

JEFFERSON MIDDLE SCHOOL

HVAC REPLACEMENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

PERMIT NOTES:

"THIS PERMIT DOES NOT INCLUDE ANY HIGHPILE STORAGE(PER UFC) OR RACK STORAGE OVER 8 FEET HIGH. ANY SUCH PROPOSED STORAGE WILL REQUIRE PLANS SUBMITTED FOR REVIEW AND APPROVAL AND ISSUANCE OF PERMITS." 2019 CFC ARTICLE 81.

IF THE PLANS DO NOT ACCURATELY REFLECT THE JOB CONDITIONS, OR THE CONSTRUCTION IS NOT PER THE PLANS, NO MECHANICAL INSPECTIONS WILL OCCUR UNTIL AN ADDENDUM APPROVED BY THE CITY OF FRESNO IS OBTAINED.

SCOPE NOTES

SCOPE OF WORK IS TO REPLACE EXISTING VENTILATION AND HEATING EQUIPMENT WITH PACKAGE UNIT EQUIPMENT AT CAFETERIA AND GYM BUILDINGS. NEW FIRE ALARM SYSTEM TO BE ADDED FOR AREAS OF WORK WITH NEW FACP ADDED IN ADMINISTRATION BUILDING.

PROJECT DIRECTORY

OWNER:
MADERA UNIFIED SCHOOL DISTRICT
1205 S. MADERA AVE.
MADERA, CA 93637
(559) 675-4534
CURTIS MANGANAAN
CurtisManganaan@maderausd.org

MECHANICAL ENGINEER:
LP ENGINEERS, INC.
895 WEST ASHLAN AVE., SUITE 101
CLOVIS, CA 93612
(559) 348-2130
GAREN LENCIONI
garen@lpengr.com

ELECTRICAL ENGINEER:
JOHN CHONG ENGINEERING
1849 N. HELM AVE. #109
FRESNO, CA 93727
(559) 325-9988
JOHN CHONG
jcengineer@aol.com

STRUCTURAL ENGINEER:
BROOKS RANSOM ASSOCIATES
7415 N. PALM AVE., STE. 100
FRESNO, CA 93711
(559) 449-8444
ART LOPEZ
art@brooksransom.com

ARCHITECT:
DAVE BAISA ARCHITECT
10270 TARON DR. #236
ELK GROVE, CA 93757
(559) 355-0510
DAVE BAISA
David@baisadesigngroup.com

CODE TABULATION

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE GOVERNING JURISDICTION.

CALIFORNIA CODE OF REGULATIONS
SAFETY, ORDERS, STATE DIVISION OF INDUSTRIAL SAFETY OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) TITLE 24, C.C.R., PART 1 ADMINISTRATION REGULATIONS.

APPLICABLE SECTIONS OF THE 2019 NON-RESIDENTIAL CALIFORNIA ENERGY STANDARDS.

TITLE 24, C.C.R., PART 1, 2019 C.A.C.
TITLE 24, C.C.R., PART 2, 2019 C.B.C.
TITLE 24, C.C.R., PART 3, 2019 C.E.C.
TITLE 24, C.C.R., PART 4, 2019 C.M.C.
TITLE 24, C.C.R., PART 5, 2019 C.P.C.
TITLE 24, C.C.R., PART 9, 2019 C.F.C.
TITLE 19, C.C.R., PUBLIC SAFETY, DIV. 1.

SEE A0.1 FOR EXPANDED CODE LISTING.

CODE SUMMARY

BUILDING CONSTRUCTION TYPE: TYPE VB FOR CAFETERIA & TYPE FOR GYM

OCCUPANCY TYPE: GROUP "A2/A3" FOR CAFETERIA & GYM

EXISTING TOTAL BUILDING AREA: 4,914 S.F. FOR CAFETERIA & 9,645 S.F. FOR GYM

AREA OF WORK: 3,036 S.F. FOR CAFETERIA & 8,848 S.F. FOR GYM

BUILDING DATA

PROJECT DESCRIPTION: JEFFERSON MIDDLE SCHOOL
HVAC REPLACEMENT AT CAFETERIA AND GYM

PROJECT ADDRESS: 1407 SUNSET AVE.
MADERA, CA 93637

CONTACT: CURTIS MANGANAAN
PHONE: (559) 675-4534
FAX:
E-MAIL: CurtisManganaan@maderausd.org

FIRE NOTES

SHEET INDEX

T1.0 TITLE SHEET

ARCHITECTURAL:

A0.1 ARCHITECTURAL NOTES
A0.2 ARCHITECTURAL NOTES
A0.3 ARCHITECTURAL SITE PLAN
A0.4 ARCHITECTURAL DETAILS
A1.1 ARCHITECTURAL FLOOR PLAN - CAFETERIA
A2.1 ARCHITECTURAL FLOOR PLAN - GYM

STRUCTURAL:

S1.1 TYPICAL NOTES AND DETAILS
S1.2 TYPICAL CONCRETE NOTES AND DETAILS
S3.1 CAFETERIA BUILDING (E) ROOF FRAMING PLAN
S3.2 GYM (E) ROOF FRAMING PLAN
S4.1 SECTIONS AND DETAILS

MECHANICAL:

M0.1 MECHANICAL LEGEND AND NOTES
M0.2 MECHANICAL SCHEDULES AND DETAILS
M0.3 MECHANICAL DETAILS
M1.1 MECHANICAL FLOOR PLAN - CAFETERIA
M2.1 MECHANICAL FLOOR PLAN - GYM

ENERGY COMPLIANCE:

EC1.1 ENERGY COMPLIANCE - CAFETERIA
EC1.2 ENERGY COMPLIANCE - CAFETERIA
EC2.1 ENERGY COMPLIANCE - GYM
EC2.2 ENERGY COMPLIANCE - GYM

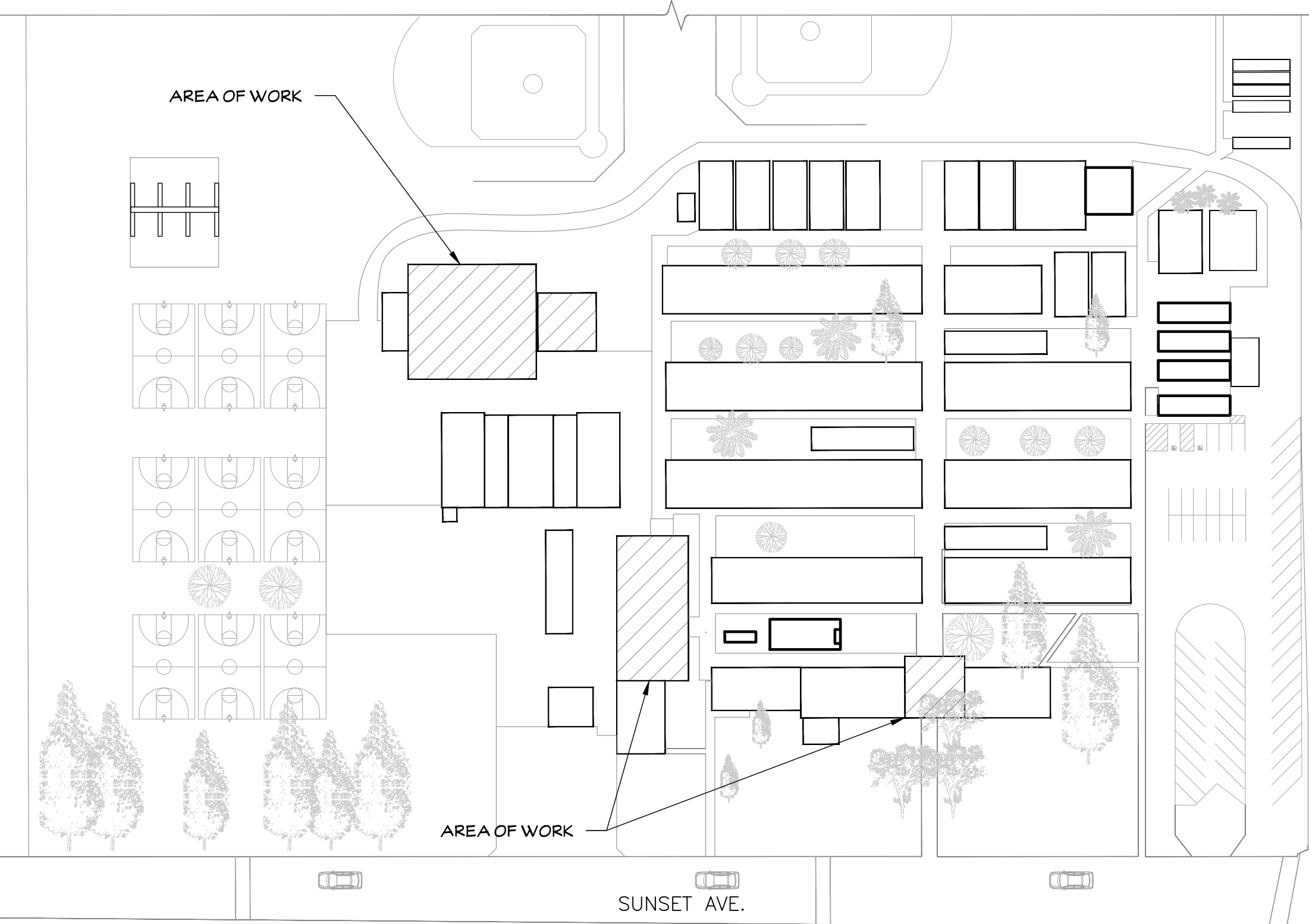
PLUMBING:

P0.1 PLUMBING LEGEND, NOTES AND DETAILS
P1.1 PLUMBING FLOOR PLAN - CAFETERIA
P2.1 PLUMBING FLOOR PLAN - GYM

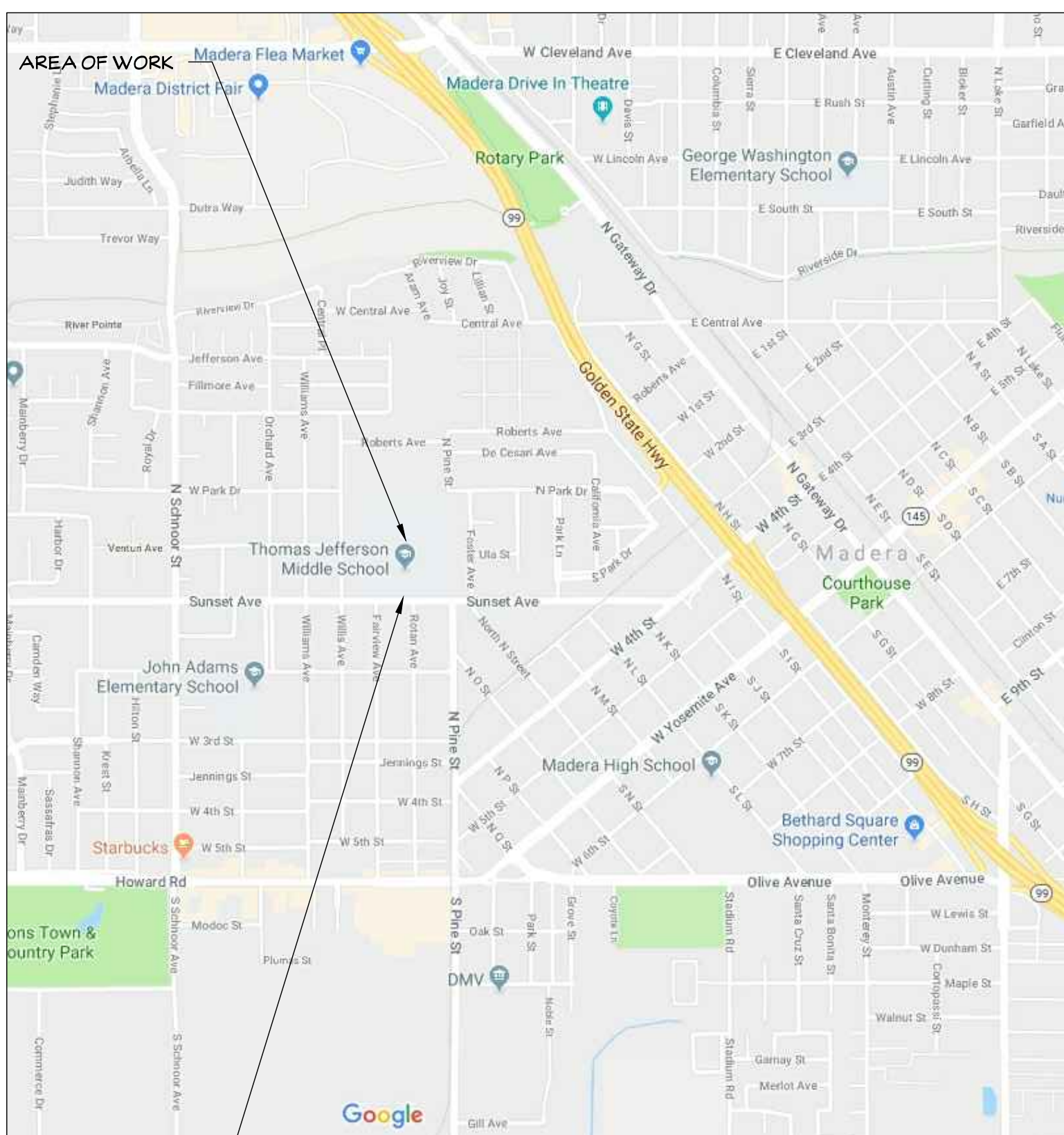
ELECTRICAL:

E0.1 SYMBOLS AND NOTES
E0.2 SITE PLAN - POWER
E0.3 SITE PLAN - FIRE ALARM
E1.1 POWER PLAN - CAFETERIA
E1.2 FIRE ALARM PLAN - CAFETERIA
E2.1 POWER PLAN - GYM
E2.2 FIRE ALARM PLAN - GYM
E3.1 FA RISER DIAGRAM BATTERY CALCULATION
E3.2 SINGLE LINE DIAGRAM AND DETAILS

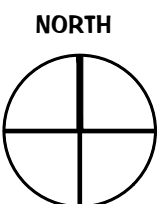
SITE MAP



VICINITY MAP



PROJECT SITE



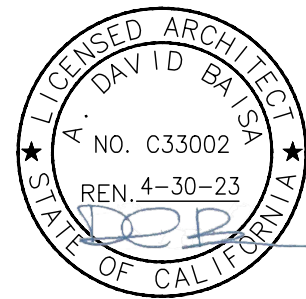
TITLE SHEET

SCALE: NTS



LP Engineers, Inc.

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DSA #: 02-118068

FILE #: 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.

No. DATE DESCRIPTION

PROJECT ENGINEER
GAREN LENCIONI

PROJECT NUMBER
17-1060

SCALE
AS NOTED

CHECKED BY
K.K.

DATE
5/18/2021

SHEET NAME
TITLE SHEET

SHEET NUMBER

T0.1

JEFFERSON MIDDLE SCHOOL

HVAC REPLACEMENT

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DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
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DATE: 11/24/2021

NOTES

- ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATION (CCR)
- FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTORS DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
- CHANGES TO THE APPROVED DRAWING AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1.
- AS 'DSA CERTIFIED' CLASS 3 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-432, PART 2, TITLE 24, CCR.
- CLASS 3 INSPECTOR REQUIRED.
- A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TEST AND INSPECTIONS FOR THE PROJECT.
- THE INTENT OF THESE DRAWING AND SPECIFICATIONS IS THAT WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTIONS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITION SUCH AS DETERIORATION OR NON COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WERE IN THE FINISHED WORK NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH WORK, (SECTION 4-317(C), PART 1, TITLE 24, CCR)
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- SUBSTITUTIONS OF ANY MATERIAL, SYSTEM OR PRODUCT THAT ARE REGULATED BY DSA OR STRUCTURAL SAFETY, FIRE-LIFE SAFETY AND/OR ACCESS COMPLIANCE SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT OR ADDENDA, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION.

DEFERRED APPROVALS

NONE

NOTE

THE SUBMITTAL SHALL BE STAMPED AND SIGNED BY AN ARCHITECT OR A LICENSED DESIGN PROFESSIONAL RESPONSIBLE FOR THE ITEM. FABRICATION AND INSTALLATION OF DEFERRED APPROVAL ITEM SHALL NOT BE STARTED UNTIL DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS (IF NEEDED) FOR THE SYSTEM HAVE BEEN ACCEPTED BY THE A/E OF RECORD AND APPROVED BY DSA (SEC. 4-317(g), PART 1)

SCOPE OF WORK

NOTE
SCOPE CONSIST OF ADDING GROUND AND ROOF MOUNTED HVAC, FA AND PATCH, REPAIR AND SUPPORTS AS SHOWN IN PLANS.

UNIQUE IDENTIFIER INFORMATION FOR DSA 153 - INSPECTION CARD BUILDING IDENTIFIER

SITE WORK INSPECTION CARD REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO						
CONSTRUCTION OF:	ADDITION TO:	ALTERATION TO:	RELOCATION OF:	RECONSTRUCTION OF:	REHABILITATION OF:	INCIDENT #
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
GYMNASIUM						GYMNASIUM
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
ADMINISTRATION						ADMINISTRATION
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
CAFETERIA						CAFETERIA

CODE TABULATION

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND ADMENDED BY THE GOVERNING JURISDICTION:

APPLICABLE CODES - EFFECTIVE JANUARY 1, 2020

2019 BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24 CCR, PART 1
2018 CALIFORNIA BUILDING CODE (CBC), TITLE 24 CCR, VOLUMES 1 & 2
(2018 INTERNATIONAL BUILDING CODE (IBC) AND 2019 CA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE, TITLE 24 CCR, PART 3
(2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA MECHANICAL CODE (CMC), TITLE 24 CCR, PART 4
(2018 UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA PLUMBING CODE (CPC), TITLE 24 CCR, PART 5
(2018 UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ENERGY CODE, TITLE 24 CCR, PART 5
2019 CALIFORNIA FIRE CODE, TITLE 24 CCR, PART 9
(2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, TITLE 24 CCR, PART 11
2019 CALIFORNIA REFERENCED STANDARDS, TITLE 24 CCR, PART 12
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS.

PARTIAL LIST OF - CBC CH. 35 AND CFH CH. 80

2016 NFPA 13: INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)
2013 NFPA 14: SANDPIPES SYSTEMS (CA AMENDED)
2016 NFPA 17: DRY CHEMICAL EXTINGUISHING SYSTEMS
2016 NFPA 17A: WET CHEMICAL EXTINGUISHING SYSTEMS
2016 NFPA 20: INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2013 NFPA 22: WATER TANKS FOR PRIVATE FIRE PROTECTION
2016 NFPA 24: INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
2016 NFPA 72: NATIONAL FIRE ALARM CODE (CA AMENDED), SEE UL STD 1971 FOR VISUAL DEVICES
2016 NFPA 80: FIRE DOOR & OTHER OPENING PROTECTIVES
2015 NFPA 2001: CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
2005 UL 300: CLASS I HOOD FIRE SUPPRESSION SYSTEMS
2003 UL 464: AUDIBLE SIGNAL APPLIANCES
1999 UL 521: HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
2012 ICC 300: BLEACHERS, FOLDING AND TELESCOPE SEATING AND GRANDSTANDS (ICC 300-2012)

STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO, SHOP DRAWINGS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(APPLICATION NO. 02-118068 FILE NO. 20-30

☒ THESE DRAWINGS OR SHEETS LISTED IN THE SHEET INDEX ON TITLE SHEET T0.1 THIS DRAWING, PAGE OF SPECIFICATIONS/ CALCULATIONS


HAVE/HAS BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

- DESIGN INTENT, AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS, AND THE PROJECT SPECIFICATIONS PREPARE BY ME AND
- COORDINATION WITH MY PLANS AND SPECIFICATIONS, AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTION 17302 AND 81138 OF EDUCATION CODE, AND SECTION 4-336, 4-341 AND 4-344 OF TITLE 24, PART 1. SECTION (4-317(B)).

I FIND THAT: ☐ ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET THIS DRAWING OR PAGE

☒ IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN, AND HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS

 08/11/2021
SIGNATURE DATE


DAVE BAISA
PRINT NAME
C33002 04.30.2023
LICENSE NUMBER EXPIRATION DATE

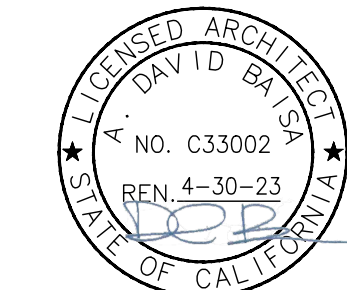
CAFETERIA

NUMBER OF STORIES:	1
OCCUPANCY:	E
CONSTRUCTION TYPE:	A-3 Existing
FIRE SPRINKERS:	NO
FIRE ALARM:	YES
AREA CALCULATION:	No increase to existing area

GYMNASIUM

NUMBER OF STORIES:	1
OCCUPANCY:	E
CONSTRUCTION TYPE:	A-3 Existing
FIRE SPRINKERS:	NO
FIRE ALARM:	YES
AREA CALCULATION:	No increase to existing area

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DSA #: 02-118068

FILE #: 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.

No. DATE DESCRIPTION REVISIONS

ARCHITECTURAL NOTES

PROJECT ENGINEER GAREN LENICINI PROJECT NUMBER 17-1060
SCALE
DRAWN BY Dong Ngo AS NOTED
CHECKED BY K.K. DATE 5/18/2021

A0.1

CONSTRUCTION DOCUMENTS

- 1. SOLELY AS A CONVENIENCE TO THE OWNER, THE ARCHITECT MAY INCLUDE DOCUMENTS PREPARED BY CERTAIN CONSULTANTS (OR INCORPORATE THE RECOMMENDATION OF SAID CONSULTANTS IN DOCUMENTS PREPARED BY THE ARCHITECT) WITHIN THE SET OF DOCUMENTS ISSUED BY THE ARCHITECT. IT BEING EXPRESSLY UNDERSTOOD THAT, BY SAID ISSUANCE, THE ARCHITECT ASSUMES NO LIABILITY FOR THE SERVICES OF SAID CONSULTANTS.
- 2. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR), A PROJECT INSPECTOR WITH A CLASSIFICATION 2, EMPLOYED BY THE OWNER SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, C.C.R.
- 3. THE BOOK OF SPECIFICATIONS ARE A PART OF THIS CONTRACT.
- 4. DRAWINGS ARE NOT TO BE SCALED. DIMENSIONS GOVERN.
- 5. PRIORITY OF DOCUMENTS: FIGURED DIMENSIONS ON DRAWINGS SHALL GOVERN, BUT WORK NOT DIMENSIONED SHALL BE AS DIRECTED. WORK NOT PARTICULARLY SHOWN OR SPECIFIED SHALL BE THE SAME AS SIMILAR PARTS THAT ARE SHOWN OR SPECIFIED. LARGE SCALE DETAILS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS AS TO SHAPE & DETAILS OF CONSTRUCTION. SPECIFICATIONS SHALL GOVERN TO MATERIALS, WORKMANSHIP AND INSTALLATION PROCEDURES. THE SPECIFICATIONS CALLING FOR THE HIGHER QUALITY MATERIAL OR WORKMANSHIP SHALL PREVAIL. CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT/ENGINEER IN WRITING, OF DRAWINGS & SPECIFICATIONS WHICH MAY BE IN CONFLICT. IN THE EVENT THAT DRAWINGS ARE SPECIFICATIONS ARE IN CONFLICT, THE MORE RESTRICTIVE, HIGHER QUALITY MATERIAL OR WORKMANSHIP SHALL PREVAIL.
- 6. THE TYPICAL DETAILS AND NOTES SHOWN ON THESE SHEETS SHALL APPLY IN ALL CASES UNLESS SHOWN OTHERWISE. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL BE AS SHOWN FOR OTHER SIMILAR WORK. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE BUILDING CODES, REGULATIONS, AND SAFETY REQUIREMENTS.

- 7. COMPLIANCE WITH CFC CH. 33 (2019) - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

GENERAL CONSTRUCTION

- 1. ALL MATERIALS AND WORK TO CONFORM TO LATEST GOVERNING BUILDING CODES AND REGULATIONS.SEE SHEET A-T-I CODE TABULATIONS
- 2. CONTRACTOR SHALL PROVIDE PROTECTION AS NECESSARY PER CITY & LOCAL CODE REQUIREMENTS.
- 3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IE CONDITIONS PRIOR TO ANY WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED DUE TO HIS FAILURE TO DO SO. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN ANY DISCREPANCIES.
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING ALL INSPECTIONS AND TESTS INDICATED ON THE PLANS AND SPECIFICATIONS. RECOMMENDED BY THE SOILS REPORT AND/OR REQUIRED BY ANY GOVERNMENT AGENCY. OWNER SHALL BEAR THE COSTS.
- 5. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL UTILITY LINES AND STUBS TO THE BUILDING(S) AS MAY BE INDICATED ON THE PLANS.
- 6. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A LIST OF THE HEATING, COOLING, WATER HEATING, LIGHTING SYSTEM, AND INSTRUCTION ON HOW TO USE THEM EFFICIENTLY.
- 7. PRIOR TO BUILDING FINAL INSPECTION, APPLIANCE CERTIFICATE, WHICH IS PROVIDED BY APPLIANCE MANUFACTURER, MUST BE COMPLETED BY THE INSTALLER OR GENERAL CONTRACTOR AND POSTED IN A CONSPICUOUS LOCATION. (INCLUDING HVAC UNITS AND WATER HEATERS.)
- 8. EQUIPMENT WHICH REQUIRES PREVENTATIVE MAINTENANCE FOR EFFICIENT OPERATION MUST BE FURNISHED WITH MAINTENANCE INFORMATION.
- 9. AUTOMATIC FIRE SPRINKLERS MUST BE IN FULL OPERATIONAL USE PRIOR TO OCCUPANCY.
- 10. CONTRACTOR SHALL PROVIDE ACCESS PANELS AS REQUIRED BY PLUMBING, AIR CONDITIONING AND OTHER TRADES. AND AS REQUIRED BY CODES.
- 11. NO ADDITIONAL ROOF OPENINGS OR ROOF MOUNTED EQUIPMENT IS ALLOWED BEYOND THAT WHICH IS SHOWN ON THESE PLANS WITHOUT WRITTEN CONSENT OF THE ARCHITECT.
- 12. CONTRACTOR(S) IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THAT ALL TRADES HAVE REVIEWED ENTIRE WORKING DOCUMENTATION AND NOT LIMITED TO SAID SPECIFIC TRADE.

EXITING REQUIREMENTS

- 1. ALL REQUIRED EXITS INDICATED ON PLANS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. FLUSH BOLTS AND SURFACE BOLTS ARE PROHIBITED.
- 2. EXIT SIGN WHERE INDICATED SHALL BE WORDED "EXIT" IN SIX INCHES (6") HIGH ILLUMINATED LETTERS AND SHALL CONFORM TO GOVERNING BUILDING CODES AND REGULATIONS.
- 3. EXIT SIGNS SHALL BE POWERED BY SEPARATE CIRCUITS. ONE OF WHICH SHALL BE SEPARATED FROM ALL OTHER CIRCUITS IN THE BUILDING AND INDEPENDENTLY CONTROLLED. REFER TO ELEC. PLANS.
- 4. INSTALL ADDRESS NUMBERS IN A CONSPICUOUS LOCATION ON THE BUILDING SO THAT IT CAN BE EASILY VISIBLE FROM THE STREET PER LOCAL MUNICIPAL CODE

SAFETY REQUIREMENTS

- 1. ALL FLOORS IN PUBLIC AREA SHALL HAVE NON-SLIP SURFACE IN COMPLIANCE WITH DIVISION 18 OF HEALTH AND SAFETY CODES OF THE STATE OF CALIFORNIA AND CHAPTER 11B OF THE CALIFORNIA BUILDING CODE
- 2. COMPLIANCE WITH CFC CH 33 (2019) - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

ORGANIZATION

THE ORGANIZATION OF THESE DRAWINGS IS NOT INTENDED TO CONTROL THE DIVISION OF WORK AMONG SUBCONTRACTORS. IT SHALL BE THE CONSTRUCTION MANAGER'S RESPONSIBILITY TO DIVIDE THE WORK.

COPIES OF THESE DRAWINGS ARE SUPPLIED TO THE OWNER, AND THE CONTRACTOR FOR USE IN THE CONSTRUCTION OF THIS PROJECT. ONLY THE DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION OF S.I.M. ARCHITECTS. ALL DRAWINGS PREPARED BY S.I.M. ARCHITECTS ARE AND SHALL REMAIN THE PROPERTY OF S.I.M. ARCHITECTS.

IT IS THE INTENTION OF THE PLANS AND SPECIFICATIONS TO COVER ALL THINGS REQUIRED TO MAKE COMPLETE AND OPERATIVE SYSTEMS. CONTRACTOR IS TO FURNISH ALL LABOR, MATERIALS, TRANSPORTATION, EQUIPMENT, MISCELLANEOUS SERVICES, ETC. REQUIRED TO ACCOMPLISH THIS RESULT. ANYTHING WHICH MAY BE REASONABLY CONSIDERED AS A NECESSARY PART OF THE INSTALLATION IS TO BE INCLUDED WHETHER SPECIFICALLY SHOWN OR MENTIONED. THE ARCHITECT WILL GIVE ANY INTERPRETATIONS NECESSARY FOR THE CONTRACTOR TO PROPERLY ESTIMATE THE PROJECT.

PROJECT NOTES

- 1. REMOVE ALL ITEMS REQUIRED TO PERFORM THE NEW WORK AS DESCRIBED IN THIS ENTIRE SET OF DRAWINGS AND SPECIFICATIONS. WHETHER OR NOT SPECIFICALLY SHOWN ON THIS DRAWING.
- 2. REFER TO CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR OTHER DEMOLITION WORK NOT SHOWN ON THIS DRAWING.
- 3. PROVIDE AND MAINTAIN INTERIOR AND EXTERIOR SHORING, BRACING, OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF STRUCTURES TO BE SELECTIVELY DEMOLISHED. CEASE OPERATIONS AND NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY IF SAFETY OR STRUCTURE APPEARS TO BE ENDANGERED. TAKE PRECAUTIONS TO SUPPORT STRUCTURE UNTIL DETERMINATION IS MADE FOR CONTINUING OPERATIONS. STRENGTHEN OR ADD NEW SUPPORTS WHEN REQUIRED DURING PROGRESS OF SELECTIVE DEMOLITION.
- 4. SAWCUT AND REMOVE EXISTING SLAB AND FOOTINGS REQUIRED TO PERFORM NEW WORK.
- 5. REMOVE ALL FLOOR FINISHES AS REQUIRED TO PERFORM NEW WORK WHETHER OR NOT SPECIFICALLY SHOWN ON THIS DRAWING.
- 6. REMOVE ALL CEILING SYSTEMS AND ASSOCIATED INSULATION, MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS TO PERFORM NEW WORK WHETHER OR NOT SPECIFICALLY SHOWN ON THIS DRAWING.
- 7. REMOVE DOORS, WINDOWS, LOUVERS, AND ASSOCIATED FRAMES AS REQUIRED.
- 8. SEE ARCHITECTURAL FLOOR PLANS, INTERIOR ELEVATIONS, AND DETAILS FOR ADDITIONAL REQUIREMENTS FOR DEMOLITION WORK.
- 9. ALL DEMOLITION WORK INVOLVING PLUMBING, MECHANICAL, AND ELECTRICAL WORK SHALL BE CLOSELY COORDINATED WITH THE GENERAL CONTRACTOR WHO SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING INSTALLATION PLANNED TO REMAIN FOR REUSE (OR AS PART OF NEW PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS).
- 10. ALL NEW OPENINGS IN EXISTING MASONRY WALLS OR SLABS SHALL BE SAWCUT. DO NOT OVERCUT AT CORNERS. CHIP FROM SAWCUT TO CORNER SEE FLOOR PLANS FOR EXACT LOCATIONS. GRIND SMOOTH ALL EXPOSED CONCRETE EDGES.
- 11. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AS SHOWN ON PLANS. NOTIFY THE ARCHITECT IMMEDIATELY IF THERE IS ANY DISCREPANCY BETWEEN EXISTING CONSTRUCTION AND THE DRAWINGS.
- 12. WHERE WALLS, PARTITIONS, CASEWORK, FIXTURES, EQUIPMENT, ETC., ARE TO BE REMOVED OR HAVE BEEN REMOVED, PATCH AND REPAIR EXISTING SURFACES AS REQUIRED TO MATCH ADJACENT UNDAMAGED SURFACES AND PROVIDE AN ACCEPTABLE SURFACE FOR SCHEDULED FINISHES.
- 13. REMOVE EXISTING WALL COVERING MATERIALS AND PREPARE WALLS AS REQUIRED.
- 14. ELECTRICAL PANEL COVERS LOCATED IN OTHER SERVICE AND UTILITY AREAS ARE TO BE REMOVED, STRIPPED OF PAINT, REPAINTED AND REINSTALLED.
- 15. WHERE EXISTING GYPSUM BOARD WALLS ARE PARTIALLY REMOVED AND/OR REQUIRE PATCHING OR EXTENSION, USE GYPSUM BOARD TO MATCH EXISTING ADJACENT UNDAMAGED SURFACES. EXTEND NEW PLASTER TO A NATURAL AND LOGICAL MATERIAL BREAK POINT.
- 16. REMOVE MISCELLANEOUS BRACKETS, CLIPS, HANGERS, NAILS, LEDGER BOARDS, WHERE REQUIRED FOR NEW WORK TO BE INSTALLED. PATCH AND REPAIR WALL SURFACES FOR SCHEDULED FINISHES.
- 17. WHERE EXISTING CEILINGS ARE SHOWN TO REMAIN, BUT REQUIRE REMOVAL FOR NEW WORK, SALVAGE AND REINSTALL EXISTING MATERIALS. SUSPENSION SYSTEM, ELECTRICAL, AND MECHANICAL ITEMS, ETC. RESUPPORT CEILING TO PROVIDE A STABLE SYSTEM AS REQUIRED. FURNISH ANY NEW MATERIALS AND ACCESSORIES TO MATCH EXISTING AS REQUIRED TO PROVIDE A COMPLETE AND FINISHED INSTALLATION.
- 18. REPLACE ATTIC/CEILING INSULATION WHERE EXISTING MATERIALS ARE DISTURBED DURING THE COURSE OF THE WORK. MATCH EXISTING MATERIALS.
- 19. CAP OFF ALL DEMOLISHED FIXTURE WATER/WASTE LINES, ETC. BEHIND (N) FINISHED WALLS AND FLOORS. AFTER REMOVAL OF PLUMBING FIXTURES PATCH FLOOR AND WALL AS REQUIRED(MATCH EXISTING)
- 20. THE CONTRACTOR SHALL BE FAMILIAR WITH EXISTING BUILDING CONDITIONS. PROPER CAUTION SHALL BE TAKEN REGARDING ANY EXISTING MATERIAL MAY CONTAIN ASBESTOS. REFER TO CALIFORNIA CONTRACTOR LICENSE LAW FOR WORKING PROCEDURES.
- 21. IN AS MUCH AS THE REMODELING AND/OR REHABILITATION OF AN EXISTING BUILDING REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY, OR DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING, THE OWNER AGREES THAT, EXCEPT FOR NEGLIGENCE ON THE PART OF THE DESIGN PROFESSIONAL, THE OWNER WILL HOLD HARMLESS AND INDEMNIFY THE DESIGN PROFESSIONAL FROM AND AGAINST ANY AND ALL CLAIMS, DAMAGES, AWARDS, AND COSTS OF DEFENSE ARISING OUT OF THE PROFESSIONAL SERVICES PROVIDED UNDER THIS AGREEMENT.
- 22. REMOVE EXISTING ACCESSORIES INCLUDING, BUT NOT LIMITED TO RESTROOM ACCESSORIES, GRAB BARS, MIRRORS, MAP RAILS, HOOKS, PENCIL SHARPENERS, CHALKBOARDS, ETC.
- 23. IN PRE-CONSTRUCTION MEETING, CONTRACTOR TO DISCUSS WITH OWNER THE FOLLOWING ITEMS:
 - A. STAGING AREAS
 - B. WORK SCHEDULING
 - C. LIMITS OR OWNER'S INVOLVEMENT
 - D. SECURITY DURING CONSTRUCTION
- 24. REPAIR AND/OR REPLACE ANY AND ALL DAMAGED IRRIGATION LINES, CONTROLLERS, IE ASSOCIATED EQUIPMENT AS NECESSARY. REROUTE IRRIGATION EQUIPMENT AS INDICATED OR AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.

DOCUMENT INTENSIONS

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERNATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. A CONSTRUCTION CHANGE DOCUMENT OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.

DESIGN COMPLIANCE

STATEMENT OF DESIGN COMPLIANCE:


THE STATE ENERGY CONSERVATION STANDARDS APPLICABLE TO THIS PROJECT HAVE BEEN REVIEWED AND THE BUILDING DESIGNED DESCRIBED HEREIN IS IN SUBSTANTIAL CONFORMANCE.

THE APPLICABLE STATE CODE TITLE 24 HAS BEEN REVIEWED FOR THIS PROJECT AND THE BUILDING DESIGN HEREIN IS IN SUBSTANTIAL CONFORMANCE.

ASBESTOS NOTES

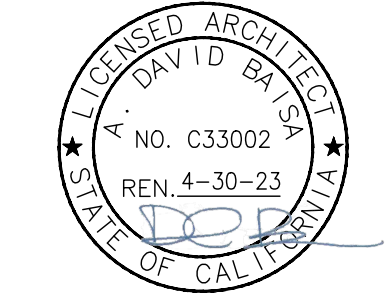
- 1. ALL DEMOLITION WORK INCLUDED IN THESE PLANS SHALL CONFORM TO THE ASBESTOS REPORT PREPARED FOR THIS CAMPUS.
- 2. ALL NEW CONSTRUCTION INCLUDED IN THESE PLANS SHALL CONFORM TO THE ASBESTOS REPORT PREPARED FOR THIS CAMPUS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
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DATE: 11/24/2021



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DSA #: 02-118068

FILE #: 20-30

PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.

No.

DATE

DESCRIPTION

REVISIONS

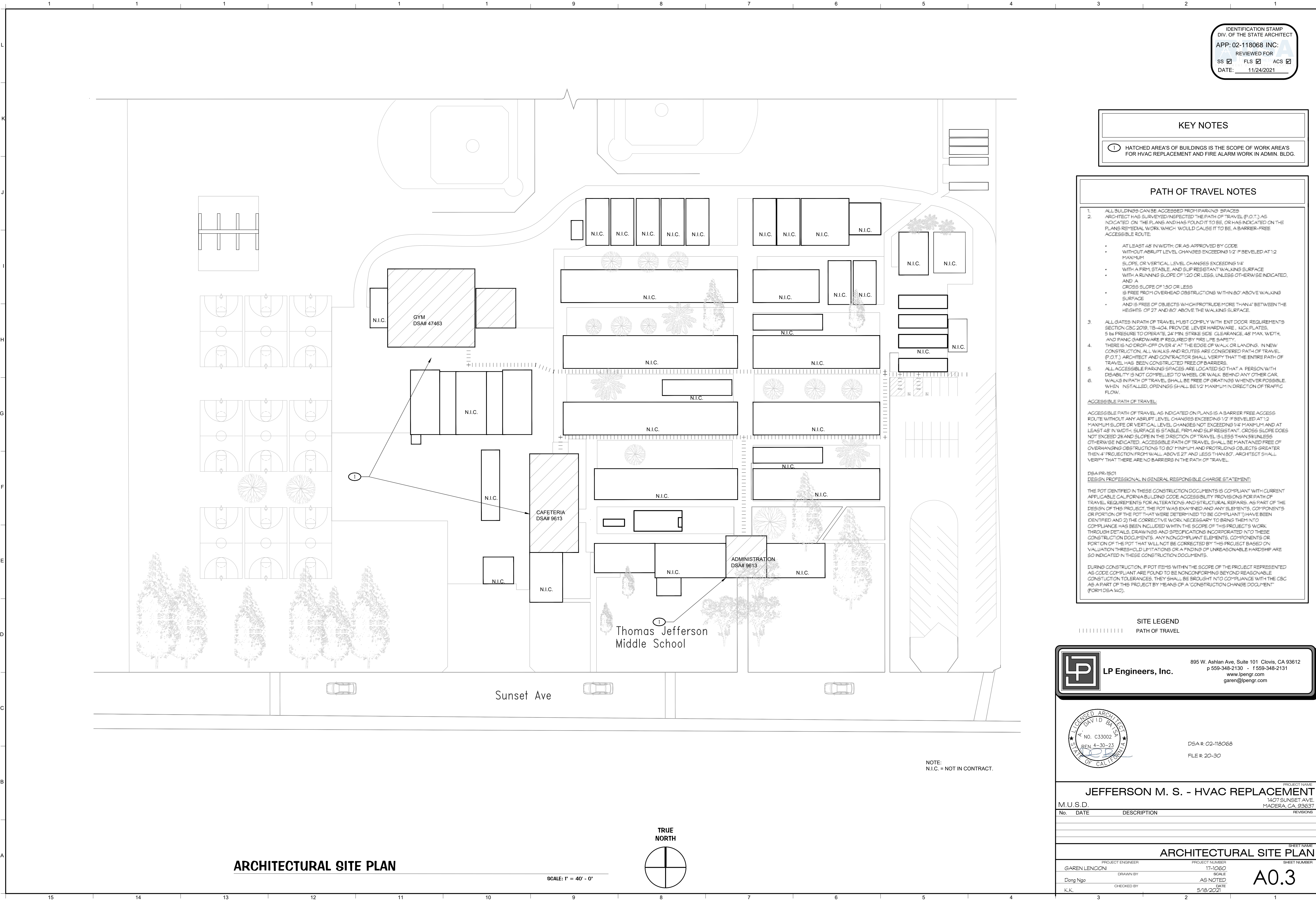
PROJECT ENGINEER
GAREN LENCIONI

PROJECT NUMBER
17-1060

SCALE
AS NOTED

DATE
5/18/2021

SHEET NUMBER
A0.2



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KEY NOTES

- 1 HATCHED AREA'S OF BUILDINGS IS THE SCOPE OF WORK AREA'S FOR HVAC REPLACEMENT AND FIRE ALARM WORK IN ADMIN. BLDG.

PATH OF TRAVEL NOTES

- ALL BUILDINGS CAN BE ACCESSED FROM PARKING SPACES
- ARCHITECT HAS SURVEYED/INSPECTED THE PATH OF TRAVEL (P.O.T.) AS INDICATED ON THE PLANS AND HAS FOUND IT TO BE, OR HAS INDICATED ON THE PLANS REMEDIAL WORK WHICH WOULD CAUSE IT TO BE, A BARRIER-FREE ACCESSIBLE ROUTE:
 - AT LEAST 48" IN WIDTH OR AS APPROVED BY CODE
 - WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM
 - SLOPE, OR VERTICAL LEVEL CHANGES EXCEEDING 1/4"
 - WITH A FIRM, STABLE, AND SLIP RESISTANT WALKING SURFACE
 - WITH A RUNNING SLOPE OF 1:20 OR LESS, UNLESS OTHERWISE INDICATED, AND A CROSS SLOPE OF 1:50 OR LESS
 - IS FREE FROM OVERHEAD OBSTRUCTIONS WITHIN 8' ABOVE WALKING SURFACE
 - AND IS FREE OF OBJECTS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE
- ALL GATES IN PATH OF TRAVEL MUST COMPLY WITH EXIT DOOR REQUIREMENTS SECTION CBC 2019, 103-104. PROVIDE LEVER HARDWARE, KICK PLATES, 5 lb PRESSURE TO OPERATE, 24" MIN. STRIKE SIDE CLEARANCE, 48" MAX. WIDTH, AND PANIC HARDWARE IF REQUIRED BY FIRE LIFE SAFETY.
- THERE IS NO DROP-OFF OVER 4" AT THE EDGE OF WALK OR LANDING. IN NEW CONSTRUCTION, ALL WALKS AND ROUTES ARE CONSIDERED PATH OF TRAVEL (P.O.T.) ARCHITECT AND CONTRACTOR SHALL VERIFY THAT THE ENTIRE PATH OF TRAVEL HAS BEEN CONSTRUCTED FREE OF BARRIERS.
- ALL ACCESSIBLE PARKING SPACES ARE LOCATED SO THAT A PERSON WITH DISABILITY IS NOT COMPELLED TO WHEEL OR WALK BEHIND ANY OTHER CAR. WALKS IN PATH OF TRAVEL SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. WHEN INSTALLED, OPENINGS SHALL BE 1/2" MAXIMUM IN DIRECTION OF TRAFFIC FLOW.
- ACCESSIBLE PATH OF TRAVEL

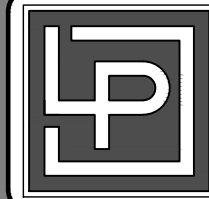
ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 8' MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL ABOVE 27" AND LESS THAN 80". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

DSA-PR-1501
DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL. REQUIREMENTS FOR ALTERATIONS AND STRUCTURAL REPAIRS, AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTION OF THE POT THAT WERE DETERMINED TO BE COMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK. THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS, ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTION OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A "CONSTRUCTION CHANGE DOCUMENT" (FORM DSA 140).

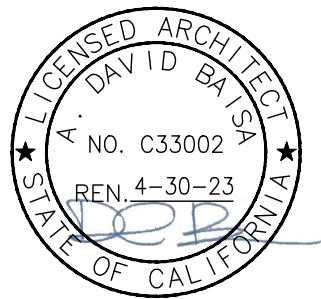
SITE LEGEND

PATH OF TRAVEL



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DSA #: 02-118068

FILE #: 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

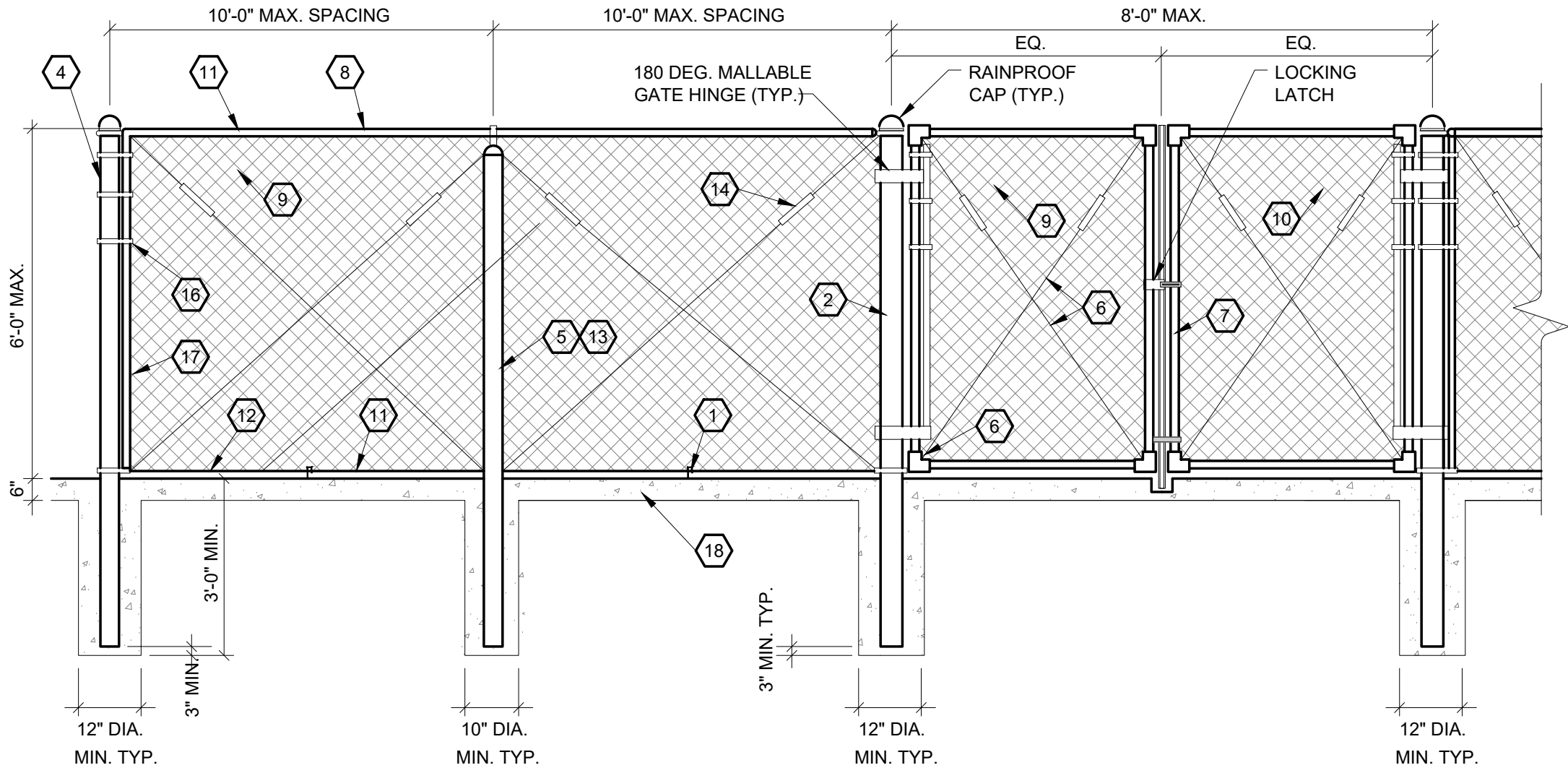
M.U.S.D. PROJECT NAME
1407 SUNSET AVE.
MADERA, CA 93637

No.	DATE	DESCRIPTION	REVISIONS
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ARCHITECTURAL SITE PLAN

PROJECT ENGINEER GAREN LENCIONI	PROJECT NUMBER 17-1060
Dong Ngo	SCALE AS NOTED
K.K.	CHECKED BY DATE 5/18/2021

A0.3



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CHAIN LINK FENCE & DOUBLE GATE

1. 3/8"X 6" GALVANIZED STEEL HOOK BOLT WITH NUT EMBEDDED INT MOWSTRIP MID WAY BETWEEN POST.

2. 4 1/2" DIAG. O.D. GALVANIZED STEEL FENCE POST (10.79 LB/FT)

3. 4" DIAG. O.D. GALVANIZED STEEL GATE POST (9.1 LB/FT)

4. 27/8" O.D. GALVANIZED STEEL FENCE POST (5.79 LB/FT) END, ANGLE, CORNER AND 6'-0" HIGH POSTS.

5. 23/8" GALVANIZED STEEL LINE POST (3.65 LB/FT).

6. 2" O.D. GALVANIZED STEEL GATE FRAME (2.72 LB/FT).

7. 17/8" O.D. STEEL GATE FRAME (2.72 LB/FT).

8. 15/8" GALVANIZED STEEL HORIZONTAL RAIL (2.27 LB/FT).

9. 2" X 2" MESH X 9 GALVANIZED FENCE FABRIC WITH KNUCKLED TOP AND BOTTOM FENCE TO BE GALVANIZED BEFORE WEAVING (G.B.W.).

10. DECORATIVE SLATING TYPICAL FOR TRASH ENCLOSURE ONLY UNLESS NOTED OTHERWISE.
11. 9 GA. (0.148 DIA.) GALVANIZED STEEL WIRES OR HOG RINGS AT 15" O.C. MAX. SPACING MINIMUM OF 8 TIE WIRES PER EA. 10'-0" HORIZONTAL RAIL.

12. 7 GA. (0.177 DIA.) GALVANIZED STEEL TENSION WIRE.

13. 6 GA. (0.912 DIA.) GALVANIZED STEEL POST CLIPS AT 14" MAX. SPACING MIN. OF 5 POSTS CLIP FOR 6'-0" POSTS MIN. OF 17 POST CLIPS FOR 20'-0" POSTS.

14. GALVANIZED ADJUSTABLE TURNBUCKLE FOR 3/8" DIA. TRUSS ROD.

15. 3/8" DIA. GALVANIZED STEEL ADJUSTABLE TRUSS ROD ARE REQUIRED FOR ALL GATE POSTS PANELS AND END OF CORNER POST PANELS.

16. GALVANIZED STRETCHER BAR TENSION BAND AT 12" MAX. SPACING. MIN. OF 6" TENSION BANDS FOR 6'-0" POSTS AND 20 TENSION BANDS FOR 20'-0" POSTS.

17. 1/4" X 6" GALVANIZED STRETCHER BAR.

18. 12" WIDE X 6" DEEP CONCRETE MOW STRIP BELOW ALL FENCING MATERIAL.

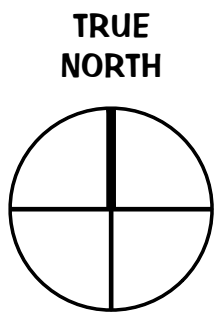
- PROVIDE SHOP DRAWING FOR FULLY FUNTIONAL GATE AND FENCE ASSEMBLIES. DETAILS SHOWN ARE SCHEMATIC AND GENERAL IN NATURE AND MAY NOT INDICATE ALL PARTS NECESSARY BUT REQUIRED FOR A COMPLETE FENCE/ GATE ASSEMBLY.
- WELDING SPECIAL INSPECTION NOT REQUIRED.

1 CHAIN LINK FENCING

SCALE: N.T.S.

ARCHITECTURAL DETAILS

SCALE: N.T.S.



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FILE #: 20-30

PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT
1407 SUNSET AVE.
MADERA, CA 93637

M.U.S.D.

No.	DATE	DESCRIPTION	REVISIONS

PROJECT ENGINEER
GAREN LENCIONI

PROJECT NUMBER
17-1060

DRAWN BY
Dong Ngo

SCALE
AS NOTED

CHECKED BY
K.K.

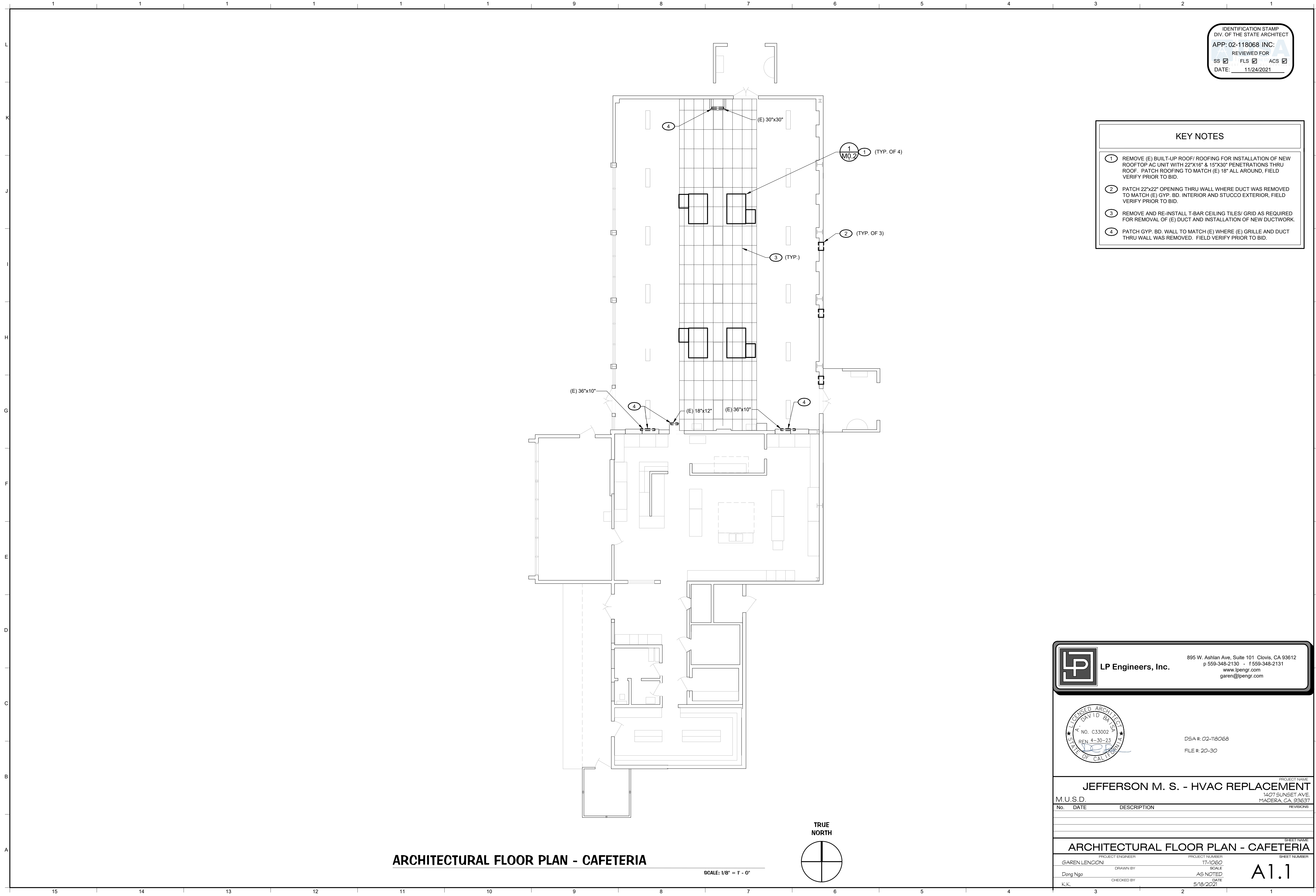
DATE
5/18/2021

ARCHITECTURAL DETAILS

SHEET NAME

SHEET NUMBER

A0.4



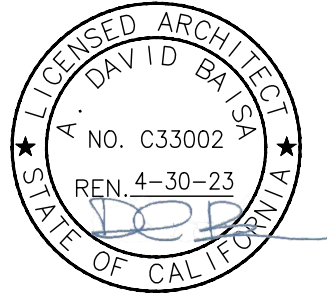
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APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

KEY NOTES

- 1 REMOVE (E) BUILT-UP ROOF/ ROOFING FOR INSTALLATION OF NEW ROOFTOP AC UNIT WITH 22"x16" & 15"x30" PENETRATIONS THRU ROOF. PATCH ROOFING TO MATCH (E) 18" ALL AROUND, FIELD VERIFY PRIOR TO BID.
- 2 PATCH 22"x22" OPENING THRU WALL WHERE DUCT WAS REMOVED TO MATCH (E) GYP. BD. INTERIOR AND STUCCO EXTERIOR, FIELD VERIFY PRIOR TO BID.
- 3 REMOVE AND RE-INSTALL T-BAR CEILING TILES/ GRID AS REQUIRED FOR REMOVAL OF (E) DUCT AND INSTALLATION OF NEW DUCTWORK.
- 4 PATCH GYP. BD. WALL TO MATCH (E) WHERE (E) GRILLE AND DUCT THRU WALL WAS REMOVED. FIELD VERIFY PRIOR TO BID.

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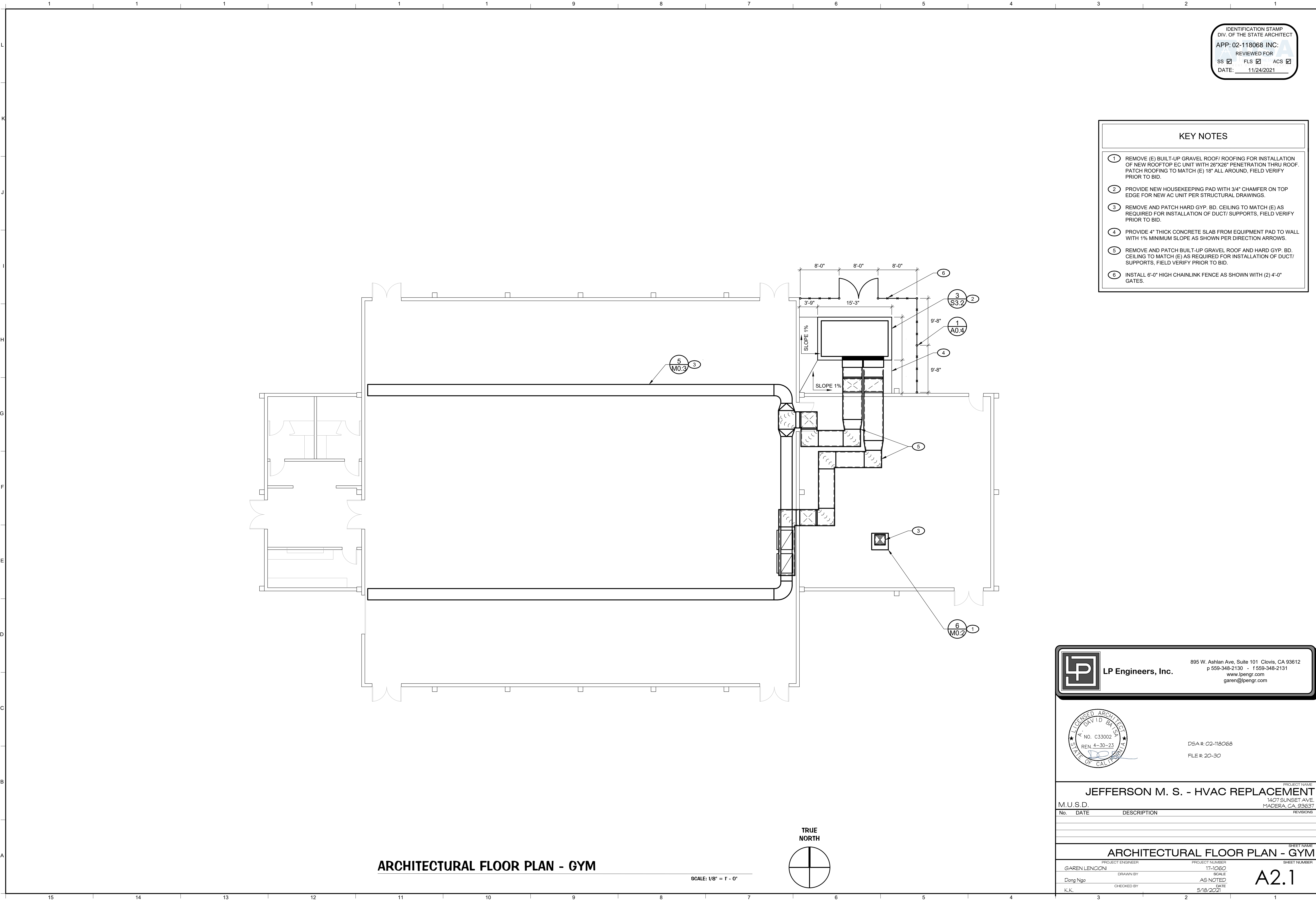
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No.	DATE	DESCRIPTION	REVISIONS

PROJECT ENGINEER		PROJECT NUMBER	
GAREN LENCIONI	17-1060	SCALE	
Dong Ngo	AS NOTED	DATE	
K.K.	CHECKED BY	5/18/2021	

SHEET NAME
ARCHITECTURAL FLOOR PLAN - CAFETERIA
SHEET NUMBER
A1.1

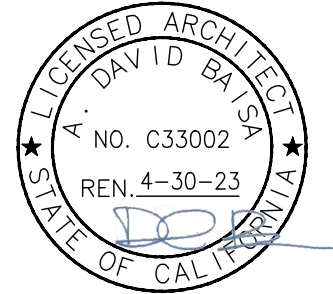


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KEY NOTES

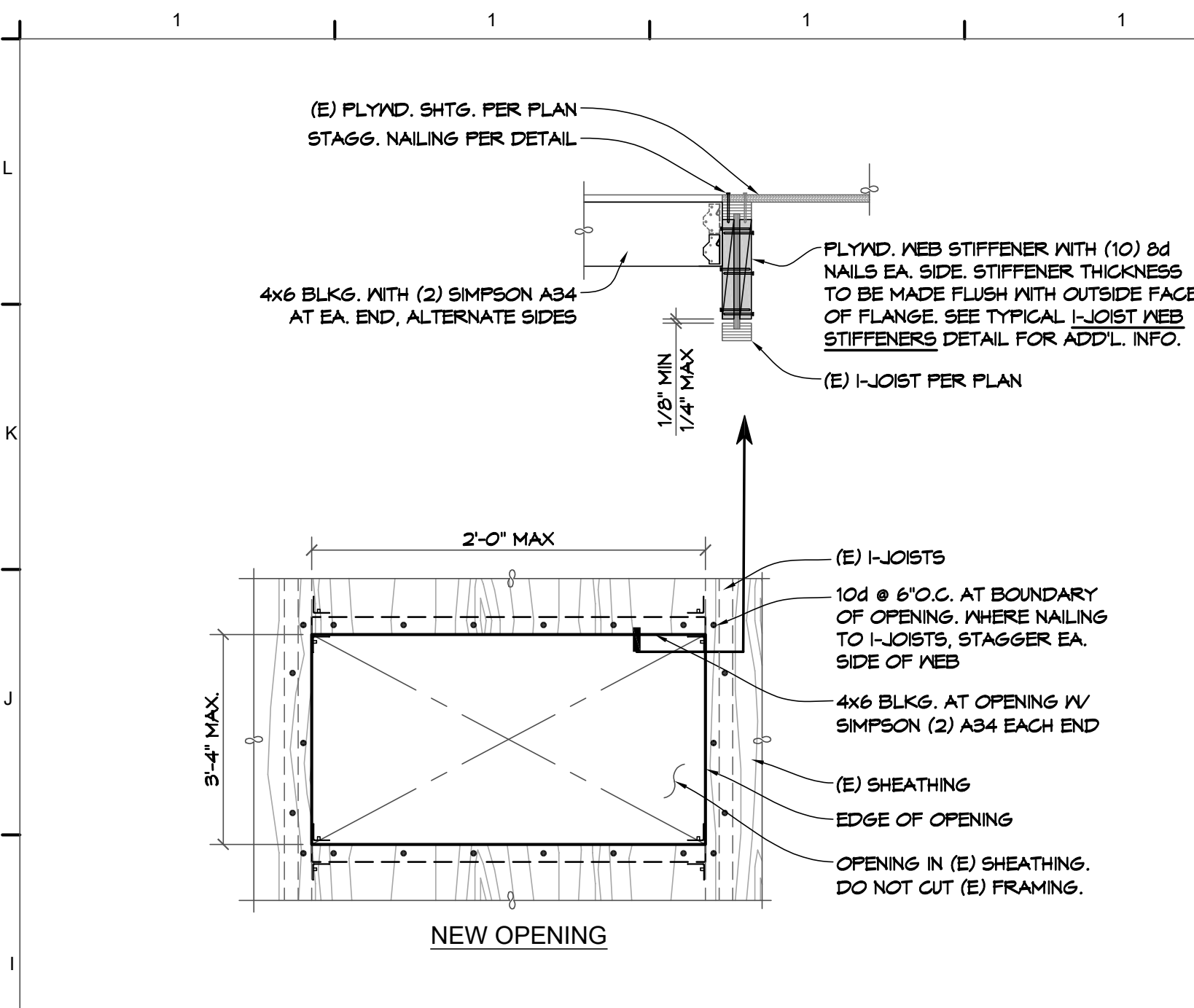
- 1 REMOVE (E) BUILT-UP GRAVEL ROOF/ ROOFING FOR INSTALLATION OF NEW ROOFTOP EC UNIT WITH 26"X26" PENETRATION THRU ROOF. PATCH ROOFING TO MATCH (E) 18" ALL AROUND, FIELD VERIFY PRIOR TO BID.
- 2 PROVIDE NEW HOUSEKEEPING PAD WITH 3/4" CHAMFER ON TOP EDGE FOR NEW AC UNIT PER STRUCTURAL DRAWINGS.
- 3 REMOVE AND PATCH HARD GYP. BD. CEILING TO MATCH (E) AS REQUIRED FOR INSTALLATION OF DUCT/ SUPPORTS, FIELD VERIFY PRIOR TO BID.
- 4 PROVIDE 4" THICK CONCRETE SLAB FROM EQUIPMENT PAD TO WALL WITH 1% MINIMUM SLOPE AS SHOWN PER DIRECTION ARROWS.
- 5 REMOVE AND PATCH BUILT-UP GRAVEL ROOF AND HARD GYP. BD. CEILING TO MATCH (E) AS REQUIRED FOR INSTALLATION OF DUCT/ SUPPORTS, FIELD VERIFY PRIOR TO BID.
- 6 INSTALL 6'-0" HIGH CHAINLINK FENCE AS SHOWN WITH (2) 4'-0" GATES.

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SCALE		DATE
Dong Ngo		AS NOTED
K.K.		5/18/2021



10 OPENING IN (E) WOOD FRMG. RETROFIT
IN EXISTING WOOD FRAMING SCALE: N.T.S.

A.B.	ANCHOR BOLT	HSS	HOLLOW STRUCTURAL SECTION
ABV.	ABOVE	HT.	HEIGHT
A.C.I.	AMERICAN CONCRETE INSTITUTE	I.B.C.	INTERNATIONAL BUILDING CODE
ADDL.	ADDITIONAL	I.C.C.	INTERNATIONAL CODE COUNCIL
A.E.S.	ARCHITECTURAL EXPOSED STEEL	IN	INCH
A.F.P.A.	AMERICAN FOREST AND PAPER ASSOCIATION	I.D.	INSIDE DIAMETER
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	I.R.	INTERIOR
A.I.T.C.	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	JST.	JOIST
ALT.	ALTERNATE	KSI	KIPS PER SQUARE INCH
A.P.A.	AMERICAN PLYWOOD ASSOCIATION	L	ANGLE
ARCH.	ARCHITECTURAL	LBS. #	POUNDS (XXX LBS. XXX#)
A.S.C.E.	AMERICAN SOCIETY OF CIVIL ENGINEERS	LL	LIVE LOAD
A.S.T.M.	AMERICAN SOCIETY FOR TESTING & MATERIALS	LLV(LLH)	LONG LEG VERTICAL (HORIZ.)
A.W.S.	AMERICAN WELDING SOCIETY	LOC.	LOCATION
BLDG.	BUILDING	LST.	LAMINATED STRAND LUMBER
BLK., BLKS.,	BLOCK, BLOCKING	LT. WT.	LIGHT WEIGHT
BM.	BEAM	LVL	LAMINATED VENEER LUMBER
B.O.	BOTTOM OF	MAS.	MASONRY
BOT.	BOTTOM	MAX.	MAXIMUM
C	CHANNEL	M.B.	MACHINE BOLT
C.B.C.	CALIFORNIA BUILDING CODE	MFR.	MANUFACTURER
CDX	C-D EXPOSURE 1	MIN.	MINIMUM
C.J.	CONSTRUCTION JOINT	M.S.R.	MACHINE STRESS RATED
CL.	CENTERLINE	MTL.	METAL
CLS.	CEILING	(N)	NEA
CLR.	CLEAR	NO., #	NUMBER (NO. XX, #XX)
C.M.U.	CONCRETE MASONRY UNIT	N.T.S.	NOT TO SCALE
COL.	COLUMN	O/, o/	OVER
CONC.	CONCRETE	O.C.	ON CENTER
CONN.	CONNECTION	O.D.	OUTSIDE DIAMETER
CONT.	CONTINUOUS	O.H.	OPPOSITE HAND
CTSK.	COUNTERSINK	OPNG.	OPENING
d	PENNY NAILS	OP.	OPPOSITE
DBL.	DOUBLE	OSB	ORIENTED STRAND BOARD
DEMO.	DEMOLISH	O.S.H.P.D.	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
DET., DTL.	DETAIL	PL.	PLATE
DF.	DOUGLAS FIR	P.T.	PRESSURE TREATED
DIA., Ø	DIAMETER	PLYM.D.	PLYWOOD
DIA.C.	DIAGONAL	PSF	POUNDS PER SQUARE FOOT
DM.	DIMENSION	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	REINF.	REINFORCING
DO	DITTO / DO OVER	REQD.	REQUIRED
DP	DEEP	RM.	ROOM
D.S.A.	DEPARTMENT OF STATE ARCHITECT	SCHED.	SCHEDULE
DWG	DRAWING	SHTG.	SHEATHING
(E)	EXISTING	SHT.	SHEET
EA.	EACH	SIM.	SIMILAR
ELEV.	ELEVATION	SMS	SHEET METAL SCREWS
E.N.	EDGE NAILING	SPEC.	SPECIFICATION
ENGR.	ENGINEER	SQ.	SQUARE
EQ.	EQUAL	STGR.	STAGGER
EQUIP.	EQUIPMENT	STD.	STANDARD
EXP.	EXPANSION	STIFF.	STIFFENER
EX.	EACH WAY	STL.	STEEL
FDN.	FOUNDATION	STRUCT.	STRUCTURAL
F.E.M.A.	FEDERAL EMERGENCY MANAGEMENT AGENCY	SYM.	SYMMETRICAL
F.F.	FINISH FLOOR	T&G	TOP AND BOTTOM
FIN.	FINISH	THK.	THICK
FLR.	FLOOR	TL.	TOTAL LOAD
F.N.	FIELD NAILING	T.O.	TOP OF
FRMG.	FRAMING	U.O., U.O.N.	UNLESS NOTED OTHERWISE
FT., FTG.	FOOT, FOOTING	VERT.	VERTICAL
F.V.	FIELD VERIFY	W, W/O	WITH, WITH OUT
GA.	GAUGE	WD	WOOD
GALV.	GALVANIZED	W.F.	WIDE FLANGE
GLB	GLUE LAMINATED BEAM	W.C.L.I.B.	WEST COAST LUMBER INSPECTION BUREAU
H.D.	HOLDOWN	WT.	WEIGHT
HDR.	HEADER	W.W.F.	WELDED WIRE FABRIC
HGR.	HANGER	W.W.A.	WELDED WIRE MESH
HORIZ.	HORIZONTAL	W.W.P.A.	WESTERN WOOD PRODUCTS ASSOCIATION

12 ABBREVIATIONS
SCALE: N.T.S.

- ALL BOLTS SHALL BE MACHINE MADE TYPE F1554 GRADE 36 U.N.O.
 - BOLT HOLES IN WOOD SHALL BE OVERSIZED BY NOT MORE THAN 1/32".
 - ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH STANDARD STEEL WASHERS UNDER HEAD AND NUTS WHICH BEAR ON WOOD ACCORDING TO THE WASHER SCHEDULE BELOW, U.N.O.
- | WASHER SCHEDULE | | | |
|-----------------|-----------------------|----------------------|---------------------|
| BOLT SIZE | STEEL PLATE SQUARE | MALLEABLE IRON ROUND | STANDARD CUT WASHER |
| 1/2"Ø | 2 x 2 x 1/4" | 2 1/2"Ø x 1/4" | 1 3/8"Ø x 7/64" |
| 5/8"Ø | 2 1/2 x 2 1/2 x 1/4" | 2 3/4"Ø x 5/16" | 1 3/4"Ø x 1/8" |
| 3/4"Ø | 3 x 3 x 5/16" | 3"Ø x 3/8" | 2"Ø x 5/32" |
| 7/8"Ø | 3 1/2 x 3 1/2 x 5/8" | 3 1/2"Ø x 7/16" | 2 1/4"Ø x 11/64" |
| 1"Ø | 3 3/4 x 3 3/4 x 7/16" | 4"Ø x 1/2" | 2 1/2"Ø x 11/64" |
| 1 1/8"Ø | 4 x 4 x 7/16" | 4 1/2"Ø x 9/16" | 2 3/4"Ø x 11/64" |
| 1 1/2"Ø | 4 1/4 x 4 1/4 x 1/2" | 5"Ø x 5/8" | 3 1/2"Ø x 3/16" |
- BOLTS AND SCREWS SHALL BE TIGHTENED AT TIME OF ERECTION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
 - ALL EXPOSED FASTENERS SHALL HAVE ZINC-COATING CORROSION RESISTANCE.
 - ALL FASTENERS AND HARDWARE IN CONTACT WITH PRESERVATIVE-TREATED OR FIRE RETARDANT WOOD SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHT FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH A.S.T.M. A 153. EXCEPTION: FASTENERS OTHER THAN NAILS, TIMBER RIVETS, WOOD SCREWS AND LAG SCREWS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH A.S.T.M. B 649, CLASS 55 MIN.
 - ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS:
 - DOUGLAS FIR - LARCH WCLIB OR NWPA RULES
 - PLYWOOD U.S. PRODUCT STANDARD PS1-01 FOR SOFTWOOD PLYWOOD
 - MINIMUM GRADES SHALL BE AS FOLLOWS U.N.O. ON DRAWINGS:
 - STRUCTURAL FRAMING DF NO. 1 OR BETTER
 - 4X AND LARGER AND POST DF NO. 1 OR BETTER
 - STRUCTURAL PLYWOOD PLYWOOD SHEATHING, GROUP 1, EXP. 1, U.N.O.
 - PREDRILL HOLES WHERE WOOD TENDS TO SPLIT.
 - WHERE LAG SCREWS ARE INDICATED, PROVIDE A FULL BODY DIAMETER LAG SCREW. THE SHANK SHALL EXTEND BEYOND THE ADJOINING MEMBER PLANE, U.N.O. LAG SCREWS SHALL NOT HAVE UPSET THREADS OR REDUCED BODY.
 - FOR LAG SCREWS, LEAD HOLE FOR THE UNTHREADED PORTION SHALL HAVE A DIAMETER EQUAL TO THE SHANK DIAMETER AND THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 65% OF THE SHANK DIAMETER. MIN. PENETRATION (NOT INCLUDING THE LENGTH OF TAPERED TIP) OF THE LAG SCREW INTO MAIN MEMBER SHALL BE EIGHT TIMES THE DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" DIAMETER LAG SCREWS PROVIDED THAT EDGE DISTANCES, END DISTANCES, AND SPACING ARE SUFFICIENT TO PREVENT UNUSUAL SPLITTING.
 - USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER AND D.S.A./O.S.H.P.D. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" PLYWOOD. IF NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MIN. ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.

8 WOOD NOTES
SCALE: N.T.S.

NAILING SCHEDULE ^h			
#	CONNECTION	FASTENING ^{g,i}	LOCATION
1.	JOIST TO BILL OR GIRDER	3 - 8d	TOENAIL
2.	BRIDGING TO JOIST	2 - 8d	TOENAIL EACH END
3.	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3 - 8d	TOENAIL
4.	RIM JOIST TO TOP PLATE	8d @ 6" o.c.	TOENAIL
5.	RAFTER TO PLATE	3 - 8d	TOENAIL
6.	1"x8" SHEATHING TO EA. BEARING	3 - 8d	FACE NAIL
7.	WIDER THAN 1"x8" SHEATHING TO EACH BEARING	3 - 8d	FACE NAIL
8.	ROOF RAFTER TO 2x RIDGE BEAM	2 - 16d 2 - 16d	TOENAIL FACE NAIL
9.	JOIST TO BAND JOIST	3 - 16d	FACE NAIL
10.	LEDGER STRIP	3 - 16d	FACE NAIL
11.	WOOD STRUCTURAL PANELS AND PARTICLEBOARD, SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING) ^b	1/2" & LESS 16/32" TO 3/4" 7/8" TO 1" 6d ^f 6d, 8d 8d	-

a. COMMON NAILS ARE REQUIRED TO BE USED U.N.O. COMMON NAIL PROPERTIES ARE AS FOLLOWS:
• 6d = 0.119"Ø x 2" LONG
• 8d = 0.131"Ø x 2 1/2" LONG
• 10d = 0.148"Ø x 3" LONG
• 16d = 0.162"Ø x 3 1/2" LONG
• 20d = 0.192"Ø x 4" LONG

b. NAILS SPACED AT 6" O.C. AT EDGES, 12" AT INTERMEDIATE SUPPORTS EXCEPT 6" AT SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2302.

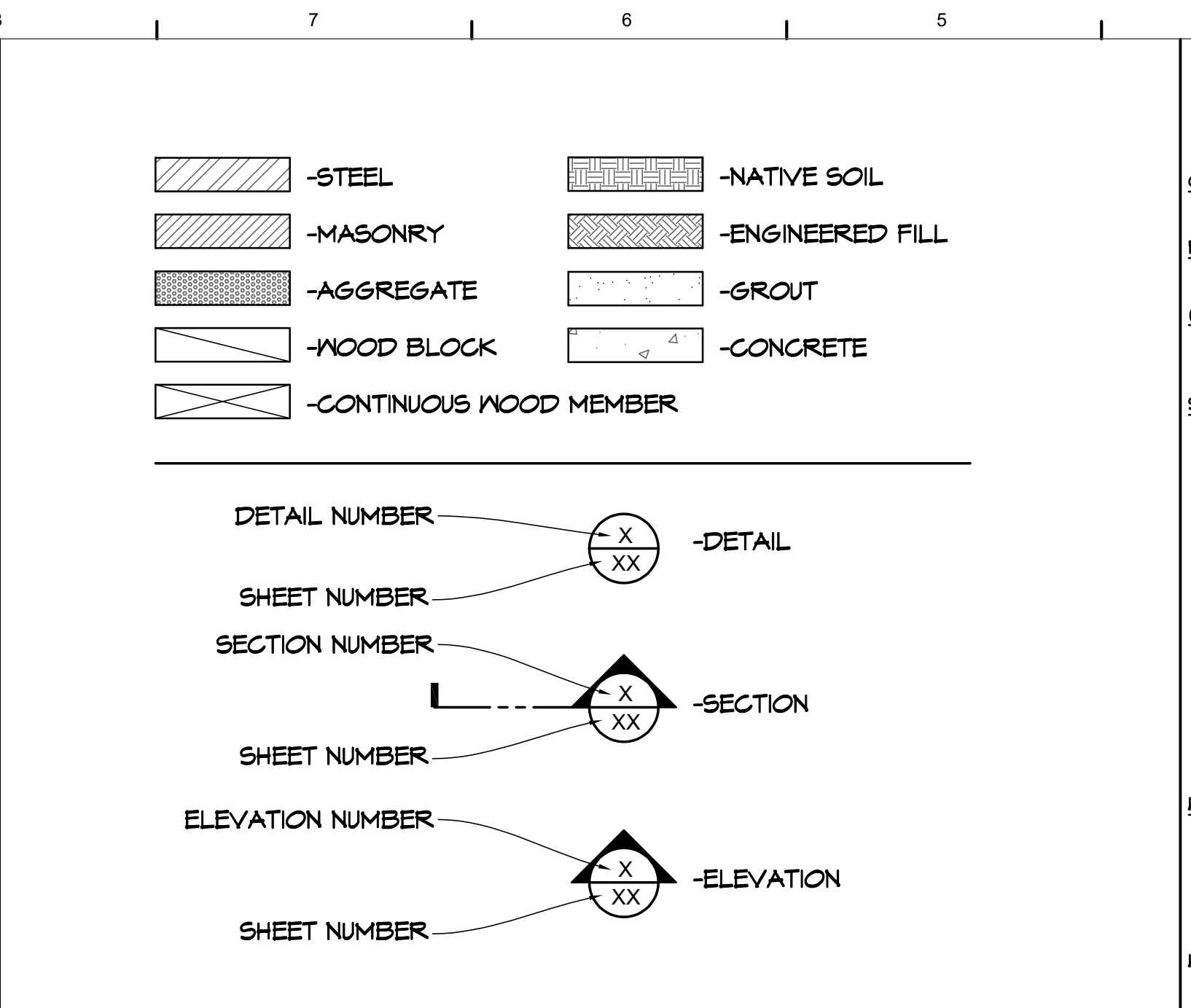
f. ROOF SHEATHING APPLICATIONS, 8d ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.

g. NAILING DRIVEN INTO PRESERVATIVE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED OR EQUIVALENT.

h. THIS SCHEDULE WILL GOVERN UNLESS NOTED OTHERWISE ON PLANS.

i. FASTENERS USED FOR THE ATTACHMENT OF EXTERIOR WALL COVERINGS SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL WITH COATING PER A.S.T.M. A153.

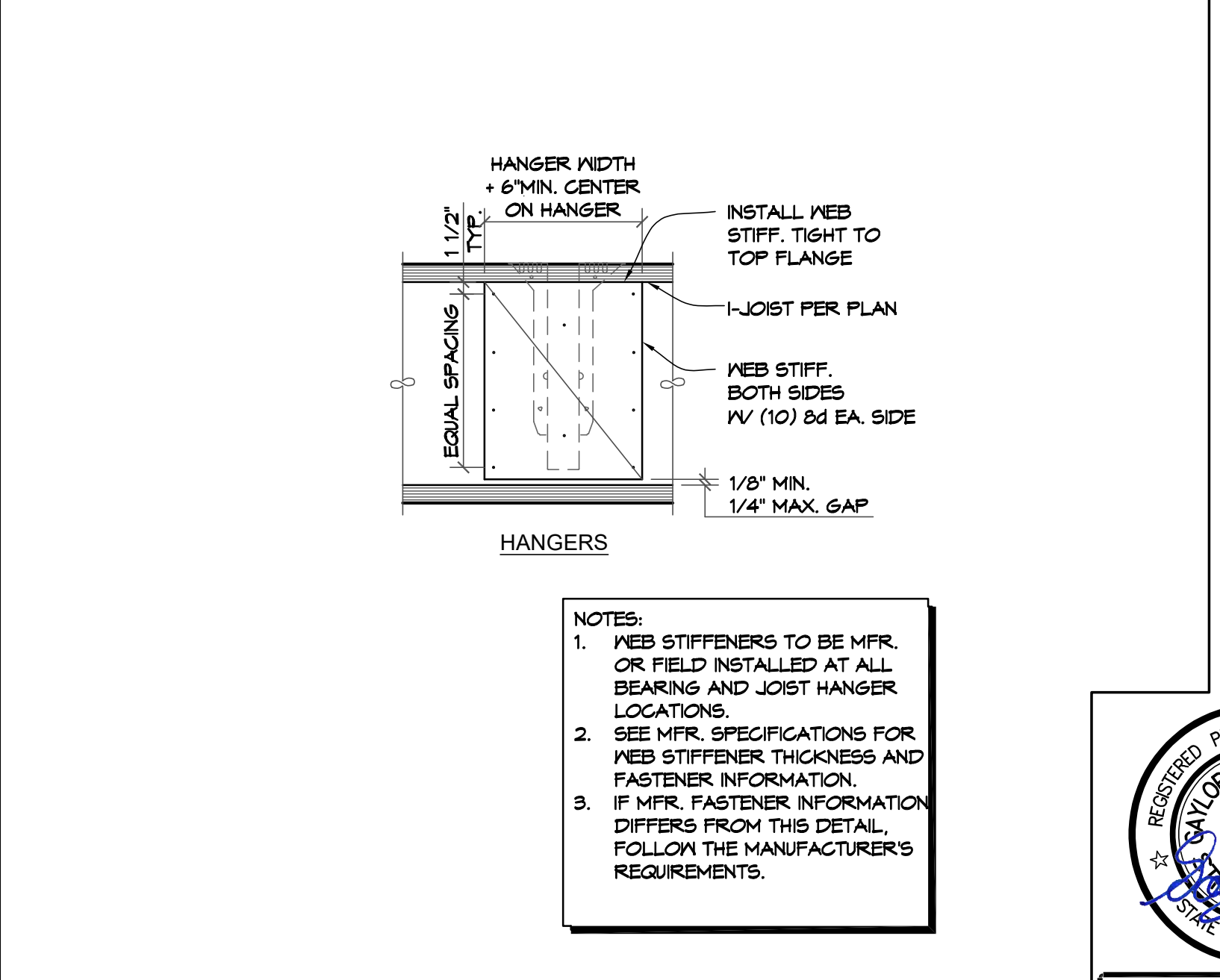
9 NAILING SCHEDULE
PER CBC TABLE 2304.9.1 SCALE: N.T.S.



4 LEGEND AND SYMBOLS
SCALE: N.T.S.

- ALL CONSTRUCTION INDICATED IS NEW UNLESS SPECIFICALLY DENOTED AS EXISTING.
- CAREFULLY EXAMINE THE CONSTRUCTION DOCUMENTS AND NOTIFY THE STRUCTURAL ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WITHIN THE STRUCTURAL CONSTRUCTION DOCUMENTS AND BETWEEN ALL OTHER CONSTRUCTION DOCUMENTS AND THE EXISTING CONDITION.
- EXISTING CONSTRUCTION INDICATED IN THE CONSTRUCTION DOCUMENTS IS BASED UPON INFORMATION SHOWN ON AVAILABLE RECORD PLANS AND/OR LIMITED VISUAL OBSERVATIONS. THE EXISTING CONSTRUCTION MAY VARY FROM THAT INDICATED ON THE CONSTRUCTION DOCUMENTS. PROVIDE ALL WORK AND MATERIALS NECESSARY TO COMPLETE THE PROJECT AS REPRESENTED IN THE CONSTRUCTION DOCUMENTS.
- VERIFY CONSTRUCTION DOCUMENTS THE EXISTING CONSTRUCTION PRIOR TO STARTING CONSTRUCTION OR FABRICATION. DO NOT SCALE THE EXISTING RECORD PLANS.
- PROVIDE AND MAINTAIN A COMPLETE SET OF THE EXISTING RECORD PLANS AND MAKE THEM AVAILABLE FOR USE ON JOB SITE.
- EXISTING STRUCTURAL ELEMENTS SHALL NOT BE REMOVED OR MODIFIED UNLESS INDICATED IN THE STRUCTURAL CONSTRUCTION DOCUMENTS. IF EXISTING STRUCTURAL ELEMENTS INTERFERE WITH THE WORK INDICATED ON PLANS, OR IF UNCERTAIN THAT AN ELEMENT IS STRUCTURAL, NOTIFY STRUCTURAL ENGINEER IMMEDIATELY.
- PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF THE EXISTING STRUCTURE AND SITE DURING DEMOLITION AND CONSTRUCTION. MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, PROVIDING ADEQUATE SHORING, BRACING, WEATHER PROTECTION AND DUST PROTECTION. THE REMOVAL OR ALTERATION OF EXISTING STRUCTURAL ELEMENTS SHALL BE PERFORMED IN A MANNER TO PREVENT DAMAGE TO THOSE ELEMENTS THAT REMAIN. SHOULD DAMAGE OCCUR TO ANY EXISTING ELEMENTS, THOSE ELEMENTS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO OWNER.
- IF EXISTING STRUCTURAL ELEMENTS NOT INDICATED FOR REPLACEMENT OR REPAIR ARE DISCOVERED TO BE DAMAGED OR DIFFERENT THAN INDICATED ON THE PLANS, NOTIFY THE STRUCTURAL ENGINEER. SUCH DAMAGE OR DIFFERENCE SHALL INCLUDE, BUT NOT LIMITED TO, DRY ROT, WATER DAMAGE, INSECT DAMAGE, POOR WORKMANSHIP OR FIT-UP, BUCKLING OR EXCESSIVE DEFLECTION, SAGGING, TWISTING AND DIFFERENT SIZE, ORIENTATION, SPACING, GRADE QUALITY OR MATERIAL.
- DO NOT CUT ANY EXISTING RE-BAR OR FRAMING MEMBERS NOT DETAILED ON STRUCTURAL CONSTRUCTION DOCUMENTS.

5 EXISTING CONDITIONS NOTES
SCALE: N.T.S.



6 I-JOIST WEB STIFFENERS
SCALE: N.T.S.

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP: 02-118068 INC: REVIEWED FOR SS <input checked="" type="checkbox"/> FLS <input checked="" type="checkbox"/> ACS <input checked="" type="checkbox"/> DATE: 11/24/2021	
CODE 2019 CALIFORNIA BUILDING CODE	RISK CATEGORY TYPE III
(E) CAFETERIA BLDG. ROOF LOADS	DEAD LOADS 16 PSF LIVE LOAD 20 PSF
SEISMIC LOADING CRITERIA	SEISMIC IMPORTANCE FACTOR, I _s 1.25 MAPPED SPECTRAL ACCELERATION, MCE: S _s 0.549 S _s 0.235 SPECTRAL RESPONSE COEFFICIENT: F _a 1.321 F _v 2.13 MAXIMUM CONSIDERED EARTHQUAKE RESPONSE ACCELERATIONS: S _{ms} 0.791 S _{ms} 0.501 DESIGN SPECTRAL RESPONSE ACCELERATIONS: S _{ds} 0.528 S _{d1} 0.394 SEISMIC DESIGN CATEGORY D
WIND LOADING CRITERIA:	BASIC WIND SPEED, V ₃₀ 100 MPH SURFACE ROUGHNESS CATEGORY C EXPOSURE CATEGORY C VELOCITY PRESSURE EXPOSURE COEFFICIENT, K _z 0.9 TOPOGRAPHIC FACTOR, K _{zt} 1.00 ENCLOSURE CLASSIFICATION 21.6 PSF WALL WIND LOADS, P _{net} DESIGN UPLIFT WIND LOADS, P _{net} 16 PSF

1 DESIGN CRITERIA
SCALE: N.T.S.

- A SPECIAL INSPECTOR EMPLOYED BY THE OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 24 AND SECTION 1704A.2 OF THE 2019 C.B.C. SHALL BE REQUIRED TO INSPECT THE PORTIONS OF THE PROJECT LISTED BELOW. THE SPECIAL INSPECTOR'S DUTIES ARE SPECIFICALLY DEFINED BY TITLE 24. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF INSPECTIONS AS REQUIRED IN SECTION 1704A.2.4 OF THE 2019 C.B.C. AND SUBMIT THEIR REPORTS DIRECTLY TO D.S.A./O.S.H.P.D.
- REQUIRED AREAS OF INSPECTION**
- STEEL
 - CONCRETE
 - MASONRY
 - OCCUPANCY CATEGORY I, II OR III TMS 402/ACI 530/ASCE 5
 - OCCUPANCY CATEGORY IV TMS 602/ACI 530.1/ASCE 6
 - WOOD
 - SOILS
 - FILE FOUNDATIONS
 - PIER FOUNDATIONS
 - POST-INSTALLED ANCHORS
 - EPOXY ADHESIVES
- 2019 C.B.C. REFERENCES
SECTIONS 1705A.2.1 AND 1705A.12.1 AND TABLE 1705A.2.3
SECTION 1705A.3 AND TABLE 1705A.3
SECTIONS 1705A.4
SECTIONS 1705A.5 AND 1705A.11.1/1705A.12.2
SECTION 1705A.6 AND TABLE 1705A.6
SECTION 1705A.7 AND TABLE 1705A.7
SECTION 1705A.8 AND TABLE 1705A.8
SECTION 1909A.2.1 AND I.C.C. E.S.R. REPORTS
SECTION 1909A.2.1 AND I.C.C. E.S.R. REPORTS
- NOTE: FOR SPECIFIC REQUIREMENTS REGARDING SPECIAL INSPECTION FOR D.S.A. PROJECTS, SEE THE TESTING AND INSPECTION FORM FOR THIS PROJECT.

2 SPECIAL INSPECTION NOTES
SCALE: N.T.S.

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DSA #: 02-118068
FILE #: 20-30

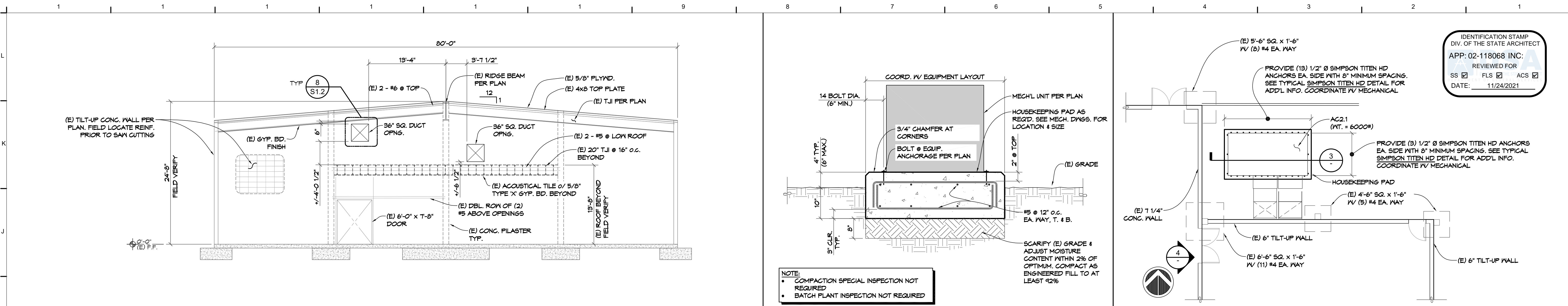
PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT
1407 SUNSET AVE
MADERA, CA. 93637

REVISIONS	
No.	DATE

TYPICAL NOTES AND DETAILS	
PROJECT ENGINEER	PROJECT NUMBER
GAREN LENCIONI	17-1060
Dong Ngo	AS NOTED
K.K.	6/11/2021

SHEET NUMBER
S1.1

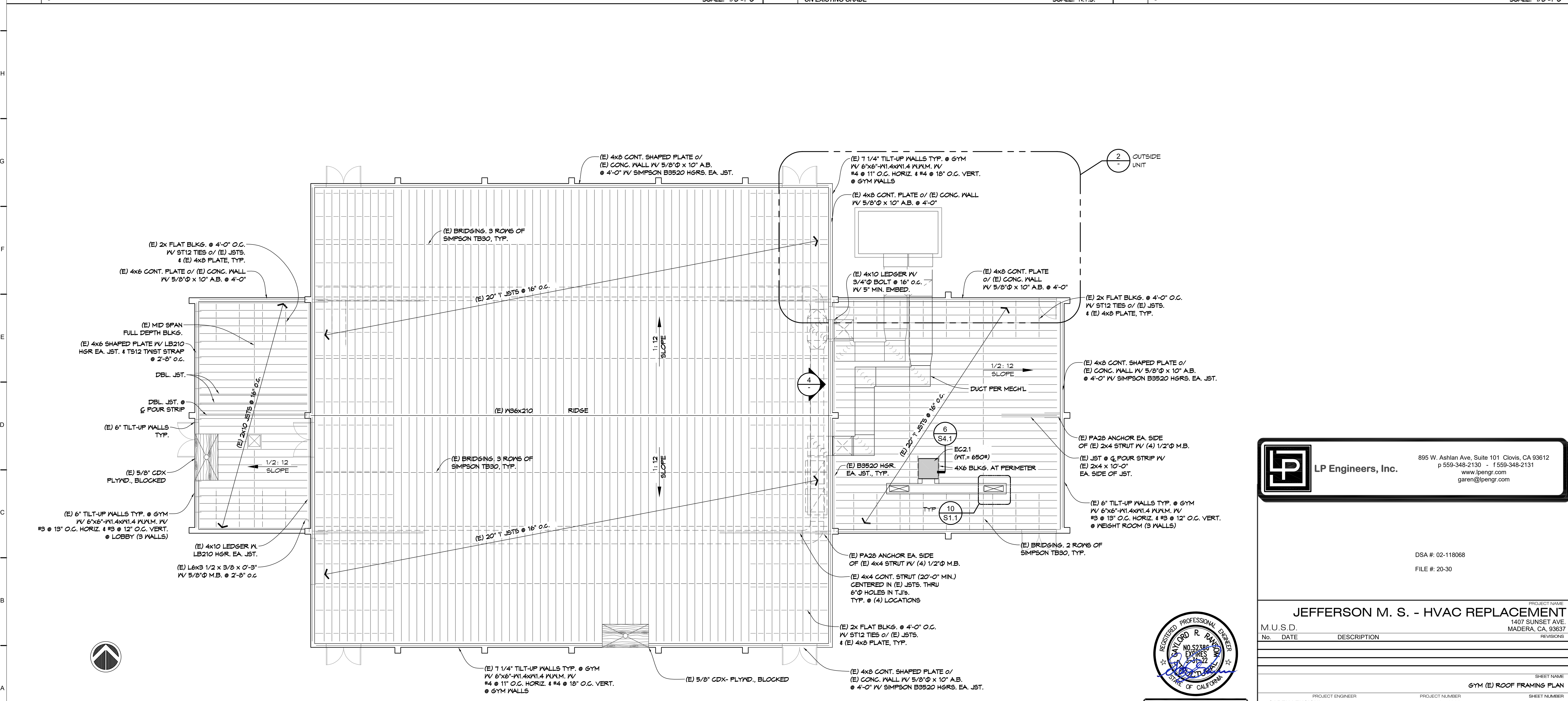
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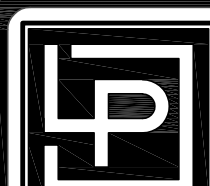
4 (E) EAST ELEVATION at GYM SCALE: 1/8"=1'-0"

3 HOUSEKEEPING PAD ON EXISTING GRADE SCALE: N.T.S.

2 HOUSEKEEPING PAD PLAN SCALE: 1/8"=1'-0"



1 EXISTING ROOF FRAMING PLAN at GYM SCALE: 1/8"=1'-0"



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PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.
1407 SUNSET AVE
MADERA, CA 93637

REVISIONS

SHEET NAME
GYM (E) ROOF FRAMING PLAN

SHEET NUMBER

PROJECT ENGINEER
GAREN LENCIONI

PROJECT NUMBER
17-1060

DRAWN BY
Dong Ngo

DATE
6/11/2021

CHECKED BY
K.K.

AS NOTED

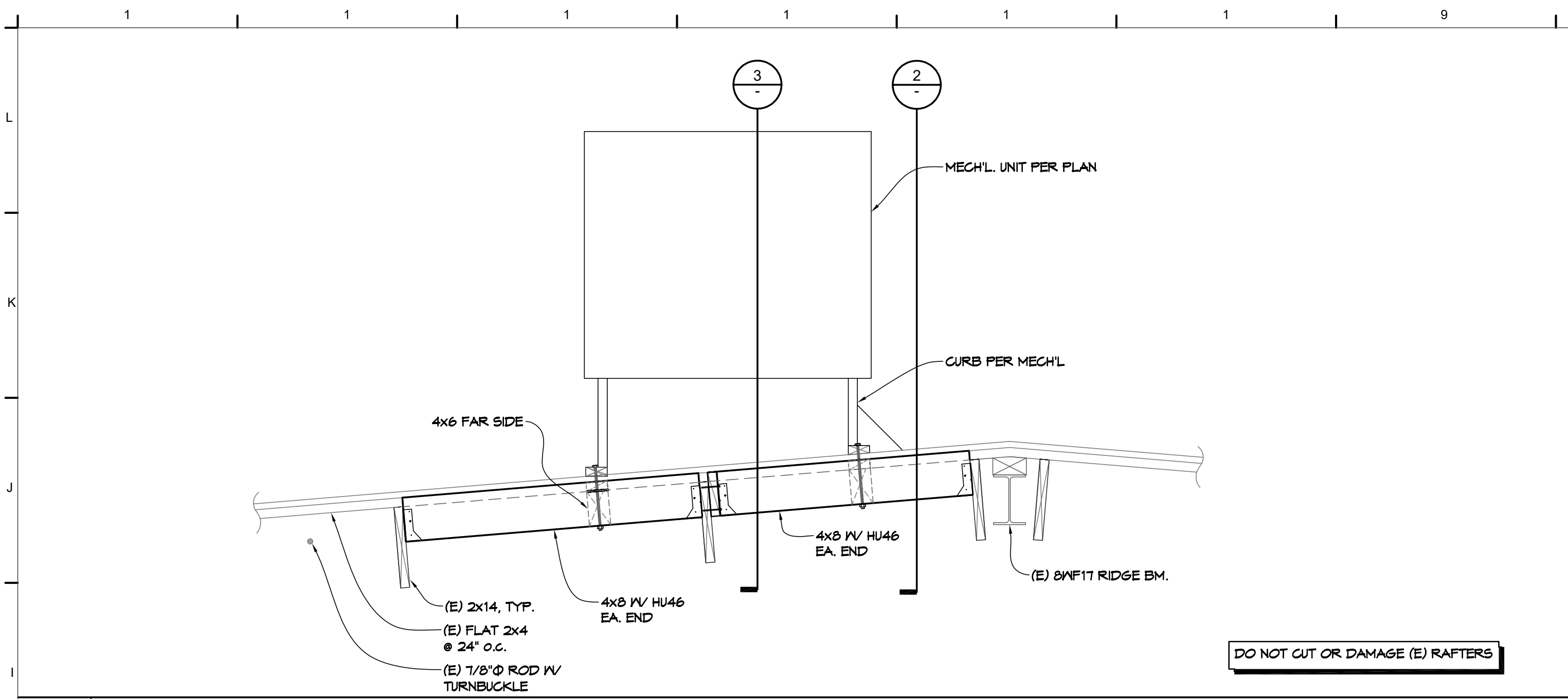
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DATE
6/11/2021

17/26

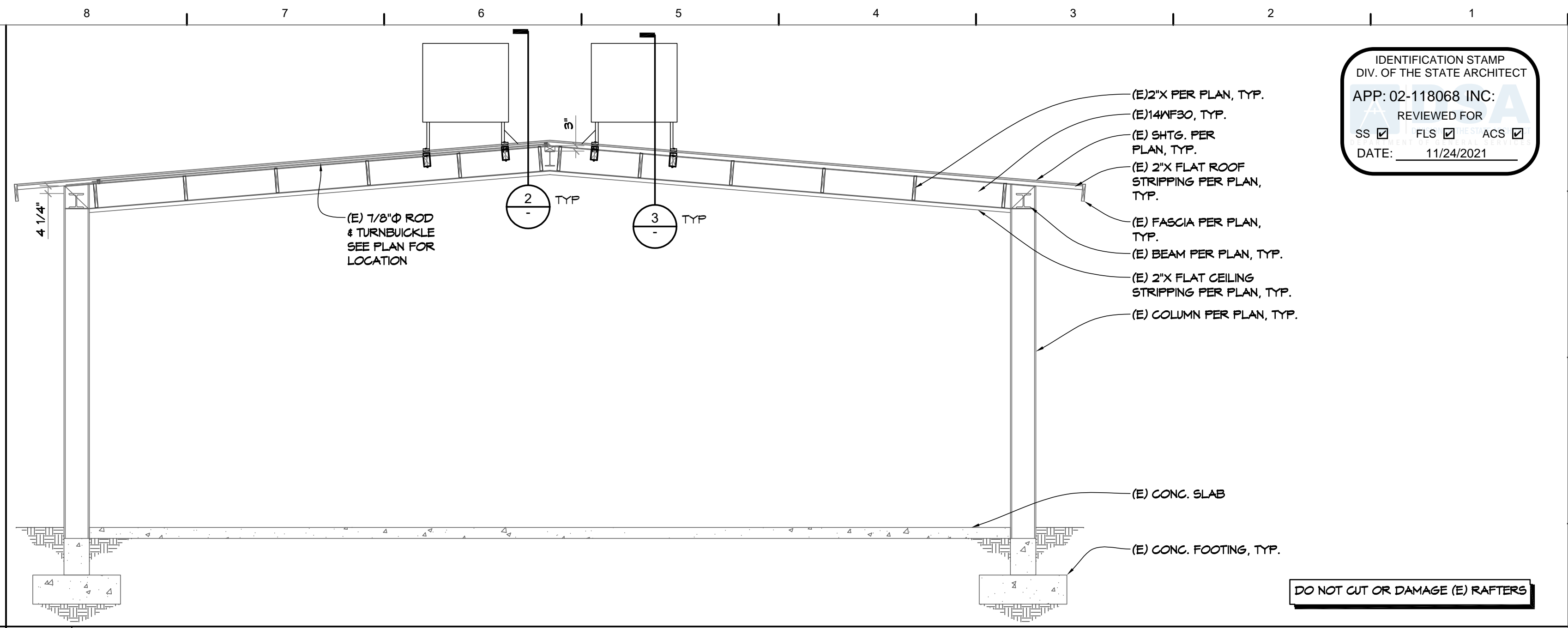
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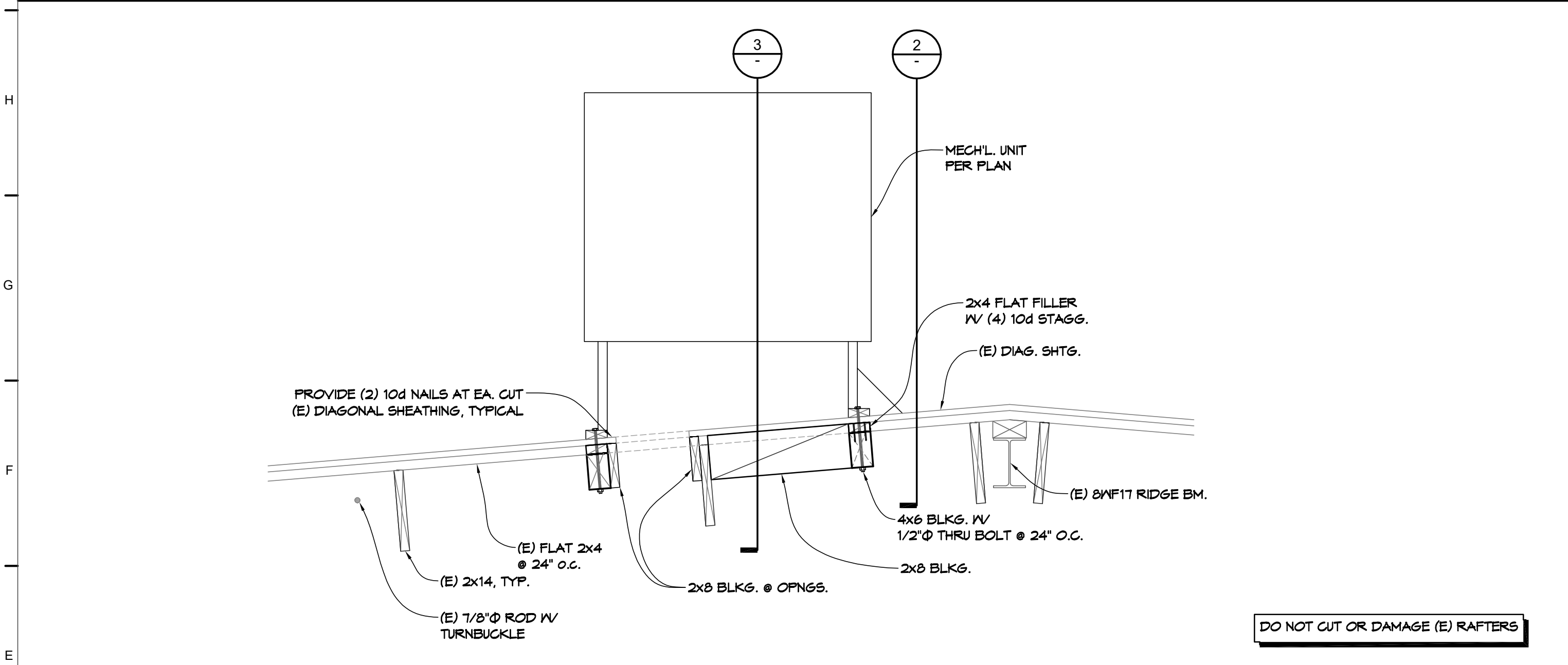
4 DETAIL

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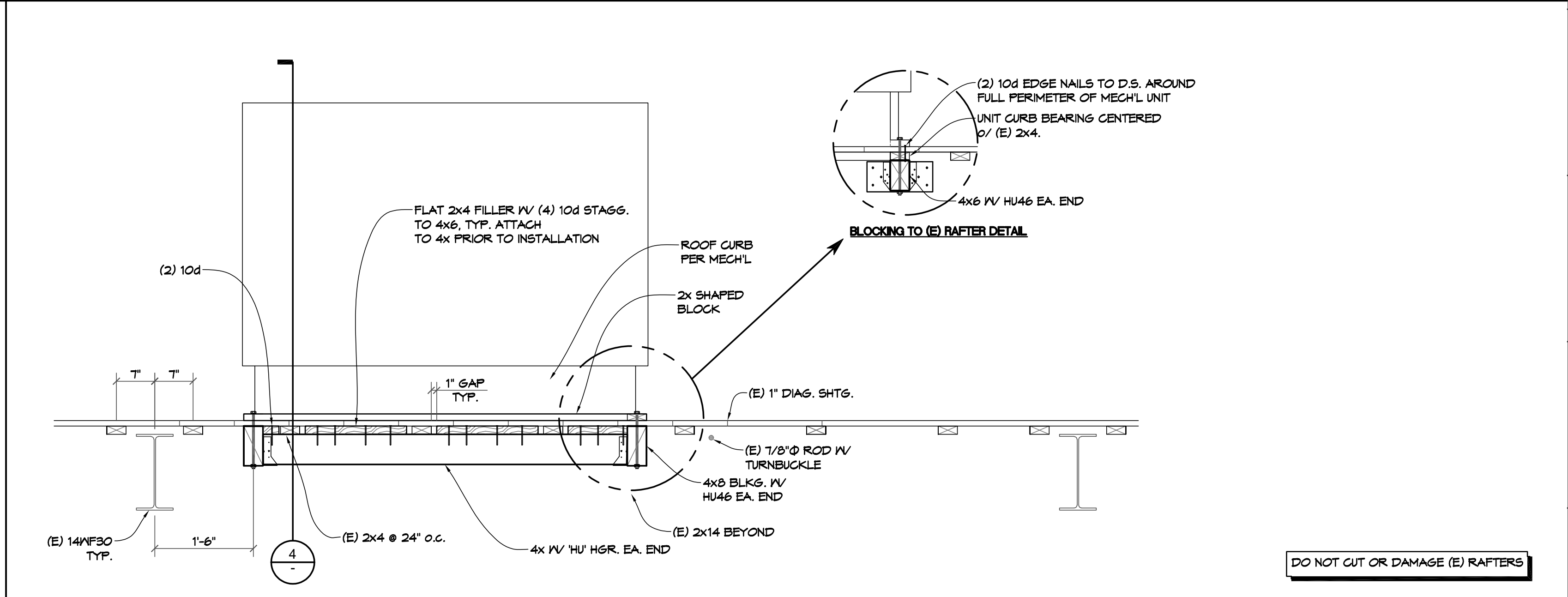
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SCALE: 1/4"=1'-0"



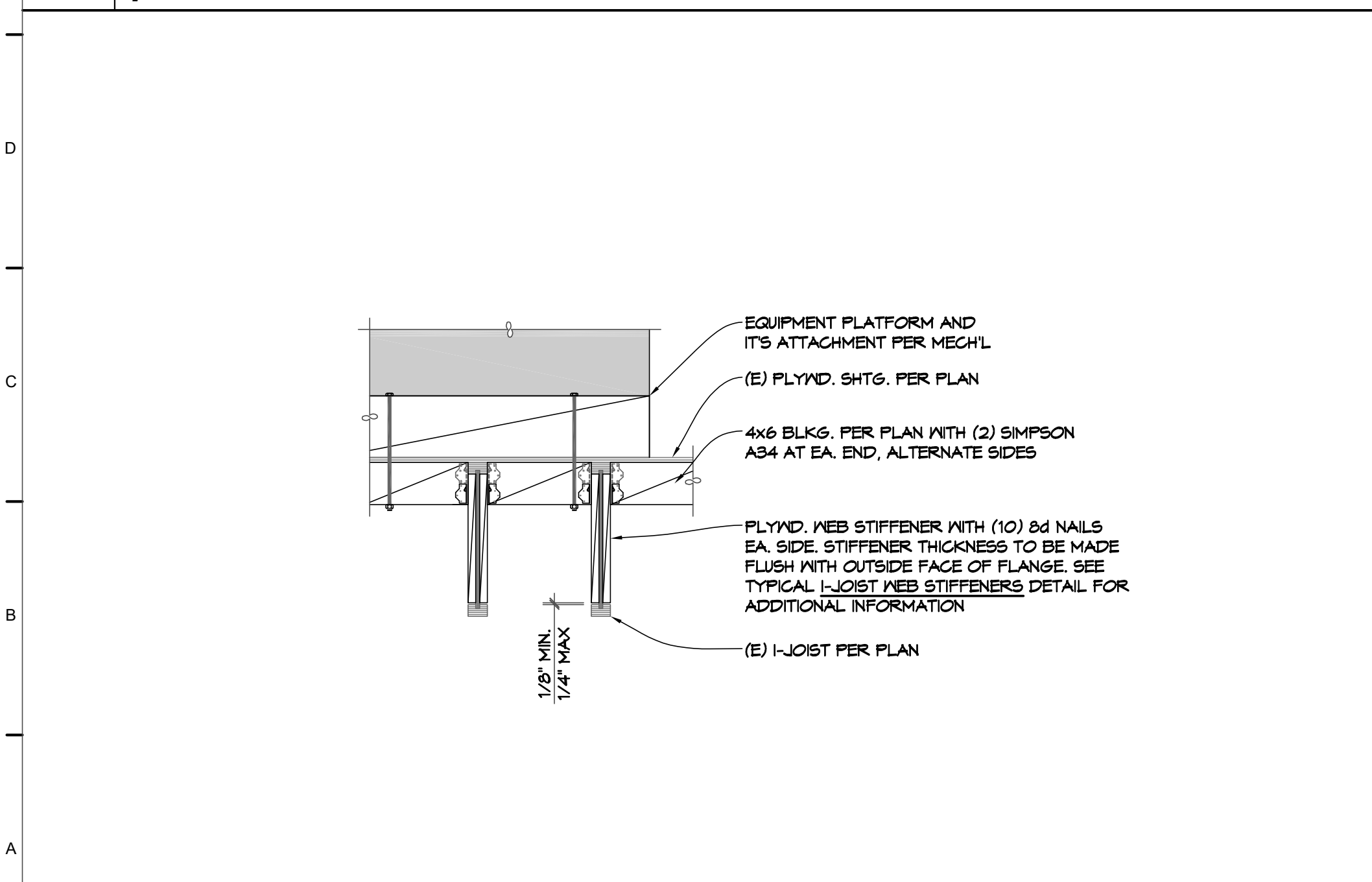
5 DETAIL

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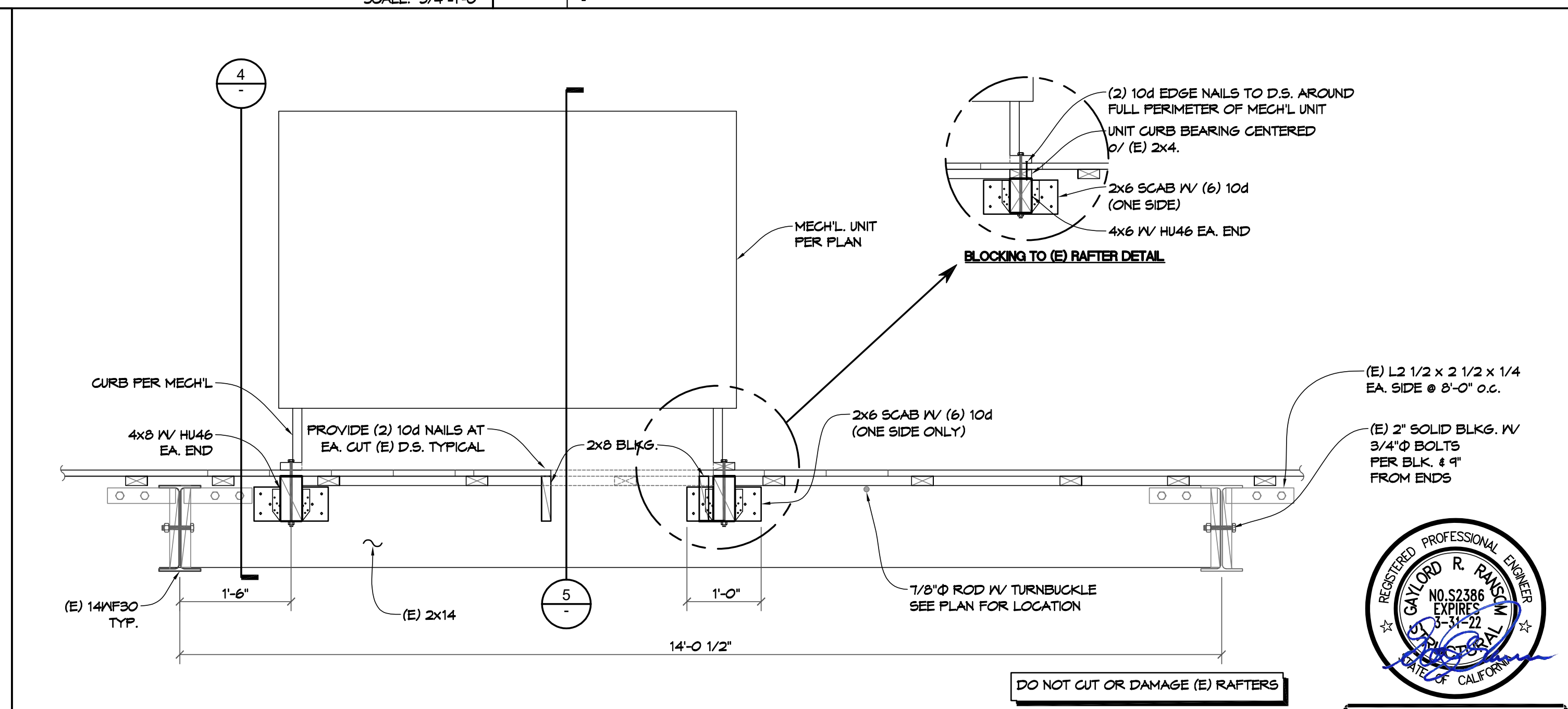
2 DETAIL

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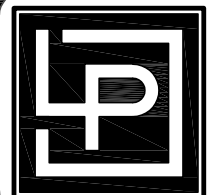
6 DETAIL

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



3 DETAIL

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



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DSA #: 02-118068
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			PROJECT NAME	
			JEFFERSON M. S. - HVAC REPLACEMENT	
			1407 SUNSET AVE.	
			MADERA, CA, 93637	
			REVISIONS	
M.U.S.D.				
No.	DATE	DESCRIPTION		

TITLE 24 NOTES

- THE FOLLOWING SHALL BE REQUIRED WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED IN DRAWINGS AND/OR SPECIFICATIONS:
- EQUIPMENT SHALL MEET EFFICIENCY REQUIREMENTS OF TABLES 110.2-A THROUGH 110.2-K.
 - ALL AIR-COOLED, UNITARY, DX UNITS (PACKAGED, SPLIT-SYSTEM, HEAT PUMPS AND VRF) WITH ECONOMIZERS SHALL BE EQUIPPED WITH FAULT DETECTION AND DIAGNOSTICS SYSTEMS.
 - PIPE INSULATION FOR SPACE CONDITIONING AND SERVICE WATER-HEATING WITH FLUID TEMPERATURES LISTED IN TABLE 120.3-A SHALL HAVE INSULATION LEVELS AS SPECIFIED IN SUBSECTION (A) AND (B).
 - MECHANICAL HEATING AND COOLING EQUIPMENT SHALL BE THE SMALLEST SIZE WITHIN THE AVAILABLE OPTIONS OF THE DESIRED EQUIPMENT LINE, NECESSARY TO MEET THE DESIGN HEATING AND COOLING LOADS OF THE BUILDING, AS CALCULATED ACCORDING TO THE REQUIREMENTS OF SECTION 140.4(B).
 - HVAC MOTORS FOR FANS THAT ARE LESS THAN 1 HP AND 1/12 HP OR GREATER SHALL BE ECM OR HAVE A MINIMUM MOTOR EFFICIENCY OF 70%. MOTORS SHALL ALSO HAVE MEANS TO ADJUST MOTOR SPEED FOR BALANCING OR REMOTE CONTROL.
 - ELECTRIC RESISTANCE HEATING SYSTEMS ARE NOT PROVIDED FOR SPACE HEATING.
 - IN DRIER CLIMATES AND WHEN LARGE OUTDOOR AIR FRACTIONS ARE REQUIRED, EVAPORATIVE PRE-COOLING PACKAGES WERE EVALUATED TO PRE-COOL OUTSIDE AIR AND COOL THE AIR FLOWING OVER THE DX CONDENSING UNIT.
 - ZONE EACH AIR HANDLER TO SERVE ONLY AREAS WITH COMMON LOADS TO ALLOW MORE AGGRESSIVE CONTROL STRATEGIES AND IMPROVE COMFORT. HAVE DIFFERENT AHU'S SERVING CORE VS. PERIMETER AREAS.
 - THE DESIGN ACCOMMODATES PARTIAL OCCUPANCY ENERGY SAVINGS WHEN THE OWNER'S REQUIREMENTS OR NARRATIVE DESCRIBE ANY POSSIBILITY OF PARTIAL OCCUPANCY, BY ZONING AIR HANDLERS BY FLOOR OR BY PART OF A FLOOR, OR BY INCORPORATING CONTROLLED FLOOR DAMPERS, OR VAV AIR TERMINALS GOING TOTALLY SHUT WHEN NOT OCCUPIED, ETC.
 - EACH ZONE IS CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL. CONTROLS SHALL BE CAPABLE OF SETTING TEMPERATURES TO 55°F FOR HEATING AND 85°F FOR COOLING AND PROVIDE A TEMPERATURE DEADBAND OF AT LEAST 5°F IF CONTROLLING BOTH HEATING AND COOLING.
 - EACH SPACE CONDITIONING SYSTEM SHALL BE EQUIPPED WITH CONTROLS TO SHUT THE SYSTEM OFF DURING PERIODS OF NONUSE AND WILL TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN SETBACK AND SETUP TEMPERATURES WHILE KEEPING VENTILATION DAMPERS CLOSED.
 - SYSTEMS SERVING MULTIPURPOSE ROOMS LESS THAN 100 SF AND CLASSROOMS, CONFERENCE, AUDITORIUM OR MEETING CENTER ROOMS GREATER THAN 750 SF SHALL HAVE OCCUPANCY SENSORS THAT INTERFACE WITH HVAC CONTROLS TO AUTOMATICALLY SETUP THE COOLING SETPOINT BY 2°F OR MORE AND SETBACK THE HEATING SETPOINT BY 2°F OR MORE AND AUTOMATICALLY RESET THE MINIMUM REQUIRED VENTILATION RATE. THESE OCCUPANT SENSOR VENTILATION CONTROL DEVICES MUST MEET THE REQUIREMENTS OF SECTION 120.1(C)(5).
 - OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN.
 - HVAC SYSTEMS WITH DDC TO THE ZONE LEVEL SHALL BE PROGRAMMED TO ALLOW CENTRALIZED DEMAND SHED FOR NON-CRITICAL ZONES.
 - ZONE CONTROLS PREVENT REHEATING, RECOOLING AND SIMULTANEOUS PROVISIONS OF HEATING AND COOLING TO THE SAME ZONE.
 - EACH WALL MOUNTED THERMOSTAT SHALL BE LOCATED AWAY FROM POTENTIAL SOURCES THAT WOULD ADVERSELY AFFECT THE READING (CLOSE TO COPIERS, DIRECT SUNLIGHT, BELOW OR ABOVE A SUPPLY AIR DIFFUSER OR CONVECTOR, ETC.). ANY THERMOSTATS MOUNTED ON EXTERIOR WALLS SHALL BE INSTALLED IN SEALED AND INSULATED JUNCTION BOXES.
 - CORNER OFFICE SHALL ALWAYS HAVE THEIR OWN THERMOSTATS, AIR TERMINAL BOXES OR FIN-TUBE RADIATORS.
 - CONTROL SEQUENCES SHALL BE LISTED FOR EQUIPMENT OPERATED BY STAND-ALONE PACKAGED CONTROLS. UNOCCUPIED SEQUENCES SHALL BE INCLUDED.
 - CONTROL SEQUENCES SHALL BE PROVIDED FOR EACH PIECE OF EQUIPMENT LISTED IN THE EQUIPMENT SCHEDULE THAT IS MONITORED OR CONTROLLED BY THE BUILDING AUTOMATION SYSTEM (BAS). UNOCCUPIED SEQUENCES SHALL BE INCLUDED.
 - OUTSIDE AIR TEMPERATURE SENSORS SHALL BE IN A COMMERCIALY DESIGNED SOLAR SHIELD LOCATED ON A NORTH WALL OR SOME OTHER LOCATION OUT OF DIRECT SUNLIGHT AND AWAY FROM BUILDING EXHAUST OR HEAT REJECTION EQUIPMENT.
 - THE OUTDOOR AIR-VENTILATION RATE AND AIR-DISTRIBUTION ASSUMPTIONS MADE IN THE DESIGN OF THE VENTILATING SYSTEM ARE CLEARLY IDENTIFIED ON THE PLANS.
 - EACH SPACE IS DESIGNED TO HAVE NATURAL VENTILATION OR MECHANICAL VENTILATION THAT IS NO LESS THAN THE LARGER OF CONDITIONED FLOOR AREA TIMES THE REQUIREMENTS IN TABLE 120.1-A OR 15 CFM TIMES THE EXPECTED NUMBER OF OCCUPANTS.
 - THE MINIMUM AND MAXIMUM OUTDOOR AIR RATES FOR EACH AIR HANDLER ARE LISTED ON THE EQUIPMENT SCHEDULES.
 - THE OUTDOOR AIR-VENTILATION RATES ARE BASED ON PLANNED OWNER OCCUPANCY AS DEFINED IN OWNER'S DESIGN INTENT AND ARE NOT BASED ON MAXIMUM EGRESS OCCUPANCY RATES.
 - HVAC SYSTEMS THAT HAVE AN ECONOMIZER, SERVE A SPACE WITH A DESIGN OCCUPANT DENSITY GREATER THAN OR EQUAL TO 25 PEOPLE PER 1000 SF, AND ARE EITHER A SINGLE ZONE SYSTEM WITH ANY CONTROLS OR MULTIPLE ZONE SYSTEM WITH DDC CONTROLS TO THE ZONE LEVEL MUST HAVE DEMAND CONTROL VENTILATION CONTROLS. THE FOLLOWING MUST BE MET:
 - CO2 SENSORS INSTALLED IN EACH ROOM SERVED BY SYSTEMS WITH DCV CONTROLS.
 - CO2 SENSORS ARE LOCATED BETWEEN 3 FT AND 6 FT ABOVE THE FLOOR.
 - CO2 CONCENTRATIONS MAINTAINED AT LESS THAN OR EQUAL TO 600 PPM PLUS OUTDOOR PPM.
 - DURING HOURS OF EXPECTED OCCUPANCY, CONTROLS MAINTAIN THE SYSTEM VENTILATION RATE.
 - EACH COOLING FAN SYSTEM THAT HAS A DESIGN MECHANICAL COOLING CAPACITY OVER 54,000 BTU/H SHALL HAVE AN AIR ECONOMIZER OR A WATER ECONOMIZER. AIR ECONOMIZERS MUST COMPLY WITH THE HIGH LIMIT SHUTOFF CONTROLS SHOWN IN TABLE 140.4-B.
 - INTEGRATED ECONOMIZER CONTROLS SHALL BE SET UP SUCH THAT PARTIAL COOLING IS PROVIDED BY THE ECONOMIZER EVEN WHEN ADDITIONAL MECHANICAL COOLING IS REQUIRED.
 - ECONOMIZER DAMPERS SHALL BE DRIVEN BY DIRECT DRIVE ACTUATORS RATHER THAN ROD LINKAGES, WHICH CAN BE A MAJOR CAUSE OF ECONOMIZER MALFUNCTION.
 - BAROMETRIC RELIEF IS USED, IF POSSIBLE. IF NOT, RELIEF FANS (RATHER THAN RETURN FANS) SHALL BE USED IN MOST CASES.
 - OUTDOOR AND RETURN AIR SENSORS SHALL BE PROPERLY SELECTED, PROPERLY LOCATED TO PROVIDE ACCURATE AND REPEATABLE MEASUREMENTS FOR CONTROLLING ECONOMIZER OPERATION. AVERAGING SENSORS COVER THE ENTIRE DUCT OR COIL FACE AREAS.
 - ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS MUST BE INSTALLED, SEALED AND INSULATED AS REQUIRED BY 120.4(A).
 - DUCT SEALING LEAKAGE RATES SHALL BE NO MORE THAN 6% OF AIR FLOW FOR NEW DUCT SYSTEMS AND NO MORE THAN 15% OF AIR FLOW FOR EXISTING DUCT SYSTEMS.
 - DUCTS SHALL UTILIZE LOW STATIC PRESSURE DESIGN. IDENTIFY THE MOST RESTRICTIVE BRANCH FROM THE FAN TO THE LAST AIR TERMINAL UNIT. IDENTIFY POSSIBLE MEANS OF SIGNIFICANTLY REDUCING THE PRESSURE DROP. BRANCH DUCT SYSTEMS SHALL BE DESIGNED FOR EQUAL PRESSURE DROP, WHEN POSSIBLE.
 - DUCT BRANCHES WITH SIGNIFICANTLY DIFFERING STATIC PRESSURE REQUIREMENTS SHALL HAVE VOLUME CONTROL STRATEGICALLY PLACED TO AID IN TAB WORK.
 - FANS SHALL DISCHARGE INTO DUCT SECTIONS THAT REMAIN STRAIGHT FOR AS LONG AS POSSIBLE (IDEALLY 10 DUCT DIAMETERS) TO REDUCE FAN INEFFICIENCIES FROM SYSTEM EFFECTS.
 - DUCT VELOCITIES SHALL GENERALLY BE BELOW 2,000 FPM FOR DUCTS IN CEILING PLENUMS, 1500 FPM FOR EXPOSED DUCTS AND 3500 FPM IN MECHANICAL ROOMS AND NON-NOISE SENSITIVE SHAFTS AND DO NOT REDUCE ANY DUCT SIZES LISTED ON PLANS.
 - DUCT FRICTION RATES SHALL GENERALLY BE LESS THAN 0.25" WC PER 100 LINEAL FEET NEARER THE FAN, 0.15 TO 0.20" IN THE MAIN DUCTS AND 0.08 TO 0.12" WC/100' NEARER THE END OF THE SYSTEM. DESIGNS OUT THESE RATES SHALL BE QUESTIONED. VERY ENERGY EFFICIENT DESIGN CAN LOWER THESE VALUES BY UP TO 40%.
 - CONTRACTOR SHOP DRAWINGS SHALL BE SUFFICIENTLY DETAILED TO ENSURE THAT DISTRIBUTION SYSTEM DESIGN INTENT IS ADEQUATELY CONVEYED TO MATCH PLANS. IF SUFFICIENT DETAIL IS NOT INCLUDED IN DRAWINGS, INSTALLATIONS MAY RESULT IN SIGNIFICANTLY HIGHER PRESSURE DROPS AND HENCE HIGHER ENERGY CONSUMPTION AND OTHER OPERATING ISSUES.
 - ACCEPTANCE REQUIREMENTS ARE CLEARLY IDENTIFIED IN CONSTRUCTION DOCUMENTS.
 - COMMISSIONING MEASURES OR REQUIREMENTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
 - REQUIREMENTS FOR FUNCTIONAL PERFORMANCE TESTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
 - COOLING SYSTEMS IDENTIFIED IN TABLE 140.4-D SHALL HAVE FAN CONTROLS TO VARY THE INDOOR FAN AIRFLOW AS A FUNCTION OF LOAD:
 - DX AND CHILLED WATER COOLING SYSTEMS THAT CONTROL CAPACITY BASED ON OCCUPIED SPACE TEMPERATURE SHALL HAVE A MINIMUM OF 2 STAGES OF CONTROL.
 - SYSTEMS THAT CONTROL SPACE TEMPERATURE BY MODULATING AIRFLOW TO THE SPACE SHALL HAVE PROPORTIONAL FAN CONTROL.
 - SYSTEMS WITH AIR SIDE ECONOMIZER SHALL HAVE A MINIMUM OF 2 SPEEDS OF FAN CONTROL DURING ECONOMIZER OPERATION.
 - FAN CABINET ENCLOSURE AND INTERNAL COMPONENTS SHALL BE SELECTED TO MINIMIZE PRESSURE DROP. E.G. FACE VELOCITY IS LESS THAN 500 FPM, LOW PRESSURE DROP COILS, FILTERS, ETC.
 - FAN WHEEL SHALL BE SELECTED FOR EFFICIENT OPERATION, E.G. LARGER DIAMETER ROTATING AT LOWER SPEED.
 - SYSTEMS THAT SERVE MULTIPLE ZONES SHALL HAVE CONTROLS THAT AUTOMATICALLY RESET SUPPLY AIR TEMPERATURE. ZONES WITH HIGH INTERNAL LOADS WITH NEAR CONSTANT AIRFLOW SHALL BE DESIGNED FOR THE ELEVATED RESET SUPPLY AIR TEMPERATURE. RESET CONTROLS SHALL BE IN RESPONSE TO BUILDING LOADS OR TO OUTDOOR AIR TEMPERATURE AND SHALL BE AT LEAST 25% OF THE DIFFERENCE BETWEEN SUPPLY AIR AND DESIGN ROOM AIR TEMPERATURE. CONTROL SEQUENCES ARE IDENTIFIED IN CONSTRUCTION DOCUMENTS.
 - SAT RESET SHALL BE ESTABLISHED WITH AN AGGRESSIVE RESET SCHEDULE OF 10°F, E.G. 55°F DURING WARM WEATHER AND 65°F DURING COOL WEATHER.

MECHANICAL LEGEND AND NOTES

SCALE: NTO

CAL GREEN NOTES

- TESTING AND ADJUSTING. TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED FOR NEW BUILDINGS LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN ADDITION OR ALTERATION SUBJECT TO SECTION 9303.1.
- SYSTEMS. DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT:
 - HVAC SYSTEMS AND CONTROLS.
 - INDOOR AND OUTDOOR LIGHTING AND CONTROLS.
 - WATER HEATING SYSTEMS.
 - RENEWABLE ENERGY SYSTEMS.
 - LANDSCAPE IRRIGATION SYSTEMS.
 - WATER REUSE SYSTEMS.
- PROCEDURES. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURE'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.
 - HVAC BALANCING. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS, THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS, ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS OR AS APPROVED BY THE ENFORCING AGENCY.
- REPORTING. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
- OPERATION AND MAINTENANCE (O & M) MANUAL. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTEES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN OCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.
 - INSPECTIONS AND REPORTS. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.
- TEMPORARY VENTILATION. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM REPORTING VALUE (MERV) OF 8, BASED ON ASHRAE 52.2-1999 OR AN AVERAGE EFFICIENCY OF 30 PERCENT BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATIONS, AT THE CONCLUSION OF CONSTRUCTION.
- COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.
- FILTERS. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDE AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8. MERV 8 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL.

EXCEPTIONS:

 - AN ASHRAE 10-PERCENT TO 15-PERCENT EFFICIENCY FILTER SHALL BE PERMITTED FOR AN HVAC UNIT MEETING THE 2019 CALIFORNIA ENERGY CODE HAVING 80,000 BTU/H OR LESS CAPACITY PER FAN COIL, IF THE ENERGY USE OF THE AIR DELIVERY SYSTEM IS 0.4 WICFM OR LESS AT DESIGN AIR FLOW.
 - EXISTING MECHANICAL EQUIPMENT.
- OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2.
 - CHLOROFLOUROCARBONS (CFCs). INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCs.
 - HALONS. INSTALL HVAC REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.

MECHANICAL GENERAL NOTES

- MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK ROUTING WITH WORK OF OTHER TRADES AND MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, TRUSSES, ETC.
- CONTRACTOR SHALL COORDINATE ALL GRILLE LOCATIONS AND CEILING TYPES PRIOR TO ORDERING GRILLES.
- THERE ARE NO EXISTING MECHANICAL PLANS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING MECHANICAL CONDITIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY EXISTING CONDITIONS WHICH CONFLICT WITH INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS.
- IF THE PLANS DO NOT ACCURATELY REFLECT THE JOB CONDITIONS, OR THE CONSTRUCTION IS NOT PER THE PLANS, NO INSPECTION WILL OCCUR UNTIL AN ADDENDUM APPROVED BY THE DSA IS OBTAINED.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1-18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL, RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTION 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM GUIDANCE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☐ MD ☒ PP ☐ E ☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP ☐ MD ☒ PP ☐ E ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM-0295-13).

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

MECHANICAL LEGEND

SYMBOL	ITEM	ABBR.
<input checked="" type="checkbox"/>	SUPPLY AIR	SA
<input checked="" type="checkbox"/>	RETURN AIR	RA
<input checked="" type="checkbox"/>	EXHAUST AIR	EXH
<input checked="" type="checkbox"/>	OUTSIDE AIR	OA
	DETAIL DESIGNATION DETAIL NO. WHERE SHOWN	
	EQUIPMENT DESIGNATION UNIT ABBREVIATION NUMBER	
	GRILLE DESIGNATION NECK SIZE & BLOW FIRE DAMPER WHERE REQ'D CFM	
	ACOUSTIC LINED DUCT	
	TURNING VANES	TV
	DUCT FLEXIBLE CONNECTION	
	DUCT TURNED TOWARD	
	DUCT TURNED AWAY	
	ROUND DUCT	
	VOLUME CONTROL DAMPER	VD
	FIRE DAMPER W/ ACCESS	FD
	OPPOSED BLADE DAMPER	OBD
	BACKDRAFT DAMPER	BDD
	THERMOSTAT AT 48" AFF TO TOP OF BOX	
	SWITCH AT 48" TO TOP OF BOX	
(E)	EXISTING	EXIST.
(N)	NEW	NEW
	OUTSIDE AIR	OSA
	PIPE RISER	
	PIPE DROP	
	SMOKE DETECTOR	
	FIRE SMOKE DAMPER	FSD
	REMOTE SENSOR	
	CARBON DIOXIDE SENSOR	CO2
	BOTTOM OF DUCT	BOD
	ABOVE FINISHED FLOOR	AFF
	FIRE WALL PENETRATION	



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DSA #: 02-118068

FILE #: 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

No.	DATE	DESCRIPTION

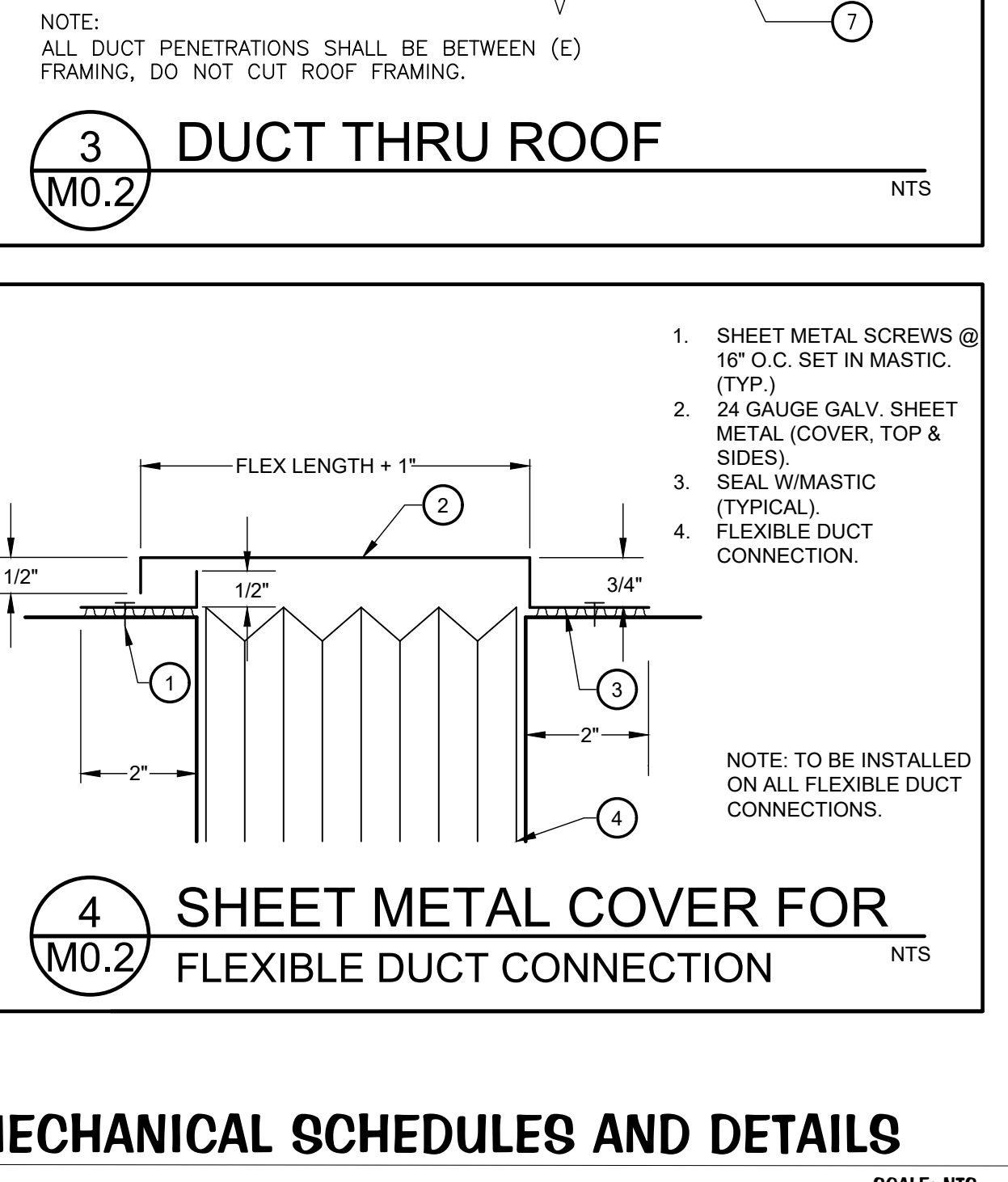
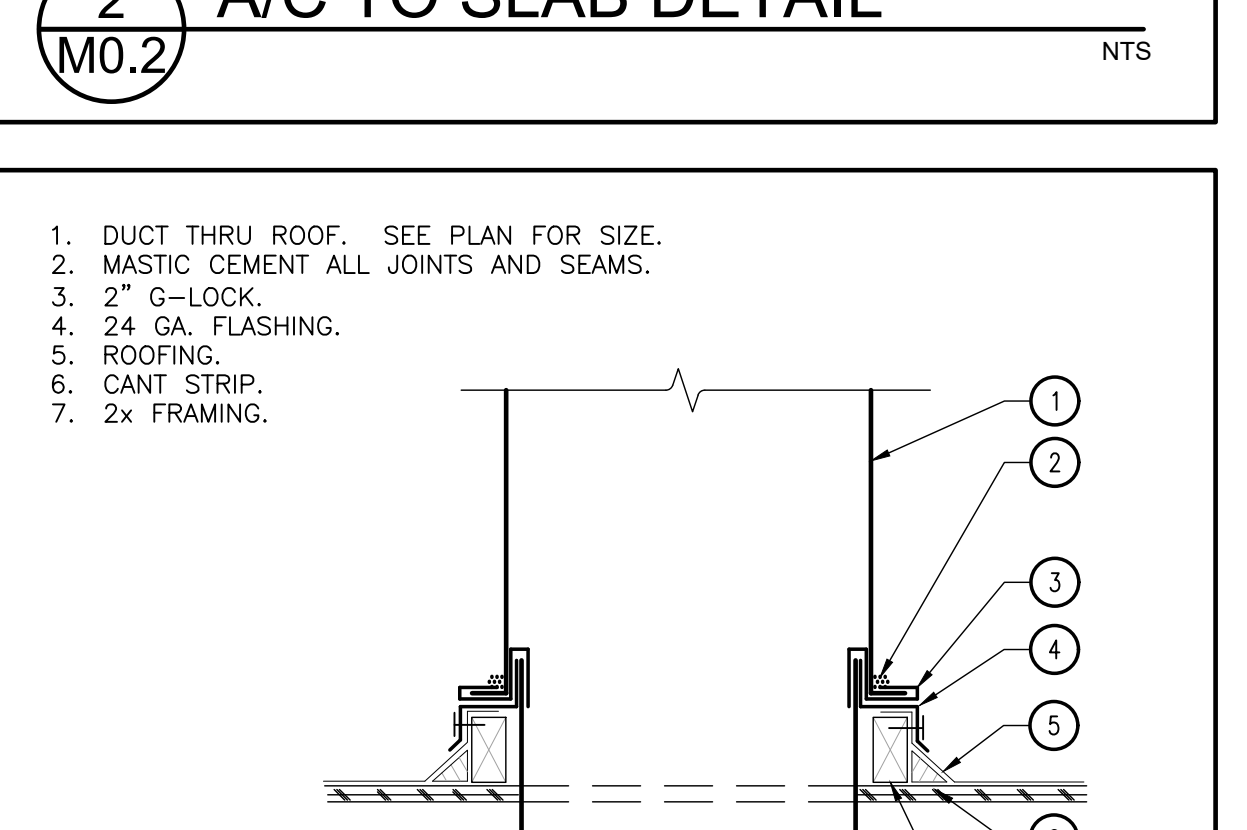
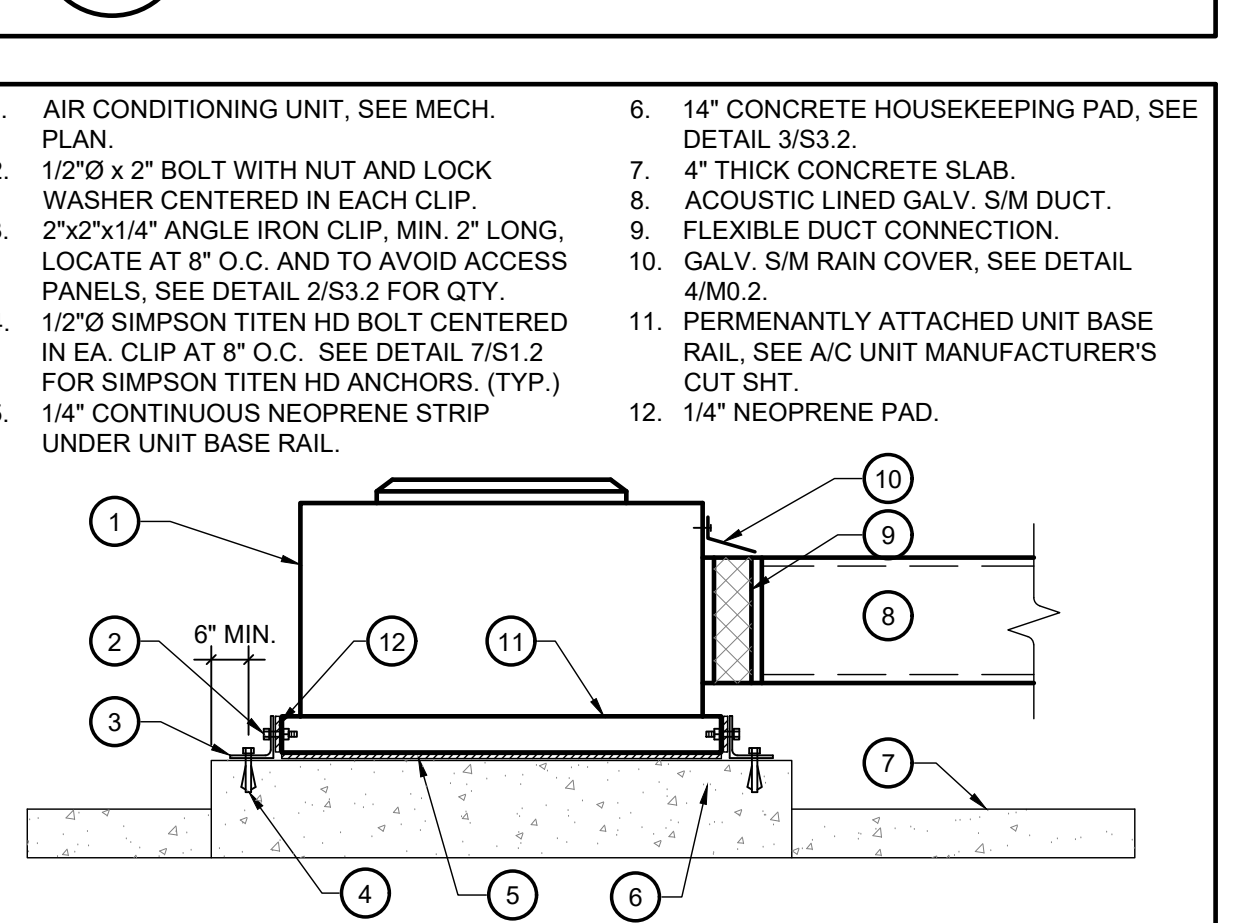
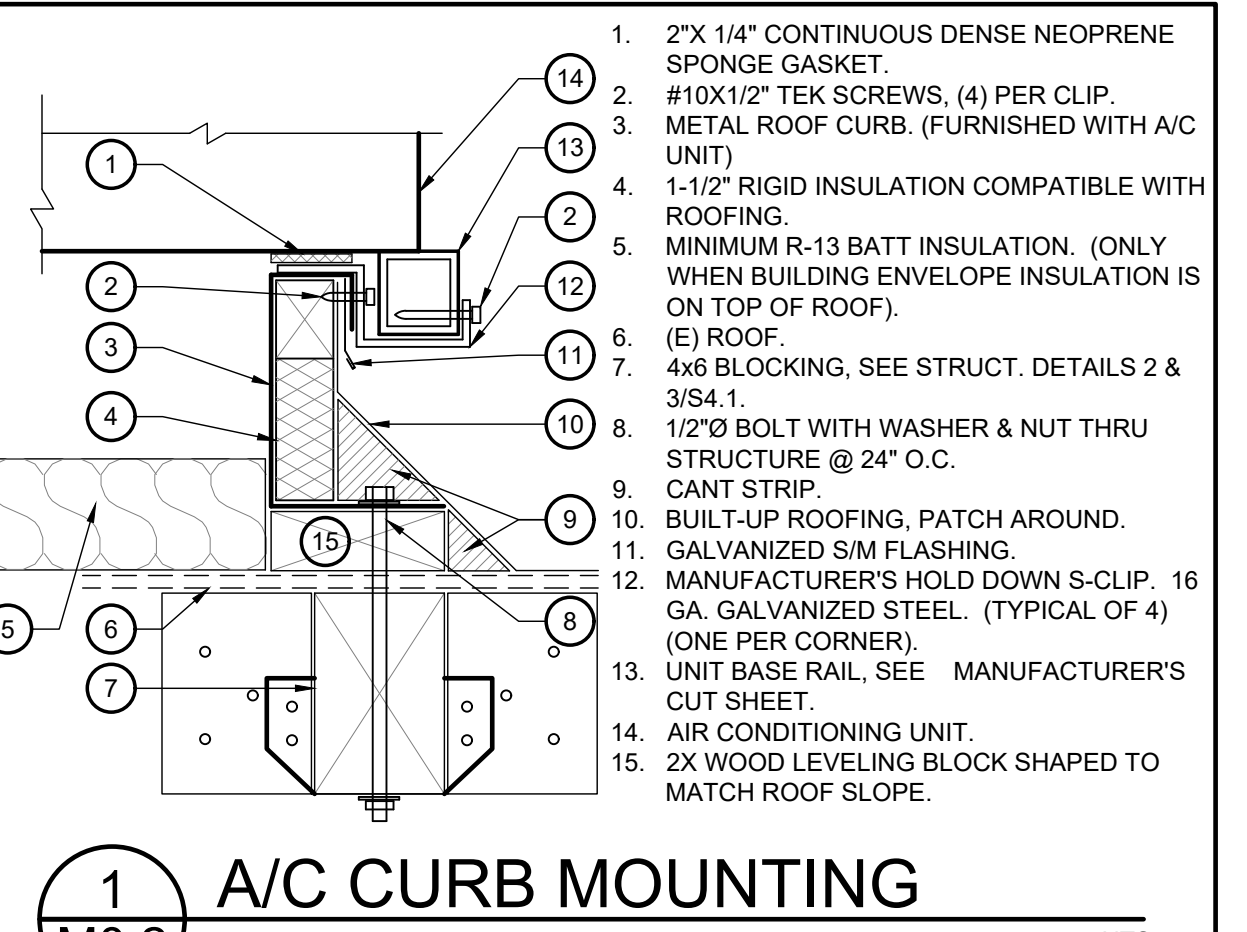
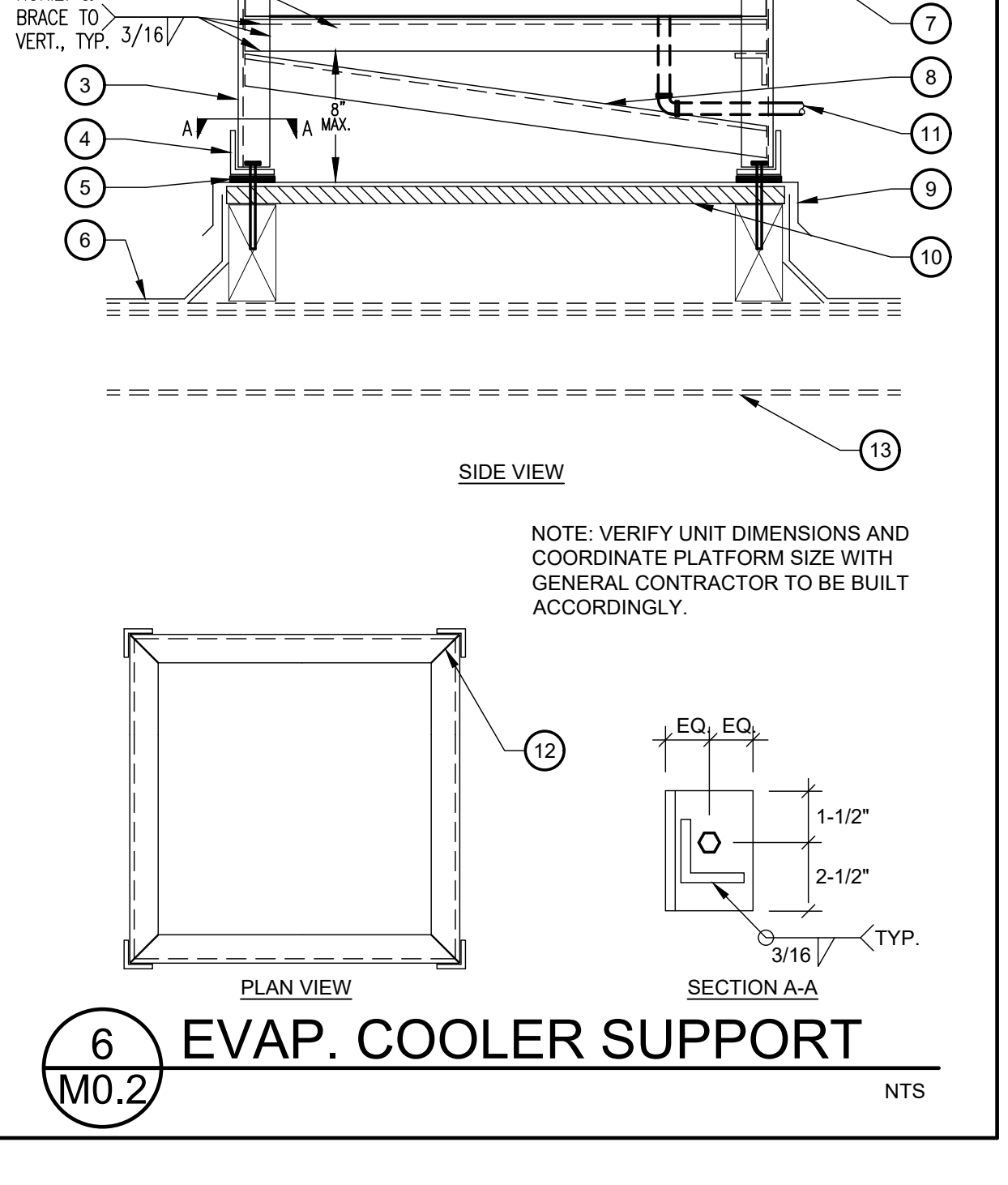
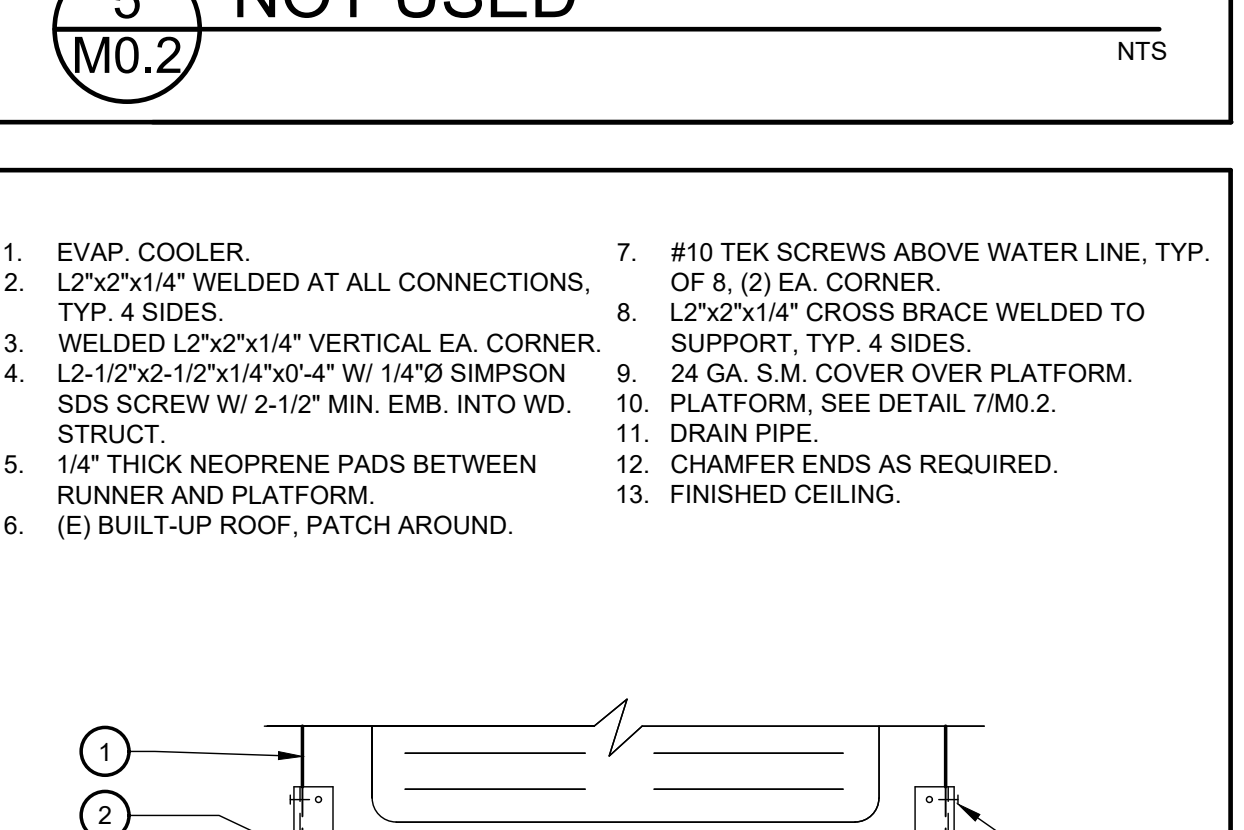
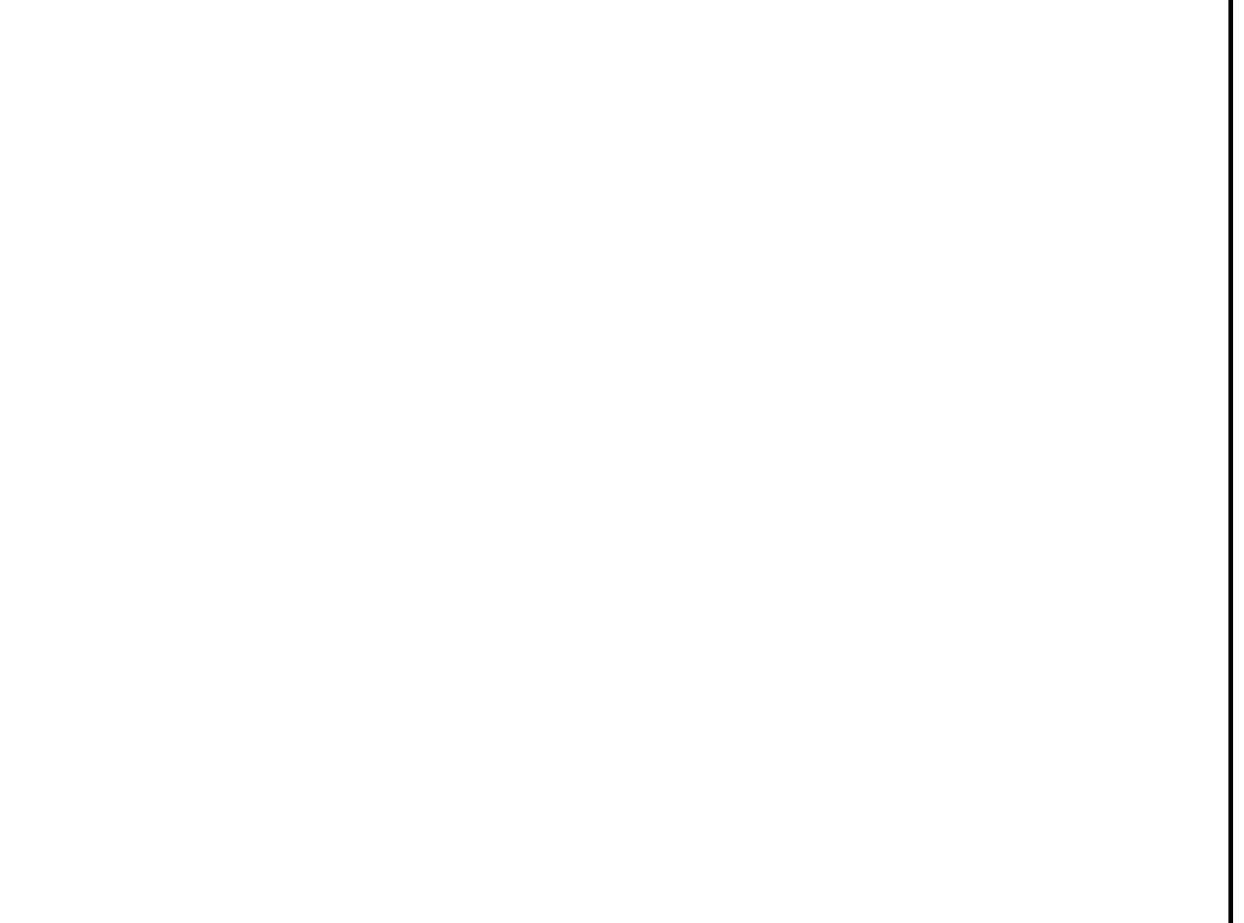
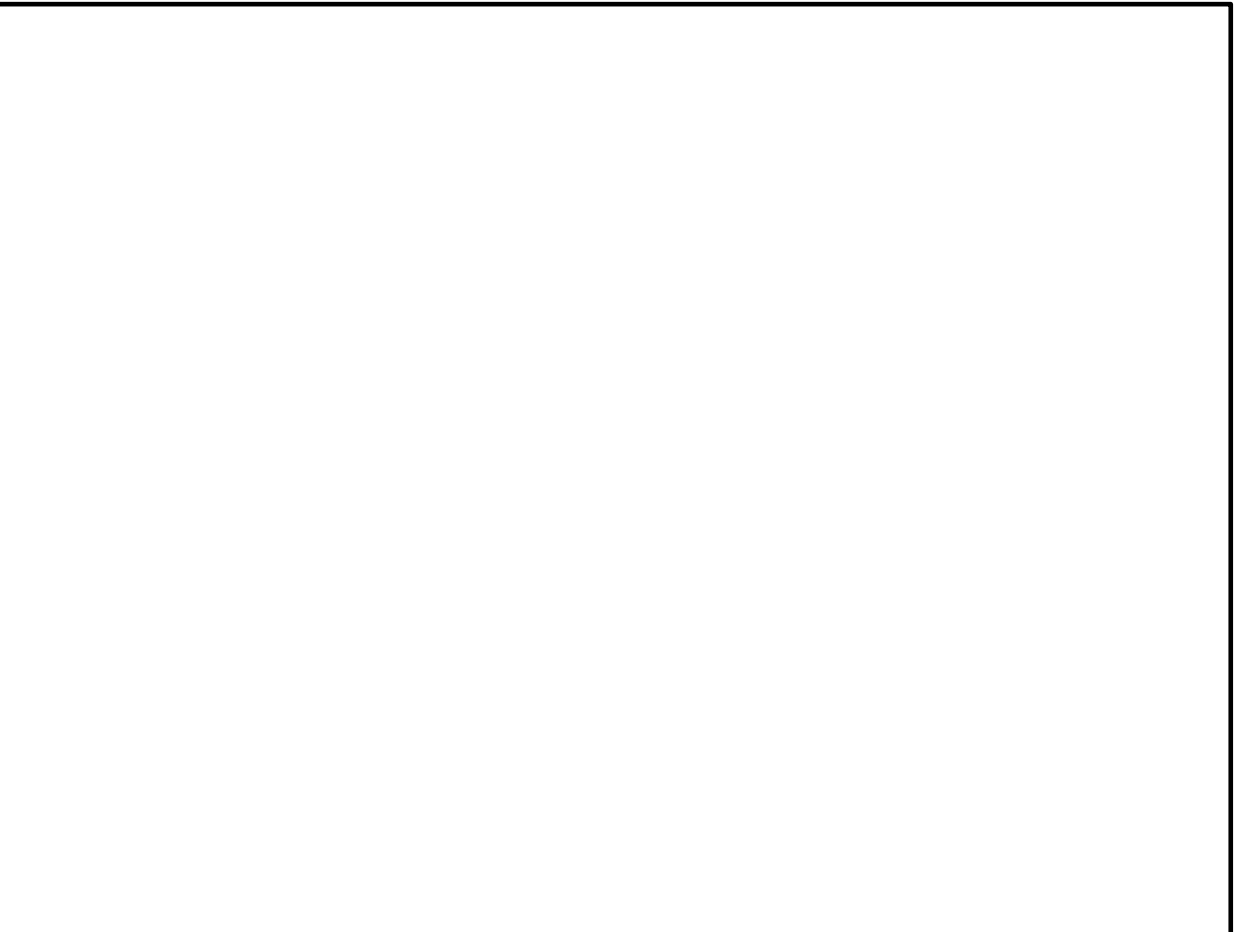
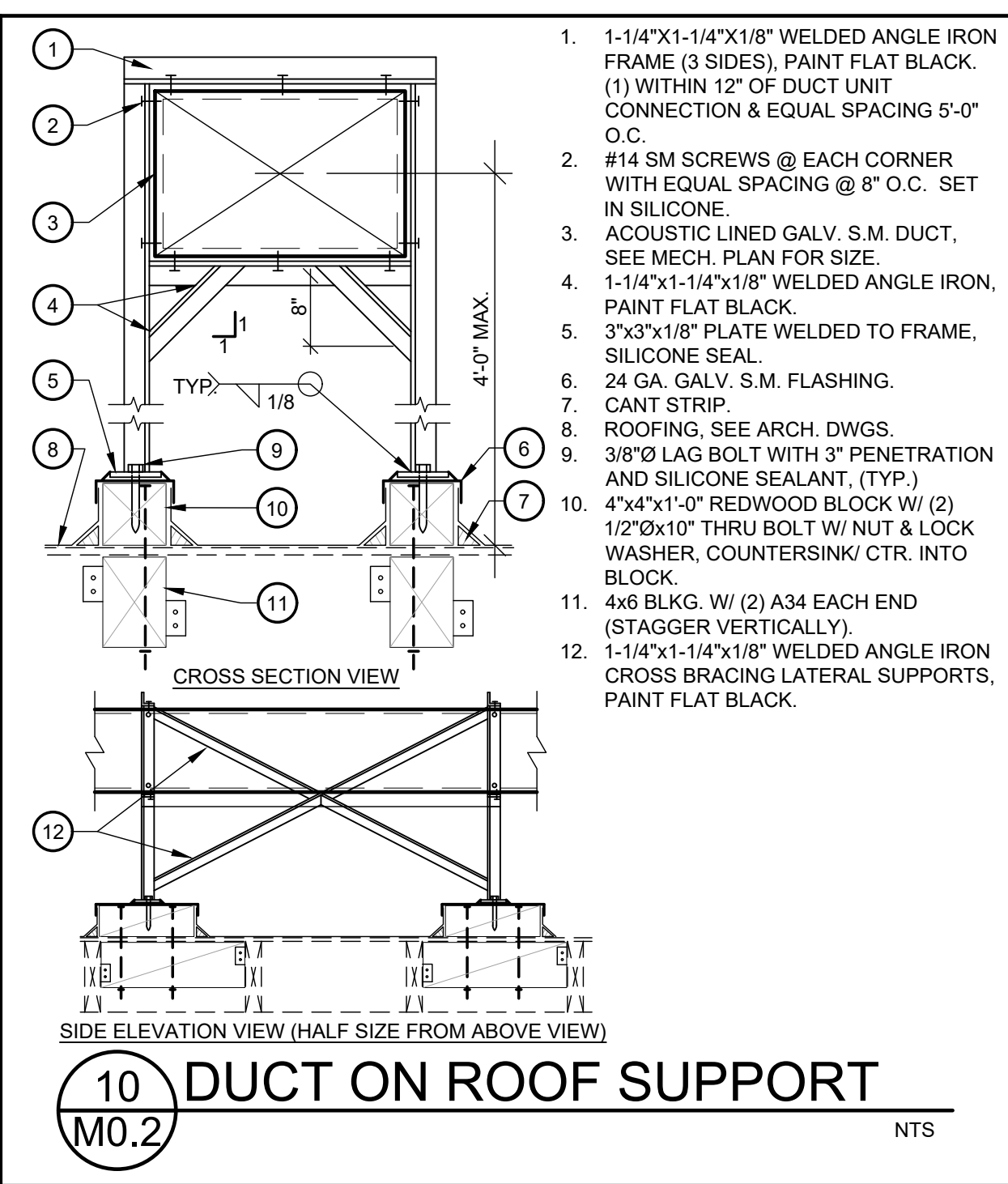
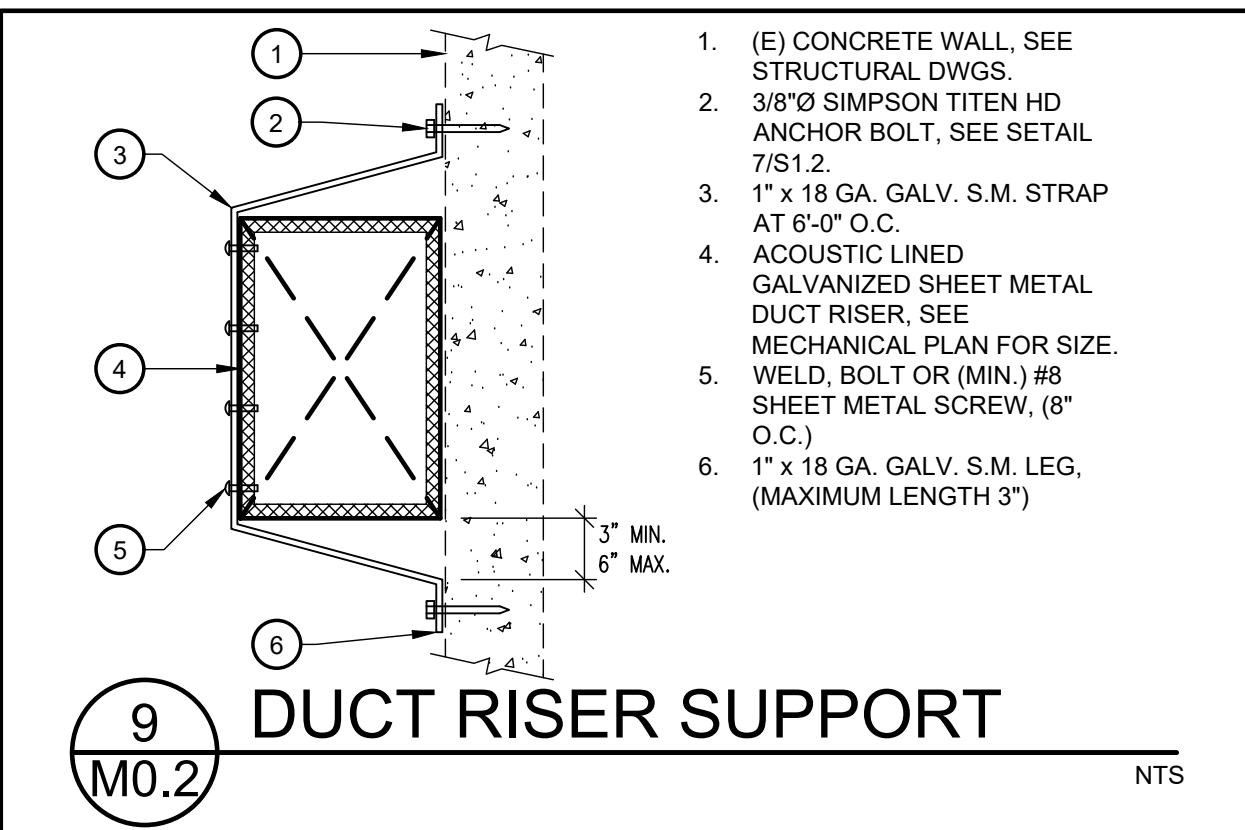
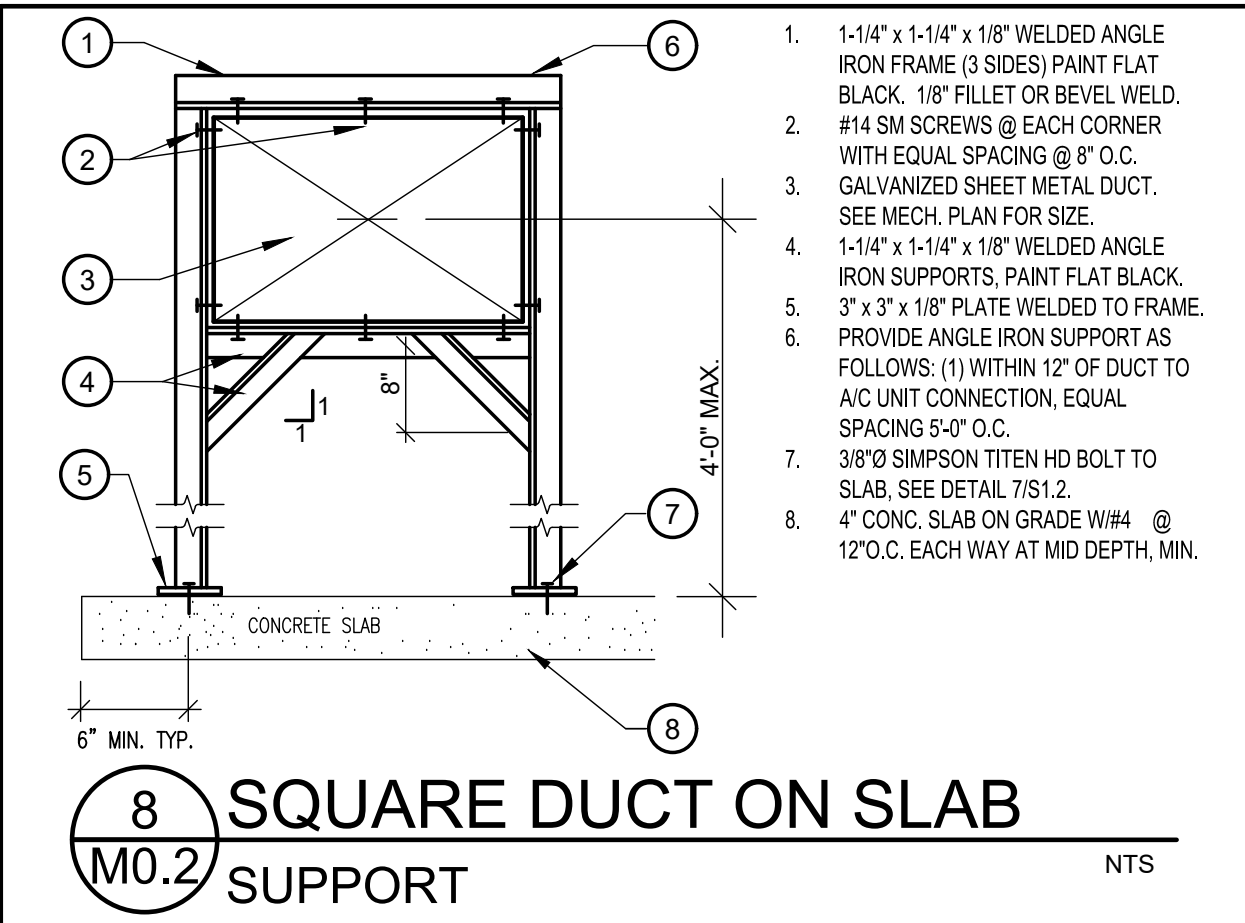
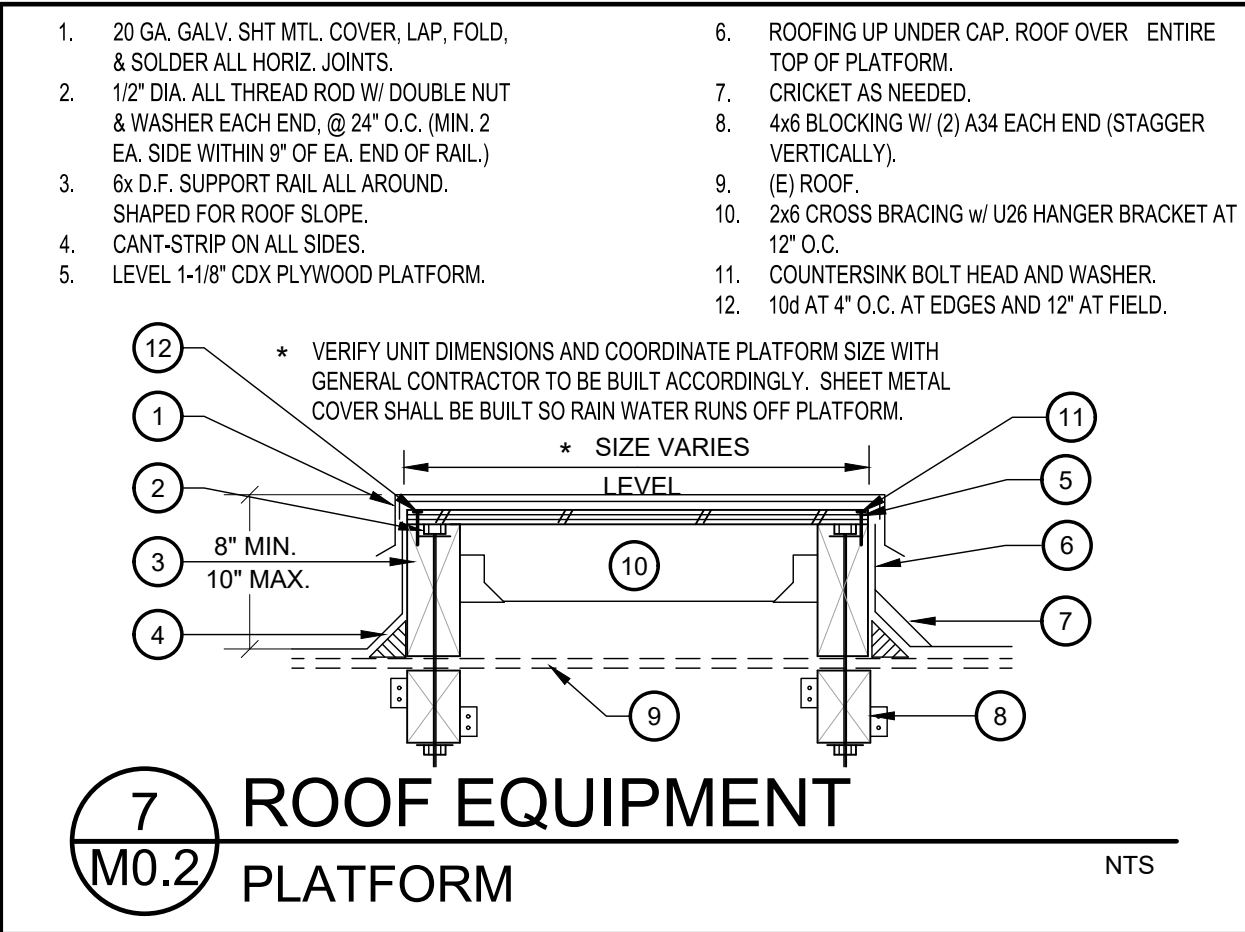
MECHANICAL LEGEND AND NOTES

PROJECT ENGINEER	PROJECT NUMBER	SHEET NUMBER
GAREN LENCIONI	17-1060	
DRAWN BY	SCALE	
Dong Ngo	AS NOTED	
CHECKED BY	DATE	
K.K.	5/18/2021	

MO.1

EVAP. COOLER SCHEDULE		
NUMBER		EC-2.1
TYPE	SIDE DRAFT	
MOUNTING	ROOF	
VOLTS/PHASE	120/1	
HORSEPOWER	1	
UNIT AMPS	15.1	
MOTOR SPEEDS	1	
B L O W E R	RATED CFM 5400 E.S.P. (IN. WC.) 0.20 DRIVE BELT RPM 375	
P U M P	VOLTS/PHASE 120/1 AMPS/WATTS 0.8/44 BLEED-OFF (GPH) - PUMP MODEL NO. - HORSEPOWER -	
SERVICE CONTROL	GYMNASIUM SWITCH	
ACCESSORIES	SEE NOTES	
OPER. WT. (LBS.)	650	
MANUFACTURER MODEL	ARCTIC CIRCLE ED830	
NOTES: 1. PROVIDE FACTORY AUTOMATIC FILL KIT. 2. CONTROL BY FAN ON/PUMP & FAN ON/OFF SWITCH. 3. PROVIDE ALL PURPOSE WATER FILTER #AP10PCL. TO BE INSTALLED BY PLUMBING CONTRACTOR ON CW CONNECTION. 4. INTERLOCK FAN WITH (E) EF-2 & 3 TO COME ON WHEN FAN IS ON.		

AIR DISTRIBUTION SCHEDULE		
SYMBOL	TYPE	DESCRIPTION
(A)	SIDEWALL SUPPLY	DOUBLE DEFLECTION HORIZONTAL FRONT GRILLE (5" DOWN) WITH 1/2" BLADE SPACING AND FRAME FOR WALL MOUNTING. TITUS MODEL 1700.
(B)	CEILING RETURN	PERFORATED FACE GRILLE WITH FRAME FOR T-BAR CEILING FLUSH FACE MOUNTING. TITUS MODEL PAR-3.
(C)	SIDEWALL RETURN	SINGLE DEFLECTION FIXED HORIZONTAL 14 GA. BLADE GRILLE WITH 1/2" SPACING AND 16 GA. FRAME FOR SURFACE MOUNTING AND SUPPORT BARS AT 6" O.C. TITUS MODEL 33RL
(D)	SIDEWALL RELIEF	SINGLE DEFLECTION FIXED HORIZONTAL 14 GA. BLADE GRILLE WITH 1/2" SPACING AND 16 GA. FRAME FOR SURFACE MOUNTING AND SUPPORT BARS AT 6" O.C. PROVIDE BACKDRAFT DAMPER BEHIND. TITUS MODEL 33RL
(E)	CEILING RELIEF	EGGCRATE GRILLE WITH 1/2"x1/2"x1/2" GRID, FRAME FOR SURFACE MOUNTING. TITUS MODEL 50F-1.
(F)	RELIEF HOOD	16" HIGH LOUVERED PENTHOUSE ROOFTOP HOOD WITH BAROMETRIC RELIEF DAMPERS AND REMOVABLE COVER LINED WITH INSULATION. ALUMINUM CONSTRUCTION WITH BIRDSCREEN PROVIDED. GREENHECK MODEL WRH.
(G)	CEILING SUPPLY	16" HIGH LOUVERED PENTHOUSE ROOFTOP HOOD WITH BAROMETRIC RELIEF DAMPERS AND REMOVABLE COVER LINED WITH INSULATION. ALUMINUM CONSTRUCTION WITH BIRDSCREEN PROVIDED. GREENHECK MODEL WRH.
NOTES: 1. EQUIVALENT MODELS OF ANEMOSTAT, PRICE, KRUEGER, ENVIRONMENTAL AIR PRODUCTS OR J & J ARE ACCEPTABLE. REFER TO THE MECHANICAL PLANS FOR NECK SIZE, CFM, AIR DIFFUSION PATTERN AND FIRE/ SMOKE DAMPER, IF REQUIRED. 2. INTERIOR OF ALL GRILLES SHALL BE PAINTED FLAT BLACK.		



ROOFTOP UNIT SCHEDULE			
NUMBER	AC-1.1 & 1.2	AC-1.3 & 1.4	AC-2.1
DISCHARGE SA & RA	VERTICAL	VERTICAL	HORIZONTAL
VOLTS/PHASE	460/3	460/3	460/3
RLAMCA	10.0/11.0	12.0/13.0	78.4/84.0
MAX. OCP.	15	15	100
IEER/IEER/SEER	-/12.6/16.0	-/12.3/16.0	11.9/9.8/-
AFUE %	81.0	81.0	81.0
B L H P	1.0	1.0	15.0
L DESIGN BHP	0.65	0.84	12.89
O SUPPLY AIR CFM	1600	2000	14000
W E.S.P. (IN. W.C.)	0.6	0.6	1.0
E MIN. O.S.A. CFM	150/CO2	200/CO2	1060/CO2
R DRIVE	BELT	BELT	BELT
COOLING TYPE	DX	DX	DX
C TOTAL CAP. (MBH)	44.4	56.5	394.9
O SENS. CAP. (MBH)	33.2	43.9	357.7
E.A. DB (°F)	80.8	80.8	82.0
L E.A. WB (°F)	67.1	67.1	67.1
AMB. TEMP. (°F)	105	105	105
HEATING TYPE	GAS	GAS	GAS
H HEAT LEVEL	67.0	67.0	400.0
E INPUT (MBH)	53.0	53.0	324.0
A OUTPUT (MBH)	53.0	53.0	324.0
T FUEL	NAT. GAS	NAT. GAS	NATURAL GAS
E EXH. ESP (IN. WC)	-	-	-
X VOLTS/PHASE	-	-	-
H HP/BHP	-	-	-
FILTER SIZE RA (IN.)	(2) 16x25x2	(4) 16x16x2	(8) 16x25x2 (4) 20x25x2 (10) 20x24x2
FILTER TYPE	SEE SPEC.	SEE SPEC.	SEE SPEC.
SERVICE	SEE PLAN	SEE PLAN	LECTURE
ACCESSORIES	SEE NOTES	SEE NOTES	SEE NOTES
OPER. WT. (LBS.)	800	850	6000
MANUFACTURER	CARRIER	CARRIER	CARRIER
MODEL	48GCDM05A2A6	48GCDM06A2A6	48A4T03S-PQ621KK
NOTES: 1. PROVIDE T-24 COMPLIANT VENSTAR T8900 WIFI PROGRAMMABLE THERMOSTAT WITH OCCUPANT CONTROLLED SMART AND DEMAND SHED CONTROLS. 2. PROVIDE THERMOSTAT AND CO2 SENSOR WITH LOCKING COVER. 3. PROVIDE 100% MODULATING ECONOMIZER WITH DIFFERENTIAL DRY BULB TEMPERATURE SENSOR AND BAROMETRIC RELIEF. PROVIDE AUTOMATIC FAULT DETECTION AND DIAGNOSTICS. 4. PROVIDE WALL MOUNTED CO2 SENSOR TO CONTROL OUTSIDE AIR REQUIRED, CFM LISTED IS MINIMUM OUTSIDE AIR SETTING. 5. PROVIDE OVERALL FIRE ALARM/ SMOKE DETECTION SYSTEM TO SHUT-OFF THE UNITS POWER UPON DETECTION OF SMOKE. DETECTOR PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. INSTALL IN STRICT ACCORDANCE WITH THE 2019 CMC, SECTION 608.1. A SMOKE DETECTOR TEST WILL BE REQUIRED. 6. PROVIDE DUCT FLEX CONNECTIONS AT DUCT CONNECTIONS WITH TRANSITIONS AS REQUIRED. 7. BYPASS UNITS ANTI-RECYCLE TIMER WHEN ANTI-RECYCLE FUNCTION IS INCLUDED IN THE THERMOSTAT. 8. PROVIDE ANTI-RECYCLE TIMER, CRANKCASE HEATER, LOW AMBIENT KIT AND HIGH CAPACITY FILTER RACK. 9. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH. 10. PROVIDE & INSTALL FACTORY CONDENSER COIL GUARDS. 11. PROVIDE FACTORY MICROMETL 14" HIGH CURB FOR AC-1.1 THRU 1.4. 12. PROVIDE FLUE EXTENSION TO 3" ABOVE THE TOP OF UNIT. TERMINATE WITH FACTORY DEFLECTOR. 13. AC-2.1 COMES WITH 800 MBH INPUT 5-STAGE HEATER. CONTRACTOR WILL NEED TO FIELD LOCK OUT THE (2) HIGH STAGES FOR A MAXIMUM INPUT OF 400 MBH AND PROVIDE PLASTIC LAMINATE LABEL STATING, "HIGH HEAT LOCKED OUT FOR 400 MBH INPUT."			

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DSA #: 02-118068
FILE #: 20-30

PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT
1407 SUNSET AVE.
MADERA, CA 93637

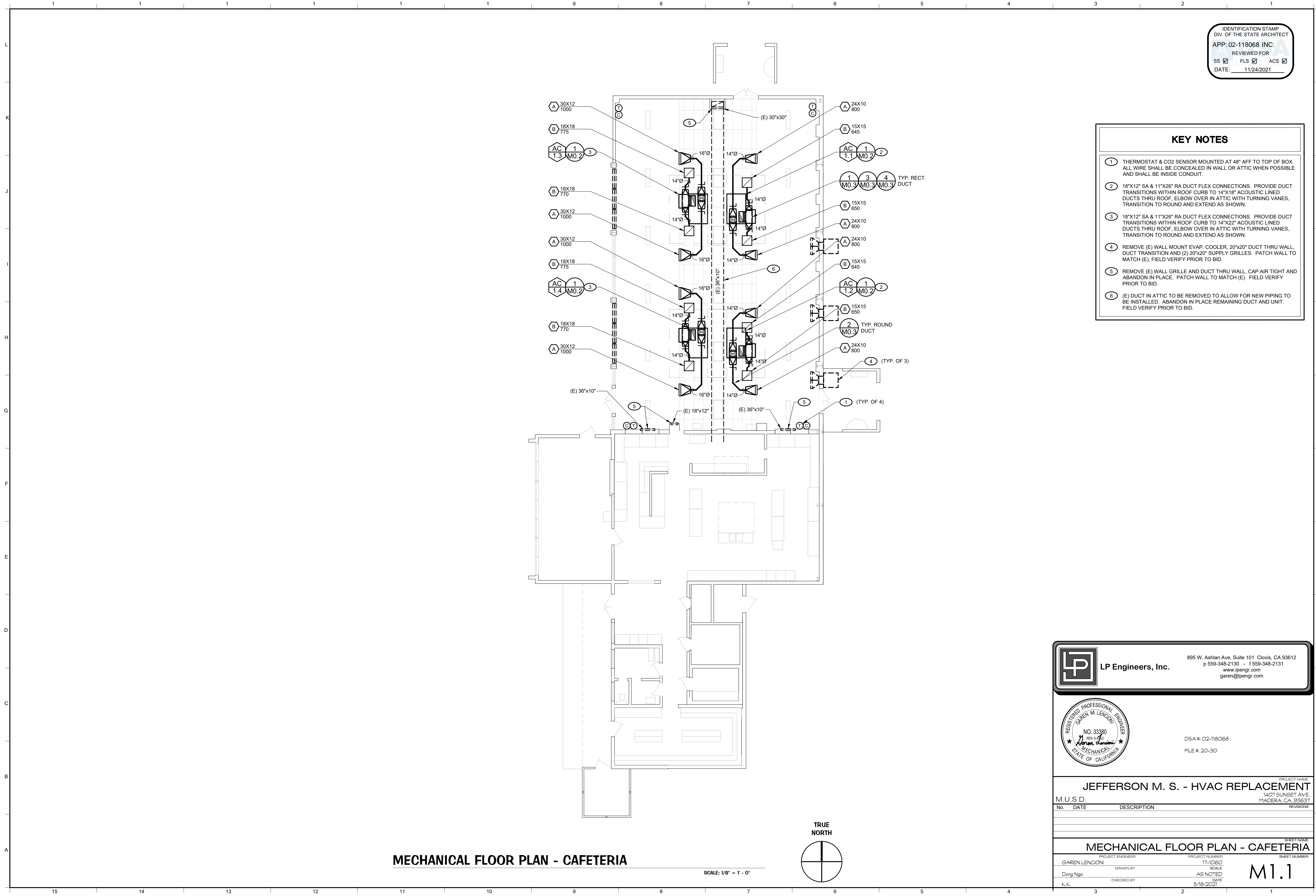
M.U.S.D. DESCRIPTION
No. DATE

SHEET NAME
MECHANICAL SCHEDULES AND DETAILS
SHEET NUMBER

PROJECT ENGINEER
GAREN LENCONI
DRAWN BY
Dong Ngo
CHECKED BY
K.K.

PROJECT NUMBER
17-1060
SCALE
AS NOTED
DATE
5/18/2021


M0.2



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

KEY NOTES

- 1 THERMOSTAT & CO2 SENSOR MOUNTED AT 48" AFF TO TOP OF BOX. ALL WIRE SHALL BE CONCEALED IN WALL OR ATTIC WHEN POSSIBLE AND SHALL BE INSIDE CONDUIT.
- 2 18"x12" SA & 11"x26" RA DUCT FLEX CONNECTIONS. PROVIDE DUCT TRANSITIONS WITHIN ROOF CURB TO 14"x18" ACOUSTIC LINED DUCTS THRU ROOF. ELBOW OVER IN ATTIC WITH TURNING VANES. TRANSITION TO ROUND AND EXTEND AS SHOWN.
- 3 18"x12" SA & 11"x26" RA DUCT FLEX CONNECTIONS. PROVIDE DUCT TRANSITIONS WITHIN ROOF CURB TO 14"x22" ACOUSTIC LINED DUCTS THRU ROOF. ELBOW OVER IN ATTIC WITH TURNING VANES. TRANSITION TO ROUND AND EXTEND AS SHOWN.
- 4 REMOVE (E) WALL MOUNT EVAP. COOLER; 20"x20" DUCT THRU WALL, DUCT TRANSITION AND (2) 20"x20" SUPPLY GRILLES. PATCH WALL TO MATCH (E). FIELD VERIFY PRIOR TO BID.
- 5 REMOVE (E) WALL GRILLE AND DUCT THRU WALL, CAP AIR TIGHT AND ABANDON IN PLACE. PATCH WALL TO MATCH (E). FIELD VERIFY PRIOR TO BID.
- 6 (E) DUCT IN ATTIC TO BE REMOVED TO ALLOW FOR NEW PIPING TO BE INSTALLED. ABANDON IN PLACE REMAINING DUCT AND UNIT. FIELD VERIFY PRIOR TO BID.



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DSA #: 02-118068
FILE #: 20-30

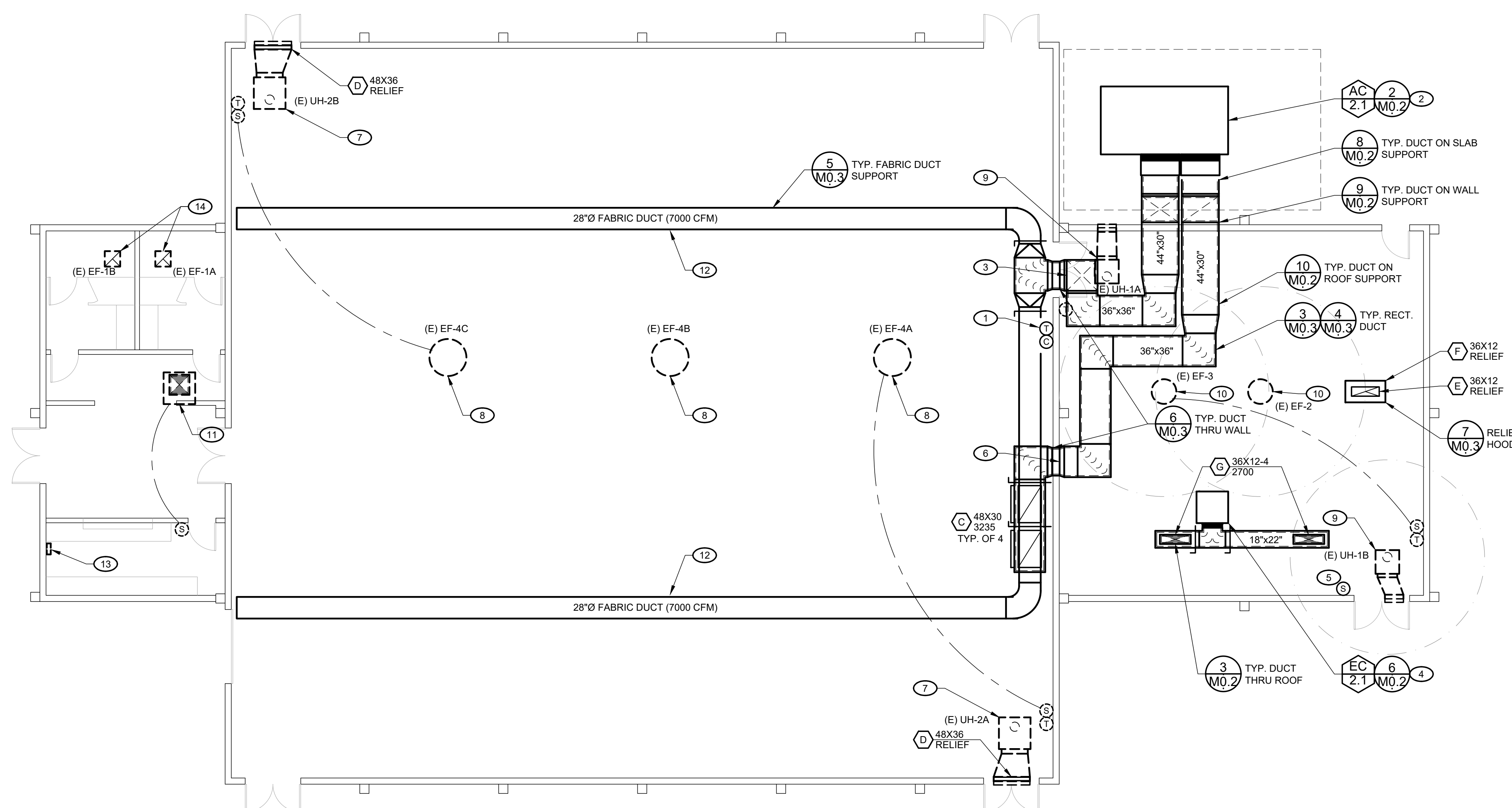
PROJECT NAME		JEFFERSON M. S. - HVAC REPLACEMENT	
M.U.S.D.		1407 SUNSET AVE. MADERA, CA 93637	
No.	DATE	DESCRIPTION	REVISIONS
PROJECT ENGINEER		PROJECT NUMBER	
GAREN LENCIONI		17-1060	
DRAWN BY		SCALE	
Dong Ngo		AS NOTED	
CHECKED BY		DATE	
K.K.		5/18/2021	

MECHANICAL FLOOR PLAN - CAFETERIA

M1.1

KEY NOTES

- (1) THERMOSTAT & CO2 SENSOR MOUNTED AT 48" AFF TO TOP OF BOX. ALL WIRE SHALL BE IN CONDUIT EXPOSED ON CONC. WALL. ROUTE STRAIGHT UP TO CEILING, THEN ROUTE ALONG BOTTOM OR SIDE OF SA DUCT THRU WALL AND EXTEND WITH DUCT TO UNIT. PAINT ALL CONDUIT TO MATCH FINISHES.
- (2) (2) 48"x13" SA (BELOW) & (2) 48"x13" RA (ABOVE) DUCT FLEX CONNECTIONS. PROVIDE DUCT TRANSITIONS AND OFFSETS TO 44"x30" ACOUSTIC LINED DUCTS. RISE UP EXPOSED ON WALL TO ROOF WITH TURNING VANES IN ELBOWS AND EXTEND ON LOWER ROOF AS SHOWN.
- (3) 36"x36" SA ACOUSTIC LINED DUCT RISER WITH ELBOW OVER, TRANSITION TO 32"x32", PENETRATE THRU WALL AT 0'-6" BELOW CEILING, TRANSITION BACK TO 36"x36", TEE IN OPPOSITE DIRECTIONS, TRANSITION TO FABRIC DUCT AND EXTEND AS SHOWN. PAINT ALL GALV. DUCT IN AND OUTSIDE OF GYM TO MATCH WALLS.
- (4) 22"x22" SA DUCT FLEX CONNECTION WITH 22"x22" DOUBLE WALL DUCT TEE TO 18"x22" DUCTS IN EACH DIRECTION WITH 36"x9" DUCT DROPS THRU ROOF TO DIFFUSER AT CEILING. INTERIOR DUCT SHALL BE STAINLESS STEEL ALONG WITH PLAQUE CONSTRUCTION.
- (5) EVAP. COOLER SWITCH MOUNTED AT 48" AFF. ALL WIRE SHALL BE IN CONDUIT EXPOSED ON WALL. ROUTE STRAIGHT UP TO CEILING AND EXTEND ALONG CEILING TO ROOF PENETRATION AT UNIT. PAINT ALL CONDUIT TO MATCH FINISHES.
- (6) 36"x36" RA ACOUSTIC LINED DUCT TRANSITION TO 32"x32", THEN PENETRATE THRU WALL AT 0'-6" BELOW SA DUCT, TRANSITION BACK TO 36"x36", ELBOW OVER AND EXTEND AS SHOWN WITH (2) GRILLES ON BOTTOM OF DUCT AND (2) GRILLES ON SIDE OF DUCT. PAINT ALL DUCT AND GRILLES IN AND OUTSIDE OF GYM TO MATCH WALLS.
- (7) REMOVE (E) SUSPENDED FURNACE, CONTROLS AND ALL ASSOCIATED FLEX PIPING & SUPPORTS TO JUST BELOW FINISHED CEILING. CAP ENDS OF PIPING AIR TIGHT. REMOVE (E) DUCT BACK TO 48"x36" INTAKE LOUVER. LOUVER TO REMAIN FOR NEW RELIEF, PRIME AND PAINT REMAINING SUPPORT AND PIPING STUB OUT TO MATCH CEILING.
- (8) (E) ROOF EXHAUST FAN SHALL BE ABANDONED IN PLACE. DISCONNECT POWER AND CONTROLS.
- (9) (E) SUSPENDED FURNACE TO REMAIN.
- (10) (E) ROOF EXHAUST FAN TO REMAIN. INTERLOCK WITH EVAP. COOLER SO IT COMES ON WHEN SUPPLY BLOWER COMES ON. (E) EF-2 IS ALSO INTERLOCKED WITH (E) FURNACES AND (E) EF-3 IS CONNECTED TO SWITCH.
- (11) (E) EVAP. COOLER ON ROOF TO REMAIN.
- (12) PROVIDE LOGO ON SIDE OF FABRIC DUCT WITH UP TO (4) COLORS. DISTRICT TO PROVIDE LOGO. FABRIC COLOR TO ALSO BE SELECTED BY DISTRICT.
- (13) (E) TIME CLOCK TO REMAIN.
- (14) (E) CEILING EXHAUST FAN TO REMAIN.



MECHANICAL FLOOR PLAN - GYM

SCALE: 1/8" = 1' - 0"



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DSA #: 02-118068

FILE #: 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

MUSD

PROJECT NAME

ACEMENT

1407 SUNSET AVE

M.U.S.D.	
No.	DATE

DESCRIPTION

REVISIONS

MECHANICAL FLOOR PLAN - GYM

PROJECT ENGINEER

PROJECT NUMBER

SHEET NUMBER

GAREN LENCION

17-106C

Rang Nao

DRAWN BY:

SCALE
AS NOTED

M2.1

Project Name:Jefferson Middle School - CafeteriaProject Address:1407 Sunset Avenue Madera 93637Input File Name:17-1060 Jefferson MS - Cafeteria v8.cbd19x

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1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
AC-1.1 & AC-1.2	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
AC-1.3 & AC-1.4	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, No DDC Differential Drybulb Economizer No Supply Air Temp. Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MDP-E.

K6. MECHANICAL VENTILATION AND REHEAT §120.1

1	2	3	4	5	6	7	8	9
Zone Name	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
	1-Cafeteria (North)	Food Service - Cafeteria/fast-food dining	0	50.61	0	759	0	1518
2-Cafeteria (South)	Food Service - Cafeteria/fast-food dining	0	50.61	0	759	0	1518	NA

K7. DISTRIBUTION SUMMARY §120.4/140.4(i)

This Section Does Not Apply

Multifamily or Hotel/Motel Occupancy? (If "Yes", see DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY)

No

Does the Project include Zonal Systems?

No

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Project Name:Jefferson Middle School - CafeteriaProject Address:1407 Sunset Avenue Madera 93637Input File Name:17-1060 Jefferson MS - Cafeteria v8.cbd19x

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K8. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtu/h)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
1-Cafeteria (North)-Trm	1-Cafeteria (North)	Uncontrolled	NA	NA	3200	NA	0.00	NA	NA	NA	<input type="checkbox"/>
2-Cafeteria (South)-Trm	2-Cafeteria (South)	Uncontrolled	NA	NA	2000	NA	0.00	NA	NA	NA	<input type="checkbox"/>

K9. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

L. DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY

L1. DHW EQUIPMENT SUMMARY

This Section Does Not Apply

L2. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

L3. SOLAR HOT WATER HEATING SUMMARY

This Section Does Not Apply

M. COVERED PROCESS SUMMARY §140.9

This Section Does Not Apply

N. INDOOR LIGHTING SUMMARY §140.6

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Project Name:Jefferson Middle School - CafeteriaProject Address:1407 Sunset Avenue Madera 93637Input File Name:17-1060 Jefferson MS - Cafeteria v8.cbd19x

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N1. INDOOR CONDITIONED LIGHTING GENERAL INFO § 140.6¹

1	2	3	4	5	Confirmed		
Occupancy Type ¹	Conditioned Floor Area ² (ft ²)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance		Pass	Fail
				Area Category Footnotes (Watts)	Tailored Method (Watts)		
Dining Area (Cafeteria/Fast Food)	3,036	1,214	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>
Building Totals:	3,036	1,214	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>

¹ See Table 140.6.C.
² See NRCC-LT1-02-E for unconditioned spaces
³ Lighting information for existing spaces modeled is not included in the table

N2. INDOOR CONDITIONED LIGHTING SCHEDULE § 130.0

This Section Does Not Apply

¹ If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.

N3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS § 140.6

This Section Does Not Apply

N4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS § 130.1

This Section Does Not Apply

¹ §130.1(a) = Manual scene controls; §130.1(b) = Multi-Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Response

N5. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST § 140.6

General lighting power (see Table D)	0
General lighting power from special function areas (see Table E)	NA
Additional "use it or lose it" (See Table G)	0
Total watts	0

N6. GENERAL LIGHTING POWER § 140.6-D

This Section Does Not Apply

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Project Name:Jefferson Middle School - CafeteriaProject Address:1407 Sunset Avenue Madera 93637Input File Name:17-1060 Jefferson MS - Cafeteria v8.cbd19x

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F. ADDITIONAL REMARKS

This Section Does Not Apply

G. ENVELOPE GENERAL INFORMATION

1	2	3	4
Opaque Surfaces & Orientation	Total Gross Surface Area (ft ²)	Total Fenestration Area (ft ²)	Window to Wall Ratio (%)
North-Facing ¹	654 ft ²	0 ft ²	00.0%
East-Facing ²	1,046 ft ²	0 ft ²	00.0%
South-Facing ³	0 ft ²	0 ft ²	00.0%
West-Facing ⁴	1,038 ft ²	181 ft ²	17.4%
Total	2,738 ft ²	181 ft ²	06.6%
Roof	3,036 ft ²	0 ft ²	00.0%

Notes:
¹ North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).
² East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).
³ South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).
⁴ West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

H. FENESTRATION ASSEMBLY SUMMARY §110.6

1.	2.	3.	4.	5.	6.	7.	8.	9.
Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method ¹	Assembly Method	Area ft ²	Overall U-Factor	Overall SHGC	Overall VT	Status ²
Single Metal Tinted	VerticalFenestration FixedWindow MetalFraming	Default Performance	SiteBuilt	181	1.19	0.68	0.77	E

¹ Newly installed fenestration shall have a certified NRCC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix 14b and are used in the analysis.
² Status: N - New, A - Altered, E - Existing

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I. ENVELOPE DETAILS §120.7 & §140.3

I1. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Surface Name	Surface Type	Description of Assembly Layers	Area (ft ²)	Framing Type	Cavity R-Value	Continuous R-Value	U-Factor / F-Factor	Status ¹
Slab On Grade6	UndergroundFloor	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0 Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in.	3036	NA	0	NA	F-Factor: 0.730	E
R-11 Roof Cathedral8	Roof	Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	3036	Wood	11	NA	U-Factor: 0.078	E
Brick Wall10	ExteriorWall	Brick - 48 Bu1/3 - 3.5/8 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more	2738	NA	0	NA	U-Factor: 0.239	E

¹ Status: N - New, A - Altered, E - Existing

I2. OVERHANG DETAILS

This Section Does Not Apply

I3. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	Overall U-Factor	Status ¹
Metal Door12	0.700	E

J. CRRC ROOFING PRODUCT SUMMARY §140.3

This Section Does Not Apply

K. HVAC SYSTEM SUMMARY §110.1 & §110.2

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

Project Name:Jefferson Middle School - CafeteriaProject Address:1407 Sunset Avenue Madera 93637Input File Name:17-1060 Jefferson MS - Cafeteria v8.cbd19x

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K1. Dry System Equipment (furnaces, air handling units, heat pumps, VRFs, etc.)

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)									
1	2	3	4	5	6	7	8	9	10
Equipment Name	Equipment Type	Qty	Heating		Efficiency	Cooling		Status ³	
			Total Heating Output (kBtu/h)	Supp Heat Source (V/N)		Total Cooling Output (kBtu/h)	Efficiency		
AC-1.1 & AC-1.2	SZAC (Packaged3Phase)	2	53	No	0	AFUE-81.0	43	SEER-16.00 / EER-12.60	N
AC-1.3 & AC-1.4	SZAC (Packaged3Phase)	1	53	No	0	AFUE-81.0	54	SEER-16.00 / EER-12.30	N

¹ Status: N - New, A - Altered, E - Existing

K2. ECONOMIZER & FAN SYSTEMS SUMMARY §140.4¹

1	2	3	4	5	6	7	8	9	10	11	12	13
Name or Item Tag	System Type packaged, DOAS, etc	Design OA CFM	Supply Fan			Return Fan			Economizer Type (if present)	Status ³		
			CFM	BHP	Watts	Control	CFM	BHP			Watts	Control
AC-1.1 & AC-1.2	SZAC	380	1600	0.650	566.8	ConstantVolume	NA	NA	NA	NA	DifferentialDryBu-lb	N
AC-1.3 & AC-1.4	SZAC	759	2000	0.840	732.5	ConstantVolume	NA	NA	NA	NA	DifferentialDryBu-lb	N

¹ Status: N - New, A - Altered, E - Existing

K3. EXHAUST FAN SUMMARY

This Section Does Not Apply

K4. Wet System Equipment(boilers,chillers,cooling towers,etc.)

This Section Does Not Apply

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A. GENERAL INFORMATION

1.	Project Location (city)	Madera	8.	Standards Version	Compliance2019
2.	CA Zip Code	93637	9.	Compliance Software (version)	EnergyPro 8.1
3.	Climate Zone	13	10.	Weather File	FRESNO_723890_CZ2010.epw
4.	Total Conditioned Floor Area in Scope	3,036 ft ²	11.	Building Orientation (deg)	(N) 0 deg
5.	Total Unconditioned Floor Area	0 ft ²	12.	Permitted Scope of Work	ExistingAlteration
6.	Total # of Stories (Habitable Above Grade)	1	13	Building Type(s)	Nonresidential
7.	Total # of dwelling units	0	14	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance		Building Components Complying Prescriptively	
Envelope	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included	Covered Process: Commercial Kitchens	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included	Covered Process: Computer Rooms	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Mechanical	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included	Covered Process: Laboratory Exhaust	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		
Domestic Hot Water	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		
	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		
Lighting (Indoor Conditioned)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		
	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		
Solar Thermal Water Heating	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		
	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		

Mandatory Measures

Electrical power systems, commissioning and solar ready requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)	NRCC-LT1-E is required
Outdoor Lighting §140.7	NRCC-LT0-E is required
Sign Lighting §140.8	NRCC-LT5-E is required
Electrical Power Distribution §110.11	NRCC-ELC-E is required
Commissioning §120.8	NRCC-CMR-E is required
Solar Ready §110.10	NRCC-SRA-E is required

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

Project Name:Jefferson Middle School - CafeteriaProject Address:1407 Sunset Avenue Madera 93637Input File Name:17-1060 Jefferson MS - Cafeteria v8.cbd19x

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C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Space Heating	50.67	34.82	15.85
Space Cooling	219.75	149.43	70.32
Indoor Fans	229.72	129.54	100.18
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	78.62	78.62	--
Indoor Lighting	55.75	55.75	--
ENERGY STANDARDS COMPLIANCE TOTAL	634.51	448.16	186.35 (29.4%)

¹ Notes: The number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS¹

☐ This project is pursuing CalGreen Tier 1
☐ This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Receptacle	74.09	74.09	--
Process	54.82	54.82	--
Other Ltg	--	--	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	763.42	577.07	186.4 (24.4%)

¹ Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

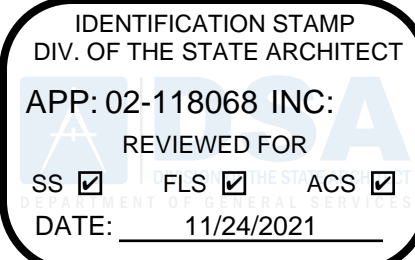
D. EXCEPTIONAL CONDITIONS

The building does not include service water heating. Verify that service water heating is not required and is not included in the design.

E. HERS VERIFICATION

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below.

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REGISTERED PROFESSIONAL ENGINEER
GAREN M. LENCIONI
NO. 33380
MECHANICAL
STATE OF CALIFORNIA

DSA #: 02-118068
FILE #: 20-30

PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT
M.U.S.D.
1407 SUNSET AVE.
MADERA, CA 93637

NO. DATE DESCRIPTION REVISIONS

SHEET NAME
ENERGY COMPLIANCE - CAFETERIA
PROJECT ENGINEER
GAREN LENCIONI
DRAWN BY
Dong Ngo
CHECKED BY
K.K.

PROJECT NUMBER
17-1060
SCALE
AS NOTED
DATE
5/18/2021

EC1.1

ENERGY COMPLIANCE - CAFETERIA

SCALE: N.T.S.

Project Name:

Jefferson Middle School - Cafeteria

Project Address:

1407 Sunset Avenue Madera 93637

Input File Name:

17-1060 Jefferson MS - Cafeteria v8.cibd19x

NRCC-PRF-01-E

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Calculation Date/Time:

10-49, Fri, Jun 05, 2020

Q. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Building Component			Form/Title	Field Inspector	
	YES	NO		Pass	Fail
Mechanical	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-04-H Duct Leakage Test	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-24-H Enclosure Air Leakage	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-27 Indoor Air Quality & Mechanical Ventilation	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-32-H Local Mechanical Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
Plumbing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-PLB-21-H - HERS verified central systems in high-rise residential, hotel/motel application	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application	<input type="checkbox"/>	<input type="checkbox"/>

R. UNMET LOAD HOURS

This Section Does Not Apply

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

Project Name:

Jefferson Middle School - Cafeteria

Project Address:

1407 Sunset Avenue Madera 93637

Input File Name:

17-1060 Jefferson MS - Cafeteria v8.cibd19x

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Calculation Date/Time:

10-49, Fri, Jun 05, 2020

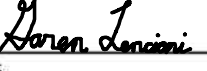
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:

Garen Lencioni

Signature:



Company: Leaf Engineers

Address: 895 West Ashlan Avenue, Suite 101

City/State/Zip: Clovis CA 93612

Phone: 559-319-1537

Signature Date: 2020-06-05

CEA/ HERS Certification Identification (if applicable):

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)

3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:

Signature: NOT IN SCOPE

Company:

Address:

City/State/Zip:

Phone:

Title:

License #:

Responsible Lighting Designer Name:

Signature:

Company:

Address:

City/State/Zip:

Phone:

Title:

License #:

Responsible Mechanical Designer Name: Garen Lencioni


Company: LP Engineers, Inc.

Address: 895 West Ashlan Avenue, Suite 101

City/State/Zip: Clovis CA 93612

Phone: (559) 348-2130

Signature:



Date Signed:

4-14-2021

Title:

Mech. Engr.

License #: M33380

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

Project Name:

Jefferson Middle School - Cafeteria

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1407 Sunset Avenue Madera 93637

Input File Name:

17-1060 Jefferson MS - Cafeteria v8.cibd19x

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Calculation Date/Time:

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O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component			Form/Title	Field Inspector	
	YES	NO		Pass	Fail
Envelope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCI-ENV-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-MCH-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-PLB-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-PLB-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water system distribution systems to be recognized for compliance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-PLB-21-E - Must be HERS verified for central systems in high-rise residential hotel/ motel application	<input type="checkbox"/>	<input type="checkbox"/>
Plumbing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-PLB-22-E - Must be HERS verified for single dwelling unit systems in high-rise residential, hotel/motel application	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-STH-01-E - Must be submitted for solar hot water heating systems	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-LTI-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS) to be recognized for compliance	<input type="checkbox"/>	<input type="checkbox"/>
Indoor Lighting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCI-PRC-01-E - Must be submitted for all Covered Processes	<input type="checkbox"/>	<input type="checkbox"/>
Covered Process	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

Project Name:

Jefferson Middle School - Cafeteria

Project Address:

1407 Sunset Avenue Madera 93637

Input File Name:

17-1060 Jefferson MS - Cafeteria v8.cibd19x

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P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component			Form/Title	Field Inspector	
	YES	NO		Pass	Fail
Envelope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-ENV-02-F - NRFC label verification for fenestration	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-ENV-03-F - Daylighting Design PAFs	<input type="checkbox"/>	<input type="checkbox"/>
Indoor Lighting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-03-A - Automatic Daylight Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-04-A - Demand Responsive Lighting Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-05-A - Institutional Tuning Power Adjustment Factor (PAF)	<input type="checkbox"/>	<input type="checkbox"/>
Covered Process	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-02-F - Kitchen Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-03-F - Garage Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-12-F - Elevator Lighting and Ventilation Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-13-F - Escalator and Moving Walkways Speed Control	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-14-F - Lab Exhaust Ventilation System	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-15-F - Fume Hood Automatic Sash Closures System	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

Project Name:

Jefferson Middle School - Cafeteria

Project Address:

1407 Sunset Avenue Madera 93637

Input File Name:

17-1060 Jefferson MS - Cafeteria v8.cibd19x

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Calculation Date/Time:

10-49, Fri, Jun 05, 2020

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit:https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component			Form/Title	Field Inspector	
	YES	NO		Pass	Fail
Mechanical	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-03-A Constant Volume Single Zone HVAC	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-04(a)-H Air Distribution Duct Leakage - HERS Verification required	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-04(b)-A Air Distribution Duct Leakage - ATT only	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-05-A Air Economizer Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §1202.1(c)(3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-07-A Supply Fan Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-08-A Valve Leakage Test	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-09-A Supply Water Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-10-A Hydronic System Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-11-A Automatic Demand Shed Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-16-A Supply Air Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-18 Energy Management Control Systems	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-MCH-19 Occupancy Sensor Controls	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

ENERGY COMPLIANCE - CAFETERIA

SCALE: N.T.S.

Project Name:

Jefferson Middle School - Cafeteria

Project Address:

1407 Sunset Avenue Madera 93637

Input File Name:

17-1060 Jefferson MS - Cafeteria v8.cibd19x

NRCC-PRF-01-E

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N7. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS § 140.6(c) 3H

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft ²)	Allowed Watts	Confirmed	
NA	NA	NA	NA	NA	NA	NA	Pass	Fail
							<input type="checkbox"/>	<input type="checkbox"/>

Note: Tailored Method for Special Function Areas is not currently implemented.

N8. ROOM CAVITY RATIO

Rectangular Spaces						
Room Number	Task/Activity Description	Room Length (ft)	Room Width (ft)	Room Cavity Height (ft)	RCR	Confirmed
NA	NA	NA	NA	NA	NA	Pass Fail
						<input type="checkbox"/> <input type="checkbox"/>

Non-Rectangular Spaces

Note: All applicable spaces are listed under the Non-Rectangular Spaces table.

N9. ADDITIONAL "USE IT OR LOSE IT"

1.	2.	3.	4.	Allowed Watts	Confirmed	
Wall Display	Combined Floor Display and Task Lighting	Combined Ornamental and Special Effects Lighting	Very Valuable Merchandise		Req	Req
0	0	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>

N10. Wall Display

This Section Does Not Apply

N11. Floor Display and Task Lighting

This Section Does Not Apply

N12. Combined Ornamental and Special Effects Lighting

This Section Does Not Apply

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

Project Name:

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Input File Name:

17-1060 Jefferson MS - Cafeteria v8.cibd19x

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Calculation Date/Time:

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N13. Very Valuable Merchandise

This Section Does Not Apply


N14. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS § 130.4

Declaration of Required Acceptance Certificates (NRCA) –Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description		Indoor			Outdoor	Confirmed	
		NRCA-LTI-02-A	NRCA-LTI-03-A	NRCA-LTI-04-A	NRCA-LTD-02-A	Pass	Fail
Equipment Requiring Testing or Verification	# of units	Occ Sensors / Auto Time Switch	Auto Daylight	Demand Responsive	Outdoor Controls		
Occupant Sensors	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic Time Switch	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic Daylighting	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demand Responsive	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoor Controls	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04282020-6206 Report Generated at: 2020-06-05 10:49:56

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021



LP Engineers, Inc.

895 W. Ashlan Ave, Suite 101 Clovis, CA 93612

p 559-348-2130 - f 559-348-2131

www.lpengr.com

garen@lpengr.com

REGISTERED PROFESSIONAL ENGINEER
GAREN M. LENCIONI
NO. 33380
MECHANICAL
STATE OF CALIFORNIA

DSA #: 02-118068
FILE #: 20-30

PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.
1407 SUNSET AVE.
MADERA, CA 93637

No. DATE DESCRIPTION REVISIONS

SHEET NAME
ENERGY COMPLIANCE - CAFETERIA

SHEET NUMBER
PROJECT ENGINEER
GAREN LENCIONI
SCALE
DRAWN BY
Dong Ngo
CHECKED BY
K.K.
PROJECT NUMBER
17-1060
SCALE
AS NOTED
DATE
5/18/2021

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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
Project Name: Jefferson Middle School - Gymnasium
Project Address: 1407 Sunset Avenue
Report Page: (Page 6 of 9)
Date Prepared: 6/8/2020

J. VENTILATION AND INDOOR AIR QUALITY
For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
§ 120.2(c)3 requires systems serving rooms that are required by § 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by § 130.1(c).

K. TERMINAL BOX CONTROLS
This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK AND PIPING)
This section does not apply to this project.

M. COOLING TOWERS
This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/titles24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Yes No Form/Title Field Inspector Pass Fail
● ○ NRCC-MCH-01-E - Must be submitted for all buildings

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.0.001
Registration Provider: Energysoft
Report Generated: 2020-06-08 09:01:50

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
Project Name: Jefferson Middle School - Gymnasium
Project Address: 1407 Sunset Avenue
Report Page: (Page 7 of 9)
Date Prepared: 6/8/2020

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/titles24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Yes No Form/Title Field Inspector Pass Fail
● ○ NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.
● ○ NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".
○ ● NRCA-MCH-04-A - Air Distribution Duct Leakage
● ○ NRCA-MCH-05-A - Air Economizer Controls
● ○ NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to § 120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.
○ ● NRCA-MCH-07-A Supply Fan Variable Flow Controls
○ ● NRCA-MCH-08-A Valve Leakage Test
○ ● NRCA-MCH-09-A Supply Water Temperature Reset Controls
○ ● NRCA-MCH-10-A Hydronic System Variable Flow Controls
○ ● NRCA-MCH-11-A Automatic Demand Shed Controls
○ ● NRCA-MCH-12-A FDD for Packaged Direct Expansion Units
○ ● NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance
○ ● NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance NOTE: This form does not automatically move to "Yes". If Distributed Energy System DX AC Systems are included in the scope permit applicant should move this form to "Yes".
○ ● NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance NOTE: This form does not automatically move to "Yes". If Chilled water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".
○ ● NRCA-MCH-16-A Supply Air Temperature Reset Controls
○ ● NRCA-MCH-17-A Condenser Water Temperature Reset Controls
○ ● NRCA-MCH-18-A Energy Management Control Systems

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.0.001
Registration Provider: Energysoft
Report Generated: 2020-06-08 09:01:50

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
Project Name: Jefferson Middle School - Gymnasium
Project Address: 1407 Sunset Avenue
Report Page: (Page 8 of 9)
Date Prepared: 6/8/2020

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
○ ● NRCA-MCH-19-A Occupancy Sensor Controls
○ ● NRCA-MCH-20-Multi-Family Ventilation
○ ● NRCA-MCH-21-Multi-Family Envelope Leakage

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Provides registry, but drafts can be found online at https://www.energy.ca.gov/titles24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Yes No Form/Title Field Inspector Pass Fail
○ ● NRCV-MCH-04-H Duct Leakage Test NOTE: Must be completed by a HERS Rater
○ ● NRCV-MCH-24 Enclosure Air Leakage Worksheet NOTE: Must be completed by a HERS Rater
○ ● NRCV-MCH-27 High-rise Residential NOTE: Must be completed by a HERS Rater
○ ● NRCV-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01 02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block? Yes Plan sheet or construction document location M-Sheets

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.0.001
Registration Provider: Energysoft
Report Generated: 2020-06-08 09:01:50

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
Project Name: Jefferson Middle School - Gymnasium
Project Address: 1407 Sunset Avenue
Report Page: (Page 3 of 9)
Date Prepared: 6/8/2020

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in § 110.1 and § 110.2(a) and prescriptive requirements found in § 140.4(a), § 140.4(b) and § 140.4(c) or § 141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01 02 03 04 05 06 07 08 09 10 11
Name or Item Tag Equipment Category per Tables 110.2 & Title 20 Equipment Type per Tables 110.2 & Title 20 Smallest Size Available¹ § 140.4(a) Heating Output²³ Cooling Output²³ Load Calculations⁴⁵
Per Design (kBtu/h) Rated (kBtu/h) Supp. Heating Output (kBtu/h) Sensible Per Design (kBtu/h) Rated (kBtu/h) Total Heating Load Total Sensible Cooling Load
AC-2.1 Unitary AC/ Condensers AC, air-cooled pkg (3 phase) NA: Load Controls 324 324 0 367.61 357.7 350.38 338.61

FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per § 140.4(a). Healthcare facilities are excepted.
¹It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
²If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
³Authority Having Jurisdiction may ask for load calculations used for compliance per § 140.4(b).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01 02 03 04 05 06 07 08 09
Name or Item Tag Size Category (Btu/h) Rating Condition (°F) Efficiency Unit Minimum Efficiency Required per Tables 110.2 / Title 20 Design Efficiency Efficiency Unit Minimum Efficiency Required per Tables 110.2 / Title 20 Design Efficiency
AC-2.1 240,000 Combustion Efficiency 0.80 0.81 EER IEER 9.8 11.4 9.8 11.9

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.0.001
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
Project Name: Jefferson Middle School - Gymnasium
Project Address: 1407 Sunset Avenue
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G. PUMPS
This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS
This table is used to demonstrate compliance with prescriptive requirements found in § 140.4(c), § 140.4(e) and § 140.4(m) for fan systems. Fan systems serving healthcare facilities, or those serving only process loads, are exempt from these requirements and do not need to be included in Table H.

System Name: AC-2.1 Economizer¹ Differential Temperature Controls: Designed per and (m) System Fan Type: Fixed Flow
01 02 03 04 05 06 07 08
Fan Name or Item Tag Fan Function Qty Maximum Design Supply Airflow (CFM) HP Unit² Design HP Fan Power Pressure Drop Adjustment - Table 140.4-8 Device Design Airflow through Device (CFM)
SF Supply 1 14000 BHP 12.89
Total System Design Supply Airflow (CFM): 14000 Total System Design (BHP): 12.89 Maximum System Fan Power (BHP): 13.16

FOOTNOTES: Computer room economizers must meet requirements of § 140.9(a) and will be documented on the NRCC-PRC-E document.
²If total filter pressure drop (SPa) is greater than 1 in WC, or 245 Pascal then enter it and total fan pressure drop across the fan (SPf) for system.

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Project Name: Jefferson Middle School - Gymnasium
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Report Page: (Page 5 of 9)
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I. SYSTEM CONTROLS
This table is used to demonstrate compliance with mandatory controls in § 110.2 and § 120.2, and prescriptive controls in § 140.4(f) and (n) or requirements in § 141.0(b)2E for altered space conditioning systems.

01 02 03 04 05 06 07 08 09
System Name System Zoning Conditioned Floor Area Being Served (ft²) Thermostats § 110.2(b) & (c)¹, § 120.2(a)or § 141.0(b)2E Isolation Zone Controls § 120.2(a) Demand Response § 120.2(a) Supply Air Temp. Reset § 140.4(f) Window Interlocks per § 140.4(n)
AC-2.1 Single zone <= 25,000 ft² Energy Management System (EMS) NA: 7 day per 4 Hour Timer EMCS NA: Alteration Project

FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

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Date Prepared: 6/8/2020

I. SYSTEM CONTROLS
¹Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with § 140.4(d) ; EXCEPTION 1 to § 140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY
This table is used to demonstrate compliance with mandatory ventilation requirements in § 120.1 and § 120.2(c)38 for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.

01 02 03
Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
Check the box if the project included new or altered high-rise residential dwelling units.
Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per § 120.1(c)2.

Nonresidential and Hotel/ Motel Ventilation Systems

04 05 06 07
System Name AC-2.1 System Design OA CFM Airflow³ 3495 System Design Transfer Air CFM 0 Air Filtration per § 120.1(c) and § 141.0(b)2
08 09 10 11 12 13 14 15 16
Space Name or Item Tag Occupancy Type⁴ Conditioned Floor Area (ft²) # of Shower heads/ toilets # of people⁵ Required Min OA CFM Provided per Design CFM DCV or Sensor Controls per § 120.1(d)3, § 120.1(d)5, and § 120.1(c)3 ⁶
Gymnasium Multiuse assembly- 6989.1 3494.6 0 0 DCV Provided per § 120.1(d)4 Occ Sensor

FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system
²Air filtration requirements apply to the following three system types per § 120.1(c)1A : space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
³Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
⁴See Standards Tables 120.1-A and 120.1-B.

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CERTIFICATE OF COMPLIANCE
Project Name: Jefferson Middle School - Gymnasium
Project Address: 1407 Sunset Avenue
Report Page: (Page 1 of 9)
Date Prepared: 6/8/2020

A. GENERAL INFORMATION
01 Project Location (city) Madera 04 Total Conditioned Floor Area 6989.1
02 Climate Zone 13 05 Total Unconditioned Floor Area 0
03 Occupancy Types Within Project:
Office (B) Retail (M) Non-refrigerated Warehouse (S)
Hotel/ Motel Guest Rooms (R-1) School (E) Healthcare Facility (H)
High-Rise Residential (R-2/R-3) Relocatable Class Bldg (E) Other (write in) See Table J

B. PROJECT SCOPE
This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in § 140.5, or § 141.0(b)2 for alterations.

01 02 03
Air System(s) Wet System Components Dry System Components
Heating Air System Water Economizer Air Economizer
Cooling Air System Pumps Electric Resistance Heat
Mechanical Controls System Piping Fan Systems
Mechanical Controls Cooling Towers Ductwork
Chillers Ventilation
Boilers Zonal Systems/ Terminal Boxes

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CERTIFICATE OF COMPLIANCE
Project Name: Jefferson Middle School - Gymnasium
Project Address: 1407 Sunset Avenue
Report Page: (Page 2 of 9)
Date Prepared: 6/8/2020

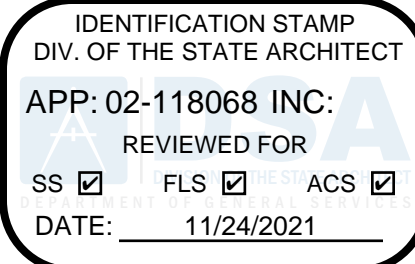
C. COMPLIANCE RESULTS
Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01 02 03 04 05 06 07 08 09
System Summary § 110.1, § 110.2, § 140.4 AND Pumps § 140.4(k) AND Fans/ Economizers § 140.4(c), § 140.4(e) AND System Controls § 110.2, § 120.2, § 140.4(f) AND Ventilation § 120.1 AND Terminal Box Controls § 140.4(d) AND Distribution § 120.3, § 140.4(l) AND Cooling Towers § 110.2(e)2 Compliance Results
(See Table F) (See Table G) (See Table H) (See Table I) (See Table J) (See Table K) (See Table L) (See Table M)
No AND AND Yes AND Yes AND Yes AND AND AND AND DOES NOT COMPLY
Mandatory Measures Compliance (See Table Q for Details) COMPLIES

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.0.001
Registration Provider: Energysoft
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895 W. Ashlan Ave, Suite 101 Clovis, CA 93612
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garen@lpengr.com

REGISTERED PROFESSIONAL ENGINEER
GAREN M. LENCIONI
NO. 33380
MECHANICAL
STATE OF CALIFORNIA

DSA #: 02-118068
FILE #: 20-30

PROJECT NAME: JEFFERSON M. S. - HVAC REPLACEMENT
M.U.S.D.
No. DATE DESCRIPTION REVISIONS

PROJECT ENGINEER: GAREN LENCIONI
SCALE: 17-1060
DRAWN BY: Dong Ngo
CHECKED BY: K.K.
DATE: 5/18/2021

SHEET NAME: ENERGY COMPLIANCE - GYM
SHEET NUMBER: EC2.1

1121598

141313111198888877766554321

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

NRCC-MCH-E

CERTIFICATE OF COMPLIANCE

Project Name: Jefferson Middle School - Gymnasium

Report Page: (Page 9 of 9)

Project Address: 1407 Sunset Avenue

Date Prepared: 6/8/2020

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Garen Lencioni

Documentation Author Signature: *Garen Lencioni*

Company: Leaf Engineers

Signature Date: 4-14-2021

Address: 895 West Ashlan Avenue, Suite 101

CEA/HERS Certification Identification (if applicable):

City/State/Zip: Clovis CA 93612

Phone: 559-319-1537

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).

3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Garen Lencioni

Responsible Designer Signature: *Garen Lencioni*

Company: LP Engineers, Inc.

Date Signed: 2020-06-08

Address: 895 West Ashlan Avenue, Suite 101

License: M33380

City/State/Zip: Clovis CA 93612

Phone: (559) 348-2130

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Date/Time: Report Version: 2019 0 001
Schema Version: rev 20190401

Registration Provider: Energysoft
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IDENTIFICATION STAMP

DIV. OF THE STATE ARCHITECT

APP: 02-118068 INC:

REVIEWED FOR

SS ☒ FLS ☒ ACS ☒

DATE: 11/24/2021

LP

LP Engineers, Inc.

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www.lpengr.com
garen@lpengr.com

REGISTERED PROFESSIONAL ENGINEER

GAREN M. LENCIONI

NO. 33380

RES. 8-376

GAREN LENCIONI

MECHANICAL

STATE OF CALIFORNIA

DSA #: 02-118068

FILE #: 20-30

PROJECT NAME

JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.

1407 SUNSET AVE.
MADERA, CA 93637

No.

DATE

DESCRIPTION

REVISIONS

SHEET NAME

ENERGY COMPLIANCE - GYM

SHEET NUMBER

PROJECT ENGINEER

GAREN LENCIONI

PROJECT NUMBER

17-1060

SCALE

Dong Ngo

DRAWN BY

AS NOTED

CHECKED BY

K.K.

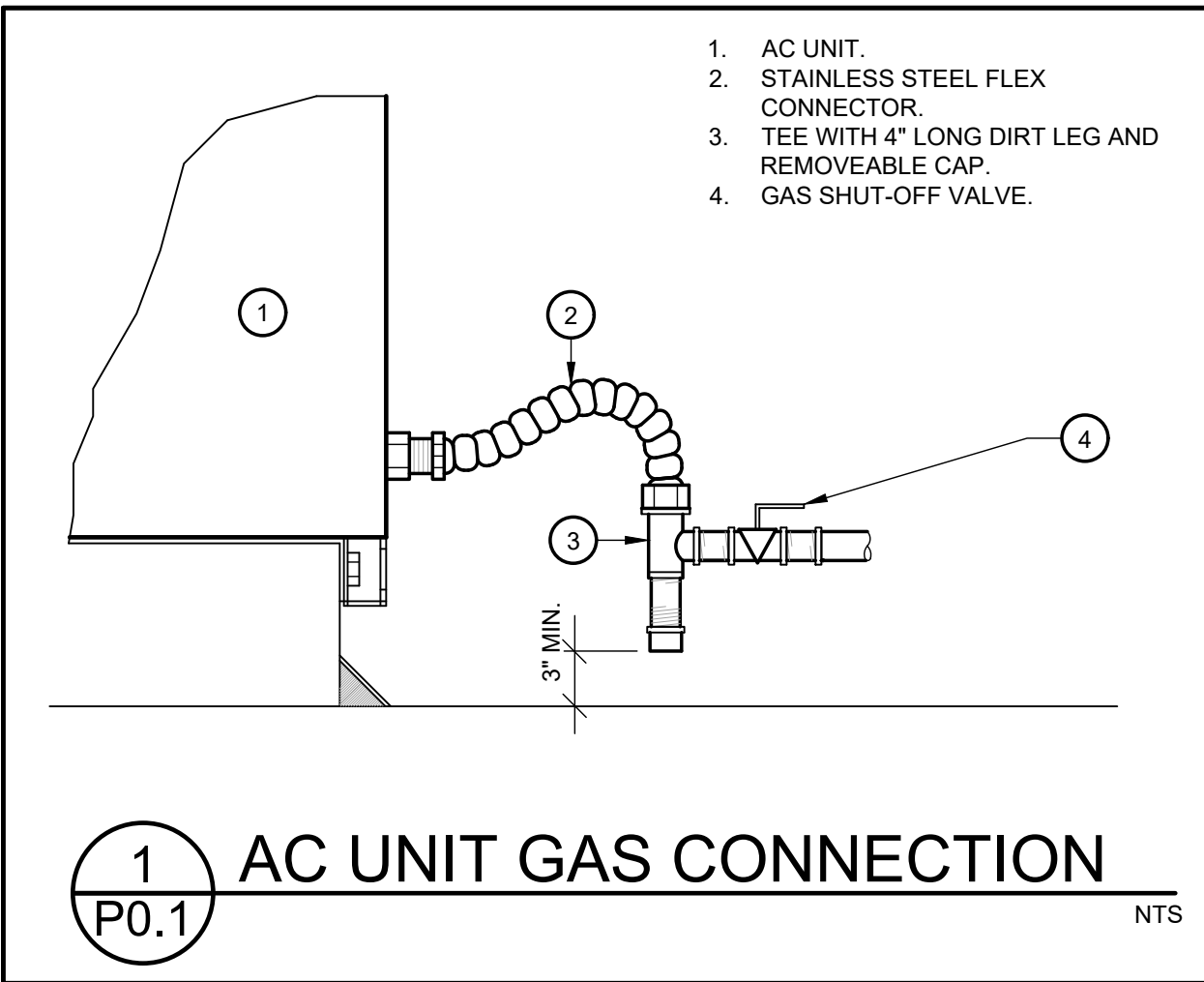
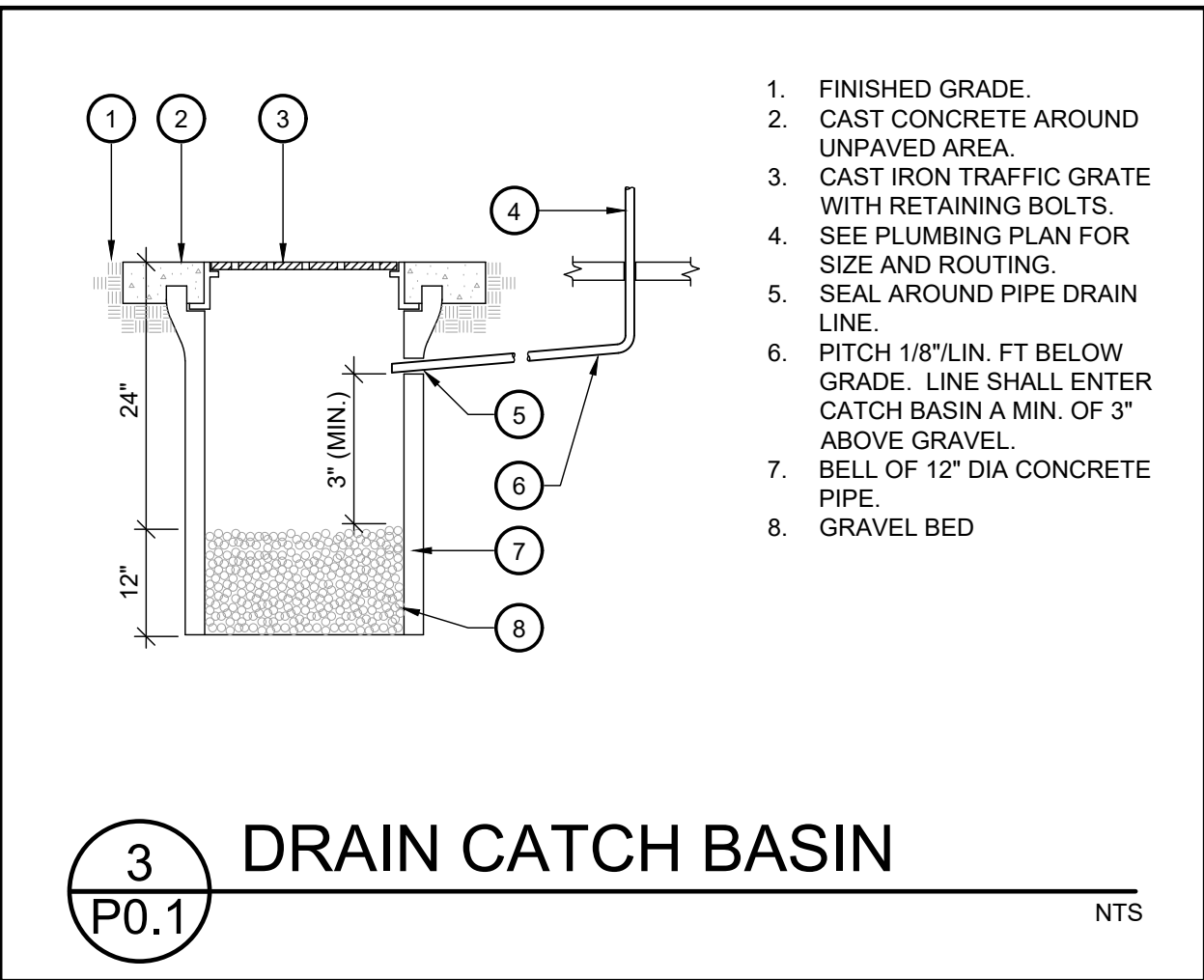
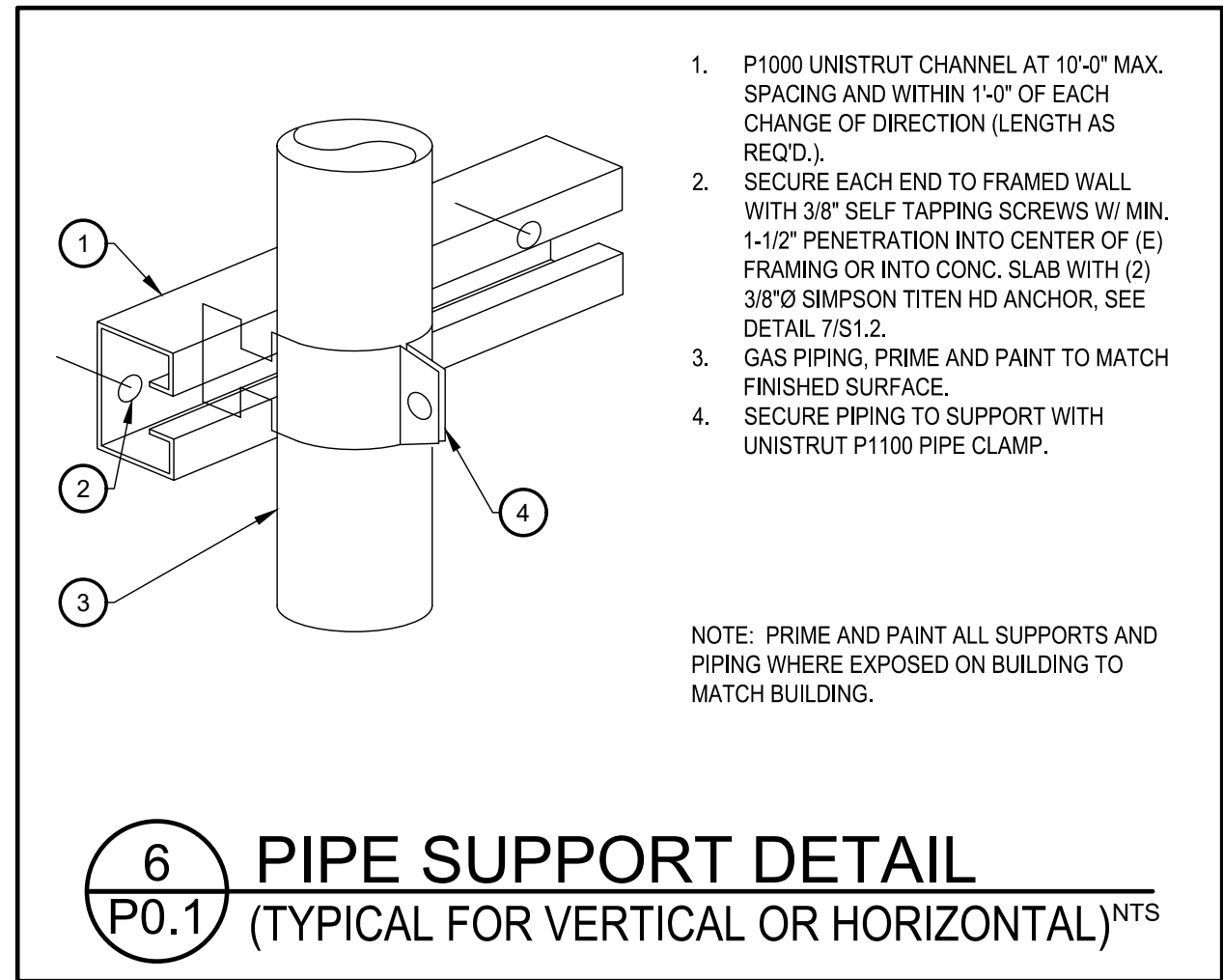
DATE

5/18/2021

EC2.2

ENERGY COMPLIANCE - GYM

SCALE: N.T.S.



MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30:

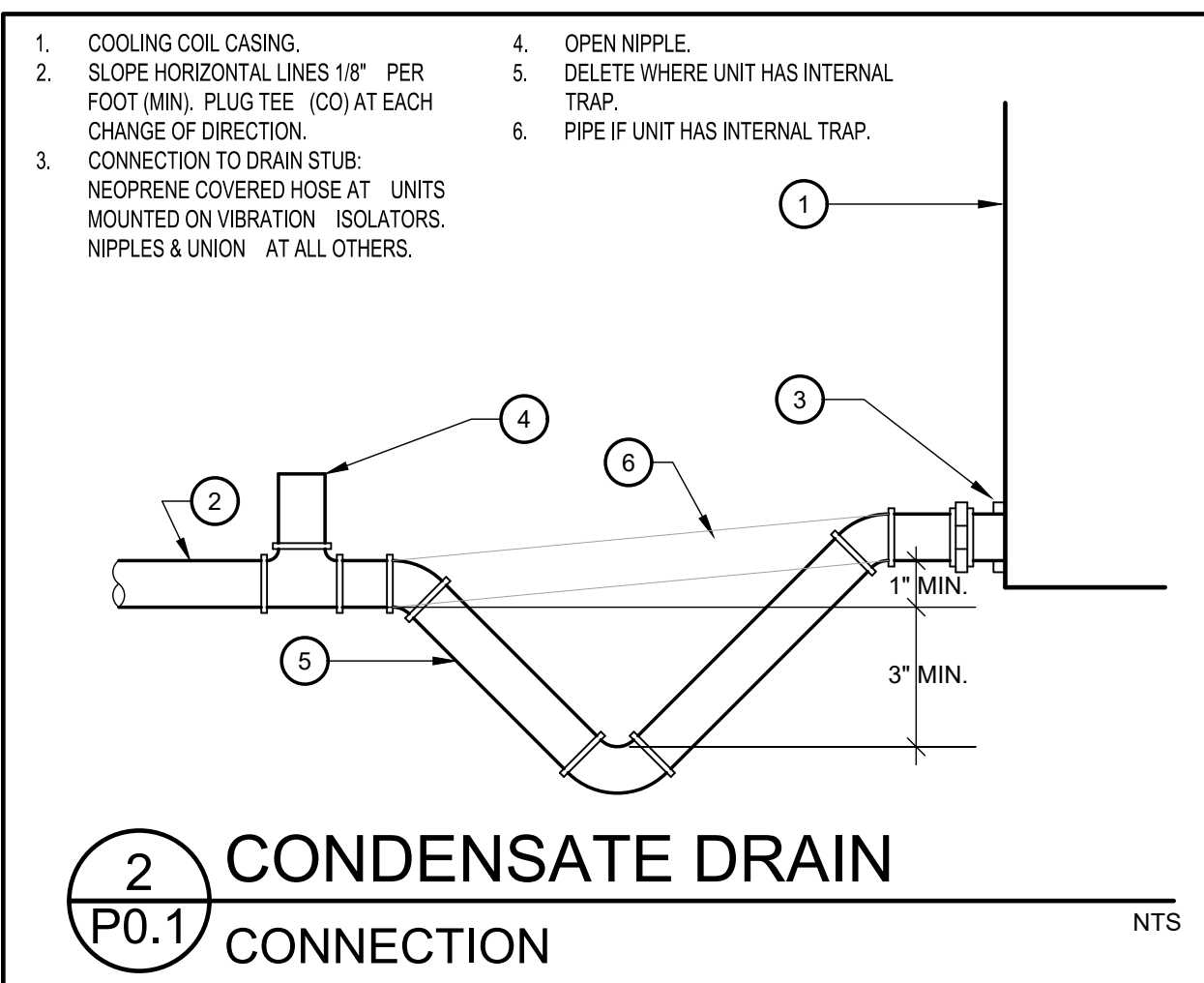
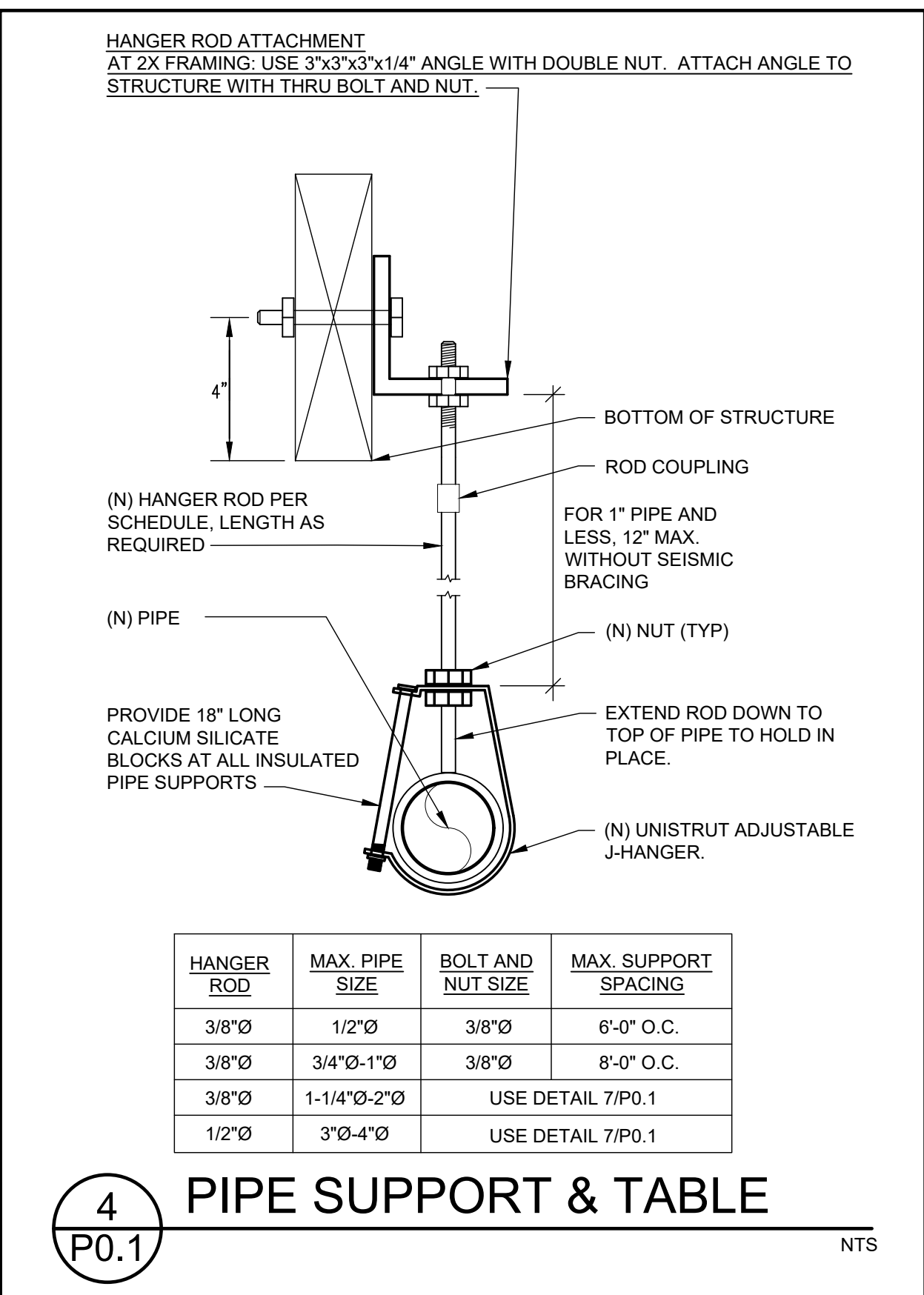
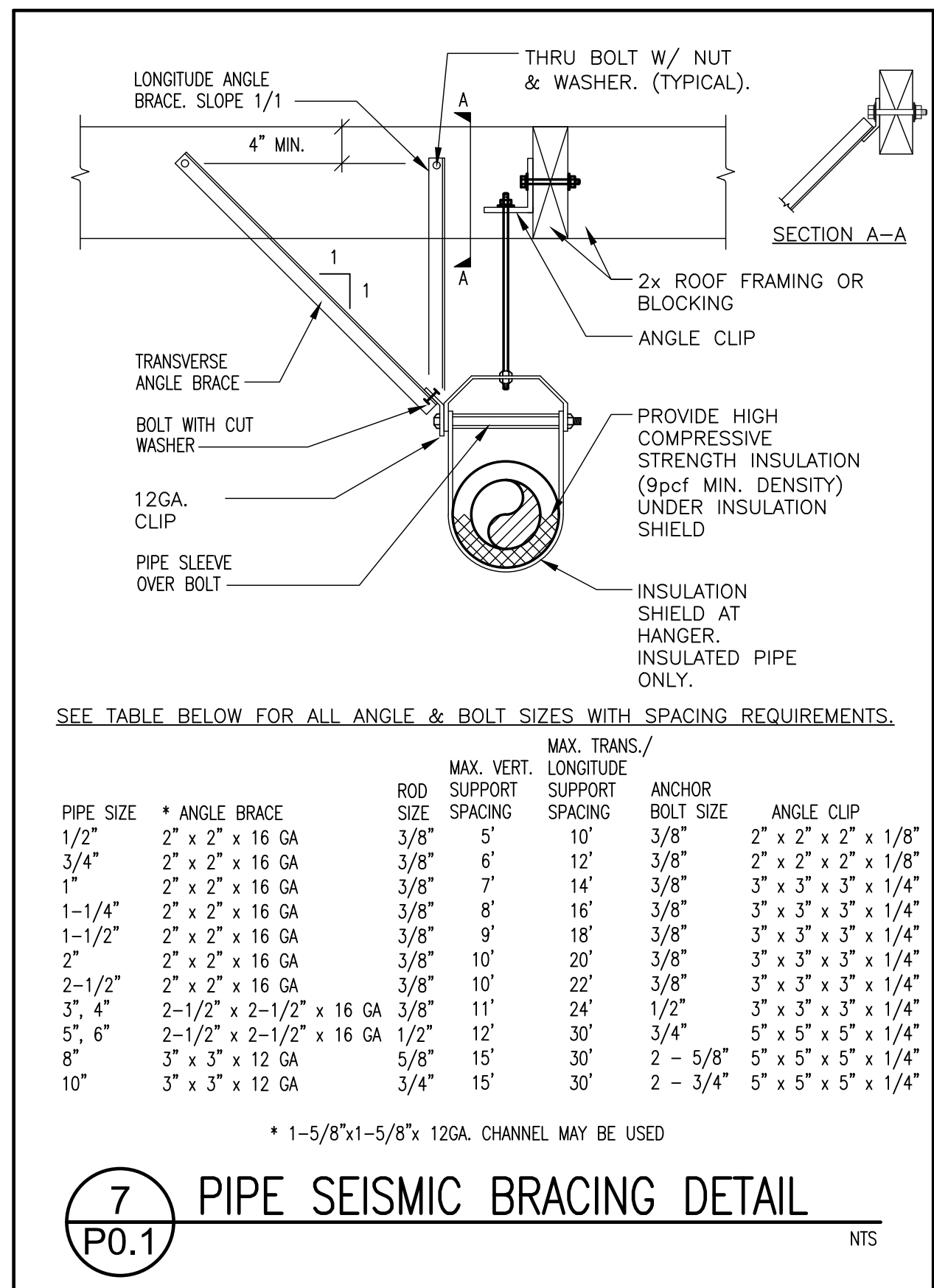
- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PLUMBING LEGEND		
SYMBOL	ITEM	ABBR.
	FIXTURE DESIGNATION	
	UNIT ABBREVIATION NUMBER	
	DETAIL DESIGNATION	
	DETAIL NUMBER	
	SHEET NO. WHERE SHOWN	
	DOMESTIC COLD WATER	CW
	DOMESTIC HOT WATER	HW
	DOMESTIC HW RETURN	HWR
	EXISTING PIPING	
	POINT OF CONNECTION	POC
	CONDENSATE DRAIN	
	SHUT-OFF VALVE IN BOX	SOV
	PIPING RISE	
	PIPING DROP	
	SOIL OR WASTE	S OR W
	VENT	V
	VENT THRU ROOF	VTR
	FLOOR CLEANOUT	FCO
	CLEANOUT TO GRADE	COTG
	WALL CLEANOUT	WCO
	HOSE BIBB	HB
	ROOF DRAIN	RD
	OVERFLOW DRAIN	OD
	DOWN SPOUT	DS
	UNDERGROUND	UG
	TRAP PRIMER	TP
	STORM DRAIN	SD
	EXISTING	EXIST.
	NEW	NEW
	UNDERFLOOR	UF
	OVERHEAD	OH
	RELIEF	
	DRAIN	
	CONDENSATE DRAIN CLEAN OUT	CO
	SECONDARY CONDENSATE DRAIN	
	FURNACE CONDENSATE	
	GAS SHUT OFF VALVE	GSOV
	CONDENSATE DRAIN TRAP	CDT
	LIQUIFIED PETROLEUM GAS	LPG
	NATURAL GAS	G
	FIRE SPRINKLER RISER	FSR
	FIRE SPRINKLER LINE	FSL
	FIRE DEPARTMENT CONNECTION	FDC
	FINISHED FLOOR	FF
	FLOW LINE	FL



PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTION 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

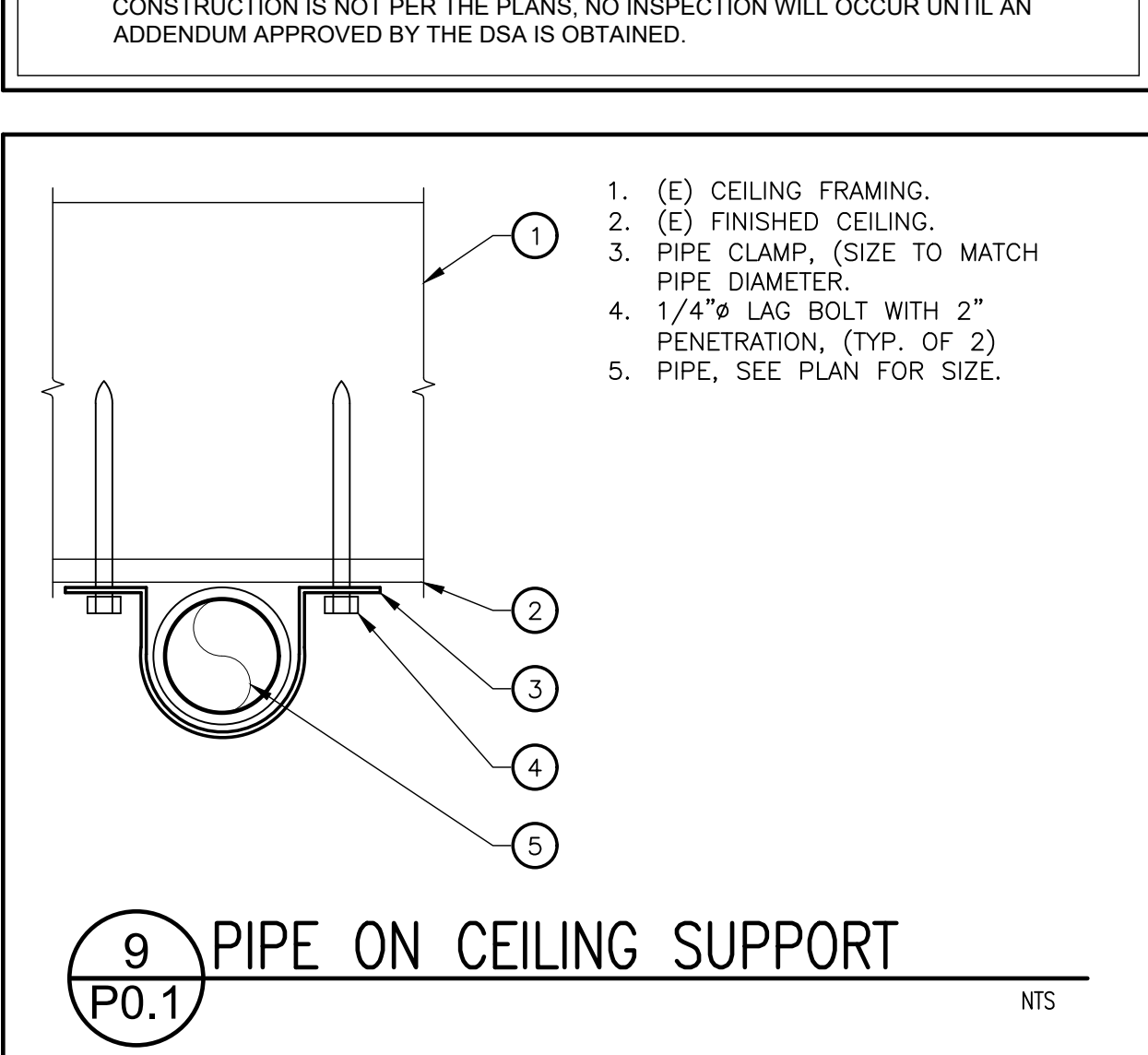
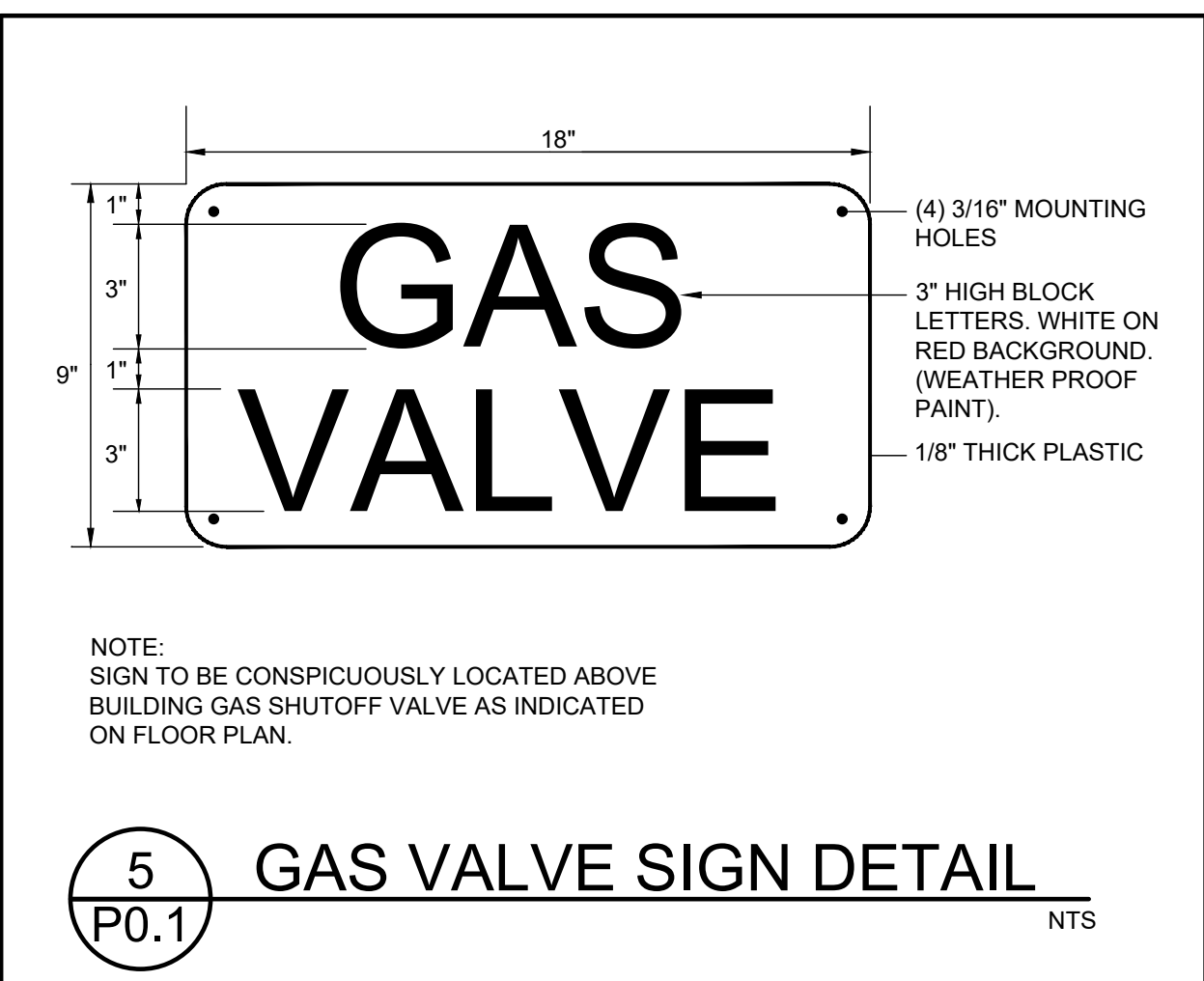
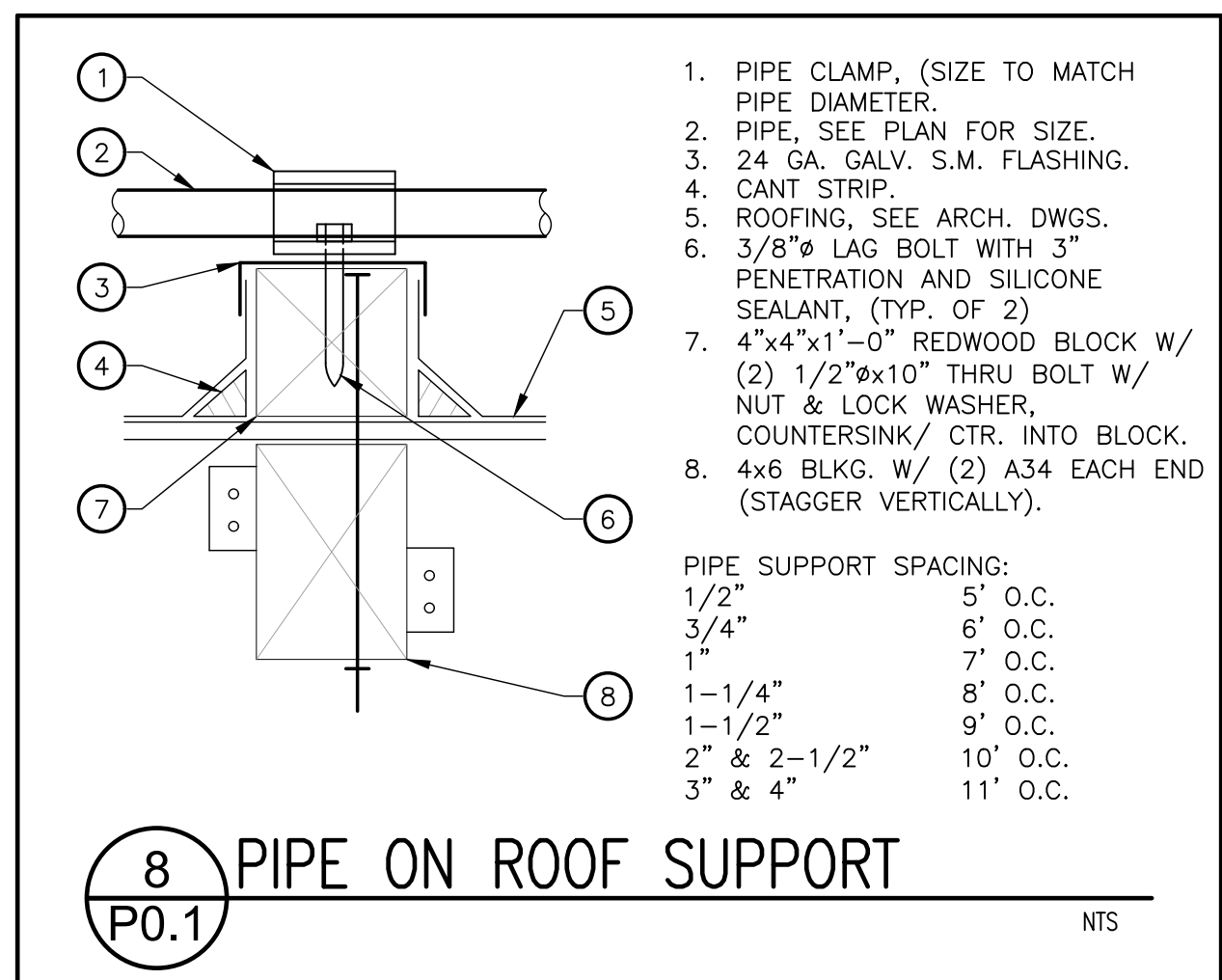
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☐ MD ☐ PP ☒ E ☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP ☐ MD ☐ PP ☒ E ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM-0295-13).

GENERAL PLUMBING NOTES

- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY EXISTING CONDITIONS WHICH CONFLICT WITH INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PIPE ROUTING WITH WORK OF OTHER TRADES AND MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH DUCTWORK, LIGHT FIXTURES, SKYLIGHTS, ETC.
- PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL GAS AND CONDENSATE DRAIN CONNECTIONS TO MECHANICAL EQUIPMENT.
- THERE ARE NO EXISTING PLUMBING PLANS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PLUMBING CONDITIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY EXISTING CONDITIONS WHICH CONFLICT WITH INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS.
- IF THE PLANS DO NOT ACCURATELY REFLECT THE JOB CONDITIONS, OR THE CONSTRUCTION IS NOT PER THE PLANS, NO INSPECTION WILL OCCUR UNTIL AN ADDENDUM APPROVED BY THE DSA IS OBTAINED.



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DSA #: 02-118068
FILE #: 20-30

PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.

No.	DATE	DESCRIPTION

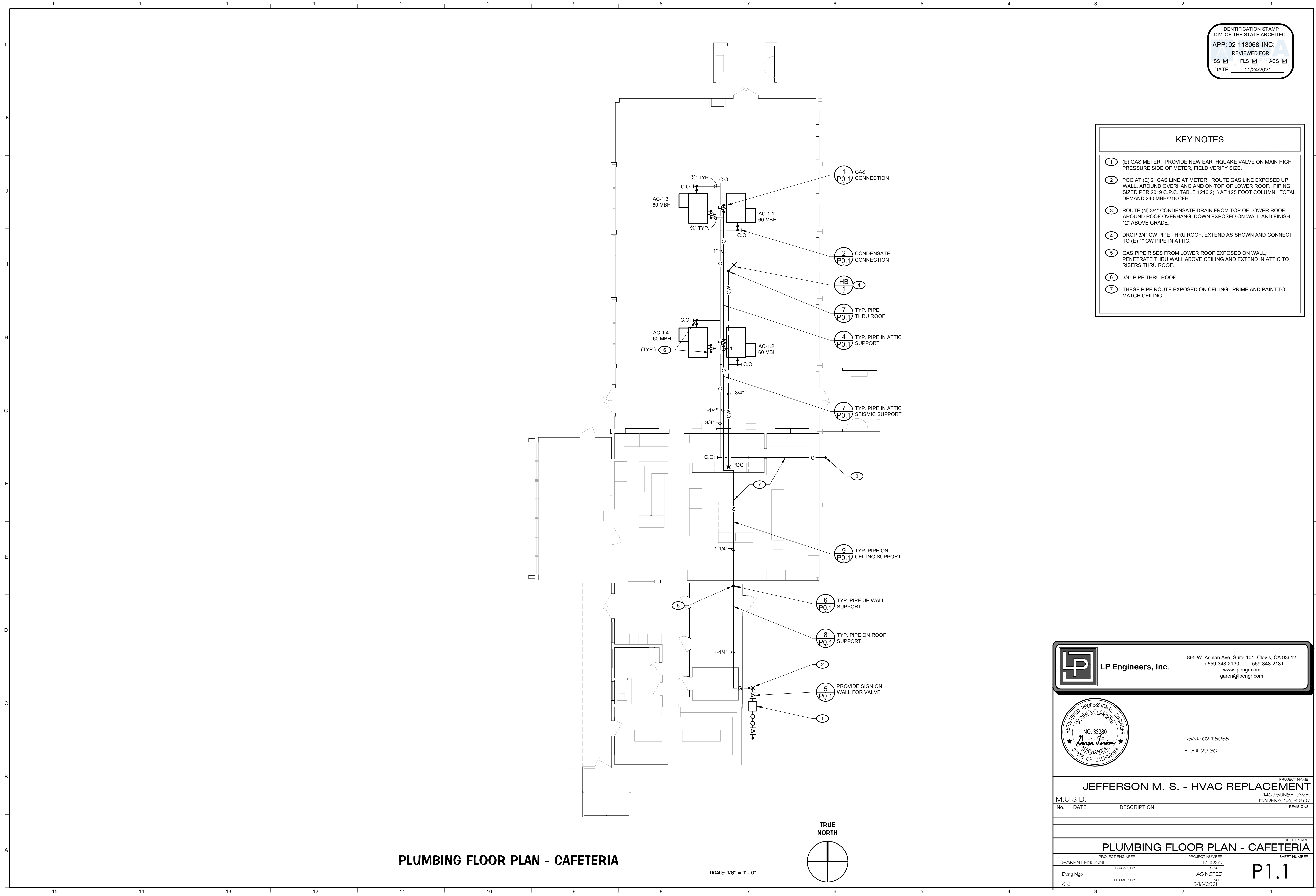
SHEET NAME
PLUMBING LEGEND, NOTES AND DETAILS

PROJECT ENGINEER	PROJECT NUMBER
GAREN LENCIONI	17-1060

DRAWN BY	SCALE
Dong Ngo	AS NOTED

CHECKED BY	DATE
K.K.	5/18/2021

P0.1



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

KEY NOTES

- 1 (E) GAS METER. PROVIDE NEW EARTHQUAKE VALVE ON MAIN HIGH PRESSURE SIDE OF METER, FIELD VERIFY SIZE.
- 2 POC AT (E) 2" GAS LINE AT METER. ROUTE GAS LINE EXPOSED UP WALL, AROUND OVERHANG AND ON TOP OF LOWER ROOF. PIPING SIZED PER 2019 C.P.C. TABLE 1216.2(1) AT 125 FOOT COLUMN. TOTAL DEMAND 240 MBH/218 CFH.
- 3 ROUTE (N) 3/4" CONDENSATE DRAIN FROM TOP OF LOWER ROOF. AROUND ROOF OVERHANG, DOWN EXPOSED ON WALL AND FINISH 12" ABOVE GRADE.
- 4 DROP 3/4" CW PIPE THRU ROOF, EXTEND AS SHOWN AND CONNECT TO (E) 1" CW PIPE IN ATTIC.
- 5 GAS PIPE RISES FROM LOWER ROOF EXPOSED ON WALL, PENETRATE THRU WALL ABOVE CEILING AND EXTEND IN ATTIC TO RISERS THRU ROOF.
- 6 3/4" PIPE THRU ROOF.
- 7 THESE PIPE ROUTE EXPOSED ON CEILING. PRIME AND PAINT TO MATCH CEILING.

LP Engineers, Inc.

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DSA #: 02-118068
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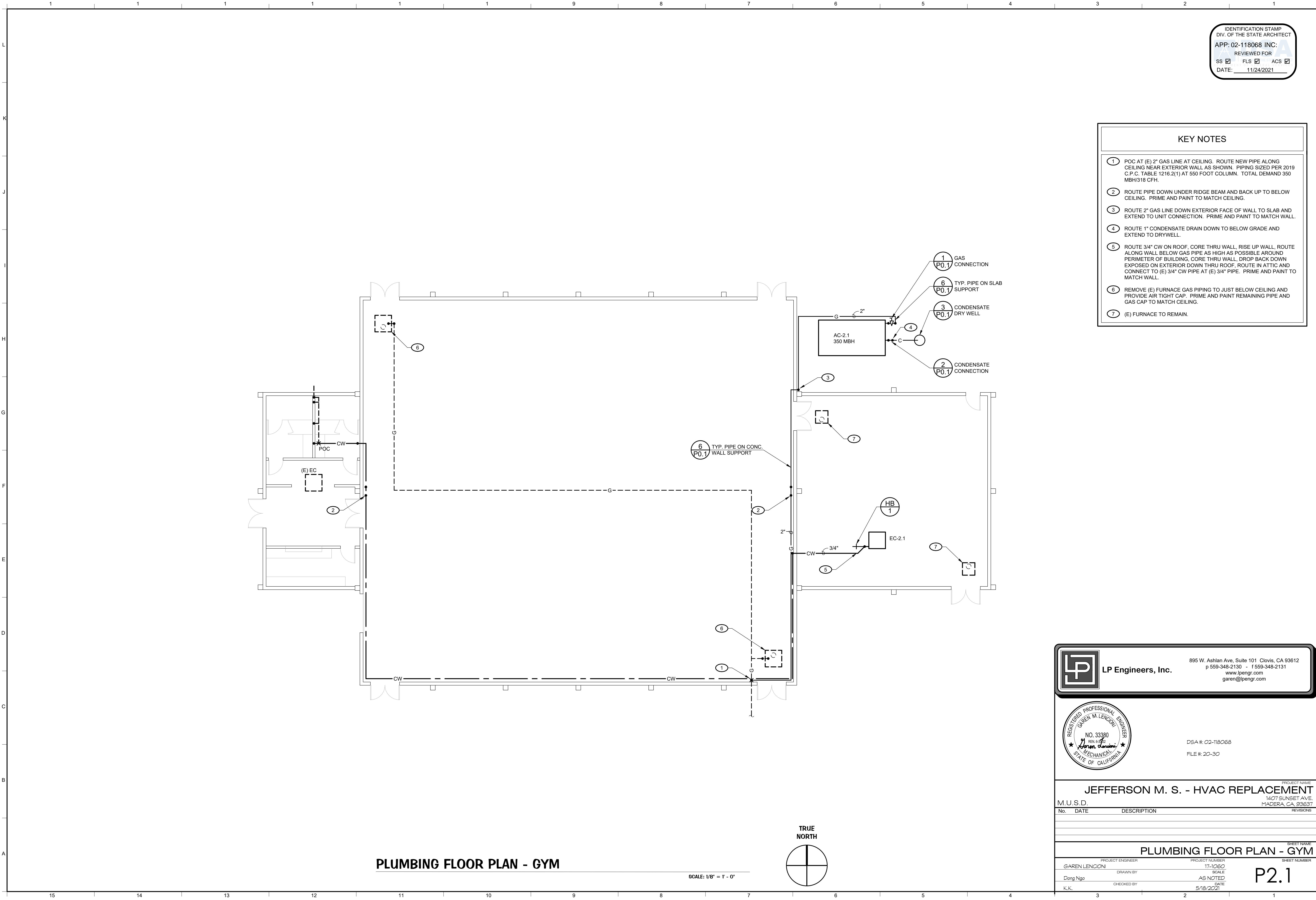
PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT
1407 SUNSET AVE.
MADERA, CA 93637

M.U.S.D.

No.	DATE	DESCRIPTION	REVISIONS

PROJECT ENGINEER		PROJECT NUMBER	
GAREN LENCONI	17-1060	SCALE	AS NOTED
Dong Ngo	DRAWN BY	DATE	5/18/2021
K.K.	CHECKED BY		

SHEET NAME
PLUMBING FLOOR PLAN - CAFETERIA
SHEET NUMBER
P1.1



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

KEY NOTES

- POC AT (E) 2" GAS LINE AT CEILING. ROUTE NEW PIPE ALONG CEILING NEAR EXTERIOR WALL AS SHOWN. PIPING SIZED PER 2019 C.P.C. TABLE 1216.2(1) AT 550 FOOT COLUMN. TOTAL DEMAND 350 MBH/318 CFH.
- ROUTE PIPE DOWN UNDER RIDGE BEAM AND BACK UP TO BELOW CEILING. PRIME AND PAINT TO MATCH CEILING.
- ROUTE 2" GAS LINE DOWN EXTERIOR FACE OF WALL TO SLAB AND EXTEND TO UNIT CONNECTION. PRIME AND PAINT TO MATCH WALL.
- ROUTE 1" CONDENSATE DRAIN DOWN TO BELOW GRADE AND EXTEND TO DRYWELL.
- ROUTE 3/4" CW ON ROOF. CORE THRU WALL. RISE UP WALL, ROUTE ALONG WALL BELOW GAS PIPE AS HIGH AS POSSIBLE AROUND PERIMETER OF BUILDING. CORE THRU WALL, DROP BACK DOWN EXPOSED ON EXTERIOR DOWN THRU ROOF, ROUTE IN ATTIC AND CONNECT TO (E) 3/4" CW PIPE AT (E) 3/4" PIPE. PRIME AND PAINT TO MATCH WALL.
- REMOVE (E) FURNACE GAS PIPING TO JUST BELOW CEILING AND PROVIDE AIR TIGHT CAP. PRIME AND PAINT REMAINING PIPE AND GAS CAP TO MATCH CEILING.
- (E) FURNACE TO REMAIN.

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DSA #: 02-118068
FILE #: 20-30

PROJECT NAME		
JEFFERSON M. S. - HVAC REPLACEMENT		
M.U.S.D. 1407 SUNSET AVE. MADERA, CA 93637		
No.	DATE	DESCRIPTION
SHEET NAME		
PLUMBING FLOOR PLAN - GYM		
SHEET NUMBER		
PROJECT ENGINEER	PROJECT NUMBER	SCALE
GAREN LENCIONI	17-1060	AS NOTED
Dong Ngo	DRAWN BY	DATE
K.K.	CHECKED BY	5/18/2021

P2.1

— / — A-1
 HOME RUN MINIMUM 3/4" CONDUIT
 SIZE PER CEC TABLE 3B
 — BRANCH CIRCUIT NO.
 — NUMBER OF CONDUCTORS
 SIZE PER PANEL SCHEDULE
 LIGHT FIXTURE WITH J-BOX
 [E] [A]
 — FIXTURE TYPE
 — SWITCHING
 — BRANCH CIRCUIT
 [] DISTRIBUTION PANEL
 [] TERMINAL CABINET
 [] JUNCTION BOX
 [] WALL BRACKET OUTLET
 [] FLUORESCENT FIXTURE
 [] CEILING OUTLET
 — BRANCH CIRCUIT NO.
 [] 3 DUPLX OUTLET
 AT +18" AFF TO THE BOTTOM OF OUTLET BOX U.N.O.
 [] FLOURPLEX CONVENIENCE OUTLET
 AT +18" AFF TO THE BOTTOM OF OUTLET BOX U.N.O.
 [] W.P. WEATHERPROOF OUTLET
 AT +18" AFF TO THE BOTTOM OF OUTLET BOX U.N.O.
 [] I.G. ISOLATE GROUND OUTLET
 AT +18" AFF TO THE BOTTOM OF OUTLET BOX U.N.O.
 [] GFI OUTLET WITH GROUND FAULT INTERRUPTER
 AT +18" AFF TO THE BOTTOM OF OUTLET BOX U.N.O.
 [] 220V DEDICATE OUTLET
 AT +18" AFF TO THE BOTTOM OF OUTLET BOX U.N.O.
 [] WALL SWITCH +48" AFF TO TOP OF OUTLET BOX
 — — CONDUIT RUN UNDER FLOOR
 — CONDUIT RUN IN CEILING AND IN WALL
 [] MOTOR DISCONNECT FUSED SWITCH
 C CONDUIT RACEWAY
 (N) NEW
 (E) EXISTING TO REMAIN IN SERVICE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DATA APPROVED CONSTRUCTION DOCUMENTS, WHERE NO DETAILS IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACKET TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1671-1.16 THROUGH 1671-1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER, "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY OR MOVABLE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENTS IS REQUIRED TO BE RESTRAINED IN A MANNER PROVIDED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OF STRUCTURAL ENGINEERS DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PUMP, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTION 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENT ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SHAMSHI OR OTHER OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE SITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM (E):

MP ☐ MD ☐ PP ☐ E ☒ — OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP ☐ MD ☐ PP ☐ E ☐ — OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) .

- 2) APPLICABLE STANDARD 2019 NFPA 72
- 3) INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING OF EACH COMPONENT OF EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
- 4) COMPLETION OF THE INSTALLATION OF THE SYSTEMS, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT ENGINEER.
- 5) A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
- 6) ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA PROJECT ARCHITECT PRIOR TO THE START OF THE WORK.
- 7) DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
- 8) PENETRATIONS THROUGH RAISED ASSEMBLIES, REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
- 9) WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
- 10) WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
- 11) AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (Dba) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 Dba ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST TWO SECONDS. IF THE NOISE LEVEL IS GREATER, IN EVERY OCCUPABLE SPACE WITHIN THE BUILDING.
- 12) AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
- 13) THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
- 14) VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDLES. VISUAL DEVICES WITHIN 5' FROM EACH OTHER SHALL BE SYNCHRONIZED.
- 15) UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVAL FOR WET LOCATIONS.
- 16) ALL FIRE ALARM WIRING SHALL BE IN RATED PLASTIC FIRE POWER LIMITED OR FIRE POWER LIMITED (PLenum) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THIN OR THWN.
- 17) PER NEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPICE THE WIRE. ALL BOXES TO BE SIZED PER NEC.
- 18) SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR RENOVATION, DETECTORS SHALL BE NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
- 19) ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE, RACEWAY OR OPEN CONDUIT. ALL WIRING SHALL BE ABOVE FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN APPROVED AS EXPOSED BY THE DSA PROJECT ARCHITECT.
- 20) FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 15 LBS. WITHOUT SPECIAL SUPPORT.
- 21) A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE CIRCUIT SHALL BE BREAKER LABELED "FIRE ALARM" AND THE HANDLE IN THE "ON" POSITION, THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE IDENTIFIED BY FIRE PANEL/EXTENDERS.
- 22) THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURE 10.18.2.1.1.
- 23) CONTROL PANELS, REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48"
- 24) THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING AND SUPERVISORY MONITORING PER NFPA 72 SECTION 901.6.1.
- 25) SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
- 26) OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.

1. VERIFY EXACT LOCATIONS OF ALL ELECTRICAL EQUIPMENT ON SITE BEFORE STARTING WORK.
2. ELECTRICAL CONTRACTOR SHALL APPRISE HIMSELF OF ALL EXISTING ELECTRICAL CONDITIONS AT SITE PRIOR TO BID.
3. ELECTRICAL CONTRACTOR TO HOOK UP ALL MOTOR CONTROL SYSTEM AS PER MECHANICAL & PLUMBING PLANS.
4. CIRCUIT BREAKERS USED TO SWITCH FLUORESCENT FIXTURES TO BE APPROVED FOR SWITCHING DUTY.
5. PROVIDE MINIMUM 36" WORK CLEARANCE IN FRONT AND 30" WIDE WORK SPACE FOR SERVICE / PANEL / EQUIPMENT.
6. ALL EQUIPMENT TO HAVE TESTING LABORATORY LABEL ATTACHED. (UL, OSHA, ...)
7. SWITCHES TO BE MAXIMUM OF +48" AFF AT TOP AND A MINIMUM OF +36" AFF TO BOTTOM OF THE OUTLET BOX (UNO).
8. RECEPTACLE TO BE A MINIMUM OF 18" TO BOTTOM FROM FINISH FLOOR (AFF). UNLESS NOTED OTHERWISE (UNO).
9. PROVIDE WEATHERPROOF (WP) GROUND FAULT INTERRUPTED (GFI) RECEPTACLE WITHIN 25 FEET OF ALL HVAC UNITS ON ROOF.
10. GROUND ALL ELECTRICAL EQUIPMENT AS PER TITLE 24 AND CALIFORNIA ELECTRICAL CODE (CEC), SECTION 250.
11. LED AND FLUORESCENT BALLASTS SHALL MEET THE CERTIFICATION REQUIREMENTS OF ARTICLE 2-5314 (A) OF CALIFORNIA ENERGY STANDARDS, TITLE 24.
12. SURFACE MOUNTED FIXTURES SHALL BE SECURED TO BLDG. STRUCTURE, NO TOGGLE BOLTS SHALL BE ALLOWED.
13. PENETRATIONS OF FIRE RATED WALLS, CEILINGS OR FLOOR SHALL COMPLY WITH UBC REQUIREMENTS.
14. NO BACK TO BACK RECEPTACLES SHALL BE INSTALLED IN FIREWALLS. MAINTAIN HORIZONTAL SEPARATION OF 24" BETWEEN RECEPTACLES.
15. EXACT LOCATION OF ALL EQUIP., SWITCH, DATA OUTLET, PHONE JACK AND RECEPTACLE ETC. TO BE VERIFY WITH OWNER IN FIELD.
16. ALL WIRING SHALL BE INSTALLED IN CONDUIT RACEWAY. PVC SCH. 40 CONDUIT BELOW GRADE, EMT CONDUIT CONCEAL IN WALL AND ABOVE CEILING, RIGID STEEL CONDUIT ON EXTERIOR WALL OR ROOF.
17. THE LOCATION AND ROUTE OF CONDUITS AND RACEWAYS IN ALL ELECTRICAL DRAWINGS IN THESE SPECIFICATIONS DOCUMENT ARE MINIMUM. ALL CONDUIT RACEWAYS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE WITH THE MINIMUM LENGTH AS POSSIBLE.
18. ELECTRICAL CONTRACTOR SHALL FILED VERIFY ALL EXISTING OVERHEAD AND UNDERGROUND UTILITY SERVICE SUCH AS POWER, TELEPHONE, CATV, GAS, WATER AND SEWER. PROVIDE MINIMUM SEPARATION CLEARANCE PER UTILITY COMPANY REQUIREMENT FOR ALL NEW ELECTRICAL EQUIPMENT AND WIRING INSTALLATION.
19. ELECTRICAL CONTRACTOR SHALL ARRANGE A MEETING WITH LOW VOLTAGE CONTRACTORS (FIRE, SECURITY, TELEPHONE, COMPUTER AND CATV), REVIEW THEIR EQUIPMENT AND DRAWINGS, INCLUDING ALL ELECTRICAL REQUIREMENTS, IF THE SCOPE OF WORK BEFORE SUBMITTING THE BID.
20. 110V 20A BRANCH CIRCUIT SHALL BE DEDICATED NEUTRAL AND GROUNDING CONDUCTOR, SEE PANEL SCHEDULES.
21. OUTLET BOXES BETWEEN INTERIOR ROOMS CANNOT COPY THE SAME WAY OF WALL STUDS, OTHERWISE PROVIDE SEALING MATERIAL FOR SOUND CONTROL PURPOSES.

A ACERES
AC AFF ALTERNATING CURRENT
AH ABOVE FINISHED FLOOR
AH AIR HANDLER
AIH AMPERES INTERRUPTING CAPACITY
AMP AMPERES
A/C AIR CONDITIONER
BKBD BACKBOARD
C CONDUIT
CB CIRCUIT BREAKER
CU COPPER
CCTV CLOSED CIRCUIT TELEVISION
CEIL CEILING
CKT CIRCUIT
COMM COMMUNICATION
CONT CONTINUED
DIST DISTRIBUTION
EDF ELECTRICAL DRINKING FOUNTAIN
EMB EMBEDMENT
EMT ELECTRICAL METALLIC TUBING
EXP EXPANSION
FACP FIRE ALARM CONTROL PANEL
FCI FAN COIL UNIT
GF GROUND FAULT INTERRUPTED
GRD GROUND
GNC GALVANIZED RIGID CONDUIT
IC INTERCOM
IMC INTERMEDIATE METALLIC CONDUIT
KVA KILOWATTAMPERE
LAN LOCAL AREA NETWORK
LTO LIGHTING
LTL MAIN LUGS ONLY
MSBD MAIN SWITCHBOARD
MT'D MOUNTED
NFD NOT FUSED DISCONNECT
N/L NIGHT LAMP
PA PUBLIC ADDRESS
PB PULL BOX
PAL ELECTRICAL LIGHTING OR POWER PANEL
PVC POLYVINYL CHLORIDE
P.G.& E. PACIFIC GAS & ELECTRIC
RC RELAY CABINET
REC RECEPTACLE
REQ'D REQUIREMENT
STD STANDARD(S)
SW SWITCH
SWBD SWITCHBOARD
TERMINAL TERMINAL CABINET
TEL TELEPHONE
TERM TERMINAL
TV TELEVISION
TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP TYPICAL
T/C TIME CLOCK
UTP UNTWIST PAIR
U.O.N. UNLESS OTHERWISE NOTED
V VOLTS
WH WATER HEATER
WP WEATHERPROOF

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS
TITLE 24 CCR, PART 1 – 2019 BUILDING STANDARDS ADMINISTRATIVE CODE (CABC) (2019 CCR, PART 2 – 2019 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC) (2019 CCR, ABC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 3 – 2019 ELECTRICAL CODE (CEC) (2019 NEC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 4 – 2019 CALIFORNIA MECHANICAL CODE (CMC) (2019 IPMVC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 5 – 2019 CALIFORNIA PLUMBING CODE (CPC) (2019 IPMVC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 6 – 2019 CALIFORNIA ENERGY CODE (CEC) (2019 CEC, PART 7 – 2019 CALIFORNIA ELEVATOR SAFETY CONSTRUCTION CODE)
TITLE 24 CCR, PART 9 – 2019 CALIFORNIA FIRE CODE (CC) (2019 IFCM AS AMENDED BY CA.)
TITLE 24 CCR, PART 12 – 2019 CALIFORNIA REFERENCED STANDARDS (FURNAL LIST SEE CBC CH. 35 AND CFC CH. 45)
2019 NFPA 13, INSTALLATION OF SPRINKLER SYSTEM (CA. AMENDED)
2019 NFPA 14, DRY CHEMICAL EXTINGUISHING SYSTEMS
2019 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS
2019 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2019 NFPA 25, INSPECTION, TESTING, MAINTENANCE OF WATER-BASE FIRE PROTECTION SYSTEMS
2019 NFPA 72, NATIONAL FIRE ALARM CODE (CA. AMENDED); SEE UL STD 1971 FOR "VISUAL DEVICES"


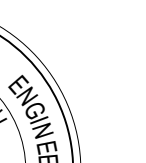
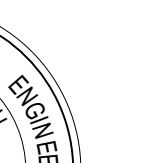
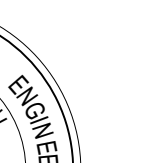
1. SOURCE OF POWER HAS BEEN INVESTIGATED AND IS ADEQUATE FOR THE ADDITIONAL LOAD.
2. SITE INSPECTOR IS TO WITNESS AND VERIFY GROUNDING TEST
3. CONTRACTOR TO MONITOR EXISTING FIRE ALARM SYSTEM IF IT IS INTERRUPTED OR DISCONNECTED.

1. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING DEMOLITION PLANS, DISCONNECT THE ELECTRICAL DEVICES TO BE REMOVED. REMOVE ASSOCIATED CONDUIT AND WIRING. PROVIDE JUNCTION BOX AND CAP THE EXISTING CIRCUITS FOR FUTURE USE.
2. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING DEMOLITION PLANS, DISCONNECT THE ELECTRICAL DEVICES TO BE RELOCATED/INSTALLED. DISCONNECT THE ELECTRICAL DEVICES PER ORIGINAL CONDITION AND CONTROL REQUIREMENT. PROVIDE PULL BOX AND JUNCTION BOX AS REQUIRED TO EXTEND THE EXISTING BRANCH CIRCUITS TO THE NEW LOCATION. PROVIDE NEW CONDUIT AND CONDUCTORS AS REQUIRED.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES WERE TAKEN FROM SOURCES BELIEVED TO BE RELIABLE, HOWEVER, THEY HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THIS ENGINEER. THE CONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

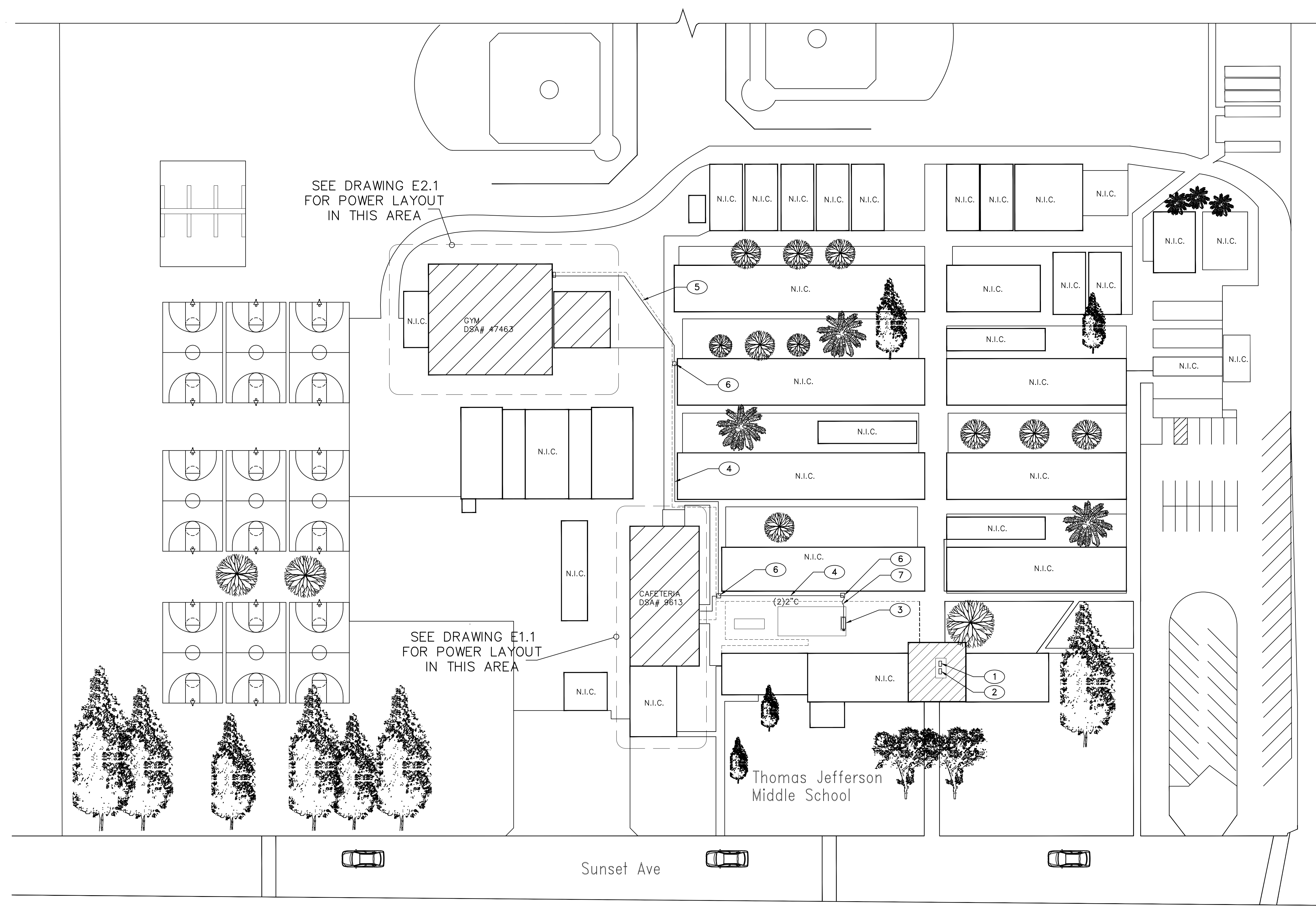
ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL, THE CALIFORNIA ELECTRICAL CODE; THE SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY AND OTHER APPLICABLE STATE LAWS OR REGULATIONS. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THIS SUBJECT. CAC 2019, CBC 2019, CMC 2019, CPC 2019, CEC 2019, NFPA, STATE OF CALIFORNIA ENERGY CONSERVATION REGULATION, TITLE 24 2019.

E0.1	SYMBOLS AND NOTES
E0.2	SITE PLAN – POWER
E0.3	SITE PLAN – FIRE ALARM
E1.1	POWER PLAN – CAFETERIA
E1.2	FIRE ALARM PLAN – CAFETERIA
E2.1	POWER PLAN – GYM
E2.2	FIRE ALARM PLAN – GYM
E3.1	FA RISER DIAGRAM BATTERY CALCULATION
E3.2	SINGLE LINE DIAGRAM & DETAILS

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		DSA # 02-118068 FILE # 20-30	
		PROJECT NAME JEFFERSON M. S. - HVAC REPLACEMENT 1407 SUNSET AVE. MADERA, CA, 93637	
M.U.S.D.		REVISIONS	
No.	DATE	DESCRIPTION	
PROJECT ENGINEER		SHEET NAME	
		SYMBOLS AND NOTES	
		SHEET NUMBER	
		PROJECT ENGINEER	
		DATE	
DRAWN BY		SCALE	
		AS NOTED	
		DATE	
CHECKED BY		8/24/2020	

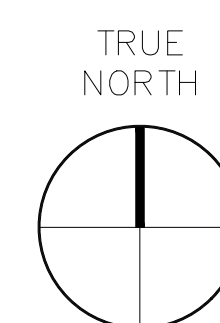
KEY NOTES

- ① APPROXIMATE LOCATION FOR EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL TO REMAIN. PROVIDE CONNECTION TO NEW FIRE ALARM DEVICES PER PLANS, UPDATE NEW FIRE ZONE MAP AND PROGRAM NEW DEVICES INFORMATION, MEASURE ACTUAL LOAD CURRENT AND VOLTAGE DROP FOR EACH NAC SIGNAL CIRCUITS, AND FACP STANDBY CURRENT AND ALARM CURRENT. SEND THE REPORT TO OWNER AND ENGINEER FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.
- ② FURNISH AND INSTALL A NEW FIRE ALARM DIGITAL VOICE COMMAND CENTER AND INTER CONNECT TO THE EXISTING FIRE ALARM CONTROL PANEL. SURFACE MOUNT NEXT TO (E) FACP IN ADMIN OFFICE. PROVIDE FIREMAN HAND SET PHONE INSIDE CABINET. PROVIDE POWER CONNECTION AND CONNECT TO EXISTING FACP DEDICATED CIRCUIT. SEE FA RISER DIAGRAM. FIELD VERIFY EXACT LOCATION.
- ③ EXISTING 1600A 480V SWITCHBOARD TO REMAIN. PROVIDE NEW MATCHING BREAKER AND POWER CONNECTION FOR NEW HVAC EQUIPMENT PER PLANS. PROVIDE OVERHEAD SURFACE CONDUIT FOR NEW CONDUITS AND FEEDERS INSTALLATION. FIELD VERIFY LOCATION.
- ④ NEW 2" EMT CONDUIT WITH NEW POWER FEEDER ON COVER WALKWAY. SEE DETAIL 2/E3.2 AND SINGLE LINE DIAGRAM 1/E3.2.
- ⑤ NEW UNDERGROUND 2" PVC CONDUIT WITH NEW POWER FEEDER. SAW CUT AND PATCH EXISTING FLOOR AS REQUIRED. SEE SINGLE LINE DIAGRAM 1/E3.2 AND DETAIL 10/E3.2.
- ⑥ FURNISH AND INSTALL A NEW FIRE ALARM JUNCTION BOX ON COVER WALKWAY, 12"x12"x4" NEMA3B WITH NEW CONDUIT AND POWER FEEDERS PER PLANS.
- ⑦ FURNISH AND INSTALL NEW WP FLEX CONDUIT BETWEEN COVER WALKWAY AND EQUIPMENT YARD CMU WALL.



SITE PLAN – POWER

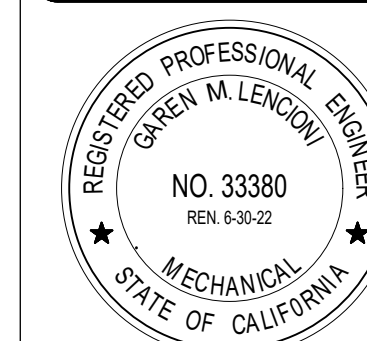
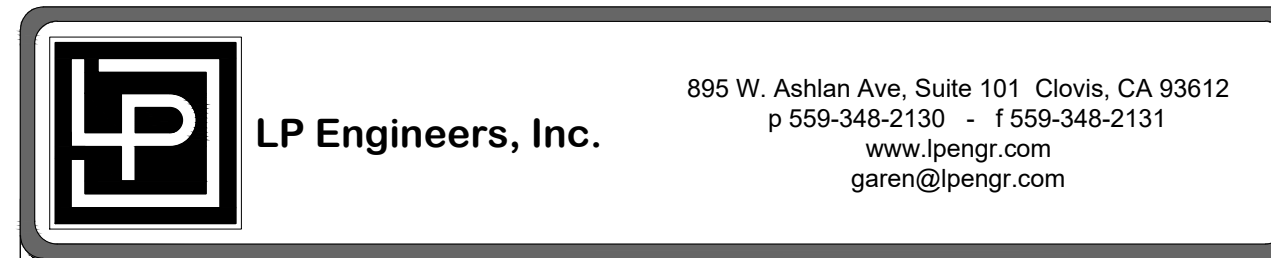
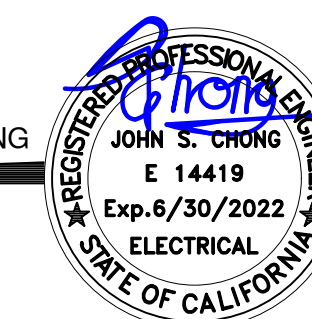
SCALE: 1" = 40' - 0"



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DSA # 02-118068
FILE # 20-30

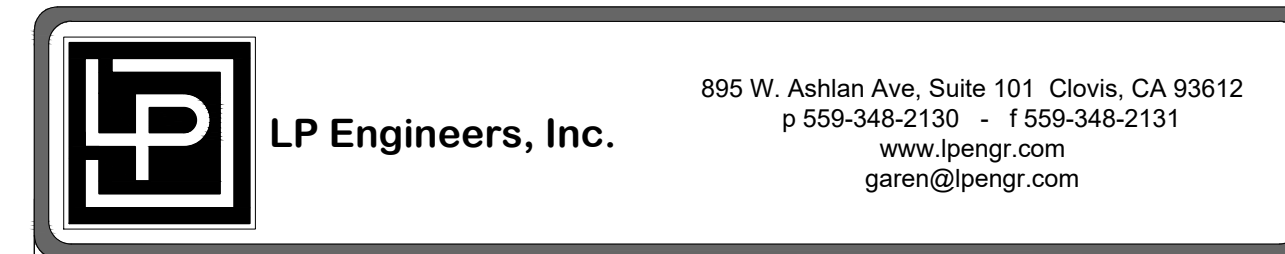
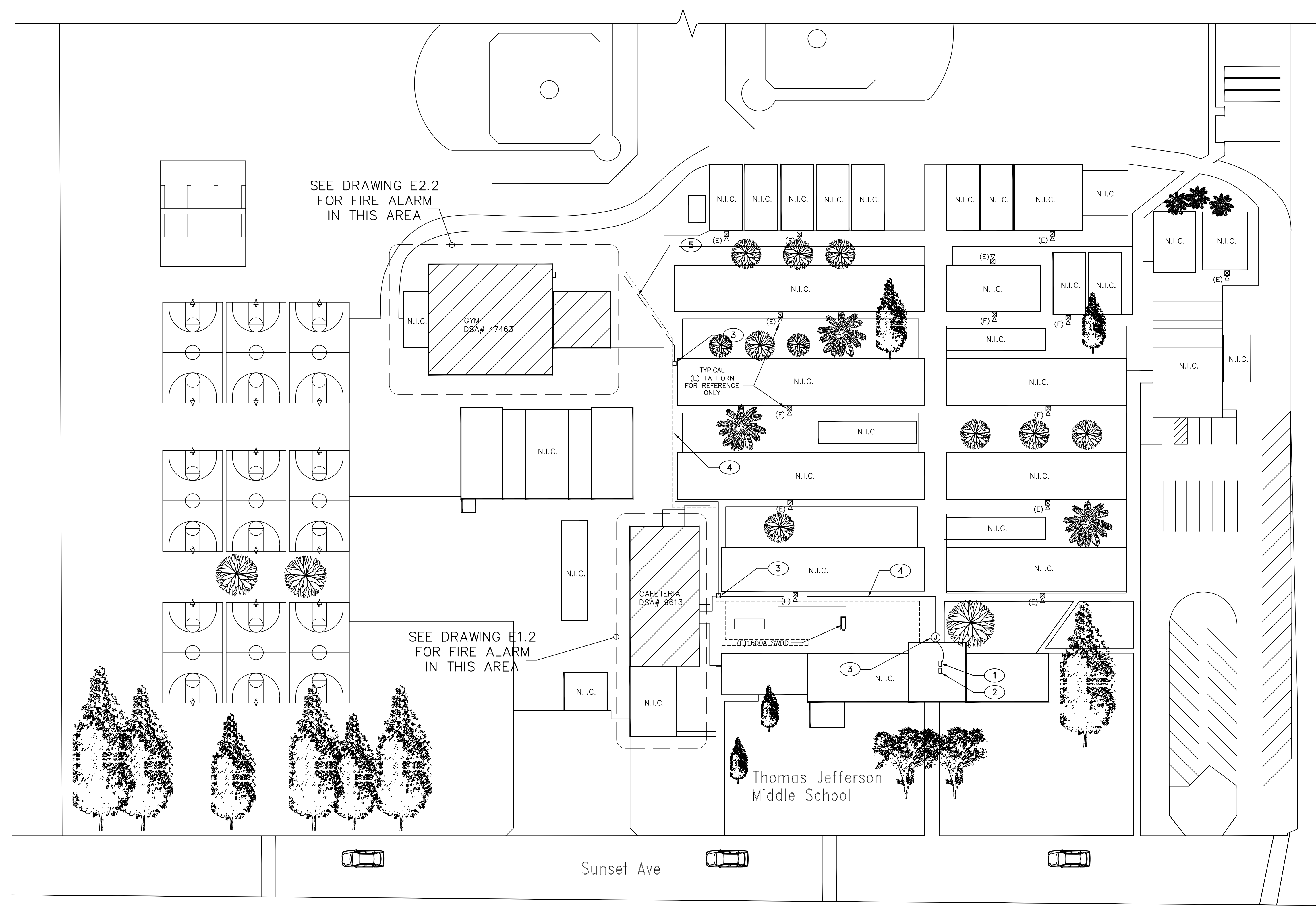
PROJECT NAME
JEFFERSON M. S. - HVAC REPLACEMENT
 M.U.S.D. 1407 SUNSET AVE
 MADERA, CA, 93637

No.		DATE	DESCRIPTION	SHEET NAME SITE PLAN - POWER SCALE AS NOTED DATE 8/24/2020	
				SHEET NUMBER E0.2	
PROJECT ENGINEER				SHEET NUMBER	
DRAWN BY					
CHECKED BY					

E0.2

KEY NOTES

- ① APPROXIMATE LOCATION FOR EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL TO REMAIN. PROVIDE CONNECTION TO NEW FIRE ALARM DEVICES PER PLANS, UPDATE NEW FIRE ZONE MAP AND PROGRAM NEW DEVICES INFORMATION. MEASURE ACTUAL LOAD CURRENT AND VOLTAGE DROP FOR EACH NAC SIGNAL CIRCUITS, and FACP STANDBY CURRENT and ALARM CURRENT. SEND THE REPORT TO OWNER AND ENGINEER FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.
- ② FURNISH AND INSTALL A NEW FIRE ALARM DIGITAL VOICE COMMAND CENTER AND INTER CONNECT TO THE EXISTING FIRE ALARM CONTROL PANEL. PROVIDE CONNECTION TO (2) FACP IN ADMIN OFFICE. PROVIDE FIREMAN HAND SET PHONE INSIDE CABINET. SEE FA RISER DIAGRAM. FIELD VERIFY EXACT LOCATION.
- ③ FURNISH AND INSTALL A NEW FIRE ALARM JUNCTION BOX ON CORRIDOR WALKWAY, 4"x4"x4" NEW WITH NEW CONDUIT AND FA CABLE TO NEW FA DEVICES PER PLANS.
- ④ NEW 1" EMT CONDUIT WITH NEW FA CABLE ON COVER WALKWAY. SEE DETAIL 2/E3.2.
- ⑤ NEW UNDERGROUND 2" PVC CONDUIT WITH NEW FA CABLE. SAW CUT AND PATCH EXISTING FLOOR AS REQUIRED. SEE DETAIL 10/E3.2.



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PROJECT NAME: JEFFERSON M. S. - HVAC REPLACEMENT
1407 SUNSET AVE.
MADERA, CA, 93637
M.U.S.D.

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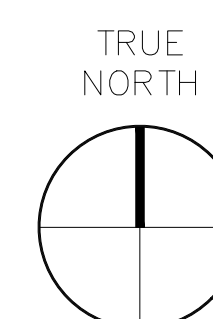
SHEET NAME

SITE PLAN - FIRE ALARM

E0.3

SITE PLAN - FIRE ALARM

SCALE: 1" = 40' - 0"



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J O H N C H O N G E N G I N E E R I N G

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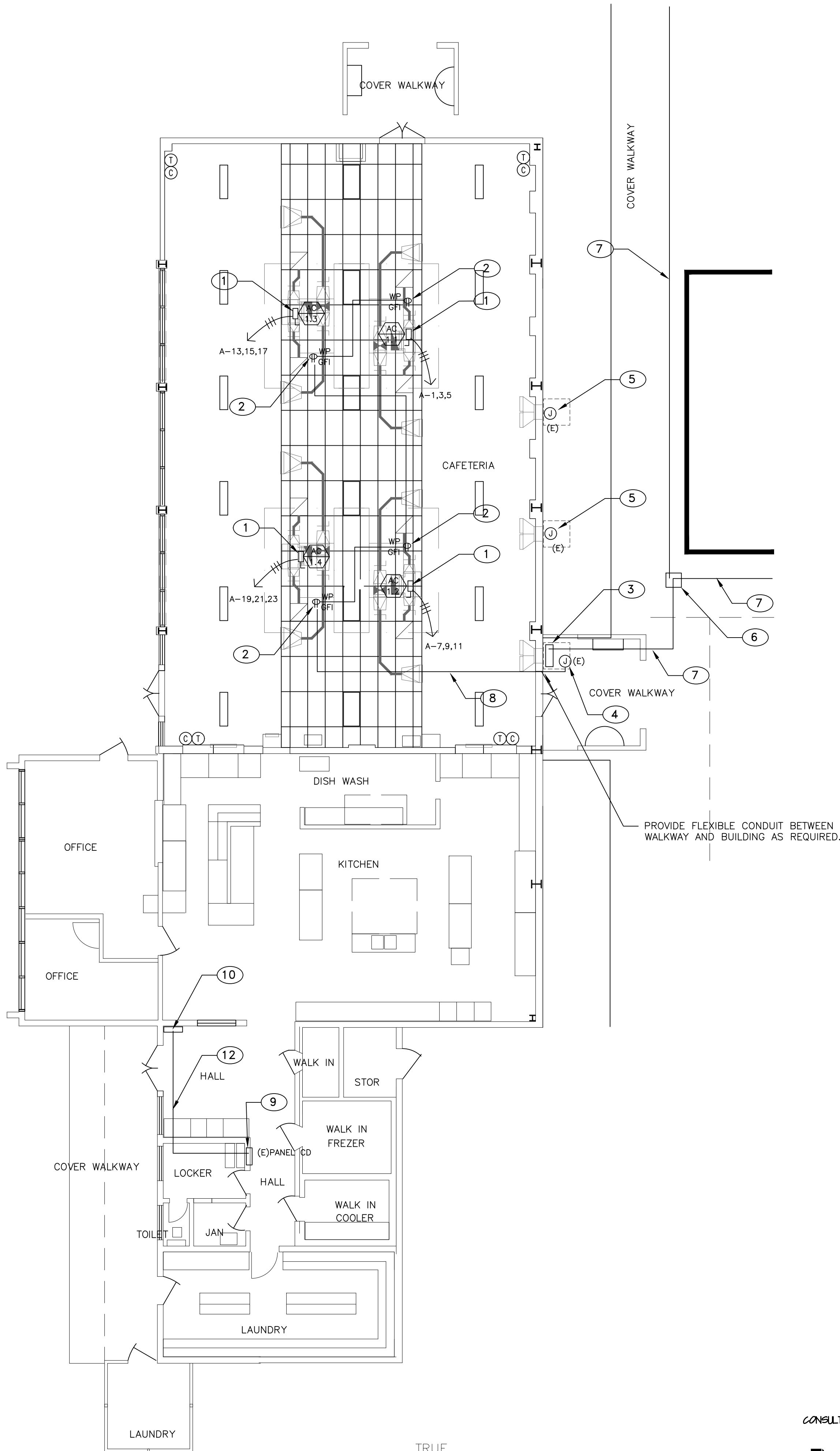
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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-118068 INC:
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SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

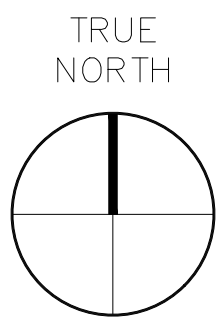
KEY NOTES

- 1 PROVIDE WP DISCONNECT SWITCH AND POWER CONNECTION FOR NEW HVAC UNIT ON ROOF. PROVIDE SHUT TRIP BREAKER FOR POWER SHUT DOWN WHEN CO OR SMOKE IS DETECTED INSIDE BUILDING. PROVIDE INTERLOCK WIRING TO FACP. SEE MECH PLANS FOR POC LOCATION AND ALL REQUIREMENT.
- 2 PROVIDE WP GFCI OUTLET ON ROOF. FIELD VERIFY LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
- 3 PROVIDE NEW PANEL AND SURFACE MOUNTED ON EXTERIOR WALL. SEE DETAIL 6/E3.2 AND SINGLE LINE DIAGRAM.
- 4 DISCONNECT EXISTING WATER COOLER CIRCUIT. REUSE EXISTING CIRCUIT FOR NEW GFCI OUTLETS ON ROOF PER PLANS.
- 5 DISCONNECT EXISTING WATER COOLER CIRCUIT. REMOVE ASSOCIATED CONDUITS AND WIRING. PULL OUT EXISTING CONDUCTORS FROM THE SOURCE PANEL AND UPDATED PANEL DIRECTOR AS "SPARE".
- 6 12"x12"x4" NEMA 3R PULL CAN ABOVE COVER WALKWAY. SEE SITE PLAN AND FIELD VERIFY EXACT LOCATION.
- 7 NEW CONDUITS AND WIRING ABOVE COVER WALKWAY. SEE DETAIL 2/E3.2.
- 8 NEW CONDUITS AND WIRING ON ROOF. SEE DETAIL 2/E3.2.
- 9 PROVIDE NEW CIRCUIT BREAKER AND DEDICATED CIRCUIT FOR NEW FA VOICE AND NAC SIGNAL BOOSTER PANEL. PROVIDE MECHANICAL LOCK ON CIRCUIT BREAKER AND UPDATED EXISTING PANEL DIRECTORY AS REQUIRED.
- 10 FURNISH AND INSTALL A NEW FA BOOSTER PANEL. PROVIDE 120V DEDICATED CIRCUIT AND POWER CONNECTION AS REQUIRED.
- 11 NEW CONDUITS AND WIRING UNDER CANOPY. FIELD VERIFY LOCATION.
- 12 PROVIDE WIREMOLD #V500 RACEWAY SYSTEM. FIELD VERIFY LOCATION.



POWER PLAN - CAFETERIA

SCALE: 1/8" = 1' - 0"

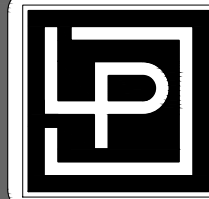


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DSA # 02-118068
FILE # 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D. 1407 SUNSET AVE. MADERA, CA, 93637

No. DATE DESCRIPTION REVISIONS

POWER PLAN - CAFETERIA

PROJECT ENGINEER PROJECT NUMBER 17-1060

DRAWN BY SCALE AS NOTED

CHECKED BY DATE 8/24/2020

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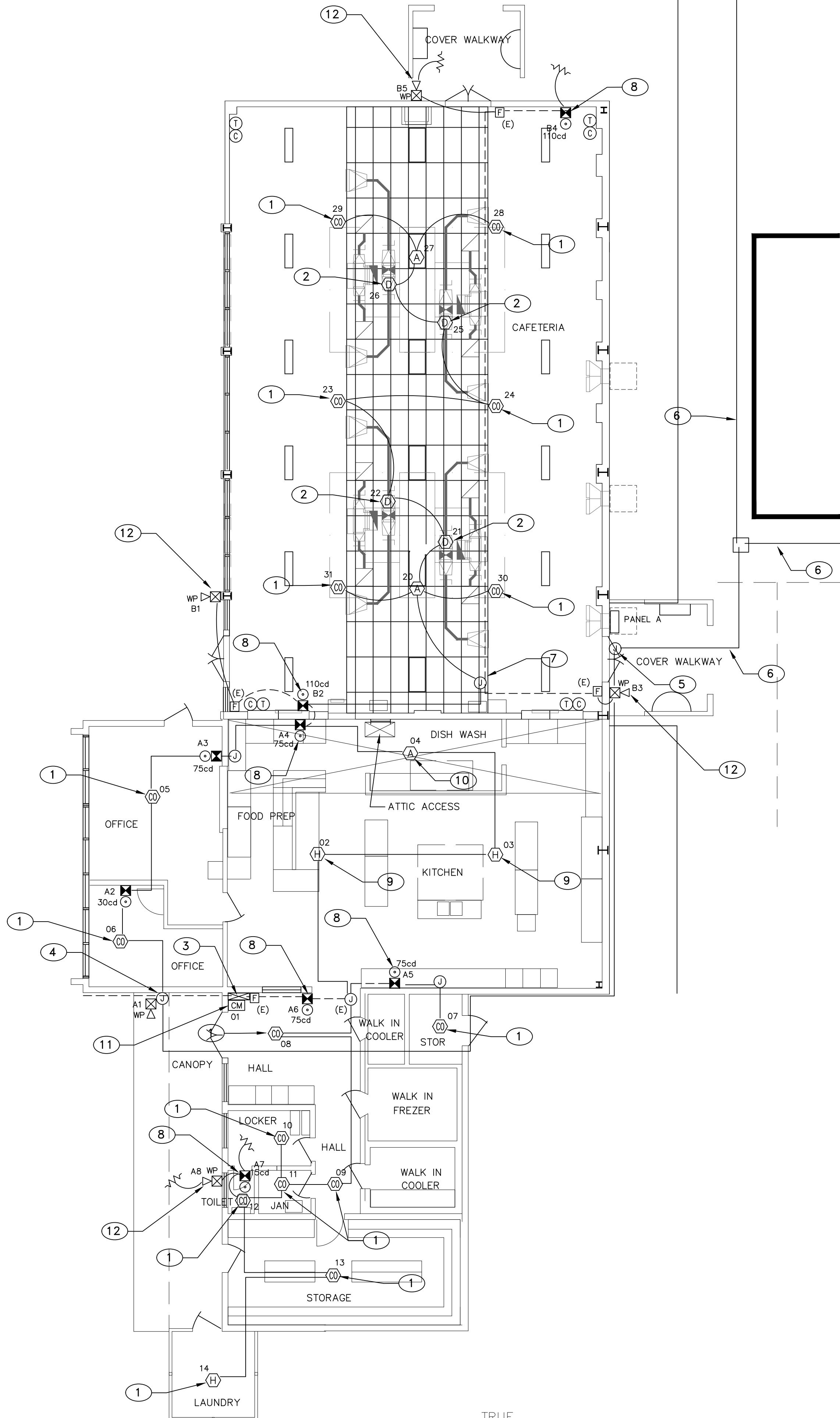
IDENTIFICATION STAMP
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APP: 02-118068 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

KEY NOTES

- NEW CEILING MOUNTED CO & SMOKE COMBO DETECTOR. PROVIDE WIREMOLD #500 STEEL RACEWAY SYSTEM FOR EXPOSED WIRING INSTALLATION. NO EMT ALLOW ON INTERIOR WALL AND CEILING.
- FURNISH AND INSTALL DUCT SMOKE DETECTOR INSIDE SUPPLY AIR DUCT, PROVIDE 110V POWER CONNECTION AND INTERLOCK WIRING WITH FIRE ALARM CONTROL PANEL, HVAC UNIT WILL BE POWER SHUT DOWN WHEN CO OR SMOKE ARE DETECTED INSIDE BUILDING.
- INTERCEPT EXISTING FIRE ALARM CONDUIT AND WIRING, INSTALL A NEW VOICE AND NAC SIGNAL BOOSTER PANEL PER PLANS. PROVIDE 110V DEDICATED CIRCUIT. SEE FA RISER DIAGRAM 1/E3.1.
- INTERCEPT EXISTING FA CONDUIT AND WIRING UNDER EAVE, INSTALL A NEW FA TC SURFACE MOUNTED ON EXTERIOR WALL, NEMA 3R 4"x4"x4", PROVIDE NEW EXTERIOR FA SPEAKER PER PLANS. FIELD VERIFY LOCATION.
- NEW 4"x4"x4" NENA3R FATC ABOVE COVER WALKWAY, PROVIDE INTERLOCK WIRING TO HVAC SHUT TRIP BREAKER. FIELD VERIFY LOCATION.
- NEW CONDUIT AND WIRING ON COVER WALKWAY, SEE DETAIL 2/E3.2
- INTERCEPT EXISTING FA CONDUIT AND WIRING ABOVE T-BAR CEILING, INSTALL A NEW JUNCTION BOX AND NEW INITIATING CIRCUITS PER PLANS. FIELD VERIFY LOCATION.
- REPLACE EXISTING FA HORN STROBE IN PLACE WITH NEW SPEAKER STROBE PER PLANS, REUSE EXISTING WIREMODE RACEWAY AND CONDUCTORS FOR NEW STROBE CIRCUIT, INSTALL NEW VOICE CIRCUIT CABLE. FIELD VERIFY LOCATION.
- NEW CEILING MOUNTED HEAT DETECTOR, PROVIDE WIREMOLD #500 STEEL RACEWAY SYSTEM FOR EXPOSED WIRING INSTALLATION. NO EMT ALLOW ON INTERIOR WALL AND CEILING.
- NEW ATTIC HEAT DETECTOR, PROVIDE EMT CONDUIT AND WIRING INSTALLATION. FIELD VERIFY LOCATION.
- INSTALL FA CONTROL MODULE ABOVE NEW BOOSTER PANEL, PROVIDE INTERLOCK WIRING TO HVAC SHUT TRIP BREAKERS. SEE RISER DIAGRAM 1/E3.1.
- PROVIDE NEW SPEAKER STROBE PER PLANS, INSTALL NEW VOICE CIRCUIT CABLE. FIELD VERIFY LOCATION.

LEGEND

- NEW CEILING CO/SMOKE COMBO DETECTOR
- NEW ATTIC HEAT DETECTOR
- NEW DUCT SMOKE DETECTOR
- EXISTING WALL MOUNTED HORN STROBE TO REMAIN. ALL EXISTING FA SIGNAL CIRCUITS TO REMAIN, NO WORK, SHOWN FOR REFERENCE.
- EXISTING MANUAL PULL STATION TO REMAIN. ALL EXISTING FA INITIATING CIRCUITS TO REMAIN, NO WORK, SHOWN FOR REFERENCE.
- NEW CONTROL MODULA



FIRE ALARM PLAN - CAFETERIA

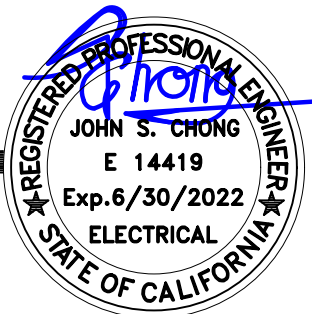
SCALE: 1/8" = 1' - 0"

TRUE
NORTH

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DSA # 02-118068
FILE # 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.

No. DATE DESCRIPTION

REVISIONS

FIRE ALARM PLAN - CAFETERIA

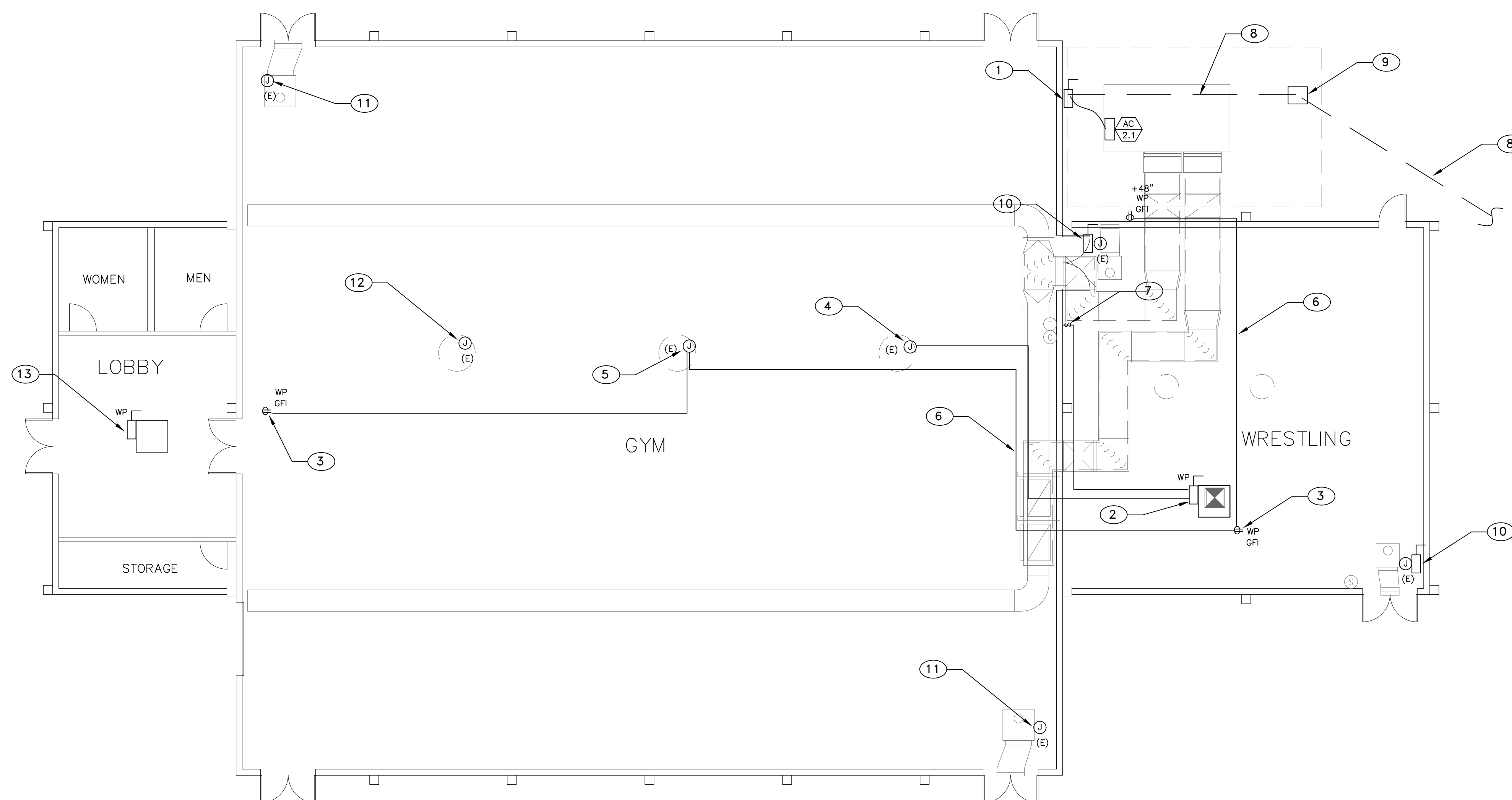
PROJECT ENGINEER PROJECT NUMBER 17-1060
DRAWN BY SCALE AS NOTED
CHECKED BY DATE 8/24/2020

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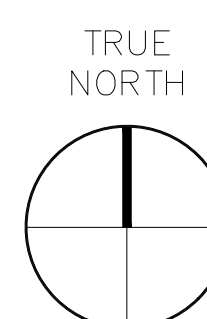
KEY NOTES

- ① FURNISH AND INSTALL A WEATHERPROOF NON FUSED DISCONNECT SWITCH WITH 100A 480V 3 POLE SHUT TRIP BREAKER, PROVIDE POWER CONNECTION FOR NEW HVAC UNIT ON GROUND AND INTERLOCK WIRING TO FIRE ALARM CONTROL PANEL, HVAC UNIT WILL BE POWER SHUT TRIP WHEN CO OR SMOKE ARE DETECTED INSIDE BUILDING, SEE MECH PLANS FOR POINT OF CONNECTION LOCATION AND ALL REQUIREMENT. SEE DETAIL 5/E3.2 8/E3.2 9/E3.2.
- ② FURNISH AND INSTALL A WEATHERPROOF NON FUSED DISCONNECT SWITCH WITH 20A 120V 1 POLE SHUT TRIP BREAKER, PROVIDE POWER CONNECTION FOR NEW EVAP COOLER ON ROOF AND PROVIDE INTERLOCK WIRING TO FIRE ALARM CONTROL PANEL, EVAP COOLER WILL BE POWER SHUT TRIP WHEN CO OR SMOKE ARE DETECTED INSIDE BUILDING, SEE MECH PLANS FOR POINT OF CONNECTION LOCATION AND ALL REQUIREMENT.
- ③ PROVIDE WP GFCI OUTLET ON ROOF, FIELD VERIFY LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
- ④ DISCONNECT EXISTING ROOF EXHAUST FAN, REUSE EXISTING CIRCUIT FOR NEW EVAP COOLER ON ROOF PER PLANS.
- ⑤ DISCONNECT EXISTING ROOF EXHAUST FAN, REUSE EXISTING CIRCUIT FOR NEW GFCI OUTLETS ON ROOF PER PLANS.
- ⑥ NEW CONDUITS AND WIRING ON ROOF. SEE DETAIL 2/E3.2.
- ⑦ NEW CONTROL SWITCH ON INTERIOR WALL WITH WIREMOLD #V500 RACEWAY SYSTEM, CORE DRILL AND SEAL ROOF DECK FOR CONDUIT PENETRATION, PROVIDE ROOF JACK AND WP CONDUIT CONDUIT ON ROOF. SEE MECHANICAL PLANS FOR CONTROL REQUIREMENT.
- ⑧ NEW UNDERGROUND CONDUITS AND WIRING, SAW CUT AND BACK FILL EXISTING FLOOR AS REQUIRED. SEE POWER SITE PLAN E0.2 FOR MORE INFORMATION. SEE DETAIL 10/E3.2.
- ⑨ PROVIDE N30 PULL BOX FOR NEW UNDERGROUND CONDUIT AND WIRING INSTALLATION. SEE DETAIL 4/E3.2.
- ⑩ EXISTING SUSPENDED FURNACE TO REMAIN, PROVIDE NON FUSED DISCONNECT SWITCH WITH 20A 120V 1 POLE SHUT TRIP BREAKER, AND INTERLOCK WIRING TO FIRE ALARM CONTROL PANEL, FURNACE WILL BE POWER SHUT TRIP WHEN CO OR SMOKE ARE DETECTED INSIDE BUILDING, FIELD VERIFY POINT OF CONNECTION LOCATION AND ALL REQUIREMENT.
- ⑪ DISCONNECT EXISTING SUSPENDED FURNACE, CAP ALL EXISTING CIRCUIT AND CONTROL WIRING AS REQUIRED.
- ⑫ DISCONNECT EXISTING ROOF EXHAUST FAN, CAP ALL EXISTING CIRCUIT AND CONTROL WIRING AS REQUIRED.
- ⑬ EXISTING EVAP COOLER TO REMAIN, PROVIDE NON FUSED DISCONNECT SWITCH WITH 20A 120V 1 POLE SHUT TRIP BREAKER, AND INTERLOCK WIRING TO FIRE ALARM CONTROL PANEL, EVAP COOLER WILL BE POWER SHUT TRIP WHEN CO OR SMOKE ARE DETECTED INSIDE BUILDING, FIELD VERIFY POINT OF CONNECTION LOCATION AND ALL REQUIREMENT.



POWER PLAN – GYM

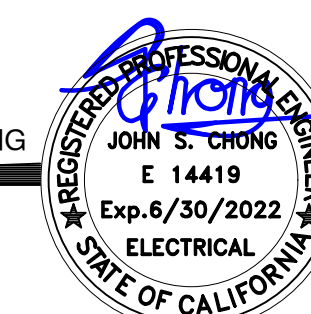
SCALE: 1/8" = 1' - 0"



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DSA # 02-118068
FILE # 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.		1407 SUNSET AVE MADERA, CA, 93637	
No.	DATE	DESCRIPTION	REVISIONS

No.	DATE	DESCRIPTION
PROJECT ENGINEER		SHEET NAME POWER PLAN - GYM
DRAWN BY	SCALE	SHEET NUMBER
CHECKED BY	AS NOTED	E2.1
	DATE 8/24/2020	

SHEET NAME

POWER PLAN - GYM

E2.1

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APP: 02-118068 INC:
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SS ☒ FLS ☒ ACS ☒
DATE: 11/24/2021

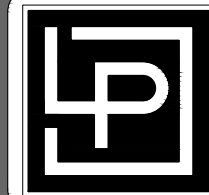
KEY NOTES

- NEW CEILING MOUNTED CO & SMOKE COMBO DETECTOR, PROVIDE WIREMOLD #700 STEEL RACEWAY SYSTEM FOR EXPOSED WIRING INSTALLATION. NO EMT ALLOW ON INTERIOR WALL AND CEILING.
- FURNISH AND INSTALL DUCT SMOKE DETECTOR INSIDE SUPPLY AIR DUCT, PROVIDE 110V POWER CONNECTION AND INTERLOCK WIRING WITH FIRE ALARM CONTROL PANEL, HVAC UNIT WILL BE POWER SHUT DOWN WHEN CO OR SMOKE ARE DETECTED INSIDE BUILDING.
- REPLACE EXISTING FA SIGNAL BOOSTER PANEL IN PLACE WITH A NEW VOICE AND SIGNAL COMBO BOOSTER PANEL, RECONNECT TO EXISTING DEDICATED CIRCUIT. SEE RISER DIAGRAM 1/E3.1.
- NEW 4"x4"x4" NEMA3R FATC ON EXTERIOR WALL, PROVIDE INTERLOCK WIRING TO HVAC SHUT TRIP BREAKER. FIELD VERIFY LOCATION.
- NEW HVAC DISCONNECT SWITCH WITH SHUT TRIP BREAKER, PROVIDE INTERLOCK WIRING WITH FACP. FIELD VERIFY LOCATION.
- NEW UNDERGROUND CONDUITS AND WIRING, SEE SITE PLAN E0.2.
- INSTALL FA CONTROL MODULE ABOVE NEW BOOSTER PANEL, PROVIDE INTERLOCK WIRING TO HVAC SHUT TRIP BREAKERS. SEE RISER DIAGRAM 1/E3.1.
- REPLACE EXISTING FA HORN STROBE IN PLACE WITH NEW SPEAKER STROBE PER PLANS, REUSE EXISTING WIREMODE RACEWAY AND CONDUCTORS FOR NEW STROBE CIRCUIT, INSTALL NEW VOICE CIRCUIT CABLE. FIELD VERIFY LOCATION.
- INTERCEPT EXISTING FA CONDUIT AND WIRING, INSTALL A NEW JUNCTION BOX AND NEW INITIATING CIRCUITS PER PLANS. FIELD VERIFY LOCATION.
- PROVIDE NEW SPEAKER STROBE PER PLANS, INSTALL NEW VOICE CIRCUIT CABLE. FIELD VERIFY LOCATION.

LEGEND

- NEW CEILING CO/SMOKE COMBO DETECTOR
- NEW DUCT SMOKE DETECTOR
- EXISTING WALL MOUNTED HORN STROBE TO REMAIN. ALL EXISTING FA SIGNAL CIRCUITS TO REMAIN, NO WORK, SHOWN FOR REFERENCE.
- EXISTING MANUAL PULL STATION TO REMAIN. ALL EXISTING FA INITIATING CIRCUITS TO REMAIN, NO WORK, SHOWN FOR REFERENCE.
- NEW CONTROL MODULA

SEE DETAIL 3/E3.2 FOR FA DEVICES MOUNTING HEIGHT



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JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.

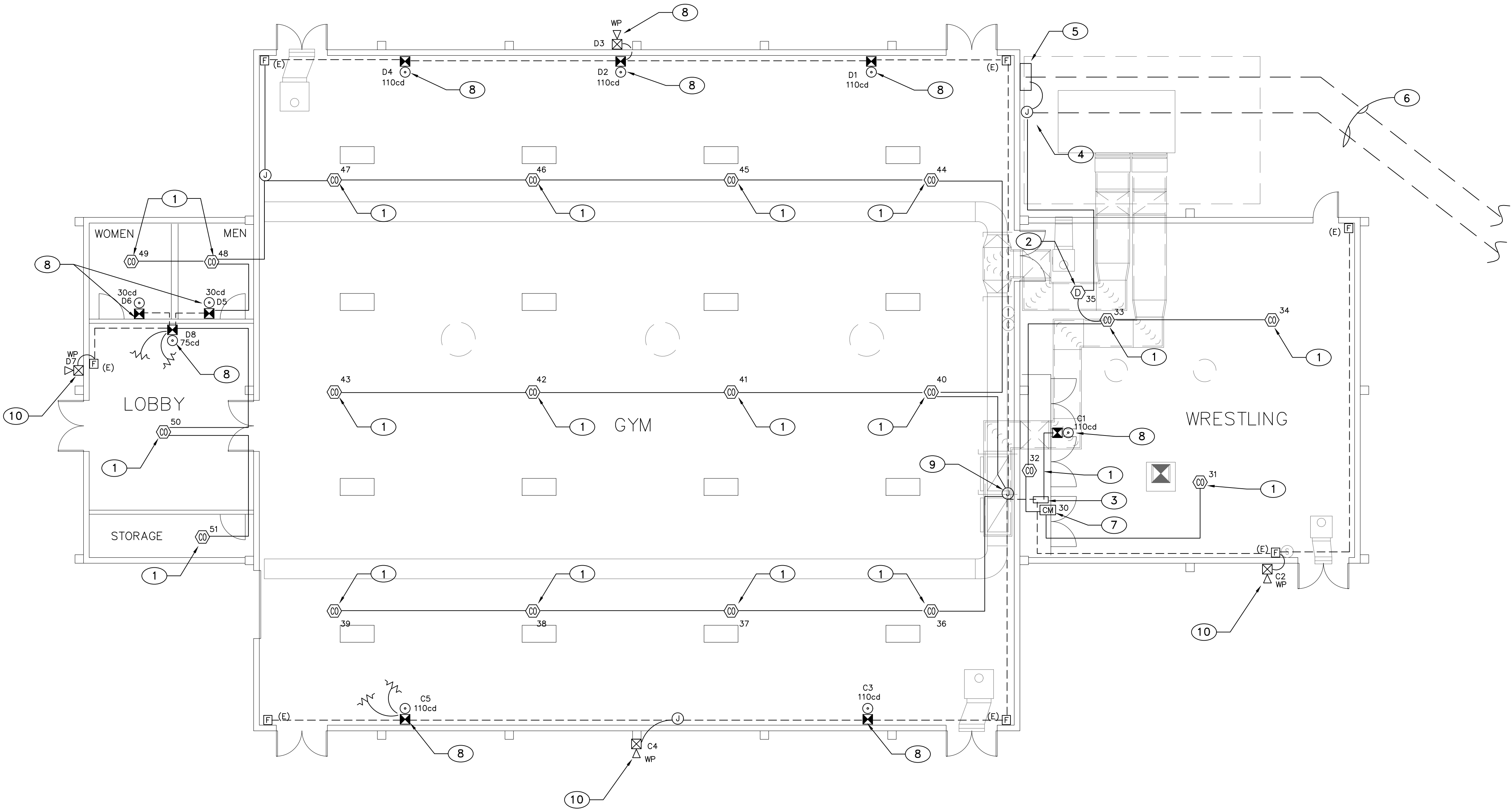
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REVISIONS

FIRE ALARM PLAN - GYM

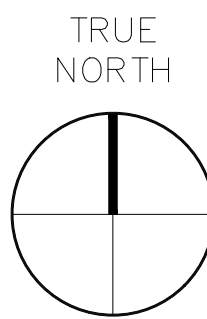
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DRAWN BY SCALE AS NOTED
CHECKED BY DATE 8/24/2020

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FIRE ALARM PLAN - GYM

SCALE: 1/8" = 1' - 0"



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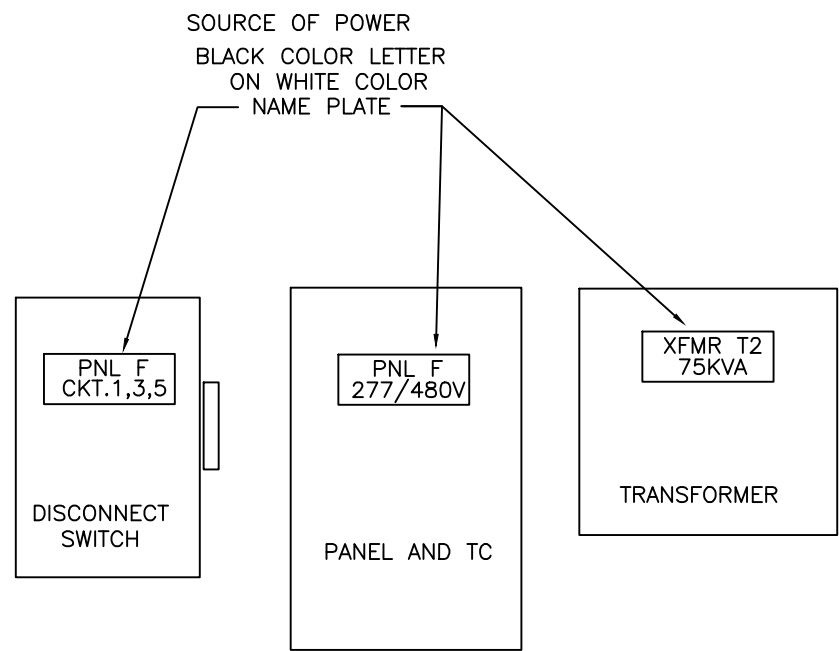
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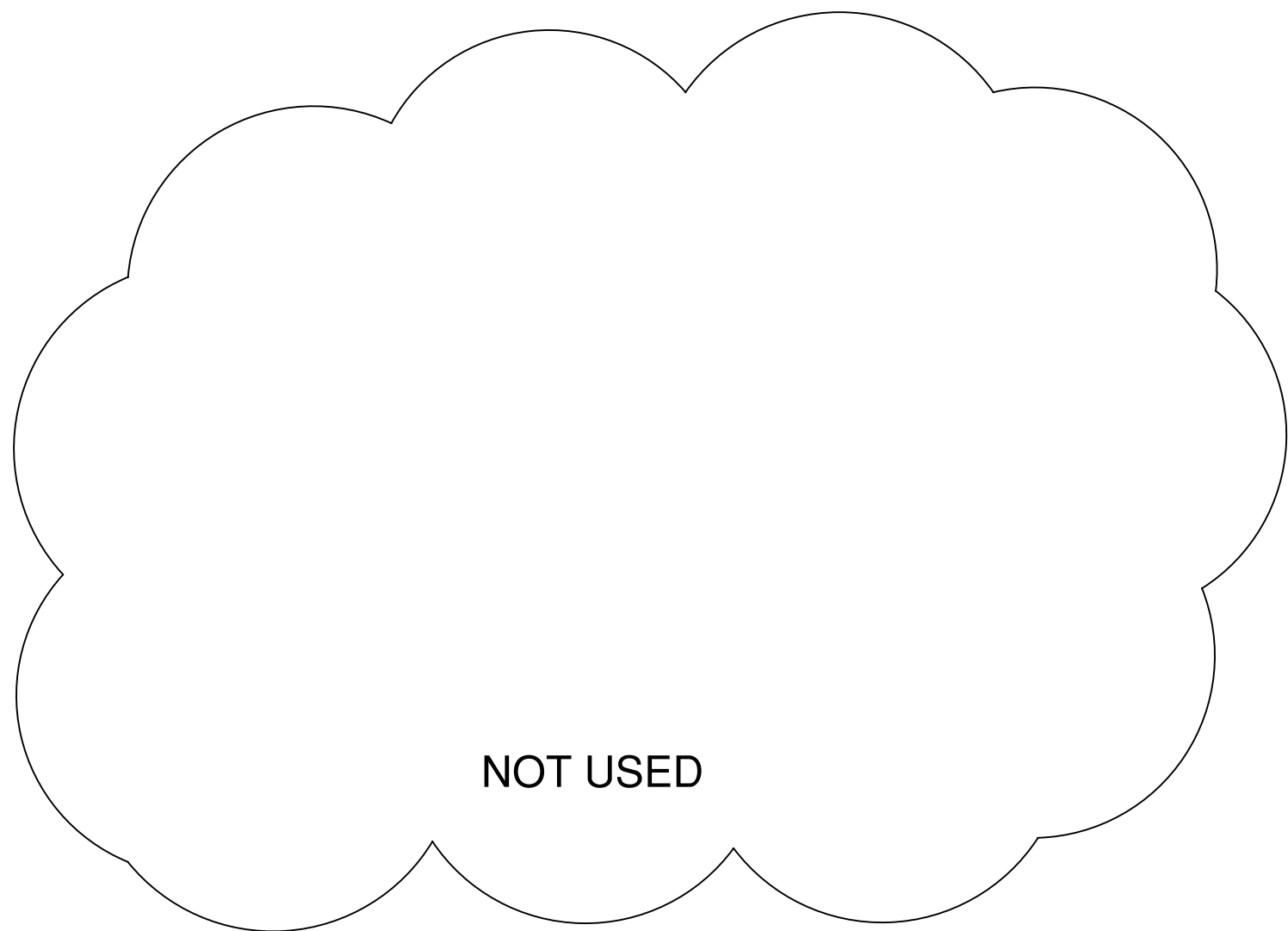
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NAME PLATE DETAIL

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NOT USED

PANEL A		BOLT ON BREAKER		277/480V 3Ø 4W			EXTERIOR WALL		SURFACE	
				100 AMP MAIN BREAKER			14,000 AIC		NEMA 3R	
CKT	SERVING	NOTE	ØA	ØB	ØC	AMP	ØA	ØB	ØC	CKT
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3	AC 1.1	3 12 12	15/3	3.0	3.0	3.0				4
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7										8
9	AC 1.2	3 12 12	15/3	3.0	3.0	3.0				10
11										12
13										14
15	AC 1.3	3 12 12	15/3	3.6	3.6	3.6				16
17										18
19										20
21	AC 1.4	3 12 12	15/3	3.6	3.6	3.6				22
23										24

NOTES:

1. PROVIDE CIRCUIT DIRECTORY INSIDE PANEL
2. PROVIDE ARC FLASH LABEL ON PANEL DOOR
3. PROVIDE SHUT TRIP BREAKER AND INTERLOCK WITH FACP

LOAD SUMMARY

LIGHTING/CONTINUOUS LOADS 125% : 54 KVA

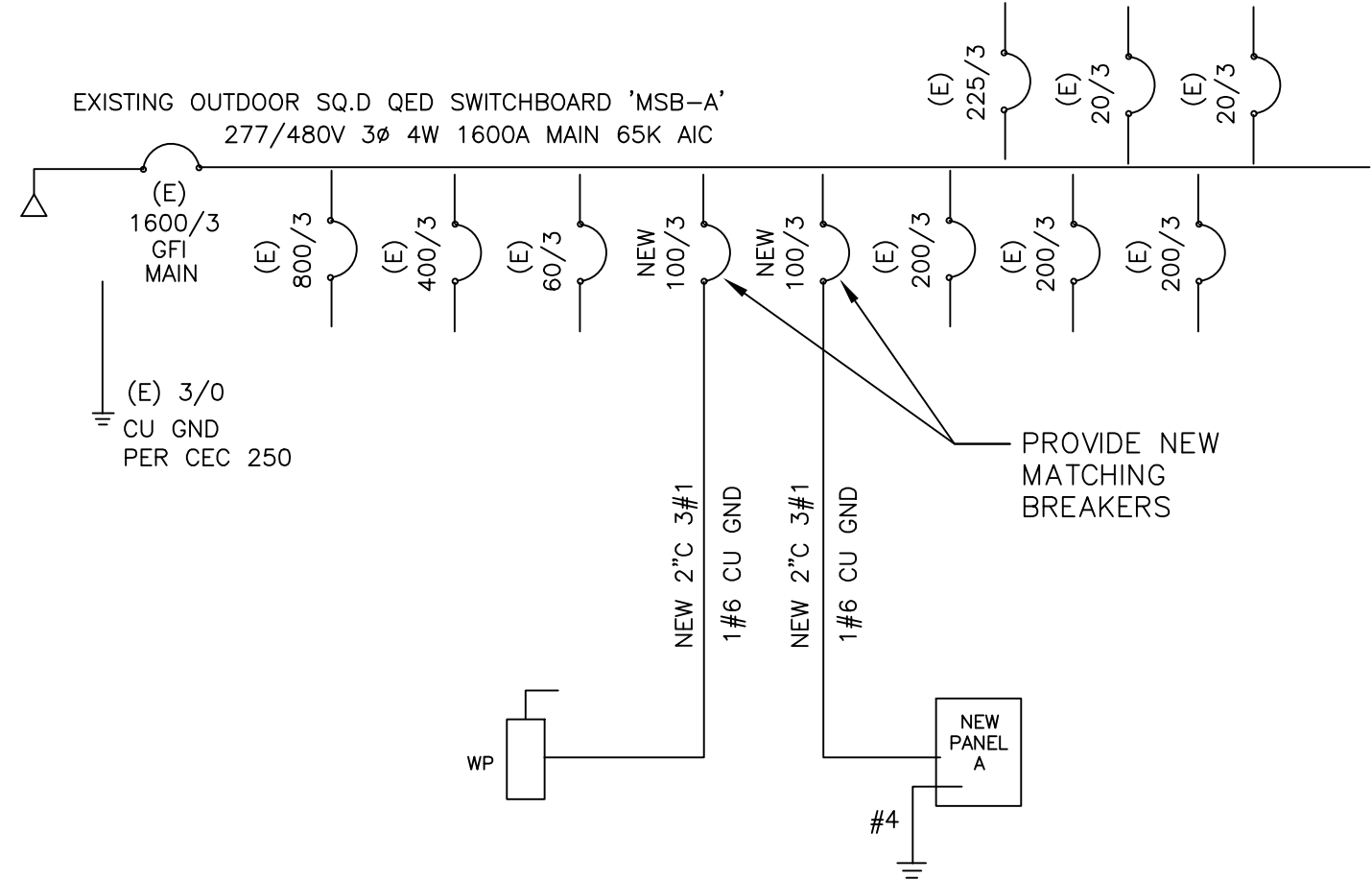
RECEPTACLES (FIRST 10KVA 100%) : 0 KVA

RECEPTACLES (OVER 10KVA 50%) : 0 KVA

HVAC / MISC LOADS 100% : 0 KVA

LARGEST MOTER LOADS 25% : 0 KVA

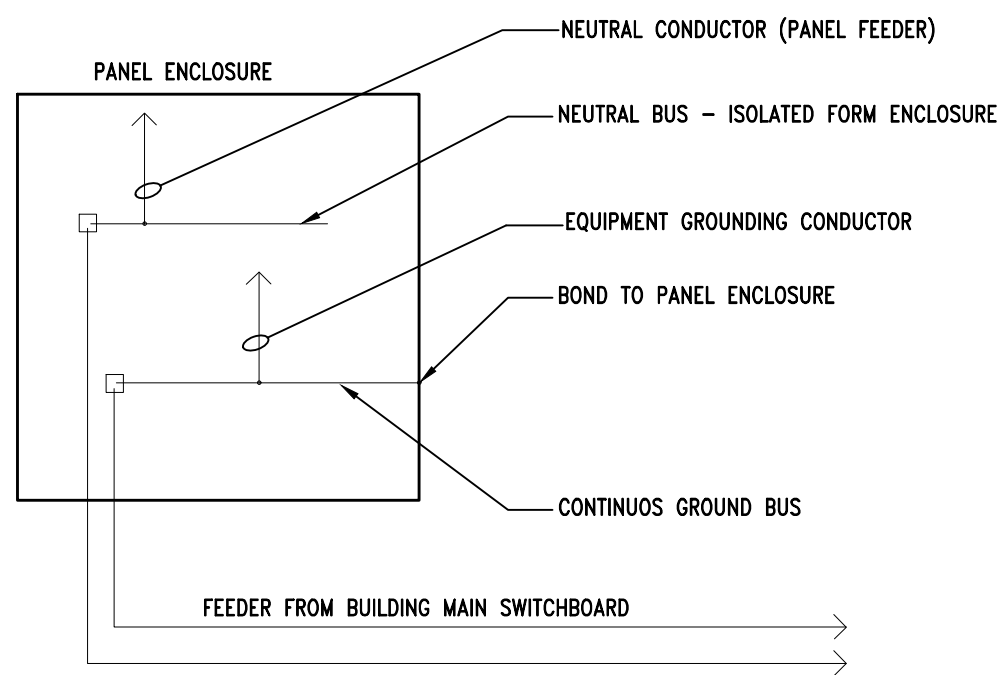
TOTAL KVA DEMAND : 54 KVA (150AMP)



- NOTES:
1. PROVIDE NEW MATCHING BREAKERS, FEEDERS AND PANELS PER PLANS.
 2. ALL NEW CONDUCTOR SHALL BE 75°C THWN-2 COPPER IN CONDUIT. (AMPACITY FOR CONDUCTOR SELECTION MUST BE DETERMINED/DERATED BY THE ALLOWED TERMINATION RATINGS MARKED/APPROVED ON EACH DEVICES, MOTOR, APPLIANCE, XFMR O.C.P.C. PANEL, ETC. CONDUCTORS INSTALLED IN U.G OR WET LOCATIONS SHALL BE MARKER 'W'. PER 2019 CEC 110-14(C)(1).)
 3. ALL WIRING OVER 100 VOLT SHALL BE INSTALLED IN RACEWAY CONDUIT, EMT ABOVE GRADE, PVC SCH. 40 BELOW GRAD AND STEEL CONDUIT ON EXPOSE SURFACE BELOW 8" AFF. FOR PHYSICAL PROTECTION.
 4. STEEL BACK BOX SHALL BE PROVIDE FOR ALL NEW ELECTRICAL DEVICES SUCH AS SWITCH, OUTLET AND CONDUCTOR SPLICE.
 5. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY THE EXISTING SWITCHBOARD AND PANELS ARE INSTALL PER ONE LINE DIAGRAM PRIOR TO WORKING, AND REPORT TO ENGINEERS IF ANY DISCREPANCY ARE FOUND.

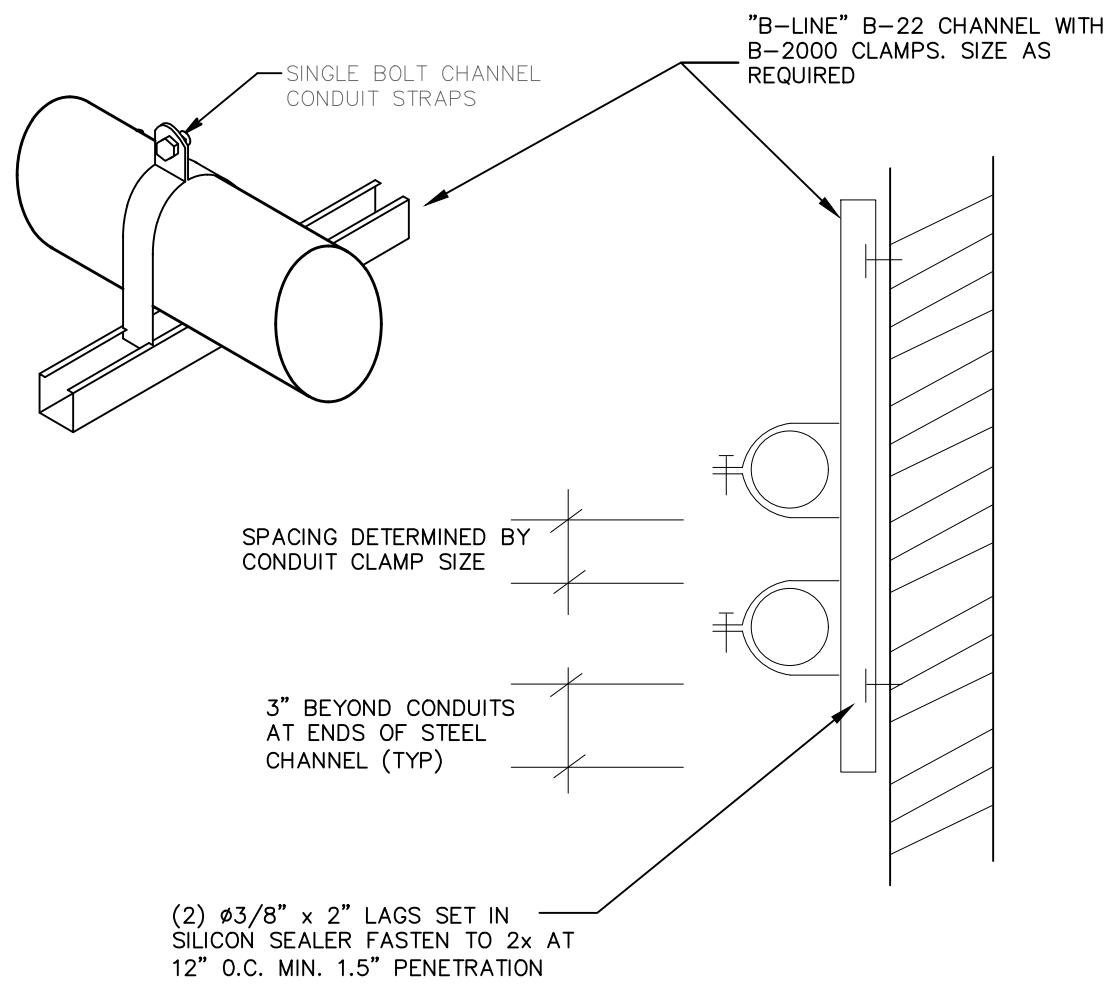
SINGLE LINE DIAGRAM

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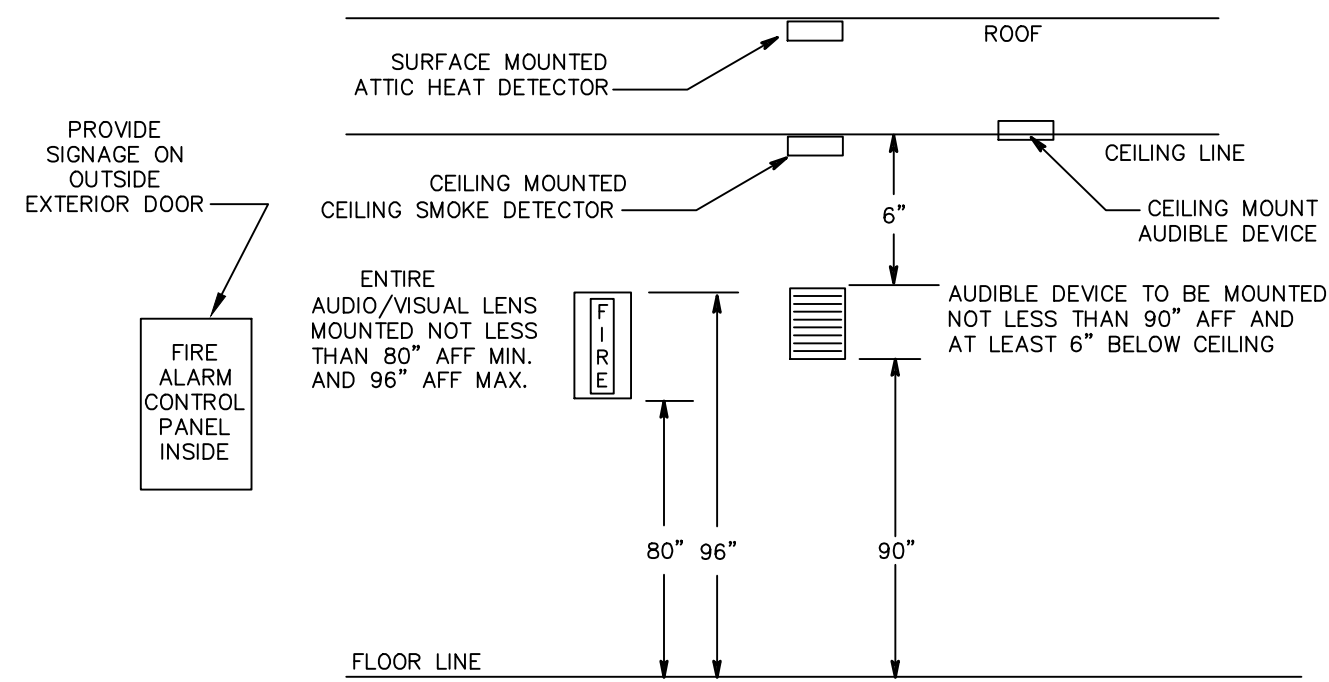
PANEL GROUNDING DETAIL

N.T.S



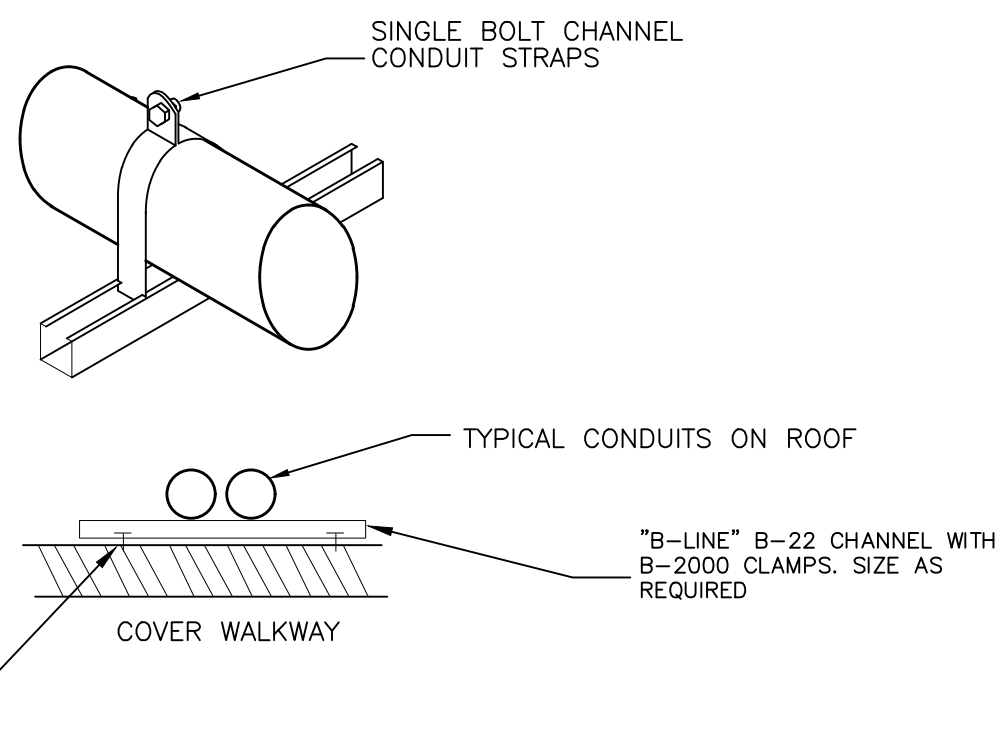
CONDUIT SUPPORT DETAIL

N.T.S



TYPICAL FIRE ALARM DEVICES MT'D DETAIL

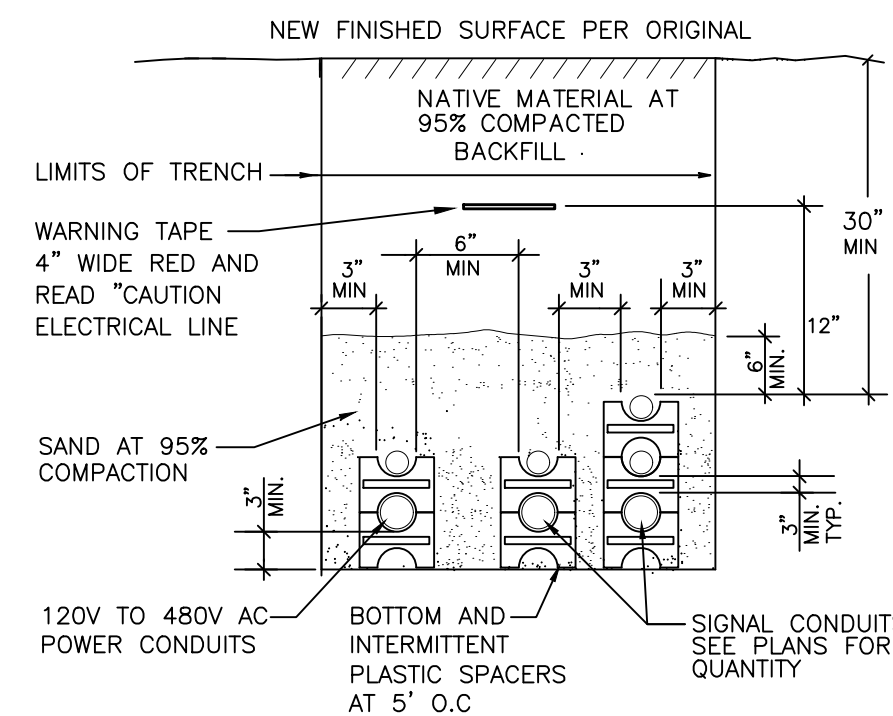
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ROOF CONDUIT MOUNTING DETAIL

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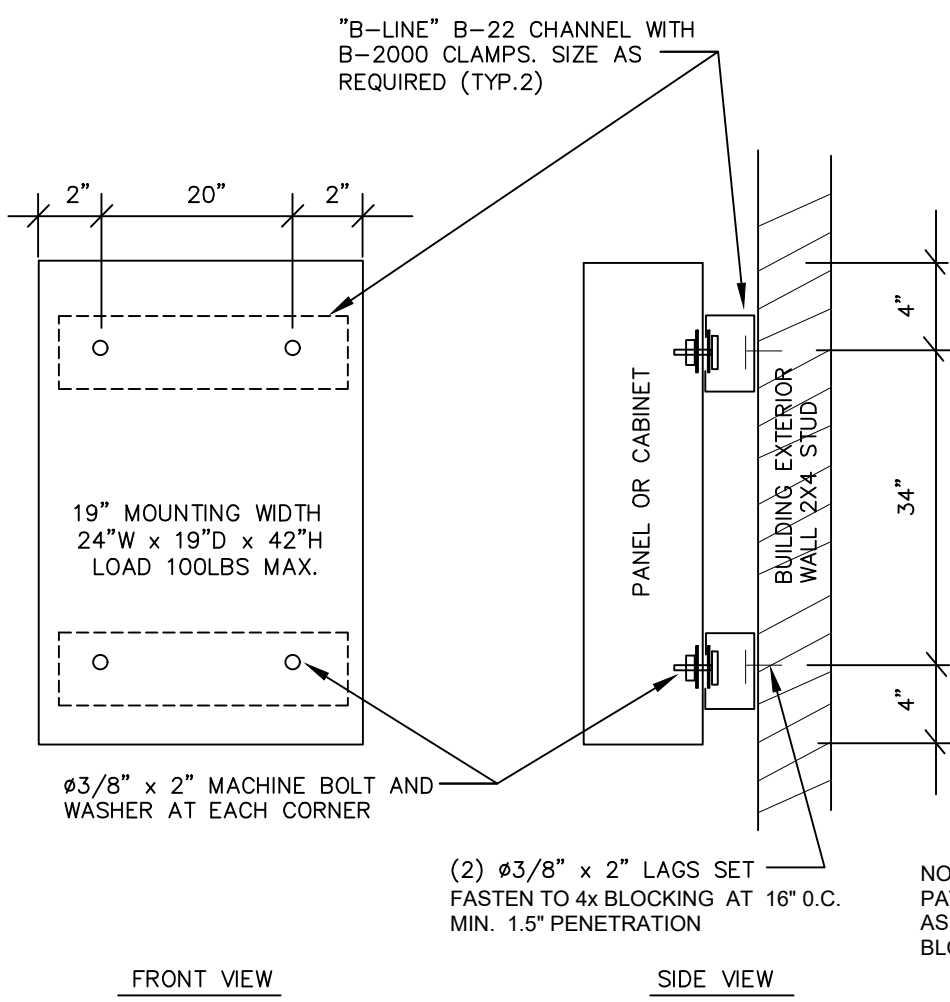
RESTORE NEW FINISHED SURFACE PER ORIGINAL CONDITION AS FOLLOW:
STRUCTURES, BUILDING SLABS, WALKWAYS, AND STEPS: COMPACT TOP 6" OF SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL AT 92% MAX. RELATIVE COMPACTION. COMPACT UPPER 2" OF BACKFILL IN UTILITIES TRENCHES OR OTHER EXCAVATION TO 92% MIN. RELATIVE COMPACTION. PATCH CONCRETE CURBS/WALKS TO MATCH EXISTING AND SURROUNDING FINISH GRADE.
LAWN OR UNPAVED AREAS: COMPACT TOP 6" OF SUBGRADE MATERIAL AT 85% RELATIVE COMPACTION. RESTORE LANDSCAPING TO MATCH EXISTING.
PAVEMENTS: COMPACT TOP 6" SUBGRADE IMMEDIATELY BENEATH THE BASE COURSE AT 95% MIN. RELATIVE COMPACTION. PATCH AC PAVEMENT TO MATCH EXISTING.



IF CONDUITS ARE INSTALLED IN A FILL AREA, THE TOP OF THE FILL MUST BE A MIN. OF 30" ABOVE THE DESIGN CONDUITS ELEVATION BEFORE THE CONDUITS IS INSTALLED.
ELECTRICAL CONDUITS SHALL BE MIN. 12" FROM OTHER UTILITY PIPES IN JOIN TRENCH, NO UTILITY PIPES ARE ALLOWED INSTALLED ON THE TOP OF ELECTRICAL CONDUITS.

CONDUIT TRENCH DETAIL

N.T.S

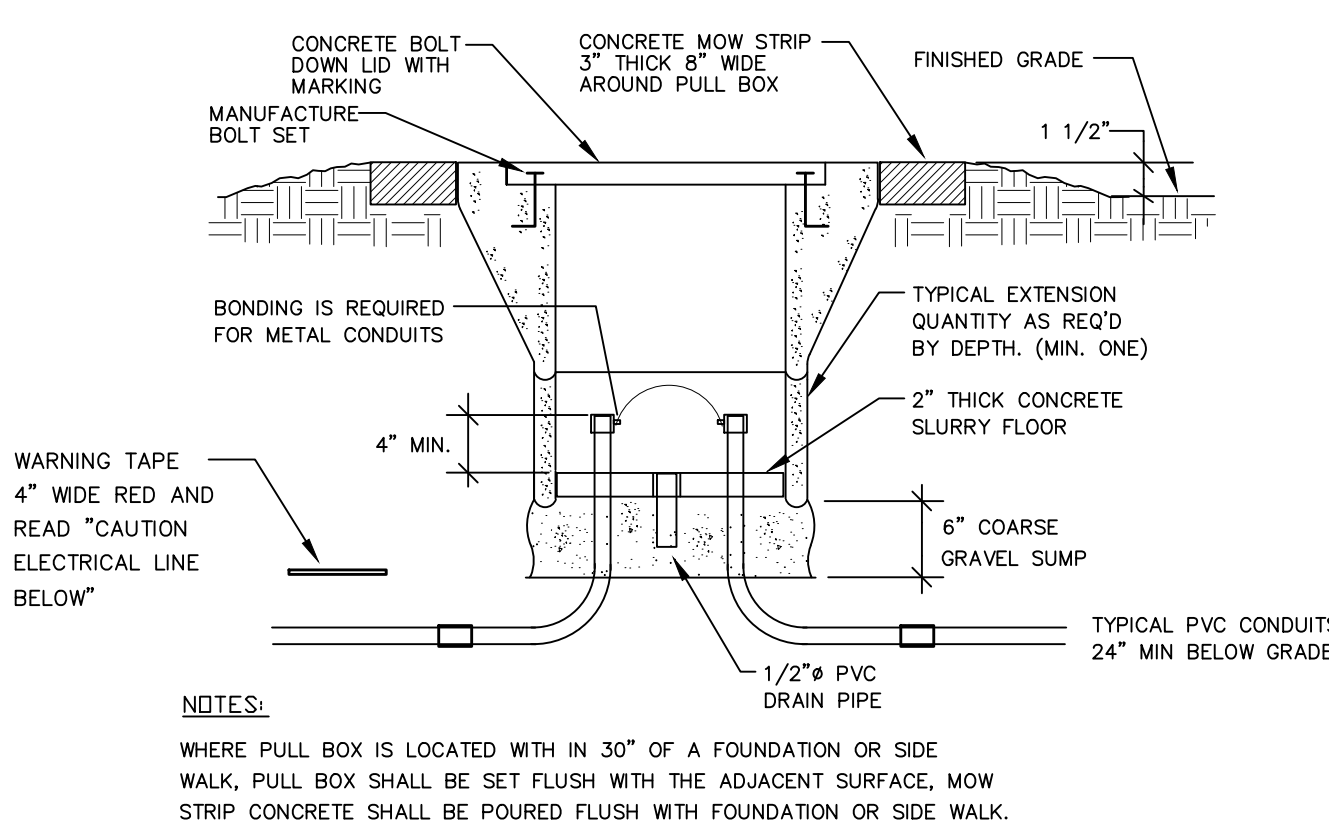


FRONT VIEW

SIDE VIEW

PANEL AND CABINET MOUNTING DETAIL

N.T.S



NOTES:

WHERE PULL BOX IS LOCATED WITH IN 30" OF A FOUNDATION OR SIDE WALK, PULL BOX SHALL BE SET FLUSH WITH THE ADJACENT SURFACE, MOW STRIP CONCRETE SHALL BE POURED FLUSH WITH FOUNDATION OR SIDE WALK.

PULL BOX AT OPEN YARD DETAIL

N.T.S

CONSULTING ENGINEERS

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DSA # 02-118068
FILE # 20-30

JEFFERSON M. S. - HVAC REPLACEMENT

M.U.S.D.		PROJECT NUMBER		PROJECT NAME	
No.	DATE	DESCRIPTION	REVISIONS	SHEET NUMBER	SHEET NAME
				17-1060	1407 SUNSET AVE.
				AS NOTED	MADERA, CA, 93637
				8/24/2020	

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