Appendix C

LESA Modeling Worksheets,
Agricultural Suitability Memorandum

Land Evaluation Worksheet - Land Capability Classification (LCC) and Storie Index Scores

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
Cropley clay 0 to 2%	83.0	0.63	II	90	57.02	60	38.02
Cropley clay 2 to 9%	19.0	0.15	II	90	13.05	54	7.83
Salinas silty clay loam 0 to 2%	29.0	0.22	I	100	22.14	86	19.04
Totals	**131.0**	**1.00**		**LCC Total**	**92.21**	**Storie Index Total**	**64.89**

Site Assessment Worksheet 1 - Project Size Score

	I	J	K
	LCC Class I-II	LCC Class III	LCC Class IV-VIII
	29.0		
	102.0		
Total Acres	**131.0**	**0.0**	**0.0**
Project Size Scores	**100**	**0**	**0**
		Highest Project Size Score	**100**

Site Assessment Worksheet 2 - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Irrigated	0.83	100	83
2				0
3				0
4				0
5				0
6				0
		0.83	Total Water Resource Score	83

Final LESA Scoresheet

A	B		C		D
Factor Name	Factor Rating	x	Factor Weighting	=	Weighted Factor Rating
	(0-100 points)		(total = 1.00)		
Land Evaluation					
1. Land Capability Classification	92.21	x	0.25	=	23.05
2. Storie Index Rating	64.89	x	0.25	=	16.22
Site Assessment					
1. Project Size	100	x	0.15	=	15.00
2. Water Resource Availability	83	x	0.15	=	12.48
3. Surrounding Agricultural Lands	0	x	0.15	=	0.00
4. Protected Resource Lands	0	x	0.05	=	0.00
Total LESA Score (sum of weighted factor ratings					66.76

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

1602 Spring Street, Paso Robles, CA 93446
(805) 237-9626 • Fax (805) 237-9181 • www.althouseandmeade.com
LynneDee Althouse, M.S. • Cell: (805) 459-1660 • lynnedee@althouseandmeade.com

November 1, 2016
Project #847.09

San Luis Ranch
c/o Coastal Community Builders, Inc.
P.O. Box 13
Pismo Beach, CA 93449
Attention: Rachel Kovesdi
Via email: rachel@kovesdiconsulting.com

Re: San Luis Ranch – Grading Plan Review for Continued Agricultural Suitability in Floodway

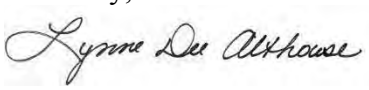
Dear Rachel:

Dr. Tom Rice, Professional Soil Scientist, and I reviewed Cannon's 8/30/2016 grading plans for Tract 3096, our findings reported in the June 30, 2015 agricultural suitability analysis letter, and results from additional sampling conducted on July 20, 2015 (attached). We also reviewed GeoSolutions' May 29, 2015 Soils Enginering Report and March 30, 2015 Preliminary Infiltration Testing Report. Based on this evidence, agricultural viability will be retained even after removal of approximately two feet of topsoil. Both Cropley clay and Salinas silty clay loam topsoil are very deep, generally over 5 feet, as verified by the cone penetration test (CPT) data reported by GeoSolutions that indicate clay and/or silty clay to a depth of over 5 feet, and groundwater at about 13 feet below ground surface. The grading plan indicates that stormwater water will still drain from the site on the same slope and aspect as the current condition (Sheet C22). The 24.4 acres of Salinas silty clay loam will retain Class I irrigated status, and 28.3 acres of Cropley clay will retain Class II status, both prime agricultural soils.

The field proposed as a floodway near U.S. Highway 101 and adjacent to the San Luis Ranch development may be farmed on the deep topsoil after up to 2.5 feet of topsoil is removed. The recommended crop is cruciferous vegetables, not root vegetables, due to the high clay content of the soil.

Feel free to call me or you may contact Dr. Tom Rice directly with questions regarding this preliminary report. Dr. Rice may be reached at Trice@calpoly.edu.

Sincerely,



LynneDee Althouse

Copy: Tom Rice, PhD; Dove Daniels, CCB

Attachments: A. Sample location map; B. Agricultural Suitability Analysis Letter dated June 30, 2015 from LynneDee Althouse and Tom Rice; C. Lab results from July 20, 2016 soil samples; D. Cannon August 30, 2016 Grading Plan Sheets C2, 5, 14, 15, 16, 17, 18, 22 of 29.

Locations of Soil Pits Sampled 2015

0 500 1,000 2,000 Feet

N
W E
S

Soil Samples

Agriculture Land
Open Space
Parks
Medium Density SFR
Medium-High Density SFR
High Density MFR
Commercial
Local Road
Regional Road

San Luis Ranch
Ag Suitability Analysis

2014 San Luis Obispo County
NAIP Aerial Photography
Map Updated: October 31, 2016, 11:06 AM

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

1602 Spring Street, Paso Robles, CA 93446
(805) 237-9626 • Fax (805) 237-9181 • www.althouseandmeade.com
LynneDee Althouse, M.S. • Cell: (805) 459-1660 • lynnedee@althouseandmeade.com

June 30, 2015
Project #847.09

San Luis Ranch
c/o Coastal Community Builders, Inc.
P.O. Box 13
Pismo Beach, CA 93449

Attention: Patti Whelen
Via email: Patti@whelenconsulting.com

Re: Agricultural Suitability Analysis in Floodway Adjacent to Highway 101

Dear Patti:

Soil samples were collected at two locations in the north portion of the agricultural fields proposed for future flood improvements and continued farming (Figure 1, below). Proposed flood improvements may remove the top two feet of soil at the north end of the farm field. The purpose of our investigation was to determine if soil layers at a depth of two to three feet would be suitable for farming. Additional samples will be collected later in the summer when our investigation will not disturb actively farmed soil.

Methods

On May 5, 2015 Althouse and Meade Inc. Principal Scientist LynneDee Althouse, Environmental Scientist Jacqueline Tilligkeit, and Biologist Jeremy Pohlman collected and composited soil samples at two locations and two depths per location (0-12 inches indicated and approximately 30 to 36 inches). Samples were collected in the vicinity of 35.256893º N, -120.676468º W (datum WGS84) and labeled NE1A and NE1B at the first site and NW2A and NW2B at the second site. Samples were collected by using shovels, hand augers, and a soil boring probe, then mixing composite samples in a bag before and taking an aliquot of 1 quart of material for laboratory analysis. A&L Western Laboratories, Inc., in Modesto, California (Lab) analyzed the samples on May 11, 2015. The Lab tested for the following analytes: Organic Matter, Estimated Nitrogen Release, Phosphorus (Weak Bray and Sodium Bicarbonate-P), Extractable Cations (Potassium, Magnesium, Calcium, Sodium), Hydrogen, Sulfate-S, pH, Cation Exchange Capacity and percent cation saturation (computed), Soluble Salts and Excess Lime, Nitrate-Nitrogen, Zinc, Manganese, Iron, Copper and Boron. Soil texture was also analyzed: (percent Sand, percent Silt, and percent Clay). Dr. Tom Rice, Ph.D. Certified Professional Soil Scientist, reviewed the Lab results and provided interpretation regarding agricultural suitability.

We also reviewed the 2004 soils engineering report by Earth Systems Pacific, a 2013 soil and water quality report by GeoSolutions, and Natural Resources Conservation Service (NRCS) soil survey data (Version 6, September 26, 2014).

Results

All four samples are clay soil texture with 43 to 47 percent clay content. The soil is slightly basic: 7.6 to 7.9 pH. The sub-soil in the second soil pit contained 37 percent sand, a better condition than the surface layer with only 17 percent sand. Organic matter and phosphorus concentrations drop significantly between the surface and sub-surface horizons. Magnesium concentration stays very high in both horizons. All four samples are low in Calcium and Potassium. Micronutrients such as iron are moderate to low concentrations. Boron and sodium are low in all four samples. Chloride was not detected. Graphical results are attached. A sketch showing the locations of sample sites NE1 and NW2 is on the Soil Sample Information Sheet provided with the Lab results (attached).

FIGURE 1. Locations of soil pits sampled May 5, 2015 are indicated by star symbol.

The soil survey data indicate that the two sample sites are located on Cropley clay. An adjacent soil map unit, not sampled, is Salinas silty clay loam. Cropley clay is considered prime farmland if irrigated. The NRCS soil report indicates that the soil formed on alluvial fans and alluvial flats with alluvium derived from sedimentary rock. However, adjacent landforms contain serpentinite, and the chemistry of the soil (high magnesium and low calcium) indicates a strong contribution from this metamorphic rock type. The surface horizon of a typical Cropley clay profile is 36 inches deep and underlain by a silty clay loam 36 to 60 inches below the surface. The capacity of the

most limiting layer to transmit water (Ksat) is moderately low to moderately high (0.06 to 0.2 inches per hour).

Adjacent Salinas silty clay loam soil, not sampled, is described with a surface horizon 29 inches deep underlain by stratified loam to silty clay loam to a depth of 72 inches. Salinas clay loam is well drained with a moderately high capacity to transmit water (Ksat) of 0.2 to 0.57 inches per hour. See attached custom soil resource report for the San Luis Ranch Floodway for additional details.

The soils engineering report (Earth Systems Pacific 2004) evaluated soil near Dalidio Road and reported that the "upper soil at the site was dark brown sandy fat clay…it ranged from soft to stiff, and contained a trace of gravel to an inch in diameter. Generally, it was underlain by sandy lean clay. The sandy lean clay was brown, in a soft to medium stiff conditions, and in many of the borings contained a trace of gravel to ½ inch in diameter. With depth, interlayered thin lenses of well-graded sand with gravel, silty clay sand, and poorly graded sand were encountered with the sandy lean clay." This finding is consistent with soil that developed on alluvium derived from serpentinite and sedimentary sources.

GeoSolutions (2013) sampled the top six inches of soil for organochlorine pesticides, volatile organic compounds, chlorinated herbicides, TPH, and nitrate. Nitrate was detected (45.7 to 92.4 mg/liter) in the vicinity of the soil samples we collected in May 2015. The pesticide DDE was detected in the soil at a concentration of 0.013 ppm, and reported as below California State action level. GeoSolutions described the farmed area soil material as "fine-grained alluvial fan and flood-plain sediments comprised of clay with interbedded lenses of sand and minor gravel (Weiger 2010). Depth of these deposits are unknown but are likely 100 feet or more in depth."

Comments for Farming Operations

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.

PLANT DISEASES may be suppressed by adjusting soil pH. Fungi such as clubroot in brassicas may be suppressed by maintaining soil pH above 7.2. However, higher pH may favor bacterial diseases.

MAGNESIUM: If levels are very high (generally, they increase with depth), one may encounter drainage problems and potassium uptake may be hindered. Extra calcium may provide some benefit. Broadcast/disc in before listing, up to 40 lb/ac N plus P2O5 and K2O requirements. Up to 40 lb/ac P2O5 may be banded 2-4 inches below planting. Side-dress remaining N before heading.

BROCCOLI nitrogen requirements (lb/ac/wk): early growth 5-15, midseason 10-20, button formation 15-30, head development 10-20. Use higher values if low residual N and potentially rapid growth.

NITROGEN: Use local conditions to determine right rate and right time of application. Allow for nitrate levels in your water source also (ppm NO3 X 0.61 = lb N/ac-ft water). Monitor plant-N.

POTASH: Side-banding 6 to 8 inches INTO the soil is more effective than surface banding or broadcasting, but be careful of salt burn. Alternatively, include in irrigation water.

POTASH applications on soils with more than about 200 ppm K may not show a response. Consider further testing/tissue analysis if in doubt and if report shows less than 2-3 percent K cation saturation.

ZINC: Maintain soil levels above 1.0 ppm to ensure an adequate zinc supply. A tissue analysis at the appropriate time will determine more accurately, availability to the plant.

MANGANESE: Soil levels below 2 ppm may respond to applications of manganese. But, first check on tissue levels to confirm any likely deficiencies. Follow label instructions if required.

BORON: Aim for soil levels above 1.0 ppm to avoid a deficiency. A tissue analysis at the appropriate time will determine more accurately, plant availability. Add boron with caution.

Recommendations

The northern field proposed as a floodway near U.S. Highway 101 may be farmed on the subsoil material. The recommended crop is cruciferous vegetables, not root vegetables due to the high clay content of the soil.

Feel free to call me or you may contact Dr. Tom Rice directly with questions regarding this preliminary report. Dr. Rice may be reached at Trice@calpoly.edu.

Sincerely,

LynneDee Althouse
Principal Scientist

Copy: Dr. Thomas Rice, Ph.D., Certified Professional Soil Scientist

Attachments: A&L Western Agricultural Laboratories Graphical Soil Analysis Report and Soil Texture analysis conducted May 15, 2015.

NRCS Custom Soil Survey Report prepared June 30, 2015.

References

A&L Western Agricultural Laboratories. 2015. Analytical Results, report number 15-126-020. Prepared for Althouse and Meade, Inc. May 11. 5 pp.

Earth Systems Pacific. 2004. Soils Engineering Report, San Luis Obispo Marketplace, Dalidio Drive, San Luis Obispo, California. June 21. Prepared for San Luis Obispo Marketplace Associates, LLC. By Dennis Shallenberger, G.E. 97 pp.

GeoSolutions. 2013. Preliminary Groundwater and Soil Sampling, Dalidio Ranch, Madonna Road, APN: 067-121-022, San Luis Obispo, California. Prepared for Inland Pacific Builders, Pismo Beach, California. By John Kammer. 67 pp.

NRCS. 2014. San Luis Obispo County, California, Coastal Part; Survey Area Data Version 6, Sep 26. http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx accessed June 30, 2015.

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-126-020 **CLIENT NO:** 4297

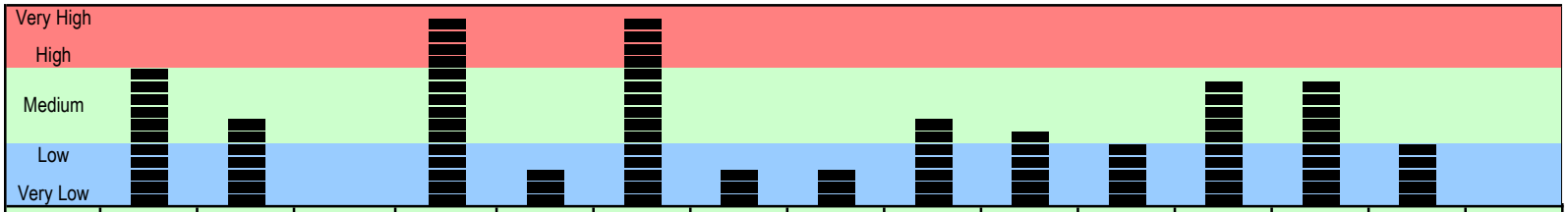
SEND TO: ALTHOUSE & MEADE, INC.
1602 SPRING STREET
PASO ROBLES, CA 93446

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNEDEE ALTHOUSE

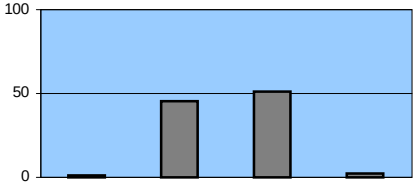
Graphical Soil Analysis Report

DATE OF REPORT: 05/11/15 **LAB NO:** 54989 **SAMPLE ID:** NE1A **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	4.7	18	60	68	188	1985	3693	180	18	1.4	4	18	1.4	0.7	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
1.3	45.3	51.2	2.2

LOW AVERAGE HIGH

ACIDIC BASIC

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.7	36.0	L	7.6

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BROCCOLI **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		4900	800	140		180			5				0.5	

COMMENTS

DEPTH OF SAMPLING: Soil fertility could differ greatly with depth. Concentrate on amending and fertilizing the topsoil zone only, but take note of trends down the profile that may need attention.

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.

PLANT DISEASES may be suppressed by adjusting soil pH. Fungi such as clubroot in brassicas may be suppressed by maintaining soil pH above 7.2. However, higher pH's may favor bacterial diseases.

HIGH levels of organic matter should have a beneficial effect on growth and "soil" pH may not be as critical. However, watch carefully as amendments and extra nitrogen may still be necessary.

Mike Buttress, CPAg
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-126-020 **CLIENT NO:** 4297

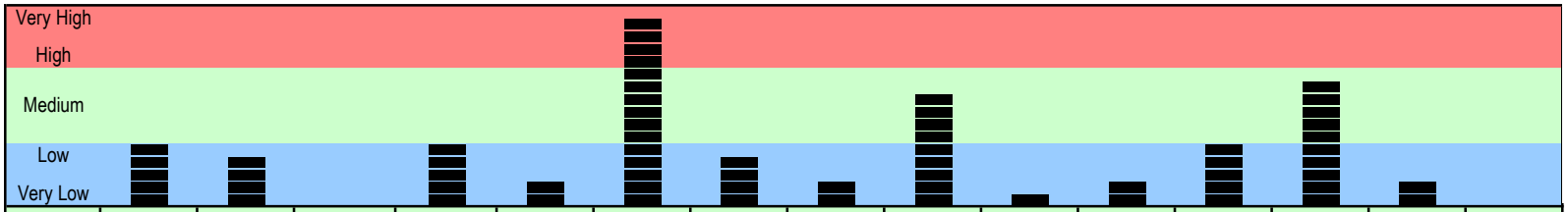
SEND TO: ALTHOUSE & MEADE, INC.
1602 SPRING STREET
PASO ROBLES, CA 93446

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNEDEE ALTHOUSE

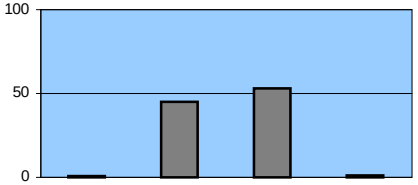
Graphical Soil Analysis Report

DATE OF REPORT: 05/11/15 **LAB NO:** 54990 **SAMPLE ID:** NE1B **PAGE:** 2



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	2.5	11	5	7	76	1855	3605	101	22	0.2	1	11	1.2	0.3	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
0.6	45.0	53.1	1.3

LOW AVERAGE HIGH

ACIDIC BASIC

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.5	33.9	L	7.9

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BROCCOLI **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		4000	1100	160	100	210			10	10			1.0	

COMMENTS

MAGNESIUM: If levels are very high (generally, they increase with depth), one may encounter drainage problems and potassium uptake may be hindered. Extra calcium may provide some benefit.

Broadcast/disc in before listing, up to 40 lb/ac N plus P2O5 and K2O requirements. Up to 40 lb/ac P2O5 may be banded 2-4 inches below planting. Side-dress remaining N before heading.

BROCCOLI nitrogen requirements (lb/ac/wk): early growth 5-15, midseason 10-20, button formation 15-30, head development 10-20. Use higher values if low residual N and potentially rapid growth.

NITROGEN: Use local conditions to determine right rate and right time of application. Allow for nitrate levels in your water source also (ppm NO3 X 0.61 = lb N/ac-ft water). Monitor plant-N.

Mike Buttress, CPAg
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-126-020 **CLIENT NO:** 4297

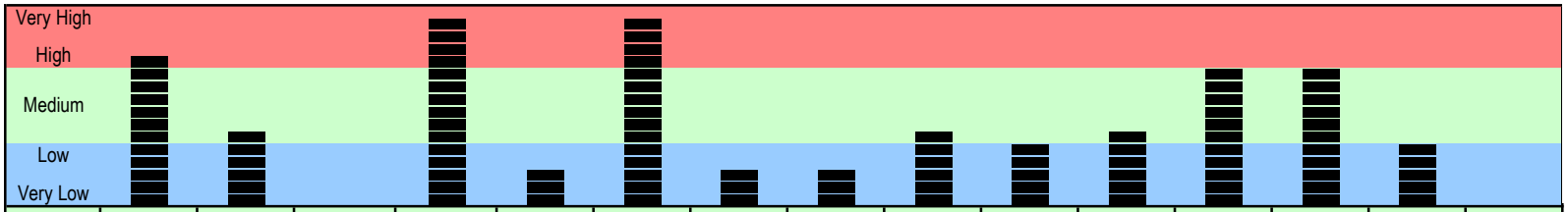
SEND TO: ALTHOUSE & MEADE, INC.
1602 SPRING STREET
PASO ROBLES, CA 93446

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNEDEE ALTHOUSE

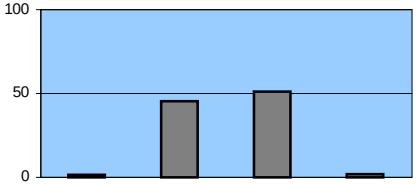
Graphical Soil Analysis Report

DATE OF REPORT: 05/11/15 **LAB NO:** 54991 **SAMPLE ID:** NW2A **PAGE:** 3



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	4.9	17	65	75	210	1988	3706	166	14	1.2	5	20	1.7	0.8	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
1.5	45.3	51.2	2.0

LOW AVERAGE HIGH

ACIDIC BASIC

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.5	36.1	L	7.6

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BROCCOLI **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		4900	800	140		40			5				0.5	

COMMENTS

POTASH: Side-banding 6 to 8 inches INTO the soil is more effective than surface banding or broadcasting, but be careful of salt burn. Alternatively, include in irrigation water.

POTASH applications on soils with more than about 200 ppm K may not show a response. Consider further testing/tissue analysis if in doubt and if report shows less than 2-3% K cation saturation.

ZINC: Maintain soil levels above 1.0 ppm to ensure an adequate zinc supply. A tissue analysis at the appropriate time will determine more accurately, availability to the plant.

MANGANESE: Soil levels below 2 ppm may respond to applications of manganese. But, first check on tissue levels to confirm any likely deficiencies. Follow label instructions if required.

Mike Buttress, CPAg
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-126-020 **CLIENT NO:** 4297

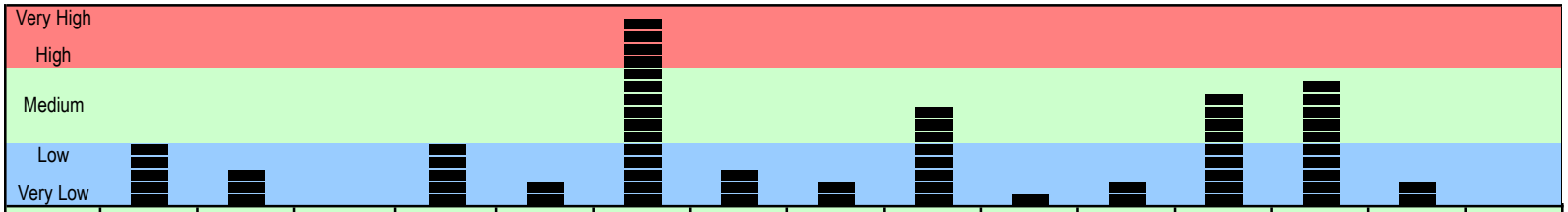
SEND TO: ALTHOUSE & MEADE, INC.
1602 SPRING STREET
PASO ROBLES, CA 93446

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNEDEE ALTHOUSE

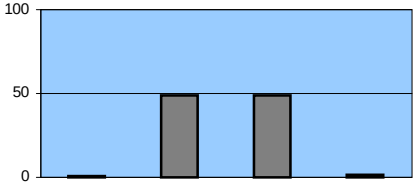
Graphical Soil Analysis Report

DATE OF REPORT: 05/11/15 **LAB NO:** 54992 **SAMPLE ID:** NW2B **PAGE:** 4



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	2.4	7	8	8	101	1851	3044	103	20	0.2	1	15	1.4	0.3	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
0.8	48.9	48.8	1.4

ACIDIC BASIC

LOW AVERAGE HIGH

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.4	31.1	L	7.6

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BROCCOLI **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		5000	800	170	100	210			10	10			1.0	

COMMENTS

BORON: Aim for soil levels above 1.0 ppm to avoid a deficiency. A tissue analysis at the appropriate time will determine more accurately, plant availability. ADD BORON WITH CAUTION.
PLEASE NOTE THAT THE PREVIOUS COMMENTS WHERE APPLICABLE, APPLY TO THE ENTIRE REPORT. THANK YOU.

Mike Buttress, CPAg
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-126-020 **CLIENT:** 4297

SUBMITTED BY:

SEND TO: ALTHOUSE & MEADE, INC.
1602 SPRING STREET
PASO ROBLES, CA 93446

GROWER: SAN LUIS RANCH

DATE OF REPORT: 05/11/15

SOIL PHYSICAL CHARACTERISTICS

Sample ID	Lab Number	% Sand	% Silt	% Clay	Soil Texture	Moisture @ 1/3 Bar	Moisture @ 15 Bar	Available Water %
NE1A	54989	27	26	47	CLAY			
NE1B	54990	31	22	47	CLAY			
NW2A	54991	17	28	55	CLAY			
NW2B	54992	37	20	43	CLAY			

NOTES:

Mike Buttress, CPAg
A & L WESTERN LABORATORIES, INC.

SOIL SAMPLE INFORMATION SHEET

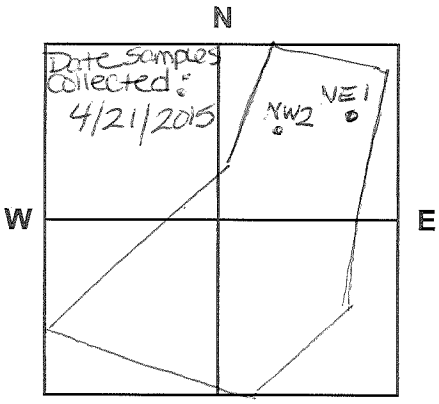
A & L WESTERN AGRICULTURAL LABORATORIES, INC.

LAB USE ONLY

MODESTO OFFICE
1311 WOODLAND AVENUE, SUITE #1 • MODESTO, CA 95351 • (209) 529-4080 FAX (209) 529-4736

PORTLAND OFFICE
10220 S.W. NIMBUS AVE., BLDG K-9 • PORTLAND, OR 97223 • (503) 968-9225 FAX (503) 598-7702

CUSTOMER	GROWER	SUBMITTED BY
Althouse + Meade, Inc	San Luis Ranch	LynneDee Althouse
1602 Spring St		1602 Spring St
Paso Robles, Ca 93446		Paso Robles, Ca 93446
PHONE NO: (805) 237-9626	PHONE NO:	PHONE NO: (805) 423-1596



☒ Graphics Report ($1.00 per sample) ☐ Fax Report (____) _____ ☒ Email Report (email address required) lynnedee@althouseandmeade.com

SAMPLE ID (5 CHARACTERS)	TEST PACKAGES									CHECK BOX IF RECOMMENDATIONS REQUIRED ☒ LBS PER ACRE ☒ LBS PER 1,000 SQ FT ☐					
	S1B	S1BN	S2	S2N	S3C	S10C	TEXTURE	NEMATODE	OTHER ANALYSES	CROP OR PLANT TYPE	PREVIOUS CROP OR PLANT TYPE	PLANTING DATES	SAMPLE DEPTH	AMENDMENTS APPLIED	METHOD OF IRRIGATION
NE1A					X		X				broccoli	—	0-12"	unknown	overhead
NE1B					X		X				broccoli	—	30-38"	unknown	overhead
NW2A					X		X				broccoli	—	0-12"	unknown	overhead
NW2B					X		X				broccoli	—	29-37"	unknown	overhead
_____															
_____															
_____															
_____															
_____															
_____															

APPENDIX B

EXPLANATION OF TESTS (SUBMIT ABOUT TWO CUPS OF SOIL PER SAMPLE)

S1B: BASIC SOIL ANALYSIS. Organic matter estimated nitrogen release, phosphorus (weak Bray and sodium bicarbonate-P), potassium, magnesium, calcium, sodium, sulfate-sulfur, soil pH, buffer pH, C.E.C. and percent cation saturation (computed).
S1BN: BASIC SOIL ANALYSIS plus nitrate-nitrogen.
S2: BASIC SOIL ANALYSIS plus soluble salts and excess lime.
S2N: BASIC SOIL ANALYSIS plus soluble salts, excess line, and nitrate-nitrogen.
S3C: COMPLETE ANALYSIS. BASIC SOIL ANALYSIS (plus soluble salts, excess lime, nitrate-nitrogen, Zn, Mn, Fe, Cu, and B).
S10C: COMPLETE ANALYSIS plus saturation percentage, SAR, ESP, carbonate, bicarbonate, chloride, and saturated paste boron.
NOTE: Strong Bray Phosphorus may be substituted for Sodium Bicarbonate Phosphorus in S1B package. Ask for package S1A

NO_3-N = Nitrate - N
SO_4-S = Sulfate - S
Zn = Zinc
Mn = Manganese
Fe = Iron
Cu = Copper
B = Boron
Mo = Molybdenum
Cl = Chloride

PRINT NAME OF SAMPLER Jacqueline Tillquist / LynneDee Althouse
SIGNATURE OF SAMPLER _____
DATE SAMPLES SUBMITTED 5/5/15

United States Department of Agriculture

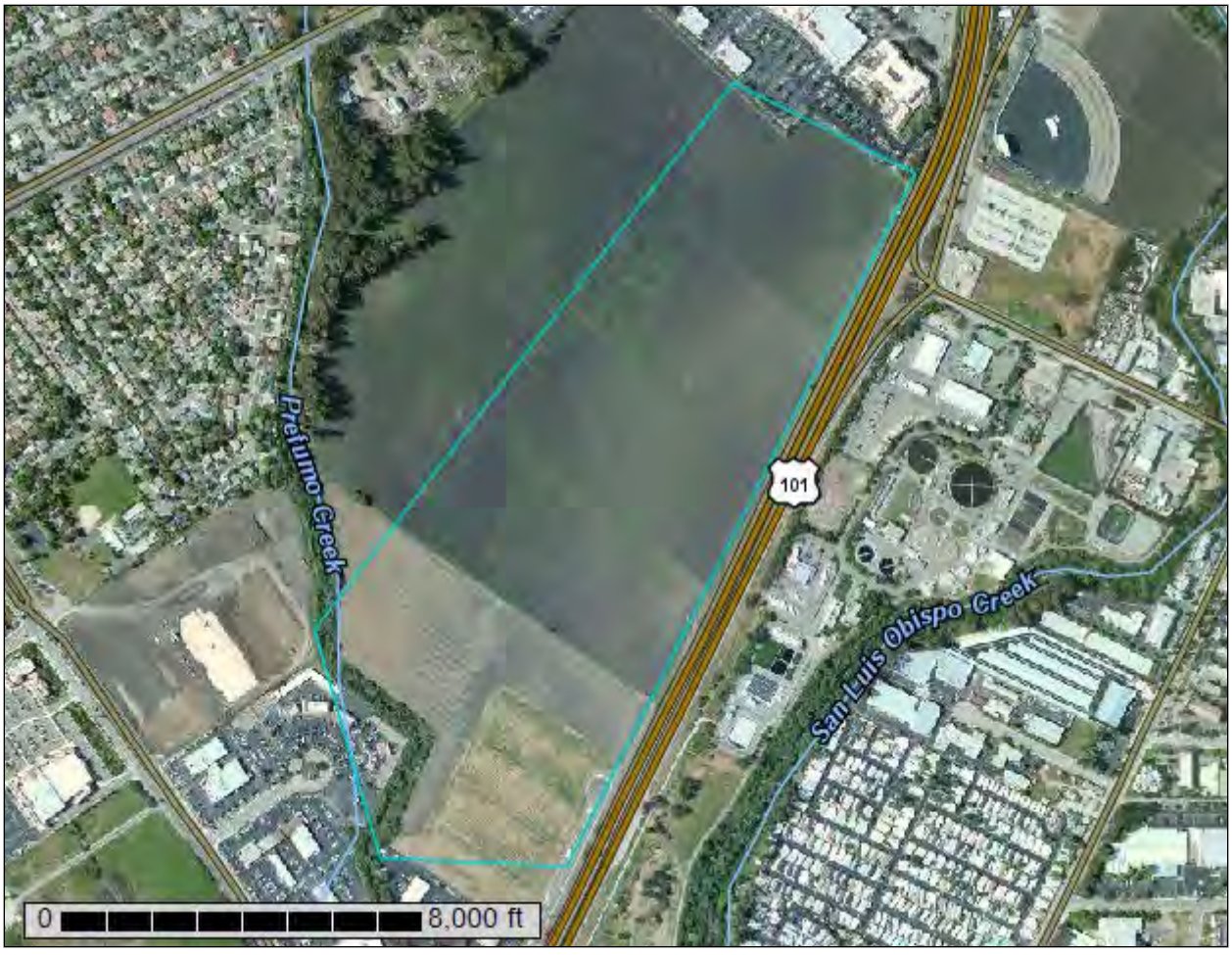
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Luis Obispo County, California, Coastal Part

San Luis Ranch Floodway



June 30, 2015

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

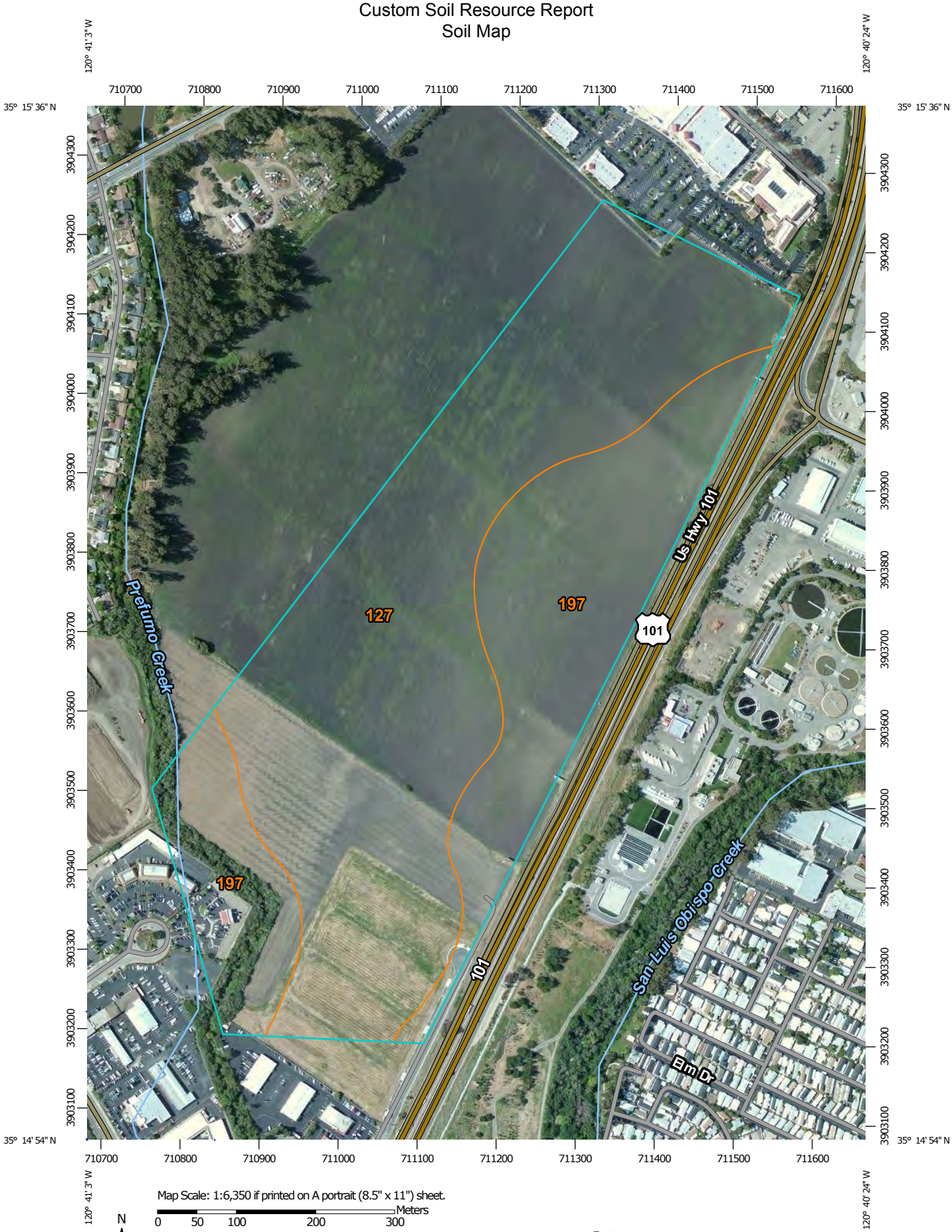
for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Luis Obispo County, California, Coastal Part
Survey Area Data: Version 6, Sep 26, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 8, 2010—May 21, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

San Luis Obispo County, California, Coastal Part (CA664)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
127	Cropley clay, 0 to 2 percent slopes	63.4	63.3%
197	Salinas silty clay loam, 0 to 2 percent slopes	36.7	36.7%
Totals for Area of Interest		**100.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If

intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Luis Obispo County, California, Coastal Part

127—Cropley clay, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hbn4
Elevation: 100 to 700 feet
Mean annual precipitation: 14 to 20 inches
Mean annual air temperature: 57 degrees F
Frost-free period: 250 to 330 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Cropley and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cropley

Setting

Landform: Alluvial fans, alluvial flats
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 36 inches: clay
H2 - 36 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Ecological site: CLAYEY (R014XD001CA)

Minor Components

Concepcion, loam

Percent of map unit: 3 percent

Diablo, clay
Percent of map unit: 3 percent

Salinas, silty clay loam
Percent of map unit: 3 percent

Unnamed
Percent of map unit: 3 percent

Unnamed
Percent of map unit: 2 percent
Landform: Drainageways

197—Salinas silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hbqd
Elevation: 0 to 40 feet
Mean annual precipitation: 14 to 22 inches
Mean annual air temperature: 57 degrees F
Frost-free period: 275 to 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Salinas and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Salinas

Setting

Landform: Alluvial fans, alluvial flats
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 29 inches: silty clay loam
H2 - 29 to 72 inches: stratified loam to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Ecological site: FINE LOAMY BOTTOM (R014XD109CA)

Minor Components

Marimel, silty clay loam

Percent of map unit: 3 percent

Mocho, loam

Percent of map unit: 3 percent

Cropley, clay

Percent of map unit: 3 percent

Mocho variant, fine sandy loam

Percent of map unit: 2 percent

Unnamed

Percent of map unit: 2 percent

Camarillo, drained

Percent of map unit: 2 percent
Landform: Depressions

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-203-040 **CLIENT NO:** 99999

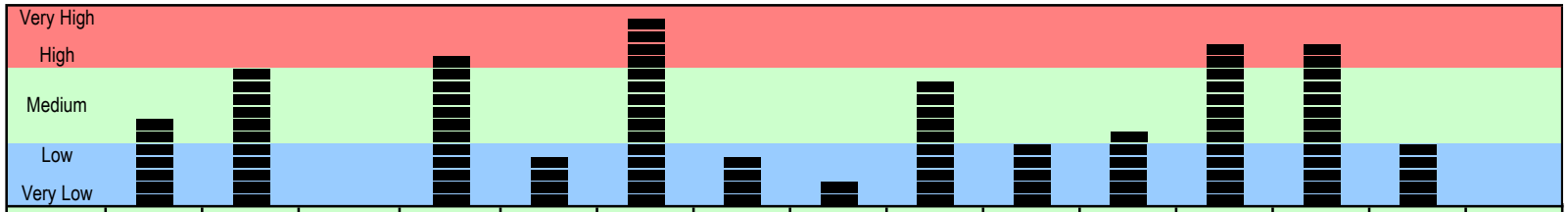
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

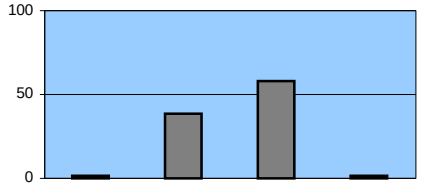
Graphical Soil Analysis Report

DATE OF REPORT: 07/27/15 **LAB NO:** 53611 **SAMPLE ID:** CW4A **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	3.1	31	27	21	188	1335	3294	107	26	1.1	5	32	3.8	0.9	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
1.7	38.7	58.0	1.6

ACIDIC BASIC

LOW AVERAGE HIGH

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.6	28.4	M	7.5

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BELL PEPPERS **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		2000	1000	160	40	180								

COMMENTS

HIGH levels of organic matter should have a beneficial effect on growth and "soil" pH may not be as critical. However, watch carefully as amendments and extra nitrogen may still be necessary.

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.

PLANT DISEASES may be suppressed by adjusting soil pH. Fungi such as clubroot in brassicas may be suppressed by maintaining soil pH above 7.2. However, higher pH's may favor bacterial diseases.

MAGNESIUM: If levels are very high (generally, they increase with depth), one may encounter drainage problems and potassium uptake may be hindered. Extra calcium may provide some benefit.

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-203-040 **CLIENT NO:** 99999

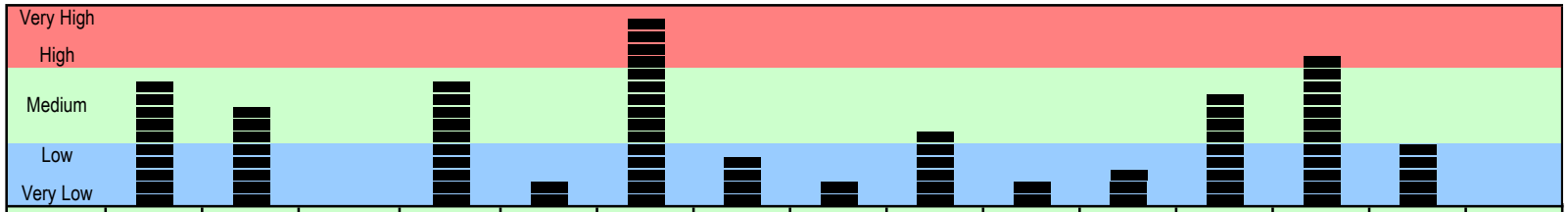
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

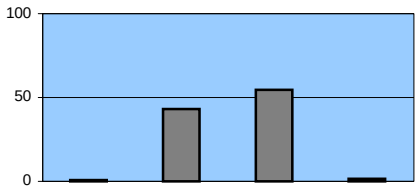
Graphical Soil Analysis Report

DATE OF REPORT: 07/27/15 **LAB NO:** 53612 **SAMPLE ID:** CW4B **PAGE:** 2



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	4.1	20	9	14	124	1993	4122	128	15	0.3	1	16	2.1	0.8	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
0.8	43.3	54.4	1.5

ACIDIC BASIC

0.5	37.8	M	7.8
ECe dS/m	CEC meq/100g	Ex. Lime	pH

LOW AVERAGE HIGH

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BELL PEPPERS **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		4000	1000	180	80	210			10	10				

COMMENTS

PEPPERS: Band up to 15 lb N + 50 lb P2O5/ac 2-4 inches below the seed or transplants. Side-dress about 80 lb N/ac after establishment, and remainder later to prolong green-colored fruit.
BRASSICAS: Broadcast and disc in before listing, up to 40 lb N/ac and all P2O5 and K2O requirements. Side-dress remaining nitrogen as required or before midseason.
NITROGEN: Use local conditions to determine right rate and right time of application. Allow for nitrate levels in your water source also (ppm NO3 X 0.61 = lb N/ac-ft water). Monitor plant-N.
POTASH: Side-banding 6 to 8 inches INTO the soil is more effective than surface banding or broadcasting, but be careful of salt burn. Alternatively, include in irrigation water.

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-203-040 **CLIENT NO:** 99999

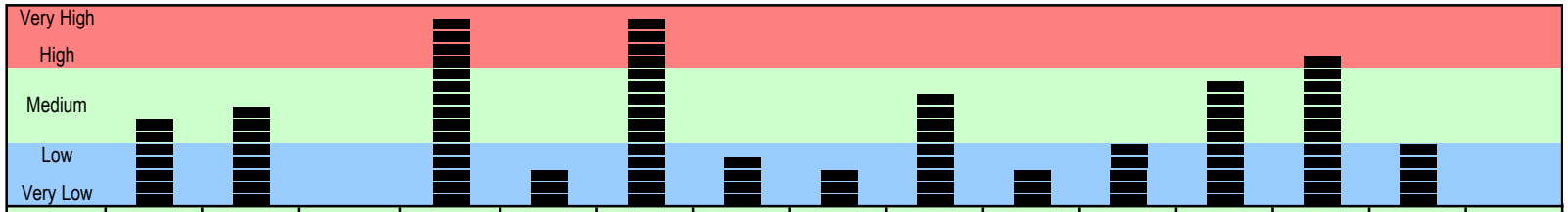
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

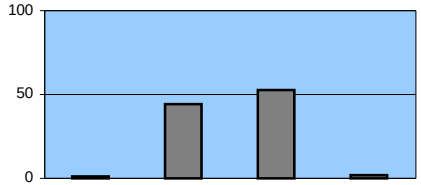
Graphical Soil Analysis Report

DATE OF REPORT: 07/27/15 **LAB NO:** 53613 **SAMPLE ID:** SE5A **PAGE:** 3



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	3.1	21	46	51	169	1735	3400	139	23	0.8	2	16	2.3	0.9	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
1.3	44.2	52.6	1.9

ACIDIC BASIC

LOW AVERAGE HIGH

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.8	32.3	L	7.7

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BELL PEPPERS **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		4000	900	180		180			10	10				

COMMENTS

ZINC: Maintain soil levels above 1.0 ppm to ensure an adequate zinc supply. A tissue analysis at the appropriate time will determine more accurately, availability to the plant.
MANGANESE: Soil levels below 2 ppm may respond to applications of manganese. But, first check on tissue levels to confirm any likely deficiencies. Follow label instructions if required.
PLEASE NOTE THAT THE PREVIOUS COMMENTS WHERE APPLICABLE, APPLY TO THE ENTIRE REPORT. THANK YOU.

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-203-040 **CLIENT NO:** 99999

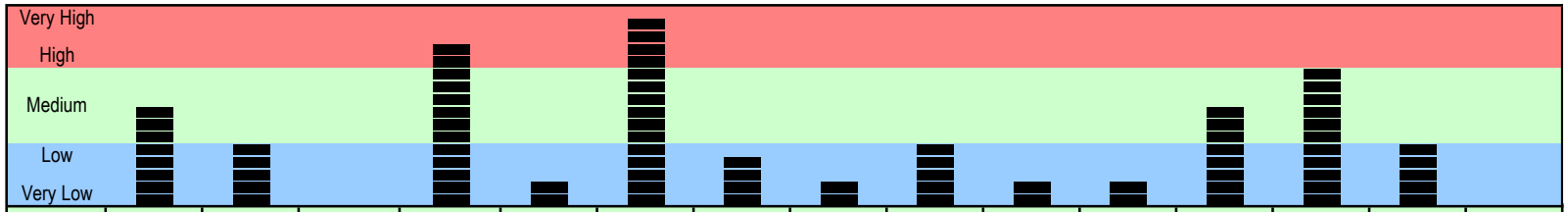
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

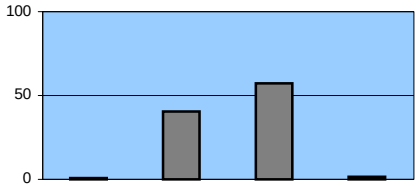
Graphical Soil Analysis Report

DATE OF REPORT: 07/27/15 **LAB NO:** 53614 **SAMPLE ID:** SE5B **PAGE:** 4



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	3.2	14	20	23	103	1694	3952	121	12	0.4	1	14	1.7	0.7	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
0.8	40.4	57.3	1.5

ACIDIC BASIC

LOW AVERAGE HIGH

0.4		34.4	L	7.7	
ECe dS/m	INCREASING SALINITY →	CEC meq/100g	Ex. Lime	pH	← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BELL PEPPERS **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		2600	900	190	40	210			10	10				

COMMENTS

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-203-040 **CLIENT NO:** 99999

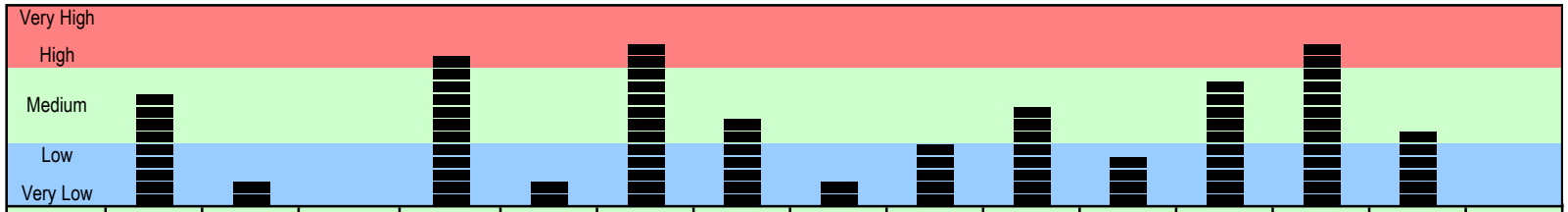
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

Graphical Soil Analysis Report

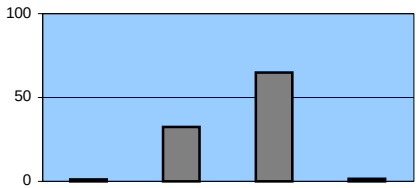
DATE OF REPORT: 07/27/15 **LAB NO:** 53615 **SAMPLE ID:** SE6A **PAGE:** 5



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	3.6	6	21	21	140	1415	4649	116	10	2.4	2	16	4.2	1.1	

LOW AVERAGE HIGH

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
1.0	32.6	65.0	1.4

ACIDIC BASIC

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.4	35.7	H	7.9

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BRASSICA **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
			1100	170	80	180				10				

COMMENTS

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-203-040 **CLIENT NO:** 99999

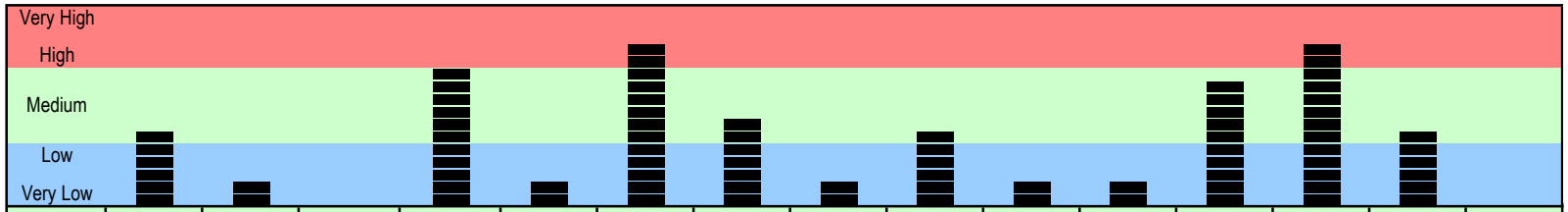
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

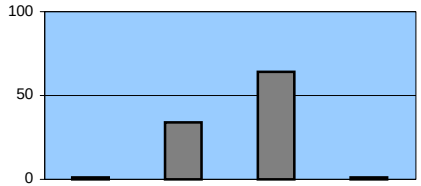
Graphical Soil Analysis Report

DATE OF REPORT: 07/27/15 **LAB NO:** 53616 **SAMPLE ID:** SE6B **PAGE:** 6



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	2.7	3	11	16	148	1567	4892	96	13	0.5	1	16	2.8	1.0	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
1.0	33.8	64.1	1.1

LOW AVERAGE HIGH

ACIDIC BASIC

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.3	38.1	H	7.9

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BRASSICA **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
			1100	180	80	210			10	10				

COMMENTS

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-204-098 **CLIENT NO:** 99999

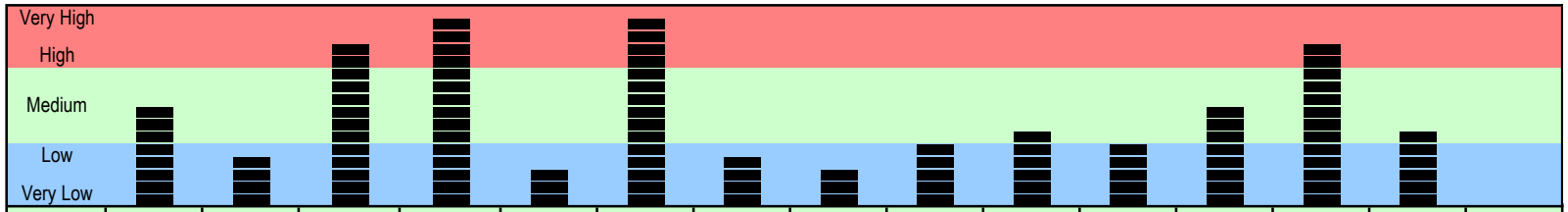
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

Graphical Soil Analysis Report

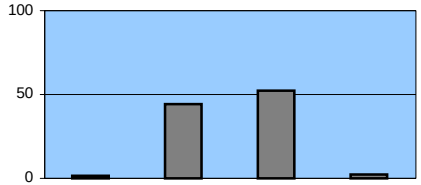
DATE OF REPORT: 07/27/15 **LAB NO:** 53796 **SAMPLE ID:** CE3A **PAGE:** 1



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	3.4	11	44	54	156	1433	2782	126	10	1.5	3	14	2.6	1.0	

LOW AVERAGE HIGH

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
1.5	44.3	52.2	2.1

ACIDIC BASIC

ECe dS/m	CEC meq/100g	Ex. Lime	pH
0.6	26.6	L	7.4

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

Soil Fertility Guidelines

CROP: BRASSICA **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		3400		160		180								

COMMENTS

PLANT DISEASES may be suppressed by adjusting soil pH. Fungi such as clubroot in brassicas may be suppressed by maintaining soil pH above 7.2. However, higher pH's may favor bacterial diseases.
MAGNESIUM: If levels are very high (generally, they increase with depth), one may encounter drainage problems and potassium uptake may be hindered. Extra calcium may provide some benefit.
Broadcast and disc in before listing, up to 40 lb N/ac and all P2O5 and K2O requirements. Side-dress remaining nitrogen as required or before midseason.
NITROGEN: Use local conditions to determine right rate and right time of application. Allow for nitrate levels in your water source also (ppm NO3 X 0.61 = lb N/ac-ft water). Monitor plant-N.

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-204-098 **CLIENT NO:** 99999

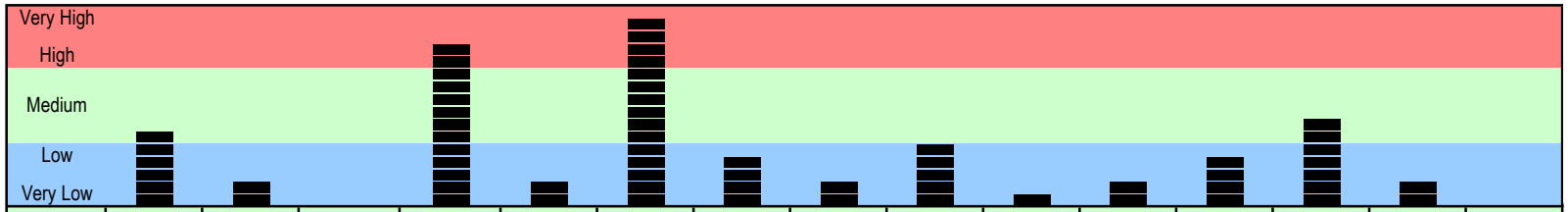
SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

SUBMITTED BY: LYNNE DEE ALTHOUSE

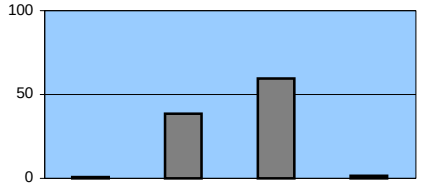
Graphical Soil Analysis Report

DATE OF REPORT: 07/27/15 **LAB NO:** 53797 **SAMPLE ID:** CE3B **PAGE:** 2



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	2.6	6	19	25	70	1419	3610	99	11	0.2	1	10	1.0	0.4	

Percent Cation Saturation (computed)



Potassium K %	Magnesium Mg %	Calcium Ca %	Sodium Na %
0.6	38.5	59.5	1.4

ACIDIC BASIC

0.4	30.3	H	7.7
ECe dS/m	CEC meq/100g	Ex. Lime	pH

LOW AVERAGE HIGH

INCREASING SALINITY →

← INCREASING NEED FOR LIME

Buffer pH:

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

Soil Fertility Guidelines

CROP: BRASSICA **RATE:** lb/acre **NOTES:**

Dolomite (70 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	
		1600	1000	170	40	210			10	10			1.0	

COMMENTS

POTASH: Side-banding 6 to 8 inches INTO the soil is more effective than surface banding or broadcasting, but be careful of salt burn. Alternatively, include in irrigation water.

ZINC: Maintain soil levels above 1.0 ppm to ensure an adequate zinc supply. A tissue analysis at the appropriate time will determine more accurately, availability to the plant.

MANGANESE: Soil levels below 2 ppm may respond to applications of manganese. But, first check on tissue levels to confirm any likely deficiencies. Follow label instructions if required.

BORON: Aim for soil levels above 1.0 ppm to avoid a deficiency. A tissue analysis at the appropriate time will determine more accurately, plant availability. ADD BORON WITH CAUTION.

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-203-040 **CLIENT:** 99999

SUBMITTED BY:

SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

DATE OF REPORT: 07/27/15

SOIL PHYSICAL CHARACTERISTICS

Sample ID	Lab Number	% Sand	% Silt	% Clay	Soil Texture	Moisture @ 1/3 Bar	Moisture @ 15 Bar	Available Water %
CW4A	53611	20	36	44	CLAY			
CW4B	53612	26	24	50	CLAY			
SE5A	53613	20	26	54	CLAY			
SE5B	53614	36	20	44	CLAY			
SE6A	53615	18	25	56	CLAY			
SE6B	53616	26	22	52	CLAY			

NOTES:

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC.

A & L WESTERN AGRICULTURAL LABORATORIES

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

REPORT NUMBER: 15-204-098 **CLIENT:** 99999

SUBMITTED BY:

SEND TO: ALTHOUSE & MEADE INC
1602 SPRING ST
PASO ROBLES, CA 93446-

GROWER: SAN LUIS RANCH

DATE OF REPORT: 07/27/15

SOIL PHYSICAL CHARACTERISTICS

Sample ID	Lab Number	% Sand	% Silt	% Clay	Soil Texture	Moisture @ 1/3 Bar	Moisture @ 15 Bar	Available Water %
CE3A	53796	26	26	48	CLAY			
CE3B	53797	44	20	36	CLAY LOAM			

NOTES:

Phoebe Gordon, PhD
A & L WESTERN LABORATORIES, INC.

LEGEND

ZONE	ACRE	LOTS
AGRICULTURE LAND	52.71	1
OPEN SPACE	8.05	2
PARK	2.79	12
MEDIUM DENSITY SFR	16.00	200
MEDIUM–HIGH DENSITY SFR 102 RESIDENCES 3 STREETS	6.81	105
HIGH DENSITY MFR	10.43	2
COMMERCIAL	17.09	3
REGIONAL ROAD	8.07	
LOCAL ROAD	9.42	
TOTAL	131.38	325

0 150 300

1 INCH = 150 FEET

SAN LUIS RANCH PROPERTY TO BE ANNEXED TO THE CITY OF SAN LUIS OBISPO.

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

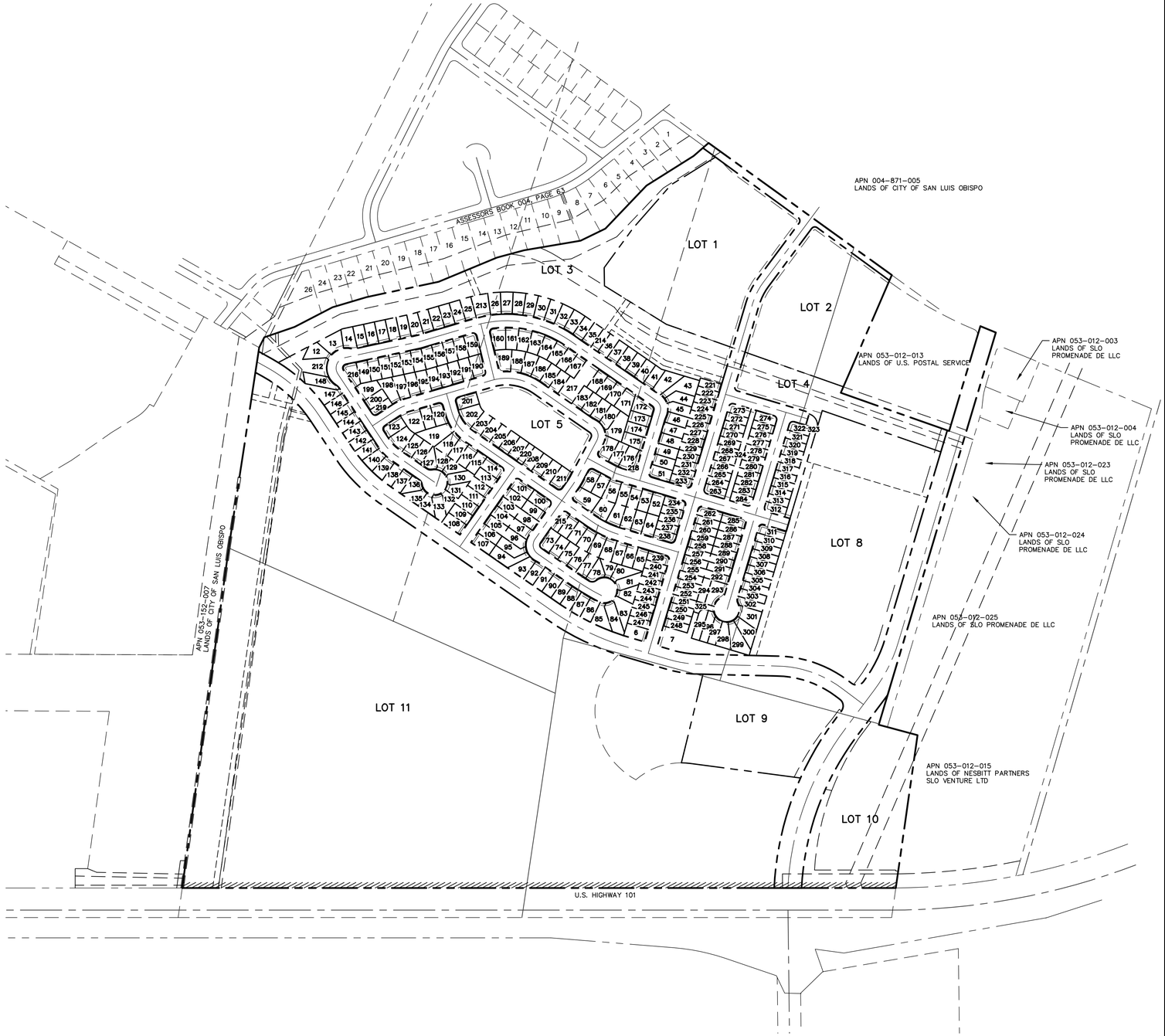
SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

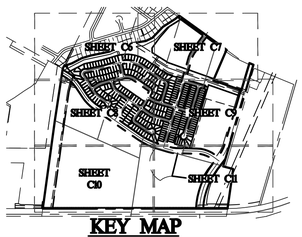
LAND USE PLAN

SAN LUIS OBISPO, CA

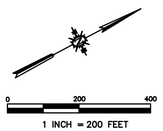
DRAWN BY	DATE	CA JOB NO.
SM	8/30/16	140310
CHECKED BY	SCALE	SHEET
SR	1" = 150'	C2 OF 29

F:\proj\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310LU0001.dwg 8-30-16 10:06:04 AM seths





KEY MAP



1 INCH = 200 FEET

REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

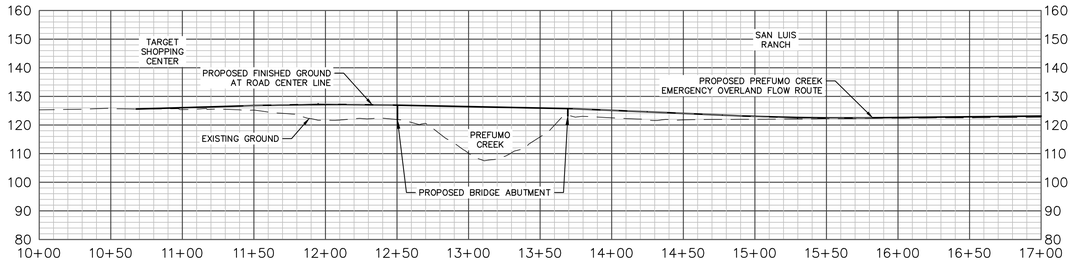
SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

TENTATIVE TRACT MAP

SAN LUIS OBISPO, CA

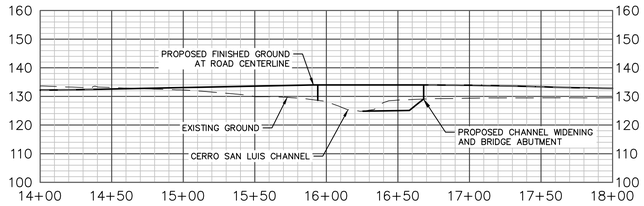
DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
	1" = 200'	C5 OF 29

F:\pro\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310TM0000.dwg 8-30-16 10:08:28 AM seths



FROOM RANCH WAY – PROFILE VIEW

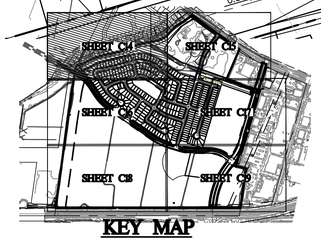
SCALE HORIZ: 1" = 50'; VERT: 1" = 25'



A STREET – PROFILE VIEW

SCALE HORIZ: 1" = 50'; VERT: 1" = 25'

1 INCH = 50 FEET



KEY MAP

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

GRADING AND DRAINAGE PLAN (1)

SAN LUIS OBISPO, CA

DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
SS	1" = 50'	C14 OF 29

F:\proj\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310GP0001.dwg 8-30-16 10:17:11 AM seths

SEAWARD STREET

OCEANAIRE DRIVE

PROJECT BOUNDARY/
CITY LIMIT LINE

PREFUMO CREEK

MONARCH
BUTTERFLY
HABITAT

STORM DRAIN
OUTFALL #2

SLO LIFE WY

STORMWATER BIOFILTRATION
& RETENTION AREA

PROPOSED CREEK WIDENING FOR
FLOOD PROTECTION PURPOSES

*LAGUNA
LAKE PARK*

PROJECT BOUNDARY/
CITY LIMIT LINE

MADONNA ROAD

*FOR FUTURE
SUBDIVISION*

SAN LUIS RANCH ROAD

STORMWATER BIOFILTRATION
& RETENTION AREA

STORM DRAIN
OUTFALL #1

PROPOSED BRIDGE TO SPAN
JURISDICTIONAL AREA AND
100-YR FLOODPLAIN

CERRO SAN LUIS CHANNEL

GREAT BLUE
HERON HABITAT
SETBACKS

*FOR FUTURE
SUBDIVISION*

*US POST
OFFICE*

PROJECT BOUNDARY/
CITY LIMIT LINE

DALIDIO DRIVE

(E) IMPROVEMENTS TO
REMAIN – RESTRIPE AS
NECESSARY

DALIDIO DRIVE

BIKE LANE
TRAVEL LANE
TRAVEL LANE
TRAVEL LANE
LEFT TURN LANE
LEFT TURN LANE
TRAVEL LANE
TRAVEL LANE
TRAVEL LANE
BIKE LANE

MADONNA ROAD LAYOUT

SHEET C14
SHEET C15
SHEET C16
SHEET C17
SHEET C18
SHEET C19

KEY MAP

0 50 150

1 INCH = 50 FEET

F:\proj\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310GP0002.dwg 8-30-16 10:18:59 AM seths

Cannon

1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

GRADING AND DRAINAGE PLAN (2)

SAN LUIS OBISPO, CA

DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
SS	1" = 50'	C15 OF 29

PREFUMO CREEK

PROJECT BOUNDARY/
CITY LIMIT LINE

STORMWATER BIOFILTRATION
& RETENTION AREA

TRAILHEAD CT

PARKVIEW PL

LEGACY LN

HEIRLOOM AV

PLUM ST

BLACKBERRY CT

FROOM RANCH WAY

UNDERGROUND STORMWATER
RETENTION FACILITY

126.97 FS
128.94 FS
129.75 FS
128.51 FS
128.57 FS
129.18 FS
129.81 FS
129.71 FS
127.63 FS
126.63 FS
132.24 FS

SHEET C4 SHEET C5
SHEET C6 SHEET C7
SHEET C8 SHEET C9

KEY MAP

0 50 150
1 INCH = 50 FEET

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

GRADING AND DRAINAGE PLAN (3)

SAN LUIS OBISPO, CA

DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
SS	1" = 50'	C16 OF 29

F:\pro\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310GP0003.dwg 8-30-16 10:20:37 AM seths

SLO BARN PL

SLO LIFE WY

SAN LUIS RANCH ROAD

HOMESTEAD PL

HARVEST ST

LEGACY LN

CERRO SAN LUIS CHANNEL

DALIDIO DRIVE

PROPOSED CREEK WIDENING FOR FLOOD PROTECTION PURPOSES

PROPOSED CULVERT EXTENSION/ DIVERSION STRUCTURE

APPROXIMATE LOCATION OF EXISTING BOX CULVERT, 3 BARRELS APPROXIMATELY 9' WIDE X 3' HIGH EACH

PROPOSED DIVERSION INTAKE CHANNEL

UNDERGROUND STORMWATER DETENTION FACILITY

PROJECT BOUNDARY/ CITY LIMIT LINE

STORMWATER BIOFILTRATION & RETENTION AREA

STORMWATER EMERGENCY OVERLAND RELEASE ROUTE

PAD 134.0

129.96 FS

131.00 FS

132.04 FS

132.44 FS

133.00 FS

135.00 FS

KEY MAP

SHEET C14

SHEET C15

SHEET C16

SHEET C17

SHEET C18

SHEET C19

0 50 150

1 INCH = 50 FEET

Cannon

1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

GRADING AND DRAINAGE PLAN (4)

SAN LUIS OBISPO, CA

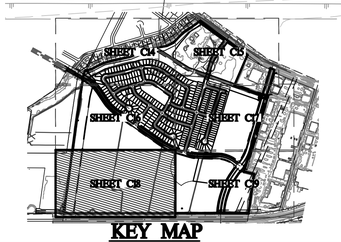
DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
SS	1" = 50'	C17 OF 29

F:\proj\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310GP0004.dwg 8-30-16 10:22:15 AM seths

PROJECT BOUNDARY/
CITY LIMIT LINE

PROJECT BOUNDARY/
CITY LIMIT LINE

US HWY 101



KEY MAP

0 50 150

1 INCH = 50 FEET

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

GRADING AND DRAINAGE PLAN (5)

SAN LUIS OBISPO, CA

DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
SS	1" = 50'	C18 OF 29

F:\proj\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310GP0005.dwg 8-30-16 10:23:53 AM seths

FROOM RANCH WAY

DALIDIO DRIVE

US HWY 101

PAD 134.0

PAD 134.0

STORMWATER TREATMENT AREA

130.57 FS

FUTURE OVERPASS – NOT A PART OF THIS PROJECT

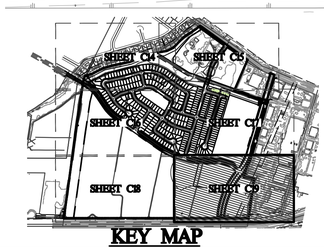
PROJECT BOUNDARY/ CITY LIMIT LINE

PROJECT BOUNDARY/ CITY LIMIT LINE

EXISTING FLOWS FROM OFFSITE TO BE ROUTED THROUGH SITE AND RELEASED TO AGRICULTURAL AREA IN NON-EROSIVE MANNER

SD

127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143



KEY MAP

0 50 150

1 INCH = 50 FEET

Cannon

1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

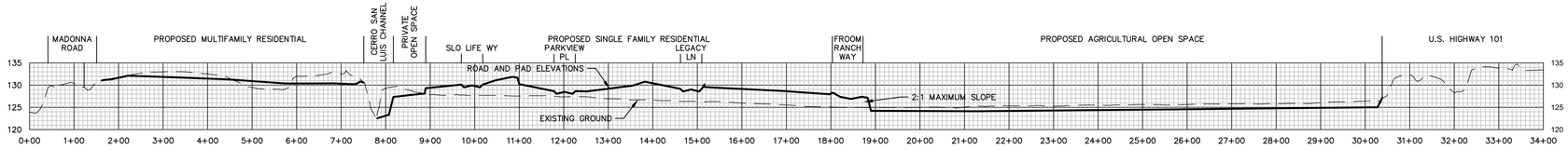
SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

GRADING AND DRAINAGE PLAN (6)

SAN LUIS OBISPO, CA

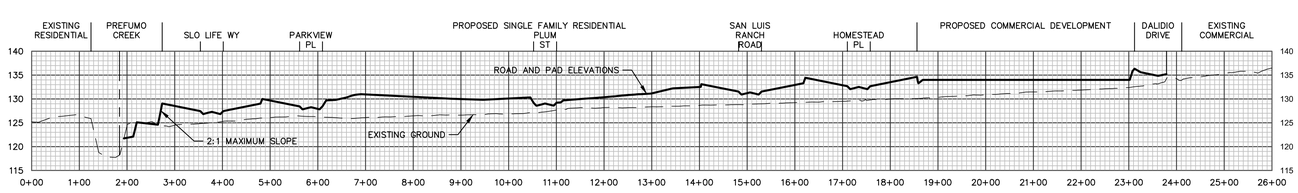
DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
XX	1" = 50'	C19 OF 29

F:\proj\2014\140310\3 Project Design\Civil\Construction Drawings\TTM\CE140310GP0006.dwg 8-30-16 10:25:28 AM seths



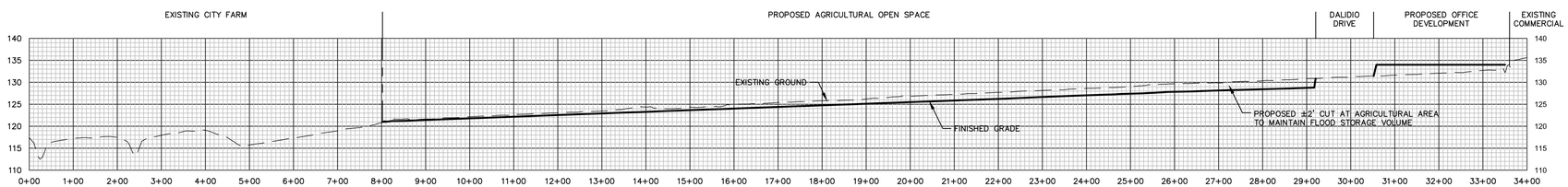
SECTION A – MADONNA ROAD TO HIGHWAY 101 – PROFILE VIEW

SCALE: HORIZ. 1" = 150'; VERT. 1" = 15'



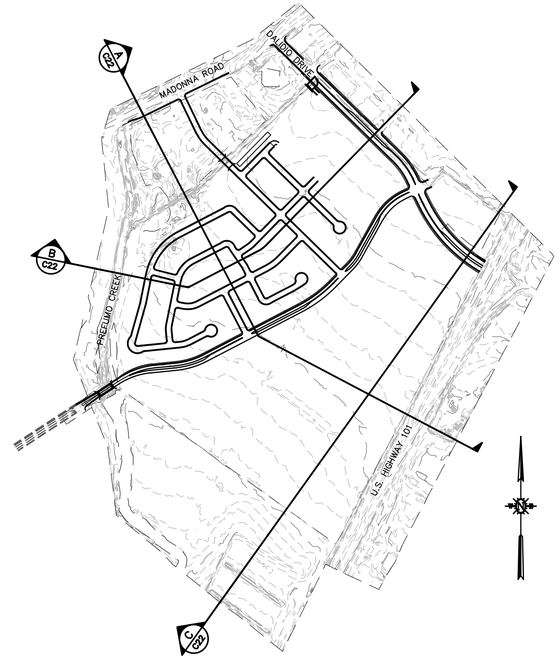
SECTION B – PREFUMO CREEK TO DALIDIO DRIVE – PROFILE VIEW

SCALE: HORIZ. 1" = 150'; VERT. 1" = 15'



SECTION C – PROPOSED AGRICULTURAL OPEN SPACE – PROFILE VIEW

SCALE: HORIZ. 1" = 150'; VERT. 1" = 15'



0 150 300

1 INCH = 150 FEET

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN LUIS RANCH
TRACT 3096 – VESTING TENTATIVE TRACT MAP

SITE CROSS–SECTIONS

SAN LUIS OBISPO, CA

DRAWN BY	DATE	CA JOB NO.
JW	8/30/16	140310
CHECKED BY	SCALE	SHEET
SS	AS SHOWN	C22 OF 29

F:\pro\2014\140310\3 Project Design\Civil\Construction Drawings\TM\CE140310XS0002.dwg 8–30–16 10:27:36 AM seths