

REGULAR DESIGN REVIEW COMMITTEE MEETING

DESIGN REVIEW COMMITTEE

THURSDAY, MAY 30, 2024

12:00 PM

AGENDA
DESIGN REVIEW COMMITTEE

Regular Design Review Committee Meeting - Thursday, May 30, 2024
12:00 PM

THIS MEETING WILL BE HELD VIRTUALLY AND IN PERSON, IS COMPLIANT WITH ASSEMBLY BILL ("AB") 2449, SIGNED INTO LAW ON SEPTEMBER 13, 2022, WHICH AMENDS GOVERNMENT CODE SECTION 54953 TO PROVIDE AUTHORITY FOR PUBLIC AGENCIES TO CONTINUE TO HOLD VIRTUAL MEETINGS AND REMAIN IN COMPLIANCE WITH THE BROWN ACT (GOV. CODE §§ 54950 ET SEQ.). TO PARTICIPATE IN THE ZOOM COUNCIL MEETING LIVE:

https://us02web.zoom.us/j/4614728829

Meeting ID: 461 472 8829

To participate telephonically by calling the number below:

(669) 900-6833

Meeting ID: 461 472 8829#

If prompted to enter a participant ID, press #

TO PARTICIPATE IN PERSON:
City Hall Council Chambers
1 Pendergrass Way
Sand City, CA

How to submit written Public Comments:
If any member of the public would like to provide written comments at the meeting, please do as set forth below.

Written: All comments received before 8:00 am the day of the meeting will be posted on the City's website as "Correspondence" under the relevant agenda item and provided to the Committee Members at the meeting. Please email your comments to: cityclerk@sandcityca.org.

Read Aloud During the Meeting: Email your comments to cityclerk@sandcityca.org. When the Mayor opens the public comment period for the relevant agenda item; please indicate the agenda item and title in your email subject line. If you want your comment read aloud, prominently write "Read Aloud at Meeting" at the top of the email and your comments will be read into the record (not to exceed three minutes at staff's cadence).

DURING EACH MEETING, members of the public may participate by calling and speaking live during the designated time(s), subject to time limits that may be imposed pursuant to the Brown Act at the number provided above. Please use the "raise your hand" option on Zoom, and the Secretary will call on your name.

1. ROLL CALL

2. COMMUNICATIONS

Members of the public may address the Design Review Committee on matters not appearing on the Design Review Committee Agenda at this time for up to three minutes. In order that the Secretary may later identify the speaker in the minutes of the meeting, it is helpful if speakers state their names. Public comments regarding items on the scheduled agenda will be heard at the time the time the item is being considered by the Design Review Committee.

3. ORDER OF BUSINESS

3A. Approve the Design Review Committee Meeting Minutes for March 14, 2024
Minutes

3B. Provide Recommendations on Coastal Development Permit for the Monterey-Salinas Transit (MST) SURF! Busway and Bus Rapid Transit Project
Staff Report
Exhibit A, SURF! Busway Overall Route
Exhibit B, SURF! Sand City Site Plan
Exhibit C, Sand City SURF! Busway 95% Plans
Exhibit D, DD&A ESHA Impacts Report
Exhibit E, Intersection Control Evaluation Memo
Exhibit F, Multi-Use Trail Impacts and Improvements
Exhibit G, Application Letter of Intent
Exhibit H, MST SURF! Final Initial Study
Exhibit I, Notice of Exemption

4. ADJOURNMENT

The current agenda is available in PDF format on our website at:
www.sandcity.org

If you have a request for a disability-related modification or accommodation, including auxiliary aids or services, which will allow you to participate in a Sand City public meeting, please call the City Clerk at (831) 394-3054 extension 220, or give your written request to the City Clerk at 1 Pendergrass Way, Sand City, CA 93955 at least 48 hours prior to the scheduled meeting to allow the City Clerk time to arrange for the requested modification or accommodation.

AGENDA ITEM
3A.

Approve the Design Review Committee Meeting Minutes for March 14, 2024

MINUTES
DESIGN REVIEW COMMITTEE

Regular Design Review Committee Meeting - Thursday, March 14, 2024
12:00 PM

As allowed by Assembly Bill AB 2449, this meeting was conducted in person and by teleconference.

Committee Chair Paul Davis called the meeting to order at 12:00 PM.

1. ROLL CALL

Present: Committee Chair Paul Davis
Committee Member Chris Barlow
Committee Member Elizabeth Sofer
Committee Member Gregory Hawthorne

Absent: Committee Member John Lewis

Staff: City Manager Vibeke Norgaard
Interim Principal Anastazia Aziz, AICP
Interim Associate Planner Zane Mortensen

2. COMMUNICATIONS

No public comment received

3. ORDER OF BUSINESS

3A. Discussion and Direction on Draft Objective Design and Development Standards

No public comment received.

Anastazia Aziz, AICP introduced the item and stated that draft reflected feedback from the DRC's December 2023 meeting.

Don Arambula, consultant with Crandall Arambula, presented the draft Objective Design and Development Standards (ODDS) with Design Review Committee (DRC) members for guidance and recommendations regarding the preliminary document. The presentation provided an overview of the ODDS pertaining to public realm design, site design, and building design. During this meeting, questionnaires were provided to committee members in order to obtain feedback on the design standards highlighted in the presentation. DRC members agreed to provided their response to the questionnaires prior to March 31st, 2024.

4. NEW BUSINESS.

Councilmember Sofer stated their will be a Celebration of Life for Kelly Morgan at the Art Park on March 30 from 11-3pm.

5. ADJOURNMENT

Design Review Committee adjourned the meeting at approximately 1:12 PM.

AGENDA ITEM
3B.

Provide Recommendations on Coastal Development Permit for the Monterey-Salinas Transit (MST) SURF! Busway and Bus Rapid Transit Project

City of Sand City

STAFF REPORT

TO: Design Review Committee
FROM: Esme Wahl, Associate Contract Planner
SUBJECT: Application for a Coastal Development Permit (CDP) for the Monterey-Salinas Transit (MST) SURF! Busway and Bus Rapid Transit Project Application CDP 23-009
DATE: **May 30, 2024**

BACKGROUND/DISCUSSION:

A Coastal Development Permit (CDP 23-009) application was submitted by Monterey-Salinas Transit (MST) (the "Applicant") for a bus rapid transit project known as the SURF! Busway. The Coastal Development Permit (CDP) will go to City Council in June 2024 and is a combined permit for a CDP, Design Permit, and Tree Removal Permit, per Municipal Code Section 18.72.030. Since the Design Permit is included in the CDP, which will go before City Council for a decision in June, the Design Review Committee's purview is limited to a recommendation on the projects consistency with Local Coastal Program Land Use policies including those governing required view corridors, dune preservation and restoration areas, and height restrictions (Municipal Code Section 18.58.050).

The project includes approximately six (6) linear miles of new roadway surface adjacent to State Route 1 that would be dedicated to the SURF! busway. The SURF! busway will run between Marina and Sand City with the northern terminus located at MST's Marina Transit Exchange at Reservation Road and De Forest Road and the southern terminus located at Contra Costa Street in Sand City. Given the length of the proposed busway and its physical location, the project would be located in and/or adjacent to the cities of Marina, Seaside, and Sand City, extending parallel to Highway 1 and Fort Ord Dunes State Park. See Exhibit A, SURF! Busway Overall Route.

The project will use 100 percent zero-emission, near-zero emission, low oxide or nitrogen engines, compressed natural gas fuel, fuel cell, or hybrid powertrain buses. The purpose of the project is to establish faster, more efficient bus rapid transit between the Monterey Peninsula and the Salinas Valley to help relieve commuter congestion on Highway 1 and to better serve environmental justice communities including low income, minority, and other disadvantaged populations within MST's service area.

Project Description:

The Sand City portion of the MST SURF! Busway and Bus Rapid Transit Project (project) is approximately 0.67 miles long and begins at Sand City's northern city-limit and terminates

at Playa Avenue to the south See Exhibit B, SURF! Busway Sand City Site Plan. From Sand City's northern city-limit to the future Monterey Bay Shores development project (located where California Avenue intersects the southbound Highway 1 on-ramp) the busway would be located between Beach Range Road and the Monterey Bay Coastal Recreation Trail, seaward of State Route 1. After passing the future Monterey Bay Shores development project entrance location, the busway alignment will meet California Avenue at the SR 1 southbound on-ramp. Buses will re-enter the public right-of-way via a new roundabout at the junction of California Avenue, the SR 1 southbound on-ramp, and the Monterey Bay Shores access road. Buses would navigate the roundabout, proceed through the existing signalized intersection, and continue on California Avenue for a few-hundred feet before making a left turn back into the undeveloped TAMC corridor just south of the California/Fremont/Del Monte/Monterey intersection. Once back within the corridor, buses would travel on dedicated lanes down to Playa Avenue to a new bus stop and platforms within the TAMC right-of-way. Following this stop, buses would turn left on Playa Avenue and then right back on to Del Monte Boulevard where they would continue south to Contra Costa Street on existing roadways. See Exhibit C, Sand City SURF! Busway 95% Plans.

The project alignment within Sand City includes the following: approximately 0.67 miles of new dedicated SURF! busway lanes located adjacent to SR 1 and California Avenue; a new multi-use trail adjacent to the new SURF! Busway lanes along the California Avenue portion of the route; a new roundabout at the SR 1 southbound on-ramp, which includes a new bus stop; a new dedicated SURF! bus stop and platform at Playa Avenue and California Avenue; a new traffic signal at Playa Avenue/California Avenue; re-alignment of beach range road and closure of a portion of the Monterey Peninsula Coastal Recreation Trail; and removal of nine trees.

The project is located within an existing transportation corridor that is assumed for continued transportation use in local land use and zoning documents. The majority of the alignment of the new "off-road" busway would be within the Transportation Agency for Monterey County (TAMC) Monterey Branch Line rail corridor right-of-way, an approximately 100-foot-wide corridor generally located between Beach Range Road and the Monterey Peninsula Recreation Trail on the ocean side of Highway 1, and adjacent to California Avenue in Sand City, which has been used for transportation purposes (rail) since the late 1800s. Some existing public roadways would be used for the SURF! line throughout the route.

The busway enters mixed-flow traffic at the north end of Sand City just before the California/Fremont/Del Monte interchange, near the entrance to the approved Monterey Bay Shores development project. City zoning districts within the project's footprint include CZ-VSC-D (Coastal Visitor Serving Commercial); CZ-C4 (Coastal Regional Commercial); and CZ-MU-P (Coastal Planned Mixed Use). These designations are within the urbanized/developed portions of the City along California Avenue.

Regulatory Setting:

The project improvements related to the SURF! Busway are located almost entirely within the Coastal Zone in Sand City. Therefore, the standard of review for this Coastal Development Permit is Sand City's certified Local Coastal Program (LCP). The LCP includes regulations for land uses, development standards, coastal access, and addressing potential impacts to special status species and Environmentally Sensitive Habitat Areas or ESHAs. Public transportation rights-of-ways have neither land use designations nor zoning ascribed to them as their only uses are for transportation. Where Sand City's certified Local Coastal Program does not include clear regulations, the Coastal Act and the City's General Plan are used as guidance.

Sand City Municipal Code (SCMC) Section 16.12 requires a tree removal permit from the City to perform or cause to be performed the removal, cutting down, or trimming of more than one-third of the green foliage of, poisoning, or otherwise killing or destroying, any significant tree within City limits, unless exempted by SCMC Section 16.12.080. Per Municipal Code Section 18.72.030, Combining Multiple Permits, when development projects require multiple permit approvals within the coastal zone, the coastal development permit may serve as the single overriding land use entitlement permit for the project. In this case, a separate tree removal permit is not required, and the proposed tree removal is addressed in this CDP.

<u>ESHA:</u>

The project is located mostly within the TAMC corridor which is characterized by coastal scrub and ruderal habitat. According to the Biological Resources Report prepared by Denise Duffy & Associates, Inc., May 2021, multiple special-status species, including Hooker's manzanita, Sandmat manzanita, Monterey spineflower, and Coast and seacliff buckwheat, have been identified in the project area. These areas are considered environmentally sensitive habitat (ESHA) under the LCP. The LCP includes the Coastal Act definition of ESHA, which is:

> Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could easily be disturbed or degraded by human activities and developments".

Section 30240 of the Coastal Act further states that ESHA "shall be protected against any significant disruption of habitat values, and only uses dependent on those resources should be allowed within those areas."

To reduce impacts to ESHA, the City asked the Applicant to explore locating the SURF! Busway on the existing California Avenue right-of-way to connect between the proposed roundabout and Playa Avenue. The Applicant provided that the project includes dedicated SURF! Busway lanes along the railroad corridor adjacent to California for multiple reasons:

1) the existing bus stops on Playa Avenue are currently running at full capacity during peak hours and MST will gain operational efficiencies and travel time savings by utilizing two new SURF-themed bus stops along this route; 2) locating the busway within the rail corridor allows MST to install a new multiuse trail immediately adjacent to the busway, and separated from California Avenue vehicular traffic, further supporting safe routes to Seaside High School and supporting Sand City's planning efforts to use the rail corridor for bicycle/pedestrian use; and 3) in the future, MST envisions extending the busway through the rail corridor and eventually connecting to downtown Monterey. In short, the proposed alignment is part of a larger multi-use transportation vision that will utilize the TAMC right-of-way.

The project, including long-term temporary and permanent impact areas, includes approximately 5.48 acres of impact to ESHA within Sand City, according to the MST SURF! Project – ESHA Impacts prepared by Denise Duffy & Associates on March 18, 2024 on behalf of the Applicant (See Exhibit D, DD&A ESHA Impacts Report). Of the 5.48 acres, 0.52 acres are impacted as a result of the proposed multi-use bicycle and pedestrian trail. Given the bicycle and pedestrian trails location in highly fragmented, ruderal habitat and the fact that the bicycle/pedestrian trail has been included in the project to meet the public access and recreation provisions of the LCP, this area has been removed from the ESHA mitigation requirements. In total, 4.96 acres of ESHA must be mitigated as a result of the project.

Sand City's LCP does not contain specific mitigation ratios for the disturbance of ESHA. However, as part of the Mitigated Negative Declaration, the Applicant prepared a Biological Resource Evaluation which requires 1:1 mitigation ratio for impacts to special-status species and dune scrub habitat. The City has conditioned the permit to mitigate impacts to ESHA at a 1:1 ratio by payment of in-lieu fees into the City's Environmental Enhancement Fund. The City's Environmental Enhancement Fund is a fund that has been established for the purpose of ESHA and dune restoration. In addition to the required mitigation, MST has indicated a willingness to apply for a grant which would fund enhanced mitigation. The City is in support of assisting with the grant application, which would fund mitigation above the required 1:1 ratio, to an enhanced mitigation ratio of up to 3:1.

Landscaping:

The City's LCP requires landscaped areas to utilize native coastal plants, as shown below:

> **LUP Policy 4.3.21.** Enhance coastal plant communities by requiring new developments to utilize appropriate native coastal plants in landscaping plans that are compatible with existing native species. Prohibit the use of invasive plants in landscaping schemes.

The project includes landscaping surrounding the proposed roundabout, the proposed new bus stop platform at California and Playa, and adjacent to the new bus lanes and multi-use path along California Avenue. The planting palette includes native coastal dunes species and native trees. Plants will be watered for one year to establish, and after that, no irrigation is proposed. However, if it is found that irrigation is required to support the long-term success of the landscaping, an irrigation plan shall be submitted to the City for approval. The project is in conformance with the LCP's policies regarding native landscaping.

Tree Removal:

Within Sand City, there are 39 significant trees that are within the project area but are outside of the project grading area and will be avoided and protected in place during construction through the use of exclusionary fencing per Mitigation Measure (MM) BIO 4.12 from the IS/MND. There are nine significant trees, as defined in Municipal Code Section 16.12, within the grading area that cannot be avoided. Removal of these trees will require pre-construction surveys for protected avian species (MM BIO-1.4). Tree's will be replaced at a ratio of a 2:1 for significant trees and 1:1 for non-significant trees, and shall be increased based on available planting space when project design is complete.

Traffic:

A traffic impact assessment was prepared in March 2021 as part of the IS/MND. The traffic impact assessment found that all intersections in Sand City would remain above Level of Service (LOS) D as a result of the project and no traffic mitigation measures were included in the IS/MND. Sand City's traffic engineer reviewed the project and raised concerns with the impact of the project on the Playa / California intersection. In response to the City's concerns, the Applicant prepared an Intersection Control Evaluation (ICE) memo for the California Avenue & Playa Avenue intersection within Sand City. The ICE memo found that the SURF! Busway project results in a LOS E at the California / Playa Avenue intersection during weekend midday peak hours. The City's General Plan Policy 3.1.1 requires that LOS D is maintained for all non-freeway streets within the city during peak hours.

> **General Plan Policy 3.1.1**. Maintain a minimum level of service of LOS D for all non-freeway streets within the city during peak hours, or as indicated within the Congestion Management Plan of the Transportation Agency of Monterey County (TAMC).

The project as submitted results in LOS E at the Playa / California intersection, and as a result, does not comply with the City's General Plan.

The ICE found that the California / Playa intersection would operate at a LOS D during peak hours if both a stoplight and a north-bound left turn lane was added to the exit of the Costco shopping center. In order to bring the intersection to LOS D and comply with the General

Plan, a stoplight and a northbound left-turn lane exiting the Costco Shopping Center is required and is included as a condition of approval. See Exhibit E, Intersection Control Evaluation Memo.

Public Access and Recreation:
A portion of the project is located seaward of Highway 1, between Beach Range Road and the Monterey Bay Coastal Recreation trail, both of which serve as lateral coastal access ways and are heavily used by walkers, runners, and bicyclists. The project will result in a long-term closure to a portion of the Monterey Peninsula Coastal Recreation Trail just north of the proposed roundabout. To compensate for this closure, the project will include a partial re-alignment of the Monterey Peninsula Coastal Recreation and Beach Range Road in order to maintain the continuous trail connection between the Monterey Peninsula Coastal Recreation and Beach Range Road. The project also includes a multi-use trail located parallel to the new bus lanes which will run adjacent to California Avenue. See Exhibit F, Multi-Use Trail Impacts and Improvements.

One of the key provisions of the Coastal Act is to maximize public access to and along the coast. The LCP includes the following policies regarding public access:

> **LCP Policy 2.3.4.** …Future developments shall implement safe access ways and improvements as determined by the City. Site specific locations shall be developed as part of future development proposals, and according to guidelines established by the City….

Overall, a continuous bicyclist and pedestrian trail will be maintained along the Monterey Peninsula Coastal Recreation Trail / Beach Range Road connection. However, bicyclists and pedestrians using the Monterey Peninsula Coastal Recreation Trail and/or Beach Range Road in this area will have to cross the proposed roundabout as a result of this project. In order to ensure safe crossing and reduce barriers to public access, the roundabout has been sited and designed to include crosswalks, signs that indicate pedestrian crossings, and MST drivers will be notified and trained to proceed into the roundabout with caution for trail users. Additionally, the Applicant has staged the Monterey Peninsula Coastal Recreation Trail closure and Beach Range Road improvements in such a way to ensure that use of the trails remain open throughout the entire project, including during construction.

Additionally, the project includes a new multi-use trail which will be located adjacent to the new bus lanes paralleling California Avenue.

In total, the project is in compliance with the LCP as it relates to public access.

Visual Resources:
The scenic and visual qualities of coastal areas are considered a resource of public importance. The LCP contains the following policies which address visual resources:

LCP Policy 5.3.1. Views of Sand City's coastal zone shall be enhanced and protected through regulation of siting, design, and landscaping of all new development in the coastal zone, adjacent to Highway One (on both the east and west) in order to minimize the loss of visual resources.

LCP Policy 5.3.2. Views of Sand City's coastal zone, Monterey Bay and Monterey Peninsula shall be protected through provision of view corridors, vista points, development height limits, and dune restoration areas, as shown on Figure 9.

LCP Policy 5.3.4. Develop design standards for future development proposals based on LCP policies and the following general design guidelines. These standards shall be used by the City's Design Committee to ensure that new development will be sited, designed and landscaped in a manner that provides view corridors and considers protection and/or enhancement of visual resources in a manner consistent with all LUP policies, including but not limited to, those governing required view corridors, dune preservation/restoration areas, and height regulations.

LCP Policy 5.3.5. Require all future developments to obtain a design permit, in order to assure conformance with the City's design standards, and design compatibility with surrounding development. All design permit applications shall be reviewed by the City's Design Committee.

According to Figure 9 in the LCP, the project is not located within an identified view corridor. Additionally, the busway is located in a depression between Highway One and the railroad tracks and will not block views to the coastline from Highway 1. While the busway lanes would be visible from Highway 1 and the Monterey Bay Coastal Recreation Trail in some locations; however, the lanes do not significantly differ in visual character from the existing railroad tracks within the corridor. In conclusion, the project as proposed is in conformance with the LCP's visual resource policies.

Archaeological Resources:

The project is not located within a designated archaeological sensitivity area. However, in the event that an archaeological resource is found during ground disturbance the LCP includes the following policy:

LCP Policy 4.4.30 Require protection, evaluation, and/or removal under supervision by a qualified archaeologist and consultation with a qualified Native American representative, archaeological resources that may be found during the construction process**.**

If archaeological resources are inadvertently found during ground disturbance, they will be protected and evaluated by a qualified archaeologist in consultation with a qualified Native American Representative, as conditioned by this CDP. As a result, the project is in compliance with the LCP with regard to protection of archaeological resources.

The Applicant provided a Letter of Intent for the project, which is included here as Exhibit G, Application Letter of Intent.

CEQA:
Early on in the CEQA process, MST, as the lead agency, considered declaring the project exempt from CEQA under a then-recently enacted statutory exemption pursuant to Senate Bill (SB) 288, which exempts certain types of transit projects, including bus rapid transit projects, from CEQA. Public Resources Code § 21080.25(b). MST nonetheless prepared an Initial Study and Mitigated Negative Declaration (IS/MND). As part of that process, MST consulted with the City as a "responsible agency" under CEQA (CEQA Guidelines, § 15096), and the City submitted comments on the MND. On June 14, 2021, MST filed a Notice of Determination of MST's adoption of MND for the project. MST determined that, based on the results of the Initial Study and supporting documentation, all potential environmental effects resulting from the project are either less than significant, or can be avoided or mitigated to a less than significant level, and that there is no substantial evidence that the project as mitigated would have a significant effect on the environment.

As such, an Environmental Impact Report is not required. On July 11, 2021, MST found the Project exempt from CEQA under the statutory exemption in SB 288 (2021) and filed a Notice of Exemption.

See Exhibit H, MST SURF! Final Initial Study and Exhibit I, Notice of Exemption.

APPEALABILTY:
Per Sand City Municipal Code Section 18.50.120, an appeal of a decision regarding a coastal development permit may be made to the State Coastal Commission for the following types of development:

1. Developments approved located between the sea and the first public road paralleling the sea or within 200 feet of the inland extent of any beach or 200 feet of the mean high tide line of the sea where there is no beach, whichever is the greater distance;

2. Developments approved located on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, stream, or within 200 feet of the top of the seaward face of any coastal bluff;

3. Any development which constitutes a major public works project or a major energy facility.

In addition, Coastal Act Section 30603 (3) identifies developments that are located in a sensitive coastal resource areas as appealable to the Coastal Commission.

This Coastal Development is appealable to the California Coastal Commission per Sand City Municipal Code Section 18.50.120 (2) because the project is a major public works project, is partially located between the sea and the first public road paralleling the sea, and, per Coastal Act Section 30603 (3) because the project is located within a sensitive coastal resource area.

FISCAL IMPACT:
Costs associated with the processing of this CDP are being reimbursed by the applicant per a signed reimbursement agreement with the City and therefore, there will be minimal direct costs to the city associated with staff time.

RECOMMENDATION:
Provide a recommendation to City Council regarding the SURF! Busway project.

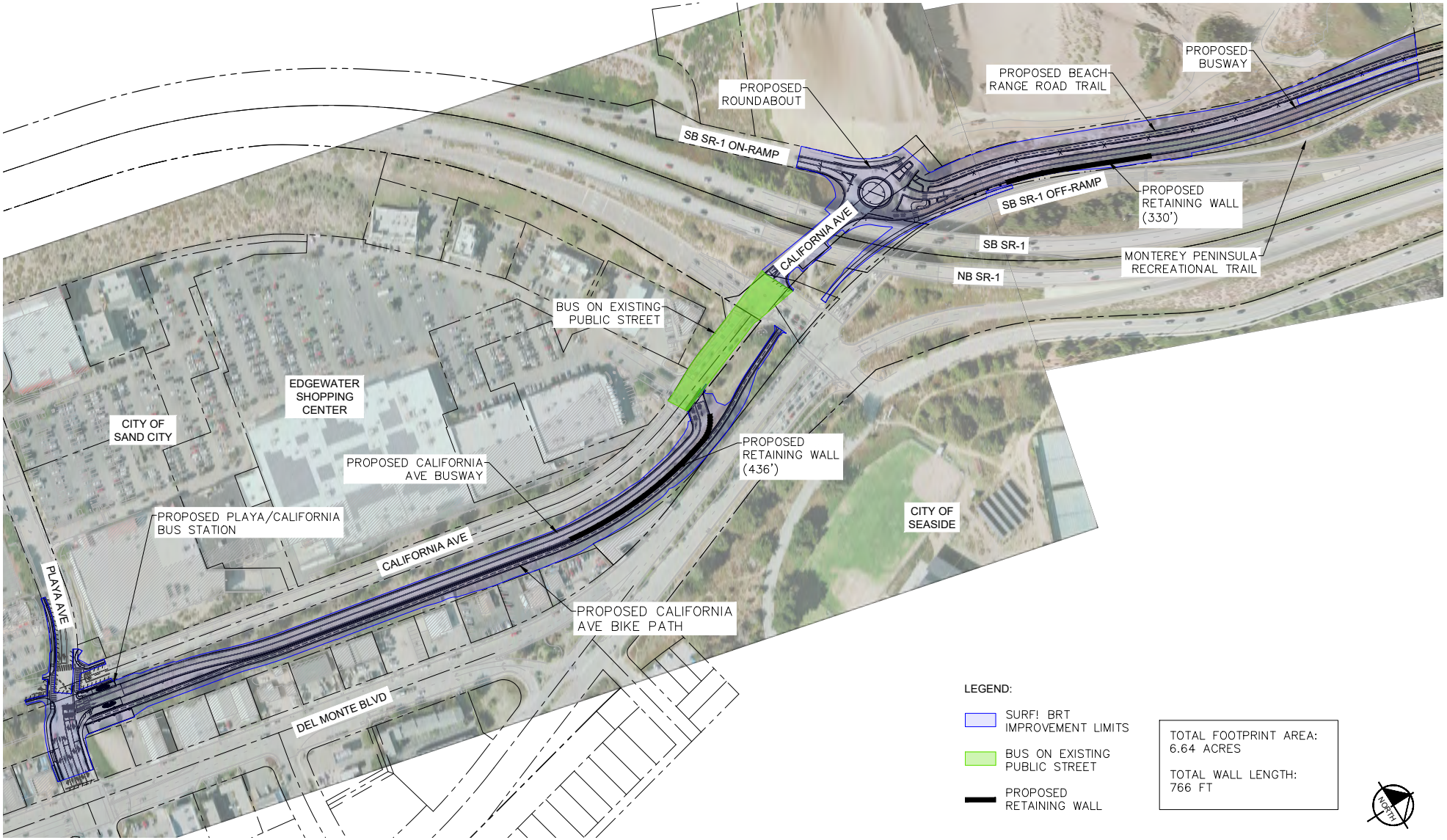
ATTACHMENTS:

1. Exhibit A: SURF! Busway Overall Route
2. Exhibit B: SURF! Busway Sand City Site Plan
3. Exhibit C: Sand City SURF! Busway 95% Plans
4. Exhibit D: DD&A ESHA Impacts Report
5. Exhibit E: Intersection Control Evaluation Memo
6. Exhibit F: Multi-Use Trail Impacts and Improvements
7. Exhibit G: Application Letter of Intent
8. Exhibit H: MST SURF! Final Initial Study
9. Exhibit I: Notice of Exemption



Source: Kimley Horn, 2020

Figure 3-2: General Project Location
MST SURF! Busway and Bus Rapid Transit Project



Source: Kimley Horn, 2023

Figure, Site Plan
MST SURF! Busway and Bus Rapid Transit Project

Not to scale

MONTEREY-SALINAS TRANSIT

MONTEREY-SALINAS TRANSIT SURF! BUSWAY AND BUS RAPID TRANSIT (BRT) PROJECT MONTEREY COUNTY, CALIFORNIA

95% DESIGN SUBMITTAL

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DATUM

VERTICAL: NAD 1988
HORIZONTAL: NAD 1983
CALIFORNIA STATE PLANE COORDINATES
ZONE IV

TAMC

TRANSPORTATION AGENCY FOR MONTEREY COUNTY
55-B PLAZA CIRCLE
SALINAS, CA 93901
PHONE: (831) 775-4407
CONTACT: TODD MUCK

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DEPARTMENT OF PUBLIC WORKS 209
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MARINA, CA 93933
PHONE: (831) 884-1212
CONTACT: BRIAN McMINN

CITY OF SEASIDE

DEPARTMENT OF PUBLIC WORKS 440 HARCOURT AVENUE
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PHONE: (831) 899-6885
CONTACT: SCOTT OTTMAR

CALTRANS

CALTRANS DISTRICT 5 PERMITS OFFICE
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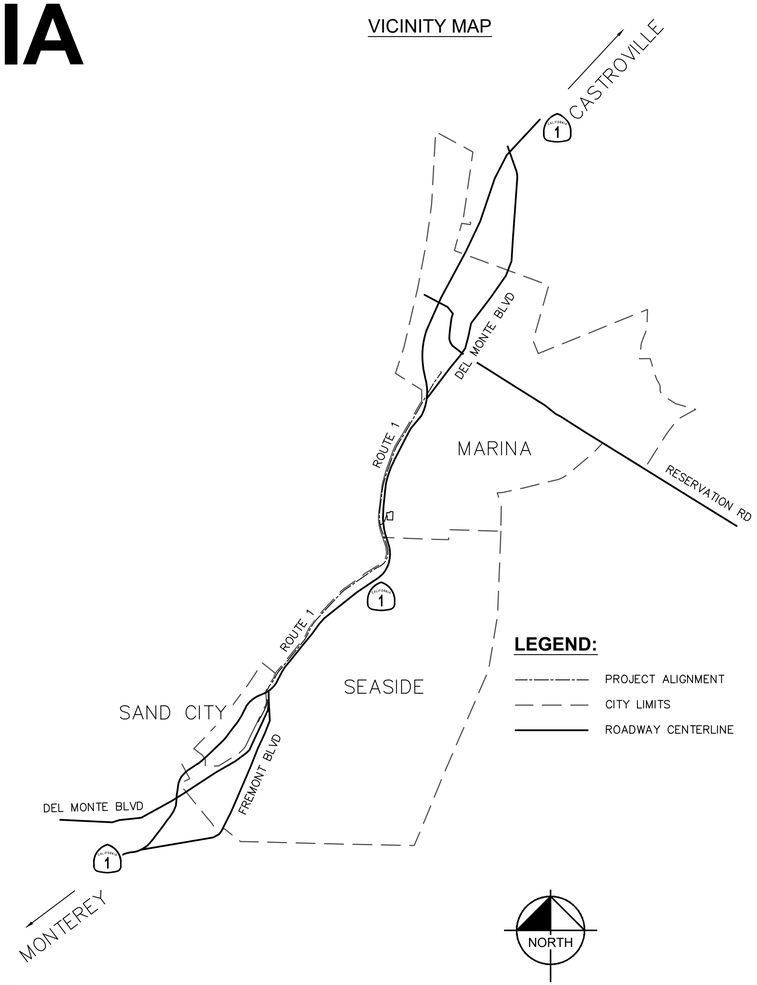
SAN LUIS OBISPO, CA 93401 PHONE: (805) 549-3227
CONTACT: MIKE LEW

CITY OF SAND CITY

PUBLIC WORKS DEPARTMENT
ONE SYLVAN PARK
SAND CITY, CA 93955
PHONE: (831) 394-6700 ext 216 CONTACT: CHUCK POOLER

VICINITY MAP



SURF! BUSWAY AND BRT PROJECT
TITLE SHEET
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
G-001
SHEET 1 OF 617

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ABBREVIATIONS

AGGREGATE SUBBASE	ASB
AMERICAN DISABILITY ACT	ADA
BOTTOM OF WALL	BW
BOULEVARD	BLVD
CALIFORNIA	CA
CALIFORNIA STATE PARKS	STATE PARKS
CATCH BASIN	CB
CENTRAL COAST LID STORMWATER MANAGEMENT STANDARD	CC LID SW STD
CENTERLINE	CL
CLEANOUT	CO
CONCRETE TREATED BASE	CTB
CURB AND GUTTER	C&G
CURB FACE	CF
DEMOLITION	DEMO
DRAWING	DWG
DRIVE	DR
ELECTRIC	ELEC
ELEVATION	ELEV, EL
EXISTING	EXIST, EX., (E)
FACE OF CURB	FOC
FEET	FT
FLARED END SYSTEM	FES
GEOTECHNICAL	GEOTECH
HOT MIX ASPHALT	HMA
LINEAR FEET	LF
MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES	MUTCD
MONTEREY-SALINAS TRANSIT	MST
NEW	N
PROTECT IN PLACE	PIP
POINT VERTICAL CURVE	PVC
POINT VERTICAL INTERSECTION	PVI
POINT VERTICAL TANGENT	PVT
PROPOSED	PROP.
REHABILITATION	REHAB
SQUARE FEET	SF
STATE ROUTE	SR
STREET LIGHT	SL
TEMPORARY CONSTRUCTION EASEMENT	TCE
TRANSPORTATION AGENCY FOR MONTEREY COUNTY	TAMC
TOP OF CURB	TC
TOP OF WALL	TW
UNKNOWN	UNK

NOTE: SEE LATEST EDITION OF CALTRANS STANDARD PLANS FOR ABBREVIATIONS NOT SHOWN.

LEGEND

	EXISTING	PROPOSED
EASEMENT		
PROPERTY LINE		
BOUNDARY/RIGHT-OF-WAY		
CENTER LINE		
CONTOUR (MAJOR)	135	125
CONTOUR (MINOR)	134	124
SPOT ELEVATION (FROM AERIAL TOPO)	× 100.8	
SANITARY SEWER	s	
SANITARY SEWER FORCE MAIN	ssfm	
STORM DRAIN	sd	SD
WATER PIPE	w	W
ELECTRICAL	e	E
GAS	gs	G
OVERHEAD ELECTRIC	e (oh)	E (OH)
TELEPHONE	t	T
TRAFFIC SIGNAL FIBER OPTIC	fo	
GRADING LIMITS		//
SAWCUT		
FENCE	x	
FLOW LINE		
CURB		
CURB AND GUTTER		
STORM DRAIN MANHOLE		
STORM DRAIN INLET		
GATE VALVE		
SANITARY SEWER MANHOLE		
FIRE HYDRANT	FH	FH
SANITARY SEWER CLEANOUT	SSCO	
WATER VALVE	WV	
TELEPHONE MANHOLE		
POWER POLE		
LIGHT POLE		
TREE BOX BIOFILTRATION		

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT

GENERAL NOTES SHEET 1 OF 2

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

G-002

SHEET 2 OF 617

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GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ALL MATERIAL AND WORKMANSHIP SHALL FULLY CONFORM WITH THE SPECIFICATIONS, STANDARDS, AND ORDINANCES OF THE APPROPRIATE AGENCIES.
3. THE LOCATION AND DEPTHS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES. THE UNDERGROUND CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. CONTACT UNDERGROUND SERVICE ALERT AT 1-800-227-2600. ANY ADDITIONAL COST INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF IDENTIFIED OR UNIDENTIFIED UTILITIES, PRIOR TO BEGINNING OF CONSTRUCTION, SHALL BE BORNE BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL PROVIDE ADEQUATE COVER FOR THE PROTECTION OF ALL PROPOSED AND EXISTING UTILITIES DURING THE CONSTRUCTION OF THE PROJECT.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE ENGINEER UPON DISCOVERY OF ANY FIELD CONFLICTS.
6. ANY DEVIATION OR CHANGES IN THESE PLANS WITHOUT OFFICIAL APPROVAL OF THE DESIGN ENGINEER SHALL ABSOLVE THE DESIGN ENGINEER OF ANY AND ALL RESPONSIBILITY OF SAID DEVIATION OR CHANGE.
7. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.
8. THE CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROLS AND SHALL SUBMIT TO EACH AGENCY A TRAFFIC CONTROL PLAN 21 WORKING DAYS PRIOR TO START OF CONSTRUCTION.
9. TRAFFIC CONTROL: PRIOR TO BEGINNING ANY WORK ON EXISTING STREETS, ADVANCE WARNING SIGNS SHALL BE INSTALLED. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE MOST RECENT CALIFORNIA EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY ADDITIONAL AGENCY REQUIREMENTS. FAILURE TO COMPLY MAY RESULT IN IMMEDIATE STOPPAGE OF WORK UNTIL THE PROPER TRAFFIC CONTROL IS IN PLACE.
10. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR SAFETY.
11. TRAFFIC CONTROL MAINTENANCE AND OPERATION SHALL COMPLY WITH THE FOLLOWING CALTRANS STANDARD SPECIFICATION SECTIONS:
    A. SECTION 7-1.04 "PUBLIC SAFETY"
    B. SECTION 7-1.03 "PUBLIC CONVENIENCE"
    C. SECTION 12 "TEMPORARY TRAFFIC CONTROL."
11. THE CONTRACTOR SHALL HAVE EMERGENCY TELEPHONE NUMBERS FOR POLICE, FIRE, AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOB SITES.
12. ALL EXISTING UTILITIES AND PRIVATE IMPROVEMENTS, INCLUDING ALL PULL BOXES, THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE ENGINEER, AT CONTRACTOR'S SOLE EXPENSE.
13. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT JUST DURING NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF CIVIL ENGINEER.
14. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
15. EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE AND IN PLACE BY THE CONTRACTOR DURING CONSTRUCTION UNLESS OTHERWISE SHOWN.
16. ALL EXISTING SIGNS AND POSTS SHALL REMAIN UNLESS OTHERWISE NOTED.
17. WORK ON THESE PLANS SHALL CONFORM TO THE MOST RECENT EDITION OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS), STANDARD SPECIFICATIONS, STANDARD PLANS, SIGN SPECIFICATION SHEETS, TRAFFIC MANUAL AND SPECIAL PROVISIONS. LOCATIONS OF CONTROLLER, SERVICE ENCLOSURE, STANDARDS, CONDUITS, PULLBOXES AND OTHER EQUIPMENT ARE APPROXIMATE AND WILL BE LOCATED IN THE FIELD AS DIRECTED BY THE ENGINEER.
18. ALL SIGN CODES REFER TO THE MOST RECENT CALIFORNIA EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
19. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL THE NECESSARY PERMITS TO PERFORM THE WORK SHOWN IN THESE PLANS FROM THE APPROPRIATE AGENCY. OBTAIN AND PAY ENCROACHMENT PERMITS REQUIRED FOR WORKING WITHIN EXISTING PUBLIC RIGHT-OF-WAYS.
20. THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS TO AREAS ADJACENT TO WORK THROUGHOUT THE PERIOD OF CONSTRUCTION, UNLESS AUTHORIZED OTHERWISE BY THE ENGINEER.
20. THE CONTRACTOR SHALL DISPOSE OF EXCESS MATERIAL OFF-SITE IN CONFORMANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
21. THE CONTRACTOR SHALL MINIMIZE CONSTRUCTION NOISE.
22. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE, THE UNIFORM BUILDING CODE, CAL-OSHA, CITY, AND STATE REQUIREMENTS, THE GOVERNING BUILDING AUTHORITY, AND ANY SPECIAL REQUIREMENTS OF THE BUILDING PERMIT. ALL CODES, STANDARDS, AND SPECIFICATIONS SHALL BE AS AMENDED TO DATE, ANY VIOLATION WILL RESULT IN STOPPING OF ALL WORK UNTIL THE VIOLATION IS CORRECTED.
23. THE DRAWINGS AND SPECIFICATIONS DESCRIBE IN GENERAL THE QUALITY AND CHARACTER OF THE MATERIALS, SHAPE, AND CONFIGURATION OF IMPROVEMENTS AND THE DESIGN INTENT OF THE COMPLETED, INSTALLED WORK. MISCELLANEOUS ITEMS OF WORK, MATERIAL, EQUIPMENT, ETC., NECESSARY TO COMPLETE THE INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR WHETHER OR NOT MENTIONED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
24. PROVIDE ALL TOOLS, TRANSPORTATION, UTILITIES, TEMPORARY FACILITIES, AND OTHER SERVICES AS NECESSARY FOR PROPER EXECUTION OF THE WORK, AND ASSUME FULL RESPONSIBILITY FOR PROTECTION AND SAFEKEEPING OF THESE ELEMENTS DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STORAGE OF MATERIAL OFF-SITE AT NO EXTRA COST TO MONTEREY-SALINAS TRANSIT, CALTRANS OR THE CITIES.
25. MAINTAIN "GOOD HOUSEKEEPING" PRACTICES AT THE JOB SITE. LIMIT ON-SITE STAGING OF EXCESS BUILDING MATERIALS AND REMOVE DEBRIS PROMPTLY FROM THE JOB SITE AND DISPOSE OF AT AN APPROVED DUMPSITE. LEAVE THE JOB SITE "BROOM CLEAN" AT THE END OF EACH WORKDAY. BEFORE ACCEPTANCE BY THE ENGINEER AND CITY'S REPRESENTATIVE, THE COMPLETED CONSTRUCTION SHALL BE CLEANED, ANY APPLICABLE LABELS REMOVED, AND ALL OTHER TOUCHUP WORK COMPLETED. ALL FINISH MATERIALS SHALL BE PROTECTED AT ALL TIMES AGAINST SUBSEQUENT DAMAGE UNTIL FINAL ACCEPTANCE BY THE ENGINEER.
26. FIELD INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS, ELEVATIONS, AND DIMENSIONS OF THE PROJECT, AS SHOWN ON OR REFERENCED ON THE DRAWINGS, AND NOTIFY THE ENGINEER ABOUT ANY CONDITION REQUIRING MODIFICATION OR CHANGE PRIOR TO THE START OF CONSTRUCTION. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND CLEARLY UNDERSTAND THE EXISTING CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED PRIOR TO BIDDING. ENTERING INTO AN AGREEMENT WITH MONTEREY-SALINAS TRANSIT INDICATES THAT THE CONTRACTOR HAS VISITED THE SITES, FAMILIARIZED HIMSELF OR HERSELF WITH EXISTING CONDITIONS AND REVIEWED SAME WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO ALLOWANCES OF ANY KIND WILL BE MADE FOR ANY EXTRA COST DUE TO THE CONTRACTOR'S FAILURE TO INFORM THE ENGINEER OF DISCREPANCIES IN TIME TO ISSUE CORRECTIVE ADDENDA PRIOR TO BIDDING. THE CONTRACT DOCUMENTS ILLUSTRATE THE INTENT OF THE WORK TO BE PERFORMED.
27. CONSTRUCTION OPERATIONS: WASTEWATER GENERATED DURING CONSTRUCTION SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM. THIS INCLUDES WASTE FROM PAINTING, SAWCUTTING, CONCRETE WORK, ETC. THE CONTRACTOR SHALL MAKE ARRANGEMENTS TO ELIMINATE DISCHARGE TO THE STORM DRAIN SYSTEM AND, IF NECESSARY, PROVIDE AN AREA FOR ON SITE WASHING ACTIVITIES DURING CONSTRUCTION. MATERIALS THAT COULD CONTAMINATE STORM RUNOFF SHALL BE STORED IN AREAS WHICH ARE DESIGNED TO PREVENT EXPOSURE TO RAINFALL AND NOT ALLOW STORM WATER TO RUN ONTO THE AREA.
28. DRAWINGS INDICATE THE LOCATION OF DEVICES, FIXTURES, AND EQUIPMENT AND THE CIRCUIT NUMBER AND PANEL DESIGNATION WHICH SUPPLIES THEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY CONNECTING ALL ELECTRICAL DEVICES TO CIRCUITS INDICATED ON THE DRAWINGS.
29. ALL EQUIPMENT GROUNDING SHALL CONFORM TO ARTICLE 250 OF THE NATIONAL ELECTRIC CODE, LATEST EDITION. ALL ELECTRICAL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, AS WELL AS STATE AND LOCAL CODES AND REQUIREMENTS.
30. ALL CONDUIT SHALL BE CONCEALED, UNLESS OTHERWISE NOTED.
31. ALL CIRCUITS IN ALL JUNCTION BOXES AND DEVICES SHALL BE CLEARLY IDENTIFIED BY MEANS OF "EZ" NUMBERING TAGS OR EQUIVALENT TO IDENTIFY THE CIRCUIT NUMBER OR RELAY SUPPLYING THE CONDUCTOR.
32. WITHIN SIXTY (60) DAYS FOLLOWING COMPLETION AND ACCEPTANCE OF THE PROJECT CONSTRUCTION CONTRACT, A FULL AND COMPLETE AS-BUILT DRAWING SET SHALL BE DEVELOPED BY THE CONTRACTOR FOR ALL BUS STOPS. THE CONTRACTOR SHALL MEET WITH THE ENGINEER AND EACH RESPECTIVE CITY AND ITS PROJECT INSPECTOR PRIOR TO DEVELOPING AS-BUILT PLANS SO A CONSENSUS CAN BE REACHED ON HOW TO SHOW FIELD CHANGES THAT WERE NOT DIRECTLY REFLECTED IN THIS PLAN SET. AS-BUILT DRAWINGS SHALL NOT BE SUBMITTED FOR CITY REVIEW UNTIL ALL CONSTRUCTION ITEMS ARE IN PLACE AND COMPLETE. THE AS-BUILT DRAWINGS ARE TO BE A TRUE REPRESENTATION OF ELEMENTS THAT EXIST AS A RESULT OF THE COMPLETED CONSTRUCTION PROJECT AS OUTLINED IN THIS PLAN SET. THE AS-BUILT PLAN SET SHALL BE IN A FORMAT EXACTLY AS REPRESENTED IN THIS DRAWING. THREE (3) FULL SIZED SETS (24"X36") OF THE AS-BUILTS DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND EACH CITY FOR REVIEW. ONCE REVISIONS ARE MADE BY THE CONTRACTOR, AS DICTATED BY THE ENGINEER AND EACH CITY, THE CONTRACTOR SHALL RESUBMIT THREE (3) FULL SIZED SETS (24"X36") TO THE ENGINEER AND EACH CITY FOR THEIR REVIEW UNTIL THE PLAN IS APPROVED IN WRITING BY THE ENGINEER AND EACH CITY.
33. THE CONTRACTOR SHALL LAY OUT CONDUIT RUNS TO SUIT FIELD CONDITIONS AND THE COORDINATION REQUIREMENTS OF UTILITIES OR ANY OTHER TRADES.
34. ALL NEW CONDUIT SHALL BE A RIGID, NON METALLIC TYPE UNLESS OTHERWISE NOTED ON PLAN.
35. COMPACTION TESTS WILL BE PERFORMED ON ALL TRENCHES AND STREET WORK TO VERIFY THAT COMPACTION CONFORMS TO CITY STANDARDS. ALL TESTING SHALL BE DONE BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. RELATIVE COMPACTION SHALL CONFORM TO CALTRANS STANDARD SPECIFICATIONS.
36. ALL WORK ADJACENT TO EXISTING PAVEMENT SECTION SHALL BUTT UP TO FULL EXISTING SECTION. WHERE FULL SECTION IS NOT ENCOUNTERED, CONTINUE REMOVAL OF ADDITIONAL PAVEMENT UNTIL A FULL SECTION IS FOUND.
37. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED BETWEEN OCTOBER 15TH-APRIL 30TH.
38. NOTHING CONTAINED IN THE CONTRACT DOCUMENTS SHALL CREATE, NOR SHALL BE CONSTRUED TO CREATE ANY CONTRACTUAL RELATIONSHIP BETWEEN THE ENGINEER AND THE CONTRACTOR OR SUBCONTRACTOR.
39. THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OR FOR SAFETY PRECAUTIONS OR PROGRAMS, UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
40. CONTRACTOR SHALL PROVIDE ACCESS TO ADJACENT BUSINESS AT ALL TIMES DURING CONSTRUCTION ACTIVITY.
41. REFER TO ARCHITECTURAL PLANS FOR PLACEMENT OF STREET FURNITURE.
42. REFER TO ELECTRICAL SHEETS FOR CONDUIT AND EQUIPMENT PLACEMENT.
43. ALL UTILITIES AND FEATURES WITHIN OR ADJACENT TO THE SHOWN LIMITS OF PROPOSED CONSTRUCTION SHALL BE PRESERVED AND PROTECTED IN PLACE UNLESS OTHERWISE NOTED IN PLANS.
44. OFFSETS AND DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
45. TOP OF CURB ELEVATIONS ARE TO THE PROJECTED TOP OF CURB.
46. STRIPING AND PAVEMENT MARKERS TO CONFORM TO "CHAPTER 3" OF THE MOST RECENT EDITION OF THE CALIFORNIA MUTCD.
47. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.
48. THE LOCATIONS OF NEW SIGNS AND POSTS SHOWN ON THE PLANS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE APPROVED BY THE ENGINEER IN THE FIELD. ALL NEW SIGNS AND POSTS SHALL BE INSTALLED TO MAINTAIN A MINIMUM OF 48" CLEAR PATH OF TRAVEL ON THE SIDEWALK AND SHALL MEET CITY AND ADA STANDARDS.
49. CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING TREES AND ROOTS IN PLACE. CONTRACTOR SHALL EXCAVATE USING HAND METHODS WITHIN THE DRIP LINE OF EXISTING TREES. TREE TRIMMING OR ROOT PRUNING SHALL BE COMPLETED UNDER THE SUPERVISION OF A CERTIFIED ARBORIST WITH APPROVAL OF THE ENGINEER.

ADA NOTES

1. ALL SITE WORK SHALL BE IN CONFORMANCE WITH TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE AND WITH THE AMERICANS WITH DISABILITIES ACT.
2. WALKWAYS SHALL NOT EXCEED A SLOPE OF 1:20 (5%) UNLESS RAILINGS ARE SHOWN, IN WHICH CASE THE SLOPE SHALL NOT EXCEED 1:12 (8.33%).
3. RAMPS ARE DEFINED AS ANY WALKWAY BETWEEN SLOPES 1:20 (5%) AND 1:12 (8.33%) AND SHALL HAVE A MINIMUM WIDTH OF 48" AND A MAXIMUM CROSS-SLOPE OF 2%. RAMPS EXCEEDING 2'-6" VERTICAL CHANGE SHALL HAVE INTERMEDIATE (2% MAX SLOPE) LANDINGS HAVING A MINIMUM LENGTH IN THE DIRECTION OF TRAVEL OF 60". BOTTOM LANDINGS AT CHANGES IN RAMP DIRECTION SHALL HAVE A MINIMUM LENGTH OF 72". 4. MAXIMUM CROSS-SLOPE ON ANY WALK OR RAMP SHALL BE 2%. 5. ALL WALKS SHALL HAVE A 4' MINIMUM CLEAR WIDTH FOR ACCESSIBLE CONFORMANCE.

UTILITY NOTES

THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING UTILITIES OR STRUCTURES LOCATED AT THE WORK SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE OWNERS OF UTILITIES OR STRUCTURES PRIOR TO ANY EXCAVATION FOR VERIFICATION AND LOCATION OF UTILITIES BEFORE EXCAVATING, VERIFY LOCATION OF UNDERGROUND UTILITIES CONTACT:

PG&E	(831)648-3238
CAL. AMERICAN WATER	(831)646-3287
AT&T	(831)728-8641
COMCAST	(831)212-7012
CITY OF MONTEREY PERMIT & INSPECTION	(831)646-3890
CITY OF SEASIDE	(831)899-6736
UNDERGROUND SERVICE ALERT	(800)227-2600
TAMC	(831)775-4413

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

GENERAL NOTES SHEET 2 OF 2

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

G-003

SHEET 3 OF 617

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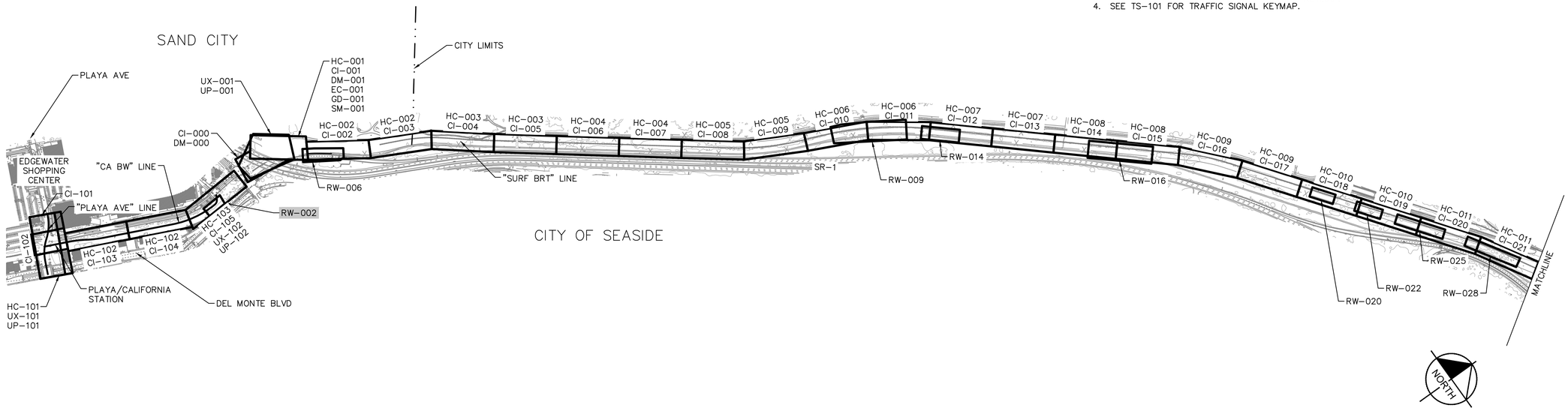
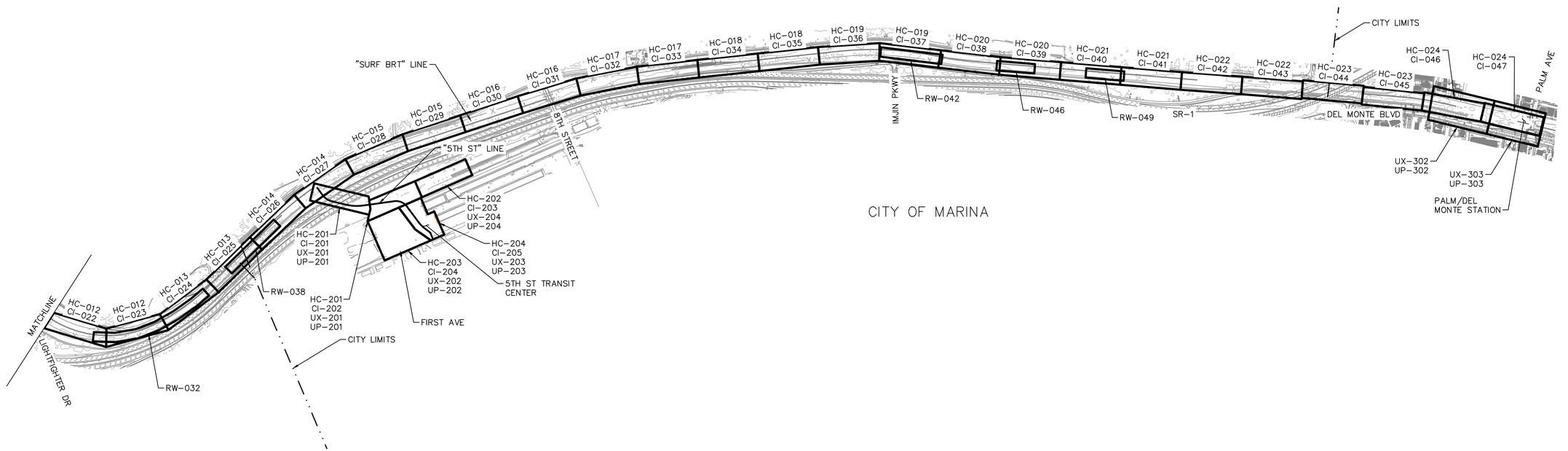
GENERAL NOTES

1. DM, EC, LS, WF, TP, AND SM DWGS FOLLOW THE SAME SHEET NUMBERING AS HORIZONTAL CONTROL SHEETS HC–001 THROUGH HC–024, HC–101 THROUGH HC–103, AND HC–201 THROUGH HC–203, UNLESS OTHERWISE NOTED.
2. GD DWGS FOLLOW THE SAME SHEET NUMBERING AS PLAN AND PROFILE SHEETS C–001 THROUGH C–047, C–101 THROUGH C–105, AND C–201 THROUGH C–205, UNLESS OTHERWISE NOTED.
3. SEE E–101 FOR ELECTRICAL AND LIGHTING KEYMAP.
4. SEE TS–101 FOR TRAFFIC SIGNAL KEYMAP.





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SURF! BUSWAY AND BRT PROJECT
KEY MAP
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	G–004	
	SHEET 4 OF 617	

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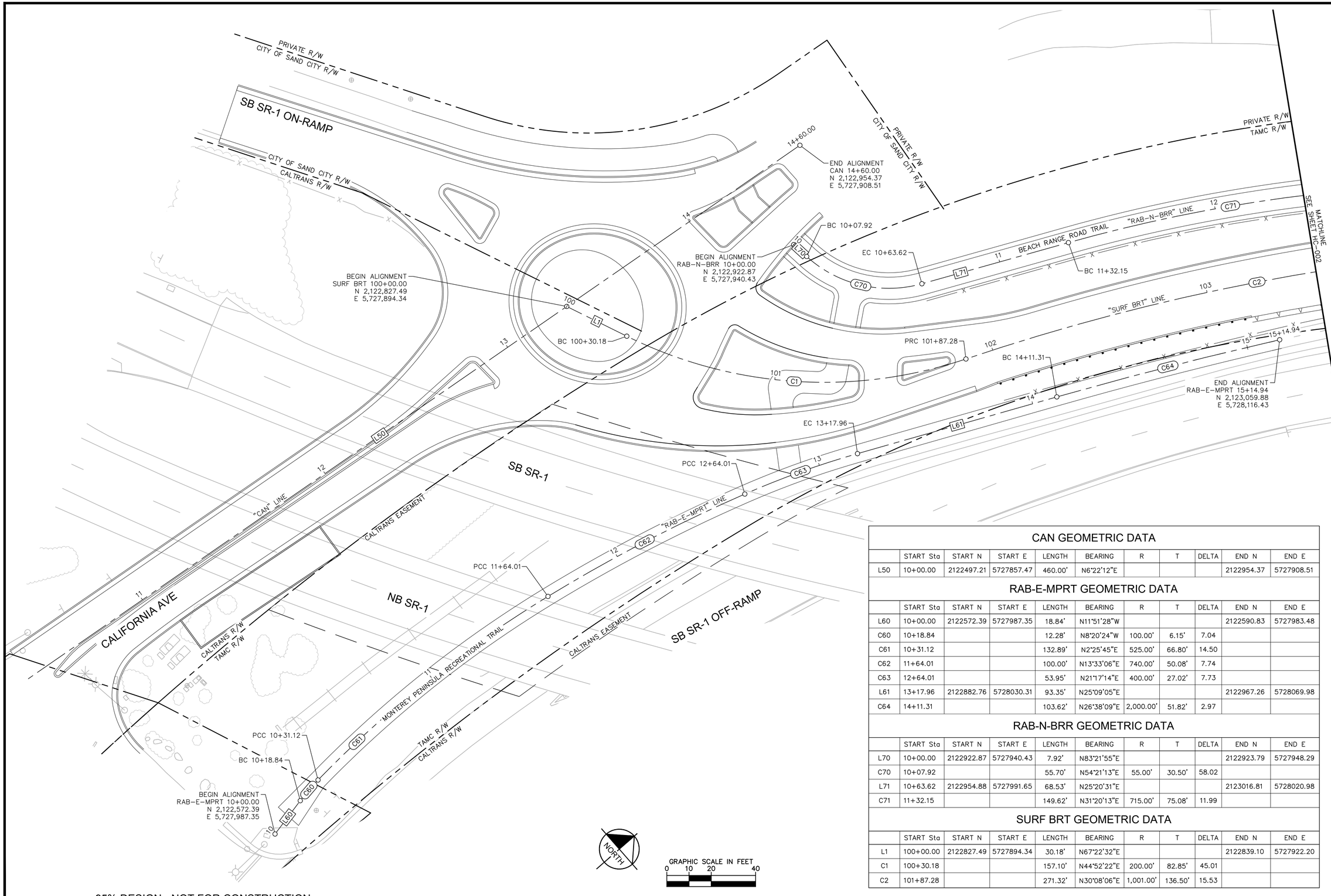

CAN GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
L50	10+00.00	2122497.21	5727857.47	460.00'	N6°22'12"E				2122954.37	5727908.51

RAB-E-MPRT GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
L60	10+00.00	2122572.39	5727987.35	18.84'	N11°51'28"W				2122590.83	5727983.48
C60	10+18.84			12.28'	N8°20'24"W	100.00'	6.15'	7.04		
C61	10+31.12			132.89'	N2°25'45"E	525.00'	66.80'	14.50		
C62	11+64.01			100.00'	N13°33'06"E	740.00'	50.08'	7.74		
C63	12+64.01			53.95'	N21°17'14"E	400.00'	27.02'	7.73		
L61	13+17.96	2122882.76	5728030.31	93.35'	N25°09'05"E				2122967.26	5728069.98
C64	14+11.31			103.62'	N26°38'09"E	2,000.00'	51.82'	2.97		

RAB-N-BRR GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
L70	10+00.00	2122922.87	5727940.43	7.92'	N83°21'55"E				2122923.79	5727948.29
C70	10+07.92			55.70'	N54°21'13"E	55.00'	30.50'	58.02		
L71	10+63.62	2122954.88	5727991.65	68.53'	N25°20'31"E				2123016.81	5728020.98
C71	11+32.15			149.62'	N31°20'13"E	715.00'	75.08'	11.99		

SURF BRT GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
L1	100+00.00	2122827.49	5727894.34	30.18'	N67°22'32"E				2122839.10	5727922.20
C1	100+30.18			157.10'	N44°52'22"E	200.00'	82.85'	45.01		
C2	101+87.28			271.32'	N30°08'06"E	1,001.00'	136.50'	15.53		

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SURF! BUSWAY AND BRT PROJECT
HORIZONTAL CONTROL SHEET 1 OF 24
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	HC-001	
	SHEET 5 OF 617	

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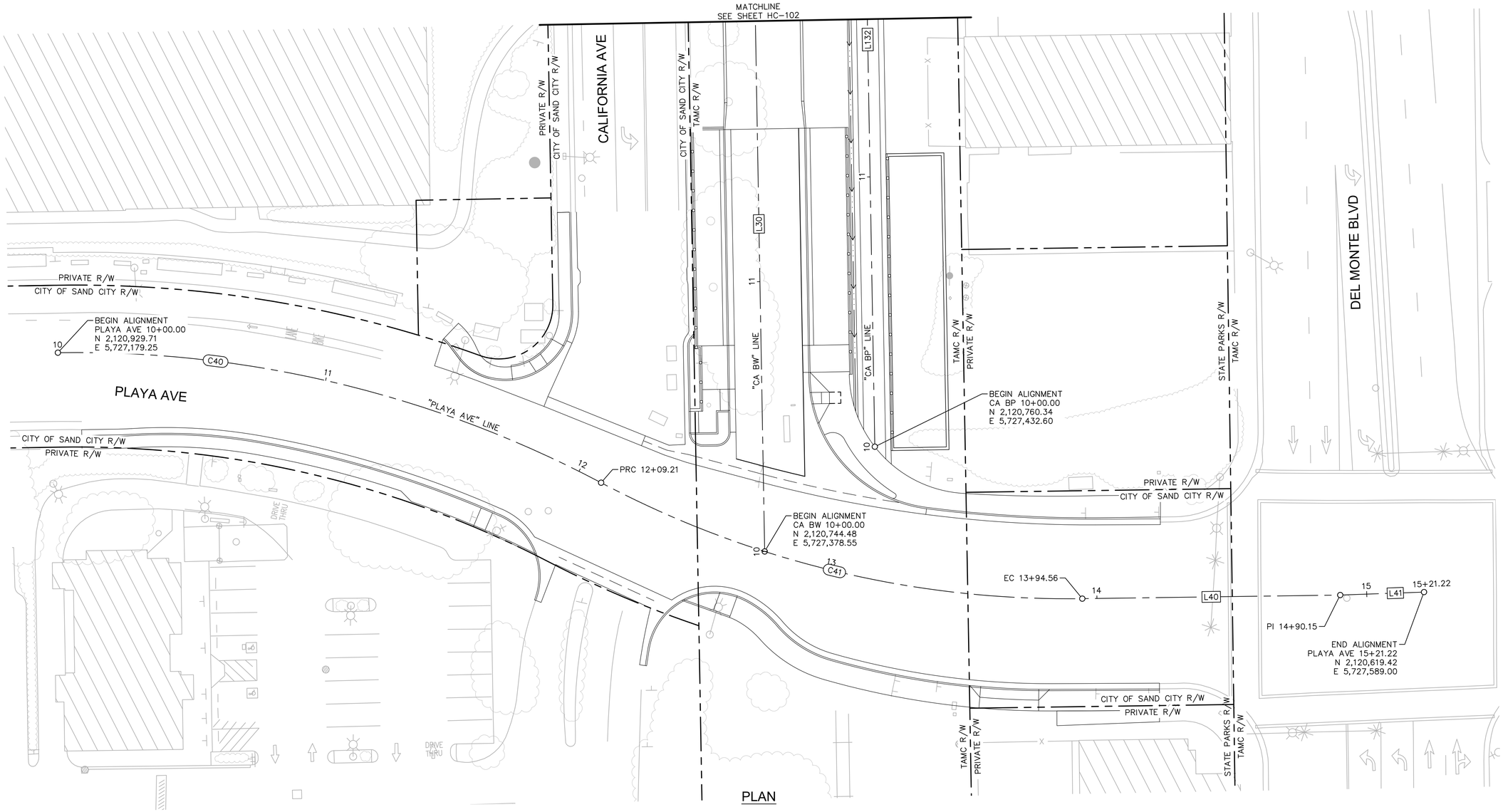

PLAN

CA BW GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
L30	10+00.00	2120744.48	5727378.55	217.52'	N26°11'38"E				2120939.66	5727474.57

CA BP GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
L132	10+00.00	2120760.34	5727432.60	350.74'	N26°11'38"E				2121075.06	5727587.43

PLAYA AVE GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
C40	10+00.00			209.21'	S49°20'43"E	415.00'	106.88'	28.88		
C41	12+09.21			185.35'	S49°15'16"E	370.00'	94.66'	28.70		
L40	13+94.56	2120675.13	5727475.26	95.59'	S63°36'20"E				2120632.63	5727560.88
L41	14+90.15	2120632.63	5727560.88	31.07'	S64°50'13"E				2120619.42	5727589.00

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
PLAYA–CALIFORNIA HORIZONTAL CONTROL SHEET 1 OF 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE SEPTEMBER 2023
DRAWN WL
DESIGNED LJ
CHECKED PM
CONTRACT NO. 22-03
SHEET NO. HC–101
SHEET 29 OF 617

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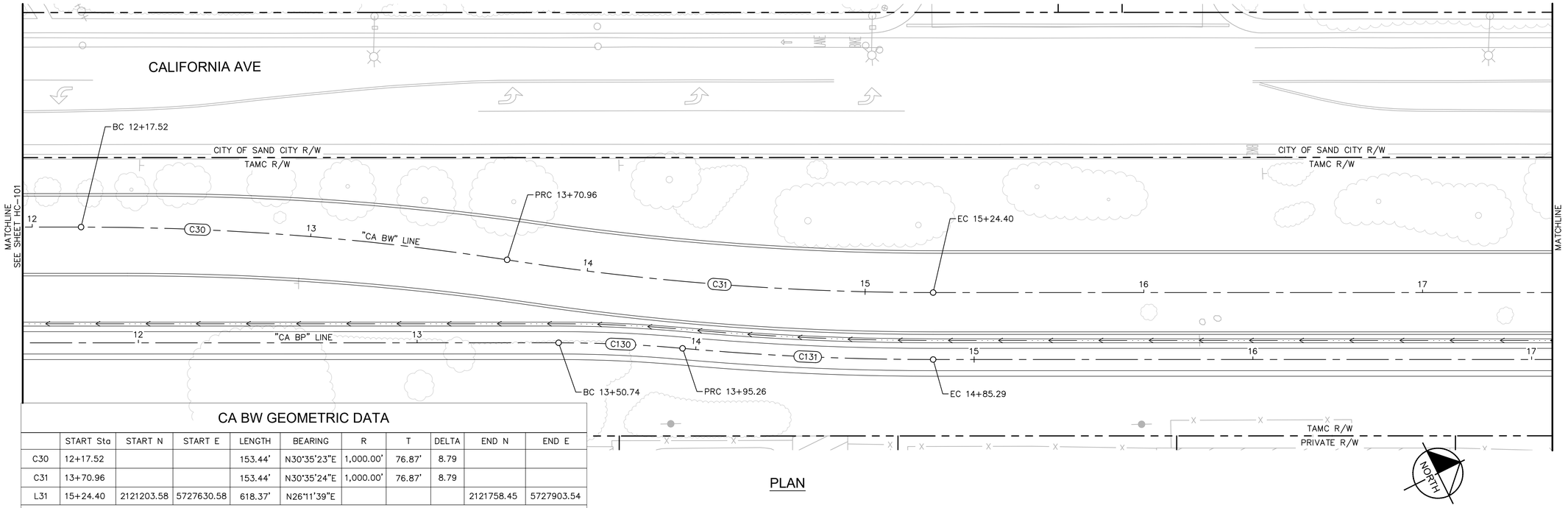


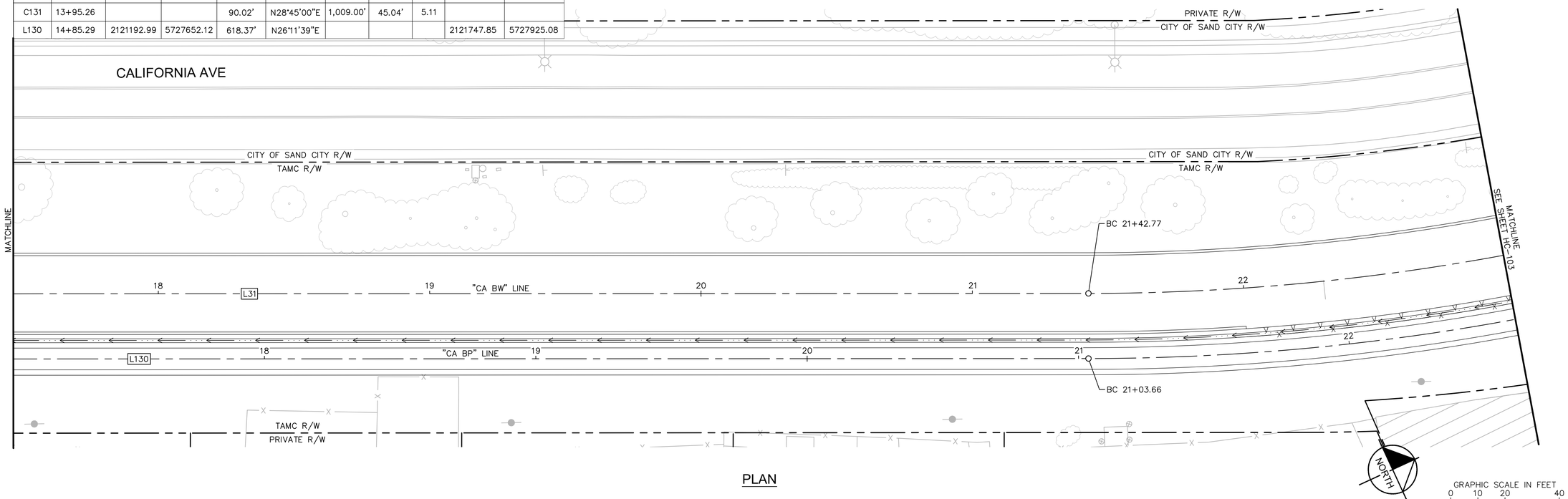
PLAN

CA BW GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
C30	12+17.52			153.44'	N30°35'23"E	1,000.00'	76.87'	8.79		
C31	13+70.96			153.44'	N30°35'24"E	1,000.00'	76.87'	8.79		
L31	15+24.40	2121203.58	5727630.58	618.37'	N26°11'39"E				2121758.45	5727903.54

CA BP GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
C130	13+50.74			44.52'	N28°45'00"E	499.00'	22.28'	5.11		
C131	13+95.26			90.02'	N28°45'00"E	1,009.00'	45.04'	5.11		
L130	14+85.29	2121192.99	5727652.12	618.37'	N26°11'39"E				2121747.85	5727925.08



PLAN

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SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA HORIZONTAL CONTROL SHEET 2 OF 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

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DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

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HC-102
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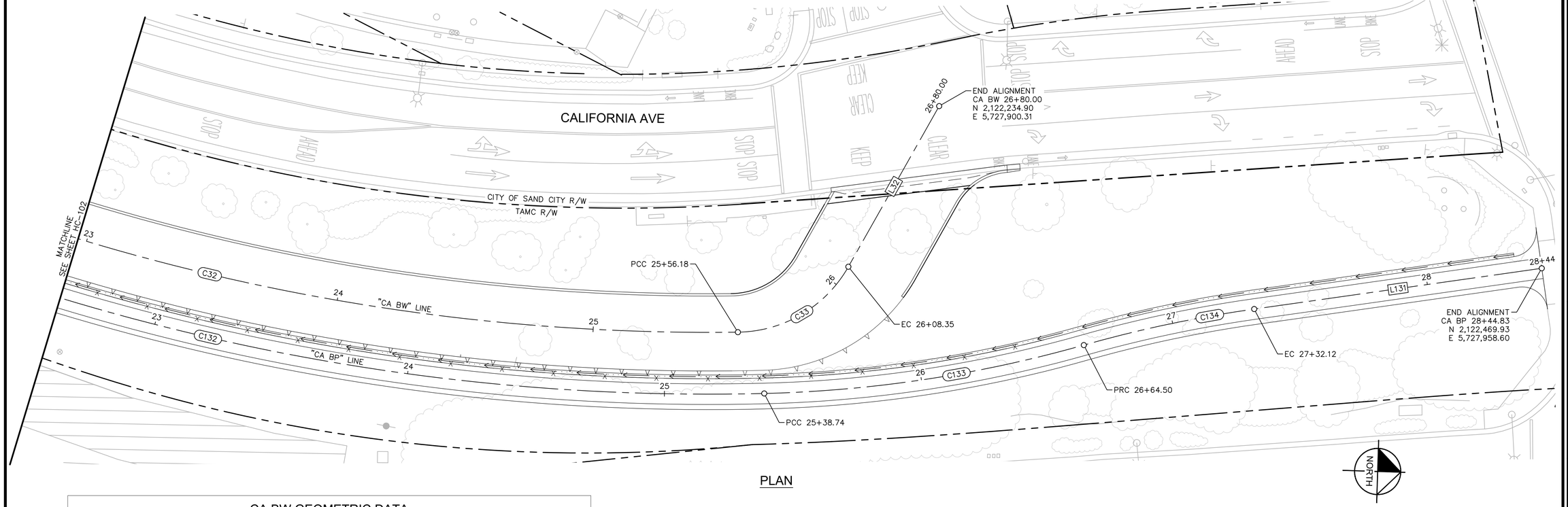

PLAN

CA BW GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
C32	21+42.77			413.41'	N12°08'42"E	843.00'	210.95'	28.10		
C33	25+56.18			52.17'	N31°47'53"W	50.00'	28.74'	59.79		
L32	26+08.35	2122200.92	5727963.39	71.65'	N61°41'31"W				2122234.90	5727900.31

CA BP GEOMETRIC DATA

	START Sta	START N	START E	LENGTH	BEARING	R	T	DELTA	END N	END E
C132	21+03.66			435.08'	N11°49'05"E	867.00'	222.22'	28.75		
C133	25+38.74			125.77'	N9°45'51"W	500.00'	63.22'	14.41		
C134	26+64.50			67.62'	N13°05'46"W	500.00'	33.86'	7.75		
L131	27+32.12	2122358.68	5727976.67	112.71'	N9°13'19"W				2122469.93	5727958.60

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
PLAYA–CALIFORNIA HORIZONTAL CONTROL SHEET 3 OF 3
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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SHEET NO.	HC–103	
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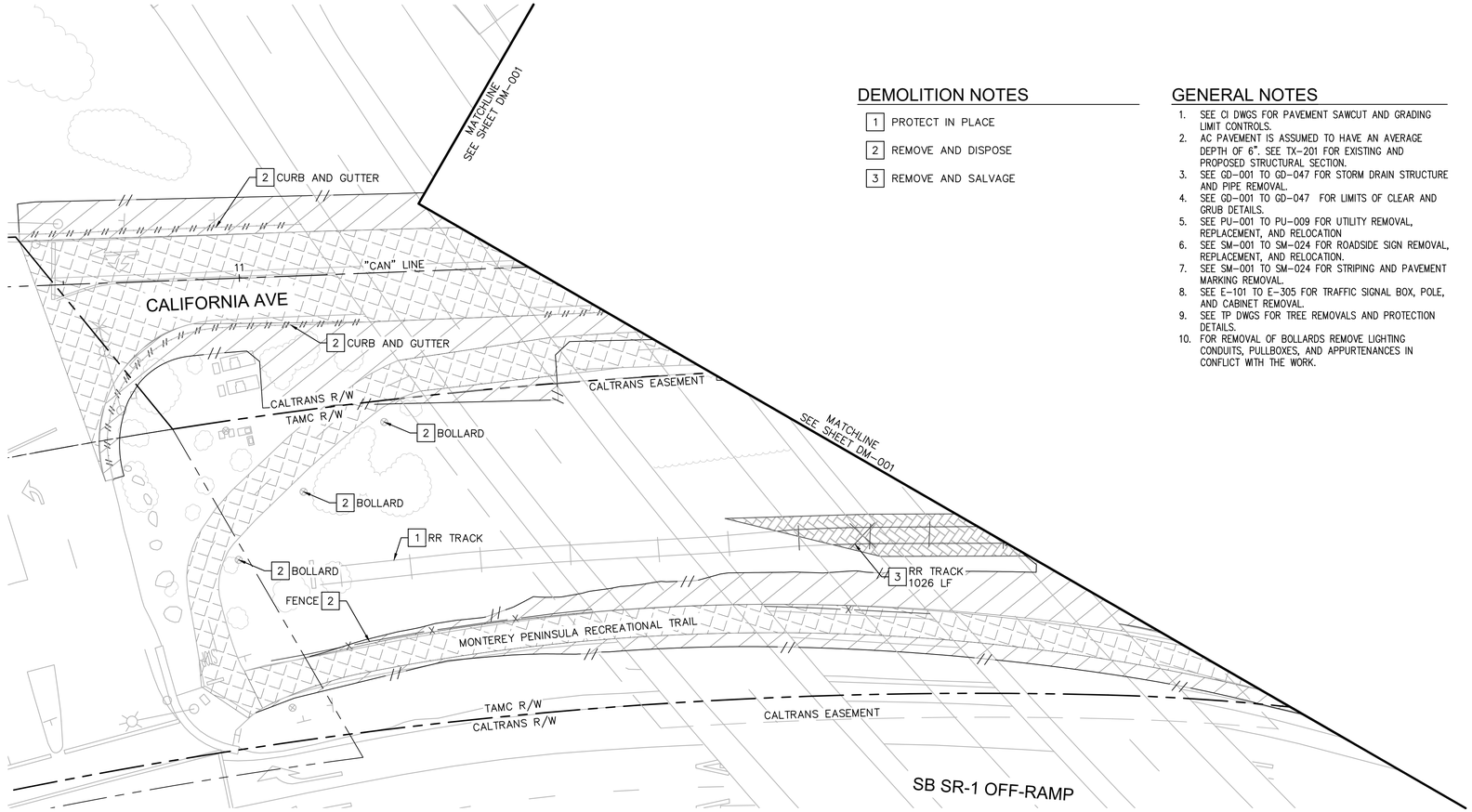

PLAN

DEMOLITION NOTES

1. PROTECT IN PLACE
2. REMOVE AND DISPOSE
3. REMOVE AND SALVAGE

GENERAL NOTES

1. SEE CI DWGS FOR PAVEMENT SAWCUT AND GRADING LIMIT CONTROLS.
2. AC PAVEMENT IS ASSUMED TO HAVE AN AVERAGE DEPTH OF 6". SEE TX-201 FOR EXISTING AND PROPOSED STRUCTURAL SECTION.
3. SEE GD-001 TO GD-047 FOR STORM DRAIN STRUCTURE AND PIPE REMOVAL.
4. SEE GD-001 TO GD-047 FOR LIMITS OF CLEAR AND GRUB DETAILS.
5. SEE PU-001 TO PU-009 FOR UTILITY REMOVAL, REPLACEMENT, AND RELOCATION
6. SEE SM-001 TO SM-024 FOR ROADSIDE SIGN REMOVAL, REPLACEMENT, AND RELOCATION.
7. SEE SM-001 TO SM-024 FOR STRIPING AND PAVEMENT MARKING REMOVAL.
8. SEE E-101 TO E-305 FOR TRAFFIC SIGNAL BOX, POLE, AND CABINET REMOVAL.
9. SEE TP DWGS FOR TREE REMOVALS AND PROTECTION DETAILS.
10. FOR REMOVAL OF BOLLARDS REMOVE LIGHTING CONDUITS, PULLBOXES, AND APPURTENANCES IN CONFLICT WITH THE WORK.

LEGEND:

- CLEARING AND GRUBING
- ROADWAY EXCAVATION
- REMOVE CONCRETE
- REMOVE RAIL
- SAWCUT, SEE NOTE 2
- CLEAR AND GRUB LIMITS
- REMOVE UTILITY

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
DEMOLITION SHEET 1 OF 25
MONTEREY COUNTY CALIFORNIA

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PLAN

DEMOLITION NOTES

2 REMOVE AND DISPOSE

3 REMOVE AND SALVAGE

9 RELOCATE FACILITY

GENERAL NOTES

1. SEE CI DWGS FOR PAVEMENT SAWCUT AND GRADING LIMIT CONTROLS.
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NORTH

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0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
DEMOLITION SHEET 3 OF 25
MONTEREY COUNTY CALIFORNIA

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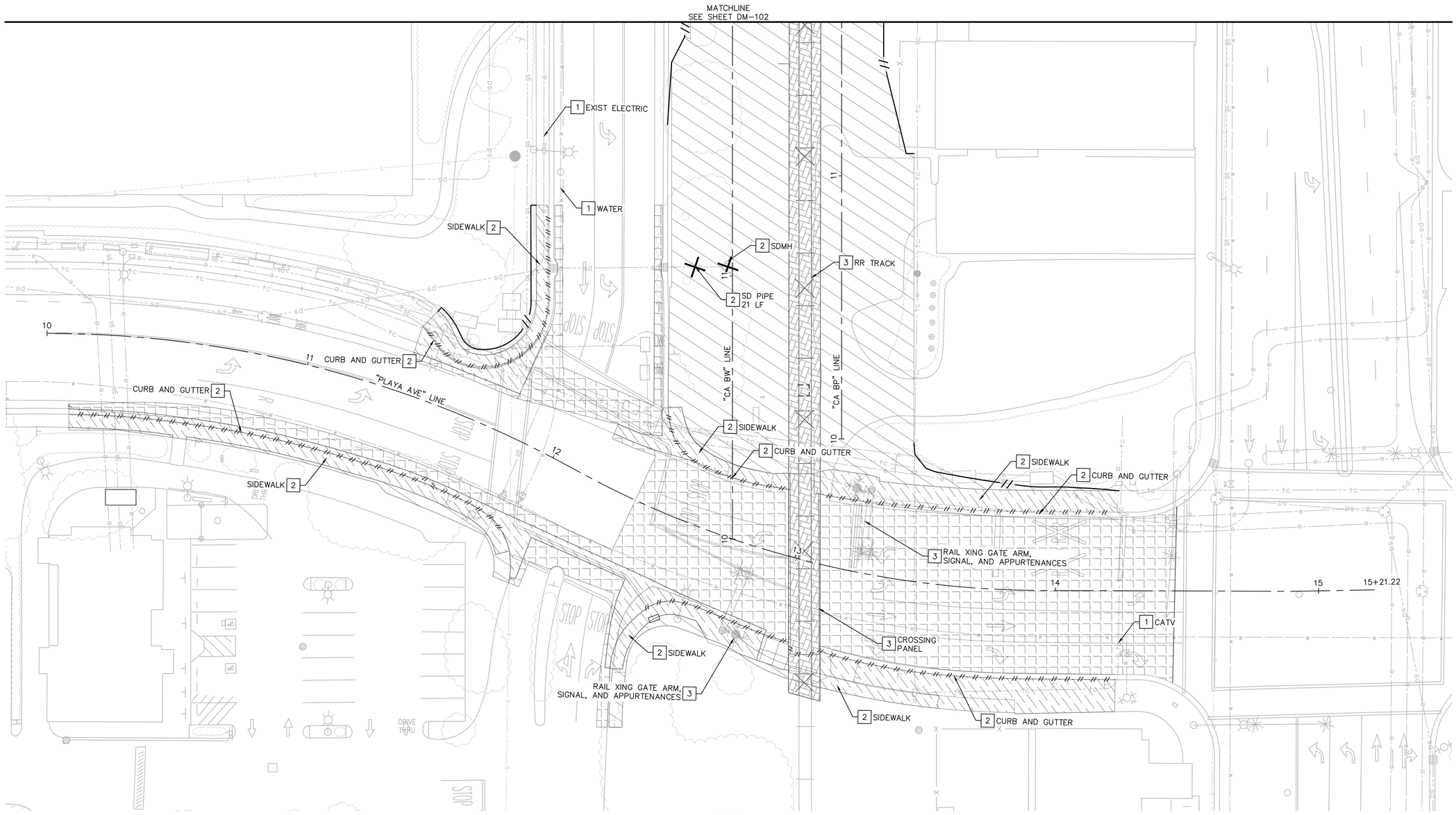

PLAN

DEMOLITION NOTES

1. PROTECT IN PLACE
2. REMOVE AND DISPOSE
3. REMOVE AND SALVAGE

GENERAL NOTES

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NORTH

GRAPHIC SCALE IN FEET
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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
PLAYA–CALIFORNIA DEMOLITION SHEET 1 OF 3
MONTEREY COUNTY CALIFORNIA

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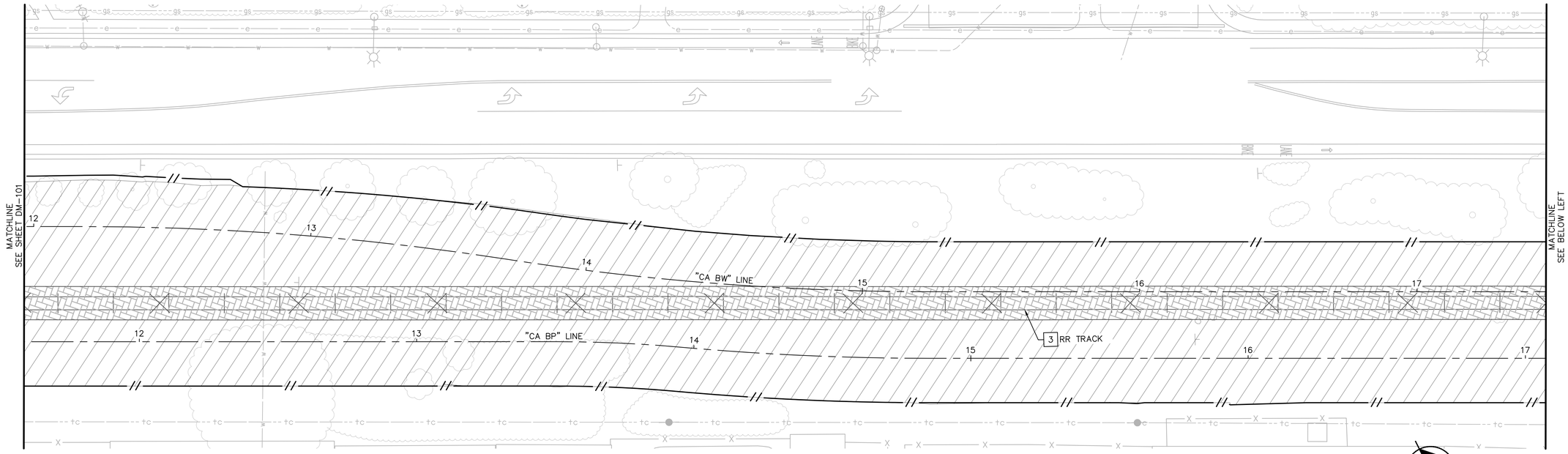

DEMOLITION NOTES

3 REMOVE AND SALVAGE

PLAN

GENERAL NOTES

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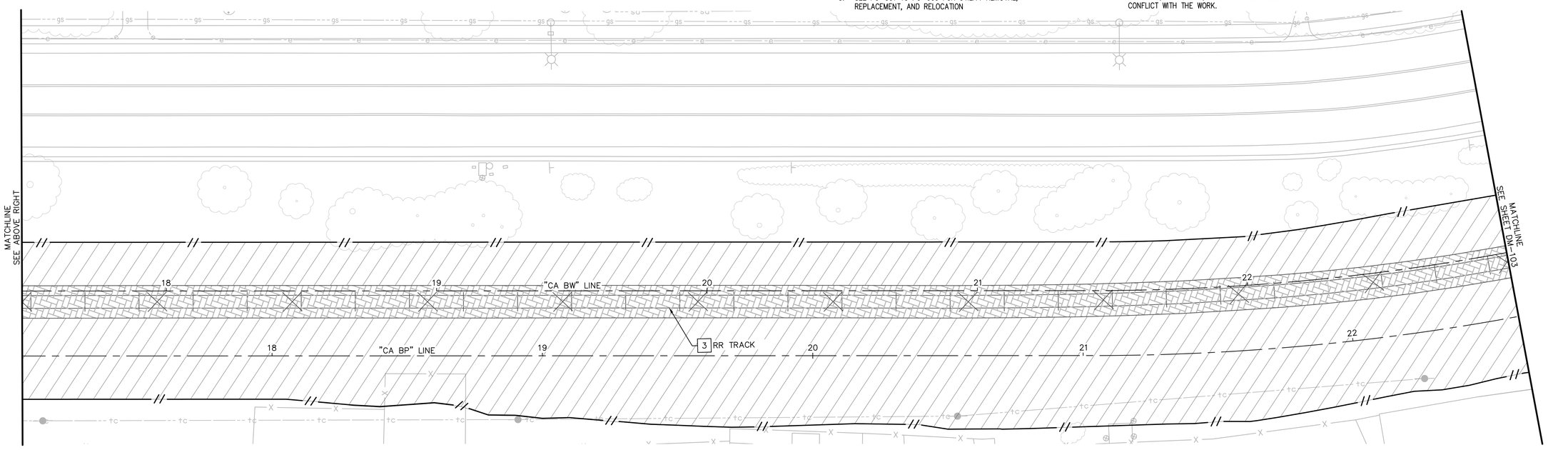

PLAN

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT

PLAYA-CALIFORNIA DEMOLITION SHEET 2 OF 3

MONTEREY COUNTY CALIFORNIA

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DM-102

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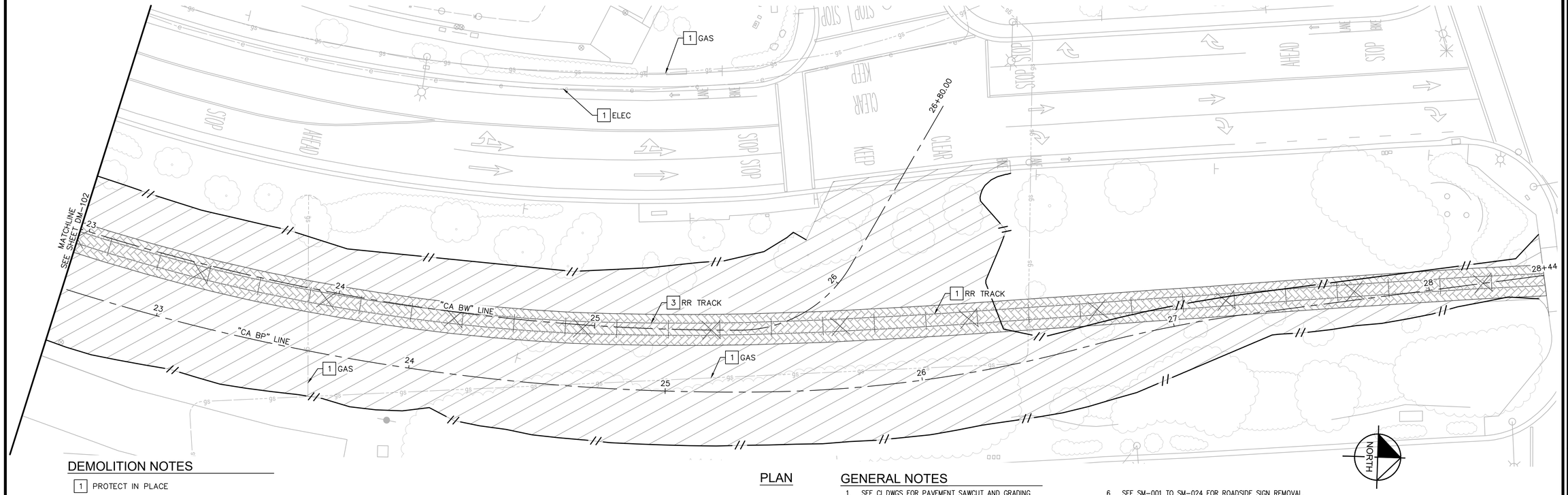

PLAN

DEMOLITION NOTES

1 PROTECT IN PLACE

3 REMOVE AND SALVAGE

GENERAL NOTES

1. SEE CI DWGS FOR PAVEMENT SAWCUT AND GRADING LIMIT CONTROLS.
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GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT

PLAYA-CALIFORNIA DEMOLITION SHEET 3 OF 3

MONTEREY COUNTY CALIFORNIA

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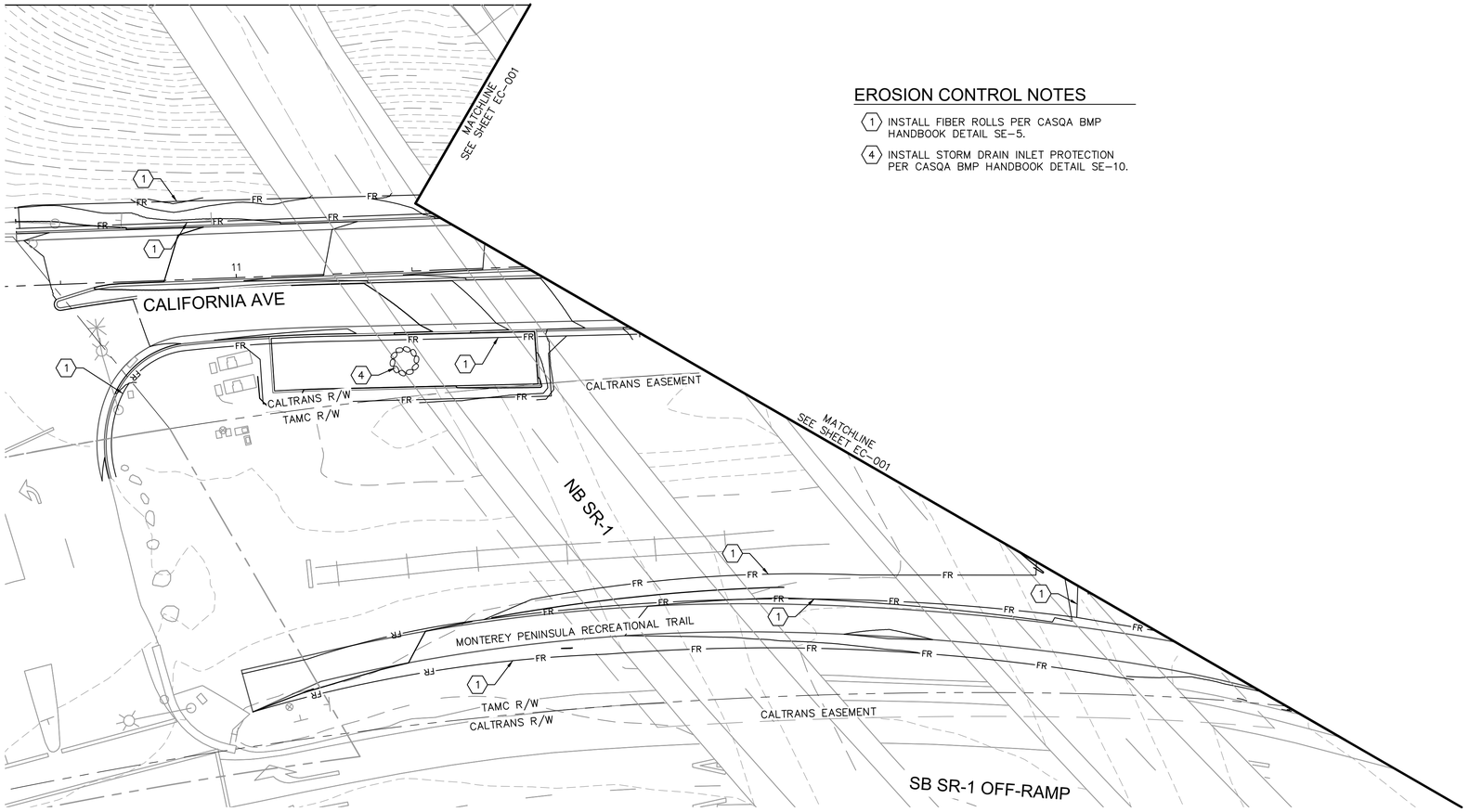

EROSION CONTROL NOTES

1. INSTALL FIBER ROLLS PER CASQA BMP HANDBOOK DETAIL SE-5.
4. INSTALL STORM DRAIN INLET PROTECTION PER CASQA BMP HANDBOOK DETAIL SE-10.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT

EROSION & TWPC SHEET 1 OF 25

MONTEREY COUNTY CALIFORNIA

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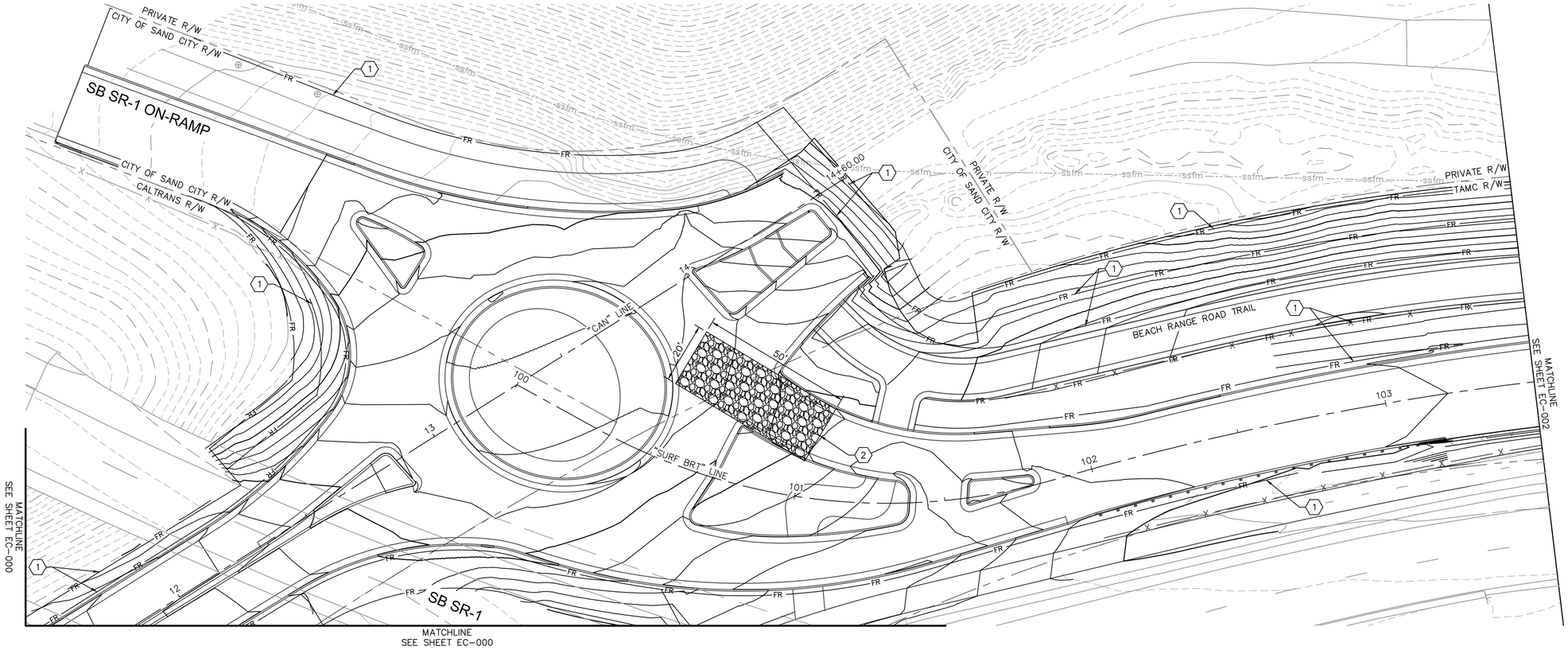

EROSION CONTROL NOTES

1. INSTALL FIBER ROLLS PER CASQA BMP HANDBOOK DETAIL SE-5.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT PER CASQA BMP HANDBOOK DETAIL TC-1.

NORTH

GRAPHIC SCALE IN FEET
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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
EROSION & TWPC SHEET 2 OF 25
MONTEREY COUNTY CALIFORNIA

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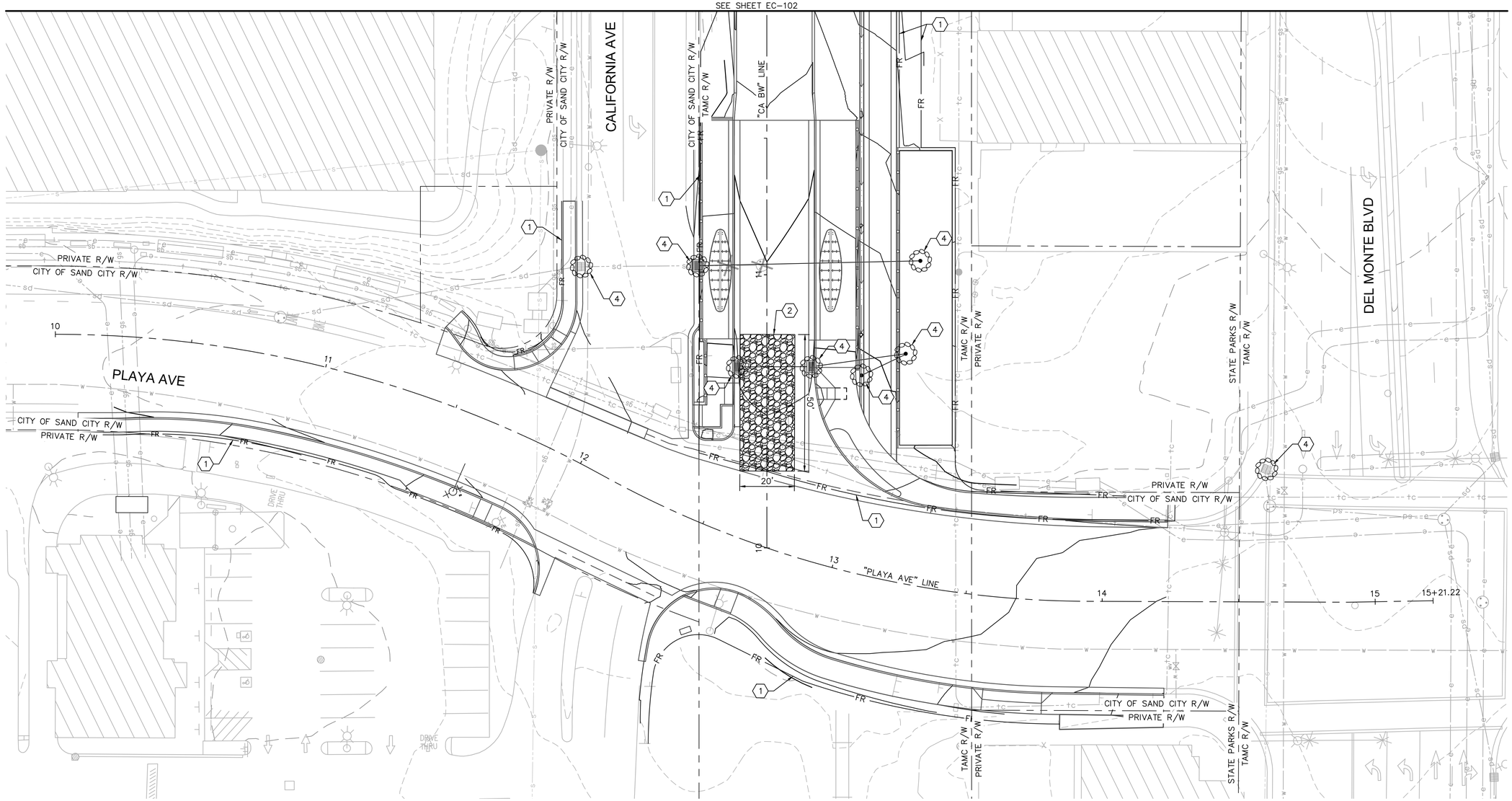

PLAN

EROSION CONTROL NOTES

1. INSTALL FIBER ROLLS PER CASQA BMP HANDBOOK DETAIL SE-5.
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NORTH

GRAPHIC SCALE IN FEET
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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT

PLAYA-CALIFORNIA EROSION & TWPC SHEET 1 OF 3

MONTEREY COUNTY CALIFORNIA

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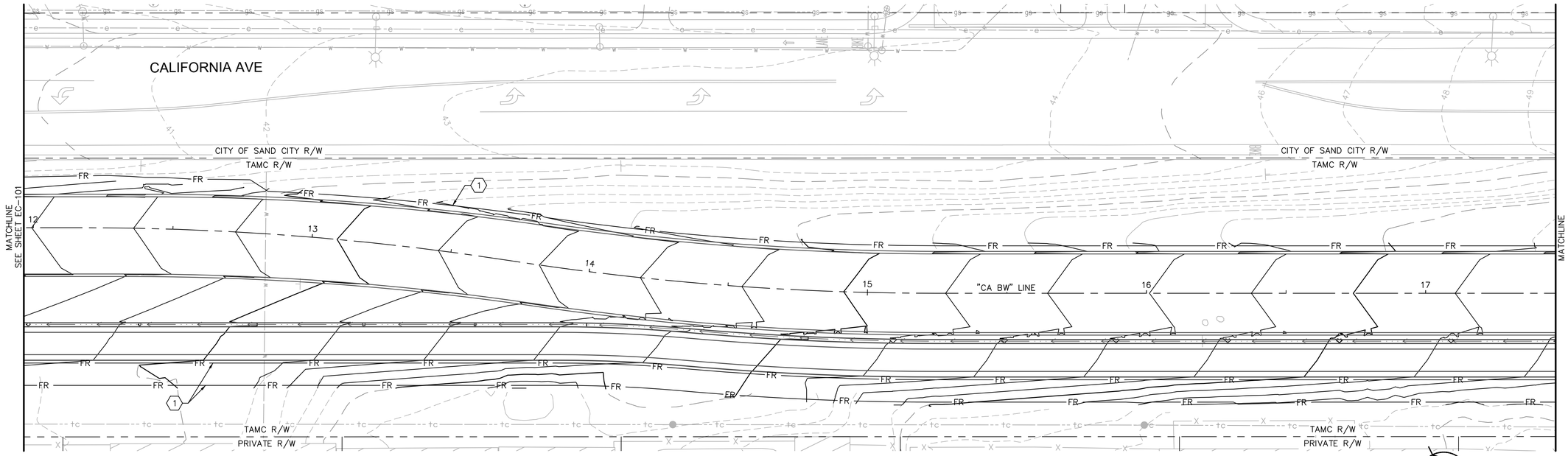
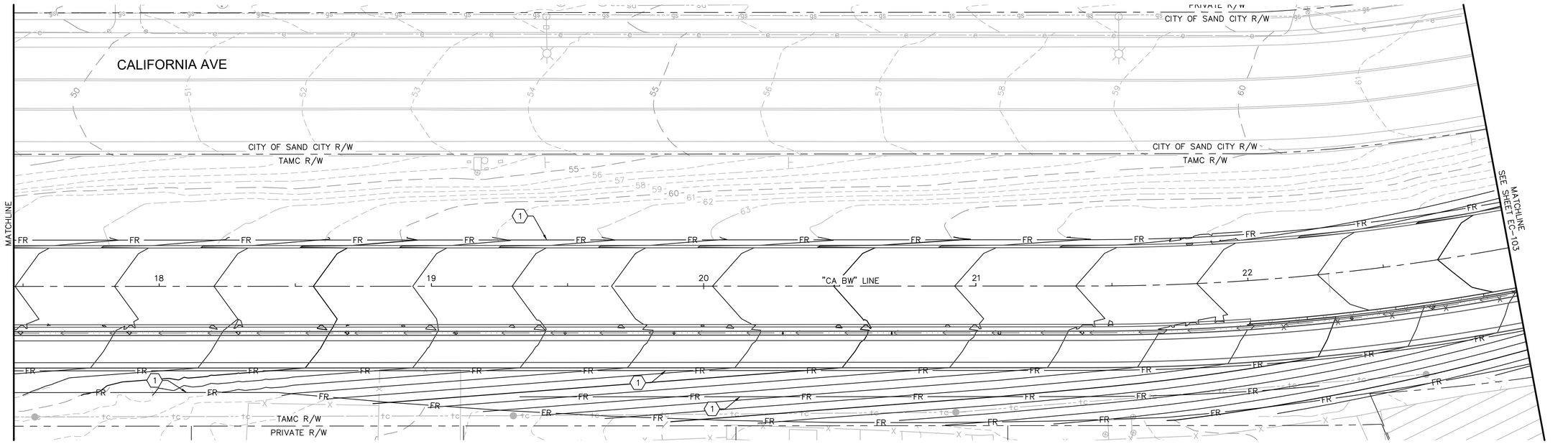


EROSION CONTROL NOTES

(1) INSTALL FIBER ROLLS PER CASQA BMP HANDBOOK DETAIL SE-5.

PLAN



PLAN

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SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA EROSION & TWPC SHEET 2 OF 3
MONTEREY COUNTY CALIFORNIA

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CONTRACT NO. 22-03

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EC-102
SHEET 94 OF 617

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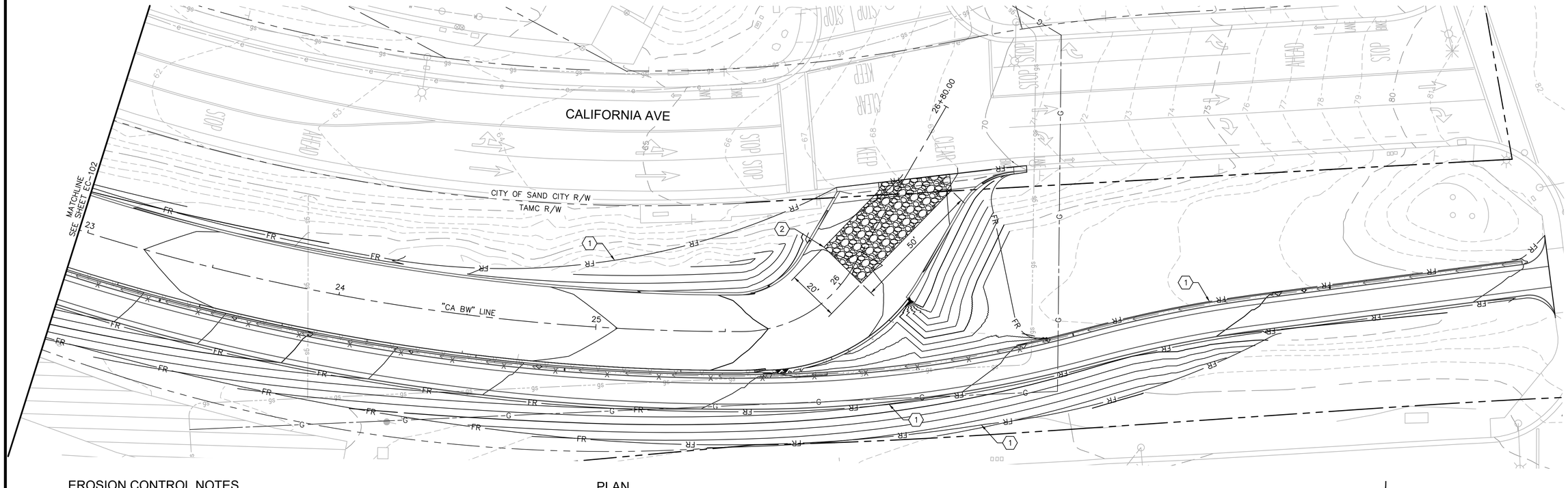

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PLAN

NORTH

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0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA EROSION & TWPC SHEET 3 OF 3
MONTEREY COUNTY CALIFORNIA

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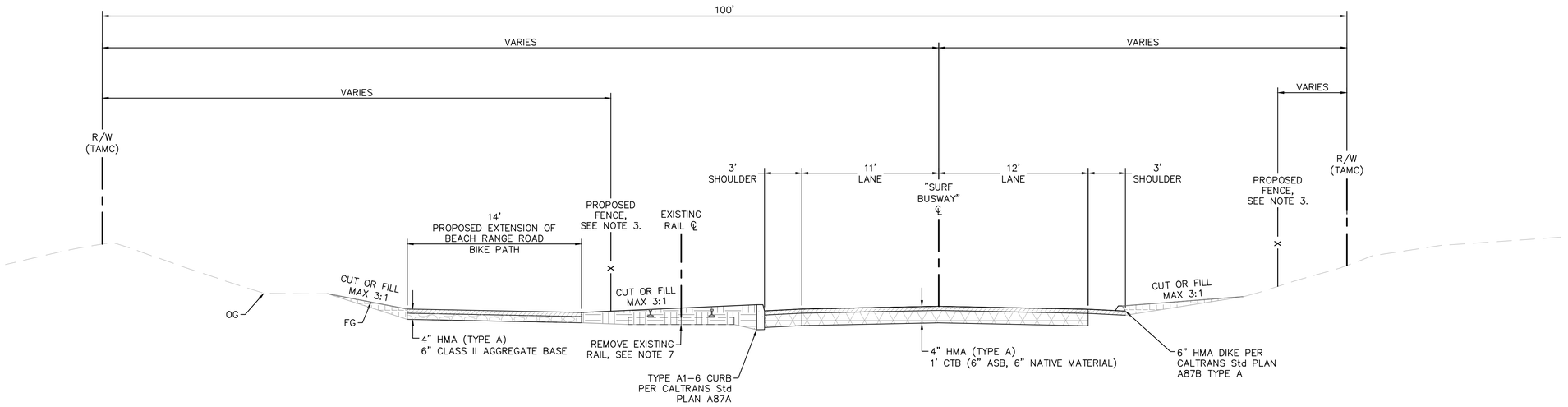
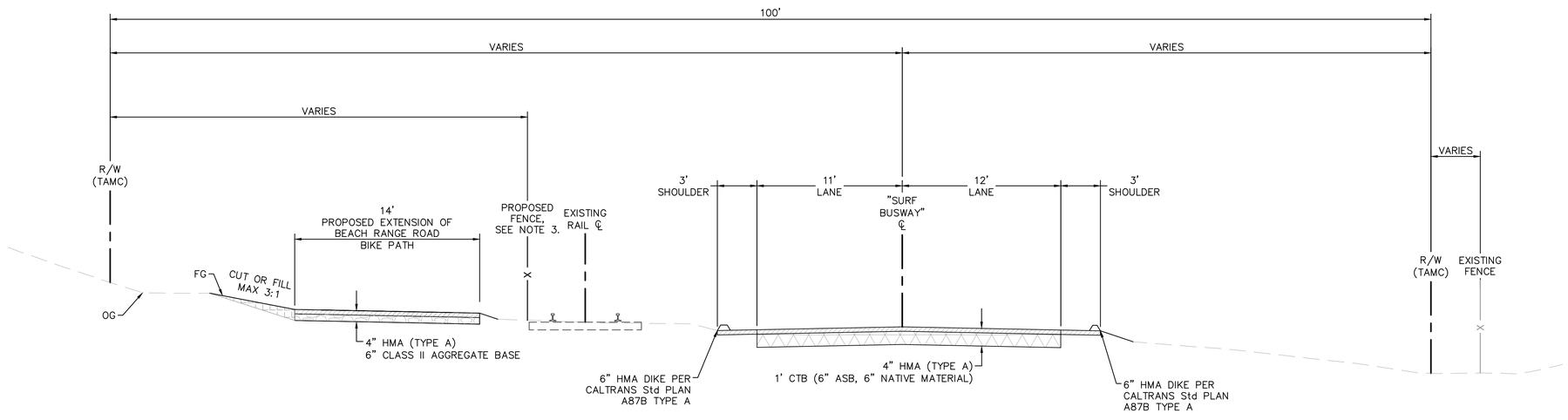


SECTION A

STA 106+50 TO 109+95



SECTION B

STA 109+95 TO 120+00

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. SECTIONS REFERENCE "SURF BRT" LINE, UNLESS OTHERWISE NOTED.
2. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
3. FOR CIVIL IMPROVEMENTS SEE SHEETS CI-001 TO CI-047.
4. FOR GRADING AND DRAINAGE SEE SHEETS GD-001 TO GD-047.
5. FOR SIGNING AND MARKING SEE SHEETS SM-001 TO SM-024.
6. FOR CROSS SLOPES SEE SHEETS CX-001 TO CX-043.
7. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
8. INSTALL 20' OF 2" HMA DIKE PER CALTRANS STANDARD PLANS A87B TYPE C UP TO 4" TYPE F DIKE. SEE SHEET CD-002.

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

TYPICAL SECTIONS SHEET 1 OF 6

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CONTRACT NO.	22-03	
SHEET NO.	TX-001	
	SHEET 99 OF 617	

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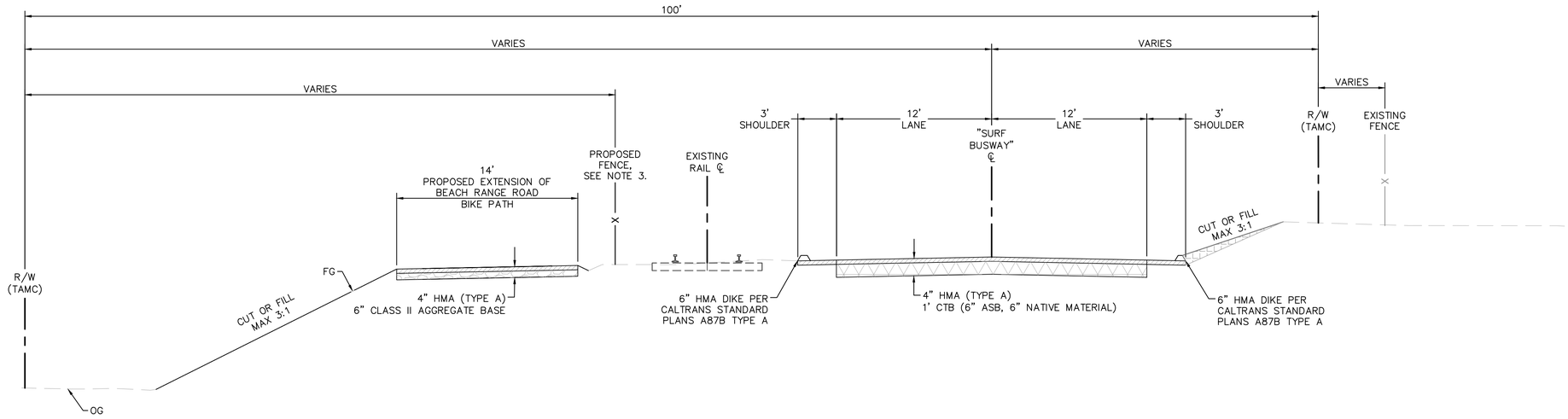
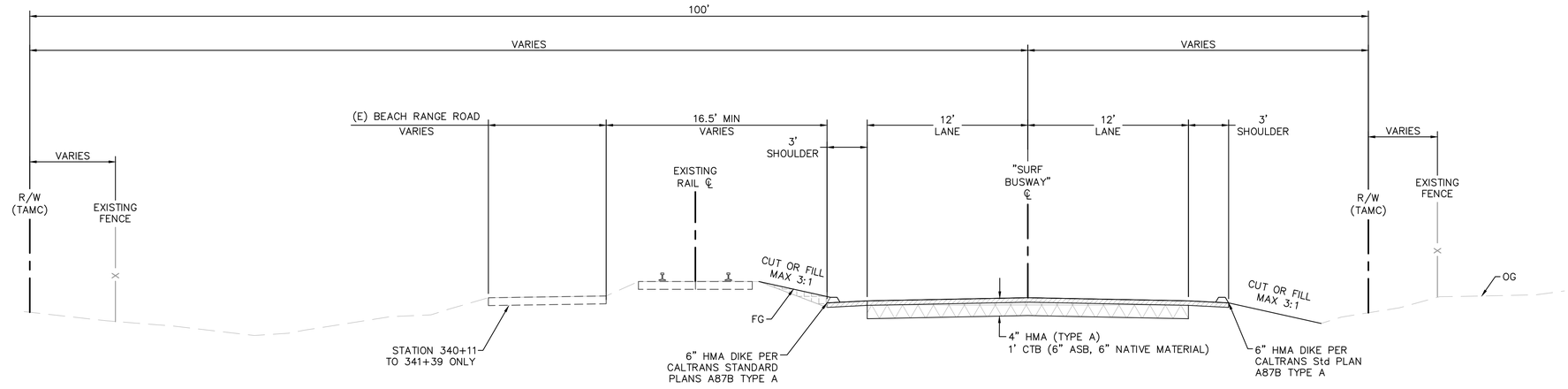


SECTION C

STA 120+00 TO 121+94
STA 335+00 TO 336+54
STA 341+39 TO 344+00
STA 344+77 TO 348+51



SECTION D

STA 122+10 TO 149+50
STA 156+17 TO 157+08
STA 160+54 TO 172+16
STA 187+00 TO 191+98
STA 213+00 TO 217+14
STA 238+11 TO 242+48
STA 274+01 TO 286+00
STA 302+00 TO 306+02
STA 310+12 TO 314+26
STA 318+23 TO 324+92
STA 340+11 TO 341+39

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. SECTIONS REFERENCE "SURF BRT" LINE, UNLESS OTHERWISE NOTED.
2. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
3. FOR CIVIL IMPROVEMENTS SEE SHEETS CI-001 TO CI-047.
4. FOR GRADING AND DRAINAGE SEE SHEETS GD-001 TO GD-047.
5. FOR SIGNING AND MARKING SEE SHEETS SM-001 TO SM-024.
6. FOR CROSS SLOPES SEE SHEETS CX-001 TO CX-043.
7. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
8. INSTALL 20' OF 2" HMA DIKE PER CALTRANS STANDARD PLANS A87B TYPE C UP TO 4" TYPE F DIKE. SEE SHEET CD-002.

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
TYPICAL SECTIONS SHEET 2 OF 6
MONTEREY COUNTY CALIFORNIA

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CONTRACT NO.	22-03	

SHEET NO.
TX-002
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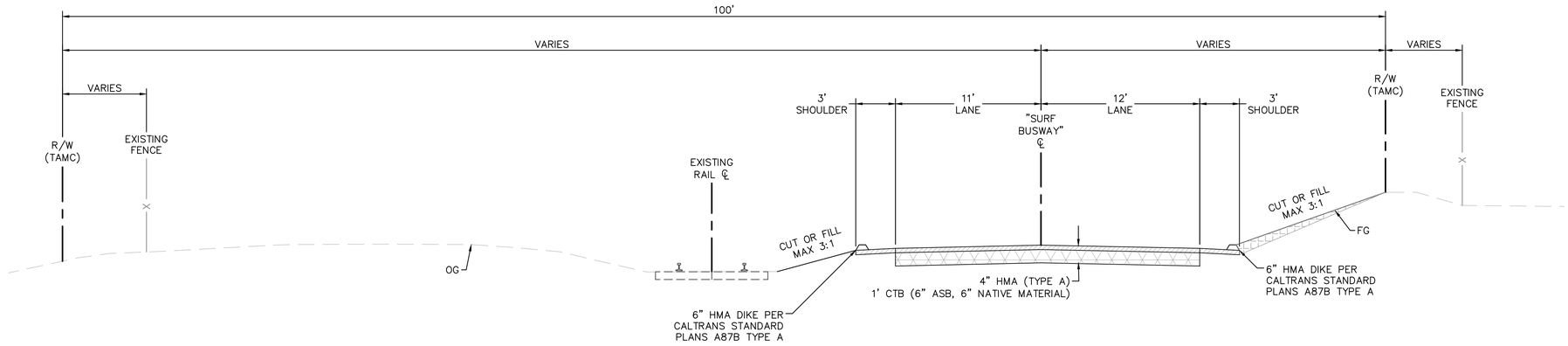
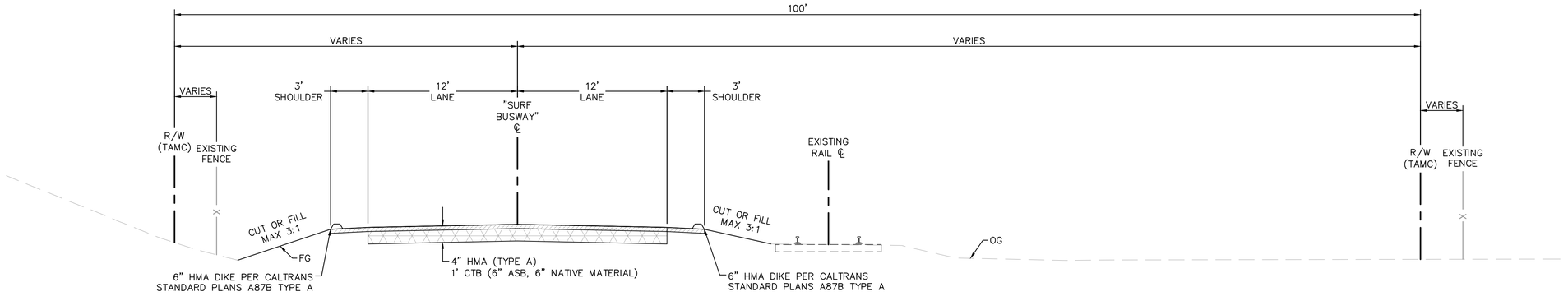


SECTION E

STA 177+86 TO 187+00
STA 211+79 TO 213+00
STA 286+00 TO 295+40
STA 301+67 TO 302+00



SECTION F

STA 250+08 TO 265+42

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. SECTIONS REFERENCE "SURF BRT" LINE, UNLESS OTHERWISE NOTED.
2. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
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6. FOR CROSS SLOPES SEE SHEETS CX-001 TO CX-043.
7. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
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GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
TYPICAL SECTIONS SHEET 3 OF 6
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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CONTRACT NO.	22-03	
SHEET NO.	TX-003	
SHEET 101 OF 617		

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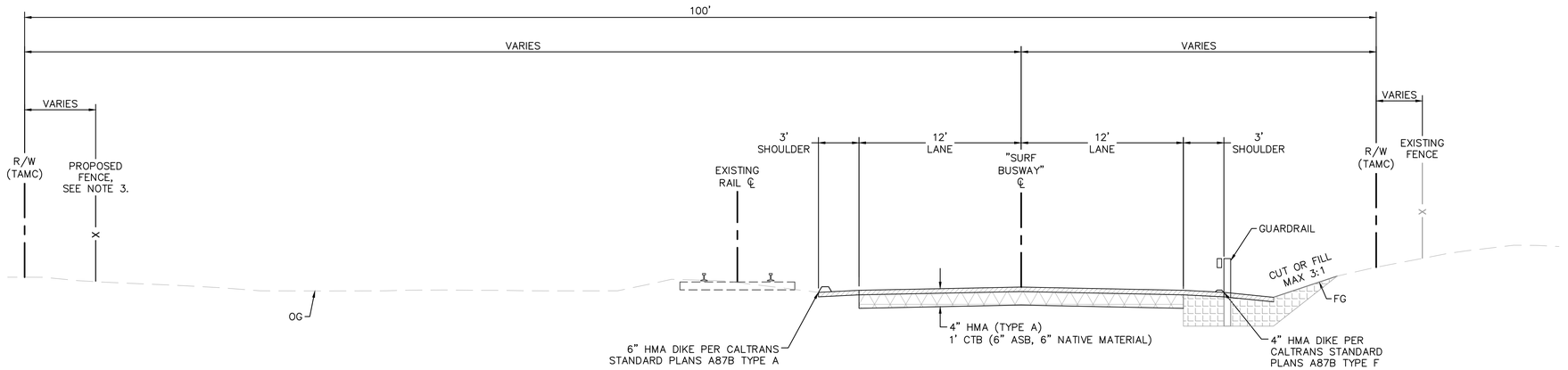
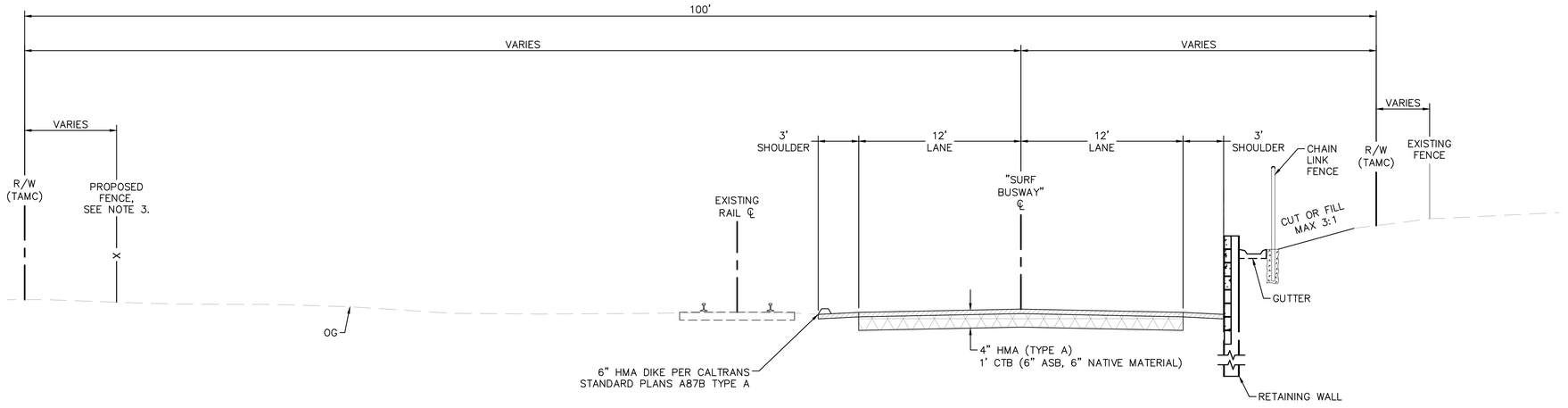


SECTION G

STA 149+50 TO 150+25
STA 157+08 TO 157+84
STA 172+16 TO 172+90
STA 191+98 TO 192+72
STA 194+62 TO 196+75
STA 199+02 TO 200+48
STA 204+78 TO 206+92
STA 217+14 TO 217+87
STA 229+13 TO 232+08
STA 295+40 TO 296+16
STA 306+02 TO 306+77
STA 314+26 TO 314+88



SECTION H

STA 150+25 TO 156+17
STA 172+90 TO 173+00
STA 196+75 TO 199.02
STA 232+08 TO 238+11
STA 306+77 TO 310+12

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. SECTIONS REFERENCE "SURF BRT" LINE, UNLESS OTHERWISE NOTED.
2. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
3. FOR CIVIL IMPROVEMENTS SEE SHEETS CI-001 TO CI-047.
4. FOR GRADING AND DRAINAGE SEE SHEETS GD-001 TO GD-047.
5. FOR SIGNING AND MARKING SEE SHEETS SM-001 TO SM-024.
6. FOR CROSS SLOPES SEE SHEETS CX-001 TO CX-043.
7. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
8. INSTALL 20' OF 2" HMA DIKE PER CALTRANS STANDARD PLANS A87B TYPE C UP TO 4" TYPE F DIKE. SEE SHEET CD-002.

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
TYPICAL SECTIONS SHEET 4 OF 6
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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SHEET NO.
TX-004
SHEET 102 OF 617

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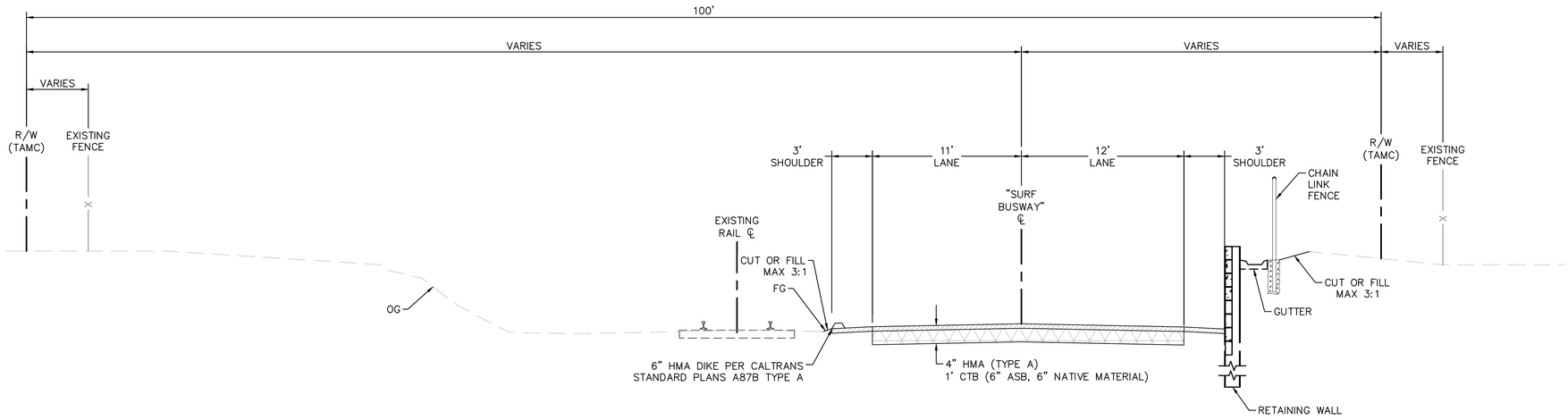

SECTION I

STA 173+00 TO 177+86
STA 206+92 TO 211+79
STA 296+16 TO 301+67

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. SECTIONS REFERENCE "SURF BRT" LINE, UNLESS OTHERWISE NOTED.
2. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
3. FOR CIVIL IMPROVEMENTS SEE SHEETS CI-001 TO CI-047.
4. FOR GRADING AND DRAINAGE SEE SHEETS GD-001 TO GD-047.
5. FOR SIGNING AND MARKING SEE SHEETS SM-001 TO SM-024.
6. FOR CROSS SLOPES SEE SHEETS CX-001 TO CX-043.
7. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
8. INSTALL 20' OF 2" HMA DIKE PER CALTRANS STANDARD PLANS A87B TYPE C UP TO 4" TYPE F DIKE. SEE SHEET CD-002.

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
TYPICAL SECTIONS SHEET 5 OF 6
MONTEREY COUNTY CALIFORNIA

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CONTRACT NO. 22-03

SHEET NO.
TX-005
SHEET 103 OF 617

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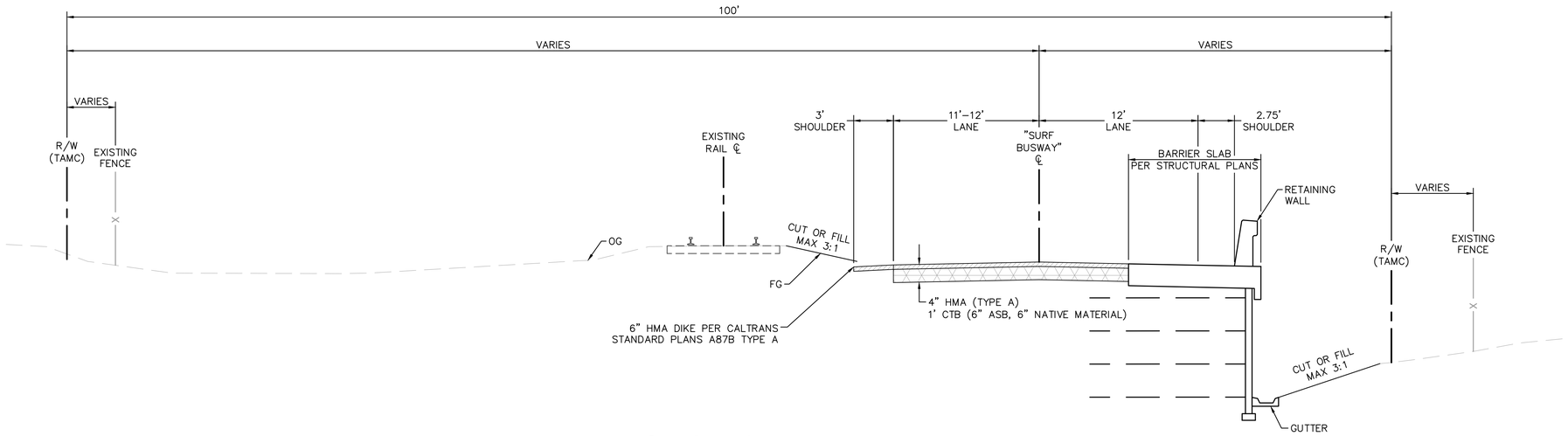
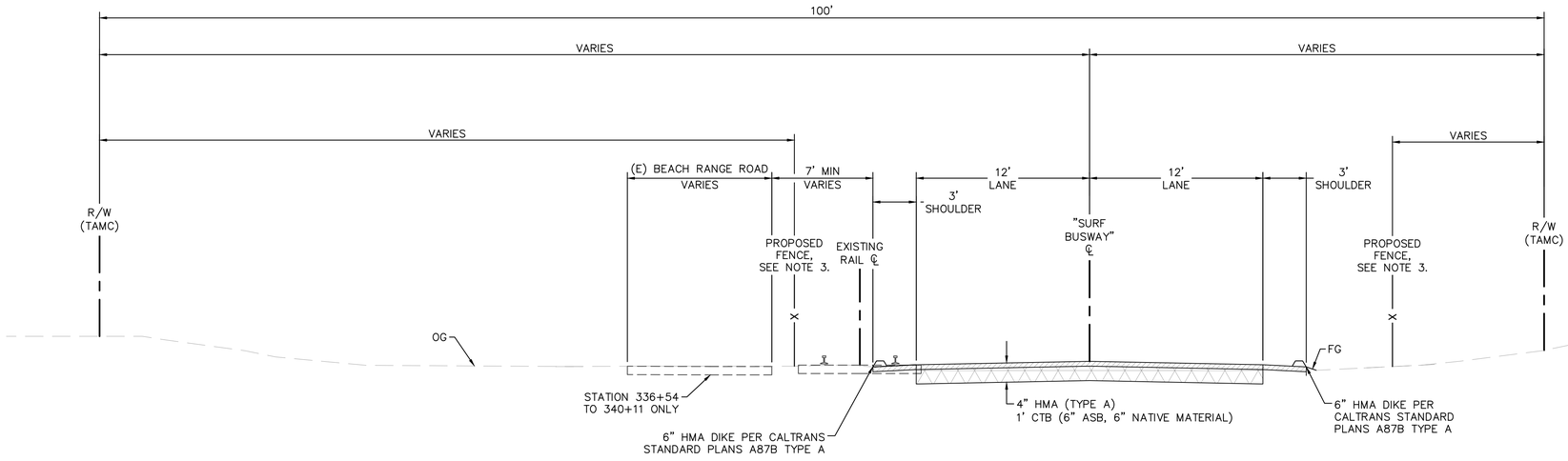


SECTION K

STA 157+84 TO 160+54
STA 192+72 TO 194+62
STA 200+48 TO 204+78
STA 217+87 TO 229+13
STA 314+88 TO 318+23



SECTION L

STA 244+47 TO 250+08
STA 265+42 TO 274+01
STA 324+92 TO 335+00
STA 336+54 TO 340+11

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. SECTIONS REFERENCE "SURF BRT" LINE, UNLESS OTHERWISE NOTED.
2. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
3. FOR CIVIL IMPROVEMENTS SEE SHEETS CI–001 TO CI–047.
4. FOR GRADING AND DRAINAGE SEE SHEETS GD–001 TO GD–047.
5. FOR SIGNING AND MARKING SEE SHEETS SM–001 TO SM–024.
6. FOR CROSS SLOPES SEE SHEETS CX–001 TO CX–043.
7. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
8. INSTALL 20' OF 2" HMA DIKE PER CALTRANS STANDARD PLANS A87B TYPE C UP TO 4" TYPE F DIKE. SEE SHEET CD–002.

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
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SURF! BUSWAY AND BRT PROJECT
TYPICAL SECTIONS SHEET 6 OF 6
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	TX–006	
SHEET 104 OF 617		

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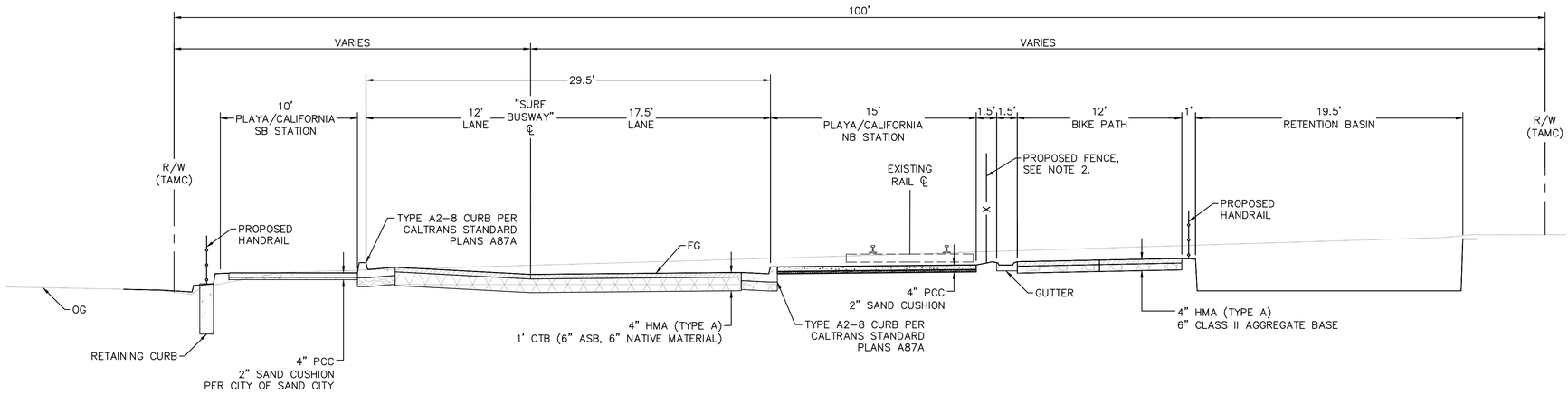
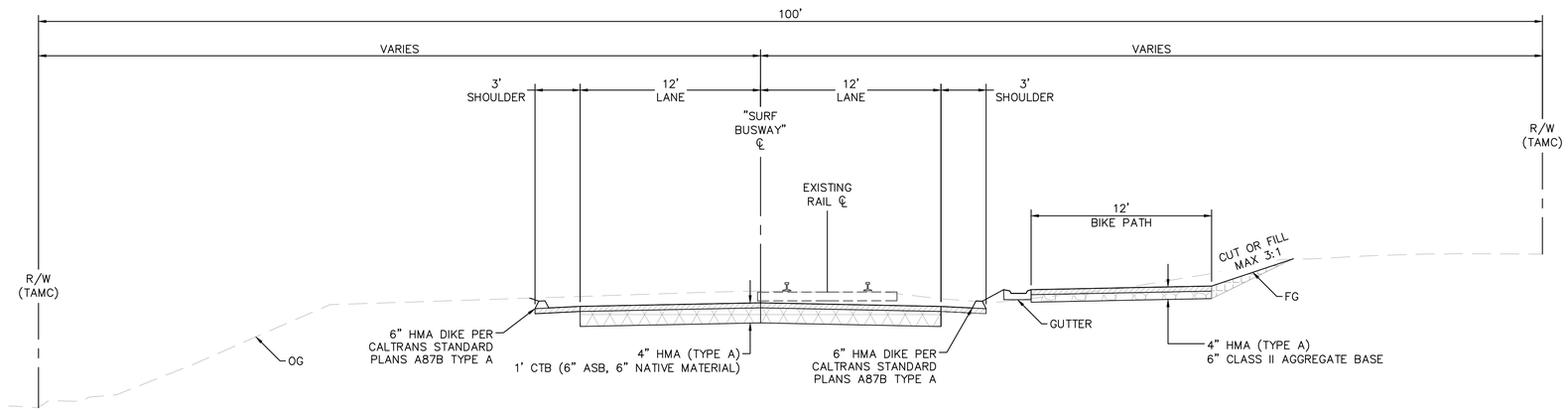


SECTION A

STA "CA BW" 10+38 TO 11+57



SECTION B

STA "CA BW" 11+57 TO 22+00

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS SEE SHEETS CI-101 TO CI-105.
3. FOR GRADING AND DRAINAGE SEE SHEETS GD-101 TO GD-103.
4. FOR SIGNING AND MARKING SEE SHEETS SM-101 TO SM-103.
5. FOR CROSS SLOPES SEE SHEETS CX-101 TO CX-106.
6. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
7. INSTALL 20' OF 2" HMA DIKE PER CALTRANS STANDARD PLANS A87B TYPE C UP TO 4" TYPE F DIKE. SEE SHEET CD-002.

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TYPICAL SECTIONS SHEET 1 OF 2
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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CONTRACT NO.	22-03	
SHEET NO.	TX-101	
SHEET 105 OF 617		

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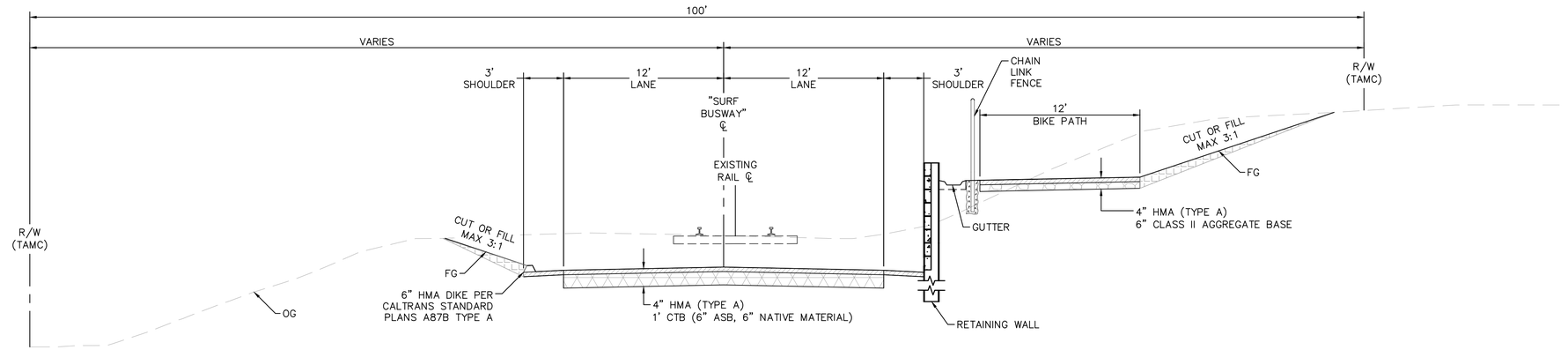

SECTION C

STA "CA BW" 22+00 TO 26+08

LEGEND:

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- APPROXIMATE OVER EXCAVATION LIMITS
- NATIVE MATERIAL BACKFILL
- CONCRETE

GENERAL NOTES:

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS SEE SHEETS CI-101 TO CI-105.
3. FOR GRADING AND DRAINAGE SEE SHEETS GD-101 TO GD-103.
4. FOR SIGNING AND MARKING SEE SHEETS SM-101 TO SM-103.
5. FOR CROSS SLOPES SEE SHEETS CX-101 TO CX-106.
6. BACKFILL PORTIONS OF REMOVED RAIL, TRACK TIES, BALLAST, AND SUBBALAST WITH NATIVE MATERIAL.
7. INSTALL 20' OF 2" HMA DIKE PER CALTRANS STANDARD PLANS A87B TYPE C UP TO 4" TYPE F DIKE. SEE SHEET CD-002.

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

PLAYA-CALIFORNIA TYPICAL SECTIONS SHEET 1 OF 2

MONTEREY COUNTY CALIFORNIA

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CONTRACT NO. 22-03

SHEET NO.

TX-102

SHEET 106 OF 617

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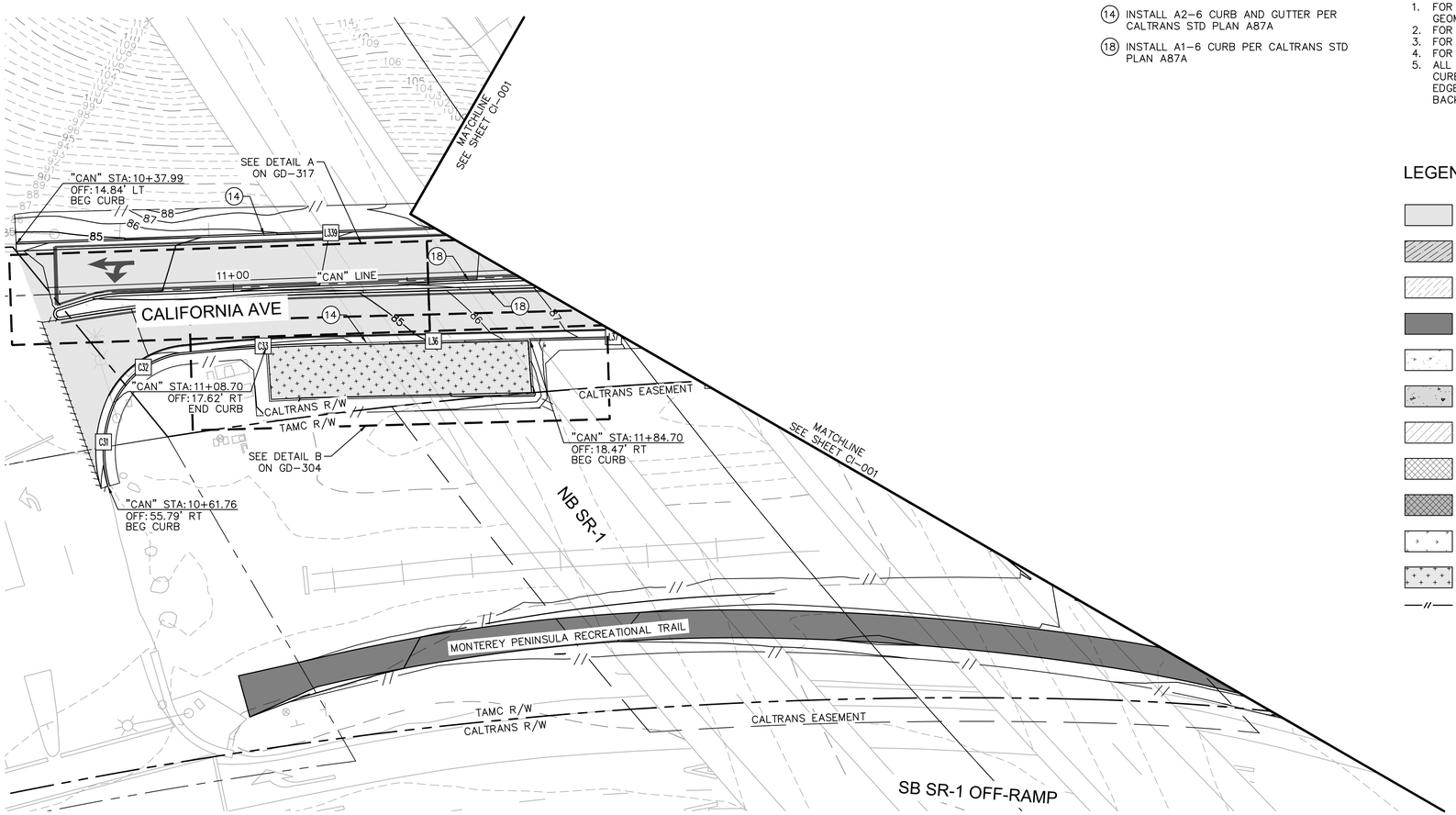

CIVIL NOTES

(14) INSTALL A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(18) INSTALL A1-6 CURB PER CALTRANS STD PLAN A87A

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

LEGEND:

- BUSWAY PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL B)
- BUSWAY RED COLORED JPCP (PER DWG CD-001 DETAIL C)
- BUSWAY JPCP (PER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- SLOPED PAVING PER CALTRANS STANDARD PLANS
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- GRADING LIMITS

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
BUSWAY PLAN AND PROFILE SHEET 2 OF 48
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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CONTRACT NO.	22-03	
SHEET NO.	CI-000	
SHEET 109 OF 617		

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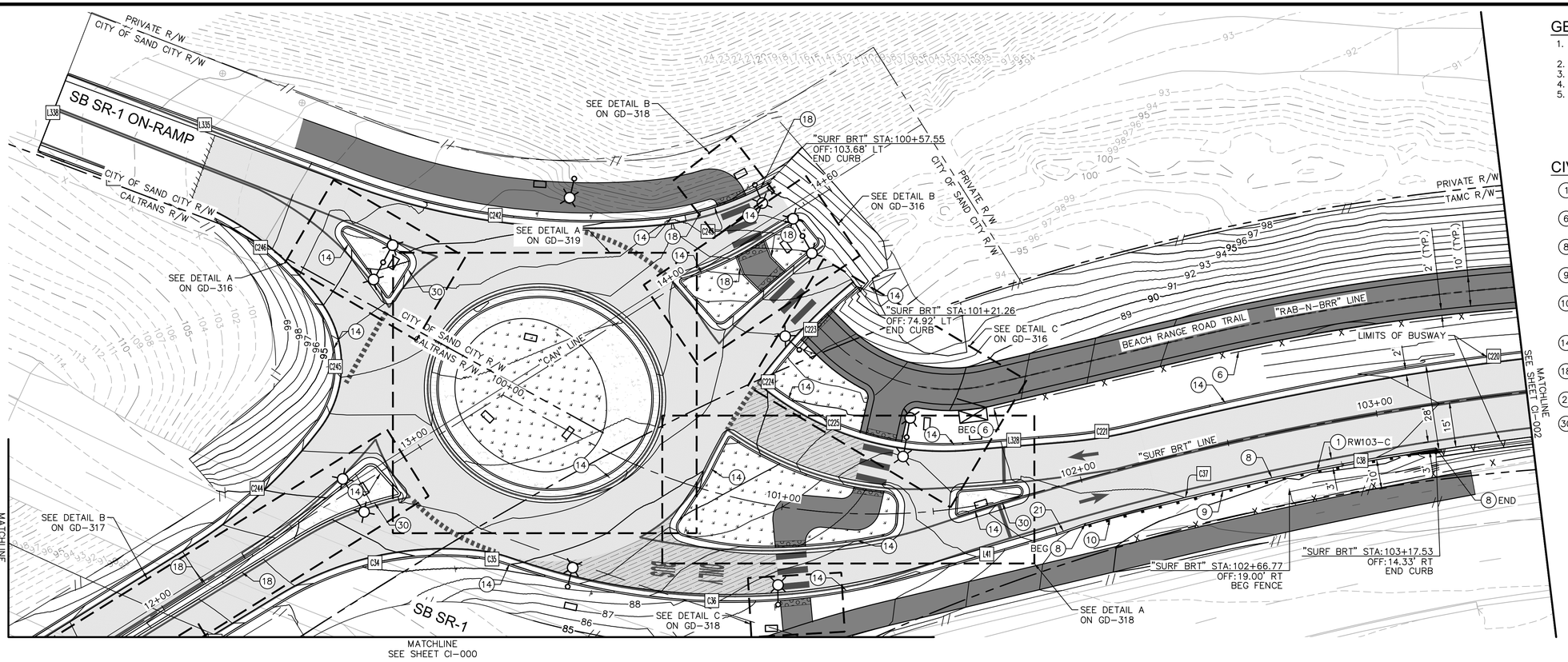


GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

CIVIL NOTES

(1) RETAINING WALL. SEE RETAINING WALL PLANS

(6) INSTALL CL-6 FENCE PER CALTRANS STD PLAN A85

(8) INSTALL TYPE C HMA DIKE PER CALTRANS STD PLAN A87B

(9) INSTALL MIDWEST GUARDRAIL SYSTEM PER CALTRANS STD PLAN A77N3

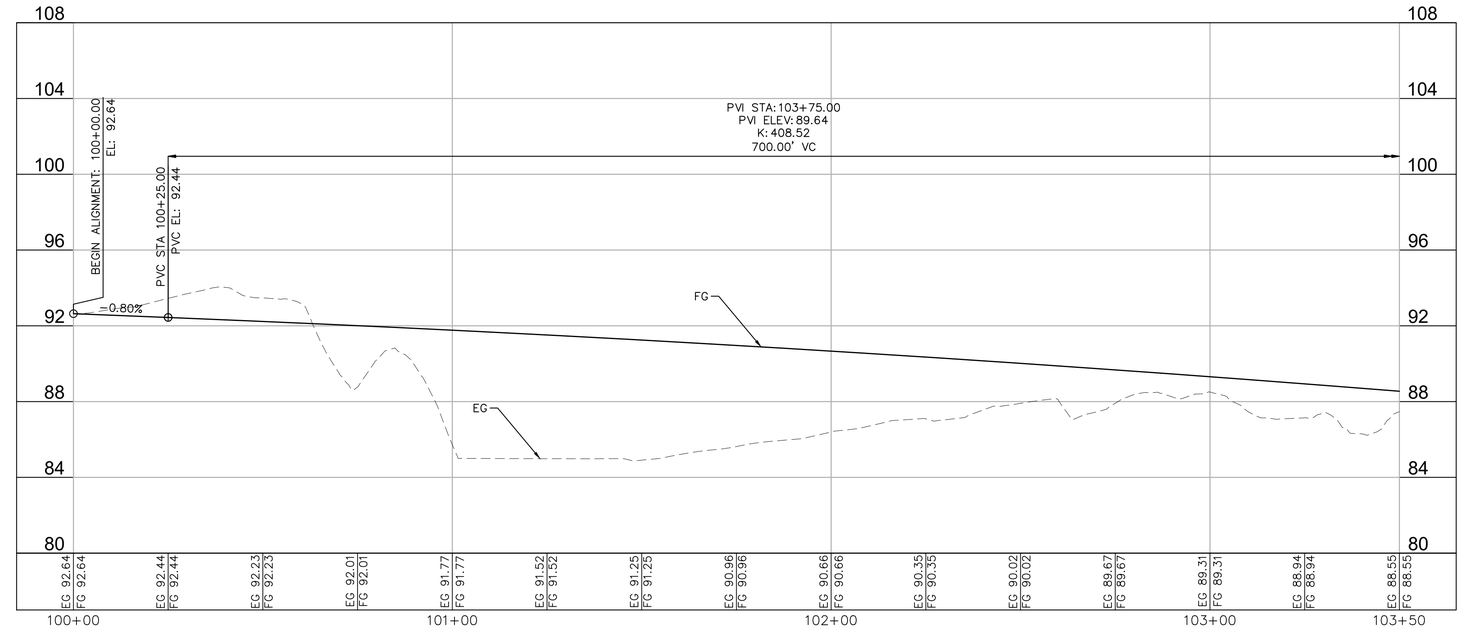
(10) INSTALL IN-LINE TERMINAL SYSTEM END TREATMENT PER CALTRANS STD PLAN A77Q1, TYPE 12A LAYOUT

(14) INSTALL A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(18) INSTALL A1-6 CURB PER CALTRANS STD PLAN A87A

(21) INSTALL CURB TRANSITION PER CD-002

(30) INSTALL CONCRETE PAVING PER CALTRANS STD PLAN A87A CASE A



PROFILE

Horiz SCALE: 1"=5'
Vert SCALE: 1"=20'

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
BUSWAY PLAN AND PROFILE SHEET 2 OF 48
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.
CI-001
SHEET 110 OF 617

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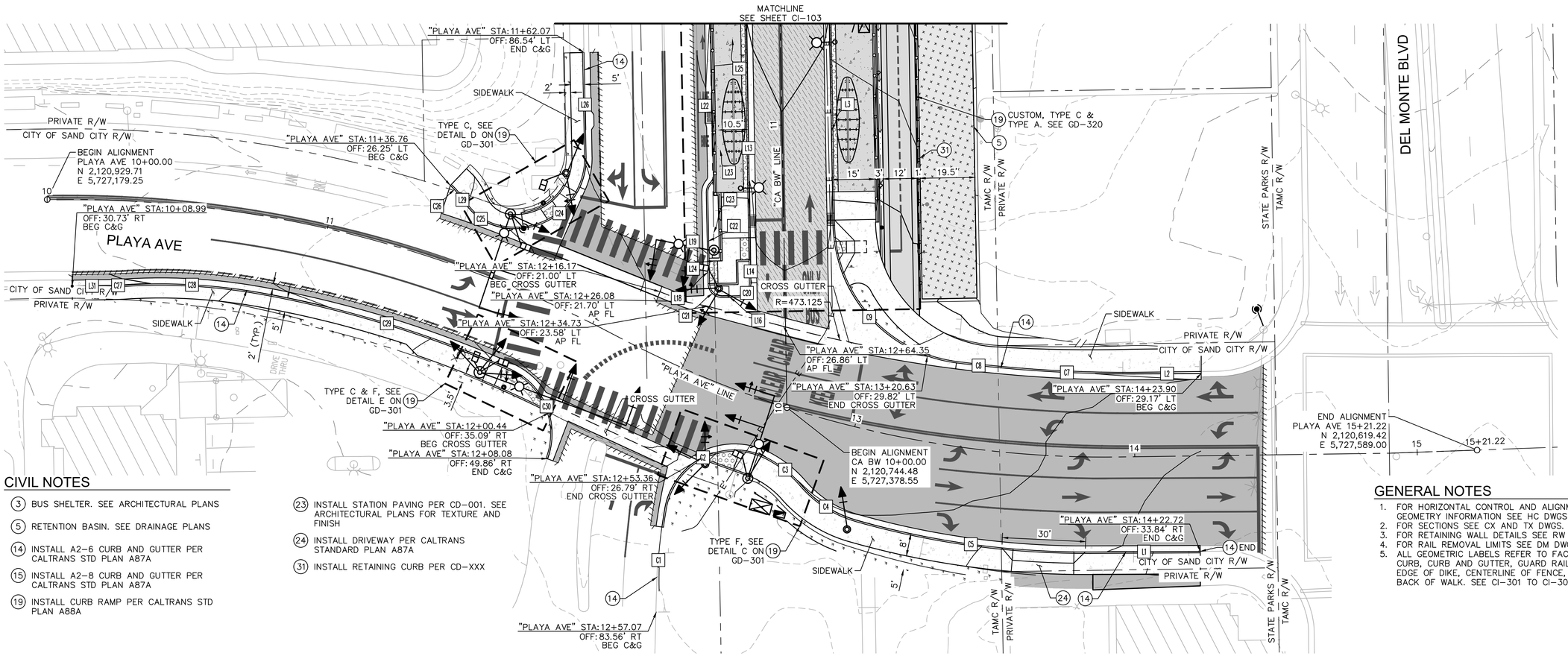


CIVIL NOTES

(3) BUS SHELTER. SEE ARCHITECTURAL PLANS

(5) RETENTION BASIN. SEE DRAINAGE PLANS

(14) INSTALL A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(15) INSTALL A2-8 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(19) INSTALL CURB RAMP PER CALTRANS STD PLAN A88A

(23) INSTALL STATION PAVING PER CD-001. SEE ARCHITECTURAL PLANS FOR TEXTURE AND FINISH

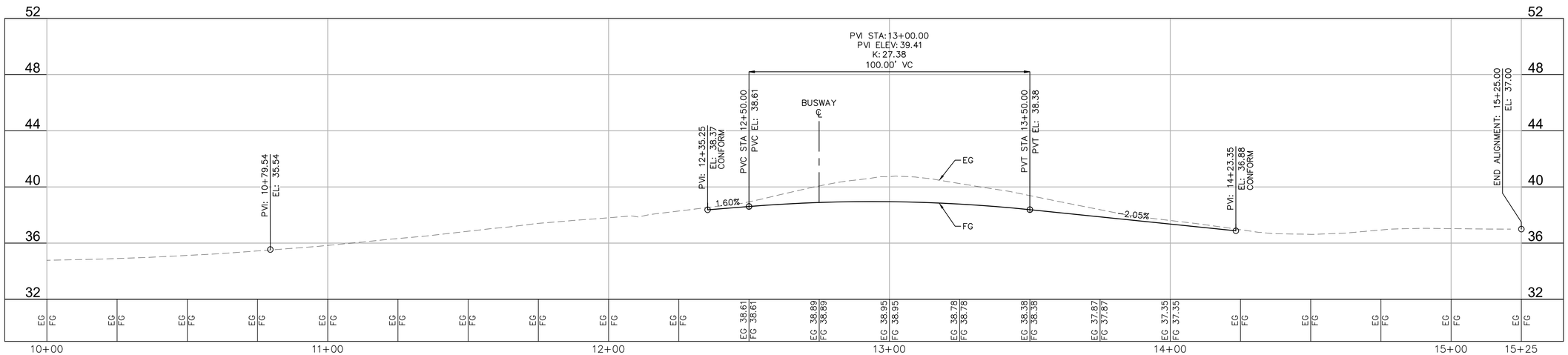
(24) INSTALL DRIVEWAY PER CALTRANS STANDARD PLAN A87A

(31) INSTALL RETAINING CURB PER CD-XXX

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

PLAN



PROFILE

Horiz SCALE: 1"=5'
Vert SCALE: 1"=20'

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA PLAN AND PROFILE SHEET 1 OF 5
MONTEREY COUNTY CALIFORNIA

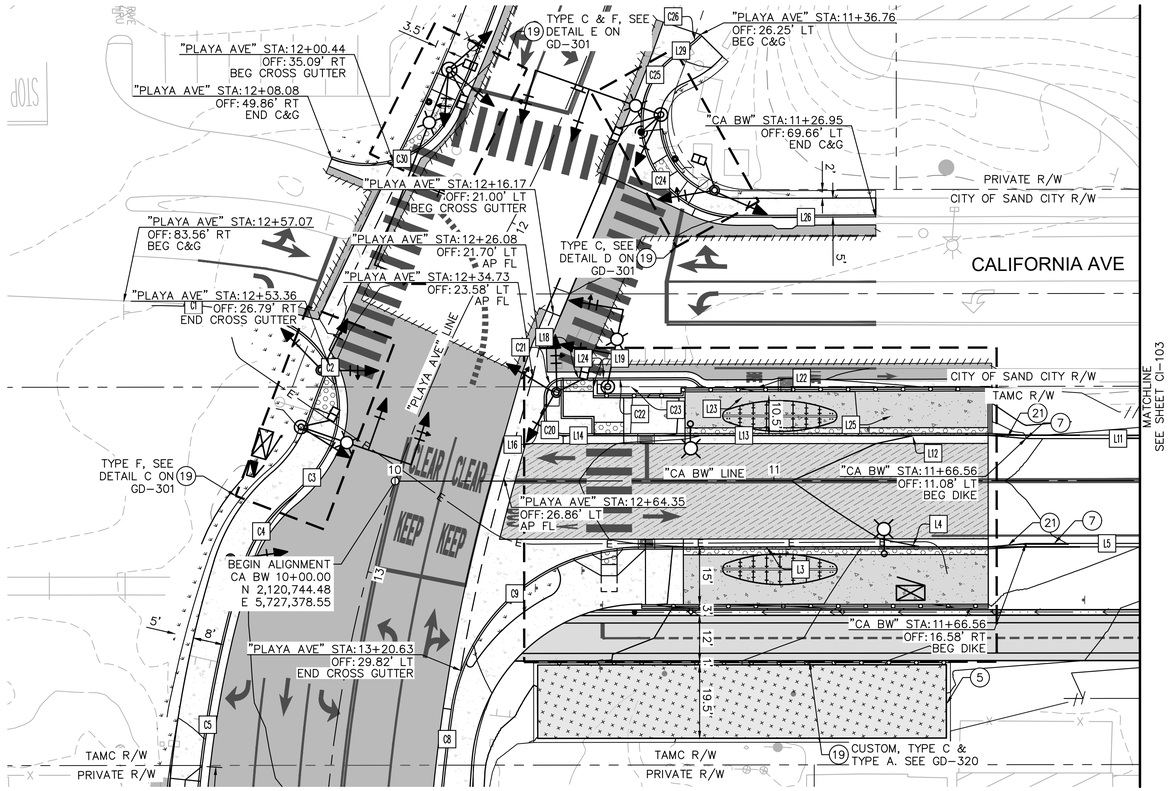
NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

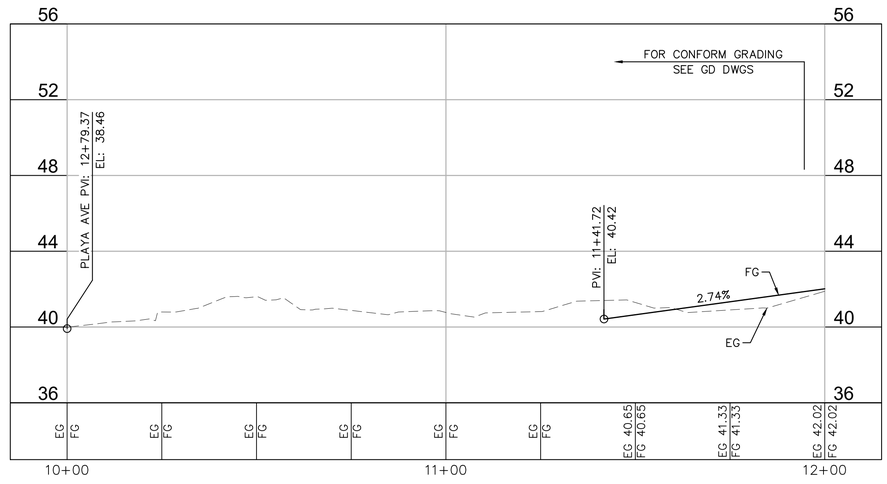
CONTRACT NO. 22-03

SHEET NO.
CI-101
SHEET 157 OF 617

K:\dk_trans\09754100 - mst surf final design\Design\Sheets\CI-101.dwg 09/08/2023 1:40:47PM Joel.Pence



PLAN



PROFILE

Horiz SCALE: 1"=5'
Vert SCALE: 1"=20'

CIVIL NOTES

(3) BUS SHELTER. SEE ARCHITECTURAL PLANS

(5) RETENTION BASIN. SEE DRAINAGE PLANS

(7) INSTALL TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

(14) INSTALL A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(15) INSTALL A2-8 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(21) INSTALL CURB TRANSITION PER CD-002

(23) INSTALL STATION PAVING PER CD-001. SEE ARCHITECTURAL PLANS FOR TEXTURE AND FINISH

(31) INSTALL RETAINING CURB PER CD-XXX

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA PLAN AND PROFILE SHEET 2 OF 5
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. CI-102		
SHEET 158 OF 617		

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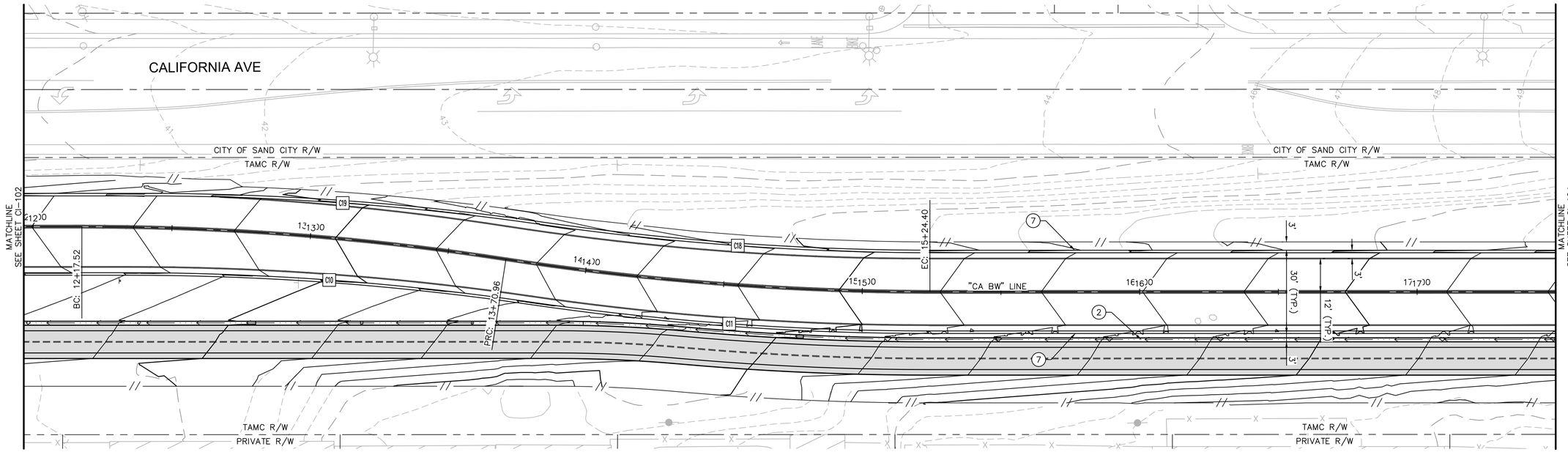


PLAN

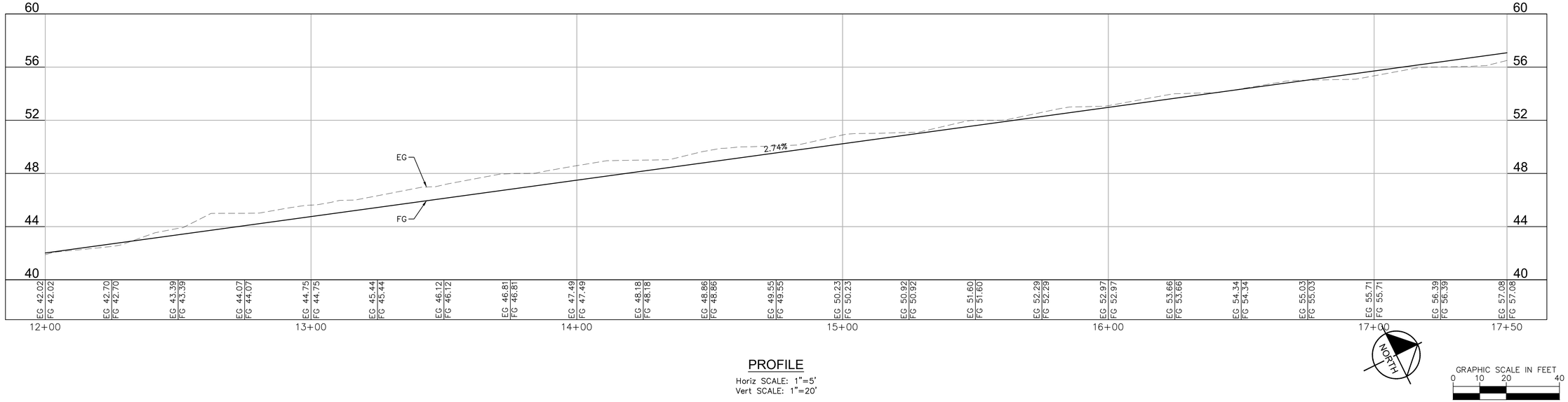
CIVIL NOTES

(2) GRADED DITCH. SEE DRAINAGE PLANS

(7) INSTALL TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308



PROFILE

Horiz SCALE: 1"=5'
Vert SCALE: 1"=20'

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA PLAN AND PROFILE SHEET 3 OF 5
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
CI-103
SHEET 159 OF 617

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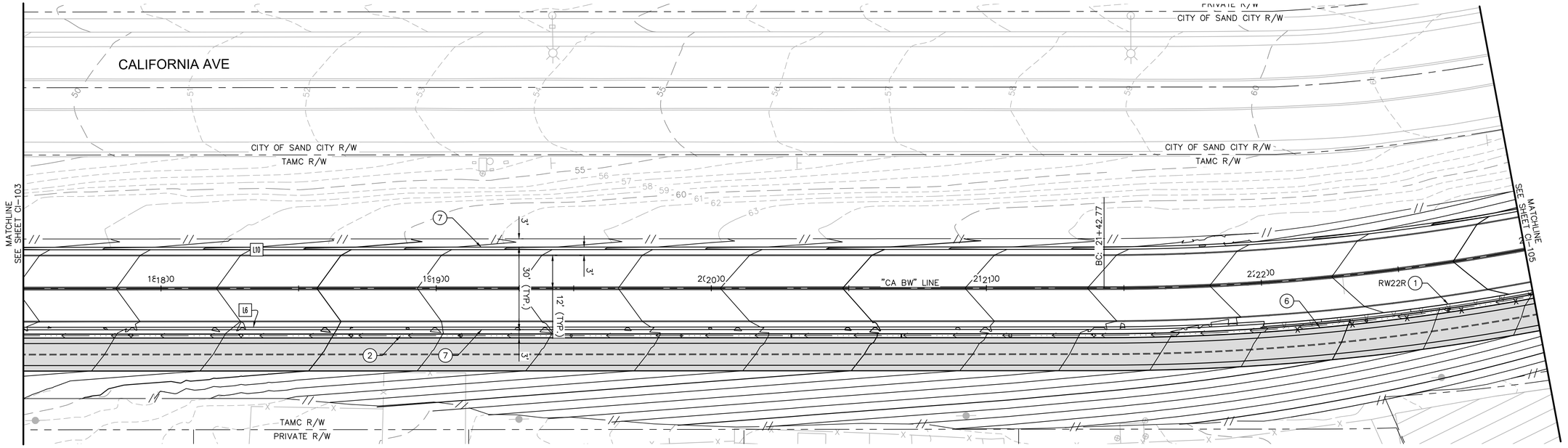


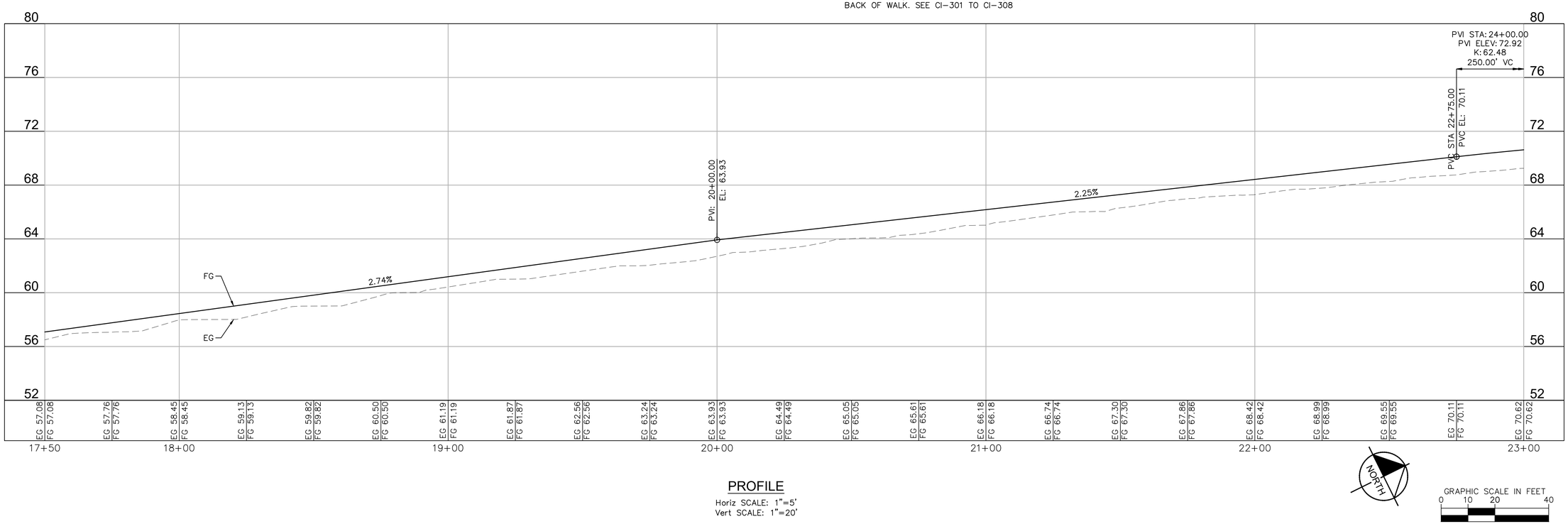
CIVIL NOTES

1. RETAINING WALL. SEE RETAINING WALL PLANS
2. GRADED DITCH. SEE DRAINAGE PLANS
6. INSTALL CL-6 FENCE PER CALTRANS STD PLAN A85
7. INSTALL TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

PLAN

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308



PROFILE

Horiz SCALE: 1"=5'
Vert SCALE: 1"=20'

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA PLAN AND PROFILE SHEET 4 OF 5
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.
CI-104
SHEET 160 OF 617

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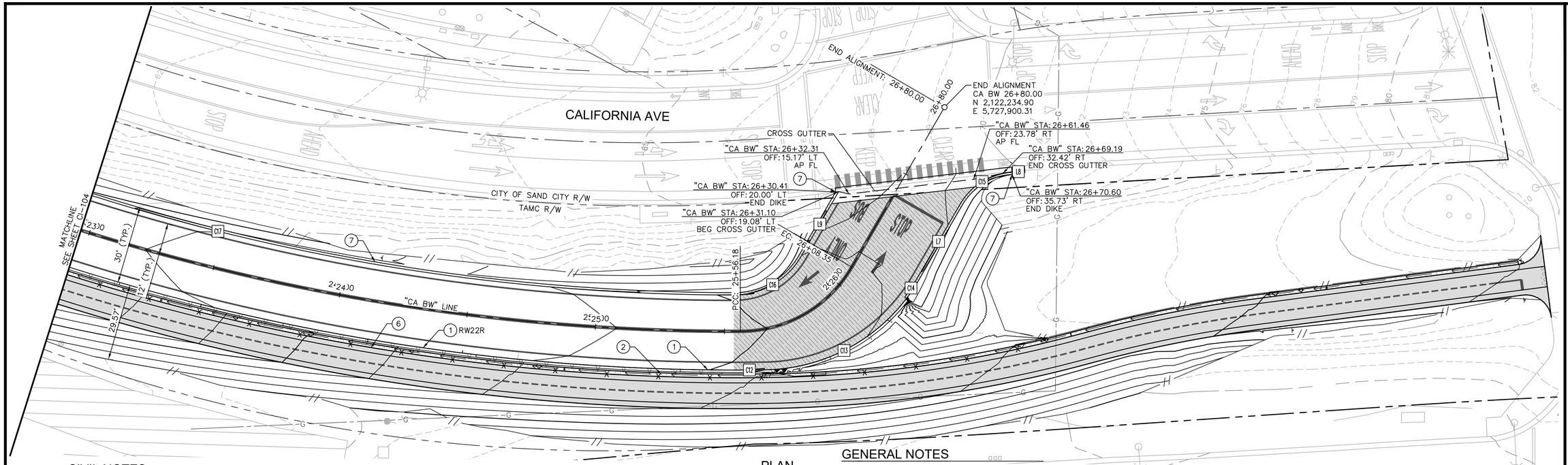


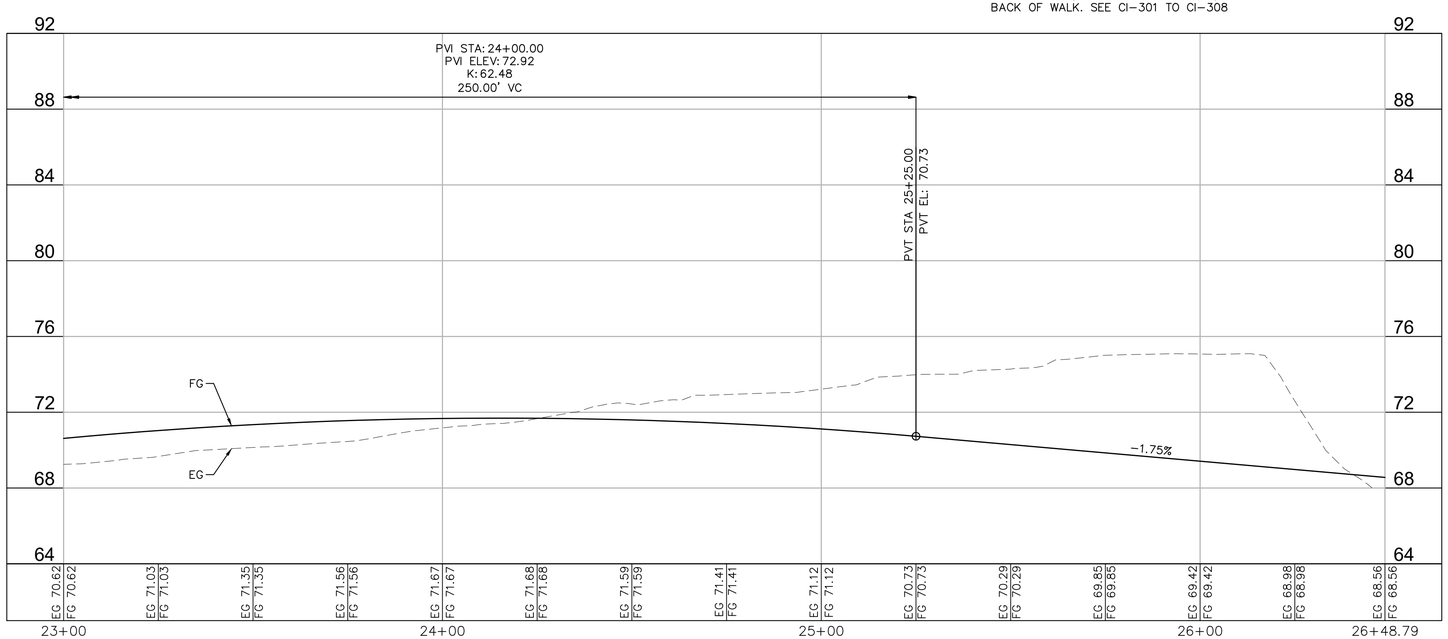
PLAN

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

CIVIL NOTES

1. RETAINING WALL. SEE RETAINING WALL PLANS
2. GRADED DITCH. SEE DRAINAGE PLANS
6. INSTALL CL-6 FENCE PER CALTRANS STD PLAN A85
7. INSTALL TYPE A HMA DIKE PER CALTRANS STD PLAN A87B



PROFILE

Horiz SCALE: 1"=5'
Vert SCALE: 1"=20'

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA PLAN AND PROFILE SHEET 5 OF 5
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
CI-105
SHEET 161 OF 617

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CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C1	Δ=10° 13' 25"	206.45'	36.84'	
C2	Δ=107° 18' 54"	25.00'	46.83'	
C3	Δ=22° 21' 19"	40.06'	15.63'	
C4	Δ=33° 39' 07"	39.99'	23.49'	
C5	Δ=16° 07' 27"	295.00'	83.02'	
C7	Δ=5° 39' 46"	474.00'	46.85'	
C8	Δ=1° 54' 55"	474.00'	15.85'	
C9	Δ=81° 40' 42"	50.00'	71.28'	
C10	Δ=8° 18' 36"	1000.92'	145.17'	
C11	Δ=8° 18' 35"	999.08'	144.90'	
C12	Δ=0° 48' 19"	858.00'	12.06'	
C13	Δ=52° 04' 11"	70.00'	63.62'	
C14	Δ=7° 05' 02"	69.08'	8.54'	
C15	Δ=56° 19' 02"	25.00'	24.57'	
C16	Δ=59° 57' 32"	30.00'	31.39'	
C17	Δ=27° 55' 37"	828.92'	404.03'	
C18	Δ=8° 12' 45"	1000.00'	143.33'	
C19	Δ=8° 12' 45"	999.08'	143.20'	
C20	Δ=90° 00' 00"	5.00'	7.85'	
C21	Δ=90° 07' 01"	4.98'	7.84'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C22	Δ=45° 30' 47"	5.00'	3.97'	
C23	Δ=45° 30' 47"	4.00'	3.18'	
C24	Δ=105° 11' 11"	25.00'	45.90'	
C25	Δ=38° 59' 42"	20.00'	13.61'	
C26	Δ=11° 31' 47"	20.00'	4.02'	
C27	Δ=2° 40' 04"	95.00'	4.42'	
C28	Δ=13° 44' 27"	200.00'	47.96'	
C29	Δ=13° 44' 01"	388.00'	93.00'	
C30	Δ=87° 03' 45"	25.00'	37.99'	
C31	Δ=42° 08' 25"	35.16'	25.86'	
C32	Δ=56° 22' 19"	25.00'	24.60'	
C33	Δ=5° 26' 59"	486.00'	46.23'	
C34	Δ=36° 54' 54"	103.00'	66.36'	
C35	Δ=13° 34' 58"	48.00'	11.38'	
C36	Δ=35° 19' 43"	222.00'	136.89'	
C37	Δ=3° 58' 09"	986.67'	68.35'	
C38	Δ=2° 54' 20"	986.67'	50.03'	
C39	Δ=0° 28' 45"	2864.92'	23.96'	
C41	Δ=15° 06' 59"	2286.08'	603.14'	
C43	Δ=2° 11' 51"	5039.08'	193.26'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C45	Δ=15° 01' 38"	1465.92'	384.47'	
C47	Δ=11° 43' 06"	1514.08'	309.66'	
C49	Δ=2° 00' 00"	2864.67'	99.99'	
C50	Δ=1° 07' 07"	2864.92'	55.94'	
C51	Δ=1° 59' 48"	2864.00'	99.81'	
C53	Δ=11° 58' 02"	1464.92'	305.98'	
C54	Δ=23° 42' 00"	995.08'	411.61'	
C56	Δ=1° 26' 17"	995.33'	24.98'	
C57	Δ=4° 19' 11"	995.33'	75.04'	
C60	Δ=1° 54' 04"	1960.33'	65.05'	
C61	Δ=84° 15' 18"	30.92'	45.46'	
C62	Δ=6° 53' 54"	2785.92'	335.42'	
C66	Δ=33° 22' 19"	170.00'	99.02'	
C67	Δ=21° 21' 45"	408.00'	152.12'	
C69	Δ=61° 03' 24"	40.00'	42.63'	
C71	Δ=41° 08' 13"	50.00'	35.90'	
C72	Δ=75° 13' 43"	50.00'	65.65'	
C73	Δ=31° 17' 07"	75.00'	40.95'	
C74	Δ=62° 49' 47"	25.00'	27.41'	
C75	Δ=195° 54' 45"	20.00'	68.39'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C77	Δ=69° 56' 17"	50.00'	61.03'	
C78	Δ=51° 07' 32"	2.00'	1.78'	
C79	Δ=57° 17' 45"	2.00'	2.00'	
C80	Δ=22° 55' 06"	55.00'	22.00'	
C81	Δ=57° 17' 45"	2.00'	2.00'	
C82	Δ=51° 07' 32"	2.00'	1.78'	
C83	Δ=142° 11' 40"	50.00'	124.09'	
C84	Δ=45° 34' 23"	50.00'	39.77'	
C85	Δ=76° 06' 13"	60.00'	79.70'	
C86	Δ=82° 00' 33"	40.00'	57.25'	
C87	Δ=89° 58' 36"	10.00'	15.70'	
C88	Δ=76° 50' 07"	5.00'	6.71'	
C89	Δ=90° 00' 00"	5.00'	7.85'	
C90	Δ=90° 00' 00"	5.00'	7.85'	
C92	Δ=90° 00' 00"	7.00'	11.00'	
C93	Δ=90° 00' 00"	2.00'	3.14'	
C94	Δ=90° 00' 00"	5.50'	8.64'	
C95	Δ=103° 09' 53"	5.00'	9.00'	
C96	Δ=90° 01' 29"	10.00'	15.71'	
C98	Δ=89° 59' 58"	4.00'	6.28'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C99	Δ=103° 09' 53"	4.00'	7.20'	
C100	Δ=76° 50' 07"	4.00'	5.36'	
C101	Δ=90° 00' 00"	4.00'	6.28'	
C102	Δ=103° 09' 53"	5.00'	9.00'	
C103	Δ=76° 50' 07"	5.00'	6.71'	
C104	Δ=90° 00' 00"	3.00'	4.71'	
C105	Δ=90° 00' 00"	3.00'	4.71'	
C106	Δ=103° 09' 53"	3.00'	5.40'	
C107	Δ=90° 00' 00"	3.00'	4.71'	
C108	Δ=90° 00' 00"	3.00'	4.71'	
C109	Δ=90° 00' 00"	3.00'	4.71'	
C110	Δ=90° 00' 00"	3.00'	4.71'	
C111	Δ=90° 00' 00"	3.00'	4.71'	
C112	Δ=90° 00' 00"	3.00'	4.71'	
C113	Δ=76° 50' 07"	3.00'	4.02'	
C114	Δ=76° 50' 07"	3.00'	4.02'	
C116	Δ=103° 09' 53"	3.00'	5.40'	
C118	Δ=90° 00' 00"	3.00'	4.71'	
C122	Δ=90° 00' 00"	3.00'	4.71'	
C124	Δ=90° 00' 00"	3.00'	4.71'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C126	Δ=90° 00' 00"	3.00'	4.71'	
C128	Δ=90° 00' 00"	3.00'	4.71'	
C132	Δ=90° 00' 00"	3.00'	4.71'	
C134	Δ=180° 00' 00"	25.00'	78.54'	
C135	Δ=180° 00' 00"	25.00'	78.54'	
C136	Δ=76° 49' 07"	50.00'	67.04'	
C138	Δ=7° 01' 00"	239.12'	29.28'	
C140	Δ=28° 57' 18"	9.87'	4.99'	
C141	Δ=151° 02' 42"	1.88'	4.94'	
C143	Δ=7° 01' 00"	243.87'	29.87'	
C145	Δ=90° 00' 00"	1.87'	2.95'	
C147	Δ=90° 00' 00"	1.88'	2.95'	
C149	Δ=12° 40' 33"	202.13'	44.72'	
C150	Δ=90° 00' 00"	9.88'	15.51'	
C151	Δ=14° 31' 59"	206.13'	52.28'	
C152	Δ=90° 00' 00"	1.88'	2.95'	
C153	Δ=90° 00' 00"	1.88'	2.95'	
C154	Δ=14° 31' 59"	210.88'	53.49'	
C155	Δ=63° 15' 32"	61.67'	68.09'	
C157	Δ=120° 00' 00"	30.00'	62.83'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C158	Δ=60° 00' 00"	10.00'	10.47'	
C159	Δ=90° 00' 00"	10.00'	15.71'	
C160	Δ=90° 00' 00"	10.00'	15.71'	
C161	Δ=3° 05' 55"	500.00'	27.04'	
C162	Δ=21° 21' 45"	381.00'	142.05'	
C163	Δ=40° 16' 27"	136.00'	95.60'	
C164	Δ=88° 58' 33"	30.92'	48.01'	
C166	Δ=15° 02' 32"	2785.92'	731.40'	
C168	Δ=12° 10' 57"	4985.92'	1060.12'	
C170	Δ=5° 21' 37"	2814.92'	263.35'	
C171	Δ=2° 02' 10"	2814.67'	100.02'	
C172	Δ=5° 30' 45"	3035.08'	292.00'	
C186	Δ=47° 59' 20"	5.00'	4.19'	
C187	Δ=85° 26' 12"	5.00'	7.46'	
C188	Δ=85° 24' 33"	5.00'	7.45'	
C189	Δ=7° 08' 14"	110.00'	13.70'	
C190	Δ=134° 01' 41"	5.00'	11.70'	
C191	Δ=16° 27' 59"	110.00'	31.61'	
C192	Δ=111° 27' 14"	5.00'	9.73'	
C194	Δ=82° 59' 20"	5.00'	7.24'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C195	Δ=18° 27' 35"	90.00'	29.00'	
C196	Δ=167° 33' 02"	2.00'	5.85'	
C197	Δ=48° 02' 45"	75.00'	62.89'	
C198	Δ=132° 00' 40"	2.00'	4.61'	
C199	Δ=26° 00' 06"	2814.08'	1277.07'	
C200	Δ=12° 10' 57"	5014.08'	1066.11'	
C201	Δ=16° 20' 39"	2842.08'	810.73'	
C202	Δ=5° 30' 46"	3006.90'	289.31'	
C203	Δ=1° 35' 48"	6735.92'	187.71'	
C204	Δ=1° 22' 55"	6764.08'	163.15'	
C205	Δ=2° 22' 07"	6764.08'	279.64'	
C206	Δ=2° 09' 15"	6735.92'	253.24'	
C207	Δ=8° 41' 05"	2992.08'	453.53'	
C208	Δ=8° 27' 34"	885.92'	130.80'	
C209	Δ=8° 07' 24"	914.08'	129.60'	
C210	Δ=18° 15' 07"	1931.92'	615.43'	
C211	Δ=15° 01' 38"	1493.08'	391.60'	
C212	Δ=1° 30' 41"	5011.92'	132.20'	
C213	Δ=15° 06' 59"	2257.92'	595.71'	
C214	Δ=19° 02' 34"	2893.08'	961.55'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C215	Δ=11° 58' 02"	1492.08'	311.65'	
C216	Δ=7° 39' 17"	2842.08'	379.70'	
C217	Δ=63° 18' 08"	966.92'	1068.28'	
C218	Δ=11° 31' 43"	1487.00'	299.20'	
C220	Δ=13° 29' 48"	1014.00'	238.86'	
C221	Δ=9° 23' 38"	150.00'	24.59'	
C223	Δ=13° 25' 13"	178.00'	41.69'	
C224	Δ=89° 25' 53"	2.00'	3.12'	
C225	Δ=41° 43' 34"	93.00'	67.73'	
C226	Δ=2° 51' 30"	201.00'	10.03'	
C227	Δ=92° 10' 05"	2.00'	3.22'	
C228	Δ=80° 56' 00"	2.00'	2.83'	
C229	Δ=2° 35' 33"	299.00'	13.53'	
C230	Δ=15° 39' 22"	106.00'	28.96'	
C231	Δ=115° 45' 51"	1.00'	2.02'	
C233	Δ=88° 23' 55"	3.00'	4.63'	
C234	Δ=89° 09' 52"	3.00'	4.67'	
C237	Δ=2° 00' 27"	106.00'	3.71'	
C239	Δ=147° 04' 16"	2.00'	5.13'	
C241	Δ=11° 35' 51"	100.00'	20.24'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C242	Δ=26° 25' 07"	228.00'	105.13'	
C243	Δ=25° 12' 47"	93.00'	40.92'	
C244	Δ=20° 32' 07"	158.00'	56.63'	
C245	Δ=72° 20' 46"	33.00'	41.67'	
C246	Δ=33° 37' 37"	93.04'	54.60'	
C247	Δ=119° 05' 35"	1.00'	2.08'	
C248	Δ=18° 41' 24"	106.00'	34.58'	
C249	Δ=8° 36' 58"	500.29'	75.23'	
C250	Δ=172° 36' 17"	1.71'	5.15'	
C251	Δ=7° 13' 12"	181.00'	22.81'	
C252	Δ=87° 38' 52"	3.00'	4.59'	
C253	Δ=107° 41' 57"	3.00'	5.64'	
C254	Δ=16° 23' 06"	100.00'	28.60'	
C255	Δ=11° 09' 17"	199.00'	38.74'	
C256	Δ=74° 41' 44"	5.00'	6.52'	
C257	Δ=88° 53' 52"	5.00'	7.76'	
C258	Δ=29° 08' 46"	106.00'	53.92'	
C259	Δ=94° 40' 37"	1.00'	1.65'	
C260	Δ=3° 44' 45"	178.50'	11.67'	
C261	Δ=8° 06' 27"	53.50'	7.57'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C262	Δ=1° 10' 21"	1001.00'	20.48'	
C263	Δ=169° 07' 11"	2.00'	5.90'	
C264	Δ=2° 15' 14"	454.75'	17.89'	
C265	Δ=82° 31' 08"	2.00'	2.88'	
C266	Δ=111° 47' 16"	1.00'	1.95'	
C267	Δ=54° 26' 58"	40.00'	38.01'	
C268	Δ=112° 44' 26"	15.00'	29.52'	
C270	Δ=114° 53' 39"	15.00'	30.08'	
C271	Δ=12° 29' 00"	68.50'	14.92'	
C272	Δ=93° 54' 55"	12.00'	19.67'	
C273	Δ=3° 30' 57"	60.00'	3.68'	
C274	Δ=114° 10' 28"	1.00'	1.99'	
L1	S 63°03'45" E		39.82'	
L2	N 63°03'45" W		24.11'	
L3	S 26°11'38" W		67.47'	
L4	N 20°57'23" E		10.04'	
L5	S 26°11'38" W		92.43'	
L6	N 26°11'39" E		618.37'	
L7	N 61°41'31" W		33.45'	
L8	N 5°22'29" W		5.00'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L9	N 61°41'31" W		29.06'	
L10	N 26°11'38" E		616.02'	
L11	S 26°11'38" W		98.27'	
L12	S 31°25'53" W		10.04'	
L13	S 26°11'38" W		79.23'	
L14	S 26°11'38" W		8.10'	
L16	N 63°48'22" W		5.13'	
L18	N 26°03'54" E		8.12'	
L19	N 26°03'54" E		5.01'	
L22	N 26°03'54" E		63.08'	
L23	S 26°11'38" W		78.35'	
L24	N 63°48'22" W		5.15'	
L25	N 63°48'22" W		10.00'	
L26	S 26°02'35" W		36.87'	
L29	N 9°46'32" W		5.25'	
L31	S 63°47'15" E		14.05'	
L36	N 7°10'44" E		51.83'	
L37	N 7°10'44" E		51.81'	
L41	N 22°22'12" E		48.09'	
L42	S 23°53'42" W		202.66'	

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
CIVIL IMPROVEMENT GEOMETRY TABLES SHEET 1 OF 7
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
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CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
CI-301
SHEET 167 OF 617

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CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L43	S 39°00'42" W		2125.45'	
L44	S 41°12'33" W		191.66'	
L45	S 26°10'54" W		200.50'	
L46	S 37°54'00" W		33.29'	
L47	N 40°59'54" E		10.06'	
L50	S 42°56'16" W		1126.63'	
L51	N 44°22'12" E		10.00'	
L52	S 42°56'16" W		99.79'	
L53	S 42°56'16" W		357.90'	
L54	S 54°54'19" W		710.05'	
L56	S 54°54'19" W		64.79'	
L57	S 54°54'19" W		212.22'	
L58	S 54°54'19" W		24.99'	
L59	S 54°54'19" W		120.75'	
L61	S 54°54'19" W		214.05'	
L62	S 62°33'36" W		94.20'	
L63	S 18°59'40" E		205.66'	
L65	S 18°59'40" E		25.00'	
L66	S 18°59'40" E		100.00'	
L67	S 18°59'40" E		52.79'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L68	N 71°00'20" E		0.92'	
L69	S 72°09'32" W		52.97'	
L70	S 38°47'13" W		137.02'	
L72	N 17°25'28" E		276.41'	
L73	S 17°25'28" W		6.81'	
L74	S 78°28'44" W		80.58'	
L75	S 86°46'04" W		48.57'	
L76	S 53°27'14" W		16.55'	
L77	S 86°46'04" W		48.51'	
L78	S 53°27'14" W		16.55'	
L79	S 78°28'44" W		19.20'	
L80	S 86°46'33" W		48.51'	
L81	S 53°27'14" W		28.60'	
L82	N 1°39'37" E		145.76'	
L83	N 17°34'22" E		51.21'	
L84	N 1°14'23" W		4.11'	
L85	S 41°15'02" W		4.11'	
L86	N 1°39'37" E		74.48'	
L87	S 88°21'47" E		59.50'	
L88	S 11°31'46" E		5.56'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L89	N 11°31'46" W		48.00'	
L90	S 78°28'14" W		12.00'	
L91	S 11°31'46" E		145.00'	
L92	N 78°28'14" E		16.49'	
L93	S 11°31'46" E		58.73'	
L94	N 78°28'14" E		38.90'	
L95	S 56°31'46" E		9.90'	
L96	N 78°28'14" E		197.00'	
L97	N 11°31'46" W		2.00'	
L98	N 78°28'14" E		66.40'	
L99	S 33°28'14" W		4.95'	
L100	S 78°28'14" W		68.90'	
L101	N 11°31'46" W		2.00'	
L102	N 11°31'46" W		21.19'	
L103	S 88°21'52" E		29.04'	
L104	S 1°38'03" W		127.26'	
L105	S 1°38'03" W		139.52'	
L106	S 88°21'52" E		346.01'	
L107	S 1°39'37" W		19.50'	
L108	N 1°39'37" E		10.34'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L109	N 1°39'37" E		18.65'	
L110	S 88°20'23" E		13.00'	
L111	N 88°20'23" W		2.50'	
L112	S 78°28'14" W		14.00'	
L113	S 11°31'46" E		135.00'	
L114	N 78°28'14" E		13.00'	
L116	S 11°31'46" E		22.08'	
L118	N 88°21'52" W		36.97'	
L120	N 11°31'46" W		13.66'	
L122	N 78°28'14" E		13.00'	
L123	N 11°31'46" W		45.00'	
L124	S 78°28'14" W		12.49'	
L126	N 1°38'08" E		94.48'	
L128	N 78°28'14" E		14.97'	
L130	S 11°31'46" E		6.00'	
L132	S 88°21'52" E		45.19'	
L134	N 11°31'46" W		25.75'	
L136	S 78°28'14" W		17.00'	
L137	N 11°31'46" W		162.00'	
L138	N 78°28'14" E		17.00'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L140	N 11°31'46" W		3.30'	
L142	S 78°28'14" W		44.00'	
L144	S 11°31'46" E		3.30'	
L146	N 78°28'14" E		17.00'	
L147	S 11°31'46" E		153.00'	
L148	S 78°28'14" W		17.00'	
L150	S 11°31'46" E		24.46'	
L152	S 88°21'52" E		45.19'	
L153	N 11°31'46" W		54.15'	
L154	S 78°28'14" W		17.00'	
L155	N 11°31'46" W		153.00'	
L156	N 78°28'14" E		17.00'	
L157	N 11°31'46" W		1.21'	
L158	S 78°28'14" W		44.00'	
L159	S 11°31'46" E		1.21'	
L160	N 78°28'14" E		17.00'	
L161	S 11°31'46" E		171.00'	
L162	S 78°28'14" W		17.00'	
L163	S 11°31'46" E		25.86'	
L164	S 78°28'44" W		50.25'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L165	N 48°57'11" E		32.47'	
L166	S 60°45'20" E		24.50'	
L167	N 78°28'44" E		50.00'	
L168	N 37°42'48" E		24.50'	
L169	N 78°28'44" E		50.00'	
L170	S 71°59'44" E		32.47'	
L171	N 78°28'44" E		50.25'	
L172	N 11°31'16" W		50.00'	
L173	N 11°31'16" W		50.00'	
L174	N 1°39'37" E		20.35'	
L175	N 1°39'37" E		15.03'	
L176	N 1°39'37" E		19.86'	
L177	N 78°28'44" E		96.31'	
L178	N 86°46'33" E		48.51'	
L179	N 53°27'43" E		16.55'	
L180	N 78°28'44" E		19.21'	
L181	N 86°46'33" E		48.51'	
L182	N 53°27'43" E		16.55'	
L183	N 86°46'33" E		48.51'	
L184	N 53°27'43" E		16.55'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L185	N 84°08'01" E		70.35'	
L186	S 84°08'01" W		74.22'	
L187	S 77°07'01" W		6.10'	
L188	S 12°52'59" E		1.00'	
L189	N 77°07'01" E		6.10'	
L190	N 14°19'33" E		8.42'	
L192	N 1°39'00" E		37.49'	
L194	S 88°21'00" E		137.90'	
L196	N 77°07'01" E		63.02'	
L198	S 12°52'59" E		1.00'	
L200	S 77°07'01" W		63.02'	
L202	N 88°21'00" W		65.31'	
L203	N 1°39'00" E		15.22'	
L204	S 1°39'00" W		24.13'	
L205	S 78°28'44" W		50.19'	
L206	S 11°31'16" E		23.50'	
L207	N 75°47'04" E		10.64'	
L208	N 78°28'44" E		24.18'	
L209	N 81°20'28" E		10.01'	
L210	S 78°28'44" W		0.22'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L213	N 78°28'44" E		17.54'	
L214	???		0.00'	
L216	N 11°31'16" W		30.00'	
L218	N 14°19'33" E		99.26'	
L219	S 17°25'28" W		249.38'	
L220	S 38°47'13" W		131.25'	
L221	S 79°03'41" W		32.69'	
L222	N 11°57'47" W		100.04'	
L223	N 7°00'26" E		1306.32'	
L224	N 19°11'23" E		1685.71'	
L225	S 25°43'28" W		13.86'	
L226	N 35°32'02" E		18.89'	
L228	N 30°01'17" E		88.99'	
L229	S 31°14'12" W		11.79'	
L230	N 30°01'17" E		100.00'	
L231	N 30°01'17" E		375.03'	
L232	N 31°27'12" E		10.00'	
L233	N 30°01'17" E		91.07'	
L262	S 38°56'24" W		13.37'	
L264	S 9°02'56" E		3.37'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L266	N 85°30'52" E		8.69'	
L270	S 85°30'52" W		1.30'	
L271	N 38°59'48" E		83.23'	
L273	N 9°02'56" W		10.98'	
L275	S 38°56'24" W		57.22'	
L276	N 38°59'48" E		82.52'	
L277	N 38°59'48" E		9.00'	
L278	N 33°26'55" E		10.05'	
L279	N 18°59'40" W		933.48'	
L281	N 7°00'26" E		1306.32'	
L283	N 19°11'23" E		1049.16'	
L284	N 19°40'02" E		120.01'	
L285	N 19°11'23" E		516.55'	
L287	N 35°32'02" E		82.00'	
L288	N 34°34'44" E		60.01'	
L290	N 30°01'17" E		1958.66'	
L291	N 30°01'17" E		34.31'	
L294	N 29°48'24" E		880.47'	
L297	N 30°01'17" E		106.98'	
L301	N 26°10'54" E		195.42'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L303	N 41°12'33" E		191.66'	
L305	N 38°24'00" E		60.01'	
L306	N 39°00'42" E		2125.46'	
L308	N 23°53'42" E		202.66'	
L310	N 42°56'16" E		1392.83'	
L311	N 43°53'34" E		60.02'	
L312	N 42°56'16" E		843.67'	
L314	N 54°54'19" E		187.37'	
L315	N 53°57'00" E		60.01'	
L316	N 54°54'19" E		1540.03'	
L317	N 55°51'36" E		60.01'	
L318	N 54°54'19" E		199.98'	
L319	N 54°54'19" E		192.30'	
L321	N 62°33'36" E		129.74'	
L322	N 61°36'18" E		59.98'	
L323	N 61°36'18" E		0.03'	
L324	N 62°33'36" E		13.51'	
L326	N 25°45'04" E		10.00'	
L327	S 37°54'00" W		224.33'	
L328	S 33°47'51" W		33.89'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L329	S 1°24'56" E		28.64'	
L330	N 89°16'29" E		7.15'	
L331	S 86°59'00" W		14.96'	
L332	S 19°23'25" E		11.12'	
L333	N 87°13'24" W		20.88'	
L334	N 59°50'51" E		0.70'	
L335	N 58°39'25" E		96.25'	
L338	N 30°09'09" W		26.87'	
L339	N 6°28'37" E		181.15'	
L343	S 58°54'39" W		53.12'	
L344	N 86°47'52" E		10.92'	
L347	S 6°52'47" W		126.34'	
L350	N 8°48'39" W		9.78'	
L351	N 5°50'56" W		2.04'	
L352	N 1°14'16" W		3.22'	
L353	N 4°14'11" E		3.22'	
L354	N 6°22'43" E		164.52'	
L356	N 0°51'00" W		27.20'	
L358	S 17°34'48" E		13.11'	
L363	N 47°30'48" W		4.95'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L369	S 47°30'48" E		5.66'	
L370	N 1°39'37" E		24.02'	
L371	N 1°39'37" E		160.09'	
L372	N 1°39'37" E		18.65'	
L373	N 1°39'37" E		68.42'	

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT

CIVIL IMPROVEMENT GEOMETRY TABLES SHEET 2 OF 7

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

CI–302

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CURBS, C&G, AND DIKES DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C276	Δ=87° 51' 21"	39.00'	59.80'	
C277	Δ=92° 08' 39"	29.00'	46.64'	
C278	Δ=87° 51' 18"	39.00'	59.80'	
C279	Δ=92° 08' 43"	29.00'	46.64'	

MIDWEST GUARD RAIL DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C500	Δ=0° 45' 01"	2864.00'	37.50'	
C501	Δ=0° 45' 01"	2864.00'	37.50'	
C503	Δ=1° 26' 17"	996.00'	25.00'	
C504	Δ=0° 43' 09"	996.00'	12.50'	
C505	Δ=1° 54' 04"	1961.00'	65.07'	
C506	Δ=0° 15' 16"	2814.00'	12.50'	
C507	Δ=0° 30' 32"	2814.00'	25.00'	
C508	Δ=0° 15' 16"	2814.00'	12.50'	
L500	S 19°19'33" W		37.50'	
L501	S 34°25'33" W		37.50'	
L504	S 48°46'55" W		37.50'	
L505	S 54°54'19" W		12.50'	
L506	S 54°54'19" W		25.00'	
L508	S 54°54'19" W		120.75'	
L509	S 54°54'19" W		24.99'	
L511	S 29°39'45" W		37.50'	
L512	S 18°59'40" E		205.66'	
L514	S 19°37'49" W		37.50'	
L515	S 30°01'17" W		25.00'	
L516	S 30°01'17" W		12.50'	

MIDWEST GUARD RAIL DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L517	S 23°53'54" W		37.50'	
L518	S 54°54'19" W		25.00'	
L519	S 54°54'19" W		189.05'	
L520	S 23°53'54" W		37.50'	
L521	S 30°01'17" W		25.00'	
L522	S 23°53'54" W		37.50'	
L523	S 36°48'53" W		37.50'	
L524	S 42°56'16" W		12.50'	
L525	S 42°56'16" W		25.00'	
L526	S 34°25'33" W		37.50'	

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

CIVIL IMPROVEMENT GEOMETRY TABLES SHEET 3 OF 7

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.

CI-303

SHEET 169 OF 617

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FENCE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C400	Δ=11° 59' 22"	707.00'	147.95'	
C401	Δ=11° 09' 00"	1493.00'	290.54'	
C402	Δ=15° 01' 38"	1507.00'	395.25'	
C403	Δ=2° 11' 51"	4993.00'	191.50'	
C404	Δ=89° 45' 57"	13.00'	20.37'	
C405	Δ=21° 21' 45"	380.00'	141.68'	
C406	Δ=3° 05' 55"	499.00'	26.99'	
C407	Δ=14° 31' 59"	193.50'	49.08'	
C408	Δ=3° 56' 15"	192.00'	13.19'	
C410	Δ=48° 02' 45"	72.50'	60.80'	
C411	Δ=12° 28' 25"	132.00'	28.74'	
C412	Δ=22° 02' 37"	130.00'	50.02'	
C413	Δ=47° 59' 20"	20.00'	16.75'	
C414	Δ=93° 19' 11"	26.00'	42.35'	
C415	Δ=11° 16' 50"	78.00'	15.36'	
C416	Δ=13° 31' 43"	130.00'	30.70'	
L400	N 26°11'38" E		78.84'	
L401	S 63°48'22" E		8.00'	
L402	S 26°11'38" W		65.63'	
L403	S 26°11'38" W		110.00'	

FENCE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L404	N 25°20'31" E		68.53'	
L406	N 37°19'54" E		278.47'	
L408	N 26°10'54" E		212.59'	
L410	N 41°12'33" E		155.02'	
L412	N 39°00'42" E		287.67'	
L414	N 50°45'15" W		6.12'	
L415	N 49°04'13" W		0.37'	
L416	S 38°47'13" W		131.25'	
L417	N 17°25'28" E		249.38'	
L419	N 14°19'33" E		99.26'	
L420	S 77°07'01" W		32.76'	
L422	N 88°21'00" W		5.00'	
L423	N 1°27'50" E		60.18'	
L424	S 88°21'18" E		73.06'	
L425	N 38°56'24" E		160.90'	
L426	N 38°59'48" E		69.23'	
L428	N 9°02'56" W		11.26'	
L429	S 64°31'55" E		2.00'	
L431	N 77°00'20" W		2.00'	
L433	N 9°02'56" W		22.49'	

FENCE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L435	N 38°56'24" E		128.07'	
L436	S 51°03'36" E		10.65'	
L437	N 82°16'59" E		17.92'	
L438	S 54°21'14" E		45.63'	
L440	S 38°57'57" W		265.57'	
L442	S 50°14'47" W		46.24'	
L443	N 51°00'12" W		19.06'	
L444	N 38°59'48" E		81.76'	
L446	S 38°59'48" W		70.35'	
L447	S 27°41'22" W		86.73'	
L448	S 39°09'31" W		14.22'	
L449	S 39°08'22" W		3.75'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C275	Δ=7° 43' 42"	396.00'	53.42'	
C600	Δ=16° 12' 20"	303.00'	85.70'	
C601	Δ=32° 34' 20"	50.00'	28.42'	
C602	Δ=21° 21' 43"	31.56'	11.77'	
C603	Δ=7° 11' 54"	375.30'	47.15'	
C604	Δ=0° 28' 46"	375.30'	3.14'	
C606	Δ=8° 10' 09"	383.00'	54.61'	
C607	Δ=13° 44' 27"	195.00'	46.77'	
C608	Δ=2° 40' 04"	100.00'	4.66'	
C611	Δ=5° 09' 52"	538.95'	48.58'	
C612	Δ=85° 23' 42"	45.00'	67.07'	
C613	Δ=5° 06' 44"	493.00'	43.99'	
C614	Δ=5° 06' 43"	1015.00'	90.56'	
C615	Δ=28° 45' 08"	873.00'	438.09'	
C616	Δ=14° 24' 44"	506.00'	127.28'	
C617	Δ=7° 44' 54"	494.00'	66.80'	
C618	Δ=90° 00' 00"	10.00'	15.71'	
C619	Δ=5° 06' 44"	505.00'	45.06'	
C620	Δ=5° 06' 43"	1003.00'	89.49'	
C621	Δ=28° 45' 08"	861.00'	432.07'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C622	Δ=14° 24' 44"	494.00'	124.26'	
C623	Δ=7° 44' 54"	506.00'	68.43'	
C624	Δ=90° 00' 00"	10.00'	15.71'	
C625	Δ=23° 39' 46"	25.00'	10.32'	
C626	Δ=17° 47' 35"	20.00'	6.21'	
C627	Δ=58° 46' 37"	10.00'	10.26'	
C629	Δ=42° 06' 55"	20.00'	14.70'	
C630	Δ=36° 36' 27"	20.00'	12.78'	
C631	Δ=2° 58' 07"	2004.00'	103.83'	
C633	Δ=7° 43' 42"	404.00'	54.49'	
C634	Δ=7° 44' 34"	744.00'	100.54'	
C635	Δ=14° 30' 09"	529.00'	133.90'	
C636	Δ=2° 58' 07"	1996.00'	103.42'	
C639	Δ=7° 44' 34"	736.00'	99.46'	
C640	Δ=14° 30' 09"	521.00'	131.87'	
C641	Δ=26° 25' 07"	225.00'	103.75'	
C642	Δ=11° 54' 34"	90.00'	18.71'	
C643	Δ=85° 30' 51"	2.00'	2.99'	
C645	Δ=87° 10' 42"	11.89'	18.09'	
C646	Δ=10° 55' 05"	86.38'	16.46'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C647	Δ=26° 52' 29"	211.34'	99.13'	
C648	Δ=58° 01' 24"	48.00'	48.61'	
C649	Δ=11° 59' 22"	722.00'	151.08'	
C650	Δ=11° 09' 00"	1478.00'	287.62'	
C651	Δ=15° 01' 38"	1522.00'	399.18'	
C652	Δ=2° 11' 51"	4978.00'	190.92'	
C653	Δ=87° 35' 56"	3.00'	4.59'	
C654	Δ=75° 14' 34"	3.00'	3.94'	
C655	Δ=17° 10' 09"	62.00'	18.58'	
C656	Δ=86° 57' 49"	3.00'	4.55'	
C657	Δ=23° 03' 39"	62.00'	24.95'	
C658	Δ=11° 59' 22"	708.00'	148.15'	
C659	Δ=11° 09' 00"	1492.00'	290.35'	
C660	Δ=15° 01' 38"	1508.00'	395.51'	
C661	Δ=2° 11' 51"	4992.00'	191.46'	
C662	Δ=89° 45' 57"	12.00'	18.80'	
C663	Δ=100° 11' 53"	8.00'	13.99'	
C664	Δ=82° 02' 56"	4.00'	5.73'	
C665	Δ=100° 11' 53"	5.00'	8.74'	
C666	Δ=82° 02' 56"	8.00'	11.46'	

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

CIVIL IMPROVEMENT GEOMETRY TABLES SHEET 4 OF 7

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

CI-304

SHEET 170 OF 617

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SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C667	Δ=101° 28' 05"	10.00'	17.71'	
C668	Δ=85° 59' 15"	45.50'	68.28'	
C669	Δ=101° 28' 05"	20.00'	35.42'	
C670	Δ=85° 24' 52"	35.50'	52.92'	
C671	Δ=76° 17' 24"	10.00'	13.32'	
C672	Δ=96° 02' 16"	45.50'	76.27'	
C673	Δ=96° 01' 13"	34.50'	57.82'	
C674	Δ=38° 58' 52"	50.00'	34.02'	
C675	Δ=21° 21' 45"	367.00'	136.83'	
C676	Δ=3° 05' 55"	486.00'	26.28'	
C677	Δ=12° 40' 33"	190.00'	42.03'	
C678	Δ=90° 00' 00"	10.00'	15.71'	
C679	Δ=14° 31' 59"	194.00'	49.21'	
C680	Δ=82° 28' 24"	18.00'	25.91'	
C681	Δ=1° 31' 45"	256.00'	6.83'	
C682	Δ=7° 01' 00"	256.00'	31.35'	
C683	Δ=11° 07' 12"	90.00'	17.47'	
C684	Δ=11° 07' 12"	80.00'	15.53'	
C685	Δ=11° 16' 50"	80.00'	15.75'	
C686	Δ=93° 19' 11"	28.00'	45.60'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C687	Δ=11° 16' 50"	90.00'	17.72'	
C688	Δ=93° 52' 37"	3.00'	4.92'	
C689	Δ=38° 01' 07"	112.00'	74.32'	
C690	Δ=90° 03' 24"	3.00'	4.72'	
C691	Δ=8° 58' 31"	3010.00'	471.51'	
C692	Δ=18° 23' 01"	203.00'	65.13'	
C693	Δ=18° 19' 36"	193.00'	61.73'	
C694	Δ=21° 56' 23"	100.00'	38.29'	
C695	Δ=18° 14' 02"	205.00'	65.24'	
C696	Δ=18° 17' 26"	195.00'	62.25'	
C697	Δ=8° 58' 31"	3022.00'	473.39'	
C698	Δ=89° 05' 47"	5.00'	7.78'	
C699	Δ=89° 58' 38"	10.00'	15.70'	
L600	S 27°05'14" W		7.50'	
L601	S 63°03'45" E		39.80'	
L602	N 43°03'05" W		18.78'	
L603	N 43°03'05" W		41.29'	
L604	N 17°14'07" W		5.57'	
L605	N 63°47'15" W		13.27'	
L606	N 61°39'06" W		0.78'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L607	N 27°25'06" E		8.14'	
L608	S 63°25'02" E		24.60'	
L609	N 26°11'38" E		357.28'	
L612	N 26°11'39" E		618.37'	
L616	N 9°13'19" W		102.71'	
L618	N 26°11'38" E		339.90'	
L621	N 26°11'39" E		618.37'	
L625	N 9°13'19" W		102.71'	
L627	S 70°57'35" W		7.74'	
L628	N 1°20'08" E		2.69'	
L629	N 26°02'35" E		3.00'	
L630	S 26°02'35" W		33.87'	
L631	S 63°57'25" E		4.50'	
L632	N 63°48'22" W		15.00'	
L633	S 26°11'38" W		78.35'	
L634	N 63°48'22" W		5.15'	
L635	N 63°48'22" W		5.00'	
L636	S 26°11'38" W		8.12'	
L637	N 63°48'22" W		10.13'	
L638	N 83°08'32" E		12.27'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L639	S 4°01'51" E		21.25'	
L640	S 25°09'05" W		93.35'	
L641	N 15°36'46" W		21.18'	
L642	S 25°09'05" W		93.35'	
L644	S 58°54'34" W		17.49'	
L645	N 72°50'39" W		1.13'	
L649	S 58°11'54" W		18.46'	
L650	N 83°21'55" E		7.85'	
L652	N 25°20'31" E		68.53'	
L654	N 37°19'54" E		278.47'	
L656	N 26°10'54" E		212.59'	
L658	N 41°12'33" E		155.02'	
L660	N 39°00'42" E		283.75'	
L662	N 48°35'14" W		2.04'	
L663	N 38°33'39" W		11.40'	
L666	S 83°21'55" W		7.85'	
L667	N 38°33'39" W		9.22'	
L670	N 25°20'31" E		68.53'	
L672	N 37°19'54" E		278.47'	
L674	N 26°10'54" E		212.59'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L676	N 41°12'33" E		155.02'	
L678	N 39°00'42" E		287.67'	
L680	N 50°45'15" W		6.13'	
L681	N 49°04'13" W		0.38'	
L682	N 56°42'36" W		8.75'	
L684	N 43°29'17" E		13.72'	
L686	N 38°33'39" W		0.76'	
L687	N 56°42'36" W		0.89'	
L689	N 43°29'17" E		10.57'	
L691	N 38°33'39" W		6.87'	
L692	S 29°18'33" E		4.86'	
L694	S 72°09'32" W		29.44'	
L696	S 13°49'43" E		141.49'	
L697	N 76°04'32" E		8.58'	
L698	S 29°18'33" E		4.59'	
L700	S 72°09'32" W		29.44'	
L702	S 13°15'20" E		141.83'	
L703	N 25°56'31" W		6.85'	
L704	S 77°46'05" W		3.22'	
L705	S 83°47'18" W		8.70'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L706	S 6°11'39" E		45.57'	
L707	S 6°12'42" E		45.82'	
L709	N 77°46'05" E		34.45'	
L710	S 38°47'13" W		135.22'	
L711	S 17°25'28" W		249.38'	
L712	S 14°19'33" W		116.58'	
L713	S 1°39'00" W		369.50'	
L714	N 4°11'31" W		50.21'	
L715	N 1°53'54" E		49.96'	
L716	S 1°39'00" W		309.17'	
L718	S 88°21'00" E		132.90'	
L719	S 77°07'01" W		33.15'	
L721	N 88°21'00" W		5.00'	
L722	N 1°27'50" E		67.97'	
L723	S 88°21'18" E		180.45'	
L724	N 88°20'23" W		13.00'	
L725	N 88°20'23" W		2.50'	
L726	N 84°08'01" E		79.17'	
L728	N 1°39'37" E		20.35'	
L729	N 1°38'42" E		49.53'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L730	N 1°27'50" E		60.29'	
L731	S 88°21'18" E		73.56'	
L732	S 50°55'58" E		5.94'	
L733	N 50°57'39" W		10.00'	
L734	S 38°47'38" W		11.00'	
L735	N 27°40'27" E		80.51'	
L736	N 51°02'14" W		9.50'	
L737	N 27°40'27" E		81.50'	
L738	N 38°57'46" E		58.99'	
L739	N 50°14'47" E		13.45'	
L740	N 51°00'12" W		6.76'	
L741	N 51°00'12" W		11.50'	
L742	S 51°00'12" E		12.00'	
L743	N 38°59'48" E		70.00'	
L744	N 38°59'48" E		18.92'	
L745	S 51°00'12" E		21.45'	
L746	N 50°14'47" E		51.75'	
L747	S 51°03'36" E		11.29'	
L748	N 82°16'59" E		17.85'	
L749	S 54°21'14" E		46.42'	

SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L751	S 38°57'57" W		265.57'	
L752	N 51°02'14" W		9.50'	
L753	N 50°14'47" E		80.53'	
L754	S 38°57'57" W		287.52'	
L755	S 58°39'50" E		5.13'	
L756	N 31°20'10" E		14.59'	
L757	N 31°20'10" E		8.55'	
L758	S 58°13'22" E		12.02'	
L759	S 58°39'50" E		12.14'	
L760	N 31°20'10" E		8.50'	
L761	N 31°20'10" E		14.59'	
L762	S 58°13'22" E		4.93'	
L763	N 51°00'12" W		13.76'	
L766	N 51°00'12" W		13.47'	
L768	N 30°01'17" E		154.91'	
L770	N 38°59'48" E		55.08'	
L773	N 38°56'24" E		162.92'	
L774	S 38°56'24" W		190.78'	
L775	S 38°59'48" W		54.43'	
L776	N 30°01'17" W		109.17'	

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SURF! BUSWAY AND BRT PROJECT
CIVIL IMPROVEMENT GEOMETRY TABLES SHEET 5 OF 7
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. CI-305		
SHEET 171 OF 617		

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SIDEWALK & PATHWAY DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L777	S 57°23'18" E		3.52'	
L778	N 32°36'42" E		28.96'	
L779	N 32°36'42" E		8.50'	
L780	S 57°21'10" E		10.25'	
L781	S 57°23'18" E		10.38'	
L782	N 32°36'42" E		8.50'	
L783	N 32°36'42" E		28.96'	
L784	S 57°21'10" E		3.24'	
L785	N 88°21'45" W		38.97'	
L786	N 88°21'45" W		39.67'	
L787	N 1°39'37" E		68.42'	
L788	N 1°39'37" E		26.02'	
L789	N 1°39'37" E		160.09'	
L790	S 56°42'36" E		10.17'	
L791	S 56°42'36" E		7.92'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C800	Δ=7° 44' 54"	506.83'	68.54'	
C801	Δ=14° 24' 44"	493.17'	124.05'	
C802	Δ=28° 45' 08"	860.17'	431.65'	
C803	Δ=5° 06' 43"	1002.17'	89.41'	
C804	Δ=5° 06' 44"	505.83'	45.13'	
L800	S 9°13'19" E		102.71'	
L804	S 26°11'39" W		618.37'	
L807	S 26°11'38" W		337.54'	
L808	S 33°18'04" W		20.51'	
L809	S 29°18'23" W		6.64'	
L810	S 39°05'59" W		46.84'	
L811	S 38°56'27" W		58.46'	
L812	S 39°00'42" W		84.26'	
L813	S 39°15'02" W		18.28'	
L814	S 23°50'02" W		9.80'	
L815	S 35°03'05" W		47.72'	
L816	S 38°26'30" W		115.53'	
L817	S 38°17'37" W		7.18'	
L818	S 33°58'38" W		35.01'	
L819	S 26°13'16" W		6.99'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L820	S 39°00'42" W		62.84'	
L821	S 39°00'42" W		36.65'	
L822	S 39°00'42" W		52.36'	
L823	S 39°00'15" W		51.52'	
L824	S 39°01'27" W		100.00'	
L825	S 38°57'25" W		16.02'	
L826	S 39°00'55" W		83.98'	
L827	S 38°58'54" W		10.26'	
L828	S 38°53'38" W		50.54'	
L829	S 39°06'01" W		53.81'	
L830	S 39°06'18" W		53.89'	
L831	S 38°43'09" W		48.08'	
L832	S 39°11'44" W		55.47'	
L833	S 39°00'42" W		47.12'	
L834	S 39°00'42" W		78.53'	
L835	S 39°00'42" W		99.48'	
L836	S 39°00'42" W		99.48'	
L837	S 39°00'40" W		48.29'	
L838	S 39°01'04" W		55.06'	
L839	S 39°00'12" W		38.01'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L840	S 39°00'28" W		61.99'	
L841	S 39°00'57" W		53.88'	
L842	S 39°00'04" W		21.65'	
L843	S 40°08'20" W		27.81'	
L844	S 39°00'42" W		46.70'	
L845	S 39°00'42" W		47.91'	
L846	S 39°00'42" W		52.62'	
L847	S 39°00'42" W		105.24'	
L848	S 39°00'42" W		52.62'	
L849	S 39°00'42" W		52.62'	
L850	S 39°00'42" W		52.62'	
L851	S 42°16'30" W		17.79'	
L852	N 37°54'00" E		19.23'	
L853	N 37°54'00" E		15.70'	
L854	N 37°54'00" E		28.39'	
L855	N 37°54'00" E		12.62'	
L856	N 37°04'20" E		3.59'	
L857	N 26°40'15" E		50.16'	
L858	N 25°24'40" E		58.96'	
L859	N 24°21'02" E		21.09'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L860	N 23°54'49" E		70.93'	
L861	N 23°53'42" E		37.51'	
L862	N 23°57'05" E		12.19'	
L863	N 23°51'51" E		22.27'	
L864	N 23°53'42" E		49.73'	
L865	N 23°53'42" E		17.41'	
L866	N 26°30'00" E		109.91'	
L867	N 22°37'47" E		10.14'	
L868	S 30°38'07" W		37.96'	
L869	S 29°51'59" W		44.43'	
L870	S 29°14'21" W		17.25'	
L871	S 28°48'50" W		24.49'	
L872	S 28°19'19" W		24.54'	
L873	S 27°50'13" W		22.34'	
L874	S 27°25'46" W		18.53'	
L875	S 26°57'53" W		34.38'	
L876	S 32°34'06" W		22.65'	
L877	N 31°19'21" E		22.08'	
L878	N 30°35'43" E		2.77'	
L879	N 31°54'28" E		18.03'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L880	N 31°47'35" E		6.84'	
L881	N 32°21'06" E		29.73'	
L882	N 32°53'37" E		24.35'	
L883	N 33°34'22" E		44.71'	
L884	N 34°13'16" E		14.59'	
L885	N 34°24'43" E		14.27'	
L886	N 34°42'52" E		9.13'	
L887	N 34°53'07" E		9.93'	
L888	N 35°08'02" E		10.63'	
L889	N 35°17'17" E		12.08'	
L890	N 35°38'53" E		15.17'	
L891	N 35°49'53" E		15.16'	
L892	N 36°13'44" E		13.98'	
L893	N 36°26'13" E		14.47'	
L894	N 36°46'09" E		15.25'	
L895	N 37°04'13" E		11.67'	
L896	N 37°30'00" E		31.16'	
L897	N 37°54'05" E		18.36'	
L898	N 38°13'34" E		10.36'	
L899	N 19°46'47" E		8.07'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L900	N 41°50'50" E		10.30'	
L901	N 42°11'58" E		20.61'	
L902	N 42°47'43" E		68.53'	
L903	N 42°56'16" E		64.93'	
L904	N 42°56'16" E		32.99'	
L905	S 42°56'16" W		21.42'	
L906	S 42°56'16" W		48.06'	
L907	S 40°55'48" W		20.83'	
L908	S 42°56'29" W		44.67'	
L909	S 42°55'26" W		49.88'	
L910	S 42°57'11" W		49.86'	
L911	S 42°55'54" W		49.87'	
L912	S 42°56'00" W		53.84'	
L913	S 42°56'44" W		69.47'	
L914	S 42°56'41" W		17.52'	
L915	S 42°51'19" W		19.37'	
L916	S 43°39'48" W		45.53'	
L917	N 44°31'43" E		37.20'	
L918	N 42°55'20" E		26.21'	
L919	N 42°56'16" E		19.17'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L920	N 42°56'16" E		7.89'	
L921	N 42°41'22" E		2.28'	
L922	S 42°56'16" W		17.57'	
L923	S 42°56'16" W		4.15'	
L924	S 42°56'16" W		22.19'	
L925	S 42°56'16" W		27.86'	
L926	S 42°56'16" W		18.43'	
L927	S 43°02'45" W		5.26'	
L928	S 42°56'16" W		30.36'	
L929	S 43°02'44" W		5.95'	
L930	S 42°54'16" W		19.19'	
L931	N 42°56'16" E		62.46'	
L932	N 42°54'20" E		10.67'	
L933	N 43°23'51" E		1.95'	
L934	N 42°22'04" E		9.54'	
L935	N 33°26'56" E		14.12'	
L936	S 54°52'11" W		15.07'	
L937	S 54°54'19" W		22.37'	
L938	S 54°54'19" W		21.49'	
L939	S 54°54'19" W		26.40'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L940	S 54°54'19" W		21.98'	
L941	S 54°54'19" W		21.89'	
L942	S 54°55'30" W		21.15'	
L943	S 52°02'34" W		7.38'	
L944	S 52°05'57" W		8.73'	
L945	S 52°05'57" W		7.86'	
L946	N 54°56'16" E		16.48'	
L947	N 54°54'19" E		7.94'	
L948	N 54°54'19" E		37.65'	
L949	N 54°54'10" E		12.93'	
L950	N 55°50'25" E		3.59'	
L951	N 54°54'19" E		13.90'	
L952	N 54°54'19" E		13.81'	
L953	N 54°54'19" E		14.31'	
L954	N 54°54'19" E		19.05'	
L955	N 54°54'19" E		36.09'	
L956	N 54°54'19" E		15.69'	
L957	S 54°54'32" W		30.99'	
L958	S 54°54'19" W		24.40'	
L959	S 54°54'19" W		15.05'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L960	S 54°54'19" W		24.88'	
L961	S 54°54'19" W		18.23'	
L962	S 46°16'13" W		21.38'	
L963	S 54°44'40" W		9.48'	
L964	S 54°54'19" W		22.25'	
L965	S 54°54'19" W		25.95'	
L966	S 54°54'19" W		17.69'	
L967	S 54°54'19" W		26.95'	
L968	S 54°54'19" W		32.58'	
L969	S 54°54'19" W		18.26'	
L970	S 54°54'11" W		49.04'	
L971	S 55°46'03" W		43.65'	
L972	S 55°10'01" W		12.60'	
L973	S 56°41'38" W		16.21'	
L974	S 56°22'15" W		16.15'	
L975	S 67°06'50" W		9.51'	
L976	S 62°33'39" W		4.32'	
L977	S 62°32'26" W		15.68'	
L978	S 62°34'19" W		14.26'	
L979	S 62°34'28" W		30.64'	

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TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
CIVIL IMPROVEMENT GEOMETRY TABLES SHEET 6 OF 7
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. CI-306		
SHEET 172 OF 617		

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DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L980	S 62°29'28" W		52.78'	
L981	S 61°51'40" W		31.21'	
L982	S 60°58'54" W		57.07'	
L983	S 60°11'45" W		19.53'	
L984	S 59°31'37" W		44.79'	
L985	S 59°06'22" W		16.49'	
L986	S 58°24'02" W		31.83'	
L987	S 58°50'24" W		9.93'	
L988	S 57°35'56" W		19.94'	
L989	S 56°43'06" W		12.70'	
L990	S 57°12'54" W		7.17'	
L991	S 56°57'04" W		10.77'	
L992	N 31°06'33" E		24.13'	
L993	N 30°18'13" E		6.01'	
L994	N 29°20'42" E		23.82'	
L996	N 47°27'01" E		19.63'	
L997	N 37°45'35" E		45.13'	
L998	S 23°19'34" W		24.67'	
L999	S 28°04'42" W		22.67'	
L1000	N 18°59'40" W		15.44'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L1001	N 18°59'40" W		55.65'	
L1002	S 18°20'21" E		33.96'	
L1003	N 18°59'40" W		11.13'	
L1004	N 14°27'08" W		33.23'	
L1005	N 18°08'16" W		8.26'	
L1006	N 18°59'40" W		37.68'	
L1007	N 18°59'40" W		19.94'	
L1008	N 19°31'10" W		1.17'	
L1009	N 18°57'46" W		19.56'	
L1010	N 18°59'42" W		55.46'	
L1011	N 18°59'37" W		47.56'	
L1012	N 18°59'40" W		18.99'	
L1013	N 18°59'40" W		20.43'	
L1014	N 18°59'40" W		21.56'	
L1015	N 18°59'40" W		21.33'	
L1016	N 18°59'40" W		26.14'	
L1017	N 18°59'40" W		40.57'	
L1018	N 18°59'40" W		50.37'	
L1019	N 18°59'40" W		32.11'	
L1020	N 18°59'40" W		34.20'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L1021	N 18°59'40" W		45.48'	
L1022	N 18°59'40" W		10.08'	
L1023	N 18°56'31" W		30.72'	
L1024	N 19°05'45" W		15.88'	
L1025	N 18°59'40" W		19.25'	
L1026	N 18°59'40" W		12.02'	
L1027	N 17°58'35" E		27.69'	
L1028	N 18°10'50" E		39.85'	
L1029	N 18°37'21" E		39.85'	
L1030	N 18°59'57" E		16.59'	
L1031	S 14°50'34" W		25.04'	
L1032	S 19°08'46" W		35.55'	
L1033	N 19°11'23" E		35.09'	
L1034	N 19°11'23" E		52.63'	
L1035	N 19°11'23" E		70.18'	
L1036	N 19°11'23" E		52.63'	
L1037	N 19°13'07" E		34.08'	
L1038	N 20°46'04" E		13.44'	
L1039	S 27°15'44" W		25.12'	
L1040	S 30°49'48" W		14.42'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L1041	S 39°55'38" W		7.47'	
L1042	S 41°56'10" W		4.41'	
L1043	S 23°44'09" W		25.63'	
L1044	S 30°02'04" W		24.03'	
L1045	S 30°01'17" W		31.20'	
L1046	S 30°04'54" W		20.21'	
L1047	S 29°58'22" W		25.10'	
L1048	S 30°01'17" W		24.20'	
L1049	S 30°01'17" W		21.06'	
L1050	N 30°00'30" E		23.97'	
L1051	N 30°02'23" E		26.12'	
L1052	S 30°00'52" W		18.91'	
L1053	S 29°56'34" W		6.09'	
L1054	N 30°00'52" E		0.00'	
L1055	N 30°01'37" E		23.95'	
L1056	N 30°01'17" E		28.26'	
L1057	N 30°01'17" E		19.71'	
L1058	N 30°01'17" E		37.97'	
L1059	N 28°02'29" E		2.30'	
L1060	N 18°25'49" E		12.72'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L1061	S 30°01'25" W		14.48'	
L1062	S 30°01'17" W		25.01'	
L1063	S 30°01'17" W		17.12'	
L1064	S 30°01'17" W		45.84'	
L1065	S 30°01'17" W		23.15'	
L1066	S 30°01'17" W		29.20'	
L1067	S 30°01'17" W		13.58'	
L1068	S 30°01'17" W		55.83'	
L1069	S 30°01'17" W		16.66'	
L1070	S 30°01'17" W		5.55'	
L1071	S 30°01'17" W		2.21'	
L1072	S 30°01'17" W		22.80'	
L1073	S 30°01'17" W		33.74'	
L1074	S 30°01'17" W		15.66'	
L1075	S 28°29'38" W		14.19'	
L1076	N 29°48'05" E		11.29'	
L1077	N 29°48'24" E		17.30'	
L1078	N 29°48'24" E		23.07'	
L1079	N 29°48'24" E		28.84'	
L1080	N 29°48'24" E		28.84'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L1081	N 29°48'24" E		34.61'	
L1082	N 29°48'24" E		28.84'	
L1083	N 29°48'24" E		28.84'	
L1084	N 29°48'24" E		40.38'	
L1085	N 29°48'24" E		51.91'	
L1086	N 29°57'50" E		46.05'	
L1087	N 30°14'45" E		22.98'	
L1088	N 30°24'07" E		17.24'	
L1089	N 30°32'04" E		17.32'	
L1090	N 30°44'58" E		28.77'	
L1091	N 30°58'15" E		23.02'	
L1092	N 31°10'44" E		23.02'	
L1093	N 31°22'21" E		23.02'	
L1094	N 31°34'01" E		23.02'	
L1095	N 31°45'41" E		23.02'	
L1096	N 31°57'21" E		23.02'	
L1098	N 32°04'22" E		17.28'	
L1099	N 32°02'39" E		23.13'	
L1100	N 31°51'53" E		23.13'	
L1101	N 31°40'13" E		23.13'	

DITCH FLOWLINE DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L1102	N 31°27'03" E		23.29'	
L1103	N 31°17'01" E		22.96'	
L1104	N 31°14'34" E		28.89'	
L1105	N 34°26'40" E		11.45'	
L1106	N 36°44'42" E		13.87'	
L1107	N 30°37'24" E		17.35'	
L1108	N 30°28'00" E		23.13'	
L1109	N 30°16'20" E		23.13'	
L1110	N 30°08'17" E		17.35'	
L1111	N 30°01'24" E		17.31'	
L1112	N 28°34'37" E		3.38'	
L1113	S 39°43'03" W		148.22'	
L1114	S 38°27'09" W		135.18'	

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT

CIVIL IMPROVEMENT GEOMETRY TABLES SHEET 7 OF 7

MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

CI-307

SHEET 173 OF 617

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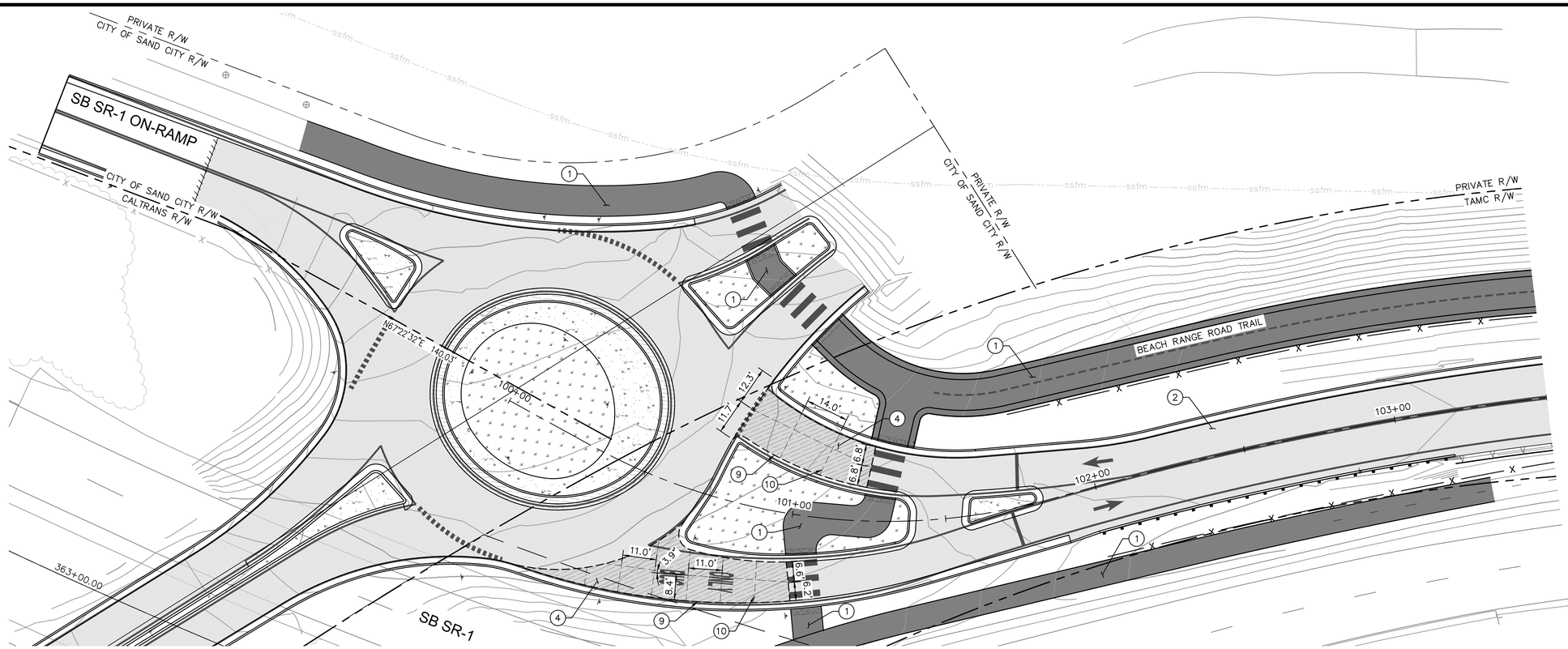

PLAN

PAVING AND JOINTING PLAN NOTES

1. INSTALL BIKE PATH PAVING PER DWG CD-001 DETAIL A
2. INSTALL BUSWAY PAVEMENT PER DWG CD-001 DETAIL B
4. INSTALL RED COLORED BUSWAY JPCP PER DWG CD-001 DETAIL C
9. INSTALL EXPANSION JOINT PER DWG CD-004 DETAIL A
10. INSTALL WEAKENED PLANE JOINT PER DWG CD-004 DETAIL C

LEGEND:

- BUSWAY PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL B)
- BUSWAY RED COLORED JPCP (PER DWG CD-001 DETAIL C)
- BUSWAY JPCP (PER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- SLOPED PAVING PER CALTRANS STANDARD PLANS
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- WEAKENED PLANE JOINT (PER DWG CD-004 DETAIL C)
- EXPANSION JOINT (PER DWG CD-004 DETAIL A)

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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PAVING AND JOINTING PLANS SHEET 1 OF 6

MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03.		
SHEET NO. PJ-001		

SHEET 174 OF 617

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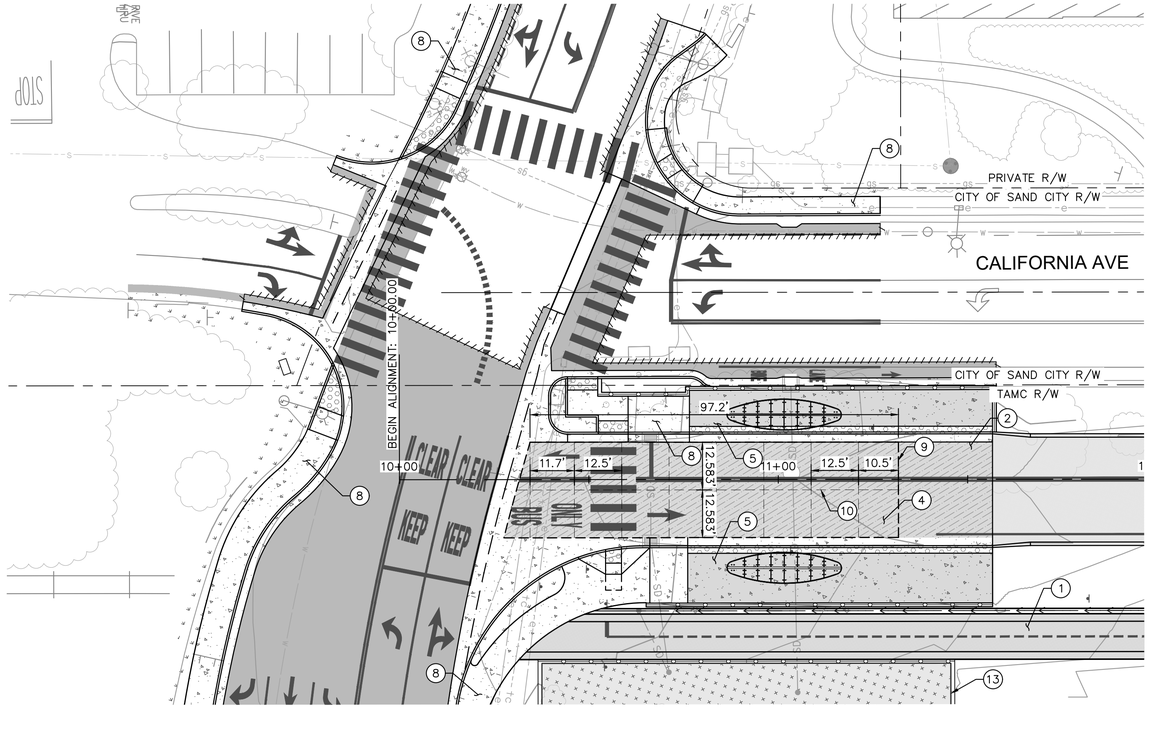

PAVING AND JOINTING PLAN NOTES

(1) INSTALL BIKE PATH PAVING PER DWG CD-001 DETAIL A

(2) INSTALL BUSWAY PAVEMENT PER DWG CD-001 DETAIL B

(4) INSTALL RED COLORED BUSWAY JPCP PER DWG CD-001 DETAIL C

(5) INSTALL STATION PCC SIDEWALK PER DWG CD-001 DETAIL D. SEE ARCHITECTURAL PLANS FOR TEXTURE AND FINISH

(8) INSTALL PCC SIDEWALK PER CITY/CALTRANS STANDARD PLANS

(9) INSTALL EXPANSION JOINT PER DWG CD-004 DETAIL A

(10) INSTALL WEAKENED PLANE JOINT PER DWG CD-004 DETAIL C

(13) BIORETENTION AREA PER LS DRAWINGS

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT

PAVING AND JOINTING PLANS SHEET 3 OF 6

MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
DRAWN	ML	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
PJ-003

SHEET 176 OF 617

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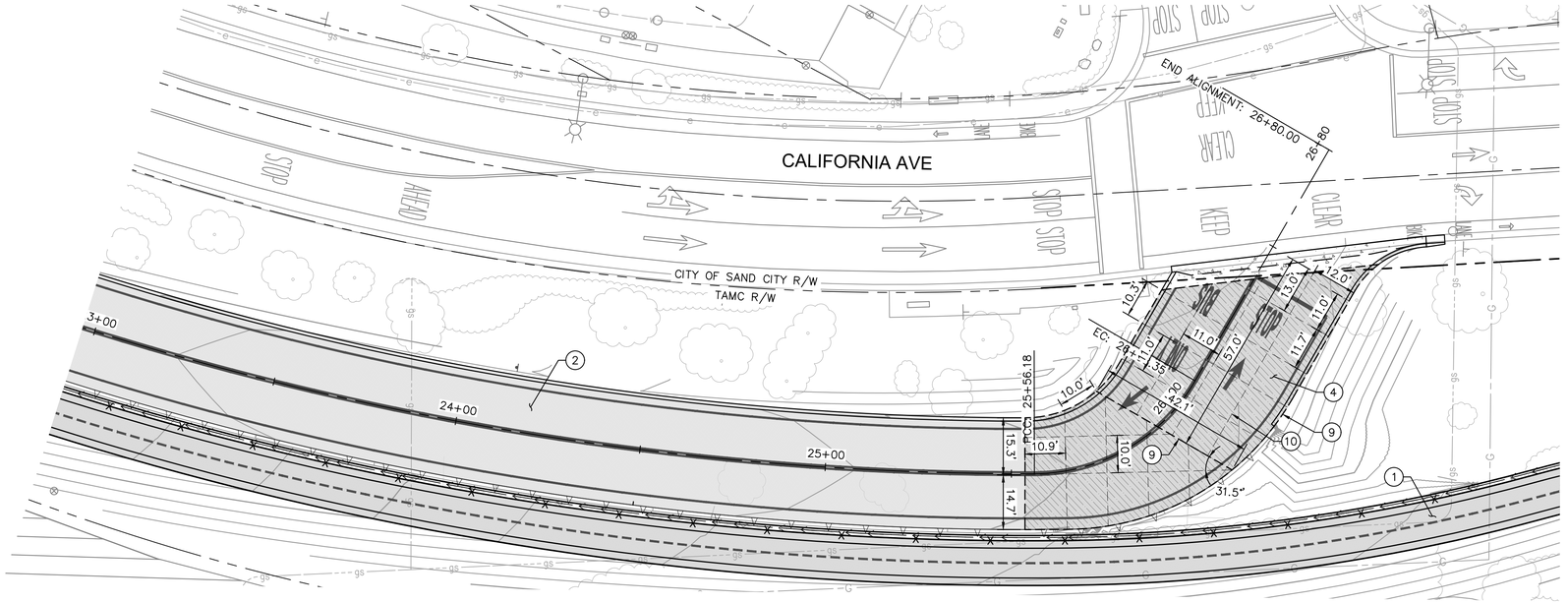

PAVING AND JOINTING PLAN NOTES

(1) INSTALL BIKE PATH PAVING PER DWG CD-001 DETAIL A

(2) INSTALL BUSWAY PAVEMENT PER DWG CD-001 DETAIL B

(4) INSTALL RED COLORED BUSWAY JPCP PER DWG CD-001 DETAIL C

(9) INSTALL EXPANSION JOINT PER DWG CD-004 DETAIL A

(10) INSTALL WEAKENED PLANE JOINT PER DWG CD-004 DETAIL C

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. ALL GEOMETRIC LABELS REFER TO FACE OF CURB, CURB AND GUTTER, GUARD RAIL, EDGE OF DIKE, CENTERLINE OF FENCE, OR BACK OF WALK. SEE CI-301 TO CI-308

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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SURF! BUSWAY AND BRT PROJECT

PAVING AND JOINTING PLANS SHEET 4 OF 6

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

PJ-004

SHEET 177 OF 617

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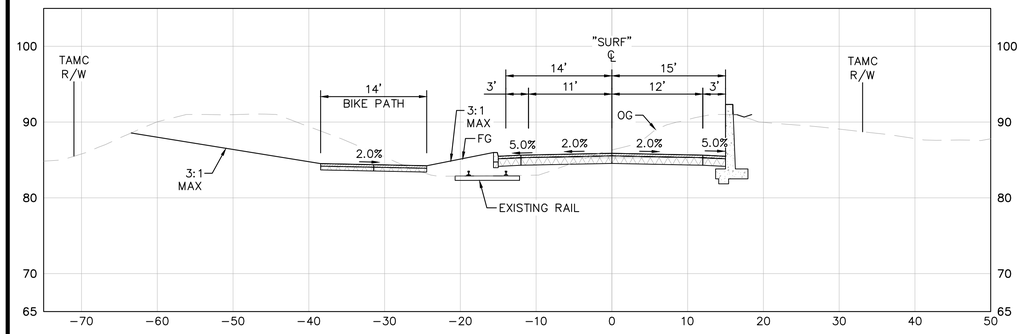

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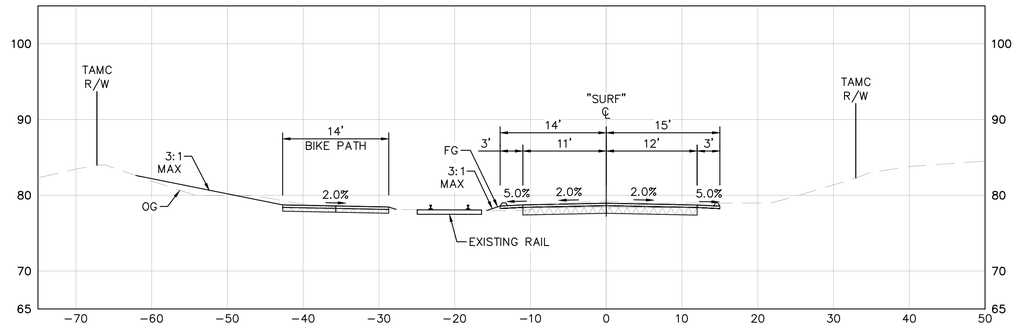

LEGEND

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- CONCRETE
- SAND

GENERAL NOTES

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS, SEE SHEETS CI-001 TO CI-047.
3. FOR GRADING AND DRAINAGE, SEE SHEETS GD-001 TO GD-047.
4. CONFORM LIMITS SHOWN ARE APPROXIMATE, AND FOR INFORMATION ONLY. CONTRACTOR SHALL PERFORM SEPARATE EARTHWORK CALCULATIONS.

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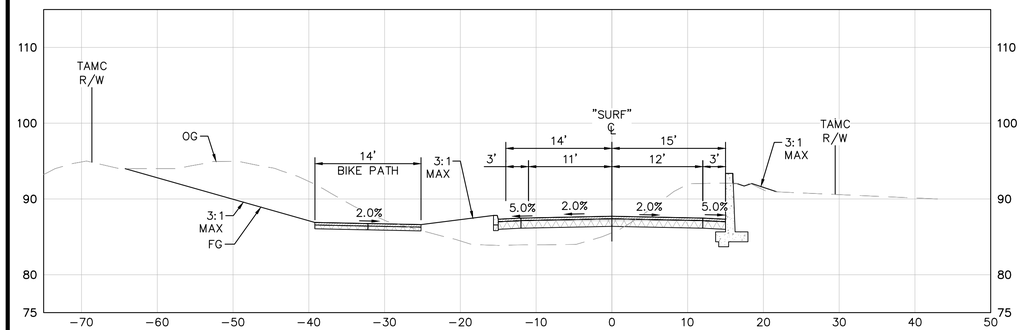

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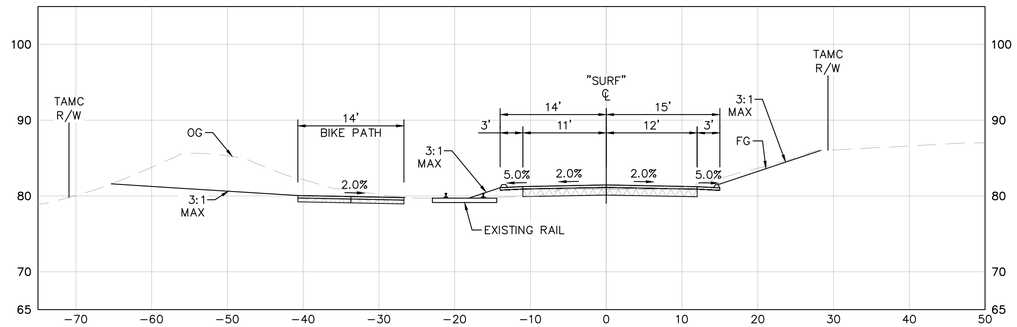

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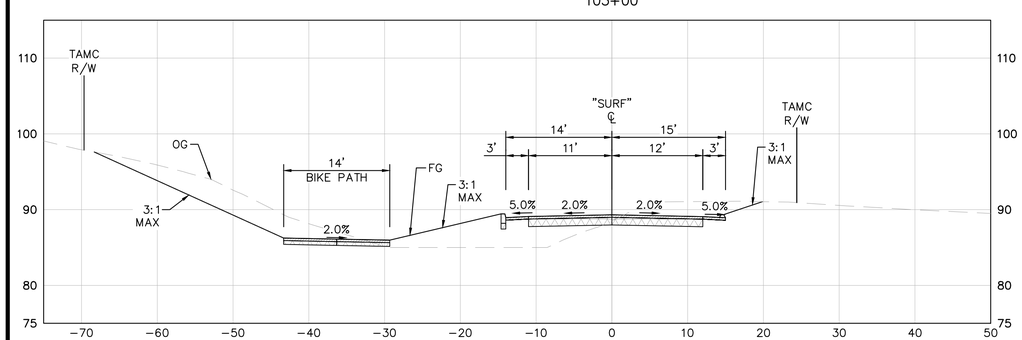

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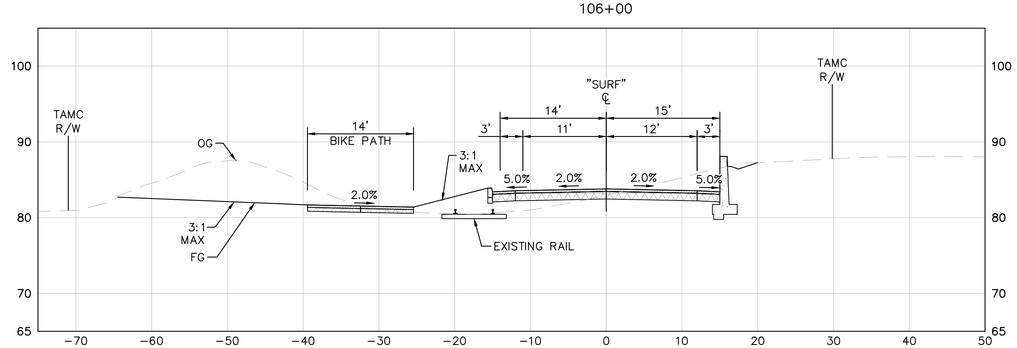

GRAPHIC SCALE IN FEET
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95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
CROSS SECTIONS SHEET 1 OF 43
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO. 22-03		
SHEET NO. CX-001		
SHEET 180 OF 617		

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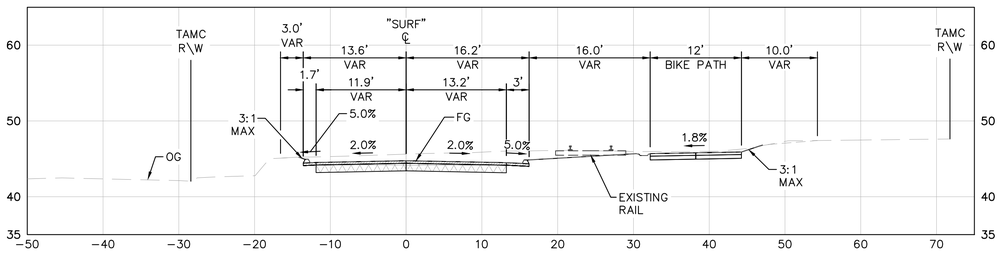

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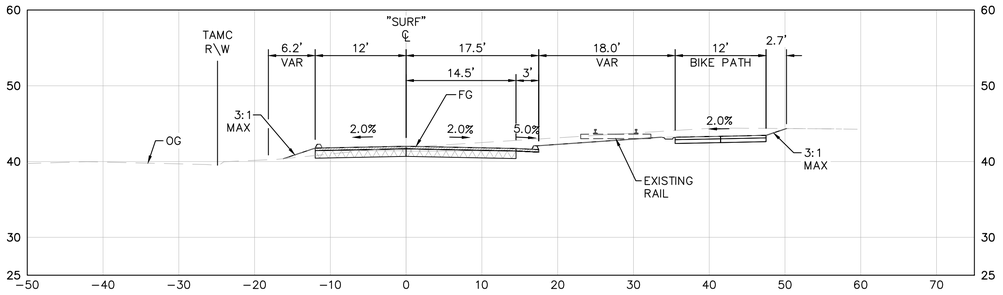

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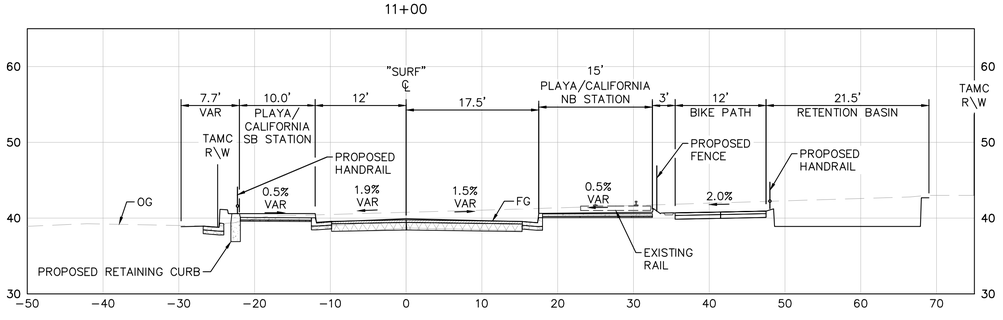

LEGEND

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- CONCRETE
- SAND

GENERAL NOTES

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS, SEE SHEETS CI-101 TO CI-105.
3. FOR GRADING AND DRAINAGE, SEE SHEETS GD-101 TO GD-103.
4. CONFORM LIMITS SHOWN ARE APPROXIMATE, AND FOR INFORMATION ONLY. CONTRACTOR SHALL PERFORM SEPARATE EARTHWORK CALCULATIONS.

GRAPHIC SCALE IN FEET
0 5 10 20

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

PLAYA-CALIFORNIA CROSS SECTIONS SHEET 1 OF 6

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LV	
CHECKED	PW	

CONTRACT NO. 22-03

SHEET NO.
CX-101
SHEET 223 OF 617

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LEGEND

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- CONCRETE
- SAND

GENERAL NOTES

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS, SEE SHEETS CI-101 TO CI-105.
3. FOR GRADING AND DRAINAGE, SEE SHEETS GD-101 TO GD-103.
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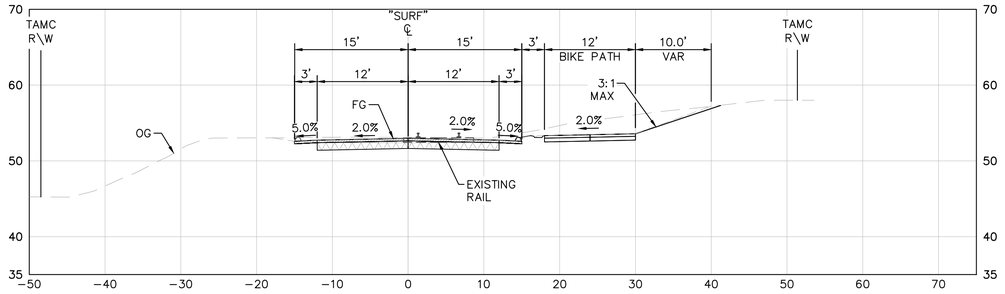

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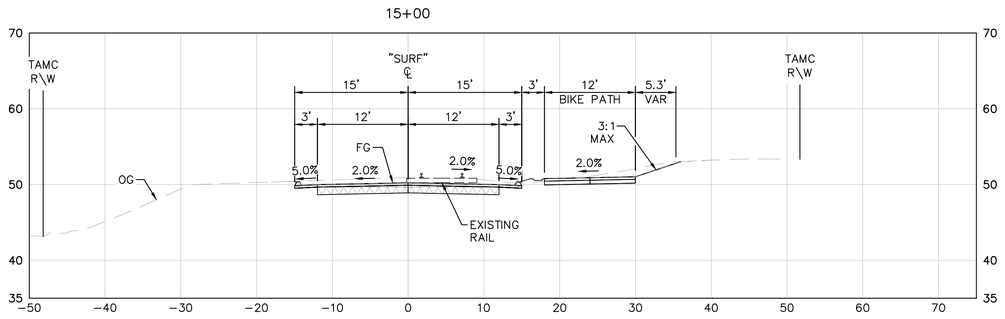

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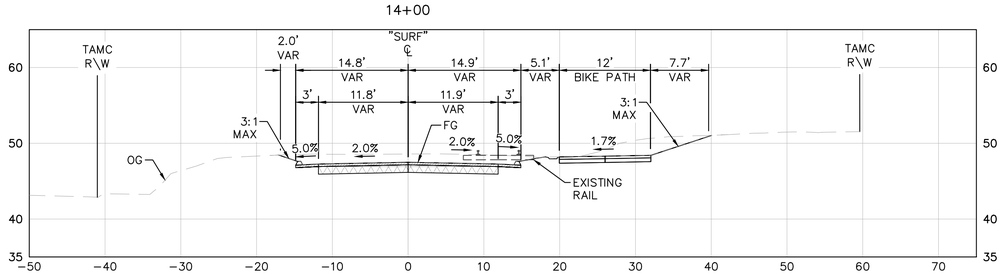

GRAPHIC SCALE IN FEET
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95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA CROSS SECTIONS SHEET 2 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	CX-102	
SHEET 224 OF 617		

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LEGEND

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- CONCRETE
- SAND

GENERAL NOTES

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS, SEE SHEETS CI-101 TO CI-105.
3. FOR GRADING AND DRAINAGE, SEE SHEETS GD-101 TO GD-103.
4. CONFORM LIMITS SHOWN ARE APPROXIMATE, AND FOR INFORMATION ONLY. CONTRACTOR SHALL PERFORM SEPARATE EARTHWORK CALCULATIONS.

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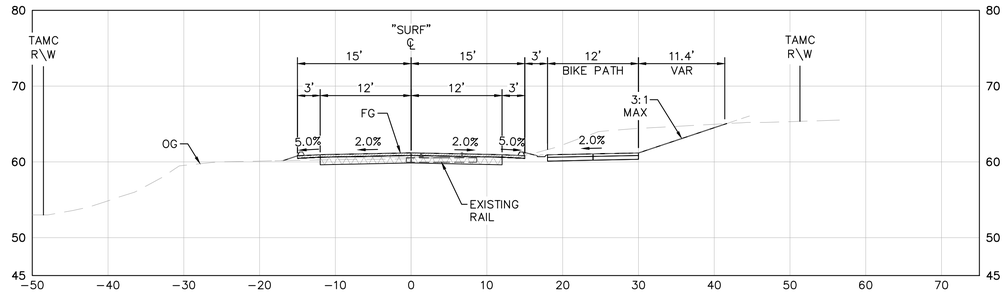

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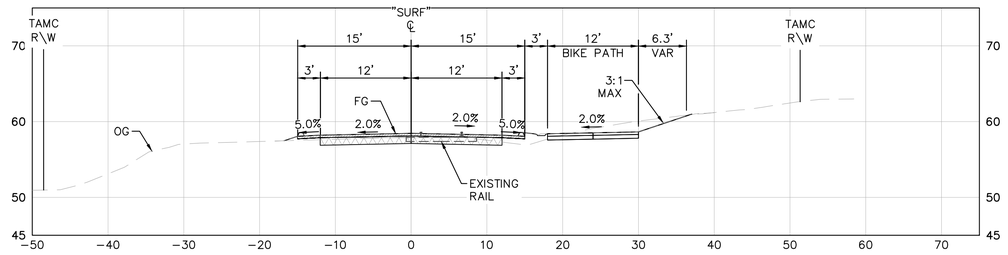

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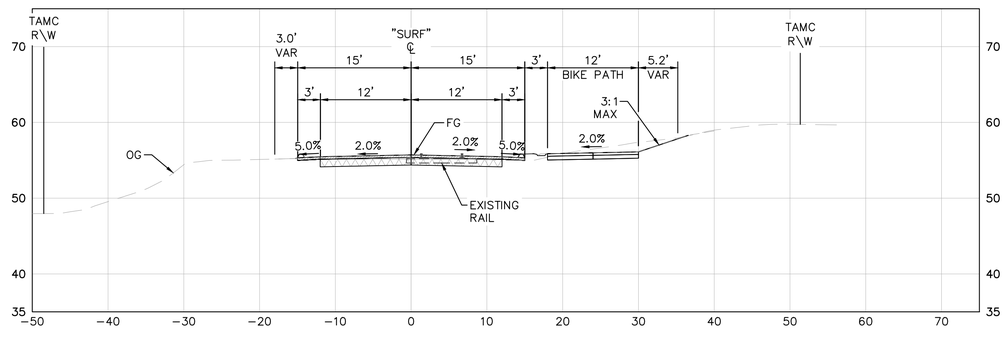

GRAPHIC SCALE IN FEET
0 5 10 20

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
PLAYA–CALIFORNIA CROSS SECTIONS SHEET 3 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LV	
CHECKED	PW	

CONTRACT NO. 22-03

SHEET NO.
CX–103
SHEET 225 OF 617

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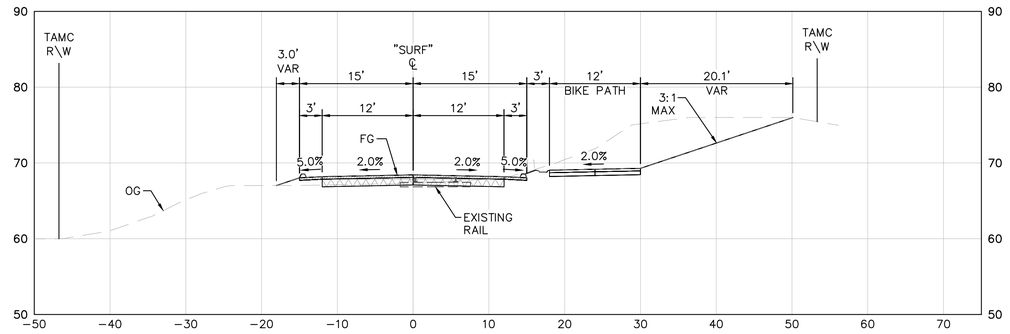

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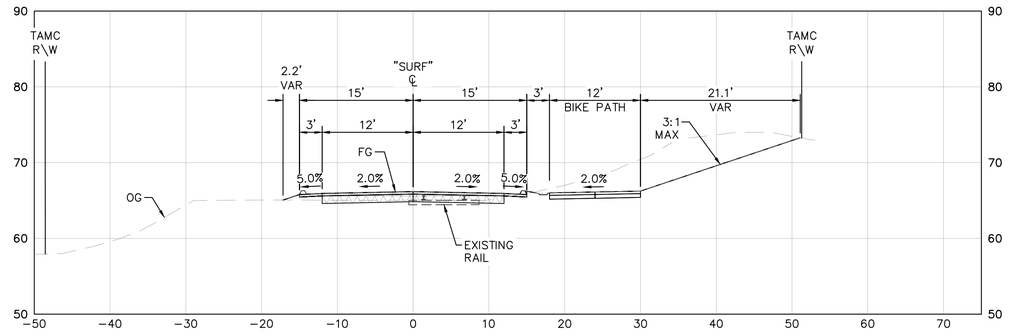

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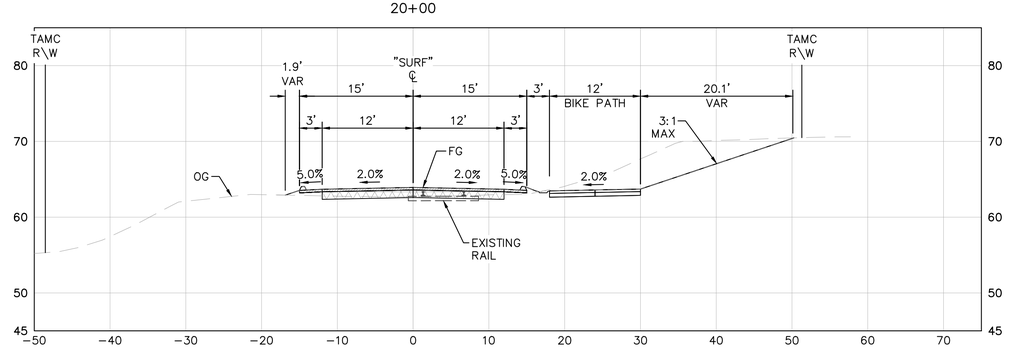

LEGEND

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- CONCRETE
- SAND

GENERAL NOTES

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS, SEE SHEETS CI−101 TO CI−105.
3. FOR GRADING AND DRAINAGE, SEE SHEETS GD−101 TO GD−103.
4. CONFORM LIMITS SHOWN ARE APPROXIMATE, AND FOR INFORMATION ONLY. CONTRACTOR SHALL PERFORM SEPARATE EARTHWORK CALCULATIONS.

GRAPHIC SCALE IN FEET
0 5 10 20

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA−CALIFORNIA CROSS SECTIONS SHEET 4 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. CX−104		
SHEET 226 OF 617		

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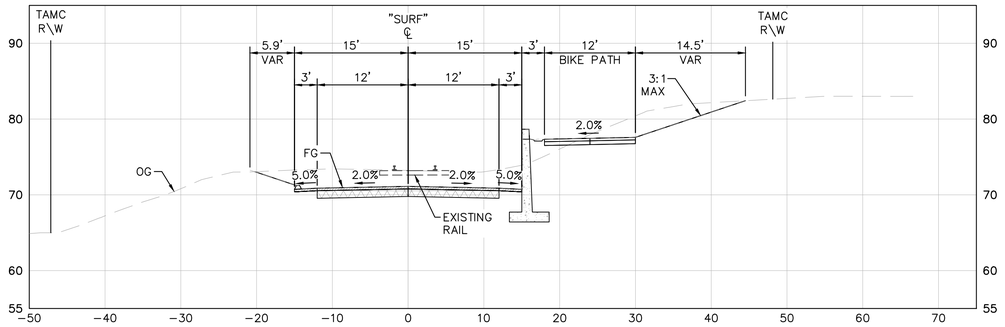

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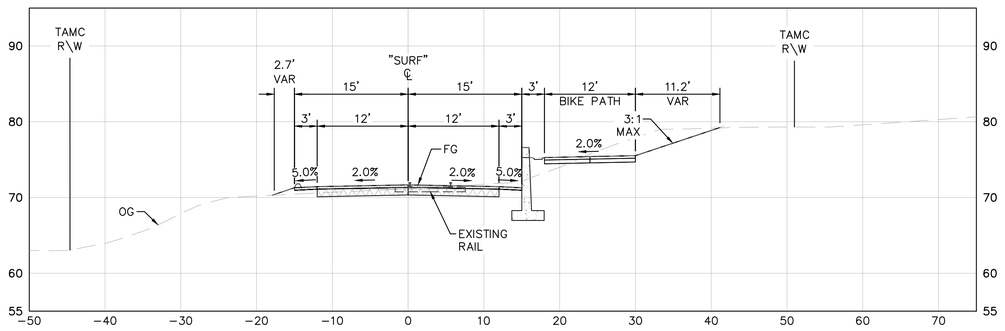

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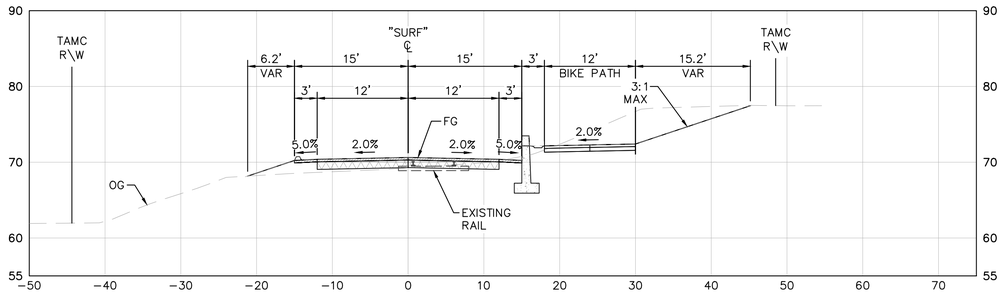

LEGEND

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- CONCRETE
- SAND

GENERAL NOTES

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS, SEE SHEETS CI−101 TO CI−105.
3. FOR GRADING AND DRAINAGE, SEE SHEETS GD−101 TO GD−103.
4. CONFORM LIMITS SHOWN ARE APPROXIMATE, AND FOR INFORMATION ONLY. CONTRACTOR SHALL PERFORM SEPARATE EARTHWORK CALCULATIONS.

GRAPHIC SCALE IN FEET
0 5 10 20

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA−CALIFORNIA CROSS SECTIONS SHEET 5 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22−03

SHEET NO.
CX−105

SHEET 227 OF 617

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LEGEND

- ASPHALT
- AGGREGATE BASE
- CEMENT TREATED BASE
- CONCRETE
- SAND

GENERAL NOTES

1. FOR RETAINING WALL HEIGHTS AND DETAILS SEE RW SHEETS.
2. FOR CIVIL IMPROVEMENTS, SEE SHEETS CI–101 TO CI–105.
3. FOR GRADING AND DRAINAGE, SEE SHEETS GD–101 TO GD–103.
4. CONFORM LIMITS SHOWN ARE APPROXIMATE, AND FOR INFORMATION ONLY. CONTRACTOR SHALL PERFORM SEPARATE EARTHWORK CALCULATIONS.

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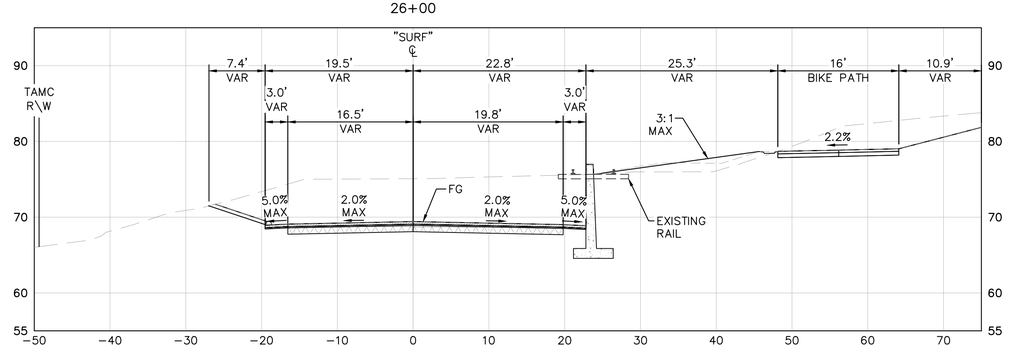

GRAPHIC SCALE IN FEET
0 5 10 20

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
CROSS SECTIONS SHEET 6 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ML	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.
CX–106
SHEET 228 OF 617

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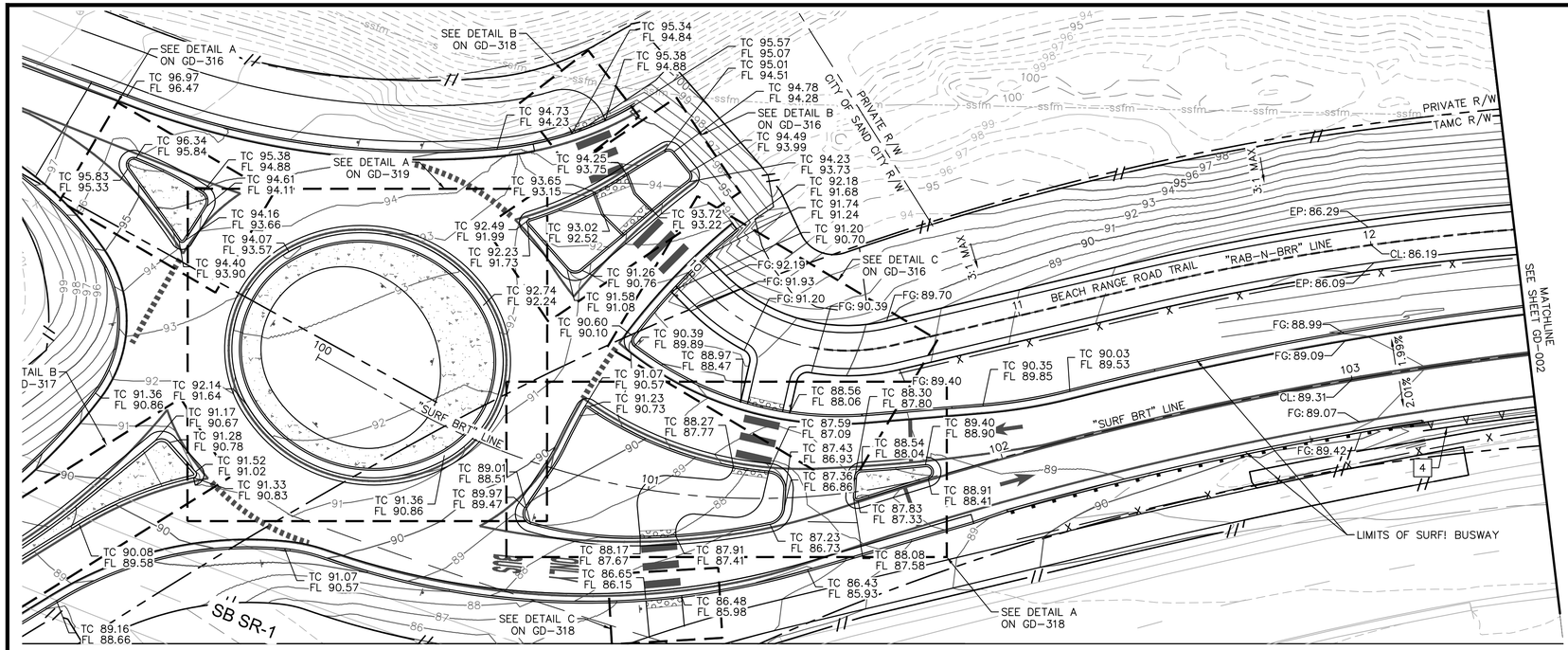


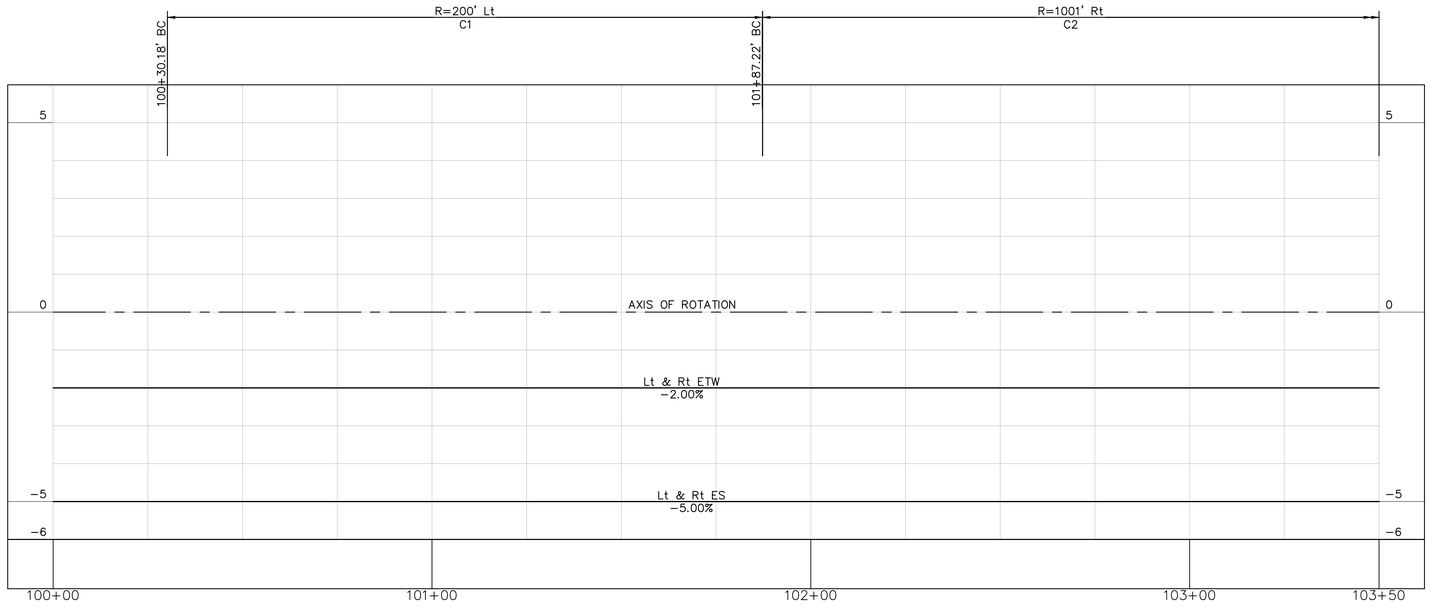
PLAN

GRADING AND DRAINAGE NOTES

4 INSTALL CONCRETE LINED DITCH PER DETAIL C ON SHEET CD-006

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. FOR CURB, GUTTER, SIDEWALK, FENCING, GUARD RAILING AND ASPHALT PAVING LIMITS, SEE CI DWGS.
6. ALL EP, CL, AND FG ELEVATIONS ARE SHOWN AT 100' INTERVALS OR GEOMETRIC POINTS UNLESS NOTED OTHERWISE. SEE CI DWGS FOR LAYOUT INFORMATION.



SUPERELEVATION DIAGRAM

95% DESIGN - NOT FOR CONSTRUCTION

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

SURF! BUSWAY AND BRT PROJECT
GRADING & DRAINAGE SHEET 1 OF 47
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. GD-001		
SHEET 234 OF 617		

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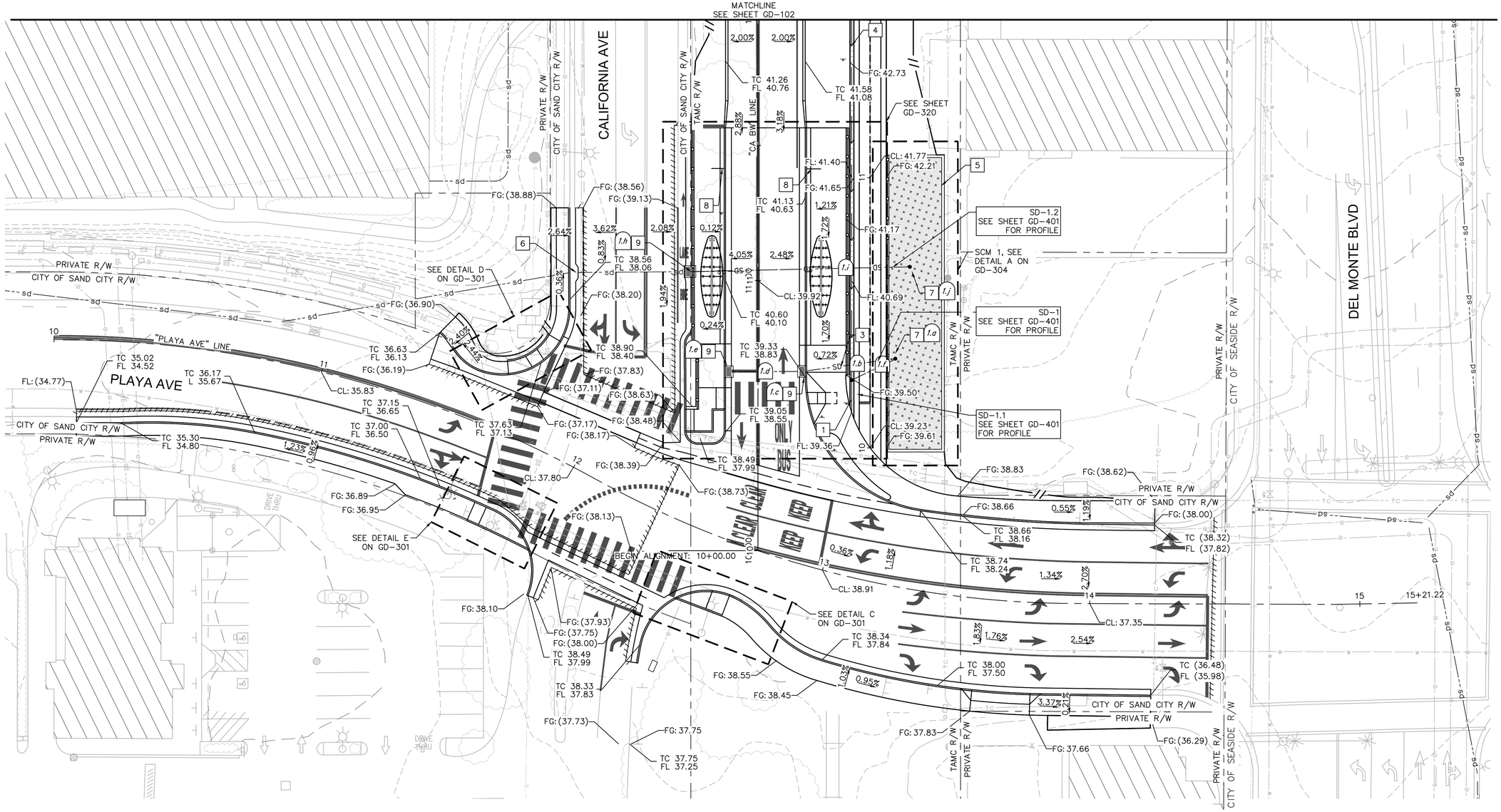

GRADING AND DRAINAGE NOTES

1. INSTALL 2' DIAMETER CONCRETE PIPE INLET TYPE GCP PER CALTRANS STD D75B
3. INSTALL STORM DRAIN PIPE. SEE STORM CENTERLINE DATA TABLE ON THIS SHEET FOR PIPE INFORMATION.
4. INSTALL CONCRETE LINED DITCH PER DETAIL C ON SHEET CD-006
5. INSTALL BIORETENTION BASIN
6. INSTALL CITY OF MARINA SD MANHOLE
7. INSTALL OVERFLOW STRUCTURE WITH BEEHIVE GRATE PER CASQA-LIDI BIORETENTION DETAIL SW-22
8. INSTALL 3" RAINWATER LEADER
9. INSTALL TYPE G2 INLET PER CALTRANS STD PLAN D73B

STORM CENTERLINE DATA TABLE

NAME	SYMBOL	LENGTH	BEARING	DIAMETER	MATERIAL
1.b		33.84'	S72° 02' 03"E	18"	HDPE
1.d		29.22'	S63° 47' 32"E	18"	HDPE
1.f		18.03'	S89° 52' 44"E	18"	HDPE
1.i		81.02'	N65° 03' 18"W	18"	HDPE

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. FOR CURB, GUTTER, SIDEWALK, FENCING, GUARD RAILING AND ASPHALT PAVING LIMITS, SEE CI DWGS.
6. ALL EP, CL, AND FG ELEVATIONS ARE SHOWN AT 100' INTERVALS OR GEOMETRIC POINTS UNLESS NOTED OTHERWISE. SEE CI DWGS FOR LAYOUT INFORMATION.

PLAN

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

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MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA GRADING & DRAINAGE SHEET 1 OF 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	GD-101	
SHEET 281 OF 617		

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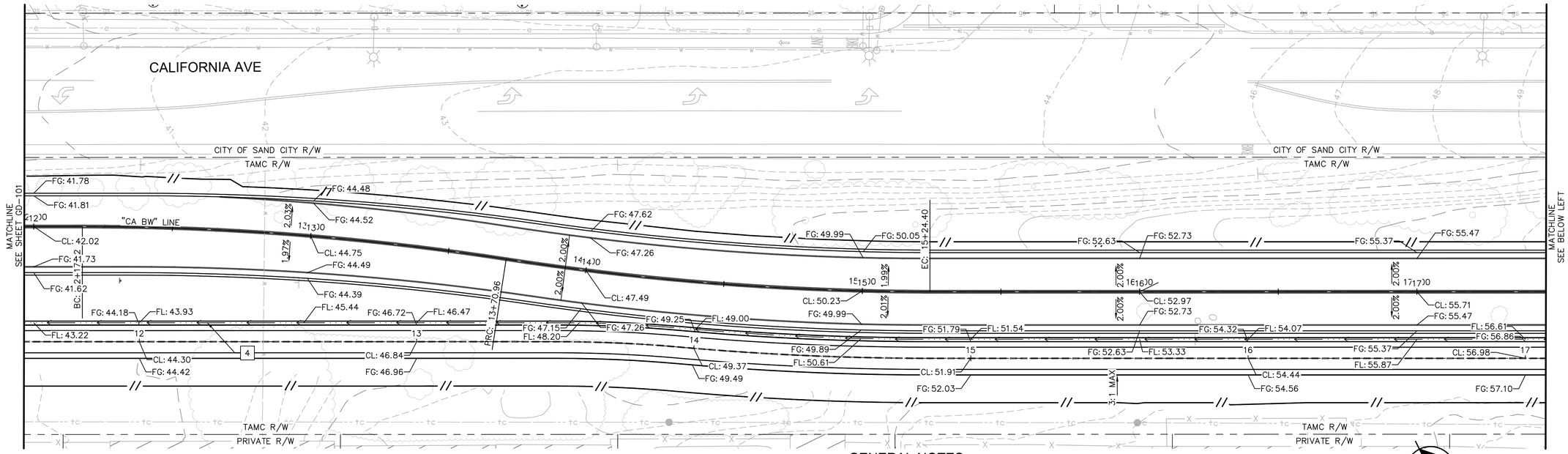


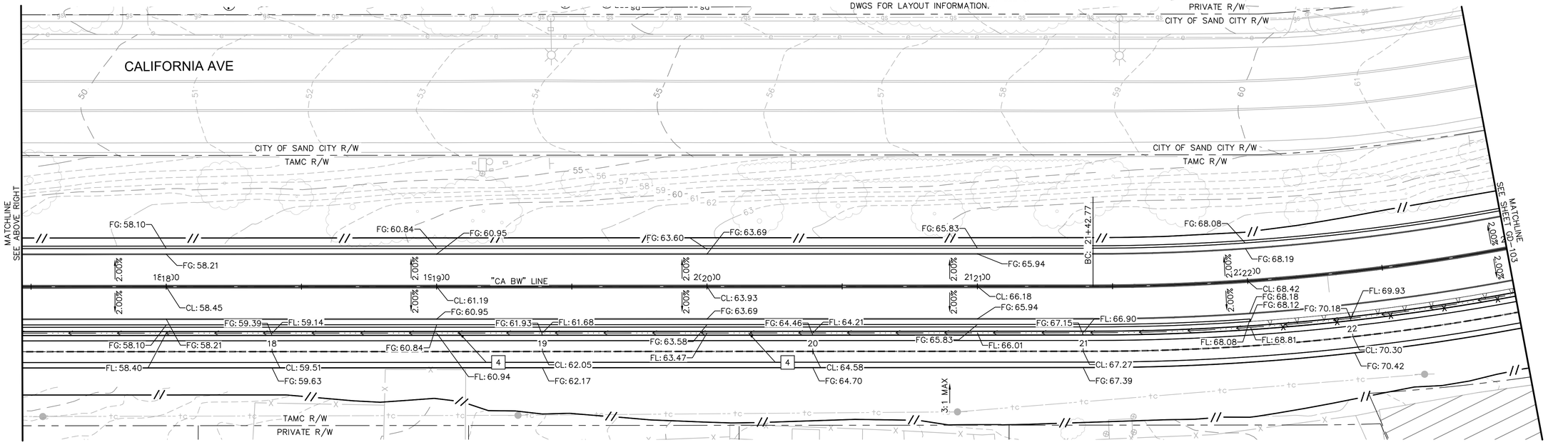
GRADING AND DRAINAGE NOTES

4 INSTALL CONCRETE LINED DITCH PER DETAIL C ON SHEET CD-006

PLAN

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. FOR CURB, GUTTER, SIDEWALK, FENCING, GUARD RAILING AND ASPHALT PAVING LIMITS, SEE CI DWGS.
6. ALL EP, CL, AND FG ELEVATIONS ARE SHOWN AT 100' INTERVALS OR GEOMETRIC POINTS UNLESS NOTED OTHERWISE. SEE CI DWGS FOR LAYOUT INFORMATION.



PLAN

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA GRADING & DRAINAGE SHEET 2 OF 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
GD-102
SHEET 282 OF 617

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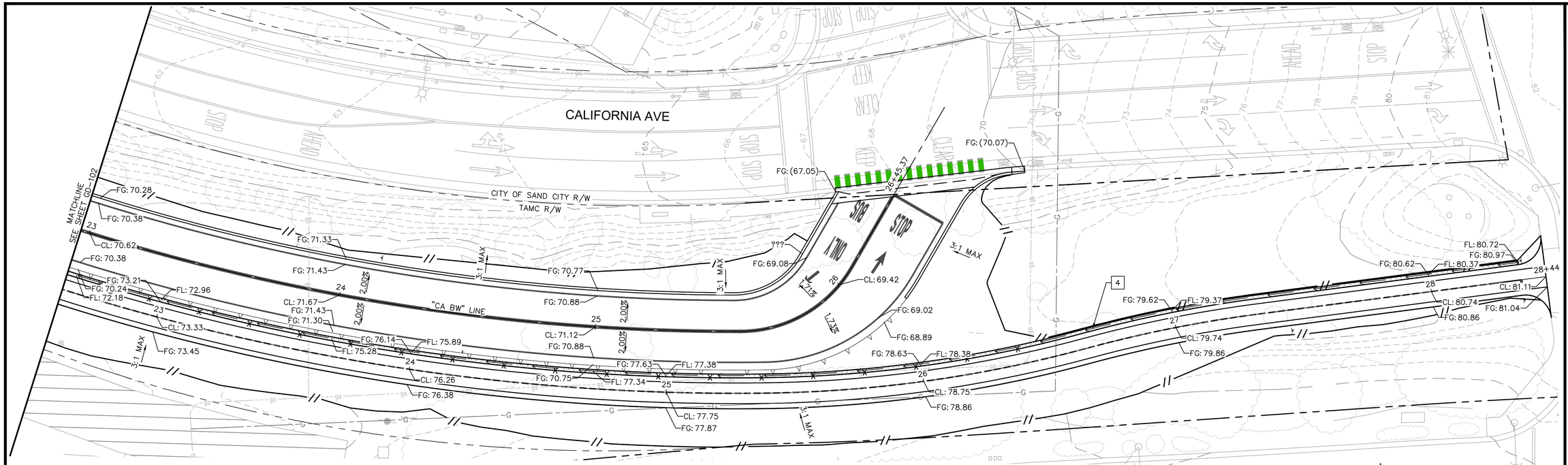

GRADING AND DRAINAGE NOTES

4 INSTALL CONCRETE LINED DITCH PER DETAIL C ON SHEET CD-006

PLAN

GENERAL NOTES

1. FOR HORIZONTAL CONTROL AND ALIGNMENT GEOMETRY INFORMATION SEE HC DWGS
2. FOR SECTIONS SEE CX AND TX DWGS.
3. FOR RETAINING WALL DETAILS SEE RW DWGS.
4. FOR RAIL REMOVAL LIMITS SEE DM DWGS.
5. FOR CURB, GUTTER, SIDEWALK, FENCING, GUARD RAILING AND ASPHALT PAVING LIMITS, SEE CI DWGS.
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GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA GRADING & DRAINAGE SHEET 3 OF 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. GD-103		
SHEET 283 OF 617		

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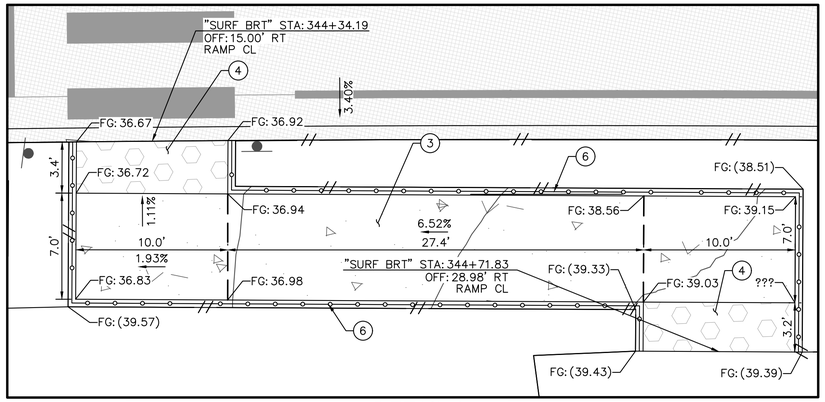
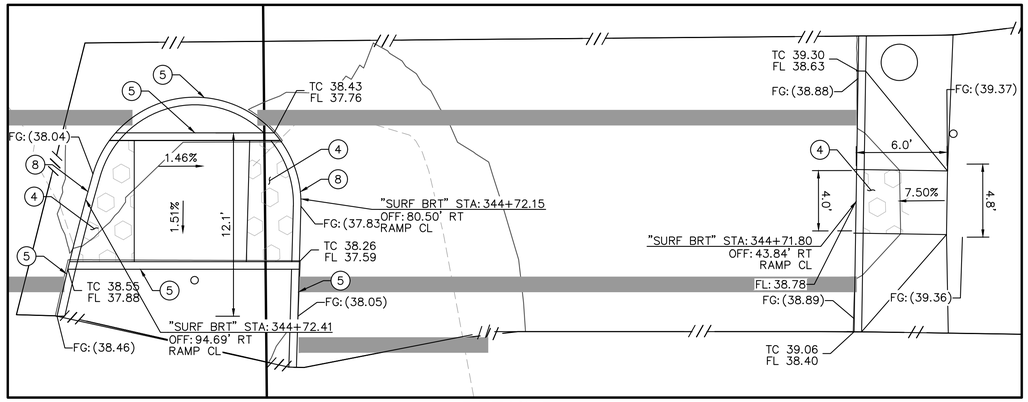


DETAIL A



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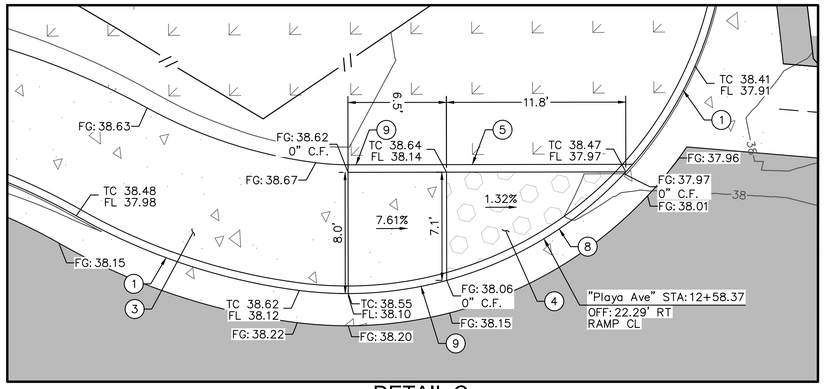
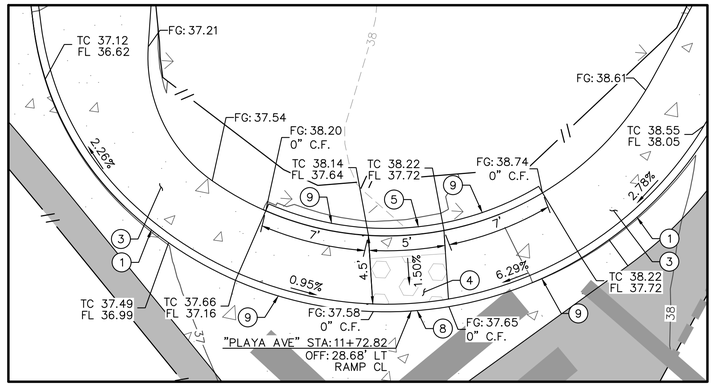
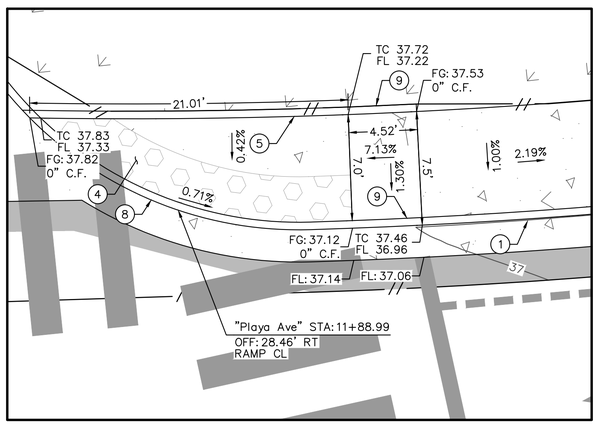


DETAIL C



DETAIL D



DETAIL E

95% DESIGN - NOT FOR CONSTRUCTION

LEGEND:

- 35 — PROPOSED MAJOR CONTOUR
- 34 — PROPOSED MINOR CONTOUR
- 35 — EXISTING MAJOR CONTOUR
- 34 — EXISTING MINOR CONTOUR
- GRADE BREAK
- DIRECTION OF FLOW
- FG 36.00 — PROPOSED GRADE ELEVATION
- FG (36.00) — EXISTING GRADE ELEVATION
- TC 36.00 / FL 35.50 — TOP OF CURB AND FLOW ELEVATION
- FG: 36.00 / 0" C.F. — PROPOSED GRADE ELEVATION AND CURB FACE
- BUSWAY RED COLORED JPCP (ER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAUK E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- TRUNCATED DOMES

GENERAL NOTES

1. NOT ALL GRADE BREAKS ARE SHOWN. CONTRACTOR TO GRADE ALL IMPERVIOUS SURFACES TO DRAIN STORMWATER RUNOFF TO APPROPRIATE DRAINAGE FACILITY AS INDICATED BY THE PROPOSED CONTOURS SHOWN ON THESE PLANS.
2. ALL ADA CURB RAMPS SHALL BE BUILT PER LATEST CALTRANS STANDARDS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

GRADING DETAIL NOTES

(1) TYPE A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(3) SIDEWALK PER CITY OF MARINA STD PLAN ST-2

(4) CURB RAMP PER CALTRANS STD PLAN A88A

(5) TYPE A1-6 CURB PER CALTRANS STD PLAN A87A

(6) ORNAMENTAL HANDRAILING. SEE ARCHITECTURAL PLANS FOR DETAILS

(8) FLUSH CURB PER CD-004 DETAIL F

(9) CURB TRANSITION PER CD-002 DETAIL A

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

GRADING & DRAINAGE DETAILS SHEET 1 OF 21

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

GD-301

SHEET 288 OF 617

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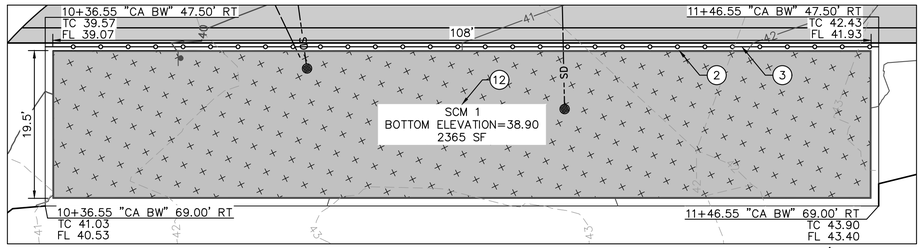
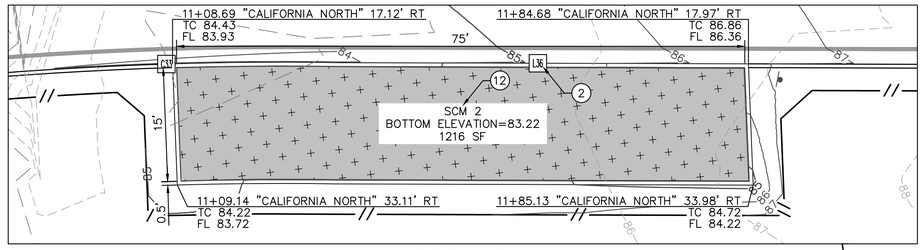


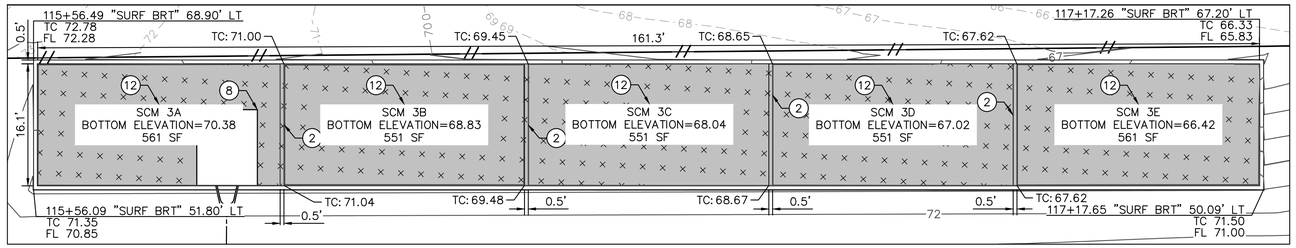
DETAIL A
SCM 1
SCALE: 1"=10'



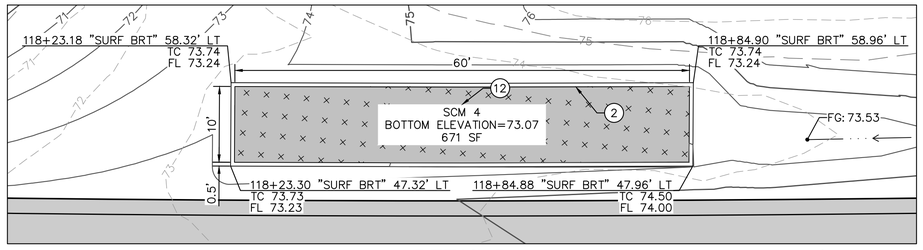
DETAIL B
SCM 2
SCALE: 1"=10'

LEGEND:

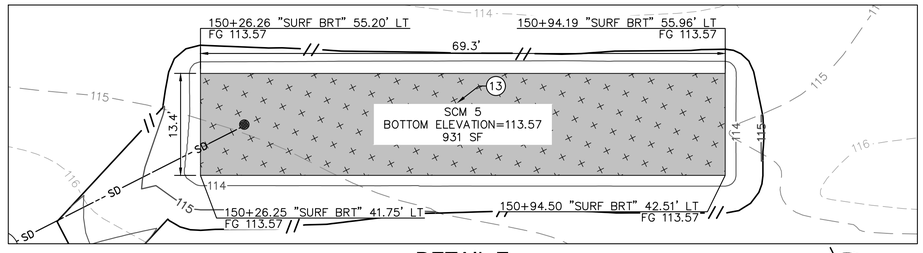
35	PROPOSED MAJOR CONTOUR
34	PROPOSED MINOR CONTOUR
35	EXISTING MAJOR CONTOUR
34	EXISTING MINOR CONTOUR
	BIORETENTION AREA
10+10.00 "CA BW" 10' RT FG 36.00	PROPOSED GRADE ELEVATION
10+10.00 "CA BW" 10' RT TC 36.00	PROPOSED TOP OF CURB ELEVATION
10+10.00 "CA BW" 10' RT TC 36.00 FL 35.50	PROPOSED TOP OF CURB AND FLOWLINE ELEVATION



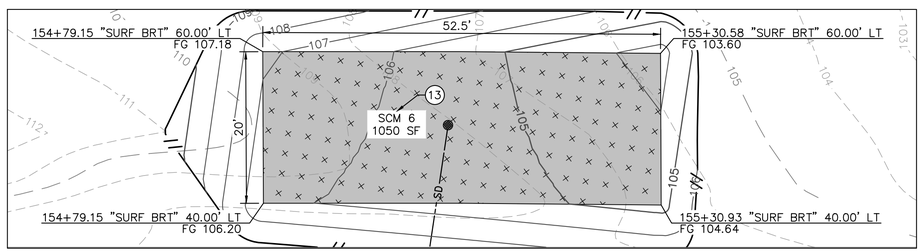
DETAIL C
SCM 3
SCALE: 1"=10'



DETAIL D
SCM 4
SCALE: 1"=10'



DETAIL E
SCM 5
SCALE: 1"=10'



DETAIL F
SCM 6
SCALE: 1"=10'

GENERAL NOTES

1. NOT ALL GRADE BREAKS ARE SHOWN. CONTRACTOR TO GRADE ALL IMPERVIOUS SURFACES TO DRAIN STORMWATER RUNOFF TO APPROPRIATE DRAINAGE FACILITY AS INDICATED BY THE PROPOSED CONTOURS SHOWN ON THESE PLANS.
2. ALL ADA CURB RAMPS SHALL BE BUILT PER LATEST CALTRANS STANDARDS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

GRADING NOTES

1. C&G.
2. INSTALL DEEP CURB PER DETAIL C ON CD-003.
3. INSTALL DEEP CURB WITH HANDRAIL PER DETAIL E ON CD-003.
4. SWLK.
5. ADA CURB RAMP.
6. GUTTER.
7. CURB TRANSITION.
8. TREE BOX BIOFILTER.
9. INSTALL BIORETENTION POND PER DETAIL A ON CD-005.
10. INSTALL BIORETENTION POND WITH CURB PER DETAIL B ON CD-005.
11. INSTALL BIORETENTION POND WITH UNDERGROUND CHAMBER PER DETAIL C ON CD-005.
12. INSTALL BIORETENTION POND WITH UNDERGROUND CHAMBER AND CURB PER DETAIL D ON CD-005.
13. INSTALL GRADED DEPRESSION PER DETAIL E ON CD-005.

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TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
GRADING & DRAINAGE DETAILS SHEET 4 OF 21
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	GD-304	
SHEET 291 OF 617		

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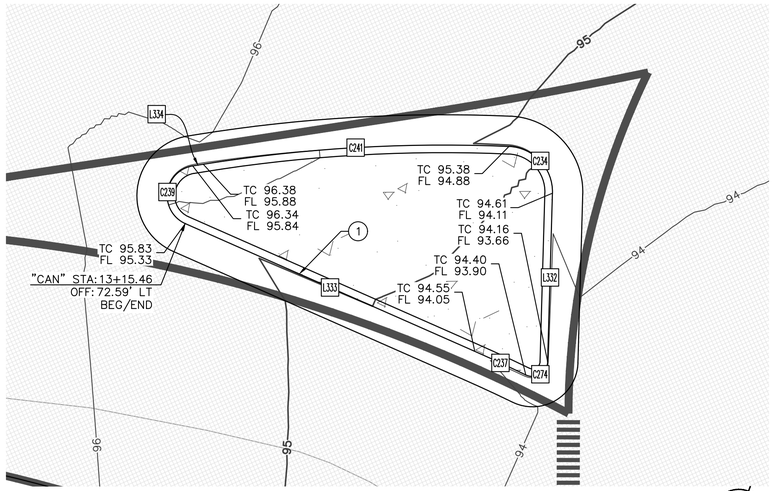
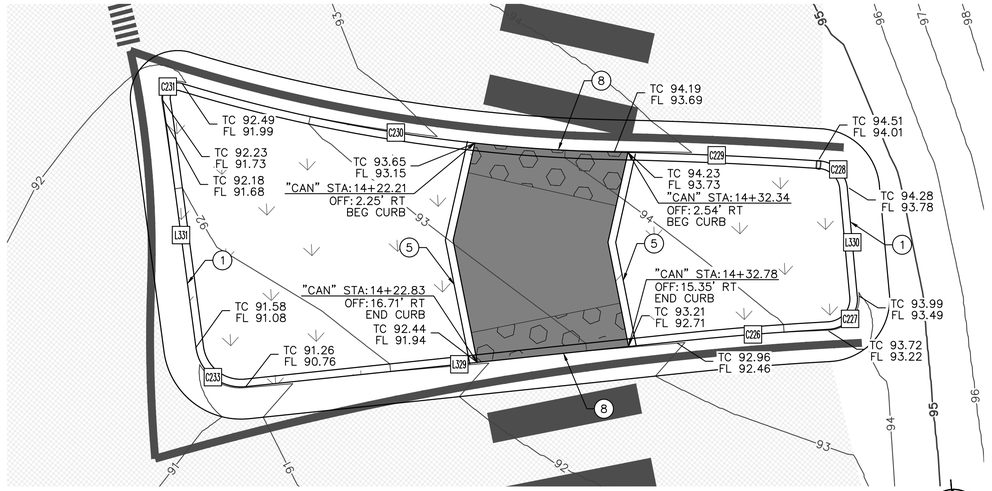
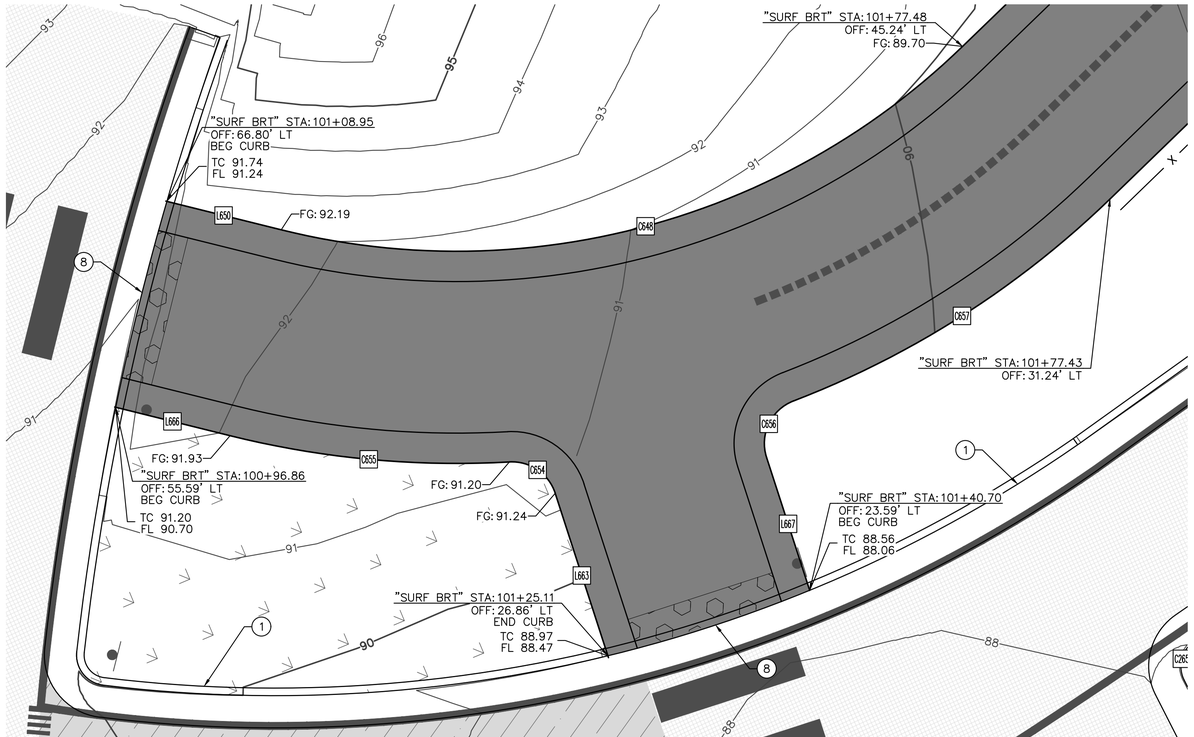


DETAIL A



DETAIL B



DETAIL C

LEGEND:

- 35 — PROPOSED MAJOR CONTOUR
- 34 — PROPOSED MINOR CONTOUR
- 35 — EXISTING MAJOR CONTOUR
- 34 — EXISTING MINOR CONTOUR
- GRADE BREAK
- DIRECTION OF FLOW
- FG 36.00 — PROPOSED GRADE ELEVATION
- FG (36.00) — EXISTING GRADE ELEVATION
- TC 36.00 / FL 35.50 — TOP OF CURB AND FLOW ELEVATION
- FG: 36.00 / 0" C.F. — PROPOSED GRADE ELEVATION AND CURB FACE
- BUSWAY RED COLORED JPCP (ER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- TRUNCATED DOMES

GENERAL NOTES

1. NOT ALL GRADE BREAKS ARE SHOWN. CONTRACTOR TO GRADE ALL IMPERVIOUS SURFACES TO DRAIN STORMWATER RUNOFF TO APPROPRIATE DRAINAGE FACILITY AS INDICATED BY THE PROPOSED CONTOURS SHOWN ON THESE PLANS.
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GRADING DETAIL NOTES

(1) TYPE A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(5) TYPE A1-6 CURB PER CALTRANS STD PLAN A87A

(8) FLUSH CURB PER CD-004 DETAIL F

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C234	Δ=89° 09' 52"	3.00'	4.67'	
C237	Δ=2° 00' 27"	106.00'	3.71'	
C239	Δ=147° 04' 16"	2.00'	5.13'	
C241	Δ=11° 35' 51"	100.00'	20.24'	
C274	Δ=114° 10' 28"	1.00'	1.99'	
L332	S 19°23'25" E		11.12'	
L333	N 87°13'24" W		20.88'	
L334	N 59°50'51" E		0.70'	

SIDEWALK & PATHWAY DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C648	Δ=58° 01' 24"	48.00'	48.61'	
C654	Δ=75° 14' 34"	3.00'	3.94'	
C655	Δ=17° 10' 09"	62.00'	18.58'	
C656	Δ=86° 57' 49"	3.00'	4.55'	
C657	Δ=23° 03' 39"	62.00'	24.95'	
L650	N 83°21'55" E		7.85'	
L663	N 38°33'39" W		11.40'	
L666	S 83°21'55" W		7.85'	
L667	N 38°33'39" W		9.22'	

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C226	Δ=2° 51' 30"	201.00'	10.03'	
C227	Δ=92° 10' 05"	2.00'	3.22'	
C228	Δ=80° 56' 00"	2.00'	2.83'	
C229	Δ=2° 35' 33"	299.00'	13.53'	
C230	Δ=15° 39' 22"	106.00'	28.96'	
C231	Δ=115° 45' 51"	1.00'	2.02'	
C233	Δ=88° 23' 55"	3.00'	4.63'	
L329	S 1°24'56" E		28.64'	
L330	N 89°16'29" E		7.15'	
L331	S 86°59'00" W		14.96'	

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

GRADING & DRAINAGE DETAILS SHEET 16 OF 21

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ML	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

GD-316

SHEET 303 OF 617

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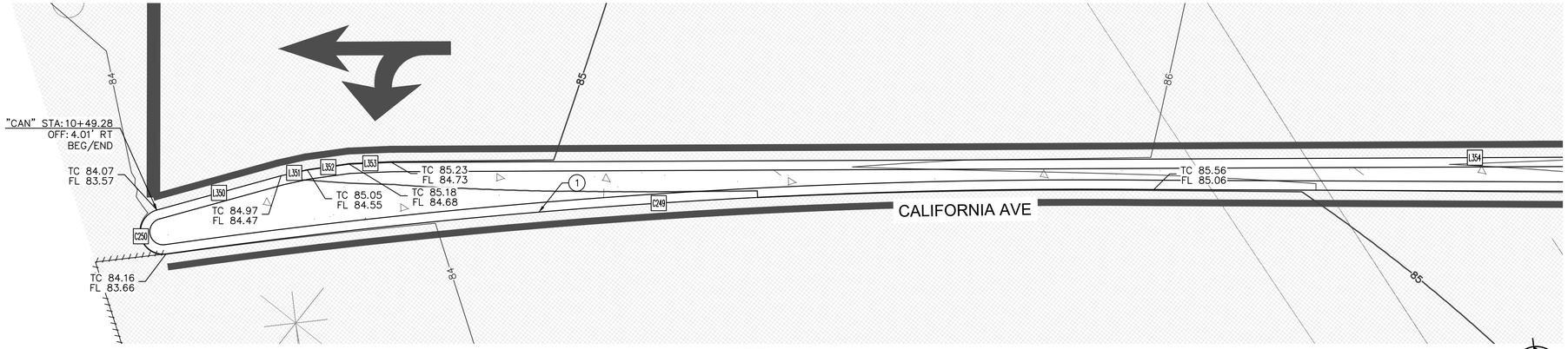
95% DESIGN - NOT FOR CONSTRUCTION



DETAIL A

CURBS, C&G, AND DIKES DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C249	Δ=8° 36' 58"	500.29'	75.23'	
C250	Δ=172° 36' 17"	1.71'	5.15'	
L350	N 8°48'39" W		9.78'	
L351	N 5°50'56" W		2.04'	
L352	N 1°14'16" W		3.22'	
L353	N 4°14'11" E		3.22'	
L354	N 6°22'43" E		164.52'	

CURBS, C&G, AND DIKES DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C247	Δ=119° 05' 35"	1.00'	2.08'	
C248	Δ=18° 41' 24"	106.00'	34.58'	
C251	Δ=7° 13' 12"	181.00'	22.81'	
C252	Δ=87° 38' 52"	3.00'	4.59'	
L344	N 86°47'52" E		10.92'	
L347	S 6°52'47" W		126.34'	
L356	N 0°51'00" W		27.20'	

LEGEND:

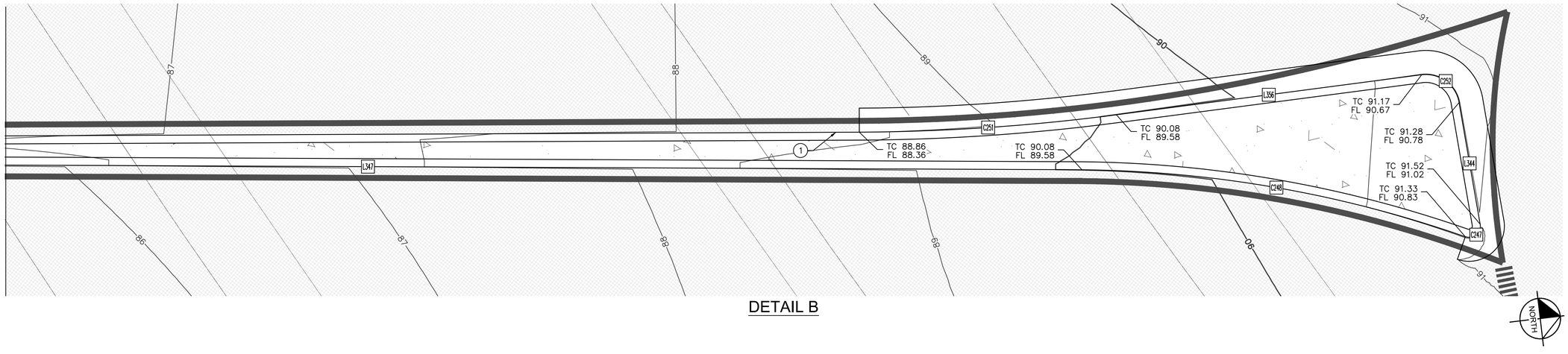
- 35 — PROPOSED MAJOR CONTOUR
- 34 — PROPOSED MINOR CONTOUR
- 35 — EXISTING MAJOR CONTOUR
- 34 — EXISTING MINOR CONTOUR
- GRADE BREAK
- DIRECTION OF FLOW
- FG 36.00 — PROPOSED GRADE ELEVATION
- FG (36.00) — EXISTING GRADE ELEVATION
- TC 36.00 FL 35.50 — TOP OF CURB AND FLOW ELEVATION
- FG: 36.00 0" C.F. — PROPOSED GRADE ELEVATION AND CURB FACE
- BUSWAY RED COLORED JPCP (ER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- TRUNCATED DOMES

GENERAL NOTES

1. NOT ALL GRADE BREAKS ARE SHOWN. CONTRACTOR TO GRADE ALL IMPERVIOUS SURFACES TO DRAIN STORMWATER RUNOFF TO APPROPRIATE DRAINAGE FACILITY AS INDICATED BY THE PROPOSED CONTOURS SHOWN ON THESE PLANS.
2. ALL ADA CURB RAMPS SHALL BE BUILT PER LATEST CALTRANS STANDARDS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

GRADING DETAIL NOTES

(1) TYPE A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A



DETAIL B

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
GRADING & DRAINAGE DETAILS SHEET 17 OF 21
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ML	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. GD-317		
SHEET 304 OF 617		

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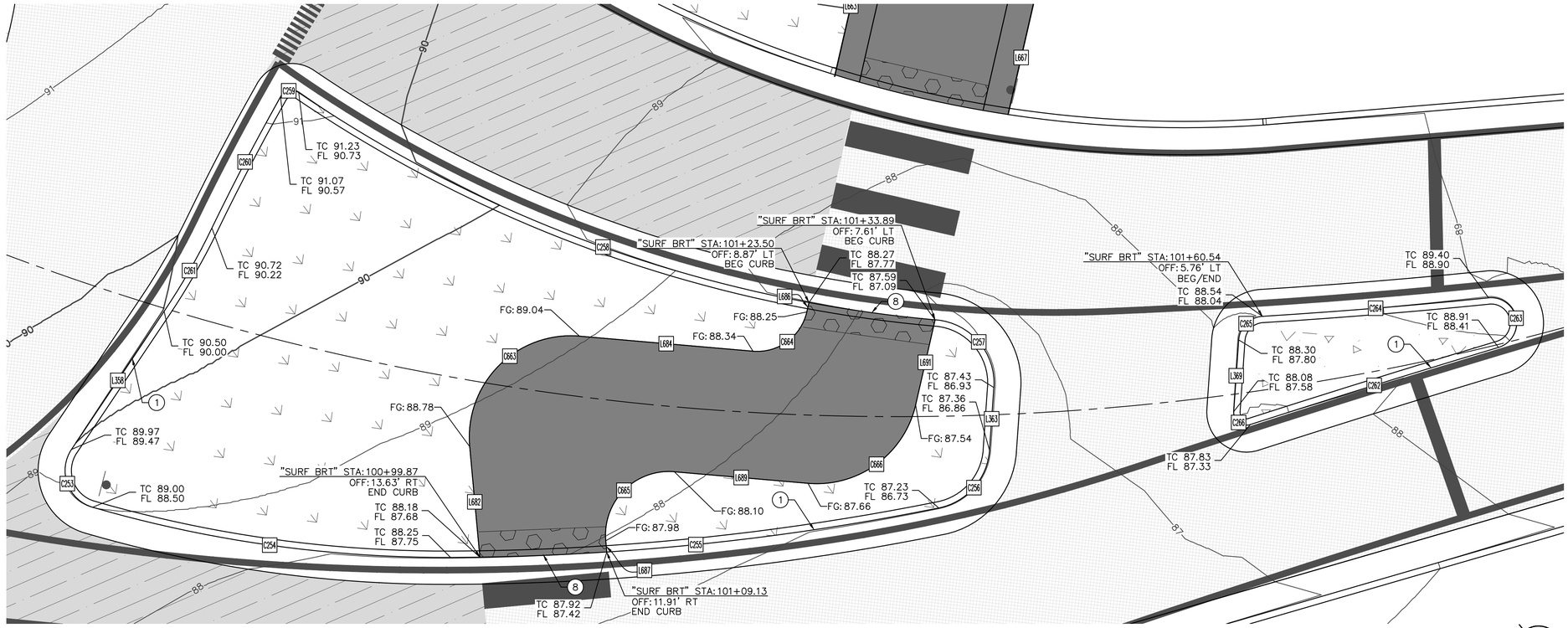
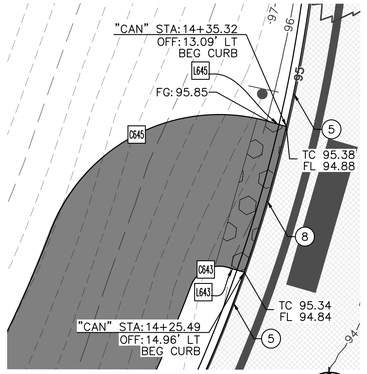
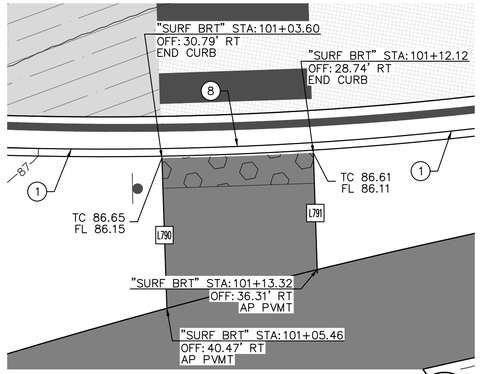


DETAIL A



DETAIL B



DETAIL C

CURBS, C&G, AND DIKES DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C253	Δ=107° 41' 57"	3.00'	5.64'	
C254	Δ=16° 23' 06"	100.00'	28.60'	
C255	Δ=11° 09' 17"	199.00'	38.74'	
C256	Δ=74° 41' 44"	5.00'	6.52'	
C257	Δ=88° 53' 52"	5.00'	7.76'	
C258	Δ=29° 08' 46"	106.00'	53.92'	
C259	Δ=94° 40' 37"	1.00'	1.65'	
C260	Δ=3° 44' 45"	178.50'	11.67'	
C261	Δ=8° 06' 27"	53.50'	7.57'	
C262	Δ=1° 10' 21"	1001.00'	20.48'	
C263	Δ=169° 07' 11"	2.00'	5.90'	
C264	Δ=2° 15' 14"	454.75'	17.89'	
C265	Δ=82° 31' 08"	2.00'	2.88'	
C266	Δ=111° 47' 16"	1.00'	1.95'	
L358	S 17°34'48" E		13.11'	
L363	N 47°30'48" W		4.95'	
L369	S 47°30'48" E		5.66'	

SIDEWALK & PATHWAY DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C663	Δ=100° 11' 53"	8.00'	13.99'	
C664	Δ=82° 02' 56"	4.00'	5.73'	
C665	Δ=100° 11' 53"	5.00'	8.74'	
C666	Δ=82° 02' 56"	8.00'	11.46'	
L682	N 56°42'36" W		8.75'	
L684	N 43°29'17" E		13.72'	
L686	N 38°33'39" W		0.76'	
L687	N 56°42'36" W		0.89'	
L689	N 43°29'17" E		10.57'	
L691	N 38°33'39" W		6.87'	

SIDEWALK & PATHWAY DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C643	Δ=85° 30' 51"	2.00'	2.99'	
C645	Δ=87° 10' 42"	11.89'	18.09'	
L643	S 73°03'33" E		1.13'	
L645	N 72°50'39" W		1.13'	

SIDEWALK & PATHWAY DATA

NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L790	S 56°42'36" E		10.17'	
L791	S 56°42'36" E		7.92'	

LEGEND:

- 35 — PROPOSED MAJOR CONTOUR
- 34 — PROPOSED MINOR CONTOUR
- 35 — EXISTING MAJOR CONTOUR
- 34 — EXISTING MINOR CONTOUR
- GRADE BREAK
- DIRECTION OF FLOW
- FG 36.00 — PROPOSED GRADE ELEVATION
- FG (36.00) — EXISTING GRADE ELEVATION
- TC 36.00 FL 35.50 — TOP OF CURB AND FLOW ELEVATION
- FG: 36.00 0" C.F. — PROPOSED GRADE ELEVATION AND CURB FACE
- BUSWAY RED COLORED JPCP (ER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- TRUNCATED DOMES

GENERAL NOTES

1. NOT ALL GRADE BREAKS ARE SHOWN. CONTRACTOR TO GRADE ALL IMPERVIOUS SURFACES TO DRAIN STORMWATER RUNOFF TO APPROPRIATE DRAINAGE FACILITY AS INDICATED BY THE PROPOSED CONTOURS SHOWN ON THESE PLANS.
2. ALL ADA CURB RAMPS SHALL BE BUILT PER LATEST CALTRANS STANDARDS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

GRADING DETAIL NOTES

(1) TYPE A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A

(5) TYPE A1-6 CURB PER CALTRANS STD PLAN A87A

(8) FLUSH CURB PER CD-004 DETAIL F

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
GRADING & DRAINAGE DETAILS SHEET 18 OF 21
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ML	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
GD-318

SHEET 305 OF 617

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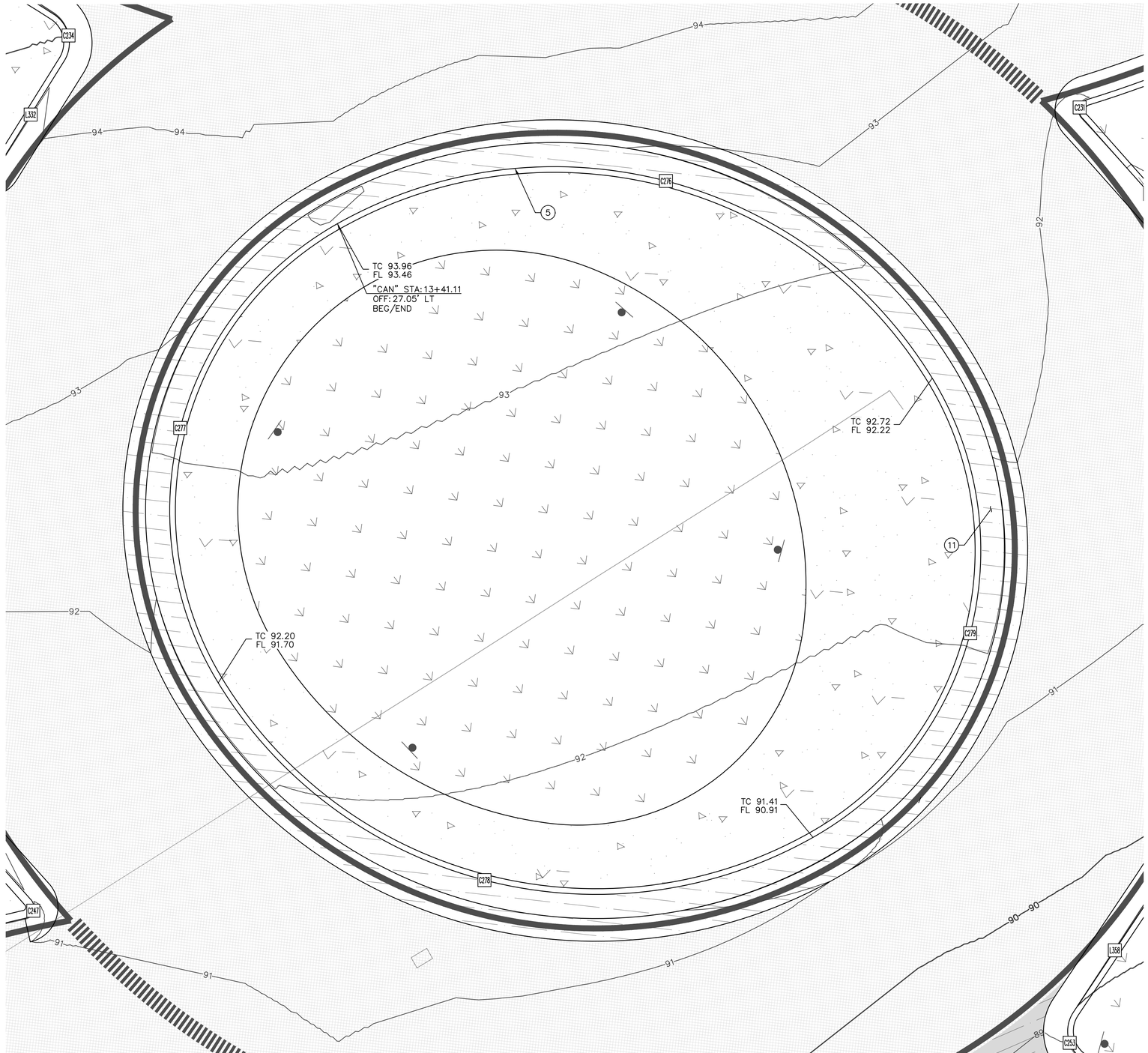

DETAIL A

LEGEND:

- 35 — PROPOSED MAJOR CONTOUR
- 34 — PROPOSED MINOR CONTOUR
- 35 — EXISTING MAJOR CONTOUR
- 34 — EXISTING MINOR CONTOUR
- GRADE BREAK
- DIRECTION OF FLOW
- FG 36.00 — PROPOSED GRADE ELEVATION
- FG (36.00) — EXISTING GRADE ELEVATION
- TC 36.00 FL 35.50 — TOP OF CURB AND FLOW ELEVATION
- FG: 36.00 0" C.F. — PROPOSED GRADE ELEVATION AND CURB FACE
- BUSWAY RED COLORED JPCP (ER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- TRUNCATED DOMES

GENERAL NOTES

1. NOT ALL GRADE BREAKS ARE SHOWN. CONTRACTOR TO GRADE ALL IMPERVIOUS SURFACES TO DRAIN STORMWATER RUNOFF TO APPROPRIATE DRAINAGE FACILITY AS INDICATED BY THE PROPOSED CONTOURS SHOWN ON THESE PLANS.
2. ALL ADA CURB RAMPS SHALL BE BUILT PER LATEST CALTRANS STANDARDS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

GRADING DETAIL NOTES

(5) TYPE A1-6 CURB PER CALTRANS STD PLAN A87A

(11) TRUCK APRON AND MOUNTABLE CURB PER CD-006 DETAIL D

CURBS, C&G, AND DIKES DATA				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C276	Δ=87° 51' 21"	39.00'	59.80'	
C277	Δ=92° 08' 39"	29.00'	46.64'	
C278	Δ=87° 51' 18"	39.00'	59.80'	
C279	Δ=92° 08' 43"	29.00'	46.64'	

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

GRADING & DRAINAGE DETAILS SHEET 19 OF 21

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ML	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

GD-319

SHEET 306 OF 617

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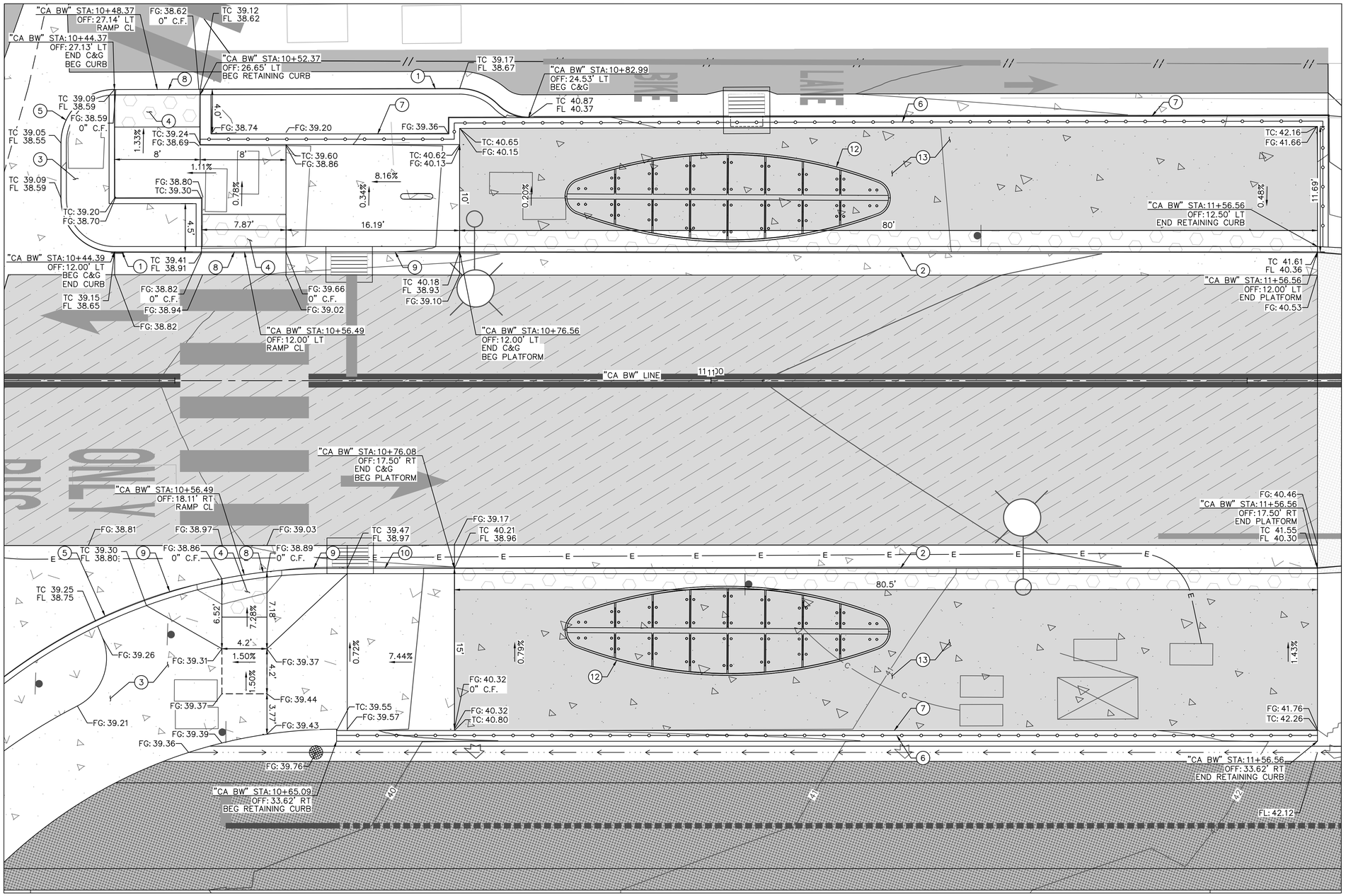

LEGEND:

- 35 — PROPOSED MAJOR CONTOUR
- 34 — PROPOSED MINOR CONTOUR
- 35 — EXISTING MAJOR CONTOUR
- 34 — EXISTING MINOR CONTOUR
- GRADE BREAK
- DIRECTION OF FLOW
- FG 36.00 — PROPOSED GRADE ELEVATION
- FG (36.00) — EXISTING GRADE ELEVATION
- TC 36.00 / FL 35.50 — TOP OF CURB AND FLOW ELEVATION
- FG: 36.00 / 0" C.F. — PROPOSED GRADE ELEVATION AND CURB FACE
- BUSWAY RED COLORED JPCP (ER DWG CD-001 DETAIL C)
- BIKE PATH PAVING (HMA TYPE A, PER DWG CD-001 DETAIL A)
- PCC SIDEWALK (PER CITY / CALTRANS STANDARD PLANS)
- STATION PCC SIDEWALK (PER DWG CD-001 DETAIL D)
- PARK AND RIDE LOT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAIL F)
- FULL-DEPTH ASPHALT PAVEMENT (HMA TYPE A, PER DWG CD-001 DETAUK E)
- LANDSCAPING AREA PER LS DWGS
- BIORETENTION AREA PER LS DWGS
- TRUNCATED DOMES

GENERAL NOTES

1. NOT ALL GRADE BREAKS ARE SHOWN. CONTRACTOR TO GRADE ALL IMPERVIOUS SURFACES TO DRAIN STORMWATER RUNOFF TO APPROPRIATE DRAINAGE FACILITY AS INDICATED BY THE PROPOSED CONTOURS SHOWN ON THESE PLANS.
2. ALL ADA CURB RAMPS SHALL BE BUILT PER LATEST CALTRANS STANDARDS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

GRADING DETAIL NOTES

1. TYPE A2-6 CURB AND GUTTER PER CALTRANS STD PLAN A87A
2. TYPE C MODIFIED 15" CURB AND GUTTER PER CD-003 DETAIL D
3. SIDEWALK PER CITY OF MARINA STD PLAN ST-2
4. CURB RAMP PER CALTRANS STD PLAN A88A
5. TYPE A1-6 CURB PER CALTRANS STD PLAN A87A
6. ORNAMENTAL HANDRAILING. SEE ARCHITECTURAL PLANS FOR DETAILS
7. RETAINING CURB PER CD-003 DETAIL E
8. FLUSH CURB PER CD-004 DETAIL F
9. CURB TRANSITION PER CD-002 DETAIL A
10. CURB TRANSITION PER CD-002 DETAIL C
12. BUS SHELTER. SEE ARCHITECTURAL PLANS
13. INSTALL STATION PAVING PER CD-001. SEE ARCHITECTURAL PLANS FOR TEXTURE AND FINISH

GRAPHIC SCALE IN FEET
0 2.5 5 10

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
GRADING & DRAINAGE DETAILS SHEET 20 OF 21
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	GD-320	
SHEET 307 OF 617		

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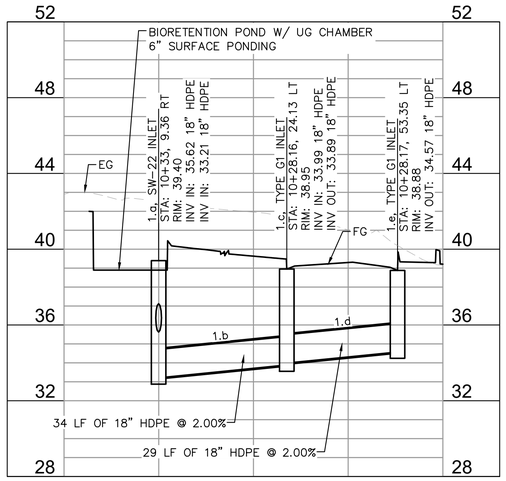
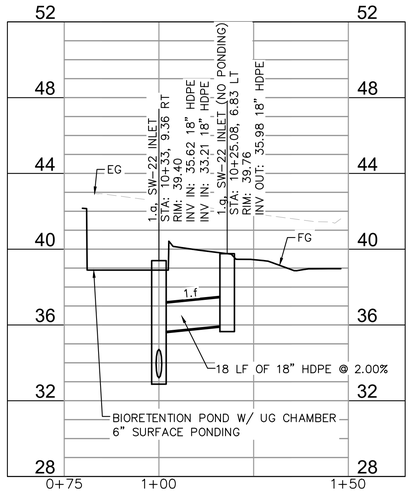


SD-1 (STA:0+75 TO STA:1+75)
HORIZ: 1" = 20'
VERT: 1" = 4'



SD-1.1 (STA:0+75 TO STA:1+50)
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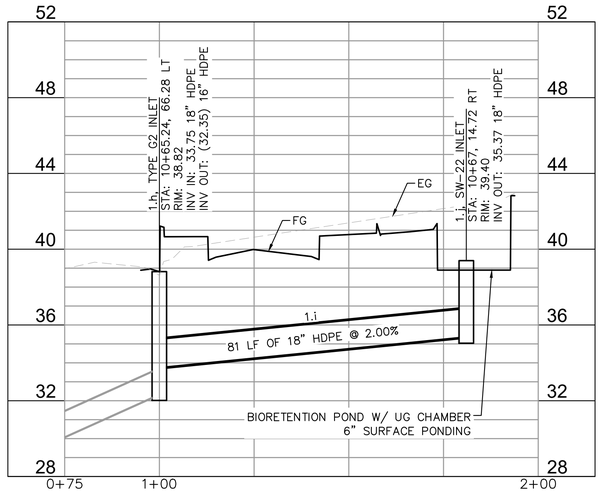
VERT: 1" = 4'



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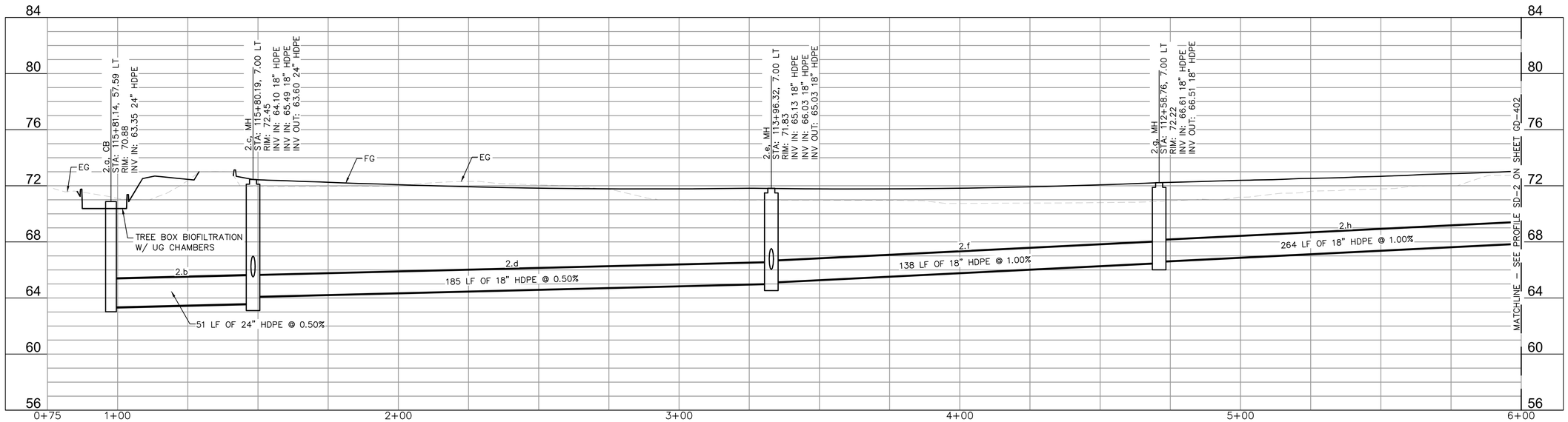

SD-2 (STA:0+75 TO STA:6+00)
HORIZ: 1" = 20'
VERT: 1" = 4'

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SURF! BUSWAY AND BRT PROJECT
DRAINAGE PROFILES SHEET 1 OF 8
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ML	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.
GD-401
SHEET 309 OF 617

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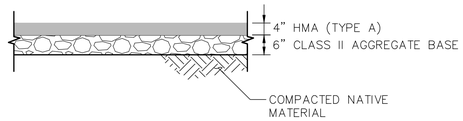
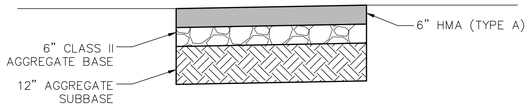
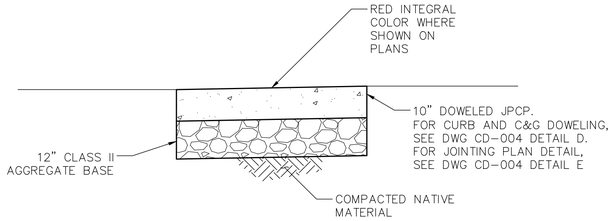


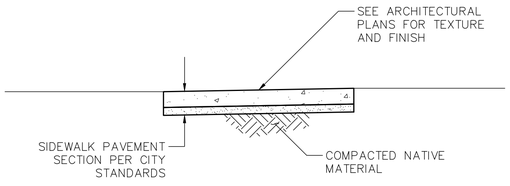
A BIKE PATH PAVING



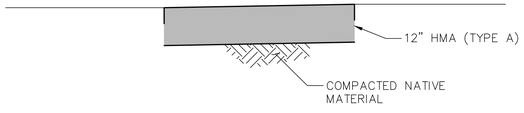
B BUSWAY PAVEMENT



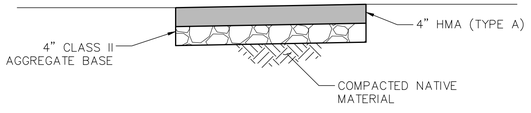
C BUSWAY JPCP



D STATION PCC SIDEWALK



E FULL-DEPTH ASPHALT PAVEMENT



F PARK AND RIDE LOT PAVEMENT

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
CONSTRUCTION DETAILS SHEET 1 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
CD-001
SHEET 317 OF 617

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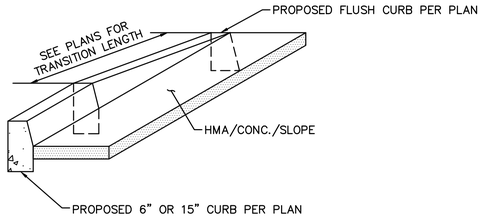
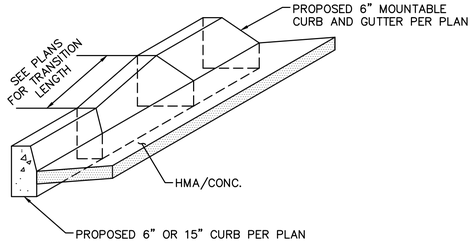
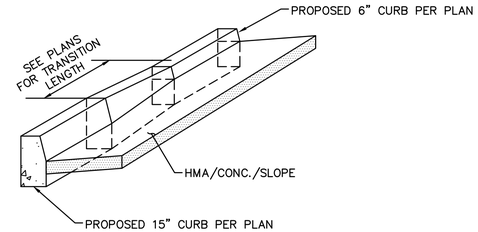


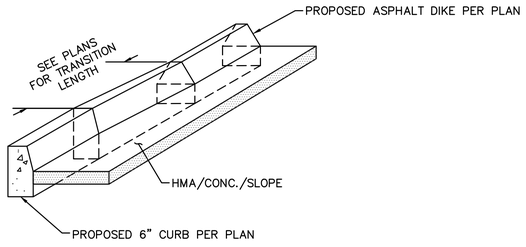
A 6" OR 15" TO 0" CURB TRANSITION



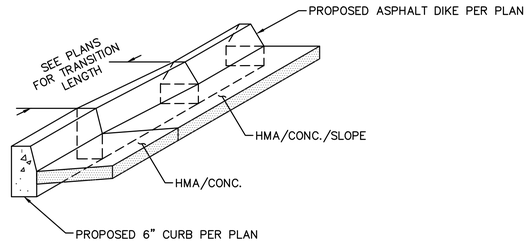
B 6" OR 15" TO MOUNTABLE CURB AND GUTTER TRANSITION



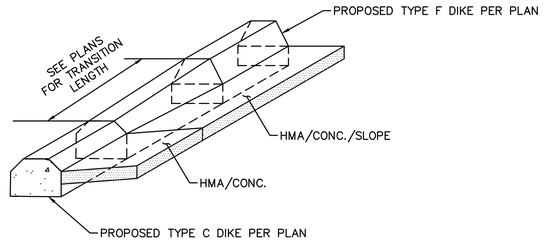
C 15" TO 6" CURB AND GUTTER TRANSITION



D 6" CURB TO ASPHALT DIKE CURB TRANSITION



E 6" CURB AND GUTTER TO ASPHALT DIKE CURB AND GUTTER TRANSITION



F 2" TYPE C TO 4" TYPE F DIKE TRANSITION

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
CONSTRUCTION DETAILS SHEET 2 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
CD-002
SHEET 318 OF 617

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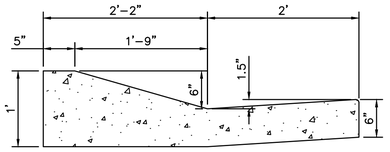
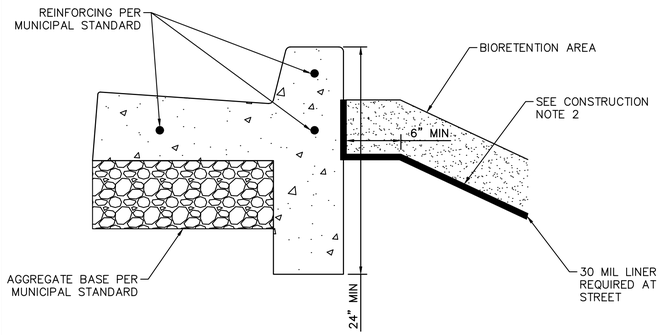
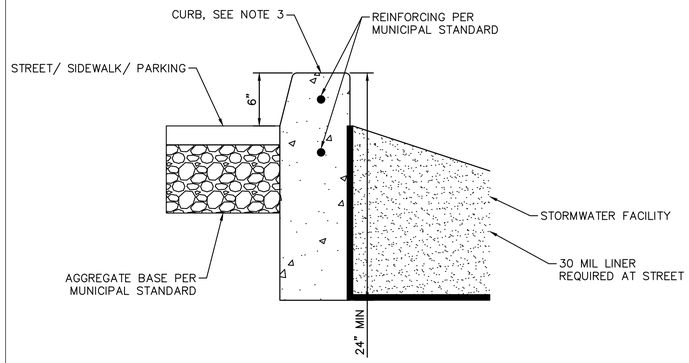


A 6" ROLLED CURB AND GUTTER



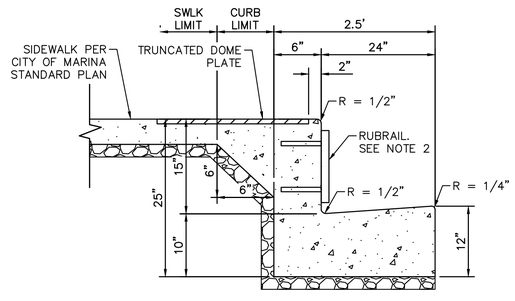
CONSTRUCTION NOTES
1. FINISH ALL EXPOSED CONCRETE SURFACES.
2. LAYBACK SLOPE AS FLAT AS POSSIBLE UNTIL TOP WIDTH PRODUCES 1:1 SLOPE & 24" BOTTOM WIDTH. AS PLANTER GETS WIDER MAINTAIN 1:1 SLOPE AND INCREASE BOTTOM WIDTH WIDER THAN 24".
3. CURB AND GUTTER GEOMETRY TO FOLLOW CITY OF MARINA STANDARD PLAN ST-1.

B BIORETENTION CURB AND GUTTER



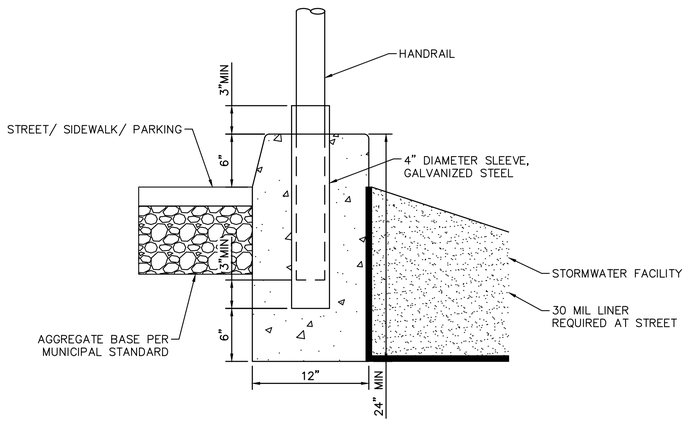
CONSTRUCTION NOTES
1. FINISH ALL EXPOSED CONCRETE SURFACES.
2. LAYBACK SLOPE AS FLAT AS POSSIBLE UNTIL TOP WIDTH PRODUCES 1:1 SLOPE & 24" BOTTOM WIDTH. AS PLANTER GETS WIDER MAINTAIN 1:1 SLOPE AND INCREASE BOTTOM WIDTH WIDER THAN 24".
3. CURB GEOMETRY TO FOLLOW CITY OF MARINA STANDARD PLAN ST-1.

C BIORETENTION CURB



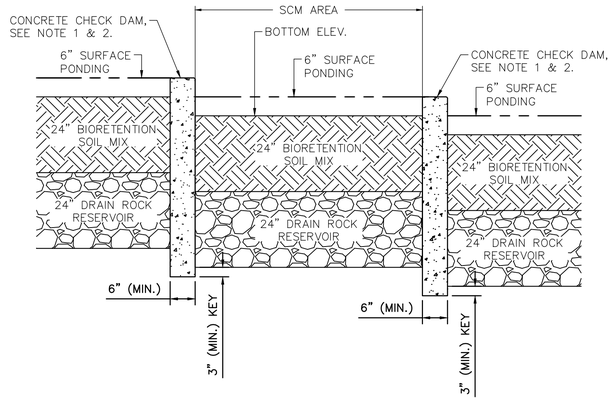
CONSTRUCTION NOTES
1. FINISH ALL EXPOSED CONCRETE SURFACES.
2. 2"X12" RUBRAIL W/ (2) 1/2" DIA X 5" SCREW ANCHORS AT 18" OC

D 15" CURB AND GUTTER



CONSTRUCTION NOTES
1. FINISH ALL EXPOSED CONCRETE SURFACES.
2. LAYBACK SLOPE AS FLAT AS POSSIBLE UNTIL TOP WIDTH PRODUCES 1:1 SLOPE & 24" BOTTOM WIDTH. AS PLANTER GETS WIDER MAINTAIN 1:1 SLOPE AND INCREASE BOTTOM WIDTH WIDER THAN 24".
3. CURB GEOMETRY TO FOLLOW CITY OF MARINA STANDARD PLAN ST-1.

E DEEP CURB WITH HANDRAIL



CONSTRUCTION NOTES
1. CONCRETE CHECK DAM SHALL BE CONTINUOUS (NO JOINTS) AND REINFORCED WITH #4 BAR, PLACED AT 18 INCHES ON CENTER, EACH WAY.
2. CONCRETE CHECK DAM SHALL MEET STRUCTURAL REQUIREMENTS FOR LATERAL BRACING WHEN USED AS LATERAL BRACING.

F CONCRETE CHECK DAM

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
CONSTRUCTION DETAILS SHEET 3 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CONTRACT NO. 22-03		
SHEET NO. CD-003		
SHEET 319 OF 617		

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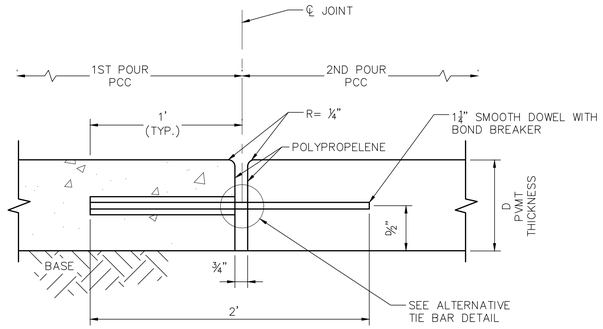
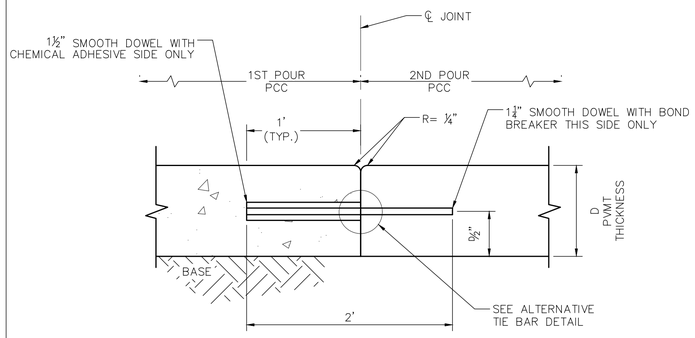
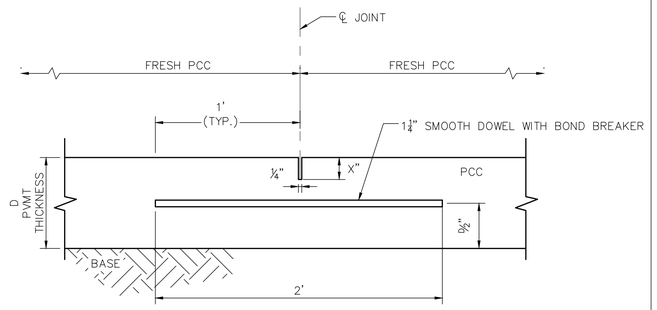


SECTION B–B

A EXPANSION JOINT

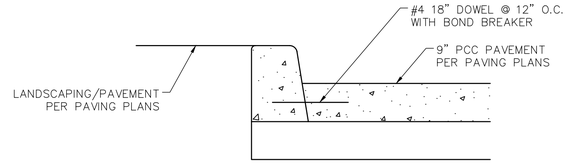


B CONSTRUCTION JOINT

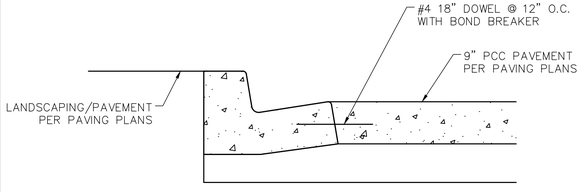


SECTION A–A

C WEAKENED PLANE JOINT

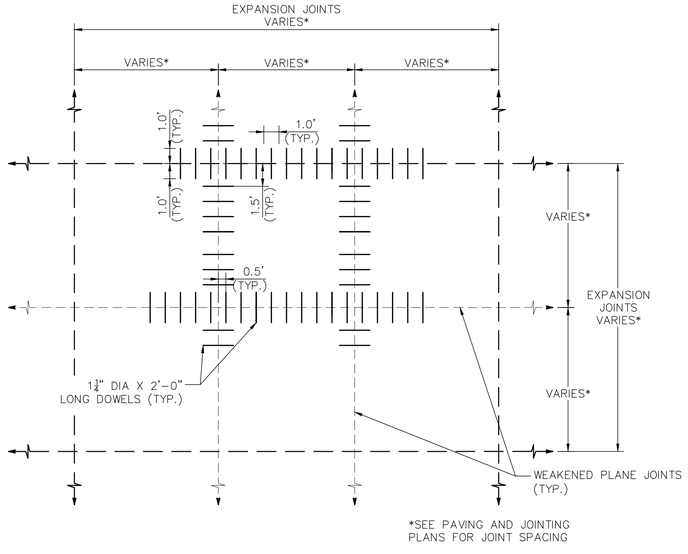


DETAIL F–1:
CURB DOWELING
NOT TO SCALE



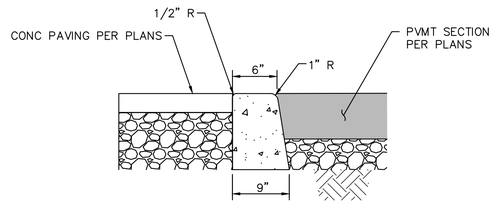
DETAIL F–2:
CURB AND GUTTER DOWELING
NOT TO SCALE

D CURB AND C&G DOWELING



*SEE PAVING AND JOINTING PLANS FOR JOINT SPACING

E JOINTING PLAN DETAIL



NOTES:

1. ISOLATION JOINTS SHALL BE PLACED ONLY AS SPECIFIED.
2. CONTRACTION JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 15' INTERVALS O.C.
3. WHERE A WALK IS ADJACENT TO THE CURB THE JOINTS SHALL ALIGN WITH JOINTS IN THE WALK.

F FLUSH CURB

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
CONSTRUCTION DETAILS SHEET 4 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		

SHEET NO.
CD–004
SHEET 320 OF 617

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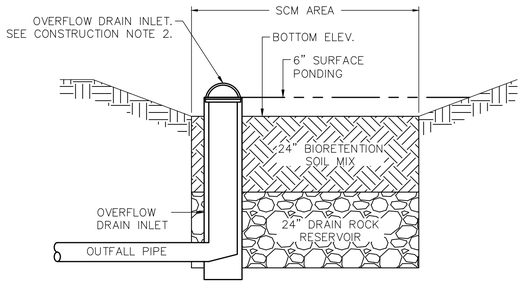
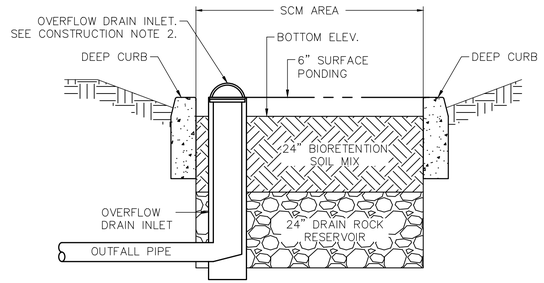


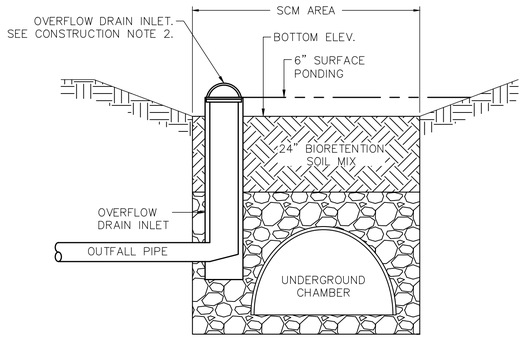
CONSTRUCTION NOTES
1. OVERFLOW DRAIN INLET PER CENTRAL COAST LID STORMWATER MANAGEMENT STANDARD DETAIL SW–22.

A BIORETENTION POND



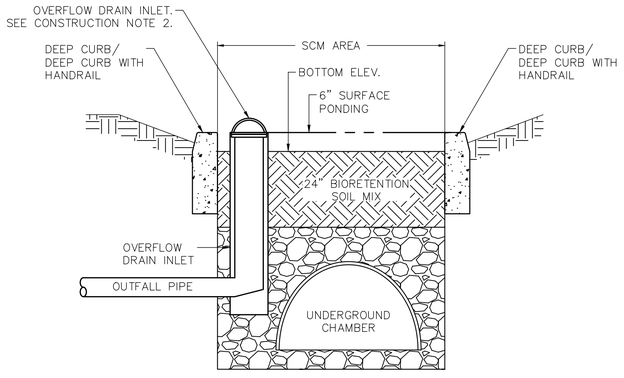
CONSTRUCTION NOTES
1. DEEP CURB PER DETAIL C SHEET CD–003.
2. OVERFLOW DRAIN INLET PER CENTRAL COAST LID STORMWATER MANAGEMENT STANDARD DETAIL SW–22.

B BIORETENTION POND WITH CURB



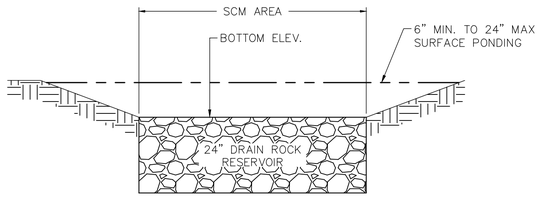
CONSTRUCTION NOTES
1. OVERFLOW DRAIN INLET PER CENTRAL COAST LID STORMWATER MANAGEMENT STANDARD DETAIL SW–22.

C BIORETENTION POND WITH UNDERGROUND CHAMBER



CONSTRUCTION NOTES
1. DEEP CURB PER DETAIL C SHEET CD–003 OR DEEP CURB WITH HANDRAIL PER DETAIL E SHEET CD–003.
2. OVERFLOW DRAIN INLET PER CENTRAL COAST LID STORMWATER MANAGEMENT STANDARD DETAIL SW–22.

D BIORETENTION POND WITH UNDERGROUND CHAMBER AND CURB



CONSTRUCTION NOTES
1. OVERFLOW DRAIN INLET PER CENTRAL COAST LID STORMWATER MANAGEMENT STANDARD DETAIL SW–22.

E GRADED DEPRESSION

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
CONSTRUCTION DETAILS SHEET 5 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. CD–005		
SHEET 321 OF 617		

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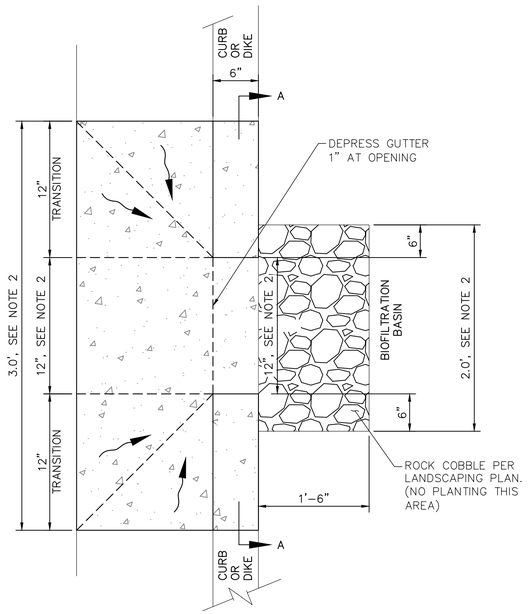
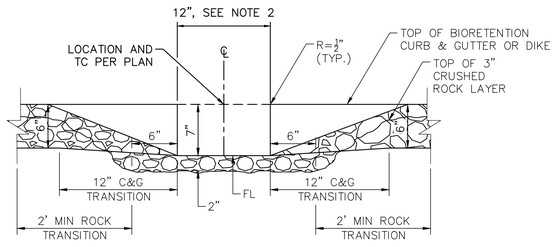


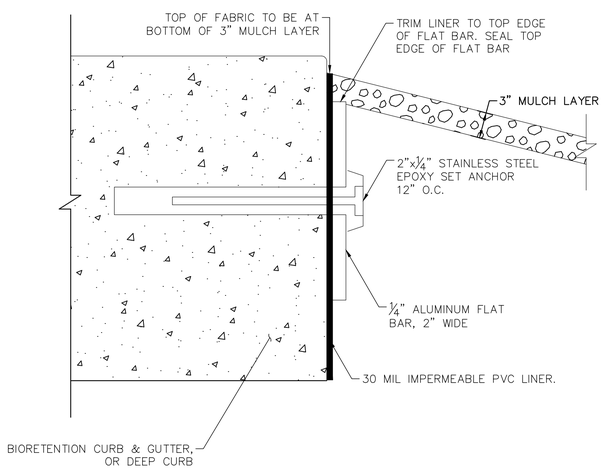
PLAN VIEW



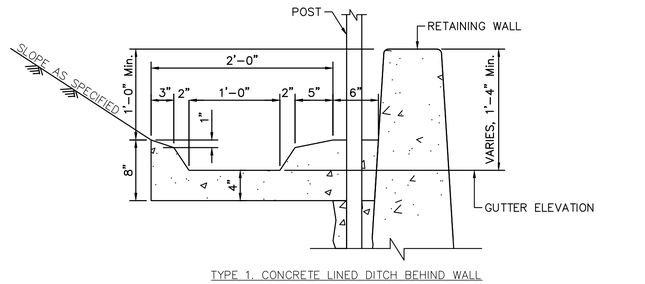
CONSTRUCTION NOTES
1. BIORETENTION CURB & GUTTER PER DETAIL B SHEET CD-003. REFER TO PLANS FOR LIMITS OF BIORETENTION CURB & GUTTER.
2. FOR THE CURB CUT INLET AT THE DOWNSTREAM POINT OF THE 13.5' WIDE RIBBON GUTTER, THE ZERO CURB LENGTH SHALL BE 13.5'.

SECTION A-A

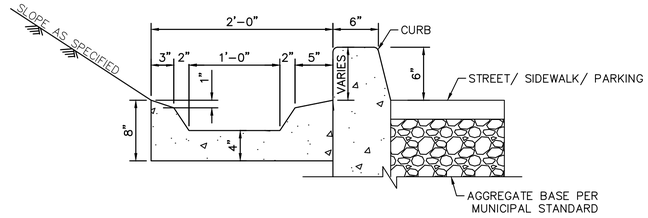
A CURB CUT INLET



B LINER ATTACHMENT



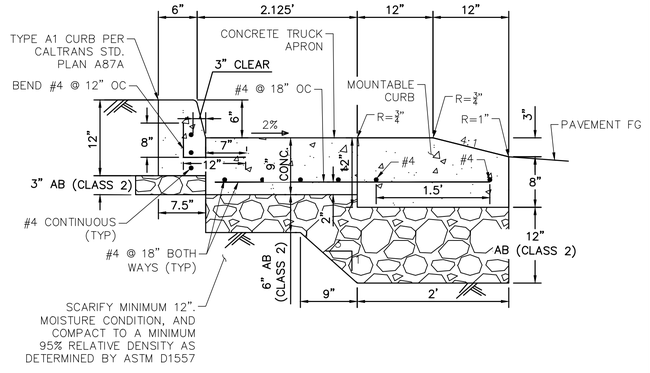
TYPE 1. CONCRETE LINED DITCH BEHIND WALL



TYPE 2. CONCRETE LINED DITCH BEHIND CURB

CONSTRUCTION NOTES
1. FINISH ALL EXPOSED CONCRETE SURFACES.
2. WALL PER RETAINING WALL PLAN AND DETAILS

C CONCRETE LINED DITCH



D TRUCK APRON AND MOUNTABLE CURB DETAIL

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SURF! BUSWAY AND BRT PROJECT
CONSTRUCTION DETAILS SHEET 6 OF 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	
SHEET NO.	CD-006	
SHEET 322 OF 617		

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INDEX TO PLANS

SHEET NO.	TITLE
RW-001	RETAINING WALL GENERAL NOTES
RW-002	RETAINING WALL NO. RW22R-C GENERAL PLAN
RW-003	RETAINING WALL NO. RW22R-C STRUCTURE PLAN NO. 1
RW-004	RETAINING WALL NO. RW22R-C STRUCTURE PLAN NO. 2
RW-005	RETAINING WALL NO. RW22R-C STRUCTURE PLAN NO. 3
RW-006	RETAINING WALL NO. RW103R-C GENERAL PLAN
RW-007	RETAINING WALL NO. RW103R-C STRUCTURE PLAN NO. 1
RW-008	RETAINING WALL NO. RW103R-C STRUCTURE PLAN NO. 2
RW-009	RETAINING WALL NO. RW150R-C GENERAL PLAN
RW-010	RETAINING WALL NO. RW150R-C STRUCTURE PLAN NO. 1
RW-011	RETAINING WALL NO. RW150R-C STRUCTURE PLAN NO. 2
RW-012	RETAINING WALL NO. RW150R-C STRUCTURE PLAN NO. 3
RW-013	RETAINING WALL NO. RW150R-C STRUCTURE PLAN NO. 4
RW-014	RETAINING WALL NO. RW158R-F GENERAL PLAN
RW-015	RETAINING WALL NO. RW158R-F STRUCTURE PLAN
RW-016	RETAINING WALL NO. RW173R-C GENERAL PLAN
RW-017	RETAINING WALL NO. RW173R-C STRUCTURE PLAN NO. 1
RW-018	RETAINING WALL NO. RW173R-C STRUCTURE PLAN NO. 2
RW-019	RETAINING WALL NO. RW173R-C STRUCTURE PLAN NO. 3
RW-020	RETAINING WALL NO. RW193R-F GENERAL PLAN
RW-021	RETAINING WALL NO. RW193R-F STRUCTURE PLAN
RW-022	RETAINING WALL NO. RW197R-C GENERAL PLAN
RW-023	RETAINING WALL NO. RW197R-C STRUCTURE PLAN NO. 1
RW-024	RETAINING WALL NO. RW197R-C STRUCTURE PLAN NO. 2
RW-025	RETAINING WALL NO. RW200R-F GENERAL PLAN
RW-026	RETAINING WALL NO. RW200R-F STRUCTURE PLAN NO. 1
RW-027	RETAINING WALL NO. RW200R-F STRUCTURE PLAN NO. 2
RW-028	RETAINING WALL NO. RW207R-C GENERAL PLAN
RW-029	RETAINING WALL NO. RW207R-C STRUCTURE PLAN NO. 1
RW-030	RETAINING WALL NO. RW207R-C STRUCTURE PLAN NO. 2
RW-031	RETAINING WALL NO. RW207R-C STRUCTURE PLAN NO. 3
RW-032	RETAINING WALL NO. RW218R-F GENERAL PLAN
RW-033	RETAINING WALL NO. RW218R-F STRUCTURE PLAN NO. 1
RW-034	RETAINING WALL NO. RW218R-F STRUCTURE PLAN NO. 2
RW-035	RETAINING WALL NO. RW218R-F STRUCTURE PLAN NO. 3
RW-036	RETAINING WALL NO. RW218R-F STRUCTURE PLAN NO. 4
RW-037	RETAINING WALL NO. RW218R-F STRUCTURE PLAN NO. 5
RW-038	RETAINING WALL NO. RW232R-C GENERAL PLAN
RW-039	RETAINING WALL NO. RW232R-C STRUCTURE PLAN NO. 1
RW-040	RETAINING WALL NO. RW232R-C STRUCTURE PLAN NO. 2
RW-041	RETAINING WALL NO. RW232R-C STRUCTURE PLAN NO. 3
RW-042	RETAINING WALL NO. RW296R-C GENERAL PLAN
RW-043	RETAINING WALL NO. RW296R-C STRUCTURE PLAN NO. 1
RW-044	RETAINING WALL NO. RW296R-C STRUCTURE PLAN NO. 2
RW-045	RETAINING WALL NO. RW296R-C STRUCTURE PLAN NO. 3
RW-046	RETAINING WALL NO. RW307R-C GENERAL PLAN
RW-047	RETAINING WALL NO. RW307R-C STRUCTURE PLAN NO. 1
RW-048	RETAINING WALL NO. RW307R-C STRUCTURE PLAN NO. 2
RW-049	RETAINING WALL NO. RW315R-F GENERAL PLAN
RW-050	RETAINING WALL NO. RW315R-F STRUCTURE PLAN NO. 1

INDEX TO PLANS

SHEET NO.	TITLE
RW-051	RETAINING WALL NO. RW315R-F STRUCTURE PLAN NO. 2
RW-052	SOLDIER PILE AND LAGGING WALL DETAILS
RW-053	MSE WALL DETAILS NO. 1
RW-054	MSE WALL DETAILS NO. 2
RW-055	MSE WALL DETAILS NO. 3
RW-056	CABLE RAILING DETAILS

DESIGN CRITERIA (SOLDIER PILE WALLS)

DESIGN:	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (8TH EDITION) WITH INTERIM REVISIONS, AND THE CALIFORNIA AMENDMENTS, PREFACE DATED OCTOBER, 2022
SOIL PARAMETERS:	SEE "SOIL PARAMETERS TABLE - SOLDIER PILE WALLS"
LIVE LOAD:	SURCHARGE = 240 PSF
SEISMIC:	kh = 0.26
STRUCTURAL STEEL:	SOLDIER PILES - ASTM A572 GRADE 50 PLATES - ASTM A36 GRADE 36 PIPES - ASTM A53 GRADE B
REINFORCED CONCRETE:	f'c = 3600 PSI fy = 60 KSI

SOIL PARAMETERS TABLE - SOLDIER PILE WALL

WALL NO.	BACKFILL SOIL WEIGHT (PCF)	FRICTION ANGLE (°)	ACTIVE PRESSURE COEFFICIENT, Ka	ACTIVE SEISMIC PRESSURE COEFFICIENT, Kae	PASSIVE PRESSURE COEFFICIENT, Kp	PASSIVE SEISMIC PRESSURE COEFFICIENT, Kpe
RW022R-C	115	36	0.470	0.752	7.90	6.25
RW103R-C	110	32	0.307	0.492	5.70	4.70
RW150R-C	110	34	0.307	0.492	6.40	5.50
RW173R-C	110	34	0.283	0.463	6.40	5.50
RW197R-C	110	36	0.318	0.521	7.90	6.25
RW207R-C	110	34	0.531	0.971	6.40	5.50
RW232R-C	120	34	0.460	0.718	6.40	5.50
RW296R-C	115	32	0.414	0.663	5.70	4.70
RW307R-C	115	30	0.375	0.586	4.85	3.50

DESIGN CRITERIA (MSE WALLS)

DESIGN:	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (8TH EDITION) WITH INTERIM REVISIONS, AND THE CALIFORNIA AMENDMENTS, PREFACE DATED OCTOBER, 2022	
SOIL PARAMETERS:	RETAINED BACKFILL SOIL UNIT WEIGHT:	γ = 125 PCF
	RETAINED BACKFILL FRICTION ANGLE:	ϕ = 34°
	ACTIVE PRESSURE COEFFICIENT:	Ka = 0.283
	ACTIVE SEISMIC PRESSURE COEFFICIENT:	Kae = 0.463
	FOUNDATION SOIL UNIT WEIGHT:	RW158R-F, RW193R-F: γ = 105 PCF RW200R-F, RW218R-F, RW315R-F: γ = 110 PCF
	FOUNDATION SOIL FRICTION ANGLE:	RW158R-F, RW193R-F, RW315R-F: ϕ = 30° RW200R-F, RW218R-F: ϕ = 34°
LIVE LOAD:	SURCHARGE = 240 PSF	
SEISMIC:	kh = 0.17	
PRECAST CONCRETE PANELS:	f'c = 4000 PSI fy = 60 KSI	
SOIL REINFORCEMENT:	WELDED WIRE MATS: fy = 65 KSI COUPLER: fy = 36 KSI CORROSION RATE: 1.1 MILS/YEAR	
REINFORCED CONCRETE:	f'c = 3600 PSI fy = 60 KSI	

MSE = MECHANICALLY STABILIZED EMBANKMENT

STANDARD SPECIFICATIONS

CONSTRUCTION OF THE SOLDIER PILE RETAINING WALLS AND MSE RETAINING WALLS IN MONTEREY COUNTY, CALIFORNIA, SHALL CONFORM TO THE CALIFORNIA STATE TRANSPORTATION AGENCY DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS, 2023 EDITION.

STANDARD PLANS DATED 2023

A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND - LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND - LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND - LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND - LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND - LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
B11-81	CONCRETE BARRIER TYPE 842 DETAILS No. 1
B11-82	CONCRETE BARRIER TYPE 842 DETAILS No. 2
A85	CHAIN LINK FENCE
A85A	CHAIN LINK FENCE DETAILS
A85B	CHAIN LINK FENCE DETAILS

GENERAL

THE DRAWINGS REPRESENT THE FINISHED STRUCTURES. THEY DO NOT SHOW CONSTRUCTION MEANS UNLESS OTHERWISE NOTED.

FABRICATE AND CONSTRUCT ALL ITEMS ACCORDING TO THE DRAWINGS, SPECIFICATIONS, & CODES. MAKE NO MODIFICATIONS WITHOUT THE ENGINEER'S WRITTEN APPROVAL.

DO NOT SCALE THE DRAWINGS FOR DIMENSIONS, SIZES, OR LOCATIONS.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ALL LONGITUDINAL AND TRANSVERSE DIMENSIONS ARE MEASURED HORIZONTALLY AND INCLUDE NO CORRECTION FOR GRADE.

IF A DISCREPANCY IS FOUND WITHIN THE CONTRACT DOCUMENTS, IMMEDIATELY SUBMIT THE MATTER IN WRITING TO THE ENGINEER WHO WILL MAKE A DETERMINATION AND PROVIDE WRITTEN CLARIFICATION.

SUBSTITUTIONS OF MATERIALS, SIZES, OR SHAPES IS PROHIBITED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

RETAINING WALL GENERAL NOTES

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	
CONTRACT NO. 22-03		

SHEET NO.

RW-001

SHEET 323 OF 617

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Know what's below. Call before you dig.

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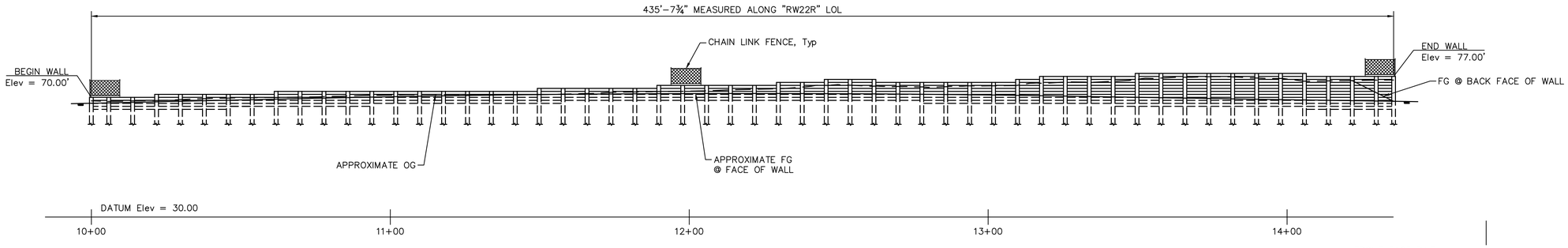
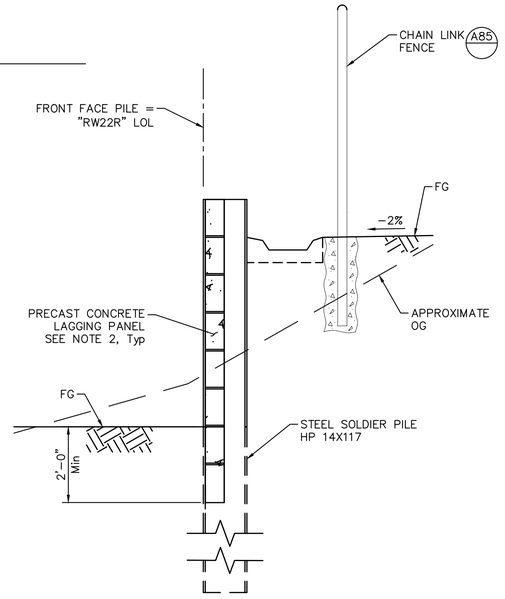


DEVELOPED MIRRORED ELEVATION

1" = 20'

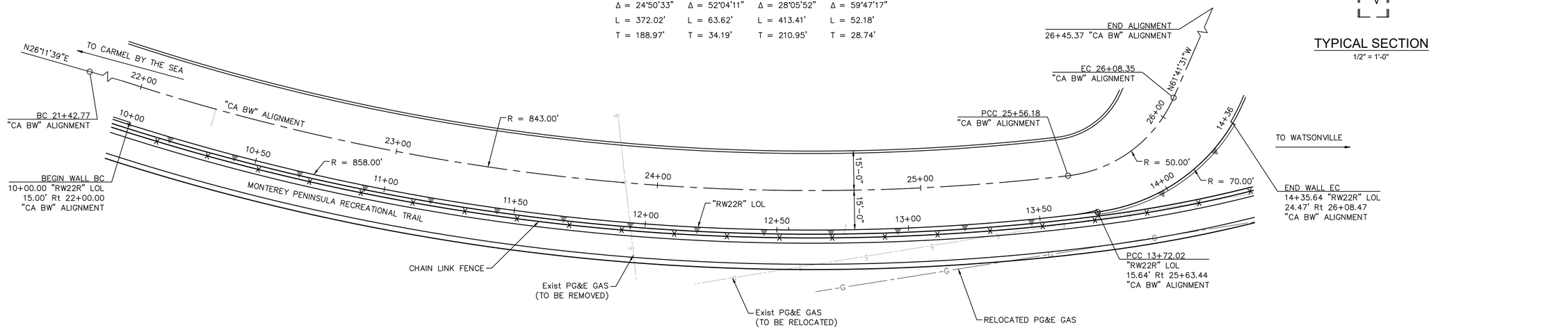


TYPICAL SECTION

1/2" = 1'-0"

CURVE DATA

"RW22R" LOL		"CA BW" ALIGNMENT	
R = 858.00'	R = 70.00'	R = 843.00'	R = 50.00'
Δ = 24°50'33"	Δ = 52°04'11"	Δ = 28°05'52"	Δ = 59°47'17"
L = 372.02'	L = 63.62'	L = 413.41'	L = 52.18'
T = 188.97'	T = 34.19'	T = 210.95'	T = 28.74'



PLAN

1" = 20'

NOTES:

1. FOR GENERAL NOTES, SEE "RETAINING WALL GENERAL NOTES" SHEET.
2. FOR SOLDIER PILE AND LAGGING DETAILS, SEE "SOLDIER PILE AND LAGGING WALL DETAILS" SHEET.
3. FOR EXISTING AND PROPOSED UTILITIES, REFER TO "UTILITY RELOCATION P&P" PLANS.

811 Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
RETAINING WALL NO. RW22R-C
GENERAL PLAN
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	
CONTRACT NO. 22-03		

SHEET NO.
RW-002
SHEET 324 OF 617

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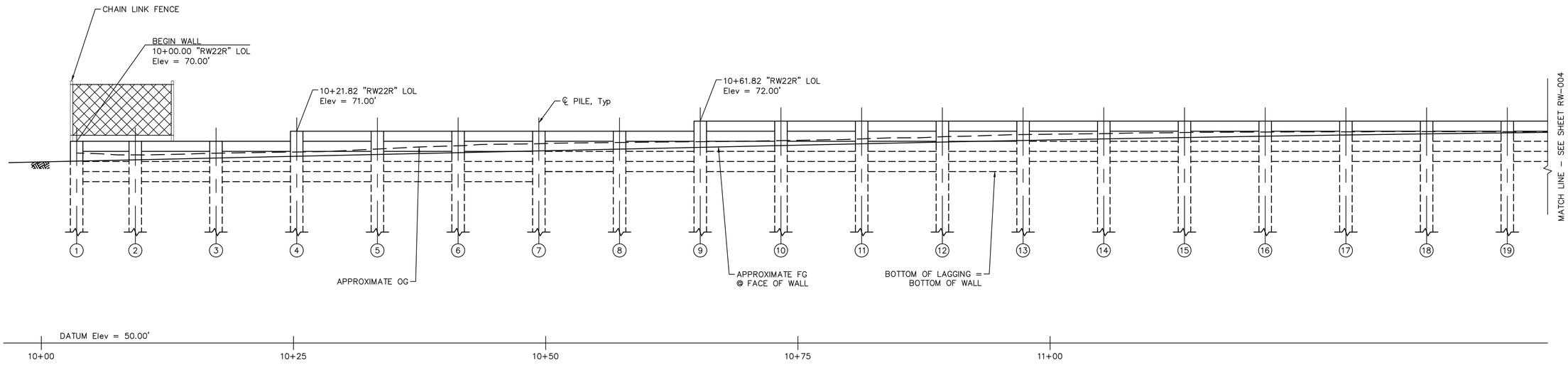


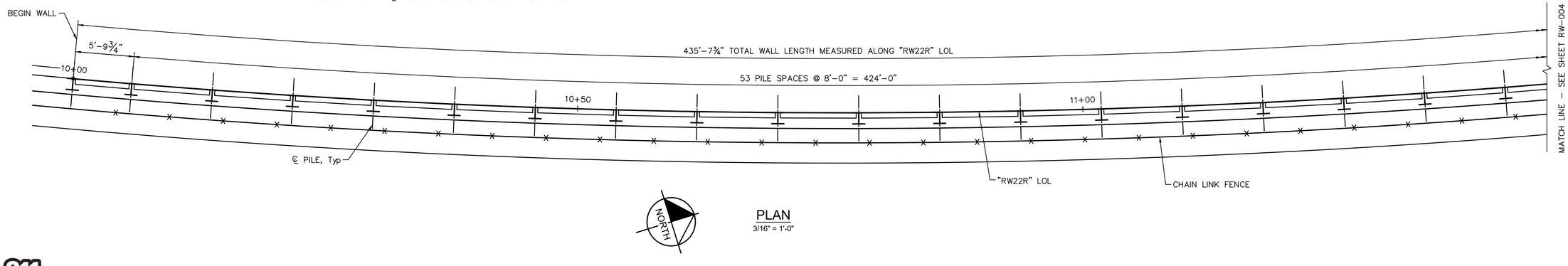
DEVELOPED MIRRORED ELEVATION
3/16" = 1'-0"

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
1	HP14X117	10+00.00	70.00	60.00	–	66.00
2	HP14X117	10+05.82	70.00	60.00	66.00	66.00
3	HP14X117	10+13.82	70.00	60.00	66.00	66.00
4	HP14X117	10+21.82	71.00	59.00	66.00	66.00
5	HP14X117	10+29.82	71.00	59.00	66.00	66.00
6	HP14X117	10+37.82	71.00	59.00	66.00	66.00
7	HP14X117	10+45.82	71.00	59.00	66.00	67.00
8	HP14X117	10+53.82	71.00	61.00	67.00	67.00
9	HP14X117	10+61.82	72.00	60.00	67.00	67.00
10	HP14X117	10+69.82	72.00	60.00	67.00	67.00

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW22R" LOL.

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
11	HP14X117	10+77.82	72.00	60.00	67.00	67.00
12	HP14X117	10+85.82	72.00	60.00	67.00	67.00
13	HP14X117	10+93.82	72.00	60.00	67.00	68.00
14	HP14X117	11+01.82	72.00	62.00	68.00	68.00
15	HP14X117	11+09.82	72.00	62.00	68.00	68.00
16	HP14X117	11+17.82	72.00	62.00	68.00	68.00
17	HP14X117	11+25.82	72.00	62.00	68.00	68.00
18	HP14X117	11+33.82	72.00	62.00	68.00	68.00
19	HP14X117	11+41.82	72.00	62.00	68.00	68.00

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW22R" LOL.



PLAN
3/16" = 1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE "RETAINING WALL GENERAL NOTES" SHEET.
2. ARCHITECTURAL TREATMENT NOT SHOWN IN PLAN.
3. ALL LONGITUDINAL DIMENSIONS ARE MEASURED ALONG "RW22R" LOL.

Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
RETAINING WALL NO. RW22R-C
STRUCTURE PLAN NO. 1
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	

CONTRACT NO. 22-03

SHEET NO.
RW-003

SHEET 325 OF 617

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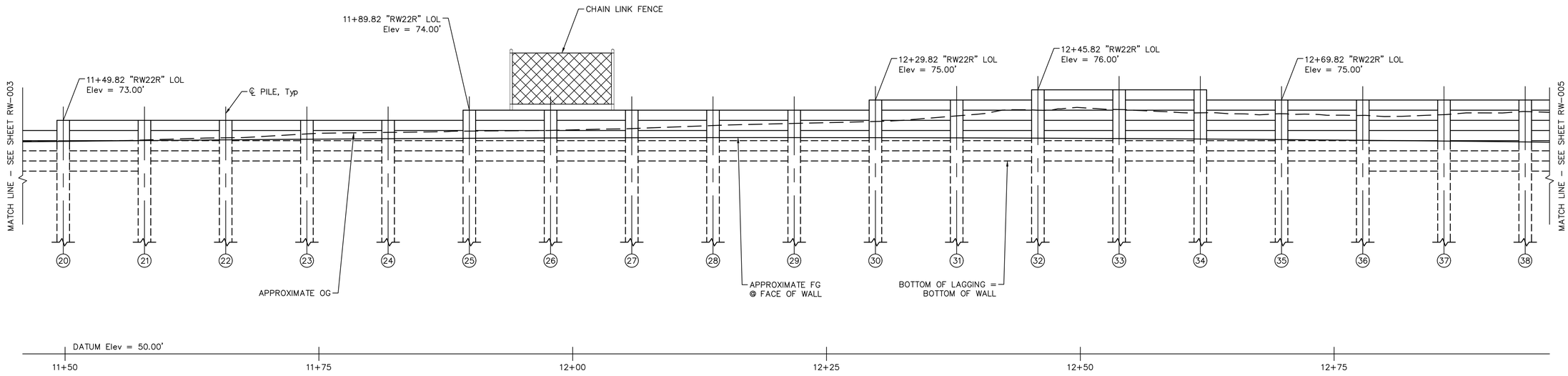
PRELIMINARY



DEVELOPED MIRRORED ELEVATION

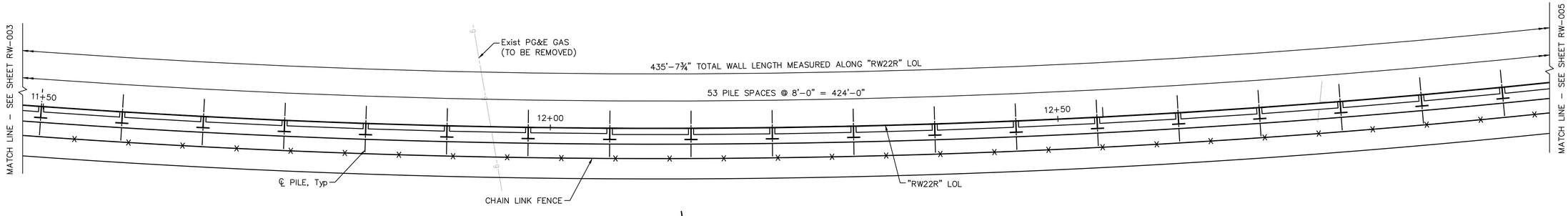
3/16" = 1'-0"

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
20	HP14X117	11+49.82	73.00	61.00	68.00	68.00
21	HP14X117	11+57.82	73.00	61.00	68.00	69.00
22	HP14X117	11+65.82	73.00	63.00	69.00	69.00
23	HP14X117	11+73.82	73.00	63.00	69.00	69.00
24	HP14X117	11+81.82	73.00	63.00	69.00	69.00
25	HP14X117	11+89.82	74.00	62.00	69.00	69.00
26	HP14X117	11+97.82	74.00	62.00	69.00	69.00
27	HP14X117	12+05.82	74.00	62.00	69.00	69.00
28	HP14X117	12+13.82	74.00	62.00	69.00	69.00
29	HP14X117	12+21.82	74.00	62.00	69.00	69.00

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW22R" LOL.

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
30	HP14X117	12+29.82	75.00	60.00	69.00	69.00
31	HP14X117	12+37.82	75.00	60.00	69.00	69.00
32	HP14X117	12+45.82	76.00	59.00	69.00	69.00
33	HP14X117	12+53.82	76.00	59.00	69.00	69.00
34	HP14X117	12+61.82	76.00	59.00	69.00	69.00
35	HP14X117	12+69.82	75.00	60.00	69.00	69.00
36	HP14X117	12+77.82	75.00	58.00	69.00	68.00
37	HP14X117	12+85.82	75.00	58.00	68.00	68.00
38	HP14X117	12+93.82	75.00	58.00	68.00	68.00

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW22R" LOL.





PLAN

3/16" = 1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE "RETAINING WALL GENERAL NOTES" SHEET.
2. ARCHITECTURAL TREATMENT NOT SHOWN IN PLAN.
3. ALL LONGITUDINAL DIMENSIONS ARE MEASURED ALONG "RW22R" LOL.
4. FOR EXISTING AND PROPOSED UTILITIES, REFER TO "UTILITY RELOCATION P&P" PLANS.

811 Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
RETAINING WALL NO. RW22R–C
STRUCTURE PLAN NO. 2
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	

CONTRACT NO. 22-03

SHEET NO.

RW–004

SHEET 326 OF 617

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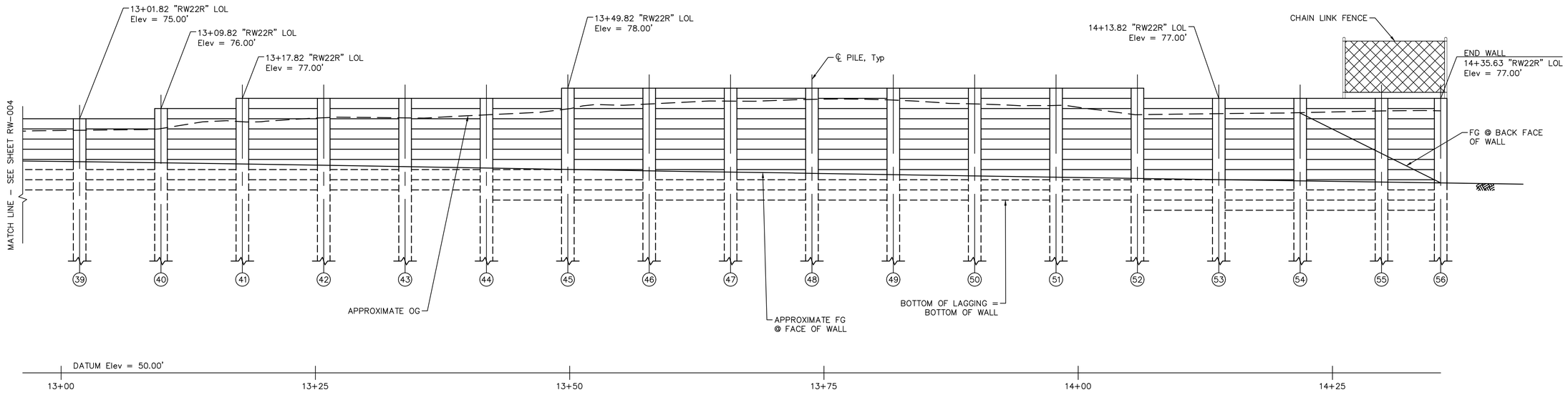
PRELIMINARY



DEVELOPED MIRRORED ELEVATION

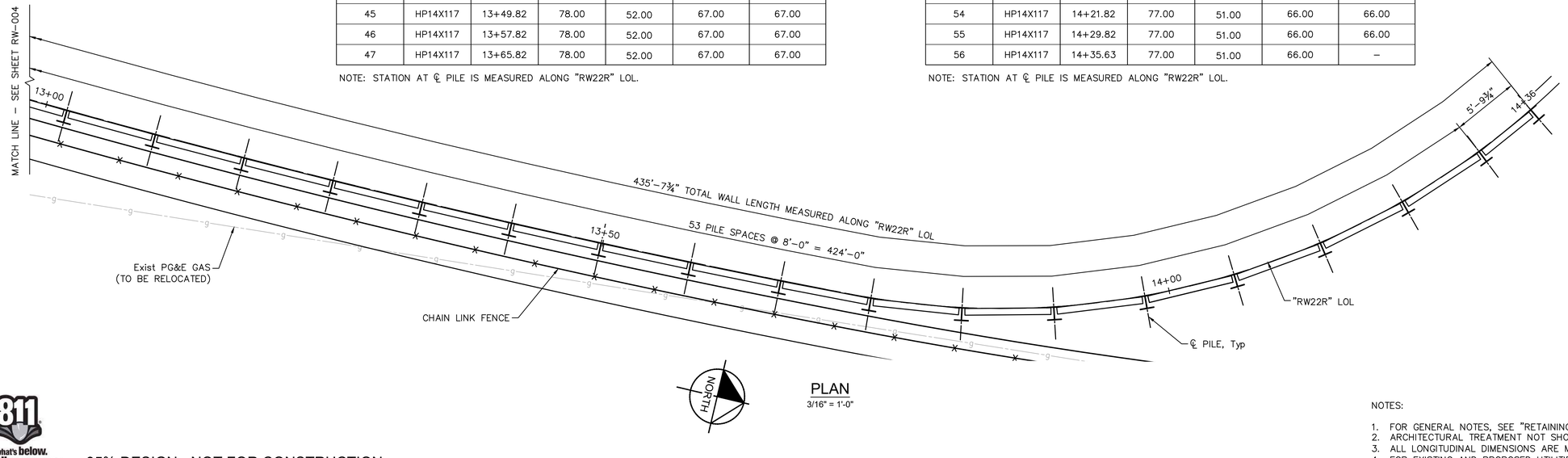
3/16" = 1'-0"

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
39	HP14X117	13+01.82	75.00	58.00	68.00	68.00
40	HP14X117	13+09.82	76.00	57.00	68.00	68.00
41	HP14X117	13+17.82	77.00	56.00	68.00	68.00
42	HP14X117	13+25.82	77.00	56.00	68.00	68.00
43	HP14X117	13+33.82	77.00	56.00	68.00	68.00
44	HP14X117	13+41.82	77.00	53.00	68.00	67.00
45	HP14X117	13+49.82	78.00	52.00	67.00	67.00
46	HP14X117	13+57.82	78.00	52.00	67.00	67.00
47	HP14X117	13+65.82	78.00	52.00	67.00	67.00

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW22R" LOL.

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
48	HP14X117	13+73.82	78.00	52.00	67.00	67.00
49	HP14X117	13+81.82	78.00	52.00	67.00	67.00
50	HP14X117	13+89.82	78.00	52.00	67.00	67.00
51	HP14X117	13+97.82	78.00	52.00	67.00	67.00
52	HP14X117	14+05.82	78.00	52.00	67.00	66.00
53	HP14X117	14+13.82	77.00	51.00	66.00	66.00
54	HP14X117	14+21.82	77.00	51.00	66.00	66.00
55	HP14X117	14+29.82	77.00	51.00	66.00	66.00
56	HP14X117	14+35.63	77.00	51.00	66.00	–

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW22R" LOL.



PLAN

3/16" = 1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE "RETAINING WALL GENERAL NOTES" SHEET.
2. ARCHITECTURAL TREATMENT NOT SHOWN IN PLAN.
3. ALL LONGITUDINAL DIMENSIONS ARE MEASURED ALONG "RW22R" LOL.
4. FOR EXISTING AND PROPOSED UTILITIES, REFER TO "UTILITY RELOCATION P&P" PLANS.

811 Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
RETAINING WALL NO. RW22R-C
STRUCTURE PLAN NO. 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	
CONTRACT NO.	22-03	
SHEET NO.	RW-005	

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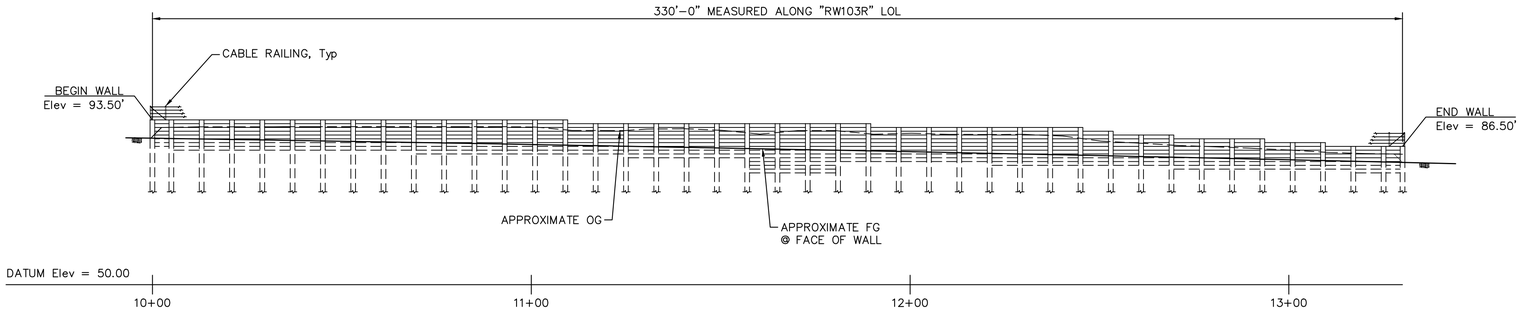
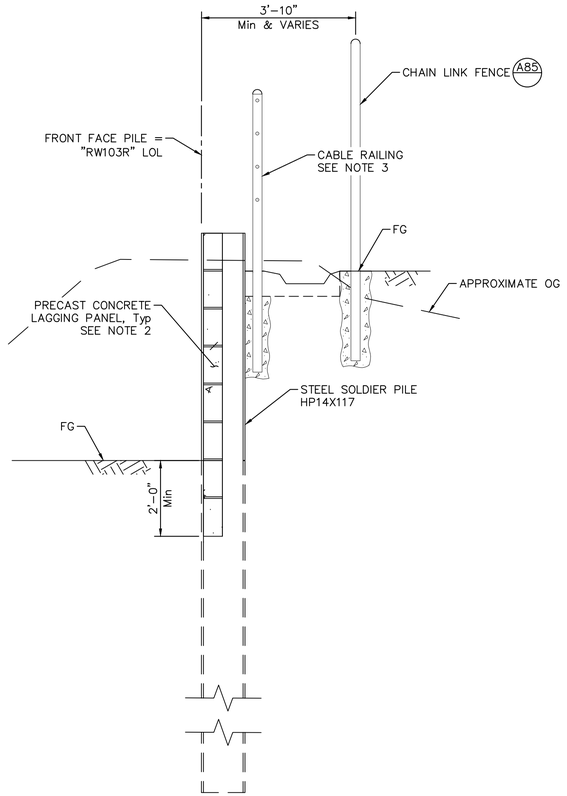
PRELIMINARY



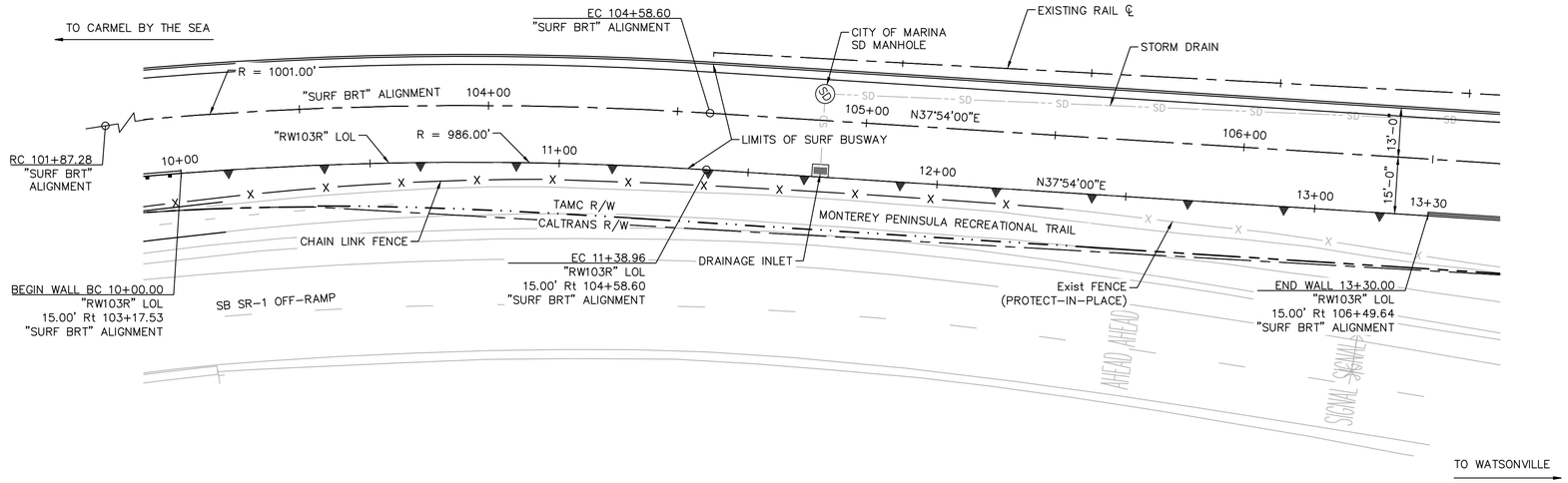
DEVELOPED MIRRORED ELEVATION

1" = 20'



TYPICAL SECTION

1/2" = 1'-0"



PLAN

1" = 20'

CURVE DATA

"RW103R" LOL	"SURF BRT" ALIGNMENT
R = 986.00'	R = 1001.00'
Δ = 08°04'29"	Δ = 15°31'48"
L = 138.96'	L = 271.32'
T = 69.59'	T = 136.50'

NOTES:

1. FOR GENERAL NOTES, SEE "RETAINING WALL GENERAL NOTES" SHEET.
2. FOR SOLDIER PILE AND LAGGING DETAILS, SEE "SOLDIER PILE AND LAGGING WALL DETAILS" SHEET.
3. FOR CABLE RAILING DETAILS, SEE "CABLE RAILING DETAILS" SHEET.
4. FOR STORM DRAIN AND DRAINAGE INLET, REFER TO "GRADING AND DRAINAGE" PLANS.

Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
RETAINING WALL NO. RW103R-C
GENERAL PLAN
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	
CONTRACT NO. 22-03		
SHEET NO. RW-006		
SHEET 328 OF 617		

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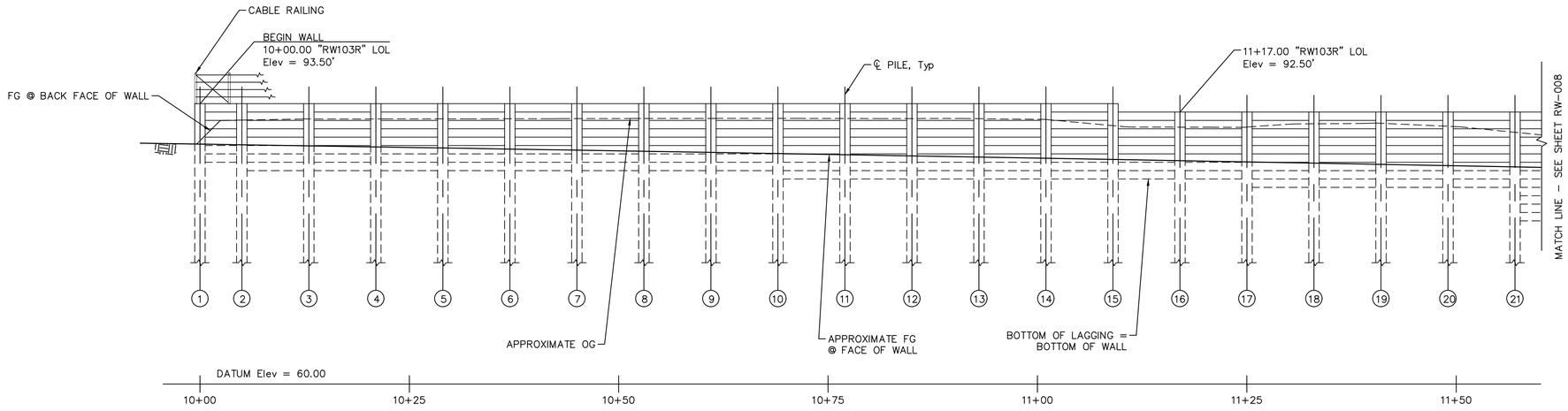
PRELIMINARY



DEVELOPED MIRRORED ELEVATION

1/8" = 1'-0"

SOLDIER PILE SCHEDULE

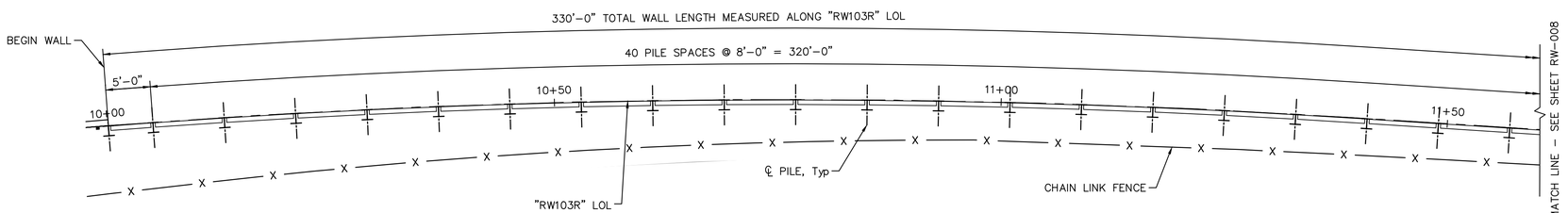
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
1	HP14X117	10+00.00	93.50	76.50	–	86.50
2	HP14X117	10+05.00	93.50	73.50	86.50	85.50
3	HP14X117	10+13.00	93.50	73.50	85.50	85.50
4	HP14X117	10+21.00	93.50	73.50	85.50	85.50
5	HP14X117	10+29.00	93.50	73.50	85.50	85.50
6	HP14X117	10+37.00	93.50	73.50	85.50	85.50
7	HP14X117	10+45.00	93.50	73.50	85.50	85.50
8	HP14X117	10+53.00	93.50	73.50	85.50	85.50
9	HP14X117	10+61.00	93.50	73.50	85.50	85.50
10	HP14X117	10+69.00	93.50	71.50	85.50	84.50
11	HP14X117	10+77.00	93.50	71.50	84.50	84.50

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW103R" LOL.

SOLDIER PILE SCHEDULE

PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
12	HP14X117	10+85.00	93.50	71.50	84.50	84.50
13	HP14X117	10+93.00	93.50	71.50	84.50	84.50
14	HP14X117	11+01.00	93.50	71.50	84.50	84.50
15	HP14X117	11+09.00	93.50	71.50	84.50	84.50
16	HP14X117	11+17.00	92.50	72.50	84.50	84.50
17	HP14X117	11+25.00	92.50	70.50	84.50	83.50
18	HP14X117	11+33.00	92.50	70.50	83.50	83.50
19	HP14X117	11+41.00	92.50	70.50	83.50	83.50
20	HP14X117	11+49.00	92.50	70.50	83.50	83.50
21	HP14X117	11+57.00	92.50	61.50	83.50	79.50

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW103R" LOL.



PLAN

1/8" = 1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE "RETAINING WALL GENERAL NOTES" SHEET.
2. CABLE RAILING AND ARCHITECTURAL TREATMENT NOT SHOWN IN PLAN.
3. ALL LONGITUDINAL DIMENSIONS ARE MEASURED ALONG "RW103R" LOL.

Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
RETAINING WALL NO. RW103R-C
STRUCTURE PLAN NO. 1
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	

CONTRACT NO. 22-03

SHEET NO.
RW-007

SHEET 329 OF 617

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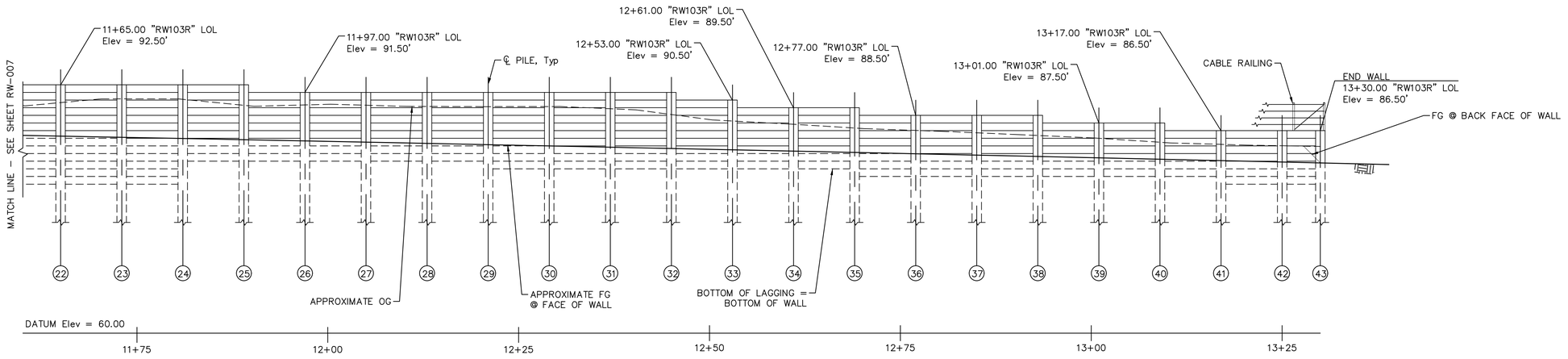
PRELIMINARY



DEVELOPED MIRRORED ELEVATION

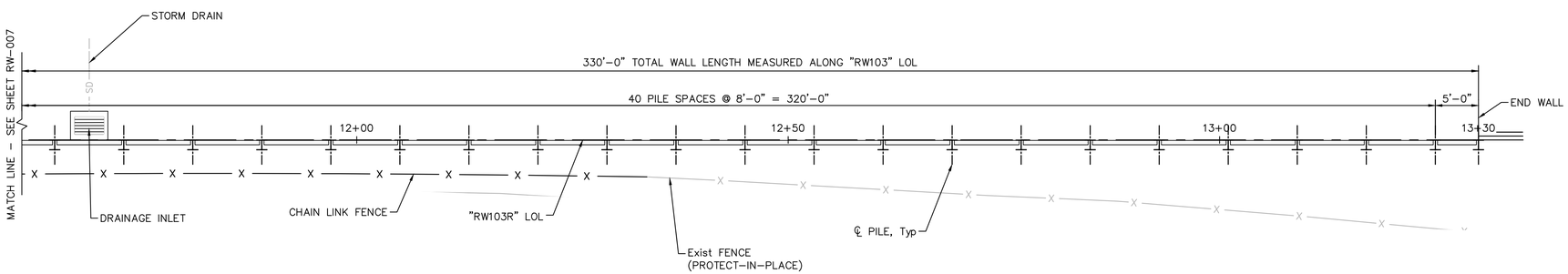
1/8" = 1'-0"

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
22	HP14X117	11+65.00	92.50	61.50	79.50	79.50
23	HP14X117	11+73.00	92.50	61.50	79.50	79.50
24	HP14X117	11+81.00	92.50	61.50	79.50	82.50
25	HP14X117	11+89.00	92.50	68.50	82.50	82.50
26	HP14X117	11+97.00	91.50	69.50	82.50	82.50
27	HP14X117	12+05.00	91.50	69.50	82.50	82.50
28	HP14X117	12+13.00	91.50	69.50	82.50	82.50
29	HP14X117	12+21.00	91.50	67.50	82.50	81.50
30	HP14X117	12+29.00	91.50	67.50	81.50	81.50
31	HP14X117	12+37.00	91.50	67.50	81.50	81.50
32	HP14X117	12+45.00	91.50	67.50	81.50	81.50

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW103R" LOL.

SOLDIER PILE SCHEDULE						
PILE NUMBER	PILE SECTION	Sta AT ℄ PILE	TOP OF PILE Elev (FEET)	PILE TIP Elev (FEET)	BOTTOM OF WALL Elev (FEET)	
					BACK Sta	AHEAD Sta
33	HP14X117	12+53.00	90.50	68.50	81.50	81.50
34	HP14X117	12+61.00	89.50	69.50	81.50	81.50
35	HP14X117	12+69.00	89.50	69.50	81.50	80.50
36	HP14X117	12+77.00	88.50	68.50	80.50	80.50
37	HP14X117	12+85.00	88.50	68.50	80.50	80.50
38	HP14X117	12+93.00	88.50	68.50	80.50	80.50
39	HP14X117	13+01.00	87.50	70.50	80.50	80.50
40	HP14X117	13+09.00	87.50	70.50	80.50	80.50
41	HP14X117	13+17.00	86.50	69.50	80.50	79.50
42	HP14X117	13+25.00	86.50	69.50	79.50	79.50
43	HP14X117	13+30.00	86.50	69.50	79.50	–

NOTE: STATION AT ℄ PILE IS MEASURED ALONG "RW103R" LOL.



PLAN

1/8" = 1'-0"



NOTES:

1. FOR GENERAL NOTES, SEE "RETAINING WALL GENERAL NOTES" SHEET.
2. CABLE RAILING AND ARCHITECTURAL TREATMENT NOT SHOWN IN PLAN.
3. ALL LONGITUDINAL DIMENSIONS ARE MEASURED ALONG "RW103R" LOL.
4. FOR STORM DRAIN AND DRAINAGE INLET, REFER TO "GRADING AND DRAINAGE" PLANS.

SURF! BUSWAY AND BRT PROJECT
RETAINING WALL NO. RW103R-C
STRUCTURE PLAN NO. 2
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	KDF	
DESIGNED	KDF	
CHECKED	CMD	
CONTRACT NO. 22-03		
SHEET NO. RW–008		
SHEET 330 OF 617		

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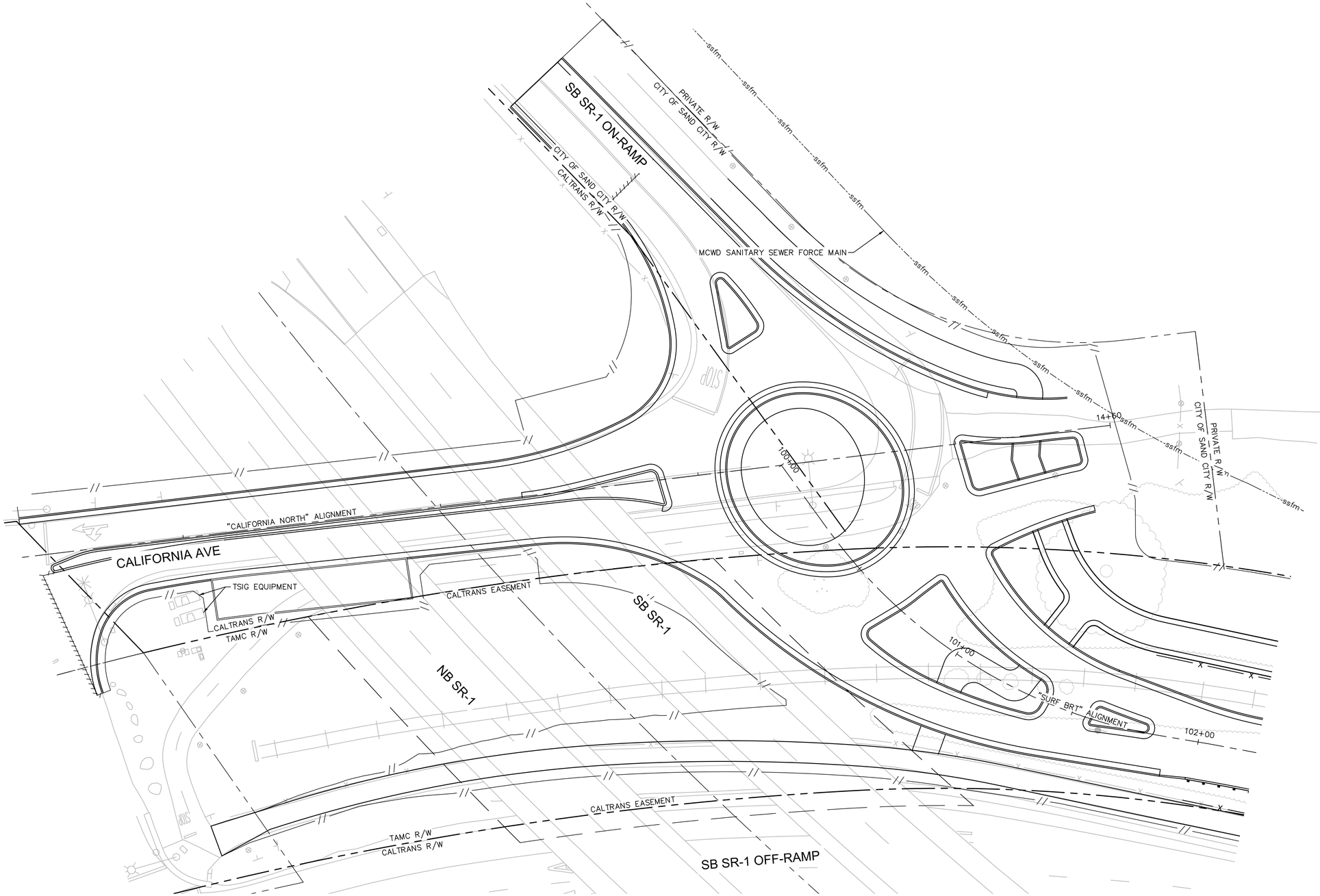
Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

PRELIMINARY



LEGEND:

- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- MANHOLE
- UTILITY POLE
- UTILITY CAP

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

EXISTING HWY 1 ROUNDABOUT UTILITIES SHEET 1 OF 1

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

UX-001

SHEET 379 OF 617

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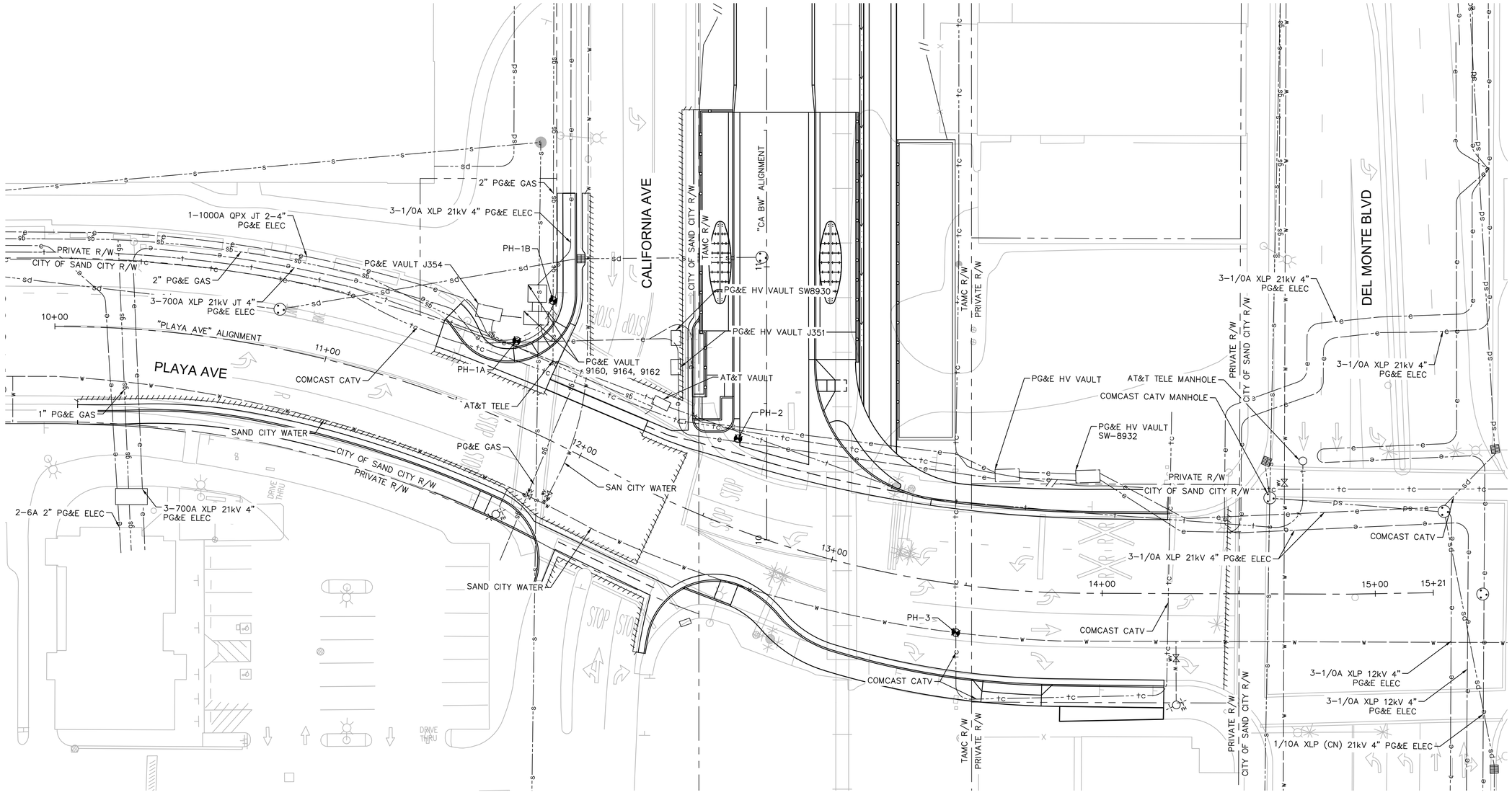

POTHOLE TABLE

PH#	UTILITY TYPE	OWNER	MATERIAL	COVER	OG ELEV	NORTHING	EASTING
1A	GAS	PG&E	PLT	33"	37.51	2120857.63	5727347.07
1B	TELECOM	AT&T	PLT	42"	37.51	2120850.36	5727328.57
1B	GAS	PG&E	PLT	36"	37.51	2120850.36	5727328.57
1B	ELECTRIC	PG&E	PLT	32"	38.40	2120850.36	5727328.57
2	TELECOM	COMCAST	PLT	48"	40.21	2120782.36	5727385.46
2	GAS	PG&E	PLT	48"	40.21	2120782.36	5727385.46
3	TELECOM	COMCAST	PVC	34"	39.14	2120683.46	5727425.69
3	WATER	CITY OF SAND CITY	STL	62"	39.14	2120683.46	5727425.69

GAS VALVE
WATER VALVE
FIRE HYDRANT
MANHOLE
UTILITY POLE
UTILITY CAP
POTHOLE

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
EXISTING PLAYA-CALIFORNIA UTILITIES SHEET 1 OF 2
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. UX-101		
SHEET 380 OF 617		

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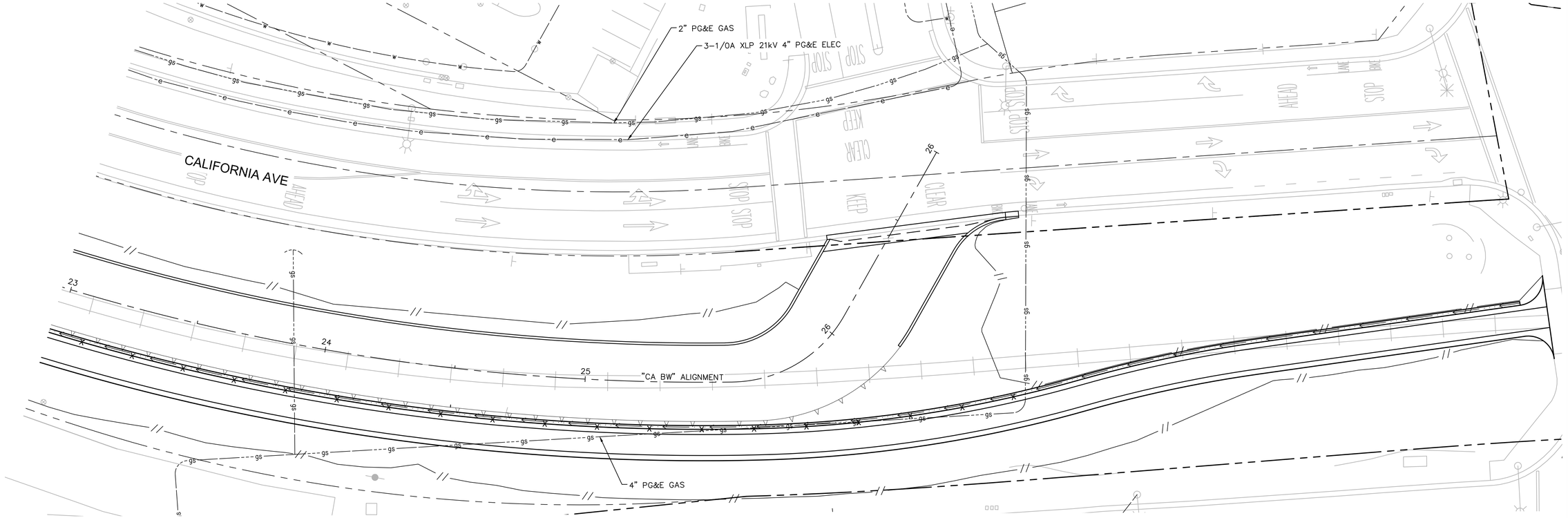

LEGEND:

- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- MANHOLE
- UTILITY POLE
- UTILITY CAP

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT

EXISTING PLAYA-CALIFORNIA UTILITIES SHEET 2 OF 2

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.

UX-102

SHEET 381 OF 617

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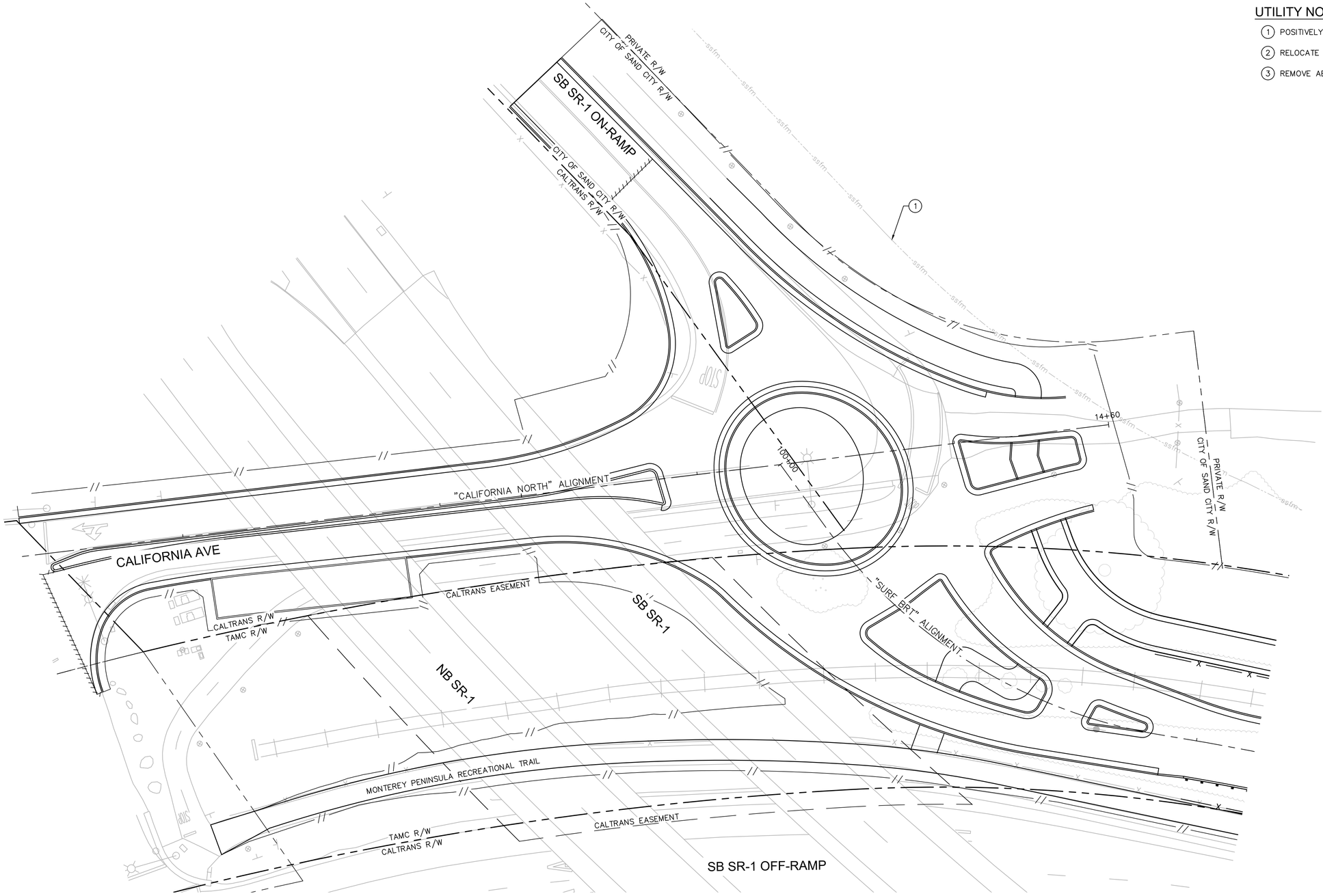
UTILITY NOTES

1. POSITIVELY IDENTIFY UTILITY
2. RELOCATE UTILITY
3. REMOVE ABANDONED UTILITY



LEGEND:

- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- MANHOLE
- UTILITY POLE

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PROPOSED HWY 1 ROUNDABOUT UTILITIES SHEET 1 OF 1
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
UP-001
SHEET 389 OF 617

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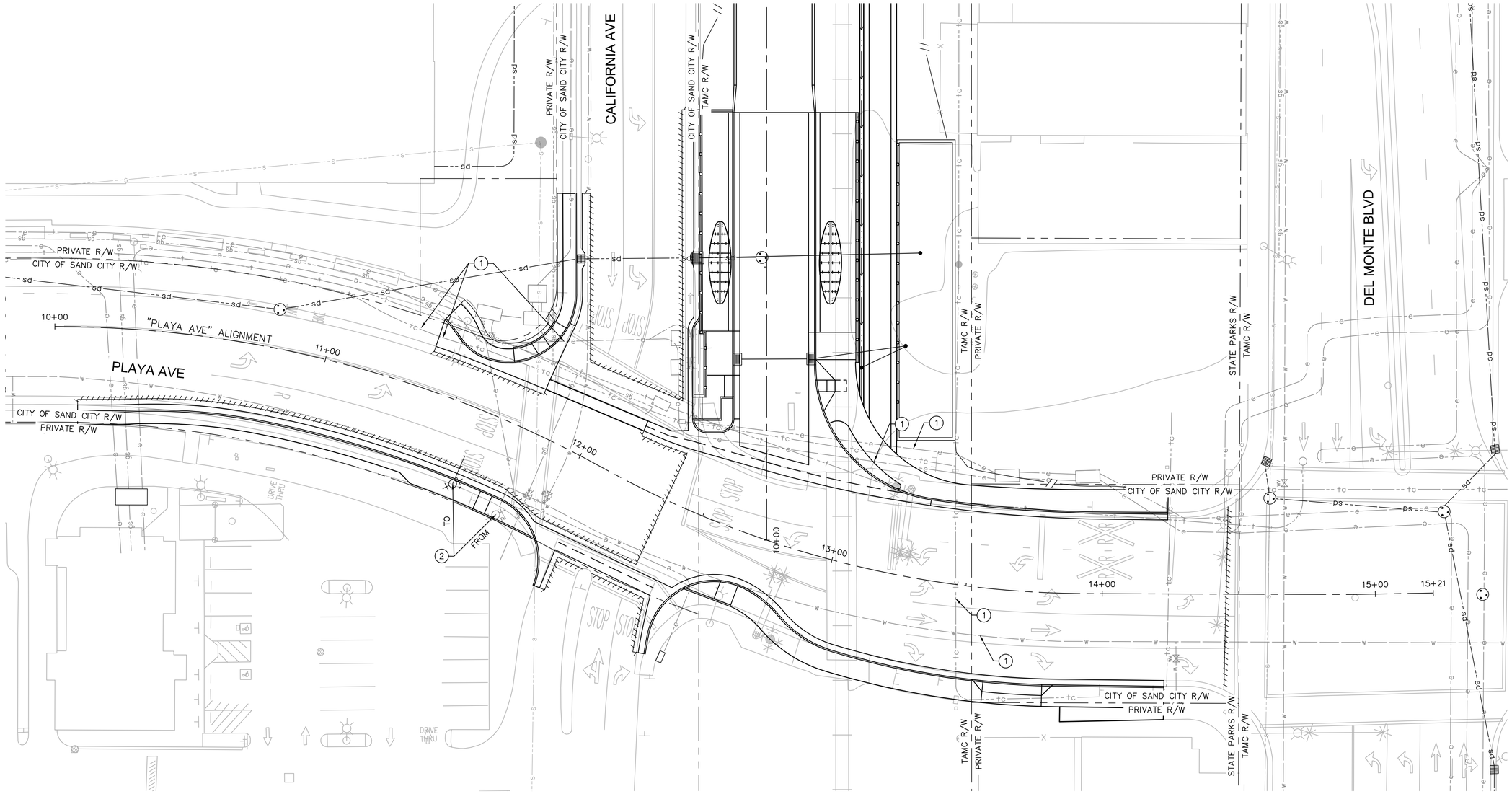

UTILITY NOTES

1. POSITIVELY IDENTIFY UTILITY
2. RELOCATE UTILITY
3. REMOVE ABANDONED UTILITY

LEGEND:

- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- MANHOLE
- UTILITY POLE

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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SURF! BUSWAY AND BRT PROJECT
PROPOSED PLAYA–CALIFORNIA UTILITIES SHEET 1 OF 2
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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CONTRACT NO.	22-03	
SHEET NO.	UP–101	
SHEET 390 OF 617		

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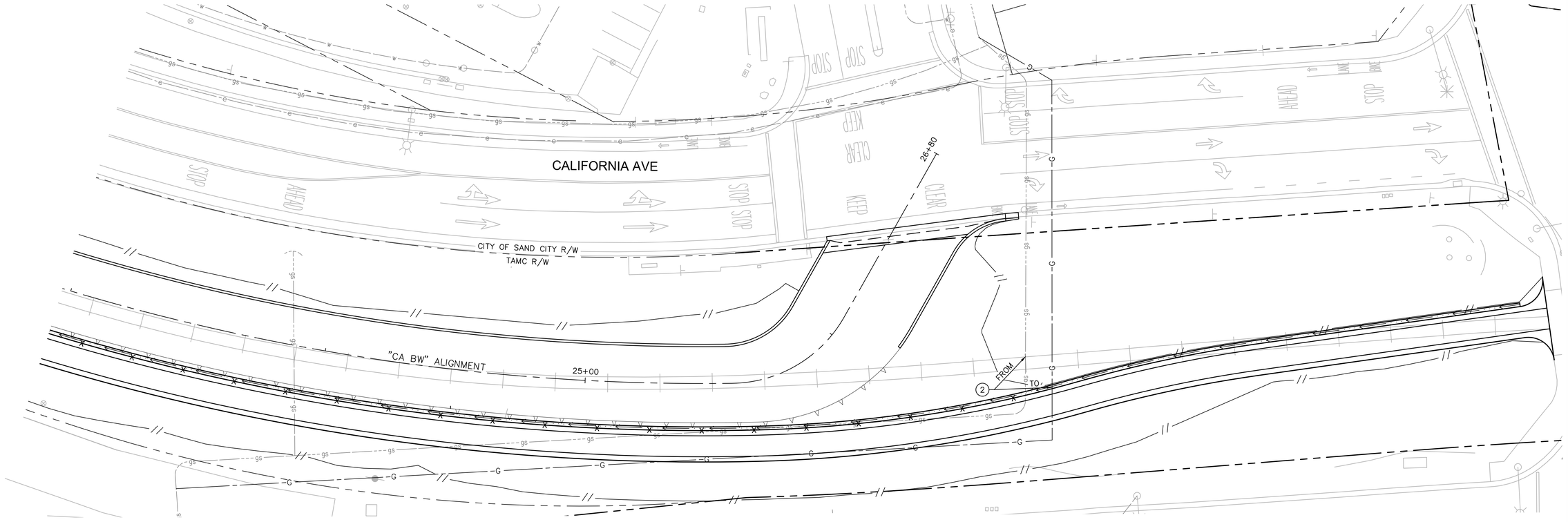

UTILITY NOTES

(2) RELOCATE UTILITY

LEGEND:

- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- MANHOLE
- UTILITY POLE

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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SURF! BUSWAY AND BRT PROJECT
PROPOSED PLAYA–CALIFORNIA UTILITIES SHEET 2 OF 2
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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CONTRACT NO.	22-03	

SHEET NO.
UP–102
SHEET 391 OF 617

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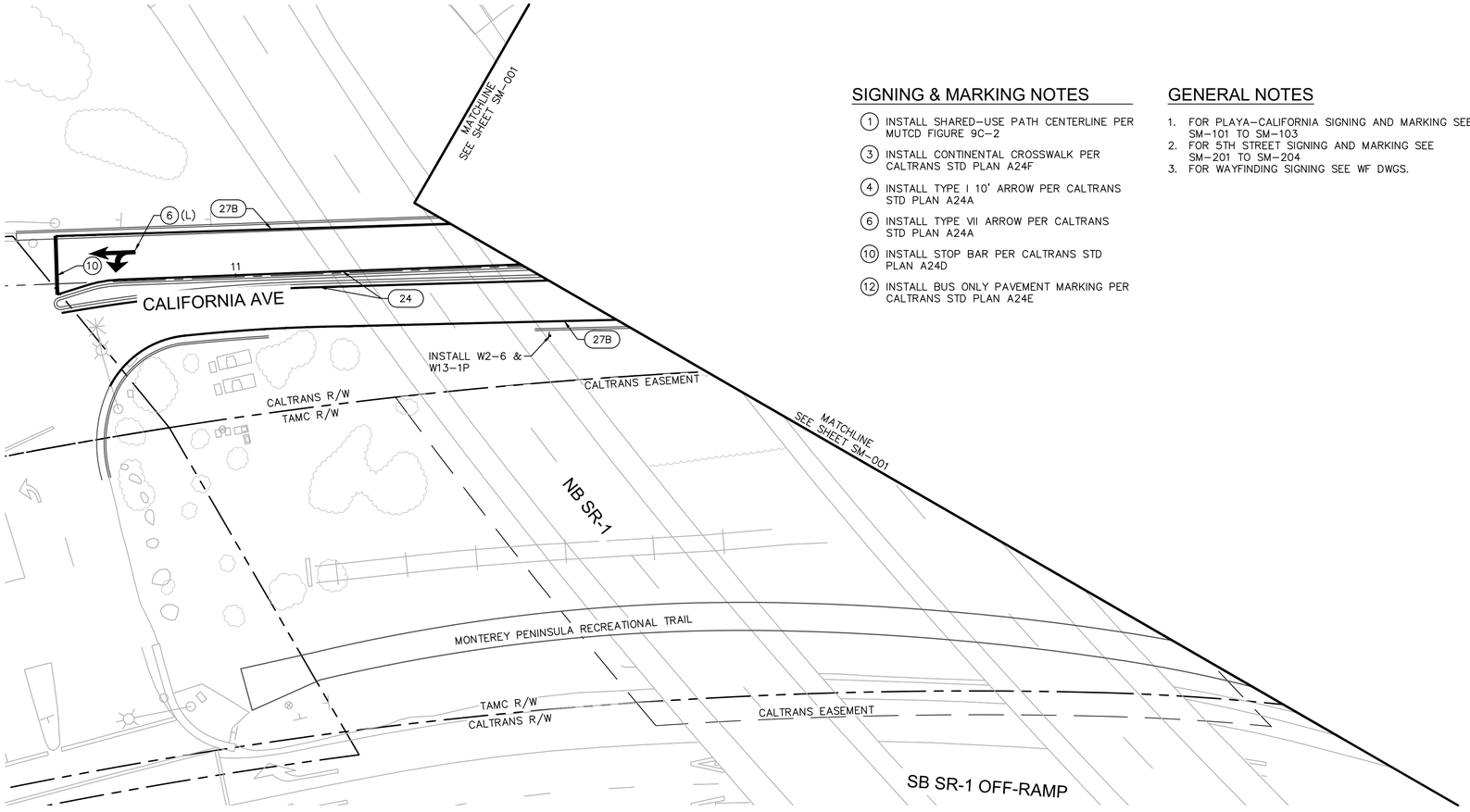

SIGNING & MARKING NOTES

1. INSTALL SHARED-USE PATH CENTERLINE PER MUTCD FIGURE 9C-2
3. INSTALL CONTINENTAL CROSSWALK PER CALTRANS STD PLAN A24F
4. INSTALL TYPE I 10' ARROW PER CALTRANS STD PLAN A24A
6. INSTALL TYPE VII ARROW PER CALTRANS STD PLAN A24A
10. INSTALL STOP BAR PER CALTRANS STD PLAN A24D
12. INSTALL BUS ONLY PAVEMENT MARKING PER CALTRANS STD PLAN A24E

GENERAL NOTES

1. FOR PLAYA-CALIFORNIA SIGNING AND MARKING SEE SM-101 TO SM-103
2. FOR 5TH STREET SIGNING AND MARKING SEE SM-201 TO SM-204
3. FOR WAYFINDING SIGNING SEE WF DWGS.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
SIGNING & MARKING SHEET 1 OF 25
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	

SHEET NO.
SM-000
SHEET 399 OF 617

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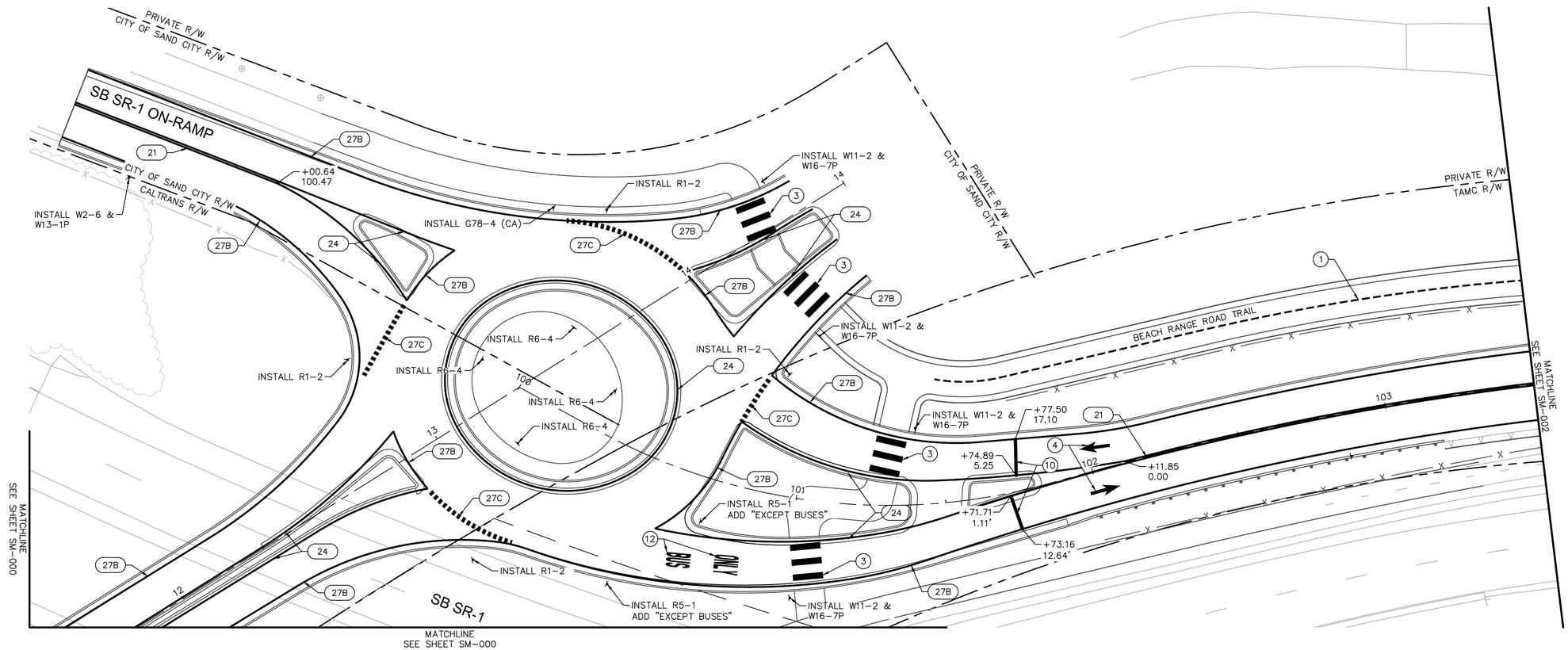

PLAN

SIGNING & MARKING NOTES

(1) INSTALL SHARED-USE PATH CENTERLINE PER MUTCD FIGURE 9C-2

(3) INSTALL CONTINENTAL CROSSWALK PER CALTRANS STD PLAN A24F

(4) INSTALL TYPE I 10' ARROW PER CALTRANS STD PLAN A24A

(6) INSTALL TYPE VII ARROW PER CALTRANS STD PLAN A24A

(10) INSTALL STOP BAR PER CALTRANS STD PLAN A24D

(12) INSTALL BUS ONLY PAVEMENT MARKING PER CALTRANS STD PLAN A24E

GENERAL NOTES

1. FOR PLAYA-CALIFORNIA SIGNING AND MARKING SEE SM-101 TO SM-103
2. FOR 5TH STREET SIGNING AND MARKING SEE SM-201 TO SM-204
3. FOR WAYFINDING SIGNING SEE WF DWGS.

GRAPHIC SCALE IN FEET
0 ## ## ##

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SURF! BUSWAY AND BRT PROJECT
SIGNING & MARKING SHEET 2 OF 25
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	

SHEET NO.
SM-001
SHEET 400 OF 617

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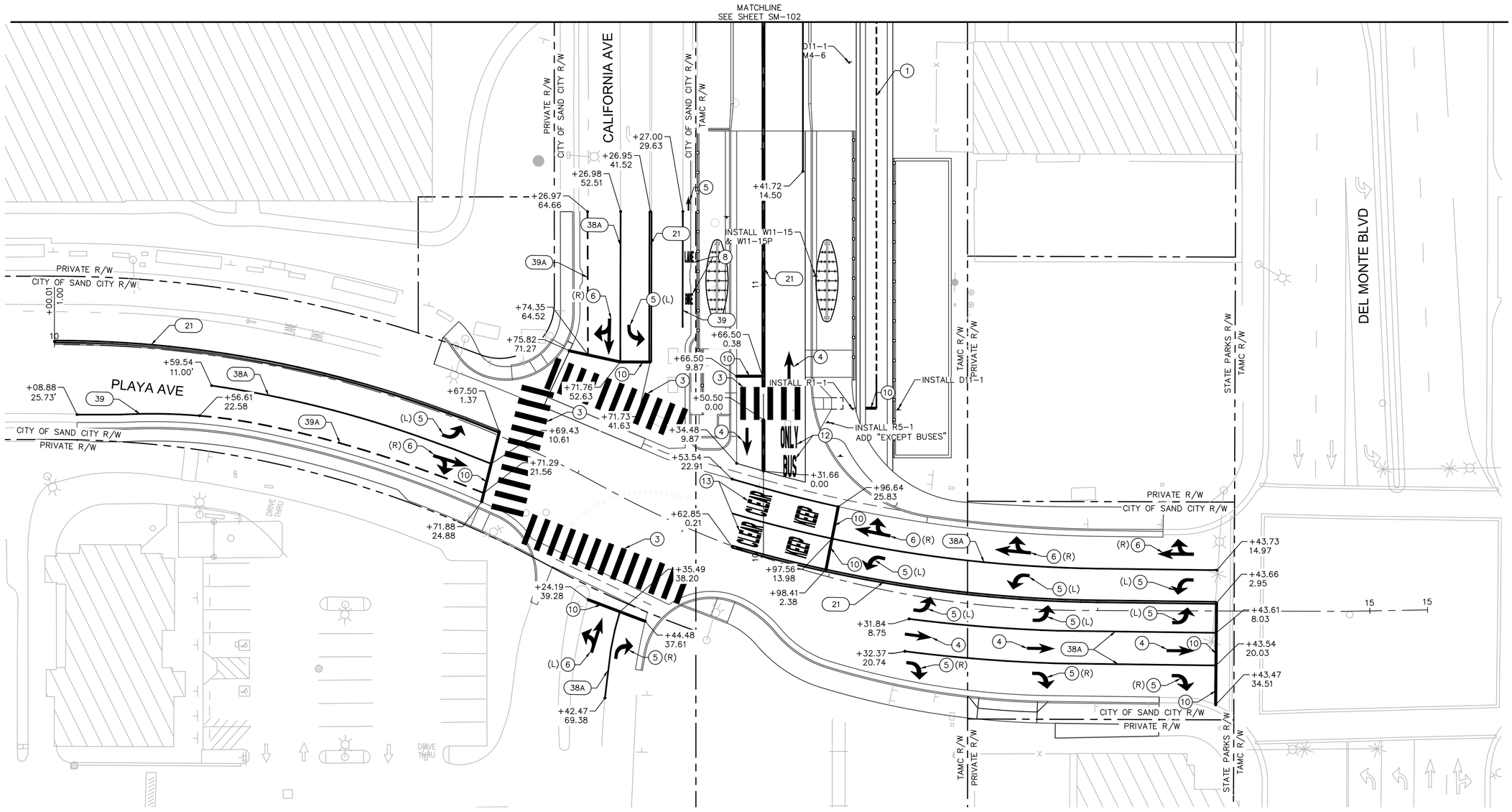

SIGNING & MARKING NOTES

1. INSTALL SHARED–USE PATH CENTERLINE PER MUTCD FIGURE 9C–2
3. INSTALL CONTINENTAL CROSSWALK PER CALTRANS STD PLAN A24F
4. INSTALL TYPE I 10' ARROW PER CALTRANS STD PLAN A24A
5. INSTALL TYPE IV ARROW PER CALTRANS STD PLAN A24A
6. INSTALL TYPE VII ARROW PER CALTRANS STD PLAN A24A
8. INSTALL BIKE LANE PAVEMENT MARKING PER CALTRANS STD PLAN A24D
10. INSTALL LIMIT LINE (STOP LINE) PER CALTRANS STD PLAN A24E
12. INSTALL BUS ONLY PAVEMENT MARKING PER CALTRANS STD PLAN A24E
13. INSTALL KEEP CLEAR PAVEMENT MARKING PER CALTRANS STD PLAN A24E

GENERAL NOTES

1. SEE SHEET SM–001 TO SM–024 FOR BUSWAY SIGNING AND MARKING
2. FOR WAYFINDING SIGNING SEE WF DWGS.

PLAN

GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
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SURF! BUSWAY AND BRT PROJECT
PLAYA–CALIFORNIA SIGNING & MARKING SHEET 1 OF 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
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CHECKED	PM	

CONTRACT NO. 22–03

SHEET NO.
SM–101
SHEET 424 OF 617

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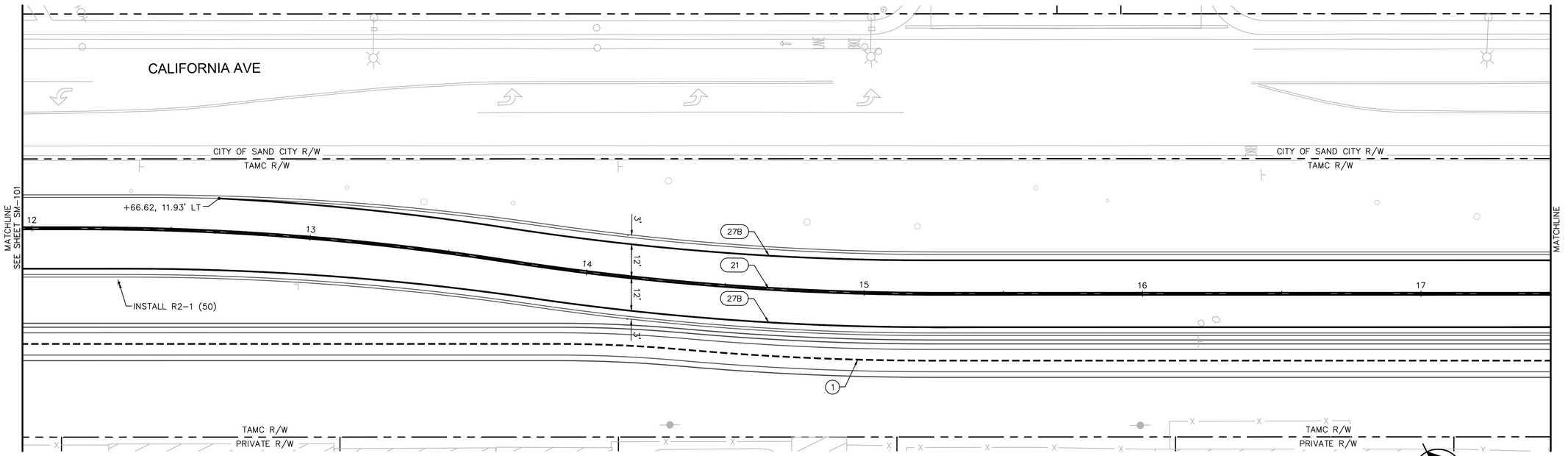
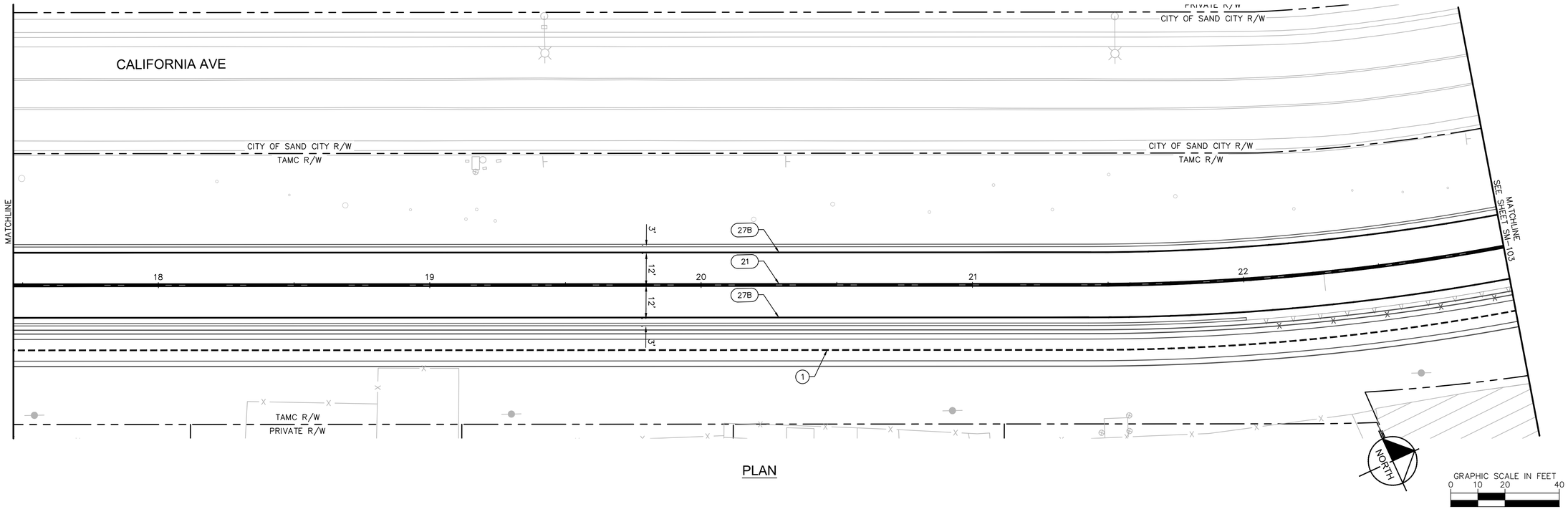


SIGNING & MARKING NOTES

PLAN

GENERAL NOTES

1. SEE SHEET SM-001 TO SM-024 FOR BUSWAY SIGNING AND MARKING
2. FOR WAYFINDING SIGNING SEE WF DWGS.



PLAN

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SURF! BUSWAY AND BRT PROJECT

PLAYA-CALIFORNIA SIGNING & MARKING SHEET 2 OF 3

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.

SM-102

SHEET 425 OF 617

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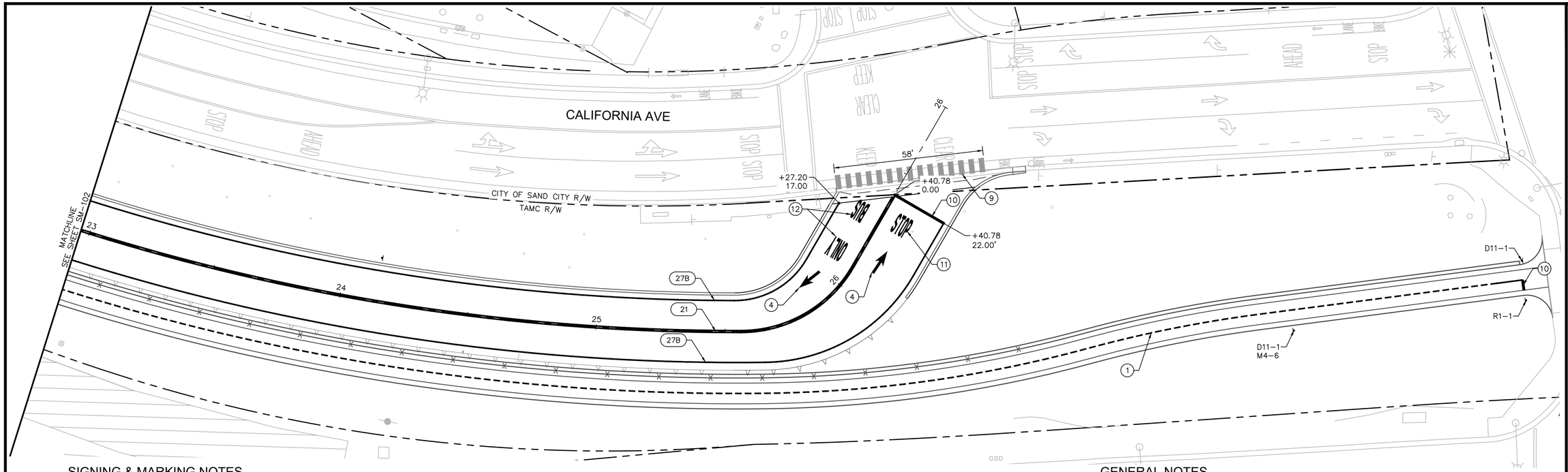

PLAN

SIGNING & MARKING NOTES

(4) INSTALL TYPE I 10' ARROW PER CALTRANS STD PLAN A24A

(9) INSTALL GREEN BIKE LANE PAVEMENT MARKING

(10) INSTALL STOP BAR PER CALTRANS STD PLAN A24D

(11) INSTALL STOP PAVEMENT MARKING PER CALTRANS STD PLAN A24D

(12) INSTALL BUS ONLY PAVEMENT MARKING PER CALTRANS STD PLAN A24E

GENERAL NOTES

1. SEE SHEET SM-001 TO SM-024 FOR BUSWAY SIGNING AND MARKING
2. FOR WAYFINDING SIGNING SEE WF DWGS.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA SIGNING & MARKING SHEET 3 OF 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
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CONTRACT NO.	22-03	
SHEET NO.	SM-103	
SHEET 426 OF 617		

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TREE DISPOSITION NOTES

A. THE LIMITS OF ALL TREE PROTECTION ZONES SHALL BE STAKED IN THE FIELD. A 6'–0" HIGH CHAIN LINK FENCE WITH POSTS SUNK INTO THE GROUND SHALL BE ERECTED TO ENCLOSE THE TREE PROTECTION ZONE.

B. THE TREE PROTECTION ZONE (TPZ) IS DEFINED AS THE LARGER OF THE DRIP LINE OF THE TREE OR THE DISTANCE FROM THE TRUNK EQUAL TO ONE (1) FOOT FOR EACH INCH OF TRUNK DIAMETER MEASURED AT FOUR AND A HALF (4.5) FEET ABOVE EXISTING GRADE (AKA DBH; DIAMETER AT BREAST HEIGHT).

C. FENCES ARE TO REMAIN UNTIL ALL SITE WORK HAS BEEN COMPLETED. FENCES MAY NOT BE RELOCATED OR MOVED WITHOUT THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT.

D. STRUCTURES AND UNDERGROUND FEATURES TO BE REMOVED WITHIN THE TREE PROTECTION ZONE SHALL USE THE SMALLEST EQUIPMENT POSSIBLE, AND OPERATE FROM OUTSIDE THE TREE PROTECTION ZONE.

E. IF TEMPORARY HAUL OR ACCESS ROADS MUST PASS OVER THE ROOT AREA OF TREES TO BE RETAINED, A ROAD BED OF 6" OF MULCH OR GRAVEL SHALL BE CREATED TO PROTECT THE SOIL. THE ROAD BED MATERIAL SHALL BE REPLENISHED AS NECESSARY TO MAINTAIN A 6" DEPTH.

F. CONSTRUCTION TRAILERS AND TRAFFIC AND STORAGE AREAS MUST REMAIN OUTSIDE FENCED AREAS AT ALL TIMES.

G. NO MATERIALS, EQUIPMENT, WASTE OR WASHOUT WATER MAY BE DEPOSITED, STORED, OR PARKED WITHIN THE TREE PROTECTION ZONE. NO DEBRIS OR GARBAGE MAY BE DUMPED OR BURIED WITHIN THE TREE PROTECTION ZONE.

H. ANY GRADING, CONSTRUCTION, DEMOLITION OR OTHER WORK THAT IS EXPECTED TO ENCOUNTER TREE ROOTS, MUST BE MONITORED BY THE LANDSCAPE ARCHITECT.

I. ALL UNDERGROUND UTILITIES AND DRAIN OR IRRIGATION LINES SHALL BE ROUTED OUTSIDE THE TREE PROTECTION ZONE. IF REROUTING IS NOT POSSIBLE, TRENCHING WITHIN THE TPZ IS TO BE PERFORMED BY AIRSPADE UNDER THE SUPERVISION AND DIRECTION OF A LICENSED ARBORIST. IF AT ANY TIME, TWENTY–FIVE (25) PERCENT OF THE AREA WITHIN THE ROOT PROTECTION ZONE WOULD BE SEPARATED FROM THE TREE BY A TRENCH, THE LINE SHALL BE LOCATED BY BORING.

J. NO ROOTS LARGER THAN ONE INCH (1.5') DIAMETER SHALL BE CUT UNLESS REVIEWED AND APPROVED BY LICENSED ARBORIST. ALL SMALLER ROOTS THAT REQUIRE CUTTING SHALL BE CUT WITH PRUNING SAWS (NO TRENCHES OR BACKHOES). CUTS SHALL BE MADE FLUSH WITH THE SIDE OF THE EXCAVATION.

K. MINOR ROOT DAMAGE DURING GRADING OR CONSTRUCTION SHALL BE PRUNED TO SOUND TISSUE AND CUT CLEANLY WITH A SAW. CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT IMMEDIATELY IN THE EVENT OF EXTENSIVE ROOT DAMAGE.

L. ADDITIONAL TREE PRUNING REQUIRED FOR CLEARANCE DURING CONSTRUCTION MUST BE PERFORMED BY A QUALIFIED ARBORIST OR AT THE DIRECTION OF THE LANDSCAPE ARCHITECT AND NOT BY CONSTRUCTION PERSONNEL.

M. EROSION CONTROL DEVICES SUCH AS SILT FENCING, DEBRIS BASINS, AND WATER DIVERSION STRUCTURES SHALL BE INSTALLED TO PREVENT SILTATION AND/OR EROSION WITHIN THE TREE PROTECTION ZONE.

N. SPOIL FROM TRENCHES OR OTHER EXCAVATIONS SHALL NOT BE PLACED WITHIN THE TREE PROTECTION ZONE, EITHER TEMPORARILY OR PERMANENTLY.

O. IF INJURY SHOULD OCCUR TO ANY TREE DURING CONSTRUCTION, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IN ORDER TO RECOMMEND EVALUATION BY A LICENSED ARBORIST. PROCUREMENT OF A LICENSED ARBORIST SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

TREE REMOVAL NOTES

1. TREE REMOVAL – NO PERSON SHALL CUT, TRIM, PRUNE, PLANT, REMOVE, SPRAY, OR IN ANY OTHER MANNER INTERFERE WITH ANY STREET TREE WITHOUT FIRST HAVING OBTAINED THE PROPER PERMITS.
2. OBTAINING WRITTEN PERMISSION TO CUT, TRIM OR PRUNE A STREET TREE SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE. ANY PRIVATE BUSINESS PERFORMING CUTTING, TRIMMING OR PRUNING OPERATIONS ON STREET TREES SHALL EMPLOY AN ISA CERTIFIED ARBORIST ON STAFF AND SHALL PERFORM ALL WORK ON STREET TREES IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.
3. ALL ATTEMPTS SHALL BE MADE TO PROTECT THE EXISTING TREES TO REMAIN ON SITE.
4. TREE PROTECTION FENCING SHALL BE USED TO PROTECT EXISTING TREES ON SITE SLATED TO REMAIN.
5. PRIOR TO AND DURING LAND CLEARING, INCLUDING GRUBBING, ALL TREES TO BE REMOVED SHALL BE CLEARLY MARKED WITH RED SURVEY RIBBONS AT 36 INCHES MINIMUM ABOVE GRADE.
6. CONTRACTOR SHALL REMOVE ALL TREES ONLY AFTER THE TREE PROTECTION FENCING IS INSTALLED.
7. ALL WOOD AND STUMPS FROM REMOVALS SHALL BE HAULED FROM THE SITE THE SAME DAY, EXCEPT FOR TOPS. ALL TOPS ARE TO BE MULCHED AND STOCKPILED OR HAULED DIRECTLY TO MULCHED AREAS FOR RELOCATED TREES IF SCHEDULING PERMITS. TOPS SHALL BE CHIPPED AND PLACED IN THE TREE PROTECTION ZONE TO A DEPTH OF THREE (3) INCHES. ALL EXCESS WOOD CHIPS SHOULD BE HAULED OFF SITE AFTER TRANSPLANTING IS COMPLETE.
8. BURN PITS ARE PROHIBITED.
9. TREES TO BE REMOVED THAT HAVE BRANCHES EXTENDING INTO THE CANOPY OF TREES TO REMAIN SHALL BE REMOVED BY THE CONSTRUCTION CONTRACTORS. THE CONTRACTOR SHALL REMOVE THE TREE IN A MANNER THAT CAUSES NO DAMAGE TO THE TREES AND UNDERSTORY VEGETATION TO REMAIN.

TREE PREPARATION NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MEET THE OWNER OR OWNER'S REPRESENTATIVE AND IDENTIFY TREES WHICH ARE TO BE PROTECTED AS WELL AS THOSE WHICH ARE TO BE REMOVED. DO NOT PROCEED WITHOUT A CLEAR UNDERSTANDING OF EXISTING CONDITIONS TO BE PRESERVED.
2. TREES TO REMAIN SHALL BE PROTECTED BY THE INSTALLATION OF FENCING AT THE DRIPLINE OF THE TREE CANOPY OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE. FENCING SHALL BE INSTALLED PRIOR TO CONSTRUCTION. FENCING SHALL BE SUFFICIENT TO PREVENT CONSTRUCTION EQUIPMENT FROM COMPACTING SOIL AT THE ROOT ZONE AND DAMAGING TRUNKS AND/OR BRANCHES.
3. IF, IN ORDER TO PERFORM EXCAVATION WORK, IT BECOMES NECESSARY TO CUT ROOTS OF PLANTS TO BE SAVED, SUCH ROOTS SHOULD BE CUT NEATLY, COVERED WITH BURLAP AND KEPT MOIST UNTIL ROOTS ARE BACK FILLED.
4. TREE REMOVAL SHALL INCLUDE THE FILLING, CUTTING, GRUBBING OUT OF ENTIRE ROOTBALLS AND SATISFACTORY OFF–SITE DISPOSAL OF TREES, SHRUBS, STUMPS, VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED BY THE REMOVAL OPERATIONS.
5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE INSIDE AND OUTSIDE THE PROPERTY LINE DUE TO HIS OR HER CONTRACT OPERATIONS.
6. ALL REFUSE, DEBRIS, UNSUITABLE MATERIALS AND MISCELLANEOUS MATERIALS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF OFF–SITE BY THE CONTRACTOR.
7. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.

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TREE DISPOSITION LEGEND

TREES	CODE	QTY	BOTANICAL / COMMON NAME
	TR	132	EXISTING TREE TO BE REMOVED
	XTR	60	EXISTING TREE TO REMAIN / PROTECT IN PLACE

TREE DISPOSITION SCHEDULE

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)			Total DBH (in)	Dripline (ft)	Health	Recommendation	Jurisdiction
1	*Hesperocyparis macrocarpa*	Monterey Cypress	35			35	44	Fair	Potential Remove	City of Marina
2	*Hesperocyparis macrocarpa*	Monterey Cypress	35			35	44	Poor	Potential Remove	City of Marina
3	*Hesperocyparis macrocarpa*	Monterey Cypress	15			15	19	Poor	Retain	City of Marina
4	*Acacia* sp.	Acacia	25			25	31	Fair	Remove	City of Marina
5	*Hesperocyparis macrocarpa*	Monterey Cypress	40	12		42	52	Fair	Potential Remove	City of Marina
615	*Hesperocyparis macrocarpa*	Monterey Cypress	13	14	8	21	26	Fair	Remove	City of Marina
616	*Hesperocyparis macrocarpa*	Monterey Cypress	12			12	15	Fair	Remove	City of Marina
617	*Hesperocyparis macrocarpa*	Monterey Cypress	17			17	21	Fair	Remove	City of Marina
618	*Eucalyptus sp.*	Eucalyptus	44			44	55	Fair	Remove	City of Marina
619	*Eucalyptus sp.*	Eucalyptus	20	7	6	22	28	Fair	Remove	City of Marina
620	*Eucalyptus sp.*	Eucalyptus	55	12		56	70	Fair	Remove	City of Marina
621	*Eucalyptus sp.*	Eucalyptus	48			48	60	Fair	Remove	City of Marina
622	*Eucalyptus sp.*	Eucalyptus	11			11	14	Fair	Remove	City of Marina
623	*Eucalyptus sp.*	Eucalyptus	12			12	15	Fair	Remove	City of Marina
624	*Eucalyptus sp.*	Eucalyptus	38			38	48	Fair	Remove	City of Marina
625	*Eucalyptus sp.*	Eucalyptus	56			56	70	Fair	Remove	City of Marina
626	*Eucalyptus sp.*	Eucalyptus	13			13	16	Fair	Remove	City of Marina
627	*Eucalyptus sp.*	Eucalyptus	28			28	35	Fair	Remove	City of Marina
628	*Eucalyptus sp.*	Eucalyptus	28			28	35	Fair	Remove	City of Marina
629	*Eucalyptus sp.*	Eucalyptus	16			16	20	Fair	Remove	City of Marina
630	*Eucalyptus sp.*	Eucalyptus	31			31	39	Fair	Remove	City of Marina
631	*Eucalyptus sp.*	Eucalyptus	32			32	40	Fair	Remove	City of Marina
632	*Eucalyptus sp.*	Eucalyptus	37			37	46	Fair	Remove	City of Marina
633	*Eucalyptus sp.*	Eucalyptus	28			28	35	Fair	Remove	City of Marina
634	*Eucalyptus sp.*	Eucalyptus	37			37	46	Fair	Remove	City of Marina
635	*Eucalyptus sp.*	Eucalyptus	28			28	35	Fair	Remove	City of Marina
636	*Eucalyptus sp.*	Eucalyptus	38			38	48	Fair	Remove	City of Marina
637	*Pinus radiata*	Monterey Pine	10			10	13	Poor	Remove	City of Marina
638	*Pinus radiata*	Monterey Pine	7			7	9	Poor	Remove	City of Marina
639	*Pinus radiata*	Monterey Pine	8			8	10	Poor	Remove	City of Marina
640	*Pinus radiata*	Monterey Pine	7			7	9	Poor	Remove	City of Marina
641	*Pinus torreyana*	Torrey Pine	7	9		11	14	Fair	Remove	City of Marina
642	*Pinus torreyana*	Torrey Pine	7			7	9	Fair	Remove	City of Marina
643	*Eucalyptus sp.*	Eucalyptus	6			6	8	Fair	Remove	City of Marina
644	*Pinus torreyana*	Torrey Pine	7			7	9	Fair	Remove	City of Marina
645	*Pinus radiata*	Monterey Pine	9			9	11	Fair	Remove	City of Marina
646	*Pinus radiata*	Monterey Pine	6			6	8	Fair	Remove	City of Marina
647	*Pinus radiata*	Monterey Pine	11			11	14	Fair	Remove	City of Marina
648	*Pinus radiata*	Monterey Pine	8			8	10	Poor	Remove	City of Marina
649	*Pinus radiata*	Monterey Pine	6			6	8	Poor	Remove	City of Marina
650	*Pinus radiata*	Monterey Pine	12			12	15	Fair	Remove	City of Marina
651	*Pinus radiata*	Monterey Pine	15			15	19	Fair	Remove	City of Marina
652	*Pinus radiata*	Monterey Pine	10			10	13	Fair	Remove	City of Marina
653	*Pinus radiata*	Monterey Pine	11			11	14	Fair	Remove	City of Marina
654	*Pinus radiata*	Monterey Pine	12			12	15	Fair	Remove	City of Marina

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
TREE DISPOSITION PLAN SHEET 1 OF 32
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023
DRAWN	CG
DESIGNED	CG
CHECKED	MM
CONTRACT NO.	22-03
SHEET NO.	431

SHEET 431 OF 617

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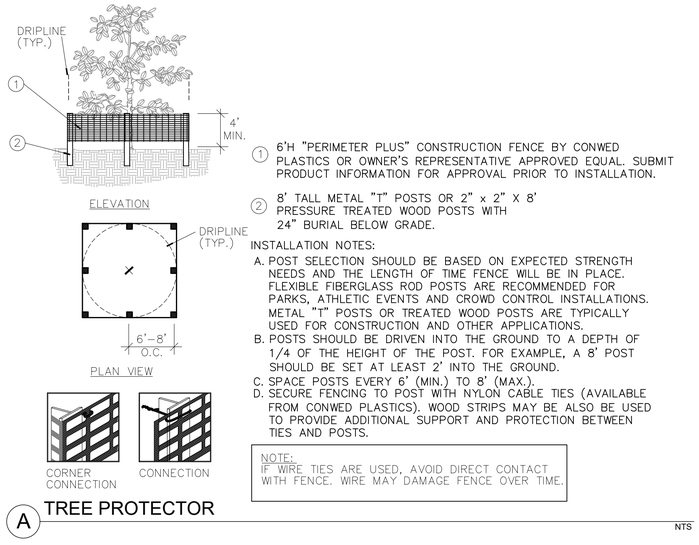
TREE DISPOSITION SCHEDULE (CONTINUED)

Tree ID	Scientific Name	Common Name	Individual Stem DBH (in)								Total DBH (in)	Dripline (ft)	Health	Recommendation	Jurisdiction
655	*Pinus radiata*	Monterey Pine	20	28							34	43	Fair	Remove	City of Marina
656	*Pinus radiata*	Monterey Pine	7								7	9	Fair	Remove	City of Marina
657	*Pinus radiata*	Monterey Pine	23								23	29	Fair	Remove	City of Marina
658	*Pinus radiata*	Monterey Pine	19								19	24	Fair	Remove	City of Marina
672	*Pinus radiata*	Monterey Pine	13								13	16	Fair	Retain	City of Marina
673	*Pinus torreyana*	Torrey Pine	9								9	11	Fair	Remove	City of Marina
674	*Pinus radiata*	Monterey Pine	15								15	19	Fair	Potential Remove	City of Marina
675	*Pinus radiata*	Monterey Pine	10								10	13	Fair	Retain	City of Marina
676	*Pinus radiata*	Monterey Pine	10								10	13	Fair	Retain	City of Marina
677	*Pinus radiata*	Monterey Pine	14								14	18	Fair	Potential Remove	City of Marina
678	*Pinus radiata*	Monterey Pine	13								13	16	Fair	Potential Remove	City of Marina
745	*Hesperocyparis macrocarpa*	Monterey Cypress	16								16	20	Fair	Potential Remove	City of Marina
761	*Pinus torreyana*	Torrey Pine	6								6	8	Good	Retain	City of Marina
762	*Pinus torreyana*	Torrey Pine	8								8	10	Fair	Retain	City of Marina
771	*Hesperocyparis macrocarpa*	Monterey Cypress	17								17	21	Fair	Potential Remove	City of Marina
772	*Hesperocyparis macrocarpa*	Monterey Cypress	8								8	10	Fair	Retain	City of Marina
773	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Remove	City of Marina
774	*Hesperocyparis macrocarpa*	Monterey Cypress	13								13	16	Fair	Potential Remove	City of Marina
776	*Hesperocyparis macrocarpa*	Monterey Cypress	7								7	9	Fair	Retain	City of Marina
777	*Hesperocyparis macrocarpa*	Monterey Cypress	17								17	21	Fair	Retain	City of Marina
778	*Hesperocyparis macrocarpa*	Monterey Cypress	20								20	25	Fair	Retain	City of Marina
779	*Hesperocyparis macrocarpa*	Monterey Cypress	30								30	38	Fair	Potential Remove	City of Marina
780	*Hesperocyparis macrocarpa*	Monterey Cypress	46								46	58	Fair	Potential Remove	City of Marina
781	*Hesperocyparis macrocarpa*	Monterey Cypress	18	18							25	32	Fair	Retain	City of Marina
782	*Pinus radiata*	Monterey Pine	34								34	43	Poor	Remove	City of Marina
783	*Pinus radiata*	Monterey Pine	6								6	8	Good	Remove	City of Marina
784	*Quercus agrifolia*	Coast Live Oak	7								7	9	Fair	Remove	City of Marina
785	*Pinus radiata*	Monterey Pine	15								15	19	Fair	Remove	City of Marina
786	*Pinus radiata*	Monterey Pine	6								6	8	Fair	Remove	City of Marina
787	*Hesperocyparis macrocarpa*	Monterey Cypress	13								13	16	Fair	Remove	City of Marina
788	*Pinus radiata*	Monterey Pine	7								7	9	Fair	Remove	City of Marina
789	*Pinus radiata*	Monterey Pine	11								11	14	Fair	Remove	City of Marina
790	*Pinus torreyana*	Torrey Pine	11								11	14	Fair	Remove	City of Marina
1051	*Pinus torreyana*	Torrey Pine	11								11	14	Fair	Retain	City of Marina
1052	*Hesperocyparis macrocarpa*	Monterey Cypress	30								30	38	Fair	Potential Remove	City of Marina
1053	*Hesperocyparis macrocarpa*	Monterey Cypress	6	6							8	11	Fair	Retain	City of Marina
1054	*Eucalyptus* sp.	Eucalyptus	32								32	40	Fair	Remove	City of Marina
1055	*Hesperocyparis macrocarpa*	Monterey Cypress	22								22	28	Good	Remove	City of Marina
1056	*Hesperocyparis macrocarpa*	Monterey Cypress	15								15	19	Fair	Remove	City of Marina
1057	*Hesperocyparis macrocarpa*	Monterey Cypress	13								13	16	Fair	Remove	City of Marina
1058	*Hesperocyparis macrocarpa*	Monterey Cypress	26								26	33	Good	Remove	City of Marina
1059	*Hesperocyparis macrocarpa*	Monterey Cypress	16								16	20	Good	Remove	City of Marina
1060	*Hesperocyparis macrocarpa*	Monterey Cypress	24	22							33	41	Fair	Remove	City of Marina
1061	*Hesperocyparis macrocarpa*	Monterey Cypress	9	15							17	22	Fair	Remove	City of Marina
1062	*Hesperocyparis macrocarpa*	Monterey Cypress	18								18	23	Fair	Remove	City of Marina
1063	*Hesperocyparis macrocarpa*	Monterey Cypress	52								52	65	Fair	Remove	City of Marina
1064	*Hesperocyparis macrocarpa*	Monterey Cypress	14	17	13	19	21	10	15	8	43	54	Good	Remove	City of Marina
1065	*Hesperocyparis macrocarpa*	Monterey Cypress	19								19	24	Fair	Remove	City of Marina
1066	*Hesperocyparis macrocarpa*	Monterey Cypress	6								6	8	Fair	Remove	City of Marina
1067	*Hesperocyparis macrocarpa*	Monterey Cypress	6								6	8	Fair	Remove	City of Marina
1068	*Hesperocyparis macrocarpa*	Monterey Cypress	9								9	11	Fair	Remove	City of Marina
1069	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Remove	City of Marina
1070	*Hesperocyparis macrocarpa*	Monterey Cypress	9								9	11	Fair	Remove	City of Marina
1071	*Hesperocyparis macrocarpa*	Monterey Cypress	8								8	10	Fair	Remove	City of Marina
1072	*Hesperocyparis macrocarpa*	Monterey Cypress	14	25	15	15	9	10			38	48	Good	Remove	City of Marina
1073	*Hesperocyparis macrocarpa*	Monterey Cypress	22	20	15						33	42	Fair	Remove	City of Marina
1074	*Hesperocyparis macrocarpa*	Monterey Cypress	12	12	10	6	9				22	28	Fair	Remove	City of Marina
1075	*Hesperocyparis macrocarpa*	Monterey Cypress	42								42	53	Fair	Potential Remove	City of Marina
1809	*Hesperocyparis macrocarpa*	Monterey Cypress	41								41	51	Poor	Potential Remove	City of Marina
1820	*Eucalyptus* sp.	Eucalyptus	46								46	58	Fair	Remove	City of Marina
1821	*Eucalyptus* sp.	Eucalyptus	18	25	10						32	40	Fair	Remove	City of Marina
1822	*Eucalyptus* sp.	Eucalyptus	10								10	13	Fair	Remove	City of Marina
1823	*Eucalyptus* sp.	Eucalyptus	8								8	10	Fair	Remove	City of Marina
1846	*Eucalyptus* sp.	Eucalyptus	16	6							17	21	Fair	Retain	City of Marina
1847	*Eucalyptus* sp.	Eucalyptus	14								14	18	Fair	Potential Remove	City of Marina
1848	*Eucalyptus* sp.	Eucalyptus	16								16	20	Fair	Potential Remove	City of Marina
1849	*Eucalyptus* sp.	Eucalyptus	18								18	23	Fair	Potential Remove	City of Marina
1850	*Eucalyptus* sp.	Eucalyptus	20	32	12	10					41	51	Fair	Potential Remove	City of Marina
1851	*Hesperocyparis macrocarpa*	Monterey Cypress	42								42	53	Good	Remove	City of Marina
1852	*Hesperocyparis macrocarpa*	Monterey Cypress	22								22	28	Fair	Remove	City of Marina
1853	*Hesperocyparis macrocarpa*	Monterey Cypress	22								22	28	Good	Remove	City of Marina
1854	*Hesperocyparis macrocarpa*	Monterey Cypress	28								28	35	Fair	Remove	City of Marina
1855	*Hesperocyparis macrocarpa*	Monterey Cypress	30								30	38	Fair	Remove	City of Marina
1856	*Hesperocyparis macrocarpa*	Monterey Cypress	7	7	36	20					42	53	Fair	Retain	City of Marina
1858	*Hesperocyparis macrocarpa*	Monterey Cypress	7	10							12	15	Fair	Potential Remove	City of Marina
1859	*Hesperocyparis macrocarpa*	Monterey Cypress	32								32	40	Fair	Remove	City of Marina
1860	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Good	Remove	City of Marina
1861	*Hesperocyparis macrocarpa*	Monterey Cypress	6	13							14	18	Fair	Potential Remove	City of Marina
1862	*Hesperocyparis macrocarpa*	Monterey Cypress	16								16	20	Fair	Potential Remove	City of Marina
1863	*Hesperocyparis macrocarpa*	Monterey Cypress	15								15	19	Poor	Remove	City of Marina
1864	*Hesperocyparis macrocarpa*	Monterey Cypress	8								8	10	Good	Retain	City of Marina
1865	*Hesperocyparis macrocarpa*	Monterey Cypress	11								11	14	Good	Retain	City of Marina
1866	*Hesperocyparis macrocarpa*	Monterey Cypress	9								9	11	Fair	Remove	City of Marina
1868	*Pinus radiata*	Monterey Pine	18								18	23	Fair	Retain	City of Marina
1869	*Hesperocyparis macrocarpa*	Monterey Cypress	9								9	11	Fair	Retain	City of Marina
1870	*Hesperocyparis macrocarpa*	Monterey Cypress	10								10	13	Fair	Remove	City of Marina
1871	*Hesperocyparis macrocarpa*	Monterey Cypress	8								8	10	Fair	Remove	City of Marina
1872	*Hesperocyparis macrocarpa*	Monterey Cypress	10								10	13	Fair	Remove	City of Marina
1873	*Hesperocyparis macrocarpa*	Monterey Cypress	9								9	11	Poor	Remove	City of Marina
1874	*Hesperocyparis macrocarpa*	Monterey Cypress	18								18	23	Good	Remove	City of Marina
1875	*Hesperocyparis macrocarpa*	Monterey Cypress	12								12	15	Fair	Remove	City of Marina
1876	*Hesperocyparis macrocarpa*	Monterey Cypress	9								9	11	Fair	Remove	City of Marina
1995	*Hesperocyparis macrocarpa*	Monterey Cypress	16	9	9	10	17				28	36	Fair	Remove	City of Marina
Acacia 1	*Acacia sp.*	Acacia	16	18	7	13					28	35	Fair	Remove	City of Marina
Acacia 2	*Acacia sp.*	Acacia	9								9	11	Fair	Remove	City of Marina
Acacia 3	*Acacia sp.*	Acacia	8								8	10	Fair	Remove	City of Marina
Acacia 4	*Acacia sp.*	Acacia	6	8	8						13	16	Fair	Remove	City of Marina
1049	*Quercus agrifolia*	Coast Live Oak	15	9							17	22	Fair	Retain	County of Monterey
1016	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Poor	Remove	Sand City
1017	*Hesperocyparis macrocarpa*	Monterey Cypress	17								17	21	Fair	Remove	Sand City
1018	*Hesperocyparis macrocarpa*	Monterey Cypress	15								15	19	Fair	Potential Remove	Sand City
1019	*Hesperocyparis macrocarpa*	Monterey Cypress	24								24	30	Fair	Remove	Sand City
1020	*Hesperocyparis macrocarpa*	Monterey Cypress	21								21	26	Fair	Remove	Sand City
1021	*Hesperocyparis macrocarpa*	Monterey Cypress	20								20	25	Poor	Potential Remove	Sand City
1022	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Potential Remove	Sand City
1023	*Hesperocyparis macrocarpa*	Monterey Cypress	22								22	28	Fair	Potential Remove	Sand City
1024	*Hesperocyparis macrocarpa*	Monterey Cypress	31								31	39	Good	Remove	Sand City
1025	*Hesperocyparis macrocarpa*	Monterey Cypress	25								25	31	Fair	Potential Remove	Sand City
1026	*Hesperocyparis macrocarpa*	Monterey Cypress	15								15	19	Good	Potential Remove	Sand City
1027	*Hesperocyparis macrocarpa*	Monterey Cypress	10								10	13	Fair	Potential Remove	Sand City
1028	*Hesperocyparis macrocarpa*	Monterey Cypress	23								23	29	Fair	Remove	Sand City
1029	*Hesperocyparis macrocarpa*	Monterey Cypress	12								12	15	Good	Remove	Sand City
1030	*Hesperocyparis macrocarpa*	Monterey Cypress	20								20	25	Fair	Remove	Sand City
1031	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Remove	Sand City
1032	*Hesperocyparis macrocarpa*	Monterey Cypress	11								11	14	Fair	Remove	Sand City
1033	*Hesperocyparis macrocarpa*	Monterey Cypress	13								13	16	Poor	Potential Remove	Sand City
1034	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Potential Remove	Sand City
1035	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Potential Remove	Sand City
1036	*Hesperocyparis macrocarpa*	Monterey Cypress	11								11	14	Poor	Remove	Sand City
1037	*Hesperocyparis macrocarpa*	Monterey Cypress	10								10	13	Poor	Remove	Sand City
1038	*Hesperocyparis macrocarpa*	Monterey Cypress	10								10	13	Poor	Remove	Sand City
1039	*Hesperocyparis macrocarpa*	Monterey Cypress	11								11	14	Fair	Remove	Sand City
1040	*Hesperocyparis macrocarpa*	Monterey Cypress	10								10	13	Fair	Remove	Sand City
1041	*Hesperocyparis macrocarpa*	Monterey Cypress	11								11	14	Fair	Remove	Sand City
1042	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Remove	Sand City
1043	*Hesperocyparis macrocarpa*	Monterey Cypress	14								14	18	Fair	Remove	Sand City
1044	*Hesperocyparis macrocarpa*	Monterey Cypress	10								10	13	Fair	Potential Remove	Sand City
1045	*Pinus radiata*	Monterey Pine	12								12	15	Fair	Retain	Sand City
1047	*Hesperocyparis macrocarpa*	Monterey Cypress	62								62	78	Fair	Remove	Sand City
1048	*Pinus torreyana*	Torrey Pine	40								40	50	Fair	Potential Remove	Sand City
1880	*Corymbia ficifolia*	Red Flowering Gum	16								16	20	Fair	Retain	Sand City
1881	*Corymbia ficifolia*	Red Flowering Gum	19								19	24	Fair	Retain	Sand City
1882	*Corymbia ficifolia*	Red Flowering Gum	15								15	19	Poor	Potential Remove	Sand City
1885	*Melaleuca quinquenervia*	Broad-Leaved Paperbark	10								10	13	Fair	Remove	Sand City
1886	*Melaleuca quinquenervia*	Broad-Leaved Paperbark	11								11	14	Fair	Potential Remove	Sand City
1888	*Washingtonia robusta*	Mexican Fan Palm	28								28	35	Fair	Retain	Sand City
1889	*Hesperocyparis macrocarpa*	Monterey Cypress	28								28	35	Good	Potential Remove	Sand City
1890	*Hesperocyparis macrocarpa*	Monterey Cypress	31								31	39	Fair	Potential Remove	Sand City
1891	*Hesperocyparis macrocarpa*	Monterey Cypress	19								19	24	Good	Potential Remove	Sand City
1893	*Hesperocyparis macrocarpa*	Monterey Cypress	30								30	38	Fair	Retain	Sand City
1894	*Hesperocyparis macrocarpa*	Monterey Cypress	18								18	23	Fair	Retain	Sand City
1895	*Hesperocyparis macrocarpa*	Monterey Cypress	18								18	23	Fair	Remove	Sand City
1896	*Hesperocyparis macrocarpa*	Monterey Cypress	35								35	44	Fair	Remove	Sand City
1897	*Hesperocyparis macrocarpa*	Monterey Cypress	22								22	28	Poor	Remove	Sand City
1898	*Hesperocyparis macrocarpa*	Monterey Cypress	22								22	28	Poor	Potential Remove	Sand City
1899	*Hesperocyparis macrocarpa*	Monterey Cypress	12								12	15	Poor	Potential Remove	Sand City
1900	*Hesperocyparis macrocarpa*	Monterey Cypress	18								18	23	Fair	Potential Remove	Sand City



1. 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
2. 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:

A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.
B. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/4 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 8' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.
C. SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).
D. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE:
IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.

A TREE PROTECTOR

NTS

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
TREE DISPOSITION PLAN SHEET 2 OF 32
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	
SHEET NO.	432 — TBD	

SHEET 432 OF 617

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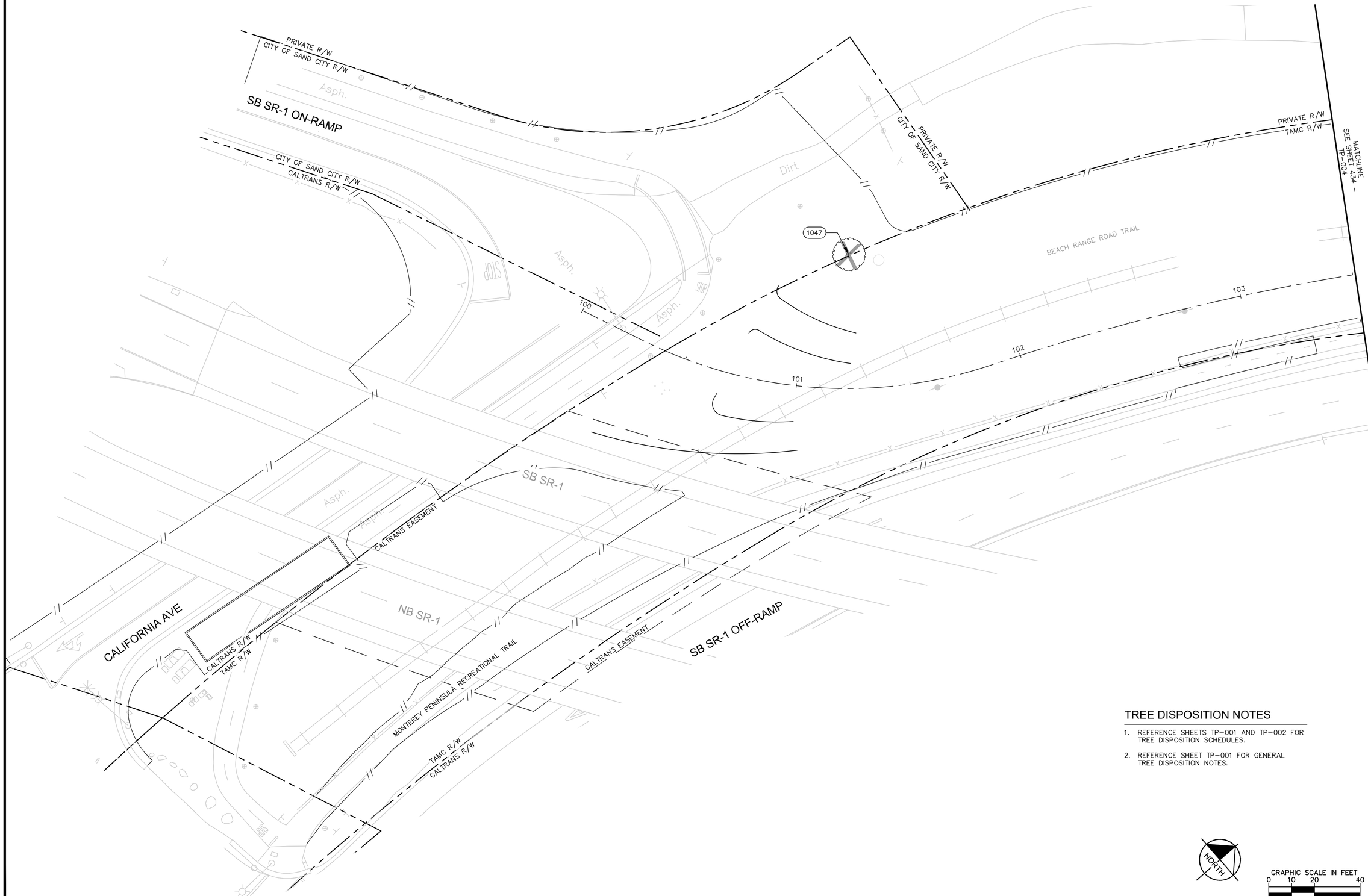
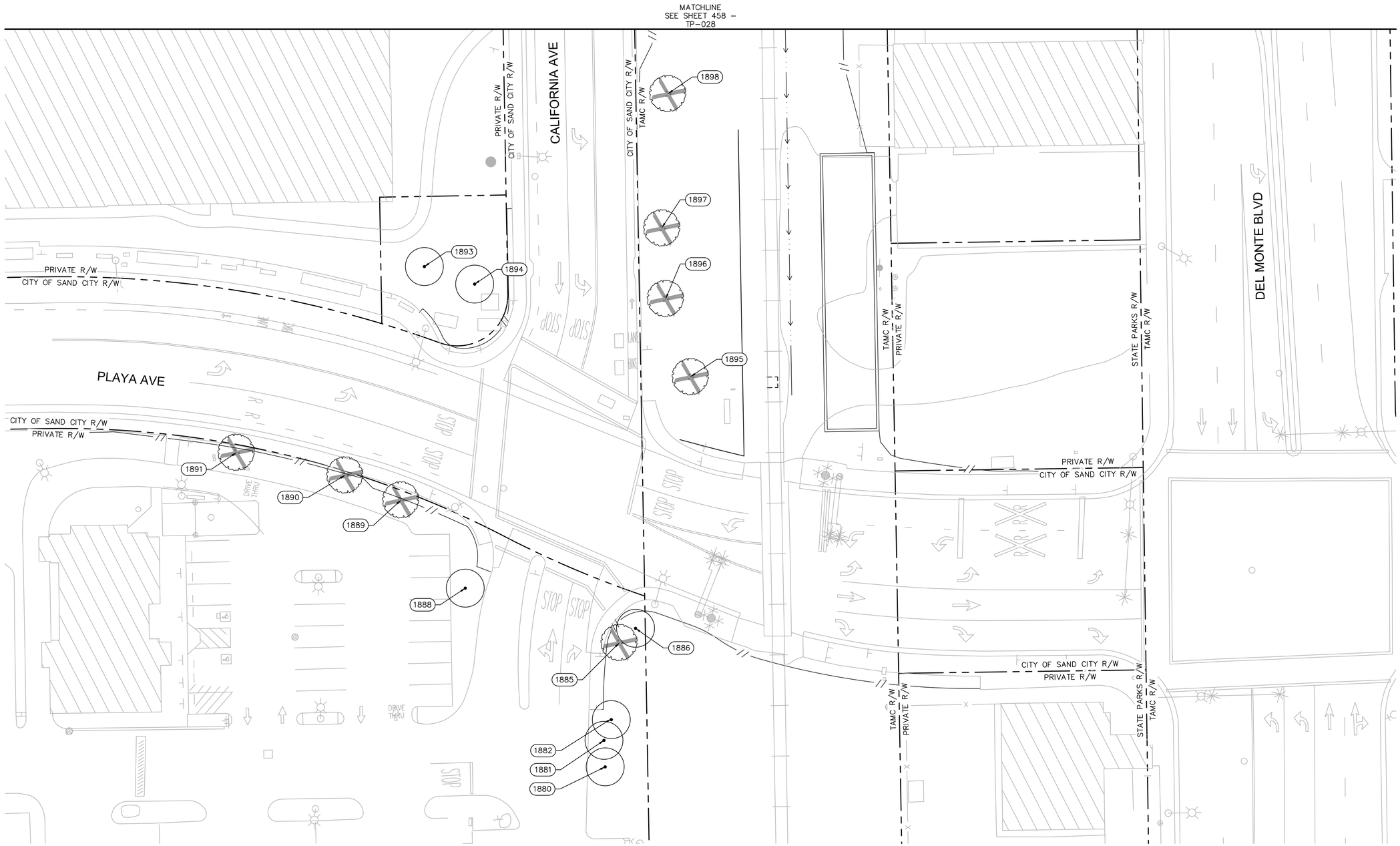

PRIVATE R/W
CITY OF SAND CITY R/W
SB SR-1 ON-RAMP
CITY OF SAND CITY R/W
CALTRANS R/W
Asp.
Dirt
Asp.
Asp.
Asp.



TREE DISPOSITION NOTES

1. REFERENCE SHEETS TP–001 AND TP–002 FOR TREE DISPOSITION SCHEDULES.
2. REFERENCE SHEET TP–001 FOR GENERAL TREE DISPOSITION NOTES.

PLAN

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
TREE DISPOSITION PLAN SHEET 27 OF 32
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	

CONTRACT NO. 22-03

SHEET NO.
TP–027
SHEET 457 OF 617

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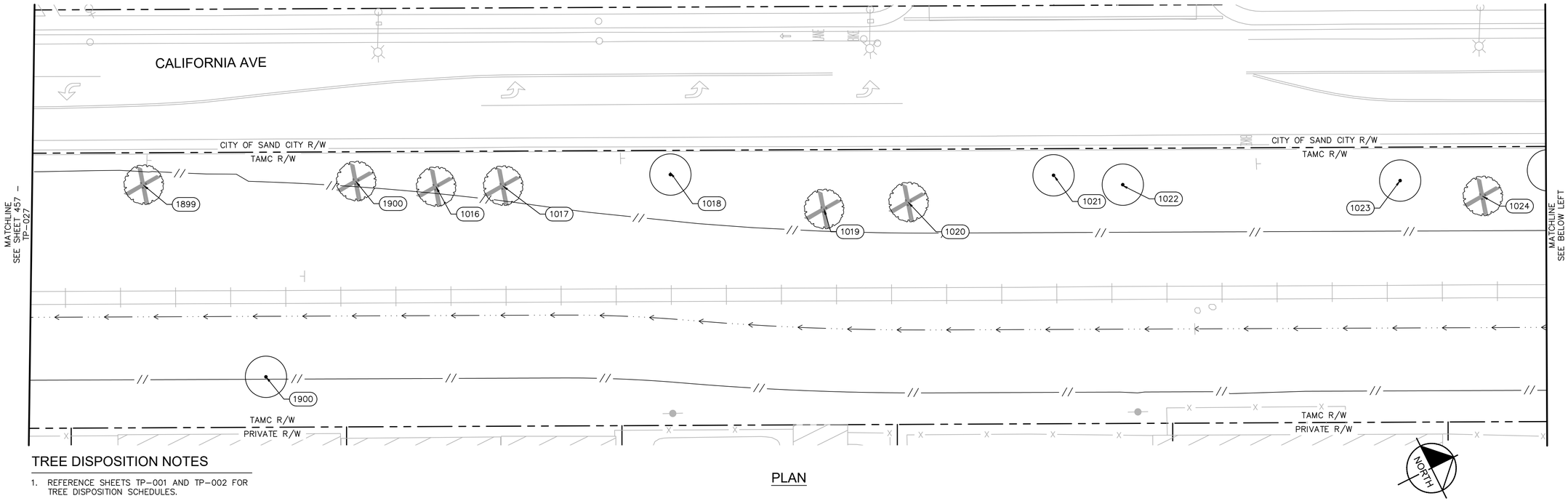
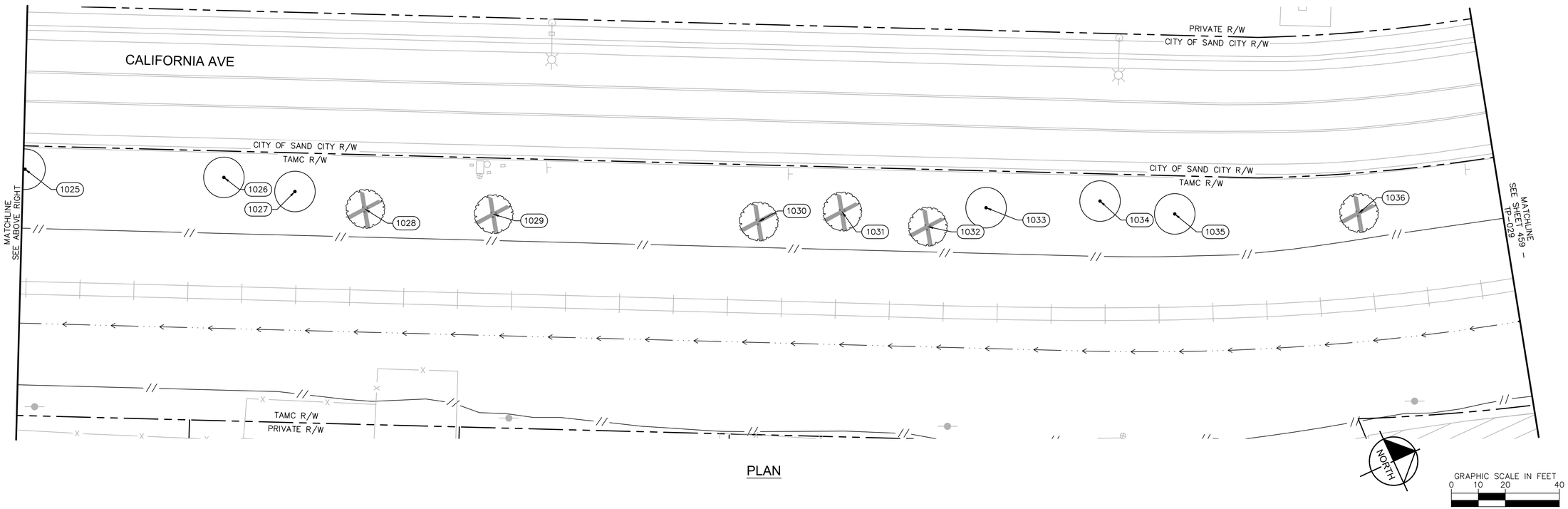


PLAN

TREE DISPOSITION NOTES

1. REFERENCE SHEETS TP–001 AND TP–002 FOR TREE DISPOSITION SCHEDULES.
2. REFERENCE SHEET TP–001 FOR GENERAL TREE DISPOSITION NOTES.



PLAN

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
TREE DISPOSITION PLAN SHEET 28 OF 32
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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DESIGNED	CG	
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CONTRACT NO. 22–03

SHEET NO.
TP–028
SHEET 458 OF 617

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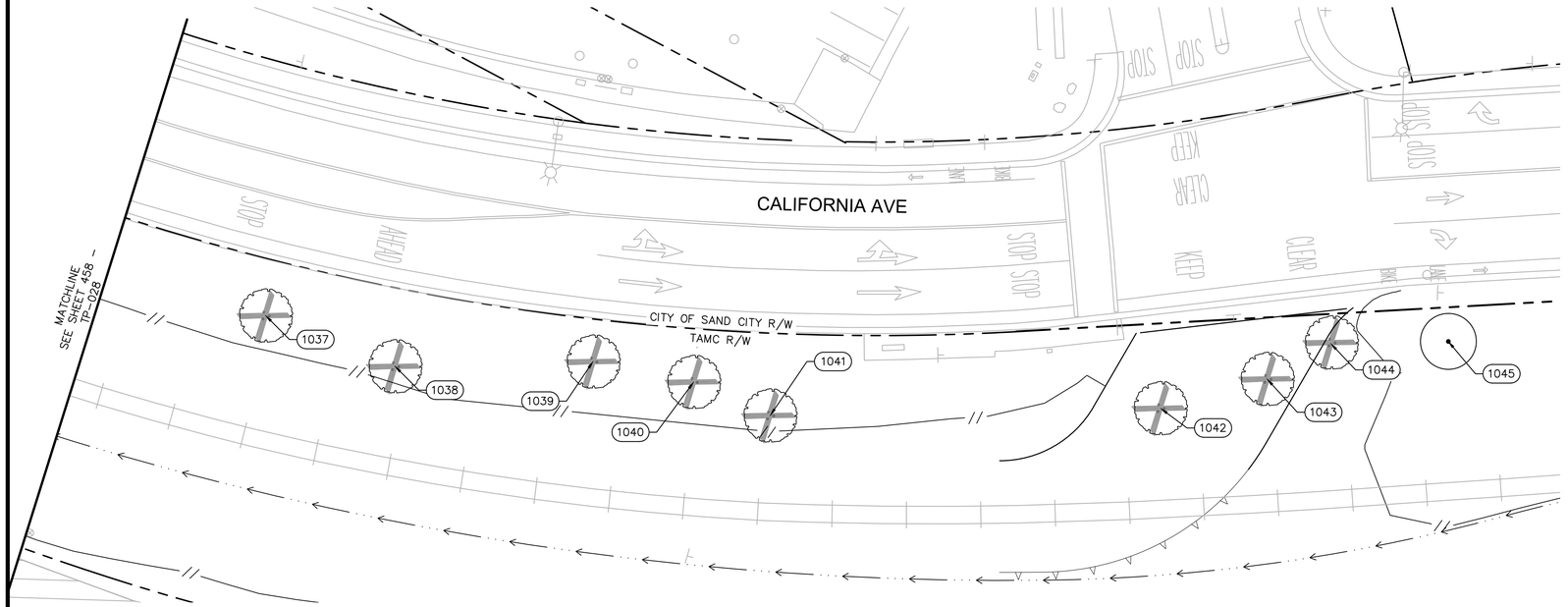

PLAN

TREE DISPOSITION NOTES

1. REFERENCE SHEETS TP–001 AND TP–002 FOR TREE DISPOSITION SCHEDULES.
2. REFERENCE SHEET TP–001 FOR GENERAL TREE DISPOSITION NOTES.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
TREE DISPOSITION PLAN SHEET 29 OF 32
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	
SHEET NO.	TP–029	
SHEET 459 OF 617		

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GENERAL LANDSCAPE NOTES

1. THE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND THE MOST CURRENT EDITION OF THE APPLICABLE COUNTY AND/OR REGIONAL STANDARDS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF THESE STANDARDS, SPECIFICATIONS AND DRAWINGS, AS WELL AS ALL OTHER STANDARDS AND SPECIFICATIONS NECESSARY TO COMPLETE AND ACCURATELY INTERPRET THESE PLANS.

2. QUANTITIES LISTED IN THE LANDSCAPE SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. IN THE CASE OF ANY DISCREPANCIES, PLANS SHALL OVERRIDE THE LANDSCAPE AND BID SCHEDULE QUANTITIES. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON THE PLANS AND BASE THEIR BID ACCORDINGLY.

3. RESPONSIBILITY FOR ESTABLISHING SUBGRADES IS NOT INCLUDED IN THIS WORK. INSPECT SUBGRADES PRIOR TO COMMENCING WORK TO CONFIRM SUBGRADE DEPTHS AND GRADES. ADVISE LANDSCAPE ARCHITECT OF DISCREPANCIES WITH DRAWINGS OR SPECIFICATIONS. PLANTING AREAS SHALL BE LEFT FREE OF CONSTRUCTION DEBRIS AND/OR TOXIC MATERIAL AND GRADED TO A LEVEL TO PERMIT LANDSCAPE CONSTRUCTION. TRENCHES OR OTHER FILLED EXCAVATIONS SHALL BE COMPACTED PRIOR TO LANDSCAPE INSTALLATION.

4. SITE GRADING NECESSITATED BY THE WORK AS IT PROGRESSES AND NOT SPECIFICALLY CALLED OUT ON THE PLANS WILL BE CONSIDERED INCIDENTAL WORK.

5. LANDSCAPE AREAS SHALL BE UNIFORMLY GRADED SO THAT FINISHED SURFACES CONFORM TO THE TYPICAL SECTIONS AND PROPOSED GRADES SHOWN. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, AND FREE FROM IRREGULAR SURFACE DRAINAGE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE FINISH GRADE AND SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS.

6. AFTER ROUGH GRADING HAS OCCURRED, CONTRACTOR SHALL OBTAIN AN AGRONOMIC SOILS REPORT AND SUBMIT TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO AMENDMENTS AND/OR PLANTING. CONTRACTOR SHALL APPLY RECOMMENDATIONS UNLESS OTHERWISE NOTED BY LANDSCAPE ARCHITECT.

7. BACKFILL MIX SHALL BE PLACED IN 6" LIFTS AND TAMPED INTO PLACE AROUND THE PLANT. NO TRANSPLANTING SHALL BE DONE WHEN SOIL IS EXCESSIVELY WET. DO NOT COUNTERSINK AROUND CACTI OR SUCCULENTS. PROVIDE POSITIVE DRAINAGE AWAY FROM PLANT.

8. TREES SHALL BE PLANTED A MINIMUM OF 5 FEET, SHRUBS AND ACCENTS A MINIMUM OF 24", ALL GROUNDCOVERS 18" FROM EDGE OF CURBS, WALKS, WALLS, PADS, ETC., UNLESS DIRECTED OTHERWISE BY THE LANDSCAPE ARCHITECT.

9. EXCAVATE PITS, AS SHOWN ON DRAWINGS AND DETAILS. LOOSEN HARD SUBSOIL IN BOTTOM OF PIT. TEST DRAINAGE OF TREE, SHRUB AND PLANT PITS BY FILLING WITH WATER TWICE IN SUCCESSION. THE RETENTION OF WATER IN PLANTING PITS FOR MORE THAN TWENTY-FOUR (24) HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. SUBMIT IN WRITING A PROPOSAL FOR THE CORRECTION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH WORK.

10. IF ROCK, UNDERGROUND CONSTRUCTION, ADVERSE DRAINAGE CONDITIONS, OR OTHER OBSTRUCTIONS ARE ENCOUNTERED IN EXCAVATION FOR PLANTING OF ANY PLANT MATERIAL, NOTIFY THE OWNER'S REPRESENTATIVE. NEW LOCATIONS MAY BE SELECTED BY THE OWNER'S REPRESENTATIVE, OR INSTRUCTIONS MAY BE ISSUED TO DIRECT REMOVAL OF OBSTRUCTION. PROCEED WITH WORK ONLY AFTER APPROVAL OF THE OWNER'S REPRESENTATIVE.

11. DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY FROM AT LEAST FIVE SOURCES TO THE OWNER'S REPRESENTATIVE, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL FOR FINAL APPROVAL.

12. PLANT MATERIAL AND SPECIFICATIONS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK STANDARDS UNLESS OTHERWISE NOTED.

13. LAY OUT INDIVIDUAL TREE AND PLANT LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS, STAKE LOCATIONS AND OUTLINE AREAS AND SECURE THE OWNER'S REPRESENTATIVE'S ACCEPTANCE BEFORE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS DIRECTED.

14. SHRUBS SHALL HAVE A FULL HEAD THAT COVERS THE CAN DIAMETER (CAN FULL) AND A MINIMUM OF THREE STEMS/BRANCHES.

15. FINISH GRADE FOR PLANTED AREAS SHALL BE 1" BELOW ALL CURBS, WALKS AND PAVING WITH SMOOTH EVEN LINES AT EDGES OF STRUCTURES.

16. FINISH LANDSCAPE GRADES SHALL SLOPE AT A 2% GRADE AWAY FROM CURBS, WALKS, AND WALLS.

17. LANDSCAPE AREAS SHALL RECEIVE A 3" DEPTH OF WOOD BARK MULCH, UNLESS OTHERWISE NOTED ON THESE PLANS. TREES TO HAVE A 6" DIAMETER RING AROUND TRUNK FREE OF MULCH. MULCH SHALL EXTEND UNDER ALL SHRUBS AND PLANTS. APPLY PRE-EMERGENT HERBICIDE PRIOR TO AND AFTER MULCH INSTALLATION.

18. PROVIDE SAMPLES OF PROPOSED MULCH SHOWING COLOR, GRADATION SIZE RANGE AND TEXTURE INCLUDING PROPOSED SOURCE. PROVIDE 1/2 CUBIC FOOT SAMPLE OF EACH.

19. ROCK MULCH OR DECOMPOSED GRANITE SHALL NOT CONTAIN LUMPS OR BALLS OF CLAY, CALICHE, ORGANIC MATTER OR CALCAREOUS COATING. PROVIDE WEED BARRIER UNDER ALL DG AND/OR ROCK MULCH. THE CONTRACTOR SHALL ENSURE THAT SUFFICIENT QUANTITY IS AVAILABLE FROM A SINGLE SOURCE TO COMPLETE THE PROJECT. THE OWNER'S REPRESENTATIVE SHALL APPROVE SAMPLES PRIOR TO ORDERING.

20. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS ACCORDING TO PLANS.

21. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PERMITS REQUIRED. (SEE THE COUNTY GENERAL CONDITIONS)

22. ALL CONSTRUCTION ROADS AND COMPACTED AREAS DEVELOPED THROUGH CONSTRUCTION THAT ARE WITHIN THE LANDSCAPE AREAS SHALL BE SCARIFIED AND LOOSENED TO A DEPTH OF 12" PRIOR TO LANDSCAPE AND IRRIGATION WORK BEGINNING

23. PLANTINGS WITHIN THE SIGHT VISIBILITY TRIANGLE LINE SHALL BE MAINTAINED SO THAT NO LIMBS HANG LOWER THAN SEVEN (7) FEET AND SHRUBS OR OTHER PLANTS PLANTED WITHIN THE SIGHT VISIBILITY TRIANGLE LINE SHALL BE NO TALLER THAN TWO (2) FEET AT FULL GROWTH.

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AB-1881 AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.

_____
MATHEW J. MORGAN, LLA 6256

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APPLY HYDROMULCH WITH HYDRAULIC SPRAY EQUIPMENT THAT MIXES FIBER, TACKIFIER, FERTILIZER, AND OTHER EROSION CONTROL MATERIALS SPECIFIED. IF APPLYING HYDROSEED, ADD SEED TO HYDROMULCH. SEED MAY BE DRY APPLIED TO SMALL AREAS NOT ACCESSIBLE BY HYDROSEEDING EQUIPMENT IF AUTHORIZED.

ADD WATER TO HYDROMULCH AND HYDROSEED MATERIALS AS RECOMMENDED BY THE MANUFACTURER AND MIX SUFFICIENTLY TO ENSURE AN EVEN APPLICATION. A DISPERSING AGENT MAY BE ADDED TO THE MIXTURE IF AUTHORIZED.EQUIPMENT MUST HAVE A BUILT-IN CONTINUOUS AGITATION AND DISCHARGE SYSTEM CAPABLE OF PRODUCING A HOMOGENEOUS MIXTURE AND A UNIFORM APPLICATION RATE. THE TANK MUST HAVE A MINIMUM CAPACITY OF 1,000 GALLONS. YOU MAY USE A SMALLER TANK IF AUTHORIZED.

APPLY MATERIALS IN LOCATIONS, RATES, AND NUMBER OF APPLICATIONS SHOWN AND AS FOLLOWS:
1. START APPLICATION WITHIN 60 MINUTES AFTER ADDING SEED TO THE TANK.
2. APPLY IN SUCCESSIVE PASSES AS NECESSARY TO ACHIEVE THE SPECIFIED APPLICATION RATE.
3. APPLY ALL HYDROMULCH OR HYDROSEED MATERIALS SHOWN FOR A SINGLE AREA WITHIN 72 HOURS.

IF HYDROMULCH OR HYDROSEED MATERIALS ARE APPLIED TO AREAS COVERED BY RECP, APPLY HYDROMULCH AND HYDROSEED MATERIALS TO THE ROLLED PRODUCT AS FOLLOWS:
1. VERIFY THE RECP IS IN UNIFORM CONTACT WITH THE SLOPE SURFACE.
2. SPRAY MATERIALS INTO THE RECP PERPENDICULAR TO THE SLOPE AND INTEGRATE WELL.
3. DO NOT DISPLACE OR DAMAGE THE RECP. AFTER THE FINAL APPLICATION, DO NOT ALLOW PEDESTRIANS OR EQUIPMENT ON THE TREATED AREAS.

SEED MIX TABLE

NON-IRRIGATED HYDROSEED MIX		
SCIENTIFIC NAME	COMMON NAME	APPLICATION RATE (LBS./AC)
ABMROSIA CHAMISSONIS	SILVER BURR RAGWEED	0.50
ACHILLEA MILLEFOLIUM	COMMON YARROW	1.00
ARMERIA MARITIMA	SEA THRIFT	1.00
DESCHAMPSIA CESPITOSA SSP. HOLICIFORMUS	CALIFORNIA HAIRGRASS	5.00
ERIGONUM LATIFOLIUM	SEASIDE BUCKWHEAT	1.00
HELIOTROPIUM CURASSAVICUM	SALT HELIOTROPE	1.00
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	6.00
LUPINUS ARBOREUS	YELLOW BUSH LUPINE	3.00

NOTE: CONTACT PACIFIC COAST SEED COMPANY (925)-373-4417 PRIOR TO PROCEEDING WITH INSTALLATION OF HYDROSEED TO CONFIRM SPECIFICATIONS AND AVAILABILITY OF SEED MIX.

GENERAL IRRIGATION NOTES

1. LANDSCAPE AREAS WILL NOT BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM. CONTRACTORS SHALL ENSURE THAT ALL PLANTS RECEIVE APPROPRIATE WATERING TO ESTABLISH HEALTHY AND DEEP ROOT GROWTH DURING THE PLANT ESTABLISHMENT PERIOD OF ONE (1) YEAR. EACH WATERING SHALL BE OF SUCH QUANTITY AS TO PROVIDE OPTIMUM GROWTH CONDITIONS. THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND MEANS FOR THE PROPER APPLICATION OF WATER TO LANDSCAPED AREAS NOT PROVIDED WITH AN IRRIGATION SYSTEM.

2. CONTRACTOR SHALL HAND WATER PLANTING AREAS AS REQUIRED TO ENSURE ACTIVE GROWTH KEEPING AREAS MOIST BUT NOT SATURATED AND REGULATED WATERING AS NECESSARY TO AVOID EROSION AND GULLYING.

3. FOLLOWING THE PLANT ESTABLISHMENT PERIOD, THE CONTRACTOR SHALL PROVIDE A WARRANTY WHICH GUARANTEES ALL PLANTS FOR ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE OF THE CONTRACT. THE CONTRACTOR SHALL REPLACE ANY PLANT WHICH HAS DIED, AND THE PLANT REPLACEMENT SHALL BE THE SAME SIZE CONTAINER AS ORIGINALLY DESIGNATED ON THE PLANS.

4. WATER SUPPLY SHALL BE CLEAN, FREE OF SUSPENDED PARTICLES, ALGAE, OR CHEMICALS THAT MAY FORM INSOLUBLE PRECIPITATES IN THE EQUIPMENT OR MAY BE DETRIMENTAL TO PLANTINGS.

LANDSCAPE SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	HEIGHT/SPREAD	CAL.	WUCOLS
	AG	20	ARCTOSTAPHYLOS GLAUCA / BIGBERRY MANZANITA	15 GAL.	9'–10' HT. X 3'–4' SPR.	2" CAL.	VERY LOW
	CW	53	CERCIS OCCIDENTALIS / WESTERN REDBUD STANDARD FORM	24"BOX	9'–11' HT. X 4'–5' SPR.	2" CAL.	VERY LOW
	CM	22	CUPRESSUS MACROCARPA / MONTEREY CYPRESS	36" BOX	9–10' HT. X 4–5' SPR.	3" CAL.	MODERATE
	XTR	59	EXISTING TREE TO REMAIN / PROTECT IN PLACE	N/A	N/A	N/A	N/A
	QA	21	QUERCUS AGRIFOLIA / COAST LIVE OAK	36" BOX	12–14' HT. X 5–6' SPR.	3" CAL.	

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	AM	506	ACHILLEA MILLEFOLIUM / COMMON YARROW	1 GAL.	18" O.C.	LOW
	CC	347	CEANOTHUS CUNEATUS / BUCKBRUSH	5 GAL.	72" O.C.	VERY LOW
	CT	243	CHONDROPETALUM TECTORUM / CAPE RUSH	5 GAL.	48" O.C.	LOW
	EF	406	ERIOGONUM FASCICULATUM / CALIFORNIA BUCKWHEAT	1 GAL.	36" O.C.	VERY LOW
	FI	913	FESTUCA IDAHOENSIS / IDAHO FESCUE	1 GAL.	24" O.C.	VERY LOW
	JE	1,744	JUNCUS PATENS 'ELK BLUE' / SPREADING RUSH	1 GAL.	36" O.C.	LOW
	LC	1,405	LEYMUS CONDENSATUS 'CANYON PRINCE' / CANYON PRINCE GIANT WILD RYE	1 GAL.	48" O.C.	LOW
	MA	99	MIMULUS AURANTIACUS / STICKY MONKEYFLOWER	5 GAL.	60" O.C.	VERY LOW
	MR	1,222	MUHLENBERGIA RIGENS / DEER GRASS	1 GAL.	60" O.C.	LOW
	RM	413	RHAMNUS CALIFORNICA 'MOUND SAN BRUNO' / MOUND SAN BRUNO COFFEEBERRY	5 GAL.	60" O.C.	LOW
	RC	12	RIBES MALVACEUM / CHAPARRAL CURRANT	5 GAL.	60" O.C.	VERY LOW
	RV	122	RIBES VIBURNIFOLIUM / EVERGREEN CURRANT	5 GAL.	96" O.C.	LOW
	SB	1,065	SISYRINCHIUM BELLUM / BLUE–EYED GRASS	1 GAL.	18" O.C.	VERY LOW
	TW	141	TRICHOSTEMA LANATUM / WOOLLY BLUE CURLS	5 GAL.	60" O.C.	VERY LOW

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	CH	73	CEANOTHUS GRISEUS HORIZONTALIS / CARMEL CREEPER	1 GAL.	96" O.C.	LOW
	GP	270	GRINDELIA STRICTA PLATYPHYLLA / SPREADING GRINDELIA	1 GAL.	36" O.C.	LOW

HYDROSEED	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	HD	358,694 SF	NON – IRRIGATED HYDROSEED (REFER TO SHEET LS–001 FOR SEED MIX)	SEED	N/A	N/A

MATERIAL	CODE	QTY	COMMON NAME
	RB	1,120 LF	ROOT BARRIER REFER TO SHEET LS–032, DETAIL H
	BM	110,984 SF	WOOD BARK MULCH

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LANDSCAPE NOTES & SCHEDULE SHEET 2 OF 33
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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CONTRACT NO. 22-03		

SHEET NO.
LS–001
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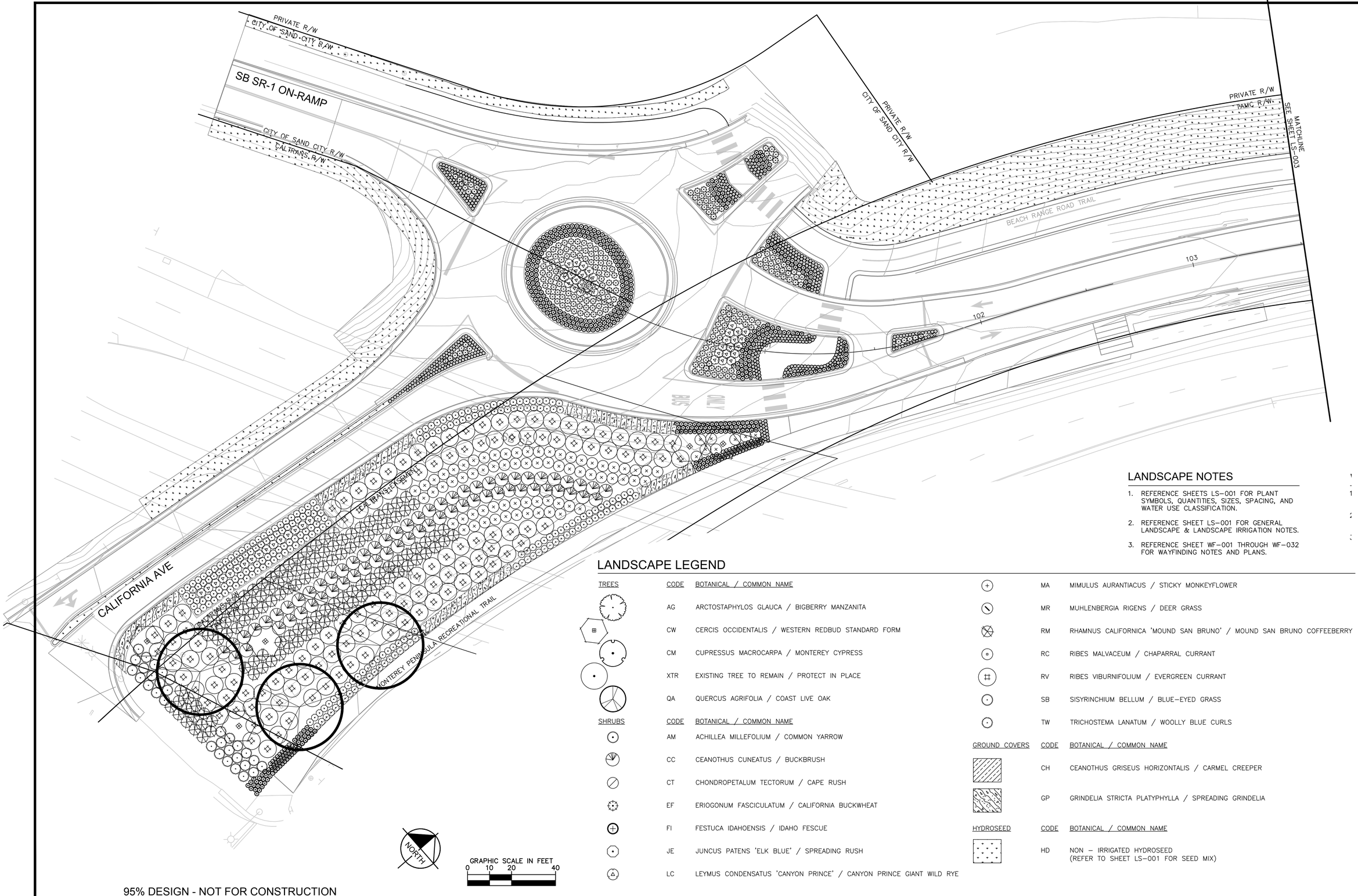

LANDSCAPE NOTES

1. REFERENCE SHEETS LS–001 FOR PLANT SYMBOLS, QUANTITIES, SIZES, SPACING, AND WATER USE CLASSIFICATION.
2. REFERENCE SHEET LS–001 FOR GENERAL LANDSCAPE & LANDSCAPE IRRIGATION NOTES.
3. REFERENCE SHEET WF–001 THROUGH WF–032 FOR WAYFINDING NOTES AND PLANS.

LANDSCAPE LEGEND

TREES	CODE	BOTANICAL / COMMON NAME
	AG	ARCTOSTAPHYLOS GLAUCA / BIGBERRY MANZANITA
	CW	CERCIS OCCIDENTALIS / WESTERN REDBUD STANDARD FORM
	CM	CUPRESSUS MACROCARPA / MONTEREY CYPRESS
	XTR	EXISTING TREE TO REMAIN / PROTECT IN PLACE
	QA	QUERCUS AGRIFOLIA / COAST LIVE OAK

SHRUBS	CODE	BOTANICAL / COMMON NAME
	AM	ACHILLEA MILLEFOLIUM / COMMON YARROW
	CC	CEANOTHUS CUNEATUS / BUCKBRUSH
	CT	CHONDROPETALUM TECTORUM / CAPE RUSH
	EF	ERIOGONUM FASCICULATUM / CALIFORNIA BUCKWHEAT
	FI	FESTUCA IDAHOENSIS / IDAHO FESCUE
	JE	JUNCUS PATENS 'ELK BLUE' / SPREADING RUSH
	LC	LEYMUS CONDENSATUS 'CANYON PRINCE' / CANYON PRINCE GIANT WILD RYE
	MA	MIMULUS AURANTIACUS / STICKY MONKEYFLOWER
	MR	MUHLENBERGIA RIGENS / DEER GRASS
	RM	RHAMNUS CALIFORNICA 'MOUND SAN BRUNO' / MOUND SAN BRUNO COFFEEBERRY
	RC	RIBES MALVACEUM / CHAPARRAL CURRANT
	RV	RIBES VIBURNIFOLIUM / EVERGREEN CURRANT
	SB	SISYRINCHIUM BELLUM / BLUE–EYED GRASS
	TW	TRICHOSTEMA LANATUM / WOOLLY BLUE CURLS

GROUND COVERS	CODE	BOTANICAL / COMMON NAME
	CH	CEANOTHUS GRISEUS HORIZONTALIS / CARMEL CREEPER
	GP	GRINDELIA STRICTA PLATYPHYLLA / SPREADING GRINDELIA

HYDROSEED	CODE	BOTANICAL / COMMON NAME
	HD	NON – IRRIGATED HYDROSEED (REFER TO SHEET LS–001 FOR SEED MIX)

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LANDSCAPE PLAN SHEET 3 OF 33

MONTEREY COUNTY CALIFORNIA

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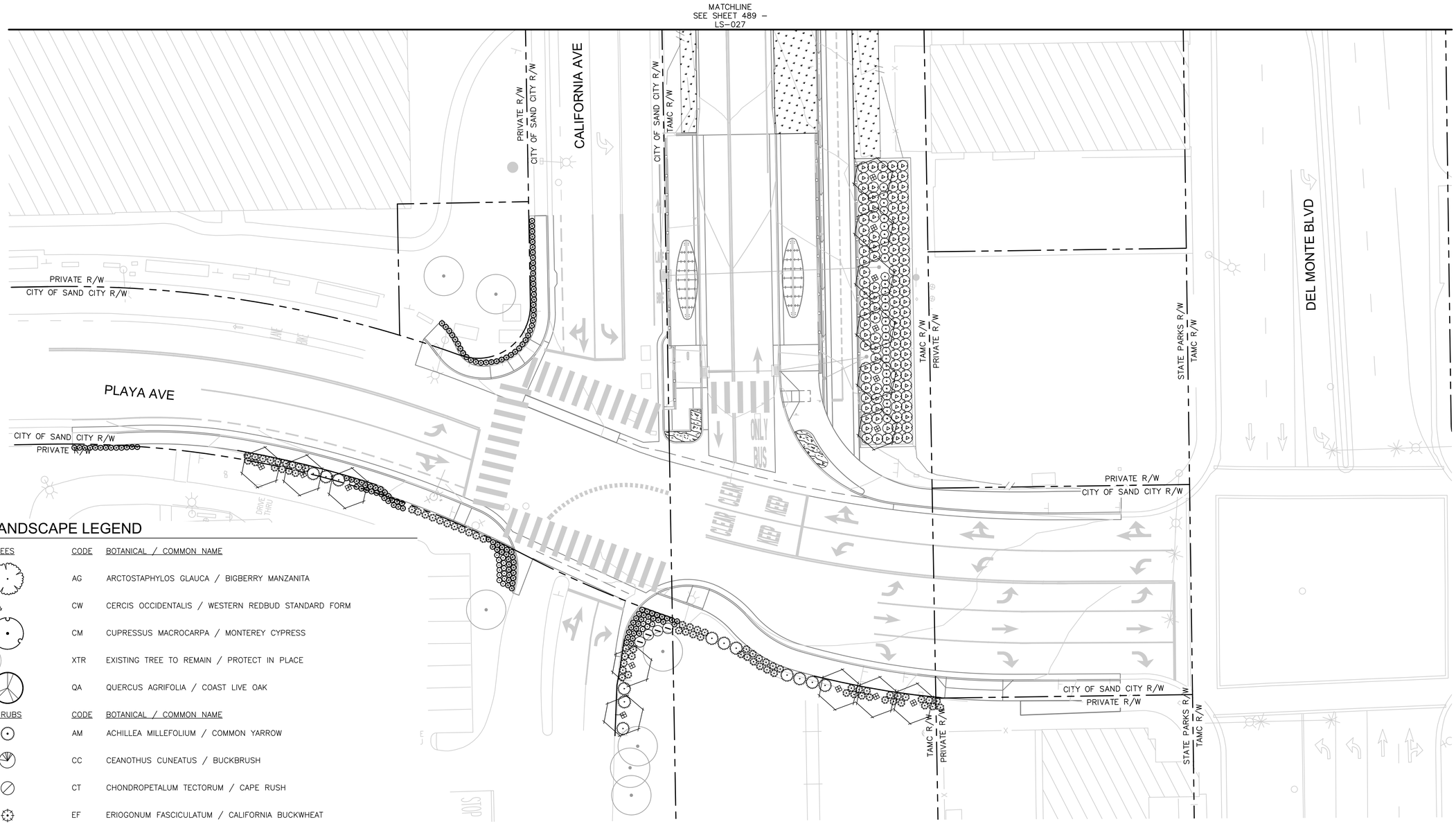

LANDSCAPE LEGEND

TREES	CODE	BOTANICAL / COMMON NAME
	AG	ARCTOSTAPHYLOS GLAUCA / BIGBERRY MANZANITA
	CW	CERCIS OCCIDENTALIS / WESTERN REDBUD STANDARD FORM
	CM	CUPRESSUS MACROCARPA / MONTEREY CYPRESS
	XTR	EXISTING TREE TO REMAIN / PROTECT IN PLACE
	QA	QUERCUS AGRIFOLIA / COAST LIVE OAK

SHRUBS	CODE	BOTANICAL / COMMON NAME
	AM	ACHILLEA MILLEFOLIUM / COMMON YARROW
	CC	CEANOTHUS CUNEATUS / BUCKBRUSH
	CT	CHONDROPETALUM TECTORUM / CAPE RUSH
	EF	ERIOGONUM FASCICULATUM / CALIFORNIA BUCKWHEAT
	FI	FESTUCA IDAHOENSIS / IDAHO FESCUE
	JE	JUNCUS PATENS 'ELK BLUE' / SPREADING RUSH
	LC	LEYMUS CONDENSATUS 'CANYON PRINCE' / CANYON PRINCE GIANT WILD RYE
	MA	MIMULUS AURANTIACUS / STICKY MONKEYFLOWER
	MR	MUHLENBERGIA RIGENS / DEER GRASS
	RM	RHAMNUS CALIFORNICA 'MOUND SAN BRUNO' / MOUND SAN BRUNO COFFEEB
	RC	RIBES MALVACEUM / CHAPARRAL CURRANT
	RV	RIBES VIBURNIFOLIUM / EVERGREEN CURRANT

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PLAN

	CODE	
	SB	SISYRINCHIUM BELLUM / BLUE–EYED GRASS
	TW	TRICHOSTEMA LANATUM / WOOLLY BLUE CURLS

GROUND COVERS	CODE	BOTANICAL / COMMON NAME
	CH	CEANOTHUS GRISEUS HORIZONTALIS / CARMEL CREEPER
	GP	GRINDELIA STRICTA PLATYPHYLLA / SPREADING GRINDELIA

HYDROSEED	CODE	BOTANICAL / COMMON NAME
	HD	NON – IRRIGATED HYDROSEED (REFER TO SHEET LS–001 FOR SEED MIX)

LANDSCAPE NOTES

1. REFERENCE SHEETS LS–001 FOR PLANT SYMBOLS, QUANTITIES, SIZES, SPACING, AND WATER USE CLASSIFICATION.
2. REFERENCE SHEET LS–001 FOR GENERAL LANDSCAPE & LANDSCAPE IRRIGATION NOTES.
3. REFERENCE SHEET WF–001 THROUGH WF–032 FOR WAYFINDING NOTES AND PLANS.

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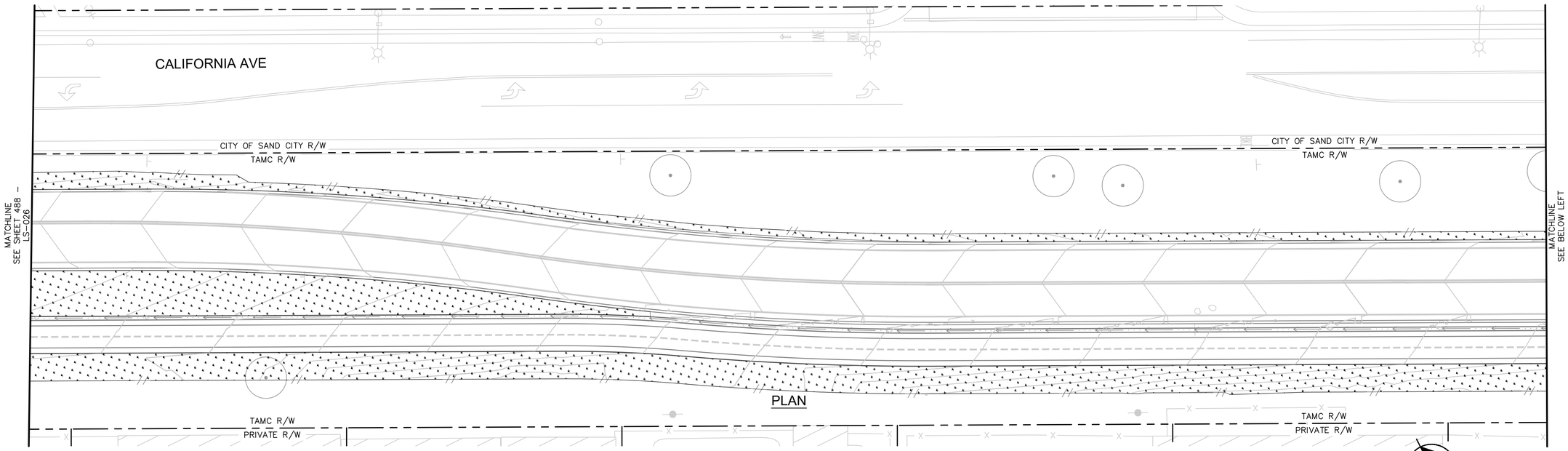

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HYDROSEED	CODE	BOTANICAL / COMMON NAME
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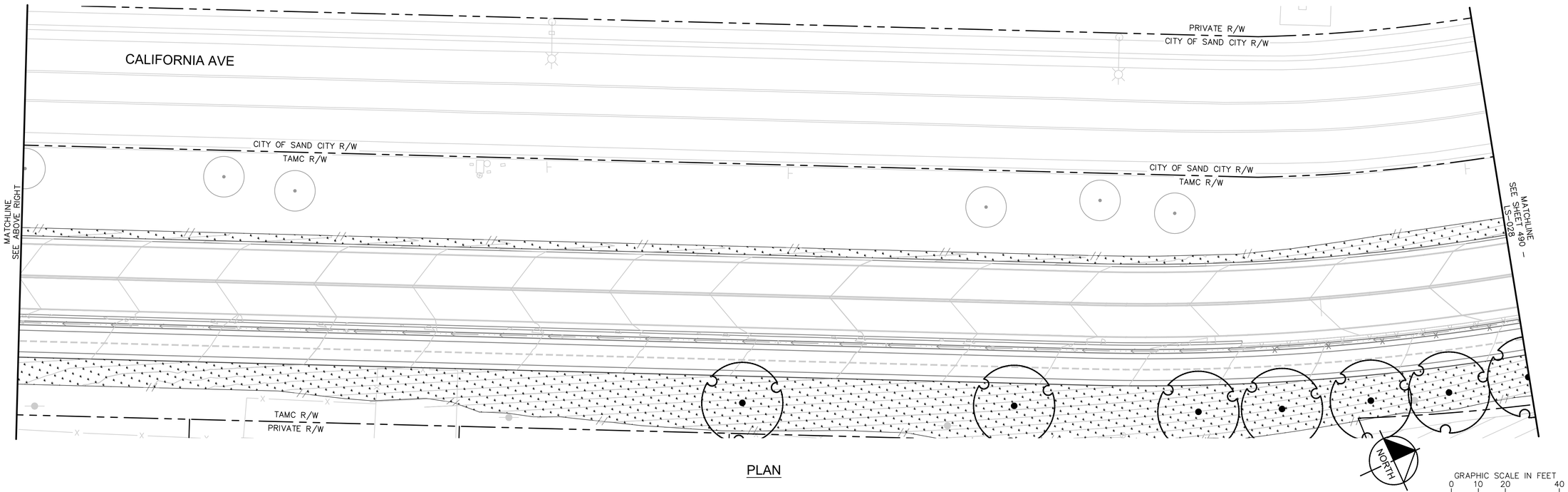
TREES	CODE	BOTANICAL / COMMON NAME
	CM	CUPRESSUS MACROCARPA / MONTEREY CYPRESS



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MONTEREY COUNTY CALIFORNIA

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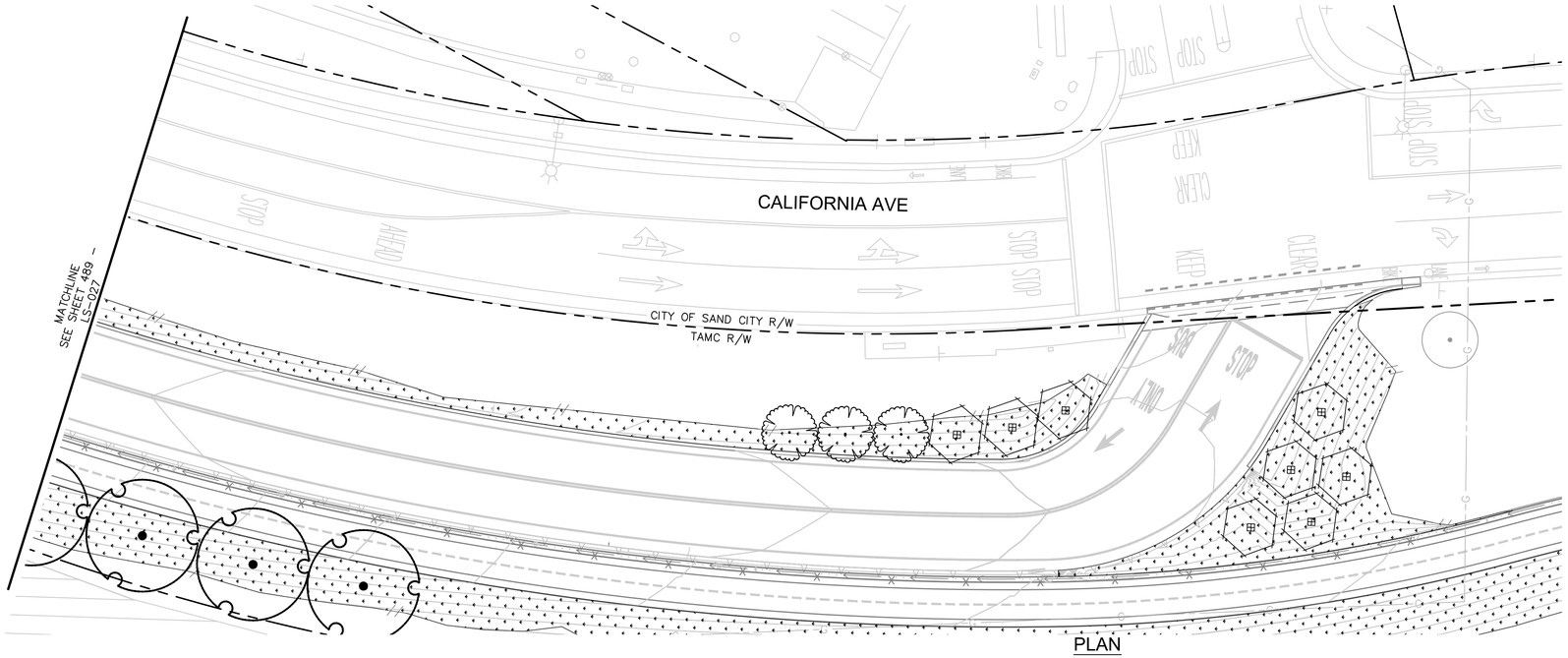

PLAN

NORTH

LANDSCAPE NOTES

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LANDSCAPE LEGEND

HYDROSEED	CODE	BOTANICAL / COMMON NAME
	HD	NON – IRRIGATED HYDROSEED (REFER TO SHEET LS–001 FOR SEED MIX)

TREES	CODE	BOTANICAL / COMMON NAME
	AG	ARCTOSTAPHYLOS GLAUCA / BIGBERRY MANZANITA
	CW	CERCIS OCCIDENTALIS / WESTERN REDBUD STANDARD
	CM	CUPRESSUS MACROCARPA / MONTEREY CYPRESS
	XTR	EXISTING TREE TO REMAIN / PROTECT IN PLACE

GRAPHIC SCALE IN FEET
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LANDSCAPE PLAN SHEET 28 OF 33
MONTEREY COUNTY CALIFORNIA

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SHEET 490 OF 617

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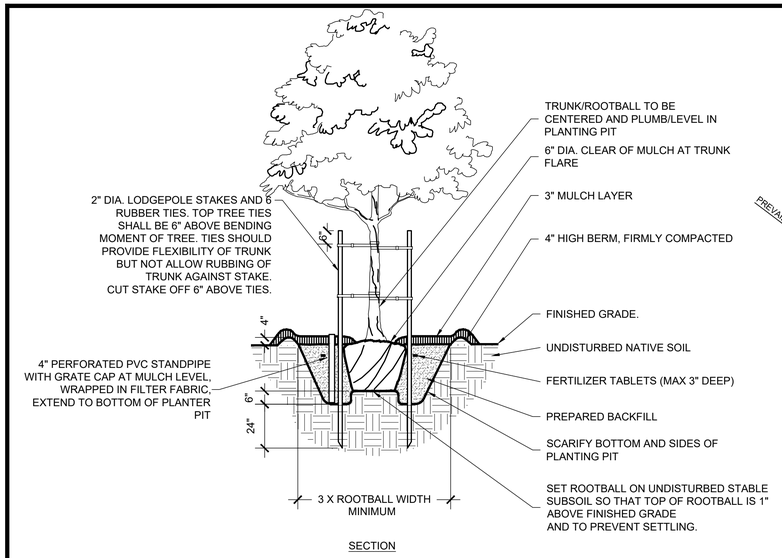
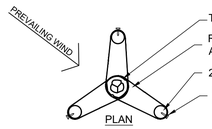


SECTION

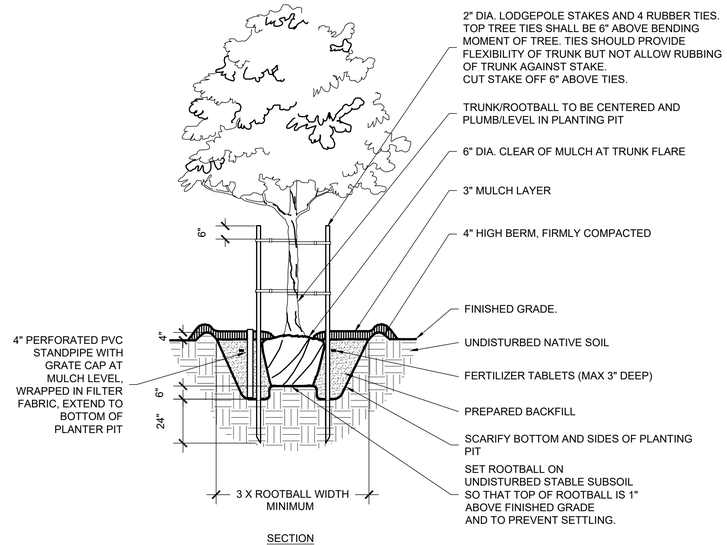


PLAN

NOTES:
1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. TRIPLE STAKE ALL TREES #36" BOX SIZE AND LARGER.
3. LOCATE ALL STAKES OUTSIDE OF ROOTBALL. DO NOT DRIVE STAKES INTO ROOTBALL. STAKE MUST BE DRIVEN MIN. 24" INTO NATIVE SOIL AT BOTTOM OF PLANTING PIT.
4. REMOVE ANYTHING (IE. BURLAP, WIRES, STRAPS, ETC.) THAT COULD GIRDLE TREE OR RESTRICT TREE GROWTH.

B 36" AND LARGER BOX TREE PLANTING

NTS



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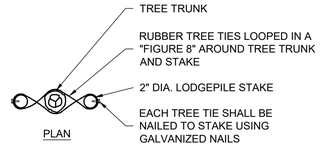
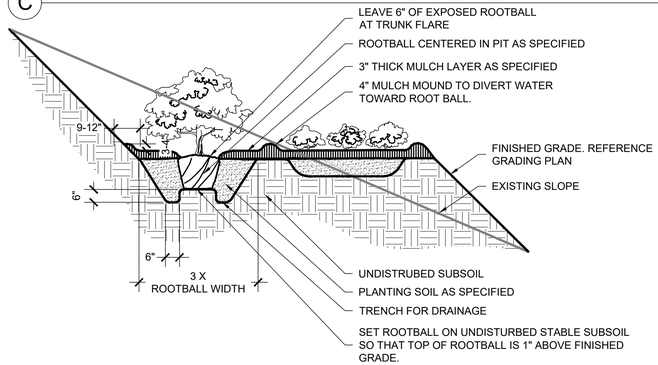


PLAN

NOTES:
1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. DOUBLE STAKE ALL TREES #15 (15 GAL.) SIZE AND LARGER.
3. FOR SINGLE STAKED TREES, PLACE STAKE ON WINDWARD SIDE OF TREE.
4. FOR DOUBLE STAKED TREES, PLACE STAKES PERPENDICULAR TO WINDWARD SIDE OF TREE.
5. LOCATE ALL STAKES OUTSIDE OF ROOTBALL. DO NOT DRIVE STAKES INTO ROOTBALL. STAKE SHALL BE DRIVEN MIN. 24" INTO NATIVE SOIL AT BOTTOM OF PLANTING PIT.
6. REMOVE ANYTHING (IE. BURLAP, WIRES, STRAPS, ETC.) THAT COULD GIRDLE TREE OR RESTRICT TREE GROWTH.

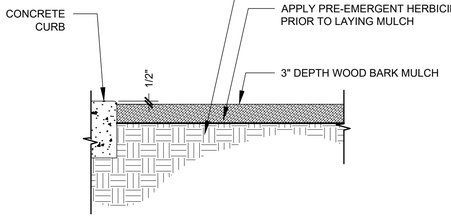
C 24" BOX TREE PLANTING

NTS



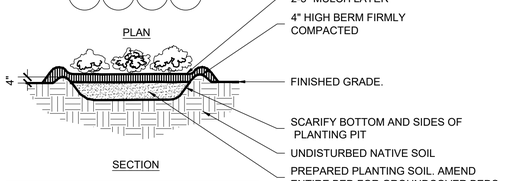
D WOOD BARK MULCH

NTS



E TYPICAL GROUNDCOVER PLANTING

NTS



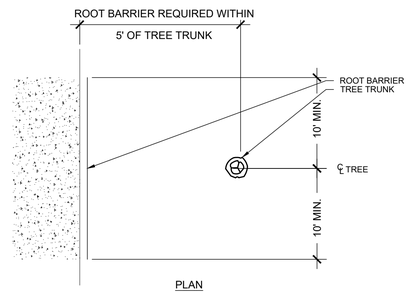
PLAN

SECTION

NOTES:
1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

F SHRUB/GROUNDCOVER PLANTING ON SLOPE

NTS



PLAN

NOTES:

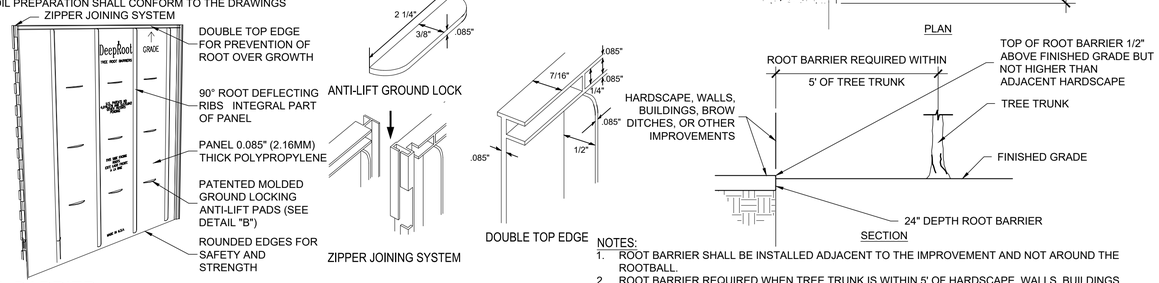
SPECIFIED TREE ROOT BARRIERS ARE A MECHANICAL BARRIER AND ROOT DEFLECTOR TO PREVENT TREE ROOTS FROM DAMAGING ADJACENT PAVING / HARDSCAPE ELEMENTS. ASSEMBLED IN 2' LONG MODULES OR FOR LINEAR APPLICATIONS DIRECTLY BESIDE AN ADJACENT HARDSCAPE AREA TO ONE SIDE OF THE TREES (LINEAR PLANTING STYLE).

MATERIALS:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE PRODUCT # UB 24-2 AS MANUFACTURED BY DEEP ROOT PARTNERS, L.P. 530 WASHINGTON STREET, SAN FRANCISCO, CA 94111 (800-458-7668), OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK, INJECTION MOLDED PANELS, OF 0.085" WALL THICKNESS IN MODULES 24" LONG BY 24" DEEP; MANUFACTURED WITH A MINIMUM 50% POST CONSUMER RECYCLED POLYPROPYLENE PLASTIC WITH ADDED ULTRAVIOLET INHIBITORS; RECYCLABLE.

CONSTRUCTION AND INSTALLATION:

1. THE CONTRACTOR SHALL INSTALL THE TREE ROOT BARRIERS WITH THE NUMBER OF PANELS AND IN THE MANNER SHOWN ON THE DRAWINGS. THE VERTICAL ROOT DEFLECTING RIBS SHALL BE FACING INWARDS TO THE ROOT BALL AND THE TOP OF THE DOUBLE EDGE SHALL BE 1/2" ABOVE GRADE. EACH OF THE REQUIRED NUMBER OF PANELS SHALL BE JOINED IN A LINEAR FASHION AND PLACED ALONG THE ADJACENT HARDSCAPE.
2. EXCAVATION AND SOIL PREPARATION SHALL CONFORM TO THE DRAWINGS

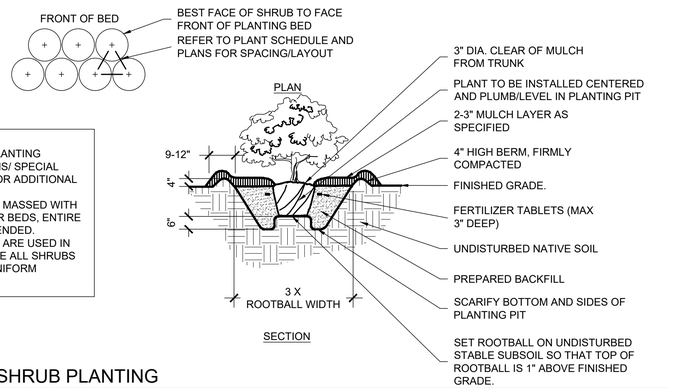


SECTION

NOTES:
1. ROOT BARRIER SHALL BE INSTALLED ADJACENT TO THE IMPROVEMENT AND NOT AROUND THE ROOTBALL.
2. ROOT BARRIER REQUIRED WHEN TREE TRUNK IS WITHIN 5' OF HARDSCAPE, WALLS, BUILDINGS, BROW DITCHES, OR OTHER IMPROVEMENTS

G TYPICAL SHRUB PLANTING

NTS



PLAN

SECTION

NOTES:
1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. WHEN SHRUBS MASSED WITH GROUNDCOVER BEDS, ENTIRE BED TO BE AMENDED.
3. WHEN SHRUBS ARE USED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS/HEIGHT

H ROOT CONTROL BARRIER

NTS

95% DESIGN - NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023
DRAWN	CG
DESIGNED	CG
CHECKED	MM
CONTRACT NO.	22-03
SHEET NO.	LS-033
	SHEET 495 OF 617

SURF! BUSWAY AND BRT PROJECT
LANDSCAPE DETAILS SHEET 33 OF 33
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

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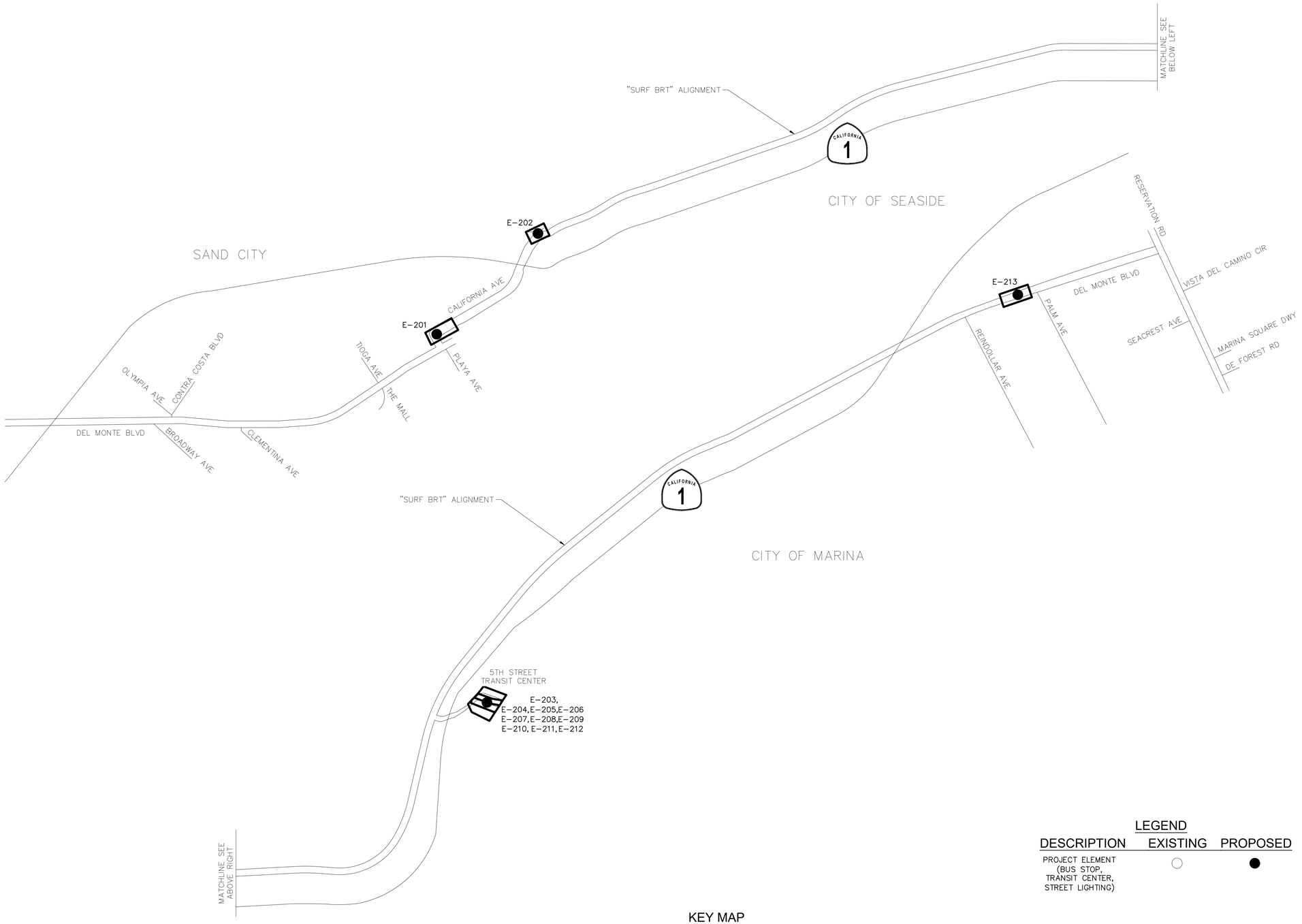

KEY MAP
NOT TO SCALE

LEGEND

DESCRIPTION	EXISTING	PROPOSED
PROJECT ELEMENT (BUS STOP, TRANSIT CENTER, STREET LIGHTING)	○	●

N TRUE NORTH
N PROJECT NORTH

811 Know what's below. Call before you dig.

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
KEY MAP
ELECTRICAL AND COMMUNICATIONS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	

SHEET NO.
E-101
SHEET 496 OF 617

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ELECTRICAL, LIGHTING, AND COMMUNICATIONS GENERAL NOTES (SHEETS 496 TO 517)

1. CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS BEFORE START OF WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES AND AFFECTED AGENCIES FOR VERIFICATION OF LOCATION AND DEPTHS OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA), AT 1-800-227-2600, TWO (2) WORKING DAYS BUT NOT MORE THAN FOURTEEN (14) CALENDAR DAYS PRIOR TO COMMENCING ANY EXCAVATION.
3. CONTRACTOR SHALL COOPERATE AND COORDINATE WITH OTHER CONTRACTORS AND CITY INSPECTORS WORKING WITHIN OR ADJACENT TO THE LIMITS OF WORK TO AVOID ANY DELAY AND CONFLICT.
4. ALL NEW CONDUIT WITH 120 V (OR HIGHER) CIRCUITS SHALL CONTAIN ONE (1) NO. 8 AWG SOLID GREEN JACKET COPPER BONDING WIRE UNLESS OTHERWISE NOTED. ALL NEW CONDUIT WITH NO METALLIC CONDUCTORS SHALL HAVE A NO. 10 AWG THW LOCATING WIRE UNLESS OTHERWISE NOTED ON PLANS. THE WIRE INSULATING JACKET SHALL BE COLOR-CODED ORANGE.
5. LOCATIONS OF POLES, PULL BOXES, EQUIPMENT, AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. BEFORE BEGINNING ANY CONSTRUCTION OPERATION, THE CONTRACTOR SHALL CHECK FOR CONFLICTS WITH UNDERGROUND UTILITIES, OVERHEAD UTILITIES, OR OTHER OBSTACLES. IF EQUIPMENT OR POLES MUST BE RELOCATED, THE NEW LOCATION IS SUBJECT TO WRITTEN APPROVAL BY THE CITY PRIOR TO INSTALLATION. CONDUIT ALIGNMENTS, PULL BOX LOCATIONS, AND FOUNDATION LOCATIONS STAKED BY THE CONTRACTOR ARE SUBJECT TO APPROVAL BY THE CITY BEFORE BEGINNING WORK ON THAT ITEM. MINOR RELOCATION OF PULL BOXES AND SPLICES SHALL BE CONSIDERED AS INCIDENTAL WORK WITH NO ADDITIONAL COMPENSATION.
6. ALL WORK, MATERIAL, AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST REVISIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS, DATED 2023, AND SPECIFICATIONS, DATED 2023.
7. THE CONTRACTOR SHALL REPAIR/REPLACE ALL LANDSCAPING, IRRIGATION, CURBS, SERVICES, SIDEWALK, PAVERS, STRIPING, MARKINGS, OR PAVEMENT MARKERS, ETC. DAMAGED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE PROJECT. ALL WORK INCLUDING REPAIRS SHALL BE DONE TO THE SATISFACTION OF THE CITY ENGINEER.
8. CONTRACTOR TO CUT, CAP, CONNECT, ADJUST, ABANDON, REPLACE, REPAIR, RELOCATE, AND/OR SALVAGE EXISTING IRRIGATION SYSTEM TO ACCOMMODATE NEW IMPROVEMENTS, AT NO ADDITIONAL COST TO THE PROJECT.
9. CONTRACTOR SHALL PROTECT IN PLACE ALL EXISTING SURVEY MONUMENTS AND BENCHMARKS.
10. NEW PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
11. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR WORKING CONDITIONS ON THE JOB SITE WITHIN THE LIMITS OF WORK, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING PERFORMANCE OF WORK. WORK SHALL NOT BEGIN UNTIL ADEQUATE TEMPORARY BARRICADES, BARRIERS, WARNING AND CONTROL DEVICES ARE IN PLACE AS REQUIRED BY THE CONTRACT. CONTRACTOR IS RESPONSIBLE TO CLEAN AND CLEAR AREA OF CONSTRUCTION EACH DAY AND REMOVE ANY HAZARD TO THE SAFETY OF RESIDENTS AND PUBLIC.
12. TRAFFIC CONTROL MUST BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION OF THE CALIFORNIA MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES AND THESE PLANS.
13. CONTRACTOR SHALL REPLACE IN KIND AND LOCATION, ALL STRIPING AND PAVEMENT MARKINGS DAMAGED WHEN INSTALLING CONDUIT AS PART OF EACH PAY ITEM OF WORK. ALL NEW STRIPING SHALL BE THERMOPLASTIC.
14. CONDUIT INSTALLATION MAY BE BY EITHER HORIZONTAL DIRECTIONAL DRILLING OR TRENCHING INSTALLATION METHODS. HORIZONTAL DIRECTIONAL DRILLING IS THE PREFERRED INSTALLATION METHOD.
15. EACH EXISTING TRAFFIC SIGNAL SHALL REMAIN IN OPERATION AT ALL TIMES DURING CONSTRUCTION. ALL PROPOSED SIGNAL SHUTDOWNS SHALL BE APPROVED BY CITY NO LESS THAN 48 HOURS IN ADVANCE OF SHUTDOWN.
16. CONTRACTOR SHALL REPLACE ALL PAVERS IN KIND WHERE INSTALLATION OF INFRASTRUCTURE REQUIRES REMOVAL AND REPLACEMENT OF EXISTING PAVERS.
17. ALL NEW PULL BOXES SHALL BE INSTALLED A MINIMUM OF 5' AWAY FROM EXISTING FIRE HYDRANTS AND EXISTING WATER METERS. NEW PULL BOXES SHALL BE 5' AWAY FROM EXISTING UNDERGROUND ELECTRICAL FACILITIES UNLESS OTHERWISE NOTED ON PLANS OR AS APPROVED BY THE ENGINEER.
18. ALL IMPROVEMENTS WITHIN CITY OR STATE RIGHT-OF-WAY, OR PUBLIC EASEMENTS, SHALL BE REPAIRED OR RESTORED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION, AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE AGENCY.
19. ALL TRENCHES WITHIN PUBLIC RIGHT-OF-WAY MUST BE BACKFILLED OR PROTECTED PRIOR TO LEAVING THE SITE.
20. ALL EXISTING RECORDED SURVEY POINTS, WHETHER WITHIN PRIVATE PROPERTY OR PUBLIC RIGHT-OF-WAY SHALL BE PROTECTED AND PRESERVED. IF SURVEY POINT(S) ARE ALTERED, REMOVED OR DESTROYED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE SERVICES OF A LICENSED SURVEYOR OR QUALIFIED CIVIL ENGINEER TO RESTORE OR REPLACE THE SURVEY POINTS AND RECORD THE REQUIRED MAP PRIOR TO COMPLETION OF THE BUILDING PERMIT, AT NO ADDITIONAL COST TO THE PROJECT.
21. CONSTRUCTION SHALL COMPLY WITH COUNTYWIDE STORM WATER POLLUTION PREVENTION PROGRAM.
22. ACCESSIBLE PEDESTRIAN PATH OF TRAVEL SHALL BE MAINTAINED DURING CONSTRUCTION AT ALL TIMES.
23. ALL EXCAVATION SPOILS SHALL BE LOADED DIRECTLY INTO TRUCKS AND DISPOSED OF AT AN APPROVED DUMPSITE.
24. STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENT WILL NOT BE ALLOWED IN OR UPON THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS INTENDED FOR USE ON ANY PROJECT SHALL BE OFF LOADED DIRECTLY FROM DELIVERY VEHICLES AND PLACED AS REQUIRED DURING THE COURSE OF CONSTRUCTION. SHOULD THE PERMIT HOLDER OR THEIR CONTRACTORS WISH TO STOCKPILE MATERIALS NEAR THE WORK SITE, THEY SHALL MAKE ARRANGEMENTS IN ADVANCE FOR STORAGE. ALL STORAGE SITES SHALL BE SECURE, INACCESSIBLE TO THE GENERAL PUBLIC AND KEPT FREE OF CONSTRUCTION SPOILS, DEBRIS AND TRASH AT ALL TIMES. STORAGE SITES SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY ENGINEER.
25. CONSTRUCTION SITES SHALL BE KEPT CLEAN AT ALL TIMES. AT NO TIME SHALL THE CONTRACTOR OR PERMIT HOLDER BE ALLOWED TO LEAVE THE SITE PRIOR TO THOROUGHLY CLEANING SIDEWALKS, CURBS, GUTTERS, AND STREET SURFACES. CLEANING SHALL BE ACCOMPLISHED BY EITHER HAND OR MACHINE SWEEPING AS REQUIRED. IN NO EVENT SHALL THE CONTRACTOR BE ALLOWED TO FLUSH THE STREETS WITH WATER UNTIL SUCH TIME AS THE AREA HAS BEEN COMPLETELY AND THOROUGHLY SWEPT AND ALL DEBRIS PICKED UP AND PROPERLY DISPOSED OF.
26. ALL EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED AT DAYS END. A MINIMUM OF TWO INCHES OF TEMPORARY PAVING SHALL BE INSTALLED AND COMPACTED BY MECHANICAL MEANS TO PRODUCE A SMOOTH SURFACE FOR PEDESTRIAN AND VEHICULAR TRAFFIC. TRAFFIC PLATES WILL NOT BE ALLOWED EXCEPT AS APPROVED BY THE ENGINEER DURING THE PERMIT APPLICATION PROCESS. INSTALLATION OF PLATES WILL ONLY BE ALLOWED IF A BONAFIDE EMERGENCY HAS BEEN DECLARED. IN THIS EVENT, PLATES WILL BE ALLOWED PROVIDING THEY ARE ANCHORED EITHER BY WELDING OR PINNED. ALL EDGES SHALL BE SECURED TO PREVENT RATTLING AND MOVEMENT AS WELL AS PROTECTED WITH TEMPORARY ASPHALT (MIN TWO FOOT TAPER). LONG TERM INSTALLATIONS, THOSE IN EXCESS OF FIVE DAYS, WILL BE ALLOWED, IF APPROVED BY THE CITY ENGINEER, PROVIDING THAT EXISTING SURFACES ARE GROUND TO ACCEPT PLATE INSTALLATIONS AND PROVIDE FOR A MATCHING SURFACE WHERE PLATE MEETS ROADWAY SURFACE. EQUIPMENT SHALL NOT BE STORED ON OR WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY ENGINEER. IF PERMITTED, EQUIPMENT SHALL BE SECURED AND LOCKED WITH PROTECTIVE COVERS IN PLACE. ADEQUATE BARRICADES WITH OPERABLE FLASHERS SHALL BE INSTALLED AROUND THE EQUIPMENT AND REMAIN IN WORKING ORDER AT ALL TIMES.
27. IN THE EVENT OF NON-COMPLIANCE WITH PERMIT, PROJECT CONDITIONS AND/OR CITY STANDARDS FOR CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY, THE CITY WILL EXERCISE ITS RIGHT TO SUSPEND PROJECT PERMITS OR HALT WORK IN PROGRESS UNTIL SUCH TIME AS THE PERMIT HOLDER OR HIS CONTRACTOR IS IN COMPLIANCE. SHOULD THE CITY HAVE TO OBTAIN OUTSIDE SERVICES FOR CLEANING EQUIPMENT, TRANSPORT SERVICES, TOWING, CONTRACT PERSONNEL OR UTILIZE CITY FORCES FOR CLEANUP, THE CITY WILL BILL FOR ITS SERVICES AND EXPENSES INCLUDING ALL INCIDENTALS AND ADMINISTRATIVE OVERHEAD COSTS.
28. AIR QUALITY DUST CONTROL: ALL CONSTRUCTION PROJECTS ARE REQUIRED TO COMPLY WITH THE MONTEREY BAY AIR RESOURCES DISTRICT'S (MBARD) DUST CONTROL MEASURES. THESE MEASURES ARE LEVIED BY THE ENGINEERING DIVISION AS A CONDITION OF BUILDING PERMIT ISSUANCE AND ARE MONITORED FOR COMPLIANCE BY STAFF AND/OR SPECIAL CITY ENGINEERING AND/OR PLANNING INSPECTORS. MEASURES MAY INCLUDE:
    A) WATER ALL ACTIVE CONSTRUCTION SITES AT LEAST TWICE DAILY.
    B) COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD.
    C) PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON-TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS, AND STAGING AREAS AT CONSTRUCTION SITES.
    D) SWEEP DAILY (WITH WATER SWEEPERS) ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.
    E) SWEEP STREETS DAILY (WITH WATER SWEEPERS) IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS.
    F) HYDROSEED OR APPLY (NON-TOXIC) SOIL STABILIZERS TO INACTIVE CONSTRUCTION AREAS (PREVIOUSLY GRADED AREAS INACTIVE FOR TEN DAYS OR MORE).
    G) ENCLOSE, COVER, WATER TWICE DAILY, OR APPLY NON-TOXIC SOIL BINDERS TO EXPOSED STOCKPILED MATERIALS.
    H) INSTALL SANDBAGS OR OTHER EROSION-CONTROL MEASURES TO PREVENT SILT RUNOFF TO PUBLIC ROADWAYS.
    I) REPLANT VEGETATION IN DISTURBED AREAS AS QUICKLY AS POSSIBLE.
    J) WATERING SHOULD BE USED TO CONTROL DUST GENERATION DURING THE BREAK-UP OF PAVEMENT.
    K) COVER ALL TRUCKS HAULING DEMOLITION DEBRIS FROM THE SITE.
    L) USE DUST-PROOF CHUTES TO LOAD DEBRIS INTO TRUCKS WHENEVER FEASIBLE.
    M) WATER OR COVER STOCKPILES OF DEBRIS, SOIL, SAND OR OTHER MATERIALS THAT CAN BE BLOWN BY THE WIND.
    N) ALL CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED AND PROPERLY TUNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL EQUIPMENT SHALL BE CHECKED BY A CERTIFIED MECHANIC AND DETERMINED TO BE IN PROPER RUNNING ORDER PRIOR TO OPERATION.
    O) DIESEL POWERED EQUIPMENT SHALL NOT BE LEFT INACTIVE AND IDLING FOR MORE THAN FIVE MINUTES, AND SHALL COMPLY WITH APPLICABLE MBARD RULES.
    P) USE ALTERNATIVE FUELED CONSTRUCTION EQUIPMENT, IF POSSIBLE.
    Q) ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MPH.
    R) POST A VISIBLE SIGN WITH THE TELEPHONE NUMBER AND PERSON TO CONTACT AT THE LEAD AGENCY REGARDING DUST COMPLAINTS. THIS PERSON SHALL RESPOND AND TAKE CORRECTIVE ACTION WITHIN 24 HOURS. THE AIR DISTRICT PHONE NUMBER SHALL ALSO BE VISIBLE TO ENSURE COMPLIANCE WITH APPLICABLE REGULATIONS.
31. CONDUITS INSIDE PULL BOXES AND SPLICE BOXES SHOULD BE TRIMMED PRIOR TO THE INSTALLATION OF ANY CABLE.
32. CONTRACTOR SHALL PROVIDE AND INSTALL BELL ENDS ON CONDUIT ENDS PRIOR TO THE INSTALLATION/PULLING OF CABLE.
33. PROPER LENGTH OF CABLE SLACK SHALL BE VERIFIED BY THE PROJECT INSPECTOR OR ENGINEER.
34. CABLE SLACK SHOULD BE PROPERLY COILED OBSERVING THE MINIMUM RADIUS OR CIRCUMFERENCE BASED ON MANUFACTURER'S SPECIFICATION.
35. ALL LIDS FOR PULL BOXES ARE TO BE PROPERLY LABELED.
36. ALL PULL BOXES SHALL BE SECURED WITH VANDAL PROOF PENTA BOLTS.
37. ALL PULL BOXES ARE NO. 5 UNLESS NOTED.

UTILITY GENERAL NOTES

1. UTILITIES SHOWN ON PLANS ARE SCHEMATIC IN NATURE AND CAN BE USED FOR PLANNING PURPOSES, BUT NOT DESIGN PURPOSES.
2. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST 14 DAYS PRIOR TO STARTING WORK.
    2.1. UNDERGROUND SERVICE ALERT (USA) 1-800-227-2600
3. EXISTING UTILITIES EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXCAVATING AND INSTALLING NEW UTILITIES. IN THE EVENT PORTIONS OF THE EXISTING UTILITIES ARE DAMAGED AS A RESULT OF PROJECT CONSTRUCTION, REPAIR OR REPLACEMENT OF THE DAMAGED SECTION SHALL BE PERFORMED BY CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF CITY AND COUNTY STANDARDS AND SPECIFICATIONS. REPAIRS WILL BE AT THE CONTRACTOR'S EXPENSE AND APPROVED BY CITY INSPECTOR.
4. FOR INSTALLATIONS PERFORMED BY DIRECTIONAL DRILLING, GRAVITY LINES SHALL BE RECORDED USING CCTV CAMERAS BEFORE AND AFTER CONSTRUCTION OR THE CROSSING POINT SHALL BE EXCAVATED DURING CONSTRUCTION. FOR THE BSD STORM SEWER FORCE MAIN, THE CROSSING POINT SHALL BE EXCAVATED DURING CONSTRUCTION.

LEGEND

PROPOSED	DESCRIPTION
	STREET LIGHT AND POLE ON NEW FOUNDATION
	CCTV CAMERA
	PA SPEAKER
	CABINET ON NEW FOUNDATION
	POLE-MOUNTED CABINET
	SERVICE PEDESTAL ON NEW FOUNDATION
E E	PROPOSED CONDUIT FOR ELECTRICAL CONDUCTORS AND CABLES
C C	PROPOSED CONDUIT FOR COMMUNICATIONS CONDUCTORS AND CABLES
6	PROPOSED PULL BOX. SIZE AS INDICATED. NO. 5 UNLESS OTHERWISE INDICATED.
	GATE
	DETECTOR HANDHOLE
	RFID LONG-RANGE READER
	VEHICLE DETECTOR LOOP
	MANUAL ACCESS CONTROL DEVICE
	BUS SHELTER AND SIGN. INSTALLATION SHOWN ON ARCHITECTURAL PLANS. (FOR ELECTRICAL AND COMMUNICATIONS CONNECTION, SEE DETAILS A, B, C, AND D ON E-302.)
XX#-#	CIRCUIT NAME – EQUIPMENT OR DEVICE ON CIRCUIT
	DUAL PORT BOLLARD MOUNT LEVEL 2 EV CHARGER
	FUTURE LEVEL 2 EV CHARGER
	LEVEL 3 BEB CHARGER POWER LINK
	LEVEL 3 BEB CHARGER POWER BLOCK
	PROTECTIVE BOLLARD
	UTILITY PAD-MOUNTED TRANSFORMER
	MAIN SERVICE SWITCHBOARD (MSB)
	PANELBOARD (DPLA)

ABBREVIATIONS

AB	ABANDON, IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
BC	INSTALL PULL BOX IN EXISTING CONDUIT RUN
CB	INSTALL CONDUIT INTO EXISTING PULL BOX
CC	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
RC	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR
RL	RELOCATE EQUIPMENT
RS	REMOVE AND SALVAGE EQUIPMENT
SC	SPLICE NEW TO EXISTING CONDUTORS

A	AMPS
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
BBS	BATTERY BACKUP SYSTEM
BEB	BATTERY ELECTRIC BUS
BRT	BUS RAPID TRANSIT
CAB	CABINET
CCTV	CLOSED CIRCUIT TELEVISION
CEC	CALIFORNIA ELECTRICAL CODE
COMMS	COMMUNICATIONS
CTS	CURRENT TRANSFORMERS
DPLA	DISTRIBUTION PANELBOARD
ETH	ETHERNET
EV	ELECTRIC VEHICLE
EX	EXISTING
GFP	GROUND FAULT PROTECTION
GT	GATE
ID	IDENTIFICATION
KAIC	KILO AMP INTERRUPTING CAPACITY
LED	LIGHT-EMITTING DIODE
LT	LIGHTING
L#	LEVEL #
MSB	MAIN SWITCHBOARD
MST	MONTEREY SALINAS TRANSIT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NO.	NUMBER
O.C.	ON CENTER
PA	PUBLIC ADDRESS
POE	POWER OVER ETHERNET
PTS	POTENTIAL TRANSFORMERS
PYL	PYLON
RELT	REDUCED ENERGY LET THROUGH
RFID	RADIO FREQUENCY IDENTIFICATION
RR	RAILROAD
R/W	RIGHT-OF-WAY
SB	SOUTHBOUND
SH	SHELTER
TAMC	TRANSPORTATION AGENCY FOR MONTEREY COUNTY
THW	THERMOPLASTIC HIGH HEAT-RESISTANT AND WATER RESISTANT
UL	UNDERWRITERS LABORATORY
USA	UNDERGROUND SERVICE ALERT
W	WATTS
V	VOLTS

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
GENERAL NOTES, LEGEND, ABBREVIATIONS
LIGHTING, COMMUNICATIONS, AND ELECTRICAL
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
E-102
SHEET 497 OF 617

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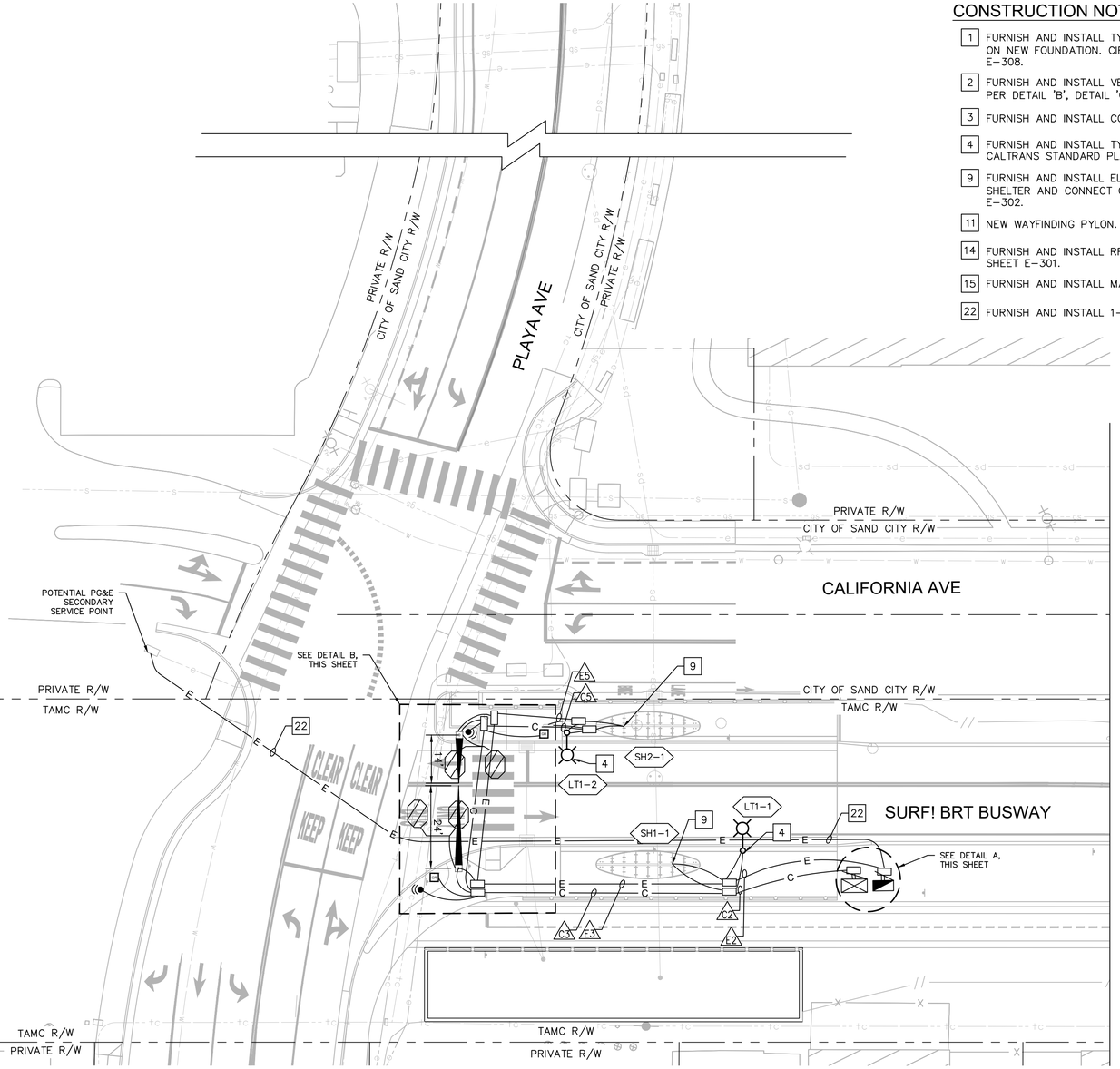
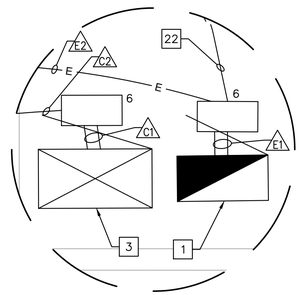
CONSTRUCTION NOTES

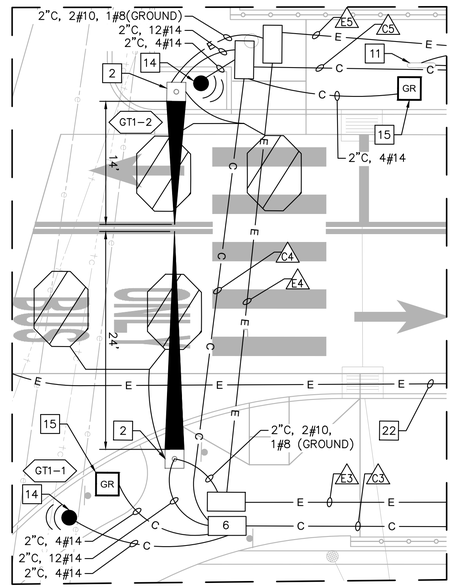
1. FURNISH AND INSTALL TYPE III–AF SERVICE EQUIPMENT ENCLOSURE PER CALTRANS STANDARD PLAN ES–2G ON NEW FOUNDATION. CIRCUIT DIAGRAM FOR THIS SERVICE ENCLOSURE (SC1) IS PER DETAIL 'A' ON SHEET E–308.
2. FURNISH AND INSTALL VEHICLE GATE CONTROL SYSTEM IN CABINET AND GATE ARM ON NEW FOUNDATION PER DETAIL 'B', DETAIL 'C', AND DETAIL 'D' ON SHEET E–301.
3. FURNISH AND INSTALL COMMUNICATIONS CABINET ON NEW FOUNDATION PER DETAIL 'A' ON SHEET E–310.
4. FURNISH AND INSTALL TYPE 15 CALTRANS STANDARD STREET LIGHT POLE AND STREET LIGHT PER CALTRANS STANDARD PLAN ES–6A. LUMINAIRE WATTAGE SHALL BE 100W, DIMMABLE.
9. FURNISH AND INSTALL ELECTRICAL AND COMMUNICATIONS CONDUIT INTO BUS SHELTER. TERMINATE INTO SHELTER AND CONNECT CCTV CAMERA PER DETAIL 'A', DETAIL 'B', DETAIL 'C', AND DETAIL 'D' ON SHEET E–302.
11. NEW WAYFINDING PYLON. SEE DETAIL 'A,' WAYFINDING PYLON ON SHEET E–302.
14. FURNISH AND INSTALL RFID LONG–RANGE READER ON NEW POLE ON NEW FOUNDATION PER DETAIL 'A' ON SHEET E–301.
15. FURNISH AND INSTALL MANUAL ACCESS CONTROL DEVICE.
22. FURNISH AND INSTALL 1–4"C.





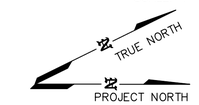
DETAIL 'A"

SCALE: 1"=5'



DETAIL 'B'

SCALE: 1"=8'



GRAPHIC SCALE IN FEET
0 10 20 40

ELECTRICAL CONDUIT AND WIRING SCHEDULE							
AWG OR CABLE	DEVICE	CIRCUIT	CONDUCTOR RUN				
			E1	E2	E3	E4	E5
#12	LIGHTING	LT1	2	2	2	2	2
	SHELTER	SH1	2	2	–	–	–
		SH2	2	2	2	2	2
	TOTAL #12		6	6	4	4	4
#10	GATE ASSEMBLY	GT1	2	2	2	2	–
	TOTAL #10		2	2	2	2	–
#8	GROUND		4	4	3	3	2
	PULL ROPE		1	1	1	1	1
CONDUIT SIZE			2–3"	3"	3"	3"	3"
PERCENT FILL			3%	6%	5%	5%	3%

COMMUNICATIONS CONDUIT AND WIRING SCHEDULE						
AWG OR CABLE	DEVICE	CONDUCTOR RUN				
		C1	C2	C3	C4	C5
CAT6A	SH1–1	1	1	–	–	–
	SH2–1	1	1	1	1	1
	TOTAL CAT6A	2	2	1	1	1
#14	GT1–1	4	4	4	–	–
	GT1–2	4	4	4	4	–
	TOTAL #14	8	8	8	4	–
PULL ROPE		1	1	1	1	1
CONDUIT SIZE		2–3"	3"	3"	3"	3"
PERCENT FILL		2%	4%	3%	2%	1%

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
CALIFORNIA AVE AND PLAYA AVE BUS STOP
LIGHTING, COMMUNICATION, AND ELECTRICAL
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	

CONTRACT NO. 22-03

SHEET NO.
E–201
SHEET 498 OF 617

K:\p&_trans\097541003 – mst surf final design\Sheets\E-201.dwg 09/11/2023 11:04:51AM michaela.wood

CONSTRUCTION NOTES

2 FURNISH AND INSTALL VEHICLE GATE CONTROL SYSTEM IN CABINET AND GATE ARM ON NEW FOUNDATION PER DETAIL 'B', DETAIL 'C', AND DETAIL 'D' ON SHEET E–301.

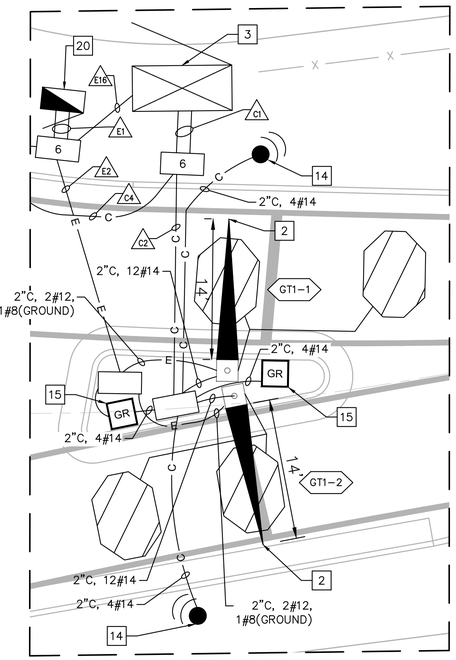
3 FURNISH AND INSTALL COMMUNICATIONS CABINET ON NEW FOUNDATION PER DETAIL 'A' ON SHEET E–310.

4 FURNISH AND INSTALL TYPE 15 CALTRANS STANDARD STREET LIGHT POLE AND STREET LIGHT PER CALTRANS STANDARD PLAN ES–6A. LUMINAIRE WATTAGE SHALL BE 100W, DIMMABLE.

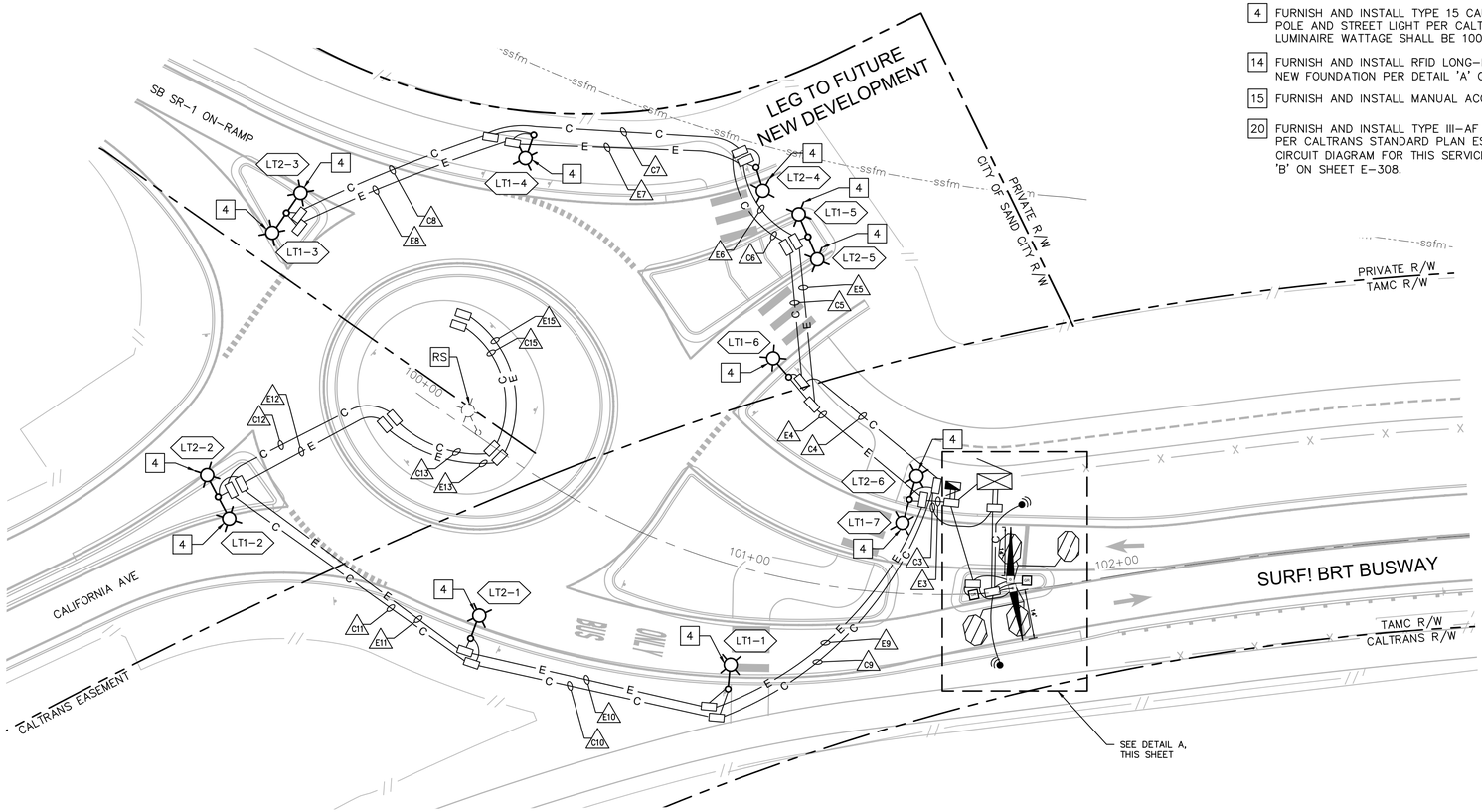
14 FURNISH AND INSTALL RFID LONG–RANGE READER ON NEW POLE ON NEW FOUNDATION PER DETAIL 'A' ON SHEET E–301.

15 FURNISH AND INSTALL MANUAL ACCESS CONTROL DEVICE.

20 FURNISH AND INSTALL TYPE III–AF SERVICE EQUIPMENT ENCLOSURE PER CALTRANS STANDARD PLAN ES–2G ON NEW FOUNDATION. CIRCUIT DIAGRAM FOR THIS SERVICE ENCLOSURE (SC3) IS PER DETAIL 'B' ON SHEET E–308.

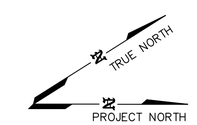


DETAIL 'A'
SCALE: 1"=7'



ELECTRICAL CONDUIT AND WIRING SCHEDULE															
AWG OR CABLE	DEVICE	CIRCUIT	CONDUCTOR RUN												
			E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14
#12	LIGHTING	LT1	2	–	2	2	2	2	2	2	2	2	–	–	–	
		LT2	2	–	2	2	2	2	2	2	2	2	–	–	–	
	GATES	GT1	2	2	–	–	–	–	–	–	–	–	–	–	–	
	TOTAL #12		6	2	4	4	4	4	4	4	4	4	–	–	–	
#8	GROUND		2	1	1	1	1	1	1	1	1	1	–	–	–	
PULL ROPE			1	1	1	1	1	1	1	1	1	1	1	1	1	
CONDUIT SIZE			2–3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
PERCENT FILL			2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	–	–	–	

COMMUNICATIONS CONDUIT AND WIRING SCHEDULE															
AWG OR CABLE	DEVICE	CONDUCTOR RUN													
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14
#14	GT1–1	4	4	–	–	–	–	–	–	–	–	–	–	–	–
	GT1–2	4	4	–	–	–	–	–	–	–	–	–	–	–	–
	TOTAL #14	8	8	–	–	–	–	–	–	–	–	–	–	–	–
	PULL ROPE	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CONDUIT SIZE		2–3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
PERCENT FILL		1%	2%	–	–	–	–	–	–	–	–	–	–	–	–



GRAPHIC SCALE IN FEET
0 10 20 40

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
CALIFORNIA AVENUE ENTRANCE ROUNDABOUT
ELECTRICAL AND LIGHTING PLAN
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22–03	
SHEET NO.	E–202	
SHEET 499 OF 617		

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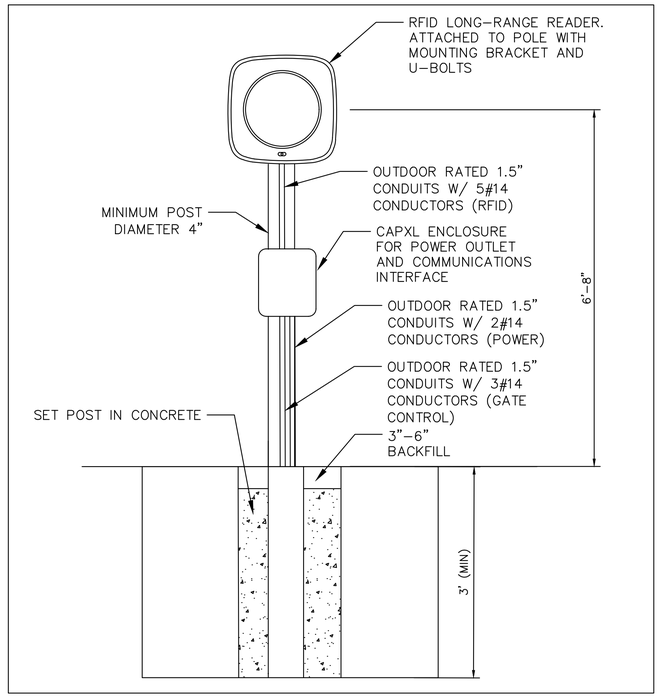
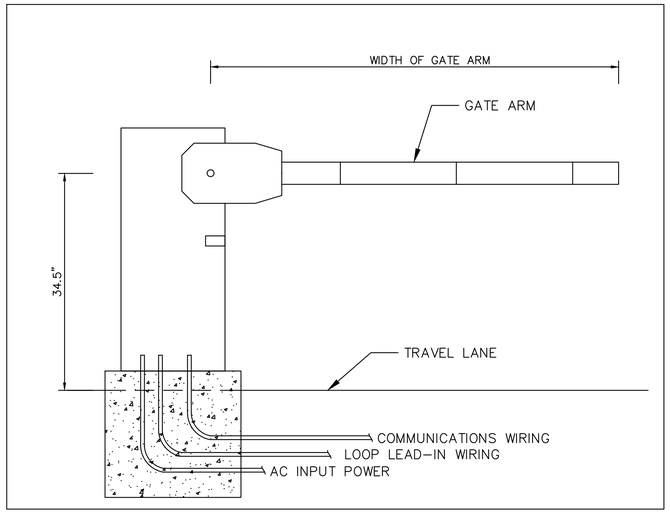
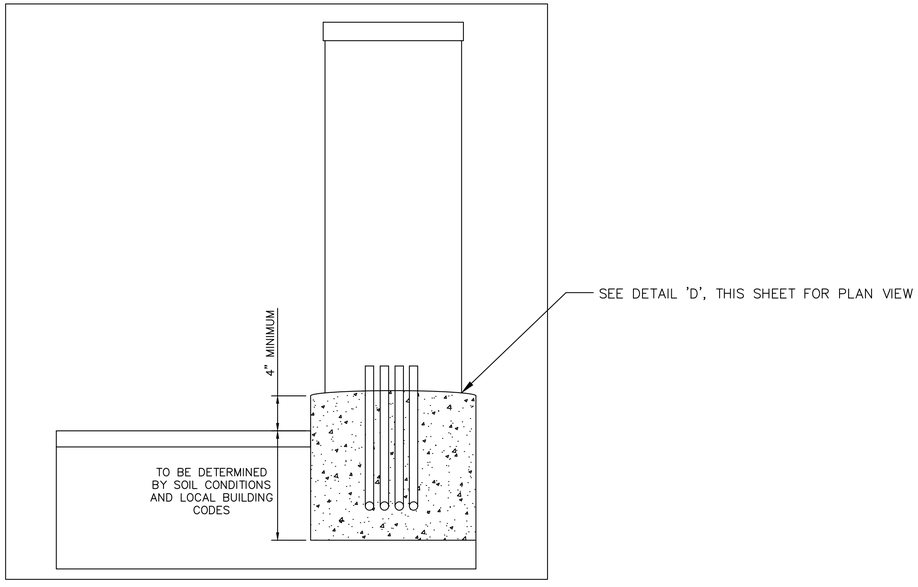


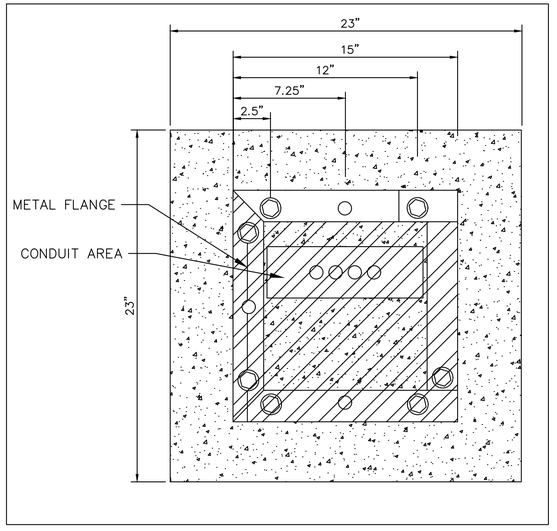
DETAIL 'A'
RFID LONG-RANGE READER
FRONT VIEW
NOT TO SCALE



DETAIL 'B'
VEHICLE GATE CONTROL SYSTEM
AND GATE ARM FRONT VIEW
NOT TO SCALE



DETAIL 'C'
VEHICLE GATE CONTROL SYSTEM
FOUNDATION SIDE VIEW
NOT TO SCALE



DETAIL 'D'
VEHICLE GATE CONTROL SYSTEM
FOUNDATION PLAN VIEW
NOT TO SCALE

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
GATE HOUSING AND RFID READER DETAILS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	

SHEET NO.
E-301
SHEET 511 OF 617

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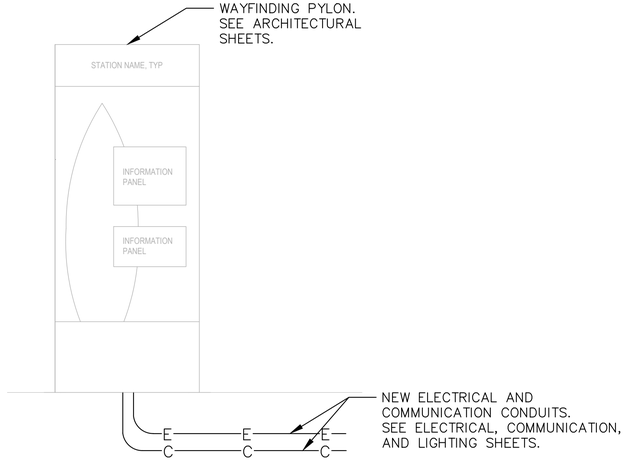
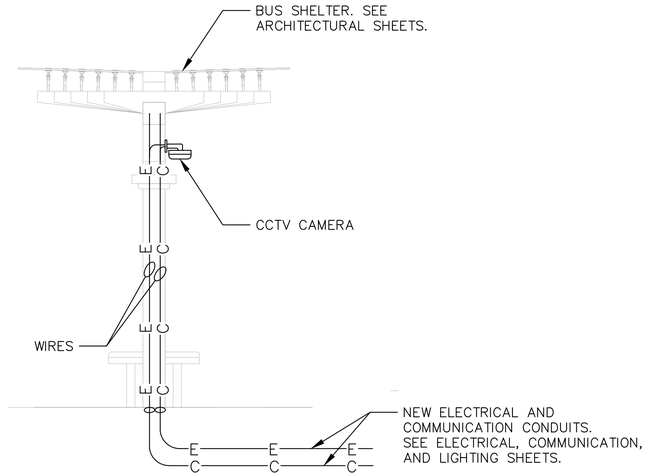
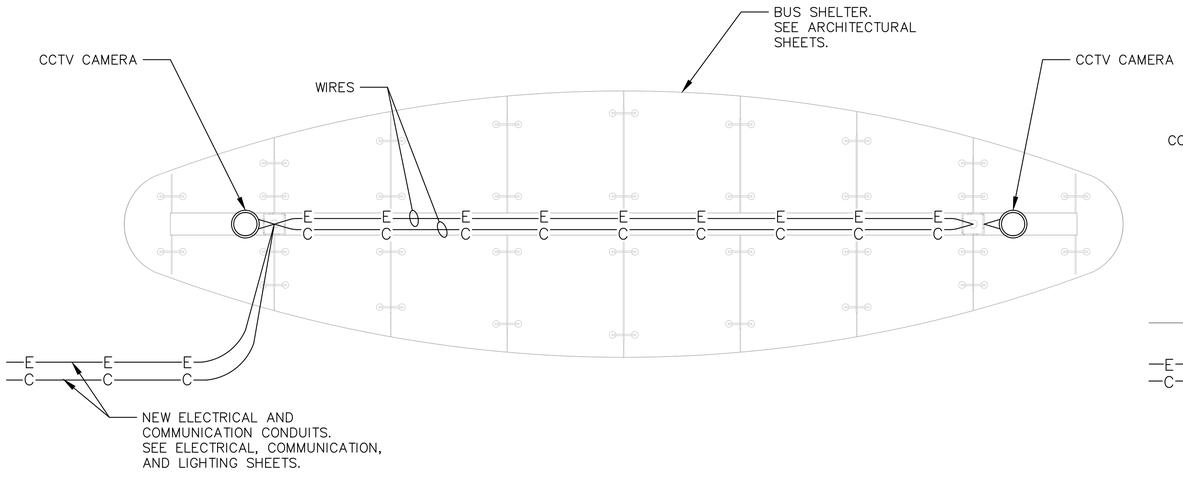


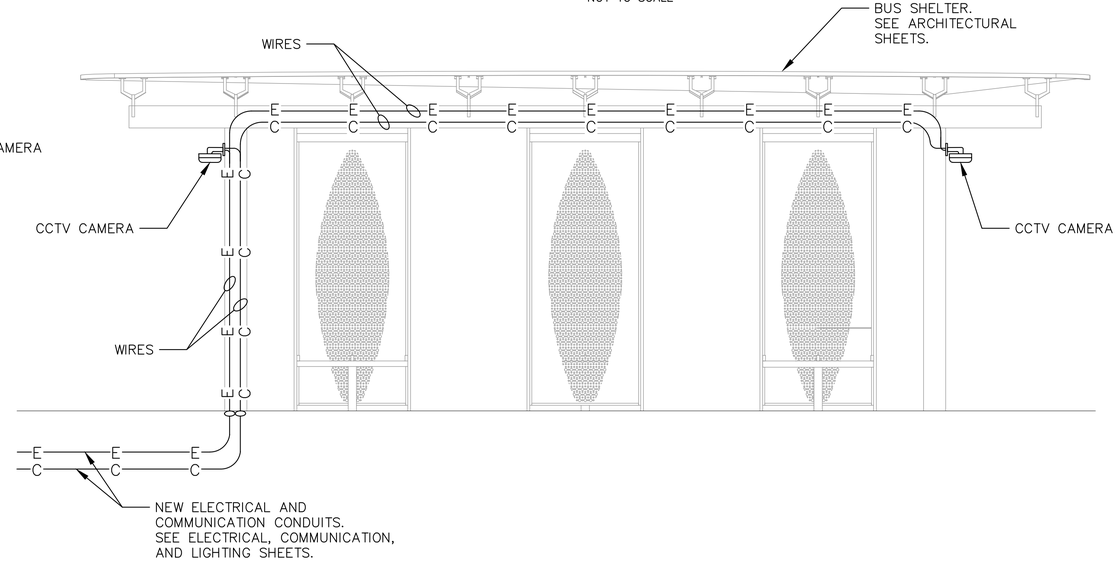
DETAIL 'A'
WAYFINDING PYLON ELECTRICAL
FRONT VIEW
NOT TO SCALE



DETAIL 'C'
BUS SHELTER ELECTRICAL
PROFILE VIEW
NOT TO SCALE



DETAIL 'B'
BUS SHELTER ELECTRICAL
PLAN VIEW
NOT TO SCALE



DETAIL 'D'
BUS SHELTER ELECTRICAL
FRONT VIEW
NOT TO SCALE

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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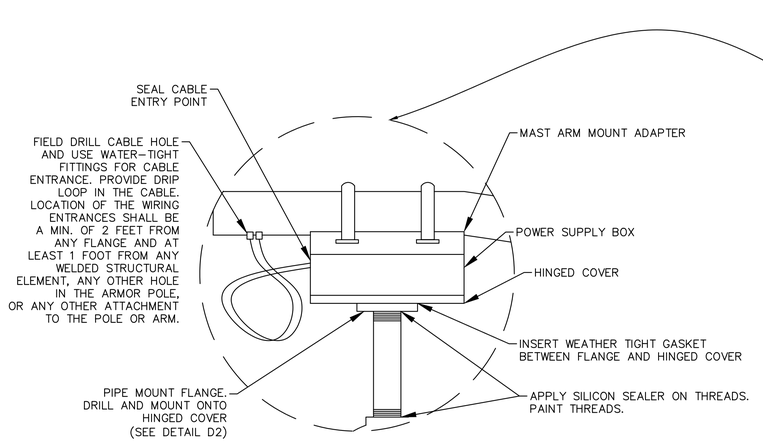
SURF! BUSWAY AND BRT PROJECT
DETAILS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	

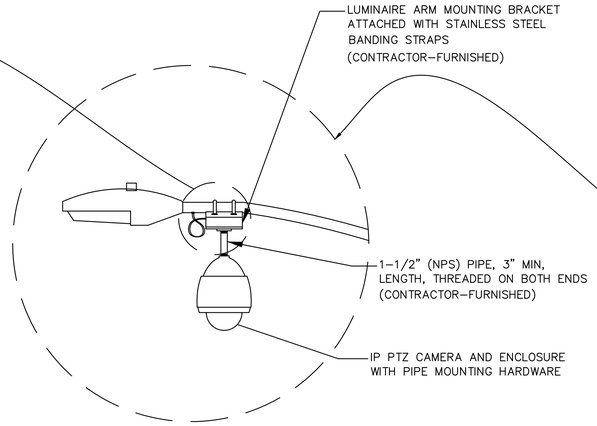
SHEET NO.
E-302
SHEET 512 OF 617

K:\SB_tcren\069754\003 - mst surf final design\Design\Sheets\E-301.dwg 09/11/2023 10:39:09AM andrew.wittner



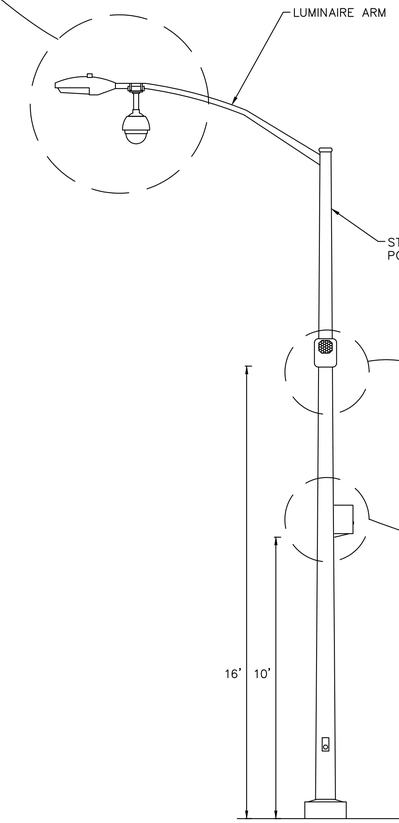
DETAIL 'A-1': LUMINAIRE MOUNTING ASSEMBLY

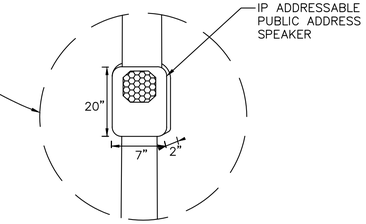
NO SCALE



DETAIL 'A': LUMINAIRE-MOUNTED CCTV CAMERA

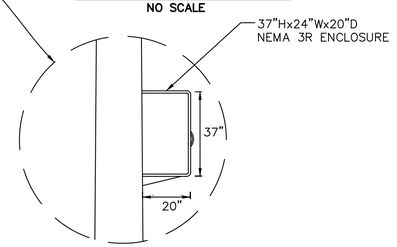
NO SCALE





DETAIL 'B' PA SPEAKER ON STREET LIGHT

NO SCALE



DETAIL 'D: COMMUNICATIONS CABINET MOUNTED ON STREET LIGHT POLE

NO SCALE

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

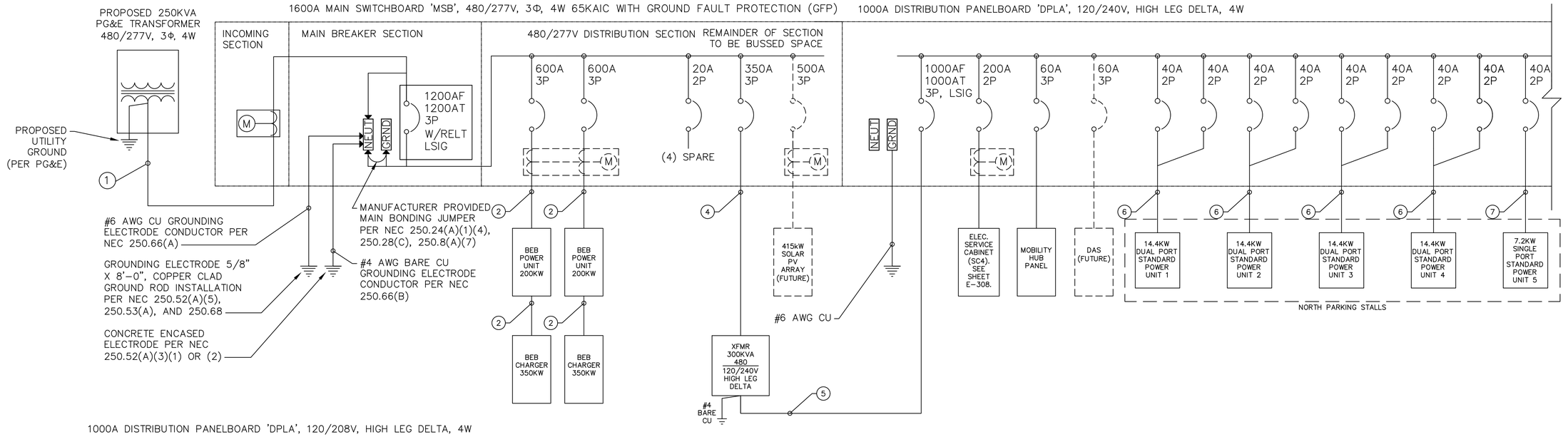
SURF! BUSWAY AND BRT PROJECT
POLE MOUNTED EQUIPMENT DETAILS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023
DRAWN	ASW
DESIGNED	MEW
CHECKED	KGA
CONTRACT NO.	22-03

SHEET NO.
E-303
SHEET 513 OF 617

K:\p&_trans\097541003 - mst surf final design\Sheets\E-301.dwg 09/11/2023 10:39:12AM andrew.wittner



NOTES

1. ALL WORK SHALL COMPLY WITH 2022 CALIFORNIA ELECTRICAL CODE (CEC), SECTION 625 FOR ELECTRIC VEHICLE STATIONS.
2. PROVIDE LABELING AS REQUIRED PER CEC 625. 15.
3. EQUIPMENT SHALL BE SUITABLE FOR EXTERIOR USE AND INSTALLED PER MANUFACTURER INSTALLATION DOCUMENTS.
4. PROPOSED CTS/PTS SHALL BE LOCATED AS APPROVED BY PG&E.
5. WHEN REQUIRED BY AHJ, A THIRD PARTY SHALL PROVIDE AN ARC FLASH HAZARD ANALYSIS AND DEVICE COORDINATION FOR THE ELECTRICAL EQUIPMENT INSIDE THE FENCED YARD.
6. MAIN BREAKER IS 100% RATED AND IS EQUIPPED WITH REDUCED ENERGY LET THROUGH (RELT) MAINTENANCE SWITCH WITH LOCAL STATUS INDICATION.
7. ALL EV CHARGING EQUIPMENT, POWER UNITS AND DISPENSERS, ARE UL 2202 LISTED AND 65KAIC WITHSTAND RATED.
8. WHEN REQUIRED BY THE AHJ, CONTRACTOR SHALL PROVIDE LABEL AT MAIN SERVICE DISCONNECT INDICATING NOMINAL VOLTAGE, AVAILABLE FAULT CURRENT, BREAKER CLEARING TIME, AND DATE OF BREAKER TESTING.
9. SWITCHGEAR IS EQUIPPED WITH MANUFACTURER INSTALLED WITH UP TO THREE (3) INTEGRAL CONVENIENCE OUTLETS.
10. MAIN BREAKER AND SWITCHGEAR ASSEMBLY SHALL BE 100% RATED. LOAD CALCULATIONS FOR THE SERVICE ARE PERFORMED IN COMPLIANCE WITH NEC 2023 230.42(A)(1), EXCEPTION NO.2.

95% DESIGN - NOT FOR CONSTRUCTION

LOAD SUMMARY (PER CEC 220)			
LOAD DESCRIPTION	KVA	QTY	TOTAL KVA
BEB CHARGER	200	2	400.0
SITE LIGHTING	21.5	1	21.5
CCTV CAMERAS	5.0	1	5.0
GATE CONTROL	1.9	1	1.9
COMMUNICATIONS SYSTEM	6.0	1	6.0
EV CHARGER	7.2	35	252.0
PANEL '1LM'	40	1	40.0
25% CONTINUOUS LOAD			195.1
TOTAL			975.5
DEMAND AMPS (480V, 3-PH)			1,170.6A
CONNECTED AMPS (480V, 3-PH)			936.5A

CONDUIT AND WIRING SCHEDULE			
TAG (#)	FROM	TO	CONFIGURATION
1	UTILITY TRANSFORMER	PROPOSED SWITCHBOARD 'MSB'	(3) 600 MCM AL + (1) 600 MCM AL NEUT + IN EACH OF (4) 3" CONDUIT
2	PROPOSED SWITCHBOARD 'MSB'	PROPOSED BEB CHARGER UNIT	(3) #3/0 AWG CU + (1) #4 AWG CU GND IN EACH OF (3) 3" CONDUIT
3	PROPOSED PANELBOARD 'DPLA'	PROPOSED ELECTRICAL SERVICE CABINET	FUTURE
4	PROPOSED SWITCHBOARD 'MSB'	PROPOSED 300KVA STEP-DOWN XFMR	(3) #3/0 AWG CU + (1) #4 AWG CU GND IN EACH OF (2) 3" CONDUIT
5	PROPOSED 300KVA STEP-DOWN XFMR	PROPOSED PANELBOARD 'DPLA'	(3) 500 MCM AL + (1) 500 MCM AL NEUT IN EACH OF (3) 4" CONDUIT
6	PROPOSED PANELBOARD 'DPLA'	PROPOSED L2 EV CHARGER	(4) #6 AWG CU + (2) #10 AWG CU GND IN EACH OF 2" CONDUIT
7	PROPOSED PANELBOARD 'DPLA'	PROPOSED L2 EV CHARGER	(2) #6 AWG CU + (1) #10 AWG CU GND IN EACH OF 2" CONDUIT
8	PROPOSED SWITCHBOARD 'MSB'	PROPOSED PANEL '1LM'	(3) #4 AWG CU + (1) #4 AWG CU NEUT + (1) #8 AWG CU GND IN EACH OF 1" CONDUIT
9	PROPOSED PANELBOARD 'DPLA'	PROPOSED L2 EV CHARGER	(4) #4 AWG CU + (2) #8 AWG CU GND IN EACH OF 2" CONDUIT

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

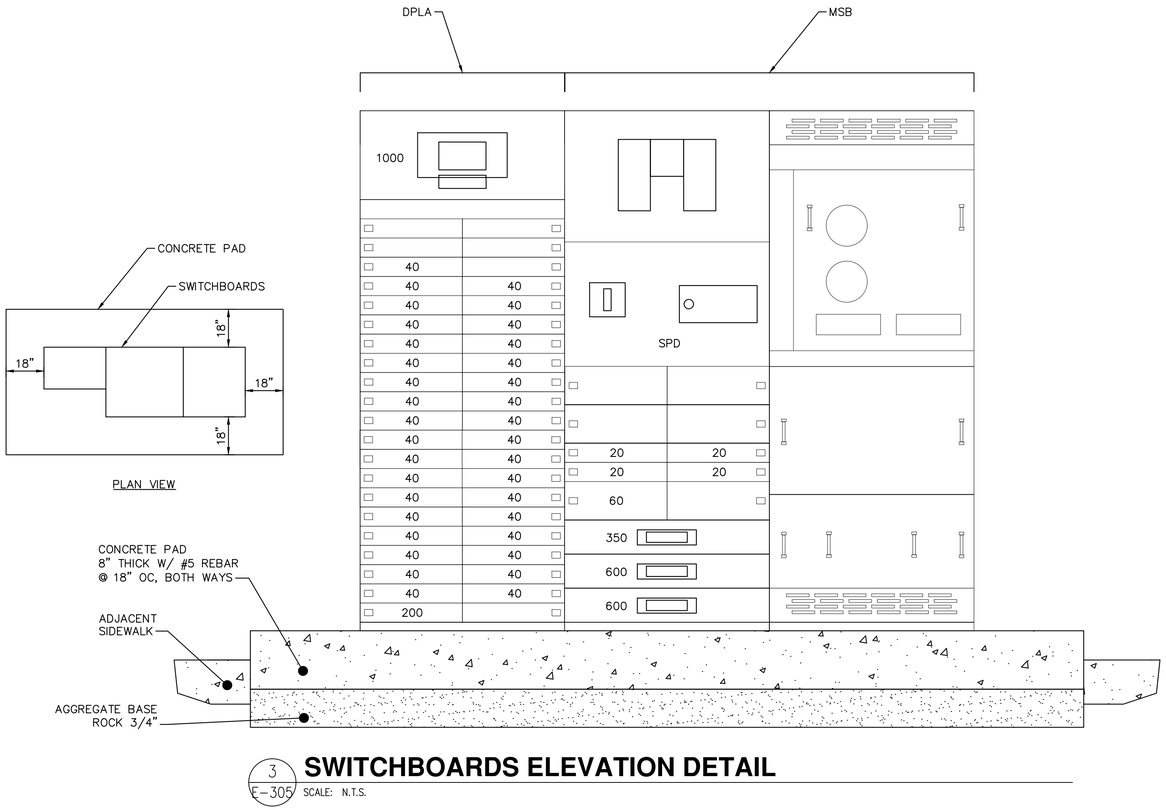
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
LINE DIAGRAM DETAIL
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

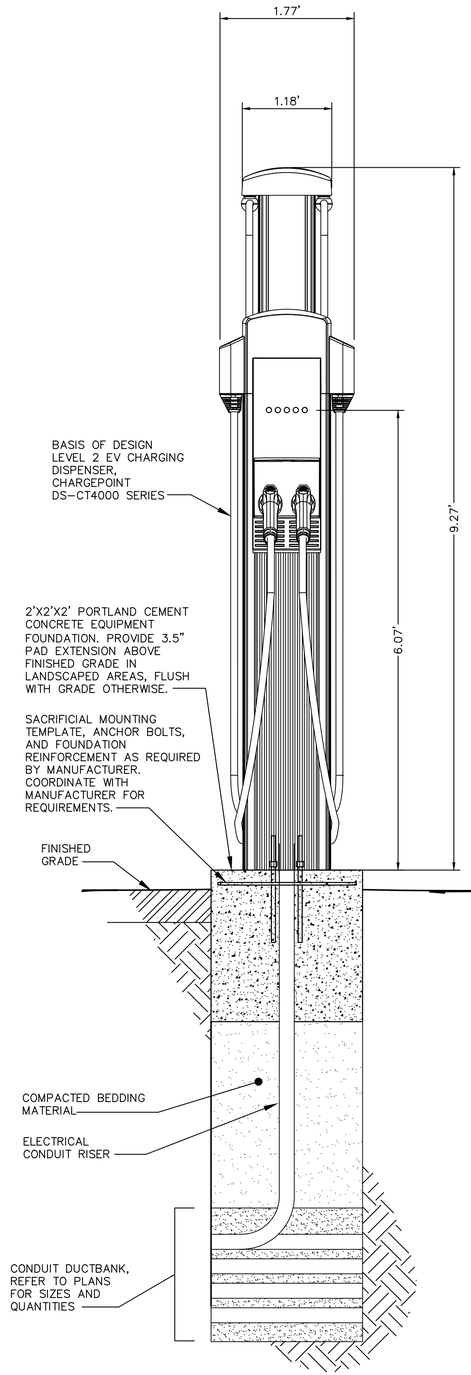
DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO. 22-03		
SHEET NO.	E-304	
SHEET 514 OF 617		

\\pbfp01\cos_sjc\Project\pb_cross\097541003 - mst surf final design\Design\Sheets\E-304.dwg 09/11/2023 12:18:09PM shane.grover



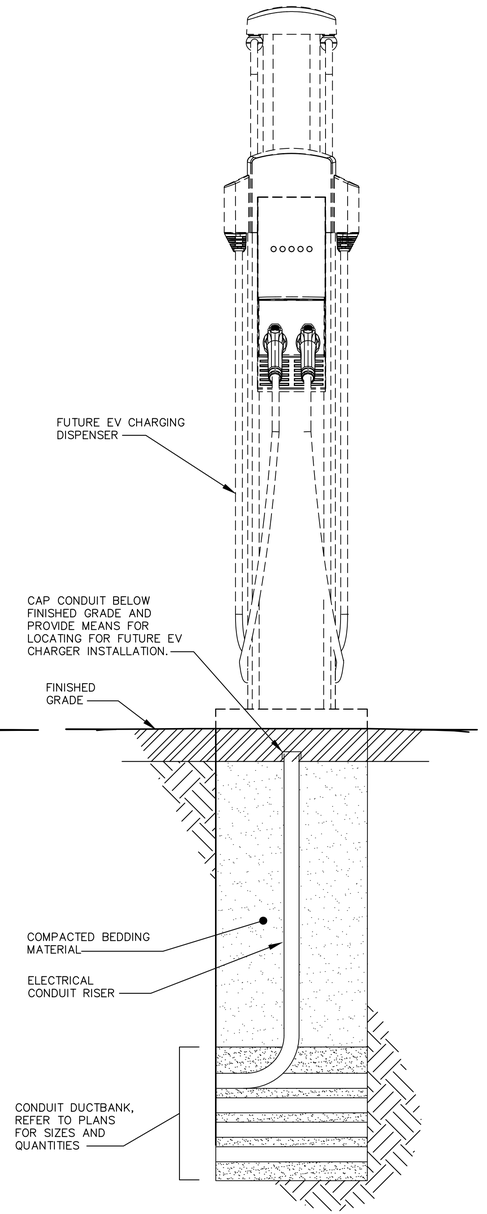
3 E-305 **SWITCHBOARDS ELEVATION DETAIL**

SCALE: N.T.S.



2 E-305 **L2 CHARGER DETAIL**

SCALE: N.T.S.



1 E-305 **FUTURE L2 CHARGER DETAIL**

SCALE: N.T.S.

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
EV CHARGER DETAILS
MONTEREY COUNTY CALIFORNIA

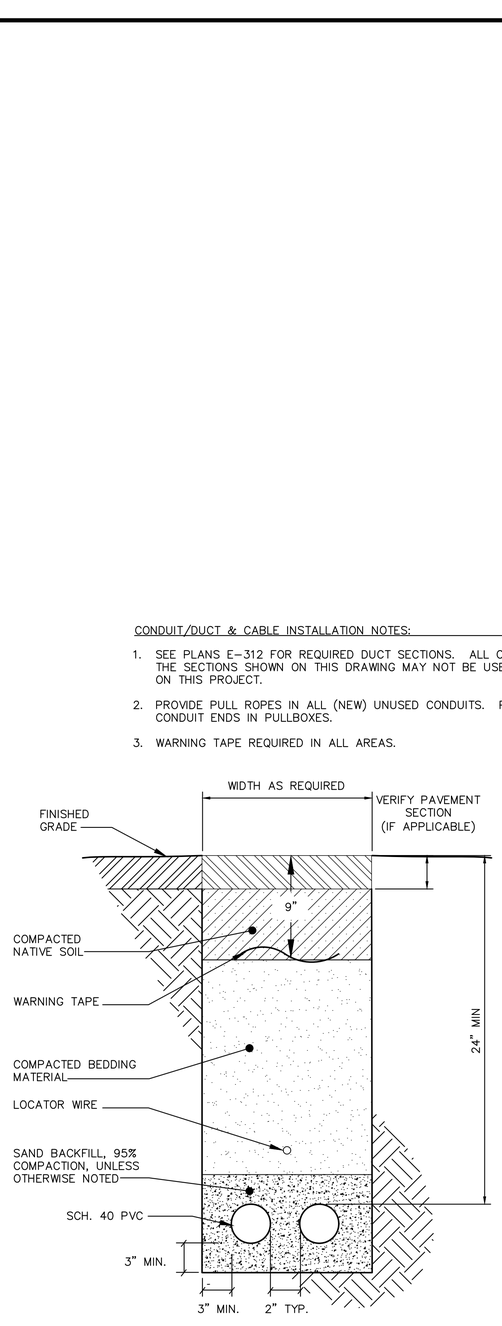
NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO. 22-03		
SHEET NO. E-305		
SHEET 515 OF 617		

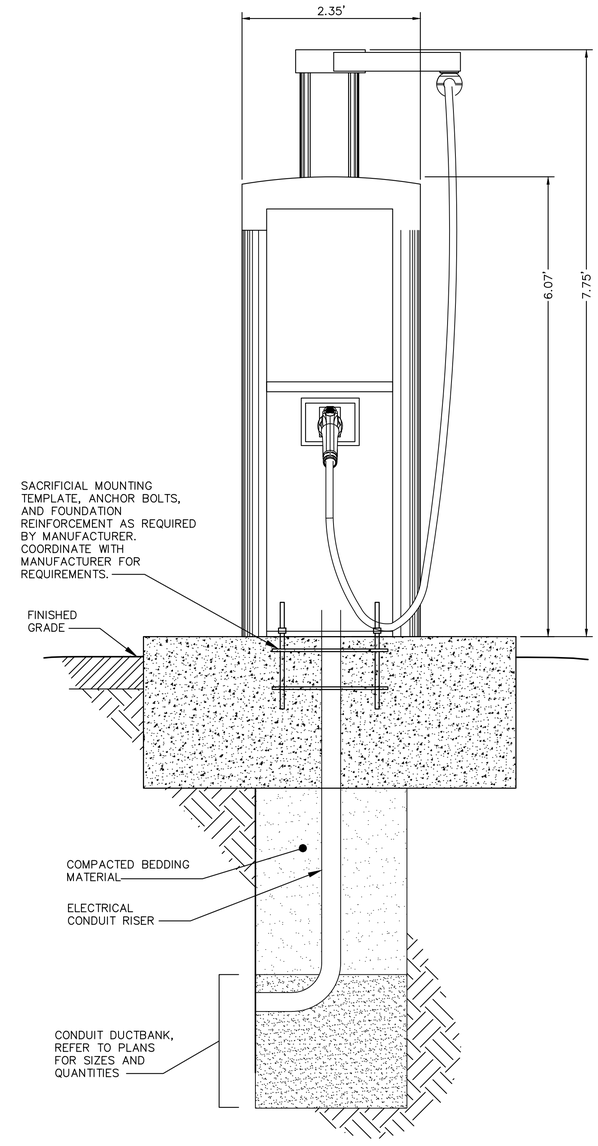
\\kfpb01\co_sjc\Project\sjc_trans\097541003 - mst surf final design\Design\Sheets\E-304.dwg 09/11/2023 12:18:14PM shane.grover

CONDUIT/DUCT & CABLE INSTALLATION NOTES:

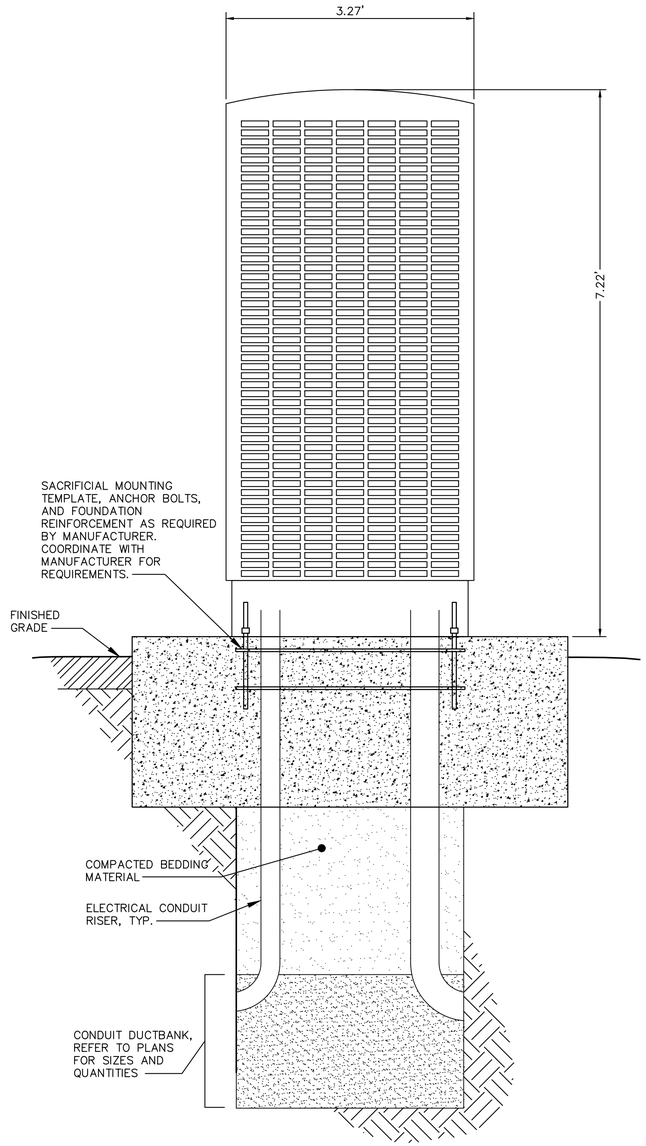
1. SEE PLANS E-312 FOR REQUIRED DUCT SECTIONS. ALL OF THE SECTIONS SHOWN ON THIS DRAWING MAY NOT BE USED ON THIS PROJECT.
2. PROVIDE PULL ROPES IN ALL (NEW) UNUSED CONDUITS. PLUG CONDUIT ENDS IN PULLBOXES.
3. WARNING TAPE REQUIRED IN ALL AREAS.



1 E-306 **CONDUIT TRENCHING DETAIL**
SCALE: N.T.S.



2 E-306 **L3 CHARGER POWER LINK DETAIL**
SCALE: N.T.S.



3 E-306 **L3 CHARGER POWER BLOCK DETAIL**
SCALE: N.T.S.

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DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	
SHEET NO.	E-306	
SHEET 516 OF 617		

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Point	Point Name	Source* Point	Source Amps	Conduit Type	Conductor Type	Wire Size/Quantity			Load (A)	Distance	Voltage	Phase	XFMR kVA	XFMR %Z	Isc	**% Vdrop	Conduit Size	**Conduit Fill	Point
1	277 / 480 3ph 750	28672	28,672												28,672				1
2	MSB	1	28,672	NM	Aluminum	4	Set of	500 KCML	1058	25	480	3			28,519	0.15%	4	28%	2
3	300KVA XFMR	2	28,519	NM	Aluminum	2	Set of	4/0	361	20	480	3			26,114	0.29%	3	23%	3
4	300KVA XF SEC	3	26,114	NM	Aluminum	6	Set of	500 KCML	833		208	3	300	1.2	32,253	0.29%	4	28%	4
5	BEB CHARGER	2	28,519	NM	Aluminum	1	Set of	500 KCML	241	230	480	3			23,837	1.37%	4	28%	5
6	DPLA	4	32,253	NM	Aluminum	4	Set of	350 KCML	833	20	208	3			29,868	0.56%	4	21%	6

Point	Point Name	Source* Point	Source Amps	Conduit Type	Conductor Type	Wire Size/Quantity			Load (A)	Distance	Voltage	Phase	Isc	**% Vdrop	Conduit Size	**Conduit Fill	Point
1	120 / 208 3ph 300	83357	83,357										83,357				1
2	DPLA	1	83,357	NM	Aluminum	4	Set of	350 KCML	665	20	240	3	70,707	0.18%	3	37%	2
3	CHARGER EV-1	2	70,707	NM	Aluminum	1	Set of	6	30	50	240	1	6,463	1.07%	2	10%	3
4	CHARGER EV-2	2	70,707	NM	Aluminum	1	Set of	6	30	68	240	1	4,870	1.39%	2	10%	4
5	CHARGER EV-3	2	70,707	NM	Aluminum	1	Set of	6	30	86	240	1	3,907	1.71%	2	10%	5
6	CHARGER EV-4	2	70,707	NM	Aluminum	1	Set of	6	30	104	240	1	3,262	2.03%	2	10%	6
7	CHARGER EV-5	2	70,707	NM	Aluminum	1	Set of	6	30	130	240	1	2,634	2.49%	2	10%	7

Point	Point Name	Source* Point	Source Amps	Conduit Type	Conductor Type	Wire Size/Quantity			Load (A)	Distance	Voltage	Phase	Isc	**% Vdrop	Conduit Size	**Conduit Fill	Point
1	120 / 208 3ph 300	83357	83,357										83,357				1
2	DPLA	1	83,357	NM	Aluminum	4	Set of	350 KCML	665	20	240	3	70,707	0.18%	3	37%	2
3	(F) CHARGER EV-6	2	70,707	NM	Aluminum	1	Set of	6	30	50	240	1	6,463	1.07%	2	10%	3
4	(F) CHARGER EV-7	2	70,707	NM	Aluminum	1	Set of	6	30	68	240	1	4,870	1.39%	2	10%	4
5	(F) CHARGER EV-8	2	70,707	NM	Aluminum	1	Set of	6	30	86	240	1	3,907	1.71%	2	10%	5
6	(F) CHARGER EV-9	2	70,707	NM	Aluminum	1	Set of	6	30	104	240	1	3,262	2.03%	2	10%	6
7	(F) CHARGER EV-10	2	70,707	NM	Aluminum	1	Set of	6	30	122	240	1	2,800	2.35%	2	10%	7
8	(F) CHARGER EV-11	2	70,707	NM	Aluminum	1	Set of	6	30	140	240	1	2,452	2.67%	2	10%	8
9	(F) CHARGER EV-12	2	70,707	NM	Aluminum	1	Set of	6	30	158	240	1	2,182	2.99%	2	10%	9
10	(F) CHARGER EV-13	2	70,707	NM	Aluminum	1	Set of	4	30	176	240	1	3,066	2.21%	2	14%	10

Point	Point Name	Source* Point	Source Amps	Conduit Type	Conductor Type	Wire Size/Quantity			Load (A)	Distance	Voltage	Phase	XFMR kVA	XFMR %Z	"C" Value	"f" Value	"M" Value	Isc	**% Vdrop	Conduit Size	**Conduit Fill	Point
1	120 / 208 3ph 300	83357	83,357															83,357				1
2	DPLA	1	83,357	NM	Aluminum	4	Set of	350 KCML	665	20	240	3			16813	0.178902	0.848247	70,707	0.18%	3	37%	2
3	(F) CHARGER EV-14	2	70,707	NM	Aluminum	1	Set of	6	30	80	240	1			1482	15.90357	0.059159	4,183	1.60%	2	10%	3
4	(F) CHARGER EV-15	2	70,707	NM	Aluminum	1	Set of	6	30	98	240	1			1482	19.48188	0.048824	3,452	1.92%	2	10%	4
5	(F) CHARGER EV-16	2	70,707	NM	Aluminum	1	Set of	6	30	116	240	1			1482	23.06018	0.041562	2,939	2.24%	2	10%	5
6	(F) CHARGER EV-17	2	70,707	NM	Aluminum	1	Set of	6	30	134	240	1			1482	26.63849	0.036181	2,558	2.56%	2	10%	6
7	(F) CHARGER EV-18	2	70,707	NM	Aluminum	1	Set of	6	30	152	240	1			1482	30.21679	0.032034	2,265	2.88%	2	10%	7

1 / E-307

CONDUIT AND CONDUCTOR SCHEDULES

SCALE: N.T.S.

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MONTEREY COUNTY CALIFORNIA

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DATE SEPTEMBER 2023

DRAWN ASW

DESIGNED MEW

CHECKED KGA

CONTRACT NO. 22-03

SHEET NO. E-307

SHEET 517 OF 617

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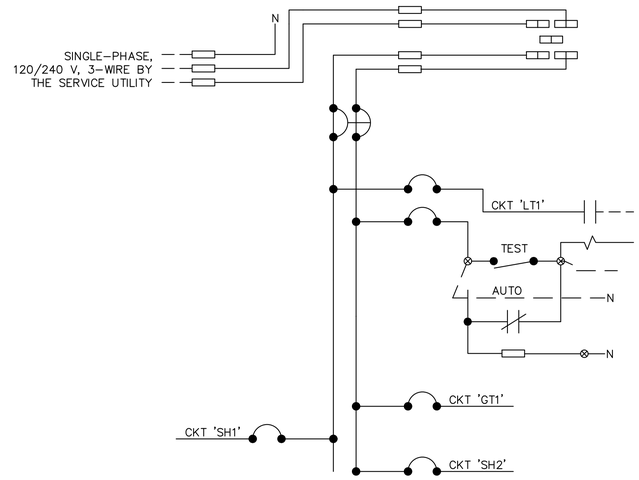
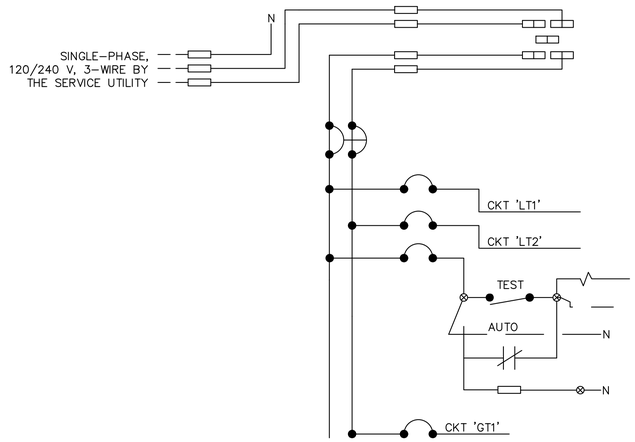
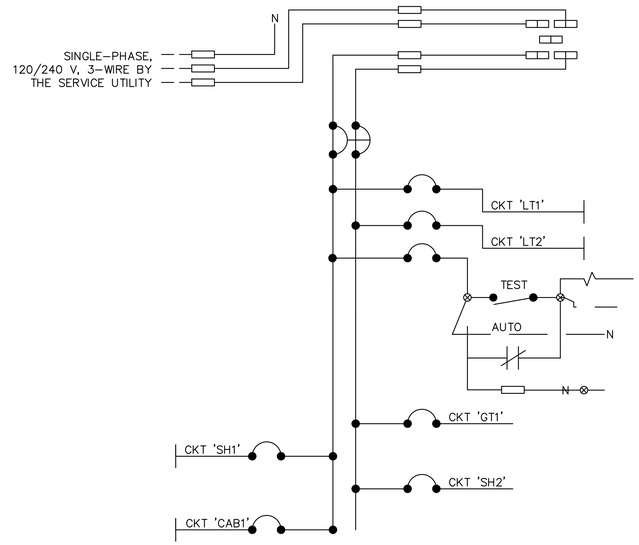


DETAIL 'A': CIRCUIT DIAGRAM FOR SC1



DETAIL 'B': CIRCUIT DIAGRAM FOR SC3



DETAIL 'C': CIRCUIT DIAGRAM FOR SC5

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SURF! BUSWAY AND BRT PROJECT
CIRCUIT DIAGRAM DETAILS
MONTEREY COUNTY CALIFORNIA

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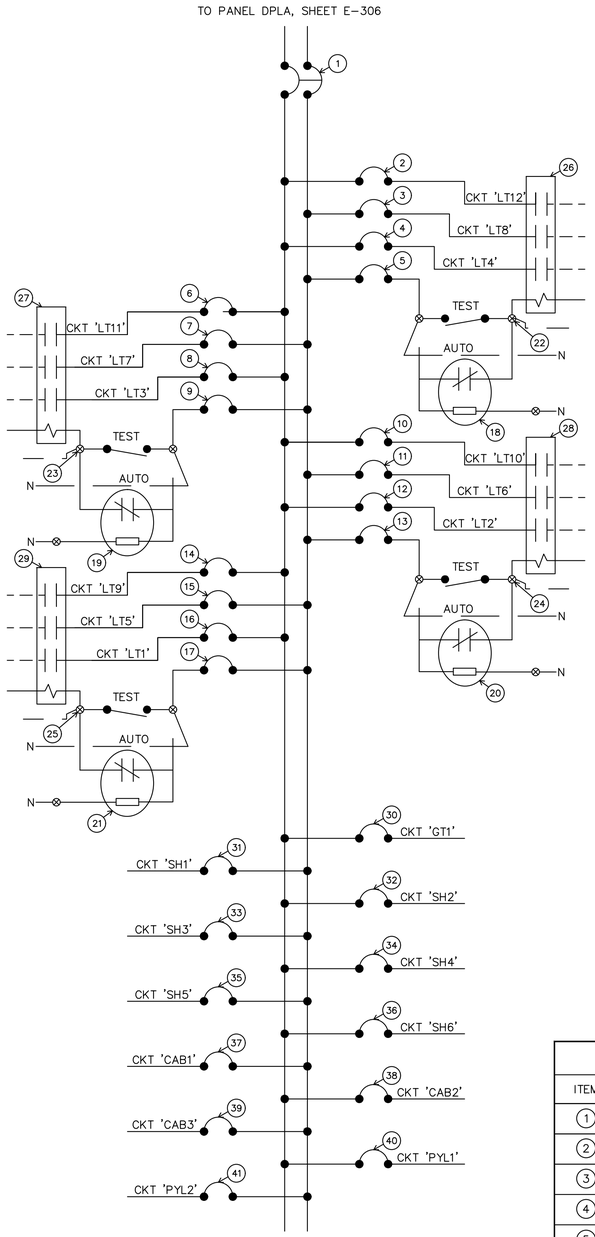
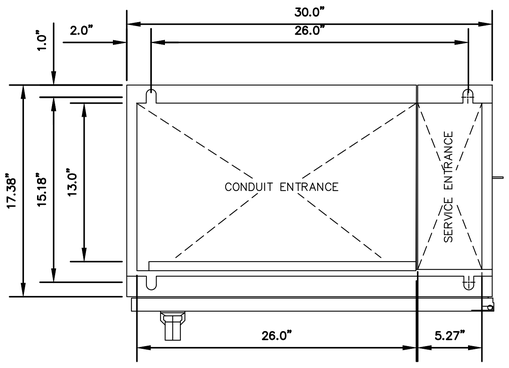
DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	

SHEET NO.
E–308
SHEET 518 OF 617

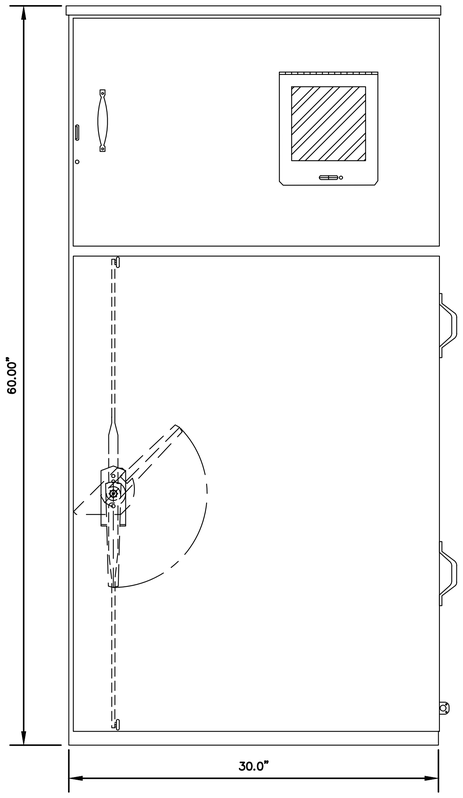
K:\SE_tran\109754\1003 - mst surf final design\Design\Sheets\E-308.dwg 09/08/2023 5:32:49PM michaela.wood



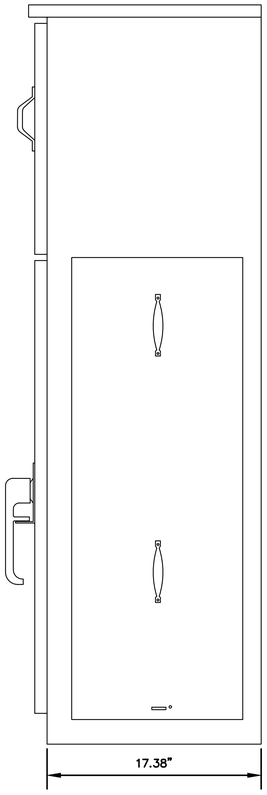
DETAIL 'A': CIRCUIT DIAGRAM FOR SC4



DETAIL 'B-1': BASE
NOT TO SCALE



DETAIL 'B-2': PANEL ELEVATION
NOT TO SCALE



DETAIL 'B-3': RIGHT SIDE
NOT TO SCALE

DETAIL 'B': SERVICE ENCLOSURE (SC4)

ELECTRICAL SERVICE CABINET (SC4)											
ITEM	COMPONENT	NAME PLATE DESCRIPTION	ITEM	COMPONENT	NAME PLATE DESCRIPTION	ITEM	COMPONENT	NAME PLATE DESCRIPTION	ITEM	COMPONENT	NAME PLATE DESCRIPTION
(1)	200A, 240V, 2P, CB	'MAIN BREAKER'	(12)	20A, 120V, 1P, CB	'LIGHTING (CKT LT2)'	(23)	NEUTRAL BUS	–	(34)	20A, 120V, 1P, CB	'SHELTER (CKT SH4)'
(2)	20A, 120V, 1P, CB	'LIGHTING (CKT LT4)'	(13)	20A, 120V, 1P, CB	'PEU2'	(24)	NEUTRAL BUS	–	(35)	20A, 120V, 1P, CB	'SHELTER (CKT SH5)'
(3)	20A, 120V, 1P, CB	'LIGHTING (CKT LT8)'	(14)	20A, 120V, 1P, CB	'LIGHTING (CKT LT9)'	(25)	NEUTRAL BUS	–	(36)	20A, 120V, 1P, CB	'SHELTER (CKT SH6)'
(4)	20A, 120V, 1P, CB	'LIGHTING (CKT LT12)'	(15)	20A, 120V, 1P, CB	'LIGHTING (CKT LT5)'	(26)	60A, 4P, NO CONTACTOR	–	(37)	20A, 120V, 1P, CB	'CABINET (CKT CAB1)'
(5)	20A, 120V, 1P, CB	'PEU4'	(16)	20A, 120V, 1P, CB	'LIGHTING (CKT LT1)'	(27)	60A, 4P, NO CONTACTOR	–	(38)	20A, 120V, 1P, CB	'CABINET (CKT CAB2)'
(6)	20A, 120V, 1P, CB	'LIGHTING (CKT LT3)'	(17)	20A, 120V, 1P, CB	'PEU1'	(28)	60A, 4P, NO CONTACTOR	–	(39)	20A, 120V, 1P, CB	'CABINET (CKT CAB3)'
(7)	20A, 120V, 1P, CB	'LIGHTING (CKT LT7)'	(18)	PHOTOELECTRIC UNIT	–	(29)	60A, 4P, NO CONTACTOR	–	(40)	20A, 120V, 1P, CB	'PYLON (CKT PYL1)'
(8)	20A, 120V, 1P, CB	'LIGHTING (CKT LT11)'	(19)	PHOTOELECTRIC UNIT	–	(30)	20A, 120V, 1P, CB	'GATE (CKT G1)'	(41)	20A, 120V, 1P, CB	'PYLON (CKT PYL2)'
(9)	20A, 120V, 1P, CB	'PEU3'	(20)	PHOTOELECTRIC UNIT	–	(31)	20A, 120V, 1P, CB	'SHELTER (CKT SH1)'			
(10)	20A, 120V, 1P, CB	'LIGHTING (CKT LT10)'	(21)	PHOTOELECTRIC UNIT	–	(32)	20A, 120V, 1P, CB	'SHELTER (CKT SH2)'			
(11)	20A, 120V, 1P, CB	'LIGHTING (CKT LT6)'	(22)	NEUTRAL BUS	–	(33)	20A, 120V, 1P, CB	'SHELTER (CKT SH3)'			

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MST MONTEREY-SALINAS TRANSIT

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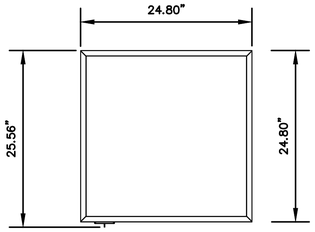
SURF! BUSWAY AND BRT PROJECT
TRANSIT CENTER CIRCUIT DETAILS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

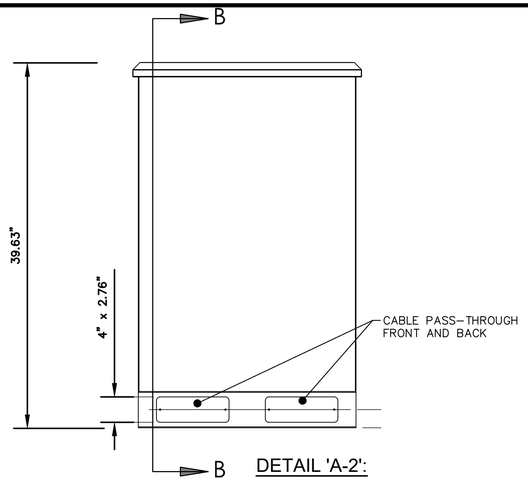
DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO. 22-03		

SHEET NO.
E–309
SHEET 519 OF 617

K:\pb_trans\097541003 - mst surf final design\Design\Sheets\E-308.dwg 09/08/2023 5:32:50PM michaela.wood



DETAIL 'A-1':
NOT TO SCALE



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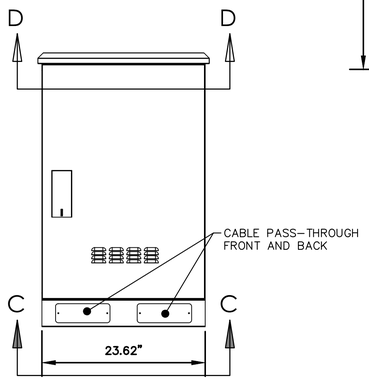
NOT TO SCALE



DETAIL 'A-3':
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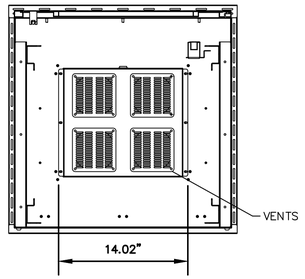
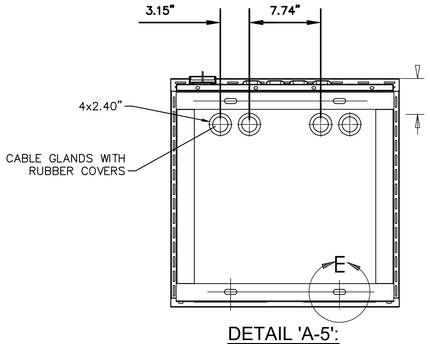
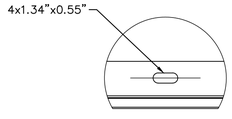


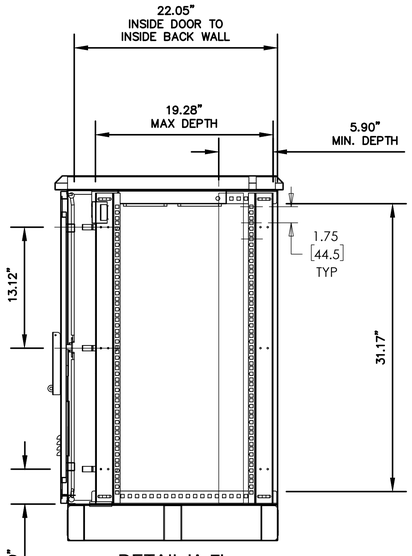
DETAIL 'A-4':
TOP VIEW
NOT TO SCALE



DETAIL 'A-5':
BOTTOM VIEW
NOT TO SCALE



DETAIL 'A-6':
BOTTOM VIEW



DETAIL 'A-7':
SECTION B-B
NOT TO SCALE

DETAIL 'A':
COMMUNICATIONS CABINET

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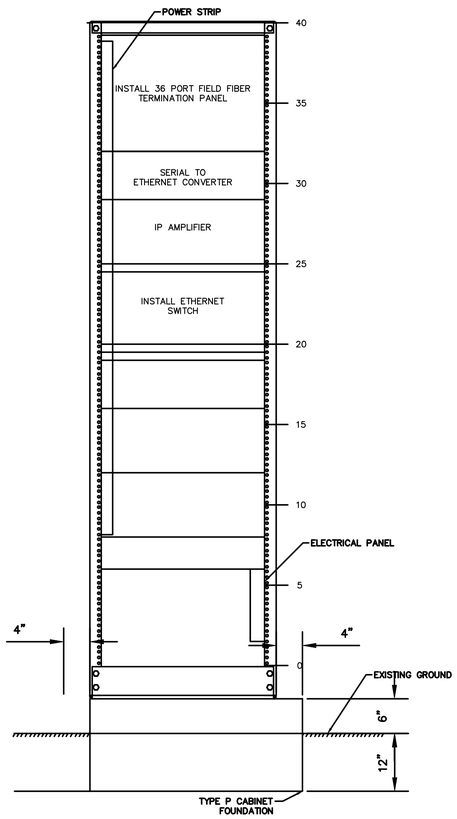
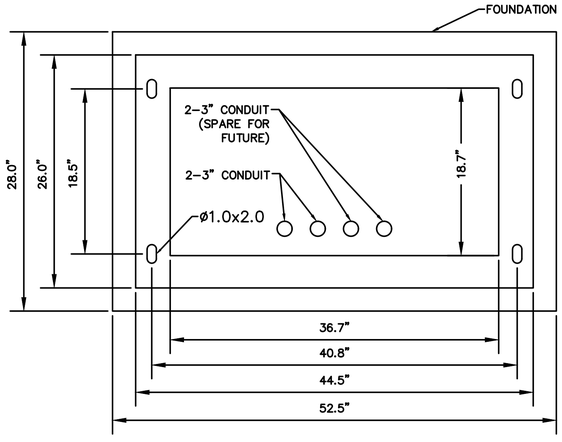
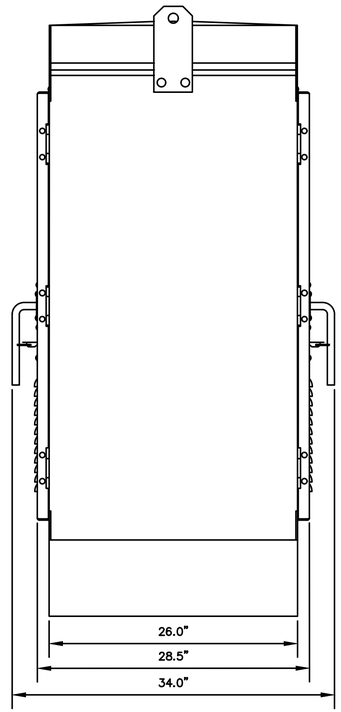


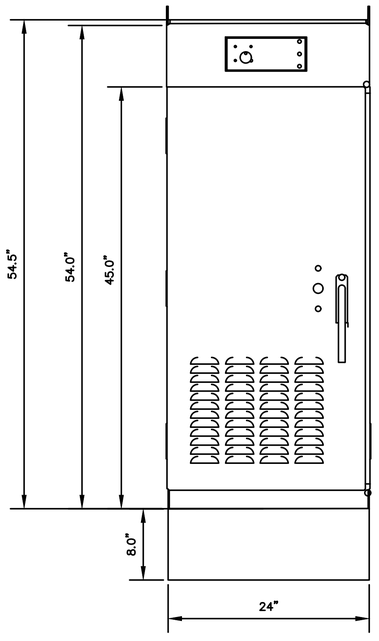
DETAIL 'B-1':
NOT TO SCALE



DETAIL 'B-3'
BASE VIEW
NOT TO SCALE



DETAIL 'B-2'
SIDE VIEW
NOT TO SCALE



DETAIL 'B-4'
FRONT VIEW
NOT TO SCALE

DETAIL 'B':
COMMUNICATIONS CABINET

MST
MONTEREY-SALINAS TRANSIT

TAMC
TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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CABINET DETAILS
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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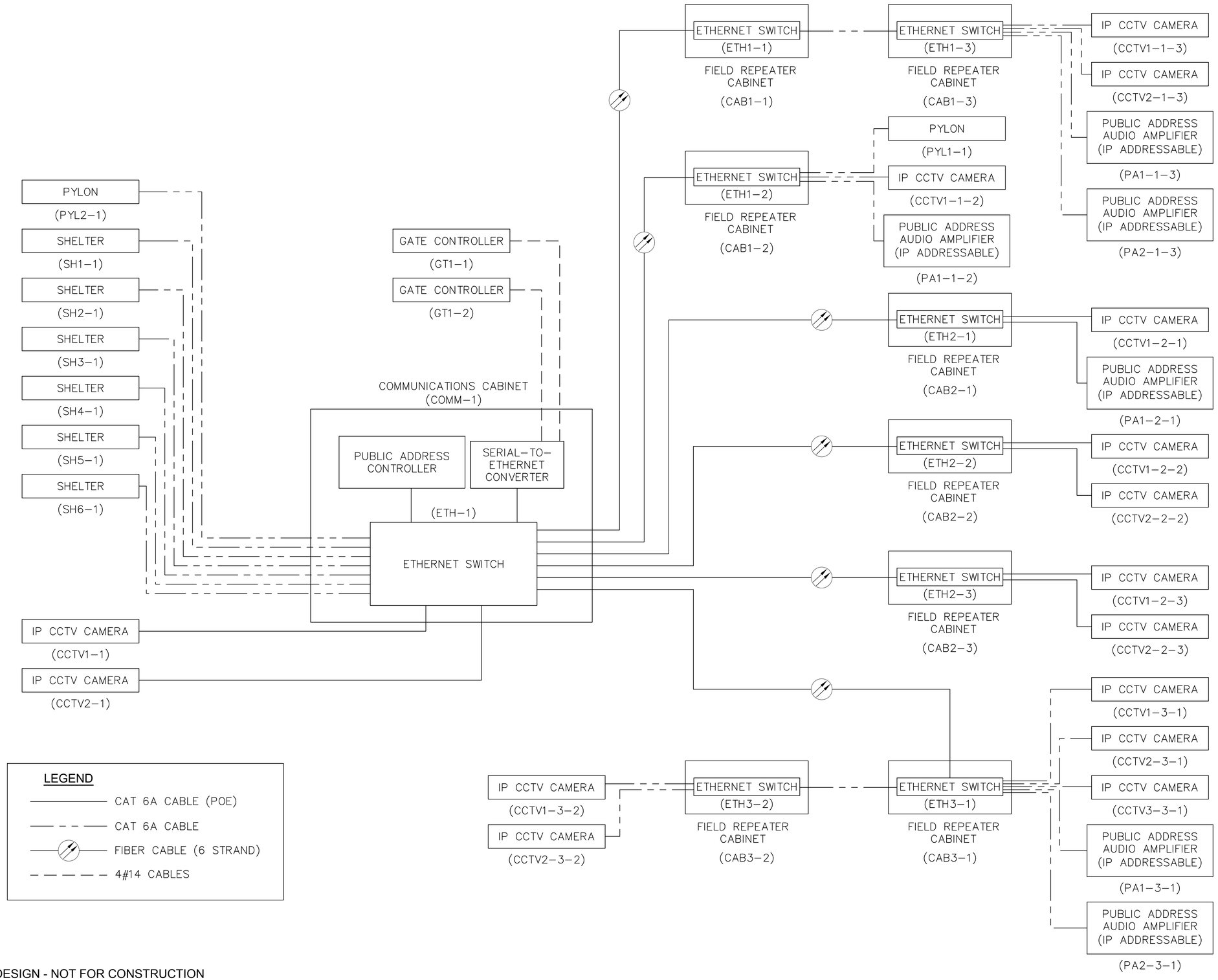
CHECKED	KGA	
CONTRACT NO. 22-03		

SHEET NO.
E-310
SHEET 520 OF 617

K:\jtk_trans\097541003 - mst surf final design\Design\Sheets\E-308.dwg 09/08/2023 5:32:52PM michaela.wood

Know what's below. Call before you dig.



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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
COMMUNICATIONS SYSTEM DIAGRAM
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO. 22-03		

SHEET NO.
E-311
SHEET 521 OF 617

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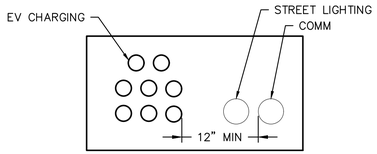
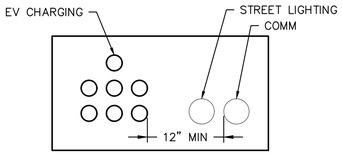


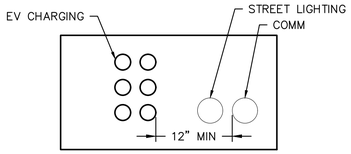
SECTION A-A

(8) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



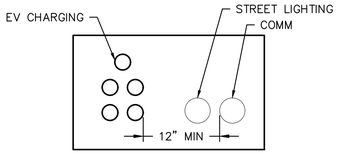
SECTION B-B

(7) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



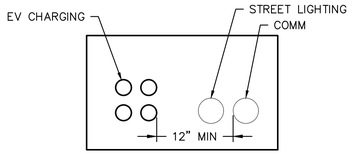
SECTION C-C

(6) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



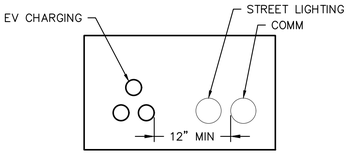
SECTION D-D

(5) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



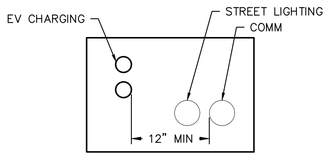
SECTION E-E

(4) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



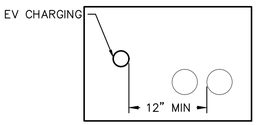
SECTION F-F

(3) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



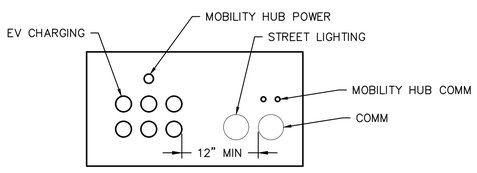
SECTION G-G

(2) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



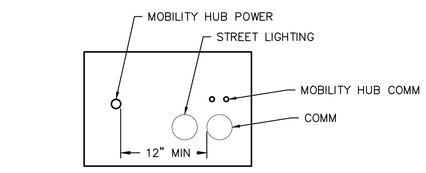
SECTION H-H

(2) 2" C (EV CHARGING)
(1) 3" C (STREET LIGHTING)
(1) 3" C (COMM)



SECTION I-I

(6) 2" C (EV CHARGING)
(1) 1" C (MOBILITY HUB POWER)
(1) 3" C (STREET LIGHTING)
(1) 3/4" C (MOBILITY HUB COMM)
(1) 3" C (COMM)



SECTION J-J

(1) 1" C (MOBILITY HUB POWER)
(1) 3" C (STREET LIGHTING)
(2) 3/4" C (MOBILITY HUB COMM)
(1) 3" C (COMM)

TRENCHING DETAILS

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
TRENCHING DETAILS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023
DRAWN	ASW
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CONTRACT NO.	22-03
SHEET NO.	E-312
	SHEET 522 OF 617

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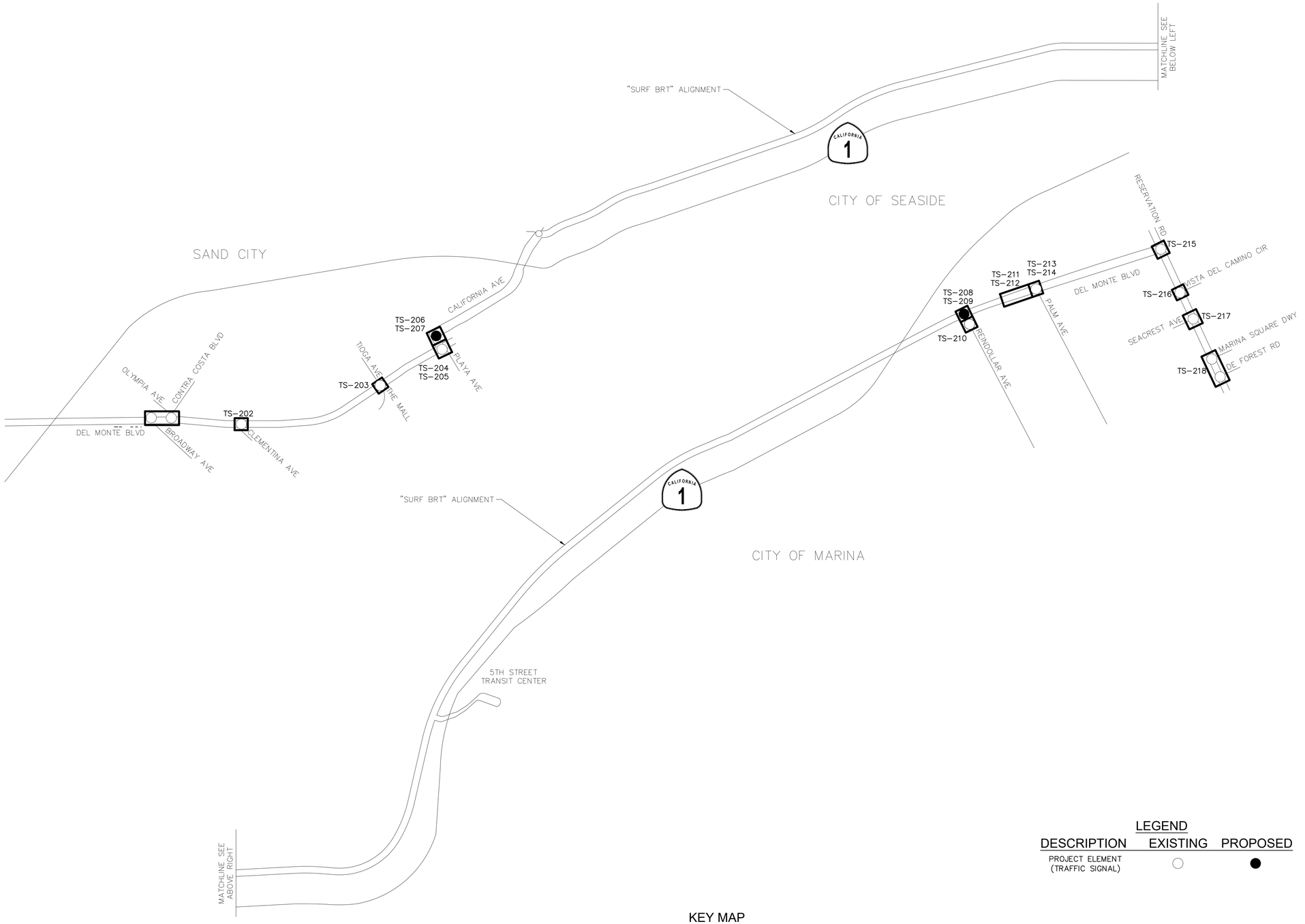

KEY MAP
NOT TO SCALE

LEGEND

DESCRIPTION	EXISTING	PROPOSED
PROJECT ELEMENT (TRAFFIC SIGNAL)	○	●

TRUE NORTH
PROJECT NORTH

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SURF! BUSWAY AND BRT PROJECT
KEY MAP
TRAFFIC SIGNALS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO.	22-03	
SHEET NO.	TS-101	

SHEET 523 OF 617

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TRAFFIC SIGNAL GENERAL NOTES (SHEETS TS-102 TO TS-302)

1. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS BEFORE BIDDING.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES AND AFFECTED AGENCIES FOR VERIFICATION OF LOCATION AND DEPTHS OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.), AT 1–800–227–2600, FIVE (5) WORKING DAYS PRIOR TO DOING ANY WORK.
3. THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS WORKING WITHIN OR ADJACENT TO THE LIMITS OF WORK TO AVOID ANY DELAY AND CONFLICT.
4. FOR BORING OPERATION, THE CONTRACTOR SHALL POTHOLE TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTE THAT NOT ALL UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL POTHOLE ALL USA MARKINGS, WHICH MAY NOT BE NECESSARILY SHOWN ON THE PLANS.
5. THESE PLANS ARE INTENDED FOR ELECTRICAL INSTALLATION WORK ONLY.
6. THE CONTRACTOR SHALL CONTACT THE CITY FIVE (5) WORKING DAYS BEFORE ANY SIGNAL AND/OR COMMUNICATION SHUTDOWNS ARE REQUIRED FOR THE INSTALLATION OF EQUIPMENT OR CABLING AS PART OF THIS PROJECT WITHIN THEIR JURISDICTION. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE AGENCY TO SHUT DOWN THE CORRECT ELECTRICAL SERVICE PRIOR TO START OF WORK.
7. LOCATIONS OF POLES, PULL BOXES, EQUIPMENT, AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. BEFORE BEGINNING ANY CONSTRUCTION OPERATION, THE CONTRACTOR SHALL CHECK FOR CONFLICTS WITH UNDERGROUND UTILITIES OR OVERHEAD UTILITIES OR OTHER OBSTACLES. IF EQUIPMENT OR POLES MUST BE RELOCATED, THE NEW LOCATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OF CONDUIT, ALIGNMENTS, AND PULL BOX LOCATIONS. FOUNDATION LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER BEFORE BEGINNING WORK ON THAT ITEM.
8. THE CONTRACTOR SHALL REPAIR/REPLACE ALL LANDSCAPING, IRRIGATION, CURBS, SERVICES, SIDEWALK, STRIPING, MARKINGS, OR PAVEMENT MARKERS, ETC. DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE PROJECT.
9. NEW PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED. PULL BOXES ARE NOT DRAWN TO SCALE.
10. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLY FOR WORKING CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL NOT BE LIMITED TO NORMAL WORKING HOURS. WORK SHALL NOT BEGIN UNTIL ADEQUATE TEMPORARY BARRICADES, BARRIERS, FENCES, WARNING AND CONTROL DEVICES ARE IN PLACE AS REQUIRED BY THE CONTRACT.
11. TRAFFIC CONTROL MUST BE PERFORMED IN ACCORDANCE WITH THE CA–MUTCD GUIDELINES AND CALTRANS STANDARD PLANS.
12. THE CONTRACTOR SHALL ADJUST TO NEW GRADE ALL EXISTING PULL BOXES LOCATED WITHIN NEW (OR REPLACED) CURB RAMPS, WHILE PROTECTING EXISTING UTILITIES AND EQUIPMENT.
13. CONTRACTOR SHALL TAKE NECESSARY MEASURES TO PROJECT EXISTING DETECTOR LOOPS, DETECTOR LOOP LEAD–IN WIRES, DETECTOR LOOP CABLES (DLC), INCLUDING MARKING EXISTING DETECTOR LOOPS AND LEAD–IN WIRES PRIOR TO CONSTRUCTION. REPLACEMENT OF DAMAGED LOOPS, DETECTOR WIRES, OR DLC FROM CONDUIT INSTALLATION OR PROJECT CONSTRUCTION SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND IN THE PRESENCE OF THE ENGINEER.
14. CONTRACTOR SHALL NOT INSTALL NEW PULL BOXES WITHIN THE CENTER OF NEW CURB RAMPS.
15. ALL EXISTING TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL AT ALL TIMES. ALL EXISTING STREETLIGHTS SHALL REMAIN OPERATIONAL EACH AND EVERY EVENING. ALL TRAFFIC SIGNAL SHUTDOWNS SHALL BE DONE ONLY BY THE CITY PERSONNEL AFTER FIVE (5) DAYS OF ADVANCED NOTIFICATION.
16. ALL VEHICULAR SIGNAL HEADS SHALL BE 12" LED.
17. ALL PEDESTRIAN SIGNAL HEADS SHALL BE LED WITH COUNTDOWN FAILURE.
18. THE CONDUCTOR AND EQUIPMENT SCHEDULES ARE FURNISHED FOR INSTALLATION GUIDELINES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE CORRECT WIRING AND EQUIPMENT FOR THE INTENDED OPERATIONS.
19. ALL WORK, MATERIAL, AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST REVISIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS, DATED 2023, AND SPECIFICATIONS, DATED 2023.

ABBREVIATIONS

AB	ABANDON, IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
BC	INSTALL PULL BOX IN EXISTING CONDUIT RUN
CB	INSTALL CONDUIT INTO EXISTING PULL BOX
CC	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
DH	DETECTOR HANDHOLE
RC	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR
RL	RELOCATE EQUIPMENT
RS	REMOVE AND SALVAGE EQUIPMENT
SC	SPLICE NEW TO EXISTING CONDUTORS

OL	OVERLAP
TSP	TRANSIT SIGNAL PRIORITY
EVP	EMERGENCY VEHICLE PREEMPTION
EX	EXISTING
BRT	BUS RAPID TRANSIT
R/W	RIGHT–OF–WAY
LED	LIGHT–EMITTING DIODE
APS	ACCESSIBLE PEDESTRIAN SYSTEM
W	WATTS
PPB	PEDESTRIAN PUSH BUTTON
RR	RAILROAD
V	VOLTS
DLC	DETECTOR LOOP CABLE
MST	MONTEREY SALINAS TRANSIT
TAMC	TRANSPORTATION AGENCY FOR MONTEREY COUNTY
VID	VIDEO DETECTION
BBS	BATTERY BACKUP SYSTEM
USA	UNDERGROUND SERVICE ALERT
AWG	AMERICAN WIRE GAUGE
NO.	NUMBER
CCTV	CLOSED CIRCUIT TELEVISION
ID	IDENTIFICATION

LEGEND

DESCRIPTION	EXISTING	PROPOSED
TRAFFIC SIGNAL CONTROLLER CABINET		
GPS/RADIO ANTENNA		
PUBLIC WI–FI ANTENNA		
PULL BOX		
SERVICE ENCLOSURE		
LUMINAIRE		
DETECTOR LOOPS		
DETECTOR HANDHOLE		
VIDEO DETECTION CAMERA		

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
GENERAL NOTES, LEGEND, ABBREVIATIONS
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023
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CONTRACT NO.	22-03
SHEET NO.	TS–102

SHEET 524 OF 617

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STEADY DEMAND SEQUENCE



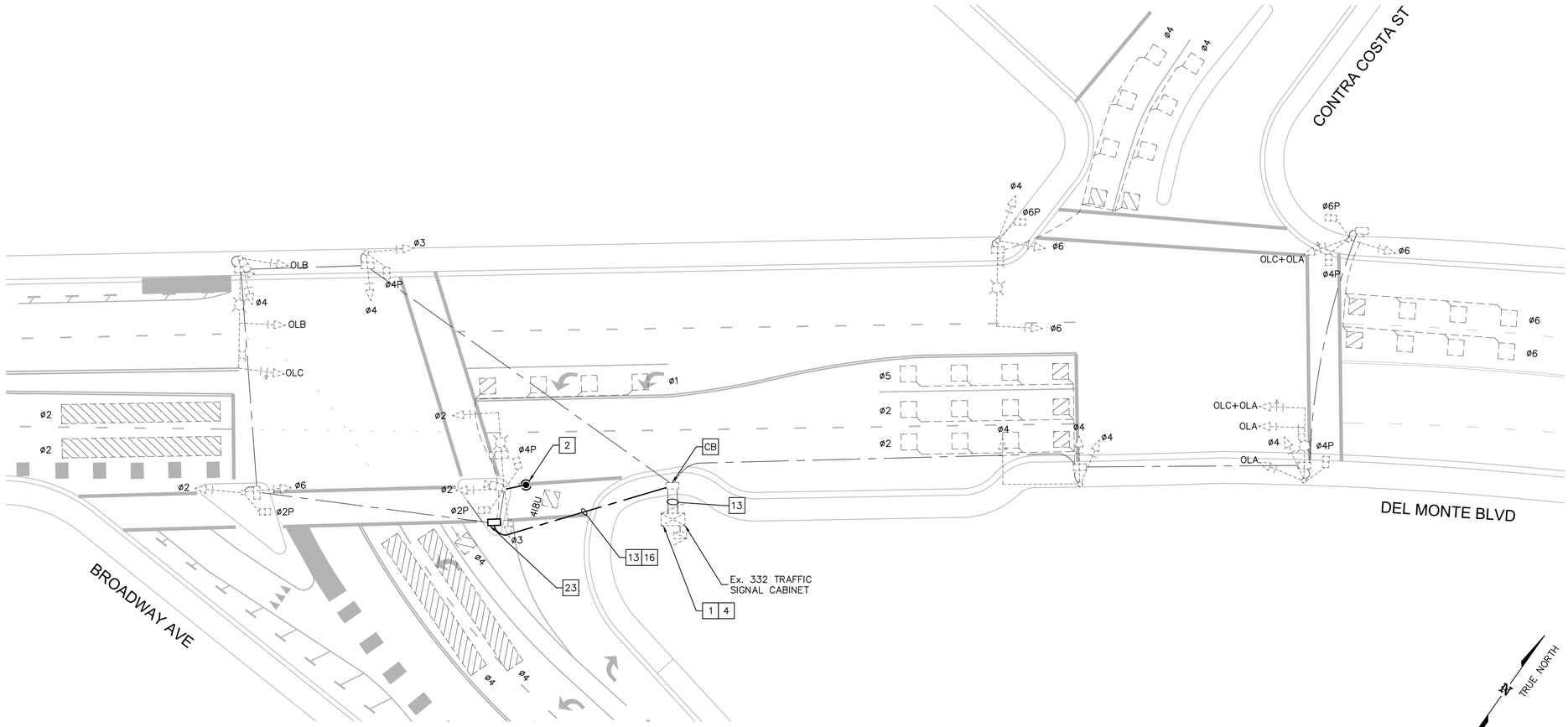
EXISTING PHASE DIAGRAM

* PROPOSED TSP PHASE

OLA = ø2
OLB = ø6
OLC = ø5
OLD = ø1

CONSTRUCTION NOTES

1. FURNISH AND INSTALL MULTI-MODE EVP/TSP PHASE SELECTOR AND CHASSIS IN TRAFFIC SIGNAL CONTROLLER CABINET. WIRE UP CHASSIS TO CABINET TERMINALS FOR TSP OPERATIONS.
2. FURNISH AND INSTALL GPS/RADIO ANTENNA ON TRAFFIC SIGNAL POLE. SEE DETAIL 'A' AND DETAIL 'B' ON SHEET TS-302.
4. REMOVE AND SALVAGE EXISTING CONTROLLER. FURNISH AND INSTALL NEW 2070LX CONTROLLER WITH TRAFFICWARE TRAFFIC CONTROL SOFTWARE.
13. FURNISH AND INSTALL GPS/RADIO ANTENNA CABLE IN EXISTING CONDUIT WITH EXISTING CONDUCTORS AND CABLES.
16. FURNISH AND INSTALL 3" CONDUIT.
23. REPLACE EXISTING PULL BOX WITH 5E PULL BOX, PROTECT EXISTING CONDUCTORS AND CABLES IN PLACE DURING CONSTRUCTION.



GRAPHIC SCALE IN FEET
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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

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SURF! BUSWAY AND BRT PROJECT
DEL MONTE BLVD AT BROADWAY AVE AND CONTRA COSTA ST
PLAN
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	ASW	
DESIGNED	MEW	
CHECKED	KGA	
CONTRACT NO. 22-03		
SHEET NO. TS-201		
SHEET 525 OF 617		

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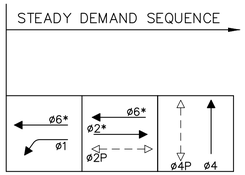
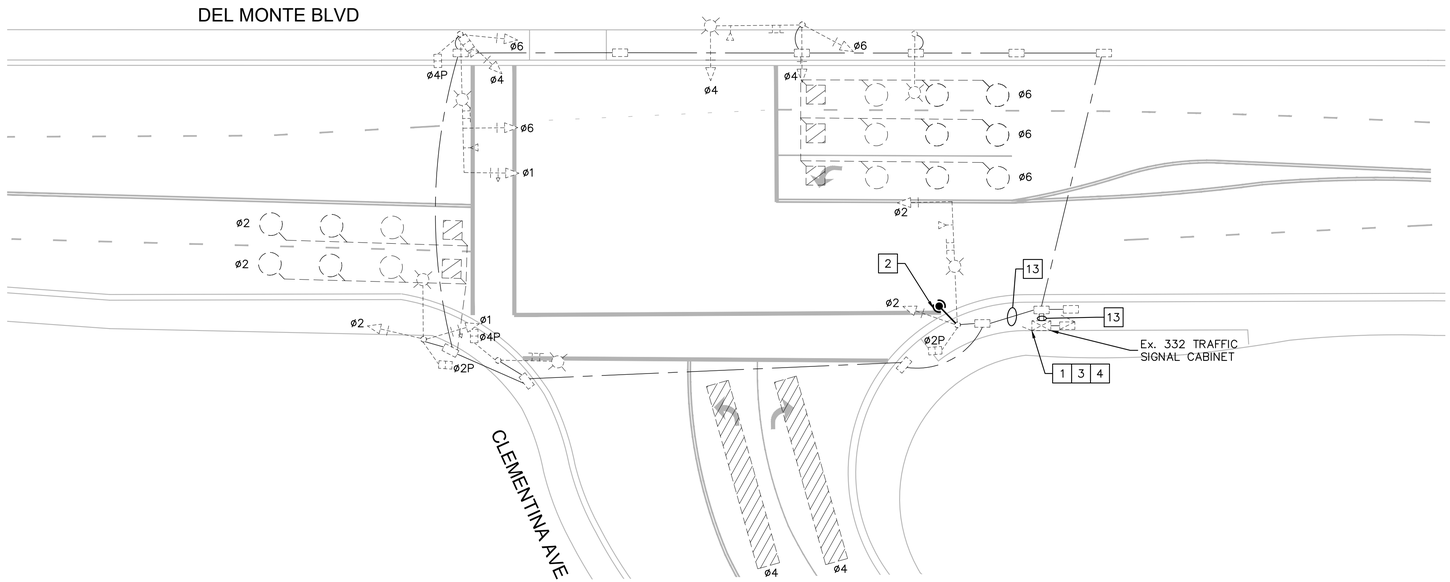


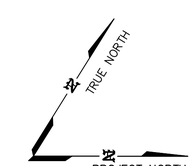
EXISTING PHASE DIAGRAM

* PROPOSED TSP PHASE

CONSTRUCTION NOTES

1. FURNISH AND INSTALL MULTI-MODE EVP/TSP PHASE SELECTOR AND CHASSIS IN TRAFFIC SIGNAL CONTROLLER CABINET. WIRE UP CHASSIS TO CABINET TERMINALS FOR TSP OPERATIONS.
2. FURNISH AND INSTALL GPS/RADIO ANTENNA ON TRAFFIC SIGNAL POLE. SEE DETAIL 'A' AND DETAIL 'B' ON SHEET TS-302.
3. REMOVE EXISTING SIGNAL PRIORITY PHASE SELECTOR AND REPLACE WITH NEW PHASE SELECTOR IN CONJUNCTION WITH OTHER LOCTATIONS.
4. REMOVE AND SALVAGE EXISTING CONTROLLER. FURNISH AND INSTALL NEW 2070LX CONTROLLER WITH TRAFFICWARE TRAFFIC CONTROL SOFTWARE.
13. FURNISH AND INSTALL GPS/RADIO ANTENNA CABLE IN EXISTING CONDUIT WITH EXISTING CONDUCTORS AND CABLES.







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TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
DEL MONTE BLVD AND CLEMENTINA AVE
PLAN
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
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SHEET NO.
TS-202
SHEET 526 OF 617

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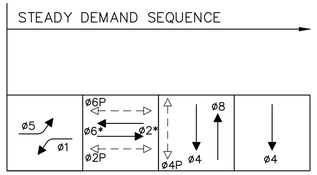

EXISTING PHASE DIAGRAM

* PROPOSED TSP PHASE

CONSTRUCTION NOTES

1. FURNISH AND INSTALL MULTI-MODE EVP/TSP PHASE SELECTOR AND CHASSIS IN TRAFFIC SIGNAL CONTROLLER CABINET. WIRE UP CHASSIS TO CABINET TERMINALS FOR TSP OPERATIONS.
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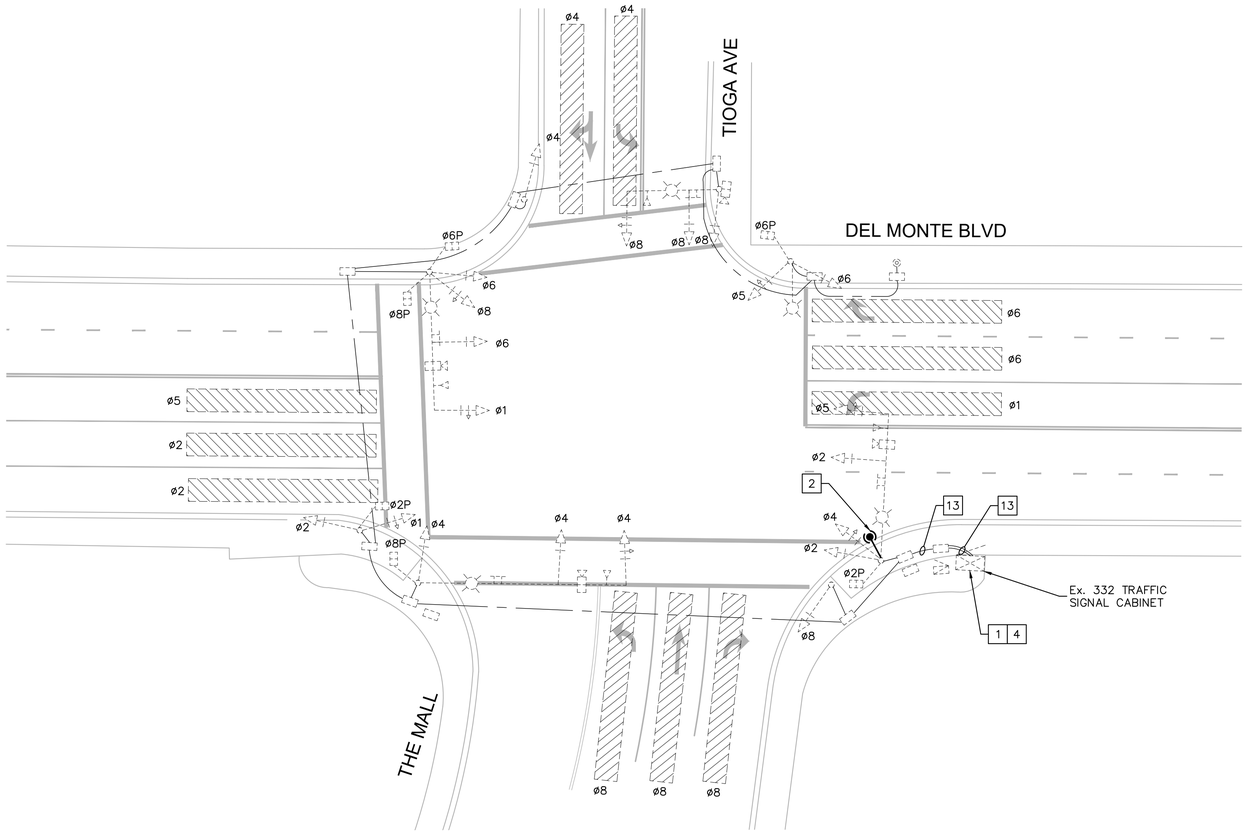
13. FURNISH AND INSTALL GPS/RADIO ANTENNA CABLE IN EXISTING CONDUIT WITH EXISTING CONDUCTORS AND CABLES.



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TRUE NORTH

PROJECT NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
DEL MONTE BLVD AND TIOGA AVE
PLAN
MONTEREY COUNTY CALIFORNIA

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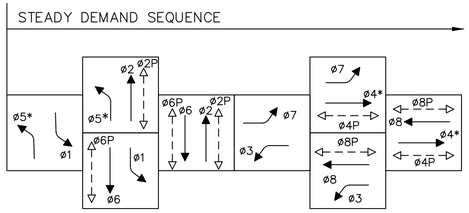
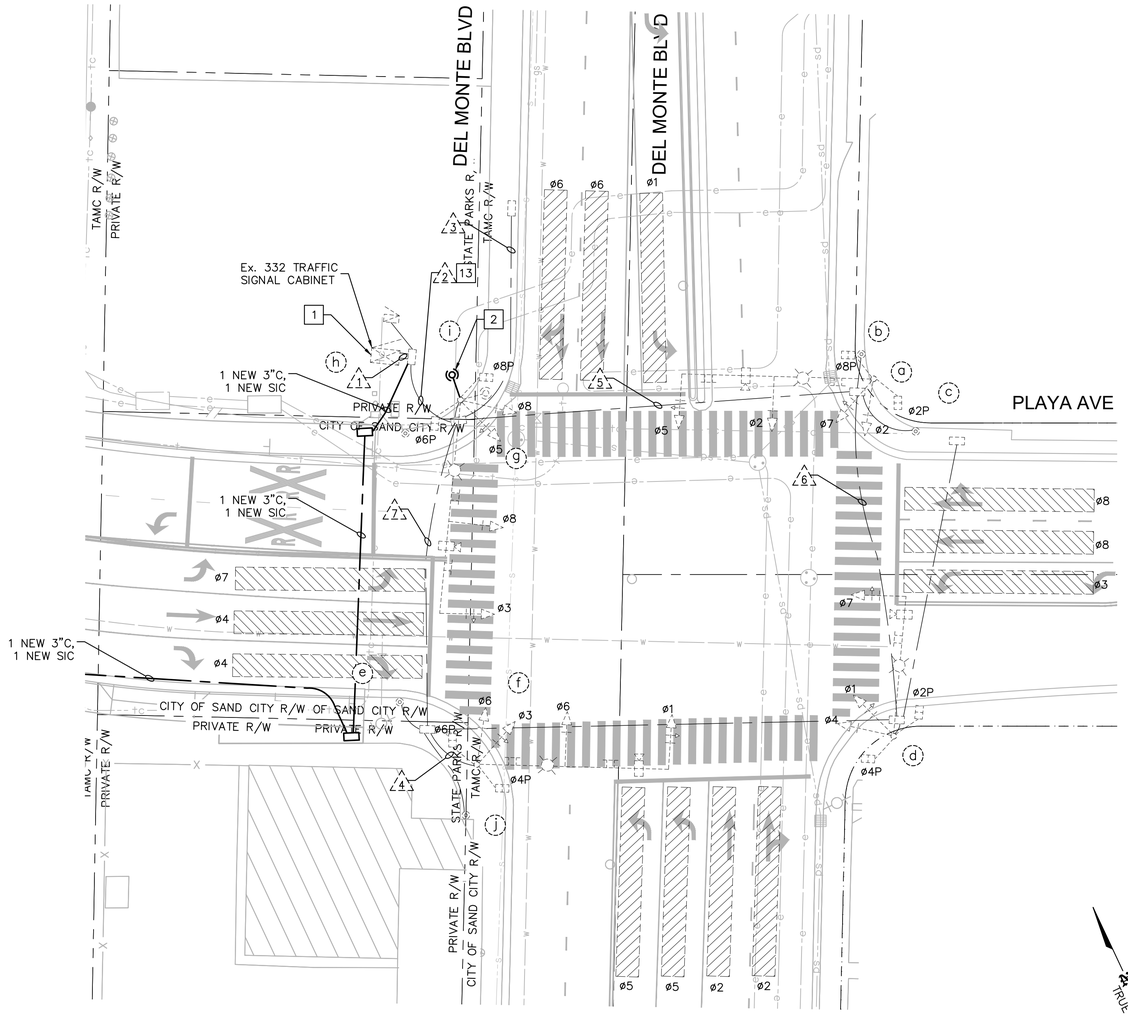


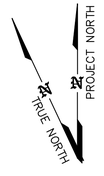
EXISTING PHASE DIAGRAM

* PROPOSED TSP PHASE

CONSTRUCTION NOTES

1. FURNISH AND INSTALL MULTI-MODE EVP/TSP PHASE SELECTOR AND CHASSIS IN TRAFFIC SIGNAL CONTROLLER CABINET. WIRE UP CHASSIS TO CABINET TERMINALS FOR TSP OPERATIONS.
2. FURNISH AND INSTALL GPS/RADIO ANTENNA ON TRAFFIC SIGNAL POLE. SEE DETAIL 'A' AND DETAIL 'B' ON SHEET TS-302.
13. FURNISH AND INSTALL GPS/RADIO ANTENNA CABLE IN EXISTING CONDUIT WITH EXISTING CONDUCTORS AND CABLES.





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Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA AVE AND DEL MONTE BLVD PLAN
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CONTRACT NO. 22-03

SHEET NO.
TS-204
SHEET 528 OF 617

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POLE AND EQUIPMENT SCHEDULE

LOCATION	STANDARD				VEHICLE SIGNAL MOUNTING		PED SIGNAL MOUNTING	APS		INTERNALLY ILLUMINATED STREET NAME SIGN (I.I.S.N.S.) LEGEND	*SPECIAL REQUIREMENTS
	TYPE	SIGNAL MAST ARM	LUMINAIRE MAST ARM	LUMINAIRE WATTS	MAST ARM	POLE		ø	ARROW		
(a)	29-5-70	50'	15'	121 W (LED)	MAS MAS	SV-2-T	SP-2-T	–	–	PLAYA AVE	–
(b)	PPB POST	–	–	–	–	–	–	ø8	LEFT	–	–
(c)	PPB POST	–	–	–	–	–	–	ø2	RIGHT	–	–
(d)	26-4-70	45'	15'	121 W (LED)	MAS MAS	SV-2-T	SP-2-T	ø2 ø4	RIGHT LEFT	DEL MONTE BLVD	–
(e)	PPB POST	–	–	–	–	–	–	ø6	RIGHT	–	–
(f)	29-5-70	35'	15'	121 W (LED)	MAS MAS	SV-2-T	SP-2-T	–	–	PLAYA AVE	–
(g)	29-5-70	50'	15'	121 W (LED)	MAS MAS	SV-2-T	SP-2-T	–	–	–	–
(h)	PPB POST	–	–	–	–	–	–	ø6	LEFT	–	–
(i)	PPB POST	–	–	–	–	–	–	ø8	RIGHT	–	–
(j)	PPB POST	–	–	–	–	–	–	ø4	LEFT	–	–

* OTHER REQUIREMENTS ARE COVERED BY NOTES, LEGEND, SPECIAL PROVISIONS AND CALTRANS STANDARD SPECIFICATIONS. FOR TYPE OF STANDARD, VEHICLE AND PEDESTRIAN MOUNTING, SEE CALTRANS STANDARD PLANS.

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
N – DENOTES NEW POLE OR EQUIPMENT

CONDUIT AND CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7
#14	ø1	6	6	–	3	3	3	3
	ø2	3	3	–	–	3	–	–
	ø3	6	6	–	3	–	–	3
	ø4	3	3	–	–	3	3	–
	ø5	3	3	–	–	3	–	–
	ø6	3	3	–	3	–	–	3
	ø7	3	3	–	–	3	3	–
	ø8	3	3	–	–	–	–	–
	ø2P	2	2	–	–	2	2	–
	ø4P	4	4	–	2	2	2	2
	ø6P	4	4	–	2	–	–	2
	ø8P	2	2	–	–	2	–	–
	ø2PPB	1	1	–	–	1	1	–
	ø4PPB	2	2	–	1	1	1	1
	ø6PPB	1	1	–	1	–	–	1
	ø8PPB	1	1	–	–	1	–	–
	PPB COMMON	2	2	–	1	1	1	1
	SPARES	6	6	–	3	3	3	3
	RR PREEMPT #14	2	2	–	–	–	–	2
	TOTAL NO. 14	57	57	–	19	28	19	21
#8	SIGNAL SERVICE (120V)	2	–	–	–	–	–	–
	LUMINAIRE (240V)	–	2	–	2	2	2	2
	SIGNAL COMMON	2	2	–	1	1	1	1
	TOTAL NO. 8	4	4	–	3	3	3	3
DLC TYPE C	ø1 DETECTOR	1	1	1	–	–	–	–
	ø2 DETECTOR	4	4	–	–	4	4	–
	ø3 DETECTOR	1	1	–	–	1	–	–
	ø4 DETECTOR	1	1	–	–	–	–	1
	ø5 DETECTOR	4	4	–	–	4	4	–
	ø6 DETECTOR	4	4	4	–	–	–	–
	ø7 DETECTOR	2	2	–	–	–	–	2
	ø8 DETECTOR	2	2	–	–	2	–	–
	TOTAL DLC	19	19	5	–	11	8	3
OTHER	GPS RADIO	1N	1N	–	–	–	–	–
	SIC	1N	–	–	–	–	–	–
	PERCENT FILL (%)	15	15	12	18	16	16	26
	CONDUIT SIZE (INCHES)	2–3.5	2–3.5	2	2	3.5	3	2

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
N – DENOTES NEW CONDUIT OR CONDUCTORS

Know what's below. Call before you dig.

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA AVE AND DEL MONTE BLVD
SCHEDULES
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
TS-205
SHEET 529 OF 617

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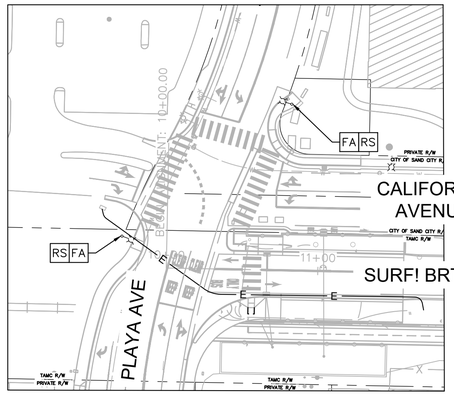

REMOVAL PLAN
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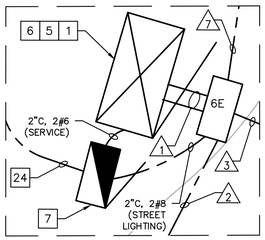
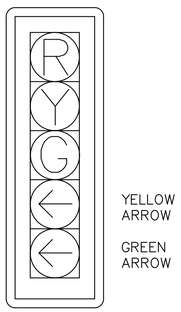
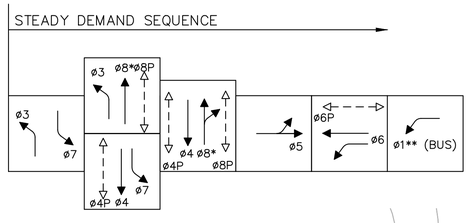


DETAIL 'A'
SCALE: 1"=5'



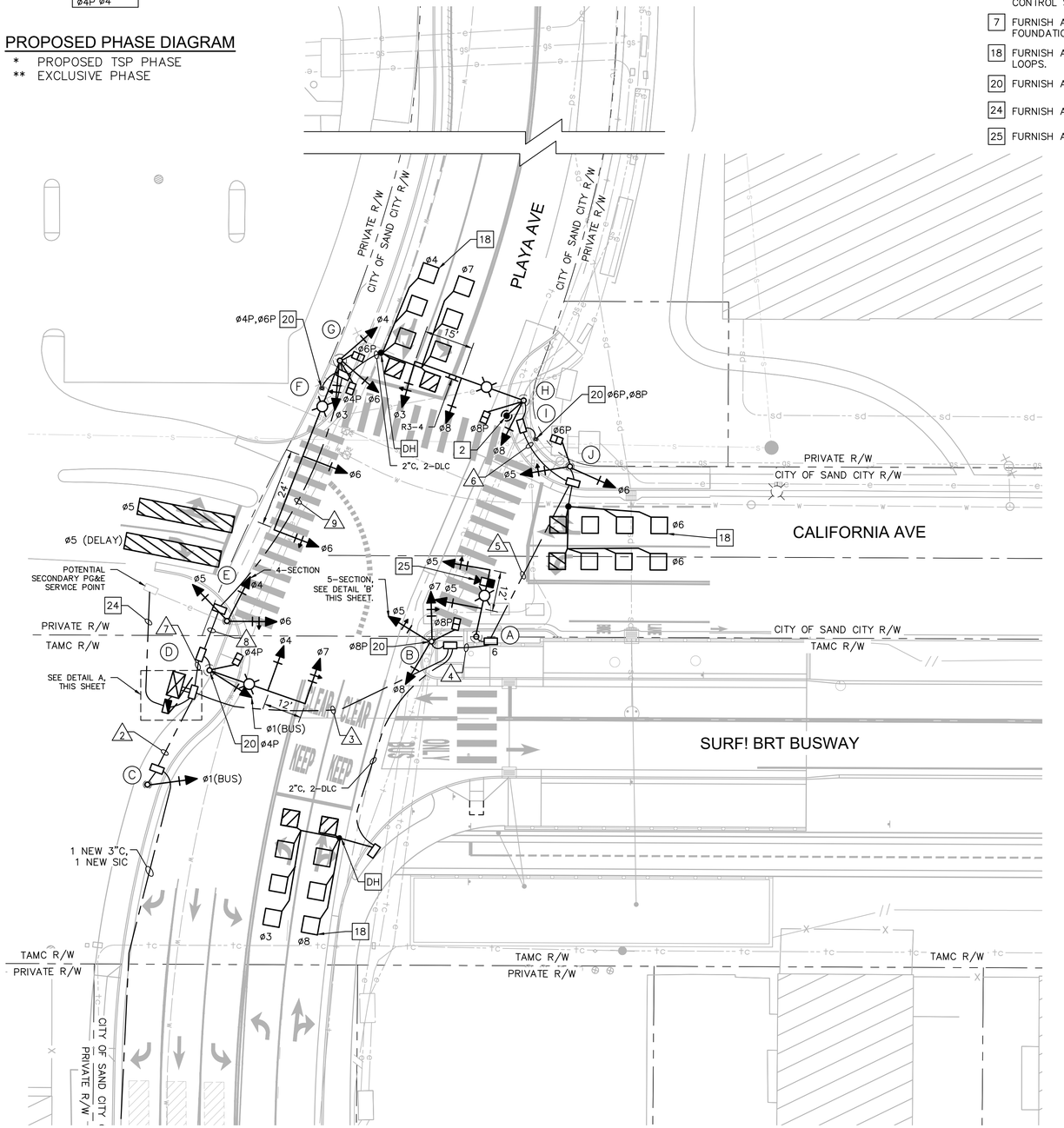
DETAIL 'B': 5-SECTION HEAD

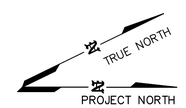


PROPOSED PHASE DIAGRAM
* PROPOSED TSP PHASE
** EXCLUSIVE PHASE

CONSTRUCTION NOTES

1. FURNISH AND INSTALL MULTI-MODE EVP/TSP PHASE SELECTOR AND CHASSIS IN TRAFFIC SIGNAL CONTROLLER CABINET. WIRE UP CHASSIS TO CABINET TERMINALS FOR TSP OPERATIONS.
2. FURNISH AND INSTALL GPS/RADIO ANTENNA ON TRAFFIC SIGNAL POLE. SEE DETAIL 'A' AND DETAIL 'B' ON SHEET TS-302.
5. FURNISH AND INSTALL TYPE 332L TRAFFIC SIGNAL CABINET ON NEW FOUNDATION.
6. FURNISH AND INSTALL NEW 2070LX TRAFFIC SIGNAL CONTROLLER WITH LATEST TRAFFICWARE TRAFFIC CONTROL SOFTWARE.
7. FURNISH AND INSTALL TYPE III SERVICE CABINET ON NEW FOUNDATION.
18. FURNISH AND INSTALL TYPE D VEHICLE DETECTION LOOPS.
20. FURNISH AND INSTALL APS PUSH BUTTON ON POLE.
24. FURNISH AND INSTALL 1-4"C.
25. FURNISH AND INSTALL VIDEO DETECTION CAMERA.





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MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
CALIFORNIA AVE AND PLAYA AVE PLAN
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.
TS-206
SHEET 530 OF 617

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POLE AND EQUIPMENT SCHEDULE

LOCATION	STANDARD			VEHICLE SIGNAL MOUNTING		PED SIGNAL MOUNTING	APS		INTERNALLY ILLUMINATED STREET NAME SIGN (I.I.S.N.S.) LEGEND	*SPECIAL REQUIREMENTS
	TYPE	SIGNAL MAST ARM	LUMINAIRE MAST ARM	MAST ARM	POLE		ø	ARROW		
Ⓐ	17-2-100	20'	12'	MAS MAS	–	–			–	–
Ⓑ	1-B	–	–	–	TV-3-TB	SP-1-T	ø8	RIGHT	–	–
Ⓒ	15TS	–	–	–	SV-1-T	–	–	–	–	INSTALL BUS SIGNAL (SEE DETAIL 'C' AND DETAIL 'D' ON TS-301 FOR DETAILS)
Ⓓ	19-3-100	30'	12'	MAS MAS	SV-1-T	SP-1-T	ø4	RIGHT	–	–
Ⓔ	1-B	–	–	–	TV-3-TB	–	–	–	–	–
Ⓕ	PPB POST	–	–	–	–	–	ø4 ø6	LEFT RIGHT		
Ⓖ	1-B	–	–	–	TV-3-TC	SP-2-T	–	–	–	–
Ⓗ	24-4-100	35'	12'	MAS MAS	SV-1-T	SP-1-T	–	–	–	INSTALL R3-4 (NO U-TURN) SIGN ON MAST ARM
Ⓘ	PPB POST	–	–	–	–	–	ø6 ø8	LEFT RIGHT	–	–
Ⓙ	1-B	–	–	–	SV-2-T	SP-1-T	–	–	–	–

CONDUIT AND CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9
#14	ø1 (BUS)	2	2	2	–	–	–	2	2	–
	ø3	6	–	3	3	3	3	3	3	3
	ø4	6	–	–	–	–	–	3	3	3
	ø5	3	–	3	3	3	–	3	3	–
	ø6	6	–	3	3	3	–	3	3	3
	ø7	3	–	3	–	–	–	3	3	–
	ø8	3	–	3	3	3	3	3	3	–
	ø4P	4	–	–	–	–	–	2	2	2
	ø6P	4	–	2	2	2	–	2	2	2
	ø8P	2	–	2	2	2	2	2	2	–
	ø4PPB	1	–	–	–	–	–	1	1	1
	ø6PPB	2	–	1	1	1	1	1	1	1
	ø8PPB	1	–	1	1	1	–	1	1	–
	PPB COMMON	1	1	1	1	1	1	1	1	1
	SPARES	3	3	3	3	3	3	3	3	3
	PEU	1	–	–	–	–	–	1	–	–
	TOTAL NO. 14	48	6	27	22	22	13	34	33	19
#8	SIGNAL SERVICE	3	–	–	–	–	–	–	–	–
	TOTAL NO. 8	3	–	–	–	–	–	–	–	–
#10	LIGHTING (240V)	1	–	1	1	1	1	1	1	1
	SIGNAL NEUTRAL	1	–	1	1	1	1	1	1	1
	TOTAL NO. 10	2	–	2	2	2	2	2	2	2
DLC	ø3	1	–	1	–	–	–	1	1	–
	ø4	1	–	–	–	–	–	–	–	1
	ø5	1	–	–	–	–	–	–	–	–
	ø6	1	–	1	1	1	–	1	1	–
	ø7	1	–	–	–	–	–	–	–	1
	ø8	1	–	1	–	–	–	1	1	–
	TOTAL DLC	6	–	3	1	1	–	3	3	2
OTHER	GPS RADIO	1	–	1	1	–	–	1	1	–
	SIC	1	1	–	–	–	–	1	1	–
	PERCENT FILL (%)	12	7	13	10	8	5	16	16	8
	CONDUIT SIZE (INCHES)	2-3"	3	3	3	3	3	3	3	3

ALL CONDUITS AND CONDUCTORS ARE NEW UNLESS OTHERWISE NOTED.
E – DENOTES EXISTING CONDUIT OR CONDUCTORS

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
CALIFORNIA AVE AND PLAYA AVE SCHEDULES
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
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CONTRACT NO. 22-03		
SHEET NO. TS-207		
SHEET 531 OF 617		

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PRIVATE R/W
CITY OF SAND CITY R/W
SB SR-1 ON-RAMP
CITY OF SAND CITY R/W
CALTRANS R/W
STOP
100+00.00
TYPE 3 BARRICADE
R11-2
R11-2
TYPE 3 BARRICADE
101+00
102+00
PRIVATE R/W
CITY OF SAND CITY R/W
PRIVATE R/W
TAMC R/W
BEACH RANGE ROAD TRAIL
"RAB-N-BRR" ALIGNMENT
"SURF BRT" ALIGNMENT
TAMC R/W
CALTRANS R/W
MONTEREY PENINSULA RECREATIONAL TRAIL
363+00.00
"CAN" ALIGNMENT
CALTRANS EASEMENT
364+00.00
SB SR-1
NB SR-1
365+00.00
SB SR-1 OFF-RAMP
CALIFORNIA AVE
CALTRANS R/W
TAMC R/W
CALTRANS EASEMENT
"RAB-E-MPR" ALIGNMENT
TAMC R/W
CALTRANS R/W

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LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN, AS WELL AS ADDITIONAL TRAFFIC CONTROL DEVICES AS REQUIRED TO ENSURE THE SAFE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH OR AROUND THE WORK AREA.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITIONS OF: CALTRANS STANDARD SPECIFICATION AND CALIFORNIA MUTCD, LATEST EDITION.
4. ALL FLASHING ARROW SIGNS SHALL BE SOLAR POWERED.
5. CONTRACTOR SHALL PROVIDE FLAGMEN AS NECESSARY TO GIVE ADEQUATE WARNING TO TRAFFIC OR TO THE PUBLIC OF ANY UNSAFE CONDITIONS TO BE ENCOUNTERED.
6. CONTRACTOR SHALL REMOVE TEMPORARY TRAFFIC DELINEATION, SIGNAGE, AND OTHER DEVICES WHEN NO LONGER REQUIRED, AND SHALL RESTORE AREAS TO ORIGINAL CONDITIONS.
7. CONTRACTOR SHALL COVER EXISTING SIGNS WHERE THEY CONFLICT WITH CONSTRUCTION DETOURS AND SIGNING.
8. ALL OPEN EXCAVATION OR CONSTRUCTION WORK SHALL BE A MINIMUM OF 5' FROM ANY OPERATION TRAFFIC LANES.
9. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR ANY TEMPORARY TRAFFIC SIGNAL TIMING AND MODIFICATIONS.
10. ALL STRIPING AND MARKING SHALL CONFORM TO SECTION 310-5.6 OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION. TEMPORARY REMOVABLE STRIPING TAPE (DETOUR GRADE) MAY BE USED IN LIEU OF PAINTED STRIPING.
11. THE CONTRACTOR SHALL PROVIDE FOR ACCESS TO ALL ADJACENT PROPERTIES DURING WORK HOURS. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING PROPERTY OWNERS/OPERATORS.
12. ALL SIGNS SHALL BE RETRO-REFLECTORIZED AND STANDARD SIZE.
13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

SIGN LEGEND

ROAD CLOSED
R11-2

NORTH

GRAPHIC SCALE IN FEET
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MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 1
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	
SHEET NO.	TC-010	
SHEET 545 OF 617		

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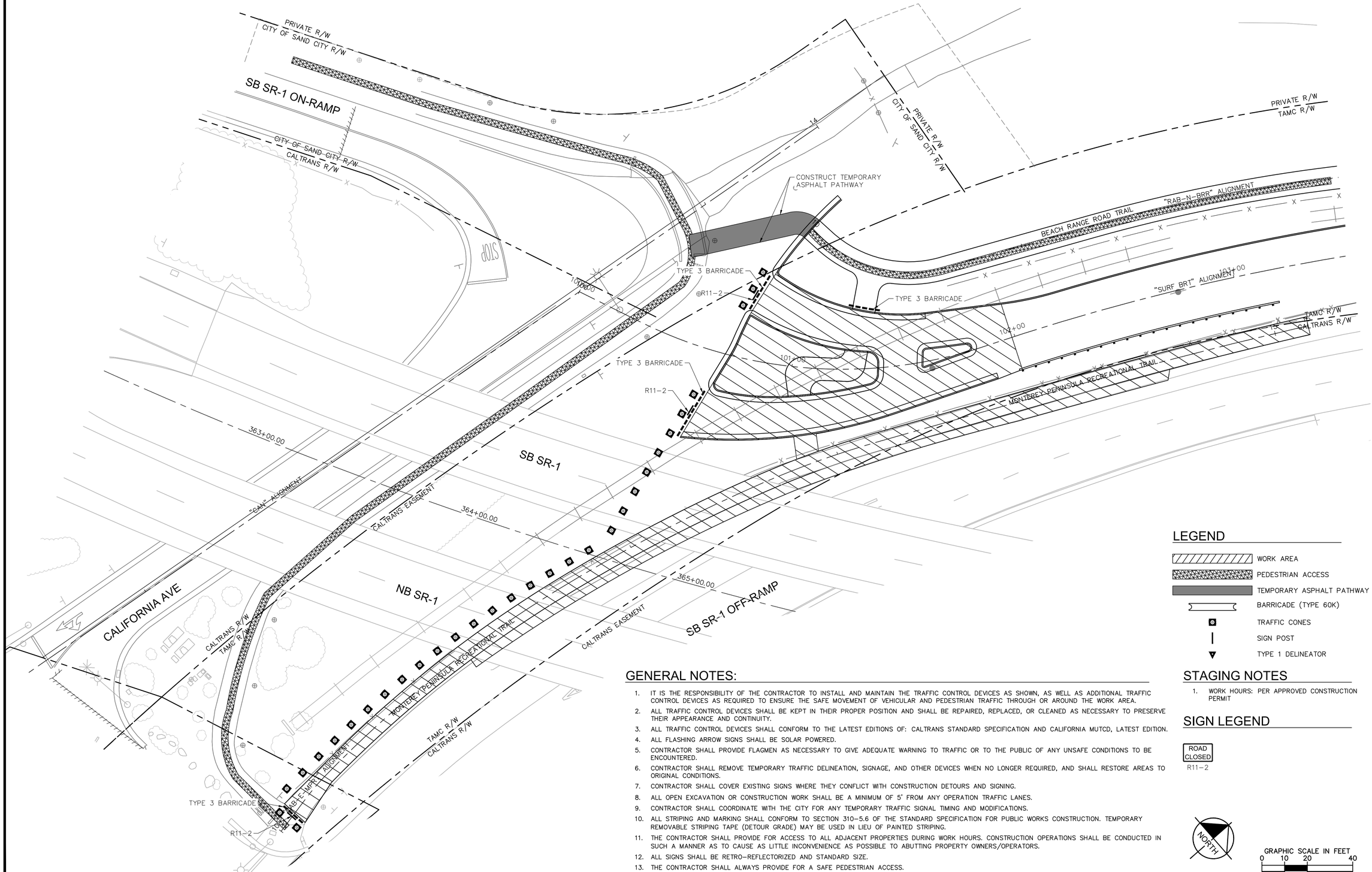

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LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN, AS WELL AS ADDITIONAL TRAFFIC CONTROL DEVICES AS REQUIRED TO ENSURE THE SAFE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH OR AROUND THE WORK AREA.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITIONS OF: CALTRANS STANDARD SPECIFICATION AND CALIFORNIA MUTCD, LATEST EDITION.
4. ALL FLASHING ARROW SIGNS SHALL BE SOLAR POWERED.
5. CONTRACTOR SHALL PROVIDE FLAGMEN AS NECESSARY TO GIVE ADEQUATE WARNING TO TRAFFIC OR TO THE PUBLIC OF ANY UNSAFE CONDITIONS TO BE ENCOUNTERED.
6. CONTRACTOR SHALL REMOVE TEMPORARY TRAFFIC DELINEATION, SIGNAGE, AND OTHER DEVICES WHEN NO LONGER REQUIRED, AND SHALL RESTORE AREAS TO ORIGINAL CONDITIONS.
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8. ALL OPEN EXCAVATION OR CONSTRUCTION WORK SHALL BE A MINIMUM OF 5' FROM ANY OPERATION TRAFFIC LANES.
9. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR ANY TEMPORARY TRAFFIC SIGNAL TIMING AND MODIFICATIONS.
10. ALL STRIPING AND MARKING SHALL CONFORM TO SECTION 310-5.6 OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION. TEMPORARY REMOVABLE STRIPING TAPE (DETOUR GRADE) MAY BE USED IN LIEU OF PAINTED STRIPING.
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12. ALL SIGNS SHALL BE RETRO-REFLECTORIZED AND STANDARD SIZE.
13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

SIGN LEGEND

ROAD CLOSED
R11-2

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 2
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	

SHEET NO.
TC-011
SHEET 546 OF 617

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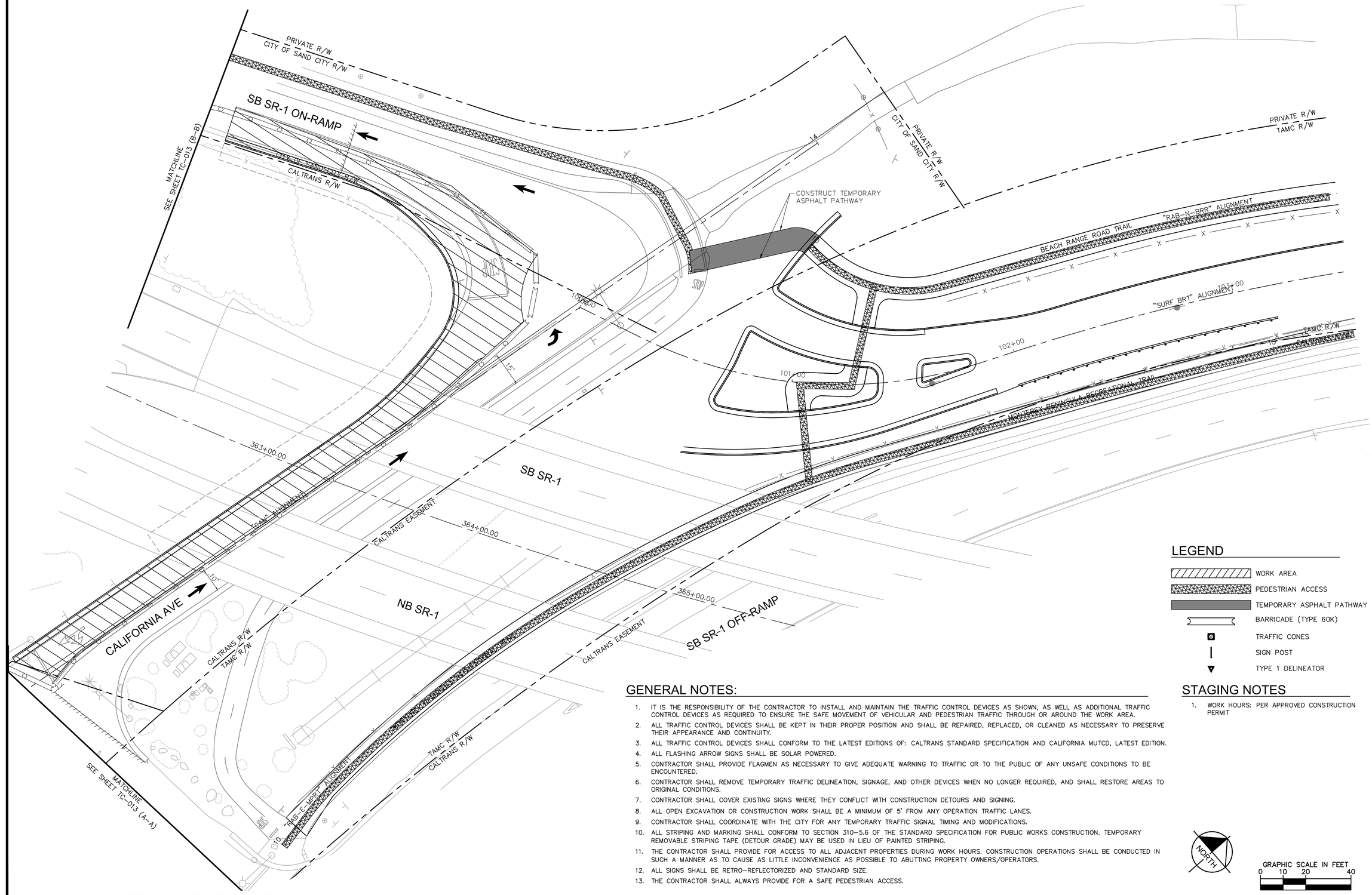

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LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

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STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	

CONTRACT NO. 22-03

SHEET NO.
TC-012
SHEET 547 OF 617

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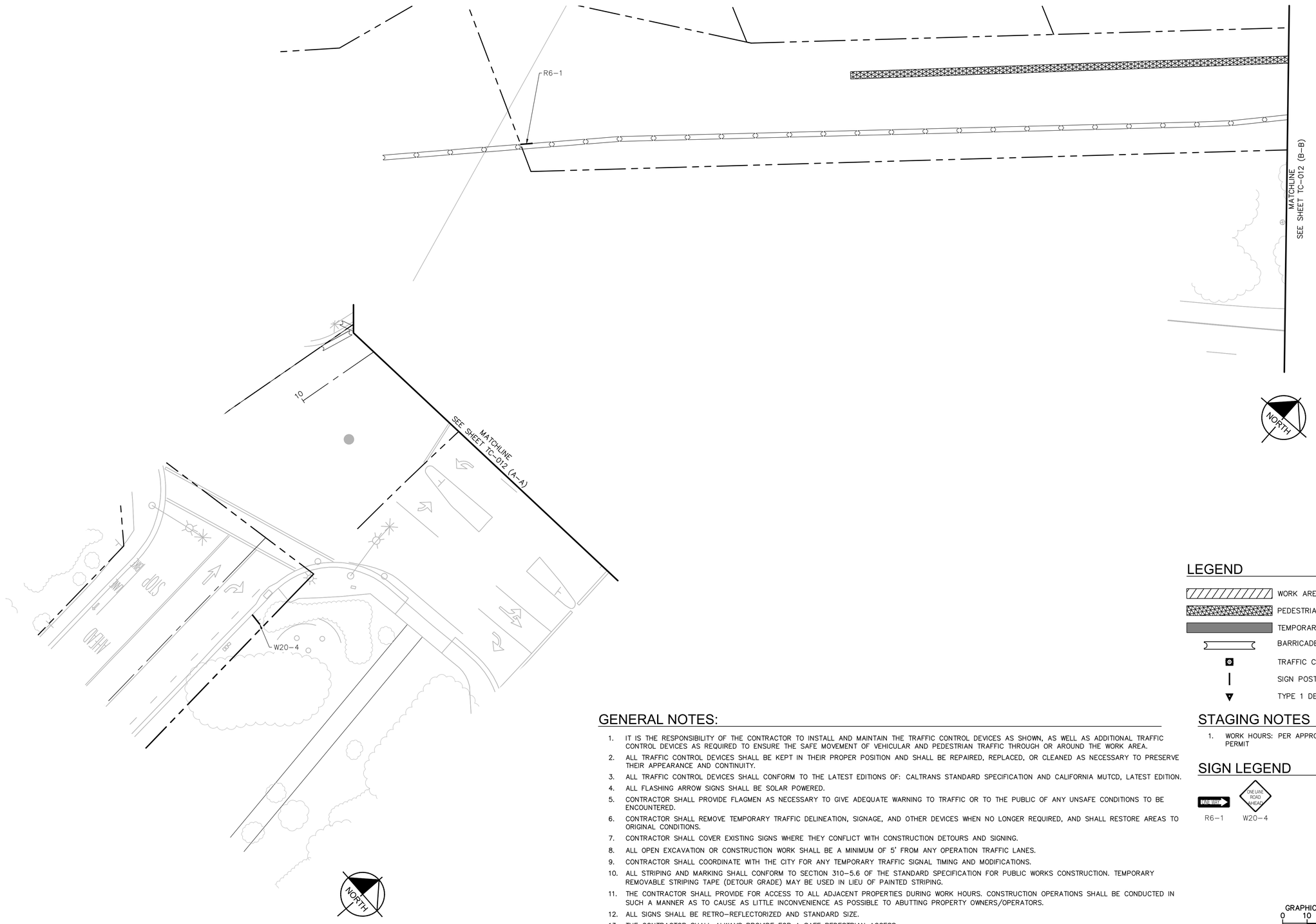

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
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GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN, AS WELL AS ADDITIONAL TRAFFIC CONTROL DEVICES AS REQUIRED TO ENSURE THE SAFE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH OR AROUND THE WORK AREA.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITIONS OF: CALTRANS STANDARD SPECIFICATION AND CALIFORNIA MUTCD, LATEST EDITION.
4. ALL FLASHING ARROW SIGNS SHALL BE SOLAR POWERED.
5. CONTRACTOR SHALL PROVIDE FLAGMEN AS NECESSARY TO GIVE ADEQUATE WARNING TO TRAFFIC OR TO THE PUBLIC OF ANY UNSAFE CONDITIONS TO BE ENCOUNTERED.
6. CONTRACTOR SHALL REMOVE TEMPORARY TRAFFIC DELINEATION, SIGNAGE, AND OTHER DEVICES WHEN NO LONGER REQUIRED, AND SHALL RESTORE AREAS TO ORIGINAL CONDITIONS.
7. CONTRACTOR SHALL COVER EXISTING SIGNS WHERE THEY CONFLICT WITH CONSTRUCTION DETOURS AND SIGNING.
8. ALL OPEN EXCAVATION OR CONSTRUCTION WORK SHALL BE A MINIMUM OF 5' FROM ANY OPERATION TRAFFIC LANES.
9. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR ANY TEMPORARY TRAFFIC SIGNAL TIMING AND MODIFICATIONS.
10. ALL STRIPING AND MARKING SHALL CONFORM TO SECTION 310-5.6 OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION. TEMPORARY REMOVABLE STRIPING TAPE (DETOUR GRADE) MAY BE USED IN LIEU OF PAINTED STRIPING.
11. THE CONTRACTOR SHALL PROVIDE FOR ACCESS TO ALL ADJACENT PROPERTIES DURING WORK HOURS. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING PROPERTY OWNERS/OPERATORS.
12. ALL SIGNS SHALL BE RETRO-REFLECTORIZED AND STANDARD SIZE.
13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

SIGN LEGEND

R6-1 W20-4

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	

SHEET NO.
TC-013
SHEET 548 OF 617

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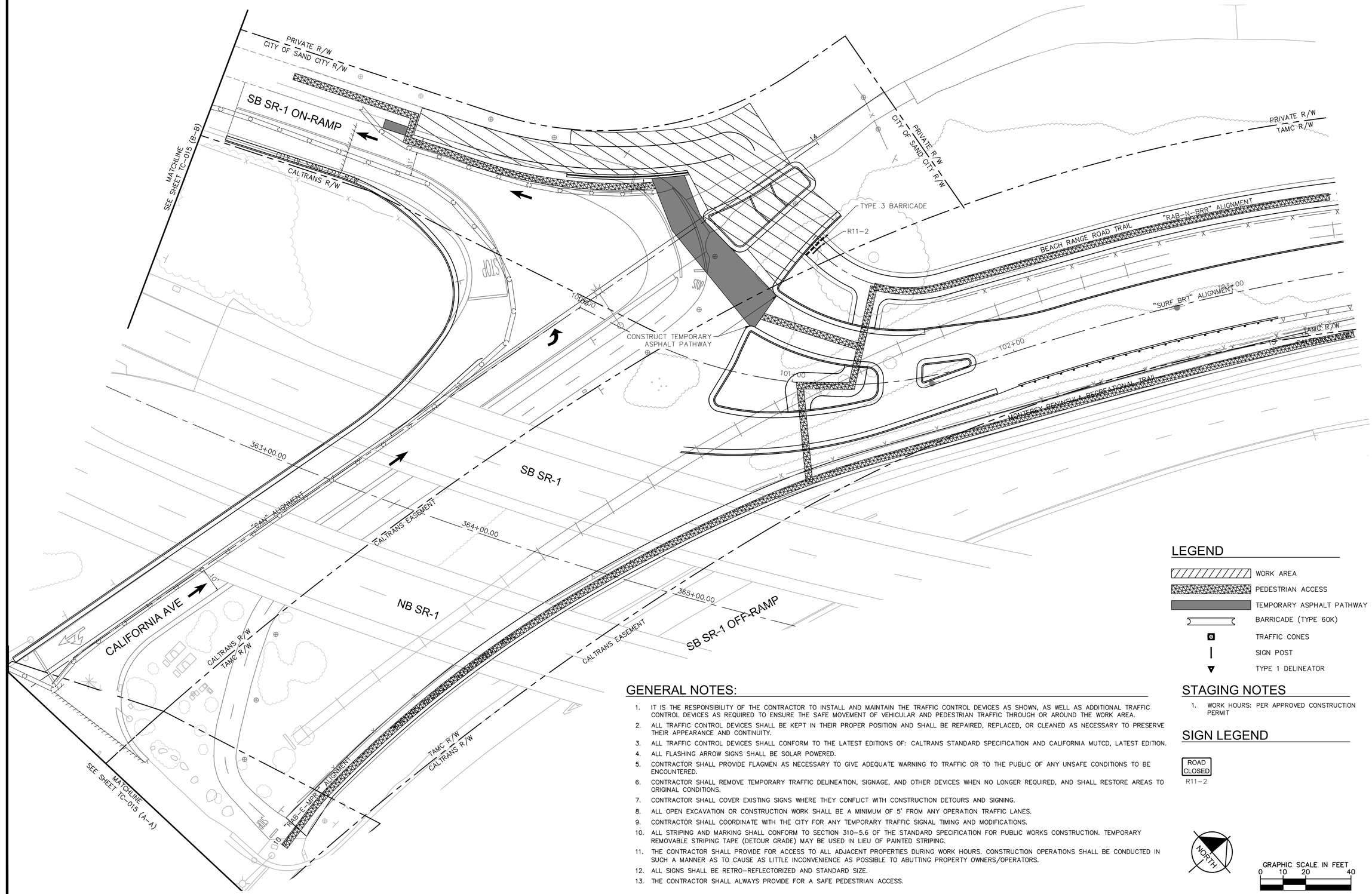

95% DESIGN - NOT FOR CONSTRUCTION

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN, AS WELL AS ADDITIONAL TRAFFIC CONTROL DEVICES AS REQUIRED TO ENSURE THE SAFE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH OR AROUND THE WORK AREA.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
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8. ALL OPEN EXCAVATION OR CONSTRUCTION WORK SHALL BE A MINIMUM OF 5' FROM ANY OPERATION TRAFFIC LANES.
9. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR ANY TEMPORARY TRAFFIC SIGNAL TIMING AND MODIFICATIONS.
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12. ALL SIGNS SHALL BE RETRO-REFLECTORIZED AND STANDARD SIZE.
13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

SIGN LEGEND

ROAD CLOSED
R11-2

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 4
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO. 22-03		
SHEET NO. TC-014		
SHEET 549 OF 617		

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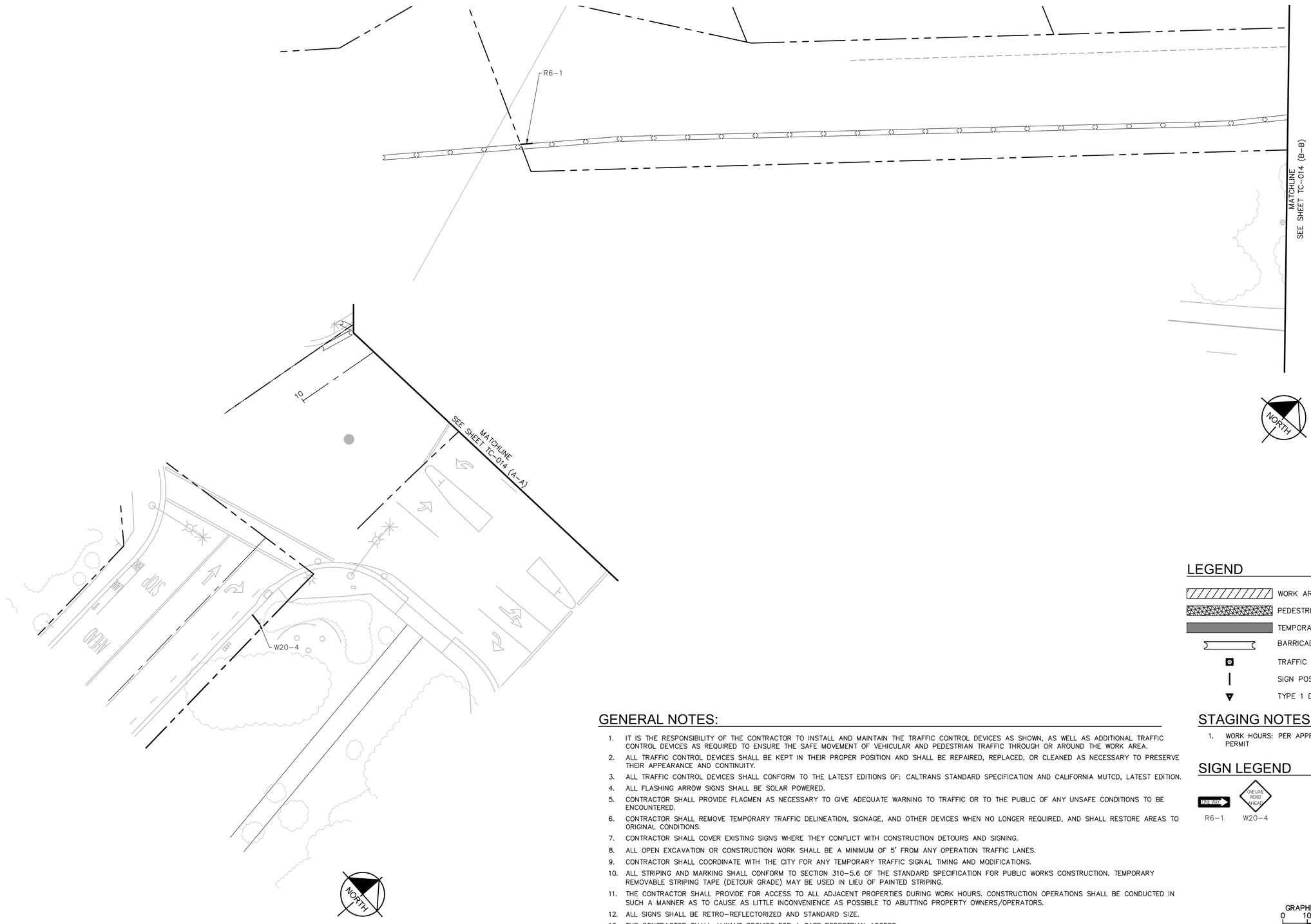

GENERAL NOTES:

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12. ALL SIGNS SHALL BE RETRO-REFLECTORIZED AND STANDARD SIZE.
13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

SIGN LEGEND

R6-1 W20-4

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 4
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	

SHEET NO.
TC-015
SHEET 550 OF 617

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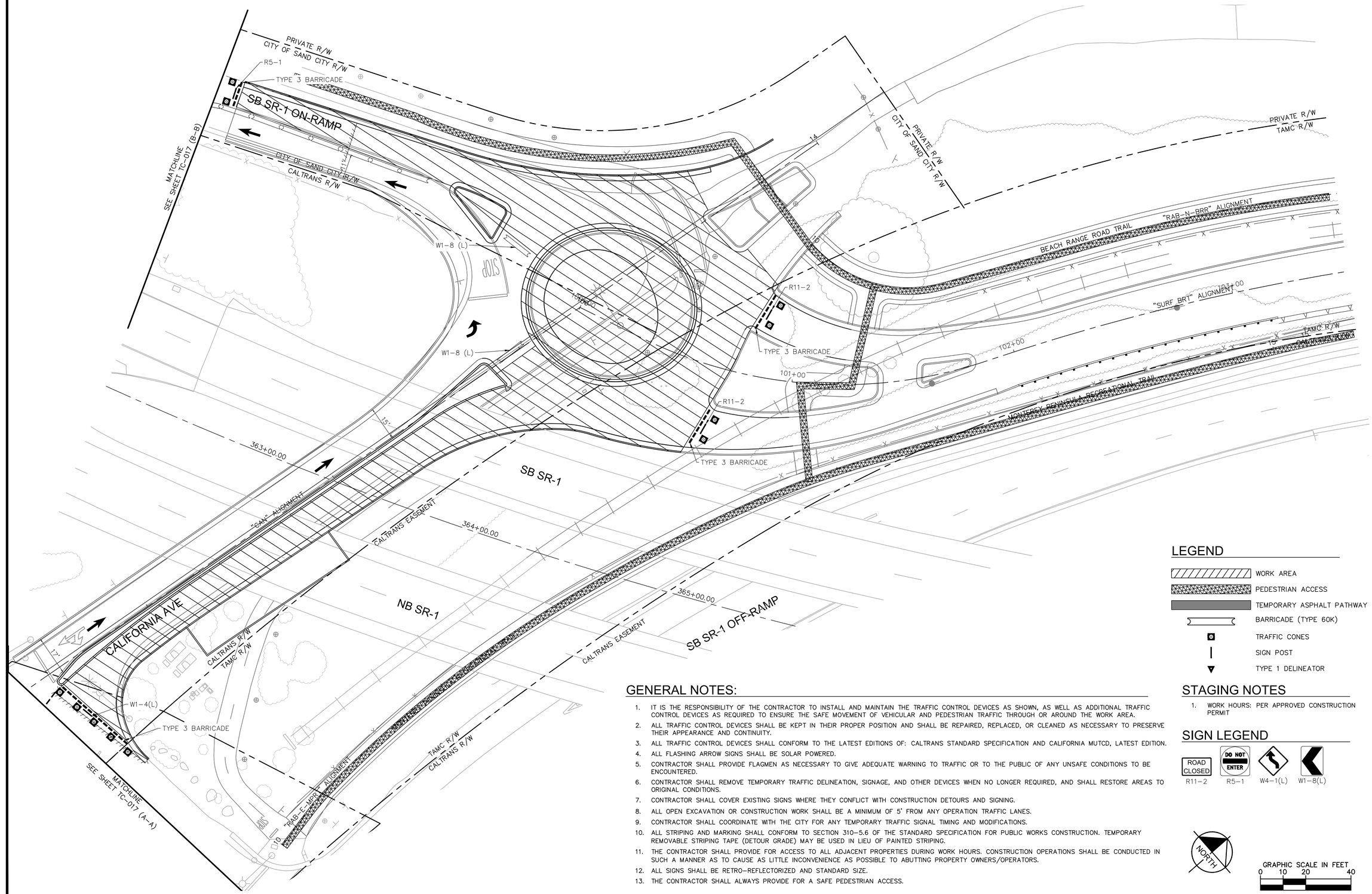

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

GENERAL NOTES:

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STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

SIGN LEGEND

ROAD CLOSED	DO NOT ENTER		
R11-2	R5-1	W4-1(L)	W1-8(L)

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 5
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	

CONTRACT NO. 22-03

SHEET NO.
TC-016
SHEET 551 OF 617

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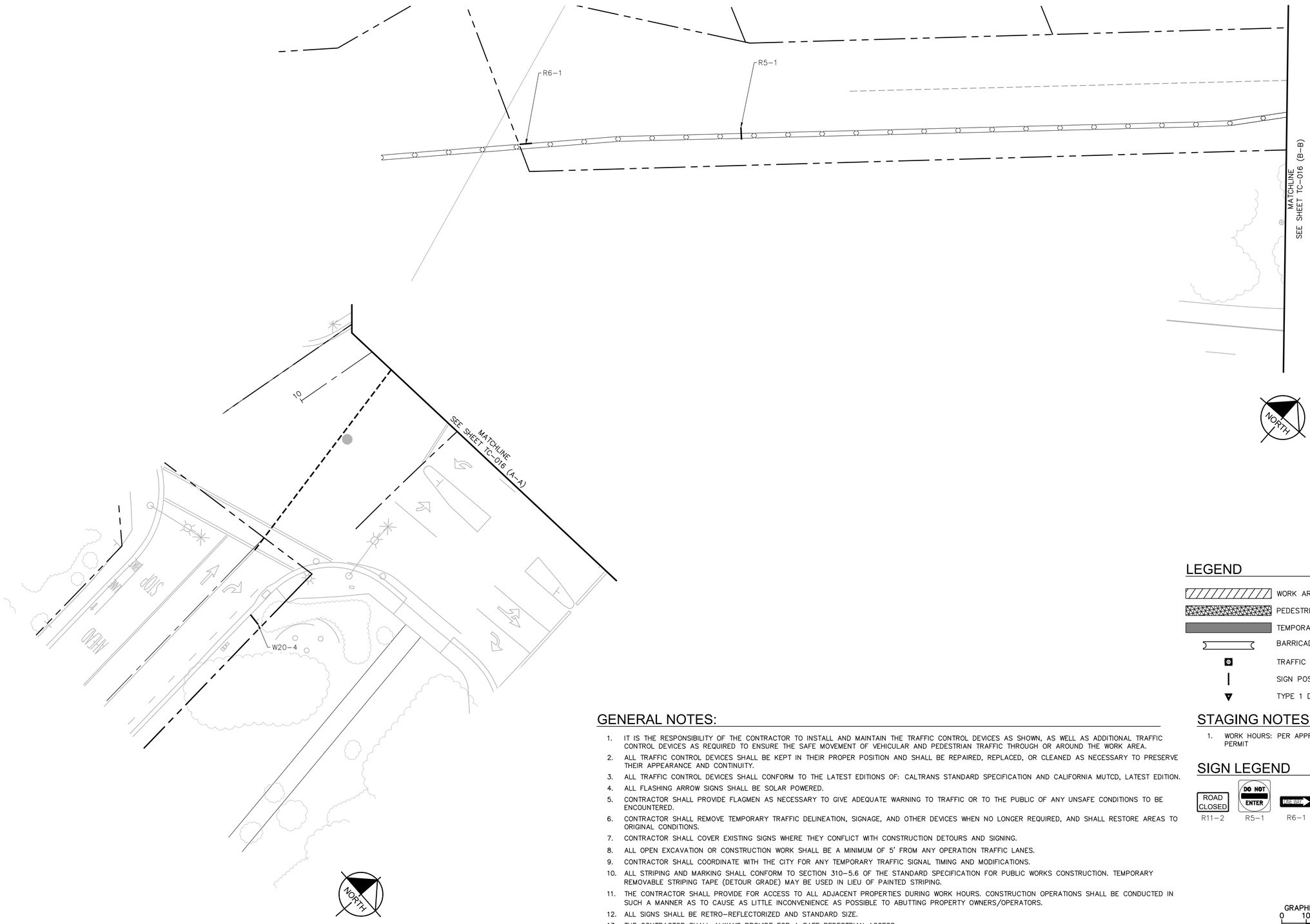

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN, AS WELL AS ADDITIONAL TRAFFIC CONTROL DEVICES AS REQUIRED TO ENSURE THE SAFE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH OR AROUND THE WORK AREA.
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13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

SIGN LEGEND

ROAD CLOSED R11-2 | DO NOT ENTER R5-1 | ONE WAY R6-1 | ONE LANE ROAD AHEAD W20-4

GRAPHIC SCALE IN FEET
0 10 20 40

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
ROUNDABOUT TRAFFIC CONTROL PLAN PHASE 5
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	

SHEET NO.
TC-017
SHEET 552 OF 617

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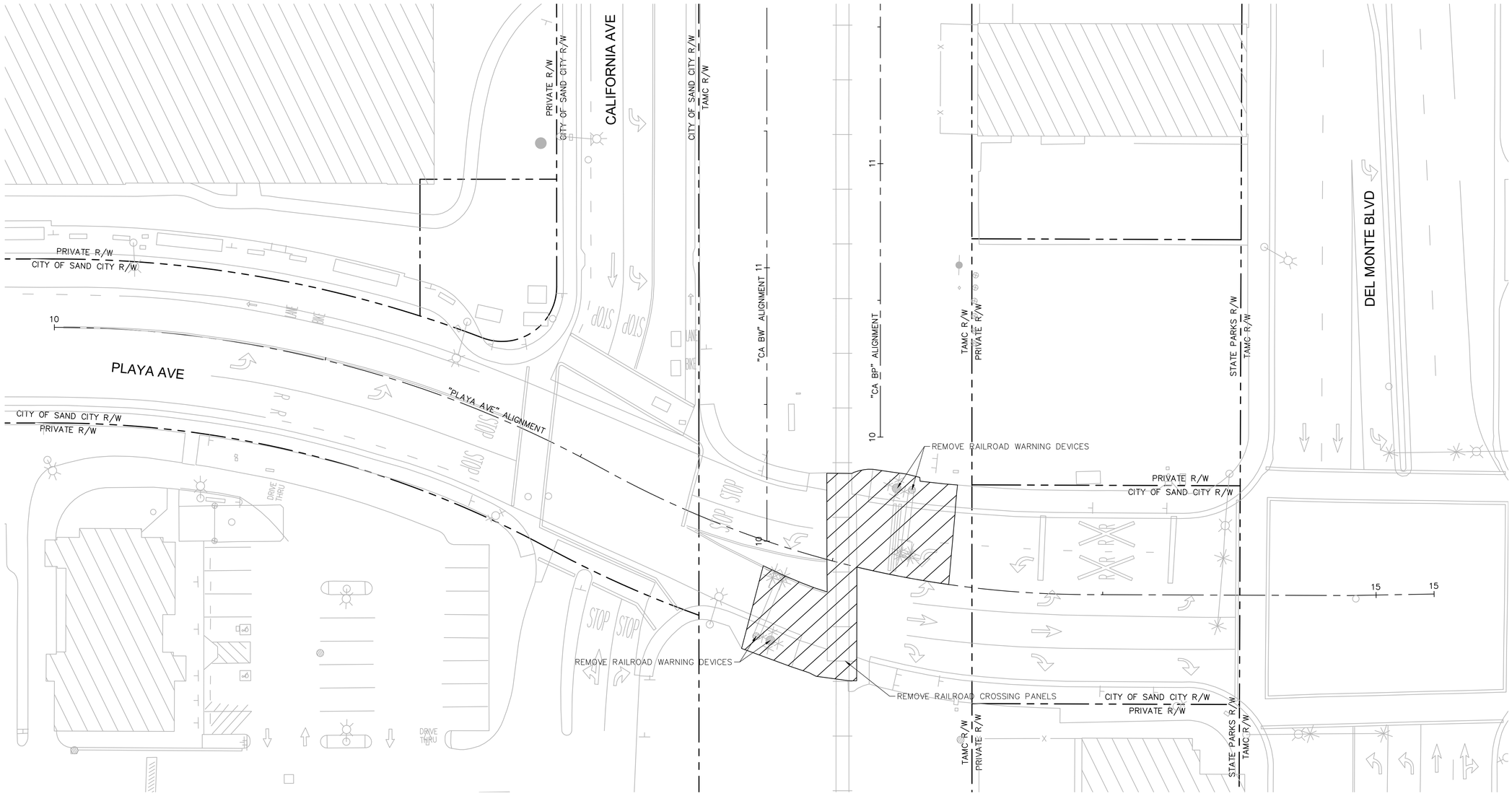

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN, AS WELL AS ADDITIONAL TRAFFIC CONTROL DEVICES AS REQUIRED TO ENSURE THE SAFE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH OR AROUND THE WORK AREA.
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12. ALL SIGNS SHALL BE RETRO-REFLECTORIZED AND STANDARD SIZE.
13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

1. ONLY ONE LANE MAY BE CLOSED AT ONE TIME.
2. NIGHT WORK PER APPROVED ENCROACHMENT PERMIT.

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 1
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	

CONTRACT NO. 22-03

SHEET NO.
TC-100
SHEET 562 OF 617

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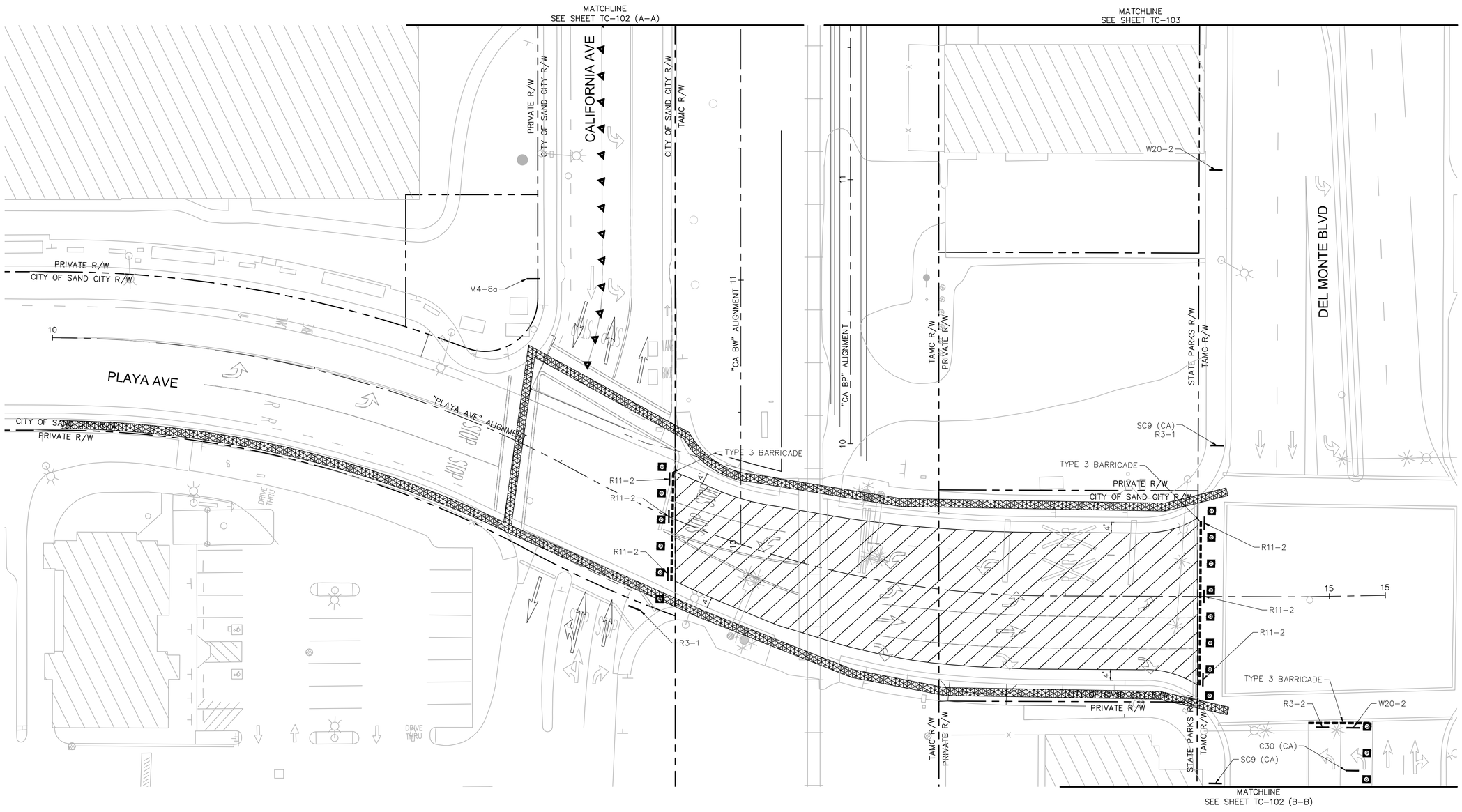

GENERAL NOTES:

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95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

1. DURATION: 72 HOURS
2. SCHEDULING TO BE CONFIRMED WITH CITY.

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- K BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

SIGN LEGEND

END DETOUR	ROAD CLOSED	DETOUR	LANE CLOSED	
M4-8a	R11-2	SC9 (CA)	C30 (CA)	
R3-1	R3-2	DETOUR AHEAD	W20-2	

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 2
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		

SHEET NO.
TC-101
SHEET 563 OF 617

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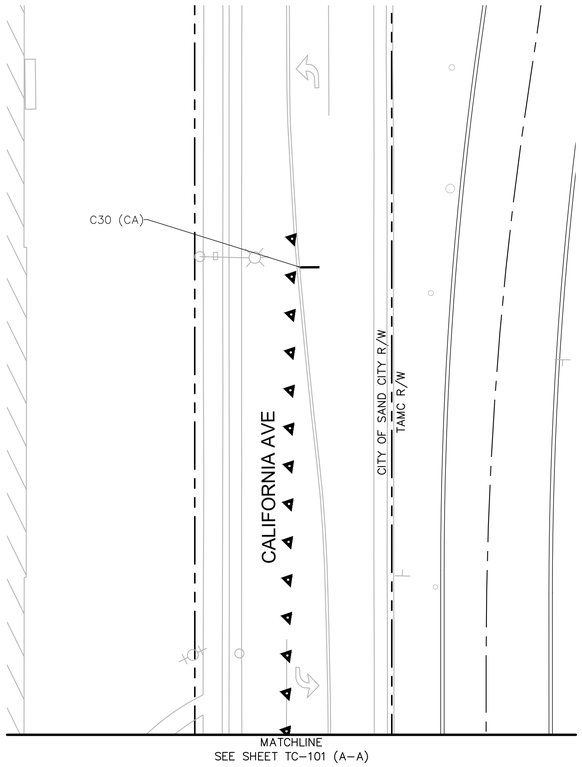

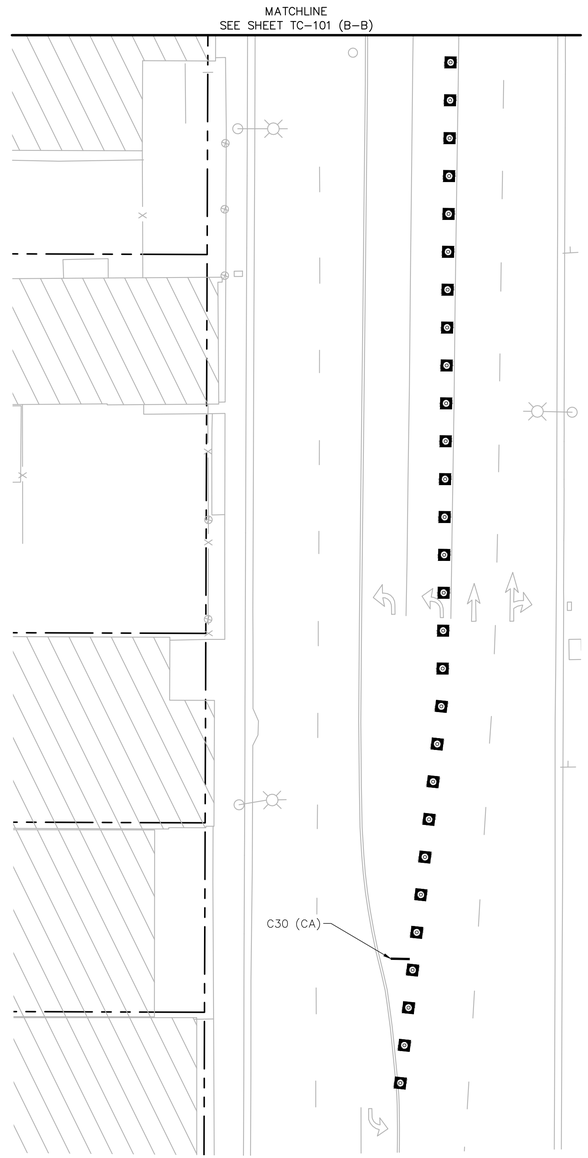

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13. THE CONTRACTOR SHALL ALWAYS PROVIDE FOR A SAFE PEDESTRIAN ACCESS.

95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

1. DURATION: 72 HOURS
2. SCHEDULING TO BE CONFIRMED WITH CITY.

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

SIGN LEGEND

LANE CLOSED
C30 (CA)

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 2
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO. 22-03		
SHEET NO. TC-102		
SHEET 564 OF 617		

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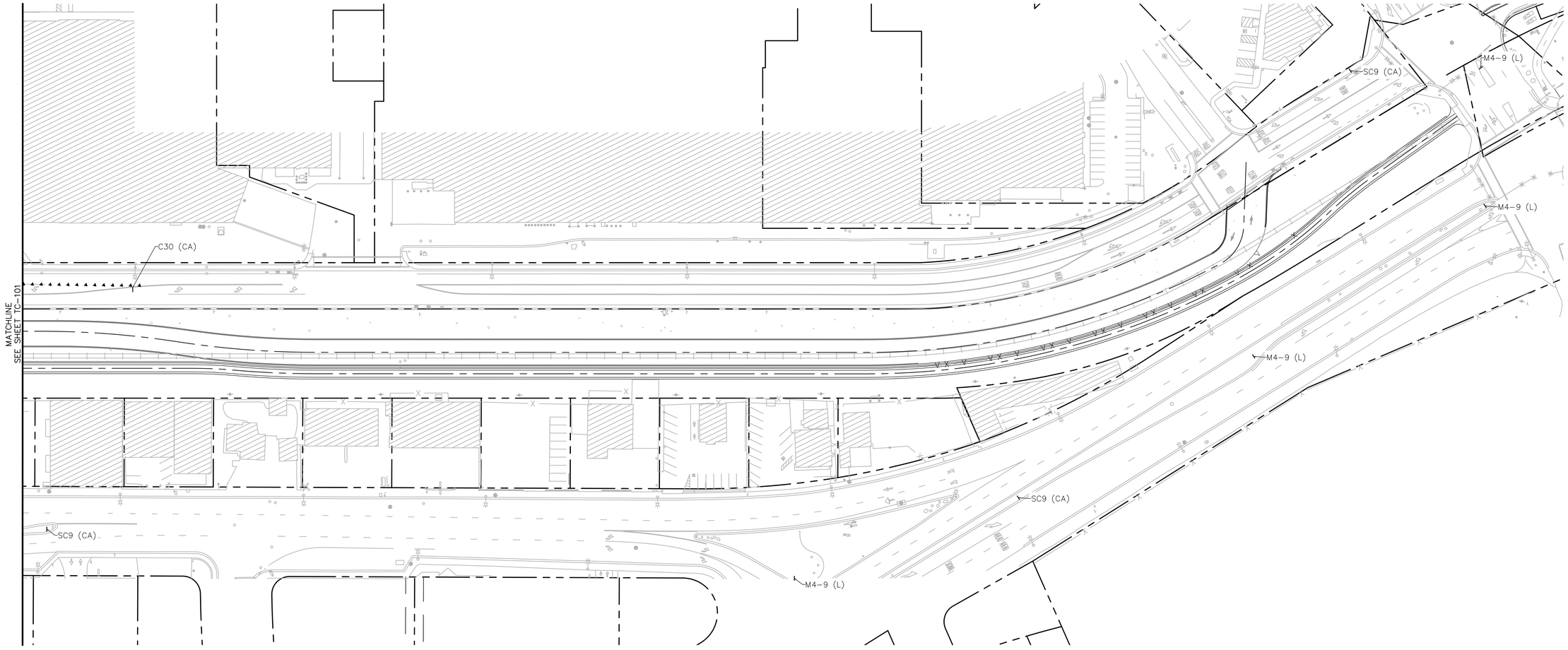

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95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

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2. SCHEDULING TO BE CONFIRMED WITH CITY.

LEGEND

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- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

SIGN LEGEND

END DETOUR	DETOUR	DETOUR	LANE CLOSED
M4-8a	M4-9 (L)	SC9 (CA)	C30 (CA)

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 2
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.
TC-103
SHEET 565 OF 617

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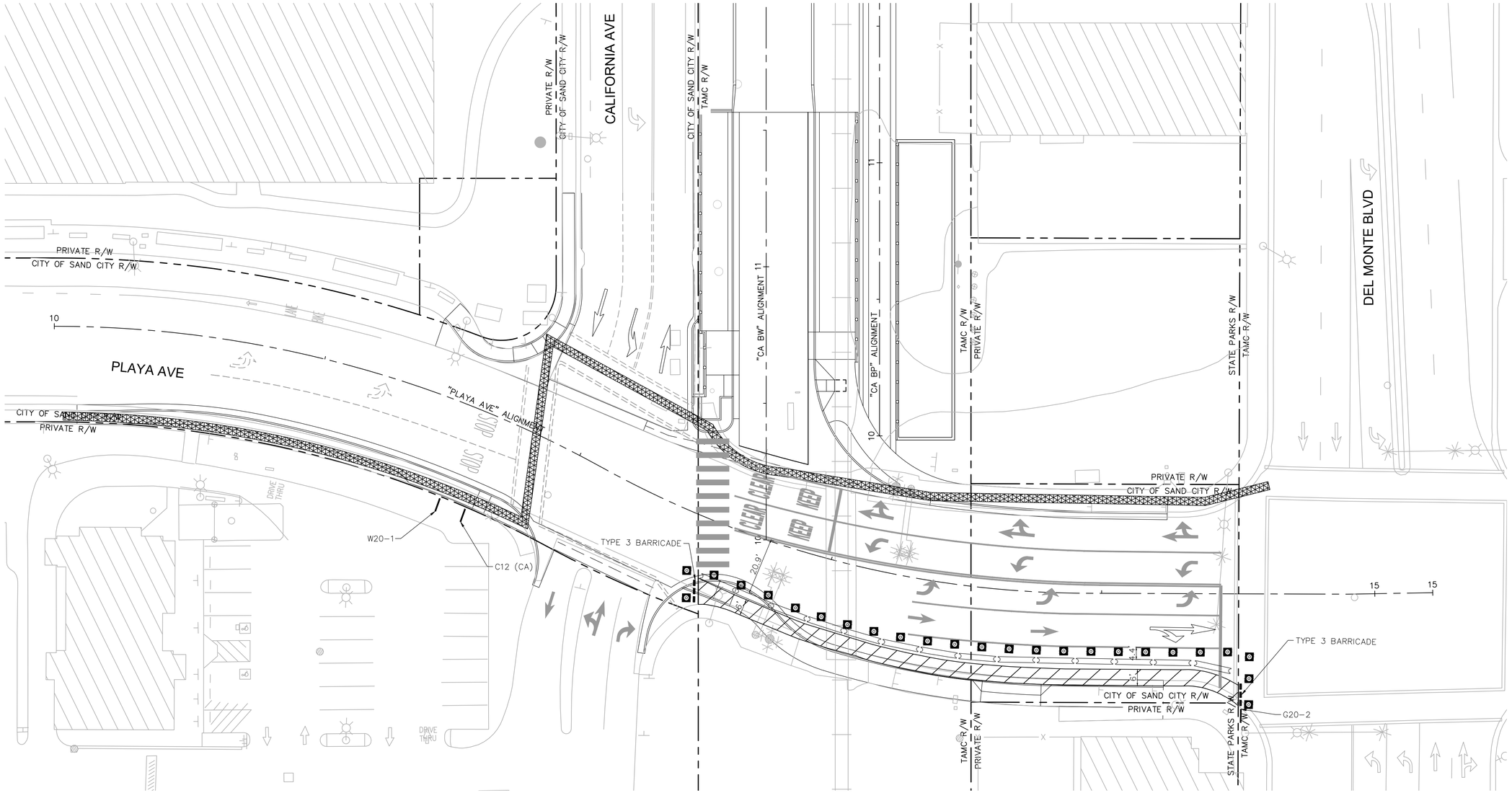

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95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

1. WORK HOURS: PER APPROVED CONSTRUCTION PERMIT

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

SIGN LEGEND

NARROW LANE	ROAD WORK AHEAD	END ROAD WORK
C12 (CA)	W20-1	G20-2

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 3
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
CHECKED	PM	
CONTRACT NO.	22-03	

SHEET NO.
TC-104
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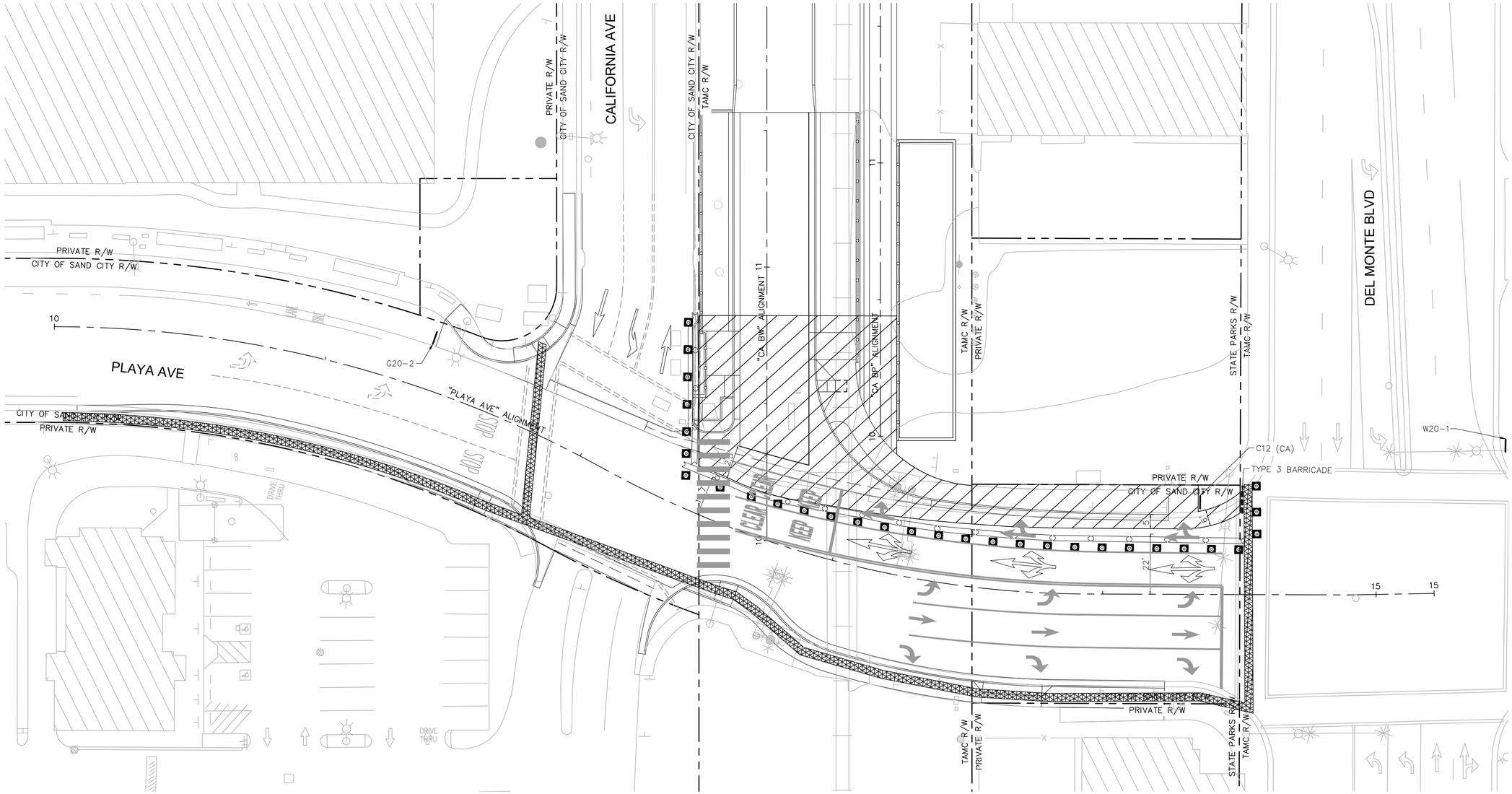

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95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

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LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
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- TYPE 1 DELINEATOR

SIGN LEGEND

NARROW LANE	ROAD WORK AHEAD	END ROAD WORK
C12 (CA)	W20-1	G20-2

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 4
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CONTRACT NO.	22-03	

SHEET NO.
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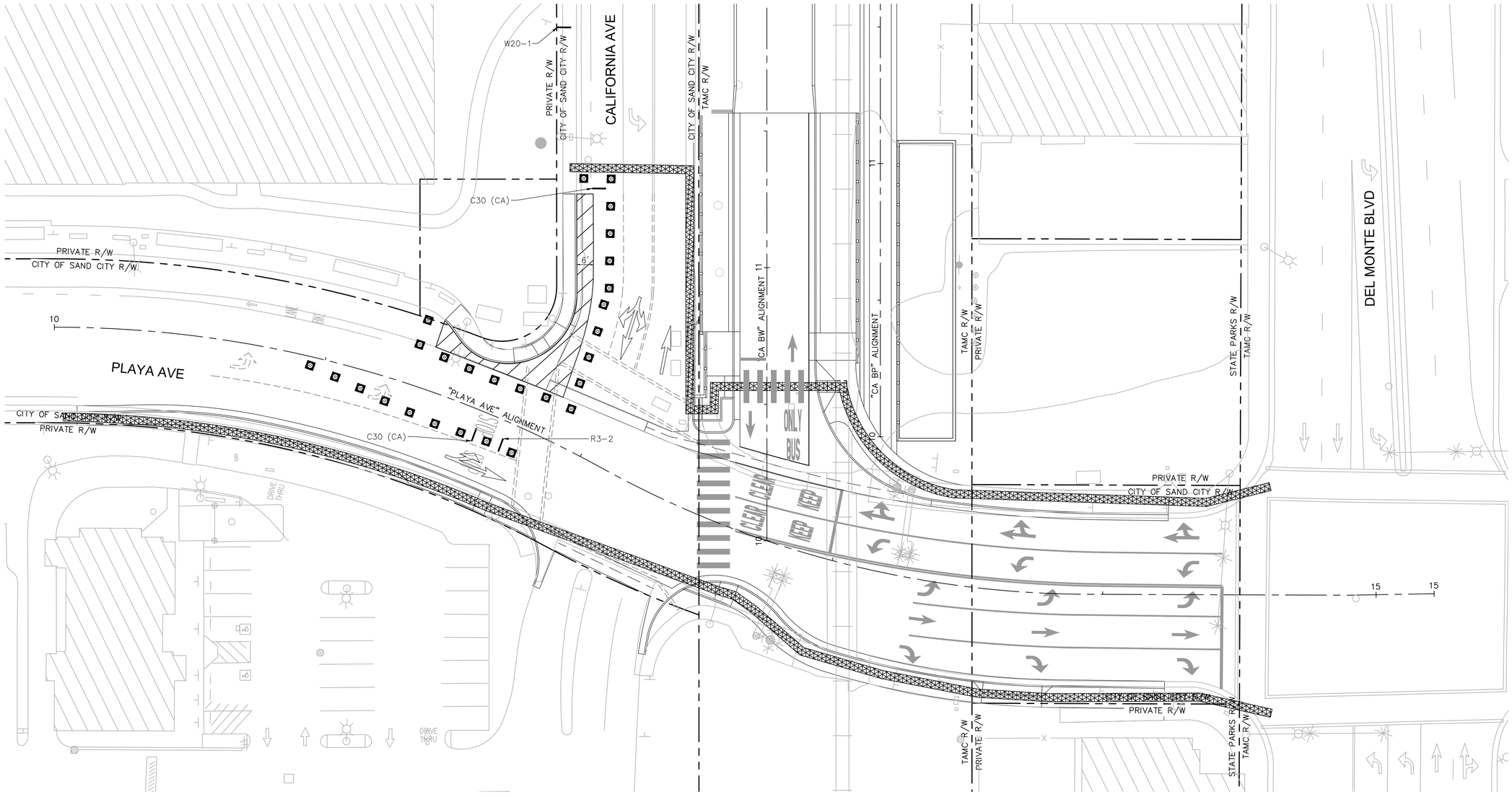

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95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

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LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
- SIGN POST
- TYPE 1 DELINEATOR

SIGN LEGEND



W20-1 C30 (CA) R3-2

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 5
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	WL	
DESIGNED	LJ	
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CONTRACT NO. 22-03

SHEET NO.
TC-106
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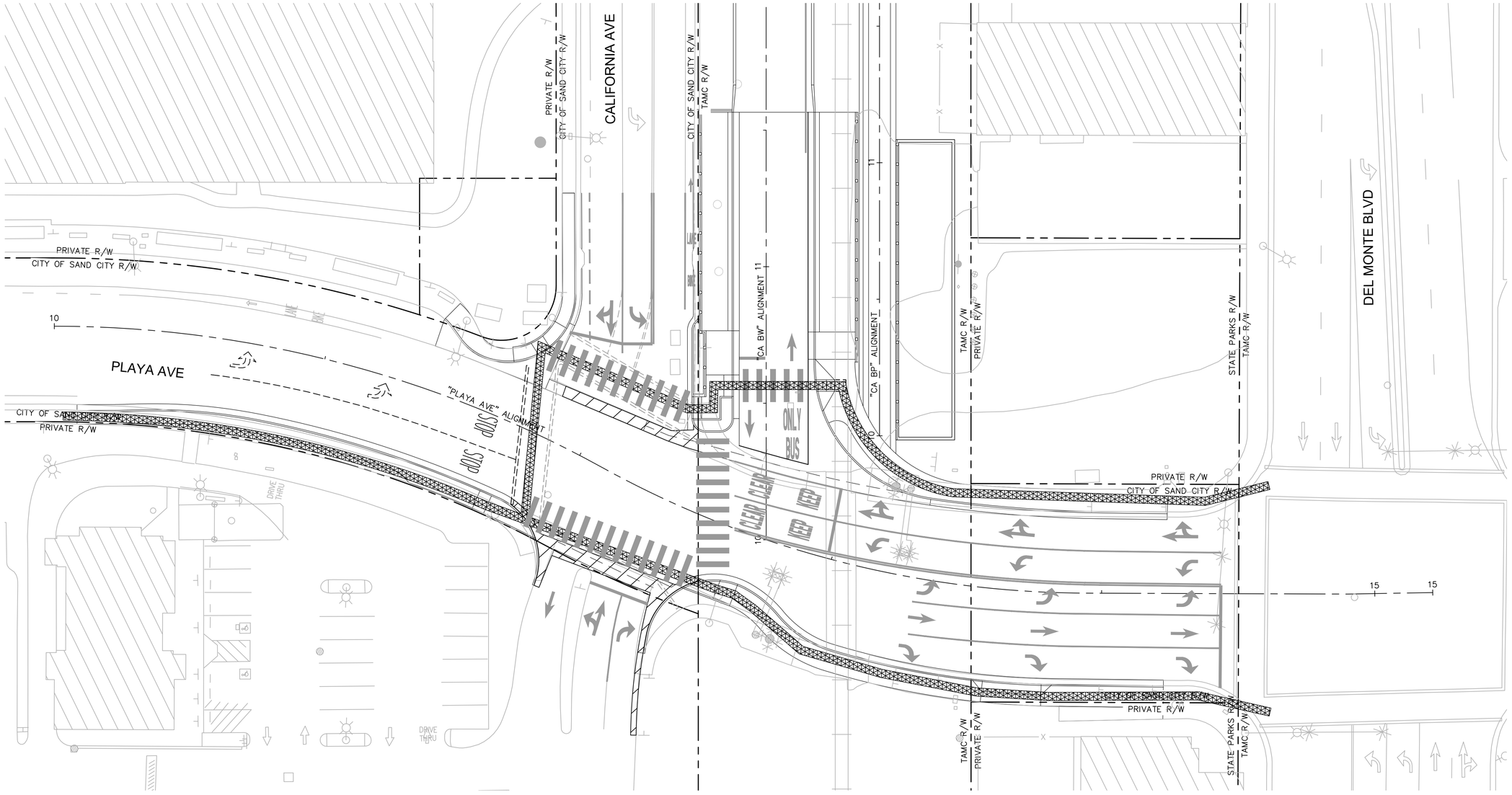

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95% DESIGN - NOT FOR CONSTRUCTION

STAGING NOTES

1. ONLY ONE LANE BE CLOSED AT ONE TIME.
2. NIGHT WORK PER APPROVED ENCROACHMENT PERMIT

LEGEND

- WORK AREA
- PEDESTRIAN ACCESS
- TEMPORARY ASPHALT PATHWAY
- BARRICADE (TYPE 60K)
- TRAFFIC CONES
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NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 6
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CONTRACT NO. 22-03

SHEET NO.
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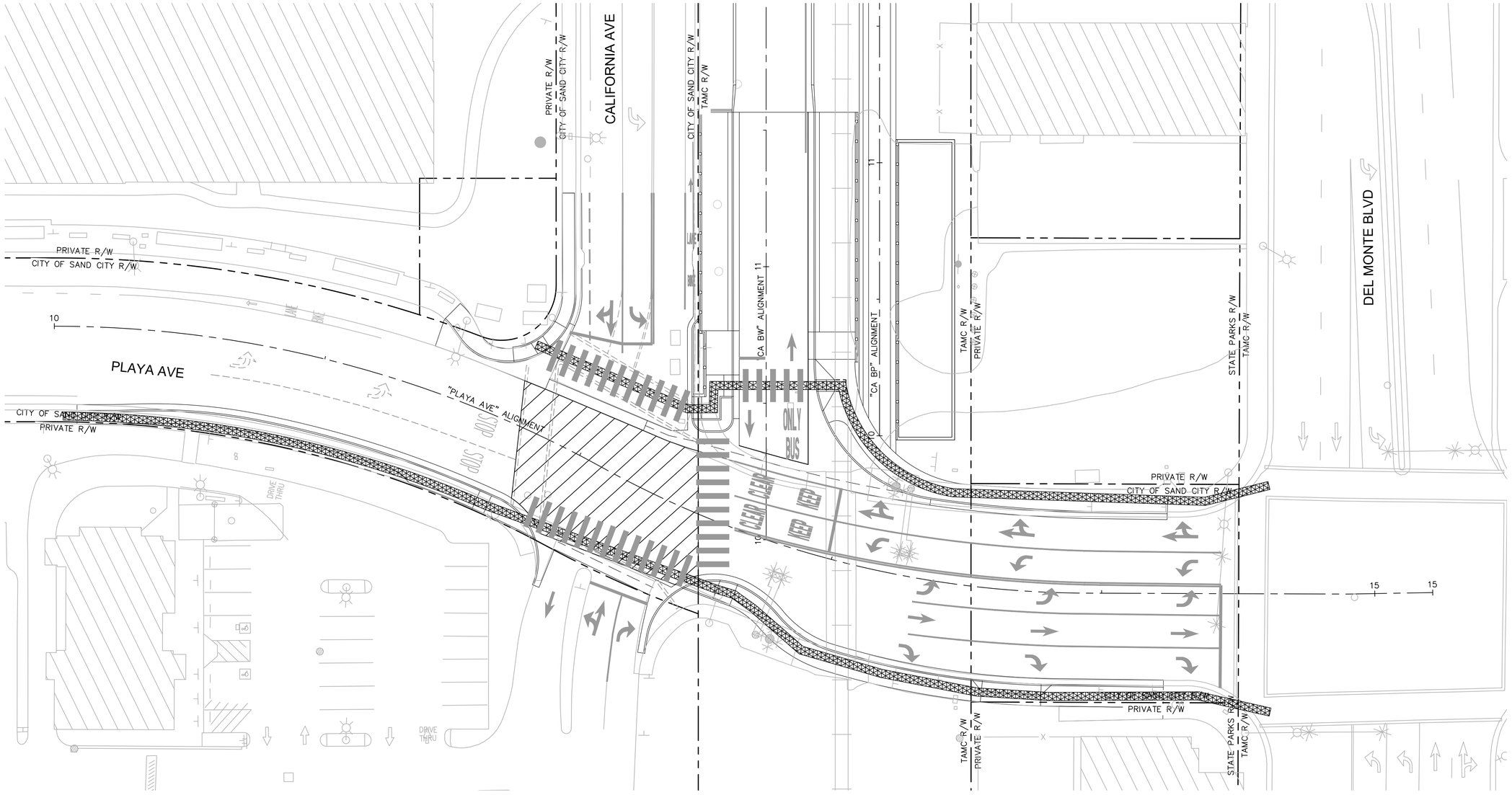

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LEGEND

- WORK AREA
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- SIGN POST
- TYPE 1 DELINEATOR

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
PLAYA-CALIFORNIA TRAFFIC CONTROL PLAN PHASE 7
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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CONTRACT NO. 22-03

SHEET NO.
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SHEET 570 OF 617

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CONSTRUCTION NOTES

1. CONCRETE FOOTING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,600 PSI AT 28 DAYS UNLESS NOTED OTHERWISE
2. BOLT STEEL ASTM A307.
3. ALL ALUMINUM MEMBERS GRADE 6061 –T6.
4. SIGN CABINETS SHALL BE FABRICATED IN THE SHOP OF AN APPROVED FABRICATOR.
5. CALCULATIONS OF SIGN AREA ARE BASED ON WORST CASE LOAD TO 1 OF 2 POLES.
6. ANCHOR BOLTS ASTM F1554 GRADE 36.
7. REINFORCING STEEL ASTM A615, GRADE 60.
8. PROVIDE 3" MIN. CLEAR CONCRETE COVER ON ALL STEEL EMBEDDED IN CONCRETE FOOTING UNLESS SHOWN ON DETAILS. ALUMINUM WELDING TO CONFORM TO AWS D1.2/D1.2H: MOST CURRENT STRUCTURAL WELDING CODE: ALUMINUM. ALL WELDS SHALL BE GROUND SMOOTH, PAINT ALL EXPOSED SEAMS.
9. PROVIDE PROTECTIVE COATING FOR ALL STEEL TO BE IN CONTACT WITH EARTH.
10. PROVIDE ISOLATION OF DISSIMILAR MATERIALS INCLUDING A PROTECTIVE COATING FOR ALL ALUMINUM TO BE IN CONTACT WITH CONCRETE AND FOR ALL ALUMINUM TO BE IN CONTACT WITH STEEL.
11. PROVIDE SLOPE AWAY FROM BASE OF POLE AND ANCHORAGE.
12. HILTI STAINLESS STEEL (S.S.) KB–TZ EXPANSION ANCHORS PER ESR–1917. SPECIAL INSPECTION IS REQUIRED.
13. HARDWARE: ALL FASTENERS SHALL BE CONCEALED. IF EXPOSED, HARDWARE SHALL BE TAMPER PROOF FASTENERS, CORROSION RESISTANT, AND COLOR MATCHING ADJACENT SURFACES.
14. CONTRACTOR TO ADJUST EXISTING IRRIGATION AS NECESSARY TO PREVENT OVERSPRAY ON SIGNS, POSTS, AND POLES AND TO PROVIDE COMPLETE COVERAGE.
15. FEATHER MULCH TO MATCH EXISTING INTO LANDSCAPE AREAS AFTER SIGN INSTALLATION.
16. MATCH SURROUNDING HARDSCAPE WHEN PATCHING CORE DRILLED CONCRETE.

FABRICATION NOTES

1. FABRICATOR MUST BE APPROVED BY THE CITY FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATORS SHOP.
2. FABRICATOR SHALL SUBMIT AN 'APPLICATION TO PERFORM OFF–SITE FABRICATION' TO THE CITY PRIOR TO ERECTION OF FABRICATED ITEMS AND ASSEMBLIES.
3. FABRICATOR TO BE RESPONSIBLE FOR OBTAINING AND BIDDING ALL COMPONENTS.
4. FABRICATOR TO REVIEW THE GRAPHIC DESIGNS, ARCHITECTURAL, AND EXISTING SITE CONDITIONS TO VERIFY LOCATIONS OF SIGNAGE ELEMENTS THAT ARE TO BE PROVIDED BY THE CONTRACTOR. ANY DISCREPANCIES AND/OR CONFLICTS AFFECTING COST SHALL BE REPORTED TO CITY'S REPRESENTATIVE IN WRITING DURING THE BIDDING PHASE.
5. FABRICATOR SHALL SUBMIT FULLY DETAILED FABRICATION (SHOP) DRAWINGS TO THE CITY'S REPRESENTATIVE FOR ALL SIGNS AND GRAPHICS CONTAINED IN THIS PACKAGE. DRAWINGS SHALL BE REVIEWED AND HAVE SIGNED APPROVAL PRIOR TO FABRICATION OR ORDERING OF MATERIALS. FABRICATOR SHALL VERIFY THE MOUNTING CONDITIONS IN THE FIELD AND PROVIDE A DETAIL DRAWING FOR EACH MOUNTING SITUATION, PRIOR TO FABRICATION. FABRICATOR SHALL OBTAIN APPROVAL FROM THE CITY'S REPRESENTATIVE FOR PLACEMENT PRIOR TO FABRICATION.
6. BEFORE INSTALLING ANY SIGNS, FABRICATOR SHALL PROVIDE (1) FULL SIZE MOCK–UP SAMPLE PER SIGN TYPE FOR APPROVAL BY CITY'S REPRESENTATIVE. FINAL REVIEW AND ACCEPTANCE WILL BE BASED ON MOCKUPS. ACCEPTANCE OF MOCKUPS DOES NOT CONSTITUTE APPROVAL OF DEVIATIONS FROM THE CONTRACT DOCUMENTS. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, APPROVED MOCKUPS MAY BECOME PART OF THE COMPLETED WORK IF UNDAMAGED AND APPROVED BY CITY'S REPRESENTATIVE AT TIME OF SUBSTANTIAL COMPLETION.
7. ALL SIGNS ARE TO BE FABRICATED FROM MATERIALS SPECIFIED UNLESS OTHERWISE REQUESTED AND APPROVED IN WRITING BY CITY'S REPRESENTATIVE, PRIOR TO BIDDING. NO EXCEPTIONS UNLESS SPECIFICALLY NOTED OTHERWISE. ALL ELEMENTS SHOWN IN THIS PACKAGE ARE TO BE PROVIDED BY THE FABRICATOR UNLESS SPECIFICALLY NOTED OTHERWISE.
8. ALL TEXT SHOWN IN THE DRAWING SHEETS IS FOR REFERENCE ONLY, UNLESS NOTED OTHERWISE.
9. FABRICATOR TO SUBMIT A FULL ALPHABET OF 1" LETTERS AND NUMERALS FOR ALL SIGN TYPOGRAPHY FOR APPROVAL.
10. ALL TYPE SHALL BE SET EXACTLY AS SPECIFIED. SUBSTITUTIONS WILL ONLY ACCEPTED, AT THE DESIGNER'S DISCRETION, WHERE THEY MATCH THE SPECIFIED TYPEFACE IN EVERY DETAIL. THE FABRICATOR SHOULD BE AWARE THAT DIFFERENT VERSIONS OF TYPESETTING EQUIPMENT MAY NOT SATISFACTORILY MATCH SPECIFIED TYPEFACES AND IN SUCH INSTANCES WILL NOT BE ACCEPTABLE.
11. FABRICATOR TO MARK SIGN LOCATIONS IN THE FIELD AS PER THESES DOCUMENTS, IN A NON–PERMANENT MANNER, PRIOR TO ANY INSTALLATION. COORDINATE SUCH EFFORTS WITH CITY'S REPRESENTATIVE PRIOR TO COMMENCING WITH SUCH WORK. MARKED LOCATIONS WILL BE APPROVED AND/OR MODIFIED ON A WALK–THROUGH WITH CITY'S REPRESENTATIVE AND CONTRACTOR.
12. INDIVIDUAL SPACING EACH LETTER NEEDS TO BE EVALUATED. KERN ALL COPY SO THAT EACH CHARACTER IS OPTICALLY CENTERED BETWEEN THE CENTER OF EACH OF THE SURROUNDING CHARACTERS.
13. WHEN MEASURING COPY HEIGHT, MEASURE ONLY THE HEIGHT OF THE CAPITAL LETTERS TO DETERMINE THE OVERALL COPY HEIGHT. SOME OF THE OTHER LETTERS HAVE AN EXTENDED HEIGHT BEYOND THE AVERAGE HEIGHT OF THE LETTERS.
14. WHEN MEASURING LINE SPACING, ALWAYS MEASURE FROM THE BASELINE OF THE TOPMOST TEXT LINE TO THE BASELINE OF THE TEXT LINE BELOW.
15. SUBMITTAL SHOP DRAWINGS NOT OUTLINING SPECIFIC INSTRUCTIONS NOTED WITHIN PACKAGE (ARROWS, ICONS, GRAPHICS, LOGOS), DIGITAL MAPS AND ANY OTHER ELEMENTS INDICATED SHALL BE PROVIDED TO FABRICATOR UPON REQUEST. ANY FILE TRANSLATION REQUIRED WILL BE THE FABRICATOR'S RESPONSIBILITY.
16. THE FABRICATOR MUST SUBMIT (2) IDENTICAL SETS OF EACH COLOR SPECIFIED FOR WRITTEN APPROVAL PRIOR FABRICATION, DIGITAL OUTPUT, OR PAINTING. SAMPLE SWATCHES ARE TO BE PRODUCED ON THE SUBSTRATE MATERIAL OF THE FINAL PRODUCT. THE COLORS MUST LOOK EXACTLY THE SAME EVERY TIME THEY ARE USED SO THAT PEOPLE ASSOCIATE THEM WITH THE CITY. ALL MEDIA, VINYL, PAINT, AND INKS MUST BE PRODUCED SO THAT THE COLORS MATCH AS SPECIFIED.
17. FABRICATOR TO SUPPLY SAMPLES OF THE FOLLOWING FOR WRITTEN APPROVAL PRIOR TO FABRICATION:
    - 17.4. PAINT FINISHES ON SPECIFIED SUBSTRATE 4" SQUARE FOR EACH COLOR AND SUBSTRATE.
    - 17.5. VINYL ADHERED TO SPECIFIED SUBSTRATE = ONE SAMPLE FOR EACH COLOR.
    - 17.6. DIGITAL OUTPUT ON SPECIFIED MATERIAL – REPRESENTATIVE STRIP OF EACH AND EVERY UNIQUE DIGITAL OUTPUT PIECE AT FULL SCALE.

GENERAL WAYFINDING NOTES

1. SIGN ASSEMBLAGE PRODUCTS ARE PER MANUFACTURER. KIMLEY–HORN IS NOT RESPONSIBLE FOR THE DESIGN OR PERFORMANCE OF THESE PRODUCTS.
2. THE 2014 CA–MUTCD IS FOLLOWED FOR ALL ISSUES REGARDING FABRICATION AND INSTALLATION. (FOR EXAMPLE – VINYL SHEETING, BREAKAWAY ASSEMBLIES AND REFLECTIVITY).
3. DRAWINGS CONTAINED IN THIS PACKAGE ARE FOR AESTHETIC AND FUNCTIONAL DESIGN INTENT ONLY. NO INSTRUCTIONS FOR STRUCTURAL APPROPRIATENESS HAVE BEEN MADE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ENGINEERED, STAMPED SHOP DRAWINGS BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA FOR ALL SIGNAGE ELEMENTS AND TO ENSURE THAT ALL ELEMENTS ARE FABRICATED FOR A STABLE AND DURABLE INSTALLATION, CONFORM TO LOCAL APPLICABLE BUILDING CODES HAVING JURISDICTION, AND ADHERE TO THE AESTHETIC DETAILS AS INDICATED.
4. PORTIONS OF THE INFORMATION SHOWN ON THESE DRAWINGS WERE TAKEN FROM SITE OBSERVATIONS. DRAWINGS ARE NOT TO BE CONSTRUCTED AS "AS–BUILT" CONDITIONS AND THE CONTRACTOR MUST FIELD VERIFY DIMENSIONS AND ACTUAL INSTALLED CONDITIONS. SHOULD ANY CONFLICTS ARISE BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN IN THE DRAWINGS, THE SIGNAGE CONTRACTOR MUST NOTIFY THE CITY'S REPRESENTATIVE OF SUCH CONFLICTS BEFORE PROCEEDING WITH THE WORK. THESE DRAWINGS MUST NOT BE SCALED FOR EXACT MEASUREMENTS.
5. RIGHT–OF–WAY SHOWN FOR REFERENCE ONLY. IT MUST BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL RIGHT–OF–WAY PRIOR TO INSTALLATION OF SIGNS.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SUBCONTRACTOR WORK IS PERFORMED IN ACCORDANCE WITH DESIGN DOCUMENTS AND APPLICABLE BUILDING CODES AND ORDINANCES. ALL WORK AND CONSTRUCTION METHODS MUST COMPLY WITH THE MOST CURRENT O.S.H.A. RULES AND REGULATIONS.
7. CONTRACTOR NOT TO DAMAGE EXISTING TREES OR LANDSCAPE FEATURES UNLESS OTHERWISE NOTED.
8. ANY NEW CONSTRUCTION WORK THAT DISTURBS EXISTING CONDITIONS MUST BE PATCHED, REPAIRED AND FINISHED TO MATCH ADJACENT EXISTING CONDITIONS.
9. ALL MATERIALS, COMPONENTS, AND EQUIPMENTS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
10. ALL SIGN LOCATIONS ARE SHOWN DIAGRAMMATICALLY. FINAL LOCATIONS ARE TO BE DETERMINED IN THE FIELD WITH CITY'S REPRESENTATIVE.
11. REVIEW SIGN LOCATION MAP FOR ADDITIONAL INFORMATION ON LOCATING EACH WAYFINDING SIGN. ALL LOCATIONS MUST BE APPROVED BY CITY REPRESENTATIVE PRIOR TO INSTALLATION.
12. ALL SIGNS ADJACENT TO SIDEWALKS ARE TO BE INSTALLED PERPENDICULAR TO THE WALK UNLESS OTHERWISE NOTED ON PLANS.
13. VERIFY ALL SIGN LOCATIONS PRIOR TO INSTALLATION.
14. ALLOWABLE SOIL PRESSURES BASED ON 2010 CBC TABLE 1806.2 CLASS 4 MATERIAL OR BETTER. SPECIAL INSPECTION NOT REQUIRED. IF SOFT OR SANDY SOIL, COLLAPSING OR UNSTABLE SOIL, ORGANIC MATERIALS OR GROUNDWATER ARE ENCOUNTERED, IMMEDIATELY CONTACT THE ENGINEER OF RECORD FOR ADDITIONAL FOUNDATION REQUIREMENTS.
15. IF POSSIBLE, STRUCTURES MUST BE LOCATED ENTIRELY ON UNDISTURBED NATIVE SOIL.
16. IF THE STRUCTURE IS NOT LOCATED ENTIRELY ON UNDISTURBED NATIVE SOIL, IMMEDIATELY CONTACT THE CITY'S REPRESENTATIVE FOR ADDITIONAL REQUIREMENTS PRIOR TO ANY ADDITIONAL WORK.
17. CONTRACTOR MUST FIELD VERIFY THAT THE SITE CONDITIONS ARE CONSISTENT WITH THESE DRAWINGS PRIOR TO SIGN INSTALLATION. NOTIFY OWNER OF RECORD IMMEDIATELY IF SITE CONDITIONS VARY FROM THESE DRAWINGS.

DIRECTION STANDARD



SPECIAL NOTE

1. SIGN PANEL IMAGES ARE SHOWN FOR AESTHETIC AND FUNCTIONAL DESIGN INTENT ONLY. ALL SIGNS MUST CONFORM TO THE STANDARDS OUTLINED WITHIN THE MONTEREY COUNTY WAYFINDING PLAN DATED MAY 2016. CONTRACTOR SHALL PROVIDE SAMPLES OF MATERIALS AND COLORS ALONG WITH A GRAPHIC LAYOUT OF EACH PROPOSED WAYFINDING SIGN FOR WRITTEN APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO FABRICATION. SEE ADDITIONAL NOTES ON THIS SHEET FOR MORE INFORMATION.

WAYFINDING SCHEDULE

SIGN NO.	SIGN TYPE	SIZE	ORIENTATION	DIRECTIONAL ARROW	DESTINATION (S)	DISTANCE (MI)	DETAIL
WF-1	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	WEST	RIGHT	SAND CITY STATION	0.4	A-C/WF-032
				LEFT	5TH STREET STATION	2.9	
				LEFT	PALM AND DEL MONTE STATION	4.8	
WF-2	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	SOUTH	LEFT	SAND CITY BEACH	0.75	A-C/WF-032
				LEFT	MONTEREY STATE BEACH	1.4	
				RIGHT	FORT ORD DUNE STATE PARK	3.1	
WF-3	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	SOUTH	RIGHT	SAND CITY BEACH	1.1	A-C/WF-032
				RIGHT	MONTEREY STATE BEACH	1.8	
				LEFT	FORT ORD DUNE STATE PARK	2.7	
WF-4	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	SOUTH	RIGHT	PALM AND DEL MONTE STATION	0.3	A-C/WF-032
				RIGHT	LOCKE-PADDON PARK	0.8	
				LEFT	FORT ORD DUNE STATE PARK	1.6	
WF-5	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	EAST	RIGHT	PALM AND DEL MONTE STATION	0.2	A-C/WF-032
				LEFT	FORT ORD DUNE STATE PARK	1.9	
				LEFT	SAND CITY BEACH	5.8	
WF-6	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	WEST	LEFT	PALM AND DEL MONTE STATION	0.2	A-C/WF-032
				RIGHT	5TH STREET STATION	2.1	
				RIGHT	SAND CITY STATION	5	
WF-7	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	EAST	RIGHT	LOCKE-PADDON PARK	0.8	A-C/WF-032
				LEFT	FORT ORD DUNE STATE PARK	1.9	
				LEFT	SAND CITY BEACH	5.8	
WF-8	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	EAST-WEST	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-9	STANDARD REGULATORY SIGN	18" X 24"	EAST	N/A	N/A	N/A	A,B,D/WF-032
WF-10	STANDARD REGULATORY SIGN	12" X 18"	EAST	N/A	N/A	N/A	A,B,D/WF-032
WF-11	STANDARD REGULATORY SIGN	18" X 24"	WEST	N/A	N/A	N/A	A,B,D/WF-032
WF-12	STANDARD REGULATORY SIGN	18" X 24"	WEST	N/A	N/A	N/A	A,B,D/WF-032
WF-13	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	EAST-WEST	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-14	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	WEST	LEFT	LOCKE-PADDON PARK	0.8	A-C/WF-032
				RIGHT	PALM AND DEL MONTE STATION	2.1	
				RIGHT	SAND CITY STATION	5.3	
WF-15	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	EAST-WEST	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-16	STANDARD REGULATORY SIGN	12" X 18"	EAST	N/A	N/A	N/A	A,B,D/WF-032
WF-17	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	EAST-WEST	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-18	STANDARD REGULATORY SIGN	18" X 24"	NORTH	N/A	N/A	N/A	A,B,D/WF-032
WF-19	STANDARD REGULATORY SIGN	18" X 24"	SOUTH	N/A	N/A	N/A	A,B,D/WF-032
WF-20	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	SOUTH	RIGHT	5TH STREET STATION	0.1	A-C/WF-032
				LEFT	PALM AND DEL MONTE STATION	2.2	
				LEFT	LOCKE-PADDON PARK	3	
WF-21	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	WEST	RIGHT	SAND CITY STATION	3.4	A-C/WF-032
				UP	5TH STREET STATION	0.1	
				LEFT	PALM AND DEL MONTE STATION	2.2	
WF-22	PEDESTRIAN DIRECTIONAL SIGN	24" X 45"	EAST	RIGHT	FORT ORD DUNE STATE PARK	0.6	A-C/WF-032
				LEFT	SAND CITY STATION	4	
				LEFT	SAND CITY BEACH	3.3	
WF-23	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	NORTH-SOUTH	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-24	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	NORTH-SOUTH	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-25	STANDARD REGULATORY SIGN	12" X 18"	SOUTH	N/A	N/A	N/A	A,B,D/WF-032
WF-26	STANDARD REGULATORY SIGN	18" X 24"	SOUTH	N/A	N/A	N/A	A,B,D/WF-032
WF-27	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	NORTH-SOUTH	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-28	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	NORTH-SOUTH	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-29	STANDARD REGULATORY SIGN	12" X 18"	SOUTH	N/A	N/A	N/A	A,B,D/WF-032
WF-30	STANDARD REGULATORY SIGN	18" X 24"	SOUTH	N/A	N/A	N/A	A,B,D/WF-032
WF-31	STANDARD REGULATORY SIGN	12" X 18"	NORTH	N/A	N/A	N/A	A,B,D/WF-032
WF-32	STANDARD REGULATORY SIGN	18" X 24"	NORTH	N/A	N/A	N/A	A,B,D/WF-032
WF-33	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	NORTH-SOUTH	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*
WF-34	STANDARD REGULATORY SIGN	12" X 18"	SOUTH	N/A	N/A	N/A	A,B,D/WF-032
WF-35	STANDARD REGULATORY SIGN	18" X 24"	SOUTH	N/A	N/A	N/A	A,B,D/WF-032
WF-36	MAP/TIMETABLE SIGN	PER MANUFACTURER'S DETAIL*	NORTH-SOUTH	N/A	N/A	N/A	PER MANUFACTURER'S DETAIL*

*MAP/TIMETABLE SIGN SHALL BE FLAT FREE-STANDING KIOSK SUPPLIED BY TOLAR MANUFACTURING COMPANY, INC, DETAIL NO. 17758-00

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

Kimley»Horn

SURF! BUSWAY AND BRT PROJECT
WAYFINDING NOTES & SCHEDULE SHEET 2 OF 32
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MW	
CONTRACT NO.	22-03	
SHEET NO.	WF–001	
SHEET 571 OF 617		

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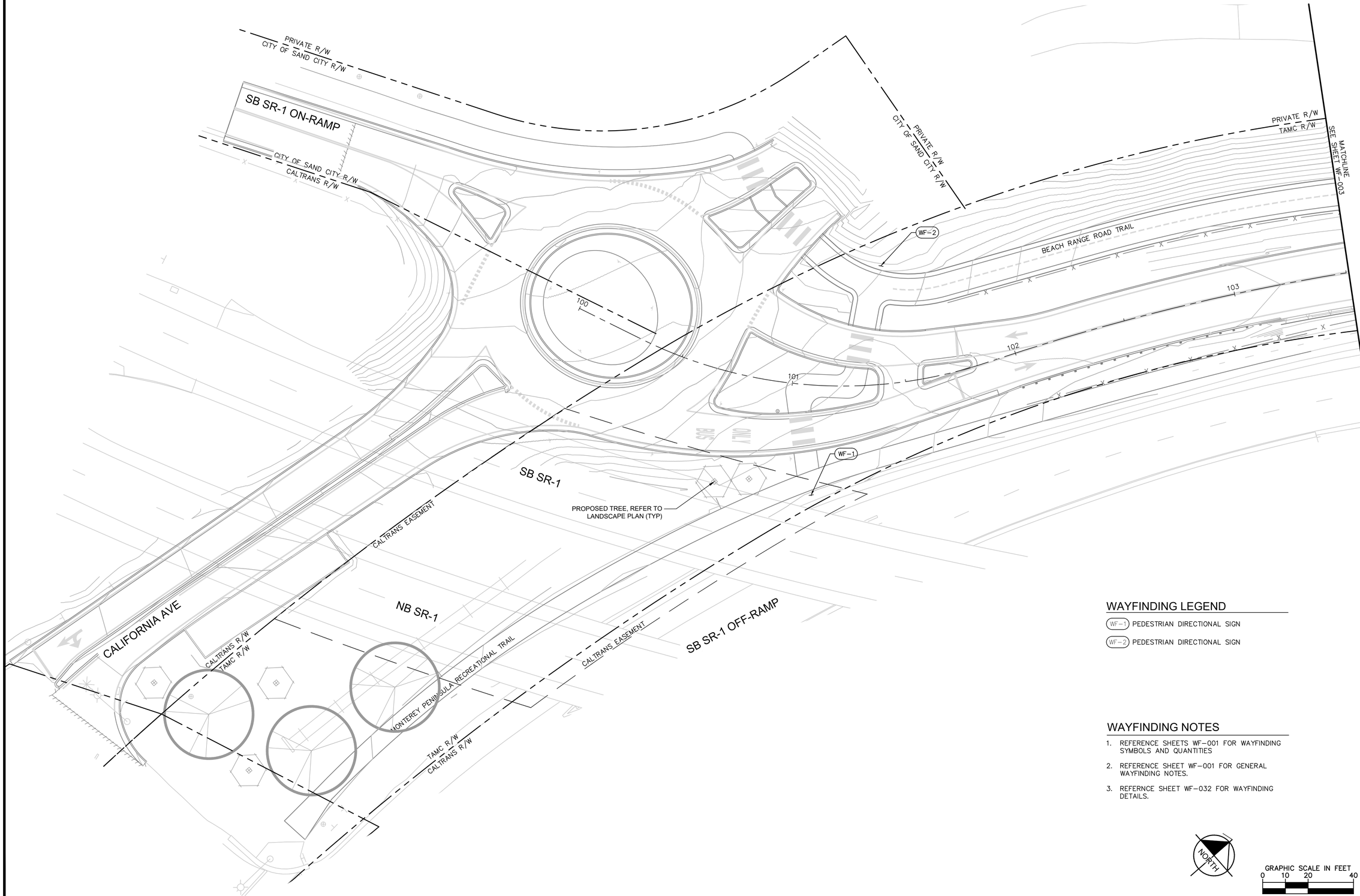

WAYFINDING LEGEND

(WF-1) PEDESTRIAN DIRECTIONAL SIGN

(WF-2) PEDESTRIAN DIRECTIONAL SIGN

WAYFINDING NOTES

1. REFERENCE SHEETS WF-001 FOR WAYFINDING SYMBOLS AND QUANTITIES
2. REFERENCE SHEET WF-001 FOR GENERAL WAYFINDING NOTES.
3. REFERNCE SHEET WF-032 FOR WAYFINDING DETAILS.

NORTH

GRAPHIC SCALE IN FEET
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SURF! BUSWAY AND BRT PROJECT

WAYFINDING PLAN SHEET 3 OF 32

MONTEREY COUNTY CALIFORNIA

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DESIGNED	CG	
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CONTRACT NO.	22-03	

SHEET NO.

WF-002

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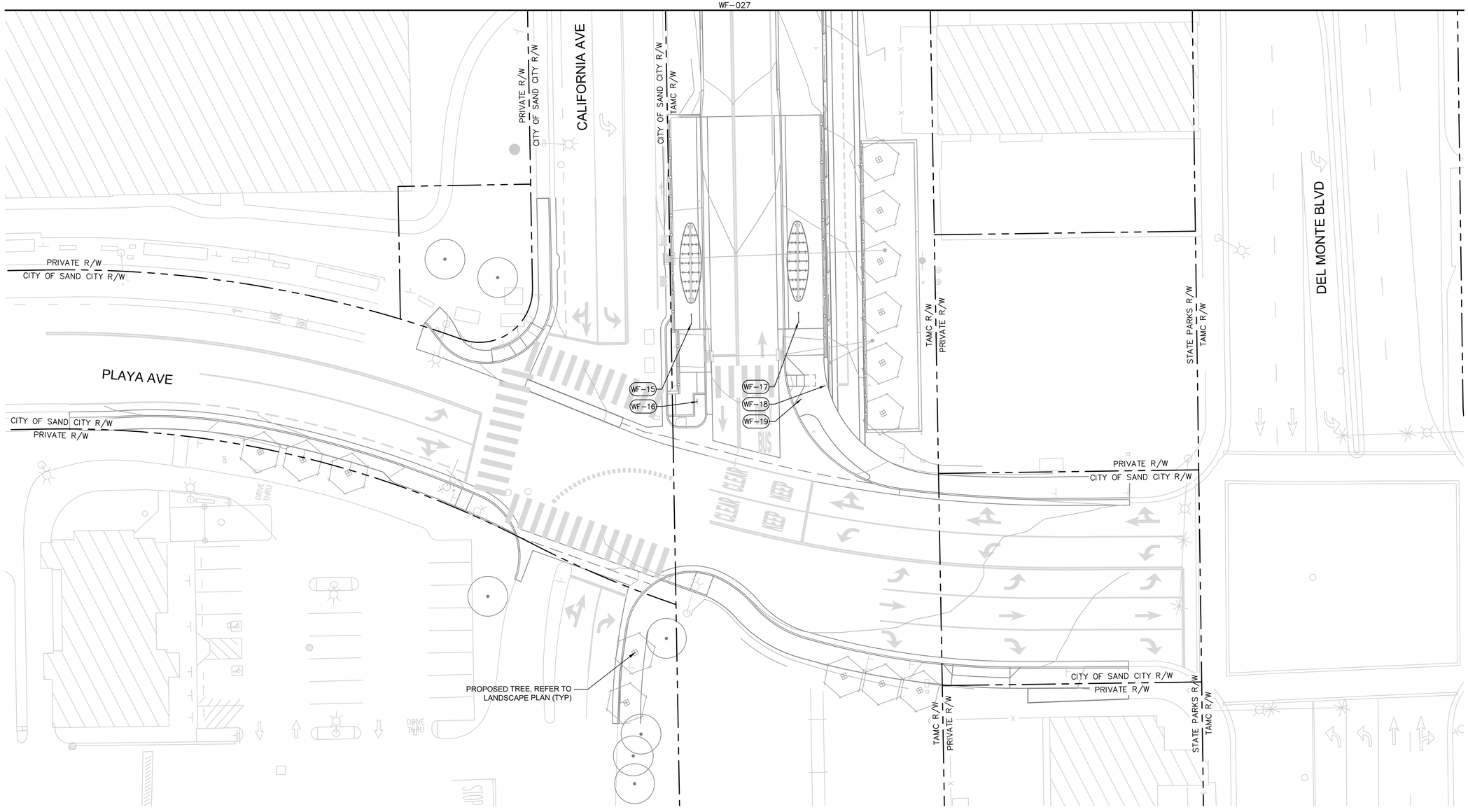

PLAN

WAYFINDING LEGEND

- (WF–15) MAP/TIMETABLE SIGN
- (WF–16) STANDARD REGULATORY SIGN
- (WF–17) MAP/TIMETABLE SIGN
- (WF–18) STANDARD REGULATORY SIGN TO BE COMBINED WITH R1–1 SIGN PER SHEET SM–101
- (WF–19) STANDARD REGULATORY SIGN TO BE COMBINED WITH R5–1 SIGN PER SHEET SM–101

WAYFINDING NOTES

1. REFERENCE SHEETS WF–001 FOR WAYFINDING SYMBOLS AND QUANTITIES
2. REFERENCE SHEET WF–001 FOR GENERAL WAYFINDING NOTES.
3. REFERNCE SHEET WF–032 FOR WAYFINDING DETAILS.

NORTH

GRAPHIC SCALE IN FEET
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WAYFINDING PLAN SHEET 26 OF 32
MONTEREY COUNTY CALIFORNIA

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CONTRACT NO.	22-03	

SHEET NO.
WF–026
SHEET 596 OF 617

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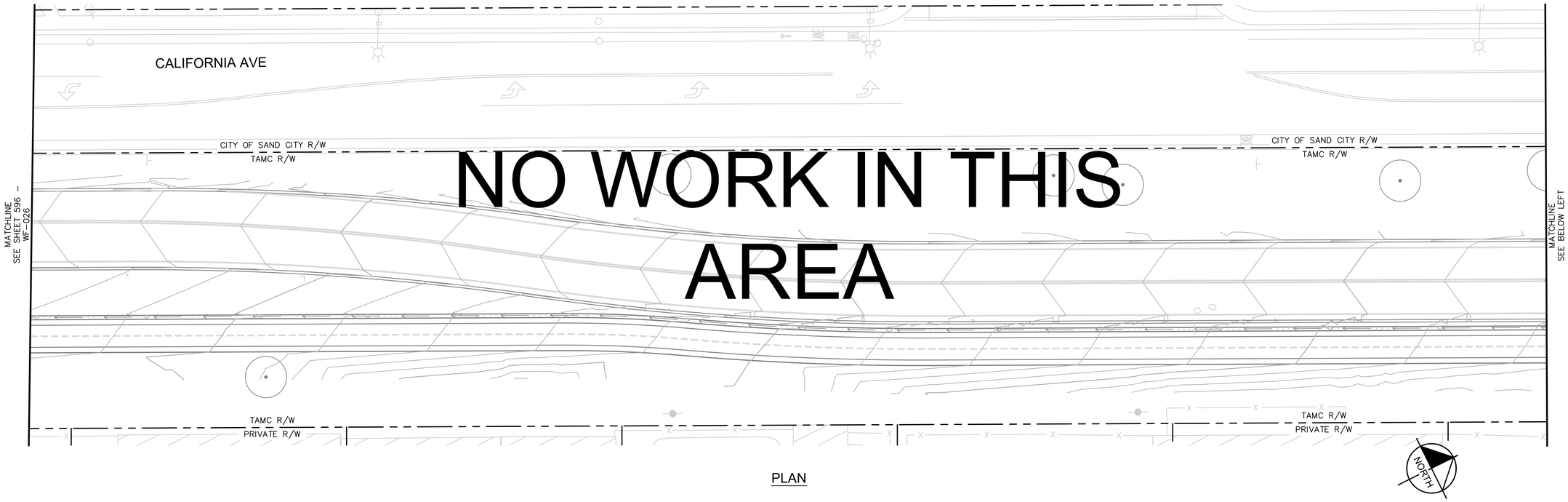
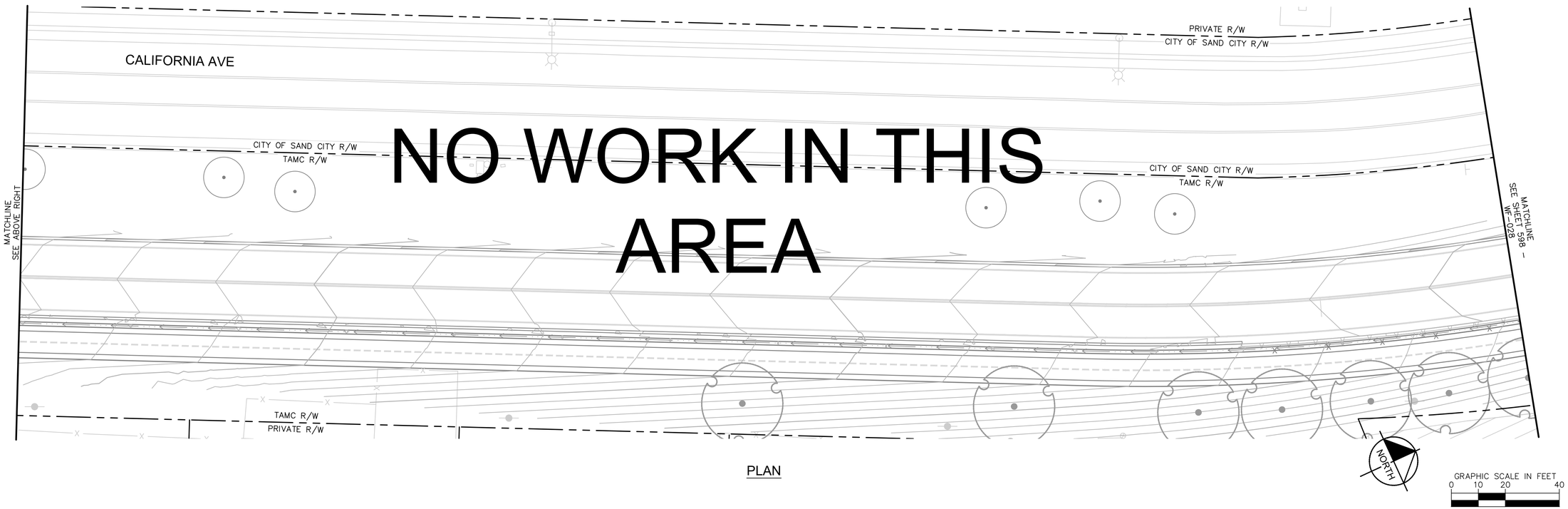


PLAN



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WAYFINDING PLAN SHEET 27 OF 32
MONTEREY COUNTY CALIFORNIA

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SHEET NO.
WF–027
SHEET 597 OF 617

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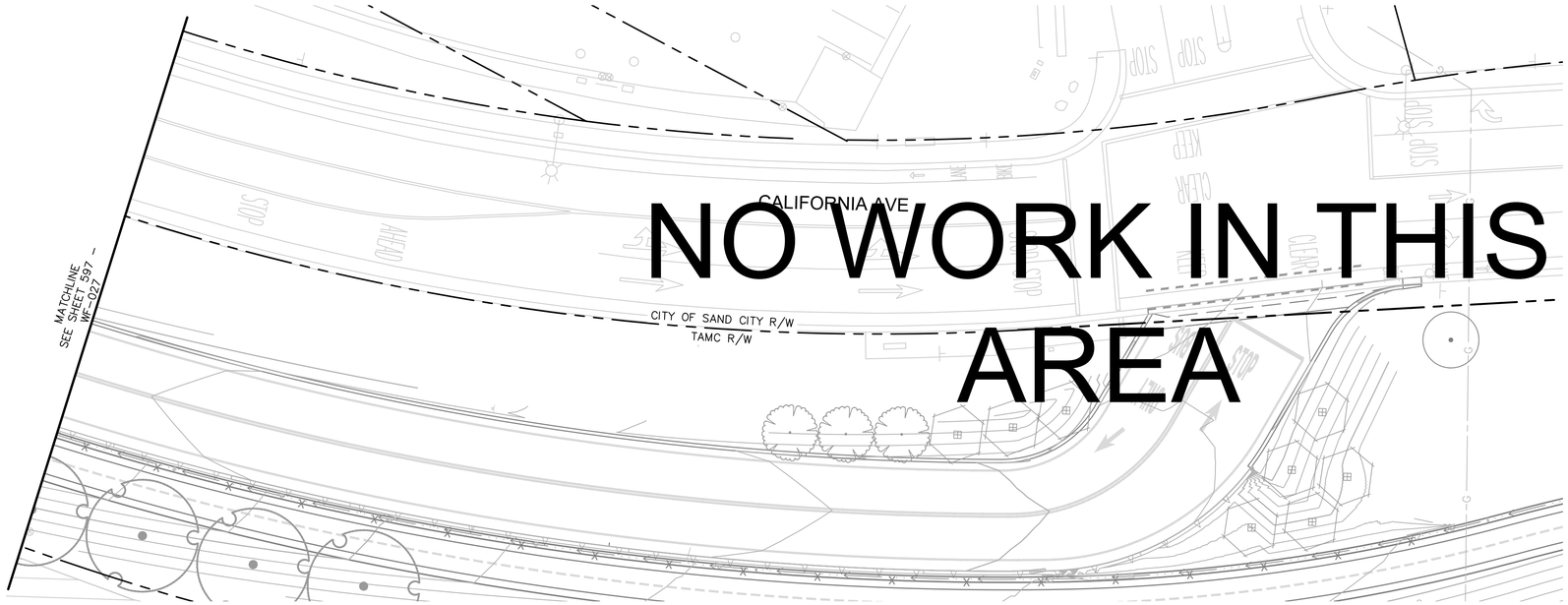

PLAN

GRAPHIC SCALE IN FEET
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WAYFINDING PLAN SHEET 28 OF 32
MONTEREY COUNTY CALIFORNIA

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DATE	SEPTEMBER 2023	
DRAWN	CG	
DESIGNED	CG	
CHECKED	MM	
CONTRACT NO.	22-03	
SHEET NO.	WF-028	
SHEET 598 OF 617		

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NOTES:

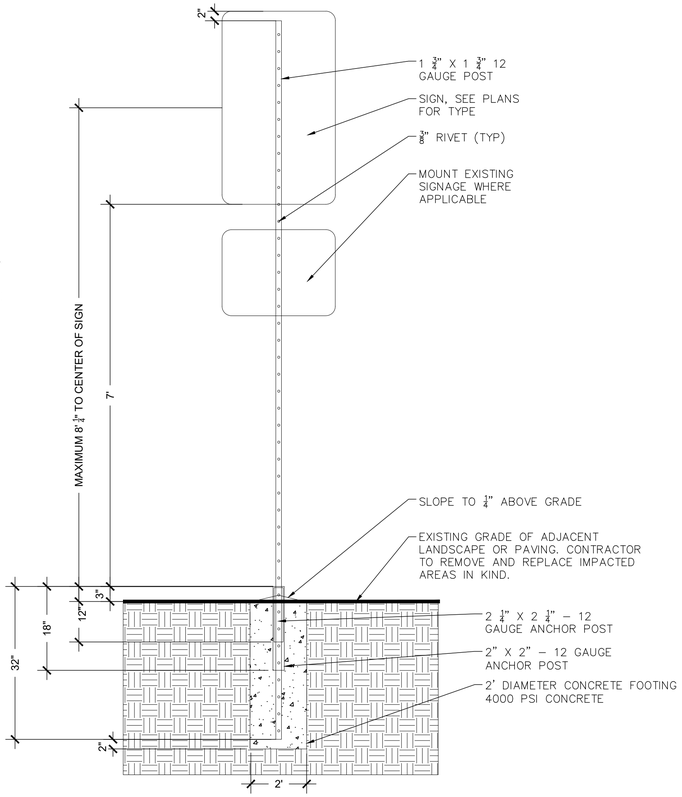
1. STRUCTURAL STEEL TUBING USED FOR POST & SLEEVES SHALL BE GALVANIZED 12 GAUGE COLD ROLLED STEEL OF THE NOMINAL DIMENSIONS SHOWN HERE, AND MEET THE REQUIREMENTS OF ASTM A653.

2. GALVANIZING SHALL BE PER ASTM A653. POSTS & SLEEVES SHALL HAVE $\frac{7}{16}$" DIA. HOLES SPACED 1" O.C. $\frac{1}{8}$" & +/– $\frac{1}{8}$" & SHALL HAVE NO MORE VARIATION IN STRAIGHTNESS THAN $\frac{1}{16}$" IN 3' POSTS SHALL BE SQUARE WITHIN +/– 0,014," HAVE TWIST NO GREATER THAN 0.62" IN 3' AND HAVE CORNER RADII OF $\frac{5}{32}$" +/– $\frac{1}{64}$".

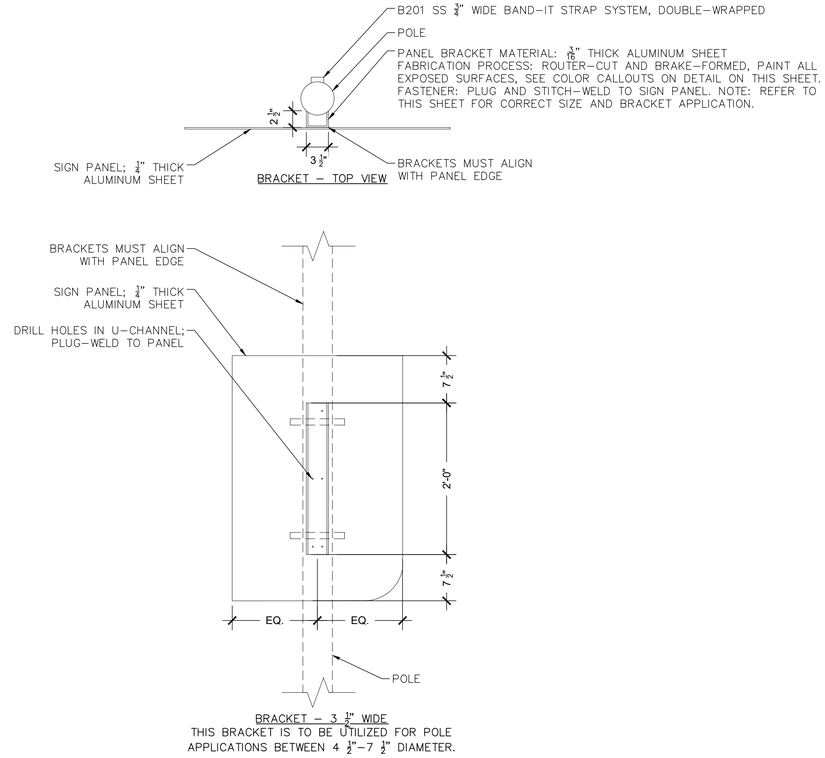
3. ALL FASTENING HARDWARE IS TO BE PROVIDED BY THE CONTRACTOR.

4. MAXIMUM SIGN HEIGHT TO BE 41" AND MAXIMUM SIGN WIDTH TO BE 24."

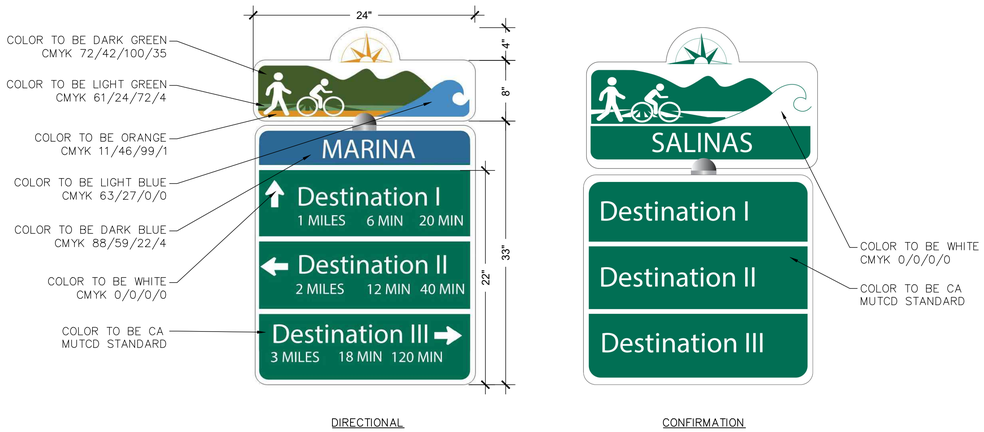
5. TO AVOID CONCRETE INTRUSION IN THE POST HOLES, ALL METAL IN CONTACT WITH CONCRETE SHALL BE WRAPPED IN 10 MIL POLYETHYLENE WRAPPING TAPE WITH EACH WRAP OF TAPE TO OVERLAP THE PREVIOUS WRAP BY $\frac{1}{3}$ THE WIDTH OF THE TAPE (INCLUDING THE BOTTOM).



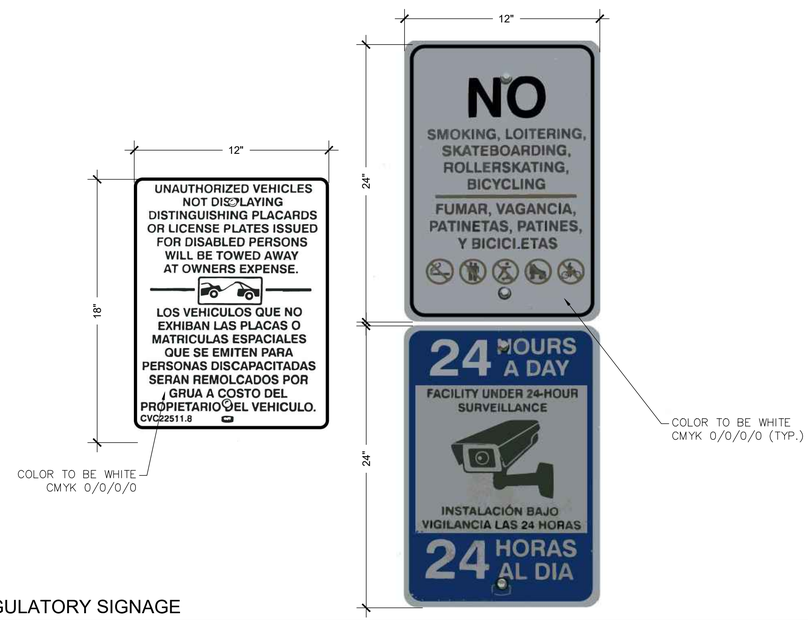
A SIGN POST



B POLE SIGN ATTACHMENT



C DIRECTIONAL SIGNAGE



D REGULATORY SIGNAGE

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WAYFINDING DETAILS SHEET 32 OF 32
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE	SEPTEMBER 2023	
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DESIGNED	CG	
CHECKED	MM	

CONTRACT NO. 22-03

SHEET NO.
WF–032
SHEET 602 OF 617

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APPLICABLE CODES

2022 CALIFORNIA CODE OF REGULATIONS.

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 23, C.C.R.
(BASED ON INTERNATIONAL BUILDING CODE WITH CALIFORNIA AMENDMENTS)

ADA STANDARDS FOR ACCESSIBLE DESIGN: ADA ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES (ADAAG), (28 CFR PART 36, APPENDIX A).

MONTEREY MUNICIPAL CODE AND ALL OTHER APPLICABLE CODES.

CODE DATA

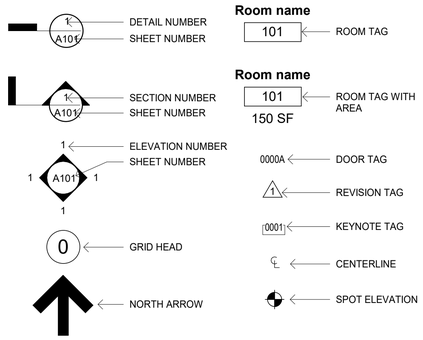
USE OF BUILDING: BUS STOP AND BIKE STORAGE
CONSTRUCTION TYPE:
OCCUPANCY CLASSIFICATION: S
MOBILITY HUB AREA: 1,020 SF
MOBILITY HUB HEIGHT: 13 FEET

DELEGATED DESIGN REQUIREMENT

THE DESIGN OUTLINED HEREIN SHALL BE CONSIDERED AS A REFERENCE OWNER PROJECT REQUIREMENT AND SHALL BE CONSIDERED AS A BASIS OF DESIGN. THE FINAL DESIGN OF THE BUS SHELTERS AND MOBILITY HUB SHALL BE CONFIRMED AND FURNISHED BY A CALIFORNIA LICENSED PROFESSIONAL ENGAGED BY THE MANUFACTURER.

MANUFACTURER SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR REVIEW AND APPROVAL.

DRAWING SYMBOLS



ABBREVIATIONS

&	AND	MAX	MAXIMUM
@	AT	M.B.	MACHINE BOLT
AB	ANCHOR BOLT	MTL	METAL
ADA ACC	ADA ACCESSIBLE	MIN.	MINIMUM
ADJ	ADJUSTABLE	MISC	MISCELLANEOUS
AFF	ABOVE FINISHED FLR	MTD	MOUNTED
ALUM	ALUMINUMM	(N)	NEW
ANOD.	ANODIZED	N.I.C.	NOT IN CONTRACT
APPROX.	APPROXIMATE	N.T.S.	NOT TO SCALE
BM	BEAM	O.C.	ON CENTER
BOT	BOTTOM	O.D.	OUTSIDE DIMESION
CJ	CONTROL JOINT	OPP	OPPSITE
CLG	CEILING	O/	OVER
CLR	CLEAR	PL	PLATE
CONC	CONCRETE	PLAM	PLASTIC LAMINATE
CONTR	CONTRACTOR	PT	PAINT
CONT	CONTINUOUS	PNTD	PAINTED
DIA(or ϕ)	DIAMETER	PR	PAIR
DIM	DIMENSION	REINF	REINFORCING
DR	DOOR	REQ'D	REQUIRED
DWG	DRAWING	RWL	RAIN WATER LEADER
(E)	EXISTING	S.E.D.	SEE ELECTRICAL DRAWINGS
EA	EACH	SIM.	SIMILAR
EL	ELEVATION HEIGHT	S.L.D.	SEE LANDSCAPE DRAWINGS
ELEV	ELEVATION	S.M.D.	SEE MECHANICAL DRAWINGS
EQ	EQUAL	SMS	SHEET METAL SCREWS
EQUIP	EQUIPMENT	S.F.	SQUARE FEET
E/S	EACH SIDE	S.S.D.	SEE STRUCTURAL DRAWINGS
EXT	EXTERIOR	SS	STAINLESS STEEL
FF	FINISHED FLOOR	STD	STANDARD
FHWS	FLAT HEAD WOOD SC	STL	STEEL
FIN	FINISH	STRUC	STRUCURAL
FOC	FACE OF CONCRETE	THK	THICK
GALV	GALVANIZED	TJ	TOOLED JOINT
HT	HEIGHT	TYP.	TYPICAL
I.S.A	INTERNATIONAL SYMBOL OF ACCESSIBILITY	U.O.N.	UNLESS OTHERWISE NOTED
		W/	WITH
JT	JOINT	V.I.F.	VERIFY IN FIELD

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING BUILDING CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION. SHOULD THERE BE ANY DISCREPANCIES, IMMEDIATELY REPORT TO THE ARCHITECT FOR CLARIFICATION.
2. CONTRACTOR SHALL ADHERE TO ALL CODES, RULES, AND REGULATIONS GOVERNING CONSTRUCTION, BUILDING, STATE, LOCAL CODES, AND BUILDING DEPARTMENT AGENCIES.
3. IT IS THE PURPOSE OF THESE DRAWINGS TO SHOW THE GENERAL ARRANGEMENT OF MODIFICATIONS. ASSUMPTIONS HAVE BEEN MADE REGARDING THE STRUCTURE AND ARCHITECTURAL CONDITIONS OF EXISTING WALLS, FLOORS, AND CEILINGS, WHICH WILL NEED TO BE VERIFIED AND PERHAPS MODIFIED AS THESE CONDITIONS ARE REVEALED DURING CONSTRUCTION. THE ARCHITECT DOES NOT ASSUME ANY RESPONSIBILITY FOR THE EXISTING STRUCTURE.
4. LARGE SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS; DETAILS TAKE PRECEDENCE OVER ALL. CONTRACTOR SHALL NOTIFY ARCHITECT OF CONFLICTS IN WRITING PRIOR TO COMMENCEMENT OF WORK. DRAWINGS ARE NOT TO BE SCALED FOR ANY REASON.
5. ALL WORK SHALL BE PERFORMED IN AN APPROVED WORKMANLIKE MANNER.
6. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF ANY DISCREPANCIES OR CONFLICTS IN LOCATION OF NEW CONSTRUCTION.
7. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UNDERGROUND STORM DRAIN, SANITARY SEWER, WATER, GAS & ELECTRICAL LINES BEFORE PROCEEDING WITH ANY EXCAVATION, S.M.D.
8. "TYPICAL" OR "TYP." MEANS FOR ALL SIMILAR CONDITIONS, UNLESS NOTED OTHERWISE.
9. AT ALL TIMES THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING THE SAFETY OF PERSONS AND PROPERTY.
10. THE CONTRACTOR WARRANTS THAT ALL MATERIALS AND WORKMANSHIP ARE IN COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS. ANY AND ALL CHANGES MUST HAVE THE ARCHITECT'S APPROVAL.
11. THE CONTRACTOR IS RESPONSIBLE TO COMPARE AND COORDINATE ALL DRAWINGS FOR PROPER FIT AND ATTACHMENT OF ALL PARTS. DETAILS NOT SHOWN, NOR DETAILED ON DRAWINGS, NOR CALLED FOR IN THESE NOTES SHALL BE CONSTRUCTED TO SAME SIZE AND CHARACTER AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN DETAILED, OR SPECIFIED.
12. CONTRACTOR SHALL COORDINATE WITH OWNER ALL NON-SPECIFIED ITEMS NOT SHOWN ON DRAWINGS.
13. THE CONTRACTOR SHALL COORDINATE ALL SUBCONTRACTORS UNDER HIS HIRE, AND SHALL COORDINATE WITH ANY SUBCONTRACTORS UNDER SEPARATE HIRE BY OWNER TO MAINTAIN EFFICIENT, WORKMANLIKE PROGRESS OF THE WORK. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL EQUIPMENT. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, OMITTED, BLOCKED OUT OR RELOCATED WITHOUT PRIOR APPROVAL WITH THE ARCHITECT.
14. THE CONTRACTOR AND SUBCONTRACTOR OF EACH TRADE SHALL KEEP PREMISES CLEAN AT ALL TIMES AND SHALL REMOVE ALL RUBBISH AS OFTEN AS REQUIRED (AT LEAST WEEKLY) FOR THE CONSTRUCTION AND FOR THE CONVENIENCE OF THE OWNER.
15. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ADJACENT PROPERTY AT ALL TIMES DURING CONSTRUCTION.
16. CONTRACTOR SHALL PROTECT ALL EXISTING SURFACES, FINISHES, AND ITEMS TO REMAIN IN PLACE. PATCH EXISTING AREAS DAMAGED DURING DEMOLITION TO MATCH EXISTING.

MST
MONTEREY-SALINAS TRANSIT

TAMC
TRANSPORTATION AGENCY FOR MONTEREY COUNTY

DIALOG

SURF! BUSWAY AND BRT

MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE:	9/1/2023 5:20:27 PM
DRAWN:	Author
DESIGNED:	Designer
CHECKED:	MB

CA 100051 - 2005501

GENERAL NOTES AND SCHEDULES

SHEET NO.
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SHEET 603 OF 617

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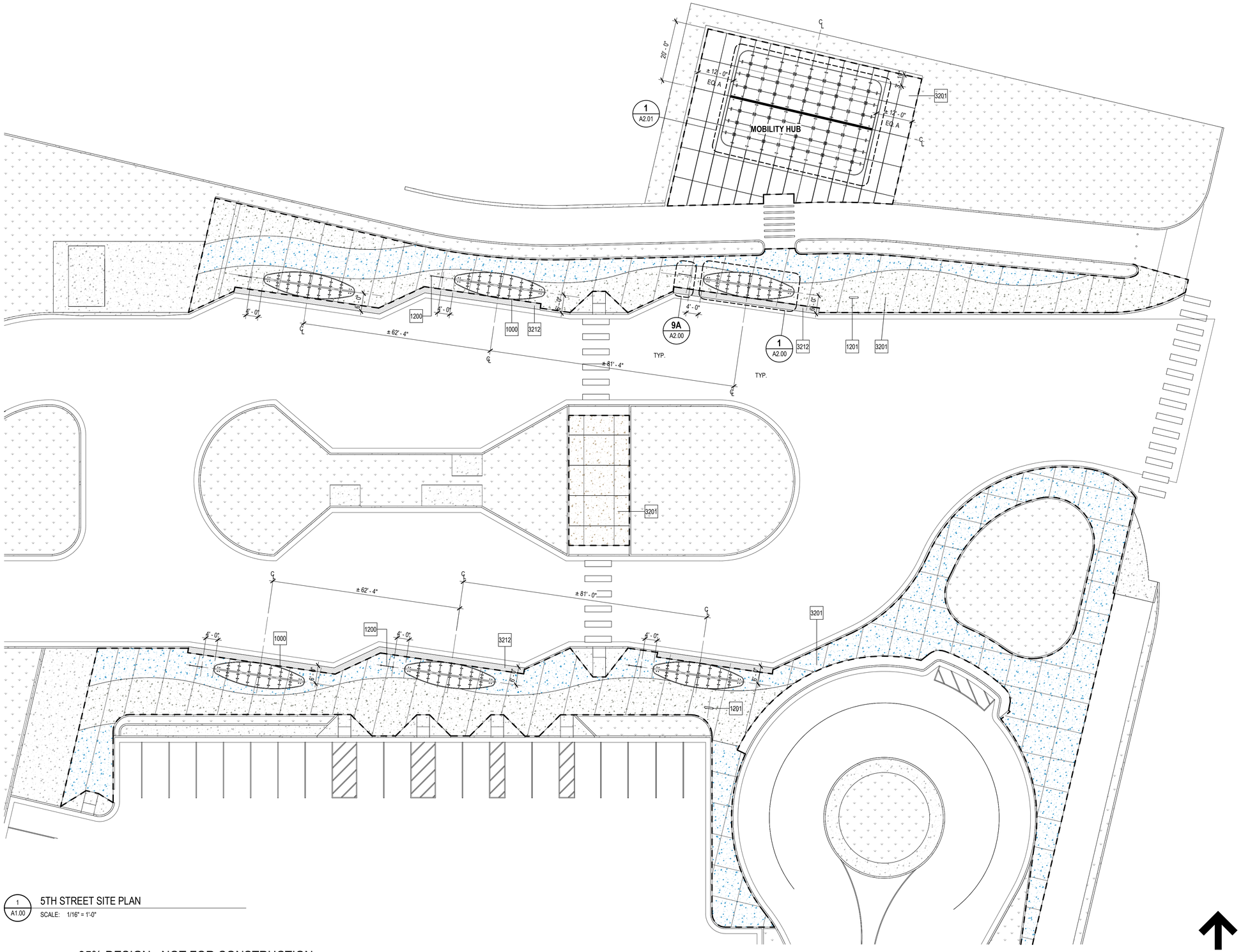

NOTES

1. FOR IMPROVEMENTS OUTSIDE AREA OF WORK, REFER TO RESPECTIVE DRAWINGS.
2. CIVIL IMPROVEMENTS BY OTHERS.
3. LANDSCAPING IMPROVEMENTS BY OTHERS.
4. ELECTRICAL IMPROVEMENTS BY OTHERS.
5. STRIPING BY OTHERS.
6. WAYFINDING SIGNAGE BY OTHERS.
7. UTILITY IMPROVEMENTS BY OTHERS.
8. BUS SHELTERS AND CONCRETE JOINTS TO BE ALIGNED AS SHOWN.
9. SEE A1.01 FOR COLORED CONCRETE INFORMATION AND DIMENSIONS.

LEGEND

- - - - ARCHITECTURAL AREA OF WORK

KEYNOTES

Key Value	Keynote Text
1000	(N) BUS SHELTER, TYP., SEE A2.00
1200	(N) STATIC SIGNAGE, TYP., SEE A2.00
1201	(N) PYLON, SEE A2.00
3201	(N) COLORED CONCRETE PAVEMENT, TYP.
3212	(N) DETECTABLE WARNING SIGNS BY OTHERS, S.C.D.

1 / A1.00 5TH STREET SITE PLAN

SCALE: 1/16" = 1'-0"

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MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

DIALOG

SURF! BUSWAY AND BRT

MONTEREY COUNTY CALIFORNIA

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SITE PLAN - 5TH STREET	

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A1.00

SHEET 604 OF 617

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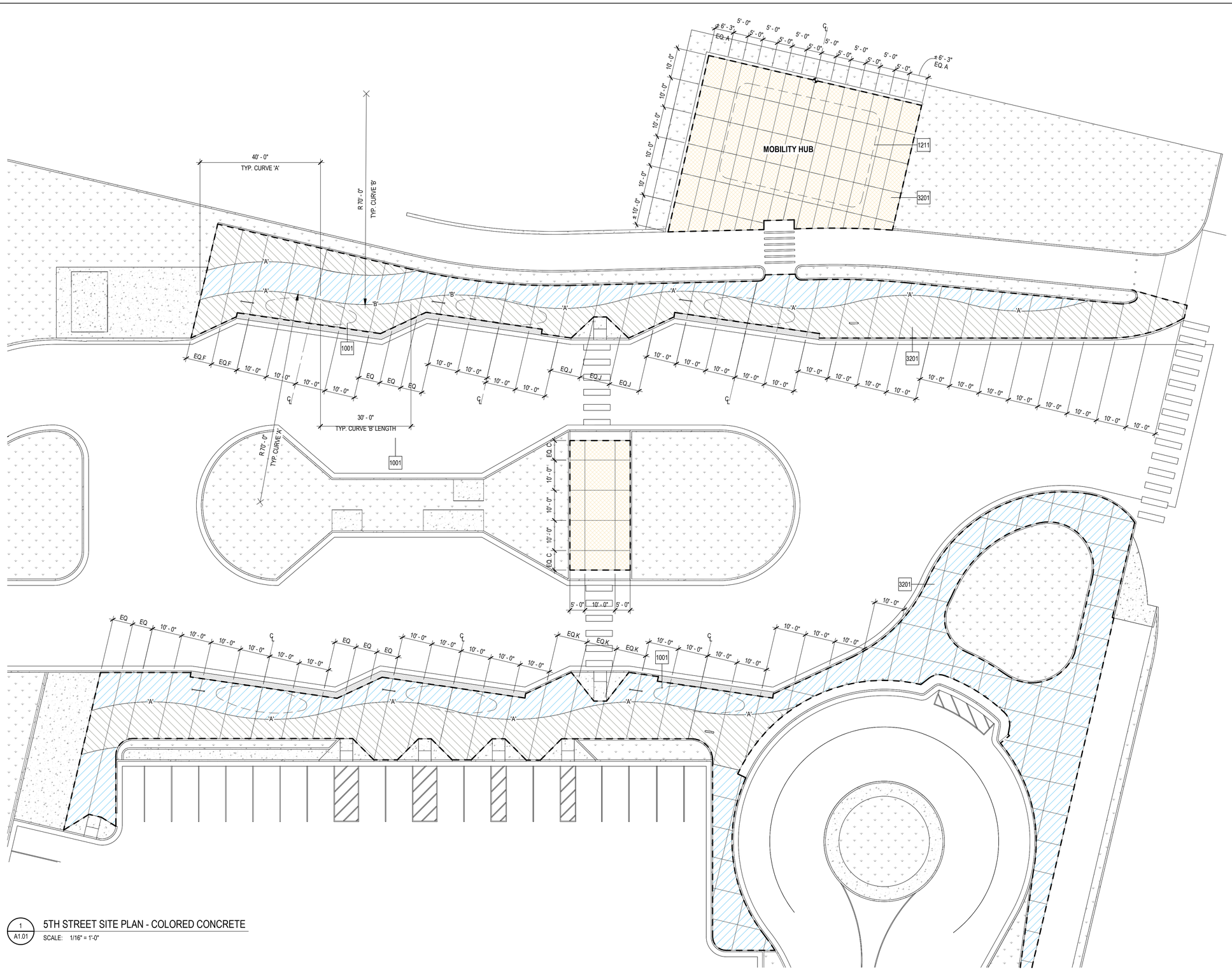

1 A1.01 5TH STREET SITE PLAN - COLORED CONCRETE

SCALE: 1/16" = 1'-0"

95% DESIGN - NOT FOR CONSTRUCTION

NOTES

1. FOR ALL BELOW GRADE SERVICES AND LOCATIONS REFER TO THE RESPECTIVE DISCIPLINES DRAWINGS.
2. CONTRACTOR TO PROVIDE MOCK-UP FOR ALL HARDSCAPE SURFACES FOR REVIEW AND APPROVAL BY THE CONSULTANT.
3. CONSULTANT TO REVIEW ALL FORM WORK PRIOR TO POURING.
4. CONTRACTOR TO PROVIDE CONCRETE POUR LAYOUT PLAN TO CONSULTANT FOR REVIEW PRIOR TO POURING. INDICATING ON THE PLAN HOW THE CONTRACTOR INTENDS TO POUR THE SLAB.
5. FOLLOWING THE POUR, CONTRACTOR IS TO LAY THE SAWCUTS OUT ON SITE FOR THE CONSULTANT TO REVIEW AND APPROVE PRIOR TO SAWCUTS BEING CUT.
6. ALL EXTERIOR CONCRETE SLABS ON GRADE THAT ARE TO BE SAWCUT, REQUIRE A DEEPER CONTRACTION JOINT TO BE CUT EVERY 10 FEET MAX ON THE SLAB TO ALLOW FOR FLEX. THIS CONTRACTION JOINT IS TO FOLLOW THE JOINTING PATTERN AND DESIGN INTENT OF THE SAWCUT PATTERN. ALL OTHER SAWCUTS ARE TO BE DECORATIVE. CONTRACTION JOINTS ON PLAN SHOW APPROXIMATE LOCATION OF REQUIRED JOINT.

COLORED CONCRETE LEGEND

- COLORED CONCRETE TYPE 1 — EUROBLUE (COBALT) 418 — BROOM FINISH
- COLORED CONCRETE TYPE 2 — GREEN SLATE 3685 — BROOM FINISH
- COLORED CONCRETE TYPE 3 — CLIFFSIDE BROWN 6804 — SAND FINISH
- JOINT LAYOUT START POINT

NOTES:
1. ALL SPECIFIED CONCRETE COLORS ARE BY DAVIS COLORS.
2. SEE CIVIL DRAWINGS FOR PAVING INFORMATION.

KEYNOTES

Key Value	Keynote Text
1001	(N) BUS SHELTER, SHOWN DASHED
1211	(N) MOBILITY HUB SHOWN DASHED
3201	(N) COLORED CONCRETE PAVEMENT, TYP.

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

DIALOG

SURF! BUSWAY AND BRT

MONTEREY COUNTY CALIFORNIA

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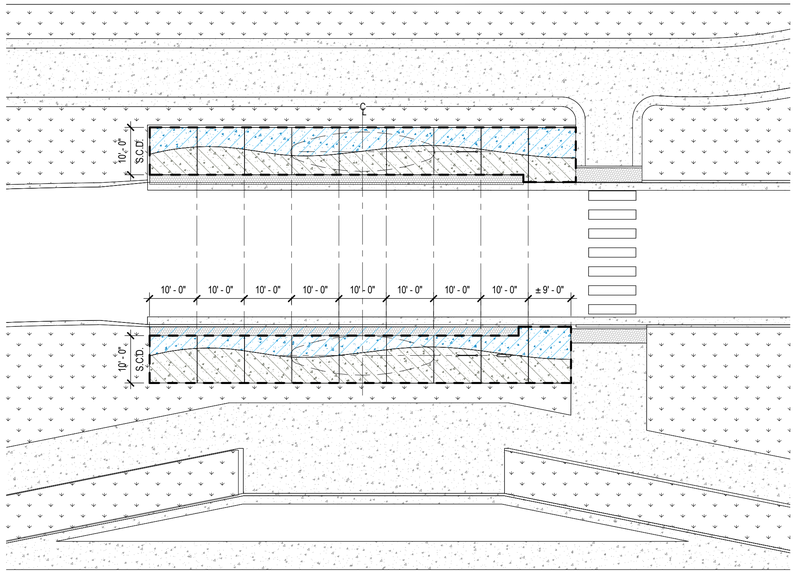
SITE PLAN - 5TH STREET CONCRETE

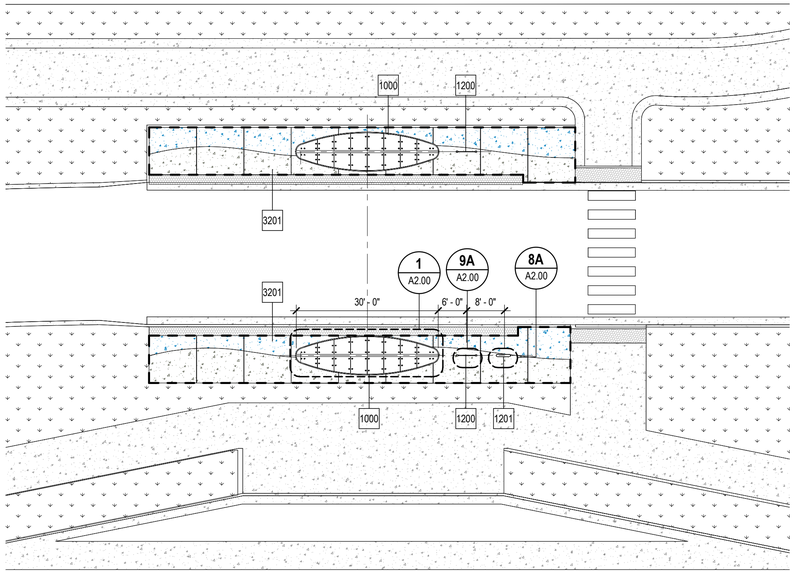
SHEET NO.
A1.01
SHEET 605 OF 617

PRELIMINARY



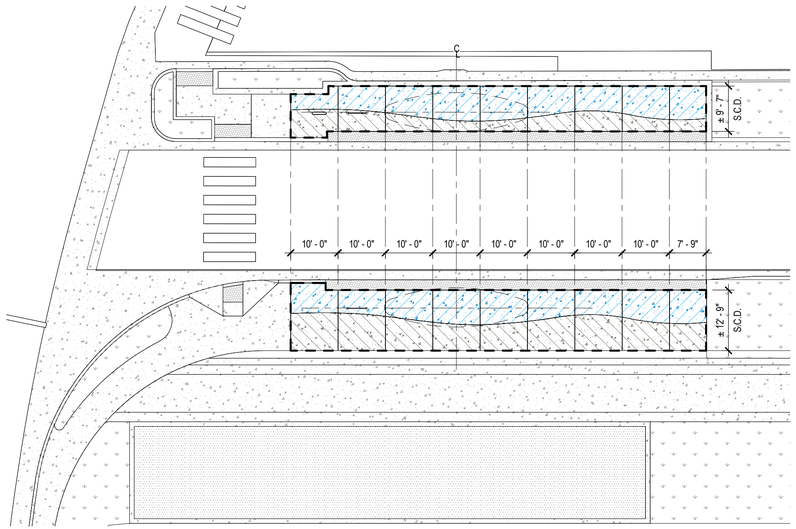
4 / A1.02 PALM AVENUE SITE PLAN - COLORED CONRETE

SCALE: 1/16" = 1'-0"



3 / A1.02 PALM AVENUE SITE PLAN

SCALE: 1/16" = 1'-0"



2 / A1.02 PLAYA AVENUE SITE PLAN - COLORED CONCRETE

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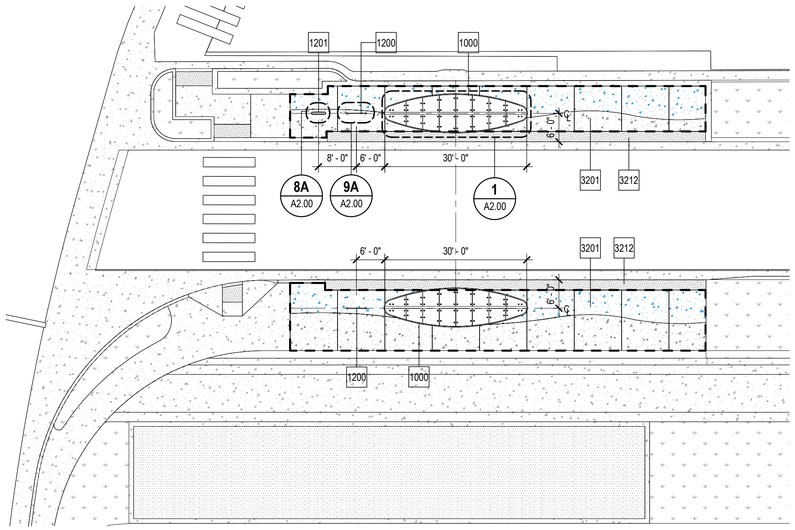

1 / A1.02 PLAYA AVENUE SITE PLAN

SCALE: 1/16" = 1'-0"

95% DESIGN - NOT FOR CONSTRUCTION

COLORED CONCRETE NOTES

1. FOR ALL BELOW GRADE SERVICES AND LOCATIONS REFER TO THE RESPECTIVE DISCIPLINES DRAWINGS.
2. CONTRACTOR TO PROVIDE MOCK-UP FOR ALL HARDSCAPE SURFACES FOR REVIEW AND APPROVAL BY THE CONSULTANT.
3. CONSULTANT TO REVIEW ALL FORM WORK PRIOR TO POURING.
4. CONTRACTOR TO PROVIDE CONCRETE POUR LAYOUT PLAN TO CONSULTANT FOR REVIEW PRIOR TO POURING. INDICATING ON THE PLAN HOW THE CONTRACTOR INTENDS TO POUR THE SLAB.
5. FOLLOWING THE POUR, CONTRACTOR IS TO LAY THE SAWCUTS OUT ON SITE FOR THE CONSULTANT TO REVIEW AND APPROVE PRIOR TO SAWCUTS BEING CUT.
6. ALL EXTERIOR CONCRETE SLABS ON GRADE THAT ARE TO BE SAWCUT, REQUIRE A DEEPER CONTRACTION JOINT TO BE CUT EVERY 10 FEET MAX ON THE SLAB TO ALLOW FOR FLEX. THIS CONTRACTION JOINT IS TO FOLLOW THE JOINTING PATTERN AND DESIGN INTENT OF THE SAWCUT PATTERN. ALL OTHER SAWCUTS ARE TO BE DECORATIVE. CONTRACTION JOINTS ON PLAN SHOW APPROXIMATE LOCATION OF REQUIRED JOINT.

COLORED CONCRETE LEGEND

- COLORED CONCRETE TYPE 1
  EUROBLUE (COBALT) 418
  BROOM FINISH
- COLORED CONCRETE TYPE 2
  GREEN SLATE 3685
  BROOM FINISH
- COLORED CONCRETE TYPE 3
  CLIFFSIDE BROWN 6804
  SAND FINISH
- JOINT LAYOUT START POINT

NOTES:
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2. SEE CIVIL DRAWINGS FOR PAVING INFORMATION.

NOTES

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5. STRIPING BY OTHERS.
6. WAYFINDING SIGNAGE BY OTHERS.
7. UTILITY IMPROVEMENTS BY OTHERS.
8. BUS SHELTERS AND CONCRETE JOINTS TO BE ALIGNED AS SHOWN.
9. SEE A1.01 FOR COLORED CONCRETE INFORMATION AND DIMENSIONS.

LEGEND

- - - - ARCHITECTURAL AREA OF WORK

KEYNOTES

Key Value	Keynote Text
1000	(N) BUS SHELTER, TYP., SEE A2.00
1200	(N) STATIC SIGNAGE, TYP., SEE A2.00
1201	(N) PYLON, SEE A2.00
3201	(N) COLORED CONCRETE PAVEMENT, TYP.
3212	(N) DETECTABLE WARNING SIGNS BY OTHERS, S.C.D.

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

DIALOG

SURF! BUSWAY AND BRT

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MONTEREY COUNTY

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SITE PLAN - PLAYA AVE. & PALM AVE.

SHEET NO.
A1.02
SHEET 606 OF 617

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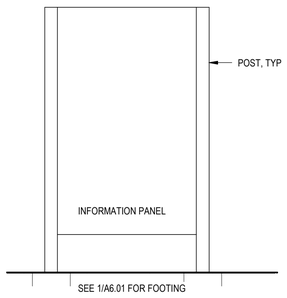
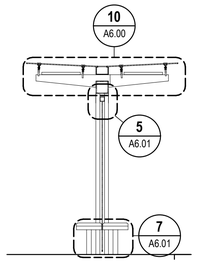


9B A2.00 STATIC SIGNAGE ELEVATION
SCALE: 1/2" = 1'-0"



7 A2.00 BUS SHELTER SECTION
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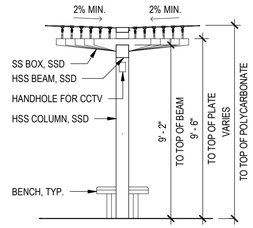
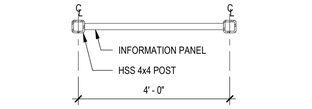


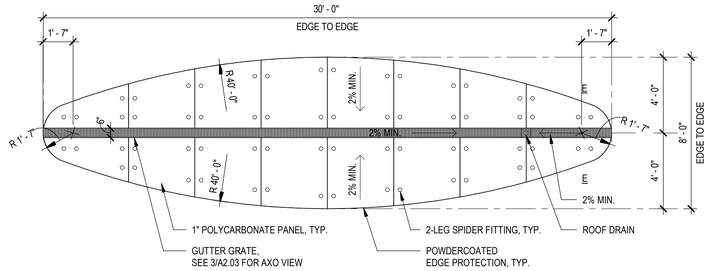
6 A2.00 BUS SHELTER SIDE ELEVATION
SCALE: 1/4" = 1'-0"



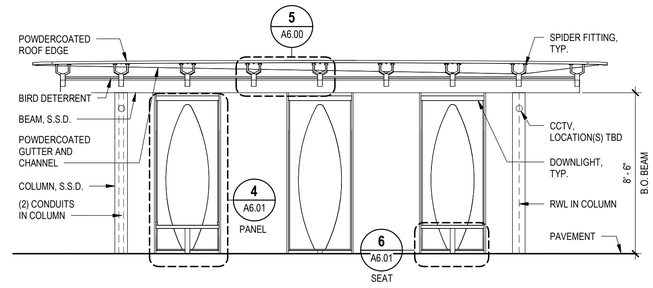
5 A2.00 BUS SHELTER FRONT ELEVATION
SCALE: 1/4" = 1'-0"



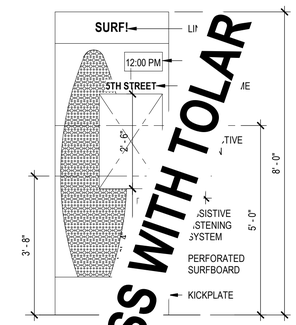
9A A2.00 STATIC SIGNAGE PLAN
SCALE: 1/2" = 1'-0"



4 A2.00 BUS SHELTER ROOF PLAN
SCALE: 1/4" = 1'-0"



3 A2.00 BUS SHELTER FRONT ELEVATION
SCALE: 1/4" = 1'-0"



8B A2.00 PY' ATION
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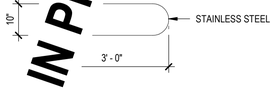
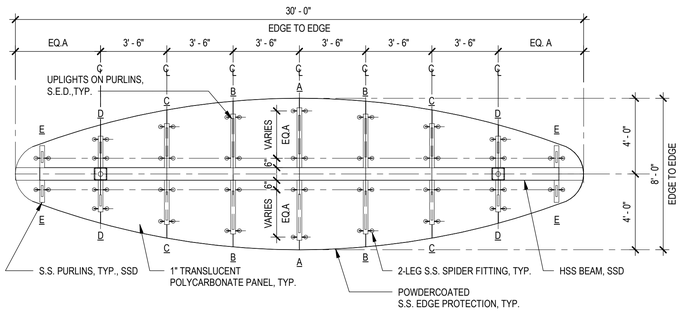


8A A2.00 PYLON PLAN
SCALE: 1/2" = 1'-0"



2 A2.00 BUS SHELTER REFLECTED CEILING PLAN
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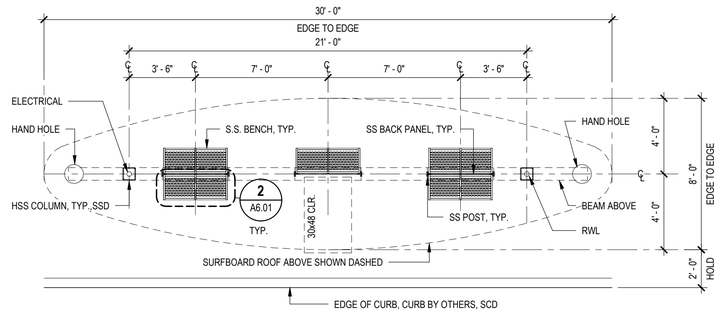

1 A2.00 BUS SHELTER FLOOR PLAN
SCALE: 1/4" = 1'-0"

NOTES

1. ALL STEEL TO BE 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.
2. ALL WELDS TO BE GROUND SMOOTH UNLESS OTHERWISE NOTED.

KEYNOTES

Key Value	Keynote Text

IN PROGRESS WITH TOLAR

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MST MONTEREY-SALINAS TRANSIT
TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY
DIALOG

SURF! BUSWAY AND BRT
MONTEREY COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

DATE:	9/1/2023 5:20:35 PM
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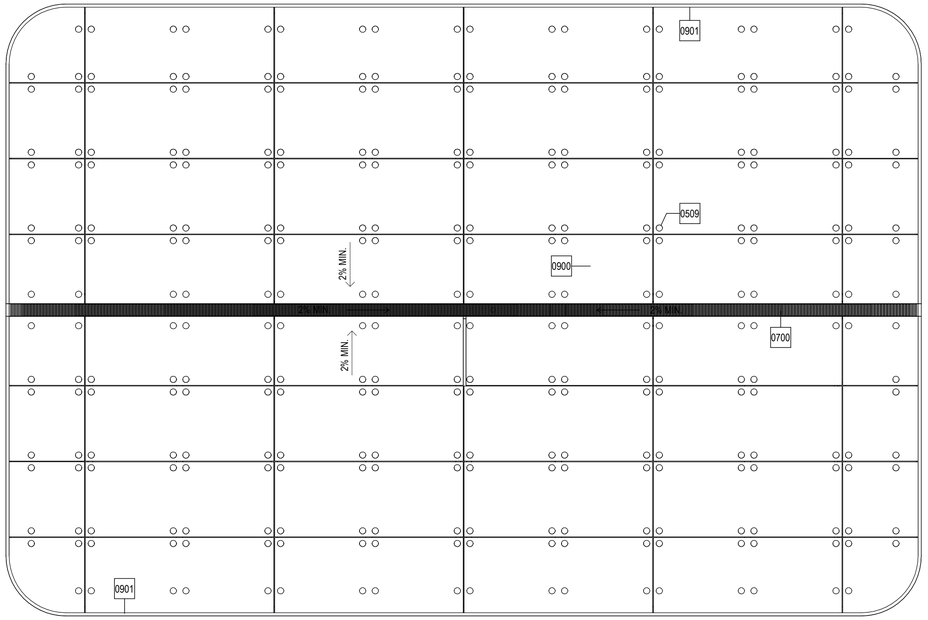
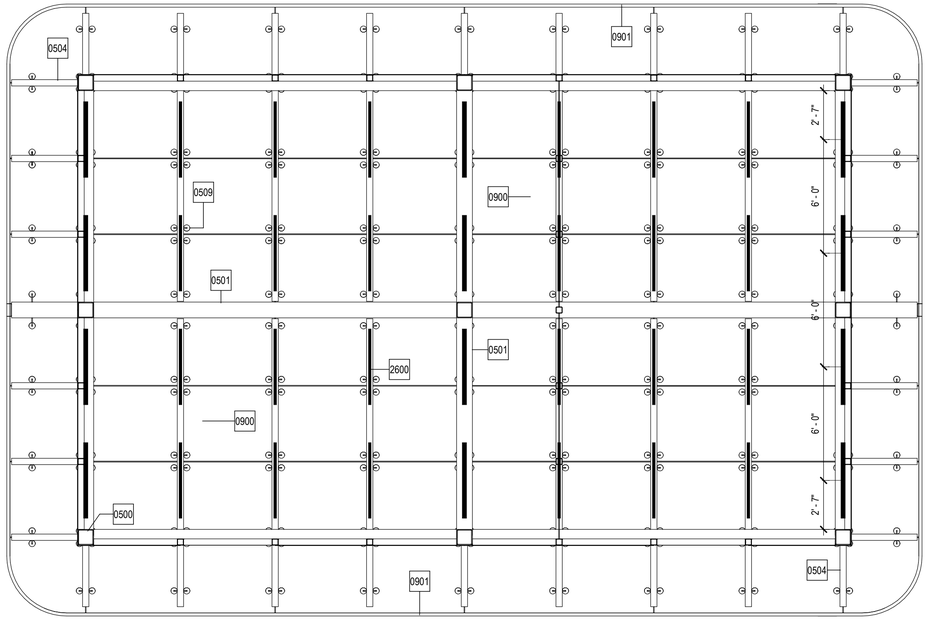
BUS SHELTER FLOOR PLAN, RCP & ELEVATIONS

SHEET NO.
A2.00
SHEET 607 OF 617

PRELIMINARY

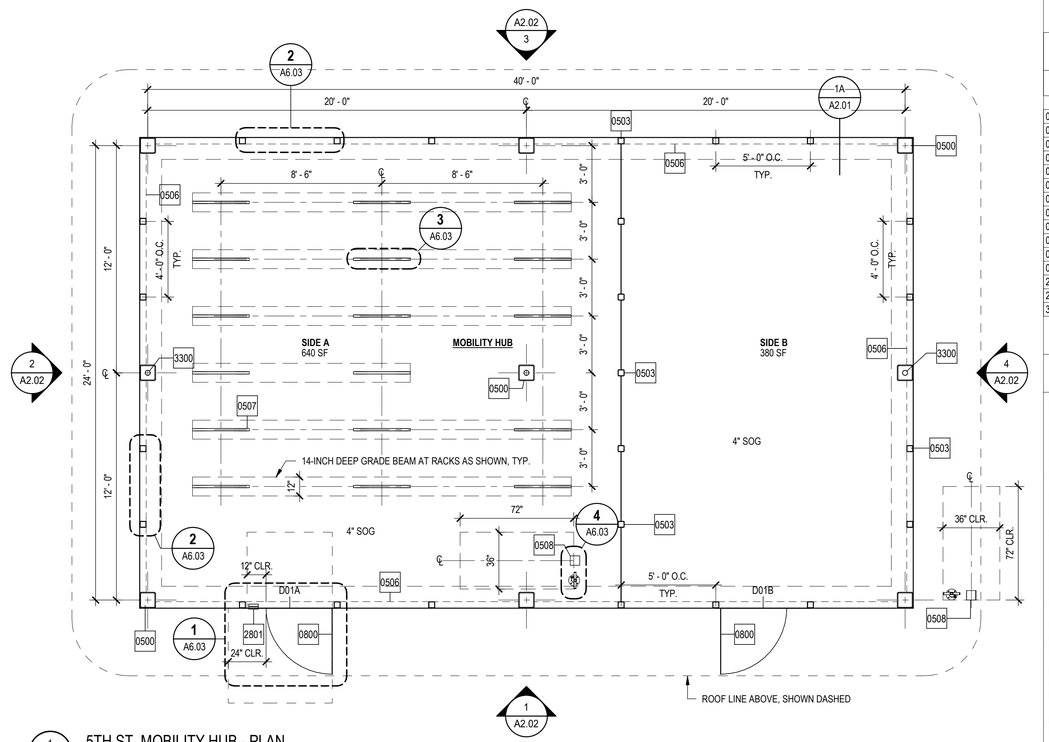


3 A2.01 5TH ST. MOBILITY HUB - ROOF PLAN
SCALE: 1/4" = 1'-0"



2 A2.01 5TH ST. MOBILITY HUB - RCP
SCALE: 1/4" = 1'-0"

1A A2.01 SOG DETAIL
SCALE: 1" = 1'-0"



1 A2.01 5TH ST. MOBILITY HUB - PLAN
SCALE: 1/4" = 1'-0"

95% DESIGN - NOT FOR CONSTRUCTION

NOTES

KEYNOTES

Key Value	Keynote Text
0500	(N) HSS COLUMN, TYP., SSD
0501	(N) HSS BEAM, TYP., SSD
0503	(N) 4X4 HSS POST, TYP.
0504	(N) HSS CUSTOM BOX PURLIN, TYP., SSD
0506	(N) HORIZONTAL SUPPORT ABOVE SHOWN DASHED
0507	(N) 36" DIA. BIKE RACK, TYP.
0508	(N) BIKE PUMP AND WHEEL CHOCK, SEE A6.03
0509	(N) STAINLESS STEEL 2-LEG SPIDER FITTING, TYP.
0700	(N) INTEGRATED DRAINAGE WITH REMOVABLE GRATE
0800	(N) SS 42" DOOR W/ KICKPLATE
0900	(N) TRANSLUCENT POLYCARBONATE PANEL ROOF, TYP.
0901	(N) STAINLESS STEEL POWDERCOATED ROOF EDGE, TYP.
2600	(N) UPLIGHT, S.E.D.
2801	(N) CARD KEY PAD & PUSH PLATE DOOR ACTUATOR
3300	3-INCH RAIN WATER LEADER

HARDWARE NOTES

DOOR 01A
1. 2 PUSH PANEL ACTUATOR
2. 1 KEY CARD ACESS
3. 1 EXIT DEVICE
4. 1 NIGHT LATCH
5. 1 AUTOMATIC OPERATOR
6. 1 KICKPLATE
7. 1 PROTECTIVE PLATE
8. 1 CONTINUOUS HINGE
9. ELECTRIC LATCH

DOOR 01B
1. 1 EXIT DEVICE
2. 1 NIGHT LATCH
3. 11 KICKPLATE
4. 1 PROTECTIVE PLATE
5. 1 CONTINUOUS HINGE
6. 1 CLOSER

DOOR 01A
ENTRY: FROM EXTERIOR, TAP KEY CARD FOR ACCESS, OPEN DOOR MANUALLY VIA LEVER OR PUSH PANEL ACTUATOR.

FOR PUBLIC: DOOR UNLOCKS VIA KEY CARD ONLY.
FOR MAINTENANCE: DOOR UNLCOKS WHEN NIGHT LATCH IS UNLOCKED.

EXIT: FROM INTERIOR, DOOR WILL OPEN WHEN EXIT DEVICE IS PUSHED OR WHEN INTERIOR PUSH PANEL IS PRESSED.

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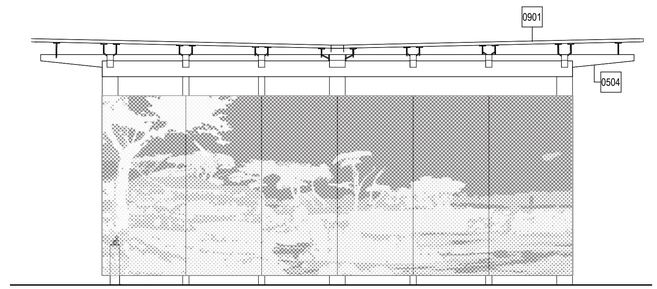
MOBILITY HUB FLOOR PLAN & RCP

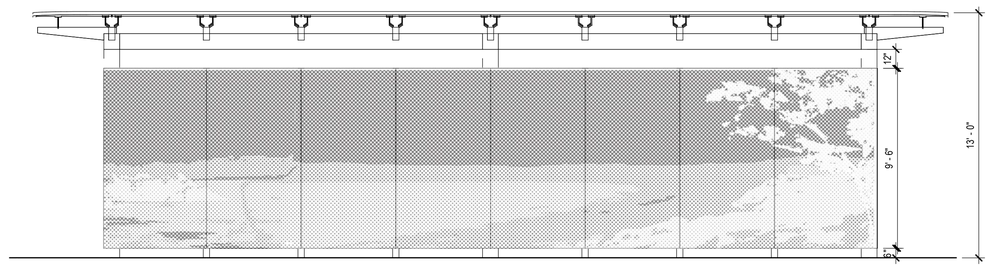
SHEET NO.
A2.01
SHEET 608 OF 617

PRELIMINARY



4 A2.02 5TH ST. MOBILITY HUB - EAST ELEVATION

SCALE: 1/4" = 1'-0"



3 A2.02 5TH ST. MOBILITY HUB - NORTH ELEVATION

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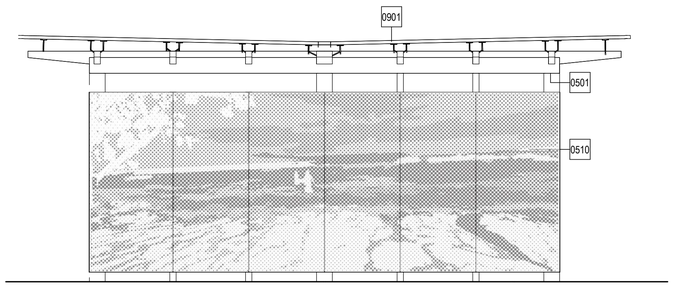

2 A2.02 5TH ST. MOBILITY HUB - WEST ELEVATION

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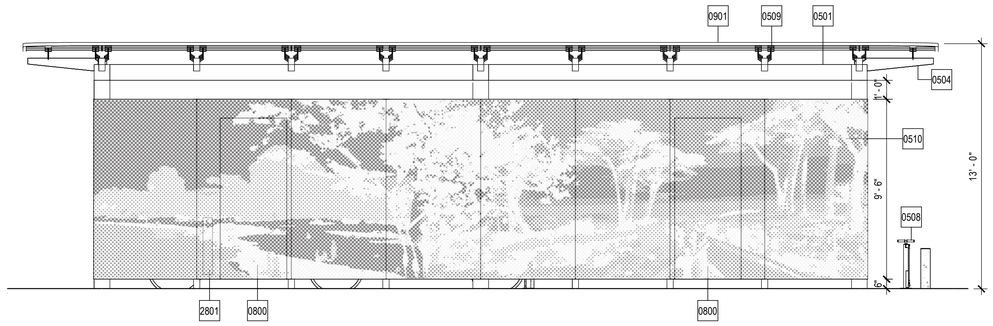

1 A2.02 5TH ST. MOBILITY HUB - SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

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NOTES

KEYNOTES

Key Value	Keynote Text
0501	(N) HSS BEAM, TYP., SSD
0504	(N) HSS CUSTOM BOX PURLIN, TYP., SSD
0508	(N) BIKE PUMP AND WHEEL CHOCK, SEE A6.03
0509	(N) STAINLESS STEEL 2-LEG SPIDER FITTING, TYP.
0510	(N) 1/4" STAINLESS STEEL PANEL W/ PERFORATED IMAGE
0800	(N) SS 42" DOOR W/ KICKPLATE
0901	(N) STAINLESS STEEL POWDERCOATED ROOF EDGE, TYP.
2801	(N) CARD KEY PAD & PUSH PLATE DOOR ACTUATOR

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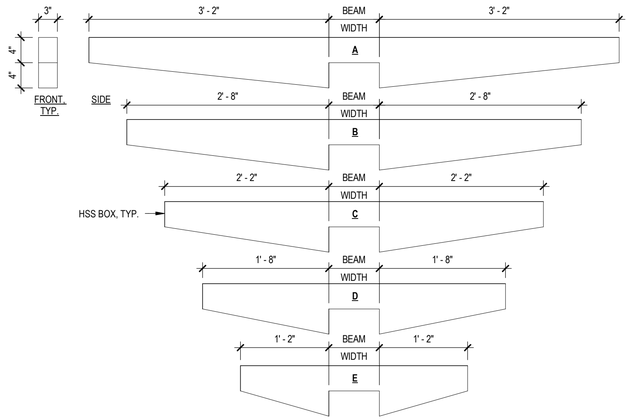
MOBILITY HUB ELEVATIONS & SECTIONS

SHEET NO.

A2.02

SHEET 609 OF 617



12 A6.00 BOX PURLINS

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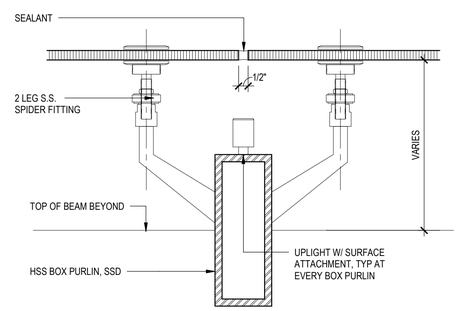

11 A6.00 SPIDER FITTING FRONT SECTION

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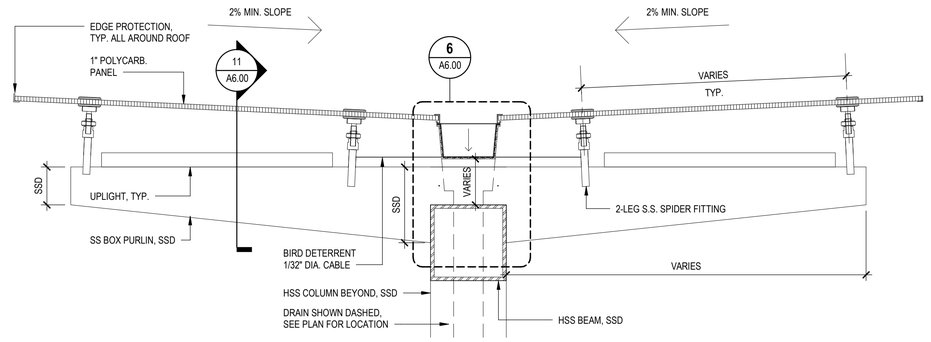

10 A6.00 ROOF CROSS SECTION

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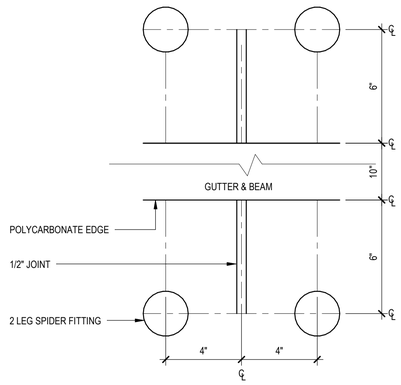

8 A6.00 SPIDER FITTING SPACING

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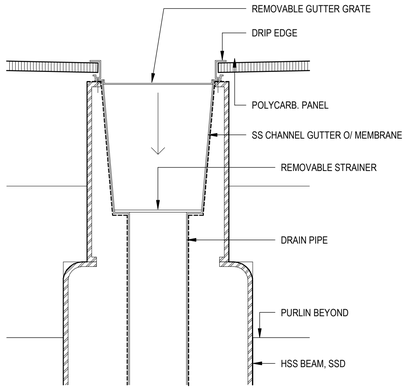

6 A6.00 ROOF DRAIN SECTION

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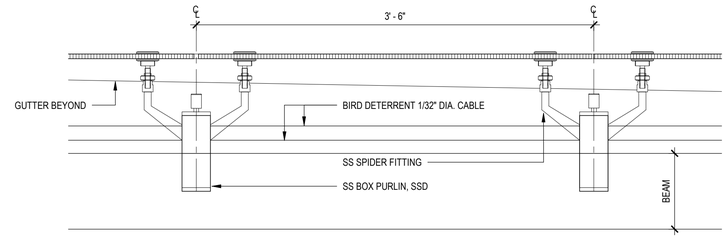
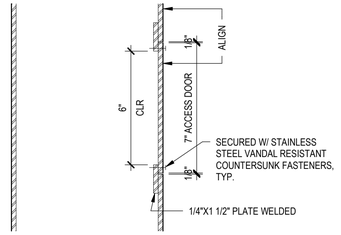


5 A6.00 BOX PURLINS FRONT

SCALE: 1 1/2" = 1'-0"



3 A6.00 COLUMN ACCESS HOLE

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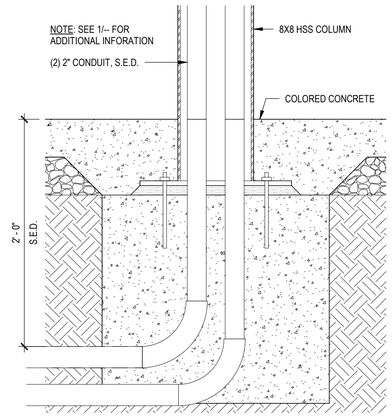
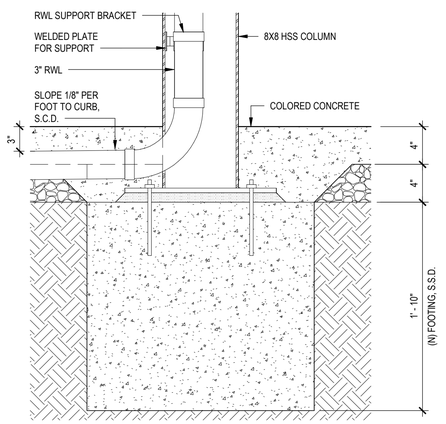


2 A6.00 COLUMN W/ CONDUIT

SCALE: 1 1/2" = 1'-0"



1 A6.00 COLUMN W/ RWL

SCALE: 1 1/2" = 1'-0"

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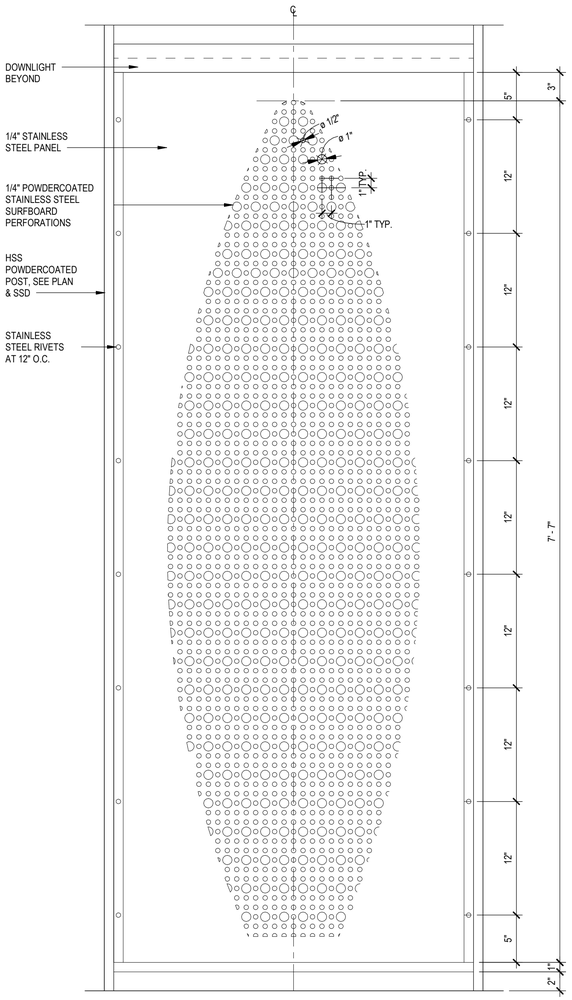

4 A6.01 PERFORATED PANEL FRONT ELEVATION

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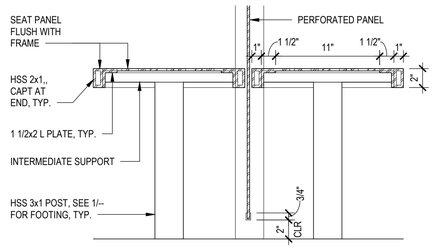

7 A6.01 BENCH & PANEL SECTION

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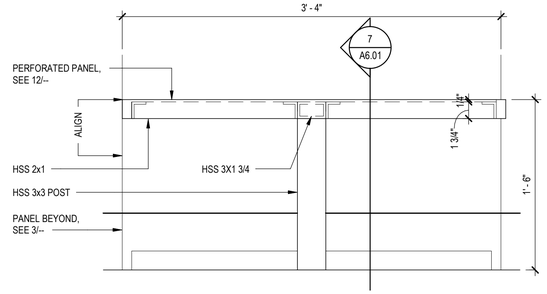
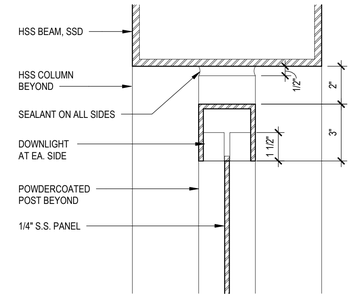


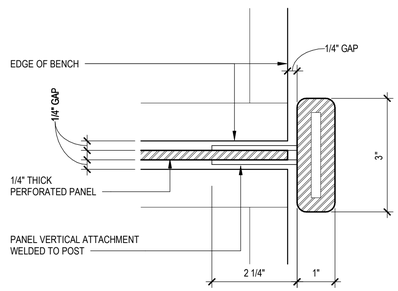
6 A6.01 BENCH FRONT ELEVATION

SCALE: 1 1/2" = 1'-0"



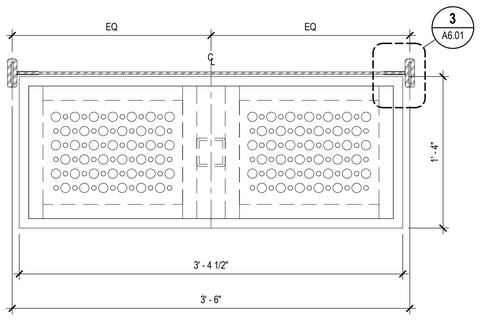
5 A6.01 POST HEAD & LIGHT

SCALE: 3" = 1'-0"



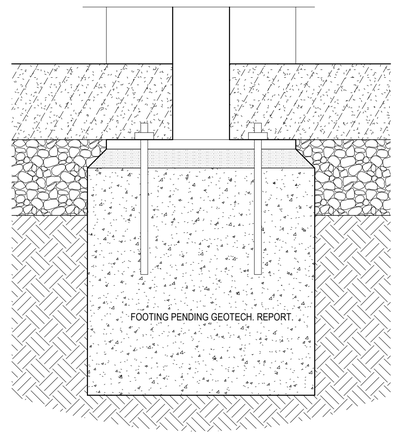
3 A6.01 BENCH POST

SCALE: 6" = 1'-0"



2 A6.01 BENCH & BACK PANEL PLAN

SCALE: 1 1/2" = 1'-0"



1 A6.01 POST FOOTING

SCALE: 3" = 1'-0"

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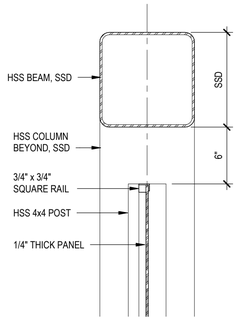
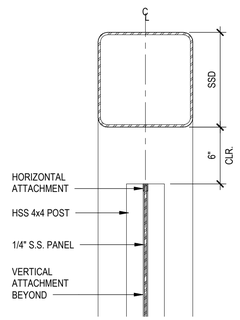


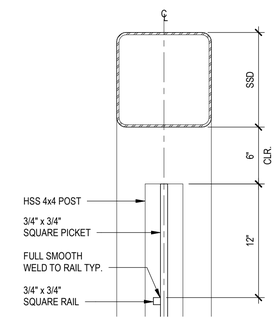
8 A6.02 MOBILITY HUB DOOR HEAD

SCALE: 1 1/2" = 1'-0"



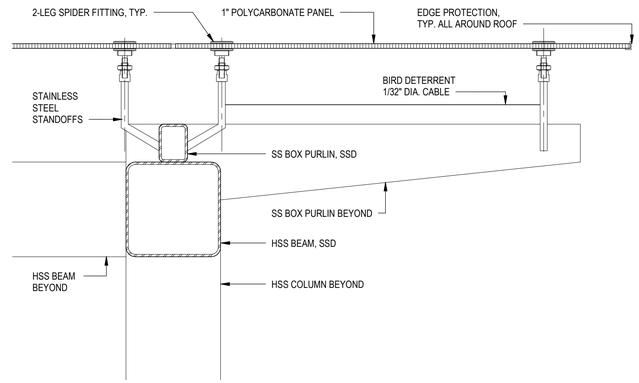
7 A6.02 MOBILITY HUB PERFORATED PANEL TOP

SCALE: 1 1/2" = 1'-0"



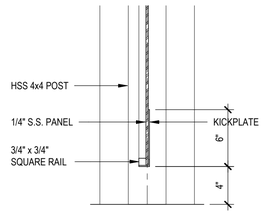
6 A6.02 MOBILITY HUB POST SECTION

SCALE: 1 1/2" = 1'-0"



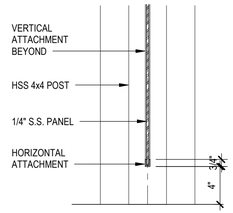
5 A6.02 MOBILITY HUB BEAM SECTION

SCALE: 1 1/2" = 1'-0"



4 A6.02 MOBILITY HUB DOOR BASE

SCALE: 1 1/2" = 1'-0"



3 A6.02 MOBILITY HUB PERFORATED PANEL BASE

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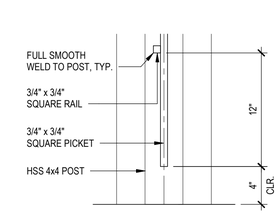

2 A6.02 MOBILITY HUB POST BASE

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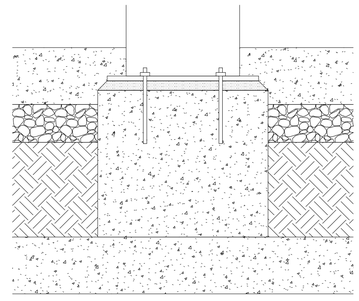

1 A6.02 MOBILITY HUB COLUMN BASE

SCALE: 1 1/2" = 1'-0"

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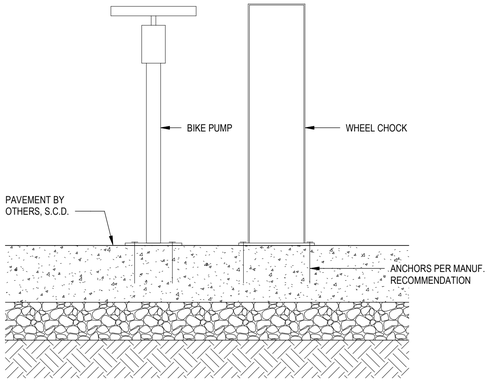
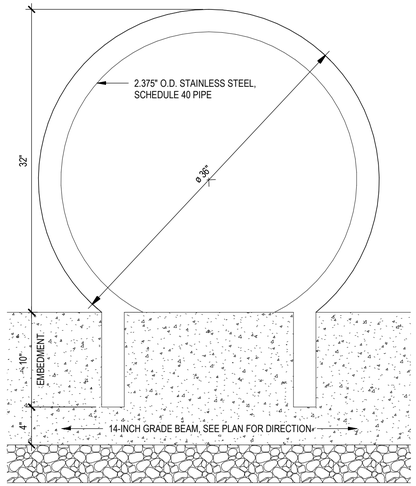
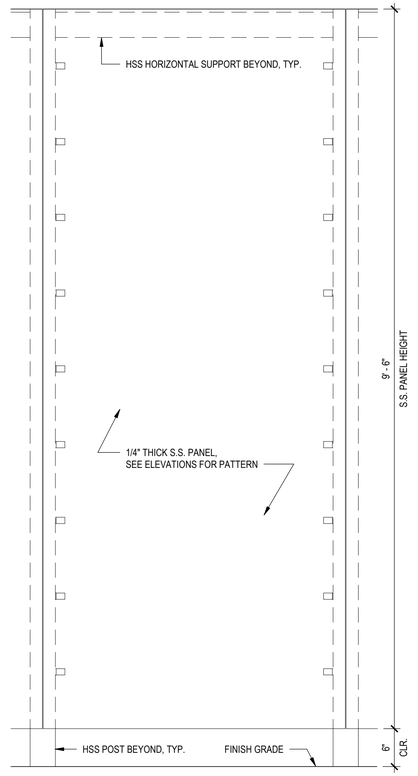


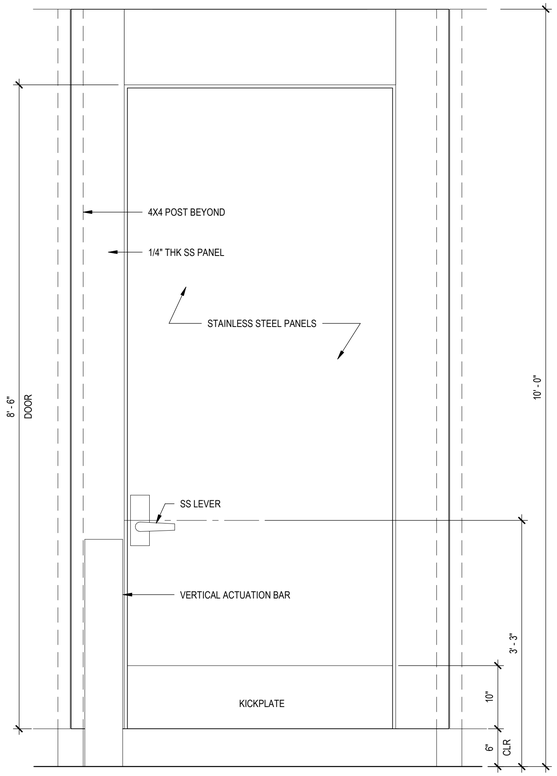
8 A6.03 BIKE PUMP ELEVATION
SCALE: 1 1/2" = 1'-0"



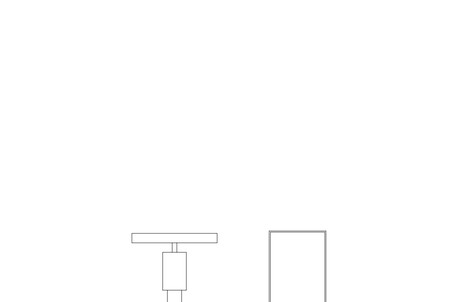
7 A6.03 BIKE RACK ELEVATION
SCALE: 1 1/2" = 1'-0"



6 A6.03 PANEL EXTERIOR ELEATION
SCALE: 1" = 1'-0"



5 A6.03 DOOR EXTERIOR ELEVATION
SCALE: 1" = 1'-0"



4 A6.03 BIKE PUMP PLAN DETAIL
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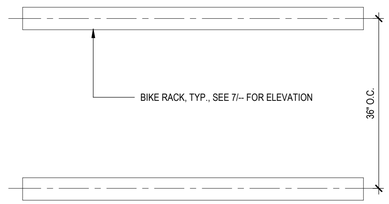

3 A6.03 BIKE RACK PLAN
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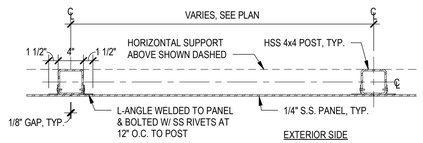

2 A6.03 MOBILITY HUB POST PLAN DETAIL
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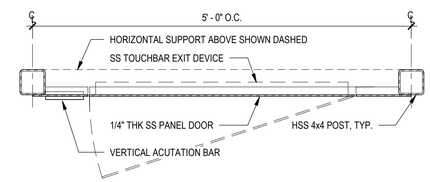

1 A6.03 MOBILITY HUB DOOR PLAN DETAIL
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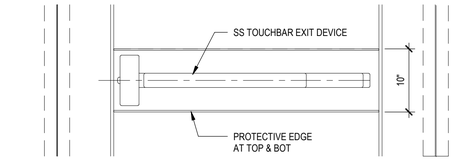

9 A6.03 DOOR EXIT DEVICE INTERIOR SIDE
SCALE: 1" = 1'-0"

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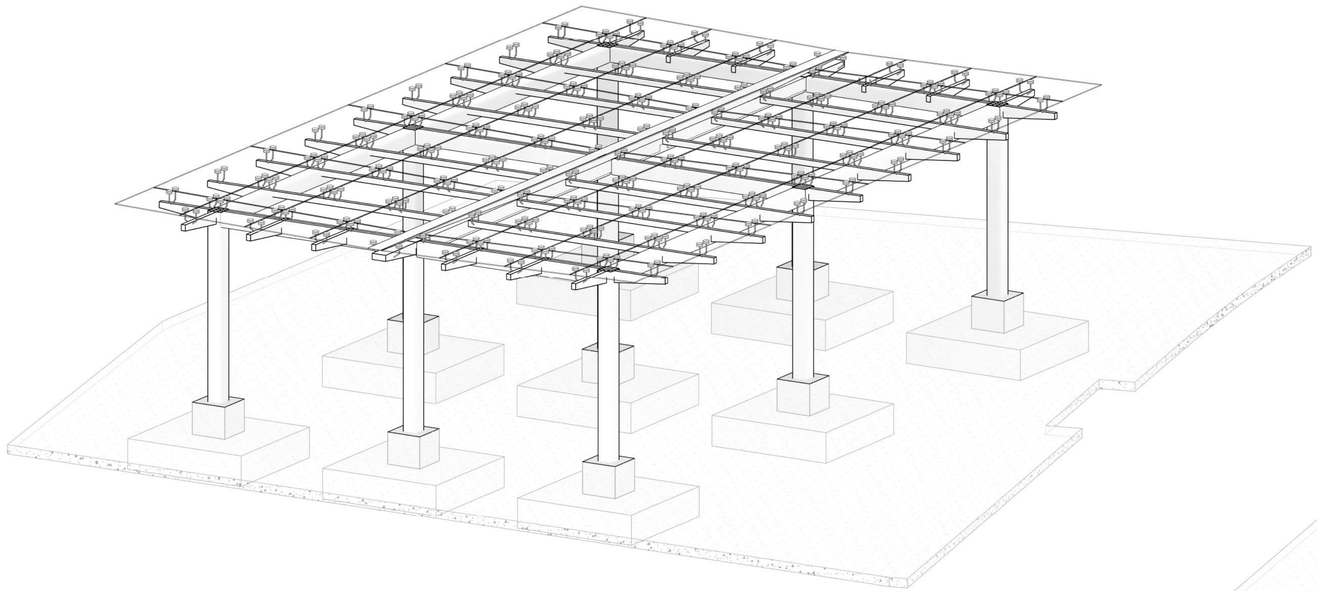
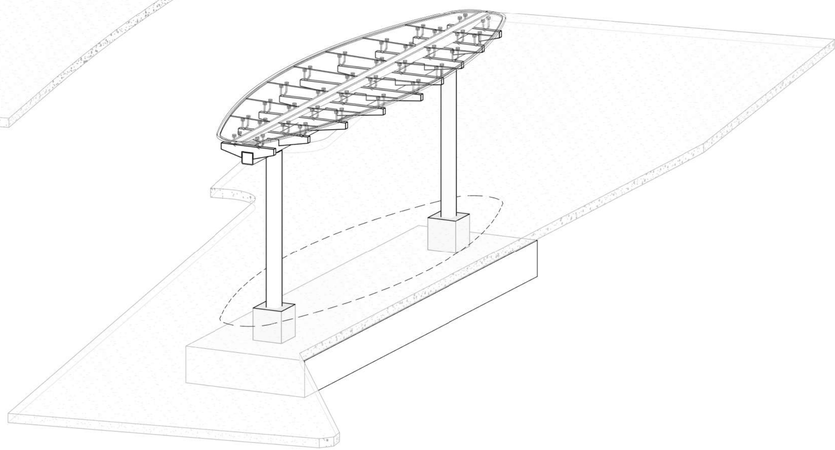
S0.02	GENERAL NOTES
S0.03	GENERAL NOTES
S0.04	GENERAL NOTES Copy 1
S2.00	BUS SHELTER PLANS AND DETAILS
S2.01	BIKE HUB PLANS AND DETAILS





BUS AND BIKE SHELTER - STRUCTURAL SUPPORT

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SHEET 614 OF 617

GENERAL NOTES

1. THESE DRAWINGS ARE ISSUED ONLY FOR DESIGN INTENT AND THEY ARE NOT TO BE USED FOR CONSTRUCTION.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE AND REFERENCED DOCUMENTS AS MODIFIED BY THE LOCAL MUNICIPALITY CODE.
3. SEE ARCHITECTURAL DRAWINGS FOR FLOOR AND ROOF ELEVATIONS, RECESSES, DRAINAGE SLOPES, ETC.
4. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SLEEVES, NAILERS, INSERTS, ETC. TO BE ENCASED IN CONCRETE.
5. REPORT DISCREPANCIES BETWEEN STRUCTURAL AND OTHER CONSULTANT DRAWINGS FOR CLARIFICATION.
6. SPECIFIED DESIGN LOADS

		SDL & LIVE LOADS kN/m^2 (PSF)	
A.)	SDL - BUS SHELTER ROOF	0.5	(10)
B.)	SDL - BIKE STORAGE ROOF	0.7	(15)
C.)	LIVE	1.0	(20)

7. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RESISTANCE REQUIREMENTS.
8. SECTION MARK SHOWN THUS 4/3 MEANS SECTION #4 SHOWN ON SHEET S-3.

CONCRETE NOTES

1. ALL CEMENT SHALL BE PORTLAND CEMENT TYPE 1.
2. SEE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR SPECIAL ARCHITECTURAL CONCRETE REQUIREMENTS.
3. CONCRETE PROPERTIES STANDARD WEIGHT AGGREGATE 150 PCF.
4. CONCRETE EXPOSURE CLASS C2

ELEMENT	MIN STRENGTH PSI	SLUMP INCH	MAXIMUM SIZE AGGREGATE (IN)	MAXIMUM W/C
SIDEWALKS, SLAB ON GRADE RAMPS AND PARKING TOPPING	5000	2 1/2	3/4	.4
ARCHITECTURAL CONCRETE	5000	2 3/4	1/2	(TO SUIT ELEMENT)

5. CONCRETE STRENGTH SHALL BE DETERMINED AT 28 DAYS
6. RANGE IN AIR CONTENT FOR CONCRETES WITH INDICATED NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE. (CATEGORY 3 AIR CONTENT NOT REQUIRED FOR 6000 PSI AND ABOVE)

AIR CONTENT CATEGORY	1/2"	3/4"	1 1/2"
1	7 TO 10 %	5 TO 8 %	4 TO 7 %
2	5 TO 8 %	4 TO 7 %	3 TO 6 %
3	3 TO 5 %	2 TO 4 %	2 TO 4 %

FOR ANY OTHER NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE, INTERPOLATION BETWEEN THE VALUES GIVEN IN TABLE ABOVE IS PERMISSIBLE

7. SLUMPS LISTED ARE BEFORE THE ADDITION OF SUPERPLASTICIZERS. TOLERANCE IN SPECIFIED SLUMP SHALL BE ± 20mm (3/4")
8. LARGE CONCRETE FOOTINGS WITH EVERY DIMENSION GREATER THAN 1000 (39") SHALL HAVE A MINIMUM 40% TYPE F FLY ASH CONTENT
9. CALCIUM CHLORIDE AS A RAW MATERIAL OR AS A CONSTITUENT IN AN ADMIXTURE IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM ENGINEER OF RECORD
10. DO NOT USE ADMIXTURES OTHER THAN STANDARD WATER REDUCERS, AIR ENTRAINMENT ADMIXTURES AND SUPERPLASTICIZERS
11. FORMWORK TO ACI 347R-14
12. ALL EXPOSED OUTSIDE CORNERS OF CONCRETE CURBS SHALL BE CHAMFERED 3/4" x 3/4". SEE ARCHITECH'S DRAWINGS FOR EXCEPTIONS.
13. STRIPPING
    A) NO COLUMN OR WALL FORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 1500 PSI FOR STANDARD CONCRETE OR 2200 PSI FOR ARCHITECTURAL CONCRETE
    B) NO SLAB OR BEAM FORM SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 2500 PSI.
    C) STRENGTH OF CONCRETE TO BE DETERMINED BY FIELD-CURED CYLINDERS

BUILDING CODE

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH 2022 CALIFORNIA CODE OF REGULATIONS, TITLE 24. THE PUBLICATIONS LISTED BELOW ARE THE GOVERNING CODES AND STANDARDS AND ARE REFERENCED BY THEIR BASIC DESIGNATION.

APPLICABLE CODES AND STANDARDS:

BUILDING CODE

AISC	SPECIFICATION FOR STRUCTURAL STAINLESS STEEL BUILDING
ACI	AMERICAN CONCRETE INSTITUTE, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318), 2019 EDITION
ACI	AMERICAN CONCRETE INSTITUTE, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530)
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, SPECIFICATION FOR STAINLESS STEEL BUILDING,
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS," (ANSI/AISC 341)
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" (ASCE 7)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM INTERNATIONAL)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM A194/ A194M-20a) STANDARD SPECIFICATION FOR CARBON STEEL, ALLOY STEEL AND STAINLESS STEEL NUTS FOR BOLTS FOR HIGH PRESSURE OR HIGH TEMPERATURE SERVICE OR BOTH.
AWS	AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - STAINLESS STEEL" (AWS D1.6)
AWS	AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - REINFORCING STEEL" (AWS D1.4)
ICC	INTERNATIONAL CODE COUNCIL, INTERNATIONAL CODE COUNCIL - EVALUATION SERVICES (ICC-ES)

EARTHQUAKE DESIGN PARAMETERS

EARTHQUAKE DESIGN DATA PER SECTION 1603.1.5 OF THE INTERNATIONAL AND ASCE BUILDING CODE.

a]	SEISMIC IMPORTANCE FACTOR, I	1.0	
b]	RISK CATEGORY	I	
c]	MAPPED SPECTRAL ACCELERATION, S_s	1.53	BASED ON ASCE https://asce7hazardtool.online/
d]	MAPPED SPECTRAL ACCELERATION, S_1	0.5	
e]	SITE CLASS	D	
f]	SPECTRAL RESPONSE COEFFICIENT, S_{DS}	1.21	BASED ON ASCE https://asce7hazardtool.online/
g]	SPECTRAL RESPONSE COEFFICIENT, S_{D1}	0.82	
h]	SEISMIC DESIGN CATEGORY	D	
i]	BASIC SEISMIC-FORCE-RESISTING SYSTEMS	STEEL ORDINARY CANTILEVER COLUMN + STEEL ORDINARY MOMENT FRAME (OMF)	
j]	TOTAL WEIGHT OF BUILDING ABOVE GROUND	7 kips (BUS SHELTER) 28 kips (BIKE STORAGE)	
k]	DESIGN BASE SHEAR (Strength Level)	DESIGNER TO CONFIRM THE SEISMIC DESIGN PARAMETERS IN ACCORDANCE TO ASCE 7 CLAUSE 12.2.1.1	
l]	RESPONSE MODIFICATION FACTORS, R		
m]	OVER STRENGTH FACTOR (OF)		
n]	DEFLECTION AMPLIFICATION FACTOR		
o]	ANALYSIS PROCEDURE USED		

WIND DESIGN PARAMETERS:

BASIC WIND SPEED	95 MPH
EXPOSURE	D
WIND IMPORTANCE FACTOR	1.0

DELEGATED DESIGN REQUIREMENT

THE DESIGN OUTLINED HEREIN SHALL BE CONSIDERED AS A REFERENCE OWNER PROJECT REQUIREMENT AND SHALL BE CONSIDERED AS A BASIS OF DESIGN. THE FINAL DESIGN OF THE STRUCTURES SHALL BE CONFIRMED AND FURNISHED BY A CALIFORNIA LICENSED STRUCTURAL ENGINEER ENGAGED BY THE BUILDING MANUFACTURER. BUILDING MANUFACTURER SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR REVIEW AND APPROVAL.

STRUCTURAL STAINLESS STEEL

1) STRUCTURAL STAINLESS STEEL SHALL CONFORM TO:
   A) STRUCTURAL SHAPES AND PLATES: ASTM A276/A276M AND ASTM A479/479M
   B) STRUCTURAL WELDING CODE - STAINLESS STEEL: AWS D1.6/D1.6M
   C) BOLTS AND NUTS: ASTM F593 AND ASTM F594
   D) ANCHOR BOLTS: ASTM F1554
2) ALL STRUCTURAL STAINLESS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISCE DESIGN GUIDE 27: STRUCTURAL STAINLESS STEEL.
3) ALL STRUCTURAL STAINLESS STEEL ERECTED WITH ANCHOR BOLTS SHALL BE PLUMBED AND LEVELED TO FINAL POSITION WITH DOUBLE NUTS. NO LEVELING PLATES SHALL BE USED.
4) BEAMS DETAILED WITHOUT SPECIFIC CAMBER SHALL BE FABRICATED SO THAT AFTER ERECTION ANY MINOR CHANGE DUE TO ROLLING OR SHOP ASSEMBLY SHALL BE UPWARD. TOPOF ALL MEMBERS SHALL BE CLEARLY IDENTIFIED.
5) STRUCTURAL STAINLESS STEEL WELDING:
   A) ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.6/D1.6M.
   B) ALL WELDING SHALL BE DONE BY AMERICAN WELDING SOCIETY (AWS) AND AISC CERTIFIED APPROVED WELDERS. CONTINUOUS INSPECTION IS REQUIRED FOR ALL FIELD WELDING. CONTINUOUS INSPECTION IS REQUIRED FOR ALL SHOP WELDING UNLESS FABRICATOR IS APPROVED BY BUILDING DEPARTMENT.
   C) WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.6/D1.6M AND APPROVED BY THE ENGINEER OF RECORD.
   D) DISCONTINUITIES IN WELD CREATED BY ERRORS OR BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND FLAME CUTTING, SHALL BE REPAIRED AS REQUIRED BY THE ENGINEER OF RECORD.
   E) ALL WELDING INSPECTORS SHALL BE BOTH A AWS CERTIFIED WELDING INSPECTOR AND APPROVED BY THE LOCAL AUTHORITY.

FOUNDATION NOTES

1. FOOTINGS HAVE BEEN DESIGNED TO THE FOLLOWING SPECIFIED PRESSURES IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY: PARIKH CONSULTANTS, INC DATED FEBRUARY 27, 2023

   STRIP FOOTINGS / SPREAD FOOTINGS
   $q_{allowable}$ = 2.0 KSF
2. SOIL CONDITIONS MUST BE APPROVED BY THE SOILS ENGINEER BEFORE CONCRETE FOOTING IS PLACED.
3. REFER TO GEOTECHNICAL REPORT FOR NON-STRUCTURAL FOOTING REQUIREMENTS.
4. FOOTING ELEVATIONS, IF SHOWN ON THE DRAWINGS, ARE FOR BIDDING PURPOSES ONLY. FOOTINGS WILL BE RAISED OR LOWERED DEPENDING ON BEARINGS CONDITIONS.
5. FOR GROUND ELEVATIONS AND DRAINAGE SLOPES - SEE ARCHITECT'S DRAWINGS.
6. UNDERPINNING AND DESIGN AND CONSTRUCTION OF OTHER MEASURES TO PROTECT ADJACENT PROPERTIES IS ENTIRELY THE RESPONSIBILITY OF THE CONTRACTOR AND ITS' TOTAL COST IS TO BE INCLUDED IN THIS CONTRACT.
7. UNLESS OTHERWISE SHOWN, CENTER FOOTINGS UNDER COLUMNS.
8 DOWELS SHALL BE PLACED BEFORE CONCRETE IS POURED. TEMPLATES SHALL BE USED TO ENSURE CORRECT PLACEMENT OF DOWELS.
16. ALLOWABLE COEFFICIENT OF FRICTION BETWEEN FOOTING CONCRETE AND UNDERLYING SOIL IS 0.4.
17. PASSIVE PRESSURE ON THE SIDE OF FOOTINGS FOR RESISTING LATERAL LOADS BASED ON AN EQUIVALENT FLUID WEIGHT OF 310 PCF.

STRUCTURAL QUALITY ASSURANCE PROGRAM

THIS QUALITY ASSURANCE PROGRAM HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE, INCLUDING THE REQUIREMENT FOR A STATEMENT OF SPECIAL INSPECTIONS.

THE QUALITY ASSURANCE PROGRAM IS REQUIRED TO BE PERFORMED IN ADDITION TO ANY PROCEDURES SUCH AS MATERIAL SAMPLING, TESTING AND INSPECTIONS THAT ARE CONDUCTED AS PART OF THE CONTRACTOR'S INTERNAL QUALITY CONTROL PROCESS. IT IS NOT INTENDED TO REPLACE THE PRIMARY RESPONSIBILITY OF THE CONTRACTOR FOR PROPER PERFORMANCE OF THE CONSTRUCTION. THE QUALITY ASSURANCE PROGRAM IS INTENDED FOR PURPOSES OF OVERSIGHT AND FAILURE OF THE OVERSIGHT PROCESS TO DETECT A DEFECT OR ERROR IN THE WORK DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR CORRECTING ANY RESULTING DEFICIENCY TO THE OWNER'S SATISFACTION.

QUALITY ASSURANCE PROCEDURES

THE QUALITY ASSURANCE PROGRAM INVOLVES THE FOLLOWING PROCEDURES:

1. INSPECTIONS BY ENFORCEMENT AGENCY
2. STRUCTURAL TESTS
3. SPECIAL INSPECTIONS
4. STRUCTURAL OBSERVATIONS

ABOVE PROCEDURES TO CONFORM WITH:

1. ASTM E-329-2021
2. 2022 CALIFORNIA CODE OF REGULATIONS
3. AISC 370
4. AISC 341
5. AISC 360
6. ACI 318

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

DIALOG

SURF! BUSWAY AND BRT

CALIFORNIA

MONTEREY COUNTY

NOT FOR CONSTRUCTION

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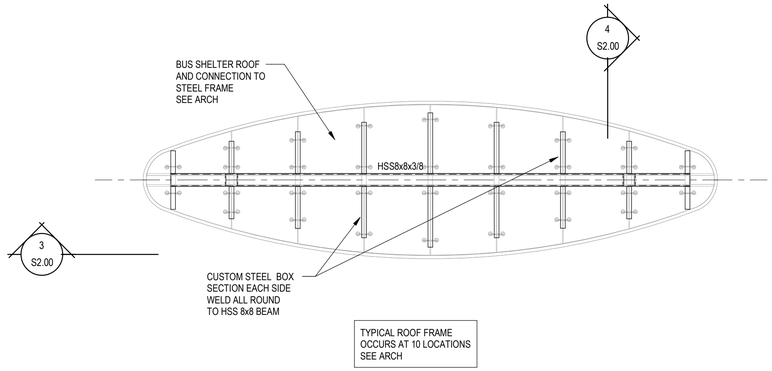
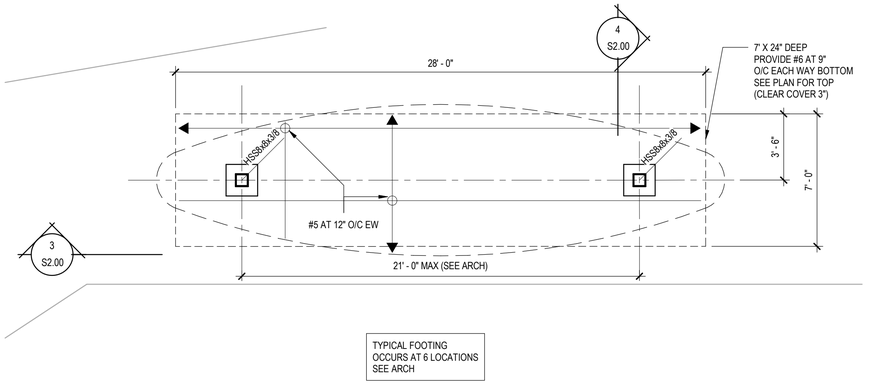
SHEET 615 OF 617



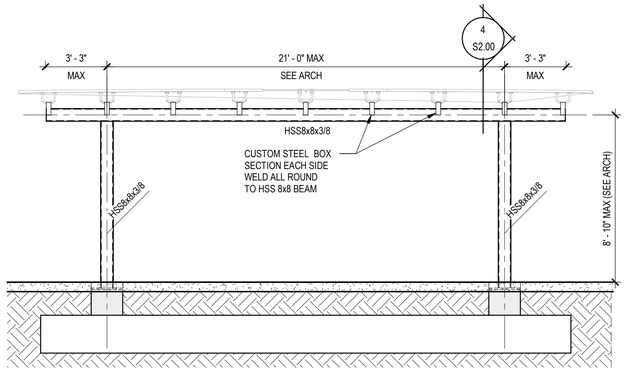
2 S2.00 BUS SHELTER ROOF FRAMING

SCALE: 1/4" = 1'-0"



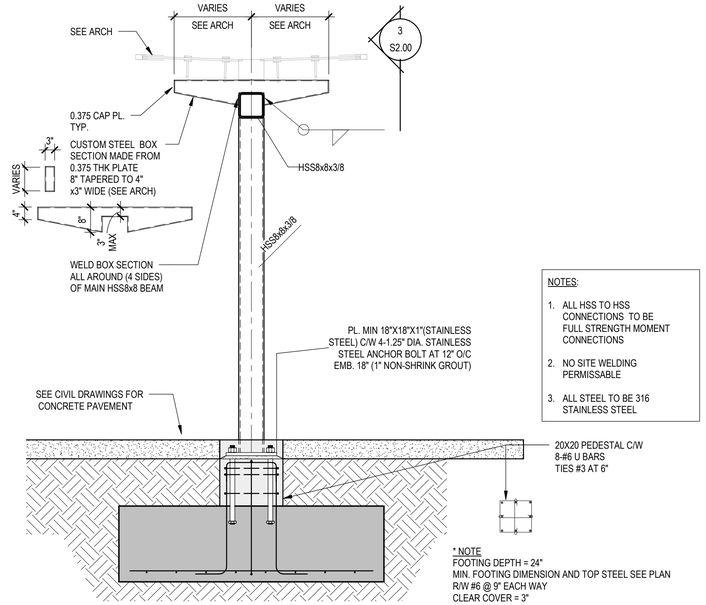
1 S2.00 BUS SHELTER FOOTING

SCALE: 1/4" = 1'-0"



3 S2.00 BUS SHELTER SECTION

SCALE: 1/4" = 1'-0"



4 S2.00 BUS SHELTER DETAIL (TYP)

SCALE: 1/2" = 1'-0"

95% DESIGN - NOT FOR CONSTRUCTION

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

DIALOG

SURF! BUSWAY AND BRT

MONTEREY COUNTY CALIFORNIA

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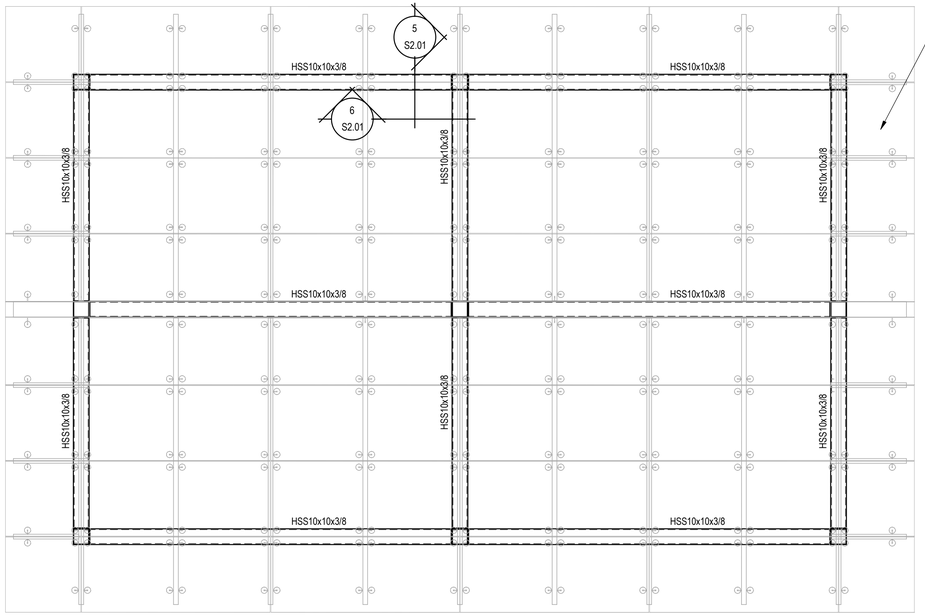
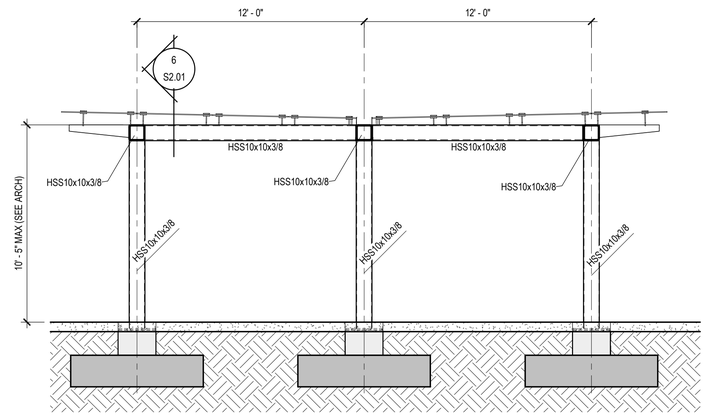
SHEET 616 OF 617



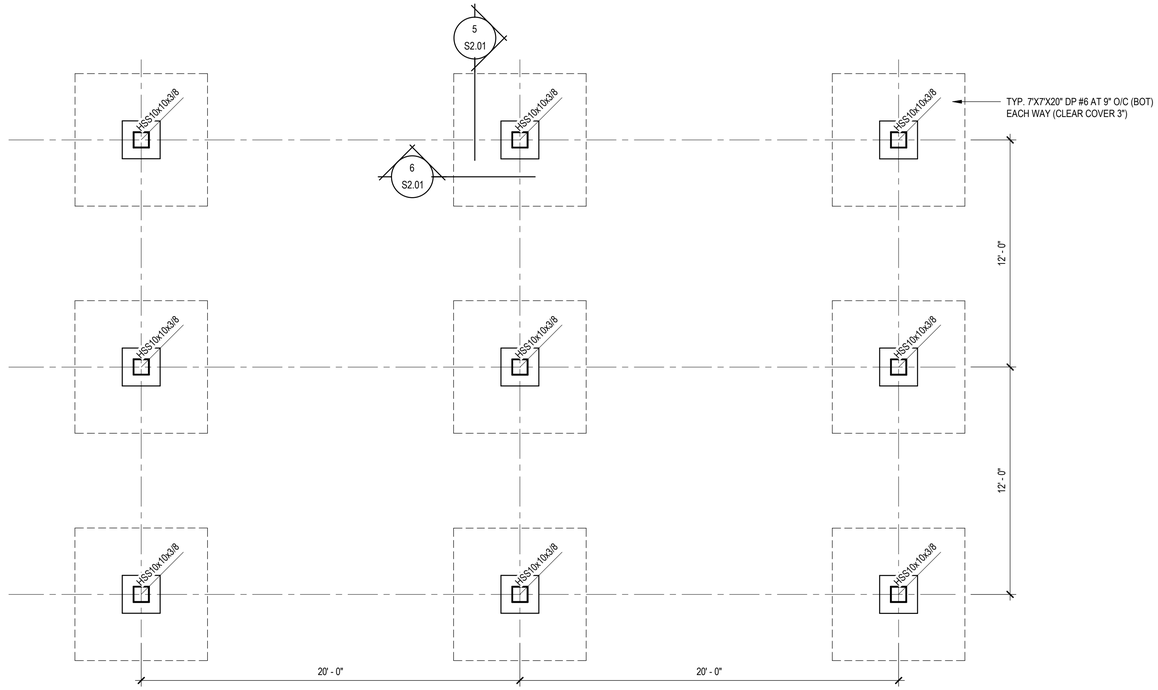
3 S2.01 BIKE HUB ROOF FRAMING

SCALE: 1/4" = 1'-0"



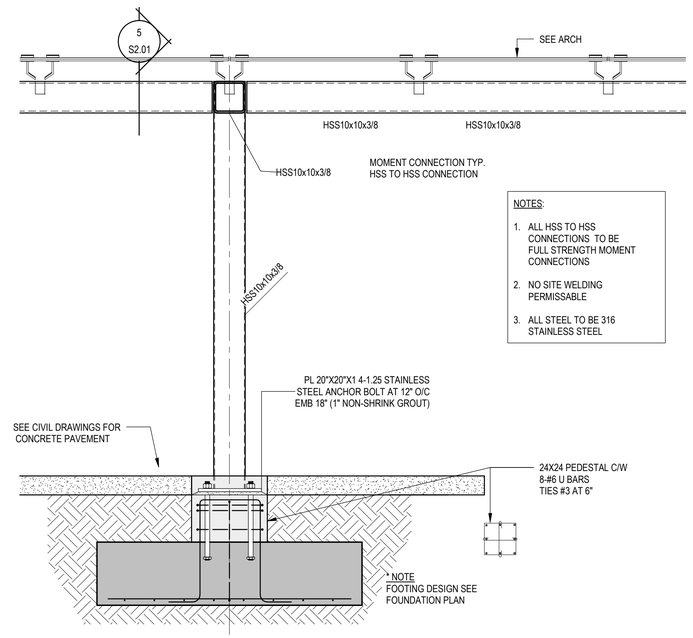
5 S2.01 BIKE HUB SECTION

SCALE: 1/4" = 1'-0"



1 S2.01 BIKE HUB FOOTING

SCALE: 1/4" = 1'-0"



6 S2.01 BIKE HUB DETAIL (TYP)

SCALE: 1/2" = 1'-0"

95% DESIGN - NOT FOR CONSTRUCTION

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PRELIMINARY

MST MONTEREY-SALINAS TRANSIT

TAMC TRANSPORTATION AGENCY FOR MONTEREY COUNTY

DIALOG

SURF! BUSWAY AND BRT

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SHEET 617 OF 617

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March 22, 2024

Anastazia Aziz, AICP
City of Sand City
1 Pendergrass Way
Sand City, CA 93955

RE: MST SURF! Busway CDP Application – Supplemental Material

Dear Ms. Aziz:

In response to the City's notice of incompleteness of September 28, 2023, MST provided detailed written responses dated January 5, 2024. Following submittal of that information, MST staff and consultants met with City staff via videoconference on January 18, 2024, to discuss remaining comments and concerns. The materials attached to this letter respond to the issues raised during the January 18 meeting. The substance of this material includes the following:

- **Environmentally Sensitive Habitat Area (ESHA) and Biological Resources**: Denise Duffy & Associates has prepared a memorandum that identifies the SURF! project's footprint in Sand City's coastal zone, identifies permanent and temporary impacts, shows the location of sensitive plant species and quantifies ESHA impacts and proposed mitigation. This information is provided at the City's request.

- **Updated Roundabout and Recreation Trail Connection Diagram**: MST's consultant team has provided the latest roundabout design concept at the California Avenue/Highway 1 southbound ramp/future Monterey Bay Shores entrance location. The diagram shows additional detail such as the crossing arm location, proposed signage, and trail markings where they cross the bus lanes near the roundabout. MST emphasizes that buses at this location in both directions will be at slow speed (between 0 and 10 mph) as they enter and exit the roundabout through controlled access points. The roundabout itself has a speed limit of 15 mph. The short crossing of the busway between the Monterey Peninsula Recreation Trail and the new Beach Range Road extension trail at this location will be marked with pavement markings and signage with clear visibility in both directions for both trail users and bus operators. The roundabout and its components are being designed in accordance with accepted design standards and in coordination with Caltrans for operational function and safety.

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As noted in MST's response document of January 5, 2024, no closure of the Monterey Peninsula Recreation Trail will occur in this location until the extension of the Beach Range Road Trail is completed as a parallel alternative. This will ensure that there is no interruption to trail through traffic or coastal access. An additional diagram has been provided showing proposed construction phasing, staging, and the temporary recreation trail closure in Sand City.

Thank you for your continued review and attention to MST's application. If you have any questions about the above comments, please do not hesitate to contact me at csedoryk@mst.org or 831-264-5001.

Sincerely,

DocuSigned by:
Carl Sedoryk
580C6BD24671488...

Carl G. Sedoryk
General Manager/CEO

CC: Todd Muck, Transportation for Monterey County
Zane Mortenson, City of Sand City

Attachments:
MST SURF! Project- ESHA Impacts (Sand City), DDA Memo 3-18-2024
Roundabout Signing and Pavement Marking
Multi-Use Access Staging for Roundabout Construction, Phases 1-3

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DENISE DUFFY & ASSOCIATES, INC.

PLANNING AND ENVIRONMENTAL CONSULTING

MEMORANDUM

Date: March 18, 2024

To: Michelle Overmeyer, Director of Planning and Innovation, Monterey-Salinas Transit

From: Erin Harwayne, AICP, DD&A

Subject: MST SURF! Project - ESHA Impacts (Sand City)

Introduction

This memo has been prepared to provide the City of Sand City (City) with additional information on the potential MST SURF! project impacts to ESHA, or environmentally sensitive habitat area, and the proposed mitigation ratios, as requested by the City in a meeting with MST on January 18, 2024. Specifically, the following memo describes the methods used to calculate project impacts and ESHA impacts, defines the impact categories, and identifies the potential ESHA impacts within the permit area in accordance with the definitions used by the California Coastal Commission (CCC).

#2. ENVIRONMENTALLY SENSITIVE HABITAT AREA (ESHA)

a. Area of ESHA Impacted

Project Footprint

Kimley-Horn (KH) reviewed the project's 95% complete design plans and updated the project limits of construction to include all permanent components associated with the project footprint (e.g., retaining walls, drainage infrastructure, roadway, bicycle/pedestrian trail, etc.) and all temporary components associated with the project (e.g., incidental grading outside the footprint, staging areas, drainage areas, construction access areas, etc.). In addition, KH differentiated the developed ballast and track areas within the permit area. Please see **Appendix A**, which provides an updated Impact Exhibit for the approximate 0.67-mile coastal permit area in Sand City. The exhibit illustrates CADD-based information and area calculations with refined linework from the 95% plan set. This exhibit provides a more focused presentation of the project footprint in this area, including all areas of permanent impacts for bus lanes, retaining walls, and hard infrastructure, as well as areas of temporary impacts.

The construction phasing has been designed to minimize impacts by keeping within the 100-foot-wide Transportation Agency for Monterey County (TAMC) corridor and avoiding adjacent sensitive habitat areas and utilizing developed areas for staging areas. Staging and movement of construction equipment will occur in a linear manner as much as possible within the footprint of the proposed bus lanes to reduce the amount of temporary impacts.

KH provided DD&A with the CADD files used to create the updated Impact Exhibit. DD&A converted the CADD files into GIS format to overlay the existing biological resources data and determine the biological resources that may be permanently and temporarily impacted by the proposed project.

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Impact Analysis

Project Impacts within Sand City Permit Area

The project footprint consists of temporary and permanent impact areas within the 100-foot-wide TAMC corridor. These areas are delineated as shown in the Impact Area Exhibit (**Appendix A**).

The impact definitions applied in this analysis follow those described by Dr. Lauren Garske-Garcia, Ph.D., Senior Ecologist for the CCC, in a memorandum dated October 8, 2020. As described in the memorandum, in the past, the CCC has generally considered two categories of impacts: temporary and permanent. "Temporary" has typically referred to those impacts where there is no significant ground disturbance or killing of native vegetation[1] and the vegetation recovers to its pre-disturbance state within one year[2]; everything else has been considered "permanent." Temporary impacts are generally brief and small, occurring on the order of a few weeks and over an area less than a quarter acre. On occasion, the CCC has recognized a third category, which acknowledges cumulative functional loss due to impacts sustained over longer construction periods and/or larger areas, even when they can recover quickly once construction ends.

Dr. Garske-Garcia's memorandum identified and defined three impact categories that may be applicable to projects that have a construction phase extending over two years, including areas where the vegetation is likely capable of recovering quickly. The impact categories are as follows:

- All temporary impacts require that 1) there be no significant ground disturbance and 2) that vegetation recovers to comparable age classes and/or size structure distributions by the end of the designated period, where:
    - Short-term temporary impacts are those where vegetation recovery occurs within 12 months of the *initial* point of disturbance;
    - Long-term temporary impacts are those that may be intermittent or sustained for up to a 24-month period such that vegetation recovery may require more than 12 months from the *initial* point of disturbance but no more than 12 months from the *conclusion* point of disturbance, thus effectively allowing for as much as 36 months to fully recover.
- Permanent impacts include areas or key ecological functions that would be lost to development, frequently disturbed in order to maintain development, involve significant ground disturbance, or necessitate more than 12 months for recovery following the conclusion of disturbance.

[1] Ground disturbance is important to consider from an ecological perspective because it can affect resources and environmental properties such as seed banks, microtopography and superficial microhabitat, animal burrows, soil horizons, root zones, mycorrhizal and bacterial assemblages, and hydrology or drainage patterns. Similarly, it is important for native vegetation to persist rather than be replaced by non-native species or bare ground that then becomes available to competitive non-native species.

[2] Vegetation recovery to a pre-disturbance state, generally recognized by age classes and/or size structure distribution, is important because that condition is what establishes the foundation for the existing ecosystem. For example, perennial and woody species provide habitat structure serving as shelter, food sources, wind breaks, etc. Larger, more mature plants with established roots help stabilize substrate and reduce erosion, can allow the space for successional processes, and contribute to habitat mosaics, which in turn foster resilience and biodiversity. Heterogeneous distributions can provide diverse habitat opportunities and in turn, support more diverse and resilient ecosystems than their homogeneous counterparts.

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The definitions recognize that **ecology is more than a function of space** and allows for accounting of temporal losses to ecological functions. Successional processes, plant maturity, seed banks, and soil development are all examples of functions that may require years to recover, even from temporary disturbances. Other functions, like drainage patterns, may be permanently altered or lost in the course of nearby development.

For planning and analysis purposes, we are assuming that all temporary impacts shown in the Impact Exhibit (**Appendix A**) are categorized as "long-term temporary" impacts. This is because these areas would require minor grading for shoulders and drainage areas, but would not be paved. Over time, it is expected that these temporarily impacted areas would revert back to baseline conditions within 12 months from the *conclusion* point of disturbance. Construction activities within these temporarily impacted areas are expected to occur intermittently and may be sustained for up to 24 months, and, therefore, it is unlikely that vegetation recovery would not occur within 12 months of the *initial* point of disturbance. Therefore, the temporary impact areas within the Sand City Permit Area are categorized as long-term temporary impacts.

As mentioned above, the proposed grading activities in the long-term temporary impact areas would be minor and associated with constructing shoulder or drainage areas; other areas within the long-term temporary impact areas would be used for access and staging and not require grading. Thus, the proposed grading activities would not result in "significant" ground disturbance and these areas would be recolonized within the required timeframe to meet the definition of "long-term temporary." As a result, this analysis applies the long-term temporary impact category to identify impacts to ESHA. It should also be noted that work in temporarily impacted areas may have a secondary benefit in locations where invasive iceplant would be removed.

All other impacts within the Sand City Permit Area are categorized as "permanent" as they would be permanently lost to development, frequently disturbed in order to maintain development, involve significant ground disturbance, or necessitate more than 12 months for recovery following the conclusion of disturbance. Permanent impacts as shown in this memo include the bicycle/pedestrian path within Sand City.

As shown in **Appendix A**, the project footprint is based on 95% design plans and totals approximately **5.48 acres**, which is comprised of the following:

- Permanent Impact Area (yellow and green): **3.30 acres**
  - SURF! Project (yellow): 2.78 acres
  - Bicycle/pedestrian trail (green): 0.52 acre
- Long-Term Temporary Impact Area (blue): **2.18 acres**

The developed ballast and track area (red outline depicted in **Appendix A**) within the 100-foot-wide TAMC corridor totals approximately 1.13 acres. Within the project footprint, there are 0.97 acre of developed ballast and track areas that overlap with permanent and temporary impact areas (please refer to **Table 2**).

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Vegetation Impacts within the Sand City Permit Area

Three vegetation types were mapped within the Sand City Permit Area (**Figure 1**). Additionally, portions of the permit area are developed ballast and track areas. **Table 2** provides the acreages of these vegetation types and developed areas within the long-term temporary and permanent impact areas of the Sand City Permit Area.

Table 2. Vegetation Types in Sand City Permit Area

Vegetation Type	Long-Term Temporary Impact Area (ac)	Permanent SURF! Impact Area (ac)	Permanent Bicycle Trail Impact Area (ac)	Total (ac)
Developed/Ballast and Track Areas	0.40	0.54	0.03	0.97
Ruderal	1.72	2.04	0.49	4.25
Coastal Scrub	0.06	0.20	0	0.26
TOTAL	**2.18**	**2.78**	**0.52**	**5.48**

Special-Status Species Impacts within the Sand City Permit Area

Focused botanical surveys for Smith's blue butterfly habitat (i.e., coast and seacliff buckwheat) and special-status plant species were conducted in 2020. Individual plants or populations of five or fewer individuals were mapped as a point and a count of the number of individual plants was documented. Populations included all individuals within approximately three feet of another individual; individual plants further than three feet apart were mapped as a separate polygon or point. In accordance with the methods identified in the most recent CCC staff report regarding development in dune ESHA in the project vicinity (A-3-MRA-19-0034 and 9-20-0603, Cal-Am Desalination, available on the CCC's November 17, 2022, archived agenda at: https://www.coastal.ca.gov/meetings/agenda/#/2022/11[3]), DD&A applied a 2-foot buffer around the coast and seacliff buckwheat points to estimate the areal cover of individuals within the Sand City Permit Area and estimate the total areal cover of SBB habitat within the Sand City Permit Area. **Table 3** quantifies the SBB habitat that was observed within the Sand City Permit Area during the surveys. **Figure 2** identifies the location of SBB habitat within the Sand City Permit Area.

[3] An appendix to the staff report identified that a 1-foot buffer was applied around Monterey spineflower points and a 1- to 15-foot buffer was applied around points of all other species, depending on species type. Since the specific buffer for other species was not given, DD&A determined a 1-foot buffer for herbs (consistent with the Monterey spineflower buffer) and 2-foot buffer for shrubs which, taken with DD&A survey methodology of mapping new points every three feet, would capture all occurrences of such species and provide an accurate estimate of areal cover.

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Table 3. Potential Smith's Blue Butterfly Habitat within Sand City Permit Area

	Long-Term Temporary Impact Area			Total Permanent Impact Area Bike Trail in Blue****			Total Areal Cover*** (long-term temporary and permanent impact areas)
Species	*Polygon Area*	*# of Individuals/ Areal Cover**	***Total Areal Cover*****	*Polygon Area*	*# of Individuals/ Areal Cover**	***Total Areal Cover*****	
Coast and seacliff buckwheat	202 sf	6 ind./ 50 sf	**252 sf (0.01 ac)**	653 sf 93 sf	17 ind./ 109 sf	**762 sf (0.02 ac)** 93 sf (<0.01 ac)	**1,014 sf (0.02 ac)**

* areal cover estimated based on 2-foot buffer around buckwheat points
** total areal cover estimated by combining acreage of polygons and areal cover of points
*** acreage does not add up due to rounding
****bike trail acreages are included as part of total permanent impact area acreages

Special-Status Plant Species

Focused botanical surveys for special-status plant species were conducted during the appropriate blooming period for all species with the potential to occur within the project site, including the Sand City Permit Area, in April, May, and June 2020. Individual plants or populations of five or fewer individuals were mapped as a point and a count of the number of individual plants was documented. Populations included all individuals within approximately three feet of another individual; individual plants further than three feet apart were mapped as a separate polygon or point. In accordance with the methods from the CCC staff report referenced above, DD&A applied a 1-foot buffer around Monterey spineflower points, and a 2-foot buffer around sandmat and Hooker's manzanita points to estimate the areal cover of individuals, and estimate the total areal cover of these species within the Sand City Permit Area.[4] **Table 4** quantifies the special-status plant species that were observed within the Sand City Permit Area during the surveys. **Figure 2** identifies the location of each species within the Sand City Permit Area.

Table 5 summarizes the total areal cover of special-status plant species and habitat for SBB within the Sand City Permit Area.

[4] Ibid.

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Table 4. Special-Status Plant Species within Sand City Permit Area

	Long-Term Temporary Impact Area			Permanent Impact Area Bike Trail in Blue****			Total Areal Cover*** (long-term temporary and permanent impact areas)
Species	*Polygon Area*	*# of Individuals/ Areal Cover**	***Total Areal Cover****	*Polygon Area*	*# of Individuals/ Areal Cover**	***Total Areal Cover****	
Hooker's manzanita	0	0	**0**	0	1 ind./12 sf	**12 sf (<0.01 ac)**	**12 sf (<0.01 ac)**
Sandmat manzanita	268 sf (0.01 ac)	6 ind./ 77 sf	**345 sf (0.01 ac)**	611 sf (0.01 ac) 84 sf (<0.01 ac)	4 ind./48 sf 1 ind./12 sf	**659 sf (0.02 ac)** 96 sf (<0.01 ac)	**1,004 sf (0.02 ac)**
Monterey spineflower	818 sf (0.02ac)	0	**818 sf (0.02ac)**	2,866 sf (0.07 ac)	13 ind./15 sf	**2,881 sf (0.07 ac)**	**3,699 sf (0.08 ac)**

* areal cover estimated based on 1-foot buffer around Monterey spineflower and coast wallflower points and a 2-foot buffer around sandmat manzanita points
** total areal cover estimated by combing area of polygons and areal estimate of points
*** some acreages do not add up due to rounding
****bike trail acreages are included as part of total permanent impact area acreages

Table 5. Areal Cover of Special-Status Plant Species and SBB Habitat within Sand City Permit Area

Species	Long-Term Temporary Impacts	Permanent SURF! Impacts	Permanent Bicycle Trail Impacts	TOTAL
Hooker's manzanita	0	<0.01 ac	0	**<0.01 ac**
Sandmat manzanita	0.01 ac	0.02 ac	<0.01 ac	**0.02 ac**
Monterey spineflower	0.02 ac	0.07 ac	0	**0.08 ac**
Coast and seacliff buckwheat	0.01 ac	0.02 ac	<0.01 ac	**0.02 ac**
Total (Excluding Overlap)	**0.03 ac**	**0.10 ac**	<0.01 ac	**0.13 ac**

Sensitive Habitat Impacts within the Sand City Permit Area

The project site was evaluated for the presence of sensitive habitats. Areas within the Sand City Permit Area that may be considered ESHA include habitat for the SBB (i.e., buckwheat; see **Figure 2**) and areas supporting rare plants. As described above, coastal scrub is not designated as a sensitive habitat by CDFW.

Environmentally Sensitive Habitat Area Impacts

An Environmentally Sensitive Habitat Area (ESHA) is a designated protected area within the Coastal Zone defined in the California Coastal Act (CCA) as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could easily be disturbed or degraded by human activities and developments" (Public Resources Code [PRC] Section 30107.5). Section 30240 of the PRC further states that ESHA "shall be protected against any significant disruption of habitat values, and only uses dependent on those resources should be allowed within those areas."

The project footprint, including long-term temporary and permanent impact areas, within the Sand City Permit Area is approximately 5.48 acres. The application of the definition of ESHA in the CCA yielded the

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areas observed to be ESHA and are mapped using GIS accuracy and presented in **Table 6**. Ground cover within the project footprint in the Coastal Zone that did not meet published criteria for defining ESHA consists of the developed ballast and track area that does not contain any special-status species, which totals approximately 0.95 acres, and, therefore, is not included in the tables below as ESHA.

Table 6. Potential ESHA Habitat Impacts

Habitat Type	Long-Term Temporary Impacts (ac)	Permanent SURF! Impacts (ac)	Permanent Bicycle Trail Impacts (ac)	TOTAL (ac)
Coastal Scrub	0.06	0.20	0	0.26
Ruderal	1.72	2.04	0.49	4.25
Developed/Ballast and Track Area (*areal cover that contains special-status species**)	0.01	0.01	<0.01	**0.02**
Total Potential ESHA Habitat Impacts	**1.79**	**2.25**	**0.49**	**4.53**
**Areal cover that does not contain special-status species is 0.95 acre (0.39 acre within long-term temporary impact areas and 0.56 acre within permanent impact areas)*				

Mitigation

The following mitigation assumptions were established during the determination of biological resource impacts associated with the implementation of the proposed project.

- In accordance with the Sand City LCP, any sandmat manzanita or Monterey ceanothus plants within the Habitat Area 5 (identified in the LCP) will be transplanted to Habitat Area 4 (identified in the LCP) or another suitable area of the coastal zone prior to construction.
- Long-term temporary and permanent impacts to biological resources (excluding permanent impacts associated with the bicycle trail) will be mitigated differently, with permanent impacts requiring greater mitigation. MST is requesting that the City waive mitigation requirements for the bicycle trail because the trail is not essential to the project and was added at the City's behest.
- As described in the "Impact Analysis" above, long-term temporary impacts will be defined as construction impacts that can be fully restored to pre-disturbance conditions for most species following construction completion. Long-term temporary impacts will be intermittent or sustained for up to a 24-month period such that vegetation recovery may require more than 12 months from the *initial* point of disturbance but no more than 12 months from the *conclusion* point of disturbance, thus effectively allowing for as much as 36 months to fully recover. Long-term temporary impacts will include construction staging, laydown, access, and other areas that will not be occupied by permanent facilities during project operation; these activities would not require significant grading or soil disturbance, which would allow plants to re-establish in these areas.
- Permanent impacts will be defined as those impacts having lasting effects beyond the project construction period or those that cannot be fully restored following construction completion.

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Permanent impacts include areas that will be filled, paved, or covered by structures (walls and paved travel lanes).

After the completion of extensive biological resource surveys within the project site and vicinity, MST modified numerous elements of the project to avoid and minimize, to the maximum extent feasible, the impact on any biological resource with the potential to occur within the project footprint, including but not limited to placing permanent infrastructure within existing disturbed and developed areas where feasible, designing to limit the need for retaining walls, and using soldier pile construction techniques to minimize the project footprint and associated disturbance. The remaining biological resource impacts will be further reduced through implementation of avoidance, minimization, and mitigation measures identified in the Final Biological Report, IS/MND, MMRP, and USFWS Biological Opinion (BO). Within the Sand City Permit Area, impacts from the project to some sensitive biological resources are unavoidable. These affected biological resource impacts are shown in **Figure 2**. As described above, project impacts were calculated in acres, and individuals where applicable, using GIS technology based on the results of biological field surveys to determine the areal extent of the project footprint impact on each biological resource present.

Table 7 provides a list of long-term temporary and permanent project impacts to special-status wildlife, plants, and habitats. ***These values overlap geographically and, therefore, are not additive***. The following mitigation ratios were established based on the IS/MND requirements and the USFWS BO. In addition, per the request of the CCC, the most recent CCC staff report regarding development in dune ESHA in the project vicinity (A-3-MRA-19-0034 and 9-20-0603, Cal-Am Desalination, available on the CCC's November 17, 2022, archived agenda at: https://www.coastal.ca.gov/meetings/agenda/#/2022/11) and Dr. Garske-Garcia's memo were reviewed. Specifically, the staff report and memo identified that the minimum mitigation ratio for short-term temporary ESHA impacts is 1:1, for long-term temporary impacts it is 1.5:1, and for permanent impacts it is 3:1 (which includes the 1:1 dune habitat creation, with a remainder of 2:1 for all other permanent impacts).

These ratios determine the size of an area that will be restored to compensate for impacts to special-status species and their habitats. Mitigation ratios for long-term temporary and permanent impacts to special-status species, their habitats, and ESHA are identified in **Table 8**. With the exception of the developed ballast and track areas, the mitigation ratios identified in Dr. Garske-Garcia's memo are applied. Due to the developed nature of the ballast and track areas, and, thus, the overall low habitat quality and value, limited amount of suitable habitat for sensitive resources available, and the minimal amount of sensitive resources present, a 1.5:1 mitigation ratio was applied. Based on the impact acreages presented in **Table 7** and the mitigation ratios presented in **Table 8**, the required mitigation acreage for each biological resource was calculated and is summarized in **Table 9**. It is important to note that federally listed species (buckwheat and Monterey spineflower) were quantified for the entire SURF! project within the project's approved BO. MST will address mitigation for federally listed species as specified in the BO, which will likely take place as a cohesive mitigation unit outside of Sand City.

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Table 7. Long-Term Temporary and Permanent Impacts to Special-Status Species and Habitats

Resource Type	Temporary Long-Term Impacts (ac)	Permanent SURF! Impacts (ac)	TOTAL (ac)
TOTAL ESHA*	**1.79**	**2.25**	**4.04**
Coastal Scrub	0.06	0.20	**0.26**
Ruderal	1.72	2.04	**3.76**
Developed Ballast and Track (containing special-status species)	0.01	0.01	**0.02**
Smith's blue butterfly (potential habitat)	0.01	0.02	**0.02**
Hooker's manzanita	0	<0.01	**<0.01**
Sandmat manzanita	0.01	0.02	**0.02**
Monterey spineflower	0.02	0.07	**0.08**

**The total ESHA habitat acreage consists of the acreage of the three undeveloped vegetation types (i.e., dune scrub, coastal scrub, and ruderal vegetation) plus the acreage of developed ballast and track area that contains special-status species or habitat for those species (i.e., buckwheat). While coastal scrub and ruderal vegetation types are not considered or designated as sensitive habitats, the sensitive species identified in the table occur within each of these three vegetation types. Therefore, coastal scrub and ruderal vegetation types meet the definition of ESHA as they support sensitive species.*

Table 8. Mitigation Ratios by Biological Resource and Impact Category

Biological Resource	Long-Term Temporary Impact Mitigation Ratio	Permanent SURF! Impact Mitigation Ratio
Coastal Scrub	1.5:1	3:1
Ruderal	1.5:1	3:1
Developed Ballast and Track Areas (containing special-status species)	1.5:1	1.5:1
Hooker's manzanita	1.5:1	3:1
Sandmat manzanita	1.5:1	3:1
Monterey spineflower	1.5:1	3:1
Smith's Blue Butterfly (habitat)	1.5:1	3:1
TOTAL ESHA	**1.5:1**	**3:1**

Table 9. Mitigation Requirements by Biological Resource and Impact Category

Resource Type	Temporary Long-Term Impacts (ac)[1]	Mitigation Area for Temporary Impacts (ac)	Permanent SURF! Impacts (ac)	Mitigation Area for Permanent Impacts (ac)	Total Mitigation Area (ac)
Coastal Scrub	0.06	**0.090**	0.20	**0.600**	**0.690**
Ruderal	1.72	**2.580**	2.04	**6.120**	**8.700**
Developed w Special-Status Species	0.01	**0.015**	0.01	**0.015**	**0.030**
Smith's Blue Butterfly (habitat)	0.01	**0.015**	0.02	**0.060**	**0.075**
Hooker's manzanita	0	**0**	<0.01 (12 sf)	**<0.01 (36 sf)**	**<0.01 (36 sf)**
Sandmat manzanita	0.01	**0.015**	0.02	**0.060**	**0.075**
Monterey spineflower	0.02	**0.030**	0.07	**0.210**	**0.240**
TOTAL ESHA	**1.79**	**2.69**	**2.25**	**6.74**	**9.42**

[1] Impact and mitigation acreages do not account for overlapping areas between biological resources, and, therefore, are not additive. For example, all the biological resources identified fall within the ESHA acreage totals.

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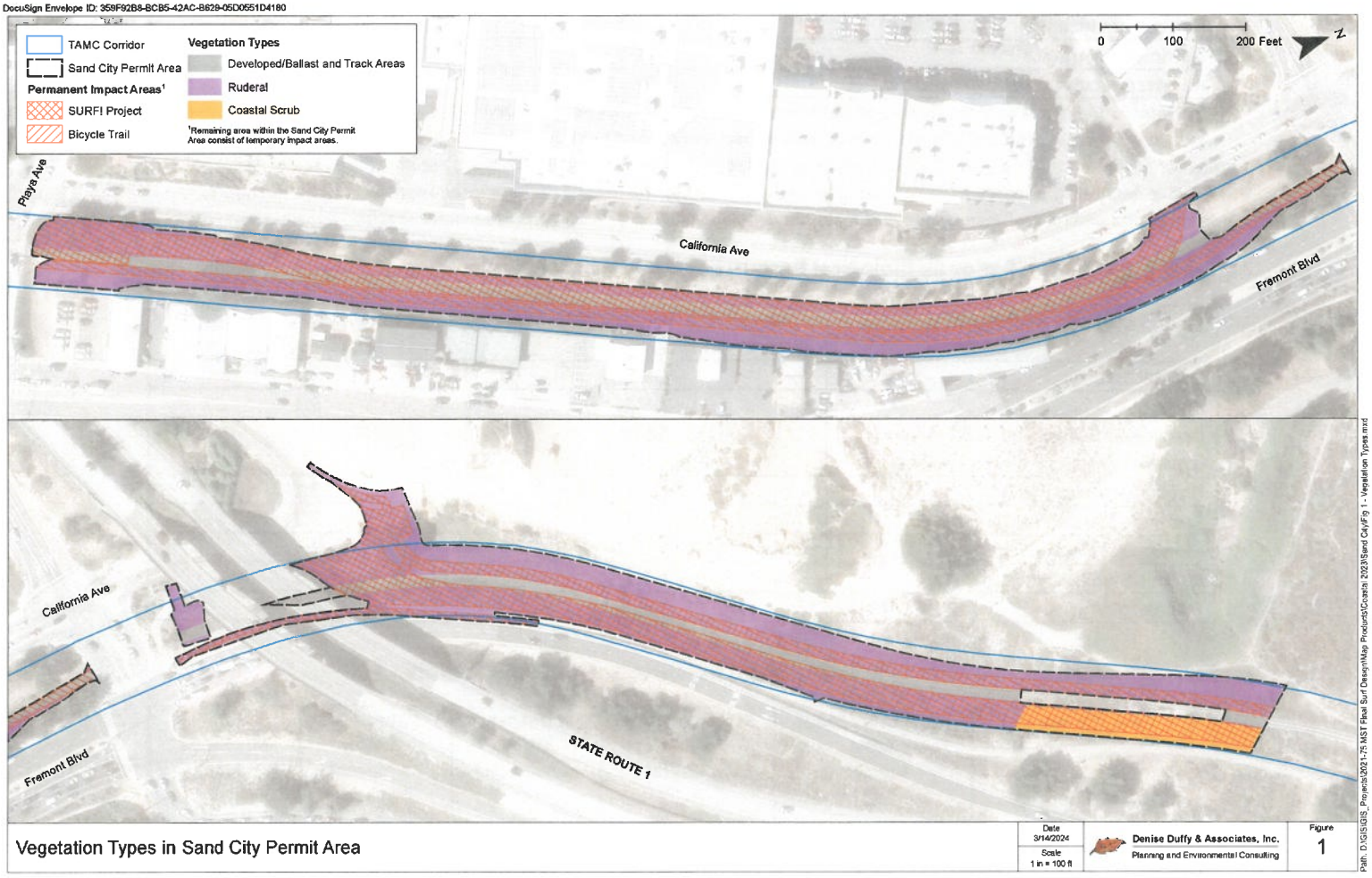

Vegetation Types in Sand City Permit Area

Date 3/14/2024
Scale 1 in = 100 ft

Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure 1

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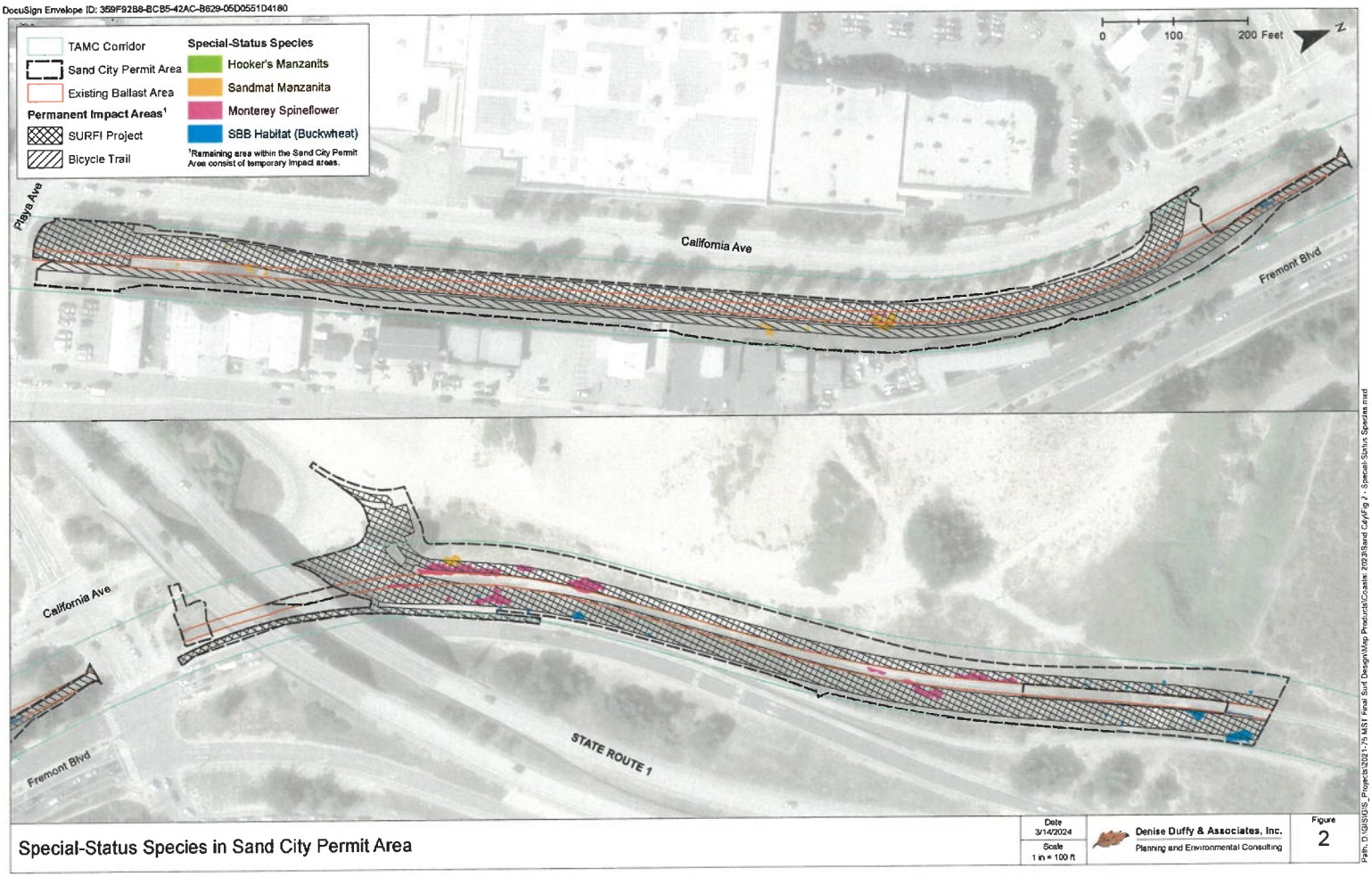

Special-Status Species in Sand City Permit Area

Date	Scale	Figure
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Planning and Environmental Consulting

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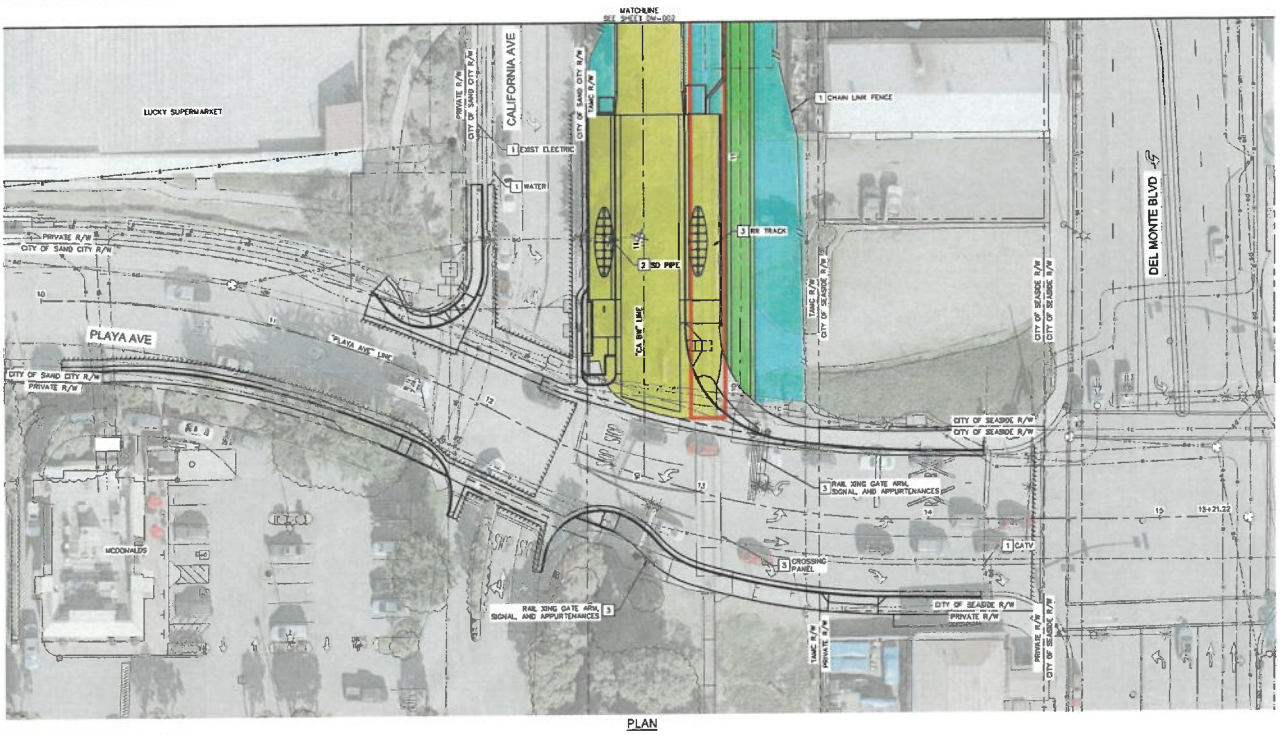
APPENDIX A
PROJECT IMPACT AREAS



DEMOLITION NOTES / LEGEND

1. PROTECT IN PLACE
2. REMOVE AND DISPOSE
3. REMOVE AND SALVAGE (BASE MATERIAL ONLY)

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- PERMANENT BIKE IMPACT AREA
- TRACK/BALLAST AREA

GRAPHIC SCALE IN FEET
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90% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
DEMOLITION SHEET 1 OF 27
MONTEREY COUNTY CALIFORNIA

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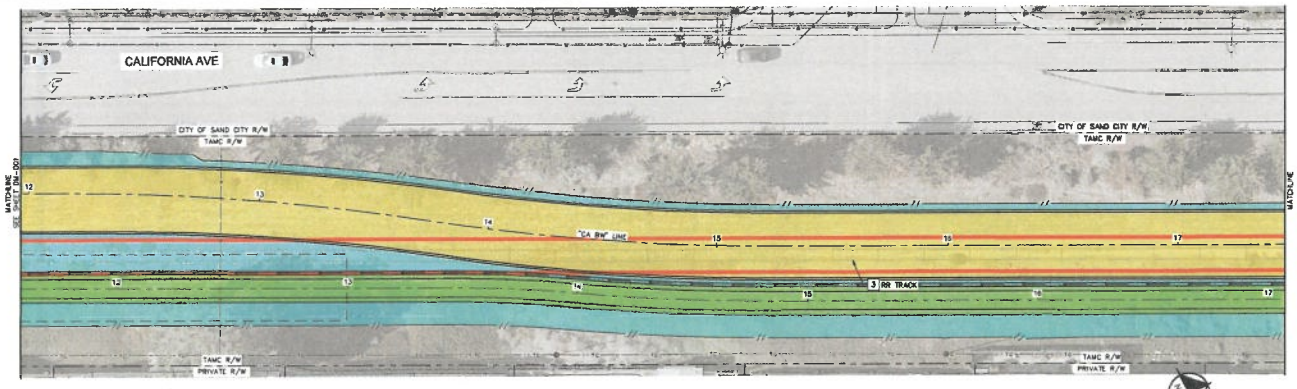

PLAN

DEMOLITION NOTES / LEGEND

2 REMOVE AND DISPOSE

3 REMOVE AND SALVAGE (BASE MATERIAL ONLY)

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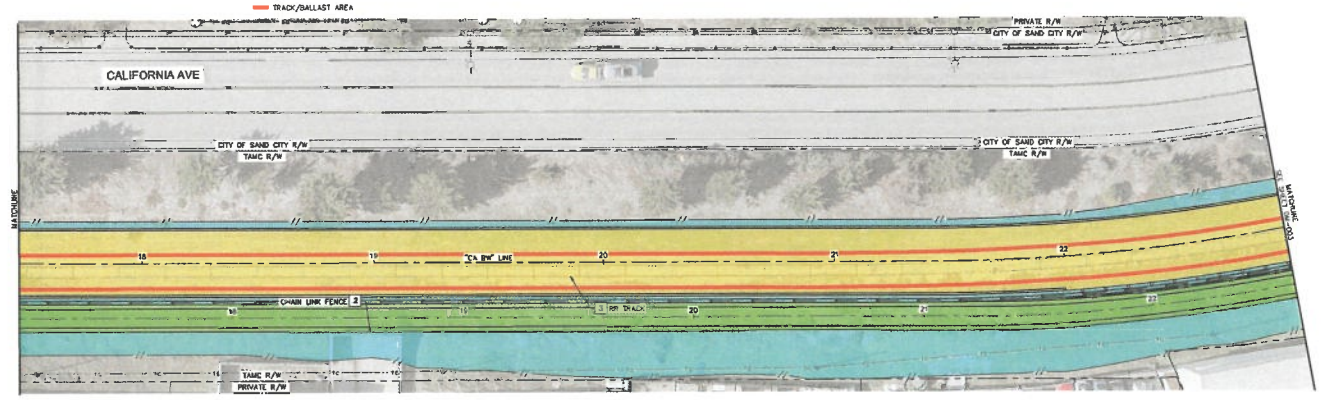
PERMANENT IMPACT AREA

PERMANENT BIKE IMPACT AREA

TRACK/BALLAST AREA



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DEMOLITION SHEET 2 OF 27
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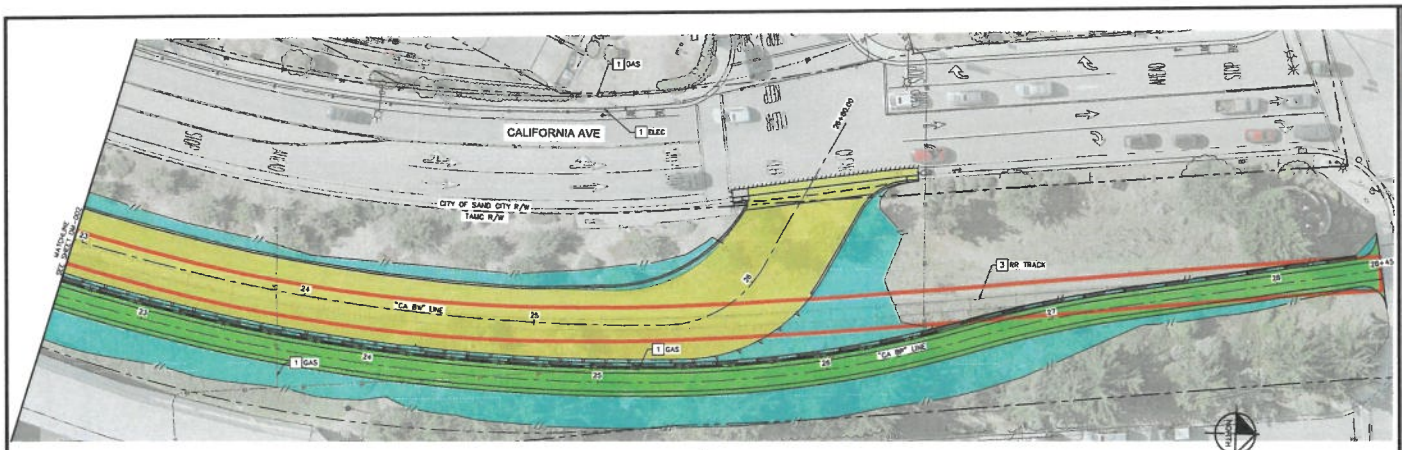

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DEMOLITION NOTES / LEGEND

1 PROTECT IN PLACE

3 REMOVE AND SALVAGE (BASE MATERIAL ONLY)

TEMPORARY IMPACT AREA

PERMANENT IMPACT AREA

PERMANENT BIKE IMPACT AREA

TRACK/BALLAST AREA

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MONTEREY COUNTY CALIFORNIA

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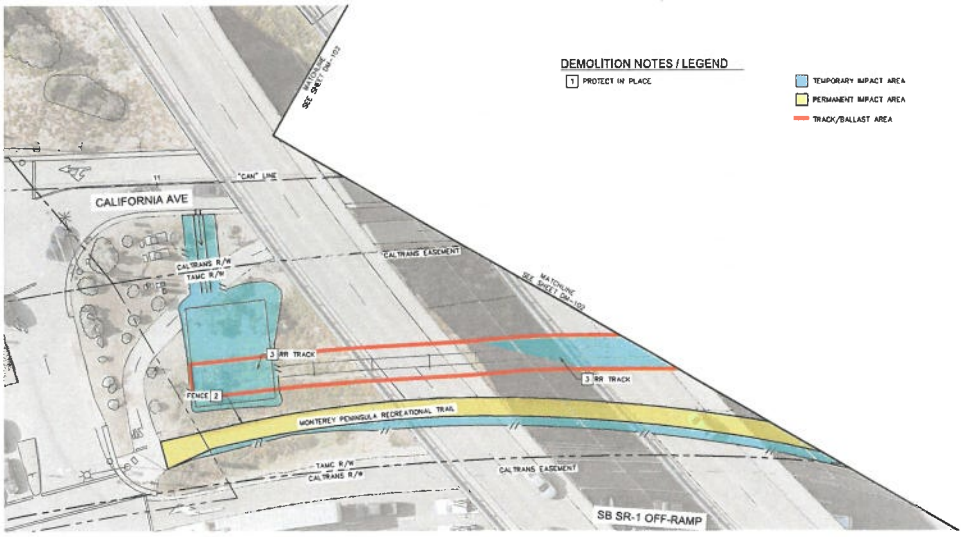

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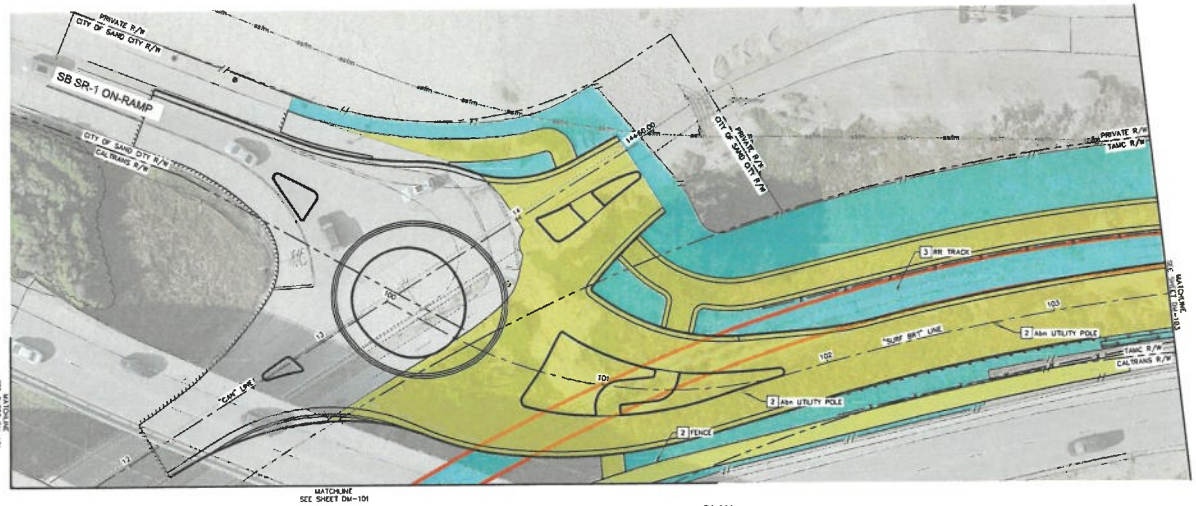

PLAN

DEMOLITION NOTES / LEGEND

- [2] REMOVE AND DISPOSE
- [3] REMOVE AND SALVAGE (BASE MATERIAL ONLY)

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- TRACK/BALLAST AREA

GRAPHIC SCALE IN FEET
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90% DESIGN - NOT FOR CONSTRUCTION

SURF! BUSWAY AND BRT PROJECT
DEMOLITION SHEET 5 OF 27
MONTEREY COUNTY CALIFORNIA

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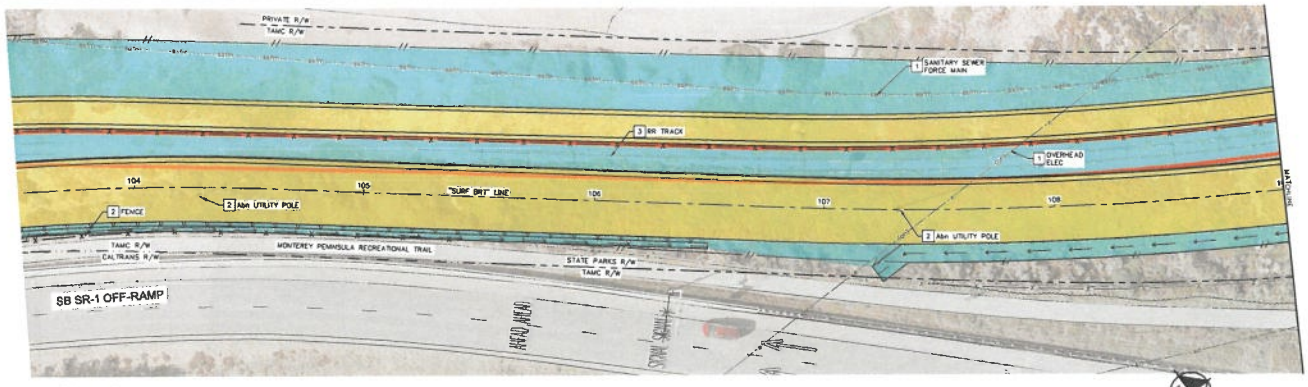
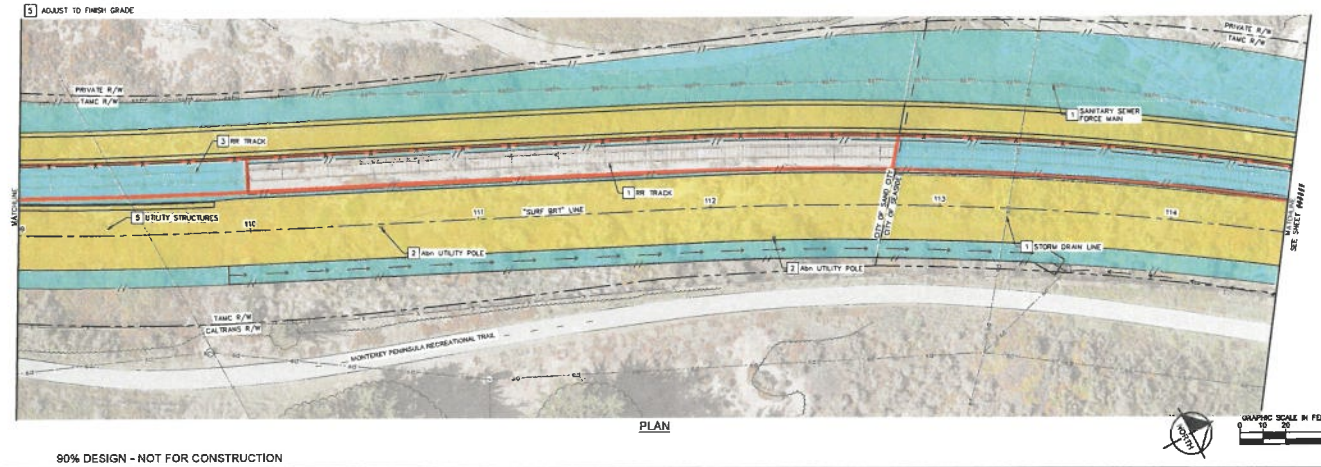


PLAN

DEMOLITION NOTES / LEGEND

1 PROTECT IN PLACE
2 REMOVE AND DISPOSE
3 REMOVE AND SALVAGE (BASE MATERIAL ONLY)
5 ADJUST TO FINISH GRADE

TEMPORARY IMPACT AREA
PERMANENT IMPACT AREA
TRACK/BALLAST AREA



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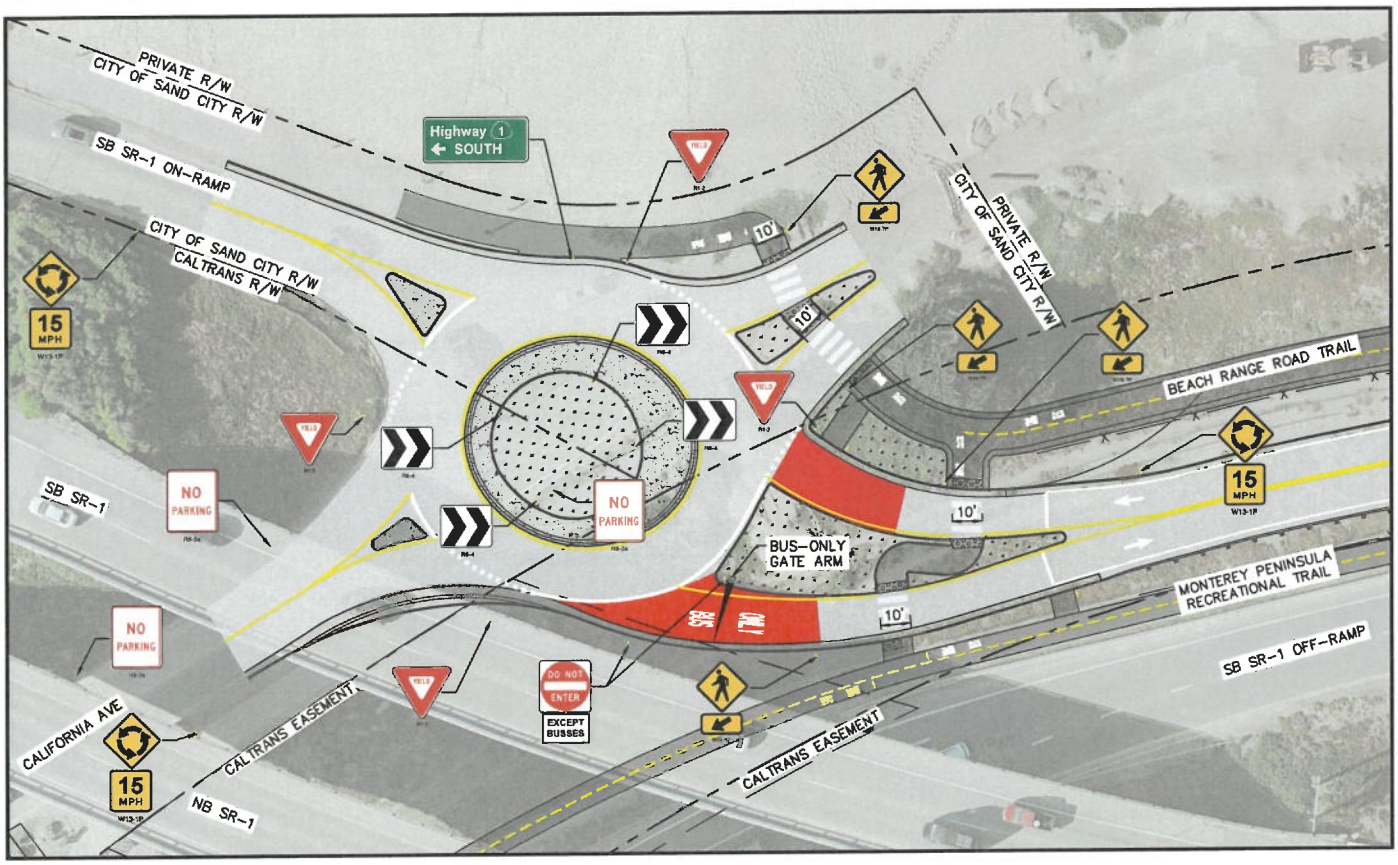

Kimley»Horn

March 2024

ROUNDABOUT SIGNING AND PAVEMENT MARKING
MST SURF! BRT

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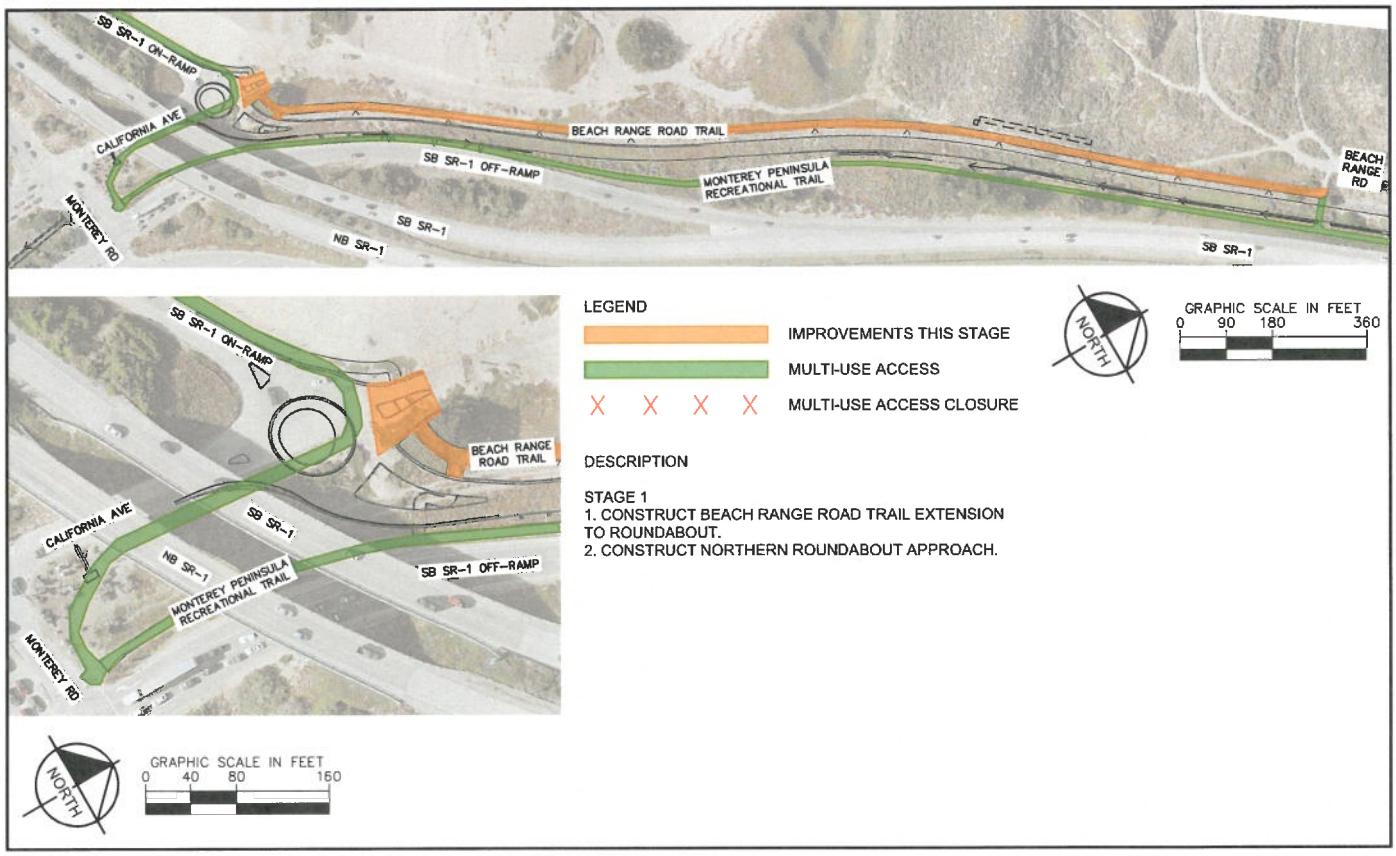

Kimley»Horn

March 2024

MULTI-USE ACCESS STAGING FOR ROUNDABOUT CONSTRUCTION - PHASE 1

MST SURF! BRT

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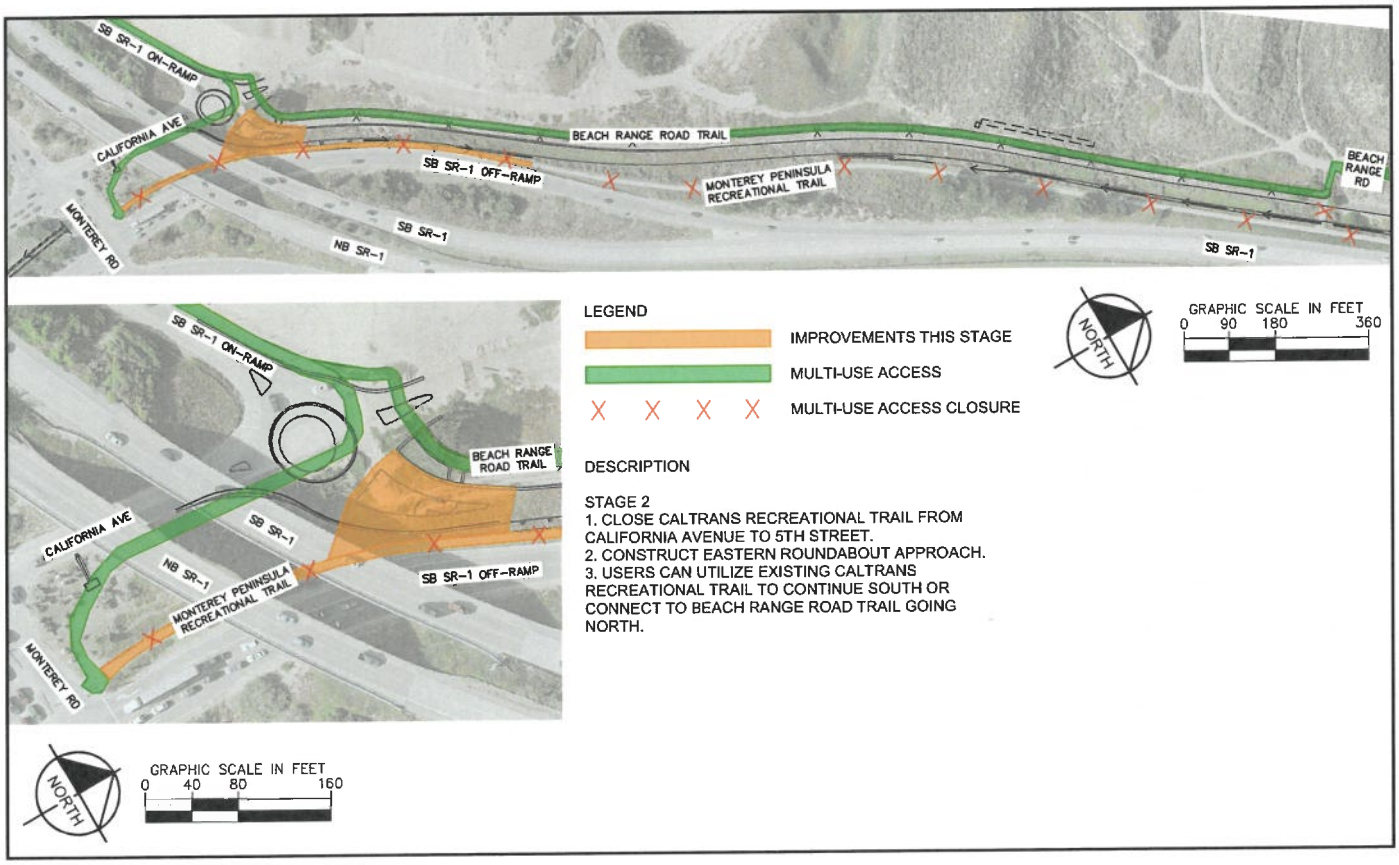

DESCRIPTION

STAGE 2
1. CLOSE CALTRANS RECREATIONAL TRAIL FROM CALIFORNIA AVENUE TO 5TH STREET.
2. CONSTRUCT EASTERN ROUNDABOUT APPROACH.
3. USERS CAN UTILIZE EXISTING CALTRANS RECREATIONAL TRAIL TO CONTINUE SOUTH OR CONNECT TO BEACH RANGE ROAD TRAIL GOING NORTH.

Kimley»Horn

March 2024

MULTI-USE ACCESS STAGING FOR ROUNDABOUT CONSTRUCTION - PHASE 2
MST SURF! BRT

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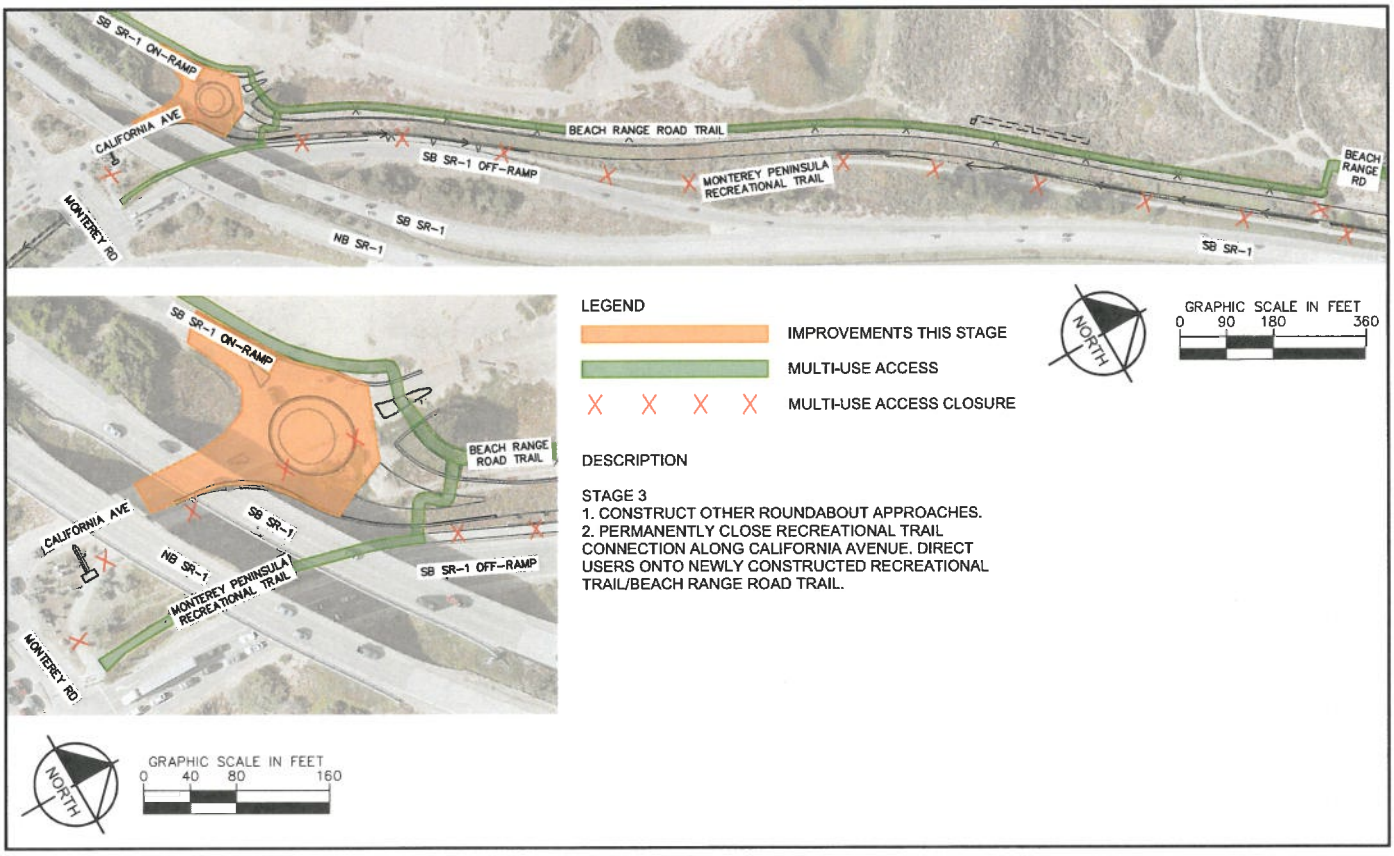


DESCRIPTION

STAGE 3
1. CONSTRUCT OTHER ROUNDABOUT APPROACHES.
2. PERMANENTLY CLOSE RECREATIONAL TRAIL CONNECTION ALONG CALIFORNIA AVENUE. DIRECT USERS ONTO NEWLY CONSTRUCTED RECREATIONAL TRAIL/BEACH RANGE ROAD TRAIL.

Kimley»Horn

March 2024

MULTI-USE ACCESS STAGING FOR ROUNDABOUT CONSTRUCTION - PHASE 3
MST SURFI BRT

Kimley»Horn

MEMORANDUM

To: Leon Gomez | Sand City, CA

From: Frederik Venter, PE and Anthony Nuti, PE | Kimley-Horn and Associates

Date: February 7, 2024

Re: **MST SURF! Intersection Control Evaluation (ICE)**

---

1. Executive Summary

This memorandum provides the analysis of Intersection Control Evaluation (ICE) for the following five (5) intersections along the MST SURF! Busway and Bus Rapid Transit Corridor (the "Project") in Monterey County, California:

- California Avenue & Edgewater Mall
- 1st Avenue Transit Center Access
  a. 1st Avenue & Street I/Northern Transit Center Driveway (Bus Only Driveway)
  b. 1st Avenue & Street J/Transit Center Pick-Off/Drop-Off Driveway (Car/Van Driveway)
  c. 1st Avenue & Southern Transit Center Driveway (Passenger Car Driveway)
- California Avenue & Playa Avenue

Table 1 provides a summary of the recommended intersection control for all study intersections.

Table 1 – Summary of Recommended Intersection Control

Intersection	Side Street Stop Control	All-Way Stop Control	Signal	Roundabout
California Ave & Edgewater Mall	-[1]	**Acceptable**	**Acceptable**	**Not Feasible[4]**
1st Ave & Northern Transit Center Dwy	**Acceptable**	**Acceptable[2]**	**Acceptable[3]**	**Not Feasible[4]**
1st Ave & St J/Transit Center Pick-Up/Drop-Off Dwy	**Acceptable**	**Acceptable[2]**	**Acceptable[3]**	**Not Feasible[4]**
1st Ave & Southern Transit Center Dwy	**Acceptable**	**Acceptable[2]**	**Acceptable[3]**	**Not Feasible[4]**
California Ave & Playa Ave	-[1]	**Not Acceptable**	**Acceptable**	**Not Acceptable**

Notes
1. If study intersections have control greater than a side street stop control, a side street stop was not analyzed.
2. All-Way Stop Controlled intersections should be reassessed per the California Manual on Uniform Traffic Control Devices (CAMUCTD) (Section 2B.07) once the transit center and Dunes are constructed.
3. Signalized intersections should be reassessed per the CAMUTCD (Section 4C) once the transit center and Dunes are constructed.
2. Roundabouts deemed not feasible due to geometric constraints.

2. Introduction

This memorandum provides the analysis of Intersection Control Evaluation (ICE) for the following five (5) intersections along the MST SURF! Busway and Bus Rapid Transit Corridor (the "Project") in Monterey County, California:

- California Avenue & Edgewater Mall
- 1st Avenue Transit Center Access
  a. 1st Avenue & Northern Transit Center Driveway (Bus Only Driveway)
  b. 1st Avenue & Pick-Off/Drop-Off Driveway (Car/Van Driveway)
  c. 1st Avenue & Southern Transit Center Driveway (Passenger Car Driveway)
- California Avenue & Playa Avenue

3. California Avenue & Edgewater Mall

The traffic volume data for the California Avenue & Edgewater Mall Driveway intersection presented in this memorandum were extracted from the *Transportation Impact Analysis for MST Surf! Busway and Bus Rapid Transit Project, Kimley-Horn,* (January 2021).

3.1 Geometry and Traffic Volume Revisions

Figure 1 illustrates the geometry updates for the All-Way Stop Control (AWSC) at the California Avenue and Edgewater Mall intersection.

Southbound buses will perform a southbound left and northbound buses will perform a westbound right turn as the bus travels along a new the busway that runs parallel to California Avenue at the intersection of California Avenue and Edgewater Mall. The lane configuration of the southbound approach is updated to one shared left turn-through lane and one right turn lane to allow buses to enter the exclusive right-of-way. The lane configuration of the westbound approach is a right turn lane to allow buses to exit the exclusive right-of-way. The rerouted bus volumes are illustrated in **Figure 2** for both Existing Plus Project and Cumulative Plus Project Conditions. To be consistent with the *Transportation Impact Analysis for MST Surf! Busway and Bus Rapid Transit Project*, a passenger car equivalent (PCE) of 2 was utilized for bus traffic at this study intersection.

3.2 All-Way Stop Control Analysis

All-way stop control (AWSC) was reviewed for the study intersection. Results of level of service (LOS) for Existing Plus Project and Cumulative Plus Project conditions are provided in **Table 2**.

With the implementation of the exclusive busway, this intersection would operate at an acceptable LOS with AWSC for the AM and PM peak hours.

A concern with the AWSC control is that the northbound vehicle queues could potentially block the intersection preventing buses from performing a southbound left turn into the busway. Therefore, it is recommended that if the AWSC remains, it is recommended to enhance the keep clear markings and signage at the intersection.

Table 2 – All-Way Stop Controlled LOS Summary

Intersection		LOS Standard	Control Type	Existing Plus Project Conditions				Cumulative Plus Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
9	California Ave & Edgewater Mall	D	AWSC	9.4	A	12.1	B	10.4	B	14.1	B

Notes
1. Analysis performed using HCM 6th Edition methodology.
2. Overall level of service (LOS) standard for the City is D.
3. AWSC – All Way Stop Controlled Intersection
4. Delay indicated in seconds/vehicle.

3.3 Signal Analysis

A signal was reviewed for the study intersection. Since the intersection cannot be widened, it was assumed that the signal would run split phasing for the north/south direction. Results for Existing Plus Project and Cumulative Plus Project conditions are provided in **Table 3**.

With implementation of the exclusive busway and a signal, the intersection this intersection would operate at an acceptable LOS for the AM and PM peak hours.

If this alternative is selected, it is recommended to conduct simulation analysis to determine the estimated queuing between the California and Edgewater Mall intersection and the Highway 1 and California Avenue intersection due to close intersection spacing.

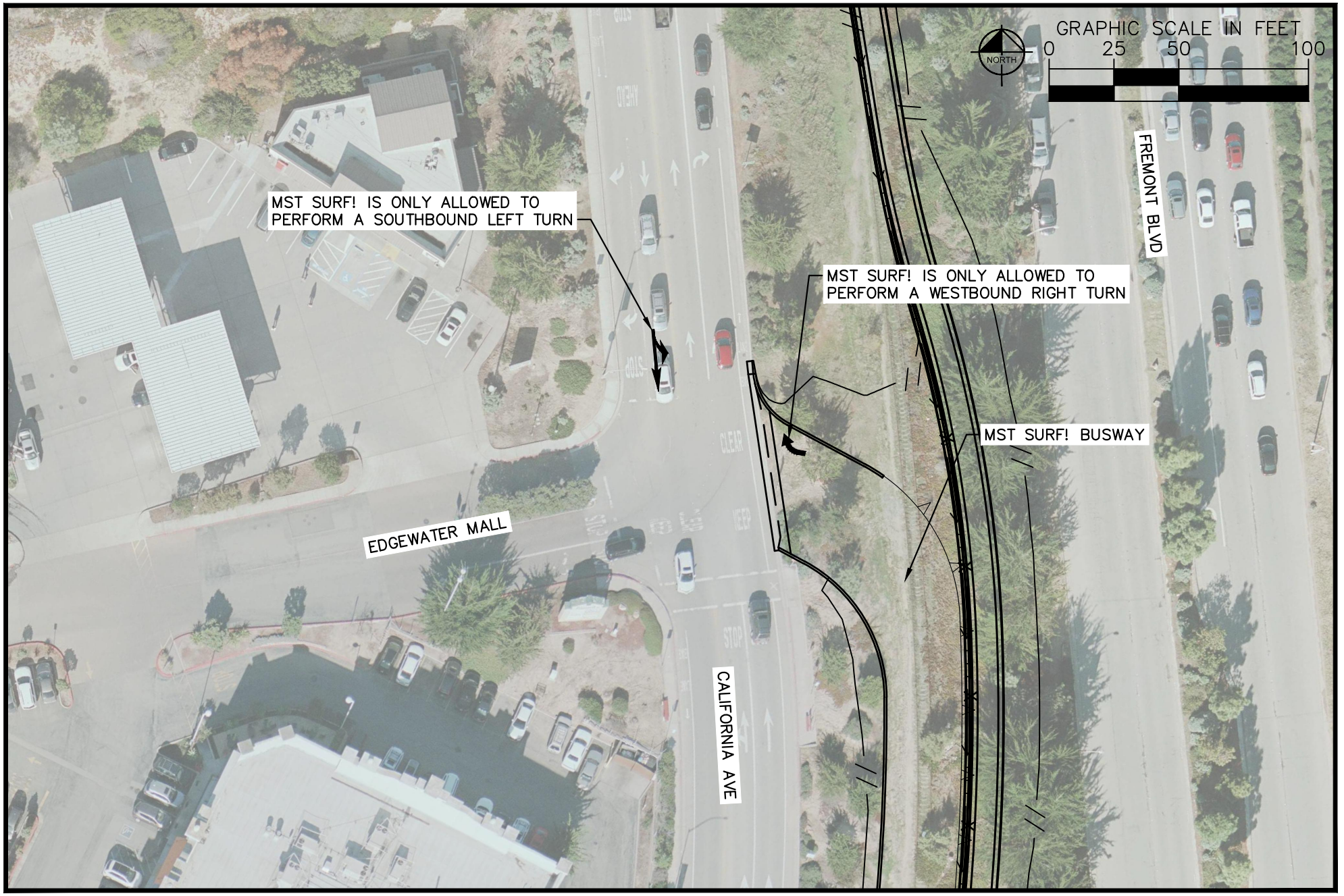
Table 3 – Signal LOS Summary

Intersection		LOS Standard	Control Type	Existing Plus Project Conditions				Cumulative Plus Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
9	California Ave & Edgewater Mall	D	Signal	14.6	B	16.3	B	15.9	B	21.7	C

Notes
1. Analysis performed using HCM 6th Edition methodology.
2. Overall level of service (LOS) standard for the City is D.
3. AWSC – All Way Stop Controlled Intersection
4. Delay indicated in seconds/vehicle.

3.4 Roundabout Analysis

A roundabout was reviewed for the study intersection. It was determined that the intersection is geometrically constrained, and a roundabout cannot be designed to accommodate trucks and bus movements. Therefore, it is not recommended to install a roundabout at the study intersection and this improvement would be infeasible.

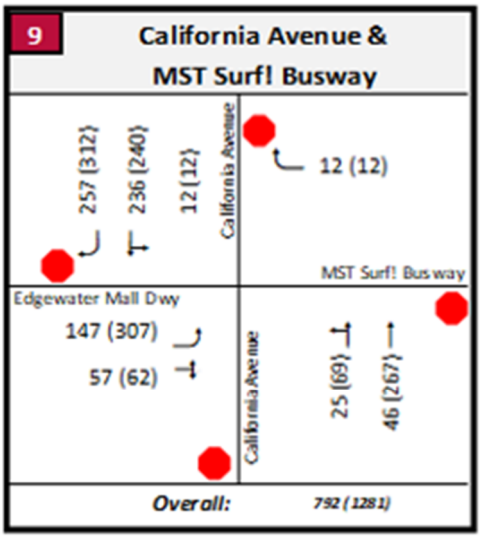


Kimley»Horn

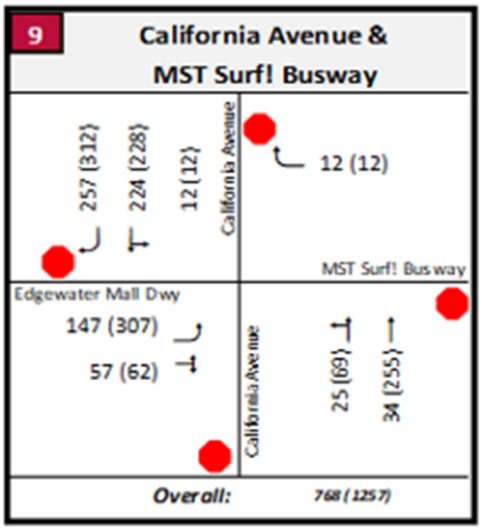
Figure 1

California & Edgewater Mall Intersection Updates

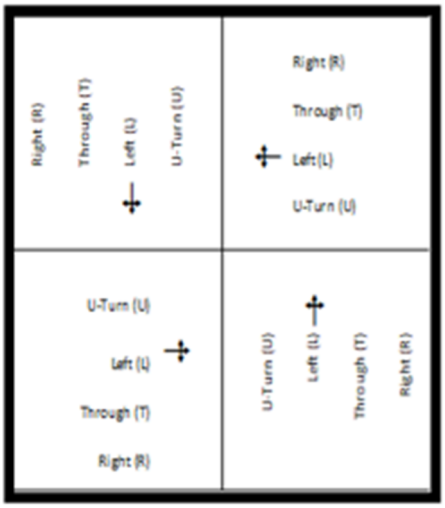
Figure 2 – California Avenue & Edgewater Mall/Busway Volumes and Geometry*



Existing Plus Project



Cumulative Plus Project



Legend

LEGEND

\# *Intersection ID*

Stop Sign

XX (XX) AM (PM) Volumes

*Geometry remains the same for the signal alternative.

4. 1st Avenue Transit Center

The Project proposes to construct a transit center along 1st Avenue just west of the Dunes development in Marina, CA.

Figure 3 illustrates the proposed 1st Avenue Transit Center.

This section provides and ICE analysis for the three intersections proposed along 1st Avenue.

4.1 1st Avenue Volume Development

The following projects were analyzed to develop volumes along 1st Avenue for the Background Conditions:

- 1st Avenue Transit Center
- Dunes

Figure 4 illustrates the geometry and volumes for the Background Conditions.

1st Ave Transit Center Trip Generation

Trip generation for the Project was calculated using the rates from the Institute of Transportation

The trip generation table for the 1st Ave Transit Center has been provided in **Table 4**.

The land uses are anticipated to generate a total of 594 Daily, 61 AM peak hour trips (49 IN / 12 OUT), and 84 PM peak hour trips (21 IN / 63 OUT) primary trips. These trips are for passenger cars only.

Table 4 – 1st Avenue Transit Center Trip Generation

Trip Generation Rates	ITE Land Use Code/Reference	Units	Daily[2]	Weekday AM				Weekday PM			
				Rate[2]	IN	/	OUT	Rate[2]	IN	/	OUT
Park & Ride Los with Bus or Light Rail Service	ITE 090	- Occupied Parking Spaces	-	-	80%	/	20%	-	25%	/	75%
Project											
1st Avenue Transit Center		153 Occupied Parking Spaces	622[3]	76	61	/	15	84	21	/	63

Notes
1. Trip Generation Rates are published by the Institute of Transportation Engineers, "Trip Generation," 11th Edition, 2021 unless otherwise stated
2. The following equations were utilized to calculate trips:
   Daily: T = 3.78(X) + 44.13
   AM Peak Hour: T = 0.40(X) + 14.78
   PM Peak Hour: T = 0.54 (X) + 1.84
3. Due to the commute nature of this transit center, the daily trip generation will not be utilized and was provided for informational purposes.

In addition to passenger vehicles, the following transit services were also assumed to utilize this transit center:

- MST Route 17
  - Travel to/from bus pick-up/drop-off along 1st Avenue
  - 60-minute headways
- MST Route 61
  - Travel to/from bus pick-up/drop-off along 1st Avenue
  - 120-minute headways

- CSUMB
  - Travel to/from passenger car pick-up/drop-off along 1st Avenue
  - 15-minute headways
- MST SURF!
  - Travel to/from bus pick-up/drop-off along SURF! Busway
  - 10-minute headways

To be consistent with the *Transportation Impact Analysis for MST Surf! Busway and Bus Rapid Transit Project*, a passenger car equivalent (PCE) of 2 was utilized for bus traffic at these study intersections.

4.2 Side Street Stop Control

Side Street Stop Control (SSSC) was reviewed for the study intersections. Results of level of service (LOS) for Background Conditions are provided in **Table 5**. It was determined that all three (3) intersections along 1st Avenue operate at an acceptable LOS.

Table 5 – Side Street Stop Control LOS Summary

Intersection		LOS Standard	Control Type	Background Conditions					
				AM Peak Hour			PM Peak Hour		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	1st Avenue & N. Transit Center Dwy	D	SSSC	-	-	-	-	-	-
	Worst Approach			*EB*	*10.8*	*B*	*EB*	*10.9*	*B*
2	1st Avenue & Pick-Up/Drop-Off Dwy	D	SSSC	-	-	-	-	-	-
	Worst Approach			*EB*	*10.5*	*B*	*WB*	*10.4*	*B*
3	1st Avenue & S. Transit Center Dwy	D	SSSC	-	-	-	-	-	-
	Worst Approach			*EB*	*10.5*	*B*	*EB*	*10.2*	*B*

Notes:
1. Analysis performed using HCM 6th Edition methodology.
2. Overall level of service (LOS) standard for the City is D.
3. SSSC – Side Street Stop Controlled Intersection
4. Delay indicated in seconds/vehicle.

4.3 All-Way Stop Control Analysis

All-Way Stop Control (AWSC) was reviewed for the study intersections. Results of level of service (LOS) for Background Conditions are provided in **Table 5**. It was determined that all three (3) intersections along 1st Avenue operate at an acceptable LOS.

It should be noted that the California Manual on Uniform Traffic Control Devices (CAMUTCD) has requirements for implementation of an AWSC intersection (Section 2B.07). At the time of this study it is uncertain if the requirements for All-Way Stop are met and should be reassessed once the transit center and Dunes are constructed.

Table 6 – All-Way Stop Control LOS Summary

	Intersection	LOS Standard	Control Type	Background Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1	1st Avenue & N. Transit Center Dwy	D	AWSC	8.3	A	8.3	A
2	1st Avenue & Pick-Up/Drop-Off Dwy	D	AWSC	8.3	A	8.3	A
3	1st Avenue & S. Transit Center Dwy	D	AWSC	8.2	A	8.3	A

Notes:
1. Analysis performed using HCM 6th Edition methodology.
2. Overall level of service (LOS) standard for the City is D.
3. AWSC – All Way Stop Controlled Intersection
4. Delay indicated in seconds/vehicle.

4.4 Signal Analysis

Signal control was reviewed for the study intersections. Results of level of service (LOS) for Background Conditions are provided in **Table 5**. All signals along 1st Avenue were assumed to operate in permissive phasing. It was determined that all three (3) intersections along 1st Avenue operate at an acceptable LOS.

It should be noted that the California Manual on Uniform Traffic Control Devices (CAMUTCD) has nine (9) warrants for implementation of a signalized intersection (Section 4C). At the time of this study it is uncertain if the warrants for a signal are met and should be reassessed once the transit center and Dunes are constructed.

Table 7 – Signal LOS Summary

	Intersection	LOS Standard	Control Type	Background Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1	1st Avenue & N. Transit Center Dwy	D	Signal	3.7	A	3.6	A
2	1st Avenue & Pick-Up/Drop-Off Dwy	D	Signal	4.0	A	4.0	A
3	1st Avenue & S. Transit Center Dwy	D	Signal	3.7	A	4.6	A

Notes:
1. Analysis performed using HCM 6th Edition methodology.
2. Overall level of service (LOS) standard for the City is D.
3. Signal – Signalized Intersection
4. Delay indicated in seconds/vehicle.

4.5 Roundabout Analysis

A roundabout was reviewed for the study intersection. It was determined that the intersection is geometrically constrained, and a roundabout cannot be designed to accommodate trucks and bus movements. Therefore, it is not recommended to install a roundabout at the study intersection and this improvement would be infeasible.

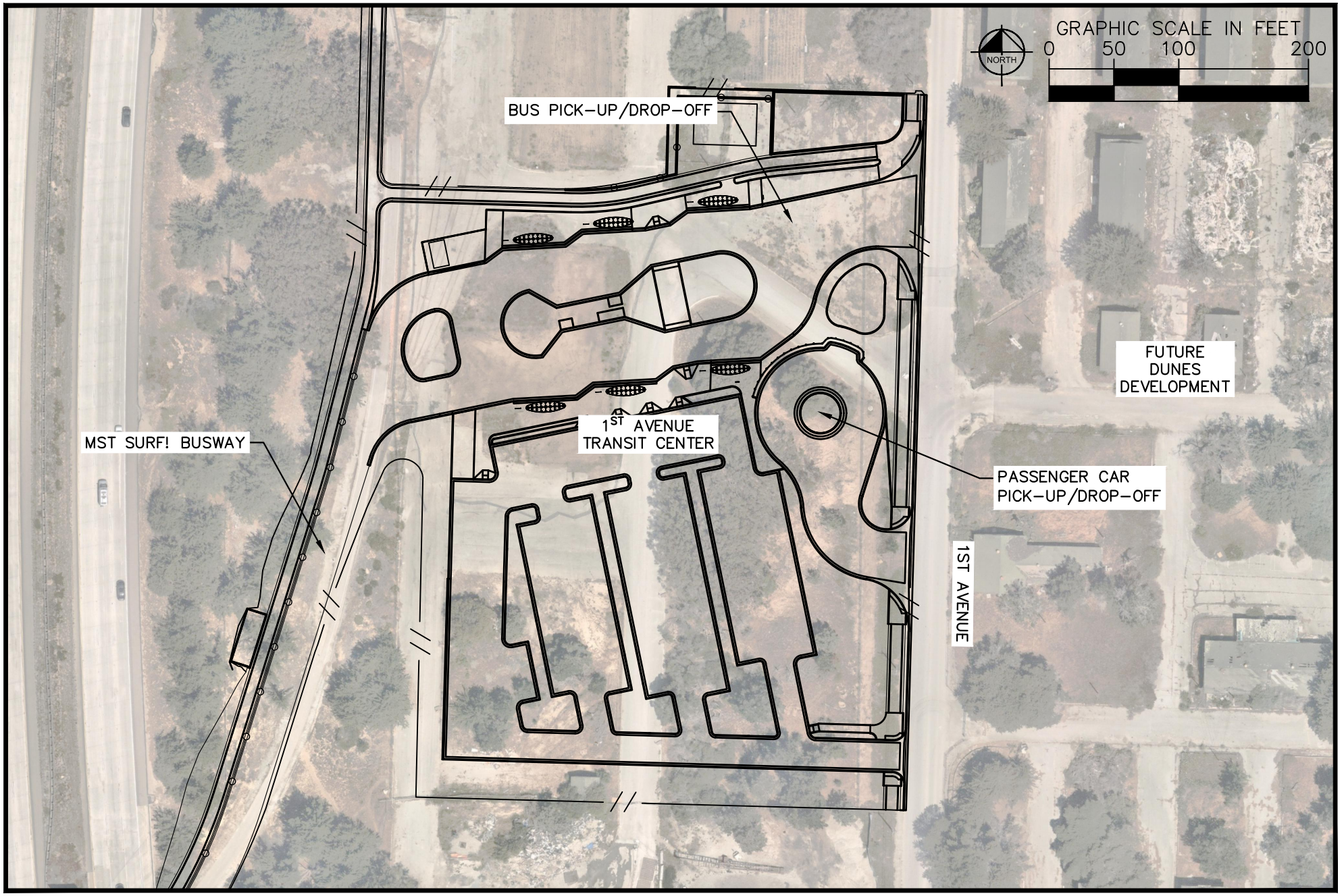


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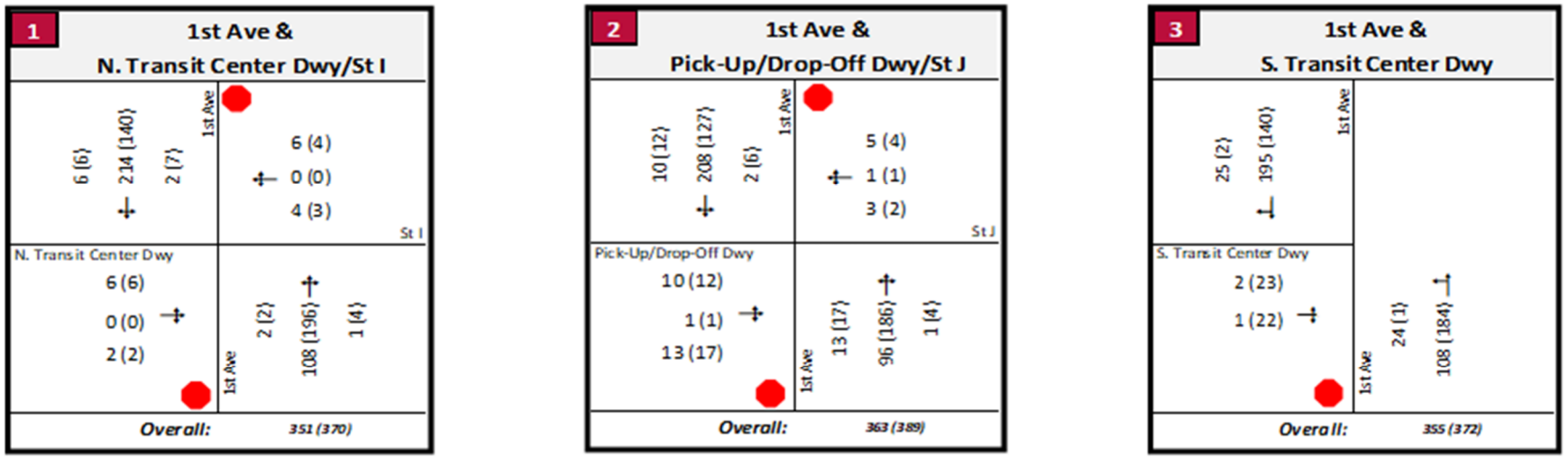
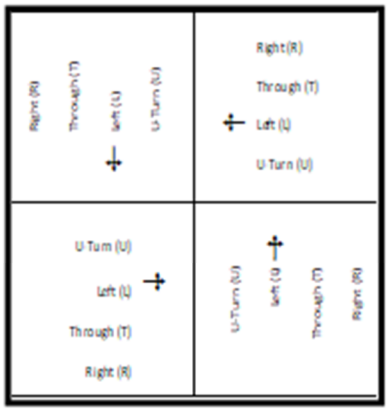
Figure 3

1st Avenue Transit Center

Figure 4 – 1st Avenue Transit Center Volumes and Geometry





LEGEND



*Geometry remains the same for all alternatives.

5. California Avenue & Playa Avenue

The Project proposed the following Scenarios for the intersection of California Avenue & Playa Avenue:

- Scenario 1: Existing Geometry
- Scenario 2: 95% Design
- Scenario 3: 95% Design + NBL (California)
- Scenario 4: Single Lane Roundabout

Refer to **Figure 5** for an illustration of the study scenarios.

This intersection was reviewed using a VISSIM simulation and the results of this analysis have been provided in **Table 8** through **Table 10**.

Table 11 provides a summary of the recommendations for the analysis.

A presentation was prepared for that summarizes the analysis in more detail and has been provided in the **Appendix**.

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Figure 5 – California & Playa Avenue Study Scenarios

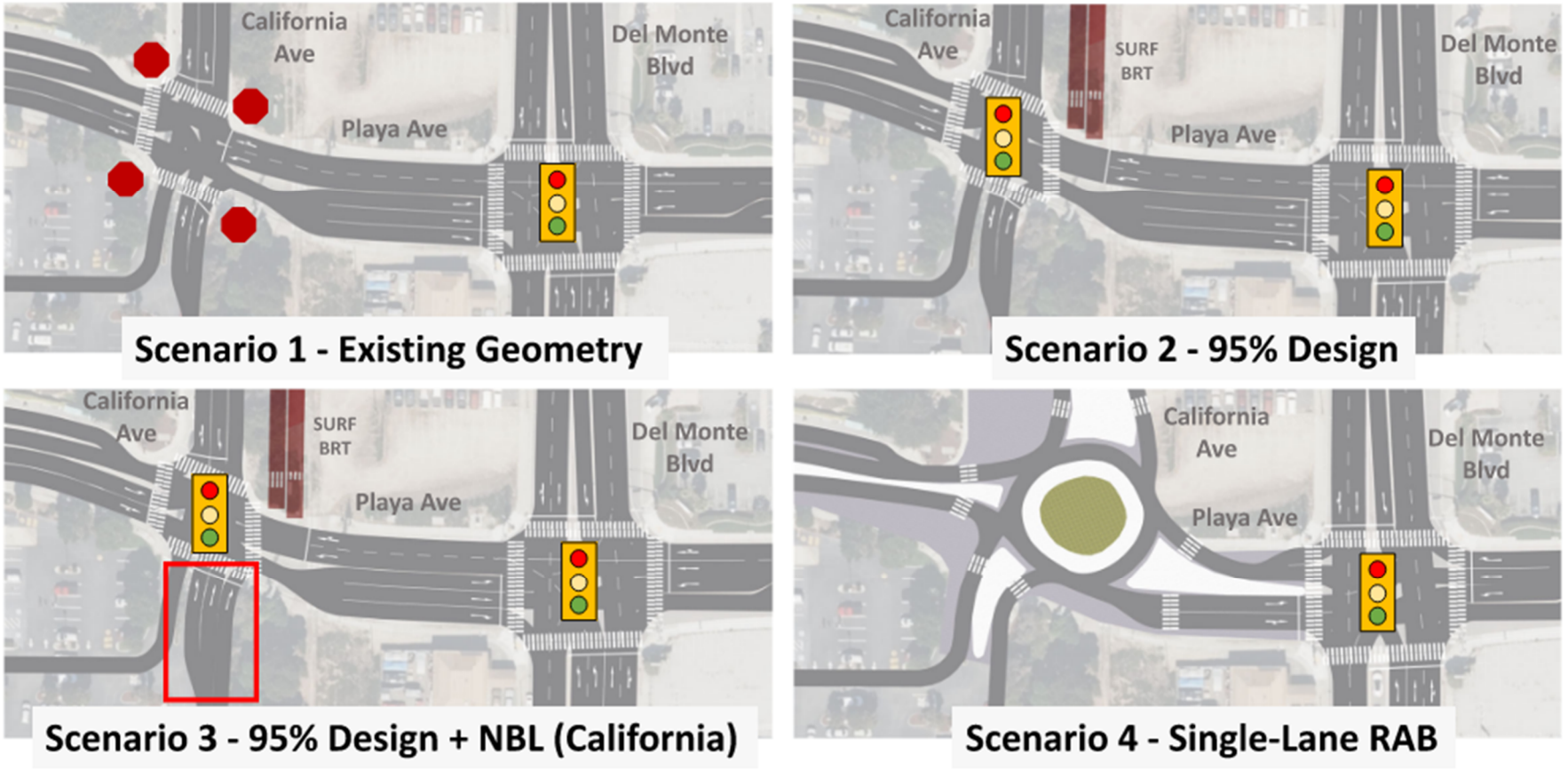

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Table 8 – Cumulative 2045 PM Peak LOS Summary

		Scenario 1 Existing Geometry			Scenario 2 95% Design			Scenario 3 95% Design + NBL (California)			Scenario 4 Single-Lane Roundabout		
No.	Intersection	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS
1	California Ave/ Playa Ave	AWSC	325.3	F	Signal	50.5	D	Signal	35.5	D	Roundabout	619.3	F
2	Del Monte Blvd/ Playa Ave	Signal	359.7	F	Signal	37.3	D	Signal	37.9	D	Signal	145.6	F
	Bus	AWSC	516.7	F	Signal	36.9	D	Signal	31.6	C	Roundabout	238.6	F

Table 9 – Cumulative 2045 AM Peak LOS Summary

		Scenario 1 Existing Geometry			Scenario 2 95% Design			Scenario 3 95% Design + NBL (California)			Scenario 4 Single-Lane Roundabout		
No.	Intersection	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS
1	California Ave/ Playa Ave	Not Analyzed for AM			Signal	37.8	D	Signal	39.8	D	Not Analyzed for AM		
2	Del Monte Blvd/ Playa Ave				Signal	39.4	D	Signal	39.0	D			
	Bus				Signal	25.7	C	Signal	26.1	C			

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Table 10 – Cumulative 2045 Weekend Midday Peak LOS Summary

		Scenario 1 Existing Geometry			Scenario 2 95% Design			Scenario 3 95% Design + NBL (California)			Scenario 4 Single-Lane Roundabout		
No.	Intersection	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS	Control	Avg Delay *(sec)*	LOS
1	California Ave/ Playa Ave	AWSC	407.0	F	Signal	56.8	E	Signal	48.4	D	Roundabout	757.1	F
2	Del Monte Blvd/ Playa Ave	Signal	378.1	F	Signal	58.9	E	Signal	48.8	D	Signal	112.8	F
	Bus	AWSC	806.3	F	Signal	47.8	D	Signal	40.0	D	Roundabout	310.6	F

Table 11 – Summary of Vissim Results

	Scenario 1 Existing Geometry	Scenario 2 95% Design		Scenario 3 95% Design + NBL (California)		Scenario 4 Single-Lane Roundabout
Who	**Win-Win-Win?**					
SURF!	**No**	**Yes**	Acceptable LOS Operations Compared to Existing Geometry Minimal Queueing at Both Intersections	**Yes**	15 sec Time Savings at California/Playa vs. Scenario 2 (PM) 5 Second Time Savings for Bus vs. Scenario 2 (PM)	**No**
Sand City	**No**	**Yes**		**Yes+***		**No**
Seaside	**No**	**Yes**		**Yes**		**No**

* NBL cannot be included in SURF project due to Right of Way requirements

6. Appendix

A. California Avenue and Edgewater Mall/MST SURF! Busway – All-Way Stop Control: Existing Plus Project Conditions Synchro Outputs

B. California Avenue and Edgewater Mall/MST SURF! Busway – Signal: Existing Plus Project Conditions Synchro Outputs

C. California Avenue and Edgewater Mall/MST SURF! Busway – All-Way Stop Control: Cumulative Plus Project Conditions Synchro Outputs

D. California Avenue and Edgewater Mall/MST SURF! Busway – Signal: Cumulative Plus Project Conditions Synchro Outputs

E. 1st Avenue Side Street Stop Control – Background Plus Project Synchro Outputs

F. 1st Avenue All Way Stop Control – Background Plus Project Synchro Outputs

G. 1st Avenue Signal – Background Plus Project Synchro Outputs

H. California Avenue & Playa Avenue PowerPoint

A. California Avenue and Edgewater Mall/MST SURF! Busway – All-Way Stop Control: Existing Plus Project Conditions Synchro Outputs

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	146	0	32	0	0	12	24	28	0	12	128	225
Future Vol, veh/h	146	0	32	0	0	12	24	28	0	12	128	225
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	0	3	0	0	0	4	11	0	0	4	1
Mvmt Flow	157	0	34	0	0	13	26	30	0	13	138	242
Number of Lanes	1	1	0	0	0	1	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	9.7	8.3	8.9	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	72%	0%	100%	63%	0%	9%	0%
Vol Thru, %	28%	100%	0%	0%	0%	91%	0%
Vol Right, %	0%	0%	0%	37%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	19	91	87	12	140	225
LT Vol	24	0	91	55	0	12	0
Through Vol	9	19	0	0	0	128	0
RT Vol	0	0	0	32	12	0	225
Lane Flow Rate	36	20	97	94	13	151	242
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.059	0.031	0.164	0.146	0.019	0.217	0.303
Departure Headway (Hd)	5.884	5.641	6.06	5.585	5.164	5.185	4.507
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	606	632	590	640	688	691	796
Service Time	3.643	3.4	3.818	3.342	3.235	2.923	2.244
HCM Lane V/C Ratio	0.059	0.032	0.164	0.147	0.019	0.219	0.304
HCM Control Delay	9	8.6	10	9.3	8.3	9.4	9.2
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.6	0.5	0.1	0.8	1.3

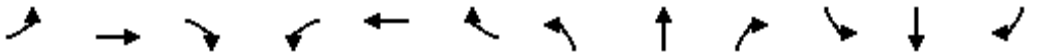
Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	275	0	51	0	0	12	37	171	0	12	207	296
Future Vol, veh/h	275	0	51	0	0	12	37	171	0	12	207	296
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	286	0	53	0	0	13	39	178	0	13	216	308
Number of Lanes	1	1	0	0	0	1	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	12.6	9.6	10.8	12.3
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	39%	0%	100%	68%	0%	5%	0%
Vol Thru, %	61%	100%	0%	0%	0%	95%	0%
Vol Right, %	0%	0%	0%	32%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	114	165	161	12	219	296
LT Vol	37	0	165	110	0	12	0
Through Vol	57	114	0	0	0	207	0
RT Vol	0	0	0	51	12	0	296
Lane Flow Rate	98	119	172	168	12	228	308
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.178	0.209	0.331	0.304	0.022	0.38	0.452
Departure Headway (Hd)	6.533	6.35	6.928	6.526	6.439	5.991	5.272
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	564	519	550	554	600	681
Service Time	4.28	4.097	4.668	4.266	4.5	3.729	3.009
HCM Lane V/C Ratio	0.179	0.211	0.331	0.305	0.022	0.38	0.452
HCM Control Delay	10.7	10.8	13.1	12.1	9.6	12.4	12.3
HCM Lane LOS	B	B	B	B	A	B	B
HCM 95th-tile Q	0.6	0.8	1.4	1.3	0.1	1.8	2.4

B. California Avenue and Edgewater Mall/MST SURF! Busway – Signal: Existing Plus Project Conditions Synchro Outputs



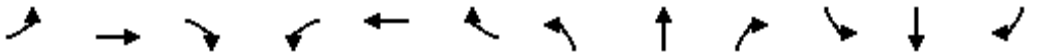
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	0	51	0	0	12	37	171	0	12	207	296
Future Volume (veh/h)	275	0	51	0	0	12	37	171	0	12	207	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	0	1900	1900	1900	1885	0	1900	1885	1900
Adj Flow Rate, veh/h	335	0	0	0	0	12	39	178	0	12	216	308
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	0	0	0	0	0	0	1	0	0	1	0
Cap, veh/h	521	514	0	0	0	25	76	369	0	28	495	446
Arrive On Green	0.15	0.00	0.00	0.00	0.00	0.02	0.12	0.12	0.00	0.28	0.28	0.28
Sat Flow, veh/h	3591	1900	0	0	0	1606	623	3116	0	99	1781	1604
Grp Volume(v), veh/h	335	0	0	0	0	12	116	101	0	228	0	308
Grp Sat Flow(s),veh/h/ln	1795	1900	0	0	0	1606	1854	1791	0	1880	0	1604
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.0	0.3	2.4	2.1	0.0	4.1	0.0	7.0
Cycle Q Clear(g_c), s	3.6	0.0	0.0	0.0	0.0	0.3	2.4	2.1	0.0	4.1	0.0	7.0
Prop In Lane	1.00		0.00	0.00		1.00	0.34		0.00	0.05		1.00
Lane Grp Cap(c), veh/h	521	514	0	0	0	25	226	219	0	523	0	446
V/C Ratio(X)	0.64	0.00	0.00	0.00	0.00	0.48	0.51	0.46	0.00	0.44	0.00	0.69
Avail Cap(c_a), veh/h	850	974	0	0	0	267	249	240	0	1147	0	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	0.0	0.0	0.0	20.0	16.8	16.7	0.0	12.2	0.0	13.2
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.0	0.0	13.5	1.8	1.5	0.0	0.6	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	0.0	0.0	0.2	0.9	0.8	0.0	1.5	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	0.0	0.0	0.0	33.5	18.6	18.3	0.0	12.7	0.0	15.1
LnGrp LOS	B	A	A	A	A	C	B	B	A	B	A	B
Approach Vol, veh/h		335			12			217			536	
Approach Delay, s/veh		17.8			33.5			18.5			14.1	
Approach LOS		B			C			B			B	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		15.9	10.4	5.1		9.5		15.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.0	9.7	6.8		5.5		21.0				
Max Q Clear Time (g_c+I1), s		9.0	5.6	2.3		4.4		0.0				
Green Ext Time (p_c), s		2.2	0.5	0.0		0.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	0	32	0	0	12	24	28	0	12	128	225
Future Volume (veh/h)	146	0	32	0	0	12	24	28	0	12	128	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	0	1900	1900	1841	1737	0	1900	1841	1885
Adj Flow Rate, veh/h	189	0	0	0	0	13	26	30	0	13	138	242
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	3	0	0	0	4	11	0	0	4	1
Cap, veh/h	417	489	0	0	0	27	198	257	0	37	393	375
Arrive On Green	0.12	0.00	0.00	0.00	0.00	0.02	0.14	0.14	0.00	0.23	0.23	0.23
Sat Flow, veh/h	3563	1900	0	0	0	1593	1444	1957	0	158	1675	1598
Grp Volume(v), veh/h	189	0	0	0	0	13	30	26	0	151	0	242
Grp Sat Flow(s),veh/h/ln	1781	1900	0	0	0	1593	1665	1650	0	1833	0	1598
Q Serve(g_s), s	1.8	0.0	0.0	0.0	0.0	0.3	0.6	0.5	0.0	2.5	0.0	5.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	0.0	0.0	0.3	0.6	0.5	0.0	2.5	0.0	5.0
Prop In Lane	1.00		0.00	0.00		1.00	0.87		0.00	0.09		1.00
Lane Grp Cap(c), veh/h	417	489	0	0	0	27	228	226	0	430	0	375
V/C Ratio(X)	0.45	0.00	0.00	0.00	0.00	0.48	0.13	0.11	0.00	0.35	0.00	0.65
Avail Cap(c_a), veh/h	929	1095	0	0	0	306	228	226	0	1283	0	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	0.0	17.7	13.8	13.8	0.0	11.6	0.0	12.6
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.0	12.8	0.3	0.2	0.0	0.5	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.9	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	0.0	0.0	0.0	0.0	30.5	14.1	14.0	0.0	12.1	0.0	14.4
LnGrp LOS	B	A	A	A	A	C	B	B	A	B	A	B
Approach Vol, veh/h		189			13			56			393	
Approach Delay, s/veh		15.8			30.5			14.0			13.5	
Approach LOS		B			C			B			B	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		13.1	8.8	5.1		9.5		13.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.5	9.5	7.0		5.0		21.0				
Max Q Clear Time (g_c+I1), s		7.0	3.8	2.3		2.6		0.0				
Green Ext Time (p_c), s		1.6	0.3	0.0		0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

C. California Avenue and Edgewater Mall/MST SURF! Busway – All-Way Stop Control: Cumulative Plus Project Conditions Synchro Outputs

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	147	0	57	0	0	12	25	46	0	12	236	257
Future Vol, veh/h	147	0	57	0	0	12	25	46	0	12	236	257
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	0	3	0	0	0	4	11	0	0	4	1
Mvmt Flow	158	0	61	0	0	13	27	49	0	13	254	276
Number of Lanes	1	1	0	0	0	1	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	10.3	8.8	9.2	10.6
HCM LOS	B	A	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	62%	0%	100%	42%	0%	5%	0%
Vol Thru, %	38%	100%	0%	0%	0%	95%	0%
Vol Right, %	0%	0%	0%	58%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	31	106	98	12	248	257
LT Vol	25	0	106	41	0	12	0
Through Vol	15	31	0	0	0	236	0
RT Vol	0	0	0	57	12	0	257
Lane Flow Rate	43	33	114	106	13	267	276
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.074	0.054	0.203	0.167	0.02	0.392	0.355
Departure Headway (Hd)	6.103	5.91	6.427	5.691	5.673	5.287	4.627
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	582	600	554	625	635	677	774
Service Time	3.897	3.704	4.216	3.48	3.673	3.043	2.383
HCM Lane V/C Ratio	0.074	0.055	0.206	0.17	0.02	0.394	0.357
HCM Control Delay	9.4	9	10.9	9.6	8.8	11.4	9.9
HCM Lane LOS	A	A	B	A	A	B	A
HCM 95th-tile Q	0.2	0.2	0.8	0.6	0.1	1.9	1.6

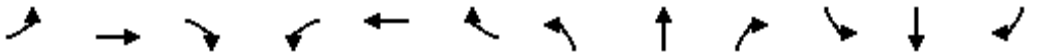
Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	307	0	62	0	0	12	69	267	0	12	240	312
Future Vol, veh/h	307	0	62	0	0	12	69	267	0	12	240	312
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	320	0	65	0	0	13	72	278	0	13	250	325
Number of Lanes	1	1	0	0	0	1	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	14.4	10.4	12.9	14.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	44%	0%	100%	66%	0%	5%	0%
Vol Thru, %	56%	100%	0%	0%	0%	95%	0%
Vol Right, %	0%	0%	0%	34%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	158	178	187	182	12	252	312
LT Vol	69	0	187	120	0	12	0
Through Vol	89	178	0	0	0	240	0
RT Vol	0	0	0	62	12	0	312
Lane Flow Rate	165	185	195	189	12	262	325
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.315	0.344	0.401	0.366	0.025	0.468	0.515
Departure Headway (Hd)	6.884	6.679	7.402	6.969	7.245	6.419	5.7
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	536	486	515	497	559	631
Service Time	4.657	4.451	5.169	4.735	5.245	4.185	3.465
HCM Lane V/C Ratio	0.317	0.345	0.401	0.367	0.024	0.469	0.515
HCM Control Delay	12.8	12.9	15.1	13.7	10.4	14.8	14.4
HCM Lane LOS	B	B	C	B	B	B	B
HCM 95th-tile Q	1.3	1.5	1.9	1.7	0.1	2.5	3

D. California Avenue and Edgewater Mall/MST SURF! Busway – Signal: Cumulative Plus Project Conditions Synchro Outputs



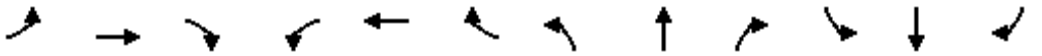
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	307	0	62	0	0	12	69	267	0	12	240	312
Future Volume (veh/h)	307	0	62	0	0	12	69	267	0	12	240	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	0	1900	1900	1900	1885	0	1900	1885	1900
Adj Flow Rate, veh/h	381	0	0	0	0	12	72	278	0	12	250	325
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	0	0	0	0	0	0	1	0	0	1	0
Cap, veh/h	445	457	0	0	0	25	121	498	0	25	512	458
Arrive On Green	0.12	0.00	0.00	0.00	0.00	0.02	0.17	0.17	0.00	0.29	0.29	0.29
Sat Flow, veh/h	3591	1900	0	0	0	1606	713	3022	0	86	1795	1605
Grp Volume(v), veh/h	381	0	0	0	0	12	187	163	0	262	0	325
Grp Sat Flow(s),veh/h/ln	1795	1900	0	0	0	1606	1850	1791	0	1881	0	1605
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.3	4.1	3.7	0.0	5.1	0.0	8.1
Cycle Q Clear(g_c), s	4.6	0.0	0.0	0.0	0.0	0.3	4.1	3.7	0.0	5.1	0.0	8.1
Prop In Lane	1.00		0.00	0.00		1.00	0.39		0.00	0.05		1.00
Lane Grp Cap(c), veh/h	445	457	0	0	0	25	315	305	0	536	0	458
V/C Ratio(X)	0.86	0.00	0.00	0.00	0.00	0.48	0.59	0.54	0.00	0.49	0.00	0.71
Avail Cap(c_a), veh/h	445	1198	0	0	0	651	750	726	0	1080	0	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	0.0	0.0	0.0	0.0	21.7	17.0	16.8	0.0	13.2	0.0	14.2
Incr Delay (d2), s/veh	15.2	0.0	0.0	0.0	0.0	13.8	1.8	1.5	0.0	0.7	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	0.0	0.0	0.2	1.6	1.4	0.0	1.9	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	0.0	0.0	0.0	35.4	18.8	18.3	0.0	13.9	0.0	16.3
LnGrp LOS	C	A	A	A	A	D	B	B	A	B	A	B
Approach Vol, veh/h		381			12			350			587	
Approach Delay, s/veh		34.2			35.4			18.6			15.2	
Approach LOS		C			D			B			B	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		17.2	10.0	5.2		12.1		15.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.5	5.5	18.0		18.0		28.0				
Max Q Clear Time (g_c+I1), s		10.1	6.6	2.3		6.1		0.0				
Green Ext Time (p_c), s		2.4	0.0	0.0		1.4		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	0	57	0	0	12	25	46	0	12	236	257
Future Volume (veh/h)	147	0	57	0	0	12	25	46	0	12	236	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	0	1900	1900	1841	1737	0	1900	1841	1885
Adj Flow Rate, veh/h	110	68	61	0	0	13	27	49	0	13	254	276
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	3	0	0	0	4	11	0	0	4	1
Cap, veh/h	198	288	259	0	0	153	132	262	0	22	434	397
Arrive On Green	0.11	0.31	0.31	0.00	0.00	0.10	0.12	0.12	0.00	0.25	0.25	0.25
Sat Flow, veh/h	1781	919	825	0	0	1590	1116	2302	0	89	1747	1598
Grp Volume(v), veh/h	110	0	129	0	0	13	41	35	0	267	0	276
Grp Sat Flow(s),veh/h/ln	1781	0	1744	0	0	1590	1681	1650	0	1836	0	1598
Q Serve(g_s), s	2.5	0.0	2.3	0.0	0.0	0.3	0.9	0.8	0.0	5.4	0.0	6.6
Cycle Q Clear(g_c), s	2.5	0.0	2.3	0.0	0.0	0.3	0.9	0.8	0.0	5.4	0.0	6.6
Prop In Lane	1.00		0.47	0.00		1.00	0.66		0.00	0.05		1.00
Lane Grp Cap(c), veh/h	198	0	547	0	0	153	199	195	0	456	0	397
V/C Ratio(X)	0.56	0.00	0.24	0.00	0.00	0.09	0.20	0.18	0.00	0.59	0.00	0.70
Avail Cap(c_a), veh/h	316	0	743	0	0	226	199	195	0	804	0	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	10.7	0.0	0.0	17.4	16.8	16.8	0.0	14.0	0.0	14.4
Incr Delay (d2), s/veh	2.4	0.0	0.2	0.0	0.0	0.2	0.5	0.4	0.0	1.2	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.7	0.0	0.0	0.1	0.3	0.3	0.0	2.0	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	11.0	0.0	0.0	17.6	17.3	17.2	0.0	15.2	0.0	16.6
LnGrp LOS	C	A	B	A	A	B	B	B	A	B	A	B
Approach Vol, veh/h		239			13			76			543	
Approach Delay, s/veh		15.2			17.6			17.3			15.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		15.0	9.2	8.6		9.5		17.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5	7.5	6.0		5.0		18.0				
Max Q Clear Time (g_c+I1), s		8.6	4.5	2.3		2.9		4.3				
Green Ext Time (p_c), s		1.9	0.1	0.0		0.0		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

E. 1st Avenue Side Street Stop Control – Background Plus Project Synchro Outputs

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	2	3	0	4	2	196	4	7	140	6
Future Vol, veh/h	6	0	2	3	0	4	2	196	4	7	140	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	2	3	0	4	2	213	4	8	152	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	393	393	156	392	394	215	159	0	0	217	0	0
Stage 1	172	172	-	219	219	-	-	-	-	-	-	-
Stage 2	221	221	-	173	175	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	566	543	890	567	542	825	1420	-	-	1353	-	-
Stage 1	830	756	-	783	722	-	-	-	-	-	-	-
Stage 2	781	720	-	829	754	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	560	539	890	562	538	825	1420	-	-	1353	-	-
Mov Cap-2 Maneuver	560	539	-	562	538	-	-	-	-	-	-	-
Stage 1	828	751	-	781	721	-	-	-	-	-	-	-
Stage 2	775	719	-	822	749	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	10.3	0.1	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1420	-	-	617	687	1353	-	-
HCM Lane V/C Ratio	0.002	-	-	0.014	0.011	0.006	-	-
HCM Control Delay (s)	7.5	-	-	10.9	10.3	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	1	17	2	1	4	17	186	4	6	127	12
Future Vol, veh/h	12	1	17	2	1	4	17	186	4	6	127	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1	18	2	1	4	18	202	4	7	138	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	402	401	145	408	405	204	151	0	0	206	0	0
Stage 1	159	159	-	240	240	-	-	-	-	-	-	-
Stage 2	243	242	-	168	165	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	559	538	902	554	535	837	1430	-	-	1365	-	-
Stage 1	843	766	-	763	707	-	-	-	-	-	-	-
Stage 2	761	705	-	834	762	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	547	527	902	534	524	837	1430	-	-	1365	-	-
Mov Cap-2 Maneuver	547	527	-	534	524	-	-	-	-	-	-	-
Stage 1	831	761	-	752	697	-	-	-	-	-	-	-
Stage 2	745	695	-	811	757	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	10.4	0.6	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1430	-	-	703	671	1365	-	-
HCM Lane V/C Ratio	0.013	-	-	0.046	0.011	0.005	-	-
HCM Control Delay (s)	7.5	0	-	10.4	10.4	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	22	1	184	140	2
Future Vol, veh/h	23	22	1	184	140	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	24	1	200	152	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	355	153	154	0	-	0
Stage 1	153	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	643	893	1426	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	642	893	1426	-	-	-
Mov Cap-2 Maneuver	642	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1426	-	744	-	-
HCM Lane V/C Ratio	0.001	-	0.066	-	-
HCM Control Delay (s)	7.5	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	2	4	0	6	2	108	1	2	214	6
Future Vol, veh/h	6	0	2	4	0	6	2	108	1	2	214	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	2	4	0	7	2	117	1	2	233	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	366	363	237	364	366	118	240	0	0	118	0	0
Stage 1	241	241	-	122	122	-	-	-	-	-	-	-
Stage 2	125	122	-	242	244	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	590	565	802	592	562	934	1327	-	-	1470	-	-
Stage 1	762	706	-	882	795	-	-	-	-	-	-	-
Stage 2	879	795	-	762	704	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	584	563	802	588	560	934	1327	-	-	1470	-	-
Mov Cap-2 Maneuver	584	563	-	588	560	-	-	-	-	-	-	-
Stage 1	760	705	-	880	793	-	-	-	-	-	-	-
Stage 2	871	793	-	758	703	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	9.8	0.1	0.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1327	-	-	627	756	1470	-	-
HCM Lane V/C Ratio	0.002	-	-	0.014	0.014	0.001	-	-
HCM Control Delay (s)	7.7	-	-	10.8	9.8	7.5	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1	13	3	1	5	13	96	1	2	208	10
Future Vol, veh/h	10	1	13	3	1	5	13	96	1	2	208	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	1	14	3	1	5	14	104	1	2	226	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	372	369	232	376	374	105	237	0	0	105	0	0
Stage 1	236	236	-	133	133	-	-	-	-	-	-	-
Stage 2	136	133	-	243	241	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	585	560	807	581	557	949	1330	-	-	1486	-	-
Stage 1	767	710	-	870	786	-	-	-	-	-	-	-
Stage 2	867	786	-	761	706	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	575	553	807	564	550	949	1330	-	-	1486	-	-
Mov Cap-2 Maneuver	575	553	-	564	550	-	-	-	-	-	-	-
Stage 1	759	709	-	860	777	-	-	-	-	-	-	-
Stage 2	851	777	-	745	705	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	10	0.9	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1330	-	-	680	725	1486	-	-
HCM Lane V/C Ratio	0.011	-	-	0.038	0.013	0.001	-	-
HCM Control Delay (s)	7.7	0	-	10.5	10	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	24	108	195	25
Future Vol, veh/h	2	1	24	108	195	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	26	117	212	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	395	226	239	0	-	0
Stage 1	226	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	610	813	1328	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	597	813	1328	-	-	-
Mov Cap-2 Maneuver	597	-	-	-	-	-
Stage 1	795	-	-	-	-	-
Stage 2	861	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1328	-	655	-	-
HCM Lane V/C Ratio	0.02	-	0.005	-	-
HCM Control Delay (s)	7.8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

F. 1st Avenue All Way Stop Control – Background Plus Project Synchro Outputs

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	2	3	0	4	2	196	4	7	140	6
Future Vol, veh/h	6	0	2	3	0	4	2	196	4	7	140	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	2	3	0	4	2	213	4	8	152	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.6	8.5	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	75%	43%	5%
Vol Thru, %	97%	0%	0%	92%
Vol Right, %	2%	25%	57%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	8	7	153
LT Vol	2	6	3	7
Through Vol	196	0	0	140
RT Vol	4	2	4	6
Lane Flow Rate	220	9	8	166
Geometry Grp	1	1	1	1
Degree of Util (X)	0.249	0.012	0.01	0.19
Departure Headway (Hd)	4.078	4.772	4.515	4.113
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	876	754	797	865
Service Time	2.127	2.773	2.516	2.172
HCM Lane V/C Ratio	0.251	0.012	0.01	0.192
HCM Control Delay	8.5	7.8	7.6	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0	0	0.7

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1	17	2	1	4	17	186	4	6	127	12
Future Vol, veh/h	12	1	17	2	1	4	17	186	4	6	127	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1	18	2	1	4	18	202	4	7	138	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.6	8.6	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	40%	29%	4%
Vol Thru, %	90%	3%	14%	88%
Vol Right, %	2%	57%	57%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	30	7	145
LT Vol	17	12	2	6
Through Vol	186	1	1	127
RT Vol	4	17	4	12
Lane Flow Rate	225	33	8	158
Geometry Grp	1	1	1	1
Degree of Util (X)	0.258	0.041	0.01	0.181
Departure Headway (Hd)	4.128	4.51	4.516	4.133
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	862	799	797	857
Service Time	2.193	2.511	2.518	2.213
HCM Lane V/C Ratio	0.261	0.041	0.01	0.184
HCM Control Delay	8.6	7.7	7.6	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.1	0	0.7

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	22	1	184	140	2
Future Vol, veh/h	23	22	1	184	140	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	24	1	200	152	2
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	8.5	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	1%	51%	0%
Vol Thru, %	99%	0%	99%
Vol Right, %	0%	49%	1%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	185	45	142
LT Vol	1	23	0
Through Vol	184	0	140
RT Vol	0	22	2
Lane Flow Rate	201	49	154
Geometry Grp	1	1	1
Degree of Util (X)	0.231	0.061	0.178
Departure Headway (Hd)	4.137	4.513	4.163
Convergence, Y/N	Yes	Yes	Yes
Cap	859	798	850
Service Time	2.208	2.513	2.244
HCM Lane V/C Ratio	0.234	0.061	0.181
HCM Control Delay	8.5	7.8	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	0.2	0.6

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	2	4	0	6	2	108	1	2	214	6
Future Vol, veh/h	6	0	2	4	0	6	2	108	1	2	214	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	2	4	0	7	2	117	1	2	233	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.5	7.9	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	75%	40%	1%
Vol Thru, %	97%	0%	0%	96%
Vol Right, %	1%	25%	60%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	8	10	222
LT Vol	2	6	4	2
Through Vol	108	0	0	214
RT Vol	1	2	6	6
Lane Flow Rate	121	9	11	241
Geometry Grp	1	1	1	1
Degree of Util (X)	0.139	0.011	0.013	0.271
Departure Headway (Hd)	4.147	4.725	4.441	4.045
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	858	762	811	886
Service Time	2.208	2.725	2.441	2.084
HCM Lane V/C Ratio	0.141	0.012	0.014	0.272
HCM Control Delay	7.9	7.8	7.5	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0	0	1.1

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	1	13	3	1	5	13	96	1	2	208	10
Future Vol, veh/h	10	1	13	3	1	5	13	96	1	2	208	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	1	14	3	1	5	14	104	1	2	226	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.5	8	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	42%	33%	1%
Vol Thru, %	87%	4%	11%	95%
Vol Right, %	1%	54%	56%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	24	9	220
LT Vol	13	10	3	2
Through Vol	96	1	1	208
RT Vol	1	13	5	10
Lane Flow Rate	120	26	10	239
Geometry Grp	1	1	1	1
Degree of Util (X)	0.139	0.032	0.012	0.27
Departure Headway (Hd)	4.195	4.479	4.474	4.061
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	845	804	805	880
Service Time	2.268	2.479	2.475	2.113
HCM Lane V/C Ratio	0.142	0.032	0.012	0.272
HCM Control Delay	8	7.6	7.5	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0	1.1

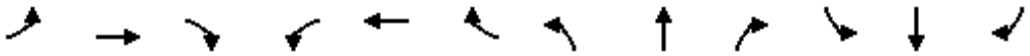
Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	24	108	195	25
Future Vol, veh/h	2	1	24	108	195	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	26	117	212	27
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	18%	67%	0%
Vol Thru, %	82%	0%	89%
Vol Right, %	0%	33%	11%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	132	3	220
LT Vol	24	2	0
Through Vol	108	0	195
RT Vol	0	1	25
Lane Flow Rate	143	3	239
Geometry Grp	1	1	1
Degree of Util (X)	0.166	0.004	0.264
Departure Headway (Hd)	4.154	4.677	3.978
Convergence, Y/N	Yes	Yes	Yes
Cap	859	770	902
Service Time	2.199	2.677	2.012
HCM Lane V/C Ratio	0.166	0.004	0.265
HCM Control Delay	8	7.7	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0	1.1

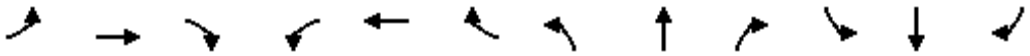
G. 1st Avenue Signal – Background Plus Project Synchro Outputs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	2	3	0	4	2	196	4	7	140	6
Future Volume (veh/h)	6	0	2	3	0	4	2	196	4	7	140	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	0	2	3	0	4	2	213	4	8	152	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	473	0	7	374	0	20	257	636	12	279	598	27
Arrive On Green	0.02	0.00	0.02	0.02	0.00	0.02	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1174	0	335	680	0	906	7	1819	34	43	1711	77
Grp Volume(v), veh/h	9	0	0	7	0	0	219	0	0	167	0	0
Grp Sat Flow(s),veh/h/ln	1509	0	0	1586	0	0	1860	0	0	1831	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.1	0.0	0.0	1.2	0.0	0.0	0.9	0.0	0.0
Prop In Lane	0.78		0.22	0.43		0.57	0.01		0.02	0.05		0.04
Lane Grp Cap(c), veh/h	480	0	0	394	0	0	904	0	0	903	0	0
V/C Ratio(X)	0.02	0.00	0.00	0.02	0.00	0.00	0.24	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	3180	0	0	3206	0	0	4016	0	0	3930	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	6.9	0.0	0.0	3.4	0.0	0.0	3.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	0.0	0.0	6.9	0.0	0.0	3.6	0.0	0.0	3.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		9			7			219			167	
Approach Delay, s/veh		6.9			6.9			3.6			3.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.5		4.8		9.5		4.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.0		27.0		29.0		27.0				
Max Q Clear Time (g_c+I1), s		3.2		2.1		2.9		2.1				
Green Ext Time (p_c), s		1.3		0.0		0.9		0.0				

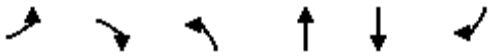
Intersection Summary												
HCM 6th Ctrl Delay			3.6									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	1	17	2	1	4	17	186	4	6	127	12
Future Volume (veh/h)	12	1	17	2	1	4	17	186	4	6	127	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	1	18	2	1	4	18	202	4	7	138	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	2	43	338	12	48	291	581	11	268	554	51
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	625	48	866	477	239	955	80	1711	33	39	1632	150
Grp Volume(v), veh/h	32	0	0	7	0	0	224	0	0	158	0	0
Grp Sat Flow(s),veh/h/ln	1539	0	0	1670	0	0	1824	0	0	1820	0	0
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.1	0.0	0.0	1.3	0.0	0.0	0.9	0.0	0.0
Prop In Lane	0.41		0.56	0.29		0.57	0.08		0.02	0.04		0.08
Lane Grp Cap(c), veh/h	421	0	0	398	0	0	883	0	0	873	0	0
V/C Ratio(X)	0.08	0.00	0.00	0.02	0.00	0.00	0.25	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	3123	0	0	3174	0	0	3799	0	0	3799	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	6.7	0.0	0.0	3.7	0.0	0.0	3.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	0.0	0.0	6.7	0.0	0.0	3.8	0.0	0.0	3.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		32			7			224			158	
Approach Delay, s/veh		6.9			6.7			3.8			3.6	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.5		5.2		9.5		5.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.0		27.0		29.0		27.0				
Max Q Clear Time (g_c+I1), s		3.3		2.3		2.9		2.1				
Green Ext Time (p_c), s		1.3		0.1		0.9		0.0				

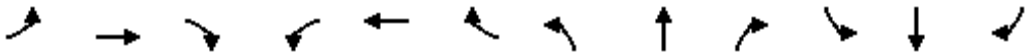
Intersection Summary												
HCM 6th Ctrl Delay			4.0									
HCM 6th LOS			A									



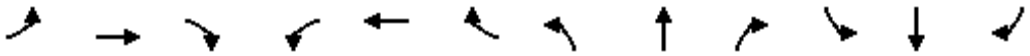
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	23	22	1	184	140	2
Future Volume (veh/h)	23	22	1	184	140	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	24	1	200	152	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	53	51	244	624	617	8
Arrive On Green	0.06	0.06	0.33	0.33	0.33	0.33
Sat Flow, veh/h	841	808	4	1864	1842	24
Grp Volume(v), veh/h	50	0	201	0	0	154
Grp Sat Flow(s),veh/h/ln	1683	0	1868	0	0	1866
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.9
Cycle Q Clear(g_c), s	0.4	0.0	1.2	0.0	0.0	0.9
Prop In Lane	0.50	0.48	0.00			0.01
Lane Grp Cap(c), veh/h	106	0	868	0	0	625
V/C Ratio(X)	0.47	0.00	0.23	0.00	0.00	0.25
Avail Cap(c_a), veh/h	3042	0	3865	0	0	3623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	3.7	0.0	0.0	3.6
Incr Delay (d2), s/veh	3.3	0.0	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	0.0	3.8	0.0	0.0	3.8
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	50			201	154	
Approach Delay, s/veh	10.0			3.8	3.8	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		9.5		5.4		9.5
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		29.0		27.0		29.0
Max Q Clear Time (g_c+I1), s		3.2		2.4		2.9
Green Ext Time (p_c), s		1.1		0.1		0.8

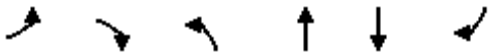
Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	2	4	0	6	2	108	1	2	214	6
Future Volume (veh/h)	6	0	2	4	0	6	2	108	1	2	214	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	0	2	4	0	7	2	117	1	2	233	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	477	0	9	357	0	27	259	636	5	255	625	19
Arrive On Green	0.03	0.00	0.03	0.03	0.00	0.03	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1186	0	339	573	0	1004	14	1830	15	7	1797	54
Grp Volume(v), veh/h	9	0	0	11	0	0	120	0	0	242	0	0
Grp Sat Flow(s),veh/h/ln	1525	0	0	1577	0	0	1859	0	0	1858	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.0	1.4	0.0	0.0
Prop In Lane	0.78		0.22	0.36		0.64	0.02		0.01	0.01		0.03
Lane Grp Cap(c), veh/h	486	0	0	383	0	0	901	0	0	898	0	0
V/C Ratio(X)	0.02	0.00	0.00	0.03	0.00	0.00	0.13	0.00	0.00	0.27	0.00	0.00
Avail Cap(c_a), veh/h	3158	0	0	3194	0	0	3984	0	0	3991	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	6.9	0.0	0.0	3.3	0.0	0.0	3.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	0.0	0.0	6.9	0.0	0.0	3.3	0.0	0.0	3.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		9			11			120			242	
Approach Delay, s/veh		6.9			6.9			3.3			3.7	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.5		4.9		9.5		4.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.0		27.0		29.0		27.0				
Max Q Clear Time (g_c+I1), s		2.6		2.1		3.4		2.1				
Green Ext Time (p_c), s		0.6		0.0		1.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			3.7									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1	13	3	1	5	13	96	1	2	208	10
Future Volume (veh/h)	10	1	13	3	1	5	13	96	1	2	208	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	1	14	3	1	5	14	104	1	2	226	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	379	3	38	352	8	41	311	571	5	250	600	29
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	655	60	833	548	183	914	109	1674	15	7	1760	85
Grp Volume(v), veh/h	26	0	0	9	0	0	119	0	0	239	0	0
Grp Sat Flow(s),veh/h/ln	1547	0	0	1645	0	0	1798	0	0	1852	0	0
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.0	1.4	0.0	0.0
Prop In Lane	0.42		0.54	0.33		0.56	0.12		0.01	0.01		0.05
Lane Grp Cap(c), veh/h	419	0	0	402	0	0	888	0	0	879	0	0
V/C Ratio(X)	0.06	0.00	0.00	0.02	0.00	0.00	0.13	0.00	0.00	0.27	0.00	0.00
Avail Cap(c_a), veh/h	3139	0	0	3172	0	0	3732	0	0	3904	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	6.7	0.0	0.0	3.4	0.0	0.0	3.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.8	0.0	0.0	6.7	0.0	0.0	3.5	0.0	0.0	3.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		26			9			119			239	
Approach Delay, s/veh		6.8			6.7			3.5			3.8	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.5		5.2		9.5		5.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.0		27.0		29.0		27.0				
Max Q Clear Time (g_c+I1), s		2.7		2.2		3.4		2.1				
Green Ext Time (p_c), s		0.6		0.1		1.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			4.0									
HCM 6th LOS			A									



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	1	24	108	195	25
Future Volume (veh/h)	2	1	24	108	195	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	1	26	117	212	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	6	3	365	561	578	74
Arrive On Green	0.01	0.01	0.36	0.36	0.36	0.36
Sat Flow, veh/h	874	437	178	1578	1626	207
Grp Volume(v), veh/h	4	0	143	0	0	239
Grp Sat Flow(s),veh/h/ln	1748	0	1757	0	0	1833
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.4
Cycle Q Clear(g_c), s	0.0	0.0	0.8	0.0	0.0	1.4
Prop In Lane	0.50	0.25	0.18			0.11
Lane Grp Cap(c), veh/h	12	0	926	0	0	651
V/C Ratio(X)	0.32	0.00	0.15	0.00	0.00	0.37
Avail Cap(c_a), veh/h	3353	0	3783	0	0	3776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	7.0	0.0	3.2	0.0	0.0	3.4
Incr Delay (d2), s/veh	14.2	0.0	0.1	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.2	0.0	3.2	0.0	0.0	3.7
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	4			143	239	
Approach Delay, s/veh	21.2			3.2	3.7	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		9.5		4.6		9.5
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		29.0		27.0		29.0
Max Q Clear Time (g_c+I1), s		2.8		2.0		3.4
Green Ext Time (p_c), s		0.8		0.0		1.4

Intersection Summary	
HCM 6th Ctrl Delay	3.7
HCM 6th LOS	A

H. California Avenue & Playa Avenue PowerPoint

Playa Ave Intersection Operations Analysis

SURF! BRT

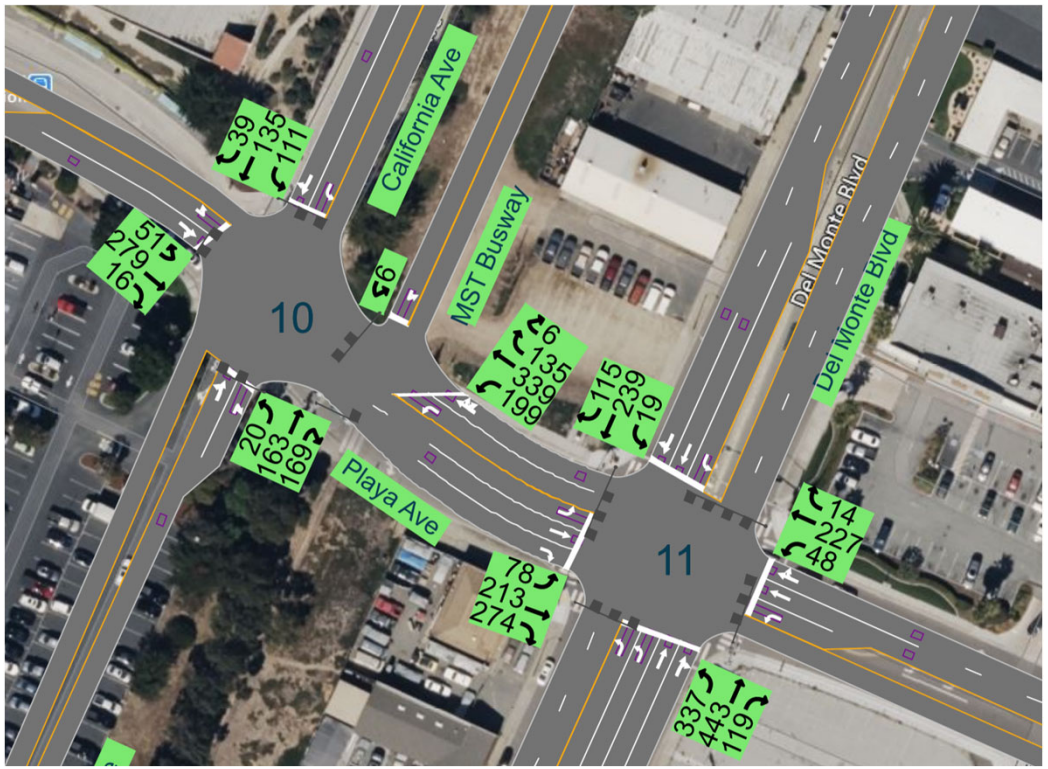
December 5, 2023

Intersection Figures

Cumulative 2045 Volumes

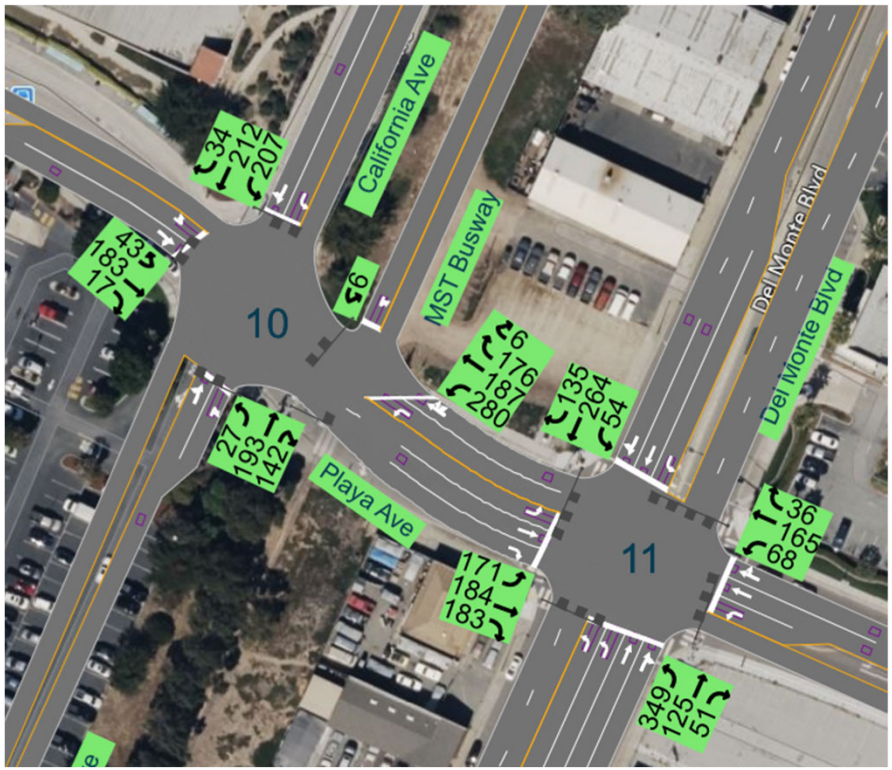


AM Peak



PM Peak

Cumulative 2045 Volumes



Weekend Midday Peak

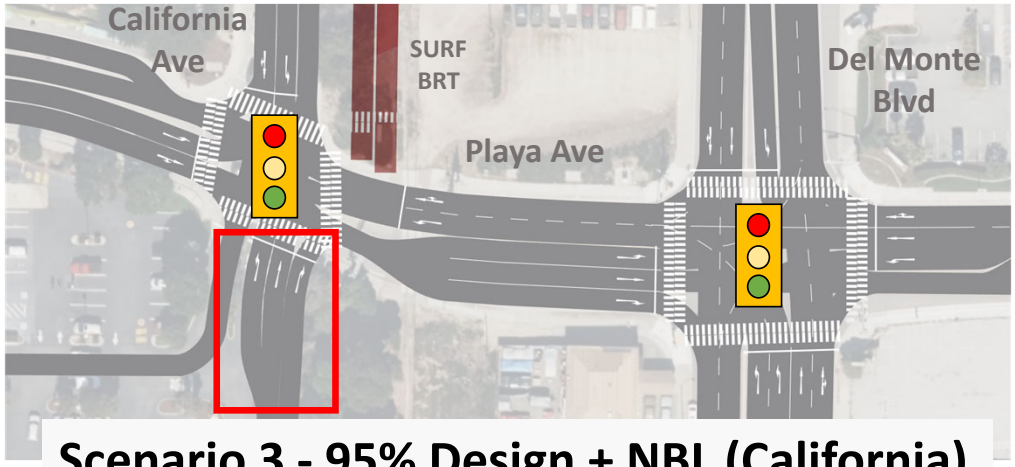
Intersection Geometry



Scenario 1 - Existing Geometry



Scenario 2 - 95% Design



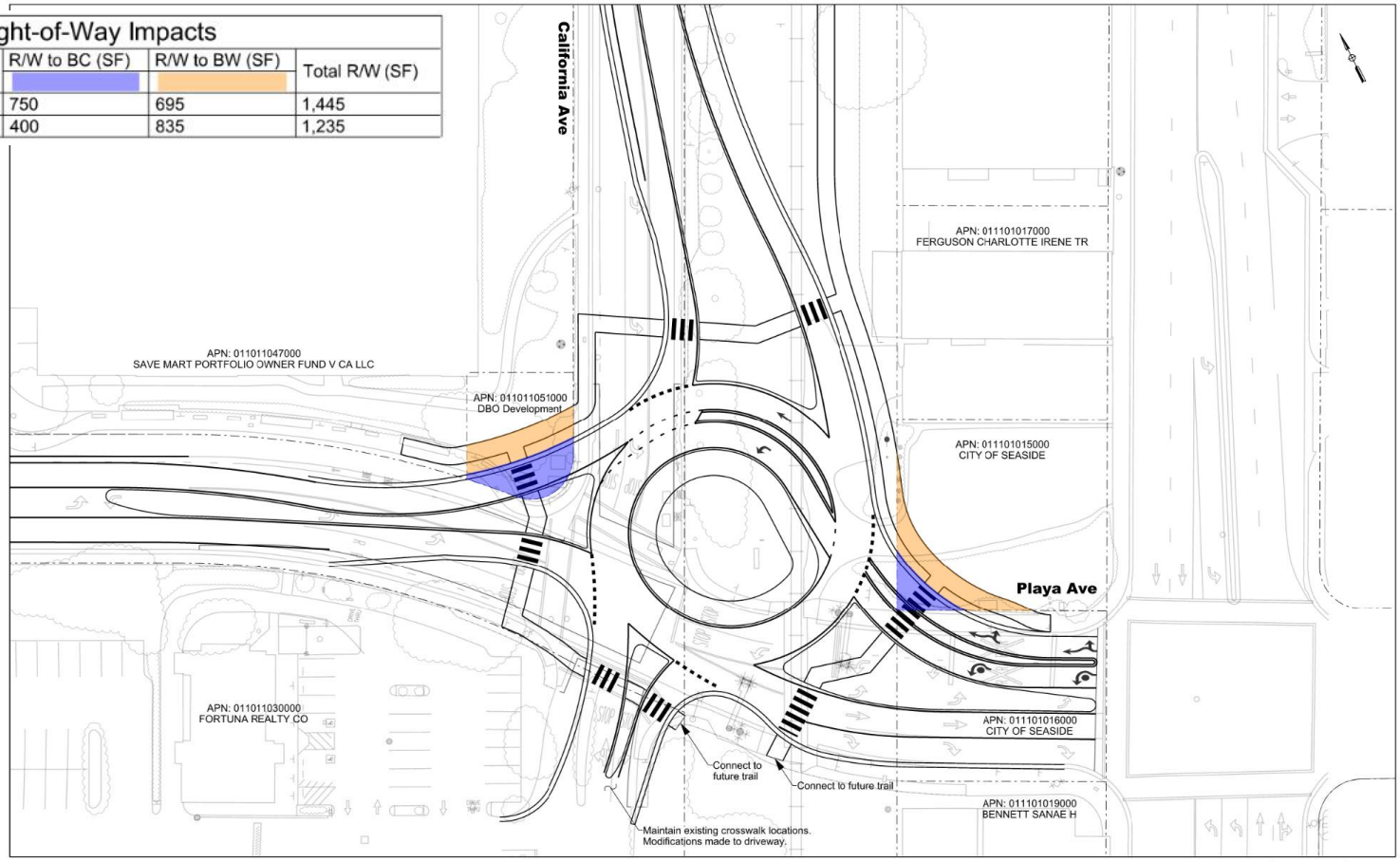
Scenario 3 - 95% Design + NBL (California)



Scenario 4 - Single-Lane RAB

2-Lane Roundabout Concept (Playa/California)

Right-of-Way Impacts				
Corner	APN Number	R/W to BC (SF)	R/W to BW (SF)	Total R/W (SF)
Northwest	011011051000	750	695	1,445
Northeast	011101015000	400	835	1,235



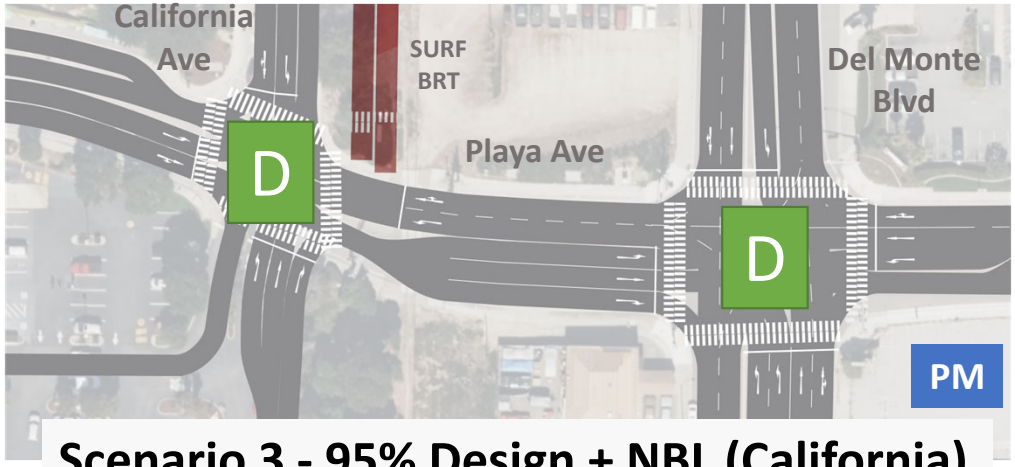
Cumulative 2045 PM Peak LOS Summary



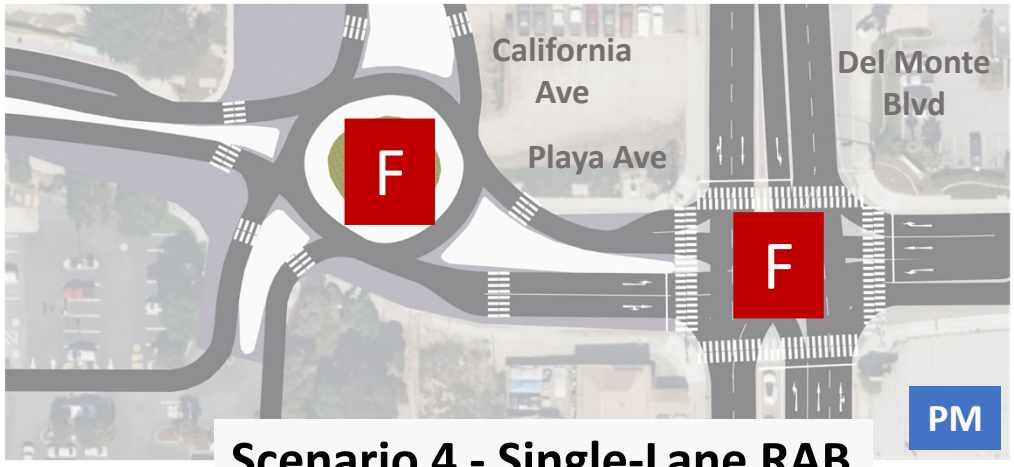
Scenario 1 - Existing Geometry



Scenario 2 - 95% Design



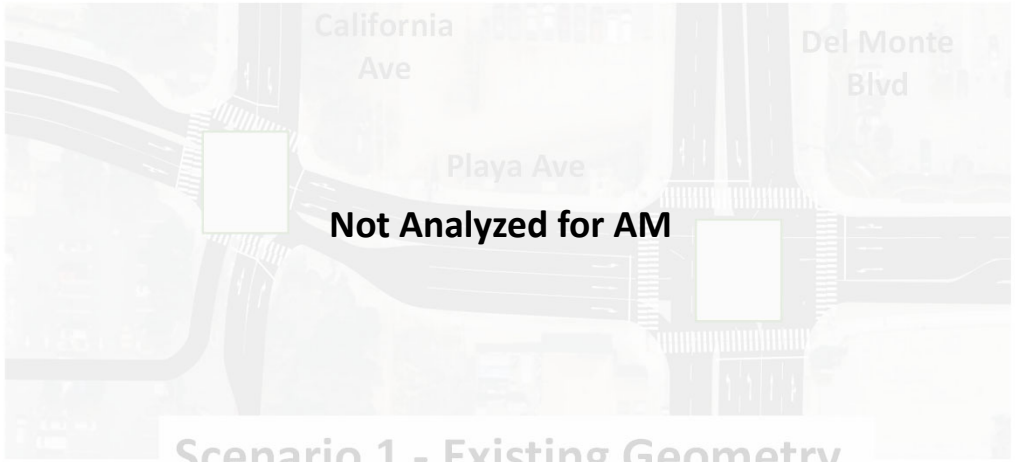
Scenario 3 - 95% Design + NBL (California)



Scenario 4 - Single-Lane RAB

Cumulative 2045 AM Peak LOS Summary

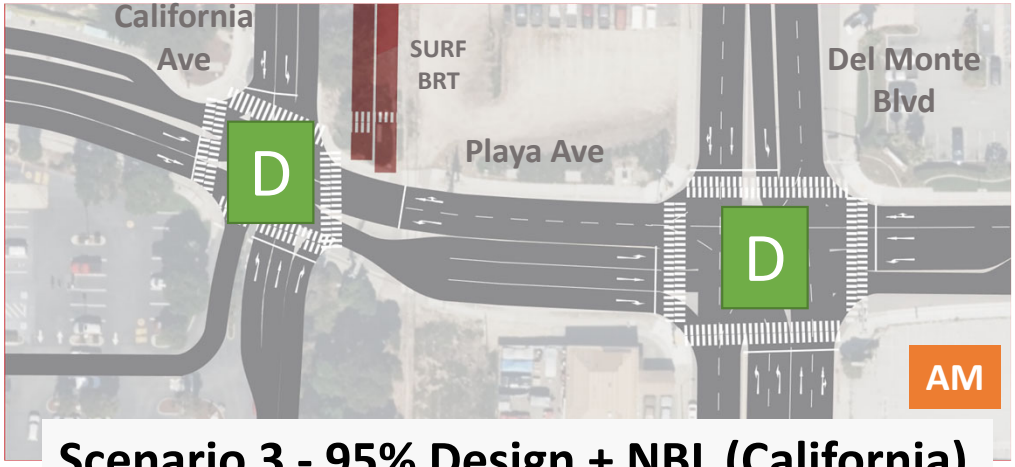
Note: Queues in AM less than PM



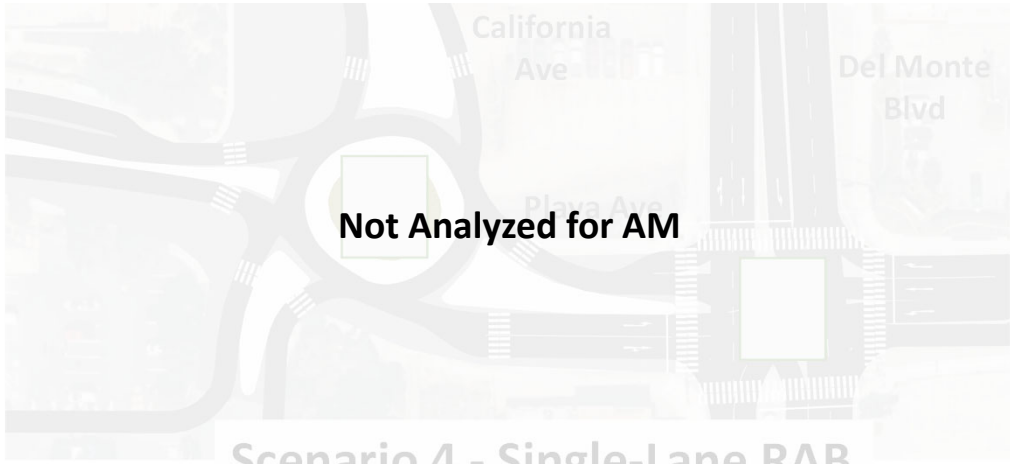
Scenario 1 - Existing Geometry



Scenario 2 - 95% Design



Scenario 3 - 95% Design + NBL (California)



Scenario 4 - Single-Lane RAB

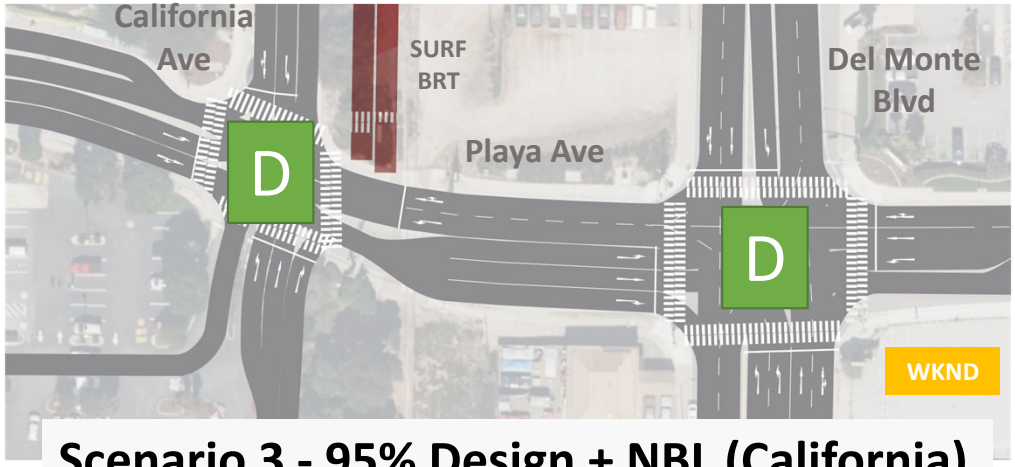
Cumulative 2045 Weekend Midday Peak LOS Summary



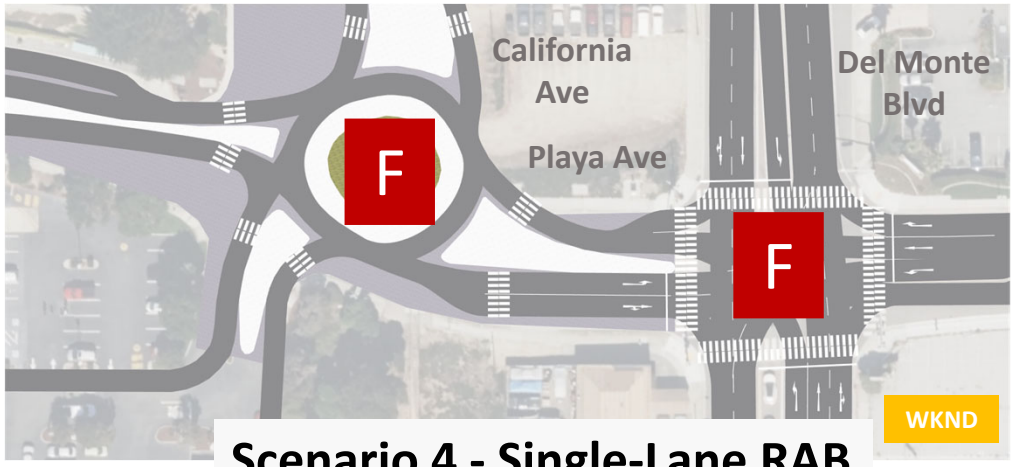
Scenario 1 - Existing Geometry



Scenario 2 - 95% Design



Scenario 3 - 95% Design + NBL (California)



Scenario 4 - Single-Lane RAB

Cumulative 2045 PM Peak Queueing Summary

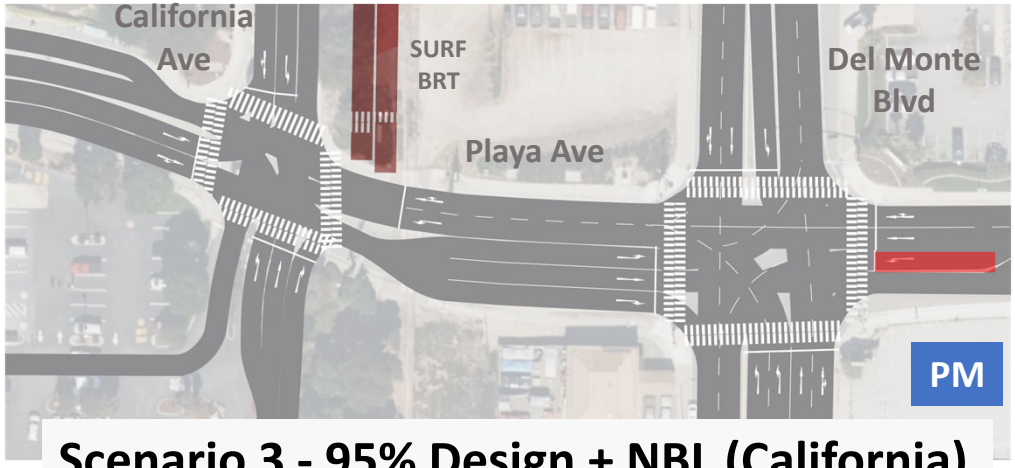
Red = Exceeds Capacity



Scenario 1 - Existing Geometry



Scenario 2 - 95% Design



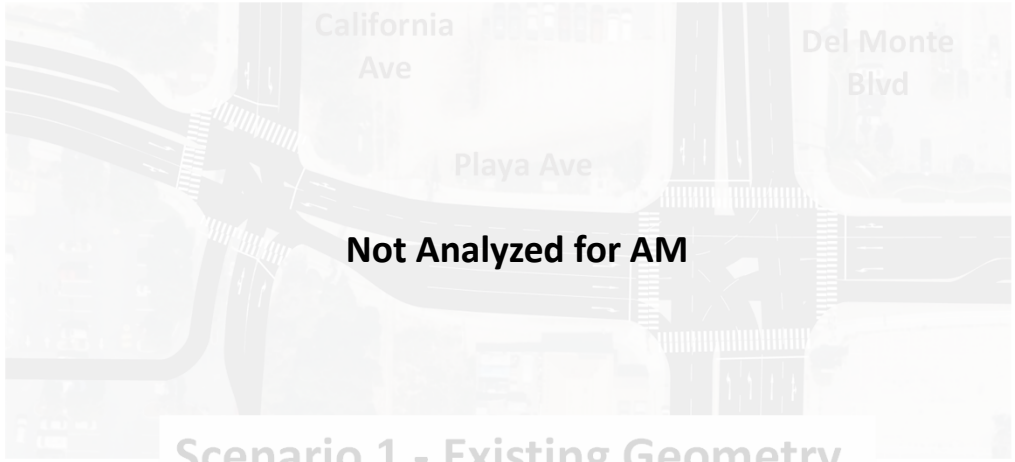
Scenario 3 - 95% Design + NBL (California)



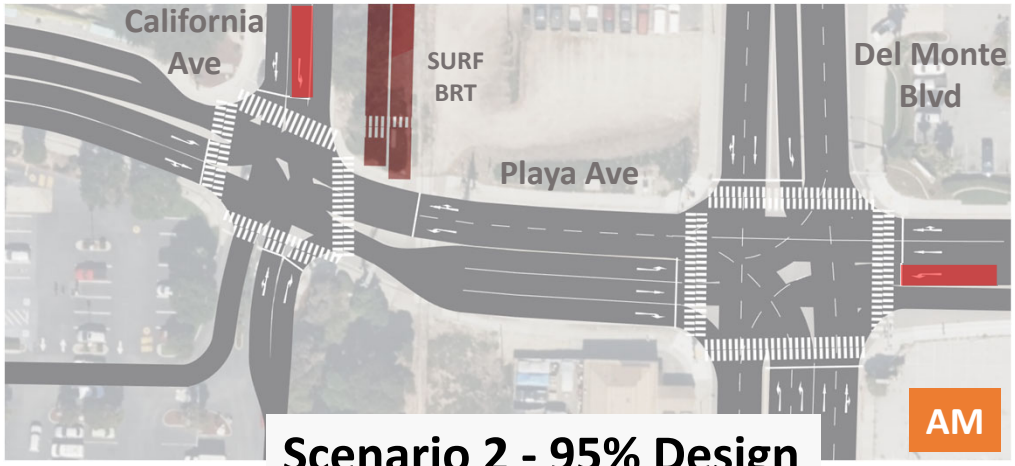
Scenario 4 - Single-Lane RAB

Cumulative 2045 AM Peak Queueing Summary

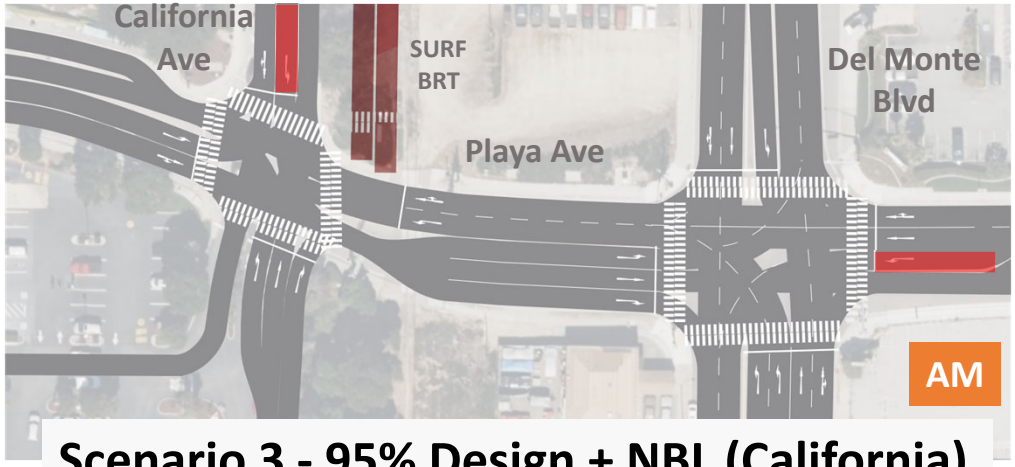
Red = Exceeds Capacity



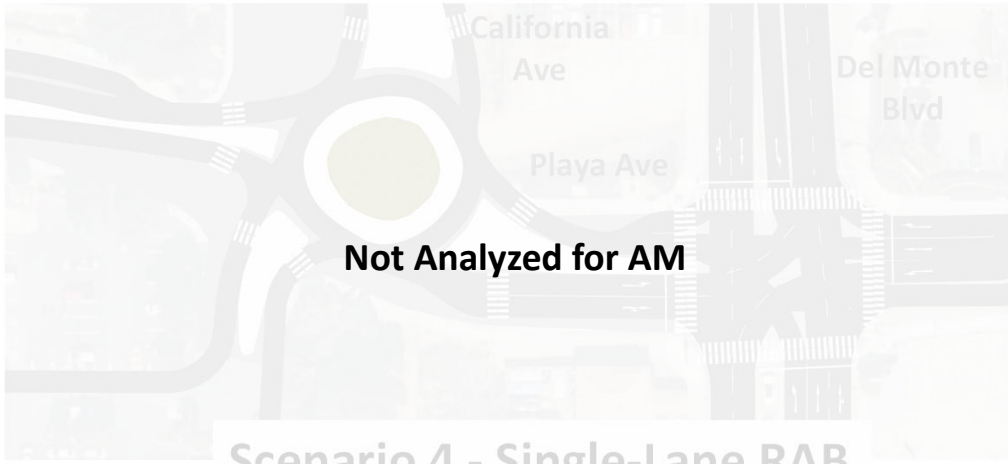
Scenario 1 - Existing Geometry



Scenario 2 - 95% Design



Scenario 3 - 95% Design + NBL (California)



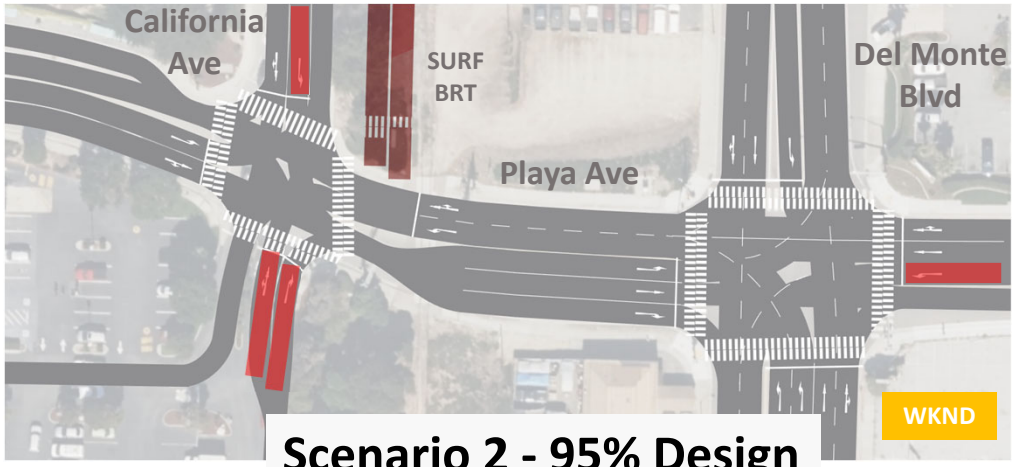
Scenario 4 - Single-Lane RAB

Cumulative 2045 Weekend Midday Peak Queueing Summary

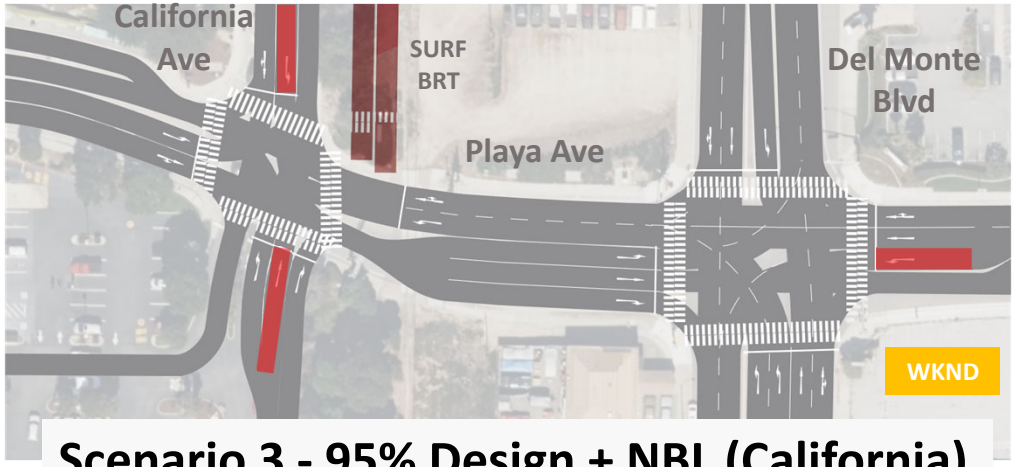
Red = Exceeds Capacity



Scenario 1 - Existing Geometry



Scenario 2 - 95% Design



Scenario 3 - 95% Design + NBL (California)



Scenario 4 - Single-Lane RAB

Delay/LOS Summary Figures

Cumulative 2045 PM Peak LOS Summary

		Scenario 1 Existing Geometry			Scenario 2 95% Design			Scenario 3 95% Design + NBL (California)			Scenario 4 Single-Lane Roundabout		
No.	**Intersection**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**
1	California Ave/ Playa Ave	AWSC	325.3	F	Signal	50.5	D	Signal	35.5	D	Roundabout	619.3	F
2	Del Monte Blvd/ Playa Ave	Signal	359.7	F	Signal	37.3	D	Signal	37.9	D	Signal	145.6	F
	Bus	AWSC	516.7	F	Signal	36.9	D	Signal	31.6	C	Roundabout	238.6	F

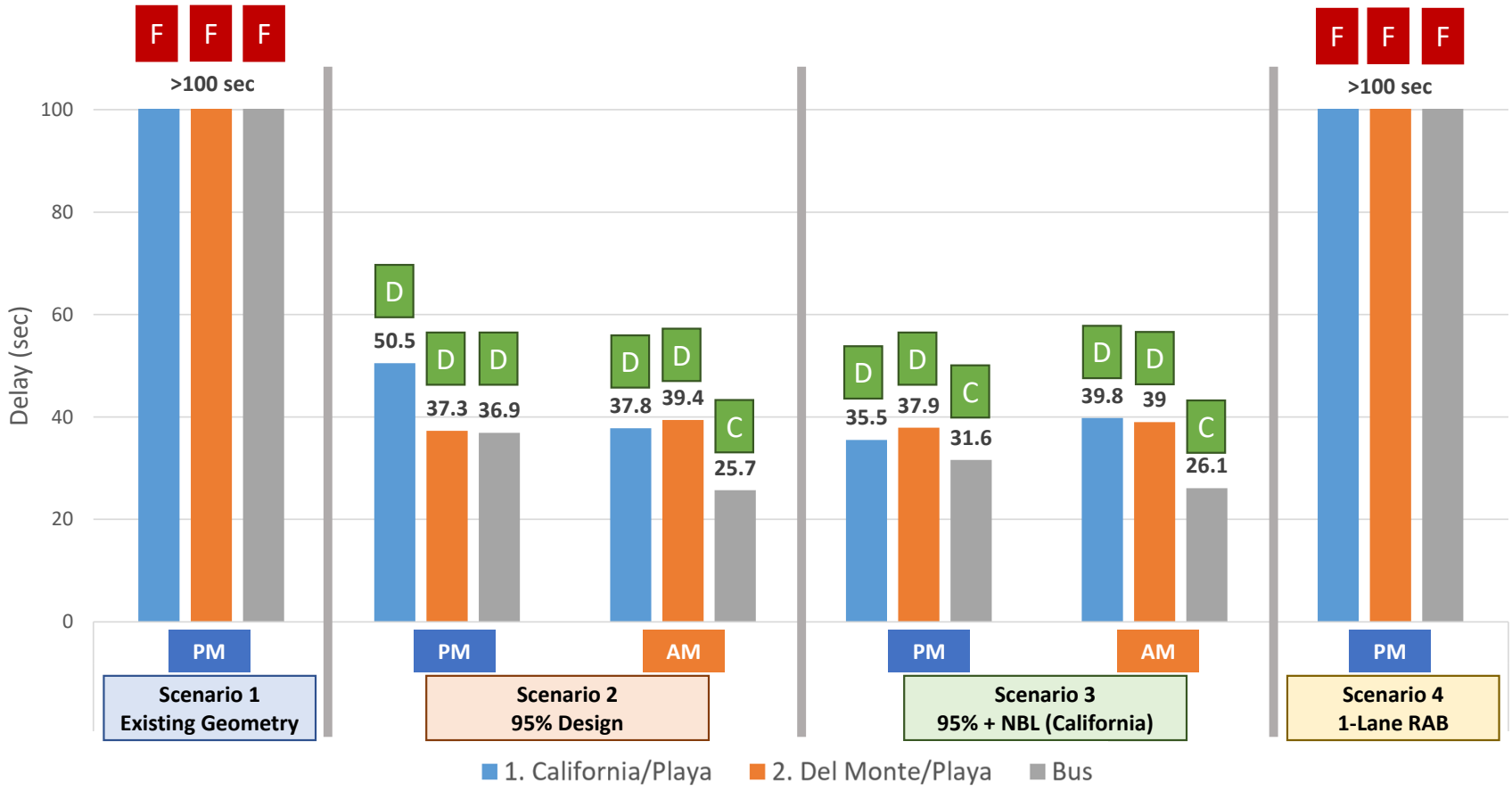
Cumulative 2045 AM Peak LOS Summary

		Scenario 1 Existing Geometry			Scenario 2 95% Design			Scenario 3 95% Design + NBL (California)			Scenario 4 Single-Lane Roundabout		
No.	**Intersection**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**
1	California Ave/ Playa Ave	Not Analyzed for AM			Signal	37.8	D	Signal	39.8	D	Not Analyzed for AM		
2	Del Monte Blvd/ Playa Ave				Signal	39.4	D	Signal	39.0	D			
	Bus				Signal	25.7	C	Signal	26.1	C			

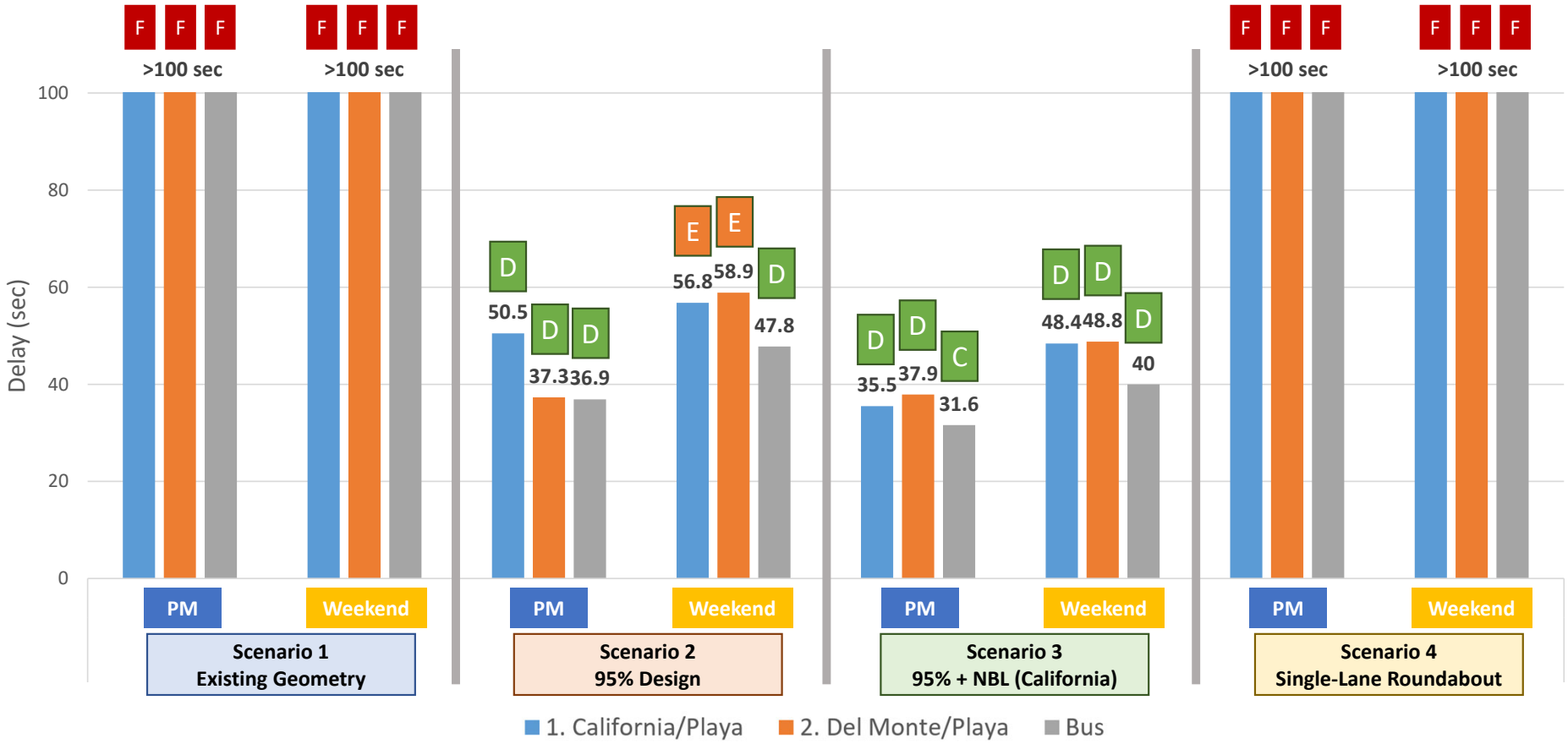
Cumulative 2045 Weekend Midday Peak LOS Summary

		Scenario 1 Existing Geometry			Scenario 2 95% Design			Scenario 3 95% Design + NBL (California)			Scenario 4 Single-Lane Roundabout		
No.	**Intersection**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**	**Control**	**Avg Delay** *(sec)*	**LOS**
1	California Ave/ Playa Ave	AWSC	407.0	F	Signal	56.8	E	Signal	48.4	D	Roundabout	757.1	F
2	Del Monte Blvd/ Playa Ave	Signal	378.1	F	Signal	58.9	E	Signal	48.8	D	Signal	112.8	F
	Bus	AWSC	806.3	F	Signal	47.8	D	Signal	40.0	D	Roundabout	310.6	F

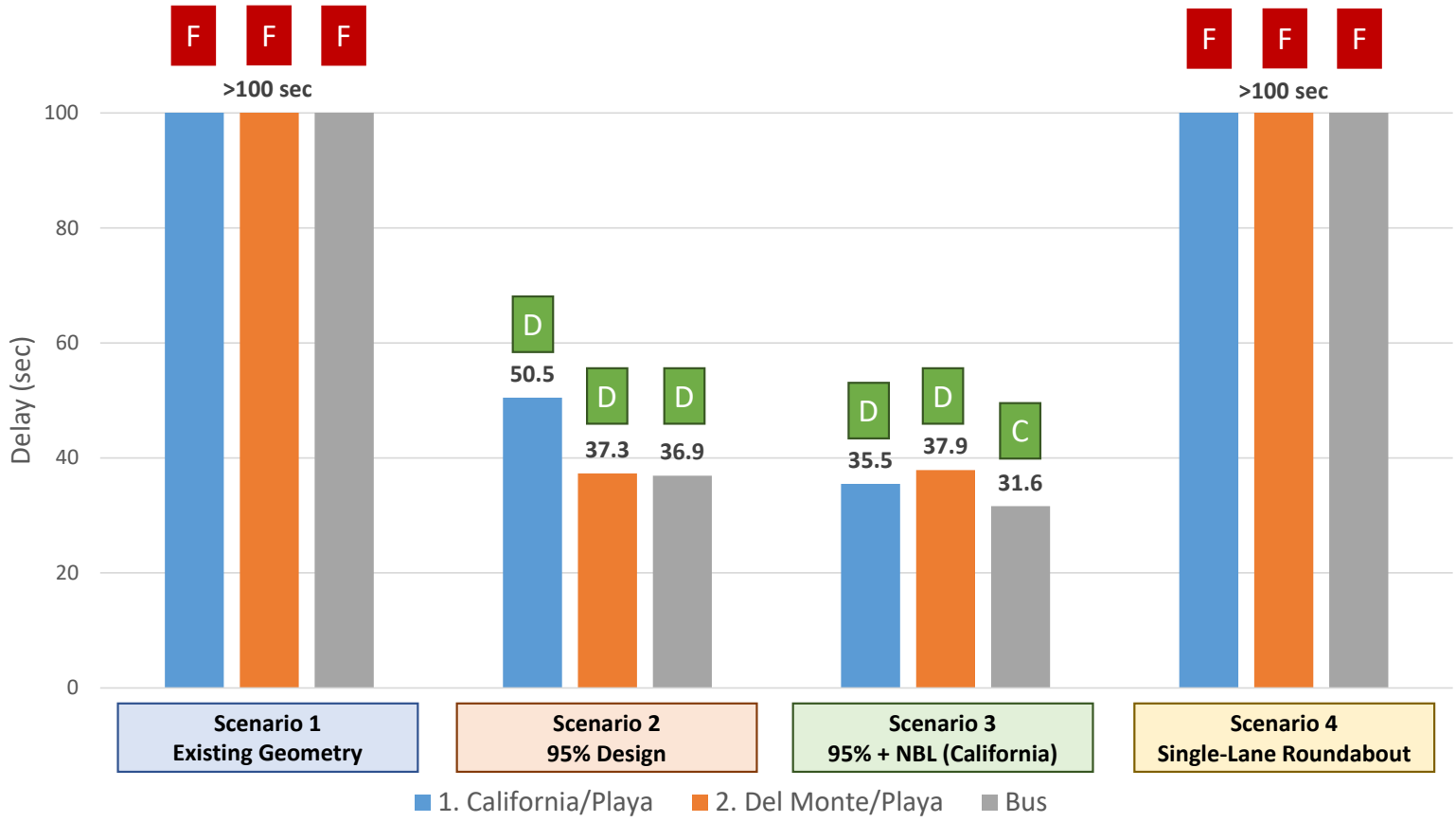
Cumulative 2045 PM Peak vs. AM Peak Delay Summary Graph



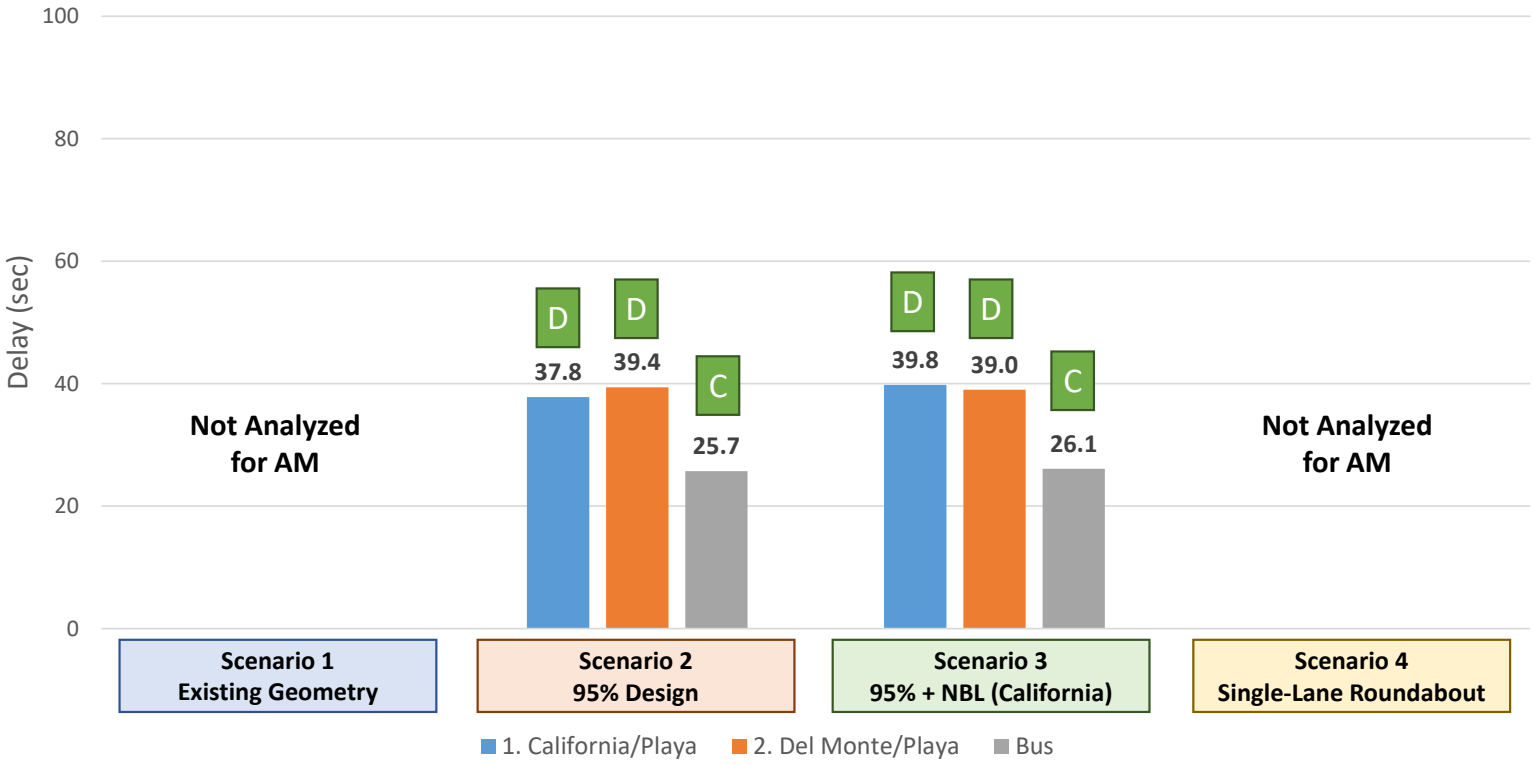
Cumulative 2045 PM Peak vs. Weekend Midday Peak Delay Summary Graph



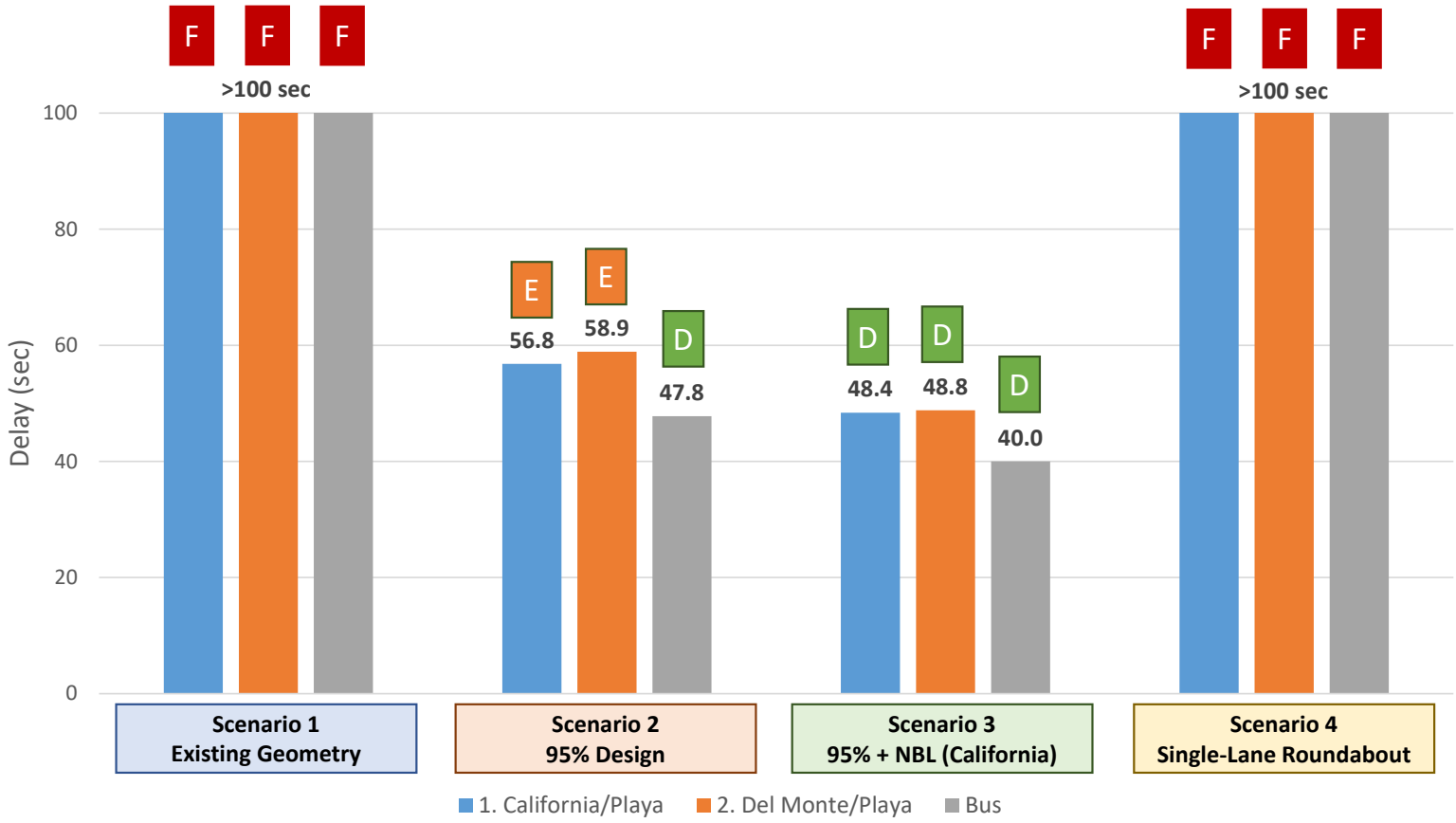
Cumulative 2045 PM Peak Delay Summary Graph



Cumulative 2045 AM Peak Delay Summary Graph



Cumulative 2045 Weekend Midday Peak Delay Summary Graph



Queueing Summary Tables

Cumulative 2045 PM Peak Queueing Summary by Movement

Red = Exceeds Capacity

No.	Intersection	Movement	Scenario 1 Existing Geometry		Scenario 2 95% Design		Scenario 3 95% Design + NBL (California)		Scenario 4 Single-Lane Roundabout	
			Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*
1	California Ave/ Playa Ave	NBL	300	**336**	300	**336**	300	84	300	**368**
		NBT	300	**336**	300	**336**	300	284	300	**368**
		NBR	100	**327**	100	**324**	100	98	300	**368**
		SBL	230	**1164**	230	195	230	216	1450	**1490**
		SBT	1450	**1456**	1450	268	1450	230	1450	**1490**
		SBR	1450	**1455**	1450	271	1450	248	1450	**1490**
		EBL	385	35	385	107	385	120	385	**528**
		EBT	385	**463**	385	407	385	378	385	**528**
		EBR	385	**463**	385	413	385	383	385	**519**
		WBL	200	**305**	200	204*	200	198	100	**241**
		WBT	200	**306**	200	204*	200	198	100	**241**
		WBR	200	**311**	200	204*	200	198	100	**241**
2	Del Monte Blvd/ Playa Ave	NBL	520	**2286**	520	373	520	396	260	**1883**
		NBT	400	**2286**	400	373	400	396	400	**1883**
		NBR	400	**2286**	400	373	400	396	400	**1888**
		SBL	150	53	150	59	150	59	150	57
		SBT	380	**650**	380	236	380	231	380	329
		SBR	380	**653**	380	239	380	233	380	329
		EBL	200	**208**	200	182	200	208*	110	**453**
		EBT	200	**208**	200	182	200	208*	150	**453**
		EBR	200	**211**	200	186	200	212*	150	**453**
		WBL	60	**489**	60	**234**	60	**225**	60	**226**
		WBT	360	**486**	360	257	360	251	360	332
		WBR	360	**490**	360	261	360	255	360	335

*Max Queue exceeds capacity, but is acceptable

Cumulative 2045 AM Peak Queueing Summary by Movement

Red = Exceeds Capacity

No.	Intersection	Movement	Scenario 1 Existing Geometry		Scenario 2 95% Design		Scenario 3 95% Design + NBL (California)		Scenario 4 Single-Lane Roundabout	
			Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*
1	California Ave/ Playa Ave	NBL			300	84	300	25		
		NBT			300	84	300	62		
		NBR			100	57	100	47		
		SBL			230	**338**	230	**329**		
		SBT			1450	181	1450	153		
		SBR			1450	184	1450	171		
		EBL			385	27	385	29		
		EBT			385	205	385	195		
		EBR			385	211	385	201		
		WBL			200	105	200	146		
		WBT			200	105	200	146		
		WBR			200	105	200	146		
2	Del Monte Blvd/ Playa Ave	NBL			520	159	520	163		
		NBT			400	159	400	163		
		NBR			400	159	400	163		
		SBL			150	49	150	42		
		SBT			380	350	380	348		
		SBR			380	353	380	350		
		EBL			200	237*	200	153		
		EBT			200	237*	200	153		
		EBR			200	242*	200	157		
		WBL			60	**107**	60	**101**		
		WBT			360	142	360	131		
		WBR			360	146	360	135		

*Max Queue exceeds capacity, but is acceptable

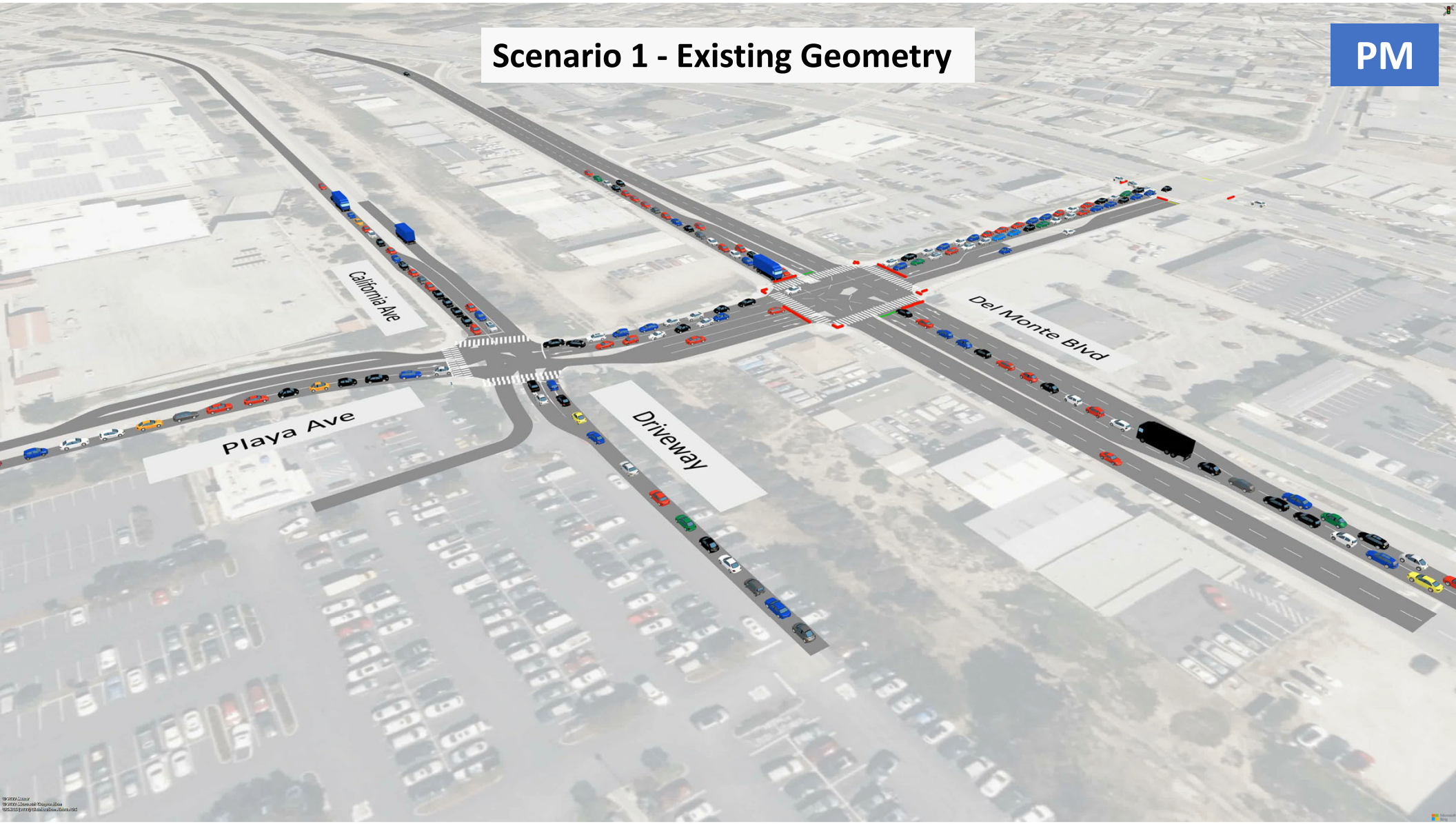
Cumulative 2045 Weekend Midday Peak Queueing Summary by Movement

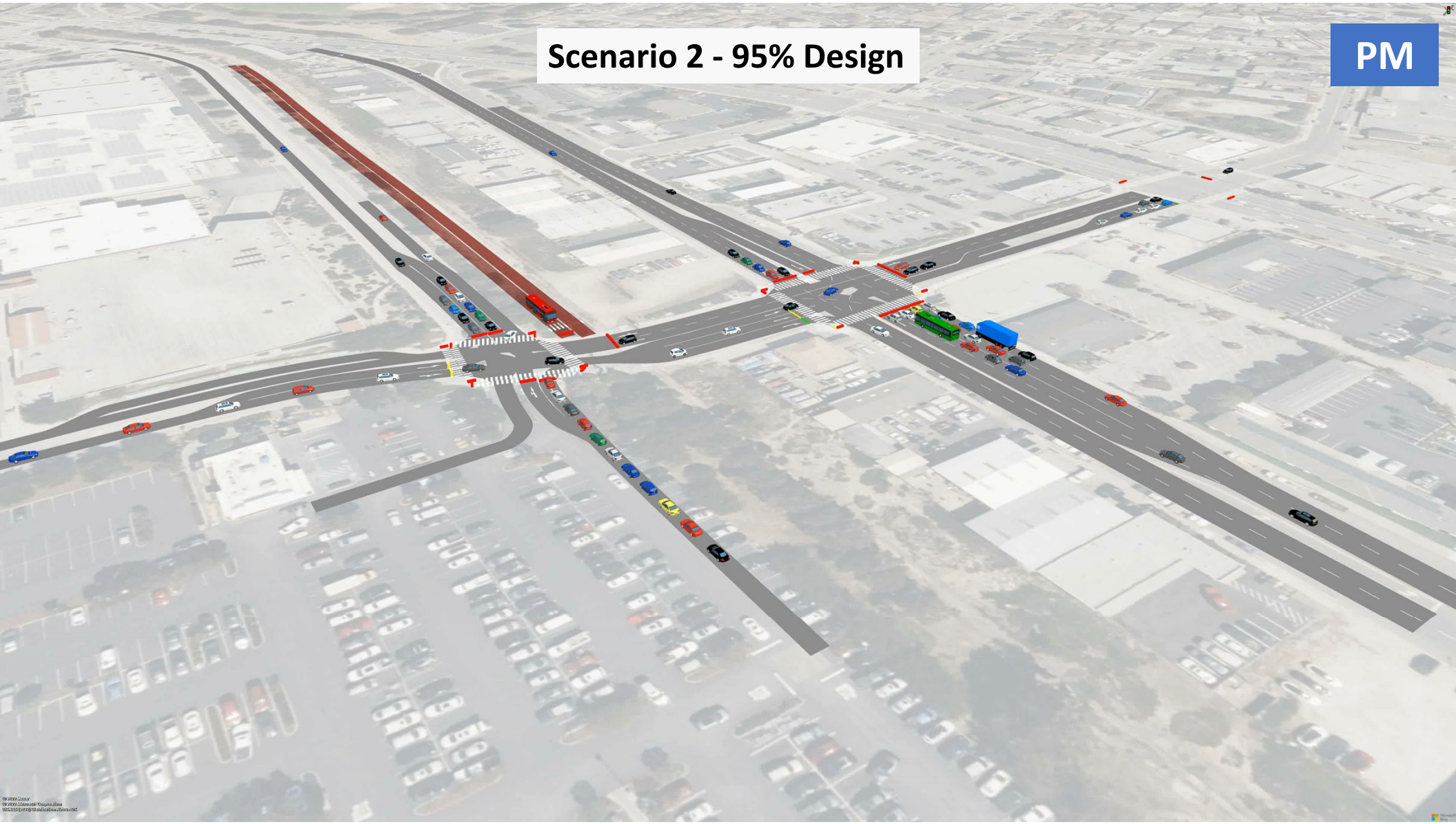
Red = Exceeds Capacity

No.	Intersection	Movement	Scenario 1 Existing Geometry		Scenario 2 95% Design		Scenario 3 95% Design + NBL (California)		Scenario 4 Single-Lane Roundabout	
			Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*	Capacity (ft)	Max Queue *(ft)*
1	California Ave/ Playa Ave	NBL	300	**342**	300	**334**	300	140	100	**369**
		NBT	300	**342**	300	**334**	300	**327**	100	**369**
		NBR	100	**333**	100	**325**	100	99	100	**369**
		SBL	230	**1509**	230	**481**	230	**456**	1450	**1495**
		SBT	1450	**1506**	1450	477	1450	476	1450	**1495**
		SBR	1450	**1506**	1450	480	1450	494	1450	**1495**
		EBL	385	61	385	107	385	79	385	**461**
		EBT	385	**470**	385	297	385	317	385	**461**
		EBR	385	**470**	385	303	385	323	385	**452**
		WBL	200	**333**	200	260*	200	256*	100	**242**
		WBT	200	**333**	200	260*	200	256*	100	**242**
		WBR	200	**338**	200	260*	200	256*	100	**242**
2	Del Monte Blvd/ Playa Ave	NBL	520	**2288**	520	427	520	453	260	**1375**
		NBT	400	**2288**	400	427*	400	453*	400	**1375**
		NBR	400	**2288**	400	427*	400	453*	400	**1380**
		SBL	150	89	150	83	150	109	150	95
		SBT	380	213	380	253	380	249	380	280
		SBR	380	215	380	255	380	251	380	280
		EBL	200	**278**	200	262*	200	240*	110	**483**
		EBT	200	**278**	200	262*	200	240*	150	**483**
		EBR	200	**283**	200	266*	200	245*	150	**483**
		WBL	60	**493**	60	**328**	60	**224**	60	**265**
		WBT	360	**490**	360	326	360	231	360	325
		WBR	360	**494**	360	330	360	235	360	329

*Max Queue exceeds capacity, but is acceptable

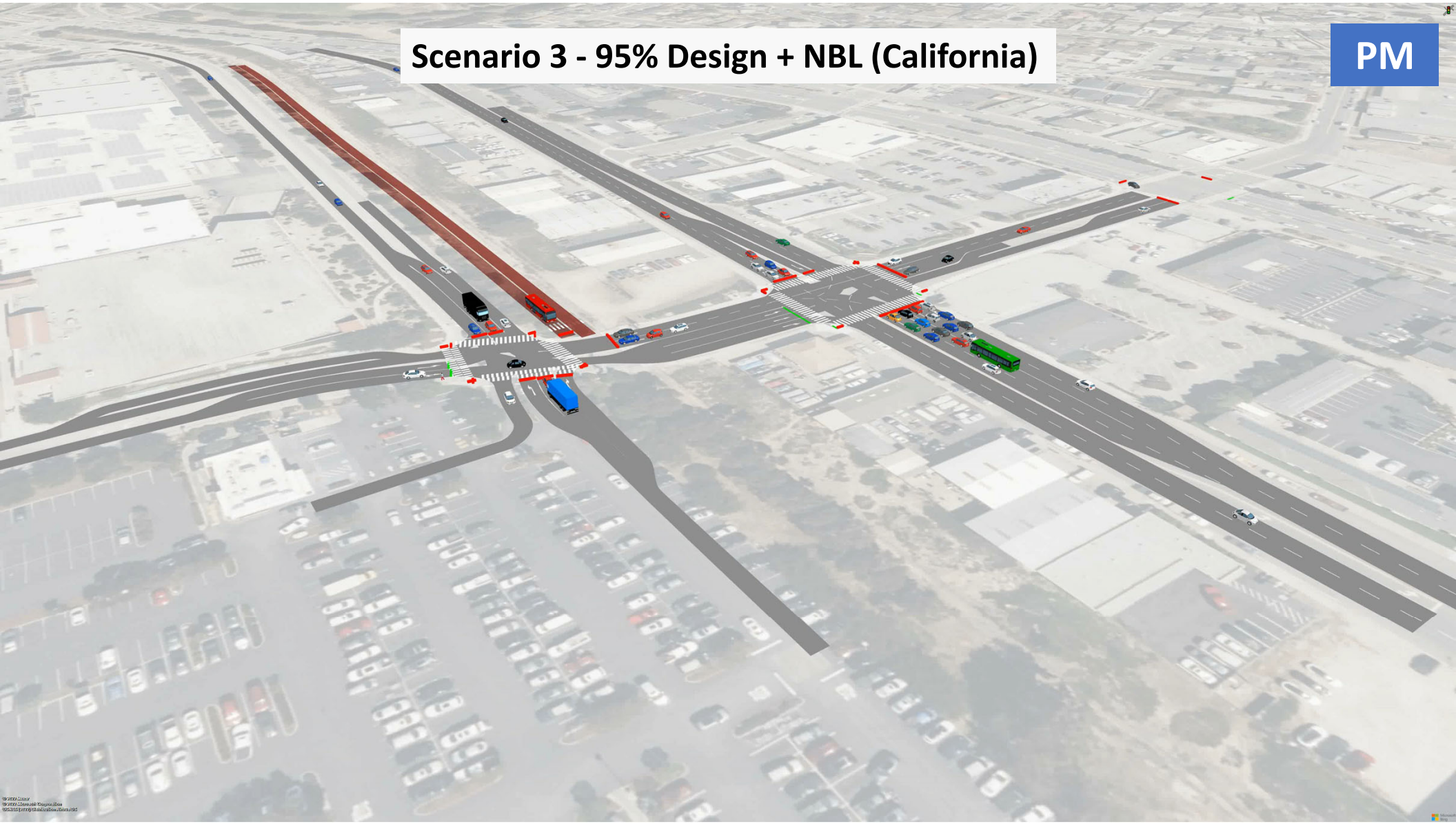
Cumulative 2045 PM Simulation Videos


Scenario 1 - Existing Geometry
PM
California Ave
Del Monte Blvd
Playa Ave
Driveway


Scenario 2 - 95% Design
PM

Scenario 3 - 95% Design + NBL (California)

PM

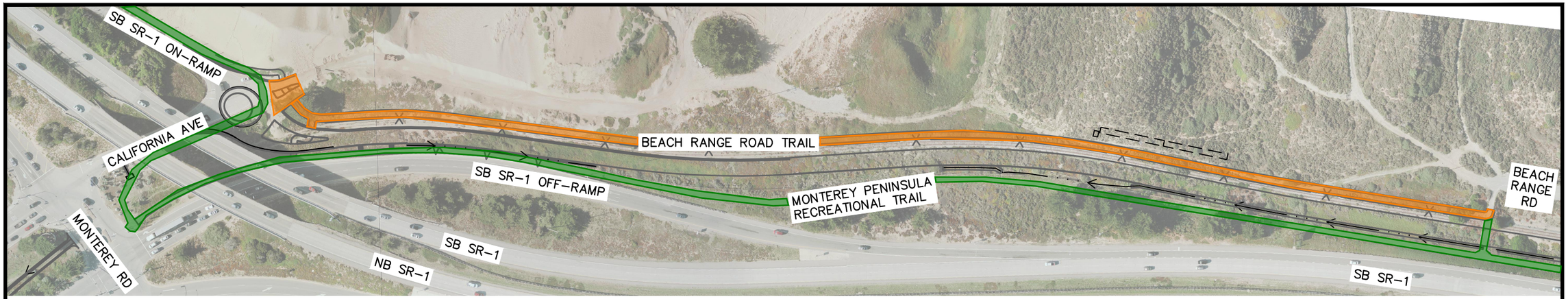


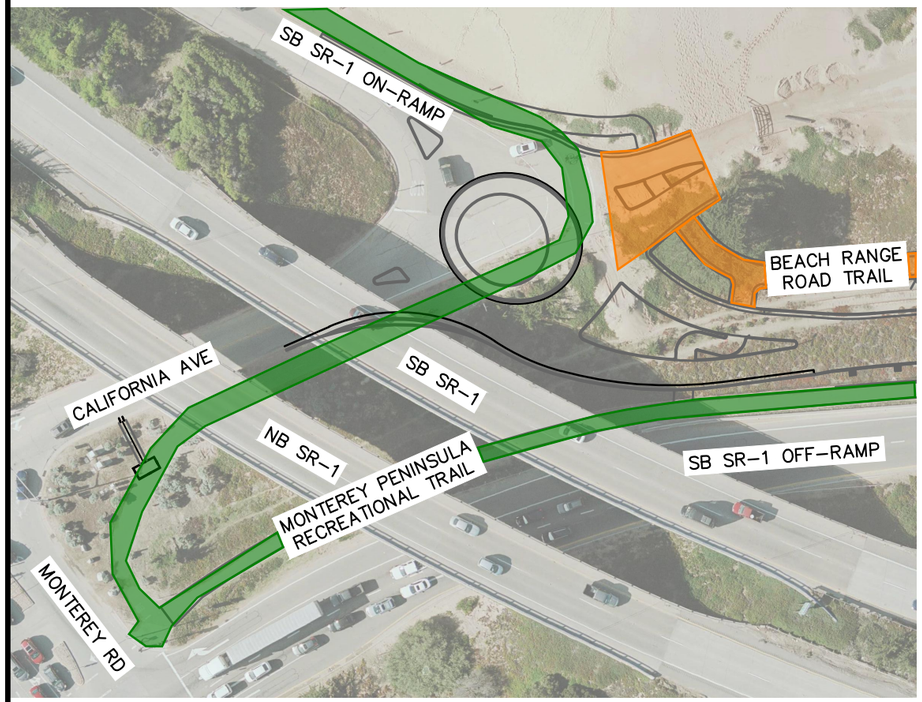

Scenario 4 - Single-Lane RAB
PM

Summary

	Scenario 1 Existing Geometry	Scenario 2 95% Design		Scenario 3 95% Design + NBL (California)		Scenario 4 Single-Lane Roundabout
Who	**Win-Win-Win?**					
SURF!	**No**	**Yes**	Acceptable LOS Operations Compared to Existing Geometry Minimal Queueing at Both Intersections	**Yes**	15 sec Time Savings at California/Playa vs. Scenario 2 (PM) 5 Second Time Savings for Bus vs. Scenario 2 (PM)	**No**
Sand City	**No**	**Yes**		**Yes+***		**No**
Seaside	**No**	**Yes**		**Yes**		**No**

* NBL cannot be included in SURF project due to Right of Way requirements





LEGEND

IMPROVEMENTS THIS STAGE

MULTI-USE ACCESS

MULTI-USE ACCESS CLOSURE

NORTH

GRAPHIC SCALE IN FEET
0 90 180 360

NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

DESCRIPTION

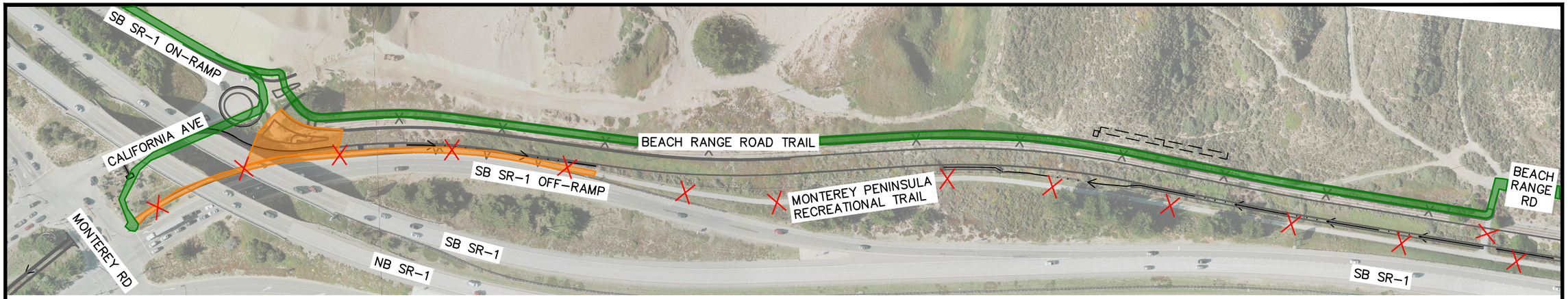
STAGE 1
1. CONSTRUCT BEACH RANGE ROAD TRAIL EXTENSION TO ROUNDABOUT.
2. CONSTRUCT NORTHERN ROUNDABOUT APPROACH.

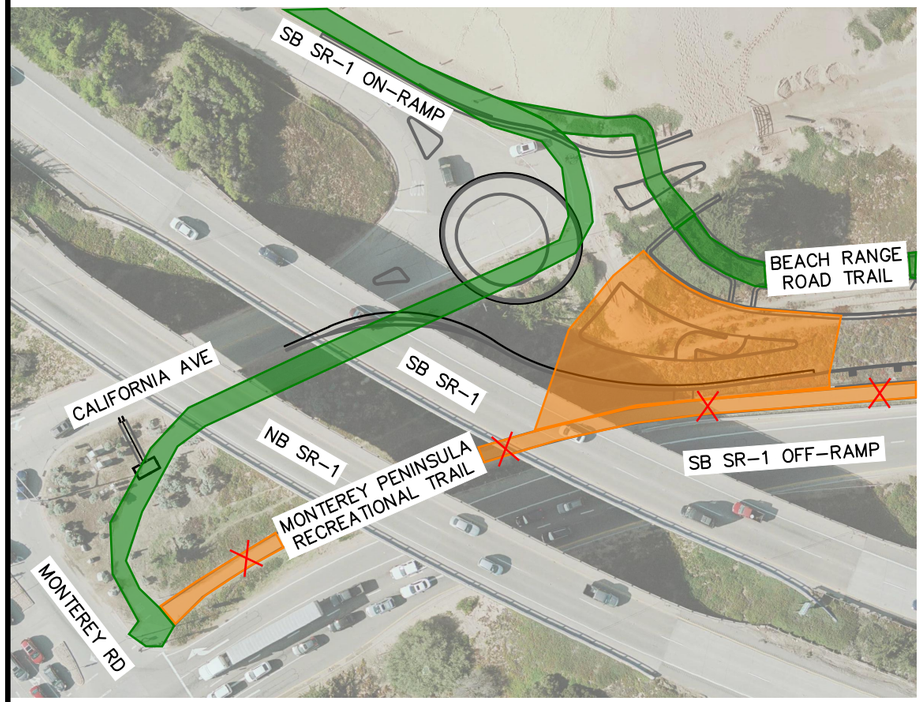
Kimley»Horn

March 2024

MULTI-USE ACCESS STAGING FOR ROUNDABOUT CONSTRUCTION - PHASE 1

MST SURF! BRT





LEGEND

IMPROVEMENTS THIS STAGE

MULTI-USE ACCESS

MULTI-USE ACCESS CLOSURE

NORTH

GRAPHIC SCALE IN FEET
0 90 180 360

NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

DESCRIPTION

STAGE 2
1. CLOSE CALTRANS RECREATIONAL TRAIL FROM CALIFORNIA AVENUE TO 5TH STREET.
2. CONSTRUCT EASTERN ROUNDABOUT APPROACH.
3. USERS CAN UTILIZE EXISTING CALTRANS RECREATIONAL TRAIL TO CONTINUE SOUTH OR CONNECT TO BEACH RANGE ROAD TRAIL GOING NORTH.

Kimley»Horn

March 2024

MULTI-USE ACCESS STAGING FOR ROUNDABOUT CONSTRUCTION - PHASE 2

MST SURF! BRT

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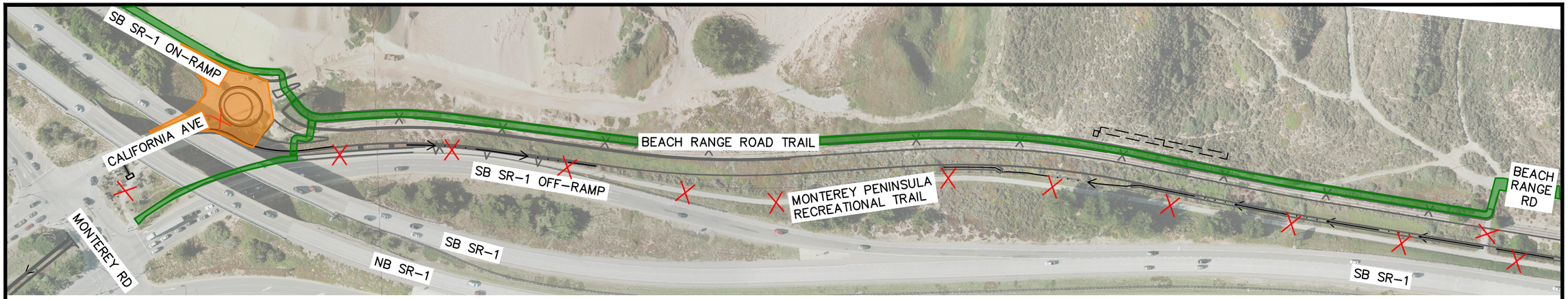

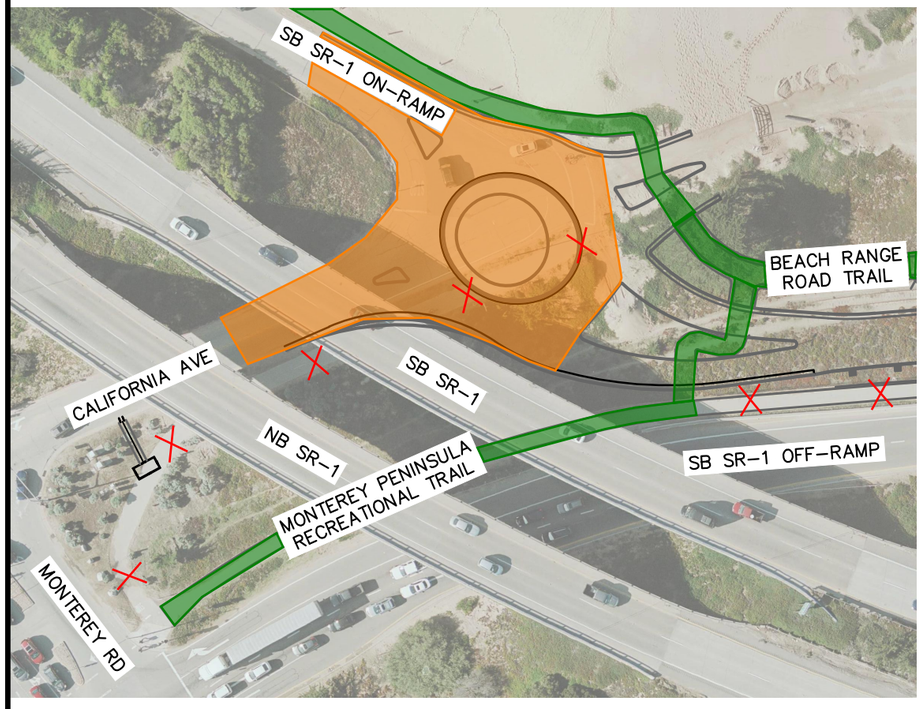

LEGEND

IMPROVEMENTS THIS STAGE

MULTI-USE ACCESS

MULTI-USE ACCESS CLOSURE

NORTH

GRAPHIC SCALE IN FEET
0 90 180 360

NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

DESCRIPTION

STAGE 3
1. CONSTRUCT OTHER ROUNDABOUT APPROACHES.
2. PERMANENTLY CLOSE RECREATIONAL TRAIL CONNECTION ALONG CALIFORNIA AVENUE. DIRECT USERS ONTO NEWLY CONSTRUCTED RECREATIONAL TRAIL/BEACH RANGE ROAD TRAIL.

Kimley»Horn

March 2024

MULTI-USE ACCESS STAGING FOR ROUNDABOUT CONSTRUCTION - PHASE 3

MST SURF! BRT

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August 29, 2023

Vibeke Norgaard, City Manager
City of Sand City
1 Pendergrass Way
Sand City, CA 93955
Via email

RE: Letter of Intent for the Monterey-Salinas Transit SURF! Busway and Bus Rapid Transit Project – Coastal Development Permit (CDP) Application and Supporting Materials

Dear Ms. Norgaard:

On behalf of Monterey-Salinas Transit (MST) and transit riders in our community, we are excited to submit this CDP application and supporting documentation for the SURF! Busway and Bus Rapid Transit Project.

The SURF! busway – a dedicated bus rapid transit (BRT) project proposed within the Transportation Agency for Monterey County's (TAMC) Monterey Branch Line transportation corridor, is one component of a larger vision to establish faster, more efficient bus rapid transit between the Monterey Peninsula and the Salinas Valley to help relieve commuter congestion on Highway 1 and to better serve environmental justice communities including low income, minority, and other disadvantaged populations within MST's service area. A full description of the project, including its components and characteristics, purpose and need, project benefits, relationship to the coastal zone and coastal resources, and evaluation of environmental effects are included in this application package.

MST has taken great care to plan and design the project to align with local and state-wide goals in terms of GHG reduction, coastal access, environmental justice, and minimal disturbance. We have also provided opportunities for the public, local community groups, stakeholders and partner agencies to participate in the planning of this important project. Thus far, MST has held over 100 meetings with over 2,500 participants with overwhelming support for the project. In fact, MST was at the West End Celebration August 26-27, 2023 specifically to provide information and answer questions about the project with Sand City residents. We spoke with 62

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individuals who stopped by MST's tent/booth and 2 individuals signed new support for the project.

Scope and Extent of the Requested CDP. This application is being submitted for the portion of the project that is located within Sand City's city limits and coastal zone. This segment, located from a point just north of the California Avenue/Highway 1 southbound on-ramp to the California Avenue/Playa Avenue intersection, is approximately 0.67 miles in length. The SURF! busway route continues from Playa down to Orange Avenue. However, that segment utilizes Del Monte Boulevard and will not require construction within the coastal zone.

For the remaining portions of the larger project, MST will prepare and submit separate Coastal Development Permit applications to the City of Marina and to the Coastal Commission Central Coast District office directly. MST understands that permits are required from all three jurisdictions to implement a viable project.

Environmental Review and Mitigation Program. The project has been subject to extensive environmental review (and clearance) under both CEQA and NEPA. As the applicant and lead agency, MST has addressed several environmental impacts through project design, avoidance and mitigation strategies. The mitigation program - detailed in the Mitigation Monitoring and Reporting Program within this package – includes detailed measures to fully mitigate potential impacts to protected plant species and habitats endemic to the coastal dune complex that underlies the TAMC transportation corridor. With oversight from the Federal Transit Administration (FTA), MST completed the Section 7 consultation process with the US Fish and Wildlife Service and has received a final Biological Opinion (BO) for the project. The proposed mitigation program – particularly biological resource mitigation within the coastal zone – is responsive to the standard of review and requirements of State and federal resource agencies.

We look forward to working with you and your staff during the application review process. MST staff and our consulting professionals are available to assist with questions and/or supplemental documentation to help your staff to fully understand the proposal and conduct a meaningful review.

If you have any questions about this CDP application, please contact Michelle Overmeyer, MST Director of Planning and Innovation at movermeyer@mst.org or 831-264-5884.

Sincerely,

DocuSigned by:
Carl Sedoryk
580C6BD24671488...

Carl G. Sedoryk
General Manager/CEO

Encl.

CC: Todd Muck, Transportation Agency for Monterey County

Initial Study/Mitigated Negative Declaration

MST SURF! Busway and Bus Rapid Transit Project

Monterey County, California



Prepared for:

MST
MONTEREY-SALINAS TRANSIT

19 Upper Ragsdale Drive, Suite 200,
Monterey, CA 93940

TAMC
TRANSPORTATION AGENCY FOR MONTEREY COUNTY

55 Plaza Circle Suite B,
Salinas, California 93901

Prepared by:

Kimley»Horn

10 Almaden Boulevard, Suite 1250
San Jose, California 95113

June 2021

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MST SURF! Busway and Bus Rapid Transit Project

Environmental Initial Study

and

Mitigated Negative Declaration

Prepared for:

Monterey-Salinas Transit District

and

Transportation Agency for Monterey County

June 2021

Prepared by:

Kimley»Horn

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TAMC, September 2011. Monterey Peninsula Light Rail Project Administrative Draft Environmental Assessment/Environmental Impact Report (SCH # 2009111044) including appendices incorporated by reference.

1.0 INTRODUCTION & PURPOSE

1.1 Purpose and Scope of the Initial Study

This Initial Study has been prepared specifically to support MST's findings, as the Lead Agency under the California Environmental Quality Act (CEQA), that the project under review would not result in significant environmental impacts with the application of existing regulations, design features and permit conditions. This study (and its supporting Appendices) has been prepared pursuant to CEQA (Pub. Resources Code, Section 21000, et seq.). The Initial Study is supported by a combination of new and prior studies, including the Administrative Draft Environmental Assessment/Environmental Impact Report (TAMC, 2011). This document and its supporting appendices are incorporated herein by reference.

CEQA requires a lead agency, as defined, to prepare, or cause to be prepared, and certify the completion of an environmental impact report on a project that it proposes to carry out or approve that may have a significant effect on the environment or to adopt a negative declaration if it finds that the project will not have that effect. CEQA also requires a lead agency to prepare a mitigated negative declaration for a project that may have a significant effect on the environment if revisions in the project would avoid or mitigate that effect and there is no substantial evidence that the project, as revised, would have a significant effect on the environment. This Initial Study and supporting documentation has concluded that all potential adverse environmental effects can be mitigated to a less than significant level.

The conclusions herein are based on CEQA standards, professional judgement, field review, project-specific technical studies and available public documents. This Initial Study and its Appendices constitutes substantial evidence supporting the conclusion that preparation of an EIR is not required prior to approval of the project and that the environmental effects of the project have been fully considered.

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Project Background, Location, and Setting

Location

The MST SURF! Busway and Bus Rapid Transit Project (project) would be located between MST's Marina Transit Exchange at Reservation Road and De Forest Road (northern terminus), and Contra Costa Street and Orange Avenue in Sand City (ultimate southern terminus). The project consists of approximately 6 linear miles of roadway surface and related improvements to provide dedicated express busway service between these points.

The majority of the alignment of the busway would be within the Transportation Agency for Monterey County (TAMC) Monterey Branch Line rail corridor right-of-way (ROW), an approximately 100-foot wide corridor generally located between Beach Range Road and the Monterey Peninsula Recreation Trail on the ocean side of Highway 1. Given the length of the proposed busway and its physical location, the project would be located in and/or adjacent to the cities of Marina, Seaside, and Sand City, extending parallel to Highway 1 and Fort Ord Dunes State Park.

The project's regional location is shown in **Figure 1**. The entirety of the project alignment is shown in **Figure 2**. More detailed location details are provided in **Appendix 3**.

Project Background and Prior Studies

The Monterey Branch Line was constructed by Southern Pacific Railroad Company (SPRR) in 1879, and extended 19.6 miles from Castroville to Lake Majella in Pacific Grove. Rail service on this standard-gauge line began in 1880, following eight years of narrow-gauge service operated by the Monterey and Salinas Valley Railroad Company. SPRR operated both freight and passenger rail service on the Del Monte Express between the Monterey Peninsula and San Francisco from 1881 to 1971. Over time, traffic on the line diminished and it fell into disrepair, and the remaining freight service on the branch line was discontinued south of Seaside in 1978.

In 1982, using State Senate Bill 620 funds the cities of Seaside and Monterey purchased the SPRR ROW between Contra Costa Street in Seaside and downtown Monterey. A highly popular pedestrian/bicycle multi-purpose trail (Monterey Bay Coastal Recreation Trail) has been constructed within this section of the ROW extending south from Canyon del Rey Boulevard along the coast into Pacific Grove. North of Contra Costa Street, SPRR continued operation of freight rail service through the 1990s. TAMC purchased this portion of the line from the Union Pacific Railroad in September 2003.

In response to continuing and increasing congestion on Highway 1, MST, in partnership with TAMC, the Association of Monterey Bay Area Governments (AMBAG), Caltrans, Santa Cruz METRO, California Highway Patrol and the Santa Cruz County Regional Transportation Commission (SCCRTC) conducted a study to explore the potential for improving bus operations in the Highway 1 corridor, including a bus-on-shoulder concept. The *Final Project Report Monterey Bay Area Feasibility Study of Bus on Shoulder Operations on State Route 1 and the Monterey Branch Line* ("Bus Study") considered eight alternatives on or parallel to State Route 1, including the possibility of using the Monterey Branch Line rail corridor for bus rapid transit operations. The final study ultimately concluded that operating MST buses along the

Monterey Branch Line would be the most cost-effective solution to improving on-time performance in this critical corridor. This feasibility study was completed in 2018, and the "bus within branch line" concept analyzed is very similar to the project evaluated in this document. See **Appendix 3** for more details on project background and prior studies.

Physical Site Conditions and Setting

The Monterey Branch Line corridor currently contains idle rail lines from the former Southern Pacific Railroad, including the railroad bed surface and aging facilities and utilities. Additional infrastructure associated with the former Fort Ord military base are located along the corridor, including concrete platforms, rail spurs, and access tunnels and bridges. The corridor is heavily disturbed by the rail lines, limited maintenance and regular practice of weed control; however, it is also wide enough to support native and non-native plant communities.

Land Use, Zoning, and Jurisdictional Boundaries

While the rail corridor is owned by TAMC, the underlying land uses are within the boundaries of the City of Marina, City of Sand City, and Monterey County. The rail right-of-way is immediately adjacent to, but outside of, the City of Seaside.

The project area consists of the following parcels:

- Portions of V69-1 (former Southern Pacific Railroad Monterey Branch Line owned by TAMC)
- 031-221-005 (MST 5th Street Station Parcel)
- 031-221-001 (5th Street underpass/busway extension road)

Additionally, the project extends along public roadways in the cities of Marina, Sand City and Seaside.

Project Characteristics

As mentioned above, the entirety of the project is approximately six miles in length. However, the area of potential affect, or APE, is 4.9 miles long. This is the portion of the project located within the TAMC ROW where most physical construction would occur. The APE is shown on **Figures 3A** and **3B**.

For ease of discussion and analysis, the six-mile long project is broken down into the following segments. See **Appendix 3** for details of each project segment.

- Segment 1 – Marina Transit Exchange to Palm Avenue Corridor Entry and Platform
- Segment 2 – Palm Avenue Corridor Entry to 5th Street Station
- Segment 3 – 5th Street Station to California/Fremont/Monterey/SR 1 Interchange (California Avenue Roundabout Connection)
- Segment 4 – California/Fremont/Monterey/SR 1 Interchange to Playa Avenue
- Segment 5 – Playa Avenue to Contra Costa Avenue (using public roadways)

Operational Information

Busway Vehicles

Under the California's Innovative Clean Transit (ICT) Rule, MST will be required to incorporate zero emission buses as part of its regular procurement schedule and transition to a 100% zero emission fleet by 2040. To meet environmental objectives of the project, MST plans to move to 100% zero emission

vehicle operation as soon as possible as procurements are made and fulfilled and as existing vehicles are replaced. The SURF! fleet is assumed to consist of 50 to 75 percent zero emission vehicles on day one of operations, moving to 100% as soon as practical as new zero emission vehicles enter the MST fleet.

Dedicated Busway Lanes, Transportation Controls and Technology

The dedicated bi-directional bus lanes will consist of two 12-foot asphalt lanes, which will be separated from existing rail lines by 9 to 12 feet (from center of rail line), except when the busway must cross the rail line to avoid constraints. With busway operations, traffic control signals at crossing locations would be activated by on-board technology on buses.

Potential Ridership, Headways and Travel Times

Buses would operate to maximize ridership in the southbound direction during the morning peak commute period (6:00 AM to 10:00 AM) and the northbound direction during the evening peak commute period (4:00 PM to 8:00 PM). It is estimated that travel time along the route would be reduced from 15.1 minutes (no busway) to 4.5 minutes (with busway), plus time for the single stop at the 5th Street Station mid-way.

Project Phasing, Construction, and Staging

MST anticipates that the major components of the project would be constructed simultaneously, with sections of busway progressing in increments based on the flow and availability of construction materials. The primary phases of construction would include:

- Site grubbing and clearing
- Palm Avenue/Del Monte Boulevard bus and roadway improvements
- California Avenue Roundabout
- Linear roadbed construction within the TAMC corridor between Palm Avenue and Playa Avenue
- 5th Street Station improvements
- Habitat restoration efforts
- Final finishes, fencing, lighting, signage and landscaping

See **Appendix 3** for a comprehensive Project Description.

2.2 Required Entitlements, Permits and Easements

The project is expected to require the following approvals:

- Approval by Federal Transit Administration (FTA) as the lead agency under NEPA prior to federal funding
- Approval by the Transportation Agency for Monterey County (TAMC) for use agreements between MST and TAMC and any additional funding commitments towards final design or construction
- Natural resource permits (e.g. take or other permits issued by United States Fish and Wildlife Services [USFWS])
- Consolidated Coastal Development Permit issued by the California Coastal Commission
- Encroachment permit issued by Caltrans (e.g. completion of a Design Engineering Evaluation Report (DEER)). For eligible projects and actions, the DEER can be used in lieu of the PSR-PDS, PSR-PR and Project Report process and provides an opportunity to streamlining Caltrans review

3.0 INITIAL STUDY CHECKLIST

3.1 Project Information

1. **Project title:**

   MST SURF! Busway and Bus Rapid Transit Project

2. **Lead agency name and address:**

   Monterey-Salinas Transit District, 19 Upper Ragsdale Drive, Suite 200, Monterey, CA 93940

3. **Contact person and phone number:**

   Michelle Overmeyer, Director of Planning and Innovation, (831)264-5877

4. **Project location:**

   The SURF! busway project would begin at MST's Marina Transit Exchange at Reservation Road and De Forest Road (northern terminus), and end at Contra Costa Street in Sand City (southern terminus). The alignment of the busway would be primarily within the Transportation Agency for Monterey County's (TAMC's) Monterey Branch Line rail corridor, generally located west of Highway 1 between Beach Range Road and the Monterey Peninsula Recreation Trail. Public roadways would be used for the SURF! line at both ends of the route. The project would be located or adjacent to the cities of Marina, Seaside, and Sand City, running parallel to Highway 1 next to Fort Ord Dunes State Park. The project area consists of the following parcels:
   Portions of V69-1 (former Southern Pacific Railroad Monterey Branch Line owned by TAMC), 031-221-005 (MST 5th Street Station Parcel), and 031-221-001 (5th Street underpass/busway extension road).

5. **Project sponsor's name and address:**

   Same as above

6. **General plan designation:**

   Various. Project alignment identified as open space and transportation corridor in local general plans and local coastal plans.

7. **Zoning:**

   Various per local agency zoning codes.

8. **Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**

   The project consists of the following primary components:
   - A bus-only entry into the TAMC right-of-way at Del Monte Boulevard and Palm Avenue in the City of Marina. This element requires upgraded intersection traffic and safety controls, as well as bicycle and pedestrian path improvements along Del Monte Boulevard and parallel to Marina Drive.
   - Two lanes (one in each direction) of dedicated busway road surface within the TAMC Monterey Branch Line right-of-way. Work within the TAMC right-of-way to construct the bus lanes will

require grading, drainage improvements, retaining walls, fencing, recreation trail connections, utility relocations and other necessary improvements to create a safe, dedicated busway.

- A new transit station (5th Street Station) located on MST property near 5th Street east of Highway 1. The station would include bus bays, public parking, drop off area and other amenities. Other improvements associated with the station include bicycle and pedestrian facilities to access the station from the Coastal Recreation Trail and new connections to the existing bike trail system adjacent to the station.
- A new roundabout in the public right-of-way at California Avenue and Highway 1 southbound ramp in Sand City to better accommodate buses re-entering the public right-of-way.
- A stop at Playa Avenue in Sand City where SURF! riders could connect to the existing bus network. The Del Monte Boulevard/Playa Avenue and California Avenue/Playa Avenue intersections would include signalization and synchronization to improve traffic operations at this location. The route would continue to Contra Costa Street in Sand City via existing public roadways.

See **Appendix 3** to this document for details.

9. **Surrounding land uses and setting: Briefly describe the project's surroundings:**

   The majority of the alignment of the busway would be within the TAMC Monterey Branch Line rail corridor ROW, an approximately 100-foot wide corridor generally located between Beach Range Road and the Monterey Peninsula Recreation Trail on the ocean side of Highway 1. The project would be located in and/or adjacent to the cities of Marina, Seaside, and Sand City, extending parallel to Highway 1 and Fort Ord Dunes State Park. The northern and southern ends of the busway alignment utilize public roadways within an existing urban environment.

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)**
    - Approval by Federal Transit Administration (FTA) as the lead NEPA agency prior to federal funding
    - Natural resource permits (e.g. take or other permits issued by United States Fish and Wildlife Services [USFWS])
    - Consolidated Coastal Development Permit issued by the California Coastal Commission
    - Encroachment permit issued by Caltrans (e.g. completion of a Design Engineering Evaluation Report (DEER))

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

    Outreach for consultation was conducted by the Lead Agency. No formal consultation was requested following outreach efforts.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

4.0 ENVIRONMENTAL ANALYSIS

4.1 Aesthetics

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
a) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				X
b) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
c) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		X		

a) Have a substantial adverse effect on a scenic vista?

Less than significant impact. There are several viewpoints near the busway corridor that could be considered scenic vistas based on the elevated nature of the views and/or visibility of a sweeping landscape. However, these vistas are not significantly affected or compromised by the project. See **Appendix 5** for detailed discussion.

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

No impact. The project site is not located within the viewshed of a state-designated scenic highway, and therefore would not impact or substantially alter scenic resources related to a scenic highway. While many segments of Highway 1 are officially designated as a scenic highway, the segment parallel to the busway is not.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than significant impact. The visual quality of the alignment and lands on either side of the alignment is dominated by Highway 1, the existing railroad tracks and railbed, the coastal dune topography and the Monterey Bay beyond. Visual simulations of the pre-and post-project conditions from selected key viewpoints (KVPs) of the alignment are shown in **Appendix 5**. Based on the existing visual character of the public views and viewing experience from the selected KVPs, implementation of the project would not substantially degrade the existing visual character of the site or its surroundings. Visual effects from construction would occur but are considered a temporary visual nuisance rather than a permanent adverse effect. See **Appendix 5** for detailed analysis of construction and operational effects.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Potentially significant unless mitigation incorporated. The project would not result in unusual or permanent light sources that would significantly affect day or nighttime views in the area during construction activities. All lighting required for construction would be temporary, and no nighttime construction is proposed.

Regarding bus headlights, buses would have direct lighting from headlights and interior cabin lighting travelling along the busway lanes that would introduce a new source of light during nighttime hours. However, these sources of light would be infrequent 10-minute headways and would not be considered a significant new source of lighting in the area compared to existing conditions and adjacent highway.

For safety purposes, limited overhead lighting would be required at key locations where the busway intersects with the bicycle/pedestrian trail network. The following mitigation measure will ensure that new sources of lighting at these locations would be controlled to minimize potential effects on the nighttime environment, coastal zone, and biological resources of the adjacent coastal dune habitat.

Mitigation Measure/Project Condition

MM AES-3.1 Limit New Sources of Lighting

The final construction drawing package shall include a final Lighting Plan indicating the type and location of proposed lighting sources. Construction lighting shall be directed away from sensitive habitat areas if required during evening hours. The Lighting Plan shall include specific products and photometric data demonstrating how new lighting sources necessary for project operational safety shall be shielded or baffled to minimize unwanted light spill and direct light away from the State Park. As the alignment is located within airport Safety Zone 7 of both the Marina Municipal and Monterey Regional airports, the project's Lighting Plan shall also be submitted to the respective airport manager for of each airport for review and approval consistent with ALUC standard conditions.

4.2 Agriculture and Forestry Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No impact. No portion of the project alignment is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the State Farmland Mapping and Monitoring Program (FMMP). No Williamson Act contract applies to the project alignment. The project site does not currently support agricultural or forestry uses, and it is designated for transportation and public uses. There would be no impact to agricultural and forestry resources.

4.3 Air Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?			X	

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact. The MBARD's 2008 CEQA Air Quality Guidelines provides criteria for determining cumulative impacts and consistency. The CEQA Air Quality Guidelines note that a project which is inconsistent with an Air Quality Plan would have a significant cumulative impact on regional air quality. The project is consistent with the Air Quality Management Plan for the Monterey Bay Region. The project does not include any changes to land use or zoning designations. The proposed project would result in the construction and operation of a new busway project with zero emission vehicles and does not include new land uses or structures. In addition, the proposed project's construction and operation emissions would not exceed MBARD thresholds. See **Appendix 6** for detailed discussion.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Potentially significant unless mitigation incorporated. As discussed above, the proposed project's construction and operation emissions would not exceed MBARD thresholds. MBARD CEQA Guidelines state that construction activities (e.g. excavation, grading, on-site vehicles), which emit 82 pounds per day or more of PM_{10}, would have a significant impact on local air quality when they are located nearby and upwind of sensitive receptors. As discussed in further detail in **Appendix 6**, construction emissions

associated with the project would not exceed this threshold for PM_{10}. Given the proximity of sensitive receptors to the project site, the project would be required to comply with the standard conditions below, which would further ensure impacts would be reduced to a less-than-significant level for all construction activities on the project site. See **Appendix 6** for additional details.

Standard Conditions and Requirements

SC AQ-2.1 Reduce Fugitive Dust

The project applicant shall implement the following measures to minimize nuisance impacts and to significantly reduce fugitive dust emissions, and the project applicant shall require all of the following measures to be shown on grading and building plans:

- Limit grading to 8.1 acres per day, and grading and excavation to 2.2 acres per day.
- Water graded/excavated areas and active unpaved roadways, unpaved staging areas, and unpaved parking areas at least twice daily. Frequency should be based on the type of operations, soil and wind exposure.
- Prohibit all grading activities during periods of high wind (more than 15 mph).
- Stabilize all disturbed soil areas as necessary using jute netting, gravel for temporary roads or other methods approved in advance by the APCD.
- Sow exposed ground areas that are planned to be reworked at dates greater than one month after initial grading with a fast germinating, non-invasive grass seed, and water until vegetation is established.
- Plant vegetative ground cover in disturbed areas as soon as possible with non-invasive species.
- Use street sweepers, water trucks, or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Reclaimed (non-potable) water should be used whenever possible.
- Spray dirt stockpile areas daily as needed.
- Place gravel on all roadways and driveways as soon as possible after grading. In addition, construct building pads as soon as possible after grading unless seeding or frequent water application are used.
- Not exceed a 15-mph vehicle speed for all construction vehicles on any unpaved surface at the construction site.
- Cover or maintain at least 2 feet of freeboard (minimum vertical distance between top of load and top of trailer) on all trucks hauling dirt, sand, soil, or other loose materials in accordance with California Vehicle Code Section 23114.
- Limit unpaved road travel to the extent possible, for example, by limiting the travel to and from unpaved areas, by coordinating movement between work areas rather than to central staging areas, and by busing workers where feasible.

- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site, and inspect vehicle tires to ensure free of soil prior to carry-out to paved roadways.
- Sweep streets at the end of each day, or as needed, if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water shall be used where feasible.

SC AQ-2.2 Designate a Dust Compliance Monitor

The project applicant shall require the contractor(s) or builder(s) to designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent transport of dust off-site. Their duties shall include monitoring during holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the MBARD Compliance Division prior to the start of any grading, earthwork, or demolition. The project applicant shall provide and post a publicly visible sign that specifies the telephone number and name to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the MBARD shall also be visible to ensure compliance with Rule 402 (Nuisance).

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact. Under CEQA, residences, schools, daycare centers, and healthcare facilities, such as hospitals, or retirement and nursing homes, are considered sensitive receptors. For this project, Fort Ord Dunes State Park is also considered a receptor to be considered. Some portions of the busway facilities would be located approximately 120 feet from the nearest residential property line. This distance, and the fact that the project would utilize zero emission vehicles, would not expose these residential receptors to substantial pollutant concentrations.

The proposed project involves roadway improvements that would not result in stationary emissions. The project would also include a transit center with approximately 181 parking spaces. However, the nearest sensitive receptors to the proposed transit center are over 2,300 feet away. Thus, the project would not result in a substantial increase in traffic-related pollutant concentrations that could affect sensitive receptors. Furthermore, the dust and equipment exhaust emissions created during construction would be minimal and would be controlled by compliance with MBARD Dust Construction Mitigation Measures. See **Appendix 6** for additional detail.

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

Less than significant impact. Construction activities associated with the project may generate detectable odors from heavy duty equipment (i.e., diesel exhaust), as well as from architectural coatings and asphalt off-gassing. Any construction-related odors would be short-term in nature and cease upon project completion. Therefore, impacts would be less than significant. See **Appendix 6** for additional details.

4.4 Biological Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Potentially significant unless mitigation incorporated. Portions of the project are located within the Coastal Zones of the City of Marina and within land immediately adjacent to the City of Seaside and Fort Ord Dunes State Parks. The Coastal Zones support a diversity of environmentally sensitive habitats, such as coastal scrub and dune scrub that occur along the California coast. Special status species known to potentially occur within the project site include the Townsend's big-eared bat, Monterey dusky-footed woodrat, Northern California legless lizard, Coast horned lizard, Smith's blue butterfly, and nesting raptors and other protected avian species. Despite the disturbed condition of the site, there is the potential for these species to be present. To avoid potential impacts associated with project construction the following mitigation measures would be incorporated into the project to reduce impacts to special status species in the project area to a less than significant level. See **Appendix 7** for detailed discussions on vegetation, sensitive habitats, and special status species within the project alignment.

Mitigation Measures/Project Conditions (For All Project Segments)

MM BIO-1.1 Construction Best Management Practices

The following best management practices will be implemented during construction (i.e., pre-, during, and post-construction) to reduce impacts to special-status plant and wildlife species:

- A qualified biologist will conduct an Employee Education Program for the construction crew prior to any construction activities. The qualified biologist will meet with the construction crew at the onset of construction at the project site to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities, 3) the special-status species and sensitive habitats that are known or may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by USFWS and CDFW; and 6) the proper procedures if a special-status species is encountered within the project site.
- Trees and vegetation not planned for removal or trimming will be protected prior to and during construction to the maximum possible through the use of exclusionary fencing, such as hay bales for herbaceous and shrubby vegetation, and protective wood barriers for trees. Only certified weed-free straw will be used to avoid the introduction of non-native, invasive species. A biological monitor will supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact.
- Following construction, disturbed areas will be restored to pre-project contours to the maximum extent possible and revegetated using locally-occurring native species

and native erosion control seed mix, per the recommendations of a qualified biologist.

- Grading, excavating, and other activities that involve substantial soil disturbance will be planned and implemented in consultation with a qualified hydrologist, engineer, or erosion control specialist, and will utilize standard erosion control techniques to minimize erosion and sedimentation to native vegetation (pre-, during, and post-construction).
- No firearms will be allowed on the project site at any time.
- All food-related and other trash will be disposed of in closed containers and removed from the project area at least once a week during the construction period, or more often if trash is attracting avian or mammalian predators. Construction personnel will not feed or otherwise attract wildlife to the area.

MM BIO-1.2 Construction-Phase Monitoring

The applicant will retain a qualified biologist to monitor all ground disturbing construction activities (i.e., vegetation removal, grading, excavation, or similar activities) of the project to protect any special-status species encountered. Any handling and relocation protocols of special-status wildlife species will be determined in coordination with CDFW prior to any ground disturbing activities, and will be conducted by a qualified biologist with appropriate scientific collection permit. After ground disturbing project activities are complete, the qualified biologist will train an individual from the construction crew to act as the on-site construction biological monitor. The construction biological monitor will be the contact for any special-status wildlife species encounters, will conduct daily inspections of equipment and materials stored on site and any holes or trenches prior to the commencement of work, and will ensure that all installed fencing stays in place throughout the construction period. The qualified biologist will then conduct regular scheduled and unscheduled visits to ensure the construction biological monitor is satisfactorily implementing all appropriate mitigation protocols. Both the qualified biologist and the construction biological monitor must work through the State Inspector to cease construction contractor work and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The qualified biologist and the construction biological monitor shall complete a daily log summarizing activities and environmental compliance throughout the duration of the project. The log will also include any special-status wildlife species observed and relocated.

MM BIO-1.3 Non-Native, Invasive Species Controls

The following measures will be implemented to reduce the introduction and spread of non-native, invasive species:

- Any landscaping or replanting required for the project will not use species listed as noxious by the California Department of Food and Agriculture (CDFA) or invasive by the California Invasive Plant Council (Cal-IPC).

- Bare and disturbed soil will be landscaped with CDFA recommended seed mix or plantings from locally adopted species to preclude the invasion on noxious weeds in the project site.
- Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds, before mobilizing to arrive at the construction site and before leaving the construction site.
- All non-native, invasive plant species will be removed from disturbed areas prior to replanting.

MM BIO-1.4 Pre-Construction Surveys for Protected Avian Species

Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species will be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist will be retained by the project applicant to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys will be determined by the qualified biologist based on review of the final construction plans and in coordination with the CDFW, as needed.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist will notify the project applicant and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance should take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

Mitigation Measures (For Segments 1-4 and 5th Street Station)

MM BIO-1.5 Pre-Construction Surveys for Monterey Dusky-Footed Woodrat

Not more than thirty (30) days prior to the start of construction of Segments 1-4 and the 5th Street Station (including vegetation removal), a qualified biologist shall conduct a survey of suitable habitat within the work site to locate existing Monterey dusky-footed woodrat nests. All Monterey dusky-footed woodrat nests shall be mapped and flagged for avoidance. Graphics depicting all Monterey dusky-footed woodrat nests shall be

provided to the construction contractor. Any Monterey dusky-footed woodrat nests that cannot be avoided shall be relocated according to the following procedures:

- Each active nest shall be disturbed by the qualified biologist to the degree that the woodrats leave the nest and seek refuge elsewhere.
- Nests shall be dismantled during the non-breeding season (between October 1 and December 31), if possible.
- If a litter of young is found or suspected, nest material shall be replaced and the nest left alone for 2-3 weeks, after this time the nest will be rechecked to verify that young are capable of independent survival before proceeding with nest dismantling.

MM BIO-1.6 Pre-Construction Surveys for Townsend's Big-eared Bat

To avoid and reduce impacts to Townsend's big-eared bat, if the project construction is planned during the reproductive season (May 1 through September 15) MST will retain a qualified bat specialist or wildlife biologist to conduct site surveys to characterize bat utilization within and adjacent to the project site and potential species present (techniques utilized to be determined by the biologist) prior to construction. Based on the results of these initial surveys, one or more of the following will occur:

- If it is determined that bats are not present within or adjacent to the site, no additional mitigation is required.
- If it is determined that bats are utilizing the trees or abandoned buildings within or adjacent to the site and may be impacted by the proposed project, pre-construction surveys will be conducted within 50 feet of construction limits no more than 30 days prior to the start of construction. If, according to the bat specialist, no bats or bat signs are observed in the course of the pre-construction surveys, construction may proceed. If bats and/or bat signs are observed during the pre-construction surveys, the biologist will determine if disturbance will jeopardize the roost (i.e., maternity, foraging, day, or night).

Mitigation Measures (For Segments 1-4)

MM BIO-1.7 SBB Avoidance and Restoration

The host plant species for SBB (i.e. seacliff and dune buckwheat) shall be avoided to the greatest extent feasible. SBB habitat not scheduled for removal shall be protected prior to and during construction to the maximum possible extent through the use of exclusionary fencing or flagging, such as construction fencing or hay bales. Only certified weed-free straw will be used to avoid the introduction of non-native, invasive species. An experienced biological monitor, trained by a qualified biologist will supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact.

If avoidance is not feasible:

- The duff and/or associated soil and plant material underneath the presumed-occupied seacliff or dune buckwheat plants that will be impacted by the project will be removed by hand by a USFWS-approved biologist prior to disturbance, and will be placed as close as possible to, but not on, living seacliff or dune buckwheat plants not scheduled for removal, within the boundaries of exclusionary fencing/flagging.
- The number of plants removed will be quantified and shall be replaced at a 1:1 success ratio for the acreage or individuals impacted. A Restoration Plan shall be prepared by a qualified biologist and implemented. The plan shall include, but is not limited to, the following:
    - A description of the baseline conditions of the habitats within the work site, including the presence of any special-status species, their locations, and densities;
    - Procedures to control and/or eliminate non-native invasive species within the work site;
    - A detailed description of on-site and/or off-site restoration areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications, which may include, but is not limited to, an increased planting ratio to ensure the 1:1 success ratio, if required by the USFWS; and
    - A monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

MM BIO-1.8 Special-Status Plant Avoidance and Restoration

Rare plants (i.e. Hooker's manzanita, sandmat manzanita, Monterey spineflower, coast wallflower, and Kellogg's horkelia) shall be avoided to the greatest extent feasible. Rare plants not scheduled for removal shall be protected prior to and during construction to the maximum extent possible through the use of exclusionary fencing or flagging, such as construction fencing or hay bales. Only certified weed-free straw will be used to avoid the introduction of non-native, invasive species. A biological monitor will supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact.

If avoidance is not feasible, the impacted area for each species shall be quantified during final design and each species shall be replaced at a 1:1 success ratio for the acreage or individuals impacted (depending on species impacted) and a Restoration Plan shall be prepared by a qualified biologist and implemented. The plan shall include, but is not limited to, the following:

- A description of the baseline conditions of the habitats within the work site, including the presence of any special-status species, their locations, and densities;
- Procedures to control and/or eliminate non-native invasive species within the work site;

- A detailed description of on-site and/or off-site restoration areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications, which may include but is not limited to, an increased planting ratio to ensure the 1:1 success ratio; and
- A monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

MM BIO-1.9 FESA Compliance

MST will comply with the Federal Endangered Species Act (FESA) and will obtain necessary authorization prior to construction of Segments 1-4.

Due to the presence and potential presence of federally listed species within the project site, including the SBB and Monterey spineflower, and Federal nexus (i.e., Federal funding), the Federal Transit Administration, acting as the NEPA lead agency for the proposed project, shall be required to initiate a Section 7 consultation with the USFWS and prepare a written analysis in the form of a Biological Assessment (BA) to determine whether their actions may affect a listed species. Based on the BA, the USFWS will issue a Biological Opinion (BO) regarding likely impacts as a result of implementing the project. Any further avoidance and minimization measures that may be required as a component of the BO will be implemented.

Mitigation Measures (For 5th Street Station)

MM BIO-1.10 Special-Status Plant Surveys and HMP Compliance

A qualified biologist shall be retained to conduct surveys for Monterey spineflower and Yadon's piperia within the 5th Street Station. The surveys shall be conducted during the appropriate identification period(s) to determine presence or absence, according to USFWS, CDFW, and CNPS protocol. The biologist shall prepare a report that provides the results of the survey, and, if found the number and locations of individuals/populations identified.

- If no Monterey spineflower or Yadon's piperia are found, no further mitigation is necessary.
- If Monterey spineflower or Yadon's piperia are found, salvage efforts for these species will be evaluated by a qualified biologist in coordination with the MST prior to construction to further reduce impacts per the requirements of the HMP and 2017 Programmatic BO. Where salvage is determined feasible and proposed, seed collection should occur from plants within the development site and/or topsoil should be salvaged within occupied areas to be disturbed. Seeds should be collected during the appropriate time of year for each species as determined by the qualified biologist. The collected seeds and topsoil should be used to revegetate temporarily disturbed construction areas and reseeding and restoration efforts on- or off-site, as determined appropriate by the qualified biologist and MST.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Potentially significant unless mitigation incorporated. The project could result in impacts to sensitive natural communities, however, no riparian habitat or waters of the U.S. and/or State were documented within the project site. The project area lies within the California Coastal Zone (Coastal zone), specifically within the boundaries of the Marina, Sand City, and Seaside Local Coastal Plans, as well as California Coastal Commission's original jurisdiction. The LCPs from these agencies address coastal resources, including the protection of biological and wetland resources.

As noted above, some of these specific habitats include coastal scrub and dune scrub that occur along the California coast. Additional areas within the project site that may be considered ESHA include habitat for the Smith's blue butterfly and areas supporting rare plants. To avoid potential impacts associated with project construction to these sensitive habitats, mitigation measures MMs BIO-1.1 through BIO-1.10 and BIO-2.11 would be implemented to reduce impacts to sensitive habitats and ESHA to a less-than-significant level. See **Appendix 7** for detailed discussions on sensitive habitats and ESHA within the project alignment.

Mitigation Measure/Project Conditions

MM BIO-2.11 Dune Scrub Restoration

Dune scrub shall be avoided to the greatest extent feasible. If avoidance is not feasible, dune scrub habitat shall be replaced at a 1:1 success ratio for the acreage impacted and a Restoration Plan shall be prepared by a qualified biologist and implemented. The plan shall include, but is not limited to, the following:

- A description of the baseline conditions of the habitat that will be impacted;
- A detailed description of on-site and/or off-site restoration areas, a planting palette, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications, which may include, but is not limited to, an increased planting ratio to ensure the 1:1 success ratio;
- Procedures to control and/or eliminate non-native invasive species within the restoration site; and
- A monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological?

No impact. No State or federally protected wetlands are present within the project area. For these reasons, these topics are not discussed further in this document.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than significant impact. The project site is not located within any significant wildlife movement corridors or linkages. See **Appendix 7** for additional details. The majority of the project site is comprised of ruderal and/or developed areas and runs adjacent to existing roads, Highway 1, shopping centers, and other businesses, which in general isolates the project site from other undeveloped areas. As such, the project site provides little use as a corridor for wildlife movement. Therefore, the proposed project would not disconnect, fragment, or otherwise impeded wildlife movement in the primary, significant wildlife movement corridors in the area.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Potentially significant unless mitigation incorporated. Construction of the proposed project could result in permanent impacts to trees within the project site; however, the number or type of trees to be removed have not been identified at this time. However, based on the biological resource surveys conducted (see Appendix 7) it is conservatively estimated for planning purposes that 60 to 90 regulated trees may require removal along the alignment if they cannot be avoided through design. Removal of native and other important trees are protected under local tree removal ordinances and impacts are typically addressed and mitigated under CEQA. Implementation of MM BIO-4.12 requires that native trees be avoided and protected during construction to the greatest extent feasible and that native trees removed be replaced at a 1:1 mitigation ratio. Implementation of this measure will ensure compliance with local policies or ordinances protecting trees, reducing potential impacts to less-than-significant. See **Appendix 7** for detailed discussion.

Mitigation Measure

MM BIO-4.12 Native Tree Protection and Replacement Measures

To maximize native tree retention and protection, a forester, arborist, or other tree care professional shall be involved in the review and development of final grading and construction plans wherever trees occur within the site or at the grading margins. To avoid unintended impacts to native trees outside the construction area, the following native tree protection measures shall be implemented:

- Temporary construction fencing shall be placed at approximately 10 feet from the trunk, limiting work within the dripline (e.g. and no grading, trenching, or vegetative alteration shall occur within this environmental exclusion zone). Grading, vegetation removal, and other ground disturbing construction activities may not commence until the project forester has inspected and approved the protective fencing installed by the contractor. No equipment or materials, including soil, shall be stored within the established environmental exclusion zone. Prior to grading within 25 feet of retained trees, the project forester, arborist, or other tree care professional shall be consulted to determine whether pruning is necessary to protect limbs from grading equipment.

- To avoid soil compaction from damaging the roots, heavy equipment shall not be allowed to drive over the root area. If deemed necessary and approved by the forester, equipment may drive across one side of the tree. To reduce soil compaction, wood chips shall be spread 6-12 inches deep to disperse the weight of equipment and plywood sheets shall be placed over the wood chips for added protection.
- Roots exposed by excavation must be pruned and recovered as quickly as possible to promote callusing, closure, and healthy regrowth.
- Retained trees shall be watered periodically in accordance with species need to promote tree health. Transplanted trees and their intended planting areas shall be pre-watered. Post planting watering shall be done as needed to assure establishment.
- When project design is completed, an estimate of the appropriate number of replacement trees shall be made based on available planting space. These replacement trees (minimum five-gallon specimens) shall be planted along boundaries and within landscape areas. Planting density for replacement trees shall be accurately detailed to allow for some unavoidable mortality over time.
- Transplants are encouraged and shall be credited on a 1:1 basis. Final replanting numbers may be modified by additional tree retention and should be made part of the final landscaping plan.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less than significant impact. The project site is not located within an approved Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) area. However, the 5th Street Station is located within the former Fort Ord and the plan area of the Fort Ord Habitat Management Plan (HMP). See **Appendix 7** for more detail regarding project's consistency with the approved Fort Ord HMP.

4.5 Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?

Less than significant impact. Implementation of the proposed action would not result in operational-related impacts to historic architectural resources because the proposed action would not directly or indirectly affect any identified historic resource within or near the project alignment. While three historic era resources were identified – the MBL, Fort Ord loading platform and commercial structure on Del Monte Boulevard – these resources were determined in the historic resource evaluation to be ineligible for historic status or listing on any State, federal or local historic register. See **Appendix 8** for detailed discussion.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Potentially significant Impact unless mitigation incorporated. While no prehistoric sites have been identified within or near the project alignment, the potential remains to uncover or disturb previously unknown resources during the construction phase of the project. To address this potential impact, the following standard mitigation measures are required.

Mitigation Measures/Project Conditions

MM CR-1 Preconstruction Archaeological and Paleontological Sensitivity Training

Prior to construction, all personnel directly involved in project related ground

disturbance shall be provided archaeological and paleontological sensitivity training. The training will be conducted by a qualified Archaeologist and Paleontologist that meet the Secretary of the Interior's standards for archaeology and CEQA qualifications for paleontology. The training will take place at a day and time to be determined in conjunction with the project construction foreman, and prior to any scheduled ground disturbance. The training will include: a discussion of applicable laws and penalties; samples or visual aids of artifacts and paleontological resources that could be encountered in the project vicinity, including what those artifacts and resources may look like partially buried, or wholly buried and freshly exposed; and instructions to halt work in the vicinity of any potential cultural resources discovery, and notify the archaeological or paleontological monitor as necessary.

MM CR-2 Procedures for Inadvertent Discovery

Inadvertent Discovery of Archaeological or Tribal Cultural Resources
In the event archaeological resources are encountered during ground disturbing activities, contractor shall temporarily halt or divert excavations within a 100-foot radius of the find until it can be evaluated.

CEQA Guidelines requires that all potentially significant archaeological deposits be evaluated to demonstrate whether the resource is eligible for inclusion on the California Register of Historic Resources, even if discovered during construction. If archaeological deposits are encountered they will be evaluated and mitigated simultaneously in the timeliest manner practicable, allowing for recovery of materials and data by standard archaeological procedures. For prehistoric archaeological sites, this data recovery involves the hand-excavated recovery and non-destructive analysis of a small sample of the deposit. Historic resources are also sampled through hand excavation, though architectural features may require careful mechanical exposure and hand excavation.

Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria by a qualified Archaeologist. Significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. If the resource is determined significant under CEQA, a qualified Archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant in accordance with Section 15064.5 of the CEQA Guidelines.

If such resources or artifacts are determined to be of native tribal origin, any mitigation or recovery program shall include direction from Ohlone/Costanoan Esselen Nation (OCEN) tribal leadership for proper handling and treatment.

The Archaeologist shall also perform appropriate technical analyses, prepare a comprehensive report complete with methods, results, and recommendations, and provide for the permanent curation of the recovered resources. The report shall be submitted to MST, TAMC, the NWIC, and the State Historic Preservation Office, as

required.

Inadvertent Discovery of Paleontological Resources
A qualified Paleontologist (per CEQA definition) shall be retained to supervise monitoring of construction excavations and to produce a Paleontological Monitoring and Mitigation Plan for the project based on the location and depth of excavation. Project related excavations that occur in surficial younger (Holocene-age) alluvial and fluvial deposits and/or topsoil (less than 10 feet in depth) will be monitored on a periodic basis to ensure that the potential underlying paleontologically sensitive sediments are not being affected. Paleontological resource monitoring will include inspection of exposed rock units during active excavations within sensitive geologic sediments, if present.

The paleontological monitor will have the authority to temporarily divert grading away from exposed fossils to professionally and efficiently recover the fossil specimens and collect associated data. All efforts to avoid delays to project schedules will be made. Collected fossils will be transported to a paleontological laboratory for processing, identification, analysis and curation. The qualified Paleontologist shall prepare a final monitoring and mitigation report to be filed with MST and, if fossil resources are found, the repository.

Inadvertent Discovery of Human Remains
In the event that human remains (or remains that may be human) are discovered at the project site, Public Resource Code Section 5097.98 must be followed. All grading or earthmoving activities shall immediately stop within a 100-foot radius of the find. The project proponent shall then inform the Monterey County Coroner and the respective city (e.g. City of Marina, Sand City, or Seaside) immediately, and the Coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b).

Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the Coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the Applicant shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (Public Resource Code [PRC] § 5097). The Coroner shall contact the NAHC to determine the most likely descendant(s) (MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD will determine the most appropriate means of treating the human remains and associated grave artifacts, and shall oversee the disposition of the remains.

In the event the NAHC is unable to identify an MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity within the project area in a location not subject to further subsurface disturbance.

4.6 Energy

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than significant impact. The Pacific Gas & Electric Company (PG&E) provides electricity and natural gas service to the Project area. The proposed project would reduce congestion on Highway 1 from local and inter-regional commuter traffic by providing an accessible 100 percent zero emission transit alternative. The project would result in a nominal increase in electricity and natural gas demand. This nominal increase represents an insignificant percent increase compared to overall demand in PG&E's service area. Therefore, projected electrical and natural gas demand would not significantly impact PG&E's level of service.

During construction, transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. Most construction equipment during demolition and grading would be gas-powered or diesel-powered, and the later construction phases would require electricity-powered equipment. Impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure; impacts would not be significant.

During operations, energy consumption associated with operation of the zero-emission busses would be nominal. Furthermore, the project site and surrounding areas are highly urbanized with numerous gasoline fuel facilities and infrastructure. Consequently, the proposed project would not result in a substantial demand for energy that would require expanded supplies or the construction of other

infrastructure or expansion of existing facilities. Additionally, fuel consumption associated with vehicle trips generated by the proposed project would not be considered inefficient, wasteful, or unnecessary. The proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, impacts are considered less than significant, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than significant impact. The project is a transit facility designed to carry passengers that would utilize almost no energy, except what may be required for low intensity safety lighting along the corridor. The project is not anticipated to require natural gas. The project would result in 7 MTCO2e/yr from energy consumption. See **Appendix 11** for discussion on the project's energy consumption during operations and project consistency with policies and actions identified in the City of Marina, Seaside, and Sand City's general plans.

4.7 Geology and Soils

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than significant impact. The project site is not located within an Alquist-Priolo Earthquake Fault Zoning Map as mapped by the State Geologist. There are four faults that cross the project alignment: the Chupines Fault, Seaside Fault, Ord Terrace Fault, and Reliz Fault. However, these faults are not considered sufficiently active or well-defined. The potential is very low that the individual traces of these faults could generate an earthquake and result in surface fault rupture. See **Appendix 10** for additional details.

ii. Strong seismic ground shaking?

Less than significant impact. Four faults cross the project alignment, however, none of these faults are currently considered active and their potential for surface-rupture is considered very low to low. The largest ground motion would likely be the result of movement along the Monterey Bay-Tularcitos Fault. However, the project is primarily a roadway project, and would be required to be designed and constructed to withstand substantial ground shaking in order to minimize seismic impacts. Compliance with currently structural codes to address the potential for ground shaking and structure stability would reduce impacts to a less-than-significant level.

iii. Seismic-related ground failure, including liquefaction?

Less than significant impact. Liquefaction generally occurs as a “quicksand” type of ground failure caused by strong ground shaking. The primary factors influencing liquefaction potential include groundwater, soil type, relative density of the sandy soils, confining pressure, and the intensity and duration of ground shaking. As shown in Exhibit 4.4.3 of the Monterey County General Plan EIR, the potential for liquefaction to occur at the project site is low. See **Appendix 10** for additional discussion.

iv. Landslides?

Less than significant impact. The majority of the project alignment traverses relatively flat terrain on existing roadways or adjacent to existing railroad tracks, where landslides and slope instability are not a

concern. Based on a search of the California Department of Conservation Landslide Inventory, the project site has gentle to low slope gradients. The potential for deep seated land sliding to occur in the bedrock is low to nil.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. The soils at the project site have a moderate to high soil erosion potential. The majority of the project site is on existing hardscaped railway and is surrounded by coastal vegetation. The southern end of the project site is surrounded by hardscape surfaces, limiting the potential for downstream/off-site erosion impacts on neighboring property. Because the project site is already in a developed area and surrounded by vegetation, there is a lower potential for off-site erosion impacts to occur during construction. Construction and water quality best practices as required by existing codes and regulations will limit erosion on the relatively small construction footprint of the project. Design features such as footing placement away from slopes and footing depths will minimize erosion during and following construction.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Potentially significant unless mitigation incorporated. The project site is located on soils that are good for use as roadway fills and firm overburden soils that are suitable for foundation support. However, the potential for soil erosion is high in areas where younger and older dune sand deposits are, especially if not covered by vegetation. While the geologic unit below the project is very stable, the site is nonetheless subject to common risks associated with the local soils. With implementation of Mitigation Measure (MM) GEO-5 and adherence to local building and engineering standards, the site's geologic and soil constraints would be reduced to a less-than-significant level through construction-level geotechnical recommendations and compliance with all applicable codes and regulations. See **Appendix 10** for detailed discussion on the potential for landslides, liquefaction and subsidence, lateral spreading, collapse, and expansive soils as a result of the project.

Mitigation Measure/Project Conditions

MM GEO-5 Final Geotechnical Evaluation

A construction level geotechnical evaluation shall be prepared and implemented for the project based on the final engineering plans. The project shall be required to adhere to and incorporate all standards and recommended engineering measures to mitigate for liquefaction, expansive soils and other local soil constraints. The final geotechnical evaluation will be prepared by MST and provided to the affected land use agencies for review prior to the issuance of local building permits or related local approvals.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than significant impact. As discussed above, the subsurface profile of the site generally consists of Baywood sand and Oceano loamy sand. Based on a review of environmental databases, soils in the

project site, both Baywood and Ocean Series are composed of sand and have low water storage potential and a low potential for expansion. Thus, impacts would be less than significant. See **Appendix 10** for additional details.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No impact. The proposed project would not require the extension or installation of wastewater connections as this service is not essential to busway operations. However, should restrooms be required for the 5th Street Station in the future, MST would seek water and wastewater connections from the City of Marina.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially significant unless mitigation incorporated. See **Appendix 8**. Based on the previous paleontological resource assessment covering the proposed project alignment, no paleontological resources were identified. The likelihood of encountering unique paleontological resources was determined to be low to high with increasing depth. Excavation depths for the project will be shallow. Because there is the potential to uncover paleontological resources in previously undisturbed portions of the project area, ground disturbing activities during construction could potentially result in significant impacts to paleontological resources. Implementation of MM CR-1 and MM CR-2 would require all construction personnel involved in project-related ground disturbances to be provided archaeological and paleontological sensitivity training and effectively mitigate potential effects to paleontological resources.

4.8 Greenhouse Gas Emissions

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than significant impact. For the purpose of this environmental analysis, the project's construction-related GHG emissions were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. Project construction-related activities would generate approximately 1,088 $MTCO_2e$ of GHG emissions over the course of construction. However, project construction-related GHG emissions would be short term and would cease once construction is complete. This is less than the CARB Mandatory Reporting applicability level of 2,500 $MTCO_2e$ per year. See **Appendix 11** for a detailed discussion on construction-related impacts from GHG emissions.

Operational or long-term emissions would occur over the project's life. The project consists of approximately 6 linear miles of roadway surface and related improvements to provide dedicated express busway service that would ultimately be expected to reduce greenhouse gas emissions in the Monterey Bay region. The majority of project emissions (approximately 100 percent) would occur from mobile and energy sources. Although MBARD does not have adopted GHG emission significance thresholds, the project's estimated GHG emissions (about 219.19 MT/ CO_2e year) is well below the significance threshold of 1,100 $MTCO_2e$ per year used in neighboring air districts and the 2,000 MT of CO_2e/year threshold that had been under consideration by the MBARD. See **Appendix 11** for a detailed discussion on operational-related impacts from GHG emissions.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than significant impact. As discussed above in Impact a), the project would not exceed significance thresholds for construction or operation of the project. The proposed BRT project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. See **Appendix 11** for a more detailed discussion.

4.9 Hazards and Hazardous Materials

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than significant impact. The normal operation of the SURF! busway along the right of way will not involve the routine transport, use or disposal of hazardous materials other than may be required for routine maintenance. This project is a transit facility designed to carry passengers. Construction of the project would require staging, site preparation, grading and construction of the new busway and station. These activities may require the use of heavy equipment that would need refueling and/or limited maintenance on site, as well as the use of materials and chemical processes typical of roadway construction. However, as the project alignment is not in a heavily populated area and would not involve the routine transport or disposal of hazardous materials, construction effects are less than significant. See **Appendix 12** for detailed discussion.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than significant impact. As discussed above, the busway project is a transit project that will transport people, not hazardous materials. For these reasons, normal project operations will not result in significant environmental hazards because the project will not use, transport, or expose people or property to such materials. However, based on the Phase I site investigations conducted along the alignment, hazardous wastes may be encountered during the construction process and hazardous materials may be used or generated during the construction process. Implementation of the following mitigation measures would reduce potential impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during project construction. See **Appendix 12** for additional details.

Mitigation Measures/Project Conditions

MM HAZ-2.1: Soil and Groundwater Management Plan

A Soil and Groundwater Management Plan shall be prepared prior to ground disturbance, identifying the methods and procedures required to handle, store, transport and dispose of chemically impacted soil and groundwater. If groundwater is encountered during construction, groundwater sampling shall be conducted to determine contaminants and contamination levels. If contamination is found, a work

plan shall be developed and implemented by the project geotechnical engineer consistent with the Management Plan to protect the health of construction workers.

MM HAZ-2.2: Work Plan

Once the construction plans showing the depth and extent of the excavation are completed for all project segments, a targeted soil and groundwater sampling shall be conducted in areas of known or suspected contamination prior to the start of disturbance in those areas. If contamination is found, a work plan shall be developed by the project geotechnical engineer to protect the health of construction workers.

MM HAZ-2.3: Asbestos and Lead Paint Survey

Any hazardous materials or wastes encountered before or during the demolition stage of the project shall be disposed of according to current regulatory guidelines. If any structures are to be removed or demolished, an asbestos and lead paint survey shall be conducted for compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations and air district rules.

MM HAZ-2.4 Worker Health and Safety Plan

A worker health and safety plan (HSP) that meets the provisions of California Code of Regulations (Title 22, Section 5192) shall be developed by the project contractor. HSP procedures will address the identification, excavation, handling, and disposal of hazardous wastes and materials that may be found in construction areas. The HSP shall include Best Management Practices (BMPs) that all contractors must employ during construction.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than significant impact. The nearest school within one-quarter mile of the busway is Seaside High School. However, any hazardous materials encountered during construction would be addressed at the site and be subject to all existing and applicable regulations regarding the handling and disposal of such materials. If the handling and disposal of contaminated soils is encountered, it may need to be transported on roadways near the high school. With the application of existing regulations, there is no acute risk associated with transport. See **Appendix 12** for additional discussion.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Potentially significant unless mitigation incorporated. See **Appendix 12** for a list of cleanup sites within 500 feet of the project site. As a transportation project, the busway is not considered a sensitive land use that would be affected by these conditions while in operation. Implementation of mitigation measures MM HAZ HAZ-2.1, HAZ-2.2, HAZ-2.3, and HAZ-2.4 would address residual environmental concerns if encountered during construction. See **Appendix 12** for additional information.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Less than significant impact. The project alignment through the City of Marina and Sand City is located within the Airport Influence Area (Zone 7) of the Marina Municipal Airport and the Monterey Regional Airport. However, the aircraft accident risk level is considered to be low within this AIA zone. Marina Municipal Airport is used for general aviation aircraft operations, and the busway project operations result in little to no risk from these operations. As such, impacts would be less than significant. See **Appendix 12** for additional information.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No impact. The busway project would create a dedicated bus lane running parallel to Highway 1 within the TAMC right-of-way. As one of the objectives of the project is to relieve highway congestion, such relief would be a benefit to any emergency response plan intended to quickly and efficiently move or evacuate people. Further, the project could potentially serve as an alternative travel corridor for emergency vehicles in the event that the highway is congested. For these reasons, the project could have beneficial impacts to locally adopted emergency response plans.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No impact. The entire length of the busway alignment contains only sparse vegetation in coastal dune habitat and is highly disturbed. The proposed project corridor is within a transportation corridor and not within a Very-High Fire Hazard Severity Zone as mapped by CALFIRE. Given this lack of fuel, the project would not be susceptible to wildland fires, nor would the project pose a risk as a source of fire. Because the project is not within an area identified as having a high potential for wildland fire, the project would have no impact related to exposing people or structures to a significant risk of loss, injury, or death from wildland fire, as per CEQA Guidelines.

4.10 Hydrology and Water Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
i. Result in substantial erosion or siltation on- or off-site?			X	
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?			X	
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than significant impact. Construction associated with the project would include demolition, grading, excavation, and temporary land disturbance to bare areas which would displace soils and temporarily increase the potential for soils to be subject to wind and water erosion. Construction-related effects to water quality would be addressed through compliance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP). A Storm Water Pollutant Prevention Plan (SWPPP), which must include erosion-control and sediment-control BMPs for construction and post-construction conditions to control potential construction-related pollutants from migrating off site into the storm drain system and into or directly in receiving waters would be required to obtain coverage under the CGP. Compliance with these requirements would reduce potential impacts to water quality standards to a less-than-significant level. See **Appendix 13** for additional details.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No impact. The project would not require the use of nor withdraw groundwater for use in construction or operation of the site, except for temporary use of privately purchased trucked water used for dust suppression during grading and construction. With appropriately designed stormwater detention, the increase in impervious surfaces from the busway lanes would not interfere with groundwater recharge. Thus, the project would have no impact to existing groundwater supply.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site?

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than significant impact. See Threshold 4.10 (a) above regarding existing controls and regulations already in place to manage water quality from site construction activity and post construction runoff. As noted above, project construction will require some earth moving and excavation for construction of the busway alignment. However, the project will be required to incorporate several BMPs into the project plans and implement those measures during construction, as already required by the local agencies' stringent stormwater measures. As discussed above, the project would be required to comply with the CGP during construction and PCRs during project operation, which means the project would not result in substantial erosion or siltation on- or offsite or increase the rate of flooding on- or offsite. Similarly, as stormwater runoff would be captured and infiltrated to the extent feasible, and new stormwater facilities would be sized to meet local standards. As such, the project would not exceed the capacity of existing or planned stormwater drainage systems. See **Appendix 13** for additional information.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No impact. The project site is located within Zone X, an Area of Minimal Flood Hazard. Thus, the project site is not located within the 100-year floodplain nor a special flood hazard area as defined by the Federal Emergency Management Agency and is not at risk from inundation.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than significant impact. The project would not require groundwater use for project construction or operation of the site, except for temporary use of privately purchased trucked water for dust suppression during grading and construction. Thus, no conflict to groundwater supply would occur in this regard. As identified above, the project will be subject to the stringent water quality control measures during construction and will have no effect on groundwater resources. See **Appendix 13** for additional information.

4.11 Land Use and Planning

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

a) Physically divide an established community?

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No impact. The project is located within an existing transportation corridor and will not significantly disrupt or divide existing neighborhoods or communities. As the busway project is intended to improve overall mobility connections for residents and visitors traveling to and from the Monterey Peninsula, the project should result in beneficial impacts by providing a safe and reliable transit connection to employment, education, and health care centers along the corridor for visitors and residents, consistent with local land use policies. See **Appendix 9** for additional information regarding consistency with local policies.

4.12 Mineral Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No impact. The project location and nature of the improvements will result in no impacts with respect to mineral resources. There are no known mineral resources located within the area of ground disturbance.

4.13 Noise

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact. The project would involve construction activities which would be temporary and have a short duration resulting in periodic increases in the ambient noise environment. Primary construction activities associated with development of the project would include site preparation, grading, retaining wall installation and paving. During construction, exterior noise levels could affect the residential neighborhoods and adjacent commercial and industrial uses at the north and south ends the construction area. Project construction would occur approximately 65 feet from existing commercial and industrial uses, and approximately 90 feet from the nearest residential uses to the north of the project site. These sensitive uses may be exposed to elevated noise levels during project construction. However, it is noted that construction activities would occur throughout the project site and would not be concentrated at a single point near sensitive receptors for an extended period of time. Project construction would be required to comply with the allowable construction hours set forth in Seaside Municipal Code Section 9.12.030, Marina Municipal Code Section 9.24.040, and Chapter 10.60 of the Monterey County Code of Ordinances. In addition, all construction equipment would be equipped

with properly operating and maintained mufflers and other state required noise attenuation devices, helping to reduce noise at the source. See **Appendix 14** for additional details.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact. Project construction can generate varying degrees of groundborne vibration depending on the construction procedure and type of construction equipment used. The effect on buildings located near a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations (i.e., 0.20 inch/second). Groundborne vibration decreases rapidly with distance. Based on the FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction range from 0.003 to 0.210 inches per second peak particle velocity (PPV) at approximately 25 feet from the source of activity. The nearest off-site structures are commercial buildings located approximately 25 feet from the active construction zone for the proposed project. At this distance, construction vibration levels would be approximately 0.089 in/sec PPV. Therefore, construction equipment vibration velocities would not exceed the FTA's 0.20 PPV threshold or Caltrans' human annoyance threshold of 0.1 in/sec PPV. In general, other construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest off-site structures. Therefore, vibration impacts associated with the project would be less than significant.

To determine potential project operational vibration impacts from the project, a General Vibration Assessment was prepared for project operational bus pass-bys, in accordance with the FTA Noise and Vibration Manual. The nearest off-site structure (a commercial building), and residence are located approximately 40 feet and 75 feet, respectively, from the proposed busway driving lane. At this distance and a maximum speed of 65 mph, vibration levels would be at a vibration velocity of approximately 72 VdB at the at the nearest commercial building and 66 VdB at the nearest residence, which would be below the FTA's 75 VdB ground-borne vibration impact level for Land Use Category 3 uses (commercial) and Land Use Category 2 (residential) uses for frequent events. As a result, vibration levels from bus pass-bys associated with the proposed project would not cause structural damage at off-site structures or create human annoyance. See **Appendix 14** for additional information.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The Monterey Regional Airport is located approximately 1.30 miles south of the project site and the Marina Municipal Airport is located approximately 1.90 miles east of the project site; there are no private airstrips in the project area. The project site lies outside the 65 dBA CNEL noise contour specified in the Monterey Regional Airport Land Use Compatibility Plan Update (May 2018). As a transportation project aircraft noise would have no adverse effects.

4.14 Population and Housing

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No impact. The project, a linear busway facility located within TAMC's Monterey Branch Line right-of-way, will not displace people or housing along the alignment that would necessitate the building of housing elsewhere. No relocation or condemnation actions are required. Nor would the project induce substantial unplanned population growth along the alignment. The adopted general plans for the affected land use agencies provide for planned growth within their jurisdictional boundaries. As such, the project would provide needed transit service for the planned population.

4.15 Public Services

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?				X
ii) Police protection?				X
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire protection?

ii. Police protection?

iii. Schools?

iv. Parks?

v. Other public facilities?

No impact. The busway project is a transportation facility that will not generate new population that would require additional public services such as schools, parks or government facilities. The busway will be maintained by MST and would not require maintenance by Marina, Sand City, Seaside, or Monterey County public works departments. In terms of fire and police protection, the project may provide enhanced vehicle access and/or an emergency access route to better serve the coastline from Marina to Sand City. Given these benefits, and the fact that no new public service facilities would need to be constructed because of the busway project, no impacts would be expected.

4.16 Recreation

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than significant impact. The project would not generate additional population near existing parks and recreational facilities. An increase in people is typically what causes increased use and deterioration of existing facilities. As part of the busway project, there would be associated bicycle and pedestrian improvements that may allow for connections to the region's existing and planned recreational trail facilities, such as Fort Ord Dunes State Park, Fort Ord Regional Trail and Greenway, and the Monterey Bay Coastal Recreation Trail. These connections would allow pedestrians or cyclists to more easily access the recreational areas, but any increase in usage caused by the project would be incidental and less than significant. Operation of the proposed project would increase public access to park and recreational facilities located along the proposed action alignment and would result in a beneficial effect. The project when completed will increase the total length of bicycle/pedestrian facilities over existing conditions. Minor realignment of existing bicycle/pedestrian facilities and new connections will be planned to allow continued use of facilities during construction. The physical effects of constructing the project are addressed throughout this Initial Study.

4.17 Transportation

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?				X
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?				X

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

No impact. One of the primary objectives of the project is to implement associated traffic, bicycle and pedestrian circulation improvements along the local network in conjunction with the dedicated busway. Safe and reliable transit connections along the corridor is consistent with the TAMC, MST, City of Marina, City of Sand City, City of Seaside, and Monterey County's planning documents, including the respective circulation elements of each jurisdiction's general plans. As such, the project will have no significant environmental impacts with respect to program or plan conflicts. See **Appendix 2** for more information.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

No impact. CEQA Guidelines Section 15064.3 addresses new requirements for analyzing vehicle miles traveled (VMT). However, SB 743 guidance issued by the Office of Planning and Research (OPR) states that initiation of new transit service would be exempt from new VMT requirements under CEQA. Transit projects would be expected to reduce regional VMT and therefore result in beneficial impacts. See **Appendix 2** for additional information.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than significant impact. The project will introduce SURF! buses along a new route where bus traffic currently does not exist. Along Palm Avenue and Marina Drive in Marina (Segment 1) buses would be traveling at low speeds through this section as they approach and depart the new platforms. Pedestrian crossings of the bus lanes in this location (as well as the crossings at the 5th Street underpass and near the new California Avenue roundabout) have been designed for safety by installing stops and lighting infrastructure, and by placing the crossings in locations where buses are traveling at slow speeds. Gates and other infrastructure have been designed to prevent inadvertent access onto the bus lanes by private vehicles, and the roundabout has been designed to meet standards for bus movements. New signalization at Playa Avenue/California Avenue should also result in better and safer traffic flow compared to the existing stop controls. With these design and safety features, potential impacts are less than significant.

d) Result in inadequate emergency access?

No impact. Where the SURF! route accesses public roadways, the 10-minute headways will have little effect on traffic operations and will not impede emergency access at any location or emergency vehicle movements. Within the TAMC corridor, the project may provide an alternative access for emergency vehicles if Highway 1 is closed or heavily congested.

4.18 Tribal Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?		X		
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?		X		

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i)Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Potentially significant unless mitigation incorporated. Please see Section 4.5 of this Initial Study (Cultural Resources) and **Appendix 8**. While no prehistoric sites have been identified within or near the project alignment (with the exception of one recorded that has not been located by current studies and is assumed to be destroyed), the potential remains to uncover or disturb previously unknown resources during the construction phase of the project. Mitigation measures MM CR-1 and MM CR-2 are in place if such resources are discovered during construction. See **Appendix 8** for additional information.

4.19 Utilities and Service Systems

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than significant impact. Construction of the project will not require the extension or installation of traditional wet utility systems (water and wastewater) as those services are not essential to busway operations. However, the project will require street/busway/pedestrian lighting (primarily at the Palm/Del Monte bus stop, 5th Street Station and California Avenue Roundabout). As discussed in **Appendix 3**, restrooms could be desired at the 5th Street Station in the future. Should restrooms be pursued, MST would seek water and wastewater connections from the City of Marina.

Near the Palm/Del Monte location, an existing storm drain outlet discharging onto Marina Drive may be routed to an existing storm drain to avoid potential conflicts with busway/platform construction and to improve localized drainage in this immediate area. No other major existing utility systems or major infrastructure will require relocation to construct the project. The railroad tracks will remain in place.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No impact. The project will not require a water supply or generate wastewater. As discussed in **Appendix 3**, restrooms could be preferred for the 5th Street Station in the future. Should restrooms be pursued, MST would seek water and wastewater connections from the City of Marina.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than significant impact. The project will result in small amounts of solid construction waste but will not create a permanent waste stream. This temporary and limited amount of construction waste will not exceed standards, local infrastructure, or negatively impact solid waste reduction goals and regulations. The solid waste from construction activities will be properly disposed of according to current law. As discussed above, the busway project is a transit project that will transport people when in operation and would not generate significant amounts of solid waste. Solid waste from operations would be limited to trash receptacles at the stations and stops.

4.20 Wildfire

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No impact. The busway project is located in an urbanized area and within the disturbed coastal dune environment parallel to Highway 1. The project is not located in a high fire hazard severity zone. With no significant sources of fuel – and the fact that the project will not introduce a permanent population – this issue has been removed from further analysis.

4.21 Mandatory Findings of Significance

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Does the project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than significant impact with mitigation incorporated. As addressed under Biological Resources the project is immediately adjacent to environmentally sensitive habitat areas (ESHA) that include coastal

scrub and dune scrub habitats that occur along the California coastal zone. The project would impact rare and endangered plant species and potentially effect special status animal species during construction. However, the project as designed and mitigated through the federal Section 7 permit process will fully mitigate these species impacts through habitat restoration and other measures.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than significant impact. The project is a busway and bus rapid transit project that is unique in terms of use and geography. The incremental effects as described in this Initial Study are largely site specific and will not combine with the effects of other related projects to create cumulatively considerable effects. Other nearby, related or reasonably foreseeable projects could include the North Fremont Street roadway improvements that have recently been constructed, and the FORTAG regional trail that will be near the project along Canyon Del Rey Boulevard. These projects provide some level of cumulative benefit as they provide opportunities for non-motorized travel, reductions in greenhouse gasses and vehicle miles travelled, and enhanced trail connections. In terms of construction, construction timelines are not concurrent with these projects, limiting the potential to combine to create a cumulatively considerable effect.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than significant impact. As evidenced within this initial study and appendices to the NOE, the project has little potential to cause adverse effects on human beings from environmental concerns such as air quality, noise or exposure to geologic or hazardous materials risks. The nature of the project will not generate a new or permanent population that will be exposed to environmental concerns, will not use or transport hazardous materials, or adversely affect emergency response plans.

5.0 REPORT PREPARERS

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Print Form

Notice of Exemption

Appendix E

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: Monterey
168 West Alisal Street, 1st Floor
Salinas, CA 93901

From: (Public Agency): Monterey-Salinas Transit District
19 Upper Ragsdale Dr., Ste. 200
Monterey, CA 93940
(Address)

FILED
MAR 13 2023
XOCHITL MARINA CAMACHO
MONTEREY COUNTY CLERK
DEPUTY

Project Title: SURF! Busway and Bus Rapid Transit Project

Project Applicant: Monterey-Salinas Transit District

2023-0036

Project Location - Specific:

Monterey Branch Line rail corridor & streets from Marina to Sand City, Monterey Count

Project Location - City: Marina, Sand City, Seaside Project Location - County: Monterey

Description of Nature, Purpose and Beneficiaries of Project:

Bus Rapid Transit/Bus Service Project along six linear miles of right of way between the cities of Marina and Sand City, including transit stations, roundabouts, pedestrian/bike facilities, wayfinding, transit prioritization, charging stations, and supporting infrastructure. designed to serve the general population of Monterey County, reduce congestion and improve mobility. The Project also includes actions from the Transportation Agency for Monterey County (TAMC).

Name of Public Agency Approving Project: Monterey-Salinas Transit District

Name of Person or Agency Carrying Out Project: Monterey-Salinas Transit District

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☐ Categorical Exemption. State type and section number:
- ☒ Statutory Exemptions. State code number: Pub. Res. Code Section 21080.25(b) [SB 922 (2022)]

Reasons why project is exempt:

The Project is a Bus Rapid Transit and Bus Service project, including transit stations which utilize a rail corridor and public streets, utilize 100% zero emission vehicles, is located in an urbanized area, and will use a skilled and trained workforce.

Lead Agency Contact Person: Michelle Overmeyer Area Code/Telephone/Extension: 831-264-5877

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ▪ Yes No

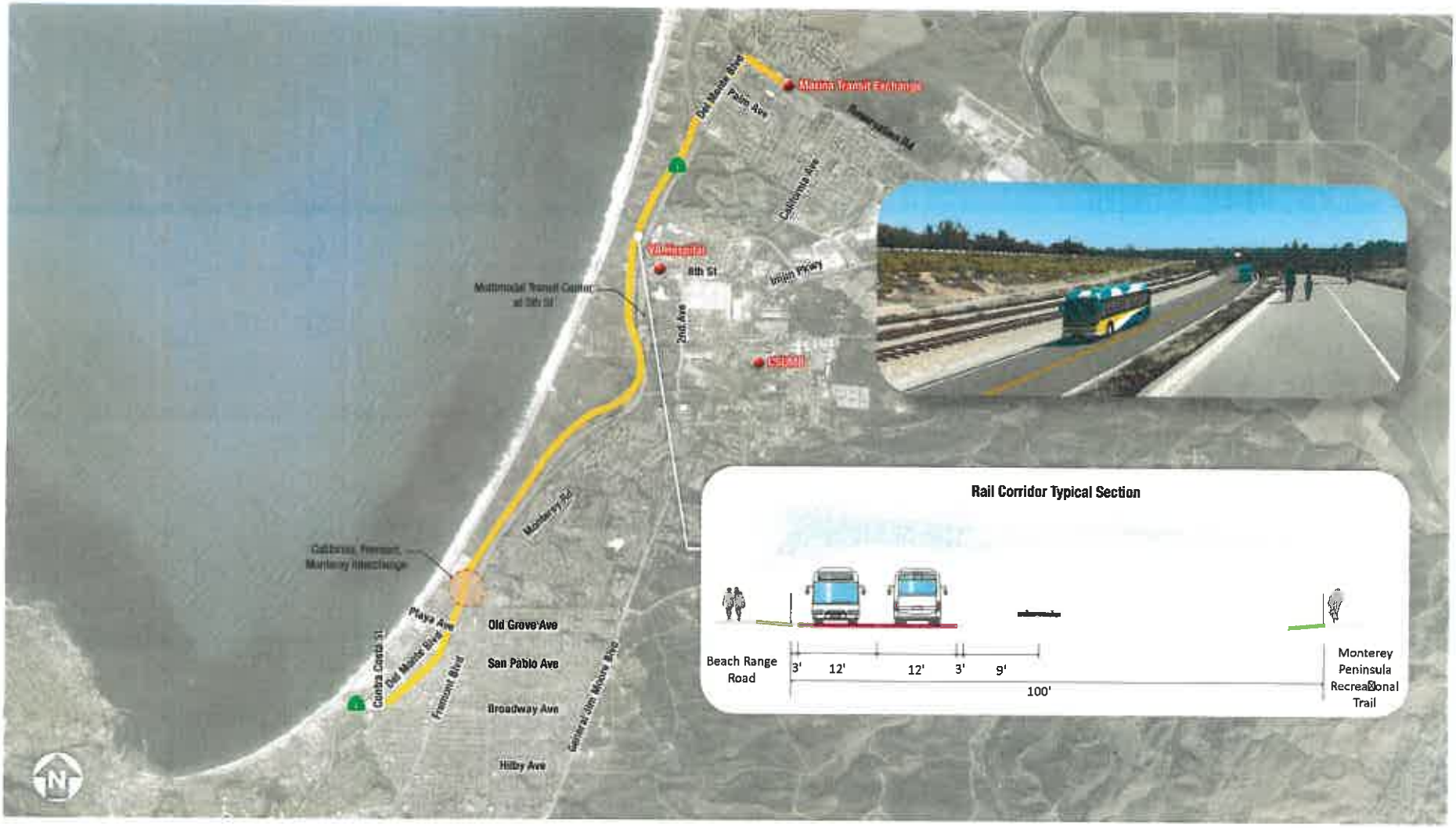
Signature: Carl G. Sedoryk Date: 3-13-2023 Title: Carl G. Sedoryk

▪ Signed by Lead Agency ▪ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR:

Revised 2011



Source: Kimley Horn, 2020

Figure 3-2: General Project Location
MST SURF! Busway and Bus Rapid Transit Project