CITY OF
LONG BEACH

Department of Parks, Recreation and Marine
2760 N. Studebaker Road
Long Beach, CA 90815
562.570.3100

December 6, 2022

C-16

HONORABLE MAYOR AND CITY COUNCIL
City of Long Beach
California

RECOMMENDATION:

Authorize the City Manager, or designee, to execute a First Amendment to Right-of-Entry and Maintenance Agreement No. 35159 with Signal Hill Petroleum, Inc., of Signal Hill, CA, to extend the term for four years, from July 1, 2023 through June 30, 2027. (District 5)

DISCUSSION

City Council approval is requested to enter into a four-year extension to Right-of-Entry and Maintenance Agreement No. 35159 with Signal Hill Petroleum, Inc., to maintain newly installed landscaping at Willow Springs Park located at 2745 Orange Avenue.

Signal Hill Petroleum, Inc. (SHP), is a privately-owned California-based energy company specializing in the responsible and sustainable exploration, development, and production of oil and gas in urban areas. Additionally, SHP operates as a real estate developer and purchased 2851 Orange Avenue, the former Amerigas property, to construct three industrial buildings and associated parking.

In 2018, SHP approached the Parks, Recreation and Marine Department (Department), proposing to install landscaping to screen the newly constructed retaining walls to deter graffiti and vandalism and create a natural buffer between the commercial development and the adjacent Willow Springs Park (Attachment A). SHP agreed to provide water and maintenance for the landscaped area for five years. On August 21, 2018, the City Council approved entering into a Right-of-Entry and Maintenance Agreement with SHP.

Due to unforeseen delays and the COVID-19 pandemic, the landscaping project was not completed until June 2022. The new landscaping consists of native, drought-tolerant plants and trees, mulch, water-efficient irrigation, decomposed granite, and dirt trails in approximately 98,000 square feet in the northeast corner of the park. To ensure the new landscaping receives its full five-year complement of maintenance, the Department proposes to extend Agreement No. 35159 until June 30, 2027.

The First Amendment to Right-of-Entry and Maintenance Agreement No. 35159 will contain the following terms and provisions:

- Permittee: Signal Hill Petroleum, Inc.
- Premises: Approximately 98,000 square feet at the northeast corner of Willow Springs Park Wetlands (Attachment A).

- Term: Four years, July 1, 2023 through June 31, 2027.

- Renewals: No renewals.

- Maintenance: SHP agrees to provide water and maintenance for the landscaped area for a period of five years, with the City of Long Beach (City) taking over maintenance and water operations at the conclusion of this period.

- Insurance: SHP will maintain all applicable insurance and endorsements, as required and approved by the City's Risk Manager.

This item was presented to the Parks and Recreation Commission on August 18, 2022, where it received unanimous support for City Council approval.

This matter was reviewed by Deputy City Attorney Anita Lakhani on November 11, 2022 and by Budget Analysis Officer Greg Sorensen on November 14, 2022.

TIMING CONSIDERATIONS

City Council action is requested on December 6, 2022, to allow execution of the Right-of-Entry and Maintenance Agreement in a timely manner.

FISCAL IMPACT

The total cost associated with landscape improvement project at Willow Springs Park will be the responsibility of Signal Hill Petroleum, Inc. At the conclusion of the maintenance period, maintenance costs, including water usage, contractor services, and staff costs, are estimated to be $45,000 annually and will be the responsibility of the Parks, Recreation and Marine Department. Funding will be identified prior to the cessation of the Agreement and will be requested during the annual budget process. This recommendation has no staffing impact beyond the normal budgeted scope of duties and is consistent with existing City Council priorities. There is no local job impact associated with this recommendation.

SUGGESTED ACTION:

Approve recommendation.

Respectfully submitted,

BRENT DENNIS
DIRECTOR
PARKS, RECREATION AND MARINE

APPROVED:

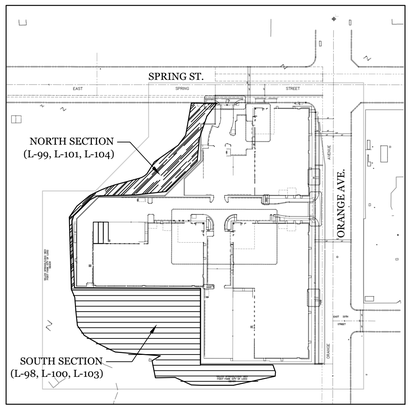
THOMAS B. MODICA
CITY MANAGER

Attachment A – SHP Landscape Project

NE WILLOW SPRINGS- SOUTH SECTION
GRADING PLAN & SOIL MANAGEMENT PLAN/ HYDROZONES

ATTACHMENT A

SYMBOL	MULCHES	HYDROZONES	TOTAL AREA
	DECOMPOSED GRANITE	NO IRRIGATION	3,839 SF
	SHREDDED ARBORISTS' TRIMMINGS @ 3"	ZONE 1: VERY LOW (PF = 1)	3,741 SF
	SHREDDED ARBORISTS' TRIMMINGS @ 3"	ZONE 2: LOW WATER (PF=3)	5,930 SF
	SHREDDED ARBORISTS' TRIMMINGS @ 3"	ZONE 3: MEDIUM WATER (PF =4)	597 SF

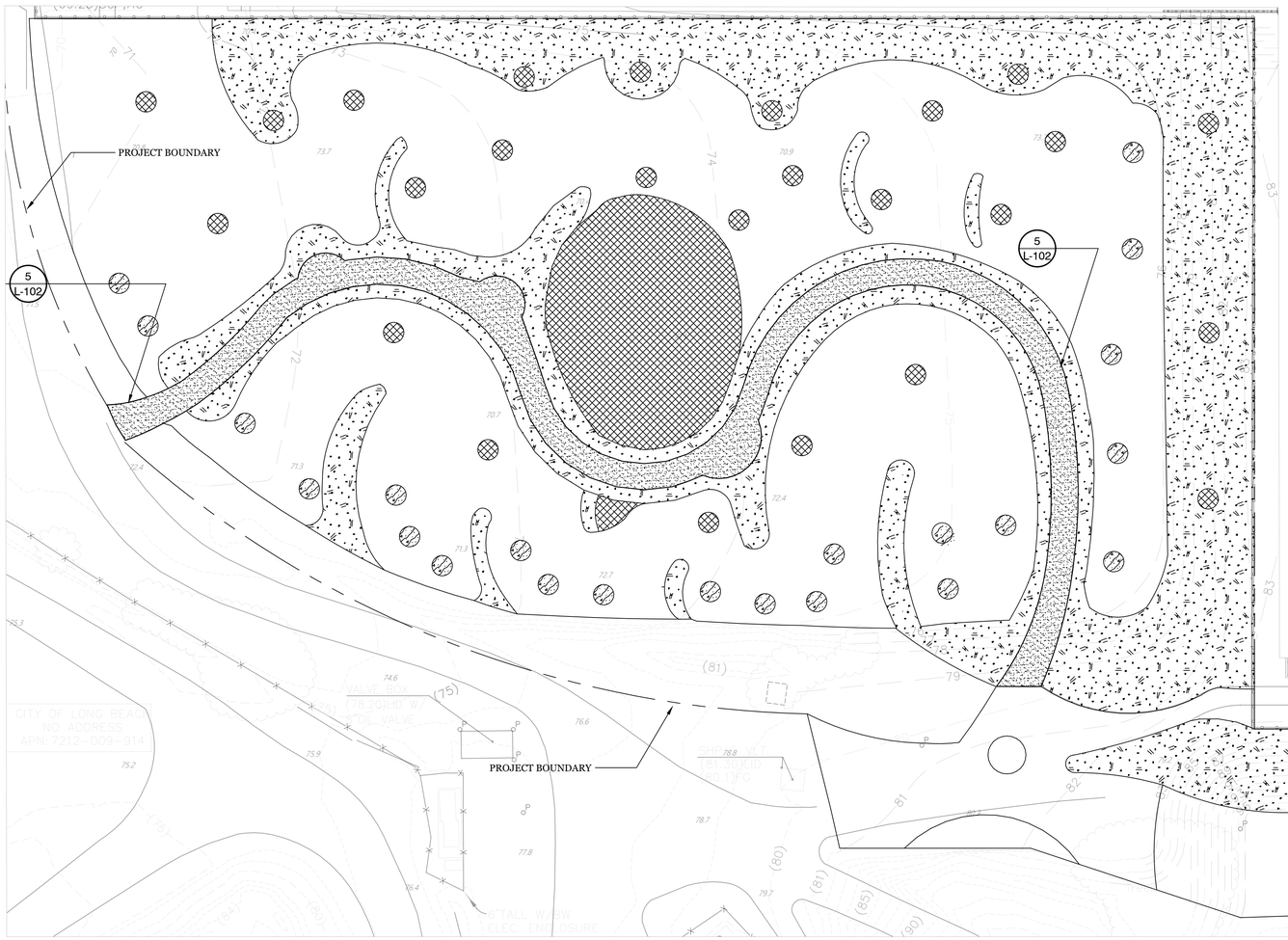


SITEMAP- NORTH & SOUTH SECTION BOUNDARIES

NORTH

0 20 40 60 feet

1" = 20'



A & L WESTERN AGRICULTURAL LABORATORIES

1311 WOODLAND AVE #1 • MODESTO, CALIFORNIA 95351 • (209) 529-4080 • FAX (209) 529-4736

REPORT NUMBER: 21-228-153 CLIENT NO: 5983

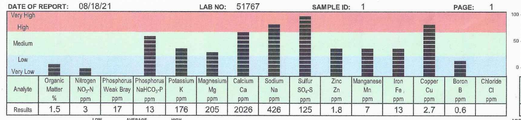
SEND TO: ORANGE COUNTY FARM SUPPLY
1826 WEST CHAPMAN AVENUE
ORANGE, CA 92868

GROWER: KAI CRAIG

SUBMITTED BY: BOB PACE

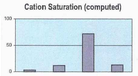
Graphical Soil Analysis Report

DATE OF REPORT: 08/18/21 LAB NO: 51767 SAMPLE ID: 1 PAGE: 1



Analyte	Organic Matter %	Nitrogen NO_3-N ppm	Phosphorus Weak Bray ppm	Phosphorus $NaHCO_3$-P ppm	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	Sulfur SO_4-S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Chloride Cl ppm
Results	1.5	3	17	13	176	205	2026	426	125	1.8	7	13	2.7	0.6	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
3.2	12.0	71.7	13.1

ACIDIC BASIC

EC e dS/m

Weak Bray P unreliable at M or H excess lime or pH > 7.5

Soil Fertility Guidelines

CROP: GENERAL RATE: lb/1000 sq ft NOTES:

Dolomite (79 score)	Lime (70 score)	Gypsum	Elemental Sulfur	Nitrogen N	Phosphate P_2O_5	Potash K_2O	Magnesium Mg	Sulfur SO_4-S	Zinc Zn	Manganese Mn	Iron Fe	Copper Cu	Boron B
			*25	3.6	2.0	3.0							

COMMENTS

* ACIDIFICATION of high pH soils could improve soil environment. Compare different sources of acidifying materials, but be aware that sulfate-sulfur (as shown on report) has NO acidifying power.
PRIOR TO PLANTING: Spread the above requirements per 1,000 sq ft and mix into the top 6-8 inches of soil. Initially, limit nitrogen to 1.5 lb/1,000 sq ft;spread the balance 30-60 days after plting.
SODIUM: If a concern, broadcast amendment and incorporate if possible. Follow with frequent/heavy watering to aid in the amending (but check water quality first and avoid leaching nitrates)!!
INCORPORATE well into the top six inches up to three yards per 1,000 sq ft (one-inch layer) of nitrified/composted organic amendment where soil organic matter level is a little low.

*Our reports and letters are for the exclusive use and confidential use of our clients, and may not be reproduced in whole or in part, nor may any re-license be made to the work, the result or the company in any advertising, news release, or other public announcement without obtaining our prior written authorization." The yield of any crop is controlled by many factors in addition to nutrition. While these recommendations are based on agronomic research and experience, they DO NOT GUARANTEE the achievement of satisfactory performance. © Copyright 1994 A & L WESTERN LABORATORIES, INC.

Rogell Rogers, CCA, PCA
A & L WESTERN LABORATORIES, INC

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Reference Evapotranspiration (ETo) 39

Hydrozone # /Planting Description*	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							
1/ Very Low	.1	Drip	.81	.12	3,741	449	10,856
2/ Low Water	.3	Drip	.81	.37	5,930	2194	53,050
3/ Medium Water	.4	Drip	.81	.49	597	293	7,085
				Totals	10,268	2,936	70,991
Special Landscape Areas							
				1			
				1			
				1			
				Totals	0 (C)	0 (D)	
						ETWU Total	70,991
						Maximum Allowed Water Allowance (MAWA)*	111,726

[a] Hydrozone #/Planting Description E.g 1.) front lawn 2.) low water use plantings 3.) medium water use planting

[b] Irrigation Method overhead spray or drip

[c] Irrigation Efficiency 0.75 for spray head 0.81 for drip

[d] ETWU (Annual Gallons Required) = ETo x 0.62 x ETAF x Area where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

MAWA (Annual Gallons Allowed) = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)] where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	(B)	2,936
Total Area	(A)	10,268
Average ETAF	**B ÷ A**	.29

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	(B+D)	
Total Area	(A+C)	
Sitewide ETAF	**(B+D) ÷ (A+C)**	

A copy of this form may be obtained from Department of Water Resources website:
http://www.water.ca.gov/wateruseefficiency/landscapeordinance/

General Notes

NOTES:
Based on soil report, amendments shall be used to increase organic matter, lower pH, and allow flushing of excess sodium. Native plants are adapted to low nutrient levels.

A minimum 3-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.

Use pine needle or shredded redwood mulch to assist with lowering pH.

Apply compost at a rate of a minimum of four cubic yards per 1,000 square feet, incorporated to a depth of six inches into the soil.

Apply ELEMENTAL SULFUR at a rate of 25 lbs/ 1000sf incorporated into the upper 4.0 to 6.0 inches of the soil surface. . After application, irrigate with ¼" to ½" of water per day. Continue irrigation for several days.

"I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."

Kai Craig, MLA
8/24/21

No.	Revision/Issue	Date
1	1ST SUBMITTAL	8/24/2021

Designed By:
California Eco Design, Inc.
P.O. BOX 15041
LONG BEACH, CA 90815
PHONE: 562.279.6713
EMAIL: INFO@CALECODESIGN.COM
WEBSITE: WWW.CALECODESIGN.COM

CALIFORNIA ECO DESIGN
CA C-27 License #1039801

WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	L #98
Date: 2021/08/24	LANDSCAPE GRADING/ SOILS/ HYDROZONES SOUTH SECTION
Scale: 1"=20'	

NE WILLOW SPRINGS- SOUTH SECTION
GRADING PLAN & SOIL MANAGEMENT PLAN/ HYDROZONES

SYMBOL	MULCHES	HYDROZONES	TOTAL AREA
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NORTH

0 20 40 60 feet

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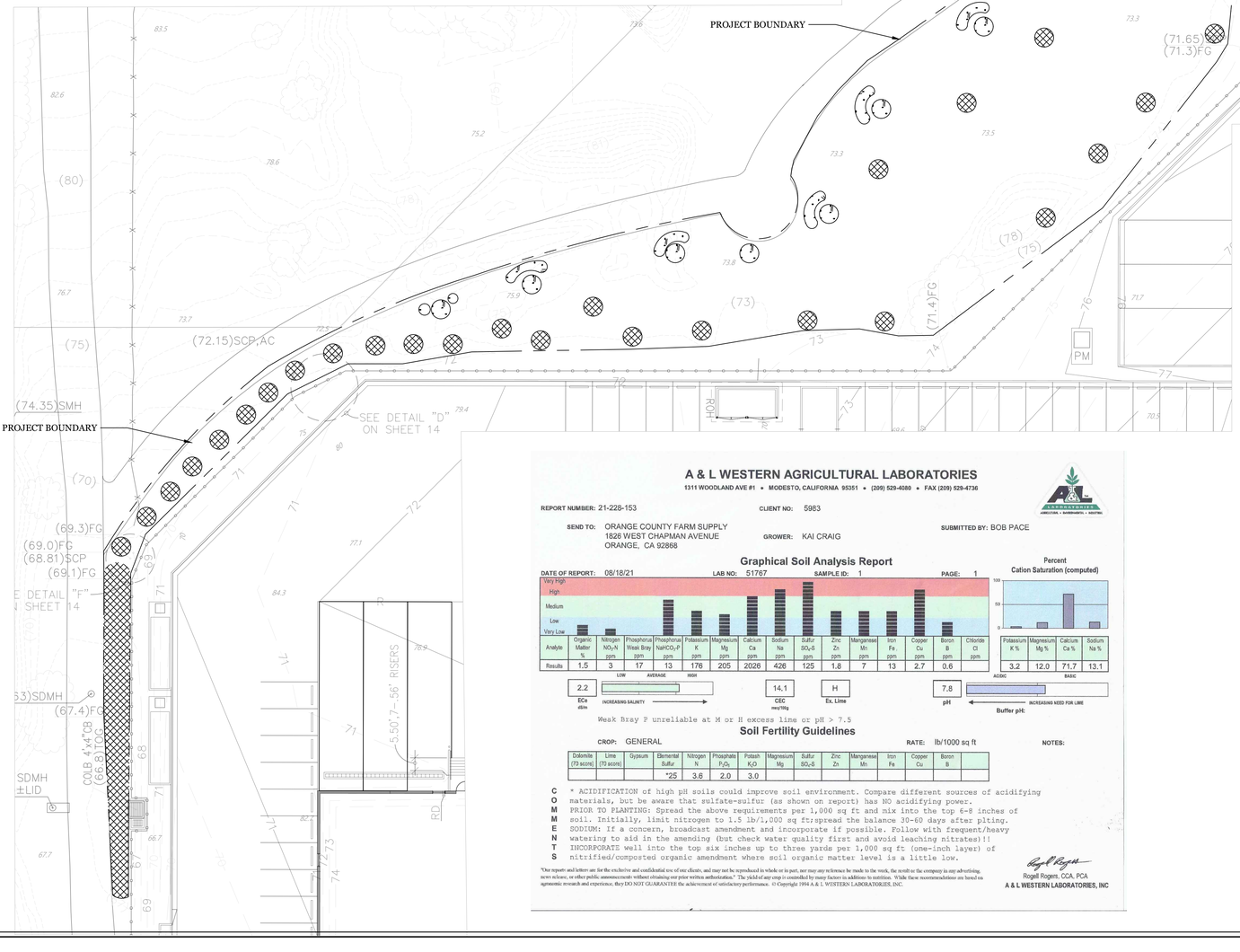

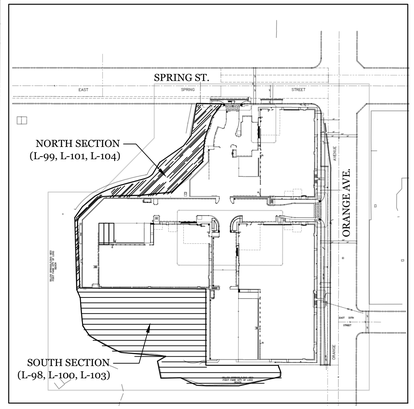

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Very High / High / Medium / Low / Very Low

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LOW AVERAGE HIGH

Percent Cation Saturation (computed)

Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
3.2	12.0	71.7	13.1

ACIDIC BASIC

2.2 ECe dS/m (INCREASING SALINITY) — 14.1 CEC meq/100g — H Ex. Lime — 7.8 pH (INCREASING NEED FOR LIME) — Buffer pH:

Weak Bray P unreliable at M or H excess lime or pH > 7.5

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Kai Craig, MLA
8/24/21

No.	Revision/Issue	Date
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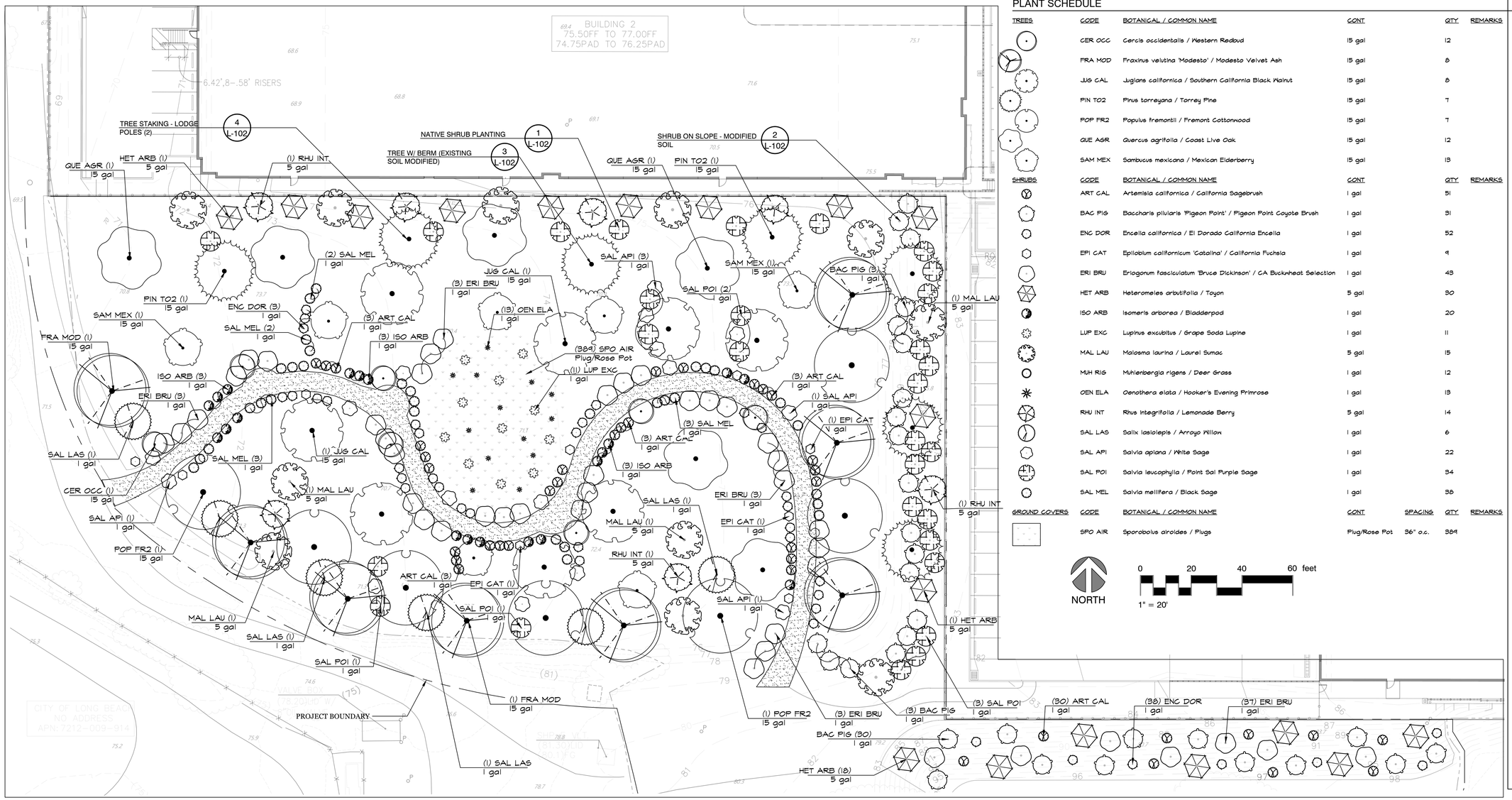
WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	L#99
Date: 2021/08/24	LANDSCAPE GRADING/ SOILS/ HYDROZONES NORTH SECTION
Scale: 1"=20'	

PLANTING PLAN- NE WILLOW SPRINGS-SOUTH SECTION



PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	CONT	QTY	REMARKS
	CER OCC	Cercis occidentalis / Western Redbud	15 gal	12	
	FRA MOD	Fraxinus velutina 'Modesto' / Modesto Velvet Ash	15 gal	8	
	JUG CAL	Juglans californica / Southern California Black Walnut	15 gal	8	
	PIN TO2	Pinus torreyana / Torrey Pine	15 gal	7	
	POP FR2	Populus fremontii / Fremont Cottonwood	15 gal	7	
	QUE AGR	Quercus agrifolia / Coast Live Oak	15 gal	12	
	SAM MEX	Sambucus mexicana / Mexican Elderberry	15 gal	13	

SHRUBS	CODE	BOTANICAL / COMMON NAME	CONT	QTY	REMARKS
	ART CAL	Artemisia californica / California Sagebrush	1 gal	51	
	BAC PIG	Baccharis pilularis 'Pigeon Point' / Pigeon Point Coyote Brush	1 gal	31	
	ENC DOR	Encelia californica / El Dorado California Encelia	1 gal	52	
	EPI CAT	Epilobium californicum 'Catalina' / California Fuchsia	1 gal	9	
	ERI BRU	Eriogonum fasciculatum 'Bruce Dickinson' / CA Buckwheat Selection	1 gal	43	
	HET ARB	Heteromeles arbutifolia / Toyon	5 gal	30	
	ISO ARB	Isomeris arborea / Bladderpod	1 gal	20	
	LUP EXC	Lupinus excubitus / Grape Soda Lupine	1 gal	11	
	MAL LAU	Malosma laurina / Laurel Sumac	5 gal	15	
	MUH RIG	Muhlenbergia rigens / Deer Grass	1 gal	12	
	OEN ELA	Oenothera elata / Hooker's Evening Primrose	1 gal	13	
	RHU INT	Rhus integrifolia / Lemonade Berry	5 gal	14	
	SAL LAS	Salix lasiolepis / Arroyo Willow	1 gal	6	
	SAL API	Salvia apiana / White Sage	1 gal	22	
	SAL POI	Salvia leucophylla / Point Sal Purple Sage	1 gal	34	
	SAL MEL	Salvia mellifera / Black Sage	1 gal	38	

GROUND COVERS	CODE	BOTANICAL / COMMON NAME	CONT	SPACING	QTY	REMARKS
	SPO AIR	Sporobolus airoides / Plugs	Plug/Rose Pot	36" o.c.	384	

General Notes

See planting notes, L#102

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

Kai L. Craig, MLA
8/24/2021

No.	Revision/Issue	Date
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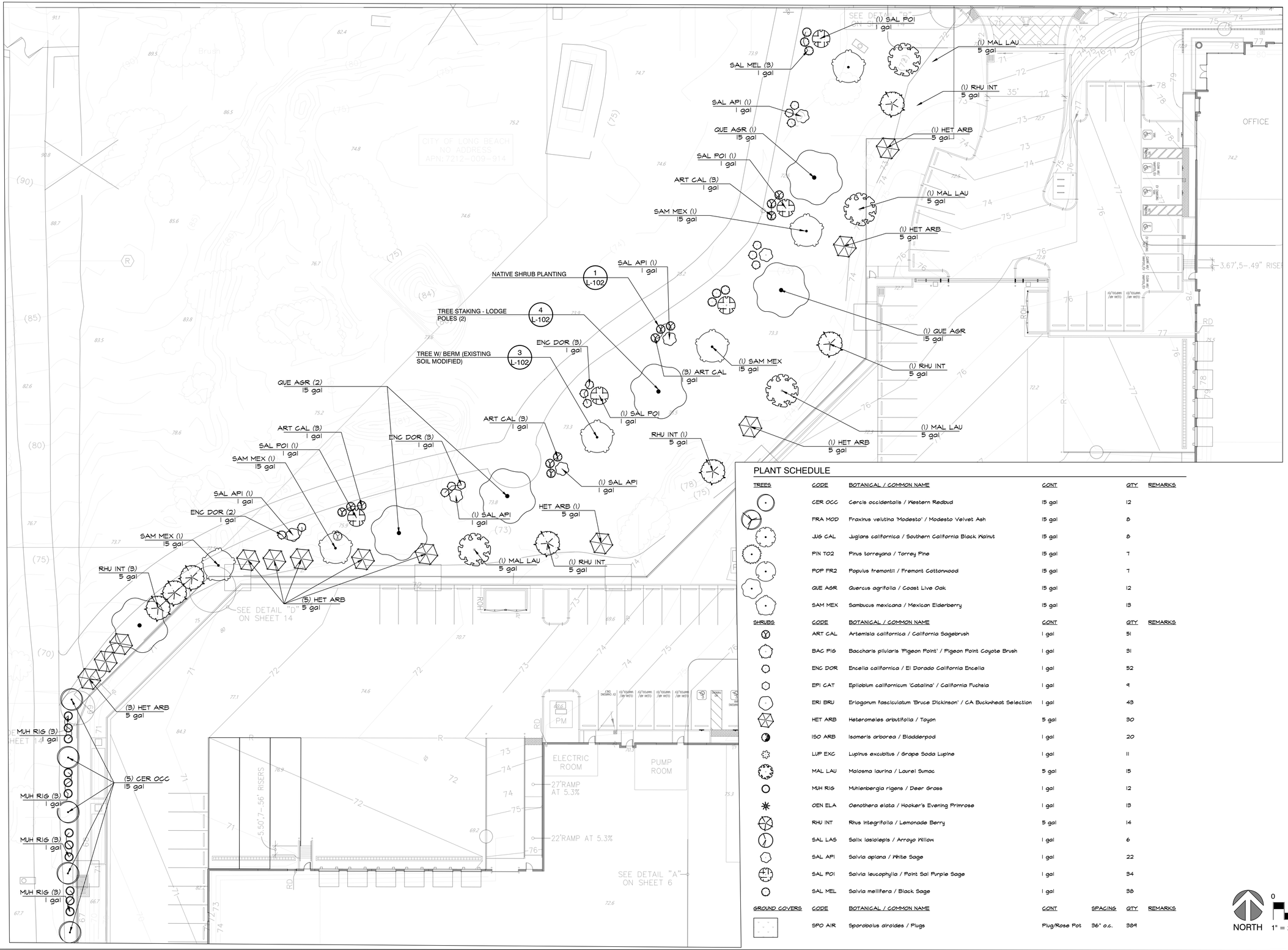
WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	PLANTING PLAN SOUTH SECTION
Date: 2021/08/24	
Scale: 1"=20'	L#100

PLANTING PLAN- NE WILLOW SPRINGS- NORTH SECTION



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	PIN TO2	Pinus torreyana / Torrey Pine	15 gal	7	
	POP FR2	Populus fremontii / Fremont Cottonwood	15 gal	7	
	QUE AGR	Quercus agrifolia / Coast Live Oak	15 gal	12	
	SAM MEX	Sambucus mexicana / Mexican Elderberry	15 gal	13	

SHRUBS	CODE	BOTANICAL / COMMON NAME	CONT	QTY	REMARKS
	ART CAL	Artemisia californica / California Sagebrush	1 gal	51	
	BAC PIG	Baccharis pilularis 'Pigeon Point' / Pigeon Point Coyote Brush	1 gal	31	
	ENC DOR	Encelia californica / El Dorado California Encelia	1 gal	52	
	EPI CAT	Epilobium californicum 'Catalina' / California Fuchsia	1 gal	9	
	ERI BRU	Eriogonum fasciculatum 'Bruce Dickinson' / CA Buckwheat Selection	1 gal	43	
	HET ARB	Heteromeles arbutifolia / Toyon	5 gal	30	
	ISO ARB	Isomeris arborea / Bladderpod	1 gal	20	
	LUP EXC	Lupinus excubitus / Grape Soda Lupine	1 gal	11	
	MAL LAU	Malosma laurina / Laurel Sumac	5 gal	15	
	MUH RIG	Muhlenbergia rigens / Deer Grass	1 gal	12	
	OEN ELA	Oenothera elata / Hooker's Evening Primrose	1 gal	13	
	RHU INT	Rhus integrifolia / Lemonade Berry	5 gal	14	
	SAL LAS	Salix lasiolepis / Arroyo Willow	1 gal	6	
	SAL API	Salvia apiana / White Sage	1 gal	22	
	SAL POI	Salvia leucophylla / Point Sal Purple Sage	1 gal	34	
	SAL MEL	Salvia mellifera / Black Sage	1 gal	38	

GROUND COVERS	CODE	BOTANICAL / COMMON NAME	CONT	SPACING	QTY	REMARKS
	SPO AIR	Sporobolus airoides / Plugs	Plug/Rose Pot	36" o.c.	384	

NORTH 1" = 20'

0 20 40 60 feet

General Notes

See planting notes, L#102

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

Kai L. Craig, MLA
8/24/2021

No.	Revision/Issue	Date
1	1ST SUBMITTAL	8/24/2021

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CA C-27 License #1039801

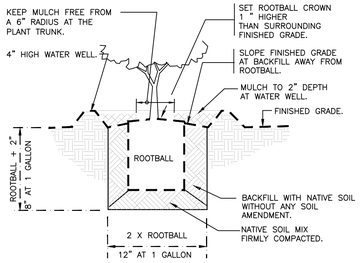
WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

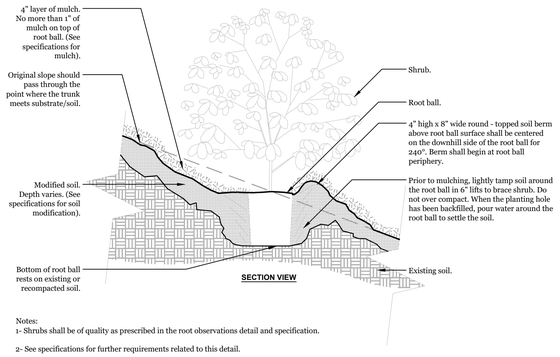
Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	PLANTING PLAN NORTH SECTION
Date: 2021/08/24	L#101
Scale: 1"=20'	

PLANTING DETAILS- NE WILLOW SPRINGS



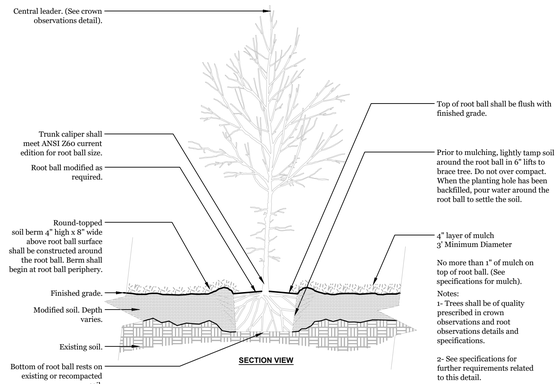
1 NATIVE SHRUB PLANTING
Not to Scale
FX-PL-FX-SHRB-09



Notes:
1- Shrubs shall be of quality as prescribed in the root observations detail and specification.

2- See specifications for further requirements related to this detail.

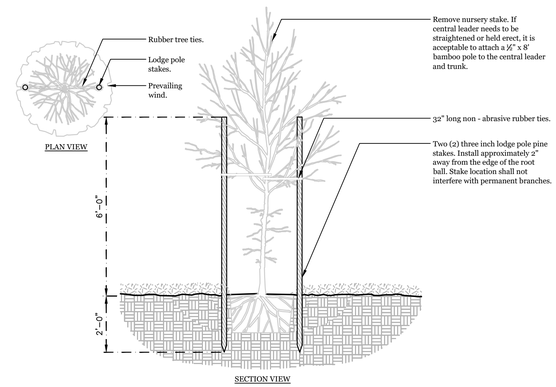
2 SHRUB ON SLOPE 5% (20:1) TO 50% (2:1) - MODIFIED SOIL
Not to Scale
FX-PL-FX-SHRB-01



Notes:
1- Trees shall be of quality prescribed in crown observations and root observations details and specifications.

2- See specifications for further requirements related to this detail.

3 TREE W/ BERM
Not to Scale
FX-PL-FX-TREE-05



4 TREE STAKING - LODGE POLES (2)
Not to Scale
FX-PL-FX-TREE-27

PLANTING NOTES

VERIFICATION OF PLANT QUANTITIES AND LOCATIONS

A. Scaled dimensions and plant locations on Plans are approximate. Before starting work, Contractor shall carefully check and verify dimensions and grade elevations. Notify the Clinet in writing of discrepancies between Contract Documents and field conditions. Final locations of all container plantings shall be flagged by the Contractor and approved by the Client or LA before planting takes place.

B. Quantities of container plant and seed materials are indicated on the Plans. Typical planting layout, slope factors, and square footage and/or acreage are shown on the Plans for convenience of the Contractor only in flagging planting locations and distributing container plantings. Contractor shall verify quantities and plant all plant material specified in design documents.

C. Prior to excavation of planting holes, Contractor shall verify location of underground utility lines and other improvements and take proper precautions to avoid damage to utilities and improvements, and notify owner of conflicts between utilities and plant locations and provide for relocation of plant material.

STAKING AND GUYING MATERIAL

If staking is required, then the following specifications shall be met:

A. Tree stakes shall be two-inch diameter treated lodgepole pine, free of knots and splits, and sharpened at one end.

B. Tree ties shall be flexible vinyl straps. Trees ties shall be attached to support stakes at lowest possible point where tree can remain in upright condition. Nursery tape shall not be used to secure trees to support stakes.

PLANTING TREES, SHRUBS AND VINES

A. Soil moisture levels prior to planting shall be horticulturally acceptable. Contractor shall request review of moisture levels by the Client or LA. If insufficient for planting, then fill planting pits with water and allow to drain before starting planting operations. In addition, the root balls of all container plantings shall be thoroughly wetted prior to planting.

B. Excavated holes shall be dug with scarified surfaces and bottoms. Planting holes shall be at least two times wider than root balls and twice as deep. Before planting the bottoms of the planting holes shall be back filled and watered to create a depth which shall allow the top of the root ball to remain 1-2 inches above finished grade. Holes shall be large enough to permit handling and planting without root injury and breakage of root balls.

C. Remove plants from containers so that soil surrounding roots remains intact. Cut circling roots by slicing root balls on opposite sides to a minimum depth of one inch (not required for plants with sensitive root systems). Plant and water container stock immediately after removal from containers.

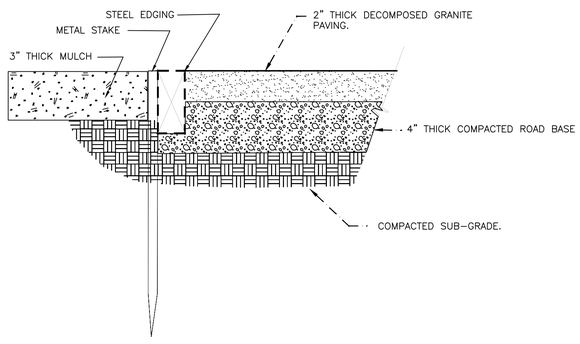
D. Place plants in center of holes (on slopes, set plant on downslope side of hole) and set plumb. Hold plants in position until backfill has been placed and lightly tamped around root balls.

E. Mix soil amendments into upper third of backfill around planting hole.

CONTAINER PLANT MULCH

A. Container plant mulch shall be shredded fibrous wood chips, ranging in size from 3/8-inch to 3 inches. Mulch shall be clean,free of debris (including palm fronds or pine needles) and foul odor, and contain no weed or grass seed.

B. Mulch shall be applied at a minimum depth of 3” in a minimum 3' diameter around trees.



5 EDGE AT DECOMPOSED GRANITE PAVING
NOT TO SCALE
FX-SI-PAV-AGGR-01

General Notes

No.	Revision/Issue	Date
1	1ST SUBMITTAL	8/24/2021

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CALIFORNIA ECO DESIGN
CA C-27 License #1039801

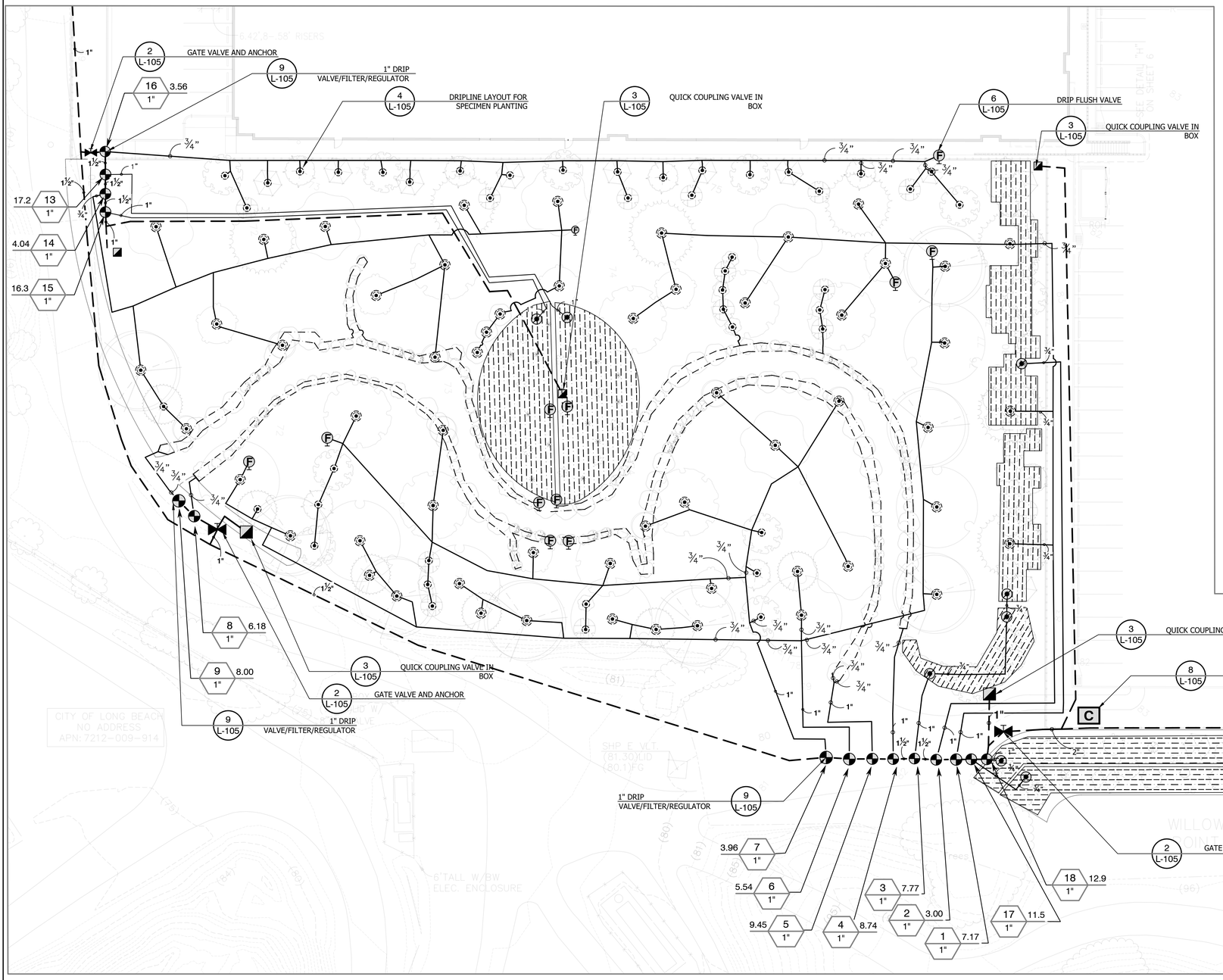
WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	PLANTING DETAILS
Date: 2021/08/24	
Scale	L#102

IRRIGATION PLAN- NE WILLOW SPRINGS- SOUTH SECTION



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Pipe Transition Point above grade Pipe transition point from PVC lateral to drip tubing with riser to above grade installation.	8
F	Rain Bird MDCFCAP Dripline Flush Valve cap in compression fitting coupler.	18
	Large Tree Drip Ring .9 GPH 12" Spacing Dripline 2 concentric circles, 3' and 5' diameter	68
	Small Drip Ring for Shrubs .9GPH at 12" spacing emitters 3' Diameter Drip Ring	128
	Area to Receive Dripline 1/2" Rainbird XFS Subsurface Dripline Pressure Compensating Landscape Dripline with Check Valve. 0.6 GPH emitters at 12" O.C. Dripline laterals spaced at 22" apart, with emitters offset for triangular pattern. 17mm.	5,713 l.f.
	Rain Bird XFS-06-12 XFS Sub-Surface Pressure Compensating Dripline w/Copper Shield Technology, 0.6 GPH emitters at 12" O.C. UV Resistant. Specify XF insert fittings.	1,853 l.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB-PRS-D 1" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Pressure Regulator Module.	18
	Quick Coupler Valve RAINBIRD 33-DLRC 3/4" LOCKING RUBBER COVER	11
	Landscape Products Inc. BBV 3/4", 1", 1-1/4", 1-1/2", 2" Full Port Brass Ball Valve. Suitable for a full range of liquids and gases in residential and commercial applications.	5
BF	Febco 825y 1" Lead Free Reduced Pressure Backflow Preventer in Guardian Brand steel cage enclosure	1
C	Controller- CalSense 3000 24 Station Automated Irrigation Controller w/ Modem In Strong Box SB-1855 Enclosure	1
	Irrigation Lateral Line: PVC Schedule 40	6,590 l.f.
	Irrigation Mainline: PVC Schedule 40	2,073 l.f.

Valve Callout
Valve Number
Valve Flow
Valve Size

General Notes

See Irrigation Notes, L-105

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

Kai L. Craig, MLA
8/24/2021

No.	Revision/Issue	Date
1	1ST SUBMITTAL	8/24/2021

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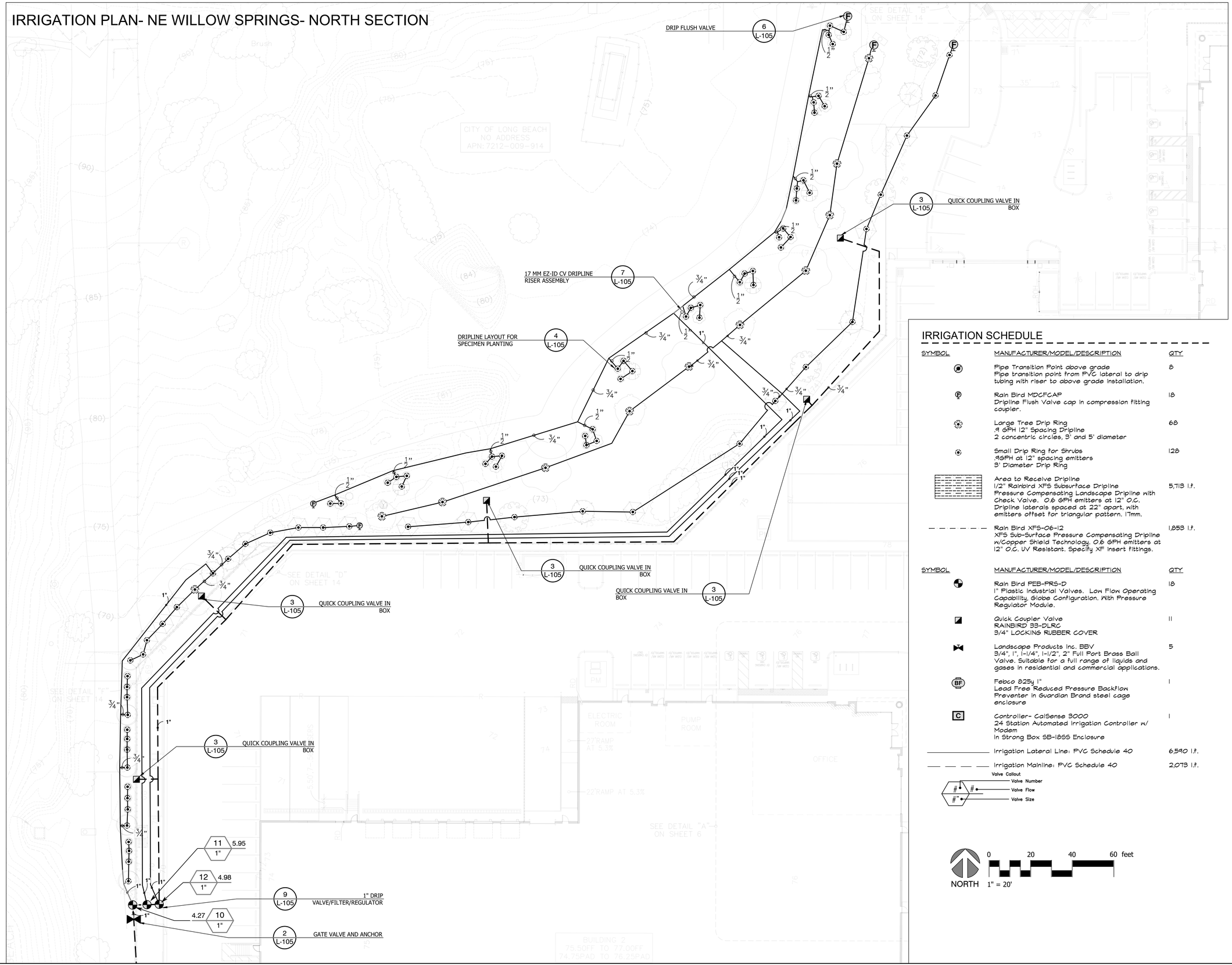
WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	L#103
Date: 2021/08/23	Irrigation- South
Scale: 1"=20'	

IRRIGATION PLAN- NE WILLOW SPRINGS- NORTH SECTION



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Pipe Transition Point above grade Pipe transition point from PVC lateral to drip tubing with riser to above grade installation.	8
F	Rain Bird MDCFCAP Dripline Flush Valve cap in compression fitting coupler.	18
	Large Tree Drip Ring .9 GPH 12" Spacing Dripline 2 concentric circles, 3' and 5' diameter	68
	Small Drip Ring for Shrubs .9GPH at 12" spacing emitters 3' Diameter Drip Ring	128
	Area to Receive Dripline 1/2" Rainbird XFS Subsurface Dripline Pressure Compensating Landscape Dripline with Check Valve. 0.6 GPH emitters at 12" O.C. Dripline laterals spaced at 22" apart, with emitters offset for triangular pattern. 17mm.	5,718 l.f.
	Rain Bird XFS-06-12 XFS Sub-Surface Pressure Compensating Dripline w/Copper Shield Technology. 0.6 GPH emitters at 12" O.C. UV Resistant. Specify XF insert fittings.	1,853 l.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB-PRS-D 1" Plastic Industrial Valves. Low Flow Operating Capability. Globe Configuration. With Pressure Regulator Module.	18
	Quick Coupler Valve RAINBIRD 33-DLRC 3/4" LOCKING RUBBER COVER	11
	Landscape Products Inc. BBV 3/4", 1", 1-1/4", 1-1/2", 2" Full Port Brass Ball Valve. Suitable for a full range of liquids and gases in residential and commercial applications.	5
BF	Febco 825y 1" Lead Free Reduced Pressure Backflow Preventer in Guardian Brand steel cage enclosure	1
C	Controller- CalSense 3000 24 Station Automated Irrigation Controller w/ Modem in Strong Box SB-1855 Enclosure	1
	Irrigation Lateral Line: PVC Schedule 40	6,590 l.f.
	Irrigation Mainline: PVC Schedule 40	2,073 l.f.

Valve Callout
- Valve Number
- Valve Flow
- Valve Size

NORTH 1" = 20'

0 20 40 60 feet

General Notes

See Irrigation Notes, L-105

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

Kai L. Craig, MLA
8/24/2021

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1	1ST SUBMITTAL	8/24/2021

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CA C-27 License #1039801

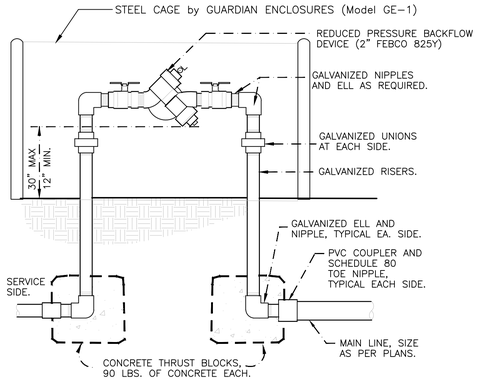
WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	L#104
Date: 2021/08/23	Irrigation- North
Scale: 1"=20'	

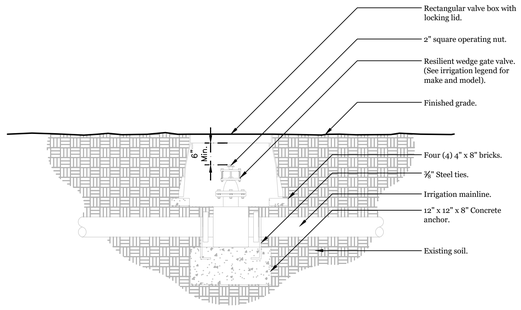
IRRIGATION DETAILS- NE WILLOW SPRINGS



1 REDUCED PRESSURE BACKFLOW DEVICE

Not to Scale

FX-IR-FX-BACK-03



Notes:
1- Install gate valve per manufacturer's specifications and recommendations.

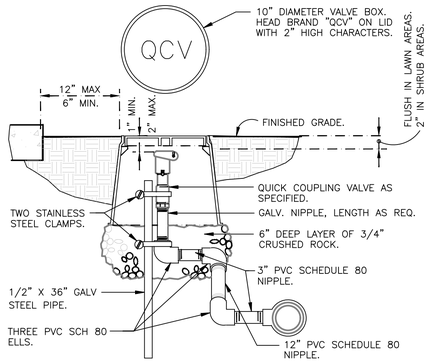
2- Valve box shall be wrapped with minimum 3 mil. thick plastic and secure it to valve box using duct tape or electrical tape.

3- Valve box shall be located in planting area.

2 GATE VALVE AND ANCHOR-LANDSCAPE PRODUCTS

Not to Scale

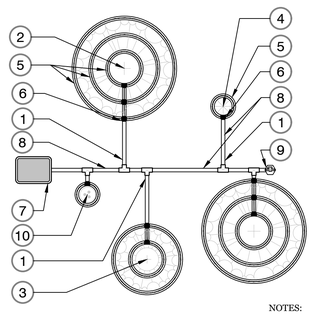
FX-IR-FX-SHUT-03



3 QUICK COUPLING VALVE IN BOX

Not to Scale

FX-IR-FX-QUIC-03



1. TO VALVE BOX W/ DRIP REMOTE CONTROL ZONE KIT
2. SPECIMEN TREE DRIP RING
3. ORNAMENTAL TREE DRIP RING
4. SHRUB DRIP RING
5. RAINBIRD CV 17MM DRIPLINE
6. 17MM INSERT FITTING (TYPICAL)
7. VALVE BOX W/ DRIP REMOTE CONTROL ZONE KIT (see dtl #9)
8. PVC PIPE WITH FITTINGS
9. FLUSH POINT
10. SHRUB

Single Lateral Maximum Run Length (Feet)						
Inlet Pressure (psi)	12" Spacing			18" Spacing		
	Nominal Flow (gph)			Nominal Flow (gph)		
	0.4	0.6	1.0	0.4	0.6	1.0
15	220	170	125	285	240	170
25	326	255	195	495	370	275
35	410	330	238	572	470	335
45	474	360	270	640	515	375

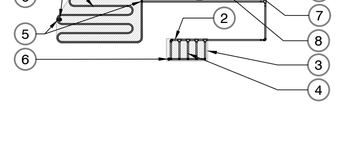
NOTES:

1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY.
2. PLACE THE DOWN STAKES EVERY 3' IN SAND, 4' IN LOAM, AND 5' IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

4 DRIPLINE LAYOUT FOR SPECIMEN PLANTING

NOT TO SCALE

FX-IR-LPI-DRIP-02



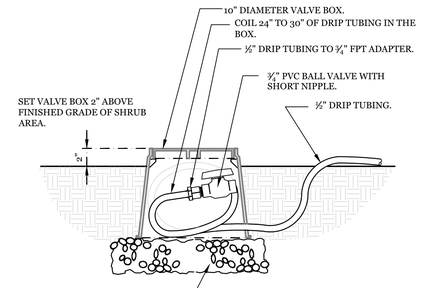
1. VALVE BOX (see dtl #9)
2. PVC SUPPLY HEADER WITH FITTINGS
3. IRRIGATED LANDSCAPE AREA WITH SETBACK (+/- 2"-4")
4. .9GPM @12" SPACING 17MM DRIPLINE
5. 17MM INSERT FITTING (TYPICAL)
6. FLUSH POINT
7. TREE
8. PVC PIPE WITH FITTINGS
9. PARKING ISLAND CURB
10. PVC OR PE FLUSH HEADER WITH FITTINGS
11. 17MM VINYL TUBING

Single Lateral Maximum Run Length (Feet)						
Inlet Pressure (psi)	12" Spacing			18" Spacing		
	Nominal Flow (gph)			Nominal Flow (gph)		
	0.4	0.6	1.0	0.4	0.6	1.0
15	220	170	125	285	240	170
25	326	255	195	495	370	275
35	410	330	238	572	470	335
45	474	360	270	640	515	375

5 17MM RAINBIRD CV DRIPLINE TYPICAL LAYOUT

NOT TO SCALE

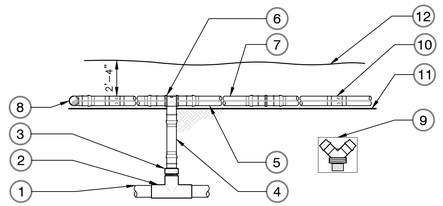
FX-IR-LPI-DRIP-01



6 DRIP FLUSH VALVE

NOT TO SCALE

FX-IR-FX-DRIP-03

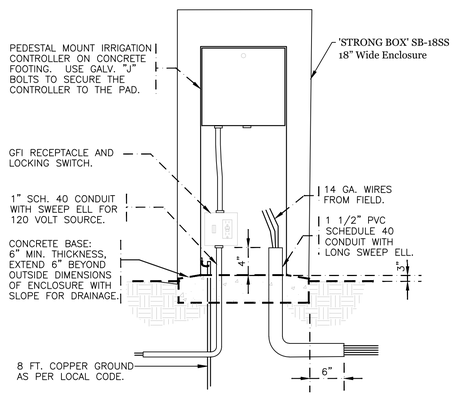


1. PVC SUPPLY HEADER
2. PVC TEE SxSxT
3. LANDSCAPE PRODUCTS 17MM DRIPLINE MALE ADAPTER
4. LANDSCAPE PRODUCTS 17MM BLANK TUBING
5. LANDSCAPE PRODUCTS 17MM EZ-ID CV COLOR CODED DRIPLINE
6. LANDSCAPE PRODUCTS 17MM DRIPLINE INSERT TEE
7. LANDSCAPE PRODUCTS 17MM DRIPLINE INSTER COUPLING
8. LANDSCAPE PRODUCTS 17MM DRIPLINE ELBOW
9. LANDSCAPE PRODUCTS 17MM 2-WAY MALE ADAPTER
10. INLINE DRIP EMITTER
11. FINISH GRADE
12. MULCH

7 17 MM EZ-ID CV DRIPLINE RISER ASSEMBLY

NOT TO SCALE

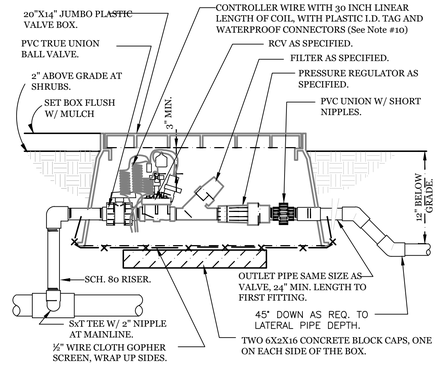
FX-IR-LPI-DREQ-02



8 CONTROLLER ENCLOSURE/ PEDESTAL MOUNT

NOT TO SCALE

FX-IR-FX-CONT-16



9 1" DRIP VALVE/FILTER/REGULATOR

NOT TO SCALE

FX-IR-FX-DRIP-12

IRRIGATION NOTES

IRRIGATION NOTES:

1. THE IRRIGATION DESIGN LAYOUT SHOWN ON PLAN IS DIAGRAMMATIC. PIPING, VALVES, AND EQUIPMENT MAY BE SHOWN WITHIN PAVED AREAS FOR CLARIFICATION ONLY.
   A. CONTRACTOR SHALL INSTALL PIPING, VALVES, AND EQUIPMENT IN PLANTING AREAS UNLESS NOTED OTHERWISE.
   B. IRRIGATION SYSTEM IS DESIGNED FOR USE WITH POTABLE WATER.

2. THE CONTRACTOR SHALL VERIFY AVAILABLE HYDROSTATIC WATER PRESSURE AT THE IRRIGATION Point-Of-Connection (POC) PRIOR TO START OF CONSTRUCTION. ANY DIFFERENCE BETWEEN THE WATER PRESSURE SHOWN ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT-OF-CONNECTION SHALL BE REPORTED TO THE CITY'S or OWNER'S REPRESENTATIVE. IN THE EVENT THAT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE REQUIRED FIELD CHANGES WITH NO CHANGES TO THE CONTRACT AMOUNT.

3. THE CONTRACTOR SHALL FAMILIARIZE THEMSELF WITH GRADE DIFFERENCES AND LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE CONTRACTOR SHALL EXERCISE DUE CAUTION, AND BE RESPONSIBLE FOR ANY DAMAGE, IN EXCAVATIONS AND WORK NEAR UTILITIES. CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES INCLUDING THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER PAVING AND NEAR STRUCTURES.

4. CONTRACTOR SHALL SUBMIT SPECIFICATIONS, TECHNICAL DATA, AND WARRANTIES TO THE CLIENT OR CLIENT REPRESENTATIVE FOR REVIEW. CONTRACTOR SHALL RECEIVE WRITIEN ACCEPTANCE OF SUBMITIALS FROM THE CLIENT PRIOR TO BEGINNING OF IRRIGATION WORK.

5. IRRIGATION SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH UNIFORM BUILDING CODE, PLUMBING CODE, ELECTRICAL CODE, AND REQUIREMENTS OF THE GOVERNING JURISDICTION. CONTRACTOR SHALL SECURE NECESSARY PERMITS AND PAY PERMIT FEES.

6. THE CONTRACTOR SHALL MAKE APPROVED CONNECTIONS FROM THE ELECTRICAL AND TELEPHONE SERVICE POINTS TO THE IRRIGATION CONTROLLER IN ACCORDANCE WITH THE ELECTRICAL CODE AND UTILITY COMPANY REQUIREMENTS.
   A. WIRES/CABLES FOR FLOW METER AND TELECOMMUNICATIONS SHALL BE INSTALLED IN ONE-INCH GRAY SCHEDULE 40 PVC CONDUITS BETWEEN IRRIGATION CONTROLLER ENCLOSURE(S) AND FLOW METER/TELEPHONE UTILITY BOXES.

7. IRRIGATION EQUIPMENT AND PIPING LOCATED IN THE PUBLIC RIGHT-OF-WAY AND UTILITY EASEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH UTILITY COMPANIES' REQUIREMENTS FOR MINIMUM SEPARATION AND MATERIALS.

8. IRRIGATION PIPES AND CONTROL WIRES UNDER PAVING, WALKWAYS AND DRIVEWAYS SHALL BE INSTALLED IN PVC SCHEDULE 40 SLEEVES. SLEEVES SHALL BE AT LEAST TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE TO BE ENCLOSED (MINIMUM 2-INCH SIZE). SLEEVING LOCATIONS SHALL BE MARKED AT EACH END AT THE TIME OF INSTALLATION WITH A BRASS PIN ON THE BACK FACE OF THE CURB OR PAVING, OR OTHER SIMILAR APPROVED MARKING.

9. TRENCHING AND PIPE INSTALLATION:
   A. BACKFILL MATERIAL FOR IRRIGATION TRENCHES SHALL BE CLEAN AND FREE OF DEBRIS, LARGE ROCKS, AND OBJECTS WITH SHARP EDGES. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS, SUNKEN AREAS, HUMPS OR OTHER IRREGULARITIES.
   B. SAND BEDDING AND BACKFILL SHALL BE PROVIDED FOR PRESSURE MAIN LINE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
   C. NO SHARED USE OF IRRIGATION PIPE TRENCHES SHALL BE ALLOWED WITH OTHER TRADES AND FOR INCOMPATIBLE USES. ELECTRICAL CONDUIT SHALL BE IN A SEPARATE DESIGNATED TRENCH.
   D. AT LEAST THREE INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN CROSSING IRRIGATION LINES.
   E. NO PIPES SHALL BE INSTALLED PARALLEL AND DIRECTLY OVER ONE ANOTHER. A MINIMUM OF SIX (6) INCHES HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN PARALLEL IRRIGATION LINES TO ALLOW FOR ACCESS TO PIPES.
   F. DETECTABLE WARNING TAPE SHALL BE PLACED OVER ALL PRESSURE MAIN LINES.
   G. NO ON-GRADE PIPING SHALL BE INSTALLED.

10. USE SPEARS DS-100 SPLICE CONNECTORS WITH DS-300 SEALANT. CONTROL WIRES SHALL BE COLOR-CODED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
    A. SPARE CONTROL WIRES SHALL BE RUN ALONG EACH MAIN LINE BRANCH FROM THE CONTROLLER(S) TO THE FURTHEST VALVE MANIFOLD. BUNDLE AND TAPE TEN (10) FEET OF ADDITIONAL WIRE AND INSTALL THE WIRE BUNDLE IN A PULL BOX ADJACENT TO VALVE MANIFOLD.
    B. REFER TO SPECIAL PROVISIONS FOR NUMBER OF REQUIRED SPARE WIRES.

11. REMOTE CONTROL VALVES:
    A. PLACE REMOTE CONTROL VALVES AND QUICK COUPLING VALVES TWELVE (12) INCHES AWAY FROM EDGE OF HARDSCAPE. VALVE BOXES SHALL BE SET PARALLEL TO EACH OTHER AND PERPENDICULAR TO ADJACENT HARDSCAPE.
    B. REMOTE CONTROL VALVES SHALL BE INSTALLED IN MANIFOLDS, WHERE POSSIBLE. MANIFOLDS SHALL BE ISOLATED FROM THE PRESSURE MAIN LINE BY BALL VALVES. THE LARGEST REMOTE CONTROL VALVE SHALL BE INSTALLED FIRST ON THE MANIFOLD, TRANSITIONING TO THE SMALLEST VALVE AT THE END OF THE MANIFOLD. THE LINE SIZE OF THE SUB-MAIN SUPPLYING THE MANIFOLD SHALL BE THE SAME SIZE AS THE PRESSURE MAIN LINE.
    C. EACH REMOTE CONTROL VALVE SHALL BE INSTALLED IN ITS OWN VALVE BOX (ONE VALVE PER VALVE BOX).

12. COORDINATE IRRIGATION WORK WITH PLANTING PLANS TO AVOID CONFLICTING LOCATIONS BETWEEN PIPING AND PLANT PITS.

13. CONTRACTOR SHALL INSTALL CHECK VALVES IN SYSTEM AS REQUIRED TO PREVENT DRAINAGE FROM SPRINKLERS WHEN SYSTEM IS NOT OPERATING. THERE SHALL BE NO LOW-HEAD DRAINAGE AFTER SYSTEM SHUTDOWN.

General Notes

No.	Revision/Issue	Date
1	1ST SUBMITTAL	8/24/2021

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WATERSHED WISE G3 LANDSCAPE PROFESSIONAL

Project/Client:
Signal Hill Petroleum
NE Willow Springs

Willow Springs Park,
Long Beach, CA

Project	Sheet
NE WILLOW SPRINGS	L#105
Date: 2021/08/23	Irrigation- Details
Scale: 1"=20'	