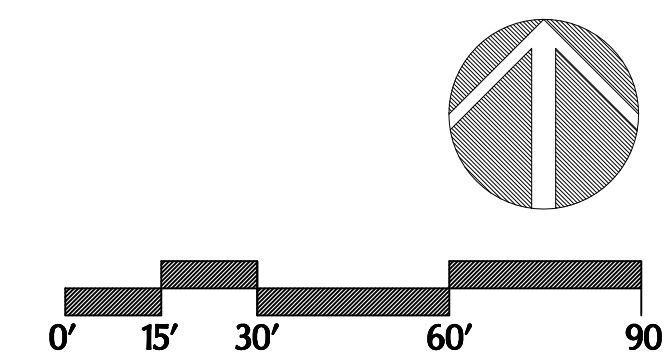
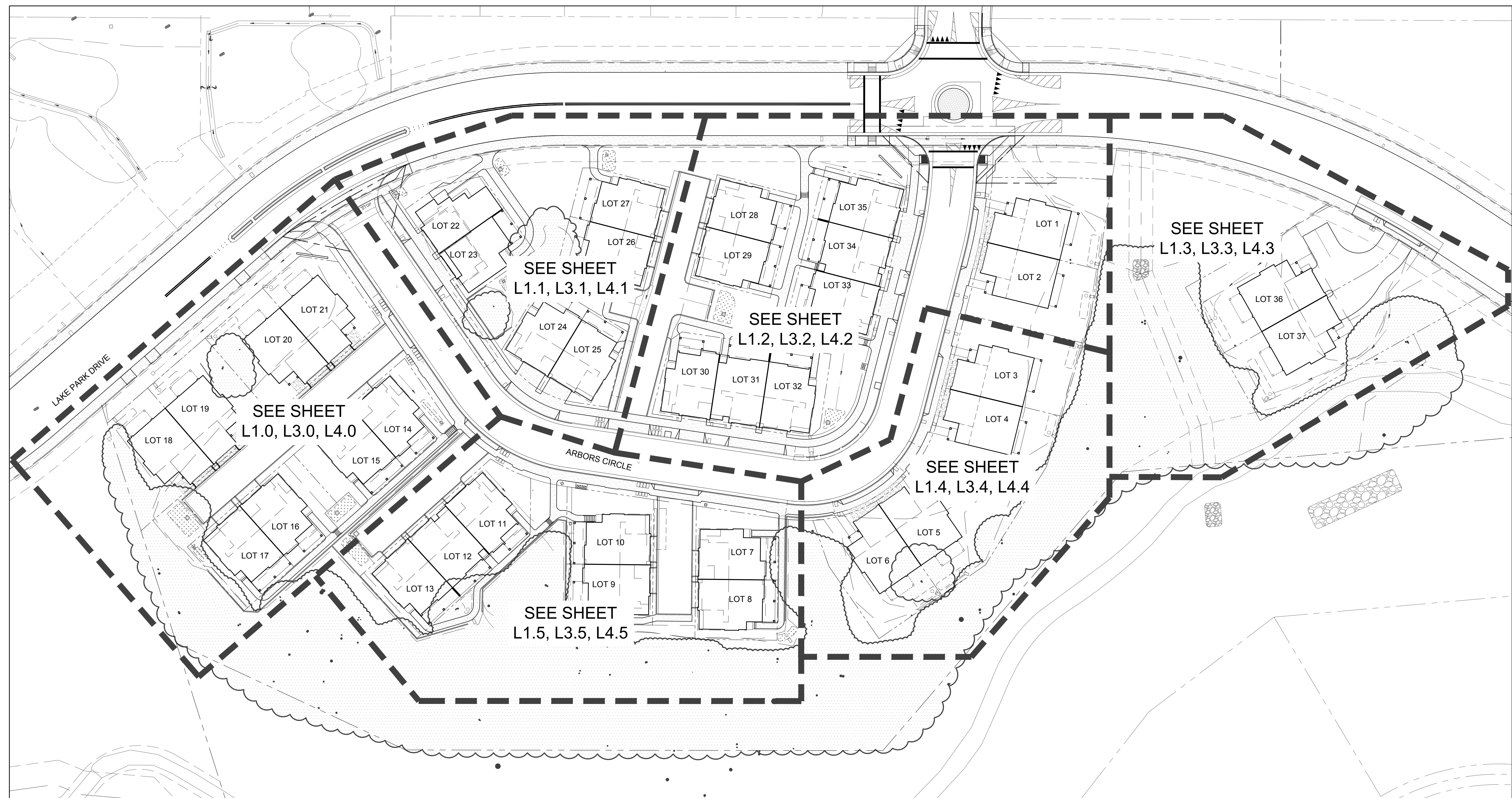
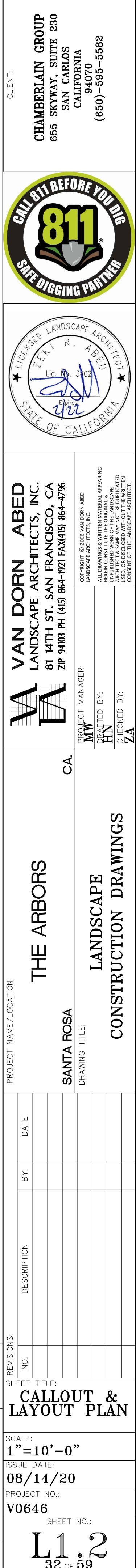


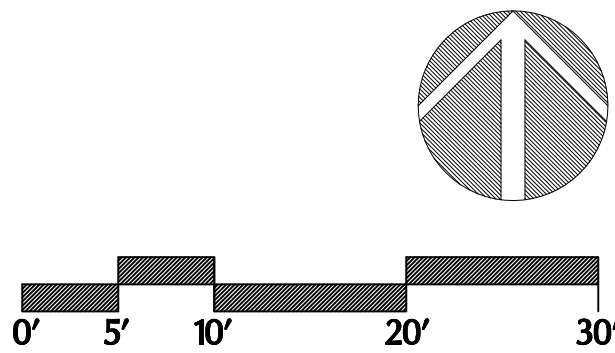
■ LANDSCAPE CONSTRUCTION PLANS ■

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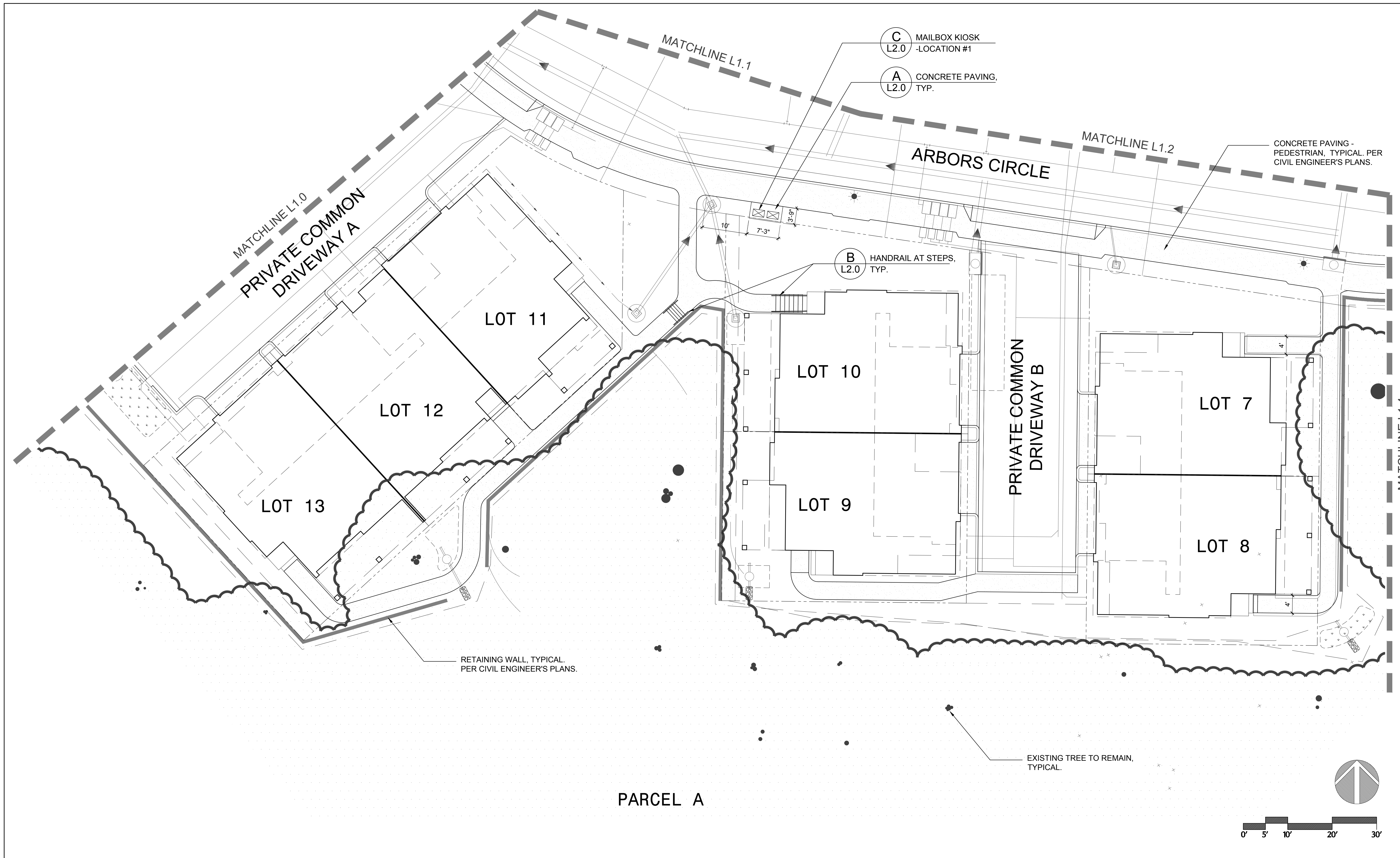


STAFF APPRVL	REVISIONS						PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION		CITY OF SANTA ROSA	REVISIONS: NO. <table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										
	NO.	REVISION	DATE	R.C.E.	EXP. DATE	CITY ENG.	DATE	SHEET TITLE: OVERALL SITE PLAN												
								SCALE: 1"=30'-0"												
								ISSUE DATE: 08/14/20												
								PROJECT NO.: V0646												
								SHEET NO.: L0.1 29 of 59												
								BY: _____ DAVID M. GUHIN CITY ENGINEER CITY OF SANTA ROSA R.C.E. 65663												
								DATE: _____												
								CITY OF SANTA ROSA FILE NO. 2020-0022												

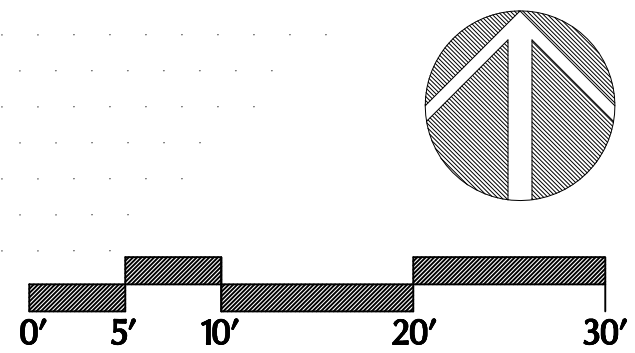




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NO.	DESCRIPTION	BY:	
SHEET TITLE:			
CALLOUT & LAYOUT PLAN			
SCALE:			
1"=10'-0"			
ISSUE DATE:			
08/14/20			
PROJECT NO.:			
V0646			
SHEET NO.:			
L1.3			
33 OF 59			



PARCEL A



REVISIONS								PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION	
STAFF APPRVL	NO.	REVISION	DATE	R.C.E.	EXP. DATE	CITY ENG.	DATE	CITY OF SANTA ROSA	
								BY: DAVID M. GUHIN, CITY ENGINEER, CITY OF SANTA ROSA, R.C.E. 65663	
								DATE:	
								CITY OF SANTA ROSA FILE NO. 2020-0022	

CLIENT:
CHAMBERLAIN GROUP
655 SKYWAY, SUITE 230
SAN CARLOS
CALIFORNIA
94070-5582
(650) 586-5582

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 14TH ST. SAN FRANCISCO, CA
94103 PH (415) 864-7621 FAX (415) 864-4796

PROJECT MANAGER:
JN

CHECKED BY:
JA

PROJECT NAME/LOCATION:
THE ARBORS
SANTA ROSA
DRAWING TITLE:
LANDSCAPE
CONSTRUCTION DRAWINGS

REVISIONS:	NO.	DATE	BY:	DESCRIPTION

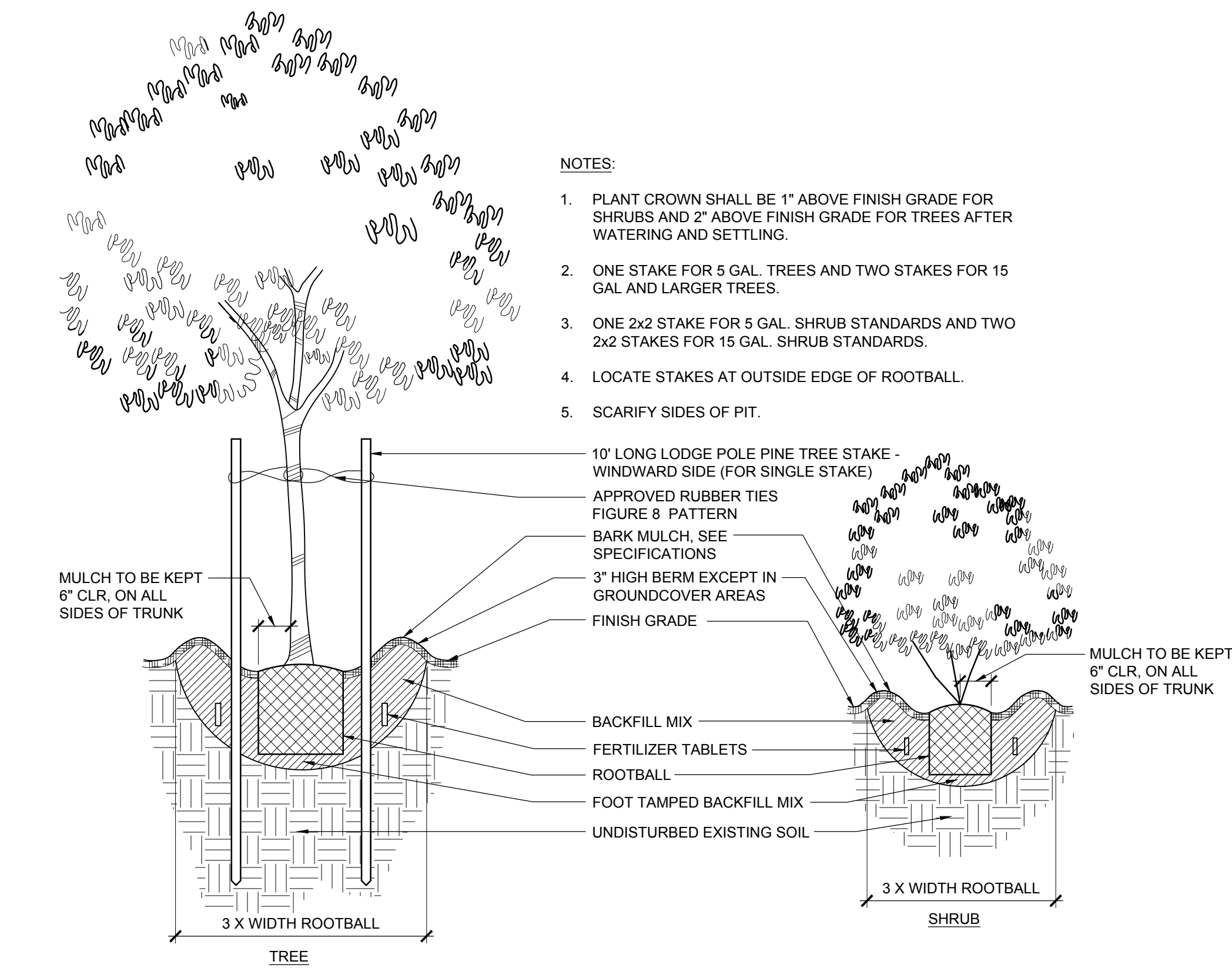
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SCALE:
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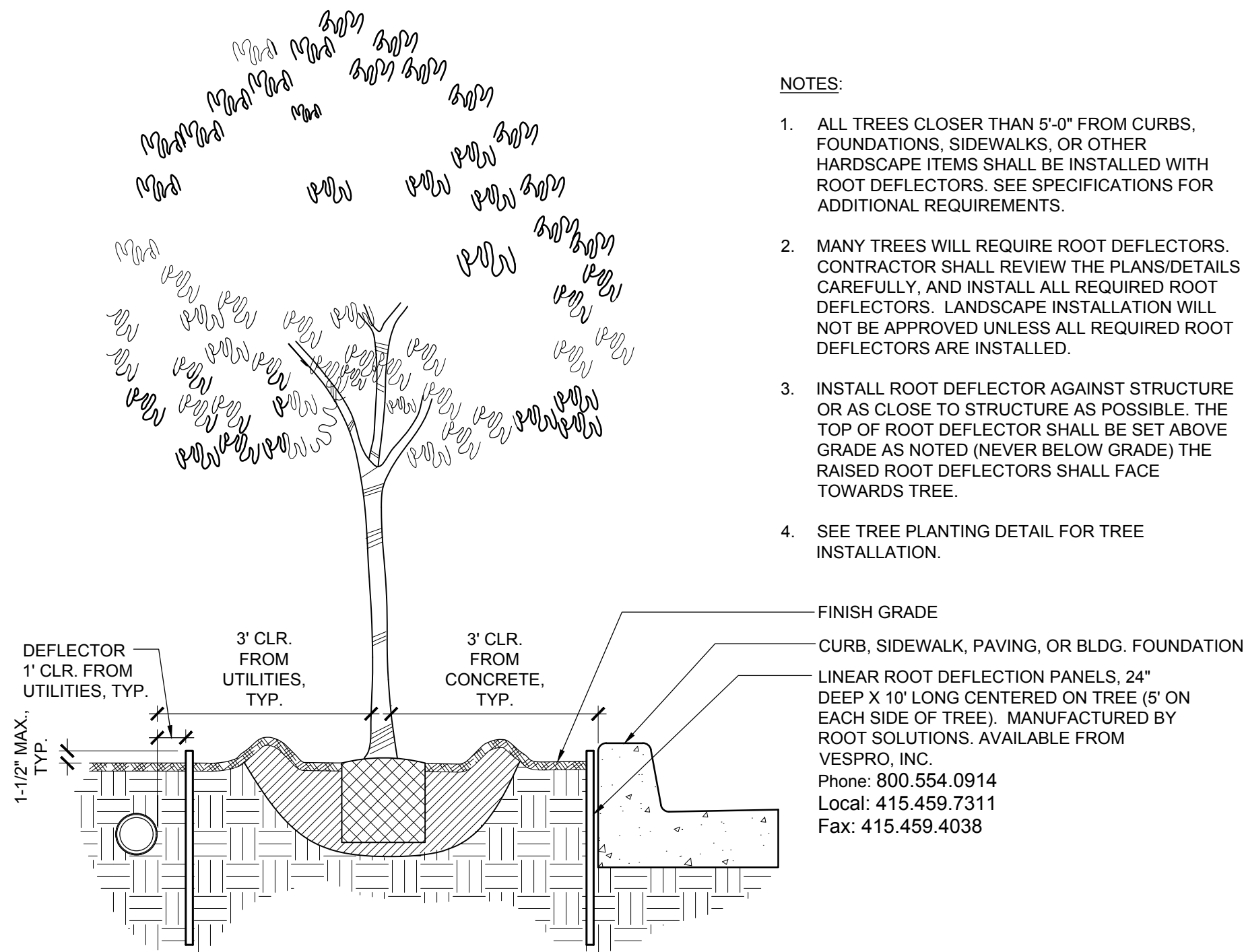
ISSUE DATE:
08/14/20

PROJECT NO.:
V0646

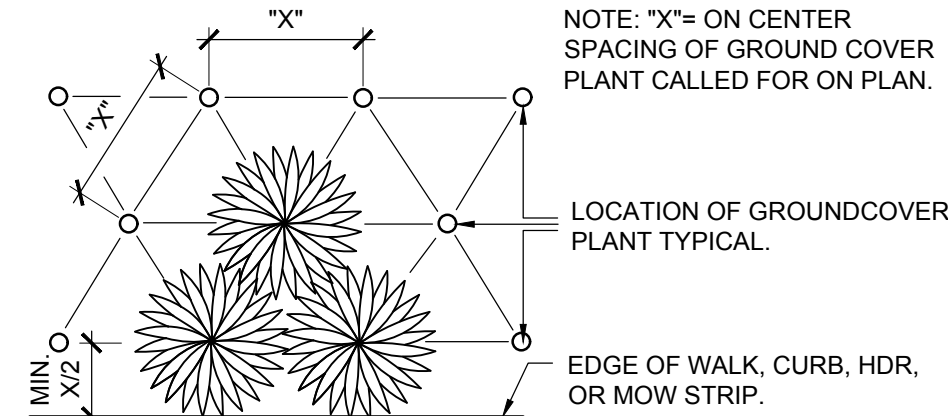
SHEET NO.:
L1.5
35 OF 59



A TREE & SHRUB PLANTING
3/4"-1'-0"



B ROOT BARRIER
3/4"-1'-0"



C GROUND COVER
NTS

STAFF APPRVL	REVISIONS						CITY ENG.		PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION CITY OF SANTA ROSA
	NO.	REVISION	DATE	R.C.E.	EXP. DATE		DATE		
									BY: _____ R.C.E. 65663
									DAVID M. GUHIN CITY ENGINEER CITY OF SANTA ROSA
									DATE: _____
									CITY OF SANTA ROSA FILE NO. 2020-0022

CLIENT:
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PROJECT MANAGER:
JHN
CHECKED BY:
JHA

CONTRACTOR:
JHN
CHECKED BY:
JHA

PROJECT NAME/LOCATION:
THE ARBORS
SANTA ROSA
DRAWING TITLE:
LANDSCAPE
CONSTRUCTION DRAWINGS

CA

REVISIONS:	NO.	DATE	BY:	DESCRIPTION

SHEET TITLE:
LANDSCAPE
DETAILS

SCALE:
AS NOTED

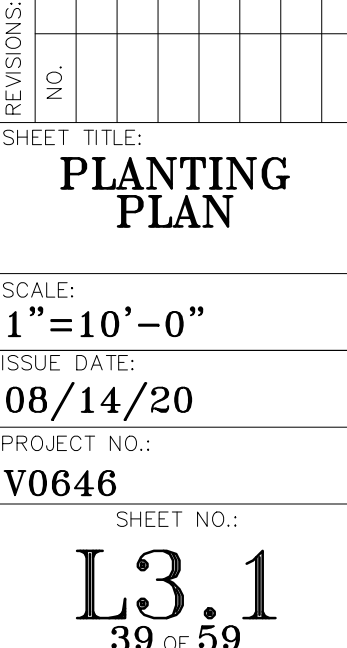
ISSUE DATE:
08/14/20

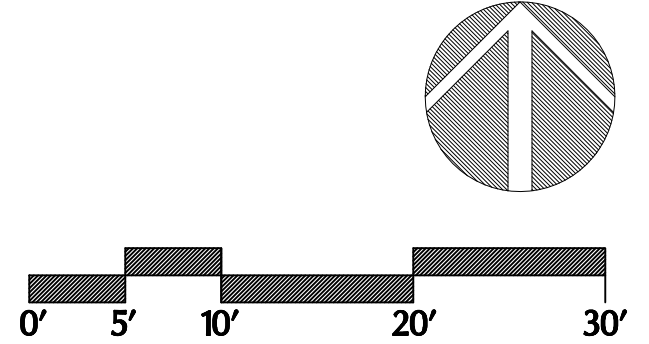
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V0646

SHEET NO.:
L2.1
37 OF 59

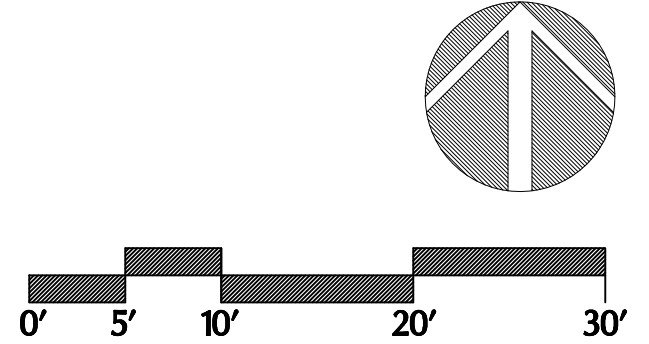


STAFF APPRVL	REVISIONS						PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION		CITY OF SANTA ROSA	REVISION NO. </
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DATE							
BY:							
DESCRIPTION							
NO.							
REVISIONS: SHEET TITLE:							
PLANTING PLAN							
SCALE: 1"=10'-0"							
ISSUE DATE: 08/14/20							
PROJECT NO.: V0646							
SHEET NO.: L3.3 41 of 59							



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CITY OF SANTA ROSA

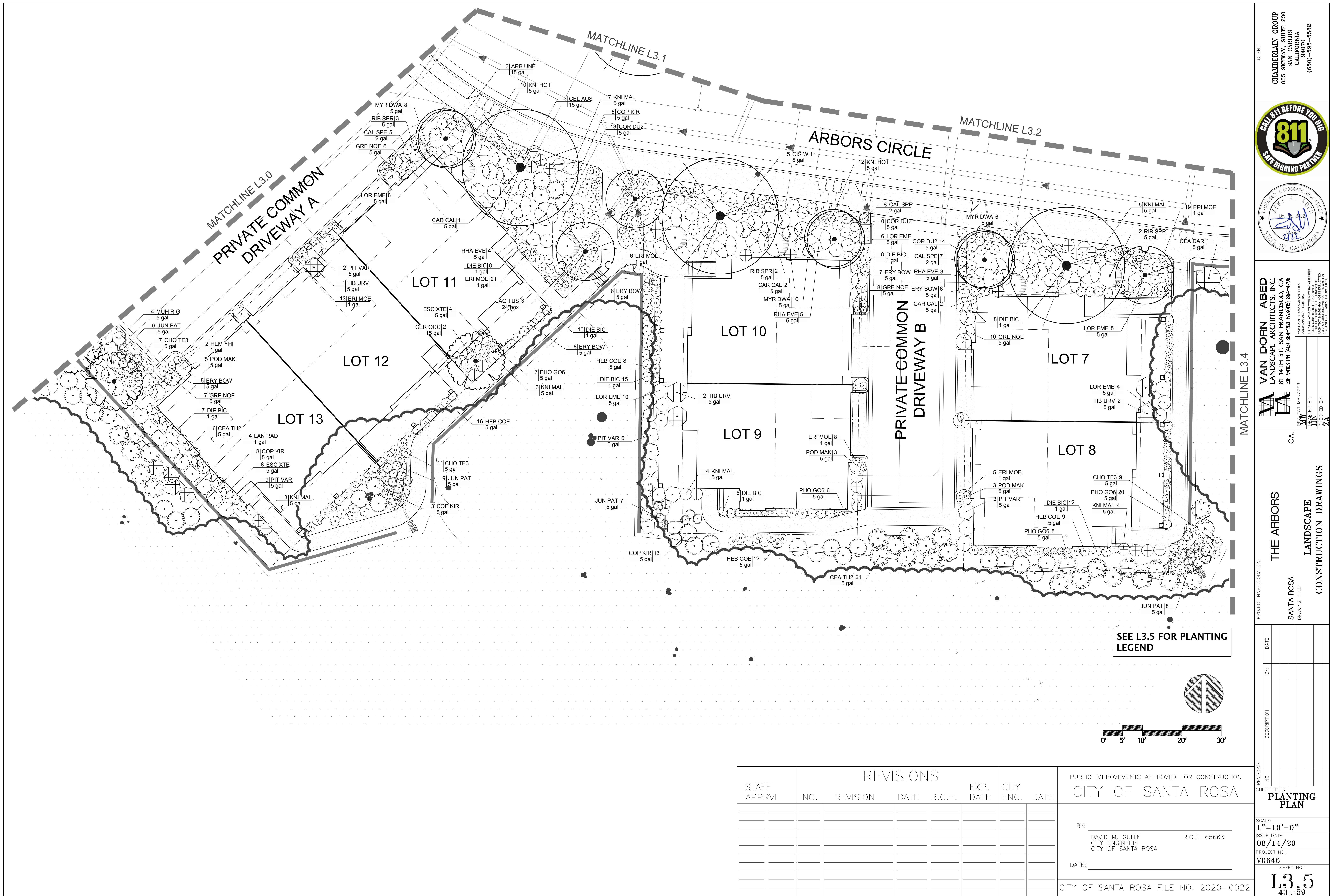
BY: _____ R.C.E. 65663

DAVID M. GUHIN
CITY ENGINEER
CITY OF SANTA ROSA

DATE: _____

CITY OF SANTA ROSA FILE NO. 2020-0022

REVISION	NO.					
SHEET TITLE:						
PLANTING PLAN						
SCALE:						
1"=10'-0"						
ISSUE DATE:						
08/14/20						
PROJECT NO.:						
V0646						
SHEET NO.:						
L3.4 42 OF 59						



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655 SKYWAY, SUITE 230
SAN CARLOS
CALIFORNIA 94070
(650) 586-5582


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Lic. No. 3300

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PROJECT MANAGER:
JH

DESIGNED BY:
JH

CHECKED BY:
JA

CA

THE ARBORS
SANTA ROSA

LANDSCAPE
CONSTRUCTION DRAWINGS

PROJECT NAME/LOCATION:
THE ARBORS
SANTA ROSA

DRAWING TITLE:
LANDSCAPE
CONSTRUCTION DRAWINGS

REVISIONS:

NO.	DESCRIPTION	BY:	DATE

STAFF
APPRVL

REVISIONS

NO.	REVISION	DATE	R.C.E.	EXP. DATE	CITY ENG.	DATE

PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION
CITY OF SANTA ROSA

BY:
DAVID M. GUHIN
CITY ENGINEER
CITY OF SANTA ROSA
R.C.E. 65663

DATE:

CITY OF SANTA ROSA FILE NO. 2020-0022

SHEET TITLE:
PLANTING
PLAN

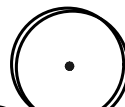
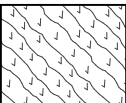
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1"=10'-0"

ISSUE DATE:
08/14/20

PROJECT NO.:
V0646

SHEET NO.:
L3.5
43 OF 59

PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT.	QTY	REMARKS	BIORETENTION PLANTS	CODE	BOTANICAL NAME	COMMON NAME	CONT.	QTY	REMARKS
	ARB UNE	ARBUTUS UNEDO	STRAWBERRY TREE SHRUB	15 GAL	19	L		CHO TE3	CHONDROPETALUM TECTORUM	CAPE RUSH	5 GAL	187	M
	CEL AUS	CELTIS AUSTRALIS	EUROPEAN HACKBERRY	15 GAL	16	L		JUN PAT	JUNCUS PATENS	CALIFORNIA GRAY RUSH	5 GAL	214	L
	CER OCC	CERCIS OCCIDENTALIS	WESTERN REDBUD	15 GAL	23	VL		MUH RIG	MUHLenbergia RIGENS	DEER GRASS	5 GAL	88	L
	LAG TUS	LAGERSTROEMIA X 'TUSCARORA'	CRAPE MYRTLE CORAL PINK	24"BOX	12	L	GROUND COVERS						
	PLA RAC	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GAL	3	M		HYD SLO	HYDROSEED SLOPES	HYDROSEED SLOPES	SF	3,135 SF	
	ZEL SER	ZELKOVA SERRATA	SAWLEAF ZELKOVA	15 GAL	11	M	NON-IRRIGATION HYDROSEED (ON OPEN SPACE GRADED SLOPE AREAS)						
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	CONT.	QTY	REMARKS	NON-IRRIGATED HYDROSEED. MIX CONSIST OF:						
	ARC HOW	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN'	HOWARD MCMINN MANZANITA	5 GAL	70	L	LBS. PER ACRE ITEM PURITY/ GERMINATION						
	CAL SPE	CALANDRINIA SPECTABILIS	PINK CALANDRINIA	2 GAL	173	L	10 ZORRO FESCUS 98%/ 85%						
	CAR CAL	CARPENTERIA CALIFORNICA	BUSH ANEMONE	5 GAL	39	M	10 MOLATE FESCUS 98%/ 85%						
	CEA TH2	CEANOTHUS THYRSIFLORUS- 'LOUIS EDMONDS'	BLUE BLOSSOM	5 GAL	97	L	6 IDAHO FESCUS 98%/ 85%						
	CEA DAR	CEANOTHUS X 'DARK STAR'	DARK STAR WILD LILAC	5 GAL	3	M	5 CRIMSON CLOVER 99%/ 90%						
	CIS WHI	CISTUS X BLANCHE	WHITE ROCKROSE	5 GAL	92	L	2 COAST RANGE MELIC 90%/ 80%						
	COP KIR	COPROSMA KIRKII	CREEPING MIRROR PLANT	5 GAL	169	L	2 CALIFORNIA POPPY 95%/ 80%						
	COR DU2	CORREA X 'DUSKY BELLS'	AUSTALIAN FUCHSIA	5 GAL	323	L	2 ARROYO LUPINE 99%/ 80%						
	DIE BIC	DIETES BICOLOR	FORTNIGHT LILY	1 GAL	310	L	1 BLUE EYED GRASS 98%/ 80%						
	ERI MOE	ERIGERON KARVINSKIANUS 'MOERHEIMII'	PINK SANTA BARBARA DAISY	1 GAL	326	L	1 FAREWELL TO SPRING 98%/ 80%						
	ERY BOW	ERYSIMUM X 'BOWLES' MAUVE'	WALLFLOWER	5 GAL	146	L	SOIL CONDITIONER/ FERTILIZER: BIOSOL AT 800 LB. PER ACRE						
	ESC XTE	ESCALLONIA X 'TERRI'	TERRI ESCALLONIA	5 GAL	135	M	TURBO START: AT ONE GALLON PER ACRE						
	EUR PEC	EURYOPS PECTINATUS	GOLDEN DAISY BUSH	5 GAL	84	L	SOIL BINDING AGENT: SENTINEL AT 150LB. PER ACRE						
	GRE NOE	GREVILLEA X 'NOELLI'	GREVILLEA	5 GAL	204	L	HYDROSEED MIX AVAILABLE AT: CONTACT S&S SEEDS: (805) 684-0436, www.ssseeds.com						
	HEB COE	HEBE X 'COED'	HEBE	5 GAL	131	M	OR PACIFIC COAST SEED: 925-373-4417, http://www.pcseed.com FOR HYDROSEED MIX						
	HEM YHI	HEMEROCALLIS X HYBRID	HYBRID DAYLILY	1 GAL	118	M	ABOVE OR SIMILAR.						
	KNI MAL	KNIPHOFIA UVARIA 'MALIBU YELLOW'	MALIBU YELLOW TORCH LILY	5 GAL	173	L	NOTE: A FINAL CITY INSPECTION SHALL BE PERFORMED. THE INSTALLATION CONTRACTOR SHALL ATTEND THIS INSPECTION AND MAKE A REQUIRED REPAIRS AND ADJUSTMENTS TO ARCHIVE APPROVAL AND COMPLETION FROM THE CITY. CONTACT YOUR BUILDING INSPECTOR PRIOR TO FINAL INSPECTION REGARDING WELO SIGN OFF.						
	KNI HOT	KNIPHOFIA UVARIA 'ORANGE'	ORANGE HOT POKER	5 GAL	180	L							
	LAN RUS	LANTANA CAMARA 'GOLD RUSH' TM	GOLD RUSH BUSH LANTANA	5 GAL	47	L							
	LAN RAD	LANTANA CAMARA 'RADIATION'	RADIATION LANTANA	1 GAL	4	L							
	LAV ASS	LAVATERA ASSURGENTIFLORA	MALLOW	5 GAL	8	L							
	LEO LIO	LEONOTIS LEONURUS	LION'S TAIL	5 GAL	34	L							
	LOR EME	LOROPETALUM CHINENSE 'EMERALD SNOW'	EMERALD SNOW LOROPETALUM	5 GAL	136	L							
	MYR DWA	MYRTUS COMMUNIS 'COMPACTA'	DWARF MYRTLE	5 GAL	190	L							
	PHO GO6	PHORMIUM TENAX 'GOLD SWORD'	NEW ZEALAND FLAX	5 GAL	318	L							
	PIT VAR	PITTOSPORUM TOBIRA 'VARIEGATA'	VARIEGATED MOCK ORANGE	5 GAL	118	L							
	POD MAK	PODOCARPUS MACROPHYLLUS 'MAKI'	MAKI SHRUBBY YEW PODOCARPUS	5 GAL	54	M							
	RHA EVE	RHAMNUS CALIFORNICA 'EVE CASE'	CALIFORNIA COFFEEBERRY	5 GAL	86	L							
	RIB SPR	RIBES SANGUINEUM 'SPRING SHOWERS'	PINK FLOWERING CURRANT	5 GAL	47	L							
	ROM WHI	ROMNEYA COULTERI 'WHITE CLOUD'	WHITE CLOUD MATILIJIA POPPY	5 GAL	15	VL							
	TIB URV	TIBOUCHINA URVILLEANA	PRINCESS FLOWER	5 GAL	14	M							
	WES MOR	WESTRINGIA FRUTICOSA 'MORNING LIGHT'	MORNING LIGHT COAST ROSEMARY	5 GAL	22	L							

STAFF APPRVL	REVISIONS						CITY		PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION	
	NO.	REVISION	DATE	R.C.E.	EXP. DATE	ENG.	DATE	CITY OF SANTA ROSA		
								BY: _____ R.C.E. 65663		
								CITY ENGINEER CITY OF SANTA ROSA		
								DATE: _____		
								CITY OF SANTA ROSA FILE NO. 2020-0022		

CLIENT:
CHAMBERLAIN GROUP
655 SKYWAY, SUITE 230
SAN CARLOS
CALIFORNIA
94061-1070
(650) 586-5582





VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 14TH ST. SAN FRANCISCO, CA
94103 TH (415) 864-7617 FAX(415) 864-4796

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PROJECT MANAGER:
JH

DESIGNED BY:
JH

CHECKED BY:
JA

PROJECT NAME/LOCATION:
THE ARBORS
SANTA ROSA
DRAWING TITLE:
LANDSCAPE
CONSTRUCTION DRAWINGS

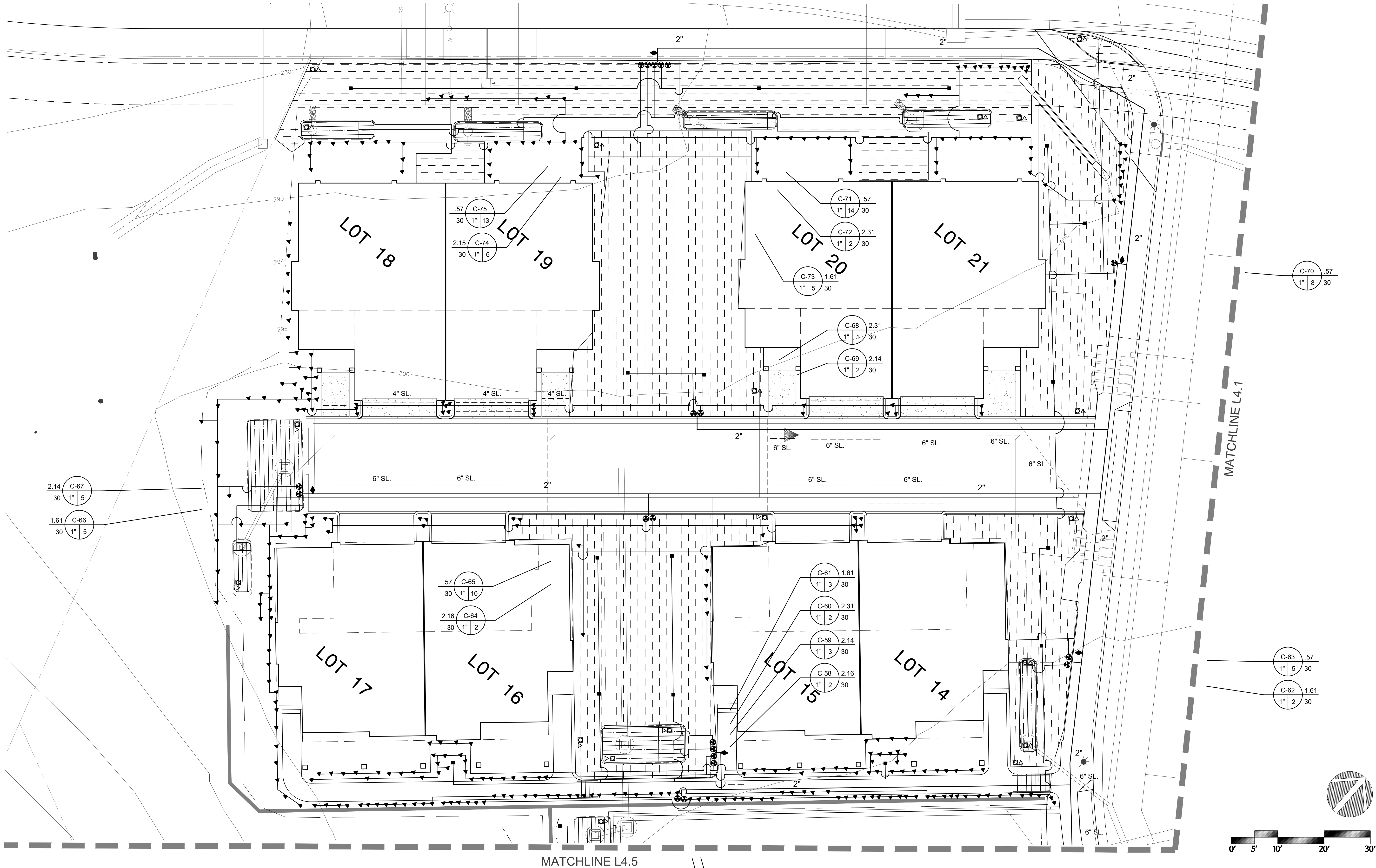
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DESCRIPTION BY: DATE
BY: DATE

NO. DATE
DESCRIPTION BY: DATE
BY: DATE

SHEET TITLE:
PLANTING
LEGEND

SCALE:
N/A
ISSUE DATE:
08/14/20
PROJECT NO.:
V0646
SHEET NO.:
L3.6
44 OF 59



STAFF APPRVL	REVISIONS						CITY ENG.	DATE
	NO.	REVISION	DATE	R.C.E.	EXP. DATE			

PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION
CITY OF SANTA ROSA

BY: DAVID M. GUHIN
CITY ENGINEER
CITY OF SANTA ROSA
R.C.E. 65663
DATE:

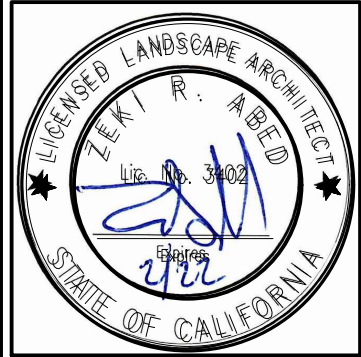
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REVISIONS:	NO.	DESCRIPTION	BY:	DATE

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**IRRIGATION
PLAN**
SCALE:
1"=10'-0"
ISSUE DATE:
08/14/20
PROJECT NO.:
V0646
SHEET NO.:
L4.0
45 OF 59

PROJECT NAME/LOCATION:
THE ARBORS
SANTA ROSA
DRAWING TITLE:
**LANDSCAPE
CONSTRUCTION DRAWINGS**

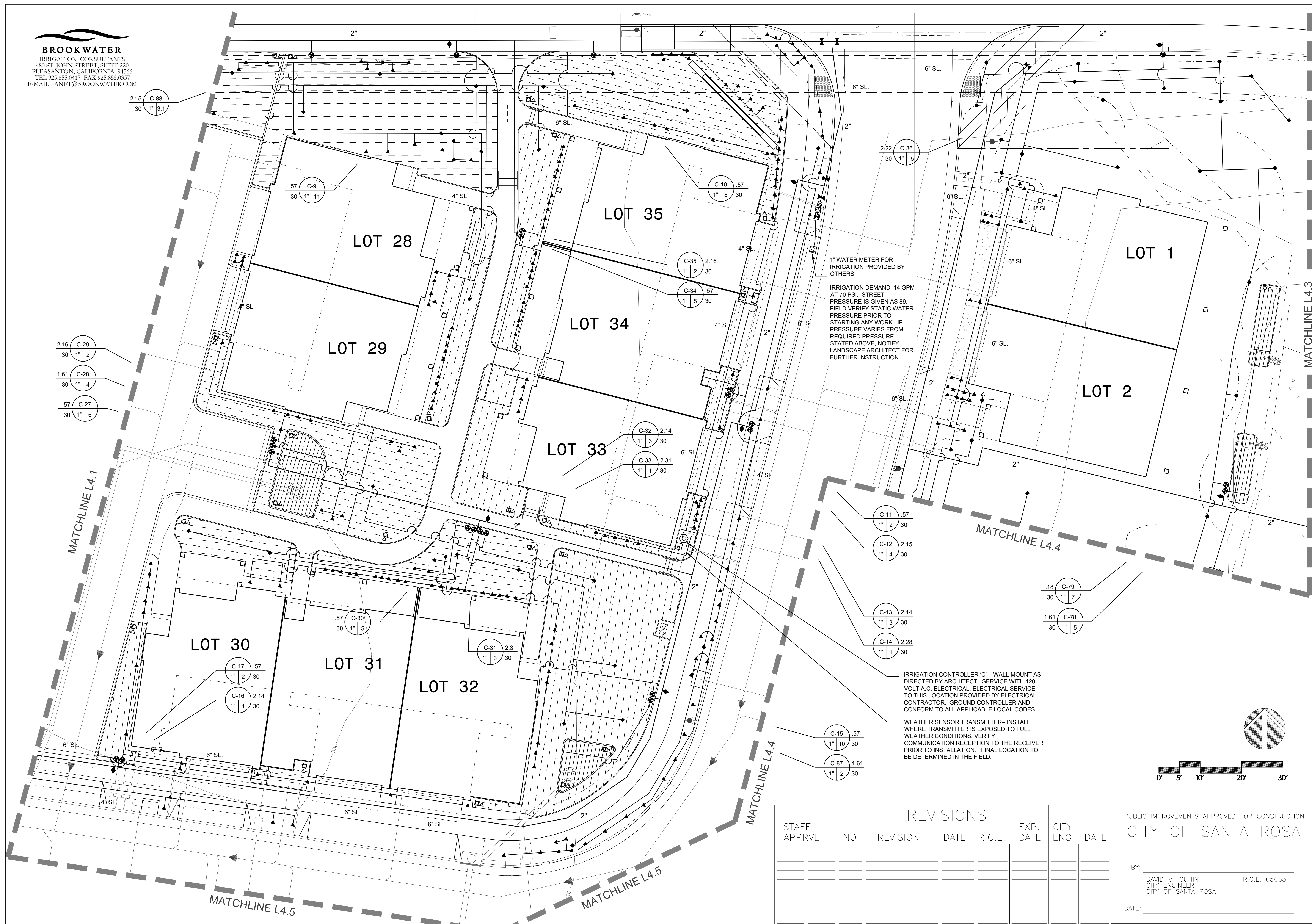
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81 14TH ST. SAN FRANCISCO, CA
ZIP 94103 PH (415) 864-7621 FAX (415) 864-4796
CONTRACT NO. 2006 VAN DORN ABED
SANTA ROSA, CA
ALL DRAWINGS & MATERIALS APPEARING
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DESIGN OF THE LANDSCAPE ARCHITECT
REGISTERED IN THE STATE OF CALIFORNIA
DATE: 08/14/20
CHECKED BY:
STAFF
Z.A.



CLIENT:
CHAMBERLAIN GROUP
655 SKYWAY, SUITE 230
SAN CARLOS
CALIFORNIA
94070
(650) 586-5582

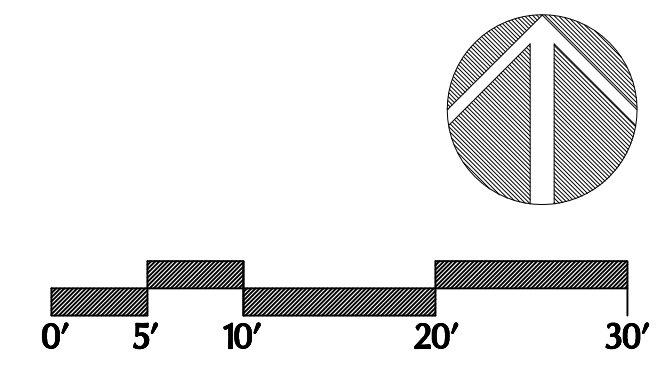


BROOKWATER
IRRIGATION CONSULTANTS
480 ST. JOHN STREET, SUITE 220
PLEASANTON, CALIFORNIA 94566
TEL. 925.855.0417 FAX 925.855.0357
E-MAIL: JANET@BROOKWATER.COM



1" WATER METER FOR IRRIGATION PROVIDED BY OTHERS.
IRRIGATION DEMAND: 14 GPM AT 70 PSI. STREET PRESSURE IS GIVEN AS 89. FIELD VERIFY STATIC WATER PRESSURE PRIOR TO STARTING ANY WORK. IF PRESSURE VARIES FROM REQUIRED PRESSURE STATED ABOVE, NOTIFY LANDSCAPE ARCHITECT FOR FURTHER INSTRUCTION.

IRRIGATION CONTROLLER "C" - WALL MOUNT AS DIRECTED BY ARCHITECT. SERVICE WITH 120 VOLT A.C. ELECTRICAL. ELECTRICAL SERVICE TO THIS LOCATION PROVIDED BY ELECTRICAL CONTRACTOR. GROUND CONTROLLER AND CONFORM TO ALL APPLICABLE LOCAL CODES.
WEATHER SENSOR TRANSMITTER- INSTALL WHERE TRANSMITTER IS EXPOSED TO FULL WEATHER CONDITIONS. VERIFY COMMUNICATION RECEPTION TO THE RECEIVER PRIOR TO INSTALLATION. FINAL LOCATION TO BE DETERMINED IN THE FIELD.



REVISIONS							
STAFF APPRVL	NO.	REVISION	DATE	R.C.E.	EXP. DATE	CITY ENG.	DATE

PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION
CITY OF SANTA ROSA
BY: DAVID M. GUHIN
CITY ENGINEER
CITY OF SANTA ROSA
R.C.E. 65663
DATE: _____
CITY OF SANTA ROSA FILE NO. 2020-0022

CLIENT:
CHAMBERLAIN GROUP
655 SKYWAY, SUITE 230
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PROJECT MANAGER:
VAN DORN ABED

DESIGNED BY:
VAN DORN ABED

CHECKED BY:
STAFF

DATE:
12/14/20

PROJECT NAME/LOCATION:
THE ARBORS
SANTA ROSA
DRAWING TITLE:
LANDSCAPE CONSTRUCTION DRAWINGS

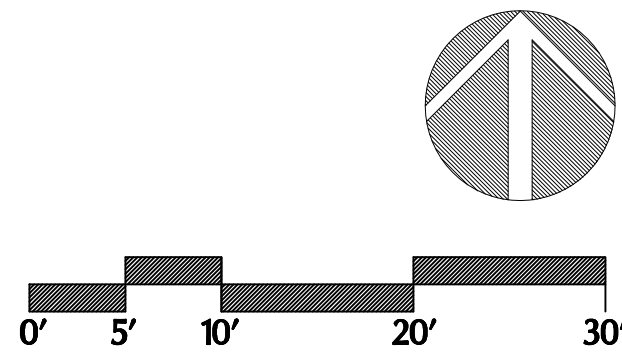
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SCALE:
1"=10'-0"

ISSUE DATE:
08/14/20

PROJECT NO.:
V0646

SHEET NO.:
L4.2
47 OF 59

[illegible]

BY: _____
DAVID M. GUHIN
CITY ENGINEER
CITY OF SANTA ROSA
R.C.E. 65663

DATE: _____

CITY OF SANTA ROSA FILE NO. 2020-0022

SHEET N
14

L4.4
49 OF 59

TITLE: LANDSCAPE CONSTRUCTION DRAWINGS

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LANDSCAPE ARCHITECTS, INC.
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ZIP 94103 PH (415) 864-1921 FAX(415) 864-4796

PROJECT MANAGER:	
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DRAWN BY:	
STAFF	
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ZA	

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TEL 925.855.0417 FAX 925.855.0357
E-MAIL JANET@BROOKWATER.COM



PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION

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BY: _____

DAVID M. GUHIN
CITY ENGINEER
CITY OF SANTA ROSA

R.C.E. 65663

DATE: _____

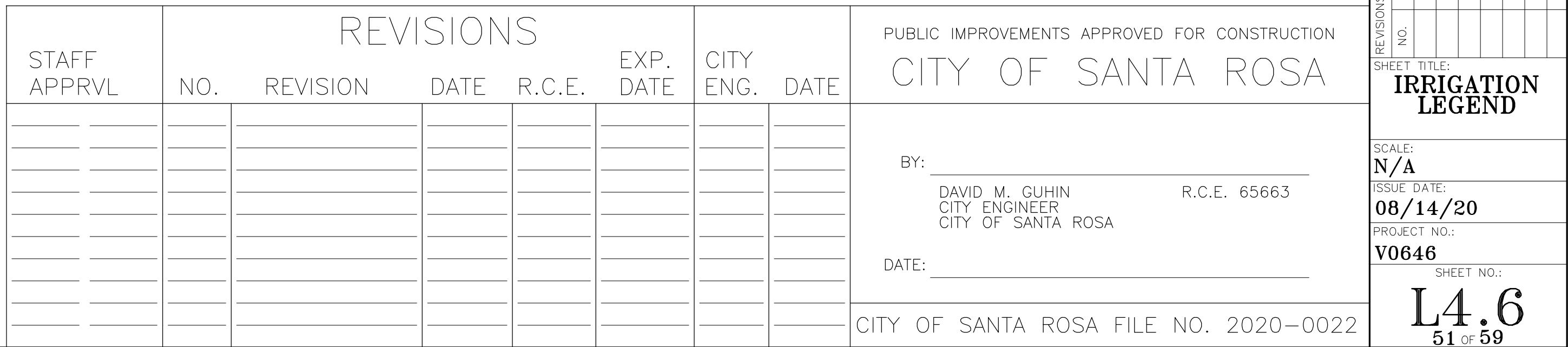
CITY OF SANTA ROSA FILE NO. 2020-0022

PROJECT NAME/LOCATION: THE ARBORS SANTA ROSA DRAWING TITLE: LANDSCAPE CONSTRUCTION DRAWINGS		CA		VAN DORN ABED LANDSCAPE ARCHITECTS, INC. 9140 1 ST ST. SAN FRANCISCO, CA 415 440-3711 (415) 661-7440 (415) 664-4796		CLIENT: CHAMBERLAIN GROUP 655 SKYWAY, SUITE 230 SAN CARLOS CALIFORNIA (650) 595-5582	
REVISIONS:		PROJECT MANAGER:		COPYRIGHT © 2008 VAN DORN ABED			
SHEET TITLE: IRRIGATION PLAN		DESIGNER:		ALL DRAWINGS & LETTERS MATERIAL, REPAIRING, REPLACEMENTS, ETC. SHALL BE THE PROPERTY OF VAN DORN ABED LANDSCAPE ARCHITECTS, INC. UNLESS OTHERWISE SPECIFIED IN WRITING. THIS DRAWING IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITING CONSENT OF VAN DORN ABED LANDSCAPE ARCHITECTS, INC.			
SCALE: 1"=10'-0"		PROJECT NO.:		DATE:			
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SYMBOL	MODEL NUMBER	DESCRIPTION	PSI	FLOW RATE (GPM)
▲	DB-04-PC-CV	TORO PRESSURE COMPENSATING DRIP BUBBLER INSTALL ONE BUBBLER PER SHRUB	40	4 GPH
■	DB-09-PC-CV	TORO PRESSURE COMPENSATING DRIP BUBBLER INSTALL TWO BUBBLERS PER TREE	40	9 GPH
NOT SHOWN	T-DPC04-DC, T-DPC02-DC	TORO NGE SINGLE OUTLET EMITTER	40	1 GPH, 1/2 GPH
●	-	COMPRESSION FITTING STUB-OUT FROM PVC RIGID PIPE TO POLY TUBING		
△	T-FCH-H-FIPT	TORO DL2000 FLUSH VALVE		
NOT SHOWN	T-YD-500-34	TORO DL2000 AIR VENT		
☐	T-DL-MP9	TORO DL2000 POP-UP OPERATION INDICATOR		
⊕	DZK-700 / LT-1000-T / TW-D-x	TORO DRIP ZONE VALVE KIT - INCL. REMOTE CONTROL VALVE, WYE FILTER WITH 150 MESH SCREEN, AND PRESET PRESSURE REGULATOR / KBI SCH 80 PVC BALL VALVE / RAIN MASTER TWO WIRE DECODER		
◆	100-2SLLVC/075-MHS	TORO QUICK COUPLING VALVE WITH 3/4" HOSE SWIVEL		
⋈	T-113-LF	NIBCO LEAD FREE GATE VALVE (LINE SIZE)		
☒	FSI-T15-000	CST 1 1/2" FLOW SENSOR		
⊞	2160-L / TW-D-1	GRISWOLD 2" MASTER CONTROL VALVE (NORMALLY OPEN) WITH RAIN MASTER DECODER		
⊞	LF825Y-2" / GS-2	FEBCO LEAD-FREE REDUCED PRESSURE BACKFLOW PREVENTER IN GUARDSHACK ENCLOSURE		
Ⓡ	RS-1000	IRRITROL WIRELESS RAIN SENSOR MOUNTED TO SIDE OF ENCLOSURE		
Ⓢ	EGP-TWi PMR-KIT	RAINMASTER TWO-WIRE CONTROLLER WITH i-CARD IN STAINLESS STEEL ENCLOSURE PRO MAX MAINTENANCE REMOTE KIT		
		CONTROLLER AND STATION NUMBER		
		APPLICATION RATE (INCHES)		
		OPERATING PRESSURE (PSI)		
		APPROXIMATE GALLONS PER MINUTE		
		REMOTE CONTROL VALVE SIZE		
		MAIN LINE: 1120-SCHEDULE 40 PVC SOLVENT WELD PLASTIC PIPE WITH SCHEDULE 80 AND SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 18" COVER.		
		LATERAL LINE: 1120-CLASS 200 PSI PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 12" COVER.		
		DRIP TUBING: TORO T-EHD1645 BLUE STRIPE HOSE WITH TORO LOC-EZE FITTINGS. 4" COVER. DISTRIBUTION TUBING: TORO EHW0437-010 1/4" HOSE.		
		SUB-SURFACE DRIPLINE: TORO DL2000 RGP-212-10 DRIPLINE WITH ROOT GUARD. USE ONLY DL2000 DRIPLINE TRI-LOC FITTINGS. 2" COVER. (12" EMITTER SPACING; .53 GPH PER EMITTER)		
		SUB-SURFACE DRIPLINE: TORO DL2000 RGP-412-10 DRIPLINE WITH ROOT GUARD. USE ONLY DL2000 DRIPLINE TRI-LOC FITTINGS. 2" COVER. (12" EMITTER SPACING; 1.0 GPH PER EMITTER)		
		SLEEVE (SL): 1120-CLASS 200 PVC PLASTIC PIPE. 24" COVER.		

SPRINKLER TYPE	GPM	NO. OF BUBBLERS*	PIPE SIZE
<u>BUBBLERS - 4 GPH</u>	1-5 5.1-15	1-75 76-225	3/4" 1"
<u>BUBBLERS - 9 GPH</u>	1-5 5.1-15	1-32 33-96	3/4" 1"

NO. OF MULTI OUTLET EMITTERS	PIPE SIZE
1-50	3/4"
51-100	1"
101-150	1 1/4"



THE CONTRACTOR SHALL REVIEW RELATED DRAWINGS AND SHALL ENSURE COORDINATION WITH ALL APPLICABLE TRADES PRIOR TO SUBMITTING BID.

2. THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES BY LICENSED CONTRACTORS AND EXPERIENCED WORKERS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES RELATING TO THEIR WORK.

3. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.

4. PARALLEL PIPES MAY BE INSTALLED IN COMMON TRENCH. PIPES ARE NOT TO BE INSTALLED DIRECTLY ABOVE ONE ANOTHER. TRENCHES SHALL BE AMPLE SIZE TO PERMIT THE PIPES TO BE LAID AT THE ELEVATIONS INTENDED AND TO PERMIT SPACE FOR JOINING.

5. CONTRACTOR SHALL RESTORE SURFACES, EXISTING UNDERGROUND INSTALLATIONS, ETC., DAMAGED OR CUT AS A RESULT OF EXCAVATIONS, TO ORIGINAL CONDITIONS IN A MANNER APPROVED BY THE OWNER'S REPRESENTATIVE.

6. DO NOT WILLFULLY 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. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, ETC. COORDINATE WORK WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, STRUCTURES, ETC. CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO THE EXCAVATION OF TRENCHES. CONTRACTOR IS TO REPAIR ANY DAMAGE CAUSED BY THEIR WORK AT NO ADDITIONAL COST TO THE OWNER.

8. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL WORK AND PLAN WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC., AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEMS, PLANTING, AND ARCHITECTURAL FEATURES.

9. ELECTRICAL CONTRACTOR TO SUPPLY 120 VAC (2.5 AMP) SERVICE TO CONTROLLER LOCATION. IRRIGATION CONTRACTOR TO MAKE FINAL CONNECTION FROM ELECTRICAL STUB-OUT TO CONTROLLER. IRRIGATION CONTROL WIRE SHALL BE #14, U.L. APPROVED FOR DIRECT BURIAL. COMMON WIRE SHALL BE #12 U.L. APPROVED AND SHALL BE WHITE IN COLOR. WIRING TO INDIVIDUAL REMOTE CONTROL VALVES SHALL BE COLOR OTHER THAN WHITE.

10. EACH CONTROLLER SHALL HAVE ITS OWN INDEPENDENT GROUND WIRE.

11. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SEQUENCE AS SHOWN ON PLANS. RUN WIRE FROM EACH RCV TO THE CONTROLLER. SPLICING WIRES TOGETHER OUTSIDE OF VALVE BOXES WILL NOT BE PERMITTED. ATTACH A LABEL TO CONTROL WIRE AT THE CONTROLLER AND ATTACH AN ID TAG AT EACH REMOTE CONTROL VALVE INDICATING CONTROLLER AND STATION NUMBER.

12. SPLICING OF 24-VOLT WIRES WILL NOT BE PERMITTED EXCEPT IN VALVE BOXES. LEAVE A 36" COIL OF EXCESS WIRE AT EACH SPLICE AND 100 FEET ON CENTER ALONG WIRE RUN. TAPE WIRE IN BUNDLES 10 FEET ON CENTER. NO TAPING PERMITTED INSIDE SLEEVES.

13. WIRE CONNECTORS SHALL BE 3M-DBR/Y-6 DIRECT BURY UNLESS OTHERWISE NOTED.

14. INSTALL TWO (2) SPARE CONTROL WIRES ALONG THE ENTIRE MAIN LINE. SPARE WIRES SHALL BE THE SAME COLOR (ONE WITH A WHITE STRIPE) AND OF A DIFFERENT COLOR THAN OTHER CONTROL WIRES. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES.

15. VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS WHERE POSSIBLE.

16. INSTALL VALVE BOXES MINIMUM 12" FROM AND PERPENDICULAR TO WALK, CURB, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, ETC. AND EACH BOX SHALL BE MINIMUM 12" APART. SHORT SIDE OF VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, ETC.

17. PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.

18. LOCATE QUICK COUPLING VALVE 12" FROM LANDSCAPE AREA.

19. THOROUGHLY FLUSH MAIN LINE BEFORE INSTALLING VALVES.

20. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE DESIGNATED ON THE PLANS.

21. CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR. FOR DRIP OR BUBBLER CIRCUITS, INSTALL KING BROS. CV SERIES CHECK VALVES IN LATERAL LINES FOR EVERY 10' OF ELEVATION CHANGE.

22. ALL MAIN LINES SHALL BE FLUSHED PRIOR TO THE INSTALLATION OF IRRIGATION, BUBBLERS AND DRIP TUBING. AT 30 DAYS AFTER INSTALLATION EACH SYSTEM SHALL BE FLUSHED TO ELIMINATE GUM AND DIRT PARTICLES FROM THE LINES.

23. NOTIFY ARCHITECT OF ANY ASPECTS OF LAYOUT THAT WILL PROVIDE INCOMPLETE OR INSUFFICIENT WATER COVERAGE OF PLANT MATERIAL AND DO NOT PROCEED UNTIL HIS/HER INSTRUCTIONS ARE OBTAINED.

24. LOCATE BUBBLERS ON UPHILL SIDE OF TREES. TREE BUBBLERS ARE FOR ESTABLISHMENT AND DROUGHT CONDITIONS. THEY ARE TO BE TURNED OFF AFTER TREES ARE ESTABLISHED AND TURNED ON DURING DROUGHT CONDITIONS.

25. IN ADDITION TO THE SLEEVES AND CONDUITS SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF SLEEVES AND CONDUITS OF SUFFICIENT SIZE UNDER ALL PAVED AREAS.

26. ALL EXCAVATIONS ARE TO BE FILLED WITH COMPACTED BACKFILL. BACKFILL MATERIAL SHALL BE THE EARTH EXCAVATED FROM THE TRENCH AND FREE OF ROCKS AND OTHER FOREIGN COURSE MATERIAL. COMPACT BACKFILL TO A MINIMUM OF 90 PERCENT OF ORIGINAL SOIL DENSITY. REPAIR ALL SETTLED TRENCHES PROMPTLY, FOR A PERIOD OF 1 YEAR AFTER COMPLETION OF WORK.

27. CONTRACTOR SHALL WARRANT THAT THE IRRIGATION SYSTEM WILL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF WORK.

28. ALL CONSTANT PRESSURE PIPES SHALL BE TESTED AT A MINIMUM OF 125 PSI FOR TWO HOURS. CENTER LOAD PIPING WITH A SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE. NO FITTINGS SHALL BE COVERED. REPAIR FAULTY JOINTS WITH NEW MATERIALS. DO NOT USE CEMENT OR CAULKING TO REPAIR LEAKS.

29. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES, AND TREE ROOTS. EXCAVATION IN AREAS WHERE 2 INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. ROOTS 2 INCHES AND LARGER IN DIAMETER SHALL BE WRAPPED IN A PLASTIC BAG AND SECURED WITH A RUBBER BAND. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN 24 HOURS; WHERE THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS.

30. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

31. IRRIGATION DEMAND: REFER TO IRRIGATION POINTS OF CONNECTION.

32. OPERATE IRRIGATION CONTROLLER(S) BETWEEN THE HOURS OF 10:00 PM AND 7:00 AM.

33. NOTIFY ALL LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.

34. NOTIFY UNDERGROUND SERVICE ALERT AT 811 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

35. AT LEAST 10 DAYS PRIOR TO COMPLETION OF CONSTRUCTION, PROVIDE THE OWNER WITH A MAINTENANCE MANUAL. DATA SHALL BE ON 8 1/2" X 11" SHEETS, IN A 3-RING BINDER AND SHALL INCLUDE:

- INDEX SHEET WITH CONTRACTOR'S CONTACT INFORMATION AND LIST OF EQUIPMENT WITH LOCAL MANUFACTURER'S REPRESENTATIVES.
- CATALOG AND PARTS SHEET OF ALL MATERIAL AND EQUIPMENT.
- COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT.
- COMPLETE AND DATED MANUFACTURER'S WARRANTIES.

36. AT COMPLETION OF MAINTENANCE PERIOD, PROVIDE OWNER WITH THREE (3) EACH OF ALL OPERATING AND SERVICING KEYS AND WRENCHES REQUIRED FOR COMPLETE MAINTENANCE AND OPERATION OF ALL HEADS AND VALVES. PROVIDE TWO (2) EACH OF KEYS AND HOSE SWIVELS FOR QUICK COUPLERS AND KEYS TO CONTROLLER CABINETS AND/OR ENCLOSURES.

37. A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.

38. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OF THE LANDSCAPE PLANS, IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.

39. AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.



BROOKWATER
IRRIGATION CONSULTANTS
480 ST. JOHN STREET, SUITE 220
PLEASANTON, CALIFORNIA 94566
TEL 925.855.0417 FAX 925.855.0357
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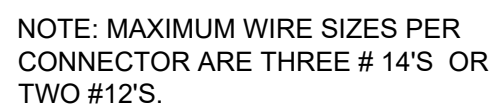
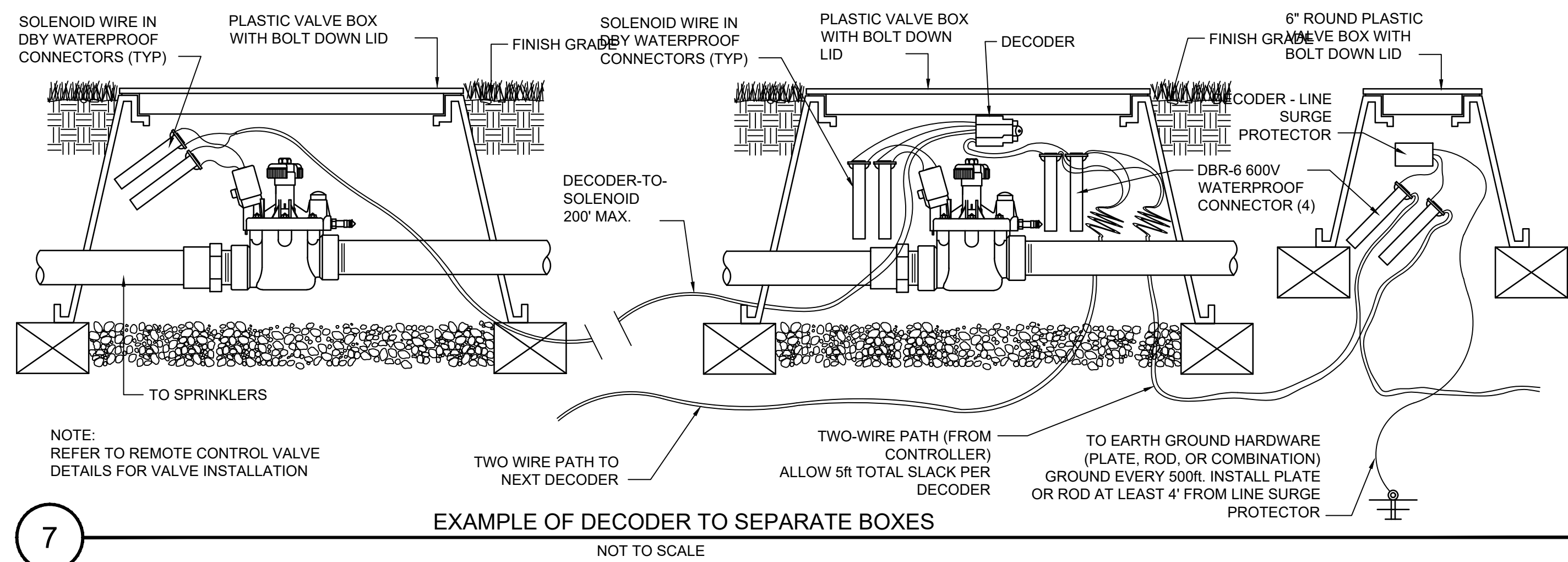
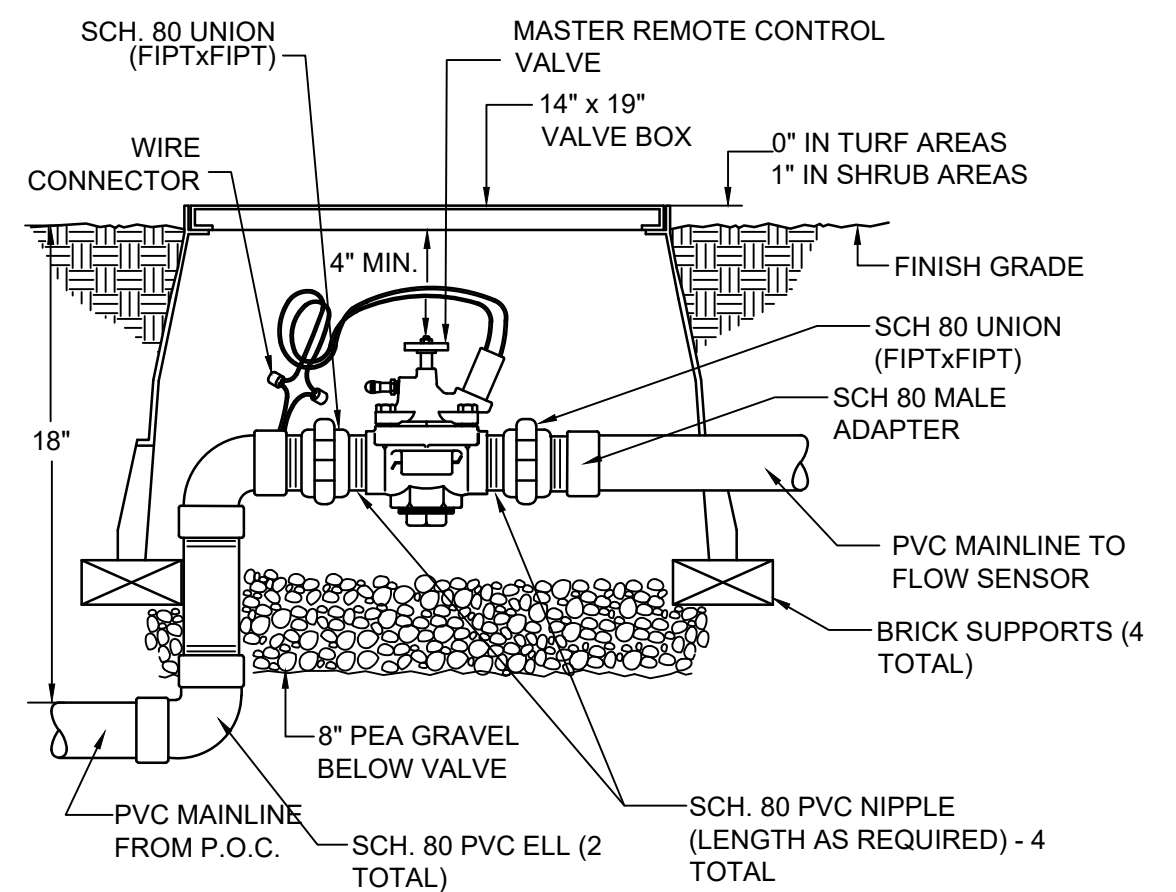
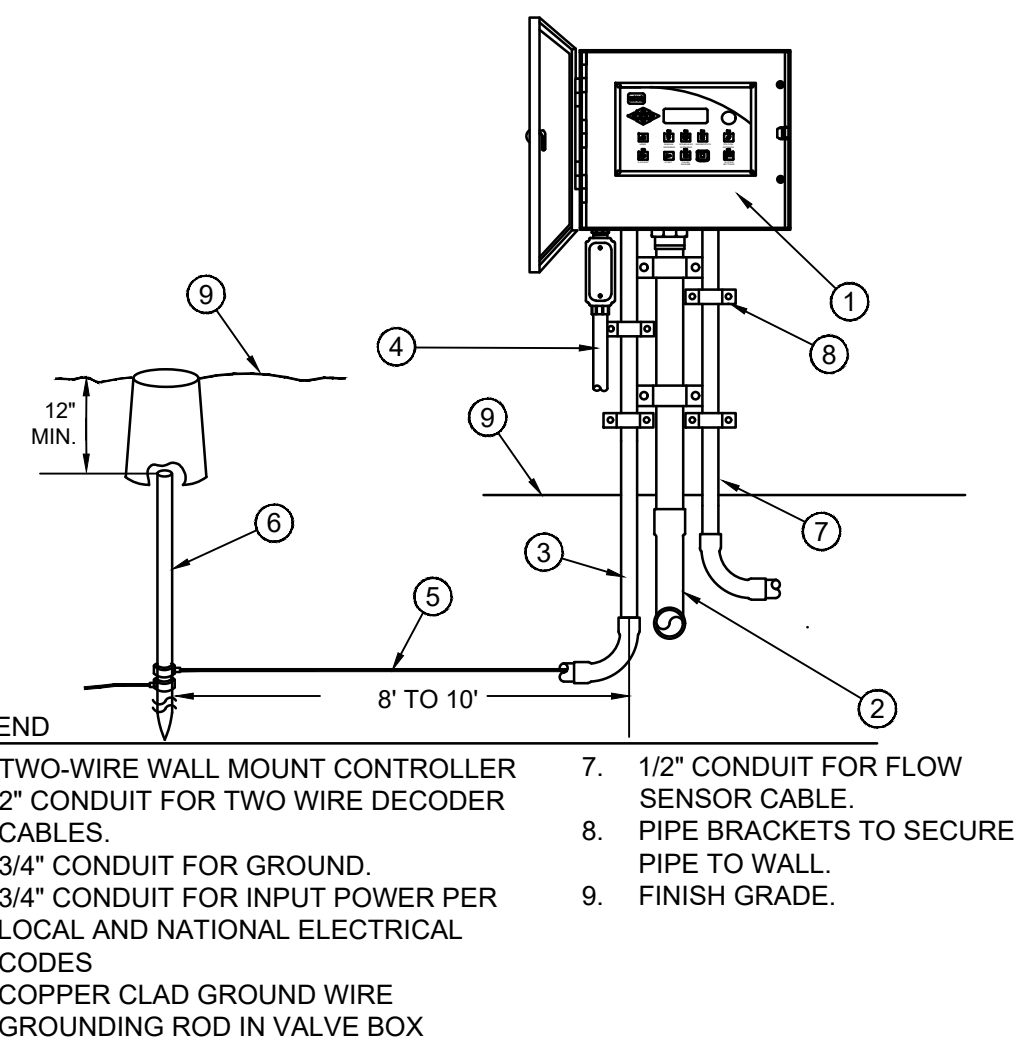
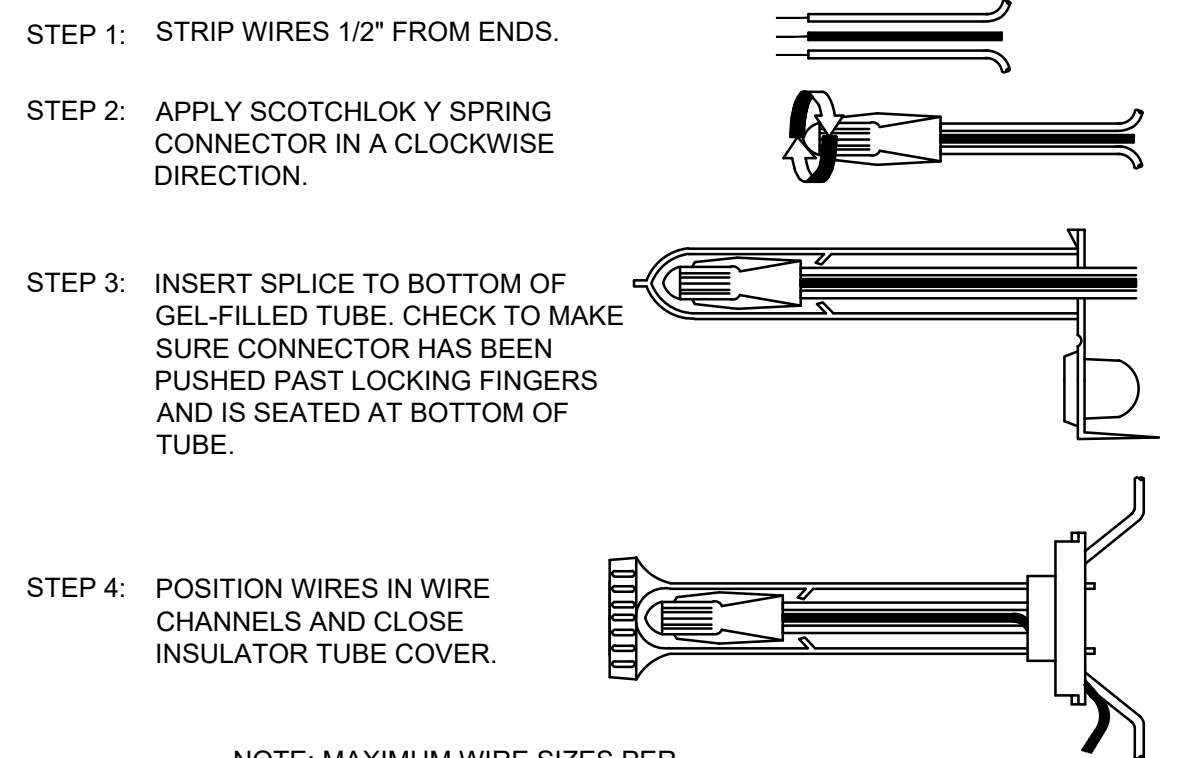
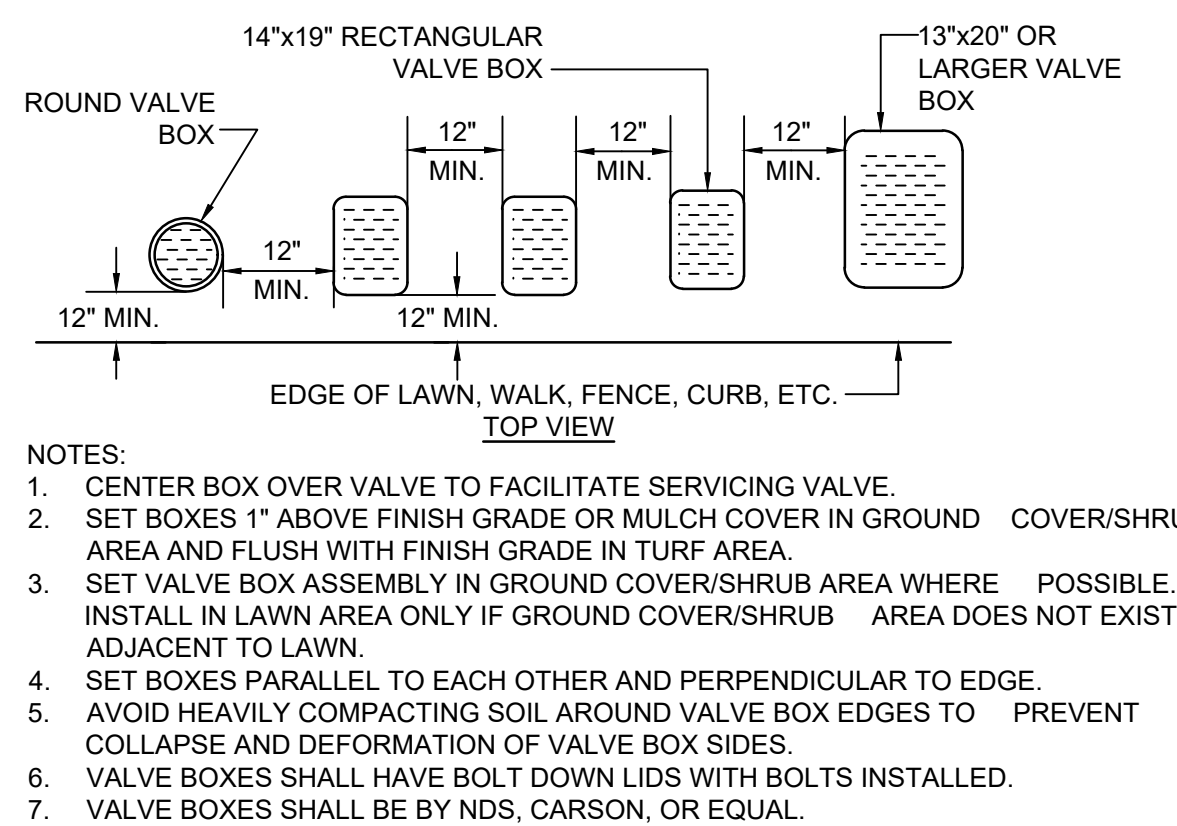
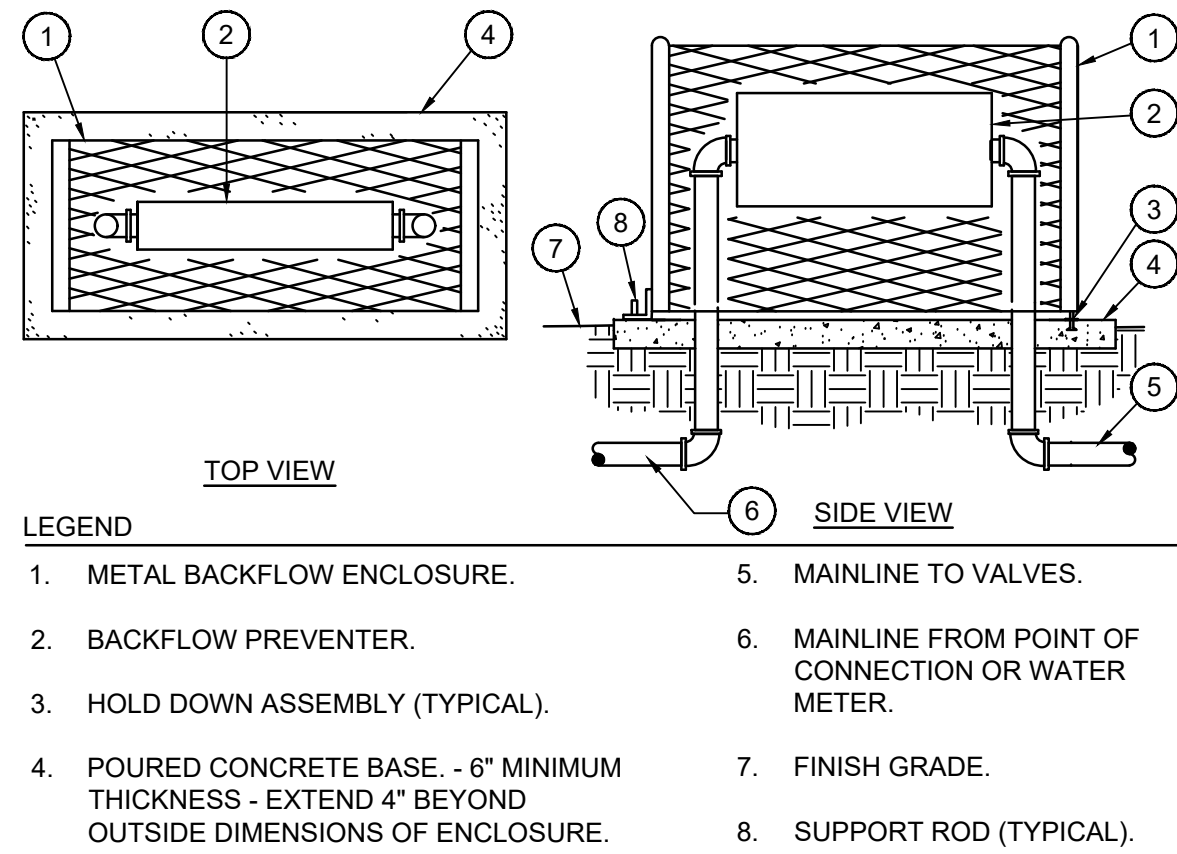
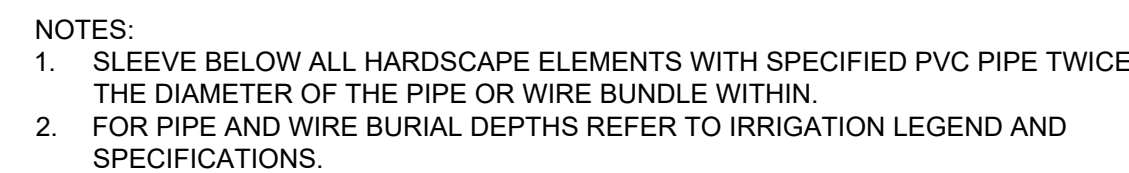
- PLANS ARE DIAGRAMMATIC. INSTALL DRIPLINE AND COMPONENTS PER MANUFACTURERS INSTRUCTIONS AND INSTALLATION DETAILS.
2. INSTALL DRIPLINE A MAXIMUM OF 18" APART (12" IN BIORETENTION/TURF AREAS) WITH EMITTERS TRIANGULARLY SPACED. INSTALL 2" FROM PERIMETER OF PLANTED AREA. THERE SHOULD BE A MINIMUM OF TWO DRIPLINE LATERALS IN EACH PLANTED AREA. DRIPLINE SHALL BE INSTALLED AT A CONSTANT DEPTH THROUGHOUT THE CIRCUIT.
3. PLACE AIR/VACUUM RELIEF VALVES AT THE HIGHEST POINTS OF EACH ZONE AND JUST BELOW CHECK VALVES ON SLOPES. INSTALL ONE AIR/VACUUM RELIEF VALVE FOR EVERY 1125' OF TOTAL DRIPLINE PER ZONE.
4. PLACE FLUSH VALVES AT THE HYDRAULIC CENTER OF THE EXHAUST HEADER OR AT LOW POINT ON SLOPES. INSTALL MINIMUM OF ONE FOR EVERY 15 GPM.
5. INSTALL IN-LINE CHECK VALVES ON SLOPES GREATER THAN 3% AND WHERE LOW-LINE DRAINAGE COULD CAUSE WET AREAS IN THE LOWEST AREAS OF AN IRRIGATION ZONE. CHECK VALVES SHALL BE PLACED EVERY 4-5 FEET BETWEEN DRIPLINE LATERALS AND BEFORE THE FLUSH VALVE.
6. ON ALL SLOPES AND MOUNDS, PLACE THE DRIPLINE LATERALS PARALLEL TO THE SLOPE CONTOUR WHERE POSSIBLE. INCREASE THE LATERAL SPACING BY 25% ON THE LOWER ONE-THIRD OF THE SLOPE TO AVOID EXCESS DRAINAGE.
7. PVC SUPPLY AND FLUSH LINE SIZING GUIDE (ALL SUPPLY AND FLUSH LINES SHALL BE THE SAME SIZE FOR THE ENTIRE ZONE):
 - 0-8 GPM – 3/4"
 - 8.1-15 GPM – 1"
 - 15.1-25 GPM – 1 1/4"
8. FITTINGS SHALL BE OF THE SAME MANUFACTURER AS DRIPLINE.
9. STAPLE DRIPLINE TO GROUND EVERY 3 FEET. USE ADDITIONAL STAPLES OVER EACH TEE, ELBOW OR CROSS. USE U-SHAPED STAPLES TO AVOID PINCHING THE DRIPLINE.
10. THOROUGHLY FLUSH EACH INSTALLATION SEGMENT TO ENSURE NO DEBRIS CONTAMINATION OCCURS.
11. RUN THE DRIPLINE SYSTEM EVERY DAY OR EVERY OTHER DAY TO ESTABLISH PLANT MATERIAL. MAINTAIN A CONSISTENT MOISTURE BALANCE IN THE SOIL. IT IS IMPORTANT TO KEEP THE SOIL MOIST WITHOUT SATURATION.

1. THE CONTRACTOR SHALL PROVIDE A DRIP EMITTER SYSTEM FOR ALL TREES, SHRUBS, AND GROUND COVER AS INDICATED ON THE IRRIGATION PLAN AND DETAILS.
2. EMITTERS ARE NOT SHOWN ON THE IRRIGATION PLAN. ACTUAL LAYOUT OF EMITTER SYSTEM SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD USING THE IRRIGATION PLAN AND THE DRIP IRRIGATION DETAILS AS A GUIDE, WHILE USING THE PLANTING PLAN FOR THE LOCATION AND QUANTITIES OF EMITTERS.
3. EACH 15 GALLON SHRUB SHALL RECEIVE THREE 1 GPH EMITTERS DISTRIBUTED EVENLY AROUND SHRUB (TWO SHALL BE ON UPHILL SIDE OF SHRUB), VIA DISTRIBUTION TUBING. REFER TO THE PLANTING PLAN FOR THE LOCATION AND QUANTITY OF SHRUBS.
4. EACH 5 GALLON SHRUB SHALL RECEIVE TWO 1 GPH EMITTERS ON OPPOSITE SIDES AND UPHILL OF SHRUB, VIA DISTRIBUTION TUBING. REFER TO THE PLANTING PLAN FOR THE LOCATION AND QUANTITY OF SHRUBS.
5. EACH 1 GALLON SHRUB SHALL RECEIVE TWO 1/2 GPH EMITTERS ON OPPOSITE SIDES AND UPHILL OF SHRUB, VIA DISTRIBUTION TUBING. REFER TO THE PLANTING PLAN FOR THE LOCATION AND QUANTITY OF SHRUBS.
6. INSTALL THE EMITTERS ON TOP OF THE ROOT BALL AND AS FAR FROM THE TRUNK OF THE PLANT AS POSSIBLE.
7. DISTRIBUTION TUBING SHALL BE A MAXIMUM OF 5' IN LENGTH FROM 1/2" TUBING TO EMITTER. EACH LENGTH OF 1/2" DRIP TUBING SHALL BE A MAXIMUM OF 25'.
8. INSTALL FLUSH VALVES AT THE END OF THE RIGID PVC AS SHOWN ON PLANS.
9. ALL PVC LATERAL PIPE TO DRIP TUBING SHALL BE 3/4" UNLESS OTHERWISE NOTED.
10. THE DRIP EMITTER SYSTEM LAYOUT SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING CONSTRUCTION AND AFTER PLANTING HAS BEEN COMPLETED.

A FINAL CITY INSPECTION SHALL BE PERFORMED. THE INSTALLATION CONTRACTOR SHALL ATTEND THIS INSPECTION AND MAKE A REQUIRED REPAIRS AND ADJUSTMENTS TO ARCHIVE APPROVAL AND COMPLETION FROM THE CITY. CONTACT YOUR BUILDING INSPECTOR PRIOR TO FINAL INSPECTION REGARDING WELO SIGN OFF.

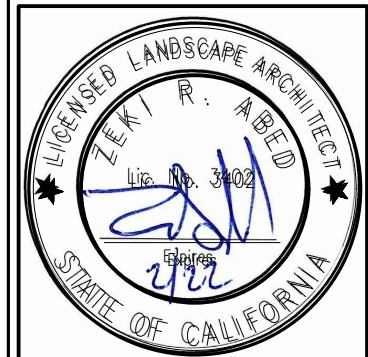
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	NO.	REVISION	DATE	R.C.E.	EXP. DATE	CITY ENG.	DATE	CITY OF SANTA ROSA	SHEET TITLE: IRRIGATION NOTES											
								BY: _____ DAVID M. GUHIN CITY ENGINEER CITY OF SANTA ROSA R.C.E. 65663	SCALE: N/A											
									ISSUE DATE: 08/14/20											
									PROJECT NO.: V0646											
									SHEET NO.: L4.7 52 OF 59											
							CITY OF SANTA ROSA FILE NO. 2020-0022													

Diagram illustrating the installation of a Reduced Pressure Backflow Prevention Assembly (RPBP) on a mainline. The assembly is mounted on a 12" minimum diameter pipe, which is supported by a concrete pad. The mainline is connected to the assembly via 2" galvanized iron fittings (as required) and unions. A wye strainer is installed on the mainline. The assembly is connected to the mainline via a PVC SCH 40 male adapter. The mainline is labeled "PVC MAINLINE TO VALVES". The assembly is labeled "REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY". The mainline is labeled "MAINLINE FROM P.O.C.". The assembly is labeled "CONCRETE BLOCK SURROUNDING PIPE". The mainline is labeled "CONCRETE PAD". The mainline is labeled "FINISH GRADE". The mainline is labeled "12\" MIN.". The mainline is labeled "18\"".

[illegible]

PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION
CITY OF SANTA ROSA

Y OF SANTA ROSA FILE NO. 2020-0022

[illegible]The logo is circular with a yellow border. Inside the border, the text "CALL 811 BEFORE YOU DIG" is written in black at the top, and "SAFE DIGGING PARTNER" is written in black at the bottom. In the center, the number "811" is displayed in large, bold, yellow digits. Below the "811", there is a stylized graphic of a shovel with a grey head and a brown handle, positioned as if it is digging into the ground.

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DRAFTED BY: STAFF	ALL DRAWINGS & WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE THE ORIGINAL & EXCLUSIVE PROPERTY OF VAN DORN & LANDSCAPE ARCHITECTS, INC.
CHECKED BY: ZA	ARCHITECT'S NAME MAY NOT BE DISSEMINATED, USED, OR DISCLOSED WITHOUT THE WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

FILE: LANDSCAPE CONSTRUCTION DRAWINGS

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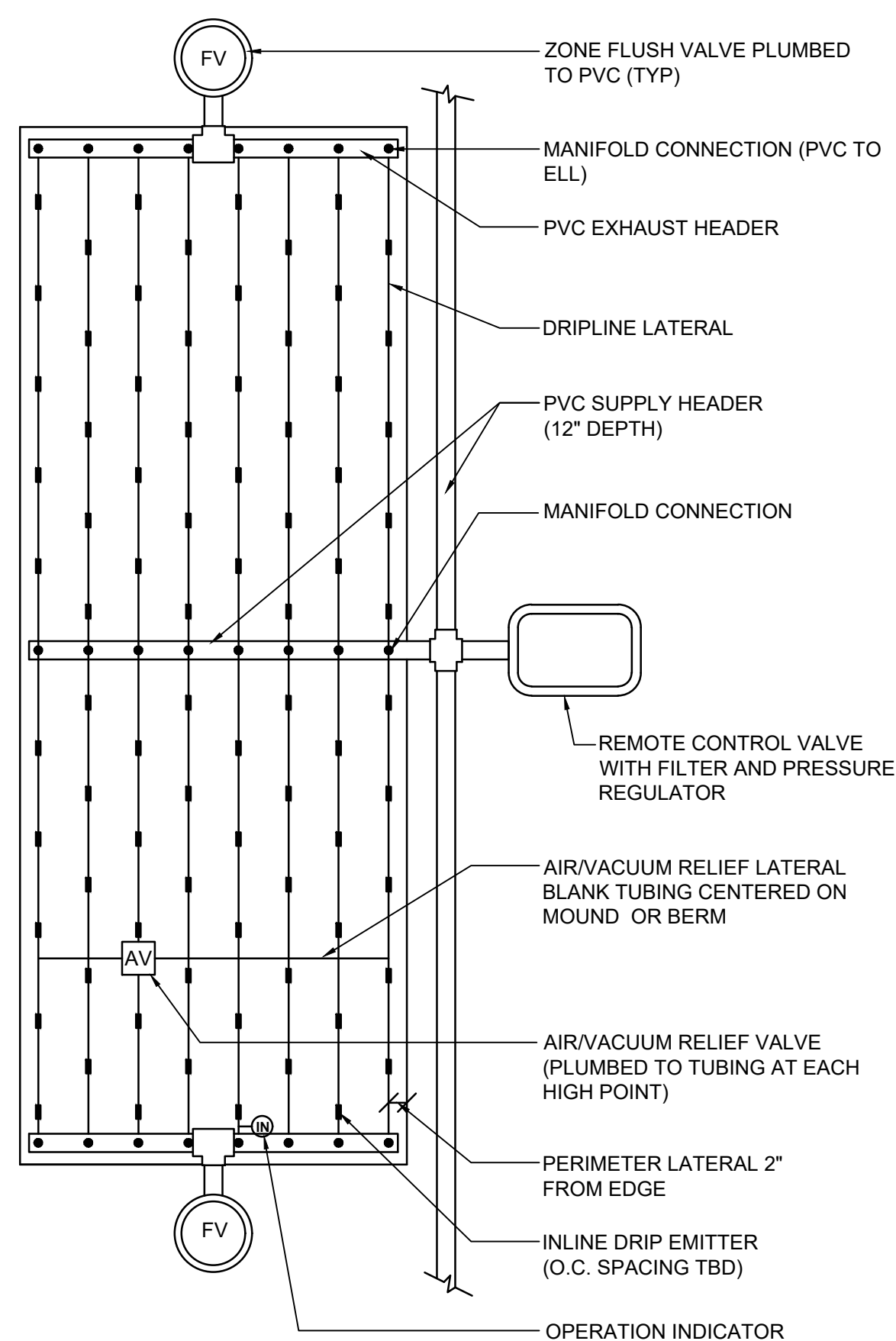
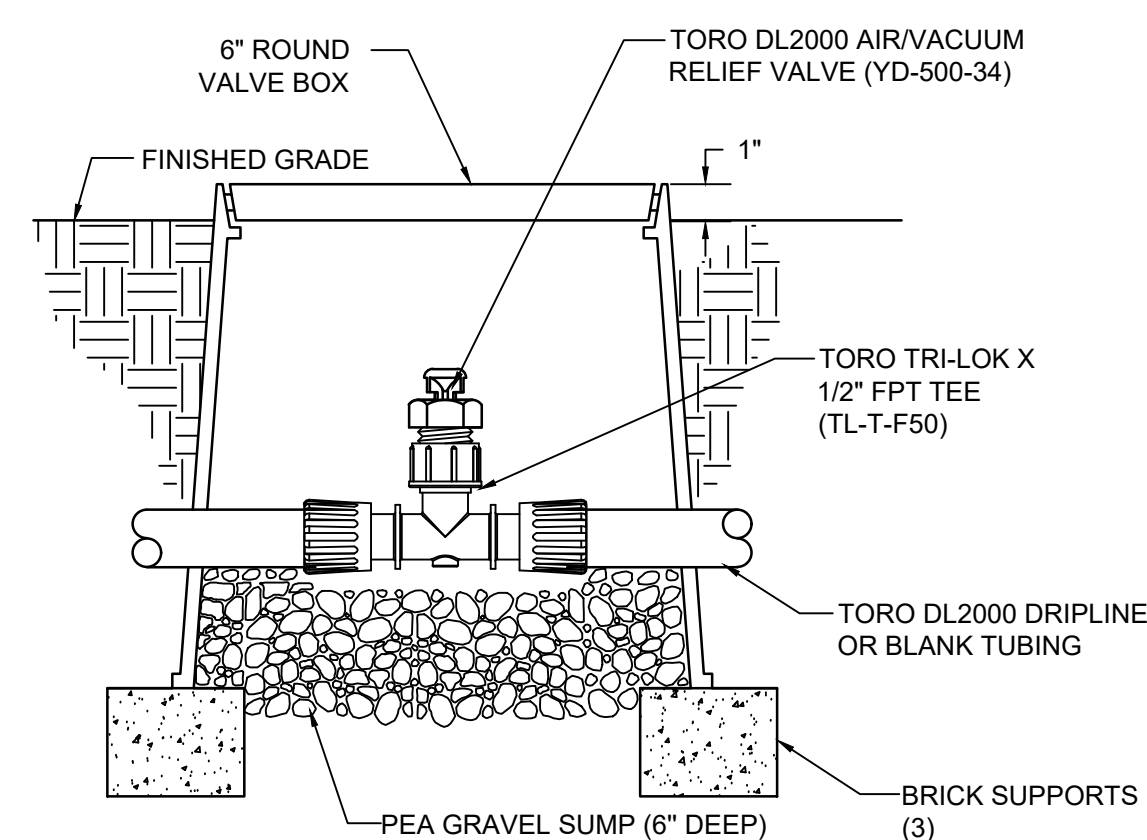
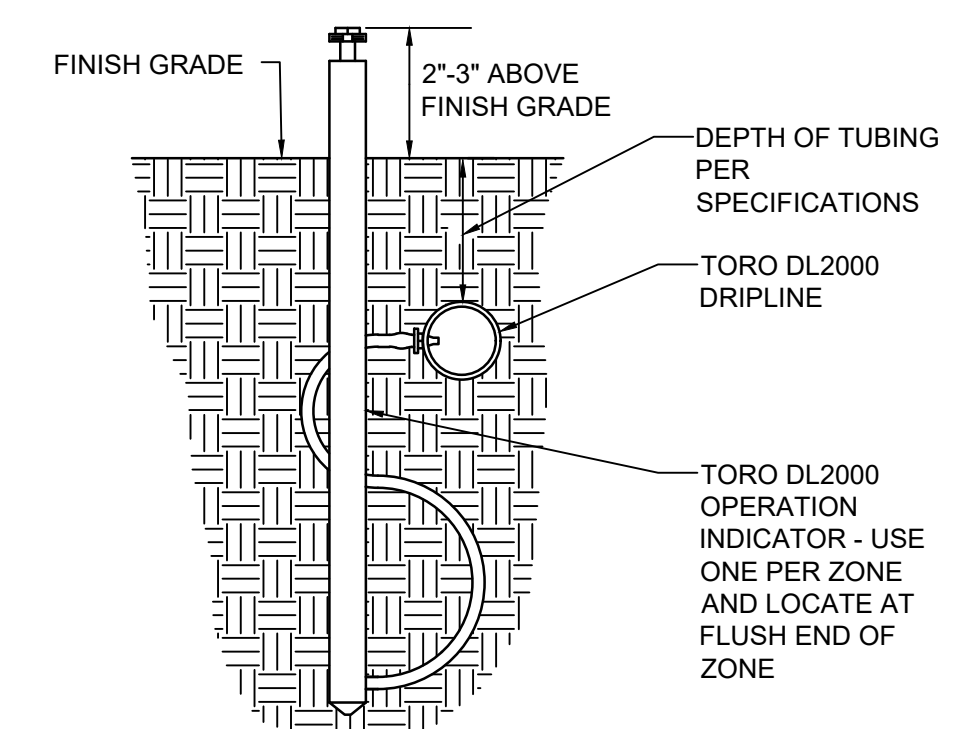
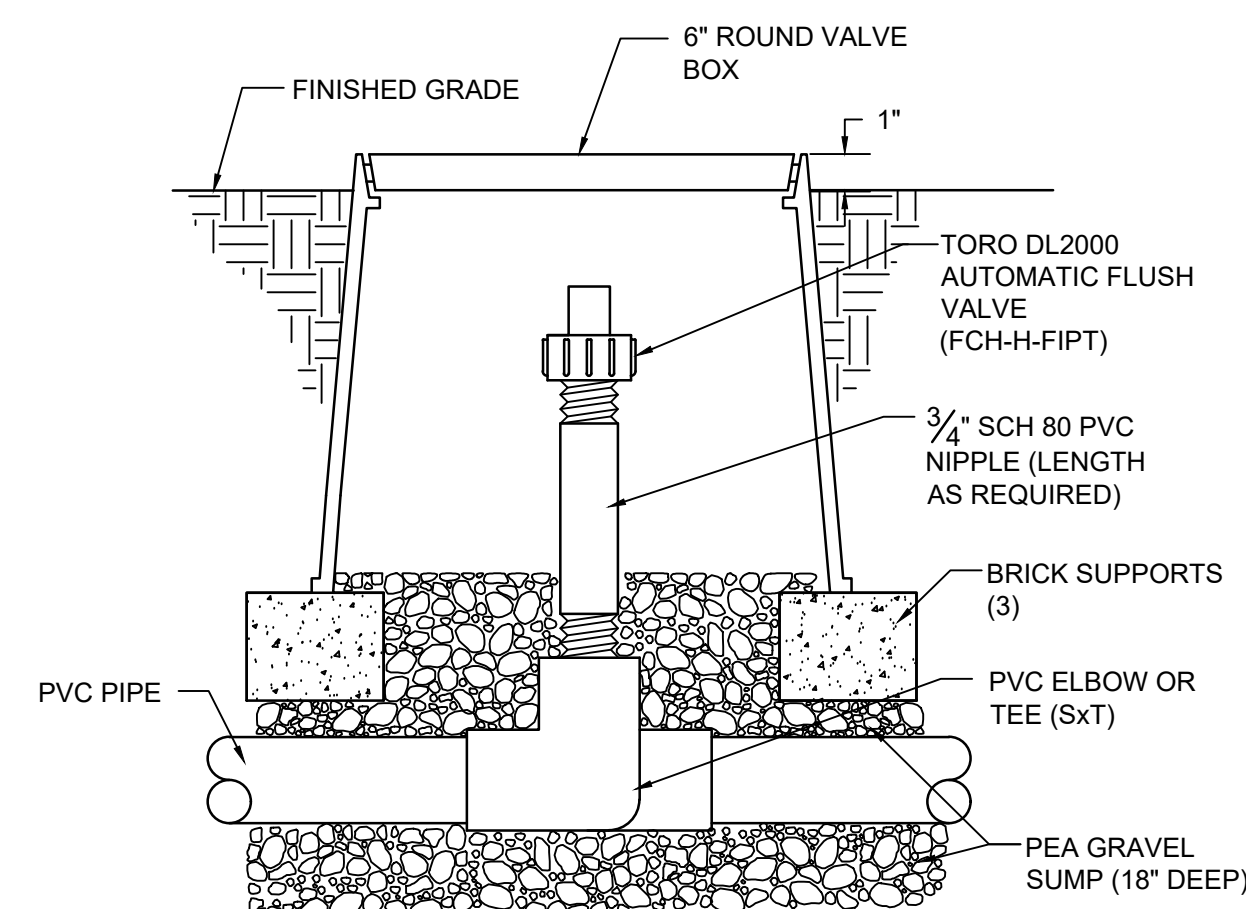
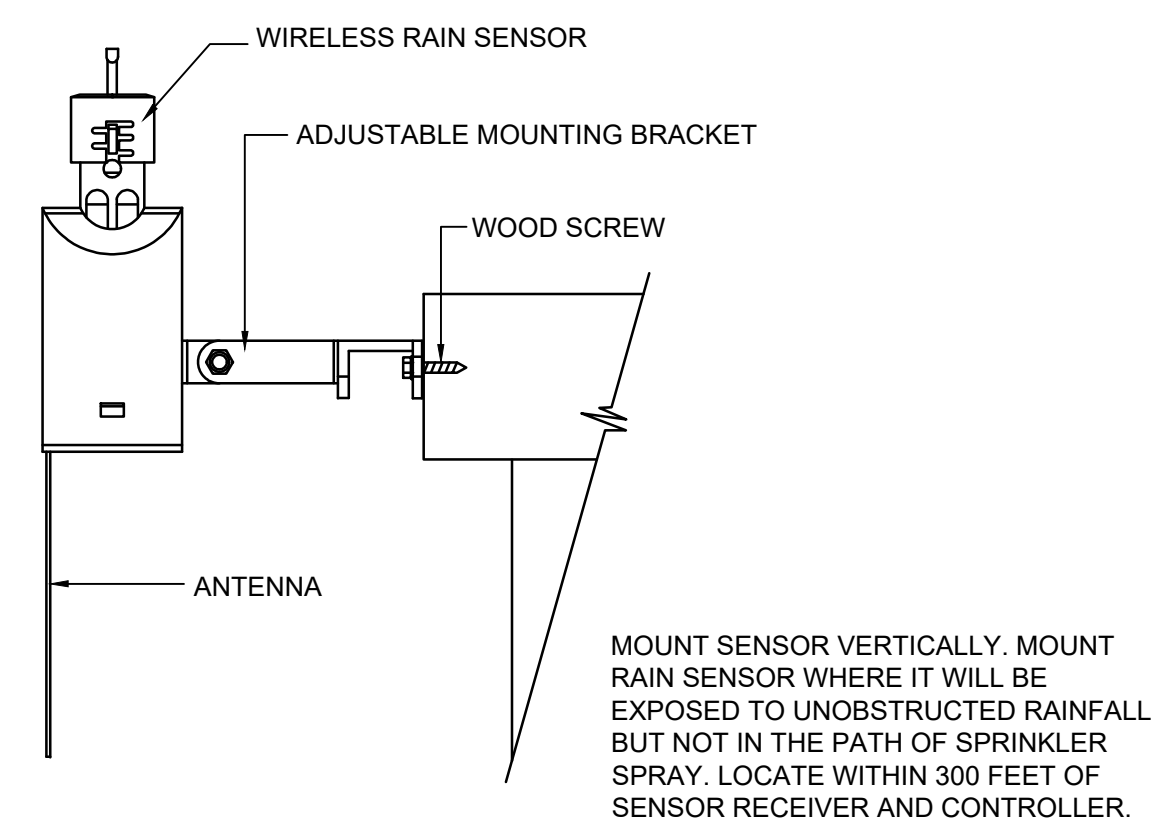
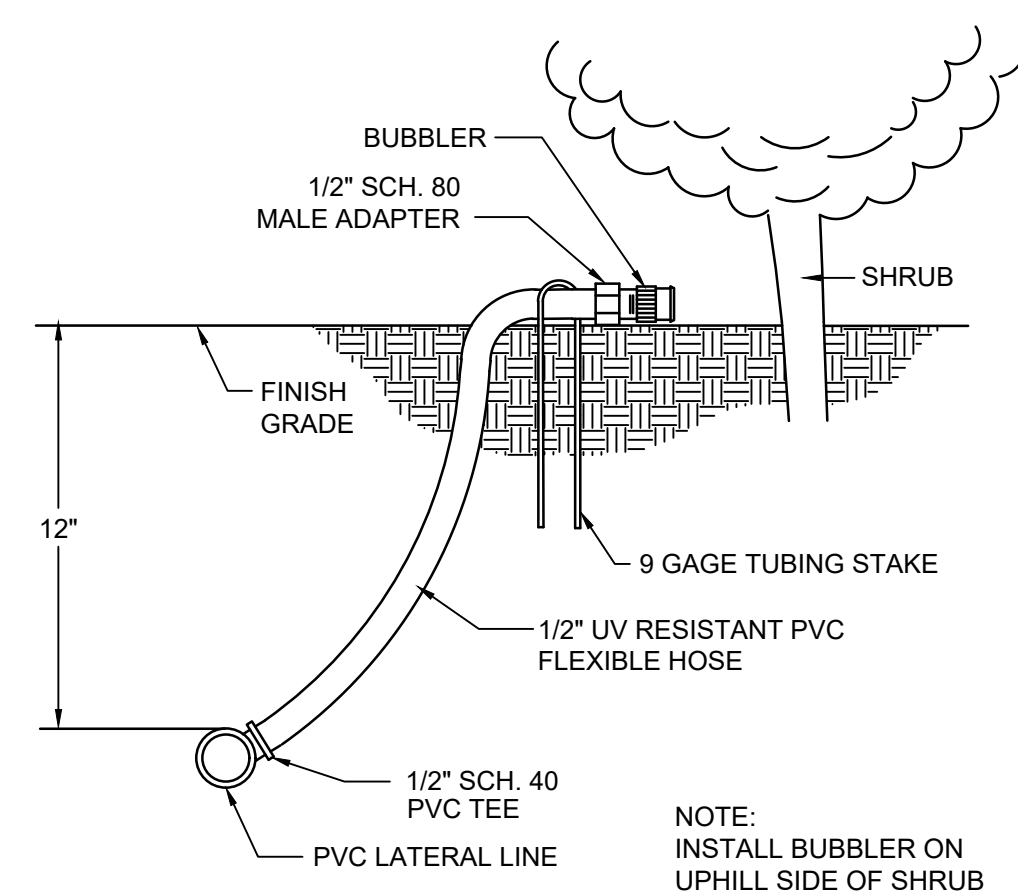
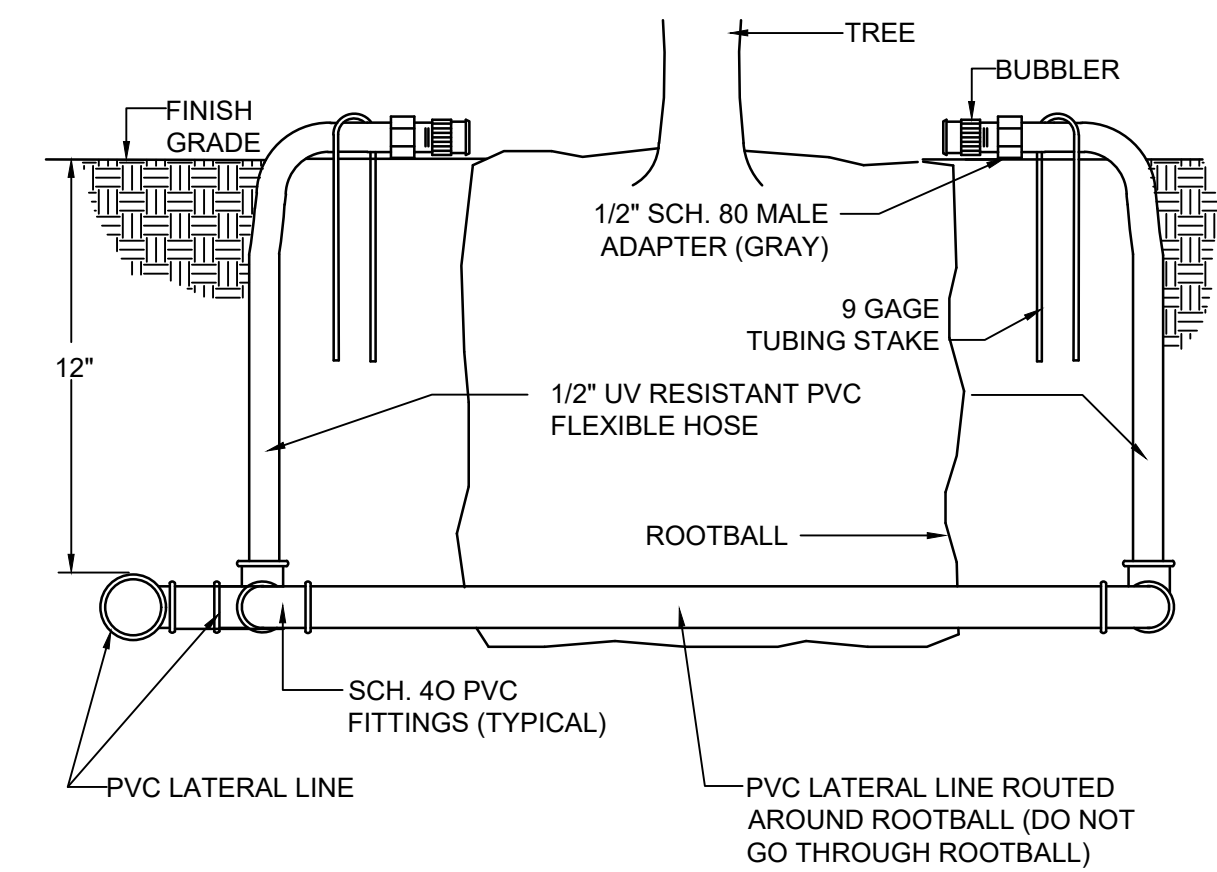
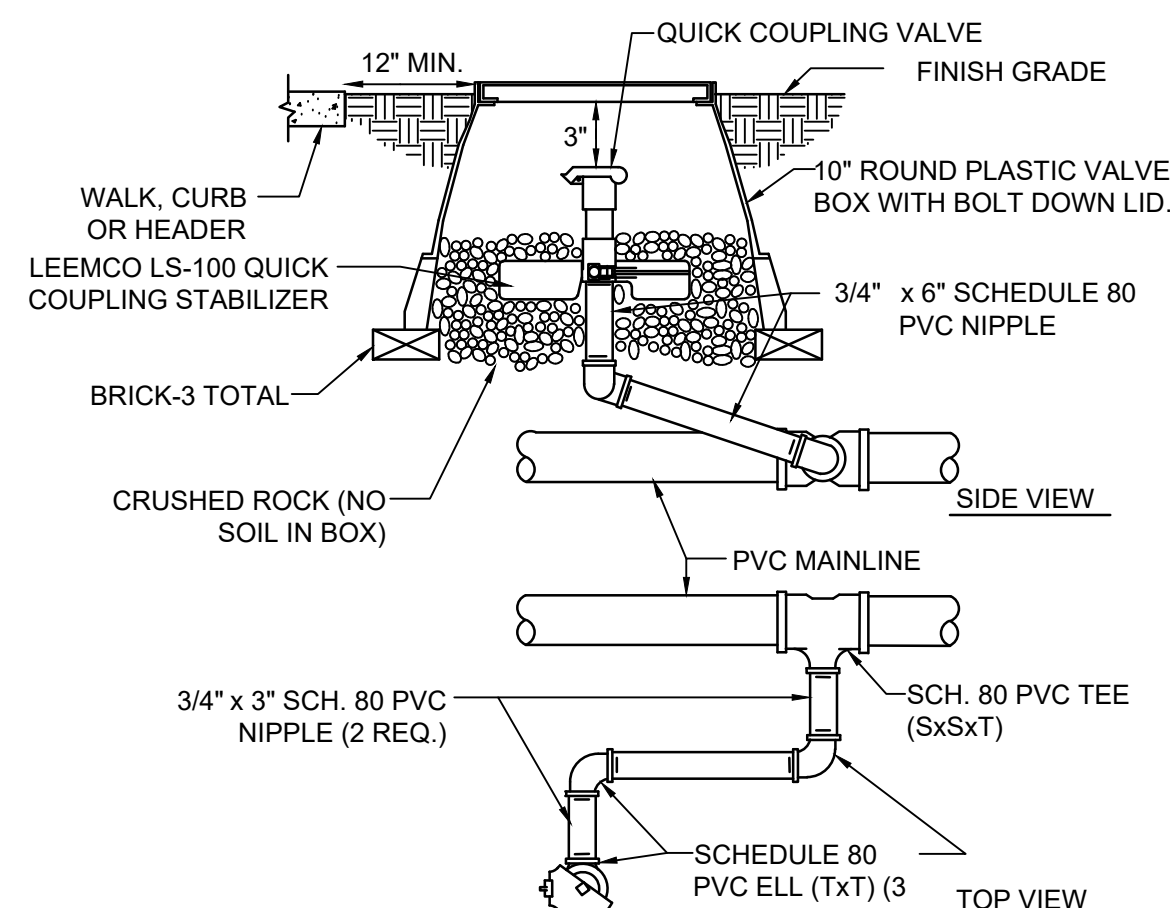
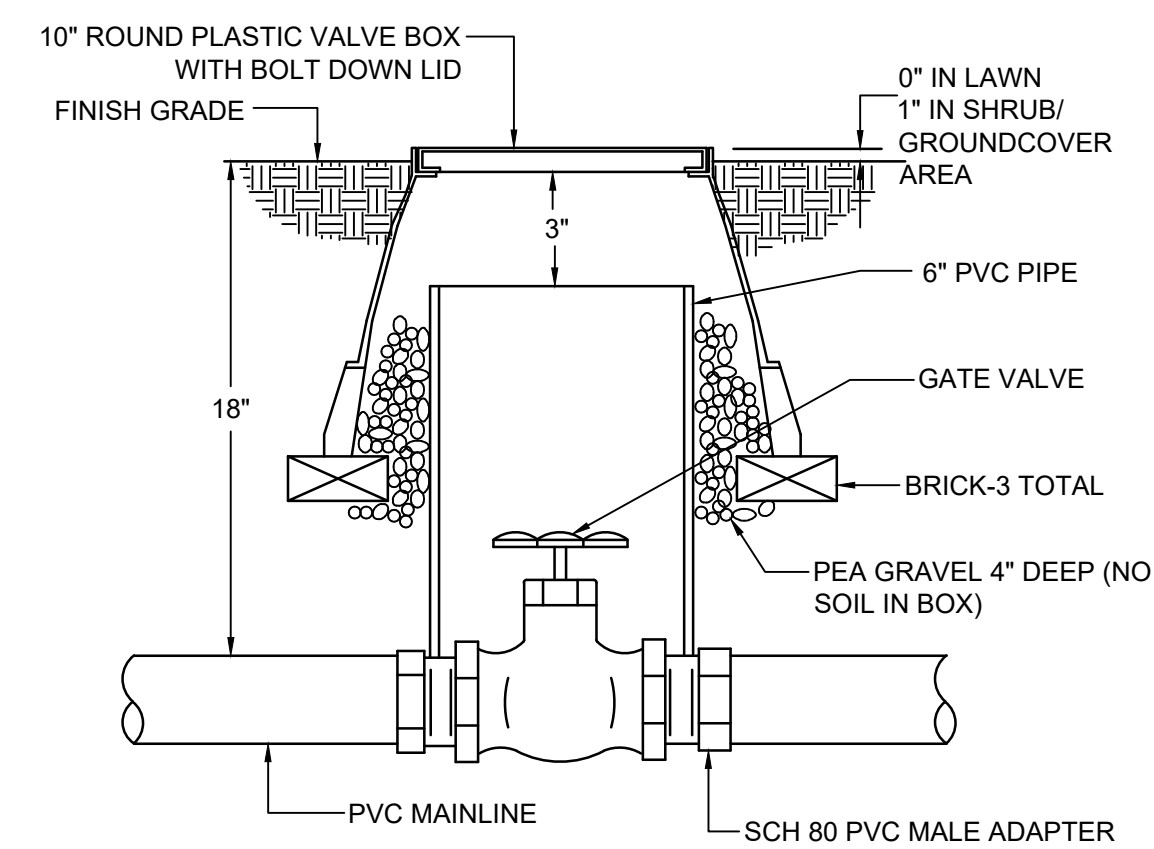
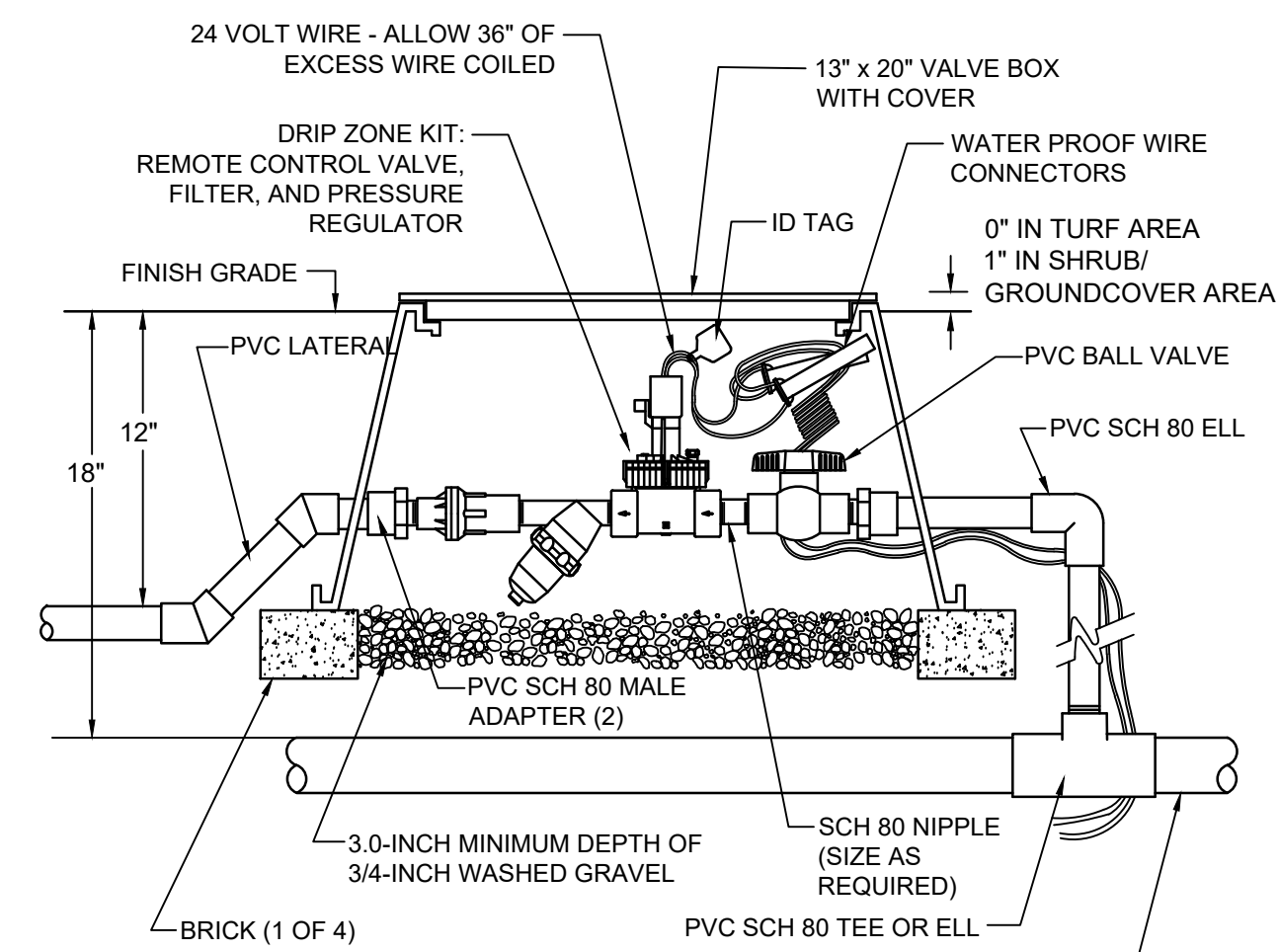
SCALE:
N/A

ISSUE DATE:
08/14/20

PROJECT N
V0646

SHEET NO.:
L4.8
53 OF 59

SHEET NO.:
L4.8
53 OF 59



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STAFF APPRVL	REVISIONS						CITY ENG.	DATE	PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION CITY OF SANTA ROSA
	NO.	REVISION	DATE	R.C.E.	EXP. DATE				
								BY: _____ DAVID M. GUHIN CITY ENGINEER CITY OF SANTA ROSA DATE: _____	
								CITY OF SANTA ROSA FILE NO. 2020-0022	

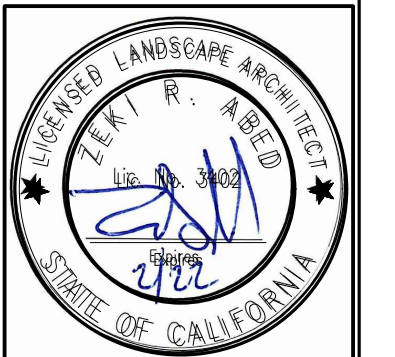


- 23 CENTER FEED MANIFOLD
NOT TO SCALE



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ZIP 94103 PH (415) 864-1921 FAX(415) 864-4796

PROJECT MANAGER:

DESIGNED BY:

APPROVED BY:

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PROJECT NAME/LOCATION:	THE ARBORS	CA
	SANTA ROSA	
DRAWING TITLE:	LANDSCAPE	
	CONSTRUCTION DRAWINGS	

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SHEET TITLE: IRRIGATION DETAILS	
SCALE: N/A	
ISSUE DATE: 08/14/20	
PROJECT NO.: V0646	
SHEET NO.: L4.10 55 OF 59	

THE ARBORS											
WATER EFFICIENT LANDSCAPE WORKSHEET											
Reference Evapotranspiration (Eto)		36.94									
ZONE NO.	PLANT TYPE	HYDROZONE* (PLANT WATER USE)	PLANT FACTOR (PF)	IRRIGATION METHOD**	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	HYDROZONE AREA (HA) (Sq Ft)	ETAF x HA	ESTIMATED TOTAL WATER USE (ETWU)	% LANDSCAPE AREA	
REGULAR LANDSCAPE AREA											
C-2	SHRUB	LW	0.30	DL	0.81	0.37	1,264	468	10,722	2.9%	
C-3	BIORETENTION	LW	0.30	DL	0.81	0.37	198	73	1,680	0.5%	
C-4	SHRUB	MW	0.50	B	0.81	0.62	107	66	1,513	0.2%	
C-5	SHRUB	LW	0.30	D	0.81	0.37	2,297	851	19,484	5.3%	
C-6	SHRUB	LW	0.30	DL	0.81	0.37	1,451	537	12,308	3.3%	
C-7	TREE	LW	0.30	B	0.81	0.37	138	51	1,171	0.3%	
C-8	TREE	MW	0.50	B	0.81	0.62	88	54	1,244	0.2%	
C-9	SHRUB	LW	0.30	DL	0.81	0.37	1,796	665	15,235	4.1%	
C-10	SHRUB	LW	0.30	DL	0.81	0.37	1,223	453	10,374	2.8%	
C-11	SHRUB	LW	0.30	DL	0.81	0.37	238	88	2,019	0.5%	
C-12	SHRUB	MW	0.50	B	0.81	0.62	141	87	1,993	0.3%	
C-13	SHRUB	LW	0.30	B	0.81	0.37	126	47	1,069	0.3%	
C-14	TREE	LW	0.30	B	0.81	0.37	38	14	322	0.1%	
C-15	SHRUB	LW	0.30	DL	0.81	0.37	1,585	587	13,445	3.6%	
C-16	SHRUB	MW	0.50	B	0.81	0.62	41	25	580	0.1%	
C-17	SHRUB	LW	0.30	DL	0.81	0.37	254	94	2,155	0.6%	
C-18	SHRUB	MW	0.50	B	0.81	0.62	85	52	1,202	0.2%	
C-19	TREE	LW	0.30	B	0.81	0.37	38	14	322	0.1%	
C-20	SHRUB	LW	0.30	B	0.81	0.37	94	35	797	0.2%	
C-21	SHRUB	MW	0.50	B	0.81	0.62	72	44	1,018	0.2%	
C-22	BIORETENTION	LW	0.30	DL	0.81	0.37	136	50	1,154	0.3%	
C-23	SHRUB	LW	0.30	D	0.81	0.37	955	354	8,101	2.2%	
C-24	TREE	LW	0.30	B	0.81	0.37	50	19	424	0.1%	
C-25	SHRUB	MW	0.50	B	0.81	0.62	66	41	933	0.2%	
C-26	SHRUB	LW	0.30	DL	0.81	0.37	1,879	696	15,939	4.3%	
C-27	SHRUB	LW	0.30	DL	0.81	0.37	955	354	8,101	2.2%	
C-28	BIORETENTION	LW	0.30	DL	0.81	0.37	193	71	1,637	0.4%	
C-29	SHRUB	MW	0.50	B	0.81	0.62	53	33	749	0.1%	
C-30	SHRUB	LW	0.30	DL	0.81	0.37	747	277	6,336	1.7%	
C-31	TREE	LW	0.30	B	0.81	0.37	88	33	746	0.2%	
C-32	SHRUB	MW	0.50	B	0.81	0.62	104	64	1,470	0.2%	
C-33	TREE	MW	0.50	B	0.81	0.62	25	15	353	0.1%	
C-34	SHRUB	LW	0.30	DL	0.81	0.37	729	270	6,184	1.7%	
C-35	SHRUB	MW	0.50	B	0.81	0.62	75	46	1,060	0.2%	
C-36	TREE	MW	0.50	B	0.81	0.62	13	8	184	0.0%	
C-37	TREE	LW	0.30	B	0.81	0.37	163	60	1,383	0.4%	
C-38	SHRUB	LW	0.30	D	0.81	0.37	1,020	378	8,652	2.3%	
C-39	SHRUB	MW	0.50	B	0.81	0.62	167	103	2,361	0.4%	
C-40	SHRUB	LW	0.30	B	0.81	0.37	91	34	772	0.2%	
C-41	BIORETENTION	LW	0.30	DL	0.81	0.37	97	36	823	0.2%	
C-42	SHRUB	MW	0.50	B	0.81	0.62	107	66	1,513	0.2%	
C-43	SHRUB	LW	0.30	D	0.81	0.37	1,125	417	9,543	2.6%	
C-44	SHRUB	MW	0.50	B	0.81	0.62	41	25	580	0.1%	
C-45	SHRUB	LW	0.30	DL	0.81	0.37	1,695	628	14,378	3.9%	
C-46	BIORETENTION	LW	0.30	DL	0.81	0.37	57	21	484	0.1%	
C-47	SHRUB	LW	0.30	D	0.81	0.37	185	69	1,569	0.4%	
C-48	SHRUB	MW	0.50	B	0.81	0.62	94	58	1,329	0.2%	
C-49	SHRUB	LW	0.30	DL	0.81	0.37	408	151	3,461	0.9%	
C-50	SHRUB	LW	0.30	DL	0.81	0.37	1,053	390	8,932	2.4%	
C-51	SHRUB	MW	0.50	B	0.81	0.62	28	17	396	0.1%	
C-52	TREE	LW	0.30	D	0.81	0.37	201	74	1,705	0.5%	
C-53	SHRUB	LW	0.30	B	0.81	0.37	430	159	3,647	1.0%	
C-54	TREE	LW	0.30	B	0.81	0.37	25	9	212	0.1%	
C-55	BIORETENTION	LW	0.30	DL	0.81	0.37	150	56	1,272	0.3%	
C-56	SHRUB	MW	0.50	B	0.81	0.62	82	51	1,159	0.2%	
C-57	SHRUB	LW	0.30	B	0.81	0.37	163	60	1,383	0.4%	
C-58	SHRUB	MW	0.50	B	0.81	0.62	75	46	1,060	0.2%	
C-59	SHRUB	LW	0.30	B	0.81	0.37	126	47	1,069	0.3%	
C-60	TREE	LW	0.30	B	0.81	0.37	75	28	636	0.2%	
C-61	BIORETENTION	LW	0.30	DL	0.81	0.37	134	50	1,137	0.3%	
C-62	BIORETENTION	LW	0.30	DL	0.81	0.37	74	27	628	0.2%	
C-63	SHRUB	LW	0.30	DL	0.81	0.37	733	271	6,218	1.7%	
C-64	SHRUB	MW	0.50	B	0.81	0.62	75	46	1,060	0.2%	
C-65	SHRUB	LW	0.30	DL	0.81	0.37	1,681	623	14,259	3.8%	
C-66	BIORETENTION	LW	0.30	DL	0.81	0.37	267	99	2,265	0.6%	
C-67	SHRUB	LW	0.30	B	0.81	0.37	214	79	1,815	0.5%	
C-68	TREE	LW	0.30	B	0.81	0.37	25	9	212	0.1%	
C-69	SHRUB	MW	0.50	B	0.81	0.62	63	39	891	0.1%	
C-70	SHRUB	LW	0.30	DL	0.81	0.37	1,265	469	10,730	2.9%	
C-71	SHRUB	LW	0.30	DL	0.81	0.37	2,300	852	19,510	5.3%	
C-72	TREE	MW	0.50	B	0.81	0.62	50	31	707	0.1%	
C-73	BIORETENTION	LW	0.30	DL	0.81	0.37	263	97	2,231	0.6%	
C-74	SHRUB	MW	0.50	B	0.81	0.62	267	165	3,775	0.6%	
C-75	SHRUB	LW	0.30	DL	0.81	0.37	2,129	789	18,059	4.9%	
C-76	BIORETENTION	LW	0.30	DL	0.81	0.37	163	60	1,383	0.4%	
C-77	SHRUB	LW	0.30	D	0.81	0.37	1,280	474	10,858	2.9%	
C-78	BIORETENTION	LW	0.30	DL	0.81	0.37	304	113	2,579	0.7%	
C-79	SHRUB	LW	0.30	D	0.81	0.37	3,360	1,244	28,501	7.7%	
C-80	SHRUB	LW	0.30	D	0.81	0.37	797	295	6,761	1.8%	
C-81	BIORETENTION	LW	0.30	DL	0.81	0.37	257	95	2,180	0.6%	
C-82	SHRUB	LW	0.30	D	0.81	0.37	1,452	538	12,317	3.3%	
C-83	SHRUB	MW	0.50	B	0.81	0.62	6	4	85	0.0%	
C-84	TREE	LW	0.30	B	0.81	0.37	25	9	212	0.1%	
C-85	SHRUB	MW	0.50	B	0.81	0.62	35	22	495	0.1%	
C-86	SHRUB	LW	0.30	D	0.81	0.37	1,275	472	10,815	2.9%	
C-87	BIORETENTION	LW	0.30	DL	0.81	0.37	96	36	814	0.2%	
C-88	SHRUB	MW	0.50	B	0.81	0.62	138	85	1,951	0.3%	
TOTALS (REGULAR LANDSCAPE AREAS)							43,728	16,714	382,788	100.0%	
SPECIAL LANDSCAPE AREA											
	0			0		1.00	0	0	0	0.0%	
TOTALS (SPECIAL LANDSCAPE AREAS)							0	0	0	0.0%	
TOTALS FOR ALL AREAS							43,728	16,714	382,788	100%	

CITY OF
SANTA ROSA
LANDSCAPE WATER USE STATEMENT

PROJECT NAME: THE ARBORS

PROJECT ADDRESS:

PREPARED BY: JANET LUEHRS (CID, CLIA #43274)
BROOKWATER INC., IRRIGATION CONSULTANTS
480 SAINT JOHN STREET, SUITE 220
PLEASANTON, CA 94566
925-855-0417
925-855-0357 (FAX)
Janet@Brookwater.com (e-mail)

"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."

Signed: *Janet Luehrs*

PART ONE	MAXIMUM APPLIED WATER ALLOWANCE (MAWA)	
	$MAWA = ETo \times .62 \times [(ETAF \times HA) + ((1-ETAF) \times SLA)]$	
YEARLY Eto (including rain)		36.9
CONVERSION FACTOR		0.62
ETAF		0.55
TOTAL IRRIGATED LANDSCAPE AREA (HA)		43,728 SQUARE FEET
SPECIAL LANDSCAPE AREA (SLA)		0 SQUARE FEET
LANDSCAPE WATER ALLOWANCE		550,822 GALLONS PER YEAR
TOTAL ACRE FEET		1.69 ACRE FEET

PART TWO	ESTIMATED TOTAL WATER USE (ETWU)	
	<i>(AVERAGE ETAF AND ETWU FROM WATER EFFICIENT LANDSCAPE WORKSHEET)</i>	
AVERAGE ETAF FOR REGULAR LANDSCAPE AREAS (TOTAL ETAF x AREA / TOTAL AREA)		0.38
ETWU FOR REGULAR LANDSCAPE AREAS		382,788 GALLONS PER YEAR
SITE WIDE ETAF		0.38
ETWU FOR ALL LANDSCAPE AREAS		382,788 GALLONS PER YEAR
TOTAL ACRE FEET		1.17 ACRE FEET

HYDROZONE SUMMARY		
*Hydrozone Description	Total Sq. Ft.	% of Landscape
Cool Season Turf (CST)	0	0.0%
Warm Season Turf (WST)	0	0.0%
High Water Use Plants (HW)	0	0.0%
Bioretention Plants (BR)	0	0.0%
Medium Water Use Plants (MW)	2,098	4.8%
Low Water Use Plants (LW)	41,630	95.2%
Very Low Water Use Plants (VLW)	0	0.0%
Water Feature	0	0.0%
Special Landscape Area (SLA)	0	0.0%
TOTAL	43,728	100.0%

**Irrigation Method	Total Sq. Ft.	% of Landscape
Rotor (FC-R, PC-R)	0	0.0%
Multi-Stream Rotator (MR)	0	0.0%
Spray (S)	0	0.0%
Bubbler (B)	3,778	8.6%
Drip (D)	14,584	33.4%
In-Line Drip (DL)	25,366	58.0%
Micro Spray (MS)	0	0.0%
Other (O)	0	0.0%

STAFF APPRVL	REVISIONS								PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION
	NO.	REVISION	DATE	R.C.E.	EXP. DATE	CITY ENG.	DATE	CITY OF SANTA ROSA	
								BY: _____ DAVID M. GUHIN CITY ENGINEER CITY OF SANTA ROSA R.C.E. 65663 DATE: _____	
								CITY OF SANTA ROSA FILE NO. 2020-0022	

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VAN DORN ABED LANDSCAPE ARCHITECTS, INC. 501 14TH ST., SAN FRANCISCO, CA ZIP 94103 PH (415) 604-1521 FAX (415) 604-4796		CHAMBERLAIN GROUP 665 SKYWAY, SUITE 230 SAN CARLOS CALIFORNIA 94068 (650) -595-5582	
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PROJECT MANAGER: AMY TAYLOR			
DRAWN BY: STAFF			

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owner's Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies, the Owner's Representative shall be contacted immediately
8. There shall be regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction. A site review to begin maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's improvement plans for all general grading information and notes.

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and 1% on paved surfaces. Ground cover areas shall be 1" and lawn areas 1" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas

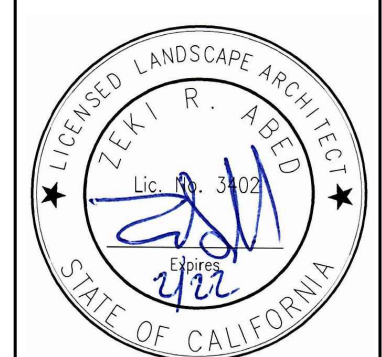
- Concrete work: Install concrete work as detailed. Layout of concrete plans and as specified below.
- A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving Installation:
 - A. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
 - B. Portland cement: Conforming to ASTM. C150, Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
 - C. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
 - D. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
 - E. Base course aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
 - F. Water: Clean and potable.
 - G. Forms: Form material is Sub-contractor's option.
 - H. Admixtures or finish retardants: For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacturer's recommendations. Obtain approval of material prior to use.
 - I. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM D1751 or D1752.
 - J. Reinforcing steel:
 - K. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
 - L. Tie wire: Annealed copper-bearing steel wire, minimum 16 gauge.
 - M. Welded wire mesh: 6" x 6" x #10.
 - N. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not deleterious to bond of cementitious materials to aggregate
 - O. Patching mortar: One part Portland cement or equal (part white and part gray adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework this mortar until it is the stiffest consistency that will permit placing.

- ## Materials

- B. Apply grout coat to surface to a thickness of 1/4" with dash brush in a heavy rough coat, or use plastering

J. All exposed site metal for utilities, irrigation, etc. shall be painted with one coat brown rustproof paint.

REVISION									
NO.									
SHEET TITLE:									
NOTES & SPECIFICATIONS									
SCALE: N/A									
ISSUE DATE: 08/14/20									
PROJECT NO.: V0646									
SHEET NO.:									
L5.0 58 OF 59									



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LANDSCAPE
CONSTRUCTION DRAWINGS

PLANTING NOTES:

1. See General Notes.

2. Submittals: Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations:
A. Soils test reports per Notes 5.B (initial site soils test) & 5.E (post amendment installation test) below.
B. Vendor data for landscape products, including: bark mulch, root barriers, fertilizers, soil amendments, and soil conditioners.
C. Written results of percolation tests per Note 6.D below.

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at this time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrubs/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards:

A. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Representative will inspect plants for approval prior to any installation.

B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

C. Nomenclature will be in accordance with Hortus III.

D. Plant materials will not be accepted that are overgrown, root-bound, or too recently canned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative.

5. Topsoil, Soil Amendments, Compost

Per City of Santa Rosa:

A. Soil Report 14-30.035:

- (A) In order to reduce runoff and encourage healthy plant growth, a soil analysis report shall be completed by the project applicant, or his/ her designee, as follows:
- (1) Submit soil samples to a laboratory for analysis and recommendations.
(a) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.
- (2) The soil analysis shall include:
(a) Soil texture;
(b) Infiltration rate determined by laboratory test or soil texture infiltration rate table;
(c) pH;
(d) Total soluble salts;
(e) Sodium;
(f) Percent organic matter; and
(g) recommendations.
- (3) In projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of 1 in 7 lots or approximately 15% will satisfy this requirement. Larger landscape projects shall sample at a rate equivalent to 1 in 7 lots.
- (4) The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.
- (5) If a grading permit is required, the soil analysis report shall be submitted to the City with the Certificate of Completion. If a grading permit is not required, the soil analysis report shall be submitted to the City with the Landscape Documentation Package.
- (6) The project applicant, or his/ her designee, shall submit documentation verifying implementation of soil analysis report recommendations to the City with Certificate of Completion."

B. Soil Test: Contractor shall submit one (1) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agricultural suitability and fertility with pre-plant and post-plant recommendations, immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous material or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially affect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test sample, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved. (See note for "Post Amendment Installation Soil Testing for Compliance" requirements - this soils test report for compliance must be submitted to Landscape Architect and Owner's Representative for review and approval prior to beginning planting operations).

C. Compacted soils must be transformed to a "friable" condition to maximize water retention.

D. Soil amendment to be added as follows in all planting areas:

Amount per 1000 square feet:

20 lbs. 6-20-20 fertilizer (Best's Cropmaker)

10 lbs. 0-25-0 Single super phosphate

10 lbs. Iron sulfate

(Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

E. Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 6" minimum by repeated rotary hoe cultivation prior to planting.

F. Soil amendments must be incorporated according to recommendations of the soil analysis report and what is appropriate for the plants selected.

G. Compost shall be applied at a minimum rate of four cubic yards per 1,000 sf of permeable area and incorporated to a depth of 6" into the soil. Soils with greater than 6% organic matter in the top 6" of soil are exempt from this requirement.

H. Post Amendment Installation Soil Testing for Compliance: After incorporating amendments, fertilizers and conditioners, Contractor shall take one (1) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting.

B. Dig pits as shown on Drawings.

C. After pits are dug, break sides and bottom of holes to open wall of pit for root penetration.

D. Percolation Test: All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water, to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours, then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

E. Planting backfill mix for trees and shrubs shall be:
Amount per Cubic Yard:

3/4 cubic yard On site soil

1.5 lbs. 6-20-20 fertilizer (Best's Cropmaker)

2.5 lbs. 0-25-0 Single super phosphate

1 lb. Iron sulfate

(Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

F. Fertilize plants at the time of planting with Agriform 21-gram fertilizer packets, 20-10-5: 2 per 1 gallon can; 3 per 5 gallon can; 8 per 15 gallon can; 15 per tree.

G. Plants shall be erect after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

H. Plant crown shall be 1" above finish grade for shrubs and 2" above finish grade for trees after watering and settling.

I. Tree and shrub plantings shall be watered & flooded to eliminate air pockets within 2 hours of the time of planting.

J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. All trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 10 foot by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other hardscape items, unless otherwise indicated. See plans for detail.

L. All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 10'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code).

M. A minimum 3" layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf applications. To provide habitat for beneficial insects and other wildlife, up to 5% of the landscape area may be left without mulch.

N. All tree and shrub planting areas shall receive 3" deep mulch. Groundcover areas to receive 1" layer of mulch. Mulch shall be organic (unless prohibited by Fuel Modifications Plans, or other applicable ordinances) and shall consist of recycled or post-consumer materials.

O. Mulch shall be "Premium Arbor Mulch" available through Lygnso, unless otherwise indicated. Mulch shall be natural brown in color (no die) and range in size to 1" maximum. Submit sample for approval. No substitutions without approval of Landscape Architect.

P. All trees and shrubs planted in ground cover areas shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Basins shall receive mulch unless otherwise indicated. Hold mulch 6" from trunk.

7. Ground Cover Planting:

A. Soil amendments shall have been incorporated into the soil prior to planting.

B. Clear planting areas of rocks and debris greater than 1" diameter.

C. Apply a pre-emergent herbicide, per manufacturer's directions.

D. All ground cover areas shall have complete coverage at spacings noted on plans.

E. All planting areas with slopes greater than 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

F. All groundcover areas shall receive 1" depth of mulch unless otherwise indicated. See bark mulch specification above.

G. Thirty (30) days after planting, replace all dead plants and fill in bare ground cover areas. Top dress with 16-6-8 fertilizer at 7 lbs./1000 sq. ft. when ground cover is dry and thoroughly irrigate promptly after application

(Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

10. Workmanship: Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

11. Clean-up: Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance operations.

12. Site Visits and Approvals: The Contractor shall contact the Owner's Representative for review and approval of plant materials (see Note 4 above) and plant locations (see Note 6 above). The maintenance period begins following acceptance of plant installation.

13. Maintenance:
A. Begin maintenance after each plant and each portion of lawn or ground cover is installed and continue until Final Acceptance.

B. Maintenance Period shall begin upon inspection and approval by Owner's Representative and shall be for 60 calendar days.

C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays and invigorates as are necessary to keep the plantings free of insects and disease and in thriving condition.

D. Maintenance of lawns shall consist of weeding, watering, mowing, treatment of fungus disease and insect pests, repair of erosion, fertilizing and all incidental work necessary to maintain turf satisfactory to the Owner. All areas sodded shall be mowed weekly beginning 14 days after sodding at a height no less than 2". All areas seeded shall be mowed only after lawn reaches 3" in height; lawn shall not be cut lower than 3" at its' first mowing. After first mowing, lawn shall be mowed weekly at a height no less than 2"

E. Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

14. Guarantee:
A. All trees and shrubs shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

IMPORT SOIL:

1. Works included:

A. Provide imported topsoil as necessary in planting areas to raise existing soil to meet grade and in pots.

B. Soils test imported top soil for landscape suitability.

C. Provide and incorporate soil amendments and fertilizers per soils test recommendations.

2. IMPORT TOPSOILS TEST:

A. Import topsoil: Contractor shall submit one soil sample for each batch of import topsoil to be delivered to the job site along with a copy of the specifications, type of plant material to be installed, and required water analysis to soil and plant laboratory, Santa Clara or approved equal, to be tested for agricultural suitability and fertility with pre-plant and post-plant recommendations and for conformance to the specifications. Written test report shall include recommendations for soil amendment, fertilizers, chemical conditioners, application rates for soil preparation, planting backfill mix, and post-maintenance fertilization programs for the types of plantings specified. Soil shall be certified as clean and free of hazardous materials or waste contamination and shall be certified as meeting all topsoil specifications. Amend and fertilize soil per report recommendations.

B. Import topsoil: After incorporating amendments and fertilizers to import topsoil areas as specified herein, Contractor shall submit one (1) soil sample to soil and plant laboratory, Santa Clara or approved equal to be tested for agricultural suitability and fertility for compliance to specifications. Soil sample shall be taken from location determined by the owner' representative. add any additional amendments recommended by soils analysis laboratory at no additional cost to owner' representative.

C. Submit all soils tests to owner' representative for approval prior to placing topsoil. Any work performed prior to submittal of required soils testing and prior to written approval shall be rejected.

3. Import Topsoil Specifications:

A. Provide new topsoil to the depth shown that is fertile, friable, USDA designated as a loamy sand, reasonably free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 25.4mm (1 inch) in any dimension, and other extraneous or toxic matter harmful to plant growth.

B. Obtain topsoil only from naturally, well-drained sites where topsoil occurs in a depth of not less than 101.6mm (4 inches). Do not obtain from bogs or marshes

C. Conform to ASTM D 5268, pH range of saturated paste of 5.5 to 7.5 without high lime content.

D. Soil to contain sufficient quantities of available nitrogen, phosphorus, potassium, calcium and magnesium to support normal plant growth. Sufficient quantities to be determined by required soils analysis and deficient nutrients or amendments to be added per report recommendations.

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

STAFF APPRVL	REVISIONS								PUBLIC IMPROVEMENTS APPROVED FOR CONSTRUCTION	
	NO.	REVISION	DATE	R.C.E.	EXP. DATE	CITY ENG.	DATE	CITY OF SANTA ROSA		
								BY: DAVID M. GUHIN CITY ENGINEER CITY OF SANTA ROSA R.C.E. 65663		
								DATE:		
								CITY OF SANTA ROSA FILE NO. 2020-0022		
REVISIONS:										
SHEET TITLE:										
NOTES & SPECIFICATIONS										
SCALE: N/A										
ISSUE DATE: 08/14/20										
PROJECT NO.: V0646										
SHEET NO.: L5.1 59 OF 59										

CLIENT:

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STATE OF CALIFORNIA

6-10-2020

VAN DORN ABED
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PROJECT MANAGER: MW
CHECKED BY: MW
DATE: 7/2

PROJECT NAME/LOCATION:

THE ARBORS

SANTA ROSA

DRAWING TITLE:

LANDSCAPE CONSTRUCTION DRAWINGS

CA

REVISIONS:

NO.

DATE

BY:

DESCRIPTION