

MECHANICAL PLAN

SCALE 1/10"=1'-0"

MECHANICAL NOTES

1. ALL WORK IS NEW UNLESS OTHERWISE INDICATED.
2. ALL DUCTING SHALL BE GALVANIZED STEEL SIZED AS INDICATED AND INSTALLED PER 2013 CALIFORNIA MECHANICAL CODE DUCT CONSTRUCTION STANDARDS DURING TENANT IMPROVEMENTS.
3. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
4. ALL WORK SHALL BE DONE ACCORDING TO THE 2013 CALIFORNIA MECHANICAL CODE.
5. ALL EXHAUST FANS SHALL HAVE GRILLS ON THE FAN INLET AND SHALL HAVE GRAVITY CONTROLLED BACK-DRAFT DAMPERS INSTALLED.
6. PROVIDE VIBRATION ISOLATION FOR EC-1 AND REZNOR UNITS PER MANUFACTURER'S RECOMMENDATIONS.
7. THERMOSTAT FOR REZNOR UNIT SHALL BE A MOUNTED ON AN INTERIOR COLUMN AND HAVE A LINE VOLTAGE TWIST TIMER FOR 1 HOUR PROVIDING POWER TO THE THERMOSTAT.

UNIT HEATER SCHEDULE						
UNIT LABEL	LOCATION	HEATING CAPACITY	AFUE	POWER	FUEL	COMMENTS
REZNOR HEATER	AS SHOWN	200,000 MBUTH OUT	0.80	120v/1PH	NAT GAS	REZNOR HRPB-250 OR EQUAL

EVAPORATIVE COOLER SCHEDULE					
UNIT ID	LOCATION	RATED AIRFLOW	POWER	MOTOR HP	COMMENTS
EC1	AS SHOWN	5600	220/1 PH	1 HP	MASTERCOOL AS1C71 OR EQUAL

REV.	DESCRIPTION	DATE
A	DESIGN REVIEW	#-##-14
0	ISSUED FOR CONSTRUCTION	#-##-14

OWNER	PROJECT	SHEET TITLE
RD PROPERTIES ATTN: RAMI DARGHALLI 42913 CAPITAL DRIVE, STE. 111 LANCASTER, CA 93535 PHONE: (661) 341-1511	PROPOSED INDUSTRIAL BUILDING APN 3126-009-116 AVENUE L & BUSINESS CENTER PARKWAY LANCASTER, CA 93535 DR. #14-123	MECHANICAL PLAN



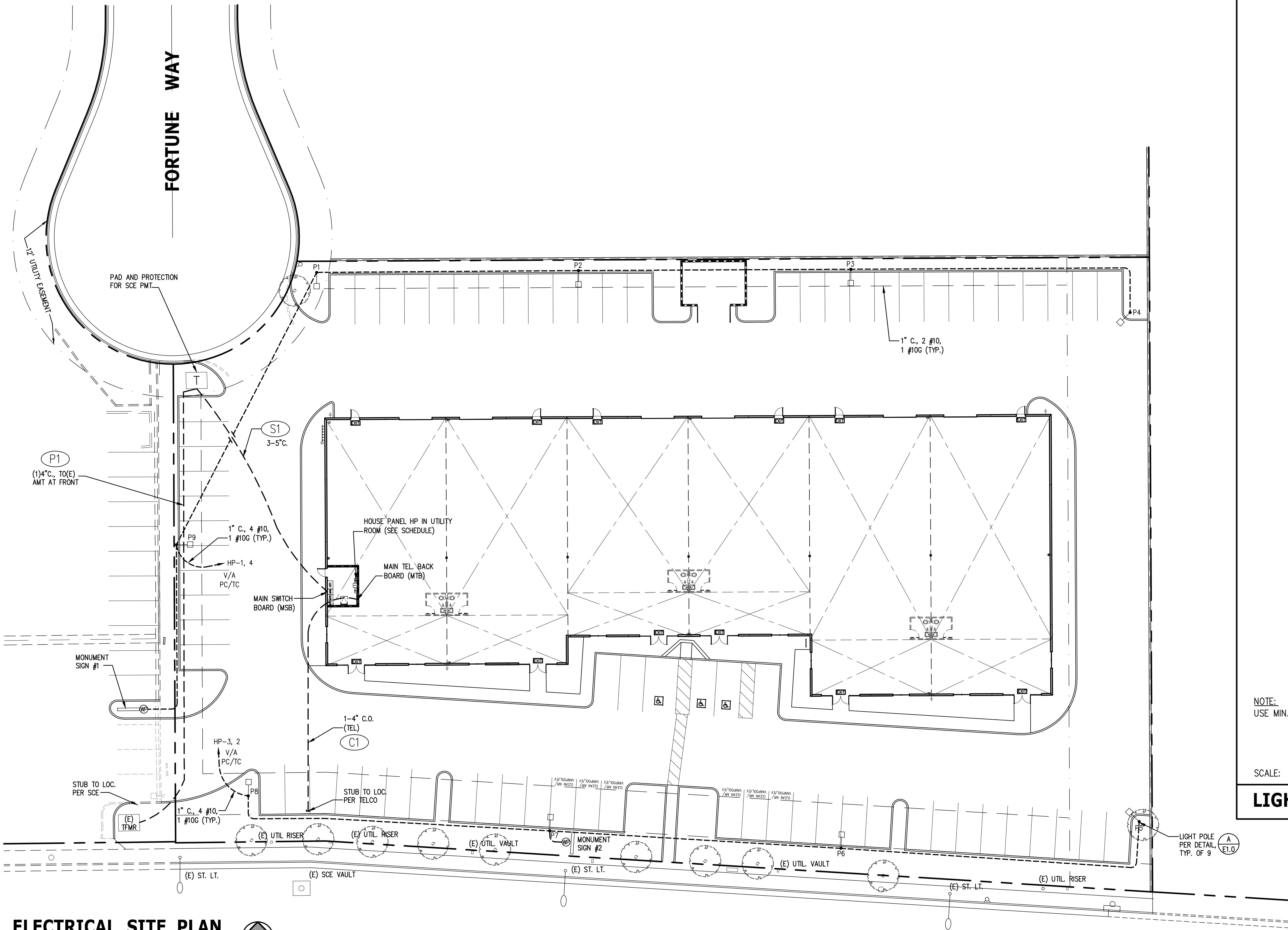
PLANS PREPARED BY:

antelope valley engineering inc.

129 WEST POWDERA STREET LANCASTER, CA 93534
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DRAWN:	C:B / JWS
DATE:	11-24-15
JOB No.:	14-107
SHEET:	M-1.0
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ELECTRICAL SITE PLAN

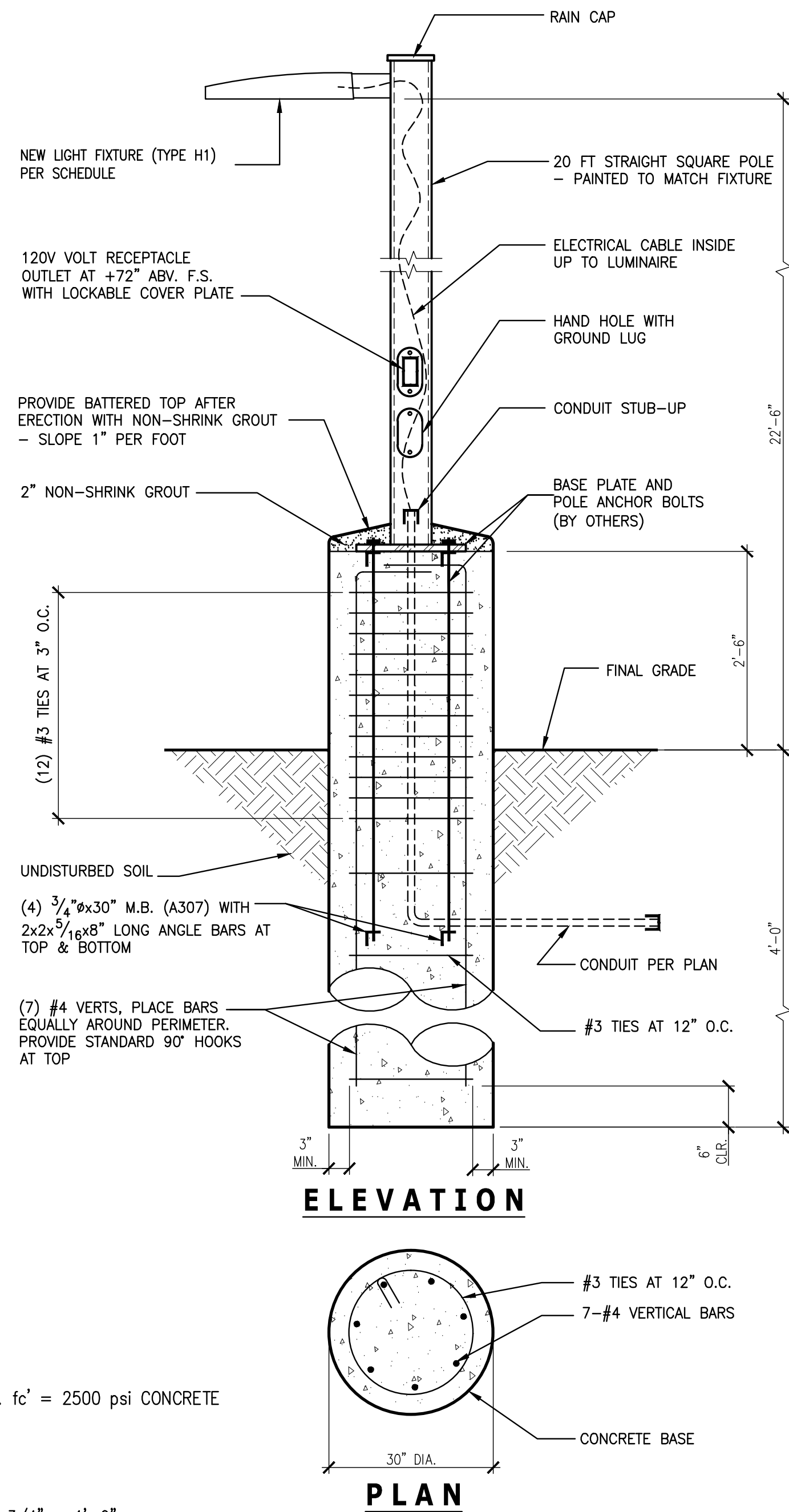
SCALE: 1" = 20'-0"

NOTE:
VERIFY ELECTRICAL AND
TELEPHONE SERVICES PRIOR
TO ALL WORK.

LIGHT POLE (P1 - P9)

NOTE:
USE MIN. f_c = 2500 psi CONCRETE

SCALE: 3/4" = 1'-0"



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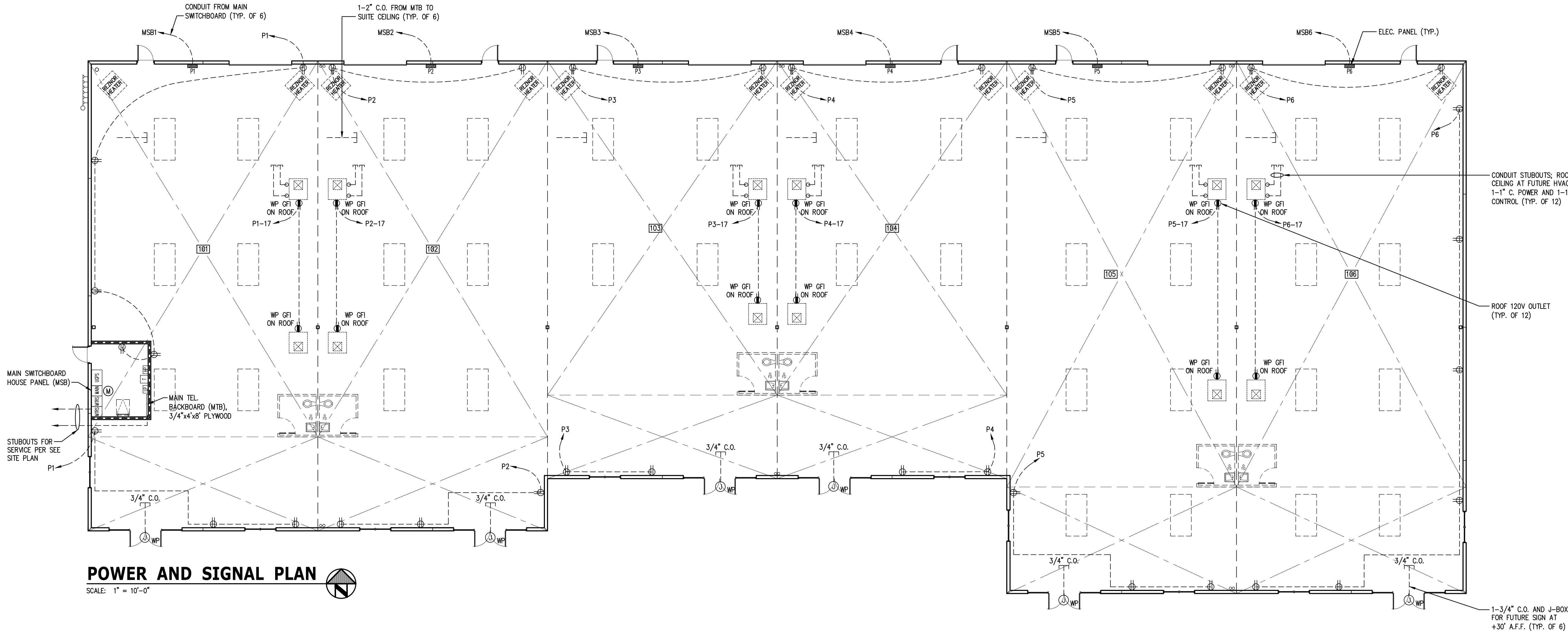
OWNER
RD PROPERTIES ATTN: RAM DARGHALLI 42913 CAPITAL DRIVE, STE. 111 LANCASTER, CA 93535 PHONE: (661) 341-1511

PROJECT
PROPOSED INDUSTRIAL BUILDING APN 3126-009-116 441 EAST AVENUE L LANCASTER, CA 93535 DR. #14-123

SHEET TITLE
ELECTRICAL SITE PLAN

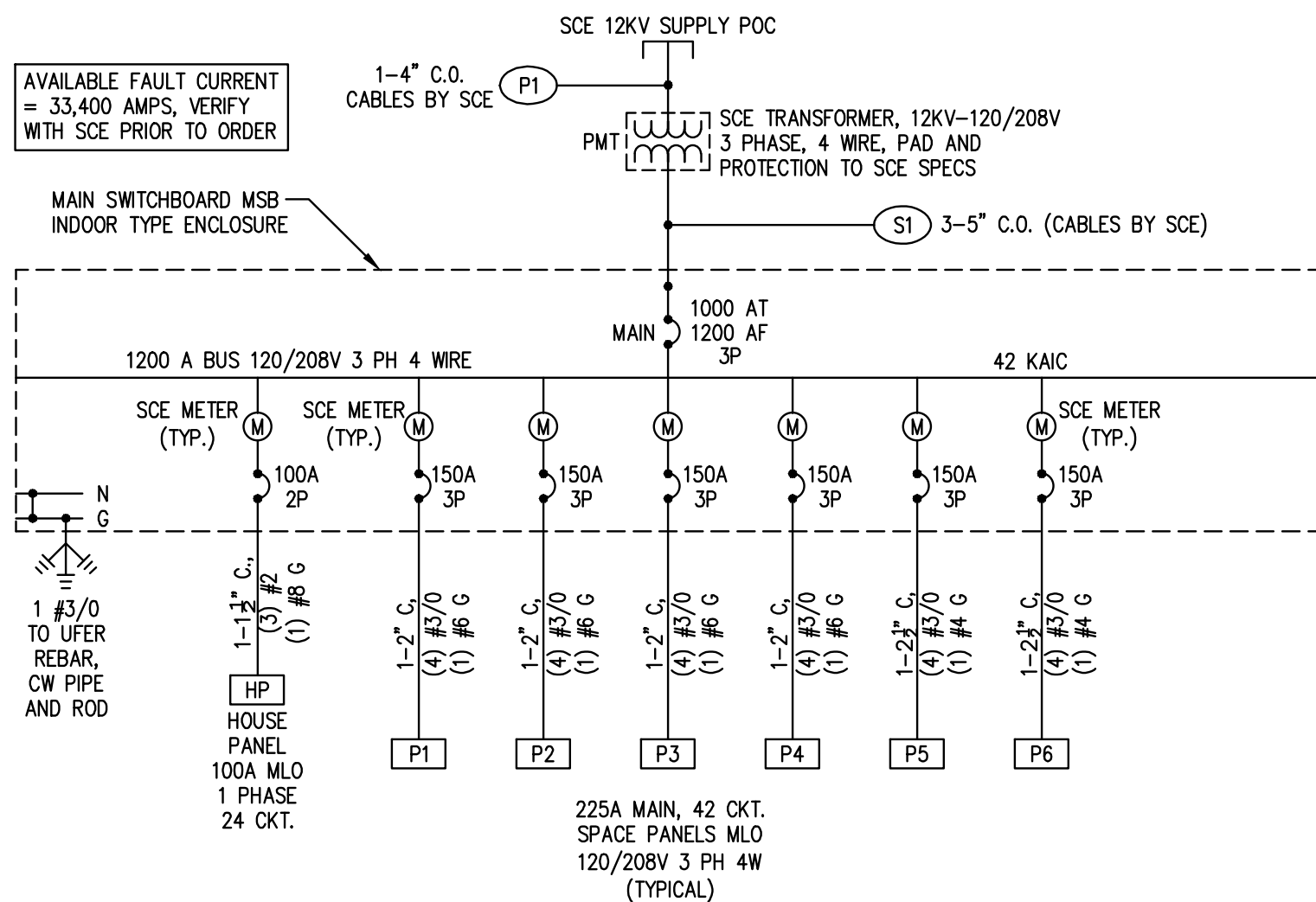
PLANS PREPARED BY:
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DATE:	8-02-16
JOB No.:	14-107
SHEET:	E-1.0
OF	SHEETS



POWER AND SIGNAL PLAN

SCALE: 1" = 10'-0"



SINGLE LINE DIAGRAM

(THREE PHASE)										(SIMILAR TO P2-P6)																							
BUS AMPS		225A		MFR.		C.H. OR EQ		LOC.		REAR WALL		MTG.		SURFACE		MAIN AMPS		200A/3P															
PHASE		3		WIRES		4		VOLTS		120/208V		FEEDER		SEE SINGLE LINE DIAGRAM		AT		TOP		AIC RATING		22K											
DESCRIPTION		QTY		VOLT-AMPERES		OUTLETS		BKR		WIRE		BUS CONNECTION		WIRE		BKR		OUTLETS		VOLT-AMPERES		QTY		DESCRIPTION									
		Ø A		Ø B		Ø C		LTG		REC		MISC		AMP		P		AWG		MISC		REC		LTG		A Ø		B Ø		C Ø			
EXIT/EMERGENCY		1		40				2		20		1		12						2		12		50		4600				2		-	
FUT. SIGN		3				1000		1		20		1		-						3		4				4600				4		FUT A/C UNIT	
FUT SPACE LT.		5				1000				20		1		-						5		6				4600				6			
FUT SPACE LT.		7		1000						20		1		-						7		8		1		20		1000		8		FUT. RECEPTACLES	
FUT. INSTANT WATER HEATER		9				1500				1		30		-						9		10		1		20		1000		10		FUT. RECEPTACLES	
FUT. SPACE LTS		11				1500						2		-						11		12		1		20		1000		12		FUT. RECEPTACLES	
FUT. SPACE LTS		13		1000						20		1		-						13		14		50		4600				14		-	
FUT. SPACE LTS		15		1000						20		1		-						15		16		1		20		4600		16		FUT A/C UNIT	
ROOF OUTLETS		17				200		1		20		1		12						17		18		3		20		4600		18		-	
SPARE		19		-						20		-		-						19		20		1		20		-		-		SPARE	
		21		-						20		-		-						21		22		1		20		-		-			
		23		-						20		-		-						23		24		1		20		-		-			
		25		-						20		-		-						25		26		1		20		-		-			
		27		-						20		-		-						27		28		1		20		-		-			
		29		-						20		-		-						29		30		1		20		-		-			
		31		-						20		-		-						31		32		1		20		-		-			
		33		-						20		-		-						33		34		1		20		-		-			
		35		-						20		-		-						35		36		1		20		-		-			
		37		-						20		-		-						37		38		1		20		-		-			
		39		-						20		-		-						39		40		1		20		-		-			
		41		-						20		-		-						41		42		1		20		-		-			
COLUMN TOTALS		3		2040		3500		2700																		10200		10200		10200		COLUMN TOTALS	
BUS LOADING										DEMAND CALCULATION																							
PHASE VOLT-AMPS:					PHASE TOTAL AMPS:					TOTAL CONNECTED VOLT-AMPS: 38840 VA.																							
PHASE A TOTAL: 12240 VA.					PHASE A TOTAL: 102 A.					LONG CONTINUOUS LOADING (LCL) AT 25%: 3450 VA.																							
PHASE B TOTAL: 13700 VA.					PHASE B TOTAL: 114 A.					TOTAL DEMAND: 42290 VA.																							
PHASE C TOTAL: 12900 VA.					PHASE C TOTAL: 108 A.																												
TOTAL DEMAND AMPS = 42290 VOLT-AMPS + 208 PANEL VOLTAGE + 5 = 117 AMPS																																	

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OWNER	RD PROPERTIES ATTN: RAMI DARGHALLI 42913 CAPITAL DRIVE, STE. 111 LANCASTER, CA 93535 PHONE: (661) 341-1511
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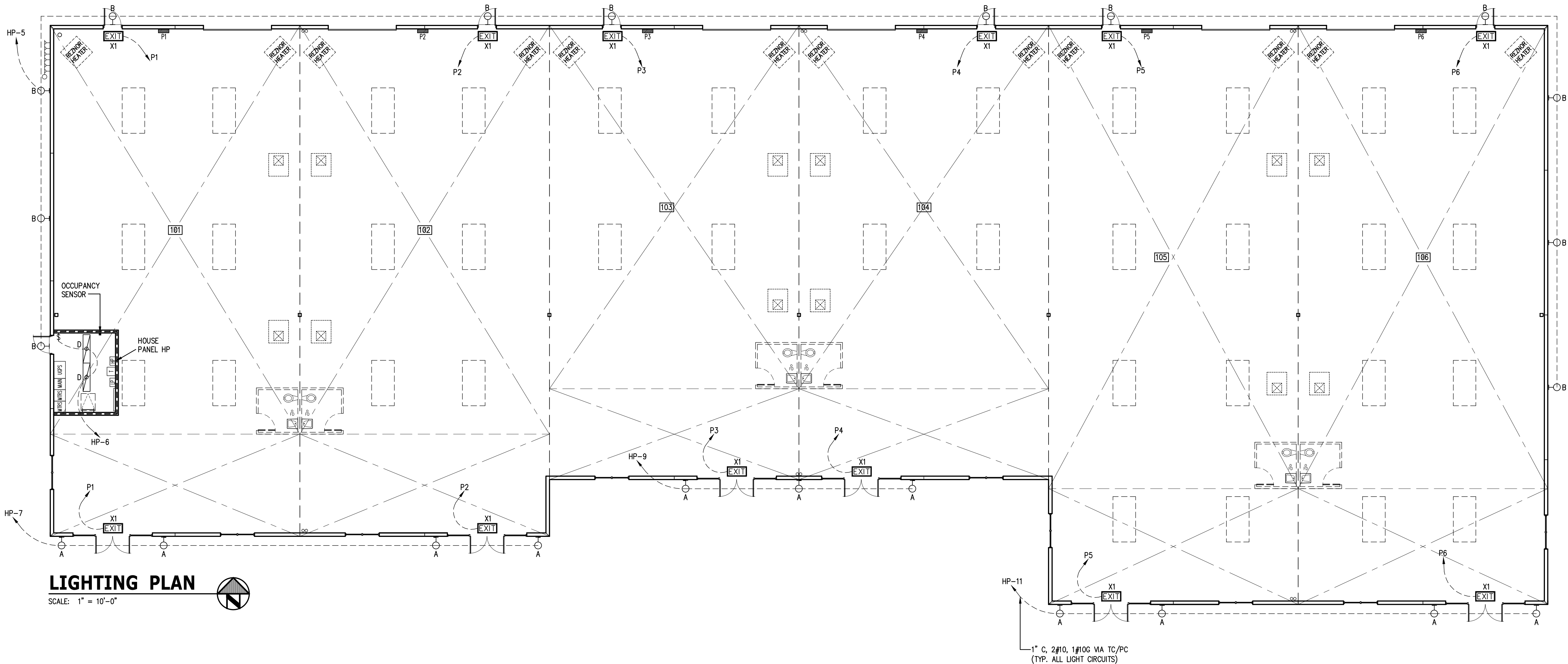
PROJECT	PROPOSED INDUSTRIAL BUILDING APN 3126-009-116 441 EAST AVENUE L LANCASTER, CA 93535 DR. #14-123
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SHEET TITLE	POWER AND SIGNAL PLAN
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PLANS PREPARED BY:	antelope valley engineering inc. 129 WEST POMEREA STREET LANCASTER, CA 93534 TEL: (661) 945-0905 FAX: (661) 945-0770 WWW: http://www.antelopevalleyengineering.com
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DATE:	8-02-16
JOB No.:	14-107
SHEET:	E-2.0
OF	SHEETS

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(SINGLE PHASE)										PANEL <u>HP</u>									
BUS AMPS <u>100A</u>				MFR. <u>SQUARE D or EQUAL</u>				LOC. <u>UTILITY ROOM</u>				MTG. <u>SURFACE</u>				MAIN AMPS <u>MLO</u>			
PHASE <u>1</u>		WIRES <u>3</u>		VOLTS <u>120/208V</u>		FEEDER <u>1 1/2" G. 3 #2, 1 #6</u>		AT <u>TOP</u>		AIC RATING		35K							
DESCRIPTION	QTY #	VOLT-AMPS		OUTLETS		BKR	AMP	P	WIRE	WIRE	BKR	OUTLETS		VOLT-AMPS		QTY #	DESCRIPTION		
		A Ø	B Ø	LTG	REC							MISC	A Ø	B Ø					
PARKING LIGHTS	1	450		5			20	1	10	1	10		1		1000	2	MONUMENT SIGN 2		
PARKING LIGHTS	3		360	4			20	1	10	3	10				1000	4	MONUMENT SIGN 1		
BACK/REAR LIGHTS	5	500			12		20	1	10	5	10			120		6	UTILITY LT		
FRONT EAST LIGHTS	7		112	4			20	1	10	7	10		2	2		8	UTILITY REC		
FRONT CENTER LTS.	9	84			3		20	1	10	9	10				400	10	TEL. BACKBOARD		
FRONT WEST LIGHTS	11		84	4			20	1	10	11	10		1	1		12	SPRINKLER CONT.		
TIME CLOCK TC	13	500					1	20	12	13	10				500	12	SPARES		
SPARES	15						20	1		15	10					16	SPARES		
SPARES	17									17	10					18	SPARES		
	19									19	10								
	21									21	10								
	23									23	10								
	25									25	10								
	27									27	10								
	29									29	10								
	31									31	10								
	33									33	10								
	35									35	10								
	37									37	10								
	39									39	10								
	41																		
COLUMN TOTALS		1534	556												1520	1900	COLUMN TOTALS		
LOAD DATA BY PHASE										DEMAND CALCULATIONS									
PHASE VOLT-AMPS:					PHASE TOTAL AMPS:					TOTAL CONNECTED VOLT-AMPS: <u>5510</u> VA									
PHASE A TOTAL: <u>3054</u> VA					PHASE A TOTAL: <u>26</u> AMPS					LONG CONTINUOUS LOADING (LCL) AT 25%: <u>500</u> VA									
PHASE B TOTAL: <u>2456</u> VA					PHASE B TOTAL: <u>21</u> AMPS					TOTAL DEMAND LOAD: <u>6010</u> VA									
TOTAL CONNECTED VOLT-AMPS: <u>5510</u> VA																			
TOTAL DEMAND AMPS = <u>6010</u> VOLT-AMPS ÷ PHASE VOLTAGE <u>208</u> VOLTS = <u>12</u> AMPS																			

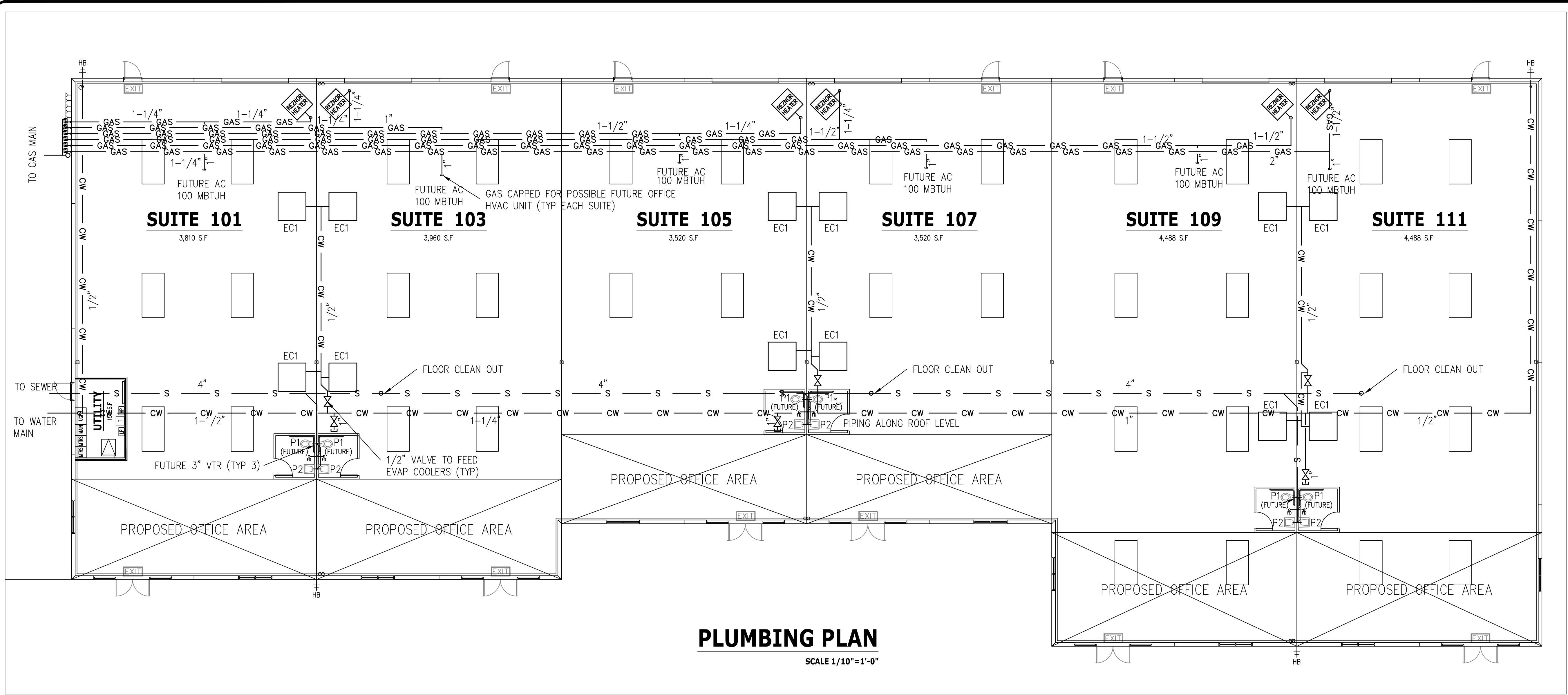
LIGHT FIXTURE SCHEDULE (120 VOLTS~)				
TYPE	INPUT WATTS	LAMP TYPE	ACCEPTED MANUFACTURER	REMARKS
A	28	LED 4000K	RAB OR EQ	GOOSENECK STRAIGHT BLADE LUMINAIRE; 24" ARM-BLACK CAT. NO. GN1LED28NSST11A
B	41	LED 5000K	LITHONIA OR EQ	SECURITY LED WALL LUMINAIRE; 3600L, 5000K, 277V CAT. NO. TWR1LED250KMVOLT
C	NOT USED			
D	64	FLUOR 32WT8	LITHONIA OR EQ	WRAPAROUND, FLUORESCENT 2 LAMP, 1'x4', WITH OCC. SENSOR CAT. NO. WT8-2-32
H1	89	LED 5000K	LITHONIA OR EQ	LED AREA LUMINAIRE, POLE MOUNTED 40 LED'S, 700 MA, 5000K TYPE III MED. CAT. NO. DS'X1-40C-700-50K-T3M
X1	5	LED 2-1W	LITHONIA OR EQ	EMERGENCY/EXIT COMB. UNIT, LED RED ON WHITE, 90 MIN., BATTERY CAT. NO. ECR LED MB

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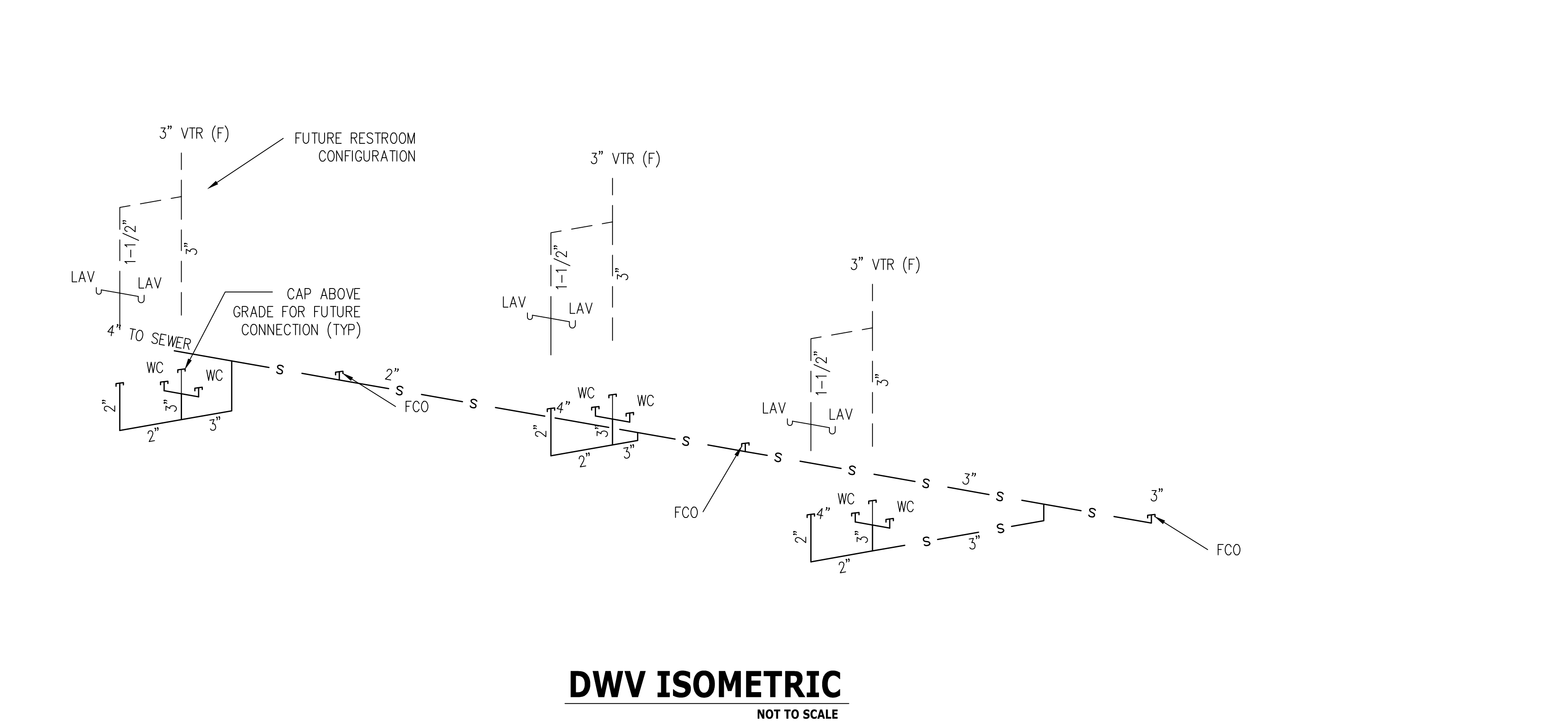
OWNER	PROJECT	SHEET TITLE
RD PROPERTIES ATTN: RAMI DARGHALI 42913 CAPITAL DRIVE, STE. 111 LANCASTER, CA 93535 PHONE: (661) 341-1511	PROPOSED INDUSTRIAL BUILDING APN 3126-009-116 441 EAST AVENUE L LANCASTER, CA 93535 DR. #14-123	LIGHTING PLAN

PLANS PREPARED BY:	valley engineering inc. 129 WEST PIONEER STREET LANCASTER, CA 93534 TEL: (661) 945-0905 FAX: (661) 945-8170 EMAIL: info@valleyengineering.com WEBSITE: http://www.valleyengineering.com
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DATE:	8-02-16
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OF	SHEETS



- ### PLUMBING NOTES
1. ALL WORK SHALL CONFORM TO THE CALIFORNIA PLUMBING CODE, 2012 EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
 2. BEFORE COMMENCEMENT OF THE WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITY PIPING AND CONNECTION POINTS.
 3. VERIFY THE LOCATIONS OF ALL PLUMBING FIXTURES FOR ROUGH IN FROM THE ARCHITECTURAL DRAWINGS.
 4. ALL WORK SHALL BE COORDINATED WITH THE WORK OF THE OTHER TRADES.
 5. ALL WATER PIPING SHALL BE TYPE K OR L COPPER. INSULATE ANY PIPING THAT HAS POTENTIAL FOR FREEZING.
 6. ALL DWV PIPING SHALL BE ABS PLASTIC, CAST IRON, PVC SCHEDULE 40 PLASTIC, OR GALVANIZED STEEL.
 7. ABS AND PVC DWV PIPING INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE STANDARDS REFERENCE IN TABLE 14-1 OF THE PLUMBING CODE.
 8. ALL REQUIRED CLEANOUTS SHALL BE INSTALLED AS PER SECTION 707.0 AND 710.0 OF THE PLUMBING CODE.
 9. ALL HOSE BIBS SHALL BE EQUIPPED WITH AN APPROVED NON-REMOVABLE VACUUM BREAKER.
 10. ALL HOSE BIBS AND FAUCETS CONNECT TO NON-POTABLE WATER LINES SHALL BE POSTED "CAUTION: NON-POTABLE WATER, DO NOT DRINK".
 11. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHOD SET IN SECTION 609.9 OF THE PLUMBING CODE.
 12. PIPING LOCATIONS ARE APPROXIMATE, ALL PIPING IS TO AVOID RUNNING UNDER SKYLIGHTS.



GAS PIPING SCHEDULE						
	Suite 101	Suite 103	Suite 105	Suite 107	Suite 109	Suite 111
	CAPACITY (MBTUH)	CAPACITY (MBTUH)	CAPACITY (MBTUH)	CAPACITY (MBTUH)	CAPACITY (MBTUH)	CAPACITY (MBTUH)
PIPE SIZE						
1/2"	56	50	40	34	30	28
3/4"	118	104	84	72	64	58
1"	222	197	158	135	120	109
1-1/4"	456	404	324	278	246	223
1-1/2"	683	605	486	416	369	334
2"	1315	1165	936	801	710	643
2-1/2"	2096	1857	1492	1277	1131	1025
3"	3705	3284	2637	2257	2000	1812
DISTANCE	80 EQ. FT.	100 EQ. FT.	150 EQ. FT.	200 EQ. FT.	250 EQ. FT.	300 EQ. FT.

FIXTURE UNITS AND ESTIMATED DEMANDS				
	WATER SUPPLY		DRAIN REQUIREMENTS	
	QTY	#FU TOTAL	#DFU TOTAL	
WATER CLOSET FLUSH TANK	0	2.5	3	0
WATER CLOSET FLUSH VALVE	6	VARIES	125	4
LAVS	6	1	6	1
HOSE BIBS	2	VARIES	3	0
EVAPORATIVE COOLERS	12	1	12	
TOTAL FIXTURE UNITS			146	30
WATER PRESSURE AT MAIN=			75	PSI
MIN FIXTURE PRESSURE=			15	PSI
METER AND REDUCING VALVE LOSS =			15	PSI
ADJUSTED LENGTH=			350	FEET
MAX FIXTURE HEIGHT=			8	FEET
ALLOWABLE PRESSURE LOSS=			41.54	PSI
MAXIMUM DEMAND=			75	GPM
ALLOWED FRICTION LOSS PER 100 FEET=			11.87	PSI
PIPING DIAMETER=			1-1/2"	IN MIN

- | LEGEND | |
|--------|--------------------|
| VTR | VENT THROUGH ROOF |
| WCO | WALL CLEAN OUT |
| FCO | FLOOR CLEAN OUT |
| --- | DIAMETER |
| --- | SEWER PIPING |
| --- | VENT PIPING |
| --- | COLD WATER PIPING |
| --- | HOT WATER PIPING |
| --- | HOT WATER RETURN |
| --- | NATURAL GAS PIPING |

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OWNER	
RD PROPERTIES	
ATTN: RAMI DARGHALLI	
42913 CAPITAL DRIVE, STE. 111	
LANCASTER, CA 93535	
PHONE: (661) 341-1511	

PROJECT	
PROPOSED INDUSTRIAL BUILDING	
APN 3126-009-116	
AVENUE L & BUSINESS CENTER PARKWAY	
LANCASTER, CA 93535	
DR. #14-123	

SHEET TITLE	
PLUMBING PLANS AND ISOMETRICS	



PLANS PREPARED BY:

antelope valley engineering inc.

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