REPLACE EXISTING HVAC EQUIPMENT IN MATH & SCIENCE COMPLEX

VENTURA COLLEGE

4667 TELEGRAPH ROAD
VENTURA , CALIFORNIA, 93003

PROJECT DIRECTORY

MECHANICAL ENGINEER:
J&S Consulting Engineers, Inc.
3111 Winona Ave., Suite 102, Burbank, CA 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
E-Mail: jsmail@jandsconsulting.com
Web Site: www.jandsconsulting.com

ARCHITECT
Amador Whittle Architects, Inc.
28328 Agoura Road, Suite 203, Agoura Hills, CA 91301
Tel.: (805) 530-3938
E-Mail: bill@awaarchitect.com

ELECTRICAL ENGINEER:
J&S Consulting Engineers, Inc.
3111 Winona Ave., Suite 102, Burbank, CA 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
E-Mail: jsmail@jandsconsulting.com
Web Site: www.jandsconsulting.com

STRUCTURAL ENGINEER:
Orion Structural Group, Inc.
223 E. Thousand Oaks Blvd., #220, Thousand Oaks, CA 91560
Tel.: (805) 390-9242
E-Mail: will@orionstructural.com

SYSTEM PERFORMANCE/COMMISSIONING
Green Link Mechanical
P.O. Box 2705
Downey, CA 90242
E-Mail: glmhvac@gmail.com

OWNER AUTHORIZED REPRESENTATIVE (OAR)
VENTURA COLLEGE
Director of Facilities– Jay Moore
4667 Telegraph Road, Ventura, CA 93003
Tel.: (805) 289-6340
E-Mail: jmoore1@vcccd.edu

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PROJECT DATA

BUILDINGS "A", "B" & "C"

PAST DSA APPLICATION #A–60113– 2/18/94
BUILDING: OCCUPANCY TYPE B
CONSTRUCTION TYPE: TYPE V CONSTRUCTION
ROOF ASSEMBLY: METAL DECK W/COMPOSITE INSULATING CONCRETE
FLOOR ASSEMBLY: METAL DECK W/LIGHTWEIGHT CONCRETE
FIRE SPRINKLER: YES
FIRE ALARM SYSTEM: YES (FULLY AUTOMATIC)

PROJECT DESCRIPTION

ONLY HVAC SYSTEM AND HVAC RELATED WORK AT BUILDINGS "A", "B" AND "C".

GENERAL REQUIREMENTS

1. ALL WORK SHALL CONFORM TO 2013 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CONSTRUCTION CHANGE DOCUMENTS (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4–338, PART 1, TITLE 24,CCR.
3. A 'DSA CERTIFIED' PROJECT INSPECTOR EMPLOYED BY DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4–342, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR).
4. A 'DSA CERTIFIED' CLASS 3 PROJECT INSPECTOR IS REQUIRED FOR THIS PROJECT
5. DSA INSPECTION AND CERTIFICATION IS REQUIRED FOR THIS PROJECT.
6. ALL WORK SHALL BE IN COMPLIANCE W/2013 CFC.
7. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUIT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
8. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATION SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON–COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK. (REFERENCE: SECTION 4–317(c), CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR)
9. POWDER DRIVEN SHOT PINS SHALL NOT BE USED.
10. THE OWNER'S AUTHORIZED REPRESENTATIVE SHALL NOTIFY THE PROJECT MANAGER AS TO THE ESTABLISHED CONSTRUCTION START DATE. THIS NOTICE SHALL BE PROVIDED A MINIMUM OF TWO WEEKS PRIOR TO THE ESTABLISHED CONSTRUCTION START DATE.
11. THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE OWNER'S PROJECT MANAGER IN QUANTITIES & FORMAT IDENTIFIED WITHIN CONTRACT SPECIFICATION SUBMITTALS. SUBMITTALS WHICH DO NOT FOLLOW THE PRESCRIBED FORMAT SHALL BE RETURNED, WITHOUT REVIEW TO THE CONTRACTOR.
12. THE INSPECTOR OF RECORD, PROJECT MANAGER AND ENGINEER OF RECORD SHALL BE NOTIFIED WHEREVER SCOPE OF WORK IS PROPOSED TO BE DELETED AND/OR ADDED TO DSA APPROVED BID DOCUMENTS (PRIOR TO WORK BEING PERFORMED) ANY PROPOSED CHANGED TO DSA APPROVED BID DOCUMENTS SHALL BE SUBMITTED AS CONSTRUCTION CHANGE DOCUMENT (CCD) TO DSA FOR REVIEW AND APPROVAL, PRIOR PERFORMING PROPOSED CHANGES.
13. SEISMIC BRACING OF ALL NEW PIPING AND DUCTWORK SHALL BE DESIGN–BUILD BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ENGINEERED DRAWINGS BEARING THE ENGINEER'S STAMP & SIGNATURE FOR ALL PROPOSED SEISMIC RESTRAINT SYSTEMS.

AS REVISED

SPECIAL NOTES FOR DEMOLITION

1. CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING AND SHALL MAKE ALLOWANCES TO INCLUDE ON THE BASE BID, THE DISMANTLING AND REMOVAL OF ALL COMPONENTS AND ACCESSIBLE ITEMS FOR THE EXISTING SYSTEMS, AFTER NEW SYSTEMS ARE OPERATIONAL.
2. THE PLAN DRAWINGS SHOW MOST OF THE COMPONENTS AND ITEMS FOR GENERAL INFORMATION ONLY. THIS INFORMATION SHALL NOT BE THE ONLY BASIS FOR ESTIMATION.
3. WHEN CEILING SUSPENSION SYSTEMS, EQUIPMENT SUPPORT SYSTEM, LIGHTING FIXTURES, J–BOXES, OR OTHER ITEMS REQUIRED TO BE REMOVED TO PERFORM THE WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAINTING OR REPLACING ANY BROKEN OR DAMAGED ITEMS, INCLUDING PATCHING WALLS AND PAINTING AS REQUIRED, TO BRING THE AREA TO ITS ORIGINAL CONDITION.
4. ASBESTOS – IF ANY MATERIALS CONTAINING ASBESTOS ARE PRESENT IN AREA OF WORK, CONTRACTOR TO COORDINATE WITH DISTRICT FOR ASBESTOS ABATEMENT BEFORE BEGINNING WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION REQUIRED OF EXISTING CONSTRUCTION AS SHOWN ON PLANS, AND TO PREPARE THE EXISTING STRUCTURE FOR NEW CONSTRUCTION, AND IS ALSO RESPONSIBLE FOR RECONSTRUCTION OF ALL DEMOLISHED CONSTRUCTION AT THE COMPLETION OF PROPOSED CONSTRUCTION.
6. CONTRACTOR SHALL PROVIDE ASBESTOS AND/OR LEAD ABATEMENT, IF ANY IN ACCORDANCE WITH THE REQUIREMENTS OF VENTURA COLLEGE.
7. "MAINTAIN REQUIRED FIRE RESISTANCE RATING OF FIRE–RESISTANCE RATED CONSTRUCTION (HORIZONTAL/ROOF) VISUAL INSPECTION AND PROPERLY REPAIRED, REPLACED WHEN DAMAGED, ALTERED, PENETRATED." – CFC 703.1.
8. OPENING(S) PROTECTIVE(S) SHALL BE MAINTAINED AN AN OPERATIVE CONDITION IN ACCORDANCE WITH NFPA 80. – CFC 703.2.

APPLICABLE CODES

LIST OF 2013 CALIFORNIA CODE OF REGULATIONS (C.C.R.): APPLICABLE CODE AS OF JANUARY 1, 2014

PART 1– 2013 CALIFORNIA BUILDING STANDARD ADMINISTRATIVE CODE, TITLE 24 C.C.R.

PART 2– 2013 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH CALIFORNIA ADMENDMENTS)

PART 3– 2013 CALIFORNIA ELECTRICAL CODE, TITLE 24 C.C.R. (2011 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA)

PART 4– 2013 CALIFORNIA MECHANICAL CODE, TITLE 24 C.C.R. (2012 UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)

PART 5– 2013 CALIFORNIA PLUMBING CODE, TITLE 24 C.C.R. (2012 UNIFORM PLUMBING CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)

PART 6– 2013 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.

PART 7– CURRENTLY VACANT

PART 8– 2013 CALIFORNIA HISTORICAL BUILDINGS CODE, TITLE 24 C.C.R.

PART 9– 2013 CALIFORNIA FIRE CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL)

PART 10– 2013 CALIFORNIA EXISTING BUILDING CODE (2012 INTERNATIONAL EXISTING BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH AMENDMENTS)

PART 11– 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE), TITLE 24 C.C.R.

PART 12– 2013 CALIFORNIA REFERENCE STANDARDS CODE, TITLE 24 C.C.R.

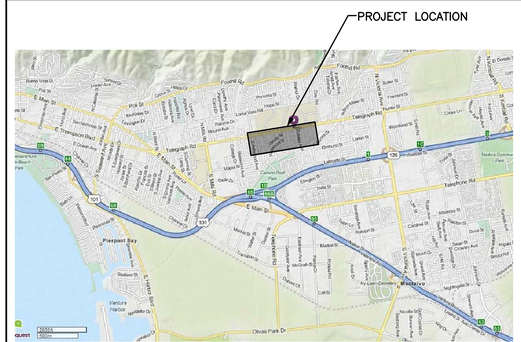
PARTIAL LIST OF APPLICABLE STANDARDS

2013 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 14	STANDPIPE SYSTEMS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17a	WET CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS	2013 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED) (NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES")	2013 EDITION
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES	2013 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2006 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2012 EDITION

DEPARTMENT OF JUSTICE REGULATIONS FOR TITLE II OF THE AMERICANS WITH DISABILITIES ACT OF 1990 WITH REVISED REGULATIONS AS PUBLISHED IN THE FEDERAL REGISTER ON SEPTEMBER 15, 2010, EFFECTIVE MARCH 15, 2012. TITLED ADA STANDARDS FOR ACCESSIBLE DESIGN.

VICINITY MAP



J & S CONSULTING ENGINEERS, INC.
ELECTRICAL ▫ MECHANICAL
FIRE PROTECTION
3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E–Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT BENJAMIN A. AMADOR C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER WILLIAM L. PORTA Exp. M25042 09–30–21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE
4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	N.J.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY: S.L.
CHECKED BY: N.J.
DATE 05.12.17
JOB NO: 45461
SHEET TITLE

TITLE SHEET

SHEET
T-0.1
DWG # 1 OF 82

05–12–17 DSA SUBMITTAL

Job No. 45461 FILE: N:\45461-VenturaCol\15-21.dwg, Layout1, Ref. Files: N:\ACTIVE\15-2020-2014.dwg, SHEET.dwg
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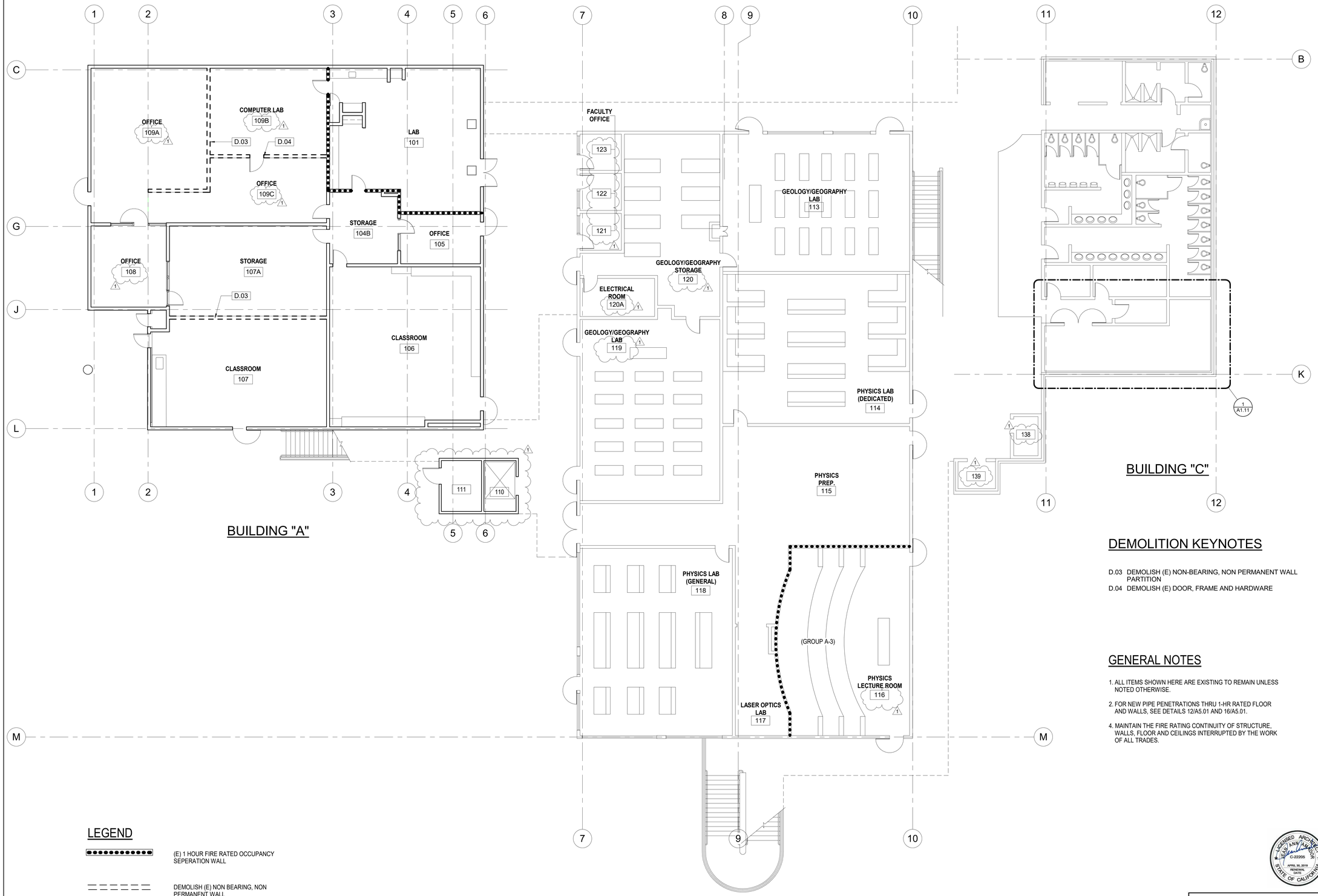


DEMOLITION KEYNOTES

D.03 DEMOLISH (E) NON-BEARING, NON PERMANENT WALL PARTITION

D.04 DEMOLISH (E) DOOR, FRAME AND HARDWARE

GENERAL NOTES

1. ALL ITEMS SHOWN HERE ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR NEW PIPE PENETRATIONS THRU 1-HR RATED FLOOR AND WALLS, SEE DETAILS 12/A5.01 AND 16/A5.01.
4. MAINTAIN THE FIRE RATING CONTINUITY OF STRUCTURE, WALLS, FLOOR AND CEILINGS INTERRUPTED BY THE WORK OF ALL TRADES.

LEGEND

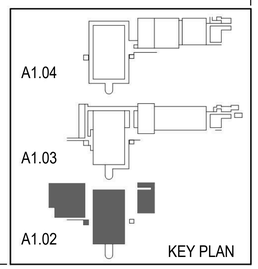
(E) 1 HOUR FIRE RATED OCCUPANCY SEPERATION WALL

DEMOLISH (E) NON BEARING, NON PERMANENT WALL

NORTH

0' 4' 8' 16' 32'

1 FIRST FLOOR PLAN
1/8" = 1'-0"



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3111 Winona Ave., #102
Burbank, Ca 91504
Tel.: (818) 841-0303
Fax: (818) 841-8531
624 Moorpark Road,
Moorpark, CA 93021
Tel.: (805) 523-1700
Fax: (805) 523-1702
www.jandsconsulting.com
E-Mail:jsmail@jandsconsulting.com
PROJECT No. 45461

AMADOR WHITTLE ARCHITECTS, INC.
28328 AGOURA ROAD, SUITE 203
AGOURA HILLS, CA 91301
(805) 530-3938 , (818) 874-0071

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL. NO. 03-117754
AC ____ FLS ____ SS ____
DATE ____

NO.	DATE	DESCRIPTION	BY
1	05.08.2020	ADDENDUM 1	
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	TJL
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

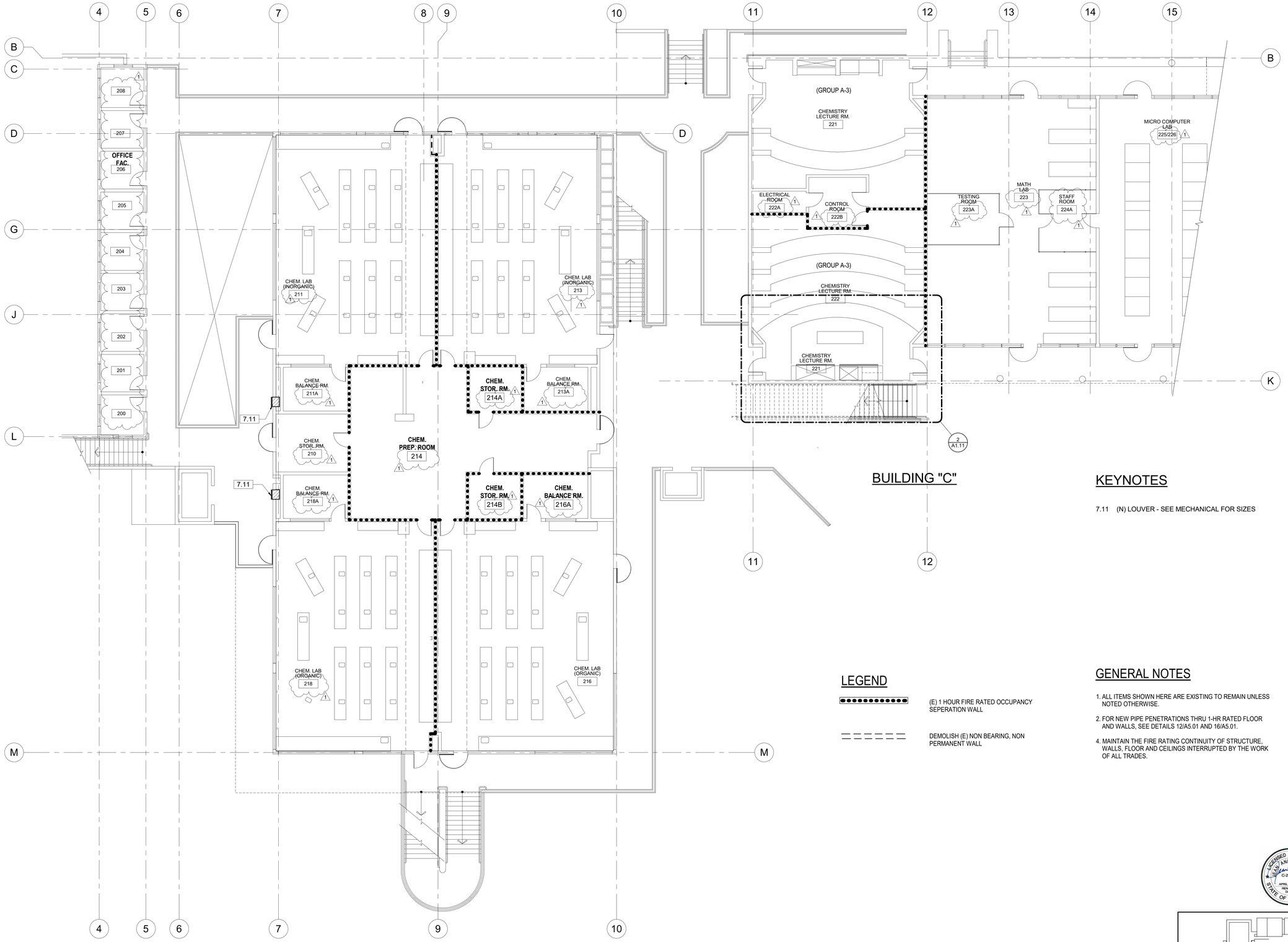
SHEET TITLE

FIRST FLOOR PLAN

SHEET

A1.02

DWG # ____ OF ____



BUILDING "C"

BUILDING "B"

KEYNOTES

7.11 (N) LOUVER - SEE MECHANICAL FOR SIZES

LEGEND

(E) 1 HOUR FIRE RATED OCCUPANCY SEPERATION WALL

DEMOLISH (E) NON BEARING, NON PERMANENT WALL

GENERAL NOTES

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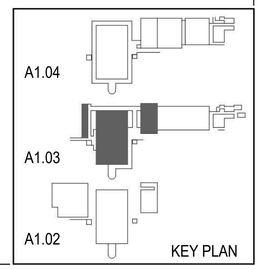
NORTH

0' 4' 8' 16' 32'



1 PARTIAL SECOND FLOOR PLAN
1/8" = 1'-0"

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28328 AGOURA ROAD, SUITE 203
AGOURA HILLS, CA 91301
(805) 330-3938 , (818) 874-0071

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MATH & SCIENCE COMPLEX

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL. NO. 03-117754
AC _____ FLS _____ SS _____
DATE _____

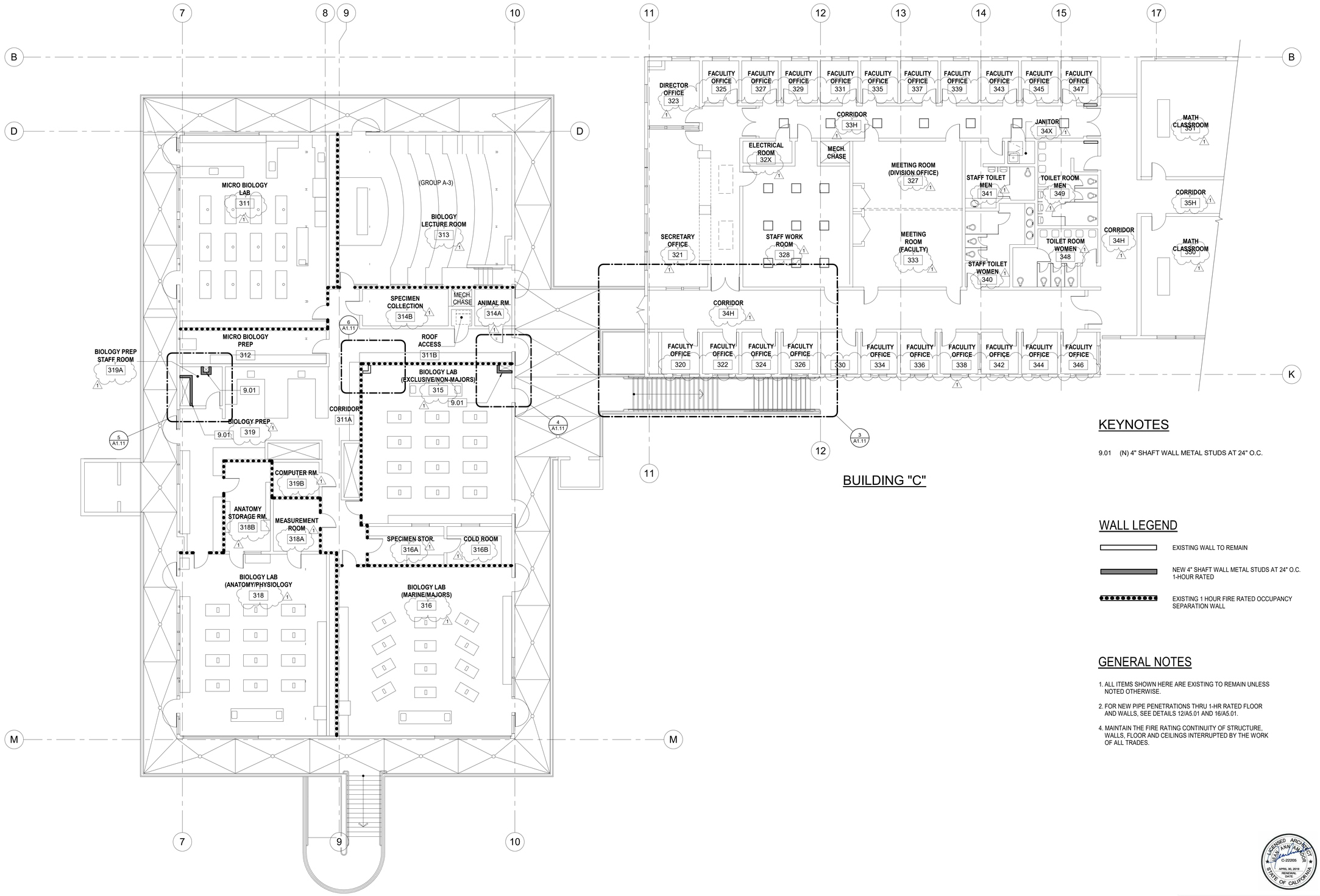
NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1	05.08.2020	ADDENDUM 1	
	12.19.16	DSA SUBMITTAL	

LICENSED ARCHITECT
TERRY JAMES WHITTLE
C-22205
APRIL 30, 2019
RENEWAL DATE
STATE OF CALIFORNIA

DRAWN BY:	TJL
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

SHEET TITLE
PARTIAL SECOND FLOOR PLAN

SHEET
A1.03
DWG # ___ OF ___



BUILDING "C"

BUILDING "B"

1 PARTIAL THIRD FLOOR PLAN
1/8" = 1'-0"

KEYNOTES

9.01 (N) 4" SHAFT WALL METAL STUDS AT 24" O.C.

WALL LEGEND

EXISTING WALL TO REMAIN

NEW 4" SHAFT WALL METAL STUDS AT 24" O.C. 1-HOUR RATED

EXISTING 1 HOUR FIRE RATED OCCUPANCY SEPARATION WALL

GENERAL NOTES

1. ALL ITEMS SHOWN HERE ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR NEW PIPE PENETRATIONS THRU 1-HR RATED FLOOR AND WALLS, SEE DETAILS 12/A5.01 AND 16/A5.01.
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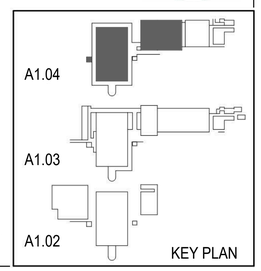
NORTH

0' 4' 8' 16' 32'



KEY PLAN

J & S CONSULTING ENGINEERS, INC.
ELECTRICAL • MECHANICAL
FIRE PROTECTION
3111 Winona Ave., #102
Burbank, Ca 91504
Tel.: (818) 841-0303
Fax: (818) 841-8531
624 Moorpark Road,
Moorpark, CA 93021
Tel.: (805) 523-1700
Fax: (805) 523-1702
www.jandsconsulting.com
E-Mail:jsmail@jandsconsulting.com
PROJECT No. 45461

AMADOR WHITTLE
ARCHITECTS, INC.
28328 AGOURA ROAD, SUITE 203
AGOURA HILLS, CA 91301
(805) 530-3938 , (818) 874-0071

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL. NO. 03-117754
AC_____ FLS_____ SS_____
DATE_____

NO.	DATE	DESCRIPTION	BY
1	05.08.2020	ADDENDUM 1	
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	TJL
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

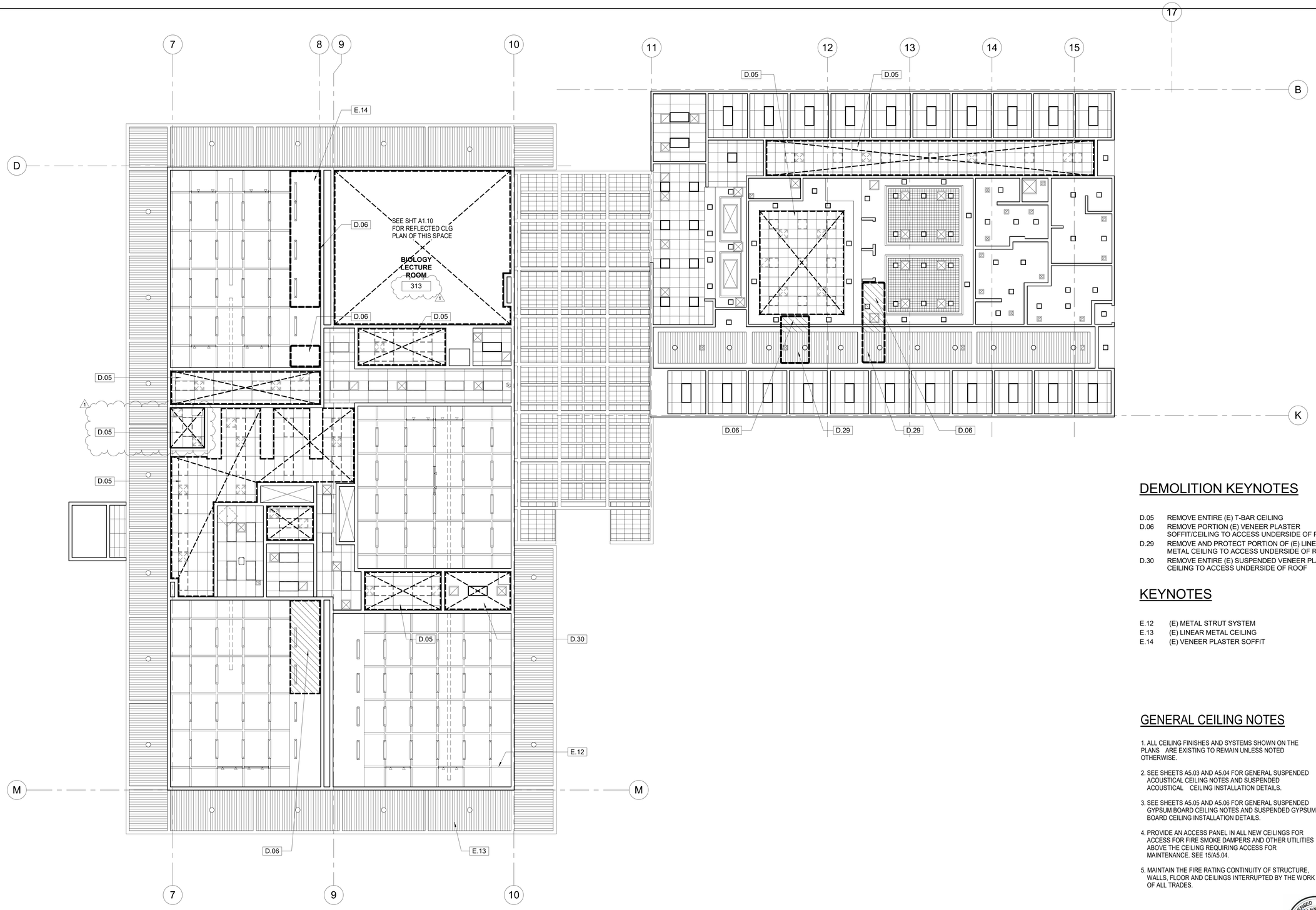
SHEET TITLE

PARTIAL THIRD FLOOR FLOOR PLAN

SHEET

A1.04

DWG # ____ OF ____



DEMOLITION KEYNOTES

D.05 REMOVE ENTIRE (E) T-BAR CEILING
D.06 REMOVE PORTION (E) VENEER PLASTER SOFFIT/CEILING TO ACCESS UNDERSIDE OF ROOF
D.29 REMOVE AND PROTECT PORTION OF (E) LINEAR METAL CEILING TO ACCESS UNDERSIDE OF ROOF
D.30 REMOVE ENTIRE (E) SUSPENDED VENEER PLASTER CEILING TO ACCESS UNDERSIDE OF ROOF

KEYNOTES

E.12 (E) METAL STRUT SYSTEM
E.13 (E) LINEAR METAL CEILING
E.14 (E) VENEER PLASTER SOFFIT

GENERAL CEILING NOTES

1. ALL CEILING FINISHES AND SYSTEMS SHOWN ON THE PLANS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
2. SEE SHEETS A5.03 AND A5.04 FOR GENERAL SUSPENDED ACOUSTICAL CEILING NOTES AND SUSPENDED ACOUSTICAL CEILING INSTALLATION DETAILS.
3. SEE SHEETS A5.05 AND A5.06 FOR GENERAL SUSPENDED GYPSUM BOARD CEILING NOTES AND SUSPENDED GYPSUM BOARD CEILING INSTALLATION DETAILS.
4. PROVIDE AN ACCESS PANEL IN ALL NEW CEILINGS FOR ACCESS FOR FIRE SMOKE DAMPERS AND OTHER UTILITIES ABOVE THE CEILING REQUIRING ACCESS FOR MAINTENANCE. SEE 15/A5.04.
5. MAINTAIN THE FIRE RATING CONTINUITY OF STRUCTURE, WALLS, FLOOR AND CEILINGS INTERRUPTED BY THE WORK OF ALL TRADES.

DEMOLITION CEILING LEGEND

REMOVE 24" x 48" SUSPENDED ACOUSTICAL CEILING PANELS AND GRID

REMOVE PORTION OF VENEER PLASTER SOFFIT/CEILING

REMOVE AND RE-INSTALL EXISTING RECESSED LIGHT FIXTURE 24" x 48"

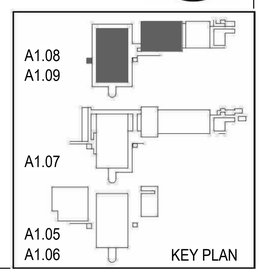
REMOVE AND RE-INSTALL SUPPLY AIR DIFFUSER AS PER MECH. DWGS.

REMOVE AND RE-INSTALL RETURN AIR GRILL AS PER MECH. DWGS.

1 PARTIAL THIRD FLOOR DEMOLITION REFLECTED CEILING PLAN
1/8" = 1'-0"

NORTH

0' 4' 8' 16' 32'



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MATH & SCIENCE COMPLEX

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DIVISION OF THE STATE ARCHITECT
APPL. NO. 03-117754
AC_____ FLS _____ SS _____
DATE _____

LICENSED ARCHITECT
JEAN ANN AMADOR
C-22205
APRIL 30, 2019
RENEWAL DATE
STATE OF CALIFORNIA

NO.	DATE	DESCRIPTION	BY
1	05.08.2020	ADDENDUM 1	
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	TJL
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

SHEET TITLE

PARTIAL THIRD FLOOR DEMOLITION REFLECTED CEILING PLAN

SHEET

A1.08

DWG # ____ OF ____

KEYNOTES

5.01	(N) STEEL BEAM REINFORCEMENT UNDER ROOF, SEE STRUCTURAL
9.05	(N) ACOUSTICAL SUSPENDED CEILING SYSTEM
9.06	(N) SUSPENDED GYPSUM BOARD CEILING SYSTEM
9.07	PATCH AND PAINT VENEER PLASTER CEILING AND/OR SOFFIT AFTER COMPLETION OF DUCT AND ROOF UNDERSIDE WORK
9.09	REINSTALL (E) LINEAR METAL CEILING TRACK SYSTEM AFER COMPLETION OF DUCT AND ROOF UNDERSIDE WORK
E.12	(E) METAL STRUT SYSTEM
E.13	(E) LINEAR METAL CEILING
E.14	(E) VENEER PLASTER SOFFIT

GENERAL CEILING NOTES

1. ALL CEILING FINISHES AND SYSTEMS SHOWN ON THE PLANS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
2. SEE SHEETS A5.03 AND A5.04 FOR GENERAL SUSPENDED ACOUSTICAL CEILING NOTES AND SUSPENDED ACOUSTICAL CEILING INSTALLATION DETAILS.
3. SEE SHEETS A5.05 AND A5.06 FOR GENERAL SUSPENDED GYPSUM BOARD CEILING NOTES AND SUSPENDED GYPSUM BOARD CEILING INSTALLATION DETAILS.
4. PROVIDE AN ACCESS PANEL IN ALL NEW CEILINGS FOR ACCESS FOR FIRE SMOKE DAMPERS AND OTHER UTILITIES ABOVE THE CEILING REQUIRING ACCESS FOR MAINTENANCE. SEE 15/A5.04.
5. MAINTAIN THE FIRE RATING CONTINUITY OF STRUCTURE, WALLS, FLOOR AND CEILINGS INTERRUPTED BY THE WORK OF ALL TRADES.

CEILING LEGEND

- (E) 24" X 48" SUSPENDED ACOUSTICAL CEILING PANELS TO REMAIN
- (N) 24" X 48" SUSPENDED ACOUSTICAL CEILING PANELS
- (E) 24" X 24" SUSPENDED ACOUSTICAL CEILING PANELS TO REMAIN
- (N) 24" X 24" SUSPENDED ACOUSTICAL CEILING PANELS
- (E) GYPSUM BOARD
- (N) GYPSUM BOARD
- EXISTING
- (E) TO BE REINSTALLED
- LIGHT FIXTURES
- VIDEO PROJECTOR
- PROJECTION SCREEN
- T.V. MONITOR BRACKET
- (E) AIR RETURN TO BE REMOVED AND REINSTALLED
- (E) EXHAUST TO BE REMOVED AND REINSTALLED
- (E) AIR SUPPLY TO BE REMOVED AND REINSTALLED
- (N) STRUCTURAL STEEL BEAM UNDERSIDE OF ROOF, SEE STRUCTURAL

1 PARTIAL THIRD FLOOR NEW REFLECTED CEILING PLAN
1/8" = 1'-0"

NORTH

0' 4' 8' 16' 32'

A1.08
A1.09
A1.07
A1.05
A1.06
KEY PLAN

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	12.19.16	DSA SUBMITTAL	

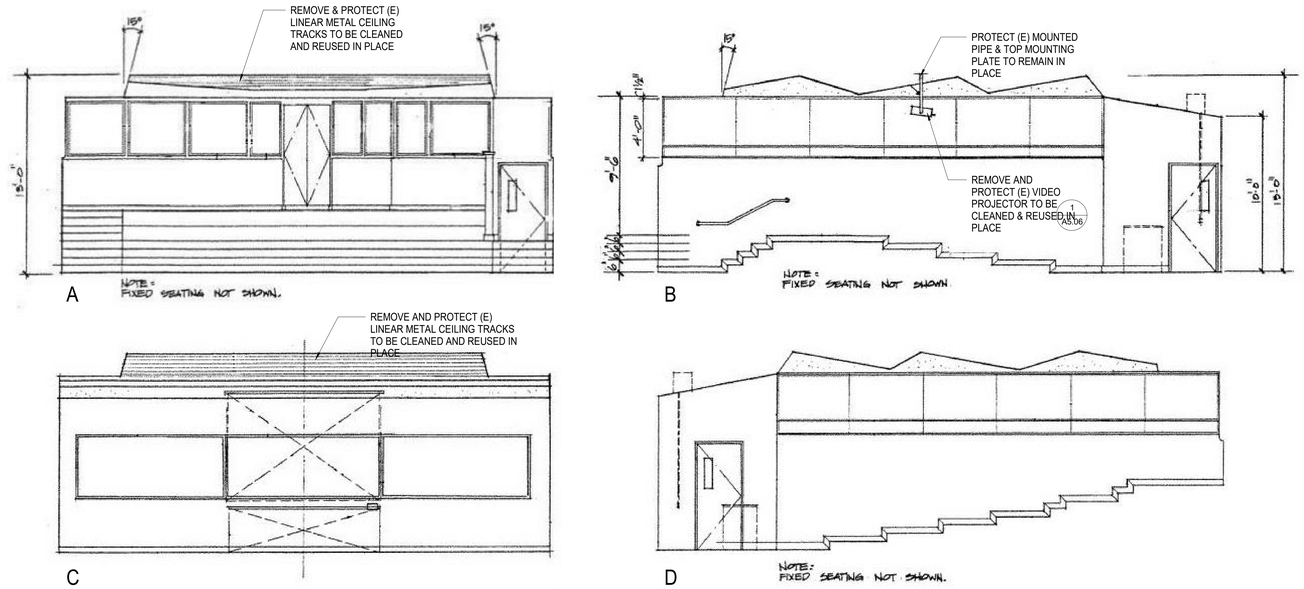
REVISIONS

LICENSED ARCHITECT EDWARD M. WHITTLE C-22205 APRIL 30, 2019 RENEWAL DATE STATE OF CALIFORNIA

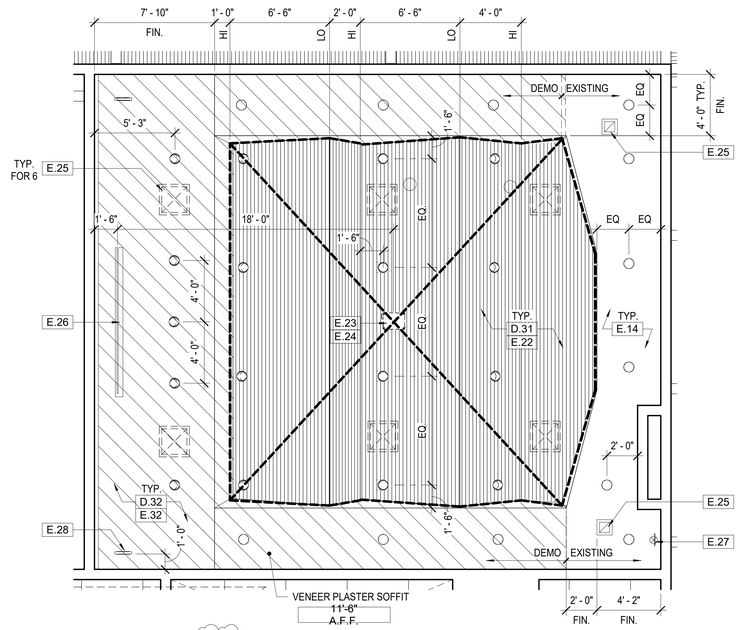
DRAWN BY:	TJL
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

SHEET TITLE
PARTIAL THIRD FLOOR NEW REFLECTED CEILING PLAN

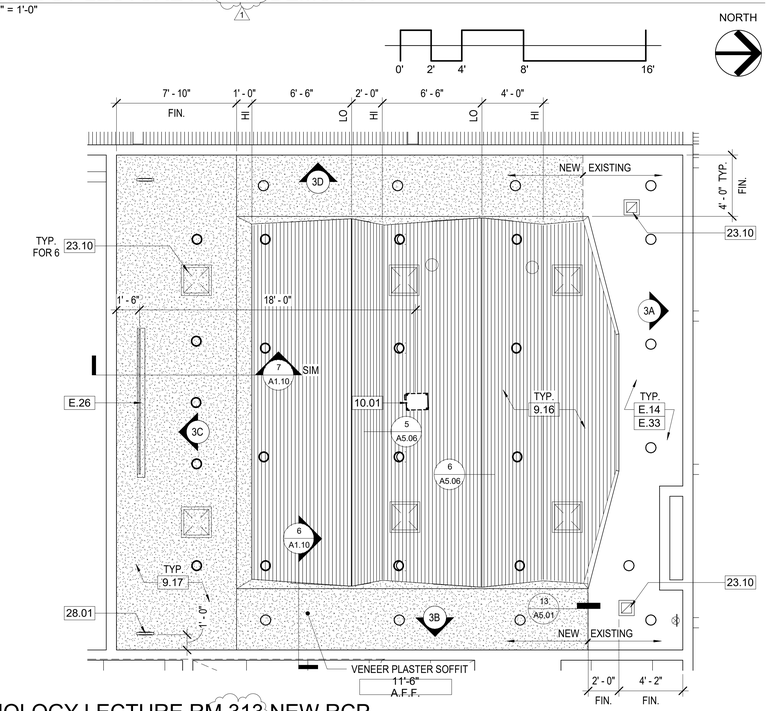
SHEET
A1.09
DWG # ____ OF ____



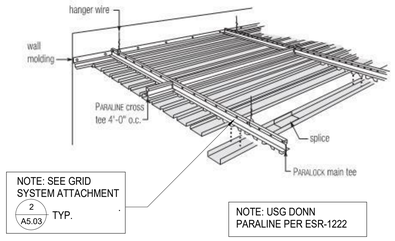
3 INTERIOR ELEVATION-BIOLOGY LECTURE RM 313
1/4" = 1'-0"



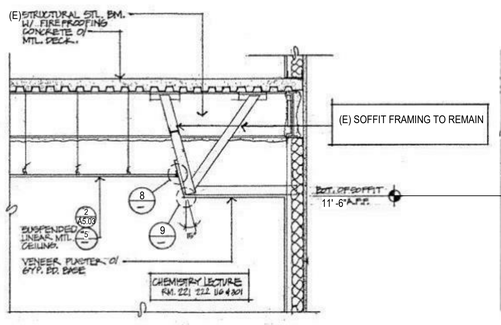
1 BIOLOGY LECTURE RM 313 DEMO RCP
1/4" = 1'-0"



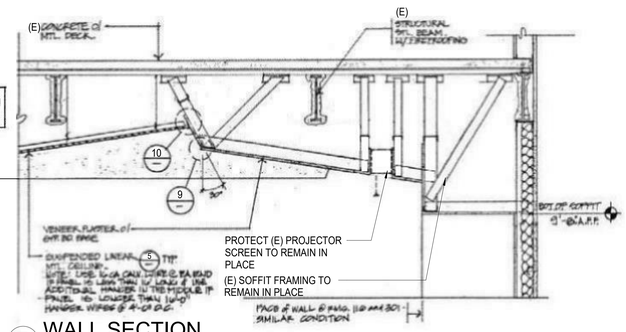
2 BIOLOGY LECTURE RM 313 NEW RCP
1/4" = 1'-0"



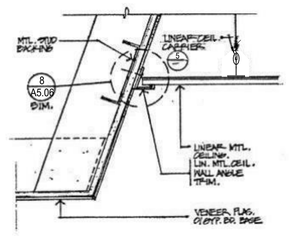
5 LINEAR METAL CEILING SYSTEM
3" = 1'-0"



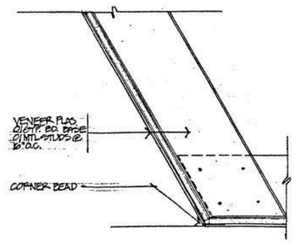
6 WALL SECTION
1/2" = 1'-0"



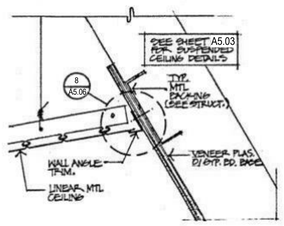
7 WALL SECTION
1/2" = 1'-0"



8 SOFFIT/LIN. CEILING
3" = 1'-0"



9 SOFFIT DETAIL
3" = 1'-0"



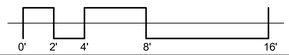
10 SOFFIT/LIN. CEILING
3" = 1'-0"

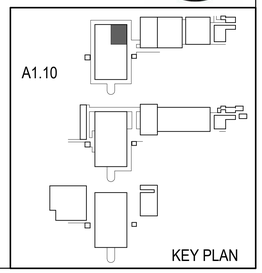
DEMOLITION KEYNOTES

D.31 DEMOLISH (E) CEILING SUSPENSION SYSTEM
D.32 DEMOLISH (E) VENEER PLASTER CEILING FINISH

KEYNOTES

9.16 (N) SUSPENSION SYSTEM TO SUPPORT (N) LINEAR METAL CEILING TRACKS
9.17 (N) VENEER PLASTER CEILING FINISH TO MATCH (E)
10.01 REINSTALL (E) VIDEO PROJECTOR AFTER COMPLETION OF DUCT AND ROOF UNDERSIDE WORK
23.10 REINSTALL (E) MECHANICAL EQUIPMENT
28.01 REINSTALL (E) EXIT SIGN CENTER ON DOOR
E.14 (E) VENEER PLASTER SOFFIT
E.22 REMOVE AND PROTECT (E) LINEAR METAL TRACKS TO BE CLEANED AND REUSED IN PLACE
E.23 REMOVE AND PROTECT (E) VIDEO PROJECTOR TO BE CLEANED AND REUSED IN PLACE
E.24 PROTECT (E) MOUNTED PIPE AND TOP MOUNTING PLATE TO BE REUSED
E.25 REMOVE AND PROTECT (E) MECHANICAL EQUIPMENT TO BE CLEANED AND REUSED IN PLACE
E.26 PROTECT (E) PROJECTOR SCREEN, TO REMAIN IN PLACE
E.27 (E) EXIT SIGN TO REMAIN IN PLACE
E.28 REMOVE AND PROTECT (E) EXIT SIGN TO BE CLEANED AND REUSED IN PLACE
E.32 (E) SOFFIT FRAMING TO REMAIN
E.33 PROTECT (E) SOUND ABSORBING PANELS TO REMAIN IN PLACE





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AC ____ FLS ____ SS ____
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NO.	DATE	DESCRIPTION	BY
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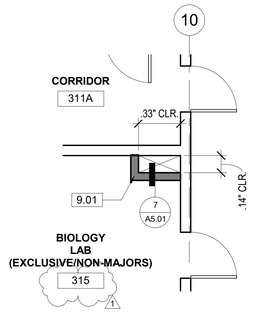
	12.19.16	DSA SUBMITTAL	

REVISIONS

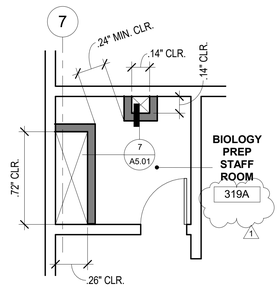
LICENSED ARCHITECT EDWARD J. WHITTLE C-22205 APRIL 30, 2019 RENEWAL DATE STATE OF CALIFORNIA

DRAWN BY:	WTJ
CHECKED BY:	JAA
DATE	05.12.17
JOB NO:	14-JS VCCCD
SHEET TITLE	BIOLOGY LECTURE ROOM-ENLARGED RCP PLANS, INT. ELEVS, WALL SECTIONS & DETAILS

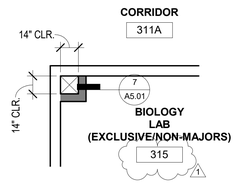
SHEET
A1.10
DWG # ____ OF ____



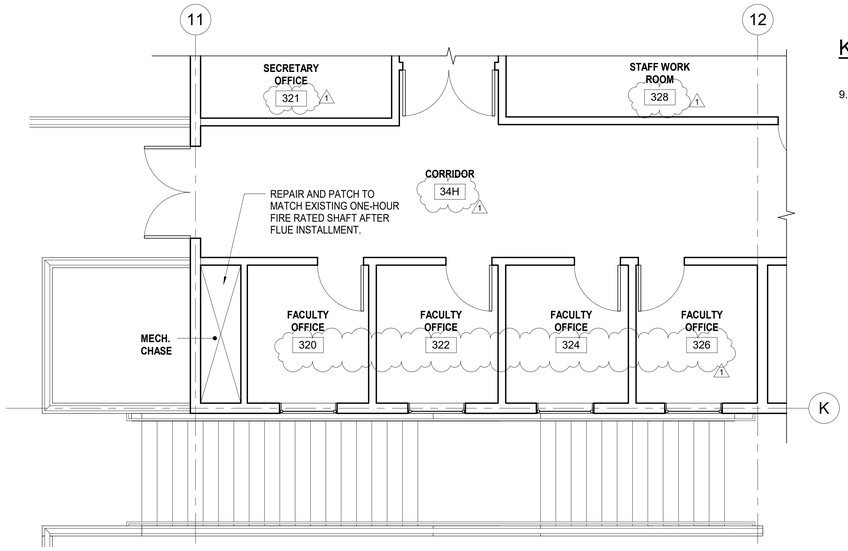
4 ENLARGED PLAN - (N) 1 HR SHAFT
1/4" = 1'-0"



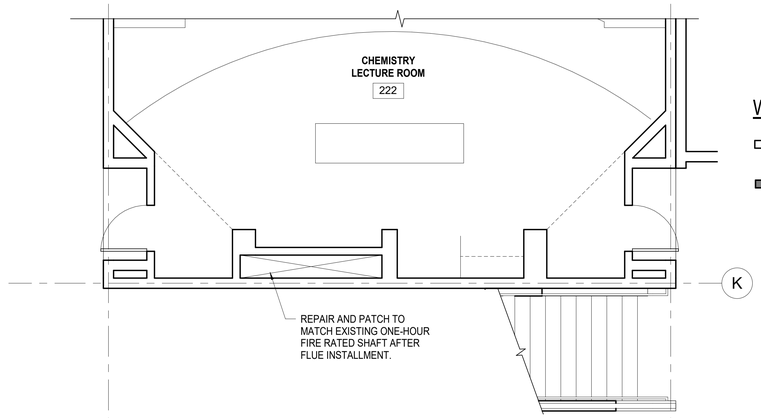
5 ENLARGED PLAN - (N) 1 HR SHAFT
1/4" = 1'-0"



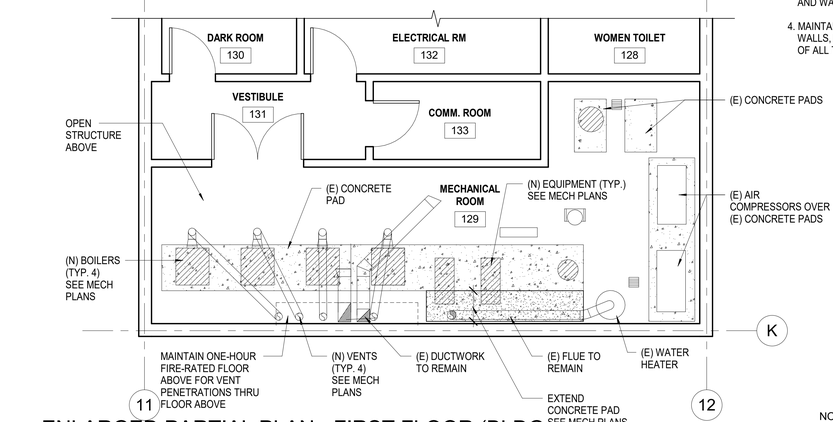
6 ENLARGED PLAN - (N) 1 HR SHAFT
1/4" = 1'-0"



3 ENLARGED PARTIAL PLAN - THIRD FLOOR (BLDG 'C')
1/4" = 1'-0"



2 ENLARGED PARTIAL PLAN - SECOND FLOOR (BLDG 'C')
1/4" = 1'-0"



1 ENLARGED PARTIAL PLAN - FIRST FLOOR (BLDG 'C')
1/4" = 1'-0"

KEYNOTES

9.01 (N) 4" SHAFT WALL METAL STUDS AT 24" O.C.

WALL LEGEND

EXISTING WALL TO REMAIN

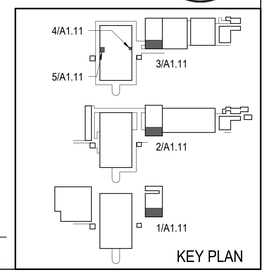
NEW 4" SHAFT WALL METAL STUDS AT 24" O.C. 1-HOUR RATED

GENERAL NOTES

1. ALL ITEMS SHOWN HERE ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR NEW PIPE PENETRATIONS THRU 1-HR RATED FLOOR AND WALLS, SEE DETAILS 12/A5.01 AND 16/A5.01.
4. MAINTAIN THE FIRE RATING CONTINUITY OF STRUCTURE, WALLS, FLOOR AND CEILINGS INTERRUPTED BY THE WORK OF ALL TRADES.

NORTH

0' 2' 4' 8' 16'



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	12.19.16	DSA SUBMITTAL	

REVISIONS

LICENSED ARCHITECT
JEAN ANN JAMISON
C-22206
APRIL 30, 2019
RENEWAL DATE
STATE OF CALIFORNIA

DRAWN BY:	MJQ
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

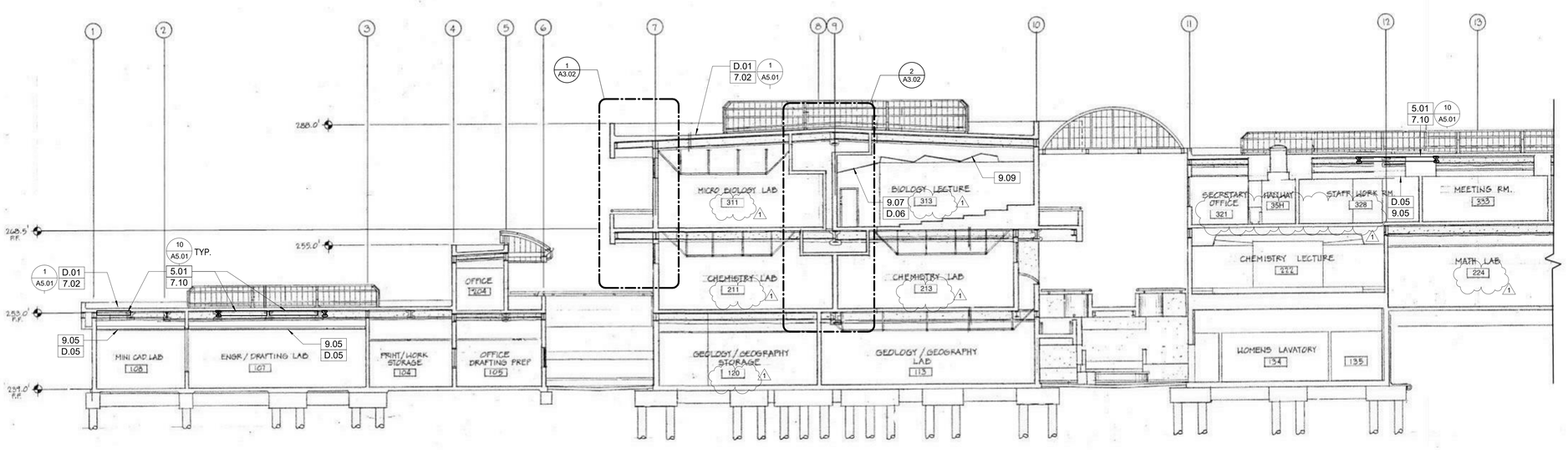
SHEET TITLE

ENLARGED PARTIAL FLOOR PLANS - BUILDINGS 'B' & 'C'

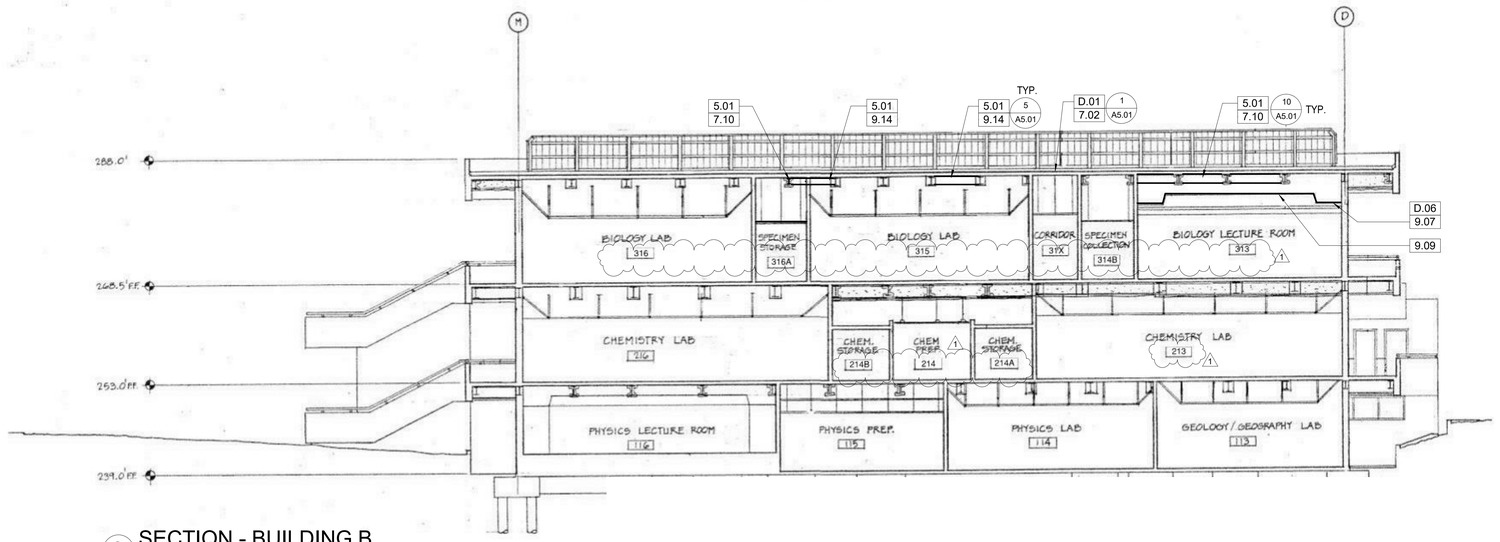
SHEET

A1.11

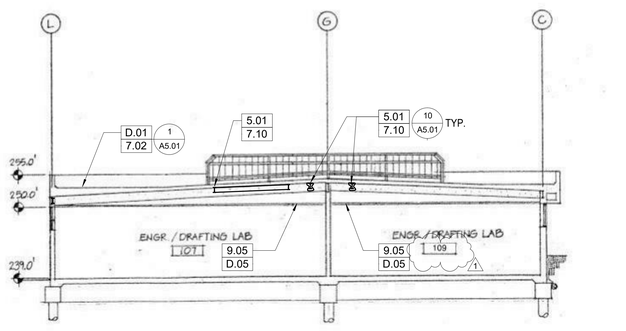
DWG # ____ OF ____



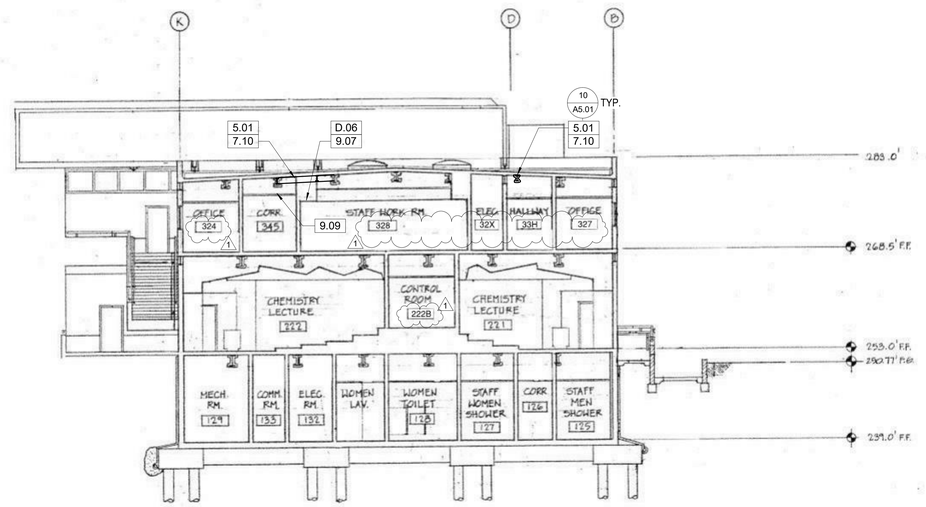
1 LONGITUDINAL SECTION - BUILDING A, B & C
1/8" = 1'-0"



2 SECTION - BUILDING B
1/8" = 1'-0"



3 SECTION - BUILDING A
1/8" = 1'-0"



4 SECTION - BUILDING C
1/8" = 1'-0"

DEMOLITION KEYNOTES

D.01 REMOVE EXISTING BUILT-UP ROOFING AND FLASHING. CLEAN AND PREP SURFACE FOR NEW PVC ROOF AND FLASHINGS.
D.05 REMOVE ENTIRE (E) T-BAR CEILING
D.06 REMOVE PORTION (E) VENEER PLASTER SOFFIT/CEILING TO ACCESS UNDERSIDE OF ROOF

KEYNOTES

5.01 (N) STEEL BEAM REINFORCEMENT UNDER ROOF, SEE STRUCTURAL
7.02 (N) PVC MEMBRANE OVER 1/2" THICK HIGH DENSITY INSULATION (SEE SPECS)
7.10 (N) SPRAY APPLIED FIRE-PROOFING
9.05 (N) ACOUSTICAL SUSPENDED CEILING SYSTEM
9.07 PATCH AND PAINT VENEER PLASTER CEILING AND/OR SOFFIT AFTER COMPLETION OF DUCT AND ROOF UNDERSIDE WORK
9.09 REINSTALL (E) LINEAR METAL CEILING TRACK SYSTEM AFER COMPLETION OF DUCT AND ROOF UNDERSIDE WORK
9.14 (N) 5/8" TYPE 'X' GYPSUM BOARD BOX AROUND (N) STEEL BEAM

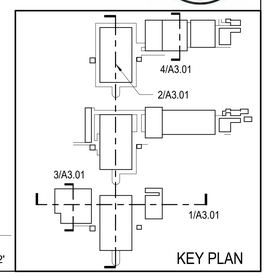
GENERAL NOTES

1. ALL ITEMS SHOWN HERE ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

2. FOR NEW PIPE PENETRATIONS THRU 1-HR RATED FLOOR AND WALLS, SEE DETAILS 12/A5.01 AND 16/A5.01.

4. MAINTAIN THE FIRE RATING CONTINUITY OF STRUCTURE, WALLS, FLOOR AND CEILINGS INTERRUPTED BY THE WORK OF ALL TRADES.

0' 4' 8' 16' 32'



J & S CONSULTING ENGINEERS, INC.
ELECTRICAL ▫ MECHANICAL
FIRE PROTECTION
3111 Winona Ave., #102
Burbank, Ca 91504
Tel.: (818) 841-0303
Fax: (818) 841-8531
624 Moorpark Road,
Moorpark, CA 93021
Tel.: (805) 523-1700
Fax: (805) 523-1702
www.jandsconsulting.com
E-Mail:jsmail@jandsconsulting.com
PROJECT No. 45461

AMADOR WHITTLE
ARCHITECTS, INC.
28328 AGOURA ROAD, SUITE 203
AGOURA HILLS, CA 91301
(805) 330-3938 , (818) 874-0071

VENTURA COLLEGE
4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL. NO. 03-117754
AC ____ FLS ____ SS ____
DATE ____

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1	05.08.2020	ADDENDUM 1	
	12.19.16	DSA SUBMITTAL	

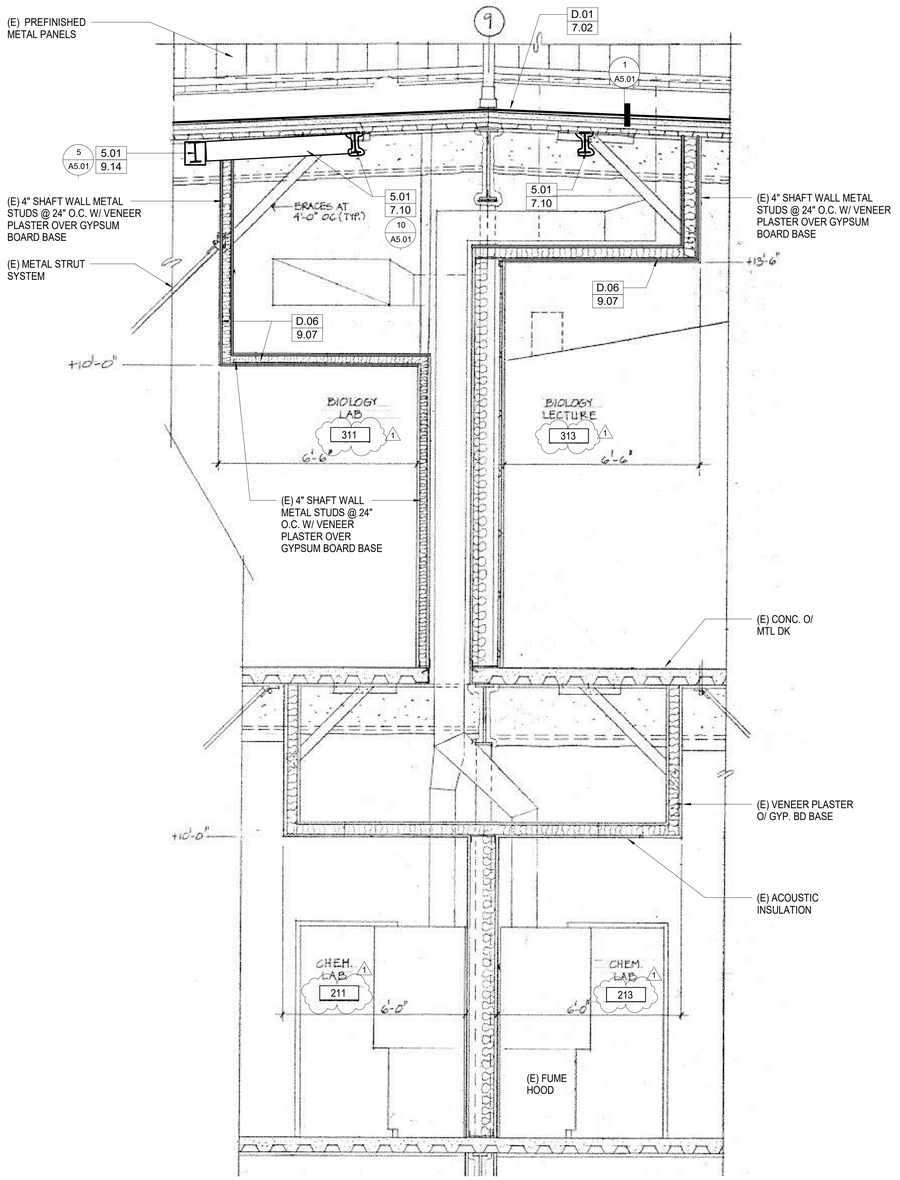
LICENSED ARCHITECT JEAN ANN MARIE WHITTLE C-22205 APPL 30, 2019 RENEWAL DATE STATE OF CALIFORNIA

DRAWN BY:	VV
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

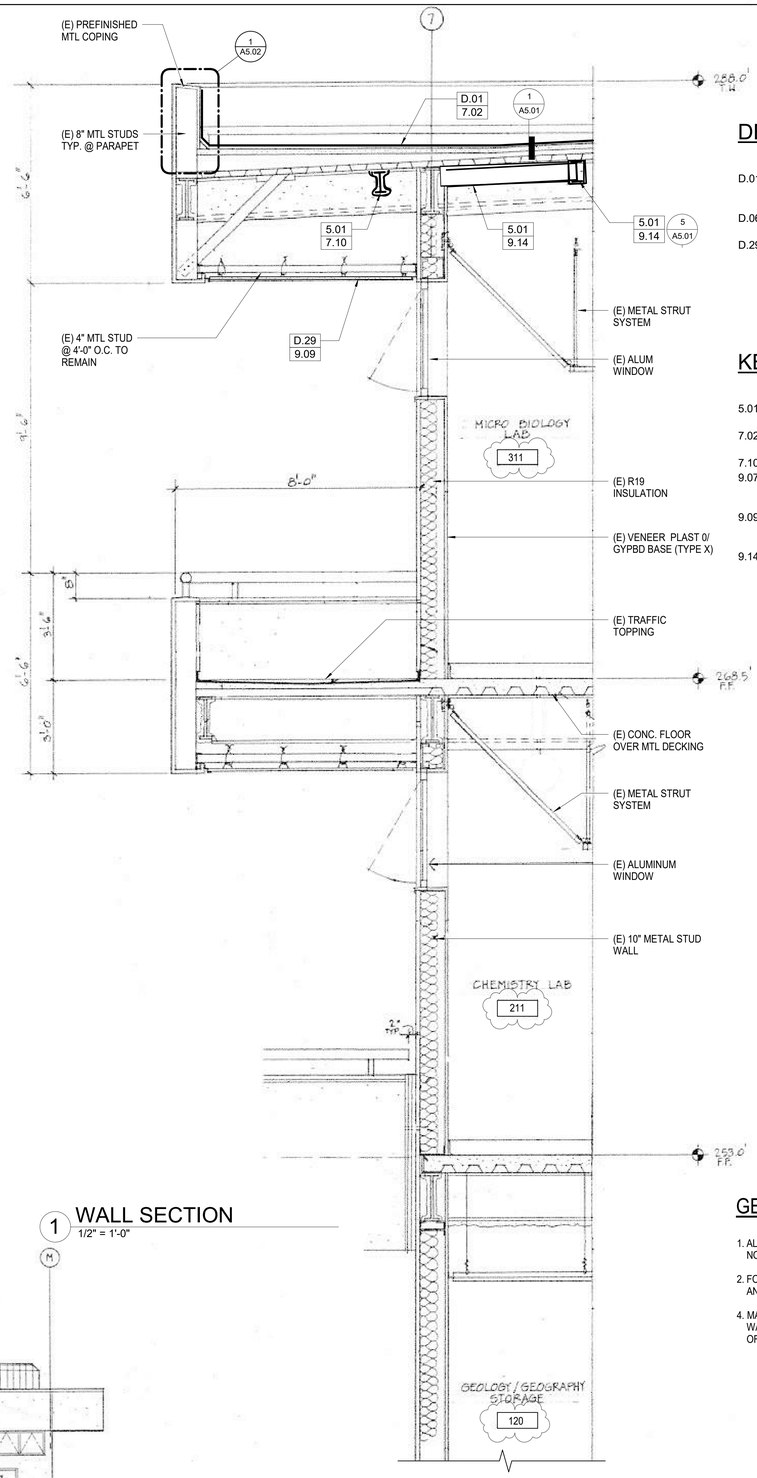
SHEET TITLE

BUILDING SECTIONS

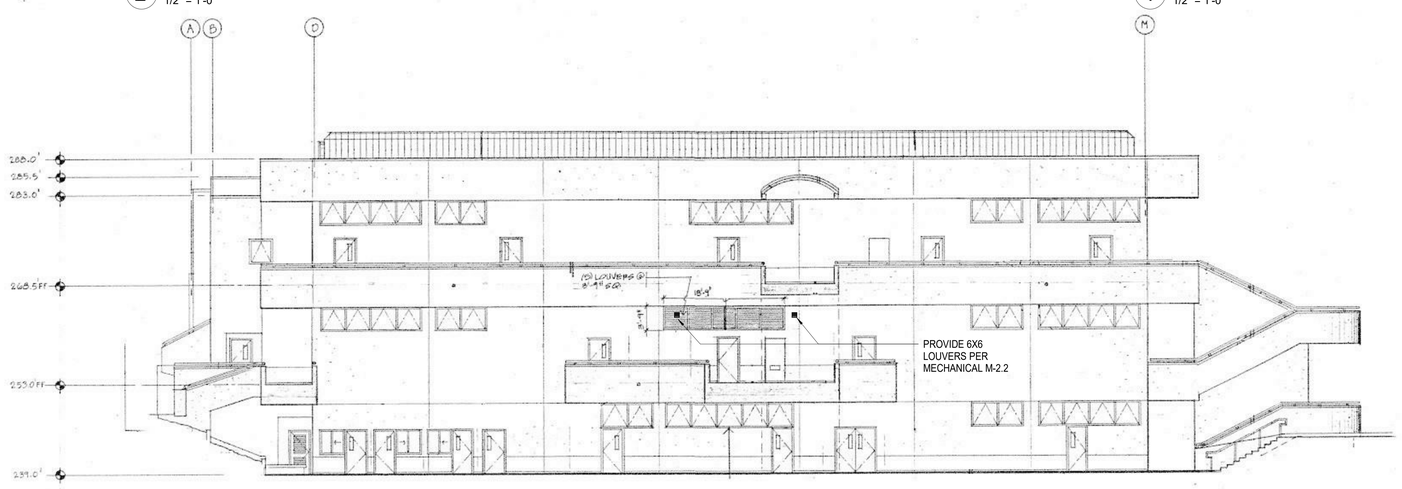
SHEET
A3.01
DWG # ____ OF ____



2 WALL SECTION
1/2" = 1'-0"



1 WALL SECTION
1/2" = 1'-0"



3 SOUTH COURT ELEVATION
1/8" = 1'-0"

DEMOLITION KEYNOTES

D.01 REMOVE EXISTING BUILT-UP ROOFING AND FLASHING. CLEAN AND PREP SURFACE FOR NEW PVC ROOF AND FLASHINGS.

D.06 REMOVE PORTION (E) VENEER PLASTER SOFFIT/CEILING TO ACCESS UNDERSIDE OF ROOF

D.29 REMOVE AND PROTECT PORTION OF (E) LINEAR METAL CEILING TO ACCESS UNDERSIDE OF ROOF

KEYNOTES

5.01 (N) STEEL BEAM REINFORCEMENT UNDER ROOF, SEE STRUCTURAL

7.02 (N) PVC MEMBRANE OVER 1/2" THICK HIGH DENSITY INSULATION (SEE SPECS)

7.10 (N) SPRAY APPLIED FIRE-PROOFING

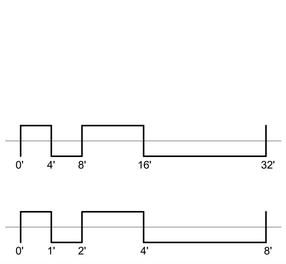
9.07 PATCH AND PAINT VENEER PLASTER CEILING AND/OR SOFFIT AFTER COMPLETION OF DUCT AND ROOF UNDERSIDE WORK

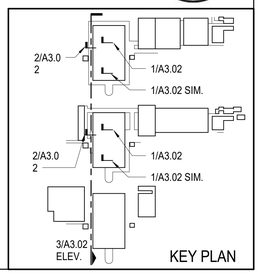
9.09 REINSTALL (E) LINEAR METAL CEILING TRACK SYSTEM AFER COMPLETION OF DUCT AND ROOF UNDERSIDE WORK

9.14 (N) 5/8" TYPE 'X' GYPSUM BOARD BOX AROUND (N) STEEL BEAM

GENERAL NOTES

1. ALL ITEMS SHOWN HERE ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR NEW PIPE PENETRATIONS THRU 1-HR RATED FLOOR AND WALLS, SEE DETAILS 12/A5.01 AND 16/A5.01.
4. MAINTAIN THE FIRE RATING CONTINUITY OF STRUCTURE, WALLS, FLOOR AND CEILINGS INTERRUPTED BY THE WORK OF ALL TRADES.





KEY PLAN

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NO.	DATE	DESCRIPTION	BY
1	05.08.2020	ADDENDUM 1	
	12.19.16	DSA SUBMITTAL	

REVISIONS

LICENSED ARCHITECT JEAN ANN JAMISON C-22205 APRIL 30, 2019 RENEWAL DATE STATE OF CALIFORNIA

DRAWN BY:	VV
CHECKED BY:	MJQ
DATE	05.12.17
JOB NO:	14-JS VCCCD

SHEET TITLE

WALL SECTIONS & SOUTH ELEVATION OF BLDG 'B'

SHEET

A3.02

DWG # ___ OF ___

EXISTING MIXING BOX SCHEDULE

(E) MIXING BOX No.	MANUFACTURER AND MODEL No.	CFM	VENTILATION INLET SIZE	HEATING INLET SIZE	OUTLET SIZE	APD IN. WG	NOTES:
MB 1	METAL-AIRE 414	2165	16"x10" OVAL	16"x10" OVAL	24"x12"	0.36	1 2
MB 2	METAL-AIRE 414	1985	16"x10" OVAL	16"x10" OVAL	24"x12"	0.31	
MB 3	METAL-AIRE 410	980	10"Ø	10"Ø			
MB 4	NOT USED						
MB 5	METAL-AIRE 414	1935	16"x10" OVAL	16"x10" OVAL	24"x12"	0.28	
MB 6	METAL-AIRE 414	2150	16"x10" OVAL	16"x10" OVAL	24"x12"	0.36	
MB 7	METAL-AIRE 406	465	6"Ø	6"Ø	12"x12"	0.34	
MB 8	METAL-AIRE 412	1800	13"x10" OVAL	13"x10" OVAL	18"x12"	0.49	
MB 9	METAL-AIRE 414	3010	16"x10" OVAL	16"x10" OVAL	24"x12"	0.44	
MB 10	METAL-AIRE 414	2710	16"x10" OVAL	16"x10" OVAL	24"x12"	0.59	
MB 11	↓	↓	↓	↓	↓	↓	
MB 12	↓	↓	↓	↓	↓	↓	
MB 13	↓	↓	↓	↓	↓	↓	
MB 14	METAL-AIRE 412	1530	13"x10" OVAL	13"x10" OVAL	18"x12"	0.36	
MB 15	METAL-AIRE 406	385	6"Ø	6"Ø	12"x12"	0.23	
MB 16	METAL-AIRE 406	340	6"Ø	6"Ø	12"x12"	0.17	
MB 17	METAL-AIRE 414	2160	16"x10" OVAL	16"x10" OVAL	24"x12"	0.36	
MB 18	↓	2310	↓	↓	↓	0.41	
MB 19	↓	2100	↓	↓	↓	0.34	
MB 20	METAL-AIRE 406	395	6"Ø	6"Ø	12"x12"	0.24	
MB 21	METAL-AIRE 414	2190	16"x10" OVAL	16"x10" OVAL	24"x12"	0.37	
MB 22	METAL-AIRE 406	200	6"Ø	6"Ø	12"x12"	0.06	

NOTES:

1. VERYFY IF EXISTING MIXING BOX IN GOOD OPERATING CONDITION.
2. PROVIDE UNIT PRICE (NOT PART OF BID) TO REPLACE MIXING BOX IF NOT IN GOOD WORKING CONDITION.

GENERAL NOTES

1. THE INTENT OF THESE DOCUMENTS IS TO PROVIDE COMPLETE AND IN PROPER OPERATION THE COOLING, HEATING, AND VENTILATING SYSTEM, ALL AS SPECIFIED OR INDICATED ON THESE DRAWINGS, OR REASONABLY IMPLIED.
2. ALL MECHANICAL WORK SHALL COMPLY WITH THE APPLICABLE CHAPTERS OF THE UMC; ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES, AND OTHER AUTHORITIES HAVING JURISDICTION.
3. THE CONTRACTOR SHALL VERIFY AND COORDINATE WITH GENERAL CONTRACTOR THE LOCATION OF PENETRATIONS BEFORE CUTTING THRU ROOF OR WALLS.
4. THE PROJECT MANAGER AND CONTRACTOR SHALL EXAMINE THE SITE AND DISCUSS GENERAL REQUIREMENTS OF BUILDING AND PERFORMING HIS WORK WITH THE OWNER. CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES ON THE PROJECT.
5. THE CONTRACTOR IS TO REPORT TO THE PROJECT MANAGER ANY OBSERVATIONS OR CONDITIONS WHICH ARE DISCOVERED IN THE BUILDING WHICH WOULD PREVENT THE FULLEST USE OF THE HVAC SYSTEM.
6. CONDENSATE DRAINS SHALL COMPLY WITH THE CALIFORNIA MECHANICAL CODE, SECTION 310.
7. VERIFY ELECTRIC POWER CHARACTERISTICS AT JOB SITE PRIOR TO ORDERING ANY MECHANICAL EQUIPMENT.
8. ALL EQUIPMENT ANCHORAGE SHALL BE DETAILED ON DRAWINGS. DESIGN SHALL CONFORM TO 2007 CBC SECTION AND ASCE 07-5.
9. THE SEISMIC BRACING AND ANCHORAGE OF DUCTS AND PIPING SHALL BE IN ACCORDANCE WITH THE "GUIDELINE FOR SEISMIC RESTRAINS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS" PUBLISHED BY SMACNA LATEST VERSION AND APPROVED BY DSA. A COPY OF THE APPROVED GUIDELINE SHALL BE PROVIDED BY THE CONTRACTOR AND BE KEPT AT THE JOB SITE AT ALL TIMES. WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER, AND DSA FIELD ENGINEER.
10. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT WITH THE APPROVAL OF DSA FIELD REPRESENTATIVE.
11. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. ALL BRACING OF DUCTS AND PIPINGS SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES AS APPROVED BY DSA.
13. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECTED TO THE APPROVAL OF THE ARCHITECT, STRUCTURAL ENGINEER AND DSA FIELD ENGINEER.
14. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.

MEP Component Anchorage Note

All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSA approved construction documents. Where no detail is indicated, the following components shall be anchored or braced to meet the force and displacement requirements prescribed in the 2013 CBC, Sections 1616A.1.18 through 1616A.1.26 and ASCE 7-05 Chapter 6 and 13.

1. All permanent equipment and components.
2. Temporary or movable equipment that is permanently attached (e.g. hard wired) to the building utility service such as electricity, gas or water.
3. Movable equipment, which is stationed in one place for more than 8 hours and heavier than 400 pounds, are required to be anchored with temporary attachments.

The attachment of the following mechanical and electrical components shall be positively attached to the structure but need not be detailed on the planes. These components shall have flexible connections provided between the component and associated ductwork, piping, and conduit.

A. Components weighting 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 weighting less than 20 pounds, or in the case of distributed system, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

For those elements that do not require details on the approved drawings, the installation shall be subject to the approval of the Structural Engineer of Record and the DSA District Structural Engineer. 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 displacement prescribed in ASCE 7-10 Section 13.3 as defined in ASCE 7-10 Section 13.6.8, 13.6.7, 13.6.5.6, and 2013 CBC, Sections 1616A.1.18, 1616A.1.24 and 1615A.1.26.

The bracing and attachments to the structure shall be detailed on the approved drawings or they shall complly with one of the OSHPD Pre-Approvals (OPA #) as modified to satisfy anchorage requirements of ACI 318, Appendix D.

Copies of the manual shall be available on the jobsite prior to the start of hanging and bracing of the pipe, ductwork, and electrical distribution systems.

The Structural Engineer of Record shall verify the adequacy of the structure to support the hanger and brace loads.

HYDRONIC PIPING SYMBOLS & ABBREVIATIONS

SYMBOLS	ABBR	DESCRIPTION	ABBR	DESCRIPTION
	HHWS	HEATING WATER SUPPLY	ABV	ABOVE
	HHWR	HEATING WATER RETURN	APPD	APPORVED
	CHWS	CHILLED WATER SUPPLY	BEL	BELOW
	CHWR	CHILLED WATER RETURN	BTE	BETWEEN
	CWS	CONDENSER WATER SUPPLY	BEY	BEYOND
	CWR	CONDENSER WATER RETURN	BFP	BACK FLOW PREVENTER
	C/HHWS	CHILLED/HEATING HOT WATER SUPPLY	BLR	BOILER
	C/HHWR	CHILLED/HEATING HOT WATER RETURN	B.R.	BOTTOM RETURN
RG	RG	REFRIGERANT HOT GAS PIPING	BSBD	BASEBORD
HV	HV	HYDRONIC VENT	CHOP	CHAIN OPERATED
CD	CD	CONDENSATE DRAIN	CHR	CHILLER
D	DR	DRAIN	COMP	COMPRESSOR
CW	CW	DOMESTIC WATER	CONN	CONNECT OR CONNECTION
PM	PM	PNEUMATIC CONTROL MAIN AIR	C.P.S	COPPER PIPE SIZE-ID
	P.D.	PIPE DROP	C.R.	CEILING REGISTER
	P.R.	PIPE RISER	DTL	DETAIL
	SLV	SLEEVE(WALL OR FLOOR)	DO	DITTO
	CONC.R	CONCENTRIC REDUCER	EFF	EFFICIENCY
	ECC.R	ECCENTRIC REDUCER	ELL	ELBOW
	UN	UNION	EXP	EXPOSED
	P.H	PIPE HANGER	F.D	FLOOR DRAIN
	P.A	PIPE ANCHOR	FPS	FEET PER SECOND
	STR	LINE STRAINER W/DRAIN	F.S	FLOOR SINK
	GV(SOV)	GATE(SHUT OFF)VALVE	FT.HD	HEAD PRESSURE(FT.H2O)
	GL-V	GLOBE VALVE	G.PM	GALLON PER MINUTE
	BAL.V	BALANCING VALVE	I.P.S	IRON PIPE SIZE
	FCV	FLO-CONTROL VALVE	JSTS	JOISTS
	BLR.DR	BOILER DRAIN VALVE	LR	LONG RADIUS
	SOL.VLV	SOLENOID CONTROL VALVE	MTD	MOUNTED
	MOD.VLV	MODULATING CONTROL VLV	OPER	OPERATOR OPERATED
	BFV	BUTTERFLY VALVE	PSI	PRESSURE-POUND/INCH
	GC	GAGE COCK	RAD	RADIATION RADIENT
	TPRV	TEMP./PRESS.RELIEF VALVE	SCH	SCHEDULE
	BPV	PRESS.BY-PASS VALVE	S.G.	SPECIFIC GRAVITY
	CH.K	CHECK VALVE	SWP	STEAM WORKING PRESS.
	V.J.	VICTAULIC COUPLING JOINT	TWR	COOLING TOWER
	A.A.V	AUTOMATIC AIR VENT	UNGD	UNDERGROUND
	M.A.V	MANUAL AIR VENT	VLV	VALVE
	M.O.	METERING ORIFICE		
	E.J.	EXPANSION JOINT		
	P.G.	PRESS.GAGE(W/PSI RANGE)		
	T.H.	THERMOMETER(W/F-RANGE)		
F	FS	FLOW SWITCH		

HVAC LEGEND

SYMBOL ONE-LINE	SYMBOL DOUBLE-LINE	DESCRIPTION
	12x6 or 12/6	DUCTWORK-1 st DIMENSION IS SIDE SHOWN, 2nd DIMENSION SIDE NOT SHOWN
		FLEXIBLE INSULATED DUCTWORK
		DUCT SIZE TRANSITION
	18"ø 16x12	DUCT SHAPE TRANSITION
		ROUND DUCT VERTICAL RISE/DROP
		RECTANGULAR DUCT VERTICAL RISE/DROP
R(D)	R(D)	GRADUAL RISE/DROP IN DUCTS
		VERTICAL TAKE-OFF UP
		VERTICAL TAKE-OFF DOWN
		RECTANGULAR DUCT 90 DEGREE MITERED ELBOW WITH TURNING VANES
		RECTANGULAR DUCT ANGLE TAKE-OFF
	12"ø 10"ø	ROUND DUCT ANGLE TAKE-OFF
FD SD	FD SD	FIRE DAMPER /SMOKE DAMPER, COMBI-NATION SMOKE & FIRE DAMPER-PROVIDE ACCESS DOOR & CEILING ACCESS
		MANUAL VOLUME DAMPER (MVD) W/LOCKING QUADRANT OPERATOR
		EXHAUST DUCT SECTION
		RETURN DUCT SECTION
		SUPPLY DUCT SECTION
		EXHAUST GRILLE
		RETURN GRILLE
		SUPPLY DIFFUSER
20x12(L)	LINE (L)	PLENUM OR DUCT LINER. NET AIRSIDE DIMENSION SHOWN
	EXH	EXHAUST
	OSA	OUTSIDE AIR FLOW
	RA	RETURN AIR
	SA	SUPPLY AIR
	UC	UNDERCUT DOOR
	D.LVR	DOOR LOUVER W/GROSS AREA
	TR	TRANSFER AIR FLOW
T S		THERMOSTAT / SENSOR
A		SMOKE DETECTOR TEST/ANNUNCIATOR STATION-MOUNT NEXT TO UNITS THERMOSTAT
BT		TIME SWITCH (BYPASS TIMER)
SD		DUCT SMOKE DETECTOR
A 12x12 300 CFM		CEILING DIFFUSER/REGISTER IDENTIFICATION: "A"-GRILLE TYPE PER AIR DISTRIBUTION SCHEDULE, 12"X12" NECK, 300 CFM AIR FLOW
HP 1		EQUIPMENT IDENTIFICATION
		LOW VOLTAGE WIRING IN MECHANICAL WORK
		LINE VOLTAGE WIRING IN ELECTRICAL WORK
P.O.C.		POINT OF CONNECTION
P.O.D.		POINT OF DISCONNECTION STOP DEMOLITION AT THIS POINT

AS REVISED

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3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SUSAN ANN LANDOR C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER SUSAN L. LANDOR No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 33.08323
SHEET TITLE

HVAC LEGEND AND GENERAL NOTES

SHEET

M-0.1

DWG # 39 OF 82

Job No. 45461; File: M:\45461\Working\CAD\M0-1.dwg, Layout: M-0.1, Ref. Files: sheet.dwg
Plot Date: 05-08-20, 10:58am; Plot scale: 1=1.25 By: S.L. Plnw, plot: 05-07-20, 1:03pm
05-12-17 DSA SUBMITTAL

HEAT PUMP SCHEDULE

CONDENSING UNIT		
UNIT DESIGNATION	CU-1A	CU-7A
NOMINAL CAPACITY-TONS	6	1.5
MAKE	MITSUBISHI	TRANE
MODEL	PURY-P72TLMU-A	4TWR4018D1000
REFRIGERANT TYPE	R410A	R410A
GROSS COOLING CAPACITY, BTUH (ARI COND.)	72,000	18,100
SENSIBLE COOLING CAPACITY, BTUH, (ARI COND.)		13200
SEER/EER	23.1/13.5	14.5/12
GROSS HEATING CAPACITY, MBH @45 DEG. F. OAT	80,000	17,000
COP	3.65	3.7
REFRIGERANT CHARGE, LBS.	13 lbs 3 oz	5.3
ELECTRICAL SERVICE: VOLTS/PHASE	208/230/3	208/1
COMPRESSOR RATED LOAD AMPS		6.4
CONDENSER FAN F.L.A		0.77
MINIMUM CIRCUIT AMPACITY	24/22	9
MAXIMUM OVERCURRENT PROTECTION	35	15
OPERATING WEIGHT, LBS.	458	204
ACCESSORIES		

NOTES:
1. CRANKCASE HEATER
2. COMPRESSOR START ASSIST CAPACITOR AND RELAY
3. HARD-SHUTOFF TxV

FAN COIL UNIT		
UNIT DESIGNATION	FC-1A,2A,3A,4A,5A,6A,8A,9A,10A	FC-7A
MANUFACTURER	MITSUBISHI	TRANE
MODEL	PKFY-P06NBMU-E2	GAM5B0A18M115A
NOMINAL TONS	0.5	1.5
AIR FLOW CONFIGURATION	SIDEWALL	HORIZONTAL
AIR FLOW, CFM	210	600
OUTSIDE AIR FLOW, CFM	SEE PLANS	SEE PLANS
COOLING CAPACITY, BTUH	6000	18100
HEATING CAPACITY, BTUH	6700	17000
DRIVE	DIRECT DRIVE	
FAN RPM		1050
ELECTRICAL SERVICE: VOLTS/PHASE	208/1	208/1
MOTOR HP	0.01	0.33
UNIT WEIGHT, LBS.	22	126

NOTES:
1. PROVIDE MERV-13 AIR FILTER.
2. HARD-SHUTOFF TxV

EXHAUST AIR / MAKE-UP AIR UNIT SCHEDULE

UNIT DESIGNATION		EMAU-1	EMAU-3	EMAU-5	EMAU-6	EMAU-7	EMAU-8	EMAU-9	EMAU-10	EMAU-11
SERVICE		SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS
MAKE		TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
MODEL		CSAA017UB	CSAA017UB	CSAA003UB	CSAA003UB	CSAA003UB	CSAA017UB	CSAA017UB	CSAA003UB	CSAA003UB
OPERATING WEIGHT, LB		5895	5895	2159	2184	2159	5970	5970	2161	2161
SUPPLY FAN	CFM	7120	7120	790	1270	790	7120	7120	790	790
	ESP, IN. WTR.	1.4	1.4	0.7	0.7	0.7	1.570	1.570	0.7	0.7
	HP	7.5	7.5	1	1	1	7.5	7.5	1	1
	VOLTAGE/PHASE	460/3	460/3	460/3	460/3	460/3	460/3	460/3	460/3	460/3
EXHAUST FAN	CFM	7620	7620	790	1270	790	7620	7620	790	790
	ESP, IN. WTR.	2	2	1.5	1.5	1.5	2	2	1.5	1.5
	HP	7.5	7.5	1	1	1	7.5	7.5	1	1
	VOLTAGE/PHASE	460/3	460/4	460/3	460/3	460/3	460/3	460/3	460/3	460/3
COOLING	TOT CAP, MBH	108.12	108.12	19.59	49.52	19.59	182.53	182.53	22.39	22.39
	SENS CAP., MBH	80.75	80.75	11.44	28.4	11.44	104.24	104.24	12.42	12.42
	ENT. AIR DB	84.78	84.78	85.74	86	85.74	84.78	84.78	85.74	85.74
	ENT. AIR WB	74.31	74.31	74.5	74.64	74.5	74.31	74.31	74.57	74.57
	LVG. AIR	55	55	55	55	55	55	55	55	55
	ENT. CW DEG. F	45	45	45	45	45	45	45	45	45
	DELTA T CW DEG. F	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
	GPM	21.55	21.55	3.9	9.87	3.9	36.38	36.38	4.46	4.46
	WPD FT. HEAD	0.54	0.54	2.33	1	2.33	2.92	2.92	5.73	5.73
	FACE VELOCITY	424	424	316	435	316	424	424	316	314
	APD IN. WG	0.224	0.224	0.1	0.46	0.1	0.221	0.221	0.1	0.1
	ROW	2	2	2	4	2	2	2	2	2
HEATING	CAPACITY, MBH	204.69	204.69	48	70.24	48	415.97	415.97	42.38	42.38
	ENT. AIR	50.13	50.13	29.00	53	29	50.13	50.13	54.54	54.54
	LVG. AIR	76.64	76.64	85.03	104	85.03	104.00	104.00	104	104
	ENT. HW DEG. F	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00
	DELTA T HW DEG. F	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
	GPM	28.48	28.48	4.8	7.03	4.8	41.62	41.62	4.24	4.24
	WPD FT. HEAD	1.28	1.28	0.68	0.58	0.68	0.83	0.83	0.61	0.61
	FACE VELOCITY	424	424	271	435	271	475	475	271	271
	APD IN. WG	0.124	0.124	0.078	0.162	0.078	0.203	0.203	0.096	0.096
	ROW	2	2	2	2	2	2	2	2	2

REMARKS: SEE NOTES 1 THRU 7

NOTES:
1. AIR TO AIR ENERGY RECOVERY MODULE
2. DIRECT DRIVE PLENUM SUPPLY AND EXHAUST FAN
3. STAINLESS STEEL COIL CASING
4. STAINLESS STEEL DRAINPAN
5. EPOXY E-COATING ON CHILLED WATER & HOT WATER COIL
6. CONTRACTOR TO INSTALL 18 GA HOOD EXHAUST STAINLESS STEEL DUCTWORK WITH WELDED JOINTS UP TO THE POINT OF CONNECTION TO EXISTING 18 GA FUME HOOD SYSTEMS CONNECTION SHOWN ON PLANS.
7. PROVIDE VFD @ SUPPLY FAN & RETURN FAN.

AIR HANDLING UNIT SCHEDULE

UNIT DESIGNATION		AH-1	AH-2	AH-3	AH-4	AH-5
MAKE		TRANE	SEASONS-4	SEASONS-4	SEASONS-4	TRANE
MODEL		CSAA004UB	AH000(/ 6HFK23-027A-HW2.7-12EW	AH000(/ 6HFK23-029A-HW3.5-12EW	AH000(/ 6HGK26-032A-HW3.5-14EW	CSAA004UB
LOCATION		BLDG "B" ROOF	BLDG "B" ROOF	BLDG "B" ROOF	BLDG "B" ROOF	BLDG "B" ROOF
AREA SERVED		3RD FLOOR	3RD FLOOR	1ST FLOOR	2ND FLOOR	3RD FLOOR
SIZE OF ACCESS OPENING						
UNIT TYPE			BLOW-THRU	BLOW-THRU	BLOW-THRU	
OPERATING WEIGHT, LBS.		2,948	8,600	8,650	8,950	2,791
TOTAL AIR, C.F.M.		1,980	9,235	11,375	13,200	1,430
OUTSIDE AIR, C.F.M.		900	2,695	3,270	3,030	680
SUPPLY FAN	MODEL & UNIT SIZE	CLIMATE CHANGER 4				CLIMATE CHANGER 4
	TOTAL STATIC PRESSURE, INCHES W.G.	3.5	6.13	6.18	6.34	4.368
	FAN SIZE & TYPE	12.25"Ø DIRECT DRIVE PLENUM	27" AF SWSI PLENUM	27" AF SWSI PLENUM	27" AF SWSI PLENUM	12.25"Ø DIRECT DRIVE PLENUM
	FAN BRAKE HORSEPOWER (PER FAN)	3.184	15.3	15.9	18.7	1.772
	FAN MOTOR H.P. (PER FAN)	5	20	20	25	2
	FAN SPEED, R.P.M.	3912	1,714	1,735	1,833	3220
	ELECTRICAL SERVICE, VOLTS/PHSE	460/3	460/3	460/3	460/3	460/3
RETURN/EXHAUST FAN	MODEL & UNIT SIZE	CLIMATE CHANGER 4 RETURN FAN				CLIMATE CHANGER 4 RETURN FAN
	TOTAL STATIC PRESSURE, INCHES W.G.	3.149	2.74	3.8	3.77	2.750
	FAN SIZE & TYPE	12.25"Ø DIRECT DRIVE PLENUM	24.5" AF SWSI PLENUM	24.5" AF SWSI PLENUM	24.5" AF SWSI PLENUM	12.25"Ø DIRECT DRIVE PLENUM
	FAN BRAKE HORSEPOWER (PER FAN)	1.662	8.5	10.3	12.7	1.134
	FAN MOTOR H.P. (PER FAN)	2	10	15	15	1.5
	FAN SPEED, R.P.M.	3162	1,692	1,798	1,956	2772
	ELECTRICAL SERVICE, VOLTS/PHSE	460/3	460/3	460/3	460/3	460/3
MAIN COOLING COIL	DESIGN AIR ACROSS COIL, C.F.M.	1,980	11,600	12,000	13,850	1,600
	FACE VELOCITY-F.P.M. MAX.	439				354
	AIR PRESSURE DROP, INCHES W.G.	0.737				0.625
	ENTERING AIR TEMPERATURE, °F DB/WB	80.1/66.3	71.2/61.1	70.9/61.1	72.1/61.4	80/67
	LEAVING AIR TEMPERATURE, °F DB/WB	55/54.46	54.4/53.5	54.6/53.6	53.8/53.1	55/54.70
	GRAND TOTAL CAPACITY, BTUH	71,760	254,315	257,908	328,834	60,940
	TOTAL SENSIBLE CAPACITY, BTUH	54,730	213,442	215,034	278,041	44,090
	CHILLED WATER TEMP. ENT/LVG °F	45/55	45/55	45/55	45/55	45/55
	CHILLED WATER QUANTITY., G.P.M.	14.3	51	51.6	66	12.15
	WATER PRESSURE DROP, MAX. FT. W.G.	2.83	3.38	3.46	3.6	1.66
	MIN. COIL ROWS	6	6	6	6	4
OA PRECOOLING COIL	DESIGN AIR ACROSS COIL, C.F.M.	1,980	2,125	2,725	1,855	1,600
	FACE VELOCITY-F.P.M. MAX.	439				354
	AIR PRESSURE DROP, INCHES W.G.	0.737				0.625
	ENTERING AIR TEMPERATURE, °F DB/WB	80.1/66.3	76.8/65.5	77.2/66.0	77.0/63.8	80/67
	LEAVING AIR TEMPERATURE, °F DB/WB	55/54.46	54.2/53.9	55.4/55.0	53.1/52.8	55/54.70
	GRAND TOTAL CAPACITY, BTUH	71,760	74,657	92,377	60,148	60,940
	TOTAL SENSIBLE CAPACITY, BTUH	54,730	52,899	65,495	48,741	44,090
	CHILLED WATER TEMP. ENT/LVG °F	45/55	45/55	45/55	45/55	45/55
	CHILLED WATER QUANTITY., G.P.M.	14.3	15	18.4	12	12.15
	WATER PRESSURE DROP, MAX. FT. W.G.	2.83	1.65	2.45	1.07	1.66
	MIN. COIL ROWS	6	6	6	6	4
HEATING COIL	DESIGN AIR ACROSS COIL, C.F.M.	1,980	11,600	12,000	13,850	1,600
	FACE VELOCITY-F.P.M. MAX.	495				400
	AIR PRESSURE DROP, INCHES W.G.	0.181				0.077
	ENTERING AIR TEMPERATURE, °F DB	44.65	68.8	68.1	69	53.4
	LEAVING AIR TEMPERATURE, °F DB	94.25	90.5	94.8	92.2	89.65
	GRAND TOTAL CAPACITY, BTUH	106,500	274,988	349,079	350,502	62,900
	TOTAL SENSIBLE CAPACITY, BTUH	-	-	-	-	-
	HOT WATER TEMP. ENT/LVG °F	180/160	160/119.0	160/132.3	160/124.4	180/160
	HOT WATER QUANTITY., G.P.M.	10.66	13.4	25.2	19.7	6.29
	WATER PRESSURE DROP, MAX. FT. W.G.	0.6	1.12	3.75	2.39	0.83
	MIN. COIL ROWS	2	2	2	2	1
FILTERS	OA MIST ELIMINATOR PRE-FILTER	PLEATED MEDIA	1" ALUMINUM MESH	1" ALUMINUM MESH	1" ALUMINUM MESH	PLEATED MEDIA
	OA MIST ELIMINATOR THICKNESS	2"	1"	1"	2"	2"
	OA MIST ELIMINATOR FACE VELOCITY., F.P.M.	356	483	500	577	288
	OA MIST ELIMINATOR PRESS. DROP, INCHES W.G.	0.594				0.569
	PRE-FILTER TYPE	PLEATED MEDIA	PLEATED MEDIA	PLEATED MEDIA	PLEATED MEDIA	PLEATED MEDIA
	PRE-FILTER THICKNESS	2"	2"	2"	2"	2"
	PRE-FILTER MERV RATING	8	8	8	8	8
	PRE-FILTER FACE VELOCITY, F.P.M.	356	322	333	385	288
	FILTER PRESS. DROP, INCHES W.G.	0.594				0.569
	PRIMARY FILTER TYPE	4 IN. CARTRIDGE	12" RIGID	12" RIGID	12" RIGID	4 IN. CARTRIDGE
	PRIMARY FILTER THICKNESS	4"	12"	12"	12"	4"
	PRE-FILTER MERV RATING	13	11%	11%	90%	90%
	PRIMARY FILTER FACE VELOCITY, F.P.M.	356	322	333	385	288
	FILTER PRESS. DROP, INCHES W.G.	0.748				0.717
	PRIMARY FILTER MERV RATING	14	13	13	13	14
	MCA		50	56	64	
	MOCP		70	70	90	
NOTES::		1,2,3,4,5,8	1,2,3,4,5,6,7,8	1,2,3,4,5,6,7,8	1,2,3,4,5,6,7,8	1,2,3,4,5,8

NOTES:
1. PROVIDE UNIT WITH ACCESS SECTION, STARTER/VFD LOCATED INSIDE AIR HANDLING UNIT ___ FROM DIRECT SUNLIGHT, FOR SUPPLY & RETURN FAN.
2. PROVIDE ECONOMIZER & FILTER SECTIONS.
3. EVAPORATORS COILS FOR AIR HANDLING UNITS SHALL BE FURNISHED WITH COPPER PLATE FINS MECHANICALLY BONDED TO ENHANCED COPPER TUBES SHEETS AND BRAZED JOINTS. COATED COILS ARE NOT ACCEPTABLE.
4. PROVIDE MCH SYSTEM.
5. PROVIDE ENERGY RECOVERY WHEEL.
6 PROVIDE OA PRE-COOL CHILLED WATER COIL.
7. PROVIDE OA MIST ELIMINATOR PRE-FILTER SECTION & FINAL FILTER SECTION, ERS OUTSIDE AIR FILTER SECTION, ORS ORS EXHAUST AIR FILTER SECTION.
8. PROVIDE VFD @ SUPPLY FAN & RETURN FAN.

PUMP SCHEDULE

UNIT DESIGNATION	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	P-9	P-10
DUTY	HOT WATER	HOT WATER	DEDICATED HW	DEDICATED HW	DEDICATED HW	DEDICATED HW	CHILLED WATER	CHILLED WATER	CH-1	CH-2
GPM FLOW	460	460	115	115	115	115	500	500	250	250
TOTAL DYNAMIC HEAD, FT. OR WATER	140	140	25	25	25	25	140	140	40	40
SUCTION/DISCHARGE SIZE, INCHES	4/3	4/3	3/3	3/3	3/3	3/3	4/3	4/3	4/3	4/3
PUMP EFFICIENCY	80.4%	80.4%	70.0%	70.0%	70.0%	70.0%	82.0%	82.0%	81.6%	81.6%
NPSHR	14.46	14.46	5.51	5.51	5.51	5.51	14.89	14.89	5.24	5.24
MOTOR RPM	3550	3550	1750	1750	1750	1750	3550	3550	1750	1750
BHP AT DESIGN	20.82	20.82	1.06	1.06	1.06	1.06	21.75	21.75	3.69	3.69
MOTOR HORSEPOWER	25	25	1.5	1.5	1.5	1.5	25	25	5	5
ELECTRICAL SERVICE, VOLTS/PHASE	460/3	460/3	460/3	460/3	460/3	460/3	460/3	460/3	460/3	460/3
FULL LOAD AMPS	28.6	28.6	3	3	3	3	28.6	28.6	6.5	6.5
MCA, AMPS	35.75	35.75	3.75	3.75	3.75	3.75	35.75	35.75	8.1	8.1
MCOP, AMPS	60	30	15	15	15	15	60	60	15	15
MANUFACTURER	BELL & GOSSETT	BELL & GOSSETT	WEIMAN	WEINMAN	WEINMAN	WEINMAN	BELL & GOSSETT	BELL & GOSSETT	BELL & GOSSETT	BELL & GOSSETT
MODEL NUMBER	SERIES e-1510, 3 AD	SERIES e-1510, 3 AD	3007-181	3007-181	3007-181	3007-181	SERIES e-1510, 3AD	SERIES e-1510, 3AD	SERIES e-1510, 3AD	SERIES e-1510, 3AD
FRAME SIZE	256T	256T	145T	145T	145T	145T	256T	256T	184T	184T
WEIGHT, LBS.	468	468	185	185	185	185	638	638	239	239
REMARKS	1	1,2	3	3	3	3	1	1,2		

NOTES:
1. PROVIDE VFD.
2. 100% STANDBY PUMP.
3. DEDICATED PUMP FOR EACH BOILER, INSTALLED BY MECHANICAL CONTRACTOR

INSULATION OF DUCTS

DUCT LOCATION	MINERAL FIBER BLANKET, 0.6 lb/cf	BLANKET DUCT LINER, 1.5 to 3 lb/cf	MINERAL FIBER BOARD, 3.0 to 10 lb/cf
ON ROOF ON EXTERIOR OF BUILDING	3"	1-1/2"	1-1/2"
ATTICS, GARAGES AND CRAWL SPACES	2"	1"	1"
IN WALLS WITHIN FLOOR-CEILING SPACES	1"	1"	1"

INSULATION MAY BE OMITTED ON THAT PORTION OF A DUCT WHICH IS WITHIN A WALL- OR FLOOR-CEILING SPACE WHERE:
A. BOTH SIDES OF THE SPACE ARE EXPOSED TO CONDITIONED AIR
B. THE SPACE IS NOT VENTILATED
C. THE SPACE IS NOT USED AS A RETURN AIR PLENUM
D. THE SPACE IS NOT EXPOSED TO UNCONDITIONED AIR
CEILINGS WHICH FORM PLENUMS NEED NOT BE INSULATED

FAN SCHEDULE

UNIT DESIGNATION		EF-25	EF-26	EF-31
LOCATION		BLDG. 'B' ROOF	BLDG. 'B' ROOF	BLDG. 'B' ROOF
AREA SERVED		SEE PLANS	SEE PLANS	SEE PLANS
MAKE		GREENHECK	GREENHECK	GREENHECK
MODEL		CUBE 161XP	CUBE 161XP	CUBE 101XP
BACKDRAFT DAMPER		YES	YES	YES
MOUNTING		BLDG. 'B' ROOF	BLDG. 'B' ROOF	BLDG. 'B' ROOF
OPERATING CONTROL		INTERLOCK WITH RTU-2B	INTERLOCK WITH RTU-1B	24 HR OPERATION
OPERATING WEIGHT, LBS.		87	87	75
FAN	FAN TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
	AIR VOLUME (CFM)	1500	1500	400
	TOTAL STATIC PRESSURE (IN. W.G.)	1.5	1.5	1
	NOISE LEVEL (SONES)	15.9	15.9	9.1
	MAXIMUM RPM	2525	2525	2045
	MAXIMUM BHP	0.9	0.9	0.17
MOTOR	WATTS	---	---	---
	HP	1	1	1/4
	VOLTS/PHASE	120/1	120/1	120/1
	DRIVE	BELT	BELT	BELT
NOTES		*	*	**

NOTES:
* PROVIDED WITH VFD, PREFABRICAQTED ROOF CURB & DISCONNECT SWITCH
** PROVIDED WITH EXPLOSION PROOF MOTOR, SPARK-PROOF CONSTRUCTION, PREFABRICATED ROOF CURB, DISCONNECT SWITCH.

AIR COOLED CHILLER SCHEDULE

UNIT DESIGNATION		CH-1	CH-2
MAKE		TRANE	TRANE
MODEL		CGAM120	CGAM120
LOCATION		BLDG "B" ROOF	BLDG "B" ROOF
UNIT TYPE		SCROLL COMPRESSOR	SCROLL COMPRESSOR
NOMINAL CAPACITY, TONS		120	120
REFRIGERANT		R-410A	R-410A
REFRIGERANT CHARGE, LBS		73.9	73.9
SHIPPING WEIGHT, LBS.		6762	6762
UNIT OVERALL DIMENSIONS, INCHES		166"Lx89"Wx93"H	166"Lx89"Wx93"H
OPERATING WEIGHT, LBS.		6884	6884
EVAPORATOR	ENTERING/LEAVING WATER TEMPERATURE, DEG. F.	54/44	54/44
	WATER FLOW, GPM	250	250
	WATER PRESSURE DROP, FT. W.G.	16.2	16.2
	CIRCUIT/COMPRESSORS	2/4	2/4
	EXCHANGER TYPE	BRAZE PLATE	BRAZE PLATE
	WATER STORAGE VOLUME, GALS	11.5	11.5
	FOULING FACTOR	0.0001	0.0001
CONDENSER	ENTERING WATER TEMPERATURE, DEG. F.	-	-
	LEAVING WATER TEMPERATURE, DEG. F.	-	-
	WATER FLOW, GPM	-	-
	WATER PRESSURE DROP, FT. W.G.	-	-
	WATER STORAGE VOLUME, GALS	-	-
	FOULING FACTOR	-	-
UNIT KW		142.1	142.1
MIN. EFFICIENCY, PER ARI 550/590		10 EER	10 EER
ELECTRICAL SERVICE, VOLTS/PHASE		460/3	460/3
RUN LOAD AMPS		202.4	202.4
LOCKED ROTOR AMPS		1280	1280
MINIMUM CIRCUIT AMPACITY		244	244
MAXIMUM OVERCURRENT PROTECTION		250	250

NOTES:
CH-1 AND CH-2 CONDENSER COILS FOR AIR COOLED CHILLERS SHALL BE FURNISHED WITH COPPER PLATE FINS MECHANICALLY BONDED TO ENHANCED COPPER TUBES WITH COPPER TUBE SHEETS AND BRAZED JOINTS. COATED COILS ARE NOT ACCEPTABLE.
PROVIDE BACNET CONNECTION TO CHILLERS CU-1 & CU-2.

ROOFTOP HEAT PUMP AC UNIT SCHEDULE

UNIT DESIGNATION		RTU-1A	RTU-2A	RTU-3A
MAKE		TRANE	TRANE	TRANE
MODEL		WSH 150	WSC 120	WSH 150
LOCATION		BLDG "B" ROOF	BLDG "A" ROOF	BLDG "A" ROOF
AREA SERVED		1st FLOOR	1st FLOOR	1st FLOOR
NOMINAL CAPACITY, TONS		12.5	10	12.5
OPERATING WEIGHT, LBS.		2203	1407	2203
FAN	TOTAL AIR, C.F.M.	5000	3400	5000
	OUTSIDE AIR, C.F.M.	1600	800	1600
	EXTERNAL S.P. IN W.G	1.25	1.25	1.25
	FAN MOTOR H.P. (NON-OVERLOAD)	3.0	3.6	3.0
	FAN SPEED, R.P.M.	1740	---	1740
	DRIVE	BELT	BELT	BELT
PERFORMANCE	GROSS COOLING CAPACITY, MBTUH	155,300	123,800	155,300
	SENSIBLE COOLING CAPACITY @ 67^F WB EAT	133,070	103,400	133,070
	SEER/EER	---/10.6	---/11.2	---/10.6
	SOUND RATING, BELS	---	87	---
	HEATING CAP.-MBTUH @ 47°F	136,330	108,420	136,330
	HSPF/COP	---/3.2	---/2.40	---/3.2
ELECTRICAL	VOLTS/PHASE	208/3	208/3	208/3
	COMPRESSOR RLA	2@ 22.4/149	2@ 9.0/9.0	2@ 22.4/149
	OUTDOOR FAN FLA	3.2	1.5	3.2
	INDOOR FAN FLA	10.6	4.3	10.6
	SUPPLEMENTARY HEAT, KW	---	---	---
	MINIMUM CIRCUIT AMPACITY	68	26.1	68
	MAXIMUM OVERCURRENT PROTECTION	80	35	80
REMARKS		1,2,3,4	1,2,3,4	1,2,3,4

NOTES:
1. EVAPORATOR COILS AND CONDENSER COILS OF RTU-1A, RTU-2A AND RTU-3A SHALL BE FURNISHED WITH COPPER PLATE FINS MECHANICALLY BONDED TO ENHANCED COPPER TUBES WITH COPPER TUBE SHEETS AND BRAZED JOINTS. COATED COILS ARE NOT ACCEPTABLE.
2. ECONOMIZER CYCLE.
3. DEMAND CONTROL VENTILATION.
4. PROVIDE VFD OR ECM MOTORS @ SUPPLY FANS.

GAS-ELECTRIC A/C UNIT SCHEDULE

UNIT DESIGNATION		RTU-1B	RTU-2B
NOMINAL COOLING CAPACITY, TONS		4.5	4.5
AREA SERVED			0
MAKE		TRANE	TRANE
MODEL		HORIZON B048	HORIZON B048
OPERATING WEIGHT, LBS.		1325	1325
REFRIGERANT TYPE			
REMARKS		1,2,3,4,5,6,7	1,2,3,4,5,6,7
FAN	TOTAL AIR, CFM	1,000	1000
	OUTSIDE AIR, CFM	1,000	1000
	EXTERNAL S.P.-IN.W.G.	1.3	1.3
	FAN RPM/BHP	1634/0.57	1634/0.57
	FAN MOTOR HP (NON-OVERLOADING)	2.5	2.5
	DRIVE	BELT	BELT
PERFORMANCE	GROSS COOLING CAPACITY, BTUH	54,000	54000
	SENSIBLE COOLING CAPACITY @67 F. WB EAT	43,700	43700
	EER	12.5	12.5
	IPLV	-	-
	SOUND RATING, dBA		
	HEATING INPUT/OUTPUT MBH	75000	75000
	HEATING FUEL	NAT. GAS	NAT. GAS
	AFUE% / SSE %		
ELECTRICAL	VOLTS/PHASE	480/3	480/3
	COMPRESSOR RLA	6.4	6.4
	OUTDOOR FAN FLA	2.1	2.1
	COMBUSTION AIR FAN FLA	-	-
	INDOOR FAN FLA	3.6	3.6
	POWER EXHAUST FLA	-	-
	MINIMUM CIRCUIT AMPACITY	14.7	14.7
	MAXIMUM OVERCURRENT PROTECTION	20	20

NOTES:
1. VIBRATION ISOLATION ROOF CURB, SELF-LEVELING FOR PITCHED ROOF
2. HUMIDIMIZER SYSTEM
3. HORIZONTAL DISCHARGE.
4. PROVIDE ECM MOTOR FOR INDOOR BLOWER.
5. PROVIDE MERV-13 FILTER.
6. PROVIDE CONDENSER RAIR GUARD.
7. PROVIDE VFD.

PIPE INSULATION THICKNESS

FLUID TEMP. RANGE, (°F)	CONDUCTIVITY RANGE (IN Btu- Inch per hour per square foot per °F)	INSULATION MEAN RATING TEMP. (°F)	NOMINAL PIPE DIAMETER, (in inches)					
			Runouts up to 2	1 and less	1.25-2	2.5-4	5-6	8 and larger
			INSULATION THICKNESS REQUIRED (in inches)					
Space heating systems (steam, steam condensate and hot water)								
Above 350	0.32-0.34	250	1.5	2.5	2.5	3	3.5	3.5
251-350	0.29-0.31	200	1.5	2	2.5	2.5	3.5	3.5
201-250	0.27-0.30	150	1	1.5	1.5	2	2	3.5
141-200	0.25-0.29	125	0.5	1.5	1.5	1.5	1.5	1.5
105-140	0.24-0.28	100	0.5	1	1	1	1.5	1.5
Service water-heating systems (recirculating sections, all piping in electric trace tape systems, and the first 8 feet of piping from the storage tank for nonrecirculating systems)								
Above 105	0.24-0.28	100	0.5	1	1	1	1.5	1.5
Space cooling systems (chilled water, refrigerant and brine)								
40-60	0.23-0.27	75	0.5	0.5	0.5	1	1	1
Below 40	0.23-0.27	75	1	1	1.5	1.5	1.5	1.5

EXPANSION TANK SCHEDULE

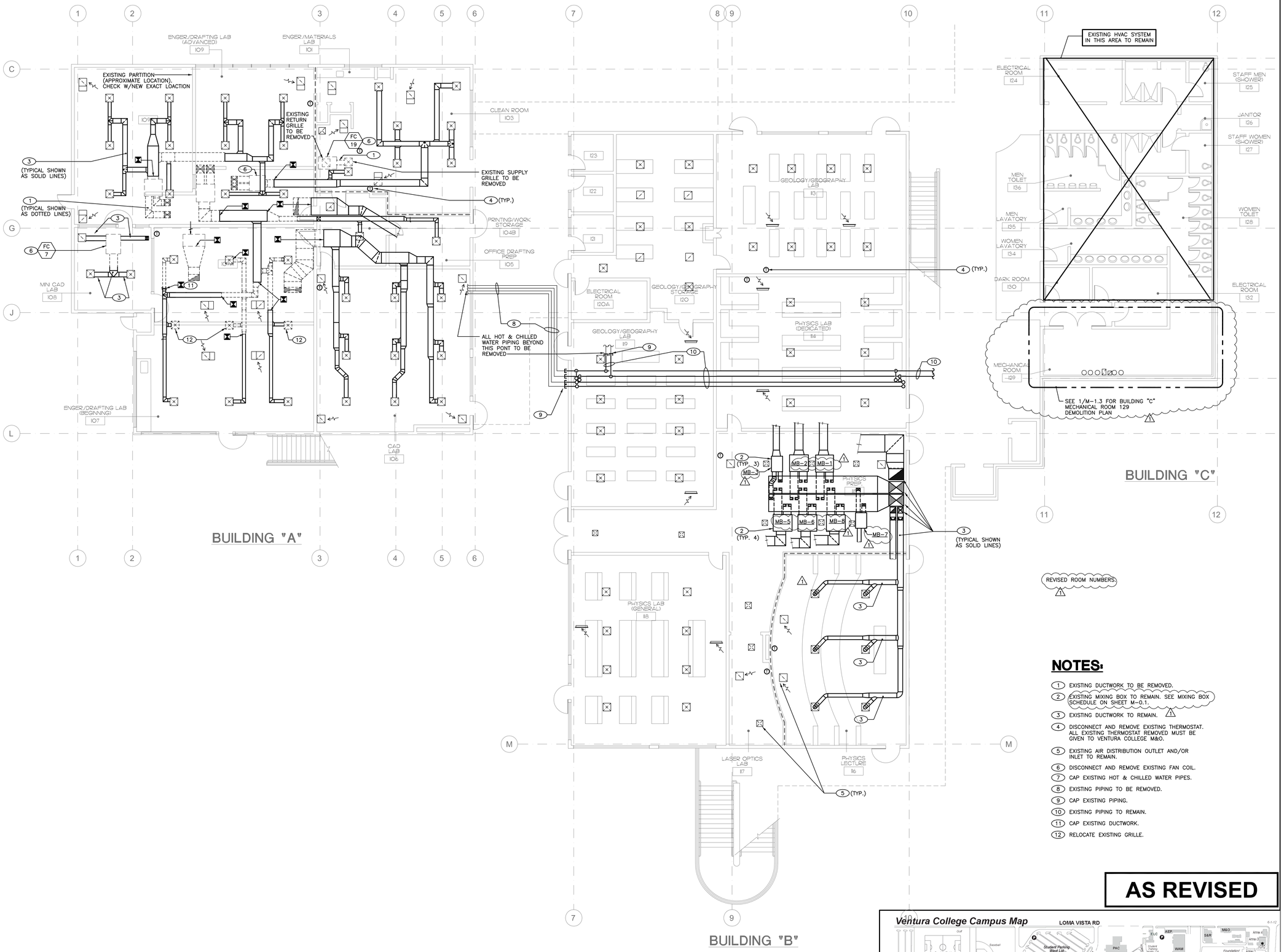
UNIT DESIGNATION	ET-1	ET-2
DUTY	HOT WATER	CHILLED WATER
LOCATION	BLDG. "C" BOLIER RM.	BLDG. "B" ROOF
MANUFACTURER	TACO	TACO
MODEL NUMBER	CBX 600	CBX 500
TYPE	VERTICAL BLADDER	VERTICAL BLADDER
TOTAL CAPACITY, GALLONS	160	132
ACCEPTANCE VOLUME, GALLONS	100	61
DIMENSIONS, DIA x LENGTH	30X69	24X80
SHIPPING WEIGHT, LBS.	1850	1526
NOTES:		

AIR SEPARATOR SCHEDULE

UNIT DESIGNATION	AS-1	AS-2
DUTY	HOT WATER	CHILLED WATER
LOCATION	BLDG. "C" BOILER RM.	BLDG. "B" ROOF
MANUFACTURER	BELL AND GOSSETT	BELL AND GOSSETT
MODEL NUMBER	R-6F	R-6F
TYPE	FLANGED, WITH STRAINER	FLANGED, WITH STRAINER
SIZE	5"	6"
GPM/PRESSURE DROP FT. W.G.	460/2.7	500/1.5
DIMENSIONS, WIDTH X HEIGHT	24X37	26X44
OPERATING WEIGHT, LBS.	429	579
NOTES:		

AIR DISTRIBUTION SCHEDULE

| SYMBOL | SERVICE | MATERIAL | FACE TYPE | MOUNT | FACE SIZE



NOTES:

1. EXISTING DUCTWORK TO BE REMOVED.
2. EXISTING MIXING BOX TO REMAIN. SEE MIXING BOX SCHEDULE ON SHEET M-0.1.
3. EXISTING DUCTWORK TO REMAIN.
4. DISCONNECT AND REMOVE EXISTING THERMOSTAT. ALL EXISTING THERMOSTAT REMOVED MUST BE GIVEN TO VENTURA COLLEGE M&O.
5. EXISTING AIR DISTRIBUTION OUTLET AND/OR INLET TO REMAIN.
6. DISCONNECT AND REMOVE EXISTING FAN COIL.
7. CAP EXISTING HOT & CHILLED WATER PIPES.
8. EXISTING PIPING TO BE REMOVED.
9. CAP EXISTING PIPING.
10. EXISTING PIPING TO REMAIN.
11. CAP EXISTING DUCTWORK.
12. RELOCATE EXISTING GRILLE.

AS REVISED

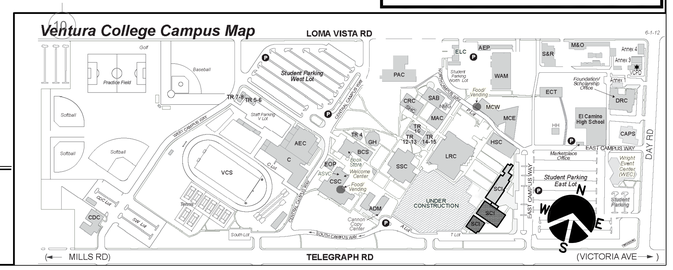
1 FIRST FLOOR DEMOLITION PLAN

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

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

0 5 10 15 30

Ventura College Campus Map



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ELECTRICAL ▫ MECHANICAL
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3111 Winona Ave., #102 Burbank, Ca 91504
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470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT — LEANN A. MOSIER — C-22205 — APRIL 30, 2021 RENEWAL DATE — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — SHELLY L. TORIA — No. M25042 — 09-30-21 — MECHANICAL — STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	
	REVISIONS		

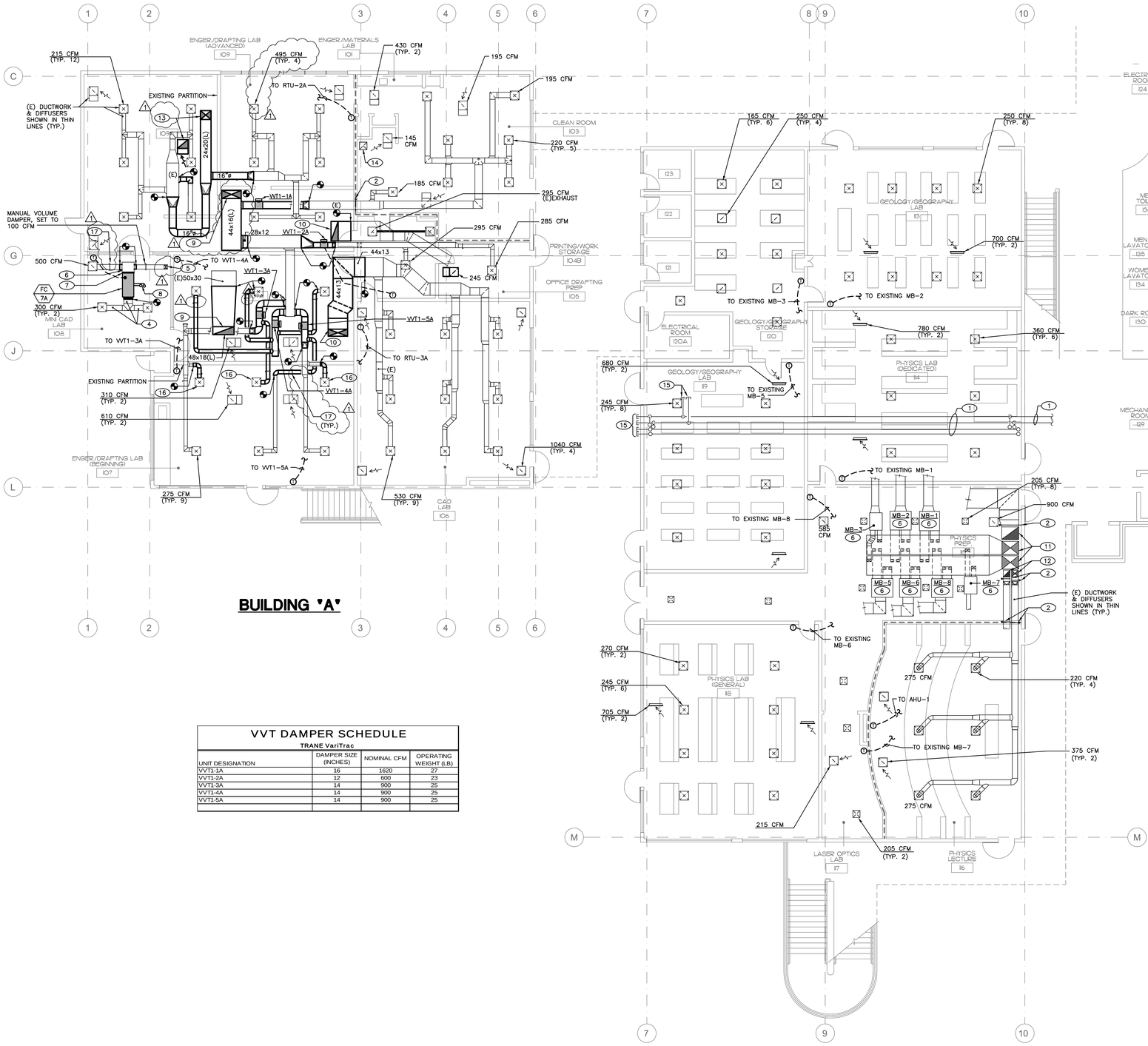
DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 45461
SHEET TITLE

MECHANICAL FIRST FLOOR DEMOLITION PLAN

SHEET **M-1.1**

DWG # 41 OF 82

Job No. 45461 - File: M_FLR1demo.dwg M-1.0 Ref. Files: X-Grid.dwg, X-TITLE.dwg, Sheet.dwg
Plot Date: 05-08-20, 10:50am; Plot scale: 1=1'-0"; By: S.L. Prev. plot: 05-07-20, 11:22pm
05-12-17 DSA SUBMITTAL



VVT DAMPER SCHEDULE

TRANE VariTrac

UNIT DESIGNATION	DAMPER SIZE (INCHES)	NOMINAL CFM	OPERATING WEIGHT (LB)
VVT1-1A	16	1620	27
VVT1-2A	12	600	23
VVT1-3A	14	900	25
VVT1-4A	14	900	25
VVT1-5A	14	900	25

GENERAL NOTES:

1. ALL DUCTWORK & DIFFUSERS SHOWN ON THE PLAN ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
2. EXISTING DIFFUSERS TO BE CLEANED AND BALANCED TO AIR FLOW SHOWN.
3. ALL EXISTING DUCTWORK SUPPLY AIR, RETURN AIR, AND EXHAUST AIR TO BE REUSED (UNLESS NOTED OTHERWISE) TO BE INTERNALLY CLEANED. CLEANING TO BE PERFORMED PER SPECIFICATION 23 0130.51.
4. SEISMIC BRACING OF ALL NEW PIPING AND DUCTWORK SHALL BE DESIGN-BUILD BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ENGINEERED SHOP DRAWINGS FOR ALL PROPOSED SEISMIC RESTRAINT SYSTEMS.

NOTES:

1. EXISTING HOT & CHILLED WATER PIPES TO REMAIN.
2. EXISTING FIRE DAMPER.
3. PROVIDE FIRE DAMPER WITH ACCESS PANEL.
4. EXISTING DUCTWORK TO REMAIN.
5. EXISTING 10x8 DUCT UP TO ROOF TO REMAIN.
6. EXISTING MIXING BOX. VERIFY IF MIXING BOX IS IN GOOD OPERATING CONDITION. MAKE NECESSARY REPAIR AND REPLACEMENT. SEE MIXING BOX SCHEDULE ON SHT. M-0.1.
7. FLEXIBLE CONNECTION.
8. REFRIGERANT PIPES UP TO ROOF. SEE M-4.2 FOR CONTINUATION.
9. 24x20(L) SUPPLY & RETURN DUCTWORK UP TO RTU-1A ON THE ROOF. SEE M-4.2 FOR CONTINUATION.
10. 44x16(L) SUPPLY & RETURN DUCTWORK UP TO RTU-3A ON THE ROOF, SEE M-4.2 FOR CONTINUATION.
11. EXISTING 28x58 SUPPLY & RETURN DUCTWORK UP TO AH-3 ON THE ROOF. SEE M-4.2 FOR CONTINUATION.
12. EXISTING 15x16 SUPPLY & RETURN DUCTWORK UP TO AH-5 ON THE ROOF. SEE M-4.2 FOR CONTINUATION.
13. 44x16(L) SUPPLY & 48x18(L) RETURN DUCTWORK UP TO RTU-2A ON THE ROOF. SEE M-4.2 FOR CONTINUATION.
14. EXISTING 12x10 EXHAUST DUCT UP TO (E) EF-27.
15. CAPPED EXISTING PIPES.
16. RELOCATED EXISTING DIFFUSER.
17. MANUAL VOLUME DAMPER.

WALL LEGEND:

EXISTING 1-HR RATED WALL

ADDED GRID LINES.

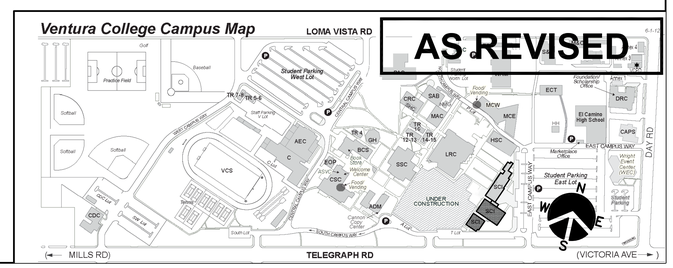
REVISED ROOM NUMBERS.

1 FIRST FLOOR PLAN

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

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

0 5 10 15 30



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www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SEAN ANN AVEDISIAN C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER SHELLY L. TORRA No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

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VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

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1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

MECHANICAL FIRST FLOOR PLAN

SHEET

M-1.2

DWG # 42 OF 82

05-12-17 DSA SUBMITTAL

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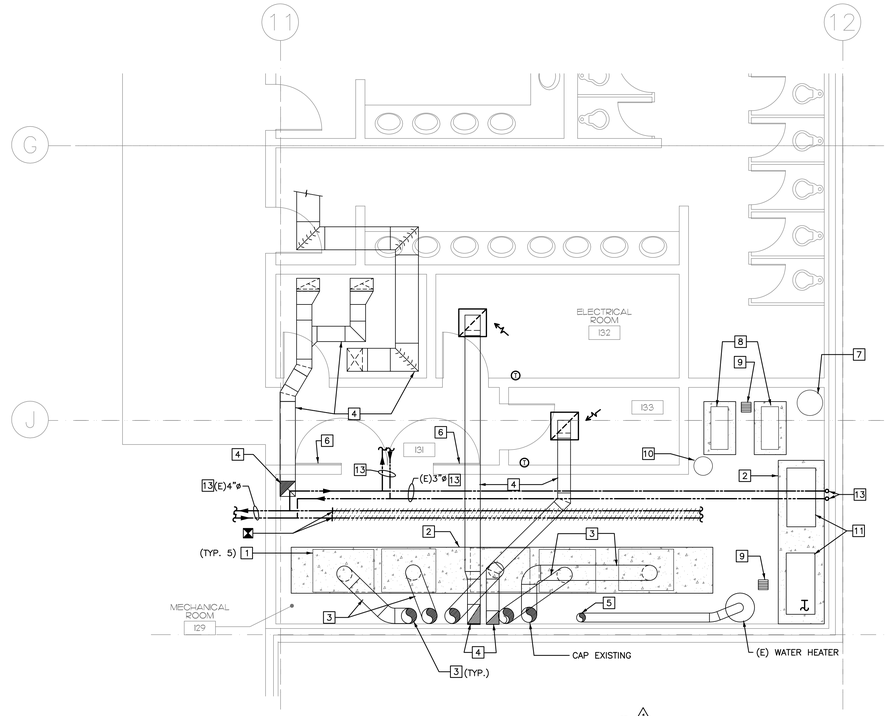


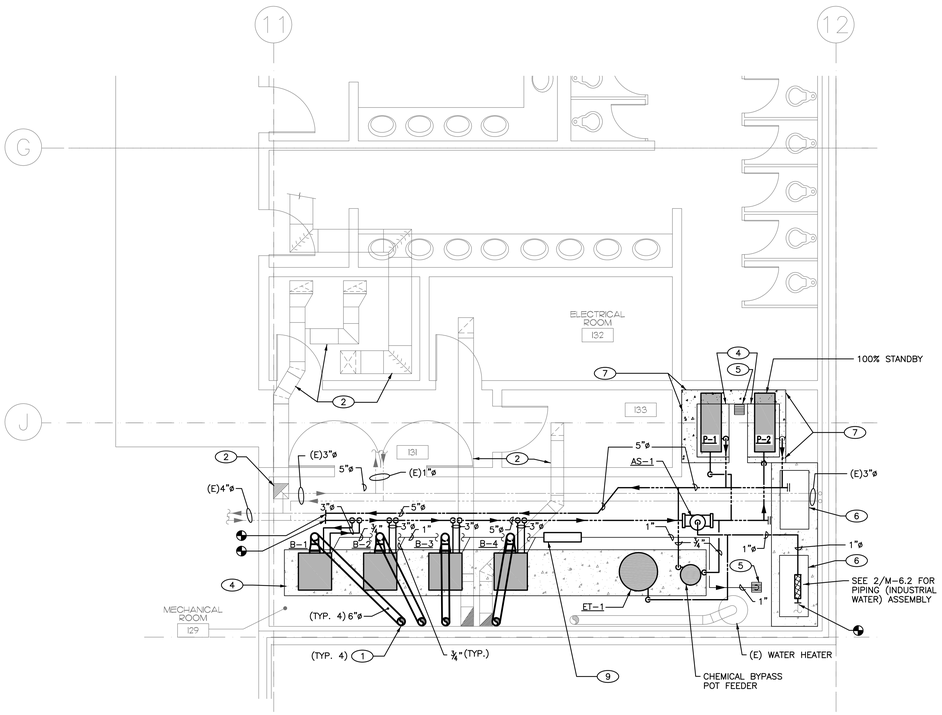
1 BUILDING "C" MECHANICAL ROOM 129 DEMOLITION PLAN

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

NOTE: ALL EXISTING PIPING IN MECHANICAL ROOM TO & FROM BOILERS B-1 THRU B-5, PUMPS P-1 & P-2, AIR SEPARATOR AS-1, EXPANSION TANK ET-1 & POT FEEDER TO BE REMOVED, UNLESS NOTED OTHERWISE.

DEMOLITION NOTES:

1. DISCONNECT AND REMOVE EXISTING BOILERS.
2. EXISTING CONCRETE PAD TO REMAIN.
3. EXISTING FLUE TO BE REMOVED.
4. EXISTING DUCTWORK TO REMAIN.
5. EXISTING FLUE TO REMAIN.
6. EXISTING COMBUSTION AIR LOUVER TO REMAIN.
7. DISCONNECT AND REMOVE EXISTING EXPANSION TANK.
8. DISCONNECT AND REMOVE EXISTING PUMPS.
9. EXISTING FLOOR SINK TO REMAIN.
10. DISCONNECT AND REMOVE EXISTING POT FEEDER.
11. EXISTING AIR COMPRESSORS TO REMAIN.
12. EXISTING PIPING TO BE REMOVED.
13. EXISTING PIPING TO REMAIN.

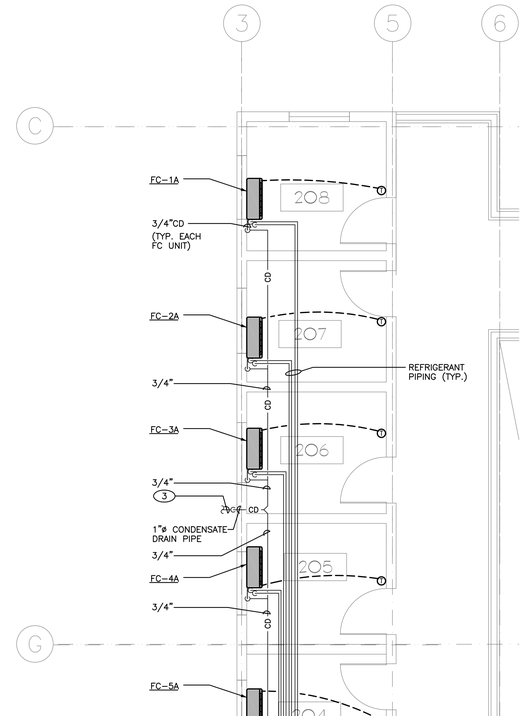


NOTES:

1. SAF-T VENT C1 PLUS, DOUBLE WALL AL29-4C 6"ø FLUE UP TO ROOF. PROVIDE UNIVERSAL BOILER ADAPTER. PROVIDE 1-HR RATED FLUE VENT ENCLOSURE ON SECOND AND THIRD FLOOR.
2. EXISTING DUCTWORK
3. SEE M-4.2 FOR CONTINUATION.
4. EXISTING CONCRETE PAD.
5. EXISTING FLOOR SINK.
6. EXISTING AIR COMPRESSOR.
7. EXTENDED CONCRETE PAD.
8. MANUAL VOLUME DAMPER.
9. CONDENSATE NEUTRALIZING TUBES MODEL JM-50.
10. SEE 2/M-6.2 FOR HOT WATER PIPING DIAGRAM.
11. SEE 2/M-5.1 FOR CHEMICAL BYPASS FEEDER PIPING DETAILS.
12. SEE 13/M-5.1 FOR BOILER PIPING DETAILS & 14/M-5.1 FOR IN-LINE PUMP PIPING DETAIL.
13. SEE 1/M-5.1 FOR BASE MOUNTED PUMP PIPING DETAIL.
14. SEE 7/M-5.1 FOR INDUSTRIAL WATER MAKE-UP ASSEMBLY.
15. BC CONTROLLER, MITSUBISHI MODEL CMB-P1010NU-G, 10 BRANCHES, 208V/1ø, MCA=0.83, MOCP=15A, OPERATING WEIGHT=94 LBS.

2 BUILDING "C" MECHANICAL ROOM 129 PLAN

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



1 REVISED ROOM NUMBERS.

3 BUILDING "A" ROOMS 200 THRU 208 PLAN

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

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

0 2 4

AS REVISED

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REGISTERED PROFESSIONAL ENGINEER SHELLY L. TORIA Exp. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

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	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

MECHANICAL ENLARGED PLANS

SHEET

M-1.3

DWG # 43 OF 82

Job No. 45461 FILE N:\45461-VenturaCOM\M-1-3.dwg, M-1.3 Ref. Files: X-STR.dwg, X-CIVIL.dwg, X-TITLE.dwg, Sheet.dwg
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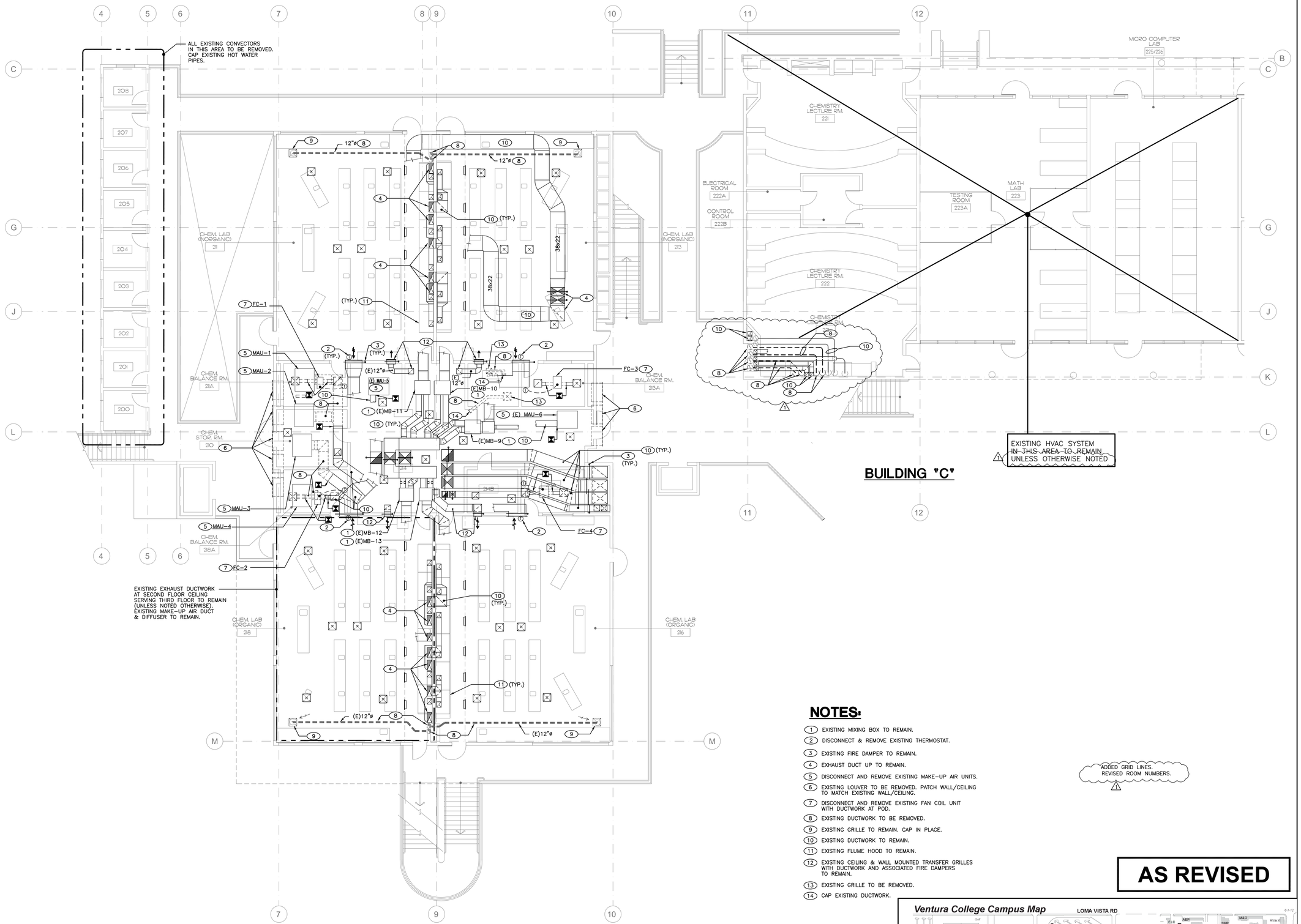
05-12-17 DSA SUBMITTAL



NOTES:

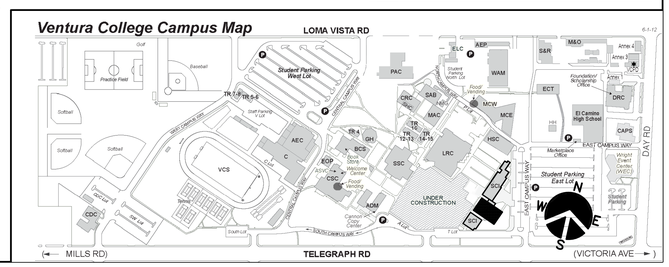
1. EXISTING MIXING BOX TO REMAIN.
2. DISCONNECT & REMOVE EXISTING THERMOSTAT.
3. EXISTING FIRE DAMPER TO REMAIN.
4. EXHAUST DUCT UP TO REMAIN.
5. DISCONNECT AND REMOVE EXISTING MAKE-UP AIR UNITS.
6. EXISTING LOUVER TO BE REMOVED. PATCH WALL/CEILING TO MATCH EXISTING WALL/CEILING.
7. DISCONNECT AND REMOVE EXISTING FAN COIL UNIT WITH DUCTWORK AT POD.
8. EXISTING DUCTWORK TO BE REMOVED.
9. EXISTING GRILLE TO REMAIN. CAP IN PLACE.
10. EXISTING DUCTWORK TO REMAIN.
11. EXISTING FLUME HOOD TO REMAIN.
12. EXISTING CEILING & WALL MOUNTED TRANSFER GRILLES WITH DUCTWORK AND ASSOCIATED FIRE DAMPERS TO REMAIN.
13. EXISTING GRILLE TO BE REMOVED.
14. CAP EXISTING DUCTWORK.

ADDED GRID LINES. REVISED ROOM NUMBERS.

AS REVISED

1 PARTIAL SECOND FLOOR DEMOLITION PLAN

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



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REVISIONS

DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 45461

SHEET TITLE

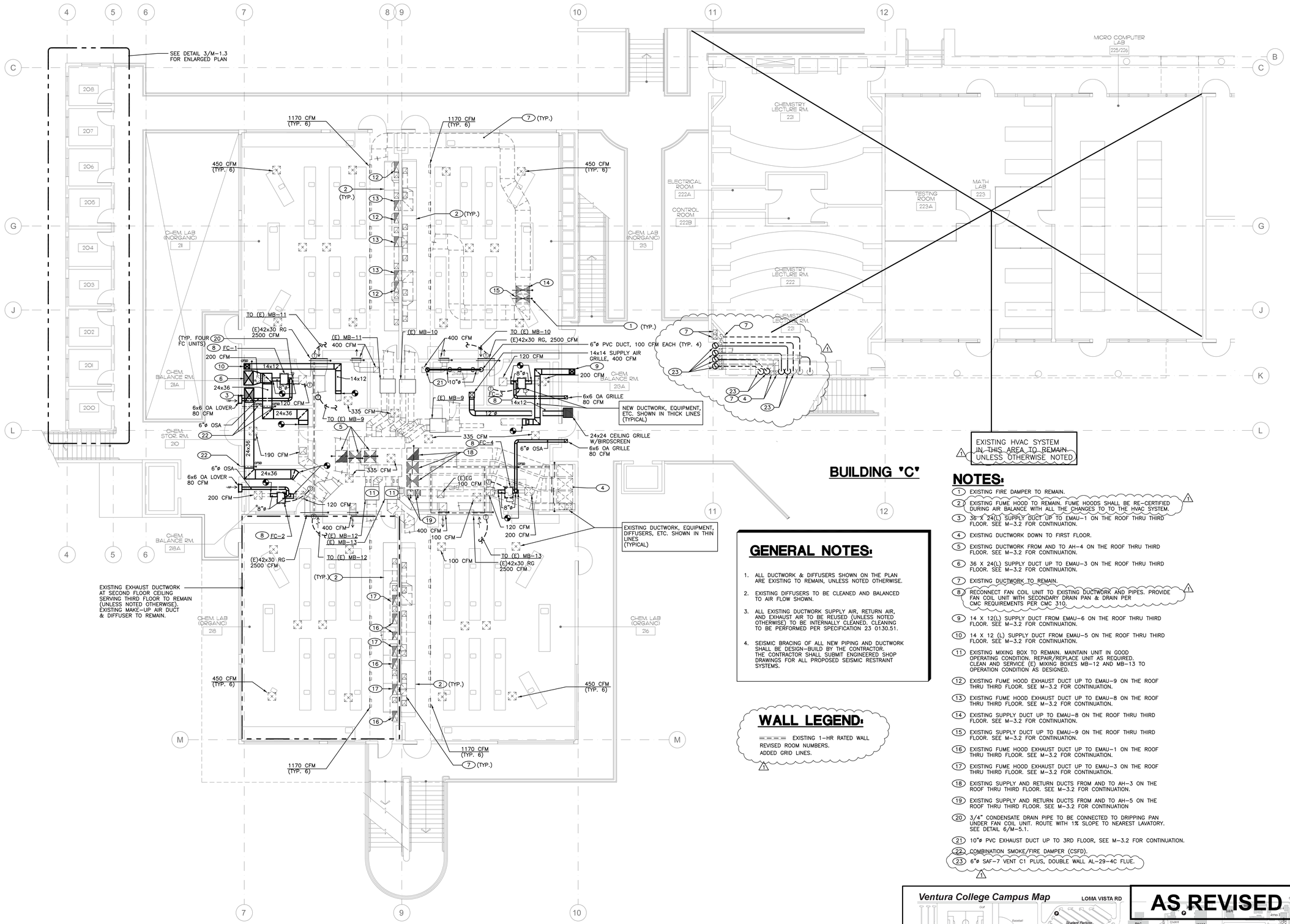
MECHANICAL SECOND FLOOR DEMOLITION PLAN

SHEET

M-2.1

DWG # 44 OF 82

05-12-17 DSA SUBMITTAL



GENERAL NOTES:

1. ALL DUCTWORK & DIFFUSERS SHOWN ON THE PLAN ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
2. EXISTING DIFFUSERS TO BE CLEANED AND BALANCED TO AIR FLOW SHOWN.
3. ALL EXISTING DUCTWORK SUPPLY AIR, RETURN AIR, AND EXHAUST AIR TO BE REUSED (UNLESS NOTED OTHERWISE) TO BE INTERNALLY CLEANED. CLEANING TO BE PERFORMED PER SPECIFICATION 23 0130.51.
4. SEISMIC BRACING OF ALL NEW PIPING AND DUCTWORK SHALL BE DESIGN-BUILD BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ENGINEERED SHOP DRAWINGS FOR ALL PROPOSED SEISMIC RESTRAINT SYSTEMS.

WALL LEGEND:

- - - - EXISTING 1-HR RATED WALL
REVISED ROOM NUMBERS.
ADDED GRID LINES.
1

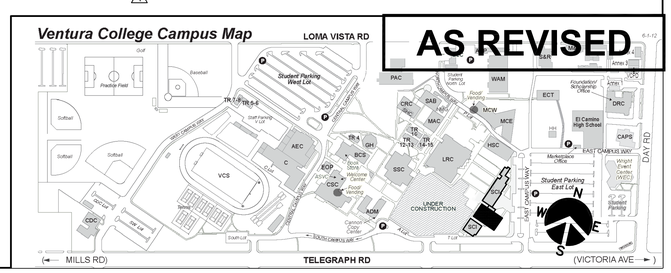
NOTES:

1. EXISTING FIRE DAMPER TO REMAIN.
2. EXISTING FUME HOOD TO REMAIN. FUME HOODS SHALL BE RE-CERTIFIED DURING AIR BALANCE WITH ALL THE CHANGES TO TO THE HVAC SYSTEM. 1
3. 36 X 24(L) SUPPLY DUCT UP TO EMAU-1 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
4. EXISTING DUCTWORK DOWN TO FIRST FLOOR.
5. EXISTING DUCTWORK FROM AND TO AH-4 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
6. 36 X 24(L) SUPPLY DUCT UP TO EMAU-3 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
7. EXISTING DUCTWORK TO REMAIN.
8. RECONNECT FAN COIL UNIT TO EXISTING DUCTWORK AND PIPES. PROVIDE FAN COIL UNIT WITH SECONDARY DRAIN PAN & DRAIN PER CMC REQUIREMENTS PER CMC 310. 1
9. 14 X 12(L) SUPPLY DUCT FROM EMAU-6 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
10. 14 X 12 (L) SUPPLY DUCT FROM EMAU-5 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
11. EXISTING MIXING BOX TO REMAIN. MAINTAIN UNIT IN GOOD OPERATING CONDITION. REPAIR/REPLACE UNIT AS REQUIRED. CLEAN AND SERVICE (E) MIXING BOXES MB-12 AND MB-13 TO OPERATION CONDITION AS DESIGNED.
12. EXISTING FUME HOOD EXHAUST DUCT UP TO EMAU-9 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
13. EXISTING FUME HOOD EXHAUST DUCT UP TO EMAU-8 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
14. EXISTING SUPPLY DUCT UP TO EMAU-8 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
15. EXISTING SUPPLY DUCT UP TO EMAU-9 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
16. EXISTING FUME HOOD EXHAUST DUCT UP TO EMAU-1 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
17. EXISTING FUME HOOD EXHAUST DUCT UP TO EMAU-3 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
18. EXISTING SUPPLY AND RETURN DUCTS FROM AND TO AH-3 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
19. EXISTING SUPPLY AND RETURN DUCTS FROM AND TO AH-5 ON THE ROOF THRU THIRD FLOOR. SEE M-3.2 FOR CONTINUATION
20. 3/4" CONDENSATE DRAIN PIPE TO BE CONNECTED TO DRIPPING PAN UNDER FAN COIL UNIT. ROUTE WITH 1% SLOPE TO NEAREST LAVATORY. SEE DETAIL 6/M-5.1.
21. 10"ø PVC EXHAUST DUCT UP TO 3RD FLOOR, SEE M-3.2 FOR CONTINUATION.
22. COMBINATION SMOKE/FIRE DAMPER (CSFD).
23. 6"ø SAF-7 VENT C1 PLUS, DOUBLE WALL AL-29-4C FLUE. 1

1 PARTIAL SECOND FLOOR PLAN
SCALE: 1/8"=1'-0"

GRAPHIC SCALE: 1/8" = 1'- 0"
0 5 10 15 30

Ventura College Campus Map



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Tel. (818) 398-5793 Fax: (818) 841-8531
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E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SEAN ANN ARCHITECT C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER SHELLY L. CORA Exp. 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE
4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 45461
SHEET TITLE
MECHANICAL SECOND FLOOR PLAN

SHEET
M-2.2
DWG # 45 OF 82

05-12-17 DSA SUBMITTAL

Job No. 45461 - FILE: N:\45461-Ventura\CAD\M2-2.dwg, M2-2 Par Flan, ARCHI-LEC.dwg, GENNOTES.dwg, M2-1.dwg, X-Civil.dwg, X-ZTLR.dwg, Sheet.dwg
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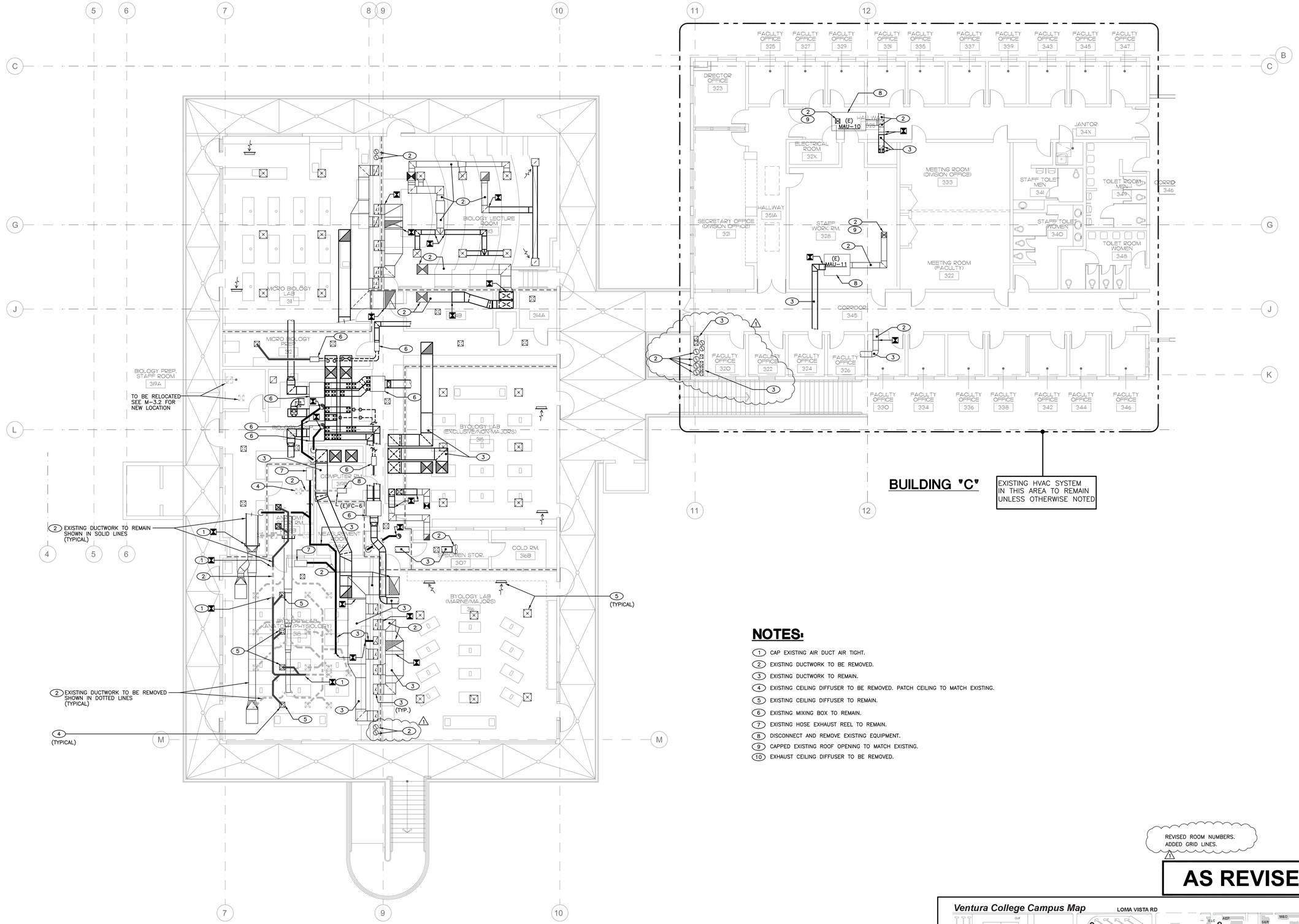


NOTES:

1. CAP EXISTING AIR DUCT AIR TIGHT.
2. EXISTING DUCTWORK TO BE REMOVED.
3. EXISTING DUCTWORK TO REMAIN.
4. EXISTING CEILING DIFFUSER TO BE REMOVED. PATCH CEILING TO MATCH EXISTING.
5. EXISTING CEILING DIFFUSER TO REMAIN.
6. EXISTING MIXING BOX TO REMAIN.
7. EXISTING HOSE EXHAUST REEL TO REMAIN.
8. DISCONNECT AND REMOVE EXISTING EQUIPMENT.
9. CAPPED EXISTING ROOF OPENING TO MATCH EXISTING.
10. EXHAUST CEILING DIFFUSER TO BE REMOVED.

1 THIRD FLOOR DEMOLITION PLAN

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

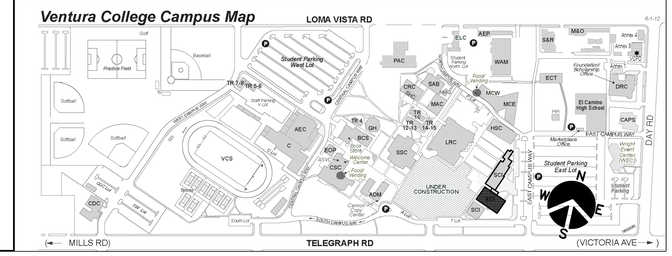
GRAPHIC SCALE: 1/8" = 1'- 0"

0 5 10 15 30

REVISED ROOM NUMBERS. ADDED GRID LINES.

AS REVISED

Ventura College Campus Map



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www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com

PROJECT No. 45461

LICENSED ARCHITECT — SEAN ANN ALEXANDER — C-22205 — APRIL 30, 2021 RENEWAL DATE — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — SHELLY LORA — No. M25842 — 09-30-21 — MECHANICAL — STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

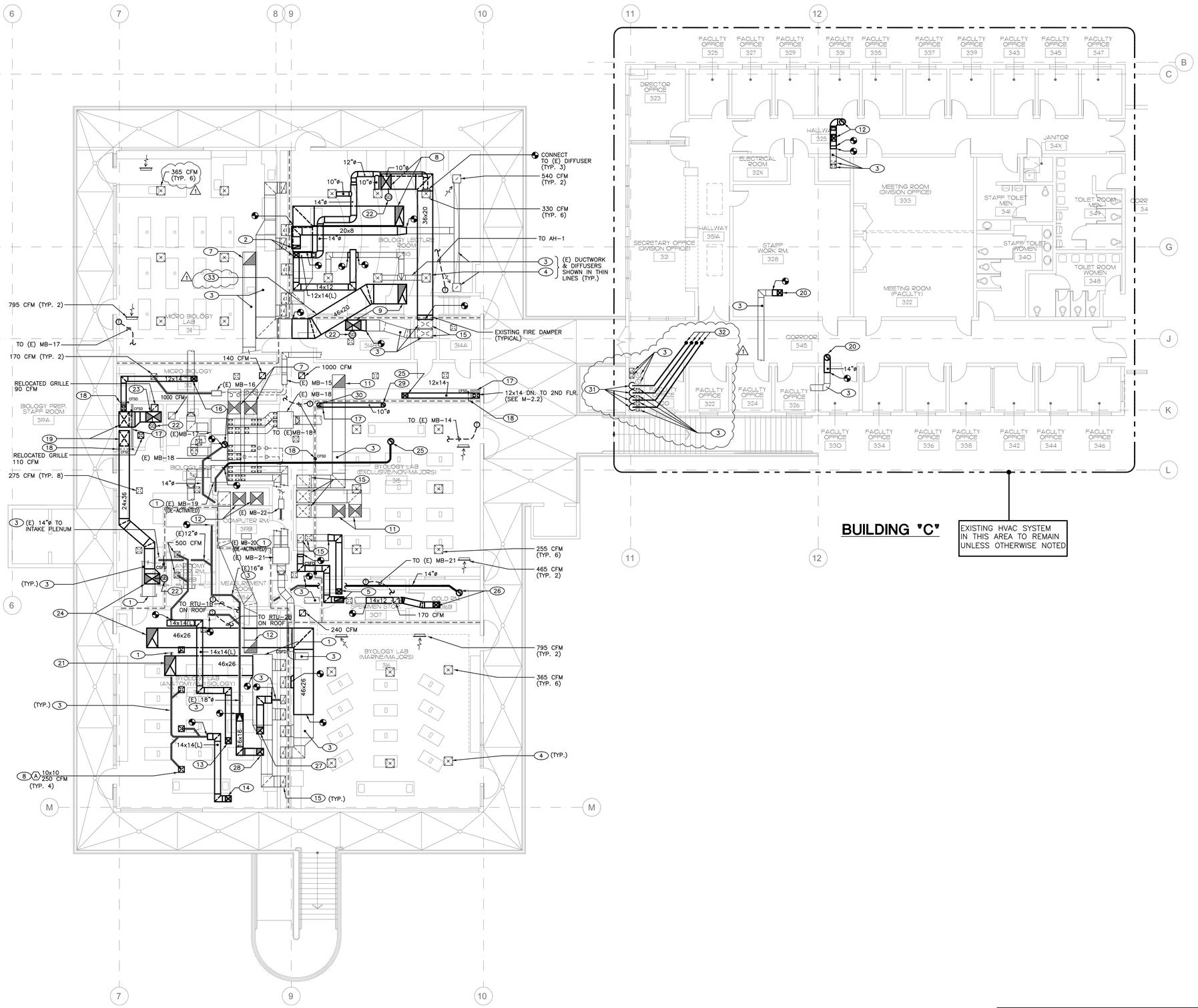
MECHANICAL THIRD FLOOR DEMOLITION PLAN

SHEET

M-3.1

DWG # 46 OF 82

Job No. 4545; File: K:\4545\-VenturaCol\M3-1-Dmlt. Ref. Files: A-G-C-P.dwg, K:\4545\-VenturaCol\x-3FLR.dwg, Sheet.dwg
Plot Date: 05-08-20, 10:52am; Plot scale: 1=1'-0"; By: S.L. Prev. plot: 05-07-20, 1:23pm
05-12-17 DSA SUBMITTAL



GENERAL NOTES:

1. ALL DUCTWORK & DIFFUSERS SHOWN ON THE PLAN ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
2. EXISTING DIFFUSERS TO BE CLEANED AND BALANCED TO AIR FLOW SHOWN.
3. ALL EXISTING DUCTWORK SUPPLY AIR, RETURN AIR, AND EXHAUST AIR TO BE REUSED (UNLESS NOTED OTHERWISE) TO BE INTERNALLY CLEANED, CLEANING TO BE PERFORMED PER SPECIFICATION 23 0130.51.
4. SEISMIC BRACING OF ALL NEW PIPING AND DUCTWORK SHALL BE DESIGN-BUILD BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ENGINEERED SHOP DRAWINGS FOR ALL PROPOSED SEISMIC RESTRAINT SYSTEMS.

NOTES:

1. CAPPED EXISTING AIR DUCT.
2. 14x12(L) SUPPLY DUCT FROM AND 20x8(L) RETURN DUCT TO AH-1 ON ROOF. SEE M-4.2.
3. EXISTING DUCTWORK TO REMAIN.
4. EXISTING CEILING DIFFUSER TO REMAIN.
5. 14x12(L) SUPPLY DUCT FROM AND 20x8(L) RETURN DUCT TO AH-5 ON ROOF. SEE M-4.2 FOR CONTINUATION.
6. 1¼"ø HHWS & HHWR PIPES FROM ROOF, RECONNECT TO EXISTING 1¼"ø HOT WATER PIPES.
7. EXISTING SUPPLY AND RETURN DUCT TO BE CONNECTED TO TO AH-2 ON ROOF. SEE M-4.2 FOR CONTINUATION.
8. 36x24(L) SUPPLY DUCT FROM AND 46x20 EXHAUST DUCT TO EMAU-8 ON ROOF. SEE M-4.2 FOR CONTINUATION.
9. 36x24(L) SUPPLY DUCT FROM AND 46x20 EXHAUST DUCT TO EMAU-9 ON ROOF. SEE M-4.2 FOR CONTINUATION.
10. 14x12(L) SUPPLY DUCT FROM & 14"ø EXHAUST DUCT TO EMAU-10 ON ROOF, SEE M-4.3 FOR CONTINUATION.
11. EXISTING SUPPLY AND RETURN DUCT TO BE CONNECTED TO TO AH-3 ON ROOF. SEE M-4.2 FOR CONTINUATION.
12. EXISTING SUPPLY AND RETURN DUCT TO BE CONNECTED TO TO AH-4 ON ROOF. SEE M-4.2 FOR CONTINUATION.
13. 14x14(L) SUPPLY DUCT FROM RTU-1B ON ROOF. SEE M-4.2 FOR CONTINUATION.
14. 14x14(L) SUPPLY DUCT FROM RTU-2B ON ROOF. SEE M-4.2 FOR CONTINUATION.
15. EXISTING DUCTWORK DOWN TO 2ND FLOOR.
16. 14x12(L) SUPPLY DUCT FROM AND 14"ø EXHAUST DUCT TO EMAU-5 ON ROOF. SEE M-4.2 FOR CONTINUATION.
17. ONE (1) HR. DUCT SHAFT.
18. COMBINATION SMOKE/FIRE DAMPER (CFSD).
19. 36x24 SUPPLY DUCT DOWN TO 2ND FLOOR.
20. 14x12(L) SUPPLY DUCT FROM & 14"ø EXHAUST DUCT TO EMAU-11 ON ROOF, SEE M-4.3 FOR CONTINUATION.
21. 46x26 EXHAUST DUCT UP TO EMAU-1 ON ROOF. SEE M-4.2 FOR CONTINUATION.
22. INSTALL SMOKE DETECTOR INSIDE PLENUM W/ACCESS DOOR. PROVIDE REMOTE TEST/ANNUNCIATOR STATION.
23. 36x24(L) SUPPLY DUCT FROM EMAU-1 ON ROOF. SEE M-4.2 FOR CONTINUATION.
24. 36x24(L) SUPPLY DUCT FROM AND 46x26 EXHAUST DUCT UP TO EMAU-3 ON ROOF. SEE M-4.2 FOR CONTINUATION.
25. 14x12(L) SUPPLY DUCT FROM AND 14"ø EXHAUST DUCT UP TO EMAU-6 ON ROOF. SEE M-4.2 FOR CONTINUATION.
26. 14x12(L) SUPPLY DUCT FROM AND 14"ø EXHAUST DUCT UP TO EMAU-7 ON ROOF. SEE M-4.2 FOR CONTINUATION.
27. 16x16 EXHAUST DUCT UP THRU ROOF TO EF-25, INTERLOCK WITH RTU-2B.
28. 16x16 EXHAUST DUCT UP THRU ROOF TO EF-26, INTERLOCK WITH RTU-1B.
29. 10"ø PVC EXHAUST DUCT FROM ROOF, SEE M-4.2 FOR CONTINUATION.
30. 10"ø PVC EXHAUST DUCT FROM 2ND FLOOR, SEE M-2.2 FOR CONTINUATION. CUT THRU EXISTING CABINET HOUSING.
31. 6"ø SAF-7 VENT C1 PLUS, DOUBLE WALL AL-29-4C FLUE FROM SECOND FLOOR. SEE M-2.2 FOR CONTINUATION.
32. 6"ø SAF-7 VENT C1 PLUS, DOUBLE WALL AL-29-4C FLUE UP TO ROOF. SEE M-4.3 FOR CONTINUATION.
33. ⚠1 PROVIDE 1-HR DUCT ENCLOSURE AROUND 46"x20" DUCTWORK TO MAINTAIN INTEGRITY OF 1-HOUR WALL.

WALL LEGEND:

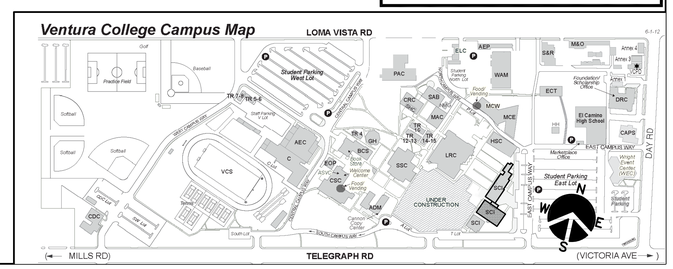
EXISTING 1-HR RATED WALL

REVISED ROOM NUMBERS.
ADDED GRID LINES.
⚠1

AS REVISED

1 THIRD FLOOR PLAN
SCALE: 1/8"=1'-0"

GRAPHIC SCALE: 1/8" = 1'- 0"
0 5 10 15 30



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Tel. (818) 398-5793 Fax: (818) 841-8531
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E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SUSAN ANN LAMOUR C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER SUSAN L. LAMOUR No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
⚠1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

MECHANICAL THIRD FLOOR PLAN

SHEET

M-3.2

DWG # 47 OF 82

Job No. 45461: I:\JOB FILE 45\45461\VenturaCOM\M3-2.dwg Ref. Files: ARCH-LEED.dwg, GENNOTES.dwg, X-Grid.dwg, N:\45461\VenturaCOM\X-3FLR.dwg, M3-1.dwg Sheet.dwg
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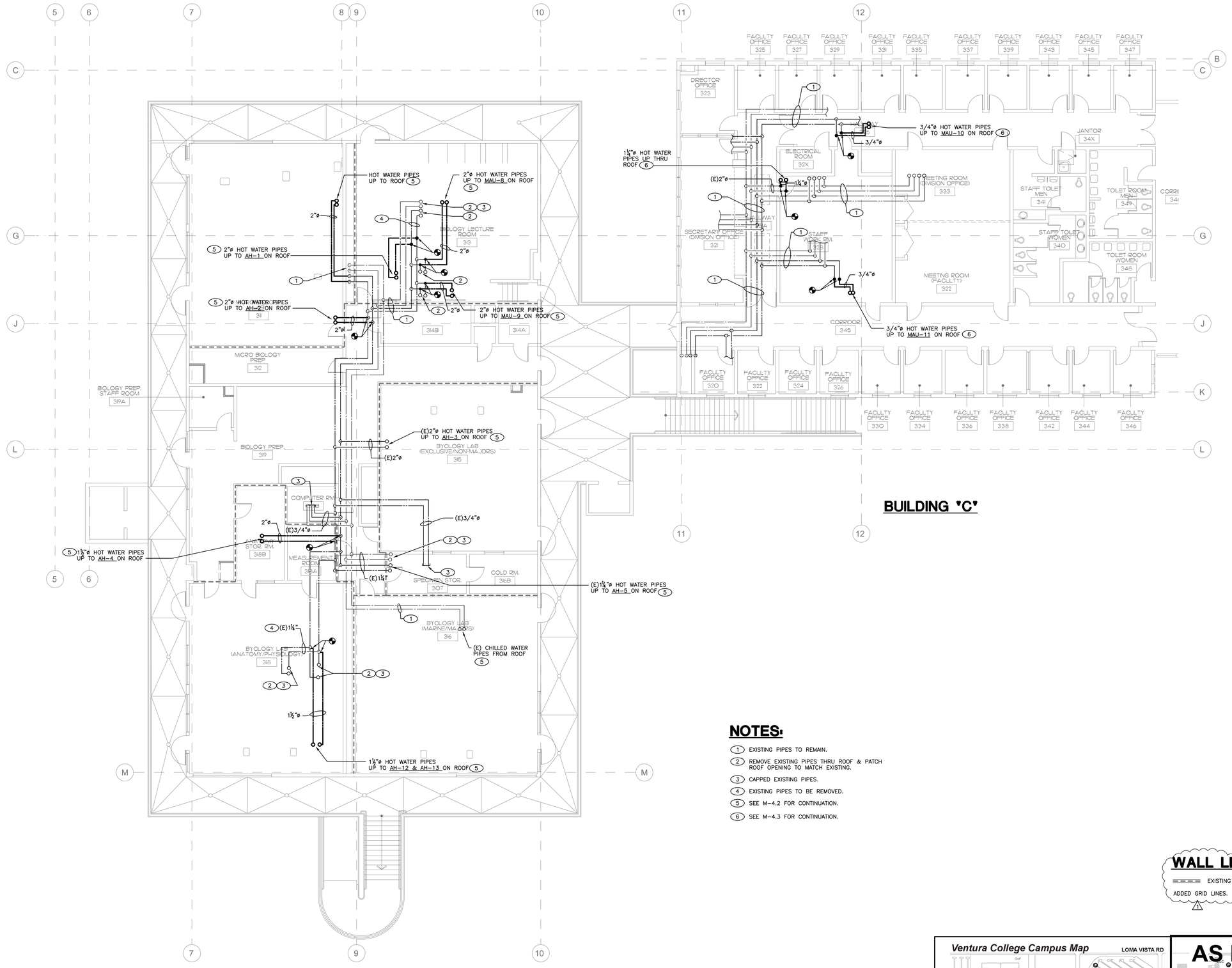
05-12-17 DSA SUBMITTAL



BUILDING "B"

BUILDING "C"

NOTES:

1. EXISTING PIPES TO REMAIN.
2. REMOVE EXISTING PIPES THRU ROOF & PATCH ROOF OPENING TO MATCH EXISTING.
3. CAPPED EXISTING PIPES.
4. EXISTING PIPES TO BE REMOVED.
5. SEE M-4.2 FOR CONTINUATION.
6. SEE M-4.3 FOR CONTINUATION.

WALL LEGEND:

EXISTING 1-HR RATED WALL

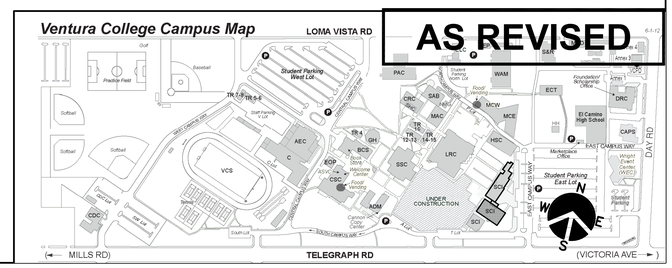
ADDED GRID LINES. (1)

1 THIRD FLOOR PLAN

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

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

0 5 10 15 30



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470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com

PROJECT No. 45461

LICENSED ARCHITECT SEAN ANN ALEXANDER C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER STEVEN L. TORA No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

MATH & SCIENCE COMPLEX

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	12.19.16	DSA SUBMITTAL	
	REVISIONS		

DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 45461

SHEET TITLE

MECHANICAL THIRD FLOOR PIPING PLAN

SHEET

M-3.3

DWG # 48 OF 82

Job No. 45461; FILE: N:\45461\Vector\M3-3.dwg; M3-3 Ref Files: ARCH-LEC.dwg, A-Grid.dwg, N:\45461\Vector\A-3F3.dwg, Sheet.dwg
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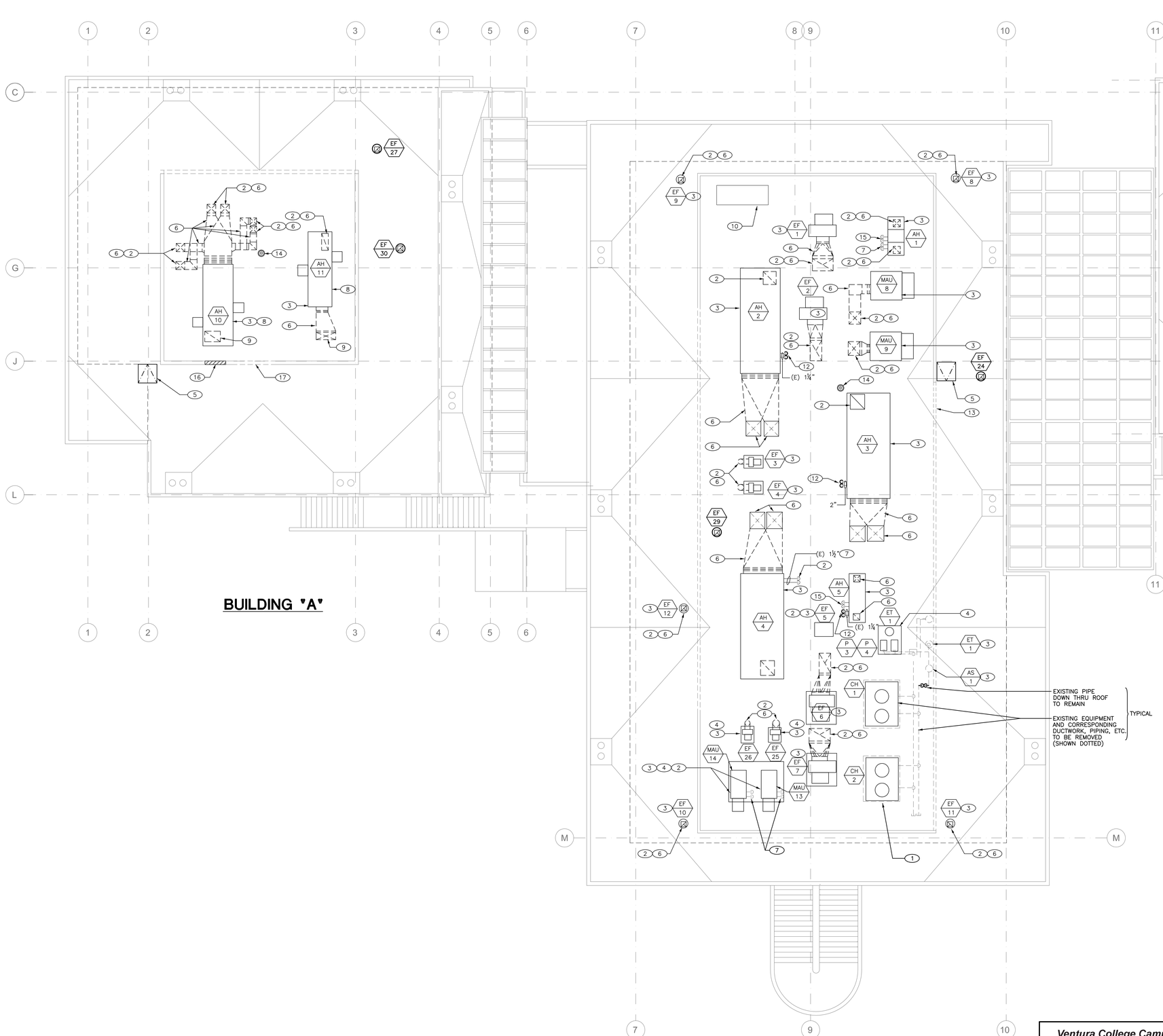
05-12-17 DSA SUBMITTAL



DEMOLITION NOTES:

1. EXISTING CONCRETE PAD TO BE REMOVED.
2. PATCH ROOF OPENING TO MATCH EXISTING ROOF.
3. EXISTING EQUIPMENT TO BE REMOVED.
4. EXISTING CONCRETE PLATFORM AND CORRESPONDING UNIT SUPPORT TO BE REMOVED.
5. EXISTING ROOF HATCH.
6. EXISTING DUCTWORK TO BE REMOVED.
7. EXISTING PIPE THRU ROOF TO BE REMOVED AND CAPPED.
8. EXISTING STEEL EQUIPMENT SUPPORT FRAME TO BE REMOVED.
9. EXISTING DUCT TO BE REMOVED. RE-USE/WIDEN EXISTING ROOF OPENING.
10. EXISTING ELECTRICAL SWITCHBOARD "MCCA" TO REMAIN.
11. EXISTING DUCTWORK TO REMAIN.
12. DISCONNECT EXISTING HOT WATER PIPES TO EXISTING AIR HANDLER UNIT. EXISTING PIPES THRU ROOF TO REMAIN.
13. EXISTING ACCESS OPENING TO REMAIN.
14. EXISTING ROOF RECEPTOR TO REMAIN.
15. EXISTING COLD WATER PIPE THRU ROOF TO BE REMOVED AND CAPPED.
16. PATCH EXISTING WALL ACCESS OPENING TO MATCH EXISTING.
17. PROVIDE 8'-0" ACCESS OPENING TO SERVICE THE UNIT.

ADDED GRID LINES.

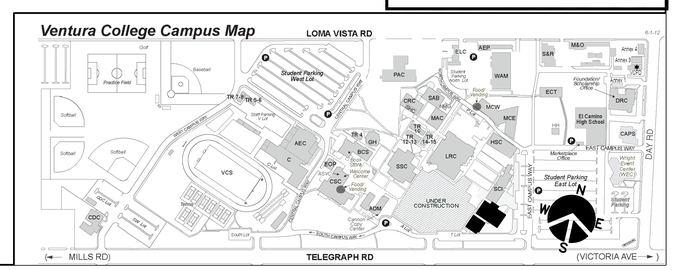
AS REVISED

1 BUILDINGS "A" AND "B" ROOF DEMOLITION PLAN

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

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

0 5 10 15 30



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PROJECT No. 45461

LICENSED ARCHITECT JEAN ANN AMADOR C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER FELIX L. LOUZA No. M25942 EXPIRES 09-30-20 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

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VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

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DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 45461

SHEET TITLE

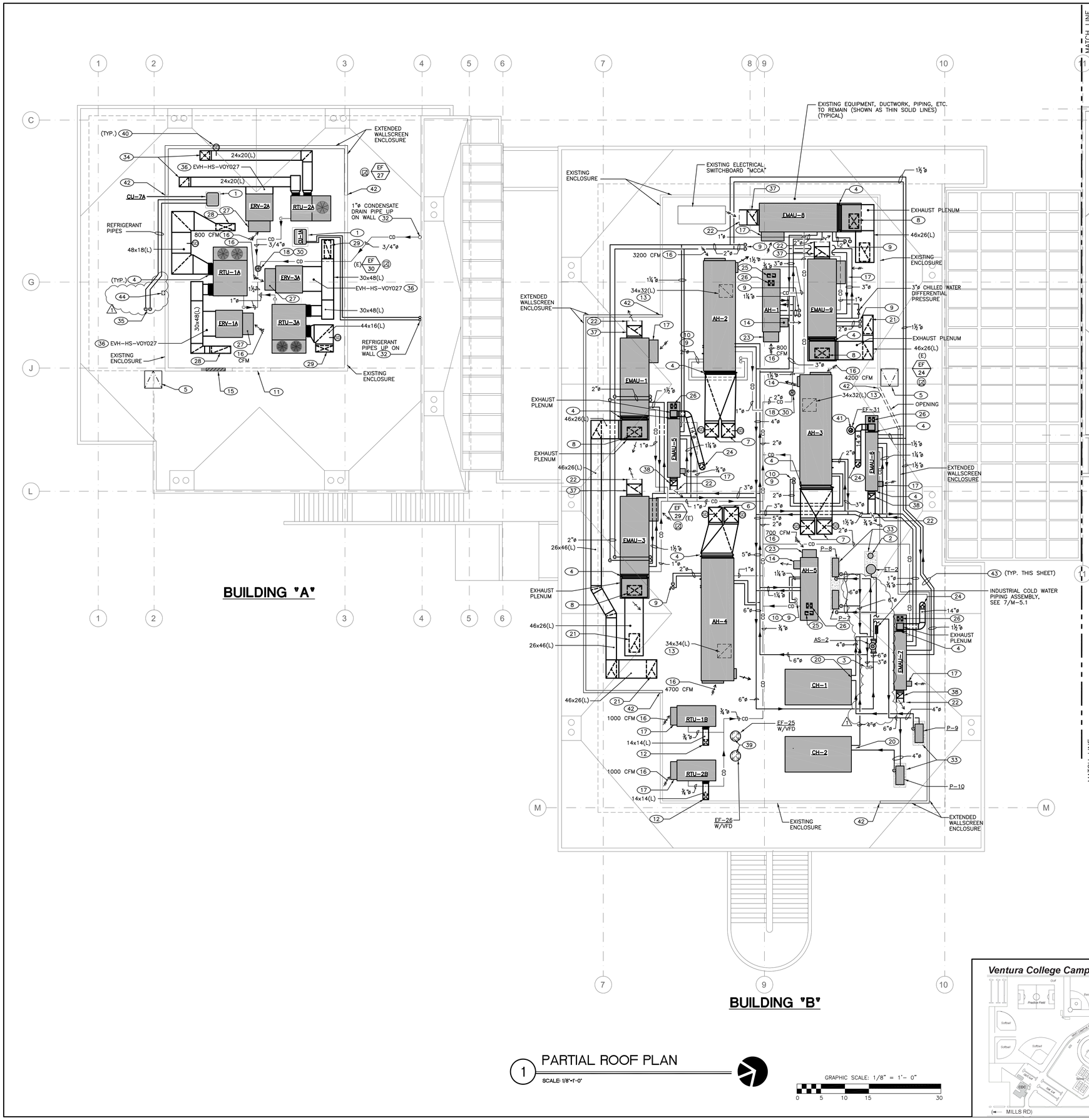
BUILDINGS "A" AND "B" MECHANICAL ROOF DEMOLITION PLAN

SHEET

M-4.1

DWG # 49 OF 82

05-12-17 DSA SUBMITTAL



GENERAL NOTES:

1. ALL DUCTWORK & DIFFUSERS SHOWN ON THE PLAN ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
2. EXISTING DIFFUSERS TO BE CLEANED AND BALANCED TO AIR FLOW SHOWN.
3. ALL EXISTING DUCTWORK SUPPLY AIR, RETURN AIR, AND EXHAUST AIR TO BE REUSED (UNLESS NOTED OTHERWISE) TO BE INTERNALLY CLEANED. CLEANING TO BE PERFORMED PER SPECIFICATION 23 0130.51.
4. SEISMIC BRACING OF ALL NEW PIPING AND DUCTWORK SHALL BE DESIGN-BUILD BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ENGINEERED SHOP DRAWINGS FOR ALL PROPOSED SEISMIC RESTRAINT SYSTEMS.

NOTES:

1. PROVIDE PLATFORM.
2. CHEMICAL BYPASS FEEDER, SEE DETAIL 2/M-5.1.
3. 3"ø CHWS & CHWR PIPES DOWN & RECONNECT TO EXISTING PIPES. POINT OF CONNECTION TO EXISTING IS ABOVE THE ROOF.
4. FLEXIBLE CONNECTION.
5. EXISTING ROOF HATCH.
6. 34x34(L) SUPPLY DUCT DOWN SEE M-3.2 FOR CONTINUATION.
7. 34x32(L) SUPPLY DUCT DOWN SEE M-3.2 FOR CONTINUATION.
8. 36x24(L) SUPPLY DUCT DOWN SEE M-3.2 FOR CONTINUATION.
9. HOT WATER PIPES AND/OR CHILLED WATER PIPES DOWN THRU ROOF AND RECONNECT TO EXISTING PIPES.
10. EXISTING HOT WATER PIPING TO REMAIN.
11. PROVIDE 8'-0" ACCESS OPENING TO SERVICE THE UNIT.
12. 14x14(L) SUPPLY DUCT THRU ROOF, SEE M-3.2 FOR CONTINUATION.
13. RETURN DUCT THRU ROOF (SIZE AS SHOWN).
14. RELIEF HOOD.
15. PATCH EXISTING WALL ACCESS OPENING TO MATCH EXISTING.
16. OUTSIDE AIR, SET AS SHOWN.
17. OUTSIDE AIR HOOD.
18. EXISTING ROOF RECEPTOR.
19. SEE COIL PIPING DETAIL 11/M-5.1.
20. SEE CHILLER PIPING DETAIL 10/M-5.1.
21. 46x26(L) EXHAUST DUCT THRU ROOF, SEE M-3.2 FOR CONTINUATION.
22. BIRD SCREEN.
23. ECONOMIZER HOOD.
24. 14"ø EXHAUST DUCT FROM BELOW, SEE M-3.2 FOR CONTINUATION.
25. 20x8(L) RETURN DUCT DOWN, SEE M-3.2 FOR CONTINUATION.
26. 14x12(L) SUPPLY DUCT DOWN, SEE M-3.2 FOR CONTINUATION.
27. RELIEF HOOD ON TOP/ECONOMIZER HOOD BELOW.
28. 48x18(L) DUCT DOWN, SEE SHEET M-1.2 FOR CONTINUATION.
29. 44x16(L) DUCT DOWN, SEE SHEET M-1.2 FOR CONTINUATION.
30. CONDENSATE DRAIN PIPE, SPILL TO EXISTING ROOF RECEPTOR.
31. 18x16(L) DUCT UP.
32. SEE M-4.3 FOR CONTINUATION..
33. CONCRETE PAD.
34. 24x24(L) SUPPLY & RETURN DUCT, SEE SHEET M-1.2 FOR CONTINUATION.
35. REFRIGERANT PIPES DOWN THRU ROOF, SEE M-1.2 FOR CONTINUATION.
36. MICROMETAL KIT HORIZONTAL DISCHARGE PART # AS SHOWN ON PLAN.
37. BOTTOM OF 38x26 EXHAUST DUCT PLENUM UP TO 36" ABOVE AC UNIT. EXHAUST PLENUM STACK SUPPORTED ALONG SIDE OF AC UNIT.
38. BOTTOM OF 18x14 EXHAUST DUCT PLENUM UP TO 36" ABOVE AC UNIT. EXHAUST PLENUM STACK SUPPORTED ALONG SIDE AC UNIT.
39. 16x16 EXHAUST DUCT FROM BELOW, SEE SHEET M-3.2 FOR CONTINUATION.
40. INSTALL SMOKE DETECTOR INSIDE PLENUM W/ACCESS DOOR. PROVIDE REMOTE TEST/ANNUNCIATOR STATION.
41. 10"ø PVC EXHAUST DUCT FROM THIRD FLOOR. SEE M-3.2 FOR CONTINUATION.
42. POINT OF CONNECTION TO EXISTING.
43. REFER TO STRUCTURAL DETAIL 23/S-5.2 FOR TYPICAL PIPE SUPPORT DETAIL.
44. EXISTING INTAKE ROOF CAP TO REMAIN. SOURCE OF MAKE-UP AIR FOR FC-7A.

ADDED GRID LINES.

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E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SUSANNA LEE LOCKWOOD C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER SHELLY L. TORIA No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
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	12.19.16	DSA SUBMITTAL	

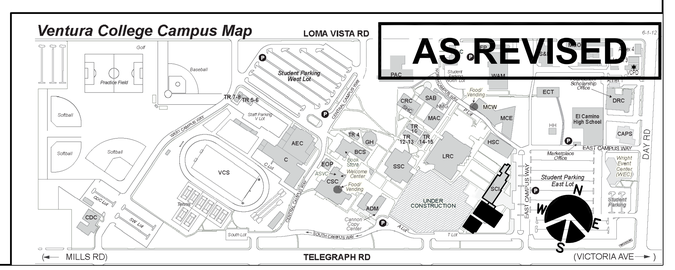
REVISIONS

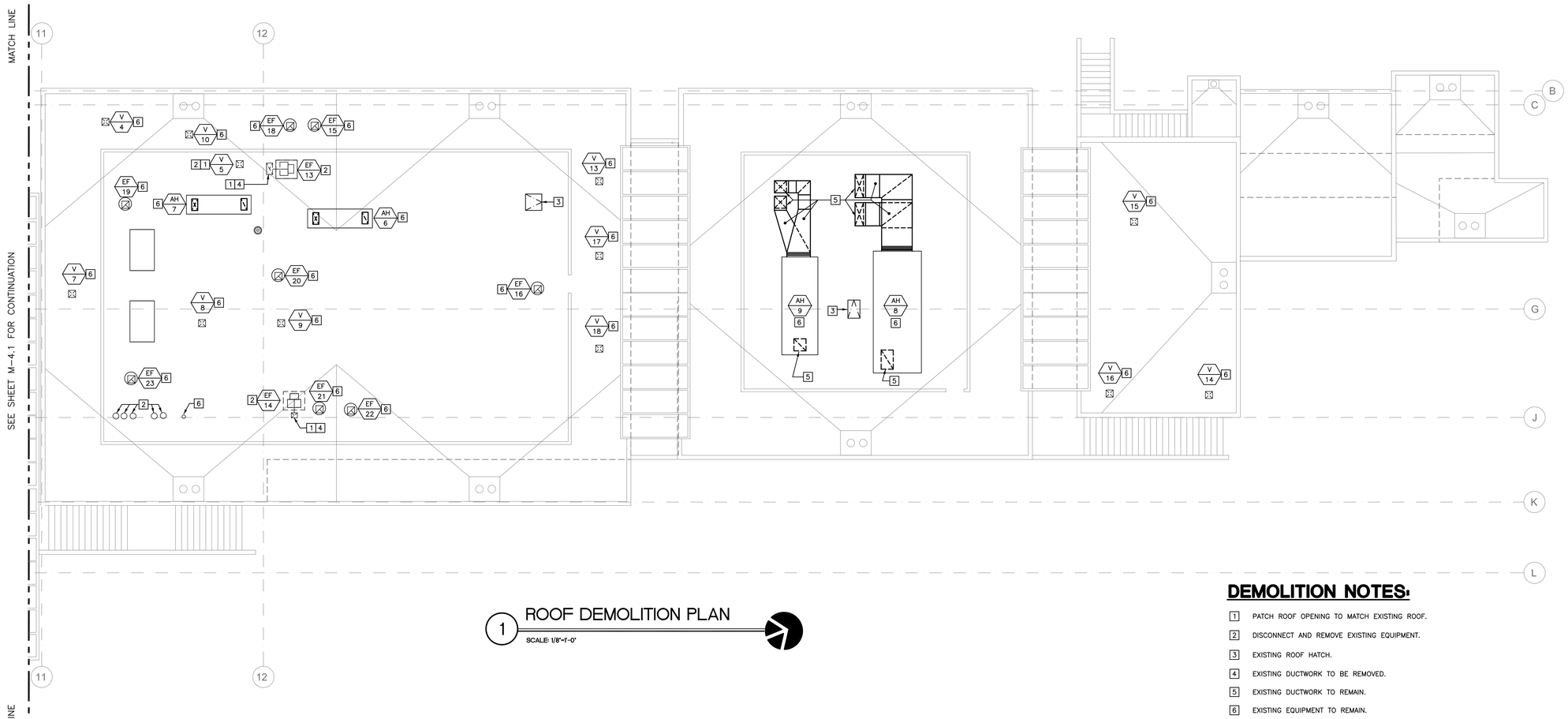
DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

BUILDINGS "A" AND "B" MECHANICAL ROOF PLAN

Ventura College Campus Map


LOMA VISTA RD
Student Parking West Lot
Practice Field
Softball
Baseball
Golf
PAC
Student Services
WAM
Scholarship Office
SAB
CRC
ADM
Police
Roof Landing
MCW
MCE
ECT
DRC
El Camino High School
MAC
TR 1-5
TR 6-8
TR 9-12
TR 13-15
TR 16-18
HSC
CAPS
EAST CAMPUS WAY
Maintenance Office
AEC
BCB
GH
Wright Brothers Statue
LRC
SSC
EOP
Student Parking East Lot
Malcolmb Center
Food Vendor
VCS
Softball
Softball
Soccer
Track
Field
Bleachers
Press Box
Tennis
Courts
Campus Safety Office
CDC
Staff Lot
Staff Lot
UNDER CONSTRUCTION
AGM
Parking
Parking
Parking

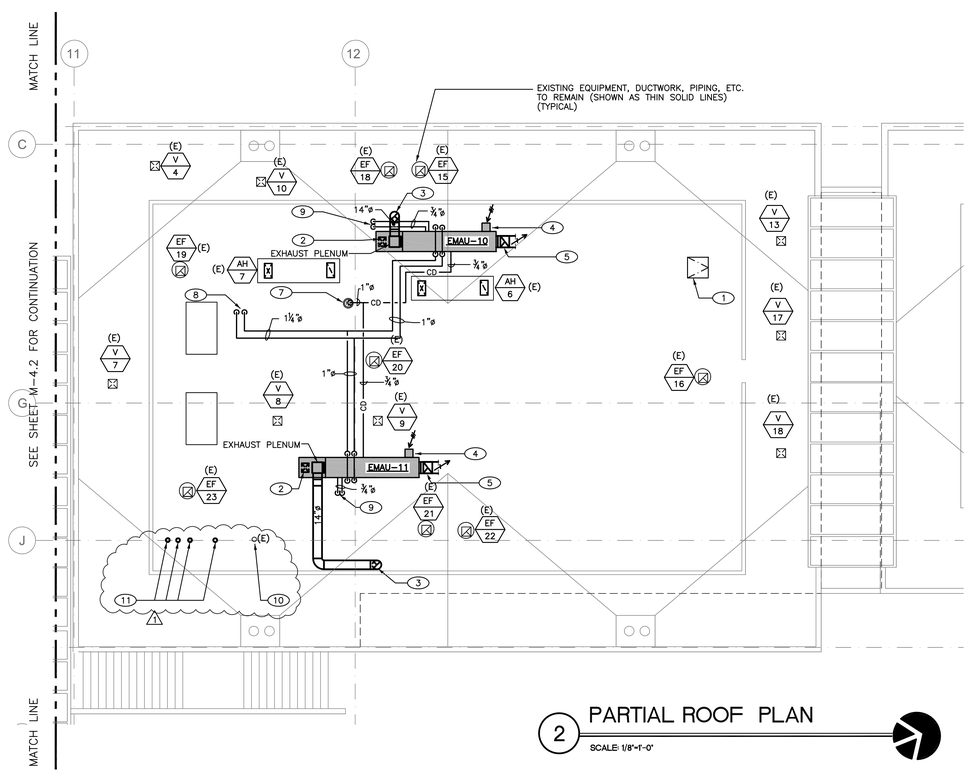


1 ROOF DEMOLITION PLAN

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

DEMOLITION NOTES:

1. PATCH ROOF OPENING TO MATCH EXISTING ROOF.
2. DISCONNECT AND REMOVE EXISTING EQUIPMENT.
3. EXISTING ROOF HATCH.
4. EXISTING DUCTWORK TO BE REMOVED.
5. EXISTING DUCTWORK TO REMAIN.
6. EXISTING EQUIPMENT TO REMAIN.



2 PARTIAL ROOF PLAN

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

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

0 5 10 15 30

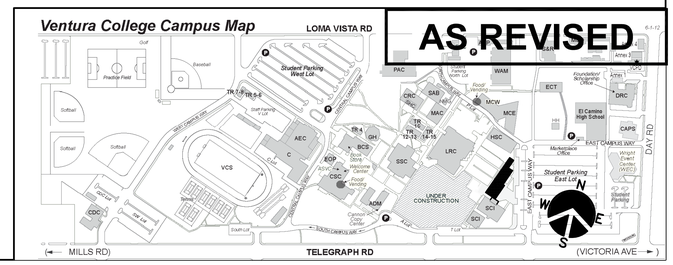
GENERAL NOTES:

1. ALL DUCTWORK & DIFFUSERS SHOWN ON THE PLAN ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
2. EXISTING DIFFUSERS TO BE CLEANED AND BALANCED TO AIR FLOW SHOWN.
3. ALL EXISTING DUCTWORK SUPPLY AIR, RETURN AIR, AND EXHAUST AIR TO BE REUSED (UNLESS NOTED OTHERWISE) TO BE INTERNALLY CLEANED. CLEANING TO BE PERFORMED PER SPECIFICATION 23 0130.51.
4. SEISMIC BRACING OF ALL NEW PIPING AND DUCTWORK SHALL BE DESIGN-BUILD BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ENGINEERED SHOP DRAWINGS FOR ALL PROPOSED SEISMIC RESTRAINT SYSTEMS.

NOTES:

1. EXISTING ROOF ACCESS.
2. 14x12(L) SUPPLY DUCT THRU ROOF, SEE M-3.2 FOR CONTINUATION.
3. 14"ø EXHAUST DUCT DOWN THRU ROOF, SEE SHEET M-3.2 FOR CONTINUATION.
4. 14x12(L) SUPPLY DUCT THRU ROOF, SEE M-3.2 FOR CONTINUATION.
5. OUTSIDE AIR HOOD.
6. BOTTOM OF 18x14 EXHAUST DUCT PLENUM UP TO 36" ABOVE AC UNIT. EXHAUST PLENUM STACK SUPPORTED ALONG SIDE OF AC UNIT.
7. EXISTING ROOF RECEPTOR.
8. 1¼"ø CHILLED WATER PIPES DOWN THRU ROOF. SEE M-3.3 FOR CONTINUATION
9. 3/4"ø CHILLED WATER PIPES DOWN THRU ROOF. SEE M-3.3 FOR CONTINUATION
10. EXISTING TO REMAIN.
11. 6"ø SAF-7 VENT C1 PLUS, DOUBLE WALL AL-29-4C FLUE, EXTENDED TO 24" ABOVE ROOF. SEE M-3.2 FOR CONTINUATION.

ADDED GRID LINES.



AS REVISED

J & S CONSULTING ENGINEERS, INC.
ELECTRICAL ▫ MECHANICAL
FIRE PROTECTION
3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SEAN ANN ARMSTRONG C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER STEVEN L. TORRA No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 45461

SHEET TITLE

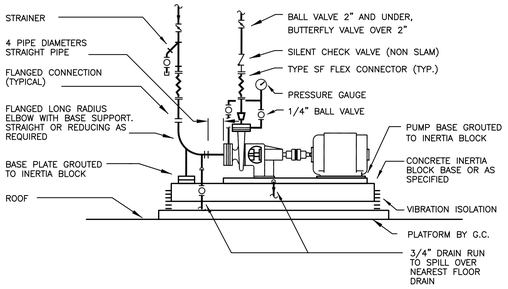
BUILDING "C" MECHANICAL ROOF PLANS

SHEET

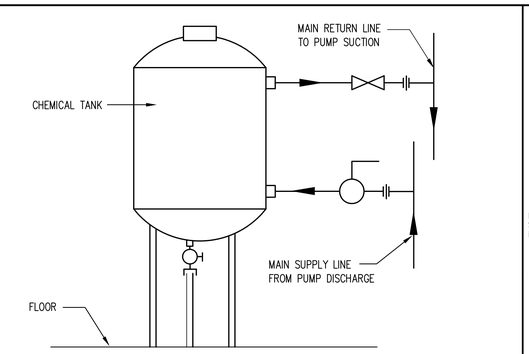
M-4.3

DWG # 51 OF 82

Job No. 45461; FILE: N:\45461-VenturaCol\M+3.dwg, M+3 Ref. Files: N:\45461-VenturaCol\Mech\VHT SHEETS.dwg, GENSHTS.dwg, M4-1.dwg, X-Grid.dwg, Steel.dwg, X-roof.dwg
Plot Date: 05-08-20, 10:54am; Plot scale: 1=1'-0"By: S.L. Plew: plot: 05-07-20, 12:25pm
05-12-17 DSA SUBMITTAL

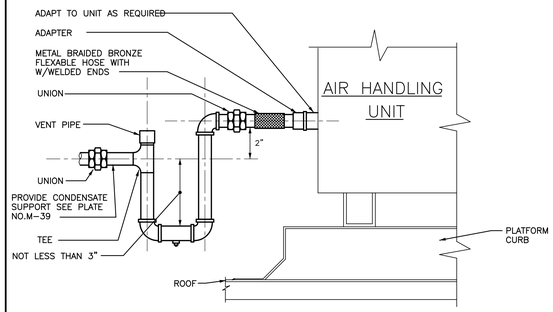


1 N.T.S. **BASE MOUNTED PUMP INSTALLATION DETAIL**

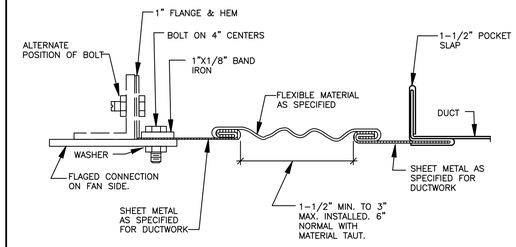


NOTES:
1. REFER TO STRUCTURAL DETAIL 25/S-5.2 FOR ANCHORING AND CALCULATIONS.

2 N.T.S. **CHEMICAL BY-PASS FEEDER PIPING DIAGRAM**

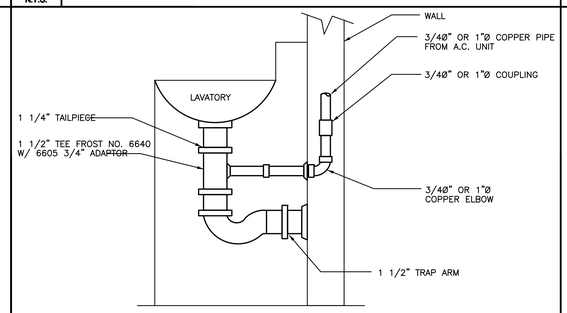


3 N.T.S. **CONDENSATE DRAIN TRAP DETAIL**

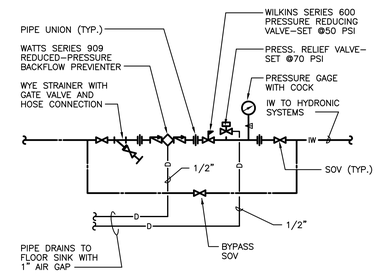


4 N.T.S. **RECTANGULAR FLEXIBLE CONNECTION**

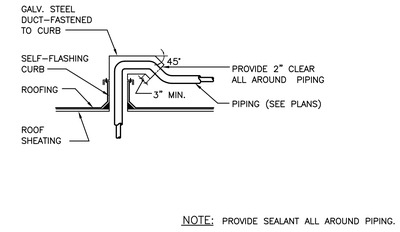
5 N.T.S. **NOT USED**



6 N.T.S. **CONDENSATE DRAIN CONNECTION TO TAILPIECE**



7 N.T.S. **INDUSTRIAL WATER MAKE-UP ASSEMBLY DETAIL**



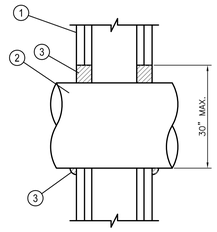
NOTE: PROVIDE SEALANT ALL AROUND PIPING.

8 N.T.S. **PIPE PENETRATION THRU ROOF**

System No. W-L-1297
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr
L Rating at Ambient -- Less than 1 CFM/Sq Ft
L Rating at 400° F -- Less than 1 CFM/Sq Ft

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

WL 1297

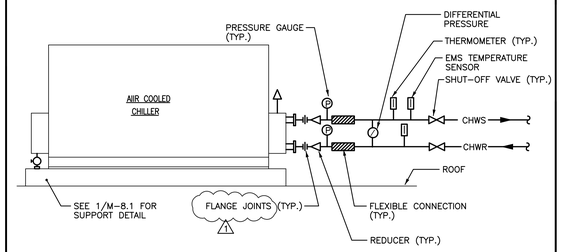


1. Wall Assembly – The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features.
A. Studs – Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
B. Gypsum Board* – Nom 5/8 in. (16 mm) thick, 4 ft (1.22 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the Fire Resistance Directory. Max diam of opening is 32 in. (813 mm).
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrant – One metallic pipe, conduit or tubing installed concentrically or eccentrically within the firestop system. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tube to be rigidly supported on both sides of wall assembly. The annular space between the pipe, conduit or tube and periphery of the opening shall be min 0 in (0 mm, point contact) to max 2 in. (51 mm) in 2 hr fire rated walls and min 0 in (0 mm, point contact) to max 1 in. (25 mm) in 1 hr fire rated walls. The following types and sizes of metallic pipes, conduit or tube may be used:
A. Steel Pipe – Nom 30 in. (762 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
B. Iron Pipe – Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
C. Conduit – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or 6 in. diam steel conduit.
D. Copper Tube – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tube.
E. Copper Pipe – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material*-Sealant – Min 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall, for 1 hr and 2 hr fire rated wall assemblies, respectively. A min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe/wall interface at the point contact location.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC – CP606 Flexible Firestop Sealant
*Bearing the UL Classification Mark

CSFM listing # 4485-1200-108.

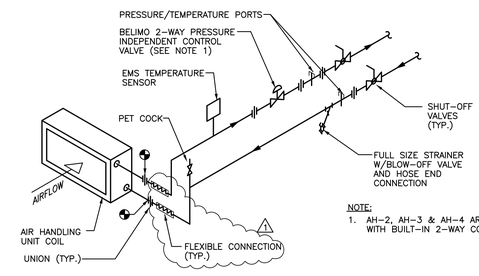
NOTES:
1. DO NOT CUT OR CORE THROUGH REINFORCING STEEL.
2. SEE 16/S1.1 FOR FRAMING ON OPENING WALL.

9 N.T.S. **PIPING FIRESTOP DETAIL**



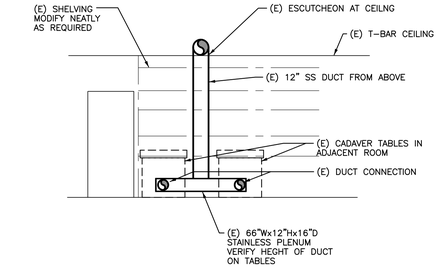
NOTE:
1. FLOW SWITCH IS BUILT-IN TO THE CHILLED WATER SUPPLY SIDE OF THE AIR COOLED CHILLER.

10 N.T.S. **AIR COOLED WATER CHILLER PIPING DIAGRAM**

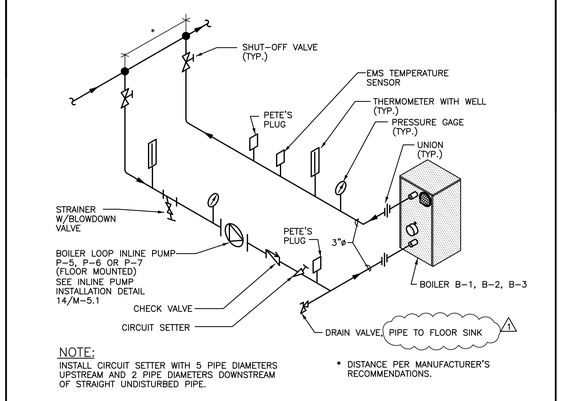


NOTE:
1. AH-2, AH-3 & AH-4 ARE PROVIDED WITH BUILT-IN 2-WAY CONTROL VALVE.

11 N.T.S. **HOT WATER COIL AND CHILLED WATER COIL DETAIL**



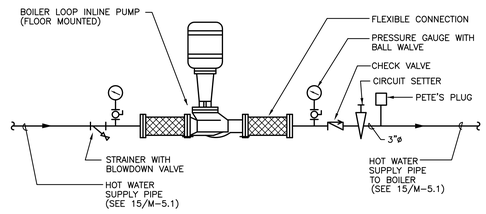
12 N.T.S. **EXISTING ELEVATION LOOKING NORTH FROM ROOM 311 TO ROOM 310**



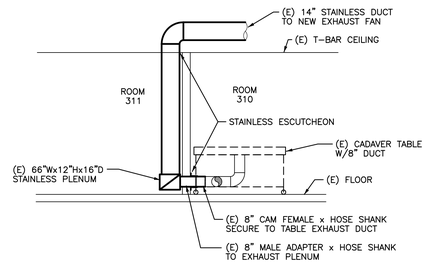
NOTE:
INSTALL CIRCUIT SETTER WITH 5 PIPE DIAMETERS UPSTREAM AND 2 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT UNDISTURBED PIPE.

* DISTANCE PER MANUFACTURER'S RECOMMENDATIONS.

13 N.T.S. **BOILER PIPING DIAGRAM**



14 N.T.S. **IN-LINE PUMP INSTALLATION DETAIL**



AS REVISED

15 N.T.S. **EXISTING CONNECTION DETAIL**

J & S CONSULTING ENGINEERS, INC.
ELECTRICAL ▫ MECHANICAL
FIRE PROTECTION
3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com

PROJECT No. 45461

LICENSED ARCHITECT SUSANN A. LOMBARDI REGISTERED PROFESSIONAL ENGINEER C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER SUSAN L. LOMBARDI No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE
4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE
MECHANICAL DETAILS

SHEET
M-5.1
DWG # 52 OF 82

05-12-17 DSA SUBMITTAL

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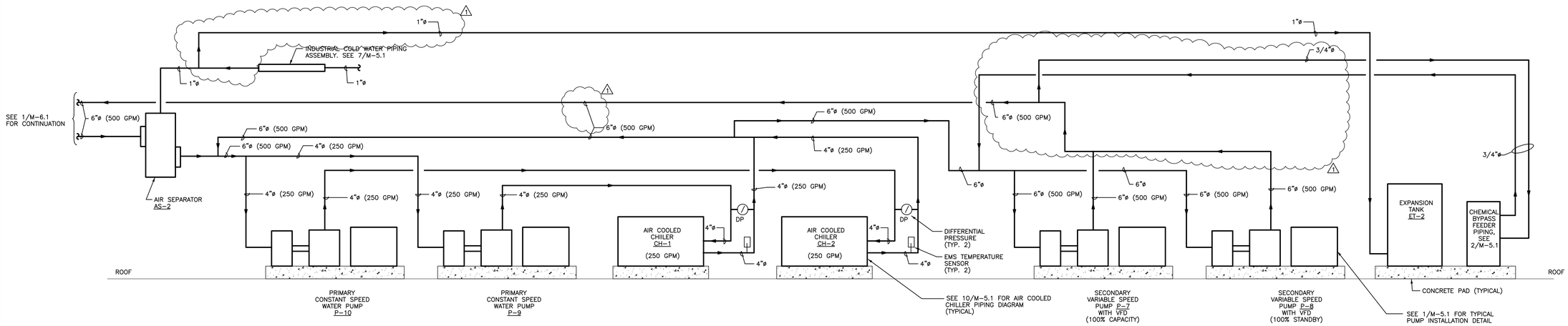
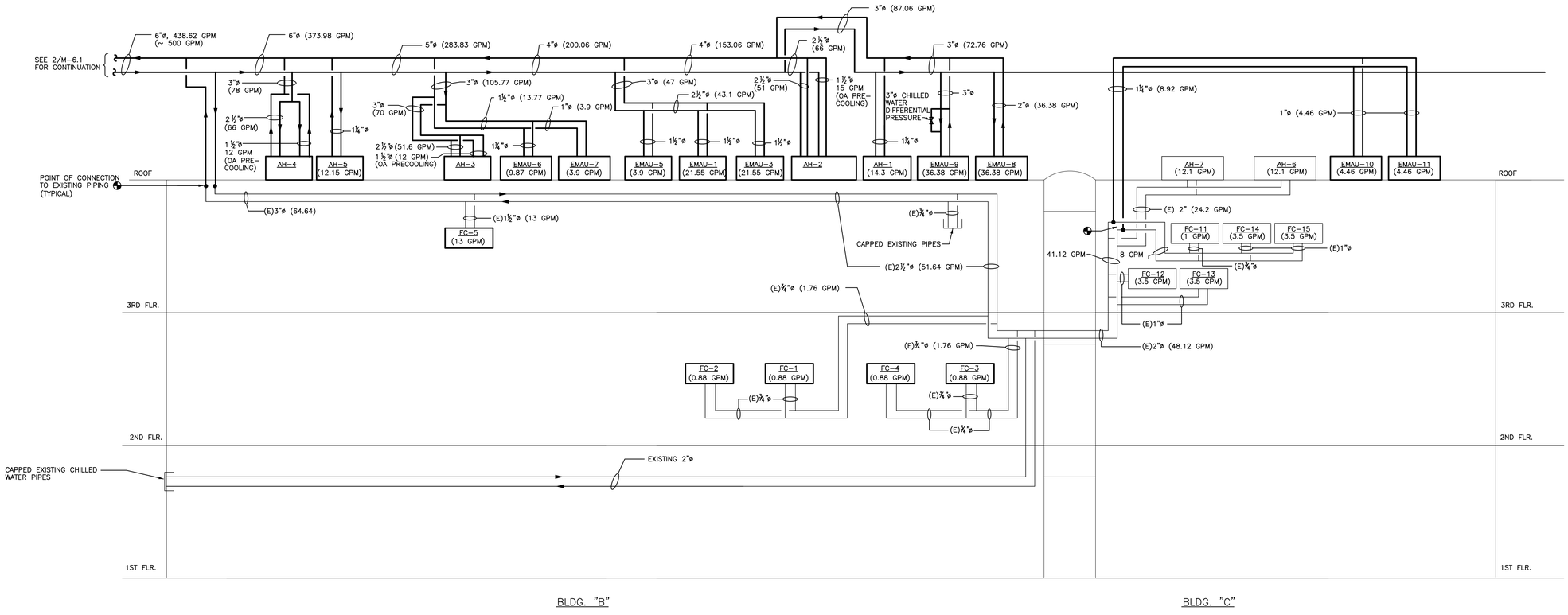


2 N.T.S. **CHILLED WATER REVERSE RETURN WITH VARIABLE SPEED PIPING SCHEMATIC**



1 N.T.S. **BUILDINGS "B" & "C" CHILLED WATER PIPING DIAGRAM**

NOTES:

1. EQUIPMENT AND PIPING SHOWN IN LIGHT LINES IS EXISTING.
2. EQUIPMENT AND PIPING SHOWN IN HEAVY LINES IS NEW.

AS REVISED

J & S CONSULTING ENGINEERS, INC.
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FIRE PROTECTION
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www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SEAN ANN ARMSTRONG C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER STEVEN L. LIA No. M25042 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE
4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

CHILLED WATER PIPING DIAGRAMS

SHEET **M-6.1**

DWG # 53 OF 82

05-12-17 DSA SUBMITTAL

Job No. 45461-FILE: K:\45461-Vcm-ncon\M6-1.dwg, Layout1, Mar 7ms, 2017 4:44pm
Plot Dow: 05-08-20, 10:55am; Plot scale: 1=1.25"; By: SLI Pmv: pen: 05-07-20, 1:25pm

Automated Logic room / emperature sensors

Supply Fan
DX Cooling Coil
Duct Temperature Sensor
ZS-ALC
ZSPL-ALC
ZSP-ALC
ZSP-F-ALC
RSBase
RSPlus
RSPro
Exhaust Fan
Electric Heating Coil
Averaging Duct Temperature Sensor
Outside Air Temperature Sensor
Outside Air Humidity Sensor
Combo OA Temp&Humidity
Return Fan
Gas Heating
Duct Humidity Sensor
Fan w/ Inlet Vane Control
Hot Water Heating Coil
Immersion Temperature Sensor w/ Well
Pump
Chilled Water Cooling Coil
Pressure Sensor
Room Temperature Sensor
Steam Heating Coil
Filter
Room Humidity Sensor
3 - Way Valve
Air Flow Station
FreezeStat
2 - Way Valve
Butterfly Valve
Smoke Detector
Flow Sensor
Dampers

Cable wire tags

Wire Tag #'s:
Number's ending with:
#001 to #XXX= Inputs (DI or AI
#501 to #XXX= Digital Outputs (DO)
#001 to #XXX= Analog Outputs (AO)
X = Expander # (if applicable)

Installing controls electrician shall tag (label) all point wires based on the number shown inside its flag.

Division of Responsibilities

(M) = by Mechanical Contractor

(E) = by Division 26 Electrical Contractor (formerly Div. 16)

(T) = by Telecom Contractor

(CV) = Provided by Controls Contractor, Installed by Electrical Contractor.

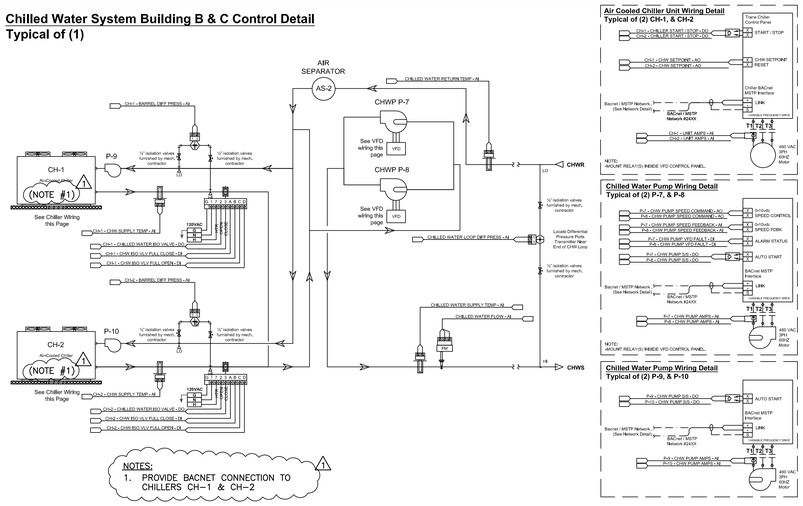
(MC) = Provided by Mechanical Contractor, Installed by Controls Contractor.

SYMBOLS AND ABBREVIATIONS

ACC	Air Cooled Condenser	ELEC	Electrical	N/A	Not Applicable
AFMS	Air Flow Measuring Station	EWT	Entering Water Temperature	NC	Normally Closed
AHU	Air Handling Unit	EXH	Exhaust	NO	Normally Open
AI	Analog Input	F	Fahrenheit	OA	Outside Air
AO	Analog Output	FC	Fan Coil	OAD	Outside Air Damper
AUTO	Automatic	FD	Fire Damper	OAH	Outside Air Humidity
AUX	Auxiliary	FLR	Floor	OAT	Outside Air Temperature
BLR	Boiler	FSD	Fire & Life Safety	PENT	Penthouse
BMS	Building Automation System	FPM	Feet Per Minute	PRESS	Pressure
BOIL	Boiler	FRZ	Freezestat	RF	Return/Exhaust Roof Ventilator
BTUH	British Thermal Unit/Hour	FSD	Fire/Smoke Damper	PSI	Pounds/Sq. In.
C	Common	FTR	Fin Tube Radiation	PSIG	Pounds/Sq. In. Gauge
CAD	Combustion Air Damper	GPM	Gallons Per Minute	RA	Return Air
CFM	Cubic Feet/Minute	GRV	Gravity Relief Vent	RAD	Return/Air Damper
CHLR	Chiller	HC	Heating Coil	RAT	Return Air Temperature
CHWC	Chilled Water Coil	HEXR	Heat Exchanger	REF	Refrigeration
CHWR	Chilled Water Return	HOA	Hand/Off/Auto	REG	Regulator
CHWS	Chilled Water Supply	HP	Heat Pump	RH	Relative Humidity
CHWP	Chilled Water Pump	HRU	Heat Recovery Unit	RAH	Return Air Humidity
CLG	Cooling	HTG	Heating	RTU	Roof Top Unit
COMP	Compressor	HUM	Humidity	SA	Supply Air
COND	Condenser or Condensate	HUMP	Humidifier	SCHED	Schedule
CP	Circ. Pump	HWP	Heating Water Pump	SD	Smoke Damper
CS	Current Switch	HWR	Hot Water Return	SF	Supply Fan
CUH	Cabinet Unit Heater	HWS	Hot Water Supply	SPC	Space Temperature
CWR	Condenser Water Return	KW/H	Kilowatt/Hour	SSP	Space Static Pressure
CWS	Condenser Water Supply	LL	Low Limit	SHT	Sheet
D/N	Day/Night	LPS	Low Pressure Steam	STM	Steam
DAT	Discharge Air Temperature	LTG	Lighting	SUCT	Suction
DB	Dry Bulb	LWT	Leaving Water Temperature	SUP	Supply
DHW	Domestic Hot Water	MAT	Mixed Air Temperature	SYS	System
DI	Digital Input	MAX	Maximum	T/STAT	Thermostat
DMP	Damper	MBH	Thousands BTU's/Hour	TEMP	Temperature
DO	Digital Output	MCC	Motor Control Center	TYP	Typical
DPS	Diff. Pressure Switch	MECH	Mechanical	UH	Unit Heater
DPT	Diff. Pressure Transmitter	MEZZ	Mezzanine	UV	Unit Ventilator
DSP	Duct Static Pressure	MIN	Minimum	VAV	Variable Air Volume
DX	Direct Expansion Cooling	MISC	Miscellaneous	VFD	Variable Freq. Drive
EA	Exhaust Air	MS	Motor Starter	VVT	Variable Volume Terminal
EAD	Exhaust Air Damper	MTR	Motor	WSHP	Water Source Heat Pump
EF	Exhaust Fan	MUA	Make Up Air (Unit)		

1 CONTROLS SYMBOL LEGEND
N.T.S.

Chilled Water System Building B & C Control Detail
Typical of (1)

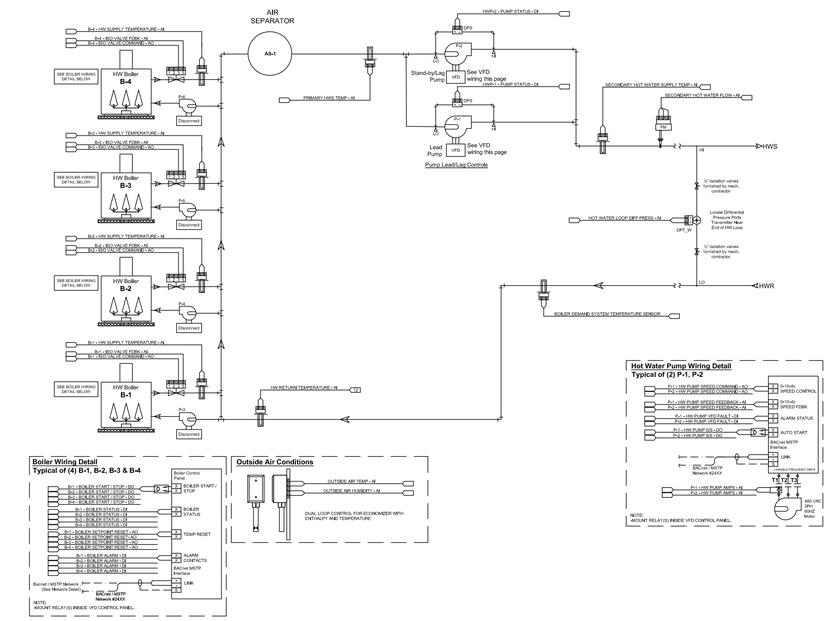


Air Cooled Chiller Unit Wiring Detail
Typical of (2) CH-1, & CH-2

Chilled Water Pump Wiring Detail
Typical of (2) P-7, & P-8

Chilled Water Pump Wiring Detail
Typical of (2) P-9, & P-10

4 Chilled Water System Building B & C Control Detail
N.T.S.



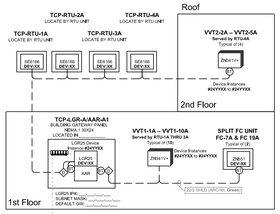
Hot Water Pump Wiring Detail
Typical of (2) P-1, P-2

Boiler Wiring Detail
Typical of (4) B-1, B-2, B-3 & B-4

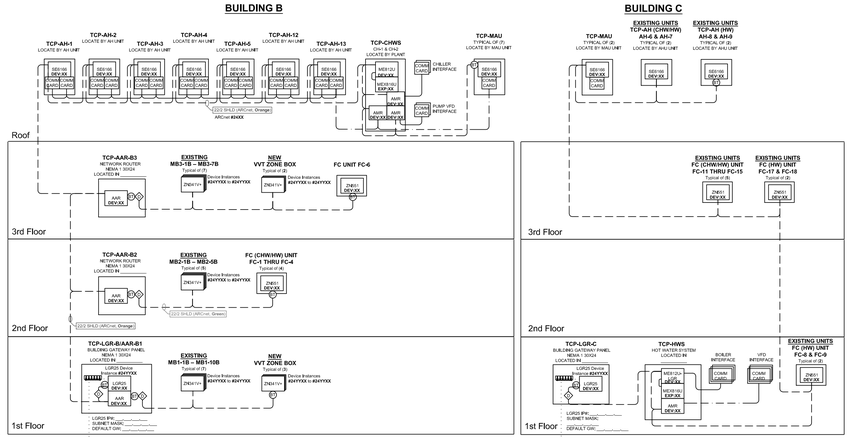
Outside Air Conditions

5 Hot Water System Building C Control Detail
N.T.S.

BUILDING A



BUILDING B

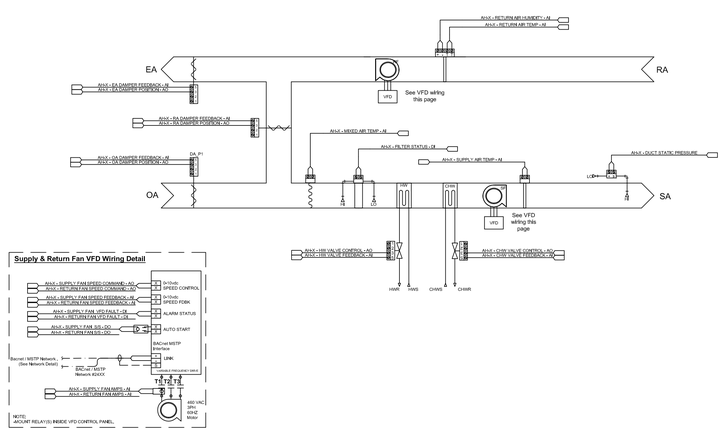


BUILDING C

EAT to ETHERNET — ETHERNET ~~CUSTOMERS WIDE AREA~~ NETWORK — EAT to ETHERNET

2 NETWORK ARCHITECTURE
N.T.S.

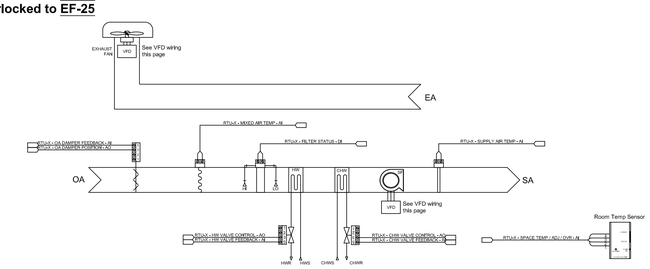
Air Handler Unit Control – Building B



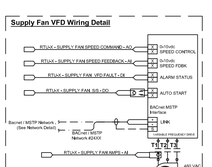
Supply & Return Fan VFD Wiring Detail

3 Constant Volume Air Handler Unit Control Building "B" (Typical to AH-1, & AH-5)
N.T.S.

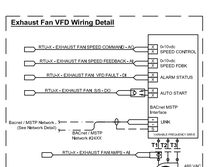
RTU-1B & RTU-2B – 100% OA
RTU-1B is interlocked to EF-26
RTU-2B is interlocked to EF-25



Supply Fan VFD Wiring Detail



Exhaust Fan VFD Wiring Detail



6 RTU-1B/EF-26 & RTU-2B/EF-25 Control Detail
N.T.S.

AS REVISED

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3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E–Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT — BENJAMIN A. MORRIS — C-22205 — APRIL 30, 2021 RENEWAL DATE — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — FELIX L. PUA — No. M25842 — 09-30-20 — MECHANICAL — STATE OF CALIFORNIA

VENTURA COLLEGE
4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

MECHANICAL CONTROL DETAILS AND DIAGRAMS

SHEET

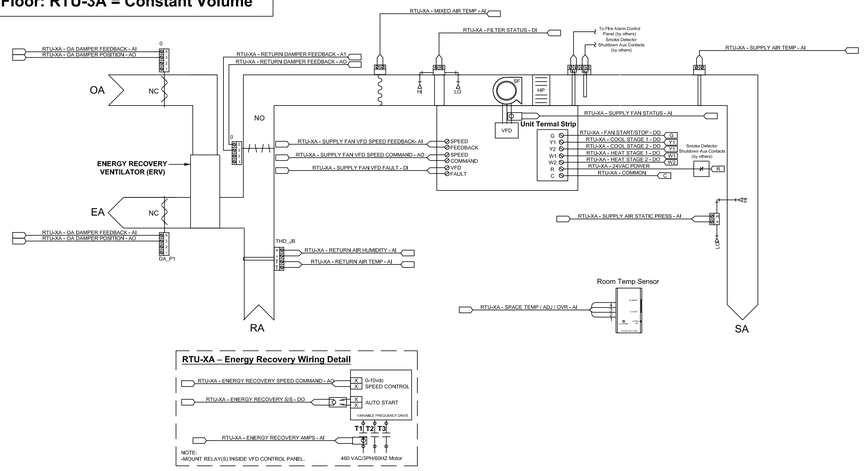
M-7.1

DWG # 55 OF 82

Plot Date: 05-08-20, 10:53am; Plot scale: 1=1"; Plotted By: S.L. Prev. plot: 05-10-20, 12:24pm
05-12-17 DSA SUBMITTAL

Rooftop HP Unit Control
Typical of (3) RTU-1A, RTU-2A & RTU-3A

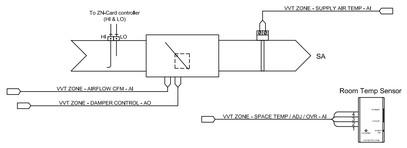
1st Floor: RTU-1A = New (5) VVT Zones
1st Floor: RTU-2A = Constant Volume
1st Floor: RTU-3A = Constant Volume



RTU-XA – Energy Recovery Wiring Detail

1 N.T.S. **ROOFTOP HP UNIT CONTROLRTU-1A, RTU2A, RTU-3A WITH ENERGY RECOVERY VENTILATOR**

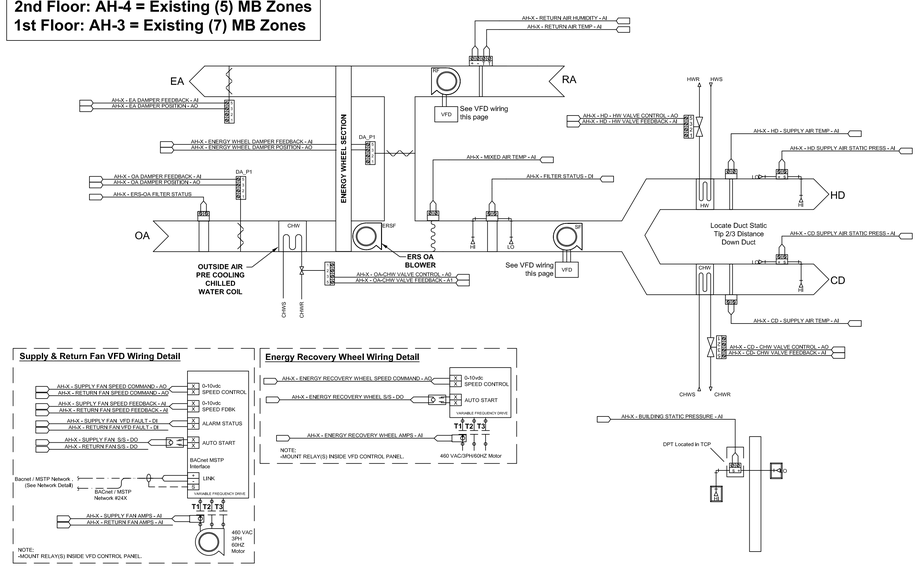
VVT Zone Box



2 N.T.S. **VVT ZONE BOX DETAIL**

Double Duct Zone Air Handler Unit Control – Building B
Typical of (3) AH-2, 3, & -4

3rd Floor: AH-2 = Existing (7) MB Zones
2nd Floor: AH-4 = Existing (5) MB Zones
1st Floor: AH-3 = Existing (7) MB Zones

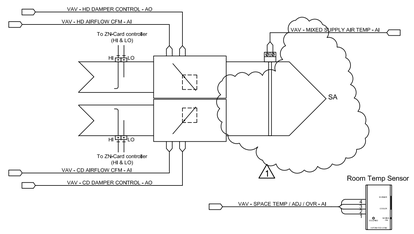


Supply & Return Fan VFD Wiring Detail

Energy Recovery Wheel Wiring Detail

3 N.T.S. **DOUBLE DUCT ZONE AIR HANDLER UNIT CONTROL BUILDING "B" AH-2, 3 & 4**

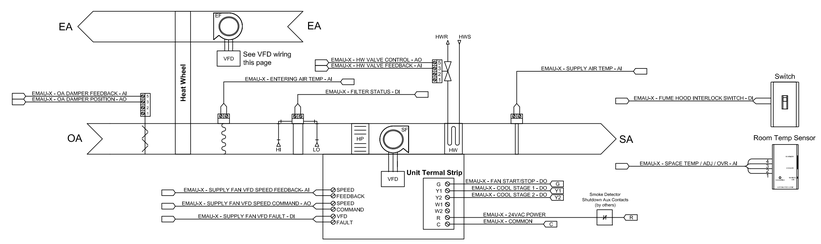
Dual Duct VAV Box



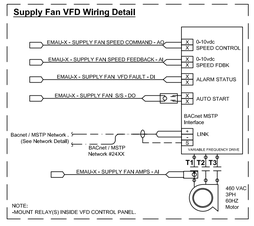
4 N.T.S. **DUAL DUCT VAV BOX**

Make Up Air Unit Control – Building B
EMAU-1, -3, -5, -6, -7, -8, -9

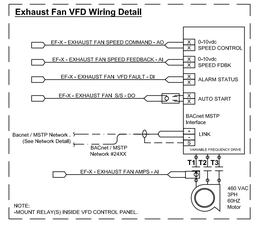
Make Up Air Unit Control – Building C
EMAU-10, -11



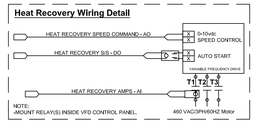
Supply Fan VFD Wiring Detail



Exhaust Fan VFD Wiring Detail



Heat Recovery Wiring Detail



AS REVISED

5 N.T.S. **MAKE-UP AIR UNIT CONTROL- BLDG. "B" - EMAU-1, 3, 5, 6, 7, 8 & 9**
MAKE-UP AIR UNIT CONTROL- BLDG. "C" - EMAU-10 & 11

J & S CONSULTING ENGINEERS, INC.
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3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT — SUSAN ANN ANDERSON — C-22205 — APRIL 30, 2021 RENEWAL DATE — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — FELIX L. FORTIA — No. M25042 — Exp. 09-30-21 — MECHANICAL — STATE OF CALIFORNIA

VENTURA COLLEGE
4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

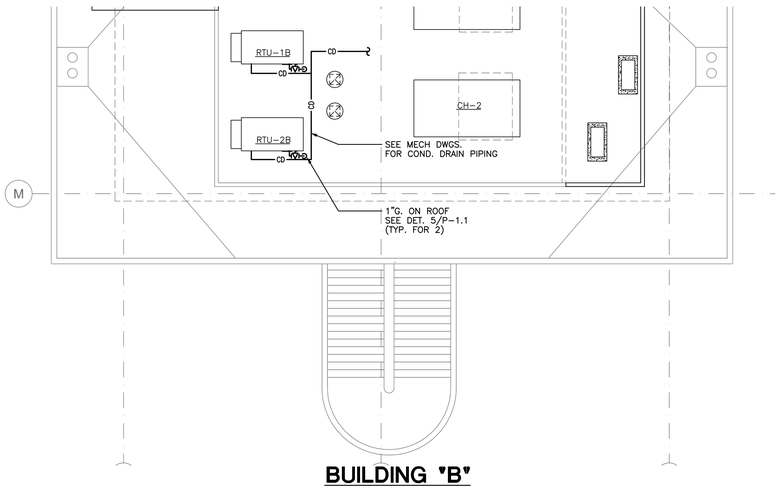
NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	
REVISIONS			

DRAWN BY: S.L.
CHECKED BY: F.T.
DATE 05.12.17
JOB NO: 45461
SHEET TITLE

MECHANICAL CONTROL DETAILS AND DIAGRAMS

SHEET
M-7.2
DWG # 56 OF 82

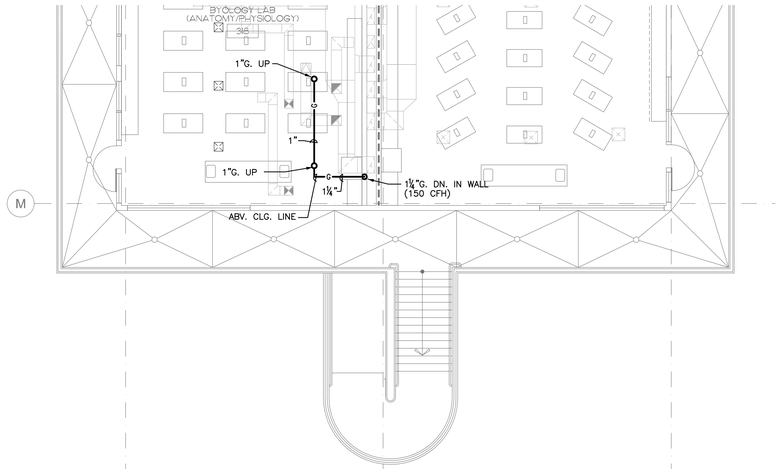
Job No. 45461 - FILE: N:\45461-Ventura\Cad\M7-2.dwg Layout1 Ref. Files: N:\45461-Ventura\Cad\Common\Various College – Ansite.dwg SHEET.dwg
Plot Date: 05-08-20, 10:56am Plot scale: 1=1.249 'By: S.L. Pwp: plot: 05-07-20, 12:24pm
05-12-17 DSA SUBMITTAL



BUILDING "B"

4 PARTIAL ROOF PLAN

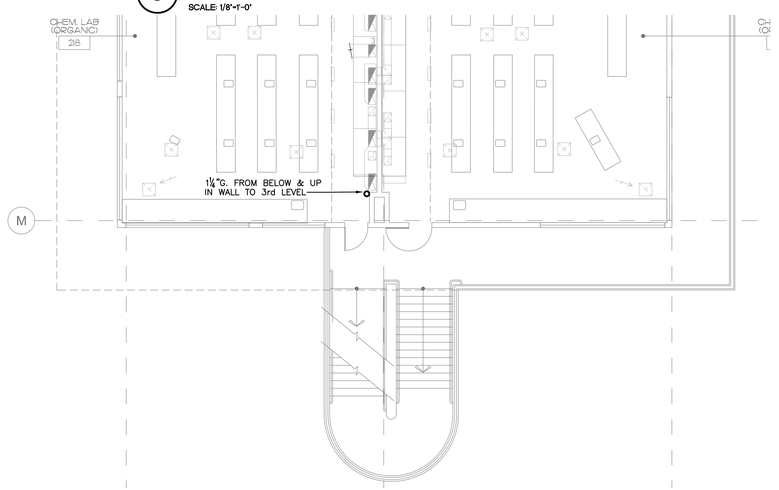
SCALE: 1/8"=1'-0"



BUILDING "B"

3 PARTIAL THIRD FLOOR PLAN

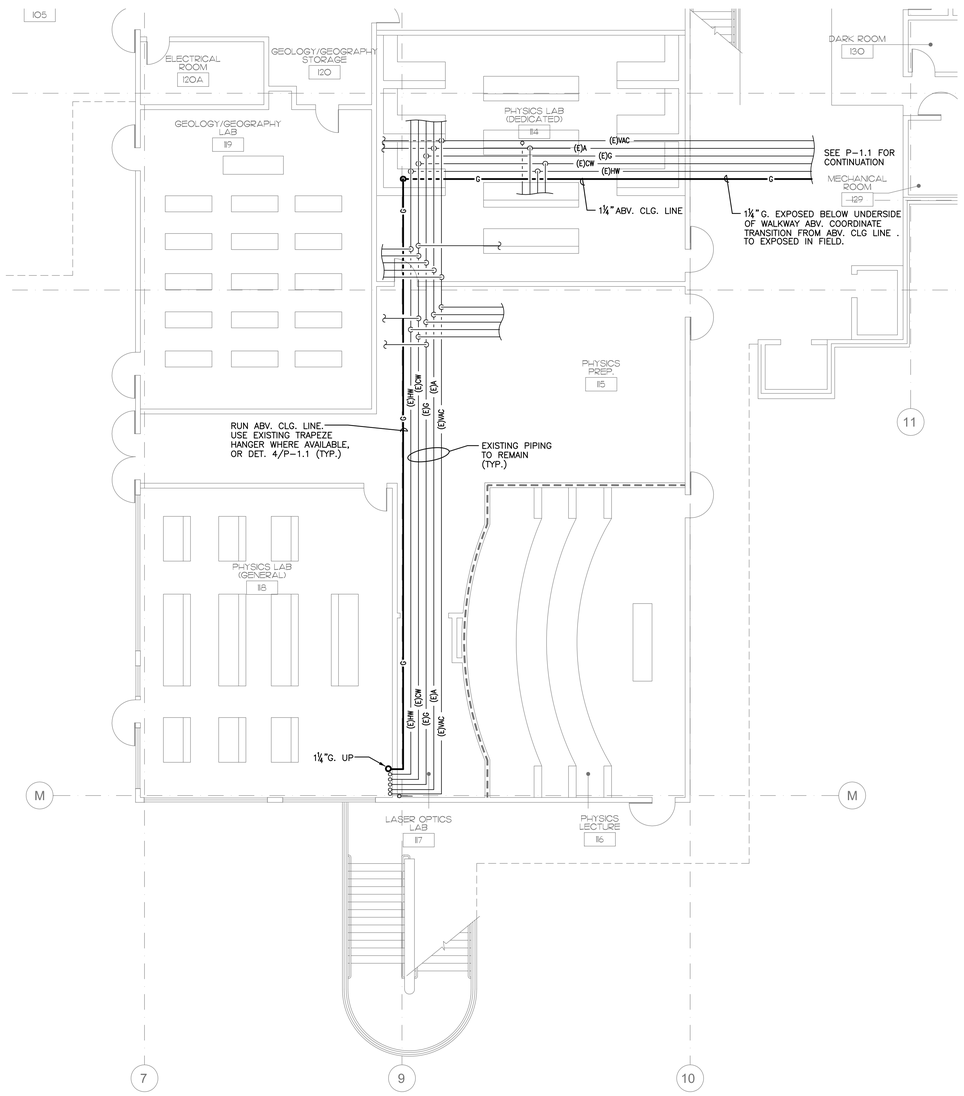
SCALE: 1/8"=1'-0"



BUILDING "B"

2 PARTIAL SECOND FLOOR PLAN

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



BUILDING "B"

1 PARTIAL FIRST FLOOR PLAN

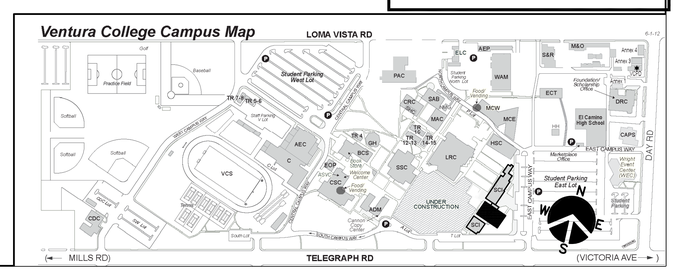
SCALE: 1/8"=1'-0"

ADDED GRID LINES. △1

AS REVISED

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

0 5 10 15 30



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www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SEAN ANN LOCKHART C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER SEAN L. LOCKHART No. M25842 09-30-21 MECHANICAL STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	F.T.
	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY:	S.L.
CHECKED BY:	F.T.
DATE	05.12.17
JOB NO:	45461

SHEET TITLE

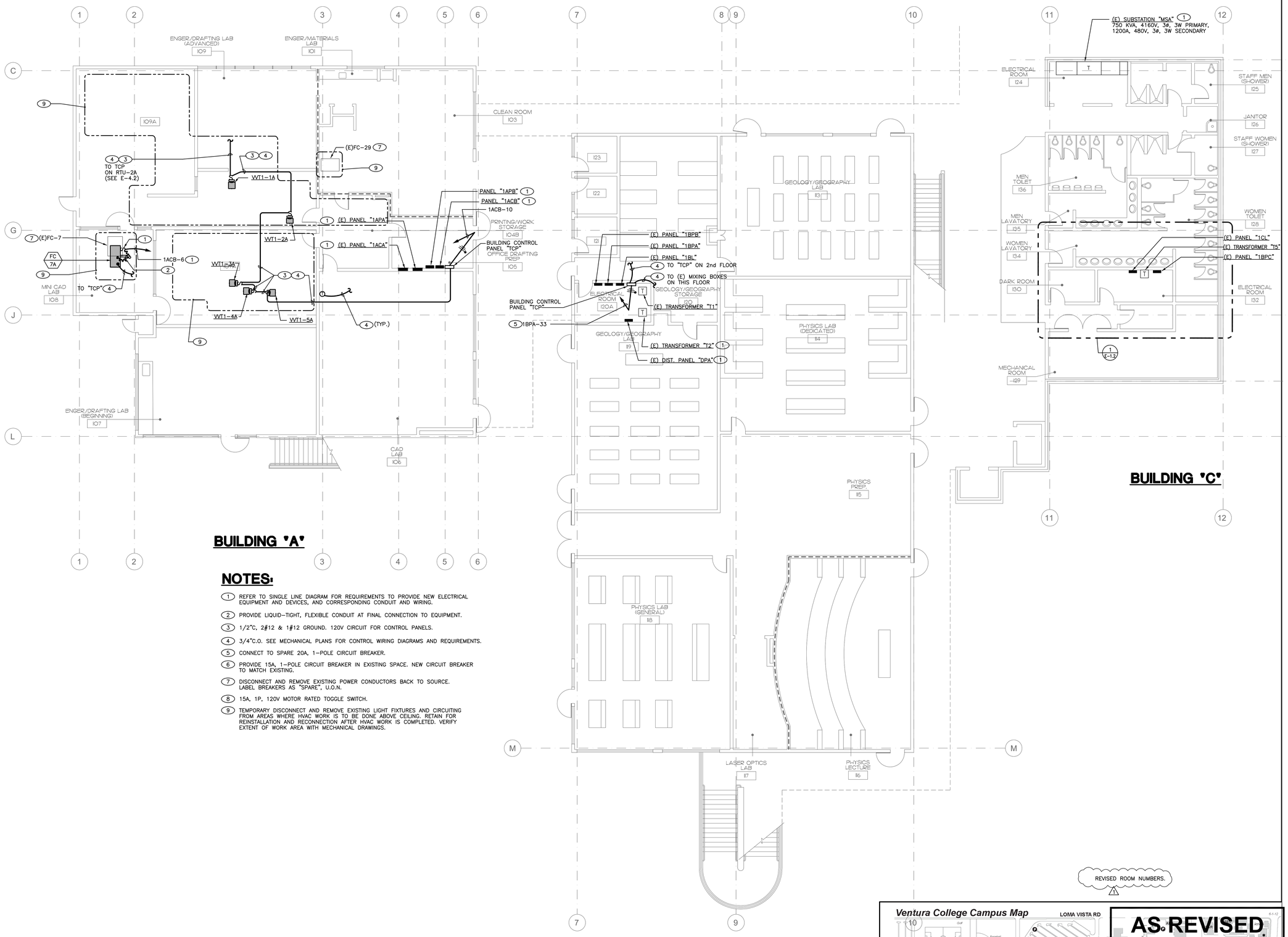
PLUMBING PLANS

SHEET

P-2.1

DWG # 71 OF 82

Job No. 45461 FILE N:\45461-VenturaCol\P2-1.dwg Layout: Bar Plot: ARCH-ED.ctb, K-ZP1B.dwg, M2-1.dwg, M2-2.dwg, K-roof.dwg, N:\45461-VenturaCol\X-3518.dwg, M2-1.dwg, M2-2.dwg, K-roof.dwg, N:\45461-VenturaCol\Work\VPPE SHOOT.dwg, GRAPHICS.dwg, M4-1.dwg, M4-2.dwg, K-Grid.dwg, K-1118.dwg, Sheet.dwg
Plot Date: 05-08-20, 10:56am Plot scale: 1=1 By: S.L. Prev. plot: 05-30-20, 10:33am
05-12-17 DSA SUBMITTAL



NOTES:

1. REFER TO SINGLE LINE DIAGRAM FOR REQUIREMENTS TO PROVIDE NEW ELECTRICAL EQUIPMENT AND DEVICES, AND CORRESPONDING CONDUIT AND WIRING.
2. PROVIDE LIQUID-TIGHT, FLEXIBLE CONDUIT AT FINAL CONNECTION TO EQUIPMENT.
3. 1/2"C, 2#12 & 1#12 GROUND. 120V CIRCUIT FOR CONTROL PANELS.
4. 3/4"C.O. SEE MECHANICAL PLANS FOR CONTROL WIRING DIAGRAMS AND REQUIREMENTS.
5. CONNECT TO SPARE 20A, 1-POLE CIRCUIT BREAKER.
6. PROVIDE 15A, 1-POLE CIRCUIT BREAKER IN EXISTING SPACE. NEW CIRCUIT BREAKER TO MATCH EXISTING.
7. DISCONNECT AND REMOVE EXISTING POWER CONDUCTORS BACK TO SOURCE. LABEL BREAKERS AS "SPARE", U.O.N.
8. 15A, 1P, 120V MOTOR RATED TOGGLE SWITCH.
9. TEMPORARY DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES AND CIRCUITING FROM AREAS WHERE HVAC WORK IS TO BE DONE ABOVE CEILING. RETAIN FOR REINSTALLATION AND RECONNECTION AFTER HVAC WORK IS COMPLETED. VERIFY EXTENT OF WORK AREA WITH MECHANICAL DRAWINGS.

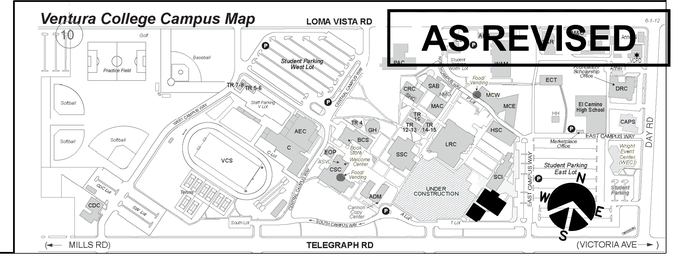
FIRST FLOOR ELECTRICAL PLAN

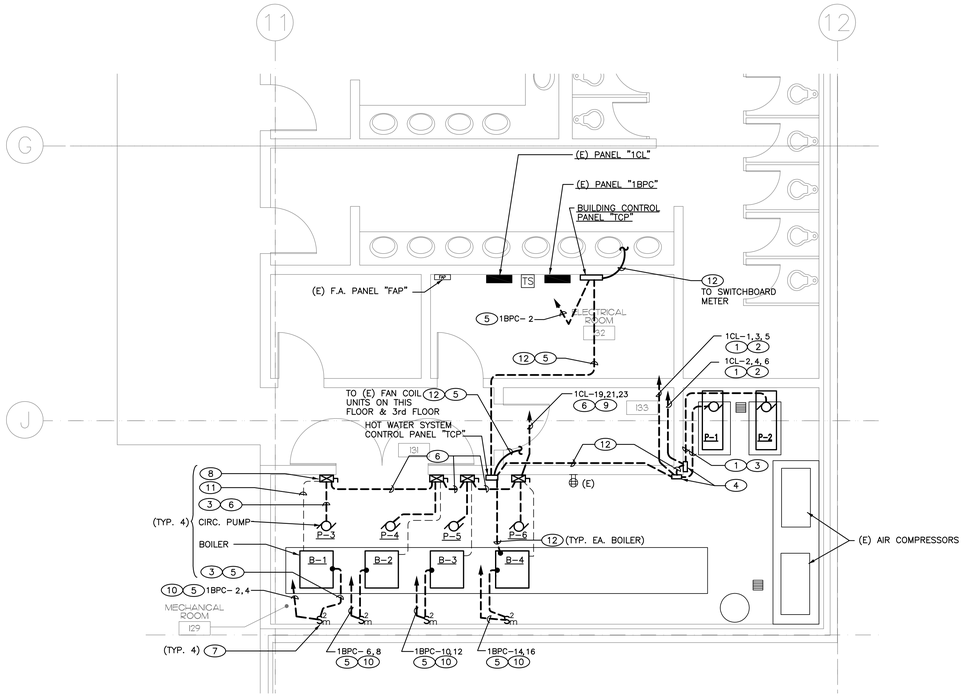
SCALE: 1/8" = 1'-0"

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

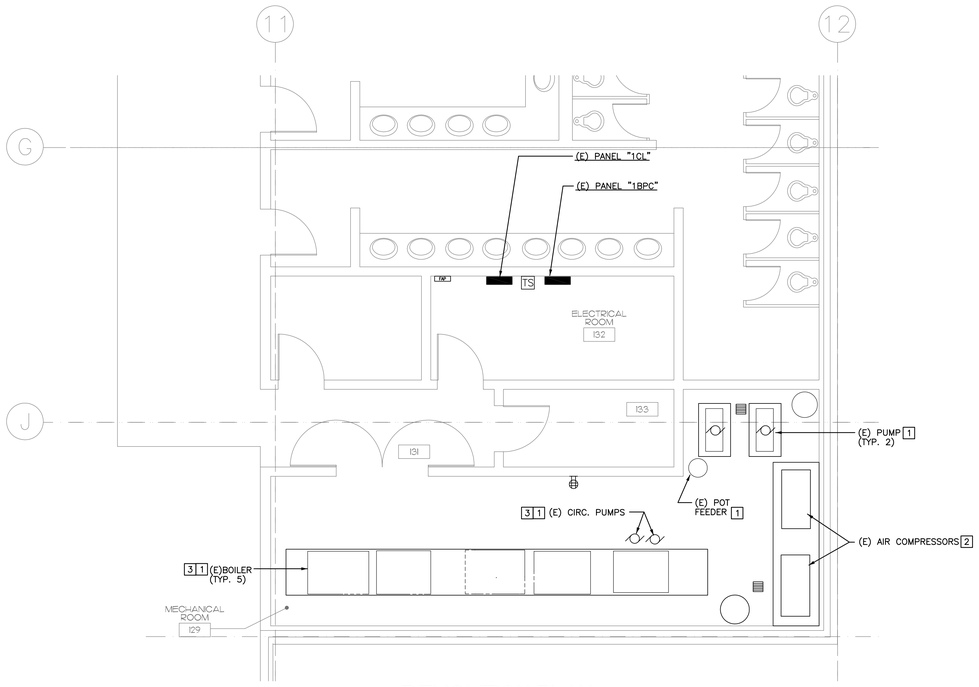
0 5 10 15 30

REVISED ROOM NUMBERS. 1


Ventura College Campus Map
LOMA VISTA RD
Student Parking West Lot
Practice Field
Baseball
Softball
Softball
Softball
Staff Parking Lot
Faculty Parking Lot
Faculty Parking Lot
Faculty



ELECTRICAL PLAN



DEMOLITION PLAN

NOTES:

1. 3/4"C, 3#8 & 1#10 GND.
2. REPLACE EXISTING 20A,3P CIRCUIT BREAKER IN PANEL WITH 60A,3P BREAKER.
3. PROVIDE LIQUID-TIGHT FLEX CONDUIT FOR FINAL CONNECTION TO EQUIPMENT.
4. WALL MOUNTED VFD.
5. 1/2"C, 2#12 & 1#12 GND.
6. 1/2"C, 3#12 & 1#12 GND.
7. 20A, 2-POLE, 250VAC, MOTOR RATED, W.P. TOGGLE SWITCH AT +48"A.F.F.
8. COMBINATION MOTOR STARTER/FUSED DISCONNECT SWITCH, 30A, 3-POLE, 480VAC, 6A FUSES, SIZE 00 STARTER. VERIFY CONTROL COIL VOLTAGE WITH BOILER SPECS.
9. PROVIDE 15A, 3P, 480VAC CIRCUIT BREAKER IN EXISTING PANEL SPACE.
10. PROVIDE 20A, 2P, 250VAC CIRCUIT BREAKER IN EXISTING PANEL SPACE.
11. 1/2"C.O. FOR CONTROL WIRING. FIELD VERIFY WIRING REQUIREMENTS WITH BOILER SPECS.
12. 3/4"C.O. SEE MECHANICAL PLANS FOR CONTROL WIRING DIAGRAMS AND REQUIREMENTS.

DEMOLITION NOTES:

1. DISCONNECT AND REMOVE EXISTING CONDUCTORS BACK TO SOURCE. DISCONNECT AND REMOVE EXISTING EXPOSED RACEWAYS.
2. TO REMAIN.
3. LABEL CIRCUIT BREAKERS AT PANEL AS "SPARE".

1 BUILDING "C" MECHANICAL ROOM 128

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

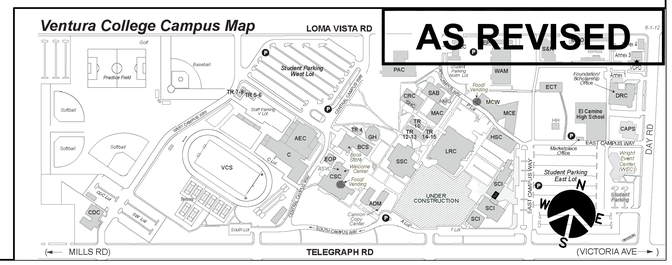
GRAPHIC SCALE: 1/4" = 1'- 0"

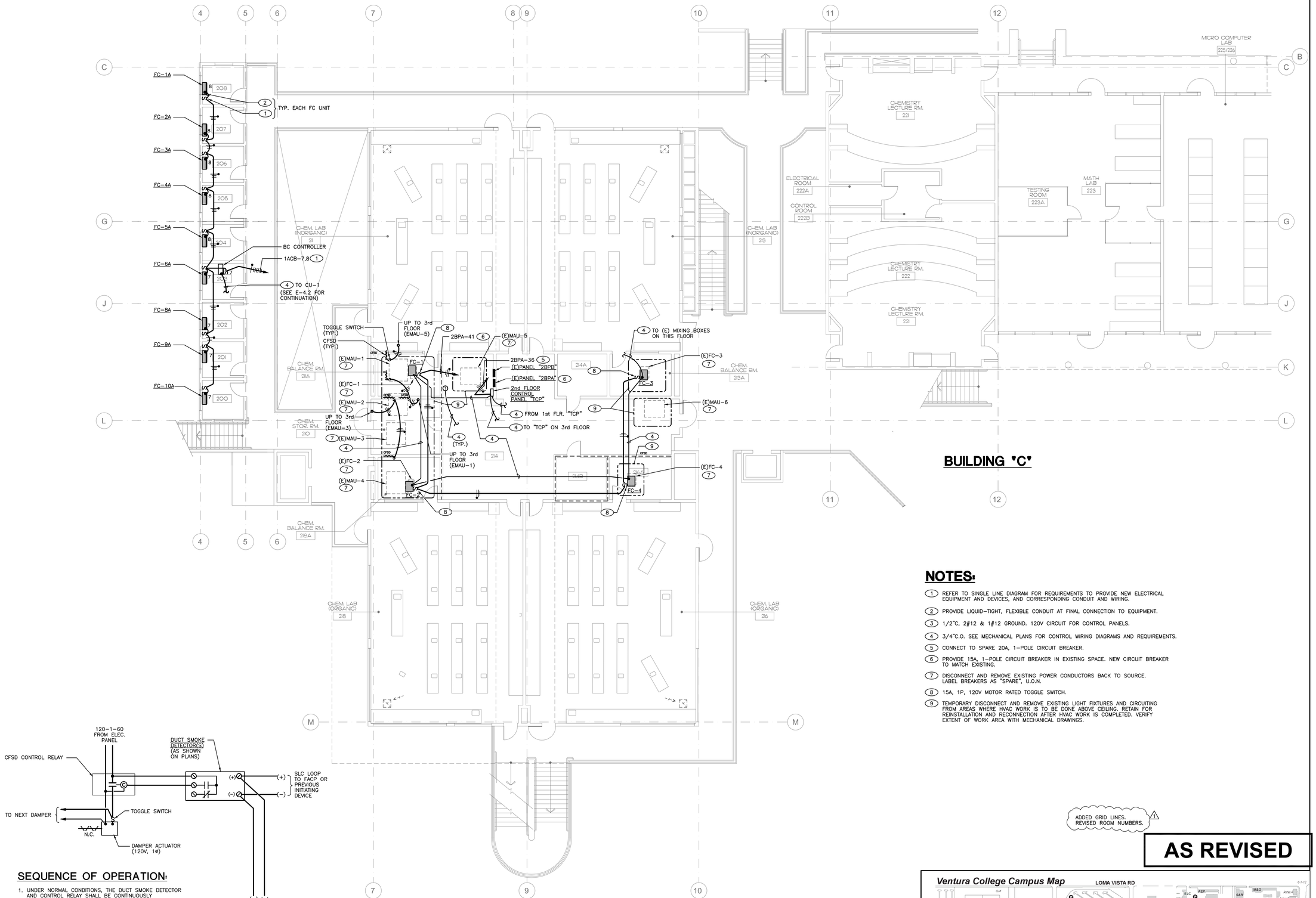
0 2 4 6 12

ADDED GRID LINES 1

AS REVISED

Ventura College Campus Map


LOMA VISTA RD
Student Parking West Lot
Baseball
Softball
Practice Field
Softball
Softball
VCS
Soccer
Track
Football
Soccer
Track
Field Events
Staff Lot
Staff Lot
Golf
Golf Training Facility
Golf Training Facility
PAC
WAM
Foundation/ Advancement Office
Annex 1
Annex 2
Roof Training Room
DRC
CRC
SAB
MAC
MCW
MCE
ECT
El Camino High School
CAPS
HSC
LRC
SSC
BCS
Book Store
EOP
AEC
GH
C
Marketplace Office
EAST CAMPUS WAY
DAY RD
Student Parking East Lot
Wright Learning Center (WEC)
Art and Design Building
Student Parking
Parking Lot
Parking Lot
Parking Lot

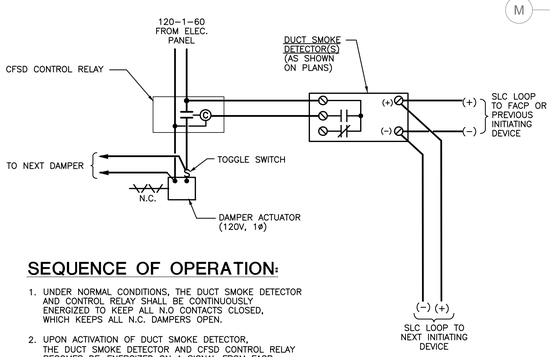


NOTES:

1. REFER TO SINGLE LINE DIAGRAM FOR REQUIREMENTS TO PROVIDE NEW ELECTRICAL EQUIPMENT AND DEVICES, AND CORRESPONDING CONDUIT AND WIRING.
2. PROVIDE LIQUID-TIGHT, FLEXIBLE CONDUIT AT FINAL CONNECTION TO EQUIPMENT.
3. 1/2"C, 2#12 & 1#12 GROUND. 120V CIRCUIT FOR CONTROL PANELS.
4. 3/4"C.O. SEE MECHANICAL PLANS FOR CONTROL WIRING DIAGRAMS AND REQUIREMENTS.
5. CONNECT TO SPARE 20A, 1-POLE CIRCUIT BREAKER.
6. PROVIDE 15A, 1-POLE CIRCUIT BREAKER IN EXISTING SPACE. NEW CIRCUIT BREAKER TO MATCH EXISTING.
7. DISCONNECT AND REMOVE EXISTING POWER CONDUCTORS BACK TO SOURCE. LABEL BREAKERS AS "SPARE", U.O.N.
8. 15A, 1P, 120V MOTOR RATED TOGGLE SWITCH.
9. TEMPORARY DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES AND CIRCUITING FROM AREAS WHERE HVAC WORK IS TO BE DONE ABOVE CEILING. RETAIN FOR REINSTALLATION AND RECONNECTION AFTER HVAC WORK IS COMPLETED. VERIFY EXTENT OF WORK AREA WITH MECHANICAL DRAWINGS.

ADDED GRID LINES. REVISED ROOM NUMBERS. (1)

AS REVISED



SEQUENCE OF OPERATION:

1. UNDER NORMAL CONDITIONS, THE DUCT SMOKE DETECTOR AND CONTROL RELAY SHALL BE CONTINUOUSLY ENERGIZED TO KEEP ALL N.O CONTACTS CLOSED, WHICH KEEPS ALL N.C. DAMPERS OPEN.
2. UPON ACTIVATION OF DUCT SMOKE DETECTOR, THE DUCT SMOKE DETECTOR AND CFSD CONTROL RELAY BECOMES DE-ENERGIZED ON A SIGNAL FROM FACP, WHICH SHUTS POWER TO ALL DAMPER ACTUATORS AND ALL DAMPERS CLOSE IMMEDIATELY.

TYPICAL COMBINATION FIRE/SMOKE DAMPER WIRING DIAGRAM

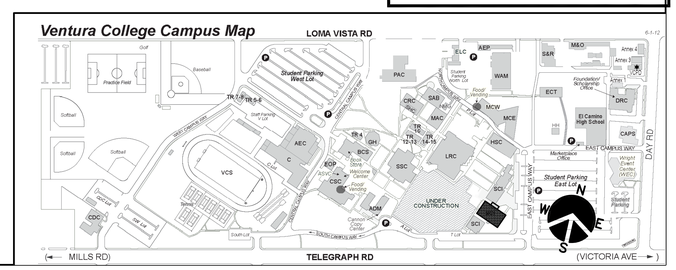
(2) N.T.S.

SECOND FLOOR ELECTRICAL PLAN

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

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

0 5 10 15 30



J & S CONSULTING ENGINEERS, INC.
ELECTRICAL ▫ MECHANICAL
FIRE PROTECTION
3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
PROJECT No. 45461

LICENSED ARCHITECT SEAN ANN ALEXANDER C-22205 APRIL 30, 2021 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JOHN SHINN No. E11075 EXPIRES 06-30-21 ELECTRICAL STATE OF CALIFORNIA

VENTURA COLLEGE

4667 TELEGRAPH ROAD, VENTURA, CALIFORNIA, 93003
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
MATH & SCIENCE COMPLEX

NO.	DATE	DESCRIPTION	BY
1	05.08.20	ADDENDUM #1	N.J.
	12.19.16	DSA SUBMITTAL	
	REVISIONS		

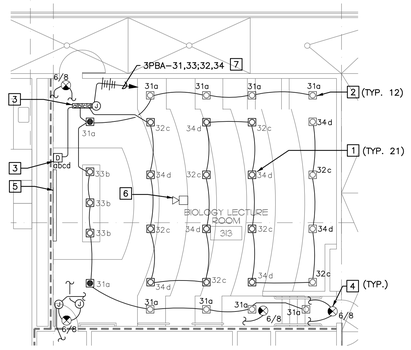
DRAWN BY: S.L.
CHECKED BY: N.J.
DATE 05.12.17
JOB NO: 45461
SHEET TITLE

SECOND FLOOR ELECTRICAL PLAN

SHEET **E-2.1**

DWG # 75 OF 82

Job No. 45461 | File: N:\45461-VenturaCol\E2-1.dwg Layout: Ref. Files: #REL-LEC.dwg, CONTROLS.dwg, X-ITLR.dwg, M1-3.dwg, X-2ELR.dwg, M2-1.dwg, CONNECTS.dwg, X-DSS.dwg, N:\45461-VenturaCol\M2-2.dwg, Sheet.dwg
Plot Date: 05-08-20, 10:48am; Plot scale: 1=1.0"; By: SL; Rev. plot: 05-07-20, 12:32pm
05-12-17 DSA SUBMITTAL



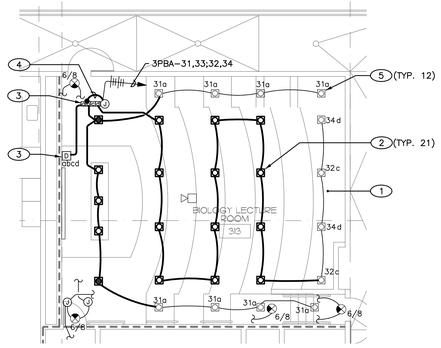
DEMOLITION NOTES:

1. DISCONNECT AND REMOVE EXISTING RECESS LED FIXTURES AND WIRING OVER CENTER OF ROOM. RETAIN FOR RELOCATION.
2. EXISTING LIGHTING FIXTURES & WIRING ON CEILING AREAS AT SIDES AND REAR OF ROOM TO REMAIN.
3. EXISTING DIMMER PACKS AND DIMMER CONTROLS TO REMAIN.
4. EXISTING EXIT SIGN TO REMAIN.
5. EXISTING MOTORIZED SCREEN AND WIRING TO REMAIN (PROTECT IN PLACE).
6. EXISTING OVERHEAD PROJECTOR TO REMAIN (PROTECT IN PLACE).

   RETAIN EXISTING HOMERUN FOR RELOCATION.

2 ROOM 301 LIGHTING DEMOLITION PLAN

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

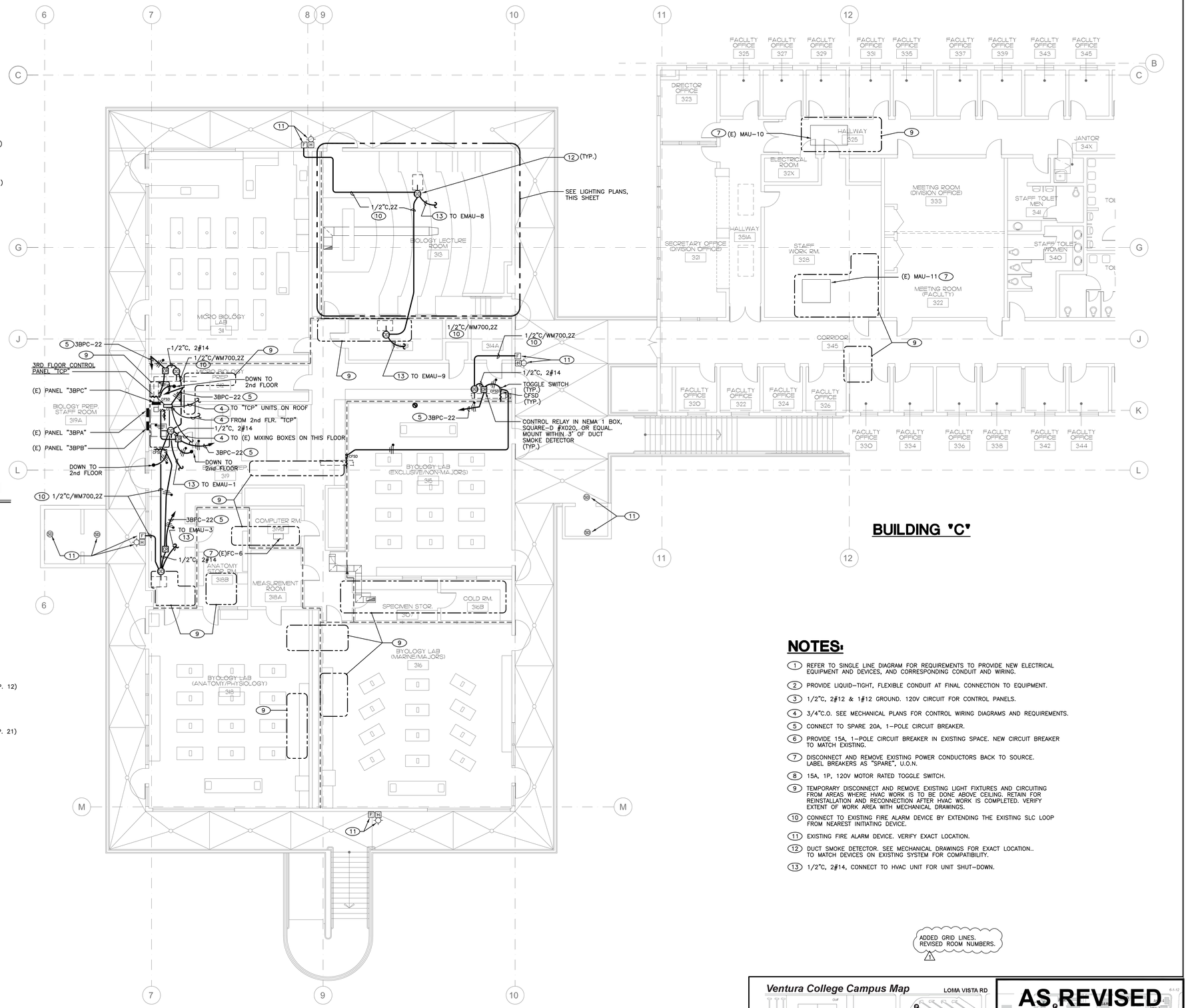


NOTES:

1. EXISTING DEVICE AND WIRING SHOWN IN LIGHT, THIN LINES. NEW WORK IS SHOWN IN DARK, HEAVY LINES.
2. REINSTALL EXISTING LED RECESSED FIXTURE, PROVIDE CONDUIT AND WIRING.
3. EXISTING DIMMERS AND CONTROLS.
4. RECONNECT TO EXISTING DIMMERS.
5. EXISTING LED RECESSED FIXTURE.

3 ROOM 301 LIGHTING PLAN

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



1 THIRD FLOOR ELECTRICAL PLAN

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

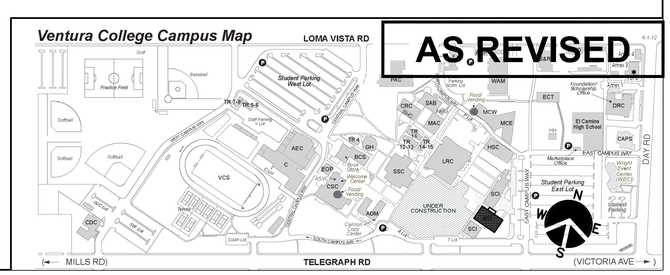
GRAPHIC SCALE: 1/8" = 1'- 0"

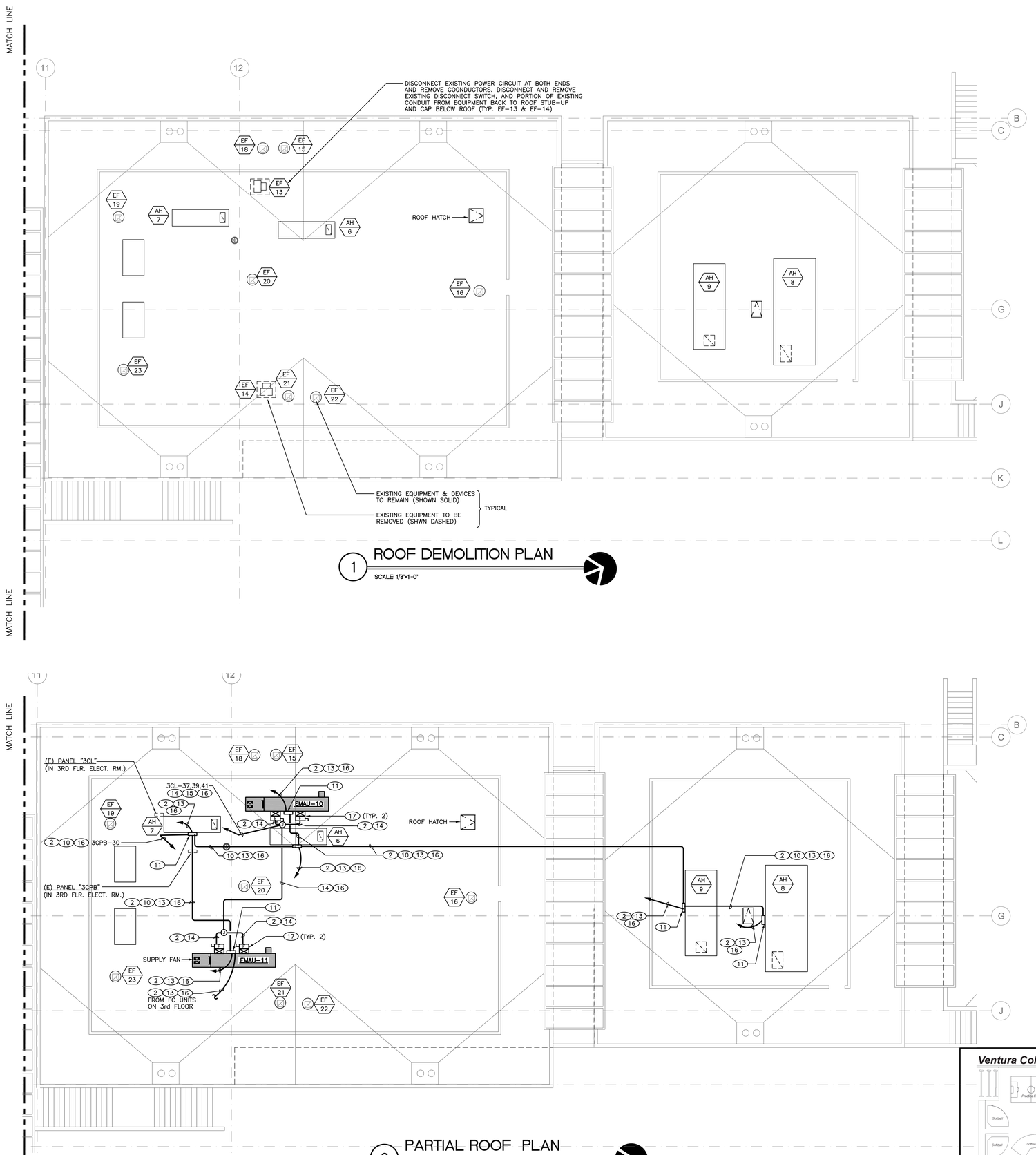
0 5 10 15 30

NOTES:

1. REFER TO SINGLE LINE DIAGRAM FOR REQUIREMENTS TO PROVIDE NEW ELECTRICAL EQUIPMENT AND DEVICES, AND CORRESPONDING CONDUIT AND WIRING.
2. PROVIDE LIQUID-TIGHT, FLEXIBLE CONDUIT AT FINAL CONNECTION TO EQUIPMENT.
3. 1/2"C, 2#12 & 1#12 GROUND. 120V CIRCUIT FOR CONTROL PANELS.
4. 3/4"C.O. SEE MECHANICAL PLANS FOR CONTROL WIRING DIAGRAMS AND REQUIREMENTS.
5. CONNECT TO SPARE 20A, 1-POLE CIRCUIT BREAKER.
6. PROVIDE 15A, 1-POLE CIRCUIT BREAKER IN EXISTING SPACE. NEW CIRCUIT BREAKER TO MATCH EXISTING.
7. DISCONNECT AND REMOVE EXISTING POWER CONDUCTORS BACK TO SOURCE. LABEL BREAKERS AS "SPARE", U.O.N.
8. 15A, 1P, 120V MOTOR RATED TOGGLE SWITCH.
9. TEMPORARY DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES AND CIRCUITING FROM AREAS WHERE HVAC WORK IS TO BE DONE ABOVE CEILING. RETAIN FOR REINSTALLATION AND RECONNECTION AFTER HVAC WORK IS COMPLETED. VERIFY EXTENT OF WORK AREA WITH MECHANICAL DRAWINGS.
10. CONNECT TO EXISTING FIRE ALARM DEVICE BY EXTENDING THE EXISTING SLC LOOP FROM NEAREST INITIATING DEVICE.
11. EXISTING FIRE ALARM DEVICE. VERIFY EXACT LOCATION.
12. DUCT SMOKE DETECTOR. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION.. TO MATCH DEVICES ON EXISTING SYSTEM FOR COMPATIBILITY.
13. 1/2"C, 2#14, CONNECT TO HVAC UNIT FOR UNIT SHUT-DOWN.

ADDED GRID LINES.
REVISED ROOM NUMBERS.
1


Ventura College Campus Map
LOMA VISTA RD
Student Parking West Lot
Softball
Practice Field
Baseball
Soccer
Track
Softball
Softball
VCS
Staff Lot
Staff Lot
Student Parking East Lot
Student Parking East Lot
Student Parking
Student Parking
Student Parking



1 ROOF DEMOLITION PLAN

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

2 PARTIAL ROOF PLAN

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

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

0 5 10 15 30

GENERAL NOTES:

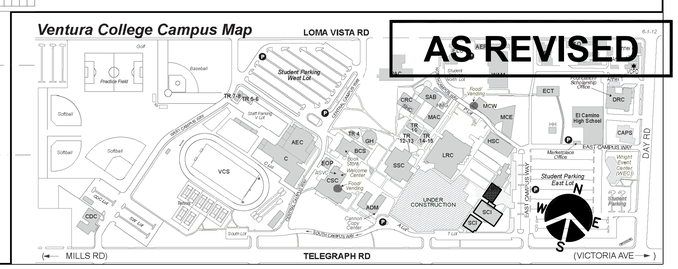
1. ALL DUCTWORK & DIFFUSERS SHOWN ON THE PLAN ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
2. EXISTING DIFFUSERS TO BE CLEANED AND BALANCED TO AIR FLOW SHOWN.
3. ALL EXISTING DUCTWORK SUPPLY AIR, RETURN AIR, AND EXHAUST AIR TO BE REUSED (UNLESS NOTED OTHERWISE) TO BE INTERNALLY CLEANED, CLEANING TO BE PERFORMED PER SPECIFICATION 23 0130.51.
4. SEISMIC BRACING OF ALL NEW PIPING AND DUCTWORK SHALL BE DESIGN-BUILD BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ENGINEERED SHOP DRAWINGS FOR ALL PROPOSED SEISMIC RESTRAINT SYSTEMS.

NOTES:

1. REFER TO SINGLE LINE DIAGRAM FOR REQUIREMENTS TO PROVIDE NEW ELECTRICAL EQUIPMENT AND DEVICES, AND CORRESPONDING CONDUIT AND WIRING.
2. PROVIDE LIQUID-TIGHT, FLEXIBLE CONDUIT AT FINAL CONNECTION TO EQUIPMENT.
3. EXISTING W.P., GFI RECEPTACLES.
4. INTERCEPT EXISTING CONDUIT BELOW CEILING AND EXTEND TO NEW UNIT LOCATION, AS SHOWN.
5. 3/4"C, 3#8 & 1#10 GND.
6. 3/4"C, 2#10 & 1#12 GND.
7. PROVIDE W.P. 60A, 480V, 3-POLE, N.F. DISCONNECT SWITCH & VFD. INSTALL ON UNISTRUT SUPPORT FRAME, AS REQUIRED.
8. EXPAND EXISTING EQUIPMENT PLATFORM AS REQUIRED TO ACCOMMODATE NEW DISTRIBUTION PANEL.
9. PROVIDE 12"x12"x8'L WIRING GUTTER, NEMA 3R. INSTALL WIRING GUTTER ON TOP OF EXISTING CONDUITS STUBBED UP ON ROOF UNDER EXISTING REMOVED "MCCA". INSTALL PANELS "RBH-1" AND "RBH-2" ABOVE WIRING GUTTER AND CONNECT BOTH WITH SHORT VERTICAL 6" NIPPLES (DIAMETER AND NUMBER OF NIPPLES AS REQUIRED).
10. 1/2"C, 2#12 & 1#12 GROUND. 120V CIRCUIT FOR CONTROL PANELS.
11. EMS NETWORK CONTROL PANEL "TCP" AT HVAC UNIT.
12. A/C UNIT CONTROL PANEL PROVIDED WITH FACTORY BUILT-IN FUSED DISCONNECT SWITCH AND VFD, WHERE SHOWN.
13. PROVIDE CONTROL CONDUIT(S) OF THE SIZE AND QUANTITY PER CONTROL WIRING DIAGRAMS AND REQUIREMENTS, SHOWN ON MECHANICAL PLANS.
14. 3/4"C, 3#12 & 1#12 GND.
15. PROVIDE 15A, 480V, 3-POLE CIRCUIT BREAKER IN AVAILABLE PANEL SPACE TO MATCH EXISTING
16. ALL CONDUIT SHALL BE RUN VIA BELOW ROOF, U.O.N.

ADDED GRID LINES. 1

Ventura College Campus Map



AS REVISED

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ELECTRICAL ▫ MECHANICAL
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3111 Winona Ave., #102 Burbank, Ca 91504
Tel.: (818) 841-0303 Fax: (818) 841-8531
470 Helga Ct. Unit A Newbury Park, Ca. 91320
Tel. (818) 398-5793 Fax: (818) 841-8531
www.jandsconsulting.com
E-Mail: jsmail@jandsconsulting.com
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	12.19.16	DSA SUBMITTAL	

REVISIONS

DRAWN BY: S.L.
CHECKED BY: N.J.
DATE 05.12.17
JOB NO: 45461

SHEET TITLE

BUILDING "C" ELECTRICAL ROOF PLANS

SHEET

E-4.3

DWG # 79 OF 82

05-12-17 DSA SUBMITTAL

N:\45461-TCE N:\45461-Ventura\CAD\E4-3.dwg, M-1.0 Ref. Files: N:\45461-Ventura\CAD\Xrefs\VPPE SADDLE.dwg, EXCONDUITS.dwg, M1-2.dwg, M1-1.dwg, X-CAD.dwg, Sheet.dwg, X-roof.dwg
Plot Date: 05-08-20, 10:48am; Plot scale: 1=1'-0"; By: S.L. Prev. plot: 05-07-20, 12:34pm