



### Staff Report

**Date:** June 13, 2024

**To:** Mayor Kircher and Council Members

**From:** Richard Simonitch, Public Works Director

**Subject:** Award of Construction Contract for the Laurel Grove Safe Pathway Project Phase II-B between Monte Alegria and Canyon Road to Bauman Landscape and Construction, Inc. in the amount \$539,334 – Town Project No. 9075-45B

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#### Recommendation

It is recommended that the Town Council award the construction contract for the Laurel Grove Safe Pathway Project Phase II-B between Monte Allegra and Canyon Road and authorize the Town Manager to enter into a construction contract with Bauman Landscape and Construction, Inc. in the amount of \$539,334; and authorize a contingency of up to \$27,000 for potential change orders to address unforeseen conditions.

#### Background & Discussion

The work to be performed under this contract consists of installing 400 feet of new asphalt pathway and concrete barrier from the terminus of the Phase IIA project near the private driveway known as “Monte Alegria” to just past the intersection at Canyon Road. The work will involve complete reconstruction of the Laurel Grove pavement within the project limits, with new lane striping and stamped asphalt pedestrian “havens” at Canyon Road, and repainting of the havens at Walters Road and Monte Alegre. 100 feet of decorative concrete retaining wall and new landscaping will be installed along the property frontage of 77 Laurel Grove as part of this phase. The project drawings are attached to this staff report.

BKF Engineers were contracted to review existing conditions and provide the engineering design and specifications for the project. The engineer’s estimate was \$430,400. Because of the estimated cost of the project, the formal bidding procedure was used. The project was advertised for bid on May 10, 2024, and four bids were received and opened on June 6<sup>th</sup> 2024. Bauman Landscape and Construction, Inc. is the lowest responsive and responsible bidder in the amount of \$539,334.00. The total is roughly 25% higher than the engineer’s estimate.

All of the bids that were received are tabulated from low to high bidder as follows:

Bauman Landscape and Construction, Inc.	\$ 539,334
W.R. Forde Associates, Inc.	\$ 587,643
Maggiora & Ghilotti	\$ 651,944
Ghilotti Bros.	\$ 668,666

**Fiscal, resource and timeline impacts**

Staff is requesting that an approximate 5% ministerial contingency of \$27,000 be available for use by the Town Manager for unforeseen changes should they arise. Adding the contingency, BKF Engineers design and estimated construction management services costs of \$175,000 bring the total project cost for Phase IIA and IIB combined to approximately \$950,000 over the past three years beginning in fiscal year 2022-2023. The project is funded under account no. 9075-45 under the gas tax fund and roadway fund for fiscal year 2023-24 and fiscal year 2024-25 including a \$400,000 grant from TAM Measure AA funds. Construction is expected to begin soon after the July 4<sup>th</sup> holiday and the contractor is allowed 40 working days, resulting in project completion by mid-August 2024.

**Alternative actions**

Considering that the low bid is 25% higher than the engineer’s estimate, the Town Council could request that the current bid be rejected, and the project re-advertised with the hope of receiving lower bids. Staff recommends that the current bid be considered reasonable and accurate with respect to the higher bid received from Ghilotti Bros., escalating construction costs, and bidding climate, and that re-advertising the project for new bids will not likely result in lower bids.

**Environmental review**

The project is categorically exempt under the California Environmental Quality Act (CEQA) Article 19, Section 15301 existing facilities (existing highways and streets).

**Attachments**

- Project Plans

# CONSTRUCTION DRAWINGS FOR

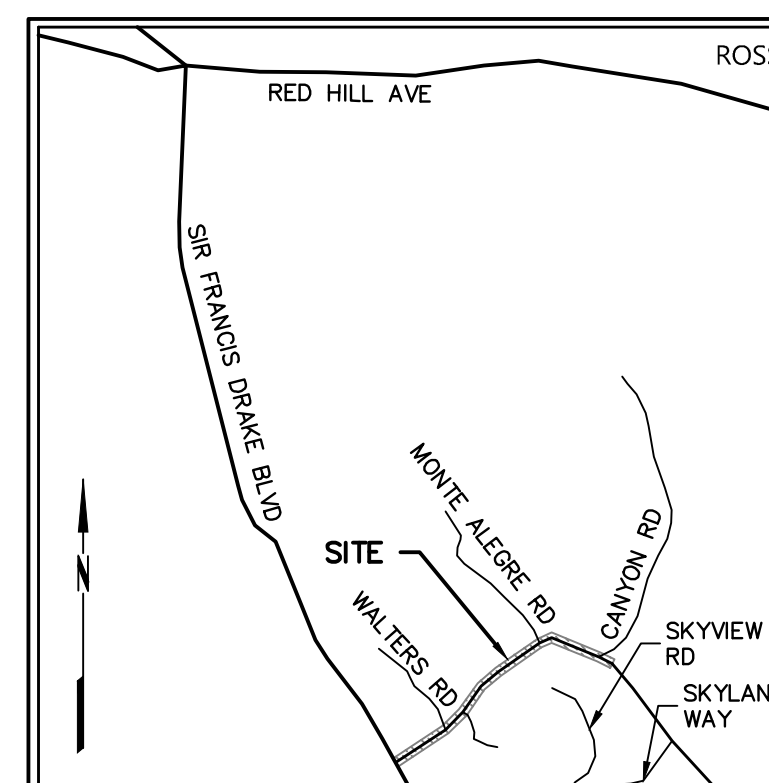
# LAUREL GROVE AVENUE

## SAFE PATHWAY TO SCHOOL

## PHASE II-B

## TOWN OF ROSS, CALIFORNIA

MAY 2024



**VICINITY MAP**  
NOT TO SCALE

**SYMBOLS & LEGEND**

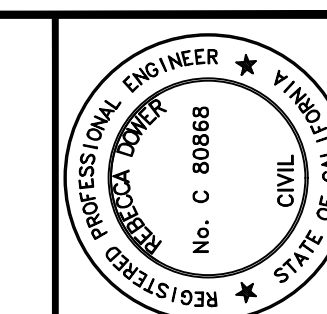
EXISTING	PROPOSED	
		BENCHMARK
		IRON PIPE
		CENTERLINE MONUMENT
		SURVEY MONUMENT
		BLOW OFF
		VALVE
		BACKFLOW PREVENTION DEVICE
		FIRE HYDRANT
		STREET LIGHT
		STREET SIGN
		UTILITY POLE
		GUY ANCHOR
		CATCH BASIN
		SEWER MANHOLE
		TELECOMMUNICATION MANHOLE
		GAS MANHOLE
		TREE
		TREE TO BE REMOVED
		PROPERTY LINE
		EASEMENT
		CENTERLINE
		FLOW LINE
		FENCE
		SANITARY SEWER
		STORM DRAIN
		WATER
		OVERHEAD UTILITY LINE
		UNDERGROUND UTILITY LINE
		UNDERGROUND ELECTRIC LINE
		UNDERGROUND GAS LINE
		UNDERGROUND TELECOM LINE
		DEMOLISH MATERIAL
		ASPHALT GRIND & OVERLAY
		ASPHALT (INCL. AC PLUG)
		CONFORM GRIND
		CONCRETE
		EXPOSED AGGREGATE CONCRETE
		COLORIZED PAVEMENT (STAMPED)
		KEYNOTE
		DETAIL IDENTIFICATION
		SHEET WHERE DETAIL IS SHOWN

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**ABBREVIATIONS**

±	MORE OR LESS (CONFORM TO EG)	MH	MANHOLE
AB	AGGREGATE BASE	MIN	MINIMUM
AC	ASPHALT CONCRETE	NO	NUMBER
APN	ASSESSOR'S PARCEL NUMBER	NTS	NOT TO SCALE
BFP	BACKFLOW PREVENTER	OH	OVERHEAD UTILITY LINE
BLRD	BOLLARD	PL	PROPERTY LINE
BM	BENCHMARK	PUE	PUBLIC UTILITY EASEMENT
CB	CATCH BASIN	PVT	PRIVATE
CL	CENTERLINE	R	RADIUS
CL2	CLASS II	RCP	REINFORCED CONCRETE PIPE
CO	CLEAN OUT	RSPR	RIPRAP ROCK SLOPE PROTECTION
CONC	CONCRETE	RTWL	RETAINING WALL
CY	CUBIC YARD	R/W	RIGHT OF WAY
DDC	DOUBLE DETECTOR CHECK	S=	SLOPE
DI	DROP INLET	SD	STORM DRAIN
DIA	DIAMETER	SDMH	STORM DRAIN MANHOLE
DN	DOCUMENT NUMBER	SF	SQUARE FEET
DW	DRIVEWAY	SL	STREETLIGHT
E	ELECTRIC	SS	SANITARY SEWER
EG	EXISTING GROUND	SSMH	SANITARY SEWER MANHOLE
ELEV	ELEVATION	STA	STATION
EP	EDGE OF PAVEMENT	STD	STANDARD
ESMT	EASEMENT	TB	TOP OF BOX
EX	EXISTING	TC	TOP FACE OF CURB
FG	FINISHED GRADE	TEL	TELECOMMUNICATION LINE
FH	FIRE HYDRANT	TF	TRANSFORMER
FL	SURFACE FLOWLINE	TG	TOP OF GRATE
FT	FOOT	TW	TOP OF WALL
G	GAS	TYP	TYPICAL
GB	GRADE BREAK	UB	UTILITY BOX
GI	GRATE INLET	UP	UTILITY POLE
GM	GAS METER	UT	UNDERGROUND UTILITY LINE
HORZ	HORIZONTAL	VC	VERTICAL CURVE
HT	HEIGHT	VERT	VERTICAL
IN	INSTRUMENT NUMBER	VLT	VAULT
INV	BOTTOM INSIDE OF PIPE	W	WATER
L	LENGTH	WM	WATER METER
MAX	MAXIMUM		



REBECCA DOWER  
5/8/2024  
C 80868

4040 CIVIC CENTER DR.  
SUITE 530  
SAN RAFAEL, CA 94903  
(415) 930-7960  
www.bkf.com



**LAUREL GROVE AVENUE - SAFE PATHWAY TO SCHOOL**

**PHASE II-B**

**TOWN OF ROSS, CALIFORNIA**

**COVER SHEET**

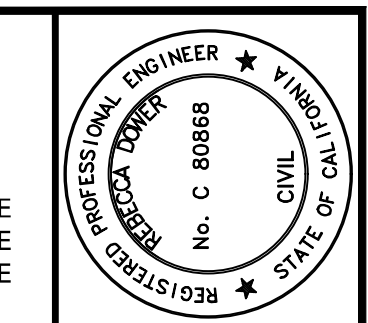
Date	Revisions
MAY 2024	

Date: MAY 2024  
Scale: AS SHOWN  
Design: IC  
Drawn: IC  
Approved: BD  
Job No: 20210182-10

Drawing Number:

**CV-1**

1 OF 14



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C 80868

4040 CIVIC CENTER DR.  
SUITE 530  
SAN RAFAEL, CA 94903  
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PHASE I-B  
TOWN OF ROSS, CALIFORNIA  
**GENERAL NOTES**

Date: MAY 2024	No.	Revisions
Scale: AS SHOWN		
Design: IC		
Drawn: IC		
Approved: BD		
Job No: 20210182-10		

Drawing Number:  
**GN-1**  
2 OF 14

GENERAL NOTES

FURNISH AND INSTALL MATERIALS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE CITIES AND COUNTY OF MARIN DATED JUNE 1992, THE UNIFORM CONSTRUCTION STANDARDS OF THE CITIES AND COUNTY OF MARIN DATED MAY 2008 AND THE CALTRANS STANDARD PLANS (CURRENT EDITION) AND CALTRANS STANDARD DRAWINGS AND SPECIFICATIONS (CURRENT EDITION).

OBTAIN AND PAY FOR ALL CONSTRUCTION PERMITS REQUIRED BY THE TOWN OF ROSS DEPARTMENT OF PUBLIC WORKS, COUNTY OF MARIN DEPARTMENT OF PUBLIC WORKS (SUCH AS ENCROACHMENT, GRADING, DEMOLITION ETC.) PRIOR TO COMMENCEMENT OF WORK. A TRAFFIC CONTROL PLAN MUST BE SUBMITTED FOR APPROVAL PRIOR TO BEGINNING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

TEMPORARY STOCKPILES SHALL NOT BE LOCATED WITHIN CREEK SETBACK AREAS, PROTECTED VEGETATION/TREE AREAS OR WITHIN 10-FEET OF AN ADJACENT RESIDENTIAL PROPERTY LINE. STOCKPILES TALLER THAN 2.5-FEET SHALL NOT BE WITHIN 50-FEET OF AN ADJACENT RESIDENTIAL PROPERTY LINE.

IF CONTAMINATED MATERIAL IS ENCOUNTERED DURING CONSTRUCTION, WORK MUST STOP UNTIL A WORK PLAN HAS BEEN APPROVED IN WRITING BY THE TOWN OF ROSS, COUNTY OF MARIN AND THE SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD. HAZARDOUS MATERIAL SHALL BE REMOVED AND DISPOSED OF ACCORDING TO THE REQUIREMENTS OF THE TOWN OF ROSS AND COUNTY OF MARIN.

SPOILS SHALL BE REMOVED AS THEY ARE GENERATED OR DISPOSED OF ON SITE. EXCESS/UNSUITABLE MATERIAL DISPOSED OF OFFSITE SHALL BE AT A LOCATION APPROVED BY THE TOWN OF ROSS. CONTAIN AND SECURELY PROTECT STOCKPILED BACKFILL AND WASTE MATERIAL FROM WIND AND RAIN AT ALL TIMES UNLESS ACTIVELY BEING USED. DO NOT BLOCK STORM WATER FLOWS.

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONSTRUCTION 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. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONSTRUCTION CONTRACTOR FURTHER AGREES TO HOLD HARMLESS, INDEMNIFY AND DEFEND THE DESIGN PROFESSIONAL, THE OWNER AND THEIR CONSULTANTS, THE TOWN OF ROSS, THE COUNTY OF MARIN, AND EACH OF THEIR OFFICERS, EMPLOYEES, AND AGENTS 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 THE DESIGN PROFESSIONAL.

THE LOCATIONS OF UNDERGROUND OBSTRUCTIONS SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY AND SHOULD NOT BE TAKEN AS FINAL OR ALL INCLUSIVE. THE CONTRACTOR IS CAUTIONED THAT THESE DRAWINGS MAY NOT INCLUDE ALL EXISTING UTILITIES INCLUDING SEWERS AND STORM DRAINS, AND THAT THE OWNER, THE TOWN OF ROSS, THE COUNTY OF MARIN AND THE DESIGN PROFESSIONAL ASSUME NO RESPONSIBILITY FOR OBSTRUCTIONS WHICH MAY BE ENCOUNTERED.

EXPOSE ALL EXISTING UTILITIES INCLUDING SEWERS AND STORM DRAINS PRIOR TO ANY TRENCHING TO ALLOW THE DESIGN PROFESSIONAL TO VERIFY THE GRADE AND ALIGNMENT OF THE UTILITIES, AND TO VERIFY DESIGN ASSUMPTIONS AND EXACT FIELD LOCATIONS. EXISTING UTILITIES MAY REQUIRE RELOCATION AND/OR PROPOSED IMPROVEMENTS MAY REQUIRE GRADE OR ALIGNMENT REVISION DUE TO FIELD CONDITIONS.

PROPERLY MUFFLE EQUIPMENT AND LIMIT CONSTRUCTION HOURS TO 7:00 AM TO 6:00 PM MONDAY THROUGH FRIDAY, AND 9:00 AM TO 6:00 PM ON SATURDAY, EXCLUDING HOLIDAYS. THIS RESTRICTION INCLUDES THE STARTUP OF MOTOR VEHICLES AND OTHER HEAVY EQUIPMENT.

REPAIR DAMAGE OR DETERIORATION OCCURRING TO EXISTING PUBLIC IMPROVEMENTS AS A DIRECT RESULT OF CONSTRUCTION ACTIVITY (GRADING, ROAD CONSTRUCTION, UTILITY INSTALLATION, ETC.). REPAIR MAY REQUIRE PATCHING, SEALING OR OVERLAYING AFFECTED AREAS AS APPROPRIATE TO RETURN THE ROADS TO AT LEAST AS GOOD A CONDITION AS THEY WERE PRIOR TO CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACT IN A TIMELY MANNER, THE CITY MAY, AT ITS DISCRETION PERFORM THE CORRECTION AND CHARGE THE CONTRACTOR FOR ALL COSTS AND OVERHEAD INCURRED.

PROVIDE AS-BUILT DRAWINGS TO THE TOWN OF ROSS UPON COMPLETION OF PROJECT AND PRIOR TO FINAL ACCEPTANCE.

ADA COMPLIANCE: COMPLY WITH THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT (ADA) WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY. IF CONSTRUCTION CONTRACTOR'S WORK IN THE PUBLIC RIGHT-OF-WAY WILL AFFECT PEDESTRIAN ACCESS, THE CONSTRUCTION CONTRACTOR IS REQUIRED TO PROVIDE A PROPERLY SIGNED ACCESSIBLE ROUTE OF TRAVEL. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

IN THE EVENT THAT ANY REMAINS OF PREHISTORIC OR HISTORIC HUMAN ACTIVITIES ARE ENCOUNTERED DURING PROJECT-RELATED ACTIVITIES, WORK IN THE IMMEDIATE VICINITY OF THE FINDS SHALL HALT AND THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT SUPERINTENDENT AND THE PROJECT INSPECTOR. WORK SHALL NOT RESUME UNTIL A QUALIFIED ARCHAEOLOGIST OR HISTORIC ARCHAEOLOGIST, AS APPROPRIATE, APPROVED BY THE TOWN OF ROSS AND/OR COUNTY OF MARIN, HAS EVALUATED THE SITUATION AND MADE RECOMMENDATIONS FOR TREATMENT OF THE RESOURCE, AND WHOSE RECOMMENDATIONS ARE CARRIED OUT. IF HUMAN BURIAL REMAINS ARE ENCOUNTERED, THE CONTRACTOR MUST ALSO CONTACT THE MARIN COUNTY CORONER.

GRADING NOTES

NO GRADING, CLEARING OR GRUBBING SHALL BE PERFORMED PRIOR TO ISSUANCE OF AN ENCROACHMENT PERMIT BY THE TOWN OF ROSS DEPARTMENT OF PUBLIC WORKS, COUNTY OF MARIN DEPARTMENT OF PUBLIC WORKS AND CALTRANS.

PROVIDE DUST CONTROL THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT TO MINIMIZE AIRBORNE POLLUTANTS.

PERFORM GRADING IN ACCORDANCE WITH CHAPTER 18 AND APPENDIX J OF THE CALIFORNIA BUILDING CODE (THE VERSION IN EFFECT AS ADOPTED BY CITY AT THE TIME OF PERMIT ISSUANCE), UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER AND IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT, PREPARED BY MILLER PACIFIC GROUP, INC. DATED SEPTEMBER 2, 2021.

DO NOT BLOCK DRAINAGE FROM UPSTREAM PROPERTIES WITH GRADING OR CONSTRUCTION OF IMPROVEMENTS.

PROTECT EXISTING DRAINAGE FACILITIES FROM SEDIMENTATION DURING ALL PHASES OF CONSTRUCTION.

REMOVE AND DISPOSE OF HAZARDOUS MATERIAL ACCORDING TO THE REQUIREMENTS OF THE TOWN OF ROSS FIRE DEPARTMENT.

DRIP LINES OF TREES OVERHANGING THE PROPERTY LINE SHALL BE AFFORDED THE SAME LEVEL OF PROTECTION AS TREES THAT ARE TO REMAIN.

UTILITY NOTES

ALL STORM DRAIN SHOWN "S.D." SHALL BE R.C.P. UNLESS OTHERWISE NOTED. RCP STORM DRAIN SHALL BE CLASS IV UNLESS OTHERWISE SHOWN ON THE DRAWINGS. IF PIPE MATERIAL IS CHANGED, THEN, DRAWING REVISIONS MAY BE REQUIRED.

UTILITY TRENCHING SHALL BE IN ACCORDANCE WITH COUNTY OF MARIN UNIFORM CONSTRUCTION STANDARD 330.

ALL STORM DRAIN PIPE LENGTHS SHOWN ARE MEASURED HORIZONTALLY FROM CENTER OF STRUCTURES.

STORM DRAIN SYSTEM SHALL BE KEPT FREE OF DIRT AND DEBRIS DURING ALL PHASES OF CONSTRUCTION. IT IS NOT ALLOWED TO WASH DIRT/DEBRIS DOWNSTREAM IN PIPES.

CONTACT MARIN MUNICIPAL WATER DISTRICT ENGINEERING SERVICES DEPARTMENT AT 415.945.1530 TO INITIATE RELOCATION OF EXISTING WATER METER (REFER TO PLAN).

STRIPING AND SIGNING NOTES

REPLACE STRIPING THAT IS REMOVED TO FACILITATE THE PROPOSED IMPROVEMENTS.

INSTALL STRIPING AND SIGNING IN ACCORDANCE WITH CALIFORNIA MUTCD REQUIREMENTS. MATERIALS SHALL BE FURNISHED BY THE CONTRACTOR.

STRIPING, PAVEMENT MARKING AND SIGNING SHALL CONFORM TO THE CALTRANS STANDARD PLANS AND THE CALIFORNIA MUTCD (CURRENT EDITIONS).

NOTIFY THE CITY ENGINEER A MINIMUM OF 48-HOURS PRIOR TO THE DAY OF LAYOUT OF THE PROPOSED SIGNING AND STRIPING.

ACCEPT RESPONSIBILITY FOR LAYOUT AND CAT TRACKING OF ALL PROPOSED STRIPING AND MARKING. PERFORM CAT TRACKING A MINIMUM OF 48-HOURS PRIOR TO PROPOSED STRIPING AND MARKING TO ALLOW THE CITY ENGINEER TIME FOR REVIEW AND APPROVAL.

REMOVE EXISTING STRIPING AND MARKING BY GRINDING.

INSTALL SIGNING AND STRIPING CONCURRENTLY.

SURVEY NOTES

TREE TRUNK DIAMETERS ARE REFLECTED GRAPHICALLY AND WERE MEASURED AT CHEST HEIGHT (±48 INCHES). DRIPLINE DIAMETERS AND TREE SPECIES ARE APPROXIMATE ONLY. CONSULT A CERTIFIED TREE ARBORIST WHEN IT IS NECESSARY TO ACCURATELY DETERMINE PERTINENT TREE INFORMATION.

PRESERVE AND PERPETUATE EXISTING SURVEY MONUMENTATION WHICH WILL BE DISTURBED OR REMOVED TO FACILITATE THE PROPOSED IMPROVEMENTS. IF WORK WILL BE CONDUCTED IN AN AREA WHICH RESULTS IN THE DISTURBANCE OF MONUMENTATION, RETAIN THE SERVICES OF A LICENSED LAND SURVEYOR TO LOCATE SAID MONUMENTATION PRIOR TO DISTURBANCE. ADDITIONALLY, RETAIN THE SERVICES OF A LICENSED LAND SURVEYOR TO RE-ESTABLISH MONUMENTATION WHICH HAS BEEN DISTURBED AS A RESULT OF PROJECT CONSTRUCTION AND TO FILE THE APPROPRIATE DOCUMENTATION, PURSUANT TO BUSINESS AND PROFESSIONS CODE SECTION 8771, WITH THE MARIN COUNTY RECORDER ONCE CONSTRUCTION IS COMPLETE.

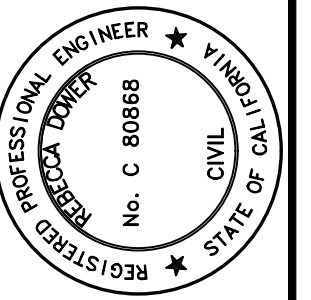
TOPOGRAPHIC INFORMATION SHOWN HEREON WAS MAPPED BY FOLLOWING FIELD SURVEYS BY L.A. STEVENS & ASSOCIATES, INC. FROM MAY 2020 THROUGH NOVEMBER 2020 PROVIDED TO BKF BY THE TOWN OF ROSS.

ALL MEASURED DISTANCES ARE IN GRID FEET AND DECIMALS THEREOF MULTIPLY BY 1.00003020 TO APPROXIMATE GROUND DISTANCES.

TEMPORARY BENCHMARK: MAG NAIL AND WASHER IN SIDEWALK STAMPED "LA STEVENS CONTROL", LOCATION SHOWN HEREON.  
ELEVATION (NAVD88): 32.64'

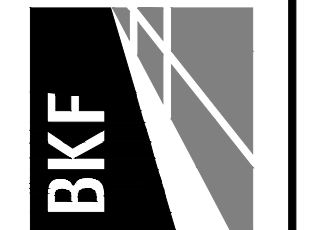
BENCHMARK: ELEVATION ESTABLISHED BY GPS RELATIVE POSITIONING FROM NATIONAL GEODETIC SURVEY (NGS) CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS). STATIONS USED WERE OHLN, P181, P198, P261, AND T1BB.

BASIS OF BEARING: THE BASIS OF BEARINGS OF THIS SURVEY IS S31°46'44"W, ROTATED CLOCKWISE 01°38'25" FROM 2008 RS 150 BETWEEN FOUND 2"x2" HUB AND FOUND 2" BRASS DISK STAMPED "RC-1".

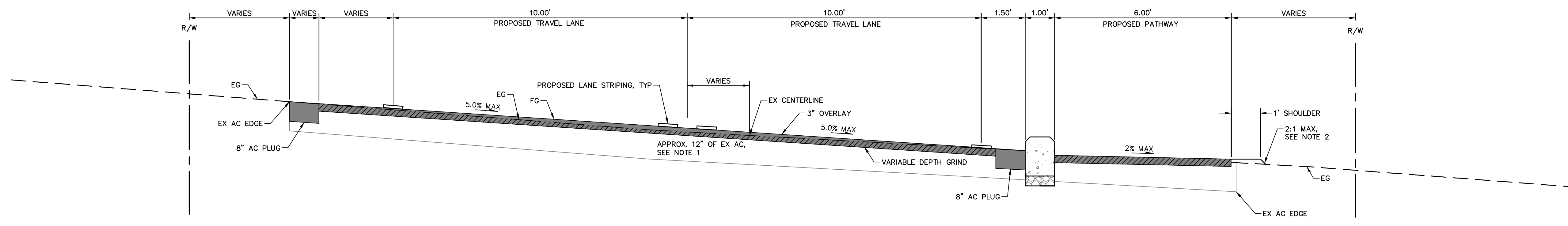


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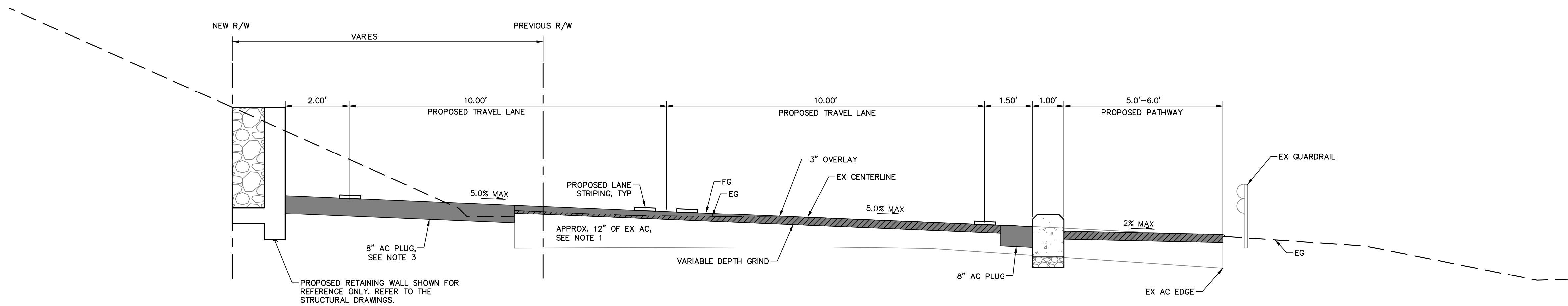
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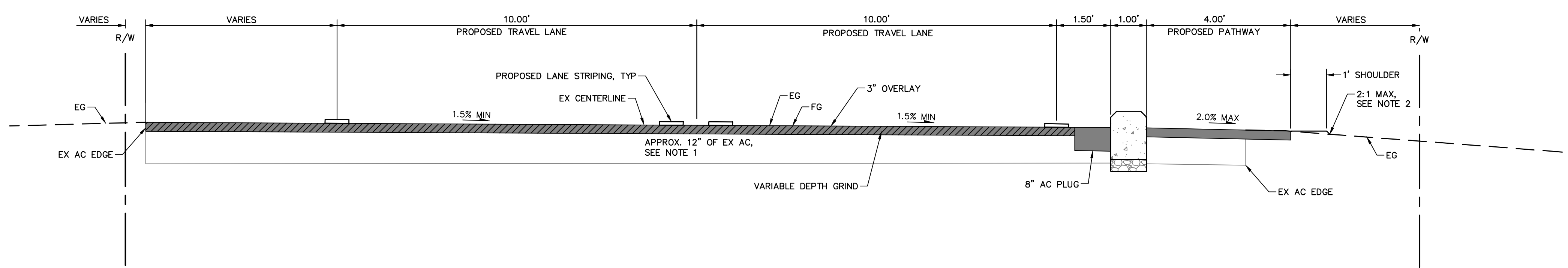
**LAUREL GROVE AVENUE - SAFE PATHWAY TO SCHOOL**  
 PHASE I-B  
 TOWN OF ROSS, CALIFORNIA  
**TYPICAL ROADWAY SECTIONS**



**TYPICAL SECTION 1**  
 STA 23+15.83 TO STA 24+45.04



**TYPICAL SECTION 2**  
 STA 24+45.04 TO STA 25+45.43

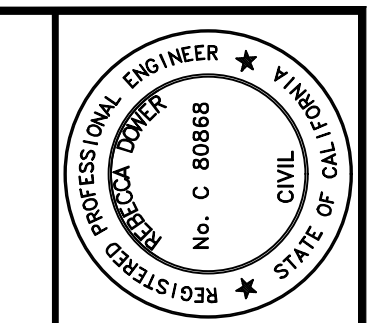


**TYPICAL SECTION 3**  
 STA 25+45.43 TO PATHWAY END

- NOTES**
- REFER TO THE PROJECT GEOTECHNICAL REPORT FOR ESTIMATED EXISTING PAVEMENT SECTION.
  - WHEN THE FINISHED GRADE OF THE PROPOSED BACK OF SIDEWALK OR PATHWAY IS 2-INCHES OR GREATER ABOVE THE EXISTING GRADE, INSTALL 1-FOOT WIDE SHOULDER BEFORE GRADING A MAXIMUM 2:1 SLOPE TO MEET EXISTING GRADE. SHOULDER SHALL BE CLASS II AGGREGATE BASE.
  - INSTALL A MINIMUM 8-INCH DEEP ASPHALT PLUG WHEN PROPOSED IMPROVEMENTS ARE BEYOND EXISTING EDGE OF PAVEMENT. REFER TO PLAN.
  - UNLESS OTHERWISE NOTED, WHERE THE EXISTING ROAD CROSS SLOPE IS LESS THAN 1.5%, PERFORM A VARIABLE GRIND AND OVERLAY AS NECESSARY TO CREATE A MINIMUM 1.5% CROSS SLOPE.

No.	Revisions

Date: MAY 2024  
 Scale: AS SHOWN  
 Design: IC  
 Drawn: IC  
 Approved: BD  
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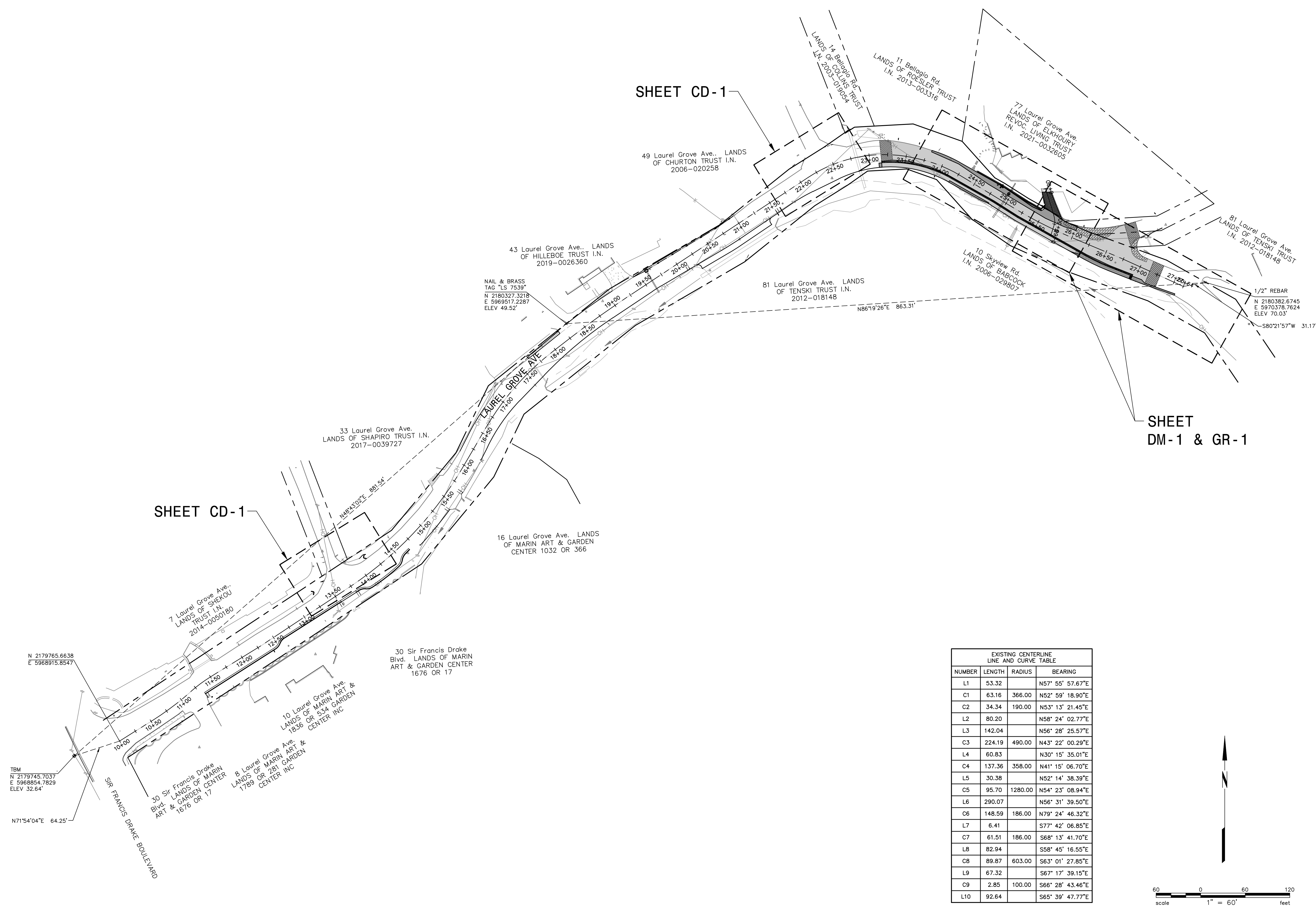
**LAUREL GROVE AVENUE - SAFE PATHWAY TO SCHOOL**  
 PHASE I-B  
 TOWN OF ROSS, CALIFORNIA  
**HORIZONTAL CONTROL PLAN & KEY MAP**

Date	Revisions
MAY 2024	AS SHOWN
	DESIGN: IC
	DRAWN: IC
	APPROVED: BD
	Job No: 20210182-10

Drawing Number:  
**OP-1**  
 4 OF 14

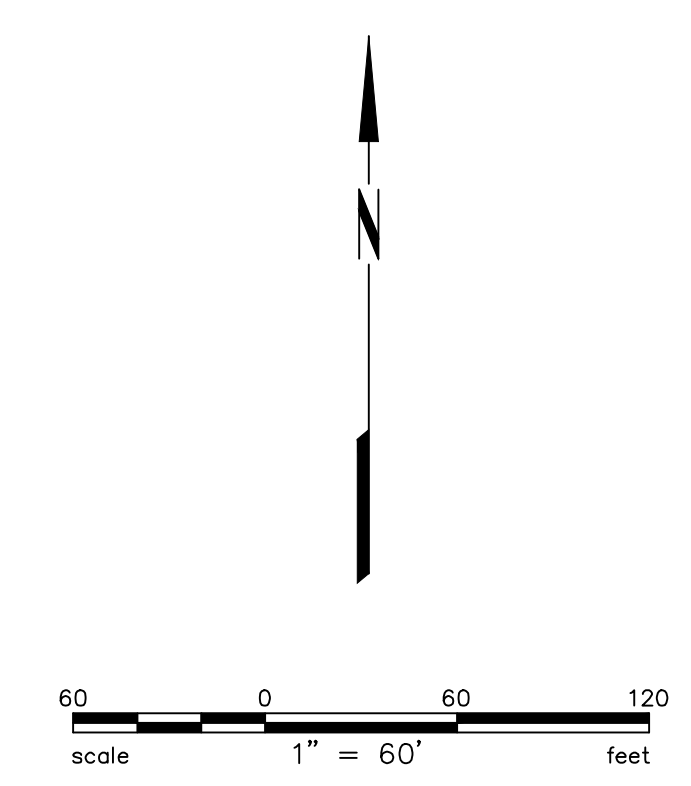
SHEET CD-1

SHEET DM-1 & GR-1



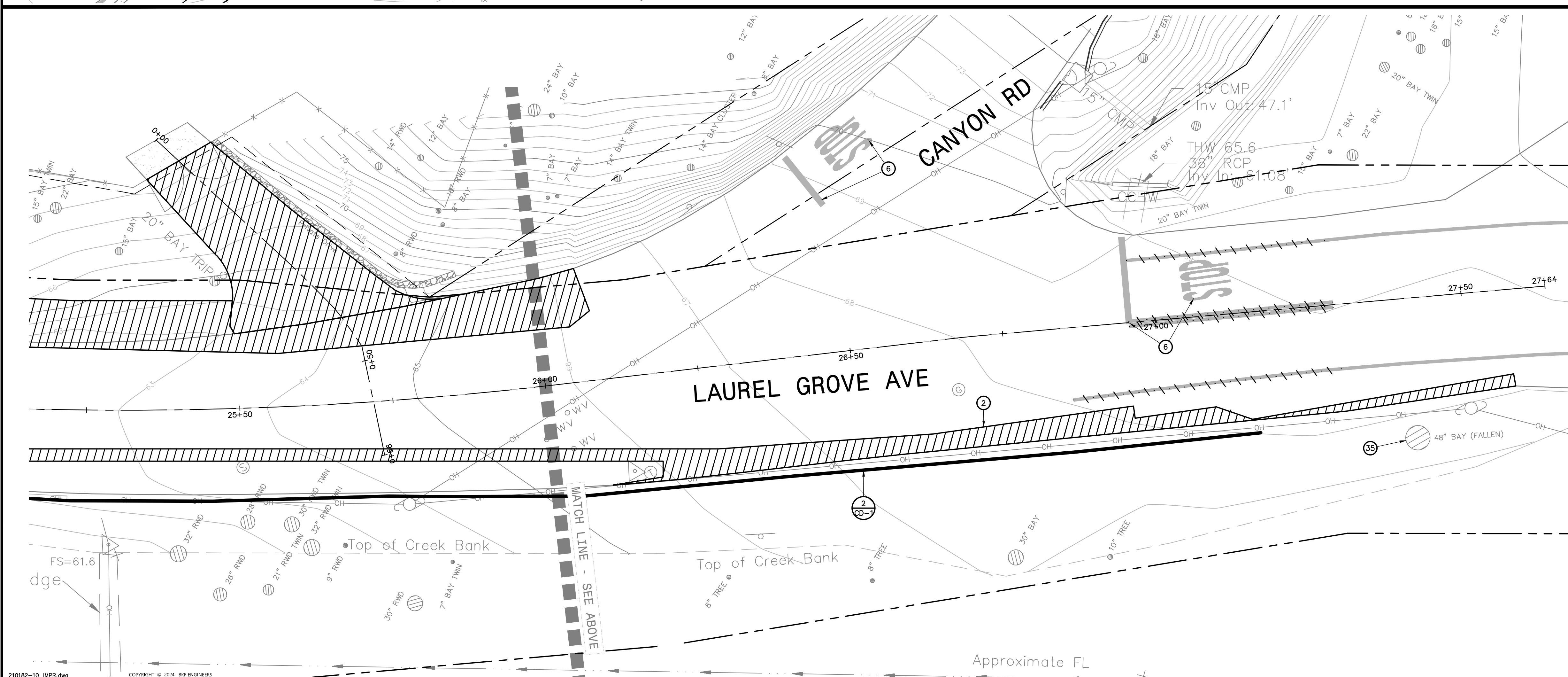
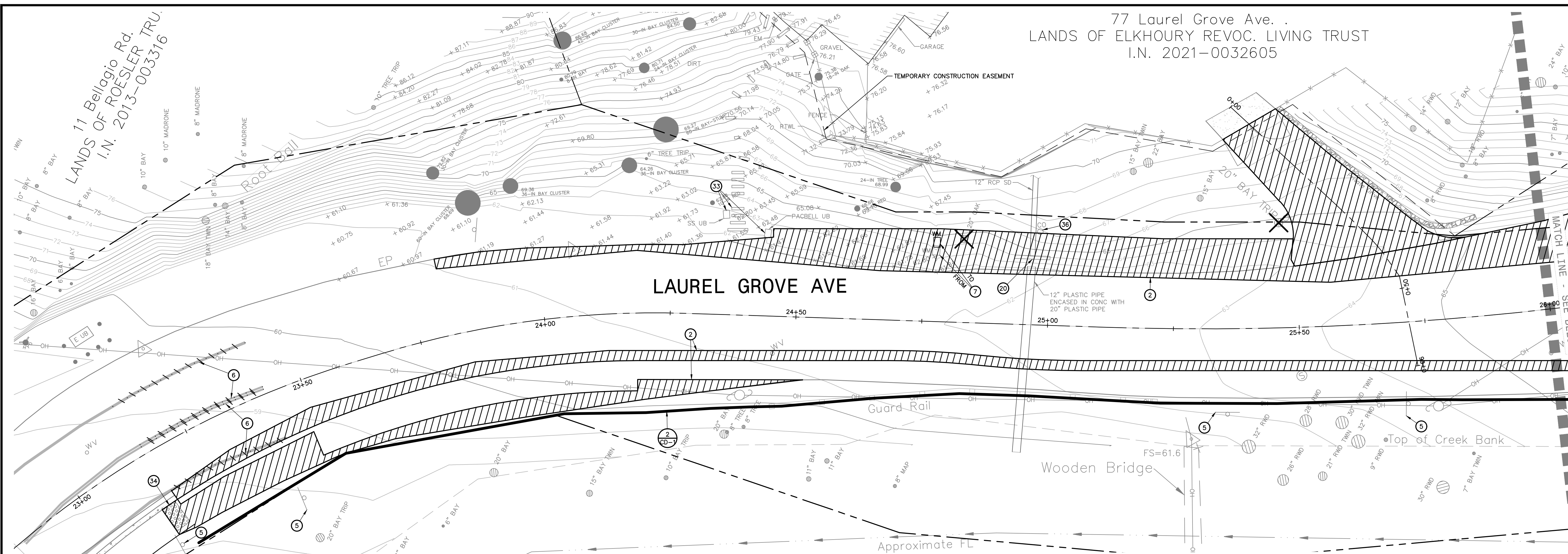
EXISTING CENTERLINE LINE AND CURVE TABLE

NUMBER	LENGTH	RADIUS	BEARING
L1	53.32		N57° 55' 57.67"E
C1	63.16	366.00	N52° 59' 18.90"E
C2	34.34	190.00	N53° 13' 21.45"E
L2	80.20		N58° 24' 02.77"E
L3	142.04		N56° 28' 25.57"E
C3	224.19	490.00	N43° 22' 00.29"E
L4	60.83		N30° 15' 35.01"E
C4	137.36	358.00	N41° 15' 06.70"E
L5	30.38		N52° 14' 38.39"E
C5	95.70	1280.00	N54° 23' 08.94"E
L6	290.07		N56° 31' 39.50"E
C6	148.59	186.00	N79° 24' 46.32"E
L7	6.41		S77° 42' 06.85"E
C7	61.51	186.00	S68° 13' 41.70"E
L8	82.94		S58° 45' 16.55"E
C8	89.87	603.00	S63° 01' 27.85"E
L9	67.32		S67° 17' 39.15"E
C9	2.85	100.00	S66° 28' 43.46"E
L10	92.64		S65° 39' 47.77"E



77 Laurel Grove Ave.  
LANDS OF ELKHOURY REVOC. LIVING TRUST  
I.N. 2021-0032605

11 Bellagio Rd.  
LANDS OF ROESLER TRU.  
I.N. 2013-003316



- KEYNOTES:**
- 2 SAW CUT AND CLEANLY REMOVE EXISTING MATERIAL TO FACILITATE THE PROPOSED IMPROVEMENTS AND DISPOSE OF UNUSED MATERIAL IN ACCORDANCE WITH LOCAL REGULATIONS.
  - 5 REMOVE EXISTING SIGN AND POST. REFER TO THE SIGNAGE PLAN.
  - 6 REMOVE EXISTING STRIPING. REFER TO THE STRIPING PLAN.
  - 7 RELOCATE EXISTING WATER METER AND BOX TO FACILITATE THE PROPOSED IMPROVEMENTS. REFER TO THE GRADING & PAVING PLAN.
  - 20 REMOVE EXISTING HEADWALL AND DISPOSE OF UNUSED MATERIAL IN ACCORDANCE WITH LOCAL REGULATIONS.
  - 33 PROTECT-IN-PLACE EXISTING LANDSCAPE STEPS, PACBELL UTILITY BOX, AND SEWER UTILITY BOX.
  - 34 REMOVE EXISTING DETECTABLE WARNING SURFACE AND CONCRETE BARRIER TAPER TO FACILITATE THE IMPROVEMENTS AND DISPOSE OF UNUSED MATERIAL IN ACCORDANCE WITH LOCAL REGULATIONS.
  - 35 VERIFY ANY POTENTIAL CONFLICTS IMPOSED BY THE FALLEN 48-INCH BAY TREE AND INFORM THE ENGINEER AND THE TOWN OF FINDINGS BEFORE INSTALLING IMPROVEMENTS IN THIS LOCATION.
  - 36 PROTECT-IN-PLACE EXISTING CLEANOUT.

**LAUREL GROVE AVENUE - SAFE PATHWAY TO SCHOOL**  
**PHASE I-B**  
**DEMOLITION PLAN & SEDIMENT CONTROL PLAN**  
 TOWN OF ROSS, CALIFORNIA

**BKF**

4040 CIVIC CENTER DR.  
SUITE 530  
SAN RAFAEL, CA 94903  
(415) 930-7960  
www.bkf.com

REBECCA DOWER  
5/8/2024  
C 80568

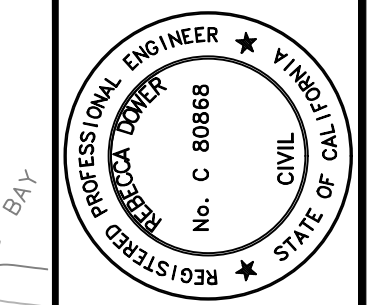
PROFESSIONAL ENGINEER  
NO. C 80568  
CIVIL  
SITE OF

Revisions	No.	Date	By

Date: MAY 2024  
 Scale: AS SHOWN  
 Design: IC  
 Drawn: IC  
 Approved: BD  
 Job No: 20210182-10

Plot May 02, 2024 at 1:09pm  
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77 Laurel Grove Ave.  
LANDS OF ELKHOURY REVOC. LIVING TRUST  
I.N. 2021-0032605

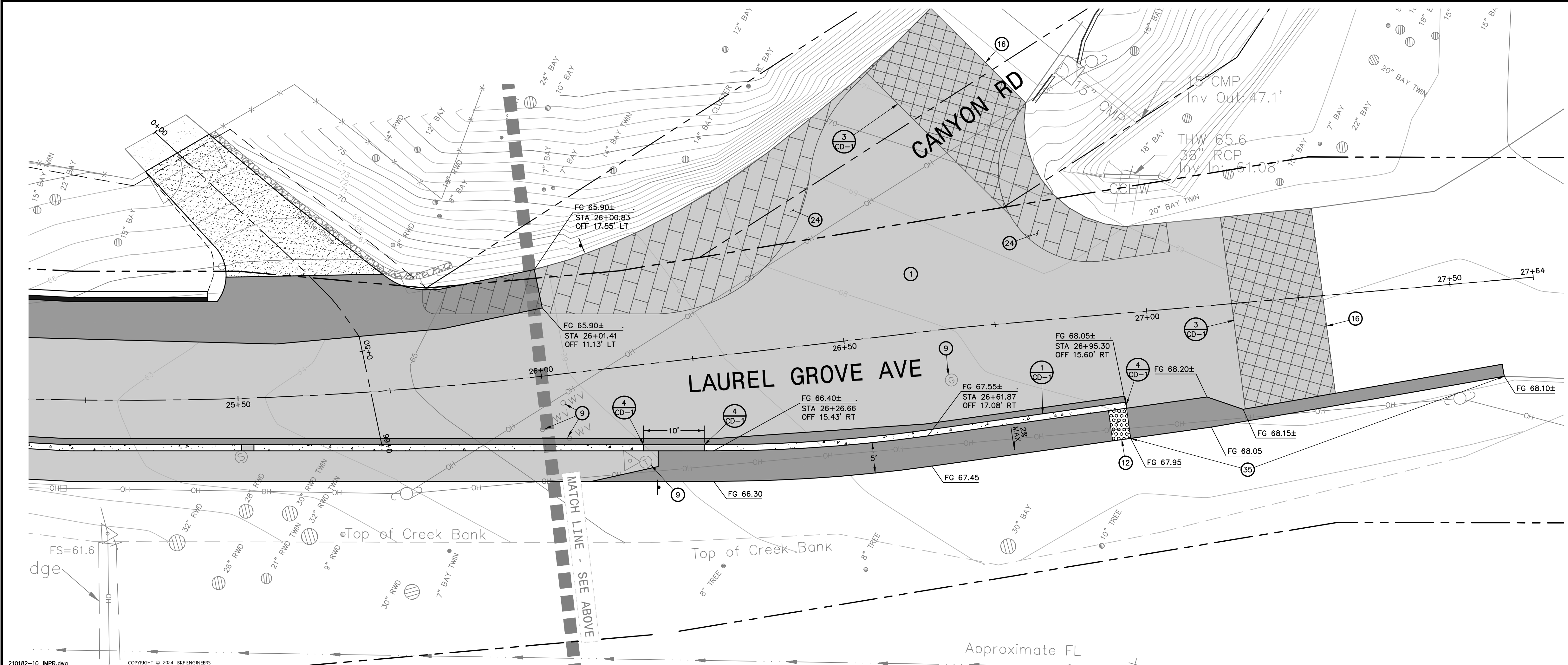
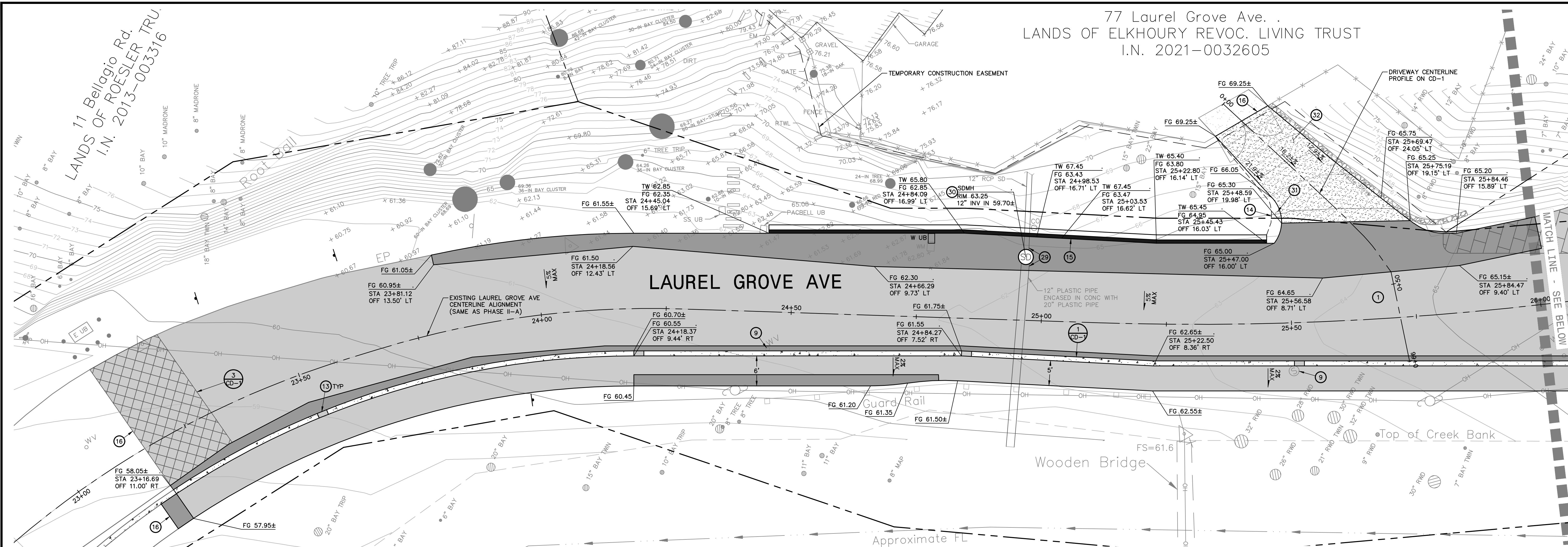


REBECCA DOWER  
5/8/2024  
C 80868

4040 CIVIC CENTER DR.  
SUITE 530  
SAN RAFAEL, CA 94903  
(415) 930-7960  
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LAUREL GROVE AVENUE - SAFE PATHWAY TO SCHOOL  
PHASE I-B  
TOWN OF ROSS, CALIFORNIA  
GRADING & PAVING PLAN



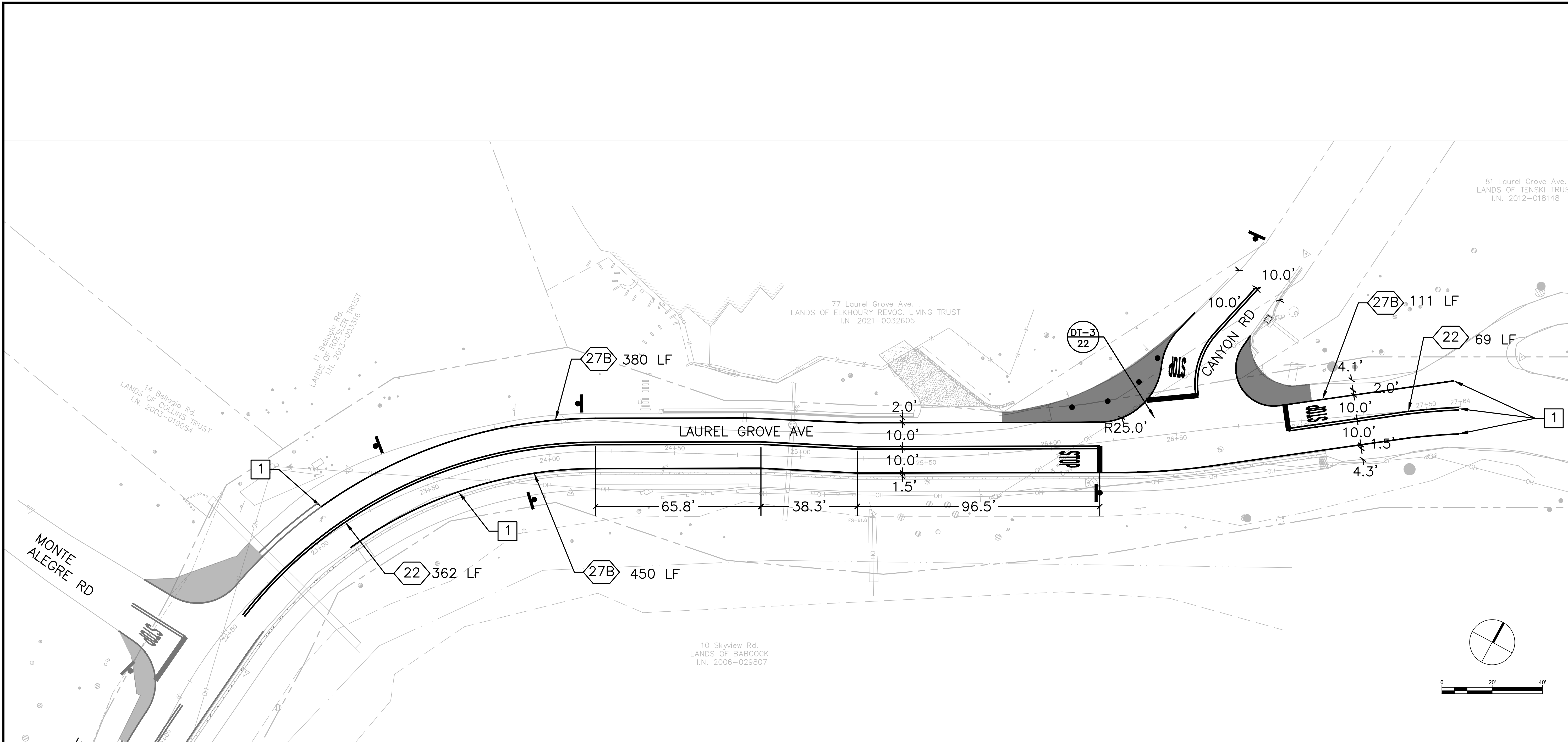
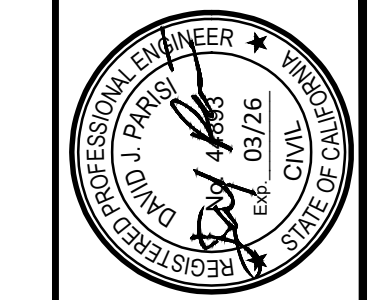
- KEYNOTES:
- GRIND EXISTING ASPHALT CONCRETE A MAXIMUM DEPTH OF 3-INCHES AND AS REQUIRED TO PROVIDE AN ASPHALT CONCRETE OVERLAY HAVING A MINIMUM SLOPE OF 1.5-PERCENT TO THE LINES AND ELEVATIONS SHOWN IN A MANNER WHICH GENERATES A UNIFORM TRANSITION BETWEEN SURFACES AND DOES NOT IMPEDE DRAINAGE.
  - ADJUST EXISTING UTILITY TO FINISH GROUND SURFACE ELEVATION.
  - DETECTABLE WARNING SURFACE (SET IN NEW CONCRETE) IN ACCORDANCE WITH SECTION 11B-705.1 OF THE 2016 CALIFORNIA BUILDING CODE.
  - 2-FOOT OPENING SPACED 65-FOOT APART (REFER TO PLAN).
  - APPROXIMATE LIMITS OF GRADING.
  - RETAINING WALL AND 1-FOOT BENCH. REFER TO THE STRUCTURAL DRAWINGS.
  - CONFORM TO EXISTING SURFACE ELEVATION IN A MANNER WHICH GENERATES A UNIFORM TRANSITION BETWEEN SURFACES AND DOES NOT IMPEDE DRAINAGE.
  - CONTRACTOR SHALL MATCH COLORIZED PAVEMENT STAMP PATTERN WITH PHASE II-A STAMP PATTERN AND CONFIRM WITH ENGINEER.
  - REMOVE PORTIONS OF EXISTING STORM DRAIN TO FACILITATE THE PROPOSED IMPROVEMENTS AND CONNECT TO THE NEW STRUCTURE. FORM AND FILL AREA BETWEEN PIPE AND STRUCTURE WITH CONCRETE IN A MANNER WHICH PROVIDES A PERMANENT WATER TIGHT SEAL.
  - TYPE 'A' STORM DRAIN MANHOLE IN ACCORDANCE WITH COUNTY OF MARIN UNIFORM CONSTRUCTION STANDARDS (UCS) 200 AND 205 HAVING A TRAFFIC RATED FRAME AND COVER IN ACCORDANCE WITH UCS STANDARD DRAWING NUMBER 215.
  - ADJUST EXISTING GATE KEYPAD TO FINISHED GRADE.
  - EXPOSED AGGREGATE 6-INCH CONCRETE OVER 6-INCH CLASS II AGGREGATE BASE. PROVIDE 12-INCH DOWELS AT 36-INCHES ON-CENTER INTO EXISTING DRIVEWAY CONCRETE. CONTACT TOWN OF ROSS A MINIMUM OF 1 WEEK PRIOR TO COMMENCING WORK ON 77 LAUREL GROVE AVENUE DRIVEWAY.
  - VERIFY ANY POTENTIAL CONFLICTS IMPOSED BY THE FALLEN 48-INCH BAY TREE AND INFORM THE ENGINEER AND THE TOWN OF FINDINGS BEFORE INSTALLING IMPROVEMENTS IN THIS LOCATION.

REFER TO THE SIGNAGE PLAN AND PAVEMENT DELINEATION PLAN FOR SIGNAGE AND STRIPING INFORMATION.

Revisions	No.	Date	By	Check

Date: MAY 2024  
 Scale: AS SHOWN  
 Design: IC  
 Drawn: IC  
 Approved: BD  
 Job No: 20210182-10



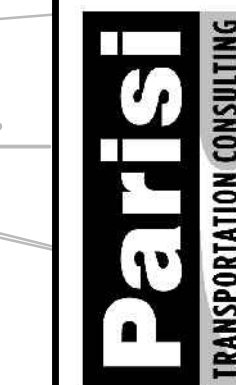


- XX CALTRANS STRIPING DETAIL
- LF LINEAR FEET
- TYP TYPICAL

**CONSTRUCTION NOTES (THIS SHEET ONLY)**

- 1 TIE PROPOSED STRIPING INTO EXISTING STRIPING TO MAINTAIN MINIMUM 10' TRAVEL LANES.

800 Bancroft Way, Ste 203  
Berkeley, CA 94710  
CSID: 343-6400

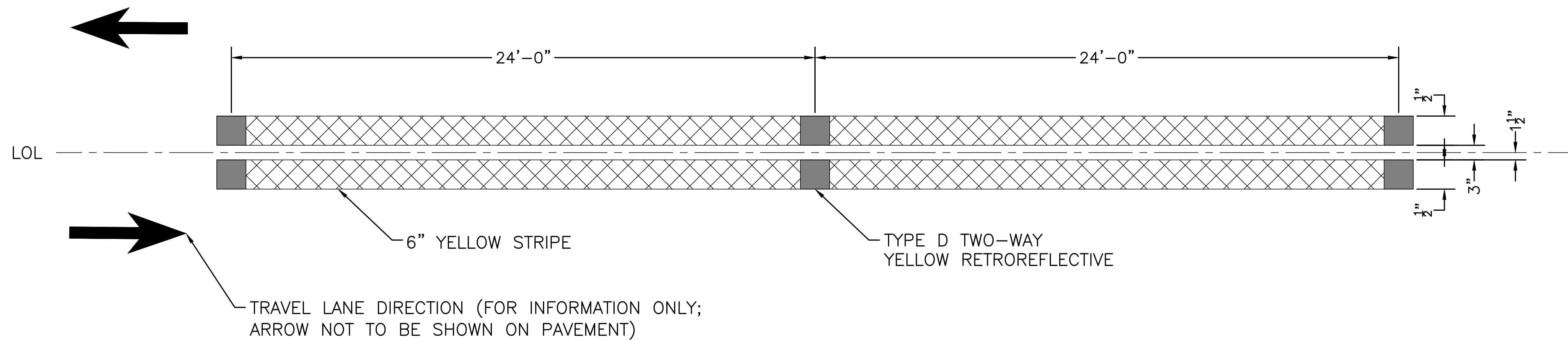


LAUREL GROVE - SAFE PATHWAY TO SCHOOL  
PHASE II-B  
LAUREL GROVE AVENUE, ROSS, CA

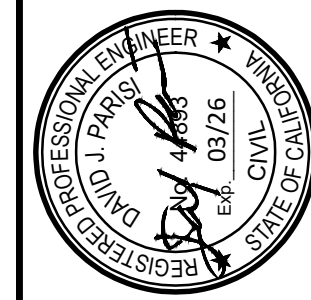
**PAVEMENT DELINEATION PLAN**

Date	No.	Revisions
MAY 2024		
AS SHOWN		
Design: BA		
Drawn: BA		
Approved: DP		
Job No: 21011		

Drawing Number:  
PD-1  
7 of 14



1  
—  
MODIFIED CALTRANS STANDARD DETAIL 22  
NO SCALE



800 Bancroft Way, Ste  
203  
Berkeley, CA 94710  
CSID: 343-6400



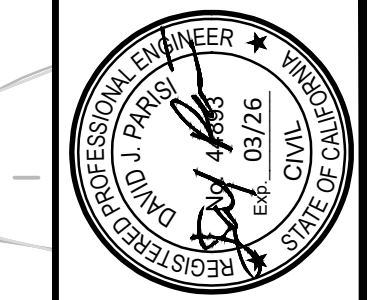
LAUREL GROVE - SAFE PATHWAY TO SCHOOL  
PHASE II-B  
LAUREL GROVE AVENUE, ROSS, CA

PAVEMENT DELINEATION PLAN

No.	Revisions

Date: MAY 2024  
Scale: AS SHOWN  
Design: BA  
Drawn: BA  
Approved: DP  
Job No: 21011

Drawing Number:  
PD-2  
8 of 14



800 Bancroft Way, Ste  
203  
Berkeley, CA 94710  
CSID: 343-6400

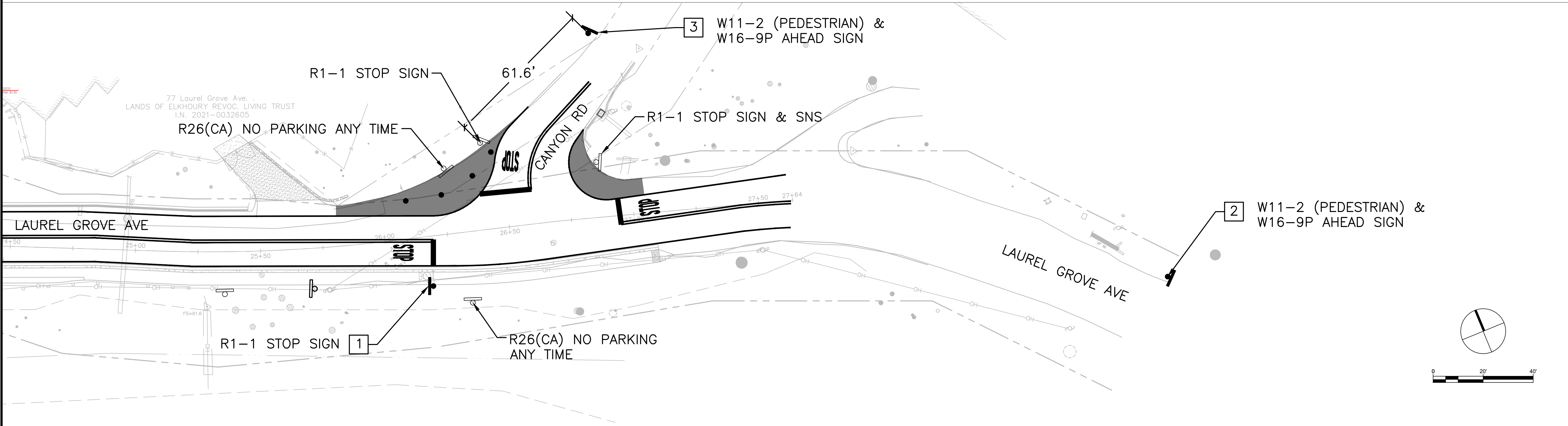
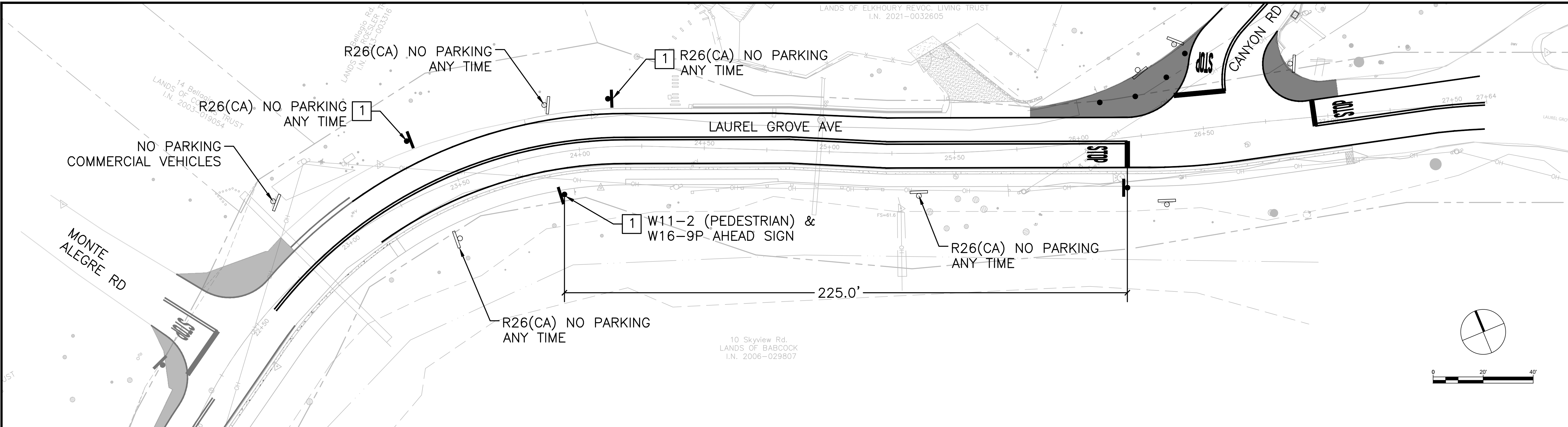


LAUREL GROVE - SAFE PATHWAY TO SCHOOL  
PHASE II-B  
LAUREL GROVE AVENUE, ROSS, CA  
SIGNAGE PLAN

Revisions	No.	Date	By	Appr.

Date: MAY 2024  
Scale: AS SHOWN  
Design: BA  
Drawn: BA  
Approved: DP  
Job No: 21011

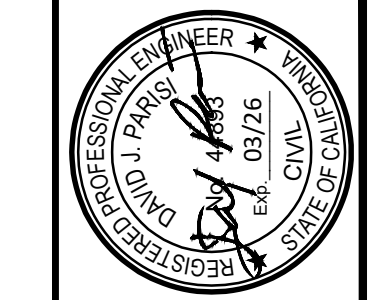
Drawing Number:  
S-1  
9 of 14



**CONSTRUCTION NOTES (THIS SHEET ONLY)**

- 1 INSTALL SIGN ON NEW POLE
- 2 INSTALL SIGN ON NEW POLE APPROXIMATELY 250' EAST OF THE LAUREL GROVE AVE & CANYON RD INTERSECTION. DIMENSION TAKEN FROM EXISTING STOP SIGN LOCATION.
- 3 INSTALL SIGN ON NEW POLE APPROXIMATELY 61' NORTH OF THE LAUREL GROVE AVE & CANYON RD INTERSECTION. DIMENSION TAKEN FROM EXISTING STOP SIGN LOCATION.

Plot May 03, 2024 at 11:53am



800 Bancroft Way, Ste  
203  
Berkeley, CA 94710  
CSID: 343-6400

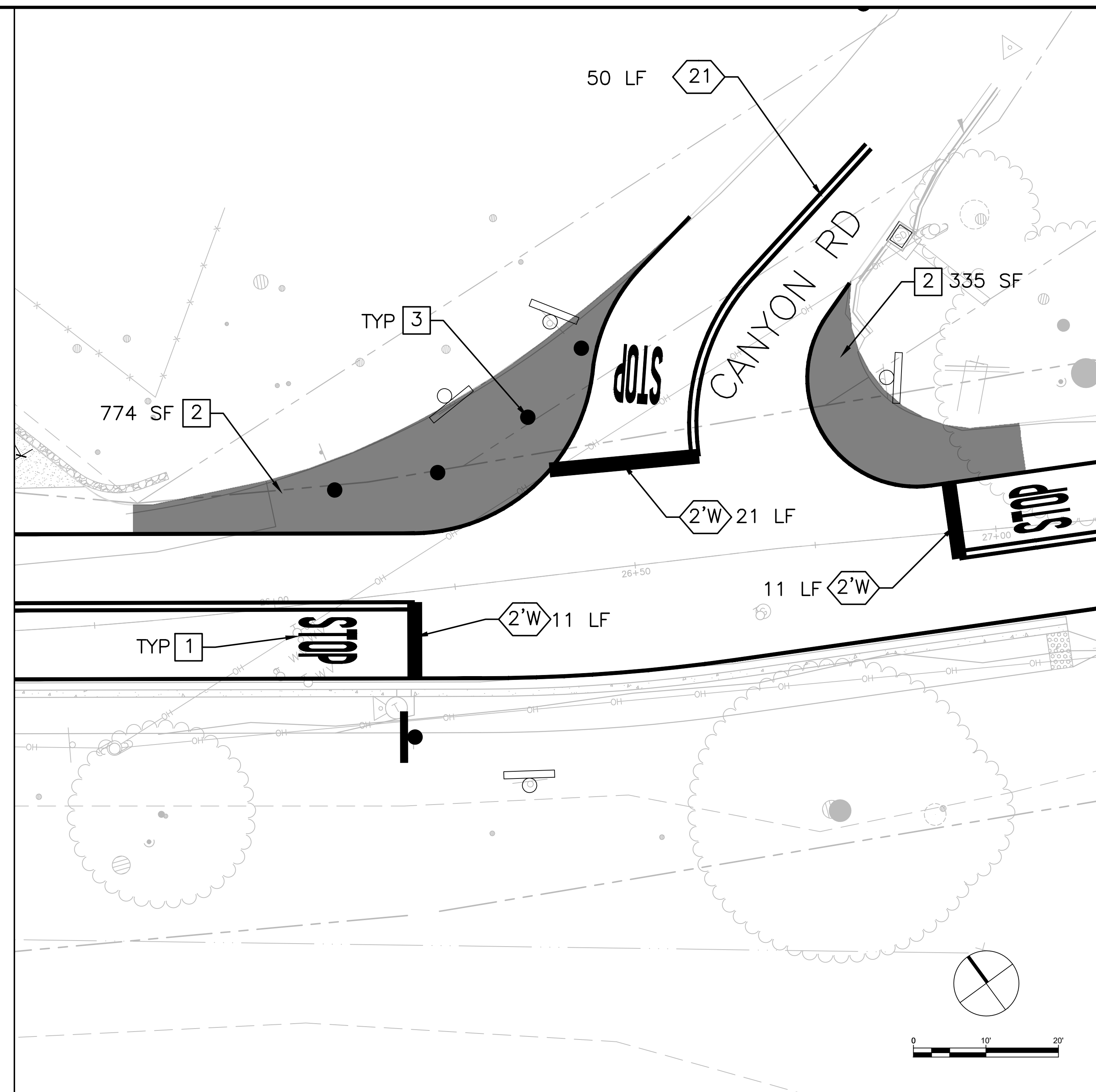


LAUREL GROVE - SAFE PATHWAY TO SCHOOL  
PHASE II-B  
LAUREL GROVE AVENUE, ROSS, CA

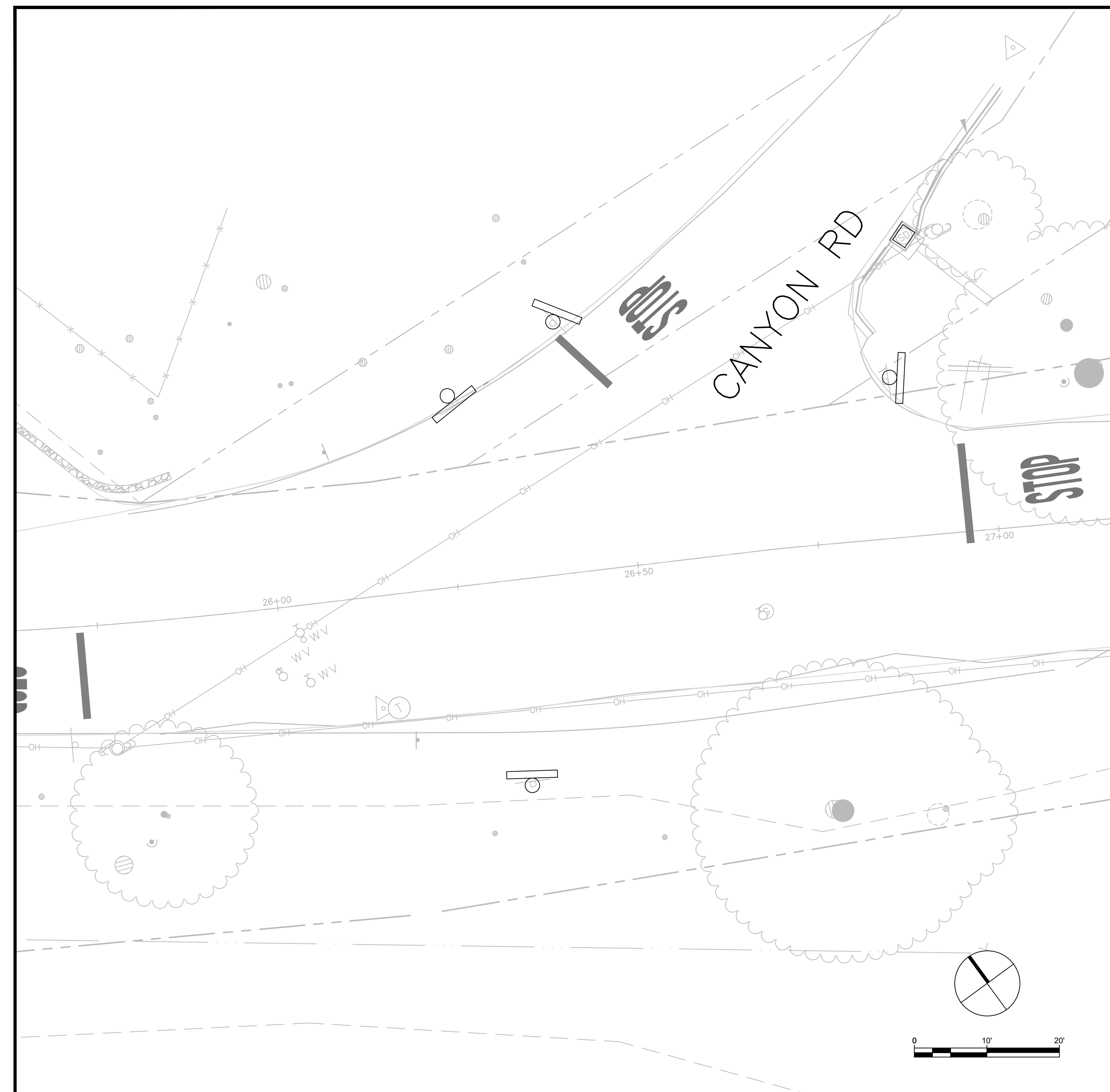
INTERSECTION DETAIL

Revisions	
No.	Description

Date: MAY 2024  
Scale: AS SHOWN  
Design: BA  
Drawn: BA  
Approved: DP  
Job No: 21011


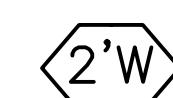


LAUREL GROVE AVE/CANYON RD  
PROPOSED CONDITIONS

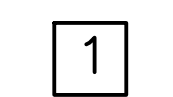




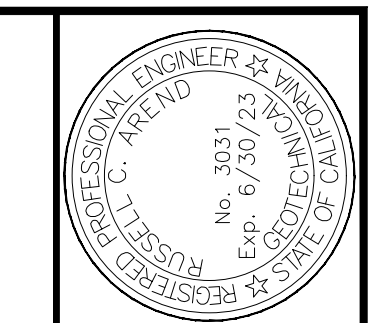
LAUREL GROVE AVE/CANYON RD  
EXISTING CONDITIONS

**LEGEND & ABBREVIATIONS**

-  CALTRANS STRIPING DETAIL
-  1-FOOT WHITE STRIPE
- LF LINEAR FEET
- SF SQUARE FEET
- TYP TYPICAL

**CONSTRUCTION NOTES (THIS SHEET ONLY)**

-  INSTALL STOP PAVEMENT MARKING
-  INSTALL COLORIZED PAVEMENT
-  INSTALL GREEN K-71 POST 2'-6" FROM STRIPE, SPACED 14' APART AND AS DIRECTED BY ENGINEER.



DATE: 5/27/2024  
GE 3031

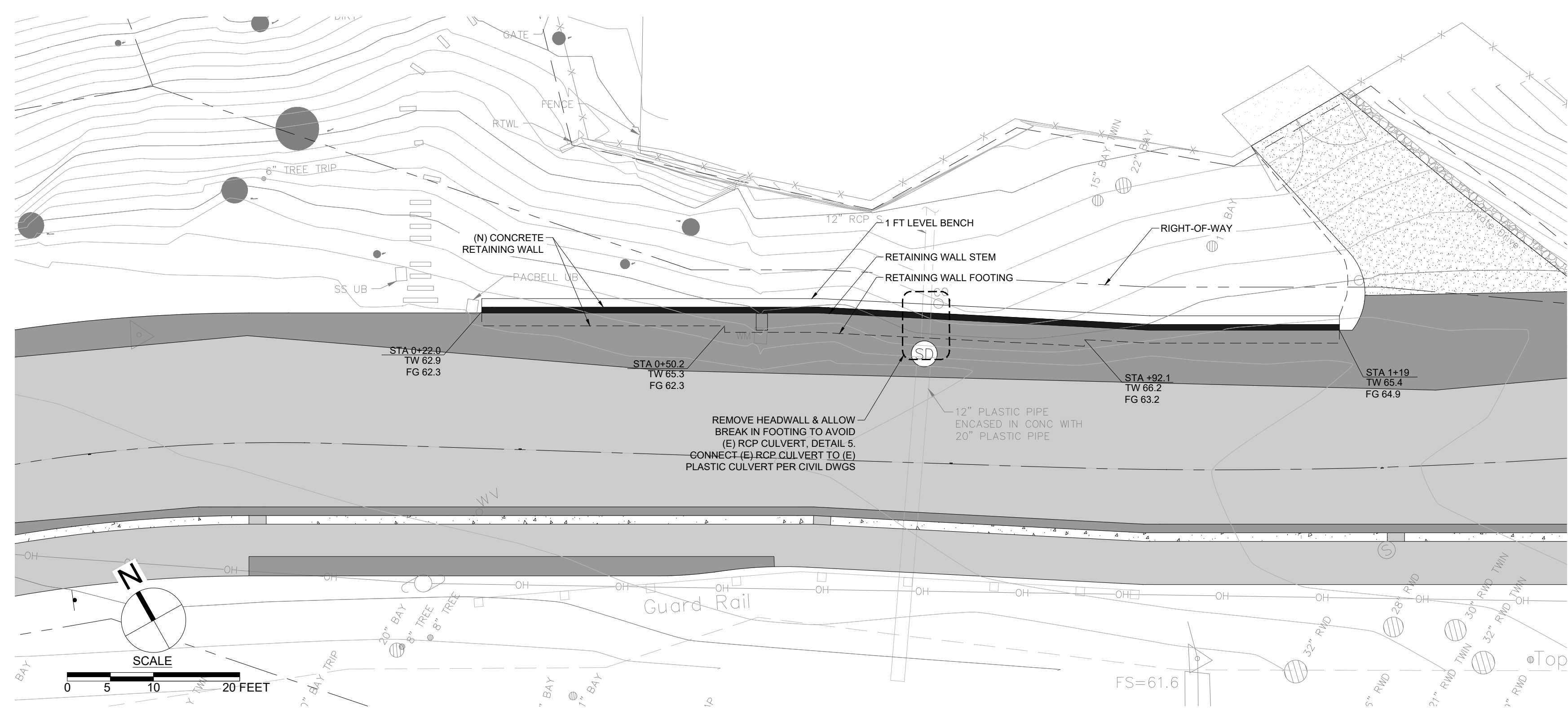
RUSSELL AREND

**MILLER PACIFIC ENGINEERING GROUP**  
504 REDWOOD BLVD, SUITE 220  
NOVATO, CA 94947  
415-882-5444 www.millerpac.com

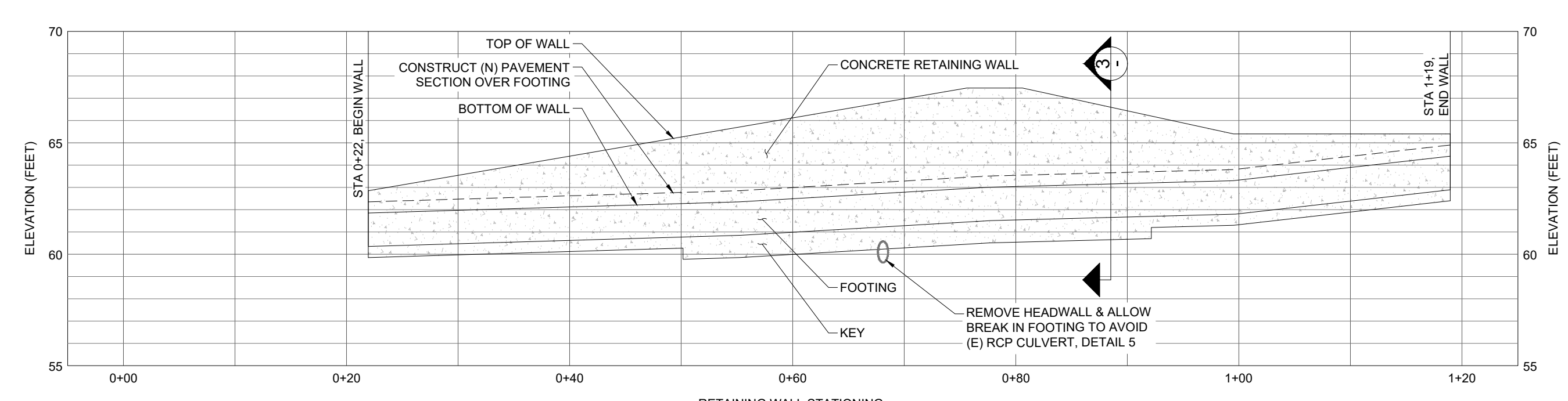
Laurel Grove - Safe Pathway to School  
Phase II-B  
Laurel Grove Avenue, Ross, CA

RETAINING PLAN, PROFILE & DETAILS

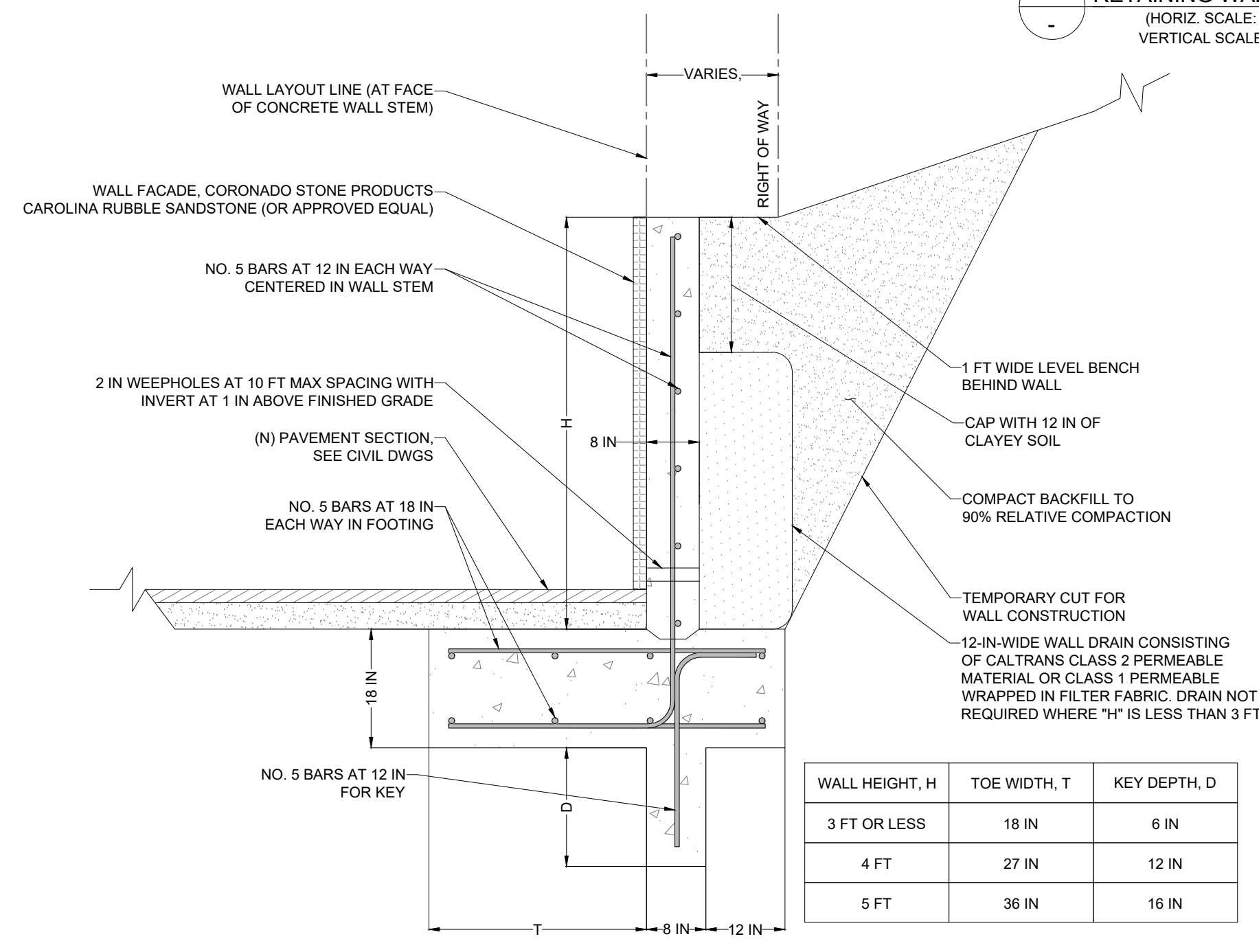
Revisions  
Date: MAY 2024  
Scale: AS SHOWN  
Design: RCA  
Drawn: RCA  
Approved: SAS  
Sub. No: 1912.020  
Drawing Number:  
RW-1  
11 of 14



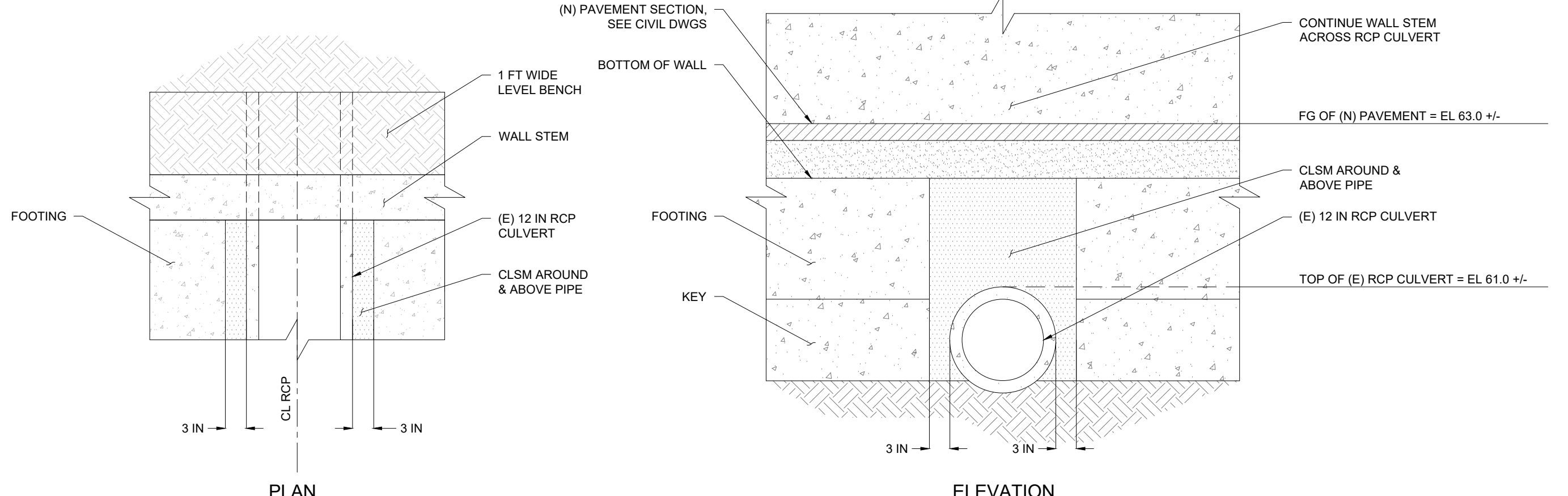
1 RETAINING WALL PLAN  
(SCALE: 1" = 10'-0")



2 RETAINING WALL PROFILE  
(HORIZ. SCALE: 1" = 10'-0"  
VERTICAL SCALE: 1" = 5'-0")



3 CANTILEVER RETAINING WALL  
(SCALE: 1" = 10'-0")



5 WALL FOOTING AT (E) RCP CULVERT  
(SCALE: 1" = 10'-0")

**RETAINING WALL DESIGN CRITERIA**  
 GEOTECHNICAL REPORT:  
 MILLER PACIFIC ENGINEERING GROUP  
 GEOTECHNICAL INVESTIGATION  
 TOWN OF ROSS - SAFE ROUTES TO SCHOOL  
 LAUREL GROVE AVENUE PATHWAY  
 ROSS, CALIFORNIA  
 DATED SEPTEMBER 2, 2021  
 ACTIVE EARTH PRESSURE: 60 PCF (EQUIVALENT FLUID PRESSURE)  
 PASSIVE EARTH PRESSURE: 350 PCF (EQUIVALENT FLUID PRESSURE)  
 SEISMIC PRESSURE: 10 X WALL HEIGHT (UNIFORM, IN POUNDS PER SQUARE FOOT)  
 BASE FRICTION COEFFICIENT: 0.35  
 ALLOWABLE BEARING CAPACITY: 3,000 PSF

**CONCRETE**  
 1. ALL WORK SHALL BE IN ACCORDANCE WITH COUNTY OF MARIN STANDARD SPECIFICATIONS AND THE LATEST EDITION OF ACI 301. SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS. ALL STRUCTURAL CONCRETE SHALL COMPLY WITH THE PROVISIONS OF ACI 318-14.  
 2. ALL CONCRETE SHALL BE NORMAL WEIGHT AND READY-MIXED WITH A MAXIMUM WATER TO CEMENT RATIO 0.45 AND A MAXIMUM MEASURED SLUMP OF 4 INCHES.  
 3. ALL AGGREGATE SHALL CONFORM TO ASTM C33.  
 4. ALL WATER SHALL BE CLEAN, POTABLE AND NOT DETRIMENTAL TO THE CONCRETE.  
 5. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI

**REINFORCING STEEL**  
 1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GR 60.  
 2. PROVIDE 3 IN MINIMUM COVER.  
 3. REINFORCING STEEL BENDS, HOOKS, DEVELOPMENT LENGTHS AND SPLICES SHALL BE IN ACCORDANCE WITH DETAIL 5/SHEET RW1.

**SPECIAL INSPECTIONS**  
 1.1 STRUCTURAL TESTS AND PERIODIC SPECIAL INSPECTIONS, AS REQUIRED BY THE 2019 CALIFORNIA BUILDING CODE (CBC) CHAPTER 17, SHALL BE PERFORMED BY A QUALIFIED TESTING AND INSPECTION AGENCY, INCLUDING THE FOLLOWING.  
 1.2 FOUNDATIONS: GEOTECHNICAL ENGINEER SHALL OBSERVE EXCAVATIONS TO CONFIRM SOIL CONDITIONS ARE CONSISTENT WITH GEOTECHNICAL DESIGN CRITERIA.  
 1.3 CONCRETE: CONCRETE SHALL BE SAMPLED, SLUMP SHALL BE MEASURED AND CYLINDERS SHALL BE CAST FOR STRENGTH TESTING IN CONFORMANCE WITH ASTM C39. A MINIMUM OF 1 CYLINDER SHALL BE TESTED AT 7 DAYS AND A MINIMUM OF 3 CYLINDERS SHALL BE TESTED AT 28 DAYS.  
 1.4 REINFORCING STEEL: REBAR SHALL BE OBSERVED PRIOR TO PLACEMENT OF CONCRETE.  
 1.5 WALL DRAINAGE: WALL DRAINAGE AND RELATED COMPONENTS SHALL BE OBSERVED PRIOR TO PLACEMENT OF O BACKFILLING.  
 1.6 WALL BACKFILL: OBSERVATION AND FIELD DENSITY TESTING OF BACKFILL MATERIALS DURING PLACEMENT AND COMPACTION.

**DEVELOPMENT LENGTH**

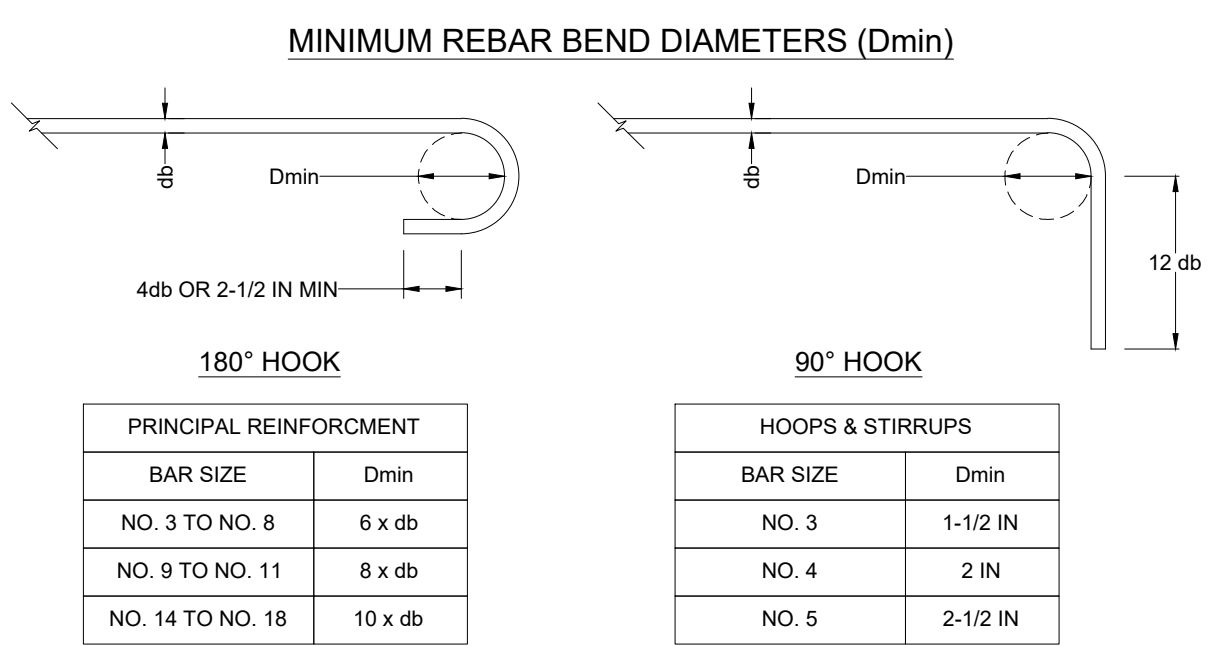
28-DAY COMP STRENGTH	LOCATION	BAR SIZE									
		NO.3	NO.4	NO.5	NO.6	NO.7	NO.8	NO.9	NO.10	NO.11	
4,000 PSI	TOP	12 IN	15 IN	23 IN	23 IN	37 IN	47 IN	58 IN	70 IN	84 IN	
	BOTTOM	12 IN	12 IN	17 IN	18 IN	29 IN	36 IN	44 IN	54 IN	65 IN	
5,000 PSI	TOP	12 IN	14 IN	20 IN	20 IN	33 IN	42 IN	52 IN	63 IN	75 IN	
	BOTTOM	12 IN	12 IN	16 IN	16 IN	26 IN	32 IN	40 IN	49 IN	58 IN	

**HOOKED DEVELOPMENT LENGTH**

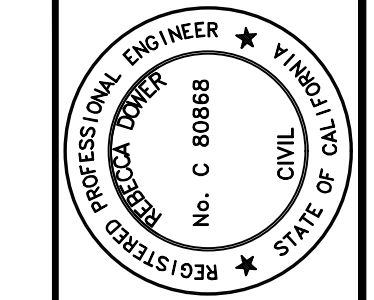
28-DAY COMP STRENGTH	LOCATION	BAR SIZE									
		NO.3	NO.4	NO.5	NO.6	NO.7	NO.8	NO.9	NO.10	NO.11	
4,000 PSI	N/A	8 IN	10 IN	12 IN	15 IN	17 IN	19 IN	22 IN	24 IN	N/A	
5,000 PSI	N/A	7 IN	9 IN	11 IN	13 IN	15 IN	17 IN	20 IN	22 IN	N/A	

**LAP SPLICE LENGTH**

28-DAY COMP STRENGTH	LOCATION	BAR SIZE									
		NO.3	NO.4	NO.5	NO.6	NO.7	NO.8	NO.9	NO.10	NO.11	
4,000 PSI	TOP	12 IN	20 IN	29 IN	29 IN	48 IN	62 IN	75 IN	91 IN	109 IN	
	BOTTOM	12 IN	15 IN	23 IN	23 IN	37 IN	47 IN	58 IN	70 IN	84 IN	
5,000 PSI	TOP	12 IN	18 IN	26 IN	26 IN	43 IN	54 IN	67 IN	82 IN	98 IN	
	BOTTOM	12 IN	14 IN	20 IN	20 IN	33 IN	42 IN	52 IN	63 IN	75 IN	

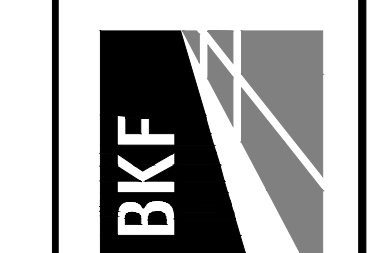


4 REINFORCING DETAILS  
(SCALE: 1" = 10'-0")



REBECCA DOWER  
5/8/2024  
C 80868

4040 CIVIC CENTER DR.  
SUITE 530  
SAN RAFAEL, CA 94903  
(415) 930-7960  
WWW.BKF.COM

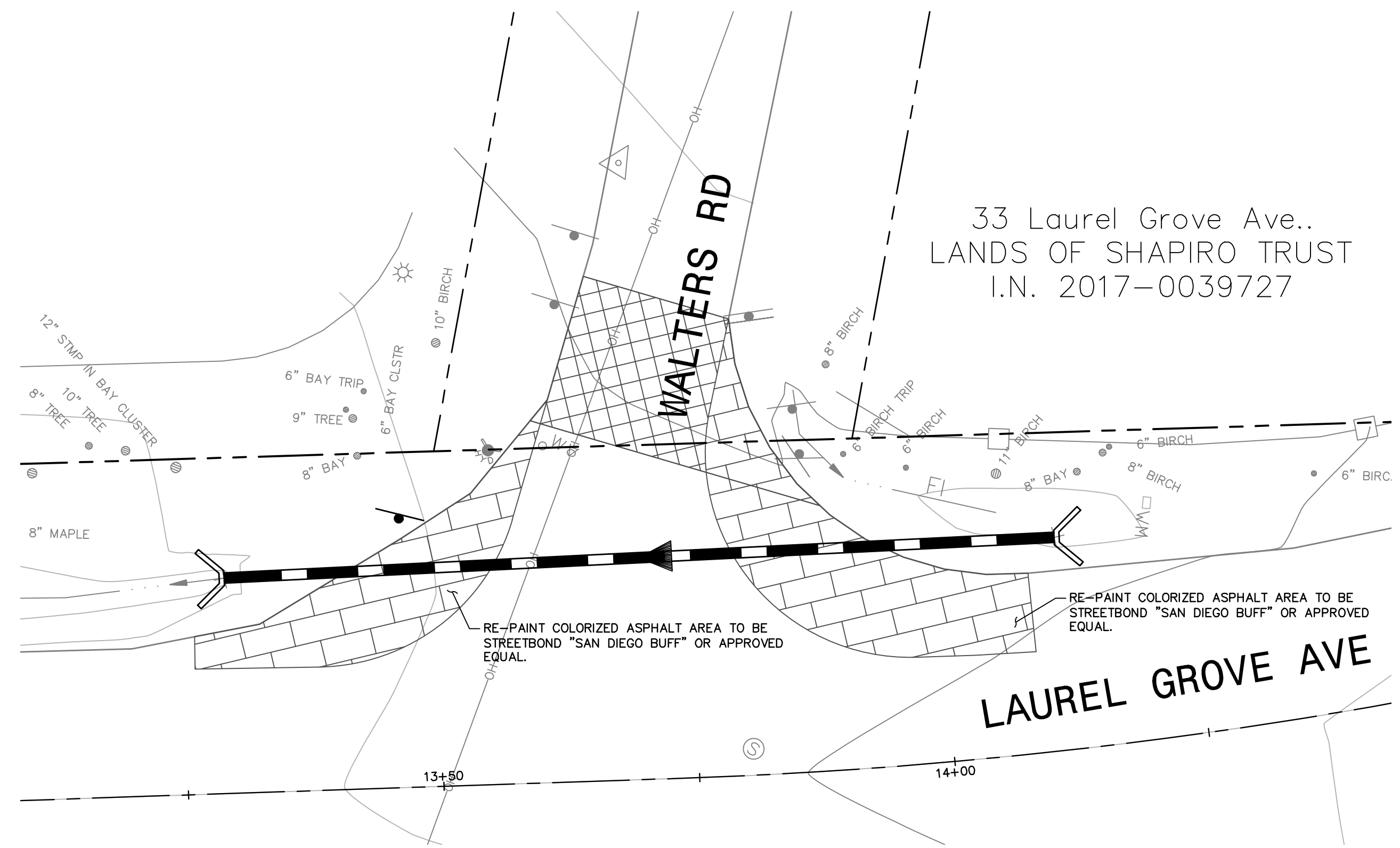


**LAUREL GROVE AVENUE - SAFE PATHWAY TO SCHOOL**  
PHASE I-B  
TOWN OF ROSS, CALIFORNIA

Revisions	
No.	Description

Date: MAY 2024  
Scale: AS SHOWN  
Design: IC  
Drawn: IC  
Approved: BD  
App. No: 20210182-10

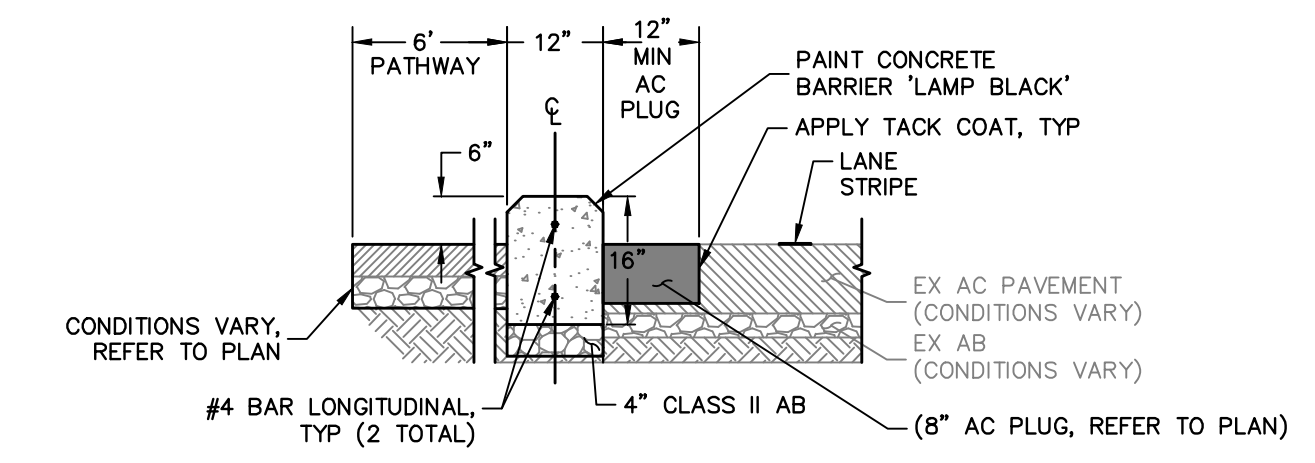
**CD-1**  
12 OF 14



**WALTERS ROAD DETAIL**  
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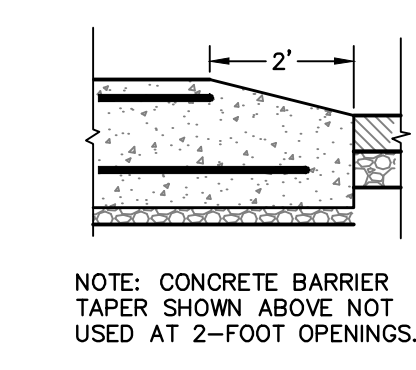


**MONTE ALEGRE ROAD DETAIL**  
SCALE: 1"=10'

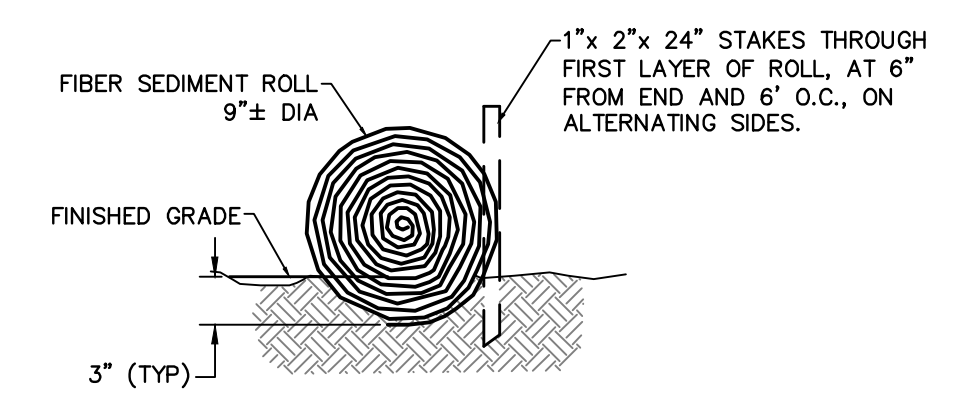


- NOTES**
- EXISTING PAVEMENT SECTION THICKNESSES VARY. REFER TO THE GEOTECHNICAL REPORT.
  - SCARIFY AND RE-COMPACT TOP 6" OF AGGREGATE BASE TO 95% MIN (IF AGGREGATE BASE IS ENCOUNTERED AT DIGOUT DEPTH).
  - SCARIFY AND RE-COMPACT TOP 6" MIN OF SUBGRADE SOILS TO 95% MIN (IF NATIVE SUBGRADE IS ENCOUNTERED AT DIGOUT DEPTH).

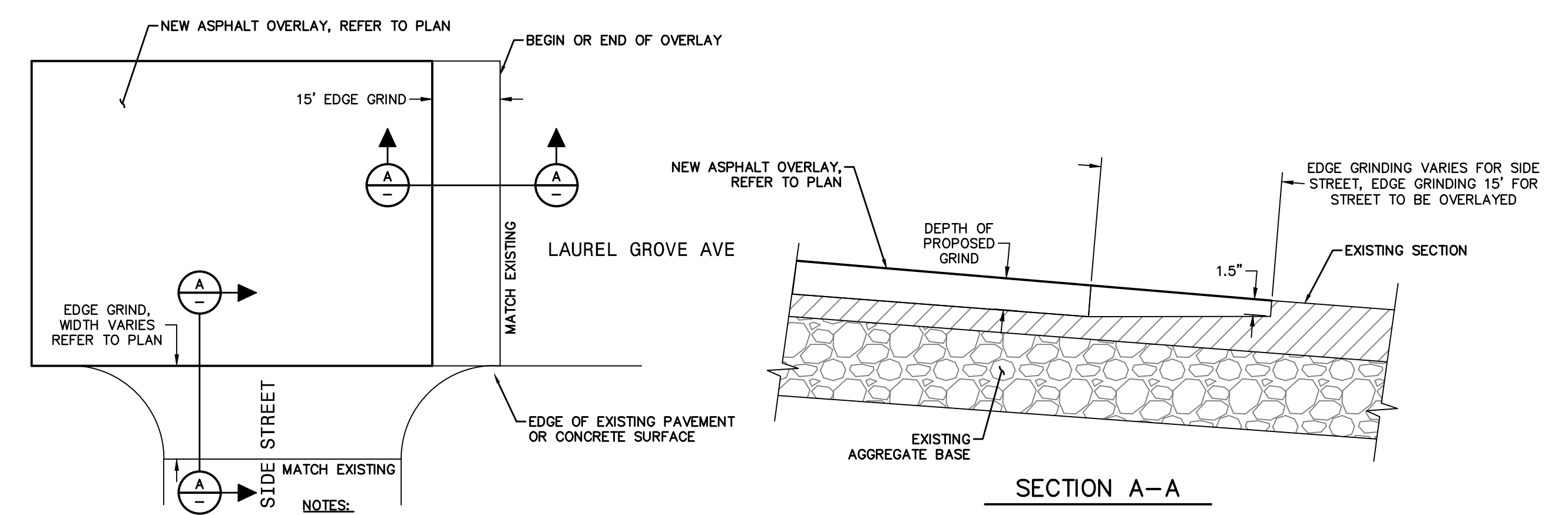
**1 CONCRETE BARRIER**  
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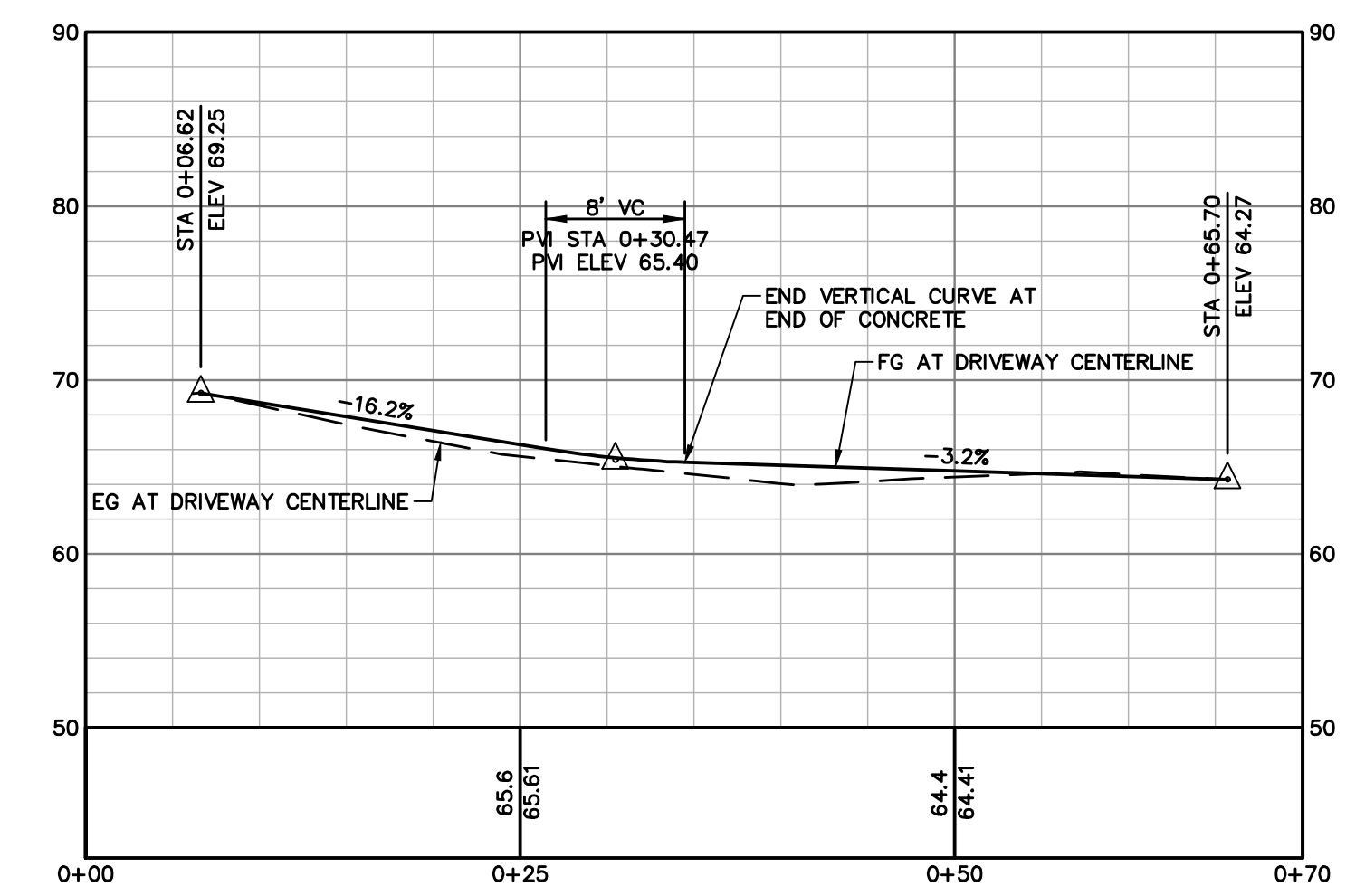
**4 CONCRETE BARRIER TAPER**  
NO SCALE



**2 FIBER ROLL**  
NO SCALE



**3 END OF PAVEMENT REHABILITATION CONFORM**  
NO SCALE



**DRIVEWAY CENTERLINE**

H: 1"=10'  
V: 1"=10'

**PLANT LEGEND**

**TREES**

ABBR	BOTANIC NAME	COMMON NAME	SIZE	Q	HT. / W/DTH	NOTE
MG	MAGNOLIA "LITTLE GEM"	SOUTHERN MAGNOLIA	24" B	8	20' X 15'	E F

**SHRUB / PERENNIALS / GRASSES / GROUND COVER LIST**

ABBR	BOTANIC NAME	COMMON NAME	SIZE	Q	HT. / W/DTH	NOTE
PL	PRUNUS LAUROCERASUS	ENGLISH LAUREL	24" B		12 X 12'	E F
RC	RHAMNUS CALIFORNICA	COFFEEBERRY	15 G		4 X 6'	E N W F
WF	WOODWARDIA FIMBRIATA	CHAIN FERN	5 G		4 X 4'	E N W F

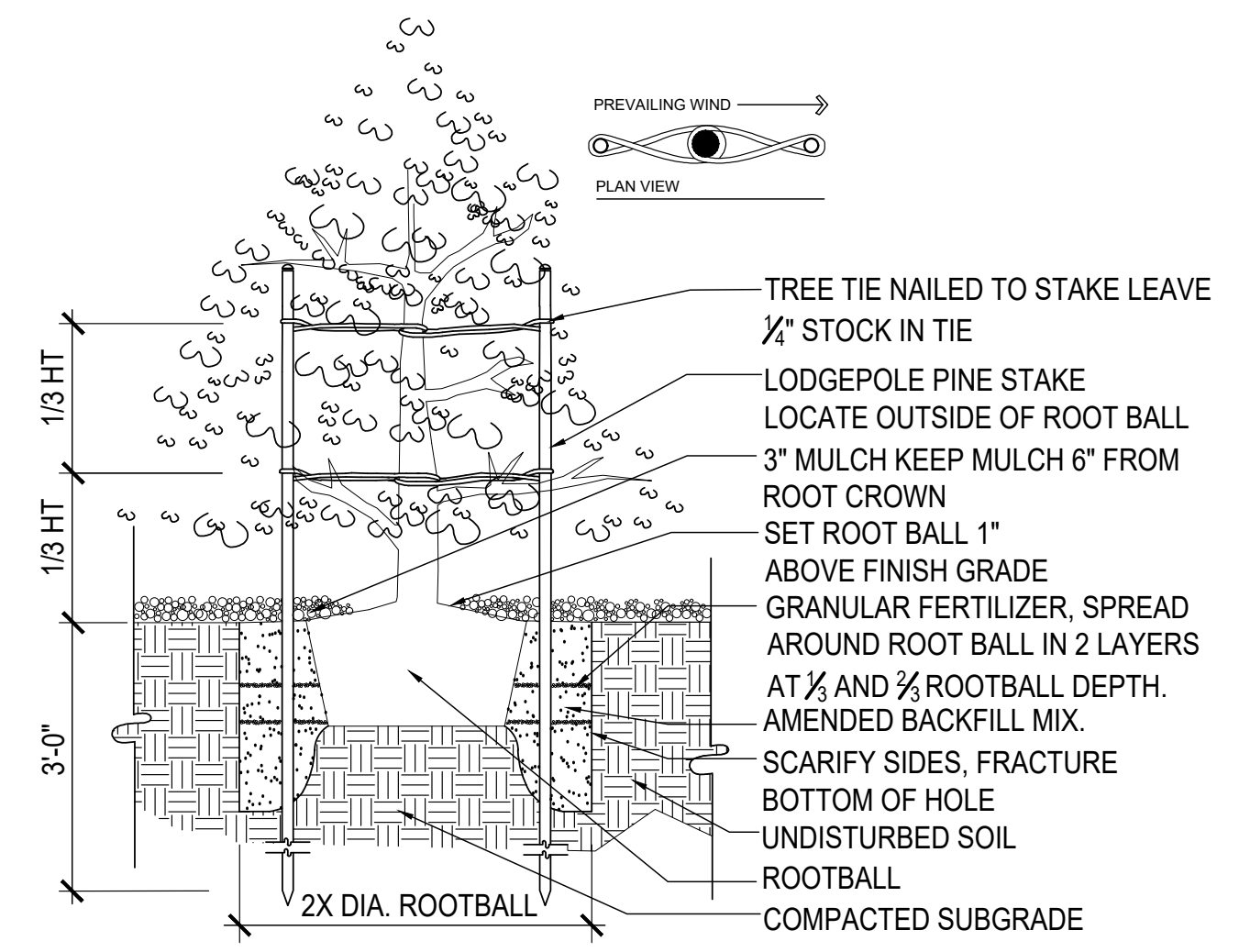
NOTE: PRUNUS LAUROCERASUS TO BE CAGED WITH 4-FOOT TALL X 3-FOOT DIAMETER HOG WIRE MESH PANELS W/4" OPENINGS

**LEGEND**  
 E = EVERGREEN, D = DECIDUOUS, N = CALIFORNIA NATIVE, W = LOW WATER USE REQUIREMENTS  
 F = LOW FIRE / NON - PYROPHYTIC  
 NOTE: ALL PLANTS ARE TO BE IRRIGATED UTILIZING DRIP IRRIGATION METHODS

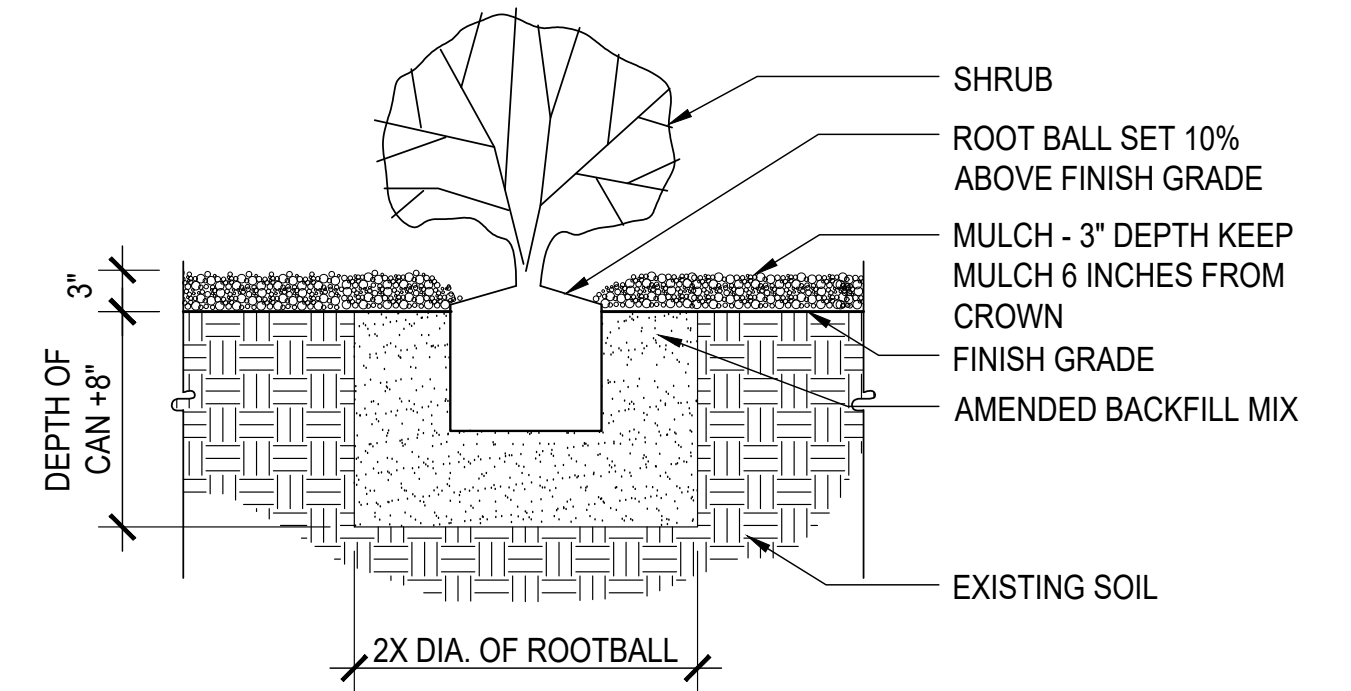
**PLAN NOTE**

MOST OF THE WORK SHOWN ON THESE LANDSCAPE AND IRRIGATION PLANS OCCURS ON PRIVATE PROPERTY. CONTRACTOR SHALL REFERENCE THE CIVIL IMPROVEMENT DRAWINGS FOR ACTUAL LOCATION AND LIMITS OF PUBLIC RIGHT OF WAY, PROPERTY LINES, AND TEMPORARY CONSTRUCTION EASEMENTS

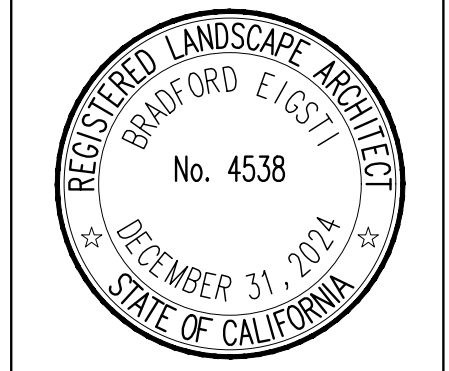
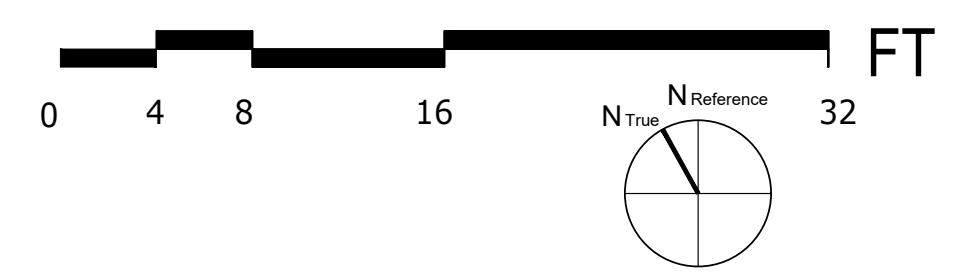
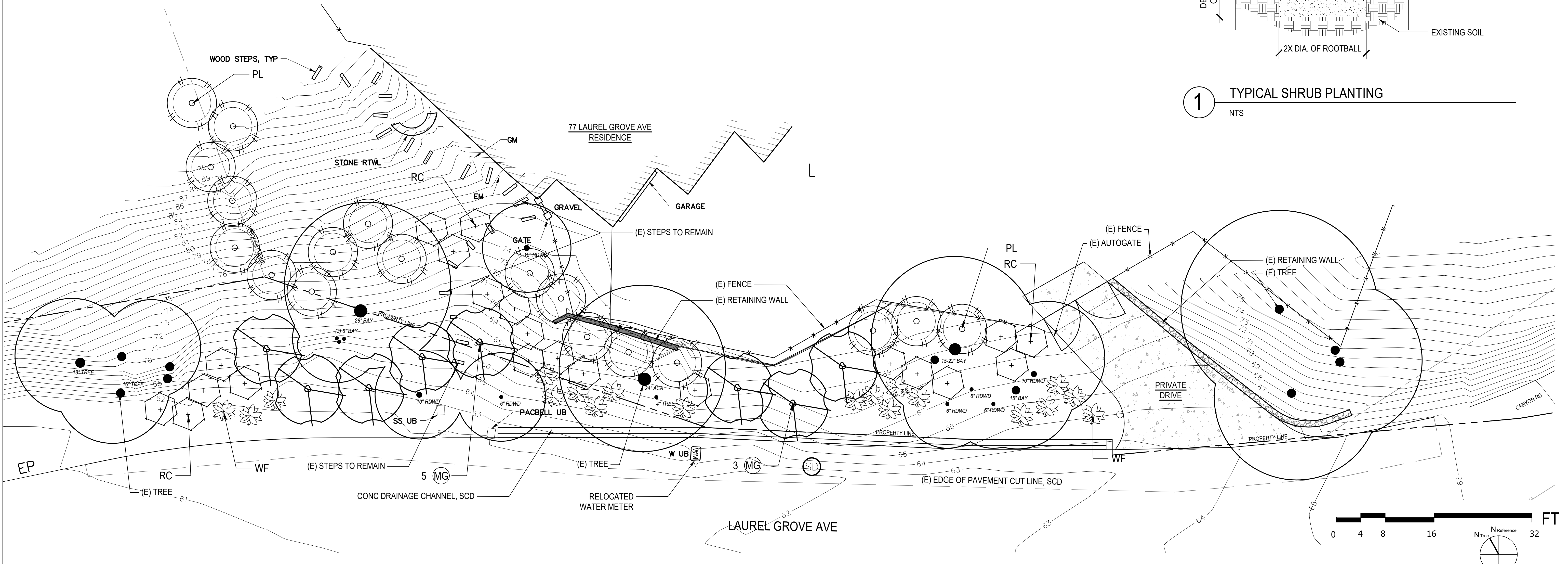
- PLANTING NOTES**
- TREE PLANTING**
- THE TREES SHALL BE SPOTTED AS PER PLAN AND THE LOCATIONS APPROVED PRIOR TO THE DIGGING OF THE HOLES. PLANT MATERIAL TO BE ADJUSTED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
  - ALL PLANTING PITS TO BE TESTED FOR PERCOLATION. PLANT HOLES THAT DO NOT COMPLETELY DRAIN ARE TO RECEIVE PERFORATED PVC DRAINPIPE SET VERTICALLY AND FILLED WITH GRAVEL.
  - 24" BOX TREES TO BE STAKED WITH A MINIMUM OF (2) 3" DIAMETER LODGEPOLE TREE STAKES WITH RUBBER VINE TIES. 36" BOX TREES ARE TO BE STAKED WITH A MINIMUM OF (3) 3" DIAMETER LODGEPOLE STAKES WITH RUBBER VINE TIES.
  - ALL STAKES ARE TO BE FINISHED WITH 2 COATS OF FLAT BLACK PAINT PRIOR TO INSTALLATION.
  - ALL TREES TO RECEIVE AGRIFORM FERTILIZER TABLET PER MANUFACTURER RECOMMENDATIONS.
- SHRUB / PERENNIAL PLANTING**
- THE SHRUBS SHALL BE SPOTTED AS PER PLAN AND THE LOCATIONS APPROVED PRIOR TO THE DIGGING OF THE HOLES. PLANT MATERIAL TO BE ADJUSTED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
  - ALL PLANTING PITS TO BE TESTED FOR PERCOLATION. PLANT HOLES THAT DO NOT COMPLETELY DRAIN ARE TO RECEIVE PERFORATED PVC DRAINPIPE SET VERTICALLY AND FILLED WITH GRAVEL MULCH.
  - NEW LANDSCAPE AREAS ARE TO RECEIVE A 3" LAYER OF ORGANIC MULCH FOLLOWING PLANT INSTALLATION OPERATIONS.
  - MULCH TO BE APPROVED BY FIRE DEPARTMENT PRIOR TO DELIVER AND INSTALLATION.
- MAINTENANCE / GUARANTEE**
- THE CONTRACTOR SHALL MAINTAIN THE PROJECT FOR 90 DAYS FOLLOWING COMPLETION. THIS INCLUDES MOWING, FERTILIZING, WEEDING, PRUNING AND FINE TUNING THE IRRIGATION SYSTEM.
  - ALL PLANT MATERIAL TO BE GUARANTEED TO BE THRIVING AND HEALTHY DURING THE MAINTENANCE PERIOD. ANY UNHEALTHY PLANTS OR PLANTS THAT HAVE DIED ARE TO BE REPLACED AT NO COST TO THE OWNER. THE CONTRACTOR WILL NOT BE HELD ACCOUNTABLE FOR LOSS OF PLANT MATERIAL DUE TO VANDALISM OR LACK OF CARE BY OTHERS.
- SOIL PREPARATION**
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINISH GRADING AND FOR ALL PLANTING AREA DRAINAGE.
  - POSITIVE DRAINAGE AWAY FROM BUILDINGS SHALL BE MAINTAINED. NO LOW SPOTS WHICH HOLD STANDING WATER WILL BE ACCEPTED.
  - CONTRACTOR SHALL ENSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
  - THE LANDSCAPE CONTRACTOR SHALL INCORPORATE 6 CY OF TOPSOIL AMENDMENT PER 1,000 SF OF PLANTING AREA. IN AREAS OF SHADE AND PART SHADE, AMENDMENT TO BE "RHODODENDRON MIX" BY SBI BUILDING MATERIALS OR EQUAL. IN SUN AREAS, TOPSOIL AMENDMENT TO BE "RAISED BED MIX" BY SBI BUILDING MATERIALS OR EQUAL. ROTOTILL THOROUGHLY INTO THE TOP 8" OF SOIL. WHERE ROTO-TILLING IS NOT POSSIBLE, WORK AMENDMENTS INTO THE SOIL USING HAND TOOLS.
  - AFTER INSTALLATION OF IRRIGATION SYSTEM, ALL PLANTING AREAS ARE TO BE FINE GRADED TO WITHIN 2" AND SLIGHTLY MOUNDED AWAY FROM EDGES OF CURBS, WALKS, HEADERS, ETC. AND RAKED SMOOTH.



**2 TYPICAL TREE PLANTING**  
NTS



**1 TYPICAL SHRUB PLANTING**  
NTS



**FOR BID PURPOSES ONLY**

DATE	DESCRIPTION	BY
		ZM

TITLE DATE	04.09.24
DRAWN	ZM
JOB #	22-013
SCALE	1/8"=1'-0"

