

DOCKETED	
Docket Number:	24-OPT-04
Project Title:	Potentia-Viridi Battery Energy Storage System
TN #:	261423
Document Title:	DR Response 2 - Attachment 16, Updated Civil Plans
Description:	This document provides the updated Civil Package for the Project, including the Site Plan, Preliminary Grading Plan, and Preliminary Stormwater Plan
Filer:	Ronelle Candia
Organization:	Dudek
Submitter Role:	Applicant Consultant
Submission Date:	1/29/2025 8:27:11 AM
Docketed Date:	1/29/2025

Attachment 16

Civil Plans



VICINITY MAP
SCALE: 1"=5000'

LEGEND

- CENTERLINE
- EASEMENT LINE
- PROPERTY LINE
- PROPOSED LEASE LINE
- PROJECT BOUNDARY
- EXISTING CHAIN LINK FENCE
- PROPOSED FENCE
- RAILROAD
- EXISTING UTILITY POLE

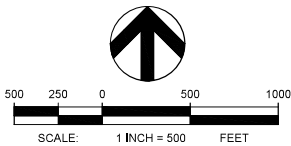
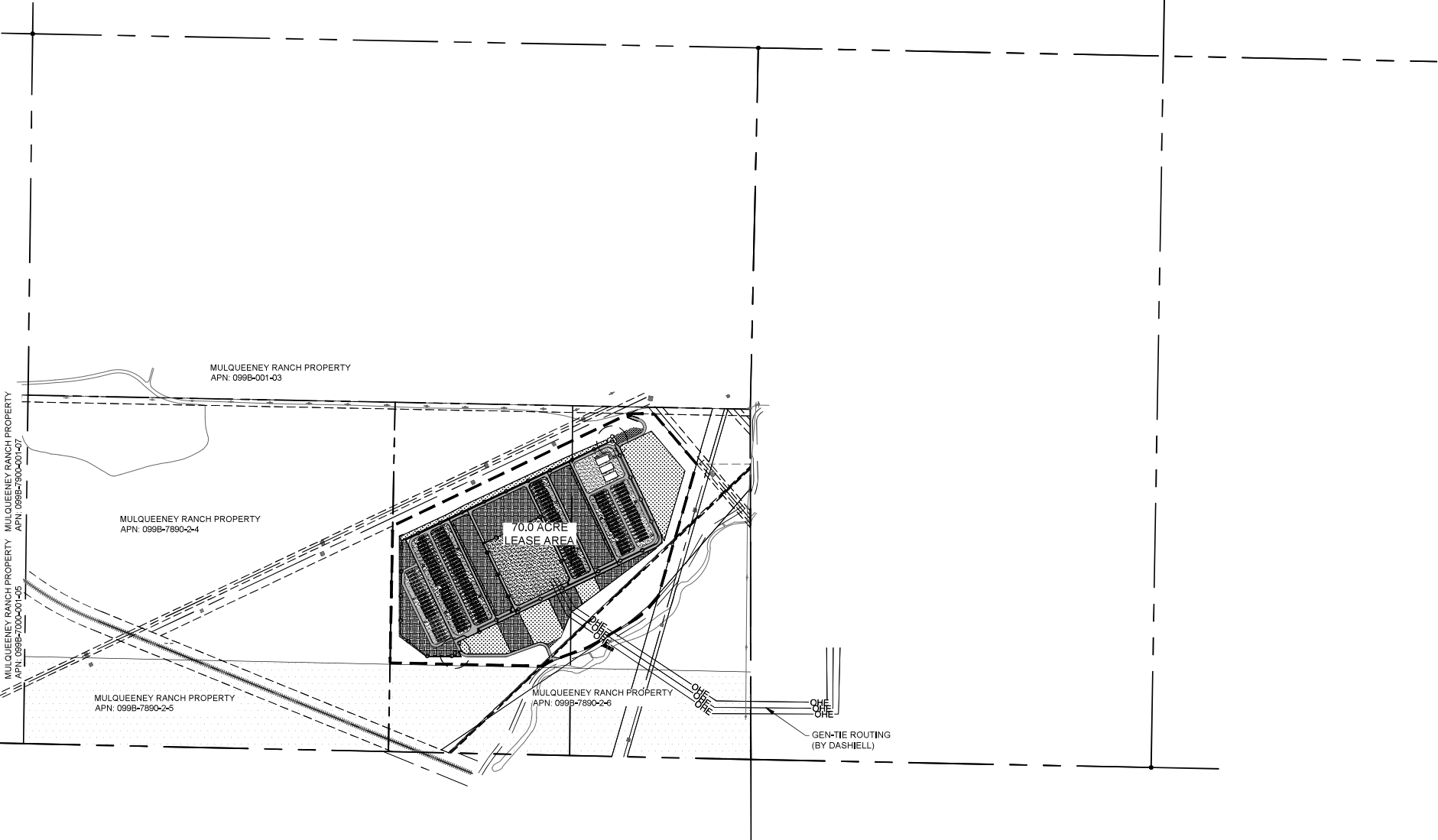
SITE INFORMATION

TOTAL AREA	321.2 ACRES
PARCEL AREA	70.0 ACRES (3,049,200 SF)
APN(S)	99B-7890-2-4
EXISTING ZONING	AGRICULTURE (A)
EXISTING LAND USE	VACANT
PROPOSED LAND USE	INDUSTRIAL
FEMA FLOOD ZONE	ZONE X

UNAUTHORIZED CHANGES & USES
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS. THESE PLANS PREPARED BY COFFMAN ENGINEERING ARE FOR DEPICTING THE LOCATION OF STRUCTURAL WALLS ONLY. SEE PLANS AND CALCULATIONS BY OTHERS FOR ALL STRUCTURAL WORK. THE STABILITY OF WALL AND EARTH SYSTEMS ARE BY OTHERS AND ARE NOT INFERRED OR REPRESENTED BY THESE PLANS.

PROPERTY LINES
THE PROPERTY LINES SHOWN HEREON ARE BASED ON PRELIMINARY SURVEY DATA, AND ARE FOR REFERENCE ONLY. THIS IS NOT A BOUNDARY SURVEY MAP AND SHOULD NOT BE USED AS SUCH.

HORIZONTAL & VERTICAL DATUM
THIS MAP IS BASED ON FIELD SURVEY INFORMATION BY TETRA TECH.



UTILITY STATEMENT
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.



POTENTIA-VIRIDI
BATTERY ENERGY
STORAGE SYSTEM

LEVY ALAMEDA, LLC

NOT FOR
CONSTRUCTION

REV	DATE	DESCRIPTION
1	1/17/25	REV 1
PROJ. NO.	232059	
DRAWN	LB	
CHECKED	RB	
DATE	7/15/24	

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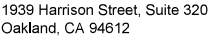
SHEET TITLE:

LEASE AREA &
SURROUNDING
FEATURES

SHEET NO:

G-1.0

SHEET 7 OF 7



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POTENTIA-VIRIDI BATTERY ENERGY STORAGE SYSTEM

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1	1/17/25	REV 1
REV	DATE	DESCRIPTION

ROJ. NO. 23205

RAWN LI

CHECKED _____ RE _____

DATE 7/15/2

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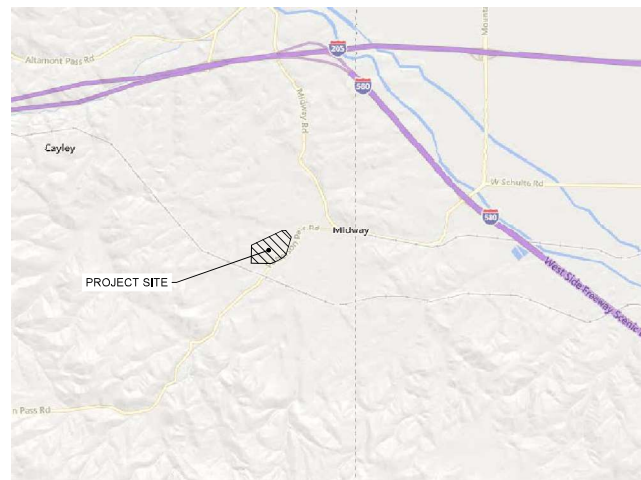
SHEET TITLE:

LEASE AREA & SURROUNDING FEATURES

SHEET NO:

G-1.0A










SHEET 7 OF 7



VICINITY MAP

SCALE: 1"=5000'

LEGEND

	CENTERLINE
	EASEMENT LINE
	PROPERTY LINE
	PROPOSED LEASE LINE
	PROJECT BOUNDARY
	EXISTING CHAIN LINK FENCE
	PROPOSED FENCE
	RAILROAD
	EXISTING UTILITY POLE

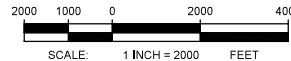
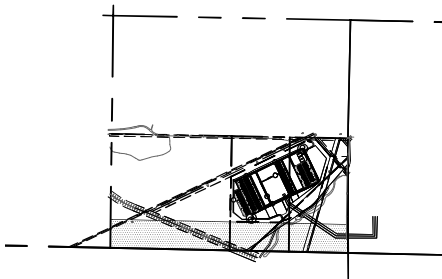
SITE INFORMATION

TOTAL AREA	321.2 ACRES
PARCEL AREA	70.0 ACRES (3,049,200 SF)
APN(S)	99B-7890-24
EXISTING ZONING	AGRICULTURE (A)
EXISTING LAND USE	VACANT
PROPOSED LAND USE	INDUSTRIAL
FEMA FLOOD ZONE	ZONE X

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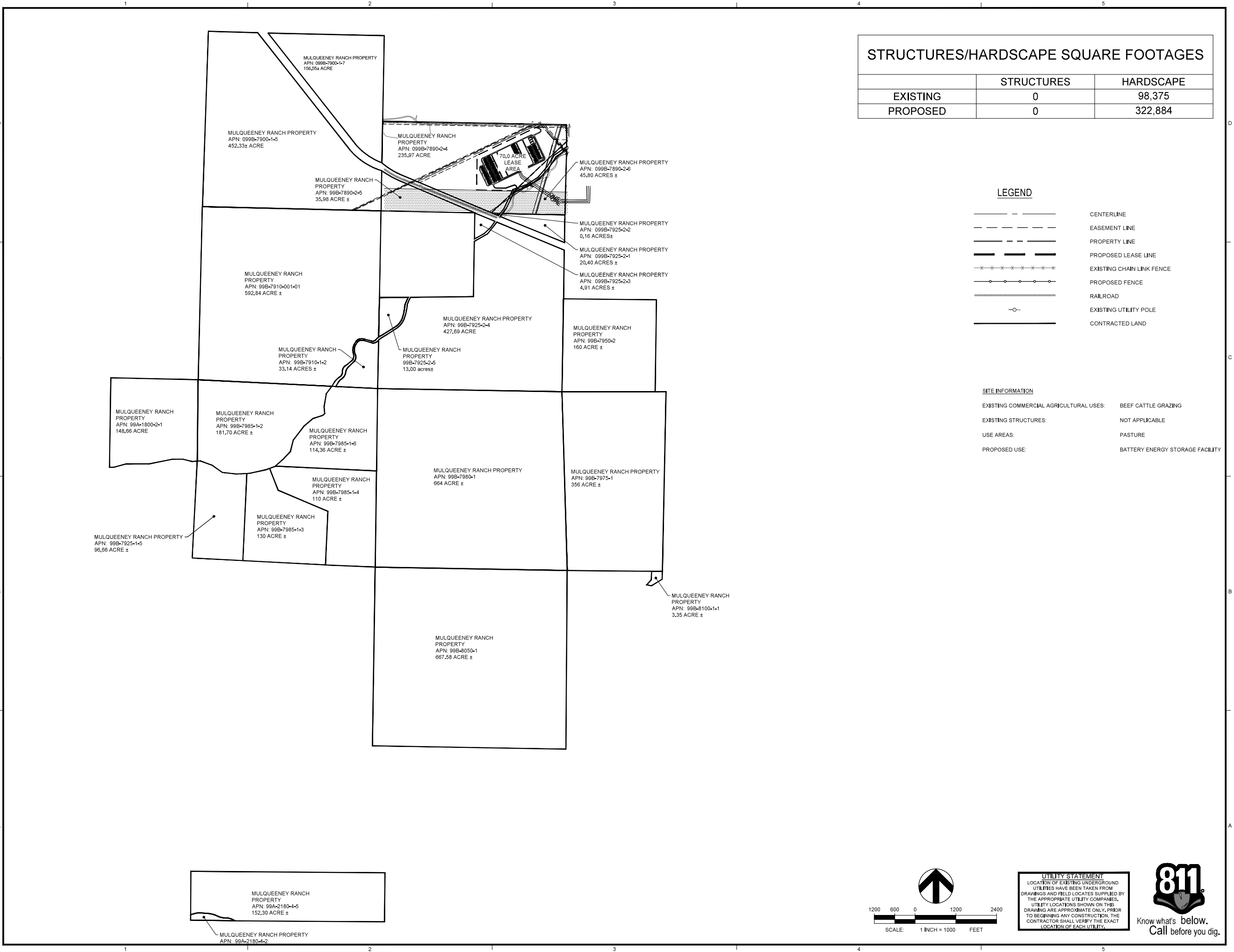
HORIZONTAL & VERTICAL DATUM
THIS MAP IS BASED ON FIELD SURVEY INFORMATION BY TETRA TECH.



UTILITY STATEMENT
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Know what's below.
Call before you dig



STRUCTURES/HARDSCAPE SQUARE FOOTAGES		
	STRUCTURES	HARDSCAPE
EXISTING	0	98,375
PROPOSED	0	322,884

LEGEND

- CENTERLINE
- EASEMENT LINE
- PROPERTY LINE
- PROPOSED LEASE LINE
- EXISTING CHAIN LINK FENCE
- PROPOSED FENCE
- RAILROAD
- EXISTING UTILITY POLE
- CONTRACTED LAND

SITE INFORMATION

- EXISTING COMMERCIAL AGRICULTURAL USES: BEEF CATTLE GRAZING
- EXISTING STRUCTURES: NOT APPLICABLE
- USE AREAS: PASTURE
- PROPOSED USE: BATTERY ENERGY STORAGE FACILITY

POTENTIA-VIRIDI
BATTERY ENERGY
STORAGE SYSTEM

LEVY ALAMEDA, LLC

NOT FOR
CONSTRUCTION

1	1/17/25	REV 1
REV	DATE	DESCRIPTION

PROJ. NO.	232059
DRAWN	LB
CHECKED	RB
DATE	7/15/24

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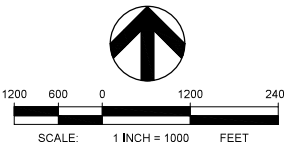
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WILLIAMSON ACT

SHEET NO:

G-2.0

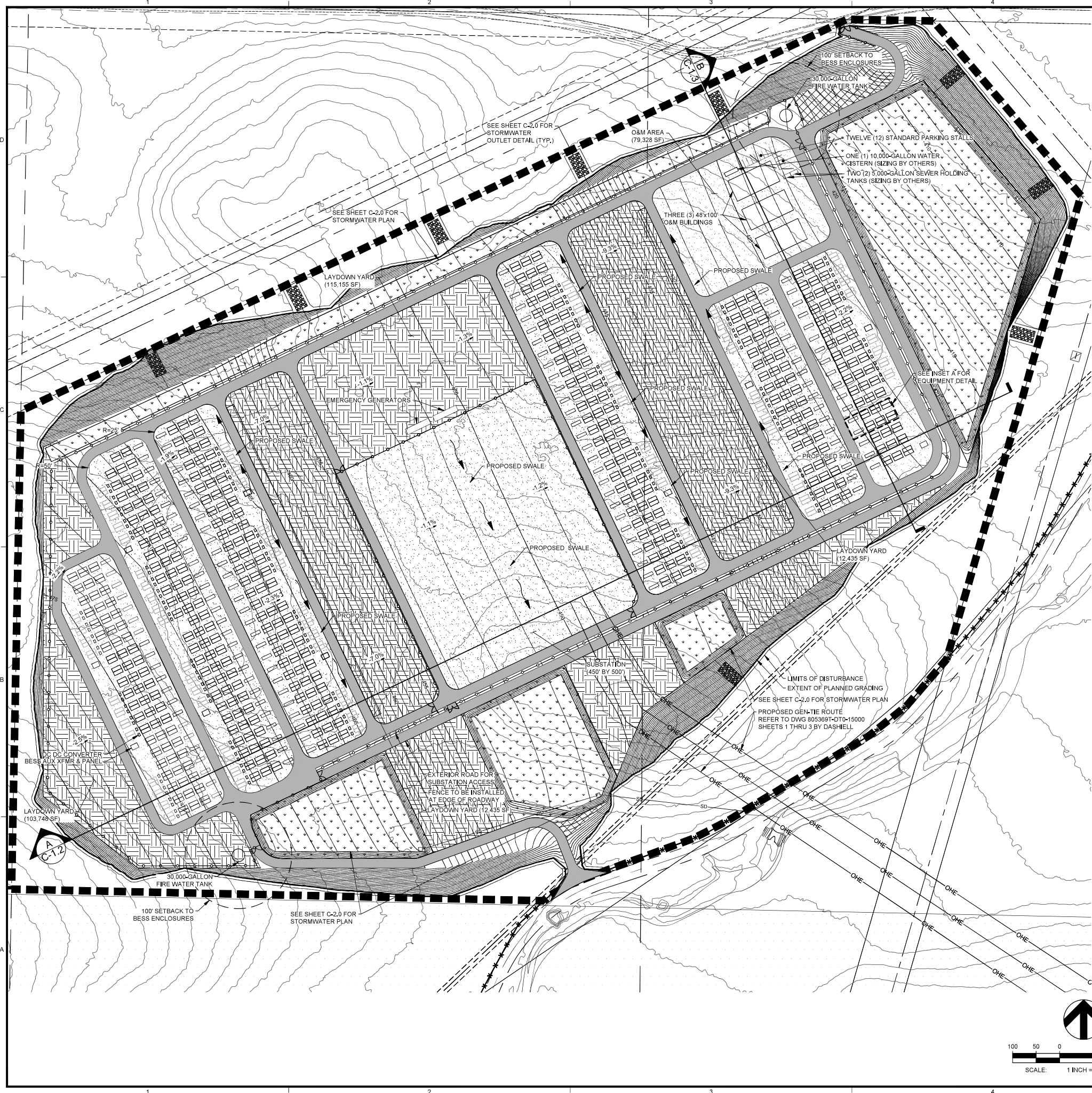
SHEET 7 OF 7



UTILITY STATEMENT
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.



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ABBREVIATIONS

ESS

PCS

POI

XMFR

ENERGY STORAGE SYSTEM

POWER CONVERSION SYSTEM

POINT OF INTERCONNECTION

TRANSFORMER

LEGEND

GRAVEL ACCESS ROAD

GRAVEL

STORMWATER/LID AREA

LAYDOWN AREA

OTHER

GRADING LIMIT

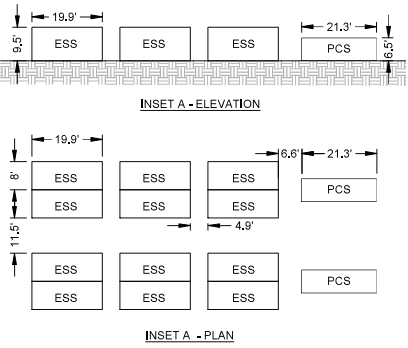
LIMITS OF DISTURBANCE

SYSTEM SUMMARY	
ESS TYPE*	SOLBANK
ESS QUANTITY	1000
PCS UNITS	140
BATTERY CAPACITY	400 MW/3200 MWH

BESS YARD	13.3 ACRES
PROJECT SUBSTATION	5.4 ACRES
ACCESS ROADS	7.1 ACRES
LAYDOWN YARD	14.0 ACRES
O&M AREA (INCLUDING BUILDINGS)	1.8 ACRES
STORMWATER AREAS**	9.0 ACRES
STORMWATER OUTFALL	0.6 ACRES
OTHER***	7.6 ACRES
TOTAL DISTURBED AREA***	58.8 ACRES

NOTE:
* ESS TYPE LISTED WAS USED FOR PRELIMINARY DESIGN/DIMENSIONS. EXACT TECHNOLOGY TO BE SELECTED DURING FUTURE DESIGN PHASE
** PRELIMINARY STORMWATER TREATMENT AND STORAGE SIZING BASED ON ALAMEDA COUNTY STANDARDS
*** INCLUDES SLOPED AREAS TO GRADING DAYLIGHT AND 6' BUFFER TO LIMITS OF DISTURBANCE

- FIRE NOTES:
- 1) FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET.
 - 2) INTERNAL RADII = 25' MINIMUM FOR INTERIOR ROADS, INTERNAL RADII = 50' MINIMUM FOR OUTER LOOP.



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POTENTIA-VIRIDI
BATTERY ENERGY
STORAGE SYSTEM

LEVY ALAMEDA, LLC

NOT FOR
CONSTRUCTION

REV	DATE	DESCRIPTION
1	1/17/25	REV 1
LB		
RB		
7/15/24		

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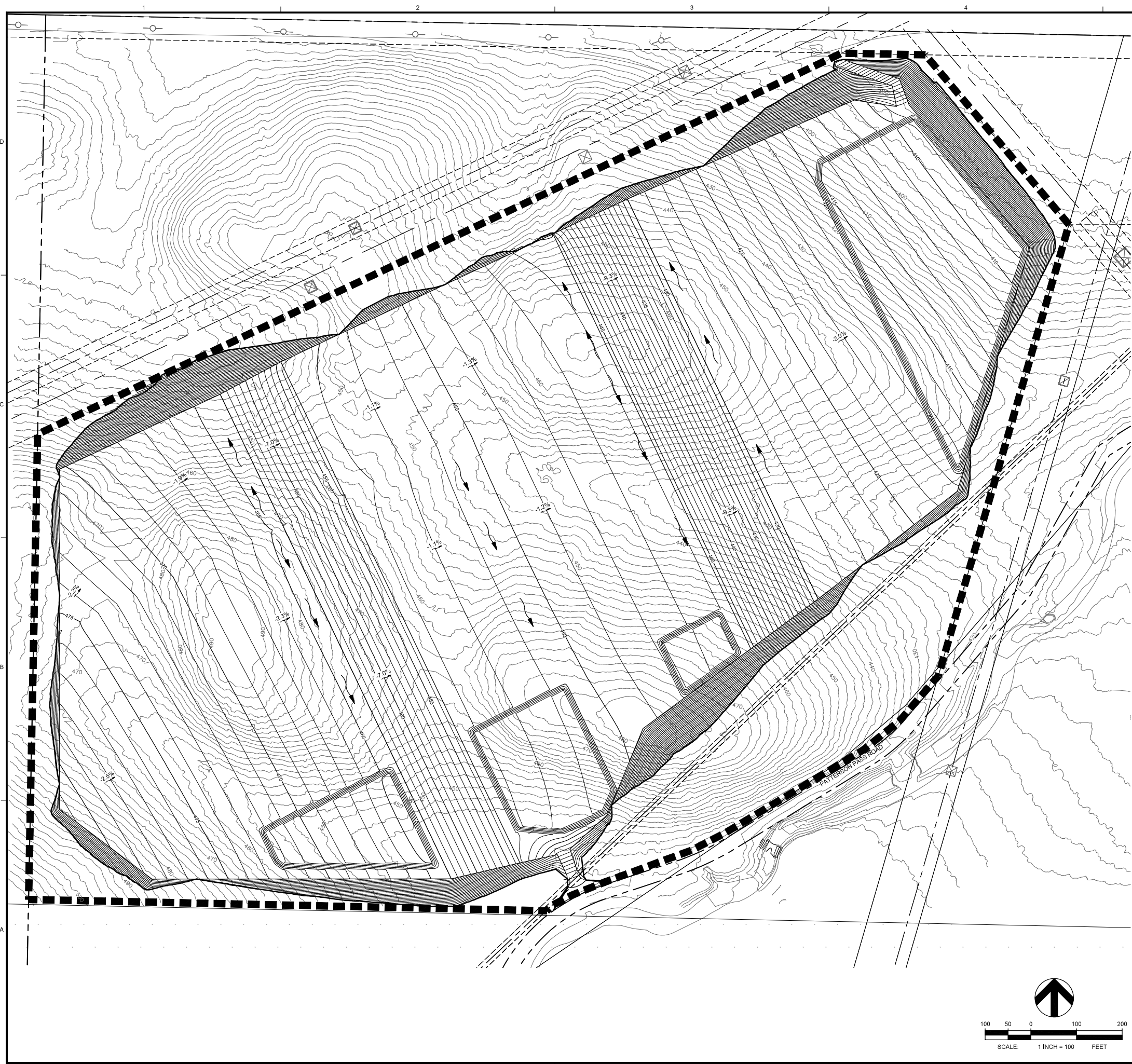
SHEET TITLE:

SITE PLAN

SHEET NO:

C-1.0

SHEET OF 7



OVERALL SITE EARTHWORK QUANTITIES
CUT = 588,018 CUBIC YARDS
FILL = 344,900 CUBIC YARDS
NET = 243,118 CUBIC YARDS (EXPORT)

TOTAL = 932,918 CUBIC YARDS

ARIZONA CROSSING EARTHWORK QUANTITIES
EXCAVATED VOLUME = 18 CY
TOTAL FILL VOLUME = 17 CY
NET = 1 CY (CUT)

ORDINARY HIGH WATER MARK (OHWM)
EXCAVATED VOLUME = 7 CY
FILL VOLUME = 6 CY
NET = 1 CY (CUT)

- NOTE:
1. EARTHWORK QUANTITIES ARE ESTIMATES ONLY AND ARE NOT ADJUSTED FOR SHRINKAGE, CONSOLIDATION, AND CLEARING LOSS FACTORS, THESE QUANTITIES ARE TO BE USED FOR BONDING AND PERMIT PURPOSES ONLY.
 2. CUT/FILL SLOPES ARE SHOWN NO STEEPER THAN 3:1.
 3. PRELIMINARY EARTHWORK QUANTITIES ASSUME ONSITE MATERIAL IS ADEQUATE FILL. ASSUMPTIONS ARE TO BE CONFIRMED BASED ON GEOTECH RECOMMENDATIONS.
 4. EARTHWORK QUANTITIES DO NOT INCLUDE GEN-TIE LINE.

POTENTIA-VIRIDI
BATTERY ENERGY
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LEVY ALAMEDA, LLC

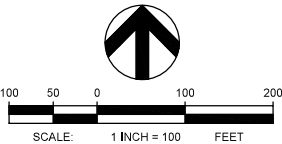
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1	1/17/25	REV 1
REV	DATE	DESCRIPTION

PROJ. NO. 232059
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DATE 12/12/24

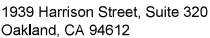
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SHEET TITLE:
PRELIMINARY
GRADING PLAN

SHEET NO:
C-1.1
SHEET 4 OF 7



UTILITY STATEMENT
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POTENTIA-VIRIDI BATTERY ENERGY STORAGE SYSTEM

EVY ALAMEDA, LLC

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1	1/17/25	REV 1
REV	DATE	DESCRIPTION

ROJ. NO. 23205

RAWN

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DATE 7/15/2015

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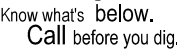
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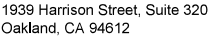
CIVIL SECTION A

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C-1.2

SHEET 5 OF 7





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POTENTIA-VIRIDI BATTERY ENERGY STORAGE SYSTEM

EVY ALAMEDA, LLC

NOT FOR
CONSTRUCTION

1	1/17/25	REV 1
REV	DATE	DESCRIPTION

ROJ. NO. 23205

RAWN

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DATE 7/15/2

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SHEET TITLE:

CIVIL SECTION B

SHEET NO:

C-1.3

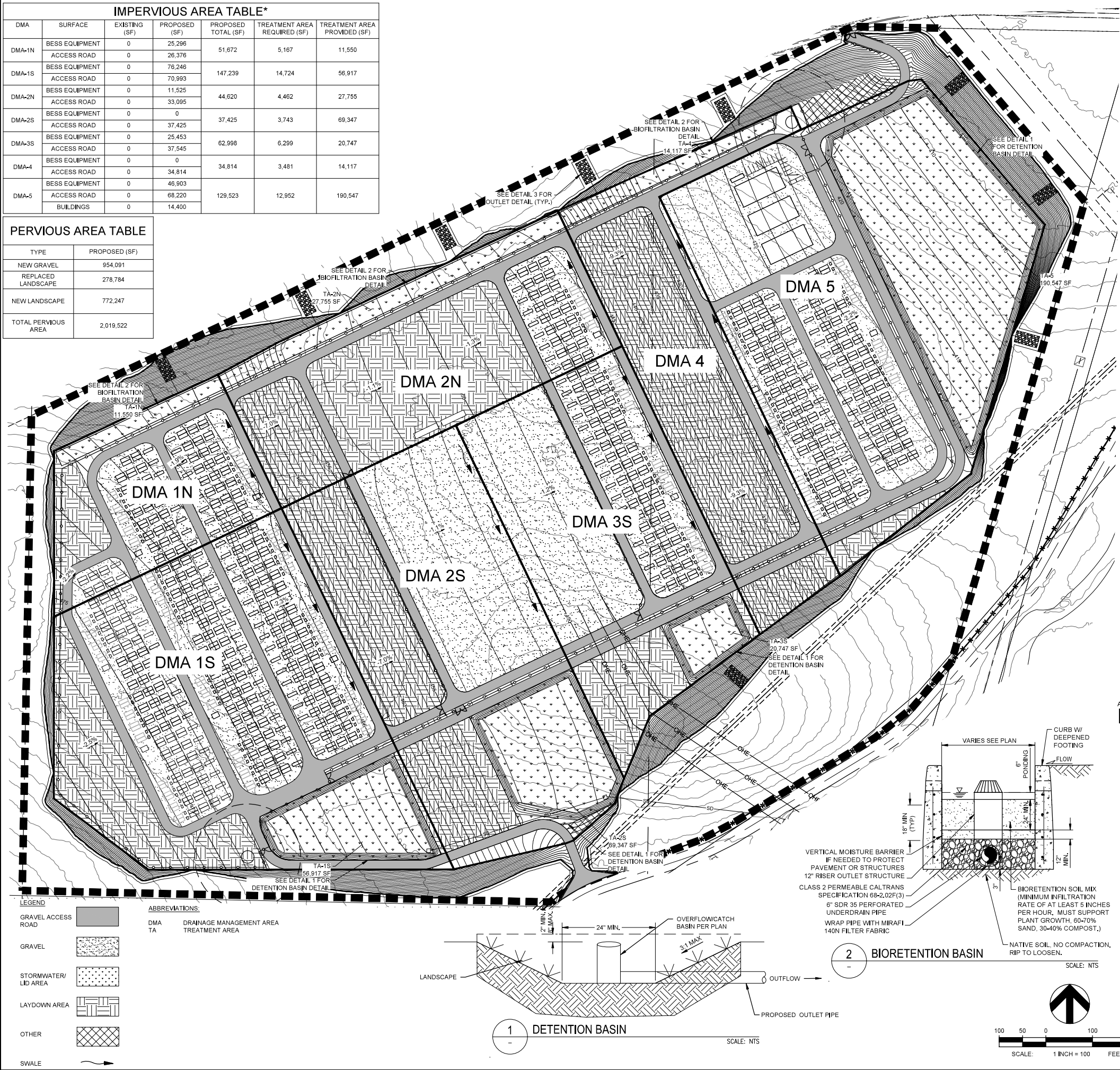
SHEET 5 OF 7



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IMPERVIOUS AREA TABLE*						
DMA	SURFACE	EXISTING (SF)	PROPOSED (SF)	PROPOSED TOTAL (SF)	TREATMENT AREA REQUIRED (SF)	TREATMENT AREA PROVIDED (SF)
DMA-1N	BESS EQUIPMENT	0	25,296	51,672	5,167	11,550
	ACCESS ROAD	0	26,376			
DMA-1S	BESS EQUIPMENT	0	76,246	147,239	14,724	56,917
	ACCESS ROAD	0	70,993			
DMA-2N	BESS EQUIPMENT	0	11,525	44,620	4,462	27,755
	ACCESS ROAD	0	33,095			
DMA-2S	BESS EQUIPMENT	0	0	37,425	3,743	69,347
	ACCESS ROAD	0	37,425			
DMA-3S	BESS EQUIPMENT	0	25,453	62,998	6,299	20,747
	ACCESS ROAD	0	37,545			
DMA-4	BESS EQUIPMENT	0	0	34,814	3,481	14,117
	ACCESS ROAD	0	34,814			
DMA-5	BESS EQUIPMENT	0	46,903	129,523	12,952	190,547
	ACCESS ROAD	0	68,220			
	BUILDINGS	0	14,400			

PERVIOUS AREA TABLE	
TYPE	PROPOSED (SF)
NEW GRAVEL	954,091
REPLACED LANDSCAPE	278,784
NEW LANDSCAPE	772,247
TOTAL PERVIOUS AREA	2,019,522



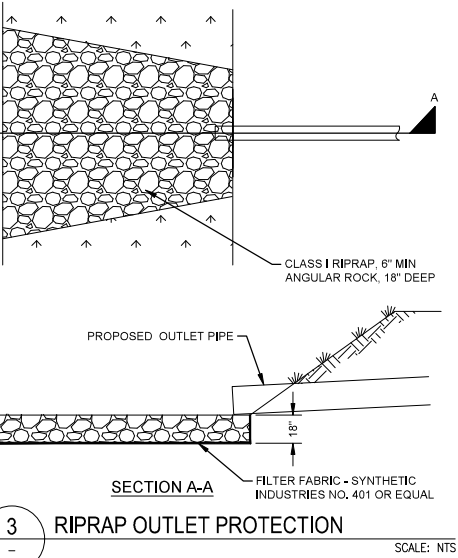
PRELIMINARY HYDROLOGY CALCS**					
DMA	STORM EVENT	INTENSITY (IN/HR)	Q-PRE (CFS)	Q-POST (CFS)	DELTA-Q (CFS)
DMA-1N	5-YEAR	1.15	0.8	2.7	1.9
	15-YEAR	1.50	1.0	3.5	2.4
	25-YEAR	1.66	1.1	3.8	2.7
	100-YEAR	2.05	1.4	4.7	3.3
DMA-1S	5-YEAR	1.06	1.9	6.5	4.6
	15-YEAR	1.38	2.5	8.4	6.0
	25-YEAR	1.52	2.7	9.3	6.6
	100-YEAR	1.88	3.4	11.5	8.1
DMA-2N	5-YEAR	1.15	1.4	4.7	3.3
	15-YEAR	1.50	1.8	6.1	4.3
	25-YEAR	1.66	2.0	6.8	4.8
	100-YEAR	2.05	2.5	8.3	5.9
DMA-2S	5-YEAR	1.21	2.0	6.9	4.9
	15-YEAR	1.58	2.7	9.0	6.4
	25-YEAR	1.74	2.9	10.0	7.0
	100-YEAR	2.16	3.6	12.4	8.7
DMA-3S	5-YEAR	1.02	1.4	4.6	3.3
	15-YEAR	1.32	1.8	6.0	4.2
	25-YEAR	1.46	1.9	6.6	4.7
	100-YEAR	1.81	2.4	8.2	5.8
DMA 4	5-YEAR	0.73	0.8	2.6	1.8
	15-YEAR	0.95	1.0	3.3	2.4
	25-YEAR	1.05	1.1	3.7	2.6
	100-YEAR	1.30	1.3	4.6	3.2
DMA 5	5-YEAR	1.45	3.4	11.4	8.1
	15-YEAR	1.89	4.4	14.9	10.5
	25-YEAR	2.08	4.8	16.4	11.6
	100-YEAR	2.59	6.0	20.4	14.4

VOLUME SIZING			
DMA	REQUIRED STORAGE VOLUME (CF)	TREATMENT AREA PROVIDED (SF)	DEPTH REQUIRED (FEET)
DMA-1N	72,284	11,550	6.3
DMA-1S	175,245	56,917	3.1
DMA-2N	127,235	27,755	4.6
DMA-2S	188,346	69,347	2.7
DMA-3S	124,989	20,747	6.0
DMA-4	69,810	14,117	4.9
DMA-5	31,758	190,547	1.6

* PRELIMINARY LID CALCULATIONS ARE CONSERVATIVELY BASED ON 10% OF TOTAL IMPERVIOUS AREA.

** HYDROLOGY CALCULATIONS ARE PER ALAMEDA COUNTY HYDROLOGY & HYDRAULICS MANUAL 2016. RAINFALL INTENSITY IS BASED ON A CALCULATED TIME OF CONCENTRATION (T_c) AND MEAN ANNUAL PRECIPITATION OF 12 INCHES PER ALAMEDA CO. HYDROLOGY & HYDRAULICS MANUAL.

NOTE: PER CALCULATIONS ABOVE, THE POST-CONSTRUCTION RUNOFF RATES FOR THE 100-YEAR STORM EXCEED 5 CFS SO A PRELIMINARY ON-SITE STORM RUNOFF DETENTION PLAN WILL BE REQUIRED PER ALAMEDA COUNTY GUIDELINES.



REV	DATE	DESCRIPTION
1	1/17/25	REV 1

PROJ. NO. 232059
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