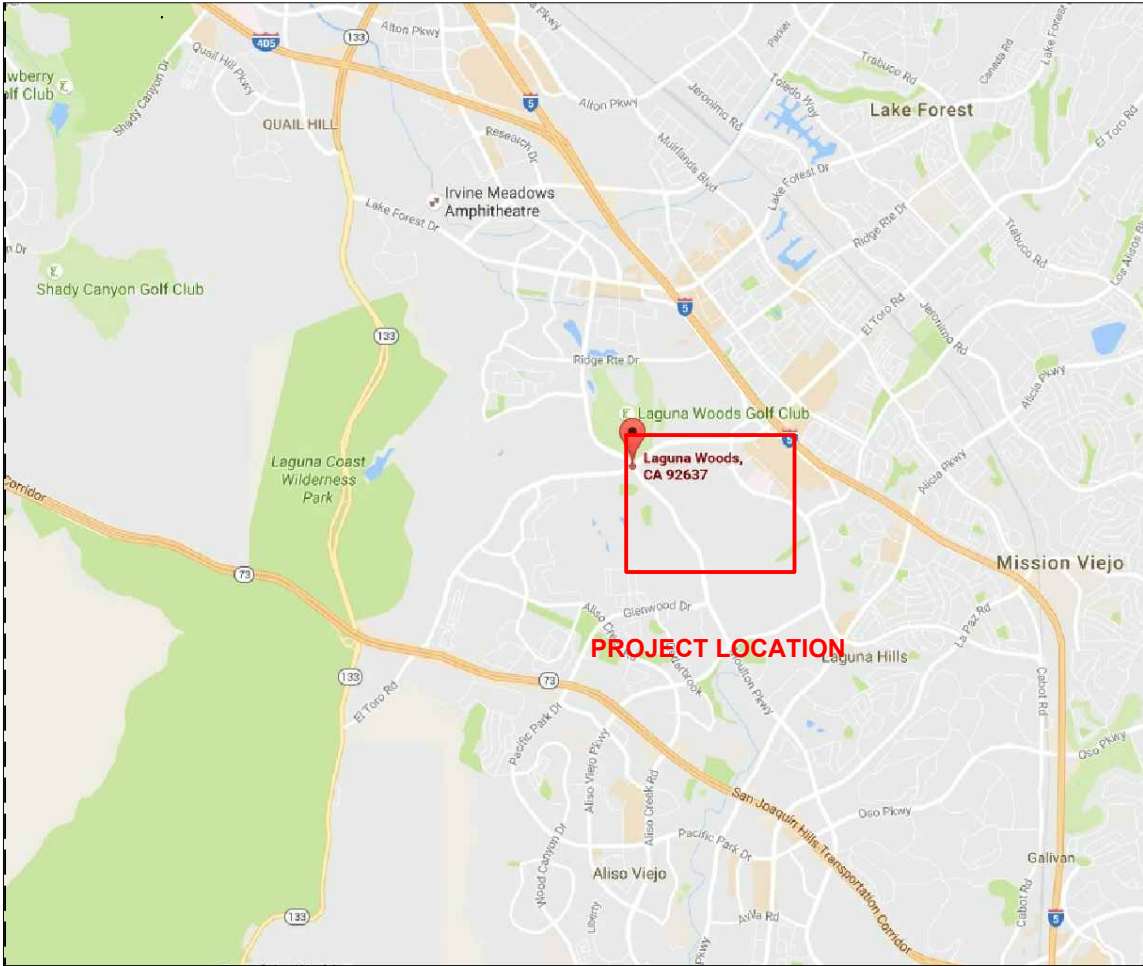


MAIN PANEL UPGRADE

LAGUNA WOODS VILLAGE UNITED MUTUAL



VICINITY MAP
SCALE: N.T.S.

SCOPE OF WORK:

INSTALL NEW MAIN SERVICE PANELS TO REPLACE EXISTING SERVICE PANELS AT THE LOCATIONS SHOWN IN THESE PLANS. THERE WILL BE (8) LOCATIONS. EACH LOCATION IS A COMMUNITY LAUNDRY FACILITY. NEW MAIN SERVICE PANELS WILL BE RATED FOR 400A, 240/120V 1P3W, CONTAINING (1) 200A MAIN SERVICE DISCONNECT. THE EXISTING MAIN PANELS ARE RATED FOR 150A, 240/120V 1P3W. THE EXISTING SERVICE PANELS EACH SUPPLY POWER TO A SEPARATE LOAD CENTER, CONTAINING COMMUNITY LAUNDRY CIRCUITS. THESE EXISITNG LOAD CENTERS WILL ALSO BE REPLACED WITH BY NEW, 200A-RATED LOAD CENTERS, AND RECONNECTED TO THE NEW MAIN SERVICE PANELS.



PROJECT LOCATION DETAIL
SCALE: N.T.S.

THE IMAGE ABOVE SHOWS FOUR HIGHLIGHTED SITES (LMUW 01 - LMUW 04). EACH SITE CONTAINS (2) SEPARATE SERVICE PANELS. SEE CORRESPONDING PAGES FOR DETAIL.

PROJECT DEVELOPER

JOHNSON CONTROLS INC.
SYSTEMS AND SOLUTIONS NA
2250 BUTLER PIKE, SUITE 130
PLYMOUTH MEETING, PA 19462

ENGINEERING, PROCUREMENT AND CONSTRUCTION MGMT.

PROGRESSIVE
POWER GROUP

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(714) 899-2323 -- FAX
www.ProPowerGroup.com
CSLB 928459 B,C10

OWNER / JOB LOCATION:

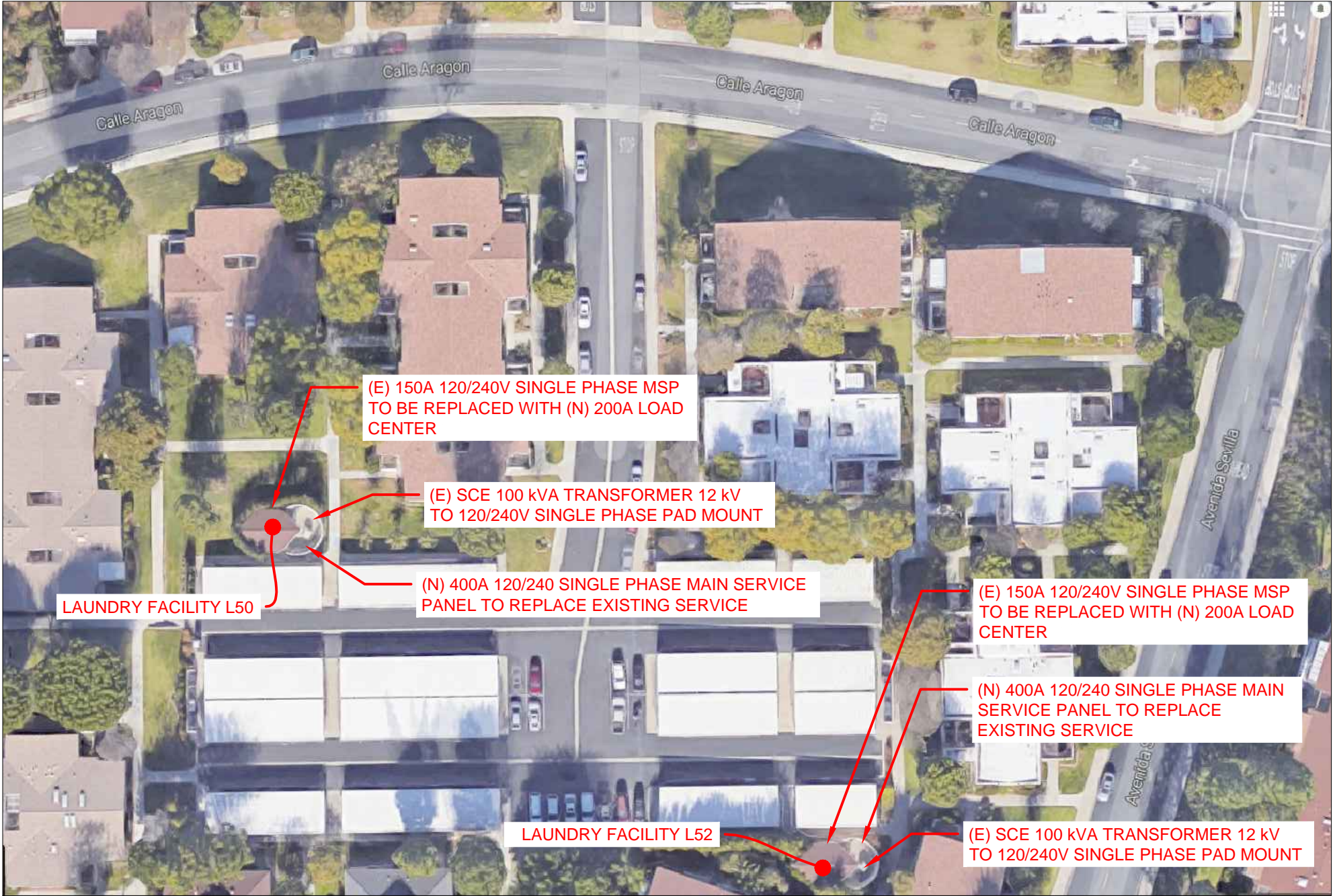
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LAGUNA WOODS, CA 92637
(949) 268-2271


CONTENTS:

TITLE	MPU-1
LMUW-01 DETAIL	MPU-2
LMUW-02 DETAIL	MPU-3
LMUW-03 DETAIL	MPU-4
LMUW-04 DETAIL	MPU-5
SINGLE LINE DIAGRAM	MPU-6
CIVIL AND TRENCHING DETAIL	MPU-7
MAIN PANEL LOCATION	MPU-8

DATE	DESCRIPTION	REV. NO.
8/11/16		0

DRAWN BY: MCB	SHEET NAME: TITLE
DATE: 8/11/16	SHEET NUMBER: MPU-1



 **LWUM 01 DETAIL**
SCALE: 1" = 40'

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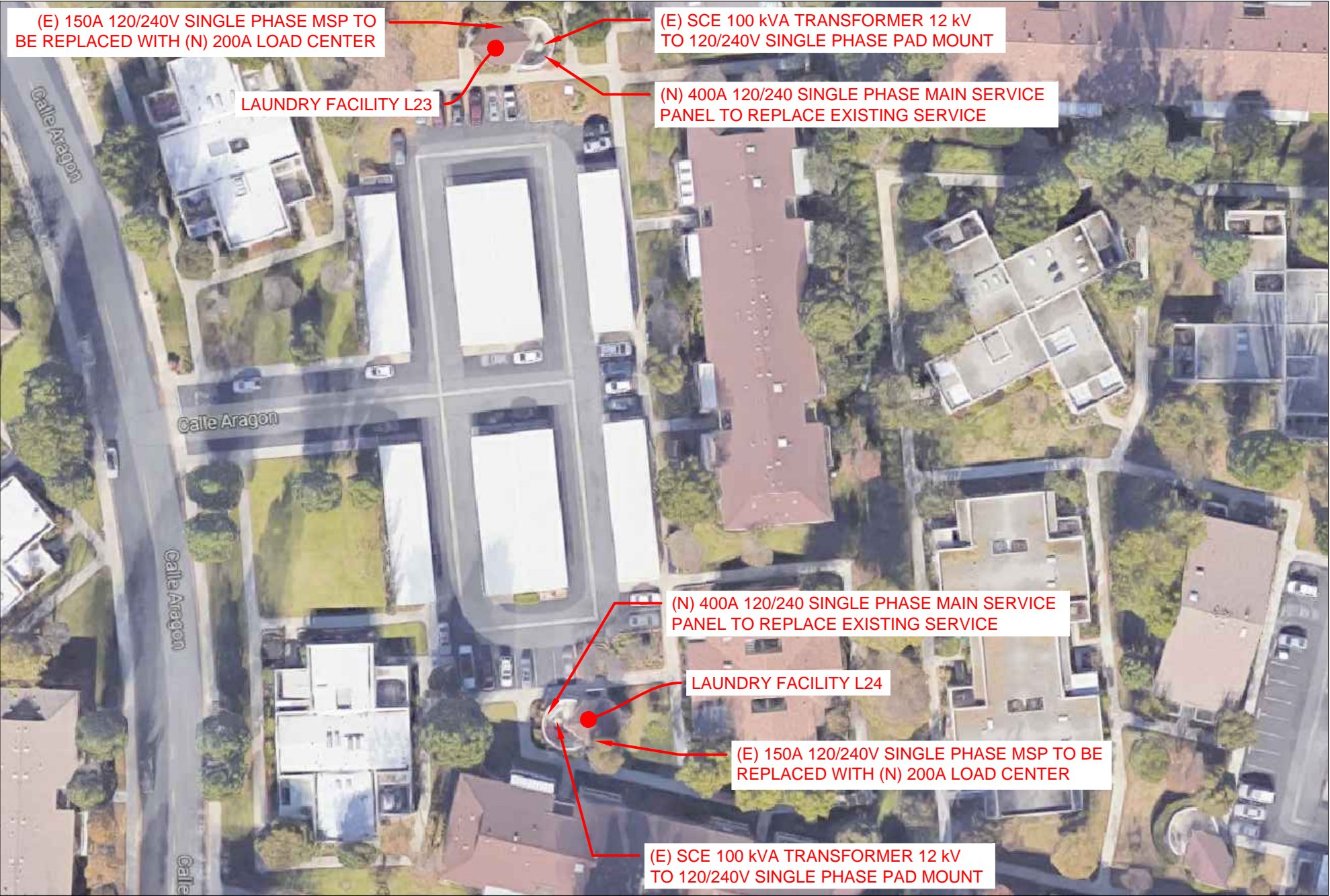
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DATE	DESCRIPTION	REV. NO.
8/11/16		0

DRAWN BY: MCB	SHEET NAME: LMUW 01
DATE: 8/11/16	SHEET NUMBER: MPU-2



 **LWUM 02 DETAIL**
SCALE: 1" = 40'

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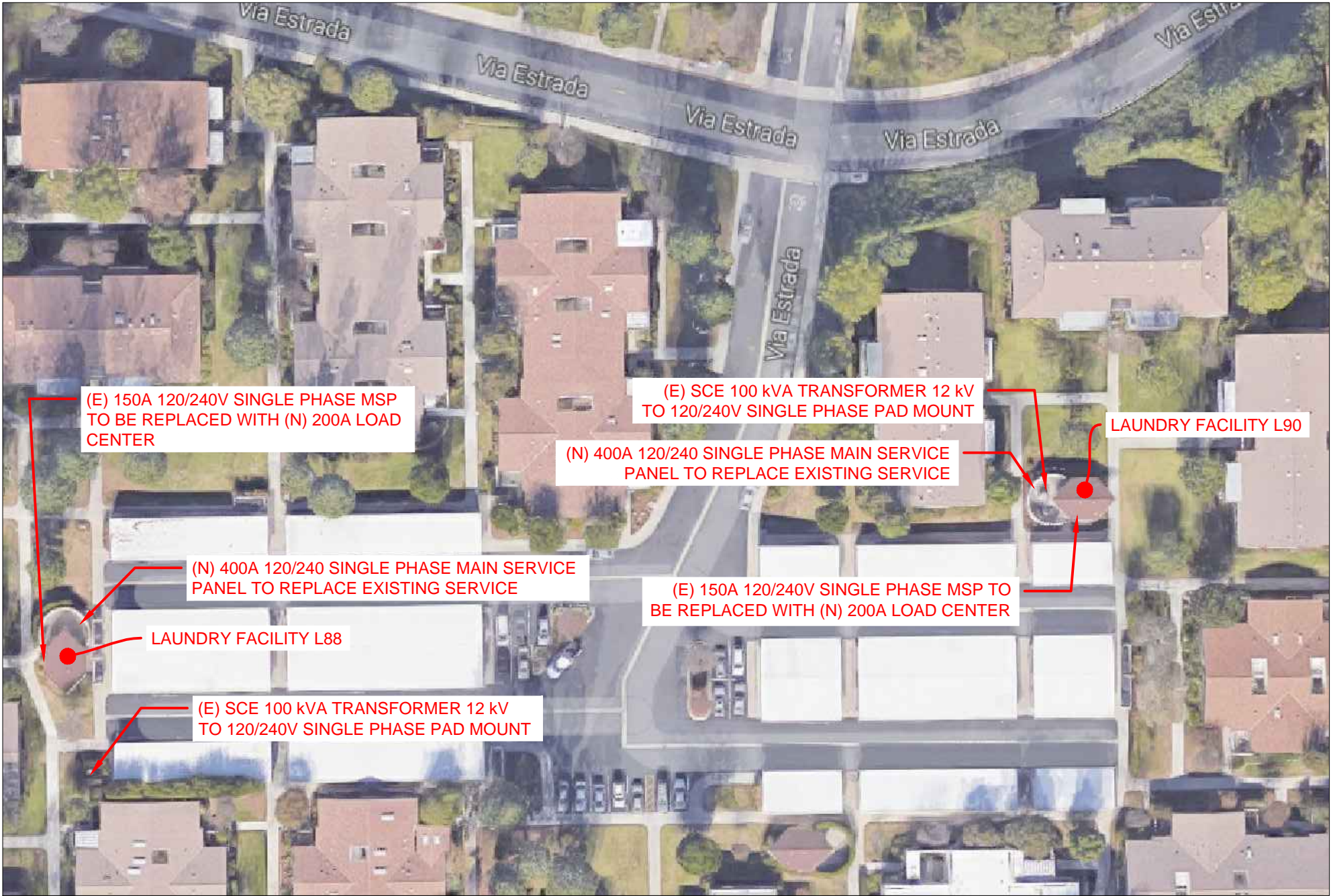
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DATE	DESCRIPTION	REV. NO.
8/11/16		0

DRAWN BY: MCB	SHEET NAME: LMUW 02
DATE: 8/11/16	SHEET NUMBER: MPU-3



 **LWUM 03 DETAIL**
SCALE: 1" = 40'

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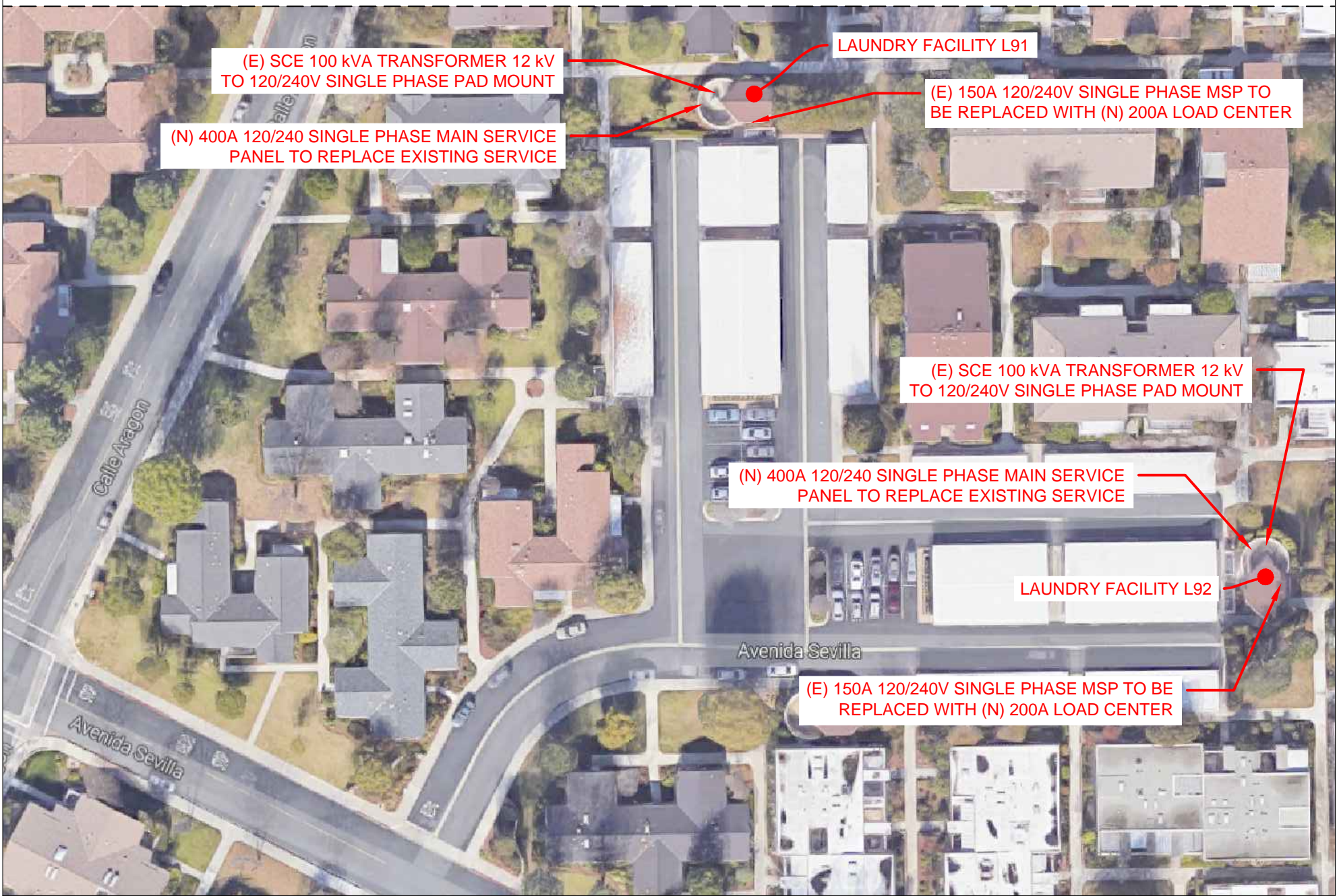
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DATE	DESCRIPTION	REV. NO.
8/11/16		0

DRAWN BY: MCB	SHEET NAME: LMUW 03
DATE: 8/11/16	SHEET NUMBER: MPU-4



 **LWUM 04 DETAIL**
 SCALE: 1" = 40'

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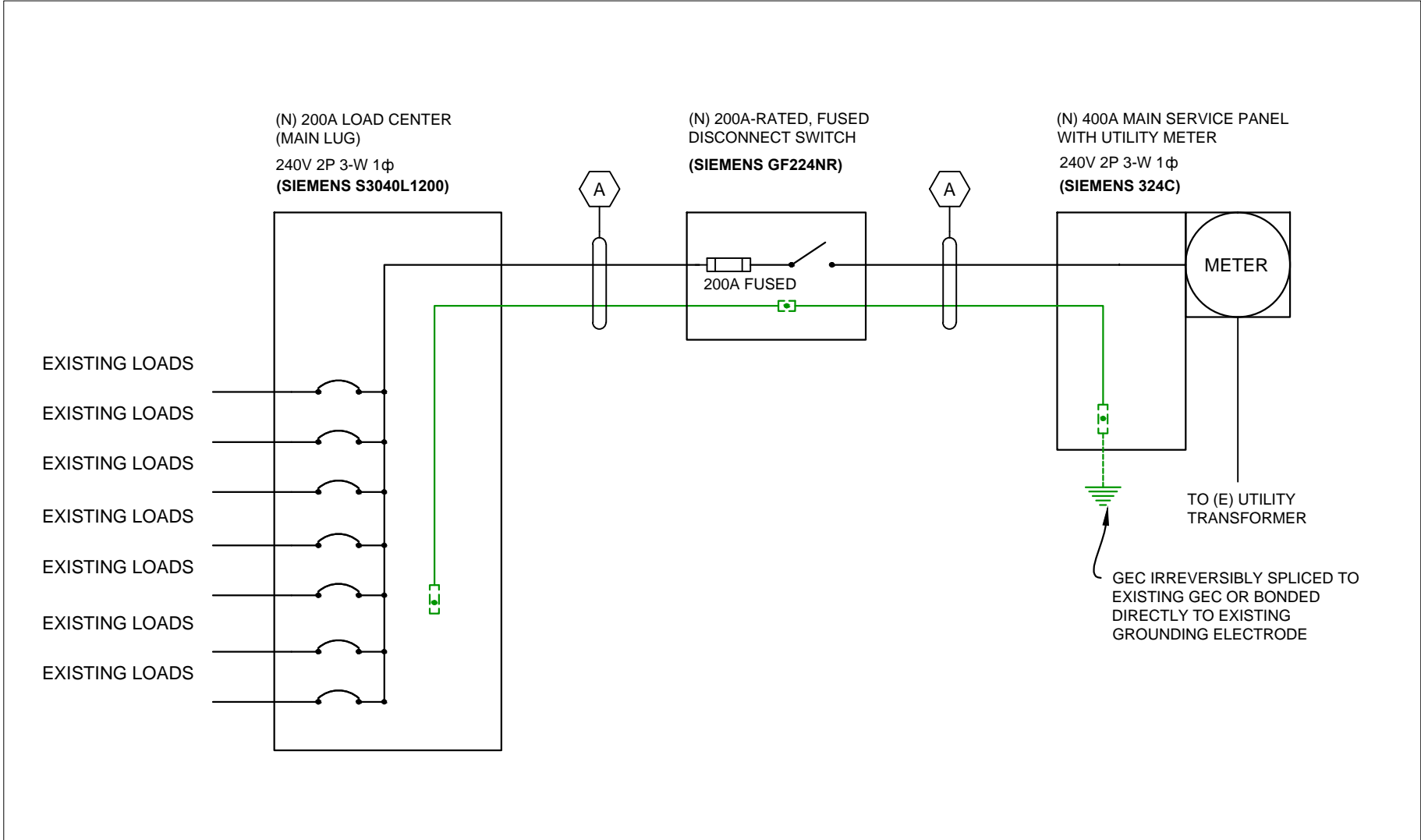
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DATE	DESCRIPTION	REV. NO.
8/11/16		0

DRAWN BY: MCB	SHEET NAME: LMUW 04
DATE: 8/11/16	SHEET NUMBER: MPU-5



SINGLE LINE DIAGRAM (TYPICAL OF 8 MAIN SERVICE PANELS)

ELECTRICAL KEY:

- BREAKER
- SWITCH
- SCREW TERMINAL
- FUSE
- SPLICE
- EARTH GROUND
- CHASSIS GROUND
- GEC
- EGC

PROJECT DEVELOPER

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LAUNDRY PUSHMATIC PANEL UPGRADE											
240/120V 200A METER/MAIN SWITCHBOARD WITH DISTRIBUTION SECTION 22KAIC 1P 3W											
CK#	CIRCUIT DESCRIPTION	TRIP	POLES	L1 (VA)	L2 (VA)	L3 (VA)	L1 (VA)	POLES	TRIP	CIRCUIT DESCRIPTION	CK#
1	WASHER #1	20	2	480		3200		2	30	DRYER #1	2
3		--	--		480		3200	--	--		4
5	WASHER #2	20	2	480		3200		2	30	DRYER #2	6
7		--	--		480		3200	--	--		8
9	WASHER #3	20	2	480		3200		2	30	DRYER #3	10
11		--	--		480		3200	--	--		12
13	WASHER #4	20	2	480		3200		2	30	DRYER #4	14
15		--	--		480		3200	--	--		16
17	WASHER #5	20	2	480		3200		2	30	DRYER #5	18
19		--	--		480		3200	--	--		20
21	OUTSIDE LIGHT	20	1	480		3200		2	30	WATER HEATER #1	22
23	OUTSIDE LIGHT	20	1		480		3200	--	--		24
25	OUTSIDE LIGHT	20	1	480		0		2	40	WATER HEATER #2	26
27	OUTSIDE LIGHT	20	1		480		0	--	--	SPARE	28
29	WATER SPRINKLER	20	1	120		1000		1	20	C-8 OUTLETS	30
31	SPARE	20	1					1	20	SPARE	32
33	SPARE	20	1					1	20	SPARE	34
35	SPARE	20	1					1	20	SPARE	36
37	SPARE	20	1					1	20	SPARE	38
39	SPARE	20	1					1	20	SPARE	40
41	SPARE	20	1					1	20	SPARE	42
TOTAL =				9480	3360	20200	19200				
LOADING				VA	AMPS						
TOTAL (VA) L1				22680	189						
TOTAL (VA) L2				23560	196.33						
TOTAL				46240	192.67						

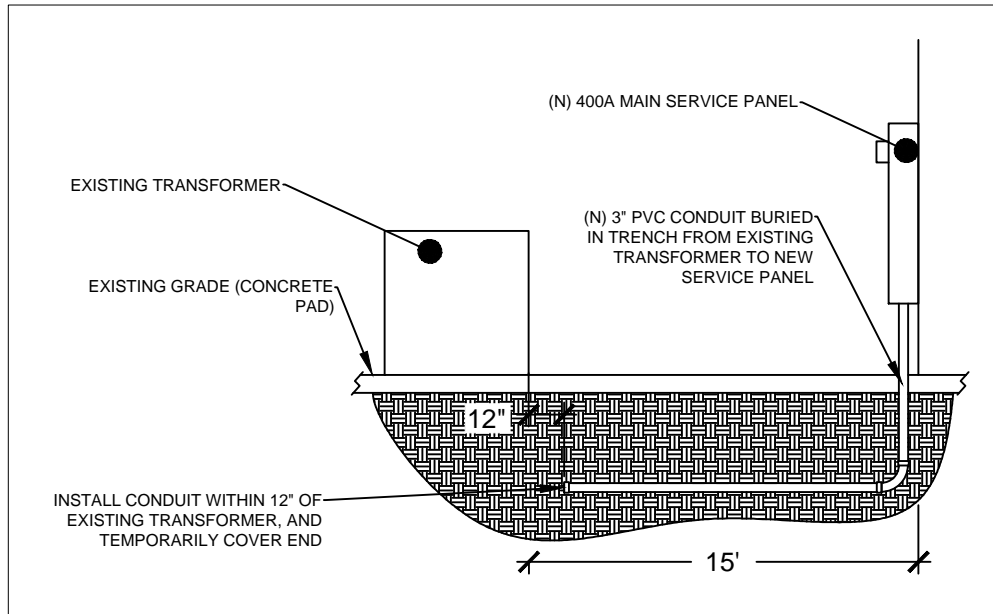
LOAD CALCULATIONS FOR 200A
SERVICE TO EXISTING SITE LOADS

TAG	DESCRIPTION	QUANTITY	ROLE	GAUGE	INSULATION	MATERIAL	LOWEST CONNECTED TERMINAL TEMPERATURE RATING	RATED CONDUCTOR AMPACITY [310.15(B)(16)]	RACEWAY TYPE	MINIMUM CONDUIT SIZE	CONDUIT FILL	HEIGHT OF CONDUIT ABOVE ROOF	ADJUSTED AMBIENT TEMPERATURE [ASHRAE 2% AVG. HIGH, 310.15(B)(7)]	TEMPERATURE DERATE FACTOR [310.15(B)(2)(A)]	NO. CONDUCTORS IN RACEWAY DERATE FACTOR [310.15(B)(3)(a)]	DERATED CONDUCTOR AMPACITY	MAXIMUM EXPECTED CURRENT (PER EACH CONDUCTOR)
A	MAIN PANEL TO LOAD CENTER	1	L1	3/0 AWG	THWN-2	COPPER	75°C (167°F)	200	EMT	2-1/2"	8.78%	N/A	27	1	1	200	200
		1	L2	3/0 AWG	THWN-2	COPPER	75°C (167°F)	200									
		1	N	3/0 AWG	THWN-2	COPPER	75°C (167°F)	200									
		1	GROUND	#6 AWG	BARE	COPPER	75°C (167°F)	65									

CONDUCTOR CALCULATIONS

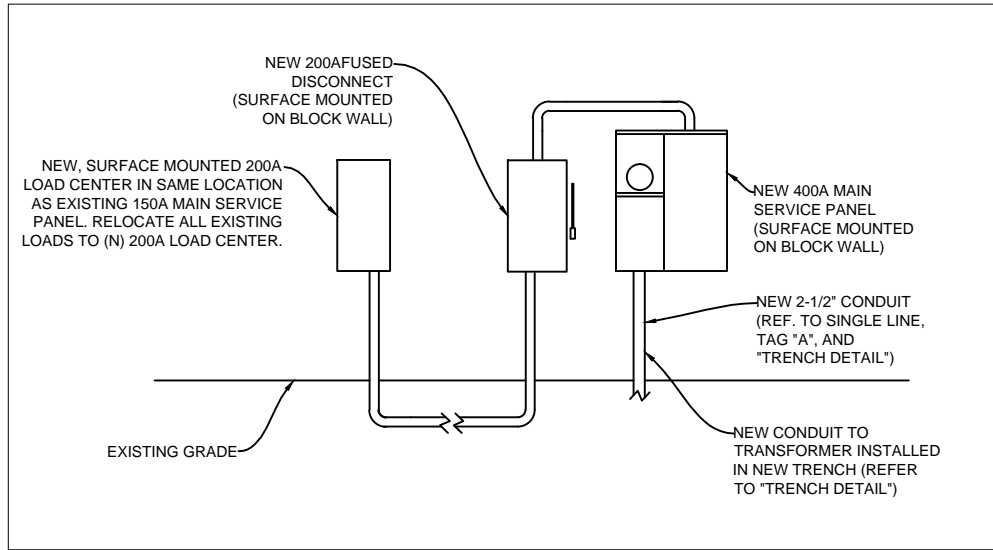
DATE	DESCRIPTION	REV. NO.
8/11/16		0

DRAWN BY: MCB	SHEET NAME: SINGLE LINE
DATE: 8/11/16	SHEET NUMBER: MPU-6



TRENCH SECTION

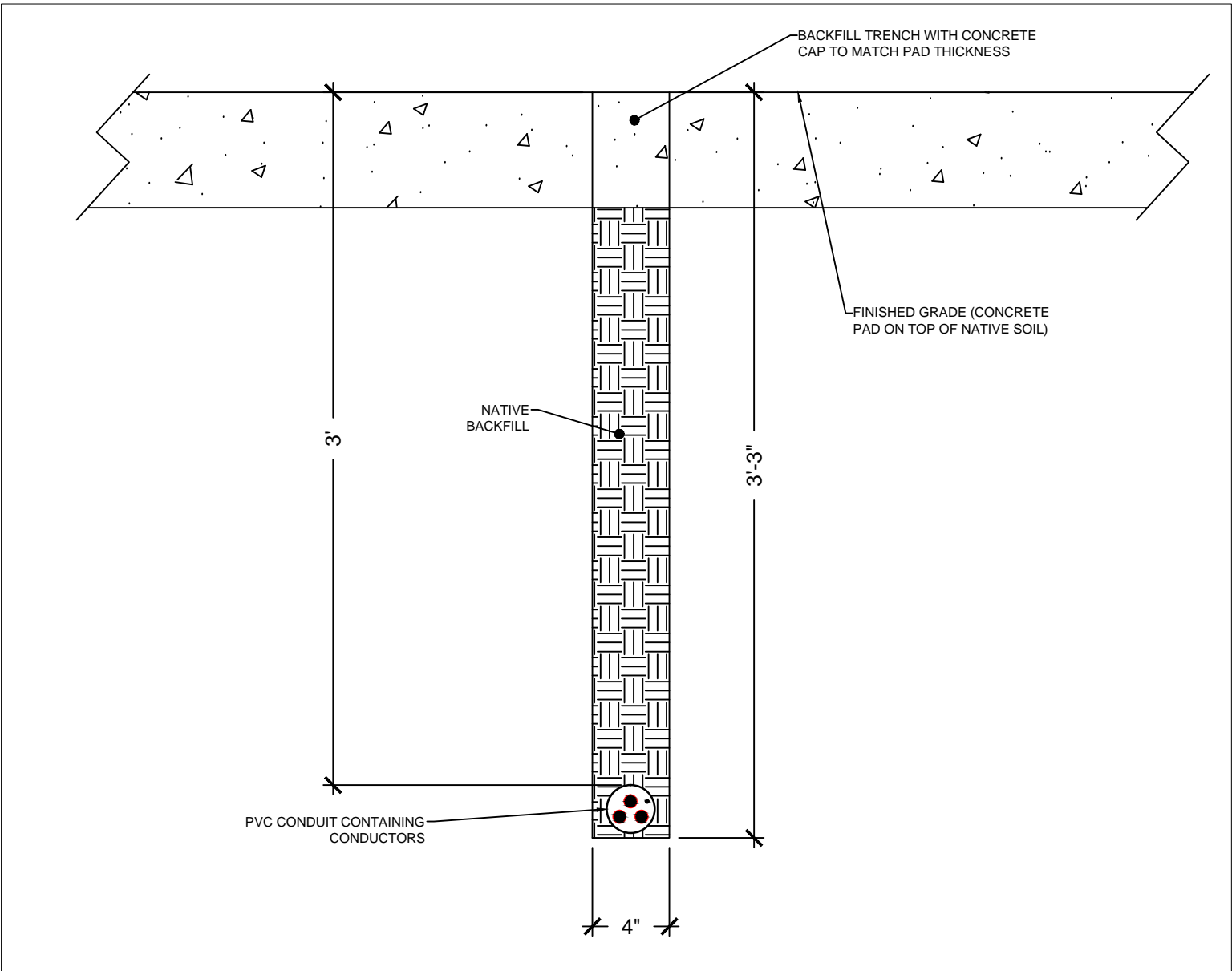
NOTE: SCE MUST INSTALL FINAL CONDUIT SWEEP TO TRANSFORMER. COORDINATE WITH SCE TO PERFORM FINAL TRENCH BACKFILL.



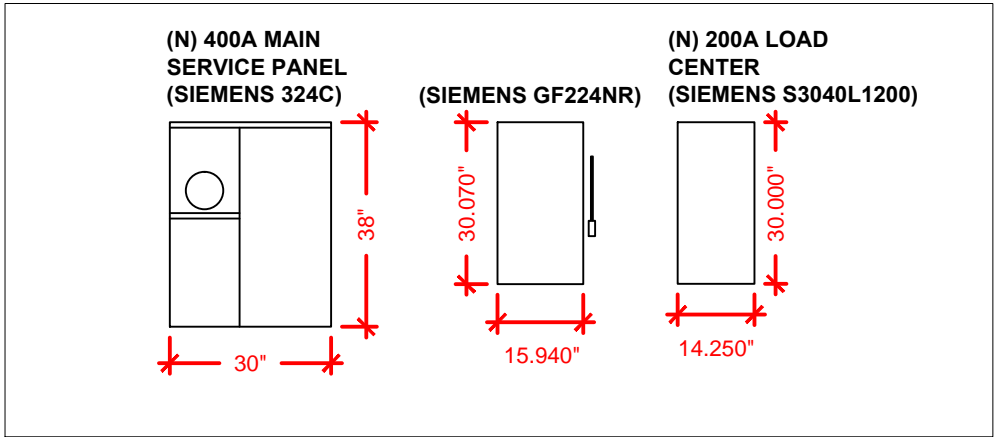
EQUIPMENT ELEVATION

(SCHEMATIC - EXACT SEPARATION DISTANCE BETWEEN EQUIPMENT MAY VARY BETWEEN METER LOCATIONS)

NOTE: ALL EXTERIOR STUCCO WORK MUST BE PERFORMED UNDER THE GUIDANCE OF AN ASBESTOS ABATEMENT CONTRACTOR APPROVED BY THE CITY OF LAGUNA WOODS AND UNITED LAGUNA WOODS MUTUAL.



TRENCH DETAIL



EQUIPMENT DIMENSIONS

PROJECT DEVELOPER

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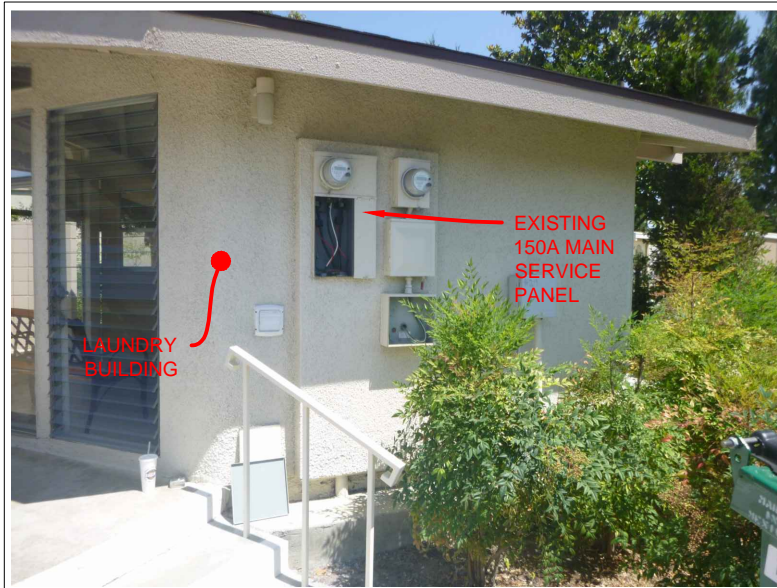
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DATE	DESCRIPTION	REV. NO.
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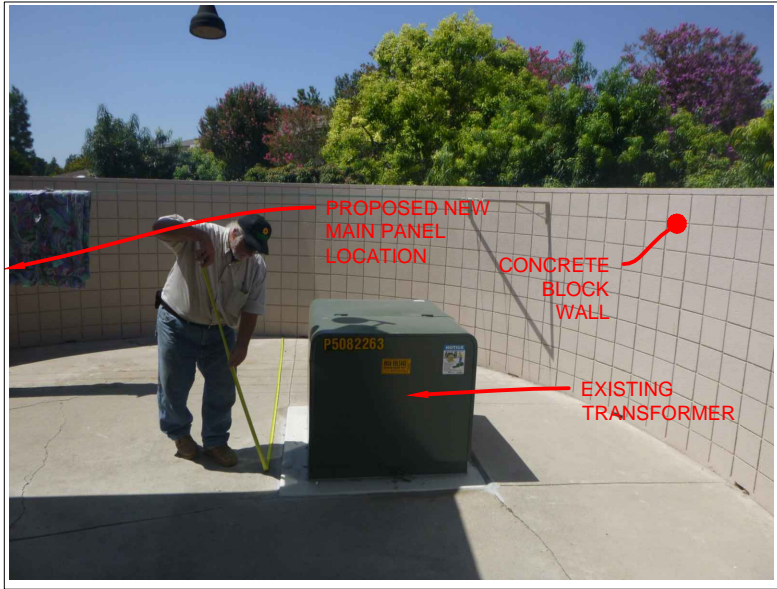
DRAWN BY: MCB	SHEET NAME: CIVIL DETAIL
DATE: 8/11/16	SHEET NUMBER: MPU-7



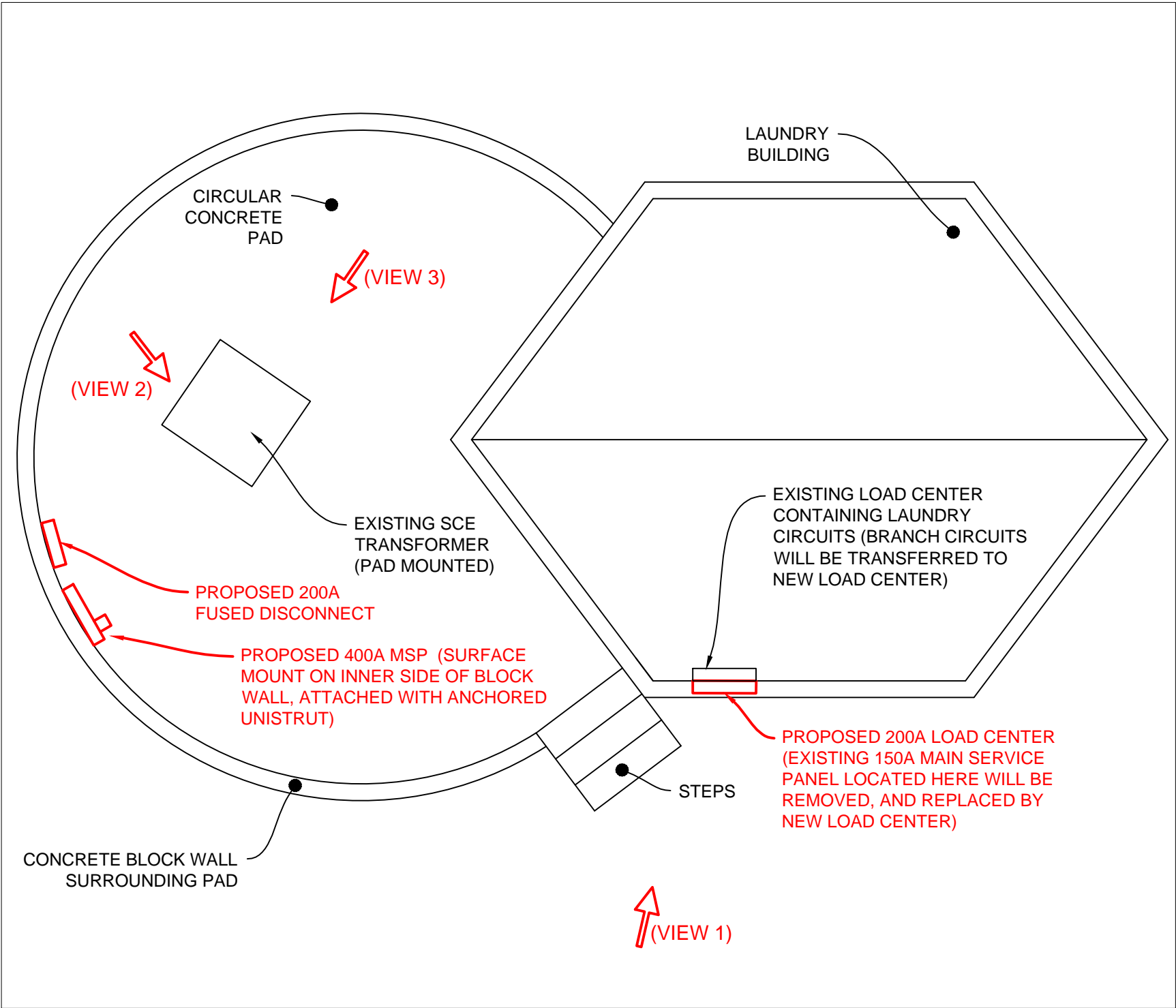
VIEW 1



VIEW 2



VIEW 3



LAYOUT (TYP. OF 8 LOCATIONS)

PROJECT DEVELOPER

JOHNSON CONTROLS INC.
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(949) 268-2271

DATE	DESCRIPTION	REV. NO.
8/11/16		0

DRAWN BY: MCB	SHEET NAME: MSP LOC.
DATE: 8/11/16	SHEET NUMBER: MPU-8