City of Lathrop

Public Works Department

390 Towne Centre Dr. – Lathrop, CA 95330
Phone (209) 941-7430
www.ci.lathrop.ca.us

ADDENDUM NO. 1 – March 27, 2025

Lathrop Animal Center – Stanford Crossing Extension
CIP GG 23-11

This addendum amends the Contract Drawings and Specifications for this project as follows:

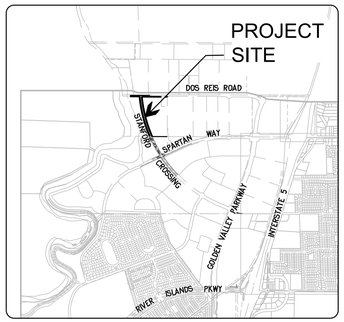
1. Revised the scope of work from 100 to 650 linear feet of road widening on Dos Reis Road.
2. Revised Bid Schedule Items:
   a. #4 Rough Grading from 3,842 to 3,700 CY
   b. #6 Construct Street Structural Section (3.5" AC, 4" AB, 10" LTB) from 63,164 to 65,146 SF
3. Revised Improvement Plans – see Attachment A of this Addendum.

When submitting the bid for the project, the Contractor must acknowledge receipt of the addendum.

Recommended by: _____ 3/27/25
Veronica Albarran
Junior Engineer
Date

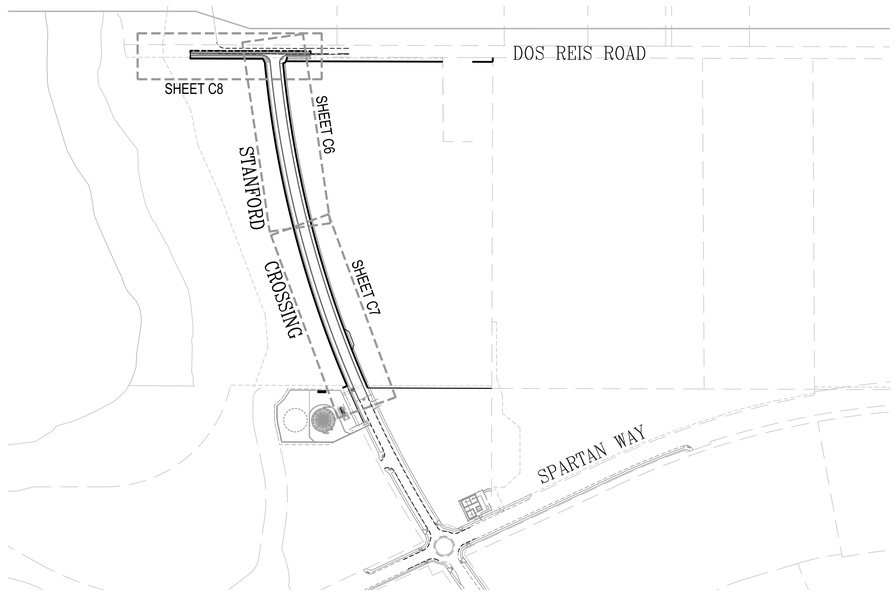
Approved by: _____ 3/27/2025
Brad Taylor, PE
City Engineer
Date

IMPROVEMENT PLANS
STANFORD CROSSING EXTENSION
LATHROP, CALIFORNIA
MARCH 2025



VICINITY MAP
NOT TO SCALE

NORTH



SITE INDEX
SCALE: 1" = 300'

SHEET INDEX

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LEGEND:

EXISTING OR BY OTHERS	PROPOSED	
		SUBDIVISION BOUNDARY
		RIGHT OF WAY / LOT LINE
		CENTERLINE
		CONTOUR LINE
		FACE OF CURB
		AC BERM
		SANITARY SEWER & MANHOLE
		STORM DRAIN & INLET
		POTABLE WATER LINE & VALVE
		STORM DRAIN MANHOLE
		RECYCLED WATER & VALVE
		SEWER FORCE MAIN & CLEANOUT
		STORM DRAIN FORCE MAIN
		FIRE HYDRANT & VALVE
		BLOWOFF VALVE
		ELECTROLIER
M	M	SURVEY MONUMENT
		AIR RELIEF VALVE
		BARRICADE
		SIDEWALK
		HANDICAP RAMP
		WATER SERVICE

ABBREVIATIONS

AB	–	AGGREGATE BASE
AC	–	ASPHALT CONCRETE
AD	–	AREA DRAIN
ANSI	–	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	–	APPROXIMATE
ARV	–	AIR RELIEF VALVE
ASTM	–	AMERICAN SOCIETY FOR TESTING & MATERIALS
AVE	–	AVENUE
AWWA	–	AMERICAN WATER WORKS ASSOC.
BC	–	BEGINNING OF CURVE
BEG.	–	BEGIN
BFV	–	BUTTERFLY VALVE
BLVD	–	BOULEVARD
BNDY	–	BOUNDARY
BO	–	BLOWOFF
BVC	–	BEGIN VERTICAL CURVE
CB	–	CATCH BASIN
CL, C/L	–	CENTERLINE
CFS	–	CUBIC FEET PER SECOND
CONT	–	CONTINUE
CR	–	CROWN
CY	–	CUBIC YARD
DI	–	DROP INLET
DIP	–	DUCTILE IRON PIPE
DR.	–	DRIVE
DW	–	DRIVEWAY
(E)	–	EAST
EC	–	END OF CURVE
EL	–	ELEVATION
ELECT	–	ELECTROLIER
EP	–	EDGE OF PAVEMENT
ER	–	END OF RETURN
EVA	–	EMERGENCY VEHICLE ACCESS
EVC	–	END VERTICAL CURVE
EX	–	EXISTING
FC	–	FACE OF CURB
FG	–	FINISH GRADE
FH	–	FIRE HYDRANT
FI	–	FIELD INLET
FL	–	FLOWLINE
FOC	–	FACE OF CURB
FS	–	FIRE SERVICE
FUT	–	FUTURE
G	–	GAS
GB	–	GRADE BREAK
GND	–	GROUND
HDPE	–	HIGH DENSITY POLYETHYLENE
HGL	–	HYDRAULIC GRADE LINE
HP	–	HIGH POINT
INV	–	INVERT
IRR	–	IRRIGATION
LF	–	LINEAR FEET
LP	–	LOW POINT
LT	–	LEFT
MCB	–	MODIFIED CATCH BASIN
MH	–	MANHOLE
MIN	–	MINIMUM
MID PT	–	MIDPOINT
MTC	–	MEDIAN TOP OF CURB
MUTCD	–	MANUAL OF UNIFORM TRAFFFIC CONTROL DEVICES
(N)	–	NORTH
NAP	–	NOT A PART
NTS	–	NOT TO SCALE
P	–	PAD
PBO	–	PERMANENT BLOW-OFF
PCC	–	PORTLAND CEMENT CONCRETE
PKWY	–	PARKWAY
PL	–	PROPERTY LINE
PP	–	POWER POLE
PRC	–	POINT OF REVERSE CURVATURE
P.T.D.F.	–	PRESSURE TREATED DOUGLAS FIR
PVC	–	POLYVINYL CHLORIDE
PVI	–	POINT OF VERTICAL INTERSECTION
PUE	–	PUBLIC UTILITY EASEMENT
PVMT	–	PAVEMENT
"Q"	–	FLOW RATE (CUBIC FEET PER SECOND)
"R"	–	RESISTANCE
RCP	–	REINFORCED CONCRETE PIPE
RP	–	RADIUS POINT
RT	–	RIGHT
RWD HDR	–	REDWOOD HEADER BOARD
R/W	–	RIGHT OF WAY
RW	–	RECYCLED WATER
S	–	SANITARY SEWER LATERAL
(S)	–	SOUTH
SD	–	STORM DRAIN
SDMH	–	STORM DRAIN MANHOLE
SDFM	–	STORM DRAIN FORCE MAIN
SJVAPCD	–	SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT
SNS	–	STREET NAME SIGN
SS	–	SANITARY SEWER
SSMH	–	SANITARY SEWER MANHOLE
SSFM	–	SANITARY SEWER FORCE MAIN
SSRI	–	SANITARY SEWER RODDING INLET
STD	–	STANDARD
STA	–	STATION
STLT	–	STREET LIGHT
SVC	–	SERVICE
SW, S/W	–	SIDEWALK
TB	–	TOP OF BERM
TBO	–	TEMPORARY BLOWOFF
TG	–	TOP OF GRATE
TOP	–	TOP OF PIPE
TYP	–	TYPICAL
(W)	–	WEST
W	–	WATER
WM	–	WATER METER
VG	–	VALLEY GUTTER
±	–	PLUS OR MINUS

AGENCIES:

CITY:
CITY OF LATHROP
390 TOWNE CENTRE DRIVE
LATHROP, CA 95330
(209) 941-7440

FIRE DEPARTMENT:
19001 SOMERSTON PARKWAY
LATHROP, CA 95330
(209) 941-5100

POLICE DEPARTMENT:
940 RIVER ISLANDS PARKWAY
LATHROP, CA 95330
(209) 647-6400

CONSULTANTS:

ENGINEER:
MACKAY & SOMPS CIVIL ENGINEERS
5142 FRANKLIN DRIVE, SUITE B
PLEASANTON, CA 94588-3368
CONTACT: JEFF MATSON
JMATSON@MSCE.COM
(925) 225-0690

SOILS ENGINEER:
ENGEO INCORPORATED
17278 GOLDEN VALLEY PARKWAY
LATHROP, CA 95330
CONTACT: CONNER DUNN
(209) 835-0610

JOINT TRENCH:
GIACALONE DESIGN SERVICES, INC.
8080 SANTA TERESA BLVD, STE 240
GILROY, CA 95020
CONTACT: ARNOLD SAENZ
(925) 989-4382

LANDSCAPE ARCHITECT:
SAM HARNED LANDSCAPE ARCHITECT
PO BOX 2275
OAKDALE, CA 95361
CONTACT: SAM HARNED
(209) 380-7376

TRAFFIC ENGINEER:
TJKM
4305 HACIENDA DRIVE, STE 550
PLEASANTON, CA 94588
CONTACT: ERIK BJORKLUND
(925) 463-0611

BENCHMARK:

SAN JOAQUIN CO. BRASS DISK IN CURB, STAMPED "CITY OF LATHROP BENCH MARK NO. 5," 1.3 FEET EAST OF THE SOUTHEAST CURB RETURN OF LOUISE AVENUE AND HARLAN ROAD. ELEVATION = 14.77

GEOTECHNICAL ENGINEER

THE GEOTECHNICAL ASPECTS OF THESE IMPROVEMENT PLANS HAVE BEEN REVIEWED FOR SUBSTANTIAL CONFORMANCE WITH THE INTENT OF THE GEOTECHNICAL RECOMMENDATIONS CONTAINED IN THE LETTER ISSUED BY ENGEO, INC DATED MARCH 20, 2025 ENTITLED "STANFORD CROSSING EXTENSION, LATHROP, CALIFORNIA GEOTECHNICAL RECOMMENDATIONS. PROJECT No. 5747.018.001", WHICH REFERENCES TO "ENGEO 2017 GEOTECHNICAL EXPLORATION, STANFORD CROSSING TRACT 3789, LATHROP CALIFORNIA. OCTOBER 27, 2017. PROJECT No. 5747.003.003"

ENGEO, INC
LATHROP, CALIFORNIA
Steve Harris

3-25-2025
DATE

LATHROP-MANTECA FIRE DISTRICT

APPROVED BY: _____ DATE: _____
FIRE MARSHAL

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

DATE: _____
APPROVED BY: _____ RCE NO: _____
CITY ENGINEER
EXP DATE: _____

ELECTRONIC VERSIONS OF THE LINEWORK ON THIS PLAN MAY NOT BE CONSISTENT WITH OTHER DIMENSIONS, NOTES, DETAILS OR DESCRIPTIONS WHICH CONTROL THE INTENDED DESIGN. ELECTRONIC VERSIONS OF THIS PLAN ARE NOT TO BE USED TO ESTABLISH THE LOCATION OF PROPERTY OR IMPROVEMENTS IN THE FIELD.

WARNING • CAUTION
EXISTING UNDERGROUND UTILITIES
CONTACT: UNDERGROUND SERVICE ALERT
PHONE: (800) 227-2600
FOR MARKING PRIOR TO DIGGING

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

Construction contractor agrees that in accordance with generally accepted construction practices, 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; that this requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional 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 design professional.

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

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

RECORD DRAWING
THESE ARE THE FINAL CONSTRUCTION PLANS FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR, AND THE CITY INSPECTOR.

CHRISTIAN T. RAGAN
RCE #60473

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

REVISIONS NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	DATE

MacKAY & SOMPS
ENGINEERS PLEASANTON, CA PLANNERS SURVEYORS (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:
BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

STANFORD CROSSING EXTENSION
COVER SHEET
DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN BY: EN
DESIGNED BY: RC
CHECKED BY: JM

RECOMMENDED FOR APPROVAL BY: _____ DATE: _____
CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C1
SHEET 1 OF 9

CITY OF LATHROP STANDARD NOTES (2024 VERSION):

A. THESE PLANS HAVE BEEN CHECKED BY THE CITY OF LATHROP AND/OR ITS AUTHORIZED REPRESENTATIVE, BUT SUCH CHECKING AND/OR APPROVAL DOES NOT RELIEVE THE DEVELOPER FROM HIS RESPONSIBILITY TO CORRECT ERRORS, OMISSIONS OR MAKE CHANGES REQUIRED BY CONDITIONS DISCOVERED IN THE FIELD DURING THE COURSE OF CONSTRUCTION.

B. ALL REVISIONS TO THIS PLAN MUST BE REVIEWED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION AND SHALL BE ACCURATELY SHOWN ON REVISED PLANS STAMPED AND SIGNED BY THE CITY PRIOR TO THE INSTALLATION OF THE IMPROVEMENTS.

C. ALL CONSTRUCTION AND MATERIAL SHALL CONFORM TO CITY OF LATHROP DESIGN AND CONSTRUCTION STANDARDS, THE PROJECT URBAN DESIGN CONCEPT (IF APPLICABLE), AND PER THE APPROVED PLANS. THE IMPROVEMENTS ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT. CONTACT PUBLIC WORKS CONSTRUCTION INSPECTION AT (209) 941-7450, AT LEAST THREE (3) WORKING DAYS PRIOR TO START OF ANY WORK TO ARRANGE FOR INSPECTION.

D. NOTIFY UNDERGROUND SERVICE ALERT (USA –NORTH) AT "811" OR (800) 227- 2600 AT LEAST TWO (2) WORKING DAYS PRIOR TO EXCAVATION. THE USA AUTHORIZATION NUMBER SHALL BE KEPT AT THE JOB SITE.

E. IF NECESSARY TO CONFIRM FIELD LOCATIONS OF FACILITIES, EXPLORATORY TRENCHING OR POTHOLING SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.

F. IF A CONFLICT OCCURS BETWEEN THE CITY OF LATHROP DESIGN AND CONSTRUCTION STANDARDS AND THE RECOMMENDATIONS BY THE DESIGN ENGINEER AND/OR SOILS ENGINEER, THE MORE STRINGENT SHALL APPLY AS DIRECTED BY THE CITY ENGINEER.

G. BASIS OF ELEVATION DATUM SHALL BE PROVIDED (IF CITY/COUNTY BENCHMARK, GIVE NUMBER, LOCATION AND ELEVATION).

H. THE EXISTING UTILITIES ARE PLOTTED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THESE UTILITIES. THE CONTRACTOR SHALL NOT EXCAVATE UNTIL ALL UTILITY AGENCIES AND THE CITY OF LATHROP HAVE BEEN NOTIFIED AND HAVE MARKED THEIR FACILITIES IN THE FIELD.

I. EXISTING UTILITIES SHALL NOT BE INTERRUPTED UNTIL THE UTILITY COMPANY HAS PROVIDED ALTERNATIVE SERVICE FACILITIES. THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS WORK WITH THE APPROPRIATE AGENCIES AND UTILITY COMPANIES.

J. FINAL PAVEMENT WORK SHALL NOT OCCUR WITHIN THE CITY RIGHT-OF-WAY PRIOR TO COMPLETION OF UTILITY RELOCATION WITHOUT THE SPECIFIC APPROVAL OF THE CITY ENGINEER.

K. ALL UTILITY TRENCHES IN EXISTING ROADWAY SHALL BE BACKFILLED AND OPENED TO PUBLIC TRAFFIC FOR A MINIMUM OF TWO WEEKS PRIOR TO PLACING PERMANENT PAVEMENT.

L. ALL CONSTRUCTION STAKING FOR GRADING, CURB, AND GUTTER, SIDEWALK, SANITARY SEWER, STORM DRAINS, WATER LINES, RECYCLED WATER, FIRE HYDRANTS, ELECTROLIERS, ETC. SHALL BE DONE BY A REGISTERED CIVIL ENGINEER OR A LICENSED LAND SURVEYOR.

M. ALL AREAS UNDERGOING GRADING, AND ALL OTHER CONSTRUCTION ACTIVITIES SHALL BE WATERED, OR OTHER DUST-PALLIATIVE MEASURES USED, TO PREVENT DUST, AS CONDITIONS WARRANT. WATER TRUCKS SHALL BE AVAILABLE AT ALL TIMES. THE PERSON RESPONSIBLE FOR DUST CONTROL, ________________ AT 209-648-7865, SHALL BE AVAILABLE 24 HOURS A DAY.

N. PRIOR TO RECEIVING/TAKING ANY WATER FROM THE CITY OF LATHROP WATER SYSTEM THE CONTRACTOR SHALL ACQUIRE A CITY WATER METER OR CITY FIRE HYDRANT METER. ALL WATER USAGE SHALL BE METERED.

O. ALL LINES ABANDONED DURING CONSTRUCTION SHALL BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS.

P. PRIOR TO TRENCHING FOR ANY SEWER, WATER, RECYCLED WATER, OR STORM DRAIN PIPE, THE CONTRACTOR SHALL VERIFY, IN THE FIELD, THE SIZE AND THE LOCATION OF THE EXISTING PIPE AT THE POINT OF CONNECTION. ANY DEVIATION FROM THE PLANS SHALL BE RESOLVED BY THE DESIGN ENGINEER PRIOR TO TRENCHING. ANY DAMAGE CAUSED BY TRENCHING TO EXISTING UNDERGROUND UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

Q. ALL TRENCHES SHALL BE BACKFILLED IN ACCORDANCE WITH CITY STANDARD DETAILS. COMPACTION SHALL BE ACHIEVED BY MECHANICAL MEANS. NO FLOODING, PONDING, OR JETTING SHALL BE PERMITTED.

R. TESTING:

1. ALL INDEPENDENT LABORATORY INSPECTIONS CALLED FOR BY THE CITY ENGINEER WILL BE PAID FOR BY THE DEVELOPER OR CONTRACTOR.
2. ROADWAY SUB-GRADE, SUB-BASE, BASE, AND TRENCH BACKFILL COMPACTION TESTING SHALL BE PERFORMED BY A SOILS LAB CONTRACTING WITH THE CITY OF LATHROP AT THE DEVELOPER'S EXPENSE.
3. R-VALUE TESTING OF THE PAVEMENT SUB-GRADE SHALL BE PERFORMED PRIOR TO THE INSTALLATION OF BASE ROCK, OR AS REQUIRED BY THE CITY ENGINEER.
4. A MINIMUM OF 48 HOURS' NOTICE IS REQUIRED TO SCHEDULE ALL SPECIAL INSPECTION/TESTING SERVICES.

S. ASBESTOS CEMENT PIPE (ACP) OR VITRIFIED CLAY PIPE (VCP) OR FITTINGS SHALL NOT BE USED WITHIN THE CITY OF LATHROP.

T. EXISTING CURB, GUTTER AND SIDEWALKS WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, SHALL BE REPAIRED OR REPLACED PER THE CITY DESIGN AND CONSTRUCTION STANDARDS BY THE CONTRACTOR.

U. NO TREES SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE IMPROVEMENT PLANS. ALL TREES CONFLICTING WITH GRADING, UTILITIES, OR OTHER IMPROVEMENTS, OR OVERHANGING THE SIDEWALK OR PAVEMENT TO FORM A NUISANCE OR HAZARD, SHALL BE TRIMMED AND PROPERLY TREATED AND SEALED. THE DRIP LINE OF TREES TO BE SAVED WILL BE FENCED, AND NO GRADING SHALL TAKE PLACE WITHIN THIS FENCED AREA.

V. THE FULL STRUCTURAL SECTION OF THE MAJOR STREETS SHALL BE CONTINUED THROUGH THE INTERSECTIONS.

W. BENCHMARKS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AT LOCATIONS SHOWN. THE DEVELOPER'S ENGINEERS SHALL STAMP THE BENCHMARKS PER STANDARD DETAIL R-51 AND FURNISH THE CITY ENGINEER WITH THE BENCHMARK ELEVATION DATA.

X. STREET SIGNS SHALL BE INSTALLED AT ALL INTERSECTIONS THAT MEET THE UDC STANDARDS (IF APPLICABLE) PER CITY DESIGN AND CONSTRUCTION STANDARDS.

Y. TRAFFIC CONTROL DEVICES AND INSTALLATIONS SHALL BE IN CONFORMANCE WITH CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND MUST MEET THE UDC STANDARDS (IF APPLICABLE).

Z. ALL STREET MONUMENTS, LOT CORNER, BENCHMARKS AND OTHER PERMANENT PIPE OR MONUMENTS DISTURBED DURING THE PROCESS OF CONSTRUCTION SHALL BE REPLACED BY A LICENSED CIVIL ENGINEER OR SURVEYOR PRIOR TO ACCEPTANCE OF IMPROVEMENTS BY THE CITY.

IF A MONUMENT IS LOCATED WITHIN THE BOUNDARY OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT THE ACKNOWLEDGEMENT OF MONUMENT RESPONSIBILITY "PRE-CONSTRUCTION" FORM, FOUND IN APPENDIX E OF CITY STANDARDS, TO THE CITY DURING THE ENCROACHMENT PERMIT APPLICATION PHASE. IN ADDITION, THE CONTRACTOR SHALL SUBMIT THE ACKNOWLEDGEMENT OF MONUMENT RESPONSIBILITY "POST-CONSTRUCTION" FORM, FOUND IN APPENDIX E OF CITY STANDARDS, TO THE CITY WHEN WORK IS COMPLETE.

AA. ECSP'S MUST BE PREPARED CONSISTENT TO THE CITY'S DESIGN AND CONSTRUCTION STANDARDS AND ORDINANCES. SWPPP'S MUST BE PREPARED BY A QUALIFIED SWPPP DEVELOPER AND BE COMPLIANT WITH THE STATE'S CONSTRUCTION GENERAL PERMIT. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AT ALL TIMES DURING THE CONSTRUCTION PROJECT UNTIL FINAL SITE STABILIZATION IS ACHIEVED. THE PERSON RESPONSIBLE FOR DAILY MAINTENANCE OF THE FACILITIES ________________ AND CAN BE REACHED 24 HOURS A DAY AT _____________. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SEDIMENT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SEDIMENT-FREE STORM WATER INTO EXISTING STORM DRAIN FACILITIES.

AB. IF THE PROJECT IS APPLICABLE TO THE STATE'S CONSTRUCTION GENERAL PERMIT, A NOTICE OF INTENT (NOI) TO COMPLY WITH THE NPDES GENERAL PERMIT FOR STORMWATER RUN-OFF ASSOCIATED WITH CONSTRUCTION ACTIVITY SHALL BE SUBMITTED TO THE SWRCB VIA THE STATE'S SMARTS SYSTEM. THE WDID# SHOULD BE INDICATED ON THE PLANS. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE SUBMITTED FOR APPROVAL BY THE CITY ENGINEER.

CC. IF, DURING CONSTRUCTION, ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AN ARCHAEOLOGIST CONSULTED AND THE CITY COMMUNITY DEVELOPMENT DEPARTMENT NOTIFIED. IF, IN THE OPINION OF THE ARCHAEOLOGIST, THE REMAINS ARE SIGNIFICANT, MEASURES, AS MAY BE REQUIRED BY THE COMMUNITY DEVELOPMENT DIRECTOR, SHALL BE TAKEN TO PROTECT THEM.

DD. WORK SHALL BE RESTRICTED TO WEEKDAYS BETWEEN 8:00 AM TO 5:00 PM AND WEEKENDS BY CITY APPROVAL. WORK WHICH REQUIRES ANY TRAFFIC LANE CLOSURES OR RESTRICTING OF THE TRAVELED WAY SHALL BE LIMITED TO 9:00 AM TO 3:30 PM IN THE COMMUTE DIRECTION AND 8:00 AM TO 4:30 PM IN THE NON-COMMUTE DIRECTION.

EE. THE OVERTIME COST FOR INSPECTING WORK PERFORMED BEFORE 8:00 AM, AFTER 5:00 PM, WEEKENDS, AND HOLIDAYS, THAT REQUIRE CITY INSPECTION, SHALL BE PRE- PAID BY THE CONTRACTOR OR DEVELOPER BEFORE THE WORK IS AUTHORIZED.

FF. CONSTRUCTION EQUIPMENT WHICH OPERATES AT A NOISE LEVEL IN EXCESS OF 85 DECIBELS (MEASURED ON THE A-WEIGHTED SCALE DEFINED IN ANSI S-1.4) AT A DISTANCE OF 100 FEET FROM THE EQUIPMENT IS PROHIBITED.

CITY OF LATHROP STANDARD NOTES (2024 VERSION) CONTINUED:

GG. THE CONTRACTOR SHALL KEEP EXCAVATIONS FREE FROM WATER DURING CONSTRUCTION. THE STATIC WATER LEVEL SHALL BE DRAWN DOWN A MINIMUM OF 2 FEET BELOW BOTTOM OF EXCAVATIONS TO MAINTAIN AN UNDISTURBED STATE OF NATURAL SOILS AND ALLOW PLACEMENT OF FILL TO THE SPECIFIED DENSITY. DISPOSAL OF WATER SHALL NOT DAMAGE PROPERTY OR CREATE A PUBLIC NUISANCE. CONTRACTOR SHALL DETERMINE METHOD OF DEWATERING AND LOCATION FOR DISCHARGE/DISPOSAL. IF APPLICABLE CONTRACTOR SHALL PROVIDE PROOF OF COVERAGE UNDER A NPDES (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT FOR DEWATERING DISCHARGES TO LAND PRIOR TO RECEIVING APPROVAL.

HH. DISPOSAL OF WATER INTO THE CITY SANITARY SEWER SYSTEM IS STRICTLY PROHIBITED.

II. DISPOSAL OF WATER INTO THE EXISTING STORM DRAIN SYSTEM MUST BE APPROVED IN WRITING BY THE CITY ENGINEER PRIOR TO DISPOSAL.IF APPLICABLE, CONTRACTOR SHALL PROVIDE PROOF OF COVERAGE UNDER A NPDES PERMIT FOR DEWATERING DISCHARGES TO SURFACE WATER PRIOR TO RECEIVING APPROVAL.

JJ. CONTRACTOR SHALL MAINTAIN ALL STREETS, SIDEWALKS, AND ALL OTHER PUBLIC RIGHT- OF-WAYS IN A CLEAN, SAFE, AND USABLE CONDITION THROUGHOUT THE COURSE OF CONSTRUCTION. ALL SPILLAGE OF SOIL, ROCK, CONSTRUCTION DEBRIS, ETC., SHALL BE REMOVED IMMEDIATELY FROM PUBLICLY OWNED PROPERTY. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE, AND USABLE CONDITION. THE CONTRACTOR SHALL PROVIDE FOR SAFE, UNOBSTRUCTED ACCESS TO PRIVATE PROPERTY ADJACENT TO WORK THROUGHOUT THE PERIOD OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE TO THE PUBLIC WORKS DEPARTMENT THE NAME AND TELEPHONE NUMBER OF THE RESPONSIBLE PERSON AVAILABLE 24 HOURS A DAY IF ANY PROBLEMS OR CONDITIONS ARE NOT MET.

KK. ALL TRASH, CONSTRUCTION DEBRIS AND MATERIALS SHALL BE CONTAINED WITHIN PROPER CONTAINERS AND REMOVED ON A WEEKLY BASIS.

LL. THE CONTRACTOR SHALL KEEP ADJOINING PUBLIC STREETS AND PARKING AREAS FREE AND CLEAN OF PROJECT DIRT, MUD, AND MATERIALS DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTIVE MEASURES AS DIRECTED BY THE PUBLIC WORKS INSPECTOR AT NO EXPENSE TO THE CITY.

MM. A BUILDING PERMIT IS REQUIRED FOR CONSTRUCTION OF ALL RETAINING WALLS OVER 4 FEET IN HEIGHT MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL. PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS AS COMPLETE, VERIFICATION THAT BUILDING INSPECTION HAS SIGNED OFF ON THE PERMIT SHALL BE PROVIDED TO THE PUBLIC WORKS INSPECTOR. ALL WOOD IN CONTACT WITH THE GROUND SHALL BE PRESSURE-TREATED, WHETHER A CONSTRUCTION PERMIT IS REQUIRED OR NOT.

NN. THE MANNER OF BRACING AND SHORING EXCAVATIONS SHALL BE AS SET FORTH IN THE RULES, ORDERS AND REGULATIONS OF THE STATE OF CALIFORNIA CONSTRUCTION SAFETY ORDERS, DIVISION OF INDUSTRIAL SAFETY.

OO. CONTRACTORS MAY BE REQUIRED AT THE DISCRETION OF THE CITY ENGINEER TO PROVIDE DRAWINGS OR CALCULATIONS BY A REGISTERED ENGINEER FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION FOR SPECIALLY DESIGNED BRACING AND SHORING OF AN EXCAVATION WHERE STANDARD PRE-MANUFACTURED BRACING OR SHORING CANNOT BE USED.

PP. CONTRACTORS SHALL SUBMIT A COPY OF THEIR CURRENT ANNUAL EXCAVATION PERMIT ISSUED BY THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY (CAL-OSHA) ALONG WITH THE CONTRACTOR'S OWN TRENCH SAFETY PLAN PRIOR TO THE START OF CONSTRUCTION.

QQ. PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL ATTEND A PRE- CONSTRUCTION MEETING WITH THE CITY OF LATHROP. THE CONTRACTOR SHALL PROVIDE THE CITY OF LATHROP 72 HOURS' NOTICE TO SCHEDULE THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL ALSO NOTIFY THE BELOW LISTED PROJECT CONTACTS A MINIMUM OF 72 HOURS IN ADVANCE OF SAID MEETING.

STORM DRAIN NOTES:

A. ALL PUBLIC STORM DRAIN LINES SHALL BE CLASS III OR HIGHER CLASS RCP OR POLYPROPYLENE PIPE TYPE "S" UP TO 36 UNLESS OTHERWISE SPECIFIED ON THE PLANS.

1. ALL PRE-CAST RCP SHALL BE OF WET CAST TYPE CONSTRUCTION. USE RUBBER GASKETED JOINTS CONFORMING TO THE REQUIREMENTS OF ASTM DESIGNATIONS C-76 AND C-443 AND SECTION 3 OF THE DESIGN AND CONSTRUCTION STANDARDS. ALTERNATIVE PIPE MATERIALS WILL BE EVALUATED ON A CASE-BY-CASE BASIS AND MUST BE PRE-APPROVED.
2. ALL POLYPROPYLENE PIPE SHALL BE DUAL WALL ADS HP POLYPROPYLENE PIPE (OR APPROVED EQUAL) UP TO 60" IN DIAMETER AND PIPE AND FITTING PRODUCTION SHALL BE AN IMPACT MODIFIED COPOLYMER MEETING THE MATERIAL REQUIREMENTS OF ASTM F2764. FITTINGS SHALL BE BELL-AND-SPIGOT MEETING WATERTIGHT JOINT PERFORMANCE AND SHALL MEET REQUIREMENTS OF ASTM D3212. GASKETED BELL & SPIGOT CONNECTIONS SHALL UTILIZE A SPUN-ON, WELDED OR INTEGRAL BELL AND SPIGOT WITH GASKET MEETING ASTM F477.
    - a. INSTALLATION: POLYPROPYLENE PIPE SHALL MEET STANDARD DETAIL R-52 FOR STORM DRAIN FLEXIBLE PIPE. FITTINGS SHALL BE LAID TO FORM A CLOSED CONCENTRIC JOINT WITH ADJOINING PIPE TO AVOID SUDDEN OFFSETS OF THE FLOW LINE. PIPE SECTIONS SHALL BE JOINED IN A WAY THAT THEY MEET OR EXCEED PERFORMANCE STANDARDS FOUND IN ASTM F2764.
    - b. BACKFILL AND COMPACTION: FOLLOW STANDARD PLAN R-52 TO R-56 FOR FLEXIBLE PIPE FOR STORM DRAINAGE APPLICATIONS. APPROPRIATE COMPACTION METHODS SHALL BE UTILIZED IN ORDER TO UNIFORMLY COMPACT BACKFILL TO SPECIFIED DENSITIES. INAPPROPRIATE OR EXCESSIVE COMPACTION MAY DAMAGE THE PIPE AND DISTURB LINE AND GRADE. EACH LAYER SHALL BE UNIFORMLY COMPACTED WITH MECHANICAL MEANS AND GUIDELINES FOR FLEXIBLE PIPE. BEDDING, SHADING AND HAUNCH FOR FLEXIBLE PIPE SHALL BE 3/8 X DUST OR ALTERNATIVE APPROVED BY SENIOR CONSTRUCTION MANAGER.
    - c. MINIMUM COVER OF POLYPROPYLENE PIPE SHALL BE AS FOLLOWS:

NOMINAL DIAMETER (IN)	4	6	8	10	12	15	18	24	30	36	42	48	60
MINIMUM COVER (IN)	24	24	24	24	24	24	24	24	24	24	24	24	24

- d. STORAGE AND HANDLING: STORE PIPES AND FITTINGS IN A WAY THAT PROTECTS GASKETS FROM WEATHER. PROTECT THE BELL END OF PIPES FROM DAMAGE. IF STACKED, TAKE MEASURES TO ENSURE LOWER PIPES ARE NOT DAMAGED FROM EXCESSIVE WEIGHT. COVER PIPES TO PROVIDE TEMPORARY SUN BLOCK, DO NOT STORE GASKETS NEAR ELECTRICAL OR EXHAUST HEAT SOURCES.
- e. THE CITY WILL REJECT PIPES WITH CRACKS OR SPLITS GASKETS.

B. UNLESS NOTED OTHERWISE, ALL STORM DRAIN MANHOLES ARE TYPE I (PER STD. DETAIL D-8) AND ALL CURB INLETS SHALL BE TYPE I INLETS (SEE STD. DETAIL D-4) OR TYPE II (SEE STD. DETAIL D-5). "SANTA ROSA" STYLE INLETS, WHICH HAVE A GRATELESS INLET, SHALL ONLY BE USED WITH APPROVAL FROM THE CITY ENGINEER. A TYPE II MANHOLE (SEE STANDARD DETAIL D-9) SHALL BE USED FOR ALL PIPES GREATER THAN 24" IN DIAMETER.

C. ALL STORM DRAIN INLETS SHALL BE LABELED PER STANDARD DETAIL D-2 "NO DUMPING – FLOWS TO RIVER" USING AN APPROVED METHOD.

D. STORM DRAIN CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 3 OF THE DESIGN AND CONSTRUCTION STANDARDS AND THE STANDARD DETAILS.

E. THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL TESTING OF STORM DRAIN FACILITIES. CONTRACTOR SHALL CLEAN, FLUSH AND PROVIDE VIDEO INSPECTION OF ALL STORM DRAIN LINES TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR.

STREET NOTES:

A. PRIOR TO PLACING CURB AND GUTTER, SIDEWALK, ASPHALT CONCRETE, SUBBASE, OR BASE MATERIAL, ALL UNDERGROUND FACILITIES WITHIN THE RIGHT-OF-WAY SHALL BE INSTALLED, BACKFILL COMPLETED, AND THE PUBLIC WORKS DEPARTMENT CONSTRUCTION INSPECTION DIVISION NOTIFIED THAT THE UTILITY INSTALLATION HAS SATISFACTORILY PASSED ACCEPTANCE TESTS BY EACH OF THE UTILITY COMPANIES HAVING FACILITIES WITHIN THE WORK AREAS.

B. WHEN WIDENING THE PAVEMENT ON AN EXISTING ROAD, THE EXISTING PAVEMENT SHALL BE SAW CUT TO A NEAT LINE, NOT LOCATED IN THE WHEEL PATH OF VEHICLE TRAFFIC, AND REMOVED BACK TO AN EXISTING SOUND STRUCTURAL SECTION AS DETERMINED BY THE CITY ENGINEER. AN EXPLORATORY TRENCH, OR POTHOLING, MAY BE REQUIRED TO DETERMINE THE LIMITS OF PAVEMENT REMOVAL.

C. STREET STRIPING SHALL INCLUDE STOP BARS, CENTERLINE STRIPING OR MARKERS, CROSSWALKS AND ALL OTHER MARKINGS REQUIRED BY THE CITY ENGINEER. ALL STRIPING SHALL BE DONE WITH THERMOPLASTIC AND REFLECTIVE MARKERS. ALL STRIPING SHALL BE CAT-TRACKED PRIOR TO FINAL INSTALLATION. FINAL INSTALLATION OF STRIPING WILL BE ALLOWED ONLY AFTER APPROVAL OF THE STRIPING LAYOUT BY THE CONSTRUCTION INSPECTOR.

D. THE THICKNESS OF SUBBASE, BASE, AND SURFACING SHALL BE AS APPROVED ON THESE PLANS.

E. FOG SEAL OF ASPHALTIC CONCRETE. THE TYPE OF FOG SEAL USED SHALL BE PER SECTION 37 OF CALTRANS STANDARD SPECIFICATIONS LATEST EDITION AND APPROVED BY THE CITY OF LATHROP PRIOR TO USE.

F. THERE SHALL BE A 2.5% CROSS SLOPE ON THE CONSTRUCTION OF ALL NEW MINOR AND LOCAL STREETS. THERE SHALL BE A 2% CROSS SLOPE ON THE CONSTRUCTION OF ALL OTHER STREETS.

G. ALL TERMINATED STREETS WITHOUT CUL-DE-SACS SHALL HAVE A BARRICADE INSTALLED IN ACCORDANCE WITH STANDARD DETAIL R-43 OF THE STANDARD DETAILS.

H. ALL MANHOLE RIMS, LAMPHOLES, VALVES, AND MONUMENT BOXES, ETC. SHALL BE ADJUSTED TO FINISH GRADE AFTER STREET PAVING BY THE UNDERGROUND CONTRACTOR AFTER THE FINAL PAVING COURSE IS PLACED, UNLESS OTHERWISE NOTED. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR MANHOLES.

CITY OF LATHROP STANDARD NOTES (2024 VERSION) CONTINUED:

I. THE CONTRACTOR SHALL PROTECT ALL EXISTING MONUMENTS AND HAVE THE ENGINEER/LAND SURVEYOR TIE OUT BEFORE THE SETTING OF ALL NEW MONUMENTS. ALL SURVEY MONUMENT WELLS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AT LOCATIONS SHOWN. DEVELOPER'S ENGINEER/LAND SURVEYOR SHALL SET AND STAMP ALL MONUMENTS AND FURNISH THE CITY ENGINEER WITH A COPY OF A TIE PLAT FOR EACH MONUMENT.

J. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS AND/OR OTHER SURVEY MONUMENTS AND SHALL NOTIFY THE CITY ENGINEER OF ANY DAMAGED OR REMOVED CITY, COUNTY, STATE OR FEDERAL MONUMENTS.

IF A MONUMENT IS LOCATED WITHIN THE BOUNDARY OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT THE ACKNOWLEDGEMENT OF MONUMENT RESPONSIBILITY "PRE- CONSTRUCTION" FORM, FOUND IN APPENDIX E OF THESE STANDARDS, TO THE CITY DURING THE ENCROACHMENT PERMIT APPLICATION PHASE. IN ADDITION, THE CONTRACTOR SHALL SUBMIT THE ACKNOWLEDGEMENT OF MONUMENT RESPONSIBILITY "POST-CONSTRUCTION" FORM, FOUND IN APPENDIX E OF THESE STANDARDS, TO THE CITY WHEN THE WORK IS COMPLETE.

K. UTILITY BOXES SET IN PAVED STREETS SHALL HAVE H-20 TRAFFIC RATING LIDS.

SANITARY SEWER NOTES:

A. SANITARY SEWER CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 5 OF THE DESIGN AND CONSTRUCTION STANDARDS AND THE STANDARD DETAILS.

B. SEWER SERVICE LATERALS SHALL BE 4-INCHES MINIMUM INSIDE DIAMETER.

C. THE LOCATION OF SEWER SERVICES IN NEW SUBDIVISIONS SHALL BE MARKED BY THE CONCRETE CONTRACTOR WITH THE LETTER "S" STAMPED ON THE TOP OF CURB. THE UNDERGROUND CONTRACTOR SHALL PROVIDE SUFFICIENT RECORDS AND SHALL LEAVE ADEQUATE CURB MARKING IN THE FIELD FOR THE CONCRETE CONTRACTOR TO ACCURATELY STAMP THE LETTER "S" FOR ALL SEWER SERVICES, PRIOR TO PLACING ANY SIDEWALK OR CURB & GUTTER. THE CONCRETE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL DRIVEWAYS AND SEWER LATERALS BEFORE POURING THE CURB, AND FURNISH DATA TO THE CITY'S CONSTRUCTION INSPECTOR SHOWING HE HAS ADEQUATE INFORMATION TO ACCURATELY FIELD LOCATE AND MARK THE LETTER "S" TO BE STAMPED IN HIS WORK, PRIOR TO FINAL TROWELING OF THE CONCRETE. THE CITY OF LATHROP'S CONSTRUCTION INSPECTOR SHALL DETERMINE THAT THE LETTER "S" HAS BEEN STAMPED IN THE PROPER LOCATION.

D. ALL SANITARY SEWER MAINS SHALL PASS A LEAKAGE TEST IN CONFORMATION WITH SECTION 5 OF THE DESIGN AND CONSTRUCTION STANDARDS, AND THE STANDARD DETAILS, FLUSHED WITH AN APPROVED SEWER BALL, MANDREL TESTED AND TELEVISION INSPECTED (TAPES OR OTHER APPROVED MEDIA SHALL BE GIVEN TO THE CITY ENGINEER) PRIOR TO ACCEPTANCE BY THE CITY. ALL TESTING SHALL BE PERFORMED AFTER THE COMPACTION FOR STREET BASE ROCK AND PRIOR TO PAVING.

E. PRIOR TO ANY WORK ON THE SANITARY SEWER LINES, A QUALITY CONTROL PLAN SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER. THE PLAN MAY INCLUDE SPECIAL TESTING BY AN INDEPENDENT LABORATORY AND CONTINUOUS INSPECTION OF THE SEWER PIPE CONSTRUCTION.

F. ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED PRIOR TO BACKFILL PER ASTM C-1244.

WATER NOTES:

A. WATER LINES SHALL BE LOCATED A MINIMUM OF 10 FEET HORIZONTALLY FROM SEWER MAINS. CROSSING SHALL MEET STATE HEALTH STANDARDS. SEWER LINE NEEDS TO BE ONE (1) FOOT BELOW WATER LINE.

B. THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL TESTING AND DISINFECTING OF WATER LINES IN CONFORMANCE WITH THE REQUIREMENTS OF THE CITY OF LATHROP PRIOR TO FINAL ACCEPTANCE. ALL WATER LINES SHALL BE PRESSURE-TESTED, DISINFECTED, FLUSHED, AND TESTED FOR BACTERIA IN CONFORMANCE WITH SECTION 4 OF THE DESIGN AND CONSTRUCTION STANDARDS PRIOR TO FINAL ACCEPTANCE BY THE CITY. THE MAXIMUM LENGTH OF PIPELINE TO BE TESTED AT A TIME SHALL BE LIMITED TO 5,000 FEET. ALL NEW VALVES SHALL BE EXERCISED DURING THE PRESSURE TEST.

C. ACTUAL CONNECTIONS TO EXISTING CITY OF LATHROP WATER LINES WILL NOT BE PERMITTED PRIOR TO COMPLETION OF STERILIZATION AND TESTING OF THE WATER MAINS. ALL EXISTING WATER VALVES ARE TO BE OPERATED UNDER THE DIRECTION OF AUTHORIZED CITY OF LATHROP PERSONNEL ONLY.

D. WATER SERVICES SHALL BE AS PER SECTION 4 OF THE DESIGN AND CONSTRUCTION STANDARDS AND STANDARD DETAILS FOR WATER.

E. THE LOCATION OF WATER SERVICES IN NEW SUBDIVISIONS SHALL BE MARKED BY THE CONCRETE CONTRACTOR WITH THE LETTER "W" STAMPED ON THE TOP CURB. THE UNDERGROUND CONTRACTOR SHALL PROVIDE SUFFICIENT RECORDS AND SHALL LEAVE ADEQUATE MARKS IN THE FIELD FOR THE CONCRETE CONTRACTOR TO ACCURATELY STAMP THE LETTER "W" FOR ALL WATER SERVICES, PRIOR TO THE PLACING OF ANY SIDEWALK OR CURB AND GUTTER. THE CONCRETE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL DRIVEWAYS AND WATER SERVICES BEFORE POURING THE CURB, AND FURNISH DATA TO THE CITY OF LATHROP'S FIELD INSPECTOR SHOWING HE HAS ADEQUATE INFORMATION TO ACCURATELY FIELD LOCATE AND MARK THE LETTER "W" TO BE STAMPED IN THE CURB. PRIOR TO THE FINAL TROWELING OF THE CONCRETE, THE CITY OF LATHROP'S CONSTRUCTION INSPECTOR SHALL VERIFY THAT THE LETTER "W" HAS BEEN STAMPED IN THE PROPER LOCATION.

F. THE TYPICAL ANGLE METER STOP AT THE END OF THE WATER SERVICE SHALL BE PER SECTION 4 OF THE DESIGN AND CONSTRUCTION STANDARDS AND STANDARD DETAILS FOR WATER.

G. ALL CONSTRUCTION WATER SHALL BE PURCHASED FROM THE CITY OF LATHROP AND SHALL BE METERED BY USE OF A CITY HYDRANT METER.

H. ALL DEAD ENDS, CAPPED OR FLANGED, INCLUDING FUTURE SERVICE STUBS, TEES, ELBOW BENDS AND BLOW-OFFS, TEMPORARY OR PERMANENT, SHALL HAVE THRUST BLOCKS INSTALLED AS PER SECTION 4 OF THE DESIGN AND CONSTRUCTION STANDARDS, AND PER STANDARD DETAILS FOR WATER, OTHERWISE MEGALUG JOINT RESTRAINTS MUST BE PROVIDED.

I. FIRE HYDRANTS TEES ARE TO BE PLACED AT LOCATIONS APPROVED BY THE FIRE DISTRICT OR AS SHOWN ON THE PLANS.

J. FLANGE JOINTS ARE REQUIRED WHEN INSTALLING FOUR INCH (4") AND LARGER LINE VALVES IN STEEL PIPE. NO OTHER TYPE OF JOINT SHALL BE USED WITHOUT SPECIFIC APPROVAL OF THE CITY ENGINEER.

K. ALL CONNECTIONS AND SERVICE TAPS TO EXISTING CITY OF LATHROP MAINS SHALL BE MADE WITHOUT DEPRESSURIZING THE MAIN, UNLESS PRIOR APPROVAL IS GIVEN BY THE CITY ENGINEER.

L. FIRE HYDRANTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE SECTION 4 OF THE DESIGN AND CONSTRUCTION STANDARDS AND STANDARD DETAILS FOR WATER.

M. ALL NUT/BOLT KITS TO BE INSTALLED BELOW GRADE SHALL BE 316 GRADE STAINLESS STEEL.

N. ALL HYDRANTS SHALL BE NUMBERED ON THE PLANS USING NOMENCLATURE APPROVED BY THE PUBLIC WORKS DIRECTOR.

RECYCLED WATER NOTES:

A. ALL RECYCLED WATER CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH SECTION 7 OF THE DESIGN AND CONSTRUCTION STANDARDS AND THE STANDARD DETAILS.

B. THE LOCATION OF RECYCLED WATER SERVICES IN NEW SUBDIVISIONS SHALL BE MARKED BY THE CONCRETE CONTRACTOR WITH THE LETTERS "RW" STAMPED ON THE TOP OF THE CURB. THE UNDERGROUND CONTRACTOR SHALL PROVIDE SUFFICIENT RECORDS AND SHALL LEAVE ADEQUATE MARKS IN THE FIELD FOR THE CONCRETE CONTRACTOR TO ACCURATELY STAMP THE LETTERS "RW" FOR ALL RECYCLED WATER SERVICES, PRIOR TO THE PLACING OF ANY SIDEWALK OR CURB AND GUTTER. THE CONCRETE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL DRIVEWAYS AND RECYCLED WATER SERVICES BEFORE POURING THE CURB, AND FURNISH DATA TO THE CITY OF LATHROP'S FIELD INSPECTOR SHOWING HE HAS ADEQUATE INFORMATION TO ACCURATELY FIELD LOCATE AND MARK THE LETTERS "RW" TO BE STAMPED IN THE CURB. PRIOR TO THE FINAL TROWELING OF THE CONCRETE, THE CITY OF LATHROP'S CONSTRUCTION INSPECTOR SHALL VERIFY THAT THE LETTERS "RW" HAVE BEEN STAMPED IN THE PROPER LOCATION.

SIGNAL INTERCONNECT CONDUIT NOTES:

A. CONTRACTOR SHALL FURNISH AND PLACE ONE (1) SIGNAL INTERCONNECT CONDUIT (SIC) ON ALL ARTERIAL STREETS FOR FUTURE USE BY THE CITY FOR TRAFFIC SIGNAL INTERCONNECT.

B. CONDUIT SHALL BE 2-INCH SCHEDULE 40 PVC, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

C. CONDUIT SHALL HAVE 30-INCH MINIMUM COVER.

D. PULL BOXES SHALL CONFORM TO CALTRANS STANDARD PLANS. PULL BOX COVERS SHALL BE MARKED AS SHOWN ON THE PLANS.

E. TRENCH RESTORATION SHALL COMPLY WITH THE CITY OF LATHROP STANDARD DETAILS. 2-10.

SPECIAL NOTES:

A. EXISTING STREETS THAT REQUIRE RECONSTRUCTION AS A RESULT OF THE CONSTRUCTION TRAFFIC SHALL REMAIN OPEN AT ALL TIMES WITH ADEQUATE DETOURS DURING RECONSTRUCTION. RECONSTRUCTION OF EXISTING STREETS SHALL INCLUDE UPGRADING THE AFFECTED PAVEMENT AREA TO MEET ORIGINAL STANDARDS TO PROVIDE A SOUND STRUCTURAL SECTION. THE CITY ENGINEER SHALL APPROVE ALL IMPROVEMENTS.

B. ANY EXISTING IMPROVEMENTS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REMOVED, REPLACED, AND FULLY RESTORED TO ITS' ORIGINAL CONDITION AT THE DEVELOPER'S COST. ALL WORK SHALL BE APPROVED BY THE CITY ENGINEER.

CITY OF LATHROP STANDARD NOTES (2024 VERSION):

C. DEVELOPER/CONTRACTORS WORK SHALL BE IN ACCORDANCE WITH THE SJVAPCD GUIDELINES, INCLUDED SJVAPCD REGULATION VIII AND IMPLEMENT CONTROL MEASURES BASED ON SJVAPCD COMPLIANCE ASSISTANCE BULLETIN FOR SHORT TERM IMPACTS, SJVAPCD SHALL BE CONTACTED TO DISCUSS MITIGATION MEASURES AND IMPLEMENT MEASURES FROM TABLE 6-4 OF THE GUIDE FOR ASSESSING AND MITIGATION AIR QUALITY IMPACTS.

D. ALL PRESSURIZED PLASTIC PIPES SHALL HAVE TRACE WIRES.

E. DEWATERING PLANS FOR ALL TRENCHES SHALL BE SUBMITTED FOR APPROVAL BY THE CITY ENGINEER. WHEN APPLICABLE, A DEWATERING PLAN DEVELOPED PURSUANT TO THE 2022 CONSTRUCTION GENERAL PERMIT, OR TO A SEPARATE NPDES PERMIT FOR DISCHARGES TO LAND, OR SURFACE WATER, SHALL BE SUBMITTED TO THE CITY ENGINEER.

F. ALL IRRIGATION SYSTEMS WITH THE CITY'S RIGHT-OF-WAYS OR PARKS SHALL BE DESIGNED USING "CALSENSE" CONTROLLERS AS APPROVED BY THE CITY ENGINEER.

G. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED IN POLYWRAP. 2-11

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

CHRISTIAN T. RAGAN
No.60473
CIVIL

RECORD DRAWING

THESE ARE THE FINAL CONSTRUCTION PLANS FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR, AND THE CITY INSPECTOR.

CHRISTIAN T. RAGAN
RCE #60473

CHRISTIAN T. RAGAN
No.60473
CIVIL

REVISIONS NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	CITY APPROVAL DATE

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
PLEASANTON, CA (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:

BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

STANFORD CROSSING EXTENSION

GENERAL NOTES

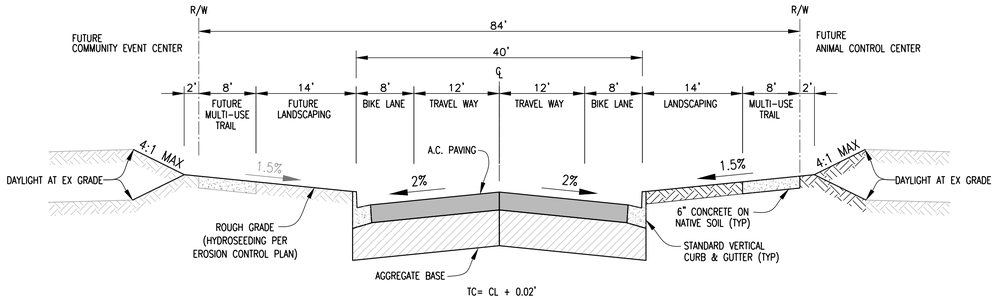
DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN BY: EN
DESIGNED BY: RC
CHECKED BY: JM

RECOMMENDED FOR
APPROVAL BY: DATE: ____________

____
CITY OF LATHROP

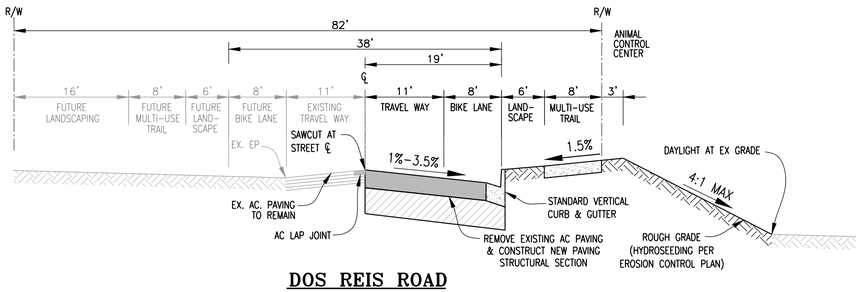
PROJECT NO.
25257.D
SHEET NO.
C2
SHEET 2 OF 9



STANFORD CROSSING – 84' R/W

STA. 43+08 TO STA. 57+63 (LOOKING SOUTH)

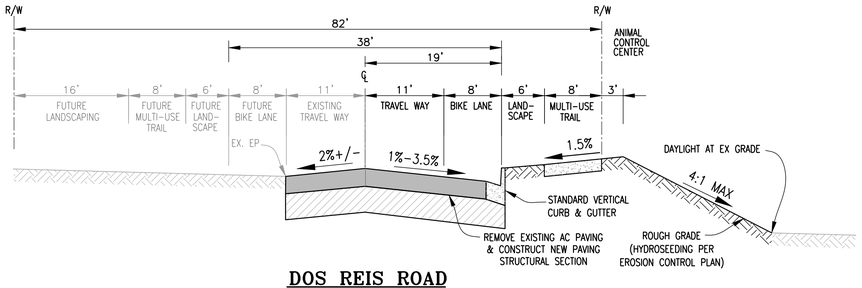
N.T.S.



DOS REIS ROAD

STA 6+50.06 TO STA 8+70

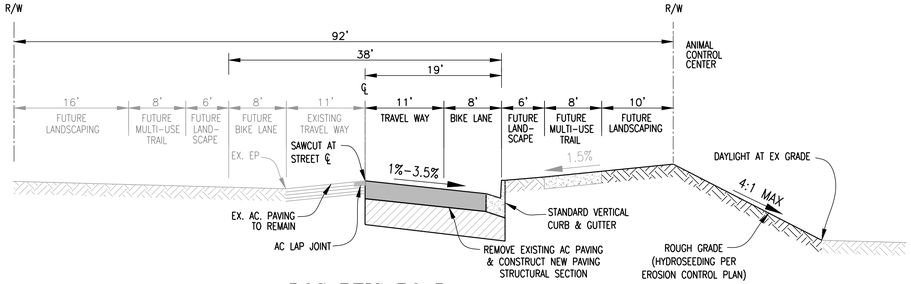
N.T.S.



DOS REIS ROAD

STA 8+70 TO STA 10+54.82

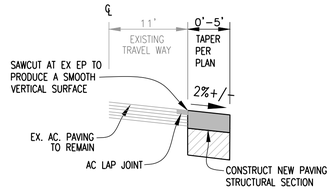
N.T.S.



DOS REIS ROAD

STA 10+54.82 TO STA 11+54.83

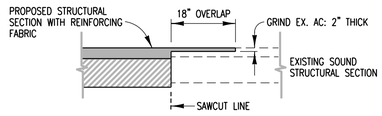
N.T.S.



DOS REIS ROAD

STA 11+54.82 TO STA 13+14.83

N.T.S.



AC LAP JOINT

N.T.S.

EARTHWORK SUMMARY:

THE EARTHWORK SUMMARY IS PROVIDED AS A COURTESY AND CONVENIENCE TO THE CONTRACTOR. THE EXCESSES OR SHORTAGES SHOWN ARE APPROXIMATE CALCULATED QUANTITIES BASED ON THE DIFFERENCES BETWEEN EXISTING GROUND ELEVATIONS AND ROUGH GRADE ELEVATIONS. FOR THIS REASON AND BECAUSE OF VARIABLES SUCH AS COMPACTION, SHRINKAGE AND THE CONTRACTOR'S METHOD OF OPERATION, THE VOLUME OF DIRT MOVED IN THE FIELD WILL IN ALL LIKELIHOOD DEVIATE TO SOME EXTENT FROM THE CALCULATED VOLUME. THE EARTHWORK SUMMARY DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY REQUIRED TO DETERMINE FOR THEMSELVES THE QUANTITY OF EARTHMOVING THAT WILL BE REQUIRED TO ROUGH GRADE THIS JOB. IT IS UNDERSTOOD THAT THE CONTRACTOR'S BID PRICE FOR ROUGH GRADING THIS JOB IS BASED ON THE CONTRACTOR'S OWN EARTHWORK ESTIMATE AND INCLUDES PROVISION FOR ANY GRADE ADJUSTMENTS REQUIRED TO BRING THE JOB TO THE ROUGH GRADE, AS DEFINED ON THE PLANS.

AREA	ESTIMATED CUT (CY)	ESTIMATED FILL (CY)
RAW COMPUTER RESULTS	3,700	1,500
SHRINKAGE (SEE NOTE 1)	0	1,100
TRENCH SPOILS (SEE NOTE 2)	4,000	0
TOTAL	7,700	2,600
EXPORT	5,100	

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPORT / OFFHAUL TO BALANCE THE SITE.

NOTES:
1. BASED ON SIMILAR PROJECTS IN THE VICINITY OF THIS SITE, A SHINKAGE OF 30% IS ANTICIPATED.
2. TRENCH SPOILS ARE CALCULATED FOR GRAVITY PIPES ONLY AND ANTICIPATE A TRENCH SECTION OF THE PIPE DIAMETER PLUS 6" ON EITHER SIDE NON-NATIVE BACKFILL TO THE PIPE CROWN.

CITY STANDARD DETAILS (JULY 2024)

ROADS:	R-6	VERTICAL CURB, GUTTER AND SIDEWALK (COMMERCIAL, INDUSTRIAL, AND CROSSROADS)
	R-7	VERTICAL CURB, GUTTER W/ DETACHED SIDEWALK (COMMERCIAL, INDUSTRIAL, AND CROSSROADS)
	R-8	CONCRETE PATH
	R-10	MEDIAN AND TRAFFIC ISLAND CURBS
	R-13(A-F)	CURB RAMP DETAILS
	R-20	TYPICAL COMMERCIAL AND INDUSTRIAL DRIVEWAY
	R-21	DRIVEWAY STREET-LEVEL INDUSTRIAL/COMMERCIAL RADIUS CORNERS
	R-22	TYPICAL COMMERCIAL DRIVEWAY LOCATIONS
	R-37	BARRICADE FOR TERMINATING STREETS
	R-41	STANDARD SIGN DETAILS
	R-48	TRENCH BEDDING AND SHADING
	R-49	TRENCH BACKFILL EXISTING OR FUTURE PAVED AREAS
STORM DRAIN:	D-1	STORM WATER QUALITY DROP INLET CONCRETE STAMP
	D-3	CURB INLET TYPE II (COMMERCIAL/INDUSTRIAL)
	D-4	18" DROP INLET (ON-SITE USE ONLY)
	D-5	18" AND 24" DROP INLET FRAME AND GRATE
	D-6	TYPE I MANHOLE
	D-7	TYPE II MANHOLE FOR PIPES UP TO & EQUAL TO 48"
	D-8	TYPE III MANHOLE FOR 54"-96" PIPE
	D-22	SADDLE TYPE MANHOLE FOR PIPE 24" & LARGER
	D-23	24"X24" STORM DRAIN CATCH BASIN
SEWER:	S-1	SANITARY SEWER TYPE I MANHOLE
	S-2	SANITARY SEWER INSIDE DROP MANHOLE
	S-3	MANHOLE FRAME AND COVER
	S-4	LAMP POLE
	S-6	PROPERTY LINE CLEANOUT
	S-9	SEWER SERVICE LATERAL
WATER:	W-1	WATER – SEWER SEPARATION STANDARDS
	W-2	THRUST BLOCK CHART
	W-3	INSTALLATION LOCATOR WIRE
	W-4	WATER AND RECYCLED WATER TURNOUTS
	W-5	FIRE SERVICE SCHEMATIC DIAGRAMS
	W-7	COMMERCIAL & INDUSTRIAL SERVICE INSTALLATION 1.5" TO 2"
	W-9	WATER SYSTEM BLOW-OFF
	W-12	VALVE BOX
	W-16	REDUCED PRESSURE BACKFLOW DEVICE
	W-19	FIRE HYDRANT LOCATIONS
	W-20	FIRE HYDRANT ASSEMBLY
FIRE:	F-4	DOUBLE CHECK VALVE BACKFLOW DEVICE ON FIRE LINE
	F-5	FIRE SERVICE CONNECTION DETAIL

PAVEMENT SECTIONS

STREET NAME	T.I.	A.C.	A.B.	S.B. *L.F.A.
STANFORD CROSSING	6	3.5	4	10
DOS REIS ROAD	6	3.5	4	10

THE PAVEMENT STRUCTURAL SECTION IS IN ACCORDANCE WITH THE INTENT OF THE GEOTECHNICAL RECOMMENDATIONS CONTAINED IN THE LETTER ISSUED BY ENGEO, INC DATED MARCH 20, 2025 ENTITLED "STANFORD CROSSING EXTENSION, LATHROP, CALIFORNIA GEOTECHNICAL RECOMMENDATIONS. PROJECT No. 5747.018.001", WHICH REFERENCES TO "ENGEO 2017 GEOTECHNICAL EXPLORATION, STANFORD CROSSING TRACT 3789, LATHROP CALIFORNIA. OCTOBER 27, 2017. PROJECT No. 5747.003.003" THE PAVEMENT STRUCTURAL SECTION AS INDICATED HEREIN HAS BEEN DETERMINED BY CITY OF LATHROP.

THE SOILS ENGR. SHALL PERFORM R-VALUE TESTS AT LOCATIONS SPECIFIED BY THE CITY OF LATHROP PRIOR TO COMPLETION OF THE SUBGRADE IN ORDER TO VERIFY PAVEMENT SECTION DESIGN. (AN R-VALUE OF 20 IS SPECIFIED IN THE ENGEO REPORT FOR THE ABOVE TABLE)

AB SHALL BE CLASS 2 (R=78) PER CALTRANS STANDARD SPECIFICATIONS.
ASB SHALL BE CLASS 2 (R=50) PER CALTRANS STANDARD SPECIFICATIONS.
*LFA-LIME FLYASH SUBGRADE TO BE MIXED PER ENGEO REPORT.

STORM DRAINAGE STRUCTURE SCHEDULE
CITY OF LATHROP STANDARD DETAILS (JULY 2024)

DESCRIPTIONS	STRUCTURE NUMBER
TYPE II MANHOLE (FOR PIPES UP TO & EQUAL TO 48") PER CITY OF LATHROP STANDARD DETAIL D-7	SDMH 106, SDMH 107
TYPE III MANHOLE (FOR 54" -96" PIPE) PER CITY OF LATHROP STANDARD DETAIL D-8	SDMH 108, SDMH 109, SDMH 110, SDMH 111, SDMH 112, SDMH 113, SDMH 114
CURB INLET TYPE II PER CITY OF LATHROP STANDARD DETAIL D-3	CB 107A, CB 109A, CB 109B, CB 109C, CB 110A, CB 110B, CB 112A, CB 112B
24"X24" STORM DRAIN CATCH BASIN PER CITY OF LATHROP STANDARD DETAIL D-23	FI 106A, FI 107B, FI 109D

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

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

RECORD DRAWING

THESE ARE THE FINAL CONSTRUCTION PLANS FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR, AND THE CITY INSPECTOR.

CHRISTIAN T. RAGAN
RCE #60473

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

REVISIONS NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	DATE

MacKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
PLEASANTON, CA (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:
BY: 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

STANFORD CROSSING EXTENSION

STREET SECTIONS & DETAILS

DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN BY: EN
DESIGNED BY: RC
CHECKED BY: JM

RECOMMENDED FOR APPROVAL BY: DATE:

CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C3
SHEET 3 OF 9

PROJECT SPECIFICATIONS:

1. GENERAL

THESE PROJECT SPECIFICATIONS SHALL APPLY TO ALL IMPROVEMENTS INCLUDING FINISH GRADING, UTILITY, HARDSCAPE, PAVING AND BUILDING PAD CONSTRUCTION AS SHOWN ON THESE PLANS.

THE WORK TO BE PERFORMED CONSISTS OF THE FURNISHING OF ALL LABOR, METHODS OF PROCESSES, IMPLEMENTS, TOOLS, MACHINERY, WATER AND MATERIALS NECESSARY AND REQUIRED FOR COMPLETION OF THE WORK FOR THE PURPOSES OF THIS SPECIFICATION THE TERM "CONTRACTOR" SHALL MEAN "ALL CONTRACTORS" UNLESS OTHERWISE QUALIFIED.

2. SPECIFICATIONS AND STANDARDS

ALL WORK TO BE DONE WITH THIS PROJECT SHALL COMPLY WITH THE STANDARD SPECIFICATIONS AND STANDARD DETAILS OF THE FOLLOWING UNLESS SPECIFICALLY NOTED OTHERWISE:

- CITY OF LATHROP

IF ANY DEVIATION FROM THE CONSTRUCTION PLANS OR SPECIFICATIONS OR AGENCY STANDARDS OR DETAILS IS MADE BY EITHER THE CONTRACTOR OR THE OWNER DURING THE COURSE OF CONSTRUCTION WITHOUT THE PRIOR NOTIFICATION, CONSENT, AND WRITTEN APPROVAL OF MACKAY & SOMPS, MACKAY & SOMPS IS NOT RESPONSIBLE FOR THE RESULTS OF SUCH DEVIATIONS.

3. QUALITY CONTROL

ALL PUBLIC IMPROVEMENT WORK BY CONTRACTOR SHALL BE DONE UNDER THE INSPECTION OF, AND TO THE SATISFACTION AND ACCEPTANCE OF, THE CITY ENGINEER OR THE DISTRICT ENGINEER. IN THE EVENT OF ANY DISPUTE ARISING AS TO THE INTERPRETATION OF THE LOCAL AGENCIES' SPECIFICATIONS OR DETAILS OR THE CHARACTER OF THE WORK DONE BY THE CONTRACTOR, THE DECISION OF THE CITY AND/OR DISTRICT ENGINEER SHALL BE CONCLUSIVE.

4. DISCREPANCIES

IF THE CONTRACTOR, IN THE COURSE OF THE WORK, FINDS ANY DISCREPANCY BETWEEN THE PLANS AND PHYSICAL CONDITIONS IN THE FIELD, OR ANY ERRORS OR OMISSION IN THE PLANS, IN THE LAYOUT OF SURVEY STAKES, AND/OR IN INSTRUCTIONS GIVEN, HE SHALL IMMEDIATELY INFORM MACKAY & SOMPS.

A MAJORITY OF ERRORS ARE EASILY DETECTABLE (AND CORRECTABLE WITH MINIMAL EXPENSE AND DISRUPTION) IF COMMON SENSE AND GOOD CONSTRUCTION PRACTICES ARE FOLLOWED. MACKAY & SOMPS IS NOT RESPONSIBLE FOR ERRANT CONSTRUCTION RESULTING FROM THE CONSTRUCTION PROCESS PROCEEDING BLINDLY FROM STAKES AND/OR PLANS WITHOUT CROSS REFERENCING BETWEEN THE TWO. THE CONTRACTOR SHALL CONDUCT ROUTINE CHECKS PRIOR TO AND DURING CONSTRUCTION AND INSTALLATION OF IMPROVEMENTS AND SHALL HAVE PLANS AVAILABLE AT THE JOB SITE AT ALL TIMES. CHECKS WILL INCLUDE (BUT NOT BE LIMITED TO) THE FOLLOWING TYPES OF ACTIVITIES:

PLACING STRING LEVELS ON STRINGLINE CONTROLS TO CONFIRM PROPER SLOPE BEFORE USING THEM FOR CONSTRUCTION.

A) USING STRAIGHT EDGE AND HAND LEVEL TO CONFIRM CROSS SLOPES AND ADEQUACY OF STREET DRAINAGE PRIOR TO PLACING PAVEMENT.

B) SUBMITTING SHOP DRAWINGS OF FACTORY (OR FIELD) MANUFACTURED FACILITIES WHICH CONTAIN CRITICAL DIMENSIONS OR OTHER CRITICAL CHARACTERISTICS TO MACKAY & SOMPS OR OTHER CONSULTANTS FOR ACKNOWLEDGMENT WELL IN ADVANCE OF CONSTRUCTION.

C) TO COMPARE WHAT IS BEING CONSTRUCTED IN THE FIELD TO WHAT IS SHOWN ON THE PLANS. IMPROVEMENTS SHALL NOT BE CONSTRUCTED BY USING CONSTRUCTION STAKES ALONE.

ANY TIME THE CONTRACTOR DOUBTS THE REASONABLENESS OR CORRECTNESS OF AN ELEMENT IN THE PLANS OR FIELD CONTROL STAKING, THE CONTRACTOR SHALL CONTACT MACKAY & SOMPS FOR CLARIFICATION OR CONFIRMATION. MACKAY & SOMPS WILL ENDEAVOR TO RESPOND TO ANY SUCH INQUIRY MADE IN GOOD FAITH ON A HIGHEST PRIORITY BASIS, AND WILL DO SO FREE OF CHARGE TO EITHER THE OWNER OR THE CONTRACTOR, EVEN IF THERE IS NO ERROR OR OMISSION. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL THE PROBLEM HAS BEEN REMEDIED OR DISPELLED, WILL BE DONE AT THE CONTRACTOR'S OWN RISK.

5. PERMITS, CONFORMANCE WITH LAWS

CONTRACTOR SHALL COMPLY WITH APPLICABLE LAWS, ORDINANCES, ORDERS, RULES, AND REGULATIONS OF EVERY KIND RELATING TO THE PERFORMANCE OF THE WORK, AND IF ANY PERMIT SHALL BE REQUIRED BY ANY LOCAL GOVERNMENTAL AGENCY OR SPECIAL DISTRICT OR BE NECESSARY BY LAW, ORDINANCE, OR OTHER REGULATIONS, THE SAME SHALL BE PROCURED BY CONTRACTOR AT THEIR OWN EXPENSE.

6. SAFETY AND LIABILITY

CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND MACKAY & SOMPS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR MACKAY & SOMPS RESPECTIVELY. THE COST OF ASSURING JOB SAFETY INCLUDING, BUT NOT LIMITED TO FENCING, TRENCH SHORING, TRAFFIC CONTROL AND/OR TRAFFIC WARNING DEVICES SHALL BE INCLUDED IN ALL APPLICABLE BID ITEMS. JOBSITE SAFETY ASSURANCES INCLUDE PROVIDING A SAFE JOBSITE FOR THE SETTING OF CONSTRUCTION STAKES. THE DUTIES OF MACKAY & SOMPS DO NOT INCLUDE ANY REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE. ALL CONTRACTORS ARE RESPONSIBLE FOR TEMPORARY TRAFFIC CONTROL AS PART OF IT'S WORK, INCLUDING THE PREPARATION OF TRAFFIC CONTROL PLANS AND OBTAINING APPROVAL OF SAME AS REQUIRED.

7. COORDINATION

CONTRACTORS ARE TO NOTIFY ALL UTILITY COMPANIES IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES (CALL UNDERGROUND SERVICE ALERT (U.S.A.) AT 1-800-642-2444). IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXISTENCE AND LOCATION OF ALL UTILITIES.

IT IS UNDERSTOOD BY THE CONTRACTOR THAT IT WILL BE RESPONSIBLE FOR THE ADVANCE COORDINATION AND SCHEDULING OF WORK BETWEEN ITSELF AND/OR IT'S SUBCONTRACTORS AND ALL UTILITY COMPANIES.

ANY PUBLIC UTILITY INSTALLATION OBSTRUCTING THE WORK TO BE PERFORMED HEREUNDER SHALL BE MOVED AT THE EXPENSE OF THE PUBLIC UTILITY COMPANY OR OWNER AND WITHOUT COST TO THE CONTRACTOR UNLESS SPECIFIED OTHERWISE ON THE PLANS OR IN THESE SPECIFICATIONS.

NO ADDITIONAL COST SHALL BE CHARGED TO THE OWNER BY THE CONTRACTOR DUE TO DELAYS, INCONVENIENCE OR OTHER ADDITIONAL EXPENSES ASSOCIATED WITH THE PRESENCE OF SUCH OBSTRUCTIONS.

8. PRECONSTRUCTION CONFERENCE

PRIOR TO THE BEGINNING OF WORK, THERE WILL BE A PRECONSTRUCTION CONFERENCE HELD AT A TIME AND PLACE TO BE SPECIFIED BY THE OWNER. REPRESENTATIVES OF THE CITY OF LATHROP, MACKAY & SOMPS, OWNER, AND OTHERS AS APPROPRIATE, (I.E. SOILS ENGINEER, UTILITY COMPANIES, ETC.)

9. GENERAL

DEMOLITION: DEMOLITION, IF ANY, SHALL BE DONE UNDER SEPARATE CONTRACT WITH THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR NECESSARY DEMOLITION PERMITS FROM CITY.

EXISTING IMPROVEMENTS: PARTICULAR CARE SHOULD BE EXERCISED BY THE CONTRACTOR WHILE WORKING (ESPECIALLY CUTTING AND FILLING) NEAR ADJACENT PROPERTIES. EXTREME CARE MUST BE TAKEN WHEN WORKING AROUND ANY EXISTING FACILITIES. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY IMPROVEMENT DAMAGED BY IT OR IT'S SUBCONTRACTORS OR MATERIAL SUPPLIERS.

EXISTING UTILITY SERVICES: IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND LEAVE IN-SERVICE EXISTING UTILITY SERVICES SUCH AS GAS, POWER, COMMUNICATION, WATER, SANITARY STORM, ETC. UNLESS OTHERWISE SPECIFIED ON PLANS.

POLLUTION CONTROL: A STORM WATER POLLUTION PREVENTION PLAN WILL BE ON FILE AT THE JOB SITE. THIS PLAN DESCRIBES THE MANNER IN WHICH POTENTIAL SOURCES OF POLLUTION WILL BE MANAGED ON THE SITE AND WILL INCLUDE PROVISIONS FOR EROSION CONTROL.

THE CONTRACTOR SHALL FAMILIARIZE ITSELF WITH THE PROVISIONS OF THIS PLAN AND ALL OTHER LOCAL REQUIREMENTS AND CONDUCT ALL ITS OPERATIONS AND ACTIVITIES IN ACCORDANCE WITH SAME. THE PLAN WILL PROVIDE JOB SITE RULES FOR PROHIBITED OPERATIONS WHEN RAIN IS EXPECTED; EQUIPMENT FUELING, CLEANING, REPAIR & MAINTENANCE; MATERIAL DELIVERY, STOCKPILING & STORAGE; JOB SITE CLEANUP, ETC., PROVISIONS OF THIS PLAN ARE NOT LIMITED TO TIMES OF INCLEMENT WEATHER.

ARRANGEMENTS FOR THE INSTALLATION, PROTECTION, AND/OR MAINTENANCE OF EROSION CONTROL MEASURES (BALES, WADDLES, BERMS, SWALES, PONDS, EROSION CONTROL FENCING, HYDROSEEDING, TEMPORARY PIPES AND DRAINS, TEMPORARY ARMORING, ETC.) REQUIRED BY THE STORM WATER POLLUTION PREVENTION PLAN ARE TO BE COORDINATED WITH THE OWNER.

IN ADDITION TO THE REQUIREMENTS NOTED ABOVE, ALL CONTRACTORS ARE TO COMPLY WITH THE FOLLOWING PROVISIONS.

- THE CONTRACTOR SHALL TRAIN ALL EMPLOYEES/SUBCONTRACTOR'S ON STORM WATER POLLUTION PREVENTION.
- WASHING DOWN OF STREETS OR HARD SURFACES WITH WATER THAT ENTERS THE STORM DRAINAGE SYSTEMS IS PROHIBITED. RATHER, CONTRACTORS ARE TO SWEEP ROADWAYS AS NECESSARY TO AVOID POLLUTANTS ENTERING THE STORM DRAIN SYSTEM.
- CONTRACTORS ARE TO COMPLY WITH ALL RECYCLING REQUIREMENTS OF THE LOCAL AGENCIES.
- CONTRACTORS SHALL NOT ALLOW SAW CUT SLURRY FROM ENTERING THE STORM DRAIN SYSTEM.
- CONTRACTORS SHALL INSPECT VEHICLES AND EQUIPMENT ARRIVING ON THE PROJECT FOR LEAKING FLUIDS AND SHALL PROMPTLY REPAIR ANY LEAKING VEHICLES OR EQUIPMENT. DRIP PANS SHALL BE USED TO CATCH LEAKS UNTIL REPAIRS ARE MADE. LEAKING FLUIDS SHALL BE PROPERLY DISPOSED OF.

10. STREETWORK CONSTRUCTION

IN ADDITION TO GRADING, THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING OPERATIONS:

A. PROVIDE AND DEPOSIT IN-PLACE AT JOB SITE ALL PAVEMENT, AND BASE ROCK FOR PAVEMENT, CURB, GUTTER, SIDEWALK, HANDICAPPED RAMPS, AND DRIVEWAY APPROACHES CALLED FOR ON THE PLANS.

B. INSTALLATION OF ALL SIGNS, SURVEY MONUMENTS, PAVEMENT MARKINGS, STRIPING AND BARRICADES CALLED FOR ON THE PLANS. (NOTE THAT ALL NEW AND EXISTING MANHOLE CASTINGS, WATER VALVE BOX CASTINGS, ETC. WILL BE ADJUSTED TO GRADE AND HAVE NEW PAVEMENT PLACED AROUND CASTINGS BY THE UNDERGROUND CONTRACTOR.)

11. UNDERGROUND CONSTRUCTION

THE UNDERGROUND CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF WATER MAINS, STORM DRAINAGE, SANITARY SEWER FACILITIES AND THEIR RESPECTIVE APPURTENANCES AND CERTAIN INLETS (INCLUDING WATER QUALITY STENCILING). IT SHALL ALSO BE RESPONSIBLE FOR LOWERING NEW AND PREVIOUSLY EXISTING MANHOLES, VALVE BOXES, CLEANOUTS, ETC. TO BELOW SUBGRADE LEVEL (FOR COMPLETION OF FINISH GRADING, ROCKING AND PAVING BY THE GRADING CONTRACTOR) AND RAISING SAME TO FINISH GRADE INCLUDING ALL PATCH PAVING NECESSARY. THE UNDERGROUND CONTRACTOR SHALL ALSO PROVIDE A EFFECTIVE METHOD OF MARKING SEWER LATERALS AND WATER SERVICES FOR USE BY THE CONCRETE CONTRACTOR IN MARKING CURBS. HE SHALL ALSO MARK WATER VALVE LOCATIONS BY APPROPRIATE REFERENCE INDICATORS ON CURBS AS MAY BE REQUIRED BY THE CITY/ DISTRICT.

THE UNDERGROUND CONTRACTOR SHALL INCLUDE IN ITS BID THE COSTS OF ALL IMPORTED BACKFILL MATERIAL THAT MAY BE REQUIRED BY THE SOILS ENGINEER OR BY THE PUBLIC AGENCIES HAVING JURISDICTION. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR IMPORTED TRENCH BACKFILL OR TRENCH BEDDING MATERIAL AS REQUIRED BY THE SOILS ENGINEER OR BY THE CITY, OR DISTRICT HAVING JURISDICTION.

THE UNDERGROUND CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SHORING OF SEWER TRENCHES IN ACCORDANCE WITH ALL APPLICABLE OCCUPATIONAL SAFETY LAWS. COST FOR THIS SHALL BE INCLUDED IN UNIT PRICES FOR VARIOUS ITEMS OF WORK AND NO ADDITIONAL COMPENSATION SHALL BE MADE. IT IS SUGGESTED THAT THE CONTRACTOR ENGAGE A CONSULTING ENGINEER TO DESIGN SHORING.

THE UNDERGROUND CONTRACTOR IS RESPONSIBLE TO REVIEW THE PLANS AND SITE OF WORK TO DETERMINE THE EXTENT OF PAVEMENT REMOVAL AND/OR REPAIR OR OTHER REMOVAL AND REPLACEMENT OR DEMOLITION THAT WILL BE REQUIRED TO CONSTRUCT UNDERGROUND LINES THROUGH EXISTING PAVEMENT OR OTHER AREAS. COST OF PAVEMENT, REPAIR, OR OTHER REMOVAL AND REPLACEMENT AND/OR REPAIR REQUIRED SHALL BE INCLUDED IN THE UNIT PRICES OF THE APPLICABLE ITEMS OF WORK AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED THEREFORE.

THE UNDERGROUND CONTRACTOR SHALL INCLUDE IN IT'S BID THE COSTS OF ALL FITTINGS, SHORTER THAN STANDARD PIPE LENGTHS, OR BEVELED END PIPE THAT ARE REQUIRED TO ACHIEVE THE PIPE ALIGNMENTS SHOWN ON THE PLANS WHETHER OR NOT THESE ITEMS ARE SPECIFICALLY CALLED FOR ON THE PLANS OR BID PROPOSAL FORMS, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED THEREFORE.

THE UNDERGROUND CONTRACTOR SHALL COMMENCE CONSTRUCTION FROM THE LOW END OF ALL GRAVITY LINES. SHOULD THE UNDERGROUND CONTRACTOR FAIL TO DO SO, AND SHOULD SUCH FAILURE RESULT IN AN UNDERGROUND SYSTEM THAT WILL NOT FUNCTION PROPERLY, THE UNDERGROUND CONTRACTOR SHALL BE RESPONSIBLE TO REMEDY THE SITUATION AT HIS OWN COST AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED THEREFORE.

THE UNDERGROUND CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE PROJECT'S SOILS REPORT. IF SUB-SURFACE CONDITIONS REQUIRE A CHANGE IN TRENCHING METHODS FROM THAT ANTICIPATED, NO EXTRA COMPENSATION WILL BE ALLOWED. THE CONTRACTOR IS WELCOME TO OBTAIN HIS OWN SOIL BORINGS IF HE SO DESIRES. THIS SOILS WORK SHALL BE COORDINATED WITH THE OWNER.

THE UNDERGROUND CONTRACTOR SHALL EXPOSE AND VERIFY THE ELEVATION AND ALIGNMENT OF EXISTING UTILITY SYSTEMS TO BE CONNECTED TO. DISCREPANCIES, IF ANY, SHALL BE REPORTED TO MACKAY & SOMPS IN ACCORDANCE WITH THE "DISCREPANCIES" SECTION OF THESE SPECIFICATIONS.

IT IS SOMETIMES REQUIRED OR REQUESTED THAT THE OWNER'S ENGINEER PROVIDE GRADES FOR THE UPSTREAM END OF SANITARY LATERALS. IF THIS IS DONE, THE UNDERGROUND CONTRACTOR SHALL NOT ASSUME THAT THE LATERALS ARE TO BE LAID ON A STRAIGHT GRADE FROM THE MAIN TO THE END OF THE LATERAL. THE UNDERGROUND CONTRACTOR SHALL REVIEW THE PLANS TO DETERMINE IF GRADE BREAKS IN THE LATERAL ARE NECESSARY (22.5° MAXIMUM DEFLECTION) OR IF WYES NEED TO BE SET A CERTAIN WAY TO AVOID CONFLICTS WITH OTHER UTILITIES AND SHALL CONSTRUCT THE LATERAL AND WYE.

12. GRADING/UNDERGROUND COORDINATION

A. BACKFILL FOR UTILITY LINES SHALL BE AS REQUIRED BY THE SOILS ENGINEER AND CITY/DISTRICT. BACKFILL SHALL BE OBSERVED BY THE SOILS ENGINEER. SUCH OBSERVATIONS SHALL BE SCHEDULED AND COORDINATED BY THE UNDERGROUND CONTRACTOR. SOILS ENGINEER'S FEES WILL BE PAID BY THE OWNER. CITY WILL PROVIDE TESTING AND OBSERVATION SERVICES DURING UTILITY TRENCH BACKFILL AND ROADWAY CONSTRUCTION.

B. THE GRADING CONTRACTOR SHALL CONSULT WITH THE UNDERGROUND CONTRACTOR PRIOR TO GRADING SO THAT PROPER UNDERCUTTING, TO ACCOMMODATE ANTICIPATED TRENCH SPOILS, CAN BE ACCOMPLISHED.

C. VARIOUS AGENCIES AND/OR UTILITY DISTRICTS HAVE ESTABLISHED REQUIREMENTS FOR SUBGRADE PREPARATION WHICH MUST BE ATTAINED PRIOR TO WATER MAIN INSTALLATION. IT SHALL BE THE UNDERGROUND CONTRACTOR'S RESPONSIBILITY TO CONFORM TO THESE REQUIREMENTS AND BEAR THE COST FOR REGRADING STREET AREAS IF REQUIRED. ORIGINAL ROUGH GRADE STAKES ARE TO BE USED TO RE-ESTABLISH SUBGRADE.

13. CONCRETE CONSTRUCTION

THE CONCRETE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING CONSTRUCTION ITEMS:

A. CONSTRUCTION OF ALL CURB, GUTTER, SIDEWALK, HANDICAPPED RAMPS, CURB INLETS AND CONCRETE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONCRETE REMOVAL AND DISPOSAL AS CALLED FOR ON THE PLANS UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS OR ON THE BID PROPOSAL FORM.

B. CONSTRUCTION OF ALL CURB, GUTTER, SIDEWALK AND HANDICAP RAMPS SHALL BE AS SPECIFIED ON THE CITY STANDARD DETAILS AND/OR AS SHOWN ON IMPROVEMENT PLANS.

C. MARKING SEWER LATERAL AND WATER SERVICE LOCATIONS IN THE CURB, AND "WATER QUALITY" STENCILING OF STORM INLETS.

D. EXPOSE AND VERIFY LOCATION OF "AS-BUILT" STORM LATERAL WHILE EXCAVATING FOR STORM WATER INLET. DISCREPANCIES, IF ANY, SHALL BE REPORTED TO MACKAY & SOMPS IN ACCORDANCE WITH THE "DISCREPANCIES" SECTION OF THESE SPECIFICATIONS.

E. IF THE CURB AND SIDEWALK IS MACHINE POURED, THE CONCRETE CONTRACTOR SHALL LEAVE "OPENINGS" THAT ARE A MINIMUM OF 10 FEET WIDE FOR THE STORM WATER INLETS OR EXPOSE, VERIFY, AND MARK THE LOCATION OF ALL STORM LATERAL STUBS PRIOR TO THE POUR IF SMALLER "OPENINGS" ARE DESIRED.

F. IF P.G.&E. FACILITIES ARE INSTALLED PRIOR TO POURING STORM WATER INLETS, THE CONCRETE CONTRACTOR SHALL USE APPROPRIATE CARE IN EXCAVATING FOR THE STORM WATER INLETS. IF THE P.G.&E. FACILITIES ARE DAMAGED THROUGH THE CONCRETE CONTRACTOR'S ACTIVITIES, THE CONCRETE CONTRACTOR WILL BE HELD RESPONSIBLE FOR SAID DAMAGES.

14. TRAFFIC CONTROL PLAN

A. CONTRACTOR TO PROVIDE A TRAFFIC CONTROL PLAN FOR ALL CONSTRUCTION ACTIVITIES AFFECTING PUBLIC RIGHT OF WAY.

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REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

RECORD DRAWING

THESE ARE THE FINAL CONSTRUCTION PLANS FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR, AND THE CITY INSPECTOR.

CHRISTIAN T. RAGAN
RCE #60473

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

REVISIONS	NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	CITY APPROVAL DATE

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
PLEASANTON, CA (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:

BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

STANFORD CROSSING EXTENSION

PROJECT SPECIFICATIONS

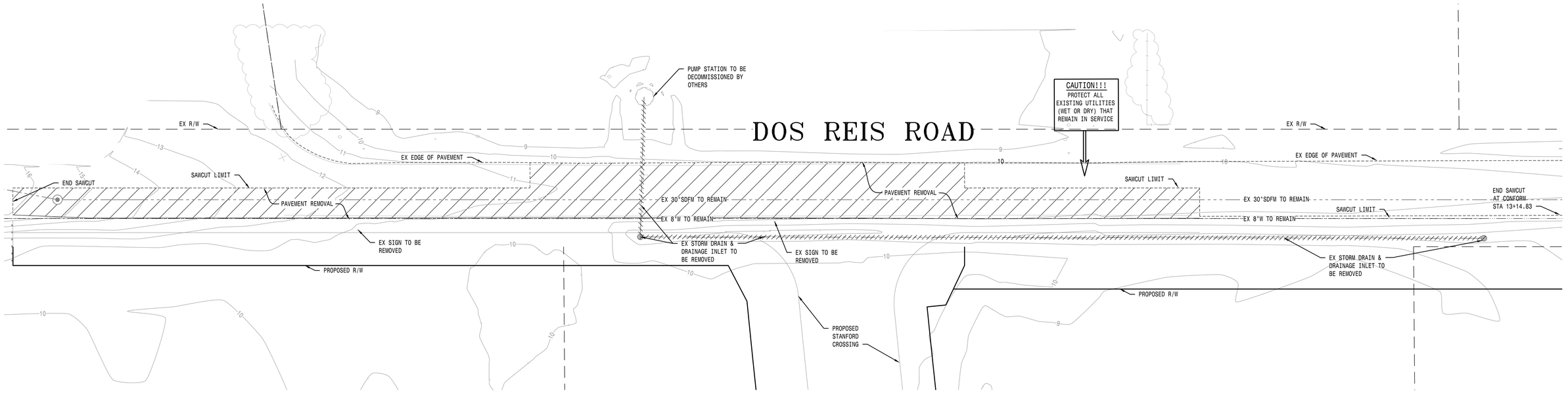
DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN BY: EN
DESIGNED BY: RC
CHECKED BY: JM

RECOMMENDED FOR APPROVAL BY: DATE:

CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C4
SHEET 4 OF 9



LEGEND:

EXISTING OR BY OTHERS	PROPOSED	
	----------	SAW CUT LINE
	— — —	GRIND AND OVERLAY LIMIT
~	~	CONTOUR LINE
- - - - - -	———	FACE OF CURB
		PAVEMENT REMOVAL
		UTILITY REMOVAL

0 10 20 40
SCALE: 1"=20'

RECORD DRAWING

THESE ARE THE FINAL CONSTRUCTION PLANS FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR, AND THE CITY INSPECTOR.

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REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

STANFORD CROSSING EXTENSION

DEMO PLAN

DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

REVISIONS NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	DATE

MacKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
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PLANS PREPARED UNDER THE DIRECTION OF:

BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

DATE: MARCH 2025
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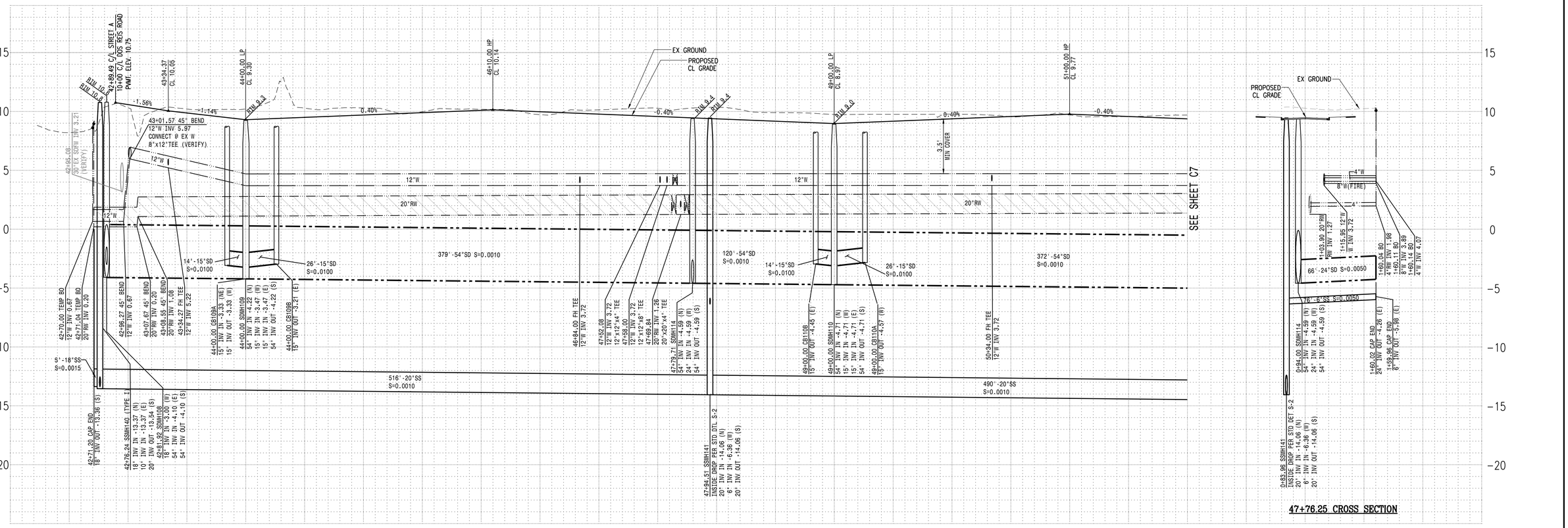
RECOMMENDED FOR APPROVAL BY: DATE:

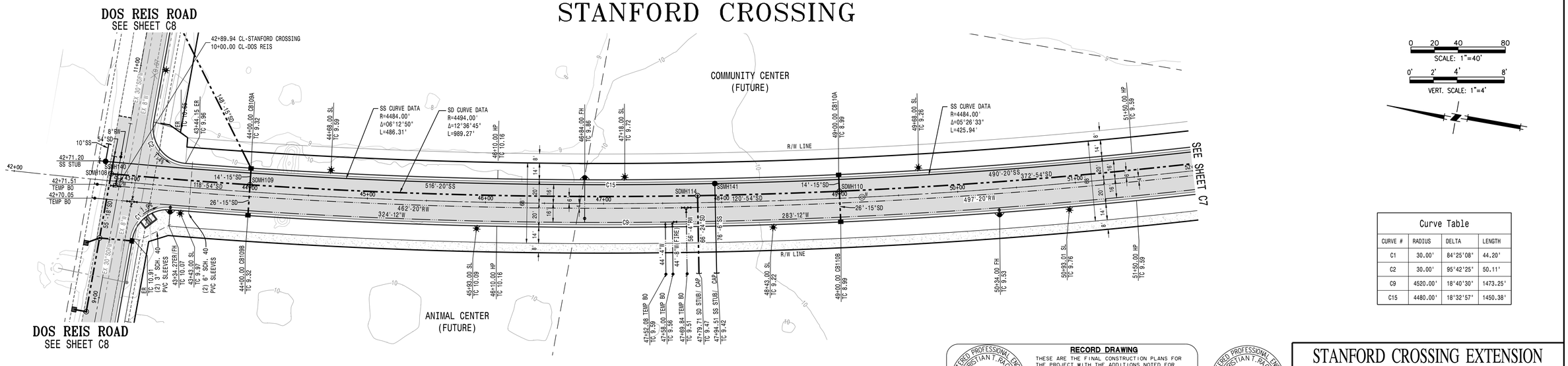
CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C5
SHEET 5 OF 9



47+76.25 CROSS SECTION

STANFORD CROSSING



Curve Table			
CURVE #	RADIUS	DELTA	LENGTH
C1	30.00'	84°25'08"	44.20'
C2	30.00'	95°42'25"	50.11'
C9	4520.00'	18°40'30"	1473.25'
C15	4480.00'	18°32'57"	1450.38'

0 20 40 80
SCALE: 1"=40'
0' 2' 4' 8'
VERT. SCALE: 1"=4'

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ELECTRONIC VERSIONS OF THE LINEWORK ON THIS PLAN MAY NOT BE CONSISTENT WITH OTHER DIMENSIONS, NOTES, DETAILS OR DESCRIPTIONS WHICH CONTROL THE INTENDED DESIGN. ELECTRONIC VERSIONS OF THIS PLAN ARE NOT TO BE USED TO ESTABLISH THE LOCATION OF PROPERTY OR IMPROVEMENTS IN THE FIELD.

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ENGINEERS PLANNERS SURVEYORS
PLEASANTON, CA (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:
BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

STANFORD CROSSING EXTENSION

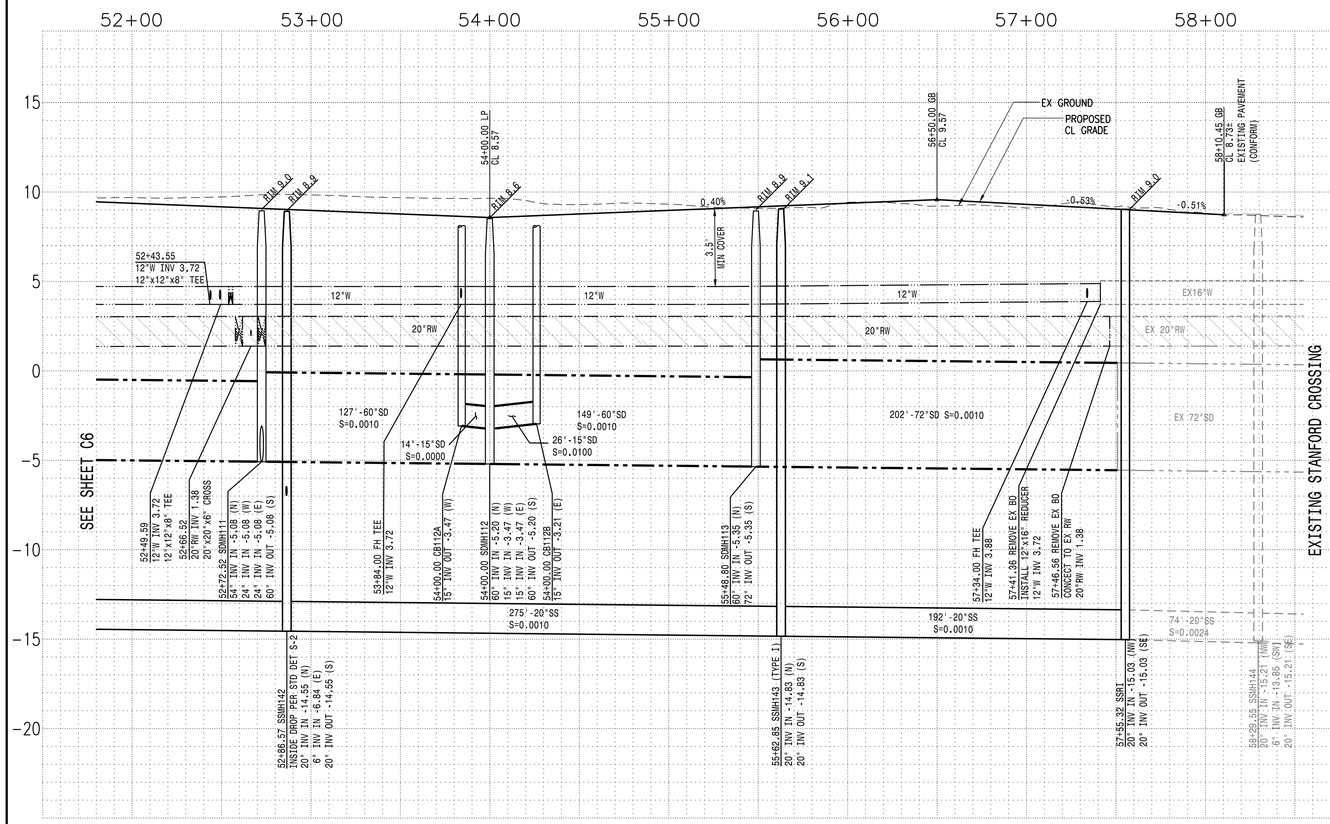
PLAN AND PROFILE STA. 43+08+/- TO STA. 52+00
STANFORD CROSSING

DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN BY: EN
DESIGNED BY: RC
CHECKED BY: JM

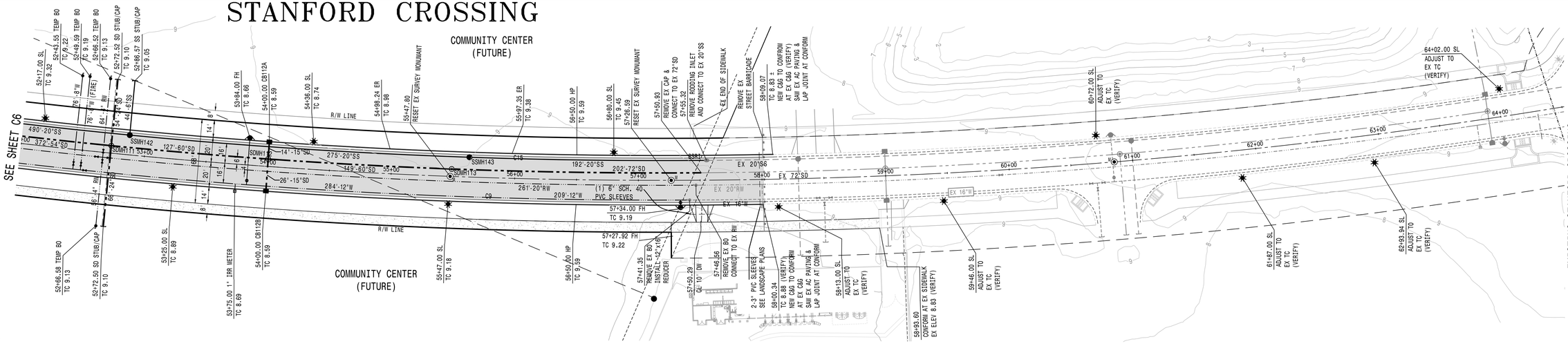
RECOMMENDED FOR APPROVAL BY: DATE:
CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C6
SHEET 6 OF 9



52+67.97 CROSS SECTION

STANFORD CROSSING



0 20 40 80
SCALE: 1"=40'

0' 2' 4' 8'
VERT. SCALE: 1"=4'

Curve Table			
CURVE #	RADIUS	DELTA	LENGTH
C9	4520.00'	18°40'30"	1473.25'
C15	4480.00'	18°32'57"	1450.38'

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

RECORD DRAWING

THESE ARE THE FINAL CONSTRUCTION PLANS FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR, AND THE CITY INSPECTOR.

CHRISTIAN T. RAGAN
RCE #60473

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

STANFORD CROSSING EXTENSION

PLAN AND PROFILE STA. 52+00 TO STA. 57+53+/- STANFORD CROSSING

DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

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

ELECTRONIC VERSIONS OF THE LINEWORK ON THIS PLAN MAY NOT BE CONSISTENT WITH OTHER DIMENSIONS, NOTES, DETAILS OR DESCRIPTIONS WHICH CONTROL THE INTENDED DESIGN. ELECTRONIC VERSIONS OF THIS PLAN ARE NOT TO BE USED TO ESTABLISH THE LOCATION OF PROPERTY OR IMPROVEMENTS IN THE FIELD.

REVISIONS NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	CITY APPROVAL DATE

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
PLEASANTON, CA (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:

BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

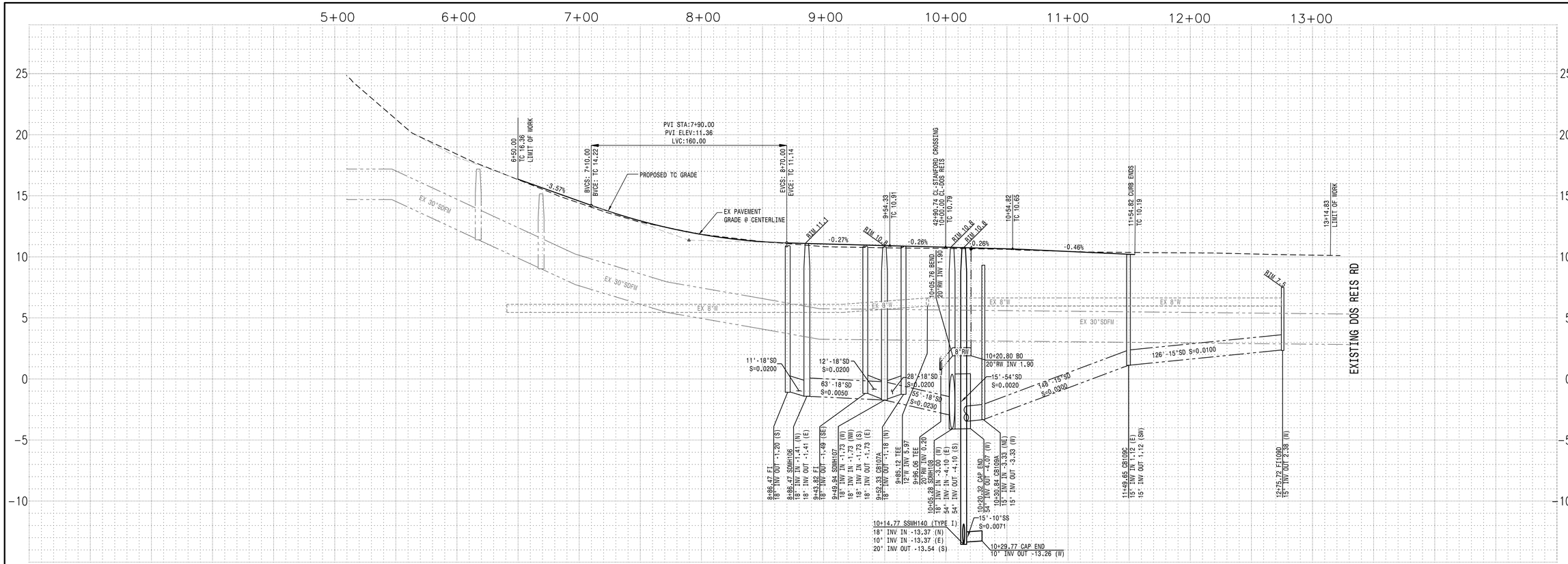
DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN BY: EN
DESIGNED BY: RC
CHECKED BY: JM

RECOMMENDED FOR APPROVAL BY: DATE:

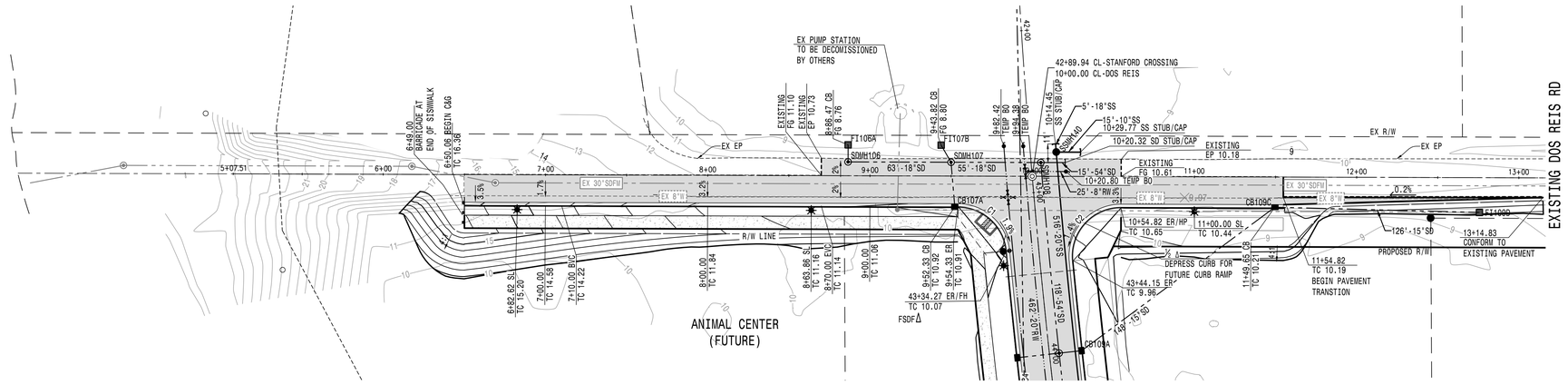
CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C7
SHEET 7 OF 9

03-25-2025 5:15pm Eric Nyman P:\25257\DES\IP\IP STANFORD CROSSING\IP07-STANFORD CROSSING.DWG



DOS REIS ROAD



0 20 40 80
SCALE: 1"=40'

0' 2' 4' 8'
VERT. SCALE: 1"=4'

Curve Table			
CURVE #	RADIUS	DELTA	LENGTH
C1	30.00'	84°25'08"	44.20'
C2	30.00'	95°42'25"	50.11'
C3	4520.00'	0°54'01"	71.02'

RECORD DRAWING

THESE ARE THE FINAL CONSTRUCTION PLANS FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR, AND THE CITY INSPECTOR.

CHRISTIAN T. RAGAN
RCE #60473

REGISTERED PROFESSIONAL ENGINEER
CHRISTIAN T. RAGAN
No.60473
CIVIL
STATE OF CALIFORNIA

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REVISIONS	NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	DATE

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
PLEASANTON, CA (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:

BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

STANFORD CROSSING EXTENSION

PLAN AND PROFILE STA. 6+00.00 TO STA. 10+54.82
DOS REIS ROAD WIDENING

DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

DATE: MARCH 2025
SCALE: AS SHOWN
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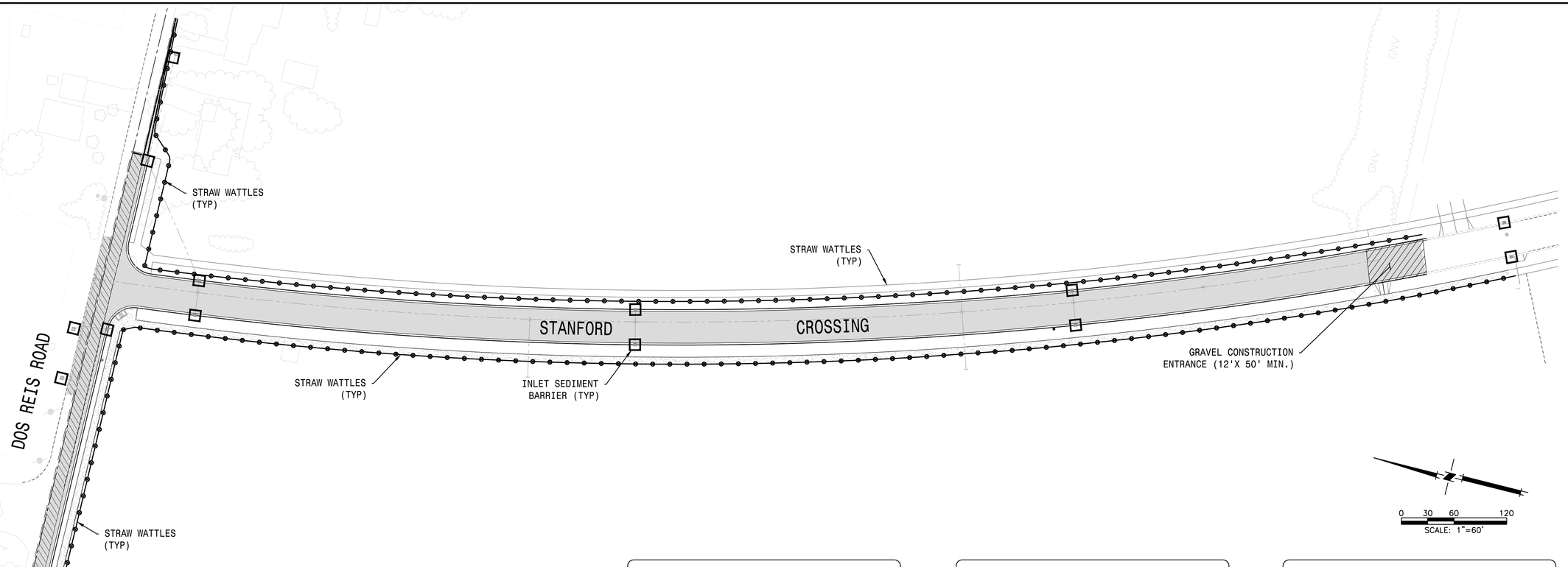
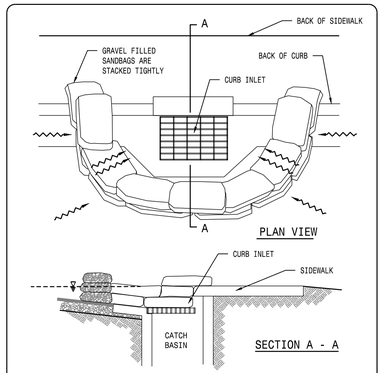
CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C8
SHEET 8 OF 9



EROSION CONTROL NOTES:

1. EROSION CONTROL DEVICES SHOWN ON THE PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE CITY INSPECTOR/OWNER AND QUALIFIED SWPPP PRACTITIONER (QSP) SHOULD BE DIRECTING/APPROVING THE EROSION CONTROL WORK AS NEEDED AS THE WORK PROGRESSES.
2. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE CITY INSPECTOR/OWNER AND QUALIFIED SWPPP PRACTIONER (QSP).
3. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREET AREAS AT INTERVALS OF TWO FT OF VERTICAL CHANGE IN ELEVATION. VELOCITY CHECK DAMS SHALL BE CONSTRUCTED OF STAKED STRAW BALES, OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE INSPECTOR, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. EARTH DIKES SHALL NOT BE USED AS VELOCITY CHECK DAMS.
4. AFTER UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS-FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTER LINE OF A CROWNED STREET.
5. EXCEPT AS OTHERWISE DIRECTED BY THE INSPECTOR, ALL DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FORECAST OF RAIN PROBABILITY EXCEEDS 40%.
6. ALL BASINS AND CHECK DAMS SHALL HAVE BEEN PUMPED DRY, AND ALL DEBRIS AND SILT REMOVED WITHIN 24 HOURS AFTER EACH STORM.
7. HYDROSEED ALL FILL AND CUT SLOPES AS APPROVED BY CITY GUIDELINES AND / OR ORDINANCES, OR AS SHOWN ON THESE PLANS.
8. STRAW BALES SHALL BE STOCKPILED ADJACENT TO EACH POINT OF USE AS SHOWN ON THE EROSION CONTROL PLAN, READY TO BE PLACED IN POSITION WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR.
9. THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE OPERABLE YEAR-ROUND.
10. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN TO MEET FIELD CONDITIONS WILL BE MADE ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE CITY INSPECTOR/OWNER AND QUALIFIED SWPPP PRACTITIONER (QSP).
11. ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE WILL BE MAINTAINED SO THAT A MINIMUM OF SEDIMENT - LADEN RUNOFF ENTERS THE STORM DRAINAGE SYSTEM.
12. AS STORM DRAIN IMPROVEMENTS ARE CONSTRUCTED, ALL STRUCTURES AND INLET PIPES SHALL BE PROTECTED FROM INFLOW OF SILT BY STRAW BALE SILT BARRIER PER DETAIL. IN AREAS WHERE GRADING OCCURS BUT INLETS ARE NOT CONSTRUCTED, STRAW BALE CHECK DAMS ARE TO BE PLACED AT FUTURE INLET LOCATIONS.
13. CONTRACTOR SHALL HAVE TOOLS, EQUIPMENT, AND MATERIALS TO PROVIDE EROSION CONTROL MEASURES MADE NECESSARY BY A CONSTRUCTION OPERATION, ON THE JOB SITE BEFORE BEGINNING THAT OPERATION.
14. ADJACENT PROPERTIES SHALL BE PROTECTED FROM STORM WATERS, MUD, SILT, ETC.
15. FOR EROSION CONTROL PURPOSES, THIS PLAN ASSUMES ALL HYDROSEEDING WILL BE COMPLETED PRIOR TO THE START OF THE RAINY SEASON (OCTOBER 1 TO APRIL 15).
16. MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
    a. REPAIR DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION AT THE END OF EACH WORKING DAY.
    b. SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS REQUIRED.
    c. SILT FENCES, BERMS AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED.
    d. SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAPS RESTORED TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO WITHIN ONE FOOT OF OUTLET ELEVATION.
    e. SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
17. CONSTRUCTION ENTRANCE CONSISTING OF AN 8" THICK LAYER OF 2"-3" COARSE DRAINROCK FOR A DISTANCE OF 50 FEET IS TO BE PROVIDED AT EACH VEHICLE ACCESS POINT FROM UNPAVED ROADS TO EXISTING PAVED STREETS.
18. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE INSPECTOR/OWNER AND QUALIFIED SWPPP PRACTITIONER (QSP).
19. THE CONTRACTOR SHALL MEET AND FOLLOW ALL NPDES REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION.
20. HYDROSEED AND/OR BLOWN STRAW SHALL BE APPLIED TO ALL GRADED AREAS PRIOR TO OCTOBER 1ST. HYDROSEED SHALL BE APPLIED TO AREAS GRADED AT 5:1 OR STEEPER. BLOWN STRAW SHALL BE APPLIED ON ALL STRAIGHT GRADED PAD AREAS LESS THAN 5:1 SLOPE. HYDROSEEDED AREAS SHALL BE WATERED UNTIL VEGETATION IS ESTABLISHED.
21. HYDROSEED SHALL BE APPLIED TO FRESHLY GRADED SLOPES WHILE SOIL REMAINS FRIABLE AND WEED-FREE.
22. ANY RELATED STANDARDS FOR GRADING, EROSION CONTROL AND LANDSCAPING MUST BE OBSERVED.
23. FIELD CONDITIONS MAY VARY AND ALTERNATIVE BMP'S MAY BE REQUIRED. THIS PLAN SHALL BE MODIFIED BY THE CONTRACTOR/ EROSION CONTROL SPECIALIST (QUALIFIED SWPPP DEVELOPER OR PRACTITIONER TO ACCOUNT FOR ACTUAL FIELD CONDITIONS.
24. THIS EROSION CONTROL PLAN HAS BEEN PREPARED TO MEET CITY OF LATHROP STANDARDS ONLY. IT REQUIRES A PROJECT SWPPP BE PREPARED BY A QUALIFIED SWPPP DEVELOPER (QSD) WHO WILL ASSUME RESPONSIBILITY FOR PROJECT COMPLANCE WITH THE STATE GENERAL CONSTRUCTION PERMIT AND WHOSE RECOMMENDATIONS WILL SUPERCEDE THIS PLAN ACCORDINGLY.
25. ANY REVISIONS TO THE APPROVED PLANS SUBMITTED TO THE STATE BOARD SHALL BE DOWNLOADED ONTO THE STATE REGIONAL WATER BOARD SMARTS DATABASE BY THE LEGAL RESPONSIBLE PARTY OR THEIR DESIGNEE.

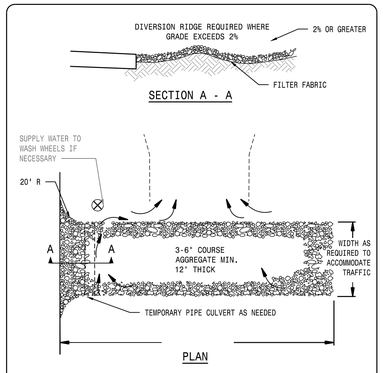


NOTES:
1. TO BE INSTALLED & MAINTAINED IN ACCORDANCE WITH CASQA STANDARD SE-10.
2. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
3. SANDBAGS, OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
4. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.
5. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

PAVED CONDITION

NOT TO SCALE

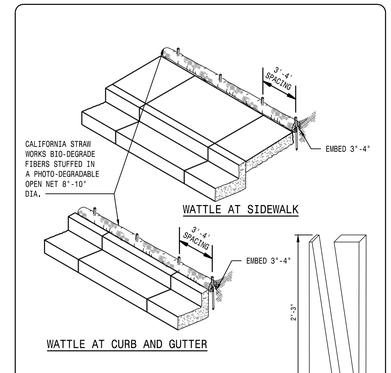
STORM DRAIN INLET PROTECTION: GRAVEL BAG



NOTES:
1. CONSTRUCTION ENTRANCE SHALL BE INSTALLED & MAINTAINED IN ACCORDANCE WITH CASQA STANTARD DETAIL TC-1.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
3. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE/EXIT



NOTES:
1. TO BE INSTALLED & MAINTAINED IN ACCORDANCE WITH CASQA STANDARD SE-5.
2. REPAIR OR REPLACE SPLIT, TORN, UNRAVELING OR SLUMPING WATTLES.
3. INSPECT WATTLES WHEN RAIN IS FORECAST, FOLLOWING RAIN EVENTS AND AT LEAST DAILY DURING PROLONGED RAINFALL. PERFORM REQUIRED MAINTENANCE.
4. IN MOST CASES, WATTLES DO NOT REQUIRE REMOVAL AND CAN BE ABANDONED IN PLACE, IF NOT EXCESSIVELY SOILED, ROLLS MAY BE REPLACED AND REUSED.

TYPICAL CONSTRUCTION STAKE SAW 2X4 LUMBER ON DIAGONAL

NOT TO SCALE

FIBER ROLLS ALONG C/G & SIDEWALK

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

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

RECORD DRAWING

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CHRISTIAN T. RAGAN
RCE #60473

REGISTERED PROFESSIONAL ENGINEER CHRISTIAN T. RAGAN No.60473 CIVIL STATE OF CALIFORNIA

REVISIONS	NO.	DESCRIPTION	CHECKED BY	CITY APPROVAL APPROVED BY	DATE

MACKAY & SOMPS ENGINEERS PLEASANTON, CA PLANNERS SURVEYORS (925)225-0690

PLANS PREPARED UNDER THE DIRECTION OF:

BY: Christian T. Ragan 3/25/2025
CHRISTIAN T. RAGAN RCE No. 60473

STANFORD CROSSING EXTENSION

EROSION CONTROL PLAN

DEPARTMENT OF PUBLIC WORKS
CITY OF LATHROP, CALIFORNIA

DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN BY: EN
DESIGNED BY: RC
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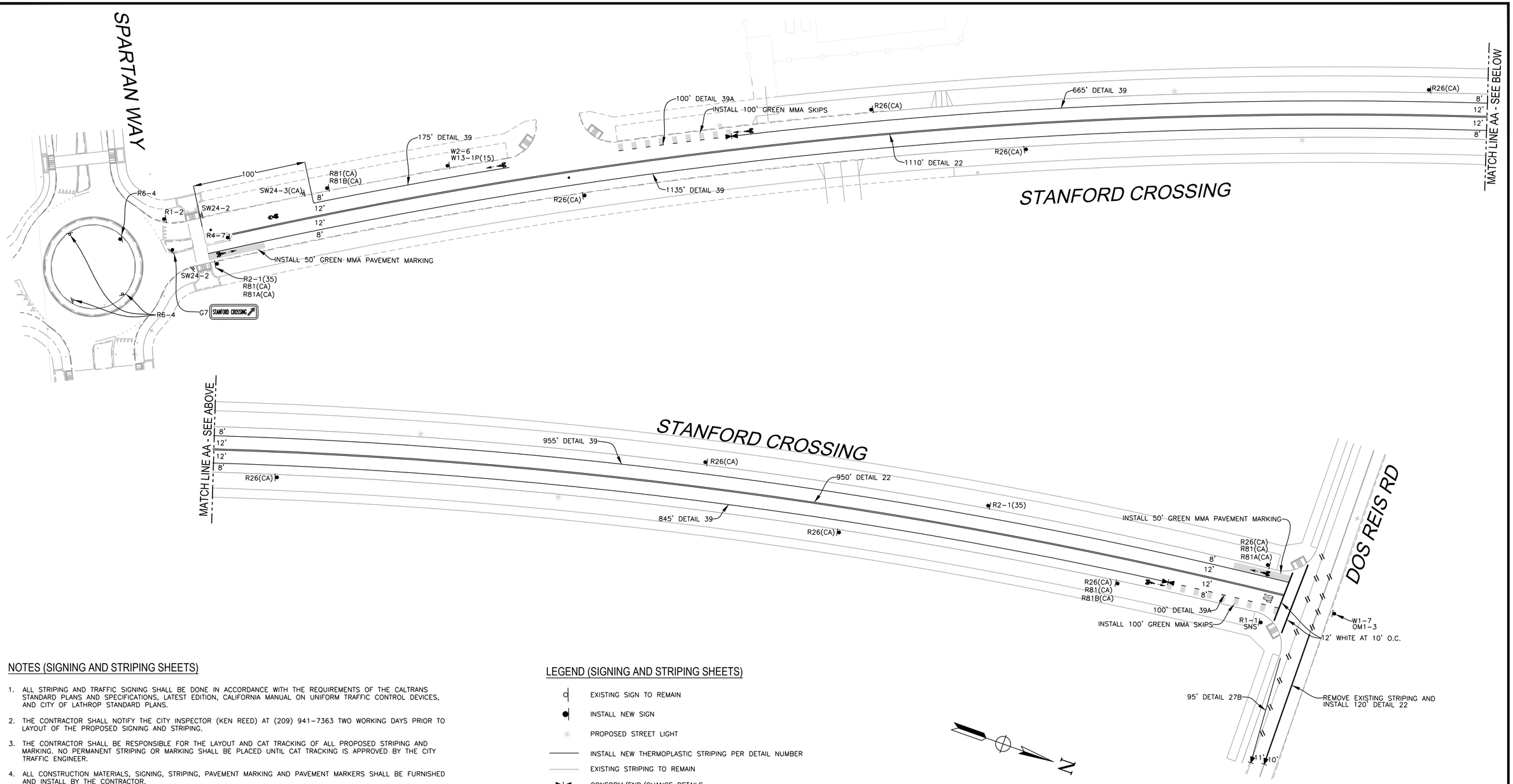
RECOMMENDED FOR APPROVAL BY: DATE:

CITY OF LATHROP

PROJECT NO. 25257.D
SHEET NO. C9
SHEET 9 OF 9



NOTES (SIGNING AND STRIPING SHEETS)

1. ALL STRIPING AND TRAFFIC SIGNING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALTRANS STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION, CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND CITY OF LATHROP STANDARD PLANS.
2. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR (KEN REED) AT (209) 941-7363 TWO WORKING DAYS PRIOR TO LAYOUT OF THE PROPOSED SIGNING AND STRIPING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT AND CAT TRACKING OF ALL PROPOSED STRIPING AND MARKING. NO PERMANENT STRIPING OR MARKING SHALL BE PLACED UNTIL CAT TRACKING IS APPROVED BY THE CITY TRAFFIC ENGINEER.
4. ALL CONSTRUCTION MATERIALS, SIGNING, STRIPING, PAVEMENT MARKING AND PAVEMENT MARKERS SHALL BE FURNISHED AND INSTALL BY THE CONTRACTOR.
5. ALL PAVEMENT MARKINGS SHALL CONFORM TO CALTRANS PLAN A24. ALL PAVMENT STRIPING SHALL CONFORM TO CALTRANS STANDARD PLAN A20.
6. ALL DETAIL NUMBERS REFER TO CALTRANS STANDARD PLANS STRIPING DETAILS.
7. CONTRACTOR SHALL USE THERMOPLASTIC FOR ALL PAVEMENT STRIPING. CAT TRACKING SHALL BE APPROVED BY CITY TRAFFIC ENGINEER PRIOR TO INSTALLING ANY PERMANENT MARKINGS (MIN. 48 HRS ADVANCE NOTICE).
8. CONTRACTOR SHALL REMOVE EXISTING STRIPING THAT IS IN CONFLICT WITH PROPOSED STRIPING.
9. CONTRACTOR SHALL SLURRY SEAL ANY DAMAGED PAVEMENT AREAS PRIOR TO INSTALLING THERMOPLASTIC STRIPING.
10. a. ALL TRAFFIC CONTROL DEVICES REQUIRED FOR THE SAFE AND ORDERLY MOVEMENT OF VEHICLES AND PEDESTRIANS WITHIN AND THROUGH THE DEVELOPMENT SHALL BE IN PLACE PRIOR TO OCCUPANCY OF ANY UNITS.

    b. PRIOR TO ACCEPTANCE OF STREET IMPROVEMENTS BY THE CITY, THE DEVELOPER SHALL INSTALL ANY ADDITIONAL TRAFFIC SIGNS, STRIPING, AND PAVEMENT MARKINGS DETERMINED NECESSARY BY THE CITY'S TRAFFIC ENGINEER AFTER INSPECTION OF THE FINAL PHYSICAL IMPROVEMENTS FOR ALIGNMENT AND PROFILE TO INSURE SAFE OPERATION OF ALL INTERSECTIONS AND SEGMENTS OF STREETS.
11. CONTRACTOR SHALL INSTALL NEW BLUE FIRE HYDRANT MARKER AT ALL FIRE HYDRANTS.

LEGEND (SIGNING AND STRIPING SHEETS)

- EXISTING SIGN TO REMAIN
- INSTALL NEW SIGN
- PROPOSED STREET LIGHT
- INSTALL NEW THERMOPLASTIC STRIPING PER DETAIL NUMBER
- EXISTING STRIPING TO REMAIN
- CONFORM/END/CHANGE DETAILS
- PROPOSED FIRE HYDRANT BLUE MARKER (TYP)
- INSTALL NEW BIKE LANE MARKING PER CALTRANS STANDARD PLANS A24A AND A24C.
- INSTALL NEW BIKE SHARROW MARKING PER CALTRANS STANDARD PLANS A24C.

OM1-3	OBJECT MARKER
R1-1	STOP
R1-2	YIELD
R2-1	SPEED LIMIT
R4-7	KEEP RIGHT
R26(CA)	NO PARKING ANYTIME
R81(CA)	BIKE LANE
R81A(CA)	BEGIN
R81B(CA)	END
SW24-2	SCHOOL CROSSWALK WITH ARROW
SW24-3	SCHOOL CROSSWALK AHEAD
W1-7	2 DIRECTIONAL ARROW
W3-2	YIELD AHEAD
W2-6	ROUNDABOUT
W13-1P	ADVISORY SPEED

TJKM
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Pleasanton, CA 94588
tjkm@tjkm.com

REGISTERED PROFESSIONAL ENGINEER
RUTA JARIWALA
No. 73840
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

R.C.E. 73840

DESIGNED:	ESB
DRAWN:	AM
CHECKED:	ESB

CITY OF LATHROP

STANFORD CROSSING EXTENTION

SIGNING AND STRIPING PLANS

DRAWING NO.	SS-1	SHEET	1 OF 1
DATE:	MARCH 2025	SCALE:	1"=40'
PROJECT NO.	228-054		

L:\CITIES\Lathrop\228-054 Stanford Crossing Ext\ACAD\228-054 Stanford Crossing Ext SS 100%.dwg 04 Mar 2025 9:58:47am amaya

Stanford Crossing Road Extension

Stanford Crossing, Lathrop, CA

Landscape Improvement Plans

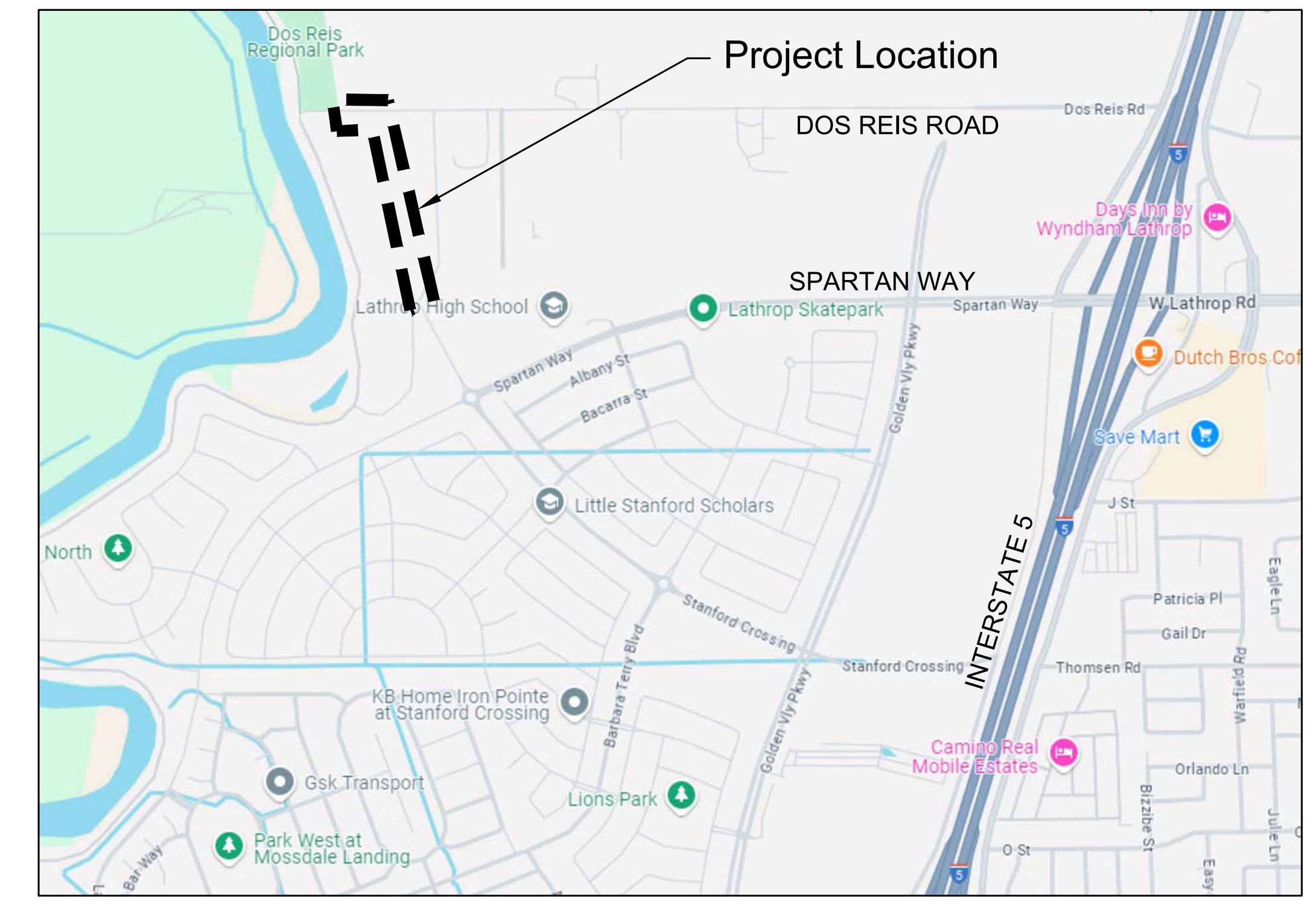
Sam Harned Landscape Architecture
PO Box 2275
Oakdale, CA 95361
209-380-7376
www.harnedla.com

Seal:

Prepared for:
Saybrook Fund Advisors, LLC

Project:
STANFORD CROSSING ROAD EXTENSION
LATHROP, CA

VICINITY MAP



ABBREVIATIONS

AB	AGGREGATE BASE OR ANCHOR BOLT
AC	ASPHALTIC CONCRETE
ACP	ASPHALTIC CONCRETE PAVING/PAVEMENT
ADJ	ADJACENT
ALT	ALTERNATE
AP	ANGLE POINT
APPROX	APPROXIMATE
BLDG	BUILDING
CB	CATCH BASIN
CF	CUBIC FOOT
C/L , CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUE
CTR	CENTER
DI	DRAIN INLET
DIA	DIAMETER
DWG	DRAWING
EA	EACH
EJ, EX JT	EXPANSION JOINT
ELECT	ELECTRICAL
EP	EDGE OF PAVEMENT
EQ	EQUAL
EX	EXISTING
EXIST	EXISTING
(E)	EXISTING
FD	FRENCH DRAIN
FES	FLARED END SECTION
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
FTG	FOOTING
FUT	FUTURE
GB	GRADE BREAK
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRATE
HP	HIGH POINT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INT	INTERSECTION
INV	INVERT
L	LENGTH
LH	LEFT HAND
LP	LOW POINT
LT	LEFT
MAT'L	MATERIAL
MAX	MAXIMUM
MED	MEDIUM
MFR	MANUFACTURE(R)
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MAINLINE
(N)	NEW
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OPP	OPPOSITE
OPT	OPTIONAL
PA, PLTR	PLANTER AREA
PC	POINT OF CURVE
PERF	PERFORATED
PERP	PERPENDICULAR
PL	PROPERTY LINE
POB	POINT OF BEGINNING
POC	POINT OF CONNECTION
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PT	POINT, POINT OF TANGENCY
¼PT	QUARTER POINT ON ARC
½PT	HALF POINT ON ARC
¾PT	THREE-QUARTER POINT ON ARC
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTLITIES EASEMENT
PVC	POLYVINYL CHLORIDE
RAD	RADIUS
REBAR	REINFORCING BAR
REC	RECOMMENDED OR RECOMMENDATION
REF	REFERENCE
REM	REMOVE
REQ, REC'D	REQUIRED
REV	REVISION(S), REVISED
RH	RIGHT HAND
ROW	RIGHTOFWAY
RT	RIGHT
S	SLOPE
SCH	SCHEDULE
SD	STORM DRAIN
SE	SOUTHEAST
SG	SUB-GRADE
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SPEC	SPECIFICATION(S)
SQ	SQUARE
SF	SQUARE FEET
SS	SANITARY SEWER
STD	STANDARD
SURF	SURFACE
SW	SOUTHWEST
SWCL	SIDEWALK CENTERLINE
SYS	SYSTEM
TBC	TOP BACK OF CURB
TC	TOP OF CURB
TS	TOP OF STEP
TS	TUBE STEEL
TW	TOP OF WALL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VAR	VARIES
W	WATER
W/	WITH
W/O	WITHOUT

GENERAL NOTES

1. The landscape drawings are part of and intended to be complementary to the drawings of the civil engineer and of other disciplines. Prior to start of Work, review all drawings, documents, and reports associated with this project and coordinate the work of the landscape drawings with the work of the other disciplines as necessary to ensure a fully complete and coordinated installation.
2. Prior to start of work, thoroughly review all Contract Documents and become thoroughly familiar with the requirements and the intent of these documents including all contract requirements.
3. Prior to start of any work, obtain all necessary permits from the City, State and all other agencies having jurisdiction over the work.
4. Prior to start of construction and as necessary throughout the progress of the Work, contact the Underground Service Alert with minimum 48 hours notice, and have all underground utilities and facilities marked in the field and verify by pot holing, the types, locations, sizes and/or depth of existing utilities within the work area. In the event existing utilities are discovered to be in conflict with the work required of the Contract Documents, immediately notify the Owner and the affected utility company in the most expeditious means available and later confirm in writing. Determine exact locations of all utilities and facilities and implement appropriate and effective measures to protect them.
5. Protect all existing monuments and other survey markers on the project site. Record the location of all monuments and other survey markers prior to the start of work. All such monuments or markers disturbed or destroyed during construction shall be replaced by a licensed surveyor at the Contractor's expense.
6. If during the course of any excavation evidence of archaeological resources including but not limited to artifacts and human remains are encountered, immediately stop all work and activities that may damage or destroy such resources and notify the Owner. Do not re-start affected work and activities until the Owner has provided direction to do so.
7. All work shall conform to applicable governing codes. At commencement of construction Owner and Contractor shall be responsible to consult with applicable agencies to determine if applicable codes, regulations, or governing ordinances have changed and determine if changes to the plans are required to comply with requirements. Changes to plans for updating due to these changes shall be solely the responsibility of the Owner.
8. All traffic controls shall be in conformance with Caltrans Manual of Traffic Controls and these Contract Documents.
9. Verify all work described in the Drawings for dimension, grade, extent, and compatibility with existing site conditions. Any discrepancies and unexpected conditions that affect or change the work described in the contract documents shall be brought to the Landscape Architect's attention immediately. Do not proceed with the work in the area of discrepancies until all such discrepancies are resolved. Proceeding with affected work prior to acceptable resolution will be at Contractor's own risk and may require the Contractor to remove and replace work and execute extra work at no additional cost to the Owner.
10. Omissions from the Drawings or Specifications or the misdescription of any work, which is manifestly necessary to carry out the intent of the Drawings and Specifications, or which is customarily performed, shall not relieve the Contractor from performing such omitted or described details of the work. Contractor shall perform such work as if fully and completely set forth and described in the drawings and specifications.
11. Written dimensions shall take precedence over drawing scale or proportion. Larger scale drawings shall take precedence over small scale drawings.
12. Removal and replacement limits of any existing feature shown on the Drawings are for general reference only. Actual limits shall be as required by the new work and shall be verified in the field with Owner.
13. RECORD DRAWINGS: Maintain one set of Contract Documents on site for use in documenting current progress of work and all changes. Document progress and changes with red, indelible ink. Make documents available to Landscape Architect for review at all site visits and as requested. Draft all changes in CAD files copy and note changes to specifications on copies of the original specifications using indelible black or red ink as directed. Unless otherwise specified, these shall serve as the Record Documents that must be submitted prior to final payment.
14. The Owner may have other work within this project area being executed under separate contracts by other contractors ("others") concurrently with the execution of work covered by these documents. Contractor shall coordinate work of this contract with work of others as necessary to ensure the proper interface of this work with work of others and by such means, methods, and timing that the work of others is not impeded.

SHEET INDEX

PROJECT INFORMATION

Project Name:	Stanford Crossing
Project Applicant:	Saybrook Funds Advisors, LLC
Project Address:	Lathrop, CA
Total Landscape Area:	25,553 sf
Project Type:	Public Streetscape
Water Supply:	Municipal Potable

Owner Information:
Saybrook Fund Advisors, LLC
303 Twin Dolphin Drive
Redwood Shores, Ca 94065
(650) 632-4522
Contact: Jeffrey Wilson

Revision:

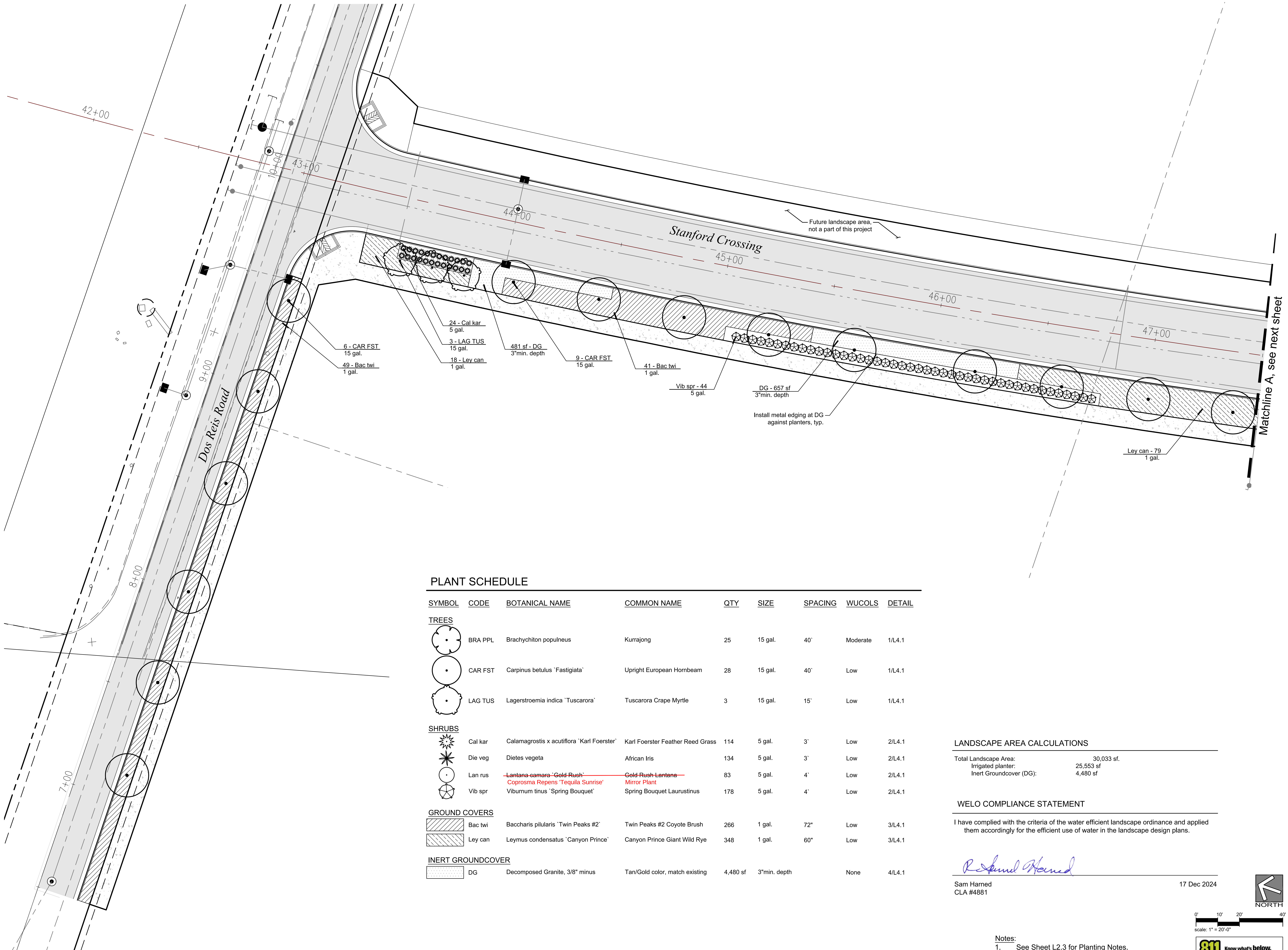
No.	Desc.	Date

Date:	12/17/2024
Drawn:	RSH
Checked:	RSH
Project No.:	24-28
Scale:	none

Sheet:
Cover Sheet

L0.1

Know what's below. 811 before you dig.



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	QTY	SIZE	SPACING	WUCOLS	DETAIL
TREES								
	BRA PPL	Brachychiton populneus	Kurrajong	25	15 gal.	40`	Moderate	1/L4.1
	CAR FST	Carpinus betulus `Fastigiata`	Upright European Hornbeam	28	15 gal.	40`	Low	1/L4.1
	LAG TUS	Lagerstroemia indica `Tuscarora`	Tuscarora Crape Myrtle	3	15 gal.	15`	Low	1/L4.1
SHRUBS								
	Cal kar	Calamagrostis x acutiflora `Karl Foerster`	Karl Foerster Feather Reed Grass	114	5 gal.	3`	Low	2/L4.1
	Die veg	Dietes vegeta	African Iris	134	5 gal.	3`	Low	2/L4.1
	Lan rus	~~Lantana camara `Gold Rush`~~ Coprosma Repens 'Tequila Sunrise'	~~Gold Rush Lantana~~ Mirror Plant	83	5 gal.	4`	Low	2/L4.1
	Vib spr	Viburnum tinus `Spring Bouquet`	Spring Bouquet Laurustinus	178	5 gal.	4`	Low	2/L4.1
GROUND COVERS								
	Bac twi	Baccharis pilularis `Twin Peaks #2`	Twin Peaks #2 Coyote Brush	266	1 gal.	72"	Low	3/L4.1
	Ley can	Leymus condensatus `Canyon Prince`	Canyon Prince Giant Wild Rye	348	1 gal.	60"	Low	3/L4.1
INERT GROUNDCOVER								
	DG	Decomposed Granite, 3/8" minus	Tan/Gold color, match existing	4,480 sf	3"min. depth		None	4/L4.1

LANDSCAPE AREA CALCULATIONS

Total Landscape Area:	30,033 sf.
Irrigated planter:	25,553 sf
Inert Groundcover (DG):	4,480 sf

WELO COMPLIANCE STATEMENT

I have complied with the criteria of the water efficient landscape ordinance and applied them accordingly for the efficient use of water in the landscape design plans.

Sam Harned
CLA #4881

17 Dec 2024

NORTH

0' 10' 20' 40'
scale: 1" = 20'-0"

Notes:
1. See Sheet L2.3 for Planting Notes.

Know what's below. 811 before you dig.

Sam Harned
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209-380-7376
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Seal:

LICENSED LANDSCAPE ARCHITECT
STATE OF CALIFORNIA
12/31/26
12/17/2024

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING ROAD EXTENSION

LATHROP, CA

Revision:

No. Desc. Date

Date:	12/17/2024
Drawn:	RSH
Checked:	RSH
Project No.:	24-28
Scale:	1" = 20'-0"

Sheet:

Planting Plan
Sta. 43+00 - 47+50

L2.1

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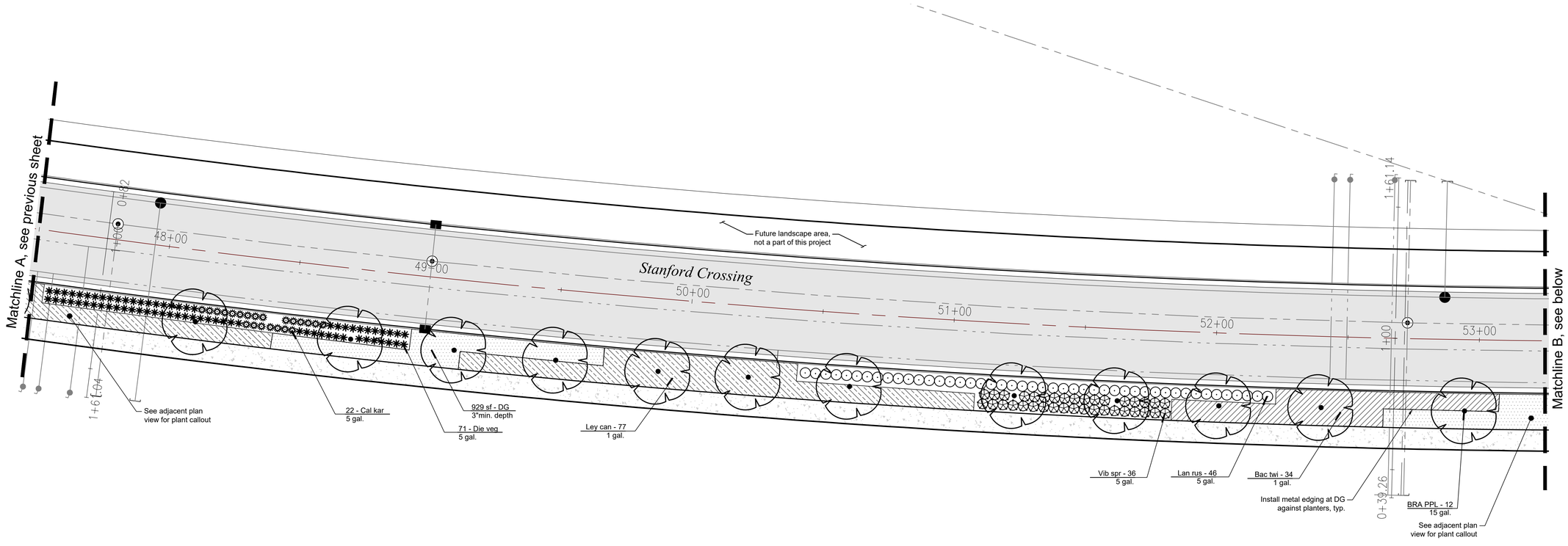

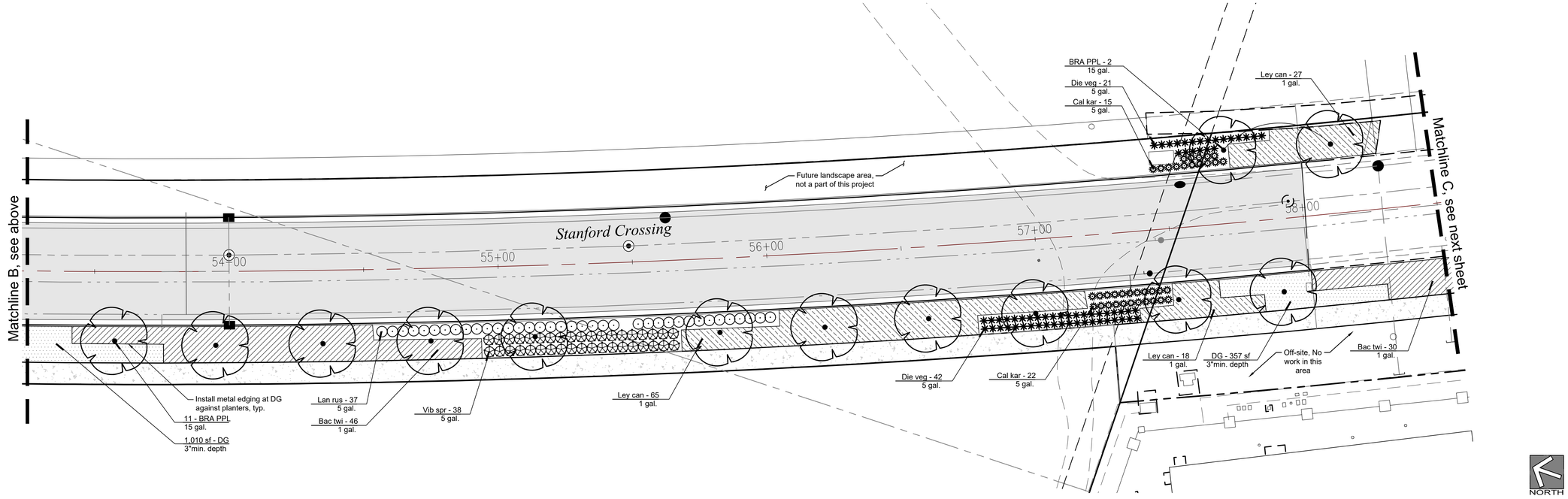

Notes:
1. See Sheet L2.3 for Planting Notes and Plant Schedule.

Existing planter, to remain. No landscape work in this area.

NORTH

0' 10' 20' 40'
scale: 1" = 20'-0"

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

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Seal:

REGISTERED LANDSCAPE ARCHITECT
Richard Sam Harned
Number 12/31/24
12/17/2024
STATE OF CALIFORNIA

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING ROAD EXTENSION
LATHROP, CA

Revision:

No.	Desc.	Date

Date:	12/17/2024
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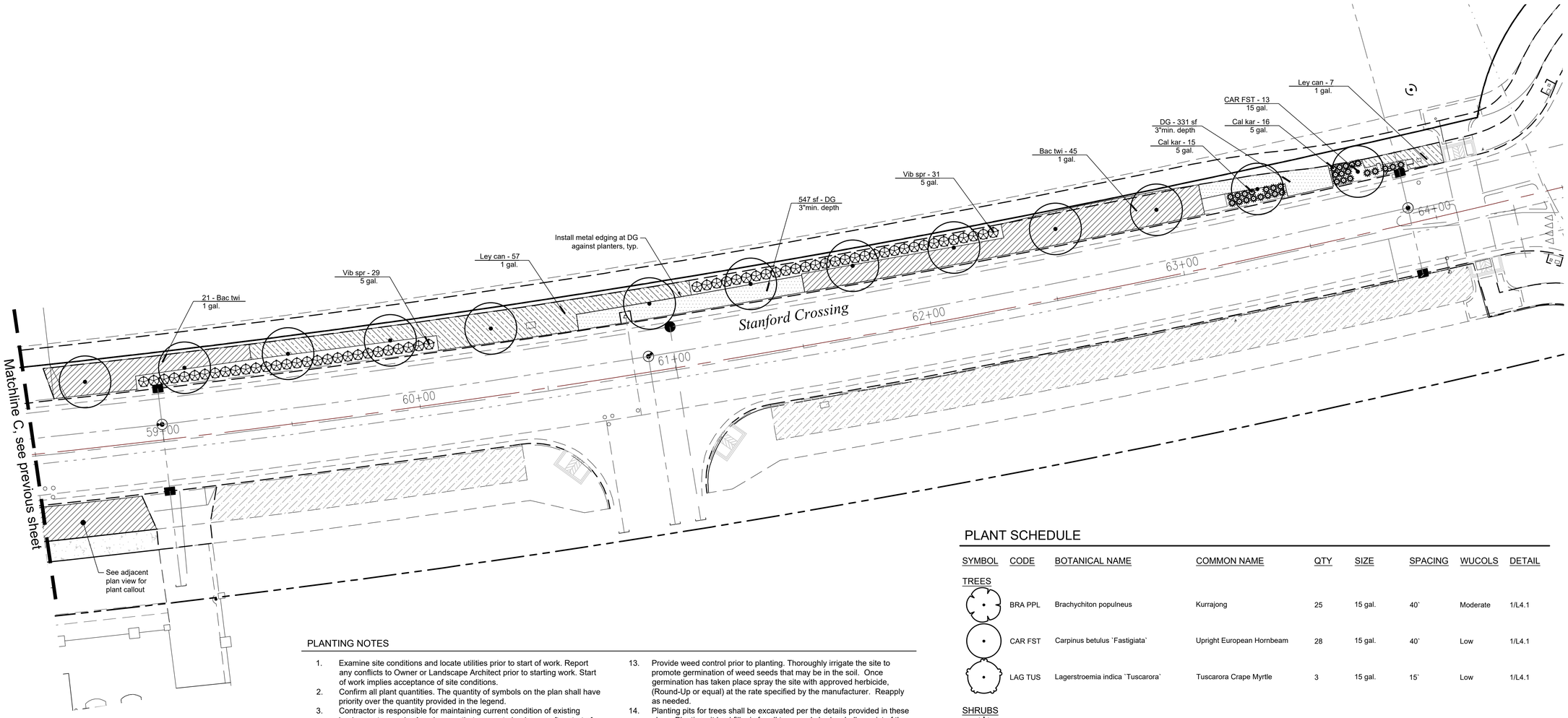
Project No.:	24-28
Scale:	1" = 20'-0"

Sheet:

Planting Plan Sta. 47+50 - 58+50

L2.2



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	QTY	SIZE	SPACING	WUCOLS	DETAIL
TREES								
	BRA PPL	Brachychiton populneus	Kurrajong	25	15 gal.	40`	Moderate	1/L4.1
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	Lan rus	~~Lantana camara `Gold Rush`~~ Coprosma Repens 'Tequila Sunrise'	~~Gold Rush Lantana~~ Mirror Plant	83	5 gal.	4`	Low	2/L4.1
	Vib spr	Viburnum tinus `Spring Bouquet`	Spring Bouquet Laurustinus	178	5 gal.	4`	Low	2/L4.1
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	Bac twi	Baccharis pilularis `Twin Peaks #2`	Twin Peaks #2 Coyote Brush	266	1 gal.	72"	Low	3/L4.1
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INERT GROUNDCOVER								
	DG	Decomposed Granite, 3/8" minus	Tan/Gold color, match existing	4,480 sf	3"min. depth		None	4/L4.1

Existing planter, to remain. No landscape work in this area.

NORTH

0" 10' 20' 40'

scale: 1" = 20'-0"

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

PLANTING NOTES

1. Examine site conditions and locate utilities prior to start of work. Report any conflicts to Owner or Landscape Architect prior to starting work. Start of work implies acceptance of site conditions.
2. Confirm all plant quantities. The quantity of symbols on the plan shall have priority over the quantity provided in the legend.
3. Contractor is responsible for maintaining current condition of existing landscape to remain. Any damage that occurs to landscape after start of work shall be repaired or replaced at no additional expense to the Owner.
4. The contractor shall be responsible for the purchasing of all material to provide a complete installation per the intent of the contract documents.
5. The contractor is responsible for the protection of all material until the project has been completely turned over to the owner.
6. Landscape Architect reserves the right to review plant material prior to planting. Plant material may be rejected at any time due to condition, form, or damage, before or after planting. Installed and then rejected material shall be replaced by the contractor at contractor expense.
7. All plant material to be nursery grown in a climate similar to that of the project site. All plant material shall:
   - 7.1. Be vigorous and of normal habit of growth.
   - 7.2. Be pest and disease free, including insects, insect eggs and larvae.
   - 7.3. Be free of girdling roots, sun scald, abrasions, disease
8. Plants shall equal or exceed the standards as outlined by the American Standards for Nursery Stock and to applicable California Agriculture Code.
9. The landscape contractor shall, prior to installation of any plant material, provide for a Soil Agronomy Report (per WELO) from an approved soils laboratory that shall include recommendations for amending and preparing soil. Provide report to landscape architect for review and further direction regarding soil amendments and preparation. Soil analysis shall include: soil texture, infiltration rate, soil pH, total soluble salts, sodium, and percent organic matter.
10. Prepare the soil by removing all rock and debris larger than 1" from planting areas; legally dispose of materials removed from this process.
11. Amend the soil per the recommendations of the Soil Agronomy Report, including any additional amendments specified by the landscape architect, prior to the installation of plant material. Provided below is a list of minimum amendments that shall be incorporated into all planting pits and broadcast into soil to depth of 12", by means of a roto-tiller or equal, per 1000 square feet. This list is provided for Bid purposes and shall be augmented as recommended by the Soils Agronomy Report.
    - 4 cyds organic amendment. Cow manure or nitrogen-treated sawdust or ground bark humus
    - 15 lbs. soil sulfur
    - 15 lbs. 15-15-15 fertilizer
12. Notify landscape architect if site soil has been lime treated. Additional testing may be required to determine extent of lime treatment, compaction, or other condition that may be deleterious to healthy plant growth.
13. Provide weed control prior to planting. Thoroughly irrigate the site to promote germination of weed seeds that may be in the soil. Once germination has taken place spray the site with approved herbicide, (Round-Up or equal) at the rate specified by the manufacturer. Reapply as needed.
14. Planting pits for trees shall be excavated per the details provided in these plans. Planting pit backfill mix for all trees and shrubs shall consist of the following:
    - 6 parts 'on-site' soil
    - 4 parts organic amendment (same as described above)
    - 1 lb./yd. of mix 12-12-12 commercial fertilizer
    - 2 lbs./cu. yd. of mix Iron Sulfate
    - 10 lbs./cu. yd. of mix Agricultural Gypsum
15. Fertilizer tablets (20-10-5) to be placed in all planting pits in the following quantities per plant container size:
    - 1 gallon 1 tablet
    - 5 gallon 3 tablets
    - 15 gallon 9 tablets
    - 24" box 9 tablets
    - 36" box 15 tablets
16. Plant establishment period of ninety (90) days shall commence upon notice of Substantial Completion. Maintain all plant material throughout duration of plant establishment period to a point accepted by the Landscape Architect or Owner's Representative. See Planting Specifications for additional information.
17. Trees to be planted a min. of 5'-0" from edge of paving or walls, U.O.N.
    - 17.1. Tree planting shall conform to minimum distances away from lights or other utilities, as published in the local jurisdictions standards or guidelines.
18. Groundcover shall be installed continuous under all shrub masses, U.O.N.
19. Install vines with runners securely attached to the adjacent wall or trellis. Remove nursery stakes prior to completion of plant establishment period, unless otherwise directed by owner or landscape architect.
20. Prior to placing mulch, apply pre-emergent weed control, (Ronstar, or approved equal) in the amounts specified by the manufacturer.
21. Uniformly place a minimum 3" depth of recycled, organic mulch (3/4" - 1-1/2" chip size) over all shrub areas. Do not install mulch at turf areas. Color: Brown (un-dyed).
    - 21.1. "Gorilla Hair" is not acceptable unless specifically noted.
    - 21.2. Do not install bark mulch in areas of inundation (e.g. - bio-swale or basin). Place min. 3" layer of crushed aggregate mulch ($\frac{3}{4}$") in these areas in place of the bark mulch. Transition back to bark mulch at top of slope, U.O.N. Submit sample for approval.

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Seal:

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING ROAD EXTENSION

LATHROP, CA

Revision:

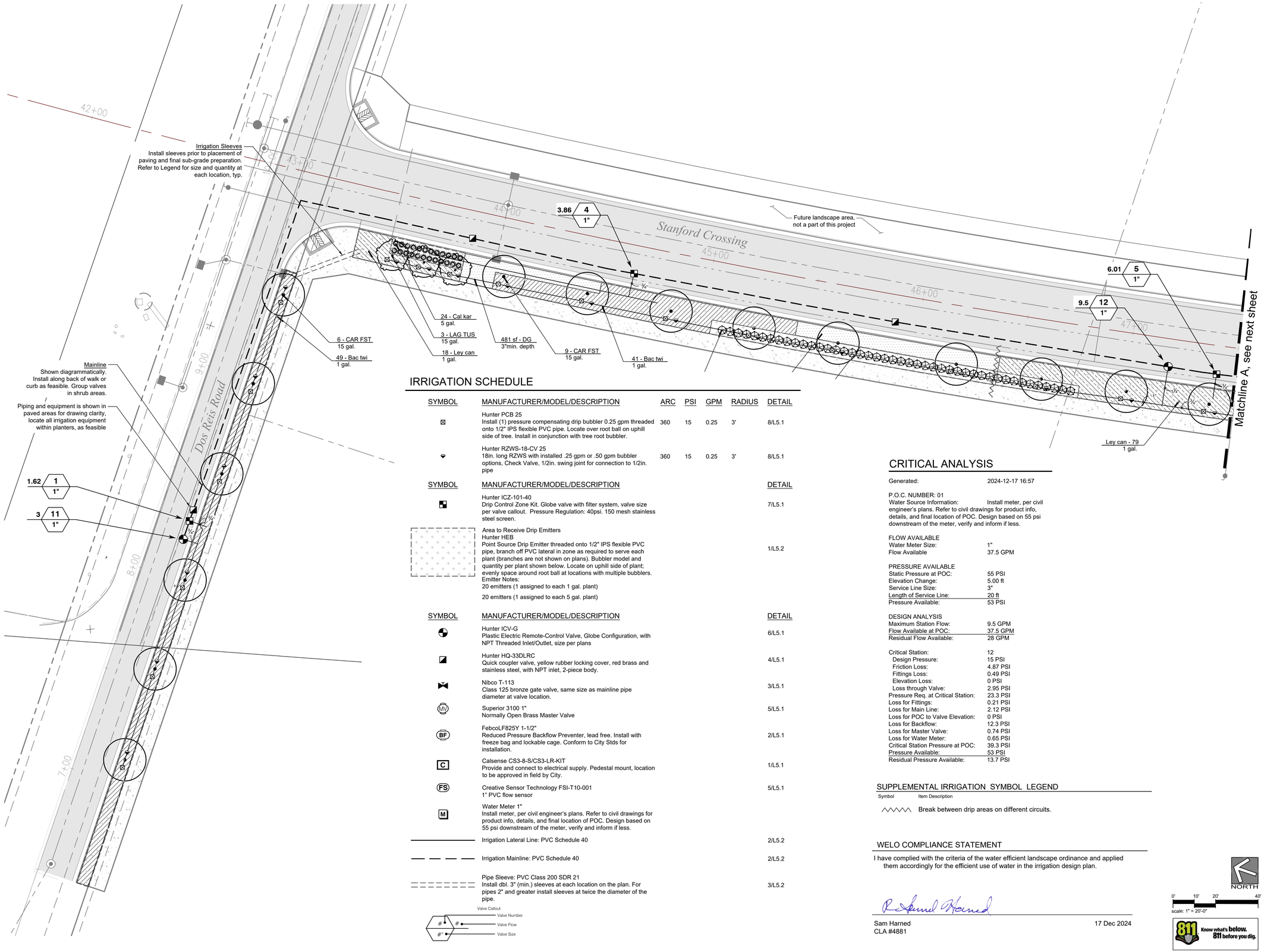
No.	Desc.	Date

Date:	12/17/2024
Drawn:	RSH
Checked:	RSH
Project No.:	24-28
Scale:	1" = 20'-0"

Sheet:

Planting Plan Sta. 58+50 - 64+50(End)

L2.3



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	ARC	PSI	GPM	RADIUS	DETAIL
⊠	Hunter PCB 25 Install (1) pressure compensating drip bubbler 0.25 gpm threaded onto 1/2" IPS flexible PVC pipe. Locate over root ball on uphill side of tree. Install in conjunction with tree root bubbler.	360	15	0.25	3'	8/L5.1
◒	Hunter RZWS-18-CV 25 18in. long RZWS with installed .25 gpm or .50 gpm bubbler options, Check Valve, 1/2in. swing joint for connection to 1/2in. pipe	360	15	0.25	3'	8/L5.1

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
◪	Hunter ICZ-101-40 Drip Control Zone Kit. Globe valve with filter system, valve size per valve callout. Pressure Regulation: 40psi. 150 mesh stainless steel screen.	7/L5.1
	Area to Receive Drip Emitters Hunter HEB Point Source Drip Emitter threaded onto 1/2" IPS flexible PVC pipe, branch off PVC lateral in zone as required to serve each plant (branches are not shown on plans). Bubbler model and quantity per plant shown below. Locate on uphill side of plant; evenly space around root ball at locations with multiple bubblers. Emitter Notes: 20 emitters (1 assigned to each 1 gal. plant) 20 emitters (1 assigned to each 5 gal. plant)	1/L5.2

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
◔	Hunter ICV-G Plastic Electric Remote-Control Valve, Globe Configuration, with NPT Threaded Inlet/Outlet, size per plans	6/L5.1
◪	Hunter HQ-33DLRC Quick coupler valve, yellow rubber locking cover, red brass and stainless steel, with NPT inlet, 2-piece body.	4/L5.1
⋈	Nibco T-113 Class 125 bronze gate valve, same size as mainline pipe diameter at valve location.	3/L5.1
MV	Superior 3100 1" Normally Open Brass Master Valve	5/L5.1
BF	FebcoLF825Y 1-1/2" Reduced Pressure Backflow Preventer, lead free. Install with freeze bag and lockable cage. Conform to City Stds for installation.	2/L5.1
C	Calsense CS3-8-S/CS3-LR-KIT Provide and connect to electrical supply. Pedestal mount, location to be approved in field by City.	1/L5.1
FS	Creative Sensor Technology FSI-T10-001 1" PVC flow sensor	5/L5.1
M	Water Meter 1" Install meter, per civil engineer's plans. Refer to civil drawings for product info, details, and final location of POC. Design based on 55 psi downstream of the meter, verify and inform if less.	
	Irrigation Lateral Line: PVC Schedule 40	2/L5.2
	Irrigation Mainline: PVC Schedule 40	2/L5.2
	Pipe Sleeve: PVC Class 200 SDR 21 Install dbl. 3" (min.) sleeves at each location on the plan. For pipes 2" and greater install sleeves at twice the diameter of the pipe.	3/L5.2

Valve Callout

CRITICAL ANALYSIS

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P.O.C. NUMBER: 01
Water Source Information: Install meter, per civil engineer's plans. Refer to civil drawings for product info, details, and final location of POC. Design based on 55 psi downstream of the meter, verify and inform if less.

FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	37.5 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	55 PSI
Elevation Change:	5.00 ft
Service Line Size:	3"
Length of Service Line:	20 ft
Pressure Available:	53 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	9.5 GPM
Flow Available at POC:	37.5 GPM
Residual Flow Available:	28 GPM
Critical Station:	12
Design Pressure:	15 PSI
Friction Loss:	4.87 PSI
Fittings Loss:	0.49 PSI
Elevation Loss:	0 PSI
Loss through Valve:	2.95 PSI
Pressure Req. at Critical Station:	23.3 PSI
Loss for Fittings:	0.21 PSI
Loss for Main Line:	2.12 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	12.3 PSI
Loss for Master Valve:	0.74 PSI
Loss for Water Meter:	0.65 PSI
Critical Station Pressure at POC:	39.3 PSI
Pressure Available:	53 PSI
Residual Pressure Available:	13.7 PSI

SUPPLEMENTAL IRRIGATION SYMBOL LEGEND

Symbol	Item Description
⋀⋀⋀	Break between drip areas on different circuits.

WELO COMPLIANCE STATEMENT

I have complied with the criteria of the water efficient landscape ordinance and applied them accordingly for the efficient use of water in the irrigation design plan.

Sam Harned
CLA #4881

17 Dec 2024

NORTH

0' 10' 20' 40'
scale: 1" = 20'-0"

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

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PO Box 2275
Oakdale, CA 95361
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www.harnedla.com

Seal:

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING ROAD EXTENSION
LATHROP, CA

Revision:

No.	Desc.	Date

Date:	12/17/2024
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Checked:	RSH
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Scale:	1" = 20'-0"

Sheet:

Irrigation Plan Sta. 43+00 - 47+50

L3.1

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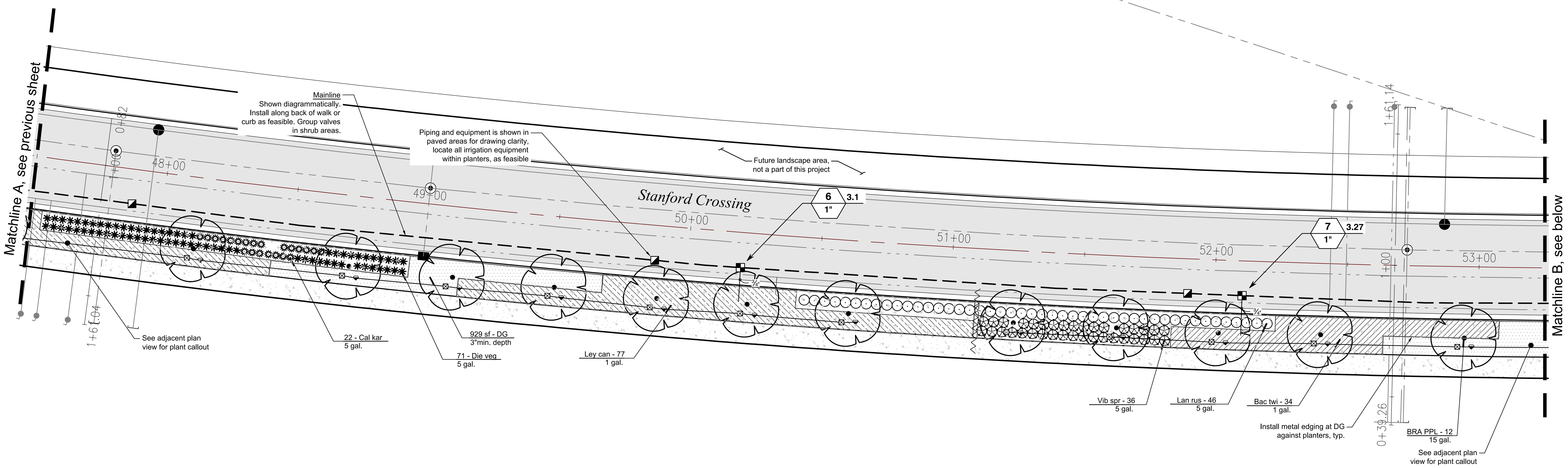

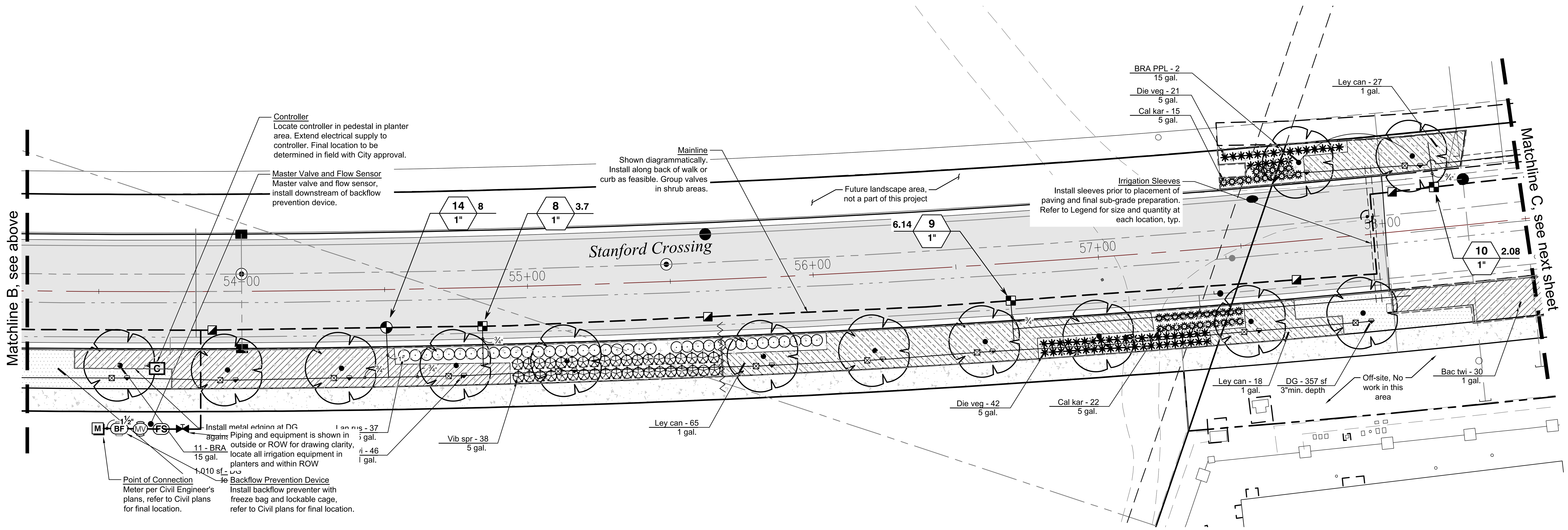

SUPPLEMENTAL IRRIGATION SYMBOL LEGEND

Symbol	Item Description
(break symbol)	Break between drip areas on different circuits.

Notes:

1. See Sheet L3.3 for Irrigation Notes and Irrigation Schedule.

Existing planter, to remain. No landscape work in this area.

scale: 1" = 20'-0"

Know what's below. 811 before you dig.

Sam Harned Landscape Architecture
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Oakdale, CA 95361
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Seal:

Prepared for:
Saybrook Fund Advisors, LLC

Project:
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LATHROP, CA

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Project No.:	24-28
Scale:	1" = 20'-0"

Sheet:
Irrigation Plan Sta. 47+50 - 58+50

L3.2

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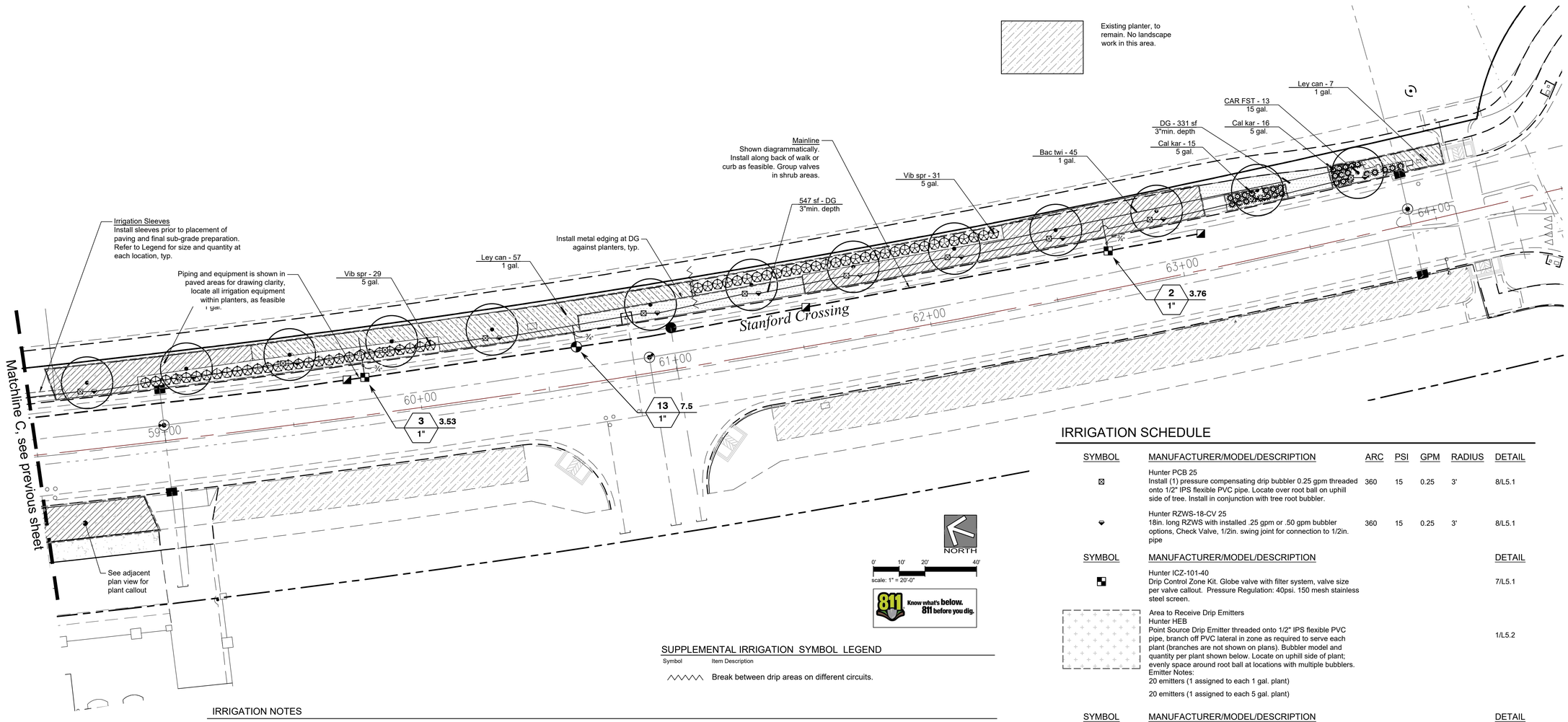

IRRIGATION SCHEDULE

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⋈	Nibco T-113 Class 125 bronze gate valve, same size as mainline pipe diameter at valve location.	3/L5.1
MV	Superior 3100 1" Normally Open Brass Master Valve	5/L5.1
BF	FebcoLF825Y 1-1/2" Reduced Pressure Backflow Preventer, lead free. Install with freeze bag and lockable cage. Conform to City Stds for installation.	2/L5.1
C	Calsense CS3-8-S/CS3-LR-KIT Provide and connect to electrical supply. Pedestal mount, location to be approved in field by City.	1/L5.1
FS	Creative Sensor Technology FSI-T10-001 1" PVC flow sensor	5/L5.1
M	Water Meter 1" Install meter, per civil engineer's plans. Refer to civil drawings for product info, details, and final location of POC. Design based on 55 psi downstream of the meter, verify and inform if less.	
———	Irrigation Lateral Line: PVC Schedule 40	2/L5.2
— — —	Irrigation Mainline: PVC Schedule 40	2/L5.2
- - -	Pipe Sleeve: PVC Class 200 SDR 21 Install dbl. 3" (min.) sleeves at each location on the plan. For pipes 2" and greater install sleeves at twice the diameter of the pipe.	3/L5.2

Valve Callout
Valve Number
Valve Flow
Valve Size

SUPPLEMENTAL IRRIGATION SYMBOL LEGEND

Symbol	Item Description
⩘⩘⩘	Break between drip areas on different circuits.

IRRIGATION NOTES

1. Contractor shall become familiar with the drawings, specifications, and site conditions prior to beginning work. Should conflicting information be found in these documents or between these documents and site conditions, notify the Landscape Architect before proceeding with the work in question.
2. All existing utilities, water lines, and fire hydrants shall remain connected and in full continuous operation unless specifically directed otherwise.
3. Irrigation design is based on a minimum 55 psi and maximum 70 psi static water pressure at the point of connection after the meter. Verify prior to ordering materials or starting work. Notify the Landscape Architect if water pressure differs from pressure on which the design is based. Variation from design pressure may require changes and additions to the equipment specifications.
   - 3.1. Booster Pump: If verified static pressure is less than minimum required design pressure, provide a booster pump as appropriate to yield the required minimum pressure based on anticipated maximum and minimum flows required for system to operate within water window requirements.
   - 3.2. Pressure Regulator: If verified static pressure is more than maximum design pressure, provide a pressure regulator as appropriate to yield the required pressure based on anticipated maximum and minimum flows required for system to operate within water window requirements.
4. Irrigation plan is diagrammatic. Actual routing of pipe and location of equipment shall be determined based on field conditions and as directed by the Landscape Architect. Install pipe and equipment in landscape areas wherever possible unless specifically noted otherwise. Stake layout of mainline and primary laterals for field review and approval prior to trenching. Field adjust existing irrigation system as necessary.
5. Pipe Sizing:
   - 5.1. Minimum pipe size shall be 3/4".
   - 5.2. Unlabeled pipe segments shall be equal to the size of the segment immediately upstream.
   - 5.3. In making adjustments to irrigation zone layouts Contractor shall be responsible to determine pipe sizes as required to deliver water pressure required for each outlet device considering flow rate, elevation changes, length of run, and other factors affecting pressure loss. Maximum flows in various pipe sizes shall not exceed the following guidelines. Flows may need to be significantly less than the maximums stated below to off-set other factors affecting pressure loss:
     - 5.3.1. 3/4": up to 8 gpm.
     - 5.3.2. 1": 8-12 gpm.
     - 5.3.3. 1-1/4": 12-22 gpm.
     - 5.3.4. 1-1/2": 22-30 gpm.
     - 5.3.5. 2": 30-50 gpm.
   - 5.4. Mainline pipe sizes shall not be changed without written approval of the Landscape Architect.
   - 5.5. Lateral line pipe runs of lengths greater than the typical distance between outlet devices shall not be made without written approval of the Landscape Architect.
6. Do not install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Notify the Landscape Architect of all such conditions immediately upon discovery. In the event this notification is not provided, the Contractor shall assume full responsibility for all revisions necessary in response to field conditions with no additional compensation.
7. Controller(s):
   - 7.1. Locate as directed. Extend electrical service to controllers and dedicate one breaker of proper size for each controller. Provide one additional duplex outlet at each controller location.
   - 7.2. Electrical service to controllers shall be completed by a licensed electrical contractor in accordance with all applicable codes.
8. Sleeves:
   - 8.1. All pipe under existing and proposed paving shall be installed in sleeves.
   - 8.2. Sleeves are shown for contractor's convenience. Contractor shall be responsible to coordinate irrigation sleeve locations and installation with other trades.
   - 8.3. Extend all sleeves 18 inches beyond paving, cap and clearly mark by approved means to facilitate recovery.
   - 8.4. Install sleeves to accommodate future paving where indicated or as may be needed.
9. Spray Heads and Rotors:
   - 9.1. Install perpendicular to grade unless otherwise noted in plans.
10. Drip Emitters:
    - 10.1. Install drip supply lines minimum 3" below grade.
    - 10.2. Located emitters 3"-6" from main trunk or stem.
    - 10.3. Include bug-guard and galvanized stake(s) for each emitter.
11. Contractor to flush entire system and adjust all delivery devices and assemblies for complete coverage and reduced over-spray, prior to project completion.
12. An irrigation audit shall be completed by a Certified Landscape Irrigation Auditor in conformance with the jurisdictional Water Efficient Landscape Ordinance (WELO or MWELO). The audit shall be provided to the jurisdictional agency for review and approval.

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Seal:

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING
ROAD EXTENSION
LATHROP, CA

Revision:

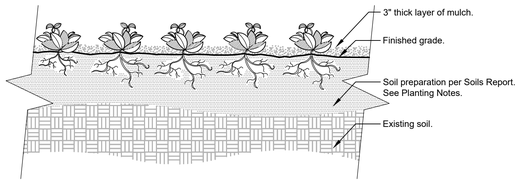
No.	Desc.	Date

Date:	12/17/2024
Drawn:	RSH
Checked:	RSH
Project No.:	24-28
Scale:	1" = 20'-0"

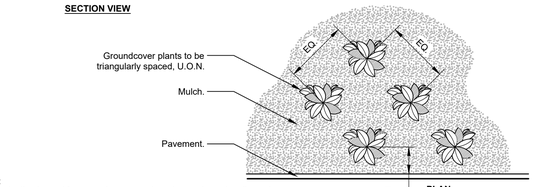
Sheet:

Irrigation Plan
Sta. 58+50 -
64+50(End)

L3.3



SECTION VIEW

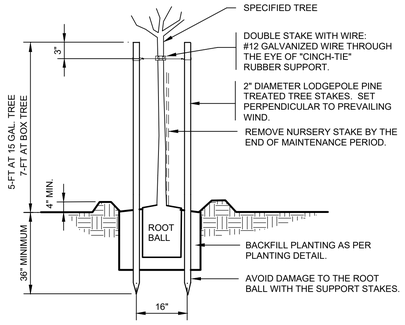


PLAN

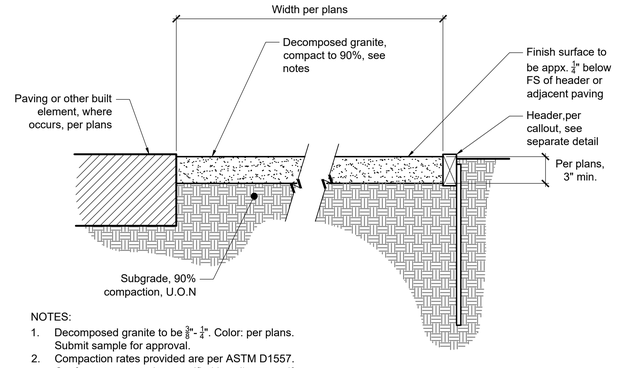
Notes:
1- See planting legend for groundcover species, size, and spacing dimension.
2- Small roots (¼" or less) that grow around, up, or down the root ball periphery are considered a
normal condition in container production and are acceptable however they should be eliminated at the
time of planting. Roots on the periperhy can be removed at the time of planting.
3- Settle soil around root ball of each groundcover prior to mulching.

3 GROUNDCOVER PLANTING

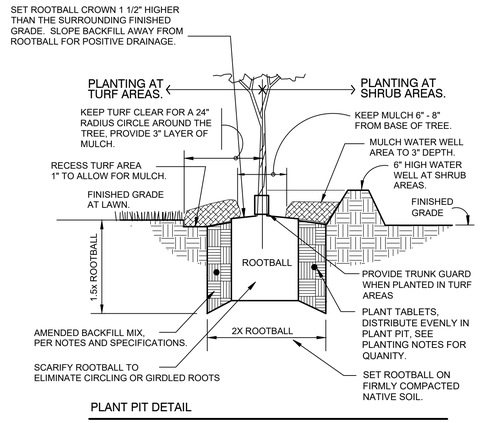
NTS 329301-12



STAKING DETAIL



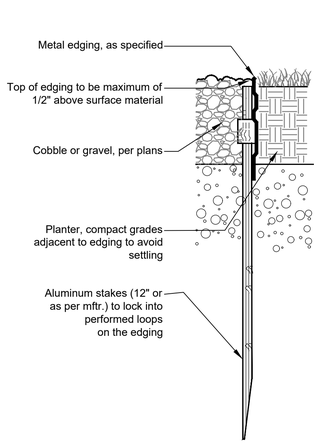
NOTES:
1. Decomposed granite to be ⅜"- ½". Color: per plans. Submit sample for approval.
2. Compaction rates provided are per ASTM D1557. Conform to compaction specified in soils report, if one is prepared for this project.



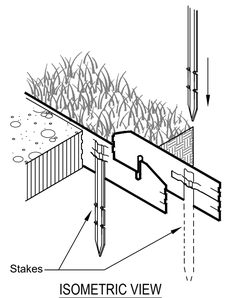
PLANT PIT DETAIL

4 DECOMPOSED GRANITE (DG) PAVING

1 1/2" = 1'-0" 321516-04



SIDE VIEW



ISOMETRIC VIEW

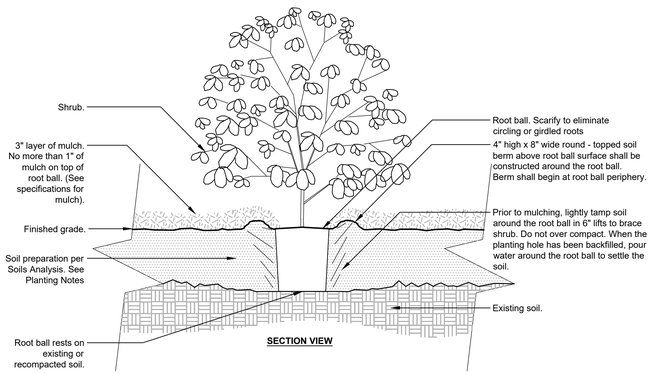
NOTES:
1. Install per manufacturer's "installation guidelines".
2. Corners - cut base edging up halfway and for a continuous corner.
3. Do not scale drawing.

5 METAL EDGING

3/4" = 1'-0" 329413.23-01

1 TREE PLANTING

1" = 1'-0" 329301-13



SECTION VIEW

2 SHRUB PLANTING

NTS 329301-11

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Sam Harned
Landscape
Architecture
P O B o x 2 2 7 5
O a k d a l e , C A 9 5 3 6 1
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w w w . h a r n e d l a . c o m

Seal:

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING ROAD EXTENSION

LATHROP, CA

Revision:

No.	Desc.	Date

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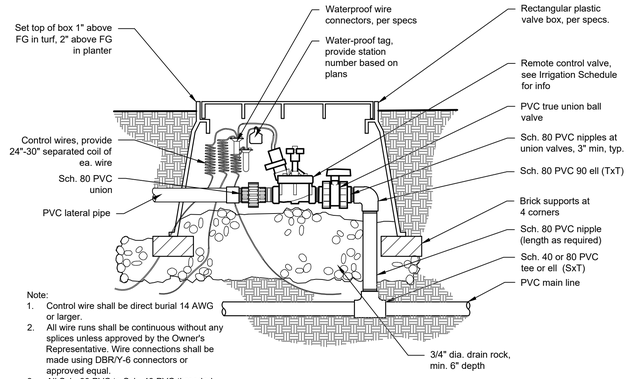
Sheet:

Planting Details

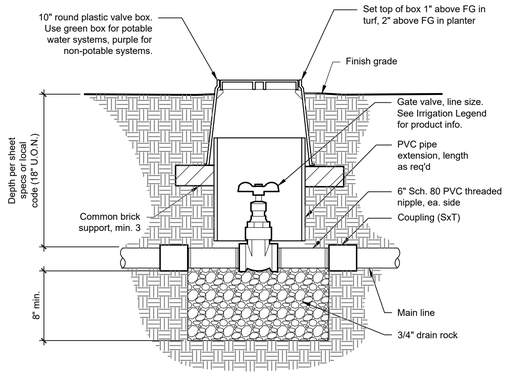
L4.1



Note:
1. Control wire shall be direct burial 14 AWG or larger.
2. All wire runs shall be continuous without any splices unless approved by the Owner's Representative. Wire connections shall be made using DBR/Y-6 connectors or approved equal.
3. All Sch. 80 PVC to Sch. 40 PVC threaded connections shall be made using teflon tape.
4. Valve boxes shall be located in planting areas.

6 REMOTE CONTROL VALVE

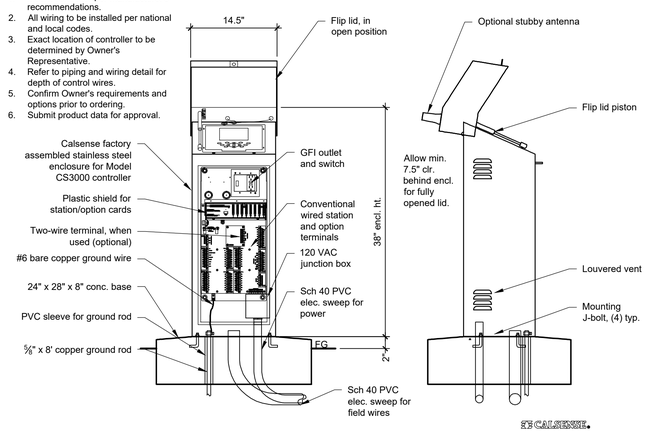
NTS 328401-12



3 GATE VALVE - UP TO 3"

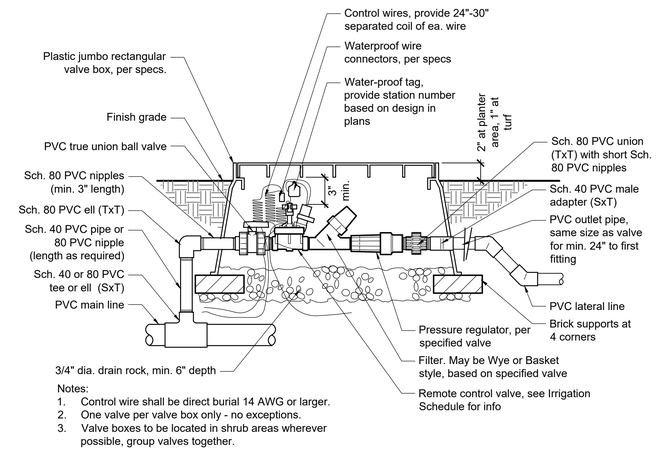
NTS 328401-09

NOTES:
1. Mount controller per manufacturer's recommendations.
2. All wiring to be installed per national and local codes.
3. Exact location of controller to be determined by Owner's Representative.
4. Refer to piping and wiring detail for depth of control wires.
5. Confirm Owner's requirements and options prior to ordering.
6. Submit product data for approval.



1 CONTROLLER - CALSENSE PEDESTAL MOUNT

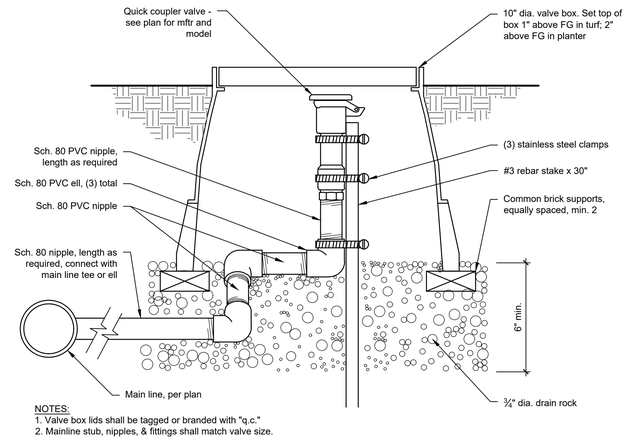
nts 328401-33



Notes:
1. Control wire shall be direct burial 14 AWG or larger.
2. One valve per valve box only - no exceptions.
3. Valve boxes to be located in shrub areas wherever possible, group valves together.

7 DRIP ZONE REMOTE CONTROL VALVE

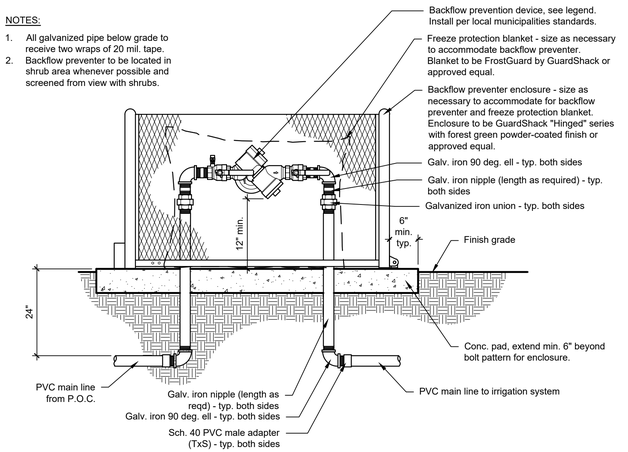
1 1/2" = 1'-0" 328401.01-14



NOTES:
1. Valve box lids shall be tagged or branded with "q.c."
2. Mainline stub, nipples, & fittings shall match valve size.

4 QUICK COUPLER

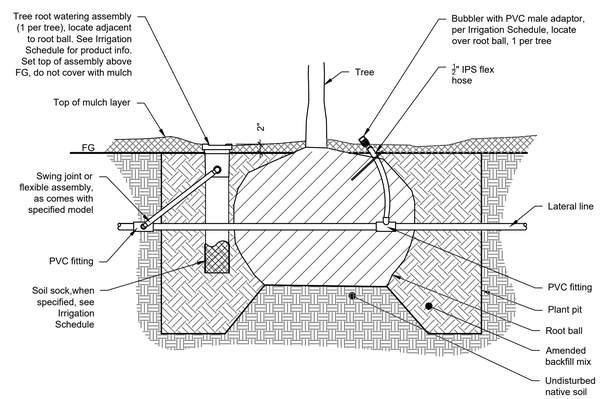
NTS 328401-10



NOTES:
1. All galvanized pipe below grade to receive two wraps of 20 mil. tape.
2. Backflow preventer to be located in shrub area whenever possible and screened from view with shrubs.

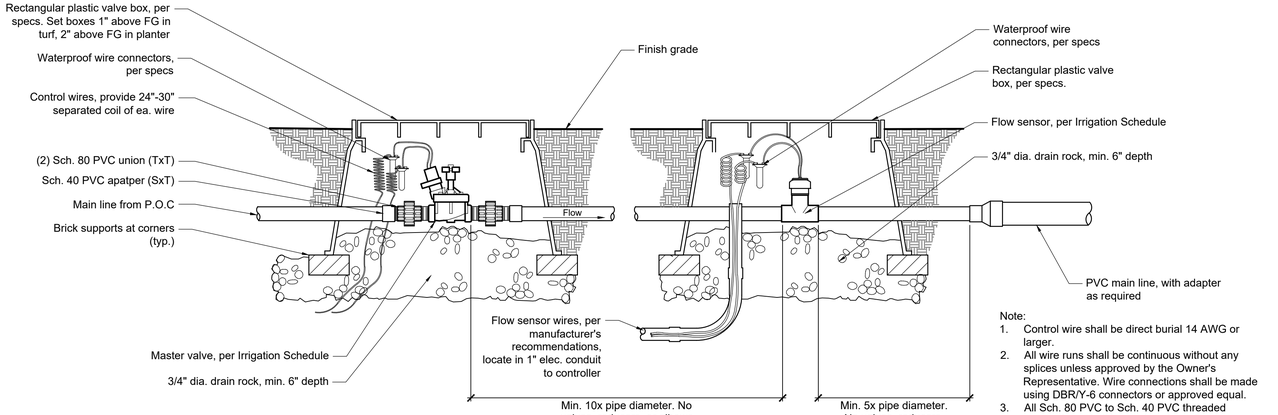
2 BACKFLOW PREVENTION DEVICE WITH ENCLOSURE AND BLANKET

NTS 328401-30



8 TREE ROOT WATERING SYSTEM WITH ADDED BUBBLER

NTS 328401-18



Note:
1. Control wire shall be direct burial 14 AWG or larger.
2. All wire runs shall be continuous without any splices unless approved by the Owner's Representative. Wire connections shall be made using DBR/Y-6 connectors or approved equal.
3. All Sch. 80 PVC to Sch. 40 PVC threaded connections shall be made using teflon tape.
4. Valve boxes shall be located in planting areas.

5 MASTER VALVE AND FLOW SENSOR

NTS 328401-01

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Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING ROAD EXTENSION
LATHROP, CA

Revision:

No.	Desc.	Date

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Scale:	As shown

Sheet:

Irrigation Details

L5.1

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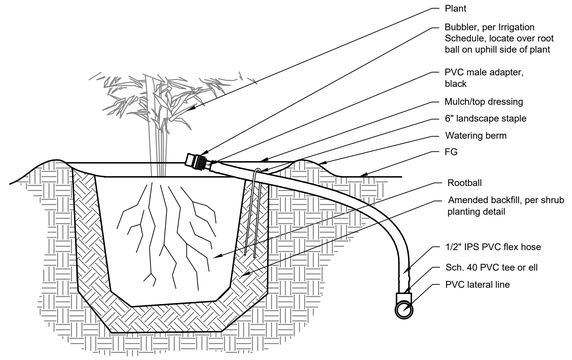
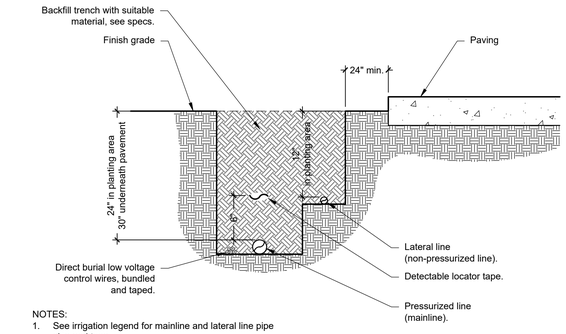


1 BUBBLER ON FLEX HOSE

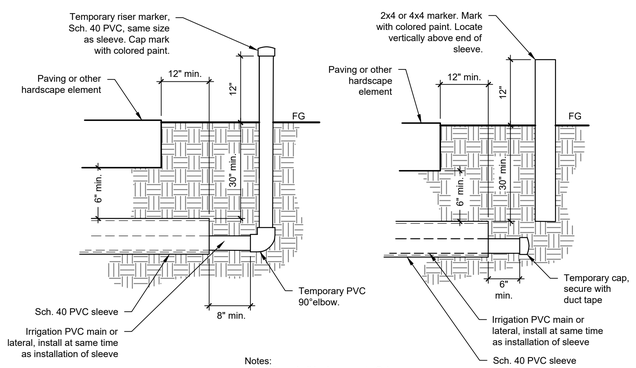
NTS 328401.01-18



NOTES:
1. See irrigation legend for mainline and lateral line pipe size and type.
2. Direct burial control wires shall be installed in Sch. 40 PVC electrical conduit if required.
3. 2-wire irrigation wire shall be installed in Sch. 40 PVC electrical conduit.
4. Detectable locator tape shall be located six inches (6") above the entire mainline run.

2 TRENCHING

NTS 328401.01-29



Notes:
1. Wires shall be in separate Sch 40 electrical conduit, min. 1" dia.
2. Install sleeves side by side in the same trench.

ALTERNATE MARKER

3 IRRIGATION SLEEVE

NTS 328401.01-26

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Sheet:

Irrigation Details

L5.2

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LANDSCAPE WELO ORDINANCE

This project has been designed to comply with the criteria of the Water Efficient Landscape Ordinance - California Code of Regulations Title 23, Division 2, Chapter 2.7 § 490 - 494 ("WELO" or the "Ordinance") as adopted by the jurisdictional agency ("Agency") for this project. The following information provides data required by the Ordinance and specifically fulfills the requirements of the Landscape Documentation Package as outlined in § 492.3 of the Ordinance. Upon completion of the Project, Contractor shall be responsible for certifying compliance with the Ordinance and Agency requirements. Prior to start of Work, Contractor shall review this information and the Ordinance to establish a full understanding of the measures necessary to meet requirements of the Ordinance. Contractor shall notify the Owner of anything the Contractor feels does not meet the requirements of the Ordinance or Agency requirements. Landscape work shall not commence until such concerns are corrected to the satisfaction of all parties.

SOILS MANAGEMENT REPORT
This project will require significant earthwork and/or construction activity. The type of soil in the proposed landscape areas cannot be sufficiently assessed until the earthwork and construction is substantially completed. Per §492.5 paragraph (a) (2) (B) of the State Ordinance, Contractor shall, upon completion of the earthwork operations, acquire soil samples representative of all landscape areas and have the samples analyzed by an approved laboratory in accordance with §492.5 paragraph (a) (1) of the State Ordinance. Contractor shall submit the approved soil laboratory's recommendations for amending the soil as appropriate for the proposed planting in a timely manner to allow for modifications to the design plans and specifications as may be required. Contractor shall amend soil in accordance with the laboratory recommendations unless otherwise directed.

LANDSCAPE DESIGN PLAN
See Planting Plan of this set of drawings.

IRRIGATION DESIGN PLAN
See Irrigation Plan of this set of drawings.

GRADING DESIGN PLAN
See Site Grading and Drainage Plan of this set of drawings. See also grading design plans prepared by the Civil Engineer for this project.

CERTIFICATE OF COMPLETION
Contractor shall be responsible of preparing and submitting the Certificate of Completion required by the Water Efficient Landscape Ordinance - California Code of Regulations Title 23, Division 2, Chapter 2.7 § 490 - 494. Refer to the Landscape Documentation Package and the information below to provide guidance on preparing the certificate. The certificate shall be prepared and submitted upon Substantial Completion. Approval of the certificate and verification by the City that the landscape and irrigation has been installed in accordance with the approved landscape and irrigation plans and the Landscape Documentation Package is required prior to Final Acceptance of the project.

PROJECT INFORMATION SHEET
Contractor shall complete Project information sheet found in the "Certificate of Completion" per Appendix C of the Ordinance.

CERTIFICATION OF INSTALLATION
Contractor shall prepare the "Certification of Installation According to the Landscape Documentation Package" per Appendix C of the Ordinance.

IRRIGATION SCHEDULE
See the irrigation schedules provided on this page as a guide. Contractor shall prepare an irrigation schedule meeting the requirements of §492.10 of the Ordinance. Contractor shall use the irrigation schedule provided with these drawings for the initial settings and after observing operation of the system Contractor shall make all adjustments necessary to finalize recommended schedules for the plant establishment period (first 12 months) and the post-establishment period providing values appropriate to each of the 4 seasons--winter, spring, summer, and fall.

MAINTENANCE SCHEDULE
Contractor shall prepare a schedule of landscape and irrigation maintenance meeting the requirements of §492.11 of the Ordinance.

IRRIGATION AUDIT REPORT
Contractor shall retain the services of an independent, third-party, certified landscape irrigation auditor to conduct an irrigation audit, an irrigation survey, and an irrigation water use analysis in accordance with the requirements of §492.12 of the Ordinance. Contractor shall prepare an Irrigation Audit Report of the results of the audit. Should the audit identify conditions that are not in compliance with the Ordinance. Contractor shall make corrections at no additional cost.

SOIL MANAGEMENT REPORT
Per §492.5 of the Ordinance, Contractor shall submit the soil analysis report on which the soil amendments were based together with acceptable documentation that the soil was amended per the recommendations in the report.

LANDSCAPE ARCHITECT'S STATEMENT

I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan and the landscape design plan.

MAINTENANCE SCHEDULE

A regular maintenance schedule shall be set up for this project to provide healthy plants and an efficient, functional irrigation system. The following practices shall be incorporated into a regular maintenance schedule:

1. Maintain irrigation system. Adjust or replace delivery system components to keep them working to meet manufacturer specifications. Repair leaks in a timely manner. Replacement products and materials shall match originally specifications, or equal..

2. Review drip emitters and adjust locations as plants mature. Replace emitters as needed to adjust water delivery to each plant, as needed.

3. Adjust controller as required to provide proper amount of water to each zone.

4. Mow turf on a regular basis. De-thatch and aerate annually.

5. Prune plantings to maintain design form (e.g.- natural, hedge) and to remove broken or dead branches. Remove suckers from tree roots on a regular basis.

6. Establish a regular program of weed and pest control. Conform to any local regulations regarding use of pesticides and herbicides. Pesticides and herbicides are to be applied only when needed and by a state licensed professional.

7. Re-apply mulches as needed to maintain full coverage at planting areas, retain soil moisture, and inhibit weed growth.

WATER EFFICIENT LANDSCAPE ORDINANCE WORKSHEET

APPENDIX B WORKSHEET

Reference Evapotranspiration			50.9 in/yr	**ETAF(req)**	Maximum Allowed ETAF		0.45
Hydro-zone (see desc. below)	**Plant Factor (PF)**	**Irrigation Method**	**Irrigation Efficiency (IE)**	**ETAF (PF/IE)**	**Landscape Area (sq. ft.)**	**ETAF x Area**	**Estimated Total Water Use (ETWU)**
Regular Landscape Areas ("RLA") - See Hydrozone Descriptions for Referenced Numbers							
	1.00	Spray	0.75	1.33	0 sf	0.00	0 gals
	0.85	Spray	0.75	1.13	0 sf	0.00	0 gals
	0.60	Spray	0.75	0.80	0 sf	0.00	0 gals
6	0.50	Drip	0.81	0.62	1,673 sf	1,032.72	32,590 gals
	0.30	Spray	0.75	0.40	0 sf	0.00	0 gals
9	0.30	Drip	0.81	0.37	17,680 sf	6,548.15	206,646 gals
12	0.30	Drip	0.81	0.37	6,200 sf	2,296.30	72,467 gals
				Sub-totals	25,553.00	9,877.16	311,703 gals
Special Landscape Areas ("SLA") - See Hydrozone Planting Descriptions for Referenced Numbers							
SLA1				1.00	0 sf	0.00	0 gals
SLA2				1.00	0 sf	0.00	0 gals
				Sub-totals	0 sf	0.00	0 gals
		Total Landscape Area (regular and special)			25,553 sf	9,877.16	
						ETWU Total	311,703 gals
						Maximum Allowed Water Allowance (MAWA)	362,881 gals

MAWA CALCULATION

MAXIMUM ALLOWABLE WATER CALCULATION ("MAWA")

	Ref. ETo	Conv.	ET Adjustment Factor "ETAF"	Area Incl. "SLA" (sf)	SLA Addt'l Water	Special Landscape Area (sf)
MAWA =	(ETo)	(0.62)	[(ETAF	x LA)	+ ((1-ETAF)	x SLA)]
362,881 gal/yr	50.9 in/yr	0.62	0.45	25,553 sf	0.55	0 sf

Data used in MAWA Formula (per 2015 WELO):

Ref. Evapotranspiration (in/yr) ETo=	50.9 in/yr		Landscape Area including SLA	25,553 sf	
Conversion Factor (to gallons)	0.62		Additional Water Allowance for SLA (1-ETAF)	0.55	
Required ETAF per Ordinance for Project	0.45		Special Landscape Area ("SLA" in SF)	0 sf	

ETWU CALCULATION

ESTIMATED TOTAL WATER USE (ETWU) TOTAL SITE W/ SLA FACTORED IN

ETWU =	(ETo)	(0.62)	(ETAF)	(Area)	
311,703 gal/yr	50.9 in/yr	0.62	0.39	25,553 sf	

ETAF CALCULATIONS

Regular Landscape Area (RLA) ETAF		Max Allowed ETAF	
Total ETAF x RLA	9877.16		
Divided by Total RLA	25,553 sf		If Average ETAF is less than Max. Allowed ETAF the Project complies with WELO
Average ETAF (RLA)	0.39	0.45	
Sitewide ETAF			
Total ETAF x Area (RLA and SLA)	9877.16		
Divided by Total Area (RLA and SLA)	25,553 sf		
Sitewide ETAF (RLA and SLA)	0.39		

HYDROZONE DESCRIPTIONS

Hydrozone number	*Description*	*Irrigation zones on plan*
1	High water use turf with gear rotor irrigation	
2	High water use turf with rotary spray irrigation	
3	High water use plantings with drip irrigation	
4	Moderate water use plantings with subsurface irrigation	
5	Moderate water use plantings with rotary spray irrigation	
6	Moderate water use plantings with drip irrigation	1
7	Low water use plantings with subsurface irrigation	
8	Low water use plantings with rotary spray irrigation	
9	Low water use plantings with drip irrigation	2-10
10	Bio-filtration basin	
11	No irrigation / inert landscape area	
12	Trees with root watering system	11-14
SLA 1		
SLA 2		

PRELIMINARY IRRIGATION SCHEDULES

The schedules below are based on calculating runtime and frequency of irrigation cycles to meet the average evapotranspiration of noted seasons factoring in the rate of water delivery, plant factors, and other variables. Actual runtimes and frequency of cycles required to sustain the landscape at the desired aesthetic appearance may differ and must be adjusted to due to field observations of microclimates, slope conditions, solar exposure, and other variables. Contractor shall observe the health of the plantings during the establishment period and make adjustments necessary from observed conditions and plant health.

After the establishment period it is incumbent upon the Owners and Owner's maintenance entity to observe plant health and desired aesthetic appearance and make adjustments to the irrigation schedules as may be required to satisfy their desired aesthetic appearance as well as limit water use to less than the MAWA.

PRELIMINARY IRRIGATION SCHEDULE - PLANT ESTABLISHMENT PERIOD

			Winter (Nov, Dec, Jan, Feb)		*Spring (Mar, Apr, May)*		*Summer (Jun, Jul, Aug, Sep)*		*Autumn (Oct.)*	
Hydro-zone	*Description*	*Zone*	*Runtime*	*Cycles per Month*	*Runtime*	*Cycles per Month*	*Runtime*	*Cycles per Month*	*Runtime*	*Cycles per Month*
1	High water use turf with gear rotor irrigation		16 min.	10	33 min.	15	17 min.	60 (2/day)	30 min.	20
2	High water use turf with rotary spray irrigation		20 min.	15	25 min.	30	45 min.	30	40 min.	15
3	High water use plantings with drip irrigation		20 min.	8	45 min.	15	60 min.	30	45 min.	15
4	Moderate water use plantings with subsurface irrigation		30 min.	5	30 min.	15	45 min.	15	30 min.	15
5	Moderate water use plantings with rotary spray irrigation		10 min.	4	15 min.	15	20 min.	15	15 min.	15
6	Moderate water use plantings with drip irrigation	1	20 min.	4	35 min.	15	40 min.	30	35 min.	15
7	Low water use plantings with subsurface irrigation		15 min.	4	20 min	15	30 min.	10	20 min	15
8	Low water use plantings with rotary spray irrigation		15 min.	2	10 min.	15	15 min.	15	10 min.	15
9	Low water use plantings with drip irrigation	2-10	10 min.	4	30 min.	15	25 min.	30	30 min.	15
10	Bio-filtration basin		20 min.	5	45 min.	15	65 min.	15	40 min.	15
11	No irrigation / inert landscape area		0 min.	0	0 min.	0	0 min.	0	0 min.	0
12	Trees with root watering system	11-14	0 min.	0	30 min.	5	45	5	30 min.	5
SLA 1										
SLA 2										

PRELIMINARY IRRIGATION SCHEDULE - ESTABLISHED PLANTING

			Winter (Nov, Dec, Jan, Feb)		*Spring (Mar, Apr, May)*		*Summer (Jun, Jul, Aug, Sep)*		*Autumn (Oct.)*	
Hydro-zone	*Description*	*Zone*	*Runtime*	*Cycles per Month*	*Runtime*	*Cycles per Month*	*Runtime*	*Cycles per Month*	*Runtime*	*Cycles per Month*
1	High water use turf with gear rotor irrigation		12 min.	10	25 min.	15	40 min.	15	30 min.	15
2	High water use turf with rotary spray irrigation		20 min.	10	45 min.	15	60 min.	15	45 min.	15
3	High water use plantings with drip irrigation		10 min.	4	45 min.	15	60 min.	10	45 min.	15
4	Moderate water use plantings with subsurface irrigation		10 min.	4	25 min.	15	30 min.	30	25 min.	15
5	Moderate water use plantings with rotary spray irrigation		10 min.	4	15 min.	10	15 min.	18	15 min.	10
6	Moderate water use plantings with drip irrigation	1	10 min.	4	45 min.	10	35 min.	15	40 min.	10
7	Low water use plantings with subsurface irrigation		10 min.	4	20 min	15	30 min.	10	20 min	15
8	Low water use plantings with rotary spray irrigation		10 min.	4	10 min.	15	15 min.	15	10 min.	15
9	Low water use plantings with drip irrigation	2-10	10 min.	4	30 min.	10	25 min.	15	30 min.	10
10	Bio-filtration basin		10 min.	4	45 min.	10	65 min.	10	45 min.	10
11	No irrigation / inert landscape area		0 min.	0	0 min.	0	0 min.	0	0 min.	0
12	Trees with root watering system	11-14	10 min.	1	30 min.	5	30 min.	8	30 min.	6
SLA 1										
SLA 2										

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1	Hunter ICZ-101-40	1"	Area for Drip Emitters	1.62	18.0	30.9	0.11 in/h
2	Hunter ICZ-101-40	1"	Area for Drip Emitters	3.76	19.7	33.0	0.3 in/h
3	Hunter ICZ-101-40	1"	Area for Drip Emitters	3.53	19.2	32.3	0.16 in/h
4	Hunter ICZ-101-40	1"	Area for Drip Emitters	3.86	19.6	32.9	0.2 in/h
5	Hunter ICZ-101-40	1"	Area for Drip Emitters	6.01	21.0	34.9	0.25 in/h
6	Hunter ICZ-101-40	1"	Area for Drip Emitters	3.1	18.9	31.8	0.17 in/h
7	Hunter ICZ-101-40	1"	Area for Drip Emitters	3.27	19.0	31.8	0.17 in/h
8	Hunter ICZ-101-40	1"	Area for Drip Emitters	3.7	19.3	32.1	0.16 in/h
9	Hunter ICZ-101-40	1"	Area for Drip Emitters	6.14	21.2	34.7	0.17 in/h
10	Hunter ICZ-101-40	1"	Area for Drip Emitters	2.08	18.1	30.9	0.26 in/h
11	Hunter ICV-G	1"	Bubbler	3	17.5	30.7	0.85 in/h
12	Hunter ICV-G	1"	Bubbler	9.5	23.3	39.3	0.88 in/h
13	Hunter ICV-G	1"	Bubbler	7.5	20.3	35.1	0.87 in/h
14	Hunter ICV-G	1"	Bubbler	8	20.4	34.1	0.87 in/h

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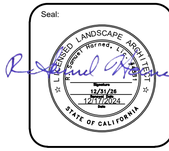

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING
ROAD EXTENSION
LATHROP, CA

Revision:

No.	Desc.	Date

Date:	12/17/2024
Drawn:	RSH
Checked:	RSH
Project No.:	24-28
Scale:	As shown

Sheet:

WELO Notes and Calculations

L6.1

IRRIGATION SPECIFICATIONS

PART ONE - GENERAL

1.01 REGULATORY COMPLIANCE: Comply with all requirements of the following:

A. Water Efficient Landscape Ordinance California Code of Regulations Title 23, Division 2, Chapter 2.7 § 490 - 494 ("WELO" or the "Ordinance")

B. Governing municipality's standards, latest edition.

1.02 DEFINITIONS:

A. Mainline: Pipe from backflow prevention device to zone valves.

B. Lateral Line: Pipe downstream of zone valve.

C. Shrub Bubbler/Emitter Zone Lateral: Lateral line symbol indicated portion or lateral run from which bubbler/drip distribution lines are run.

D. Bubbler/Drip Distribution Line: Lines from shrub bubbler/emitter zone lateral to bubbler or emitter locations. Not graphically shown on plan. See detail for schematic routing.

E. Extra Control Wire: Control wire that is intended for a future valve.

F. Spare Control Wire: Control wire that is intended as a backup in case of faults or unknown conditions.

1.03 SYSTEM DESCRIPTION

A. Contractor shall provide and install a complete irrigation system in conformance with the intent of the Drawings and Specifications. System shall provide 100% coverage to all planted areas.

1.04 SUBMITTALS

A. Submit product data for all materials to be incorporated into the project as part of this work.

B. Submit samples of products as requested.

C. Submit proposed substitutions prior to start of any irrigation or planting work.

1.05 PROJECT RECORD DOCUMENTS

A. Accurately record actual locations of piping system, valves, controllers, control wire, backflow prevention assemblies and other equipment of the completed system.

B. Draft "as-built" conditions on Owner-provided reproducible or in CAD drawing file. Locate each component with dimensions from 2 different permanent surface objects.

1.06 OPERATION AND MAINTENANCE DATA

A. Provide instructions for operation and maintenance of system and controls, seasonal activation and shutdown, and manufacturer's parts catalog of all components.

B. Color Coded Schematic Reference Plan:

1. Prepare a color coded schematic reference plan of the system that clearly differentiates individual zones using color coding for different zones.

2. The plan shall delineate the valve, piping, and heads in color. Use a minimum of 5 distinct colors and more if necessary to clearly differentiate zones from one another.

3. Provide 11"x17" set of color-coded schematic with each sheet laminated with plastic front and back and bind one end with a spiral binder that allows each sheet to open and fold back under following sheet such that the set will lie flat.

1.07 FIELD MEASUREMENTS

A. Verify in the field that dimensions are as shown on Drawings and as required for installation. Adjust layout as required by each individual lot for which typical designs are applied. Confirm adjustments with Landscape Architect.

B. Notify Landscape Architect of discrepancies between actual field conditions and the Drawings.

C. Contractor shall not intentionally install any part of the irrigation system as shown on the Drawings when it is obvious that field conditions such as obstructions, grade differences, or dimensional discrepancies might not have been considered in the design of the system. No work affected by discrepancies between actual field conditions and what is shown on the Drawings shall be executed until direction is provided by the Landscape Architect. Contractor shall assume responsibility for revisions to work if contractor executes work in areas of concern prior to receiving direction from the Landscape Architect.

1.08 MAINTENANCE

A. Contractor shall maintain system during the Plant Establishment Period.

1.09 WARRANTY

A. Warranty Period: A period of one year beginning with Final Acceptance.

B. Contractor shall warrant that the sprinkler irrigation system is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings, specifications and approved changes. Contractor shall repair or replace any defects in material or workmanship that may develop during the Warranty Period.

PART TWO - PRODUCTS

2.01 PVC PIPE AND FITTINGS MATERIALS

A. PVC Materials: ASTM D1784, Type I Polyvinyl chloride plastic (PVC), cell classification 12454-B.

B. Class 200 PVC Pipe: ASTM D2241 listed with NSF-PW Standard 61 and Standard 14.

C. Class 315 PVC Pipe: ASTM D2241 listed with NSF-PW Standard 61 and Standard 14.

D. Schedule 40 PVC Pipe: ASTM D1785 listed with NSF-PW Standard 61 and Standard 14.

E. Flexible PVC Pipe: Agricultural Products Inc. 1174AG, Heavy Wall IPS Flex Vinyl (PVC) Pipe (C).

F. PVC, Schedule 40 Socket Fittings: ASTM D2466 listed with NSF-PW Standard 61 and Standard 14.

G. PVC, Schedule 80 Socket Fittings: ASTM D2467 and listed with NSF-PW Standard 61 and Standard 14.

H. PVC, Schedule 80 Threaded Fittings: ASTM D2464 and listed with NSF-PW Standard 61 and Standard 14.

I. Gasket Joints: Comply with ASTM F477 and ASTM D3139

2.02 Steel Pipe and Fittings

A. Galvanized Pipe: Standard weight Schedule 40. Comply with ASTM A53.

B. Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106, Schedule 40, galvanized, seamless steel pipe with threaded ends.

C. Malleable-Iron Unions: ASME B16.39, Class 150, hexagonal-stock body with ball-and-socket, metal-to-metal, bronze seating surface, and female threaded ends.

D. Gray-Iron Threaded Fittings: ASME B16.4, Class 125, galvanized, standard pattern.

E. Cast-Iron Flanges: ASME B16.1, Class 125.

F. Cast-Iron Flanged Fittings: ASME B16.1, Class 125, galvanized.

G. Galvanized Fittings: 150lbs. malleable iron, threaded. Comply with ASTM A53

2.03 PIPE SCHEDULE

A. Water Service: Conform to City requirements.

B. Equipment Assemblies: Per referenced details and Standard Specifications.

C. Irrigation Mainline: As specified on the Drawings

D. Lateral Lines: As specified on the Drawings

E. Sleeves: Class 200 PVC conforming to ASTM D2241, solvent weld joints. Inside diameter shall be a minimum of twice the outside diameter of pipe for which it is used. Size sleeves to facilitate ease of pipe installation.

F. Fittings: Schedule 40 PVC unless otherwise indicated.

2.04 EQUIPMENT

A. Automatic Control Valves: As specified on the Drawings.

B. Ball Valves: True Union 2000 Industrial Ball Valves, T x T

C. Gate/Isolation Valves: As specified on the Drawings.

D. Automatic Controllers: As specified on the Drawings.

2.05 ACCESSORIES

A. Control Wire for Conventional Controller: Copper, UL rated for direct burial, Type UF. Conform to NEC. Common shall be white and pilot wire shall be red. Spare control wires shall be of a different color approved by the Landscape Architect.

1. Pilot Wire: 14 Gauge

2. Common Wire: 12 Gauge

3. See Two-wire Control System notes for wire requirements for two-wire system.

B. Control Wire Connectors: DBRY-6 waterproof wire connectors.

C. Valve Boxes: As specified on the Drawings and below. Provide extensions by same manufacturer as required and heat stamp cover with identification of equipment or valve and controller number as applicable. Verify sizes are sufficient to completely house valves and unions as necessary to facilitate removal with valve box in place. Use concrete vehicle traffic rated boxes of appropriate size when located in road shoulder.

1. Isolation Valves: Carson 1220 with T-cover and Bolt Down Loc-Kit, green.

2. Master Valve: Carson 1324 with T-cover and Bolt Down Loc-Kit, green.

3. Flow Sensor: Carson 1220 with T-cover and Bolt Down Loc-Kit, green.

4. Remote Control Valves: Carson valve box with T-cover and Bolt Down Loc-Kit, green. Size as required by valve configuration. All unions, ball valves, filters, and pressure regulators must fit in box with sufficient room for removal.

5. Quick Couplers: Carson 910 with T-cover and Bolt Down Loc-Kit, green

D. Primer: Weldon P-70 PVC, IAMPO-UPC and NSF listed.

E. Cement (solvent):

1. Comply with ASTM D2564, IAMPO-UPC and NSF listed. Compatible with pipe being joined and job site conditions.

2. Flexible PVC to Schedule 40 PVC Fittings, use cement specifically approved for flexible PVC.

F. Galvanized Pipe Paint: Carbon elastic Paint No. 2221 by American Tar Company or equal.

2.06 IRRIGATION HEADS AND EMITTERS

A. As specified on Drawings.

PART THREE - EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Verify location of underground utilities and facilities. Drawings may show utilities in some locations but do not necessarily represent all underground utilities and facilities. Field verify locations prior to start of Work.

C. Verify that required utilities are available, in proper location, and ready for use.

D. Verify locations of existing sleeves. Notify Landscape Architect of discrepancies in existing sleeve locations and system requirements.

E. Beginning of installation shall signify Contractor's acceptance of existing conditions.

F. Verify existing pressure prior to start of Work

3.02 PREPARATION

A. Call Underground Service Alert 48 hrs prior to start of work. Field mark underground utilities prior to excavation. Make provisions to protect underground utilities and facilities.

B. Piping layout indicated is diagrammatic only. Route piping to avoid utilities, structures, proposed plantings, and as directed. Locate in planter areas wherever possible.

C. Layout and stake locations of system components for review by Landscape Architect.

3.03 TRENCHING

A. Minimum Trench Width: As required to provide a minimum 3 inches clearance between adjacent piping and trench walls.

B. Minimum Trench Depths:

1. Mainline: 18" cover in planters and 36" cover under paving

2. Lateral Lines: 12" cover in planters and paving.

3. Bubbler Distribution Lines: 6" cover in planters. Do not install under areas to be paved.

C. Trench to accommodate grade changes and slope to drains.

D. Maintain trenches free of debris, material, and obstructions that may damage pipe.

3.04 PIPE INSTALLATION

A. General

1. Comply with manufacturer's printed instructions and recognized industry standards.

2. Pipe and equipment installed in trenches shall be fully supported by approved trench foundation material. Do not stack pipe.

3. Pipe and equipment installed above grade shall be properly and securely anchored and supported by approved devices and means.

4. Pipe under paved areas shall be installed in PVC pipe sleeves

B. PVC, Solvent-Cement Welded Joints: Comply with ASTM D2855 and ASTM F402

C. Threaded Joints: Use teflon tape. Hand tighten and use only light wrench pressure as required to produce sound, water tight joint.

D. Galvanized Pipe:

1. Comply with industry standards.

2. Paint all below grade galvanized pipe with specified galvanized pipe paint.

E. Bubbler Distribution Line:

1. Comply with manufacturer's printed instruction and specifications.

2. Layout pipe in orderly manner and as required to provide emitters or bubblers to each plant within the irrigated zone. Field mark example typical layout for review by Landscape Architect prior to installation of system.

3.05 EQUIPMENT INSTALLATION

A. Automatic Control Valves:

1. Comply with referenced details and manufacturer recommendations.

2. Install valve risers plumb true and square to adjacent construction.

3. Flush mainline of all debris before installing valves.

B. Controller:

1. Comply with referenced details and manufacturer recommendations.

2. Install wall-mounted controllers by approved means. Submit shop drawing.

3. Install and wire in conformance with manufacturer's published instructions and specifications

4. Wire only one valve per station.

5. Make connection to electrical supply. Conform to applicable regulations and codes. All electrical work shall be performed by properly licensed electricians

C. Remote Control Valve Control Wiring for Conventional Controllers. See Two-Wire Control System notes for wiring requirements for Two-wire systems:

1. Comply with applicable requirements of Standard Specifications.

2. Above grade wire shall be installed in approved conduit. Extend conduit to the full required depth of cover. Transition from vertical to horizontal alignment shall be made with a sweep elbow.

3. Install in sleeve when under paved areas. Sleeve shall be sized so that no more than 40% of its cross-sectional area is filled.

4. Bundle wires with electrical tape.

5. Run a separate pilot wire to each control valve.

6. Run a separate common ground for each controller.

7. Make splices in valve boxes only. Use specified connectors. Provide a 36 inch loop at each valve.

8. Install extra control wire for future valves, if any, where indicated on the Drawings. Extra control wire quantities are cumulative. Extra control wires shall not be used as spares without approval.

9. Install 2 spare control wires to the furthest valve location

D. Sensor Installations:

1. Mount by approved means only.

2. Firmly and securely attach to structure, building, or pole where indicated on plans and approved in the field. Provide mounting arms and all required mounting hardware as appropriate for each sensor.

3. Run required control wires in Schedule 80 PVC conduit from controller to sensor. Above grade conduit shall be metal. Size as required for wire size,type, and quantity; 1" minimum.

4. Field verify that the distance from the controller to the sensor unit does not exceed its operational limits based on the field determined wire routing.

5. Make splices in valve boxes only. Minimize number of splices. Use only approved connectors.

E. Sprinkler Heads:

1. Comply with referenced details and manufacturer recommendations.

2. Thoroughly flush lines before installing nozzles or emitters.

3.06 BACKFILLING

A. Backfill only after specified tests have been performed and Landscape Architect's acceptance has been obtained.

B. Clean trenches of debris and rocks.

C. Bed pipe with approved bedding sand.

D. Backfill with approved granular sandy material free of rocks, sticks, debris and other deleterious material.

E. Compaction

1. In landscape areas match compaction of landscape area soil and as required to prevent settling.

2. Under areas to be paved compact to a minimum of 95% per ASTM D1557. Meet minimum compaction requirements for pavement section.

3.07 FIELD QUALITY CONTROL

A. Tests: The following tests shall be performed by the Contractor and observed by the Landscape Architect. Contractor shall supply all equipment necessary for conducting tests.

B. Pressure Testing: Pressure test mainlines and lateral lines as follows.

1. Perform pressure tests prior to concealing fittings and valves.

2. Cap all open ends.

3. Mainline: Test with all gate valves open. Pressurize to full line pressure. Piping must hold this pressure for 6 continuous hours.

4. Laterals, Spray Systems: Pressurize to full line pressure. Piping must hold this pressure for period of 2 continuous hours.

C. Laterals, Drip System: Pressurize to maximum pressure recommended by flex pipe manufacturer based on specified joint and fitting systems. Piping must hold this pressure for 2 continuous hours.

D. Coverage test: Operate system to test irrigation coverage in presence of Landscape Architect. Make adjustments to nozzle sizes, radius, degree of arc, head locations, and operating pressure as required to provide 100% coverage with distribution uniformity that meets or exceeds industry standards and all governing regulation or ordinance.

E. All tests that fail will require additional testing at Contractor's expense, including Landscape Architect's time and expenses, until accepted by the Landscape Architect.

3.08 INSTALLER'S FIELD SERVICES

A. Prepare and start systems.

B. Provide one complete spring startup and one winterization procedure. Conduct these operations with Owner's personnel present and instruct them on the required procedures.

3.09 ADJUSTING

A. Adjust control system to achieve time cycles required to deliver proper precipitation rates for the various planting types. Adjust sequencing of stations such that the required watering can be accomplished during the Owner-specified watering time window.

B. Change head and nozzle types as directed and as required to achieve proper coverage and precipitation rates.

C. Adjust heads and valve pressures as required to provide proper irrigation coverage and precipitation rates.

3.10 DEMONSTRATION

A. Instruct Owner's personnel in operation and maintenance of system, including adjusting of sprinkler heads. Use operation and maintenance material as basis for demonstration.

3.11 MAINTENANCE

A. Maintain the system during the Plant Establishment Period specified in the Planting Notes and Specifications. Make all necessary adjustments and repairs to keep the system functioning as intended.

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Seal:

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING
ROAD EXTENSION
LATHROP, CA

Revision:

No.	Desc.	Date

Date:	12/17/2024
Drawn:	RSH
Checked:	RSH
Project No.:	24-28
Scale:	None

Sheet:

Landscape Specifications

L7.1

PLANTING SPECIFICATIONS

PART ONE- GENERAL

1.01 REGULATORY COMPLIANCE: Comply with all requirements of the following:

A. Water Efficient Landscape Ordinance California Code of Regulations Title 23, Division 2, Chapter 2.7 §490 - 494 ("WELO" or the "Ordinance")

B. Governing municipality's standards, latest edition.

1.02 SUBMITTALS

A. Materials List:

1. Prior to start of any irrigation or planting work submit documentation that specified plants have been ordered.

2. Submit requests for substitutions with materials list.

B. Delivery Tickets: Submit for all plant deliveries. Include botanical and common names.

C. Product Data: Submit catalog cuts, MSDS, installation instructions and other pertinent product data as appropriate and as requested for all materials incorporated into this portion of the Work.

D. Federal and State certificates of inspection as applicable.

E. Samples: Submit samples as requested.

F. Test Reports: Submit soil test results and recommendations.

1.03 GUARANTEE

A. Guarantee Period: One year immediately following the Plant Establishment Period.

B. All planting shall be guaranteed to be in a healthy and thriving condition after completion of Guarantee Period.

C. Replace all dead plants and plants not in vigorous growing condition immediately upon notification by Owner or Landscape Architect during Guarantee Period.

D. Repair all defective work and materials as directed by Owner or Landscape Architect during guarantee period.

PART TWO - PRODUCTS

2.01 FERTILIZERS: All fertilizers shall be of an approved commercial brand with a guaranteed chemical analysis as required.

2.02 SOIL CONDITIONERS

A. Soil conditioners shall be modified as required by the soil report recommendations

B. Organic matter: Dairy Manure.

C. Compost: Nitrolized redwood

D. Dolomite limestone: Kaiser AG-65 containing not less than 85% of total carbonates. 100% shall pass No. 200 sieve.

E. Gypsum: Approved by Landscape Architect.

F. Mulch: Recycled organic mulch.

2.03 PLANTS

A. Quantities shown on Drawings are for Contractor's convenience only. Contractor is responsible for total number of plants represented graphically or by calculation.

B. Quality: Plant grading shall conform to ANSI Z60.1

C. Prior to ordering any plants, landscape products, or other landscape materials, confirm that all plants specified are available and secure them for this project. Submit acceptable evidence of confirmation. Should any plant not be available, submit a proposed substitute. Plant substitution must be approved by Landscape Architect.

D. Condition: All plants shall conform to the following minimum requirements:

1. Nursery grown containerized stock unless otherwise specified.

2. In vigorous growing condition with full foliage and symmetrically branched typically representative of the species.

3. Free from pests, diseases and weeds.

4. Free from damage from pests, diseases, and weeds.

5. Fully and completely rooted but not root-bound.

6. Street Trees: Uniform in appearance, high branched.

7. Oversized Plants: Plants larger than specified size may be used providing height, spread, caliper, and root ball dimensions conform to ANSI Z60.1.

2.04 TOP SOIL

A. Sandy loam suitable for horticultural use free of rocks, clods, gravel, sticks debris, and other deleterious material.

2.05 HERBICIDES:

A. Pre-emergent: Surflan or approved equal.

B. Other Herbicides: As approved. Submit product data and purpose of use for review.

2.06 ACCESSORIES

A. Tree Stakes: 3" round Lodge Pole pine stakes. Length as required.

B. Tree Ties: Cinch-Tie by V.I.T. Products. Size and strength per manufacturer's recommendation for tree size.

C. Root Barriers: Deep Root UB-24-2 and UB-36-2

PART THREE - EXECUTION

3.01 SOIL TESTING AND ANALYSIS

A. Upon establishment of rough grades in landscape planting areas, take soil samples and have samples analyzed by an approved horticultural soil testing laboratory. Comply with the requirements of §492.5 of the Ordinance.

B. Collect a minimum of one sample per 10,000 SF for each area of distinct soil characteristics as directed by Landscape Architect.

C. Prepare a Soil Management Report in compliance with §492.5 of the Ordinance.

3.02 SOIL PREPARATION

A. Use the mix as specified in the Planting Notes for bidding purposes. Modify or replace the specified quantities based on the recommendations from the Soil Management Report. Final soil preparation shall be as indicated in the Soil Management Report.

B. Fine grade as specified herein.

3.03 FINE GRADING

A. Remove rocks and debris that has any dimension larger than 1 inch turned up during preparation.

B. Rake, drag, and roll area smooth to establish approved finished grades. Maintain established flow lines, slopes, and grade to achieve positive drainage allowing no puddling.

C. Finished grade requirements: Grade as required to leave landscaped areas with finished grades as follows:

1. Turf Areas: 1" below adjacent paving and curbs.

2. Planting Bed Areas: 2" below adjacent paving and curbs.

3.04 PLANTING

A. Layout: Plant locations shown on the plans are diagrammatic. Review plant layout with Landscape Architect prior to excavating plant pits. Coordinate layout with irrigation system. Adjust locations of plants as required to avoid conflicts with utilities, underground facilities, paving, and structures.

B. Coordinate planting operations with other construction to avoid damage to plants by other trades.

C. Planting operations shall not be conducted during freezing weather, excessive heat, high winds, or excessively wet conditions.

D. Plant Pit Excavation:

1. Clear and set aside amended soil from area to be excavated.

2. Excavate to sizes indicated on Drawings and flood to test drainage. Notify Landscape Architect of poorly draining pits and propose solution.

3. Roughen sides of pit.

E. Backfill plant pits with soil excavated from the pit thoroughly mixed with amendments specified in the approved Soil Management Report. Use the mix as specified in the Planting Notes for bidding purposes. Modify or replace the specified quantities based on the recommendations from the Soil Management Report. Submit a detailed change order request that itemizes the specific modifications from the above specification to the recommendations of the Soil Management Report. Provide unit pricing for each item.

3.05 ROOT BARRIERS: Install root barriers on all trees planted within 5'-0" of paving, curb, or walls.

A. Install immediately adjacent to the paving or curb and extend a distance of 6'-0" each side of the tree along the length of the adjacent paving or curb.

B. Install 24" deep barriers when adjacent to paving and mow curbs.

C. Install 36" deep barriers when adjacent to curbs or walls.

3.06 TREE STAKING

A. Conform to details.

B. Set stakes plumb without damage to root ball and sufficiently deep to provide intended support.

3.07 PRE-EMERGENT HERBICIDE

A. Apply in accordance with manufacturer's recommended rates and procedures.

B. Apply to soil of all Planting Bed Areas prior to placement of mulch.

3.08 MULCHING

A. Apply to a depth of 3 inches uniformly throughout all planter areas not being seeded or sodded.

B. Thoroughly water mulched areas to ensure moisture penetration to the soil.

C. Depth of mulch shall be measured as the compacted depth after it has been thoroughly watered in.

3.09 PLANT ESTABLISHMENT PERIOD

A. The Plant Establishment Period shall be a period of 90 consecutive calendar days immediately following substantial completion. Maintain landscape planting and irrigation system during this period as follows and as necessary.

B. Provide personnel skilled in all appropriate horticultural, arboricultural, weed control, and pest control sciences and practices as necessary to develop and implement an acceptable maintenance program.

C. Keep planting beds and turf areas weed free until final acceptance by weeding on a continuous and regular basis so as not to allow establishment of weeds.

D. Keep all plantings properly watered until final acceptance. Adjust irrigation system and watering times to minimize run-off. Adjust to seasonal and weather conditions.

E. Contractor shall establish an appropriate fertilization, pest control, and pruning program for the duration of the Plant Establishment Period as required to ensure vigorous establishment and growth of all plantings.

F. Dead plants and plants that in the opinion of the Landscape Architect are not in vigorous growth condition shall be replaced immediately.

G. At the end of the Plant Establishment Period, all plantings shall be healthy, in vigorous growing condition, and properly pruned. The irrigation system shall be completely operable and functioning as intended. And, the entire project area shall be clean and free of all weeds. If at the end of the specified Plant Establishment Period the Project is not in a condition acceptable to the Owner, the Plant Establishment Period shall be extended at no cost to the Owner until the Contractor brings the Project into compliance with the requirements of the Contract Documents.

Sam Harned
Landscape
Architecture
PO Box 2275
Oakdale, CA 95361
209-380-7376
www.harnedla.com

Seal:

Prepared for:

Saybrook Fund Advisors, LLC

Project:

STANFORD CROSSING
ROAD EXTENSION
LATHROP, CA

Revision:

No.	Desc.	Date

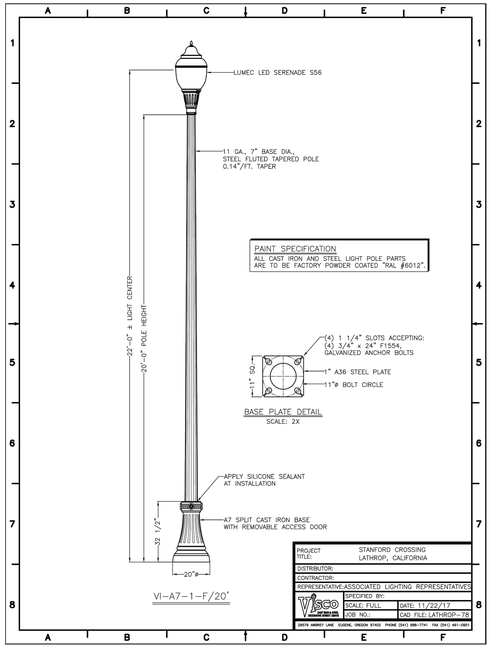
Date:	12/17/2024
Drawn:	RSH
Checked:	RSH
Project No.:	24-28
Scale:	None

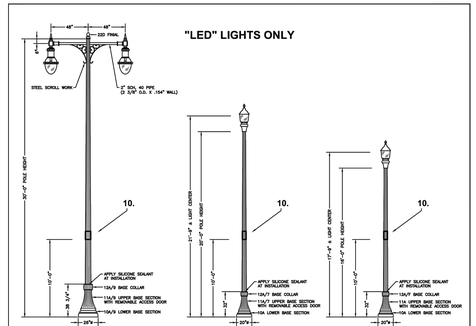
Sheet:

Landscape Specifications

L7.2

STANFORD CROSSING EXTENSION - STREET LIGHTING





NOTES:

1. See improvement plans for pole height, luminaire wattage and distribution. Lighting spacing and brightness shall meet city, PG&E and State of California standards for illumination and safety.
2. Projects requiring installation of 4 or more electroliers shall be required to have plans prepared by and signed by a registered Electrical Engineer.
3. Electroliers along expressways and arterials shall be required to have plans prepared by and signed by a registered Electrical Engineer.
4. Electrolier finish shall be cast iron and steel, factory finish painted green-black, RAL-6012, per city standards.
5. Structural design of electroliers shall be performed by licensed structural or civil engineer.
6. Light poles shall be 11 ga., steel fluted tapered pole with 0.14 inches per foot taper.
7. Electroliers for arterial streets shall have a light post that is 9-inches in diameter, and a Lumec Luminaire #RN20-110W64LED4K-G3-ACDR-LE3R-UNV-DMG-SMA-RC-GN8TX.
8. Electroliers for collector streets shall have a light post that is 7-inches in diameter, and a Lumec Luminaire #SS6-72W32LED4K-G3-ACDR-LE3W-UNV-DMG-SFX-FN1-HS-RC-TN2.875C-GN8TX.
9. Electroliers for residential streets shall have a light post that is 5 3/4-inches in diameter, and a Lumec Luminaire #SS6-35W32LED4K-G3-ACDR-LE3W-UNV-DMG-SFX-FN1-HS-RC-TN2.875C-GN8TX.
10. Street light numbers to be on stickers, 2" letter size reflective black on white. Place numbers on street side of pole perpendicular to street.

NOT TO SCALE

Approved-by: City of Lathrop City Engineer

No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS
ELECTROLIER

STANDARD DETAIL
Date: JULY 2024
Drawing No:
E-4

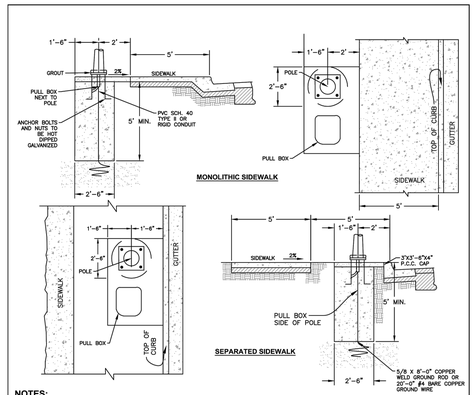
STREET LIGHTING GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHALL, FEDERAL AND ALL APPLICABLE CITY, COUNTY, STATE AND LOCAL UTILITY COMPANY REGULATIONS; N.E.C., AND THE LATEST APPROVED STANDARDS OF I.E.E.E., A.S.A, N.E.M.A., U.L. AND OSHA WHERE APPLICABLE. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE ABOVE. ALSO, ALL SECTIONS OF STATE OF CALIFORNIA PUC G.O. 95 SHALL APPLY.
2. MATERIALS FURNISHED UNDER THIS SECTION OF THESE SPECIFICATIONS FOR WHICH UL STANDARDS HAVE BEEN ESTABLISHED SHALL BE LISTED AND BEAR THE LABEL OF UNDERWRITER'S LABORATORIES, INC.
3. WHERE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS CONFLICT WITH THE DRAWINGS OR THESE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
4. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT FIRST NOTIFYING & OBTAINING APPROVAL FROM CITY/COUNTY AGENCY & GIACALONE DESIGN SERVICES, INC.
5. GIACALONE DESIGN SERVICES, INC. ASSUMES NO RESPONSIBILITY FOR ANY VARIANCE BETWEEN THESE PLANS AND THE ACTUAL FIELD CONDITIONS. CONTRACTOR SHOULD REVIEW PROJECT SITE PRIOR TO SUBMITTING ITS BID.
6. LEGEND SYMBOLS ARE SHOWN IN STREET AREA FOR CLARITY. INSTALL BEHIND CURB AND/OR SIDEWALK PER COUNTY SPECIFICATIONS KEEP CLEAR OF DRIVEWAYS AND PATHWAYS (TYPICAL).
7. ANY CHANGES OR MODIFICATIONS TO PROPOSED STREET LIGHT LOCATIONS SHALL BE APPROVED, IN WRITING, BY THE CITY/COUNTY AGENCY PRIOR TO INSTALLATION.

CONTRACTORS NOTES

1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHALL, FEDERAL AND ALL APPLICABLE CITY, COUNTY, STATE AND LOCAL UTILITY COMPANY REGULATIONS; N.E.C., AND THE LATEST APPROVED STANDARDS OF I.E.E.E., A.S.A, N.E.M.A., U.L. AND OSHA WHERE APPLICABLE. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE ABOVE. ALSO, ALL SECTIONS OF STATE OF CALIFORNIA PUC G.O. 95 SHALL APPLY.
2. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE UNDERGROUND SERVICE FROM THE LUMINAIRE TO PG&E SERVICE POINT AND TERMINATE CONDUIT AND WIRES AT BOX AS DIRECTED BY PG&E
3. KEEP STREET LIGHTS A MINIMUM OF 3 FEET AWAY FROM THE EDGE OF DRIVEWAYS OR 5 FEET AWAY FROM FIRE HYDRANTS.
4. TWO OR MORE STREET LIGHTS ON THE SAME CIRCUIT SHALL BE WIRED TO BALANCE THE LOAD. (SEE WIRING DIAGRAM)
5. **CONDUIT AND FITTINGS:** ALL CONDUIT AND FITTINGS SHALL BE U.L. APPROVED. UNLESS OTHERWISE NOTED OR REQUIRED, USE MINIMUM 2" SCHEDULE 40 P.V.C. CONDUIT AND FITTINGS BELOW GRADE. MINIMUM RADIUS BENDS SHALL BE 18". FOR ABOVE GROUND INSTALLATION AND IN POLE BASE, USE METALLIC RIGID STEEL CONDUIT. PROVIDE PULL WIRE IN ALL EMPTY CONDUITS. ALL CROSSINGS TO BE PERPENDICULAR TO STREET.
6. **CONDUIT DEPTH:** 24" UNDER SIDEWALK; 24" UNDER PLANTER STRIP; 36" UNDER PAVEMENT.
7. **CABLE:** CABLE SHALL BE U.L. LISTED 600 VOLT A.W.G. NO. 8, 7-STRAND SOFT COPPER, TYPE THW OR THWN WITH MINIMUM OF 3/64" (54 MIL) POLYVINYL CHLORIDE INSULATION, UNLESS OTHERWISE NOTED. U.L. LISTED 600 VOLT, NO. 10 IN POLE MAY BE USED.
8. **SPLICE BOXES:** SPLICE BOXES SHALL BE NO. 3-1/2 STATE TYPE WITH LID AND BRASS HOLDDOWN BOLTS, UNLESS OTHERWISE NOTED. LIDS TO BE INSCRIBED 'STREET LIGHTING'. SPLICE BOXES SHALL NOT BE MORE THAN 200 FEET APART ON LONG RUNS. (SEE CALTRANS DETAIL ES-8A).
9. **FUSES:** EACH POLE SHALL BE FUSED WITH WATERPROOF IN-LINE FUSE HOLDERS (BUSHMAN HEB SERIES) AT EACH ADJACENT SPLICE BOX WITH 10 AMP FUSE.
10. **SPLICING:** ALL SPLICES SHALL BE MADE IN STREET LIGHT BOXES ONLY. SPLICES SHALL BE MADE WITH 'C' SHAPED COMPRESSION CONNECTORS. ON SPLICES, WRAP WITH MOISTURE PROOF INSULATION A MINIMUM OF 1-1/2 TIMES THE THICKNESS OF REQUIRED WIRE INSULATION THICKNESS. SPLICES SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD METHOD 'B'. (SEE CALTRANS DETAIL ES-13A).
11. **POLE NUMBERS:** OBTAIN AND PLACE POLE NUMBERS ON ALL STREET LIGHT STANDARDS AS REQUIRED. COORDINATE WITH PG&E AND/OR COUNTY. FOR THEIR REQUIREMENTS.
12. **TRENCH:** CONDUIT CAN BE PLACED IN JOINT TRENCH. CONDUIT LAYOUT IS SHOWN SCHEMATICALLY. SEE COMPOSITE DRAWING FOR TRENCH LOCATION. ANY INCIDENTAL TRENCHING NOT PROVIDED BY TRENCHING AGENT IS CONTRACTOR'S RESPONSIBILITY.
13. CONTRACTOR TO INSTALL CIRCUIT GROUNDING AND GROUND WIRE IN CONDUIT AS PER PLANS.
14. CENTERLINE OF STREET LIGHTS SHALL BE LOCATED ON THE LOT LINE UNLESS OTHERWISE NOTED ON THESE PLANS.
15. A LIST OF ALL MATERIALS & SUPPLIERS SHOULD BE PROVIDED TO AUTHORITY HAVING JURISDICTION FOR APPROVAL.
16. **BURN TEST:** DAY BURN FOR 24 HOURS FOR 5 CONSECUTIVE DAYS FOR COUNTY INSPECTOR APPROVAL.
17. GROUNDING AND BONDING SHALL PROPERLY INTERCONNECT ALL METAL PARTS OF THE SYSTEM.
18. ALL CONNECTIONS SHALL BE SECURED WITH LOCK NUTS AND INSULATED BUSHINGS.
19. CONTRACTOR SHALL CONSULT LOCAL AGENCIES FOR THEIR CIRCUIT GROUNDING REQUIREMENTS. IF GROUND WIRE IS REQUIRED IN CONDUIT, INSTALL ACCORDINGLY.
20. WATERPROOF INLINE FUSES SHALL BE PROVIDED IN THE SPLICE BOX NEXT TO EACH NEW OR RELOCATED STREET LIGHT. IF THE DESIGN IS SUCH THAT NO BOXES WILL BE INSTALLED, THE SPLICE SHALL BE LOCATED IN THE HANDHOLE.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE OPERATING SYSTEM.
22. EACH STREET LIGHT SHALL BE CONTROLLED BY A PHOTO ELECTRIC CELL MOUNTED ON TOP OF EACH LUMINAIRE OR THE TOP OF EACH POLE DEPENDING UPON THE MANUFACTURER'S RECOMMENDATIONS OR CONTROLLED BY OTHER MEANS AS SHOWN ON THE DRAWINGS.
23. FOUNDATION MOUNTED ELECTROLIERS SHALL BE PLUMBED BY ADJUSTING THE NUTS ON THE ANCHOR BOLTS BEFORE THE FOUNDATION CAP IS PLACED. SHIMS OR OTHER SIMILAR DEVICES FOR PLUMBING OR RAKING WILL NOT BE PERMITTED. AFTER PLUMBING THE STANDARD, ANCHOR BOLTS SHALL BE CUT OFF 1/4" ABOVE THE NUTS AND THE EXPOSED SURFACES SHALL BE REPAIRED AS INDICATED BY THE INSPECTING AGENCY.
24. AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE STREET LIGHT ADMINISTRATION DEPT. OF THE COUNTY PRIOR TO ACCEPTANCE OF THE STREET LIGHTING SYSTEM.

CAUTION:
CONTACT U.S.A. (811) (2) FULL WORKING DAYS PRIOR TO STARTING WORK IF EXISTING UTILITIES CONFLICT WITH POLE LOCATION, FIELD ADJUST TO CLEAR EXISTING UTILITIES A MINIMUM OF 3'-0".



NOTES:

1. Secure electrolier to grounded stud.
2. 20' #4 bare copper, ground wire or 5/8" x 8' copper weld ground rod shall be covered with 2" of soil prior to pouring base.
3. Base shall be 3,000 PSI concrete field cast.
4. Street light pull box to have lockjaw security lid by Sipra Corp. or approved equal.
5. Minimum conduit size shall be 1 1/2", minimum radius at bends shall be 18".
6. Pull boxes shall be installed down stream and incorporated into pad.
7. All connection shall be waterproof.
8. Minimum cover over conduit shall be 18" under sidewalks.
9. All wiring shall extend 30" min. into pull box, with extra slack to be coiled in box.
10. All conduits terminating in pull boxes shall have duct sealant.
11. Ground Rods shall be installed at the beginning of all runs.
12. See Standard Detail E-11 for service box detail.

NOT TO SCALE

Approved-by: City of Lathrop City Engineer

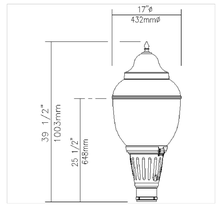
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS
ELECTROLIER BASE

STANDARD DETAIL
Date: JULY 2024
Drawing No:
E-6

Stanford Crossing - Lathrop Lumec LED S56 (LE3W distribution, 53 system watts)

LEDGINE 3D



EPA: 2.17 sq ft / weight: 60 lb (27.3 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

Qty	Type DD Luminaire	S56-55W48LED4K-T-ACDR-LE3W-UNIV-DMG-SFX-RC-FN1-HS-GN8TX
21		

Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Hood: (ACDR), One-piece, seamless, pressure-molded impact-resistant (DR) acrylic globe having internal prisms with smooth external self-cleaning surface, permanently assembled to the globe.

Access-Mechanism: A cast A360.1 aluminum technical ring with latch and hinge. The mechanism shall offer tool-free access to the inside of the luminaire. **The Photoelectric Cell can be independently oriented from the optical system**. An embedded memory-retentive gasket shall ensure weatherproofness.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Globe: (ACDR), One-piece, seamless, injection-molded impact-resistant (DR) acrylic globe having an inner prismatic surface with semi-prismatic house side shield and glare softening prisms on the street side. The smooth external finish offers self-cleaning properties. The globe is permanently sealed onto the access-mechanism.

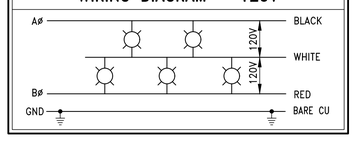
LED Module: LED type Philips Lumileds LUXEON T. Composed of 48 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical.

Optical System: (LE3W), IES type III (asymmetrical), wide. Composed of high-performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated. **Complete with a (HS) House side shield.**

PHILIPS LUMEC

PUBLIC/PRIVATE LIGHTING:	PUBLIC
PG&E RATE SCHEDULE:	LS-2A
INSTALL IN JOINT TRENCH:	
INSTALL IN SEPARATE TRENCH:	✓
CITY PERMIT REQUIRED:	✓

WIRING DIAGRAM - 120V



LUMINAIRE SCHEDULE

TYPE	LUMINAIRE	DIST.	MTG. HT.	ARM	POLE HT.	COLOR	MATERIAL	QUANTITY
LED POST TOP	55W, 48LED, 240V	TYPE 3W	18'-0" ±	-	16'-0"	RAL	GALV. STEEL	22

***NOTE: CONTRACTOR TO VERIFY ALL QUANTITIES AND SPECIFICATIONS PRIOR TO ORDERING.**

REGISTERED PROFESSIONAL ENGINEER
DAVID SCOT CROWTOOT
E11965
EXP. 9/30/25
ELECTRICAL
STATE OF CALIFORNIA

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CALL BEFORE YOU DIG

REVISIONS

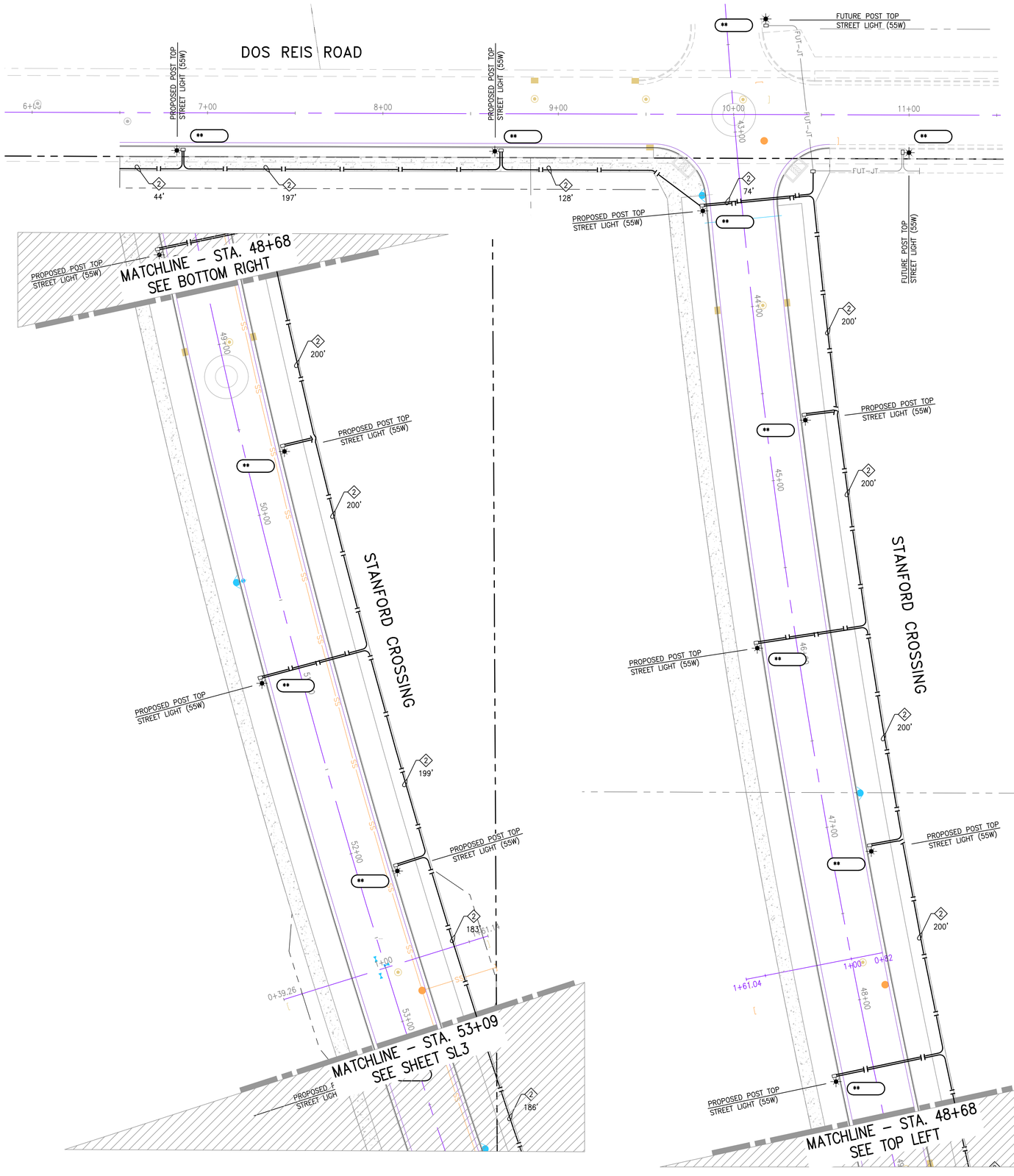
SYMBOL	DATE	DESCRIPTION	APPROVED

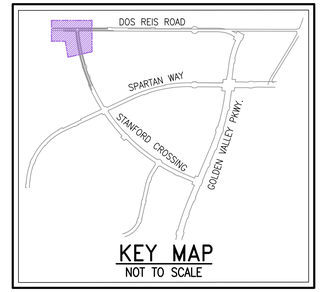
GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

STREET LIGHTING TITLE SHEET

McKAY & SOMPS
STANFORD CROSSING EXTENSION
STANFORD CROSSING
LATHROP CALIFORNIA

PROJECT MANAGER: A. SAENZ
DRAWN BY: M. BAKER
CHECKED BY: A. SAENZ
SCALE: AS SHOWN
JOB NUMBER: 24-147
DATE LAST MODIFIED: 01-24-25
SHEET **SL1**
OF 3 SHEETS





KEY MAP
NOT TO SCALE

LEGEND

- EXISTING TRENCH OR UTILITIES
- PROPOSED 1 1/2" SCH. 40 PVC CONDUIT
- EXISTING STREET LIGHT SPLICE BOX
- 2 — ELECTRIC SERVICE POINT (SECONDARY BOX)
- PROPOSED POST TOP STREET LIGHT (55W)
- PROPOSED POST TOP STREET LIGHT (70W)
- EXISTING STREET LIGHT
- EXISTING DOUBLE ARM STREET LIGHT
- 123456 — STREET LIGHT POLE NUMBER

30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE		RUN NUMBER						
		NUMBER OF CONDUCTORS						
		①	②	③	④			
#4								
#6	GND							
#8		2	2	3				
	GND							
#10								
	GND		1	1				
#12								
	GND							
CONDUIT SIZE		2"	2"	2"				

NOTE:
CONDUIT SHOWN SCHEMATICALLY. REFER TO JOINT TRENCH COMPOSITE PLAN FOR EXACT TRENCH AND BOX LOCATIONS.

CAUTION:
CONTACT U.S.A. (811) (2) FULL WORKING DAYS PRIOR TO STARTING WORK IF EXISTING UTILITIES CONFLICT WITH POLE LOCATION, FIELD ADJUST TO CLEAR EXISTING UTILITIES A MINIMUM OF 3'–0".

REGISTERED PROFESSIONAL ENGINEER
DAVID SCOT CROWFOOT
E11965
EXP. 9/30/25
ELECTRICAL
STATE OF CALIFORNIA

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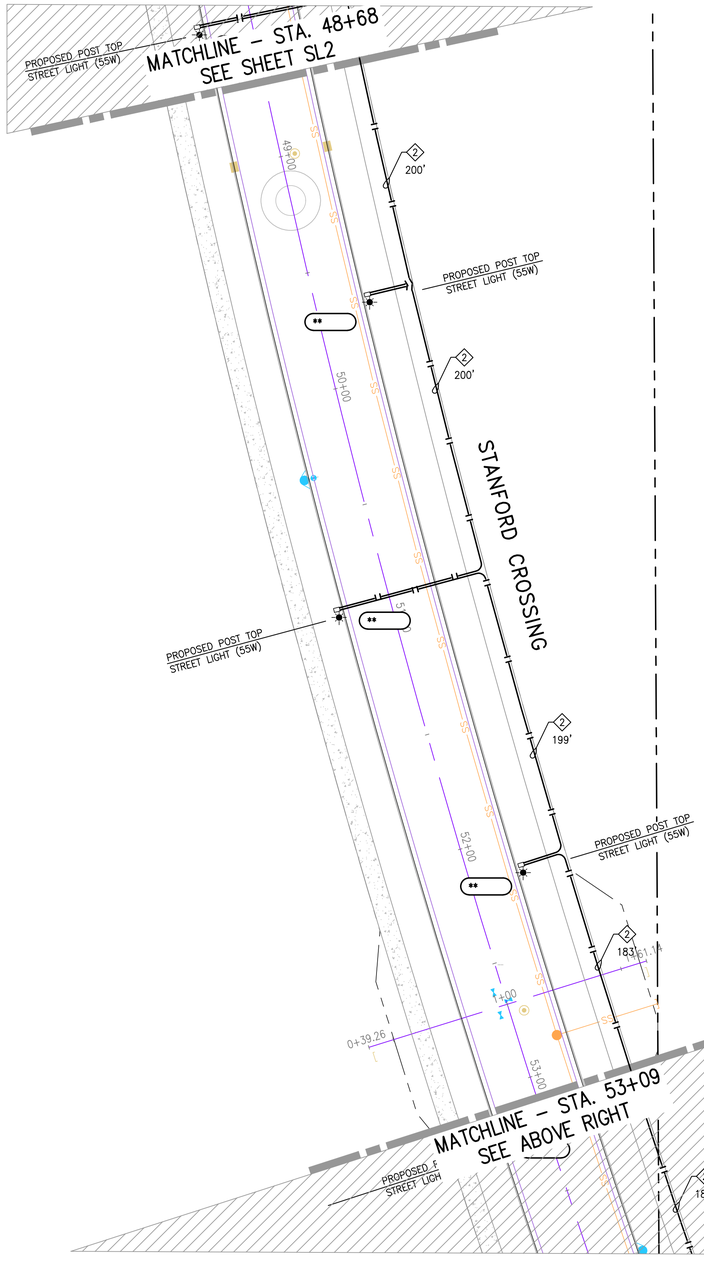
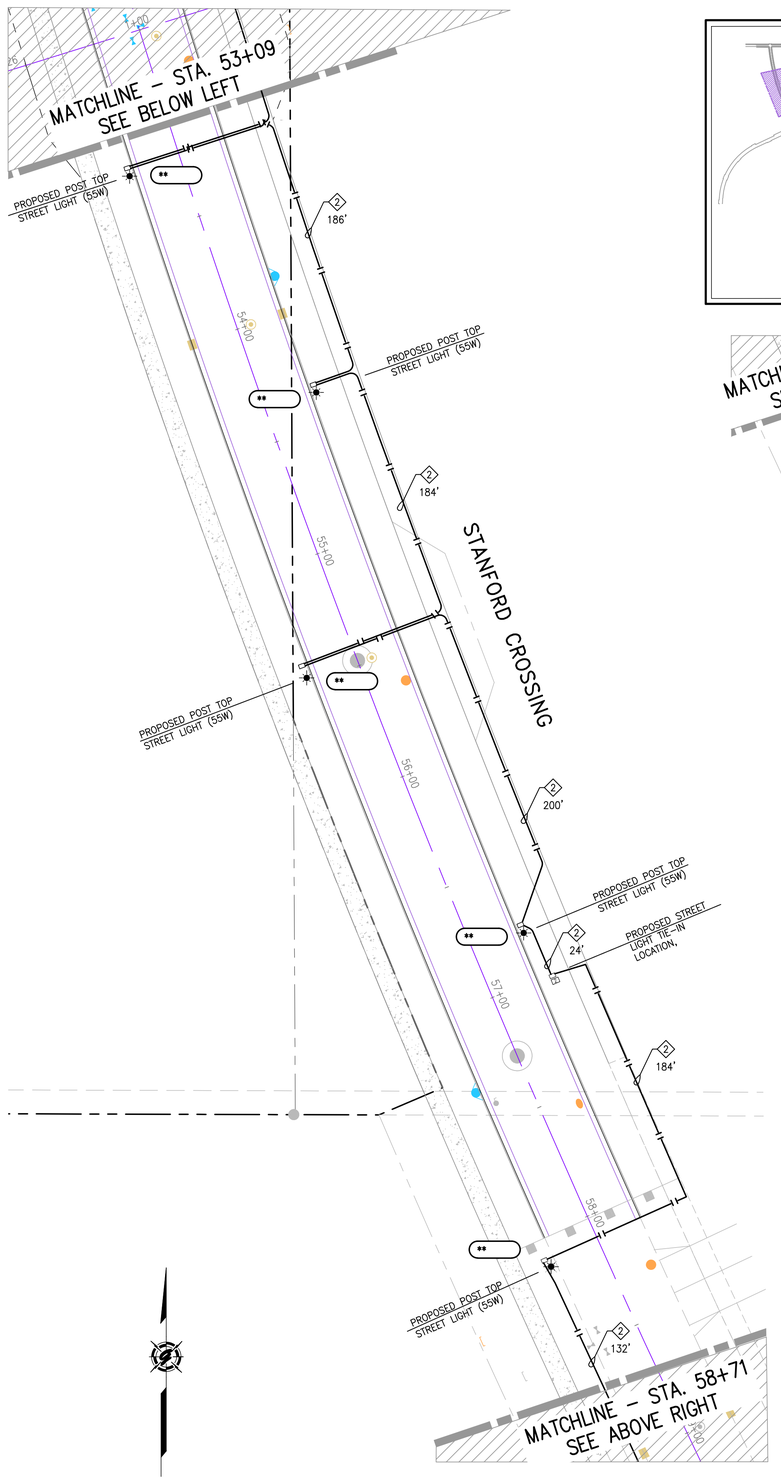
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

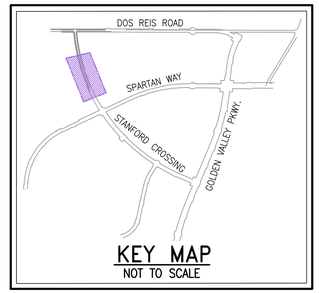
STREET LIGHTING SITE PLAN

McKAY & SOMPS
STANFORD CROSSING EXTENSION
STANFORD CROSSING
LATHROP CALIFORNIA

PROJECT MANAGER: A. SAENZ
DRAWN BY: MB2
CHECKED BY: D. CROWFOOT, PE
SCALE: 1"=30'
JOB NUMBER: 24-147
DATE LAST MODIFIED: 01-24-25
SHEET SL2
OF 3 SHEETS







LEGEND

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- PROPOSED POST TOP STREET LIGHT (55W)
- PROPOSED POST TOP STREET LIGHT (70W)
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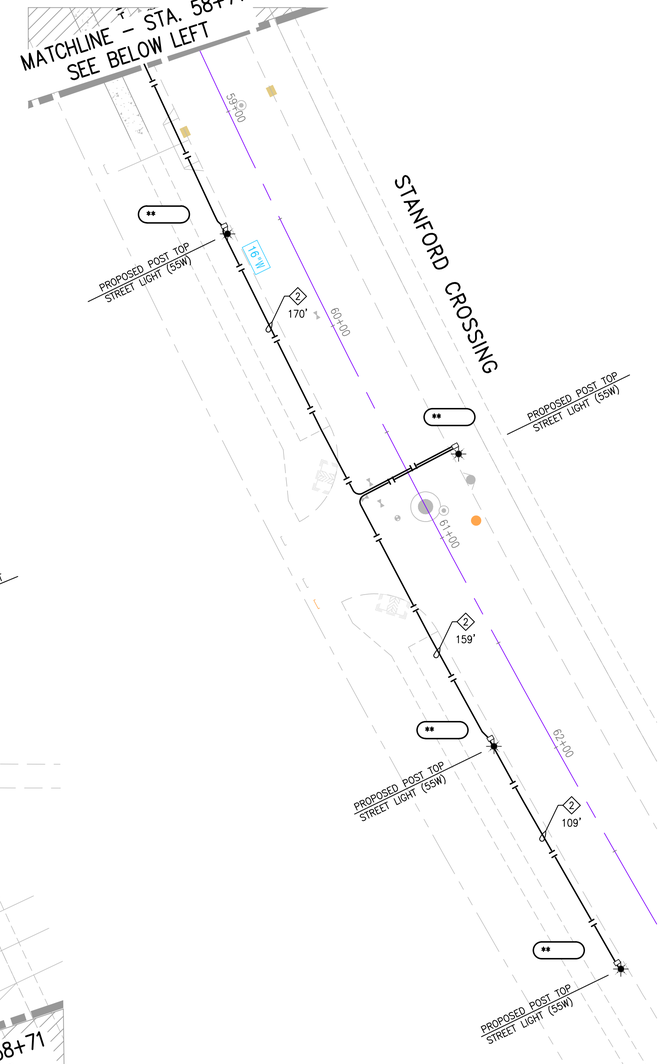
- EXISTING DOUBLE ARM STREET LIGHT
- 123456 — STREET LIGHT POLE NUMBER



CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE		RUN NUMBER / NUMBER OF CONDUCTORS ①	②	③	④			
#4								
#6	GND							
#8		2	2	3				
	GND							
#10								
	GND		1	1				
#12								
	GND							
CONDUIT SIZE		2"	2"	2"				

CAUTION:
CONTACT U.S.A. (811) (2) FULL WORKING DAYS PRIOR TO STARTING WORK IF EXISTING UTILITIES CONFLICT WITH POLE LOCATION, FIELD ADJUST TO CLEAR EXISTING UTILITIES A MINIMUM OF 3'–0".

NOTE:
CONDUIT SHOWN SCHEMATICALLY. REFER TO JOINT TRENCH COMPOSITE PLAN FOR EXACT TRENCH AND BOX LOCATIONS.

30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

REGISTERED PROFESSIONAL ENGINEER
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STREET LIGHTING SITE PLAN

McKAY & SOMPS
STANFORD CROSSING EXTENSION
STANFORD CROSSING
LATHROP CALIFORNIA

PROJECT MANAGER: A. SAENZ
DRAWN BY: MB2
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SCALE: 1"=30'
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