4.0 Site Plans

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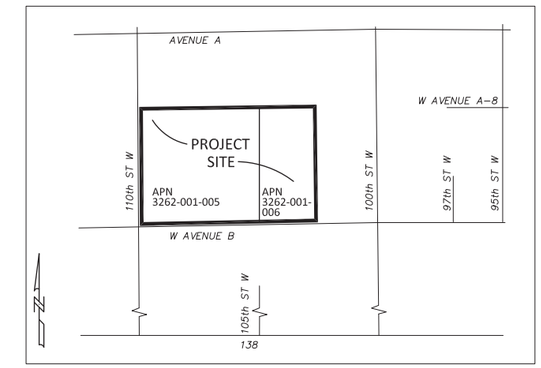
LOCATION MAP
NOT TO SCALE

PROJECT 1 NORTH LANCASTER RANCH

LOS ANGELES COUNTY, CALIFORNIA



VICINITY MAP
NOT TO SCALE

DRAWING INDEX

DRAWING NO.	TITLE
T-01	TITLE SHEET
G-01	TOPOGRAPHIC MAP
G-01	TOPOGRAPHIC MAP
C-01	SITE PLAN
C-02	GRADING PLAN
C-03	ON-SITE DRAINAGE MAP
C-04	ON-SITE DRAINAGE MAP
C-05	ON-SITE DRAINAGE MAP
C-06	ON-SITE DRAINAGE MAP
C-07	DETAIL SHEET
C-08	SECTION SHEET

NOTE:

WE HEREBY DEDICATE TO THE COUNTY OF LOS ANGELES A TWELVE (12) FOOT WIDE MULTI-USE (HIKING, MOUNTAIN BIKING AND EQUESTRIAN) TRAIL EASEMENT FOR THE PURPOSES OF THE "LITTLE BUTTES TRAIL". FULL MULTI-USE (HIKING, MOUNTAIN BIKING, AND EQUESTRIAN) PUBLIC ACCESS SHALL BE PROVIDED FOR THE TRAIL EASEMENT.

T-01

2011-00833 (RCUP201100079)

P:\CAD\PROJECTS\106-4338 SILVERADO POWER\SP LA-CUP_14-0324\P1-6\T-01-TITLE-6-B.DWG
PLOT/UPDATE: Mar 21, 2014 11:32:11 AM

REGISTERED PROFESSIONAL ENGINEER
JULIE ANN DELANEY
No.C54558
CIVIL
STATE OF CALIFORNIA

EXHIBIT PREPARER:

TETRA TECH, INC.
17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

NOT ISSUED FOR CONSTRUCTION

NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System

APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch

Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

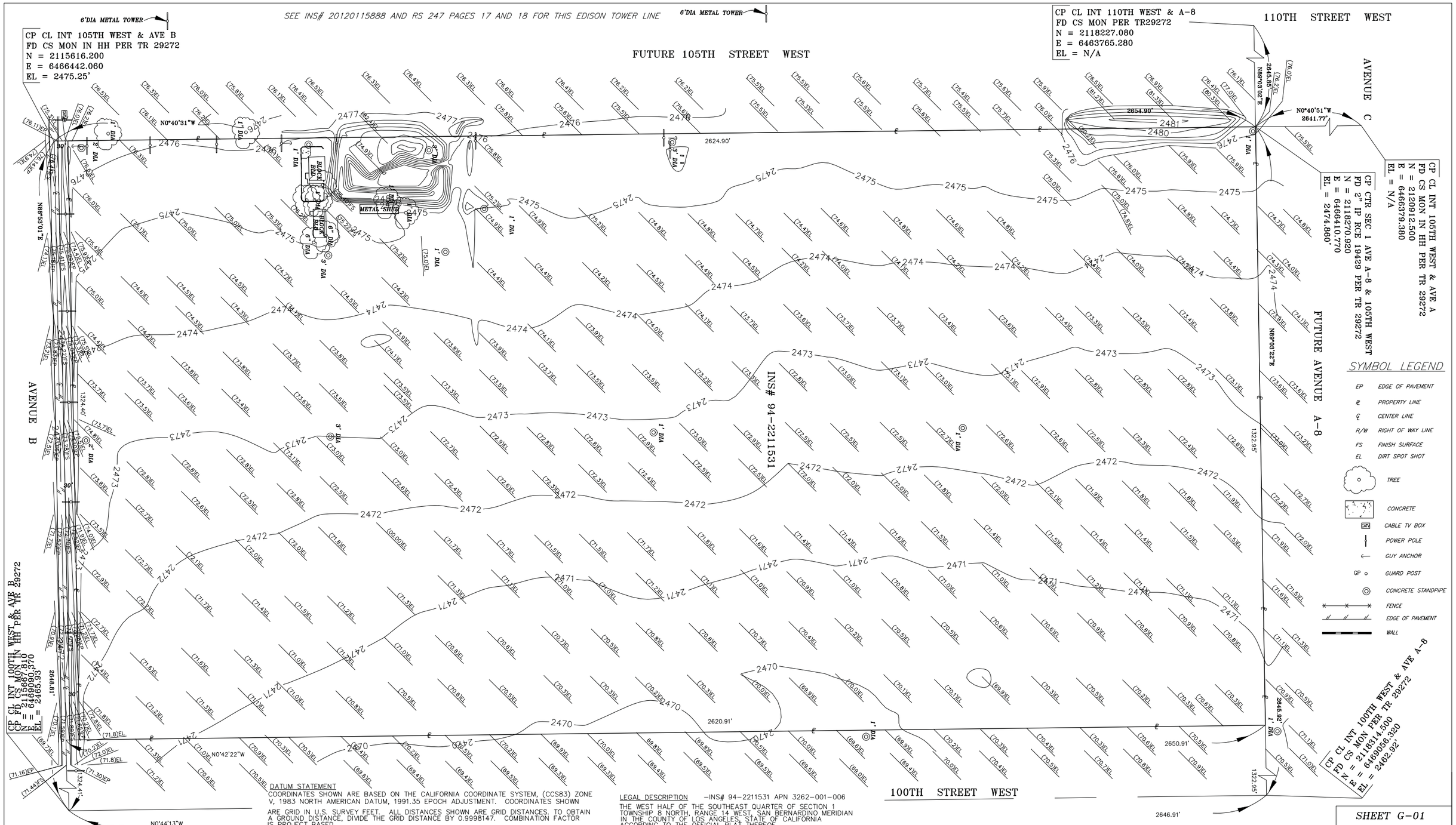
DRAWING: TITLE SHEET

APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

SILVERADO power

PROJECT 1 NORTH LANCASTER RANCH
LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main



DATUM STATEMENT
COORDINATES SHOWN ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, (CCS83) ZONE V, 1983 NORTH AMERICAN DATUM, 1991.35 EPOCH ADJUSTMENT. COORDINATES SHOWN ARE GRID IN U.S. SURVEY FEET. ALL DISTANCES SHOWN ARE GRID DISTANCES. TO OBTAIN A GROUND DISTANCE, DIVIDE THE GRID DISTANCE BY 0.9998147. COMBINATION FACTOR IS PROJECT BASED.

LEGAL DESCRIPTION —INS# 94-2211531 APN 3262-001-006
THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 1 TOWNSHIP 8 NORTH, RANGE 14 WEST, SAN BERNARDINO MERIDIAN IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA ACCORDING TO THE OFFICIAL PLAT THEREOF.

SHEET G-01

BASIS OF BEARING	BENCH MARK
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE V, NAD 83, EPOCH 1991.35, AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING STATIONS (CGPS), EW7123 AND EW7124, BEING NORTH 13°31'30" EAST AS DERIVED FROM GEODETIC VALUES PUBLISHED BY THE NATIONAL GEODETIC SURVEY.	LOS ANGELES COUNTY DPW BENCHMARK L 2329, LANCASTER 1998 ADJUSTMENT, NAVD 1988, ELEVATION = 2485.504 FEET. CS MON IN WELL 560MM DN @ C/L INT 110TH ST W & AVE B MKD (2, 1, 11, 12, R14W, T8N)

SCALE HORIZ: 1" = 100'

PROFESSIONAL LAND SURVEYOR LARRY E JERNIGAN No. 5924 EXP 12-31-12 STATE OF CALIFORNIA

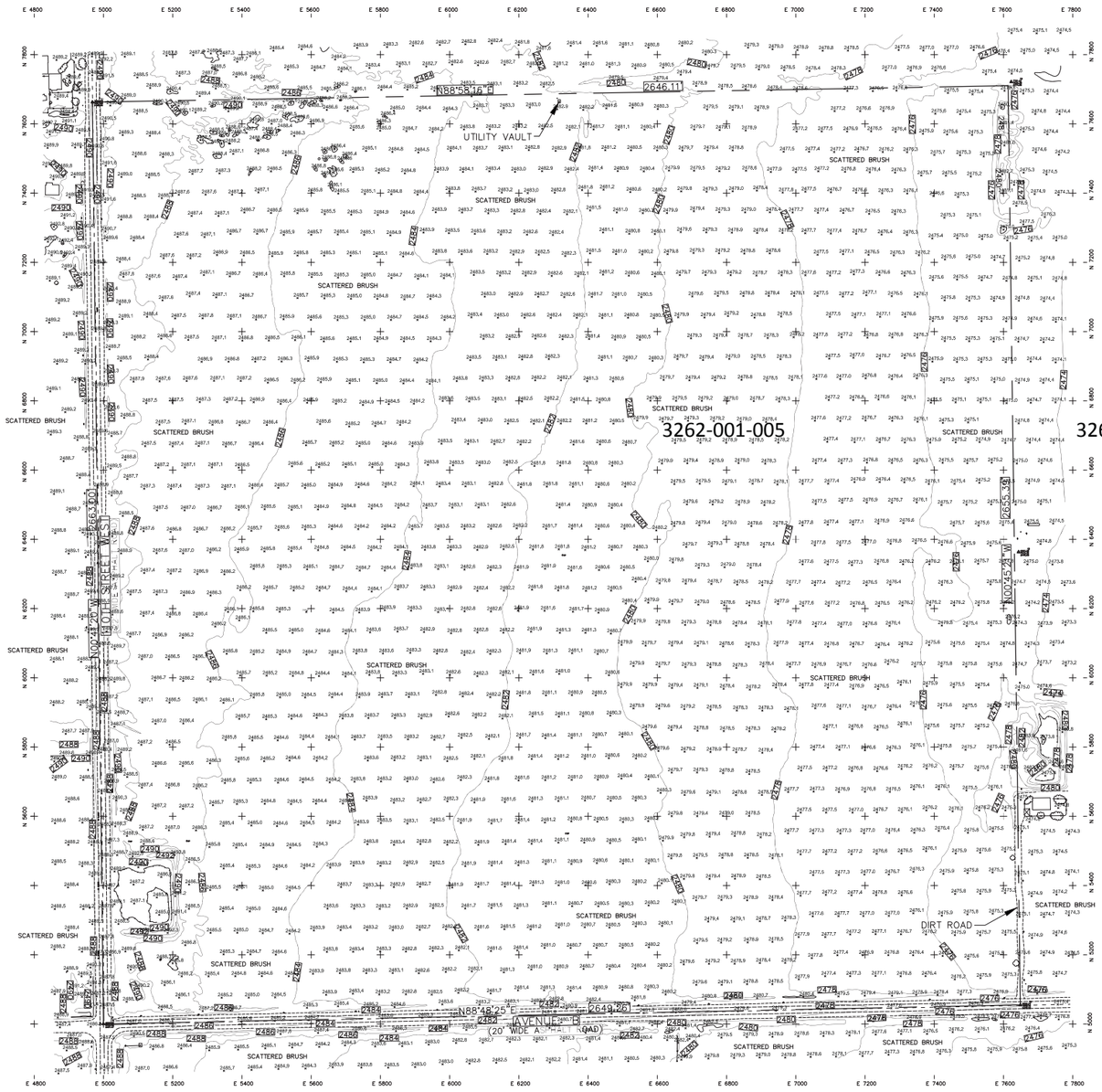
ALL VALLEY SURVEYING
44965 10TH STREET WEST
LANCASTER, CA. 93534
(661) 942-3639

NO.	REVISION	BY	APPR.	DATE
1				
2				
3				

TOPOGRAPHIC MAP
105TH STREET WEST & WEST AVENUE B
ANTELOPE VALLEY
COUNTY OF LOS ANGELES
STATE OF CALIFORNIA

DATE OF SURVEY 4/5/12

COUNTY PLAN CHECK NUMBER 2011-00833 (RCUP201100079)



BENCH MARK

QUAD: LANCASTER
NO.: L 2328
ELEVATION: 2488.811
ADJUSTMENT: 1998
DESCRIPTION: CS MON IN WELL 300MM DN @ C/L INT 110TH ST W & AVE A-8 MKD (1/4 COR 2,1,T8N,R14W)

BENCH MARK

QUAD: LANCASTER
NO.: L 2329
ELEVATION: 2485.504
ADJUSTMENT: 1998
DESCRIPTION: CS MON IN WELL 560MM DN @ C/L INT 110TH ST W & AVE B MKD (2,1,11,12,R14W,T8N)

SURVEY NOTE

BOUNDARY BASED ON FIELD SURVEY BY SPEARS LAND SURVEY PERFORMED ON 4/28/08.

BASIS OF BEARING

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING OF N88°48'25"E BEING THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 8 NORTH, RANGE 12 WEST, AS SHOWN ON THE MAP OF TRACT 29272, MAP BOOK 795, PAGES 54-59, O.R.

LEGEND

- POWER/TELEPHONE POLE
- STREET/TRAFFIC SIGN
- ON-SITE TREE

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

G-02

TOPOGRAPHIC SURVEY BY:

RJL

COMPILED USING PHOTOGRAMMETRIC METHODS BY
ROBERT J. LUCE & ASSOCIATES
2832 WALNUT AVENUE, SUITE E
TUSTIN, CALIFORNIA 92680
(714) 832-2077

WORK ORDER: 41344
DATE OF PHOTOGRAPHY: 5-2-08
CONTOUR INTERVAL: 2'

20MW AC Solar Photovoltaic Generation System

APNs
3262-001-005
3262-001-006

Project Name:
North Lancaster Ranch 6-22

Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

Silverado Power
44 Montgomery Street, Ste. 3065
San Francisco, CA 94104
(415) 692-7740

2011-00833 (RCUP201100079)
NORTH LANCASTER RANCH
LOS ANGELES COUNTY, CA

REGISTERED PROFESSIONAL ENGINEER
CHARLES J. BECK
C19289
EXP. 9-30-09
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED UNDER THE SUPERVISION OF CHARLES J. BECK FOR E-SOLAR

(SIGNATURE)

C19289	9-30-09	07073
RCE#	EXP. DATE	PROJECT

antelope valley engineering inc.
129 WEST PONDERA STREET
LANCASTER, CA. 93534
PHONE: (661) 948-0805

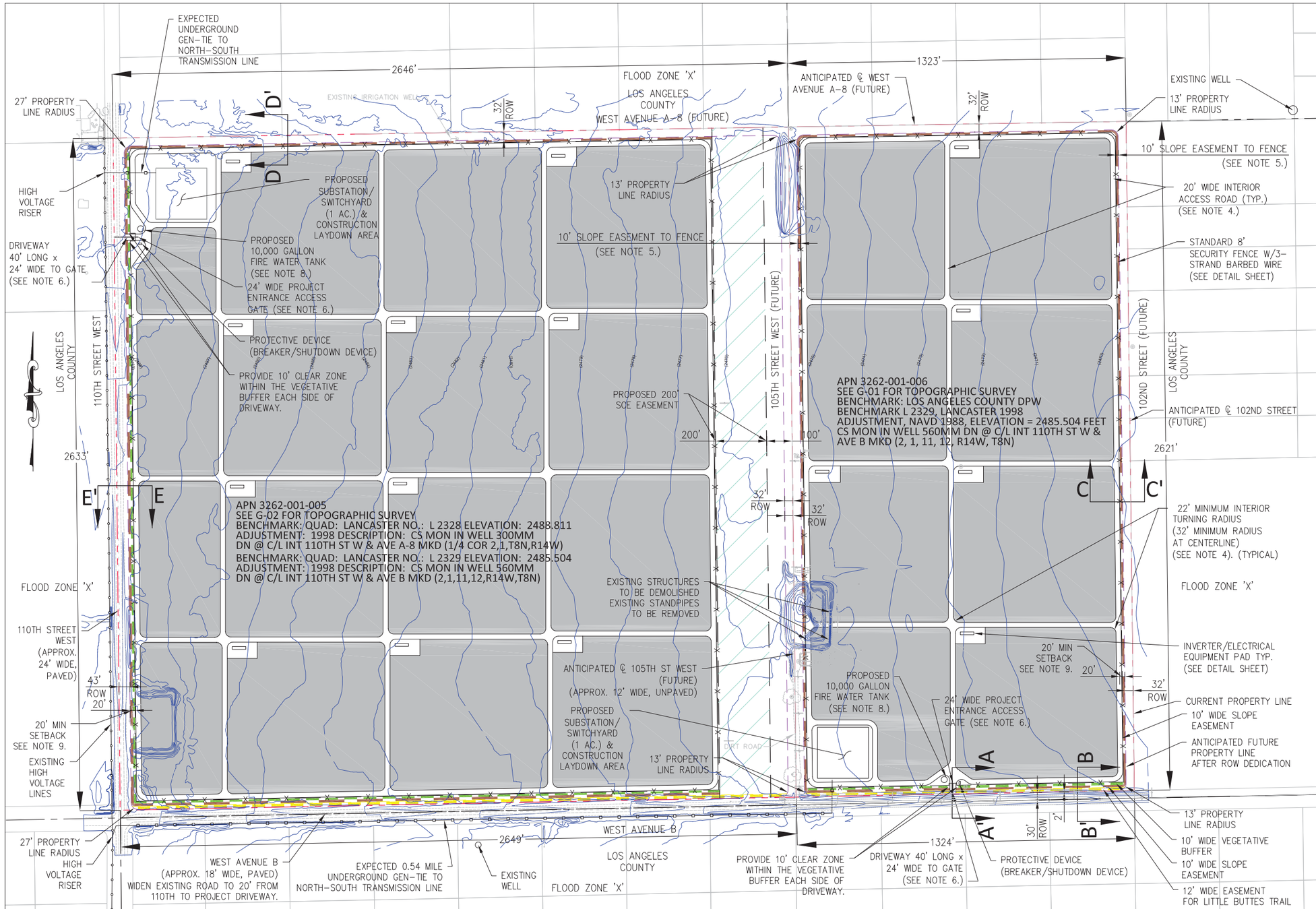
REV#		DATE
1		
2		
3		
4		
5		
6		

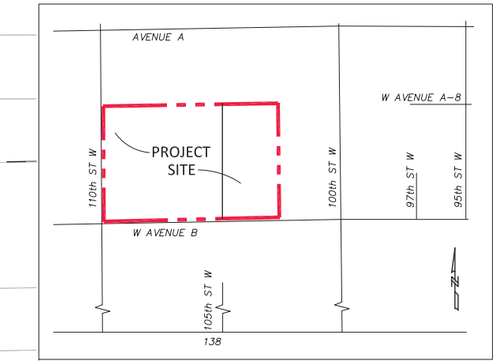
TOPOGRAPHY SURVEY
TUMBLEWEED SUNTOWER

SHEET 1 OF 1 SHTS

SCALE: 1" = 200' | CAD DWG. FILE NO.: 08066_TOPO_24x36.dwg

Julie.Delaney P:\4336-Silverado Power Solar Cup\CAD\SITE PLANS\6\6-County Submittal-C\G-02-TOPO.dwg Tue Nov 06, 2012 - 6:59am





VICINITY MAP

NO SCALE

PROJECT SITE:

PROJECT SITE IS 239 ACRES (NET)

NOTES:

1. 'ZONE X' AS SHOWN ON PANEL 0150F OF FLOOD INSURANCE RATE MAP NO. 06037C0150F. ZONE "X" DESIGNATED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

2. FIRE DEPARTMENT ACCESS DEVICE AND EMERGENCY CONTACT PLACARD LOCATED AT ALL ENTRANCE GATES.

3. MOBILE SANITATION FACILITY, AS DEFINED BY THE LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH, CAN BE LOCATED AT ALL PARKING LOCATIONS AND WILL BE LOCATED AT THE NEAREST LOCATION TO CONSTRUCTION AND OPERATIONAL WORKERS ACTIVITY. THE FACILITIES WILL BE KEPT TO LOS ANGELES COUNTY CODE, TITLE 11 – HEALTH & SAFETY, AND CAL-OSHA SANITATION STANDARDS IN SECTION 3360, TITLE 8, CALIFORNIA CODE OF REGULATIONS. MOBILE SANITATION FACILITIES WILL BE MADE AVAILABLE DURING CONSTRUCTION AND AS REQUIRED BY OSHA DURING OPERATIONS AND MAINTENANCE. SEE ARRAY BLOCK DETAIL (TYPICAL) ON C-07.

4. INTERIOR ACCESS ROADS WILL BE 20' WIDE, COMPACTED TO 90%, WITH 32 FOOT TURNING RADIUS AT CENTER LINE. THE INNER RADIUS WILL BE 22' AND THE OUTER RADIUS WILL BE 42'. INTERIOR ACCESS ROADS WILL BE PROVIDED TO INVERTER/ELECTRICAL EQUIPMENT PADS AND AROUND THE PERIMETER OF THE PROJECT. SEE ARRAY BLOCK DETAIL (TYPICAL) ON C-07.

5. 10 FOOT WIDE SLOPE EASEMENT WILL BE PROVIDED AROUND PERIMETER.

6. DRIVEWAY ACCESS GATES TO BE SET 40 FEET BACK FROM EDGE OF PROPERTY. DRIVEWAY WILL BE 24 FEET WIDE.

7. ALL DIMENSIONS SHOWN ARE APPROXIMATE AND SUBJECT TO VERIFICATION DURING DETAILED DESIGN.

8. TANK CONNECTIONS PER LOS ANGELES COUNTY FIRE DEPARTMENT.

9. A 20' MINIMUM SETBACK FROM PROPERTY LINE (AFTER DEDICATIONS) TO ARRAYS OR EQUIPMENT TO BE MAINTAINED ON SITE. PROJECT FENCE, FIRE ROADS, EASEMENTS, AND VEGETATION ARE OK WITHIN THE SETBACK.

LEGEND:

MIN	MINIMUM
ROW	RIGHT OF WAY
℄	CENTERLINE
—x—x—	FENCE LINE
	OVERHEAD LINE
	UNDERGROUND LINE
	PROPERTY LINE (AFTER ROW DEDICATIONS)
	PROPERTY LINE (CURRENT)
	PARCEL LINE
(2470)	CONTOUR LINE
	SOLAR ARRAY FIELD
	10' WIDE VEGETATIVE BUFFER
	10' WIDE SLOPE EASEMENT
	12' WIDE EASEMENT FOR LITTLE BUTTES TRAIL

C-01

2011-00833 (RCUP201100079)

REGISTERED PROFESSIONAL ENGINEER JULIE ANN DELANEY No.C54558 CIVIL STATE OF CALIFORNIA

EXHIBIT PREPARER:

TETRA TECH, INC.
17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

NOT ISSUED FOR CONSTRUCTION

NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System

APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch

Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

DRAWING: Site Plan

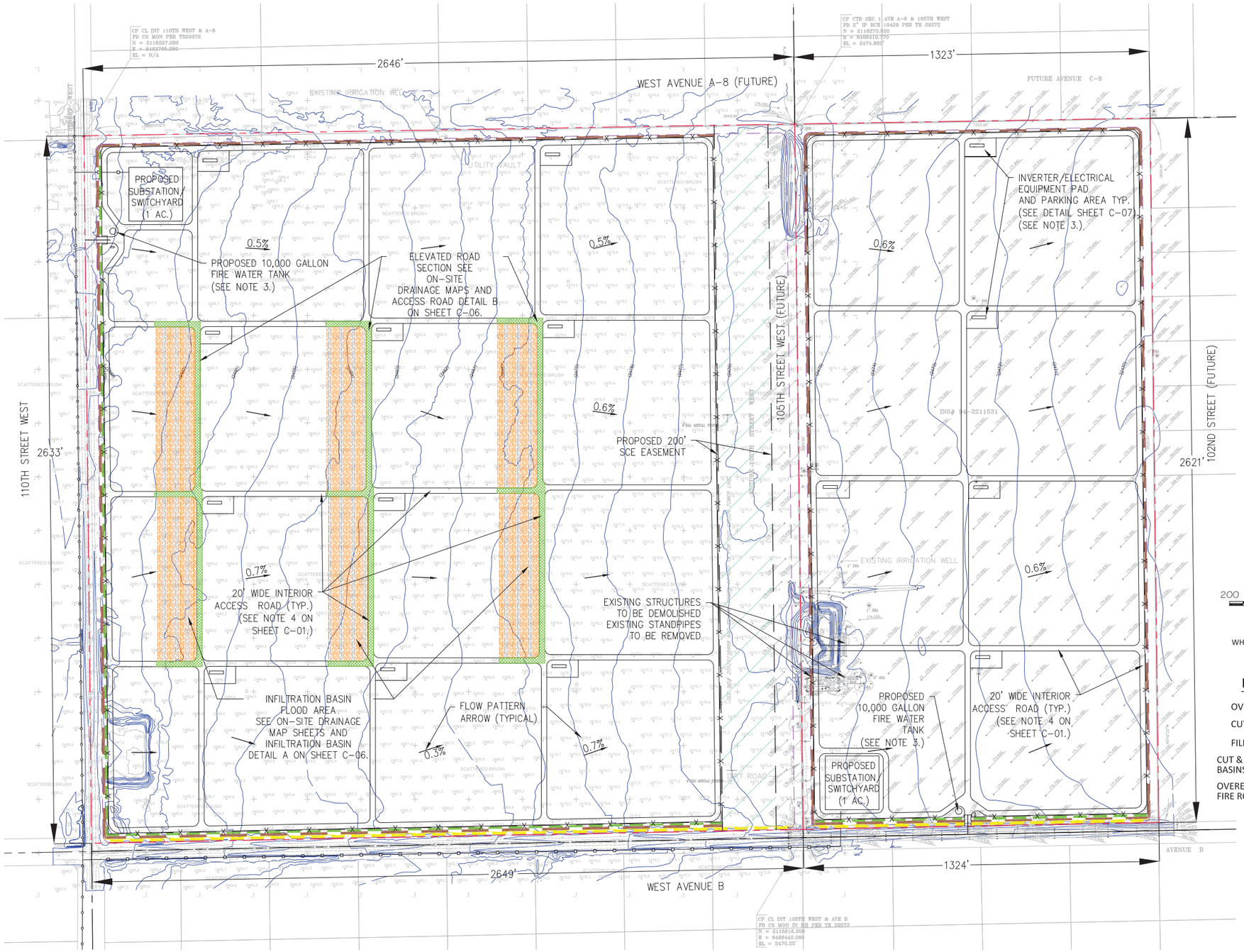
APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

SILVERADO power

PROJECT 1 NORTH
LANCASTER RANCH
LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

P:\CAD\PROJECTS\196-4336 SILVERADO POWER\SP LA-CUP_14-0324\P1-4\C-01-SITE-6.DWG
PLOT/PDF DATE: Mar 24, 2014 10:52:23 AM



NOTES:

1. DRAINAGE ACROSS SITE IS CURRENTLY FROM THE WEST TO THE EAST, AS SHOWN ON THE SURFACE CONTOURS. TOPOGRAPHY/CONTOURS ARE BASED ON SURVEY DATA PROVIDED BY ALL VALLEY SURVEYING AND ANTELOPE VALLEY ENGINEERING, INC.

2. OVERALL EXISTING GRADING AND DRAINAGE PATTERN TO REMAIN UNCHANGED DURING AND AFTER CONSTRUCTION WITH THE EXCEPTION OF AREAS USED FOR DRAINAGE FEATURES. ELEVATED ROAD SECTIONS WILL BE USED TO CREATE INFILTRATION BASINS. FLOOD AREAS AND FLOW PATTERN ARROWS ARE SHOWN ON THIS SHEET AND SHEETS C-03 AND C-04. LIMIT OF GRADING ACTIVITIES WILL BE AT PROPERTY LINE (AFTER DEDICATIONS).

3. EQUIPMENT PADS WILL BE GRADED AS REQUIRED PER MANUFACTURER SPECIFICATIONS.

LEGEND:

CATV	CABLE TV BOX	EP	EDGE OF PAVEMENT
	POWER POLE	PL	PROPERTY LINE
	GUY ANCHOR	CL	CENTER LINE
GP	GUARD POST	R/W	RIGHT OF WAY LINE
	CONCRETE STANDPIPE	FS	FINISH SURFACE
	FENCE	EL	DIRT SPOT SHOT
	EDGE OF PAVEMENT		TREE
	WALL		CONCRETE

MIN	MINIMUM
ROW	RIGHT OF WAY
℄	CENTERLINE
—— x —— x ——	FENCE LINE
	OVERHEAD LINE
	UNDERGROUND LINE
	PROPERTY LINE (AFTER DEDICATIONS)
	PROPERTY LINE (CURRENT)
	PARCEL LINE
(2470)	CONTOUR LINE
	INFILTRATION BASIN FLOOD AREA
	ELEVATED ROAD SECTION
	10' WIDE VEGETATIVE BUFFER
	10' WIDE SLOPE EASEMENT
	12' WIDE EASEMENT FOR LITTLE BUTTES TRAIL

200 0 200 400

SCALE IN FEET

1'=200'

WHEN PRINTED TO SCALE ON 22"x34" SHEET

EARTHWORK QUANTITIES:

OVEREXCAVATION	=	43,600 CUBIC YARDS
CUT	=	5,400 CUBIC YARDS
FILL	=	5,400 CUBIC YARDS

CUT & FILL QUANTITIES INCLUDE INVERTER PADS, SUBSTATIONS/SWITCHYARDS, BASINS, AND ELEVATED ROAD BED FOR DRAINAGE FEATURES.

OVEREXCAVATION QUANTITY INCLUDES ACCESSIBLE FIRE ROAD.

SURVEY INFORMATION:

TOPOGRAPHIC MAP AND CONTOURING PREPARED BY ALL VALLEY SURVEYING, SEE TOPOGRAPHIC MAP SHEET G-01 AND ANTELOPE VALLEY ENGINEERING, INC. SEE TOPOGRAPHIC MAP SHEET G-02

BASIS OF BEARINGS:

SEE TOPOGRAPHIC MAP SHEETS G-01 & G-02.

BENCHMARK:

SEE TOPOGRAPHIC MAP SHEETS G-01 & G-02.

SURVEYORS:

LARRY E. JERNIGAN, PLS #5924
ALL VALLEY SURVEYING
44965 10TH STREET WEST
LANCASTER, CA 93534
(661) 942-3639

CHARLES J. BECK, PE #C19289
ANTELOPE VALLEY ENGINEERING, INC.
129 WEST PONDERA ST.
LANCASTER, CA 93534
(661) 948-0805

C-02

2011-00833 (RCUP201100079)

REGISTERED PROFESSIONAL ENGINEER JULIE ANN DELANEY No.C54558 CIVIL STATE OF CALIFORNIA

EXHIBIT PREPARER:

TETRA TECH, INC.
17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

NOT ISSUED FOR CONSTRUCTION

NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System

APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch

Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

DRAWING:
Preliminary Grading & Drainage Plan

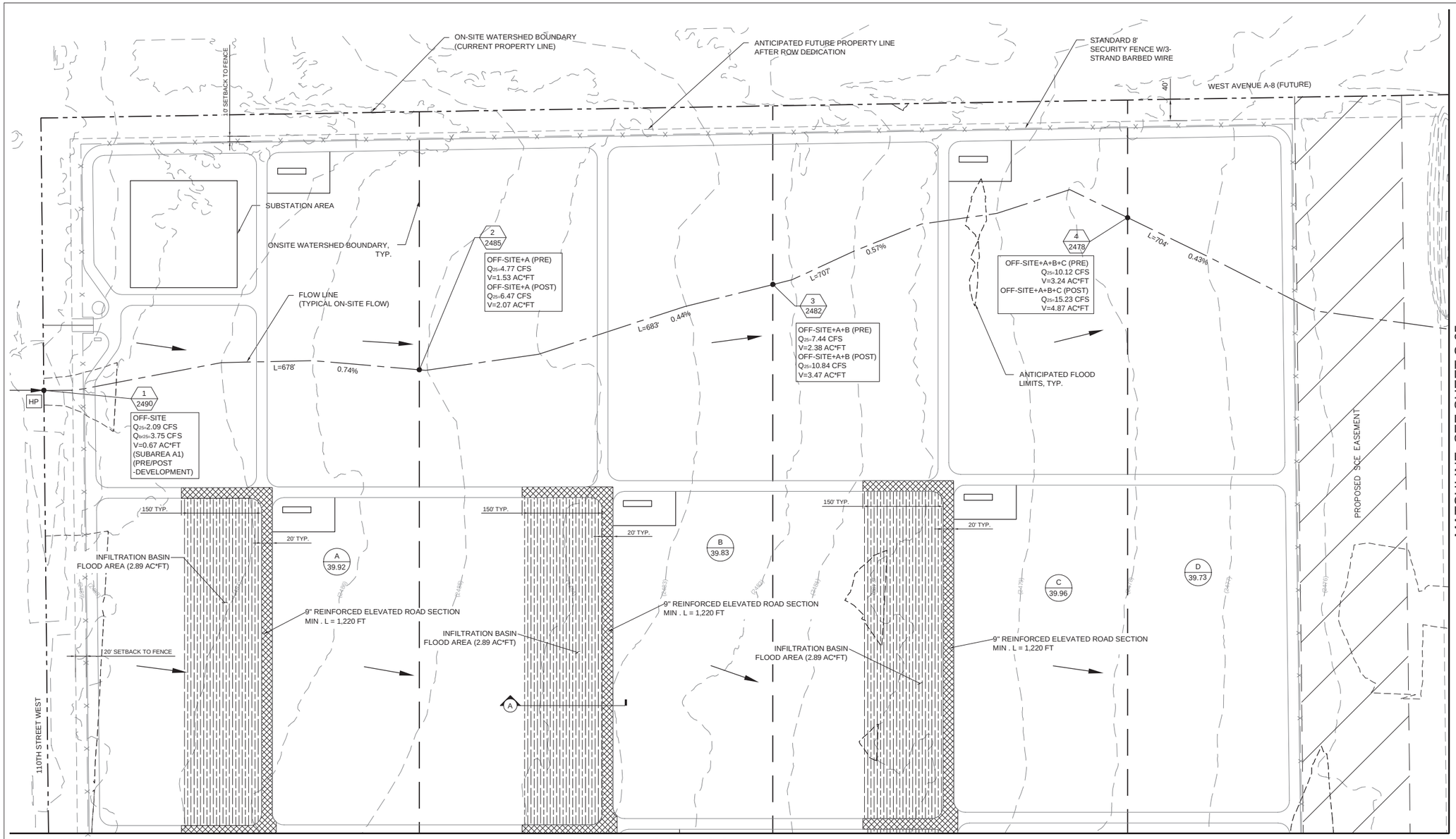
APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

SILVERADO power

PROJECT 1 NORTH
LANCASTER RANCH
LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

P:\CAD\PROJECTS\196-4336 SILVERADO POWER\SP LA-CUP_14-0324\P1-4\C-02-GRAD-6.DWG
PLOT/UPDATE: Mar 24, 2014 10:27:29 AM



LEGEND:

XX / XX.X	SUBAREA ID / ACREAGE
XX / XXX	NODE ID / ELEVATION
HP	HIGH POINT
LP	LOW POINT
	WATERSHED BOUNDARY
	FUTURE PROPERTY LINE
X	SECURITY FENCING
	FLOW LINE
	SUB-AREA BOUNDARY
	ANTICIPATED 25-YR FLOOD LIMITS
	ELEVATED ROAD SECTION
	INFILTRATION BASIN FLOOD AREA

Q_{25} PEAK FLOW RATE (25-YEAR STORM EVENT)
Q_{br25} BURNED PEAK FLOW RATE (25-YEAR STORM EVENT)
V STORM VOLUME (25-YEAR STORM EVENT)
Q_{PM} PEAK MITIGATION FLOW RATE (85TH % STORM EVENT)
V_M MITIGATION VOLUME (85TH % STORM EVENT)
V_{DP} DEBRIS POTENTIAL VOLUME = (1,300 CY / SQ. MI.) * (TOTAL WATERSHED AREA 0.419 SQ. MI.) = 545 CY

DRAINAGE CONCEPT NOTES:
1) LOCATIONS OF DRAINAGE DEVICES SHOWN ARE NOT NECESSARILY APPROVED.
2) COMPLIANCE OF ALL STREET DRAINAGE REQUIREMENTS WILL BE MET TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3) APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 66462.5, (EXCEPT AS NOTES).
4) AN OFFSITE DRAINAGE COVENANT FOR ACCEPTANCE OR DRAINAGE (AND DRAINAGE FACILITIES) MAY BE REQUIRED WHERE INDICATED.
5) A NOTE OF FLOOD HAZARD WILL BE REQUIRED WHERE INDICATED ON THIS PLAN.
6) A SOIL REPORT WILL BE REQUIRED TO VERIFY THAT A 7-DAY PERCOLATION RATE CAN BE OBTAINED.
7) BASIN SIZES ARE DEPENDENT ON THE VERIFICATION OF PERCOLATION RATES AND ARE SUBJECT TO CHANGE.
8) NOT WITHIN A FEMA ZONE A. WITHIN FEMA FLOOD ZONE X, UNSHADED.
9) NOT WITHIN A COUNTY ADOPTED FLOODWAY.
10) ALL BASINS ARE PRIVATELY MAINTAINED.
11) FOR THE POST-DEVELOPMENT 50-YEAR STORM EVENT EXITING THE PROJECT, THE PEAK FLOW RATE (Q_{50}) DECREASED BY 1.5%, THE VOLUME (V_{50}) INCREASED BY 6.9%, THE DEPTH INCREASED BY 0.0%, AND THE VELOCITY INCREASED BY 0.0%. THESE REPRESENT NEGLIGIBLE INCREASES FROM THE PRE-DEVELOPMENT CONDITION. SEE IMPACT ANALYSIS CALCULATIONS.

HYDROLOGY STUDY/DRAINAGE CONCEPT/LID PLAN
APPROVED FOR AREA AND Q ONLY
APPROVED BY:_____ RCE NO:_____ DATE_____
CHECKED BY:_____ DATE_____
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

N
0 50 100 200
SCALE: 1":100' (ON FULL SIZE DWG.)

2011-00833 (RCUP201100079) C-03

PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER JOSEPH E. DIETZ No. 67032 EXP: 9-30-14 CIVIL STATE OF CALIFORNIA
JOSEPH E. DIETZ, P.E.

EXHIBIT PREPARER:
TETRA TECH, INC.
17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

NOT ISSUED FOR CONSTRUCTION

NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System
APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch
Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

HYDROLOGY STUDY/DRAINAGE CONCEPT/LID FOR CUP 201100079 ON-SITE DRAINAGE MAP

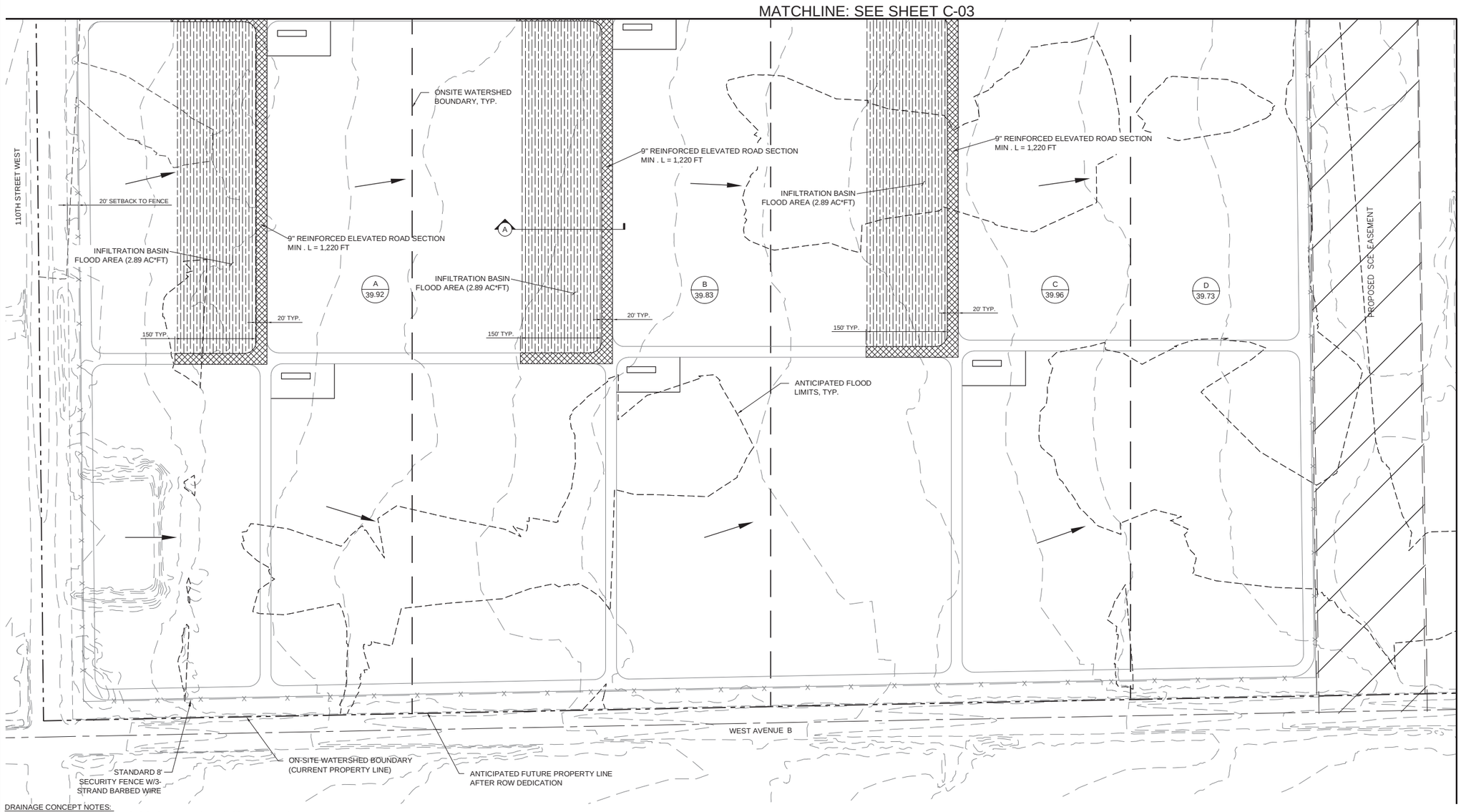
APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

SILVERADO power

PROJECT 1 NORTH LANCASTER RANCH
LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

P:\245486\135-04546-12001\SUPPORTDOCS\CALCS\HYDROLOGY\CUP6\FINAL DESIGN\ONSITE HYDROLOGY C03.DWG
PLOT/UPDATE: Dec 6, 2013 10:44:45 AM



LEGEND:

XX / XX.X	SUBAREA ID / ACREAGE
XX / XXX	NODE ID / ELEVATION
HP	HIGH POINT
LP	LOW POINT
	WATERSHED BOUNDARY
	FUTURE PROPERTY LINE
X	SECURITY FENCING
	FLOW LINE
	SUB-AREA BOUNDARY
	ANTICIPATED 25-YR FLOOD LIMITS
	ELEVATED ROAD SECTION
	INFILTRATION BASIN FLOOD AREA

Q_{25} PEAK FLOW RATE (25-YEAR STORM EVENT)
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DRAINAGE CONCEPT NOTES:

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HYDROLOGY STUDY/DRAINAGE CONCEPT/LID PLAN
APPROVED FOR AREA AND Q ONLY
APPROVED BY:_____RCE NO:_____DATE_____
CHECKED BY:_____DATE_____
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

N
0 50 100 200
SCALE: 1":100' (ON FULL SIZE DWG.)

2011-00833 (RCUP201100079) C-04

PREPARED UNDER THE SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER JOSEPH E. DIETZ No. 67032 EXP: 9-30-14 CIVIL STATE OF CALIFORNIA

JOSEPH E. DIETZ, P.E.

EXHIBIT PREPARER:

TETRA TECH, INC.
17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

NOT ISSUED FOR CONSTRUCTION

NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System
APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch
Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

HYDROLOGY STUDY/DRAINAGE CONCEPT/LID FOR CUP 201100079 ON-SITE DRAINAGE MAP

APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

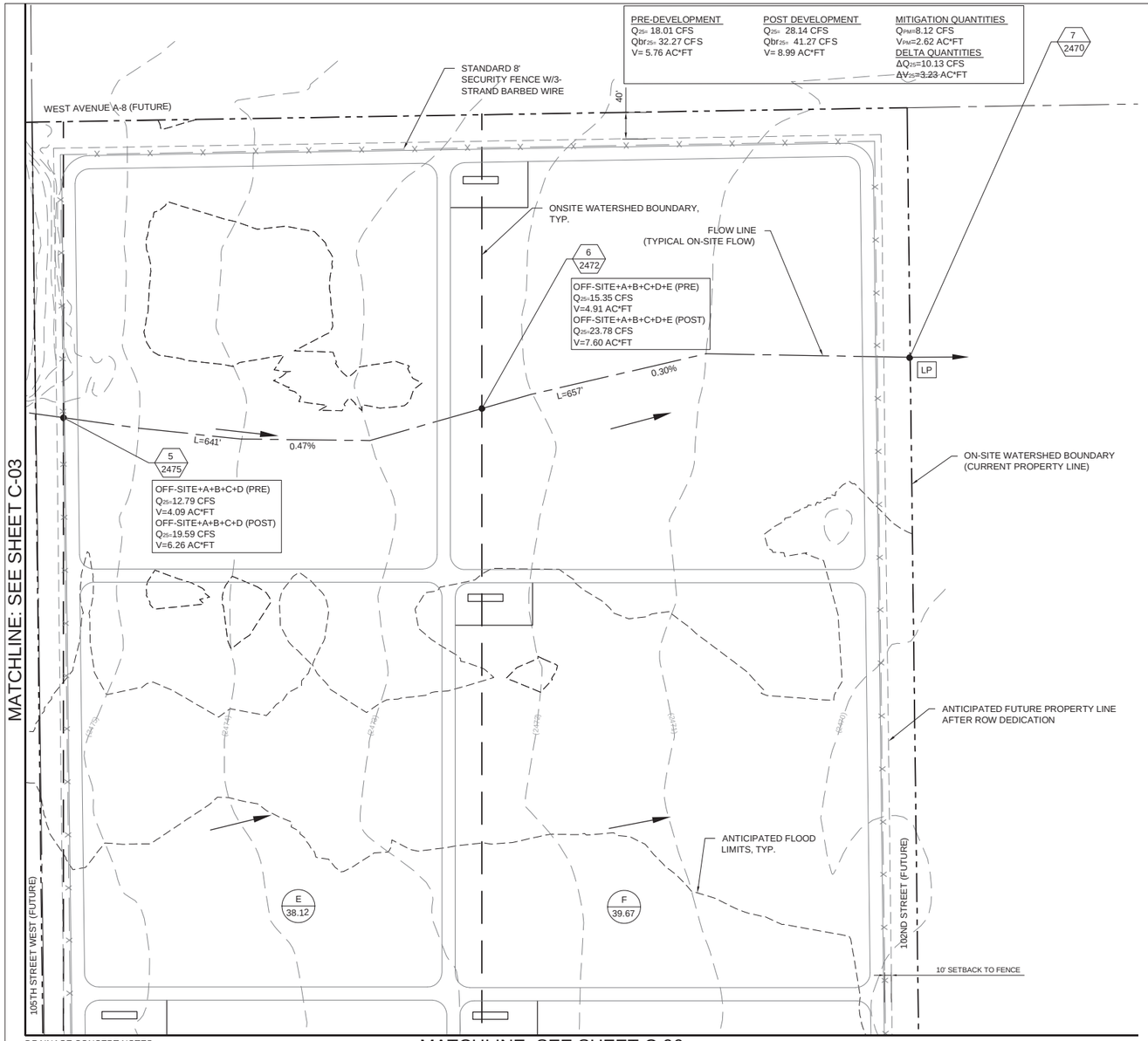
SILVERADO power

PROJECT 1 NORTH
LANCASTER RANCH
LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

P:\04546\135-04546-12001\SUPPORTDOCS\CALCS\HYDROLOGY\CUP\FINAL DESIGN\ONSITE HYDROLOGY C04.DWG
PLOT/UPDATE: Dec 6, 2013 10:39:57 AM

PRE-DEVELOPMENT	POST DEVELOPMENT	MITIGATION QUANTITIES
Q_{25}= 18.01 CFS	Q_{25}= 28.14 CFS	Q_{PM}=8.12 CFS
Q_{Brf25}= 32.27 CFS	Q_{Brf25}= 41.27 CFS	V_{PM}=2.62 AC*FT
V= 5.76 AC*FT	V= 8.99 AC*FT	DELTA QUANTITIES
		ΔQ_{25}=10.13 CFS
		ΔV_{25}=3.23 AC*FT



HYDROLOGY RESULTS: (BASED ON LA FLOOD CONTROL TC CALCULATOR)

ON-SITE HYDROLOGY (PRE-DEVELOPMENT)

Project	Subarea	Area (acre)	Q_{100}	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc calculated (min.)	Intensity (in./hr)	Cu	Cd	Flow rate (cfs)	Fire Factor	Burned flow rate (cfs)	Volume (acre-ft)
Project 1	A	39.92	0.01	2	120	678	0.0074	1.0	30	0.27	0.10	0.11	1.19	0.34	1.52	0.38
Project 1	B	39.83	0.01	2	120	683	0.0044	1.0	30	0.27	0.10	0.11	1.18	0.34	1.52	0.37
Project 1	C	39.96	0.01	2	120	707	0.0057	1.0	30	0.27	0.10	0.11	1.19	0.34	1.52	0.38
Project 1	D	39.73	0.01	2	120	704	0.0043	1.0	30	0.27	0.10	0.11	1.18	0.34	1.51	0.37
Project 1	E	38.12	0.01	2	120	641	0.0047	1.0	30	0.27	0.10	0.11	1.13	0.34	1.44	0.36
Project 1	F	39.67	0.01	2	120	657	0.0030	1.0	30	0.27	0.10	0.11	1.18	0.34	1.51	0.37
Project 1	A	39.92	0.01	5	120	678	0.0074	1.6	30	0.41	0.10	0.11	1.80	0.34	3.08	0.57
Project 1	B	39.83	0.01	5	120	683	0.0044	1.6	30	0.41	0.10	0.11	1.80	0.34	3.07	0.57
Project 1	C	39.96	0.01	5	120	707	0.0057	1.6	30	0.41	0.10	0.11	1.80	0.34	3.08	0.57
Project 1	D	39.73	0.01	5	120	704	0.0043	1.6	30	0.41	0.10	0.11	1.79	0.34	3.06	0.57
Project 1	E	38.12	0.01	5	120	641	0.0047	1.6	30	0.41	0.10	0.11	1.72	0.34	2.94	0.55
Project 1	F	39.67	0.01	5	120	657	0.0030	1.6	30	0.41	0.10	0.11	1.79	0.34	3.06	0.57
Project 1	A	39.92	0.01	10	120	678	0.0074	1.9	30	0.50	0.10	0.11	2.20	0.34	3.85	0.70
Project 1	B	39.83	0.01	10	120	683	0.0044	1.9	30	0.50	0.10	0.11	2.19	0.34	3.84	0.70
Project 1	C	39.96	0.01	10	120	707	0.0057	1.9	30	0.50	0.10	0.11	2.20	0.34	3.85	0.70
Project 1	D	39.73	0.01	10	120	704	0.0043	1.9	30	0.50	0.10	0.11	2.19	0.34	3.83	0.69
Project 1	E	38.12	0.01	10	120	641	0.0047	1.9	30	0.50	0.10	0.11	2.10	0.34	3.67	0.67
Project 1	F	39.67	0.01	10	120	657	0.0030	1.9	30	0.50	0.10	0.11	2.19	0.34	3.82	0.69
Project 1	A	39.92	0.01	25	120	678	0.0074	2.4	30	0.61	0.10	0.11	2.74	0.34	4.80	0.86
Project 1	B	39.83	0.01	25	120	683	0.0044	2.4	30	0.61	0.10	0.11	2.67	0.34	4.79	0.85
Project 1	C	39.96	0.01	25	120	707	0.0057	2.4	30	0.61	0.10	0.11	2.68	0.34	4.80	0.86
Project 1	D	39.73	0.01	25	120	704	0.0043	2.4	30	0.61	0.10	0.11	2.67	0.34	4.78	0.85
Project 1	E	38.12	0.01	25	120	641	0.0047	2.4	30	0.61	0.10	0.11	2.56	0.34	4.58	0.82
Project 1	F	39.67	0.01	25	120	657	0.0030	2.4	30	0.61	0.10	0.11	2.67	0.34	4.77	0.85
Project 1	A	39.92	0.01	50	120	678	0.0074	2.7	30	0.69	0.13	0.14	3.96	0.34	6.24	0.96
Project 1	B	39.83	0.01	50	120	683	0.0044	2.7	30	0.69	0.13	0.14	3.95	0.34	6.23	0.96
Project 1	C	39.96	0.01	50	120	707	0.0057	2.7	30	0.69	0.13	0.14	3.96	0.34	6.25	0.96
Project 1	D	39.73	0.01	50	120	704	0.0043	2.7	30	0.69	0.13	0.14	3.94	0.34	6.21	0.96
Project 1	E	38.12	0.01	50	120	641	0.0047	2.7	30	0.69	0.13	0.14	3.68	0.34	5.96	0.94
Project 1	F	39.67	0.01	50	120	657	0.0030	2.7	30	0.69	0.13	0.14	3.93	0.34	6.21	0.96
Project 1	A	39.92	0.01	MIT	120	678	0.0074	0.75	30	0.19	0.10	0.11	0.83	0.34	1.29	0.27
Project 1	B	39.83	0.01	MIT	120	683	0.0044	0.75	30	0.19	0.10	0.11	0.83	0.34	1.29	0.27
Project 1	C	39.96	0.01	MIT	120	707	0.0057	0.75	30	0.19	0.10	0.11	0.84	0.34	1.29	0.27
Project 1	D	39.73	0.01	MIT	120	704	0.0043	0.75	30	0.19	0.10	0.11	0.83	0.34	1.28	0.27
Project 1	E	38.12	0.01	MIT	120	641	0.0047	0.75	30	0.19	0.10	0.11	0.80	0.34	1.23	0.26
Project 1	F	39.67	0.01	MIT	120	657	0.0030	0.75	30	0.19	0.10	0.11	0.83	0.34	1.28	0.27

ON-SITE HYDROLOGY (POST-DEVELOPMENT)

Project	Subarea	Area (acre)	Q_{100}	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc calculated (min.)	Intensity (in./hr)	Cu	Cd	Flow rate (cfs)	Fire Factor	Burned flow rate (cfs)	Volume (acre-ft)
Project 1	A	39.92	0.1	2	120	678	0.0074	1.0	30	0.27	0.10	0.18	1.94	0.34	2.61	0.61
Project 1	B	39.83	0.1	2	120	683	0.0044	1.0	30	0.27	0.10	0.18	1.94	0.34	2.61	0.61
Project 1	C	39.96	0.1	2	120	707	0.0057	1.0	30	0.27	0.10	0.18	1.94	0.34	2.61	0.62
Project 1	D	39.73	0.1	2	120	704	0.0043	1.0	30	0.27	0.10	0.18	1.93	0.34	2.60	0.61
Project 1	E	38.12	0.1	2	120	641	0.0047	1.0	30	0.27	0.10	0.18	1.85	0.34	2.49	0.59
Project 1	F	39.67	0.1	2	120	657	0.0030	1.0	30	0.27	0.10	0.18	1.93	0.34	2.60	0.61
Project 1	A	39.92	0.1	5	120	678	0.0074	1.6	30	0.41	0.10	0.18	2.95	0.34	4.11	0.93
Project 1	B	39.83	0.1	5	120	683	0.0044	1.6	30	0.41	0.10	0.18	2.94	0.34	4.10	0.93
Project 1	C	39.96	0.1	5	120	707	0.0057	1.6	30	0.41	0.10	0.18	2.95	0.34	4.12	0.93
Project 1	D	39.73	0.1	5	120	704	0.0043	1.6	30	0.41	0.10	0.18	2.93	0.34	4.09	0.93
Project 1	E	38.12	0.1	5	120	641	0.0047	1.6	30	0.41	0.10	0.18	2.81	0.34	3.93	0.89
Project 1	F	39.67	0.1	5	120	657	0.0030	1.6	30	0.41	0.10	0.18	2.93	0.34	4.09	0.93
Project 1	A	39.92	0.1	10	120	678	0.0074	1.9	30	0.50	0.10	0.18	3.59	0.34	5.00	1.14
Project 1	B	39.83	0.1	10	120	683	0.0044	1.9	30	0.50	0.10	0.18	3.58	0.34	5.08	1.14
Project 1	C	39.96	0.1	10	120	707	0.0057	1.9	30	0.50	0.10	0.18	3.60	0.34	5.10	1.14
Project 1	D	39.73	0.1	10	120	704	0.0043	1.9	30	0.50	0.10	0.18	3.58	0.34	5.07	1.14
Project 1	E	38.12	0.1	10	120	641	0.0047	1.9	30	0.50	0.10	0.18	3.43	0.34	4.87	1.09
Project 1	F	39.67	0.1	10	120	657	0.0030	1.9	30	0.50	0.10	0.18	3.57	0.34	5.06	1.13
Project 1	A	39.92	0.1	25	120	678	0.0074	2.4	30	0.61	0.10	0.18	4.38	0.34	6.31	1.40
Project 1	B	39.83	0.1	25	120	683	0.0044	2.4	30	0.61	0.10	0.18	4.37	0.34	6.40	1.40
Project 1	C	39.96	0.1	25	120	707	0.0057	2.4	30	0.61	0.10	0.18	4.39	0.34	6.32	1.40
Project 1	D	39.73	0.1	25	120	704	0.0043	2.4	30	0.61	0.10	0.18	4.36	0.34	6.28	1.39
Project 1	E	38.12	0.1	25	120	641	0.0047	2.4	30	0.61	0.10	0.18	4.19	0.34	6.03	1.34
Project 1	F	39.67	0.1	25	120	657	0.0030	2.4	30	0.61	0.10	0.18	4.36	0.34	6.28	1.39
Project 1	A	39.92	0.1	50	120	678	0.0074	2.7	30	0.69	0.13	0.21	5.76	0.34	7.95	1.61
Project 1	B	39.83	0.1	50	120	683	0.0044	2.7	30	0.69	0.13	0.21	5.77	0.34	7.94	1.60
Project 1	C	39.96	0.1	50	120	707	0.0057	2.7	30	0.69	0.13	0.21	5.79	0.34	7.96	1.61
Project 1	D	39.73	0.1	50	120	704	0.0043	2.7	30	0.69	0.13	0.21	5.76	0.34	7.92	1.60
Project 1	E	38.12	0.1	50	120	641	0.0047	2.7	30	0.69	0.13	0.21	5.52	0.34	7.59	1.53
Project 1	F	39.67	0.1	50	120	657	0.0030	2.7	30	0.69	0.13	0.21	5.75	0.34	7.90	1.60
Project 1	A	39.92	0.1	MIT	120	678	0.0074	0.75	30	0.19	0.10	0.18	1.37	0.34	1.78	0.44
Project 1	B	39.83	0.1	MIT	120	683	0.0044	0.75	30	0.19	0.10	0.18	1.36	0.34	1.77	0.44
Project 1	C	39.96	0.1	MIT	120	707	0.0057	0.75	30	0.19	0.10	0.18	1.37	0.34	1.78	0.44
Project 1	D	39.73	0.1	MIT	120	704	0.0043	0.75	30	0.19	0.10	0.18	1.36	0.34	1.77	0.44
Project 1	E	38.12	0.1	MIT	120	641	0.0047	0.75	30	0.19	0.10	0.18	1.30	0.34	1.70	0.42
Project 1	F	39.67	0.1	MIT	120	657	0.0030	0.75	30	0.19	0.10	0.18	1.36	0.34	1.77	0.44

Incremental Flow and Volume Increase for Various Storm Events

Storm Event	Pre Q (cfs)	Post Q (cfs)	Delta Q (cfs)	Pre V (acre-ft)	Post V (acre-ft)	Delta V (acre-ft)
2.00	7.05	13.53	6.48	2.23	3.65	1.42
5.00	10.70	17.51	6.81	3.40	5.54	2.14
10.00	13.06	21.35	8.29	4.15	6.78	2.63
25.00	15.92	26.05	10.13	5.05	8.32	3.23
50.00	22.92	34.37	11.45	5.86	9.55	3.69

NOTE: FOR INFILTRATION BASIN MITIGATION VOLUME, SUM MIT. FREQUENCY VOLUMES UNDER POST-DEVELOPMENT TABLE. V_{PM}=2.62 AC*FT.

DELTA QUANTITIES FOR DRAINAGE AREA A:
$\Delta Q25$ = 4.38 - 2.68 = 1.70 CFS
$\Delta V25$ = 1.40 - 0.86 = 0.54 AC*FT

DELTA QUANTITIES FOR DRAINAGE AREA B:
$\Delta Q25$ = 4.37 - 2.67 = 1.70 CFS
$\Delta V25$ = 1.40 - 0.85 = 0.55 AC*FT

DELTA QUANTITIES FOR DRAINAGE AREA C
$\Delta Q25$ = 4.39 - 2.68 = 1.71 CFS
$\Delta V25$ = 1.32 - 0.86 = 0.54 AC*FT

DELTA QUANTITIES FOR DRAINAGE AREA D
$\Delta Q25$ = 4.36 - 2.67 = 1.69 CFS
$\Delta V25$ = 1.39 - 0.85 = 0.54 AC*FT

DELTA QUANTITIES FOR DRAINAGE AREA E
$\Delta Q25$ = 4.19 - 2.56 = 1.63 CFS
$\Delta V25$ = 1.34 - 0.82 = 0.52 AC*FT

DELTA QUANTITIES FOR DRAINAGE AREA F
$\Delta Q25$ = 4.36 - 2.66 = 1.70 CFS
$\Delta V25$ = 1.39 - 0.85 = 0.54 AC*FT

TOTAL DELTA QUANTITIES
$\Delta Q25$ = 10.13 CFS
$\Delta V25$ = 3.23 AC*FT

NOTE: DUE TO THE LID Δ QUANTITIES ABOVE BEING GREATER THAN THE MITIGATION QUANTITIES (Q_{PM} AND V_{PM}) THEY REPRESENT THE WORST CASE SCENARIO BETWEEN THE PRE-/POST DEVELOPMENT CONDITIONS AND THEREFORE SHALL BE USED FOR SIZING THE INFILTRATION BASINS.

LEGEND:

- XX / XX.X — SUBAREA ID / ACREAGE
- XX / XXX — NODE ID / ELEVATION
- HP — HIGH POINT
- LP — LOW POINT
- WATERSHED BOUNDARY
- FUTURE PROPERTY LINE
- X — SECURITY FENCING
- FLOW LINE
- SUB-AREA BOUNDARY
- ANTICIPATED 25-YR FLOOD LIMITS
- ELEVATED ROAD SECTION
- INFILTRATION BASIN FLOOD AREA

Q_{25} PEAK FLOW RATE (25-YEAR STORM EVENT)
Q_{Brf25} BURNED PEAK FLOW RATE (25-YEAR STORM EVENT)
V STORM VOLUME (25-YEAR STORM EVENT)
Q_{PM} PEAK MITIGATION FLOW RATE (85TH % STORM EVENT)
V_M MITIGATION VOLUME (85TH % STORM EVENT)
V_{DP} DEBRIS POTENTIAL VOLUME = (1.300 CY / SQ. MI.) * (TOTAL WATERSHED AREA 0.419 SQ. MI.) = 545 CY

DRAINAGE CONCEPT NOTES:
1) LOCATIONS OF DRAINAGE DEVICES SHOWN ARE NOT NECESSARILY APPROVED.
2) COMPLIANCE OF ALL STREET DRAINAGE REQUIREMENTS WILL BE MET TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3) APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 66462.5, (EXCEPT AS NOTES).
4) AN OFFSITE DRAINAGE COVENANT FOR ACCEPTANCE OR DRAINAGE (AND DRAINAGE FACILITIES) MAY BE REQUIRED WHERE INDICATED.
5) A NOTE OF FLOOD HAZARD WILL BE REQUIRED WHERE INDICATED ON THIS PLAN.
6) A SOIL REPORT WILL BE REQUIRED TO VERIFY THAT A 7-DAY PERCOLATION RATE CAN BE OBTAINED.
7) BASIN SIZES ARE DEPENDENT ON THE VERIFICATION OF PERCOLATION RATES AND ARE SUBJECT TO CHANGE.
8) NOT WITHIN A FEMA ZONE A. WITHIN FEMA FLOOD ZONE X, UNSHADED.
9) NOT WITHIN A COUNTY ADOPTED FLOODWAY.
10) ALL BASINS ARE PRIVATELY MAINTAINED.
11) FOR THE POST-DEVELOPMENT 50-YEAR STORM EVENT EXITING THE PROJECT, THE PEAK FLOW RATE (Q_{50}) DECREASED BY 1.5%, THE VOLUME (V_{50}) INCREASED BY 6.9%, THE DEPTH INCREASED BY 0.0%, AND THE VELOCITY INCREASED BY 0.0%. THESE REPRESENT NEGLIGIBLE INCREASES FROM THE PRE-DEVELOPMENT CONDITION. SEE IMPACT ANALYSIS CALCULATIONS.

HYDROLOGY STUDY/DRAINAGE CONCEPT/LID PLAN
APPROVED FOR AREA AND Q ONLY
APPROVED BY:_____RCE NO:_____DATE_____
CHECKED BY:_____DATE_____
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

SCALE: 1":100' (ON FULL SIZE DWG.)

2011-00833 (RCUP201100079) C-05

PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER JOSEPH E. DIETZ No. 67032 EXP: 9-30-14 CIVIL STATE OF CALIFORNIA
JOSEPH E. DIETZ, P.E.

EXHIBIT PREPARER:
TETRA TECH, INC.
17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

NOT ISSUED FOR CONSTRUCTION

NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System
APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch
Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

HYDROLOGY STUDY/DRAINAGE CONCEPT/LID FOR CUP 201100079 ON-SITE DRAINAGE MAP

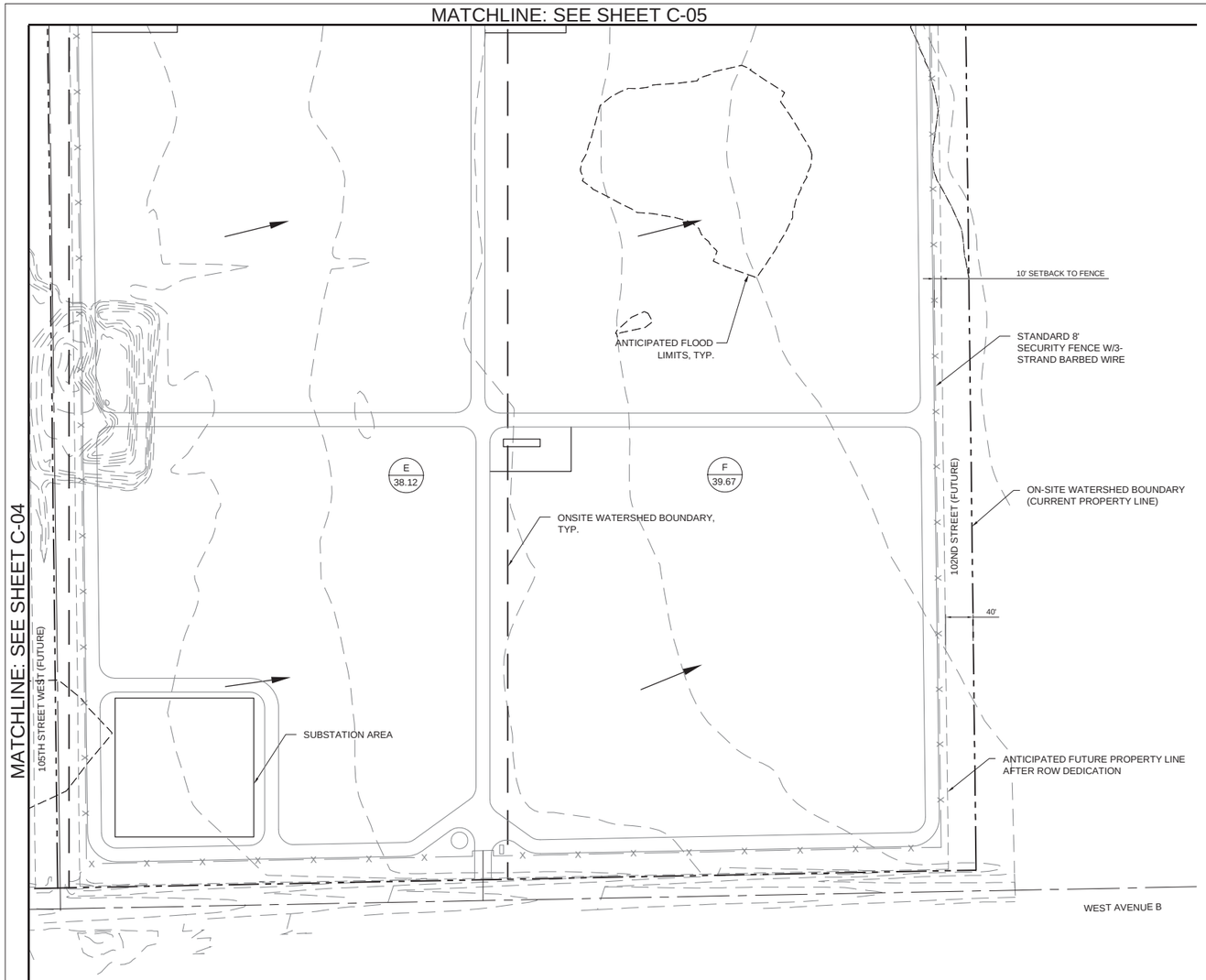
APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

SILVERADO power

PROJECT 1 NORTH
LANCASTER RANCH
LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

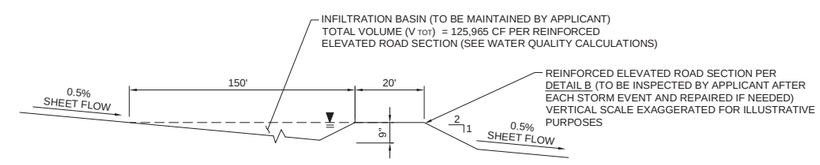
P:\045461\35-04546-T20011\SUPPORTDOCS\CALCS\HYDROLOGY\CUP6\FINAL DESIGN\ONSITE HYDROLOGY C05.DWG
PLOT/UPDATE: Dec 6, 2013 10:43:29 AM



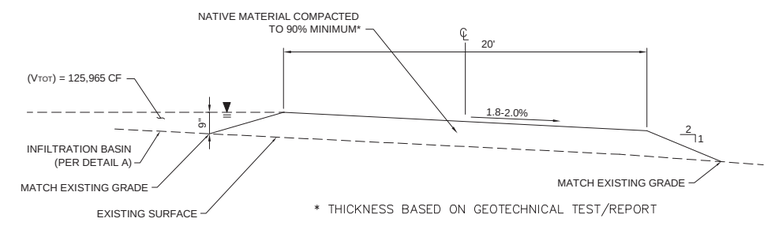
LEGEND:

XX / XX.X	SUBAREA ID / ACREAGE
XX / XXX	NODE ID / ELEVATION
HP	HIGH POINT
LP	LOW POINT
	WATERSHED BOUNDARY
	FUTURE PROPERTY LINE
X	SECURITY FENCING
	FLOW LINE
	SUB-AREA BOUNDARY
	ANTICIPATED 25-YR FLOOD LIMITS
	ELEVATED ROAD SECTION
	INFILTRATION BASIN FLOOD AREA

Q_{25} PEAK FLOW RATE (25-YEAR STORM EVENT)
Qbr_{25} BURNED PEAK FLOW RATE (25-YEAR STORM EVENT)
V STORM VOLUME (25-YEAR STORM EVENT)
Q_{PM} PEAK MITIGATION FLOW RATE (85TH % STORM EVENT)
V_M MITIGATION VOLUME (85TH % STORM EVENT)
V_{DP} DEBRIS POTENTIAL VOLUME = (1,300 CY / SQ. MI.) * (TOTAL WATERSHED AREA 0.419 SQ. MI.) = 545 CY



A INFILTRATION BASIN DETAIL
SCALE: NTS



B ACCESS ROAD DETAIL (TYP.)
SCALE: NTS

N

0 50 100 200
SCALE: 1":100' (ON FULL SIZE DWG.)

DRAINAGE CONCEPT NOTES:
1) LOCATIONS OF DRAINAGE DEVICES SHOWN ARE NOT NECESSARILY APPROVED.
2) COMPLIANCE OF ALL STREET DRAINAGE REQUIREMENTS WILL BE MET TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3) APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 66462.5, (EXCEPT AS NOTES).
4) AN OFFSITE DRAINAGE COVENANT FOR ACCEPTANCE OR DRAINAGE (AND DRAINAGE FACILITIES) MAY BE REQUIRED WHERE INDICATED.
5) A NOTE OF FLOOD HAZARD WILL BE REQUIRED WHERE INDICATED ON THIS PLAN.
6) A SOIL REPORT WILL BE REQUIRED TO VERIFY THAT A 7-DAY PERCOLATION RATE CAN BE OBTAINED.
7) BASIN SIZES ARE DEPENDENT ON THE VERIFICATION OF PERCOLATION RATES AND ARE SUBJECT TO CHANGE.
8) NOT WITHIN A FEMA ZONE A. WITHIN FEMA FLOOD ZONE X, UNSHADED.
9) NOT WITHIN A COUNTY ADOPTED FLOODWAY.
10) ALL BASINS ARE PRIVATELY MAINTAINED.
11) FOR THE POST-DEVELOPMENT 50-YEAR STORM EVENT EXITING THE PROJECT, THE PEAK FLOW RATE (Q_{50}) DECREASED BY 1.5%, THE VOLUME (V_{50}) INCREASED BY 6.9%, THE DEPTH INCREASED BY 0.0%, AND THE VELOCITY INCREASED BY 0.0%. THESE REPRESENT NEGLIGIBLE INCREASES FROM THE PRE-DEVELOPMENT CONDITION. SEE IMPACT ANALYSIS CALCULATIONS.

HYDROLOGY STUDY/DRAINAGE CONCEPT/LID PLAN
APPROVED FOR AREA AND Q ONLY
APPROVED BY:_____RCE NO:_____DATE_____
CHECKED BY:_____DATE_____
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

2011-00833 (RCUP201100079) C-06

PREPARED UNDER THE SUPERVISION:
REGISTERED PROFESSIONAL ENGINEER JOSEPH E. DIETZ No. 67032 EXP: 9-30-14 CIVIL STATE OF CALIFORNIA
JOSEPH E. DIETZ, P.E.

EXHIBIT PREPARER:
TETRA TECH, INC.
17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

NOT ISSUED FOR CONSTRUCTION

NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System
APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch
Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

HYDROLOGY STUDY/DRAINAGE CONCEPT/LID FOR CUP 201100079 ON-SITE DRAINAGE MAP

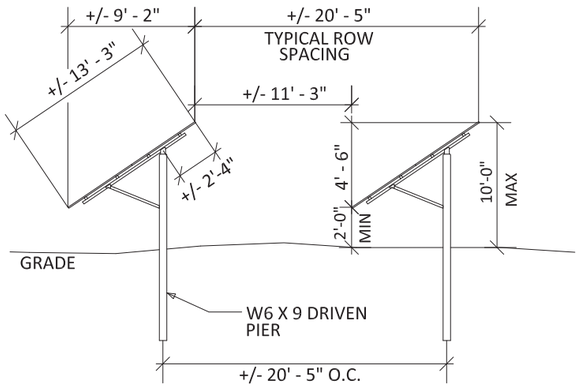
APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

SILVERADO power

PROJECT 1 NORTH
LANCASTER RANCH
LOS ANGELES COUNTY, CA

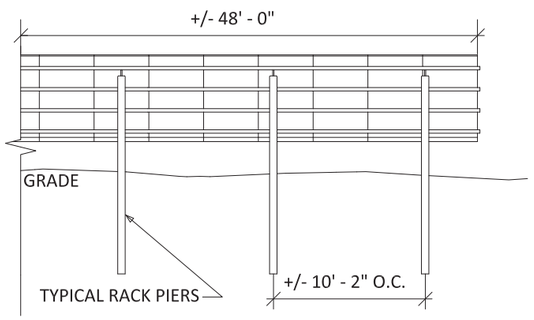
2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

P:\04546\135-04546-12001\SUPPORTDOCS\CALCS\HYDROLOGY\CUP\FINAL DESIGN\ONSITE HYDROLOGY C06.DWG
PLOT/UPDATE: Dec 6, 2013 10:44:37 AM



TYPICAL SOLAR ARRAY RACK DETAIL AND END ELEVATION

NOT TO SCALE



SOLAR ARRAY RACK DETAIL ELEVATION

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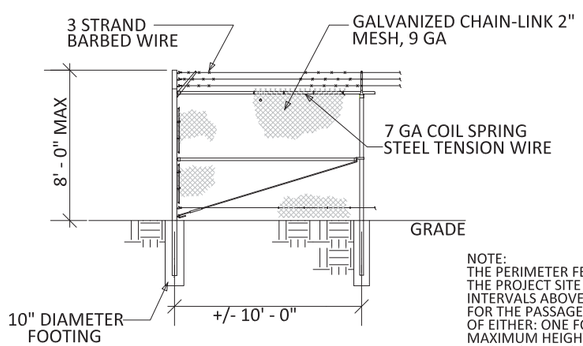
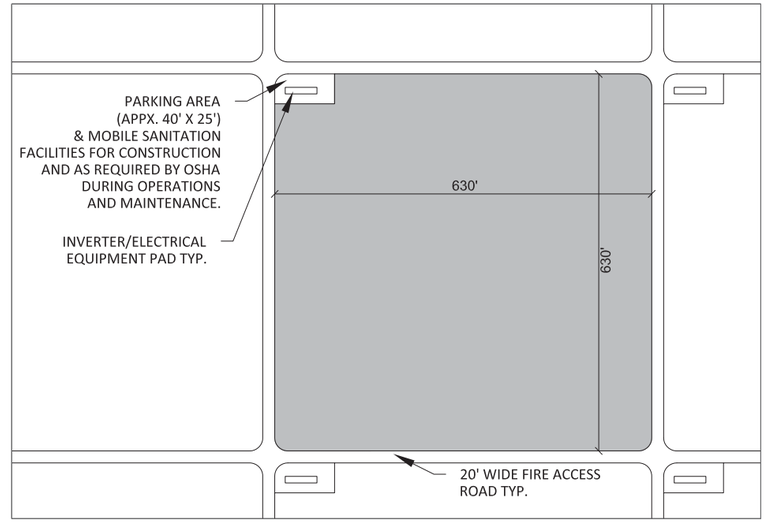


NOTE:
THE PERIMETER FENCING SURROUNDING THE PROJECT SITE WILL BE RAISED AT REGULAR INTERVALS ABOVE GROUND LEVEL TO ALLOW FOR THE PASSAGE OF WILDLIFE TO THE LESSER OF EITHER: ONE FOOT ABOVE GRADE OR TO THE MAXIMUM HEIGHT ALLOWED BY THE PUC. RAISED OPENINGS WILL BE 50' WIDE SPACED AT 200' ON-CENTER.

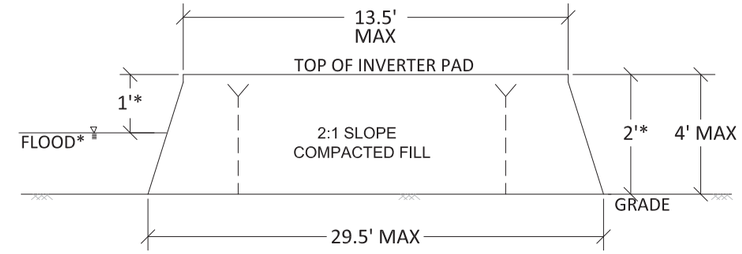
CHAIN LINK SECURITY FENCE ELEVATION

NOT TO SCALE



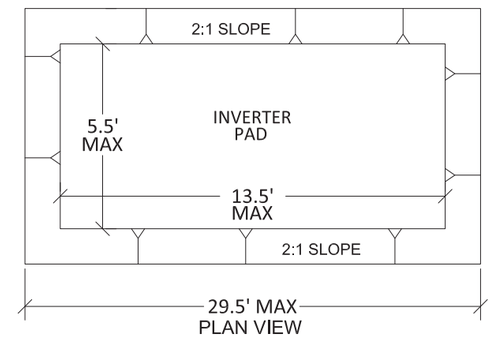
ARRAY BLOCK DETAIL (TYPICAL)

NOT TO SCALE



*TOP OF INVERTER PAD TO BE 1' MINIMUM ABOVE FLOOD WATER ELEVATION AS DETERMINED IN FINAL HYDROLOGY REPORT AND 2' ABOVE GRADE IN FEMA ZONE A.

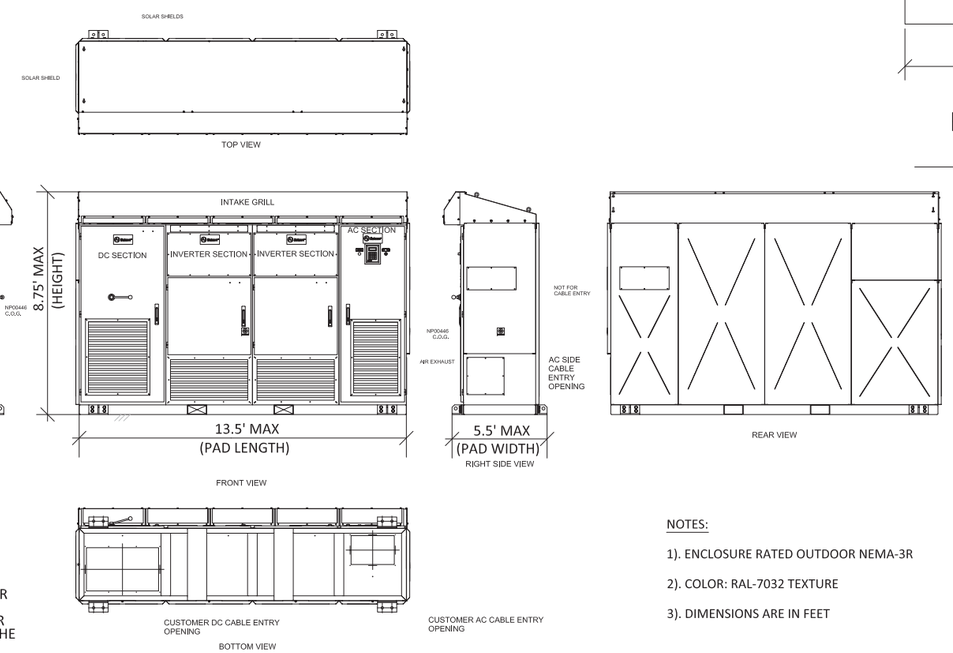
ELEVATION VIEW



PLAN VIEW

RAISED INVERTER PAD DETAILS FOR FLOOD AREAS AS NEEDED

NOT TO SCALE



NOTES:

1). ENCLOSURE RATED OUTDOOR NEMA-3R

2). COLOR: RAL-7032 TEXTURE

3). DIMENSIONS ARE IN FEET

INVERTER PAD DETAILS (TYPICAL)

NOT TO SCALE

C-07

2011-00833 (RCUP201100079)

REGISTERED PROFESSIONAL ENGINEER JULIE ANN DELANEY No.C54558 CIVIL STATE OF CALIFORNIA

EXHIBIT PREPARER:

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IRVINE, CALIFORNIA 92614-6213
TEL: 949.809.5000

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Solar PV System Summary

20MW AC Solar Photovoltaic Generation System

APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch

Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

DRAWING: DETAIL SHEET

APPLICANT:
Silverado Power
2 Embarcadero Center, Ste. 410
San Francisco, CA 94111
(415) 692-7740

SILVERADO power

PROJECT 1 NORTH LANCASTER RANCH
LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

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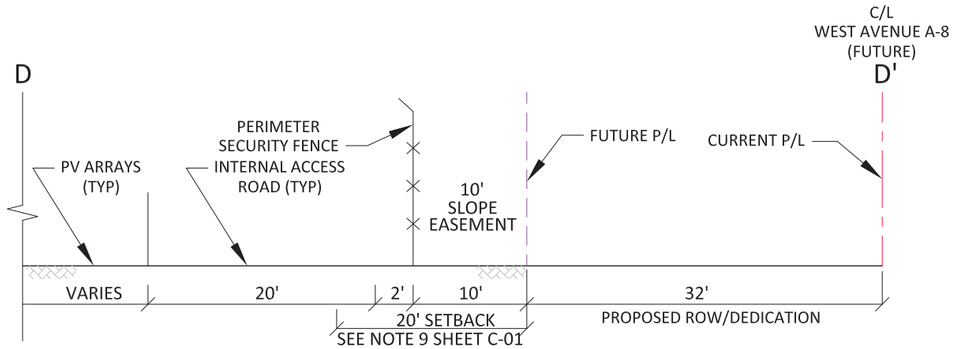

SECTION D - D'

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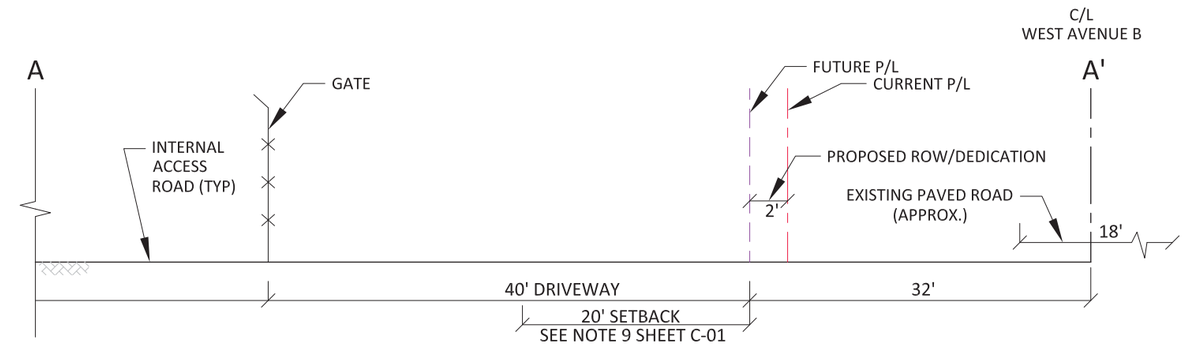

SECTION A - A'

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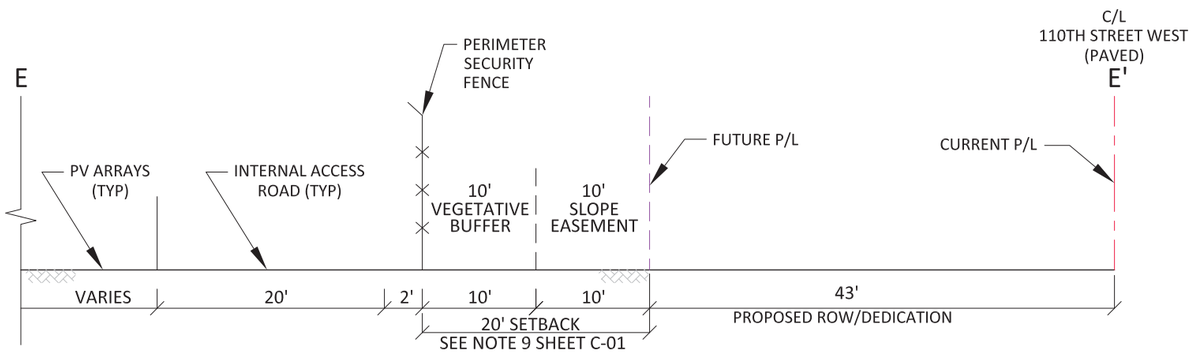

SECTION E - E'

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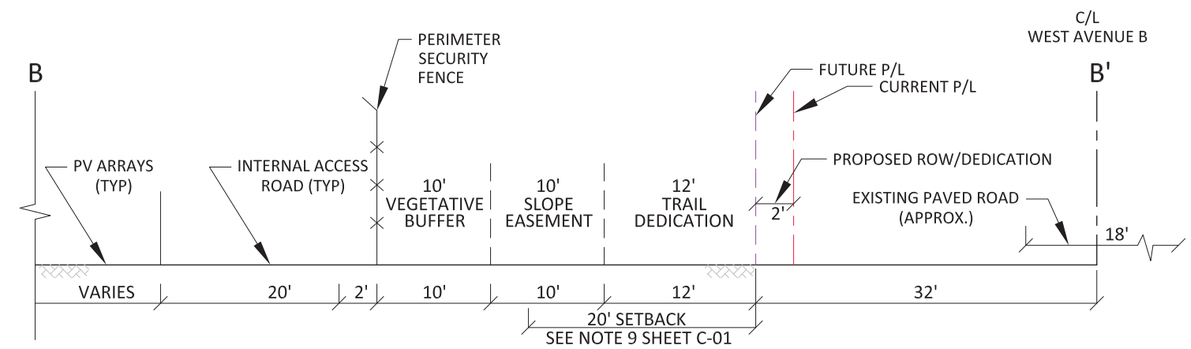

SECTION B - B'

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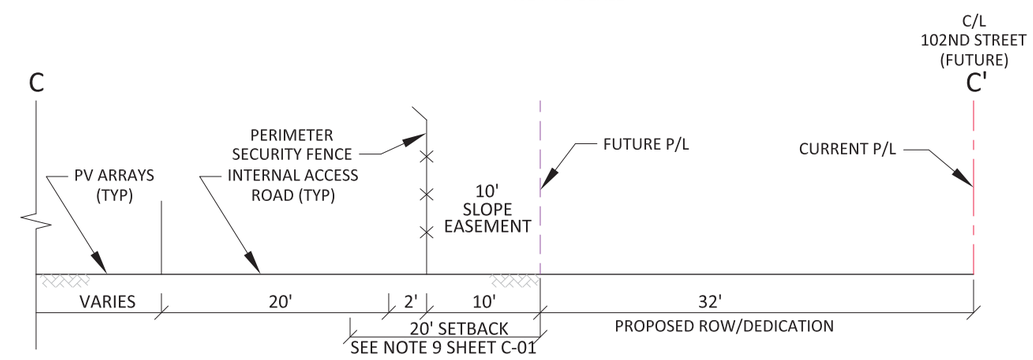

SECTION C - C'

NOT TO SCALE

C-08

2011-00833 (RCUP201100079)

REGISTERED PROFESSIONAL ENGINEER
JULIE ANN DELANEY
No.C54558
CIVIL
STATE OF CALIFORNIA

EXHIBIT PREPARER:

TETRA TECH, INC.

17885 VON KARMAN AVENUE, SUITE 500
IRVINE, CALIFORNIA 92614-6213
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NO.	DATE	REVISION	SUBM'T BY	APPV'D BY

Solar PV System Summary

20MW AC Solar Photovoltaic Generation System

APNs
3262-001-005
3262-001-006
SCH # 2012061068

Project Name:
Project 1 North Lancaster Ranch

Project Address:
110th Street West & West Avenue B
Lancaster
Los Angeles County, CA

DRAWING: SECTION SHEET

APPLICANT:
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SILVERADO power

PROJECT 1 NORTH
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LOS ANGELES COUNTY, CA

2 Embarcadero Center, Ste. 410 | San Francisco, CA 94111 | 415.692.7740 main

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