his recommendation.

Vice-Chair Linke said that he has significant concerns to the proposed changes to the higher volume streets like La Costa Avenue and Cannon Road. Starting with the vehicle lane eliminations, he thinks the ones that

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are proposed are fine. They are in areas where the traffic volumes are low enough to justify the reduction. One concern he has is that going forward there is an odd plan to reduce the number of lanes to one lane between intersections and then expand it back out to two lanes at the intersection. The cars would merge in and out at each intersection. Is this a new philosophy that staff is planning to use at intersections?

Transportation Director Frank replied that they look at the individual streets. An example would be El Fuerte Street, where they are looking at the lane drop between Faraday Avenue and south of Bressi Ranch to tie in to the existing one lane in each direction configuration. When there are short distances between intersections, we wouldn't then transition back to one travel lane in each direction. Staff's objective when doing an arterial reconfiguration or restriping is to consider the needs of all of the users however we do recognize that a significant proportion of users are vehicles so that is the first mode of travel that we consider. Therefore, there could be some transitions like El Fuerte Street where we plan to do a lane reduction from Faraday Avenue up to Loker Avenue and then keep it two lanes in each direction through the Bressi Ranch segment.

Vice-Chair Linke spoke about the lane width reduction on Cannon Road. Studies have shown that there is an increase in side-swipe collisions with a lane width reduction. While driving this segment of road, he has noticed vehicles crossing over the lines, and he has noticed landscape trailers swaying between lanes. He knows the trend is to widen the bike lanes but on certain streets this will increase the collision frequency.

Transportation Director Frank referenced a study regarding highway lane widths in rural settings that compares the collision rate between 10.5-foot and 12-foot travel lanes. In the construction zone I-5 currently has an 11-foot-wide travel lane and cars are still comfortable traveling at highway speeds. He welcomes any data or statistics that show that a ten-foot urban arterial travel lane results in any type of collision increase. Staff's goal is to find a balance for all of the modes of travel. La Costa Avenue has 50,000 trips a day for vehicles and 400 bicyclists a day travel this segment as well. Plus, you have runners and pedestrians. That roadway is heavily used by vehicles, bicyclists, and pedestrians. When considering lane widths, staff strives to providing buffers and extra space for the more vulnerable users (e.g. bicycles and pedestrians). This is how staff came up with the 10-10.5 foot wide travel lanes. He believes 11-foot travel lanes are excessively wide for urban arterials. Staff received similar comments when they reduced the travel lanes down from 12-feet to 11-feet as they are getting now. It is uncomfortable for users, and they notice that they have to pay attention much more, but this uncertainty actually makes drivers focus more on the conditions around them. Looking at the latest engineering guidelines and available research on collision data we consider the ten-foot width to be an appropriate width to balance the needs of all roadway users.

Vice-Chair Linke said that this is a very big change, and he believes that City Council should be reviewing. We have members of the public who are concerned.

Commissioner Fowler asked about the intersection of Poinsettia Lane and Aviara Parkway. There is a double left hand turn lane and double right hand turn lane. Is this intersection part of the restriping project?

Transportation Director Frank confirmed that this intersection is a part of this restriping project. It will become one right hand turn lane instead of dual right hand turn lanes. There will be two lanes to go straight through the intersection.

Transportation Director Frank clarified that on the small segment of Olivenhain Road they are being consistent with the existing striping within the City of Encinitas.

Vice-Chair Linke asked if staff would agree to highlight the fact that there was a concern about the lane width. He will just vote no on the recommendations with the caveat that he supported much of it. He is concerned that we are making a recommendation while the whole thing is in flux and many more changes could be added by staff between now and the City Council meeting.

Commissioner Coelho commented that he understood that staff is waiting for input from CalTrans only. Is this correct?

Transportation Director Frank replied that this is correct and that there are some minor revisions that were pointed out. There are no other issues that are in flux.

Commissioner Coelho asked about the input from CalTrans. Do we have to go with whatever they decide or is there a negotiation of some sort?

Transportation Director Frank explained that we are currently going through the approval process with CalTrans. We need to do these transitions to the existing interchange area in order to be compliant with their conditions today.

Vice-Chair Linke stated that he thinks we should have caution when there is an exception to go down to 10-foot wide lanes because CalTrans does not think it is a good idea. It is up to City Council to decide if they want a new policy in going down to 10-foot lanes around the city.

Commissioner Coelho said that the Commission should make recommendations as presented on four lanes and make additional recommendations on the other two lanes. If there are additional issues you can go to the City Council meeting and make your specific objections known.

Motion by Commissioner Fowler, seconded by Commissioner Proulx to support staff's recommendation to the City Council to approve plans and specifications for the 2022 East-West Corridors Emergency Resurfacing and Restriping Project, Capital Improvement Project No. 6001-22E, as part of the Pavement Management Program. Motion carried, 4/1/2 (No: Linke; Absent: Perez and Newlands)

Vice-Chair Linke wanted the minutes to reflect that he voted No due to his concerns with the reduction of lane widths on the multi-lane arterial roads.

 RECONFIGURE EL FUERTE STREET FROM FARADAY AVENUE TO LOKER AVENUE PROVIDING A MORE BALANCED STREET CROSS SECTION – Support staff's recommendation to the City Council to reconfigure El Fuerte Street from Faraday Avenue to Loker Avenue to provide a more balanced street cross section including one 10-foot vehicle lane in each direction plus a center median or two-way left turn lane, 8-foot bike lanes, and 9-foot buffers. (Staff Contact: Tom Frank, Public Works Department)

#### Staff's Recommendation: Support staff's recommendation

Transportation Director Frank presented the report and reviewed a PowerPoint presentation (on file in the Office of the City Clerk).

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#### PUBLIC COMMENT:

David Pierce spoke in support of reconfiguring El Fuerte Street from Faraday Avenue to Loker Avenue.

Commissioner Proulx asked if after removing the lane if the traffic pattern was as much post covid as it was pre-covid. Has there been consideration for the traffic increasing over time as we return to normal?

Transportation Director Frank said they did take pre-covid traffic patterns into consideration.

Commissioner Proulx asked if there are developments planned for this area that would add traffic flow?

Transportation Director Frank responded that they also looked at future projected traffic demands.

Commissioner Penseyres said that the existing bike lanes are 4.5 feet and that includes the gutter pan. This does not meet the minimum requirements for a Class II bike lane, does it? He believes it must be five feet.

Transportation Director Frank replied that the CalTrans guidelines has the minimum requirement of five feet.

Commissioner Penseyres stated that even if they left the street at two lanes each way that the traffic lanes would have to shrink to provide a basic minimum width bike lane. He also commented that when you provide a wide buffer in addition to a bike lane that the bike lane stops being swept by the adjacent vehicles and more debris ends up in the bike lane. Therefore, we need to increase the frequency of street sweeping in the bike lane. Will staff be looking at the street sweeping schedule?

Transportation Director Frank replied that he does not know if they need to change the frequency of street sweeping. They will make sure to observe this issue and make sure that we are sweeping appropriately.

Vice-Chair Linke agreed that eliminating a vehicle lane here is justified. However, he still thinks we could have eleven-foot driving lanes and an eleven-foot center turn lane. This would only reduce the bike lane buffer down to seven and a half feet which is still a substantial buffer. Therefore, it would minimize conflict with vehicles. He is just concerned about the precedent that is being set where we are going to ten-foot lanes and a ten-foot center turn lane. He supports the road diet, but he does not support the reduction to a ten-foot-wide lane.

Transportation Director Frank commented that they are proposing the ten-foot-wide vehicle travel lane to be consistent with the other arterials. We recognize that we have an extra wide buffer in this area. Again, he understands some might feel uncomfortable with a ten-foot travel lane versus the twelve-foot travel lane. He wants to remind people that the width and extra space allows people to feel like they can travel faster. We see this in the traffic speed data. However, when the street is narrower or has cars parked along the side this slows driver behavior.

Motion by Commissioner Proulx, seconded by Commissioner Penseyres to support the staff's recommendations to the City Council to reconfigure El Fuerte Street from Faraday Avenue to Loker Avenue to provide a more balanced street cross section including one 10-foot vehicle lane in each

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direction plus a center median or two-way left turn lane, 8-foot bike lanes, and 9-foot buffers. Motion carried, 4/1/2 (No: Linke; Absent: Perez and Newlands).

Vice-Chair Linke wanted the minutes to reflect that he supported the lane elimination but not the lane width reduction.

4. <u>SEMIANNUAL TRANSPORTATION REPORT</u>- Receive the Semiannual Transportation Report. (Staff Contact: Tom Frank, Public Works Department)

#### Staff's Recommendation: Receive the report.

Transportation Director Frank presented the report and reviewed a PowerPoint presentation (on file in the Office of the City Clerk).

Commissioner Fowler volunteered to represent the Traffic and Mobility Commission at City Council on Jan. 24, 2023. He inquired about what material should be covered.

Commissioner Coelho said to highlight whatever topics and projects that still have questions or concerns.

Transportation Director Frank said that Commissioner Coelho can look at the Work Plan and comment on staff's progress on the Work Plan and any other comments.

Motion by Commissioner Proulx, seconded by Commissioner Coelho to nominate Commissioner Fowler to represent the Traffic and Mobility Commission at the Jan. 24, 2023, City Council meeting. Motion carried, 5/0/2 (Absent: Perez and Newlands).

#### **CITY TRAFFIC ENGINEER COMMENTS:**

Transportation, Planning and Mobility Manager Schmidt mentioned that there is a pledge campaign for the Safer Streets Together initiative that Communication and Engagement is launching soon. Communication and Engagement staff will be sending the Commissioners information on how you can individually help support this pledge campaign. The process is very simple, and a website page is set up for anyone to participate. All you need to do is agree to a simple statement which is "I care about my community and pledge to do my part to keep Carlsbad streets safe for everyone". The Commissioners can take a picture of themselves and share why they decided to take the pledge. The city will share these testimonials on social media. We are asking members of our school and business communities to support this pledge as well.

#### TRAFFIC AND MOBILITY COMMISSION COMMENTS:

Vice-Chair Linke wanted to honor Chair Perez and his commitment to the Commission. He thanked the Commissioners and staff for their support during his time on the Commission. He wanted to make special shoutout to Commissioner Penseyres who he has learned a lot from over the last four years regarding cycling. He encourages everyone to listen to his input as he not only talks the talk but walks the walk.

Commissioner Coelho asked when City Council will vote on the menu of options for Safer Streets Initiative?

Transportation Director Frank said that it is not yet determined when that will take place. He said they are going back to City Council for the extension of the emergency declaration on Jan. 24, 2023.

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Commissioner Coelho thanked Chair Perez and Vice-Chair Linke for their service on the Commission. He has learned a lot from them over the last eighteen months.

Commissioner Proulx thanked Chair Perez and Vice-Chair Linke for their service.

Commissioner Fowler thanked Vice-Chair Linke for all of his hard work and expertise. He also thanked Chair Perez for his leadership and contributions to the Commission. He said that he highly respects both Commissioners and they will be missed.

Commissioner Penseyres brought up Sage Creek High School as there has been a lot of interest. He has been out there three times now watching at peak hours in the morning. The incidents happen when the cyclists make a left turn. They are then hit when the vehicle is making a right turn on red which they are allowed to do. He has been working with staff and residents about what can be done.

Commissioner Penseyres wanted to share his appreciation to Chair Perez and Vice-Chair Linke. He always respected their opinions and arguments that are so well thought out.

Vice-Chair Linke said that his first goal when he joined the commission was to update the municipal code and the rules of the commission to increase the scope of our duties and our visibility with City Council. He would like to encourage everyone to speak their mind and not have to be a rubber stamp for staff. He believes that staff has taken a lot of the input given over the past four years, particularly after the municipal code update.

#### **ADJOURNMENT:**

Vice-Chair Linke adjourned the Traffic & Mobility Commission Regular Meeting on Jan. 3, 2023, at 6:23 p.m.

Clians Paiva

Eliane Paiva, Secretary



#### TRAFFIC AND MOBILITY COMMISSION



Council Chambers 1200 Carlsbad Village Drive Carlsbad, CA 92008

June 5, 2023, 4 p.m.

#### CALL TO ORDER: 4 p.m.

**ROLL CALL:** Coelho, Fowler, Penseyres, Newlands, Garcia, and Kohl. Proulx – Absent.

**PLEDGE OF ALLEGIANCE:** Chair Coelho led the Pledge of Allegiance.

#### APPROVAL OF MINUTES:

Minutes of the Regular Meeting held on May 1, 2023

Motion by Commissioner Kohl, seconded by Vice-Chair Fowler to approve the minutes of the Regular Meeting held on May 1, 2023, as presented. Motion carried, 5/0/1/1 (Newlands – Abstain, Proulx – Absent).

#### PUBLIC COMMENT:

Jan Neff-Sinclair spoke regarding the Carlsbad budget and shared disappointment at the elimination of some of the TGIF concerts. She also shared concern over raising the sales tax.

#### **CONSENT CALENDAR**:

Motion by Commissioner Newlands, seconded by Commissioner Kohl to approve Consent Item No. 1. Motion carried, 6/0/0/1 (Proulx – Absent).

1. <u>SEMIANNUAL TRANSPORTATION REPORT</u> – Receive the Semiannual Transportation Report. (Staff Contact: Tom Frank, Public Works Department).

This item was pulled for discussion by Commissioner Penseyres.

 <u>2023 SLURRY SEAL PROJECT NO. 6001-23SS</u> – Support staff's recommendation to the City Council to approve the plans for the 2023 Slurry Seal Project, Capital Improvement Project No. 6001-23SS, as a part of the Pavement Management Program. (Staff Contact: Eric Zielke and Hossein Ajideh, Public Works Department).

#### CONSENT CALENDAR ITEM #2 PULLED FOR DISCUSSION:

This item was pulled for discussion by Commissioner Penseyres.

 <u>2023 SLURRY SEAL PROJECT NO. 6001-23SS</u> – Support staff's recommendation to the City Council to approve the plans for the 2023 Slurry Seal Project, Capital Improvement Project No. 6001-23SS, as a part of the Pavement Management Program. (Staff Contact: Eric Zielke and Hossein Ajideh, Public Works Department). In response to Commissioner Penseyres' concern about the width of the bike lane being six inches too narrow to provide a minimum two foot door side buffer along with the five foot bike lane to avoid failing the Multimodal Level of Service, City Traffic Engineer Kim responded that the city started practicing a 10.5 width for lanes adjacent to raised medians but considering that Paseo Del Norte is relatively low speed, staff is willing to reduce the vehicle lane width to 10 feet and add the half foot to the bike lane to get the two foot door side buffer and a five foot bike lane.

In response to Commissioner Penseyres' suggestion about extending the bike lane on Paseo Del Norte back another 50 feet to help the cyclists merge before the left-hand curve, City Traffic Engineer Kim responded that they could accommodate a bike lane in the gore area of Cannon Road which would reduce the move to the left that makes cyclists uncomfortable and then the dashed green would not have to be extended.

Motion by Commissioner Penseyres, seconded by Commissioner Newlands to recommend to the City Council to approve Consent Item No. 2 with the following amendments:

- 1) On Paseo Del Norte from Car Country Drive to Cannon Road to change vehicle lane widths to 10-feet to accommodate a five-foot bike lane with a two foot "door side" buffer between the bike lane and parking lane; and
- 2) Northbound on Paseo Del Norte at Cannon Road, the gore/hatched area between the left-turn lane and right-turn lane will be removed and the bike lane will be extended to the stop bar at the intersection; and
- Tamarack Avenue from Knollwood Drive to Saddle Drive will be modified to reflect existing conditions with bike lane and door zone buffer.
   Motion carried, 6/0/0/1 (Proulx – Absent).

#### **DEPARTMENTAL REPORTS**:

3. <u>POLICE REPORT REGARDING TRAFFIC & MOBILITY-RELATED MATTERS DURING THE MONTH</u> <u>OF APRIL 2023, INCLUDING NOTABLE NEWS FOR THE MONTH OF MAY</u> – Receive a presentation from a representative of the City of Carlsbad's Police Department that will provide an overview of traffic and mobility-related police matters during the month of April 2023, including notable news for the month of May. (Staff Contact: Alonso DeVelasco, Police Department).

#### Staff's Recommendation: Receive the presentation.

Lieutenant DeVelasco presented the report and reviewed a PowerPoint presentation (on file in the Office of the City Clerk).

The Commission received the report.

In response to Commissioner Penseyres inquiry about whether the Police Department investigates hit and runs from previous months and whether the Commission can see these

investigation updates, Lieutenant DeVelasco responded that traffic investigators are tasked with following up with these cases and then he can get the updates and report on the percentages and closures.

 SOUTH CARLSBAD BOULEVARD CLIMATE ADAPTATION PROJECT, PREFERRED OPTION FOR THE 30% DESIGN – Receive a report on traffic study results for the South Carlsbad Boulevard Climate Adaptation Project and make a recommendation to the City Council on the preferred design option to complete the grant requirements. (Staff Contact: Tom Frank and Katie Hentrich, Public Works Department).

**Staff's Recommendation:** Receive the report and make a recommendation.

The Commission received the report.

Kris Wright spoke against reducing Carlsbad Boulevard from Palomar Airport Road south to the border to 10.5-foot vehicle lane in each direction and keeping highway 101 as is, with four lanes.

Jan Neff-Sinclair spoke in favor of keeping the coast highway a two-lane road wherever possible.

*Karen Pearson spoke in favor of the roundabout and option number two, and possible speed limit reduction.* 

Bill Fenner spoke about reducing the speed limit on Carlsbad Boulevard to lower than 50 miles per hour. He spoke in support of the roundabout and lane reduction.

Motion by Commissioner Kohl, seconded by Commissioner Penseyres to recommend to the City Council to adopt Option 2 - two vehicle lanes with roundabouts, as the preferred design option. Motion carried, 6/0/1 (Proulx – Absent).

 <u>FISCAL YEAR 2023-24 CAPITAL IMPROVEMENT PROGRAM OVERVIEW OF TRANSPORTATION</u> <u>PORJECTS</u> – Receive an informational report on transportation projects included in the proposed fiscal year 2023-24 Capital Improvement Program budget. (Staff Contact: Tom Frank and Craddock Stropes, Public Works Department).

#### Staff's Recommendation: Receive the report.

The Commission received the report.

6. <u>TRAFFIC CALMING PLANS FOR VICTORIA AVENUE, HIGHLAND DRIVE, NUEVA CASTILLA WAY,</u> <u>CIRCULO SEQUOIA AND CELINDA DRIVE</u> – Receive the presentation based on the findings contained in this report and the requirements of the Carlsbad Residential Traffic Management Program, and support staff's recommendation for the proposed traffic calming plans on Victoria Avenue, Highland Drive, Nueva Castilla Way, Circulo Sequoia and Celinda Drive. (Staff Contact: Lindy Pham and Miriam Jim, Public Works Department).

Staff's Recommendation: Receive the presentation and support staff's recommendation.

The Commission received the report.

Christine Marshall spoke regarding the survey results for Celinda Drive and stated that the results did not meet the 67% minimum requirement.

Gary Nessim spoke in favor of the proposed traffic calming plans.

Meghan Novy spoke in support of the speed humps on Celinda Drive.

*Kevin Valles spoke in support of the speed humps on Celinda Drive.* 

In response to Commissioner Penseyres' question about the Celinda Drive survey not being valid since the support rate did not meet the 67% requirement and since some surveys were accepted after the due date, City Traffic Engineer Kim responded that all support rates are rounded to nearest whole number and that 66.67% can be considered equivalent to 67%. He further added that the due dates given on the survey are to encourage residents to return the survey in a timely manner and that surveys are accepted in the period between the due date and the scheduled Traffic & Mobility Commission date.

Motion by Commissioner Kohl, seconded by Commissioner Penseyres to support staff's recommendation for the proposed traffic calming plans on Victoria Avenue, Highland Drive, Nueva Castilla Way, Circulo Sequoia and Celinda Drive. Motion carried, 6/0/1 (Proulx – Absent).

7. <u>TYLER STREET COMPLETE STREETS STUDY</u> – Receive a presentation and provide input regarding the Tyler Street Complete Streets Study. (Staff Contact: Nathan Schmidt and Nick Gorman, Public Works Department).

**Staff's Recommendation:** Receive the presentation and provide input.

The Commission received the report and provided input.

Jeanine spoke about the parking and shared her concern about adding bicycle lanes and lack of parking for residents.

*Jen Neff-Sinclair spoke her concern about the proposed improvements on Tyler Street.* 

Gary Nessim spoke about his desire to see wider sidewalks added in the Carlsbad Village. He also shared the need for lighting on Tyler Street.

8. <u>SUSTAINABLE MOBILITY IMPLEMENTATION PLAN & MULTIMODAL TRANSPORTATION</u> <u>IMPACT FEE STUDY: REVIEW OF PRIORITY PROJECTS</u> – Receive an update and provide input on the project prioritization of Sustainable Mobility Plan implementation plan. (Staff Contact: Nathan Schmidt, Public Works Department).

**Staff's Recommendation:** Receive the update and provide input.

The Commission received the report and provided input.

In response to Commissioner Penseyres comment on prioritizing the section of Avenida Encinas north of the train station exit that is extremely narrow, Transportation Planning and Mobility Manager Schmidt responded that the section on Avenida Encinas is part of the approved Capital Improvement Program (CIP # 6004 - Avenida Encinas Coastal Rail Trail and Pedestrian Improvements) and it will be addressed with new bike lanes in both directions of travel on Avenida Encinas.

 <u>FISCAL YEAR 2023-24 – TRAFFIC AND MOBILITY COMMISSION WORKPLAN</u> – Review and approve the final Fiscal Year 2023-24 Traffic and Mobility Commission Workplan and appoint a commissioner to represent the Traffic and Mobility Commission at the City Council meeting where the Work Plan will be presented for City Council consideration. (Staff Contact: Nathan Schmidt, Public Works Department).

**Staff's Recommendation:** Approve the Work Plan and appoint one commissioner to represent the Traffic & Mobility Commission at a City Council meeting.

The Commission received the report.

In response to Commissioner Kohl's comment that the Commission would like to change the name to Traffic, Mobility and Safety Commission, Transportation Planning and Mobility Manager Schmidt responded that he would make that change in his notes.

In response to Chair Coelho's comment that the minutes reflect the name change request to show as Traffic, Safety and Mobility Commission, Transportation Planning and Mobility Manager Schmidt responded that the Commission could discuss and make a recommendation to change the name at this time.

Motion by Vice-Chair Fowler, seconded by Commissioner Newlands to change the name of the Traffic and Mobility Commission to Traffic and Mobility Safety Commission. Motion failed, 3/3/1 (Proulx – Absent).

In response to Chair Coelho's request to add the Annual Presentation of the Budget to the Work Plan, Transportation Planning and Mobility Manager Schmidt responded that he would add it to the Traffic & Mobility Commission workplan.

Motion by Chair Coelho, seconded by Commissioner Kohl to recommend to the City Council to approve the Fiscal Year 2023-24 Traffic & Mobility Commission Workplan with the addition of the Annual Budget Presentation. Motion carried, 6/0/1 (Proulx – Absent).

Motion by Commissioner Garcia, seconded by Vice-Chair Fowler to appoint Commissioner Kohl as representative of the Traffic & Mobility Commission at the July 25, 2023, City Council Meeting. Motion carried, 5/0/1/1 (Kohl – Abstain, Proulx – Absent).

Motion by Commissioner Penseyres, seconded by Commissioner Newlands to appoint Chair Coelho as the back-up representative of the Traffic & Mobility Commission at the July 25, 2023, City Council Meeting. Motion carried, 6/0/1 (Proulx – Absent).

#### **CITY TRAFFIC ENGINEER COMMENTS:**

City Traffic Engineer Kim explained that staff will bring forward another group of streets for traffic calming at the next meeting in August.

#### COMMISSION COMMENTARY AND REQUESTS FOR CONSIDERATION OF MATTERS:

In response to Commissioner Kohl's question about the red-light time at Fire Station No. 2 and whether they could put some sort of indication that there is a call-in process, and also about using the Opticom to put the intersection into Preempt instead of using the door mechanism, City Traffic Engineer Kim responded that he believes the preemption is not by the door mechanism but by the fire station operators, he further added that staff will take a look at this and see if there is a way to notify the public of a call-in progress and about shortening the red-light delay.

Commissioner Penseyres mentioned a Strong Towns grant that a resident of oceanside received to do a study of the intersection of Basswood and Valley where there was a recent fatality. He further added that this person will be using a radar detector to conduct speed surveys on both of those streets and the results showed that the maximum speed measured on Basswood Avenue was between 66 and 67 miles per hour.

In response to Vice-Chair Fowler's question regarding the traffic signal on El Camino Real and Arenal and how it operates with the Fire Station, City Traffic Engineer Kim responded that he would let his traffic signal staff know that it would be helpful to bring this information to the Traffic & Mobility Commission when the agenda is light.

ADJOURNMENT: Chair Coelho adjourned the Traffic & Mobility Commission Regular Meeting on June 5, 2023, at 7:44 p.m.

Clians Paiva

Eliane Paiva Secretary



E.L. E. 2024

Meeting Date:	Feb. 5, 2024
То:	Traffic Safety & Mobility Commission
Staff Contact:	Alonso DeVelasco, Police Lieutenant Alonso.develasco@carlsbadca.gov, 442-339-5578
Subject:	Police Report Regarding Traffic & Mobility-Related Matters During the Months of November and December 2023, including Notable News for the Month of January 2024

#### **Recommended Action**

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Receive a presentation from a representative of the City of Carlsbad's Police Department that will provide an overview of traffic and mobility-related police matters during the months of November and December 2023, including notable news for the month of January 2024.

#### **Fiscal Analysis**

This action has no fiscal impact.

#### **Environmental Evaluation**

In keeping with California Public Resources Code Section 21065, this action does not constitute a "project" within the meaning of the California Environmental Quality Act in that it has no potential to cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. Therefore, it does not require environmental review.

#### **Public Notification and Outreach**

This item was noticed in keeping with the Ralph M. Brown Act and it was available for public viewing and review at least 72 hours before the scheduled meeting date.

**Exhibits** 

None.



Meeting Date:	Feb. 5, 2024	
То:	Traffic Safety & Mobility Commission	
Staff Contact:	Nathan Schmidt, Transportation Planning and Mobility Manager Nathan.Schmidt@carlsbadca.gov or 442-339-2734	
	Tom Frank, Transportation Director/City Engineer Tom.Frank@carlsbadca.gov or 442-339-2766	
Subject:	Complete Streets Best Practices: New Bikeway Treatments and Roadway Widths	

#### **Recommended Action**

Receive an informational presentation on Complete Streets Best Practices including an overview of recent street striping such as bike lane treatments and roadway travel lane widths.

#### **Executive Summary**

The purpose of this informational report is to provide the Traffic Safety & Mobility Commission with an overview and description of benefits of the new roadway striping improvements that have been implemented as part of the city's traffic safety enhancements. This report will explain how staff determines appropriate vehicle travel lane widths and how this provides a benefit to all roadway users. This report can also assist the commission in evaluating proposed street design projects in the city.

#### **Discussion**

The Transportation Department is working on dozens of projects and initiatives designed to align city streets with the policies of the city's General Plan. The General Plan reflects changes in state law requiring cities to take a "complete streets" approach to road design. Complete streets are designed to accommodate all of the different ways people might want to get around the city. By making streets more accessible for walking and biking, complete streets support other goals such as reducing greenhouse gases, reducing vehicle traffic, supporting healthy lifestyles and creating a stronger sense of community.

The General Plan recognizes that one size does not fit all when it comes to transportation. The plan puts city streets into different categories, each with its own set of operational priorities. For example, streets most conducive to walking and biking, such as those in the Village and along the coast, prioritize wider bike lanes and sidewalks. Main thoroughfares, such as El Camino Real, prioritize car traffic with multiple lanes.

The city's work of transforming local streets was already well underway when, on Aug. 23, 2022, the city proclaimed a local traffic safety emergency. The main safety focus of the emergency was related to bikes including electric bikes or e-bikes; however, the city's approach focused on encouraging safe behaviors among all road users. In response to the local emergency, the City Council approved a

comprehensive approach to traffic safety. This approach, summarized in the Safer Streets Together Plan, included adding new street redesign projects and moving up the timing of others.

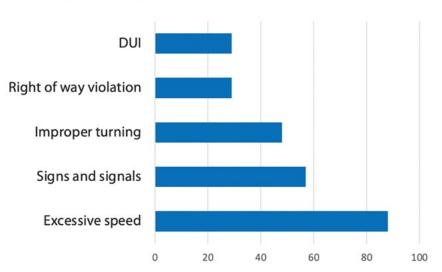
One of the projects prioritized by the Safer Streets Together Plan is the resurfacing and restriping of Carlsbad's major east-west corridors. This project, which is currently in construction, incorporates complete streets strategies in an effort to help reduce vehicle speeds and increase safety.

#### Reducing speeding through street design

The implementation of complete streets designs, which aim to enhance safety and provide more accessible to all users including bicyclists, pedestrians, and motorists, requires a careful analysis of vehicle travel lane widths. An important element of the recent restriping project is the placement of appropriate vehicle lane widths.

Appropriate sizing of vehicle lanes is crucial in this context for several reasons:

- Speeding is listed as the number one cause of injury collisions in Carlsbad, cited as the "primary collision factor" in 25% of these crashes. Distracted driving is often associated with this collision factor as well.
- Properly designed lanes encourages drivers to pay more attention and drive appropriate speeds.
- Lane width is based on several factors, including traffic volume, speed, the type of street and its location.
- Compliance with national industry practices and recommendations.



#### Primary Collision Factor | Injury Collisions in Carlsbad Sept. 1, 2022, to Aug. 31, 2023

A new report from researchers at the John Hopkins Bloomberg School of Public Health further highlights the critical role street design and lane widths play in traffic and pedestrian safety. The study includes analysis of 1,117 streets in seven U.S. cities found that even slightly narrower lane widths are, in many cases, safer than wide travel lanes.

The study found that the number of vehicle collisions do not significantly change in streets with a lane width of nine feet compared to streets with lane widths of 10 feet or 11 feet. There are significant increases in collisions, approximately 1.5 times higher, when the lane width increases from Feb. 5, 2024 Rem #3 Page 2 of 9

nine feet to 12 feet. A summary of this report is provided in Exhibit 1 and the full study can be found at the following website: <u>https://narrowlanes.americanhealth.jhu.edu/</u>

In conclusion, the relationship between vehicle travel lane widths and the implementation of complete streets designs is a pivotal aspect of urban planning that requires a balanced approach. The goal is to ensure that streets are safe, functional, and welcoming for all users, fostering a more sustainable and inclusive urban mobility framework.

#### New bikeway design features

Many of the city's bike lanes are being enhanced by widening and adding buffers and green paint to highlight critical conflict zones between bicyclists and vehicles.

#### **Buffered Class-II bike lanes**

When roads are restriped, there is often an opportunity to create a buffer between cars and bikes. Buffered bike lanes are conventional (Class-II) bicycle lanes with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. The California Manual on Uniform Traffic Control Devices, or CA MUTCD, serves as the state's guidelines for traffic control devices including striping. Buffered bike lanes are included in the CA MUTCD. In addition to the guidelines found in the CA MUTCD, the city's current standard of practice specify a minimum buffer width of two feet. The minimum bike lane width with buffer is six feet. If the total width for bike lane/buffer is between six feet and eight feet, no buffer is to be provided.



#### **Buffered Class-II Bike Lanes**

#### Through bike lanes with conflict zone striping

For bicyclists traveling in a bike lane, the approach to an intersection with vehicular turn lanes can present a significant challenge. For this reason, it is important that bicyclists are provided with an opportunity to correctly position themselves to avoid conflicts with turning vehicles. Ideally, bicyclists should be able to travel straight through the conflict zone area of the intersection while right turning vehicles are required to transition into the right turn pocket. This allows for the greatest visibility of bicyclists at the critical conflict zone area. The following outlines the numerous safety benefits of bike lane conflict zone treatments:

- Enables bicyclists to correctly position themselves to the left of right turn lanes or to the right of left turn lanes.
- Reduces conflicts between turning motorists and bicycle through traffic.
- Provides bicyclists with guidance to follow the preferred travel path.
- Leads to more predictable bicyclist and motorist travel movements.
- Alerts motorists to expect and yield to merging bicycle traffic.
- Signifies an appropriate location for motorists to safely merge across the bike lane into the turn lane.



#### Combined bike lane / right turn lane with green dashed striping

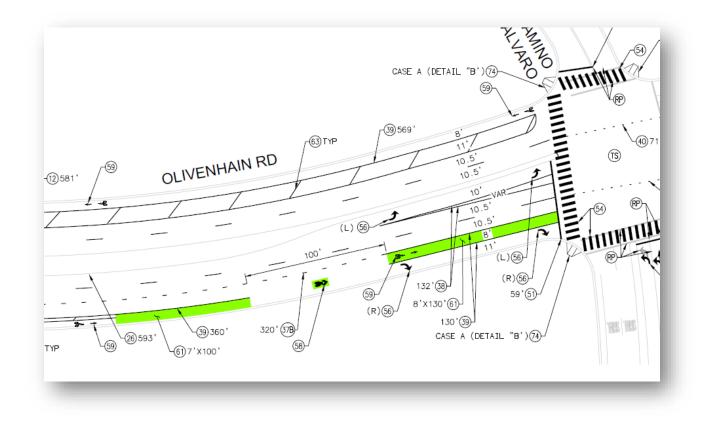
To avoid conflicts between bikes and right-turning vehicles, bike lanes are placed on the left hand side of any right turn lane. These bike lanes are enhanced in green paint to highlight the presence of bicyclists in between vehicle lanes. Dashed green is used to highlight the area where motorists are encouraged to cross the bike lane and into the right turn lane. These new markings are there to remind road users to watch for bicyclists or be alert for potential conflict zones. For example, in the graphic below you see the conflict zone highlighted with dashed green markings within the right turn. The green paint does not change the rules of the road. The green is there to alert vehicles to the potential presence of bicyclists within the bike lane at the intersection.



With or without green paint, a dashed line indicates when drivers turning right should merge into the bike lane. Always check first to make sure the coast is clear.

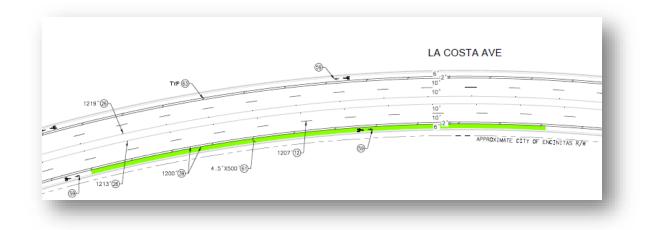
#### Bike lane conflict zone with sharrows (mixing zones)

In situations where a through lane transitions into a right turn only lane, a continuous bike lane is not possible. Therefore, a "mixing zone" will be established using shared lane markings (sharrows). Mixing zones help position vehicles closer to the curbside to help facilitate the right turn and reduce right hooks with bicyclists. The example shown below includes a greenback sharrow that indicates that multiple transportation modes may "mix" in this area.



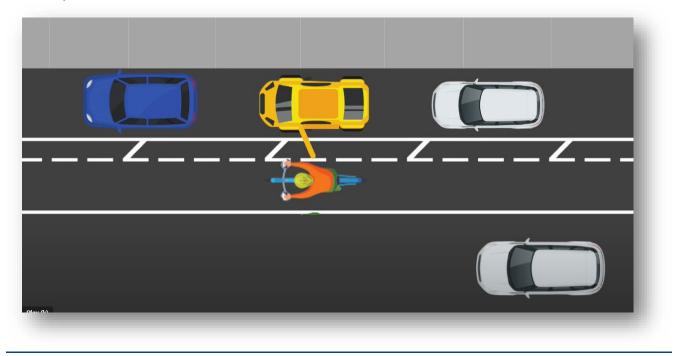
#### Solid green paint at curves

Solid green paint can also be used on curves to highlight the presences of bike lanes at curves where bicyclists may be less visible and to discourage vehicles from encroaching into the bike lane.



#### **Door zone striping**

Door zone striping establishes a buffer between the bike lane and parked vehicles using a dashed line. This line helps keep bikes out of the door zone and alerts bikes to watch out for people opening doors in parked cars.



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#### **Fiscal Analysis**

This item is a presentation on the work related to management of the city's transportation assets and, as such, there is no financial impact related to this item.

#### **Environmental Evaluation (CEQA)**

Pursuant to Public Resources Code Section 21065, receiving a presentation on the work of the Public Works Branch, Transportation Department does not constitute a "project" within the meaning of the California Environmental Quality Act, or CEQA, in that it has no potential to cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

#### **Public Notification**

This item was noticed in accordance with the Ralph M. Brown Act and was available for public viewing and review at least 72 hours prior to the scheduled meeting date.

#### **Exhibit**

1. Narrowing Travel Lanes Saves Lives: A summary of the findings of narrowing travel lanes from Hopkins Bloomberg School of Public Health

# NARROWING TRAVEL LANES SAVES LIVES

With rising pedestrian and cyclist fatalities, U.S. cities need cost-effective ways to improve safety within existing roadways.

There's a solution hiding in plain sight.

- → 40% increase in pedestrian fatalities and 44% increase in cyclist fatalities from 2010 to 2018.
- 16% increase in the number of deadly car accidents in the U.S. between 2018-2022.
- → About 8% of streets in New York City have a dedicated bike lane, despite being one of the most bike-friendly cities in the U.S.

A national study of **1,117 streets** in **seven U.S. cities** evaluated how travel lane widths impact traffic safety. The findings? **Wider lanes are not necessarily safer.** In fact, narrowing travel lanes can **improve safety, optimize sidewalks and bike lanes, reduce environmental impacts and boost economic activity.** 

# **KEY INSIGHTS**

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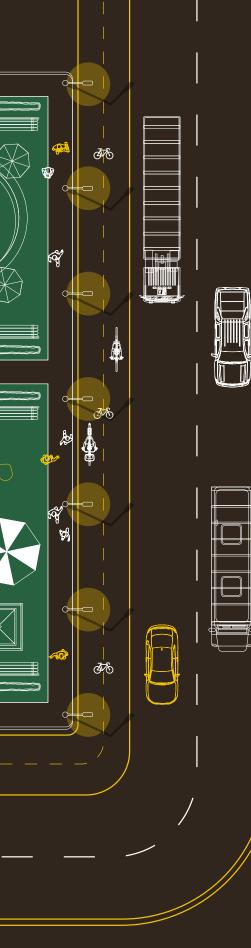
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- 9, 10 and 11 ft. lanes did not increase accident risk or frequency, compared to 12-ft. lanes.
- 2 Wider lanes at faster speeds had significantly more crashes than narrower lanes, but slower speeds had no difference.
- **3** Narrower lanes help the environment by allowing more users in less space and using less pavement.
  - Narrowing lanes offers great opportunities for **adding bike lanes and wider sidewalks** to existing streets without compromising safety.





ohns Hopkins

OOMBERG SCHOOI

# HOW DEPARTMENTS OF TRANSPORTATION ACROSS 5 STATES ARE IMPROVING ROAD SAFETY

- → Florida: FDOT uses a context classification system, allowing designers to choose the best design based on the area's needs.
- → Vermont: VTrans was the first state to change the minimum lane width to 9 feet in urban areas.
- → Oregon: ODOT uses design criteria vs. standards for more flexibility in decisions about lane width and street design.
- → California: Caltrans uses a "complete streets" approach, considering the needs and safety of all users to determine street design.
- → Delaware: DelDOT rarely uses less than 11-ft. lanes, due to higher speeds and more transit vehicles.

### "HERE ON THE EAST COAST OUR ROADWAY CORRIDORS ARE REALLY TIGHT. IF WE CAN NARROW OUR ROADWAYS IN DELAWARE TO ACCOMMODATE MORE CYCLISTS AND PEDESTRIANS IT WILL MAKE A HUGE DIFFERENCE."

#### **Mike Simmons**

Chief of Project Development South, Delaware Department of Transportation

# RECOMMENDATIONS

Take a holistic approach to street design by considering the needs of all users, over speed and traffic efficiency.



1

Start with 10-ft. lanes in slower speed urban areas and let engineers justify wider widths.

**Establish a context-appropriate speed** before determining lane width.



Launch a lane repurposing program to add a bike lane or wider sidewalk.

The best roads for travel lane reduction projects are 11-13-ft. lanes in urban areas with slower speeds and streets with less traffic, limited street parking, fewer lanes, low degrees of curvature, and no raised medians.



Ready to get started? For more information and to read the full report, visit narrowlanes.americanhealth.jhu.edu

