Madera Unified School District

1902 Howard Road, Madera, CA 93637
559.675.4500
Fax: 559.675.1186
www.madera.k12.ca.us

March 16, 2023

Addendum No. 1 Bid No.030823-MLK Cold Box Addition

NOTICE TO ALL VENDORS:
This addendum is attached to and made a part of the above-entitled specifications for Madera Unified School District for Bid No. Bid No.030823-MLK Cold Box Addition
with a due date of **March 27, 2023 @ 10:00:00 AM.**

All changes and/or clarifications will appear in bold type and deletions will be struck out within a sentence.

See attached plans/specifications

Signature: _____

Date: _____

LAWRENCE
ENGINEERING GROUP

ADDENDUM NO. #1 Bid No.030823-MLK Cold Box Addition **DATE:** **3/15/23**

PROJECT: Martin Luther King Jr. Middle School
Cold Box Addition

JOB NO.: 21182
DSA File No.: 20-30
DSA App. No.: 02-120015

OWNER: Madera Unified School District
1205 S. Madera Ave.
Madera, CA 93637

ENGINEER: Lawrence Engineering Group
Attention: Ryan Carlson
4910 E. Clinton Way, Suite 101
Fresno, CA 93727
T. (559) 431-0101

It will be the responsibility of the General Contractor to submit the information contained in this addendum to all its subcontractors and suppliers. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

The following additions, deletions, and revisions to the Sheets and Project Manual are hereby made and do become a part of these Contract Documents.

Changes to Sheets:

1. **Drawing, Sheet MP-1, Mechanical Yard Plan:**
   a. Relabeled the Evaporator and Condenser serving the Freezer to E-1 and CU-1, respectively, to match the schedules on sheet MP-2.
   b. Relabeled the Evaporator and Condenser serving the Cooler to E-2 and CU-2, respectively, to match the schedules on sheet MP-2.

2. **Drawing, Sheet MP-2, Mechanical Details & Schedules:**
   a. Evaporator Schedule:
      i. Revised evaporator E-1 Full Load Amps to 14.3 A.
      ii. Revised model number of E-1 to "E1LD0142B-TE2".
      iii. Revised evaporator E-2 Full Load Amps to 2.4 A.
      iv. Revised evaporator E-2 voltage to 115-volt single phase.
      v. Revised model number of E-2 to "E1MD0163A-TA2".
      vi. Revised weights of E-1 and E-2 to 78 lbs. and 72 lbs., respectively to match Structural Calculations.

   b. Condensing Unit Schedule:
      i. Revised condensing unit CU-1 model number to "MSLD040AB".
      ii. Added MCA / MOP requirements for CU-1 and CU-2:
         1. CU-1: MCA = 48 A, MOP = 60 A
         2. CU-2: MCA = 31 A, MOP = 35 A
      iii. Added refrigerant piping connections for CU-1 and CU-2:
         1. Liquid line size = 1/2"
         2. Suction line size = 7/8"
      iv. Revised condensing unit CU-2 model number to "MSMD020AB".

3. **Drawing, Sheet E1.04, Panel Schedule**
   a. Revised mechanical Equipment schedule.
   b. Revised voltage drop calculations.
   c. Revised Panel WF schedule.

4. **Drawing, Sheet E3.01, Enlarged Equipment Yard**
   a. Revised Evaporator and Condenser unit labels.
   b. Revised Keynote 10: New Fire Alarm bell.

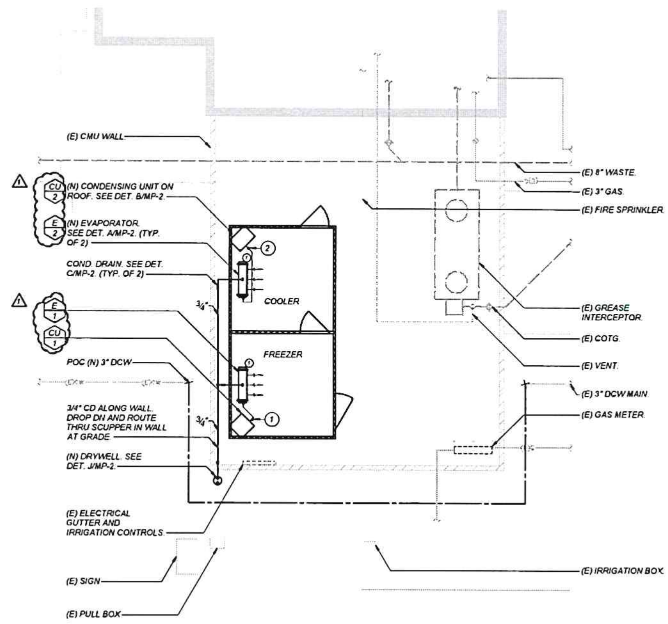
NOTES:

1. FREEZER/COOLER COMBO BOX TO BE 15'W x 30'L x 10'-2"H AND INCLUDES THE FOLLOWING:

   STUCCO GALV. INT. & EXT. FINISH.
   SMOOTH CEILING FINISH.
   (2) 4' LED LIGHT FIXTURES
   (2) HEATED AIR VENTS
   (8) 1.5"x1.5"x96" 14 GA. ANGLE BRACKET.
   RAIN HOOD & CURTAIN.
   FLAT WHITE MEMBRANE ROOF.

2. COOLER DOOR TO BE 48" WIDE x 78" HIGH. FREEZER DOOR TO BE 60" WIDE x 78" HIGH.
3. SLOPE REFRIG. PIPE 1/4" PER 10' DOWN TOWARD COND. UNITS.
4. SLOPE CD 1/4" PER FOOT DOWN INSIDE FREEZER BOX.
5. SLOPE CD 1/8" PER FOOT DOWN OUTSIDE FREEZER BOX.
6. SEE SHEET MP-4 FOR FREEZER SPECS.

LEGEND		
SYMBOL	ITEM	ABBR
—RL—	REFRIGERANT LIQUID	RL
—RS—	REFRIGERANT SUCTION	RS
—CD—	CONDENSATE DRAIN	CD
	FLEXIBLE CONNECTION	FLEX
	REDUCER OR INCREASER	—
	POINT OF CONNECTION	POC
- - - -	EXISTING (DESIGNATED)	(E)
—	NEW (DESIGNATED)	(N)
—	ABOVE GRADE	AG
—	BELOW GRADE	BG
S	SWITCH	-
—EMS—	ENERGY MANAGEMENT SYSTEM CONDUIT	EMS
T	THERMOSTAT	T'STAT
T	EMS TEMPERATURE SENSOR @ +4'-0" TOP OF BOX	—

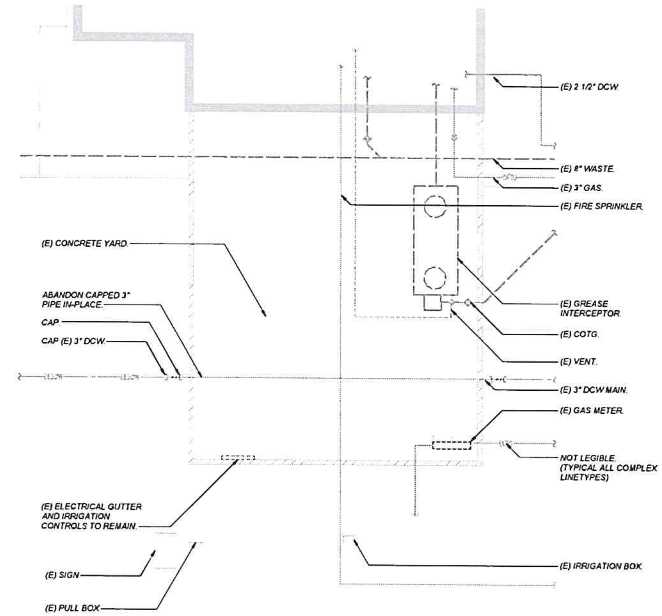


(E) CMU WALL
CU 2 (N) CONDENSING UNIT ON ROOF. SEE DET. B/MP-2
E 2 (N) EVAPORATOR. SEE DET. A/MP-2. (TYP. OF 2)
COND. DRAIN. SEE DET. C/MP-2. (TYP. OF 2)
E 1
CU 1
POC (N) 3" DCW
3/4" CD ALONG WALL. DROP DN AND ROUTE THRU SCUPPER IN WALL AT GRADE
(N) DRYWELL. SEE DET. J/MP-2.
(E) ELECTRICAL GUTTER AND IRRIGATION CONTROLS
(E) SIGN
(E) PULL BOX
COOLER
FREEZER
3/4"
(E) 8" WASTE.
(E) 3" GAS.
(E) FIRE SPRINKLER.
(E) GREASE INTERCEPTOR.
(E) COTG.
(E) VENT.
(E) 3" DCW MAIN.
(E) GAS METER.
(E) IRRIGATION BOX.

MECHANICAL YARD PLAN
SCALE: 1/8"=1'-0"

KEYNOTES: (THIS VIEW ONLY)

1. 1/2"RL & 7/8"RS PIPING DN. THRU FREEZER ROOF. ROUTE ALONG CEILING TO EVAP. E-2.
2. 1/2"RL & 7/8"RS PIPING DN. THRU COOLER ROOF. ROUTE ALONG CEILING TO EVAP. E-1.



(E) 2 1/2" DCW
(E) 8" WASTE.
(E) 3" GAS.
(E) FIRE SPRINKLER.
(E) CONCRETE YARD
ABANDON CAPPED 3" PIPE IN-PLACE.
CAP
CAP (E) 3" DCW
(E) GREASE INTERCEPTOR.
(E) COTG.
(E) VENT.
(E) 3" DCW MAIN.
(E) GAS METER.
NOT LEGIBLE. (TYPICAL ALL COMPLEX LINETYPES)
(E) ELECTRICAL GUTTER AND IRRIGATION CONTROLS TO REMAIN
(E) SIGN
(E) PULL BOX
(E) IRRIGATION BOX.

MECHANICAL DEMOLITION YARD PLAN
SCALE: 1/8"=1'-0"

APPROVALS:
APPLICATION # 02-120015

REGISTERED PROFESSIONAL ENGINEER No. M34846 Exp. 6-30-24 MECHANICAL STATE OF CALIFORNIA

DATE: 11-9-2022

MARTIN LUTHER KING MIDDLE SCHOOL
COLD BOX ADDITION
601 LILLY ST.
MADERA, CA 93638

REVISIONS
1 3/14/22 ADDENDUM 1

LAWRENCE ENGINEERING GROUP
4510 E. Clinton Way, Suite 101
Fresno, CA 93727
(559) 431-0101
FAX (559) 431-1342

TITLE: MECHANICAL YARD PLAN

SHEET: MP-1

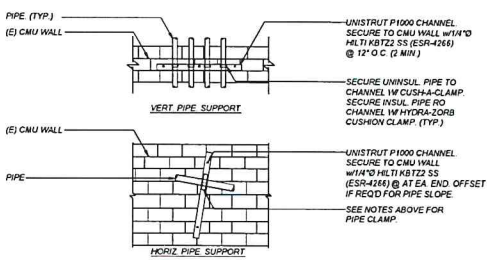
PROJECT: 21182

EVAPORATOR SCHEDULE		
DESIGNATION	E 1	E 2
AIRFLOW (CFM)		
FLA	14.3	2.4 ⚠
VOLTS/PHASE	230/1	115/1
TOTAL CAP. (MBH)	13,587	14,857
REFRIGERANT	R-448A	R-448A
SAFETY CLASSIFICATION	A1	A1
EVAP. TEMP. (°F)	-10	25
BOX TEMP. (°F)	0	35
MANUFACTURER	MASTER-BILT	MASTER-BILT
DEFROST TYPE	ELEC. DEFROST	AIR DEFROST
MODEL NUMBER	E1LD0142B-TE2	E1MD0163A-TA2 ⚠
LOCATION	FREEZER	COOLER
OPER. WT (LBS)	78	72 ⚠
ACCESSORIES	1	-

1. INCLUDES DEFROST HEATER.

CONDENSING UNIT SCHEDULE		
DESIGNATION	CU 1	CU 2
NAME PLATE AMPS	31.2	23.3
VOLTS/PHASE	230/1	230/1
MCA / MOP (AMPS)	48 / 60	31 / 35
LIQ. / SUCTION (IN.) ⚠	1/2 / 7/8	1/2 / 7/8
COOLING CAP (MBH)	13,587	13,184
AMBIENT (°F)	105	105
MANUFACTURER	MASTER-BILT	MASTER-BILT
TYPE	-	- ⚠
MODEL NUMBER	MSLD040AB	MSMD020AB
LOCATION	EQUIPMENT YARD	EQUIPMENT YARD
OPER. WT (LBS)	250	240
ACCESSORIES	1,3	2,3

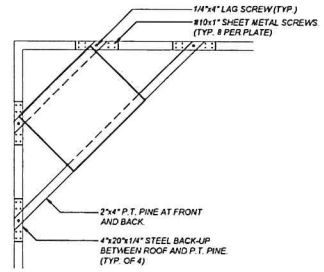
1. SINGLE 4 HP SCROLL COMPRESSOR.
2. SINGLE 2 HP COMPRESSOR.
3. REPLACEABLE CORE SUCTION FILTER, REPLACEABLE CORE LIQUID FILTER, FAN CYCLING CONTROL, SUCTION ACCUMULATOR, MANUAL RESET HIGH PRESSURE SWITCH.



PIPE ON WALL SUPPORT

SCALE: NONE

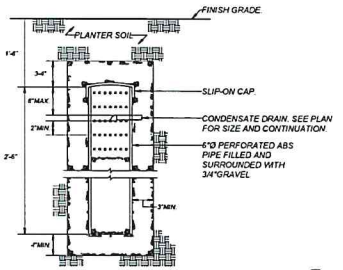
G MP-2



CONDENSING UNIT SUPPORT FRAMING

SCALE: NONE

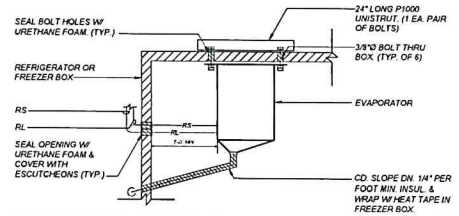
H MP-2



SINGLE CONDENSATE DRAIN DRYWELL

SCALE: NONE

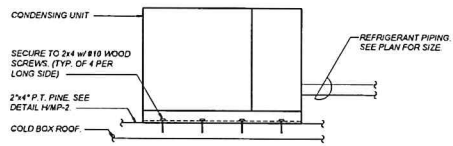
J MP-2



EVAPORATOR MOUNTING DETAIL

SCALE: NONE

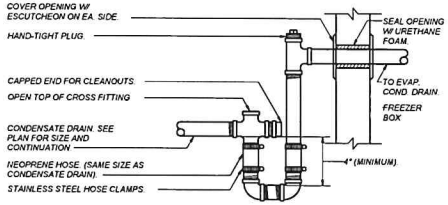
A MP-2



CONDENSING UNIT MOUNTING DETAIL

SCALE: NONE

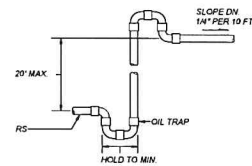
B MP-2



CONDENSATE DRAIN CONNECTION DETAIL

SCALE: NONE

C MP-2



NOTE:
IF LIFT IS HIGHER THAN 20' USE MULTIPLE TRAPS.

RS RISER DETAIL

SCALE: NONE

D MP-2

APPROVALS

APPLICATION #
05-120015

DATE 11-9-2022

MARTIN LUTHER KING MIDDLE SCHOOL
COLD BOX ADDITION
601 LILLY ST.
MADERA, CA 93638

REVISIONS
3/14/23 ADDENDUM 1

LAWRENCE ENGINEERING GROUP
4115 E. Clinton Way, Suite 101
Fresno, CA 93727
(559) 431-5161 FAX

TITLE:
MECHANICAL
DETAILS &
SCHEDULES

SHEET:
MP-2

PROJECT 21182

14 March 2023 7:53 AM F:\2021\21182 Madera USD MLK MS Cold Box Addition\1-Drawings\1 M\MP-2 - MECHANICAL DETAILS.dwg anthonyb

MECHANICAL EQUIPMENT SCHEDULE

DESIG	DESCRIPTION	FLA/MCA/HP/W	STARTER/ FUSES	VOLT	PHASE	MAX OCPD SIZE	CONDUIT SIZE	CONDUCTOR #	CONDUCTOR SIZE	GND
CU-1	CONDENSING UNIT	48 MCA	FUSE/DISC	208	1	NOTE 2	3/4"	2	8	NOTE 3
CU-2	CONDENSING UNIT	31 MCA		↓					↓	
E-1	EVAPORATOR UNIT	18.8 FLA		208					10	
E-2	EVAPORATOR UNIT	7.2 FLA	↓	120	↓	↓	↓	↓	10	↓

NOTES:
1. * = THERMAL RATED SWITCH FOR FRACTIONAL HORSEPOWER MOTORS.
2. REFER TO THE PANEL SCHEDULE AND SINGLE LINE DIAGRAM FOR THE CIRCUIT BREAKER AND CONDUIT SIZES. IF NOT INDICATED WITHIN THE SCHEDULE.
3. GROUNDING CONDUCTOR SIZE TO MATCH CONDUCTOR SIZE.

GENERAL NOTES:
1. COORDINATE LOCATIONS AND POWER REQUIREMENT FOR MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.
2. PROVIDE FUSED SWITCH DISCONNECT PER NAME PLATE RATING OF MECHANICAL UNITS FOR OVERLOAD PROTECTION.

(N) PANEL 'WF'

VOLTAGE: 208/120V, 3Ø, 4W
BUS 150A
MAIN BREAKER: 150A/3P
BREAKER AIC: 35,000
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

CIR #	BKR	LOAD (VA) PHASE A	PHASE B	PHASE C	DESCRIPTION	DESCRIPTION	LOAD (VA) PHASE C	PHASE B	PHASE A	BKR	CIR #
1	15A/1P	100			TPZB ALRM & LMS	COOLER ALRM & LMS			100	15A/1P	2
3	20A/1P		864		COOLER EVAP. E-2	FREEZER EVAP. E-1	2327				4
5	↓			0	SPARE		2327			25A/2P	6
7	35A/2P	2925			COOLER CONDENSING	FIRE ALARM BELL			20	20A/1P	8
9		2925			UNIT, CU-2	RECEPTACLE ON ROOF		180		1	10
11	60A/2P		4784		FREEZER CONDENSING	SPARE	0			1	12
13		4784			UNIT, CU-1	SPACE			0	1	14
15			0		SPACE	↓		0		1	16
17	↓			0	↓	↓	0			1	18
19	↓	0			↓	↓			0	1	20
21	↓		0		↓	↓		0		1	22
23	↓			0	↓	↓	0			1	24
25	↓	0			↓	↓			0	1	26
27	↓		0		↓	↓		0		1	28
29	↓			0	↓	↓	0			1	30
TOTAL Ø LOADS (VA)		PHASE A = 7959				PHASE B = 6296	PHASE C = 7111				
TOTAL Ø LOADS (A)		PHASE A = 66				PHASE B = 52	PHASE C = 59				
TOTAL LOAD		21366 VA				59 A					

VOLTAGE DROP CALCULATIONS

Panel or Device	Distance	Material	Current	Voltage	Parallel Runs	Wire Size	For segment V_{DS}	For segment %V_{DS}	Total to Device V_{DT}	Total to Device %V_{DT}
(N) XFMR 'XWF'	850.000	Copper	56.000	480	1	#1	1.2.6931	2.64%	1.2.6931	2.64%
(N) PNL 'WF'	15.000	Copper	120.000	208	1	#1/0	0.4402	0.21%	0.4402	0.21%
WF-1	70.000	Copper	7.200	120	1	#10	1.2527	1.04%	1.6929	1.31%
WF-3	60.033	Copper	7.200	120	1	#10	1.0087	0.91%	1.5209	1.27%
WF-7,9	71.500	Copper	28.100	208	1	#8	3.1397	1.51%	3.5799	1.72%
WF-11,13	44.917	Copper	46.000	208	1	#8	3.2280	1.55%	3.6690	1.76%
WF-2	30.000	Copper	7.200	120	1	#10	0.5369	0.45%	0.9771	0.81%
WF-4,6	47.583	Copper	18.800	208	1	#10	2.2235	1.07%	2.6637	1.28%
WF-8	30.000	Copper	2.000	120	1	#12	0.2371	0.20%	0.6772	0.56%
WF-10	63.000	Copper	2.000	120	1	#12	0.4928	0.41%	0.9380	0.78%

ELECTRICAL DISTRIBUTION WEIGHT & DIMENSIONS SCHEDULE

NAME	CB	WEIGHT(LB)	H	W	D	MOUNTING
PANEL 'WF'	150A	213	62"	20"	6.5"	SURFACE

TRANSFORMER WEIGHT & DIMENSIONS SCHEDULE

SITE PLAN

NAME	WEIGHT(LBS)	H	W	D
45kVA XFMR 'XWF'	369	29.32"	25.14"	25.93"

BASE ANCHORAGE: 1-3/8" DIA. HILTI KB TZ2 PER DETAIL 1/E4.01.

Borrelli & Associates, Inc.
Consulting Electrical Engineers
2032 N. Gateway Boulevard
Fresno, CA. 93727
Phone: 559-233-4138
http://www.borrellengineering.com/
ca-bain@borrellengineering.com
BAI# 21161

APPROVALS:
APPLICATION #
02-120015

REGISTERED PROFESSIONAL ENGINEER — WILLIAM W. CAIN — No. M34846 — Exp. 6-30-24 — ELECTRICAL — STATE OF CALIFORNIA

DATE 1-7-2022

MARTIN LUTHER KING MIDDLE SCHOOL
COLD BOX ADDITION
601 LILLY ST.
MADERA, CA 93638

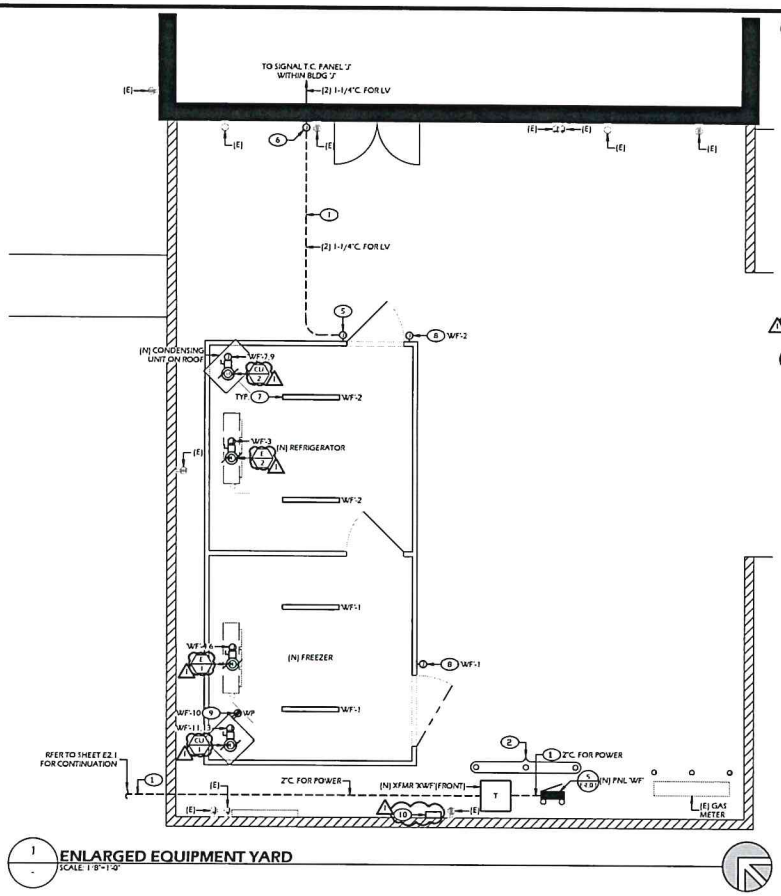
REVISIONS	
2	11-22 ADDENDUM 1

LAWRENCE ENGINEERING GROUP
7504 N. Maple Ave., Suite 101
Fresno, CA 93720
(559) 431-3161
FAX (559) 431-3162

TITLE:
PANEL SCHEDULE, WEIGHT AND DIMENSION SCHEDULE, VOLTAGE DROP

SHEET
E1.04
PROJECT 21182

15 March 2023 1:50 PM G:\Educational\Madera USD\MartinLutherKingMiddle\ coldBoxAddition\21161E1-04.dwg wjhan



1 ENLARGED EQUIPMENT YARD
SCALE: 1'-8"=1'-0"

SHEET NOTES ②

1. SAW-CUT CONCRETE AS APPLICABLE ALONG CONDUIT ROUTE AND HAUL AWAY DEBRIS. PATCH AND REPAIR TO MATCH THE EXISTING SURFACE AFTER INSTALLATION OF CONDUITS.
2. PROVIDE AND INSTALL NEW FIXED BARRIER POST.
3. NOT USED.
4. NOT USED.
5. PROVIDE AND INSTALL A 6X6X4-INCH J-BOX, MOUNTED UP HIGH. TERMINATE THE SPARE COMMUNICATIONS CONDUITS AT J-BOX.
6. PROVIDE AND INSTALL A 6X6X4-INCH J-BOX, MOUNTED UP HIGH ABOVE THE INTERIOR CEILING LEVEL. PROVIDE (2) 1-1 4-INCH CONDUIT, NIPPLE THROUGH WALL TO THE ATTIC FOR FUTURE COMMUNICATION CABLES.
7. LIGHT FIXTURE SHALL BE MASTER-BILT 48-INCH FIXTURE P. N #157752. FIXTURE SHALL HAVE OPTIONAL CEILING MOUNT AND MOUNTED ON CEILING OF FREEZER, COOLER.
8. PROVIDE AND INSTALL A 1-1/4-INCH CONDUIT BACK TO PANEL INDICATED. MAKE CONNECTIONS TO THE NL708 HIGH/ LOW ALARM AND LIGHTING MANAGEMENT SYSTEM. MAKE ALL LIGHTING CONNECTIONS WITH 3/4-INCH LIQUID TIGHT CONDUITS TO THE LIGHTS AND SWITCHES. COORDINATE WITH WALK-IN FREEZER CONTRACTOR FOR EXACT LOCATION.
9. MOUNT RECEPTACLE ON ROOF.
10. NEW FIRE ALARM BELL. REFER TO FIRE SPRINKLER PLAN.

GENERAL NOTES ①

1. ALL CONDUIT PENETRATIONS SHALL BE SEALED WITH APPROVED SEALANT TO PREVENT MOISTURE PENETRATION WITHIN THE FREEZER AND COOLER.
2. ALL PANELS SHALL BE LOCKABLE.
3. COORDINATE WITH THE REFRIGERATION CONTRACTOR. PART NUMBERS WITHIN THIS PLAN ARE PER THE BUILT OF MATERIAL FOR THE WALK-IN BOXES. COORDINATE WITH THE REFRIGERATION CONTRACTOR FOR EQUIPMENT PURCHASE.

Borrelli & Associates, Inc.
Consulting Electrical Engineers
2032 N. Gateway Boulevard
Fresno, CA 93727
Phone: 559-233-4138
http://www.borrelliengineering.com
ba@borrelliengineering.com
BA# 21161

APPROVALS:

APPLICATION # 00-120015

REGISTERED PROFESSIONAL ENGINEER — JAMES W. CARR — No. M34846 — Exp. 6-30-24 — ELECTRICAL — STATE OF CALIFORNIA

DATE: 1-7-2022

MARTIN LUTHER KING MIDDLE SCHOOL
COLD BOX ADDITION
601 LILLY ST.
MADERA, CA 93638

REVISIONS
1 3.14.23 ADDENDUM 1

LAWRENCE ENGINEERING GROUP
7044 N. Maple Ave., Suite 101
Fresno, CA 93720
(559) 431-3061
FAX (559) 431-1162

TITLE: ENLARGED EQUIPMENT YARD

SHEET: E3.01

PROJECT 21182

13 March 2023 1:50 PM G:\Educational\Madera\USD\MartinLutherKing\Middle\ColdBoxAddition\21161E3-01.dwg wjhom