

Year: 1966
Source: USGS
Scale: 1" = 500'
Comment:

Address: APN 646-100-77-00, San Diego, CA
Approx Center: -116.98622804,32.5624841

Order No: 22062300084

ERIS



Year: 1958
Source: FAIRCHILD
Scale: 1" = 500'
Comment:

Address: APN 646-100-77-00, San Diego, CA
Approx Center: -116.98622804,32.5624841

Order No: 22062300084

ERIS



Year: 1953
Source: ASCS
Scale: 1" = 500'
Comment:

Address: APN 646-100-77-00, San Diego, CA
Approx Center: -116.98622804,32.5624841

Order No: 22062300084

ERIS



Year: 1949
Source: ASCS
Scale: 1" = 500'
Comment:

Address: APN 646-100-77-00, San Diego, CA
Approx Center: -116.98622804,32.5624841

Order No: 22062300084

ERIS



Year: 1928
Source: COSD
Scale: 1" = 500'
Comment:

Address: APN 646-100-77-00, San Diego, CA
Approx Center: -116.98622804,32.5624841

Order No: 22062300084

ERIS

TOPOGRAPHIC MAPS

Project Property:	APN 646-100-77-00 APN 646-100-77-00 San Diego CA None
Project No:	None
Requested By:	C Young Associates
Order No:	22062300084
Date Completed:	June 23, 2022

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2021	7.5
2018	7.5
2015	7.5
1996	7.5
1975	7.5
1971	7.5
1955	7.5
1955	15
1943	15

Topographic Map Symbology for the maps may be available in the following documents:

Pre-1947

Page 223 of 1918 Topographic Instructions

Page 130 of 1928 Topographic Instructions

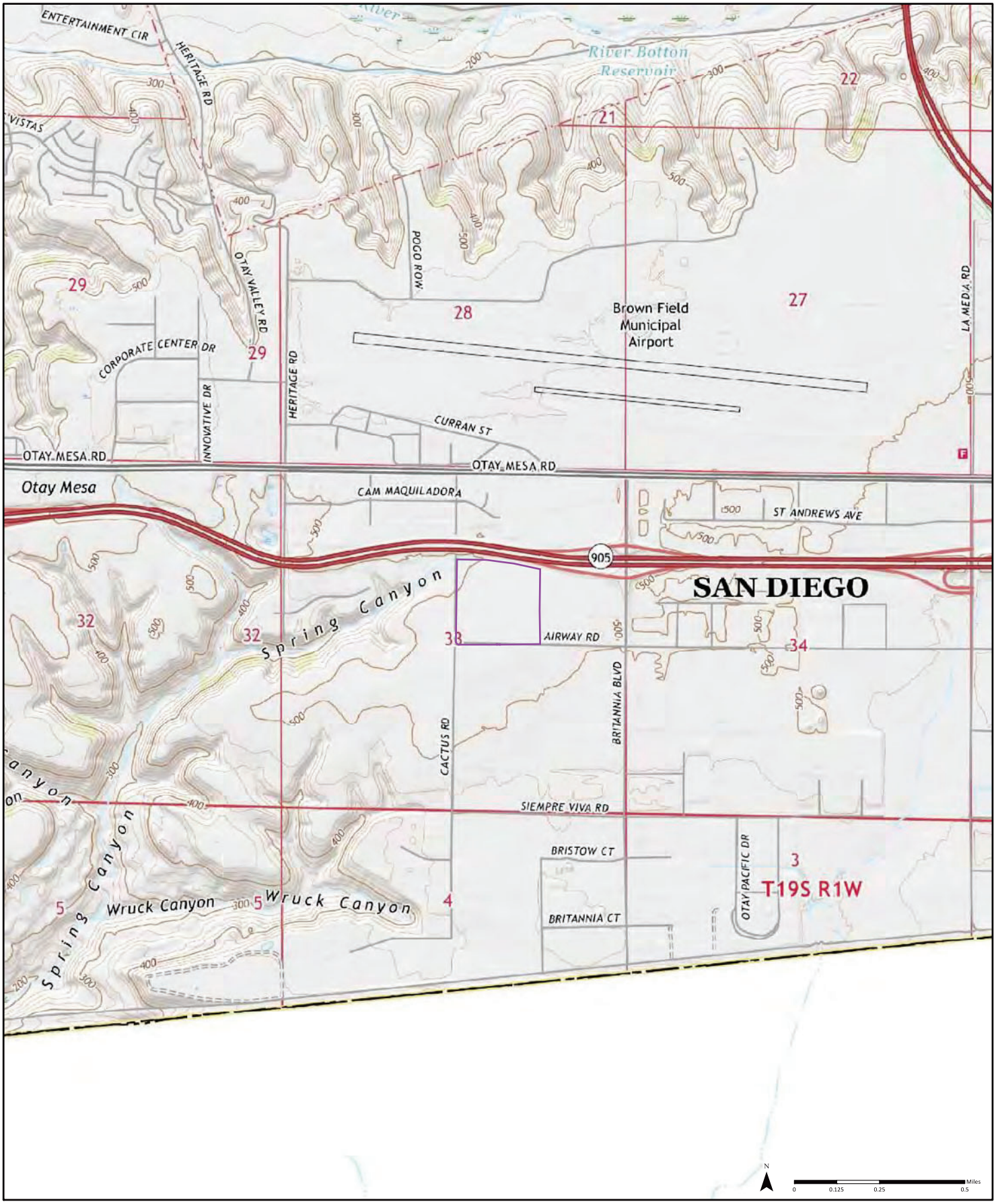
1947-2009

Topographic Map Symbols

2009-present

US Topo Map Symbols

Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.
No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

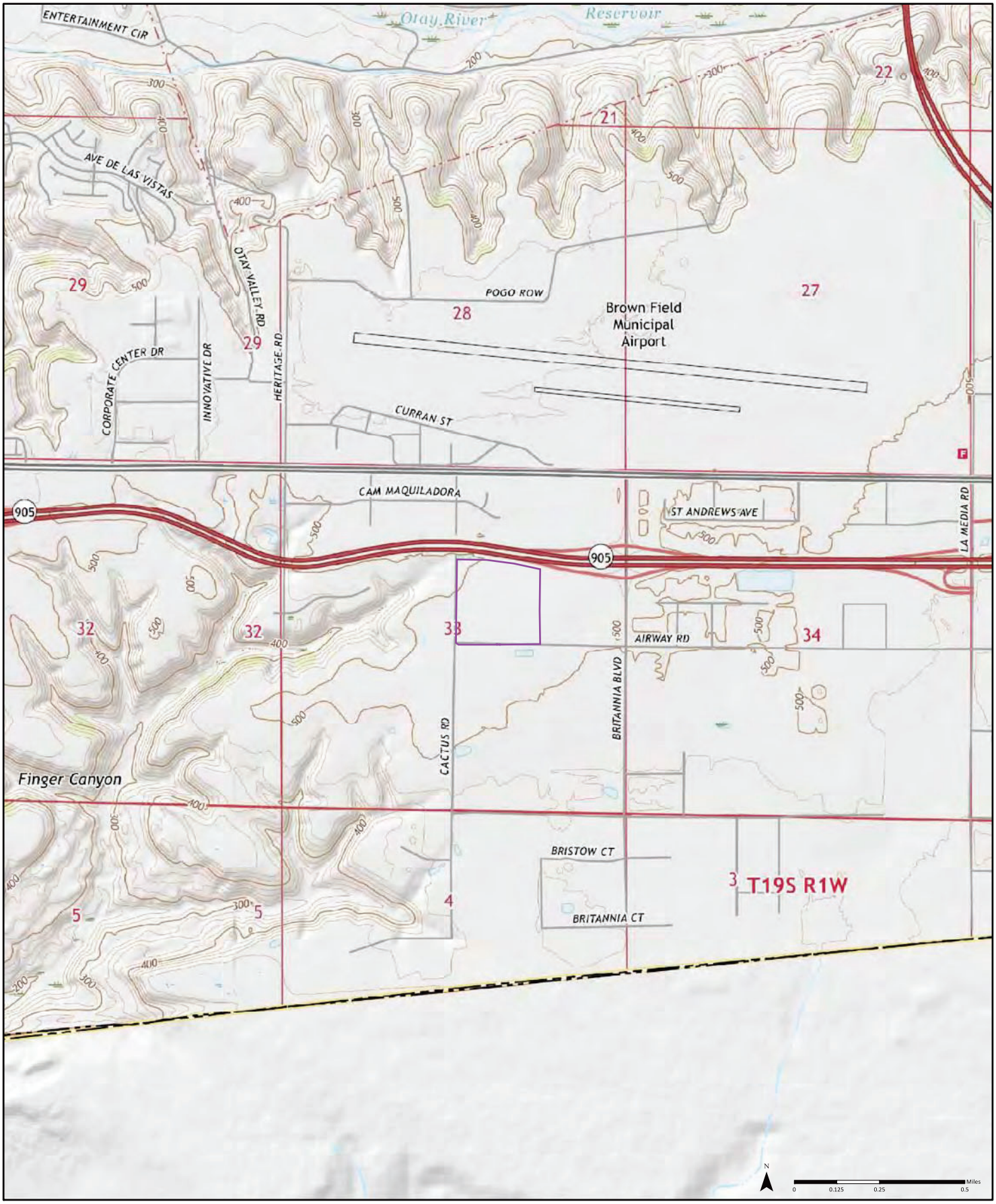


2021

Quadrangle(s): Imperial Beach, CA| Otay Mesa, CA|

Order No. 22062300084

Source: USGS 7.5 Minute Topographic Map

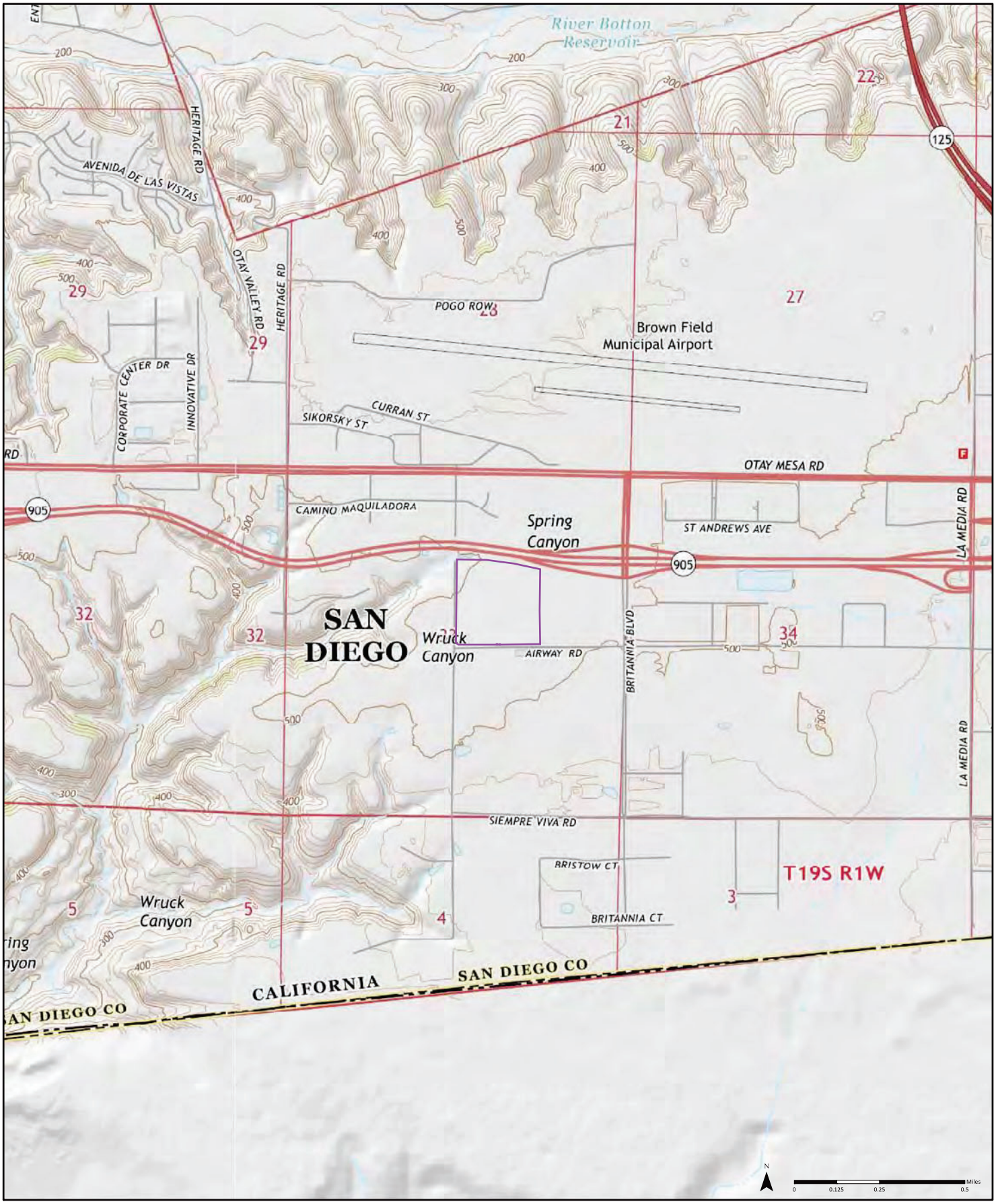


2018

Quadrangle(s): Otay Mesa, CA| Imperial Beach, CA|

Order No. 22062300084

Source: USGS 7.5 Minute Topographic Map

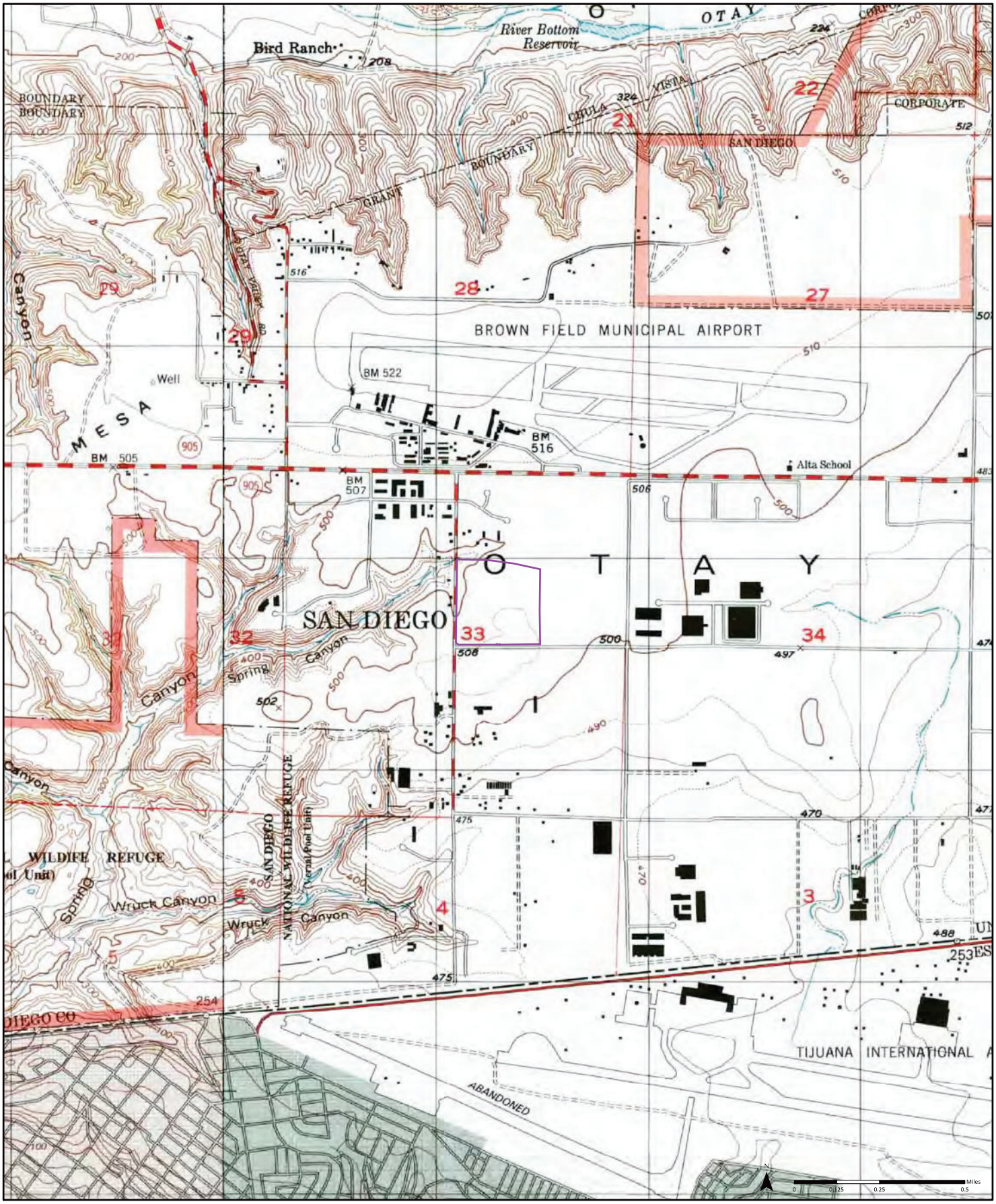


2015

Quadrangle(s): Imperial Beach, CA| Otay Mesa, CA|

Order No. 22062300084

Source: USGS 7.5 Minute Topographic Map

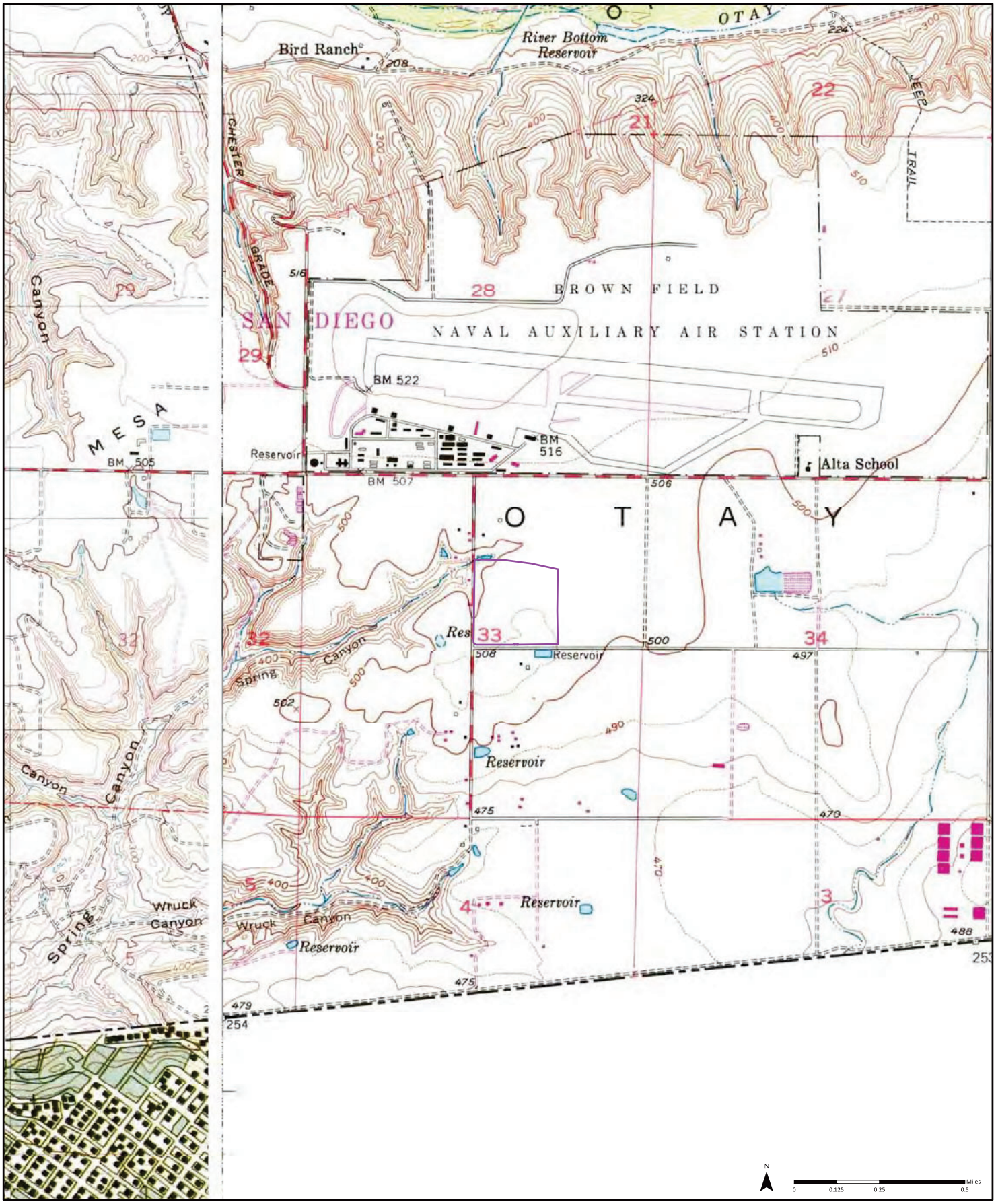


1996 *(1-1996)* *Aerial Photo Year: 1996* *(2-1996)* *Aerial Photo Year: 1996*

Quadrangle(s): Imperial Beach, CA(1-1996)| Otay Mesa, CA(2-1996)|

Order No. 22062300084

Source: USGS 7.5 Minute Topographic Map



1975

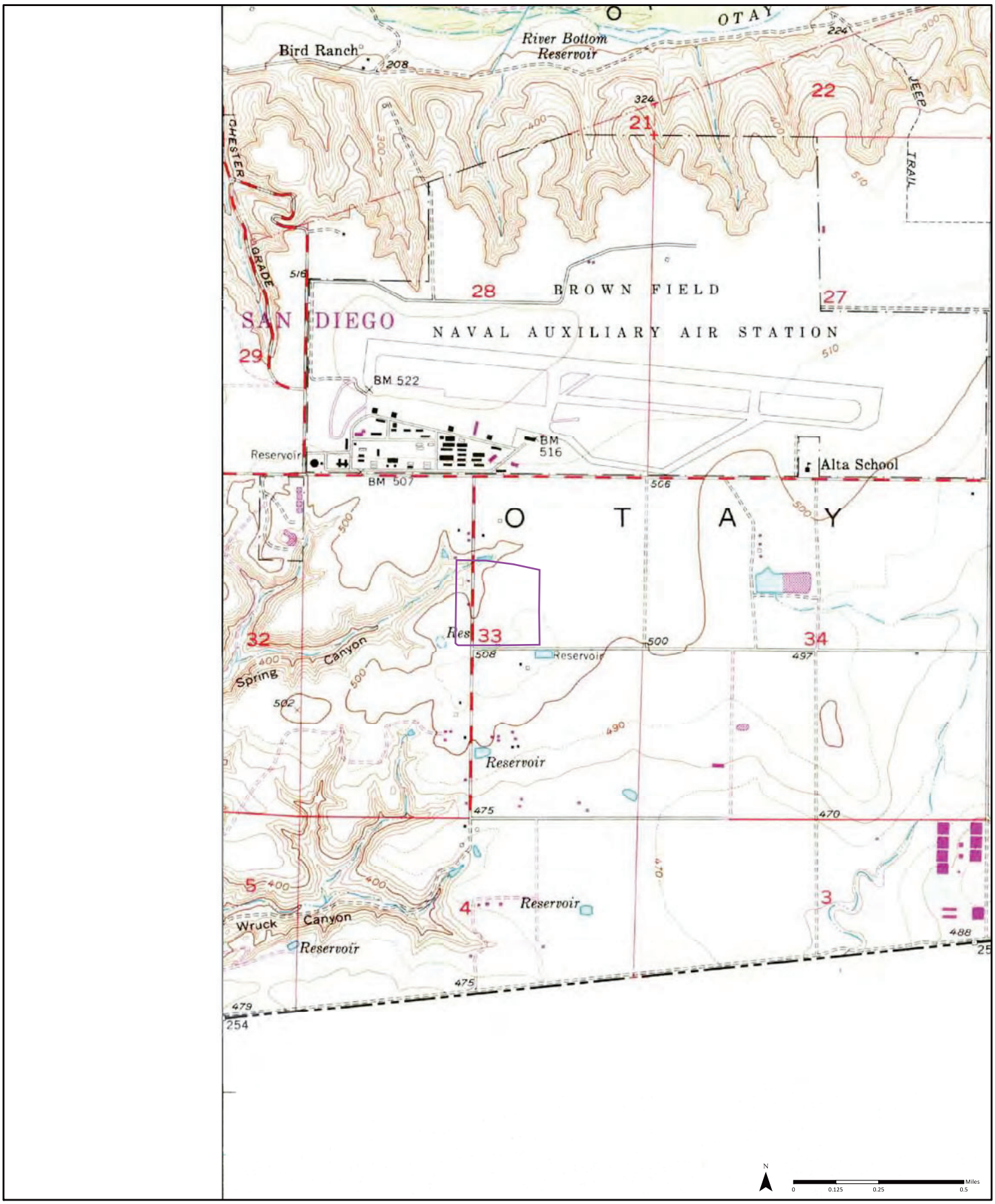
(1-1975)
Aerial Photo Year: 1975
Photo Revision Year: 1975

(2-1975)
Aerial Photo Year: 1975
Photo Revision Year: 1971

Quadrangle(s): Imperial Beach, CA(1-1975)| Otay Mesa, CA(2-1975)|

Order No. 22062300084

Source: USGS 7.5 Minute Topographic Map



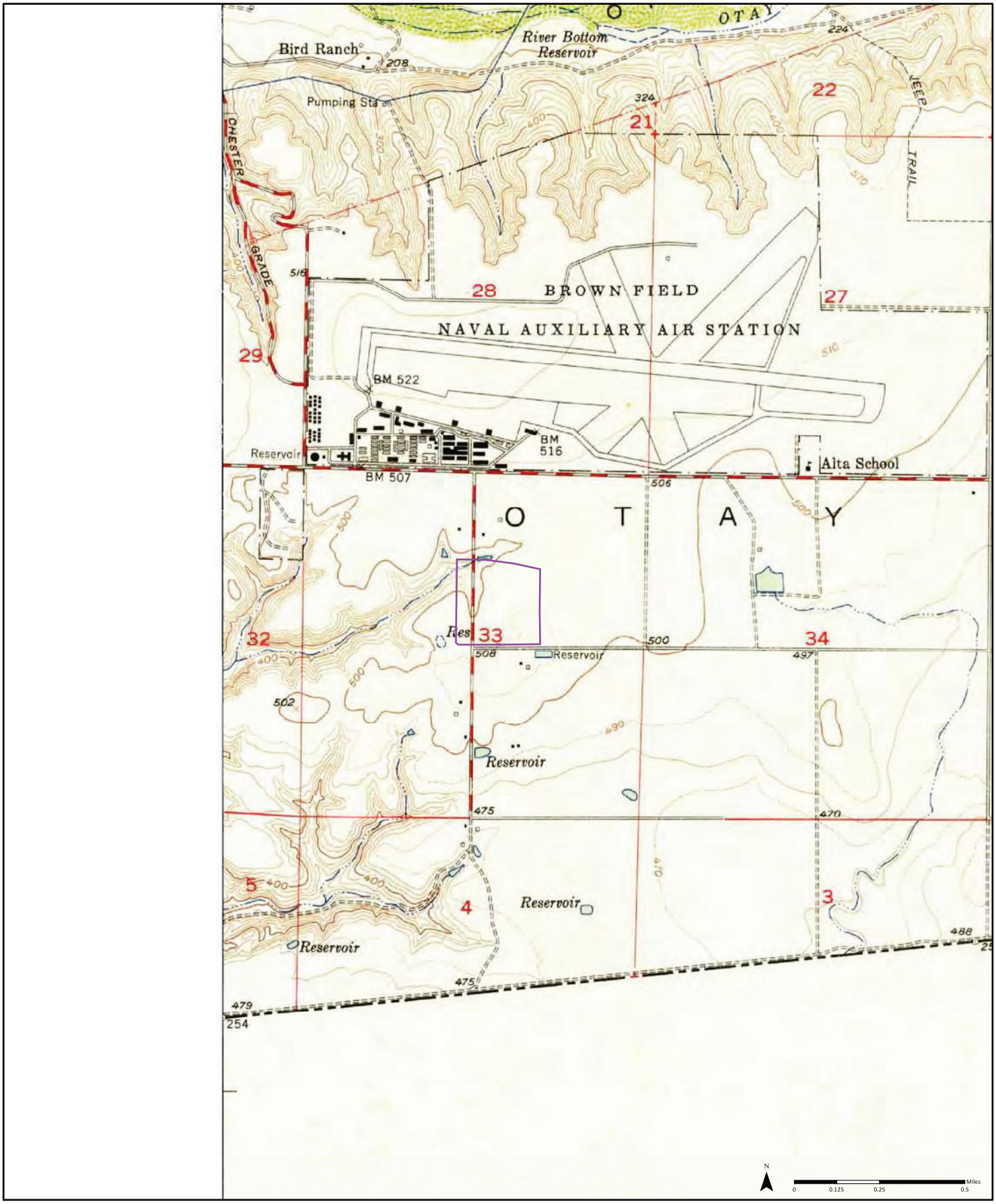
1971 *(1-1971)*

Aerial Photo Year: 1971
Photo Revision Year: 1971

Quadrangle(s): Otay Mesa, CA(1-1971)|

Order No. 22062300084

Source: USGS 7.5 Minute Topographic Map

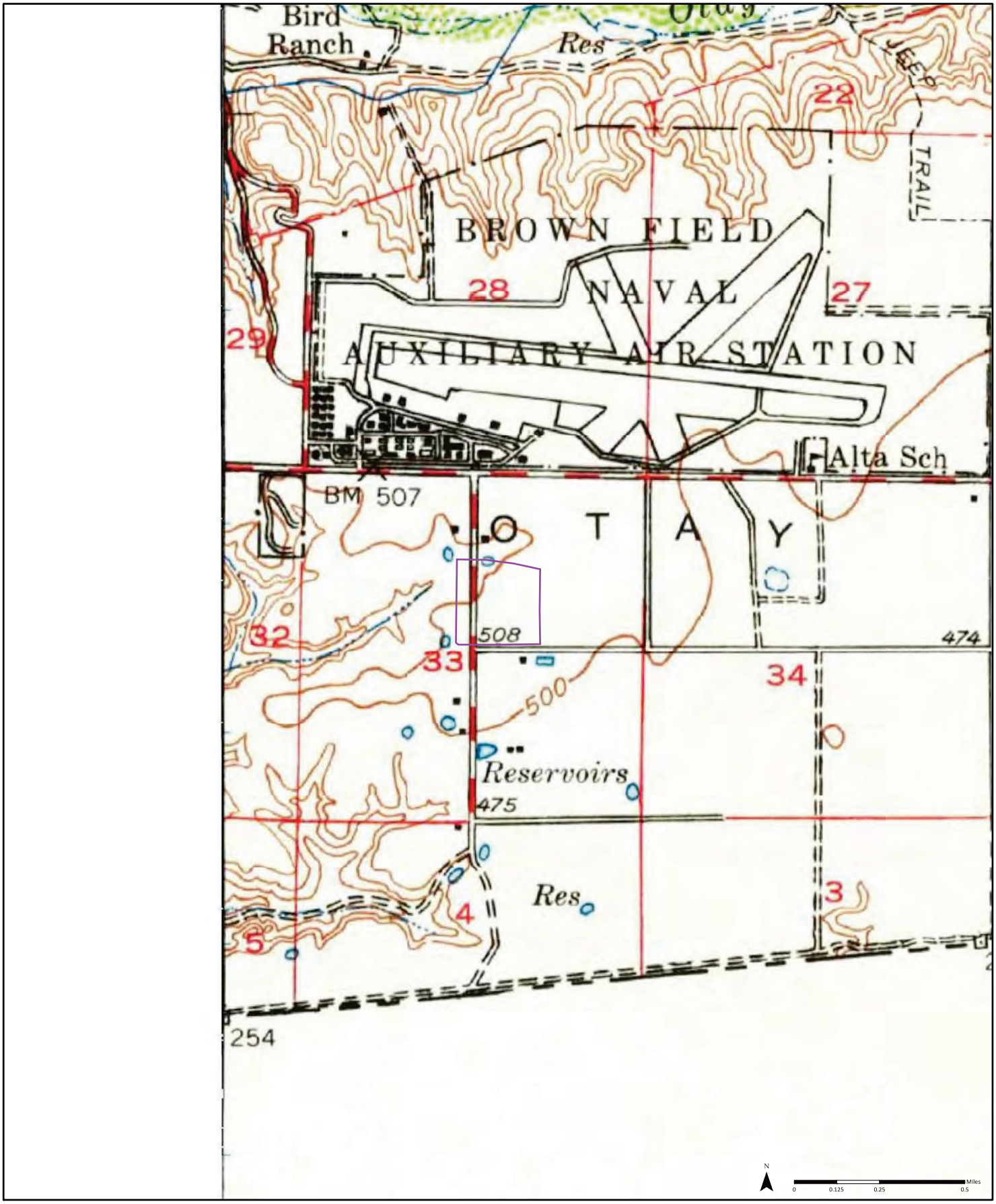


1955 *(1-1955)*
Aerial Photo Year: 1949

Quadrangle(s): Otay Mesa, CA(1-1955)|

Order No. 22062300084

Source: USGS 7.5 Minute Topographic Map

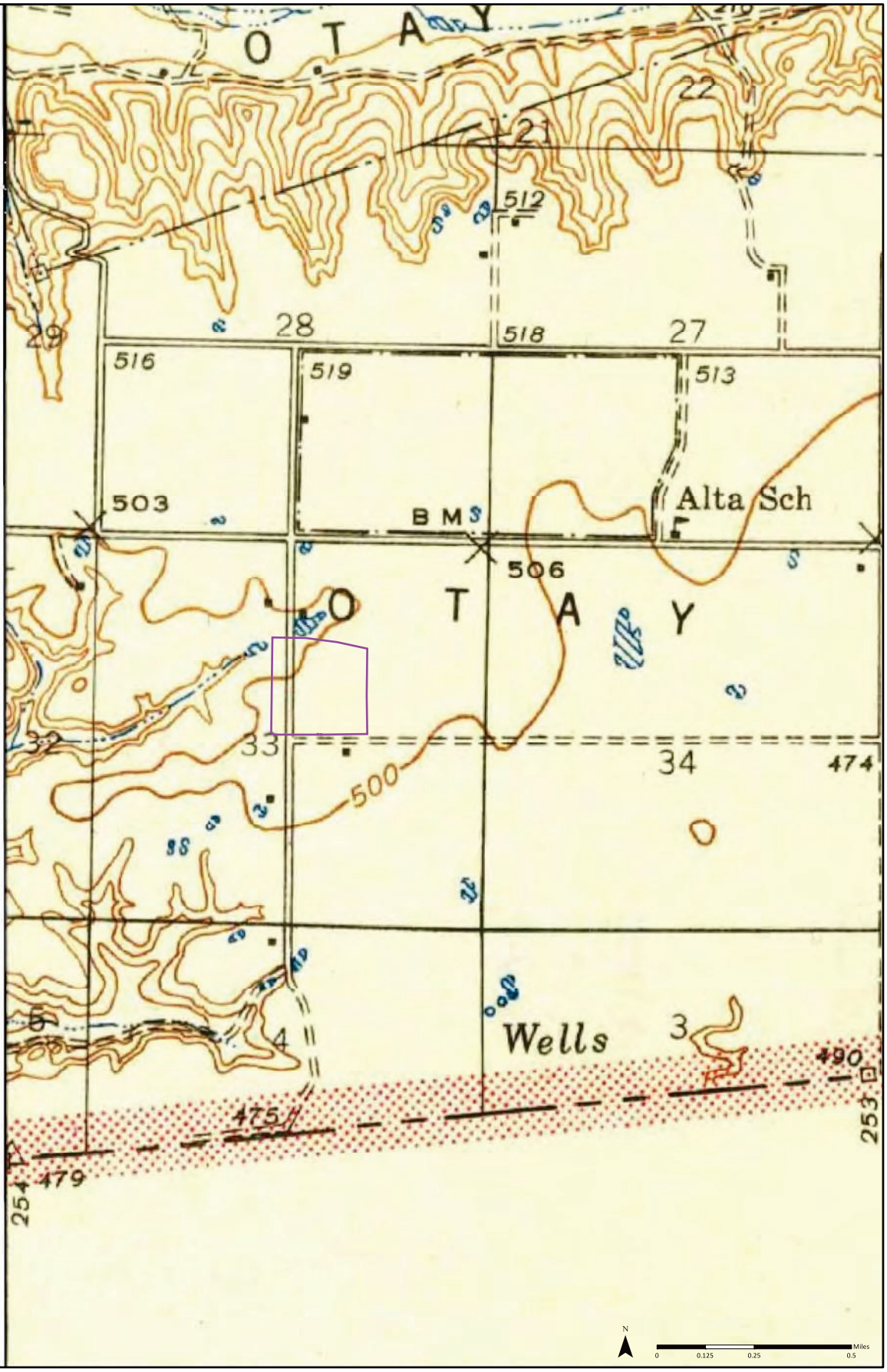


1955 *(1-1955)*
Aerial Photo Year: 1953

Quadrangle(s): Jamul, CA(1-1955)|

Order No. 22062300084

Source: USGS 15 Minute Topographic Map



1943

Quadrangle(s): Jamul, CA|

Order No. 22062300084

Source: USGS 15 Minute Topographic Map

APPENDIX C
PHOTOGRAPHS



1. Western Site Boundary Looking North



2. Central View of Site Looking Northeast



3. Southern Site Boundary Looking East



4. Western Site Boundary Looking South



5. Central View of Site Looking Southeast



6. Northern Site Boundary Looking East



7. Northern Site Boundary Looking West



8. Central View of Site Looking Southwest



9. Eastern Site Boundary Looking South



10. Southern Site Boundary Looking West



11. Central View of Site Looking Northwest



12. Eastern Site Boundary Looking North



13. Eastern Adjacent Property-Residential Construction



14. Southern Adjacent Property



15. Southern Adjacent Property



16. Southern Adjacent Property



17. Western Adjacent Property (EPOCA)



18. Western Adjacent Property (EPOCA)



19. Western Adjacent Property (EPOCA)



20. Western Adjacent Property (North of EPOCA)



21. Western Adjacent Property (North of EPOCA)



22. Western Adjacent Property (North of EPOCA)

APPENDIX D
INTERVIEW QUESTIONAIRRES

C Young Associates
Due Diligence Environmental Questionnaire - *CLIENT*

Site Name/Location: __Paez____- Collection at Cactus_____

Completed by: __Jason Shepard_____

Company or Organization: __ColRich_____

Title: __Director of Project Management _____

Date: 6/23/2022_____

Please email completed questionnaire to colin@cyaforensics.com

1.) Are you aware of any environmental cleanup liens that are filed or recorded against the subject property?

_No_____
__
_____
_____

2.) Are you aware of any activity and land use limitations that are in place on the property that have been filed or recorded in a registry?

__No_____
__
_____
_____

3.) Are you aware of any specialized knowledge or experience related to the property or nearby properties that is pertinent to potential adverse environmental conditions?

___No_____
__
_____
_____

4.) Does the purchase price being paid (or proposed to be paid) for this property reasonably reflect the fair market value of the property? If this assessment is part of a re-finance, do you have any knowledge pertaining to the purchase price of the property when it was last sold in comparison to the fair market value at that time?

___Yes the purchase price is fair market value.
_____

5.) If there is a significant difference between the purchase price and fair market value, have you considered whether the lower purchase price is/was due to known or suspect contamination at the property?

__N/A_____
_____
_____

6.) Are you aware of commonly known or reasonably obtainable information that would help C Young Associates to identify conditions indicative of releases or threatened releases of hazardous wastes/materials at the property? Such information includes knowledge of specific chemicals that are present or were once present on the property, spills or other chemicals releases that may have occurred, underground or aboveground storage tanks and environmental cleanups that have been conducted on the property.

___No_____
__
_____
_____

7.) Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

___No_____
__
_____
_____

Please email completed questionnaire to colin@cyaforensics.com

C Young Associates
Due Diligence Environmental Questionnaire - *OWNER*

Project Name/Location: Cactus and Airway
_____

APN 646-100-77-00
_____

Completed by: Joe Paez, Jr.
_____

Company or Organization: none
_____

Title: Owner.
_____

Date: _6/30/2022
_____

Please email completed questionnaire to colin@cyaforensics.com

1.) Who is the current owner of the subject property and when was it purchased?

_Joe Paez, Jr.
July 2002
_____
_____
_____

2.) Who are the past owners of the property and years of ownership (if available)?

_Curtis J. Corn.
_____
_____
_____

3.) What was the past use of the subject property?

I don't know
_____
_____
_____

4.) Are you aware of any environmental cleanup liens that are filed or recorded against the subject property?

_No_____
__
_____
_____

5.) Are you aware of any activity and land use limitations that are in place on the property that have been filed or recorded in a registry? No.

_____
_____
_____

6.) Are you aware of any specialized knowledge or experience related to the property or nearby properties that is pertinent to potential adverse environmental conditions?

_____No_____
__
_____
_____

7.) Are you aware of commonly known or reasonably obtainable information that would help C Young Associates to identify conditions indicative of releases or threatened releases of hazardous wastes/materials at the property? Such information includes knowledge of specific chemicals that are present or were once present on the property, spills or other chemicals releases that may have occurred, underground or aboveground storage tanks and environmental cleanups that have been conducted on the property.

____No._____
___
_____
_____

8.) Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

No._____
___
_____
_____

Please email completed questionnaire to colin@cyaforensics.com

APPENDIX E
SOIL SAMPLE LOCATIONS AND ANALYTICAL LABORATORY REPORT


905
6
1 2 3 4 5 6 7 8 9 10
Otay Mesa Fwy
A B C D E F G H I J
N
Cactus Rd
Cactus Rd
Airway Rd
Airway Rd
Airway Rd
600 ft
A1 A3 A5 A7 A9
B2 B4 B6 B8 B10
C1 C3 C5 C7 C9
D2 D4 D6 D8 D10
E1 E3 E5 E7 E9
F2 F4 F6 F8 F10
G1 G3 G5 G7 G9
H2 H4 H6 H8 H10
I1 I3 I4 I7 I9
J2 J4 J6 J8 J10
Legend
Sample Location

AMERICAN ENVIRONMENTAL TESTING LABORATORY, LLC
2840 North Naomi Street, Burbank, CA 91504 • ELAP# 1541 • LACSD# 10181
Telephone (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

July 07, 2022

AETL Job No: BDF0236
Received Date: 06/28/2022
Project Number: [none]

C Young Associates
1042 Skylark Drive
La Jolla, CA 92037
Telephone: (858)945-7029

Attention: Colin Young

Project Name: Epoca/Lumina (Paez)
Site:

Enclosed please find the results of analyses for samples which were analyzed as specified on the attached chain of custody. If you have any questions concerning this report, please do not hesitate to call.

Checked By: 

Corey Jones
Project Manager

Approved By: 

Joe Sevrean
Laboratory Director

Table of Contents

Client Project Name: Epoca/Lumina Project Number: [none]
Work Order Number: BDF0236

1 Cover Letter 1
2 Sample Condition on Receipt 3
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5 Case Narrative 10
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A KYZER LABS COMPANY

C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature: 2.4 °C**

Are the COCs Correct	Y		
Labels Legible	Y	Containers In Good Condition	Y
COC/Labels Agree	Y	Samples Preserved Properly	Y
Sufficient Sample Volume	Y	Sufficient Holding Time for all Tests	Y
Sample Labels intact	Y	Received on Ice	Y

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

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A KYZER LABS COMPANY

CHAIN OF CUSTODY RECORD

AETL JOB No. BOF0236 Page 1 of 4

COMPANY	C Young Associates
COMPANY ADDRESS	1042 Skylark Drive, La Jolla, CA 92037
PROJECT MANAGER	Colin Young
PHONE	858.945.7029
EMAIL	colin@cyaforensics.com
PROJECT NAME	Epoca/Lumina (PAEZ)
PROJECT #	—
SITE NAME AND ADDRESS	
PO #	

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	EPA 6010 Arsenic	OCP 8081A	TEST INSTRUCTIONS & COMMENTS
1	I 1	BOF0236-01	06/28/22		Soil	1 GJ	ICE	X	X	COMPOSITE AS INDICATED
2	I 3	02						X		COMPOSITE 1
3	H 2	03								
4	J 2	04								
5	H 1	05								
6	H 6	06						X	X	COMPOSITE 2
7	I 4	07								
8	J 4	08								
9	J 6	09								
10	I 7	10						X	X	COMPOSITE 3
11	H 5	11								
12	J 5	12								
13	I 8	13								
14	E 9	14						X	X	COMPOSITE 4
15	E 10	15	↓	↓	↓	↓	↓			

TOTAL NUMBER OF CONTAINERS:

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Colin Young	Printed Name:	Printed Name:
Date: 6/29/22 Time: 1400	Date: Time:	Date: 6/28/22 Time: 1930
RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY LABORATORY: AETL 3.
Signature:	Signature:	Signature:
Printed Name: CHARLTON RAGSDALE	Printed Name:	Printed Name:
Date: 6/28/22 Time: 1650	Date: Time:	Date: 6/28/22 Time: 19:30

TURN AROUND TIME: ☒ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH ☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED: ☐ HARD COPY ☒ E-COPY ☐ GEOTRACKER (GLOBAL ID) _____ ☐ OTHER (PLEASE SPECIFY) _____

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

06/30/2020 REV. 1.0

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CHAIN OF CUSTODY RECORD

AETL JOB No. BDF0236 Page 2 of 4

COMPANY	C Young Associates
COMPANY ADDRESS	1042 Skylark Drive, La Jolla, CA 92037
PROJECT MANAGER	Colin Young
PHONE	858.945.7029
EMAIL	colin@cyaforensics.com
PROJECT NAME	Epoca/Lumina (PAEZ)
PROJECT #	—
SITE NAME AND ADDRESS	—
PO #	—

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	EPA 6010 ARSNIC	CCP 8081 LA	TEST INSTRUCTIONS & COMMENTS
1	E1	BDF0236-16	6/28/22		Soil	1 GJ	ICE		X	COMPOSITE, AS INDICATED
2	G1	17						X		composite 5
3	F2	18								
4	G3	19								
5	E3	20							X	
6	F4	21						X		composite 6
7	G5	22								
8	E5	23							X	
9	E7	24						X		composite 7
10	F6	25								
11	G7	26								
12	G9	27							X	
13	H10	28						X		composite 8
14	I7	29								
15	J10	30	↓		↓	↓	↓			

TOTAL NUMBER OF CONTAINERS:

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Colin Young	Printed Name:	Printed Name:
Date: 6/28/22 Time: 1400	Date: Time:	Date: 6/28/22 Time: 1930
RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY LABORATORY: AETL 3.
Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name:
Date: 6/28/22 Time: 1650	Date: Time:	Date: 06/28/22 Time: 19:30

TURN AROUND TIME: ☒ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH ☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED: ☐ HARD COPY ☒ E-COPY ☐ GEOTRACKER (GLOBAL ID) ☐ OTHER (PLEASE SPECIFY)

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

06/30/2020 REV: 1.0

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CHAIN OF CUSTODY RECORD

AETL JOB No. BOT0236 Page 3 of 4

COMPANY	C Young Associates
COMPANY ADDRESS	1042 Skylark Drive, La Jolla, CA 92037
PROJECT MANAGER	Colin Young
PHONE	858.945.7029
EMAIL	colin@cyaforensics.com
PROJECT NAME	Epoca/Lumina (PAEZ)
PROJECT #	—
SITE NAME AND ADDRESS	—
PO #	—

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	EPA 6020 ARSENIC	CCR 6020 LA	TEST INSTRUCTIONS & COMMENTS
1	C1	BOT0236-31	06/28/22		Soil	1 GJ	ICE		X	COMPOSITE, AS INDICATED
2	C3	32						X		composite 9
3	D2	33								
4	D4	34								
5	C5	35							X	
6	C7	36						X		composite 10
7	D6	37								
8	D8	38								
9	D10	39							X	
10	C9	40						X		composite 11
11	B10	41								
12	A9	42	↓	↓	↓	↓	↓			
13										
14										
15										

ANALYSIS REQUESTED

TOTAL NUMBER OF CONTAINERS:

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Colin Young	Printed Name:	Printed Name: C. Pinkham
Date: 6/28/22 Time: 1400	Date: Time:	Date: 6/28/22 Time: 1930
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY LABORATORY: AETL 3.**
Signature:	Signature:	Signature:
Printed Name: Christian Pacillas	Printed Name:	Printed Name: Cate Ca (Kroggos, SM
Date: 6/28/22 Time: 1650	Date: Time:	Date: 6/28/22 Time: 19:3

TURN AROUND TIME

☒ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH
☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED

☐ HARD COPY
☒ E-COPY
☐ GEOTRACKER (GLOBAL ID) _____
☐ OTHER (PLEASE SPECIFY) _____

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

06/30/2020 REV. 1.0

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CHAIN OF CUSTODY RECORD

AETL JOB No. BDF0236 Page 4 of 4

COMPANY	C Young Associates
COMPANY ADDRESS	1042 Skylark Drive, La Jolla, CA 92037
PROJECT MANAGER	Colin Young
PHONE	858.945.7029
EMAIL	colin@cyaforensics.com
PROJECT NAME	Epoca/Lumina (PAEZ)
PROJECT #	—
SITE NAME AND ADDRESS	—
PO #	—

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	EPA 6010 LA CAP GOLD ARSENIC	TEST INSTRUCTIONS & COMMENTS
1	A5	BDF0236-43	6/28/22		Soil	1 GJ	ICE	X	COMPOSITE AS INDICATED
2	A7	44						X	
3	B6	46							COMPOSITE 12
4	B8	46							
5	A1	47						X	
6	A3	48						X	COMPOSITE 13
7	B2	49							
8	B4	50	↓		↓	↓	↓		
9	Comp 1	51							
10	Comp 2	52							
11	Comp 3	53							
12	Comp 4	54							
13	Comp 5	55							
14	Comp 6	56							
15	Comp 7	57							

TOTAL NUMBER OF CONTAINERS:

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Colin Young	Printed Name:	Printed Name:
Date: 6/28/22 Time: 1400	Date: Time:	Date: Time:
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY LABORATORY: AETL 3.**
Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name:
Date: Time: 1650	Date: Time:	Date: 6/29/22 Time: 10:30

TURN AROUND TIME

- [X] NORMAL
- [ ] SAME DAY RUSH
- [ ] NEXT DAY RUSH
- [ ] 2 DAYS RUSH
- [ ] 3 DAYS RUSH
- [ ] 4 DAYS RUSH

DATA DELIVERABLE REQUIRED

- [ ] HARD COPY
- [X] E-COPY
- [ ] GEOTRACKER (GLOBAL ID) _____
- [ ] OTHER (PLEASE SPECIFY) _____

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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CHAIN OF CUSTODY RECORD

Nº 125204

AETL JOB No. BOF0236 Page 5 of ___

COMPANY: C Young Associates
PROJECT MANAGER: Colin
COMPANY ADDRESS: 1042 S Kylark Drive, La Jolla, CA 92037
PHONE: 858.945.7029
EMAIL: colin@cyaforensics.com
PROJECT NAME: Epica/Lumina (PAEZ)
PROJECT #:
SITE NAME AND ADDRESS:
PO #:

SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.
1 Comp 8	BOF0236 58	06/28/22				
2 Comp 9	59					
3 Comp 10	60					
4 Comp 11	61					
5 Comp 12	62					
6 Comp 13	63					
7						
8						
9						
10						
11						
12						
13						
14						
15						

ANALYSIS REQUESTED

8081A OCP
X
X
X
X
X
X

TEST INSTRUCTIONS & COMMENTS

TOTAL NUMBER OF CONTAINERS:

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name:
Date: Time:	Date: Time:	Date: Time:

TURN AROUND TIME
☑ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH
☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED
☐ HARD COPY
☐ E-COPY
☐ GEOTRACKER (GLOBAL ID) _____
☐ OTHER (PLEASE SPECIFY) _____

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY LABORATORY: AETL 3.
Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name: Greta Giragoosian
Date: Time:	Date: Time:	Date: 06/28/22 Time: 19:30

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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COOLER RECEIPT FORM

Client Name: C Young Associates
Project Name: Epoca/Lumina (PAE-2)
AETL Job Number: BD F0236
Date Received: 06/08/22 Received by: Coreta Cerageosian
Carrier: ☒ AETL Courier ☐ Client ☐ GSL ☐ FedEx ☐ UPS
☐ Others:

Samples were received in: ☒ Cooler (1) ☐ Other (Specify):
Inside temperature of shipping container No 1: 2.4°, No 2: ____, No 3: ____
Type of sample containers: ☐ VOA, ☐ Glass bottles, ☒ Wide mouth jars, ☐ HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify): ____
How are samples preserved: ☐ None, ☒ Ice, ☐ Blue Ice, ☐ Dry Ice
☒ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, ☐ MeOH, ☐ $NaHSO_4$
☐ Other (Specify):

	Yes	No*	N/A	Name, if client was notified.
1. Are the COCs Correct?	✓			
2. Are Sample labels legible & indelible ink?	✓			
3. Do samples match the COC?	✓			
4. Are the required analyses clear?	✓			
5. Is there enough samples for required analysis?	✓			
6. Does cooler or samples have custody seal(s)?	✓		✓	
7. Are sample containers in good condition?	✓			
8. Are samples preserved?	✓			
9. Are samples preserved properly for the intended analysis?	✓			
10. Are the VOAs free of headspace?			✓	
11. Are the jars free of headspace?			✓	
* = see note below. N/A = Not Applicable				

PLEASE NOTE ALL SAMPLES WILL BE DISPOSED OF 30 DAYS AFTER RECEIVING DATE. IF AETL IS INFORMED OTHERWISE, THERE WILL BE A STORAGE CHARGE PER SAMPLE PER MONTH FOR ANY SAMPLE HELD BEYOND 30 DAYS.

***Explain all "No" answers for above questions:**

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Case Narrative

The following "Sample Received" Section summarizes the samples received and associated analyses requested as specified on the enclosed chain of custody.

Results as reported by the laboratory apply only to 1) the items tested, 2) as the samples are received, and 3) the accuracy of information provided. Information supplied by the customer that may affect validity of results and may be contained in this report include Project Name/Number, Site Location, Sample Locations, Sampling Dates/Times, Sample ID, Sample Preservation, Sample Matrix, Sample Properties, Field Blanks, Field Duplicates, Field Spikes, and Site Historical Data.

Accreditation applies only to the test methods listed on each scope of accreditation held by the laboratory; certifications held by the laboratory may not apply to results supplied in this report.

Unless otherwise noted, all results of soil and solid samples are based on wet weight.

No analytical non-conformances were encountered.

Qualifiers are noted in the report.

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Samples Received

AETL received the following samples on 06/28/2022 with the following specifications

Client ID	Sample Date
I3	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-02	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID	Sample Date
H6	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-06	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID	Sample Date
I7	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-10	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID	Sample Date
E9	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-14	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Samples Received
(Continued)

AETL received the following samples on 06/28/2022 with the following specifications

Client ID G1 — **Sample Date** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-17	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID F4 — **Sample Date** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-21	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID E7 — **Sample Date** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-24	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID H10 — **Sample Date** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-28	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Samples Received
(Continued)

AETL received the following samples on 06/28/2022 with the following specifications

Client ID: C3 — **Sample Date:** 06/28/2022 0:00
Lab ID: BDF0236-32 — **Matrix:** Soil — **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID: C7 — **Sample Date:** 06/28/2022 0:00
Lab ID: BDF0236-36 — **Matrix:** Soil — **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID: C9 — **Sample Date:** 06/28/2022 0:00
Lab ID: BDF0236-40 — **Matrix:** Soil — **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID: A7 — **Sample Date:** 06/28/2022 0:00
Lab ID: BDF0236-44 — **Matrix:** Soil — **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Samples Received
(Continued)

AETL received the following samples on 06/28/2022 with the following specifications

Client ID: A3 — **Sample Date:** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-48	Soil	1

Method	Analyte	Units	TAT
EPA 6010B	Arsenic, total by ICP	mg/kg	5

Client ID: COMP1 — **Sample Date:** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-51	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID: COMP2 — **Sample Date:** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-52	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID: COMP3 — **Sample Date:** 06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-53	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Samples Received
(Continued)

AETL received the following samples on 06/28/2022 with the following specifications

Client ID	Sample Date
COMP4	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-54	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID	Sample Date
COMP5	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-55	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID	Sample Date
COMP6	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-56	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID	Sample Date
COMP7	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-57	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Samples Received
(Continued)

AETL received the following samples on 06/28/2022 with the following specifications

Client ID	Sample Date
COMP8	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-58	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID	Sample Date
COMP9	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-59	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID	Sample Date
COMP10	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-60	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID	Sample Date
COMP11	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-61	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Samples Received
(Continued)

AETL received the following samples on 06/28/2022 with the following specifications

Client ID	Sample Date
COMP12	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-62	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Client ID	Sample Date
COMP13	06/28/2022 0:00

Lab ID	Matrix	Quantity of Containers
BDF0236-63	Soil	1

Method	Analyte	Units	TAT
EPA 8081A	Organochlorine Pesticides by GC/ECD	ug/kg	5

Total Number of Samples received: 26

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Positive Hits Summary

Lab ID	Client ID				Sampled
BDF0236-02	I3				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	2.43	J	mg/kg	07/05/2022 13:56

Lab ID	Client ID				Sampled
BDF0236-06	H6				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	2.67	J	mg/kg	07/05/2022 13:59

Lab ID	Client ID				Sampled
BDF0236-10	I7				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	3.74	J	mg/kg	07/05/2022 14:02

Lab ID	Client ID				Sampled
BDF0236-14	E9				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	3.89	J	mg/kg	07/05/2022 14:05

Lab ID	Client ID				Sampled
BDF0236-17	G1				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	2.00	J	mg/kg	07/05/2022 14:08

Lab ID	Client ID				Sampled
BDF0236-21	F4				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	2.19	J	mg/kg	07/05/2022 14:11

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C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BDF0236-24	E7				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	4.04	J	mg/kg	07/05/2022 14:13

Lab ID	Client ID				Sampled
BDF0236-28	H10				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	4.37	J	mg/kg	07/05/2022 14:16

Lab ID	Client ID				Sampled
BDF0236-32	C3				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	1.86	J	mg/kg	07/05/2022 14:19

Lab ID	Client ID				Sampled
BDF0236-36	C7				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	5.14		mg/kg	07/05/2022 14:22

Lab ID	Client ID				Sampled
BDF0236-40	C9				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	5.09		mg/kg	07/05/2022 14:31

Lab ID	Client ID				Sampled
BDF0236-44	A7				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	4.95	J	mg/kg	07/05/2022 14:34

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BDF0236-48	A3				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Arsenic	2.06	J	mg/kg	07/06/2022 13:55

Lab ID	Client ID				Sampled
BDF0236-51	COMP1				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	7.32		ug/kg	07/01/2022 16:02
EPA 8081A	4,4'-DDE (DDE)	574	DIL	ug/kg	07/01/2022 16:02
EPA 8081A	4,4'-DDT (DDT)	238	DIL	ug/kg	07/01/2022 16:02
EPA 8081A	Toxaphene	890	DIL	ug/kg	07/01/2022 16:02

Lab ID	Client ID				Sampled
BDF0236-52	COMP2				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	5.44		ug/kg	07/01/2022 16:19
EPA 8081A	4,4'-DDE (DDE)	600	DIL	ug/kg	07/01/2022 16:19
EPA 8081A	4,4'-DDT (DDT)	165	DIL	ug/kg	07/01/2022 16:19
EPA 8081A	Toxaphene	1020	DIL	ug/kg	07/01/2022 16:19

Lab ID	Client ID				Sampled
BDF0236-53	COMP3				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	12.3		ug/kg	07/01/2022 16:36
EPA 8081A	4,4'-DDE (DDE)	1030	DIL	ug/kg	07/01/2022 16:36
EPA 8081A	4,4'-DDT (DDT)	293	DIL	ug/kg	07/01/2022 16:36
EPA 8081A	Toxaphene	2070	DIL	ug/kg	07/01/2022 16:36

Lab ID	Client ID				Sampled
BDF0236-54	COMP4				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	13.9		ug/kg	07/01/2022 17:10

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A KYZER LABS COMPANY

C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BDF0236-54	COMP4				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDE (DDE)	660	DIL	ug/kg	07/01/2022 17:10
EPA 8081A	4,4'-DDT (DDT)	409	DIL	ug/kg	07/01/2022 17:10
EPA 8081A	Toxaphene	1720	DIL	ug/kg	07/01/2022 17:10

Lab ID	Client ID				Sampled
BDF0236-55	COMP5				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	19.2		ug/kg	07/01/2022 17:27
EPA 8081A	4,4'-DDE (DDE)	537	DIL	ug/kg	07/01/2022 17:27
EPA 8081A	4,4'-DDT (DDT)	317	DIL	ug/kg	07/01/2022 17:27
EPA 8081A	Dieldrin	1.13		ug/kg	07/01/2022 17:27
EPA 8081A	Toxaphene	1220	DIL	ug/kg	07/01/2022 17:27

Lab ID	Client ID				Sampled
BDF0236-56	COMP6				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	24.5		ug/kg	07/01/2022 17:44
EPA 8081A	4,4'-DDE (DDE)	849	DIL	ug/kg	07/01/2022 17:44
EPA 8081A	4,4'-DDT (DDT)	419	DIL	ug/kg	07/01/2022 17:44
EPA 8081A	Toxaphene	1920	DIL	ug/kg	07/01/2022 17:44

Lab ID	Client ID				Sampled
BDF0236-57	COMP7				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	20.3		ug/kg	07/01/2022 18:01
EPA 8081A	4,4'-DDE (DDE)	952	DIL	ug/kg	07/01/2022 18:01
EPA 8081A	4,4'-DDT (DDT)	373	DIL	ug/kg	07/01/2022 18:01
EPA 8081A	Toxaphene	1990	DIL	ug/kg	07/01/2022 18:01

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C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BDF0236-58	COMP8				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	23.1		ug/kg	07/01/2022 18:18
EPA 8081A	4,4'-DDE (DDE)	1020	DIL	ug/kg	07/01/2022 18:18
EPA 8081A	4,4'-DDT (DDT)	385	DIL	ug/kg	07/01/2022 18:18
EPA 8081A	Toxaphene	2470	DIL	ug/kg	07/01/2022 18:18

Lab ID	Client ID				Sampled
BDF0236-59	COMP9				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	6.19		ug/kg	07/01/2022 18:35
EPA 8081A	4,4'-DDE (DDE)	257	DIL	ug/kg	07/01/2022 18:35
EPA 8081A	4,4'-DDT (DDT)	86.4	DIL	ug/kg	07/01/2022 18:35
EPA 8081A	Toxaphene	457	DIL	ug/kg	07/01/2022 18:35

Lab ID	Client ID				Sampled
BDF0236-60	COMP10				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	20.3		ug/kg	07/01/2022 18:51
EPA 8081A	4,4'-DDE (DDE)	979	DIL	ug/kg	07/01/2022 18:51
EPA 8081A	4,4'-DDT (DDT)	279	DIL	ug/kg	07/01/2022 18:51
EPA 8081A	Toxaphene	1990	DIL	ug/kg	07/01/2022 18:51

Lab ID	Client ID				Sampled
BDF0236-61	COMP11				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	17.2		ug/kg	07/01/2022 19:08
EPA 8081A	4,4'-DDE (DDE)	826	DIL	ug/kg	07/01/2022 19:08
EPA 8081A	4,4'-DDT (DDT)	224	DIL	ug/kg	07/01/2022 19:08
EPA 8081A	Toxaphene	1470	DIL	ug/kg	07/01/2022 19:08

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BDF0236-62	COMP12				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	15.2		ug/kg	07/01/2022 19:25
EPA 8081A	4,4'-DDE (DDE)	544	DIL	ug/kg	07/01/2022 19:25
EPA 8081A	4,4'-DDT (DDT)	178	DIL	ug/kg	07/01/2022 19:25
EPA 8081A	Toxaphene	1030	DIL	ug/kg	07/01/2022 19:25

Lab ID	Client ID				Sampled
BDF0236-63	COMP13				06/28/2022 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8081A	4,4'-DDD (DDD)	3.30		ug/kg	07/01/2022 19:59
EPA 8081A	4,4'-DDE (DDE)	446	DIL	ug/kg	07/01/2022 19:59
EPA 8081A	4,4'-DDT (DDT)	83.8	DIL	ug/kg	07/01/2022 19:59
EPA 8081A	Toxaphene	726	DIL	ug/kg	07/01/2022 19:59

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: I3
Lab ID: BDF0236-02 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**2.43**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 13:56	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: H6
Lab ID: BDF0236-06 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**2.67**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 13:59	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: I7
Lab ID: BDF0236-10 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**3.74**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:02	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: E9

Lab ID: BDF0236-14 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**3.89**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:05	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: G1
Lab ID: BDF0236-17 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**2.00**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:08	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: F4
Lab ID: BDF0236-21 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**2.19**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:11	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: E7
Lab ID: BDF0236-24 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**4.04**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:13	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: H10
Lab ID: BDF0236-28 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**4.37**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:16	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: C3
Lab ID: BDF0236-32 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**1.86**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:19	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: C7
Lab ID: BDF0236-36 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**5.14**		1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:22	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: C9

Lab ID: BDF0236-40 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**5.09**		1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:31	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: A7
Lab ID: BDF0236-44 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**4.95**	J	1	1.00	5.00	mg/kg	07/05/22 09:00	07/05/22 14:34	B2G0047	AP	3050B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: A3
Lab ID: BDF0236-48 (Soil) **Sampled:** 06/28/22 0:00

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Arsenic	**2.06**	J	1	1.00	5.00	mg/kg	07/06/22 11:25	07/06/22 13:55	B2G0072	AP	3050B

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A KYZER LABS COMPANY

C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP1
Lab ID: BDF0236-51 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
4,4'-DDD (DDD)	**7.32**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
4,4'-DDE (DDE)	**574**	DIL	5	0.465	5.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
4,4'-DDT (DDT)	**238**	DIL	5	1.18	5.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
Toxaphene	**890**	DIL	5	20.5	250	ug/kg	07/01/22 12:48	07/01/22 16:02	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*64.0%*				*30-150*		07/01/22 12:48	*07/01/22 16:02*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*68.3%*				*30-150*		07/01/22 12:48	*07/01/22 16:02*	B2G0027	*AM*	3550B

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C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP2
Lab ID: BDF0236-52 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
4,4'-DDD (DDD)	**5.44**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
4,4'-DDE (DDE)	**600**	DIL	5	0.465	5.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
4,4'-DDT (DDT)	**165**	DIL	5	1.18	5.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
Toxaphene	**1020**	DIL	5	20.5	250	ug/kg	07/01/22 12:48	07/01/22 16:19	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*74.8%*				*30-150*		07/01/22 12:48	*07/01/22 16:19*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*77.8%*				*30-150*		07/01/22 12:48	*07/01/22 16:19*	B2G0027	*AM*	3550B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP3

Lab ID: BDF0236-53 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
4,4'-DDD (DDD)	**12.3**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
4,4'-DDE (DDE)	**1030**	DIL	10	0.930	10.0	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
4,4'-DDT (DDT)	**293**	DIL	10	2.35	10.0	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
Toxaphene	**2070**	DIL	10	41.0	500	ug/kg	07/01/22 12:48	07/01/22 16:36	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*62.0%*				*30-150*		07/01/22 12:48	*07/01/22 16:36*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*76.3%*				*30-150*		07/01/22 12:48	*07/01/22 16:36*	B2G0027	*AM*	3550B

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C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP4
Lab ID: BDF0236-54 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
4,4'-DDD (DDD)	**13.9**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
4,4'-DDE (DDE)	**660**	DIL	5	0.465	5.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
4,4'-DDT (DDT)	**409**	DIL	5	1.18	5.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
Toxaphene	**1720**	DIL	5	20.5	250	ug/kg	07/01/22 12:48	07/01/22 17:10	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*64.6%*				*30-150*		07/01/22 12:48	*07/01/22 17:10*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*79.0%*				*30-150*		07/01/22 12:48	*07/01/22 17:10*	B2G0027	*AM*	3550B

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A KYZER LABS COMPANY

C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP5
Lab ID: BDF0236-55 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
4,4'-DDD (DDD)	**19.2**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
4,4'-DDE (DDE)	**537**	DIL	5	0.465	5.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
4,4'-DDT (DDT)	**317**	DIL	5	1.18	5.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Dieldrin	**1.13**		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
Toxaphene	**1220**	DIL	5	20.5	250	ug/kg	07/01/22 12:48	07/01/22 17:27	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*49.5%*				*30-150*		07/01/22 12:48	*07/01/22 17:27*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*80.3%*				*30-150*		07/01/22 12:48	*07/01/22 17:27*	B2G0027	*AM*	3550B

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A KYZER LABS COMPANY

C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP6
Lab ID: BDF0236-56 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
4,4'-DDD (DDD)	**24.5**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
4,4'-DDE (DDE)	**849**	DIL	10	0.930	10.0	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
4,4'-DDT (DDT)	**419**	DIL	10	2.35	10.0	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
Toxaphene	**1920**	DIL	10	41.0	500	ug/kg	07/01/22 12:48	07/01/22 17:44	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*88.0%*				*30-150*		07/01/22 12:48	*07/01/22 17:44*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*109%*				*30-150*		07/01/22 12:48	*07/01/22 17:44*	B2G0027	*AM*	3550B

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Telephone (888) 288-AETL • (818) 845-8200 • www.aetlab.com
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C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP7
Lab ID: BDF0236-57 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
4,4'-DDD (DDD)	**20.3**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
4,4'-DDE (DDE)	**952**	DIL	10	0.930	10.0	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
4,4'-DDT (DDT)	**373**	DIL	10	2.35	10.0	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
Toxaphene	**1990**	DIL	10	41.0	500	ug/kg	07/01/22 12:48	07/01/22 18:01	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*55.5%*				*30-150*		07/01/22 12:48	*07/01/22 18:01*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*82.6%*				*30-150*		07/01/22 12:48	*07/01/22 18:01*	B2G0027	*AM*	3550B

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A KYZER LABS COMPANY

C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP8
Lab ID: BDF0236-58 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
4,4'-DDD (DDD)	**23.1**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
4,4'-DDE (DDE)	**1020**	DIL	10	0.930	10.0	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
4,4'-DDT (DDT)	**385**	DIL	10	2.35	10.0	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
Toxaphene	**2470**	DIL	10	41.0	500	ug/kg	07/01/22 12:48	07/01/22 18:18	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*72.9%*				*30-150*		07/01/22 12:48	*07/01/22 18:18*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*90.7%*				*30-150*		07/01/22 12:48	*07/01/22 18:18*	B2G0027	*AM*	3550B

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A KYZER LABS COMPANY

C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP9
Lab ID: BDF0236-59 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
4,4'-DDD (DDD)	**6.19**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
4,4'-DDE (DDE)	**257**	DIL	2	0.186	2.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
4,4'-DDT (DDT)	**86.4**	DIL	2	0.470	2.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
Toxaphene	**457**	DIL	2	8.20	100	ug/kg	07/01/22 12:48	07/01/22 18:35	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*83.1%*				*30-150*		07/01/22 12:48	*07/01/22 18:35*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*108%*				*30-150*		07/01/22 12:48	*07/01/22 18:35*	B2G0027	*AM*	3550B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP10

Lab ID: BDF0236-60 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
4,4'-DDD (DDD)	**20.3**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
4,4'-DDE (DDE)	**979**	DIL	10	0.930	10.0	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
4,4'-DDT (DDT)	**279**	DIL	10	2.35	10.0	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
Toxaphene	**1990**	DIL	10	41.0	500	ug/kg	07/01/22 12:48	07/01/22 18:51	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*69.5%*				*30-150*		07/01/22 12:48	*07/01/22 18:51*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*101%*				*30-150*		07/01/22 12:48	*07/01/22 18:51*	B2G0027	*AM*	3550B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP11

Lab ID: BDF0236-61 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
4,4'-DDD (DDD)	**17.2**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
4,4'-DDE (DDE)	**826**	DIL	10	0.930	10.0	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
4,4'-DDT (DDT)	**224**	DIL	10	2.35	10.0	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
Toxaphene	**1470**	DIL	10	41.0	500	ug/kg	07/01/22 12:48	07/01/22 19:08	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*54.5%*				*30-150*		07/01/22 12:48	*07/01/22 19:08*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*77.8%*				*30-150*		07/01/22 12:48	*07/01/22 19:08*	B2G0027	*AM*	3550B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP12

Lab ID: BDF0236-62 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
4,4'-DDD (DDD)	**15.2**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
4,4'-DDE (DDE)	**544**	DIL	5	0.465	5.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
4,4'-DDT (DDT)	**178**	DIL	5	1.18	5.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
Toxaphene	**1030**	DIL	5	20.5	250	ug/kg	07/01/22 12:48	07/01/22 19:25	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*54.6%*				*30-150*		07/01/22 12:48	*07/01/22 19:25*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*72.4%*				*30-150*		07/01/22 12:48	*07/01/22 19:25*	B2G0027	*AM*	3550B

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C Young Associates
1042 Skylark Drive
La Jolla, CA 92037

AETL Job Number: BDF0236
Project Number: [none]
Attention: Colin Young
Project Name: Epoca/Lumina (Paez)
Reported: 07/07/2022 17:51

Analytical Results

Client ID: COMP13
Lab ID: BDF0236-63 (Soil) **Sampled: 06/28/22 0:00**

Organochlorine Pesticides

Method: EPA 8081A

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Aldrin	ND		1	0.0900	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
alpha-Chlordane	ND		1	0.121	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
gamma-Chlordane	ND		1	0.114	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Chlordane (Total)	ND		1	1.00	2.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND		1	0.0620	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND		1	0.0710	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
beta-Hexachlorocyclohexane (Betta-BHC)	ND		1	0.217	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
delta-Hexachlorocyclohexane (Delta-BHC)	ND		1	0.0880	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
4,4'-DDD (DDD)	**3.30**		1	0.0980	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
4,4'-DDE (DDE)	**446**	DIL	5	0.465	5.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
4,4'-DDT (DDT)	**83.8**	DIL	5	1.18	5.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Dieldrin	ND		1	0.0950	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Endrin	ND		1	0.106	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Endrin aldehyde	ND		1	0.117	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Endrin ketone	ND		1	0.122	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Endosulfan 1	ND		1	0.115	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Endosulfan 11	ND		1	0.177	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Endosulfan sulfate	ND		1	0.0470	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Heptachlor	ND		1	0.206	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Heptachlor epoxide	ND		1	0.101	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Methoxychlor	ND		1	0.310	1.00	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
Toxaphene	**726**	DIL	5	20.5	250	ug/kg	07/01/22 12:48	07/01/22 19:59	B2G0027	AM	3550B
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*72.7%*				*30-150*		07/01/22 12:48	*07/01/22 19:59*	B2G0027	*AM*	3550B
Surrogate: Tetrachloro-m-xylene	*89.5%*				*30-150*		07/01/22 12:48	*07/01/22 19:59*	B2G0027	*AM*	3550B

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Quality Control Results

Metals Total (EPA 6010B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B2G0047 - 3050B					**Prepared: 07/05/2022 09:00**						
Method Blank (B2G0047-BLK1)					**Analyzed: 07/05/2022 13:30**						
Arsenic	ND	1.00	5.00	mg/kg							

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Quality Control Results

Metals Total (EPA 6010B)

Analyte	Result		RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B2G0047 - 3050B (Continued)					**Prepared: 07/05/2022 09:00**						
LCS (B2G0047-BS1)					**Analyzed: 07/05/2022 13:33**						
Arsenic	103		5.00	mg/kg	100		103	75-125			
LCSD (B2G0047-BSD1)					**Analyzed: 07/05/2022 13:36**						
Arsenic	101		5.00	mg/kg	100		101	75-125	1.39	15	
Duplicate (B2G0047-DUP1)		**Source: BDF0200-01**			**Analyzed: 07/05/2022 13:42**						
Arsenic	6.23	1.00	5.00	mg/kg		4.53			31.7	20	R
Matrix Spike (B2G0047-MS1)		**Source: BDF0200-01**			**Analyzed: 07/05/2022 13:45**						
Arsenic	104	1.00	5.00	mg/kg	100	4.53	99.1	75-125			
Matrix Spike Dup (B2G0047-MSD1)		**Source: BDF0200-01**			**Analyzed: 07/05/2022 13:47**						
Arsenic	103	1.00	5.00	mg/kg	100	4.53	98.1	75-125	<1.00	15	
Batch: B2G0072 - 3050B					**Prepared: 07/06/2022 11:25**						
Method Blank (B2G0072-BLK1)					**Analyzed: 07/06/2022 13:47**						
Arsenic	ND	1.00	5.00	mg/kg							

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Quality Control Results

Metals Total (EPA 6010B)

Analyte	Result		RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B2G0072 - 3050B (Continued)					**Prepared: 07/06/2022 11:25**						
LCS (B2G0072-BS1)					**Analyzed: 07/06/2022 13:50**						
Arsenic	97.7		5.00	mg/kg	100		97.7	75-125			
LCSD (B2G0072-BSD1)					**Analyzed: 07/06/2022 13:52**						
Arsenic	97.6		5.00	mg/kg	100		97.6	75-125	<1.00	15	
Duplicate (B2G0072-DUP1)		**Source: BDF0236-48**			**Analyzed: 07/06/2022 14:04**						
Arsenic	2.24	1.00	5.00	mg/kg		2.06			8.52	20	J
Matrix Spike (B2G0072-MS1)		**Source: BDF0236-48**			**Analyzed: 07/06/2022 14:07**						
Arsenic	125	1.00	5.00	mg/kg	100	2.06	123	75-125			
Matrix Spike Dup (B2G0072-MSD1)		**Source: BDF0236-48**			**Analyzed: 07/06/2022 14:10**						
Arsenic	125	1.00	5.00	mg/kg	100	2.06	123	75-125	<1.00	15	

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Quality Control Results

Organochlorine Pesticides (EPA 8081A)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B2G0027 - 3550B					**Prepared: 07/01/2022 12:48**						
Method Blank (B2G0027-BLK1)					**Analyzed: 07/01/2022 15:45**						
Aldrin	ND	0.0900	1.00	ug/kg							
alpha-Chlordane	ND	0.121	1.00	ug/kg							
gamma-Chlordane	ND	0.114	1.00	ug/kg							
Chlordane (Total)	ND	1.00	2.00	ug/kg							
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	ND	0.0620	1.00	ug/kg							
alpha-Hexachlorocyclohexane (Alpha-BHC)	ND	0.0710	1.00	ug/kg							
beta-Hexachlorocyclohexane (Betta-BHC)	ND	0.217	1.00	ug/kg							
delta-Hexachlorocyclohexane (Delta-BHC)	ND	0.0880	1.00	ug/kg							
4,4'-DDD (DDD)	ND	0.0980	1.00	ug/kg							
4,4'-DDE (DDE)	ND	0.0930	1.00	ug/kg							
4,4'-DDT (DDT)	ND	0.235	1.00	ug/kg							
Dieldrin	ND	0.0950	1.00	ug/kg							
Endrin	ND	0.106	1.00	ug/kg							
Endrin aldehyde	ND	0.117	1.00	ug/kg							
Endrin ketone	ND	0.122	1.00	ug/kg							
Endosulfan 1	ND	0.115	1.00	ug/kg							
Endosulfan 11	ND	0.177	1.00	ug/kg							
Endosulfan sulfate	ND	0.0470	1.00	ug/kg							
Heptachlor	ND	0.206	1.00	ug/kg							
Heptachlor epoxide	ND	0.101	1.00	ug/kg							
Methoxychlor	ND	0.310	1.00	ug/kg							
Toxaphene	ND	4.10	50.0	ug/kg							
Surrogate: Decachlorobiphenyl	*18.5*			*ug/kg*	*25.0*		*74.0*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*20.2*			*ug/kg*	*25.0*		*81.0*	*30-150*			

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Quality Control Results

Organochlorine Pesticides (EPA 8081A)

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B2G0027 - 3550B (Continued)				**Prepared: 07/01/2022 12:48**						
LCS (B2G0027-BS1)				**Analyzed: 07/01/2022 14:38**						
Aldrin	19.6	1.00	ug/kg	20.0		97.9	50-150			
alpha-Chlordane	20.0	1.00	ug/kg	20.0		99.8	50-150			
gamma-Chlordane	19.5	1.00	ug/kg	20.0		97.6	50-150			
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	19.1	1.00	ug/kg	20.0		95.3	50-150			
alpha-Hexachlorocyclohexane (Alpha-BHC)	18.3	1.00	ug/kg	20.0		91.5	50-150			
beta-Hexachlorocyclohexane (Betta-BHC)	25.0	1.00	ug/kg	20.0		125	50-150			
delta-Hexachlorocyclohexane (Delta-BHC)	19.9	1.00	ug/kg	20.0		99.3	50-150			
4,4'-DDD (DDD)	10.1	1.00	ug/kg	20.0		50.4	50-150			
4,4'-DDE (DDE)	17.4	1.00	ug/kg	20.0		87.2	50-150			
4,4'-DDT (DDT)	21.2	1.00	ug/kg	20.0		106	50-150			
Dieldrin	20.5	1.00	ug/kg	20.0		102	50-150			
Endrin	18.2	1.00	ug/kg	20.0		90.8	50-150			
Endrin aldehyde	16.8	1.00	ug/kg	20.0		84.2	50-150			
Endrin ketone	18.3	1.00	ug/kg	20.0		91.4	50-150			
Endosulfan 1	21.4	1.00	ug/kg	20.0		107	50-150			
Endosulfan 11	17.7	1.00	ug/kg	20.0		88.6	50-150			
Endosulfan sulfate	18.3	1.00	ug/kg	20.0		91.7	50-150			
Heptachlor	22.2	1.00	ug/kg	20.0		111	50-150			
Heptachlor epoxide	19.6	1.00	ug/kg	20.0		98.1	50-150			
Methoxychlor	21.3	1.00	ug/kg	20.0		106	50-150			
Surrogate: Decachlorobiphenyl	*18.2*		*ug/kg*	*25.0*		*73.0*	*50-150*			
Surrogate: Tetrachloro-m-xylene	*17.4*		*ug/kg*	*25.0*		*69.6*	*50-150*			
LCS (B2G0027-BS2)				**Analyzed: 07/01/2022 15:12**						
Toxaphene	552	50.0	ug/kg	500		110	50-150			
Surrogate: Decachlorobiphenyl	*30.4*		*ug/kg*	*25.0*		*122*	*50-150*			
Surrogate: Tetrachloro-m-xylene	*15.7*		*ug/kg*	*25.0*		*62.8*	*50-150*			

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Telephone (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Quality Control Results

Organochlorine Pesticides (EPA 8081A)

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B2G0027 - 3550B (Continued)				**Prepared: 07/01/2022 12:48**						
LCSD (B2G0027-BSD1)				**Analyzed: 07/01/2022 14:55**						
Aldrin	22.0	1.00	ug/kg	20.0		110	50-150	11.6	40	
alpha-Chlordane	23.4	1.00	ug/kg	20.0		117	50-150	16.0	40	
gamma-Chlordane	22.5	1.00	ug/kg	20.0		113	50-150	14.2	40	
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	22.1	1.00	ug/kg	20.0		110	50-150	14.6	40	
alpha-Hexachlorocyclohexane (Alpha-BHC)	21.2	1.00	ug/kg	20.0		106	50-150	14.8	40	
beta-Hexachlorocyclohexane (Betta-BHC)	28.5	1.00	ug/kg	20.0		143	50-150	13.4	40	
delta-Hexachlorocyclohexane (Delta-BHC)	22.7	1.00	ug/kg	20.0		113	50-150	13.4	40	
4,4'-DDD (DDD)	11.3	1.00	ug/kg	20.0		56.7	50-150	11.7	40	
4,4'-DDE (DDE)	20.2	1.00	ug/kg	20.0		101	50-150	14.4	40	
4,4'-DDT (DDT)	23.7	1.00	ug/kg	20.0		118	50-150	10.8	40	
Dieldrin	23.4	1.00	ug/kg	20.0		117	50-150	13.3	40	
Endrin	20.6	1.00	ug/kg	20.0		103	50-150	12.6	40	
Endrin aldehyde	19.2	1.00	ug/kg	20.0		96.2	50-150	13.3	40	
Endrin ketone	20.7	1.00	ug/kg	20.0		103	50-150	12.3	40	
Endosulfan 1	24.6	1.00	ug/kg	20.0		123	50-150	13.8	40	
Endosulfan 11	20.3	1.00	ug/kg	20.0		101	50-150	13.4	40	
Endosulfan sulfate	20.9	1.00	ug/kg	20.0		104	50-150	13.0	40	
Heptachlor	24.9	1.00	ug/kg	20.0		124	50-150	11.4	40	
Heptachlor epoxide	22.3	1.00	ug/kg	20.0		111	50-150	12.6	40	
Methoxychlor	23.1	1.00	ug/kg	20.0		115	50-150	8.08	40	
Toxaphene	ND	50.0	ug/kg				50-150		40	
Surrogate: Decachlorobiphenyl	*20.4*		*ug/kg*	*25.0*		*81.5*	*50-150*			
Surrogate: Tetrachloro-m-xylene	*20.1*		*ug/kg*	*25.0*		*80.4*	*50-150*			
LCSD (B2G0027-BSD2)				**Analyzed: 07/01/2022 15:28**						
Toxaphene	474	50.0	ug/kg	500		94.8	50-150	15.1	40	
Surrogate: Decachlorobiphenyl	*28.2*		*ug/kg*	*25.0*		*113*	*50-150*			
Surrogate: Tetrachloro-m-xylene	*14.8*		*ug/kg*	*25.0*		*59.1*	*50-150*			

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C Young Associates	AETL Job Number:	BDF0236	
1042 Skylark Drive	Project Number:	[none]	
La Jolla, CA 92037	Attention:	Colin Young	
	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

Qualifiers and Definitions

Item	Qualifiers
DIL	Result for the compound reported from diluted analysis.
J	Analyte was detected. However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Reporting Limit (RL).
R	The RPD was outside of QC acceptance limits due to possible matrix interference.

Item	Definitions
% wt	Percent Weight
%REC	Percent Recovery
°F	Degrees Fahrenheit
AETL	American Environmental Testing Laboratory, LLC
C	Carbon
CARB	California Air Resources Board
COC	Chain of Custody
CRM	Certified Reference Material
DPD	Department of Planning and Development
DRO	Diesel Range Organics
Dup	Duplicate
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
GC/FID	Gas Chromatography Flame Ionization Detection
GRO	Gasoline Range Organics
HC	Hydrocarbon
HEM	Hexane Extractable Material
HMU	Hazardous Material Unit
ICP/MS	Inductively Coupled Plasma Mass Spectrometry
LACSD	Los Angeles County Sanitation Districts
LCS	Laboratory Control Sample - A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes.
LCSD	Laboratory Control Sample Duplicate - A replicate of Laboratory Control Sample.
LOQ	Limit of Quantitation
MDL	Method Detection Limit - The minimum measured concentration of a substance that can be reported with 99% confidence. MDL is statistically derived number which is specific for each instrument, each method and each compound.
mg/kg	Miligrams per Kilogram
mg/L	Miligrams per Liter
ml/L/hr	Milliliter per Liter per Hour
MRO	Motor oil Range Organics
MS	Matrix Spike - A sample prepared, taken through all sample preparation and analytical steps of the procedure and analyzed as an independent test results.

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C Young Associates	AETL Job Number:	BDF0236	
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	Project Name:	Epoca/Lumina (Paez)	Reported: 07/07/2022 17:51

MSD	Matrix Spike Duplicate - A replicate of Matrix Spike Sample.
N	No
ND	Analyte is not detected below Method Detection Limit.
ng/m3	Nanograms per cubic meter
NIOSH	National Institute for Occupational Safety and Health
nL/L	Nanoliters per Liter
NTU	Nephelometric Turbidity Units
Ohm-cm	Ohms per centimeter
ORO	Oil Range Organics
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PSU	Practical Salinity Unit
RL	Reporting Limit - The lowest concentration at which an analyte can be detected in a sample and its concentration can be reported with a specified degree of confidence, accuracy and precision. For usage at AETL, RL is equivalant to LOQ.
RPD	Relative Percent Difference
SIM	Selective Ion Monitoring
SM	Standard Method
SPLP	Synthetic Precipitation Leaching Procedure
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
TTLC	Total Threshold Limit Concentrations
ug/kg	Micrograms per Kilogram
ug/L	Micrograms per Liter
ug/m3	Micrograms per cubic meter
WET	Waste Extraction Test
Y	Yes
ZHE	Zero Headspace Extraction

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APPENDIX F
QUALIFICATIONS

COLIN P. YOUNG, CIH

PROFESSIONAL HISTORY

Current

- C Young Associates (CYA), La Jolla, California, 1996-2000, 2003, 01/2009-Present

Previous

- ERM-West, Inc., San Diego, California, Partner-Managing Principal, San Diego Office, 12/03-01/09
- Geocon, Inc., San Diego, California, Vice President/Southern California Operations Manager, 2000-2003, Project Manager/ Marketing Coordinator, 1989-1991
- Metcalf & Eddy, Inc., San Diego, California, Associate/Business Manager-Environmental Services Division, October 1994-1996
- University of California, San Diego (UCSD), Instructor for Occupational Medicine/Public Health & Safety Extension Certificate Program, 1992-2003
- Brown & Root Environmental/Halliburton NUS Corporation
  - San Diego, California, West Region Manager-Western Division Operations, 1991-1993
  - Boston, Massachusetts, U.S. EPA, Region 1 FIT Public Health Specialist, 1982-1985
- Westec Services, Inc./ERCE, San Diego, California, Project Manager/ Manager of Corporate Health & Safety, 1986-1989

PROFESSIONAL EXPERIENCE and QUALIFICATIONS-Academic

- UCSD, Course Instructor for Occupational Medicine Certificate Program, *Industrial Hygiene for the Occupational Health Nurse*, 1992-1995
- UCSD, Course Instructor for Occupational Health & Safety/ Hazardous Materials Certificate Program, *Principles in Industrial Hygiene*, 1995-2003

PROFESSIONAL EXPERIENCE and QUALIFICATIONS-Technical

Industrial Hygiene

Provide, or have provided, forensic investigation, human health assessment and exposure/injury prevention related services, including the performance of "sick-building"/indoor air quality evaluations, worker exposure assessments, biological contamination (e.g., bioaerosol/mold) studies, litigation support, workers' comp. investigations, asbestos and lead assessments, industrial process safety evaluations, health & safety training and support programs for environmental, hazardous waste, industrial and construction projects and activities. Services have been provided to legal, insurance, industrial, commercial and governmental (e.g., Navy, DOE, regulatory, etc.) clients, alike. Experience representations are summarized, as follows:

- Provide technical and risk management counsel on civil and exposure/toxic tort matters involving alleged environmental impairment and human exposures to hazardous materials, including chemicals and bioaerosols. To date, approximately 200 legal matters have been

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (858) 945-7029
E-Mail: colin@cyaforensics.com

supported.

- ∞ Provided industrial hygiene/health & safety support and programs for more than 400 environmental and hazardous waste investigations and remediation programs for the US EPA and private entities. Typical projects involved the handling of, and/or potential for exposure to, biological contaminants, fuel and chlorinated hydrocarbons, pesticides, PCBs, asbestos, lead and explosive materials.
- ∞ Performed numerous surveys of commercial, industrial and residential structures believed to contain unhealthy and/or potentially hazardous indoor air-quality conditions, including chemical and bioaerosol intrusion.
- ∞ Performed numerous industrial process safety evaluations in support of both Workers' Compensation claim-reduction (i.e., limitation of liability) programs and impending Workers' Compensation claims. The services have been provided for the benefit of employers, property owners and business/property insurers and legal counsel.
- ∞ Provided training and developed corporate health and safety programs for more than thirty industrial facilities, environmental laboratories and/or engineering consulting firms.
- ∞ Performed a Job Safety Analysis (JSA) of more than 300 aerospace manufacturing processes in support of the company's existing and developing Industrial Health & Safety Program.
- ∞ Developed and managed a complex health and safety program for a multi-million dollar remediation project for the Department of Energy at Oak Ridge National Laboratory (ORNL) in Oak Ridge, Tennessee. The remedial and site safety program innovatively employed the use of remotely operated vehicles (i.e., submarines) to retrieve and decommission over 7000 containers of explosive, water-reactive and radiologically-contaminated materials.
- ∞ Developed and managed a health & safety/quality assurance-quality control (QA/QC) program for a study involving the assessment of 15 uncontrolled disposal sites at the Naval Air Weapons Station (NAWS) in China Lake, California. The studies evaluated the degree of environmental impact from chemical, biological and live ordnance wastes in the (typical) 115ºF area climate.
- ∞ Contributed to the development of health and safety Standard Operating Procedures and training protocols currently used by each of the U.S. EPA FIT, Zone 1 offices.

Environmental Engineering

Provide, or have provided, forensic studies, environmental site assessments; remediation programs; environmental litigation support, and; regulatory compliance support and permitting.

- ∞ Developed and managed a multimillion-dollar burn dump remediation project for a client who was redeveloping a former Navy facility. Provided project management and oversight, data interpretation, training, and HASP development. The contaminants of concern include burn ash, lead, asbestos, PCBs, chlorinated and/or petroleum hydrocarbons.
- ∞ Managed multiple environmental assessments and mitigation programs of former

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (858) 945-7029
E-Mail: colin@cyaforensics.com

agricultural properties. Many possessed impairment by the historic and legal application of pesticides and/or natural occurrence of arsenic. In all situations, the impairment was managed on-site by controlled burial of the impaired soils, resulting in no need for costly or wasteful removal, transport and treatment/disposal of the same.

- Provided technical support for an underground storage tank (UST) investigation at San Diego International Airport's (Lindbergh Field) tank farm. The project was performed for the local Port Authority and involved the in situ inspection of the interior of numerous fuel tanks throughout the fuel farm. This activity required the use of Level B PPE in confined space environments.
- Provided management of a million-dollar environmental design contract for Naval Public Works Center (PWC), San Diego, California. Services included the development of SPCC Plans, preparation of RCRA Part B permits, performance of cathodic protection evaluations and the design of TSD facilities.
- Planned and managed a multitude of UST investigations for the Department of Defense at MCB Camp Pendleton, North Island NAS and 32nd Street Naval Station, California. The results of each investigation were used to develop remediation specifications for MCON projects planned at each site. The remedial programs were subsequently implemented using fixed or unit-cost pricing structures dependent on the prepared specifications. Remediation technologies applied included controlled aeration, vapor extraction (VES), pump and treat, and dig and dispose. All of the projects were performed either on or under budget.
- Provided operations management of a multi-million dollar fuel recovery/remediation project at the fuel farm at Naval Air Station North Island (NASNI), California. Ground water at the site had been impaired by a 2-3 foot thick layer of fuel hydrocarbon, released from a multitude of concrete USTs on the base. The remediation technology applied to date included pump and treat.
- Provided Delivery Order management of a large-scale asbestos survey project at Naval Amphibious Base, Coronado for Southwest Division NAVFACENGCOM.
- Planned and managed an assessment and remediation project at Fire Fighting Training Areas at Pacific Missile Test Center (PMTC) in Point Mugu and CBC Port Hueneme, California, for the Western Division NAVFACENGCOM. The remedial programs were subsequently implemented using fixed or unit-cost pricing structures dependent on the prepared specifications. Remediation technologies applied included VES and dig and dispose. Each of the projects was performed under budget.
- Removed and performed an investigation of multiple USTs located on agricultural property owned by the Viejas Indian Reservation. The property is slated for Casino and Resort expansion.
- Performed a UST investigation at several commercial service stations. Determined MTBE impacts to beneficial-use ground water. Data used to initiate a ground water investigation and remediation plans.
- Provided environmental support and waste characterization services for engineering (i.e.,

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (858) 945-7029
E-Mail: colin@cyaforensics.com

clean-out) projects performed within lead-impacted storm water basins throughout San Diego County.

- Provided technical and environmental management support for numerous engineering projects performed within lead-impacted areas along the highways of Orange County. Formulated a Lead Management Plan for the engineering/utility contractor providing the construction services for Caltrans.
- Provided environmental compliance support services to supplement an aerospace manufacturing company's environmental department. Products supported include the Hazardous Materials Business Plan, Storm Water Pollution Prevention (SWPP) Plan, Underground Storage Tank (UST) Program, Compliance Audit Program, etc.
- Providing environmental support to the owners of a property involved in litigation over the condemnation of the property by the local municipality acquisition.

ACADEMIC HISTORY

- University of Massachusetts, Amherst, Massachusetts, B.S., School of Environmental Science and Public Health, 1982
- Harvard School of Public Health, Boston, Massachusetts, Certificate of Risk Analysis in Environmental Health, 1985

PROFESSIONAL CERTIFICATIONS

- Certified Industrial Hygienist (CIH) No. 3987, American Board of Industrial Hygiene (ABIH), 1988; Recertified 1995, 2001, 2006, 2011, 2015
- Certified Safety Specialist/Executive (CSS/CSE), World Safety Organization (WSO), 1986 (inactive)
- AHERA-Certified Asbestos Inspector-California No. 855, U.S. EPA/UC Berkeley, 1989 (inactive)

PROFESSIONAL TRAINING

- Certificate in Professional Engineering Practice, ASFE/Institute for Professional Practice, 1990
  - Program Facilitator, 1991
- Professional "Loss Prevention" Training, ASFE, 1989
- Professional Management Training, Management Action Programs (MAP), 1990
- HazWOpER (29CFR 1910.120) Training, 1982; - Trainer, 1986-Present
- Guidelines for the Assessment of Microbiological Contamination, AIHA, 2002

PUBLICATIONS

- Fung M.D., F. Y., Young CIH, C. P., Mold-Associated Asthma, IAQ 2001, ASHRAE

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (858) 945-7029
E-Mail: colin@cyaforensics.com

PROFESSIONAL AFFILIATION HISTORY

- American Industrial Hygiene Association (AIHA), Fairfax, VA
- American Academy of Industrial Hygiene (AAIH), Lansing, MI
- American Lung Association, San Diego and Imperial Counties, CA, Member-Board of Directors, 2002-2006, Board Chair 2006
- ASFE, Silver Spring, MD
  - "Loss Prevention Education" Committee (1990-1991)
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- Association for Environmental Health and Sciences (AEHS), Amherst, MA
- American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, OH
- Institute for Professional Practice (IPP), Silver Spring, MD
- Society of American Military Engineers (SAME), San Diego, CA
- American Indoor Air Quality Council

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (858) 945-7029
E-Mail: colin@cyaforensics.com

DANIEL A. WEIS, R.E.H.S.

PROFESSIONAL HISTORY

Current

- C Young Associates (CYA), La Jolla, California, Senior Associate/Technical Advisor, 01/2009-Present
- Weis Environmental, Carlsbad, California, Environmental Manager, 8/2020-Present

Previous

- Advantage Environmental Consultants, San Marcos, California, Branch Manager, 11/2005-8/2020
- Rincon Consultants, Carlsbad, California, Project Manager, 11/2003-11/2005
- Geocon, Inc., San Diego, California, Project Manager, 11/2001-11/2003
- Geosoils, Inc., Carlsbad, California, Field Technician, 11/1999-11/2001

PROFESSIONAL EXPERIENCE SUMMARY

Twenty-one years of experience in the environmental sciences consulting field. Responsibilities include client development and management, project management, technical oversight and quality control for assessment, and remediation and construction oversight services. Clients include, but are not limited to, local government entities, developers (affordable housing and market rate), Federal government entities, law firms, architectural and engineering firms, commercial lending institutions, conservancies, commercial/industrial real estate owners/managers, insurance companies, wireless telecommunication carriers and other real estate developers. Experienced in the completion of assessment, construction and remediation quality assurance during the completion of urban redevelopment/brownfields projects, many of which have been located in downtown areas of San Diego, Los Angeles, Oakland, San Francisco, and other urban communities throughout the State of California.

Completed or managed over 2,500 due diligence related environmental assessments and completed or managed over 500 subsurface environmental investigations of soil gas, soil, groundwater and other media. Investigations have included human health and ecological risk assessments, evaluations of indoor air conditions based on interpretations of subsurface conditions, underground storage tank (UST) evaluation/closure and hazardous waste characterization/management. Subsurface activities performed include the completion of soil borings using various drilling technologies, soil and groundwater sampling, installation and sampling of groundwater monitoring wells, free product evaluations, exploratory trenching and real-time delineation using mobile analytical laboratories and other soil screening technology. Assets evaluated include industrial, commercial, residential, agricultural and vacant land sites throughout the State of California and numerous other states, with many of the assessments completed under the regulatory oversight of local environmental regulatory agencies, the California Regional Water Quality Control Boards (RWQCBs) and the California Environmental Protection Agency Department of Toxic Substances Control (DTSC). Has also conducted and/or managed hundreds of public/environmental health related assessments including electromagnetic field surveys, radionuclide surveys, indoor air quality investigations, radon surveys, drinking water assessments,

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (760) 672-6338
E-Mail: danw@cyaforensics.com

asbestos containing materials (ACM) and lead-based paint (LBP) surveys and mold/microbial evaluations.

Managed over 100 remediation or construction management related projects primarily related to source removal of subsurface contaminants, including but not limited to, petroleum hydrocarbons, chlorinated solvents, heavy metals, organochlorine pesticides and other agricultural related chemicals, dioxins and furans and polychlorinated biphenyls (PCBs). Has also assisted in cost recovery efforts from private parties and State/Federal funding programs for environmental assessment and remediation work and has served as an expert witness during legal proceedings pertaining to environmental related claims.

SPECIFIC PROJECT EXPERIENCE (COMPLETED WITH VARIOUS FIRMS)

- 14th and Island, San Diego, California – Development of Site Mitigation Plan, contaminated soil management and disposal concurrent with site construction activities at the superblock construction site in downtown San Diego and achievement of regulatory closure with the County of San Diego Department of Environmental Health.
- 2198 Market Street, San Francisco, California – Phase I and II Environmental Site Assessments, supplemental subsurface investigation, Site Mitigation Plan development, contaminated soil management and disposal concurrent with site construction activities and negotiation/achievement of regulatory closure with the City of San Francisco Department of Public Health.
- Former EZ Serve, 9305 Mission Gorge Road, Santee, California – Closure report preparation and San Diego Regional Water Quality Control Board interface and negotiation/achievement of regulatory closure under State of California low-threat policy.
- French Field – Former Vista Burn Dump, Oceanside, California – Oversight of the capping of a former burn dump/landfill facility and restoration for public use as a sports facility. Negotiation and achievement of regulatory closure with the California Department of Toxic Substances Control with concurrence from the San Diego Regional Water Quality Control Board and the County of San Diego Local Enforcement Agency.
- Indoor Skydiving Facility, 1401 Imperial Avenue, San Diego, California – Development of Soil Management Plan and contaminated soil management and disposal concurrent with site construction activities in downtown San Diego.
- Lemon Grove Avenue Realignment Project, Lemon Grove, California – Development of Impacted Soil Management Plan, Community Health and Safety Plan and Worker Health and Safety Plan and oversight of the implementation of such plans during construction activities.
- North Side Interior Road and Utilities Project at San Diego International Airport, San Diego, California - Subsurface assessment, development of Soil Management Plan and Work Health and Safety Plan and implementation and monitoring of soil management strategies.
- Olympic and Hill, Los Angeles, California – Removal of multiple underground storage tanks and underlying contaminated soil and achievement of regulatory closure with the City of Los Angeles Fire Department.
- San Ysidro - U.S. Land Port of Entry, San Diego, California – Subsurface assessment and development and implementation of soil management strategies.

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (760) 672-6338
E-Mail: danw@cyaforensics.com

- Tabata Ranch Site, Carlsbad, California – Development of Soil Management Plan and Community Health and Safety Plan, completion of soil removal action of petroleum hydrocarbon impacted soil, oversight and management of selective reuse and replacement of pesticide impacted soil and subsequent export of inert soils and achievement of regulatory closure with the County of San Diego Department of Environmental Health. Consent to discharge inert soils at an off-site receiving location was granted by the San Diego Regional Water Quality Control Board.
- VA Medical Center Long Beach, 5901 East 7th Street, Long Beach, California - VA Long Beach: Seismic Corrections – Mental Health, Community Living Center and Chiller Replacements Project – Asbestos containing materials and lead-based paint surveys and preparation of abatement contractor bid specifications.

EDUCATION

- Bachelor of Arts - University of Delaware, Newark, DE (1995)
- Master of Science – Public Health, San Diego State University, San Diego, CA (1998)

PROFESSIONAL REGISTRATIONS, LICENSES, AND CERTIFICATIONS

- Registered Environmental Health Specialist #8172 in the State of California
- OSHA 40-hour Hazardous Waste Operations Worker and Supervisor Certifications and Annual Refreshers

PUBLICATIONS

- Gersberg, R.M., Brown, C., Zambrano, V., Worthington, K., and Weis, D. (2000) Quality of urban runoff in the Tijuana River watershed. In Westerhoff, P. (editors), SCERP Monograph Series (no.2) on Water Issues Along the United States and Mexico Border. : Southwest Center for Environmental Research and Policy, 31-45.
- Weis, D.A., Callaway, J.C., and R.M. Gersberg (2001). Vertical Accretion Rates and Heavy Metal Chronologies in Wetland Sediments of the Tijuana Estuary. Estuaries 24(6A).
- Gersberg, R.M., Pitt, J.L., Weis, D.A., and D.D. Yorkey. Characterizing In-Stream Metal Loading in the Tijuana River Watershed. (2002). National TMDL Science and Policy Conference, Specialty Conference Proceeding on CD Rom, November 13-16, Phoenix, Arizona

PROFESSIONAL AFFILIATIONS

- Building Industry Association
- San Diego Environmental Professionals
- San Diego Housing Federation

C YOUNG ASSOCIATES
1042 Skylark Drive, La Jolla, CA 92037
Cell: (760) 672-6338
E-Mail: danw@cyaforensics.com

C Young Associates
Due Diligence Environmental Questionnaire - *OWNER*

Project Name/Location: Cactus and Airway
_____

APN 646-100-77-00
_____

Completed by: Joe Paez, Jr.
_____

Company or Organization: none
_____

Title: Owner.
_____

Date: _6/30/2022
_____

Please email completed questionnaire to colin@cyaforensics.com

1.) Who is the current owner of the subject property and when was it purchased?

_Joe Paez, Jr.
July 2002
_____
_____
_____

2.) Who are the past owners of the property and years of ownership (if available)?

_Curtis J. Corn.
_____
_____
_____

3.) What was the past use of the subject property?

I don't know
_____
_____
_____

4.) Are you aware of any environmental cleanup liens that are filed or recorded against the subject property?

_No_____
__
_____
_____

5.) Are you aware of any activity and land use limitations that are in place on the property that have been filed or recorded in a registry? No.

_____
_____
_____

6.) Are you aware of any specialized knowledge or experience related to the property or nearby properties that is pertinent to potential adverse environmental conditions?

_____No_____
__
_____
_____

7.) Are you aware of commonly known or reasonably obtainable information that would help C Young Associates to identify conditions indicative of releases or threatened releases of hazardous wastes/materials at the property? Such information includes knowledge of specific chemicals that are present or were once present on the property, spills or other chemicals releases that may have occurred, underground or aboveground storage tanks and environmental cleanups that have been conducted on the property.

____No._____
___
_____
_____

8.) Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

No._____
___
_____
_____

Please email completed questionnaire to colin@cyaforensics.com

ALDEN
ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

June 21, 2022

Ms. Rita Mahoney
Colrich
444 West Beech Street, Suite 300
San Diego, CA 92101

Subject: Biological resources due diligence on the Paez property

Dear Ms. Mahoney:

This letter report has been prepared in support of Colrich's due diligence effort on the approximately 40-acre Paez property (site; Assessor's Parcel Number 646-100-77-00).

INTRODUCTION

The site is located in the Central Valley Specific Plan (CVSP) Area of the Otay Mesa Community in the City of San Diego (City). The site is undeveloped and is located south of State Route 905, east of Cactus Road, and North of Airway Road (Figures 1 and 2). The proposed Britannia Airway Logistics Center Project is located to the south, and the Lumina/Epoca project that is currently under development is located to the west.

METHODS

Prior to surveying the site, aerial imagery of the site was reviewed, as well as available maps, sensitive species database records, and existing conditions material for the site. These included:

- National Wetlands Inventory (NWI)/National Hydrography Dataset (NHD) mapping;
- California Natural Diversity Database and U.S. Fish and Wildlife Service Listed Species Database;
- Otay Mesa Community Plan Update Final Environmental Impact Report (Final EIR; City 2014);
- Addendum to the Program EIR for the adjacent Lumina/Epoca project (City 2019);
- Biological Resources Letter Report for the Floreo Project (REC Consultants 2019; covers the same Assessor Parcel);
- Biological Technical Report for the Britannia Airway Logistics Center Project (Alden 2021); and
- Proposed site plans

Biologist Greg Mason surveyed the site on December 8 and 16, 2021 to check the current conditions on the site as compared with the NWI and NHD mapping as well as the resource mapping done in 2018 by REC Consultants (2019). A third visit was conducted on June 20, 2022 to confirm the mapping and identify any changes that may have occurred since the prior visits.

RESULTS

Vegetation Communities

Alden concurs with REC's general mapping of the site. Non-sensitive disturbed/developed land accounts for the majority of the site (approximately 37.8 acres). In addition, there approximately 0.05 acre of disturbed wetland located in a drainage ditch in the northwestern corner of the site (Figure 3). A formal delineation has not yet been conducted for this drainage; therefore, it is being mapped now as disturbed wetland. It is possible that some of the channel would be classified as a non-wetland (no wetland vegetation) following a formal delineation. For now, the drainage is mapped as disturbed wetland, in conformance with the prior REC mapping and for due diligence purposes.

Impacts to disturbed wetland would require agency permitting and mitigation as described below under Waters and Wetlands.

Waters and Wetlands

The site contains a drainage feature mapped as disturbed wetland (Figure 3), which is a ditch that originates off site on the south side of State Route 905. Alden concurs with REC Consultants (2019) that this feature would likely fall under the jurisdiction of California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and/or the Regional Water Quality Control Board. Furthermore, the section between State Route 905 and Cactus Road may very well be considered City wetland requiring avoidance and a buffer. With the requirement that Cactus Road be widened per CVSP Roadway Standards, it is not possible to avoid impacting this jurisdictional drainage feature. Impacts to this feature would require agency permitting, which would take 18 to 24 months, and mitigation at an anticipated ratio of 3:1 (for no net loss of wetlands).

There is no currently available wetland mitigation bank that serves this portion of Otay Mesa. While distant, the site could technically obtain mitigation in the San Luis Rey mitigation bank. The site is within the greater tertiary service area for the bank and, arguably, could be used for the project, provided it can be shown that no other alternatives are feasible. The bank is also approximately 10 watersheds away from the project site. The agencies typically add an additional 1:1 mitigation requirement for each watershed. So, with a starting point of 3:1 and an additional 10 watersheds distance, the project could face a mitigation ratio of 13:1, if using this bank. With an estimated cost of $600,000 per acre of credit, the project would be required to make a payment of $390,000 for the required mitigation credits (0.65 acre credits at $600,000).

Sensitive Species

Species of particular concern for the site are Quino checkerspot butterfly and burrowing owl.

REC Consultants (2019) stated that there is no suitable Quino checkerspot habitat or Quino checkerspot host plants present on site; Alden agrees with this. Therefore, this species is not expected and would not affect site development.

REC Consultants (2019) concluded that the burrowing owl has moderate potential to occur on site because it is a highly mobile species that can quickly colonize a new location. REC did not, however, observe any burrowing owl sign on site and stated that there appeared to be a paucity of suitable prey and fossorial small mammals (creating burrows the owl could use), making the site lower quality potential habitat. Alden concurs with this assessment and also did not observe any burrowing owl sign on site during its site surveys. However, conditions for coverage under the MSCP for the burrowing owl require that during the environmental analysis of proposed projects, a burrowing owl survey (using appropriate protocols) be conducted in suitable habitat to determine if this species is present and the location of active burrows. Therefore, Alden recommends a focused burrowing owl breeding season (February 1 to August 31) survey on the site in 2023.

Small-flowered morning glory was found on the adjacent Lumina/Epoca site and could also be present on the Paez property, but the species' sensitivity level is low, and impacts to it are likely to be less than significant (as they were for Lumina/Epoca). REC Consultants (2019, Attachment F) stated that it has moderate potential to occur. Since this species was observed on the Lumina/Epoca project site and it can reappear from seed bank in formerly farmed fields, Alden agrees that is has moderate potential to occur. In order to determine if this species is present and to confirm the conclusions regarding other plant species drawn by REC Consultants (since REC Consultants did not conduct a sensitive plant species survey), Alden recommends a focused sensitive plant species survey for the site in spring 2023.

CONCLUSION

The requirement to impact the jurisdictional drainage feature in the northwest corner of the site for Cactus Road widening would result in the need for agency permits and mitigation. No other significant biological resources impacts are anticipated pending negative survey results for the burrowing owl and sensitive plant species.

Please contact me if you have any questions regarding this letter report.

Sincerely,



Greg Mason
Senior Biologist

Enclosures:
Figure 1 – Regional Location
Figure 2 – Project Location
Figure 3 – Biological Resources

References:

Alden Environmental, Inc. 2021. Biological Technical Report for the Britannia Airway Logistics Center Project. December 17.

City of San Diego. 2019. Addendum to a Program Environmental Impact Report, Project Number 555609, Addendum to PEIR No. 30330/304032, SCH No. 2004651076, Lumina Tentative Map, Right-of-Way Vacation, Easement Vacation, Neighborhood Development Permit, Site Development Permit, and MHPA Boundary Line Adjustment.

2018. Land Development Code – Biology Guidelines, as amended February 1, 2018. City of San Diego Development Services Department.

2014. Otay Mesa Community Plan Update Final Environmental Impact Report. Revised February 21.

REC Consultants. 2019. Biological Resources Letter Report for the Floreo Project; Airway Road and Cactus Road, San Diego, California, APN 646-100-77-00; Prepared for the City of San Diego, Project No. 620164. October 30.

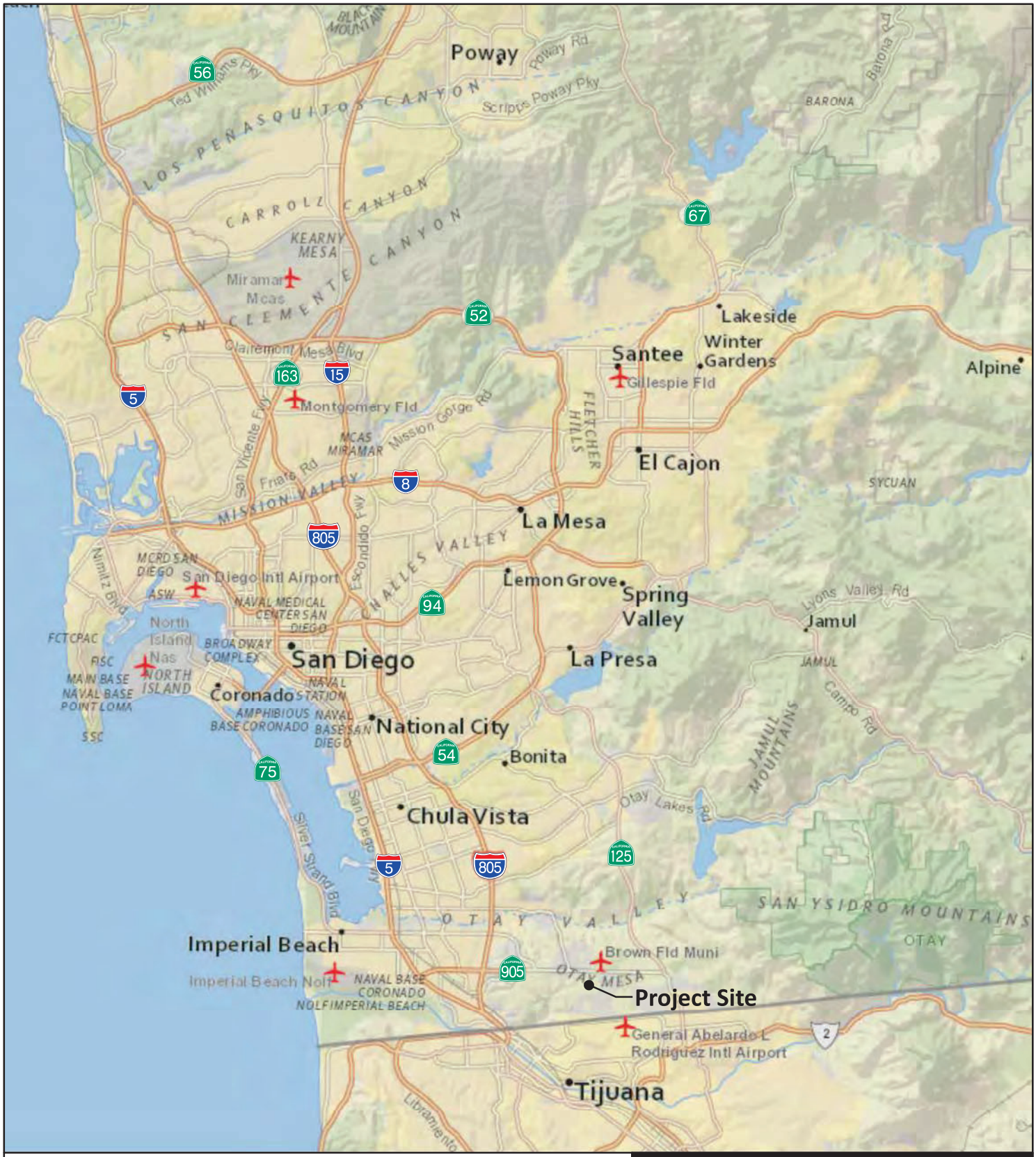


Figure 1

Regional Location

PAEZ PARCEL
APN 64610077

N
W E
S

0 2 4 Miles

ALDEN ENVIRONMENTAL, INC



Parcel Boundary
MHPA

N
W E
S

0 1,000 2,000
Feet

ALDEN
ENVIRONMENTAL, INC

Figure 2

Project Location

PAEZ PARCEL
APN 64610077



Parcel Boundary
Survey Area

Vegetation

Disturbed Wetland
Disturbed Land
Developed

N
W E
S

0 100 200
Feet

ALDEN
ENVIRONMENTAL, INC

Figure 3

Biological Resources

PAEZ PARCEL
APN 64610077

R·E·C Civil Engineering Environmental Land Surveying
rec-consultants.com

2442 Second Avenue
San Diego, California 92101
Phone: 619.232.9200
Fax: 619.232.9210

January DATE, 2021

Joseph Paez, Jr.
Bcs Produce Company, Inc.7808 Saint Andrews Avenue
San Diego, CA 92154

Subject: **Biological Resources Letter Report for the Floreo Project; Airway Road and Cactus Road, San Diego, California, APN 646-100-77-00; Prepared for the City of San Diego**

Dear Mr. Paez:

REC Consultants, Inc. has prepared this letter report to address potential development-related impacts to biological resources on the Floreo project site.

SUMMARY

The Floreo project (Project) will develop Planning Areas 10, 11, 12, 13, and 17 in accordance with the Central Village Specific Plan (CVSP). The Project is not within or adjacent to the City of San Diego's Multi-Habitat Planning Area, will impact only disturbed and developed land, and will not result in any significant impacts to biological resources.

INTRODUCTION

Project Description

The Project will develop the five Planning Areas (PAs) according to the CVSP as Mixed Use (PA 10), Medium Residential (PAs 11 and 12), Medium to Medium-High Residential / Multi-Family) (PA 13), and Park (PA 17). These uses for the PAs are shown in the CVSP Figure 2.2-1, provided in **Attachment A**. The Project also includes an offsite underground culvert to transport water under Cactus Road from the onsite detention basin to an outlet on the west side of the road. The construction staging area will be near the northern end of Cactus Road, where it dead-ends at State Route 905 (SR-905). Groundwork is scheduled to begin in the first or second quarter of 2021.

Project Location and Setting

Location

The 40-acre Project site (Site) is located on Assessor's Parcel Number (APN) 646-100-77-00 in the CVSP Area of the Otay Mesa Community in the City of San Diego (City), approximately three miles southeast of the intersection of Interstate 805 (I-805) and SR-905 and one mile north of the U.S.-Mexico border (**Figures 1** and **2**). The Site is bordered by SR-905 to the north; Airway Road and undeveloped land to the south; graded/developed land to the east; and Cactus Road, undeveloped land, and light industrial land to the west (**Figure 3**).

Regulatory Setting

The Project is located in the City of San Diego. Multiple federal, State and local laws and regulations protect and conserve biological resources. Major regulations that apply to the Project are summarized below.

Federal Endangered Species Act

The U.S. Congress passed the 1973 federal Endangered Species Act (ESA) (and later amendments) to protect and recover imperiled species and the ecosystems upon which they depend. The federal ESA has four major components: 1) Section 4, which provides for listing species and designating critical habitat; 2) Section 7, which requires federal agencies, in consultation with the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of species or result in the modification or destruction of critical habitat; 3) Section 9, which prohibits "taking" of listed species; and 4) Section 10, which provides for permitting incidental take of listed species. Under the ESA, to "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. A project that does or may support a species protected by the federal ESA may be subject to federal ESA regulation.

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984 generally parallels the main provisions of the federal ESA and is administered by the California Department of Fish and Wildlife (CDFW); it prohibits take of any species that CDFW has classified as threatened or endangered, or that is experiencing a significant decline that could lead to such as designation, and permits take incidental to otherwise lawful development projects with approval from CDFW.

California Environmental Quality Act

The California Environmental Quality Act, or CEQA, is a statute first created in 1970 that requires State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. Every development project that requires a discretionary governmental approval requires at least some environmental review pursuant to CEQA, unless an exemption applies. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource; instead, lead agencies are charged with determining what should be considered a significant impact, according to the CEQA Guidelines.

Natural Communities Conservation Planning Act

The State of California's Natural Communities Conservation Planning (NCCP) Act of 1991 and 2003 is intended to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (and later amendments) was passed by Congress to provide protection to the breeding activities of migratory birds throughout the United States. The MBTA makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts (including feathers), nests, or eggs of such a bird except under the terms of a valid Federal permit. All birds in California except those

specifically excluded (such as non-native birds and certain "game" birds) are protected by this act. The Project will comply with the provisions of the MBTA.

Bald and Golden Eagle Protection Act

The Bald Eagle Protection Act was enacted in 1940 to prohibit the take, transport, or sale of bald eagles, their eggs, or any part except where expressly allowed by the Secretary of Interior, and was amended in 1962 to also cover golden eagles.

Clean Water Act

The 1972 Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating surface water quality standards. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters of the United States unless a permit was obtained. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into "Waters of the U.S."

California Fish and Game Code

California Fish and Game Code regulates the taking and possession of birds, mammals, fish, amphibians, and reptiles, as well as impacts to natural resources such as lakes and streams. It includes the CESA described above, Lake and Streambed Alteration (LSA) Agreement regulations (Sections 1600-1616), provisions for legal hunting and fishing, tribal agreements for activities involving take of native wildlife, protection of nests and eggs of all birds except as otherwise provided by Fish and Game Code (Section 3503), protection of all raptors and their nests and eggs except as otherwise provided (Section 3503.5), and the California Native Plant Protection Act (Section 1900-1913).

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State" and gave CDFW the power to designate native plants as Endangered or Rare and to protect such designated plants from take.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act protects wetlands and waters as "Waters of the State" and designated the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) as the principal State agencies with primary responsibility for the coordination and control of water quality. "Waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." State Resolution 2008-0026 effectively extended jurisdiction of the SWQCB to wetlands as defined in accordance with the federal definition for the Clean Water Act. Impacts to Waters of the State require notification/permitting through the RWQCB and usually also require compensatory mitigation, although this mitigation is typically handled through the USACE and/or CDFW.

California Coastal Commission and Coastal Act

In response to 1972 federal coastal zone management legislation, which encouraged and funded states to implement responsible coastal zone management, the State of California established the California Coastal Commission in 1972 and adopted the California Coastal Act in 1976. The Coastal Commission, in partnership with coastal cities and counties, regulates the use of land and water in the coastal zone. Development in the coastal zone generally requires a permit from either the Coastal

Commission or the local government. The Coastal Act includes specific policies that address, among other things, shoreline public access and recreation, terrestrial and marine habitat protection, water quality, and development design. The Project Site is not within the City's Coastal Overlay Zone.

Multiple Species Conservation Program

The 1998 Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation planning program for a 900-square-mile area in southwest San Diego County. It allows local jurisdictions to plan regional preserve systems while maintaining land use control and providing development flexibility. Local jurisdictions implement their own Subarea Plans. The City of San Diego's Subarea Plan (1997) covered approximately 206,124 acres at the time it was created in 1997, and its hard-line preserve Multi-Habitat Planning Area (MHPA) covers approximately 47,910 acres. The nearest MHPA lands are approximately 0.15 mile west of the Site. Therefore, the Project is not subject to regulations pertaining to projects within or adjacent to the MHPA.

City of San Diego Land Development Code Biology Guidelines

The Land Development Code Biology Guidelines were formulated by the City of San Diego Development Services Department to help implement the City's Environmentally Sensitive Lands Regulation, Land Development Code, and Open Space Residential Zone Code, and to guide determination of impacts and mitigation under CEQA and the Coastal Act (City of San Diego 2018a). The Biology Guidelines specifically guide protection for sensitive biological resources including narrow endemic species; habitat for rare, endangered or threatened species; vegetation communities in Tiers I, II, IIIA or IIIB; MHPA lands; and those areas outside the MHPA that qualify as wetlands according to the City of San Diego wetland definition.

City of San Diego Environmentally Sensitive Lands Regulations

The Land Development Code contains restrictions on development within Environmentally Sensitive Lands (ESL). ESL regulations are intended to "protect, preserve and, where damaged, restore the environmentally sensitive lands of San Diego and the viability of species supported by those lands." These regulations are intended to assure that development, including, but not limited to coastal development in the Coastal Overlay Zone, occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to flooding in specific areas while minimizing the need for construction of flood control facilities. They are intended to protect the public health, safety, and welfare while employing regulations that are consistent with sound resource conservation principles and the rights of private property owners.

Otay Mesa Community Plan Update

The Project is also within the Otay Mesa Community, which recently had a community plan update. The Otay Mesa Community Plan Update (OMCPU) (City of San Diego 2014) was again updated in 2017 to include the CVSP. The 229.2-acre CVSP is a mixed-use "village" located in the central portion of the Otay Mesa Community. The primary purpose of the CVSP (City of San Diego 2017a) is to implement the City General Plan "City of Villages" strategy and guide the development of a mixed-use village by providing site-specific land use design standards and policies. The CVSP consists of Planning Areas (PAs). This report addresses the five PAs in the northeastern corner of the Specific Plan: PA 10, 11, 12, 13, and 17. The PAs are planned for Mixed Use (PA 10), Medium Residential (PAs 11 and 12), Medium to Medium-High Residential/Multi-Family) (PA 13), and Park (PA 17). CVSP impacts to biological resources were addressed in an addendum to the

Environmental Impact Report (EIR) for the OMCPU. The EIR addendum included a Biological Resources Report Addendum (BRRA) (Alden 2017) that evaluated CVSP impacts relative to impacts addressed in the OMCPU, and also required preparation of site-specific biological resources surveys before implementing development projects in accordance with the City Biology Guidelines.

METHODS AND SURVEY LIMITATIONS

Biological resources on the Site were investigated through records review and a Site survey. Records review consisted of a search of RareFind5 California Natural Diversity Database (CNDDB) documentation of special-status plant and animal species within the Project USGS 7.5-minute quadrangle (Otay Mesa) and surrounding quadrangles (National City, Jamul Mountains, Dulzura, Imperial Beach, and Otay Mountain), the CVSP, the EIR addendum for the OMCPU (City of San Diego 2017b), the EIR addendum BRRA, and soil maps and descriptions from the USDA Web Soil Survey. One general biological field survey was conducted, as summarized in Table 1, below.

Table 1. Site Survey on the Project Site

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
7/31/2018	0830 to 0955	75-81	Sunny, hazy	0-3 to 2-6	General biological	C. MacGregor

REC Senior Biologist and Botanist Catherine MacGregor conducted a general biological survey on the Site to document current conditions and biological resources (see **Attachment B** for her resume). All onsite vegetation and land cover types were mapped, and all observed plant and animal species were documented. Wildlife species were identified directly by sight or vocalizations and indirectly by scat, tracks, burrows, nests or other sign. Any observed special-status species were documented, and suitability of habitat for special-status species was evaluated based on factors including soil, topography, elevation, water availability, microhabitats such as boulders, vegetation, proximity to development, size of overall habitat, and presence/absence of suitable prey, as applicable. Habitats and wildlife on surrounding properties were observed from the Site or public roadways. Mapping of resources on the Site was conducted on an aerial photograph scaled at approximately 1 inch = 50 feet.

Site survey limitations include under-representation of growing-season vegetation due to discing of the field, spring-blooming annuals due to time of year, summer-flowering plants due to low rainfall, and nocturnal wildlife due to time of day.

Vegetation communities and land cover classification in this report follow Holland (1986) as updated by Oberbauer et al. (2008), as well as City-specific guidelines. Plant taxonomy and nomenclature in this report follow the Jepson eFlora (Jepson 2018) and the Jepson Manual, 2nd edition (Baldwin et al. 2012) for taxonomy and scientific names, and Checklist of the Vascular Plants of San Diego County, 5th Edition (Rebman and Simpson 2014) for common names, with some rare plant common names from the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2018). Wildlife taxonomy and nomenclature in this report follow *San Diego County Mammal Atlas* (Tremor et al. 2017) for mammals, Avibase (Lepage 2015) for birds, California Herps (Nafis 2015) for reptiles and amphibians, Butterflies of America (Warren et al. 2015) for butterflies, BugGuide (ISUDE 2015) for other insects and arachnids, and the Integrated Taxonomic Information System (ITIS 2015) for other invertebrates, as well as the San Diego Natural History Museum

spider, butterfly, bird, reptile, and amphibian checklists for localized subspecies information (SDNHM 2002, 2005, and undated).

SURVEY RESULTS

Physical Characteristics

Geology and Soils

The Site is located on a marine wave-cut terrace approximately 8.5 miles inland, and 1.3 miles south of the Otay River valley. Site topography is nearly flat with elevation ranging from approximately 500 feet (152 meters) to 515 feet (157 meters) above mean sea level. According to the U.S. Department of Agriculture (USDA) Web Soil Survey (USDA 2018), three soil types occur onsite: Olivenhain cobbly loam, 30 to 50 percent slopes (OhF); Stockpen gravelly clay loam, 0 to 2 percent slopes (SuA); and Stockpen gravelly clay loam, 2 to 5 percent slopes (SuB). The Olivenhain series consists of well-drained, moderately deep to deep cobbly loams that have a very cobbly clay subsoil. These soils formed in old gravelly and cobbly alluvium and occur on dissected marine terraces. Because the Site is now flat, formerly sloping areas onsite may have historically been filled or leveled. The Stockpen series consists of moderately well drained, moderately deep gravelly clay loams. These soils are on marine terraces, with clay content and a clay substratum. SuA is nearly level and SuB is gently sloping, with slow runoff and light erosion hazard. Included in mapping are small areas of Diablo, Huerhuero, and Salinas soils.

Stockpen soils, where undisturbed, can support mima mound topography associated with vernal pools but no mima mound topography was observed. These soils also have clay content, associated with specific rare plants in addition to vernal pool plants. However, the soil has been heavily disturbed for so long that any previously occurring special-status plants are very unlikely to reoccur.

Habitats

During REC's Site survey, three habitats/land cover categories were observed onsite: disturbed land, disturbed wetland, and developed land, as shown in **Figure 4**. Vegetation in these categories is described in the Biological Resources – Flora section below.

Sensitive Lands and Critical Habitats

The Site does not support any Tier I, II, IIIA, or IIIb habitat environmentally sensitive lands. The Site would not serve as a wildlife corridor because it does not form a connection to other potential wildlife habitat nearby. Use of the Site as a wildlife nursery site is very unlikely because of the lack of habitat onsite and proximity to SR-905 and development. The Site is also unlikely to serve as a "stepping stone" habitat because it supports inadequate habitat. The Site does not support Critical Habitats of any endangered species.

The Site contains a drainage feature mapped as disturbed wetland (see **Figure 4**), which was evaluated as a potential environmentally sensitive land. It is a ditch that originates offsite on the south side of SR-905 where a culvert empties into riprap. Stormwater flow, when present, follows the ditch toward Cactus Road parallel to the northern property boundary, turns sharply south when it reaches Cactus Road, enters a culvert to pass under Cactus Road, and empties into a riprap-lined

channel on the west side of Cactus Road. The Oberbauer category 11200 “disturbed wetland” was used because it applies to ditches (Oberbauer et al. 1998), but use of this category does not necessarily indicate wetland jurisdictional status.

The drainage was also evaluated as a potentially jurisdictional wetland/waters/streambed. This evaluation included historical conditions research. Based on a review of aerial photographs on historicaerials.com (NETR 2019), a ditch or path of flow in or near the northwestern corner of the Site has been present since at least 1953 (oldest aerial photograph available). At that time, the Cactus Road alignment was already present, and the path of flow appears to have originated at an agricultural pond next to an orchard, located in what is now the SR-905 right-of-way just north of the Site boundary. The original path of flow appears to have passed under Cactus Road and continued southwest toward Spring Canyon. In the aerial photographs between 1981 and 1994, the agricultural pond dried out, and development in the general area increased. By 1994 the former agricultural pond and ditch appear to have attained their current configuration of a northern east-to-west arm and western north-to-south area before flowing west under Cactus Road. In the 2010 aerial, grading for construction of SR-905 is visible. In 2018 Google Earth imagery, the presence of the SR-905 culvert and rip rap at the upstream end and connection to the riprap-lined channel west of Cactus Road indicates that the ditch now serves as a maintained stormwater conveyance to carry runoff from inlets between the east and west-bound sides of SR 905 to the natural drainage in Spring Canyon.

The ditch could fall under jurisdiction of CDFW, U.S. Army Corps of Engineers (USACE), and/or the Regional Water Quality Control Board (RWQCB) because it at least occasionally conveys water, and a bed and bank are present. Mapping of the onsite ditch for this report is based on the outer edges of the banks. This corresponds to the top-of-bank jurisdictional limits of CDFW streambed and RWQCB Waters of the State. USACE-jurisdictional Waters of the U.S. would be between the tops of banks. Therefore, the disturbed wetland habitat shown in Figure 5 corresponds to the maximum potential jurisdictional area. Technical delineation reports according to the standards of these three agencies are not needed because the Project is intentionally set back from the maximum potential jurisdictional limits and will not impact the ditch.

Wetlands are also regulated by the City of San Diego. The definition of wetlands in ESL is intended to differentiate uplands (terrestrial areas) from wetlands, and to differentiate naturally occurring wetland areas from those created by human activities. Naturally occurring wetland vegetation communities are typically characteristic of wetland areas. Common to all wetland vegetation communities is the predominance of hydrophytic plant species (plants adapted for life in anaerobic soils). Seasonal drainage patterns that are sufficient to etch the landscape (i.e. ephemeral/intermittent drainages) may not be sufficient enough to support wetland dependent vegetation and would not satisfy the City’s wetland definition unless wetland dependent vegetation is either present in the drainage or lacking due to past human activities. (City of San Diego 2018a)

Review of historical aerial photographs does not clarify whether the ditch is the remains of an original natural drainage or was artificially created by agricultural and development runoff. The ditch contained a few wetland plants, and two willows are located in the channel north of the Site where waters enters from under SR-905, but cover of wetland plants is assumed to vary seasonally and a predominance of wetland plants was not confirmed. Water supply is also artificially supported by onside ponding of SR-905 run-off below the culvert that carries stormwater runoff under Cactus Road. For these reasons, the status of the ditch as a City wetland is unclear. However, for the

purposes of this report, the section between SR-905 and Cactus Road will be treated as a City wetland and provided with a buffer.

The section west of Cactus Road is not a City wetland. The channel in this area is completely lined with riprap, which could prevent growth of wetland vegetation. However, a similar riprap-lined channel into which this one flows does support vegetation visible in Google Earth imagery, indicating that the riprap is not the reason for lack of hydrophytic vegetation. The section west of Cactus Road would be considered an ephemeral/intermittent drainage that does not satisfy the City's wetland definition (City of San Diego 2018a).

Impacts to any wetlands and waters must be avoided or minimized to the maximum extent possible, so the Project was designed to completely avoid the ditch both onsite and offsite west of Cactus Road. Because the Project completely avoids impacts to the drainage ditch, no permits from CDFW, U.S. Army Corps of Engineers, or Regional Water Quality Control Board are necessary.

Biological Resources

Botanical Resources - Flora

All plant species observed in the three habitats / land cover types onsite are listed in **Attachment C**. Each habitat/land cover type is described below. Representative photographs are provided in **Attachment D** and photograph locations are shown in **Figure 5**.

Disturbed Land (Habitat Code, Tier IV)
Disturbed land occupies approximately 38.68 acres onsite. Disturbed land consists of areas "that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites." (Oberbauer et al. 2008) Disturbed areas are usually associated with prior development (e.g., previous grading) or agricultural use (City of San Diego 2012).

In the 2017 EIR Addendum to the OMCPU and its accompanying BRRA, the Site was mapped as non-native grassland with a narrow border of disturbed land. However, vegetation observed during the REC's 2018 Site visit indicated that disturbed land is a better classification. The City provides specific guidelines for distinguishing between non-native grassland and other disturbed areas such as ruderal or agricultural/fallow.

Non-native grassland typically includes at least 50% cover of the entire herbaceous layer attributable to annual non-native grass species, although other plant species (native or non-native) may be intermixed. Other common plant species found in non-native grassland include filaree (*Erodium* spp.), California poppy (*Eschscholzia californica*), tocalote (*Centaurea melitensis*), mustards,

artichoke thistle (*Cynara cardunculus*), sweet fennel (*Foeniculum vulgare*), and others. (City of San Diego 2012)

Other disturbed areas include lands commonly defined as ruderal habitat or agricultural/fallow. Ruderal habitat typically develops on sites with heavily compacted soils following intense levels of disturbance such as grading. Agricultural/fallow lands include areas of active agricultural cultivation (e.g., nurseries, orchards, field crops) and fallow areas which have been disturbed in the recent past by cultivation or agricultural activity. Disturbed areas are usually associated with prior development (e.g., previous grading) or agricultural use. These areas can consist of bare ground, or when vegetated, are dominated by at least 50% cover of invasive broad-leaved non-native plant species including, but not limited to, horseweed (*Erigeron* spp.), garland daisy (*Glebionis coronaria*), pineapple weed (*Matricaria discoidea*), sow-thistle (*Sonchus* spp.), Russian-thistle (*Salsola* spp.), mustards, knotweed (*Polygonum* spp.), bur-clover (*Medicago polymorpha*), fennel (*Foeniculum vulgare*) and others. Minor amounts of other species including non-native annual grasses can also be present. (City of San Diego 2012a)

To distinguish between non-native grassland and other disturbed areas, the relative percent cover of the herbaceous species should be used as a diagnostic tool. Within the area in question, the percent cover and relative percent cover of all herbaceous species should be assessed. Vegetative cover is usually determined by visual estimate. If native habitats have been ruled out and if the majority (50% or greater) of the observed species are introduced members of the Poaceae family, then the area should be characterized as non-native annual grassland. In cases where vegetative cover cannot easily be determined by visual estimate, a more detailed procedure is followed. (City of San Diego 2012) In this case, visual estimation was sufficient. Although overall cover was very low, herbaceous species had grown on the disced portion of the Site between the last time it was disced and REC's 2018 Site visit.

The dominant and common species were garland daisy, short-pod mustard (*Hirschfeldia incana*), nettle-leaf goosefoot (*Chenopodium murale*), London rocket (*Sisymbrium irio*), and cheeseweed (*Malva parviflora*) (see photographs 1, 3, 4 and 5). Very few non-native grasses were observed re-growing in the disced area. Non-native grasses were present in the ruderal vegetation at the edges of the field previously mapped as disturbed land (photographs 3 and 6), but were outnumbered by other broadleaf species including Australian tumbleweed/Russian-thistle (*Salsola australis*), black mustard (*Brassica nigra*), prickly lettuce (*Lactuca serriola*), castor bean (*Ricinus communis*), and fennel. Overall, based on observed cover of living and intact dead plants, the disced field and edges were best classified as disturbed land. In a few locations, un-disced piles of dumped rubble or debris are more densely vegetated with Russian-thistle and garland daisy.

The offsite culvert impact area includes 0.01 acre of disturbed land.

<u>Disturbed Wetland (Habitat Code 11200, Wetland)</u>
Disturbed wetland occupies approximately 0.04 acre onsite. The disturbed wetland habitat category consists of areas permanently or periodically inundated by water, which have been significantly modified by human activity. This includes portions of wetlands with obvious artificial structures such as concrete lining, barricades, riprap, piers, or gates. They are often unvegetated, but may contain scattered native or non-native vegetation. Examples include lined channels, Arizona crossings, detention basins, culverts, and ditches. (Oberbauer et al. 2008)

A drainage ditch in the northwestern corner of the Site was classified as disturbed wetland. This ditch connects storm water flow from a culvert under SR-905 to a culvert under Cactus Road (see photograph 2). Vegetation in the ditch onsite was dominated by upland non-native species such as short-pod mustard and castor bean, transitional non-natives such as bristly ox-tongue (*Helminthotheca echioides*) and curly dock (*Rumex crispus*), and a small patch of the wetland plant California bulrush (*Schoenoplectus californicus*). A black willow (*Salix gooddingii*) is located just offsite to the northwest.

Developed Land (Habitat Code 12000, no Tier)
Developed land occupies approximately 1.33 acre onsite. This land cover category consists of areas "that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that require irrigation. Areas where no natural lands is evident due to a large amount of debris or other materials being placed upon it may also be considered urban/developed (e.g. car recycling plant, quarry)." Developed land is typically unvegetated, or landscaped with a variety of ornamental (usually non-native) plants. (Oberbauer et al. 2008)

Developed land onsite is limited to the portion of Airway Road within the parcel boundary.

The offsite culvert impact area includes 0.03 acre of developed land.

Zoological Resources - Fauna

Animal species were identified by sight, call, and sign such as scat or shells. All wildlife observed onsite are listed in **Attachment E**.

Wildlife observed in disturbed land included western pygmy-blue butterfly (*Brephidium exilis*), Mexican cactus fly (*Copestylum mexicanum*), dragonfly (Suborder Anisoptera), horned lark (*Eremophila alpestris*), mourning dove (*Zenaida macroura*), and coyote (scat) (*Canis latrans*).

Wildlife observed in the disturbed wetland drainage ditch consisted of brown garden snail (*Helix aspersa*) and desert cottontail rabbit (*Sylvilagus audubonii*).

No wildlife was detected in developed land onsite. An American kestrel (*Falco sparverius*) was observed at the top of a utility pole along Cactus Road adjacent to the northwestern property boundary.

Rare, Threatened, Endangered, Endemic and/or Sensitive Species or MSCP-covered Species

For the purposes of this report, a sensitive or special-status plant or animal is any species, subspecies, or variety that is officially listed by the State of California or the federal government as Endangered, Threatened, or Rare, or a candidate for one of those listings; classified as Fully Protected, Species of Special Concern, or Watch List by the California Department of Fish and Wildlife (CDFW); included in California Rare Plant Ranks (CRPR) 1 through 4; covered by the MSCP; or included in the City of San Diego Narrow Endemics list.

Observed Special-Status Species

No special-status plants were observed. One special-status animal species was observed onsite:

California horned lark (*Eremophila alpestris actia*), State Watch List. This species inhabits open patches of bare land alternating with low vegetation in grasslands, montane meadows, sagebrush and open coastal plains, fallow grain fields, and alkali flats. It is tolerant of disturbance, but sensitive to habitat fragmentation. Horned larks remain somewhat common on grasslands and disturbed lands on Otay Mesa. A flock of at least 25 individuals was observed foraging in the central and eastern areas of the Site.

Special-Status Species with Potential to Occur Onsite

Lists of special-status plants and animals with the potential to occur on the Site were generated from the CNDDB RareFind5 database. The resulting lists include any special-status species documented within the Site's USGS 7.5-minute quadrangle or surrounding quadrangles and within an applicable elevation range. **Attachment F** provides information on these special-status plant species, as well as an evaluation of potential for each species to occur onsite, based on CNDDB, the CNPS Inventory of Rare and Endangered Plants (online version, 2018), Reiser's *Rare Plants of San Diego County* (2001), SDNHM's Herbarium Collection Map (SDNHM 2012), and Jepson eFlora (Jepson Flora Project 2018), professional experience, and field observations. **Attachment G** provides information on these animal species, and an evaluation of the potential for each species to occur onsite, based on species requirements, CNDDB search results, *San Diego County Mammal Atlas* (Tremor et al. 2017), *San Diego County Bird Atlas* (Unitt 2004) and Google Earth Bird Atlas (SDNHM 2018), Amphibian and Reptile Atlas of Peninsular California (SDNHM 2018), and field observations.

No special-status plant or wildlife species have high potential to occur onsite.

Other Species Considered

The BRRA for the CVSP identified the following species as potentially subject to significant impact. It should be noted that field surveys for the BRRA did not include the Project Site.

- Ashy spike-moss (*Selaginella cinerascens*),
- San Diego sunflower (*Bahiopsis laciniata*),
- Seaside cistanthe (*Cistanthe maritima*),
- Small-flowered morning-glory (*Convolvulus simulans*),
- Quino checkerspot butterfly (*Euphydryas editha quino*),
- Coastal California gnatcatcher (*Polioptila c. californica*), and
- Burrowing owl (*Athene cunicularia*).

Based on REC's Site survey, small-flowered morning-glory could have low potential to occur onsite because it is somewhat widespread, suitable soils occur or occurred onsite, and it can reappear from old seed bank in formerly farmed fields. However, it was not observed and the Site has likely been too heavily disturbed to support this species.

Burrowing owl has moderate potential to occur onsite because it is a highly mobile species that can quickly colonize a new location. However, no burrowing owl sign was observed onsite and there appeared to be a paucity of suitable prey and fossorial small mammals, making the Site lower quality potential habitat. No sign of burrowing owl use was found during the Site survey.

Occurrence of the other BRRA species onsite is extremely unlikely due to the Site's long-term disturbed condition (see **Appendices F** and **G**).

City of San Diego Narrow Endemic and Vernal Pool Species

Fifteen plant species have been designated by the City as Narrow Endemic species because of their limited distribution within the region, and are considered sensitive biological resources of special importance to the City. Information about whether each species was observed and why it would or would not be expected to occur onsite is provided in Table 2, below. These species are also addressed in **Attachment F**.

Table 2. Narrow Endemics Potential to Occur on the Project Site

Scientific Name	Common Name	Observed Onsite	Rationale to Expect or Not Expect Onsite
Acanthomintha ilicifolia	San Diego thornmint	No	Not expected; site too disturbed, no suitable habitat.
Agave shawii var. *shawii*	Shaw's agave	No	Not expected; would have been visible and was not observed, no suitable habitat.
Ambrosia pumila	San Diego ambrosia	No	Not expected; no suitable habitat.
Aphanisma blitoides	Aphanisma	No	Not expected; no suitable habitat.
Astragalus tener var. *titi*	Coastal dune milkvetch	No	Not expected; no suitable habitat.
Baccharis vanessae	Encinitas baccharis	No	Not expected; would have been visible and was not observed, no suitable habitat.
Cylindropuntia californica var. *californica*	Snake cholla	No	Not expected; would have been visible and was not observed, no suitable habitat.
Deinandra conjugens	Otay tarplant	No	Not expected; unlikely to occur after so many years of disturbance.
Dudleya brevifolia	Short-leaf dudleya	No	Not expected; no suitable habitat.
Dudleya variegata	Variegated dudleya	No	Not expected; no suitable habitat.
Eryngium aristulatum	San Diego button-celery	No	Not expected; no vernal pools or similar onsite.
Navarretia fossalis	Spreading navarretia	No	Not expected; no vernal pools or similar onsite.
Orcuttia californica	California Orcutt's grass	No	Not expected; no vernal pools or similar onsite.
Pogogyne abramsii	San Diego mesa mint	No	Not expected; no vernal pools or similar onsite.
Pogogyne nudiuscula	Otay mesa mint	No	Not expected; no vernal pools or similar onsite.

Five plant and two animal species have been identified as vernal pool sensitive biological resources in the City of San Diego Vernal Pool Habitat Conservation Plan. Information about whether each species was observed and why it would or would not be expected to occur onsite is provided in **Table 3**, below. These species are also addressed in **Attachments F** and **G**.

Table 3. Vernal Pool Species Potential to Occur on the Project Site

Scientific Name	Common Name	Observed Onsite	Rationale to Expect or Not Expect Onsite
Eryngium aristulatum	San Diego button-celery	No	Not expected; no vernal pools or similar onsite.
Navarretia fossalis	Spreading navarretia	No	Not expected; no vernal pools or similar onsite.
Orcuttia californica	California Orcutt's grass	No	Not expected; no vernal pools or similar onsite.
Pogogyne abramsii	San Diego mesa mint	No	Not expected; no vernal pools or similar onsite.

Scientific Name	Common Name	Observed Onsite	Rationale to Expect or Not Expect Onsite
Pogogyne nudiuscula	Otay mesa mint	No	Not expected; no vernal pools or similar onsite.
Branchinecta sandiegonensis	San Diego fairy shrimp	No	Not expected; no vernal pools or similar onsite.
Streptocephalus woottoni	Riverside fairy shrimp	No	Not expected; no vernal pools or similar onsite.

PROJECT IMPACT ANALYSIS

A direct impact is a physical change in the environment caused by and immediately related to a project. An example of a direct physical change in the environment is the removal of vegetation due to brushing, grubbing, grading, trenching, and excavating.

An indirect impact is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct impact in turn causes another physical change in the environment, then the secondary change is an indirect impact. Examples include introduction of urban meso-predators and invasive non-native plants into a biological system; introduction of urban runoff into a biological system; noise and lighting impacts (both construction/demolition and operational phases of the project); alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles; and loss of a wetland buffer that includes no environmentally sensitive lands.

Cumulative impacts occur as a result of ongoing direct and indirect impacts for unrelated projects within a geographic area, and are assessed on a regional basis to determine the overall effect of numerous activities on a special-status resource over a larger area.

Direct, indirect, and cumulative Project impacts to habitats and special-status resources are discussed in the following sections.

Direct Impacts

Direct Project impacts are shown in **Figure 6**. The Project would directly impact the entire parcel except for a small area in the northwestern corner where the drainage ditch crosses the Site. The Project would also impact 0.04 acre offsite for installation of a drainage culvert and riprap flow dissipater. Impact acreages are provided in Table 4, below.

Table 4. Vegetation / Land Cover Acreages and Impacts

Vegetation Type / Land Cover Category	Existing Onsite (Acres)	Project Impact Onsite (Acres)	Project Impact Offsite (Acres)	Total Impacts (Acres)	Mitigation Ratio	Mitigation Required (Acres)
Disturbed Land (Tier IV)	38.68	38.14	0.01	38.15	0:1	0.0
Developed Land	1.33	1.02	0.03	1.05	0:1	0.0
Disturbed Wetland	0.04	0.00	0.00	0.00	2:1	0.0

Vegetation Type / Land Cover Category	Existing Onsite (Acres)	Project Impact Onsite (Acres)	Project Impact Offsite (Acres)	Total Impacts (Acres)	Mitigation Ratio	Mitigation Required (Acres)
TOTAL	**40.05**	**39.16**	**0.04**	**39.20**		0.0

Disturbed land and developed land are not sensitive biological resources, and the Project impact to these would not be a significant impact.

The Project will not impact the disturbed wetland drainage ditch or the drainage to the west of Cactus Road. The onsite drainage ditch is being treated as a City wetland and an undeveloped wetland buffer will be provided between the ditch and Project development. The buffer will range from 33 feet at the narrowest to 74 feet at the widest. These dimensions are shown in **Attachment H**.

Development of disturbed land used by California horned lark could potentially be a significant direct impact to these species. However, as shown in Figure 1-5 "Otay Mesa Community Plan Land Use Map" in the CVSP, large blocks of open space will be preserved to the west and southwest even after the CVSP is built out, and additional open space will be preserved to the northwest north of SR-905 and to the north of Brown Field. In addition, horned lark is a Watch List species less vulnerable to development than other more restrictively protected threatened and endangered species. It remains relatively common on Otay Mesa. Therefore, this impact would be less than significant.

One American kestrel was observed immediately west of the Site. This raptor could potentially forage over the Site. Loss of raptor foraging habitat can be considered a direct impact. However, the paucity of small prey species onsite indicates the Site does not have high value for raptor foraging. Due to the low quality of the Site for raptor foraging, loss of the disturbed land onsite would be considered only an indirect impact. Large blocks of open space will be preserved to the west and southwest even after the CVSP is built out, and additional open space will be preserved to the northwest north of SR-905 and to the north of Brown Field. Therefore, this impact to American kestrel would be less than significant.

The Project is not expected to directly impact any sensitive plant or animal species, wetlands, wildlife corridors, nursery sites, or the MHPA.

Indirect Impacts

Potential indirect impacts to the disturbed wetland drainage ditch onsite will be prevented by providing a buffer between the ditch and Site development. The buffer ranges in width from 33 to 74 feet. The very low quality and disturbed condition of the ditch would not warrant more than a 25 foot buffer, so the project will not cause an indirect impact to a City wetland through loss of a wetland buffer.

No other indirect impacts to sensitive habitats are anticipated, due to the Site's location between developed and disturbed land adjacent to SR-905.

The Project could potentially indirectly impact nesting birds protected by the MBTA and Fish and

Game Code. Ground-nesting birds such as the horned larks observed onsite would be most vulnerable. The required avoidance measures, based on either avoidance of work during the avian breeding season or use of focused nest surveys and nest buffers (see Avoidance Measures below for details), would reduce this potential impact to less than significant.

The Project is not expected to indirectly impact any sensitive plant or animal species, wetlands, wildlife corridors, nursery sites, or the MHPA.

Indirect impacts to water and air quality would not be significant because the Project will comply with all applicable water and air quality regulations.

Cumulative Impacts

The MSCP was designed to compensate for the regional loss of biological resources throughout the region. Projects that conform with the MSCP as specified by the Subarea Plan, and implementing ordinances, (i.e. Biology Guidelines and ESL Regulations) are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP. These resources include the vegetation communities identified as Tier I through IV.

In addition, potential cumulative impacts to biological resources from the overall CVSP have already been addressed in OMCPU EIR addendum. This Project's required site-specific biological resources survey indicates that the Project will not result in any significant impacts to biological resources, and does not conflict with EIR cumulative impact findings. Therefore, this Project will have no significant cumulative impact to biological resources.

MITIGATION AND MONITORING REQUIREMENTS

Mitigation Element

The Project will result in no significant biological impacts and will require no mitigation beyond the avoidance measures described in the following section.

Avoidance Measures

The Project would incorporate the following avoidance measures to ensure that no significant direct or indirect impacts to biological resources occur.

1. Prior to vegetation clearing, grubbing, and/or grading, a qualified biologist shall supervise the placement of temporary construction fencing or flagging at the limits of disturbance near the drainage ditch in the northwestern corner.
2. The Project applicant shall ensure that no active nests are adversely affected by vegetation clearing, grubbing, grading, or construction, in compliance with the Migratory Bird Treaty Act and California Fish and Game Code. These activities shall be scheduled to avoid the raptor and general avian breeding season (February 1 – August 31). Alternatively, these activities may occur during the avian breeding season if a qualified biologist conducts a survey for nests, with a focus on ground-nesting birds, within three days prior to the work in the area, and monitors vegetation removal to ensure no nesting birds/raptors are impacted by the Project. If an active nest is identified, the following active nest protection mitigation measures shall be applied:

a. A buffer shall be established between the clearing, grubbing, grading, and construction activities and the active nest so that nesting activities are not interrupted. The buffer shall be a minimum width of 300 feet (500 feet for raptors and threatened or endangered species) shall be delineated by temporary fencing, and shall remain in effect as long as construction is occurring or until the nest is no longer active. The biologist shall monitor the nest during Project activities until nesting is complete. This buffer may be reduced if it can be demonstrated to the satisfaction of the City of San Diego and Wildlife Agencies that the reduction does not represent a threat to nesting activities.
b. Normal clearing, grubbing, grading, and construction without nest buffer(s) may resume once the biologist demonstrates to the satisfaction of the City of San Diego and Wildlife Agencies that all nesting is complete. Nesting would be considered complete if no active nests are observed during a focused nesting bird survey conducted within three days prior to resumption of such activities.

3. Because burrowing owls could unexpectedly move onto the Site, a pre-construction focused survey for burrowing owl shall be undertaken by a qualified biologist within one week before ground disturbance. If evidence of burrowing owl use is detected, Project implementation shall pause while the City is notified and until any resulting required measures have been completed to the satisfaction of the City and Wildlife Agencies.
4. Project-related landscaping shall not include exotic plant species that may be invasive to native habitats. Invasive exotic plant species to be excluded include those listed on the California Invasive Plant Council's Invasive Plant Inventory. Invasive species that already occur onsite will be removed.
5. Best Management Practices and a Storm Water Pollution Prevention Plan will be implemented and enforced to prevent indirect impacts to air or water quality.

Protection and Notice Element

The Project does not require mitigation; therefore assurances that the mitigation or remainder areas are adequately protected are not required.

Management Element

The Project does not require mitigation; therefore assurances that the mitigation or remainder areas are adequately protected are not required.

CONCLUSION

With implementation of the avoidance measures provided in this report, the Project will not result in any significant direct, indirect, or cumulative impacts to biological resources.

This concludes REC's biological letter report for the Floreo Project. Please do not hesitate to contact REC with any questions.

Sincerely,

Catherine MacGregor
Senior Biologist and Botanist

ATTACHMENTS

Figure 1. Regional Location
Figure 2. Vicinity Map
Figure 3. Aerial Photograph of Site
Figure 4. Biological Resources
Figure 5. Photographs Key Map
Figure 6. Project Impacts

Attachment A. Central Village Specific Plan Figure 2.2-1
Attachment B. Biologist Resume
Attachment C. Plants Observed on the Floreo Project Site
Attachment D. Floreo Project Site Photographs
Attachment E. Animals Observed on the Floreo Project
Attachment F. Special-Status Plants with Potential to Occur on the Floreo Project Site
Attachment G. Special-Status Animals with Potential to Occur on the Floreo Project Site
Attachment H. Wetland Buffer Widths

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R·E·C Civil Engineering Environmental Land Surveying
rec-consultants.com

2442 Second Avenue
San Diego, California 92101
Phone: 619.232.9200
Fax: 619.232.9210

October 30, 2019

Robert Furey
Groundwurk Inc.
2442 2nd Avenue
San Diego, CA 92101

Subject: **Biological Resources Letter Report for the Floreo Project; Airway Road and Cactus Road, San Diego, California, APN 646-100-77-00; Prepared for the City of San Diego, Project No. 620164**

Dear Mr. Furey:

REC Consultants, Inc. has prepared this letter report to address potential development-related impacts to biological resources on the Floreo project site.

SUMMARY

The Floreo project (Project) will develop Planning Areas 10, 11, 12, 13, and 17 in accordance with the Central Village Specific Plan (CVSP). The Project is not within or adjacent to the City of San Diego's Multi-Habitat Planning Area, will impact only disturbed and developed land, and will not result in any significant impacts to biological resources.

INTRODUCTION

Project Description

The Project will develop the five Planning Areas (PAs) according to the CVSP as Mixed Use (PA 10), Medium Residential (PAs 11 and 12), Medium to Medium-High Residential / Multi-Family) (PA 13), and Park (PA 17). These uses for the PAs are shown in the CVSP Figure 2.2-1, provided in **Attachment A**. The Project also includes an offsite underground culvert to transport water under Cactus Road from the onsite detention basin to an outlet on the west side of the road. The construction staging area will be near the northern end of Cactus Road, where it dead-ends at State Route 905 (SR-905). Groundwork is scheduled to begin in the first or second quarter of 2021.

Project Location and Setting

Location

The 40-acre Project site (Site) is located on Assessor's Parcel Number (APN) 646-100-77-00 in the CVSP Area of the Otay Mesa Community in the City of San Diego (City), approximately three miles southeast of the intersection of Interstate 805 (I-805) and SR-905 and one mile north of the U.S.-Mexico border (**Figures 1** and **2**). The Site is bordered by SR-905 to the north; Airway Road and

undeveloped land to the south; graded/developed land to the east; and Cactus Road, undeveloped land, and light industrial land to the west (**Figure 3**).

Regulatory Setting

The Project is located in the City of San Diego. Multiple federal, State and local laws and regulations protect and conserve biological resources. Major regulations that apply to the Project are summarized below.

Federal Endangered Species Act

The U.S. Congress passed the 1973 federal Endangered Species Act (ESA) (and later amendments) to protect and recover imperiled species and the ecosystems upon which they depend. The federal ESA has four major components: 1) Section 4, which provides for listing species and designating critical habitat; 2) Section 7, which requires federal agencies, in consultation with the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of species or result in the modification or destruction of critical habitat; 3) Section 9, which prohibits "taking" of listed species; and 4) Section 10, which provides for permitting incidental take of listed species. Under the ESA, to "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. A project that does or may support a species protected by the federal ESA may be subject to federal ESA regulation.

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984 generally parallels the main provisions of the federal ESA and is administered by the California Department of Fish and Wildlife (CDFW); it prohibits take of any species that CDFW has classified as threatened or endangered, or that is experiencing a significant decline that could lead to such as designation, and permits take incidental to otherwise lawful development projects with approval from CDFW.

California Environmental Quality Act

The California Environmental Quality Act, or CEQA, is a statute first created in 1970 that requires State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. Every development project that requires a discretionary governmental approval requires at least some environmental review pursuant to CEQA, unless an exemption applies. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource; instead, lead agencies are charged with determining what should be considered a significant impact, according to the CEQA Guidelines.

Natural Communities Conservation Planning Act

The State of California's Natural Communities Conservation Planning (NCCP) Act of 1991 and 2003 is intended to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (and later amendments) was passed by Congress to provide protection to the breeding activities of migratory birds throughout the United States. The MBTA makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for

sale, purchase, or barter, any migratory bird, or the parts (including feathers), nests, or eggs of such a bird except under the terms of a valid Federal permit. All birds in California except those specifically excluded (such as non-native birds and certain "game" birds) are protected by this act. The Project will comply with the provisions of the MBTA.

Bald and Golden Eagle Protection Act

The Bald Eagle Protection Act was enacted in 1940 to prohibit the take, transport, or sale of bald eagles, their eggs, or any part except where expressly allowed by the Secretary of Interior, and was amended in 1962 to also cover golden eagles.

Clean Water Act

The 1972 Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating surface water quality standards. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters of the United States unless a permit was obtained. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into "Waters of the U.S."

California Fish and Game Code

California Fish and Game Code regulates the taking and possession of birds, mammals, fish, amphibians, and reptiles, as well as impacts to natural resources such as lakes and streams. It includes the CESA described above, Lake and Streambed Alteration (LSA) Agreement regulations (Sections 1600-1616), provisions for legal hunting and fishing, tribal agreements for activities involving take of native wildlife, protection of nests and eggs of all birds except as otherwise provided by Fish and Game Code (Section 3503), protection of all raptors and their nests and eggs except as otherwise provided (Section 3503.5), and the California Native Plant Protection Act (Section 1900-1913).

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State" and gave CDFW the power to designate native plants as Endangered or Rare and to protect such designated plants from take.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act protects wetlands and waters as "Waters of the State" and designated the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) as the principal State agencies with primary responsibility for the coordination and control of water quality. "Waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." State Resolution 2008-0026 effectively extended jurisdiction of the SWQCB to wetlands as defined in accordance with the federal definition for the Clean Water Act. Impacts to Waters of the State require notification/permitting through the RWQCB and usually also require compensatory mitigation, although this mitigation is typically handled through the USACE and/or CDFW.

California Coastal Commission and Coastal Act

In response to 1972 federal coastal zone management legislation, which encouraged and funded states to implement responsible coastal zone management, the State of California established the California Coastal Commission in 1972 and adopted the California Coastal Act in 1976. The Coastal

Commission, in partnership with coastal cities and counties, regulates the use of land and water in the coastal zone. Development in the coastal zone generally requires a permit from either the Coastal Commission or the local government. The Coastal Act includes specific policies that address, among other things, shoreline public access and recreation, terrestrial and marine habitat protection, water quality, and development design. The Project Site is not within the City's Coastal Overlay Zone.

Multiple Species Conservation Program

The 1998 Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation planning program for a 900-square-mile area in southwest San Diego County. It allows local jurisdictions to plan regional preserve systems while maintaining land use control and providing development flexibility. Local jurisdictions implement their own Subarea Plans. The City of San Diego's Subarea Plan (1997) covered approximately 206,124 acres at the time it was created in 1997, and its hard-line preserve Multi-Habitat Planning Area (MHPA) covers approximately 47,910 acres. The nearest MHPA lands are approximately 0.15 mile west of the Site. Therefore, the Project is not subject to regulations pertaining to projects within or adjacent to the MHPA.

City of San Diego Land Development Code Biology Guidelines

The Land Development Code Biology Guidelines were formulated by the City of San Diego Development Services Department to help implement the City's Environmentally Sensitive Lands Regulation, Land Development Code, and Open Space Residential Zone Code, and to guide determination of impacts and mitigation under CEQA and the Coastal Act (City of San Diego 2018a). The Biology Guidelines specifically guide protection for sensitive biological resources including narrow endemic species; habitat for rare, endangered or threatened species; vegetation communities in Tiers I, II, IIIA or IIIB; MHPA lands; and those areas outside the MHPA that qualify as wetlands according to the City of San Diego wetland definition.

City of San Diego Environmentally Sensitive Lands Regulations

The Land Development Code contains restrictions on development within Environmentally Sensitive Lands (ESL). ESL regulations are intended to "protect, preserve and, where damaged, restore the environmentally sensitive lands of San Diego and the viability of species supported by those lands." These regulations are intended to assure that development, including, but not limited to coastal development in the Coastal Overlay Zone, occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to flooding in specific areas while minimizing the need for construction of flood control facilities. They are intended to protect the public health, safety, and welfare while employing regulations that are consistent with sound resource conservation principles and the rights of private property owners.

Otay Mesa Community Plan Update

The Project is also within the Otay Mesa Community, which recently had a community plan update. The Otay Mesa Community Plan Update (OMCPU) (City of San Diego 2014) was again updated in 2017 to include the CVSP. The 229.2-acre CVSP is a mixed-use "village" located in the central portion of the Otay Mesa Community. The primary purpose of the CVSP (City of San Diego 2017a) is to implement the City General Plan "City of Villages" strategy and guide the development of a mixed-use village by providing site-specific land use design standards and policies. The CVSP consists of Planning Areas (PAs). This report addresses the five PAs in the northeastern corner of the Specific Plan: PA 10, 11, 12, 13, and 17. The PAs are planned for Mixed Use (PA 10), Medium

Residential (PAs 11 and 12), Medium to Medium-High Residential/Multi-Family) (PA 13), and Park (PA 17). CVSP impacts to biological resources were addressed in an addendum to the Environmental Impact Report (EIR) for the OMCPU. The EIR addendum included a Biological Resources Report Addendum (BRRA) (Alden 2017) that evaluated CVSP impacts relative to impacts addressed in the OMCPU, and also required preparation of site-specific biological resources surveys before implementing development projects in accordance with the City Biology Guidelines.

METHODS AND SURVEY LIMITATIONS

Biological resources on the Site were investigated through records review and a Site survey. Records review consisted of a search of RareFind5 California Natural Diversity Database (CNDDB) documentation of special-status plant and animal species within the Project USGS 7.5-minute quadrangle (Otay Mesa) and surrounding quadrangles (National City, Jamul Mountains, Dulzura, Imperial Beach, and Otay Mountain), the CVSP, the EIR addendum for the OMCPU (City of San Diego 2017b), the EIR addendum BRRA, and soil maps and descriptions from the USDA Web Soil Survey. One general biological field survey was conducted, as summarized in Table 1, below.

Table 1. Site Survey on the Project Site

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
7/31/2018	0830 to 0955	75-81	Sunny, hazy	0-3 to 2-6	General biological	C. MacGregor

REC Senior Biologist and Botanist Catherine MacGregor conducted a general biological survey on the Site to document current conditions and biological resources (see **Attachment B** for her resume). All onsite vegetation and land cover types were mapped, and all observed plant and animal species were documented. Wildlife species were identified directly by sight or vocalizations and indirectly by scat, tracks, burrows, nests or other sign. Any observed special-status species were documented, and suitability of habitat for special-status species was evaluated based on factors including soil, topography, elevation, water availability, microhabitats such as boulders, vegetation, proximity to development, size of overall habitat, and presence/absence of suitable prey, as applicable. Habitats and wildlife on surrounding properties were observed from the Site or public roadways. Mapping of resources on the Site was conducted on an aerial photograph scaled at approximately 1 inch = 50 feet.

Site survey limitations include under-representation of growing-season vegetation due to discing of the field, spring-blooming annuals due to time of year, summer-flowering plants due to low rainfall, and nocturnal wildlife due to time of day.

Vegetation communities and land cover classification in this report follow Holland (1986) as updated by Oberbauer et al. (2008), as well as City-specific guidelines. Plant taxonomy and nomenclature in this report follow the Jepson eFlora (Jepson 2018) and the Jepson Manual, 2nd edition (Baldwin et al. 2012) for taxonomy and scientific names, and Checklist of the Vascular Plants of San Diego County, 5th Edition (Rebman and Simpson 2014) for common names, with some rare plant common names from the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2018). Wildlife taxonomy and nomenclature in this report follow *San Diego County Mammal Atlas* (Tremor et al. 2017) for mammals, Avibase (Lepage 2015) for birds, California Herps (Nafis 2015) for reptiles and amphibians, Butterflies of America (Warren et al. 2015) for butterflies,

BugGuide (ISUDE 2015) for other insects and arachnids, and the Integrated Taxonomic Information System (ITIS 2015) for other invertebrates, as well as the San Diego Natural History Museum spider, butterfly, bird, reptile, and amphibian checklists for localized subspecies information (SDNHM 2002, 2005, and undated).

SURVEY RESULTS

Physical Characteristics

Geology and Soils

The Site is located on a marine wave-cut terrace approximately 8.5 miles inland, and 1.3 miles south of the Otay River valley. Site topography is nearly flat with elevation ranging from approximately 500 feet (152 meters) to 515 feet (157 meters) above mean sea level. According to the U.S. Department of Agriculture (USDA) Web Soil Survey (USDA 2018), three soil types occur onsite: Olivenhain cobbly loam, 30 to 50 percent slopes (OhF); Stockpen gravelly clay loam, 0 to 2 percent slopes (SuA); and Stockpen gravelly clay loam, 2 to 5 percent slopes (SuB). The Olivenhain series consists of well-drained, moderately deep to deep cobbly loams that have a very cobbly clay subsoil. These soils formed in old gravelly and cobbly alluvium and occur on dissected marine terraces. Because the Site is now flat, formerly sloping areas onsite may have historically been filled or leveled. The Stockpen series consists of moderately well drained, moderately deep gravelly clay loams. These soils are on marine terraces, with clay content and a clay substratum. SuA is nearly level and SuB is gently sloping, with slow runoff and light erosion hazard. Included in mapping are small areas of Diablo, Huerhuero, and Salinas soils.

Stockpen soils, where undisturbed, can support mima mound topography associated with vernal pools but no mima mound topography was observed. These soils also have clay content, associated with specific rare plants in addition to vernal pool plants. However, the soil has been heavily disturbed for so long that any previously occurring special-status plants are very unlikely to reoccur.

Habitats

During REC's Site survey, three habitats/land cover categories were observed onsite: disturbed land, disturbed wetland, and developed land, as shown in **Figure 4**. Vegetation in these categories is described in the Biological Resources – Flora section below.

Sensitive Lands and Critical Habitats

The Site does not support any Tier I, II, IIIA, or IIIb habitat, or environmentally sensitive lands. The Site would not serve as a wildlife corridor because it does not form a connection to other potential wildlife habitat nearby. Use of the Site as a wildlife nursery site is very unlikely because of the lack of habitat onsite and proximity to SR-905 and development. The Site is also unlikely to serve as a "stepping stone" habitat because it supports inadequate habitat. The Site does not support Critical Habitats of any federal Threatened or Endangered species.

The Site contains a drainage feature mapped as disturbed wetland (see **Figure 4**), which was evaluated as a potential environmentally sensitive land. It is a ditch that originates offsite on the south side of SR-905 where a culvert empties into riprap. Stormwater flow, when present, follows

the ditch toward Cactus Road parallel to the northern property boundary, turns sharply south when it reaches Cactus Road, enters a culvert to pass under Cactus Road, and empties into a riprap-lined channel on the west side of Cactus Road. The Oberbauer category 11200 "disturbed wetland" was used because it applies to ditches (Oberbauer et al. 1998), but use of this category does not necessarily indicate wetland jurisdictional status.

The drainage was also evaluated as a potentially jurisdictional wetland/waters/streambed. This evaluation included historical conditions research. Based on a review of aerial photographs on historicaerials.com (NETR 2019), a ditch or path of flow in or near the northwestern corner of the Site has been present since at least 1953 (oldest aerial photograph available). At that time, the Cactus Road alignment was already present, and the path of flow appears to have originated at an agricultural pond next to an orchard, located in what is now the SR-905 right-of-way just north of the Site boundary. The original path of flow appears to have passed under Cactus Road and continued southwest toward Spring Canyon. In the aerial photographs between 1981 and 1994, the agricultural pond dried out, and development in the general area increased. By 1994 the former agricultural pond and ditch appear to have attained their current configuration of a northern east-to-west arm and western north-to-south area before flowing west under Cactus Road. In the 2010 aerial, grading for construction of SR-905 is visible. In 2018 Google Earth imagery, the presence of the SR-905 culvert and riprap at the upstream end and connection to the riprap-lined channel west of Cactus Road indicates that the ditch now serves as a maintained stormwater conveyance to carry runoff from inlets between the east and west-bound sides of SR-905 to the natural drainage in Spring Canyon.

The ditch could fall under jurisdiction of CDFW, U.S. Army Corps of Engineers (USACE), and/or the Regional Water Quality Control Board (RWQCB) because it at least occasionally conveys water, and a bed and bank are present. Mapping of the onsite ditch for this report is based on the outer edges of the banks. This corresponds to the top-of-bank jurisdictional limits of CDFW streambed and RWQCB Waters of the State. USACE-jurisdictional Waters of the U.S. would be between the tops of banks. Therefore, the disturbed wetland habitat shown in **Figure 5** corresponds to the maximum potential jurisdictional area. Technical delineation reports according to the standards of these three agencies are not needed because the Project is intentionally set back from the maximum potential jurisdictional limits and will not impact the ditch.

Wetlands are also regulated by the City of San Diego. The definition of wetlands in ESL is intended to differentiate uplands (terrestrial areas) from wetlands, and to differentiate naturally occurring wetland areas from those created by human activities. Naturally occurring wetland vegetation communities are typically characteristic of wetland areas. Common to all wetland vegetation communities is the predominance of hydrophytic plant species (plants adapted for life in anaerobic soils). Seasonal drainage patterns that are sufficient to etch the landscape (i.e. ephemeral/intermittent drainages) may not be sufficient enough to support wetland dependent vegetation and would not satisfy the City's wetland definition unless wetland dependent vegetation is either present in the drainage or lacking due to past human activities. (City of San Diego 2018a)

Review of historical aerial photographs does not clarify whether the ditch is the remains of an original natural drainage or was artificially created by agricultural and development runoff. The ditch contained a few wetland plants, and two willows are located in the channel north of the Site where waters enter from under SR-905, but cover of wetland plants is assumed to vary seasonally and a predominance of wetland plants was not confirmed. Water supply is also artificially supported

by onsite ponding of SR-905 run-off below the culvert that carries stormwater runoff under Cactus Road. For these reasons, the status of the ditch as a City wetland is unclear. However, for the purposes of this report, the section between SR-905 and Cactus Road will be treated as a City wetland and provided with a buffer.

The section west of Cactus Road is not a City wetland. The channel in this area is completely lined with riprap, which could prevent growth of wetland vegetation. However, a similar riprap-lined channel into which this one flows does support vegetation visible in Google Earth imagery, indicating that the riprap is not the reason for lack of hydrophytic vegetation. The section west of Cactus Road would be considered an ephemeral/intermittent drainage that does not satisfy the City's wetland definition (City of San Diego 2018a).

Impacts to any wetlands and waters must be avoided or minimized to the maximum extent possible, so the Project was designed to completely avoid the ditch both onsite and offsite west of Cactus Road. Because the Project completely avoids impacts to the drainage ditch, no permits from CDFW, U.S. Army Corps of Engineers, or Regional Water Quality Control Board are necessary.

Biological Resources

Botanical Resources - Flora

All plant species observed in the three habitats / land cover types onsite are listed in **Attachment C**. Each habitat / land cover type is described below. Representative photographs are provided in **Attachment D** and photograph locations are shown in **Figure 5**.

Disturbed Land (Habitat Code, Tier IV)
Disturbed land occupies approximately 38.68 acres onsite. Disturbed land consists of areas "that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites." (Oberbauer et al. 2008) Disturbed areas are usually associated with prior development (e.g., previous grading) or agricultural use (City of San Diego 2018a).

In the 2017 EIR Addendum to the OMCPU and its accompanying BRRA, the Site was mapped as non-native grassland with a narrow border of disturbed land. However, vegetation observed during the REC's 2018 Site visit indicated that disturbed land is a better classification. The City provides specific guidelines for distinguishing between non-native grassland and other disturbed areas such as ruderal or agricultural/fallow.

Non-native grassland typically includes at least 50% cover of the entire herbaceous layer attributable to annual non-native grass species, although other plant species (native or non-native) may be intermixed. Other common plant species found in non-native grassland include filaree (*Erodium*

spp.), California poppy (*Eschscholzia californica*), tocalote (*Centaurea melitensis*), mustards, artichoke thistle (*Cynara cardunculus*), sweet fennel (*Foeniculum vulgare*), and others. (City of San Diego 2018a)

Other disturbed areas include lands commonly defined as ruderal habitat or agricultural/fallow. Ruderal habitat typically develops on sites with heavily compacted soils following intense levels of disturbance such as grading. Agricultural/fallow lands include areas of active agricultural cultivation (e.g., nurseries, orchards, field crops) and fallow areas which have been disturbed in the recent past by cultivation or agricultural activity. Disturbed areas are usually associated with prior development (e.g., previous grading) or agricultural use. These areas can consist of bare ground, or when vegetated, are dominated by at least 50% cover of invasive broad-leaved non-native plant species including, but not limited to, horseweed (*Erigeron* spp.), garland daisy (*Glebionis coronaria*), pineapple weed (*Matricaria discoidea*), sow-thistle (*Sonchus* spp.), Russian-thistle (*Salsola* spp.), mustards, knotweed (*Polygonum* spp.), bur-clover (*Medicago polymorpha*), fennel (*Foeniculum vulgare*) and others. Minor amounts of other species including non-native annual grasses can also be present. (City of San Diego 2018a)

To distinguish between non-native grassland and other disturbed areas, the relative percent cover of the herbaceous species should be used as a diagnostic tool. Within the area in question, the percent cover and relative percent cover of all herbaceous species should be assessed. Vegetative cover is usually determined by visual estimate. If native habitats have been ruled out and if the majority (50% or greater) of the observed species are introduced members of the Poaceae family, then the area should be characterized as non-native annual grassland. In cases where vegetative cover cannot easily be determined by visual estimate, a more detailed procedure is followed. (City of San Diego 2018a) In this case, visual estimation was sufficient. Although overall cover was very low, herbaceous species had grown on the disced portion of the Site between the last time it was disced and REC's 2018 Site visit.

The dominant and common species were garland daisy, short-pod mustard (*Hirschfeldia incana*), nettle-leaf goosefoot (*Chenopodium murale*), London rocket (*Sisymbrium irio*), and cheeseweed (*Malva parviflora*) (see photographs 1, 3, 4 and 5). Very few non-native grasses were observed re-growing in the disced area. Non-native grasses were present in the ruderal vegetation at the edges of the field previously mapped as disturbed land (photographs 3 and 6), but were outnumbered by other broadleaf species including Australian tumbleweed/Russian-thistle (*Salsola australis*), black mustard (*Brassica nigra*), prickly lettuce (*Lactuca serriola*), castor bean (*Ricinus communis*), and fennel. Overall, based on observed cover of living and intact dead plants, the disced field and edges were best classified as disturbed land. In a few locations, un-disced piles of dumped rubble or debris are more densely vegetated with Russian-thistle and garland daisy.

The offsite culvert impact area includes 0.01 acre of disturbed land.

<u>Disturbed Wetland (Habitat Code 11200, Wetland)</u>
Disturbed wetland occupies approximately 0.04 acre onsite. The disturbed wetland habitat category consists of areas permanently or periodically inundated by water, which have been significantly modified by human activity. This includes portions of wetlands with obvious artificial structures such as concrete lining, barricades, riprap, piers, or gates. They are often unvegetated, but may contain scattered native or non-native vegetation. Examples include lined channels, Arizona crossings, detention basins, culverts, and ditches. (Oberbauer et al. 2008)

A drainage ditch in the northwestern corner of the Site was classified as disturbed wetland. This ditch connects storm water flow from a culvert under SR-905 to a culvert under Cactus Road (see photograph 2). Vegetation in the ditch onsite was dominated by upland non-native species such as short-pod mustard and castor bean, transitional non-natives such as bristly ox-tongue (*Helminthotheca echioides*) and curly dock (*Rumex crispus*), and a small patch of the wetland plant California bulrush (*Schoenoplectus californicus*). A black willow (*Salix gooddingii*) is located just offsite to the northwest.

Developed Land (Habitat Code 12000, no Tier)

Developed land occupies approximately 1.33 acre onsite. This land cover category consists of areas "that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that require irrigation. Areas where no natural lands is evident due to a large amount of debris or other materials being placed upon it may also be considered urban/developed (e.g. car recycling plant, quarry)." Developed land is typically unvegetated, or landscaped with a variety of ornamental (usually non-native) plants. (Oberbauer et al. 2008)

Developed land onsite is limited to the portion of Airway Road within the parcel boundary.

The offsite culvert impact area includes 0.03 acre of developed land.

Zoological Resources - Fauna

Animal species were identified by sight, call, and sign such as scat or shells. All wildlife observed onsite are listed in **Attachment E**.

Wildlife observed in disturbed land included western pygmy-blue butterfly (*Brephidium exilis*), Mexican cactus fly (*Copestylum mexicanum*), dragonfly (Suborder Anisoptera), horned lark (*Eremophila alpestris*), mourning dove (*Zenaida macroura*), and coyote (scat) (*Canis latrans*).

Wildlife observed in the disturbed wetland drainage ditch consisted of brown garden snail (*Helix aspersa*) and desert cottontail rabbit (*Sylvilagus audubonii*).

No wildlife was detected in developed land onsite. An American kestrel (*Falco sparverius*) was observed at the top of a utility pole along Cactus Road adjacent to the northwestern property boundary.

Rare, Threatened, Endangered, Endemic and/or Sensitive Species or MSCP-covered Species

For the purposes of this report, a sensitive or special-status plant or animal is any species, subspecies, or variety that is officially listed by the State of California or the federal government as Endangered, Threatened, or Rare, or a candidate for one of those listings; classified as Fully Protected, Species of Special Concern, or Watch List by the California Department of Fish and Wildlife (CDFW); included in California Rare Plant Ranks (CRPR) 1 through 4; covered by the MSCP; or included in the City of San Diego Narrow Endemics list.

Observed Special-Status Species

No special-status plants were observed. One special-status animal species was observed onsite:

California horned lark (*Eremophila alpestris actia*), State Watch List. This species inhabits open patches of bare land alternating with low vegetation in grasslands, montane meadows, sagebrush and open coastal plains, fallow grain fields, and alkali flats. It is tolerant of disturbance, but sensitive to habitat fragmentation. Horned larks remain somewhat common on grasslands and disturbed lands on Otay Mesa. A flock of at least 25 individuals was observed foraging in the central and eastern areas of the Site.

Special-Status Species with Potential to Occur Onsite

Lists of special-status plants and animals with the potential to occur on the Site were generated from the CNDDB RareFind5 database. The resulting lists include any special-status species documented within the Site's USGS 7.5-minute quadrangle or surrounding quadrangles and within an applicable elevation range. **Attachment F** provides information on these special-status plant species, as well as an evaluation of potential for each species to occur onsite, based on CNDDB, the CNPS Inventory of Rare and Endangered Plants (online version, 2018), Reiser's *Rare Plants of San Diego County* (2001), SDNHM's Herbarium Collection Map (SDNHM 2012), and Jepson eFlora (Jepson Flora Project 2018), professional experience, and field observations. **Attachment G** provides information on these animal species, and an evaluation of the potential for each species to occur onsite, based on species requirements, CNDDB search results, *San Diego County Mammal Atlas* (Tremor et al. 2017), *San Diego County Bird Atlas* (Unitt 2004) and Google Earth Bird Atlas (SDNHM 2018), Amphibian and Reptile Atlas of Peninsular California (SDNHM 2018), and field observations.

No special-status plant or wildlife species have high potential to occur onsite.

Other Species Considered

The BRRA for the CVSP identified the following species as potentially subject to significant impact. It should be noted that field surveys for the BRRA did not include the Project Site.

- Ashy spike-moss (*Selaginella cinerascens*),
- San Diego sunflower (*Bahiopsis laciniata*),
- Seaside cistanthe (*Cistanthe maritima*),
- Small-flowered morning-glory (*Convolvulus simulans*),
- Quino checkerspot butterfly (*Euphydryas editha quino*),
- Coastal California gnatcatcher (*Polioptila c. californica*), and
- Burrowing owl (*Athene cunicularia*).

Based on REC's Site survey, small-flowered morning-glory could have low potential to occur onsite because it is somewhat widespread, suitable soils occur or occurred onsite, and it can reappear from old seed bank in formerly farmed fields. However, it was not observed and the Site has likely been too heavily disturbed to support this species.

Burrowing owl has moderate potential to occur onsite because it is a highly mobile species that can quickly colonize a new location. However, no burrowing owl sign was observed onsite and there

appeared to be a paucity of suitable prey and fossorial small mammals, making the Site lower quality potential habitat. No sign of burrowing owl use was found during the Site survey.

Occurrence of the other BRRA species onsite is extremely unlikely due to the Site's long-term disturbed condition (see **Appendices F** and **G**).

City of San Diego Narrow Endemic and Vernal Pool Species

Fifteen plant species have been designated by the City as Narrow Endemic species because of their limited distribution within the region, and are considered sensitive biological resources of special importance to the City. Information about whether each species was observed and why it would or would not be expected to occur onsite is provided in Table 2, below. These species are also addressed in **Attachment F**.

Table 2. Narrow Endemics Potential to Occur on the Project Site

Scientific Name	Common Name	Observed Onsite	Rationale to Expect or Not Expect Onsite
Acanthomintha ilicifolia	San Diego thornmint	No	Not expected; site too disturbed, no suitable habitat.
Agave shawii var. *shawii*	Shaw's agave	No	Not expected; would have been visible and was not observed, no suitable habitat.
Ambrosia pumila	San Diego ambrosia	No	Not expected; no suitable habitat.
Aphanisma blitoides	Aphanisma	No	Not expected; no suitable habitat.
Astragalus tener var. *titi*	Coastal dune milkvetch	No	Not expected; no suitable habitat.
Baccharis vanessae	Encinitas baccharis	No	Not expected; would have been visible and was not observed, no suitable habitat.
Cylindropuntia californica var. *californica*	Snake cholla	No	Not expected; would have been visible and was not observed, no suitable habitat.
Deinandra conjugens	Otay tarplant	No	Not expected; unlikely to occur after so many years of disturbance.
Dudleya brevifolia	Short-leaf dudleya	No	Not expected; no suitable habitat.
Dudleya variegata	Variegated dudleya	No	Not expected; no suitable habitat.
Eryngium aristulatum	San Diego button-celery	No	Not expected; no vernal pools or similar onsite.
Navarretia fossalis	Spreading navarretia	No	Not expected; no vernal pools or similar onsite.
Orcuttia californica	California Orcutt's grass	No	Not expected; no vernal pools or similar onsite.
Pogogyne abramsii	San Diego mesa mint	No	Not expected; no vernal pools or similar onsite.
Pogogyne nudiuscula	Otay mesa mint	No	Not expected; no vernal pools or similar onsite.

Five plant and two animal species have been identified as vernal pool sensitive biological resources in the City of San Diego Vernal Pool Habitat Conservation Plan. Information about whether each species was observed and why it would or would not be expected to occur onsite is provided in **Table 3**, below. These species are also addressed in **Attachments F** and **G**.

Table 3. Vernal Pool Species Potential to Occur on the Project Site

Scientific Name	Common Name	Observed Onsite	Rationale to Expect or Not Expect Onsite
Eryngium aristulatum	San Diego button-celery	No	Not expected; no vernal pools or similar onsite.
Navarretia fossalis	Spreading navarretia	No	Not expected; no vernal pools or similar onsite.
Orcuttia californica	California Orcutt's grass	No	Not expected; no vernal pools or similar onsite.

Scientific Name	Common Name	Observed Onsite	Rationale to Expect or Not Expect Onsite
Pogogyne abramsii	San Diego mesa mint	No	Not expected; no vernal pools or similar onsite.
Pogogyne nudiuscula	Otay mesa mint	No	Not expected; no vernal pools or similar onsite.
Branchinecta sandiegonensis	San Diego fairy shrimp	No	Not expected; no vernal pools or similar onsite.
Streptocephalus woottoni	Riverside fairy shrimp	No	Not expected; no vernal pools or similar onsite.

PROJECT IMPACT ANALYSIS

A direct impact is a physical change in the environment caused by and immediately related to a project. An example of a direct physical change in the environment is the removal of vegetation due to brushing, grubbing, grading, trenching, and excavating.

An indirect impact is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct impact in turn causes another physical change in the environment, then the secondary change is an indirect impact. Examples include introduction of urban meso-predators and invasive non-native plants into a biological system; introduction of urban runoff into a biological system; noise and lighting impacts (both construction/demolition and operational phases of the project); alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles; and loss of a wetland buffer that includes no environmentally sensitive lands.

Cumulative impacts occur as a result of ongoing direct and indirect impacts for unrelated projects within a geographic area, and are assessed on a regional basis to determine the overall effect of numerous activities on a special-status resource over a larger area.

Direct, indirect, and cumulative Project impacts to habitats and special-status resources are discussed in the following sections.

Direct Impacts

Direct Project impacts are shown in **Figure 6**. The Project would directly impact the entire parcel except for a small area in the northwestern corner where the drainage ditch crosses the Site. The Project would also impact 0.04 acre offsite for installation of a drainage culvert and riprap flow dissipater. Impact acreages are provided in Table 4, below.

Table 4. Vegetation / Land Cover Acreages and Impacts

Vegetation Type / Land Cover Category	Existing Onsite (Acres)	Project Impact Onsite (Acres)	Project Impact Offsite (Acres)	Total Impacts (Acres)	Mitigation Ratio	Mitigation Required (Acres)
Disturbed Land (Tier IV)	38.68	38.14	0.01	38.15	0:1	0.0
Developed Land	1.33	1.02	0.03	1.05	0:1	0.0
Disturbed Wetland	0.04	0.00	0.00	0.00	2:1	0.0

Vegetation Type / Land Cover Category	Existing Onsite (Acres)	Project Impact Onsite (Acres)	Project Impact Offsite (Acres)	Total Impacts (Acres)	Mitigation Ratio	Mitigation Required (Acres)
TOTAL	**40.05**	**39.16**	**0.04**	**39.20**		0.0

Disturbed land and developed land are not sensitive biological resources, and the Project impact to these would not be a significant impact.

The Project will not impact the disturbed wetland drainage ditch or the drainage to the west of Cactus Road. The onsite drainage ditch is being treated as a City wetland and an undeveloped wetland buffer will be provided between the ditch and Project development. The buffer will range from 33 feet at the narrowest to 74 feet at the widest. These dimensions are shown in **Attachment H**.

Development of disturbed land used by California horned lark could potentially be a significant direct impact to these species. However, as shown in Figure 1-5 "Otay Mesa Community Plan Land Use Map" in the CVSP, large blocks of open space will be preserved to the west and southwest even after the CVSP is built out, and additional open space will be preserved to the northwest north of SR-905 and to the north of Brown Field. In addition, horned lark is a Watch List species less vulnerable to development than other more restrictively protected threatened and endangered species. It remains relatively common on Otay Mesa. Therefore, this impact would be less than significant.

One American kestrel was observed immediately west of the Site. This raptor could potentially forage over the Site. Loss of raptor foraging habitat can be considered a direct impact. However, the paucity of small prey species onsite indicates the Site does not have high value for raptor foraging. Due to the low quality of the Site for raptor foraging, loss of the disturbed land onsite would be considered only an indirect impact. Large blocks of open space will be preserved to the west and southwest even after the CVSP is built out, and additional open space will be preserved to the northwest north of SR-905 and to the north of Brown Field. Therefore, this impact to American kestrel would be less than significant.

The Project is not expected to directly impact any sensitive plant or animal species, wetlands, wildlife corridors, nursery sites, or the MHPA.

Indirect Impacts

Potential indirect impacts to the disturbed wetland drainage ditch onsite will be prevented by providing a buffer between the ditch and Site development. The buffer ranges in width from 33 to 74 feet. The very low quality and disturbed condition of the ditch would not warrant more than a 25 foot buffer, so the project will not cause an indirect impact to a City wetland through loss of a wetland buffer.

No other indirect impacts to sensitive habitats are anticipated, due to the Site's location between developed and disturbed land adjacent to SR-905.

The Project could potentially indirectly impact nesting birds protected by the MBTA and Fish and

Game Code. Ground-nesting birds such as the horned larks observed onsite would be most vulnerable. The required avoidance measures, based on either avoidance of work during the avian breeding season or use of focused nest surveys and nest buffers (see Avoidance Measures below for details), would reduce this potential impact to less than significant.

The Project is not expected to indirectly impact any sensitive plant or animal species, wetlands, wildlife corridors, nursery sites, or the MHPA.

Indirect impacts to water and air quality would not be significant because the Project will comply with all applicable water and air quality regulations.

Cumulative Impacts

The MSCP was designed to compensate for the regional loss of biological resources throughout the region. Projects that conform with the MSCP as specified by the Subarea Plan, and implementing ordinances, (i.e. Biology Guidelines and ESL Regulations) are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP. These resources include the vegetation communities identified as Tier I through IV.

In addition, potential cumulative impacts to biological resources from the overall CVSP have already been addressed in OMCPU EIR addendum. This Project's required site-specific biological resources survey indicates that the Project will not result in any significant impacts to biological resources, and does not conflict with EIR cumulative impact findings. Therefore, this Project will have no significant cumulative impact to biological resources.

MITIGATION AND MONITORING REQUIREMENTS

Mitigation Element

The Project will result in no significant biological impacts and will require no mitigation beyond the avoidance measures described in the following section.

Avoidance Measures

The Project would incorporate the following avoidance measures to ensure that no significant direct or indirect impacts to biological resources occur.

1. Prior to vegetation clearing, grubbing, and/or grading, a qualified biologist shall supervise the placement of temporary construction fencing or flagging at the limits of disturbance near the drainage ditch in the northwestern corner.
2. The Project applicant shall ensure that no active nests are adversely affected by vegetation clearing, grubbing, grading, or construction, in compliance with the Migratory Bird Treaty Act and California Fish and Game Code. These activities shall be scheduled to avoid the raptor and general avian breeding season (February 1 – August 31). Alternatively, these activities may occur during the avian breeding season if a qualified biologist conducts a survey for nests, with a focus on ground-nesting birds, within three days prior to the work in the area, and monitors vegetation removal to ensure no nesting birds/raptors are impacted by the Project. If an active nest is identified, the following active nest protection mitigation measures shall be applied:

a. A buffer shall be established between the clearing, grubbing, grading, and construction activities and the active nest so that nesting activities are not interrupted. The buffer shall be a minimum width of 300 feet (500 feet for raptors and threatened or endangered species) shall be delineated by temporary fencing, and shall remain in effect as long as construction is occurring or until the nest is no longer active. The biologist shall monitor the nest during Project activities until nesting is complete. This buffer may be reduced if it can be demonstrated to the satisfaction of the City of San Diego and Wildlife Agencies that the reduction does not represent a threat to nesting activities.
b. Normal clearing, grubbing, grading, and construction without nest buffer(s) may resume once the biologist demonstrates to the satisfaction of the City of San Diego and Wildlife Agencies that all nesting is complete. Nesting would be considered complete if no active nests are observed during a focused nesting bird survey conducted within three days prior to resumption of such activities.

3. Because burrowing owls could unexpectedly move onto the Site, a pre-construction focused survey for burrowing owl shall be undertaken by a qualified biologist within one week before ground disturbance. If evidence of burrowing owl use is detected, Project implementation shall pause while the City is notified and until any resulting required measures have been completed to the satisfaction of the City and Wildlife Agencies.
4. Project-related landscaping shall not include exotic plant species that may be invasive to native habitats. Invasive exotic plant species to be excluded include those listed on the California Invasive Plant Council's Invasive Plant Inventory. Invasive species that already occur onsite will be removed.
5. Best Management Practices and a Storm Water Pollution Prevention Plan will be implemented and enforced to prevent indirect impacts to air or water quality.

Protection and Notice Element

The Project does not require mitigation; therefore assurances that the mitigation or remainder areas are adequately protected are not required.

Management Element

The Project does not require mitigation; therefore assurances that the mitigation or remainder areas are adequately managed are not required.

CONCLUSION

With implementation of the avoidance measures provided in this report, the Project will not result in any significant direct, indirect, or cumulative impacts to biological resources.

This concludes REC's biological letter report for the Floreo Project. Please do not hesitate to contact REC with any questions.

Sincerely,

Catherine MacGregor
Senior Biologist and Botanist

ATTACHMENTS

Figure 1. Regional Location
Figure 2. Vicinity Map
Figure 3. Aerial Photograph of Site
Figure 4. Biological Resources
Figure 5. Photographs Key Map
Figure 6. Project Impacts

Attachment A. Central Village Specific Plan Figure 2.2-1
Attachment B. Biologist Resume
Attachment C. Plants Observed on the Floreo Project Site
Attachment D. Floreo Project Site Photographs
Attachment E. Animals Observed on the Floreo Project
Attachment F. Special-Status Plants with Potential to Occur on the Floreo Project Site
Attachment G. Special-Status Animals with Potential to Occur on the Floreo Project Site
Attachment H. Wetland Buffer Widths

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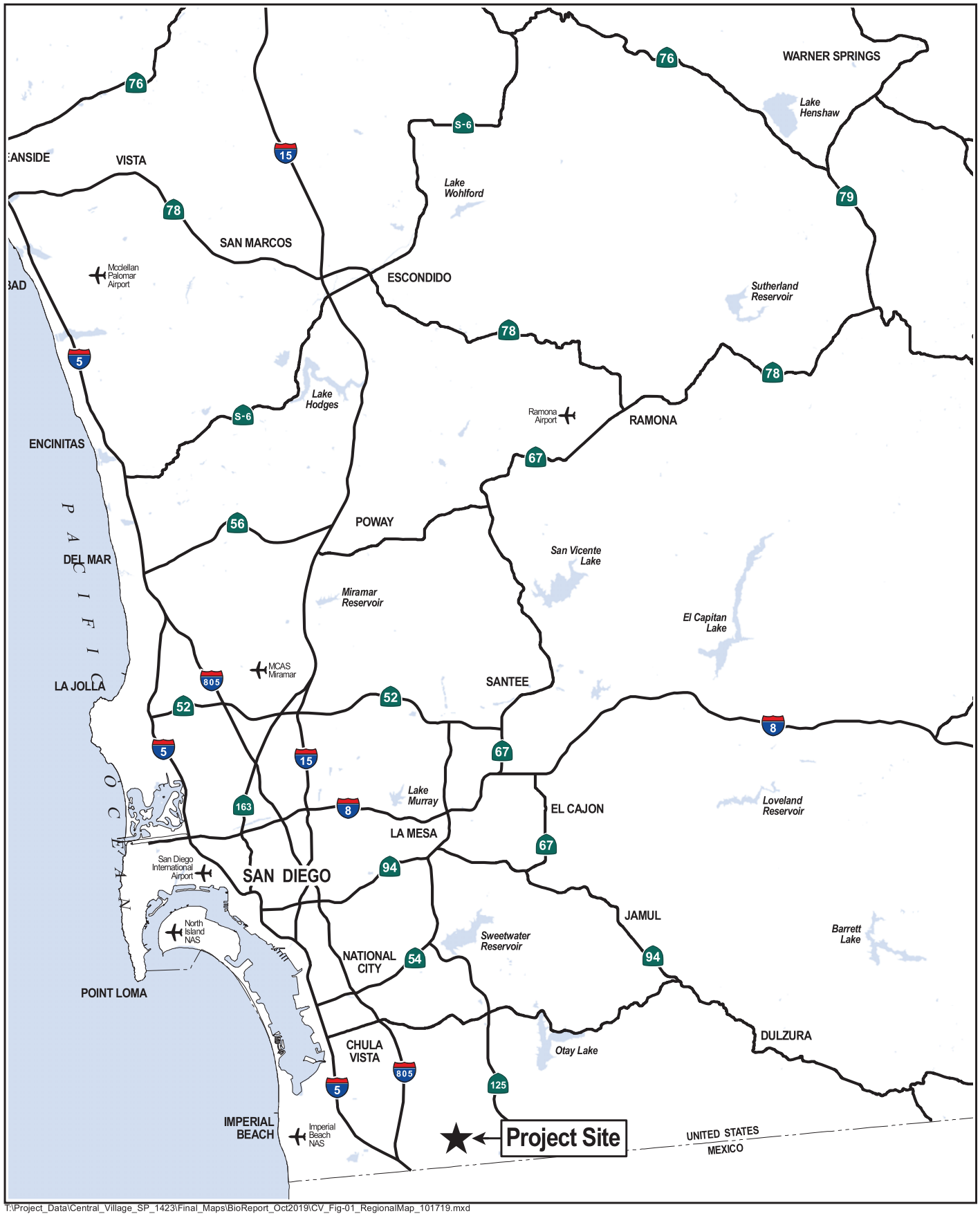
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R·E·C Consultants, Inc.

Regional Location

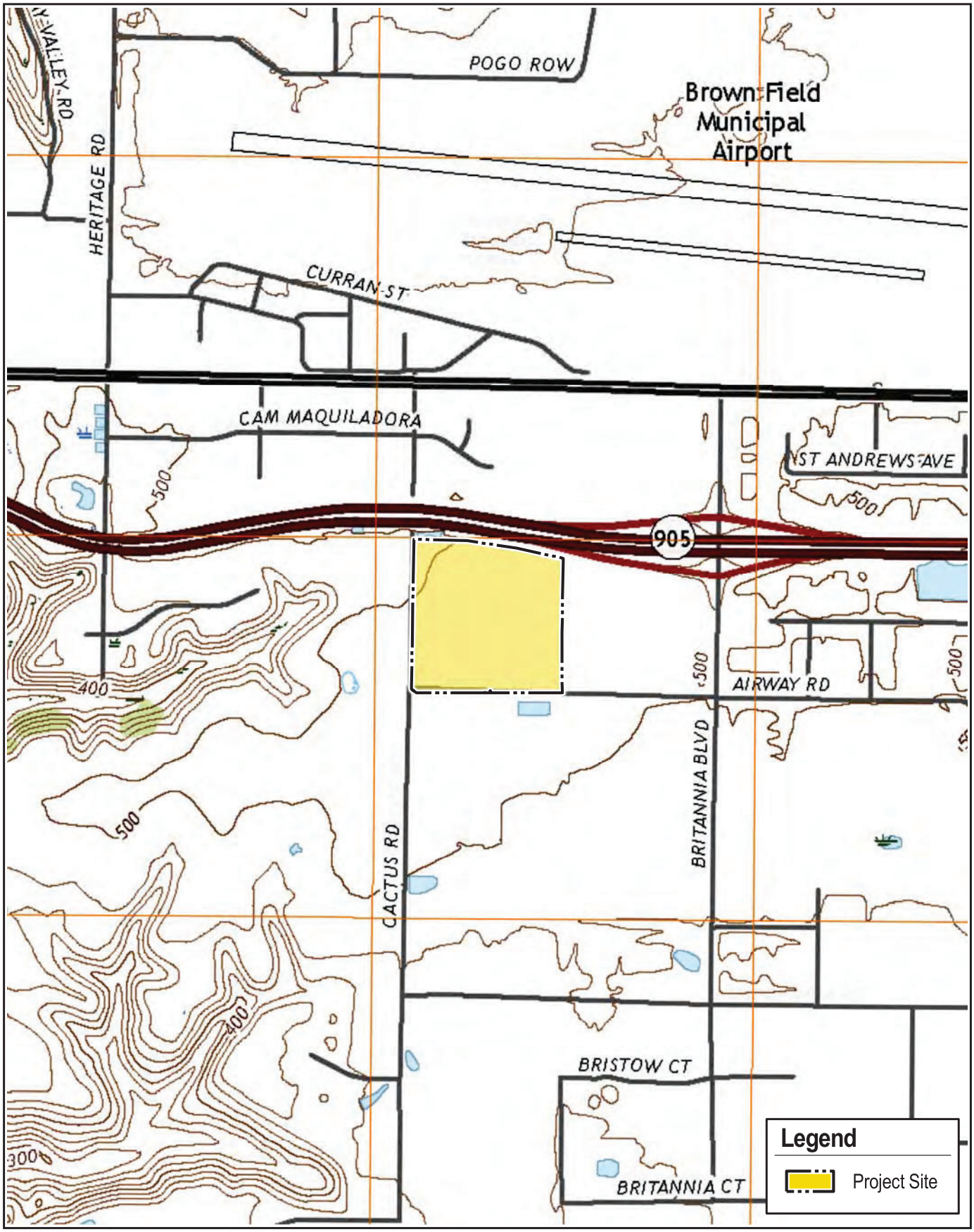
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FIGURE 1

CVSP PLANNING AREAS 10-13 AND 17

Source: County of San Diego SanGIS Database, 2016.

October 2019



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R·E·C Consultants, Inc.

Vicinity Map

CVSP PLANNING AREAS 10-13 AND 17

0 600 1,200 Feet

Source: USGS Topographic Map Otay Mesa Quadrangle, 2018.

FIGURE 2

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T:\Project_Data\Central_Village_SP_1423\Final_Maps\BioReport_Oct2019\CV_Fig-03_AerialMap_101719.mxd

R·E·C Consultants, Inc.

Site Aerial

CVSP PLANNING AREAS 10-13 AND 17

0 150 300 Feet

Source: Google Earth, August 2018.

FIGURE 3

October 2019



T:\Project_Data\Central_Village_SP_1423\Final_Maps\BioReport_Oct2019\CV_Fig-04_Bio-ResourcesMap_101719.mxd

REC Consultants, Inc.

Biological Resources

CVSP PLANNING AREAS 10-13 AND 17

0 100 200 Feet

Source: REC Biological Survey, July 2018.

FIGURE 4

October 2019



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R·E·C Consultants, Inc.

Photographic Key

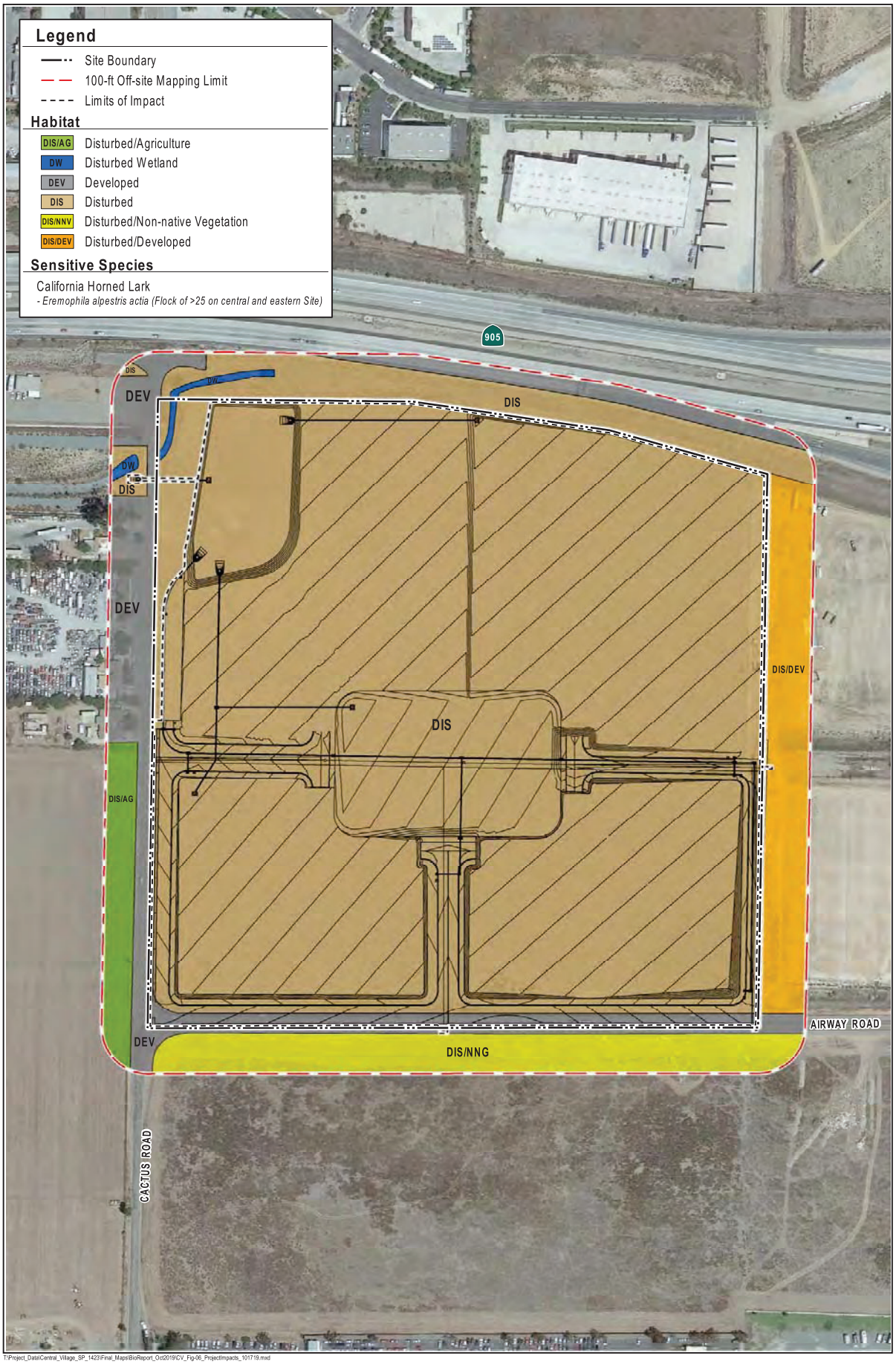
CVSP PLANNING AREAS 10-13 AND 17

0 150 300 Feet

Source: Google Earth, August 2018.

FIGURE 5

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Project Impacts

CVSP PLANNING AREAS 10-13 AND 17

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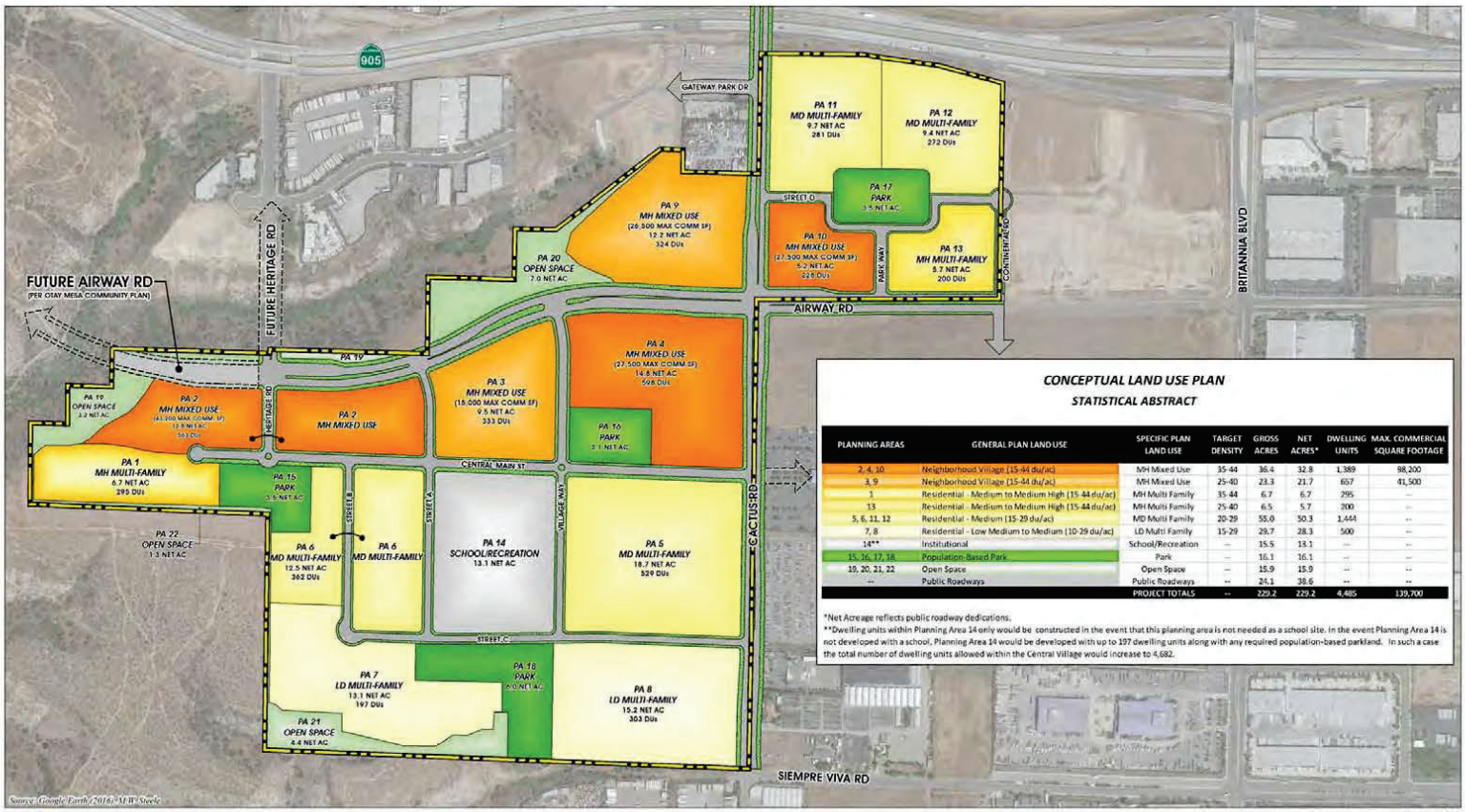
Source: REC Biological Survey, July 2018.

FIGURE 6

October 2019

ATTACHMENT A

Central Village Specific Plan Figure 2.2-1



Source: Google Earth, 2016; MIG Steele

CONCEPTUAL LAND USE PLAN
STATISTICAL ABSTRACT

PLANNING AREAS	GENERAL PLAN LAND USE	SPECIFIC PLAN LAND USE	TARGET DENSITY	GROSS ACRES	NET ACRES*	DWELLING UNITS	MAX. COMMERCIAL SQUARE FOOTAGE
2, 4, 10	Neighborhood Village (15-44 du/ac)	MH Mixed Use	35-44	36.4	32.8	1,389	98,200
3, 9	Neighborhood Village (15-44 du/ac)	MH Mixed Use	25-40	23.3	21.7	657	41,500
1	Residential - Medium to Medium High (15-44 du/ac)	MH Multi Family	35-44	6.7	6.7	295	--
13	Residential - Medium to Medium High (15-44 du/ac)	MH Multi Family	25-40	6.5	5.7	200	--
5, 6, 11, 12	Residential - Medium (15-29 du/ac)	MD Multi Family	20-29	55.0	50.3	1,444	--
7, 8	Residential - Low Medium to Medium (10-29 du/ac)	LD Multi Family	15-29	29.7	28.3	500	--
14**	Institutional	School/Recreation	--	15.5	13.1	--	--
15, 16, 17, 18	Population-Based Park	Park	--	16.1	16.1	--	--
19, 20, 21, 22	Open Space	Open Space	--	15.9	15.9	--	--
--	Public Roadways	Public Roadways	--	24.1	38.6	--	--
		PROJECT TOTALS	--	229.2	229.2	4,485	139,700

*Net Acreage reflects public roadway dedications.
**Dwelling units within Planning Area 14 only would be constructed in the event that this planning area is not needed as a school site. In the event Planning Area 14 is not developed with a school, Planning Area 14 would be developed with up to 197 dwelling units along with any required population-based parkland. In such a case the total number of dwelling units allowed within the Central Village would increase to 4,682.

Figure 2.2-1

SPECIFIC PLAN LAND USE PLAN

ATTACHMENT B

Biologist Resume

Catherine MacGregor

SENIOR BIOLOGIST AND BOTANIST

Education: Bachelor of Arts, Biological Sciences with Plant Ecology emphasis, minor in Marine and Coastal Science; Smith College, Northampton, MA

Professional Background: REC Consultants, Inc. – 2001 to 2006 and 2013 to present
URS Corporation – 2012 to 2013
TRC and SDG&E through Aerotek Staffing – 2011 to 2012
Consulting Botanist and Volunteer Botanist, La Jolla Band of Luiseño Indians – 2008 through 2010

Professional Experience:

In her 15 years of biological, botanical, and environmental science experience, Ms. MacGregor has performed extensive field work for floristic and rare plant surveys, habitat mapping, avian surveys, and jurisdictional wetlands and waters delineation. *Her local experience includes numerous projects in the City of San Diego, with an emphasis on rare vegetation surveys and creek restoration.* Botanical experience includes floristic and rare plant surveys in the coastal, mountain, and desert regions of southern California; detailed habitat mapping and assessment; and development, implementation, and monitoring of rare plant and habitat restoration projects. Wildlife experience includes general wildlife surveys, protocol surveys for burrowing owl and least Bell's vireo, and Gila woodpecker, Mojave fringe-toed lizard, and nesting bird surveys. Ms. MacGregor has performed numerous jurisdictional delineations according to USACE, state, and local regulations in San Diego County, Riverside County, and Florida. She has managed teams of field biologists, prepared numerous biological technical reports and monitoring reports, managed environmental permit compliance, and coordinated with clients and agency personnel to successfully move projects through the permitting and approval processes.

City of San Diego Work Experience

- Performed biological resources surveys and a jurisdictional delineation, and prepared a biological technical report and delineation reports for the Chollas Creek Bikeway project, in the Southcrest and Barrio Logan neighborhoods of San Diego.
- Performed a biological resources survey and prepared a biological letter report for a residential development on San Pasqual Street adjacent to Chollas Creek in the Mountain View neighborhood of San Diego.
- Prepared a biological letter report and burrowing owl survey and report for the Continental Commerce Center project on Otay Mesa in the City of San Diego.
- Prepared an updated biological technical report for the Jackie Robinson YMCA project, located on Chollas Creek in the Mountain View neighborhood of San Diego.
- Conducted a jurisdictional drainages assessment and prepared a biological letter report of the Hotel Circle South Project in Mission Valley.
- Conducted a burrowing owl habitat assessment for a 20-acre site on Otay Mesa in the City of San Diego.

- Performed vegetative surveys, assisted with revegetation of creek and upland slopes, and assisted with USACE wetland permitting for the Northwest Village Creek project on Chollas Creek in the Chollas View neighborhood of San Diego.
- Performed a biological survey for the Hopkins Street project site, a residential project on an urban canyon in the Paradise Hills neighborhood of San Diego.
- Performed a biological resources survey, rare plant survey, and habitat mapping update for light-industrial development project site on Carroll Canyon Creek in Sorrento Valley.
- Assisted with biological resources letter report for the Rutgers Road residential project, located on an urban canyon in La Jolla.
- Habitat mapping and rare plant and bird surveys in the Tijuana River Valley and Peñasquitos Canyon for City of San Diego Stormwater Department and mapping of invasive species.
- Vernal pool assessment and rare plant surveys at the Sevilla site on the western edge of Otay Mesa.
- Vernal pool survey and rare plant survey including maritime succulent scrub at the Candlelight site in western Otay Mesa, with rare maritime succulent scrub habitat and vernal pools.
- Biological resources surveys and letter reports for Sprint Telecommunications potential cell tower sites throughout the City of San Diego.
- Biological monitoring and project management for the Market Creek Plaza riparian habitat restoration project in the Lincoln Park and Chollas View neighborhoods of San Diego.
- Otay tarplant restoration project implementation and monitoring for the Riviera del Sol project on the western edge of Otay Mesa.
- Evaluated Chollas Creek restoration candidate sites for PBS&J, as part of the City of San Diego's habitat restoration site selection and prioritization process.

Specialized Training:

2015	California Department of Fish and Wildlife CNDDB and BIOS professional users training
2014	Arroyo Toad Workshop with Field Survey (including AT observations *in situ*)
2013	Goldspotted Oak Borer Identification Field Training
2013	Desert Washes and Waters of the Coachella Valley, California Area Jurisdictional Delineation Training
2012	Desert Tortoise Council Desert Tortoise Training Workshop
2012	Unexploded Ordnance Training
2007	San Diego Stream Team Bio-Assessment Professional Training
2006	San Diego Vernal Pool Flora and Habitat Restoration Workshop
2004	Fire Ecology of Chaparral and Coastal Sage Scrub Workshop
2002	SERCAL Restoration and Revegetation Workshop
2001	Southwestern Willow Flycatcher Workshop
1999	US Army Corps of Engineers Wetland Delineation Training

ATTACHMENT C

Plants Observed on the Floreo Project Site

ATTACHMENT C

PLANTS OBSERVED ON THE FLOREO PROJECT SITE			
Species Name	**Common Name**	**Family**	**Habitat**
*Atriplex rosea**	tumbling oracle	Chenopodiaceae	DIS
*Avena sp.**	oats	Poaceae	DIS
Baccharis sarothroides	broom baccharis	Asteraceae	DIS
Boraginaceae	(dead, likely *Amsinckia)*	Boraginaceae	DIS
*Brassica nigra**	black mustard	Brassicaceae	DIS
*Bromus diandrus**	ripgut grass	Poaceae	DIS
*Bromus madritensis subsp. rubens**	red brome, foxtail chess	Poaceae	DIS
*Carduus pycnocephalus subsp. pycnocephalus**	Italian thistle	Asteraceae	DIS
*Chenopodium murale**	nettle-leaf goosefoot	Chenopodiaceae	DIS
*Convolvulus arvensis**	field bindweed	Convolvulaceae	DIS
Corethrogyne filaginifolia (var. filaginifolia)	California sand-aster	Asteraceae	DIS
*Cynodon dactylon**	Bermuda grass	Poaceae	DIS
Datura wrightii	western jimson weed	Solanaceae	DIS
*Foeniculum vulgare**	sweet fennel	Apiaceae	DIS
*Glebionis coronaria**	garland/crown daisy	Asteraceae	DIS
*Helminthotheca echioides**	bristly ox-tongue	Asteraceae	DIS, DW
Heterotheca grandiflora	telegraph weed	Asteraceae	DIS
*Hirschfeldia incana**	short-pod mustard	Brassicaceae	DIS, DW
*Lactuca serriola**	prickly lettuce	Asteraceae	DIS
*Malva parviflora**	cheeseweed	Malvaceae	DIS
Malvella leprosa	alkali mallow	Malvaceae	DIS
*Melilotus sp.**	sweetclover/sourclover	Fabaceae	DIS
*Phalaris paradoxa**	paradox canary grass	Poaceae	DIS
*Rhus lancea**	African sumac	Anacardiaceae	DIS
*Ricinus communis**	castor bean	Euphorbiaceae	DIS
*Rumex crispus**	curly dock	Polygonaceae	DW
*Salsola australis**	Australian tumbleweed/Russian-thistle	Chenopodiaceae	DIS
Schoenoplectus californicus	California bulrush	Cyperaceae	DW
*Sisymbrium irio**	London rocket	Brassicaceae	DIS
*Sonchus asper subsp. asper**	prickly sow-thistle	Asteraceae	DIS
*Washingtonia robusta**	Mexican fan palm	Arecaceae	DW

* non-native

Habitat Abbreviations
DIS = Disturbed Land
DW = Disturbed Wetland (drainage ditch)

ATTACHMENT D

Floreo Project Site Photographs

ATTACHMENT D
Floreo Project Site Photographs, July 2018



1. Disturbed Land, from northwest corner toward southeast, Airway Road in background



2. Disturbed Wetland ditch and culvert near northeast corner, under Cactus Road

ATTACHMENT D
Floreo Project Site Photographs, July 2018



3. Disturbed Land from southwest corner toward northeast



4. Disturbed Land from southeast corner toward northwest

ATTACHMENT D
Floreo Project Site Photographs, July 2018



5. Eastern edge, with graded pad under development to east of site



6. Disturbed un-disced south edge of Site along Airway Road, toward west

ATTACHMENT E

Animals Observed on the Floreo Project Site

ATTACHMENT E

ANIMALS OBSERVED ON THE FLOREO PROJECT SITE			
Species Name	**Common Name**	**Habitat**	**Number**
Invertebrates			
*Apis mellifera**	western honey bee	DIS	many
Brephidium exilis	western pygmy-blue	DIS	~8
Copestylum mexicanum	Mexican cactus fly	DIS	1
Family Lycosidae	wolf spider	DIS	1
*Helix aspersa**	brown garden snail	DIS, DW	many
Order Coleoptera	beetle (brown, very small)	DIS	many
*Pieris rapae**	cabbage white	DIS	3
Suborder Anisoptera	dragonfly	DIS	2
Suborder Caelifera	grasshopper	DIS	1
Birds			
Corvus corax	common raven	flyover	1
Eremophila alpestris	horned lark	DIS	large flock (>25)
Falco sparverius	American kestrel	DIS (utility pole)	1
Haemorhous mexicanus	house finch	DIS	5
Mimus polyglottos	northern mockingbird	DIS	2
Spinus psaltria	lesser goldfinch	DIS	5
Tyrannus vociferans	Cassin's kingbird	flyover	2
Zenaida macroura	mourning dove	DIS	7
Mammals			
Canis latrans	coyote	DIS	(scat)
Sylvilagus audubonii	desert cottontail	DIS, DW	1

* non-native

! State or federal special-status species (State endangered, threatened, endangered candidate, fully protected, watchlist, or

Habitat Abbreviations

DIS = Disturbed Land

DW = Disturbed Wetland (drainage ditch)

ATTACHMENT F

Special-Status Plants with Potential to Occur on the Floreo Project Site

ATTACHMENT F

SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR ON THE FLOREO PROJECT SITE (USGS OTAY MESA QUAD, 152 - 157 METERS [500 - 515 FT] AMSL)								
Species Name	**Common Name**	**Family**	**CRPR**	**State/ Federal**	**City NE**	**Growth form, bloom time**	**Habitat**	**Potential to Occur Onsite**
Abronia maritima	red sand-verbena	Nyctaginaceae	4.2	-/-	-	Perennial herb, Feb-Nov	Coastal dunes. 0-100 m.	Low; no suitable onsite.
Acanthomintha ilicifolia	San Diego thorn-mint	Lamiaceae	1B.1	SE/FT	X	Annual herb, Apr-Jun	Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Endemic to active vertisol clay soils of mesas & valleys. Usually on clay lenses within grassland or chaparral communities. 10-960 m.	Low; no remaining suitable habitat.
Acmispon prostratus (Lotus nuttallianus)	Nuttall's acmispon (Nuttall's lotus)	Fabaceae	1B.1	-/-	-	Annual herb, Mar-Jun(Jul)	Coastal dunes, sandy coastal scrub. 0-18 m.	Low; no suitable habitat onsite.
Adolphia californica	California adolphia	Rhamnaceae	2B.1	-/-	-	Shrub (deciduous), Dec-May	From sandy/gravelly to clay soils within grassland, coastal sage scrub, or chaparral; various exposures. 45-740 m.	Low; would have been visible and was not observed; no remaining habitat onsite.
Agave shawii var. shawii	Shaw's agave	Agavaceae	2B.1	-/-	X	Perennial (leaf succulent), Sep-May	Coastal bluffs and slopes within coastal sage scrub. 10-120 m.	Low; would have been visible and was not observed; no suitable habitat onsite.
Ambrosia chenopodiifolia	San Diego bur-sage	Asteraceae	2B.1	-/-	-	Shrub, Apr-Jun	Slopes of canyons in open succulent scrub, especially maritime suculent scrub, usually with little herbaceous cover. 55-155 m.	Low; this species is used in Caltrans hydroseed and could move onto the site but was not observed during the survey.
Ambrosia monogyra (Hymenoclea m.)	singlewhorl burrobrush	Asteraceae	2B.2	-/-	-	Shrub, Aug-Nov	Sandy or rocky soils in sage scrub, chaparral and Sonoran desert scrub. 10-500 m.	Low; would have been visible and was not observed.

ATTACHMENT F

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Ambrosia pumila	San Diego ambrosia	Asteraceae	1B.1	-/FE	X	Perennial herb (rhizomatous), Apr-Oct	Sandy loam or clay soil, sometimes alkaline, in chaparral, coastal scrub, valley and foothill grassland. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m.	Low; no suitable habitat onsite.
Aphanisma blitoides	aphanisma	Chenopodiaceae	1B.2	-/-	X	Annual herb, Feb-Jun	Sandy or clay soils in coastal bluff scrub, coastal dunes, coastal scrub. 3-305 m.	Low, no suitable habitat onsite.
Aphyllon parishii subsp. brachylobum (Orobanche p. subsp. brachyloba)	short-lobe orobanche	Orobanchaceae	4.2	-/-	-	Perennial herb (parasitic), Apr-Oct	Sandy coastal bluff scrub, coastal dunes, coastal scrub; parasitic on shrubs, generally Isocoma menziesii. 3-305 m.	Low, no suitable habitat onsite.
Arctostaphylos otayensis	Otay manzanita	Ericaceae	1B.2	-/-	-	Shrub (evergreen), Jan-Apr	Metavolcanic soils in chaparral, cismontane woodland. 75-1040 m.	Low; would have been visible and was not observed; no remaining habitat onsite.
Artemisia palmeri	San Diego sagewort	Asteraceae	4.2	-/-	-	Biennial to perennial herb to subshrub, (Feb) May-Sep	Drainages and riparian areas in sandy soil within chaparral, coastal scrub, riparian forest, riparian woodland and riparian scrub. 15-915 m.	Low; would have been visible and was not observed.
Asplenium vespertinum	western spleenwort	Aspleniaceae	4.2	-/-	-	Perennial herb (rhizomatous), Feb-Jun	Under overhanging rocks in rocky chaparral, cismontane woodland, coastal scrub. 180-1000 m.	Low; would have been visible and was not observed; no remaining habitat onsite.
Astragalus deanei	Deane's milk-vetch	Fabaceae	1B.1	-/-	-	Perennial herb, Feb-May	Chaparral, cismontane woodland, coastal scrub, riparian forest. Open, brushy south-facing slopes in Diegan coastal sage scrub, sometimes on recently burned-over hillsides. 75-695 m	Low; no suitable habitat onsite.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Astragalus oocarpus	San Diego milk-vetch	Fabaceae	1B.2	-/-	-	Perennial herb, May-Aug	Chaparral (openings), gravelly flats and slopes in thin oak woodland. 120-1795 m.	Low; no suitable habitat onsite.
Astragalus tener var. titi	coastal dune milkvetch	Fabaceae	1B.1	SE/FE	X	Annual herb, Mar-May	Moist, sandy depressions of bluffs or dunes in coastal bluff scrub, coastal dunes, coastal prairie. 1-45 m.	Low; no suitable habitat onsite.
Atriplex coulteri	Coulter's saltbush	Chenopodiaceae	1B.2	-/-	-	Perennial herb, Mar-Oct	Alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, valley & foothill grassland, also ridgetops and alkaline low places. 2-460 m.	Low; no remaining suitable habitat.
Atriplex pacifica	south coast saltscale	Chenopodiaceae	1B.2	-/-	-	Annual herb, Mar-Oct	Alkali soils in coastal bluff scrub, coastal dunes, coastal scrub, playas. 1-400 m.	Low; no remaining suitable habitat.
Baccharis vanessae	Encinitas baccharis	Asteraceae	1B.1	SE/FT	X	Shrub (deciduous), Aug-Nov	Steep, open, rocky areas with sandstone soils in maritime chaparral, cismontane woodland. 40-855 m.	Low; no suitable habitat onsite.
Bahiopsis laciniata (Viguiera l.)	San Diego sunflower (San Diego County viguiera)	Asteraceae	4.3	-/-	-	Shrub, Feb-Jun(Aug)	Slopes and ridges in chaparral and coastal scrub. 60-750 m.	Low; this species may be used in Caltrans hydroseed and could move onto the site but was not observed during the survey.
Bergerocactus emoryi	golden-spined cereus	Cactaceae	2B.2	-/-	-	Perennial (stem succulent), May-Jun	Sandy soils in chaparral, closed-cone coniferous forest, coastal scrub; coastal only. 3-395 m.	Low; would have been visible and was not observed, no suitable habitat onsite.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Bloomeria clevelandii (Muilla c.)	San Diego goldenstar	Themidaceae	1B.1	-/-	-	Perennial herb (bulbiferous), Apr-May	Clay soil in chaparral, coastal scrub, valley & foothill grassland. Often on mounds between vernal pools in fine, sandy loam. 50-465 m.	Low; no remaining suitable habitat.
Brodiaea orcuttii	Orcutt's brodiaea	Themidaceae	1B.1	-/-	-	Perennial herb (deciduous, bulbiferous), May-Jul	Mesic, clay, sometimes serpentine soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows & seeps, valley & foothill grassland. Usually in vernal pools and small drainages. 30-1695 m.	Low; no remaining suitable habitat.
Calandrinia breweri	Brewer's calandrinia	Montiaceae	4.2	-/-	-	Annual herb, (Jan)Mar-Jun	Sandy or loamy disturbed or burned areas in chaparral, coastal scrub. 10-1220 m.	Low; no suitable habitat onsite.
Calochortus dunnii	Dunn's mariposa lily	Liliaceae	1B.2	SR/-	-	Perennial herb (bulbiferous), (Feb)Apr-Jun	Gabbroic or metavolcanic soil, sometimes sandstone, in closed-cone coniferous forest, chaparral, valley & foothill grassland. 255-1655 m.	Low; no suitable soils or habitat onsite.
Camissoniopsis lewisii (Camissonia l.)	Lewis's evening-primrose	Onagraceae	3	-/-	-	Annual herb, Mar-May(Jun)	Sandy or clay soil in cismontane woodland, coastal bluff scrub, coastal dunes, coastal scrub, valley & foothill grassland. 0-300 m.	Low; no remaining suitable habitat.
Carex obispoensis	San Luis Obispo sedge	Cyperaceae	1B.2	-/-	-	Perennial herb, Apr-Jun	Chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland; usually in transition zone on sand, clay, serpentine, or gabbro; in seeps. 5-845 m.	Low; no suitable habitat onsite.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Ceanothus cyaneus	Lakeside ceanothus	Rhamnaceae	1B.2	-/-	-	Shrub (evergreen), Apr-Jun	Closed-cone coniferous forest, chaparral. 200-1040 m.	Low; would have been visible and was not observed; no remaining habitat onsite.
Ceanothus otayensis	Otay Mountain ceanothus	Rhamnaceae	1B.2	-/-	-	Shrub (evergreen), Jan-Apr	Metavolcanic or gabbroic soils in chaparral. 75-1160 m.	Low; would have been visible and was not observed; no suitable soils or habitat onsite.
Ceanothus verrucosus	wart-stemmed ceanothus	Rhamnaceae	2B.2	-/-	-	Shrub (evergreen), Dec-May	Southern maritime chaparral and nearby chaparral, rocky slopes. 1-380 m.	Low; would have been visible and was not observed; no remaining habitat onsite.
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	Asteraceae	1B.1	-/-	-	Annual herb, Jan-Aug	Sandy coastal bluff scrub, coastal dunes. 0-100 m.	Low; no suitable habitat onsite.
Chamaebatia australis	southern mountain misery	Rosaceae	4.2	-/-	-	Shrub (evergreen), Nov-May	Gabbroic or metavolcanic chaparral. 300-1020 m.	Low; would have been visible and was not observed; no suitable soils or habitat onsite.
Chloropyron maritimum subsp. maritimum (Cordylanthus maritimus subsp. m.)	salt marsh bird's beak	Orobanchaceae	1B.2	SE/FE	-	Annual herb (hemiparasitic), May-Oct(Nov)	Limited to the higher zones of salt marsh habitat. 0-10 m.	Low; no suitable habitat onsite.
Chorizanthe polygonoides var. longispina	long-spined spineflower	Polygonaceae	1B.2	-/-	-	Annual herb, Apr-Jul	Gabbroic clay soils in chaparral, coastal scrub, meadows & seeps, valley & foothill grassland, near vernal pools. 30-1530 m.	Low; no suitable habitat remaining onsite.
Cistanthe maritima	seaside cistanthe	Montiaceae	4.2	-/-	-	Annual herb, (Feb)Mar-Jun(Aug)	Sandy coastal bluff scrub, coastal scrub, valley & foothill grassland. 5-300 m.	Low; no suitable habitat remaining onsite.
Clinopodium chandleri (Satureja c.)	San Miguel savory	Lamiaceae	1B.2	-/-	-	Shrub, Mar-Jul	Rocky, gabbroic or metavolcanic soils in chaparral, cismontane woodland, coastal scrub, riparian woodland, valley & foothill grassland. 120-1075 m.	Low; no suitable soils or habitat onsite.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Comarostaphylis diversifolia subsp. diversifolia	summer-holly	Ericaceae	1B.2	-/-	-	Shrub (evergreen), Apr-Jun	Chaparral, cismontane woodland. 30-945 m.	Low; would have been visible and was not observed; no suitable habitat onsite.
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	4.2	-/-	-	Annual herb, Mar-Jul	Wet clay and serpentine ridges in chaparral openings, coastal scrub, valley & foothill grassland. 30-700 m.	Moderate; not observed, but somewhat widespread, suitable soils onsite, can reappear from seed bank in formerly farmed fields.
Corethrogyne filaginifolia var. incana (no varieties recognized in TJM2)	San Diego sand aster	Asteraceae	1B.1	-/-	-	Perennial herb, Jun-Sep	Chaparral, coastal bluff scrub, coastal scrub, possibly disturbed sites and ecotones. 35-115 m.	Low; sand aster observed at the edge of the site and offsite was the common type.
Cylindropuntia californica var. californica (Opuntia parryi var. serpentina)	snake cholla	Cactaceae	1B.1	-/-	X	Shrub (stem succulent), Apr-May	Coastal chaparral, coastal sage scrub. 30-150 m.	Low; would have been visible and was not observed; no suitable habitat onsite.
Deinandra conjugens (Hemizonia c.)	Otay tarplant	Asteraceae	1B.1	SE/FT	X	Annual herb, May-Jun	Clay soils in coastal plains, coastal scrub, mesas, river bottoms, valley & foothill grassland; often in open disturbed areas. 60-275 m.	Low; known in project area but no tarplant observed even at un-disced edges of field.
Deinandra floribunda (Hemizonia f.)	Tecate tarplant	Asteraceae	1B.2	-/-	-	Annual herb, Aug-Oct	Chaparral, coastal scrub, often in small drainages or disturbed areas. 150-1325 m.	Low; scarce in project area and no tarplant observed even at un-disced edges of field.
Deinandra paniculata (Hemizonia p.)	San Diego tarplant, paniculate tarplant	Asteraceae	4.2	-/-	-	Annual herb, Apr-Nov	Usually vernally mesic sites in coastal scrub and valley and foothill grassland; sometimes vernal pools or nearby mima mounds. 25-940 m.	Low; scarce in project area, no habitat onsite, no tarplant observed even at un-disced edges of field.
Dicranostegia orcuttiana (Cordylanthus orcuttianus)	Orcutt's bird's beak	Orobanchaceae	2B.1	-/-	-	Annual herb (hemiparasitic), Mar-Sep	Coastal scrub associations on slopes; also reported from intermittently moist swales, and in washes. 0-200 m	Low; not observed, unlikely to occur this far east.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Dudleya attenuata subsp. attenuata (D. a. subsp. orcuttii)	Orcutt's dudleya	Crassulaceae	2B.1	-/-	-	Perennial herb, May-Jul	Rocky mesas, canyons and ridges in coastal scrub, coastal bluff scrub, chaparral. Only known from Border Field State Park and Lichty Mesa, near US-Mexico border. 3-50 m.	Low; no suitable habitat onsite.
Dudleya blochmaniae subsp. blochmaniae	Blochman's dudleya	Crassulaceae	1B.1	-/-	-	Perennial herb, Apr-Jun	Coastal bluff scrub, chaparral, coastal scrub, valley & foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. 5-450 m.	Low; no suitable habitat onsite.
Dudleya brevifolia (D. blochmaniae subsp. brevifolia)	short-leaf dudleya	Crassulaceae	1B.1	SE/-	X	Perennial herb, Apr-May	On Torrey sandstone in openings in maritime chaparral & coastal scrub. 30-125 m.	Low; no suitable soils or habitat onsite.
Dudleya variegata	variegated dudleya	Crassulaceae	1B.2	-/-	X	Perennial herb, Apr-Jun	Often rocky/gravelly or clay soils or on rock outcrops in grassland, openings in chaparral, cismontane woodland, coastal scrub, also near vernal pools or on mima mounds. 3-580 m.	Low; known in project area but no remaining habitat onsite.
Ericameria palmeri var. palmeri	Palmer's goldenbush	Asteraceae	1B.1	-/-	-	Shrub (evergreen), Jul-Nov	Steep hillsides, granitic soils in mesic chaparral, coastal scrub. 5-625 m.	Low; would have been visible and was not observed, no suitable habitat onsite.
Eryngium aristulatum var. parishii	San Diego button-celery	Apiaceae	1B.1	SE/FE	X	Biennial to perennial herb, Apr-Jun	Mesic coastal scrub, valley & foothill grassland, vernal pools. 15-880 m.	Low; no remaining suitable habitat.
Euphorbia misera	cliff spurge	Euphorbiaceae	2B.2	-/-	-	Shrub, Dec-Aug	Rocky coastal bluff scrub, coastal scrub, Mojavean desert scrub. 3-430 m.	Low; would have been visible and was not observed, no suitable habitat onsite.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Ferocactus viridescens	coast barrel cactus, San Diego barrel cactus	Cactaceae	2B.1	-/-	-	Perennial (stem succulent), May-Jun	Chaparral, coastal scrub, valley & foothill grassland, near vernal pools. 3-490 m.	Low; would have been visible and was not observed, no suitable habitat onsite.
Frankenia palmeri	Palmer's frankenia	Frankeniaceae	2B.1	-/-	-	Perennial herb, May-Jul	Coastal dunes, coastal salt marshes and swamps, playas; 0-10 m	Low; no suitable habitat.
Fraxinus parryi	chaparral ash	Oleaceae	2B.2	-/-	-	Shrub, Mar-May	Chaparral, 213-620 m	Low; would have been visible and was not observed, no suitable habitat onsite.
Fremontodendron mexicanum	southern fremontia, Mexican flannelbush	Malvaceae	1B.1	SR/FE	-	Shrub (evergreen), Mar-Jun	Gabbroic, metavolcanic, or serpentinite soils in closed-cone coniferous forest, chaparral, cismontane woodland; 10-716 m	Low; would have been visible and was not observed, no suitable soils or habitat onsite.
Galium proliferum	limestone bedstraw, desert bedstraw	Rubiaceae	2B.2	-/-	-	Annual herb, Mar-Jun	Rocky, carbonate (limestone) areas in Joshua tree woodland, Mojavean desert scrub, pinyon & juniper woodland; 1190-1630 m	Low; only one SD record, near San Miguel Ranch.
Grindelia hallii (G. hirsutula var. hallii)	San Diego gumplant	Asteraceae	1B.2	-/-	-	Perennial herb, Jul-Oct	Moist areas in chaparral, lower montane coniferous forest, meadows & seeps, valley & foothill grassland. 180-1810 m.	Low; no gumplant observed at un-disced field edges, no suitable habitat remaining onsite.
Harpagonella palmeri	Palmer's grappling-hook	Boraginaceae	4.2	-/-	-	Annual herb, Mar-May	Clay soils in chaparral, coastal scrub, valley & foothill grassland. 20-955 m.	Low; no suitable habitat remaining onsite.
Hesperevax caulescens	hogwallow starfish	Asteraceae	4.2	-/-	-	Annual herb, Mar-Jun	Valley and foothill grassland (mesic, clay); 0-505 m	Low; no suitable habitat remaining onsite.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Hesperocyparis forbesii (Cupressus f.)	Tecate cypress	Cupressaceae	1B.1	-/-	-	Tree (evergreen)	Clay, gabbroic, or metavolcanic soils in closed-cone coniferous forest, chaparral. 60-1650 m.	Low; would have been visible and was not observed, no suitable habitat onsite, no records this far west since 1888.
Heterotheca sessiliflora subsp. sessiliflora	false goldenaster, beach goldenaster	Asteraceae	1B.1	-/-	-	Perennial herb, Mar-Dec	Sandy soils in coastal chaparral, coastal dunes, coastal scrub. 0-5 m.	Low; no suitable soils or habitat, site is too high.
Holocarpha virgata subsp. elongata	graceful tarplant	Asteraceae	4.2	-/-	-	Annual herb, May-Nov	Chaparral, cismontane woodland, coastal scrub, valley & foothill grassland. 60-1100 m.	Low; no suitable habitat remaining onsite.
Hordeum intercedens	little barley, vernal barley	Poaceae	3.2	-/-	-	Annual herb, Mar-Jun	Dry, saline streambeds and alkaline flats in coastal dunes, coastal scrub, valley and foothill grassland; vernal pools. 5-1000 m.	Low; no barley observed, suitable habitat remaining onsite.
Isocoma menziesii var. decumbens	decumbent goldenbush	Asteraceae	1B.2	-/-	-	Shrub, Apr-Nov	Sandy, often disturbed areas in chaparral, coastal scrub. 10-135 m.	Low; would have been visible and was not observed; no suitable habitat or soils onsite.
Iva hayesiana	San Diego marsh-elder	Asteraceae	2B.2	-/-	-	Perennial herb to subshrub, Apr-Oct	Marshes & swamps, playas, riverwashes. 10-500 m.	Low; would have been visible and was not observed.
Juglans californica (J. c. var. californica)	Southern California black walnut	Juglandaceae	4.2	-/-	-	Tree (deciduous), Mar-Aug	Slopes, canyons, and alluvial habitats in chaparral, cismontane woodland, coastal scrub. 50-900 m.	Low; would have been visible and was not observed, no suitable habitat.
Juncus acutus subsp. leopoldii	southwestern spiny rush	Juncaceae	4.2	-/-	-	Perennial herb, (Mar)May-Jun	Moist saline places such as mesic coastal dunes, alkaline seeps, salt marshes. 3-900 m.	Low; would have been visible and was not observed.
Lasthenia glabrata subsp. coulteri	Coulter's salt-marsh daisy, Coulter's goldfields	Asteraceae	1B.1	-/-	-	Annual herb, Feb-Jun	Alkaline soils in coastal salt marshes & swamps, playas, vernal pools. 1-1375 m.	Low; no suitable habitat remaining onsite, not known on Otay Mesa.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Lepidium virginicum var. robinsonii (not recognized in TJM2)	Robinson's peppergrass	Brassicaceae	4.3	-/-	-	Annual herb, Jan-Jul	Dry chaparral, coastal scrub. 4-1435 m.	Low; no suitable habitat.
Leptosyne maritima (Coreopsis m.)	San Diego sea-dahlia	Asteraceae	2B.2	-/-	-	Perennial herb, Mar-May	Coastal bluff scrub, coastal scrub. 5-185 m.	Low; no suitable habitat.
Lilium humboldtii subsp. ocellatum	ocellated lily, ocellated Humboldt lily	Liliaceae	4.2	-/-	-	Perennial herb (bulbiferous), Mar-Jul(Aug)	Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian forest. 30-1800 m.	Low; no suitable habitat.
Lycium californicum	California desert thorn	Solanaceae	4.2	-/-	-	Shrub, (Dec)Mar-Aug	Coastal bluff scrub, coastal scrub. 5-150 m.	Low; would have been visible and was not observed, no suitable habitat.
Microseris douglasii subsp. platycarpha	small-flower microseris	Asteraceae	4.2	-/-	-	Annual herb, Mar-May	Alkaline clay soils in cismontane woodland, coastal scrub, valley & foothill grassland, vernal pools. 15-1070 m.	Low; no remaining suitable habitat.
Monardella stoneana	Jennifer's monardella	Lamiaceae	1B.2	-/-	-	Perennial herb to subshrub, Jun-Sep	Usually in rocky intermittent streambeds, closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub; 10-790 m	Low; would have been visible and was not observed, no suitable habitat.
Monardella viminea (M. linoides subsp. v.)	willowy monardella	Lamiaceae	1B.1	SE/FE	-	Perennial herb to subshrub, Jun-Aug	Canyons, rocky and sandy places, and alluvial, ephemeral washes or floodplains in chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland. 45-230 m.	Low; would have been visible and was not observed, no suitable habitat.
Mucronea californica	California spineflower	Polygonaceae	4.2	-/-	-	Annual herb, Mar-Aug	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley & foothill grassland; 0-1400 m	Low; no suitable habitat or sandy soil onsite.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Myosurus minimus (includes M. m. subsp. apus)	little mousetail	Ranunculaceae	3.1	-/-	-	Annual herb, Mar-Jun	Valley & foothill grassland, vernal pools (alkaline). 20-640 m.	Low; no vernal pools or suitable habitat.
Nama stenocarpa	mud nama	Boraginaceae	2B.2	-/-	-	Annual to perennial herb, Jan-Jul	Marshes & swamps (lake margins, riverbanks). 5-500 m.	Low; no suitable habitat.
Navarretia fossalis	spreading navarretia, Moran's navarretia	Polemoniaceae	1B.1	-/FT	X	Annual herb, Apr-Jun	Vernal pools, swales, and depressions surrounded by chaparral, grassland, or scrub. 15-850 m.	Low; no vernal pools or suitable habitat.
Navarretia prostrata	flat navarretia	Polemoniaceae	1B.1	-/-	-	Annual herb, Apr-Jul	Mesic, alkaline areas in coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. 3-1235 m.	Low; no vernal pools or suitable habitat.
Nemacaulis denudata var. gracilis	slender woolly-heads, slender cottonheads	Polygonaceae	2B.2	-/-	-	Annual herb, Mar-May	Coastal dunes, desert dunes, Sonoran desert scrub; -50-400 m	Low; no suitable habitat.
Ophioglossum californicum	California adder's tongue	Ophioglossaceae	4.2	-/-	-	Perennial herb (rhizomatous), (Dec)Jan-Jun	Mesic chaparral and valley & foothill grassland, vernal pools margins. 60-525 m.	Low; no suitable habitat.
Orcuttia californica	California Orcutt's grass	Poaceae	1B.1	SE/FE	X	Annual herb, Apr-Aug	Vernal pools. 10-660 m.	Low; no vernal pools or similar habitat.
Ornithostaphylos oppositifolia	Baja California birdbush	Ericaceae	2B.1	SE/-	-	Shrub (evergreen), Jan-Apr	Chaparral; 55-800 m	Low; would have been visible and was not observed, no suitable habitat, not known to occur on north side of Tijuana River Valley.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Pentachaeta aurea subsp. aurea	golden-ray pentachaeta	Asteraceae	4.2	-/-	-	Annual herb, Mar-Jul	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley & foothill grassland. 80-1850 m.	Low; no suitable habitat.
Phacelia stellaris	Brand's phacelia	Boraginaceae	1B.1	-/-	-	Annual herb, Mar-Jun	Coastal dunes, openings in coastal scrub. 3-370 m.	Low; no suitable habitat.
Pickeringia montana var. tomentosa	hairy chaparral-pea	Fabaceae	4.3	-/-	-	Annual herb, Apr-Jun	Chaparral; gabbroic or granitic soils; usually clay. 0-1700 m.	Low; no suitable habitat.
Piperia cooperi	Cooper's rein orchid, chaparral rein orchid	Orchidaceae	4.2	-/-	-	Perennial herb, Mar-Jun	Chaparral, cismontane woodland, valley & foothill grassland. 15-1585 m.	Low; no suitable habitat.
Pogogyne abramsii	San Diego mesa mint	Lamiaceae	1B.1	SE/FE	X	Annual herb, Mar-Jul	Vernal pools within grasslands, chamise chaparral, or coastal sage scrub. 70-195 m.	Low; no vernal pools or similar.
Pogogyne nudiuscula	Otay mesa mint	Lamiaceae	1B.1	SE/FE	X	Annual herb, May-Jul	Dry beds of vernal pools and moist swales. 135-165 m.	Low; no vernal pools or similar.
Polygala cornuta var. fishiae	Fish's milkwort	Polygalaceae	4.3	-/-	-	Shrub (deciduous), May-Aug	Chaparral, cismontane woodland, riparian woodland; scree slopes, brushy ridges, and along creeks, often with oaks. 100-1000 m.	Low; would have been visible and was not observed, no suitable habitat.
Quercus cedrosensis	Cedros Island oak	Fagaceae	2B.2	-/-	-	Tree (evergreen), Apr-May	Closed-cone coniferous forest, chaparral, coastal scrub. 130-975 m.	Low; would have been visible and was not observed, no suitable habitat.
Quercus dumosa	Nuttall's scrub oak	Fagaceae	1B.1	-/-	-	Shrub (evergreen), Feb-Aug	Sandy soil near coast, clay loam soils in closed-cone coniferous forest, chaparral, coastal scrub. 15-400 m.	Low; would have been visible and was not observed, no suitable habitat.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Quercus engelmannii	Engelmann/mesa blue oak	Fagaceae	4.2	-/-	-	Tree (deciduous), Apr-May	Chaparral, cismontane woodland, riparian woodland, valley & foothill grassland. 50-1300 m.	Low; would have been visible and was not observed, no suitable habitat.
Ribes viburnifolium	Santa Catalina Island currant, evergreen currant	Grossulariaceae	1B.2	-/-	-	Shrub (evergreen), Feb-Apr	Chaparral, cismontane woodland; 30-305 m	Low; would have been visible and was not observed, no suitable habitat.
Romneya coulteri	Coulter's Matilija poppy	Papaveraceae	4.2	-/-	-	Perennial herb (rhizomatous), Mar-Jul	Chaparral, coastal scrub, in washes and on slopes; also after burns. 20-1200 m.	Low; would have been visible and was not observed, no suitable habitat.
Rosa minutifolia	small-leaf rose, desert rose	Rosaceae	2B.1	SE/-	-	Shrub (deciduous), Jan-Jun	Chaparral, coastal scrub; 150-160 m	Low; would have been visible and was not observed, no suitable habitat.
Salvia munzii	Munz's sage	Lamiaceae	2B.2	-/-	-	Shrub (evergreen), Feb-Apr	Rocky hills and slopes in chaparral, coastal scrub. 35-575 m.	Low; would have been visible and was not observed, no suitable habitat.
Selaginella cinerascens	mesa spike-moss, ashy spike-moss	Selaginellaceae	4.1	-/-	-	Perennial herb (rhizomatous)	Chaparral and coastal scrub on undisturbed soil. 20-640 m.	Low; would have been visible and was not observed, no suitable habitat.
Senecio aphanactis	California groundsel, chaparral ragwort	Asteraceae	2B.2	-/-	-	Annual herb, Jan-Apr	Chaparral, cismontane woodland, coastal scrub, sometimes alkaline flats. 20-855 m.	Low; no suitable habitat.
Stemodia durantifolia	blue streamwort, purple stemodia	Plantaginaceae	2B.1	-/-	-	Perennial herb, Jan-Dec	Sandy soil in riparian habitats, on wet sand or rocks, drying streambeds, mesic Sonoran desert scrub. 35-795 m.	Low; no suitable habitat.
Stipa diegoensis (Achnatherum diegoense)	San Diego needlegrass, San Diego County needle grass	Poaceae	4.2	-/-	-	Perennial herb, Feb-Jun	Rocky slopes, sea cliffs and stream banks, often mesic areas in chaparral, coastal scrub. 10-800 m.	Low; no needle grass observed, no suitable habitat.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Stylocline citroleum	oil neststraw	Asteraceae	1B.1	-/-	-	Annual herb, Mar-Apr	Flats, clay soils in oil-producing areas in chenopod scrub, coastal scrub, valley & foothill grassland. No modern occurrences outside of Bakersfield, CA. 50-400 m.	Low; no suitable habitat onsite, no modern occurrences outside of Bakersfield, CA.
Tetracoccus dioicus	Parry's tetracoccus	Picrodendraceae	1B.2	-/-	-	Shrub, Apr-May	Rocky, decomposed gabbro soil in chaparral, coastal scrub. 135-705 m.	Low; no suitable soils or habitat.
Tortula californica	California screw moss	Pottiaceae	1B.2	-/-	-	Moss	Sandy soils in chenopod scrub, valley and foothill grassland. 10-1460 m.	Low; no suitable soils or habitat.
Xanthisma junceum (Machaeranthera juncea)	rush chaparral-star, rush-like bristleweed	Asteraceae	4.3	-/-	-	Perennial herb, May-Jan	Dry hillsides in chaparral and coastal scrub. 240-1000 m.	Low; no suitable habitat.

Listing Designations

CRPR - California Rare Plant Rank (from Rare Plant Status Review Group, jointly managed by California Department of Fish and Wildlife [CDFW] and California Native Plant Society [CNPS])

1A - Plants presumed extirpated in California and either rare or extinct elsewhere
1B - Plants rare, threatened or endangered in California AND elsewhere
2A - Presumed extirpated or extinct in California, but more common elsewhere
2B - Plants rare, threatened or endangered in California, but more common elsewhere
3 - Plants about which more information is needed - a review list
4 - Plants of limited distribution - a watch list

.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 - Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
CBR - Considered But Rejected

State of California species designations (CDFW April 2016)
SE - State-listed Endangered
ST - State-listed Threatened
SR - State-listed Rare

Federal species designations (CDFW April 2016, USFWS 2016)
FE - Federally-listed Endangered
FT - Federally-listed Threatened
FC - Federal candidate for listing

City NE - an X in this column indicates the species is considered a Narrow Endemic by the City of San Diego (Land Development Manual - Biology Guidelines 2009)

Other abbreviations:
TJM2 - The Jepson Manual, 2nd edition (2012) (taxonomic authority for this report except where it conflicts with special-status plant recognition)
(Common names are primarily from *The Checklist of Vascular Plants of San Diego County* [Rebman and Simpson 2014], and secondarily from CNPS's Inventory of Rare and Endangered Plants [CNPS 2018])

ATTACHMENT G

Special-Status Animals with Potential to Occur on the Floreo Project Site

ATTACHMENT G

SPECIAL-STATUS ANIMALS WITH POTENTIAL TO OCCUR THE FLOREO PROJECT SITE (USGS OTAY MESA QUAD, 152 - 157 METERS [500 - 515 FT] AMSL)				
Species Name	**Common Name**	**State/Federal Status**	**Habitat**	**Potential to Occur Onsite**
INVERTEBRATES				
Branchinecta sandiegonensis	San Diego fairy shrimp	-/FE	Vernal pools and other unvegetated ephemeral basins in Orange and San Diego Counties and Baja California. Habitat is typically < 30 cm deep and within 64 km of the Pacific Ocean. < 701 m.	Very low; no vernal pools or similar features occur onsite.
Euphydryas editha quino	Quino checkerspot butterfly	-/FE	Sunny openings within chaparral and coastal sage shrublands on hills and mesas. Larval host plants are primarily Plantago erecta and P. patagonica, but Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla may also be used.	Low; no suitable habitat or host plants occur onsite.
Lycaena hermes	Hermes copper butterfly	-/FC	Southern mixed chaparral and coastal sage scrub; limited to western edge of Laguna Mountains. Host plant is Rhamnus crocea.	Very low; no suitable habitat or host plants occur onsite.
Streptocephalus woottoni	Riverside fairy shrimp	-/FE	Vernal pools in grassland and coastal sage scrub in western Riverside, Orange and San Diego Counties (Ramona area), and coastal SD County. Does not appear until later in the season; may require warmer water or longer inundation times than Branchinecta sandiegonensis.	Very low; no vernal pools or similar features occur onsite.
AMPHIBIANS				
Anaxyrus californicus (Bufo microscaphus c.)	arroyo toad	SSC/FE	Washes, arroyos, sandy riverbanks, and riparian areas, especially with willows, cottonwoods and sycamores; needs exposed sandy streamsides with stable terraces for burrowing with scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding. 0-900 m	Very low; suitable riparian habitat does not occur onsite.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Spea hammondii	western spadefoot	SSC/-	Grassland, also valley-foothill hardwood woodlands. Vernal pools essential for breeding and egg-laying. Activity limited to wet season, summer storms or during evenings with elevated substrate moisture levels; stays below ground in dry/cold weather. Nocturnal. Extirpated throughout much of lowland southern California.	Very low; vernal pools or similar do not occur onsite, site too disturbed.
REPTILES				
Acinemys pallida *(Emys marmorata, Clemmys m. p.)*	western pond turtle	SSC/-	Permanent waters with aquatic vegetation; can occur in urban conditions and brackish water. Nests in sand or grassy open fields up to 0.5 km from water. < 1850 m	Very low; suitable aquatic habitat does not occur onsite and site too disturbed to serve as suitable upland habitat.
Anniella stebbinsi *(A. p. pulchra)*	southern California legless lizard (silvery legless lizard)	SSC/-	Sandy or loose loamy soils under sparse vegetation or other cover. Occasionally found in suburban gardens. Mostly subterranean and strongly prefer soils with a high moisture content.	Low; suitable soils do not occur onsite; site too disturbed.
Arizona elegans occidentalis	California glossy snake	SSC/-	Various scrub and grassland habitats, often with loose or sandy soils; Peninsular Ranges.	Very low; suitable habitat and soils do not occur onsite.
Aspidoscelis hyperythra (beldingi) *(A. hyperythrus b.)*	orange-throated whiptail (Belding's)	WL/-	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats; prefers sandy areas with perennial plants that support termites.	Low; no sandy areas or suitable habitat onsite.
Aspidoscelis tigris stejnegeri	coastal whiptail	SSC/-	Found in hot, dry open areas with sparse vegetation; also woodland and riparian areas mostly west of the Peninsular Ranges; ground may be firm soil, sandy, or rocky.	Low; site could potentially be used as low-quality habitat but likely too disturbed.
Coluber fuliginosus	Baja California coachwhip	SSC/-	Openings in grassland and coastal sage scrub; southern San Diego County.	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Crotalus ruber	red-diamond rattlesnake	SSC/-	Coastal San Diego County to the eastern slopes of Peninsular Ranges in coastal sage scrub, mixed chaparral, open grassy areas and agricultural areas, chamise chaparral, pinon juniper and desert scrub. Most common in the western foothills of the Peninsular Ranges and in dry rocky inland valleys; associated with granite rock outcroppings, especially in winter. 0-1500 m (typically < 1200m)	Low; no recent records in Otay Mesa area and suitable habitat does not occur onsite.
Phrynosoma blainvillii (P. coronatum b.)	coast horned lizard	SSC/-	Coastal scrub, chaparral, grassland, cismontane woodland, riparian scrub and woodland; most common in lowlands along sandy washes with scattered low shrubs. Prefers open areas for sunning with loose soil for burial and native harvester ant colonies (few or no Argentine ants).	Low; suitable habitat does not occur onsite and no native harvester ants occur onsite.
Plestiodon skiltonianus interparietalis (Eumeces s. i.)	Coronado skink	WL/-	Rocky areas and dry hillsides in coastal sage scrub, grassland, chaparral, pinyon-juniper woodland, open pine or oak woods, near streams; digs burrows in soil.	Low; suitable habitat does not occur onsite; site too disturbed.
Salvadora hexalepis virgultea	coast patch-nosed snake	SSC/-	Chaparral, coastal sage scrub, and other brushy vegetation west of desert, near rock outcrops with adjacent seasonal drainages; require small mammal burrows for refuge and overwintering.	Low; suitable habitat does not occur onsite; site too disturbed.
Thamnophis hammondii	two-striped gartersnake	SSC/-	In or near permanent fresh water, often along streams with rocky beds bordered by willows and other riparian vegetation, also desert oases and sometimes vernal pools. 0-2100 m.	Low; Site including drainage ditch is too disturbed.
BIRDS				
Agelaius tricolor	tricolored blackbird	SCE, SSC/-	Highly colonial; require open water, protected nesting substrate, and foraging area with insect prey within a few km of colony. Breed and nest in freshwater marshes with emergent vegetation but also in thickets of willow, blackberry, wild rose, tall herbs. In migration and winter inhabit open cultivated lands and pastures as well as marshes. 0-150 m and 300-915 m	Low; suitable aquatic habitat does not occur onsite and site does not support sufficient vegetation to serve as winter habitat.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Accipiter cooperii	Cooper's hawk	WL/-	Open riparian cottonwood and sycamore, oak, and eucalyptus woodland and other open forested areas. Nests in second-growth conifer stands, live oaks or deciduous riparian areas. Forages in openings near forested areas. Similar winter habitat, but open woodlands and fields may be used more. 150-915 m	Low; no suitable habitat on or adjacent to Site.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	WL/-	Steep, moderately vegetated slopes of coastal sage scrub dominated by Artemisia californica but also coastal bluff scrub and chaparral. Nest on the ground at the base of rocks, grass tufts, or saplings, or slightly above ground in the branches of shrubs or trees. 0-915 m	Low; no suitable habitat onsite.
Aquila chrysaetos	golden eagle	FP/-	Rolling foothills, mountain areas, sage-juniper flats, desert with sufficient mammalian prey base and near suitable nesting sites. Nest on rock ledges of cliffs but sometimes in large trees (e.g., oak or eucalyptus), on steep hillsides, or on the ground. 0-915 m.	Low; minimal prey species observed onsite and suitable nesting habitat does not occur onsite.
Artemisiospiza belli belli (Amphispiza b. b.)	Bell's sage sparrow	WL/-	Year-round resident in open chamise chaparral and sage scrub, especially recently burned areas or on gabbro substrate; most common in central southern SD County; very sensitive to habitat fragmentation.	Low; no suitable habitat onsite.
Athene cunicularia	burrowing owl	SSC/-	Open, dry annual or perennial grasslands, deserts & scrublands with low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, especially California ground squirrel.	Moderate; documented in the area but no sign observed, prey species appeared limited.
Buteo swainsoni	Swainson's hawk	ST/-	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Relatively tolerant of human activity. 0-150 m	Low; site does not support trees or suitable populations of prey.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	SSC/-	Open coastal sage scrub with thickets of chollas (Cylindropuntia sp.), south- and west-facing slopes below 460 m, usually within 400 m of river valleys, also hillsides in tributary canyons, along washes, and in very open woodland of coast live oak and California sycamore.	Low; suitable habitat does not occur onsite.
Circus cyaneus	northern harrier	SSC/-	Marshes, grasslands, agricultural lands, sagebrush flats, and desert sinks. Nests on the ground, mostly within patches of dense, often tall, vegetation in undisturbed areas; forages over grasslands. Year-round resident but more common in winter.	Low; site could only serve as low-quality foraging habitat.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	SE/FT	Forests, woodland, and scrub. Breeds in deciduous riparian woodland, especially dense stands of cottonwood and willow, sometimes mesquite and tamarisk. Dense riparian understory foliage important for nesting (e.g. blackberry, nettles, wild grape), and cottonwood important for foraging habitat.	Low; suitable habitat does not occur onsite.
Eremophila alpestris actia	California horned lark	WL/-	Open patches of bare land alternating with low vegetation in grasslands, montane meadows, sagebrush and open coastal plains, fallow grain fields, and alkali flats. Tolerant of disturbance, but sensitive to habitat fragmentation.	**Observed onsite: flock of >25 observed foraging in central and eastern areas of Site.**
Empidonax traillii extimus	southwestern willow flycatcher	SE/FE	Riparian and wetland thickets of willow or tamarisk, does not need to be extensive. Nests in trees or shrubs with dense vegetation. Forages within and occasionally above dense riparian vegetation. Present in California from late April to September.	Very low; suitable riparian habitat does not occur onsite.
Icteria virens	yellow-breasted chat	SSC/-	Summer visitor in dense riparian woodland. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground. Most common in coastal lowland, strongly concentrated in NW corner of County; usually return to SD second week in April and start to leave by early August.	Low; suitable riparian habitat does not occur onsite.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Laterallus jamaicensis coturniculus	California black rail	ST, FP/-	Freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Very low; suitable habitat does not occur onsite.
Passerculus guttatus beldingi (P. sandwichensis b.)	Belding's savannah sparrow	SE/-	Coastal salt marshes. Nests on the ground in natural depression or scrape, primarily in pickleweed (Salicornia virginica) habitat at the higher levels of the marsh, above the reach of the highest spring tides.	Very low; suitable coastal habitat does not occur onsite.
Polioptila californica californica	coastal California gnatcatcher	SSC/FT	Obligate, permanent resident of coastal sage scrub especially where Artemisia californica dominates; up to 915 m but 90% at 305 m or lower.	Low; suitable habitat does not occur onsite.
Rallus obsoletus levipes (R. longirostris l.)	light-footed Ridgway's rail (light-footed clapper rail)	SE, FP/FE	Year-round resident in coastal salt marsh dominated by cordgrass and pickleweed, and also known at three freshwater sites in SD County.	Very low; suitable coastal habitat does not occur onsite.
Setophaga aestiva (Dendroica petechia brewsteri, S. p.)	yellow warbler	SSC/-	Riparian forest/scrub/woodlands in close proximity to water. Nest and forage in willow shrubs and thickets, and in other riparian plants including cottonwoods and sycamores. In migration and winter, often occur in open woodland, agicultural lands, brushy areas, and forest edges.	Low; suitable riparian habitat does not occur onsite.
Sternula antillarum browni	California least tern	SE, FP/FE	Coastal; nest colonially up to 4 mi inland on bare or sparsely vegetated sand beaches, alkali flats, land fills, paved areas. Usually nest in same area in successive years; tend to return to natal site to nest.	Low; Site not suitable because subject to periodic soil disturbance.
Vireo bellii pusillus	least Bell's vireo	SE/FE	Summer resident in riparian vegetation along rivers and larger creeks, also dry river bottoms, with both riparian canopy and a somewhat dense or shrubby understory for nesting. 0-610 m	Low; suitable riparian habitat does not occur onsite.
MAMMALS				

ATTACHMENT G

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Antrozous pallidus	pallid bat	SSC/-	Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, desert wash and desert scrub; often near rocky outcrops and water. May forage over agricultural lands, but is largely absent from urban and suburban areas.	Low; suitable habitat does not occur onsite.
Chaetodipus californicus femoralis	Dulzura pocket mouse	SSC/-	Gravelly substrates in or near chaparral, to a lesser extent in coastal sage scrub, oak woodland, and edge of grassland. More abundant on steeper slopes and increasing cover of scrub oak and Ceanothus.	Low; suitable habitat does not occur onsite.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	SSC/-	Loose sandy soil to gravel to mixed rock on moderate to steep slopes with open shrubland, also grassland (negligible in chaparral and woodland). On coast and urban canyons, also up to at least 1000 m on shrubby slopes. Extirpated from urbanized habitat and most small fragments of natural habitat.	Low; suitable habitat does not occur onsite.
Choeronycteris mexicana	Mexican long-tongued bat	SSC/-	Arid habitats throughout range, urban and suburban areas in SD County. Roost in relatively well-lit caves but also crevices and man-made structures . Feed on pollen and nectar, especially of agaves and columnar cacti, and will visit hummingbird feeders. Seen in fall and winter, presumed to not breed in CA, San Diego on periphery of range. 0-500 m.	Low; suitable habitat and food sources do not occur onsite.
Corynorhinus townsendii	Townsend's big-eared bat	SSC/-	Obligate cave-roosting species, no preference for particular vegetation community. Also use mines, buildings, and bridges that offer cave-like situations. Forage in mosaic of forested and edge habitats, including riparian; avoid open areas. Sensitive to human disturbance, presumed absent from coastal locations.	Low; no suitable roosts, site too open.
Eumops perotis californicus	western mastiff bat	SSC/-	Strongly associated with roosting habitat: steep rocky cliffs, rock quarries, large granitic boulders and occasionally large buildings. Flies long distances and can be found foraging in coastal and desert scrub, riparian, oak woodlands, open grasslands, openings in montane pine forests, and over open water.	Low; although Site is likely within range of roosting habitat at Otay Mountain, no suitable foraging habitat onsite.

ATTACHMENT G

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Lasiurus blossevillii	western red bat	SSC/-	Low-elevation wooded habitats. Associated with riparian trees but also eucalyptus and tamarisk as well as orchards. Forage along rivers and streams but also forested meadow edges and sometimes parks in urban or suburban areas.	Low; suitable habitat does not occur onsite.
Lasiurus xanthinus	western yellow bat	SSC/-	Roost in "skirts" of dead palm fronds, strongly associated with groves of California fan palm, particularly with open surface water. Has expanded range to use non-native palms in coastal suburban areas with artificial water sources.	Low; no mature palms occur onsite.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	SSC/-	Prefers grasslands or open areas with patches of scrub of varying densities, generally absent in chaparral with closed canopy.	Moderate; documented in the area but not observed, site likely only provides marginal foraging habitat.
Macrotus californicus	California leaf-nosed bat	SSC/-	Lowland desert scrub. Uses caves or abandoned mine tunnels during day. Small groups may also use natural rock shelters in canyon walls. Uses shelter of open buildings, bridges, rocks, and mines for temporary night roosts.	Low; suitable habitat does not occur onsite.
Neotoma bryanti intermedia (N. lepida i.)	San Diego desert woodrat	SSC/-	Coastal sage scrub and chamise chaparral to pinyon-juniper woodland (but not coniferous forest). Associated with large exposures of boulder outcrops. Houses most commonly constructed under ledges, in crevices, or within rock piles, but also at base of juniper, ceanothus, creosote bush, yucca, and clumps of prickly-pear or cholla. Nocturnal. 180-1500 m.	Low; no nests observed, suitable habitat does not occur onsite.
Nyctinomops femorosaccus	pocketed free-tailed bat	SSC/-	Closely associated with roosting habitat: vertical cliffs, quarries, rocky outcrops. Does not favor any particular vegetation community for foraging.	Low; site does not support roosting habitat and is very marginal foraging habtiat.
Perognathus longimembris pacificus	Pacific pocket mouse	SSC/FE	Coastal sage scrub and grasslands with abundance of forbs but without dense cover of non-native grasses. Population in southern Camp Pendleton (Santa Margarita population) possibly only extant population in San Diego.	Low; suitable habitat does not occur onsite and site is far from only known population in San Diego.

ATTACHMENT G

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Taxidea taxus	American badger	SSC/-	Persists mainly in large blocks of undeveloped land, avoids urbanization. Prefers grasslands, alluvial fans, meadows, desert, and other open areas. Requires friable soils, primarily consumes rodents. < 3600 m.	Low; site too disturbed, area too developed, and lacks sufficient prey.

Listing Designations

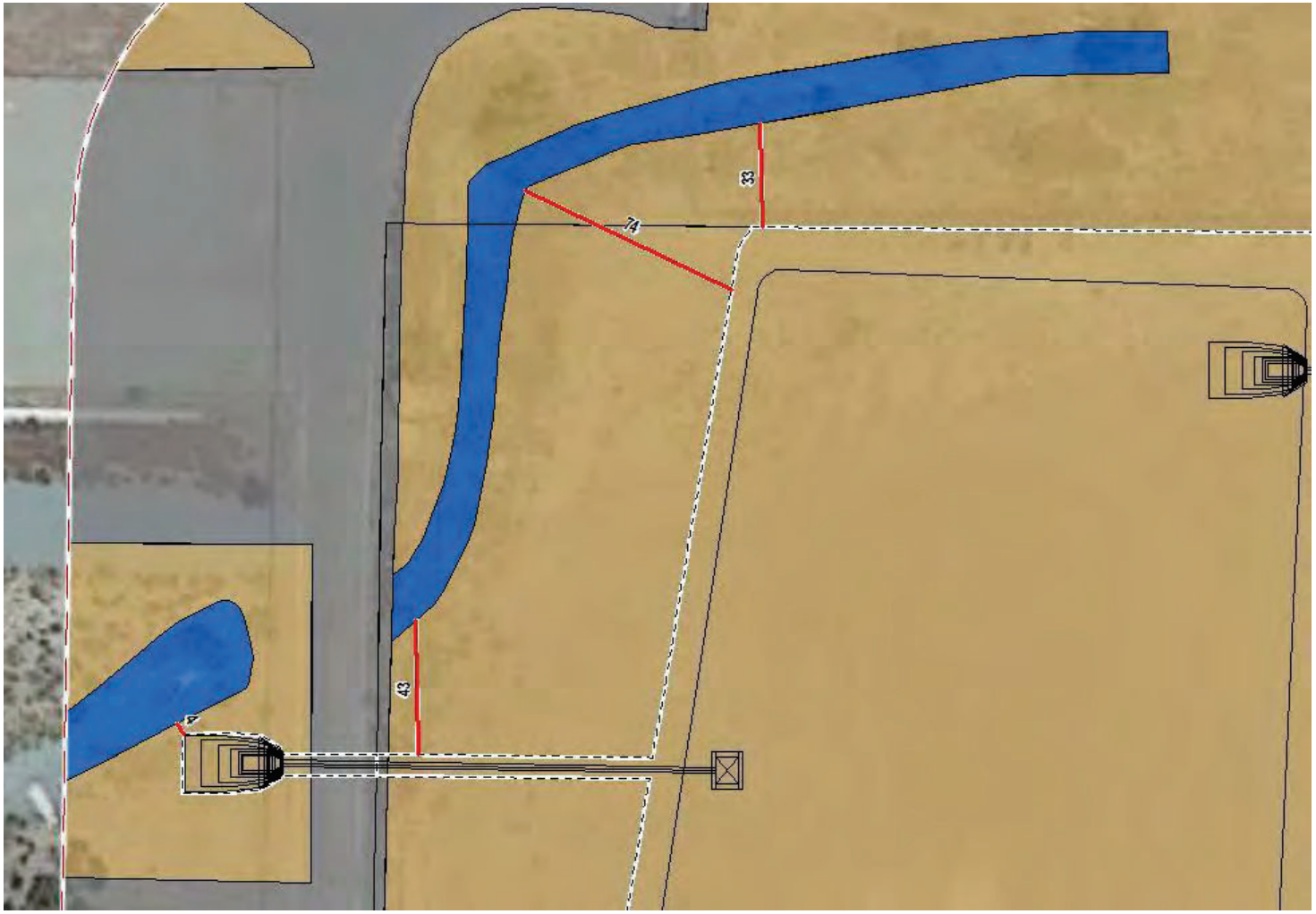
Federal Listing (USFWS 2015, CDFW 2015)
FE - Federal-listed Endangered
FT - Federal-listed Threatened
FC - Federal candidate for listing

State Listing (CDFW 2015, 2015)
SE - State-listed Endangered
ST - State-listed Threatened
STC - State Threatened Candidate
SEC - State Endangered Candidate
FP - CA Dept. of Fish and Wildlife Fully Protected
SSC - State Species of Special Concern
WL - CA Dept. of Fish and Wildlife Watch List

ATTACHMENT H

Wetland Buffer Widths

Widths (feet) of buffer zone between drainage ditch and Project impacts
Floreo Project



Section east of Cactus Road is considered a City wetland for the purposes of this report. Section west of Cactus Road is not a City wetland.

MEYERS RESEARCH
a Kennedy Wilson Company

420 Stevens Avenue, Suite 120 * Solana Beach, CA 92075
Tel: (858) 381-4390 * Fax: (858) 832-8938

May 26, 2017

Mr. Joe Paez
c/o GROUNDWURK INC.
2442 Second Avenue
San Diego, California 92101

Delivered via email: furey.rob@gmail.com

Subject: **Market Assessment and Product Program Recommendations for a Proposed Mixed-Use Project on +/-40 Acres of the Central Village Specific Plan in the Otay Mesa Area in South San Diego County, California**

Dear Mr. Paez:

Meyers Research LLC, a Kennedy Wilson Company ("Meyers") is pleased to present this proposal to provide market research consulting services to Groundwurk Inc. ("Groundwurk"). This proposal contains eight sections:

1. Background and Objectives
2. Scope of Work
3. Deliverables and Timing
4. Project Team
5. Experience with San Diego County Master Plans
6. Fee Requirements
7. Terms and Conditions
8. Acceptance

1. BACKGROUND AND OBJECTIVES

Your development team is considering the development of a mixed use residential and commercial project on a +/-40-acre site in Otay Mesa. The property is within the Central Village Specific Plan in the Otay Mesa area and you are working with other property owners (Colrich, Davisson Trust) on a master plan for the entire area. Your property is zoned for between 500 and 900 units (if developed with maximum density products).

Opportunities to develop new master planned areas like the Central Village Specific Plan are quite limited in San Diego County. The South County region, where the Central Village Specific Plan is located, offers significant potential to offer housing to address long-term growth pattern in the county. While there are environmental, infrastructure and planning issues for large-scale projects, the South County area is increasingly be the solution for homebuyers seeking relatively affordable detached new home options inside San Diego County.

Most, if not all, of the current master plans in South San Diego County (Eastlake, Rolling Hills Ranch, Lomas Verdes, WindingWalk, established areas of Otay Ranch), are in advanced build out stage and lots for builders are already quite limited or sold out in the established master plans. New additions to supply include Millenia (+/-3,000 high-density units in mixed-use setting) and ongoing development in Otay Ranch (Village 2) and Pardee's Ocean View Hills, etc. Other villages of Otay Ranch are being entitled and a portion of Village 3 will start selling soon as Homefed's Escaya project. A number of planning proposals are being considered for mixed-use development in the Otay Mesa area (until now, this was largely a commercial area).

The Central Village Specific Plan project will be a strategic opportunity for you to capitalize on dwindling opportunities for residential development in relatively convenient locations to serve ongoing growth in the San Diego County region.

Key questions posed by Groundwurk to be addressed in this analysis include:

- How does the project fit in the context of the San Diego market, including direction of growth in the County and availability of alternative housing options?
- Who are the target market audiences for residential development in the Otay Mesa area (Primary? Families? Retiree?) Rental or For-Sale Product?
- What residential products maximize the current land constraints and market opportunities? What mix of rental or for-sale residential products, densities, lot sizes, should the land planning team include?
- What are appropriate pricing/rent expectations for the recommended product program?
- Key amenities to offer in the community? Special tax rates?
- What are examples of market-viable for-sale and rental product that maximize allowable density of up to 25 units/acre?

The key objectives of this stage of the assignment are to evaluate the attributes of the subject site and current residential supply and demand conditions in the relevant market area, to develop product program recommendations (including key revenue inputs), and to evaluate the Subject Property's absorption potential. Our recommendations will cover such items as general market orientation and positioning, unit sizes, unit mix, base prices/rents, other revenue factors (options/premiums), target market and buyer profiles, absorption estimate, community amenities, etc.

The end result of the assignment will be a Team Presentation (Powerpoint) and an executive summary report accompanied by supporting tables and charts as appropriate.

2. SCOPE OF WORK

The following is a summary of the analysis that will be conducted to provide you the most accurate insights about the development opportunity going forward.

- **Site Analysis**. Review existing plans and documents. Define the competitive market area (CMA) and summarize access, adjacent uses, transportation, school options (public/private), location of services, etc.

- **Analysis of Relevant Economic, Demographic, and Housing Market Trends:** We will summarize projected key economic, demographic, and housing market trends (e.g., jobs, population and household projections, sales and pricing) for the San Diego MSA and South County area. This will help identify what pricing and sales levels are achievable at the subject property currently and going forward.

- **Competitive For-Sale and Rental Product:** We will assess the competitive set for subject, defining competitive product, pricing and buyer profile. This will address new and resale activity and will focus on housing in master plans that would be most comparable. Resales in key sold-out communities will also be evaluated. For currently active master planned communities, we will provide a summary of overall project characteristics, including amenities, schools, tax rate, HOA fee, school and commercial facilities, etc. Given the proposed density of the plan, we will also survey area rental projects, focusing on the newest options.

- **Future Supply:** We will evaluate the key pipeline supply for competitive master plans in the South San Diego County area. We will determine the lot supply left in active projects and the planning status and timing of potential new master planned options that would compete with this project.

- **Statistical Demand Analysis:** We will utilize our housing demand model to identify for-sale housing demand by buyer group and income range (and implied prices**)** in the South County market area for the next five years. We use historical census data as well as future projections to forecast household demand.

- **Recommended Product Program, Pricing and Premiums**: We will define the range of for-sale and rental product types that would be appropriate for the subject's planned product array and recommend unit types, sizes, pricing/rents, premiums and absorption potential. Product examples for each recommended product type will be provided.

- **Absorption Potential**: Define a reasonable absorption rate for each product type and for the overall community. We will translate this into an implied lot take down schedule based on recommended products and build out.

- **Reasonable Lot Values**: We will provide market prices for finished residential lots and supporting land comparables.

- **Strategic Considerations and Most Marketable Use**: We will translate our research, market assessments and demand estimates into strategic recommendations on product, pricing and absorption potential. We will summarize the key assumptions used to derive our conclusions, including our view on the current market and submarket.

3. DELIVERABLES AND TIMING

The findings will be presented in a memorandum of opinion report. The report will include a series of graphs and charts depicting research. A draft version of our reports will be distributed in an electronic form – but hard copies can be provided if requested. A final report will be issued once your comments are received and addressed.

This analysis can be completed within approximately 20 business days of authorization. Please let us know specific deadlines and we will work to those.

4. PROJECT TEAM

Meyers Research LLC is uniquely qualified to assist you with this assignment. Our highly educated and experienced staff believes in providing the highest quality service possible to our clients, which means completing the exact analysis they need: quickly, accurately, and cost-effectively.

Peter Dennehy, Senior Vice President, will direct this assignment. Mr. Dennehy is an expert in residential and non-residential feasibility studies, strategic planning and product development and has completed numerous studies in his 30 years of experience in the Real Estate Industry. He has worked extensively on residential projects throughout San Diego County, including many of the built and future areas of Otay Ranch and many of the active, built-out and planned master planned communities in the San Diego County region. Mr. Dennehy was the Absorption Analyst for numerous special tax offerings in Otay Ranch from the 1997 to 2007 period, providing analysis of the pricing and market feasibility of Otay Ranch villages and the overall housing market.

JT Schwartz, Senior Manager, will assist with all facets of the engagement. Mr. Schwartz has 12 years of research experience and has worked throughout the United States and was on the project teams that has analyzed many areas of Otay Ranch and surrounding areas, Homefed properties, Ocean View Hills, etc.

Additional resources may be added to the team as necessary to meet the information objectives of the study and the timing constraints.

5. EXPERIENCE WITH SAN DIEGO COUNTY MASTER PLANS

Meyers has extensive experience in evaluating San Diego County residential market conditions and trends. Our key personnel have been based in the region for three decades and have worked extensively on large and small mixed-use projects similar to this one that have been developed in the county. ***We have recently conducted research for relevant master plans for the Subject such as Escaya, Millenia, Lomas Verdes, WindingWalk, Ocean View Hills, the South Otay project (Pardee), Eastlake and areas of Otay Ranch controlled by HomeFed, Baldwin companies and Tricon.***

We understand and have worked extensively in the San Diego County and South County markets that are key to understanding the market potential for this project. This past work evaluating specific San Diego-area developments and our ongoing work in the region gives us a good feel for factors that will be important for Groundwurk to understand in maximizing the highest & best use of this property.

We have conducted market feasibility studies and demand/absorption analyses (for land-secured financing) on all of the major master planned communities developed within San Diego County and South County in the past three decades. These studies have ranged from full scale product program recommendations for proposed master plans, supply/demand and buildout projections for master plans and pricing studies for specific parcels within active master plans. Specifically, active, planned and built-out San Diego County and South County master plans which our team has personally evaluated over the past three decades include:

- Harmony Grove (Escondido)
- Las Lilas (Valley Center)
- Campus Park (Pala/Bonsall)
- Meadowood (Valley Center)
- Woods Valley Ranch (Valley Center)
- Eureka Springs (Escondido)
- 4S Ranch (Rancho Bernardo)
- Del Sur /Black Mountain Ranch
- Arrowood (Oceanside)
- San Elijo Hills (San Marcos)
- University Commons (San Marcos)
- La Costa Oaks/Greens/Ridge (Carlsbad)
- The Lakes (Rancho Santa Fe)
- Doubletree Resort (Rancho Bernardo)
- Wolf Creek Ranch (Temecula)
- Paseo del Sol (Temecula)
- Roripaugh Ranch (Temecula)
- Spencer's Crossing (Murrieta)
- Morningstar Ranch (French Valley)

Projects in the Eastern Chula Vista area are highlighted in BLUE

- Rancho Carrillo (Carlsbad)
- Bressi Ranch (Carlsbad)
- Aviara (Carlsbad)
- Calavera Hills (Carlsbad)
- Stonebridge Estates (Poway)
- Scripps Ranch Villages (San Diego)
- Pacific Highlands Ranch
- Horse Creek Ridge (Fallbrook)
- **Otay Ranch (Chula Vista)**
- **Windingwalk (Chula Vista)**
- **San Miguel Ranch (Chula Vista)**
- **Rolling Hills Ranch (Chula Vista)**
- **Millennia (Chula Vista)**
- **Sky Ranch (Santee)**
- **Ocean View Hills (Otay Mesa)**
- **South Otay Parcels (Otay Mesa)**
- **Homefed Parcels (Otay Ranch)**
- **Escaya (Otay Ranch)**

6. FEE REQUIREMENTS

The total professional fees will be $17,500. Expenses will be billed separately and reimbursed at cost. A fee equal to 3.5% of the professional fees will be added to offset non-itemizable expenses. If any meetings or conference calls with potential partners are required, we will bill our time separately at $300 per hour.

We will begin the analysis upon receipt of a retainer for 50 percent of the fees and a signed copy of this letter. We will invoice you for the balance of the fees at delivery of the draft report. Any fee amount unpaid 30 days after the invoice date will be assessed a bi-monthly service charge of 1.5 percent per month.

7. TERMS AND CONDITIONS

This letter sets forth our understanding of the terms and objectives of our engagement and the nature and limitations of the services we will provide. Groundwurk and its partners are responsible for representations about its plans and expectations and for disclosure of significant information that might affect the ultimate realization of the projected results. There will usually be differences between projected and actual results because events and circumstances frequently do not occur as expected, and the differences may be material. We have no responsibility to update our report for events and circumstances occurring after the date of our report. Payment of our fees and expenses is not in any way contingent upon any factor other than our providing services outlined in this proposal. We understand that these reports will be shared with third parties and potential investors, but in general, the use of this report is limited to you and should not be relied on solely by anyone in making an investment decision.

8. ACCEPTANCE

We look forward to working with you. The signed proposal may be sent via e-mail or can be faxed to (858) 704-4097.

Respectfully,

Meyers Research LLC, a Kennedy Wilson Company

Peter F. Dennehy

_____

By: Peter Dennehy, its Senior Vice President

Agreed and Accepted: GROUNDWURK INC.

Signature: _____

Print Name: _____

Date: _____

SD381-17

ADVANCED GEOTECHNICAL SOLUTIONS, INC.
485 Corporate Drive, Suite B
Escondido, California 92029
Telephone: (619) 867-0487 Fax: (714) 409-3287

ColRich
444 West Beech Street, Suite 300
San Diego, California 92101

July 7, 2022
P/W 2206-06
Report No. 2206-06-B-2

Attention: **Mr. Jason Shepard**

Subject: **Geotechnical Due Diligence Study, Proposed Residential Development, Cactus Road and Airway Road, Otay Mesa Area, City of San Diego, California**

References: Appendix A

Gentlepersons,

Presented herein is Advanced Geotechnical Solutions, Inc.'s, (AGS) limited geotechnical/geologic due diligence evaluation for a 40-acre parcel located northeast of the intersection of Cactus Road and Airway Road and south of Highway 905 in the City of San Diego, California. The purpose of this evaluation is to provide geologic and geotechnical information that should be considered in your due diligence process associated with the potential acquisition and future development of the subject property. In preparing this report AGS has observed the existing site conditions and reviewed the referenced geologic reports and maps. Design plans have not been formulated yet. As such, the evaluation of site conditions will be limited and may not be as extensive as required to provide detailed design and construction recommendations for new habitable structures onsite. Future studies will be needed to provide additional construction and design recommendations.

1.0 INTRODUCTION

In this document, we first describe the site and proposed development, then summarize the anticipated soils and geologic conditions at the site. Secondly, we assess key geologic/geotechnical issues which could potentially impact site development and outline possible measures which can be employed to mitigate and or minimize the impact these issues could have on the development as currently proposed. Finally, we provide conclusions regarding the adequacy of currently available geologic/geotechnical information, the feasibility of site development and provide recommendations for future study needs. This abbreviated document is intended to serve as a "first step" for acquiring geotechnical information useful for planning and design.

1.1. Existing Site Conditions

The site is currently vacant with vegetation consisting of low grass and shrubs. Site topography is relatively level to gently sloping down to the northwest with elevations ranging between a high of approximately 515 feet above mean sea level (msl) in the southeast to a low of approximately 490 feet (msl) in the northwest. Based on our experience with nearby projects and the referenced reports, the site is underlain by Pleistocene age Lindavista Formation (terrace deposits) which rests unconformably on Otay Formation. A relatively shallow topsoil was reported to have been encountered at the surface in all the trenches excavated at the site. In addition, engineered fill

associated with the construction of Highway 905 may exist locally along the northerly property boundary.

1.2. Proposed Development

A tentative map was prepared for the project site in 2019 by REC Consultants, Inc. The project titled Floreo (TM No. 2213107), proposed to develop the site into 4 multi-family residential lots with a central park site and a regional BMP basin in the northwest. Access to the site would be afforded by three public 'hammerhead' drives connected to Cactus Road on the west, Airway Road on the south, and Continental Road/Colchester Court on the east.

It is our understanding that a new tentative map will be prepared if acquisition of property occurs. In general, the proposed development of the site will include grading for construction of several multi-family residential buildings 4- to 5-stories in height with associated improvements including ancillary buildings (e.g. leasing office, recreation facility, etc.), trash enclosures, underground utilities, and permanent stormwater BMPs.

2.0 SITE INVESTIGATION

2.1. Previous Studies

A previous geotechnical study was conducted at the site by Geocon Incorporated in 2019 in support of the Floreo Tentative Map. The study results are presented in the referenced report by Geocon dated April 8, 2019. As part of that study sixteen test pits (TP-1 thru TP-16) and three borings (B-1 thru B-3) were advanced, logged, and sampled by representatives of Geocon. In addition, infiltration testing was performed in four (4) locations within the proposed BMP area located at the northwest corner of the site (Plate 1). The infiltration report was not readily available for review. Logs of the test pits and borings are presented in Appendix B. The laboratory data provided by Geocon is presented in Appendix C.

2.2. Current Study

In preparing this *Geotechnical Due Diligence Study* representatives of AGS conducted a site reconnaissance, reviewed the geotechnical report for the subject site by Geocon (2019) and transferred the previous test pit and boring locations to the 60-scale preliminary grading plan by REC Consultants (2019) as presented in the attached Plate 1.

3.0 SITE GEOLOGY

The subject site is situated within the Peninsular Ranges Geomorphic Province. The Peninsular Ranges province occupies the southwestern portion of California and extends southward to the southern tip of Baja California. In general, the province consists of young, steeply sloped, northwest trending mountain ranges underlain by metamorphosed Late Jurassic to Early Cretaceous-age extrusive volcanic rock and Cretaceous-aged igneous plutonic rock of the Peninsular Ranges Batholith. The westernmost portion of the province is predominantly underlain by younger marine and non-marine sedimentary rocks. The Peninsular Ranges' dominant structural feature is northwest-southeast trending crustal blocks bounded by active faults of the San Andreas transform system.

3.1. Onsite Geologic Units

The following is a summary of the various geologic units expected to be encountered during the development of the project as described in the geotechnical report by Geocon (2019).

3.1.1. Undocumented Fill (no map symbol)

Locally derived "undocumented" fill associated with the site was not encountered during Geocon's investigation, however, it is likely that shallow, localized layers of undocumented fill may be encountered in the property during grading.

3.1.2. Topsoil (no map symbol)

Topsoil was encountered in all trenches and borings excavated by Geocon at the site. The topsoil consisted primarily of grayish brown to black clay, with varying amounts of silt and sand, in a soft and moist to wet state. The upper soils may contain residual pesticides that exceed environmental threshold limits and will require specialized disposal. The topsoil extended to depths ranging between 1 and 4 feet below existing ground surface (bgs).

3.1.3. Lindavista Formation (Map Symbol - Ql)

Lindavista Formation (terrace deposits), underlies topsoil throughout the site. The upper layer of this unit consisted primarily of light gray, yellow to olive brown, and dark brown, dry to moist, firm to hard, clay to sandy clay, with trace gravel, cobbles, carbonates, and manganese oxide. These clayey deposits were encountered in all excavations, except for trenches TP-1 and TP-2 located on the northwest portion of the site. The clayey portion of this unit ranges in thickness from 2 feet to more than 14 feet. Practical refusal was reached at a depth of 11 feet in trench TP-13 on hard, blocky clay. This clayey layer exhibits "medium" to "very high" expansion potential.

Below the clayey layer, a granular layer was encountered. This material primarily consisted of yellow brown, slightly moist, dense to very dense, silty to clayey sand, with sub-rounded gravel and cobbles ranging in size between 3 and 18 inches with larger clasts possible. Channelized zones of cohesionless sand and cobble locally exist within the Lindavista Formation. The granular layer has favorable engineering characteristics, such as low expansion and higher shear strength and extended to the maximum depth of exploration of 16 feet.

3.1.4. Tertiary age Otay Formation (Map Symbol - To)

The Otay Formation was not encountered during the subsurface investigation by Geocon. Based on our experience with projects in the immediate site vicinity, the Otay Formation underlies the Lindavista Formation onsite at a depth on the order of 20 feet below grade. The Otay Formation consists primarily of light gray to brown clayey to silty sandstone with some gravel and cobble, in a moderately hard condition. Highly expansive bentonite beds are known to exist in this unit. Given the depth of the bentonite beds encountered in nearby sites, they are unlikely to be encountered during anticipated grading operations. If deep utilities are proposed, additional exploration may be warranted.

3.2. Groundwater

Based on our review of the geotechnical report by Geocon (2019) and our experience in the immediate site vicinity, no natural groundwater condition is known to exist at the site that would impact the proposed site development. It should be noted that localized perched groundwater may develop at a later date, most likely at or near fill/bedrock contacts, due to fluctuations in precipitation, irrigation practices, or other factors not evident at this time.

3.3. Flooding

According to available FEMA maps, the site is not in a FEMA identified flood hazard area.

3.4. Subsidence/Ground Fissuring

Due to the presence of the dense Terrace Deposits overlying the Otay Formation, the potential for subsidence/settlement and ground fissuring is unlikely.

3.5. Landsliding/Slope Instability

No mapped landslides are present onsite nor in the general vicinity. Given the flat gradients across the site and the surrounding area, the potential for landsliding, mass wasting, and/or surficial instability onsite is considered to be negligible.

4.0 SEISMIC HAZARDS

The project is located in the tectonically active southern California and will likely experience some effects from future earthquakes. Alquist-Priolo Fault Hazard Zones have not been imposed within the subject property. The city of San Diego Seismic Hazards Study identified the site as being in an area of level or sloping terrain, unfavorable geologic structure, low to moderate risk.

The type or severity of seismic hazards affecting the site is chiefly dependent upon the distance to and direction from causative faults, the intensity and duration of the seismic events, and the onsite soil characteristics. The seismic hazard may be primary, such as surface rupture and/or ground shaking, or secondary, such as liquefaction or landsliding.

The following is a site-specific discussion of ground motion parameters, earthquake-induced landslide hazards, settlement, and liquefaction. The purpose of this analysis is to identify potential seismic hazards and propose mitigations, if necessary, to reduce the hazard to an acceptable level of risk. The following seismic hazards discussion is guided by the 2019 California Building Code, CDMG (2008), and Martin and Lew (1998).

4.1. Surface Fault Rupture

Active, potentially active and inactive faults are not known to exist at the site. According to the literature, the nearest known active fault is the Rose Canyon Fault located approximately 9.5 miles west of the project site. Accordingly, the potential for fault surface rupture within the project is not significant.

4.2. Seismicity

As noted, the site is within the tectonically active southern California area, and is approximately 9.5 miles from an active fault, the Rose Canyon Fault. The potential exists for strong ground motion that may affect future improvements.

At this point in time, non-critical structures (commercial, residential, and industrial) are usually designed according to the California Building Code (2019) and that of the city of San Diego.

4.3. Liquefaction

Seismic agitation of relatively loose saturated sands and silty sands can result in a buildup of pore pressure. If the pore pressure exceeds the overburden stresses, a temporary quick condition known as liquefaction may occur. The effects of liquefaction at a site can manifest in several ways and may include: 1) ground oscillations; 2) loss of bearing; 3) lateral spread; 4) dynamic settlement; and 5) flow failure.

Within the project, the potential for liquefaction in both the pre- and post- development condition is considered to be “very low” due to the lack of liquefaction susceptible earth materials, the dense nature of the onsite geologic units, and the lack of shallow groundwater.

4.4. Dynamic Settlement

Dynamic settlement occurs in response to an earthquake event affecting loose sandy earth materials. The potential of dynamic settlement at the subject site is anticipated to be “very low” due to the presence of the dense and the compacted fill

4.5. Seismically Induced Landsliding

Given the relatively flat topography onsite the potential for landsliding is negligible.

4.6. Tsunami

Our review of the 2009 Tsunami Inundation Map for Emergency Planning prepared by CalFEMA, indicates that the site is not within the tsunami inundation limits.

4.7. City of San Diego Seismic Safety Study

The project site is located within Grid Tile 3 of the San Diego Seismic Safety Study and is mapped as Geologic Hazard Category 53 identified as ‘Level or sloping terrain, unfavorable geologic structure, low to moderate risk’.

4.8. Seismic Design Parameters

Based on our review of previous subsurface exploration, the site has been classified as Seismic Site Class D consisting of a stiff soil profile with average SPT N blowcount between 15 and 50 blows per foot. Table 4.8 presents seismic design parameters in accordance with 2019 California Building Code and mapped spectral acceleration parameters (United States Geological Survey, 2022) utilizing site coordinates of Latitude 32.562°N and Longitude 116.987°W.

TABLE 4.8 2019 CBC SEISMIC DESIGN PARAMETERS (SITE CLASS D)	
Mapped Spectral Acceleration Parameter at Period of 0.2-Second, S_s	0.754
Mapped Spectral Acceleration Parameter at Period 1-Second, S_1	0.276
Site Coefficient, F_a	1.199
Site Coefficient, F_v	N/A[3]
Adjusted MCE_R[1] Spectral Response Acceleration Parameter at Short Period, S_{MS}	0.903
1-Second Period Adjusted MCE_R[1] Spectral Response Acceleration Parameter, S_{M1}	N/A[3]
Short Period Design Spectral Response Acceleration Parameter, S_{DS}	0.602
1-Second Period Design Spectral Response Acceleration Parameter, S_{D1}	N/A[3]
Peak Ground Acceleration, PGA_M[2]	0.417
Seismic Design Category	N/A[3]

Notes:
[1] Risk-Targeted Maximum Considered Earthquake
[2] Peak Ground Acceleration adjusted for site effects
[3] Requires Site Specific Ground Motion Hazard Analysis per ASCE 7-16 Section 11.4.8 unless, per Exception 2, the value of the seismic response coefficient, C_S, is determined by Equation (12.8-2) for values of $T \leq 1.5T_S$ and taken as equal to 1.5 times the values computed with either Equation (12.8-3) for $T_L \geq T > 1.5Ts$ or Equation (12.8-4) for $T > T_L$.

5.0 ENGINEERING ANALYSIS

Presented herein is a general discussion of the geotechnical properties of the various soil types and earth materials summarized from our review of previous work conducted by Geocon and available geotechnical reports by others in the general area. It should be anticipated that detailed site-specific geotechnical analyses of the project should be conducted during the design and entitlement phase. Dependent upon the future studies, the conclusions and recommendations contained herein could change. The following is a summary of our opinions based upon the available data.

5.1. Material Properties

5.1.1. Excavation Characteristics

Based on our previous experience with similar projects near the subject site and the information gathered during our investigation for this report, it is our opinion that topsoil, artificial fill, if encountered, and Lindavista Formation are readily excavatable with conventional earthmoving equipment. Portions of the Lindavista Formation are partially cemented and contain cobble lenses that may require heavy ripping and/or rock breaking equipment.

5.1.2. Compressibility

The topsoil, any undocumented fill, and the upper weathered portion of the Lindavista Formation are considered compressible in their current condition and not suitable for support of fill or improvements. These materials will need to be removed and recompacted.

5.1.3. Collapse Potential/Hydro-Consolidation

Given the recommended removal of topsoil and artificial fill, if encountered, to very dense formational materials, the potential for hydro-consolidation is considered remote at the subject site.

5.1.4. Expansion Potential

The expansion potential of the clayey portion of Lindavista Formation materials are "high" to "very high" when classified in accordance with ASTM D 4829. It is anticipated that the onsite materials will produce very high expansion pressures exceeding 4,000 psf. The granular portion of Lindavista Formation materials encountered at depth possess "low" expansion potential.

5.1.5. Pavement Support Characteristics

Compacted fill derived from onsite soils is expected to possess poor pavement support characteristics. Final design should be based upon representative sampling of the as-graded soils.

5.1.6. Permeability

Based on our subsurface investigation and familiarity with the area and materials present at the site, it is anticipated that the onsite native materials process negligible permeability.

5.2. Remedial Grading

It should be anticipated that topsoil and artificial fill, if encountered, and upper weathered portion of the Lindavista Formation should be removed to expose competent materials under structural areas and any other settlement sensitive areas such as residential roadways and where surface improvements are proposed. The removals will typically be on the order of 2 to 5 feet. Additional overexcavation and mixing may be required to reduce the expansion potential of fill materials.

It is anticipated that the majority of onsite soils will be reused for compacted fill. Engineered fill should be compacted to a relative compaction of 90% of the dry density obtained per ASTM D1557 and will be suitable for support of the proposed four to five-story structures.

5.3. Soil Expansion Potential

After remedial grading, mixing and compaction of onsite soils, it is anticipated that compacted fill will likely exhibit "medium" to "high" expansion potential. Accordingly, once grading is completed, surface improvements (foundation elements, flatwork, and streets, etc.) should be designed based on the results of expansion index testing of near surface soils.

5.4. Preliminary Foundation Design

Generally, compacted fill derived from native soils is expected to exhibit moderate bearing capacity characteristics ranging between 2,000 and 2,500 psf for shallow foundations.

5.5. Corrosivity

Corrosivity testing of onsite soils conducted by Geocon indicates "S0" sulfate exposure and very low chloride content. Additional corrosivity testing should be conducted on the near-surface soils once grading is completed.

6.0 CONCLUSIONS

Based upon available information, the proposed residential development at the subject site is considered feasible by AGS. As project entitlements move forward, an updated geotechnical review may be needed when grading plans are available.

7.0 LIMITATIONS

This report is based on the project as described and the information obtained from the referenced documents and excavations at the approximate locations indicated above. The findings are based on the results of field and office investigations combined with an interpolation and extrapolation of conditions between and beyond the excavation locations. The results reflect an interpretation of the direct evidence obtained. Services performed by AGS have been conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, either expressed or implied, and no warranty or guarantee is included or intended. The recommendations presented in this report are based on the assumption that an appropriate level of field review will be provided by geotechnical engineers and engineering geologists who are familiar with the design and site geologic conditions. That field review shall be sufficient to confirm that geotechnical and geologic conditions exposed during grading are consistent with the geologic representations and corresponding recommendations presented in this report. AGS should be notified of any pertinent changes in the project plans or if subsurface conditions are found to vary from those described herein. Such changes or variations may require a re-evaluation of the recommendations contained in this report.

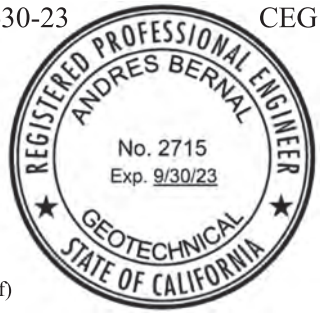
The data, opinions, and recommendations of this report are applicable to the specific design of this project as discussed in this report. They have no applicability to any other project or to any other location, and any and all subsequent users accept any and all liability resulting from any use or reuse of the data, opinions, and recommendations without the prior written consent of AGS. AGS has no responsibility for construction means, methods, techniques, sequences, or procedures, or for safety precautions or programs in connection with the construction, for the acts or omissions of the CONTRACTOR, or any other person performing any of the construction, or for the failure of any of them to carry out the construction in accordance with the final design drawings and specifications.

The opportunity to be of service is sincerely appreciated. Should have you any questions, please do not hesitate to contact the undersigned.

Respectfully Submitted,
Advanced Geotechnical Solutions, Inc.

ANDRES BERNAL, Sr. Geotechnical Engineer
RCE 62366/GE 2715, Reg. Exp. 9-30-23

PAUL J. DERISI, Engineering Geologist
CEG 2536, Reg. Exp. 5-31-23





Distribution: (1) Addressee (pdf)

Attachments: Appendix A - References
Appendix B - Subsurface Exploration Logs (Geocon, 2019)
Appendix C - Laboratory Test Results (Geocon, 2019)
Plate 1

2206-06-B-2 Due Diligence Study Paez Parcel 7-7-22.docx

APPENDIX A
REFERENCES

Advanced Geotechnical Solutions, Inc., 2019, Updated Grading Plan Review, Epoca, Otay Mesa Area, City of San Diego, California, Report No. 1304-04-B-15, dated December 13, 2019.

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---, 2007, Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps, Special Publication 42, Interim Revision 2007.

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United States Geological Survey, 2022, Unified Hazards Tool, https://earthquake.usgs.gov/hazards/interactive

United States Geological Survey, 2022, Seismic Design Maps developed by SEAOC and OSHPD, https://seismicmaps.org/.

APPENDIX B

SUBSURFACE EXPLORATION LOGS (GEOCON, 2019)

PROJECT NO. G2338-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TEST PIT TP 1 ELEV. (MSL.) 497' DATE COMPLETED 03-08-2019 EQUIPMENT Backhoe BY: R. ADAMS MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	TP1-1			CL	**TOPSOIL (Ts)** Soft, moist, dark brown, Sandy CLAY; trace silt			
				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Medium dense, damp to moist, pale yellowish brown, Clayey, fine grained SAND			
2								
4	TP1-2				-Becomes medium- to coarse-grained, trace cobble, trace silt			
6				SC	Dense, damp, yellowish brown, medium- to coarse-grained SAND; trace clay, trace subrounded cobble			
8								
					TRENCH TERMINATED AT 9 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-1,
Log of Test Pit TP 1, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 2

ELEV. (MSL.) **503'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	TP1-1			CL	**TOPSOIL (Ts)** Soft to moist, wet, dark brown to black, Sandy CLAY			
2								
4				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Medium dense to dense, damp, yellowish brown, Clayey, medium coarse SAND; trace cobble, pockets of dark brown, Sandy CLAY throughout			
6				SM	Dense, damp, pale brown to yellowish brown, Silty, fine to coarse SAND; trace clay, trace sub-rounded cobble up to 10-inch diameter			
8								
10					-Becomes weakly cemented; excavating to a clayey sand with gravel and cobble			
12					TRENCH TERMINATED AT 12 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-2,
Log of Test Pit TP 2, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 3

ELEV. (MSL.) **504'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft to firm, moist, grayish brown to black, Silty CLAY; trace sand			
2				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, moist, grayish brown, Sandy CLAY; trace rock fragments, trace sand			
4	TP3-1				-Becomes stiff to very stiff			
6				CH	Very stiff, moist, grayish brown to reddish brown, Sandy CLAY			
8	TP3-2			SM	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, reddish brown to grayish brown (mottled), Silty, fine to medium SAND; trace clay, trace cobble up to 6-inch diameter			
10					-Some gravel and cobble up to 8-inch diameter			
12					TRENCH TERMINATED AT 12 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-3,
Log of Test Pit TP 3, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 4

ELEV. (MSL.) **506'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft, wet, brown to grayish brown, CLAY; trace silt; trace sand			
4				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, damp to moist, brownish gray, CLAY -Becomes stiff to very stiff, on blocky texture, manganese films noted on parking surfaces			
8				SC	**TERRACE DEPOSITS-Sand/Gravel (Qtg)** Medium dense to dense, damp, reddish brown to grayish brown (mottled), Clayey, fine- to medium-grained SAND; trace silt			
10				SM	Dense, damp, grayish brown, Silty, medium to coarse SAND; trace clay; some gravel/cobble up to 10-inch diameter			
					TRENCH TERMINATED AT 11 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-4,
Log of Test Pit TP 4, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE | ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 5

ELEV. (MSL.) **507'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	TP5-1			CH	**TOPSOIL (Ts)** Soft, damp to wet, brown, CLAY; trace sand; few rootlets			
2	TP5-2			CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, damp to moist, whitish gray, CLAY			
4								
6				SM	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, pale yellowish gray, Silty, coarse SAND; trace small cobble			
8	TP5-3							
					TRENCH TERMINATED AT 9 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-5,
Log of Test Pit TP 5, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 6

ELEV. (MSL.) **507'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Very soft to soft, wet, grayish brown to brown, CLAY			
2				SC	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, damp to moist, grayish brown, Sandy CLAY; trace rounded gravel -Becomes hard and blocky, trace carbonate and manganese			
4	TP6-1			CH	Hard, dry to damp, yellowish brown, Sandy CLAY			
6				SM	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, dry to damp, yellowish brown, Silty, fine to coarse SAND; trace small cobble, angular to sub-rounded			
8					-Becomes reddish brown			
10					TRENCH TERMINATED AT 10 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-6,
Log of Test Pit TP 6, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 7

ELEV. (MSL.) **501'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Stiff, firm, damp to moist, dark brown, Silty CLAY; trace plastic debris			
2								
4				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Stiff to hard, dry to damp, whitish gray to grayish brown, Sandy CLAY			
6				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, yellowish gray to yellowish brown, Clayey, medium coarse SAND; trace cobble up to 8-inch diameter			
8					-Becomes reddish brown			
10					-Becomes very dense, little cobble and rock fragments up to 12-inch diameter			
12					-Becomes reddish brown to greenish brown (mottled); Cobble up to 20-inch diameter			
14	TP7-1			SC/CL	Dense, damp, yellowish brown, greenish gray (mottled), Clayey SAND and Sandy CLAY (Interbedded); some cobble up to 10-inch diameter			
16					TRENCH TERMINATED AT 16 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-7,
Log of Test Pit TP 7, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. G2338-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TEST PIT TP 8 ELEV. (MSL.) 501' DATE COMPLETED 03-08-2019 EQUIPMENT Backhoe BY: R. ADAMS MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Firm, damp, brownish black, CLAY; trace sand -Cobble lens			
2				CH	**TERRACE DEPOSITS-Clay (Qtc)** Stiff to hard, damp grayish yellow (mottled), Sandy CLAY; trace cobble			
4				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, reddish brown to grayish brown, Clayey SAND; trace cobble up to 8-inch diameter -Becomes dense to very dense, reddish brown; some cobble up to 6-inch diameter			
6					TRENCH TERMINATED AT 6 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-8,
Log of Test Pit TP 8, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. G2338-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TEST PIT TP 9 ELEV. (MSL.) 505' DATE COMPLETED 03-08-2019 EQUIPMENT Backhoe BY: R. ADAMS MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Firm to stiff, moist, dark brown, CLAY; trace sand			
2	TP9-1			CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Stiff, damp, grayish brown, CLAY; trace sand, trace carbonate			
4				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, yellowish brown, Clayey, medium to coarse SAND; trace cobble and gravel up to 6-inch diameter			
6					-Little cobble up to 8-inch diameter			
					TRENCH TERMINATED AT 7 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-9,
Log of Test Pit TP 9, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 10

ELEV. (MSL.) **509'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft, moist to wet, brownish black, CLAY; trace carbonate			
2				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, damp, brown to grayish brown, Sandy CLAY; trace cobble			
4								
6	TP10-1			SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Medium dense to dense, grayish brown to pale yellowish brown, Clayey SAND; trace cobble			
8				SM-SW	Medium dense to dense, grayish brown to dark brown, Silty, medium to coarse SAND; trace cobble, friable with low cohesion			
10					TRENCH TERMINATED AT 10 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-10,
Log of Test Pit TP 10, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 11

ELEV. (MSL.) **509'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft to firm, moist, dark brown to black, CLAY			
2				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm, damp, brownish gray, CLAY; trace sand; trace carbonate			
4								
6				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Medium dense to dense, damp, pale yellowish brown, Clayey, fine to medium SAND; trace cobble			
				SM	Dense, damp, dark brown, Silty, medium to coarse SAND			
8					TRENCH TERMINATED AT 8 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-11,
Log of Test Pit TP 11, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 12

ELEV. (MSL.) **511'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft, wet, brown, CLAY			
2	TP12-1			SC	Medium dense, dry to damp, whitish brown, Clayey, fine to coarse SAND; abundant caliche; trace gravel			
4	TP12-2			CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, damp, reddish gray, Sandy CLAY; blocky texture; manganese films along fractures			
8					-Mottled (red gray)			
10				CL	Stiff to very hard, dry to damp, reddish gray and greenish gray (mottled) Silty CLAY			
12	TP12-3							
14					TRENCH TERMINATED AT 14 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-12,
Log of Test Pit TP 12, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TEST PIT TP 13 ELEV. (MSL.) 513' DATE COMPLETED 03-08-2019 EQUIPMENT Backhoe BY: R. ADAMS MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft, moist to wet, brownish black, CLAY; trace rounded gravel			
2				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, damp, grayish brown CLAY; trace sand; trace carbonate			
4				CL	Stiff to hard, dry to damp, yellowish brown to reddish brown, CLAY; blocky texture (peds) with manganese films along fractures			
6					-Crumbly block texture with abundant carbonate			
8					-Becomes hard with blocky texture			
10					-Very hard excavation PRACTICAL REFUSAL AT 11 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-13,
Log of Test Pit TP 13, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 14

ELEV. (MSL.) **508'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft, moist, dark brown, CLAY; trace carbonate			
2				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Firm to stiff, damp, brownish gray to black, CLAY; trace sand			
4	TP14-1			CL/SC	Stiff, damp, yellowish brown to orange brown, Silty CLAY and Clayey SAND mixture			
6								
8								
10				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, yellowish brown, Clayey SAND; trace cobble			
					TRENCH TERMINATED AT 11 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-14,
Log of Test Pit TP 14, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 15

ELEV. (MSL.) **509'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft, moist, dark brownish black CLAY			
2				CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Stiff, damp, grayish brown, Sandy CLAY; trace gravel; trace carbonate			
4				SC	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, pale yellowish brown to grayish brown, Clayey, fine to coarse SAND; trace gravel			
6					TRENCH TERMINATED AT 6 FEET Groundwater not encountered Backfilled 03-08-2019			
8								
10								
12								
14								
16								

Figure A-15,
Log of Test Pit TP 15, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

TEST PIT TP 16

ELEV. (MSL.) **507'** DATE COMPLETED **03-08-2019**

EQUIPMENT **Backhoe** BY: **R. ADAMS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				CH	**TOPSOIL (Ts)** Soft, moist to wet, brownish black, CLAY			
2	TP16-1			CH	**TERRACE DEPOSITS-Clay Member (Qtc)** Stiff, damp to moist, whitish gray, Sandy CLAY; trace silt			
4								
6				SM	**TERRACE DEPOSITS-Sand/Gravel Member (Qtg)** Dense, damp, Silty, medium to coarse SAND; trace clay; trace cobble up to 6-inch diameter			
					TRENCH TERMINATED AT 7 FEET Groundwater not encountered Backfilled 03-08-2019			

Figure A-16,
Log of Test Pit TP 16, Page 1 of 1

G2338-42-01 (BORING AND TEST PIT).GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING B 1 ELEV. (MSL.) 506' DATE COMPLETED 11-27-2018 EQUIPMENT CME 95 BY: N. BORJA MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM/SC	**TOPSOIL** Loose, dry to damp, dark brown, Silty to Clayey, fine to coarse SAND			
2								
				CL	**TERRACE DEPOSITS-CLAY MEMBER (Qtc)** Firm, moist, dark olive brown, Sandy CLAY			
4								
6								
8								
				SM	**TERRACE DEPOSITS-GRAVEL MEMBER (Qtg)** Medium dense, damp, tan brown, Silty, fine to coarse SAND			
10					BORING TERMINATED AT 10 FEET Groundwater not encountered			

Figure A-17,
Log of Boring B 1, Page 1 of 1

G2338-42-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING B 2 ELEV. (MSL.) 511' DATE COMPLETED 11-27-2018 EQUIPMENT CME 95 BY: N. BORJA MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**TOPSOIL** Loose, dry, dark grayish brown, Silty, fine to medium SAND			
2				CL	**TERRACE DEPOSITS-CLAY MEMBER (Qtc)** Firm, damp, dark olive brown, Sandy CLAY			
4				SC	Loose to medium dense, damp, very light gray, Clayey, fine to medium SAND			
6								
8				SM	**TERRACE DEPOSITS-GRAVEL MEMBER (Qtg)** Medium dense, dry, tan brown, Silty, fine to coarse SAND -Excavates with gravel at 9 feet			
					BORING TERMINATED AT 9.5 FEET Groundwater not encountered			

Figure A-18,
Log of Boring B 2, Page 1 of 1

G2338-42-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G2338-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING B 3 ELEV. (MSL.) 507.5' DATE COMPLETED 11-27-2018 EQUIPMENT CME 95 BY: N. BORJA	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose, dry, dark grayish brown, Silty, fine to coarse SAND			
2				CL	**TERRACE DEPOSITS-CLAY MEMBER (Qtc)** Firm, damp, olive brown, Sandy CLAY			
4				SM	Loose to medium dense, damp, grayish brown to brown, Silty, fine to medium SAND			
6				SM	**TERRACE DEPOSITS-GRAVEL MEMBER (Qtg)** Dense to very dense, dry, light brown to yellowish brown, Silty, fine to coarse SAND; little gravel			
					REFUSAL AT 7.5 FEET Groundwater not encountered			

Figure A-19,
Log of Boring B 3, Page 1 of 1

G2338-42-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

APPENDIX C

LABORATORY TEST RESULTS (GEOCON, 2019)

LABORATORY TESTING (Geocon)

We performed laboratory tests in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. We tested selected samples for maximum dry density and optimum moisture content, direct shear, expansion, plasticity, water-soluble sulfate, chloride ion content, and gradation characteristics. The results of our laboratory tests are presented in the following tables and figure.

TABLE B-I
SUMMARY OF LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557

Proctor Curve No.	Source and Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
TP 1-1	Dark brown, Sandy CLAY; trace gravel (CL)	127.6	9.7
TP 1-2	Brown, Clayey, fine to coarse SAND; trace gravel (SC)	126.7	10.6
TP 5-3	Brown, Silty, fine to coarse SAND; trace gravel (SM)	126.7	10.4
TP 10-1	Brown, Silty, fine to coarse SAND; trace gravel (SM)	130.4	8.4

TABLE B-II
SUMMARY OF LABORATORY DIRECT SHEAR TEST RESULTS
ASTM D 3080

Sample No.	Dry Density (pcf)	Moisture Content (%)		Cohesion (psf)	Angle of Shear Resistance (degrees)
		Initial	Final		
TP 1-2*	115.0	10.2	15.3	330	36
TP 10-1*	117.4	8.6	13.2	0	40

*Sample remolded to approximately 90 percent of the maximum dry density near optimum moisture content.

TABLE B-III
SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	Expansion Classification
	Before Test	After Test			
TP 1-1	9.7	18.1	111.2	29	Low
TP 1-2	8.8	15.8	113.1	11	Very Low
TP 3-1	14.3	38.9	93.9	147	Very High
TP 10-1	7.8	15.3	118.5	0	Very Low

TABLE B-IV
SUMMARY OF LABORATORY PLASTICITY INDEX TEST RESULTS
ASTM D 4318

Sample No.	Depth (geet)	Geologic Unit	Liquid Limit	Plastic Limit	Plasticity Index
TP 1-1	1	Topsoil	42	16	26
TP 5-2	2 to 4	Qtc	66	18	48

TABLE B-V
SUMMARY OF LABORATORY WATER-SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417

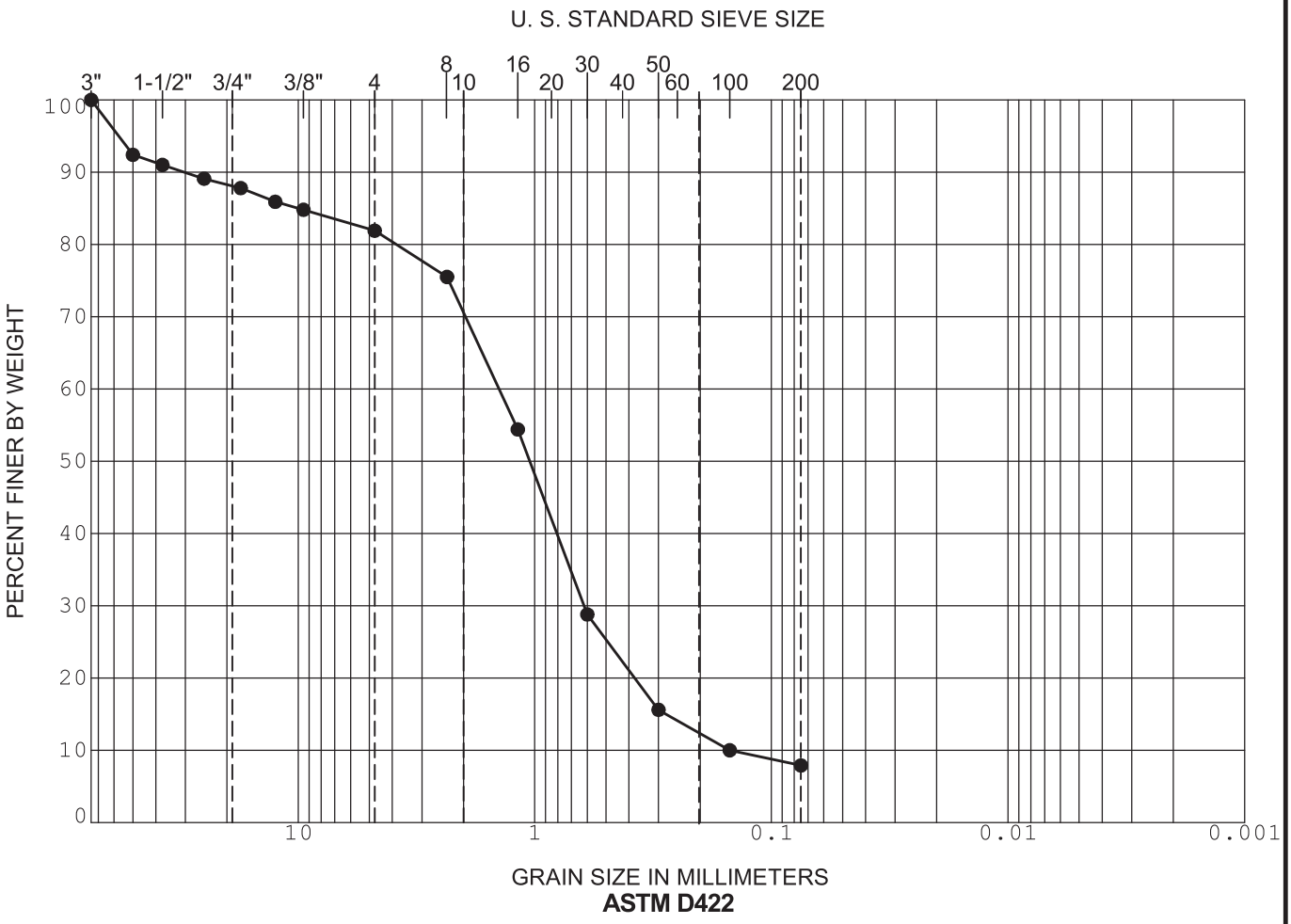
Sample No.	Water-Soluble Sulfate (%)	Sulfate Class
TP 5-3	0.014	S0

TABLE B-VI
SUMMARY OF LABORATORY CHLORIDE ION CONTENT TEST RESULTS
CALIFORNIA TEST NO. 422

Sample No.	Chloride Ion Content (%)	Chloride Ion Content (ppm)
TP 5-3	0.011	111

PROJECT NO. G2338-42-01

GRAVEL		SAND			SILT OR CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



ASTM D422

	SAMPLE	DEPTH (ft)	CLASSIFICATION	NAT WC	LL	PL	PI
●	TP10-1	1.0	(SW-SM) Well graded SAND with silt and gravel				
⊠							
▲							

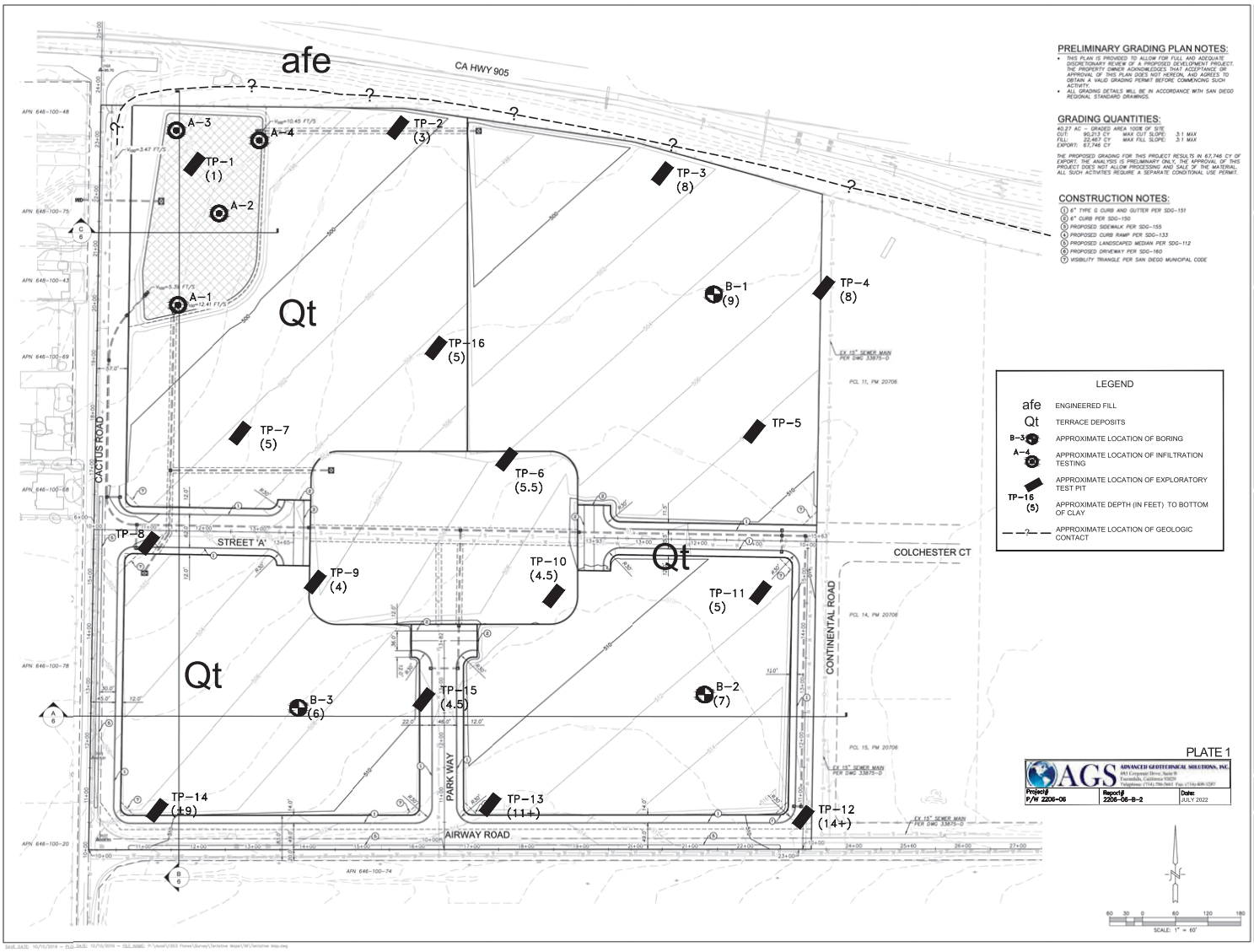
GRADATION CURVE

OTAY CENTRAL VILLAGE
PLANNING AREAS 10-13 AND 17, AIRWAY ROAD AND CACTUS ROAD
SAN DIEGO, CALIFORNIA

G2338-42-01 (BORING AND TEST PIT).GPJ

Figure B-1

GEOCON



PRELIMINARY GRADING PLAN NOTES:

- THIS PLAN IS PROVIDED TO ALLOW FOR FULL AND ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT. THE PROPERTY OWNER ACKNOWLEDGES THAT ACCEPTANCE OR APPROVAL OF THIS PLAN DOES NOT HEREON, AND AGREES TO OBTAIN A VALID GRADING PERMIT BEFORE COMMENCING SUCH ACTIVITY.
- ALL GRADING DETAILS WILL BE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARD DRAWINGS.

GRADING QUANTITIES:

40.27 AC ± GRADED AREA 100% OF SITE

CUT:	90,213 CY	MAX CUT SLOPE:	3:1 MAX
FILL:	22,467 CY	MAX FILL SLOPE:	3:1 MAX
EXPORT:	67,746 CY		

THE PROPOSED GRADING FOR THIS PROJECT RESULTS IN 67,746 CY OF EXPORT. THE ANALYSIS IS PRELIMINARY ONLY. THE APPROVAL OF THIS PROJECT DOES NOT ALLOW PROCESSING AND SALE OF THE MATERIAL. ALL SUCH ACTIVITIES REQUIRE A SEPARATE CONDITIONAL USE PERMIT.

CONSTRUCTION NOTES:

1. 6" TYPE G CURB AND GUTTER PER SDG-151
2. 6" CURB PER SDG-150
3. PROPOSED SIDEWALK PER SDG-155
4. PROPOSED CURB RAMP PER SDG-133
5. PROPOSED LANDSCAPED MEDIAN PER SDG-112
6. PROPOSED DRIVEWAY PER SDG-160
7. VISIBILITY TRIANGLE PER SAN DIEGO MUNICIPAL CODE

LEGEND

afe	ENGINEERED FILL
Qt	TERRACE DEPOSITS
B-3 (6)	APPROXIMATE LOCATION OF BORING
A-4	APPROXIMATE LOCATION OF INFILTRATION TESTING
TP-16 (5)	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT / APPROXIMATE DEPTH (IN FEET) TO BOTTOM OF CLAY
? ?	APPROXIMATE LOCATION OF GEOLOGIC CONTACT

PLATE 1

AGS ADVANCED GEOTECHNICAL SOLUTIONS, INC.
Project# P/W 2206-06 | Report# 2206-06-B-2 | Date: JULY 2022

SCALE: 1" = 60'

REVISIONS

REV.	REVISION	DATE

STAMP

CWI Engineering-Environmental Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
REC Consultants, Inc.

TENTATIVE MAP NO 2213107
FLOREO
00 CACTUS ROAD
SAN DIEGO, CA 92154
APN: 646-100-77

PROJECT NO: 1553
CLIENT: GROUNDWORKS
SUBMITTED DATE: 07/20/2019
PREPARED BY: GMB

PRELIMINARY GRADING PLAN

SHEET NUMBER: 4

PTS 620164

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.

2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS UNLESS APPROVED BY TRAFFIC CONTROL PERMIT FROM THE DEVELOPMENT SERVICES DEPARTMENT.

3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY OF SAN DIEGO DOES NOT AUTHORIZE THE PERMIT HOLDER OR OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.

4. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE (800) 422-4133, TWO DAYS BEFORE YOU DIG.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND LOCATING ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE WHILE MAINTAINING A 1 FOOT VERTICAL CLEARANCE.

6. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT ISSUING AUTHORITY.

7. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE RESIDENT ENGINEER.

8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.

9. PRIOR TO SITE DISTURBANCE, CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRECONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO, CONSTRUCTION MANAGEMENT AND FIELD SERVICES DIVISION (858) 627-3200.

10. CONTRACTOR SHALL ONLY PERFORM SITE SURVEY AND UTILITY MARK OUT SERVICES PRIOR TO THE PRECONSTRUCTION MEETING.

11. CONTRACTOR SHALL IMPLEMENT AN EROSION CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.

12. CONTRACTOR SHALL HAVE EMERGENCY MATERIAL AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHERE FLOW MAY GENERATE EROSION AND SEDIMENT POLLUTION.

13. MANHOLES AND PULL BOX COVER SHALL BE LABELED WITH NAME OF COMPANY.

14. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

15. CONTRACTOR SHALL PROVIDE RED-LINES DRAWINGS IN ACCORDANCE WITH 2-5.4 OF THE WHITEBOOK, "RED-LINES AND RECORD DOCUMENTS."

16. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 1 FOOT VERTICAL SEPARATION TO ALL UTILITIES UNLESS OTHERWISE SPECIFIED ON THE PLANS.

17. CONTRACTOR SHALL REMOVE AND REPLACE ALL UTILITY BOXES SERVING AS HANDHOLES THAT ARE NOT IN "AS-NEW" CONDITION IN PROPOSED SIDEWALK, DAMAGED BOXES, OR THOSE THAT ARE NOT IN COMPLIANCE WITH CURRENT CODE SHALL BE REMOVED AND REPLACED WITH NEW BOXES, INCLUDING WATER, SEWER, TRAFFIC SIGNALS, STREET LIGHTS, DRY UTILITIES-SDG&E, COX, ETC. ALL NEW METAL LIDS SHALL BE SLIP RESISTANT AND INSTALLED FLUSH WITH PROPOSED SIDEWALK GRADE. IF A SLIP RESISTANT METAL LID IS NOT COMMERCIALLY AVAILABLE FOR THAT USE, NEW BOXES AND LIDS SHALL BE INSTALLED.

18. CONTRACTOR SHALL INSTALL CITY APPROVED TEMPORARY VIDEO OR RADAR DETECTION WHEN EXISTING TRAFFIC SIGNAL DETECTION SYSTEMS ARE DAMAGED, DISABLED, OR BECOME INEFFECTIVE DUE TO CONSTRUCTION ACTIVITIES FOR A PERIOD OF ONE (1) OR MORE DAYS, SATISFACTORY TO THE CITY ENGINEER. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL TEMPORARY TRAFFIC SIGNAL DETECTION EQUIPMENT AND RESTORE/INSTALL A CITY APPROVED PERMANENT VEHICLE DETECTION SYSTEM UPON COMPLETION OF CONSTRUCTION, SATISFACTORY TO THE CITY ENGINEER.

19. PRIOR TO CONSTRUCTION, SURVEY MONUMENTS (HORIZONTAL AND VERTICAL) THAT ARE LOCATED IN THE CONSTRUCTION AREA SHALL BE TIED-OUT AND REFERENCED BY A LAND SURVEYOR.

20. UPON COMPLETION OF CONSTRUCTION, ALL DESTROYED SURVEY MONUMENTS ARE REQUIRED TO BE REPLACED, AND A CORNER RECORD OR RECORD OF SURVEY SHALL BE PREPARED AND FILED WITH THE COUNTY SURVEYOR AS REQUIRED BY THE PROFESSIONAL LAND SURVEYOR ACT, SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA.

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 6, EPOCH 1991.35 AND IS DETERMINED BY G.P.S. MEASUREMENTS TAKEN IN APRIL 2018 AT POINT 'A' AND 'B' SHOWN HEREON. SAID POINTS WERE ESTABLISHED FROM FIRST ORDER G.P.S. STATION NO. 209 AND FIRST ORDER G.P.S. STATION NO. 189 PER RECORD OF SURVEY NO. 14492.

BEARING FROM POINT 'A' TO 'B' IS: NORTH 00°56'15" WEST.

DISTANCES SHOWN HEREON ARE GROUND LEVEL DISTANCES. THE COMBINED SCALE FACTOR AT POINT 'A' IS 1.0000287. GRID DISTANCE = GROUND DISTANCE X COMBINED SCALE FACTOR. ELEVATION AT POINT 'A' IS 474.85' (N.G.V.D. 29)

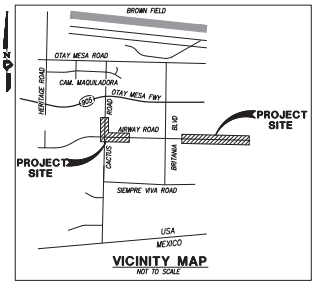
QUOTED BEARINGS FROM REFERENCE DEEDS/MAPS MAY OR MAY NOT BE IN TERMS OF SAID SYSTEM.

AGREEMENT DATA				
APPROVAL TYPE	DESCRIPTION	APPROVAL NO.	DOCUMENT NO.	SEE SHEET NUMBER(S)

PUBLIC IMPROVEMENT PLANS FOR:

EPOCA

AIRWAY EAST OFFSITE



VICINITY MAP
NOT TO SCALE

MONUMENT PRESERVATION CERTIFICATION

THE PERMITTEE SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ALL SURVEY MONUMENTS DESTROYED BY CONSTRUCTION. IF A VERTICAL CONTROL MONUMENT IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO DEMOLITION/CONSTRUCTION.

☐ THE TYPE OF CONSTRUCTION WILL NOT AFFECT ANY SURVEY MONUMENTS (THIS LINE IS FOR PROJECTS THAT ARE PROPOSING NO DEMOLITION, TRENCHING, ASSOCIATED WITH A CIP, ETC)

NAME _____ DATE _____

PRIOR TO PERMIT ISSUANCE, THE PERMITTEE SHALL RETAIN THE SERVICE OF A PROFESSIONAL LAND SURVEYOR OR CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING WHO WILL BE RESPONSIBLE FOR MONUMENT PRESERVATION AND SHALL PROVIDE A CORNER RECORD OR RECORD OF SURVEY TO THE COUNTY SURVEYOR AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, IF APPLICABLE. (SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA)

I HAVE INSPECTED THE SITE AND DETERMINED THAT:

☐ NO SURVEY MONUMENTS WERE FOUND WITHIN THE LIMITS OF WORK
☐ SURVEY MONUMENTS EXISTING IN OR NEAR LIMITS OF WORK WILL BE PROTECTED IN PLACE
☐ SURVEY MONUMENTS HAVE BEEN TIED OUT AND A FINAL OR PARCEL MAP WILL BE FILED (NO CORNER RECORD OR RECORD OF SURVEY WILL BE REQUIRED)
☐ OTHER AGENCY SURVEY MONUMENT (CORNER RECORD OR RECORD OF SURVEY MAY NOT BE REQUIRED). AGENCY HAS BEEN NOTIFIED OF POSSIBLE MONUMENT DESTRUCTION AND A LETTER PROVIDED TO CITY
☐ A PRE-CONSTRUCTION CORNER RECORD (OR RECORD OF SURVEY) FOR SURVEY MONUMENTS FOUND WITHIN THE LIMITS OF WORK HAS BEEN FILED.

CORNER RECORD #_____ OR RECORD OF SURVEY #_____

NAME P.L.S. / R.C.E. NO. XXXXX EXP. XX-XX-XX DATE

POST CONSTRUCTION CORNER RECORD (AS-BUILT ITEM)

☐ POST CONSTRUCTION CORNER RECORD FOR SURVEY MONUMENTS DESTROYED DURING CONSTRUCTION AND REPLACED AFTER CONSTRUCTION.

CORNER RECORD #_____ OR RECORD OF SURVEY #_____

NAME P.L.S. / R.C.E. NO. XXXXX EXP. XX-XX-XX DATE

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800
San Diego, CA 92101
619.235.6471 Tel
619.234.0349 Fax

GREGORY M. SHIELDS, R.C.E. 42951 DATE REGISTRATION EXPIRES 3-31-22 | DESIGNED BY: | PM REVIEW: | SURVEY REVIEW:

REGISTERED PROFESSIONAL ENGINEER GREGORY M. SHIELDS No. 42951 Exp. 03-31-22 CIVIL STATE OF CALIFORNIA

OWNER/APPLICANT

CR LUMINA GROUP, LLC
444 WEST BEECH STREET, SUITE 300
SAN DIEGO, CA 92101
(619) 235-6471

REFERENCE DRAWINGS

21305-D; TRUNK SEWER PUMP STATION
RECORD OF SURVEY (ROS) 22386
ALTA/ACSM LAND TITLE SURVEY-COLRICH OTAY CANYON RANCH
23871-D, 24016-D, 24211-D, 25183-D

SITE ADDRESS

THE INTERSECTION OF AIRWAY ROAD AND CACTUS ROAD, SAN DIEGO, CA 92154

TOPOGRAPHY SOURCE

AERIAL TOPOGRAPHY BY PROJECT DESIGN CONSULTANTS PHOTOGRAMMETRY DEPARTMENT DATED: MAY 12, 2014 . AND FIELD VERIFIED DECEMBER 1, 2020. CONTOURS AT 2' INTERVAL
PROJECT DESIGN CONSULTANTS
(619) 235-6471
701 'B' STREET, SUITE 800
SAN DIEGO, CA 92101

BENCHMARK

CITY OF SAN DIEGO BRASS PLUG AT THE N.E. INTERSECTION OF OTAY MESA ROAD AND HERITAGE ROAD
ELEVATION = 504.00'' M.S.L. DATUM (N.G.V.D. 29)

ASSESSORS PARCEL NUMBER

TAX ASSESSOR PARCEL NO. 646-100-74, 76 77;
646-110-19, 26, 27, 28, 39, 40

EXISTING LEGAL DESCRIPTION

PORTION OF SECTION 33 AND PORTION OF SECTION 34, TOWNSHIP 18 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLATS THEREOF.

SHEET INDEX

SHEET DESCRIPTION	SHEET #/RANGE
TITLE SHEET	1
KEY MAP AND NOTES	2
GENERAL NOTES AND CROSS SECTIONS	3-4
IMPROVEMENT SHEETS	5-10
EROSION CONTROL PLAN SHEETS	11-12
SIGNING AND STRIPING SHEETS	13-17
TRAFFIC SIGNAL PLAN	18
TRAFFIC CONTROL PLANS	101-108

CONSTRUCTION STORM WATER PROTECTION NOTES

1. TOTAL SITE DISTURBANCE AREA (ACRES):
WATERSHED: TIJUANA RIVER
HYDROLOGIC SUB AREA NAME AND NUMBER: WATER TANKS 911.12

2. THE PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF THE
☐ WPCP
THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NUMBER R9-2013-0001
AND SUBSEQUENT AMENDMENTS..
☒ SWPPP
THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NUMBER R9-2013-0001
AND CONSTRUCTION GENERAL PERMIT ORDER NUMBER 2009-009-DWQ AS AMENDED BY ORDER 2010-0014 DWQ AND 2012-0006-DWQ
TRADITIONAL: RISK LEVEL ☐ 1 ☒ 2 ☐ 3
LUP RISK LEVEL ☐ 1 ☐ 2 ☐ 3
WDID NO: 9 37C39144

3. CONSTRUCTION SITE PRIORITY
☐ ASBS ☒ HIGH ☐ MEDIUM ☐ LOW

GREEN STREETS NOTES

THE PROJECT IS COMPLYING WITH STORM WATER REQUIREMENTS BY INSTALLING THE FOLLOWING GREEN STREET ELEMENTS THAT WILL BE MAINTAINED BY CITY OF SAN DIEGO

*VEGETATED SWALES

NOTE: THIS PROJECT IS PDP EXEMPT SINCE IT QUALIFIES FOR THE GREEN STREETS EXEMPTION.

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS:

DOCUMENT NO.	DESCRIPTION
PWP010119-01	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREENBOOK", 2018 EDITION
PWP010119-02	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLICWORKS CONSTRUCTION (WHITEBOOK), 2018 EDITION
PWP010119-04	CITYWIDE COMPUTER AIDED DESIGN AND DRAFTING (CADD) STANDARDS, 2018 EDITION
PWP030119-07	CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (REVISION 5), 2014 EDITION
PWP030119-05	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD SPECIFICATIONS, 2018 EDITION

STANDARD DRAWINGS:

DOCUMENT NO.	DESCRIPTION
PWP010119-03	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION
PWP030119-06	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S CUSTOMARY STANDARD PLANS, 2018 EDITION

LEGEND

PROPOSED IMPROVEMENTS

IMPROVEMENT — SYMBOL

PROPERTY LINE/R/W BOUNDARY
PROPOSED RIGHT OF WAY
PROPOSED CENTERLINE
PROPOSED CURB AND GUTTER ..... (SDG-151, SDG-156)
PROPOSED CURB MEDIAN ..... (SDG-154, TYPE B-2)
PROPOSED SIDEWALK
PROPOSED CONTINENTAL CROSS WALK
PROPOSED 24' DRIVEWAY ..... (SDG-160)
PROPOSED CURB RAMP ..... (SDG-130, SDG-132)
PROPOSED CENTERLINE ELEVATIONS — 490.0
PROPOSED FLOWLINE ELEVATIONS — 490.0 FL
PROPOSED DIRECTIONAL FLOW — 1.0 %
PROPOSED CONTOUR — 500
PROPOSED DAYLIGHT
PROPOSED BERM
PROPOSED SLOPE (2:1)
INDICATES FOUND MONUMENT AS NOTED (SEE PLAN FOR NOTES)
PROP. SCHEDULE J AC PAVEMENT
PROP. GRIND & OVERLAY

EXISTING IMPROVEMENTS

EXISTING STREET CENTERLINE
EXISTING RIGHT-OF-WAY
EXISTING LOT LINE
EXISTING CURB AND GUTTER
EXISTING CONTOUR — 500
EXISTING FENCE
EXISTING TREE
EXISTING STORM DRAIN PIPE
EXISTING DRAINAGE INLET
EXISTING SEWER — S
EXISTING SEWER MANHOLE — S
EXISTING WATER — W
EXISTING FORCE MAIN — FM
EXISTING SDG&E OVERHEAD ELECTRIC — OHE

ENGINEERING PERMIT NO:_____
DISCRETIONARY PERMIT NO: 1972222
PRIVATE CONTRACT

TITLE SHEET FOR:

EPOCA

AIRWAY EAST OFFSITE IMPROVEMENTS

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 1 OF 18 SHEETS

PROJECT NO. 673439
R.T.M. 1972222

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	PDC			
AS-BUILTS				

1784-6331 NADB3 COORDINATES
144-1771 LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088-1-D

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS		PROJECT NO.

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

The City of SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT

STREET DATA TABLE

STREET NAME	CLASSIFICATION	SPEED (MPH)	ADT (VEHICLES)	R/W (FT)
CACTUS ROAD	2 LANE COLLECTOR	35	3180	94-115
AIRWAY ROAD	2 LANE COLLECTOR	35	4250	162

Last save by ISMAEL MARQUEZ, File Name P:\2357.80\Engr\DWG_Plans\Improvement\Offsite\Airway East Offsite\2357.80 IMP Offsite 2023 Sheet 1.dwg, Date Last Saved 12/15/2020 11:04:50 AM, Date Plotted Last 12/15/2020 11:05:17 AM

STRIPING AND SIGNING GENERAL NOTES

1. INSTALLATION OF ALL STRIPING, SIGNS AND PAVEMENT MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL STRIPING AND SIGNING SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE FOLLOWING MANUALS:

DESCRIPTION	EDITION	DOCUMENT NO.
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2018 EDITION	2018	PWPI010119-01
CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION	2018	PWPI010119-03
CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 5), 2014 EDITION	2018	PWPI030119-07

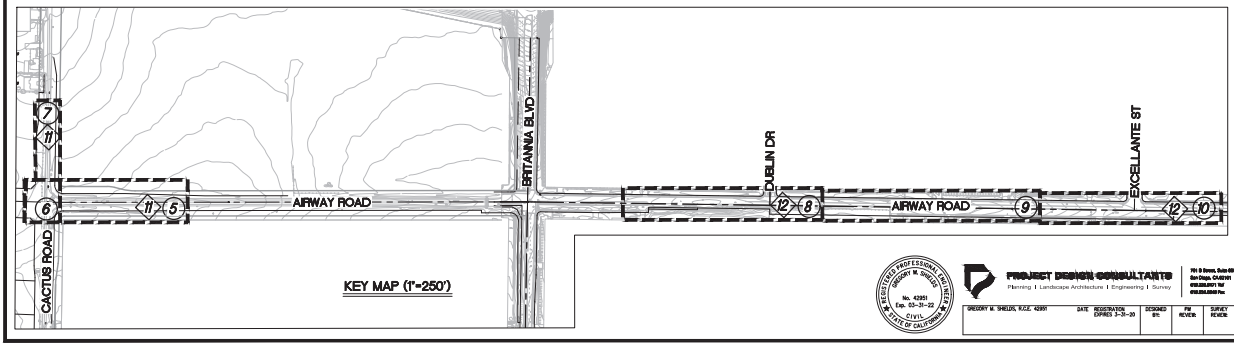
3. ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE CITY ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
4. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS AND LEGENDS BY SANDBLASTING AND/OR GRINDING WITH THE SEAL. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PERFORATED STEEL TUBING WITH A BREAKAWAY BASE PER CITY OF SAN DIEGO STANDARD DRAWING SDM-104.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW.
7. ALL SIGNS SHOWN ON THE STRIPING AND SIGNING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN.
8. MARKED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET UNLESS INDICATED OTHERWISE.
9. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LANES) SHALL BE THERMOPLASTIC.
10. THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT (858) 495-4742 A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO AND UPON COMPLETION OF STRIPING AND SIGNING.

CURB RAMP NOTE

THE REQUIRED DETECTABLE WARNING (TRUNCATED DOMES) ON CURB RAMPS ARE TO COMPLY WITH THE CITY STANDARDS (SDG 130) AND SPECIFICATIONS. A 12" X 12" (MIN) SAMPLE OF THE DETECTABLE WARNING, THE PRODUCTS' TEST REPORT, AND A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE SUBMITTED TO THE DESIGNATED CITY RESIDENT ENGINEER FOR REVIEW PRIOR TO INSTALLATION. FAILURE TO COMPLY WITH THE STANDARDS, SPECIFICATIONS, AND SAMPLE SUBMITTAL REVIEW PROCESS WILL RESULT IN THE REMOVAL OR REPLACEMENT OF THE DETECTABLE WARNING AND/OR CURB RAMP(S) AT CONTRACTOR AND/OR OWNER'S EXPENSE.

STREET NAME	STATION LIMITS	AS-BUILT PAVEMENT STRUCTURAL SECTION		
		AC (IN.)	CTB (IN.)	PCC (IN.)

NOTE:
STREET SUBGRADE SOIL SAMPLES ARE TO BE TAKEN FOR "R" VALUE ANALYSIS BY A PRIVATE GEOTECHNICAL ENGINEERING FIRM AND UNDER THE DIRECTION OF THE RESIDENT ENGINEER. THESE ANALYSIS ARE TO BE PERFORMED BY A CERTIFIED PRIVATE GEOTECHNICAL FIRM TO DETERMINE THE PAVEMENT SECTION(S) DURING CONSTRUCTION. A PAVEMENT SECTION LETTER WILL BE ISSUED BY THE CITY.



KEY MAP (1"=250')

LEGENDS:

IMPROVEMENT PLANS . . . . . (5)

EROSION CONTROL PLANS . . . . . (1)

PRIVATE CONTRACT

NOTES FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 8 OF 18 SHEETS

PROJECT NO. 673439

FOR CITY ENGINEER _____ DATE _____

Y.T.M. 1972222

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	PDC			
AS-BUILTS				

1784-6331
NADB3 COORDINATES

144-1771
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____

INSPECTOR _____ DATE COMPLETED _____

42088- 2-D

REGISTERED PROFESSIONAL ENGINEER GREGORY M. SHELDS No. 42351 Exp. 03-31-20 CIVIL STATE OF CALIFORNIA

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800
San Diego, CA 92101
619.235.6471 Tel
619.234.0349 Fax

GREGORY M. SHELDS, R.C.E. 42351 DATE REGISTRATION EXPIRES 3-31-20

DESIGNED BY: | PM REVIEW: | SURVEY REVIEW:

CONSTRUCTION BMP GENERAL NOTES

PRIOR TO ANY SOIL DISTURBANCE, TEMPORARY EROSION AND SEDIMENT CONTROLSHALL BE INSTALLED BY THE CONTRACTOR OR QUALIFIED PERSON(S) AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE CITY OF SAN DIEGO 'LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMP'S AND, IF APPLICABLE, THE STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR POST CONSTRUCTION TREATMENT CONTROL BMP'S.

2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL STORM DRAIN INLETS. INLET PROTECTION IN THE PUBLIC RIGHT OF WAY MAY BE TEMPORARILY REMOVED WHERE IT IS PRONE TO FLOODING PRIOR TO A RAIN EVENT AND REINSTALLED AFTER RAIN IS OVER.

3. ALL CONSTRUCTION BMPS SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.

4. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING, AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.

5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED SWPPP/WPCP WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, CIVIL PENALTIES AND/OR STOP WORK NOTICES.

6. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT, DEBRIS AND MUD ON AFFECTED AND ADJACENT STREET(S) AND WITHIN STORM DRAIN SYSTEM DUE TO CONSTRUCTION VEHICLES/EQUIPMENT AND CONSTRUCTION ACTIVITY AT THE END OF EACH WORK DAY.

7. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING STORM WATER CONVEYANCE SYSTEMS FROM SEDIMENTATION, CONCRETE RINSE, OR OTHER CONSTRUCTION RELATED DEBRIS AND DISCHARGES WITH THE APPROPRIATE BMPS THAT ARE ACCEPTABLE TO THE ENGINEER AND AS INDICATED IN THE SWPPP/WPCP

8. THE CONTRACTOR OR QUALIFIED PERSON SHALL CLEAR DEBRIS, SILT AND MUD FROM ALL DITCHES AND SWALES PRIOR TO AND AFTER EACH RAIN EVENT.

9. IF A NON-STORM WATER DISCHARGE LEAVES THE SITE, THE CONTRACTOR SHALL IMMEDIATELY STOP THE ACTIVITY AND REPAIR THE DAMAGES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF THE DISCHARGE. AS SOON AS PRACTICAL, ANY AND ALL WASTE MATERIAL, SEDIMENT AND DEBRIS FROM EACH NON STORM WATER DISCHARGE SHALL BE REMOVED FROM THE STORM DRAIN CONVEYANCE SYSTEM AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

10. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID DEPLOYMENT OF CONSTRUCTION BMPS WHEN RAIN IS IMMINENT.

11. THE CONTRACTOR SHALL RESTORE AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS TO WORKING ORDER YEAR ROUND.

12. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DUE TO GRADING INACTIVITY OR UNFORESEEN CIRCUMSTANCES TO PREVENT NON-STORM WATER AND SEDIMENT-LADEN DISCHARGES.

13. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

14. ALL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP/WPCP SHALL BE INSTALLED AND MAINTAINED. ALL EROSION AND SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE PROPERLY DOCUMENTED AND INSTALLED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

15. UPON NOTIFICATION BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL ARRANGE FOR MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION AND SEDIMENT CONTROL MEASURES AND OTHER BMPS RELATIVE TO ANTICIPATED CONSTRUCTION ACTIVITIES.

16. THE CONTRACTOR SHALL CONDUCT VISUAL INSPECTIONS DAILY AND MAINTAIN ALL BMPS AS NEEDED. VISUAL INSPECTIONS AND MAINTENANCE OF ALL BMPS SHALL BE CONDUCTED BEFORE, DURING AND AFTER EVERY RAIN EVENT AND EVERY 24 HOURS DURING ANY PROLONGED RAIN EVENT. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ALL BMPS AS SOON AS POSSIBLE AS SAFETY ALLOWS.

17. CONSTRUCTION ENTRANCE AND EXIT AREA. TEMPORARY CONSTRUCTION ENTRANCE AND EXIT AREA SHALL BE ON LEVEL, STABILIZED GROUND. THE ENTRANCE AND EXIT AREA SHALL BE CONSTRUCTED BY OVERLAYING THE STABILIZED ACCESS AREA WITH 3 TO 6 DIAMETER STONES. THE AREA SHALL BE MINIMUM 50' LONG X 30' WIDE. IN LIEU OF STONE COVERED AREA, THE CONTRACTOR MAY CONSTRUCT RUMBLE RACKS OF STEEL PANELS WITH RIDGES MINIMUM 20' LONG X 30' WIDE CAPABLE OF PREVENTING THE MIGRATION OF CONSTRUCTION MATERIALS INTO THE TRAVELED WAYS.

18. PERFORMANCE STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING WATER POLLUTION CONTROL MEASURES BASED ON PERFORMANCE STANDARDS. PERFORMANCE STANDARDS SHALL INCLUDE:

A. NON-STORM WATER DISCHARGES FROM THE SITE SHALL NOT OCCUR TO THE MEP.3. STORM WATER DISCHARGES SHALL BE FREE OF POLLUTANTS INCLUDING SEDIMENT TO THE MEP.

B. EROSION SHALL BE CONTROLLED BY ACCEPTABLE BMPS TO THE MEP. IF RILLS AND GULLIES APPEAR THEY SHALL BE REPAIRED AND ADDITIONAL BMPS INSTALLED TO PREVENT A REOCCURRENCE OF EROSION.

C. AN INACTIVE AREA SHALL BE PROTECTED TO PREVENT POLLUTANT DISCHARGES. A SITE OR PORTIONS OF A SITE SHALL BE CONSIDERED INACTIVE WHEN CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD OF 14 OR MORE CONSECUTIVE DAYS.

MINIMUM POST-CONSTRUCTION MAINTENANCE PLAN

AT THE COMPLETION OF THE WORK SHOWN, THE FOLLOWING PLAN SHALL BE FOLLOWED TO ENSURE WATER QUALITY CONTROL IS MAINTAINED FOR THE LIFE OF THE PROJECT:

1. STABILIZATION: ALL PLANTED SLOPES AND OTHER VEGETATED AREAS SHALL BE INSPECTED PRIOR TO OCTOBER 1 OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH) AND REPAIRED AN REPLANTED AS NEEDED UNTIL A NOTICE OF TERMINATION (NOT) IS FILLED.

2. STRUCTURAL PRACTICES: DESILTING BASINS, DIVERSION DITCHES, DOWNDRAINS, INLETS, OUTLET PROTECTION MEASURES, AND OTHER PERMANENT WATER QUALITY AND SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED PRIOR TO OCTOBER 1ST OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH). REPAIRS AND REPLACEMENTS SHALL BE MADE AS NEEDED AND RECORDED IN THE MAINTENANCE LOG IN PERPETUITY.

3. OPERATION AND MAINTENANCE, FUNDING: POST-CONSTRUCTION MANAGEMENT MEASURES ARE THE RESPONSIBILITY OF THE DEVELOPER UNTIL THE TRANSFER OF RESPECTIVE SITES TO HOME BUILDERS, INDIVIDUAL OWNERS, HOMEOWNERS ASSOCIATIONS, SCHOOL DISTRICTS, OR LOCAL AGENCIES AND/OR GOVERNMENTS AT THAT TIME, THE NEW OWNERS SHALL ASSUME RESPONSIBILITY FOR THEIR RESPECTIVE PORTIONS OF THE DEVELOPMENT.

PERMANENT POST-CONSTRUCTION BMP NOTES

1. OPERATION AND MAINTENANCE SHALL BE SECURED BY AN EXECUTED AND RECORDED STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT (SWMDCMA), OR ANOTHER MECHANISM APPROVED BY THE CITY ENGINEER, THAT ASSURES ALL PERMANENT BMP'S WILL BE MAINTAINED IN PERPETUITY, PER THE LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS.

2. ANY MODIFICATION(S) TO THE PERMANENT POST CONSTRUCTION BMP DEVICES/STRUCTURES SHOWN ON PLAN REQUIRES A CONSTRUCTION CHANGE TO BE PROCESSED AND APPROVED THROUGH DEVELOPMENT SERVICES DEPARTMENT BY THE ENGINEER OF WORK. APPROVAL OF THE CONSTRUCTION CHANGE IS REQUIRED PRIOR TO CONSTRUCTION OF THE PERMANENT BMP.

STORM WATER REQUIREMENTS

1. THIS PROJECT IS SUBJECT TO MUNICIPAL CODE SECTION 4.03 AND ORDER NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100

2. ALL WORK RELATED TO POST-CONSTRUCTION STORMWATER QUALITY SHALL BE IN ACCORDANCE WITH THE STORM WATER QUALITY MANAGEMENT PLAN ENTITLED, PRIORITY DEVELOPMENT PROJECT (PDP) – EXEMPT STORM WATER REPORT FOR AIRWAY EAST PUBLIC IMPROVEMENTS (PTS #673439). PREPARED FOR COLRICH, INTERSECTION OF AIRWAY AND CACTUS, PREPARED BY PROJECT DESIGN CONSULTANTS , 8/27/2020 .

3. POST-CONSTRUCTION BMPS ARE REQUIRED, SEE SHEET 9.

LEGEND OF ABBREVIATIONS

AC	ASPHALT CONCRETE
ASS'Y	ASSEMBLY
BC	BEGINNING CURVE
BO	BLOW-OFF
BOT.	BOTTOM
BP	BOTTOM PIPE
BVC	BEGIN VERTICAL CURVE
CL	CENTERLINE
DWG	DRAWING
EC	END CURVE
EOP	EDGE OF PAVEMENT
EVC	END VERTICAL CURVE
EX./EXIST.	EXISTING
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
GB	GRADE BREAK
HP	HIGH POINT
IE	INVERT ELEVATION
LP	LOW POINT
LT.	LEFT
MH	MANHOLE
OWD	OTAY WATER DISTRICT
NTS	NOT TO SCALE
PCR	POINT OF CURB RETURN
PL	PROPERTY LINE
PROP.	PROPOSED
PVI	POINT OF VERTICAL INTERSECTION
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RD.	ROAD
RT.	RIGHT
SD	STORM DRAIN
ST.	STREET
STA.	STATION
TB	TOP OF BERM
TC	TOP OF CURB
TOP	TOP OF PIPE
TP	TOP PIPE
VC	VERTICAL CURVE

SITE DESIGN, SOURCE CONTROL, AND POLLUTANT CONTROL BMP OPERATION AND MAINTENANCE PROCEDURE

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT APPROVAL NO.:

O&M RESPONSIBLE DESIGNEE: CITY

BMP DESCRIPTION	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE METHOD	QUANTITY	INCLUDED IN O&M MANUAL	SHEET
GREEN STREET ELEMENT: VEGETATED SWALE 3	EVERY 6-12 MONTHS	AS NEEDED	REMOVE TRASH AND SEDIMENT FROM SWALE, TRIM VEGETATION, MAINTAIN SWALE GRADING, MAINTAIN INLETS AND OUTLETS, CORRECT ANY EROSION DUE TO CONCENTRATED STORMWATER RUNOFF.	1	NO	9
HMP EXEMPT: YES						

SITE DESIGN, SOURCE CONTROL, AND POLLUTANT CONTROL BMP OPERATION AND MAINTENANCE PROCEDURE

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT APPROVAL NO.: 2407517 UNDER PTS# 658080

O&M RESPONSIBLE DESIGNEE: PROPERTY OWNER

BMP DESCRIPTION	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE METHOD	QUANTITY	INCLUDED IN O&M MANUAL	SHEET
SITE DESIGN: LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES	ANNUALLY	QUARTERLY		PER PLAN	NO	ALL
SOURCE CONTROL: STORM DRAIN STENCILING	ANNUALLY	AS NEEDED	RESPRAY STORM DRAIN STENCILING WHEN NECESSARY	PER PLAN	NO	ALL
POLLUTANT CONTROL BMP: PR-1 & HMP FACILITY: BIOFILTRATION BASIN WITH ORIFICE CONTROL & AND OUTLET STRUCTURE (BMP1)	2X PER YEAR	ANNUALLY OR AS NEEDED	CLEAN AND REMOVE DEBRIS FROM INLET/OUTLET STRUCTURES. REPAIR/REPLACE VEGETATION AS NECESSARY TO MAINTAIN FULL COVER. CHECK FOR SEDIMENT BUILD-UP IN GENERAL BED. INSPECTION ORIFICES ON OUTLET STRUCTURE FOR CLOGGING, CLEAN AND REMOVE IF NECESSARY.	1	YES	41791-D-48
POLLUTANT CONTROL BMP: BF-1 & HMP FACILITY: BIOFILTRATION BASIN WITH ORIFICE CONTROL & AND OUTLET STRUCTURE (BMP4)	2X PER YEAR	ANNUALLY OR AS NEEDED	CLEAN AND REMOVE DEBRIS FROM INLET/OUTLET STRUCTURES. REPAIR/REPLACE VEGETATION AS NECESSARY TO MAINTAIN FULL COVER. CHECK FOR SEDIMENT BUILD-UP IN GENERAL BED. INSPECTION ORIFICES ON OUTLET STRUCTURE FOR CLOGGING, CLEAN AND REMOVE IF NECESSARY.	1	YES	41791-D-49
POLLUTANT CONTROL BMP: HYDRODYNAMIC SEPERATOR	2X PER YEAR	AS NEEDED	REMOVE DEBRIS, USE EXTENSION ON A VACUUM TRUCK, REPLACE HYDROCARBON BOOM AS NEEDED	3	YES	41791-D-46,47
DIVERSION STRUCTURE	2X PER YEAR	ANNUALLY OR AS NEEDED	REMOVE DEBRIS, USE EXTENSION ON A VACUUM TRUCK	2	YES	41791-D-46,47
HMP EXEMPT	NO					

REGISTERED PROFESSIONAL ENGINEER
GREGORY M. SHIELDS
No. 42951
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800
San Diego, CA 92101
619.235.6471 Tel
619.234.0349 Fax

GREGORY M. SHIELDS, R.C.E. 42951	DATE REGISTRATION EXPIRES 3-31-20	DESIGNED BY:	PM REVIEW:	SURVEY REVIEW:

PRIVATE CONTRACT

NOTES FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 3 OF 10 SHEETS

PROJECT NO. 673439

FOR CITY ENGINEER _____ DATE _____

V.T.M. 1972222

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	PDC			

1784-6331
NAD83 COORDINATES

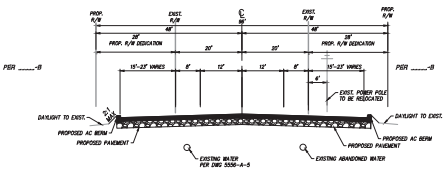
144-1771
LAMBERT COORDINATES

AS-BUILTS

CONTRACTOR _____ DATE STARTED _____

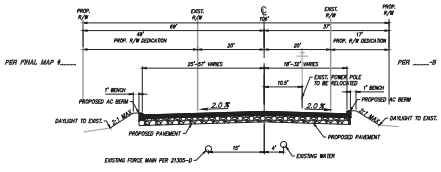
INSPECTOR _____ DATE COMPLETED _____

42088-3-D



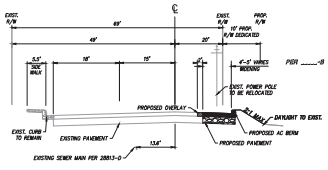
AIRWAY ROAD SECTION

STA. 91+81.43 TO STA. 95+68.26
NOT TO SCALE



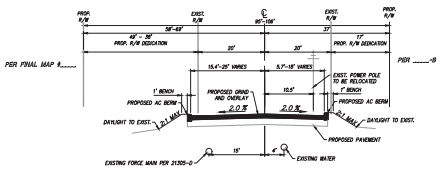
CACTUS ROAD SECTION

STA. 45+26.09 TO STA. 46+60.00
NOT TO SCALE



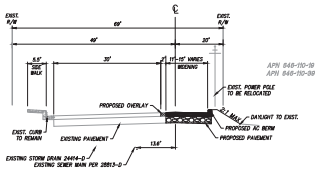
AIRWAY ROAD SECTION

STA. 124+41.74 TO STA. 127+12.21
NOT TO SCALE



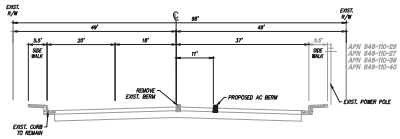
CACTUS ROAD SECTION

STA. 46+60.00 TO STA. 49+75.11
NOT TO SCALE



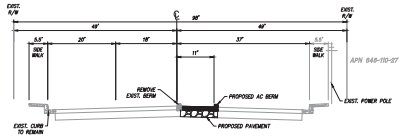
AIRWAY ROAD SECTION

STA. 127+12.21 TO STA. 137+75.86
NOT TO SCALE



AIRWAY ROAD SECTION

STA. 137+75.86 TO STA. 140+53.62
STA. 142+42.10 TO STA. 144+51.08
STA. 145+52.36 TO STA. 148+80.84
STA. 149+58.88 TO STA. 153+38.06
NOT TO SCALE



AIRWAY ROAD SECTION

STA. 153+38.06 TO STA. 155+26.60
NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
GREGORY M. SHIELDS
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CIVIL
STATE OF CALIFORNIA

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800
San Diego, CA 92101
619.235.6471 Tel
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GREGORY M. SHIELDS, R.C.E. 42951 DATE REGISTRATION EXPIRES 3-31-20

DESIGNED	PM	SURVEY
BTL	REVIEW:	REVIEW:

PRIVATE CONTRACT

NOTES AND CROSS SECTIONS FOR

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 4 OF 18 SHEETS

PROJECT NO. 673439

FOR CITY ENGINEER _____ DATE _____

Y.T.M. 1972222

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RBE			
AS-BUILTS				

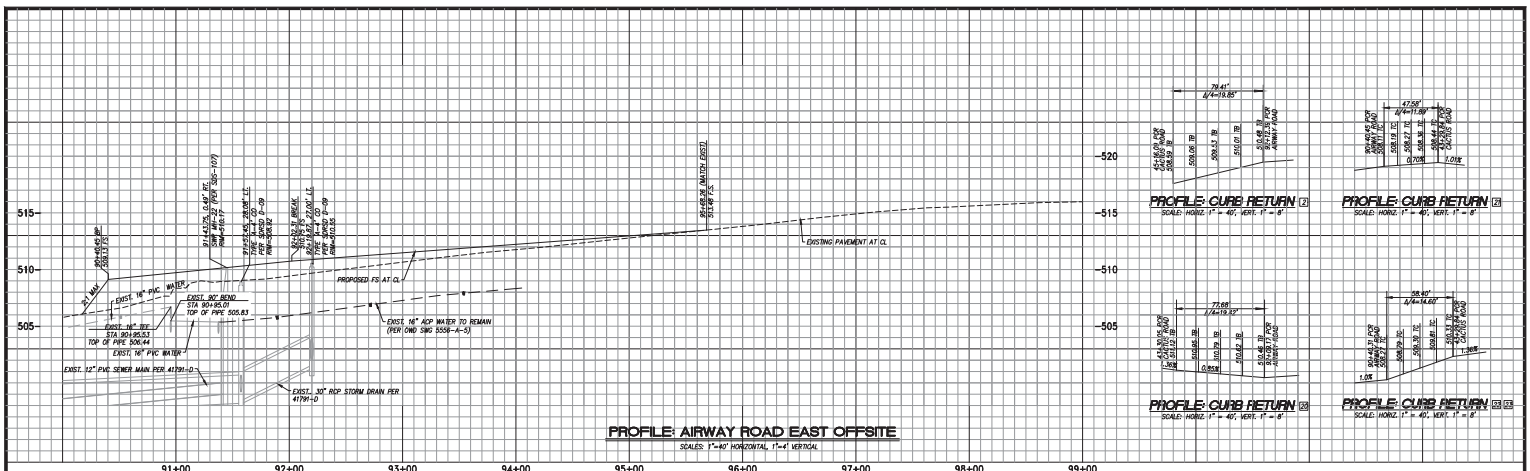
1784-6331
NADB3 COORDINATES

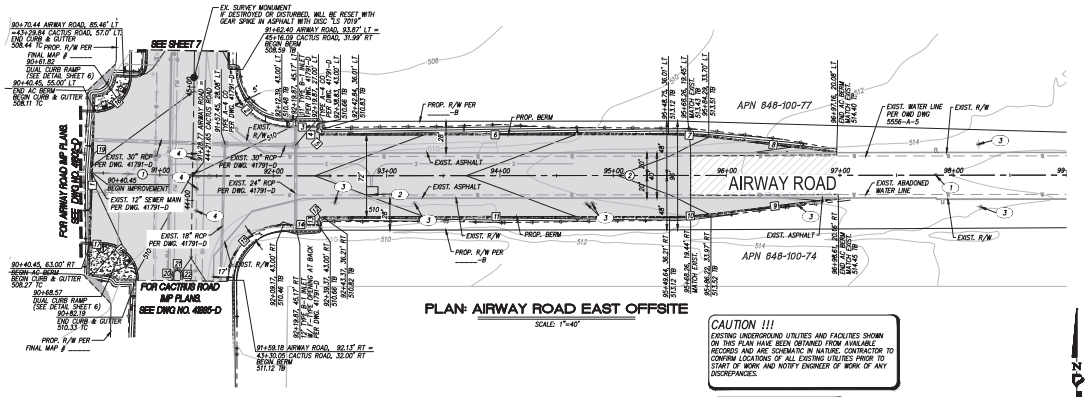
144-1771
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088- 4-D

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PLAN: AIRWAY ROAD EAST OFFSITE

SCALE: 1"=40'

CENTERLINE DATA				
NO.	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N88°10'47"W	---	88.13'	
2	N89°56'48"E	---	771.32'	

CURB DATA				
NO.	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N 01°49'13" E	---	116.50'	6" AC BERM TYPE B (G-5)
2	Δ=91°00'03"	50.00'	79.41'	6" AC BERM TYPE B (G-5)
3	N 89°50'46" E	---	26.44'	6" AC BERM TYPE B (G-5)
4	N 00°17'11" W	---	5.00'	6" AC BERM TYPE B (G-5)
5	Δ=89°50'03"	4.00'	6.27'	6" AC BERM TYPE B (G-5)
6	N 89°56'48" E	---	305.91'	6" AC BERM TYPE B (G-5)
7	Δ=08°58'55"	300.00'	36.56'	6" AC BERM TYPE B (G-5)
8	N 83°04'19" W	---	112.77'	6" AC BERM TYPE B (G-5)
9	N 82°56'39" E	---	113.24'	6" AC BERM TYPE B (G-5)
10	Δ=07°00'14"	300.00'	36.67'	6" AC BERM TYPE B (G-5)
11	N 89°56'48" E	---	306.27'	6" AC BERM TYPE B (G-5)
12	Δ=90°00'00"	4.00'	6.28'	6" AC BERM TYPE B (G-5)
13	N 00°03'12" W	---	2.29'	6" AC BERM TYPE B (G-5)
14	N 89°56'48" E	---	30.20'	6" AC BERM TYPE B (G-5)
15	Δ=89°50'31"	50.00'	77.67'	6" AC BERM TYPE B (G-5)
16	Δ=90°57'24"	30.00'	47.58'	6" CURB & GUTTER (SDG-157)
17	N88°10'47"W	---	11.74'	6" CURB & GUTTER (SDG-157)
18	Δ=89°17'02"	30.00'	46.66'	6" CURB & GUTTER (SDG-157)
19	Δ=180°00'00"	2.00'	6.28'	6" MEDIAN TYPE B-2 (SDG-154)
20	N00°56'15"E	---	5.03'	6" MEDIAN TYPE B-2 (SDG-154)
21	Δ=180°00'00"	3.00'	9.42'	6" MEDIAN TYPE B-2 (SDG-154)
22	N00°56'15"E	---	5.02'	6" MEDIAN TYPE B-2 (SDG-154)

CONSTRUCTION NOTES:

1. EXIST. WATER GATE VALVE TO PROTECT IN PLACE
2. EXIST. SDG&E VAULT TO BE RELOCATED PER SEPARATE PLAN
3. EXIST. POWER POLE TO BE RELOCATED PER SEPARATE PLAN
4. EXIST. VALVE COVER FINISHED SURFACE TO BE ADJUSTED (VALVE COVER TO BE TRAFFIC RATED)

CAUTION !!!

EXISTING UNDERGROUND UTILITIES AND FACILITIES SHOWN ON THIS PLAN HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SCHEMATIC IN NATURE. CONTRACTOR TO CONFIRM LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF WORK AND NOTIFY ENGINEER OF WORK OF ANY DISCREPANCIES.

CAUTION !!!

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NOTE:

CONTRACTOR TO ADJUST TO FINAL GRADE ALL EXISTING STRUCTURES, MANHOLE RIMS, GATE VALVE LIDS, ETC. WITHIN PUBLIC RIGHT-OF-WAY



REGISTERED PROFESSIONAL ENGINEER GREGORY M. SHIELDS No. 42351 Exp. 03-31-20 CIVIL STATE OF CALIFORNIA

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800 San Diego, CA 92101 619.235.6471 Tel 619.234.0349 Fax

GREGORY M. SHIELDS, R.C.E. 42351 | DATE REGISTRATION EXPIRES 3-31-20 | DESIGNED BY: | PM REVIEW: | SURVEY REVIEW:

PRIVATE CONTRACT

IMPROVEMENT PLAN FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 5 OF 19 SHEETS

PROJECT NO. 673439

Y.T.M. 1972222

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FDC			
AS-BUILTS				

1784-6331 NADB3 COORDINATES

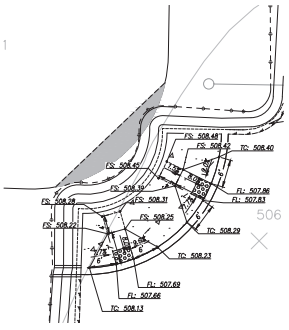
144-1771 LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____

INSPECTOR _____ DATE COMPLETED _____

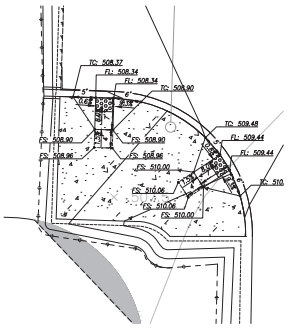
42088- 5-D

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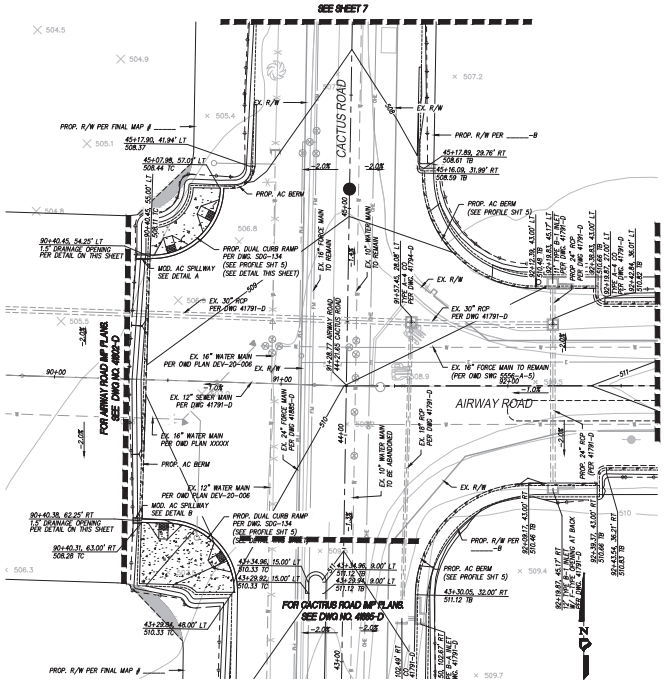
DUAL CURB RAMP DETAIL STA. 90+61.82

SCALE 1" = 10'



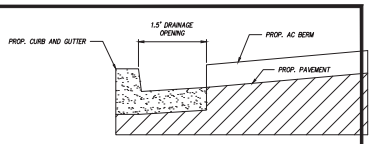
DUAL CURB RAMP DETAIL STA. 90+68.57

SCALE 1" = 10'



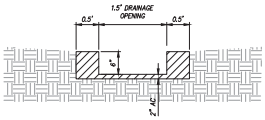
INTERSECTION DETAIL

SCALE 1" = 20'



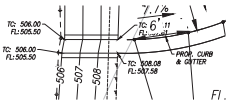
DRAINAGE OPENING DETAIL

N.T.S.



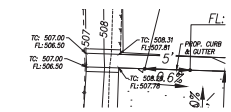
MODIFIED AC SPILLWAY DETAIL

N.T.S.



DETAIL A

SCALE: 1" = 5'



DETAIL B

SCALE: 1" = 5'

CAUTION !!!

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NOTE:

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PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel
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GREGORY M. SHIELDS, R.C.E. 42351	DATE REGISTRATION EXPIRES 3-31-20	DESIGNED BY:	PM REVIEW:	SURVEY REVIEW:

PRIVATE CONTRACT

NOTES AND CROSS SECTIONS FOR

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 6 OF 18 SHEETS

PROJECT NO. 673439

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RBE			
AS-BUILTS				

V.T.M. 1972222

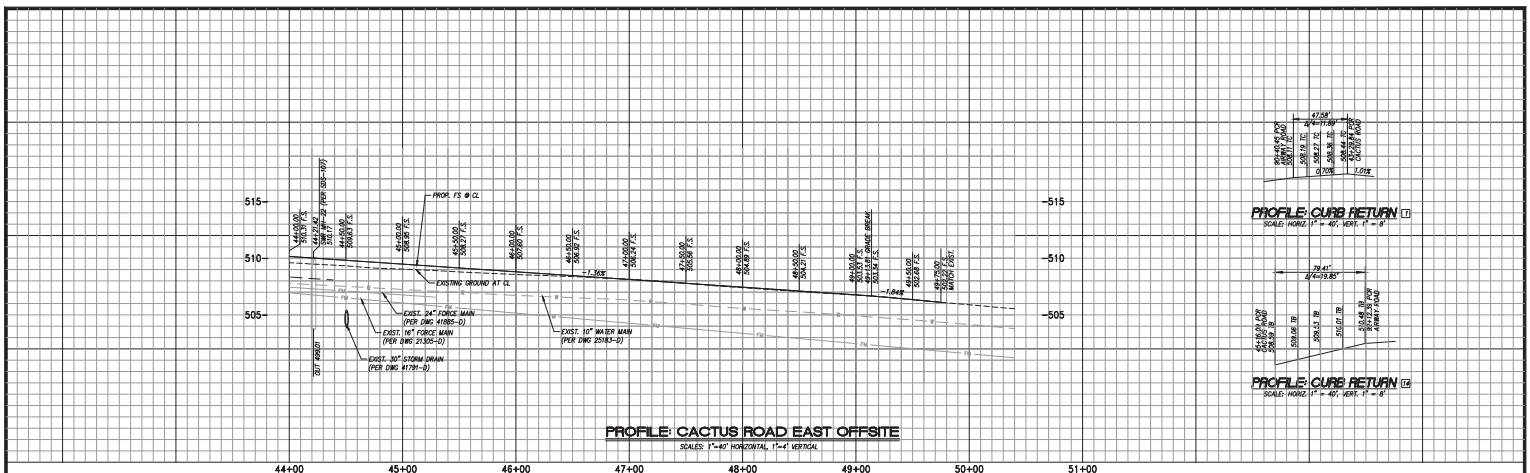
1784-6331 NAD83 COORDINATES

144-1771 LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

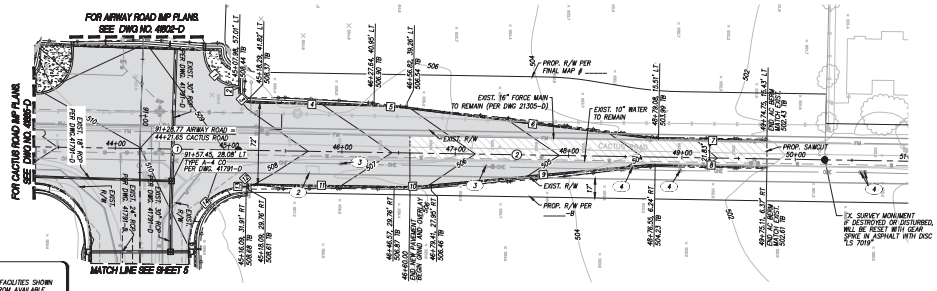
42088- 6-D

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PROFILE: CACTUS ROAD EAST OFFSITE

SCALES: 1"=40' HORIZONTAL, 1"=4' VERTICAL



PLAN: CACTUS ROAD EAST OFFSITE

SCALE: 1"=40'

CENTERLINE DATA				
NO	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N00°56'15"E	---	108.55'	
2	N00°56'49"E	---	491.46'	

CURB DATA				
NO	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	Δ=90°52'24"	30.00'	47.58'	6" CURB & GUTTER (C-2)
2	N 89°16'51" W	---	3.58'	6" AC BERM TYPE B (G-5)
3	Δ=89°25'03"	10.00'	15.61'	6" AC BERM TYPE B (G-5)
4	N 01°27'47" E	---	109.75'	6" AC BERM TYPE B (G-5)
5	Δ=05°35'04"	300.00'	29.24'	6" AC BERM TYPE B (G-5)
6	N 01°52'51" E	---	223.53'	6" AC BERM TYPE B (G-5)
7	N 00°59'47" E	---	95.67'	6" AC BERM TYPE B (G-5)
8	N 01°01'12" E	---	98.56'	6" AC BERM TYPE B (G-5)
9	N 05°20'20" W	---	198.32'	6" AC BERM TYPE B (G-5)
10	Δ=06°17'09"	300.00'	32.91'	6" AC BERM TYPE B (G-5)
11	N 00°56'49" E	---	128.47'	6" AC BERM TYPE B (G-5)
12	Δ=90°00'00"	2.00'	3.14'	6" AC BERM TYPE B (G-5)
13	N 89°03'11" W	---	0.23'	6" AC BERM TYPE B (G-5)
14	Δ=91°00'03"	50.00'	79.41'	6" AC BERM TYPE B (G-5)

CAUTION !!!
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CONSTRUCTION NOTES:

1. EXIST. WATER GATE VALVE TO PROTECT IN PLACE
2. EXIST. SDG&E VAULT TO BE RELOCATED PER SEPARATE PLAN
3. EXIST. POWER POLE TO BE RELOCATED PER SEPARATE PLAN
4. EXIST. POWER POLE TO BE REMAIN

40 20 0 40 80 120

SCALE: 1"=40'

REGISTERED PROFESSIONAL ENGINEER GREGORY M. SHIELDS No. 42351 Exp. 03-31-20 CIVIL STATE OF CALIFORNIA

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GREGORY M. SHIELDS, R.C.E. 42351 | DATE REGISTRATION EXPIRES 3-31-20 | DESIGNED BY: | PM REVIEW: | SURVEY REVIEW:

PRIVATE CONTRACT

IMPROVEMENT PLAN FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 7 OF 18 SHEETS

PROJECT NO. 673439

FOR CITY ENGINEER			DATE		
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FDC			
AS-BUILTS				

Y.T.M. 1972222

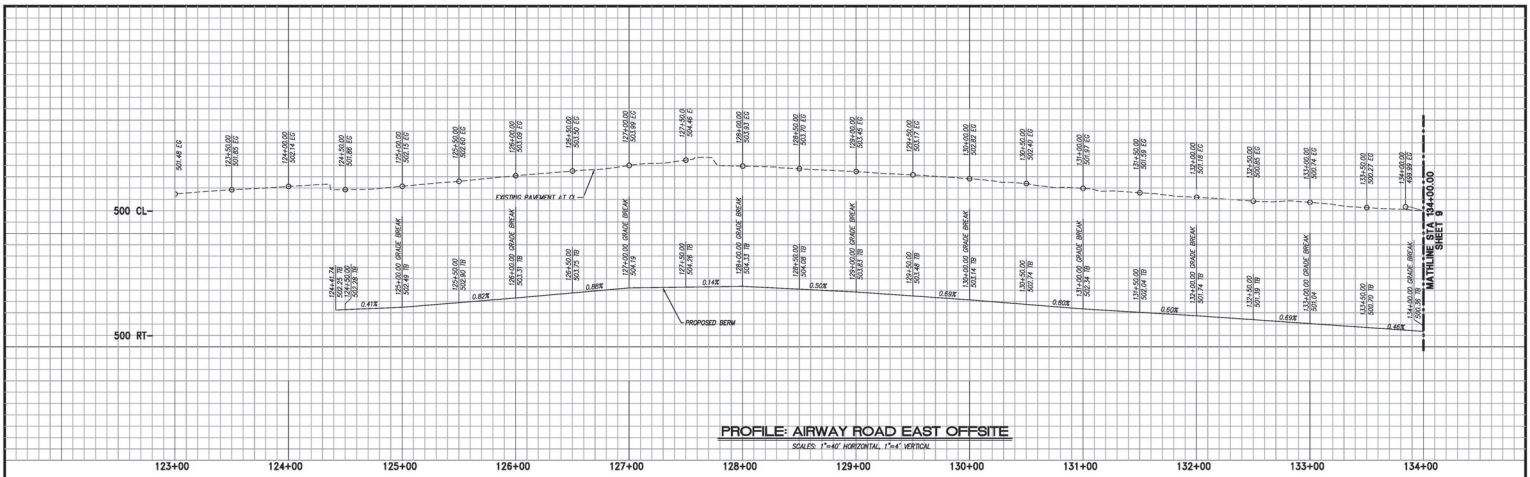
1784-6331
NAD83 COORDINATES

144-1771
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

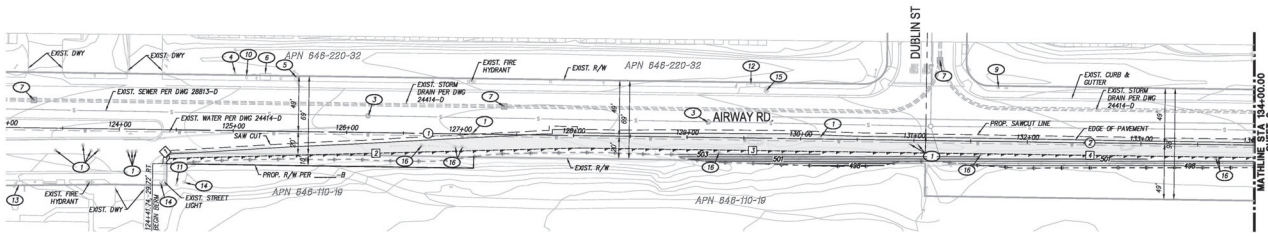
42088- 7-D

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PROFILE: AIRWAY ROAD EAST OFFSITE

SCALES: 1"=40' HORIZONTAL, 1"=4' VERTICAL



PLAN: AIRWAY ROAD EAST OFFSITE

SCALE: 1"=40'

CAUTION !!!
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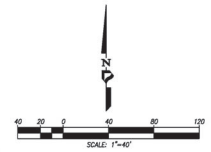
NOTE:
CONTRACTOR TO ADJUST TO FINAL GRADE ALL EXISTING STRUCTURES, MANHOLE RIMS, GATE VALVE LIDS, ETC. WITHIN PUBLIC RIGHT-OF-WAY

CONSTRUCTION NOTES:

1. EXIST. WATER GATE VALVE TO PROTECT IN PLACE
3. EXIST. SEWER MANHOLE TO PROTECT IN PLACE
4. EXIST. IRRIGATION CONTROL PANEL TO PROTECT IN PLACE
5. EXIST. SDG&E TRANSFORMER TO PROTECT IN PLACE
6. EXIST. SDG&E VAULT TO PROTECT IN PLACE
7. EXIST. STORM DRAIN MANHOLE TO PROTECT IN PLACE
9. EXIST. COX MANDHOLE TO PROTECT IN PLACE
10. EXIST. SDG&E BOX
11. EXIST. AT&T PEDESTAL
12. EXIST. BUS BENCH TO PROTECT IN PLACE
13. EXIST. COX VAULT TO PROTECT IN PLACE
14. EXIST. WATER BLOW OFF PROTECT IN PLACE
15. EXIST. PACIFIC BELL MANHOLE
16. EXIST. POWER POLE TO BE RELOCATED

CENTERLINE DATA				
NO.	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N89°11'08"W	---	810.33'	
2	N89°11'24"W	---	289.63'	

CURB DATA				
NO.	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	Δ=63°08'56"	5.00'	7.25'	6" AC BERM TYPE B (G-5)
2	N 88°31'28" E	---	159.23'	6" AC BERM TYPE B (G-5)
3	N 89°11'08" W	---	304.89'	6" AC BERM TYPE B (G-5)
4	N 89°11'24" W	---	289.63'	6" AC BERM TYPE B (G-5)



REGISTERED PROFESSIONAL ENGINEER GREGORY M. SHIELDS No. 42551 Exp. 03-31-20 CIVIL STATE OF CALIFORNIA

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey

701 B Street, Suite 800 San Diego, CA 92101 619.235.6471 Tel 619.234.0349 Fax

GREGORY M. SHIELDS, R.C.E. 42551 | DATE | REGISTRATION EXPIRES 3-31-20 | DESIGNED BY: | PM REVIEW: | SURVEY REVIEW:

PRIVATE CONTRACT

IMPROVEMENT PLAN FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 8 OF 10 SHEETS

PROJECT NO. 673439

FOR CITY ENGINEER _____ DATE _____

V.T.M. 19722222

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	PDC			
AS-BUILTS				

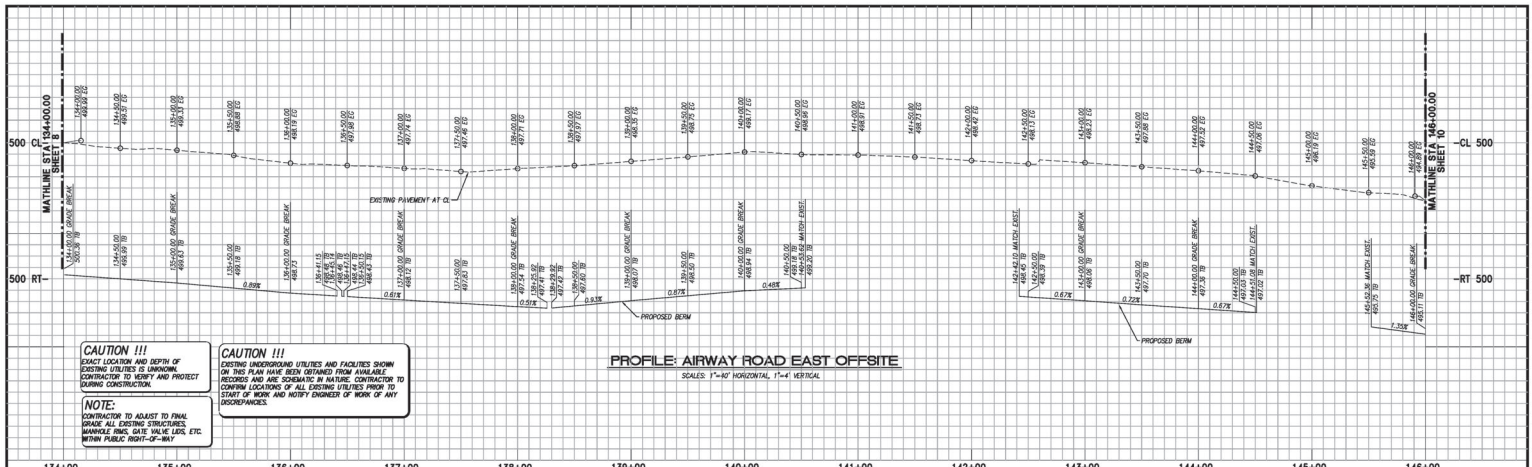
1784-6331 NADB3 COORDINATES

144-1771 LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____

INSPECTOR _____ DATE COMPLETED _____

42088- 8-D



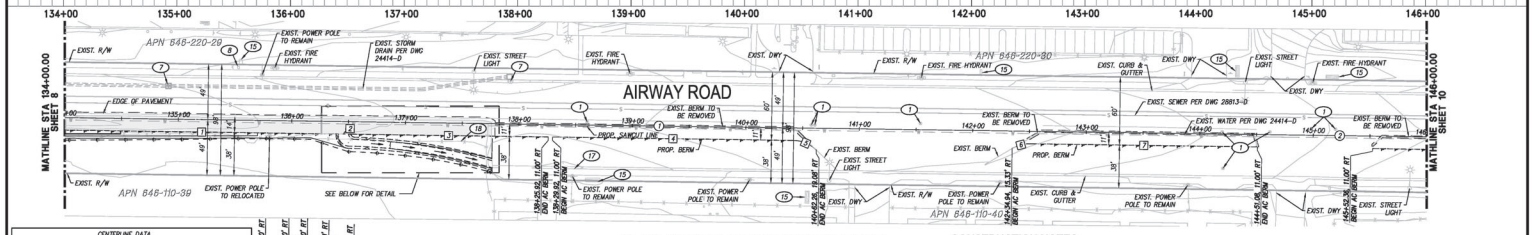
PROFILE: AIRWAY ROAD EAST OFFSITE

SCALES: 1"=40' HORIZONTAL, 1"=4' VERTICAL

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PLAN: AIRWAY ROAD EAST OFFSITE

SCALE: 1"=40'

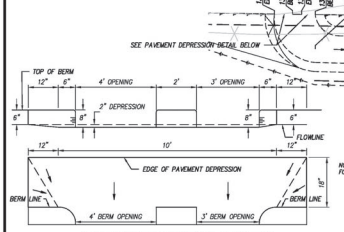
CONSTRUCTION NOTES:

1. EXIST. WATER GATE VALVE TO PROTECT IN PLACE
3. EXIST. SEWER MANHOLE TO PROTECT IN PLACE
7. EXIST. STORM DRAIN MANHOLE TO PROTECT IN PLACE
8. EXIST. WATER METER TO PROTECT IN PLACE
9. EXIST. COX HANDHOLE TO PROTECT IN PLACE
15. EXIST. BACKFLOW PREVENTOR TO PROTECT IN PLACE
16. EXIST. PACIFIC BELL MANHOLE
17. EXIST. CURB INLET TO REMAIN
18. EXIST. FENCE TO BE RELOCATED

SCALE: 1"=40'

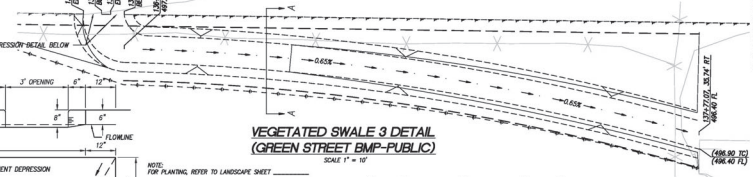
CENTERLINE DATA				
(W)	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N89°17'24"W	---	1046.55'	
2	N89°12'52"W	---	153.45'	

CURB DATA				
(W)	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N. 89°17'24" W.	---	241.00'	6" AC BERM TYPE B (G-5)
2	N. 89°17'16" W.	---	2.00'	6" AC BERM TYPE B (G-5)
3	N. 89°17'24" W.	---	175.77'	6" AC BERM TYPE B (G-5)
4	N. 89°17'24" W.	---	211.86'	6" AC BERM TYPE B (G-5)
5	Δ=43°03'12"	30.00'	22.54'	6" AC BERM TYPE B (G-5)
6	Δ=31°09'07"	30.00'	16.31'	6" AC BERM TYPE B (G-5)
7	N. 89°17'24" W.	---	200.63'	6" AC BERM TYPE B (G-5)
8	N89°12'52"W	---	47.80'	6" AC BERM TYPE B (G-5)



PAVEMENT DEPRESSION DETAIL

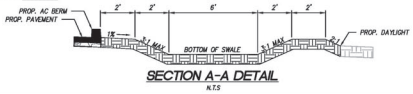
N.T.S.



VEGETATED SWALE 3 DETAIL (GREEN STREET BMP-PUBLIC)

SCALE 1" = 10'

NOTE:
FOR PLANTING, REFER TO LANDSCAPE SHEET



SECTION A-A DETAIL

N.T.S.

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San Diego, CA 92101
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GREGORY M. SHIELDS, R.C.E. 42551	DATE REGISTRATION EXPIRES 3-31-20	DESIGNED BY:	PM REVIEW:	SURVEY REVIEW:

PRIVATE CONTRACT

IMPROVEMENT PLAN FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 9 OF 10 SHEETS

PROJECT NO.: 673439

FOR CITY ENGINEER _____ DATE _____

V.T.M.: 1972222

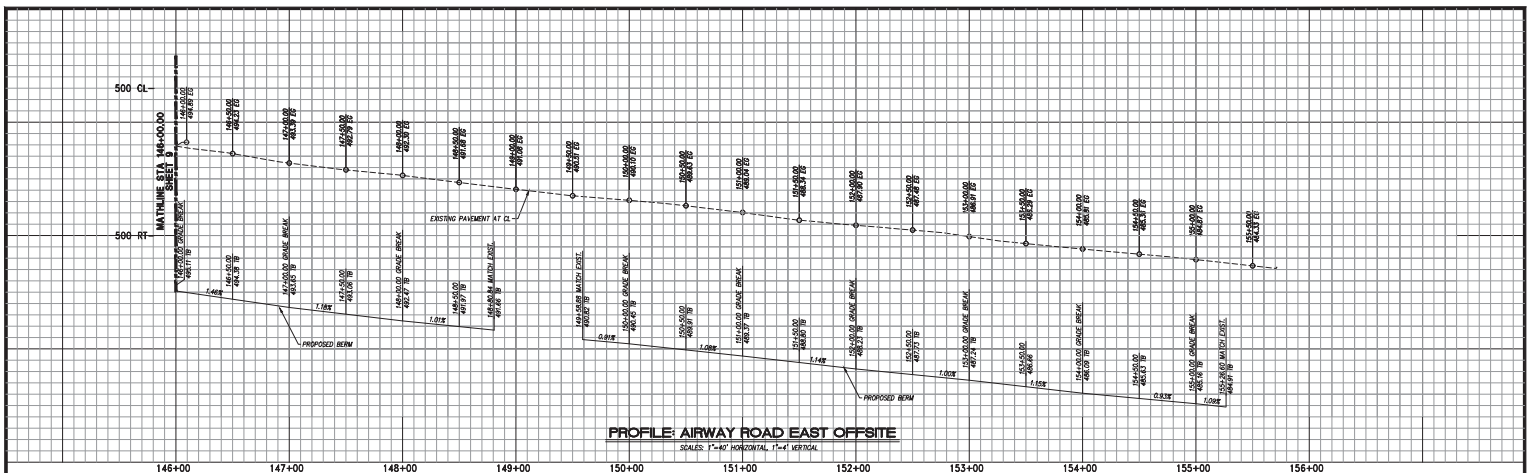
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	PDC			
AS-BUILTS				

1784 - 6331
NADB3 COORDINATES

144 - 1771
LAMBERT COORDINATES

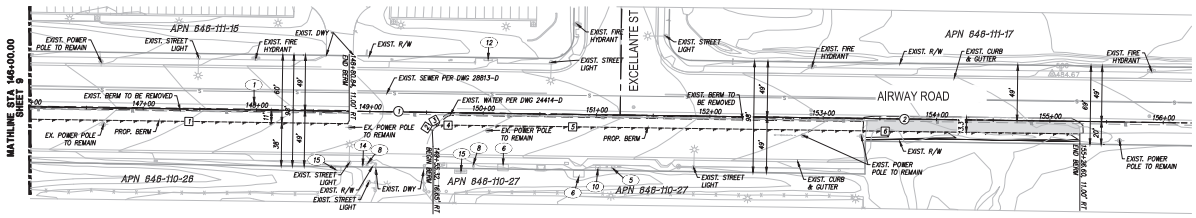
CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088- 9-D



PROFILE: AIRWAY ROAD EAST OFFSITE

SCALES: 1"=40' HORIZONTAL, 1"=4' VERTICAL



PLAN: AIRWAY ROAD EAST OFFSITE

SCALE: 1"=40'

CENTERLINE DATA

NO	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N89°12'02"W	---	582.98'	
2	N89°12'09"W	---	417.02'	

CURB DATA DATA

NO	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N 89°12'02" W	---	280.84'	6" AC BERM TYPE B (G-5)
2	N 32°46'11" E	---	2.10'	6" AC BERM TYPE B (G-5)
3	Δ=57°31'58"	8.00'	8.03'	6" AC BERM TYPE B (G-5)
4	N 89°47'51" W	---	11.96'	6" AC BERM TYPE B (G-5)
5	N 89°12'02" W	---	207.87'	6" AC BERM TYPE B (G-5)
6	N 89°12'09" W	---	343.62'	6" AC BERM TYPE B (G-5)

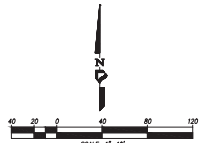
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CONSTRUCTION NOTES:

1. EXIST. WATER GATE VALVE
5. EXIST. SDG&E TRANSFORMER TO PROTECT IN PLACE
6. EXIST. SDG&E VAULT
8. EXIST. WATER METER TO PROTECT IN PLACE
10. EXIST. BUS BENCH
12. EXIST. BUS BENCH TO PROTECT IN PLACE
14. EXIST. WATER BLOW OFF PROTECT IN PLACE
15. EXIST. BACKFLOW PREVENTOR TO PROTECT IN PLACE



REGISTERED PROFESSIONAL ENGINEER GREGORY M. SHIELDS No. 42351 Exp. 03-31-20 CIVIL STATE OF CALIFORNIA

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GREGORY M. SHIELDS, R.C.E. 42351 — DATE REGISTRATION EXPIRES 3-31-20

DESIGNED BY:	PM REVIEW:	SURVEY REVIEW:

PRIVATE CONTRACT

IMPROVEMENT PLAN FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 89 OF 98 SHEETS

PROJECT NO. 673439

FOR CITY ENGINEER _____ DATE _____

Y.T.M. 1972222

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FDC			
AS-BUILTS				

1784-6331
NADB3 COORDINATES

144-1771
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088-10-D

CONSTRUCTION BMP GENERAL NOTES

PRIOR TO ANY SOIL DISTURBANCE, TEMPORARY EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED BY THE CONTRACTOR OR QUALIFIED PERSON(S) AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE CITY OF SAN DIEGO 'LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMP'S AND, IF APPLICABLE, THE STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR POST CONSTRUCTION TREATMENT CONTROL BMP'S.

2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL STORM DRAIN INLETS. INLET PROTECTION IN THE PUBLIC RIGHT OF WAY MAY BE TEMPORARILY REMOVED WHERE IT IS PRONE TO FLOODING PRIOR TO A RAIN EVENT AND REINSTALLED AFTER RAIN IS OVER.

3. ALL CONSTRUCTION BMPS SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.

4. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING, AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.

5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED SWPPP/WPCP WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, CIVIL PENALTIES AND/OR STOP WORK NOTICES.

6. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT, DEBRIS AND MUD ON AFFECTED AND ADJACENT STREET(S) AND WITHIN STORM DRAIN SYSTEM DUE TO CONSTRUCTION VEHICLES/EQUIPMENT AND CONSTRUCTION ACTIVITY AT THE END OF EACH WORK DAY.

7. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING STORM WATER CONVEYANCE SYSTEMS FROM SEDIMENTATION, CONCRETE RINSE, OR OTHER CONSTRUCTION RELATED DEBRIS AND DISCHARGES WITH THE APPROPRIATE BMPS THAT ARE ACCEPTABLE TO THE ENGINEER AND AS INDICATED IN THE SWPPP/WPCP

8. THE CONTRACTOR OR QUALIFIED PERSON SHALL CLEAR DEBRIS, SILT AND MUD FROM ALL DITCHES AND SWALES PRIOR TO AND AFTER EACH RAIN EVENT.

9. IF A NON-STORM WATER DISCHARGE LEAVES THE SITE, THE CONTRACTOR SHALL IMMEDIATELY STOP THE ACTIVITY AND REPAIR THE DAMAGES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF THE DISCHARGE. AS SOON AS PRACTICAL, ANY AND ALL WASTE MATERIAL, SEDIMENT AND DEBRIS FROM EACH NON STORM WATER DISCHARGE SHALL BE REMOVED FROM THE STORM DRAIN CONVEYANCE SYSTEM AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

10. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID DEPLOYMENT OF CONSTRUCTION BMPS WHEN RAIN IS IMMINENT.

11. THE CONTRACTOR SHALL RESTORE AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS TO WORKING ORDER YEAR ROUND.

12. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DUE TO GRADING INACTIVITY OR UNFORESEEN CIRCUMSTANCES TO PREVENT NON-STORM WATER AND SEDIMENT-LADEN DISCHARGES.

13. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

14. ALL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP/WPCP SHALL BE INSTALLED AND MAINTAINED. ALL EROSION AND SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE PROPERLY DOCUMENTED AND INSTALLED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

15. UPON NOTIFICATION BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL ARRANGE FOR MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION AND SEDIMENT CONTROL MEASURES AND OTHER BMPS RELATIVE TO ANTICIPATED CONSTRUCTION ACTIVITIES.

16. THE CONTRACTOR SHALL CONDUCT VISUAL INSPECTIONS DAILY AND MAINTAIN ALL BMPS AS NEEDED. VISUAL INSPECTIONS AND MAINTENANCE OF ALL BMPS SHALL BE CONDUCTED BEFORE, DURING AND AFTER EVERY RAIN EVENT AND EVERY 24 HOURS DURING ANY PROLONGED RAIN EVENT. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ALL BMPS AS SOON AS POSSIBLE AS SAFETY ALLOWS.

17. CONSTRUCTION ENTRANCE AND EXIT AREA. TEMPORARY CONSTRUCTION ENTRANCE AND EXIT AREA SHALL BE ON LEVEL, STABILIZED GROUND. THE ENTRANCE AND EXIT AREA SHALL BE CONSTRUCTED BY OVERLAYING THE STABILIZED ACCESS AREA WITH 3 TO 6" DIAMETER STONES. THE AREA SHALL BE MINIMUM 50' LONG X 30' WIDE. IN LIEU OF STONE COVERED AREA, THE CONTRACTOR MAY CONSTRUCT RUMBLE RACKS OF STEEL PANELS WITH RIDGES MINIMUM 20" LONG X 30" WIDE CAPABLE OF PREVENTING THE MIGRATION OF CONSTRUCTION MATERIALS INTO THE TRAVELED WAYS.

18. PERFORMANCE STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING WATER POLLUTION CONTROL MEASURES BASED ON PERFORMANCE STANDARDS. PERFORMANCE STANDARDS SHALL INCLUDE:

A. NON-STORM WATER DISCHARGES FROM THE SITE SHALL NOT OCCUR TO THE MEP.3. STORM WATER DISCHARGES SHALL BE FREE OF POLLUTANTS INCLUDING SEDIMENT TO THE MEP.

B. EROSION SHALL BE CONTROLLED BY ACCEPTABLE BMPS TO THE MEP. IF RILLS AND GULLIES APPEAR THEY SHALL BE REPAIRED AND ADDITIONAL BMPS INSTALLED TO PREVENT A REOCCURRENCE OF EROSION.

C. AN INACTIVE AREA SHALL BE PROTECTED TO PREVENT POLLUTANT DISCHARGES. A SITE OR PORTIONS OF A SITE SHALL BE CONSIDERED INACTIVE WHEN CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD OF 14 OR MORE CONSECUTIVE DAYS.

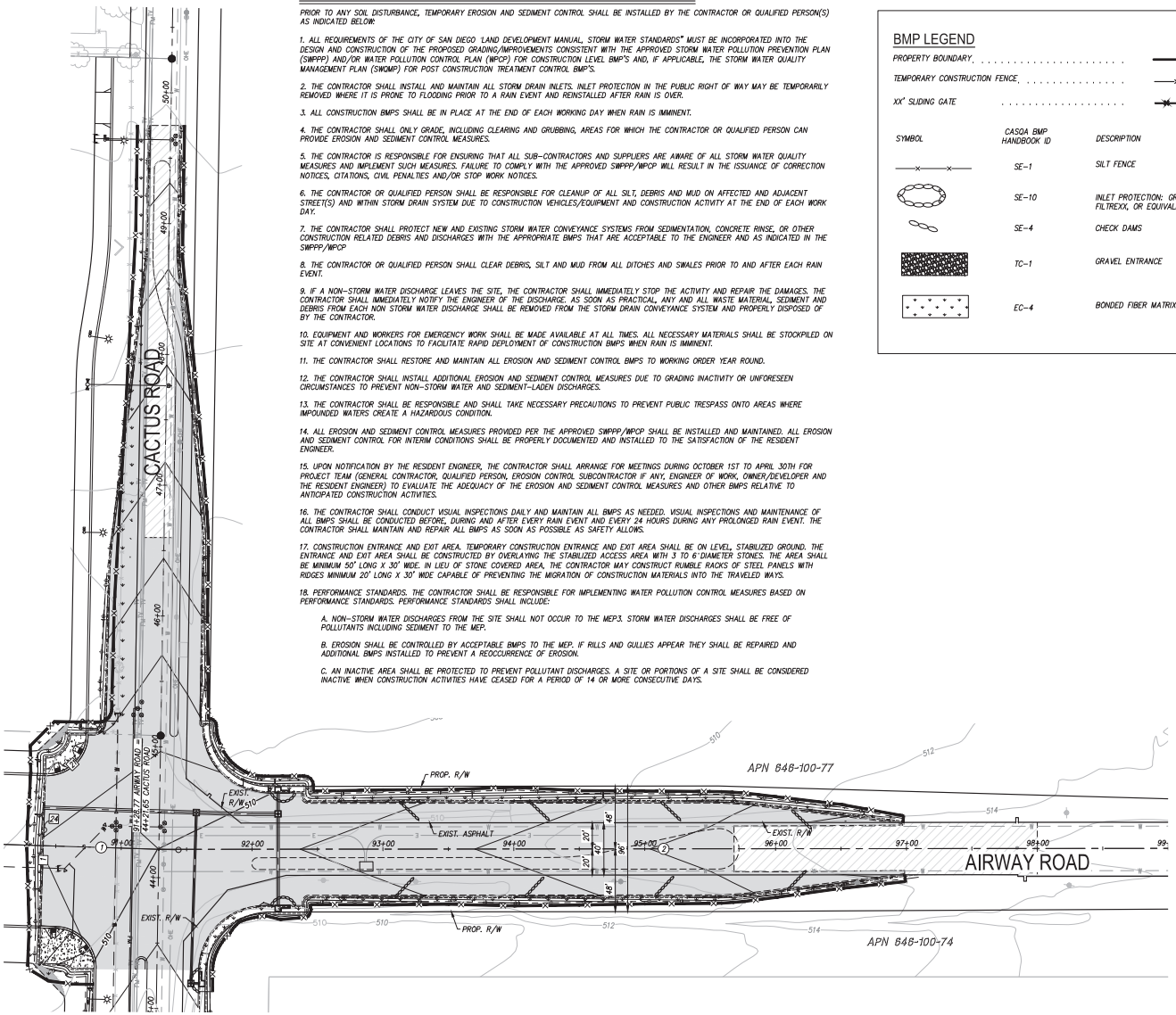
BMP LEGEND

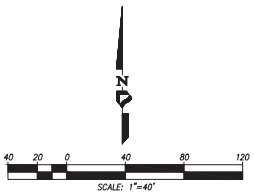
PROPERTY BOUNDARY		
TEMPORARY CONSTRUCTION FENCE		
XX' SLIDING GATE		
SYMBOL	CASQA BMP HANDBOOK ID	DESCRIPTION
	SE-1	SILT FENCE
	SE-10	INLET PROTECTION: GRAVEL BAG, FILTREXX, OR EQUIVALENT
	SE-4	CHECK DAMS
	TC-1	GRAVEL ENTRANCE
	EC-4	BONDED FIBER MATRIX

GENERAL NOTE:

AS CONSTRUCTION PROGRESSES, IT IS THE RESPONSIBILITY OF THE QUALIFIED CONTACT PERSON TO ADD ANY ADDITIONAL CHANGES THAT REFLECT ACTUAL CONDITIONS.

THE CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT PRIOR TO PLACING ANY EROSION CONTROL WITHIN THE CITY OF SD PUBLIC RIGHT-OF-WAY.





PRIVATE CONTRACT

EROSION CONTROL PLAN FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 11 OF 15 SHEETS

PROJECT NO. 673439

V.T.M. 1972222

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	PDC			
AS-BUILTS				

1784-6331
NAD83 COORDINATES

144-1771
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
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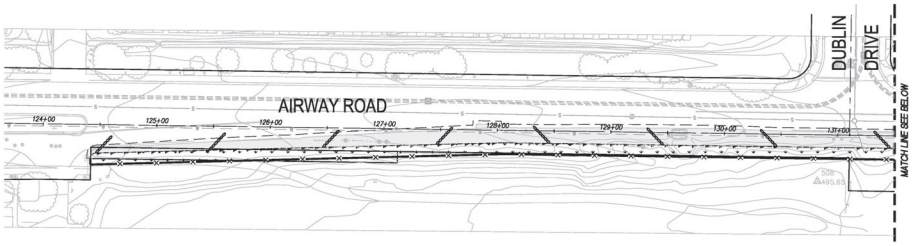
42088- 11-D

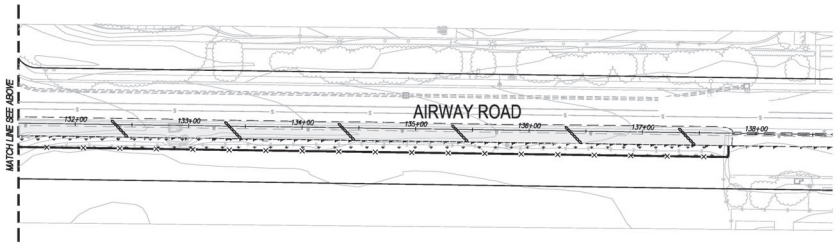
REGISTERED PROFESSIONAL ENGINEER
GREGORY M. SHIELDS
No. 42951
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA

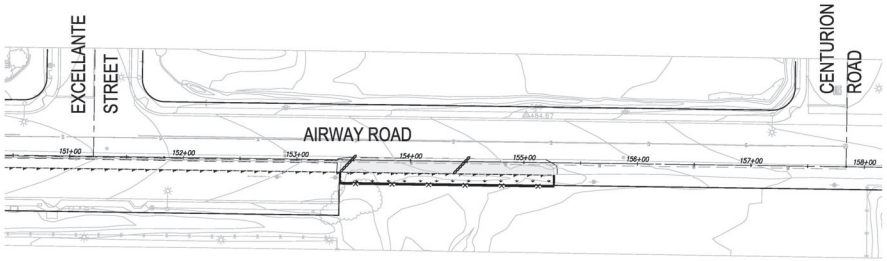
PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey

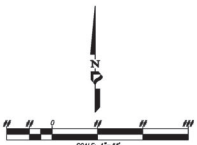
701 B Street, Suite 800
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PRIVATE CONTRACT

EROSION CONTROL PLAN FOR:

EPOCA

AIRWAY EAST OFFSITE

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 12 OF 19 SHEETS

PROJECT NO. 673439

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1784-6331
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INSPECTOR _____ DATE COMPLETED _____

42088-12-D

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SIGNING AND PAVEMENT MARKING PLANS FOR:

EPOCA

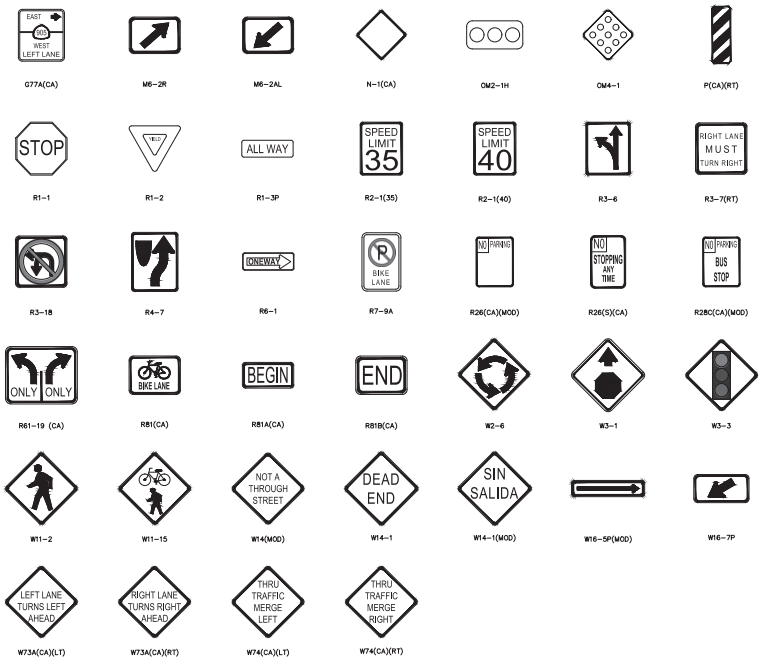
SIGNING AND PAVEMENT MARKING GENERAL NOTES

1. INSTALLATION OF ALL STRIPING, SIGNS AND PAVEMENT MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL STRIPING AND SIGNING SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE FOLLOWING MANUALS:

DESCRIPTION	EDITION	DOCUMENT NO
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2018 EDITION	2018	PWPI010119-01
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2018 EDITION	2018	PWPI010119-02
CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION	2018	PWPI010119-03
CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 5), 2014 EDITION	2018	PWPI030119-08
CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD PLANS	2018	PWPI030119-06

3. ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE CITY ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
4. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS AND LEGENDS BY SANDBLASTING AND/OR GRINDING WITH THE SEAL. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PERFORATED STEEL TUBING WITH A BREAKAWAY BASE PER CITY OF SAN DIEGO STANDARD DRAWING SDM-104.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW.
7. ALL SIGNS SHOWN ON THE STRIPING AND SIGNING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN.
8. MARKED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET UNLESS INDICATED OTHERWISE.
9. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LANES) SHALL BE THERMOPLASTIC.
10. THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT (858) 495-4742 A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO AND UPON COMPLETION OF STRIPING AND SIGNING.

SIGN LEGEND



LEGEND

- (XX") EXISTING LANE WIDTH
- XX" NEW LANE WIDTH OR LENGTH OF NEW STRIPING
- EXISTING SIGN
- NEW SIGN
- EXISTING OVERHEAD SIGN
- I TYPE III BARRICADE
- (XX) STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
- (TS) TRAFFIC SIGNAL
- BIKE LANE ARROW PER CALTRANS STANDARD PLAN A24A
- BIKE LANE WITH PERSON SYMBOL PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24C
- TYPE I ARROW (10') PER CALTRANS STANDARD PLAN A24A
- TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- TYPE VII ARROW PER CALTRANS STANDARD PLAN A24A
- "STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D
- "SIGNAL" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D
- "AHEAD" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D
- "ONLY" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24E



STRIPING DETAIL
WHITE DOTTED EXTENSION OF ROUNDABOUT EDGE LINE
N.T.S.

NOT FOR CONSTRUCTION

CHEN RYAN
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

PRIVATE CONTRACT

SIGNING AND PAVEMENT MARKING PLAN FOR:

EPOCA

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 13 OF 18 SHEETS

PROJECT NO. 658690

V.T.M. 1972022

FOR CITY ENGINEER — DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

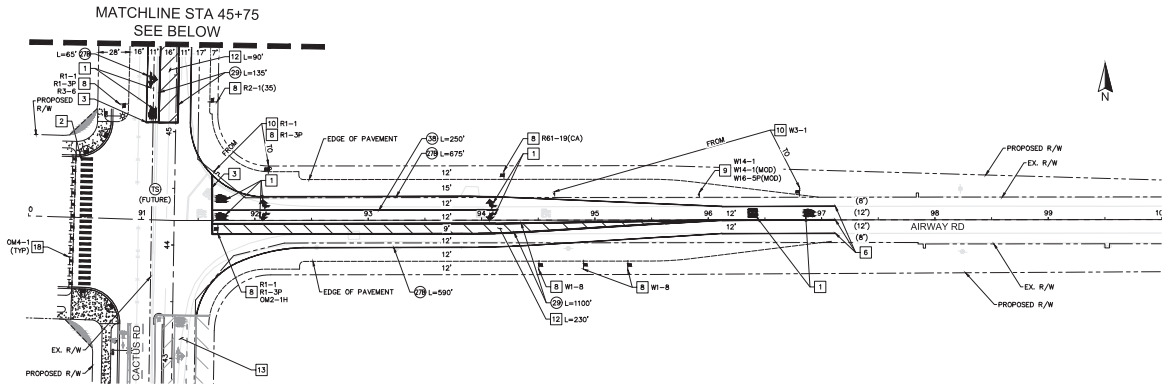
1789-6331 NAD83 COORDINATES

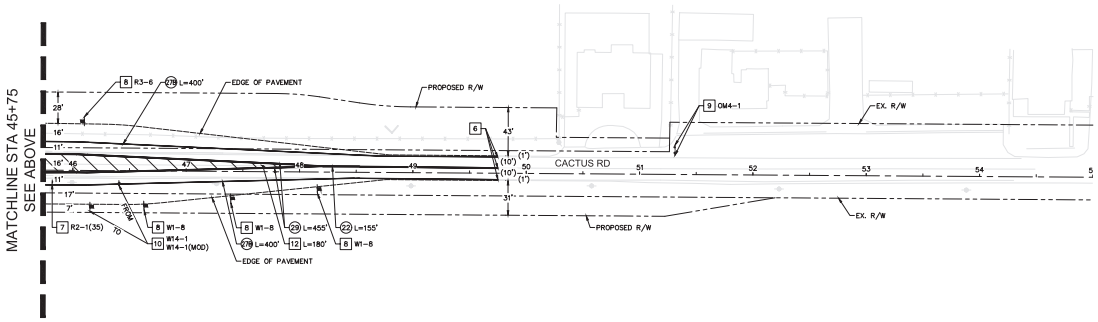
140-1771 LAMBERT COORDINATES

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

42088-13-D

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SIGNING AND MARKING NOTES

1. INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD PLAN. SEE LEGEND
2. INSTALL WHITE THERMOPLASTIC CONTINENTAL CROSSWALK PER SDPWC SDM-116
3. INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE PER CITY OF SAN DIEGO STD DWG SDM-116
4. INSTALL WHITE PAINT PAVEMENT MARKING PER CALTRANS STD PLAN. SEE LEGEND.
5. INSTALL 6" BIKE LANE BUFFER STRIPING AND DIAGONAL MARKINGS AT 45° AND 10 FEET CENTER TO CENTER
6. CONFORM TO EXISTING STRIPING
7. EXISTING SIGN TO BE REMOVED AND SALVAGED. DELIVER TO CITY OF SAN DIEGO
8. FURNISH AND INSTALL NEW SIGN ON BREAK-AWAY POST PER CITY STANDARD DWG SDM-104
9. EXISTING SIGN TO REMAIN
10. EXISTING SIGN TO BE RELOCATED
11. INSTALL 6" WHITE CHEVRON AT 20' CENTER TO CENTER
12. INSTALL 6" YELLOW DIAGONAL MARKINGS AT 45° AND 20 FEET CENTER TO CENTER
13. SEE CACTUS ROAD PUBLIC IMPROVEMENT PLANS (PTS NO. 661308)
14. SEE ON-SITE IMPROVEMENT PLANS (PTS NO. 656888)
15. SEE AIRWAY WEST IMPROVEMENT PLANS (PTS NO. XXXXXX)
16. SEE BRITANNIA IMPROVEMENT PLANS (PTS NO. 675272)
17. CONFORM TO CIP PROJECT (PTS NO. 435752)
18. FURNISH AND INSTALL SIGN ON TYPE III BARRICADE

STRIPING DETAILS

9. INSTALL WHITE LANE LINE (DETAIL 9) PER CALTRANS STD. PLAN RSP A20A
22. INSTALL YELLOW NO PASSING LINE (DETAIL 22) PER CALTRANS STD. PLAN RSP A20A
27B. INSTALL WHITE RIGHT EDGE LINE (DETAIL 27B) PER CALTRANS STD. PLAN RSP A20B
29. INSTALL YELLOW MEDIAN ISLAND LINE (DETAIL 29) PER CALTRANS STD. PLAN RSP A20B
32. INSTALL YELLOW TWO-WAY LEFT TURN LANE LINE (DETAIL 32) PER CALTRANS STD. PLAN RSP A20B
37B. INSTALL WHITE LANE DROP LINE (DETAIL 37B) PER CALTRANS STD. PLAN RSP A20C
38. INSTALL WHITE CHANNELIZING LINE (DETAIL 38) PER CALTRANS REVISED STD. PLAN RSP A20D
39. INSTALL WHITE BIKE LANE LINE (DETAIL 39) PER CALTRANS REVISED STD. PLAN RSP A20D
39A. INSTALL WHITE INTERSECTION BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN RSP A20D

SCALE 1" = 40'

NOT FOR CONSTRUCTION

CHEN RYAN
ASSOCIATES
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

PRIVATE CONTRACT

INTERIM SIGNING AND PAVEMENT MARKING PLAN FOR:

EPOCA

AIRWAY ROAD

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 14 OF 18 SHEETS

PROJECT NO. 656890

FOR CITY ENGINEER _____ DATE _____

V.T.M. 1972022

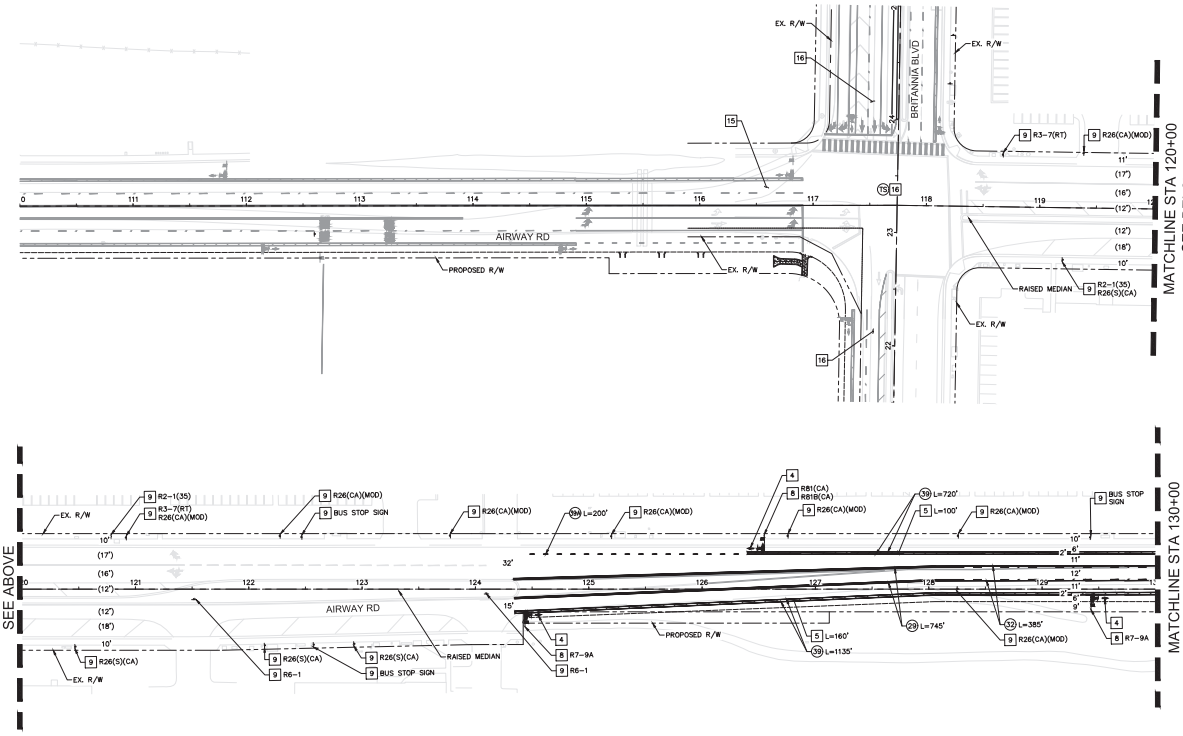
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ORIGINAL	CRA			
AS-BUILTS				

1705-6331
NAD83 COORDINATES

140-1771
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088-14-D



SIGNING AND MARKING NOTES

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13. SEE CACTUS ROAD PUBLIC IMPROVEMENT PLANS (PTS NO. 661308)
14. SEE ON-SITE IMPROVEMENT PLANS (PTS NO. 658888)
15. SEE AIRWAY WEST IMPROVEMENT PLANS (PTS NO. XXXXXX)
16. SEE BRITANNIA IMPROVEMENT PLANS (PTS NO. 675272)
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- (39A) INSTALL WHITE INTERSECTION BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN RSP A20D

SCALE 1" = 40'

NOT FOR CONSTRUCTION

CHEN RYAN
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

PRIVATE CONTRACT

SIGNING AND PAVEMENT MARKING PLAN FOR:

EPOCA

AIRWAY ROAD

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 15 OF 18 SHEETS

PROJECT NO. 658880

FOR CITY ENGINEER — DATE — V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1788-6338 NAD83 COORDINATES

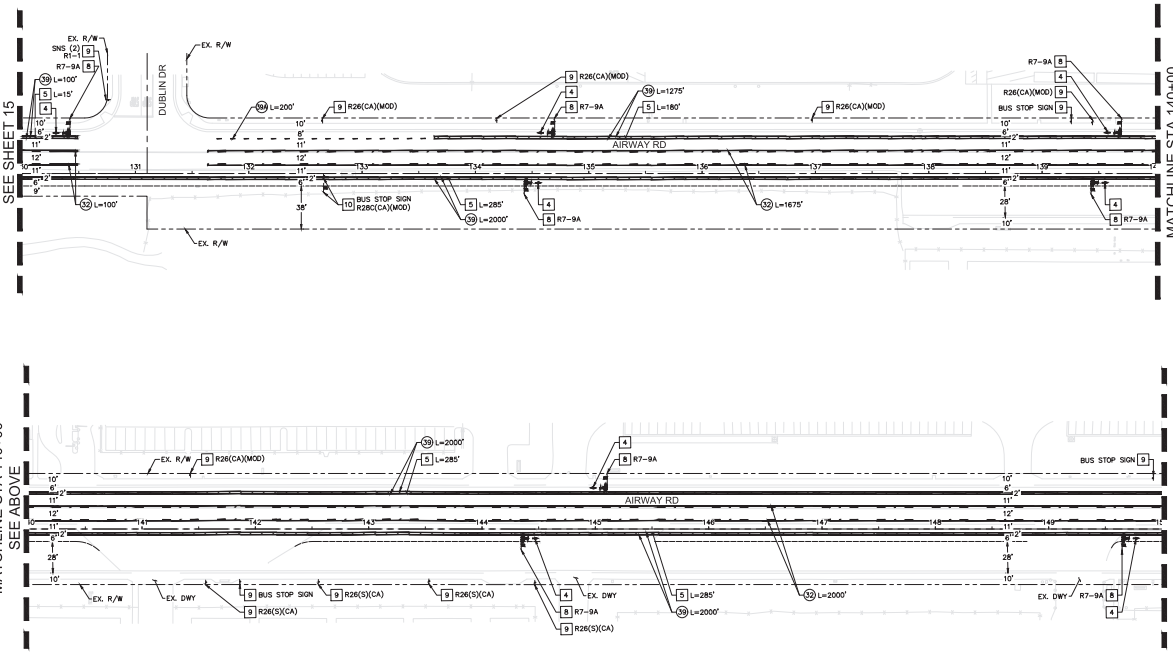
140-1771 LAMBERT COORDINATES

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

42088-15-D

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- (39) INSTALL WHITE BIKE LANE LINE (DETAIL 39) PER CALTRANS REVISED STD. PLAN RSP A20D
- (39A) INSTALL WHITE INTERSECTION BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN RSP A20D

N

0' 40' 80'

SCALE 1" = 40'

NOT FOR CONSTRUCTION

CHEN RYAN

3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

PRIVATE CONTRACT

SIGNING AND PAVEMENT MARKING PLAN FOR:

EPOCA

AIRWAY ROAD

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 16 OF 19 SHEETS

PROJECT NO. 638880

V.T.N. 1978888

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CDA			
AS-BUILTS				

1789-5339
NADB3 COORDINATES

149-1771
LAMBERT COORDINATES

CITY ENGINEER

DATE

CONTRACTOR

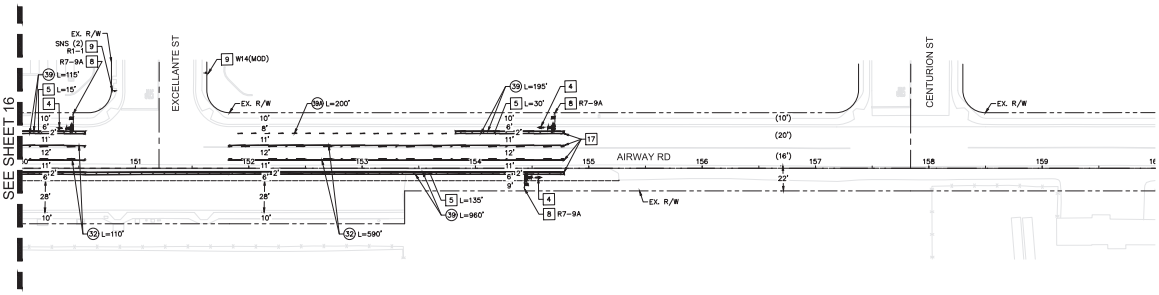
DATE STARTED

INSPECTOR

DATE COMPLETED

42088-16-D

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SIGNING AND MARKING NOTES

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- (39A) INSTALL WHITE INTERSECTION BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN RSP A20D

PRIVATE CONTRACT

SIGNING AND PAVEMENT MARKING PLAN FOR:

EPOCA

AIRWAY ROAD

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 17 OF 18 SHEETS

PROJECT NO 638880

V.T.M. 1970888

CITY ENGINEER		DATE		
DESCRIPTION	BY	APPROVED	DATE	FILM ID
ORIGINAL	CDA			
AS-BUILTS				

1789-6329 NAD83 COORDINATES

149-1771 LAMBERT COORDINATES

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

42088-17-D

0' 40' 80'
SCALE 1" = 40'

NOT FOR CONSTRUCTION

CHEN RYAN
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

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POLE & EQUIPMENT SCHEDULE

NO.	STANDARD TYPE	HEIGHT	SIG. M.A.	LUM. M.A.	LUM. LED	PLACEMENT A	PLACEMENT B	MOUNTING AND PLACEMENT: VEHICLE SIGNAL MOUNTING	VEHICLE SIGNAL INDICATION	VEHICLE SIGNAL PHASE	PED SIGNAL MOUNTING	PED SIGNAL PHASE	PUSH BUTTON LOCATION	PUSH BUTTON PHASE	NOTES
A	61-S-100	30'	65'	15'	Z14	3.5'	7'	MAT MAS SV-1-T	RA,YA,GA R,Y,G R,Y,G	Ø1 Ø6 Ø6	SP-1-T	Ø4P	3	Ø4P	ALL NEW EQUIPMENT.
B	1-A	10'	-	-	-	6.5'	7'	SV-2-T	RA,YA,GA R,Y,G	Ø3 Ø8	-	-	-	-	ALL NEW EQUIPMENT.
C	24-4-100	30'	35'	15'	Z14	16'	3'	MAT MAS SV-1-T	RA,YA,GA R,Y,G R,Y,G	Ø3 Ø8 Ø8	-	-	-	-	ALL NEW EQUIPMENT.
D	1-A	10'	-	-	-	16'	3.5'	SV-2-T	RA,YA,GA R,Y,G	Ø5 Ø6	-	-	-	-	ALL NEW EQUIPMENT.
E	26-4-100	30'	40'	15'	Z14	11.5'	3.5'	MAT MAS SV-1-T	RA,YA,GA R,Y,G R,Y,G	Ø5 Ø2 Ø2	-	-	-	-	ALL NEW EQUIPMENT.
F	1-A	10'	-	-	-	11'	3.5'	SV-2-T	RA,YA,GA R,Y,G	Ø7 Ø8	-	-	-	-	ALL NEW EQUIPMENT.
G	29-5-100	30'	55'	15'	Z14	8'	7'	MAT MAS SV-1-T	RA,YA,GA R,Y,G R,Y,G	Ø7 Ø4 Ø4	-	-	-	-	ALL NEW EQUIPMENT.
H	1-A	10'	-	-	-	5'	7'	SV-2-T	RA,YA,GA R,Y,G	Ø1 Ø2	SP-1-T	Ø4P	3	Ø4P	ALL NEW EQUIPMENT.

ALL VEHICLE HEADS SHALL BE 12" WITH BACKPLATES AND GLASS LENSES. ANCHOR BOLT NUT COVERS SHALL BE PROVIDED. ALL PEDESTRIAN HEADS SHALL BE TYPE A (MTS MODEL 7090).

TRAFFIC SIGNAL GENERAL NOTES:

1. NEW PULL BOXES SHALL BE NO. 6 AND CONDUIT 3" UNLESS NOTED OTHERWISE.
2. LOCATIONS OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND VERIFY THE EXACT LOCATIONS AND CONDITIONS ON THE JOB SITE.
3. THE TRAFFIC SIGNAL CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PLAN PERMIT FROM THE CITY OF SAN DIEGO DEVELOPMENT SERVICES DEPARTMENT PERMIT CENTER A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
4. ALL NEW TRAFFIC SIGNAL POLE FOUNDATIONS SHALL HAVE A 3" CONDUIT INSTALLED TO THE ADJACENT NO. 6 PULL BOX. NEW CONTROLLER FOUNDATION SHALL HAVE A SPARE 3" CONDUIT INSTALLED TO THE ADJACENT NO. 6 PULL BOX FOR FUTURE USE AS SHOWN ON CONDUIT SCHEDULE.
   A. ALL NEW CONDUIT CROSSINGS SHALL INCLUDE A MINIMUM OF TWO (2) 3" CONDUITS.
5. THE TRAFFIC SIGNAL CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT AND INSTALLATION OF LOOP DETECTORS, TRAFFIC STRIPING, PAVEMENT MARKINGS, PARKING REMOVAL AND TRAFFIC SIGNING (EXCEPT "S" SERIES STREET NAME SIGNS) AS SHOWN ON THESE PLANS.
   A. THE TRAFFIC SIGNAL CONTRACTOR SHALL OBTAIN THE APPROVAL OF CITY RESIDENT ENGINEER (ETS DIVISION) OF THE LOOP LOCATIONS PRIOR TO CUTTING, AS WELL AS, PRIOR TO ANY INSTALLATION AND/OR REMOVAL OF STRIPING, PAVEMENT MARKING, PARKING REMOVAL AND SIGN LOCATIONS.
   B. THE TRAFFIC SIGNAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL UNNECESSARY AND CONFLICTING STRIPING AND PAVEMENT MARKINGS.
   C. THE TRAFFIC SIGNAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL PAVEMENT MARK-OUTS.
6. THE TRAFFIC SIGNAL CONTRACTOR SHALL NOT ERECT ANY SIGNAL STANDARDS MORE THAN THREE (3) WEEKS PRIOR TO SCHEDULED TRAFFIC SIGNAL TURN ON.
7. CONTRACTOR SHALL PROVIDE ALL CABLING AND CONDUCTORS NECESSARY TO PERFORM ALL FUNCTIONS SHOWN ON THESE PLANS.
8. ALL POLES, CONDUIT, PULL BOXES, STRIPING AND LOOP DETECTOR LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND AS DIRECTED BY THE CITY OF SAN DIEGO.
9. ROUTING AND LOCATIONS OF UNDERGROUND ELECTRICAL SYSTEM IS DIAGRAMMATIC AND SUBJECT TO APPROVAL OF THE CITY ELECTRICAL ENGINEER. UNDERGROUND ELECTRICAL LINES AND SUBSURFACE STRUCTURES MAY BE RELOCATED IF NECESSARY TO CLEAR OTHER EXISTING UNDERGROUND FACILITIES.
10. ALL TREES AND SHRUBS SHALL BE TRIMMED OR REMOVED AS DETERMINED BY THE CITY RESIDENT ENGINEER AS REQUIRED TO MAINTAIN SIGNAL HEAD VISIBILITY AND SIGHT DISTANCE.
11. ALL NEW VEHICLE SIGNAL HEADS SHALL BE 12" L.E.D. WITH AN INCANDESCENT LOOK AND BACKPLATES.
12. ALL NEW VEHICLE DETECTOR LOOPS SHALL BE TYPE "E" AS SHOWN ON THESE PLANS.
   A. NEW DETECTOR LOOPS SHALL BE 6' DIAMETER WITH 10' SPACING AND POSITIONED IN CENTER OF LANE UNLESS OTHERWISE SHOWN.
   B. NEW FRONT DETECTOR LOOPS SHALL BE TYPE "E" MODIFIED LOOPS PER SDE-104.
   C. ALL LOOP LAYOUTS SHALL INCLUDE LAYOUT OF HOMERUN LINES, WHICH MUST BE APPROVED PRIOR TO INSTALLATION.
   D. NEW BICYCLE DETECTOR LOOPS SHALL BE TYPE "Q" AND POSITIONED IN CENTER OF LANE UNLESS OTHERWISE SHOWN.
13. NEW PEDESTRIAN SIGNAL INDICATIONS AND PUSH BUTTONS SHALL BE INTERNATIONAL SYMBOLS. NEW PEDESTRIAN SIGNAL INDICATIONS SHALL BE 16"X18" L.E.D. COUNTDOWN TIMER WITH AN INCANDESCENT LOOK. NEW PEDESTRIAN PUSH BUTTONS SHALL BE 2" PER ADA REQUIREMENTS.
14. ALL NEW CROSSWALKS SHALL BE CONTINENTAL TYPE PER SDM-116.
15. NEW PEDESTRIAN PUSH BUTTON HOUSING COLOR SHALL MATCH COLOR NO. 33538 OF FED-STD-595 WHEN PEDESTRIAN PUSH BUTTONS ARE PLACED ON A TRAFFIC SIGNAL POLE.

TRAFFIC SIGNAL CONSTRUCTION NOTES

1. FURNISH AND INSTALL TYPE 332 CABINET ON NEW FOUNDATION. CONTROLLER SHALL BE TYPE 170E AND INCLUDE ALL ACCESSORIES NECESSARY TO PROVIDE THE PHASING AND PERFORM ALL FUNCTIONS INDICATED IN THESE PLANS.
2. FURNISH AND INSTALL TYPE III-BF SIGNAL AND LIGHTING SERVICES CABINET AND FOUNDATION, PROVIDE 50A-1P CIRCUIT BREAKER FOR SIGNAL AND 30A-1P CIRCUIT BREAKER FOR LIGHTING.
3. FURNISH AND INSTALL SINGLE CHANNEL EVPE ON SIGNAL HEAD.
5. INSTALL VEHICLE LOOP DETECTOR.
6. INSTALL BIKE LOOP DETECTOR.
7. INSTALL SIGN ON POLE PER PLAN.
8. INSTALL SIGN ON MAST ARM PER PLAN.

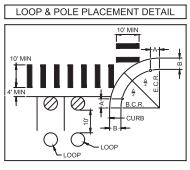
SIGN LEGEND

R9-3 18"x18"

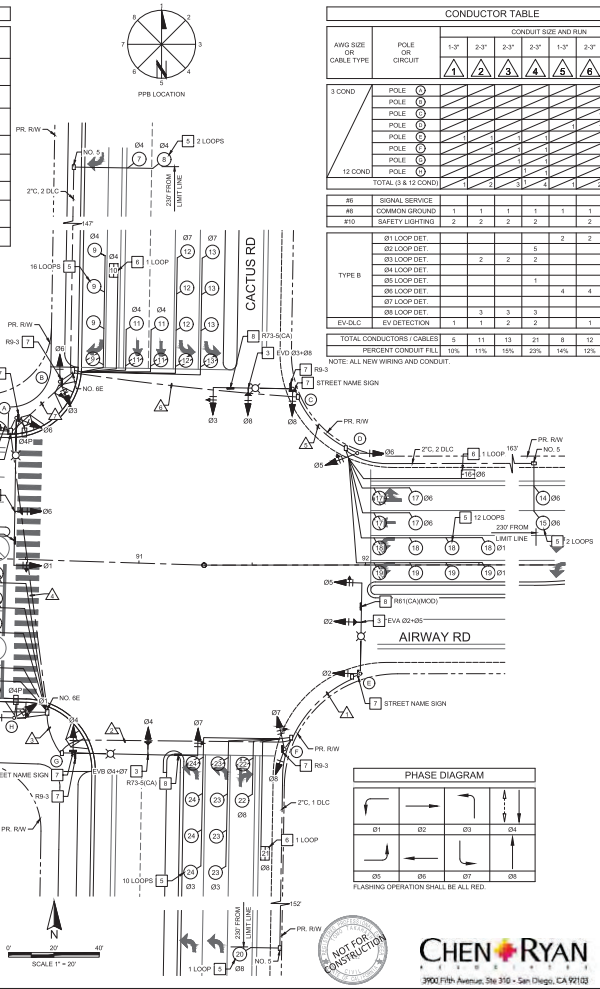
R73-5 24"x24"

R61(CA)(MOD) 72"x30"

LOOP & POLE PLACEMENT DETAIL



PPB LOCATION



CONDUCTOR TABLE

AWG SIZE OR CABLE TYPE	POLE OR CIRCUIT	CONDUIT SIZE AND RUN 1-3" (1)	2-3" (2)	2-3" (3)	2-3" (4)	1-3" (5)	2-3" (6)	2-3" (7)	3-3" (8)
3 COND	POLE A							1	1
	POLE B							1	1
	POLE C							1	1
	POLE D					1		1	1
	POLE E	1	1	1	1				1
	POLE F					1			1
	POLE G						1		1
12 COND	POLE H				1		1	1	1
TOTAL (3 & 12 COND)		1	1	1	1	1	1	3	8

#6	SIGNAL SERVICE								
#8	COMMON GROUND	1	1	1	1	1	1	1	1
#10	SAFETY LIGHTING	2	2	2	2		2	2	
TYPE B	Ø1 LOOP DET.					2	2	2	2
	Ø2 LOOP DET.				5				5
	Ø3 LOOP DET.	2	2	2					2
	Ø4 LOOP DET.							5	5
	Ø5 LOOP DET.				1				1
	Ø6 LOOP DET.					4	4	4	4
	Ø7 LOOP DET.							2	2
	Ø8 LOOP DET.	3	3	3					3
EV-DLC	EV DETECTION	1	1	2	2		1	1	4
TOTAL CONDUCTORS / CABLES		5	11	13	21	8	12	20	39
PERCENT CONDUIT FILL		10%	11%	15%	23%	14%	12%	19%	30%

NOTE: ALL NEW WIRING AND CONDUIT.

PHASE DIAGRAM

Ø1	Ø2	Ø3	Ø4
Ø5	Ø6	Ø7	Ø8

FLASHING OPERATION SHALL BE ALL RED.

DETECTOR ASSIGNMENT

DETECTOR	PHASE	SLOT	TERMINAL
1	Ø2	I2U	T2-5&6
2	Ø2	I2L	T2-7&8
3	Ø2	I3U	T2-9&10
4	Ø2	I3L	T2-11&12
5	Ø2	I4U	T4-1&2
6	Ø5	J1U	T3-1&2
7	Ø4	I6U	T4-9&10
8	Ø4	I6L	T4-11&12
9	Ø4	I7U	T5-1&2
10	Ø4	I7L	T5-3&4
11	Ø4	I8U	T5-5&6
12	Ø7	J5U	T5-5&6
13	Ø7	J5L	T5-7&8
14	Ø6	J2U	T3-5&6
15	Ø6	J2L	T3-7&8
16	Ø6	J3U	T3-9&10
17	Ø6	J3L	T3-11&12
18	Ø1	I1U	T2-1&2
19	Ø1	I1L	T2-3&4
20	Ø8	J6U	T5-9&10
21	Ø8	J6L	T5-11&12
22	Ø8	J7U	T7-1&2
23	Ø3	I5U	T4-5&6
24	Ø3	I5L	T4-7&8
PPB	Ø4P	I12L	T8-5&COM6
EVA	Ø2+Ø5	J12U	T9-4&COM6
EVB	Ø4+Ø7	J13U	T9-7&COM9
EVC	Ø1+Ø6	J12L	T9-5&COM6
EVD	Ø3+Ø8	J13L	T9-8&COM9
FLASH	FLASH	I14U	T6-10&COM12

WORK TO BE DONE:

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS:

DOCUMENT NO.	DESCRIPTION
PWP010119-01	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2018 EDITION
PWP010119-02	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2018 EDITION
PWP030119-07	CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 3) 2014 EDITION
PWP030119-05	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD SPECS. 2018 EDITION

STANDARD DRAWINGS:

DOCUMENT NO.	DESCRIPTION
PWP010119-03	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION
PWP030119-06	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD PLANS, 2018 EDITION

PRIVATE CONTRACT

TRAFFIC SIGNAL PLAN FOR EPOCA:

AIRWAY RD & CACTUS RD

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 10 OF 10 SHEETS

PROJECT NO. 658890

FOR CITY ENGINEER _____ DATE _____

V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1700-5330 NAD83 COORDINATES

140-1771 LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____

INSPECTOR _____ DATE COMPLETED _____

42088-18-D

CHEN RYAN
ENGINEERING
3900 Fifth Avenue, Ste 310 • San Diego, CA 92103

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TRAFFIC CONTROL PLANS FOR:

EPOCA

TRAFFIC CONTROL NOTES

1. VALIDATION: THE TRAFFIC CONTROL PLAN IS NOT VALID UNTIL WORK DATES AND WORK HOURS ARE APPROVED. THE CONTRACTOR SHALL SUBMIT TWO (2) REDUCED COPIES OF TRAFFIC CONTROL PLANS (11"x17") TO THE TRAFFIC CONTROL PERMIT COUNTER, 3RD FLOOR DEVELOPMENT SERVICES CENTER, 1222 FIRST AVENUE, SAN DIEGO. THE CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM OF FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.
2. CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT (858) 495-4741 A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO ANY CONSTRUCTION WORK AFFECTING TRAFFIC SIGNALS.
3. STANDARDS: THE TRAFFIC CONTROL PLAN SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF EACH OF THE FOLLOWING MANUALS:

DESCRIPTION	EDITION	DOCUMENT NO.
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (THE "GREENBOOK")	2018	PWPI010119-01
CITY OF SAN DIEGO SUPPLEMENT TO THE "GREENBOOK ("WHITEBOOK")	2018	PWPI010119-02
CITY OF SAN DIEGO STANDARD DRAWINGS	2018	PWPI010119-03
CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD) (REV 4)	2014	PWPI092816-08

4. NOTIFICATIONS: THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION, CONSTRUCTION, OR TRAFFIC CONTROL AFFECTING THE AGENCIES LISTED BELOW:

FIRE DEPARTMENT DISPATCH	(STREET OR ALLEY CLOSURE)	(858) 573-1300
POLICE DEPARTMENT DISPATCH	(STREET OR ALLEY CLOSURE)	(858) 495-7800
ENVIRONMENTAL SERVICES	(REFUSE COLLECTION)	(858) 492-5060
STREET DIVISION	(TRAFFIC SIGNALS)	(619) 527-7500
METROPOLITAN TRANSIT SYSTEM (MTS)	(BUS STOPS)	(619) 238-0100 EXT. 6451
METROPOLITAN TRANSIT SYSTEM (MTS)	(TAXI ZONES)	(619) 235-2644
METROPOLITAN TRANSIT SYSTEM (MTS)	(TROLLEY LINES)	(619) 595-4930
UNDERGROUND SERVICE ALERT	(ANY EXCAVATION)	(800) 422-4133
U.S. NAVY	(32ND ST NAVAL STATION)	(619) 556-1319
SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY		(619) 400-2880

THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS AND TENANTS A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO CLOSURE OF DRIVEWAYS. THE CONTRACTOR SHALL POST SIGNS NOTIFYING THE PUBLIC A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO CLOSURE OF STREETS.

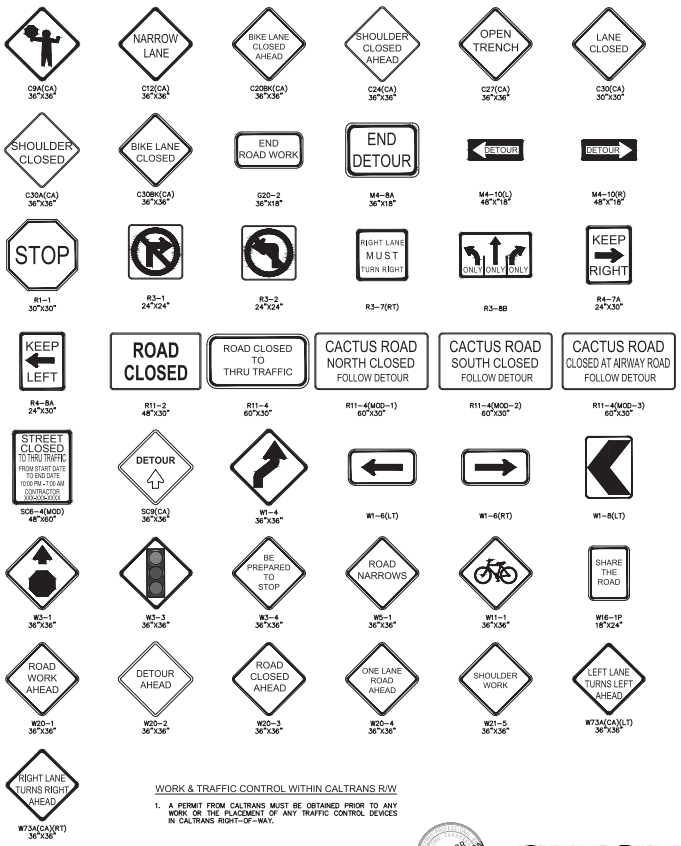
THE CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGEMENT & FIELD SERVICES DIVISION AT (858) 627-3200 AND ARRANGE FOR INSPECTION A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK INVOLVING NIGHTTIME OR WEEKEND HOURS.

5. POSTING PARKING RESTRICTIONS: THE CONTRACTOR SHALL POST TOW-AWAY/NO PARKING SIGNS SEVENTY-TWO (72) HOURS IN ADVANCE OF PARKING REMOVAL. SIGNS SHALL INDICATE SPECIFIC DAYS, DATES AND TIMES OF RESTRICTIONS. PARKING METERS SHALL BE BAGGED WHERE APPLICABLE.
6. EXCAVATIONS: EXCEPT WHEN OTHERWISE SHOWN ON THE PLANS, ALL TRENCHES SHALL BE BACKFILLED OR TRENCH-PLATED AT THE END OF EACH WORKDAY. AN ASPHALT RAMP SHALL BE PLACED AROUND EACH TRENCH PLATE TO PREVENT THE PLATE FROM BEING DISLODGED. CONTRACTOR SHALL MONITOR TRENCH PLATES DURING NON-WORKING HOURS TO ENSURE THAT THEY DO NOT BECOME DISLODGED. UPON COMPLETION OF EXCAVATION BACKFILL, THE CONTRACTOR SHALL PROVIDE A SATISFACTORY SURFACE FOR TRAFFIC. WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVELY IN PROGRESS, THE CONTRACTOR SHALL MAINTAIN ALL TRAVEL LANES, BIKE LANES, AND PEDESTRIAN WALKWAYS IN THE RIGHT-OF-WAY EXCEPT WHEN OTHERWISE SHOWN ON THE PLANS.
7. COVERED PEDESTRIAN WALKWAY. THE CONTRACTOR SHALL CONTACT CITY RESIDENT ENGINEER AT (619) 627-3200 FOR INSPECTION OF ANY COVERED PEDESTRIAN WALKWAY DURING CONSTRUCTION OF SUCH WALKWAY.
8. RESTORATION OF ROADWAY: THE CONTRACTOR SHALL REPAIR OR REPLACE ALL EXISTING IMPROVEMENTS WITHIN THE RIGHT-OF-WAY NOT DESIGNATED FOR PERMANENT REMOVAL (TRAFFIC SIGNS, STRIPING, PAVEMENT MARKERS, PAVEMENT MARKINGS, LEGENDS, CURB MARKINGS, LOOP DETECTORS, TRAFFIC SIGNAL EQUIPMENT, ETC.) WHICH ARE DAMAGED OR REMOVED AS A RESULT OF OPERATIONS. REPAIRS AND REPLACEMENTS SHALL BE AT LEAST EQUAL TO EXISTING IMPROVEMENT.
9. PROVISION OF TEMPORARY TRAFFIC SIGNAL DETECTION: THE CONTRACTOR SHALL INSTALL CITY APPROVED TEMPORARY VIDEO OR RADAR DETECTION WHEN EXISTING TRAFFIC SIGNAL DETECTION SYSTEMS ARE DAMAGED, DISABLED, OR BECOME INEFFECTIVE DUE TO CONSTRUCTION ACTIVITIES FOR A PERIOD OF FIVE (5) OR MORE DAYS, SATISFACTORY TO THE CITY ENGINEER. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL TEMPORARY TRAFFIC SIGNAL DETECTION EQUIPMENT AND RESTORE/INSTALL A CITY APPROVED PERMANENT VEHICLE DETECTION SYSTEM UPON COMPLETION OF CONSTRUCTION, SATISFACTORY TO THE CITY ENGINEER.
10. CHANGE IN WORK: THE CITY ENGINEER RESERVED THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN OPERATION AND TO MAKE ANY CHANGED AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL BE DOCUMENTED AND SUPERSEDE THESE PLANS.
11. RESTORATION OF TRAFFIC CONTROL DEVICES: THE CONTRACTOR SHALL REPAIR OR REPLACE TRAFFIC CONTROL DEVICES (INCLUDING TRAFFIC SIGNS, STRIPING, PAVEMENT MARKERS, PAVEMENT MARKINGS, LEGENDS, CURB MARKINGS, LOOP DETECTORS, TRAFFIC SIGNAL EQUIPMENT, ETC.) DAMAGED OR REMOVED AS A RESULT OF OPERATIONS AND NOT DESIGNATED FOR REMOVAL. REPAIRS AND REPLACEMENTS SHALL BE EQUAL TO EXISTING IMPROVEMENTS. LOOP DETECTORS SHALL BE REPLACED WITHIN THREE (3) WORKING DAYS OF COMPLETION OF UNDERGROUND WORK.
12. FOR WORK NOT COVERED BY THESE TRAFFIC CONTROL PLANS: THE CONTRACTOR SHALL PREPARE TRAFFIC CONTROL WORKING DRAWINGS AND SUBMIT THEM TO THE RESIDENT ENGINEER. THE CONTRACTOR SHALL ALLOW A MINIMUM OF TWENTY (20) WORKING DAYS FOR REVIEW OF THE WORKING DRAWINGS. UPON APPROVAL OF THE TRAFFIC CONTROL PLAN, THE ENGINEERING TRAFFIC CONTROL SECTION WILL ISSUE A TRAFFIC CONTROL PLAN (TCP) PERMIT FOR THIS WORK.
13. THE CONTRACTOR SHALL MAINTAIN A MINIMUM LANE WIDTH OF 12 FEET AT ALL TIMES OTHERWISE OTHERWISE SHOWN. DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL TIMES.
14. ALL WORK SHALL BE CONDUCTED AT NIGHT UNLESS OTHERWISE APPROVED BY THE CITY OF SAN DIEGO.

TEMPORARY CURB RAMP NOTES

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY ASPHALT CURB RAMPS TO PROVIDE A SAFE PATH OF TRAVEL FOR MOBILITY-IMPAIRED PEDESTRIANS AT ALL LOCATIONS WHERE RAMPS HAVE BEEN TEMPORARILY REMOVED OR NEEDED TO ROUTE PEDESTRIANS.
2. TEMPORARY RAMPS SHALL BE CONSTRUCTED SO INSTALLATION AND REMOVAL WILL NOT DAMAGE EXISTING PAVEMENT, CURB, AND/OR GUTTER.
3. RAMPS SHALL HAVE A MINIMUM OF 4' WIDE WALKING SURFACE AND A SLOPE NOT EXCEED 8.33%.
4. RAMPS SHALL SNUGLY MEET EXISTING SURFACES WITHOUT GAPS.
5. WHEN REQUIRED FOR DRAINAGE, SCHEDULE 40 PVC PIPE MINIMUM 2" DIAMETER SHALL BE INSTALLED.
6. TRANSITIONS BETWEEN RAMPS AND THE STREET SURFACE SHALL BE SMOOTH SUCH THAT NO LIP EXISTS AT THE BASE OF THE RAMP.
7. SIDES OF A RAMP SHALL BE TAPERED TO PREVENT DROPOFF OR HAZARD TO BICYCLISTS.
8. TEMPORARY RAMPS SHALL BE REMOVED AS SOON AS CONSTRUCTION AND APPROVAL OF PERMANENT RAMPS ARE COMPLETED.
9. CONSTRUCTION THAT AFFECTS AN EXISTING CURB RAMP SHALL INCLUDE REPLACEMENT OR REPAIR OF THE CURB RAMP TO MEET CURRENT STANDARDS.

TRAFFIC CONTROL SIGN LEGEND



WORK & TRAFFIC CONTROL WITHIN CALTRANS R/W

1. A PERMIT FROM CALTRANS MUST BE OBTAINED PRIOR TO ANY WORK OR THE PLACEMENT OF ANY TRAFFIC CONTROL DEVICES IN CALTRANS RIGHT-OF-WAY.

NOT FOR CONSTRUCTION

TRAFFIC LEGEND

- I TYPE III BARRICADE
- FLASHING ARROW SIGN
- TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL CONE OR DELINEATOR
- TS11 CRASH CUSHION
- IN-LINE CRASH CUSHION
- WATER FILLED BARRIER
- WORK ZONE
- TRAFFIC DIRECTIONAL ARROW
- (XX') EXISTING LANE WIDTH
- XX' PROPOSED LANE WIDTH
- F FLAGGER
- TYPE I ARROW (10") PER CALTRANS STANDARD PLAN A24A
- TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- TYPE VIII ARROW PER CALTRANS STANDARD PLAN A24A
- "STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D
- TS TRAFFIC SIGNAL
- SC STOP CONTROL
- COMPLETED WORK ZONE

TABLE 1

RECOMMENDED SIGN SPACING FOR ADVANCE WARNING SIGN SERIES AND MINIMUM TAPER LENGTH

APPROACH SPEED (S) (MPH)	MINIMUM DISTANCE IN FEET BETWEEN SIGNS AND FROM LAST SIGN TO TAPER	MINIMUM TAPER LENGTHS (L) (FEET) FOR 12-FOOT LANE		
		L	1/2 L	1/3 L
25	100	125	63	42
30	250	180	90	60
35	250	245	123	82
40	250	320	160	107
45	350	540	270	180
50	350	600	300	200
55	350	660	330	220
60	350	720	360	240
65	350	780	390	260
70	350	840	420	280

L FOR MERGE TAPER
1/2 L FOR SHIFT TAPER
1/3 L FOR SHOULDER TAPER

TABLE 2

RECOMMENDED TAPER LENGTH AND MAXIMUM CHANNELIZER/CONE SPACING

APPROACH SPEED (S) (MPH)	BUFFER LENGTH (FEET)	MAX CONE SPACING TAPER	TANGENT	CONFLICT
25	125	25	50	12
30	200	30	60	15
35	250	35	70	17
40	305	40	80	20
45	360	45	90	22
50	425	50	100	25
55	495	50	100	25
60	570	50	100	25
65	645	50	100	25
70	730	50	100	25

NOTES:
TAPER FORMULA
L = S x W FOR SPEEDS GREATER THAN 40 MPH
$L = \frac{W \times S^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS

WHERE:
L = MINIMUM LENGTH OF TAPER
S = APPROACH SPEED (MPH)= POSTED SPEED LIMIT OR OFF-PEAK 85TH % SPEED PRIOR TO WORK STARTING OR ANTICIPATED OPERATING SPEED
W = WIDTH OF OFFSET (FEET)

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN NOTES AND LEGEND FOR:

EPOCA

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 1 OF 8 SHEETS

PROJECT NO. 658880

FOR CITY ENGINEER _____ DATE _____

V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1700-5331 NAD83 COORDINATES

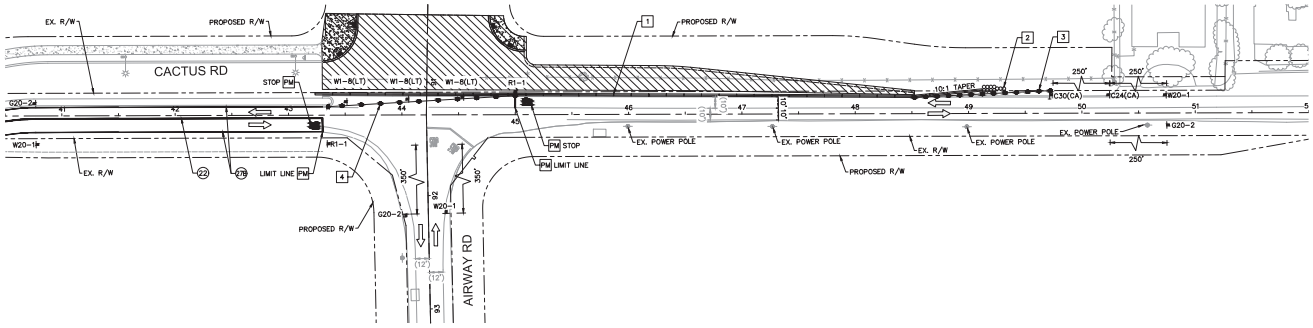
140-1771 LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088-T01-D

CHEN RYAN
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

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CONSTRUCTION NOTES

1. WATER FILLED BARRIER OR APPROVED EQUAL WITH FLASHING BEACON PLACED AT 100' O.C.
2. TEMPORARY CRASH CUSHION ARRAY "TS11" OR ALTERNATIVE CRASH CUSHION
3. 10' DELINEATOR SPACING
4. 17' DELINEATOR SPACING

STAGE 1

1. CONSTRUCT THE WIDENING OF PAVEMENT ON THE WEST SIDE OF CACTUS.

STRIPING DETAILS

(22) INSTALL YELLOW NO PASSING LINE (DETAIL 22) PER CALTRANS STD. PLAN RSP A20A

(27B) INSTALL WHITE RIGHT EDGE LINE (DETAIL 27B) PER CALTRANS STD. PLAN RSP A20B

N

0' 40' 80'
SCALE 1" = 40'

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN FOR:

EPOCA

AIRWAY ROAD EAST

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 2 OF 8 SHEETS

PROJECT NO. 658690

FOR CITY ENGINEER _____ DATE _____

V.T.M. 1970202

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1700-6330
NAD83 COORDINATES

140-1771
LAMBERT COORDINATES

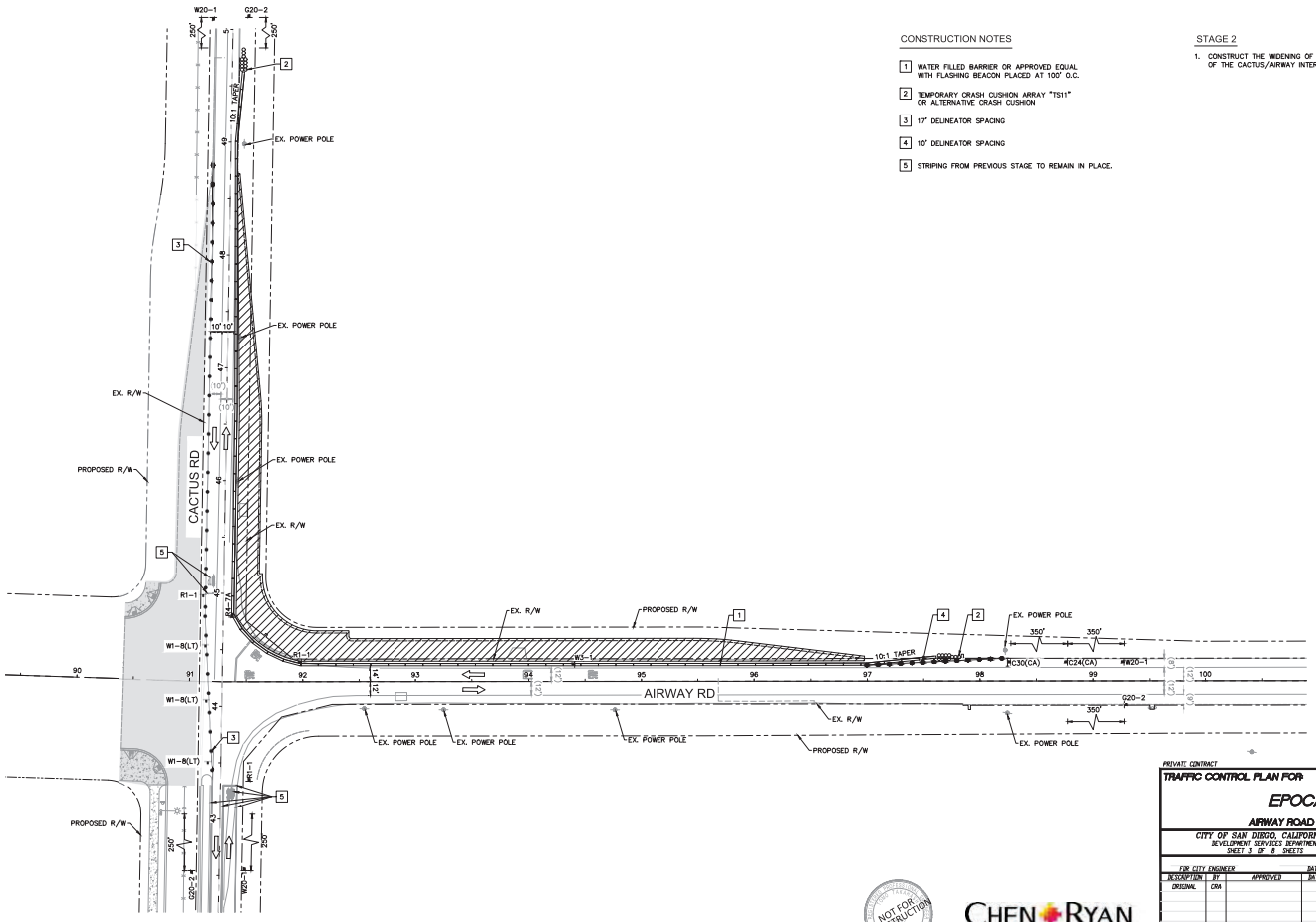
CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088-102-D

NOT FOR CONSTRUCTION

CHEN RYAN
ASSOCIATES
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

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CONSTRUCTION NOTES

1. WATER FILLED BARRIER OR APPROVED EQUAL WITH FLASHING BEACON PLACED AT 100' O.C.
2. TEMPORARY CRASH CUSHION ARRAY "TS11" OR ALTERNATIVE CRASH CUSHION
3. 17" DELINEATOR SPACING
4. 10' DELINEATOR SPACING
5. STRIPING FROM PREVIOUS STAGE TO REMAIN IN PLACE.

STAGE 2

1. CONSTRUCT THE WIDENING OF PAVEMENT NORTHEAST OF THE CACTUS/AIRWAY INTERSECTION.

NOT FOR CONSTRUCTION

CHEN RYAN
ASSOCIATES
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN FOR:

EPOCA

AIRWAY ROAD EAST

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 3 OF 8 SHEETS

PROJECT NO. 658690

FOR CITY ENGINEER — DATE — V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

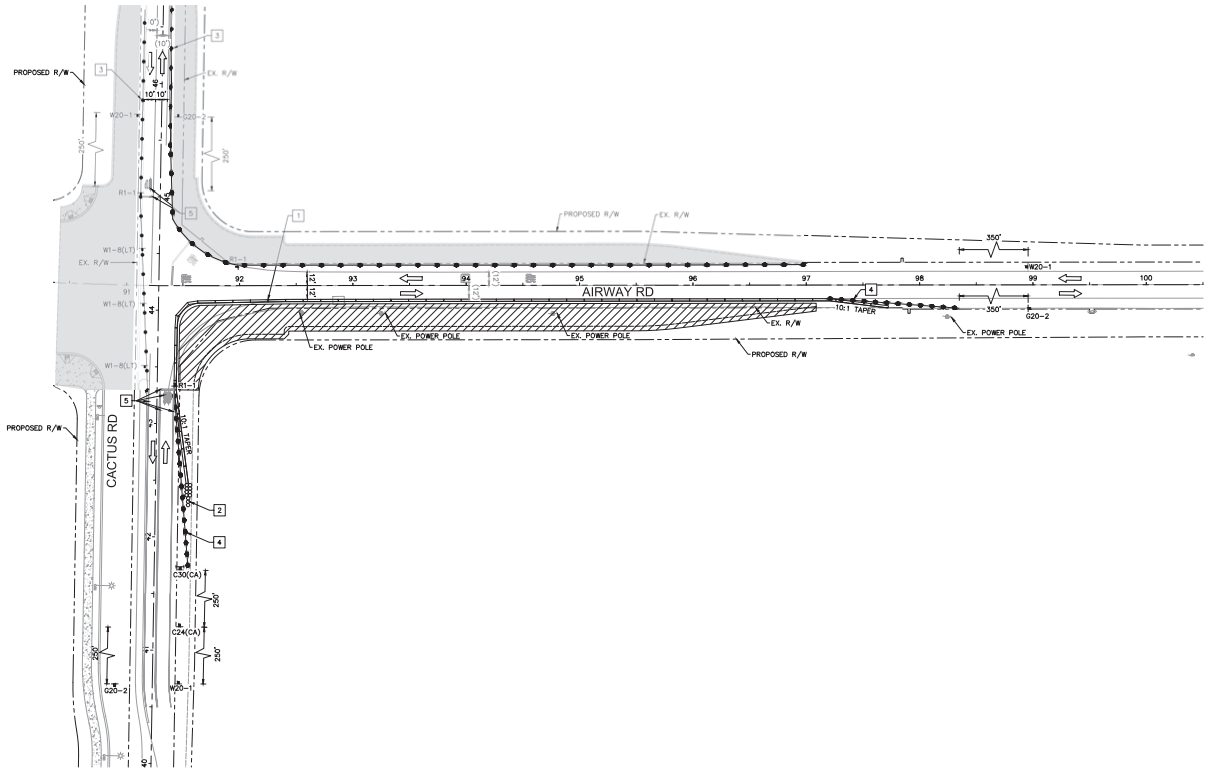
1700-6330
NAD83 COORDINATES

140-1771
LAMBERT COORDINATES

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

42088-103-D

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N

0' 40' 80'

SCALE 1" = 40'

CONSTRUCTION NOTES

1. WATER FILLED BARRIER OR APPROVED EQUAL WITH FLASHING BEACON PLACED AT 100' O.C.
2. TEMPORARY CRASH CUSHION ARRAY "TS11" OR ALTERNATIVE CRASH CUSHION
3. 17' DELINEATOR SPACING
4. 10' DELINEATOR SPACING
5. STRIPING FROM PREVIOUS STAGE TO REMAIN IN PLACE.

STAGE 3

1. CONSTRUCT THE WIDENING OF PAVEMENT SOUTHEAST OF THE CACTUS/AIRWAY INTERSECTION.

NOT FOR CONSTRUCTION

CHEN RYAN

3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN FOR:

EPOCA

AIRWAY ROAD EAST

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 4 OF 8 SHEETS

PROJECT NO. 658690

FOR CITY ENGINEER _____ DATE _____

V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1788-6331
NAD83 COORDINATES

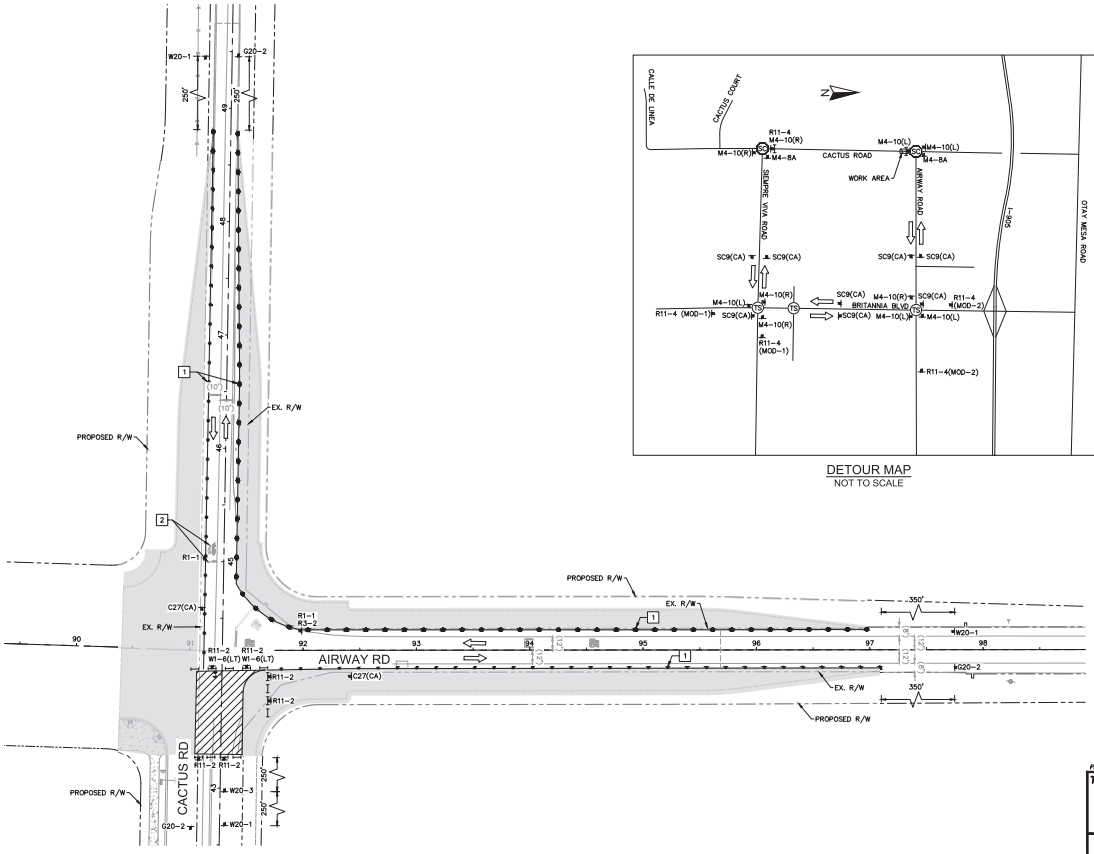
140-1771
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____

INSPECTOR _____ DATE COMPLETED _____

42088-T04-D

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DETOUR MAP
NOT TO SCALE

CONSTRUCTION NOTES

1 17' DELINEATOR SPACING

2 STRIPING FROM PREVIOUS STAGE TO REMAIN IN PLACE.

STAGE 4

1. CONSTRUCT A PORTION OF THE CACTUS/AIRWAY INTERSECTION TO THE SOUTH. ROAD TO BE CLOSED FOR DURATION OF CONSTRUCTION.

N

0' 40' 80'
SCALE 1" = 40'

NOT FOR CONSTRUCTION

CHEN RYAN
ASSOCIATES
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN FOR:

EPOCA

AIRWAY ROAD EAST

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 5 OF 8 SHEETS

PROJECT NO. 658690

FOR CITY ENGINEER DATE

V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

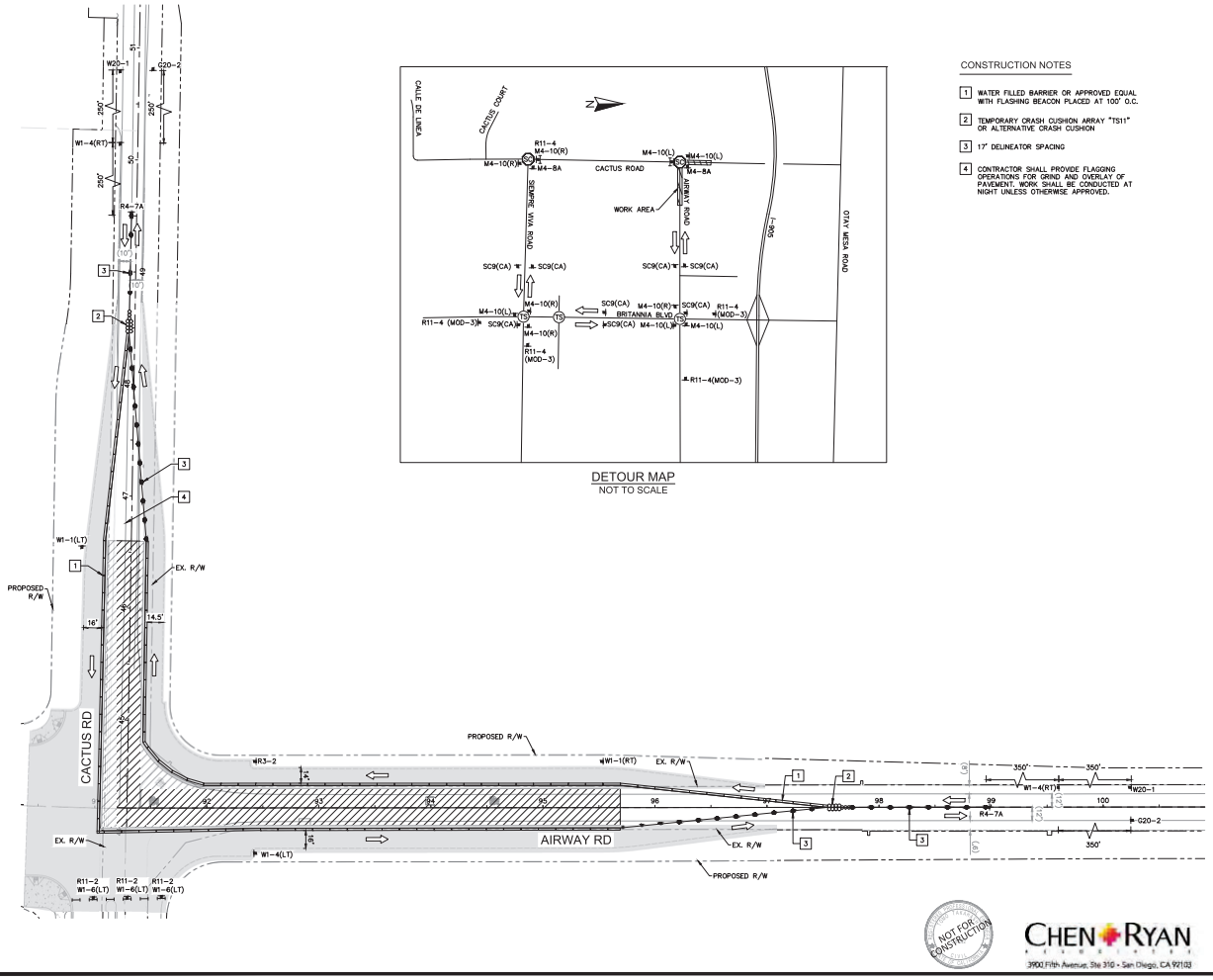
1785-6331
NAD83 COORDINATES

140-1771
LAMBERT COORDINATES

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

42088-T05-D

C:\Users\ttasu\Chen Ryan\2018-0377 - Files\CAD\Plans\Airway East\0377_TC-05_Stage 5_Cactus-Airway.dwg Plot: Theodore Tasu Date: 12/1/2020 2:51:06 PM



DETOUR MAP
NOT TO SCALE

CONSTRUCTION NOTES

1. WATER FILLED BARRIER OR APPROVED EQUAL WITH FLASHING BEACON PLACED AT 100' O.C.
2. TEMPORARY CRASH CUSHION ARRAY "TS11" OR ALTERNATIVE CRASH CUSHION
3. 17" DELINEATOR SPACING
4. CONTRACTOR SHALL PROVIDE FLAGGING OPERATIONS FOR GRIND AND OVERLAY OF PAVEMENT. WORK SHALL BE CONDUCTED AT NIGHT UNLESS OTHERWISE APPROVED.

STAGE 5

1. CONSTRUCT THE REMAINING PORTION OF THE CACTUS/AIRWAY INTERSECTION.

N

0' 40' 80'
SCALE 1" = 40'

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN FOR:

EPOCA

AIRWAY ROAD EAST

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 6 OF 8 SHEETS

PROJECT NO. 658690

FOR CITY ENGINEER — DATE — V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1700-6330 NAD83 COORDINATES

140-1771 LAMBERT COORDINATES

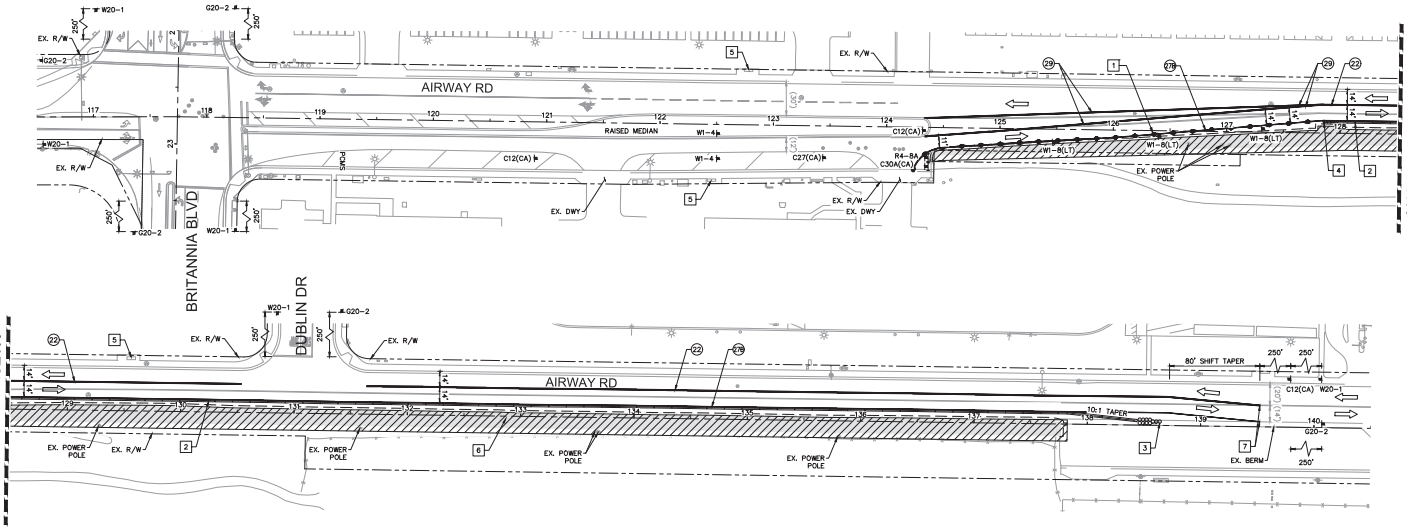
CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

42088-106-D

NOT FOR CONSTRUCTION

CHEN RYAN
ASSOCIATES
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

C:\Users\tteek\Chen Ryan\2019-0377 - Files\CAD\Plans\Airway East\0377_TC-06_Stage 6_Airway East Pavement.dwg Plot: Theodore Teek Date: 12/1/2020 12:13:30 PM



CONSTRUCTION NOTES

1. 17' DELINEATOR SPACING
2. WATER FILLED BARRIER OR APPROVED EQUAL WITH FLASHING BEACON PLACED AT 100' O.C.
3. TEMPORARY CRASH CUSHION ARRAY "TS11" OR ALTERNATIVE CRASH CUSHION.
4. IN-LINE ATTENUATOR RATED FOR 40 MPH.
5. EXISTING BUS STOP TO REMAIN IN SERVICE.
6. CLOSE EXISTING BUS STOP. CONTRACTOR SHALL NOTIFY MTS A MINIMUM FIVE (5) WORKING DAYS PRIOR TO CLOSURE.
7. CONFORM TO EXISTING STRIPING.

STAGE 6

1. CONSTRUCT THE WIDENING OF PAVEMENT ON THE SOUTH SIDE OF AIRWAY ROAD BETWEEN BRITANNIA BOULEVARD AND EXCELLANTE STREET.

STRIPING DETAILS

(22) INSTALL YELLOW NO PASSING LINE (DETAIL 22) PER CALTRANS STD. PLAN RSP A20A

(27B) INSTALL WHITE RIGHT EDGE LINE (DETAIL 27B) PER CALTRANS STD. PLAN RSP A20B

(29) INSTALL YELLOW MEDIAN ISLAND LINE (DETAIL 29) PER CALTRANS REVISED STD. PLAN RSP A20B

N

0' 40' 80'

SCALE 1" = 40'

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN FOR:

EPOCA

AIRWAY ROAD EAST

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 7 OF 8 SHEETS

PROJECT NO. 658690

FOR CITY ENGINEER _____ DATE _____

V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1700-6331
NAD83 COORDINATES

140-1771
LAMBERT COORDINATES

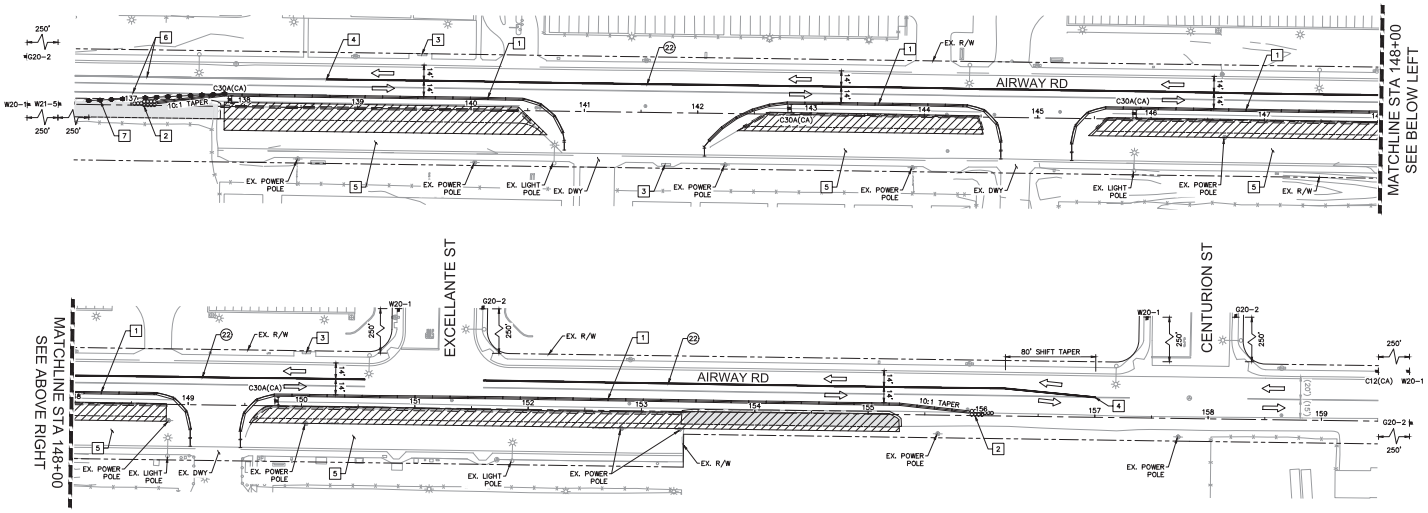
CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

42088-107-D

NOT FOR CONSTRUCTION

CHEN RYAN
ASSOCIATES
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

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CONSTRUCTION NOTES

1. WATER FILLED BARRIER OR APPROVED EQUAL WITH FLASHING BEACON PLACED AT 100' O.C.
2. TEMPORARY CRASH CUSHION ARRAY "TS11" OR ALTERNATIVE CRASH CUSHION.
3. EXISTING BUS STOP TO REMAIN IN SERVICE.
4. CONFORM TO EXISTING STRIPING.
5. POST NO TOW-AWAY/NO PARKING SIGNS SEVENTY-TWO (72) HOURS IN ADVANCE OF AND DURATION OF PARKING REMOVAL.
6. STRIPING FROM PREVIOUS STAGE TO REMAIN IN PLACE.
7. 10' DELINEATOR SPACING

STAGE 7

1. REMOVE AND CONSTRUCT BERM, AND CONSTRUCT THE WIDENING OF PAVEMENT ON THE SOUTH SIDE OF AIRWAY ROAD BETWEEN DUBLIN DRIVE AND CENTURION STREET.

STRIPING DETAILS

(22) INSTALL YELLOW NO PASSING LINE (DETAIL 22) PER CALTRANS STD. PLAN RSP A20A

N

0' 40' 80'
SCALE 1" = 40'

PRIVATE CONTRACT

TRAFFIC CONTROL PLAN FOR:

EPOCA

AIRWAY ROAD EAST

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 8 OF 8 SHEETS

PROJECT NO. 658690

FOR CITY ENGINEER — DATE — V.T.M. 1972022

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	CRA			
AS-BUILTS				

1700-6320 NAD83 COORDINATES
140-1771 LAMBERT COORDINATES

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

42088-108-D

NOT FOR CONSTRUCTION

CHEN RYAN
3900 Fifth Avenue, Ste 310 - San Diego, CA 92103

ALTA/NSPS LAND TITLE SURVEY

PAEZ - SAN DIEGO, CA

NOTES

1. TOTAL AREA WITHIN ALTA SURVEY BOUNDARY = 38.80 ACRES
2. TAX ASSESSOR PARCEL NO. 646-100-77
3. FIELD SURVEY FOR THIS SITE WAS PERFORMED DURING JUNE OF 2022 BY PROJECT DESIGN CONSULTANTS.
4. AS DETERMINED BY GRAPHIC PLOTTING ONLY, THIS SITE IS IN PORTIONS OF ZONE AE (SPECIAL FLOOD HAZARD AREA) OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO'S. 06073C2178G & 06073C2200G, EFFECTIVE MAY 16, 2012. *(ITEM 3)*
5. UNDERGROUND UTILITIES SHOWN ARE FROM READILY OBSERVABLE EVIDENCE FOUND IN THE FIELD AND CERTAIN RECORD DRAWINGS. *(ITEM 11)*
6. THE PROPERTY ABUTS CACTUS ROAD, AIRWAY ROAD AND CONTINENTAL STREET, ALL DEDICATED PUBLIC RIGHT OF WAY STREETS.
7. THERE IS NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK. *(ITEM 16)*
8. PDC IS AWARE OF PROPOSED RIGHT-OF-WAY WIDENING ALONG AIRWAY ROAD AND CACTUS ROAD, ASSOCIATED WITH THE ADJOINING EPOCA PROJECT TO THE WEST PER APPROVED TENTATIVE MAP NO. 1972222. *(ITEM 17)*
9. THERE IS NO EVIDENCE OF A WETLANDS FIELD DELINEATION. *(ITEM 18)*
10. NO OFFSITE EASEMENTS HAVE BEEN PROVIDED. *(ITEM 19)*

LEGAL DESCRIPTION

REAL PROPERTY IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO UNITED STATES GOVERNMENT SURVEY THEREOF.

EXCEPTING THEREFROM THAT PORTION DESCRIBED IN FINAL ORDER OF CONDEMNATION RECORDED JULY 13, 2007 AS INSTRUMENT NO. 2007-0469983 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED IN FINAL ORDER OF CONDEMNATION RECORDED OCTOBER 12, 2010 AS INSTRUMENT NO. 2010-0547452 OF OFFICIAL RECORDS.

EASEMENTS/ENCUMBRANCES

THIS SURVEY IS BASED ON PRELIMINARY REPORT ISSUED BY FIRST AMERICAN TITLE COMPANY, ORDER NUMBER 0151-6846388 DATED MAY 20, 2022. ENCUMBRANCE ITEMS SUCH AS TAXES, LIENS, FACTS, AGREEMENTS, OPTIONS, RIGHTS APPEARING IN SAID POLICY AS ITEM NO.'S 1-2, 7-9 AND 10-15 HAVE BEEN REVIEWED AND ARE NOT CONSIDERED SURVEY RELATED, AND THEREFORE HAVE NOT BEEN SHOWN HEREON.

(F) INDICATES ITEM NO. OF THE PRELIMINARY REPORT PLOTTED HEREON.

(3) INDICATES EXISTING 20' WIDE PUBLIC HIGHWAY DEDICATED PER DEED BOOK 257 PAGE 50, RECORDED AUGUST 22, 1896 O.R.

(4) INDICATES EXISTING 20' WIDE PUBLIC HIGHWAY DEDICATED PER DEED BOOK 310 PAGE 47, RECORDED SEPTEMBER 21, 1901 O.R.

(5) INDICATES 6 EXISTING SDG&E POLE LINE EASEMENT PER DOCUMENT NO. 103775, BOOK 2985, PAGE 317, RECORDED OCTOBER 19, 1948 O.R. (NO WIDTH)

(6) INDICATES 6' WIDE EXISTING SDG&E POLE LINE EASEMENT PER DOCUMENT NO. 98986, BOOK 4930, PAGE 330, RECORDED JULY 22, 1953 O.R.

(10) INDICATES ACCESS RELINQUISHMENT IN AND TO STATE HIGHWAY PER DOCUMENT NO. 2007-0469983 RECORDED JULY 13, 2007 O.R.

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS MAP IS THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 6, EPOCH 1991.35 AND IS DETERMINED BY G.P.S. MEASUREMENTS TAKEN ON APRIL 2018 AT POINT 'A' AND 'B' SHOWN HEREON, SAID POINTS WERE ESTABLISHED FROM FIRST ORDER G.P.S. STATION NO. 209 AND FIRST ORDER G.P.S. STATION NO. 189 PER RECORD OF SURVEY NO. 14492.

BEARING FROM POINT 'A' TO 'B' IS: NORTH 00°56'15" WEST

DISTANCES SHOWN HEREON ARE GROUND LEVEL DISTANCES. THE COMBINED GRID FACTOR AT POINT 'A' IS 1.0000288.

GRID DISTANCE = GROUND DISTANCE X COMBINED GRID FACTOR. ELEVATION AT POINT 'A' IS 474.95' (N.G.V.D. 29)

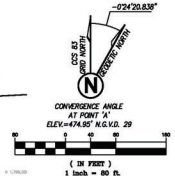
QUOTED BEARINGS FROM REFERENCE DEEDS/MAPS MAY OR MAY NOT BE IN TERMS OF SAID SYSTEM.

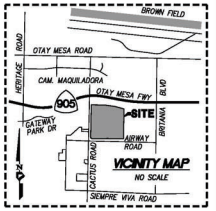
BENCHMARK

CITY OF SAN DIEGO BRASS PLUG AT THE N.E. INTERSECTION OF OTAY MESA ROAD AND HERITAGE ROAD.

ELEVEATION: 504.00' M.S.L. DATUM (N.G.V.D. 29)

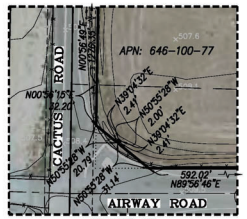




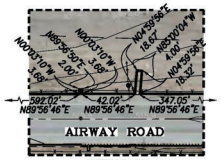


LEGEND

- INDICATES ALTA FEE TITLE BOUNDARY
- ● INDICATES FOUND IRON PIPE MONUMENT AS NOTED HEREON
- ■ INDICATES FOUND LEAD & DISC MONUMENT AS NOTED HEREON
- ▲ INDICATES FOUND M-10 STANDARD STREET MONUMENT AS NOTED
- SMH INDICATES SEWER MANHOLE



DETAIL 'A'
SCALE: 1"=40'



DETAIL 'B'
SCALE: 1"=40'

CURRENT VESTED OWNER

TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

JOSEPH PAEZ, JR., SINGLE MAN

SURVEYOR'S STATEMENT

TO: (1) COLRICH; AND (2) FIRST AMERICAN TITLE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 8, 11(OBSERVED), 13 AND 14 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON XXXXX XX, XXXX.

DATE OF PLAT OR MAP: _____

NOTE: SECTION 8770.6 OF THE PROFESSIONAL LAND SURVEYORS ACT IN THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA STATES THAT THE USE OF THE WORD "CERTIFY" OR "CERTIFICATION" HEREON ONLY CONSTITUTES AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THOSE FACTS OR FINDINGS WHICH ARE THE SUBJECT OF THE CERTIFICATION, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESSED OR IMPLIED.

LICENSED LAND SURVEYOR GARY L. HUS NO. 7019 STATE OF CALIFORNIA

PRELIMINARY

GARY L. HUS, L.S. 7019 DATE

PROJECT DESIGN CONSULTANTS
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800
San Diego, CA 92101
619.235.6471 Tel
619.234.0349 Fax

P:\4481\Survey Boundary\ALTA\4481 ALTA 01.dwg
Jul 05, 2022 - 6:26pm

CITY OF DIEGO
TENTATIVE MAP - PLANNING AREAS 10,11,12,13,17
CENTRAL VILLAGE - OTAY

LEGEND

DESCRIPTION	SYMBOL
PROJECT BOUNDARY	
EXISTING CENTER LINE	
EXISTING PROPERTY LINE	
EXISTING CURB AND GUTTER	
EXISTING SEWER MAIN	S
EXISTING WATER MAIN	W
EXISTING TOP/TOE SLOPE	
EXISTING POWER POLE	
EXISTING OVERHEAD LINES	OH
EXISTING FENCE	
EXISTING EASEMENT	
EXISTING MAJOR CONTOUR	510
EXISTING MINOR CONTOUR	511
EXISTING R/W	
EXISTING FORCE MAIN	FM
PROPOSED MAJOR CONTOUR	510
PROPOSED MINOR CONTOUR	511
PROPOSED RETAINING WALL	
CUT/FILL DAYLIGHT LINE	
SLOPES (2:1 SLOPE, UNLESS SHOWN OTHERWISE)	CUT 2 : 1, FILL
PROPOSED BUILDING SETBACK	
PROPOSED PAD/GARAGE ELEVATION	P-610.0/G-610.0
PROPOSED EDGE OF PAVEMENT	
PROPOSED CONCRETE CURB & GUTTER	
PROPOSED SEWER MAIN	
PROPOSED SEWER MANHOLE	S
PROPOSED WATER MAIN	W
PROPOSED STORM DRAIN	
PROPOSED GRATED INLET	
PROPOSED F CATCH BASIN	
PROPOSED STORM DRAIN CLEANOUT	
PROPOSED AREA DRAIN	
PROPOSED BIOFILTRATION & INFILTRATION BASIN	

ABBREVIATIONS

A.C.	ASPHALT CONCRETE		
APN	ASSESSOR'S PARCEL NUMBER		
ASPH	ASPHALT		
B.C.	BEGIN HORIZONTAL CURVE	INT	INTERIOR
B.O.	BLOW OFF		
BVCE	BEGIN VERTICAL CURVE ELEVATION	IE	INVERT ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION	INV.	INVERT
BLDG	BUILDING	LAT.	LATERAL
CONC.	CONCRETE	℄	PROPERTY LINE
CONN.	CONNECT	PROP.	PROPOSED
℄	CENTERLINE	PVT.	PRIVATE
E.C.	END HORIZONTAL CURVE	RCP	REINFORCED CONCRETE PIPE
ESL	ENVIRONMENTALLY SENSITIVE LANDS	RET	RETAINING
ESMT.	EASEMENT	RIM	TOP OF RIM
EX./EXIST./(E)	EXISTING	R/W	RIGHT OF WAY
FG	FINISHED GRADE	SB	SETBACK
FH	FIRE HYDRANT	SD	STORM DRAIN
FL	FLOW LINE	ST	STREET
FS	FINISHED SURFACE	SVC	SERVICE
GF	GARAGE FLOOR	TYP.	TYPICAL
		SDG	SD CURB INLET
		SDCO	SD CLEAN OUT

GENERAL DESIGN NOTES

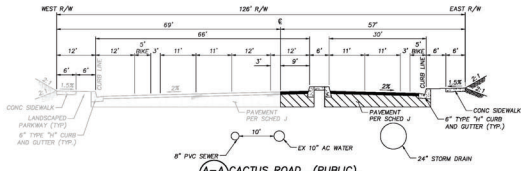
1. FINISH GRADES & PAD LIMITS SHOWN HEREON ARE APPROXIMATE ONLY AND ARE SUBJECT TO CHANGE IN FINAL ENGINEERING.
2. EASEMENTS WILL BE PROVIDED AS REQUIRED BY THE CITY ENGINEER.
3. ALL PROPOSED UTILITIES ARE TO BE UNDERGROUND.
4. NO OVERHEAD ELECTRIC LINES ARE LOCATED ADJACENT TO THE SITE.
5. NO TREES OR SHRUBS EXCEEDING 3' IN HEIGHT AT MATURITY SHALL BE INSTALLED WITHIN 5' OF ANY PUBLIC WATER FACILITIES OR WITHIN 10' OF ANY PUBLIC SEWER FACILITIES.

MAPPING NOTE

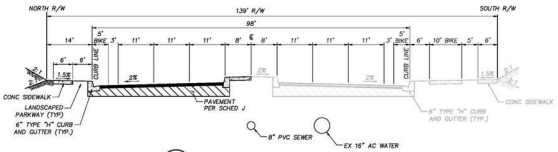
A FINAL MAP WILL BE FILED AT THE COUNTY RECORDER'S OFFICE PRIOR TO THE EXPIRATION OF THE TENTATIVE MAP. A DETAILED PROCEDURE OF SURVEY WILL BE SHOW ON THE FINAL MAP AND ALL PROPERTY CORNERS WILL BE SET ON THE FINAL MAP.

CONDOMINIUM NOTE

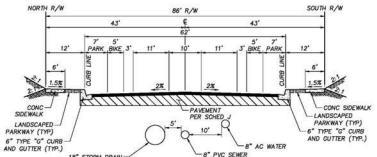
THIS IS A CONDOMINIUM PROJECT AS DEFINED IN SECTION 1350 ET. SEQ. OF THE CIVIL CODE OF THE STATE OF CALIFORNIA AND IS FILED PURSUANT TO THE SUBDIVISION MAP ACT. TOTAL NUMBER OF RESIDENTIAL UNITS IS 30.



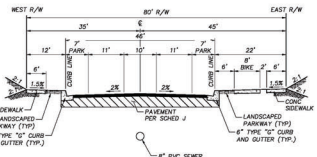
A-A CACTUS ROAD (PUBLIC)
NOT TO SCALE



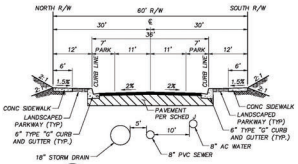
B-B AIRWAY ROAD (PUBLIC)
NOT TO SCALE



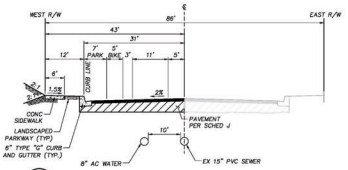
C-C STREET A (PUBLIC)
NOT TO SCALE



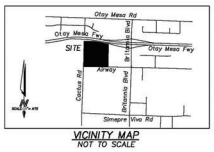
D-D PARK WAY (PUBLIC)
NOT TO SCALE



E-E COLCHESTER CT (PUBLIC)
NOT TO SCALE



F-F CONTINENTAL ROAD (PUBLIC)
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

PROJECT DESCRIPTION:

TENTATIVE MAP TO SUBDIVIDE 1 EXISTING LOT INTO 5 PROPOSED LOTS CONSISTENT WITH THE CENTRAL VILLAGE SP

DISCRETIONARY PERMITS/APPROVALS:

NONE

PARKING:

PER SDMC SECTION 142.0525.

LEGAL DESCRIPTION:

THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT PORTION OF SAID LAND AS DESCRIBED IN A FINAL ORDER OF CONDEMNATION BY THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION RECORDED JULY 13,2017 AS FILE NO. 2007-0469983 OF OFFICIAL RECORDS.

GENERAL NOTES:

1.	PROJECT NAME:	CENTRAL VILLAGE--OTAY TM
2.	APN:	646-100-77-00
3.	PROJECT LOCATION:	NORTH OF AIRWAY RD BETWEEN CACTUS ROAD & CONTINENTAL ROAD
4.	PROJECT AREA:	GROSS: 53.23 ACRES± NET: 53.23 ACRES±
5.	EASEMENTS:	EXISTING: AS SHOWN ON TM SHEET 3 PROPOSED: AS SHOWN TM ON PLAN SHEET 3
6.	EXISTING LOTS:	1
7.	PROPOSED LOTS:	5--4 NUMBERED AND 1 LETTERED LOTS
8.	ZONING:	EXISTING: CENTRAL VILLAGE SPECIFIC PLAN PROPOSED: SP
9.	OVERLAY ZONES:	NONE
10.	NET DENSITY:	ALLOWED: PA 10 35--44 DU/AC PA 11 20--29 DU/AC PA 12 20--29 DU/AC PA 13 25--40 DU/AC
11.	PUBLIC UTILITIES AND DISTRICTS:	GAS AND ELECTRICITY: SDG&E TELEPHONE: AT&T FIRE AND POLICE: CITY OF SAN DIEGO SCHOOL: SAN DIEGO SCHOOL DISTRICT AREA: OTAY WATER DISTRICT SEWER: CITY OF SAN DIEGO STORM DRAIN: CITY OF SAN DIEGO WATER: OTAY WATER DISTRICT
14.	TOPOGRAPHY SOURCE:	PDC, INC. DATED DECEMBER 5, 2014
15.	GEOLOGIC HAZARD ZONE:	
16.	NAD 27 NAD 83	

PROJECT MANAGEMENT/APPLICANT

ROBERT FUREY
GROUNDWORK INC.
2442 SECOND AVE
SAN DIEGO CA 92101
PH: 619.521.8452
E-MAIL: FUREYGRD@GMAIL.COM

GEOTECHNICAL CONSULTANT

GEOCON, INC
ROD MIKESELL
6960 FLANDERS DR
SAN DIEGO, CA 92121
TEL: 858-558-6900
FAX:858-558-6159
E-MAIL :

OWNER INFORMATION

ROBERT FUREY
7808 SAINT ANDREWS AVE
SAN DIEGO CA 92154
PH: 619.521.8452
E-MAIL: FUREYGRD@GMAIL.COM

ENGINEER OF WORK

LANDMARK CONSULTING
MARK BRENCICK
9555 GENESEE AVENUE, SUITE 200
SAN DIEGO, CA 92121
TEL: 858-587-8070
FAX:858-587-8750
E-MAIL : MARK@LMCO.NET

BENCHMARK:

DESCRIPTION: BRASS PIN ON TOP OF INLET.
LOCATION: NW CORNER OF WA DE LA VALLE AND VIA DEL CAMON
ELEVATION: 45.963'
DATUM: MSL

ENGINEER OF WORK:

LANDMARK CONSULTING
9555 GENESEE AVENUE, SUITE 200
SAN DIEGO, CA 92121
PHONE: (858) 587-8070
FAX: (858) 587-8750

MARK A. BRENCICK — DATE

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
01	TITLE SHEET
02	EXISTING CONDITIONS
03	TENTATIVE MAP
04	PRELIMINARY GRADING PLAN
05	LANDSCAPE CONCEPT

REVISIONS
REVISION 5
REVISION 4
REVISION 3
REVISION 2
REVISION 1
ORIGINAL SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
MARK A. BRENCICK
NO. 46153
EXP. 6/30/19
CIVIL
STATE OF CALIFORNIA

PREPARED BY:

LANDMARK
CONSULTING

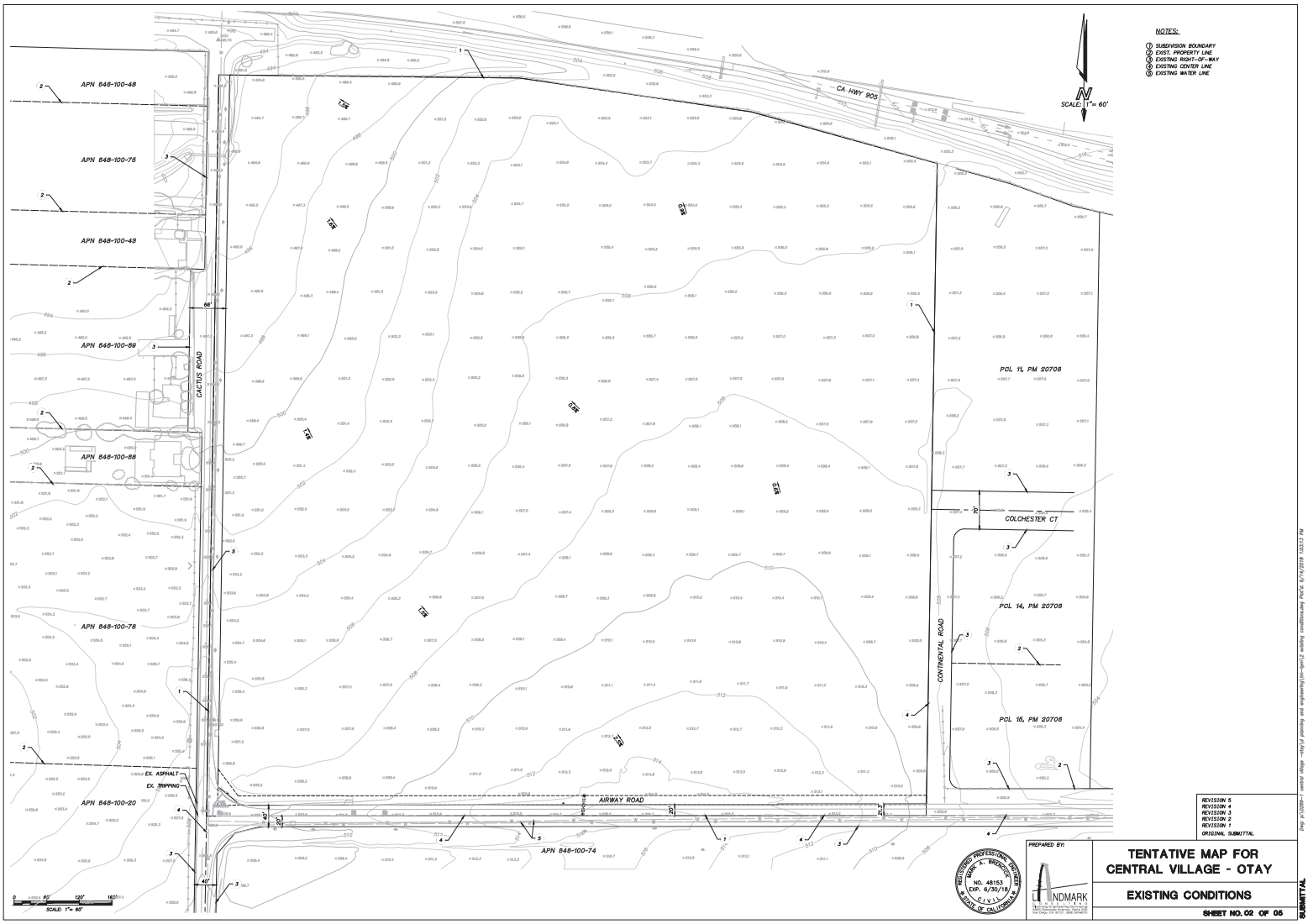
TENTATIVE MAP FOR
CENTRAL VILLAGE - OTAY

TITLE SHEET

SHEET NO. 01 OF 05

SUBMITTAL

Dwg: p:\0318-1 central village - otay\ planning and engineering\civil\ title sheet.dwg Plot: 6/14/2018 2:27:52 PM



REVISION 5
REVISION 4
REVISION 3
REVISION 2
REVISION 1
ORIGINAL SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
MARC A. BRIDGES
NO. 48153
EXP. 6/30/19
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
LANDMARK CONSULTANTS, INC.

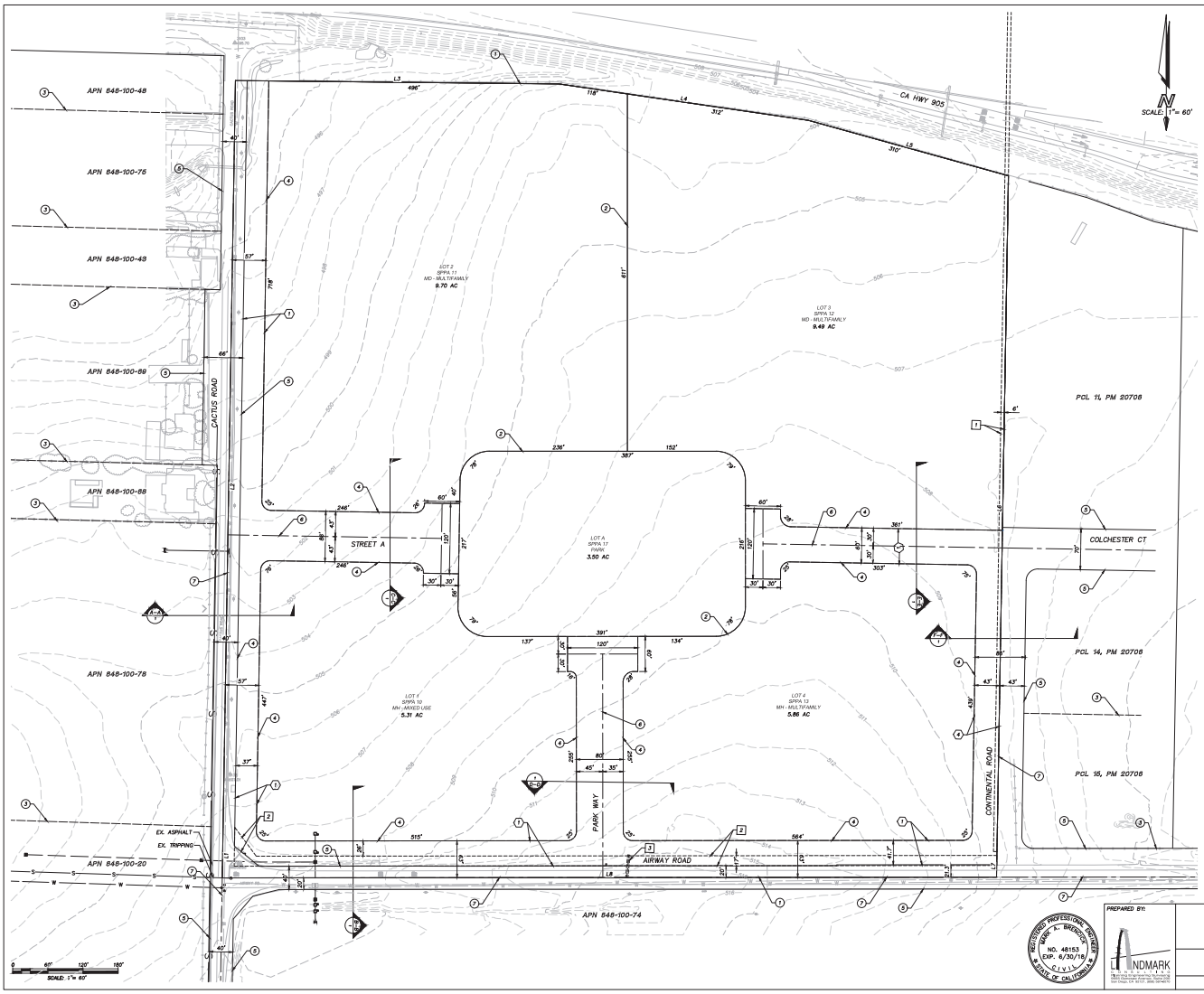
TENTATIVE MAP FOR CENTRAL VILLAGE - OTAY

EXISTING CONDITIONS

SHEET NO. 02 OF 05

SUBMITTAL

Plotted: 6/14/2018 12:03 PM By: Ray Armitage Engineering Software: Land F/Projects/Otay Ranch - Village Eleven - 12800's/Engineering/Exhibits/Tentative Map/Exhibit 1.dwg



NOTES:

1. SUBDIVISION BOUNDARY
2. PROPOSED LOT LINE
3. EXIST. PROPERTY LINE
4. PROPOSED RIGHT-OF-WAY
5. EXISTING RIGHT-OF-WAY
6. PROPOSED CENTER LINE
7. EXISTING CENTER LINE
8. PROPOSED EASEMENT LINE
9. EXISTING EASEMENT LINE

BOUNDARY DATA

L#	BEARING	DISTANCE
L1	S00°56'11"W	87.00'
L2	S00°56'46"W	1275.72'
L3	N89°31'42"W	552.43'
L4	N81°41'28"W	430.60'
L5	N74°29'56"W	354.65'
L6	N00°58'11"E	1155.17'
L7	N00°58'11"E	43.50'
L8	N89°56'50"E	1322.63'

LOT SUMMARY

LOT	USE	AC
1	SPPA 10 MH - MIXED USE	5.31
2	SPPA 11 MD - MULTIFAMILY	9.70
3	SPPA 12 MD - MULTIFAMILY	9.49
4	SPPA 13 MH - MULTIFAMILY	5.86
A	SPPA 17 PARK	3.50
	PUBLIC STREET	6.80
	TOTAL	40.93

EXISTING EASEMENTS:

- EXISTING S.D.G&E EASEMENT
- EXISTING SLOPE EASEMENT
- EXISTING PUBLIC UTILITY EASEMENT

PROPOSED EASEMENTS:

1. PROPOSED RIGHT-OF-WAY DEDICATION
2. PROPOSED PRIVATE DRAINAGE EASEMENT

REVISION 5
REVISION 4
REVISION 3
REVISION 2
REVISION 1
ORIGINAL SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
MARC A. BREDDAN
NO. 48153
EXP. 6/30/18
CIVIL
STATE OF CALIFORNIA

PREPARED BY:

LANDMARK
CONSULTING
LAND DEVELOPMENT ENGINEERING
1903 WRIGHT PLACE, SUITE 220
CARLSBAD, CA 92008 (760) 929-4010

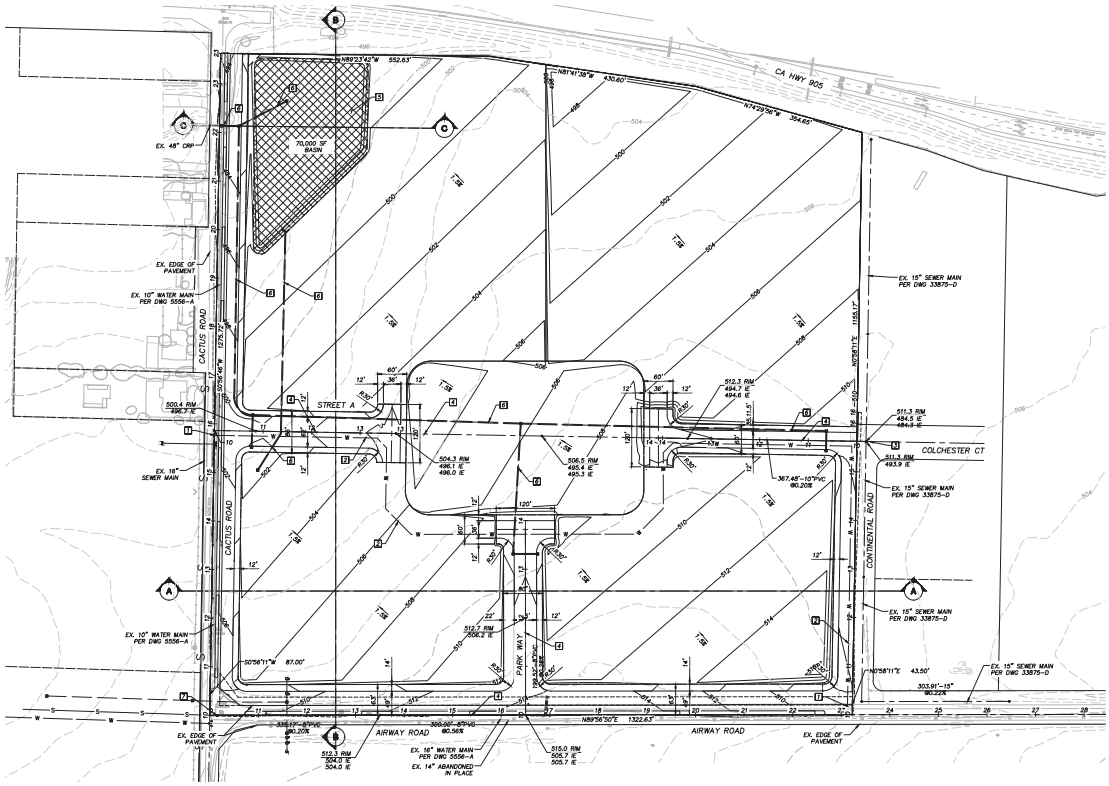
TENTATIVE MAP FOR CENTRAL VILLAGE - OTAY

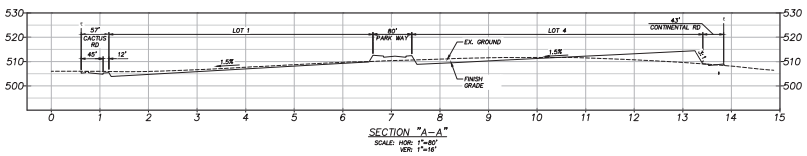
TENTATIVE MAP

SHEET NO. 03 OF 08

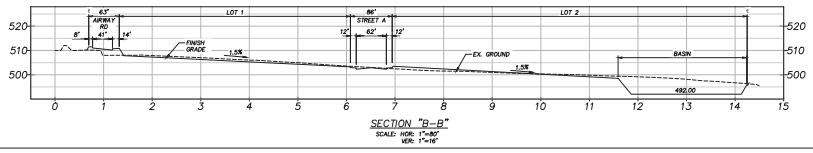
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SECTION "A-A"
SCALE: HOR: 1"=80'
VER: 1"=16'



SECTION "B-B"
SCALE: HOR: 1"=80'
VER: 1"=16'

SECTION "C-C"
SCALE: HOR: 1"=80'
VER: 1"=16'

PRELIMINARY GRADING PLAN NOTES:

1. THIS PLAN IS PROVIDED TO ALLOW FOR FULL AND ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT. THE PROPERTY OWNER ACKNOWLEDGES THAT ACCEPTANCE OR APPROVAL OF THIS PLAN DOES NOT HEREON, AND AGREES TO OBTAIN A VALID GRADING PERMIT BEFORE COMMENCING SUCH ACTIVITY.
2. ALL GRADING DETAILS WILL BE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARD DRAWINGS.

IMPROVEMENT NOTES

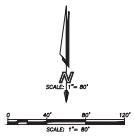
1. CONNECTION TO EXISTING WATER MAIN
2. 12" WATER MAIN
3. CONNECTION TO EXISTING SEWER
4. 8" SEWER MAIN
5. 70,000 SF 60' DEEP BASIN
6. 24" STORM DRAIN
7. CONNECTION TO EXISTING SEWER AT EXISTING MANHOLE

GRADING QUANTITIES

40.27 AC GRADED AREA 100% OF SITE

CUT	90,313 CY	MAX CUT SLOPE (3:1MAX)
FILL	22,467 CY	
EXPORT	67,746 CY	MAX FILL SLOPE (3:1MAX)

THE PROPOSED GRADING FOR THIS PROJECT RESULTS IN 61,250 CY OF EXPORT. THE ANALYSIS IS PRELIMINARY ONLY. THE APPROVAL OF THIS PROJECT DOES NOT ALLOW PROCESSING AND SALE OF THE MATERIAL. ALL SUCH ACTIVITIES REQUIRE A SEPARATE CONDITIONAL USE PERMIT.



REVISIONS
REVISION 5
REVISION 4
REVISION 3
REVISION 2
REVISION 1
ORIGINAL SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
MARC A. BRIDGES
NO. 48153
EXP. 6/30/16
CIVIL
STATE OF CALIFORNIA

PREPARED BY:

LANDMARK
CONSULTING
LAND PLANNING, ENGINEERING, SURVEYING
1220 ROSECRANS AVENUE, SUITE 309
MANHATTAN BEACH, CA 90266 (310) 802-1366

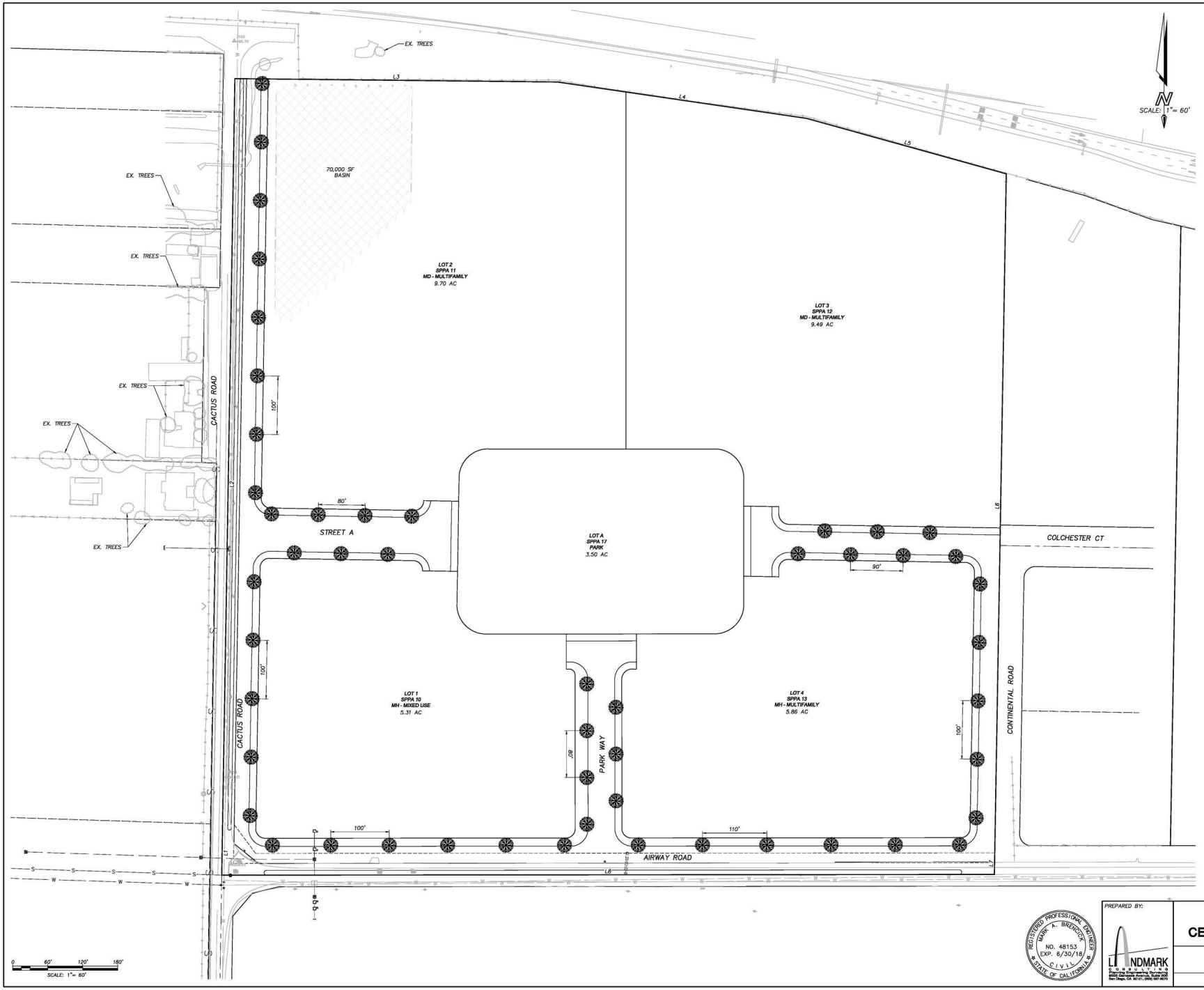
TENTATIVE MAP FOR CENTRAL VILLAGE - OTAY

PRELIMINARY GRADING PLAN

SHEET NO. 04 OF 05

SUBMITTAL

Dwg: p:\2007\...\central village - otay\planning and engineering\tm-(plan)\1 preliminary grading plan\tm_grading_6-15-2015 8:55:56 PM



REVISION 5
REVISION 4
REVISION 3
REVISION 2
REVISION 1
ORIGINAL SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
MARK A. BREWICK
NO. 48153
EXP. 6/30/18
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
LANDMARK CONSULTING
Planning Engineering Surveying
4660 Kenmore Ave., Suite 1000
San Diego, CA 92121, (858) 587-0970

TENTATIVE MAP FOR CENTRAL VILLAGE - OTAY

LANDSCAPE CONCEPT

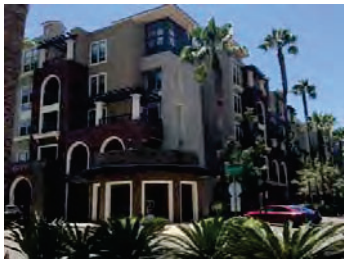
SHEET NO. 05 OF 05

SUBMITTAL

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Ⓒ Stacked Flats



Ⓓ Podium



Ⓔ Mixed-Use Retail



Ⓐ Motorcourt/ Towns



Ⓑ Townhomes



DEVELOPMENT SUMMARY

Ⓐ	Motorcourt/Towns	154 DU
Ⓑ	Townhomes	66 DU
Ⓒ	Stacked Flats	270 DU
Ⓓ	Podium	90 DU
	Total: 580 DU	
Ⓔ	Mixed-Use Retail	5,000-10,000 SF

NORTH
1:200

Groundwurk

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING

Concept Site Plan

Otay Central Village PA10-13

September 25, 2018



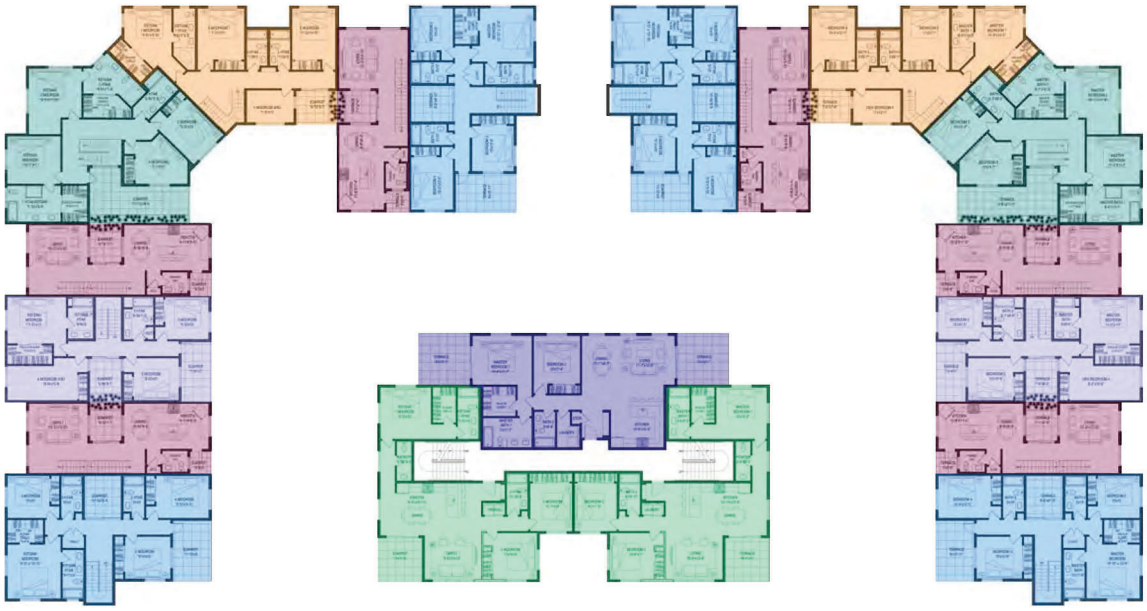
UNIT TYPE	BEDs/BATHs	GROSS AREA	# UNIT
A	4 beds/3.5 baths	1723	4
B	4 beds/2.5 baths	1594	2
C	3 beds/3.5 baths	1500	6
D	4 beds/3.5 baths	2096	2
E	4 beds/3.5 baths	1677	2
F	3 beds/2.5 baths	1218	2
G	2 beds/2 baths	1163	4

FLOREO - OVERALL 1ST FLOOR PLAN

01/04/2019

SCALE: 1/16"=1'

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING



UNIT TYPE	BEDs/BATHs	GROSS AREA	# UNIT
A	4 beds/3.5 baths	1723	4
B	4 beds/2.5 baths	1594	2
C	3 beds/3.5 baths	1500	6
D	4 beds/3.5 baths	2096	2
E	4 beds/3.5 baths	1677	2
F	3 beds/2.5 baths	1218	2
G	2 beds/2 baths	1163	4

FLOREO - OVERALL 2ND FLOOR PLAN

01/04/2019

SCALE: 1/16"=1'

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING



SECURED TAX BILL

1 TAX BILL YEAR 2020-2021

For Fiscal Year Beginning July 1, 2020 and Ending June 30, 2021

CURRENT OWNER

PAEZ JOSEPH JR
7808 ST ANDREWS AVE
SAN DIEGO CA 92154

2 PROPERTY ADDRESS - DESCRIPTION - SUBDIVISION

00000 CACTUS RD

(EX HWY)IN S H OF W H OF NEQ SEC 33-18-1W

SPECIAL MESSAGES

3 MAP NO.

5 DOCUMENT NO. 552600

6 DOCUMENT DATE 07/01/02

4 DESCRIPTION	VALUES & EXEMPTIONS
LAND	$ 4051435
IMPROVEMENTS	
TOTAL L&I	4051435
PERSONAL PROPERTY	
EXEMPTIONS	
HOMEOWNERS	$
OTHER	
NET TAXABLE VALUE	4051435

7 OWNER OF RECORD ON JANUARY 1 PAEZ JOSEPH JR

Z92154 218592 14670 1/1

8 PARCEL / BILL NO.	9 TAX RATE AREA	10 CORTAC NO.	11 1ST INSTALLMENT 11/1		12 2ND INSTALLMENT 2/1		13 TOTAL DUE
646-100-77-00	08215		25973.91	+	25973.91	=	51947.82

14 YOUR TAX DISTRIBUTION

AGENCY	RATE / CONTACT #	TAX AMOUNT
1% TAX ON NET VALUE	1.00000	40514.35
VOTER APPROVED BONDS AND TAXES:		
SD ZOO MAINTENANCE	NET 0.00500	202.57
ELEMENTARY SCHOOL	NET 0.14649	5934.94
HIGH SCHOOL	NET 0.04880	1977.10
COMMUNITY COLLEGE	NET 0.02792	1131.16
METRO WATER DISTRICT	NET 0.00350	141.80
TOTAL ON NET VALUE	1.23171	49901.92
FIXED CHARGE ASSMTS:	PHONE #	
MOSQUITO SURVEILLANCE	800-273-5167	3.00
VECTOR DISEASE CTRL	800-273-5167	2.08
WATER AVAILABILITY	619-670-2712	1188.60
MWD WTR STANDBY CHRG	866-807-6864	456.02

15 YOUR TAX DISTRIBUTION

AGENCY	RATE / CONTACT #	TAX AMOUNT
CWA WTR AVAILABILITY	858-522-6691	396.20
TOTAL AMOUNT		51947.82

23L (06/20)

SECURED TAX BILL

Dan McAllister
SAN DIEGO COUNTY
TREASURER-TAX COLLECTOR

SECURED TAX BILL

For Fiscal Year Beginning July 1, 2021 and Ending June 30, 2022

1 TAX BILL YEAR
2021-2022

CURRENT OWNER
PAEZ JOSEPH JR
7808 ST ANDREWS AVE
SAN DIEGO CA 92154

SPECIAL MESSAGES

2 PROPERTY ADDRESS - DESCRIPTION - SUBDIVISION
00000 CACTUS RD

(EX HWY)IN S H OF W H OF NEQ SEC 33-18-1W

3 MAP NO.

5 DOCUMENT NO.
552600

6 DOCUMENT DATE
07/01/02

4 DESCRIPTION	VALUES & EXEMPTIONS
LAND	$ 4093407
IMPROVEMENTS	
TOTAL L&I	4093407
PERSONAL PROPERTY	
EXEMPTIONS	
HOMEOWNERS	$
OTHER	
NET TAXABLE VALUE	4093407

7 OWNER OF RECORD ON JANUARY 1
PAEZ JOSEPH JR

Z92154 207175 10016 1/1

8 PARCEL / BILL NO.	9 TAX RATE AREA	10 CORTAC NO.	11 1ST INSTALLMENT 11/1		12 2ND INSTALLMENT 2/1		13 TOTAL DUE
646-100-77-00	08215		26361.34	+	26361.34	=	52722.68

14 YOUR TAX DISTRIBUTION

AGENCY	RATE / CONTACT #	TAX AMOUNT
1% TAX ON NET VALUE	1.00000	40934.07
VOTER APPROVED BONDS AND TAXES:		
SD ZOO MAINTENANCE	NET 0.00500	204.68
ELEMENTARY SCHOOL	NET 0.13486	5520.37
HIGH SCHOOL	NET 0.04611	1887.47
COMMUNITY COLLEGE	NET 0.04854	1986.93
METRO WATER DISTRICT	NET 0.00350	143.26
TOTAL ON NET VALUE	1.23801	50676.78
FIXED CHARGE ASSMTS:	PHONE #	
MOSQUITO SURVEILLANCE	800-273-5167	3.00
VECTOR DISEASE CTRL	800-273-5167	2.08
WATER AVAILABILITY	619-670-2712	1188.60
MWD WTR STANDBY CHRG	866-807-6864	456.02

15 YOUR TAX DISTRIBUTION

AGENCY	RATE / CONTACT #	TAX AMOUNT
CWA WTR AVAILABILITY	858-522-6691	396.20
TOTAL AMOUNT		52722.68

23L (06/20)

SECURED TAX BILL

C Young Associates
1042 Skylark Drive
La Jolla, California 92037

PUBLIC NOTIFICATION

REQUEST FOR NO FURTHER ACTION
Lumina/Epoca (Otay Canyon Ranch)
Cactus Road, San Diego, California
Voluntary Assistance Program Case #DEH2014-LSAM-000254
GeoTracker Global ID# T10000006065
Public Comment Period December 16, 2022 to January 15, 2023

Dear Property Owner or Occupant:

The County of San Diego Department of Environmental Health (DEH) invites you to comment on the DEH's intent to grant regulatory closure for the Voluntary Assistance Program, Case No. DEH2014-LSAM-000254, associated with the Lumina/Epoca (Otay Canyon Ranch) property located along Cactus Road in San Diego, California (Site).

The approximately 100 acre Site has been recently graded for new mixed-use development. The majority of the Site was formerly used for agricultural purposes which resulted in the presence of residual organochlorine pesticides being present in relatively shallow soil throughout the Site. A former reservoir was present in the northern portion of the Site which contained waste and fill material with elevated concentrations of one or more heavy metals. In addition, portions of two canyon areas (i.e., identified as the north and south canyons) were previously filled with varying amounts of fill material, but of no remarkable environmental impact.

Soil management work completed concurrent with Site grading and construction activities included the clearing and preparation of the north and south canyon areas for placement/processing of previously placed fill materials as suitable fill for the new Site development. In addition, former agricultural soils were placed as deep fill in the north and south canyon areas. Lastly, the contents of the former reservoir were removed from the Site and delivered to a landfill in Yuma, Arizona for disposal. All work was completed under a DEH approved Soil Management Plan. Confirmation soil samples collected from throughout the Site indicated that remaining soils were suitable for residential and other mixed-use purposes. The work completed has been documented in a report titled Soil Management Closure Report and dated September 8, 2022.

C Young Associates has requested no further action and DEH concurs with no further action, pending a 30-day public review period. Public comments are being accepted by the DEH during the public comment period stated above. The Soil Management Closure Report and other Site information are available on the State Water Resources Control Board GeoTracker website:

https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000006065

Please direct any questions to the DEH case worker:

Ewan Moffat
County of San Diego Department of Environmental Health and Quality
5500 Overland Avenue, San Diego, CA 92123
Phone – (858) 505-6856
Email – Ewan.Moffat@sdcounty.ca.gov

THE CITY OF SAN DIEGO

For:

The City of San Diego
Development Services Department
Building, Safety, & Construction

1222 First Avenue, M.S. 501
San Diego, CA 92101-4155

LETTER OF PERMISSION FOR OFFSITE GRADING/IMPROVEMENTS

PROJECT NUMBER: 673439

INTERNAL ORDER NUMBER: _____

I am the owner of S.W. 1/4 of the N.E. 1/4 of Section 33, Township 18 south, Range 1 west. ROS 13227 (APN 646-100-77) (Owner)

(Legal Description/Address-Owner)

which is adjacent to Lots 1 thru 8 of Map No. 16481 (Applicant)

(Legal Description/Address -Applicant)

has reviewed the proposed grading/improvements as shown on City of San Diego Drawing No. 42088-D, with the above referenced project number, and do hereby grant permission for the City of San Diego to issue a permit for the grading/improvements to be performed and/or constructed by ColRich (*Applicant/Developer*) on property as shown thereon.

The grading/improvements for which permission is granted can be more particularly described as:

Grade a 2:1 slope from the public right-of-way of Airway Road into APN 646-100-77 (for a maximum of. 3.5-feet into the property and for a length of approx. 400LF) due to the widening and raising of Airway Road.

Owner:

JOE PAEZ, JR. (who took title as Joseph, Paez, Jr.)
Print Name

n/a
Title

n/a
Company

Signature 4/6/2022
Date

This information is available in alternative formats for persons with disabilities, upon request.

THE CITY OF SAN DIEGO

For:

The City of San Diego
Development Services Department
Land Development Review Division

1222 First Avenue, M.S. 501
San Diego, CA 92101-4155

WWW.Sandiego.Gov

LETTER OF PERMISSION FOR OFFSITE GRADING/IMPROVEMENTS

P.T.S. PROJECT NUMBER: 88430

WORK ORDER NUMBER: 425574

West 1/2, NE 1/2, Section 33, T18S, R1W, S.B.M. (Owner)
(*Legal Description/Address-Owner*)

which is adjacent to Lots 10,14,18,& 22 of Final Map No. 13498 Recorded November 10, 1997 (Applicant)
(*Legal Description/Address -Applicant*)

and have reviewed the proposed grading/improvements as shown on City of San Diego Drawing No. 33876-D & 33877-D, with the above referenced Project Tracking System (PTS) number, and do hereby grant permission for the City of San Diego to issue a permit for the grading/improvements to be performed and/or constructed by (*Owner/Developer*) Murphy Development Company on property as shown thereon.

The grading/improvements for which permission is granted can be more particularly described as:

Minor grading and the construction of a sewer main along the joint property line, which is the future centerline of Continental Street as shown in drawings 33874-D & 33875-D.

Owner:

Joseph Paez
Print Name

Joe PAEZ JR
Title

Owner
Company

Signature Date

This information is available in alternative formats for persons with disabilities, upon request.

CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of San Diego

On Jan 21, 2009 before me, Beatriz Torres Notary Public
(Here insert name and title of the officer)

personally appeared Joseph Paez, Jr.

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(~~ies~~), and that by ~~his/her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Beatriz Torres
Signature of Notary Public

BEATRIZ TORRES
COMM. # 1747290
NOTARY PUBLIC - CALIFORNIA
SAN DIEGO COUNTY
MY COMM. EXP. MAY 26, 2011

(Notary Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

_____
(Title or description of attached document)

_____
(Title or description of attached document continued)

Number of Pages _____ Document Date _____

_____
(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

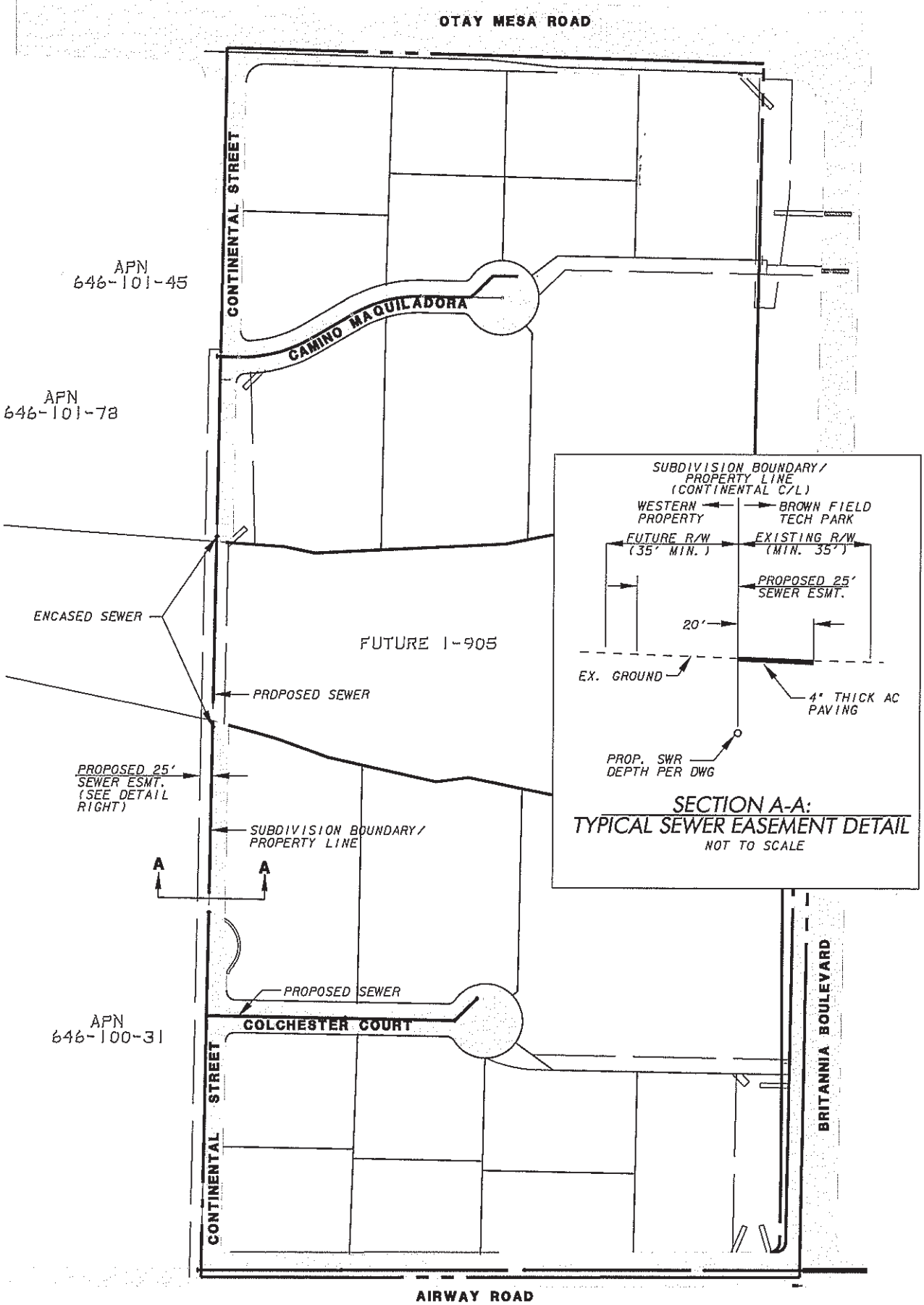
_____
(Title)

- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must, contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they~~, is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document



PLOTTED: 6/3/2008 K:\09960006\GRA\Exhibits\sewer\fbtp_esmt.dgn

JUNE 2, 2008

SEWER EASEMENT EXHIBIT

BROWN FIELD TECH PARK

RECORDING REQUESTED BY:

THE CITY OF SAN DIEGO

AND WHEN RECORDED MAIL TO:

CITY CLERK
CITY OF SAN DIEGO
MAIL STATION 2A

Originating Dept – DSD/LDR – M.S. 501

(THIS SPACE FOR RECORDER'S USE ONLY)

GRANT DEED - SEWER EASEMENT

J.O. NO: 425575

ASSESSOR'S PARCEL NO: 646-101-72

PTS NO: 88422

DWG NO: _____

NO DOCUMENT TAX DUE
R & T CODE 11922

NO FEE FOR GOVT. AGENCY
GOVERNMENT CODE 27383

For valuable consideration, receipt of which is hereby acknowledged, JOSEPH PAEZ, JR., a single man

HEREBY GRANT(S) to the City of San Diego, a municipal corporation, in the County of San Diego, State of California, a permanent easement and a right-of-way for access to construct, reconstruct, maintain, operate and repair **sewer facilities,** including any or all appurtenances thereto, together with the right of ingress and egress, over, under, along and across all that real property situated in the City of San Diego, County of San Diego, State of California, described as follows:

See exhibit "A" attached hereto and exhibit "B" attached for illustration purposes

Reserving unto the Grantor herein, heirs and assigns the continued use of the above described parcel of land subject to the following conditions: The erecting of buildings, masonry walls, and other permanent structures; the planting of trees; the changing of the surface grade; and the installation of privately owned pipe lines shall be prohibited except by an Encroachment Maintenance and Removal Agreement issued by the City Engineer.

Date: 11/21/09

Grantor: *(type or print)* JOE PAEZ JR

By: *(signature)* _____
(type or print name)

This is to certify that the interest in real property conveyed by this instrument to the City of San Diego, a municipal corporation, is hereby accepted by the undersigned officer on behalf of the City of San Diego, pursuant to authority conferred by the Municipal Code, and the grantee consents to recordation thereof by its duly authorized officer.

Date: _____

For City Engineer
By: _____

NOTE: NOTARY ACKNOWLEDGMENTS FOR ALL SIGNATURES MUST BE ATTACHED, PER CIVIL CODE SEC. 1180 ET. SEQ.

EXHIBIT 'A'
LEGAL DESCRIPTION

SEWER EASEMENT

THE EASTERLY 25.00 FEET OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE ONE WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT PORTION OF LAND CONDEMNED TO THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, RECORDED JULY 13, 2007 AS DOCUMENT NO. 2007-0469983, OFFICIAL RECORDS, SAN DIEGO COUNTY, CALIFORNIA.

TOGETHER WITH A PORTION OF THE SOUTHEAST QUARTER OF SAID SECTION 33, MORE PARTICULARY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 33, SAID POINT BEING ALSO ON THE CENTERLINE OF CONTINENTAL STREET AS SHOWN PER MAP 13498, RECORDED NOVEMBER 10, 1997 AS FILE NUMBER 97-0567091, OFFICIAL RECORDS, SAN DIEGO COUNTY, CALIFORNIA; THENCE ALONG THE CENTERLINE OF SAID CONTINENTAL STREET SOUTH 00°58'25" WEST 43.50 FEET TO THE CENTERLINE OF AIRWAY ROAD AS SHOWN PER RECORD OF SURVEY 13227, RECORDED JUNE 6, 1991 AS FILE NUMBER 91-271215, OFFICIAL RECORDS, SAN DIEGO COUNTY, CALIFORNIA;

J.O. 425575
P.T.S. 88422
DWG: XXXXX-B

EXHIBIT 'A'
LEGAL DESCRIPTION

SEWER EASEMENT

THENCE ALONG SAID CENTERLINE OF AIRWAY ROAD SOUTH 89°56'49" WEST 25.00 FEET; THENCE LEAVING SAID CENTERLINE OF AIRWAY ROAD NORTH 00°58'25" EAST 44.33 FEET; THENCE SOUTH 88°10'07" EAST 25.00 FEET TO THE SAID CENTERLINE OF CONTINENTAL STREET AND THE POINT OF BEGINNING.

THE ABOVE DESCRIBED EASEMENT CONTAINS 30,055 SQUARE FEET, MORE OR LESS.

MICHAEL JAMES KNAPTON
P.L.S.8012 EXPIRES 12/31/08

6/10/08
DATE



J.O. 425575
P.T.S. 88422
DWG: XXXXX-B

CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of San Diego

On Jan 21, 2009 before me, Beatriz Torres, Notary Public
(Here insert name and title of the officer)

personally appeared Joseph Paez, Jr

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

(Notary Seal)

BEATRIZ TORRES
COMM. # 1747290
NOTARY PUBLIC - CALIFORNIA
SAN DIEGO COUNTY
MY COMM. EXP. MAY 25, 201

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages ____ Document Date____

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

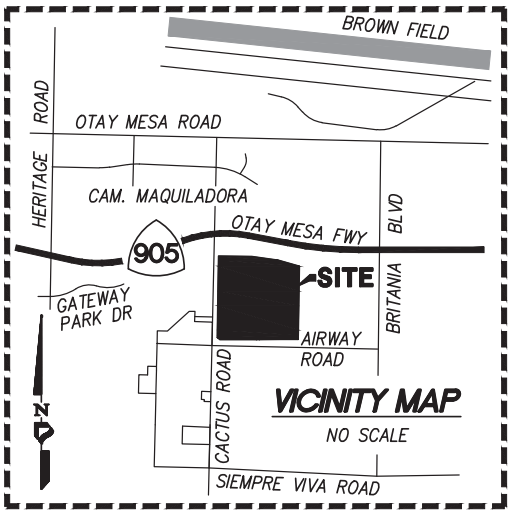
- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other ____

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  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

EXHIBIT "B"



VICINITY MAP
NO SCALE

LEGEND

- INDICATES STREET EASEMENT ACQUIRED AREA = 0.893 AC. MORE OR LESS
- INDICATES SUBJECT PROPERTY BOUNDARY
- INDICATES EXISTING RIGHT OF WAY
- INDICATES EXISTING SECTION LINE
- INDICATES EXISTING LOT/PARCEL LINE
- ( ) INDICATES MEASURED AND RECORD DATA PER ROS NO. 22398
- [ ] INDICATES TIE LINE DIMENSIONS
- ● INDICATES 3/4" IRON PIPE WITH DISC STAMPED "R.C.E. 33487" PER ROS 13227 & 22398. ACCEPTED AS THE CENTER OF SECTION 33
- [A] INDICATES CENTERLINE OF EXISTING SDG&E ELECTRIC TRANSMISSION LINE EASEMENT REC. 10/19/1948 IN BK. 2985, PG. 317, O.R. NO WIDTH GIVEN; EASEMENT CENTERLINE LOCATED 18' EASTERLY & PARALLEL WITH CENTERLINE OF CACTUS ROAD.
- [B] INDICATES SLOPE EASEMENT (PARCEL 33278-4) PER FINAL ORDER OF CONDEMNATION DOC. NO.2010-0547452, 10/12/2010, O.R.

LEGAL DESCRIPTION

PORTION OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO UNITED STATES GOVERNMENT SURVEY THEREOF.

EXCEPTING THEREFROM THAT PORTION DESCRIBED IN FINAL ORDER OF CONDEMNATION RECORDED JULY 13, 2007 AS INSTRUMENT NO. 2007-0469983 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED IN FINAL ORDER OF CONDEMNATION RECORDED OCTOBER 12, 2010 AS INSTRUMENT NO. 2010-0547452 OF OFFICIAL RECORDS.

ASSESSOR'S PARCEL NO.

- 646-100-77

REFERENCE DRAWINGS

- ROS NO. 22398
- ROS NO. 16667

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS DRAWING IS THE WEST LINE OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, AS SHOWN ON RECORD OF SURVEY NO. 22398.

I.E. NORTH 00°56'49" EAST

LICENSED LAND SURVEYOR
GARY L. HUS
NO. 7019
STATE OF CALIFORNIA

GARY L. HUS, L.S. 7019 DATE

PROJECT DESIGN CONSULTANTS
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel 619.234.0349 Fax

DOCUMENT NO.: _____

RECORDED: _____

PUBLIC STREET EASEMENT

PORTION OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, S.B.M.

DESCRIPTION	BY	APPRVD.	DATE	FILMED
ORIGINAL	PDC			

STATUS

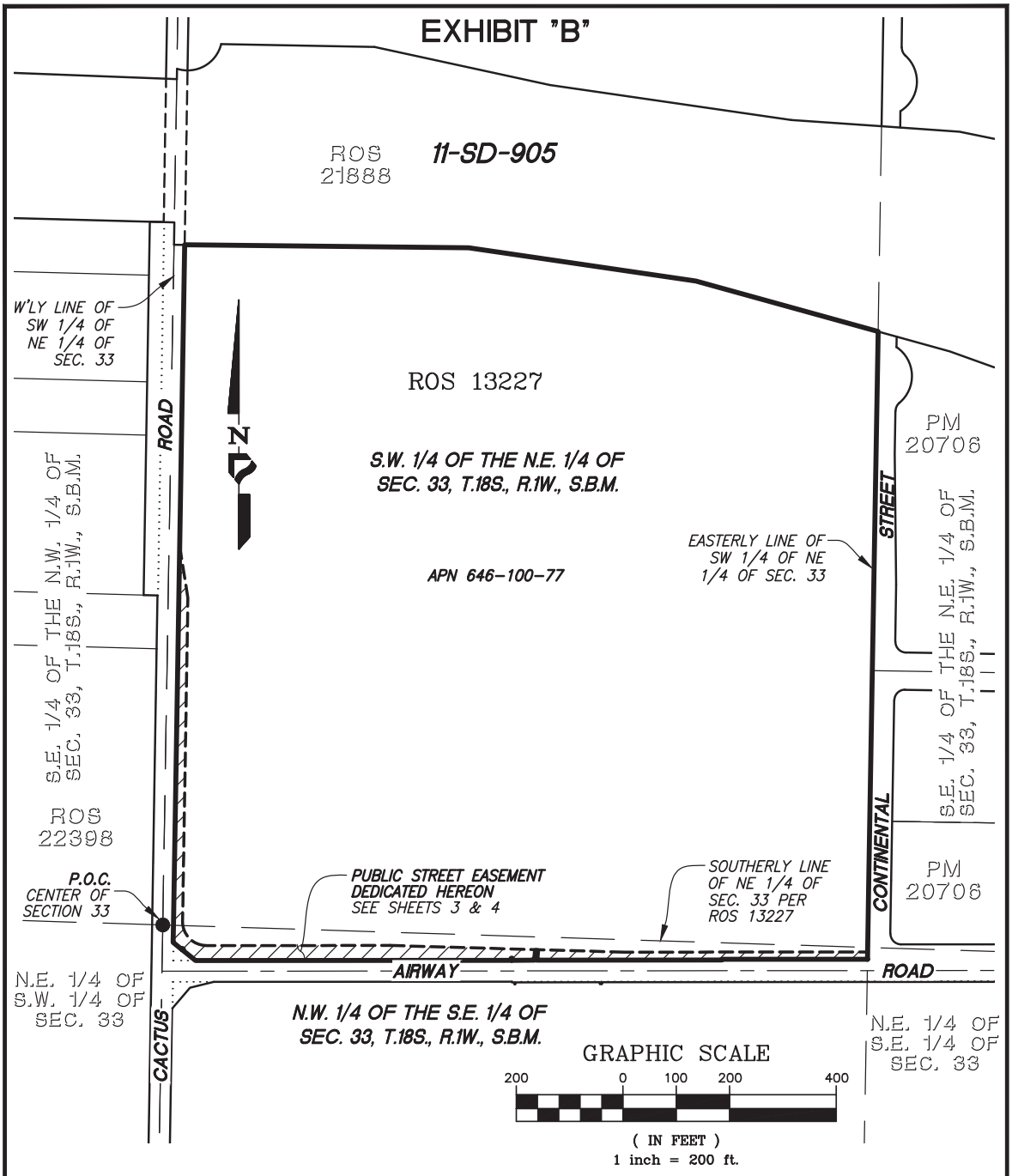
CITY OF SAN DIEGO, CALIFORNIA
SHEET 1 OF 4 SHEETS

FOR CITY LAND SURVEYOR DATE

P.T.S. NO. _____
I.O. NO. N/A
1782-6331
CCS83 COORDINATES
142-1771
LAMBERT COORDINATES
_____-B

P:\2357.80\Mapping\Plats\OFFSITE\STREET DEDICATIONS\APN 646-100-77 Cactus St-Airway Rd\2357.80_Cactus-Airway_Bsht_646-100-77_Sh1-2.dwg
Feb 09, 2021 - 3:48pm

EXHIBIT "B"



PROJECT DESIGN CONSULTANTS
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel 619.234.0349 Fax

PUBLIC STREET EASEMENT

PORTION OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, S.B.M.

DESCRIPTION	BY	APPRVD.	DATE	FILMED
ORIGINAL	PDC			

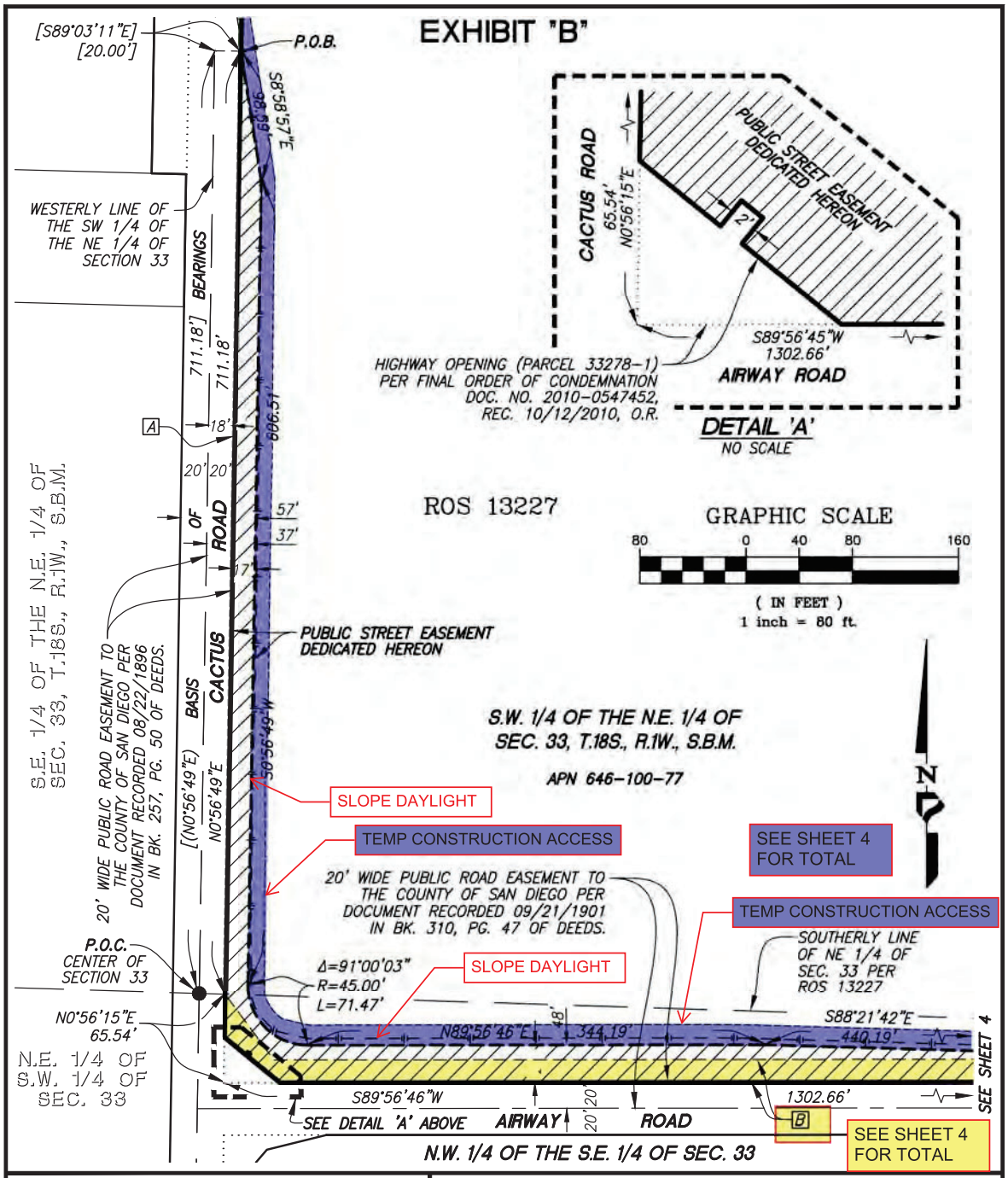
STATUS

CITY OF SAN DIEGO, CALIFORNIA
SHEET 2 OF 4 SHEETS

FOR CITY LAND SURVEYOR DATE

P.T.S. NO. _____
I.O. NO. N/A
1782-6331
CCS83 COORDINATES
142-1771
LAMBERT COORDINATES
_____-B

P:\2357.80\Mapping\Plats\OFFSITE\STREET DEDICATIONS\APN 646-100-77 Cactus St-Airway Rd\2357.80_Cactus-Airway_Bsht_646-100-77_Sh1-2.dwg
Feb 09, 2021 - 3:49pm



PROJECT DESIGN CONSULTANTS
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel 619.234.0349 Fax

PUBLIC STREET EASEMENT

PORTION OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, S.B.M.

DESCRIPTION	BY	APPRVD.	DATE	FILMED
ORIGINAL	PDC			

STATUS

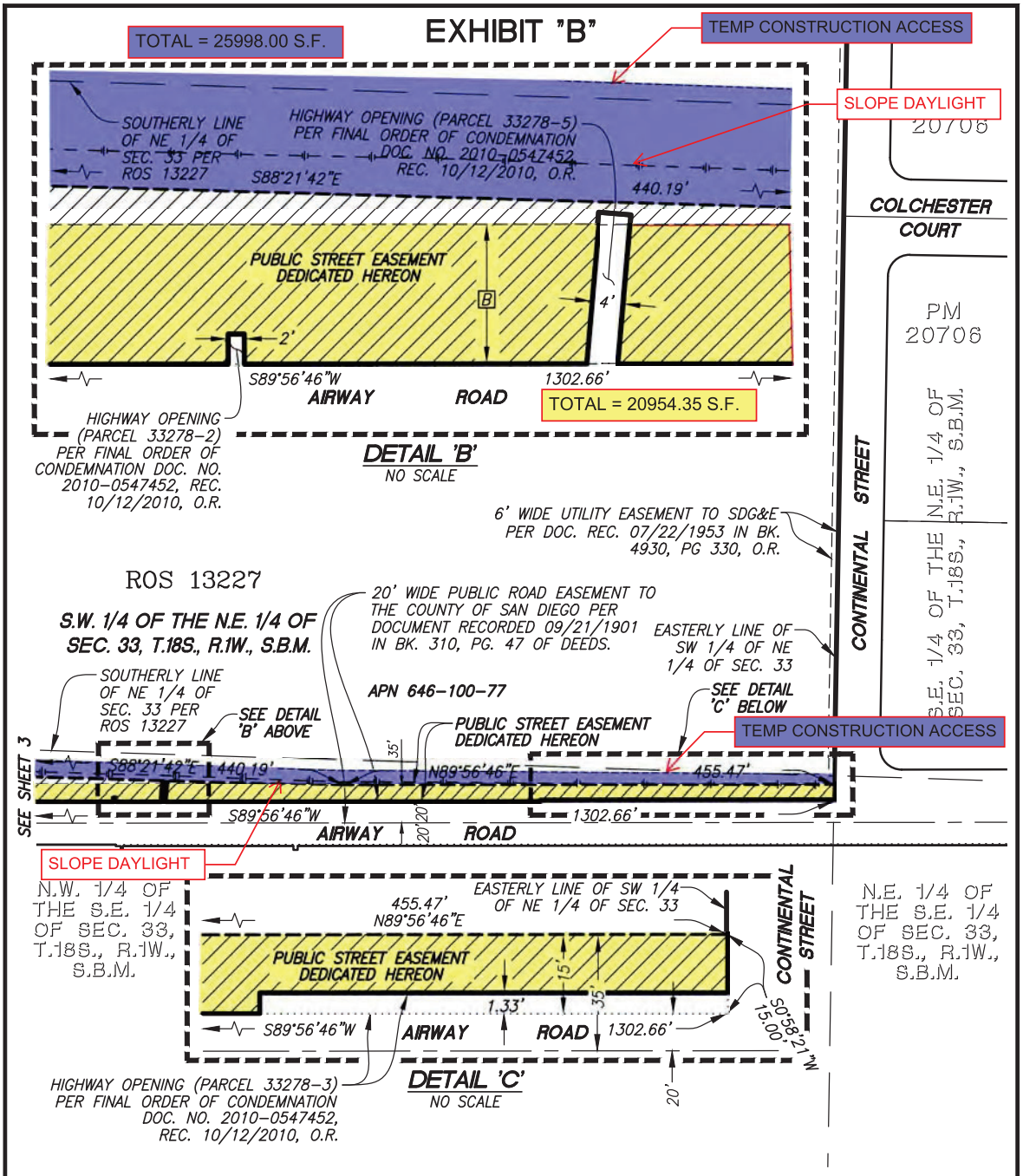
CITY OF SAN DIEGO, CALIFORNIA
SHEET 3 OF 4 SHEETS

FOR CITY LAND SURVEYOR DATE

P.T.S. NO. _____
I.O. NO. N/A
1782-6331
CCS83 COORDINATES
142-1771
LAMBERT COORDINATES
_____-B

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Aug 30, 2022 - 4:59pm

EXHIBIT "B"



PROJECT DESIGN CONSULTANTS
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel 619.234.0349 Fax

AREA TOTALS
SLOPE EASEMENT (2009): 20954.35 S.F.
TEMP. SLOPE CONSTRUCTION EASEMENT: 25998.00 S.F.

PUBLIC STREET EASEMENT

PORTION OF SECTION 33, TOWNSHIP 18 SOUTH, RANGE 1 WEST, S.B.M.

DESCRIPTION	BY	APPRVD.	DATE	FILMED
ORIGINAL	PDC			

STATUS

CITY OF SAN DIEGO, CALIFORNIA
SHEET 4 OF 4 SHEETS

FOR CITY LAND SURVEYOR DATE

P.T.S. NO. _____
I.O. NO. N/A
1782-6331
CCS83 COORDINATES
142-1771
LAMBERT COORDINATES
_____-B

P:\2357.80\Engr\Exhibits\Epoca Offsite Easement RoW Acquisition Calculations\2357.80_Cactus-Airway_Bsht_646-100-77_Sh4.dwg
Aug 30, 2022 - 5:00pm

JAMES NAUGHTON JR., MAI

APPRAISAL REPORT

ROAD WIDENING OFFSITES – EPOCA PROJECT
Britannia Innovation Center LLC – 5761 Airway Road, San Diego 92154
Joseph Paez, Jr. – Cactus Road, San Diego 92154
Crown Enterprises Inc. – San Diego, CA 92154

Ref. No. 22-009

PREPARED FOR:

Jason Shepard
Director of Project Management
ColRich Communities
444 West Beech St. Suite 300
San Diego, CA, 92101

PREPARED BY:

James Naughton, Jr., MAI
State Certified General Real Estate Appraiser
Certificate #AG006748

DATE OF VALUATION:

August 21, 2022

JAMES (Buzz) NAUGHTON, JR, MAI
Real Estate Appraisal & Consultation
14272 Half Moon Bay Drive
Del Mar, CA 92014

DRAFT