CALEXICO UNIFIED SCHOOL DISTRICT

CALEXICO HIGH SCHOOL

MODERNIZATION

CULINARY ARTS CLASSROOM MODERNIZATION

DISTRICT OFFICE
901 ANDRADE AVE
CALEXICO, CA 92231
(760) 768-3888

PROJECT LOCATION
1030 ENCINAS AVE
CALEXICO, CA 92231
(760) 768-3980

SHEET INDEX KEY / KEY PLAN

CONSULTANTS

MECHANICAL/PLUMBING
DIVISION 15 CONSULTING SERVICES
TOM F. GREEN
11180 TURQUOISE CIRCLE
DENEY AZ 86327
(928) 772-8448

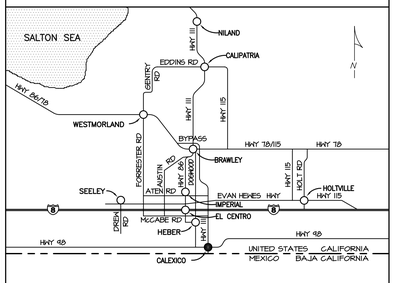
STRUCTURAL
ORIE² ENGINEERING
DONALD ORIE
9750 MIRAMAR ROAD, SUITE 310
SAN DIEGO, CA 92126
(858) 335-1643

ELECTRICAL
KRUSE AND ASSOCIATES
KEITH KRUSE
12245 WORLD TRADE DRIVE
SUITE E
SAN DIEGO, CA 92128
(858) 676-9776

FIRE ALARM
JOHNSON CONTROLS (SIMPLEX)
JOHN ROSUS
3568 RUFFIN ROAD
SAN DIEGO, CA 92123
(619) 909-9103

FOOD SERVICE DESIGN
DIELI MURAWKA HOWE
RICHARD DIELI
10393 SAN DIEGO MISSION RD
SUITE 209
SAN DIEGO, CA 92108
(619) 295-1184

VICINITY MAP



GENERAL NOTES

1. EXAMINATION OF SITE AND CONTRACT DOCUMENTS:

EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT HIMSELF WITH THE CONDITIONS RELATING TO THE CONSTRUCTION AND LABOR SO THAT HE MAY FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS ATTENDING THE EXECUTION OF THE WORK UNDER THE CONTRACT. BIDDERS SHALL THOROUGHLY EXAMINE AND BE FAMILIAR WITH THE DRAWINGS AND PROJECT MANUAL. THE FAILURE OR OMISSION OF ANY BIDDER TO RECEIVE OR EXAMINE ANY CONTRACT, FORM, INSTRUMENT, ADDENDUM, OR OTHER DOCUMENT OR TO VISIT THE SITE AND ACQUAINT HIMSELF WITH CONDITIONS THERE EXISTING SHALL IN NO-WISE RELIEVE ANY BIDDER FROM OBLIGATIONS WITH RESPECT TO HIS BID OR TO THE CONTRACT. THE SUBMISSION OF A BID SHALL BE TAKEN AS PRIMA FACIE EVIDENCE OF COMPLIANCE WITH THIS SECTION. THE ARCHITECT SHALL BE NOTIFIED, PRIOR TO BID, OF ANY UNUSUAL CONDITIONS OR DISCREPANCIES IN THE CONTRACT DOCUMENTS OR INTENT OF WORK TO BE ACCOMPLISHED, WHEREIN;

2. SCOPE OF WORK:

THE CALEXICO HIGH SCHOOL CTE MODERNIZATION PROJECT SHALL INCLUDE ALL WORK SHOWN ON CONTRACT DOCUMENTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. MODERNIZATION OF EXISTING HOME ECONOMICS LAB TO CONVERT TO CAREER TECHNICAL EDUCATION CULINARY ARTS CLASSROOM
2. EXISTING ROOF FRAMING SYSTEM IS MODIFIED TO SUPPORT THE ADDITIONAL ROOF MOUNTED EQUIPMENT LOADS
3. NEW MECHANICAL AND ELECTRICAL TO SUPPORT THE NEW FOOD SERVICE

3. GEOLOGICAL AND SOILS REPORT:

NONE THIS PROJECT

4. CODES AND STANDARDS:

APPLICABLE CODES:

ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

2016 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, CCR
2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, CCR

2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24, CCR
(2014 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, CCR
(2015 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, CCR
(2015 UNIFORM PLUMBING CODE WITH CALIFORNIA 2016 AMENDMENTS)
2016 CALIFORNIA ENERGY CODE, PART 6, TITLE 24, CCR
2016 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, CCR
(2015 INTERNATIONAL FIRE CODE WITH CALIFORNIA 2016 AMENDMENTS)
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, CCR
2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24, CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
2013 ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS

PARTIAL LIST OF APPLICABLE STANDARDS:

NFPA 13	AUTOMATIC SPRINKLER SYSTEM	2016 EDITION
NFPA 14	STANDPIPE SYSTEMS	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17A	WET CHEMICAL SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS FOR FIRE PROTECTION	2016 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	PRIVATE FIRE MAINS & THEIR APPURTENANCES	2016 EDITION
NFPA 25	STANDARD FOR INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 92	STANDARD SMOKE CONTROL SYSTEMS	2015 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
ICC 300	ICC STANDARDS ON BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS	2012 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS	2005 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2016 CBC (SFM) CHAP 35, SEE CHAP 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS

5. INSPECTION:

A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE 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, PART 1, TITLE 24, CCR. THIS PROJECT SHALL REQUIRE:

A. INSPECTOR OF RECORD, CLASS 3

6. CHANGES TO APPROVED DRAWINGS:

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR CONSTRUCTION CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR

7. DEFERRED APPROVALS:

NONE THIS PROJECT

8. CONSTRUCTION FIRE SAFETY:

CONTRACTOR IS RESPONSIBLE FOR FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION AND SHALL COMPLY WITH CFC CHAPTER 33.

GENERAL NOTES

9. BUILDING DATA:

BUILDING 4 - CLASSROOMS

OCCUPANCY . . . . . E
CONSTRUCTION TYPE . . . . . TYPE V-B
FIRE SPRINKLER SYSTEM . . . . . NONE
NUMBER OF STORIES 1
CONSTRUCTION AREA
BUILDING AREA . . . . . 4,960 SQ FT
ALLOWABLE AREA . . . . . 9,500 SQ FT (TABLE 506.2)
AREA INCREASE . . . . . NONE

4,960 ≤ 9,500 = OK

ADDITIONAL NOTES

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, CCR, 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, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AN APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

SHEET INDEX

SHEET INDEX

PROJECT BIDDING

BASE BID

BASE BID SHALL INCLUDE ALL WORK SHOWN ON CONTRACT DOCUMENTS FOR THE CULINARY ARTS LAB AND CLASSROOM AND THE MODERNIZATION OF THE STANDARD TEACHING CLASSROOM 1. THE WORKS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:

1. REMOVE EXISTING IMPROVEMENTS AS REQUIRED TO COMPLETE THE WORK
2. PROVIDE NEW ARCHITECTURAL FINISHES
3. PROVIDE NEW PLUMBING AS REQUIRED TO SUPPORT NEW FOOD SERVICE EQUIPMENT
4. PROVIDE NEW MECHANICAL SYSTEMS AS REQUIRED TO SUPPORT NEW FOOD SERVICE EQUIPMENT
5. PROVIDE NEW ELECTRICAL SYSTEMS AS REQUIRED TO SUPPORT NEW FOOD SERVICE EQUIPMENT
6. PROVIDE ALL NEW FOOD SERVICE EQUIPMENT ITEMS EXCEPT FOR ITEM SPECIFICALLY EXCLUDED FROM BASE BID

PROJECT SCOPE

THE SCOPE OF WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:

1. REMOVE EXISTING IMPROVEMENTS AS REQUIRED TO COMPLETE THE WORK
2. PROVIDE NEW ARCHITECTURAL FINISHES
3. PROVIDE NEW PLUMBING AS REQUIRED TO SUPPORT NEW FOOD SERVICE EQUIPMENT
4. PROVIDE NEW MECHANICAL SYSTEMS AS REQUIRED TO SUPPORT NEW FOOD SERVICE EQUIPMENT
5. PROVIDE NEW ELECTRICAL SYSTEMS AS REQUIRED TO SUPPORT NEW FOOD SERVICE EQUIPMENT
6. PROVIDE ALL NEW FOOD SERVICE EQUIPMENT ITEMS EXCEPT FOR ITEM SPECIFICALLY EXCLUDED FROM BASE BID

APPROVALS

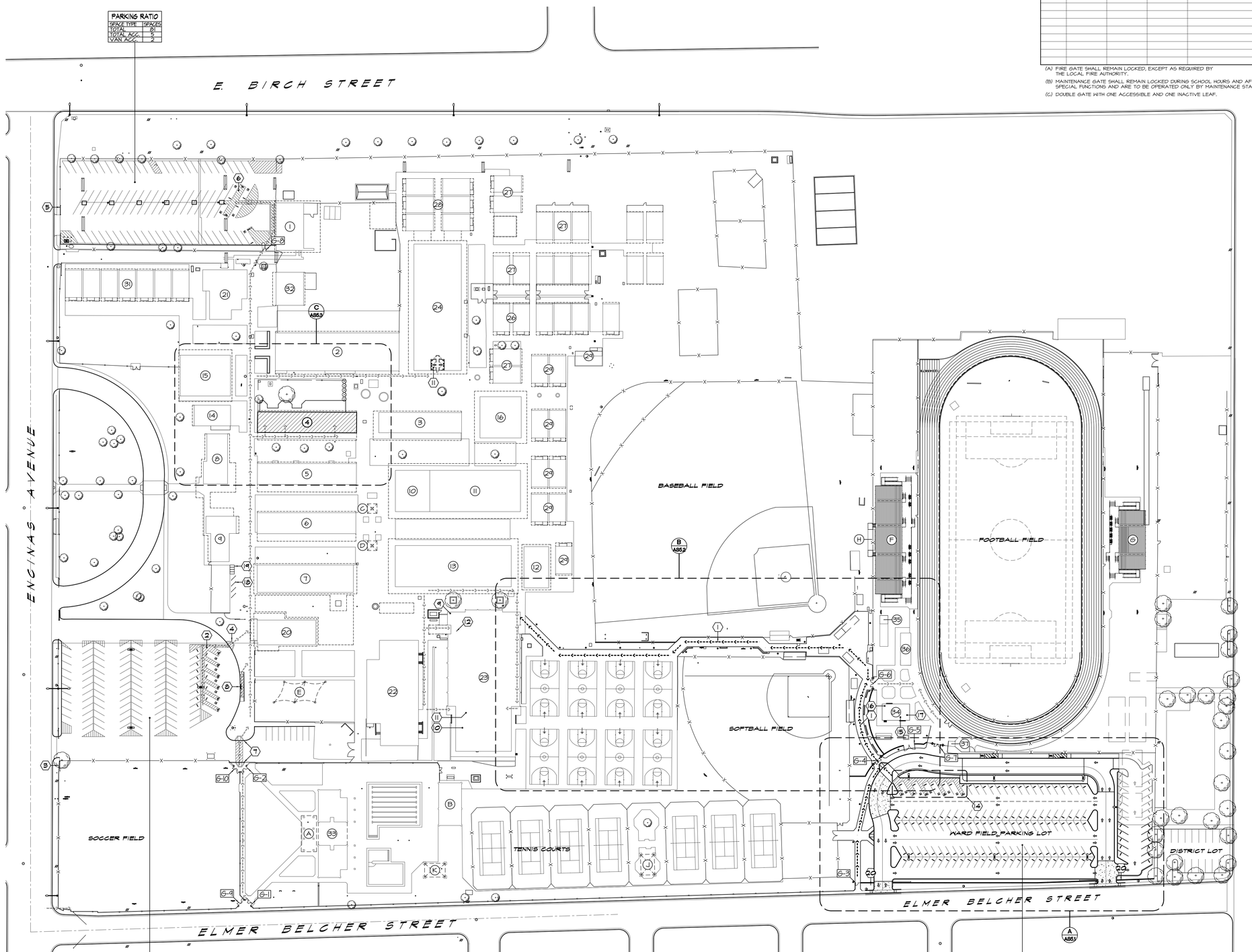
Sanders, INC.
Architecture/Engineering
1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
TITLE SHEET - GENERAL NOTES, SHEET INDEX

LICENSED ARCHITECT JIMMIE L. SANDERS 17647 RENEWAL 08-31-19 STATE OF CALIFORNIA

Document Date: 09-23-18	Project Number: 18-250X
Date Last Revised:	Sheet Number: T



GATE SCHEDULE:

NUMBER	GATE SIZE	GATE MATERIAL	DETAIL	REMARKS
G1	PR 4'-0" x 6'-8"	STEEL	DSA# 04-113256	ACCESSIBLE PEDESTRIAN GATE w/ PH
G2	PR 4'-0" x 6'-8"	STEEL	DSA# 04-113256	ACCESSIBLE PEDESTRIAN GATE w/ PH
G3	PR 4'-0" x 8'-0"	STEEL	15/AS5X1,	ACCESSIBLE PEDESTRIAN GATE (C)
G4	8'-0" x 8'-0"	STEEL	13/AS5X1,	ACCESSIBLE PEDESTRIAN DOUBLE GATE (C)
G5	8'-0" x 8'-0"	STEEL	N/A	MAINTENANCE DOUBLE GATE (B)
G6	8'-0" x 8'-0"	STEEL	11/AS5X1,	ACCESSIBLE PEDESTRIAN DOUBLE GATE (C)
G7	8'-0" x 8'-0"	STEEL	14/AS5X1,	ACCESSIBLE PEDESTRIAN DOUBLE GATE (C)
G8	PR 4'-0" x 6'-8"	STEEL	XX/AS5X1,	ACCESSIBLE PEDESTRIAN GATE w/ PH
G9	PR 4'-0" x 6'-8"	STEEL	DSA# 04-113256	ACCESSIBLE PEDESTRIAN GATE w/ PH
G10	PR 4'-0" x 6'-8"	STEEL	DSA# 04-113256	ACCESSIBLE PEDESTRIAN GATE w/ PH

(A) FIRE GATE SHALL REMAIN LOCKED, EXCEPT AS REQUIRED BY THE LOCAL FIRE AUTHORITY.

(B) MAINTENANCE GATE SHALL REMAIN LOCKED DURING SCHOOL HOURS AND AFTER HOURS SPECIAL FUNCTIONS AND ARE TO BE OPERATED ONLY BY MAINTENANCE STAFF.

(C) DOUBLE GATE WITH ONE ACCESSIBLE AND ONE INACTIVE LEAF.

BUILDING IDENTIFICATION:

NUMBER	DESCRIPTION	CONST TYPE	OCCUPANCY GROUP	FIRE SPRINKLERS	DSA APPL NO	CLOSED DSA COMPLIANT
1	AUTOMOTIVE SHOP	V-B	E	NO	A-28428, 04-108687, 04-111421	YES;YES;YES
2	VOCATIONAL ARTS	V-B	E	NO	A-10004, A-28428, A-50204, 04-111421	YES/YES/YES/YES
3	CLASSROOMS	V-B	E	NO	A-14632, A-50204, 04-111421	UK;YES;YES
4	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES/YES/YES
5	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES;YES;YES
6	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES;YES;YES
7	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES;YES;YES
8	ADMIN / COUSELING / OFFICES	V-B	B	NO	A-10004, A-50204, 04-111421	YES;YES;YES
9	COUSELING CENTER	V-B	B	NO	A-10004, A-50204, A-23385	YES;YES;UK
10	LIBRARY / CAREER CENTER / CLASSROOMS	V-B	E	NO	A-23385, 04-108687, 04-111421	UK;YES;YES
11	LIBRARY / CAREER CENTER / CLASSROOMS	V-B	E	NO	A-23385, 04-108687, 04-111421	UK;YES;YES
12	SPECIAL EDUCATION CLASSROOMS	V-B	E	NO	A-51425	UK
13	CLASSROOMS	V-B	E	NO	A-23385, 04-108687, 04-111421	UK;YES;YES
14	MODULAR STAFF WORK ROOM / LOUNGE	V-B	E	NO	UNKNOWN	UK
15	CLASSROOMS	V-B	E	NO	A-40481, 04-108687, 04-111421	UK;YES;YES
16	CLASSROOMS	V-B	E	NO	A-28428, 04-108687, 04-111421	YES;YES;YES
17	NOT USED	-	-	-	N/A	N/A
18	NOT USED	-	-	-	N/A	N/A
19	NOT USED	-	-	-	N/A	N/A
20	CAFETERIA	V-B	A-2	NO	A-10004, A-50204, 04-111421	YES;YES;YES
21	MUSIC CLASSROOM	V-B	E	NO	A-14632, 04-108687	UK;YES
22	GYMNASIUM	I-B	A-3	NO	A-10004, A-50204, 04-111421	YES;YES;YES
23	VARNER GYMNASIUM	I-B	A-3, A-4, E	NO	A-23365, A-28428, 04-115141	UK;YES, YES
24	SCIENCE CLASSROOM	V-B	E	NO	A-62735, 04-107492	UK;YES
25	NOT USED	-	-	-	N/A	N/A
26	MODULAR CLASSROOMS	V-B	E	NO	04-107683	YES
27	MODULAR CLASSROOMS	V-B	E	NO	04-107683	YES
28	MODULAR CLASSROOMS	V-B	E	NO	UNKNOWN	UK
29	MODULAR CLASSROOMS / RESTROOMS	V-B	E	NO	04-107683	YES
30	NOT USED	-	-	-	N/A	N/A
31	MODULAR CLASSROOMS	V-B	E	NO	UNKNOWN	UK
32	MODULAR CLASSROOMS	V-B	E	NO	UNKNOWN	UK
33	POOL SHOWER AND LOCKER	V-A	E	YES	04-113256	YES
34	MODULAR RESTROOMS	V-B	E	NO	04-115622	YES
35	STORAGE	V-B	E	NO	UNKNOWN	UK
36	CONCESSION STAND	V-B	E	NO	UNKNOWN	UK
37	TICKET BOOTH	V-B	E	NO	UNKNOWN	UK
A	SHADE STRUCTURE	V-A	E	YES	04-113256	YES
B	POOL EQUIPMENT	II-A	E	YES	04-113256	YES
C	SHADE STRUCTURE	V-B	A-3	NO	04-114823	YES
D	SHADE STRUCTURE	V-B	A-3	NO	04-114823	YES
E	SHADE STRUCTURE	V-B	A-3	NO	04-114823	YES
F	GRANDSTAND	V-B	A-5	NO	04-115622	YES
G	GRANDSTAND	V-B	A-5	NO	04-115622	YES
H	PRESS BOX	V-B	A-5	NO	04-115622	YES
J	SHADE STRUCTURE	V-B	A-3	NO	04-116871	YES
K	SHADE STRUCTURE	V-B	A-3	NO	04-116871	YES

KEYNOTES:

1. DESIGN PROFFESIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT. THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE P.O.T. HAS EXAMINED ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NONCOMPLIANT 1.) HAVE BEEN IDENTIFIED AND 2.) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF P.O.T. ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE ORDER.
2. EXISTING ACCESSIBLE PARKING - DSA# 04-113256
3. EXISTING TOW-AWAY SIGN - DSA# 04-113256
4. ACCESSIBLE CURB RAMP - DSA# 04-113256
5. EXISTING TOW-AWAY SIGN - DSA# 04-113256
6. EXISTING ACCESSIBLE PARKING - DSA# 04-115141
7. EXISTING ACCESSIBLE CURB RAMP - DSA# 04-113256
8. EXISTING ACCESSIBLE LOADING ZONE - DSA# 04-113256
9. EXISTING BOY'S/GIRL'S TOILET - DSA# 04-115141
10. EXISTING BOY'S TOILET - DSA# 04-115141
11. EXISTING MEN'S AND WOMEN'S STAFF TOILET - DSA# 04-115141
12. EXISTING ACCESSIBLE DRINKING FOUNTAIN - DSA# 04-115141
13. NOT USED
14. PROPOSED ACCESSIBLE PARKING (12 / AS1)
15. EXISTING BOY'S/GIRL'S TOILET - DSA# 04-115622
16. EXISTING WOMEN'S STAFF TOILET - DSA# 04-115622
17. EXISTING MEN'S STAFF TOILET - DSA# 04-115622
18. EXISTING STUDENT BIKE RACKS - DSA# 04-115622
19. EXISTING STAFF BIKE LOCKERS - DSA# 04-115622
20. EXISTING TOW-AWAY SIGN - DSA# 04-115622

LEGEND:

- EXISTING ACCESSIBLE PATH OF TRAVEL - DSA# 04-115622
- PROPOSED ACCESSIBLE PATH OF TRAVEL
- G13 GATE NUMBER - SEE GATE SCHEDULE

APPROVALS

Sanders, INC.
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1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

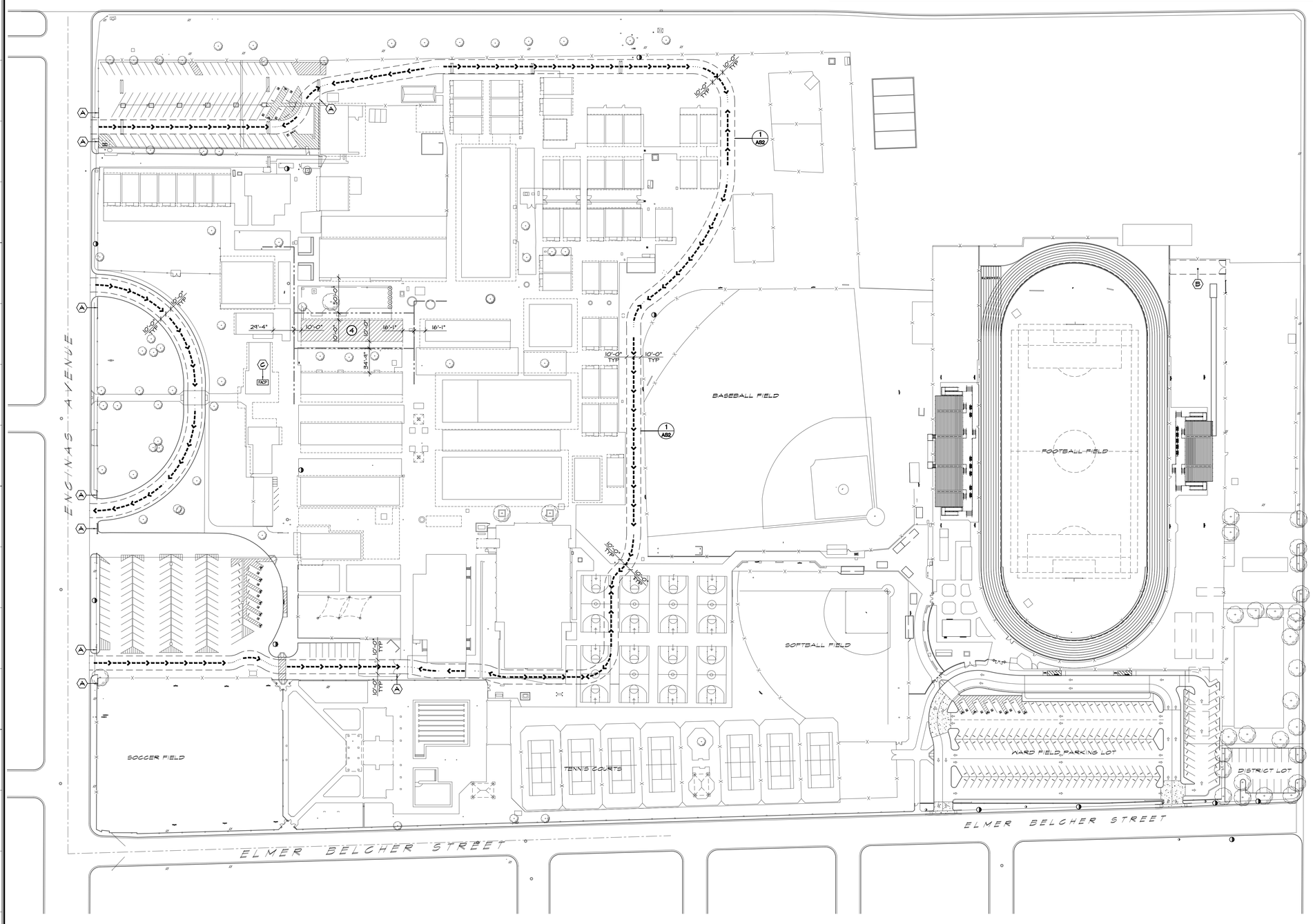
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
ACCESSIBILITY SITE PLAN

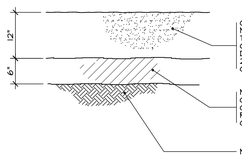
LICENSED ARCHITECT — JIMMIE SANDERS — 17644 — RENEWAL DATE 07-31-19 — STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-23CX
Date Last Revised	Sheet Number
	AS1

ACCESSIBILITY SITE PLAN — SCALE: 1" = 60'-0" — A



FIRE ACCESS SITE PLAN — SCALE: 1" = 60'-0" — A



FIRE LANE — SCALE: 1" = 1'-0" — 1

BUILDING DATA:

BUILDING 4 - CLASSROOMS

OCCUPANCY . . . . . E
CONSTRUCTION TYPE . . . . . TYPE V-B
FIRE SPRINKLER SYSTEM . . . . . NONE
NUMBER OF STORIES. 1
CONSTRUCTION AREA,
BUILDING AREA . . . . . 4,960 SQ FT
ALLOWABLE AREA . . . . . 9,500 SQ FT (TABLE 506.2)
AREA INCREASE. . . . . NONE

4,960 ≤ 9,500 = OK

KEYNOTES:

(A) EXISTING FIRE ACCESS GATE, PROVIDE KNOX-BOX
(B) EMS STAGING AREA
(C) EXISTING FIRE ALARM CONTROL PANEL

LEGEND:

EXISTING FIRE HYDRANT W/ GATE VALVE
FIRE TRUCK ACCESS ROUTES (ALL WEATHER SURFACE)
ASSUMED IMAGINARY LINE

BUILDING IDENTIFICATION:

NUMBER	DESCRIPTION	CONST TYPE	OCCUPANCY GROUP	FIRE SPRINKLERS	DSA APPL NO	CLOSED DSA COMPLIANT
1	AUTOMOTIVE SHOP	V-B	E	NO	A-28428, 04-108687, 04-111421	YES;YES;YES
2	VOCATIONAL ARTS	V-B	E	NO	A-10004, A-28428, A-50204, 04-111421	YES/YES/YES
3	CLASSROOMS	V-B	E	NO	A-14632, A-50204, 04-111421	UK;YES;YES
4	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES;YES;YES
5	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES;YES;YES
6	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES;YES;YES
7	CLASSROOMS	V-B	E	NO	A-10004, A-50204, 04-111421	YES;YES;YES
8	ADMIN / COUSELING / OFFICES	V-B	B	NO	A-10004, A-50204, 04-111421	YES;YES;YES
9	COUSELING CENTER	V-B	B	NO	A-10004, A-50204, A-23585	YES;YES;UK
10	LIBRARY / CAREER CENTER / CLASSROOMS	V-B	E	NO	A-23585, 04-108687, 04-111421	UK;YES;YES
11	LIBRARY / CAREER CENTER / CLASSROOMS	V-B	E	NO	A-23585, 04-108687, 04-111421	UK;YES;YES
12	SPECIAL EDUCATION CLASSROOMS	V-B	E	NO	A-51425	UK
13	CLASSROOMS	V-B	E	NO	A-23585, 04-108687, 04-111421	UK;YES;YES
14	MODULAR STAFF WORK ROOM / LOUNGE	V-B	E	NO	UNKNOWN	UK
15	CLASSROOMS	V-B	E	NO	A-40481, 04-108687, 04-111421	UK;YES;YES
16	CLASSROOMS	V-B	E	NO	A-28428, 04-108687, 04-111421	YES;YES;YES
17	NOT USED	-	-	-	N/A	N/A
18	NOT USED	-	-	-	N/A	N/A
19	NOT USED	-	-	-	N/A	N/A
20	CAFETERIA	V-B	A-2	NO	A-10004, A-50204, 04-111421	YES;YES;YES
21	MUSIC CLASSROOM	V-B	E	NO	A-14632, 04-108687	UK;YES
22	GYMNASIUM	I-B	A-3	NO	A-10004, A-50204, 04-111421	YES;YES;YES
23	VARNER GYMNASIUM	I-B	A-3, A-4, E	NO	A-23365, A-28428, 04-115141	UK;YES, YES
24	SCIENCE CLASSROOM	V-B	E	NO	A-62735, 04-107492	UK;YES
25	NOT USED	-	-	-	N/A	N/A
26	MODULAR CLASSROOMS	V-B	E	NO	04-107683	YES
27	MODULAR CLASSROOMS	V-B	E	NO	04-107683	YES
28	MODULAR CLASSROOMS	V-B	E	NO	UNKNOWN	UK
29	MODULAR CLASSROOMS / RESTROOMS	V-B	E	NO	04-107683	YES
30	NOT USED	-	-	-	N/A	N/A
31	MODULAR CLASSROOMS	V-B	E	NO	UNKNOWN	UK
32	MODULAR CLASSROOMS	V-B	E	NO	UNKNOWN	UK
33	POOL SHOWER AND LOCKER	V-A	E	YES	04-118256	YES
34	MODULAR RESTROOMS	V-B	E	NO	04-115622	YES
35	STORAGE	V-B	E	NO	UNKNOWN	UK
36	CONCESSION STAND	V-B	E	NO	UNKNOWN	UK
37	TICKET BOOTH	V-B	E	NO	UNKNOWN	UK
A	SHADE STRUCTURE	V-A	E	YES	04-118256	YES
B	POOL EQUIPMENT	II-A	E	YES	04-118256	YES
C	SHADE STRUCTURE	V-B	A-3	NO	04-114823	YES
D	SHADE STRUCTURE	V-B	A-3	NO	04-114823	YES
E	SHADE STRUCTURE	V-B	A-3	NO	04-114823	YES
F	GRANDSTAND	V-B	A-5	NO	04-115622	YES
G	GRANDSTAND	V-B	A-5	NO	04-115622	YES
H	PRESS BOX	V-B	A-5	NO	04-115622	YES
J	SHADE STRUCTURE	V-B	A-3	NO	04-116871	YES
K	SHADE STRUCTURE	V-B	A-3	NO	04-116871	YES

DSA 810

LOCAL FIRE AUTHORITY REVIEW

To facilitate the Division of the State Architect's (DSA) approval of the Fire/Life Safety portion of a project, DSA requires Local Fire Authority (LFA) review of certain elements as identified in this form. Use of this form is mandatory for projects that add square footage to a campus or if any item on this form is relevant to the project. For additional information, see DSA 810 Instructions and DSA Policy 08-01.

PROJECT INFORMATION

School District/Owner: Calexico Unified School District
Project Name/School: Calexico High School CTE Culinary Arts Modernization
Project Address: 1030 Encinas Ave, Calexico, CA 92231

LOCAL FIRE AUTHORITY (LFA)

LFA Agency Name: Calexico Fire Department
LFA Reviewer Name: Title:
Email: Telephone Number:

I have reviewed and responded to the applicable items for this project as listed below.
Note: Only sign this form when it is imaged onto the site plan. A loose form is not acceptable to DSA.

LFA Reviewer's Signature: Date:

Review Key: "Y" = Complies with LFA requirements "N" = Not approved (complete Section 8)
"NA" = Not applicable to the project "NR" = LFA elects not to review

	Description	Y	N	NA	NR
1	Where an elevator does not meet medical emergency service cab size, per the California Building Code (CBC), use of stairways for emergency rescue and patient transport is acceptable.			X	
2	Access roads, fire lane markings, pavers and gate entrances are in accordance with Title 19, California Code of Regulations and the California Fire Code, Chapter 5.				
3	Fire hydrant location and distribution complies with the California Fire Code (or see # 4).				
4	Fire hydrant location and distribution complies with NFPA 1142, "Alternate Means." If "NR" is checked, DSA can only approve on-site water storage as an alternate. The signature of the school district official is required to acknowledge the use of alternate means. Signature of School District Official: Date: Print the School District Official's Name:				
5	The location(s) of the proposed post indicator valve and fire department connection meet the requirements of this jurisdiction.				
6	The location(s) of the detector check valve assembly meet the requirements of this jurisdiction.				
7	Is the project located in a hazard severity zone area? (CBC, Chapter 7A, Section 701A.) ☐ Yes ☒ No Check type if "Yes": ☐ Moderate ☐ High ☐ Very High ☐ WIFA (If one of these boxes is checked, the project design must meet the requirements of Chapter 7A.)				
8	COMMENTS (note deficiencies):				

DSA 810 (rev 06-12-14) DIVISION OF THE STATE ARCHITECT — DEPARTMENT OF GENERAL SERVICES — STATE OF CALIFORNIA — Page 1 of 1

APPROVALS

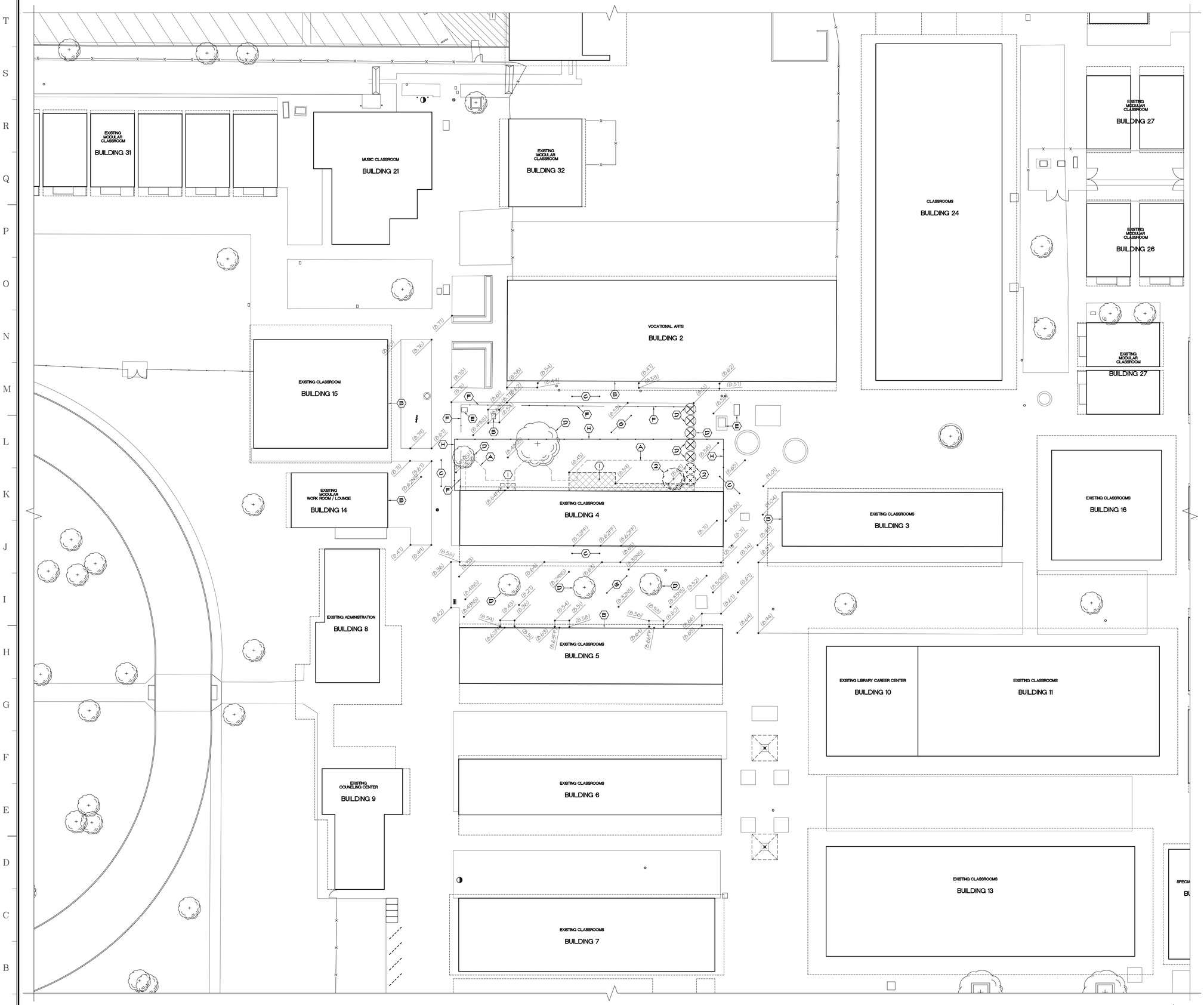
Sanders, INC.
Architecture/Engineering
1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FIRE ACCESS SITE PLAN

LICENSED ARCHITECT JIMMIE SANDERS No. C-27644 RENEWAL 08-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-250X
Date Last Revised	Sheet Number
	AS2



KEYNOTES:

- (A) LINE OF PROPOSED SITE IMPROVEMENTS
- (B) EXISTING STRUCTURE - PROTECT
- (C) EXISTING CONCRETE WALK - PROTECT
- (D) EXISTING TREE / SHRUB - PROTECT
- (E) EXISTING UTILITIES - PROTECT
- (F) EXISTING STEEL FENCE - PROTECT
- (G) EXISTING LANDSCAPE AREA - PROTECT
- (H) CONSTRUCTION FENCING

DEMOLITION KEYNOTES:

- (1) EXISTING CONCRETE SLAB TO BE REMOVED
- (2) EXISTING TREE / SHRUB TO BE REMOVED

LEGEND:

86.30	BENCH MARK. NGS DESIGNATION V1225, PID DB0930 N32 58 56.54174, W115 31 42.54320 (NGS ELEVATION ADJUSTED +200)
(88.40)	EXISTING NATURAL SOIL ELEVATION (UNO)
87.50 / 87.17	EXISTING ELEVATION (SITE CONCRETE UNO)
	FIRE HYDRANT
	POWER POLE
NS	NATURAL SOIL
TC	TOP OF CURB
FL	FLOW LINE
AC	ASPHALT PAVING
FF	FINISH FLOOR

NOTES:

1. DEMOLITION KEYNOTES ARE NOT INTENDED TO SHOW ALL DEMOLITION REQUIRED FOR PROPOSED IMPROVEMENTS. CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING IMPROVEMENTS/CONDITIONS REQUIRED TO COMPLETE WORK FOR PROPOSED IMPROVEMENTS.
2. CONTRACTOR SHALL ENCOUNTER EXISTING IRRIGATION LINES DURING DEMOLITION. CONTRACTOR SHALL CAP LINE, AWAY FROM PROPOSED IMPROVEMENTS, AND NOTIFY ARCHITECT/SCHOOL DISTRICT.
3. FIRE PROTECTION DURING DEMOLITION AND CONSTRUCTION SHALL CONFORM TO 2016 CFC CHAPTER 33.

APPROVALS

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Architecture/Engineering
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Project Title

CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

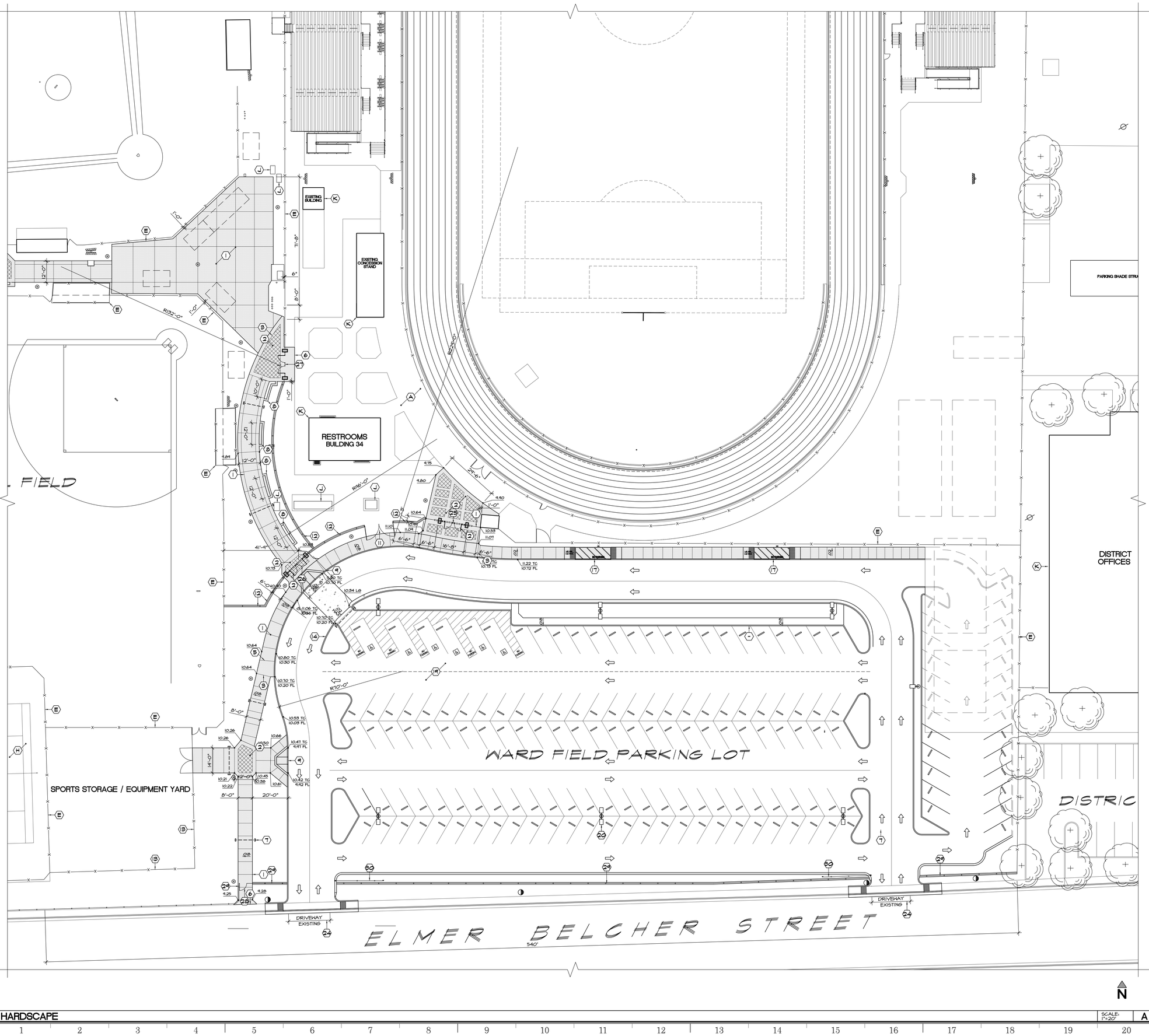
Sheet Title

SITE SURVEY AND DEMOLITION PLAN

LICENSED ARCHITECT JIMMIE G. SANDERS No. C-17644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-250X
Date Last Revised	Sheet Number
	AS3

SITE SURVEY AND DEMOLITION PLAN — SCALE: 1"=20' — A



KEYNOTES:

1. 6" THICK CONCRETE WALK (1/ABX2)
2. 6" THICK COLORED CONCRETE W/ SANDBLAST FINISH (1/ABX2)
3. EXPANSION JOINT (6/ABX2)
4. CONSTRUCTION JOINT (7/ABX2)
5. CONTROL JOINT (8/ABX2)
6. NEW TO EXISTING CONCRETE - MATCH EXISTING ELEVATION (9/ABX2)
7. PROVIDE 4" PVC SLEEVE (CAP ENDS) W/ 12" DEPTH MIN TO ALL PLANTING AREAS, TYP - VERIFY EXACT LOCATIONS
8. CONCRETE BENCH (17/ABX2)
9. ACCESSIBLE CURB RAMP (7/AX81)
10. 3" ASPHALT PAVING (3/ABX2)
11. 8'-0" STEEL DOUBLE GATE (C/ABX4)
12. STEEL FENCE - TYPE A (20/ABX2)
13. CHAINLINK FENCE (22/ABX2)
14. NEW CURB (11/ABX2)
15. NEW CURB AND GUTTER (12/ABX2)
16. NEW CONCRETE SWALE (13/ABX2)
17. ACCESSIBLE LOADING ZONE (9/ABX1)
18. 1" THICK CONC. PAVING (2/ABX2)
19. ASPHALT PAVING (5/ABX2)
20. EXISTING LIGHTING STANDARD
21. FLAG POLE (5/ABX3)
22. COMMUNICATIONS VAULT - SEE COMMUNICATIONS DRAWINGS
23. ACCESSIBLE DRINKING FOUNTAIN. PROVIDE POWER AND WATER
24. EXISTING CONCRETE SIDEWALK, CURB AND GUTTER PER CITY OF CALEXICO STANDARDS
25. STEEL GATE (E/ABX4)
26. STEEL GATE (B/ABX4)
27. STEEL GATE (D/ABX4)
28. NEW 4'-0" ACCESSIBLE PEDESTRIAN STEEL GATE (A/ABX4)
29. STEEL FENCE - TYPE B (11/ABX3)
30. EXISTING 30'-0" STEEL ROLLING GATE

A. EXISTING CONCRETE WALK - PROTECT
B. EXISTING CONCRETE / ASPHALT PAVING - PROTECT
C. EXISTING CONCRETE CURB / GUTTER - PROTECT
D. EXISTING TREE / SHRUB - PROTECT
E. EXISTING FENCE - PROTECT
F. EXISTING DUGOUT - PROTECT
G. EXISTING LIGHT STANDARD - PROTECT
H. EXISTING CONCRETE COURTS
J. EXISTING ELECTRICAL VAULT/EQUIPMENT
K. EXISTING LANDSCAPE AREA - PROTECT

LEGEND:

- 936.55 — BENCH MARK: TOP OF MANHOLE CORNER OF E. BELCHER STREET AND DOOL AVE
- 933.4 — EXISTING ELEVATION FROM AERIAL SURVEY
- 936.50 (TOP OF PAVING) / 936.80 — EXISTING ELEVATION (SITE CONCRETE U.N.O.) / PROPOSED ELEVATION (SITE CONCRETE U.N.O.)
- .02 — DIRECTION OF SLOPE W/ SLOPE NOTED
- (6) — RADIUS - NOTED IN DECIMAL FEET
- GB — GRADE BREAK
- SD — STORM DRAIN
- FIRE HYDRANT
- IRRIGATION HYDRANT
- POWER POLE
- SPORTS FIELD LIGHT STANDARDS
- MANHOLE
- CHAIN LINK FENCE
- NS — NATURAL SOIL
- TC — TOP OF CURB
- FL — FLOW LINE
- TB — TOP OF BENCH
- TP — TOP OF PLANTER
- PB — POLE BASE
- D — DRAIN

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB AND FACE OF STUD/CMU (U.N.O.).
2. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY DRAINAGE OF SITE. CONTRACTOR SHALL NOTIFY ARCHITECT, PRIOR TO CONSTRUCTION, ANY SITE CONCRETE WHICH WILL NOT PROPERLY DRAIN.
3. ALL CONTROL JOINTS TO BE SAW CUT.
4. ALL NATIVE SOIL REMOVED FOR CONSTRUCTION HARDSCAPE SHALL REMAIN ON SITE. CONTRACTOR SHALL USE NATIVE SOIL FOR FINISH GRADING.
5. MAXIMUM CROSS SLOPE AT ALL ACCESSIBLE PATHS OF TRAVEL IS 2%.

APPROVALS

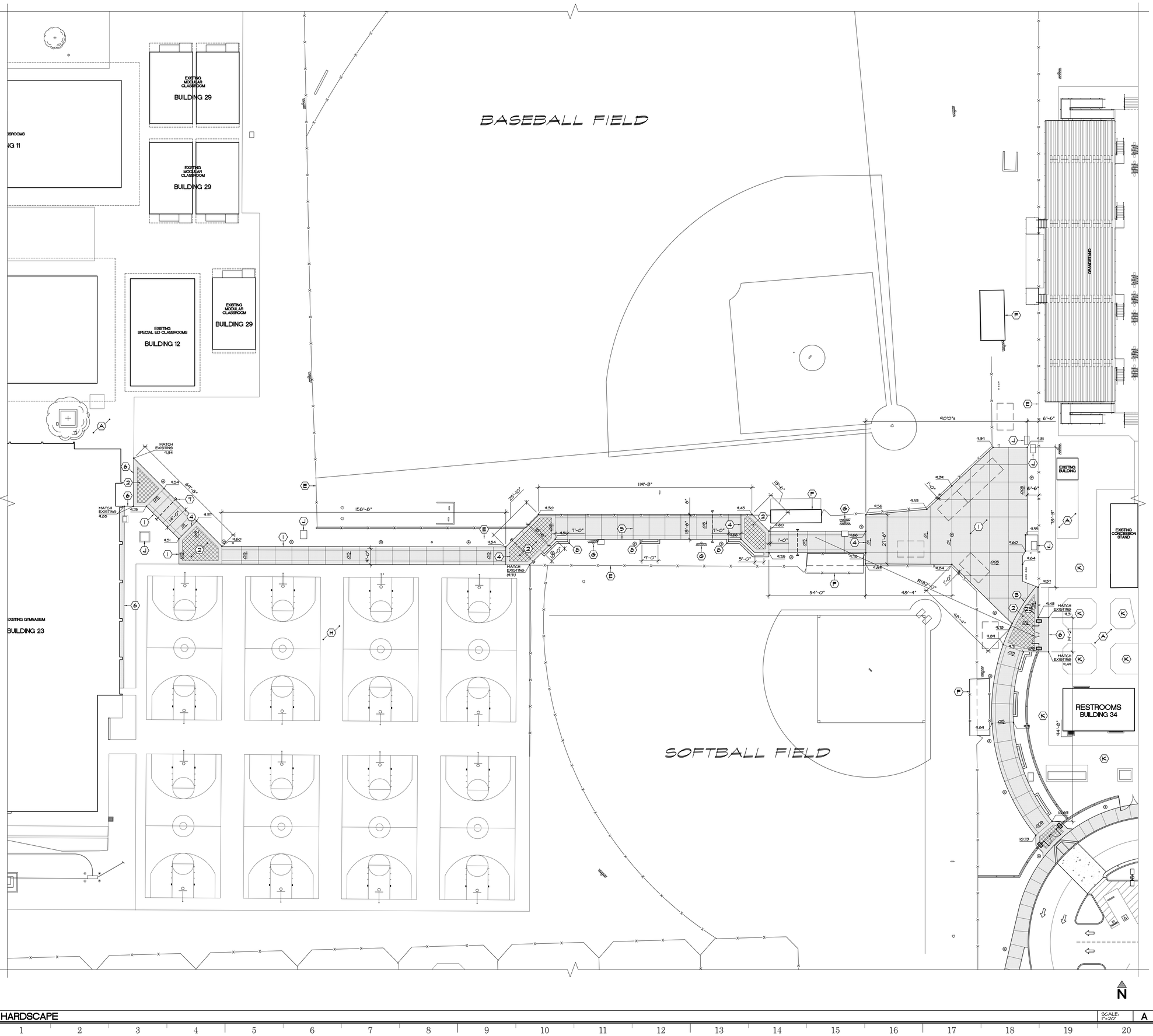
Sanders, INC.
Architecture/Engineering
1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
HARDSCAPE

LICENSED ARCHITECT — JIMMIE D. SANDERS — No. C-17644 — RENEWAL DATE 8-31-19 — STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-250X
Date Last Revised	Sheet Number
	AS5.1



KEYNOTES:

1. 6" THICK CONCRETE WALK (1/ASX2)
2. 6" THICK COLORED CONCRETE W/ SANDBLAST FINISH (1/ASX2)
3. EXPANSION JOINT (6/ASX2)
4. CONSTRUCTION JOINT (7/ASX2)
5. CONTROL JOINT (8/ASX2)
6. NEW TO EXISTING CONCRETE - MATCH EXISTING ELEVATION (9/ASX2)
7. PROVIDE 4" PVC SLEEVE (CAP ENDS) W/ 12" DEPTH MIN TO ALL PLANTING AREAS, TYP - VERIFY EXACT LOCATIONS
8. CONCRETE BENCH (17/ASX2)
9. ACCESSIBLE CURB RAMP (7/AX2)
10. 3" ASPHALT PAVING (3/ASX2)
11. 8'-0" STEEL DOUBLE GATE (C/ASX4)
12. STEEL FENCE - TYPE A (20/ASX2)
13. CHAINLINK FENCE (22/ASX2)
14. NEW CURB (11/ASX2)
15. NEW CURB AND GUTTER (12/ASX2)
16. NEW CONCRETE SWALE (13/ASX2)
17. ACCESSIBLE LOADING ZONE (9/AX1)
18. 1" THICK CONC. PAVING (2/ASX2)
19. ASPHALT PAVING (5/ASX2)
20. EXISTING LIGHTING STANDARD
21. FLAG POLE (5/ASX3)
22. COMMUNICATIONS VAULT - SEE COMMUNICATIONS DRAWINGS
23. ACCESSIBLE DRINKING FOUNTAIN. PROVIDE POWER AND WATER
24. EXISTING CONCRETE SIDEWALK, CURB AND GUTTER PER CITY OF CALEXICO STANDARDS
25. STEEL GATE (E/ASX4)
26. STEEL GATE (B/ASX4)
27. STEEL GATE (D/ASX4)
28. NEW 4'-0" ACCESSIBLE PEDESTRIAN STEEL GATE (A/ASX4)
29. STEEL FENCE - TYPE B (11/ASX3)
30. EXISTING 30'-0" STEEL ROLLING GATE

- (A) EXISTING CONCRETE WALK - PROTECT
- (B) EXISTING CONCRETE / ASPHALT PAVING - PROTECT
- (C) EXISTING CONCRETE CURB / GUTTER - PROTECT
- (D) EXISTING TREE / SHRUB - PROTECT
- (E) EXISTING FENCE - PROTECT
- (F) EXISTING DUGOUT - PROTECT
- (G) EXISTING LIGHT STANDARD - PROTECT
- (H) EXISTING CONCRETE COURTS
- (J) EXISTING ELECTRICAL VAULT/EQUIPMENT
- (K) EXISTING LANDSCAPE AREA - PROTECT

LEGEND:

- 936.55 — BENCH MARK: TOP OF MANHOLE CORNER OF E. BELCHER STREET AND DOOL AVE
- 933.4 — EXISTING ELEVATION FROM AERIAL SURVEY
- 933.4 (TOP OF PAVING) — EXISTING ELEVATION (SITE CONCRETE U.N.O.)
- 38.80 — PROPOSED ELEVATION (SITE CONCRETE U.N.O.)
- .02 — DIRECTION OF SLOPE W/ SLOPE NOTED
- (8) — RADIUS - NOTED IN DECIMAL FEET
- GB — GRADE BREAK
- SD — STORM DRAIN
- FIRE HYDRANT
- IRRIGATION HYDRANT
- POWER POLE
- SPORTS FIELD LIGHT STANDARDS
- MANHOLE
- CHAIN LINK FENCE
- NS — NATURAL SOIL
- TC — TOP OF CURB
- FL — FLOW LINE
- TB — TOP OF BENCH
- TP — TOP OF PLANTER
- PB — POLE BASE
- D — DRAIN

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB AND FACE OF STUD/CMU (U.N.O.).
2. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY DRAINAGE OF SITE. CONTRACTOR SHALL NOTIFY ARCHITECT, PRIOR TO CONSTRUCTION, ANY SITE CONCRETE WHICH WILL NOT PROPERLY DRAIN.
3. ALL CONTROL JOINTS TO BE SAW CUT.
4. ALL NATIVE SOIL REMOVED FOR CONSTRUCTION HARDSCAPE SHALL REMAIN ON SITE. CONTRACTOR SHALL USE NATIVE SOIL FOR FINISH GRADING.
5. MAXIMUM CROSS SLOPE AT ALL ACCESSIBLE PATHS OF TRAVEL IS 2%.

APPROVALS

Sanders, INC.
Architecture/Engineering
1102 INDUSTRY WAY, SUITE A
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760 353 5440 FAX 760 353 5442

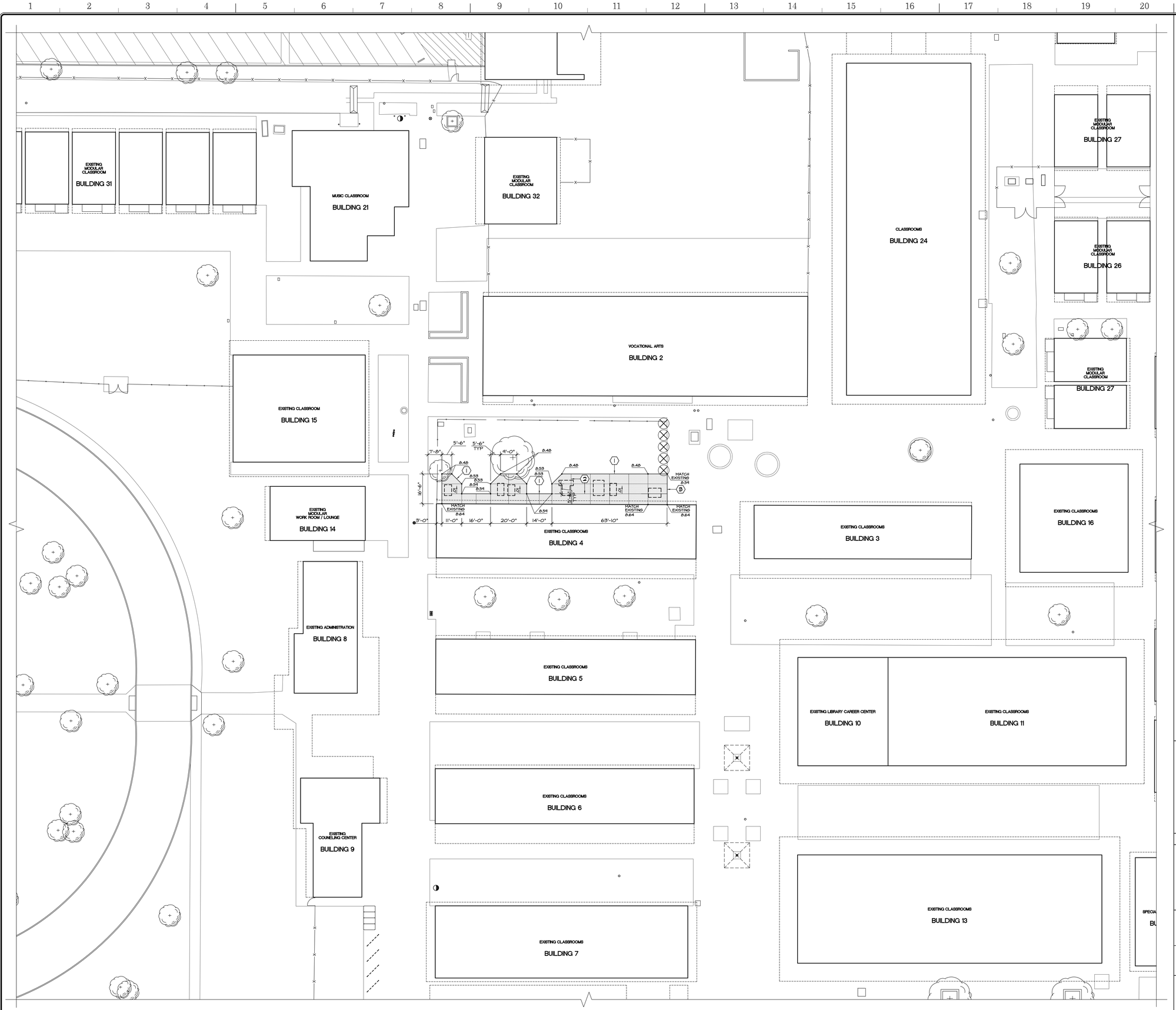
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
HARDSCAPE

LICENSED ARCHITECT — JIMMIE SANDERS — 17644 — RENEWAL DATE 08-31-19 — STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-23CX
Date Last Revised	Sheet Number
	AS5.2

HARDSCAPE — SCALE: 1"=20" — A



KEYNOTES:

1. 5" THICK CONCRETE WALK (1 / AS5.3)
2. CONTROL JOINT (8 / AS5.3)
3. NEW TO EXISTING CONCRETE - MATCH EXISTING ELEVATION (9 / AS5.3)

LEGEND:

936.55	BENCH MARK: TOP OF MANHOLE CORNER OF E. BELCHER STREET AND DOOL AVE
933.4	EXISTING ELEVATION FROM AERIAL SURVEY
933.4 EX	EXISTING ELEVATION (SITE CONCRETE U.N.O.)
38.80	PROPOSED ELEVATION (SITE CONCRETE U.N.O.)
.02	DIRECTION OF SLOPE w/ SLOPE NOTED
R	RADIUS - NOTED IN DECIMAL FEET
GB	GRADE BREAK
SD	STORM DRAIN
	FIRE HYDRANT
	IRRIGATION HYDRANT
	POWER POLE
	SPORTS FIELD LIGHT STANDARDS
	MANHOLE
X	CHAIN LINK FENCE
NS	NATURAL SOIL
TC	TOP OF CURB
FL	FLOW LINE
TB	TOP OF BENCH
TP	TOP OF PLANTER
PB	POLE BASE
D	DRAIN

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB AND FACE OF STUD/CMU (U.N.O.).
2. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY DRAINAGE OF SITE. CONTRACTOR SHALL NOTIFY ARCHITECT, PRIOR TO CONSTRUCTION, ANY SITE CONCRETE WHICH WILL NOT PROPERLY DRAIN.
3. ALL CONTROL JOINTS TO BE SAW CUT.
4. ALL NATIVE SOIL REMOVED FOR CONSTRUCTION HARDSCAPE SHALL REMAIN ON SITE. CONTRACTOR SHALL USE NATIVE SOIL FOR FINISH GRADING.
5. MAXIMUM CROSS SLOPE AT ALL ACCESSIBLE PATHS OF TRAVEL IS 2%.

APPROVALS

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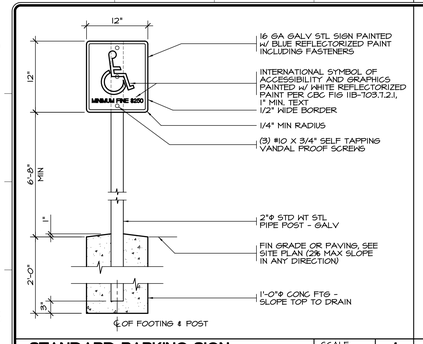
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
HARDSCAPE

LICENSED ARCHITECT — JIMMIE L. SANDERS — No. 17644 — RENEWAL DATE 7-31-19 — STATE OF CALIFORNIA

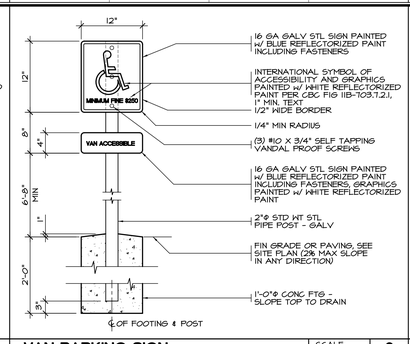
Document Date	Project Number
09-23-18	18-25CX
Date Last Revised	Sheet Number
	AS5.3

HARDSCAPE — SCALE: 1"=20' — A



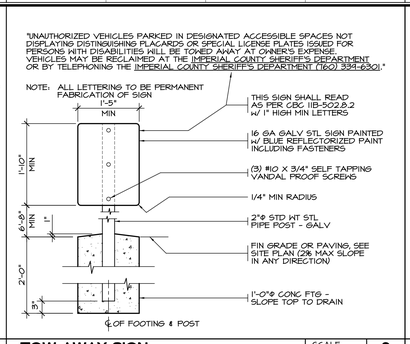
STANDARD PARKING SIGN

SCALE: 1" = 1'-0" | 1



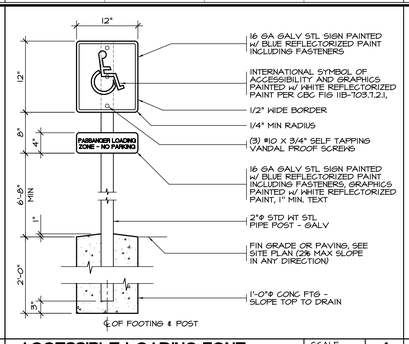
VAN PARKING SIGN

SCALE: 1" = 1'-0" | 2



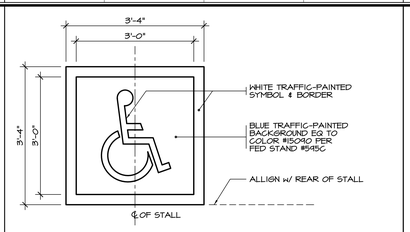
TOW AWAY SIGN

SCALE: 1" = 1'-0" | 3



ACCESSIBLE LOADING ZONE

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

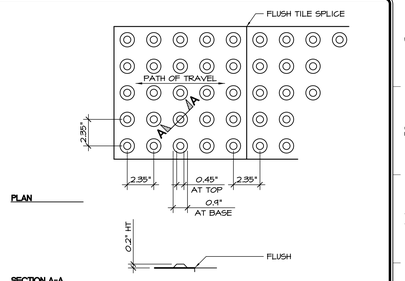


NOTES:

1) ALL STROKES TO BE 2" WIDE.
2) PROVIDE TWO (2) COATS OF TRAFFIC-PAINT BLUE.
3) LOCATE SYMBOL AT CENTER OF STALL AS SHOWN ON DETAIL.
4) ISA PROPORTIONS PER CBC FIGURE IIB-703.7.2.1

INTL SYMBOL OF ACCESSIBILITY

SCALE: 3/4" = 1'-0" | 5

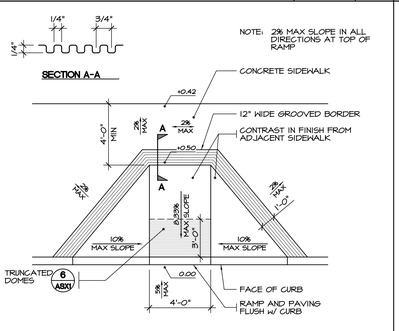


SECTION A-A

NOTE:
PROVIDE (5) YEAR MANUFACTURER WARRANTY.
TRUNCATED DOMES TO BE YELLOW COLOR.

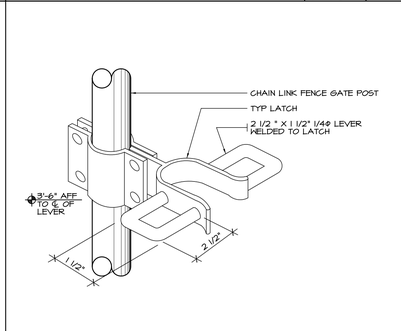
TRUNCATED DOMES

SCALE: 1/4" = 1'-0" | 6



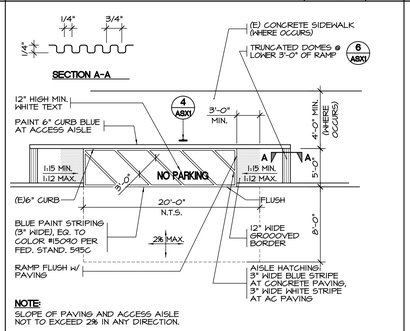
ACCESSIBLE CURB RAMP

SCALE: 1/4" = 1'-0" | 7



LATCHING FORK w/ LEVER HARDWARE

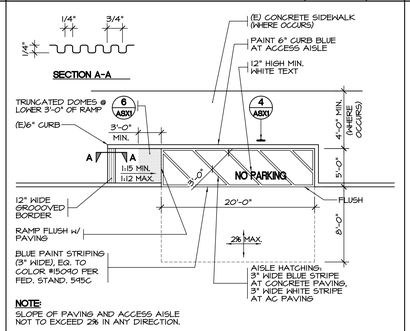
SCALE: NTS | 8



NOTE:
SLOPE OF PAVING AND ACCESS AISLE NOT TO EXCEED 2% IN ANY DIRECTION.

ACCESSIBLE LOADING ZONE

SCALE: 1/8" = 1'-0" | 9



NOTE:
SLOPE OF PAVING AND ACCESS AISLE NOT TO EXCEED 2% IN ANY DIRECTION.

ACCESSIBLE LOADING ZONE

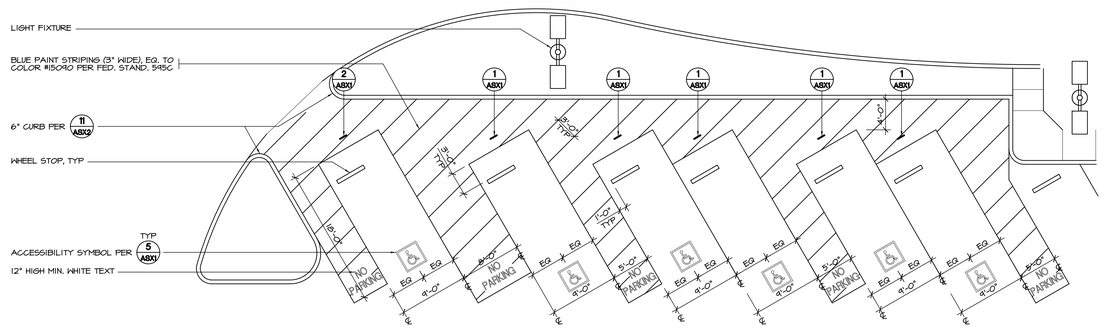
SCALE: 1/8" = 1'-0" | 10

ACCESSIBLE GATE

SCALE: 1/4" = 1'-0" | 11

ACCESSIBLE GATE

SCALE: 1/4" = 1'-0" | 12

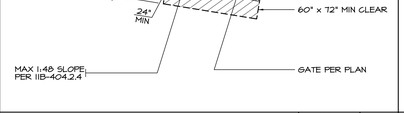


ACCESSIBLE PARKING DETAIL

SCALE: 1/8" = 1'-0" | 13

ACCESSIBLE GATE

SCALE: 1/4" = 1'-0" | 14



ACCESSIBLE GATE

SCALE: 1/4" = 1'-0" | 15

APPROVALS

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
SITE ACCESSIBILITY DETAILS

LICENSED ARCHITECT JIMMIE L. SANDERS C-17644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-250X
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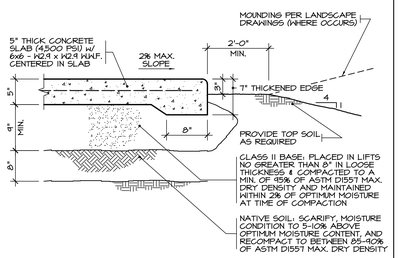
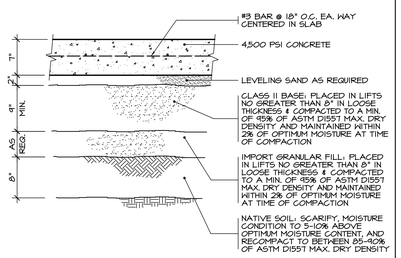


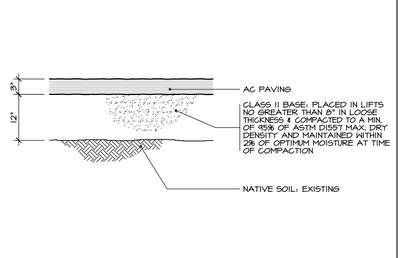
SITE CONCRETE SECTION

SCALE: 1" = 1'-0" | 1



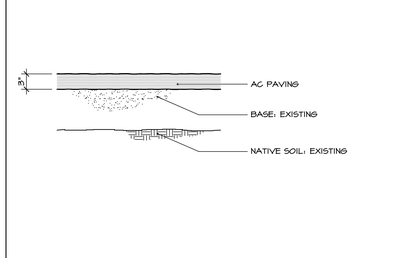
7" CONCRETE PAVING SECTION

SCALE: 1" = 1'-0" | 2



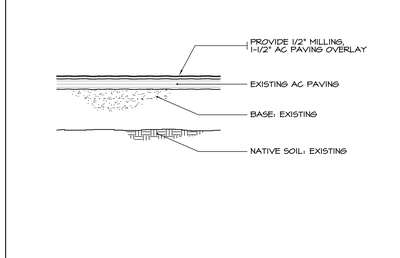
3" AC PAVING SECTION

SCALE: 1" = 1'-0" | 3



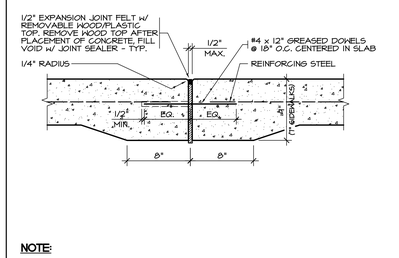
3" AC PAVING SECTION

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



AC PAVING SECTION

SCALE: 1" = 1'-0" | 5

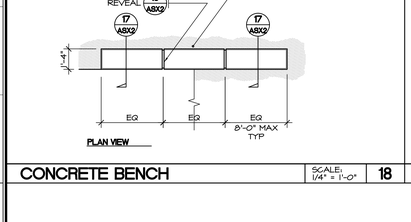


NOTE:

ADJACENT POURS SHALL BE FLUSH

EXPANSION JOINT

SCALE: 1 1/2" = 1'-0" | 6

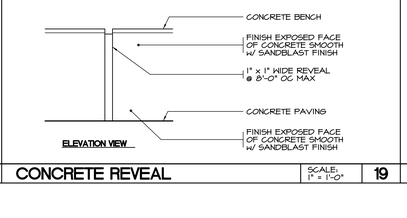


NOTE:

ADJACENT POURS SHALL BE FLUSH

CONSTRUCTION JOINT

SCALE: 1 1/2" = 1'-0" | 7

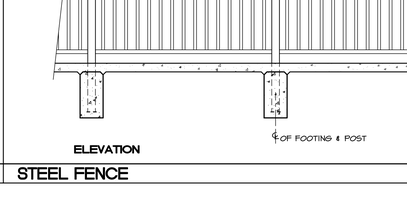


NOTE:

SLAB MUST BE CUT WITHIN 8 HOURS OF PLACEMENT OF CONCRETE OR CONCRETE WILL BE REJECTED

CONTROL JOINT, SAW CUT

SCALE: 1 1/2" = 1'-0" | 8

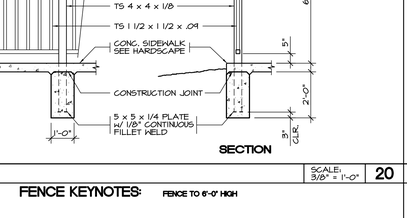


NOTE:

ADJACENT POURS SHALL BE FLUSH

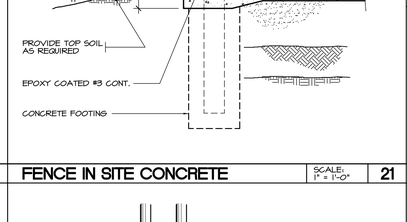
NEW TO EXISTING CONCRETE

SCALE: 1 1/2" = 1'-0" | 9



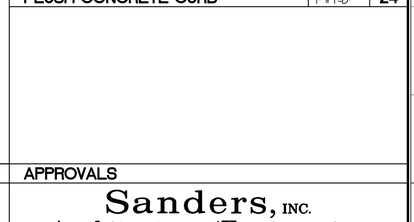
CURB AND GUTTER

SCALE: 1" = 1'-0" | 10



CURB AT PAVING

SCALE: 1" = 1'-0" | 11



SIDEWALK TO PAVING

SCALE: 1" = 1'-0" | 12

GUTTER

SCALE: 1" = 1'-0" | 13

CONCRETE SWALE

SCALE: 1" = 1'-0" | 14

TYPICAL TRENCH DETAIL

SCALE: N.T.S. | 15

TOP SOIL AT CURBS

SCALE: 1" = 1'-0" | 16

CONCRETE BENCH SECTION

SCALE: 1" = 1'-0" | 17

CONCRETE BENCH

SCALE: 1/4" = 1'-0" | 18

CONCRETE REVEAL

SCALE: 1" = 1'-0" | 19

STEEL FENCE

SCALE: 3/8" = 1'-0" | 20

FENCE IN SITE CONCRETE

SCALE: 1" = 1'-0" | 21

APPROVALS

FENCE KEYNOTES:

FENCE TO 6'-0" HIGH

1	TERMINAL POST	4.0"ø x .160", 6.56 lb/ft, T-40 GALVANIZED
2	CORNER POST	2.875" DIA x .160", 4.64 lb/ft, T-40 GALVANIZED
3	LINE POST	2.875" DIA x .160", 4.64 lb/ft, T-40 GALVANIZED
4	TOP RAIL	1.66" DIA x .110", 1.82 lb/ft, T-40 GALVANIZED
5	FABRIC	2" x 9 GA KK, 1.2 OUNCES OF ZINC PER SQ FT
6	BOTTOM RAIL	1.66" DIA x .110", 1.82 lb/ft, T-40 GALVANIZED
7	LINE POST FOOTING	1'-0"ø x 2'-0" CONC
8	CORNER POST FOOTING	1'-0"ø x 2'-0" CONC
9	TERMINAL/GATE POST FOOTING	1'-4"ø x 3'-0" CONC
10	BRACE AT ALL CORNERS	1.998 x 0.120" 2.28 lb/ft POST
11	INTERMEDIATE SUPPORT @ GATE	SAME AS LINE POST
12	CONCRETE PAVING/SITE CONCRETE (WHERE OCCURS)	1 ASX2, 5 ASX2
13	SINGLE WALK GATE POST	SAME AS TERMINAL POST
14	DOUBLE WALK GATE POST	SAME AS TERMINAL POST (NOT SHOWN)
15	ROLLER SUPPORT	HEAVY DUTY
16	SMOOTH 10" KICK PLATE @ BOTH SIDES	FLUSH W/ GATE FRAMING
17	HEAVY DUTY ROLLER, 6" DIAMETER MIN	
18	LATCHING FORK W/ LEVER HARDWARE	7 ASX2
19	CENTER DROPROD	

FENCE ELEVATION

GATE ELEVATION

NOTE: GATE SHALL OPERATE WITH 5 LBS MAX FORCE.

PARTIAL FENCE / ROLLING GATE ELEVATION

CHAIN LINK FENCE AND GATE DETAIL

SCALE: NTS | 22

SECTION AT ROLLING GATE

SCALE: 1" = 1'-0" | 23

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TYPICAL SITE DETAILS

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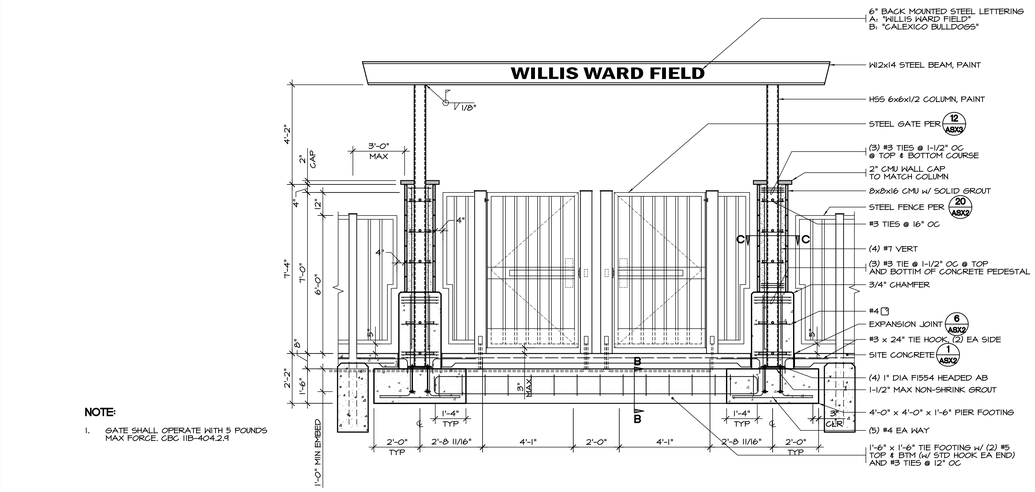
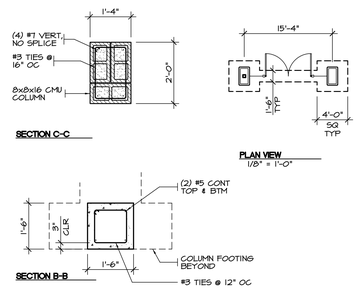
STEEL GATE w/ MASONRY COLUMNS

SCALE: 3/8" = 1'-0" | 1



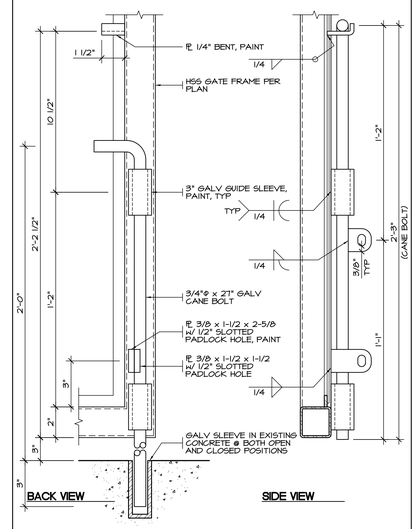
NOTE:

1. GATE SHALL OPERATE WITH 5 POUNDS MAX FORCE. CBC 11B-404.2.9



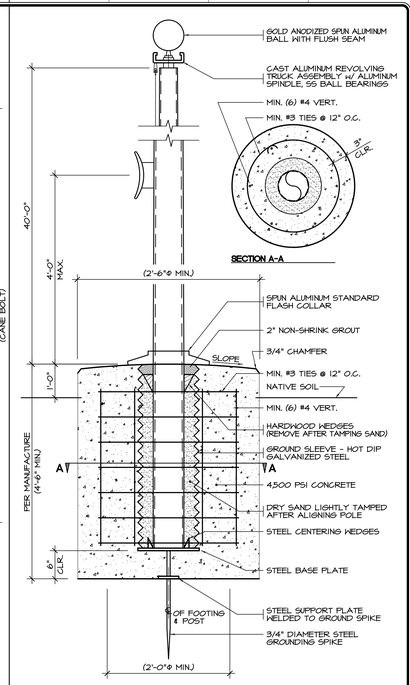
GATE CANE BOLT

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



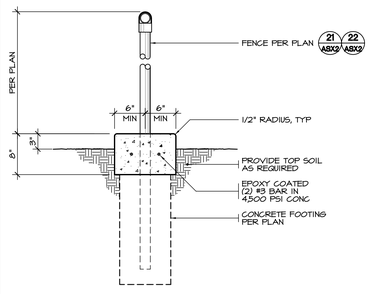
GROUND SET FLAGPOLE

SCALE: N.T.S. | 5



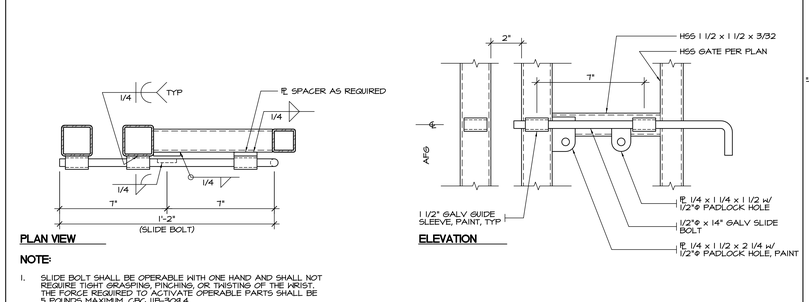
CURB AT FENCE

SCALE: 1" = 1'-0" | 2



GATE SLIDE BOLT

SCALE: 3"=1'-0" | 3

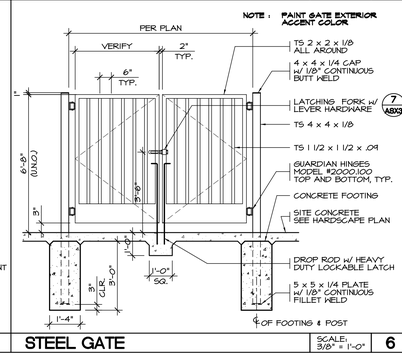


NOTE:

1. SLIDE BOLT SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM. CBC 11B-309.4

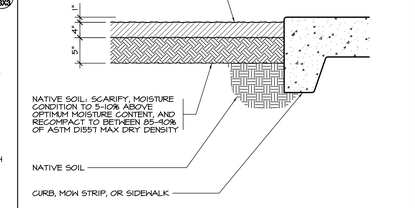
STEEL GATE

SCALE: 3/8" = 1'-0" | 6



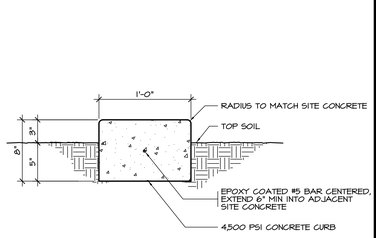
DECOMPOSED GRANITE PAVING

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



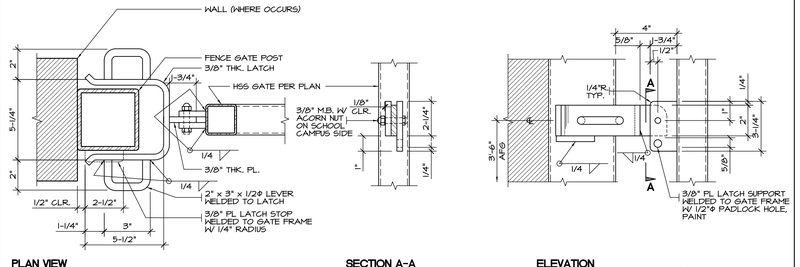
CONCRETE MOW CURB

SCALE: 1 1/2" = 1'-0" | 9



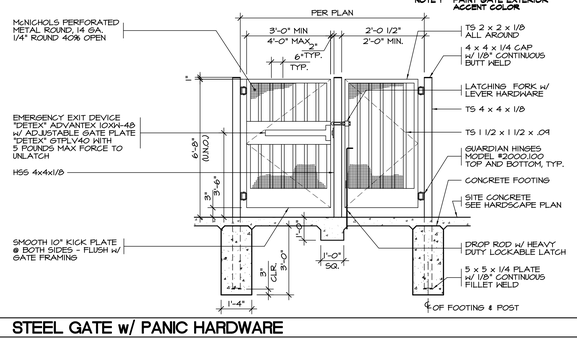
LATCHING FORK w/ LEVER HARDWARE

SCALE: 3"=1'-0" | 7



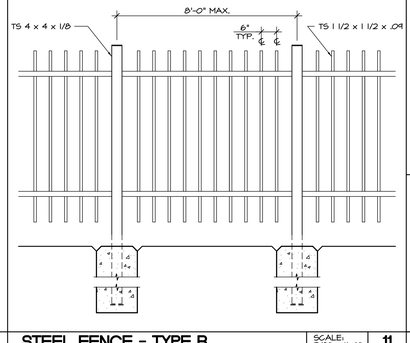
STEEL GATE w/ PANIC HARDWARE

SCALE: 3/8" = 1'-0" | 10



STEEL FENCE - TYPE B

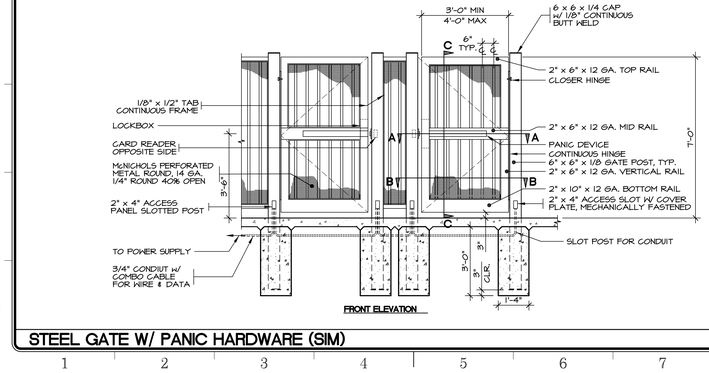
SCALE: 3/8" = 1'-0" | 11



APPROVALS

STEEL GATE w/ PANIC HARDWARE (SIM)

SCALE: 3/8" = 1'-0" | 12



REQUIRED GATE HARDWARE CARD ACCESS ELECTRIFIED PANIC HARDWARE

1. PANIC DEVICE: RX-2-GEL-PA-48-NL-OP-110MD-WH
2. TRIM: DOOR PULL - VR910 NL
3. LOCKBOX: KEEDEX, STEEL 14GA
4. CLOSER: SURECLOSE
5. POWER SUPPLY-(FUTURE) VON DUPRIN PS914

NOTES

1. GATE SHALL OPERATE WITH 5 POUNDS MAX FORCE. CBC 11B-404.2.9

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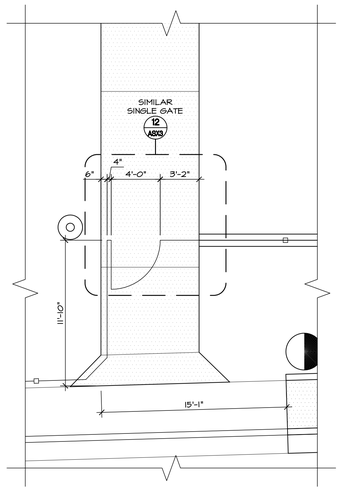
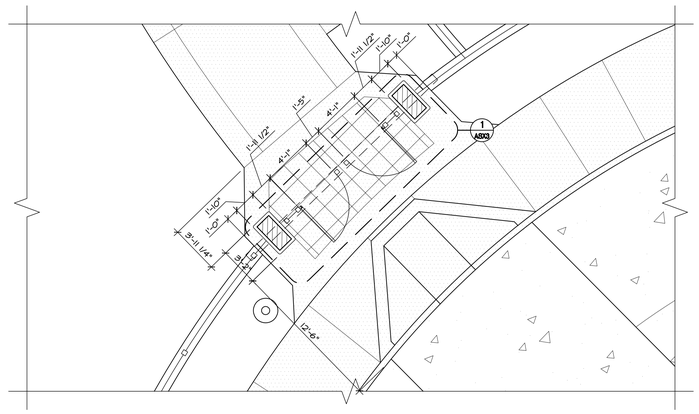
	ASX3



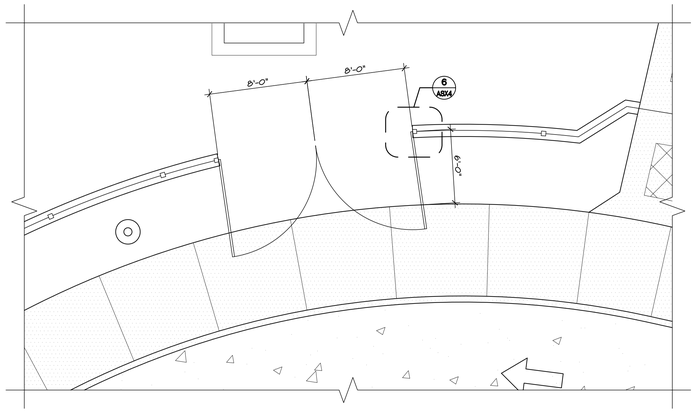
N

ENLARGED GATE PLAN - GATE 3 | SCALE: 1"=1'-0" | A



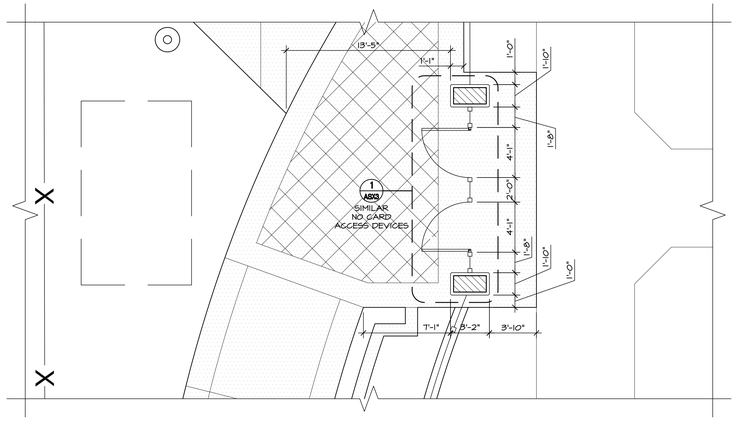
N

ENLARGED GATE PLAN WITH CARD ACCESS - GATE 4 | SCALE: 1"=1'-0" | B



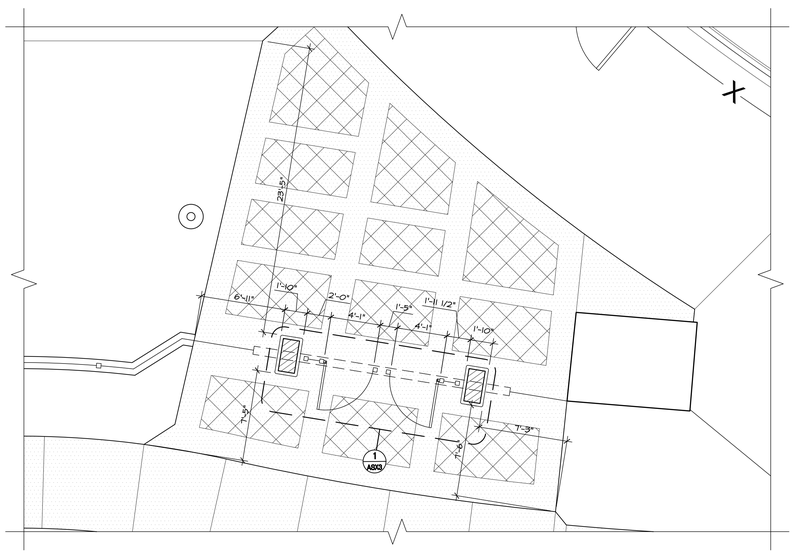
N

ENLARGED GATE PLAN - GATE 5 | SCALE: 1"=1'-0" | C



N

ENLARGED GATE PLAN - GATE 6 | SCALE: 1"=1'-0" | D



N

ENLARGED GATE PLAN WITH CARD ACCESS - GATE 7 | SCALE: 1"=1'-0" | E

APPROVALS

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ENLARGED GATE PLANS

LICENSED ARCHITECT
JIMMIE W. SANDERS
No. C-17644
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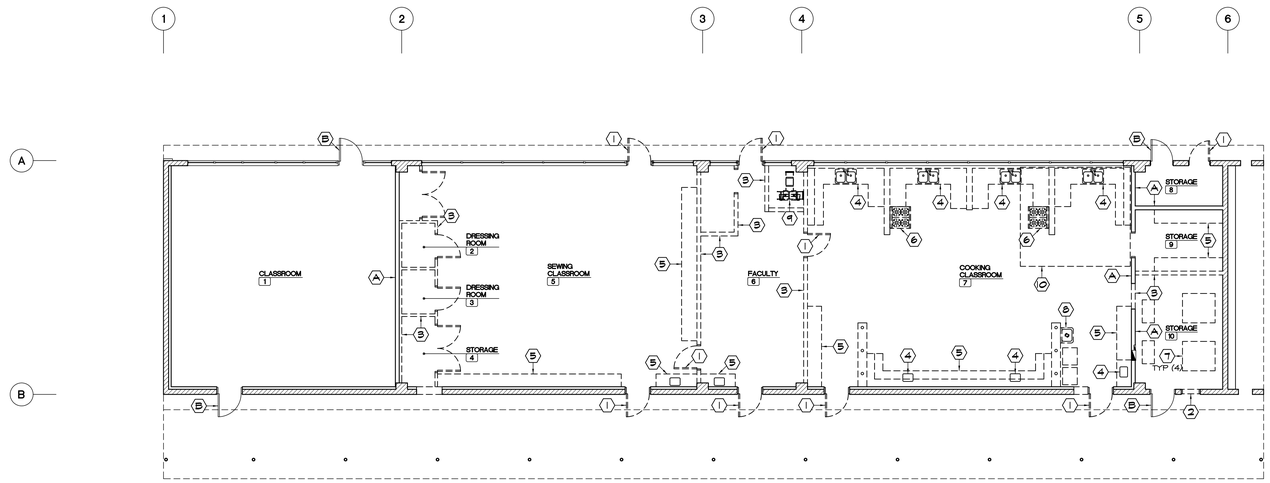


DEMOLITION FLOOR PLAN

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

N

DEMOLITION KEYNOTES:

1. REMOVE EXISTING DOOR, HARDWARE AND DOOR FRAME
2. REMOVE EXISTING FRAME VENT OPENING
3. REMOVE EXISTING FRAMED WALL
4. REMOVE EXISTING SINK AND CASEWORK
5. REMOVE EXISTING CASEWORK
6. REMOVE EXISTING STOVE
7. REMOVE EXISTING CONCRETE HOUSE KEEPING PAD, PATCH TO EXISTING FLOOR ELEVATION
8. REMOVE EXISTING PLUMBING FIXTURE
9. REMOVE AND RELOCATE EXISTING DATA RACK
10. REMOVE EXISTING CONCRETE SLAB FOR WALK-IN DEPRESSION SLAB

KEYNOTES:

A. EXISTING WALL TO REMAIN - PROTECT
B. EXISTING DOOR / WINDOW TO REMAIN - PROTECT

NOTES:

1. DEMOLITION KEYNOTES ARE NOT INTENDED TO SHOW ALL DEMOLITION REQUIRED FOR PROPOSED IMPROVEMENTS. CONTRACTOR RESPONSIBLE TO REMOVE ALL EXISTING IMPROVEMENTS / CONDITIONS REQUIRED TO COMPLETE WORK FOR PROPOSED IMPROVEMENTS.
2. DO NOT ALTER OR DAMAGE ANY EXISTING SHEAR WALLS OR BEARING WALLS UNO.
3. ALL DEMOLITION SHALL COMPLY WITH CH 34 CBC AND ARTICLE 87 CFC.
4. REMOVE EXISTING FLOOR FINISHES IN AREAS OF WORK - SEE FLOORING PLAN
5. SAWCUT EXISTING CONCRETE SLAB FOR NEW PLUMBING FIXTURES, AS REQUIRED - SEE PLUMBING PLANS
6. REMOVE EXISTING SUSPENDED CEILING, LIGHTING AND HVAC FIXTURES IN AREAS OF WORK - EXISTING POWER AND DUCTWORK TO SUPPLY NEW FIXTURES
7. REMOVE EXISTING FRAMED CEILING, LIGHTING AND HVAC FIXTURES IN AREAS OF WORK - EXISTING POWER AND DUCTWORK TO SUPPLY NEW FIXTURES

OCCUPANT LOAD: 53 PEOPLE

N

EXITING PLAN

SCALE: 1/32" = 1'-0" | C

BUILDING DATA:

BUILDING 4 - CLASSROOMS

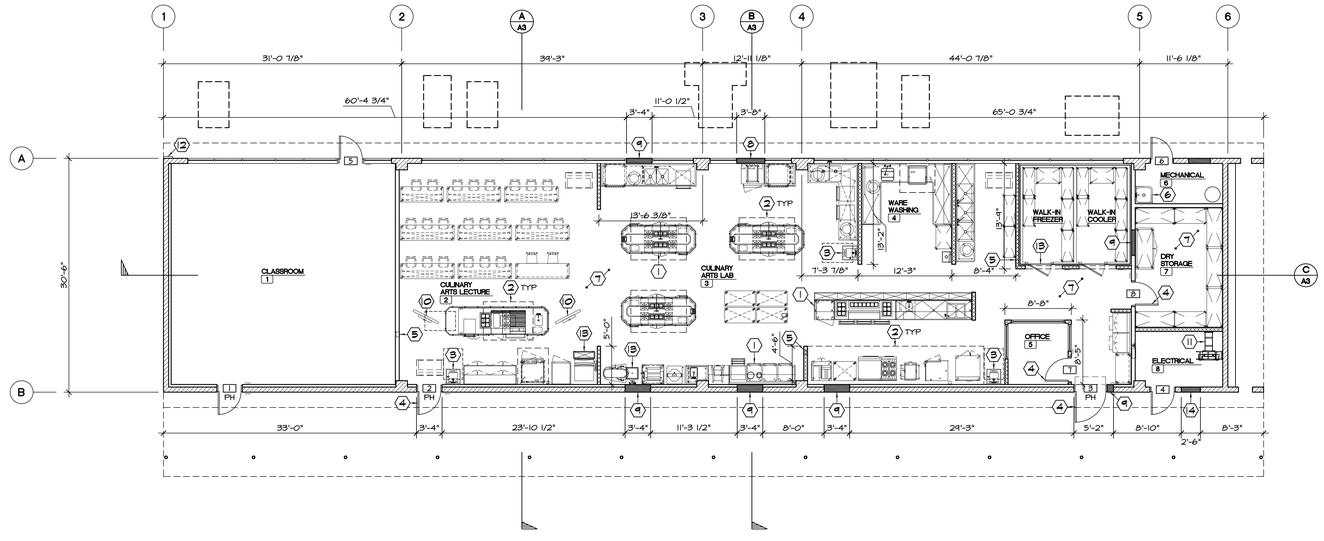
OCCUPANCY . . . . . E
CONSTRUCTION TYPE . . . . . TYPE V-B
FIRE SPRINKLER SYSTEM . . . . . NONE
NUMBER OF STORIES 1
CONSTRUCTION AREA
BUILDING AREA . . . . . 4,960 SQ FT
ALLOWABLE AREA . . . . . 9,500 SQ FT (TABLE 506.2)
AREA INCREASE . . . . . NONE

4,960 ≤ 9,500 = OK

N

OCCUPANCY PLAN

SCALE: 1/32" = 1'-0" | D



FLOOR PLAN

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

N

KEYNOTES:

1. KITCHEN EQUIPMENT - SEE FOOD SERVICE DRAWINGS
2. EXHAUST HOOD TYPE II - SEE FOOD SERVICE DRAWINGS
3. ACCESSIBLE SINK - SEE PLUMBING DRAWINGS
4. NEW DOOR / WINDOW
5. FIRE EXTINGUISHER SEMI-RECESSED - TYPE K (L / AX3.1)
6. PLUMBING FIXTURE - SEE PLUMBING DRAWINGS
7. NEW QUARRY TILE
8. EXISTING WINDOW OPENING TO BE INFILLED (15 / AX5.2)
9. EXISTING DOOR OPENING TO BE INFILLED (15 / AX5.2)
10. NEW CEILING MTD MONITORS (2 / 0X2.2)
11. RELOCATED DATA RACK
12. EXISTING ELECTRICAL PANEL TO REMAIN, PROTECT
13. LINE OF RECESSED FLOOR
14. EXISTING VENT OPENING TO BE INFILLED

WALL TYPES

(E) 8" GUNITE WALL
(E) 4" WOOD STUD WALL
NEW 6" METAL STUD (NON BEARING) (1 / AX5.2)
NEW 4" METAL STUD (NON BEARING) (1 / AX5.2)

LEGEND:

DOOR NUMBER - SEE DOOR SCHEDULE
PH PANIC HARDWARE

NOTES:

CULINARY ARTS CLASSROOM MODERNIZATION WILL REPLACE THE HOME ECONOMIC CLASSROOM, THEREFORE NO CHANGE IN USE AND THERE ARE NO HAZARDOUS MATERIALS USED OR STORED TO CONSIDER IT A VOCATIONAL SHOP. IT WAS ORIGINALLY APPROVED IN A#56843 WITHOUT FIRE RATED BARRIERS TO THE ADJACENT ROOMS.

NOTES:

1. 5% MIN OF EACH TYPE OF FURNITURE ITEMS TO MEET ACCESSIBILITY REQUIREMENTS PER 2016 CBC.
2. ALL FURRINGS ON EXTERIOR WALLS TO HAVE BATT INSULATION (R-19 @ 6", R-11 @ 4")
3. ALL FRAMED INTERIOR WALLS TO HAVE SOUND ATTENUATION BATT INSULATION.
4. FLAME SPREAD RATING FOR WALL INSULATION NOT TO EXCEED 25 AND SMOKE DEVELOPED INDEX NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.

LEGEND:

30" x 48" CLEAR FLOOR SPACE (2% MAX SLOPE IN ALL DIRECTIONS)

60" DIAMETER CLEAR FLOOR SPACE (2% MAX SLOPE IN ALL DIRECTIONS)

60" x 60" CLEAR FLOOR SPACE AT PULL SIDE OF EXTERIOR DOOR (2% MAX SLOPE IN ALL DIRECTIONS)

60" x 54" CLEAR SPACE AT PULL SIDE OF INTERIOR DOOR (2% MAX SLOPE IN ALL DIRECTIONS)

48 x 48" CLEAR SPACE AT PUSH SIDE OF DOOR (2% MAX SLOPE IN ALL DIRECTIONS)

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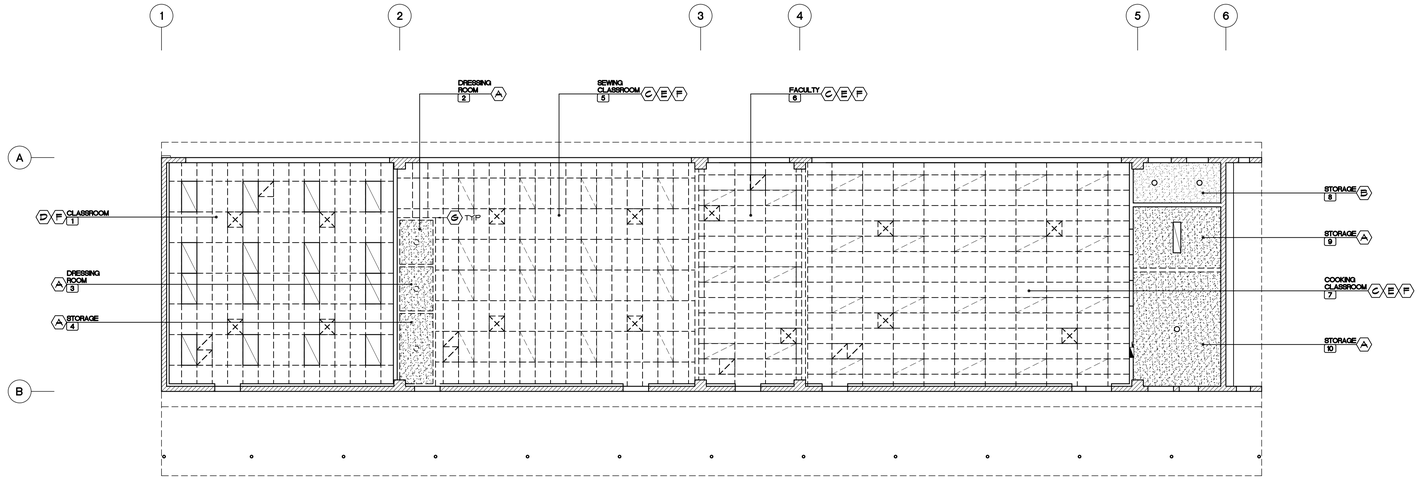
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
DEMOLITION AND FLOOR PLANS

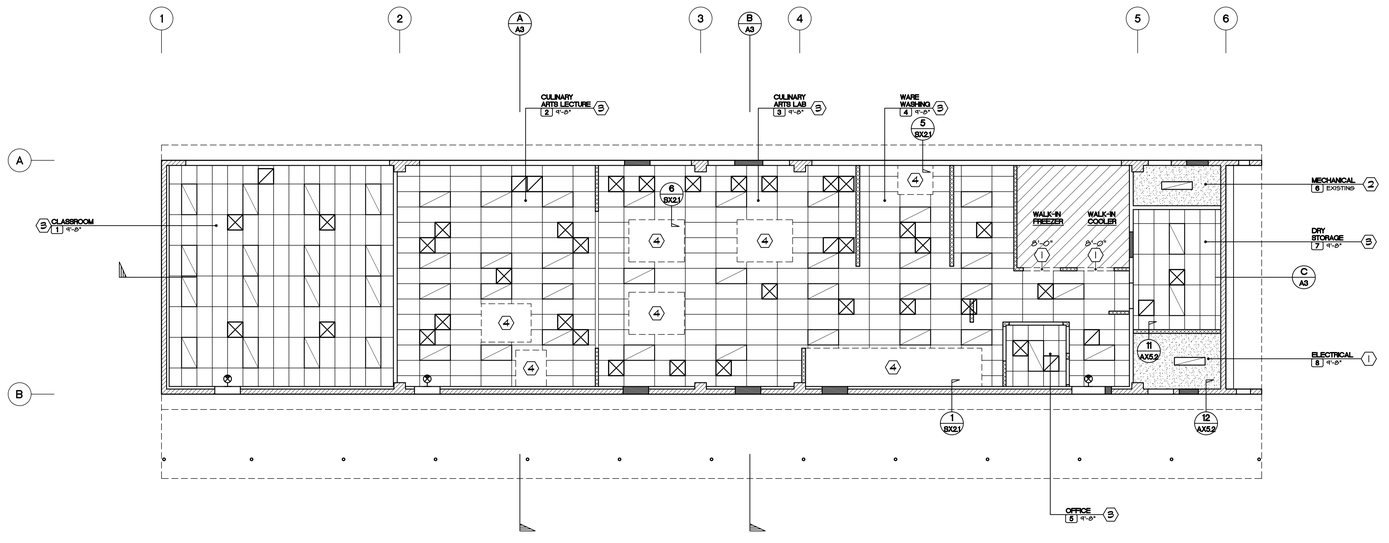
LICENSED ARCHITECT JIMMIE SANDERS No. 17644 RENEWAL DATE 08-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-25CX
Date Last Revised	Sheet Number
	A1



N

REFLECTED CEILING PLAN DEMOLITION — SCALE: 1/8" = 1'-0" — A



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REFLECTED CEILING PLAN — SCALE: 1/8" = 1'-0" — B

DEMOLITION CEILING KEYNOTES

- A — EXISTING GYPSUM BOARD CEILING TO BE REMOVED
- B — EXISTING GYPSUM BOARD CEILING TO REMAIN
- C — EXISTING SUSPENDED CEILING GRID TO BE REMOVED
- D — EXISTING LIGHT FIXTURE TO BE REMOVED AND REINSTALLED
- E — EXISTING LIGHT FIXTURE TO BE REMOVED
- F — EXISTING HVAC RETURN AND SUPPLY GRILLS TO BE REMOVED AND RELOCATED
- G — EXISTING NON BEARING WALL TO BE REMOVED

NOTES:

THE ENTIRE CEILING IN THE AFFECTED SPACE SHALL BE UPGRADED TO MEET THE CURRENT REQUIREMENTS OF THE 2016 CBC AND DSA IR 25-2.13 SECTION 4 (REVISION 11/9/17) IF ANY PORTION OF THE GRID SYSTEM IS CUT OR ALTERED AND THE CEILING HAS NO LATERAL BRACING ASSEMBLIES (4-WAY SPLAY WIRES AND COMPRESSION POST) OR HAS LATERAL BRACING ASSEMBLIES SPACED MORE THAN 12 FEET ON-CENTER

REFLECTED CEILING KEYNOTES:

- 1 — GYPSUM BOARD - PAINT PRIME COLOR, TEXTURE TO MATCH WALLS
- 2 — EXISTING GYPSUM BOARD - PATCH AND REPAIR AS REQUIRED - PAINT
- 3 — SCRUBABBLE CEILING TILES - SEE SPECIFICATIONS
- 4 — CULINARY ARTS EXHAUST HOOD CEILING ENCLOSURE - SEE FOOD SERVICE DRAWINGS

LEGEND:

- FLUORESCENT LIGHT FIXTURE - CONNECT TO EXISTING ELECTRICAL PANEL, CONTRACTOR TO BALANCE
- FLUORESCENT LIGHT FIXTURE - CONNECT TO EXISTING ELECTRICAL PANEL, CONTRACTOR TO BALANCE
- LIGHT FIXTURE
- CEILING DIFFUSER - SUPPLY AIR - CONNECT TO EXISTING HVAC SYSTEM, CONTRACTOR TO BALANCE AIR SUPPLY
- RETURN AIR REGISTER - CONNECT TO EXISTING HVAC SYSTEM, CONTRACTOR TO BALANCE AIR SUPPLY
- NEW EXHAUST FAN, 5 AIR CHANGES P/H MIN, CONNECT TO EXISTING POWER CIRCUIT
- GYPSUM BOARD - PAINT
- 2' x 4' LAY-IN CEILING TILES

NOTES:

1. SEE SHEET 9 AX5.1 FOR NOTES AND DETAILS.
2. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR FIXTURES AND EQUIPMENT.

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
DEMOLITION AND REFLECTED CEILING PLAN

LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL DATE 08-31-19 STATE OF CALIFORNIA

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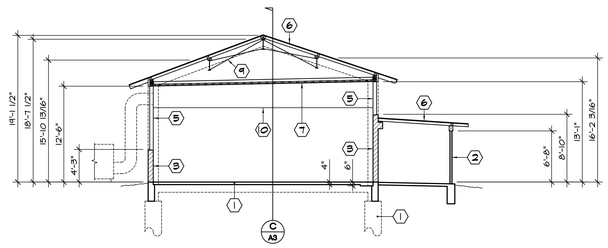
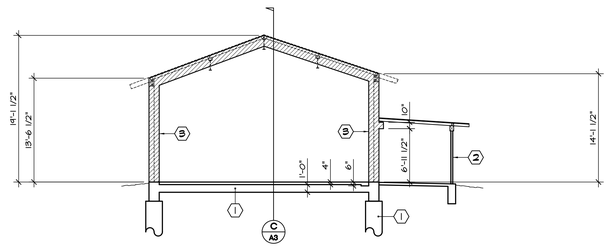
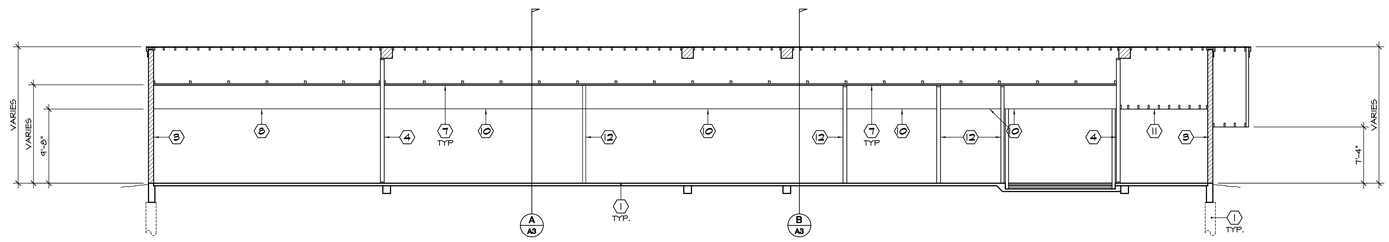


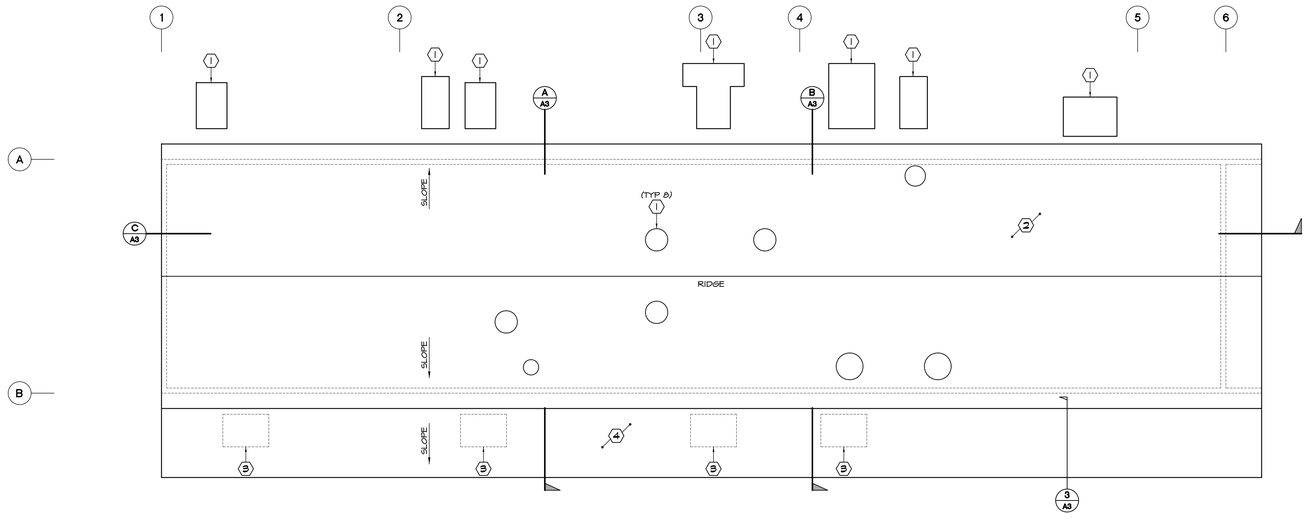
SECTION | SCALE: 1/8" = 1'-0" | A



SECTION (RIGID FRAME) | SCALE: 1/8" = 1'-0" | B



SECTION | SCALE: 1/8" = 1'-0" | C



ROOF PLAN | SCALE: 1/8" = 1'-0" | D

N

SECTION KEYNOTES:

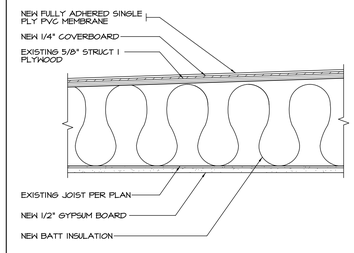
1. EXISTING CONCRETE FOUNDATION
2. EXISTING STEEL COLUMN
3. EXISTING CONCRETE WALL - PROTECT
4. EXISTING STUD WALL - PROTECT
5. EXISTING 3x6 MULLION - PROTECT
6. EXISTING ASPHALT SHINGLE ROOF - PROTECT
7. EXISTING FRAMED CEILING - PROTECT
8. EXISTING SUSPENDED CEILING - PROTECT
9. EXISTING CROSS BRACING AT ROOF BEAMS
10. NEW SUSPENDED CEILING - SEE CEILING PLAN DRAWINGS
11. NEW HARDLID CEILING - SEE CEILING PLAN DRAWINGS
12. NEW STUD WALL TO BOTTOM OF FRAMED CEILING - SEE FLOOR PLAN DRAWINGS

ROOF PLAN KEYNOTES:

1. NEW MECHANICAL EQUIPMENT - SEE MECHANICAL DRAWINGS
2. EXISTING ASPHALT SHINGLE ROOF - PROTECT
3. EXISTING MECHANICAL EQUIPMENT TO BE REMOVED, EXISTING OPENINGS TO BE INFILLED AS REQUIRED
4. NEW ROOFING OVER EXISTING STRUCTURE (1/A3)

NOTES:

1. ALL ROOFS TO BE CLASS A (UNO) w/ 1.5MM REINFORCED PVC MEMBRANE OVER 1/4" COVERBOARD.
2. CONTRACTOR RESPONSIBLE TO VERIFY EXACT PLACEMENT OF ROOF MOUNTED MECHANICAL EQUIPMENT TO AVOID CONFLICTS WITH ELECTRICAL ITEMS, PLUMBING LINES, OR OTHER MECHANICAL EQUIPMENT.



ROOFING ASSEMBLY - INSULATED | SCALE: 3" = 1'-0" | E

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
SECTION AND ROOF PLAN

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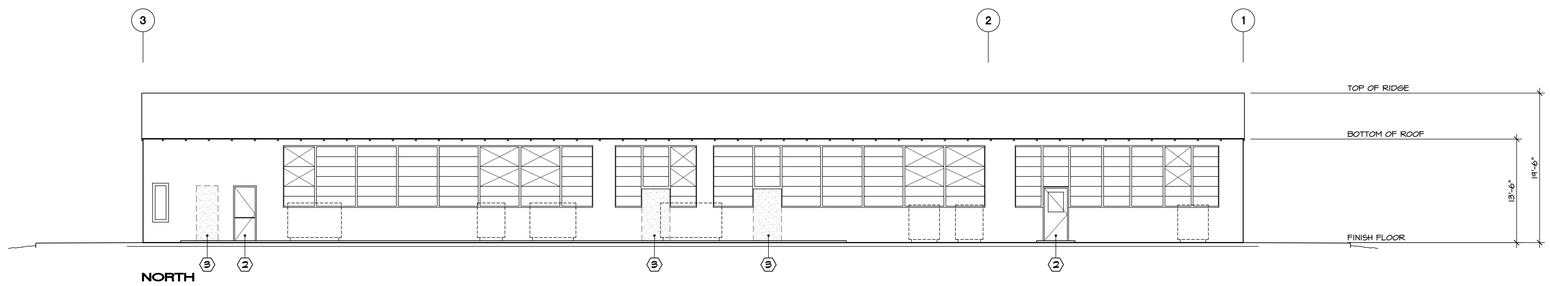
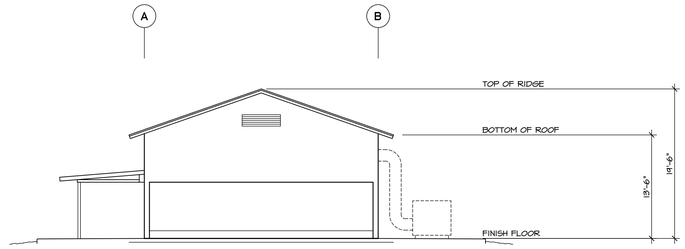
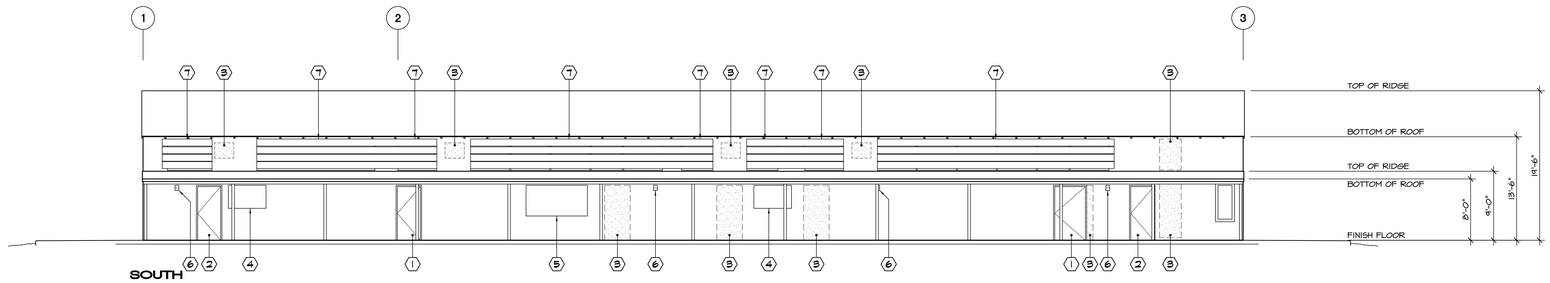


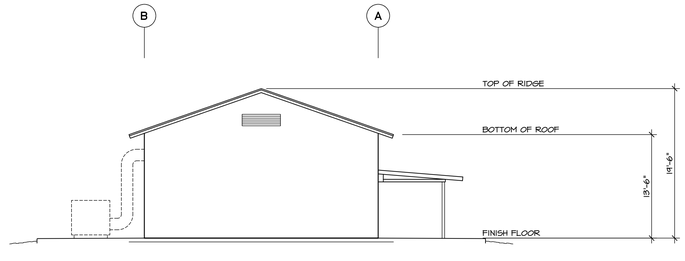
NORTH



EAST



SOUTH



WEST

KEYNOTES:

1. NEW DOOR / WINDOW PER PLAN
2. EXISTING DOOR / WINDOW TO REMAIN, PROTECT
3. INFILL OPENING, PLASTER & PAINT TO MATCH EXISTING WALLS (15 / AX5.2)
4. EXISTING DISPLAY CASE TO REMAIN, PROTECT
5. EXISTING BULLETIN BOARD TO REMAIN, PROTECT
6. EXISTING OUTDOOR LIGHTING TO REMAIN, PROTECT
7. REMOVE EXISTING LOUVERS

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CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title

EXTERIOR ELEVATIONS

LICENSED ARCHITECT
JIMMIE SANDERS
No. C-7644
RENEWAL DATE
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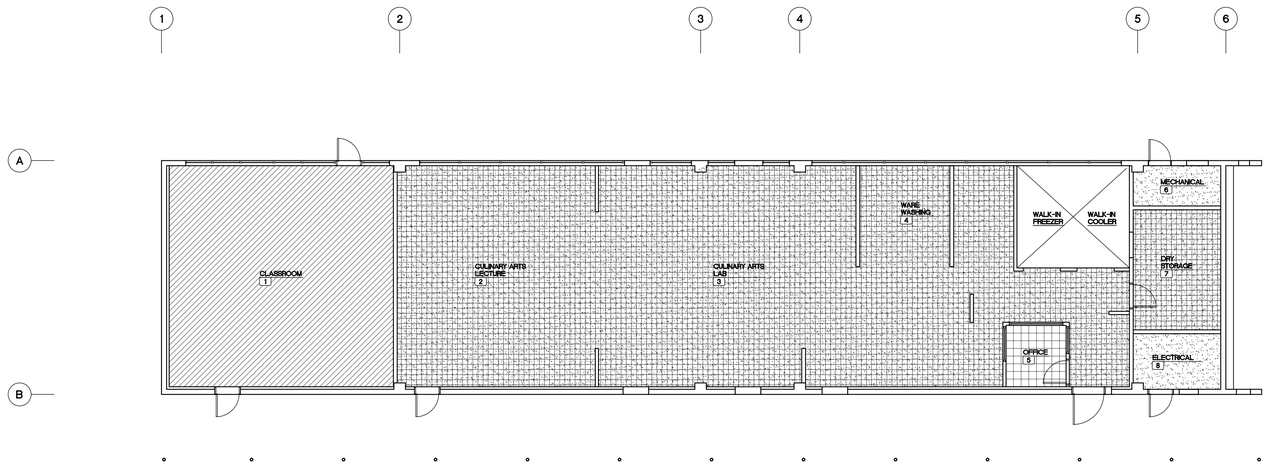
EXTERIOR ELEVATIONS

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



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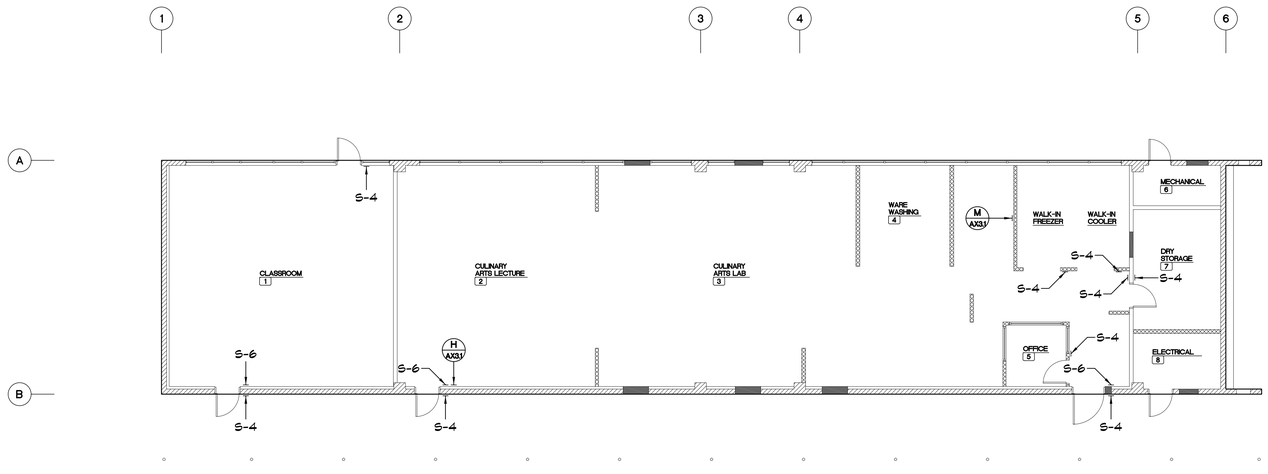
FLOORING PLAN — SCALE: 1/8" = 1'-0" — A

LEGEND:

- QUARRY TILE (8"x8") - FIELD COLOR
- RUBBER TILE (18"x18") - FIELD COLOR
- SEALED CONCRETE
- CARPET TILE (36"x36")

NOTES:

1. FOR SIGN TYPES SEE (A/AX3.1)
2. GLAZING MOUNTED SIGNS TO HAVE MATCHING BLANK SIGN ON OPPOSING SIDE AT LOCATIONS WITHOUT SIGN SPECIFIED ON BOTH SIDES.
3. GLAZING MOUNTED SIGNS TO HAVE MATCHING BLANK SIGN ON OPPOSING
4. ASSISTIVE LISTENING DEIVE SYSTEMS SHALL BE INSTALLED IN ASSEMPLY AREAS FOR PEOPLE WITH HEARING IMPAIRMENTS, PER SECTION 11B-219
5. SHALL PROVIDE QUANTITY OF 2 ASSISTIVE-LISTENING SYSTEMS. SHALL BE PROVIDED IN ACCORDANCE WITH CBC SECTION 11B-219 AND SHALL COMPLY WITH CBC SECTION 11B-706. SHALL BE HEARING-AID COMPATIBLE IN ACCORDANCE WITH CBC SECTION 11B-706.3



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SIGNAGE PLAN — SCALE: 1/8" = 1'-0" — B

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CALEXICO UNIFIED SCHOOL DISTRICT

CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title

FLOORING AND SIGNAGE PLANS

LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL DATE 08-31-19 STATE OF CALIFORNIA

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ROOM FINISH SCHEDULE

RM NO	NAME	FLOOR	BASE		WALLS				WAINSCOT		CEILING		CABINETRY		REMARKS
			HT	MATERIAL	NORTH	EAST	SOUTH	WEST	HT	MATERIAL	HT	MATERIAL	HT	MATERIAL	
1	CLASSROOM	CARPER TILE	6"	RUBBER	GYP BD, PAINT	GYP BD	GYP BD	GYP BD, PAINT	N/A	N/A	9'-8"	5/8P CEILING TILE	N/A	N/A	
2	CULINARY ARTS LECTURE	QUARRY TILE	6"	QUARRY TILE	FRP	FRP	FRP	FRP	N/A	N/A	9'-8"	5/8P CEILING TILE	N/A	N/A	SEE FOODSERVICE DRAWINGS
3	CULINARY ARTS	QUARRY TILE	6"	QUARRY TILE	FRP	FRP	FRP	FRP	N/A	N/A	9'-8"	5/8P CEILING TILE	N/A	N/A	SEE FOODSERVICE DRAWINGS
4	WARE WASHING	QUARRY TILE	6"	QUARRY TILE	FRP	FRP	FRP	FRP	N/A	N/A	9'-8"	5/8P CEILING TILE	N/A	N/A	SEE FOODSERVICE DRAWINGS
5	OFFICE	RUBBER TILE	6"	RUBBER	GYP BD, PAINT	GYP BD, PAINT	GYP BD, PAINT	GYP BD, PAINT	N/A	N/A	8'-0"	5/8P CEILING TILE	N/A	N/A	
6	MECHANICAL	SEALED CONCRETE	6"	RUBBER	(E) GYP BD	(E) GYP BD	(E) GYP BD	(E) GYP BD	N/A	N/A	OTS	GYP BD, PAINT	N/A	N/A	
7	DRY STORAGE	QUARRY TILE	6"	QUARRY TILE	GYP BD, PAINT	GYP BD, PAINT	GYP BD, PAINT	GYP BD, PAINT	N/A	N/A	9'-8"	5/8P CEILING TILE	N/A	N/A	SEE FOODSERVICE DRAWINGS
8	ELECTRICAL	SEALED CONCRETE	6"	RUBBER	GYP BD, PAINT	GYP BD, PAINT	(E) GYP BD	(E) GYP BD	N/A	N/A	OTS	GYP BD, PAINT	N/A	N/A	

DOOR SCHEDULE

NO	TYPE	DOOR				FRAME	HARDWARE HEADING	FIRE RATING	GLAZING		FRAME DETAILS - SHEET AX13 UNO				REMARKS
		SIZE	THICKNESS	CORE	MATERIAL				TYPE	LOW-E / TINT	JAMB	SILL	HEAD	MULLION	
1	S-1	(E) 3'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	1	NR	N/A	N/A	3	7 / SIM	3	N/A	PANIC HARDWARE
2	S-1	3'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	2	NR	N/A	N/A	3	7 / SIM	3	N/A	PANIC HARDWARE
3	S-2	4'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	2	NR	N/A	N/A	3	7 / SIM	3	N/A	PANIC HARDWARE
4	S-1	(E) 3'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	3	NR	N/A	N/A	3	7 / SIM	3	N/A	
5	S-1	3'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	1	NR	N/A	N/A	3	7 / SIM	3	N/A	
6	S-1	(E) 3'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	3	NR	N/A	N/A	3	7 / SIM	3	N/A	
7	S-1	3'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	4	NR	N/A	N/A	3	7 / SIM	3	N/A	
8	S-1	3'-0" x 7'-0"	1 3/4"-16 GA	POLYURETHANE	STEEL	MTL-16 GA	5	NR	N/A	N/A	3	7 / SIM	3	N/A	

EQUIPMENT SCHEDULE:

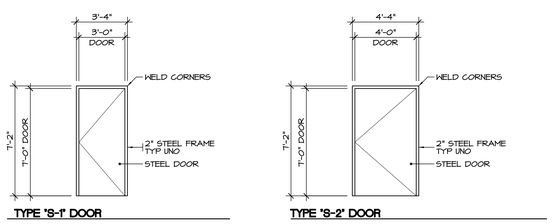
ITEM	DESCRIPTION	QTY	SIZE			ELECTRICAL						PLUMBING AND MECHANICAL										CLASSIFICATION (SEE NOTES)	REMARKS
			WIDTH	DEPTH	HEIGHT	VOLTS	PHASE	KW	HP	AMPS	CONNECTION	WATER		DRAIN	GAS						AIR	EXH	
												COLD	HOT		NG	02	C2H2	CO2	C25	AR			
1	FIRE EXTINGUISHER	3																				"K"	SEE DETAIL 1/AX3.1

ROOM FINISH SCHEDULE NOTES:

1. ALL OUTSIDE GYP-BRD CORNERS @ WALLS AND SOFFITS SHALL BE FINISHED WITH "BULLNOSE" PAPER FACED METAL CORNER BEAD.
2. GYPSUM BOARD FINISH AT WALLS AND CEILINGS TEXTURED "LIGHT SKIP TROWEL". PROVIDE SAMPLE FOR APPROVAL.
3. ALL INTERIOR FINISHES SHALL COMPLY W/ CBC CHAPTER 8, CFC CHAPTER 8, AND CCR TITLE 19, 3.08 AND 3.21.
4. SLIP RESISTANT TILE: SLIP RESISTANT TILE SHALL HAVE SUFFICIENT ABRASIVES ADDED SUCH THAT THE STATIC COEFFICIENT OF FRICTION WET OR DRY, SHALL BE NOT LESS THAN 0.6 FOR WALKING SURFACES AND 0.8 FOR RAMPS WHEN TESTED IN ACCORDANCE W/ ASTM DESIGNATION: C 1028.
5. ALL INTERIOR FINISHES SHALL BE OF MAX FLAME SPREAD CLASS II W/ AN INDEX OF 26-75.
6. SEE 6/AX13 7/AX13 FOR FLOORING TRANSITION DETAILS
7. ALL ONE HOUR RATED CEILINGS AND WALLS SHALL BE AS PER C.B.C. TABLE T720.1, 14-1.3.

DOOR SCHEDULE NOTES:

1. FOR DOOR TYPES SEE SHEET A/AX1.1
2. SEE A/AX3.1 F/AX3.1 FOR SIGNAGE.
3. ALL DOOR THRESHOLD SHALL COMPLY W/ 6/AX13 7/AX13
4. FOR LIGHTED EXIT SIGNS SEE ELECTRICAL DRAWINGS.
5. SIGNAGE AT EXIT DOORS MUST READ "EXIT" AND "EXIT ROUTE" AT DOORS LEADING TO EXIT DOORS.
6. MINIMUM FRAME LAP AT GLAZING IS 1/4" AND MINIMUM GLASS EDGE CLEARANCE IS 1/8"
7. EACH GLAZING LIGHT SHALL BEAR THE MANUFACTURE'S LABEL DESIGNATING THE TYPE AND THICKNESS OF GLASS. WHEN APPROVED BY THE ENFORCING AGENCY, LABELS MAY BE OMITTED FROM OTHER THAN SAFETY GLAZING MATERIALS, PROVIDED AN AFFIDAVIT IS FURNISHED BY THE GLAZING CONTRACTOR CERTIFYING THAT EACH LIGHT IS GLAZED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.
8. EACH LIGHT OF SAFETY GLAZING MATERIAL SHALL BE IDENTIFIED BY A PERMANENT LABEL THAT SPECIFIES THE LABELER, WHETHER THE MANUFACTURE OR INSTALLER, AND STATE THAT SAFETY GLAZING MATERIAL HAS BEEN UTILIZED IN SUCH INSTALLATION AND SHALL SPECIFY THAT THE LABEL SHALL NOT BE REMOVED, THE IDENTIFICATION SHALL BE ETCHED OR CERAMIC FIRED ON THE GLASS AND READABLE FROM THE INSIDE OF THE BLDG AFTER INSTALLATION.
9. GLAZING AT EXTERIOR DOOR SHALL BE MOUNTED ON EXTERIOR SIDE OF JAMBS.
10. MAXIMM EFFORT TO OPERATE DOOR SHALL NOT EXCEED 5lbs. (22 N) PER (CBC 1008.1.3). MAXIMUM EFFORT TO OPERATE FIRE DOORS TO BE PER FIRE MARSHAL, BUT SHALL NOT EXCEED 15lbs.
11. ALL EXIT DOORS SHALL OPERABLE FROM INSIDE W/O ANY SPECIAL KNOWLEDGE, EFFORT OR TOOLS
12. FOR HARDWARE HEADINGS SEE SPECIFICATIONS.



STEEL FRAME DOOR TYPES

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

A

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
ROOM FINISH, DOOR, WINDOW, EQUIPMENT SCHEDULES

LICENSED ARCHITECT JIMMIE L. SANDERS No. C-7647 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

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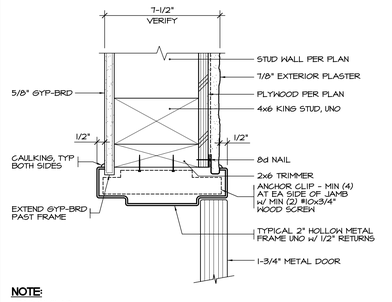
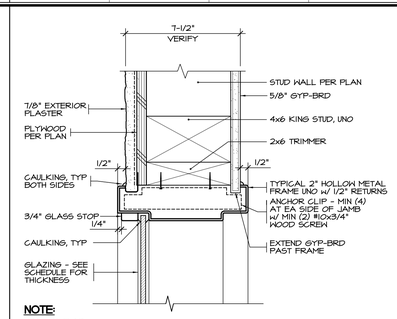


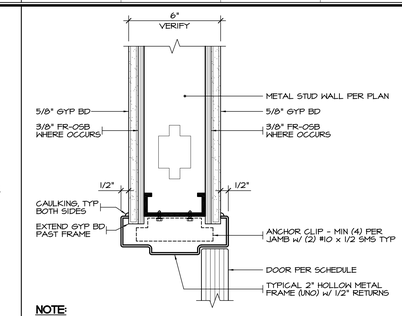
NOTE:
HEAD SIMILAR

EXTERIOR WOOD STUD — SCALE: 3" = 1'-0" — 1



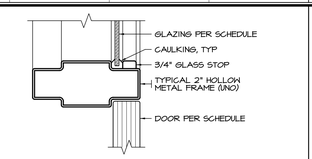
NOTE:
HEAD SIMILAR

EXTERIOR WOOD STUD WINDOW — SCALE: 3" = 1'-0" — 2

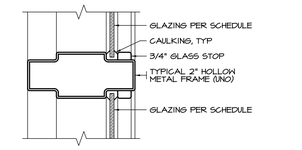


NOTE:
HEAD SIMILAR

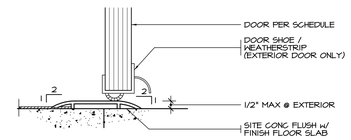
INTERIOR METAL STUD — SCALE: 3" = 1'-0" — 3



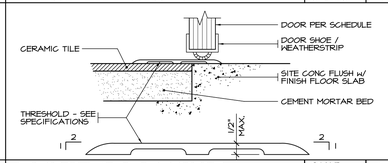
DOOR JAMB AND GLAZING — SCALE: 3" = 1'-0" — 4



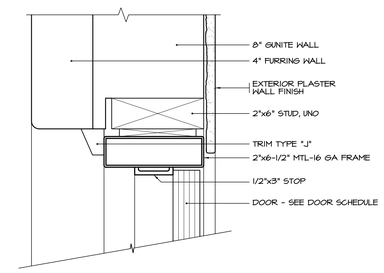
WINDOW MULLION — SCALE: 3" = 1'-0" — 5



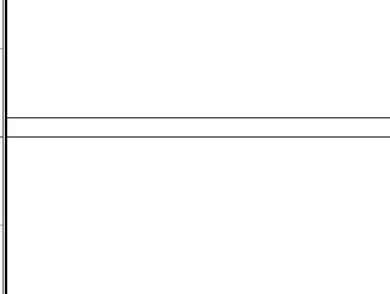
TYPICAL THRESHOLD — SCALE: 3" = 1'-0" — 6



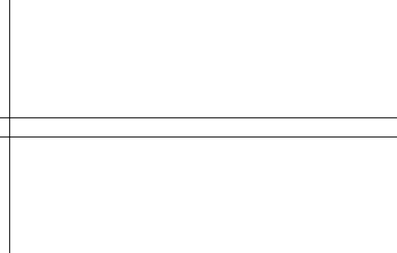
TYPICAL TILE THRESHOLD — SCALE: 3" = 1'-0" — 7



EXTERIOR DOOR - HEAD — SCALE: 3" = 1'-0" — 8



EXTERIOR DOOR - JAMB — SCALE: 3" = 1'-0" — 9



EXTERIOR DOOR - SILL — SCALE: 3" = 1'-0" — 10

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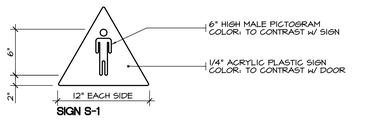
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

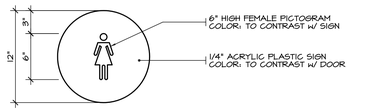
Sheet Title
DOOR AND WINDOW DETAILS

LICENSED ARCHITECT
JIMMIE SANDERS
No. 7644
RENEWAL DATE
08-31-19
STATE OF CALIFORNIA

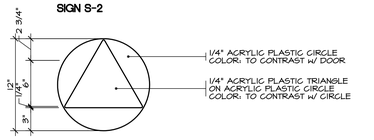
Document Date	Project Number
09-23-18	09-23-18
Date Last Revised	Sheet Number
	AX1.3



SIGN S-1



SIGN S-2



SIGN S-3

NOTES:

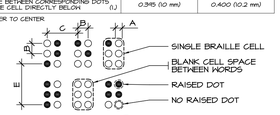
1. CHARACTER TYPE:
   CHARACTERS ON TACTILE SIGNS SHALL BE RAISED 1/32 INCH (0.794 MM) MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY CONTRACTED (GRADE 2) BRAILLE (SEE NOTE 5 BELOW). (CBC 11B-703.2)
2. CHARACTER SIZE:
   RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8 INCH (15.9 MM) AND A MAXIMUM OF 2 INCHES (51 MM) HIGH. (CBC 11B-703.2.5)
3. FINISH AND CONTRAST:
   CONTRAST BETWEEN CHARACTERS, SYMBOLS AND THEIR BACKGROUND MUST BE 70% MINIMUM AND HAVE A NON-GLARE FINISH. (CBC 11B-1013.1)
4. PROPORTIONS:
   CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN AND 110% MAX OF THE HEIGHT OF THE UPPERCASE LETTER "I". (CBC 11B-703.2.4) STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15% MAX OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.2.6)
5. BRAILLE:
   BRAILLE SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH SECTIONS 11B-703.3 AND 11B-703.4.

   DIMENSIONS AND CAPITALIZATION: BRAILLE DOTS SHALL HAVE ROUNDED SHAPE AND SHALL COMPLY WITH TABLE 11B-703.3 (THE INDICATION OF AN UPPERCASE LETTER OR LETTERS SHALL ONLY BE USED BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS, AND ACRONYMS.

   POSITION: BRAILLE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT. FLUSHLEFT OR CENTERED. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8 INCH (9.5 mm) MINIMUM AND 1/2 INCH (12.7 mm) MAXIMUM FROM ANY OTHER TACTILE CHARACTERS AND 3/8 INCH (9.5 mm) MINIMUM FROM RAISED BORDERS AND DECORATIVE ELEMENTS.

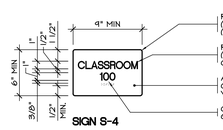
KEYNOTE	MEASUREMENT RANGE	MINIMUM IN INCHES	MINIMUM IN INCHES
A	DOT BASE DIAMETER	0.059 (1.5 mm)	0.063 (1.6 mm)
B	DISTANCE BETWEEN TWO DOTS IN THE SAME CELL	0.100 (2.5 mm)	N/A
C	DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS (1)	0.300 (7.6 mm)	N/A
D	DOT HEIGHT	0.025 (0.6 mm)	0.037 (0.9 mm)
E	DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW (1)	0.345 (10 mm)	0.400 (10.2 mm)

(1) MEASURED CENTER TO CENTER



6. MOUNTING LOCATIONS:
   FOR ALL MOUNTING LOCATIONS SEE DETAIL F/AX3.1
7. ALL INTERNATIONAL SYMBOL OF ACCESSIBILITY (15A) PROPORTIONS SHALL MATCH CBC FIGURE 11B-703.7.2.1.
8. EDGES AND VERTICES ON GEOMETRIC SYMBOLS:
   EDGES SHALL BE EASED OR ROUNDED AT 1/16 INCH MIN, OR CHAMFERED AT 1/8 INCH MAX. VERTICES SHALL BE RADIUSED BETWEEN 1/8 INCH MIN AND 1/4 INCH MAX (CBC 11B-703.7.2.6.4) AND SHALL COMPLY WITH CBC FIGURE 11B-703.7.2.6.4.

ACCESSIBILITY SIGNAGE — SCALE: 1 1/2" = 1'-0" — A



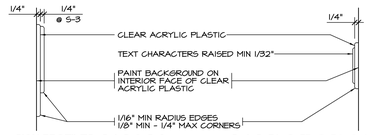
SIGN S-4

SIGN S-5A

SIGN S-5B

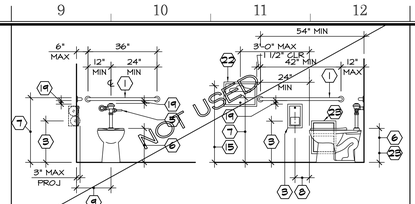
SIGN S-5C

SIGN S-6

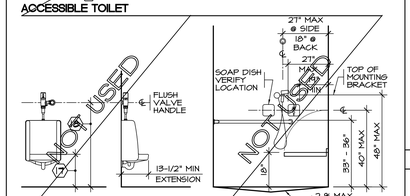


SIGN PROFILES S-1, S-2, S-3 S-4, S-5A, S-5B, S-5C, S-6

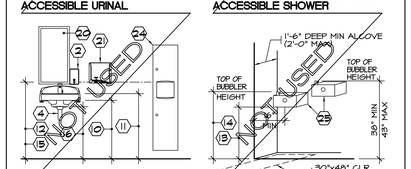
SIGN LOCATIONS / MOUNTING — SCALE: 1/2" = 1'-0" — F



ACCESSIBLE TOILET



ACCESSIBLE URINAL — ACCESSIBLE SHOWER



ACCESSIBLE LAVATORY / MIRROR — HI-LO DRINKING FOUNTAIN

KEYNOTES:

1. GRAB BAR E/AX3.1
2. SOAP DISPENSER
3. RECESSED TISSUE DISPENSER (CONTRACTOR TO PROVIDE RECESS) J/AX3.1 3" MAX PROJECTION FROM WALL
4. INSULATE TRAP AND SUPPLY WATER PIPING, NO SHARP OR ABRASIVE EDGES FROM WALL
5. HANDLE ON WIDE SIDE OF TOILET STALL
6. 17"-19" (ADULT TOILET SEAT)
7. 33"-36" (ADULT GRAB BAR)
8. 7" MIN - 9" MAX
9. 17"-18" (ADULT TOILET)
10. 29" MIN (ADULT LAVATORY)
11. 34" MAX (ADULT LAVATORY)
12. (TO BOTTOM OF REFLECTIVE SURFACE) 35" MAX AT MIRROR, NOT ABOVE LAVATORY NOR COUNTERTOP - 40" MAX (ADULT MIRROR)
13. DRINKING FOUNTAIN KNEE SPACE - 27" MIN (AGES 5-ADULT)
14. - 36" MAX (ADULT BUBBLER)
15. - 40" MAX (ADULT DISPENSER / CONTROL)
16. - 27" MIN (ADULT LAVATORY)
17. - 17" MAX AT URINALS
18. - 44" MAX AT URINALS
19. 1-1/2" MIN CLR TO THE TANGENT POINT OF GRAB BAR
20. 16" x 30" MIRROR W/ 9S FRAME
21. HAND DRYER - 4" MAX PROJECTION
22. TOILET SEAT COVER DISPENSER
23. SEMI-RECESSED FEMININE NAPKIN DISPOSAL - SAME HEIGHT AS TOILET SEAT, 3" MAX PROJECTION
24. RECESSED TOWEL DISPENSER / WASTE RECEPTACLE
25. HI-LO DRINKING FOUNTAIN NOTES:
    1. CONTROLS TO BE LOCATED WITHIN 6" OF FRONT OF DRINKING FOUNTAIN
    2. SPOUT IS LOCATED WITHIN 5" OF FRONT OF DRINKING FOUNTAIN & 15" MIN FROM FACE OF WALL
    3. ANGLE OF WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT
    4. IF THE SPOUT IS LESS THAN 3" FROM FRONT OF THE DF THE ANGLE OF WATER STREAM SHALL BE 30° MAX
    5. IF THE SPOUT IS BETWEEN 3"-5", ANGLE OF STREAM SHALL BE 15° MAX
    6. SPOUT TO PROVIDE 4" MIN HIGH FLOW OF WATER
    7. CONTROLS TO BE OPERATED WITH 5LB MAX FORCE PER CBC 11B-309.4
    8. DRINKING FOUNTAINS TO BE 18" MIN - 19" MAX IN DEPTH

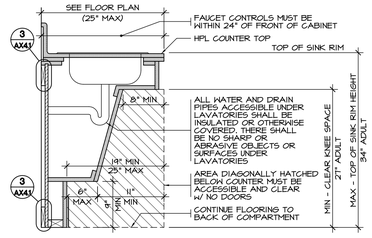
NOTE:

ALL TRAPS AND ALL SUPPLY WATER PIPING, WHETHER LOCATED AT LAVATORIES OR AT SINKS SET IN COUNTERS, TO BE INSULATED. NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

FIXTURE MOUNTING HEIGHTS — SCALE: 3/8" = 1'-0" — B

NOTE:

1. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO MORE THAN 5 lbs. LEVER OPERATED PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE ACCEPTABLE. SELF CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.



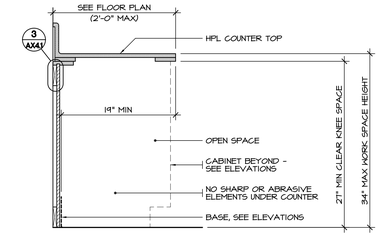
ACCESSIBLE SINK AND CABINET — SCALE: 1" = 1'-0" — C

NOTE:

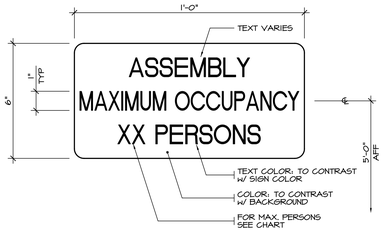
PROVIDE MECHANICAL MOUNTING WITH VANDAL RESISTANT FASTENERS. COMPLY WITH ARTICLES 480.B A4.30 OF THE ADAAG.

RECESSED TISSUE DISPENSER — SCALE: NTS — J

ACCESSIBLE WORK STATION — SCALE: 1" = 1'-0" — D



MAXIMUM OCCUPANCY SIGN — SCALE: NTS — G

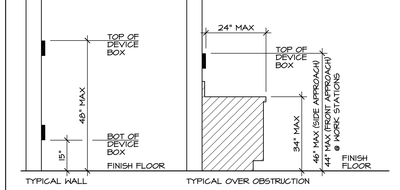


ROOM #	TEXT	MAX PERSONS
1	CULINARY ARTS	XX

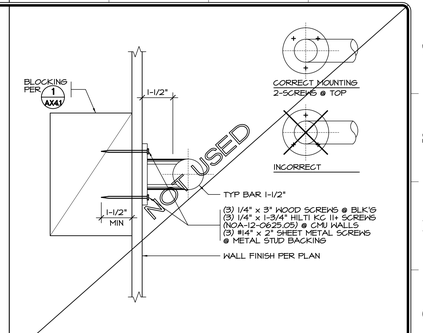
MAXIMUM OCCUPANCY SIGN — SCALE: NTS — G

NOTES:

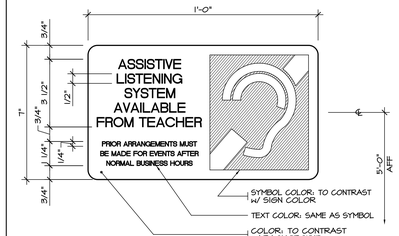
1. FORWARD OR FRONT APPROACH FOR DEVICES MOUNTED ABOVE COUNTERS ASSUMES THAT DIRECTLY BELOW THE DEVICE, THE COUNTER HAS A 30"x27"x19" DEEP CLEAR OPENING.



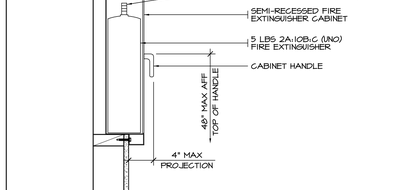
TYPICAL MOUNTING HEIGHTS — SCALE: NTS — K



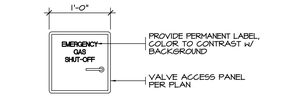
GRAB BAR DETAIL — SCALE: 3/4" = 1'-0" — E



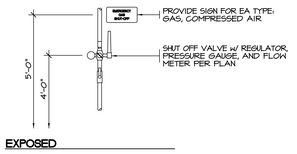
ASSISTIVE LISTENING SIGN — SCALE: NTS — H



SEMI-RECESSED FIRE EXTINGUISHER — SCALE: NTS — L



VALVE ACCESS PANEL



EXPOSED

GAS SHUTOFF SIGN — SCALE: NTS — M

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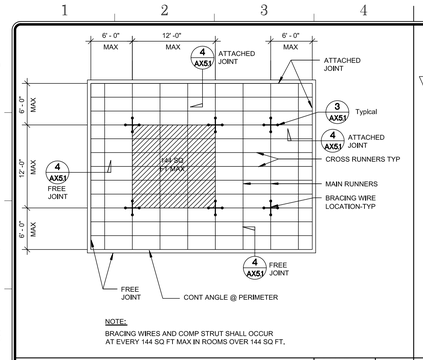
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
ACCESS COMPLIANCE DETAILS

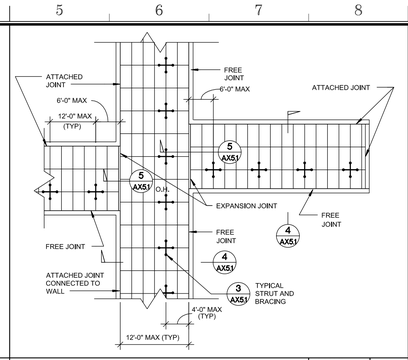
LICENSED ARCHITECT JIMMIE SANDERS No. 17644 RENEWAL DATE 08-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-23CX
Date Last Revised	Sheet Number
	AX3.1

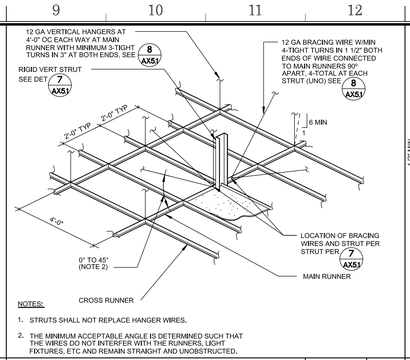


NOTE:
BRACING WIRES AND COMP STRUT SHALL OCCUR AT EVERY 144 SQ FT MAX IN ROOMS OVER 144 SQ FT.

TYPICAL CEILING PLAN
SCALE: NTS | 1

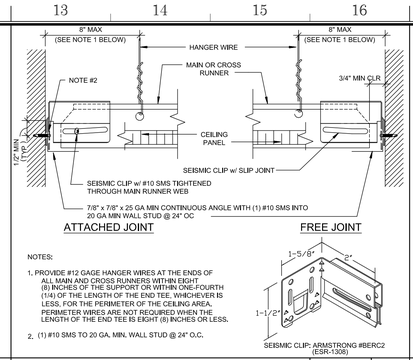


TYPICAL CORRIDOR CEILING PLAN
SCALE: NTS | 2



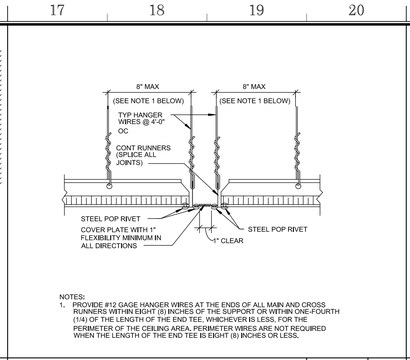
NOTES:
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC AND REMAIN STRAIGHT AND UNOBSTRUCTED.

SUSPENSION AND BRACING
SCALE: NTS | 3



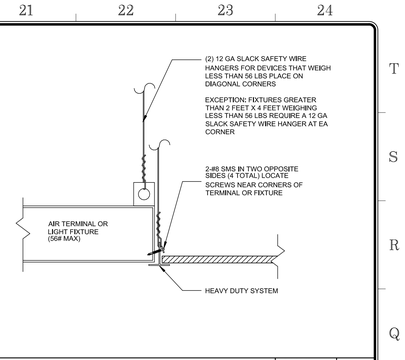
NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE. WHICHEVER IS LESS. FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. (1) #10 SMS TO 20 GA. MIN. WALL STUD @ 24" O.C.

CEILING PERIMETER
SCALE: NTS | 4

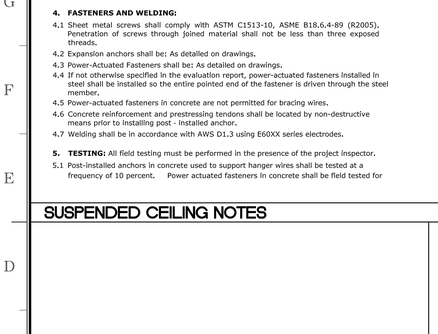


NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE. WHICHEVER IS LESS. FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

EXPANSION JOINT
SCALE: NTS | 5



TYPICAL LIGHT FIXTURE SUPPORT
SCALE: NTS | 6



COMPRESSION STRUT
SCALE: NTS | 7

1. CEILING SYSTEM GENERAL NOTES:

1.1 Ceiling system components shall comply with ASTM C635-07 and Section 5.1 of ASTM E580-10a.

1.2 The ceiling grid system must be rated heavy duty as defined by ASTM C635-08.

1.3 Ceiling systems. The following ceiling system(s) is/are part of the scope of this project:

Manufacturer's Name: ARMSTRONG
Product Evaluation Report Type and Number: ESR-1308
Manufacturer's Model Number - main runner: PRELUDE XL #7301
Manufacturer's catalog number - cross runner: PRELUDE XL #XL7341 (4ft), #XL7328 (2ft)

1.4 Seismic Wall Clip:

Manufacturer's Model: BERC2 (ESR-1308)

1.5 Ceiling panels shall not support any light fixtures, air terminals or devices.

1.6 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide ¼" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide ¼" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip.

2. MATERIALS:

2.1 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641-09a. Wire shall be #12 gage (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi.

2.2 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653-11, or other equivalent sheet steel listed in Section A2.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members 2007, including supplement 2 dated 2010 (AISI S100-07/S2-10). Material 43 mil (18 gage) and lighter shall have minimum yield strength of 33 ksi. Material 54 mil (16 gage) and heavier shall have a minimum yield strength of 50 ksi.

2.3 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 carbon steel with G90 galvanizing. EMT shall have minimum yield strength (Fy) of 30 ksi and minimum ultimate strength (Fu) of 48 ksi.

3. ATTACHMENT OF HANGER AND BRACING WIRES:

3.1 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.

3.2 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to: piping, ductwork, conduit and equipment.

3.3 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.

3.4 Slack safety wires shall be considered hanger wires for installation and testing requirements.

3.5 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire. (e.g. bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.)

4. FASTENERS AND WELDING:

4.1 Sheet metal screws shall comply with ASTM C1513-10, ASME B18.6.4-89 (R2005). Penetration of screws through joined material shall not be less than three exposed threads.

4.2 Expansion anchors shall be: As detailed on drawings.

4.3 Power-Actuated Fasteners shall be: As detailed on drawings.

4.4 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.

4.5 Power-actuated fasteners in concrete are not permitted for bracing wires.

4.6 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post - installed anchor.

4.7 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes.

5. TESTING: All field testing must be performed in the presence of the project inspector.

5.1 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power actuated fasteners in concrete shall be field tested for 200 lbs. in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1913A.7.

5.2 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1913A.7.

6. LIGHT FIXTURES:

6.1 All light fixtures shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the fixture. A minimum of two screws or approved fasteners are required at each light fixture, per ASTM E580, Section 5.3.1.

6.2 Surface-mounted light fixtures shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gage. Rotational spring catches do not comply. A #12 gage slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when light fixtures are eight (8) feet or longer or exceed 56 lb. Maximum spacing between supports shall not exceed eight (8) feet.

6.3 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.

6.4 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.

6.5 Light fixtures weighing greater than 10 lb. but less than or equal to 56 lbs. may be supported directly on the ceiling runners, but they shall have a minimum of two (2) #12 gage slack safety wires connected from the fixture housing at diagonal corners to the structure above.
Exception: All light fixtures greater than two by four feet weighing less than 56 lbs. shall have a #12 gage slack safety wire at each corner.

6.6 All Light fixtures weighing greater than 56 lb. shall be independently supported by not less than four (4) taut #12 gage hanger wires (one at each corner) attached from the fixture housing to the structure above or other approved hangers. The four (4) taut #12 gage wires or other approved hangers, including their attachment to the structure above, shall be capable of supporting four (4) times the weight of the fixture.

7. SERVICES WITHIN THE CEILING:

7.1 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or approved fasteners are required. A minimum of two attachments are required at each component.

7.2 Ceiling-mounted air terminals or other services weighing less than or equal to 20 lb. shall have one (1) #12 gage slack safety wire attached from the terminal or service to the structure above.

7.3 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 lb. but less than or equal to 56 lb. shall have two (2) #12 gage slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.

7.4 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 lb. shall be supported directly from the structure above by not less than four (4) taut #12 gage hanger wires attached from the terminal or service to the structure above or other approved hangers.

8. OTHER DEVICES WITHIN THE CEILING:

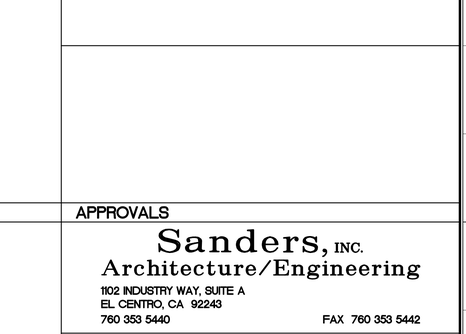
8.1 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid. In addition, devices weighing more than 10 lbs. shall have a #12 gage slack safety wire anchored to the structure above. Devices weighing more than 20 lb. shall be supported independently from the structure above.

SUSPENDED CEILING NOTES
SCALE: NTS | 9

TYPICAL WIRE TURNS | **HANGER WIRE TO WALL**

NOTE:
(1) WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES W/ SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION.

HANGER WIRE TO SAWN TIMBER | **BRACE WIRE TO WALL**



BRACE WIRE TO SAWN TIMBER

HANGER AND BRACING WIRE CONNECTIONS
NTS
SCALE: | 8

EQUIPMENT ANCHORAGE
SCALE: NTS | 10

TYPICAL TILE
SCALE: 3" = 1'-0" | 11

BACKING AT STUDS
SCALE: 1 1/2" = 1'-0" | 12

NOTE:
PROVIDE ANCHORAGE AT TOP AND BOTTOM OF ALL FLOOR SUPPORTED CASEWORK OVER 5'-0".

LOWER CABINET ANCHORAGE
SCALE: 1 1/2" = 1'-0" | 13

APPROVALS

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Project Title
CALEXICO UNIFIED HIGH SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

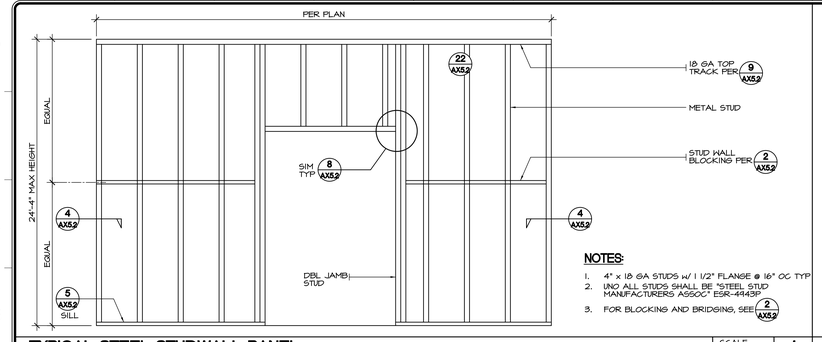
Sheet Title
INTERIOR ARCHITECTURAL DETAILS

LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL 08-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-25CX
Date Last Revised	Sheet Number
	AX5.1

TYPICAL STEEL STUDWALL PANEL

SCALE: 1/2" = 1'-0" | 1

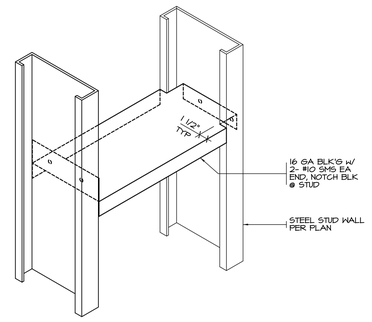


NOTES:

1. 4" x 18 GA STUDS w/ 1 1/2" FLANGE @ 16" OC TYP
2. UNO ALL STUDS SHALL BE "STEEL STUD MANUFACTURERS ASSOC" ESR-4943P
3. FOR BLOCKING AND BRIDGING, SEE 2 AX5.2

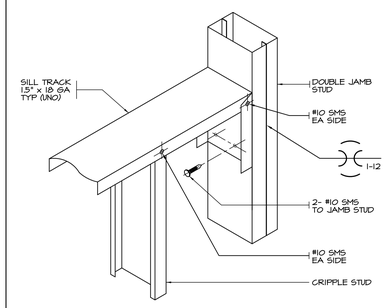
TYPICAL BLOCKING AND BRIDGING

SCALE: NTS | 2



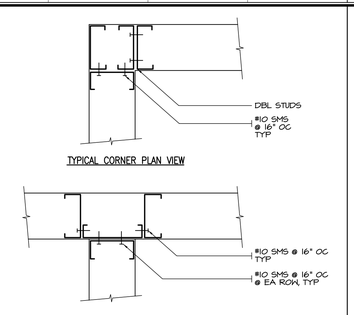
TYPICAL SILL TO JAMB STUD CONN.

SCALE: NTS | 3



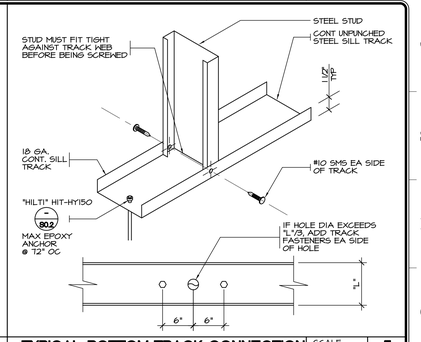
TYP CORNER CONNECTION

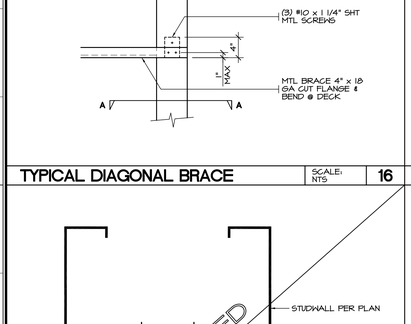
SCALE: 1 1/2" = 1'-0" | 4

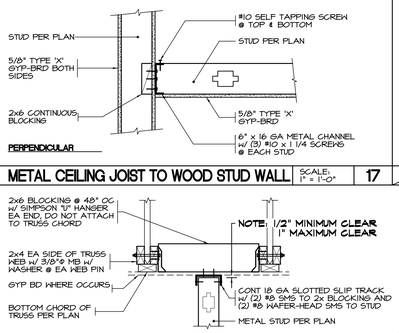


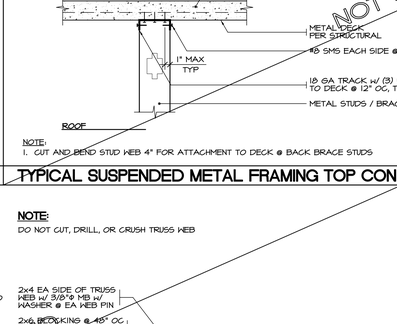
TYPICAL BOTTOM TRACK CONNECTION

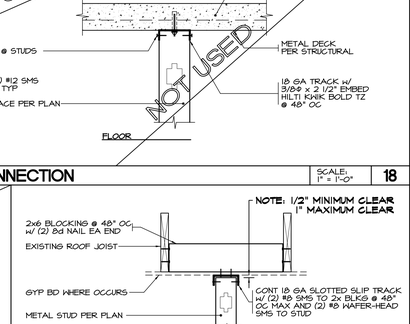
SCALE: NTS | 5











NONBEARING HEADER SCHEDULE

OPENING	HEADER SIZE	HEADER CONNECTOR	REMARK
0 ≥ 6'-0"	2- 400S162-43	4- #10 FLAT HEAD SMS ES	
6'-0" ≥ 8'-0"	2- 600S162-43	6- #10 FLAT HEAD SMS ES	
8'-0" ≥ 10'-0"	2- 600S162-54	8- #10 FLAT HEAD SMS ES	
10'-0" ≥ 12'-0"	2- 800S162-54	10- #10 FLAT HEAD SMS ES	PROVIDE 600S162-54 SILL TRACK

TYP BOTTOM TRACK SPLICE

SCALE: 1" = 1'-0" | 6

TYPICAL BACKING

SCALE: NTS | 7

TYP NON-BRG WALL HEADER

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

TYP NON-BRG WALL TRACK SPLICE

SCALE: 1" = 1'-0" | 9

TYPICAL NON-BRG WALL

SCALE: NTS | 10

METAL CEILING JOIST TO METAL WALL

SCALE: 1" = 1'-0" | 11

METAL CEILING JOIST TO CMU WALL

SCALE: 1" = 1'-0" | 12

CEILING JOIST MID-SPAN SUPPORT

SCALE: 1" = 1'-0" | 13

TYPICAL SOFFIT FRAMING

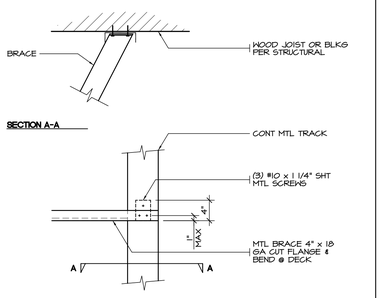
SCALE: 1" = 1'-0" | 14

INFILL EXISTING DOOR/WINDOW OPENING

SCALE: 1/2" = 1'-0" | 15

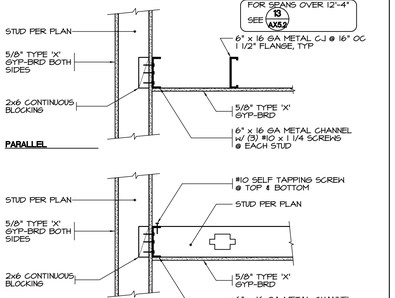
TYPICAL DIAGONAL BRACE

SCALE: NTS | 16



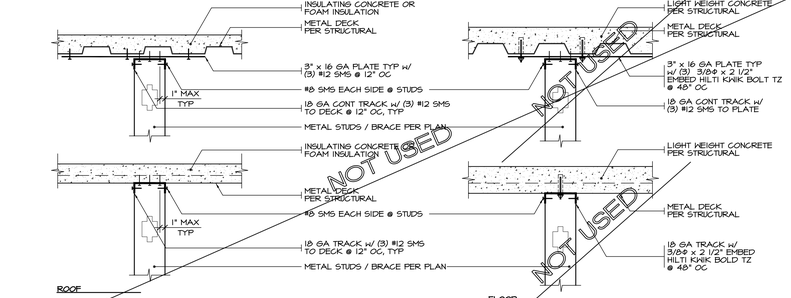
METAL CEILING JOIST TO WOOD STUD WALL

SCALE: 1" = 1'-0" | 17



TYPICAL SUSPENDED METAL FRAMING TOP CONNECTION

SCALE: 1" = 1'-0" | 18



EXPANSION ANCHORAGE NOTES:

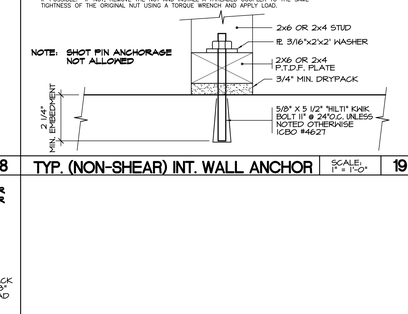
1. ONE PIECE TYPE EXPANSION ANCHORS SHALL BE "HILTI KWIK BOLT II" ANCHORS CONFORMING TO AND INSTALLED IN ACCORDANCE WITH THE ICBO REPORT 4627. A TORQUE WRENCH MAY BE USED TO TEST THESE ANCHORS IF CALIBRATED TO THE TENSION PROOF LOAD WITH THE SPECIFIED ANCHOR TO BE TESTED. TENSION PROOF LOADS AND MINIMUM EMBEDMENTS FOR THESE ANCHORS INSTALLED IN CONCRETE WITH A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF f'c = 3000 P.S.I. ARE AS FOLLOWS:

BOLT DIAMETER	1/2 INCH	5/8 INCH
MINIMUM EMBEDMENT	2 1/4 INCH	2 3/4 INCH
TENSION PROOF LOAD	2000 LBS.	2300 LBS.
TORQUE WRENCH – TORQUE	50 FT. LBS.	80 FT. LBS.

2. ALL EXPANSION ANCHORS LOADED IN EITHER PULLOUT OR SHEAR SHALL HAVE 50% OF THE BOLTS (ALTERNATE BOLTS IN ANY GROUP ARRANGEMENT) PROOF TESTED IN TENSION TO TWICE THE ALLOWABLE TENSION LOAD. IF THE DESIGN LOAD IS LESS THAN 75 LBS. ONLY ONE ANCHOR IN 10 NEED BE TESTED.
   WHEN INSTALLING DRILL IN ANCHORS TAKE CARE NOT TO DAMAGE EXISTING REINFORCING BARS.
3. TEST SHALL BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR.
4. ANCHOR SIZE REFERS TO THE THREAD SIZE FOR THE WEDGE AND SHELL CATEGORIES, AND TO THE ANCHOR OUTSIDE DIAMETER FOR THE SLEEVE CATEGORY.
5. APPLY PROOF LOAD TEST TO WEDGE AND SLEEVE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE THE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.

TYP. (NON-SHEAR) INT. WALL ANCHOR

SCALE: 1" = 1'-0" | 19



APPROVALS

TOILET PARTITION SUPPORT

SCALE: 3/4" = 1'-0" | 20

TYP NONBEARING WALL BRACING

SCALE: NTS | 21

TYP NONBEARING WALL BRACING

SCALE: NTS | 22

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Project Title
CALEXIOC UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
NON-BEARING METAL FRAMING

LICENSED ARCHITECT JIMMIE G. SANDERS C-17644 RENEWAL 08-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-23-18	18-25CX
Date Last Revised	Sheet Number
	AX5.2

DESIGN BASIS:

CODE: 2016 C.B.C. (CALIFORNIA BUILDING CODE TITLE) BASED ON 2015 IBC

GRAVITY LOADS:

1. ROOF LIVE LOAD 20 P.S.F. (REDUCIBLE)

WIND LOADS:

BASIC WIND SPEED (3-SECOND GUST)	115 MPH
WIND EXPOSURE	C
WIND RISK CATEGORY	III

SEISMIC DESIGN CRITERIA:

SEISMIC IMPORTANCE FACTOR, I	1.25
SEISMIC OCCUPANCY CATEGORY	III
MAPPED SPECTRAL RESPONSE ACCELERATION, Ss	1.500g
MAPPED SPECTRAL RESPONSE ACCELERATION, S1	0.600g
SITE CLASS	D
MAPPED SPECTRAL RESPONSE ACCELERATION, Sds	1.000g
MAPPED SPECTRAL RESPONSE ACCELERATION, Sd1	0.600g
SEISMIC DESIGN CATEGORY	D

GENERAL NOTES:

1. THE PROJECT SPECIFICATIONS ARE A PART OF THE CONTRACT DOCUMENTS.
2. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS BY: SANDERS, INC. ARCHITECTURE / ENGINEERING
3. THE CONTRACTOR SHALL REVIEW EXISTING CONDITIONS ON THE SITE DURING THE BIDDING. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK AND THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO PROCEEDING.
4. UNLESS OTHERWISE SHOWN OR NOTED, ALL PHASES OF WORK ARE TO CONFORM TO THE MINIMUM STANDARDS OF THE 2013 CALIFORNIA BUILDING CODE (2013 EDITION C.B.C.), RELATED REFERENCE STANDARDS (2013 EDITION CHAPTER 35), AND ANY A.S.T.M. SPECIFICATIONS WHICH THESE STANDARDS ARE BASED. WHERE CONFLICT BETWEEN BUILDING CODES AND SPECIFICATIONS OCCURS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
5. ALL A.S.T.M. DESIGNATIONS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST ADOPTED OR REVISED SPECIFICATION, AS OF THE DATE OF THESE DRAWINGS.
6. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS. DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
7. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
8. THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL REQUIREMENTS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR NON-STRUCTURAL
   A. SIZE AND LOCATION OF ALL OPENINGS.
   B. SIZE AND LOCATION OF ALL NONBEARING PARTITIONS.
   C. SIZE AND LOCATION OF ALL CONCRETE CURBS, WALKS, ROOF AND FLOOR DRAINS, SLOPES, DEPRESSED SLAB AREAS, ETC.
   D. FLOOR, ROOF AND WALL FINISHES.
   E. DIMENSION NOT SHOWN ON STRUCTURAL DRAWINGS.
   F. EQUIPMENT ANCHORAGE
9. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT LIFE AND THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING AND SHORING OF LOADS DUE TO CONSTRUCTION, EQUIPMENT, WIND, EARTHQUAKE, ETC. CONTRACTOR AT HIS OWN EXPENSE, SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN FIELD. CONTRACTOR SHALL CONFORM TO ALL SAFETY ORDINANCES, RULES AND CODES. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE SAFETY ITEMS.
10. SATISFACTORY EXECUTION OF CONSTRUCTION IS DEPENDENT UPON CONFORMANCE WITH THE INTENT OF THESE DRAWINGS. OWNER OR CONTRACTOR SHALL RETAIN A CALIFORNIA LICENSED CIVIL OR STRUCTURAL ENGINEER DURING CONSTRUCTION TO OBSERVE THE CONSTRUCTION AND STATE THAT THE STRUCTURE HAS BEEN BUILT IN GENERAL CONFORMANCE WITH THE INTENT OF THESE DRAWINGS.
11. THIS FIRM DOES NOT PRACTICE OR CONSULT IN THE FIELD OF SAFETY ENGINEERING. WE DO NOT DIRECT THE CONTRACTOR'S OPERATIONS AND WE CANNOT BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL OTHER THAN OUR OWN ON THE SITE. THE SAFETY OF OTHERS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHOULD NOTIFY THE OWNER IF HE CONSIDERS ANY OF THE RECOMMENDED ACTIONS PRESENTED HEREIN TO BE UNSAFE.
12. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD FOR EACH PARTICULAR LEVEL. WHEN WEIGHT OF MATERIALS OR EQUIPMENT MAY EXCEED DESIGN LOAD, STRUCTURAL SYSTEMS SHALL BE SHORED.
13. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
14. NO PIPES OR DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER.

FOUNDATION:

1. REMOVE EXISTING SOIL TO A MINIMUM OF 4' BELOW FINISHED PAD ELEVATION, 1'-6" MIN. BELOW ANY FOOTING AND 4' MIN BELOW EXISTING GROUND SURFACE TO A DISTANCE OF 5' BEYOND THE BUILDING OR STRUCTURE. REPLACE WITH IMPORTED NON EXPANSIVE SOIL WITH EXPANSION LESS THAN 20. SEE ARCHITECTURAL SITE DRAWINGS.
2. ALLOWABLE SOIL PRESSURE:

FOOTING TYPE	STATIC BEARING PRESSURE
SPREAD FOOTING	1,500 P.S.F.

3. FOR ALL DIMENSIONS, CURBS, SLAB DEPRESSIONS, STEPS, FLOOR DRAINS, FLOOR SINKS, TRENCHES, UNDERFLOOR DUCTS AND CONDUITS SEE ARCHITECTURAL, MECHANICAL, REFRIGERATION, AIR CONDITIONING, PLUMBING, ELECTRICAL, AND FOOD SERVICE DRAWINGS, TRENCH BACKFILL AS PER SOILS REPORT REQUIREMENTS.
4. ALL WALLS RETAINING EARTH SHALL DRAIN TO DAYLIGHT OR OTHER DRAINAGE.
5. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
6. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICES IN AREAS TO BE EXCAVATED BEFORE BEGINNING EXCAVATION. EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING. DAMAGES CAUSED AS A RESULT OF FAILING TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN, APPROVALS, PERMITS, INSTALLATION AND MONITORING OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN TEMPORARY EXCAVATIONS.
8. ALL PLANTERS IN CLOSE PROXIMITY TO THE STRUCTURE SHALL HAVE ADEQUATE DRAINAGE OF SURFACE WATER TO PREVENT SATURATION OF SOIL UNDER FOUNDATION.

REINFORCING STEEL:

1. ALL REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE C.B.C., AND THE "MANUAL OF STANDARD PRACTICE" BY THE C.R.S.I. OR AS MODIFIED BY THE CONSTRUCTION DOCUMENTS.
2. REINFORCING BARS SHALL CONFORM TO A.S.T.M. A-615, GRADE 60. REINFORCING BARS THAT ARE TO BE WELDED SHALL CONFORM TO A.S.T.M. A-706, GRADE 60.
3. WELDING OF REINFORCEMENT SHALL BE DONE WITH LOW HYDROGEN ELECTRODES AND SHALL CONFORM TO STRUCTURAL WELDING CODE REINFORCING STEEL - ANSI/AWS D1.4 OF THE AMERICAN WELDING SOCIETY MINIMUM TENSILE STRENGTH OF WELD METAL SHALL BE 90 K.S.I. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. QUALIFICATION TESTS MUST BE PERFORMED PER AWS, WPS'S SUBMITTED PRIOR TO REBAR WELDING.
4. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
5. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A-1064, AND SHALL BE LAPPED 1 SPACES AND 12" MINIMUM.
6. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE LAPPED WITH THE SAME GRADE, SIZE, SPACING AND NUMBERS AS THE VERTICAL REINFORCEMENT, RESPECTIVELY.
7. REINFORCING SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS.
8. ALL VERTICAL REINFORCING SHALL BE CONTINUOUS BETWEEN TWO LEVELS. U.N.O.
10. SLAB ON GRADE REINFORCING SHALL BE POSITIONED AT MID-DEPTH
11. PROVIDE #3 SPACER TIES AT 2'-6" ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING BARS IN PLACE, U.N.O.
12. ALL REBAR SIZES ON THESE DRAWINGS ARE IN ENGLISH UNITS. SEE TABLE BELOW FOR METRIC EQUIVALENT.

ENGLISH BAR SIZE DESIGNATION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18
METRIC BAR SIZE DESIGNATION	10MM	15MM	15MM	20MM	25MM	25MM	30MM	35MM	35MM	45MM	55MM

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318-14 AND A.C.I. 301 LATEST EDITION "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS CONTAINED HEREIN OR SHOWN ON THE DRAWINGS. IN CASE OF CONFLICT ACI 318-14 SHALL GOVERN.
2. ALL CONCRETE SHALL BE 150 P.C.F. HARDROCK, MIXED PER A.S.T.M. C-94, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 P.S.I. AT 28 DAYS. FREQUENCY OF CONCRETE SAMPLING SHALL CONFORM TO C.B.C. 1903A AND ACI 318, 5.6.
3. THE MAXIMUM SIZE AGGREGATE IN FOUNDATION AND MASS CONCRETE WORK SHALL BE 1 INCH. THE MAXIMUM SIZE AGGREGATE IN SLABS ON GRADE, WALLS, AND ALL OTHER CONCRETE SHALL BE 3/4" INCH.
4. CEMENT SHALL CONFORM TO A.S.T.M., C-150, TYPE V, LOW ALKALI. MIN. OF 6.25 SACKS PER CUBIC YARD OF CONCRETE. MAX. WATER/CEMENT RATIO = 0.45. AGGREGATES FOR NORMAL WEIGHT SHALL CONFORM TO A.S.T.M. C-33.
5. ADMIXTURES AND COLORS (EXCEPT AS NOTED HEREIN) SHALL NOT BE USED UNLESS SUBSTANTIATING DATA IS SUBMITTED TO AND ACCEPTED BY THE ENGINEER AND ARCHITECT OF RECORD. ADMIXTURES MUST BE APPROVED BY DSA.
6. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY. THE MIX DESIGNS SHALL CONFORM TO C.B.C. SEC. 1903A, 1905A AND ACI 318 CH 4 AND 5.1 THROUGH 5.5. UNLESS NOTED OTHERWISE.
7. PROVIDE 2- #5 x 4'-0" LONG DIAGONAL BARS AT CORNERS OF WALL, FLOOR, AND ROOF OPENINGS AND INSIDE CORNERS OF FLOORS.
8. NOT USED
9. READY MIXED CONCRETE SHALL CONFORM TO (A.S.T.M. C-94)
10. PLACEMENT OF CONCRETE SHALL CONFORM TO A.C.I. 304. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED.
11. DRYPACK UNDER BASEPLATES, WHERE OTHERWISE NOTED ON DRAWINGS SHALL CONSIST OF 1 PART PORTLAND CEMENT AND 2 1/2 PARTS OF FINE AGGREGATE CONFORMING TO A.S.T.M. C-33 WITH ENOUGH WATER TO FORM A BALL WHEN SQUEEZED IN THE HAND. THE SPACE BETWEEN TWO SURFACES REQUIRING DRYPACK SHALL BE PACKED WITH THE DRYPACK MATERIAL BY TAMPING OR RAMMING WITH A BAR OR ROD UNTIL VOIDS ARE COMPLETELY FILLED.
12. ALL EXPOSED CONCRETE SHALL HAVE A SMOOTH FORM FINISH USING B-B PLYFORM, CLASS I, EXT-A.P.A. PLYWOOD.
13. ALL SLABS SHALL HAVE A TROWELED FINISH EXCEPT AS NOTED ON THE DRAWINGS.
14. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
15. IF THE CONTRACTOR DESIRES TO MAKE ANY CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THESE DRAWINGS, HE SHALL SUBMIT DETAILS OF CHANGES TO THE ENGINEER OF RECORD FOR REVIEW BEFORE STARTING WORK.
16. NO BRICK OR POROUS MATERIAL SHALL BE USED TO SUPPORT FOUNDATION STEEL OFF THE GROUND
17. PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS, U.N.O.
18. SLEEVE PLUMBING OPENINGS IN SLABS OR WALLS BEFORE PLACING CONCRETE, SLEEVES SHALL NOT INTERRUP REINFORCING.
19. ALL REINFORCING BARS SHALL BE PROVIDED WITH THE FOLLOWING CONCRETE MINIMUM COVER:

FOOTINGS AND SLABS CAST AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	2"
BEAMS AND GIRDERS	1 1/2"
WALLS	1 1/2"
COLUMN TIES	1 1/2"
SLABS (#11 AND SMALLER)	3/4"

20. CONCRETE CURING: TYPICALLY REQUIRED FOR 10 DAYS.
21. FUSION WELDING IS NOT PERMITTED UNLESS APPROVED BY THE ENGINEER OF RECORD AND DSA.

STEEL:

1. FABRICATION AND ERECTION TO CONFORM TO A.I.S.C. LATEST ADOPTED EDITION "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND AND BRIDGES" EXCEPT AS OTHERWISE SHOWN OR SPECIFIED.
2. QUALIFIED AND CERTIFIED WELDERS SHALL BE USED FOR ALL WELDING. WELDING TO BE PERFORMED IN THE SHOP OF BOTH I.A.S. AND A.I.S.C. CERTIFIED FABRICATOR. ALL WELDING TO CONFORM TO THE LATEST ADOPTED EDITION OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE A.W.S. D1.1. SPECIAL INSPECTION IN SHOP IS REQUIRED.
3. MATERIALS:

STRUCTURAL STEEL SHAPES	A.S.T.M. A-992, GRADE 50
STRUCTURAL STEEL PLATES	A.S.T.M. A-36
STRUCTURAL STEEL PIPES	A.S.T.M. A53 TYPE E OR S, GRADE B
WELDING ELECTRODES	A.W.S. A-5.1 OR A-5.5.
ANCHOR BOLTS	A.S.T.M. A-307
TYPICAL STEEL CONNECTION BOLTS	A.S.T.M. A-325X
MISCELLANEOUS BOLTS	A.S.T.M. A-307
GALVANIZING	A.S.T.M. A-123
RUST-INHIBITING PRIMER	TT-P-645
STEEL TUBING	A.S.T.M. A-500, GRADE B (Fy = 46 K.S.I.)
DEFORMED STEEL WIRE	A.S.T.M. A-496

4. HOT-DIPPED GALVANIZE AFTER FABRICATION ALL STRUCTURAL STEEL (ASTM A-123 AND A-385) AND CONNECTORS (ASTM A-153) EXPOSED TO WEATHER. TOUCH UP DAMAGED GALVANIZING WITH GALVALLOY AFTER ERECTION IS COMPLETE. (ASTM A-780)
5. CONNECTED MEMBERS SHALL BEAR ONLY UPON UNTHREADED PORTIONS OF BOLTS.
6. BURNING OF HOLES IS NOT ALLOWED.
7. INSPECTION OF WELDING SHALL CONFORM TO C.B.C. REQUIREMENTS (CHAPTER 17A)
8. THE STRUCTURAL STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
9. BOLT HOLES SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED. UNLESS NOTED OTHERWISE.
10. STRUCTURAL STEEL SHALL BE DELIVERED TO THE JOB SITE FREE OF EXCESSIVE RUST, MILL SCALE, GREASE, ETC.
11. OPENING SHALL NOT BE PLACED IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED.

WELDING

1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE AMERICAN WELDING SOCIETY CODE D1.1. (LATEST ADOPTED EDITION.)
2. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS.
3. ALL WELDING SHALL BE DONE BY THE SHIELDED ARC PROCESS USING APPROVED ELECTRODES PER A.W.S. SPECIFICATIONS E70 (LOW HYDROGEN ELECTRODES)
4. NOT USED
5. ALL ELECTRODES FILLER MATERIAL SHALL BE A MINIMUM OF E70.
6. WELDING OF REINFORCING BARS TO BE IN ACCORDANCE WITH A.W.S. D1.4. REINFORCING STEEL TO BE WELDED SHALL HAVE A CARBON EQUIVALENT (CE) OF 0.75. SPECIAL INSPECTION IS REQUIRED.
7. WELDING OF SHEET METAL SHALL BE IN ACCORDANCE WITH A.W.S. D1.3
8. SPECIAL INSPECTION IS REQUIRED FOR ALL WELDING.
9. ALL SHOP AND FIELD WELDING OF MOMENT CONNECTIONS OR MOMENT RESISTING FRAMES, AND ALL COLUMN SPLICE WELDS, SHALL BE TESTED AS PER C.B.C.

REGISTERED PROFESSIONAL ENGINEER DONALD R. ORIE No. S3839 Exp 12-31-20 STRUCTURAL STATE OF CALIFORNIA

APPROVALS

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
TYPICAL NOTES

LICENSED ARCHITECT JIMMIE L. SANDERS No. C-17644 RENEWAL DATE 07-31-19 CALIFORNIA

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EXPANSION AND ADHESIVE ANCHORS:

*CONCRETE ADHESIVE ANCHORS SHALL BE BY "HILTI" HIT HY-200 ADHESIVE ANCHOR SYSTEMS OR APPROVED EQUAL (ESR-3187). MASONRY ADHESIVE ANCHORS SHALL BE "HILTI" HIT HY70 (ESR-2682).

1. CONCRETE EXPANSION ANCHORS SHALL BE BY "HILTI" KWIKBOLT-TZ OR AN APPROVED EQUAL.* ALL ANCHORS AND FASTENERS SHALL HAVE DESIGN LOADS IN NORMAL WEIGHT OR LIGHTWEIGHT CONCRETE SUBSTANTIATED BY ICC ES REPORT NO ESR-1917.
MASONRY EXPANSION ANCHORS SHALL BE BY "HILTI" KWIKBOLT-3 (ESR-1385) OR AN APPROVED EQUAL. ANCHORS SHALL BE PROOF LOAD TESTED BY APPLYING A TEST LOAD AS FOLLOWS: (SEE ITEM 6 FOR TESTING FREQUENCY)

FOR ANCHORS IN NORMAL WEIGHT CONCRETE (f'c=4,500 psi)

ANCHOR DIAMETER (IN.)	EXPANSION (KB-TZ)		ADHESIVE (HIT HY-200)		
	EMB.	TORQUE (FT-LB)	EMB.	LOAD (LB)	TORQUE (FT-LB)
3/8	2 1/2"	25	3 1/2"	2600	–
1/2	3 1/2"	40	4 1/4"	4200	–
5/8	4"	60	5	6200	–
3/4	4 3/4"	110	6 5/8"	10000	–

NOTE:
EDGE DISTANCE SHALL BE EQUAL TO OR GREATER THAN CRITICAL EDGE DISTANCE IN ICC REPORT

FOR ANCHORS IN FULLY GROUTED CMU (f'm=2,000 psi) SPECIAL INSPECTION REQUIRED

ANCHOR DIAMETER (IN.)	EXPANSION (KB-3)		ADHESIVE (HIT HY70)		
	EMB.	TORQUE (FT/LB)	EMB.	LOAD (LB)	TORQUE (FT/LB)
1/4	2"	4	–	–	–
3/8	2 1/2"	15	3 1/2"	1692	–
1/2	3 1/2"	25	4 1/4"	3004	–
5/8	4"	65	5	4544	–
3/4	4 3/8"	120	6 5/8"	6096	–

NOTE:
MINIMUM EDGE DISTANCE FROM EDGE OF WALL = 4in.

USE THE FOLLOWING SPECIAL INSPECTION TORQUE VALUES FOR SCREW ANCHORS:

ANCHOR TYPE / DIAMETER (IN.)	EMBED.	ICC REPORT	BASE MATERIAL	TORQUE (FT-LB)
1/4" DIA. HILTI "HUS EZ"	1-5/8"	ESR-3056	CMU	21
3/8" DIA. SIMPSON "TITEN HD"	2 3/4"	ESR-1056	CMU	50
3/8" DIA. SIMPSON "TITEN HD"	2 3/4"	ESR-2713	CONCRETE	50

2. "APPROVED EQUAL" SUBSTITUTIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO INSTALLATION. CCD APPROVED BY THE "DIVISION OF THE STATE ARCHITECT" WILL BE REQUIRED FOR ANY SUBSTITUTIONS.

3. THE TESTING OF EXPANSION AND ADHESIVE ANCHORS IN HARDENED CONCRETE SHALL CONFORM TO TITLE 24, PART 2, SECTION 1910A.5

4. EXPANSION AND ADHESIVE ANCHOR INSTALLATION SHALL BE INSPECTED BY A SPECIAL INSPECTOR SPECIFICALLY APPROVED BY DSA FOR THAT PURPOSE.

5. EXPANSION AND ADHESIVE ANCHOR TESTING SHALL BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND SHOULD OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.

6. TEST QUANTITY OF EXPANSION AND ADHESIVE ANCHORS AS NOTED BELOW

APPLICATION:	QUANTITY:
STRUCTURAL	100% OF BOLTS
SILL PLATE	10% OF BOLTS
NON-STRUCTURAL (EQUIPMENT ANCHORAGE, ETC.)	50% OF BOLTS

7. THE TEST LOADS SHALL BE APPLIED BY DIRECT PULL WITH A HYDRAULIC JACK, OR A CALIBRATED TORQUE WRENCH. SEE TABLES ABOVE FOR TEST LOADS.

8. THE FOLLOWING CRITERIA SHALL APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

HYDRAULIC RAM METHOD:
THE ANCHOR SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD APPLIED FOR A MINIMUM OF (15) SECONDS. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.

TORQUE WRENCH METHOD:
THE APPLICABLE TEST LOAD MUST BE REACHED WITHIN ONE-HALF (1/2) TURN OF THE NUT.

9. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE PASS, THEN RESUME INITIAL TESTING FREQUENCY.

LUMBER:

1. STRUCTURAL LUMBER SHALL BE STRESS-MARKED DOUGLAS FIR-LARCH S4S IN ACCORDANCE WITH GRADING AND DRESSING RULE NO. 16 OF THE WEST COAST LUMBER INSPECTION BUREAU (LATEST EDITION)

2. LUMBER SHALL NOT BE BORE OR NOTCHED, EXCEPT WHERE DETAILED.

3. STUDS AND PLATES IN CONTACT WITH CONCRETE OR MASONRY WITHIN 48 INCH OF GROUND SHALL BE PRESSURE TREATED DOUGLAS FIR-LARCH.

4. PROVIDE 2 INCHES FIRE BLOCKING AT MID-HEIGHT OF STUD PARTITIONS OVER 8'-6" IN HEIGHT.

5. PROVIDE 2 INCHES SOLID BLOCKING AT ALL SUPPORTS FOR RAFTERS, CEILING JOISTS AND FLOOR JOIST EXCEPT WHERE RAFTERS OR JOISTS ARE SUPPORTED BY JOIST HANGERS.

6. ROOF SHEATHING INSPECTIONS SHALL BE MADE PRIOR TO COVERING. ALL STRUT CONNECTIONS SHALL BE COMPLETED PRIOR TO INSPECTION.

7. SEE DRAWINGS FOR SHEAR WALL SCHEDULE, HOLDOWN DETAILS, PANEL LOCATIONS, ETC. SHEAR PANEL NAILING SHALL BE SPACED AT LEAST 3/8 INCH FROM ALL EDGES.

8. METAL CONNECTORS SHALL BE "SIMPSON STRONG-TIE" OR EQUAL, EXCEPT AS SHOWN. FILL ALL HOLES OF THE PREFAB CONNECTORS AND STRAPS. AS SPECIFIED BY MANUFACTURER

9. LUMBER MINIMUM GRADE:

A. HORIZONTAL MEMBERS

JOISTS AND RAFTERS	NO. 1
PURLINS	NO. 1
SUBPURLINS	
2x4	NO. 1
2x6 OR LARGER	NO. 1
BEAMS	NO. 1
LEDGERS AND NAILERS	NO. 1
HEADERS	NO. 1
TOP PLATES	MATCH VERTICAL MEMBERS

B. VERTICAL MEMBERS:

2x4 STUDS, 8'-0" MAX.	NO. 1
2x4 STUDS, 8'-1" TO 14'-0"	NO. 1
2x6 STUDS AND LARGER	NO. 1
POSTS	NO. 1

10. ALL BOLTS AND LAG SCREWS SHALL HAVE STANDARD CUT WASHERS BETWEEN THE WOOD AND THE NUTS AND BOLT HEADS. SEE DRAWINGS FOR LOCATIONS OF PLATE WASHERS AS REQUIRED.

BOLTS	A.S.T.M. A-307
LAG SCREWS	A.N.S.I. B-18
NUTS	A.S.T.M. A-563
WASHERS	A.S.T.M. F-844

11. LEAD HOLES FOR LAG SCREWS SHALL HAVE THE SAME DIAMETER OF THE SHANK FOR THE UNTHREADED PORTION OF THE SHANK, AND 70% OF THE SHANK DIAMETER FOR THE THREADED PORTION. ALL LAG SCREWS SHALL BE INSERTED BY TURNING WITH A WRENCH AND NOT BY DRIVING WITH A HAMMER.

12. TOP PLATES OF ALL WOOD STUD WALLS SHALL BE TWO PIECE SAME SIZE AS STUDS EXCEPT AS NOTED OTHERWISE, LAP 4'-0" MINIMUM PER 5/SO.5 WITH NO LESS THAN 24- 16d AND NO MORE THAN SIX INCHES BETWEEN NAILS AT EACH LAP U.N.O.

13. STRUCTURAL PLYWOOD FOR ROOF AND WALLS SHALL BE A.P.A. RATED AS INDICATED ON THE DRAWINGS IN ACCORDANCE WITH VOLUNTARY STANDARD PS 1-07

14. ALL BOLTS, LAG SCREWS, AND WOOD SCREWS SHALL BE RETIGHTENED PRIOR TO THE APPLICATION OF DRYWALL, PLYWOOD, PLASTER, ETC.

15. JOISTS MORE THAN 8 INCH DEPTH SHALL BE CONTINUOUSLY BRIDGED BY SOLID BLOCKING, 2 INCH THICK AND THE FULL DEPTH OF THE JOIST, SPACED AT 8'-0" ON CENTER

16. ALL NAILING SHALL CONFORM TO TABLE NO. 2304.9.1 NAILING SCHEDULE, USING COMMON WIRE NAILS. PREDRILL ALL NAILS 20d AND LARGER AND WHERE REQUIRED TO PREVENT SPLITTING

17. THE MOISTURE CONTENT OF WOOD MEMBERS SHALL NOT EXCEED 19%, BEFORE INSTALLATION. IT WILL BE THE RESPONSIBILITY OF THE INSPECTOR OF RECORD TO VERIFY THAT THE CONTRACTOR HAS SUPPLIED LUMBER OF THE PROPER MOISTURE CONTENT BEFORE INSTALLATION. THE USE OF A HAND HELD MOISTURE CONTENT METER IS ACCEPTABLE.

MACHINE APPLIED NAILING:

1. THE USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL OF THE JOB SITE ENGINEER AND THE DIVISION OF THE STATE ARCHITECT. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE.

2. NAIL HEADS SHALL NOT PENETRATE THE OUTER PLY MORE THAN A NORMAL HAND HAMMER WOULD.

3. EDGE DISTANCES SHALL BE MAINTAINED. SHINERS SHALL BE REPLACED. IF NAILHEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER, OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.

4. MACHINE NAILING WILL NOT BE APPROVED FOR PLYWOOD 5/16" OR LESS IN THICKNESS

NAILING SCHEDULE: 2016 CBC TABLE NO. 2304.9.1

CONNECTION	FASTENING [a,m]	LOCATION
1. JOIST TO SILL OR GIRDER	3 – 8d COMMON (2-1/2" x 0.131") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	TOENAIL
2. BRIDGING TO JOIST	2 – 8d COMMON (2-1/2" x 0.131") 2 – 3" x 0.131" NAILS 2 – 3" 14 GAGE STAPLES	TOENAIL EACH END
3. 1"x6" SUBFLOOR OR LESS TO EA. JOIST	2 – 8d COMMON (2-1/2" x 0.131")	FACE NAIL
4. WIDER THAN 1"x6" SUBFLOOR TO EACH JOIST	3 – 8d COMMON (2-1/2" x 0.131")	FACE NAIL
5. 2" SUBFLOOR TO JOIST OR GIRDER	2 – 16d COMMON (3-1/2" x 0.162")	BLIND AND FACE NAIL
6. SOLE PLATE TO JOIST OR BLOCKING	16d (3-1/2" x 0.135") AT 16" O.C. 3" x 0.131" NAILS AT 8" O.C. 3" 14 GAGE STAPLES AT 12" O.C.	TYPICAL FACE NAIL
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANEL	2" – 16d (3-1/2" x 0.135") AT 16" 4 – 3" x 0.131" NAILS AT 16" 4 – 3" 14 GAGE STAPLES AT 16"	BRACED WALL PANELS
7. TOP PLATE TO STUD	2 – 16d COMMON (3-1/2" x 0.162") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	END NAIL
8. STUD TO SOLE PLATE	4 – 8d COMMON (2-1/2" x 0.131") 4 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	TOENAIL
	2 – 16d COMMON (3-1/2" x 0.162") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	END NAIL
9. DOUBLE STUDS	16d (3-1/2" x 0.135") AT 24" O.C. 3" x 0.131" NAILS AT 8" O.C. 3" 14 GAGE STAPLES AT 8" O.C.	FACE NAIL
10. DOUBLE TOP PLATES	16d (3-1/2" x 0.135") AT 16" O.C. 3" x 0.131" NAILS AT 12" O.C. 3" 14 GAGE STAPLES AT 12" O.C.	TYPICAL FACE NAIL
DOUBLE TOP PLATES	8 – 16d COMMON (3-1/2" x 0.162") 12 – 3" x 0.131" NAILS 12 – 3" 14 GAGE STAPLES	LAP SPLICE
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3 – 8d COMMON (2-1/2" x 0.131") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	TOENAIL
12. RIM JOIST TO TOP PLATE	8d (2-1/2" x 0.131") AT 6" O.C. 3" x 0.131" NAILS AT 6" O.C. 3" 14 GAGE STAPLES AT 6" O.C.	TOENAIL
13. TOP PLATES, LAPS AND INTERSECTIONS	2 – 16d COMMON (3-1/2" x 0.162") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	FACE NAIL
14. CONTINUOUS HEADER, TWO PIECES	16d COMMON (3-1/2" x 0.162")	16" O.C. ALONG EDGE
15. CEILING JOISTS TO PLATE	3 – 8d COMMON (2-1/2" x 0.131") 5 – 3" x 0.131" NAILS 5 – 3" 14 GAGE STAPLES	TOENAIL
16. CONTINUOUS HEADER TO STUD	4 – 8d COMMON (2-1/2" x 0.131")	TOENAIL
17. CEILING JOISTS, LAPS OVER PARTITIONS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	3 – 16d COMMON (3-1/2" x 0.162") MINIMUM, 4 – 3" x 0.131" NAILS 4 – 3" 14 GAGE STAPLES	FACE NAIL
18. CEILING JOISTS TO PARALLEL RAFTERS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	3 – 16d COMMON (3-1/2" x 0.162") MINIMUM, 4 – 3" x 0.131" NAILS 4 – 3" 14 GAGE STAPLES	FACE NAIL
19. RAFTER TO PLATE (SEE SECTION 2308.10.1, TABLE 2308.10.1)	3 – 8d COMMON (2-1/2" x 0.131") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	TOENAIL
20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE	2 – 8d COMMON (2-1/2" x 0.131") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	FACE NAIL
21. 1"x8" SHEATHING TO EACH BEARING	3 – 8d COMMON (2-1/2" x 0.131")	FACE NAIL
22. WIDER THAN 1"x8" SHEATHING TO EACH BEARING	3 – 8d COMMON (2-1/2" x 0.131")	FACE NAIL
23. BUILT-UP CORNER STUDS	16d COMMON (3-1/2" x 0.162") 3" x 0.131" NAILS 3" 14 GAGE STAPLES	24" O.C. 16" O.C. 16" O.C.
24. BUILT-UP GIRDER AND BEAMS	20d COMMON (4 x 0.192") AT 32" O.C. 3" x 0.131" NAILS AT 24" O.C. 3" 14 GAGE STAPLES AT 24" O.C	FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	2 – 20d COMMON (4 x 0.192") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	FACE NAIL AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	16d COMMON (3-1/2" x 0.162")	AT EACH BEARING
26. COLLAR TIE TO RAFTER	3 – 10d COMMON (3" x 0.148") 4 – 3" x 0.131" NAILS 4 – 3" 14 GAGE STAPLES	FACE NAIL
27. JACK RAFTER TO HIP	3 – 10d COMMON (3" x 0.148") 4 – 3" x 0.131" NAILS 4 – 3" 14 GAGE STAPLES	TOENAIL
	2 – 16d COMMON (3-1/2" x 0.162") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	FACE NAIL
28. ROOF RAFTER TO 2-BY RIDGE BEAM	3 – 16d COMMON (3-1/2" x 0.162") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	TOENAIL
	2 – 16d COMMON (3-1/2" x 0.162") 3 – 3" x 0.131" NAILS 3 – 3" 14 GAGE STAPLES	FACE NAIL
29. JOIST TO BAND JOIST	3 – 16d COMMON (3-1/2" x 0.162") 4 – 3" x 0.131" NAILS 4 – 3" 14 GAGE STAPLES	FACE NAIL
30. LEDGER STRIP	3 – 16d COMMON (3-1/2" x 0.162") 4 – 3" x 0.131" NAILS 4 – 3" 14 GAGE STAPLES	FACE NAIL
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD[b] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	1/2" AND LESS	6d [c,l] 2-3/8" x 0.113" NAIL[n] 1-3/4" 16 GAGE[o] 8d[d] OR 6d[e] 2-3/8" x 0.113" NAIL[p] 2" 16 GAGE[p]
	19/32" TO 3/4"	8d[d] OR 6d[e] 2-3/8" x 0.113" NAIL[p] 2" 16 GAGE[p]
	7/8" TO 1" 1-1/8" TO 1-1/4"	8d[c] 10d[d] OR 8d[d]
SINGLE FLOOR (COMBINATION SUBFLOOR -UNDERLAYMENT (TO FRAMING)	3/4" AND LESS 7/8" TO 1" 1-1/8" TO 1-1/4"	6d[e] 8d[e] 10d[d] OR 8d[d]
32. PANEL SIDING (TO FRAMING)	1/2" OR LESS 5/8"	6d[f] 8d[f]
33. FIREBOARD SHEATHING[g]	1/2"	No. 11 GAGE ROOFING NAIL[h] 6d COMMON NAIL (2" x 0.113") No. 16 GAGE STAPLE[i]
	25/32"	No. 11 GAGE ROOFING NAIL[h] 8d COMMON NAIL (2-1/2" x 0.131") No. 16 GAGE STAPLE[i]
34. INTERIOR PANELING	1/4" 5/8"	4d[j] 6d[k]

FOR SI: 1 inch = 25.4 mm.
a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
b. NAILS SPACED AT 6" O.C. AT EDGES, 12" AT INTERMEDIATE SUPPORTS EXCEPT 6" AT SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
c. COMMON OR DEFORMED SHANK (6d – 2" x 0.113"; 8d 2-1/2" x 0.131"; 10d – 3" x 0.148").
d. COMMON (6d – 2" x 0.113"; 8d 2-1/2" x 0.131"; 10d – 3" x 0.148").
e. DEFORMED SHANK (6d – 2" x 0.113"; 8d 2-1/2" x 0.131"; 10d – 3" x 0.148").
f. CORROSION RESISTANT SIDING (6d – 1-7/8" x 0.106"; 8d 2-3/8" x 0.128") OR CASING (6d – 2" x 0.099"; 8d – 2-1/2" x 0.113") NAIL.
g. FASTENERS SPACED 3" O.C. AT EXTERIOR EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6" O.C. ON THE EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
h. CORROSION-RESISTANT ROOFING NAILS WITH 7/16" DIAMETER HEAD AND 1-1/2" LENGTH FOR 1/2" SHEATHING AND 1-3/4" LENGTH FOR 25/32" SHEATHING.
i. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16" CROWN AND 1-1/8" LENGTH FOR 1/2" SHEATHING AND 1-1/2" LENGTH FOR 25/32" SHEATHING. PANEL SUPPORTS AT 16" (20" IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
j. CASING (1-1/2" x 0.080") OR FINISH (1-1/2" x 0.072") NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.
k. PANEL SUPPORTS AT 24". CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.
l. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS (2-1/2" x 0.131") ARE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
m. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16".
n. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4" O.C. AT EDGES, 8" AT INTERMEDIATE SUPPORTS.
o. FASTENERS SPACED 4" O.C. AT EDGES, 8" AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3" O.C. AT EDGES, 6" AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
p. FASTENERS SPACED 4" O.C. AT EDGES, 8" AT INTERMEDIATE SUPPORTS.

STRUCTURAL OBSERVATION:

1. PER 2016 CALIFORNIA BLD'G STANDARDS ADMIN. CODE, SECTION 4-333. A LICENSED ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, OR HIS DESIGNATED ENGINEER OR ARCHITECT MUST MAKE SITE VISITS TO OBSERVE GENERAL COMPLIANCE WITH THE APPROVED STRUCTURAL PLANS, SPECIFICATIONS AND CHANGE ORDERS. THE ENGINEER OR ARCHITECT SHALL SUBMIT A FINAL VERIFIED REPORT FORM DSA-6A/E TO DSA.

ABBREVIATIONS

&	AND	KIPS	KILOPOUNDS (1,000 POUNDS)
@	AT	K.O.	KNOCK OUT
℄	CENTER LINE	LB	POUND
℞	PLATE, PROPERTY LINE	L.B.	LAG BOLT
A.B.	ANCHOR BOLT	L.F.	LINEAR FOOT
ADJ	ADJACENT	LG	LONG
A.F.F.	ABOVE FINISH FLOOR	LL	LIVE LOAD
ARCH'L	ARCHITECTURAL	L.L.H.	LONG LEG HORIZONTAL
BD	BOARD	L.L.V.	LONG LEG VERTICAL
BLD'G	BUILDING	L.S.	LAG SCREW
BLK	BLOCK	LT.	LIGHT
BLK'G	BLOCKING	MAS	MASONRY
BLW	BELOW	MAT.	MATERIAL
BM	BEAM	MAX.	MAXIMUM
B.N.	BOUNDARY NAIL	M.B.	MACHINE BOLT
BOT.	BOTTOM	MECH'L	MECHANICAL
BRG	BEARING	MEZZ.	MEZZANINE
B.S.	BOTH SIDE	MIN.	MINIMUM
BTWN	BETWEEN	M.H.	MANHOLE
C.B.	CARRIAGE BOLT	MANUF.	MANUFACTURER
C.F.	CUBIC FOOT	MTL.	METAL
CHAM	CHAMFER	N.S.	NEAR SIDE
C.I.	CAST-IRON	N.I.C.	NOT IN CONTRACT
C.I.P.	CAST-IN-PLACE	NOM.	NOMINAL
C.J.	CONTROL JOINT	N.T.S.	NOT TO SCALE
CLG	CEILING	O.C.	ON CENTER
CLK	CAULK	O.D.	OUTSIDE DIAMETER
CLK'G	CAULKING	O.H.	OPPOSITE HAND
CLR.	CLEAR	OPN'G	OPENING
C.M.U.	CONCRETE MASONRY UNIT	OPP.	OPPOSITE
CNTR	CENTER	O.W.J.	OPEN WEB JOIST
COL	COLUMN	P.C.	PRECAST
CONC	CONCRETE	PERP.	PERPENDICULAR
CONN	CONNECTION	PLYWD	PLYWOOD
CONT	CONTINUOUS	PNL	PANEL
CNTRSNK	COUNTERSINK	PREFAB	PREFABRICATED
d	PENNY	P.S.F.	POUNDS PER SQUARE FOOT
DBL	DOUBLE	P.S.I.	POUNDS PER SQUARE INCHES
DEP	DEPRESSED	PT	POINT
DET	DETAIL	P.T.	PRESSURE TREATED
D.F.	DOUGLAS FIR	P.V.C.	POLYVINYL CHLORIDE
D.F.L.	DOUGLAS FIR/LARCH	RAD	RADIUS
DIA	DIAMETER	R.D.	ROOF DRAIN
DIAG	DIAGONAL	REF.	REFERENCE
DIM.	DIMENSION	REINF.	REINFORCED / REINFORCING
D.L.	DEAD LOAD	REQ'D	REQUIRED
DN	DOWN	REV	REVISION
DIV	DIVISION	RF	ROOF
DR	DOOR	RFTR	RAFTER
DWG	DRAWING	R.H.	ROOF HATCH
DWL	DOWEL	RM	ROOM
EA.	EACH	R.O.	ROUGH OPENING
E.F.	EACH FACE	R.S.	ROUGH SAWN
EL.	ELEVATION	SCHED.	SCHEDULE
ELEV.	ELEVATION / ELEVATOR	SECT.	SECTION
E.N.	EDGE NAIL	S.F.	SQUARE FOOT
EQ.	EQUAL	SHT.	SHEET
EQUIP	EQUIPMENT	SHT'G	SHEETING
E.S.	EACH SIDE	SIM.	SIMILAR
E.W.	EACH WAY	S.M.S.	SHEET METAL SCREW
EXIST'G	EXISTING	SPEC'C.	SPECIFICATION
EXP	EXPANSION	SQ.	SQUARE
EXT	EXTERIOR	S.S.	STAINLESS STEEL
F.D.	FLOOR DRAIN	STAGG.	STAGGERED
FDN	FOUNDATION	STD.	STANDARD
F.F.	FINISH FLOOR	STIFF.	STIFFENER
FIN.	FINISH	STL.	STEEL
FLR.	FLOOR	STRUCT'L	STRUCTURAL
F.N.	FIELD NAIL	S.T.S.	SELF TAPPING SCREW
F.O. ___	FACE OF ___	SYM	SYMMETRICAL
FRM'G	FRAMING	SYS	SYSTEM
F.S.	FAR SIDE	T & B	TOP AND BOTTOM
FT	FEET / FOOT	T & G	TONGUE AND GROOVE
FTG	FOOTING	TEMP	TEMPORARY
GA	GAUGE	THK	THICK
GALV	GALVANIZED	THKN'D	THICKENED
G.I.	GALVANIZED IRON	THRU	THROUGH
GLB	GLU-LAMINATED BEAM	T.L.	TOTAL LOAD
GRD	GRADE	T.O. ___	TOP OF ___
GYP	GYPSUM	T.S.G.	TAPERED STEEL GIRDER
H.D.	HOLDOWN	TYP.	TYPICAL
HDR	HEADER	U.N.O.	UNLESS NOTED OTHERWISE
HGR	HANGER	VERT.	VERTICAL
HORIZ	HORIZONTAL	W/	WITH
HRD	HARD	W/O	WITHOUT
H.S.B.	HIGH STRENGTH BOLT	WD	WOOD
HT.	HEIGHT	WIN	WINDOW
HVAC	HEATING, VENTILATION, & AIR CONDITIONING	W.P.	WATERPROOF / WORK POINT
IN.	INCH	W.P.J.	WEAKENED PLANE JOINT
INSP.	INSPECTION / INSPECTOR	WT.	WEIGHT
INT.	INTERIOR	W.W.F.	WELDED WIRE FABRIC
JST	JOIST	W.W.M.	WELDED WIRE MESH
J/T	JOINT		

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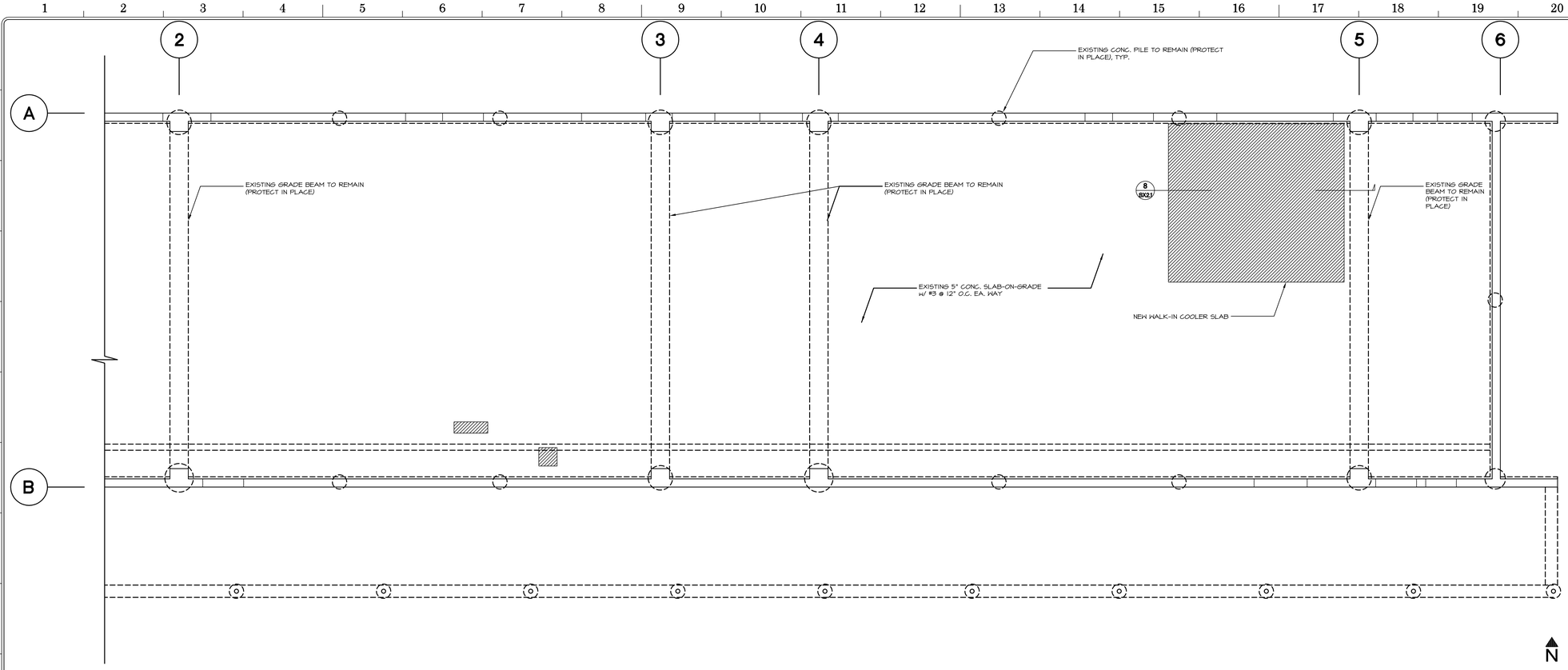
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
TYPICAL NOTES

LICENSED ARCHITECT
JIMMIE R. SANDERS
No. C-17644
RENEWAL DATE
08-31-19
CALIFORNIA

Document Date	Project Number
09-12-18	18-25CX
Date Last Revised	Sheet Number
	S0.2



FOUNDATION PLAN

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

A

NOT USED

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

B

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title

FOUNDATION PLAN

LICENSED ARCHITECT
JIMMIE R. SANDERS
No. C-17644
RENEWAL DATE
STATE OF CALIFORNIA

Document Date	Project Number
09-27-18	18-250X
Date Last Revised	Sheet Number
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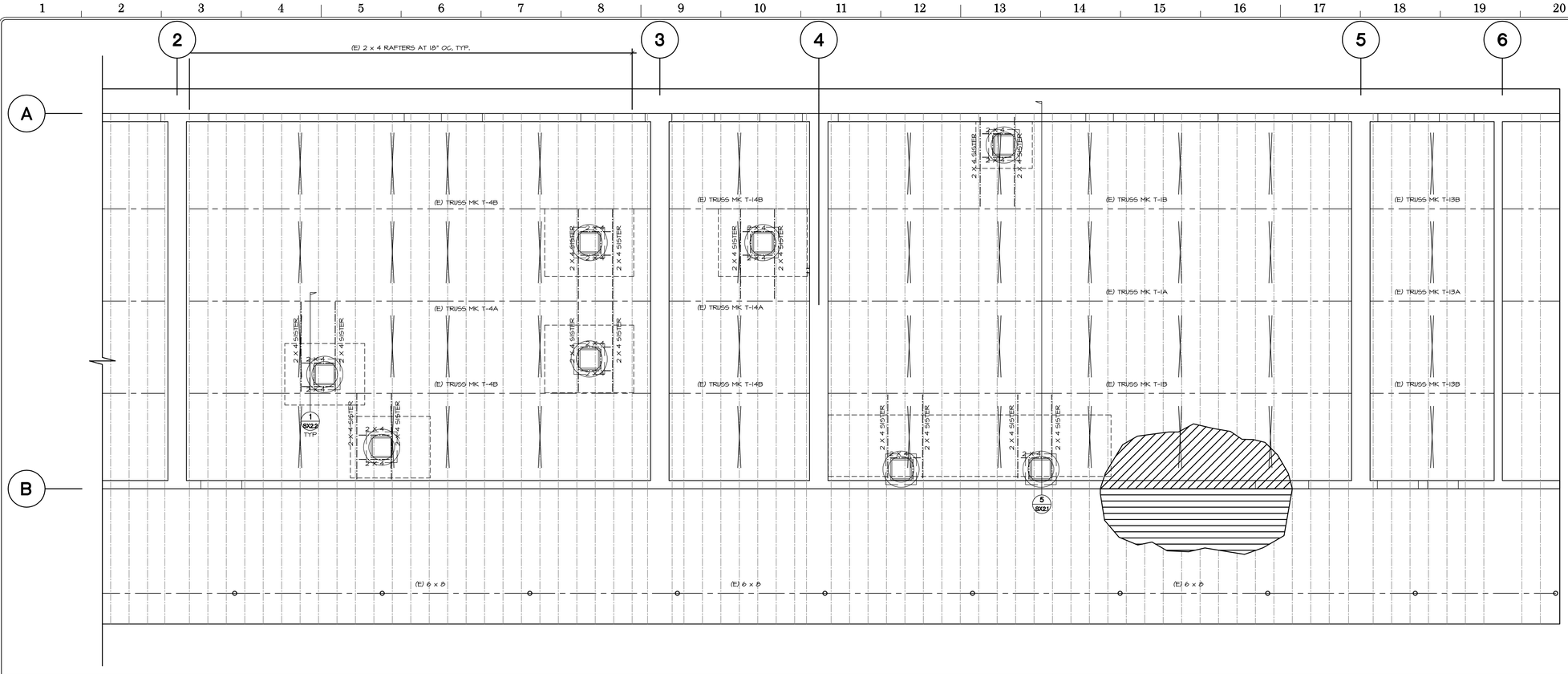
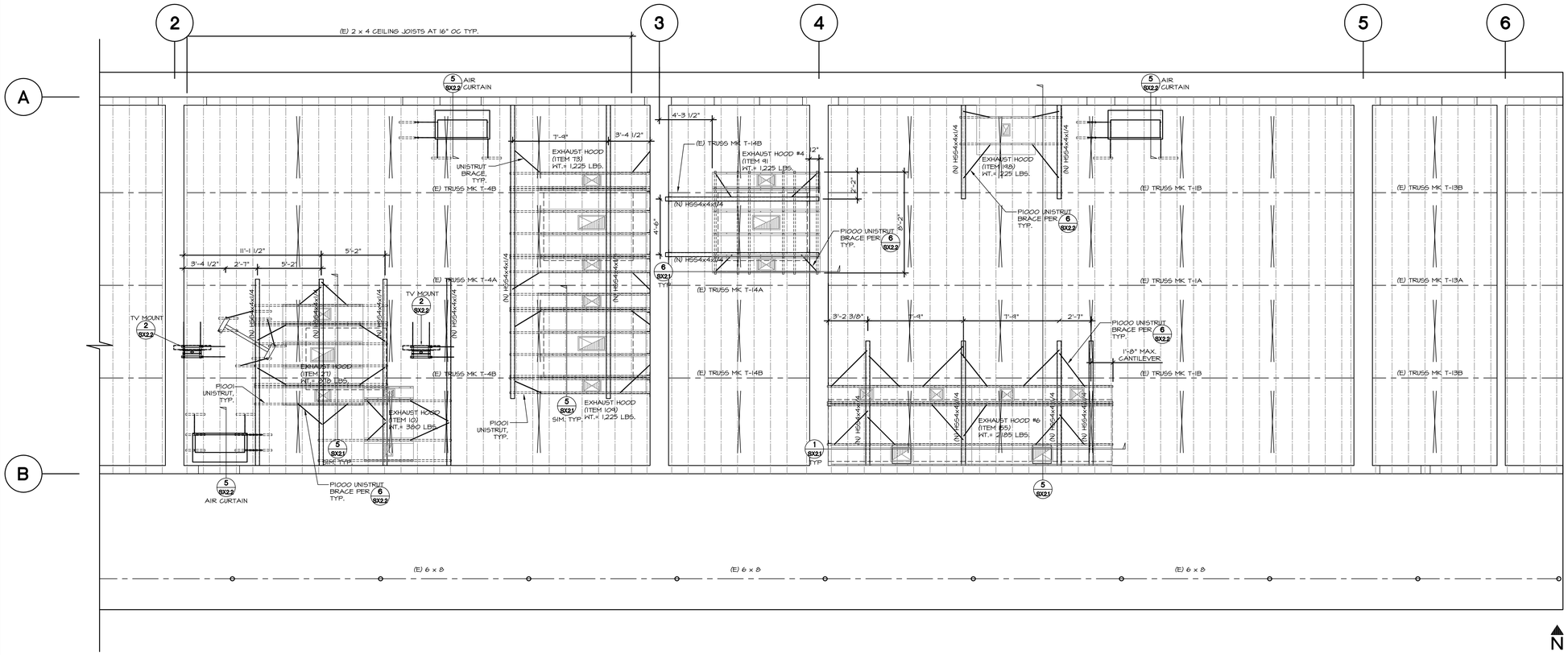


EXISTING ROOF FRAMING PLAN w/ NEW EQUIPMENT

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



EXHUAST HOOD SUPPORT FRAMING AT EXISTING CEILING FRAMING

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

N

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
HVAC PLAN

LICENSED ARCHITECT
JIMMIE D. SANDERS
No. C-27644
RENEWAL DATE
07-31-19
STATE OF CALIFORNIA

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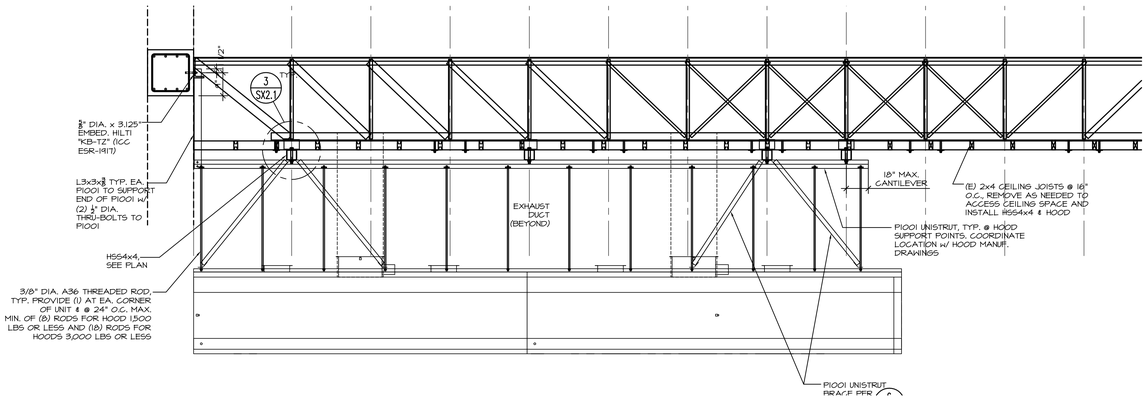
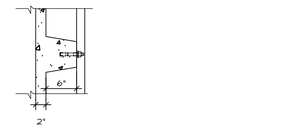
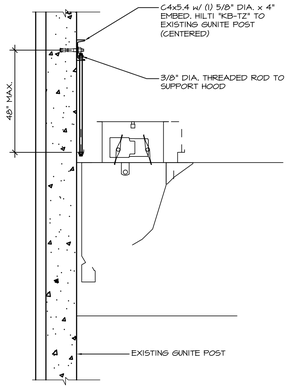
Date Last Revised	Sheet Number
	S2

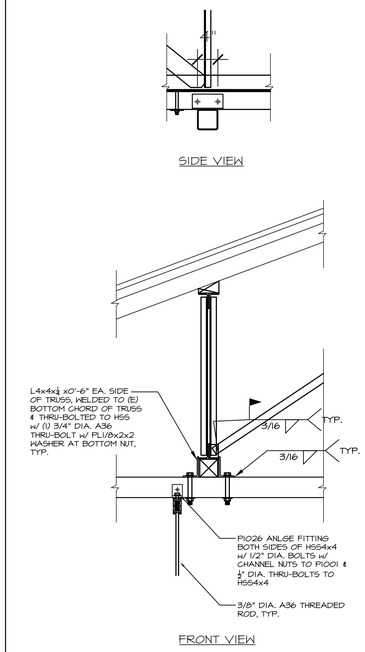


EXHAUST FAN SUPPORT AND OPENING FRAMING DETAIL | SCALE: 1" = 1'-0" | 1

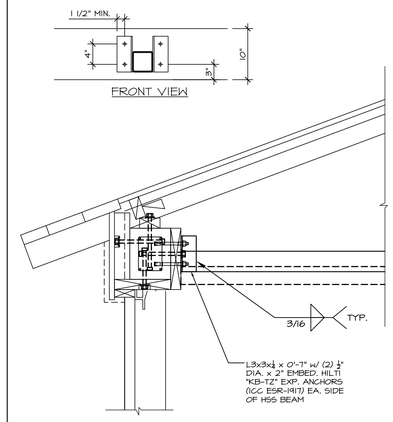




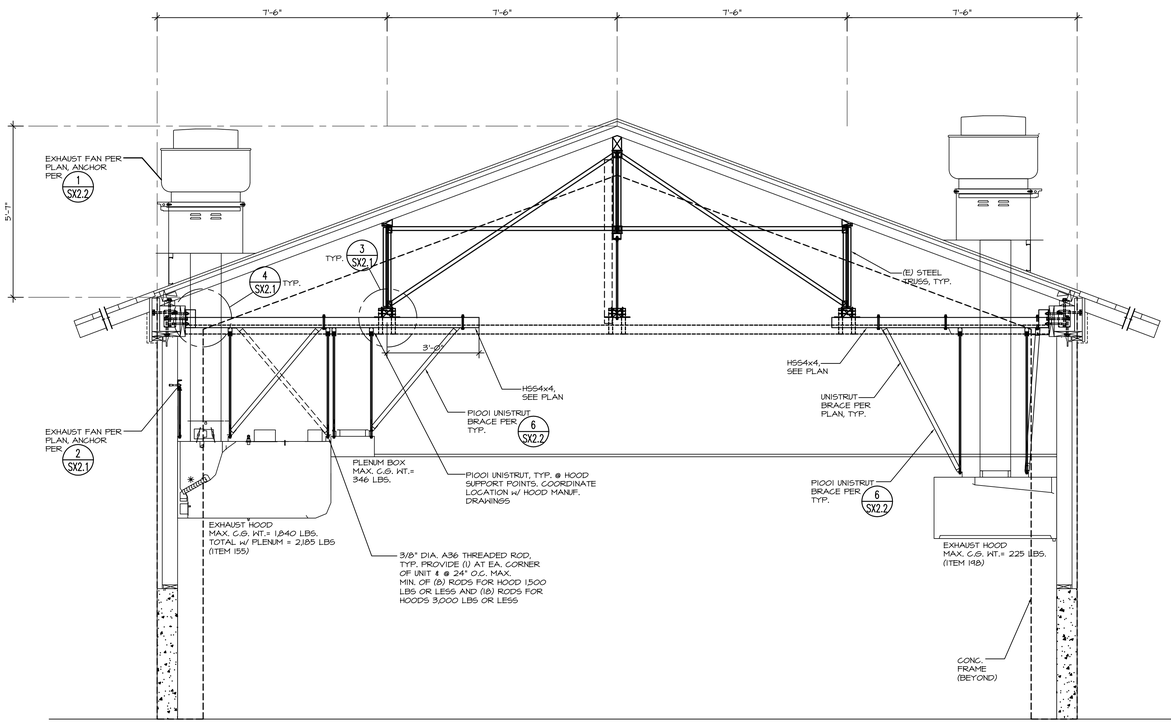
HOOD SUPPORT DETAIL | SCALE: 1" = 1'-0" | 2



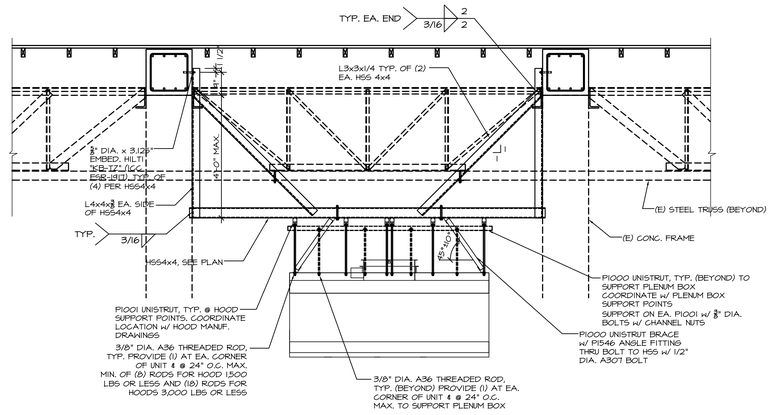
HOOD SUPPORT DETAIL | SCALE: 1" = 1'-0" | 3



FRAMING DETAIL | SCALE: 1" = 1'-0" | 4

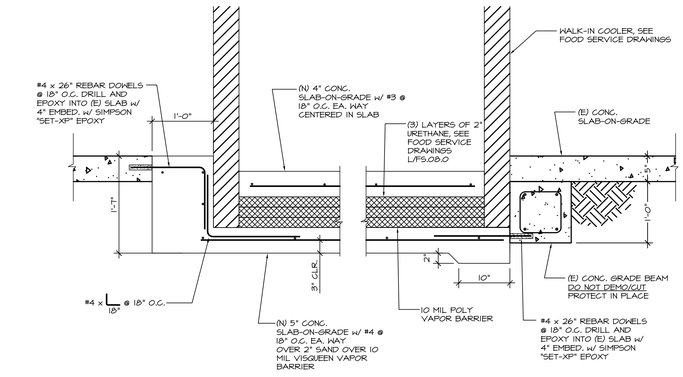


EXHAUST HOOD SUPPORT DETAIL | SCALE: 1/2" = 1'-0" | 5



EXHAUST HOOD SUPPORT DETAIL | SCALE: 1/2" = 1'-0" | 6

NOT USED | SCALE: 1" = 1'-0" | 7



FOOTING DETAIL | SCALE: N.T.S. | 8

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
STRUCTURAL DETAILS

LICENSED ARCHITECT — JIMMIE SANDERS — No. 17644 — RENEWAL DATE 08-31-19 — STATE OF CALIFORNIA

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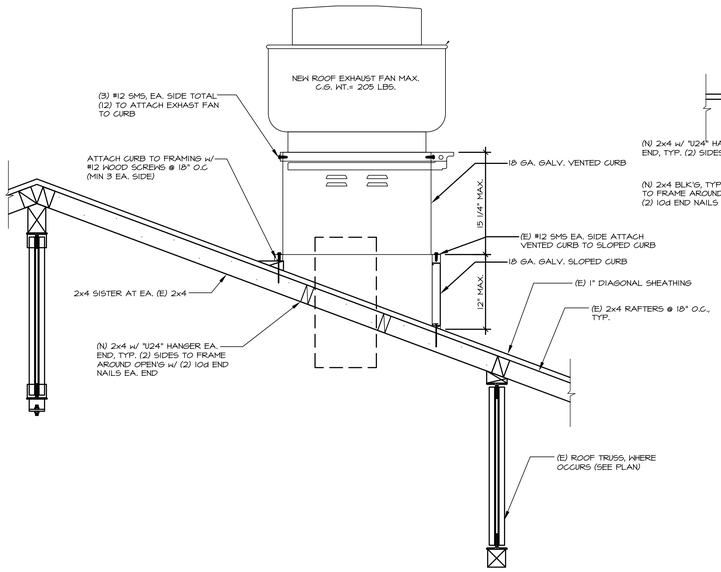
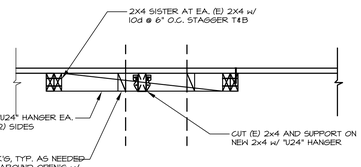
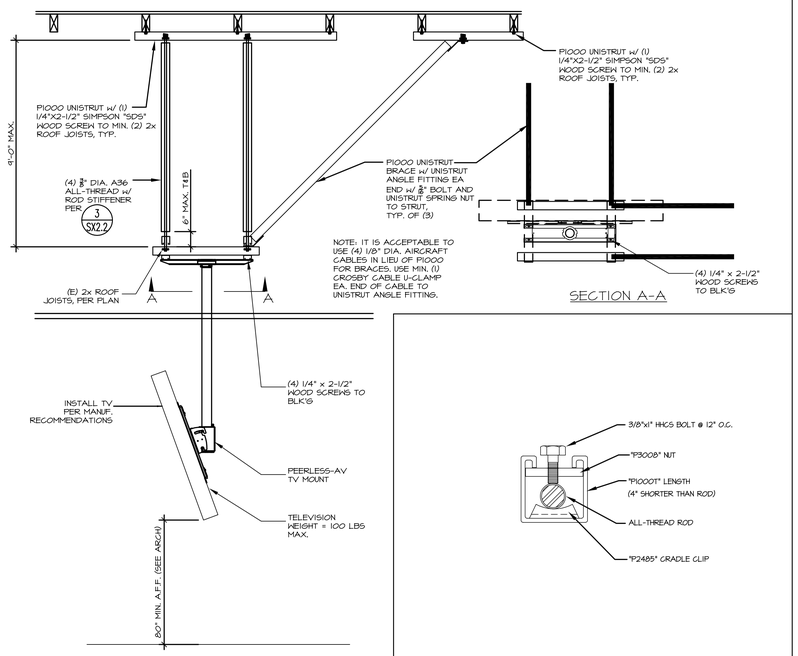




EXHAUST FAN SUPPORT AND OPENING FRAMING DETAIL

SCALE: 1" = 1'-0" | 1

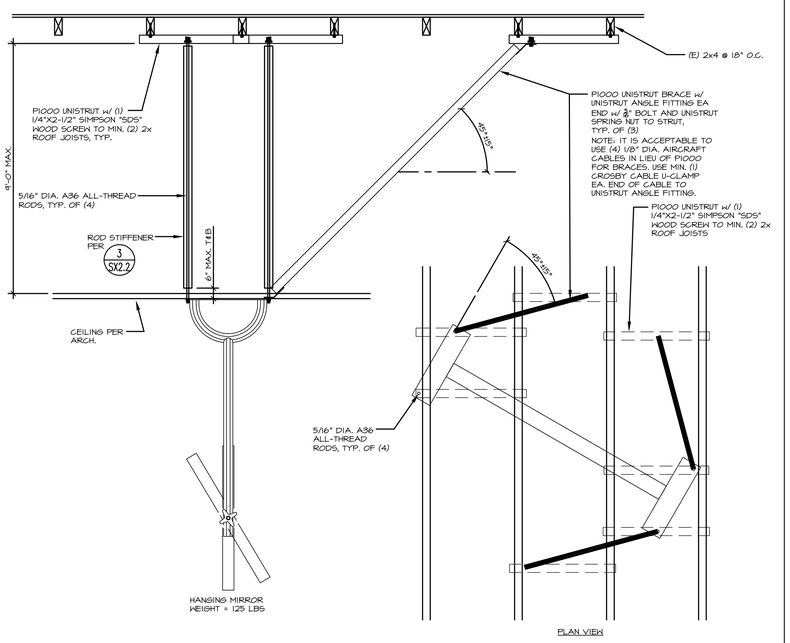


TV MOUNT ANCHORAGE DETAIL

SCALE: 1" = 1'-0" | 2

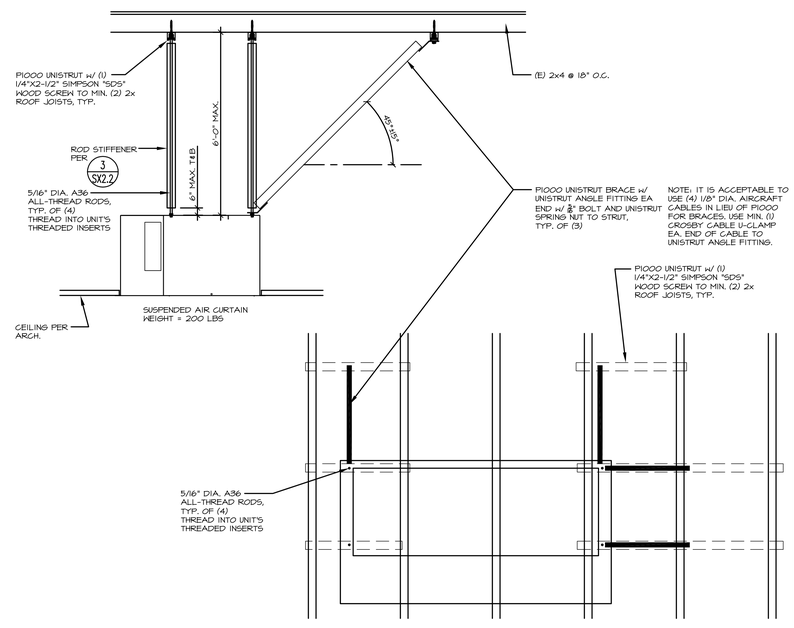
ROD STIFFENER DETAIL

SCALE: 1" = 1'-0" | 3



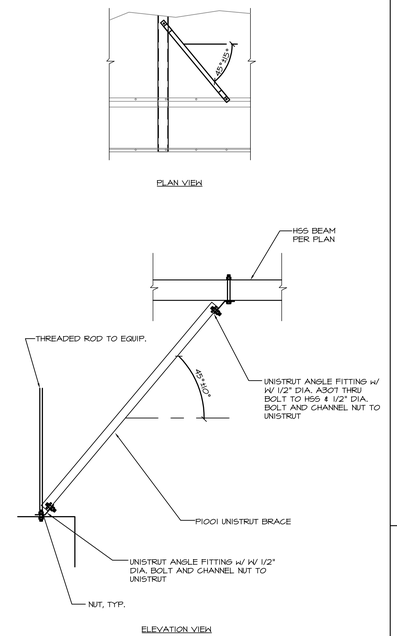
MIRROR ANCHORAGE DETAIL

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



AIR CURTAIN ANCHORAGE DETAIL

SCALE: 1" = 1'-0" | 5



TYP. EQUIP. BRACE

SCALE: 1" = 1'-0" | 6

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LICENSED ARCHITECT
JIMMIE L. SANDERS
No. C-17644
RENEWAL DATE
12-31-19
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Document Date	Project Number
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ABBREVIATIONS

A.C.C.	APPLICABLE CATEGORY CONTRACTOR
A.F.F.	ABOVE FINISHED FLOOR
A.P.	AIR PRESSURE
ACR	AIR CONDITIONING REFRIGERATION
ADA	AMERICAN DISABILITY ACT
ADDT'L	ADDITIONAL
ADJ.	ADJUSTABLE
ALT.	ALTERNATE
ALUM.	ALUMINUM
AMPS.	AMPERES
APPROX.	APPROXIMATE
ARCH.	ARCHITECT
ASS'Y	ASSEMBLY
ATTACH.	ATTACHMENT
B.F.C.	BELOW FINISHED CEILING
B/C	BLOWER COIL
BLDG	BUILDING
BLK	BLOCKING
BPD	BACKFLOW PREVENTION DEVICE
BRKT	BRACKET
BTU	BRITISH THERMAL UNITS PER HOUR
BWP	BUILDING WORKS PLAN
C.O.	CONVENIENCE OUTLET
C.T.	CERAMIC TILE
C/E	CONDENSATE EVAPORATOR
C/L	CENTER LINE
C/T	COUNTER TOP
C/W	COMES WITH
CAB.	CABINET
CANT.	CANTILEVER
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO2	CARBON DIOXIDE
COL	COLUMN
COMP'R	COMPRESSOR
COMP'T	COMPARTMENT
CONC	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CUST.	CUSTOM
CW	COLD WATER
D.	DIRECT
DM	DISH MACHINE
DBL	DOUBLE
DEPT	DEPARTMENT
DET.	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM.	DIMENSION
DISP.	DISPENSER
DIV.	DIVISION
DMH	DIELI MURAWKA HOWE
DN	DOWN
DP	DEEP
DPDT	DOUBLE PULL, DOUBLE THROW
DSA	DIVISION OF THE STATE ARCHITECT
DTA	DIAMOND TREAD ALUMINUM
DWG	DRAWING
DWR	DRAWER
E.	EXISTING
E.C.	ELECTRICAL CONTRACTOR
E.F.	EXHAUST FAN
E.G.	FOR EXAMPLE
EMT	ELECTRICAL METALLIC TUBING
E.P.	ELECTRICAL PANEL
EA	EACH
ELEV	ELEVATION
E.M.S.	ENERGY MANAGEMENT SYSTEM
EPH	ENVIRONMENTAL HEALTH PROTECTION
EQ.	EQUAL
EQUIP	EQUIPMENT
ETC	ET CETERA
EVAP	EVAPORATOR
EXH	EXHAUST
EXT	EXTERIOR
F.D.	FLOOR DRAIN
F.J.	FIELD JOINT
F.S.	FLOOR SINK
F.S.E.C.	FOODSERVICE EQUIPMENT CONTRACTOR
F.T.	FLOOR TROUGH
F.T.D.	FAHRENHEIT TEMPERATURE DIFFERENCE
FEWD	FOOD ESTABLISHMENT WASTEWATER DISCHARGE
FIN.	FINISH
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FPM	FOOT POUNDS PER MINUTE
FRP	FIBERGLAS REINFORCED PLASTIC
FRZ	FREEZER
F.S.S.	FIRE SUPPRESSION SYSTEM
FT	FOOT or FEET
G.C.	GENERAL CONTRACTOR
G.M.	GAS METER
GA.	GAUGE
GAL.	GALLON
GALV	GALVANIZED
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H&C	HOT AND COLD WATER
H.	HEIGHT
H.I.D.	HIGH INTENSITY DISCHARGE
H.V.A.C.	HEATING/VENTILATING AND AIR CONDITIONING
HACCP	HAZARD ANALYSIS CRITICAL CONTROL POINT
HORIZ	HORIZONTAL
HP	HORSE POWER
HTR	HEATER
HW	HOT WATER
I.D.	INSIDE DIMENSION
I.E.	THEREFORE
I.W.	INDIRECT WASTE
IN.	INCHES
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IPS	INTERNAL PIPE SIZE
J-BOX	JUNCTION BOX
KW	KILOWATTS
L.	LENGTH
L/P	LAMINATED PLASTIC
LBS	POUNDS
LIN	LINEAR
LOCN	LOCATION
LTS	LIGHTS
MACH	MACHINE
MAT.	MATERIAL
MAX.	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD.	MOUNTED
MUA	MAKE-UP AIR
MULL	MULLION
N.A.	NOT AVAILABLE
NSF	NATIONAL SANITATION FOUNDATION
N.T.S.	NOT TO SCALE
N/A	NOT APPLICABLE
NAT	NATURAL
No.	NUMBER
OB	OPEN BURNER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPNG	OPENING
OSHPD	OFFICE STATE HEALTH PLANNING & DEVELOPMENT
OZ	OUNCE
P.B.	PULL BOX
P.C.	PLUMBING CONTRACTOR
PERF.	PERFORATED
PG	PAGE
PH	PHASE
PL	PLATE
PREP	PREPARATION
PREV	PREVIOUS
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PVC	POLY VINYL CHLORIDE
Q.D.	QUICK DISCONNECT
Q.T.	QUARRY TILE
QT	QUART
QTY	QUANTITY
RAD	RADIUS
RECOM'D	RECOMMENDED
REFRIG	REFRIGERATOR
REMOV	REMOVABLE
REQD	REQUIRED
RLA	RUNNING LOAD AMPS
RM	ROOM
RND	ROUND
RPPD	REDUCED PRESSURE PRINCIPLE DEVICE
S.O.V.	SHUT-OFF VALVE
SP	STATIC PRESSURE
S/C	SELF CONTAINED
S/S	STAINLESS STEEL
SCHED	SCHEDULE
SECT	SECTION
SHS	SINGLE HORIZONTAL SLIDE
SHT	SHEET
SIM	SIMILAR
SL/SF	SOLID SURFACE
SMACNA	SHEET METAL AIR CONDITIONING NAT. ASSOC.
SNZ GD	SNEEZE GUARD
SPEC	SPECIFICATIONS
SQ FT	SQUARE FEET
STMR	STEAMER
SW	SWITCH
SYM	SYMBOL
SYS	SYSTEM
T.B.D.	TO BE DETERMINED
T.C.	TRASH CAN
TEL CO	TELEPHONE COMPANY
TEMP.	TEMPERATURE
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UDS	UTILITY DISTRIBUTION SYSTEM
UL	UNDERWRITERS LABORATORY
UMC	UNIFORM MECHANICAL CODE
UPC	UNIFORM PLUMBING CODE
UV	ULTRA VIOLET
U/C	UNDER COUNTER
VCT	VINYL COMPOSITION TILE
VS	VERSUS
VFD	VARIABLE FREQUENCY DRIVE
W.	WIDTH
W.G.	WATER GAUGE
W.H.	WATER HEATER
W.I.	WALK IN
W.I.C.	WIDTH IN CLEAR
W/	WITH
WGT	WEIGHT
W.P.	WATER PRESSURE
X-BRC	CROSS-BRACING

FOOD SERVICE SHEET LIST

(*) NOTE: THE FOLLOWING INFORMATION CAN BE FOUND ON THE BUILDING WORK PLAN: FLOOR DEPRESSIONS, LEVEL FLOORS; GALV. CURBS; WALL BACKING; HOOD OUTLINES, EXHAUST & MUA DUCTS; WALL & CEILING PENETRATIONS; WALL & WINDOW OPENINGS; FRP & S/S WALL FINISHES.

ATTACHMENT NOTES

(MIN. REQUIREMENTS UNLESS NOTED OTHERWISE)

THESE GUIDELINES HAVE BEEN PREPARED FOR USE BY ENGINEERS, ARCHITECTS AND CONTRACTORS, APPROVING AUTHORITIES, AND OTHERS AS AN AID IN STANDARDIZING DETAILS OF CONSTRUCTION FOR SEISMIC RESTRAINTS OF FOOD SERVICE EQUIPMENT COMPLYING WITH THE 2016 CALIFORNIA BUILDING CODE (CBC). IT IS NOT TO BE CONSTRUED TO BE A DESIGN GUIDELINE. THE APPLICATIONS OF THE DETAILS CONTAINED HEREIN TO A SPECIFIC PROJECT ARE THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL.
DIVISION OF THE STATE ARCHITECT (DSA) APPROVAL IS FOR ANCHORAGE ONLY.
CONSTRUCTION OF EQUIPMENT MUST BE STRONG ENOUGH TO RESIST DESIGN FORCES.

THESE GUIDELINES WERE DEVELOPED USING SOUND ENGINEERING PRINCIPLES AND JUDGMENT. THEY REPRESENT REALISTIC AND SAFE DETAILS COMPATIBLE WITH GENERAL GUIDELINES AND FORCE FACTORS IN THE 2016 CALIFORNIA BUILDING CODE (CBC). THEY ARE SUBJECT TO REVISION AS FURTHER EXPERIENCE AND INVESTIGATION MAY SHOW IF NECESSARY. SMACNA ASSUMES NO RESPONSIBILITY AND ACCEPTS NO LIABILITY FOR THE APPLICATION OF THE PRINCIPLES OR TECHNIQUES CONTAINED IN THIS GUIDELINE.

1. – KITCHEN EQUIPMENT IS MANUFACTURED IN A MULTITUDE OF DIFFERENT SHAPES, SIZES, AND WEIGHTS. IN ORDER TO CODIFY THE VARIABLES, EQUIPMENT HAS BEEN ARRANGED INTO BASIC CATEGORIES OR TYPES; ALL EQUIPMENT WITHIN A CATEGORY HAS SIMILAR RESTRAINT REQUIREMENTS. DETAILS OF ANCHORAGE AND BRACING FOR EACH OF THE BASIC TYPES HAVE BEEN DEVELOPED. THE EQUIPMENT SHOWN IN THE INDEX IS NOT NECESSARILY A COMPLETE LIST, BUT THE LISTED EQUIPMENT DETAILS MAY BE USED AS A GUIDE FOR SIMILAR EQUIPMENT WITHIN THE RESTRAINTS INDICATED. THE PROJECT ARCHITECT/ENGINEER SHOULD BE CONSULTED IF THERE IS ANY DOUBT ABOUT RESTRAINT REQUIREMENTS, SO THAT ALLOWANCES FOR BRACING SYSTEMS MAY BE INCLUDED IN THE CONTRACT DOCUMENTS OR CONTRACTOR'S BID.
2. – ALL DETAILS IN THIS GUIDELINE ARE FOR EQUIPMENT THAT IS DIRECTLY CONNECTED TO UTILITIES. PLUG-IN TYPES ARE USUALLY EXCLUDED. THE EXCEPTION IS FREESTANDING CABINETS GREATER THAN FIVE FEET IN HEIGHT. THE DETAILS IN THE GUIDELINE SHOW AN ENTIRE ASSEMBLY.
3. – THE DETAILS HAVE BEEN PREPARED ON THE BASIS OF NEW CONSTRUCTION. THE SAME DETAILS ARE APPLICABLE TO REMODELING, PROVIDED THE SPECIFIED STRUCTURAL CAPACITIES OF THE EXISTING STRUCTURES, SUCH AS STUD WALLS, FLOORS, ETC., ARE EQUIVALENT SUBSTANTIATED.
4. – FINISHES INDICATED ON THE DETAILS ARE NOT INCLUDED IN THE KITCHEN EQUIPMENT CONTRACT.
5. – THE FOOD SERVICE EQUIPMENT CONTRACTOR SHALL PROVIDE LOCATION DRAWINGS FOR ALL EMBEDDED ITEMS AND WALL PLATES. THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF OTHER TRADES AS THEY RELATE TO THE INSTALLATION OF KITCHEN EQUIPMENT.
6. – BACKING PLATES ON WALLS SHALL BE INSTALLED TO ENSURE A FLAT FINISHED WELL.
7. – CONCRETE ANCHORS WILL HAVE LOCAL-GOVERNING-JURISDICTION-APPROVED VALUES. CAST-IN-PLACE BOLTS, INSERTS, EXPANSION ANCHORS, OR HEAT-TREATED CONCRETE SCREWS MAY BE USED WHERE THE APPROVED LOADS ARE EQUAL TO OR GREATER THAN THE VALUES FOR THE SPECIFIED CONCRETE ANCHOR. THE STRUCTURAL ENGINEER SHOULD USE CAUTION WHEN USING THE SHALLOWEST ANCHOR IN THE APPROVED REPORTS BECAUSE IT MAY NOT PERFORM SATISFACTORILY WHEN SUBJECTED TO SEISMIC LOADS.
8. – ALL SCREWS INTO METAL FRAMING SHALL PENETRATE A MINIMUM OF 1/4" (6.4 MM) OR 5 PITCHED OF THREAD. ALL SCREWS INTO WOOD FRAMING SHALL PENETRATE A MINIMUM OF 1" (25.4 MM) UNLESS NOTED OTHERWISE.

BUILDING CONSTRUCTION NOTES

1. – REFER TO THE ARCHITECTS DRAWINGS AND SPECIFICATIONS FOR CURRENT BUILDING CODES

ELECTRICAL NOTES

1. – REFER TO THE ELECTRICAL ENGINEER'S DRAWINGS AND SPECIFICATIONS FOR CURRENT ELECTRICAL CODES AND ELECTRICAL NOTES

MECHANICAL / VENTILATING NOTES

1. – REFER TO THE MECHANICAL ENGINEER'S DRAWINGS AND SPECIFICATIONS FOR CURRENT MECHANICAL CODES AND MECHANICAL NOTES

PLUMBING NOTES

1. – REFER TO THE PLUMBING ENGINEER'S DRAWINGS AND SPECIFICATIONS FOR CURRENT PLUMBING CODES AND PLUMBING NOTES

REFRIGERATION NOTES

(MIN. REQUIREMENTS UNLESS NOTED OTHERWISE)

1. – ANY DISCREPANCIES BETWEEN PLANS AND CODE REQUIREMENTS THAT MAY AFFECT THE INSTALLATION, FABRICATION, OR OVERALL WORK IN ANY WAY SHALL BE BROUGHT TO THE ATTENTION OF THE FOOD SERVICE EQUIPMENT CONTRACTOR IMMEDIATELY BY THE REFRIGERATION CONTRACTOR, BEFORE START OF CONSTRUCTION.
2. – FOOD FACILITY REQUIREMENT NOTES AND ALL OTHER NOTES ARE TO BE CONSIDERED A PART OF THESE NOTES. REFRIGERATION CONTRACTOR TO PROVIDE AS THEY APPLY.
3. – CONTRACTOR SHALL BE RESPONSIBLE THAT HIS PHASE OF WORK MEETS AND IS INSTALLED IN ACCORDANCE WITH STANDARDS REQUIRED BY ALL GENERAL, STATE, FEDERAL, AND ALL CODES PECULIAR TO MUNICIPALITY OR AREA WHERE JOB IS BEING INSTALLED INCLUDING DEPARTMENT OF HEALTH SERVICES REQUIREMENTS.
4. – CONTRACTOR TO VERIFY ALL SERVICES, SIZES, AND LOCATIONS REQUIRED FOR REFRIGERATION EQUIPMENT. PROVIDE AND INSTALL ALL COMPRESSORS, REMOTE ICE MACHINE CONDENSING UNITS, REFRIGERANT PIPING, VALVES, FITTINGS, GAUGES, INSULATION, ETC., ALL AS REQUIRED. FOR A COMPLETE WORKING SYSTEM, UNLESS NOTED OTHERWISE.
5. – CONTRACTOR SHALL SEAL ALL REFRIGERATION PENETRATIONS THROUGH WALLS, FLOORS, AND CEILINGS. WATERTIGHT AND VERMIN-PROOF.
6. – ELECTRICAL SERVICE, CONTROL WIRING, AND CONNECTIONS TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
7. – REFRIGERATION COMPRESSOR(S) AND REMOTE ICE MACHINE CONDENSING UNIT(S) ARE TO BE LOCATED A MINIMUM OF TEN (10) FEET FROM COOKING EXHAUST FANS.
8. – REFRIGERATION COMPRESSOR(S) SHALL BE AIR COOLED, SEMI-HERMETIC TYPE WHERE POSSIBLE. BLOWER COILS SHALL BE VINYL DIPPED TYPE.
9. – CONTRACTOR TO PROVIDE & INSTALL INSULATED REFRIGERATION LINES IN WALLS AND/OR CEILINGS BEFORE THEY ARE CLOSED, AND FINISH SURFACE IS APPLIED.
10. – CONTRACTOR TO PROVIDE AND INSTALL SUPPORTS (TRAPEZE STYLE) FOR ALL OVERHEAD REFRIGERATION LINE RUNS.

FOOD FACILITY REQUIREMENTS NOTES

(MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE)

1. – A CONCRETE SLAB IS PROVIDED FOR TRASH, GARBAGE, AND GREASE CONTAINER. IF WALLS ENCLOSE AREA, THE INTERIOR WALL SURFACES WILL BE SMOOTH, SEALED AND WASHABLE (E.G., PLASTERED SMOOTH AND PAINTED, ETC.)
2. – ALL FOOD-RELATED AND UTENSIL-RELATED EQUIPMENT SHALL MEET OR BE EQUIVALENT TO SANITATION STANDARDS ESTABLISHED BY AN AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) ACCREDITED PROGRAM.
3. – ALL FLOOR MOUNTED EQUIPMENT WILL BE INSTALLED ON MINIMUM 6" SANITARY LEGS, CASTORS, OR COMPLETELY SEALED IN POSITIONED ON A 4-INCH HIGH CURB WITH CONTINUOUSLY COVED BASE. COUNTER TOP EQUIPMENT WILL BE ON 4-INCH SANITARY LEGS OR SEALED TO THE COUNTER UNLESS READILY MOBILE.
4. – NOT USED
5. – ANY OPENABLE WINDOWS, VENT OPENINGS OR OTHER SIMILAR OPENINGS MUST BE PROVIDED WITH TIGHT FITTING SCREENS OF MINIMUM 16-MESH TO THE INCH. WINDOWS TO BE FIXED AT FOOD PREP, UNTENSIL-WASHING, OPEN FOOD AND UTENSIL STORAGE AREAS.
6. – ALL EXTERIOR DOORS OPEN OUTWARD AND ARE SELF-CLOSING AND TIGHT FITTING.
7. – BI-FOLD, FRENCH, ACCORDION STYLE AND ROLL-UP DOORS CANNOT OPEN INTO THE FOOD PREP, UTENSIL WASHING OR UNPACKAGED FOOD SERVICE AREAS.
8. – TOILET ROOM DOORS AND DRESSING ROOM DOORS MUST BE SELF-CLOSING AND TIGHT FITTING.
9. – DELIVERY DOORS TO HAVE AIR CURTAIN FANS THAT SPAN THE WIDTH OVER THE DOOR. THE FAN MUST ACTIVATE VIA A MICROSWITCH PROVIDING A MINIMUM VELOCITY OF 1600 FPM MEASURED 3-FEET ABOVE THE GROUND.
10. – A MINIMUM OF 10 FOOT-CANDLES OF LIGHT MEASURED 30-INCHES OFF FLOOR IS PROVIDED IN WALK-IN REFRIGERATED STORAGE AND DRY STORAGE ROOMS AND AT LEAST 20-FOOT CANDLES IS PROVIDED WHERE FOOD IS PROVIDED FOR CONSUMER SELF-SERVICE, WHERE FRESH PRODUCE OR PREPACKAGED FOODS ARE SOLD OR OFFERED FOR CONSUMPTION; INSIDE EQUIPMENT SUCH AS REACH-IN AND UNDER-COUNTER REFRIGERATORS; IN AREAS USED FOR HANDWASHING, WAREWASHING, EQUIPMENT AND UTENSIL STORAGE, AND IN TOILET ROOMS.
11. – A MINIMUM OF 50 FOOT-CANDLES OF LIGHT MEASURED 30-INCHES OFF FLOOR IS PROVIDED WHEN WORKING WITH FOOD OR WORKING WITH UTENSILS OR EQUIPMENT SUCH AS KNIVES, SLICERS, GRINDERS, OR SAWS WHERE EMPLOYEE SAFETY IS A FACTOR AND IN ALL AREAS DURING PERIODS OF CLEANING.
12. – SHATTERSHEILDS FOR ALL LIGHTS ABOVE FOOD PREPARATION, WORK, AND STORAGE WILL BE PROVIDED.
13. – ALL WAREWASHING SINKS TO HAVE THREE COMPARTMENTS THAT ARE A MINIMUM SIZE OF AT LEAST 18"x18"x12" DEEP (OR 16"x20"x12" DEEP) WITH A MINIMUM 18-INCH DRAINBOARD AT EACH END. IF AGAINST A WALL, IT MUST HAVE AN 8-INCH INTEGRAL BACKSPLASH. HOWEVER, IT MUST BE CAPABLE TO ACCOMMODATE THE LARGEST UTENSIL TO BE WASHED. A WAREWASHING MACHINE DOES NOT SUBSTITUTE FOR THE SINK REQUIREMENT.
14. – SINKS TO HAVE SPOUT(S) CAPABLE OF REACHING EACH COMPARTMENT.
15. – FOOD PREP SINK COMPARTMENT(S) TO BE AT LEAST 18"x18"x12" DEEP (OR 16"x20"x12" DEEP) WITH A MINIMUM 18-INCH DRAINBOARD. SEPARATE FOOD PREP SINKS TO BE PROVIDED FOR MEATS AND PRODUCE.
16. – THE THREE OR FOUR COMPARTMENT BAR SINK TO BE AT LEAST 12"x12"x10" DEEP (OR 10"x14"x10" DEEP) WITH A MINIMUM 18-INCH DRAINBOARD AT EACH END.
17. – A SEPARATE WET WASTE DUMP FIXTURE SHALL BE PROVIDED FOR DISPOSAL OF DRINK, WASTE ICE OR COFFEE WASTE.
18. – EACH HANDWASHING SINK MUST HAVE PERMANENTLY MOUNTED SINGLE-SERVICE SOAP & PAPER TOWEL DISPENSERS.
19. – THE HOT WATER HEATER WILL BE A COMMERCIAL TYPE CAPABLE OF CONSTANTLY SUPPLYING HOT WATER AT A TEMPERATURE OF 120°F TO ALL SINKS. IN SIZING THE WATER HEATER, THE PEAK HOURLY DEMAND FOR ALL SINKS, ETC., ARE ADDED TOGETHER TO DETERMINE THE MINIMUM REQUIRED RECOVERY RATE.
20. – ALL LAVATORIES OR HAND SINKS WILL HAVE A COMBINATION FAUCET OR PREMIXING FAUCET CAPABLE OF SUPPLYING WATER TEMPERED TO 100°F. SELF-CLOSING OR METERED FAUCET TO PROVIDE AT LEAST 15-SECONDS OF WATER WITHOUT REACTIVATION.
21. – ALL PLUMBING, ELECTRICAL AND GAS LINES SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE TO AS GREAT EXTENT AS POSSIBLE. ALL EXPOSED CONDUITS, PLUMBING, ETC. SHALL BE INSTALLED AT LEAST 6-INCHES OFF FLOOR AND 3/4" FROM WALLS USING STANDOFF BRACKETS.
22. – CONDUIT, PLUMBING OR PIPING CANNOT BE INSTALLED ACROSS THE AISLE WAY, TRAFFIC AREA OR DOOR OPENING.
23. – MULTIPLE RUNS OR CLUSTERS OF CONDUIT OR PIPELINES SHALL BE FURRED IN OR ENCASED IN AN APPROVED SEALED ENCLOSURE.
24. – ALL LIQUID WASTE SHALL BE DRAINED BY MEANS OF INDIRECT WASTE PIPES INTO A FLOOR SINK. FLOOR SINKS ARE TO BE INSTALLED FLUSH WITH THE FINISH FLOOR SURFACE AND HAVE SUITABLE EASILY REMOVABLE SAFETY COVER GRATES.
25. – FLOOR SINK TO BE 50% EXPOSED WHEN NO ACCESS IS PROVIDED FOR CLEANING OR BE IN LINE WITH THE FRONT FACE OF ELEVATED FREESTANDING EQUIPMENT.
26. – APPROVED BACKFLOW PREVENTION DEVICES SHALL BE PROPERLY INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN THE POTABLE WATER SUPPLY AND THE SOURCE OF CONTAMINATION. HOSES SHALL NOT BE ATTACHED TO A FAUCET OR HOSE BIBB UNLESS AN APPROVED BACKFLOW PREVENTER IS PROVIDED.
27. – WATER SUPPLY TO CARBONATORS SHALL BE PROTECTED BY AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER. THE RELIEF VALVE SHALL DRAIN INDIRECTLY TO SEWER WITH A LEGAL AIR GAP.
28. – FOR CLEANING FLOOR MATS, THE JANITORIAL SINK TO BE A MINIMUM 24" BY 36" FLOOR-MOUNTED TYPE. MOPS SHALL BE PLACED IN A POSITION THAT ALLOWS THEM TO AIR-DRY WITHOUT SOILING WALLS, EQUIPMENT, OR SUPPLIES.
29. – THE JANITORIAL SINK FAUCET WILL HAVE A THREADED OUTER LIP FOR HOSE ATTACHMENT AND AN APPROVED BACKFLOW PREVENTION DEVICE. NO CHEMICAL DISPENSING SYSTEMS OR SHUT-OFF VALVES TO BE ATTACHED TO MOP SINK FAUCET OUTLET (UNLESS A "SIDEKICK" PLUMBING DEVICE IS INSTALLED).
30. – NO CONDENSATE OR WASTEWATER INCLUDING HVAC WILL DRAIN INTO THE JANITORIAL SINK.
31. – GREASE TRAP TO BE LOCATED OUTSIDE THE FOODSERVICE ACTIVITY AREA, FLUSH WITH THE FINISH FLOOR WHEN INDOORS. LOCAL WASTEWATER DISTRICT OR BUILDING DEPARTMENT TO BE CONTACTED FOR GREASE REMOVAL REQUIREMENTS.
32. – FLOOR DRAINS SHALL BE INSTALLED IN FLOORS THAT ARE WATER-FLUSHED FOR CLEANING AND IN AREAS WHERE PRESSURE SPRAY METHODS FOR CLEANING EQUIPMENT ARE USED, IN RESTROOMS, JANITORIAL ROOMS, SCULLERIES, AND AT BARS WITH WAREWASHING. FLOOR SURFACE IN AREAS PURSUANT TO THIS SHALL BE SLOPED 1:50 TO THE FLOOR DRAINS.
33. – ADEQUATE VENTILATION IS TO BE PROVIDED TO ALL TOILET ROOMS, JANITOR CLOSET WITH MOP SINKS, AND INDOOR TRASH ROOMS AND IN DRESSING/CHANGE ROOM(S).
34. – THE FLOOR FINISH WILL HAVE A SMOOTH SURFACE UNDER ALL EQUIPMENT AND THE WALKWAYS WILL HAVE A LIGHT TEXTURE ONLY.
35. – THE PAINT USED ON WALLS AND CEILINGS OF ALL KITCHEN, FOOD PREP, WORK, STORAGE AREAS WILL BE A GLOSS OR SEMI-GLOSS ENAMEL. FINISH MATERIAL SHALL BE A LIGHT COLOR IN FOOD PREP AREAS FOR EASY CLEANING.
36. – PRIOR TO INSTALLATION, SAMPLES OF FINISHES TO BE SUBMITTED TO ENVIRONMENTAL HEALTH FOR APPROVAL AS NEEDED.
37. – COLD STORAGE ROOMS SHALL BE PROVIDED WITH A SECTION OF SHELVING INSTALLED TO HOLD SHALLOW COOL DOWN PANS – NOT TO EXCEED 4-INCHES IN HEIGHT. SPACE BETWEEN SHELVING TO BE AT LEAST 8-INCHES HIGH.
38. – BACKUP DRY STORAGE SHELVING SHALL BE A MINIMUM OF 96 LINEAR FEET (MEASURED WITH TIERS) OR 25% OF KITCHEN, FOOD PREP, AND WORK AREAS, WHICHEVER IS GREATER. SHELVING SHALL BE AT LEAST 18-INCHES DEEP AND START A MINIMUM SIX-INCHES OFF THE FLOOR SURFACE.
39. – SHELVING OVER WET AREAS (SINKS, MOP SINKS, ETC.) AND FOOD SURFACES WILL BE METAL.
40. – ALL SEAMS, GAPS, OPENINGS TO BE PROPERLY SEALED.

PROJECT INFORMATION:

1. – PROJECT INFO: CALEXICO HIGH SCHOOL CULINARY ARTS CLASSROOM – 1030 ENCINAS AVE. CALEXICO, CA 92231
2. – NAME AND PHONE NUMBER OF THE ARCHITECT IS: SANDERS INC – (760) 353-5440
3. – TYPE OF THIS FOOD FACILITY IS: CLASSROOM
4. – NUMBER OF EMPLOYEES PER SHIFT (INCLUDING OWNERS & MANAGERS): 10-12
5. – THIS FOOD FACILITY IS SERVED BY THE MUNICIPAL WATER DISTRICT OF CITY OF CALEXICO
6. – THIS FOOD FACILITY IS SERVED BY THE MUNICIPAL SEWER DISTRICT OF CITY OF CALEXICO
7. – SQUARE FOOTAGE OF THIS FOOD FACILITY IS: APPROXIMATELY 3140 SQ. FT.

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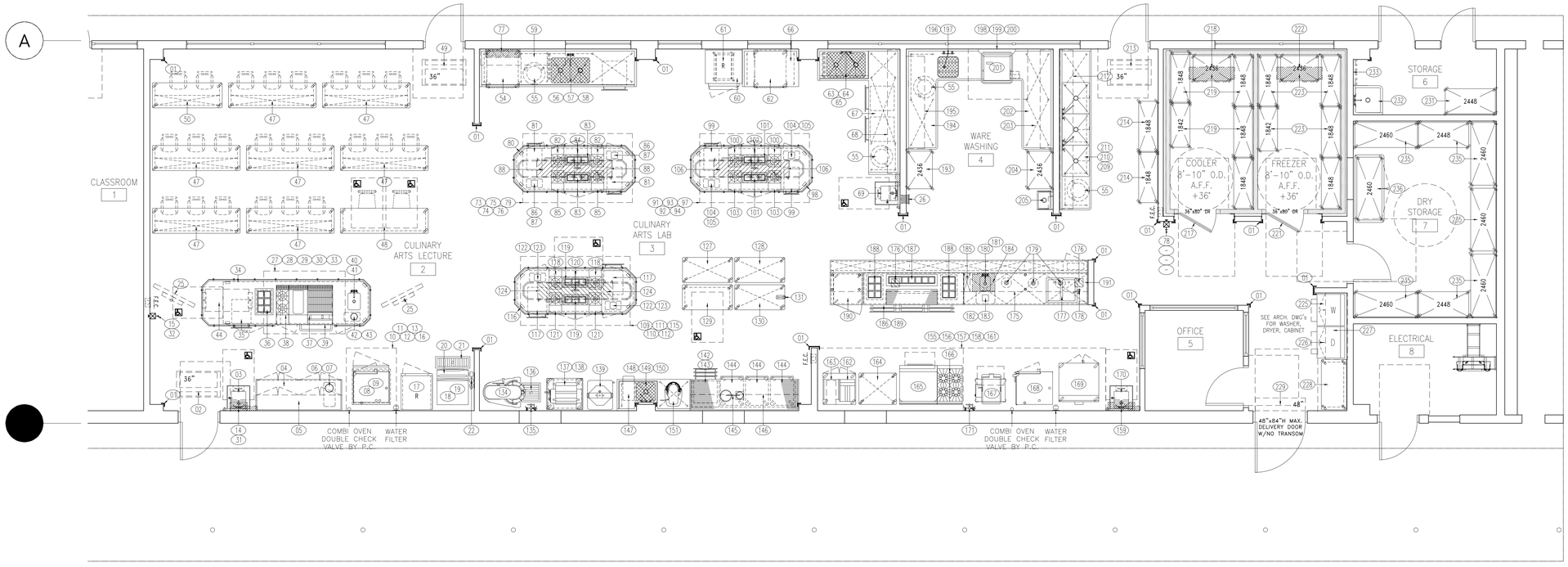
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT GENERAL NOTES

LICENSED ARCHITECT JIMMIE L. SANDERS No. C-17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-25CX
Date Last Revised	Sheet Number
-	FS.00.0



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

FLOOR PLAN LEGEND

- BUILDING WALLS (SEE ARCH. DWGS.)
- (123) ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- KITCHEN A-105 ROOM/ AREA NAME AND ROOM NUMBER
- ACCESSIBLE CLEARANCES AND SYMBOL
- (123) (E) EXISTING FOOD SERVICE EQUIPMENT
- (C) COLUMN GRIDS WITH COLUMN INDICATORS
- R, F, H EQUIPMENT LABELS (Refrigerator, Freezer, Heated)
- OUTLINE OF FOOD SERVICE EQUIPMENT
- 2442, 1848 STORAGE SHELVING SIZES (Width x Length)
- FOOD SERVICE EQUIPMENT BELOW EQUIPMENT TOP
- (321) FUTURE FOOD SERVICE EQUIPMENT
- FOOD SERVICE EQUIPMENT ABOVE EQUIPMENT TOP
- E.P. (ELECTRICAL PANEL, SEE ELECT ENG DWGs)
- MOBILE FOOD SERVICE EQUIPMENT
- (FZ) F.E.C. (TYPE "K" FIRE EXTINGUISHER & CABINET)
- FS.01.0 SHEET NUMBER
- (W.H.) WATER HEATER (SEE PLUMBING ENG DWGs)
- WALK-IN COOLER/FREEZER INSULATED WALLS
- 1 FS07B 2 ELEVATION INDICATOR SYMBOL

TYPICAL KITCHEN FINISH SCHEDULE

ROOM/AREA	FLOOR	BASE	WALLS	CEILING
WALK-IN COOLER & FREEZER	QUARRY TILE NOTE #5	6" QUARRY TILE 3/8" RADIUS COVED	22 GA. S/S STAINLESS STEEL	WHITE STUCCO EMBOSSED ALUMINUM
ALL OTHERS ROOMS/AREAS	SEE SHEET AX1.1 FOR FINISHES			

NOTE #5: ALL FLOORS WILL HAVE A SMOOTH SURFACE UNDER ALL EQUIPMENT, AND ALL WALKWAYS WILL HAVE A LIGHT TEXTURE ONLY

FOOD SERVICE EQUIP. KEYNOTE

01 — FOOD SERVICE EQUIPMENT IDENTIFIER
ITEM NUMBER

(SEE EQUIPMENT SCHEDULE ON FS.02.0)

NOTE: SEE SHEET FS.00.0 FOR FOOD FACILITY REQ'MT NOTES AND OTHER APPLICABLE NOTES

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT FLOOR PLAN

LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL 08-31-19 STATE OF CALIFORNIA

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09-12-18	18-25CX
Date Last Revised	Sheet Number
–	FS.01.0

NOTE: SEE SHEETS FS.09.0, FS.09.1 FOR ATTACHMENT DET.

CALEXICO HIGH SCHOOL EQUIPMENT SCHEDULE AND MECHANICAL REQUIREMENTS

NOTE: SEE SHEET FS.00.0 FOR ABBREVIATIONS LIST

ITEM	EQUIPMENT					ELECTRICAL							PLUMBING/MECHANICAL							
	DESCRIPTION	REMARKS	QTY	ATTACH DETAIL	EQUIP WEIGHT	VOLTS	LOAD HP	LOAD KW	LOAD AMPS	PHASE	CONN.	ELECTRICAL REMARKS	HOT WATER HOT	HOT WATER GPH	HOT WATER TEMP	WATER COLD	WASTE	GAS	BTU 1000	PLUMBING REMARKS
01.	CORNER GUARDS/WALL & END CAPS	FULL HEIGHT TO CEILING CUSTOM S/S; SEE DETAIL N/FS.08.1	LOT		15															
02.	RECESSED CEILING MTD 36" AIR CURTAIN	SEE DETAIL H/FS.08.0	1	A-35	68	120			7.5	1	D.	PROVIDE MICRO-SWITCH FOR ON/OFF DOOR OPERATION								
03.	ACCESSIBLE HAND SINK W/FAUCET	W/SOAP & P.T. DISPENSER SEE DETAIL A/FS.08.0	1 EA.	A-28	35								1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
04.	SERVICE COUNTER	CUSTOM S/S SEE DETAIL -/FS.07.2	1	A-4	580	120			15.0	1	C.O.	(3) CONVENIENCE OUTLETS								
05.	WALL CABINET	CUSTOM S/S SEE DETAIL -/FS.07.2	1	A-6	380															
06.	S/S TRASH CHUTE	CUSTOM S/S PART OF ITEM 04	1																	
07.	TRASH CAN	PROVIDED BY SCHOOL DISTRICT F.S.E.C. TO INSTALL	1																	
08.	66-LB BLAST CHILLER	SELF CONTAINED	1	A-7	390	208			11.7	1	C.O.	NEMA L6-20P					1 1/4"			SELF-CONTAINED/CONDENSATE EVAPORATOR INDIRECT WASTE TO FLOOR SINK W/MIN. 1" AIR GAP
09.	COMBI OVEN W/STAND & WATER FILTER	PROVIDED W/QUICK DISCONNECT	1	A-1 / A-18	359	120			7.5	1	D.	CIRCUIT BREAKER REQUIRED				2)3/4"	2"	1/2"	68.2	REAR NAT. GAS CONN.; DRINKING QUALITY WATER ONLY; I.W. TO F.S. (CONNECT ONLY TO STEAM TEMP. RESISTANT PIPE)
10.	TYPE 1 EXHAUST HOOD (HOOD 1)	SEE SHEET FS.10.1	1	A-13	380	120		0.03		1	D.	(2) 11W ROUND LED LIGHTS SWITCHING BY THE ELECTRICAL CONTRACTOR								(1) 6"x10" EXHAUST DUCT @ 560 CFM @ 0.48/ S.P. (1) 10"x6" M.U.A. DUCT @ 336 CFM @ 0.11 S.P.
11.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
12.	MAKE-UP AIR SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
13.	FIRE SUPPRESSION SYSTEM (PIPING SYSTEM)	ANSUL R-102 SEE DETAIL J/FS.08.0	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
14.	FIRE SUPPRESSION SYSTEM (CONTROL AUTOMAN)	ANSUL R-102 SEE DETAIL J/FS.08.0	1		75	120			1.0	1	D.	DEDICATED CIRCUIT								P.C. TO INSTALL ELECT. GAS S.O.V.; (VALVE BY F.S.E.C.); VERIFY QTY, SIZE & LOC'N W/PLUMBING ENGINEER
15.	FIRE SUPPRESSION SYSTEM (MANUAL PULL)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
16.	S/S WALL FLASHING W/HOOD TRIM	CUSTOM S/S SEE DETAIL P/FS.08.1	1																	
17.	1-SECTION REACH-IN REFRIGERATOR	SELF CONTAINED	1	A-10	440	120			10.0	1	C.O.	NEMA 5-15P								SELF CONTAINED CONDENSATE EVAPORATOR
18.	REMOTE ICE MACHINE (800 LB. CUBER)		1	A-18	235	208			10.0	1	D.	2 CIRCUIT WIRES				1/2"	3/4"			INDIRECT WASTE TO FLOOR SINK W/MINIMUM 1" AIR GAP FILTERED WATER REQUIRED
19.	REMOTE CONDENSER (FOR ITEM 18)	PART OF ITEM 238 SEE SHEET FS.06.1	1		150	208			1.25	1	D.	DEDICATED CIRCUITS REQUIRED REMOTE CONDENSER ON REFRIG. RACK								
20.	ICE STORAGE BIN		1	A-11	140												1"			INDIRECT WASTE TO FLOOR SINK W/MINIMUM 1" AIR GAP
21.	FLOOR TROUGH W/GRATE	CUSTOM S/S SEE DETAIL W/FS.08.1	1														2"			DIRECT WASTE LINE TO A RECESSED FLOOR DRAIN
22.	WATER FILTER		1													1"				CONNECT FROM WATER FILTER TO THE ICE MAKER
23.	SPARE No.		–																	
24.	SPARE No.		–																	
25.	CEILING MTD MONITORS W/STAND	PROVIDED BY A.V. DEPT. SCHOOL DISTRICT	2			120			15.0	1	C.O.	VERIFY REQUIREMENTS W/DATA LINE								
26.	DCV HOOD CONTROL CABINET	FOR ITEMS 10, 27, 73, 91, 109 & 155 SEE SHEET FS.10.5	1		25	120			1.0	1	D.	5 AMP DEDICATED CIRCUIT								
27.	TYPE 1 EXHAUST HOOD (HOOD #2)	SEE SHEET FS.10.2	1	A-13	878	120		0.07		1	D.	(6) 11W ROUND LED LIGHTS SWITCHING BY THE ELECTRICAL CONTRACTOR								(1) 22"x12" EXH DUCT @ 2730 CFM @ 0.89 S.P. (2) 14"x10" MUA DUCTS @ 819 CFM @ 0.10 S.P.
28.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
29.	MAKE-UP AIR SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
30.	FIRE SUPPRESSION SYSTEM (PIPING SYSTEM)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
31.	FIRE SUPPRESSION SYSTEM (CONTROL AUTOMAN)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
32.	FIRE SUPPRESSION SYSTEM (MANUAL PULL)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
33.	S/S HOOD TRIM	CUSTOM S/S SEE DETAIL P/FS.08.1	1																	
34.	INSTRUCTOR COOKING ISLAND SUITE	ACCESSIBLE STATION SEE SHEET FS.10.4	1	A-5	3900	120			60.0	1	D.	4 FIXTURE MOUNTED CONVENIENCE OUTLETS (15 AMP EACH)						1"	174	
35.	15"x20" UTILITY DRAWER	PART OF ITEM 34	1																	
36.	SAUTE STATION W/CONDIMENT PANS	PART OF ITEM 34	1														1"			INDIRECT WASTE TO FLOOR SINK W/MINIMUM 1" AIR GAP
37.	16" DROP-IN CHARBROILER	PART OF ITEM 34	1															1"	40	PRE-PLUMBED TO ITEM #34
38.	36" PLANCHA/2-O.B. RANGE	PART OF ITEM 34	1															1"	48	PRE-PLUMBED TO ITEM #34
39.	LOW PROFILE U/C CONVECTION OVEN	PART OF ITEM 34	1			120			7.9	1	C.O.	NEMA 5-15P						1"	52	PRE-PLUMBED TO ITEM #34
40.	FULLY WELDED 1-COMPT. SINK	W/ S/S SINK COVER	1 EA.														1 1/2"			W/MINIMUM 1" AIR GAP INDIRECT WASTE TO FLOOR SINK
41.	DECK MOUNTED FAUCET	W/ S/S SINK COVER	1										1/2"	12	120°	1/2"				
42.	S/S TRASH CHUTE	PART OF ITEM 34	1																	
43.	TRASH CAN	PROVIDED BY SCHOOL DISTRICT F.S.E.C. TO INSTALL	1																	
44.	CEILING MTD. DEMONSTRATION MIRROR	CUSTOM S/S	1	A-39	125															
45.	SPARE No.		–																	
46.	SPARE No.		–																	
47.	84" MOBILE STUDENT WORK TABLES	CUSTOM S/S SEE DETAIL Y/FS.08.1	7		240															
48.	MOBILE ACCESSIBLE STUDENT WORK TABLE	CUSTOM S/S SEE DETAIL V/FS.08.1	1		240															
49.	RECESSED CEILING MTD 36" AIR CURTAIN	SEE DETAIL H/FS.08.0	1	A-35	68	120			7.5	1	D.	PROVIDE MICRO-SWITCH FOR ON/OFF DOOR OPERATION								
50.	66" MOBILE STUDENT WORK TABLE	CUSTOM S/S SEE DETAIL Y/FS.08.1	1		180															
51.	SPARE No.		–																	
52.	SPARE No.		–																	
53.	SPARE No.		–																	
54.	MOBILE U/C HOLDING/PROOFING CABINET		1		200	120			12.0	1	C.O.	NEMA 5-15P								
55.	TRASH CANS W/DOLLY & LID		4 EA.																	
56.	PREP TABLE W/SINKS W/SINK COVERS	CUSTOM S/S SEE DETAIL T/FS.08.1	1	A-2	280	120			15.0	1	C.O.	(2) CONVENIENCE OUTLETS								
57.	DECK MOUNTED FAUCET – 12" NOZZLE		1		8								1/2"	50	120°	1/2"				
58.	TWIST WASTES W/OVERFLOWS		2														2"			INDIRECT WASTE TO FLOOR SINK W/MINIMUM 1" AIR GAP
59.	WALL MOUNTED SHELF	CUSTOM S/S SEE DETAIL Q-5/FS.08.1	1	A-17	35															
60.	1-SECTION ROLL-IN REFRIGERATOR	SELF CONTAINED	1	A-9	605	120			10.9	1	C.O.	NEMA 5-15P								SELF CONTAINED CONDENSATE EVAPORATOR
61.	MOBILE LADDER RACK		1		68															
62.	MOBILE U/C HOLDING/PROOFING CABINET		1		200	120			12.0	1	C.O.	NEMA 5-15P								
63.	PREP TABLE W/SINKS W/SINK COVERS	CUSTOM S/S SEE DETAIL T/FS.08.1	1	A-2	280															
64.	DECK MOUNTED FAUCET – 12" NOZZLE		1		8								1/2"	50	120°	1/2"				
65.	TWIST WASTES W/OVERFLOWS		2														2"			INDIRECT WASTE TO FLOOR SINK W/MINIMUM 1" AIR GAP
66.	STATIONARY WORK TABLE	CUSTOM S/S SEE DETAIL ---	1	A-1	180	120			15.0	1	C.O.	(1) CONVENIENCE OUTLET								
67.	L-SHAPED PREP TABLE W/DRAWERS	CUSTOM S/S SEE DETAIL U/FS.08.1	1	A-2	280	120			15.0	1	C.O.	(2) CONVENIENCE OUTLETS								
68.	WALL MOUNTED SHELF	CUSTOM S/S SEE DETAIL Q-5/FS.08.1	1	A-17	90															
69.	ACCESSIBLE HAND SINK W/FAUCET	W/SOAP & P.T. DISPENSER SEE DETAIL A/FS.08.0	1 EA.	A-28	35								1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
70.	SPARE No.		–																	
71.	SPARE No.		–																	
72.	SPARE No.		–																	
73.	TYPE 1 EXHAUST HOOD (HOOD #3)	SEE SHEET FS.10.x	1	A-13	1225	120		0.07		1	D.	(6) 11W ROUND LED LIGHTS SWITCHING BY THE ELECTRICAL CONTRACTOR								(1) 12"x25" EXH. DUCT @ 3060 CFM @ 0.66 S.P. (2) 10"x16" MUA DUCTS @ 918 CFM @ 0.10 S.P.
74.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									PROVIDED BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
75.	MAKE-UP AIR SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									PROVIDED BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
76.	FIRE SUPPRESSION SYSTEM (PIPING SYSTEM)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
77.	FIRE SUPPRESSION SYSTEM (CONTROL AUTOMAN)	ANSUL R-102 SEE DETAIL J/FS.08.0	1									COMBINE WITH ITEMS 81 & 106								
78.	FIRE SUPPRESSION SYSTEM (MANUAL PULL)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
79.	S/S HOOD TRIM	CUSTOM S/S SEE DETAIL P/FS.08.1	1																	
80.	COOKING ISLAND SUITE #1	W/BELLY RAIL SEE SHEET FS.011.x	1	A-5	3500	120			40.0	1	D.	(4) FIXTURE MTD CONVENIENCE OUTLETS						1"	200	
81.	15"x20" UTILITY DRAWERS	PART OF ITEM 80	2		20															
82.	1-OPEN BURNER RANGES	PART OF ITEM 80	2															1/2"	35	PRE-PLUMBED TO ITEM #80
83.	SAUTE STATION W/(3) CONDIMENT PANS	PART OF ITEM 80	2														2) 1"			INDIRECT WASTES TO FLOOR SINK W/MINIMUM 1" AIR GAP
84.	DECK MOUNTED FAUCET	PART OF ITEM 80	1										1/2"	12	120°	1/2"				
85.	1-OPEN BURNER RANGES	PART OF ITEM 80	2															1/2"	35	PRE-PLUMBED TO ITEM #80
86.	S/S TRASH CHUTES	PART OF ITEM 80	2																	
87.	TRASH CANS	PROVIDED BY SCHOOL DISTRICT F.S.E.C. TO INSTALL	2																	
88.	36" PASS-THRU CHEESE-MELTERS		2															3/4"	40	PRE-PLUMBED TO ITEM #80
89.	SPARE No.		–																	
90.	SPARE No.		–																	
91.	TYPE 1 EXHAUST HOOD (HOOD #4)	SEE SHEET FS.10.x	1	A-13	1225	120		0.07		1	D.	(6) 11W ROUND LED LIGHTS SWITCHING BY THE ELECTRICAL CONTRACTOR								(1) 12"x25" EXH. DUCT @ 3060 CFM @ 0.66 S.P. (2) 10"x16" MUA DUCTS @ 918 CFM @ 0.10 S.P.
92.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									PROVIDED BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
93.	MAKE-UP AIR SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									PROVIDED BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
94.	FIRE SUPPRESSION SYSTEM (PIPING SYSTEM)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
95.	FIRE SUPPRESSION SYSTEM (CONTROL AUTOMAN)	ANSUL R-102 SEE DETAIL J/FS.08.0	1									COMBINE WITH ITEMS 81 & 106								
96.	FIRE SUPPRESSION SYSTEM (MANUAL PULL)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
97.	S/S HOOD TRIM	CUSTOM S/S SEE DETAIL P/FS.08.1	1																	
98.	COOKING ISLAND SUITE #2	W/BELLY RAIL SEE SHEET FS.11.x	1	A-5	3500	120			40.0	1	D.	(4) FIXTURE MTD CONVENIENCE OUTLETS						1"	200	
99.	15"x20" UTILITY DRAWERS	PART OF ITEM 98	2		20															
100.	1-OPEN BURNER RANGES	PART OF ITEM 98	2															1/2"	35	PRE-PLUMBED TO ITEM #98
101.	SAUTE STATION W/(3) CONDIMENT PANS	PART OF ITEM 98	2														2) 1"			INDIRECT WASTES TO FLOOR SINK W/MINIMUM 1" AIR GAP
102.	DECK MOUNTED FAUCET	PART OF ITEM 98	1										1/2"	12	120°	1/2"				
103.	1-OPEN BURNER RANGES	PART OF ITEM 98	2															1/2"	35	PRE-PLUMBED TO ITEM #98
104.	S/S TRASH CHUTES	PART OF ITEM 98	2																	
105.	TRASH CANS	PROVIDED BY SCHOOL DISTRICT F.S.E.C. TO INSTALL	2																	
106.	36" PASS-THRU CHEESE-MELTERS		2															3/4"	40	PRE-PLUMBED TO ITEM #98
107.	SPARE No.		–																	
108.	SPARE No.		–																	
109.	TYPE 1 EXHAUST HOOD (HOOD #5)	SEE SHEET FS.10.x	1	A-13	1225	120		0.07		1	D.	(6) 11W ROUND LED LIGHTS SWITCHING BY THE ELECTRICAL CONTRACTOR								(1) 12"x25" EXH. DUCT @ 3060 CFM @ 0.66 S.P. (2) 10"x16" MUA DUCTS @ 918 CFM @ 0.10 S.P.
110.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									PROVIDED BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
111.	MAKE-UP AIR SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									PROVIDED BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
112.	FIRE SUPPRESSION SYSTEM (PIPING SYSTEM)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
113.	FIRE SUPPRESSION SYSTEM (CONTROL AUTOMAN)	ANSUL R-102 SEE DETAIL J/FS.08.0	1									COMBINE WITH ITEMS 81 & 106								
114.	FIRE SUPPRESSION SYSTEM (MANUAL PULL)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
115.	S/S HOOD TRIM	CUSTOM S/S SEE DETAIL P/FS.08.1	1																	
116.	ACCESSIBLE COOKING ISLAND SUITE	W/BELLY RAIL SEE SHEET FS.11.x	1	A-5	3500	120			40.0	1	D.	(4) FIXTURE MTD CONVENIENCE OUTLETS						1"	200	
117.	15"x20" UTILITY DRAWERS	PART OF ITEM 116	2		20															
118.	1-OPEN BURNER RANGES	PART OF ITEM 116	2															1/2"	35	PRE-PLUMBED TO ITEM #116
119.	SAUTE STATION W/(3) CONDIMENT PANS	PART OF ITEM 116	2														2) 1"			INDIRECT WASTES TO FLOOR SINK W/MINIMUM 1" AIR GAP
120.	DECK MOUNTED FAUCET	PART OF ITEM 116	1										1/2"	12	120°	1/2"				

ITEM	EQUIPMENT					ELECTRICAL							PLUMBING/MECHANICAL							
	DESCRIPTION	REMARKS	QTY	ATTACH DETAIL	EQUIP WEIGHT	VOLTS	LOAD HP	LOAD KW	LOAD AMPS	PHASE	CONN.	ELECTRICAL REMARKS	HOT WATER HOT	HOT WATER GPH	HOT WATER TEMP	WATER COLD	WASTE	GAS	BTU 1000	PLUMBING REMARKS
121.	1-OPEN BURNER RANGES	PART OF ITEM 116	2															1/2"	35	PRE-PLUMBED TO ITEM #116
122.	S/S TRASH CHUTES	PART OF ITEM 116	2																	
123.	TRASH CANS	PROVIDED BY SCHOOL DISTRICT F.S.E.C. TO INSTALL	2																	
124.	36" PASS-THRU CHEESE-MELTER		1															3/4"	40	PRE-PLUMBED TO ITEM #116
125.	SPARE No.		–																	
126.	SPARE No.		–																	
127.	MOBILE WORK TABLE	CUSTOM S/S SEE DETAIL Z/FS.08.1	1		180	120			15.0	1	C.O.	(1) CONVENIENCE OUTLET (DROP-CORD & PLUG) STUB-DOWN FROM CEILING (NEMA 5-15P)								
128.	MOBILE WORK TABLE	CUSTOM S/S SEE DETAIL Z/FS.08.1	1		180	120			15.0	1	C.O.	(1) CONVENIENCE OUTLET (DROP-CORD & PLUG) STUB-DOWN FROM CEILING (NEMA 5-15P)								
129.	MOBILE ACCESSIBLE TABLE	CUSTOM S/S SEE DETAIL V/FS.08.1	1		180	120			15.0	1	C.O.	(1) CONVENIENCE OUTLET (DROP-CORD & PLUG) STUB-DOWN FROM CEILING (NEMA 5-15P)								
130.	MOBILE WORK TABLE	CUSTOM S/S SEE DETAIL Z/FS.08.1	1		180	120			15.0	1	C.O.	(1) CONVENIENCE OUTLET (DROP-CORD & PLUG) STUB-DOWN FROM CEILING (NEMA 5-15P)								
131.	TABLE MOUNTED CAN OPENER		1		9															
132.	SPARE No.		–																	
133.	SPARE No.		–																	
134.	60-QT. FOOD MIXER		1	A-19	886	208			10.0	3	D.	W/DISCONNECT SWITCH								
135.	WALL MOUNTED FILL FAUCET		1		8								1/2"	4	120°	1/2"				
136.	FLOOR TROUGH W/GRATE	CUSTOM S/S SEE DETAIL W/FS.08.1	1														2"			DIRECT WASTE (DRAIN TO A RECESSED FLOOR DRAIN)
137.	VERTICAL DOUGH SHEETER		1		130	120			7.4	1	C.O.	NEMA 5-15P								
138.	MOBILE DOUGH SHEETER STAND	CUSTOM S/S SEE DETAIL Z/FS.08.1	1		180															
139.	COUNTER TOP DIVIDER/ROUNDER		1	A-18	212	120			5.2	1	C.O.	NEMA 5-15P								
140.	SPARE No.		–																	
141.	SPARE No.		–																	
142.	BAKERS TABLE W/MAPLE TOP	CUSTOM S/S SEE DETAIL -/FS.07.2	1	A-2	225	120			15.0	1	C.O.	(2) CONVENIENCE OUTLETS								
143.	3-DRAWER ASSEMBLY	CUSTOM S/S PART OF ITEM 142	1		60															
144.	MOBILE INGREDIENT BINS		3																	
145.	BAKER'S BEAM SCALE		1		25															
146.	WALL SHELF	CUSTOM S/S SEE DETAIL Q-5/FS.08.1	1	A-17	75															
147.	TRASH CAN	PROVIDED BY SCHOOL DISTRICT F.S.E.C. TO INSTALL	1																	
148.	PREP TABLE W/SINK W/SINK COVER	CUSTOM S/S SEE DETAIL T/FS.08.1	1	A-2	280												2"			INDIRECT WASTE TO FLOOR SINK W/MINIMUM 1" AIR GAP
149.	SPLASH MOUNTED FAUCET		1		8								1/2"	50	120°	1/2"				
150.	TWIST WASTE W/OVERFLOW		1																	
151.	20-QT. FOOD MIXER		1		270	120			8.0	1	C.O.	NEMA 5-15P								
152.	SPARE No.		–																	
153.	SPARE No.		–																	
154.	SPARE No.		–																	
155.	TYPE 1 EXHAUST HOOD (HOOD #6)	SEE SHEET FS.10.1	1	A-13	2185	120		0.09		1	D.	(8) 11W ROUND LED LIGHTS SWITCHING BY THE ELECTRICAL CONTRACTOR								(2) 19"x12" EXH DUCT @ 2323 CFM @ 0.75 S.P. (4) 10"x12" MUA DUCT @ 697 CFM @ 0.10 S.P.
156.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENG. PROVIDED BY THE H.V.A.C.	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
157.	MAKE-UP AIR SYSTEM	SPEC'D BY THE MECH. ENG. PROVIDED BY THE H.V.A.C.	1									BY THE H.V.A.C. CONTRACTOR VERIFY ELECTRICAL REQUIREMENTS								
158.	FIRE SUPPRESSION SYSTEM (PIPING SYSTEM)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	INSTALL ELECT. GAS S.O.V.; VALVE BY F.S.E.C.;
159.	FIRE SUPPRESSION SYSTEM (CONTROL AUTOMAN)	ANSUL R-102 SEE DETAIL J/FS.08.0	1	A-6	175	120			13.0	1	D.	20 AMP DEDICATED CIRCUIT								
160.	FIRE SUPPRESSION SYSTEM (MANUAL PULL)	ANSUL R-102 SEE DETAIL J/FS.08.0	1																	
161.	S/S WALL FLASHING W/HOOD TRIM	CUSTOM S/S SEE DETAIL P/FS.08.1	LOT																	
162.	MOBILE 40 LB FRYER W/FILTER		1	A-43	525	120			9.0	1	C.O.	NEMA 5-15P						1"	110	REAR NATURAL GAS CONNECTION; F.S.E.C. TO PROVIDE Q.D. & RESTRAINING DEVICE
163.	FRENCH FRY WARMER		1		200	120			6.3	1	C.O.	NEMA 5-15P								
164.	MOBILE WORK TABLE	CUSTOM S/S SEE DETAIL Z/FS.08.1	1		180	120			15.0	1	C.O.	(1) CONVENIENCE OUTLET								
165.	36" GRIDDLE W/OVEN		1	A-7	601	120			3.4	1	C.O.	ELECTRONIC IGNITION						1"	141	NATURAL REAR GAS CONNECTION W/ QUICK DISCONNECT
166.	4-OPEN BURNERS RANGE		1	A-7	400													1"	140	NATURAL REAR GAS CONNECTION W/ QUICK DISCONNECT
167.	10 GALLON TILT BRAISING PAN W/STAND		1	A-1	212	208			20.5	3	D.						1 1/4"			INDIRECT WASTE TO FLOOR SINK W/1" AIR GAP
168.	HALF-SIZE COMBI OVEN W/STAND/FILTER	PROVIDED W/QUICK DISCONNECT	1	A-1 / A-18	359	120			7.5	1	D.	CIRCUIT BREAKER REQUIRED				2)3/4"	2"	1/2"	37.5	REAR NAT. GAS CONN.; DRINKING QUALITY WATER ONLY; I.W. TO F.S. (CONNECT ONLY TO STEAM TEMP. RESISTANT PIPE)
169.	MOBILE CONVECTION OVEN		1	A-40	1095	(2)120			(2)8.0	(2)1	(2)C.O.	(2) NEMA 5-15P						3/4"	100	(1) NATURAL REAR GAS CONNECTION; THE F.S.E.C. TO PROVIDE QUICK DISCONNECT & RESTRAINING DEVICE
170.	ACCESSIBLE HAND SINK W/FAUCET	W/SOAP & P.T. DISPENSER SEE DETAIL A/FS.08.0	1 EA.	A-28	35								1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
171.	WALL MOUNTED FILL FAUCET		1		8								1/2"	4	120°	1/2"				
172.	SPARE No.		–																	
173.	SPARE No.		–																	
174.	PICK-UP COUNTER W/PLATE STORAGE	CUSTOM S/S SEE ELEVATION -/FS.07.1	1	A-5	1890	120			15.0	1	C.O.	(1) FIXTURE MOUNTED CONVENIENCE OUTLET & (2) CONVENIENCE OUTLETS MOUNTED IN COUNTER'S CHASE								
175.	TABLE MOUNTED OVER-SHELVES	CUSTOM S/S PART OF ITEM 174	2		168															
176.	PRINTERS	PROVIDED BY SCHOOL DISTRICT INSTALLED BY THE G.C.	2		10	120			5.0	1	C.O.	DEDICATED CIRCUIT REQUIRED W/DATA LINES TO SERVER VERIFY ELECTRICAL REQUIREMENTS								
177.	2-PAN HOT FOOD WELLS		1		86	208			6.0	1	C.O.	NEMA 6-15P					1"			INDIRECT WASTE TO FLOOR SINK
178.	DECK MOUNTED FILL FAUCET		1		8								1/2"	4	120°					
179.	RETRACTABLE PENDANT HEAT LAMPS		3		8	120		0.375		1	D.	(1) REMOTE ON-OFF SWITCH MOUNTED IN COUNTER'S CHASE								
180.	1-COMPARTMENT SINK WITH TWIST WASTES AND OVERFLOWS	CUSTOM S/S PART OF ITEM 174	1														1 1/2"			INDIRECT WASTE TO FLOOR SINK
181.	DECK-MOUNTED FAUCET		1		8								1/2"	18	120°	1/2"				
182.	S/S TRASH CHUTE	CUSTOM S/S PART OF ITEM 174	1																	
183.	TRASH CAN	PROVIDED BY SCHOOL DISTRICT INSTALLED BY THE G.C.	1																	
184.	MICROWAVE OVEN		1		34	120			13.4	1	C.O.	NEMA 5-15P								
185.	S/S UTILITY CHASE	CUSTOM S/S PART OF ITEM 174	1									STUB-DOWN THRU CHASE, E.C TO CONNECT HEAT LAMP ON-OFF SWITCHES TO RETRACTABLE PENDANT HEAT LAMPS								
186.	6-DRAWER REFRIG BASE W/ CUTTING BRD	CUSTOM S/S REMOTE REFRIGERATION	1		400	120			3.0	1	C.O.	FOR EVAPORATOR COIL					1"			INDIRECT WASTE LINE (INSULATED) FROM EVAPORATOR COIL TO FLOOR SINK
187.	REFRIGERATED COIL RAIL	PART OF ITEM 186 REMOTE REFRIGERATION	1																	
188.	MECHANICAL COOLED PANS	PART OF ITEM 186 REMOTE REFRIGERATION	2																	
189.	REFRIGERATION SYSTEM	FOR ITEMS 187 & 188 SEE SHEET FS.06.1	1			– FOR ELECT. INFO. SEE B/FS.06.1 –						REMOTE COMPRESSOR, PART OF REFRIGERATION RACK – ITEM 238								
190.	MOBILE UNDER-COUNTER FREEZER	WITH 3" CASTERS	1		180	120			6.0	1	C.O.	NEMA 5-15P								SELF-CONTAINED CONDENSATE EVAPORATOR
191.	REFRIGERATION SYSTEM	FOR ITEM 186 SEE SHEET FS.06.1	1			– FOR ELECT. INFO. SEE B/FS.06.1 –						REMOTE COMPRESSOR, PART OF REFRIGERATION RACK – ITEM 238								
192.	SPARE No.		–																	
193.	MOBILE STORAGE SHELVING	5-TIER	1		85															
194.	SOILED DISH TABLE	CUSTOM S/S SEE DETAIL S/FS.08.1	1	A-2	810															
195.	WALL MOUNTED SLANT RACK	CUSTOM S/S SEE DETAIL Q-9/FS.08.1	1	A-17	75															
196.	SCRAP SINK W/RACK GUIDE	CUSTOM S/S SEE DETAIL X/FS.08.1	1														2"			INDIRECT WASTE TO FLOOR SINK W/1" AIR GAP
197.	WALL MTD PRE-RINSE FAUCET		1		8								1/2"	45	120°	1/2"				
198.	TYPE 2 EXHAUST HOOD	SEE SHEET FS.10.0	1	A-13	225												1/2"			(1) 6"x10" EXHAUST DUCT @ 450 CFM @ 0.25 S.P.; INDIRECT WASTE LINE TO FLOOR SINK
199.	EXHAUST SYSTEM	SPEC'D BY THE MECH. ENGINEER PROVIDED BY H.V.A.C. CONTRACTOR	1									PROVIDED BY THE H.V.A.C. CONTRACTOR VERIFY ELECTICAL REQUIREMENTS								
200.	S/S WALL FLASHING	CUSTOM S/S SEE DETAIL P/FS.08.1	LOT																	
201.	HIGH-TEMP WASHER W/BUILT-IN BOOSTER	HOBART AM-15-T	1	A-11	329	208			45.4	3	D.	SINGLE POINT CONNECTION 60 AMP CIRCUIT	3/4"	43	120°		1 1/2"			I.W. LINE TO A 3" MIN. TRAPPED F.S. (42.9 G.P.H. WATER CONSUMPTION)
202.	CLEAN DISH TABLE	CUSTOM S/S SEE DETAIL S/FS.08.1	1	A-2	810															
203.	WALL MOUNTED SHELF	CUSTOM S/S SEE DETAIL Q-5/FS.08.1	1	A-17	85															
204.	MOBILE STORAGE SHELVING	5-TIER	1		85															
205.	HAND SINK W/FAUCET & SOAP DISPENSER		1 EA.	A-28	35								1/2"	5	105°	1/2"	1 1/2"			DIRECT WASTE
206.	SPARE No.		–																	
207.	SPARE No.		–																	
208.	SPARE No.		–																	
209.	3-COMPARTMENT POT & PAN SINK	CUSTOM S/S SEE DETAIL R/FS.08.1	1	A-2	855															
210.	TWIST WASTES W/OVERFLOWS		3														2"			INDIRECT WASTE LINE TO A MINIMUM 3" TRAPPED 12"x12"x10" DEEP FLOOR SINK W/1" AIR GAP
211.	SPLASH MOUNTED FAUCETS		2		8								2)3/4"	75	120°	2)3/4"				
212.	WALL MOUNTED SHELF	CUSTOM S/S SEE DETAIL Q-5/FS.08.1	1	A-17	75															
213.	RECESSED CEILING MTD 36" AIR CURTAIN	SEE DETAIL H/FS.08.0	1	A-35	68	120			7.5	1	D.	PROVIDE MICRO-SWITCH FOR ON/OFF DOOR OPERATION								
214.	MOBILE STORAGE SHELVING	5-TIER	2		85															
215.	SPARE No.		–																	
216.	SPARE No.		–																	
217.	WALK-IN COOLER W/TRIM	W/36"x 80" PLEXIGLAS DOOR	1	A-20	345	120		0.1		1	D.	(2) 33W x 36" L.E.D. LIGHT & (1) 11W L.E.D. DOOR LIGHT; SWITCHING BY THE E.C.								
218.	EVAP. COIL – PART OF ITEM 238	FOR ITEM 217 SEE SHEET FS.06.1	1	F/FS.06.1	58	120			1.6	1	D.	SEE DETAIL K/FS.08.0					1"			INSULATED INDIRECT WASTE FROM EVAP COIL TO FLOOR SINK W/MINIMUM 1" AIR GAP
219.	MOBILE 4-TIER STORAGE SHELVING		6		85															
220.	SPARE No.		–																	
221.	WALK-IN FREEZER W/TRIM	W/36"x 80" PLEXIGLAS DOOR	1	A-20	345	120		0.3		1	D.	(2) 33W x36" L.E.D. LIGHTS, (1) 11W L.E.D. DOOR LIGHT (1) 250W DOOR HEATER; SWITCHING BY THE E.C.								
222.	EVAP. COIL – PART OF ITEM 238	FOR ITEM 221 SEE SHEET FS.06.1	1	F/FS.06.1	62	208			1.0	1	D.	SEE DETAIL K/FS.08.0					1"			INSULATED INDIRECT WASTE FROM EVAP COIL TO FLOOR SINK W/MINIMUM 1" AIR GAP
223.	MOBILE 4-TIER STORAGE SHELVING		6		85															
224.	SPARE No.		–																	
225.	CLOTHES WASHER	SPEC'D BY ARCHITECT PROVIDED BY THE SCHOOL DIST	1	–	–	120				1	D.	VERIFY REQUIREMENTS	1/2"	12	120°	1/2"	1 1/2"			VERIFY REQUIREMENTS
226.	CLOTHES DRYER	SPEC'D BY ARCHITECT PROVIDED BY THE SCHOOL DIST	1	–	–	120				1	D.	PROVIDE 20 AMP TIME DELAY FUSE OR CIRCUIT BREAKER VERIFY REQUIREMENTS						1"	20	4" ROUND EXHAUST DUCTS VERIFY REQUIREMENTS
227.	LINEN OVERHEAD CABINET	SPEC'D BY ARCHITECT PROVIDED BY THE SCHOOL DIST	1	–	–															
228.	SORTING TABLE	SPEC'D BY ARCHITECT PROVIDED BY THE SCHOOL DIST	1	–	–															
229.	48" WALL MOUNTED AIR CURTAIN	SEE DETAIL G/FS.08.0	1	A-6	84	120			7.5	1	D.	PROVIDE (1) MICRO-SWITCH FOR ON/OFF DOOR OPERATION								
230.	SPARE No.		–																	
231.	MOBILE STORAGE SHELVING	5-TIER	1		85															
232.	MOP SINK W/FAUCET	SPEC'D BY THE PLUMBING ENG. PROVIDED BY THE P.C.	1 EA.		45								1/2"	19	120°	1/2"	2"			DIRECT WASTE TO A RECESSED FLOOR WASTE VERIFY PLUMBING REQUIREMENTS
233.	WALL MOUNTED MOP RACK		1		15															
234.	SPARE No.		–																	
235.	MOBILE DRY STORAGE SHELVING	5-TIER	7		85															
236.	MOBILE SECURE STORAGE SHELVING	4-TIER	1		125															
237.	SPARE No.		–																	
238.	ROOF MTD AIR COOLED REFRIG RACK	SEE SHEET FS.06.1	1	E/FS.06.1	1720	208				3	D.	FUSE SIZE = 50.0 AMPS; CONNECTED LOAD = 38.0 AMPS; MINIMUM AMPACITY = 41.0 AMPS								RACK SIZE: 84"L x 61.5"W x 54"H PLATFORM SIZE: 100"L x 65"W x 6"H
239.	SPARE No.		–																	
240.	WALL BACKING	PROVIDED BY F.S.E.C. SEE KEYNOTE 1/SHEET FS.05.0	1	A-24																

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT SCHEDULE

LICENSED ARCHITECT JIMMIE SANDERS C-7644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

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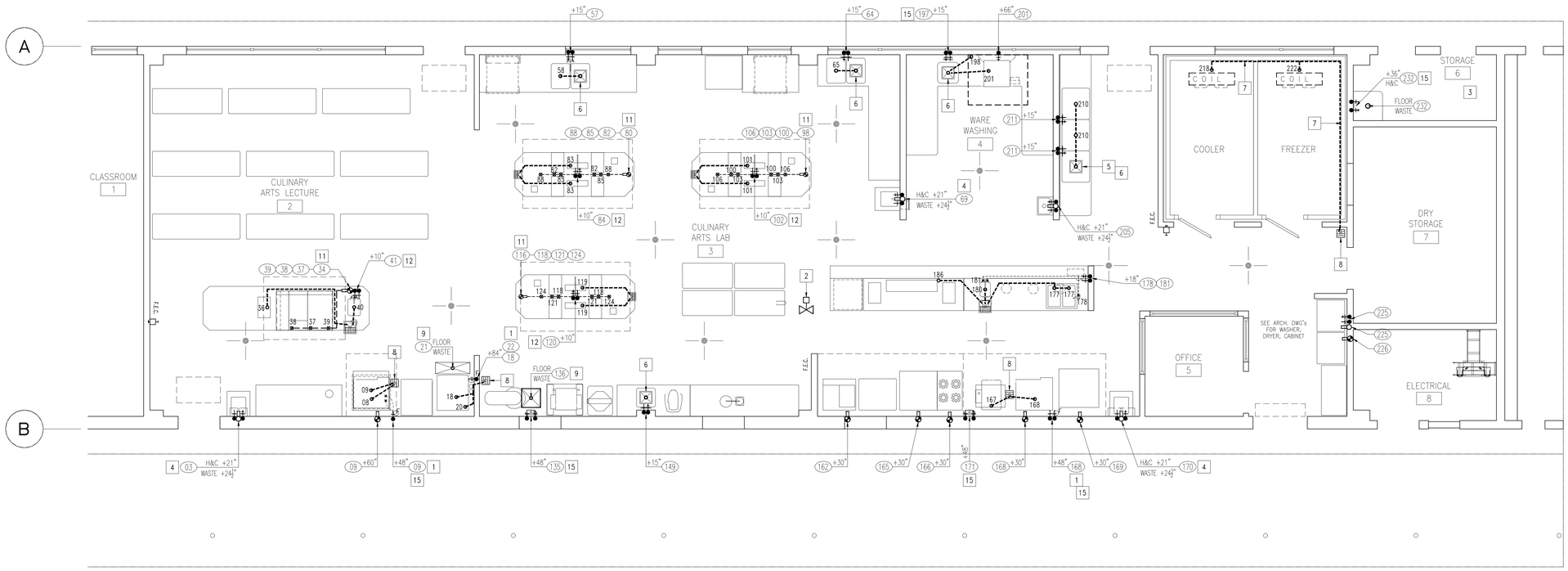

PLUMBING LEGEND

- COLD WATER STUB
- COLD WATER STUB (FILTERED WATER)
- HOT WATER STUB
- HOT WATER STUB (180°)
- CHILLED WATER SUPPLY
- CHILLED WATER RETURN
- DIRECT WASTE
- INDIRECT DRAIN LINE TO FLOOR SINK
- GAS STUB (NATURAL GAS SUPPLY)
- STEAM SUPPLY
- STEAM RETURN
- FLOOR SINK
- FLOOR SINK (WITH 1/2 GRATE) WITH 1/2" MAX. GRATE SPACING ALL DIRECTIONS
- FLOOR SINK (WITH 3/4 GRATE) 1/2" MAX. GRATE SPACING ALL DIRECTIONS
- FLOOR DRAIN (WITH SLOPE PER CODE)
- ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- KEYNOTE SYMBOL (SEE KEYNOTES BELOW)

NOTE:
REFERENCE TO PLUMBING ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION

NOTE: SEE SHEET FS.00.0 FOR PLUMBING NOTES AND OTHER APPLICABLE NOTES

PLUMBING KEYNOTES

1. FILTERED WATER REQUIRED, VERIFY REQUIREMENTS WITH THE VENDOR
2. xx" GAS SHUT-OFF VALVE – VERIFY SIZE, QUANTITY & LOCATION W/PLUMBING ENGINEER
3. PLUMBING REQUIREMENTS FOR THESE AREAS TO BE VERIFIED WITH THE ARCHITECT AND/OR PLUMBING ENGINEER
4. ACCESSIBLE HAND SINK – SEE DETAIL A/FS.08.0
5. 3-COMPARTMENT POT SINK TO GREASE INTERCEPTOR – SEE DETAIL E/FS.08.0
6. FLOOR SINKS IN THE WARE WASHING AREA SHALL BE 12" x12" x10" DEEP FLOOR SINK, MINIMUM 3" TRAPPED
7. DRAIN LINE FROM EVAP COIL TO FLOOR SINK SEE DETAIL F/FS.06.1
8. 8" x 8" x 6" DEEP FLOOR SINK
9. FLOOR TROUGH WITH GRATE – SEE DETAIL W/FS.08.1
10. NOT USED
11. GAS STUB-UP FROM BELOW, CONNECT TO ISLAND EQUIPMENT SEE PLUMBING ENGINEER DRAWINGS
12. HOT & COLD WATER STUB-UP AT +10" A.F.F., TEE-OFF AND CONNECT AS REQUIRED
13. NOT USED
14. NOT USED
15. MOP SINK FAUCET, FILLER HOSES, PRE-RINSE FAUCETS, CARBONATORS, COMBI-OVENS, AND COUNTERTOP EQUIPMENT W/WATER CONNECTIONS TO BE PROVIDED WITH AN APPROVED BACKFLOW PREVENTION DEVICE WITH REDUCED PRESSURE PRINCIPLE. BACKFLOW DEVICE SHALL BE INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN POTABLE WATER AND THE SOURCE OF CONTAMINATION.

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

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT PLUMBING PLAN

LICENSED ARCHITECT JIMMIE G. SANDERS No. 17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

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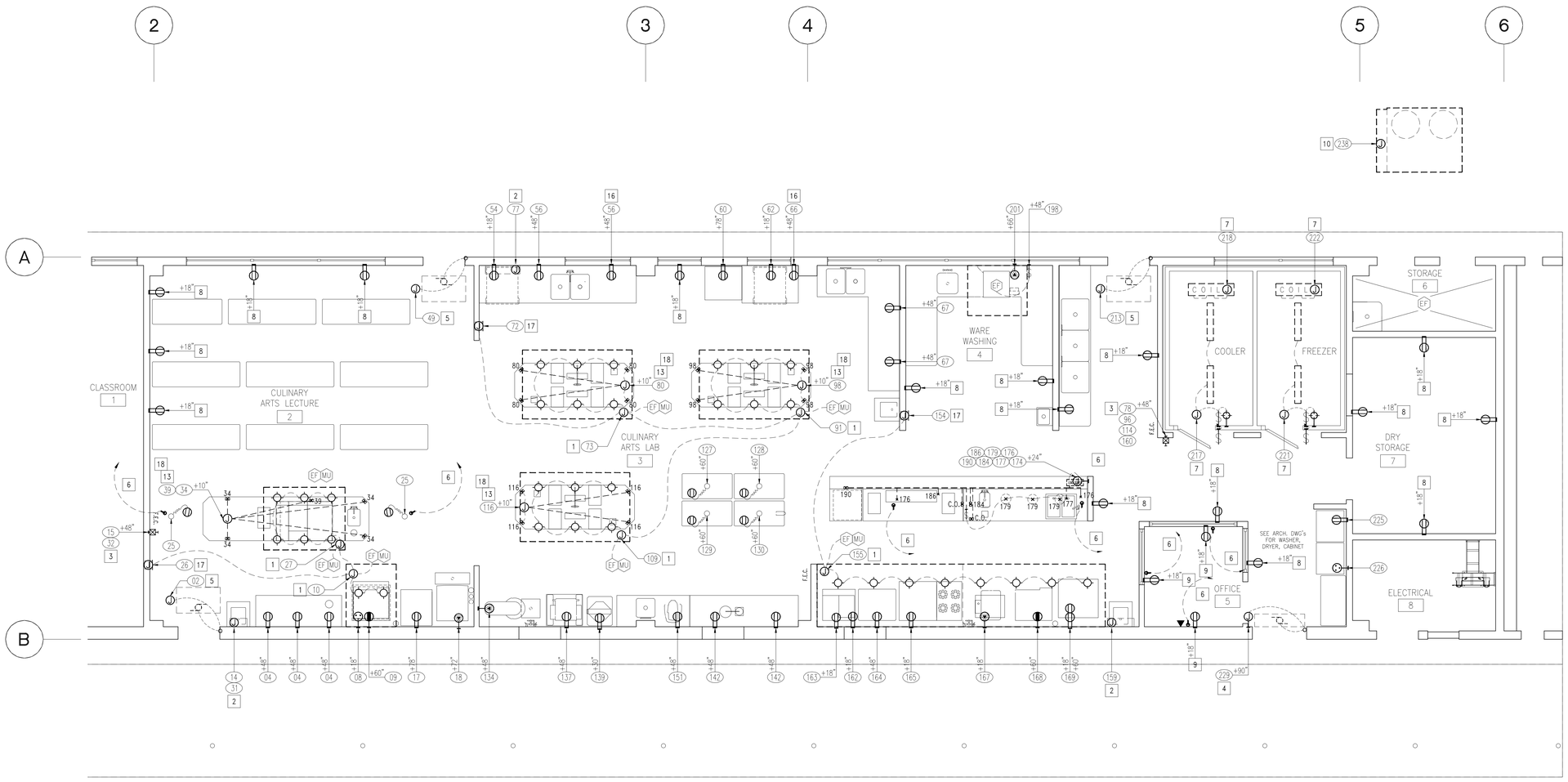

ELECTRICAL LEGEND

- 120 VOLT 1ø CONVENIENCE OUTLET (C.O.)
- 120 VOLT 1ø DIRECT FLEXIBLE CONNECTION
- 120 VOLT 1ø 8W LED LIGHT FIXTURE
- 120 V/1ø DROP CORD DOWN FROM CEILING
- 208 V/1ø DROP CORD DOWN FROM CEILING
- 208 VOLT 1ø OR 3ø CONVENIENCE OUTLET (C.O.)
- 120/208 VOLT 1ø CONVENIENCE OUTLET (C.O.)
- 208 VOLT 1ø OR 3ø DIRECT FLEXIBLE CONNECTION
- 120/208 VOLT 1ø DIRECT FLEXIBLE CONNECTION
- 480 VOLT 3ø DIRECT FLEXIBLE CONNECTION
- JUNCTION BOX
- FIRE PULL-BOX (+48" MAX. A.F.F.)
- 208 VOLT 1ø FLOOR FLUSH OUTLET
- 120 VOLT 1ø FLOOR FLUSH OUTLET
- SWITCH
- SWITCH FOR HOOD LIGHTS
- INTERLOCK EXHAUST & M.U.A. FANS
- EF — EXHAUST FAN
- MU — MAKE-UP AIR FAN
- 120 VOLT 1ø 36W LED HOOD OR W.I. LIGHT FIXTURE
- DATA LINE (VERIFY W/ELECTRICAL ENGINEER)
- 1 — ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- 123 — ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- +48" — UTILITY MOUNTING HEIGHT ABOVE FINISHED FLOOR
- FIXTURE MOUNTED OUTLET
- 1 — KEYNOTE SYMBOL (SEE KEYNOTES BELOW)

NOTE:
REFERENCE TO ELECTRICAL ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION

NOTE:
ALL CONDUIT TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND COORDINATED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR

NOTE: SEE SHEET FS.00.0 FOR ELECTRICAL NOTES AND OTHER APPLICABLE NOTES

NOTE: SEE SHEET FS.06.0 FOR S/S PULL BOXES AND UNDER-GROUND CONDUIT

ELECTRICAL KEYNOTES

1. J-BOX STUB-DOWN FROM ABOVE AND CONNECT TO TO HOOD LIGHTS
2. J-BOX LOCATED 12" ABOVE CEILING LINE FOR FIRE SUPPRESSION SYSTEM AUTOMAN (SEE DETAIL J/FS.08.0)
3. OCTAGON PULL BOX FOR FIRE SUPPRESSION SYSTEM – SEE DETAIL J/FS.08.0
4. WALL MOUNTED AIR CURTAIN'S MICRO SWITCH – SEE DETAIL G/FS.08.0
5. J-BOX STUB-DOWN FROM ABOVE AND CONNECT TO RECESSED CEILING MOUNTED AIR CURTAIN
6. DATA LINE TO SERVER VERIFY LOCATION WITH ELECTRICAL ENGINEER
7. TYPICAL WALK-IN BOX WIRING – SEE DETAIL K/FS.08.0
8. CONVENIENCE OUTLETS – 120 VOLTS 1ø = 15 AMPS; 208 VOLTS 1ø = 30 AMPS; VERIFY W/ELECT ENGINEER)
9. ADDITIONAL CONVENIENCE OUTLETS, DATA & TELEPHONE LINES (IF APPLICABLE) TO BE VERIFIED W/ELECT ENGINEER
10. REFRIGERATION RACK LOCATED ON ROOF SEE SHEET A3 FOR EXACT LOCATION
11. NOT USED
12. NOT USED
13. J-BOX STUB-UP +10" AND CONNECT TO EQUIPMENT – SEE DETAIL F/FS.06.0
14. NOT USED
15. NOT USED
16. CONVENIENCE OUTLETS MOUNT HORIZONTALLY AT HEIGHT INDICATED
17. STUB DOWN +66" A.F.F. FOR EXHAUST HOOD CONTROL CABINET – SEE SHEETS FS.10.7, FS.10.8 & FS.10.9
18. CONDUIT WITH ELECTRICAL WIRING TO STUB-UP A.F.F., FLEX AND CONNECT TO EQUIPMENT AND/OR CO'S AS REQUIRED (MOUNT CO'S IN FIXTURE). ELECTRICAL WIRING TO BE SIZED FOR ALL INCOMING SERVICE BY THE ELECTRICAL ENGINEER. E.C. TO MAKE FINAL HOOK-UPS TO ALL APPLICABLE EQUIPMENT AND TO PROVIDE AND INSTALL CONTRACTOR TO MAKE FINAL HOOK-UPS TO ALL SWITCHES BREAKERS, STARTERS, CONDUIT, JUNCTION BOXES AND OUTLETS IN FIXTURE. FIXTURE FABRICATOR TO LOCATE ALL OUTLETS AND SWITCHES WHEN PART OF FIXTURE. INTERNAL WIRING TO BE PROVIDED AND INSTALLED BY THE E.C. IN ACCORDANCE WITH ALL LOCAL CODES. E.C. SHALL SEAL ALL ELECTRICAL PENETRATIONS THROUGH FLOORS, WATER-TIGHT AND VERMIN-PROOF. A MINIMUM OF 3 WIRES REQUIRED ON ALL 208 VOLT OR LARGER CIRCUITS. SEE FOOD SERVICE EQUIPMENT SCHEDULE FOR LOADED SCHEDULE; ELEVATIONS FOR CO'S LOCATIONS; AND ELECTRICAL NOTES FOR ADDITIONAL REQUIREMENTS. (DETAIL F/FS.08.0)

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

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
ELECTRICAL PLAN

LICENSED ARCHITECT JIMMIE SANDERS No. 17644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

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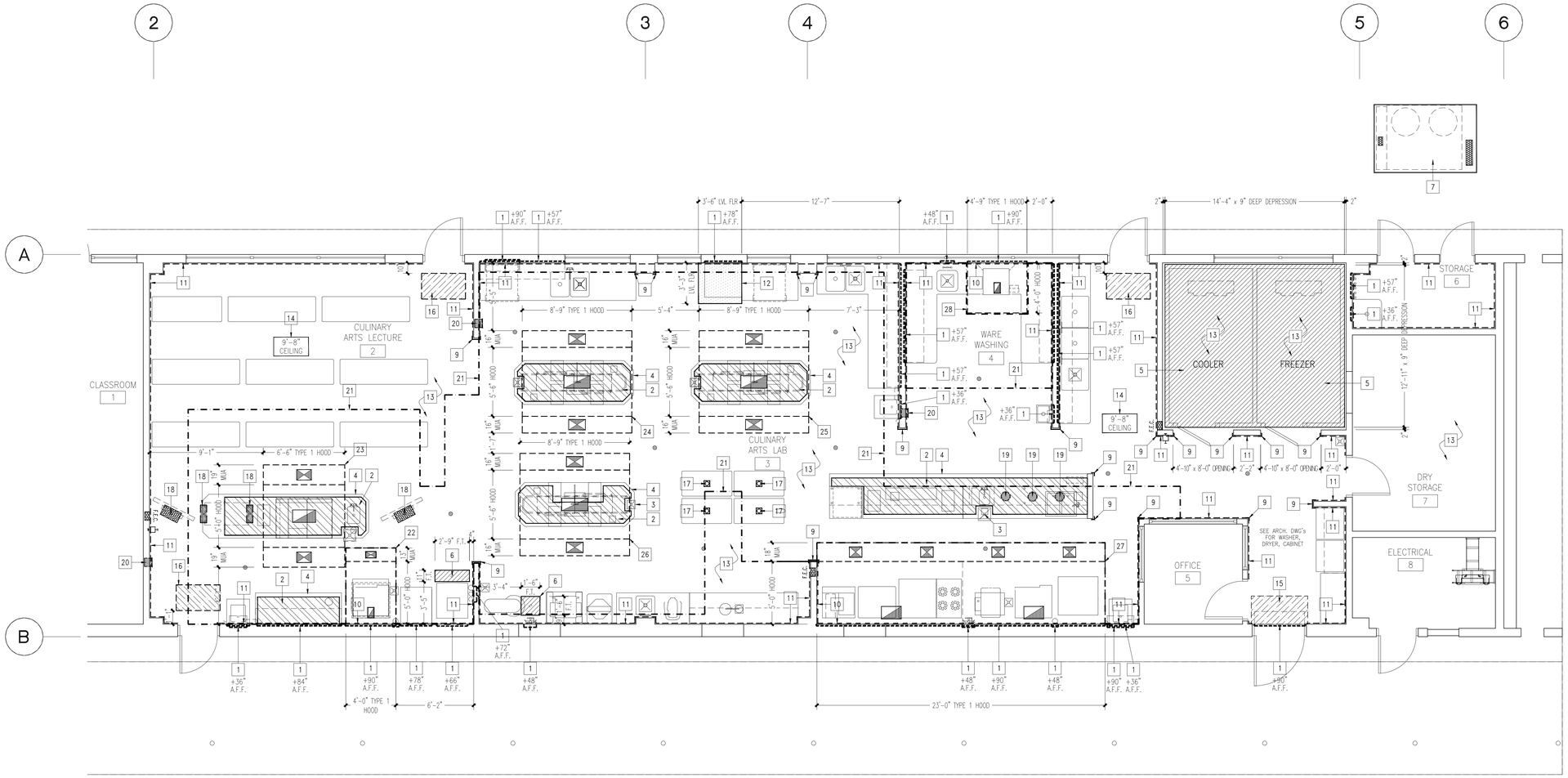

BUILDING WORK LEGEND

- WALL BACKING (14 GA. G.I.)
- S/S WALL FLASHING
- EXHAUST DUCT CONNECTION
- MAKE-UP AIR DUCT CONNECTION
- ROUND EXHAUST FLUE CONNECTION
- EXHAUST HOOD OUTLINE
- DROP CORD SET, DOWN FROM CEILING
- FLOOR OUTLET DEPRESSION
- SMOOTH AND LEVELED FLOOR AREA
- WALL or WINDOW OPENING
- WALL OPENING (SLEEVE)
- FLOOR DEPRESSION
- FIBERGLASS REINFORCED PLASTIC (F.R.P.)
- WALK-IN INSULATED FLOOR (BY W.I. MFG.)
- WALL RECESS FOR CONTROL CABINETS
- WALK-IN COOLER (SLAB-ON-GRADE)
- FLOOR DRAIN
- STEEL KICKBASE OUTLINE
- FLOOR SINK AT STEEL KICKBASE OUTLINE
- 1 KEYNOTE SYMBOL (SEE KEYNOTES BELOW)

WALL BACKING LEGEND

WALL BACKING (PROVIDED BY F.S.E.C., INSTALLED BY G.C.) – ALL A.F.F. HEIGHTS ARE TO CENTERLINE OF 12" HIGH (OR PER ATTACHMENT DETAIL) WALL BACKING –

WALL BACKING TO BE VERIFIED AND COORDINATED BY FOOD SERVICE EQUIPMENT CONTRACTOR.

ALL WALL BACKING TO BE 14 GA. G.I. (OR PER ATTACHMENT DETAIL) & RUN FULL LENGTH OF EQUIPMENT ITEM.

NOTE; SEE SHEET FS.00.0 FOR EXHAUST, BLDG, H.V.A.C. NOTES & OTHER APPLICABLE NOTES

BUILDING WORK KEYNOTES

1. WALL BLOCKING – HEIGHT AS INDICATED SEE DETAIL C/FS.08.0
2. GALV CURB OUTLINE SEE DETAIL B/FS.08.0
3. OUTLINE OF FLOOR SINK AT CURB SEE DETAIL B/FS.08.0
4. COUNTERTOP LINE AND/OR EQUIPMENT SEE ELEVATION SHEETS FS.07.0 AND FS.07.1
5. 9" FLOOR DEPRESSION @ WALK-IN BOX SEE DETAIL L/FS.08.0
6. 6" FLOOR DEPRESSION @ FLOOR TROUGH SEE DETAIL W/FS.08.1
7. REFRIG. RACK'S PLATFORM ON ROOF (SEE SHEET FS.06.1) SEE SHEET A3 FOR EXACT LOCATION
8. NOT USED
9. STAINLESS STEEL END CAP, CORNER GUARD, AND WALL CAPS – SEE DETAIL N/FS.08.1
10. S/S WALL FLASHING (FLOOR TO UNDERSIDE OF HOOD & UNDERSIDE OF FINISHED CEILING WHERE NO HOOD; DETAIL P/FS.08.1
11. F.R.P. (FIBERGLASS REINFORCED PANELS) FROM TOP OF COVE BASE TO FINISHED CEILING (SEE ARCH SPECS/DWGS)
12. FLOOR TO BE LEVEL AND SMOOTH FOR ROLL-IN UNITS
13. TILE FLOOR TO HAVE SMOOTH SURFACE UNDER ALL EQUIPMENT, AND ALL WALKWAYS TO HAVE A LIGHT TEXTURE ONLY.
14. 9'-8" T-BAR CEILING HEIGHT TO BE PROVIDED IN THE KITCHEN & CLASSROOM – SEE ARCHITECT'S SHEET A2
15. PROVIDE A CEILING POCKET @ 104" HIGH FOR DELIVERY DOOR AIR CURTAIN
16. RECESSED CEILING MTD AIR CURTAIN REQUIRES 18" CLEAR ABOVE FINISHED CEILING (SEE MANUFACTURER SPEC. SHEET)
17. DROP CORD DOWN FROM CEILING
18. SUPPORT BY G.C. FOR UNIT – SECURE TO BUILDING STRUCTURE (VERIFY W/ARCHITECT/S.E.)
19. 12 GA. GALV. CONCEALED CEILING BACKING (ABOVE CEILING LINE) FOR OBJECT) SECURE TO BLDG (SEE STRUCTURAL DWGS)
20. HOOD CONTROL PANEL(S) WALL RECESS SEE SHEETS FS.10.7, FS.10.8 & FS.10.9 FOR DETAILS
21. CEILING DIFFUSERS TO BE 6'-0" FROM ALL SIDES OF THE EXHAUST HOOD; SEE SHEET FS.10.0
22. TYPE 1 EXHAUST HOOD (ITEM 10) SEE SHEET FS.10.0 & FS.10.1 (1) 6"x10" EXH DUCT @ 560 CFM @ 0.48 S.P. (1) 10"x6" MUA DUCT @ 336 CFM @ 0.11 S.P.
23. TYPE 1 EXHAUST HOOD (ITEM 27) SEE SHEET FS.10.0 & FS.10.2 (1) 22"x12" EXH DUCT @ 2730 CFM @ 0.89 S.P. (2) 14"x10" MUA DUCTS @ 819 CFM @ 0.10 S.P.
24. TYPE 1 EXHAUST HOOD (ITEM 73) SEE SHEET FS.10.0 & FS.10.3 (1) 12"x25" EXH. DUCT @ 3060 CFM @ 0.66 S.P. (2) 10"x16" MUA DUCTS @ 918 CFM @ 0.10 S.P.
25. TYPE 1 EXHAUST HOOD (ITEM 91) SEE SHEET FS.10.0 & FS.10.4 (1) 12"x25" EXH. DUCT @ 3060 CFM @ 0.66 S.P. (2) 10"x16" MUA DUCTS @ 918 CFM @ 0.10 S.P.
26. TYPE 1 EXHAUST HOOD (ITEM 109) SEE SHEET FS.10.0 & FS.10.5 (1) 12"x25" EXH. DUCT @ 3060 CFM @ 0.66 S.P. (2) 10"x16" MUA DUCTS @ 918 CFM @ 0.10 S.P.
27. TYPE 1 EXHAUST HOOD (ITEM 155) SEE SHEET FS.10.0 & FS.10.6 (2) 19"x12" EXH DUCT @ 2323 CFM @ 0.75 S.P. (4) 10"x12" MUA DUCT @ 697 CFM @ 0.10 S.P.
28. TYPE 2 EXHAUST HOOD (ITEM 198) SEE SHEET FS.10.0 (1) 6"x10" EXH. DUCT @ 475 CFM @ 0.25 S.P.
29. NOT USED
30. NOT USED

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

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT BUILDING WORK PLAN

LICENSED ARCHITECT JIMMIE SANDERS No. C-17644 RENEWAL 7-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-250X
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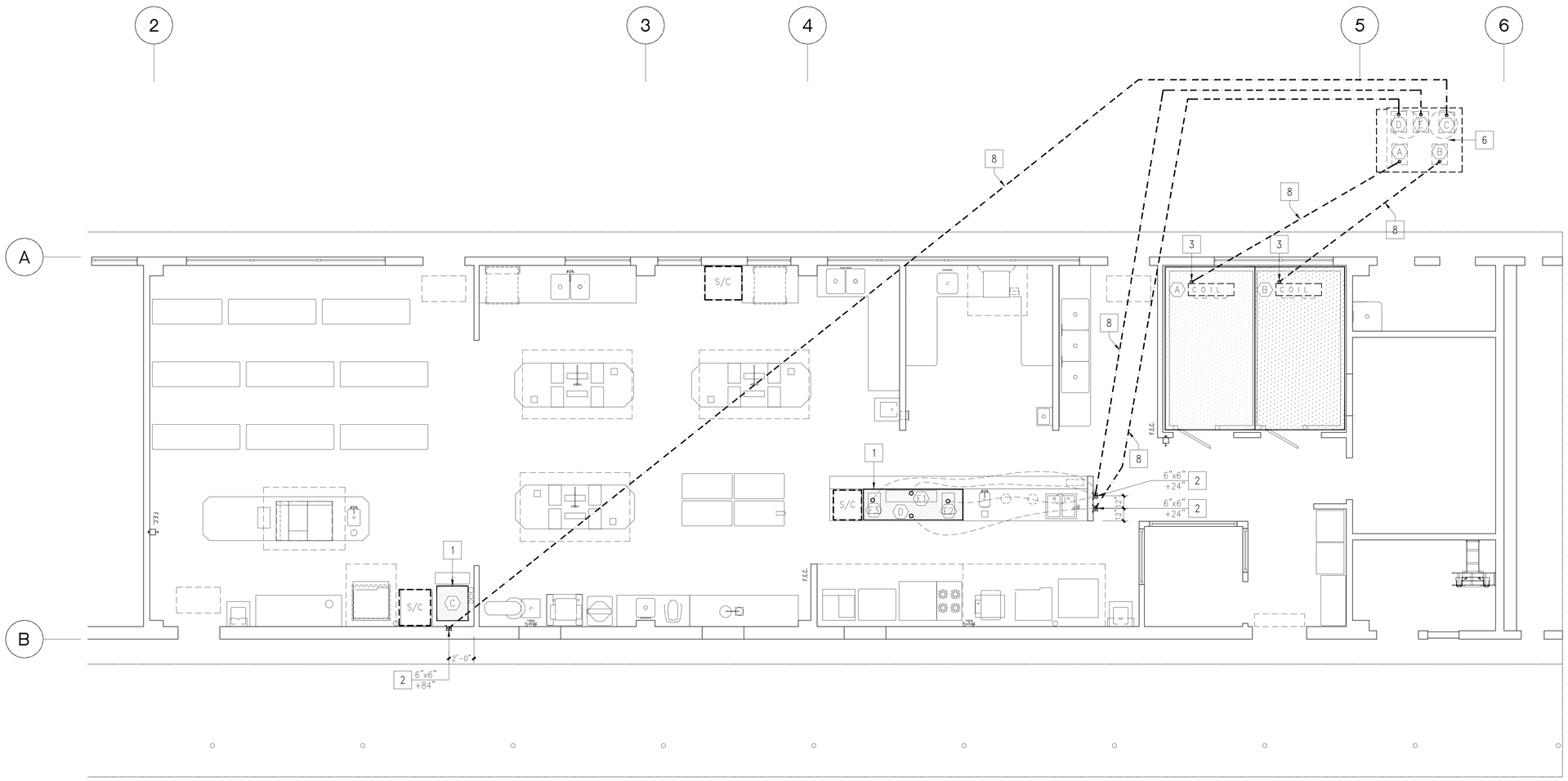

REFRIGERATION LEGEND

- CONDUIT FOR REFRIGERATION LINES (RUN UNDER FLOOR)
- REMOTE COMPRESSOR (ON REFRIGERATION RACK)
- REFRIGERATION SYSTEM (SEE SCHEDULE ON SHEET FS.06.1)
- REFRIGERATION LINE (RUN FROM REFRIGERATION RACK)
- REMOTE REFRIGERATED BASE AND/OR EQUIPMENT
- S/C — SELF-CONTAINED REFRIGERATED BASE AND/OR EQUIPMENT
- ACCESS PULL-BOX FOR REFRIG. LINES (IN THE WALL)
- PVC CONDUIT FOR SODA AND CO2 LINES (RUN UNDER FLOOR)
- PVC CONDUIT TO STUB-UP AT HEIGHT INDICATED
- (1) ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- [1] KEYNOTE SYMBOL (SEE KEYNOTES BELOW)

NOTE: ALL CONDUIT AND PULL BOXES WITH S/S COVERS TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND COORDINATED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR

NOTE: SEE SHEET FS.00.0 FOR REFRIGERATION NOTES AND OTHER APPLICABLE NOTES

NOTE: REFRIGERATION LINES ARE FOR GRAPHIC PURPOSES ONLY. IT IS NOT MEANT TO SHOW ROUTING.

NOTE: SEALED AND PRESSURIZED WITH 350 LBS. OF NITROGEN FOR 48 HOUR PERIOD. REFRIG. CONTRACTOR TO USE GAUGE TO VERIFY.

REFRIG PLAN KEYNOTES

1. REFRIGERATED EQUIPMENT AND/OR SYSTEM FOR ADDITIONAL INFO. SEE SHEET FS.06.1
2. PULL-BOX FOR REFRIGERATION LINES THRU WALL – SEE DETAIL M/FS.08.0
3. REFRIGERATION LINES STUB-DOWN FROM CEILING THRU TO EVAP COIL – SEE DETAIL F/FS.06.1
4. NOT USED
5. NOT USED
6. REFRIGERATION RACK FOR REMOTE COMPRESSORS LOCATED ON THE ROOF (SEE SHEET FS.06.1) SEE SHEET A3 FOR EXACT LOCATION
7. NOT USED
8. REFRIGERATION LINES RUN ABOVE CEILING LINE (UNISTRUT TRAPEZE OR SIMILAR), EXTEND FROM REFRIGERATION RACK LOCATION ON ROOF TO DROP-DOWN POINT AT WALL.
9. NOT USED
10. NOT USED
11. NOT USED
12. NOT USED
13. NOT USED

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

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FOODSERVICE EQUIPMENT
REFRIGERATION PLAN

LICENSED ARCHITECT JIMMIE SANDERS No. C-17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

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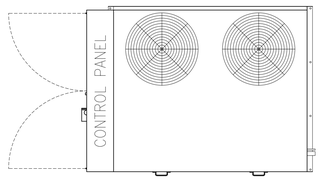


PLAN VIEW

NOTES:

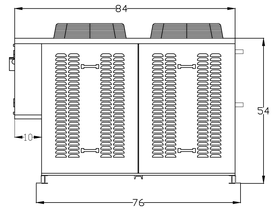
1. UNIT WEIGHT IS 1,720 LBS.
2. INSTALLATION CLEARANCE REQUIRES 3 FT. ON ALL SIDES

LINE SET SEQUENCE FACING UNIT

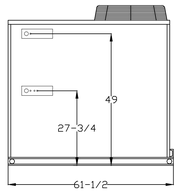
TOP ROW	A	D	C
BOTTOM ROW	B	E	

SUCTION
LIQUID
LINE SET

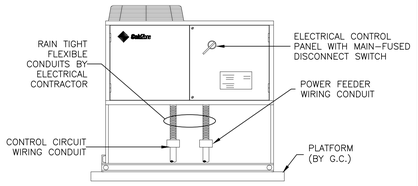
MEA



FRONT VIEW



RIGHT SIDE VIEW



ELECTRICAL END

A ITEM #238 - REFRIGERATION RACK MODEL "ET-1" OUTLINE DRAWING

N.T.S.

COLDZONE ENGINEERING SUMMARY

POWER SUPPLY: 208-230V/3PH/60HZ
CONNECTED LOAD: 38.0 AMPS
FUSE SIZE: 50 AMPS
MINIMUM AMPACITY: 41.0 AMPS

IDENT SYSTEM	IDENT ITEM	FIXTURES DESCRIPTION	FIXT.*F FIX +/-	FIXT.*F QTY	REFRIG. R-	COMPRESSORS MODEL NO.	COMPRESSORS H.P.	COMPRESSORS ELECTRICAL CHARACTERISTIC AT 60 HZ RLA	V	PH	MBH AT 115*F	DEFROST	EVAPORATOR COILS QUANTITY	MODEL NO.	MFR.	FAN 1PH REMARKS	FAN 1PH AMP	FAN 1PH V	HEATER AMP	HEATER V	HEATER PH	TOTAL UNIT AMP (RLA)	LINE SIZES ** ROUTE +	SUCTION	LIQUID	DISCH.	ACCESSORIES KEYFROST OPTION NO.	CRANKCA. HEATER	HOT GAS PRESS. CTRL.	TURNISHED BY (SEE CODE) TXT AT	SOL VAL.	TX VAL.
A	218	WALK-IN COOLER	35	25	448A	ZS11KAE	1.5	9.3	208	3	10.5	T	1	CL6A117ADAEL	COLDZONE	1.6	115				9.3	S	7/8	3/8		TMR	FI	FI	FI	FI	FI
B	222	WALK-IN FREEZER	-10	-20	448A	ZF13K4E	4.0	11.9	208	3	11.0	E	1	CL6E105DDAEE	COLDZONE	1.0	208	9.8	208	1	11.9	S	1 1/8	1/2		ECONET	FI	FI	FI	FI	FI
C	18	ICE MAKER #C0830			404A	CONDENSER CIRCUIT ONLY					30.0	E**		BY SCOTSMAN									S		3/8	1/2		MFR	MFR	MFR	MFR	MFR
D	186	6-DRAWER REF. BASE	35	20	448A	RST55C1E	0.8	6.1	208	1	4.7	E**		BY CUSTOM FAB.							6.1	S	5/8	3/8			FI	FI	MFR	MFR	MFR
E		MULTIPLEX		-10	448A	ZF03K4E	1.0	3.7	208	3	3.0	E**									3.7	M	7/8	3/8			FI	FI			
E1	187	REFRIGERATED COLD RAIL	0											BY CUSTOM FAB.								B							MFR	MFR	MFR
E2	188	MECHANICAL COOLED PANS	0											BY CUSTOM FAB.								B							MFR	MFR	MFR
E3	188	MECHANICAL COOLED PANS	0											BY CUSTOM FAB.								B							MFR	MFR	MFR
		(2)CONDENSER FAN MOTORS					3/4	3.0	208	3											6.0										

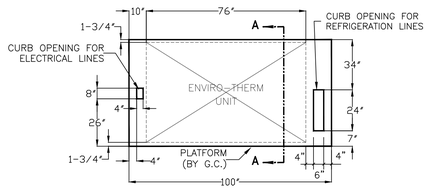
SYSTEM ITEM NO.: LEGEND: * T-AIR E-ELECTRIC G-GRAVITY(W/TIMER); O-OFF-CYCLE E**-DEFROST CLOCK BY FIXTURE MFR; + S-SINGLE M-MAIN B-BRANCH; ** VERIFY LINE SIZES WITH JOB SITE CONDITIONS; MFR- FURNISH WITH FIXTURE. FI- GZ TO FURNISH AND SHIP LOOSE. FI- GZ TO FURNISH AND INSTALL ON UNIT. RC- FURNISH AND INSTALL BY REF. CONTRACTOR

ColdZone DRAWING NUMBER 19752

NOTES:
- ALL EVAPORATOR COILS WILL REQUIRE POWER FROM A HOUSE CIRCUIT
- WALK-IN COOLER EVAPORATOR SUPPLIED WITH MOUNTED AIR DEFROST TIMER
- WALK-IN FREEZER EVAPORATOR SUPPLIED WITH ECONET ADAPTIVE DEFROST CONTROL
- 100' MAXIMUM LINE RUN FOR ANY ICE MACHINE CONDENSER CIRCUIT WHEN PROVIDED
- INHERENT 3PH CONDENSER FAN MOTORS
- EVAPORATORS PROVIDED WITH HIGH EFFICIENCY EC MOTORS
- ALL COMPRESSORS AND CONDENSER CIRCUITS ARE SIZED TO OPERATE AT 115°F AMBIENT
- EACH COMPRESSOR SYSTEM IS SUPPLIED WITH A CRANKCASE HEATER AND HEAD PRESSURE CONTROL
- LOW TEMPERATURE SYSTEM SUPPLIED WITH SUCTION LINE ACCUMULATOR
- REFRIGERATION SYSTEM INCLUDES A MAIN-FUSED DISCONNECT SWITCH

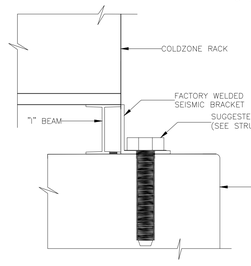
B COLDZONE ENGINEERING SUMMARY FOR ITEM 238

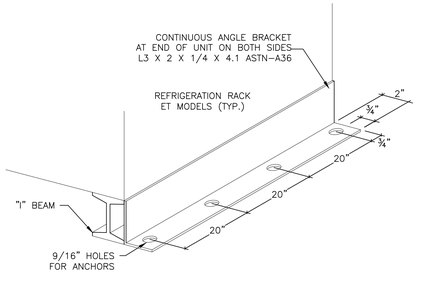
N.T.S.



G.C. NOTES

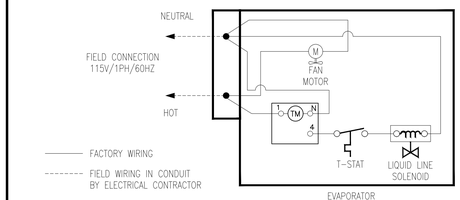
1—PLATFORM TO BE INSTALLED LEVEL AND TO LOCAL CODE HEIGHT.
2—PROVIDE SHEET METAL HAT SECTION WITH WATER TIGHT SOLDERED JOINTS.
3—BACK FILL OPENING WITH HOT PITCH AFTER INSTALLATION.





E SUGGESTED ROOF PLATFORM DETAIL

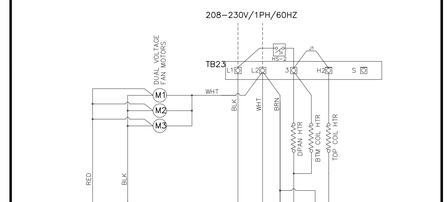
N.T.S.



EVAPORATOR

C AIR DEFROST WIRING DIAGRAM

N.T.S.



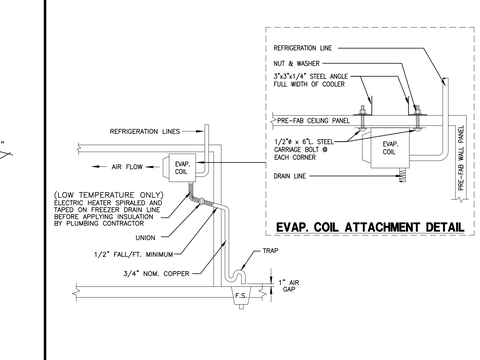
NOTES:
1. USE COPPER CONDUCTORS ONLY
2. UNIT MUST BE GROUNDED
3. FOR MOTOR AND HEATER AMPS REFER TO REFRIGERATION SCHEDULE ABOVE
4. JUMPERS ARE 16 GA. UNLESS OTHERWISE SPECIFIED.

LEGEND:
TB — TERMINAL BOARD
HTR — HEATER
HS — HEATER SAFETY
M1 — MOTOR #1, ETC.
EXV — ELECTRONIC EXPANSION VALVE
R1 — RELAY

FACTORY WIRING
FIELD WIRING

D ECONET - ELECTRIC DEFROST WIRING DIAGRAM

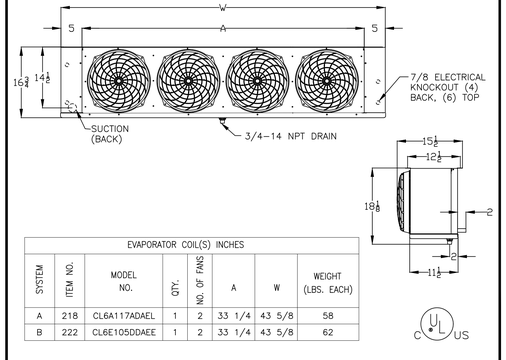
N.T.S.



EVAP. COIL ATTACHMENT DETAIL

F DRAIN LINE DETAIL AND EVAP. COIL ATTACH DETAIL

N.T.S.



EVAPORATOR COIL(S) INCHES							
SYSTEM	ITEM NO.	MODEL NO.	QTY.	NO. OF FANS	A	W	WEIGHT (LBS. EACH)
A	218	CL6A117ADAEL	1	2	33 1/4	43 5/8	58
B	222	CL6E105DDAEE	1	2	33 1/4	43 5/8	62

G COLDZONE EVAPORATOR COILS

N.T.S.

ENGINEERING GUIDE TO SPECIFICATION
FOR REMOTE REFRIGERATION PACKAGE
MINI-PAK REFRIGERATION SYSTEM

THE REFRIGERATION PACKAGE SHALL BE A PRE-ENGINEERED AND FACTORY ASSEMBLED UNIT, TRADE NAME "MINI-PAK", AS MANUFACTURED BY COLDZONE, A DIVISION OF HEAT TRANSFER PRODUCTS GROUP, 1933 VINEYARD AVE. ONTARIO, CA 91761. PHONE: (909) 786-3656, FAX: (714) 529-8503.

CONTRACTOR SHALL FURNISH AND INSTALL, WHERE SHOWN ON PLANS, (1) COLDZONE U.L. APPROVED "MINI-PAK".

1. MINI-PAK REFRIGERATION SYSTEM
   THE ENTIRE UNIT IS TO BE WEATHER-PROOFED AND MINIMUM OF TWO COATS OF PAINT SHALL BE APPLIED TO MAKE THE UNIT RUST-PROOF. THE UNIT SHALL BE PROVIDED WITH MULTI-CIRCUITED AIR-COOLED CONDENSER FOR COOLER, FREEZER AND ICE MACHINES. SUCTION LINE FOR LOW TEMPERATURE UNIT MUST BE INSULATED WITH ARMAFLEX.

2. REFRIGERATION UNITS
A. CRANKCASE HEATER SHALL BE PROVIDED WITH EVERY COMPRESSOR.
B. AIR-COOLED CONDENSING UNITS SHALL BE SEMI-HERMETIC, HERMETIC OR GLACIER SCROLL TYPE (COPELAND). EACH UNIT SHALL BE EQUIPPED WITH HIGH-LOW PRESSURE CONTROL, LIQUID LINE DRIER, SIGHT GLASS, SUCTION AND DISCHARGE VIBRATION ELIMINATOR, AND HEAD PRESSURE CONTROL.
C. ALL COMPRESSOR UNITS SHALL BE NEW AND FACTORY ASSEMBLED TO OPERATE WITH THE REFRIGERANT SPECIFIED IN THE ENGINEERING SUMMARY SHEET.

3. PRE-PIPING
A. ALL COPPER TUBING TO BE REFRIGERANT GRADE A.C.R. OR TYPE "L".
B. ALL TUBING SHALL BE SECURELY SUPPORTED AND ANCHORED WITH CLAMPS.
C. ALL REFRIGERANT LINES SHALL BE EXTENDED TO ONE SIDE OF THE PACKAGE IN A NEAT AND ORDERLY MANNER.
D. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED FOR ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE.
E. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 300 PSI. AFTER THE CONDENSING UNIT AND COIL HAVE BEEN CONNECTED, THE BALANCE OF THE SYSTEM SHALL BE LEAK TESTED WITH ALL VALVES OPEN.

4. CONTROL PANEL
A. THE PACKAGE SHALL HAVE FACTORY MOUNTED AND PRE-WIRED CONTROL PANEL COMPLETE WITH INTERLOCKED MAIN FUSED DISCONNECT, COMPRESSOR CIRCUIT BREAKERS, CONTACTORS AND TIME CLOCKS WIRED FOR SINGLE POINT POWER CONNECTION.
B. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL MAIN POWER LINES TO PANEL, AND USE WIRE HARNESS WIRING FOR CONTROL AND DEFROST HEATER BETWEEN THE DEFROST CLOCK AND THE REFRIGERATION FIXTURES, ALL IN ACCORDANCE WITH THE WIRING DIAGRAM AND LOCAL CODES.

GENERAL NOTES

1. GENERAL CONTRACTOR
A. CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND COORDINATE WITH OTHER TRADES.
B. GENERAL CONTRACTOR SHALL PREPARE AND WEATHERPROOFING THE PLATFORM AND CURBED OPENINGS.

2. REFRIGERATION CONTRACTOR
A. THE COMPLETE SYSTEM SHALL BE EVACUATED WITH VACUUM PUMP.
B. ALL COPPER TUBING TO BE REFRIGERANT GRADE A.C.R. OR TYPE "L".
C. CHARGE, TEST, AND ADJUST EACH UNIT TO BE IN AN OPERATIONAL SYSTEM.
D. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED FOR ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT
E. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 300 PSI. AFTER THE CONDENSING UNIT AND COIL HAVE BEEN CONNECTED, THE BALANCE OF THE SYSTEM SHALL BE LEAK TESTED WITH ALL VALVES OPEN.
F. REFRIGERATION CONTRACTOR TO PROVIDE AND INSTALL DRAIN LINE HEATER IN FREEZER TO BE CONNECTED BY ELECTRICAL CONTRACTOR

3. ELECTRICAL CONTRACTOR
A. ELECTRICAL CONTRACTOR TO PROVIDE POWER FROM REFRIGERATION PACKAGE AND CONNECT CONTROL AND DEFROST SYSTEM AS CALLED FOR IN THE WIRING DIAGRAM.
B. ALL ELECTRICAL WIRING AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE WIRING DIAGRAM AND LOCAL CODES.

4. PLUMBING CONTRACTOR
A. PLUMBING CONTRACTOR TO PROVIDE HARD A.C.R. OR TYPE "L" COPPER DRAIN LINES FOR WALK-IN REFRIGERATOR AND FREEZER, PITCHED 1/2" PER FOOT OF RUN. IN FREEZER, UNHEATED DRAIN LINE MUST BE OUTSIDE OF FREEZER WALL TO PREVENT FREEZING. TRAP DRAIN LINE OUTSIDE OF REFRIGERATED SPACE TO AVOID ENTRANCE OF WARM AND MOIST AIR.
B. PLUMBING CONTRACTOR TO PROVIDE INDIVIDUAL DRAIN LINE FOR EACH EVAPORATOR UNLESS OTHERWISE CALLED FOR.
C. ALL PLUMBING INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL CODES.

NOTE:
SEE SHEET FS.00.0 FOR REFRIGERATION NOTES AND OTHER APPLICABLE NOTES

NOTE: REFRIGERATION LINES SHOULD BE SEALED AND PRESSURIZED WITH 350 LBS. OF NITROGEN FOR 48 HOUR PERIOD. REFRIG. CONTRACTOR TO USE GAUGE TO VERIFY.

H REFRIGERATION RACK NOTES

N.T.S.

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Sheet Title
FOODSERVICE EQUIPMENT RACK DETAILS

LICENSED ARCHITECT JIMMIE SANDERS C-17644 RENEWAL DATE 8-31-19 STATE OF CALIFORNIA

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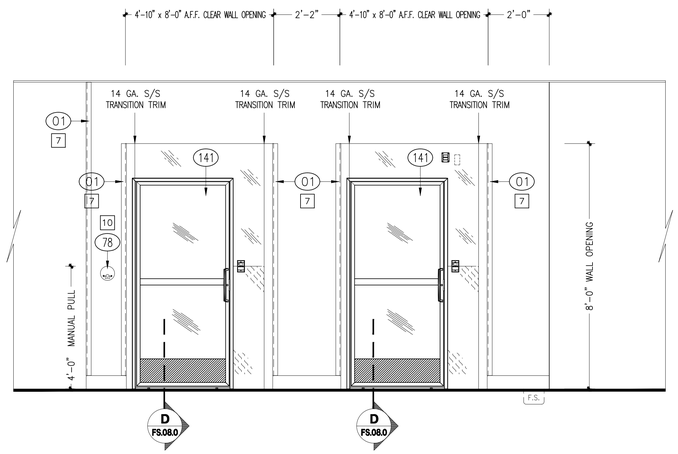
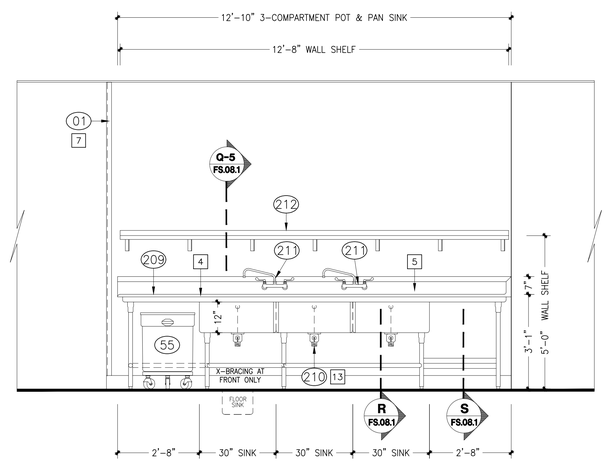


1 ELEVATION @ WALK-IN COOLER & WALK-IN FREEZER 1/2"=1'-0"

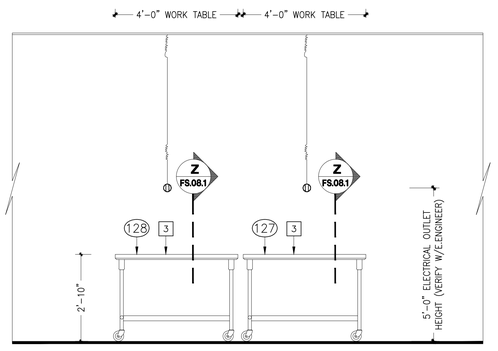


2 ELEVATION @ 3-COMPARTMENT POT & PAN SINK 1/2"=1'-0"

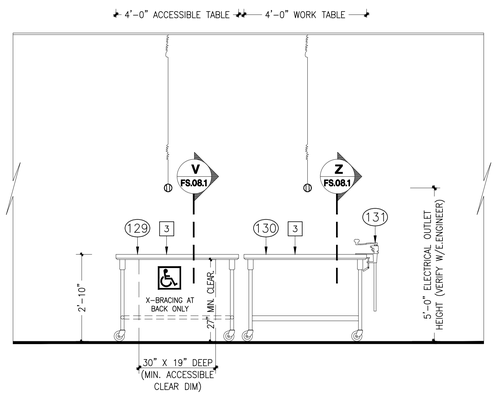
KEYNOTES

1	SEE CURB DETAIL B/FS.08.0
2	SEE MARINE EDGE Q-2/FS.08.1
3	SEE TURN-DOWN 90° EDGE Q-1/FS.08.1
4	SEE RAISED ROLLED EDGE Q-4/FS.08.1
5	SEE SINK SPLASH DETAIL Q-10/FS.08.1
6	SEE TABLE SPLASH DETAIL Q-7/FS.08.1
7	SEE CORNER GUARD/END CAP DETAIL – N/FS.08.1
8	SEE S/S WALL FLASHING DETAIL P/FS.08.1
9	SEE ACCESSIBLE SINK DETAIL A/FS.08.0
10	SEE FIRE SUPPRESSION DETAIL J/FS.08.0
11	SEE FLOOR TROUGH DETAIL W/FS.08.1
12	NOT USED
13	SEE POT SINK DETAIL E/FS.08.0

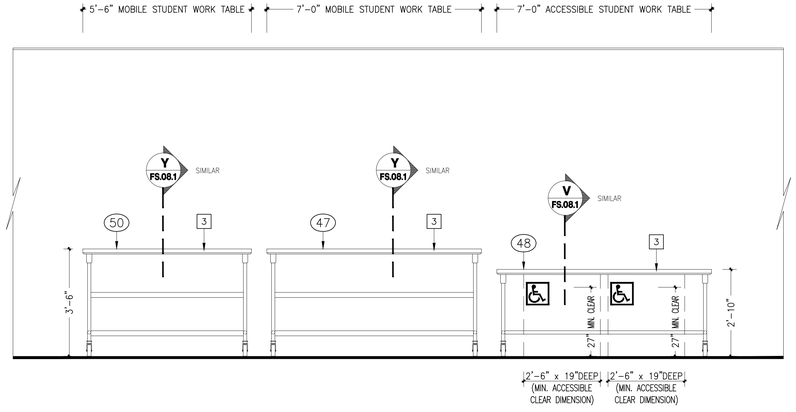
01 ITEM NUMBER (SEE EQUIPMENT SCHEDULE)



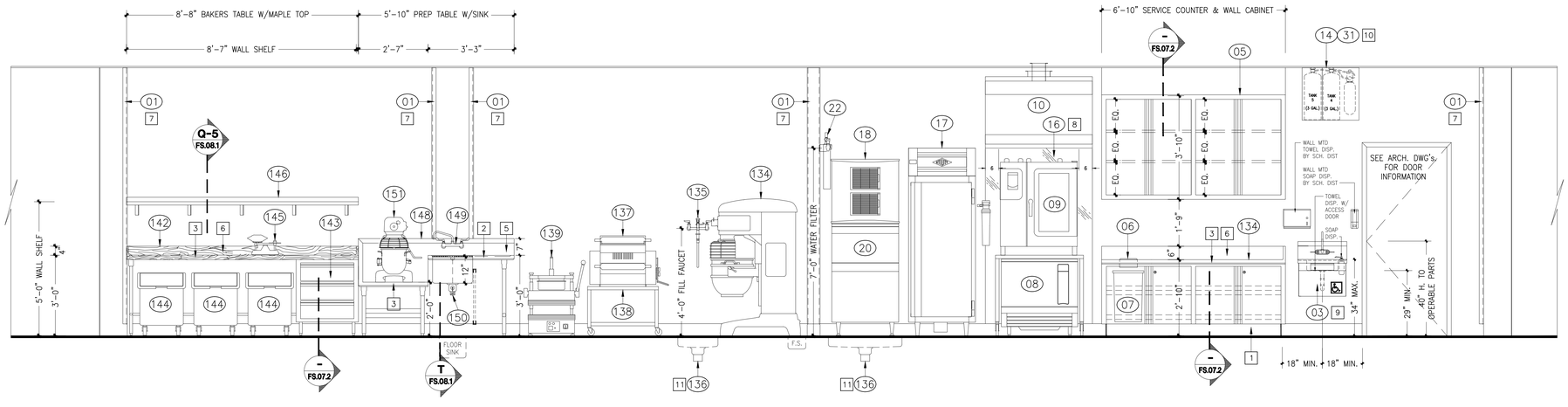
3 ELEVATION @ MOBILE WORK TABLES 1/2"=1'-0"



4 ELEVATION @ ACCESSIBLE WORK TABLE & WORK TABLE 1/2"=1'-0"



5 ELEVATION @ MOBILE STUDENT WORK TABLES 1/2"=1'-0"



6 ELEVATION @ BAKERS TABLE, PREP TABLE W/SINK, DIVIDER/ROUNDER, DOUGH SHEETER, 60-QT. FOOD MIXER, ICE MAKER, REACH-IN REFRIGERATOR, COMBI-OVEN, BLAST CHILLER, SERVICE COUNTER, & ACCESSIBLE HAND SINK 1/2"=1'-0"

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT ELEVATIONS

LICENSED ARCHITECT JIMMIE SANDERS C-17644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

Document Date	Project Number
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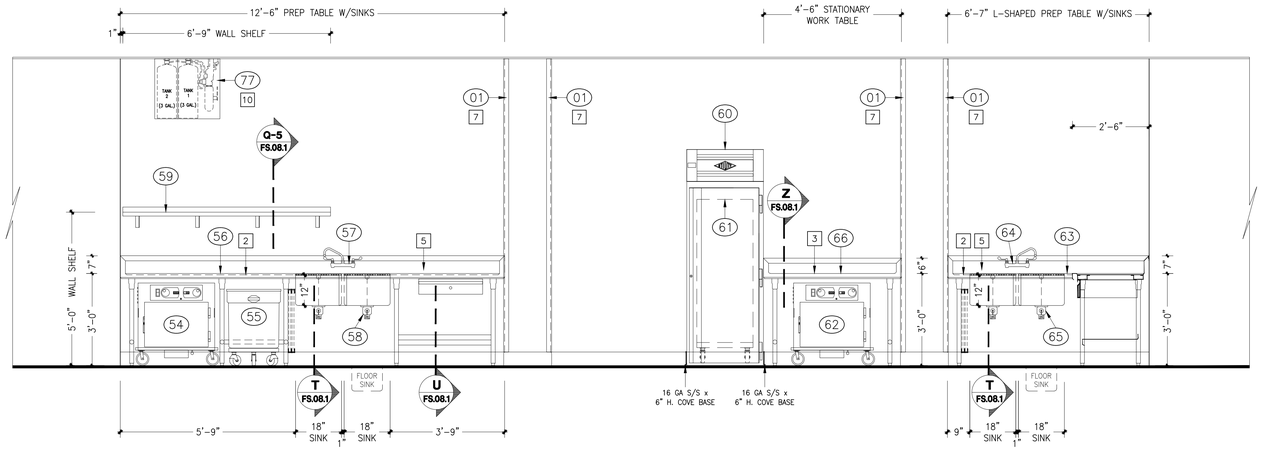


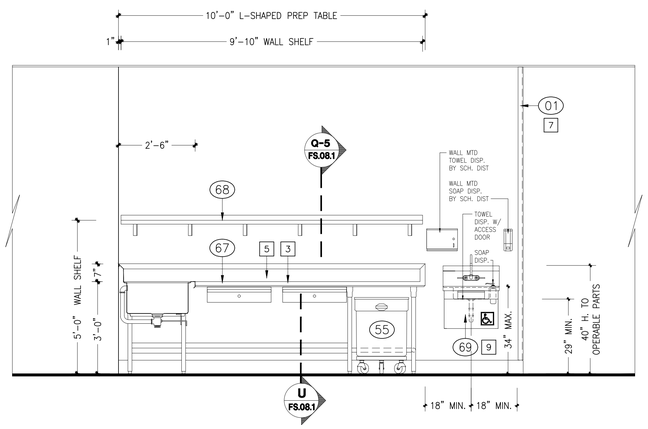
1 SEE CURB DETAIL B/FS.08.0
2 SEE MARINE EDGE Q-2/FS.08.1
3 SEE TURN-DOWN 90° EDGE Q-1/FS.08.1
4 SEE RAISED ROLLED EDGE Q-4/FS.08.1
5 SEE SINK SPLASH DETAIL Q-10/FS.08.1
6 SEE TABLE SPLASH DETAIL Q-7/FS.08.1
7 SEE CORNER GUARD/END CAP DETAIL – N/FS.08.1
8 SEE S/S WALL FLASHING DETAIL P/FS.08.1
9 SEE ACCESSIBLE SINK DETAIL A/FS.08.0
10 SEE FIRE SUPPRESSION DETAIL J/FS.08.0
11 SEE FLOOR TROUGH DETAIL W/FS.08.1
12 NOT USED
13 SEE POT SINK DETAIL E/FS.08.0

(01) ITEM NUMBER (SEE EQUIPMENT SCHEDULE)

7 ELEVATION @ PREP TABLE W/SINKS, ROLL-IN REFRIGERATOR, STATIONARY WORK TABLE & L-SHAPED PREP TABLE W/SINKS

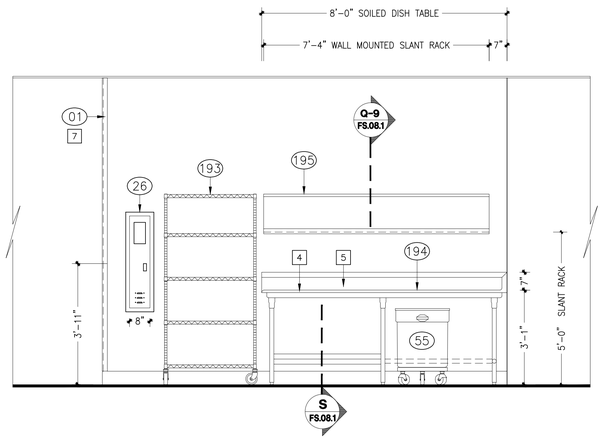
1/2"=1'-0"

KEYNOTES



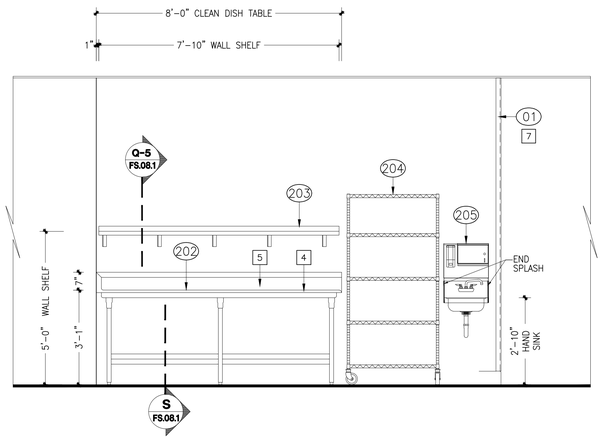
8 ELEVATION @ L-SHAPED PREP TABLE & ACCESSIBLE HAND SINK

1/2"=1'-0"



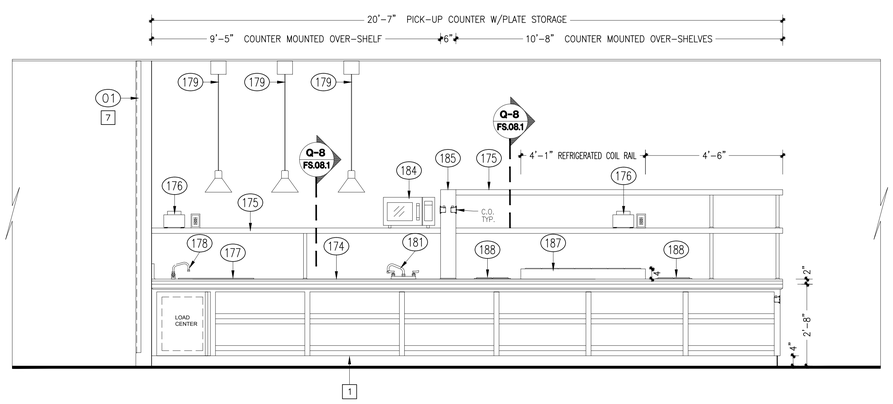
9 ELEVATION @ STORAGE SHELVING & SOILED DISH TABLE

1/2"=1'-0"



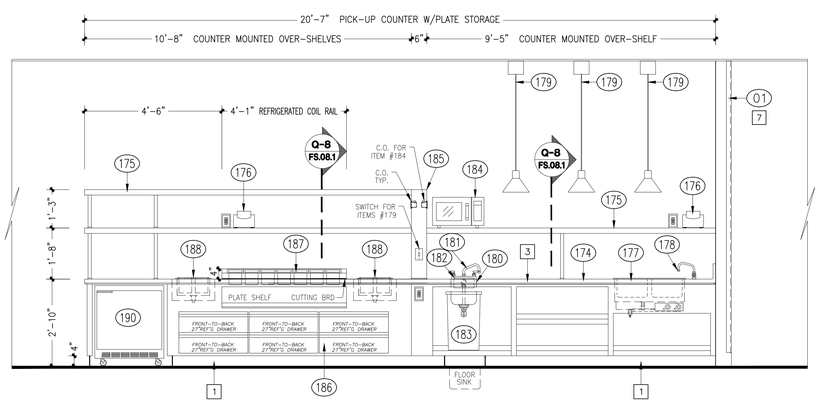
10 ELEVATION @ CLEAN DISH TABLE, STORAGE SHELVING & HAND SINK

1/2"=1'-0"



11 ELEVATION @ PICK-UP COUNTER W/PLATE STORAGE

1/2"=1'-0"



12 ELEVATION @ PICK-UP COUNTER W/PLATE STORAGE

1/2"=1'-0"

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Project Title
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Sheet Title
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LICENSED ARCHITECT JIMMIE L. SANDERS No. C-17644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

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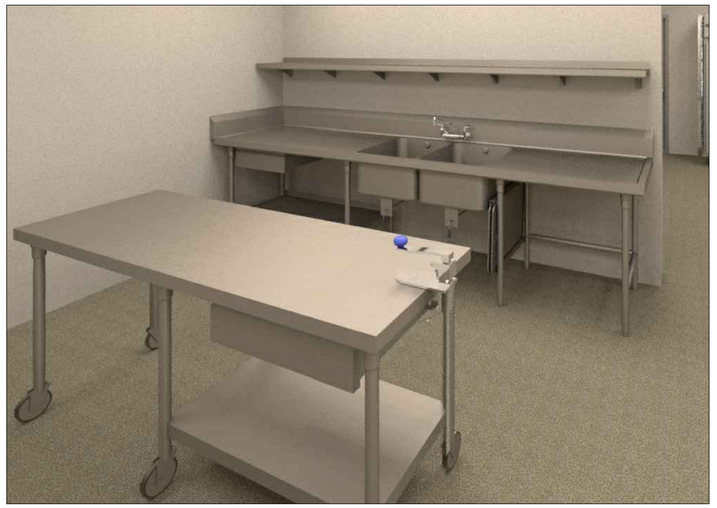
5 | **3D VIEW of PICK-UP COUNTER W/PLATE STORAGE**



6 | **3D VIEW of PICK-UP COUNTER W/PLATE STORAGE**

7 | **3D VIEW of HOOD #1, COOKING EQUIPMENT & PREP TABLE**

8 | **3D VIEW of HOOD #2 & COOKING EQUIPMENT**

9 | **3D VIEW of BAKERY AREA**

- | **NOT USED**

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3D VIEWS

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5 3D VIEW of PICK-UP COUNTER W/PLATE STORAGE

6 3D VIEW of PICK-UP COUNTER W/PLATE STORAGE

7 3D VIEW of HOOD #1, COOKING EQUIPMENT & PREP TABLE

8 3D VIEW of HOOD #2 & COOKING EQUIPMENT

9 3D VIEW of BAKERY AREA

- NOT USED

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FOODSERVICE EQUIPMENT
3D VIEWS

LICENSED ARCHITECT JIMMIE SANDERS C-17644 RENEWAL DATE 2-28-19 STATE OF CALIFORNIA

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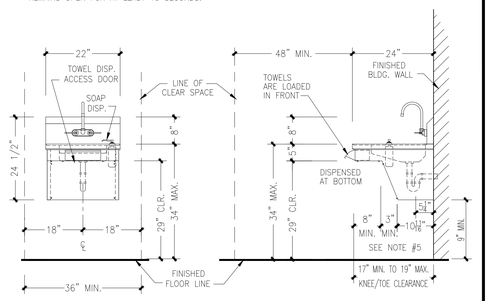
A ACCESSIBLE HAND SINK DETAILS N.T.S.

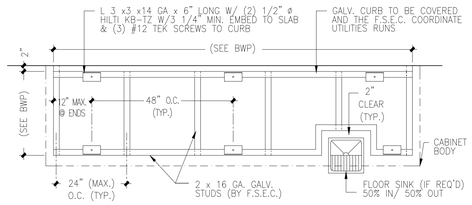
ACCESSIBLE HAND SINK REQUIREMENT NOTES

1. WATER AND DRAIN PIPES UNDER ACCESSIBLE HAND SINKS SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS OR SURFACES UNDER HAND SINKS.
2. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.
3. WHERE TOWEL, SANITARY NAPKINS, WASTE RECEPTACLES, SOAP DISPENSER AND OTHER SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE SHALL BE LOCATED WITH ALL OPERABLE PARTS WITHIN 40 INCHES FROM THE FINISHED FLOOR.
4. ALL DIMENSIONS SHOWN ARE MINIMUM CLEARANCES, UNLESS NOTED.
5. AREA BELOW HAND SINKS SHALL BE ACCESSIBLE AND CLEAR.

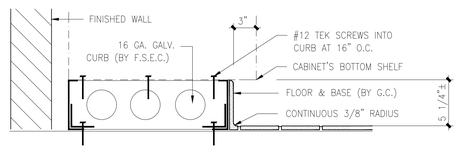


FRONT VIEW SIDE VIEW

B GALVANIZED CURB FOR COUNTER DETAIL N.T.S.



PLAN VIEW

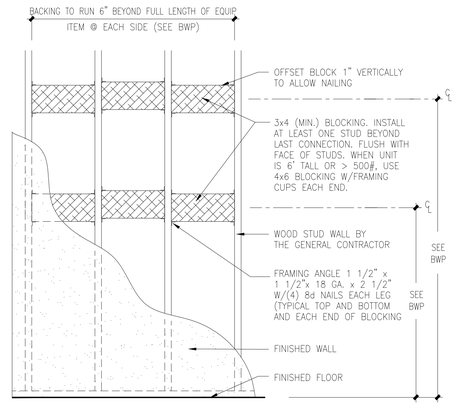


SECTION

NOTE #2: INSTALL BORIC ACID PER LOCAL CODES.

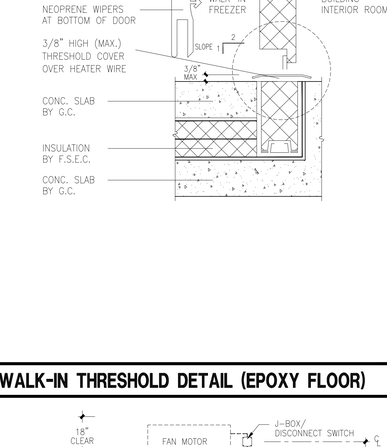
NOTE #1: ON ALL FRAMED PLATFORMS IN FOODSERVICE AREAS, THE F.S.E.C. TO PROVIDE MIN. 1/2" OF BORIC ACID IN AIR SPACES TO PREVENT INSECT NESTING.

C WALL BLOCKING DETAIL PER SMACNA GUIDELINES

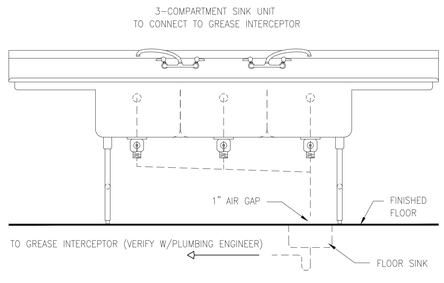


NOTE: WALL-BACKING TO BE VERIFIED AND COORDINATED BY THE F.S.E.C.

D WALK-IN THRESHOLD DETAIL (EPOXY FLOOR) N.T.S.



E POT SINK/GREASE INTERCEPTOR DETAIL N.T.S.

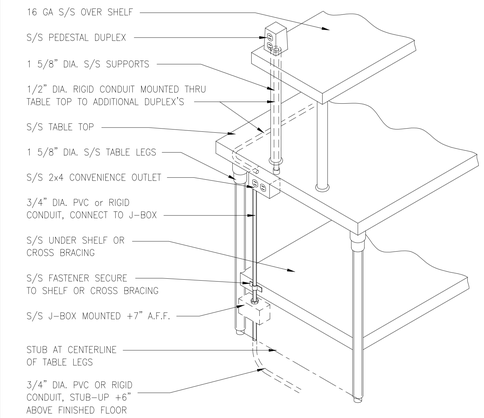


GREASE INTERCEPTOR INSTALLED BELOW FLOOR SURFACE

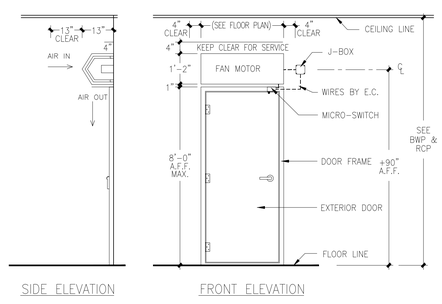
N.T.S.

NOTE:
ALL PIPES MUST BE MIN. 6 INCHES OFF THE FLOOR IF GREASE TRAP UNIT IS LOCATED ABOVE THE FLOOR THEN THE UNIT MUST BE 6 INCHES MIN. AWAY FROM ALL WALLS. (SEE SHEET FS.00.0, FOOD FACILITY REQUIREMENTS NOTES, PLUMBING #24 & 31)

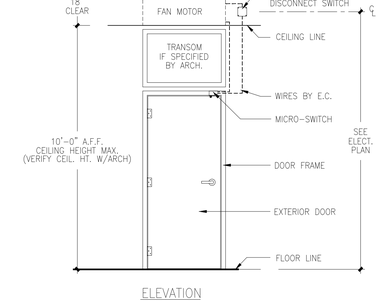
F ELECTRICAL CONDUIT STUB-UP DETAIL N.T.S.



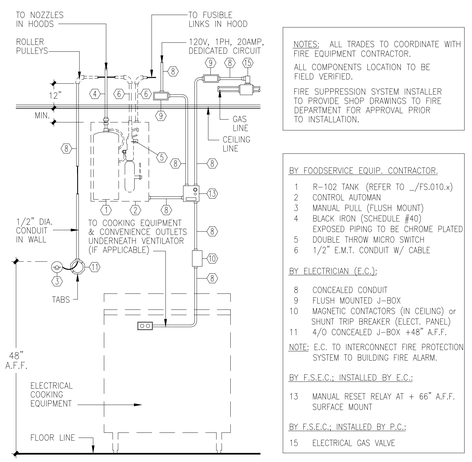
G WALL MTD AIR CURTAIN'S MICRO-SWITCH DETAIL N.T.S.



H RECESSED CEILING MTD AIR CURTAIN'S DETAIL N.T.S.



J ELECTRICAL FIRE SUPPRESSION SYSTEM DETAIL N.T.S.



NOTES: ALL TRADES TO COORDINATE WITH FIRE EQUIPMENT CONTRACTOR.
ALL COMPONENTS LOCATION TO BE FIELD VERIFIED.
FIRE SUPPRESSION SYSTEM INSTALLER TO PROVIDE SHOP DRAWINGS TO FIRE DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION.

BY FOODSERVICE EQUIP. CONTRACTOR:

1 R-102 TANK (REFER TO _/FS.010.x)
2 CONTROL AUTOMAN
3 MANUAL PULL (FLUSH MOUNT)
4 BLACK IRON (SCHEDULE #40) EXPOSED PIPING TO BE CHROME PLATED
5 DOUBLE THROW MICRO SWITCH
6 1/2" E.M.T. CONDUIT W/ CABLE

BY ELECTRICIAN (E.C.):

8 CONCEALED CONDUIT
9 FLUSH MOUNTED J-BOX
10 MAGNETIC CONTACTORS (IN CEILING) or SHUNT TRIP BREAKER (ELECT. PANEL)
11 4/0 CONCEALED J-BOX +48" A.F.F.

NOTE: E.C. TO INTERCONNECT FIRE PROTECTION SYSTEM TO BUILDING FIRE ALARM.

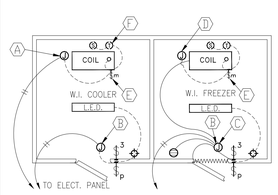
BY F.S.E.C.; INSTALLED BY E.C.:

13 MANUAL RESET RELAY AT + 66" A.F.F. SURFACE MOUNT

BY F.S.E.C.; INSTALLED BY P.C.:

15 ELECTRICAL GAS VALVE

K TYPICAL WALK-IN BOX WIRING DETAIL N.T.S.



NOTE: REFRIGERATION RACK ON ROOF (SEE SHEET A3 FOR LOCATION) SEE SHEET FS.06.1 FOR ELECT. REQ'MTS

NOTE: ELECTRICAL CONTRACTOR (E.C.) TO WIRE FROM ROUGH-IN POINTS A, B, C, D, E & F TO ALL COMPONENTS OF WALK-IN ASSEMBLIES, INCLUDING COMPRESSORS, TO MAKE A COMPLETE & OPERABLE REFRIGERATION SYSTEM, E.C. TO MAKE PENETRATIONS FROM ROUGH-IN LOCATIONS TO INTERIOR WALK-IN BOX AND PROVIDE PROPER SEALING OF SAME PENETRATIONS (VERIFY SPECIFIC REQUIREMENTS WITH GENERAL CONTRACTOR). SEAL CONDUIT AFTER ALL WIRES ARE PULLED.

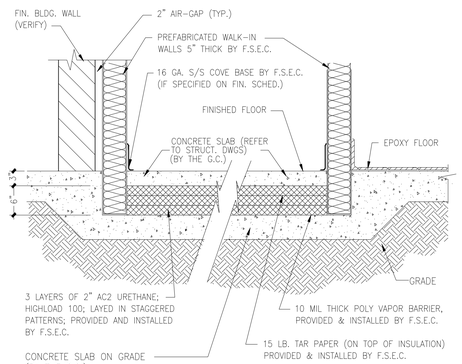
ELECTRICAL CONTRACTOR TO PROVIDE:

(A) 120 VOLT/1 PHASE FOR COIL, SOLENOID AND THERMOSTAT.
(B) 120 VOLT/1 PHASE FOR LIGHTS THRU SWITCHES - MOUNT LIGHTS IF SHIPPED LOOSE.
(C) 120 VOLT/1 PHASE FOR FREEZER DOOR HEATER, CONDENSATE LINE HEAT TRACE AND HEATED VACUUM VENT.
(D) 208 VOLT/1 PH FOR COIL, COIL HEATER, SOLENOID, AND THERMOSTAT.
(E) MOTOR RATED DISCONNECT BY E.C. (AS REQUIRED BY LOCAL CODES).
(F) E.C. TO PROVIDE 120 VOLT/1 PHASE FOR SOLENOID AND THERMOSTAT.

NOTE: NO EXPOSED ELECTRICAL CONDUIT RUNS INSIDE WALK-IN BOX.

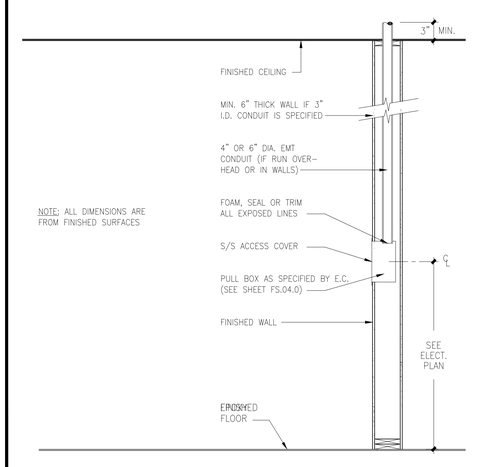
NOTE: E.C. TO WIRE THRU TO ALL THREE AND FOUR WAY SWITCHES PER ELECTRICAL ENGINEER'S PLANS AND SPECIFICATIONS.

L WALK-IN FLOOR 9" DEEP DEPRESSION DETAIL N.T.S.



NOTE: THE WALK-IN COOLER MUST HAVE A FLOOR THAT IS GRADED, SO THAT IT DRAINS TO THE OUTSIDE THROUGH A WASTE PIPE OR DOORWAY.

M REFRIGERATION PULL-BOX DETAIL N.T.S.



NOTE: ALL DIMENSIONS ARE FROM FINISHED SURFACES

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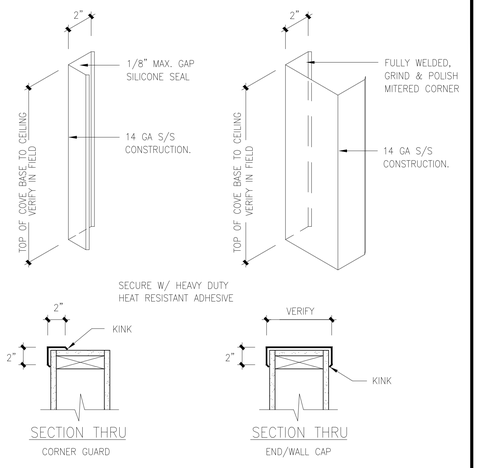
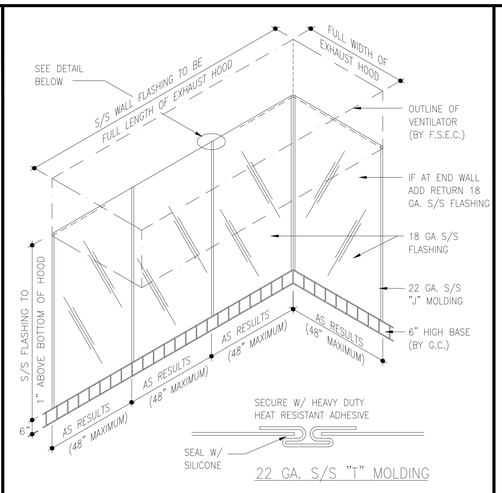
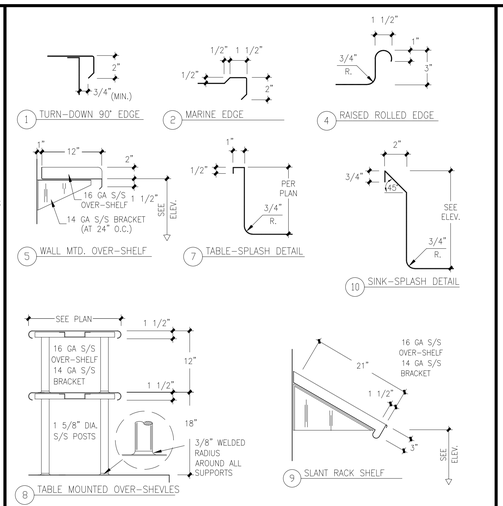
N | CORNER GUARD/END CAP/WALL CAP N.T.S.



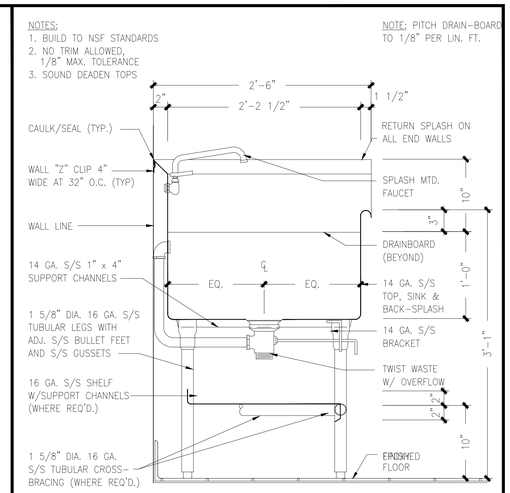
P | 18 GA. S/S WALL FLASHING DETAIL N.T.S.



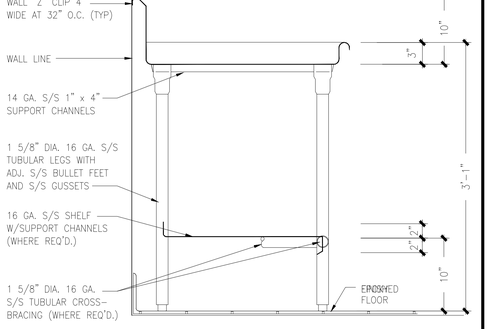
Q | EDGE / SPLASH / OVERSHELF DETAILS N.T.S.



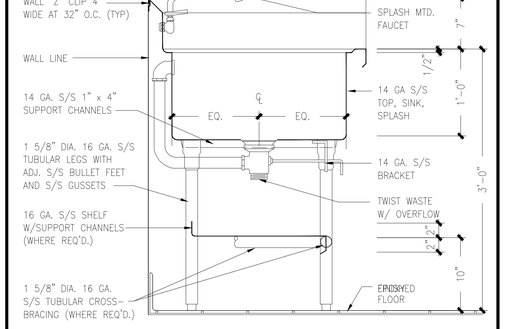
R | 30" SINK W/RAISED ROLLED EDGE SECTION 1 1/2"=1'-0"



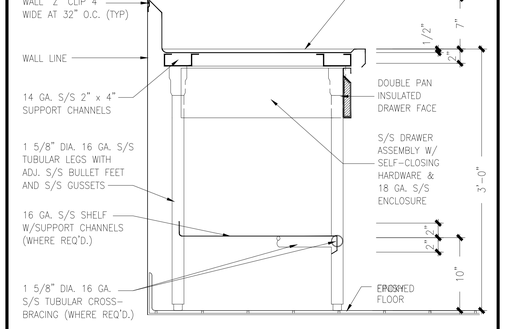
S | 30" CLEAN DISHTABLE SECTION 1 1/2"=1'-0"



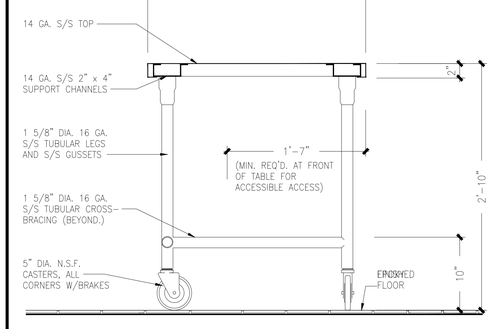
T | 30" PREP SINK W/MARINE EDGE SECTION 1 1/2"=1'-0"



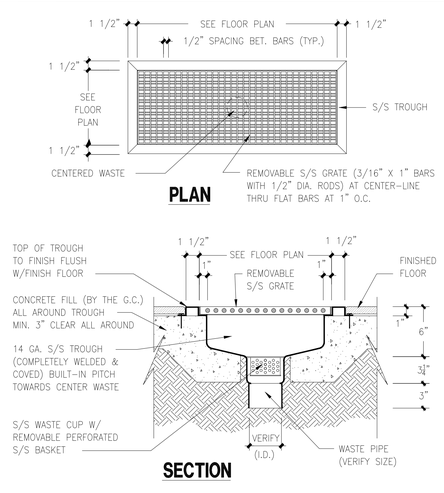
U | 30" PREP TABLE W/MARINE EDGE SECTION 1 1/2"=1'-0"



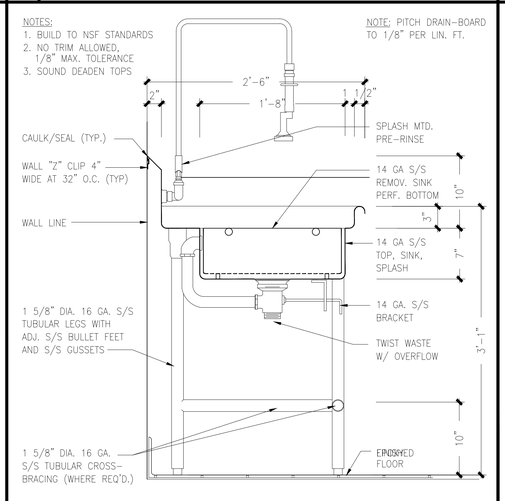
V | 30" MOBILE ACCESSIBLE TABLE SECTION 1 1/2"=1'-0"



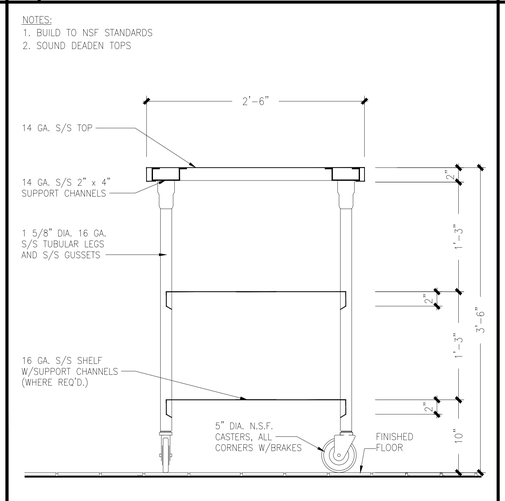
W | FLOOR TROUGH W/SUBWAY GRATE DETAIL N.T.S.



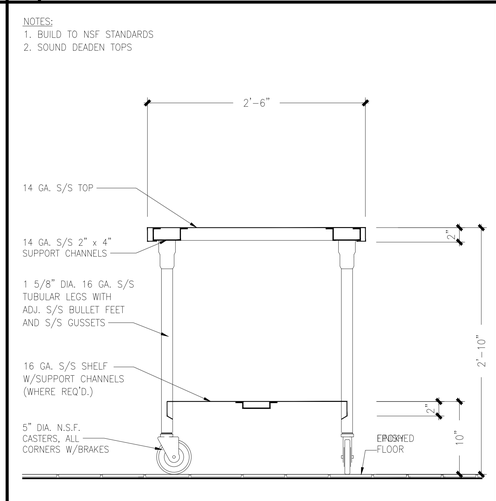
X | 30" DISHTABLE / SCRAP SINK SECTION N.T.S.



Y | 42" HIGH MOBILE TABLE WITH DUAL SHELVES SECTION N.T.S.



Z | 30" MOBILE TABLE SECTION 1 1/2"=1'-0"



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Sheet Title
FOODSERVICE EQUIPMENT DETAILS

LICENSED ARCHITECT JIMMIE SANDERS C-17644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-25CX
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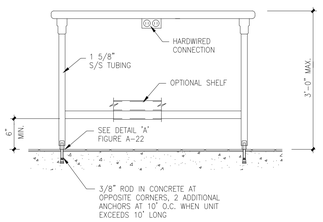
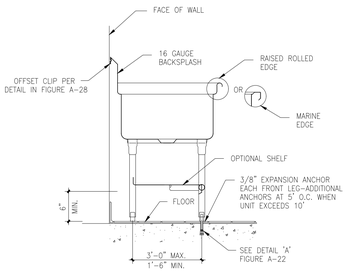
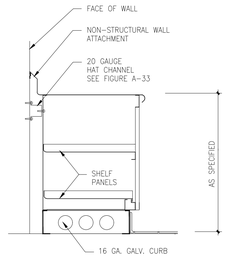


A-1 FIGURE A-1 (FREE STANDING TABLE) N.T.S.



NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

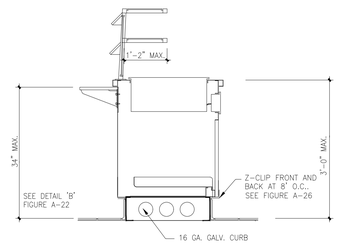
A-2 FIGURE A-2 (WALL ATTACHED SINK, WORKTABLE WITH WALL CLIP) N.T.S.



MAXIMUM WEIGHT = 35 lbs. PER LIN. FT.

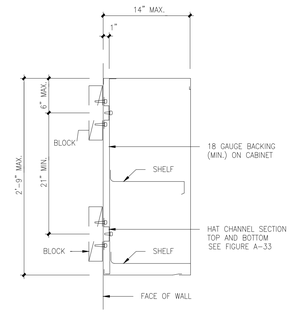
NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

A-4 FIGURE A-4 (ENCLOSED CABINET) N.T.S.



NOTE: THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS.

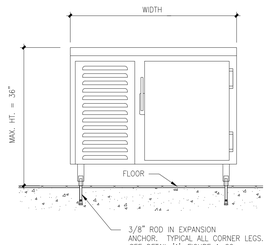
A-5 FIGURE A-5 (ISLAND COUNTER) N.T.S.



A-6 FIGURE A-6 (WALL CABINET) N.T.S.

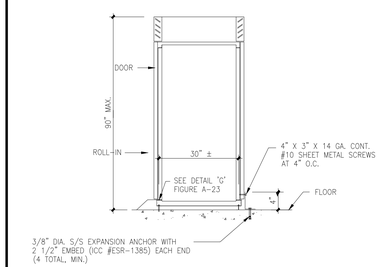
NOTES:

1. THE LEAST PLAN DIMENSION MUST BE GREATER THAN OR EQUAL TO 6/10 HEIGHT.
2. APPLIANCES WITHIN COUNTER MUST BE ATTACHED TO COUNTER IF THE COUNTER IS ATTACHED TO FLOOR WITHIN 24" OF APPLIANCE EACH SIDE.

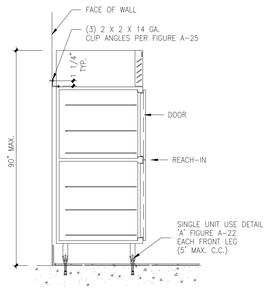


MAXIMUM TOTAL WEIGHT = 485 lbs.

A-7 FIGURE A-7 (FLOOR MOUNTED APPLIANCE) N.T.S.

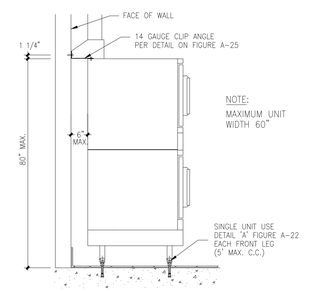


A-9 FIGURE A-9 (ROLL-IN FLOOR MOUNTED APPLIANCES) N.T.S.



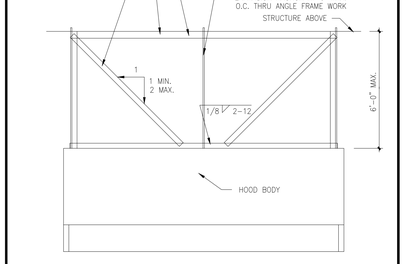
LEG MOUNTED UNIT

A-10 FIGURE A-10 (FLOOR MOUNTED APPLIANCE AGAINST WALL) N.T.S.



LEG MOUNTED UNIT

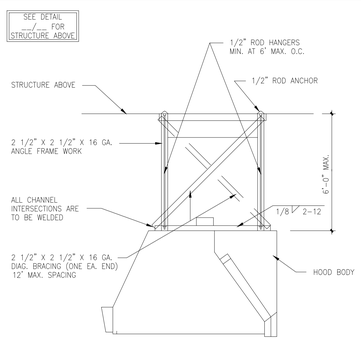
A-11 FIGURE A-11 (FLOOR MOUNTED APPLIANCE AGAINST WALL) N.T.S.



INSTALL END BRACING TYP. EA. END PER FIGURE A-14

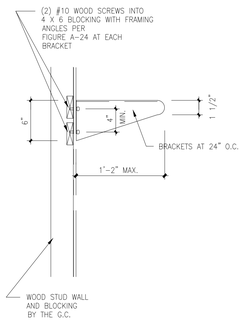
FRONT ELEVATION

A-13 FIGURE A-13 (HOOD BRACING) N.T.S.



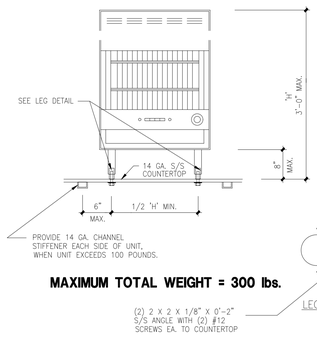
END ELEVATION

A-14 FIGURE A-14 (HOOD DETAIL) N.T.S.



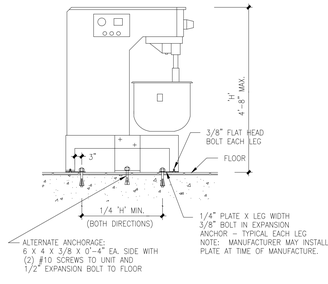
CONNECTIONS TO WOOD

A-17 FIGURE A-17 (WALL MOUNTED SHELVES) N.T.S.



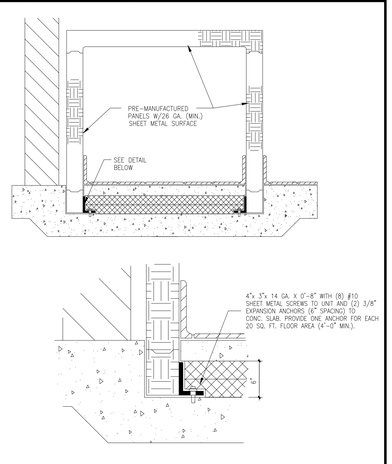
MAXIMUM TOTAL WEIGHT = 300 lbs.

A-18 FIGURE A-18 (COUNTERTOP EQUIPMENT) N.T.S.



MAXIMUM TOTAL WEIGHT = 1,000 lbs. (INCL. CONTENTS)

A-19 FIGURE A-19 (FLOOR MOUNTED MIXER) N.T.S.



A-20 FIGURE A-20 (WALK-IN BOXES - SCHOOLS) N.T.S.

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT ATTACHMENT DETAILS

LICENSED ARCHITECT JIMMIE D. SANDERS C-17641 RENEW: JUNE 30, 2019 STATE OF CALIFORNIA

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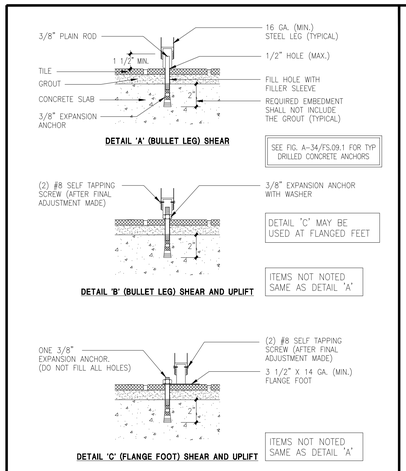
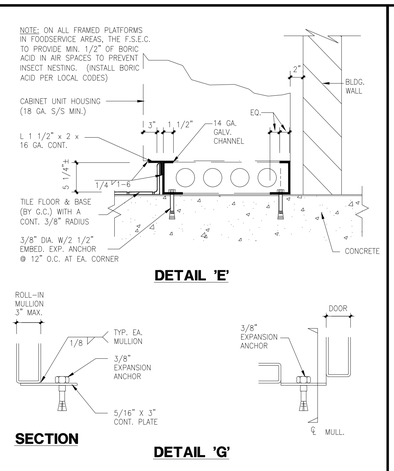
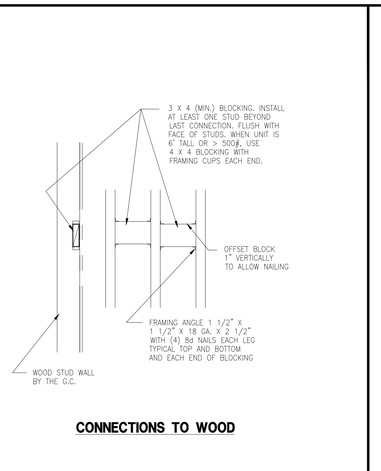


CONNECTIONS TO WOOD

A-22 **FIGURE A-22** (FOOT DETAILS) N.T.S.

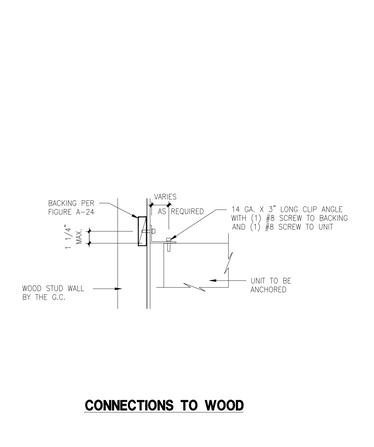


A-23 **FIGURE A-23** (BASE ATTACHMENTS) N.T.S.



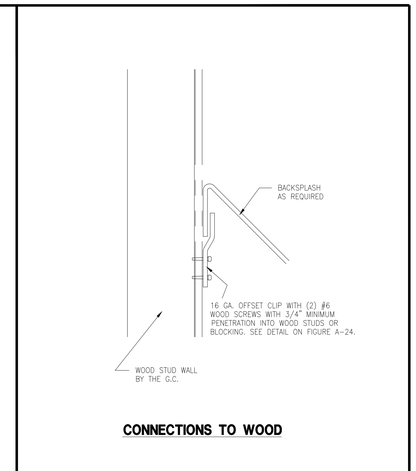
CONNECTIONS TO WOOD

A-24 **FIGURE A-24** (WALL SUPPORT BACKING) N.T.S.



CONNECTIONS TO WOOD

A-25 **FIGURE A-25** (TOP ANGLE CONNECTION) N.T.S.



CONNECTIONS TO WOOD

A-28 **FIGURE A-28** (OFFSET CLIP DETAILS) N.T.S.

CONNECTIONS TO WOOD

A-33 **FIGURE A-33** (FURRING CHANNEL CONNECTIONS) N.T.S.

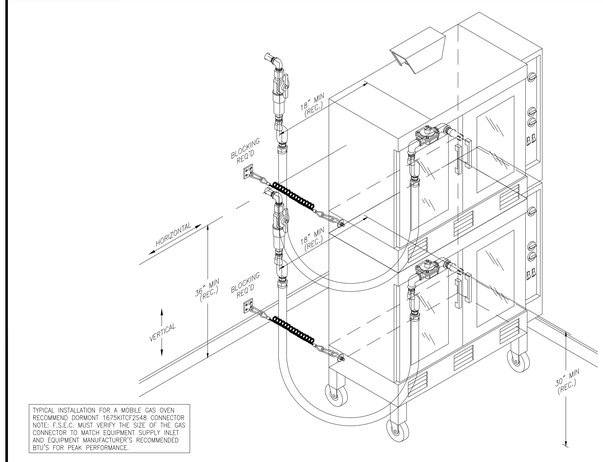
HILTI
KWIK BOLT TZ
ICC ESR: 1917

ANCHOR DIA.	MIN. EMBEDMENT	MIN. INSTALLATION TORQUE	MIN. EDGE DISTANCE
3/8"ø	2"	25 FT-LBS.	2 1/2"
1/2"ø	3 1/4"	50 FT-LBS.	2 3/8"
5/8"ø	4"	80 FT-LBS.	3 1/4"

A-34 **FIGURE A-34** (TYPICAL DRILLED CONCRETE ANCHORS) N.T.S.

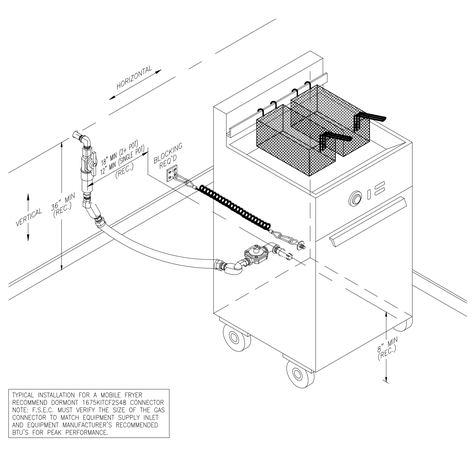
A-35 **FIGURE A-35** (RECESSED CEILING MTD AIR CURTAIN) N.T.S.

A-39 **FIGURE A-39** (CEILING MTD MIRROR BRACING) N.T.S.



TYPICAL INSTALLATION FOR A MOBILE GAS OVEN RECOMMEND DORMONT 1675KITCF2548 CONNECTOR NOTE: F.S.E.C. MUST VERIFY THE SIZE OF THE GAS CONNECTOR TO MATCH EQUIPMENT SUPPLY INLET AND EQUIPMENT MANUFACTURER'S RECOMMENDED BTU'S FOR PEAK PERFORMANCE.

A-40 **FLEX HOSE W/RESTRAINING CABLE DETAIL FOR MOBILE GAS OVEN** N.T.S.



TYPICAL INSTALLATION FOR A MOBILE FRYER RECOMMEND DORMONT 1675KITCF2548 CONNECTOR NOTE: F.S.E.C. MUST VERIFY THE SIZE OF THE GAS CONNECTOR TO MATCH EQUIPMENT SUPPLY INLET AND EQUIPMENT MANUFACTURER'S RECOMMENDED BTU'S FOR PEAK PERFORMANCE.

A-43 **FLEX HOSE W/RESTRAINING CABLE DETAIL FOR MOBILE FRYER** N.T.S.

NOT USED

\- **NOT USED** N.T.S.

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LICENSED ARCHITECT JAMES R. SANDERS C-17844 RENEWAL 08/31/19 STATE OF CALIFORNIA

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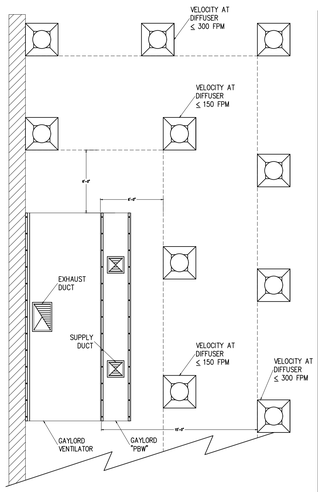


Gaylord Capture Performance Guarantee

Gaylord warrants the Capture Performance of the ventilator, only if the Exhaust Air Volumes are correct, per the Exhaust Air Volume Guidelines, and the Make-up Air Volumes are correct and the make-up air is delivered correctly, per the Make-up Air Delivery Guidelines as stated below.

Exhaust Air Volume Guidelines:

1. The amount of air exhausted by the Gaylord Ventilator shall be between 100% and 110% of the values shown on the Plan View for the Exhaust Ducts for each ventilator

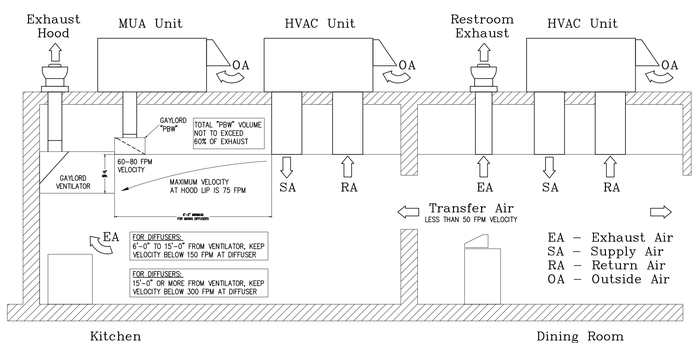
Make-up Air Delivery Guidelines:

1. Gaylord "PBW" Plenum boxes shall be included for each ventilator
2. The amount of make-up air delivered through the Gaylord "PBW" plenum boxes shall be between 90% and 100% of the values shown on the Plan View for the Supply Ducts for each ventilator
3. The make-up air delivered using Gaylord "PBW" plenum boxes shall not exceed 60% of the exhaust volume of the ventilator
4. Ceiling diffusers shall be at least 6'-0" from all sides of the ventilator and the velocity at the diffuser shall not exceed 150 Feet per Minute (FPM)
   OR
   Ceiling diffusers shall be 15'-0" from all sides of the ventilator and the velocity at the diffuser shall not exceed 300 Feet per Minute (FPM)
5. The maximum velocity of the make-up air from Transfer Air, Diffusers, etc. shall not exceed 75 FPM at the ventilator lip
6. Cross drafts from pass through windows, hallways, or other openings shall not exceed 50 FPM
7. All forms of make-up air introduction (PBW, Transfer Air, Diffusers, etc.) must be evenly distributed around each ventilator to prevent unequal pressurization
8. Kitchen pressurization shall not exceed -0.02"W.G. relative to the dining or adjacent spaces, as stated in NFPA-96 and ASHRAE Standard 154
9. For more information on acceptable methods of Make-up Air Delivery reference ASHRAE Standard 154.

Following these guidelines will result in proper capture and containment at the ventilator and enact the Gaylord Capture Performance Guarantee. If jobsite conditions cannot accommodate these guidelines, consult factory for alternative design.

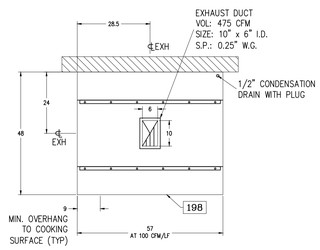
SPACE CONDITIONS IN HOT AND HUMID CLIMATES / STEAM COOKING EQUIPMENT

Gaylord recommends the kitchen temperature be kept between 74°F to 79°F with a dew point not exceeding 55°F to prevent excess condensation and or dripping in the hood over heavy steam producing equipment such as Steamers, Kettles, Dim Sum Counters, etc. If this is not possible, please consult the factory for increased air volume levels to prevent condensation buildup and potential dripping. Please refer to ASHRAE STD's 62.1-2010, 55-2010, and "The ASHRAE Guide for Buildings in Hot & Humid Climates" to address occupancy comfort and reduce the growth of pathogenic or allergenic organisms. It should be noted that exceeding these values can result in increased potential for unsanitary conditions.

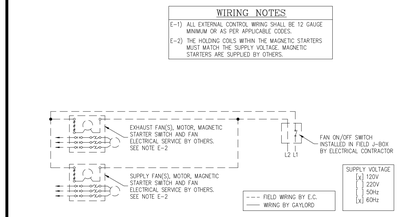


TYPICAL DESIGN

1 GAYLORD TYPICAL DESIGN AND CAPTURE PERFORMANCE GUARANTEE N.T.S.



A TYPE 2 HOOD (ITEM #198) - MODEL #VH2-W-48 1/2"=1'-0"



B WIRING DIAGRAM NOTES N.T.S.

GAYLORD DWG. #18-1014
HOOD #198 MODEL #VH2-W-48
TOTAL HOOD HANGING WEIGHT: 238 LBS

VENTILATOR NOTES (NON-WATER WASH)

A) VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT AND LOCATION IN RELATION TO VENTILATOR PRIOR TO FABRICATION.

B) FRONT AND REAR MOUNTING BRACKETS HAVE ø0.625" HOLES. BRACKETS TO BE SUPPORTED WITHIN 12" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

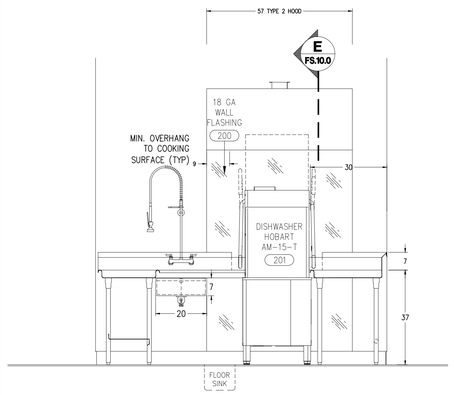
C) INTERIOR MOUNTING BRACKET(S) TO BE SUPPORTED WITHIN 36" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

VERIFY EXHAUST & SUPPLY FANS

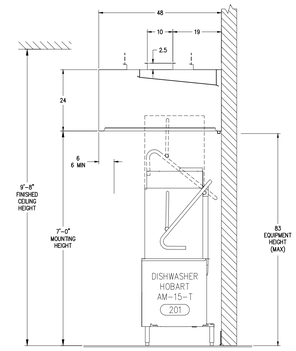
A) VERIFY IF THIS HOOD IS EXHAUSTED ON ITS OWN EXHAUST FAN OR IS IT EXHAUSTED ON A COMMON EXHAUST FAN SHARED WITH OTHER HOODS.

B) VERIFY NUMBER OF SUPPLY (MAKE-UP AIR) FANS.

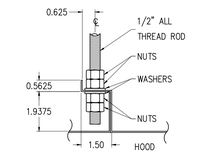
C TYPE 2 HOOD NOTES N.T.S.



D ELEVATION OF TYPE 2 HOOD (ITEM #198) 1/2"=1'-0"



E SECTION OF TYPE 2 HOOD (ITEM #198) 1/2"=1'-0"



MOUNTING BRACKET DETAIL

F HOOD MOUNTING DETAIL N.T.S.

WARNING: ANY CHANGES IN THE HOOD DESIGN OR MAKES/MODELS OF COOKING EQUIPMENT MAY AFFECT THE SIZE OF AND/OR REQUIRED AIRFLOWS FOR THE HOOD. **NOTE:** COOKING EQUIPMENT MODEL, MANUFACTURER & LOCATION **MUST** BE VERIFIED FOR FIRE SUPPRESSION PRIOR TO FABRICATION.

GENERAL NOTES FOR NON-WATER WASH VENTILATORS

ELECTRICAL

1. Locate Fan Start/Stop Switch in a convenient location. Refer to the wiring diagram for required voltage.
2. If ventilators are equipped with light fixtures, provide a separate light circuit to the ventilator as shown on electrical plan.

EXHAUST VOLUME REQUIREMENTS

3. Exhaust Volumes as shown on the drawings are determined by established Gaylord engineering methods and in accordance with the terms of the ventilator's listing. These air volume levels require that the make-up air be brought into the space in such a way that it does not negatively affect the ventilator. See the Make-up Air Requirements and the "Typical Design" drawing.
4. Ventilator static pressure is noted on each ventilator plan view. Total duct system and other external static's must be added to the ventilator static for determining the total system static pressure drop. Static based on operation at mean sea level at 75°F kitchen ambient.

MAKE-UP AIR REQUIREMENTS

5. Make-up air is critical to the performance of the ventilator.
6. The total amount of make-up air (supply air) brought into the kitchen must be between 90% and 100% of the total exhaust volume. It should be brought in throughout the kitchen evenly for best results. See the "Typical Design" drawing.

AIR FLOW RATES

7. Exhaust and Supply Air Flow Rates were established under controlled laboratory conditions. Greater Exhaust and/or lesser Supply Air Flows may be required for complete vapor removal in specific installations.

INSTALLATION

8. Ventilators to be installed in accordance with NFPA-96 and all other local applicable codes. Contractors must review applicable codes with code authorities before approving drawings for fabrication. Special attention must be given to code regulations relative to clearances from surrounding combustible and limited combustible construction (walls, ceiling, etc.).
9. Ventilators manufactured in multiple sections are factory pre-wired to a single connection point. Ventilator wiring is disconnected for shipment to be reconnected by electrical contractor.
10. Ventilators manufactured in multiple sections may have drains factory interconnected (see drawing) to a single outlet point. Ventilator plumbing is disconnected for shipment to be reconnected by plumbing contractor.
11. All ductwork beyond the ventilator duct take-off collar to be provided and installed by others, in accordance with applicable codes. Exhaust ducts must be continuously welded liquid tight.
12. All ventilators are equipped with hanging brackets. Hanging rods to be supplied by ventilator installer. Hanging weight of the ventilator(s) is noted on each drawing.
13. Ventilators manufactured in multiple sections are provided with bolts, clips, and all necessary hardware for reconnecting by the ventilator installer.

CONSTRUCTION

14. Ventilators are manufactured in strict accordance with Gaylord specifications.
15. Ventilators constructed of 18 Ga. stainless steel, Type 300 series, No. 4 finish unless otherwise noted on drawings.

FIRE EXTINGUISHING SYSTEM

16. Fire extinguishing system to be installed in accordance with NFPA-96. Refer to "FIRE PROTECTION SYSTEM NOTES" for information on supplier and installation.
17. Caution: Fire extinguishing system piping installed on the ventilator at job site should be coordinated with Gaylord to ensure piping does not interfere with the ventilator's operation/performance. Improper installation may void the Listings of the ventilator.
18. IMPORTANT NOTE: NFPA-96 requires that all gas and electric cooking equipment, that is protected by surface fire protection, must automatically shut off upon activation of the fire extinguishing system.
19. IMPORTANT NOTE: Most building departments require separate hood and fire protection permits prior to installation. The hood permit is typically obtained through the plan review department and the fire protection permit from the fire prevention bureau. It is the responsibility of the installing contractor to check with local building departments for their requirements and to obtain necessary permits.

LIGHTING

20. Light fixtures in ventilators will provide less than 30 foot candles of light at the cooking surface as a standard, unless otherwise noted on Section View. Confirm if this amount of light is acceptable with local health codes.

2 GENERAL NOTES FOR NON-WATER WASH VENTILATORS N.T.S.

THE GAYLORD VENTILATOR TESTING, LISTING AND COMPLIANCE REFERENCES:

IMPORTANT NOTE: Gaylord Ventilators are designed to meet the National codes listed below. Local codes may vary. Gaylord Industries must be notified in writing of local codes that may affect the ventilator design.

NATIONAL FIRE PROTECTION ASSOCIATION
The exhaust ventilator meets all requirements of the latest edition of NFPA-96.

NATIONAL SANITATION FOUNDATION
The exhaust ventilator is NSF listed to:
Standard #2 - "Food Service Equipment"

INTERNATIONAL & UNIFORM MECHANICAL CODE
The exhaust ventilator meets all requirements of IMC and UMC.

UNDERWRITERS LABORATORIES, INC.
The exhaust ventilator is UL Listed. *

INTERTEK TESTING SERVICES
The exhaust ventilator is ETL Listed. *

* UL and ETL listed exhaust ventilators are tested to standard: UL 710 - "Exhaust Hoods for Commercial Cooking Equipment".

Intertek

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Design By: RICHARD DIELI

APPROVALS

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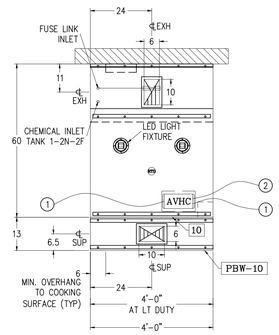
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
HOOD DETAILS ITEM 198

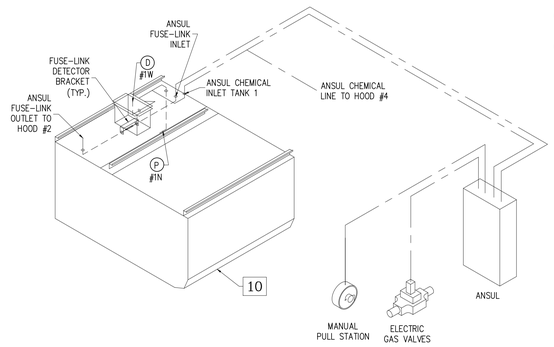
LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL DATE 7-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-25CX
Date Last Revised	Sheet Number
-	FS.10.0



A PLAN VIEW OF EXHAUST HOOD #1 (Item #10) - MODEL #ELX-GBD-A-AV-60

1/2"=1'-0"



(D) = DUCT NOZZLE

(P) = PLENUM NOZZLE

(A) = APPLIANCE NOZZLE

DISTRIBUTION PIPING REQUIREMENTS PER 3 GALLON TANK

REQUIREMENTS	SUPPLY	DUCT BRANCH LINE	PLENUM BRANCH LINE	APPLIANCE BRANCH LINE
PIPE SIZE	3/8 IN.	3/8 IN.	3/8 IN.	3/8 IN.
MAXIMUM LENGTH	40 FT. (12.2 M)	8 FT. (2.4 M)	4 FT. (1.2 M)	12 FT. (3.7 M)
MAXIMUM RISE	6 FT. (1.8 M)	4 FT. (1.2 M)	2 FT. (0.6 M)	2 FT. (0.6 M)
MAXIMUM 90° ELBOW	9	4	4	6
MAXIMUM TEES	1	2	2	4
MAXIMUM FLOW NUMBERS	11*	4	2	4

*EXCEPTIONS
1. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK FOR DUCT AND PLENUM PROTECTION ONLY.
2. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY TWO-FLOW APPLIANCE NOZZLES.
3. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY THREE-FLOW APPLIANCE NOZZLES.

FLOW POINT CALCULATION CHART

NOZZLE	QUANTITY	FLOWS
1W	1	1 (EACH)
1N	1	1 (EACH)
TOTAL:	2	2

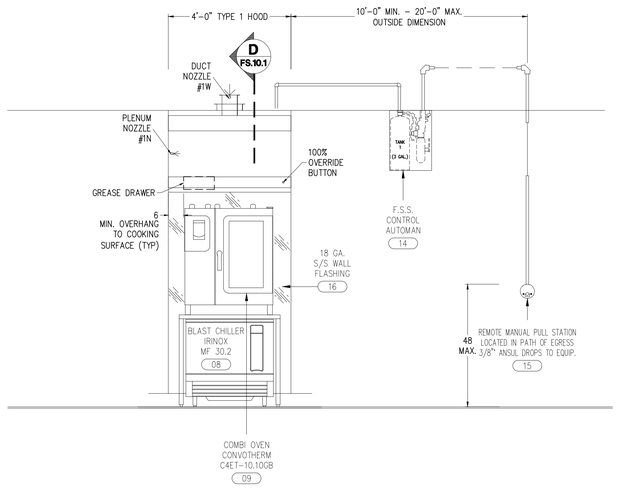
——— — ——— = ANSUL PIPING BY FIRE SUPPRESSION INSTALLER

- - - - - - - - - = INTERIOR HOOD ANSUL PIPING BY GAYLORD

——————— = ROOF TOP ANSUL PIPING BY GAYLORD

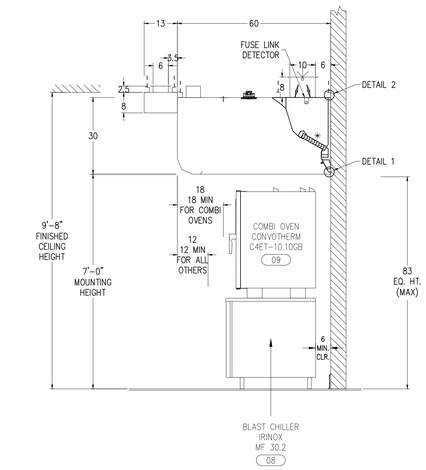
B FIRE SUPPRESSION SYSTEM OF HOOD #1 (Items #13, 14 & 15) - (Isometric View)

N.T.S.



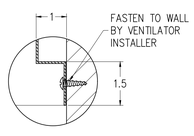
C ELEVATION OF EXHAUST HOOD #1 (Item #10) & FIRE SUPPRESSION SYSTEM (Items #13, 14 & 15)

1/2"=1'-0"



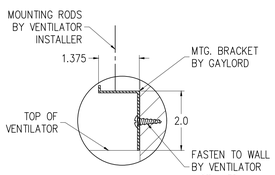
D SECTION OF EXHAUST HOOD #1

1/2"=1'-0"

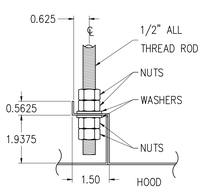


DETAIL 1

NOTE: REFER TO SHEET FS.09.0 DETAIL A-13 & DETAIL A-14 FOR ATTACHMENT DETAILS



DETAIL 2



MOUNTING BRACKET DETAIL

E HOOD MOUNTING DETAILS

N.T.S.

HOOD INFORMATION

ITEM NO.	MODEL	SIZE L (in)	SIZE D (in)	SIZE H (in)	AIR FLOW REQUIREMENTS S.P. TEST PORT ("W.G.)	DUCT COLLAR DUCT TYPE	DUCT COLLAR QTY	DUCT COLLAR DUCT S.P. ("W.G.)	DUCT COLLAR CFM (EACH)	DUCT COLLAR SIZE L (in)	DUCT COLLAR SIZE D (in)	WEIGHT (LBS)
10	ELX	48	60	30	0.20	EXHAUST	1	0.48	560	6	10	320
PBW-10	PBW	48	13	8		SUPPLY	1	0.11	336	10	6	60

TOTAL HOOD S.P.: 0.48" W.G.
TOTAL EXHAUST: 560 CFM
TOTAL SUPPLY: 336 CFM
TOTAL WEIGHT: 380 LBS

HOOD NUMBER	APPLIANCE WITH HIGHEST DUTY RATING	ASHRAE-154 DUTY RATING	GAYLORD TOTAL AIRFLOW	LENGTH OF HOOD IN FEET	GAYLORD CFM/LF	TABLE 140.9-A MAX ALLOWABLE CFM/LF	COMPLIES WITH SECTION 140.9 CA TITLE 24 (YES/NO)
10	CONV. OVEN	LIGHT	560	4	140	140	YES

HOOD EXHAUST INFORMATION CHART

ITEM #	DUCT COLLAR	CFM/LF	TOTAL CFM	STATIC PRESSURE	VELOCITY
10	10" X 6"	140	560	0.48" W.G.	1344 FPM

HOOD SUPPLY INFORMATION CHART

ITEM #	DUCT COLLAR	TOTAL CFM	STATIC PRESSURE	VELOCITY
10	10" X 6"	336	0.11" W.G.	878 FPM

HOOD CARTRIDGES

ITEM #	QTY.	CARTRIDGE	CARTRIDGE SIZE	MAX. RATING
10	3	XGS	11" X 15.5"	280 CFM/LF

F HOOD EXHAUST INFORMATION CHART

N.T.S.

VENTILATOR NOTES (NON-WATER WASH)

A) VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT AND LOCATION IN RELATION TO VENTILATOR PRIOR TO FABRICATION.

B) FRONT AND REAR MOUNTING BRACKETS HAVE ø0.625" HOLES. BRACKETS TO BE SUPPORTED WITHIN 12" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

C) INTERIOR MOUNTING BRACKET(S) TO BE SUPPORTED WITHIN 36" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

VERIFY EXHAUST & SUPPLY FANS

A) VERIFY IF THIS HOOD IS EXHAUSTED ON ITS OWN EXHAUST FAN OR IS IT EXHAUSTED ON A COMMON EXHAUST FAN SHARED WITH OTHER HOODS.

B) VERIFY NUMBER OF SUPPLY (MAKE-UP AIR) FANS.

PBW PLENUM FEATURES

* REMOVABLE S/S PERFORATED PANEL(S)
* ALL EXPOSED SURFACES ARE STAINLESS STEEL

LIGHTING NOTE

THIS LIGHTING IN THIS VENTILATOR IS DESIGNED TO PROVIDE 50 FOOT CANDLES OF LIGHT AT THE COOKING SURFACE, IF 50 FOOT CANDLES OF LIGHTING IS PROVIDED IN THE SURROUNDING SPACE.

THESE LED FIXTURES ARE PROVIDED WITH LED SMD CHIPS INTEGRATED INTO THE FIXTURE ASSEMBLY, THEREFORE NO SEPARATE BULBS ARE REQUIRED.

ELECTRICAL NOTES (DCV-AV)

① (1) CAT 5 CABLE, FOR CONTROL(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO DCV CONTROL CABINET OR NEXT HOOD (IF APPLICABLE) BY ELECTRICAL CONTRACTOR.

∗ LIGHT FIXTURES, VAPOR PROOF, U.L. LISTED, FURNISHED, INSTALLED AND WIRED BY GAYLORD. ∗

② (2) WIRES AND GROUND, FOR CONTROL(S) AND LIGHT(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO SUPPLY VOLTAGE BY ELECTRICAL CONTRACTOR.

WARNING: ANY CHANGES IN THE HOOD DESIGN OR MAKES/MODELS OF COOKING EQUIPMENT MAY AFFECT THE SIZE OF AND/OR REQUIRED AIRFLOWS FOR THE HOOD. NOTE: COOKING EQUIPMENT MODEL, MANUFACTURER & LOCATION MUST BE VERIFIED FOR FIRE SUPPRESSION PRIOR TO FABRICATION.

FIRE SUPPRESSION SYSTEM NOTES ANSUL R-102-ASEF

FP-1) LOCATION OF FIRE SUPPRESSION NOZZLES MUST BE VERIFIED IN RELATION TO THE COOKING EQUIPMENT, PRIOR TO VENTILATOR FABRICATION.

COMPLETE SYSTEM INCLUDING APPLIANCE DROPS AND SURFACE MOUNTED DETECTION BRACKETS, WITH FIELD INSTALLATION BY GAYLORD.

ANSUL FIRE SYSTEM (LISTED TO A U.L. 300) FACTORY PRE-PIPED CHEMICAL LINES INCLUDING DUCT, PLENUM AND APPLIANCE DROPS WITH ALL NOZZLES INSTALLED PER COOKING EQUIPMENT ARRANGEMENT ON GAYLORD APPROVED DRAWINGS. ALL EXPOSED CHEMICAL PIPING CHROME PLATED OR CHROME SLEEVED. INCLUDES FACTORY PRE-PIPED DETECTION LINES WITH SURFACE MOUNTED DETECTOR BRACKETS. INSTALLATION BY CERTIFIED FACTORY INSTALLERS.

INCLUDES:
* TANK(S) AND RELEASE ASSEMBLY(S)
* CHEMICAL
* DETECTOR CABLE
* FUSIBLE LINKS WITH LINKAGE
* EXPELLANT GAS CARTRIDGE(S) (PROVIDED BY FIRE SUPPRESSION INSTALLER)
* (1) REMOTE MANUAL PULL STATION
* (1) GAS VALVE PER FIRE SYSTEM WITH A MAXIMUM SIZE OF 2-1/2"
* (1) MANUAL RESET RELAY PER FIRE SYSTEM, IF REQUIRED
* PLANS AND PERMITS (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)
* PARTS AND INSTALLATION OF CHEMICAL AND DETECTION LINES FROM TANK(S) TO CONNECTION POINTS ON HOOD
* INSTALLATION OF TANKS AND RELATED COMPONENTS
* INSTALLATION OF DETECTOR CABLE AND FUSIBLE LINKS
* INSTALLATION OF REMOTE MANUAL PULL STATION
* JOB SITE REPOSITIONING OF NOZZLES AS PER GAYLORD APPROVED DRAWINGS, IF REQUIRED TO MEET SYSTEM DESIGN REQUIREMENTS
* TRIP TEST AND CERTIFICATION (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)

EXCLUDES:
* UNION LABOR AND PREVAILING WAGE
* INSTALLATION OF GAS VALVE(S)
* ELECTRICAL DISCONNECTS
* PARTS AND LABOR FOR ANY ELECTRICAL INTERCONNECTIONS
* JOB SITE REPOSITIONING OF NOZZLES IF COOKING EQUIPMENT IS NOT INSTALLED PER GAYLORD APPROVED DRAWINGS
* PLANS AND PERMITS ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* TRIP TEST AND CERTIFICATION ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* HAND HELD FIRE EXTINGUISHER(S)
* INSPECTION AND SERVICING
* RECESSED ANSUL CABINET(S)

NOTE: REFER TO SHEET FS.05.7 FOR ADDITIONAL INFORMATION FOR THE DCV CONTROL CABINET & WIRING DETAILS

Intertek

E.T.L. LISTING #3192993CRT-002

GAYLORD DWG. #18-1014
HOOD #10 MODEL #ELX-GBD-A-AV-60
TOTAL HOOD HANGING WEIGHT: 320 LBS
PLENUM BOX #PBW-10 MODEL #PBW-13
TOTAL PLENUM BOX WEIGHT: 60 LBS

G TYPE 1 EXHAUST HOOD NOTES

N.T.S.

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Phone: 619.285.1189
Design By: RICHARD DIELI

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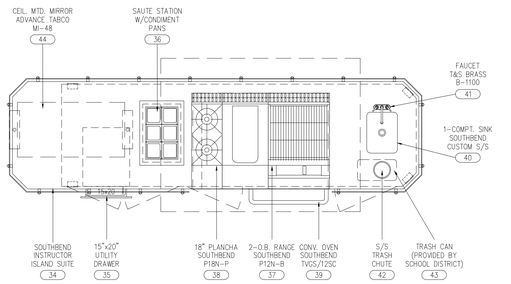
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

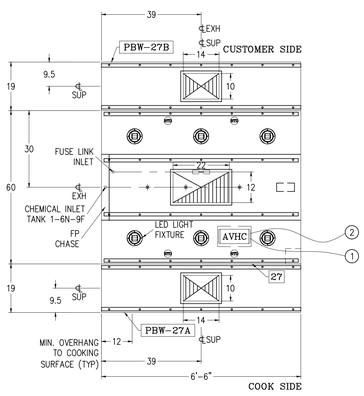
Sheet Title
FOODSERVICE EQUIPMENT
HOOD DETAILS ITEM 10

LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL 7-31-19 STATE OF CALIFORNIA

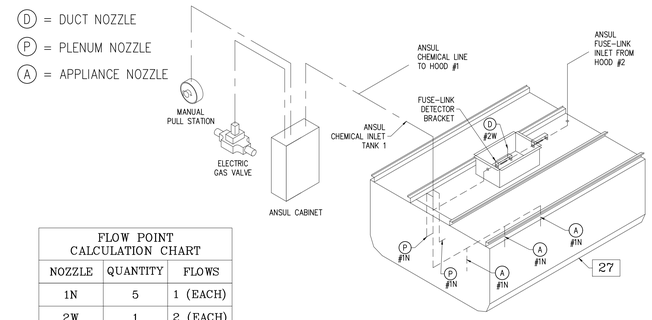
Document Date	Project Number
09-12-18	18-25CX
Date Last Revised	Sheet Number
-	FS.10.1



A PLAN VIEW of INSTRUCTOR COOKING ISLAND SUITE (Item #34) 1/2"=1'-0"



B PLAN VIEW of HOOD #2 (ITEM #27) - MODEL #ELX-GBD-BBC-CL-AV-60 1/2"=1'-0"



FLOW POINT CALCULATION CHART		
NOZZLE	QUANTITY	FLOWS
1N	5	1 (EACH)
2W	1	2 (EACH)
TOTAL:	6	7

= ANSUL PIPING BY FIRE SUPPRESSION INSTALLER

= INTERIOR HOOD ANSUL PIPING BY GAYLORD

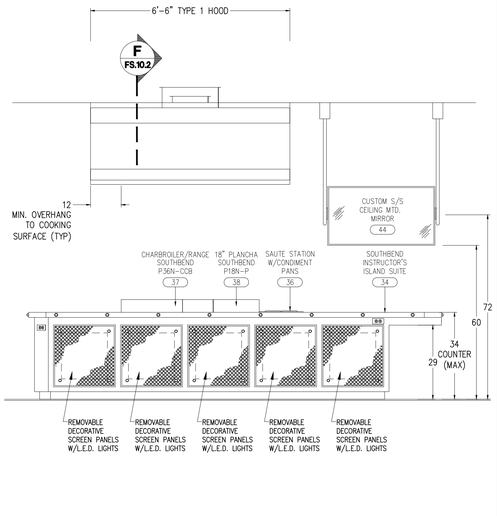
= ROOF TOP ANSUL PIPING BY GAYLORD

DISTRIBUTION PIPING REQUIREMENTS PER 3 GALLON TANK

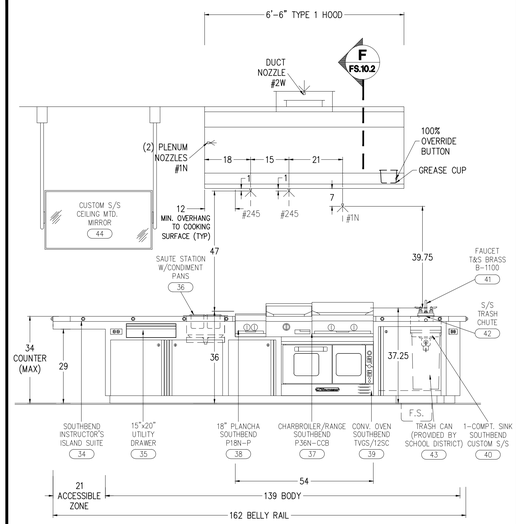
REQUIREMENTS	SUPPLY	DUCT BRANCH LINE	PLENUM BRANCH LINE	APPLIANCE BRANCH LINE
PIPE SIZE	3/8 IN.	3/8 IN.	3/8 IN.	3/8 IN.
MAXIMUM LENGTH	40 FT. (12.2 M)	8 FT. (2.4 M)	4 FT. (1.2 M)	12 FT. (3.7 M)
MAXIMUM RISE	6 FT. (1.8 M)	4 FT. (1.2 M)	2 FT. (0.6 M)	2 FT. (0.6 M)
MAXIMUM 90° ELBOW	9	4	4	6
MAXIMUM TEES	1	2	2	4
MAXIMUM FLOW NUMBERS	11*	4	2	4

*EXCEPTIONS
1. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK FOR DUCT AND PLENUM PROTECTION ONLY.
2. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY TWO-FLOW APPLIANCE NOZZLES.
3. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY THREE-FLOW APPLIANCE NOZZLES.

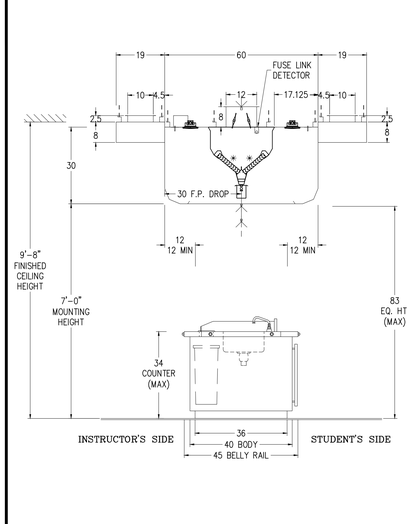
C FIRE SUPPRESSION SYSTEM OF HOOD #2 (Items #30, 31 & 32) - (Isometric View) N.T.S.



D ELEV. VIEW OF HOOD #2 & INSTRUCTOR SUITE (Item #34) 1/2"=1'-0"



E ELEV. VIEW OF HOOD #2 & INSTRUCTOR SUITE (Item #34) 1/2"=1'-0"



F SECTION OF HOOD #2 & INSTRUCTOR SUITE (Item #34) 1/2"=1'-0"

VENTILATOR NOTES (NON-WATER WASH)

A) VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT AND LOCATION IN RELATION TO VENTILATOR PRIOR TO FABRICATION.

B) FRONT AND REAR MOUNTING BRACKETS HAVE Ø0.625" HOLES. BRACKETS TO BE SUPPORTED WITHIN 12" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

C) INTERIOR MOUNTING BRACKET(S) TO BE SUPPORTED WITHIN 36" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

VERIFY EXHAUST & SUPPLY FANS

A) VERIFY IF THIS HOOD IS EXHAUSTED ON ITS OWN EXHAUST FAN OR IS IT EXHAUSTED ON A COMMON EXHAUST FAN SHARED WITH OTHER HOODS.

B) VERIFY NUMBER OF SUPPLY (MAKE-UP AIR) FANS.

PBW PLENUM FEATURES

* REMOVABLE S/S PERFORATED PANEL(S)
* ALL EXPOSED SURFACES ARE STAINLESS STEEL

LIGHTING NOTE

THIS LIGHTING IN THIS VENTILATOR IS DESIGNED TO PROVIDE 50 FOOT CANDLES OF LIGHT AT THE COOKING SURFACE, IF 50 FOOT CANDLES OF LIGHTING IS PROVIDED IN THE SURROUNDING SPACE.

THESE LED FIXTURES ARE PROVIDED WITH LED SMD CHIPS INTEGRATED INTO THE FIXTURE ASSEMBLY, THEREFORE NO SEPARATE BULBS ARE REQUIRED.

ELECTRICAL NOTES (DCV-AV)

① (1) CAT 5 CABLE, FOR CONTROL(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO DCV CONTROL CABINET OR NEXT HOOD (IF APPLICABLE) BY ELECTRICAL CONTRACTOR.

∗ LIGHT FIXTURES, VAPOR PROOF, U.L. LISTED, FURNISHED, INSTALLED AND WIRED BY GAYLORD. ∗

② (2) WIRES AND GROUND, FOR CONTROL(S) AND LIGHT(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO SUPPLY VOLTAGE BY ELECTRICAL CONTRACTOR.

FIRE SUPPRESSION SYSTEM NOTES ANSUL R-102-ASEF

FP-1) LOCATION OF FIRE SUPPRESSION NOZZLES MUST BE VERIFIED IN RELATION TO THE COOKING EQUIPMENT, PRIOR TO VENTILATOR FABRICATION.

COMPLETE SYSTEM INCLUDING APPLIANCE DROPS AND SURFACE MOUNTED DETECTION BRACKETS, WITH FIELD INSTALLATION BY GAYLORD.

ANSUL FIRE SYSTEM (LISTED TO A U.L. 300) FACTORY PRE-PIPED CHEMICAL LINES INCLUDING DUCT, PLENUM AND APPLIANCE DROPS WITH ALL NOZZLES INSTALLED PER COOKING EQUIPMENT ARRANGEMENT ON GAYLORD APPROVED DRAWINGS. ALL EXPOSED CHEMICAL PIPING CHROME PLATED OR CHROME SLEEVED. INCLUDES FACTORY PRE-PIPED DETECTION LINES WITH SURFACE MOUNTED DETECTOR BRACKETS. INSTALLATION BY CERTIFIED FACTORY INSTALLERS.

INCLUDES:
* TANK(S) AND RELEASE ASSEMBLY(S)
* CHEMICAL
* DETECTOR CABLE
* FUSIBLE LINKS WITH LINKAGE
* EXPELLANT GAS CARTRIDGE(S) (PROVIDED BY FIRE SUPPRESSION INSTALLER)
* (1) REMOTE MANUAL PULL STATION
* (1) GAS VALVE PER FIRE SYSTEM WITH A MAXIMUM SIZE OF 2-1/2"
* (1) MANUAL RESET RELAY PER FIRE SYSTEM, IF REQUIRED
* PLANS AND PERMITS (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)
* PARTS AND INSTALLATION OF CHEMICAL AND DETECTION LINES FROM TANK(S) TO CONNECTION POINTS ON HOOD
* INSTALLATION OF TANKS AND RELATED COMPONENTS
* INSTALLATION OF DETECTOR CABLE AND FUSIBLE LINKS
* INSTALLATION OF REMOTE MANUAL PULL STATION
* JOB SITE REPOSITIONING OF NOZZLES AS PER GAYLORD APPROVED DRAWINGS, IF REQUIRED TO MEET SYSTEM DESIGN REQUIREMENTS
* TRIP TEST AND CERTIFICATION (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)

EXCLUDES:
* UNION LABOR AND PREVAILING WAGE
* INSTALLATION OF GAS VALVE(S)
* ELECTRICAL DISCONNECTS
* PARTS AND LABOR FOR ANY ELECTRICAL INTERCONNECTIONS
* JOB SITE REPOSITIONING OF NOZZLES IF COOKING EQUIPMENT IS NOT INSTALLED PER GAYLORD APPROVED DRAWINGS
* PLANS AND PERMITS ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* TRIP TEST AND CERTIFICATION ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* HAND HELD FIRE EXTINGUISHER(S)
* INSPECTION AND SERVICING
* RECESSED ANSUL CABINET(S)

NOTE: REFER TO SHEET FS.05.7 FOR ADDITIONAL INFORMATION FOR THE DCV CONTROL CABINET & WIRING DETAILS

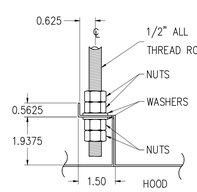
WARNING: ANY CHANGES IN THE HOOD DESIGN OR MAKES/MODELS OF COOKING EQUIPMENT MAY AFFECT THE SIZE OF AND/OR REQUIRED AIRFLOWS FOR THE HOOD. NOTE: COOKING EQUIPMENT MODEL, MANUFACTURER & LOCATION MUST BE VERIFIED FOR FIRE SUPPRESSION PRIOR TO FABRICATION.

SHOP NOTE: FP CHASE REQUIRED ON OPPOSITE END FROM GREASE CUP

Intertek
E.T.L. LISTING #3192993CRT-002

GAYLORD DWG. #18-1014
HOOD #27 MODEL #ELX-GBD-BBC-CL-AV-60
TOTAL HOOD HANGING WEIGHT: 683 LBS
PLENUM BOX #PBW-27 MODEL #PBW-19
TOTAL PLENUM BOX WEIGHT: 196 LBS

NOTE: REFER TO SHEET FS.09.0 DETAIL A-13 & DETAIL A-14 FOR ATTACHMENT DETAILS



MOUNTING BRACKET DETAIL

G HOOD MOUNTING DETAILS N.T.S.

HOOD EXHAUST INFORMATION CHART

ITEM #	DUCT COLLAR	CFM/LF	TOTAL CFM	STATIC PRESSURE	VELOCITY
27	12" X 22"	420	2730	0.48" W.G.	1489 FPM

HOOD SUPPLY INFORMATION CHART

ITEM #	DUCT COLLAR	TOTAL CFM	STATIC PRESSURE	VELOCITY
PBW-27A	10" X 14"	819	0.10" W.G.	842 FPM
PBW-27B	10" X 14"	819	0.10" W.G.	842 FPM

HOOD CARTRIDGES

ITEM #	QTY.	CARTRIDGE	CARTRIDGE SIZE	MAX. RATING
27	8	XGS	11" X 15.5"	280 CFM/LF

HOOD INFORMATION

ITEM NO.	MODEL	SIZE L (in)	SIZE D (in)	SIZE H (in)	S.P. TEST PORT (" W.G.)	AIR FLOW REQUIREMENTS DUCT COLLAR DUCT TYPE	QTY	DUCT S.P. (" W.G.)	CFM (EACH)	SIZE L (in)	SIZE D (in)	WEIGHT (LBS)
27	ELX	78	60	30	0.55	EXHAUST	1	0.89	2730	22	12	683
PBW-27A	PBW	78	19	8		SUPPLY	1	0.10	819	14	10	98
PBW-27B	PBW	78	19	8		SUPPLY	1	0.10	819	14	10	98

TOTAL HOOD S.P.: 0.89" W.G. TOTAL EXHAUST: 2730 CFM TOTAL SUPPLY: 1638 CFM — TOTAL WEIGHT: 878 LBS

HOOD NUMBER	APPLIANCE WITH HIGHEST DUTY RATING	ASHRAE-154 DUTY RATING	GAYLORD TOTAL AIRFLOW	LENGTH OF HOOD IN FEET	GAYLORD CFM/LF	TABLE 140.9-A MAX ALLOWABLE CFM/LF	COMPLIES WITH SECTION 140.9 CA TITLE 24 (YES/NO)
27	CHARBROILER	HEAVY	2730	6.5	420	420	YES

H HOOD EXHAUST INFORMATION CHART N.T.S.

J TYPE 1 EXHAUST HOOD NOTES N.T.S.

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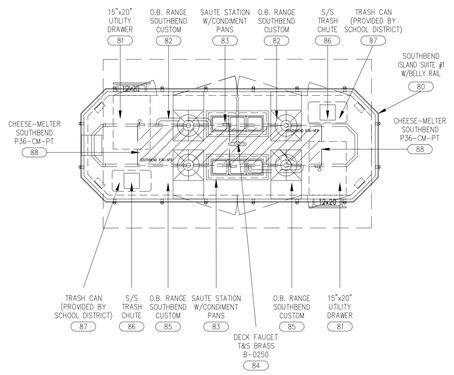
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

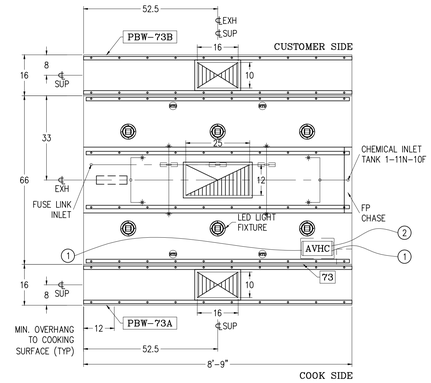
Sheet Title
FOODSERVICE EQUIPMENT
HOOD DETAILS ITEM 27

LICENSED ARCHITECT JIMMIE L. SANDERS C-17647 RENEWAL 08/31/19 STATE OF CALIFORNIA

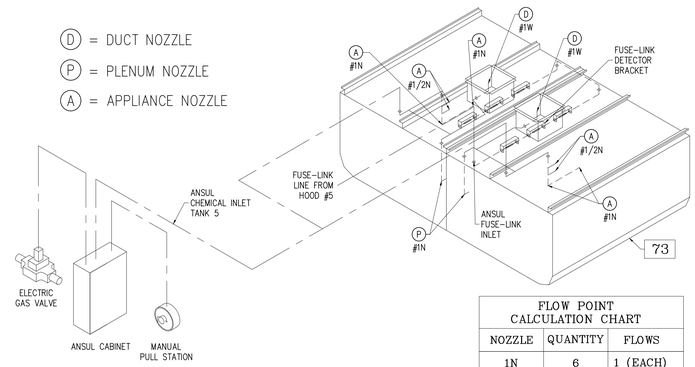
Document Date	Project Number
09-12-18	18-25CX
Date Last Revised	Sheet Number
-	FS.10.2



A **PLAN VIEW of COOKING ISLAND SUITE #1 (Item #80)** 1/2"=1'-0"



B **PLAN VIEW of HOOD #3 (ITEM #73) - MODEL #ELX-GBD-BBC-CL-AV-66** 1/2"=1'-0"



FLOW POINT CALCULATION CHART		
NOZZLE	QUANTITY	FLOWS
1N	6	1 (EACH)
1W	2	1 (EACH)
1/2N	4	1/2 (EACH)
TOTAL:	12	10

DISTRIBUTION PIPING REQUIREMENTS PER 3 GALLON TANK

REQUIREMENTS	SUPPLY	DUCT BRANCH LINE	PLENUM BRANCH LINE	APPLIANCE BRANCH LINE
PIPE SIZE	3/8 IN.	3/8 IN.	3/8 IN.	3/8 IN.
MAXIMUM LENGTH	40 FT. (12.2 M)	8 FT. (2.4 M)	4 FT. (1.2 M)	12 FT. (3.7 M)
MAXIMUM RISE	6 FT. (1.8 M)	4 FT. (1.2 M)	2 FT. (0.6 M)	2 FT. (0.6 M)
MAXIMUM 90° ELBOW	9	4	4	6
MAXIMUM TEES	1	2	2	4
MAXIMUM FLOW NUMBERS	11*	4	2	4

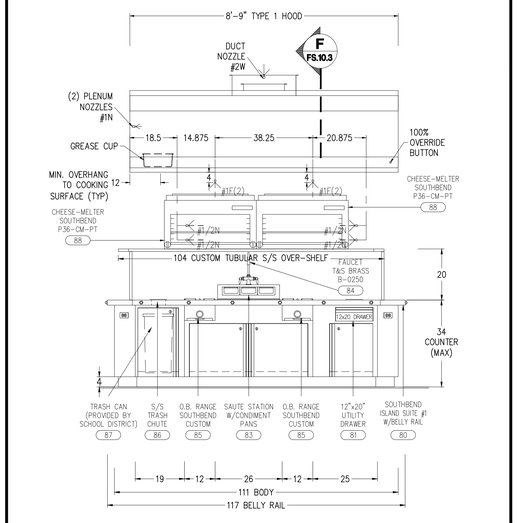
*EXCEPTIONS
1. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK FOR DUCT AND PLENUM PROTECTION ONLY.
2. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY TWO-FLOW APPLIANCE NOZZLES.
3. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY THREE-FLOW APPLIANCE NOZZLES.

= ANSUL PIPING BY FIRE SUPPRESSION INSTALLER

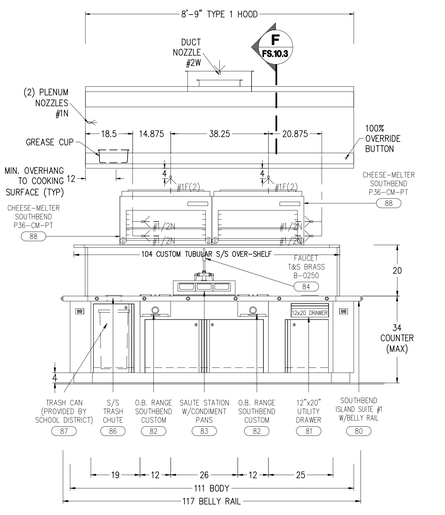
= INTERIOR HOOD ANSUL PIPING BY GAYLORD

= ROOF TOP ANSUL PIPING BY GAYLORD

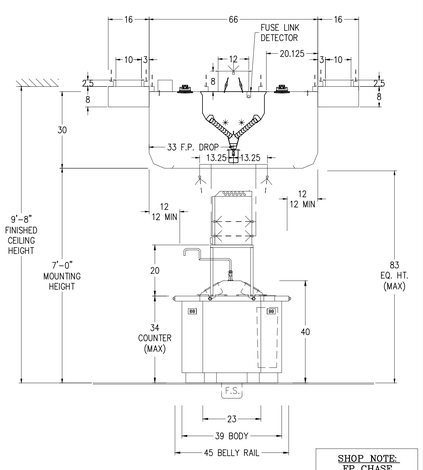
C **FIRE SUPPRESSION SYSTEM OF HOOD #3 (Items #76, 77 & 78) - (Isometric View)** N.T.S.



D **ELEV. VIEW OF HOOD #3 & ISLAND SUITE (Item #80)** 1/2"=1'-0"



E **ELEV. VIEW OF HOOD #3 & ISLAND SUITE (Item #80)** 1/2"=1'-0"



SHOP NOTE:
FP CHASE REQUIRED ON OPPOSITE END FROM GREASE CUP

F **SECTION OF HOOD #3 & ISLAND SUITE (Item #80)** 1/2"=1'-0"

VENTILATOR NOTES (NON-WATER WASH)

A) VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT AND LOCATION IN RELATION TO VENTILATOR PRIOR TO FABRICATION.

B) FRONT AND REAR MOUNTING BRACKETS HAVE Ø0.625" HOLES. BRACKETS TO BE SUPPORTED WITHIN 12" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

C) INTERIOR MOUNTING BRACKET(S) TO BE SUPPORTED WITHIN 36" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

VERIFY EXHAUST & SUPPLY FANS

A) VERIFY IF THIS HOOD IS EXHAUSTED ON ITS OWN EXHAUST FAN OR IS IT EXHAUSTED ON A COMMON EXHAUST FAN SHARED WITH OTHER HOODS.

B) VERIFY NUMBER OF SUPPLY (MAKE-UP AIR) FANS.

PBW PLENUM FEATURES

* REMOVABLE S/S PERFORATED PANEL(S)
* ALL EXPOSED SURFACES ARE STAINLESS STEEL

LIGHTING NOTE

THIS LIGHTING IN THIS VENTILATOR IS DESIGNED TO PROVIDE 50 FOOT CANDLES OF LIGHT AT THE COOKING SURFACE, IF 50 FOOT CANDLES OF LIGHTING IS PROVIDED IN THE SURROUNDING SPACE.

THESE LED FIXTURES ARE PROVIDED WITH LED SMD CHIPS INTEGRATED INTO THE FIXTURE ASSEMBLY, THEREFORE NO SEPARATE BULBS ARE REQUIRED.

ELECTRICAL NOTES (DCV-AV)

① (1) CAT 5 CABLE, FOR CONTROL(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO DCV CONTROL CABINET OR NEXT HOOD (IF APPLICABLE) BY ELECTRICAL CONTRACTOR.

∗ LIGHT FIXTURES, VAPOR PROOF, U.L. LISTED, FURNISHED, INSTALLED AND WIRED BY GAYLORD. ∗

② (2) WIRES AND GROUND, FOR CONTROL(S) AND LIGHT(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO SUPPLY VOLTAGE BY ELECTRICAL CONTRACTOR.

WARNING: ANY CHANGES IN THE HOOD DESIGN OR MAKES/MODELS OF COOKING EQUIPMENT MAY AFFECT THE SIZE OF AND/OR REQUIRED AIRFLOWS FOR THE HOOD. NOTE: COOKING EQUIPMENT MODEL, MANUFACTURER & LOCATION MUST BE VERIFIED FOR FIRE SUPPRESSION PRIOR TO FABRICATION.

FIRE SUPPRESSION SYSTEM NOTES ANSUL R-102-ASEF

FP-1) LOCATION OF FIRE SUPPRESSION NOZZLES MUST BE VERIFIED IN RELATION TO THE COOKING EQUIPMENT, PRIOR TO VENTILATOR FABRICATION.

COMPLETE SYSTEM INCLUDING APPLIANCE DROPS AND SURFACE MOUNTED DETECTION BRACKETS, WITH FIELD INSTALLATION BY GAYLORD.

ANSUL FIRE SYSTEM (LISTED TO A U.L. 300) FACTORY PRE-PIPED CHEMICAL LINES INCLUDING DUCT, PLENUM AND APPLIANCE DROPS WITH ALL NOZZLES INSTALLED PER COOKING EQUIPMENT ARRANGEMENT ON GAYLORD APPROVED DRAWINGS. ALL EXPOSED CHEMICAL PIPING CHROME PLATED OR CHROME SLEEVED. INCLUDES FACTORY PRE-PIPED DETECTION LINES WITH SURFACE MOUNTED DETECTOR BRACKETS. INSTALLATION BY CERTIFIED FACTORY INSTALLERS.

INCLUDES:
* TANK(S) AND RELEASE ASSEMBLY(S)
* CHEMICAL
* DETECTOR CABLE
* FUSIBLE LINKS WITH LINKAGE
* EXPELLANT GAS CARTRIDGE(S) (PROVIDED BY FIRE SUPPRESSION INSTALLER)
* (1) REMOTE MANUAL PULL STATION
* (1) GAS VALVE PER FIRE SYSTEM WITH A MAXIMUM SIZE OF 2-1/2"
* (1) MANUAL RESET RELAY PER FIRE SYSTEM, IF REQUIRED
* PLANS AND PERMITS (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)
* PARTS AND INSTALLATION OF CHEMICAL AND DETECTION LINES FROM TANK(S) TO CONNECTION POINTS ON HOOD
* INSTALLATION OF TANKS AND RELATED COMPONENTS
* INSTALLATION OF DETECTOR CABLE AND FUSIBLE LINKS
* INSTALLATION OF REMOTE MANUAL PULL STATION
* JOB SITE REPOSITIONING OF NOZZLES AS PER GAYLORD APPROVED DRAWINGS, IF REQUIRED TO MEET SYSTEM DESIGN REQUIREMENTS
* TRIP TEST AND CERTIFICATION (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)

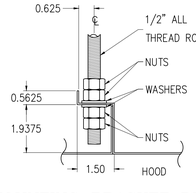
EXCLUDES:
* UNION LABOR AND PREVAILING WAGE
* INSTALLATION OF GAS VALVE(S)
* ELECTRICAL DISCONNECTS
* PARTS AND LABOR FOR ANY ELECTRICAL INTERCONNECTIONS
* JOB SITE REPOSITIONING OF NOZZLES IF COOKING EQUIPMENT IS NOT INSTALLED PER GAYLORD APPROVED DRAWINGS
* PLANS AND PERMITS ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* TRIP TEST AND CERTIFICATION ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* HAND HELD FIRE EXTINGUISHER(S)
* INSPECTION AND SERVICING
* RECESSED ANSUL CABINET(S)

NOTE: REFER TO SHEET FS.05.8 FOR ADDITIONAL INFORMATION FOR THE DCV CONTROL CABINET & WIRING DETAILS

Intertek
E.T.L. LISTING #3192993CRT-002

GAYLORD DWG. #18-1014
HOOD #73 MODEL #ELX-GBD-BBC-CL-AV-66
TOTAL HOOD HANGING WEIGHT: 963 LBS
PLENUM BOX #PBW-73 MODEL #PBW-16
TOTAL PLENUM BOX WEIGHT: 264 LBS

NOTE: REFER TO SHEET FS.09.0 DETAIL A-13 & DETAIL A-14 FOR ATTACHMENT DETAILS



MOUNTING BRACKET DETAIL

G **HOOD MOUNTING DETAILS** N.T.S.

HOOD EXHAUST INFORMATION CHART

ITEM #	DUCT COLLAR	CFM/LF	TOTAL CFM	STATIC PRESSURE	VELOCITY
73	12" X 25"	350	3060	0.66" W.G.	1469 FPM

HOOD SUPPLY INFORMATION CHART

ITEM #	DUCT COLLAR	TOTAL CFM	STATIC PRESSURE	VELOCITY
PBW-73A	10" X 16"	918	0.10" W.G.	826 FPM
PBW-73B	10" X 16"	918	0.10" W.G.	826 FPM

HOOD CARTRIDGES

ITEM #	QTY.	CARTRIDGE	CARTRIDGE SIZE	MAX. RATING
73	12	XGS	11" X 15.5"	280 CFM/LF

H **HOOD EXHAUST INFORMATION CHART** N.T.S.

HOOD INFORMATION

ITEM NO.	MODEL	SIZE L (in)	SIZE D (in)	SIZE H (in)	AIR FLOW REQUIREMENTS S.P. TEST PORT ("W.G.)	DUCT COLLAR DUCT TYPE	DUCT COLLAR QTY	DUCT COLLAR S.P. ("W.G.)	DUCT COLLAR CFM (EACH)	DUCT COLLAR SIZE L (in)	DUCT COLLAR SIZE D (in)	WEIGHT (LBS)
73	ELX	105	66	30	0.33	EXHAUST	1	0.66	3060	25	12	963
PBW-73A	PBW	105	16	8		SUPPLY	1	0.10	918	16	10	132
PBW-73B	PBW	105	16	8		SUPPLY	1	0.10	918	16	10	132

TOTAL HOOD S.P.: 0.66" W.G.
TOTAL EXHAUST: 3060 CFM
TOTAL SUPPLY: 1836 CFM
TOTAL WEIGHT: 1225 LBS

HOOD NUMBER	APPLIANCE WITH HIGHEST DUTY RATING	ASHRAE-154 DUTY RATING	GAYLORD TOTAL AIRFLOW	LENGTH OF HOOD IN FEET	GAYLORD CFM/LF	TABLE 140.9-A MAX ALLOWABLE CFM/LF	COMPLIES WITH SECTION 140.9 CA TITLE 24 (YES/NO)
73	RANGE	MEDIUM	3060	8.75'	350	350	YES

J **TYPE 1 EXHAUST HOOD NOTES** N.T.S.

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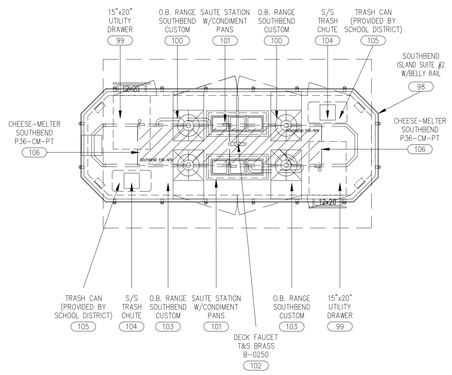
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

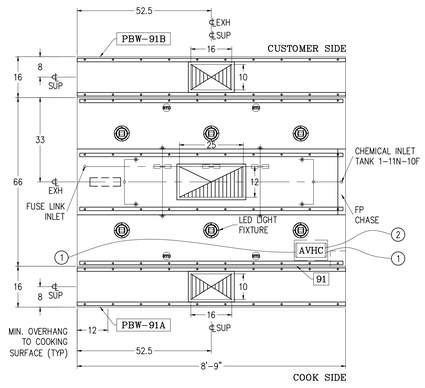
Sheet Title
FOODSERVICE EQUIPMENT
HOOD DETAILS ITEM 73

LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

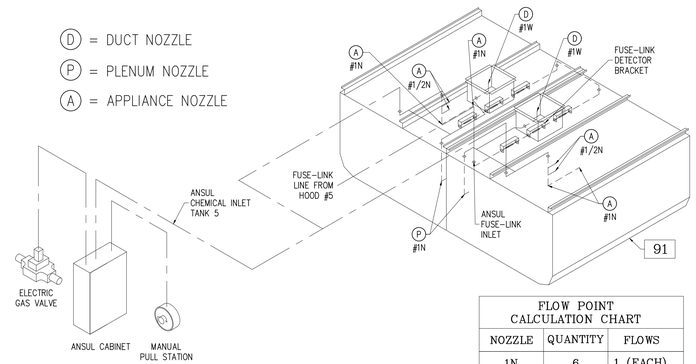
Document Date	Project Number
09-12-18	18-25CX
Date Last Revised	Sheet Number
-	FS.10.3



A PLAN VIEW of COOKING ISLAND SUITE #2 (Item #98) 1/2"=1'-0"



B PLAN VIEW of HOOD #4 (ITEM #91) - MODEL #ELX-GBD-BBC-CL-AV-66 1/2"=1'-0"



DISTRIBUTION PIPING REQUIREMENTS PER 3 GALLON TANK

REQUIREMENTS	SUPPLY	DUCT BRANCH LINE	PLENUM BRANCH LINE	APPLIANCE BRANCH LINE
PIPE SIZE	3/8 IN.	3/8 IN.	3/8 IN.	3/8 IN.
MAXIMUM LENGTH	40 FT. (12.2 M)	8 FT. (2.4 M)	4 FT. (1.2 M)	12 FT. (3.7 M)
MAXIMUM RISE	6 FT. (1.8 M)	4 FT. (1.2 M)	2 FT. (0.6 M)	2 FT. (0.6 M)
MAXIMUM 90° ELBOW	9	4	4	6
MAXIMUM TEES	1	2	2	4
MAXIMUM FLOW NUMBERS	11*	4	2	4

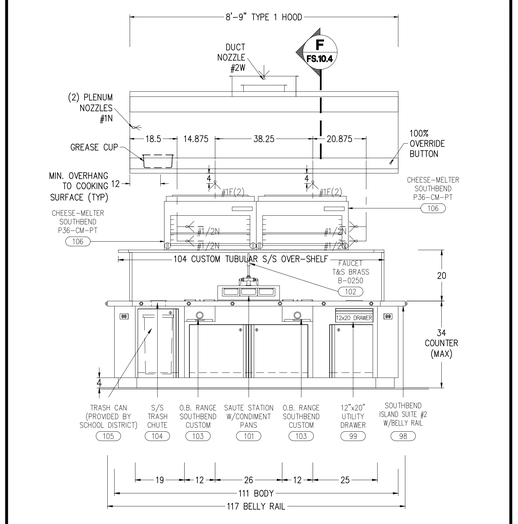
*EXCEPTIONS
1. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK FOR DUCT AND PLENUM PROTECTION ONLY.
2. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY TWO-FLOW APPLIANCE NOZZLES.
3. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY THREE-FLOW APPLIANCE NOZZLES.

FLOW POINT CALCULATION CHART

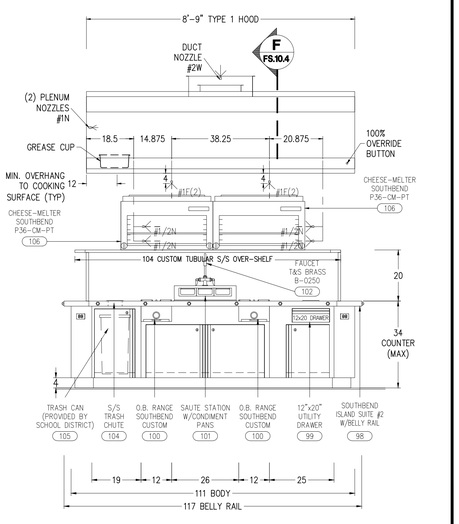
NOZZLE	QUANTITY	FLOWS
1N	6	1 (EACH)
1W	2	1 (EACH)
1/2N	4	1/2 (EACH)
TOTAL:	12	10

= ANSUL PIPING BY FIRE SUPPRESSION INSTALLER
= INTERIOR HOOD ANSUL PIPING BY GAYLORD
= ROOF TOP ANSUL PIPING BY GAYLORD

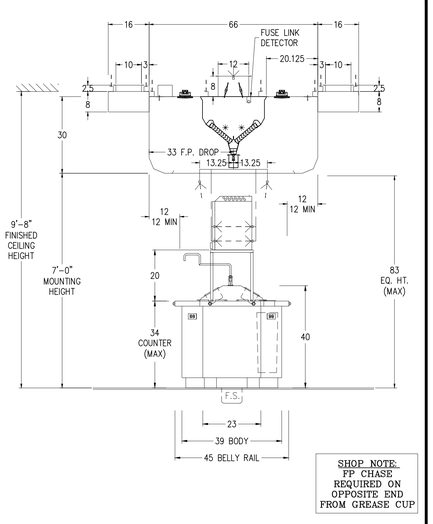
C FIRE SUPPRESSION SYSTEM OF HOOD #4 (Items #94, 95 & 96) - (Isometric View) N.T.S.



D ELEV. VIEW OF HOOD #4 & ISLAND SUITE (Item #98) 1/2"=1'-0"



E ELEV. VIEW OF HOOD #4 & ISLAND SUITE (Item #98) 1/2"=1'-0"



SHOP NOTE:
FP CHASE REQUIRED ON OPPOSITE END FROM GREASE CUP

VENTILATOR NOTES (NON-WATER WASH)

A) VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT AND LOCATION IN RELATION TO VENTILATOR PRIOR TO FABRICATION.

B) FRONT AND REAR MOUNTING BRACKETS HAVE Ø0.625" HOLES. BRACKETS TO BE SUPPORTED WITHIN 12" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

C) INTERIOR MOUNTING BRACKET(S) TO BE SUPPORTED WITHIN 36" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

VERIFY EXHAUST & SUPPLY FANS

A) VERIFY IF THIS HOOD IS EXHAUSTED ON ITS OWN EXHAUST FAN OR IS IT EXHAUSTED ON A COMMON EXHAUST FAN SHARED WITH OTHER HOODS.

B) VERIFY NUMBER OF SUPPLY (MAKE-UP AIR) FANS.

PBW PLENUM FEATURES

* REMOVABLE S/S PERFORATED PANEL(S)
* ALL EXPOSED SURFACES ARE STAINLESS STEEL

LIGHTING NOTE

THIS LIGHTING IN THIS VENTILATOR IS DESIGNED TO PROVIDE 50 FOOT CANDLES OF LIGHT AT THE COOKING SURFACE, IF 50 FOOT CANDLES OF LIGHTING IS PROVIDED IN THE SURROUNDING SPACE.

THESE LED FIXTURES ARE PROVIDED WITH LED SMD CHIPS INTEGRATED INTO THE FIXTURE ASSEMBLY, THEREFORE NO SEPARATE BULBS ARE REQUIRED.

ELECTRICAL NOTES (DCV-AV)

① (1) CAT 5 CABLE, FOR CONTROL(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO DCV CONTROL CABINET OR NEXT HOOD (IF APPLICABLE) BY ELECTRICAL CONTRACTOR.

∗ LIGHT FIXTURES, VAPOR PROOF, U.L. LISTED, FURNISHED, INSTALLED AND WIRED BY GAYLORD. ∗

② (2) WIRES AND GROUND, FOR CONTROL(S) AND LIGHT(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO SUPPLY VOLTAGE BY ELECTRICAL CONTRACTOR.

WARNING: ANY CHANGES IN THE HOOD DESIGN OR MAKES/MODELS OF COOKING EQUIPMENT MAY AFFECT THE SIZE OF AND/OR REQUIRED AIRFLOWS FOR THE HOOD. NOTE: COOKING EQUIPMENT MODEL, MANUFACTURER & LOCATION MUST BE VERIFIED FOR FIRE SUPPRESSION PRIOR TO FABRICATION.

FIRE SUPPRESSION SYSTEM NOTES ANSUL R-102-ASEF

FP-1) LOCATION OF FIRE SUPPRESSION NOZZLES MUST BE VERIFIED IN RELATION TO THE COOKING EQUIPMENT, PRIOR TO VENTILATOR FABRICATION.

COMPLETE SYSTEM INCLUDING APPLIANCE DROPS AND SURFACE MOUNTED DETECTION BRACKETS, WITH FIELD INSTALLATION BY GAYLORD.

ANSUL FIRE SYSTEM (LISTED TO A U.L. 300) FACTORY PRE-PIPED CHEMICAL LINES INCLUDING DUCT, PLENUM AND APPLIANCE DROPS WITH ALL NOZZLES INSTALLED PER COOKING EQUIPMENT ARRANGEMENT ON GAYLORD APPROVED DRAWINGS. ALL EXPOSED CHEMICAL PIPING CHROME PLATED OR CHROME SLEEVED. INCLUDES FACTORY PRE-PIPED DETECTION LINES WITH SURFACE MOUNTED DETECTOR BRACKETS. INSTALLATION BY CERTIFIED FACTORY INSTALLERS.

INCLUDES:
* TANK(S) AND RELEASE ASSEMBLY(S)
* CHEMICAL
* DETECTOR CABLE
* FUSIBLE LINKS WITH LINKAGE
* EXPELLANT GAS CARTRIDGE(S) (PROVIDED BY FIRE SUPPRESSION INSTALLER)
* (1) REMOTE MANUAL PULL STATION
* (1) GAS VALVE PER FIRE SYSTEM WITH A MAXIMUM SIZE OF 2-1/2"
* (1) MANUAL RESET RELAY PER FIRE SYSTEM, IF REQUIRED
* PLANS AND PERMITS (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)
* PARTS AND INSTALLATION OF CHEMICAL AND DETECTION LINES FROM TANK(S) TO CONNECTION POINTS ON HOOD
* INSTALLATION OF TANKS AND RELATED COMPONENTS
* INSTALLATION OF DETECTOR CABLE AND FUSIBLE LINKS
* INSTALLATION OF REMOTE MANUAL PULL STATION
* JOB SITE REPOSITIONING OF NOZZLES AS PER GAYLORD APPROVED DRAWINGS, IF REQUIRED TO MEET SYSTEM DESIGN REQUIREMENTS
* TRIP TEST AND CERTIFICATION (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)

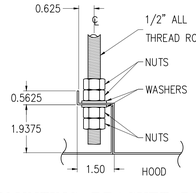
EXCLUDES:
* UNION LABOR AND PREVAILING WAGE
* INSTALLATION OF GAS VALVE(S)
* ELECTRICAL DISCONNECTS
* PARTS AND LABOR FOR ANY ELECTRICAL INTERCONNECTIONS
* JOB SITE REPOSITIONING OF NOZZLES IF COOKING EQUIPMENT IS NOT INSTALLED PER GAYLORD APPROVED DRAWINGS
* PLANS AND PERMITS ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* TRIP TEST AND CERTIFICATION ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* HAND HELD FIRE EXTINGUISHER(S)
* INSPECTION AND SERVICING
* RECESSED ANSUL CABINET(S)

NOTE: REFER TO SHEET FS.05.8 FOR ADDITIONAL INFORMATION FOR THE DCV CONTROL CABINET & WIRING DETAILS

Intertek
E.T.L. LISTING #3192993CRT-002

GAYLORD DWG. #18-1014
HOOD #91 MODEL #ELX-GBD-BBC-CL-AV-66
TOTAL HOOD HANGING WEIGHT: 963 LBS
PLENUM BOX #PBW-91 MODEL #PBW-16
TOTAL PLENUM BOX WEIGHT: 264 LBS

NOTE: REFER TO SHEET FS.09.0 DETAIL A-13 & DETAIL A-14 FOR ATTACHMENT DETAILS



MOUNTING BRACKET DETAIL

G HOOD MOUNTING DETAILS N.T.S.

HOOD EXHAUST INFORMATION CHART

ITEM #	DUCT COLLAR	CFM/LF	TOTAL CFM	STATIC PRESSURE	VELOCITY
91	12" X 25"	350	3060	0.66" W.G.	1469 FPM

HOOD SUPPLY INFORMATION CHART

ITEM #	DUCT COLLAR	TOTAL CFM	STATIC PRESSURE	VELOCITY
PBW-91A	10" X 16"	918	0.10" W.G.	826 FPM
PBW-91B	10" X 16"	918	0.10" W.G.	826 FPM

HOOD CARTRIDGES

ITEM #	QTY.	CARTRIDGE	CARTRIDGE SIZE	MAX. RATING
91	12	XGS	11" X 15.5"	280 CFM/LF

HOOD INFORMATION

ITEM NO.	MODEL	SIZE L (in)	SIZE D (in)	SIZE H (in)	AIR FLOW REQUIREMENTS S.P. TEST POINT ("W.G.)	DUCT TYPE	DUCT COLLAR QTY.	DUCT COLLAR DUCT S.P. ("W.G.)	DUCT COLLAR CFM (EACH)	DUCT COLLAR SIZE L (in)	DUCT COLLAR SIZE D (in)	WEIGHT (LBS)
91	ELX	105	66	30	0.33	EXHAUST	1	0.66	3060	25	12	963
PBW-91A	PBW	105	16	8		SUPPLY	1	0.10	918	16	10	132
PBW-91B	PBW	105	16	8		SUPPLY	1	0.10	918	16	10	132

TOTAL HOOD S.P.: 0.66" W.G.
TOTAL EXHAUST: 3060 CFM
TOTAL SUPPLY: 1836 CFM
TOTAL WEIGHT: 1225 LBS

HOOD NUMBER	APPLIANCE WITH HIGHEST DUTY RATING	ASHRAE-154 DUTY RATING	GAYLORD TOTAL AIRFLOW	LENGTH OF HOOD IN FEET	GAYLORD CFM/LF	TABLE 140.9-A MAX ALLOWABLE CFM/LF	COMPLIES WITH SECTION 140.9 CA. TITLE 24 (YES/NO)
91	RANGE	MEDIUM	3060	8.75	350	350	YES

H HOOD EXHAUST INFORMATION CHART N.T.S.

J TYPE 1 EXHAUST HOOD NOTES N.T.S.

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
HOOD DETAILS ITEM 91

LICENSED ARCHITECT JIMMIE SANDERS No. C-17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

Document Date	Project Number
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Date Last Revised	Sheet Number
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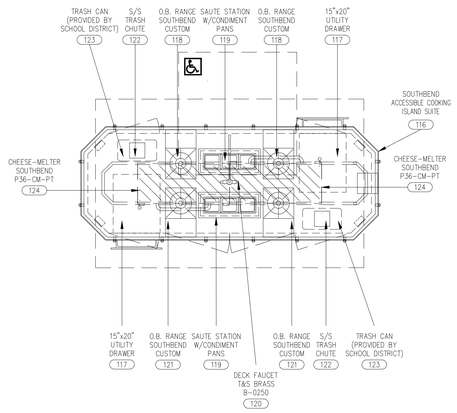
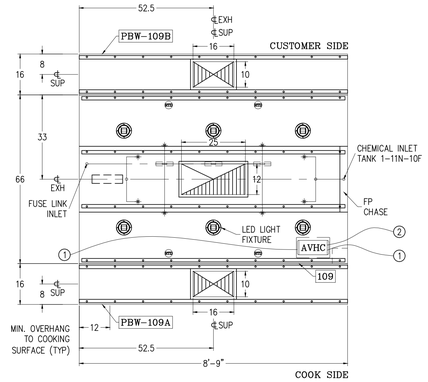
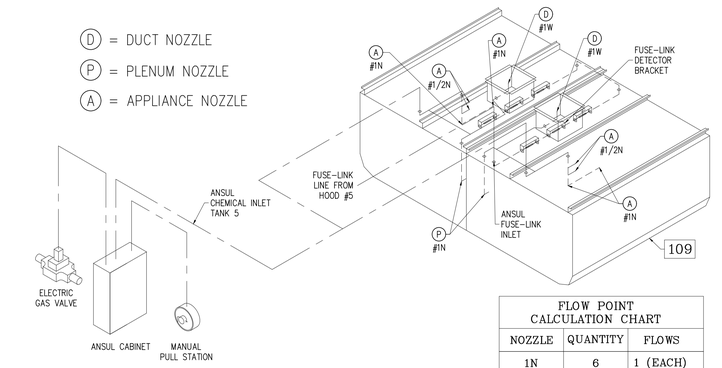


A PLAN VIEW of ACCESSIBLE COOKING ISLAND SUITE (Item #116) 1/2"=1'-0"



B PLAN VIEW of HOOD #5 (ITEM #109) - MODEL #ELX-GBD-BBC-CL-AV-66 1/2"=1'-0"



C FIRE SUPPRESSION SYSTEM OF HOOD #5 (Items #112, 113 & 114) - (Isometric View) N.T.S.

DISTRIBUTION PIPING REQUIREMENTS PER 3 GALLON TANK

REQUIREMENTS	SUPPLY	DUCT BRANCH LINE	PLENUM BRANCH LINE	APPLIANCE BRANCH LINE
PIPE SIZE	3/8 IN.	3/8 IN.	3/8 IN.	3/8 IN.
MAXIMUM LENGTH	40 FT. (12.2 M)	8 FT. (2.4 M)	4 FT. (1.2 M)	12 FT. (3.7 M)
MAXIMUM RISE	6 FT. (1.8 M)	4 FT. (1.2 M)	2 FT. (0.6 M)	2 FT. (0.6 M)
MAXIMUM 90° ELBOW	9	4	4	6
MAXIMUM TEES	1	2	2	4
MAXIMUM FLOW NUMBERS	11*	4	2	4

*EXCEPTIONS
1. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK FOR DUCT AND PLENUM PROTECTION ONLY.
2. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY TWO-FLOW APPLIANCE NOZZLES.
3. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY THREE-FLOW APPLIANCE NOZZLES.

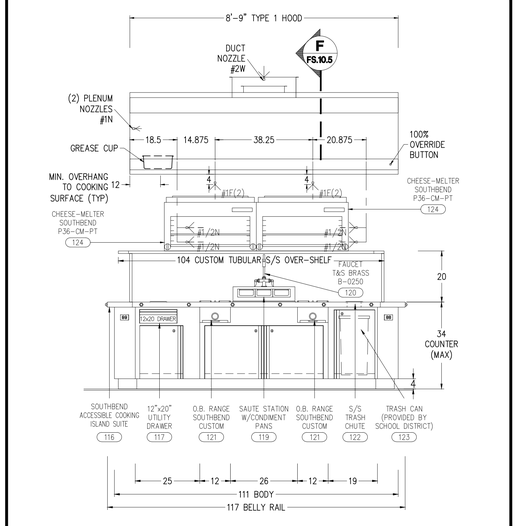
FLOW POINT CALCULATION CHART

NOZZLE	QUANTITY	FLOWS
1N	6	1 (EACH)
1W	2	1 (EACH)
1/2N	4	1/2 (EACH)
TOTAL:	12	10

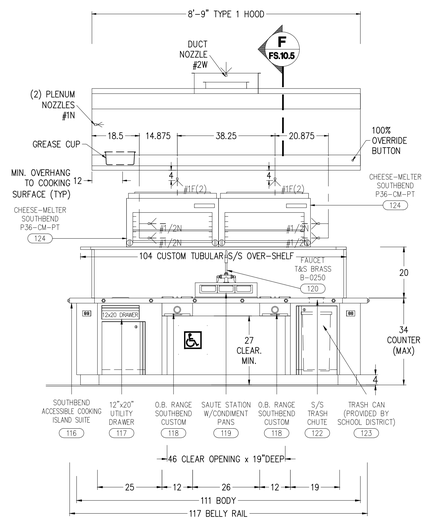
= ANSUL PIPING BY FIRE SUPPRESSION INSTALLER

= INTERIOR HOOD ANSUL PIPING BY GAYLORD

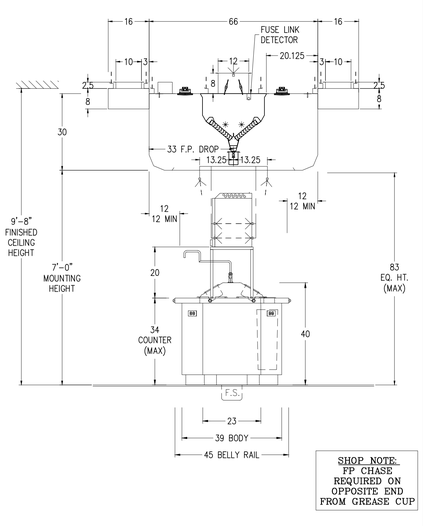
= ROOF TOP ANSUL PIPING BY GAYLORD



D ELEV. VIEW OF HOOD #5 & ISLAND SUITE (Item #116) 1/2"=1'-0"



E ELEV. VIEW OF HOOD #5 & ISLAND SUITE (Item #116) 1/2"=1'-0"



F SECTION OF HOOD #5 & ISLAND SUITE (Item #116) 1/2"=1'-0"

SHOP NOTE:
FP CHASE REQUIRED ON OPPOSITE END FROM GREASE CUP

VENTILATOR NOTES (NON-WATER WASH)

A) VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT AND LOCATION IN RELATION TO VENTILATOR PRIOR TO FABRICATION.

B) FRONT AND REAR MOUNTING BRACKETS HAVE Ø0.625" HOLES. BRACKETS TO BE SUPPORTED WITHIN 12" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

C) INTERIOR MOUNTING BRACKET(S) TO BE SUPPORTED WITHIN 36" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

VERIFY EXHAUST & SUPPLY FANS

A) VERIFY IF THIS HOOD IS EXHAUSTED ON ITS OWN EXHAUST FAN OR IS IT EXHAUSTED ON A COMMON EXHAUST FAN SHARED WITH OTHER HOODS.

B) VERIFY NUMBER OF SUPPLY (MAKE-UP AIR) FANS.

PBW PLENUM FEATURES

* REMOVABLE S/S PERFORATED PANEL(S)
* ALL EXPOSED SURFACES ARE STAINLESS STEEL

LIGHTING NOTE

THIS LIGHTING IN THIS VENTILATOR IS DESIGNED TO PROVIDE 50 FOOT CANDLES OF LIGHT AT THE COOKING SURFACE, IF 50 FOOT CANDLES OF LIGHTING IS PROVIDED IN THE SURROUNDING SPACE.

THESE LED FIXTURES ARE PROVIDED WITH LED SMD CHIPS INTEGRATED INTO THE FIXTURE ASSEMBLY, THEREFORE NO SEPARATE BULBS ARE REQUIRED.

ELECTRICAL NOTES (DCV-AV)

① (1) CAT 5 CABLE, FOR CONTROL(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO DCV CONTROL CABINET OR NEXT HOOD (IF APPLICABLE) BY ELECTRICAL CONTRACTOR.

∗ LIGHT FIXTURES, VAPOR PROOF, U.L. LISTED, FURNISHED, INSTALLED AND WIRED BY GAYLORD. ∗

② (2) WIRES AND GROUND, FOR CONTROL(S) AND LIGHT(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO SUPPLY VOLTAGE BY ELECTRICAL CONTRACTOR.

WARNING: ANY CHANGES IN THE HOOD DESIGN OR MAKES/MODELS OF COOKING EQUIPMENT MAY AFFECT THE SIZE OF AND/OR REQUIRED AIRFLOWS FOR THE HOOD. NOTE: COOKING EQUIPMENT MODEL, MANUFACTURER & LOCATION MUST BE VERIFIED FOR FIRE SUPPRESSION PRIOR TO FABRICATION.

FIRE SUPPRESSION SYSTEM NOTES ANSUL R-102-ASEF

FP-1) LOCATION OF FIRE SUPPRESSION NOZZLES MUST BE VERIFIED IN RELATION TO THE COOKING EQUIPMENT, PRIOR TO VENTILATOR FABRICATION.

COMPLETE SYSTEM INCLUDING APPLIANCE DROPS AND SURFACE MOUNTED DETECTION BRACKETS, WITH FIELD INSTALLATION BY GAYLORD.

ANSUL FIRE SYSTEM (LISTED TO A U.L. 300) FACTORY PRE-PIPED CHEMICAL LINES INCLUDING DUCT, PLENUM AND APPLIANCE DROPS WITH ALL NOZZLES INSTALLED PER COOKING EQUIPMENT ARRANGEMENT ON GAYLORD APPROVED DRAWINGS. ALL EXPOSED CHEMICAL PIPING CHROME PLATED OR CHROME SLEEVED. INCLUDES FACTORY PRE-PIPED DETECTION LINES WITH SURFACE MOUNTED DETECTOR BRACKETS. INSTALLATION BY CERTIFIED FACTORY INSTALLERS.

INCLUDES:
* TANK(S) AND RELEASE ASSEMBLY(S)
* CHEMICAL
* DETECTOR CABLE
* FUSIBLE LINKS WITH LINKAGE
* EXPELLANT GAS CARTRIDGE(S) (PROVIDED BY FIRE SUPPRESSION INSTALLER)
* (1) REMOTE MANUAL PULL STATION
* (1) GAS VALVE PER FIRE SYSTEM WITH A MAXIMUM SIZE OF 2-1/2"
* (1) MANUAL RESET RELAY PER FIRE SYSTEM, IF REQUIRED
* PLANS AND PERMITS (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)
* PARTS AND INSTALLATION OF CHEMICAL AND DETECTION LINES FROM TANK(S) TO CONNECTION POINTS ON HOOD
* INSTALLATION OF TANKS AND RELATED COMPONENTS
* INSTALLATION OF DETECTOR CABLE AND FUSIBLE LINKS
* INSTALLATION OF REMOTE MANUAL PULL STATION
* JOB SITE REPOSITIONING OF NOZZLES AS PER GAYLORD APPROVED DRAWINGS, IF REQUIRED TO MEET SYSTEM DESIGN REQUIREMENTS
* TRIP TEST AND CERTIFICATION (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)

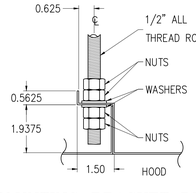
EXCLUDES:
* UNION LABOR AND PREVAILING WAGE
* INSTALLATION OF GAS VALVE(S)
* ELECTRICAL DISCONNECTS
* PARTS AND LABOR FOR ANY ELECTRICAL INTERCONNECTIONS
* JOB SITE REPOSITIONING OF NOZZLES IF COOKING EQUIPMENT IS NOT INSTALLED PER GAYLORD APPROVED DRAWINGS
* PLANS AND PERMITS ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* TRIP TEST AND CERTIFICATION ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* HAND HELD FIRE EXTINGUISHER(S)
* INSPECTION AND SERVICING
* RECESSED ANSUL CABINET(S)

NOTE: REFER TO SHEET FS.05.8 FOR ADDITIONAL INFORMATION FOR THE DCV CONTROL CABINET & WIRING DETAILS

Intertek
E.T.L. LISTING #3192993CRT-002

GAYLORD DWG. #18-1014
HOOD #109 MODEL #ELX-GBD-BBC-CL-AV-66
TOTAL HOOD HANGING WEIGHT: 963 LBS
PLENUM BOX #PBW-109 MODEL #PBW-16
TOTAL PLENUM BOX WEIGHT: 264 LBS

NOTE: REFER TO SHEET FS.09.0 DETAIL A-13 & DETAIL A-14 FOR ATTACHMENT DETAILS



MOUNTING BRACKET DETAIL

G HOOD MOUNTING DETAILS N.T.S.

HOOD EXHAUST INFORMATION CHART

ITEM #	DUCT COLLAR	CFM/LF	TOTAL CFM	STATIC PRESSURE	VELOCITY
109	12" X 25"	350	3060	0.66" W.G.	1469 FPM

HOOD SUPPLY INFORMATION CHART

ITEM #	DUCT COLLAR	TOTAL CFM	STATIC PRESSURE	VELOCITY
PBW-109A	10" X 16"	918	0.10" W.G.	826 FPM
PBW-109B	10" X 16"	918	0.10" W.G.	826 FPM

HOOD CARTRIDGES

ITEM #	QTY.	CARTRIDGE	CARTRIDGE SIZE	MAX. RATING
109	12	XGS	11" X 15.5"	280 CFM/LF

HOOD INFORMATION

ITEM NO.	MODEL	SIZE L (in)	SIZE D (in)	SIZE H (in)	AIR FLOW REQUIREMENTS S.P. TEST POINT ("W.G.)	DUCT COLLAR DUCT TYPE	DUCT COLLAR QTY	DUCT COLLAR S.P. ("W.G.)	DUCT COLLAR CFM (EACH)	DUCT COLLAR SIZE L (in)	DUCT COLLAR SIZE D (in)	WEIGHT (LBS)
109	ELX	105	66	30	0.33	EXHAUST	1	0.66	3060	25	12	963
PBW-109A	PBW	105	16	8		SUPPLY	1	0.10	918	16	10	132
PBW-109B	PBW	105	16	8		SUPPLY	1	0.10	918	16	10	132

TOTAL HOOD S.P.: 0.66" W.G.
TOTAL EXHAUST: 3060 CFM
TOTAL SUPPLY: 1836 CFM
TOTAL WEIGHT: 1225 LBS

HOOD NUMBER	APPLIANCE WITH HIGHEST DUTY RATING	ASHRAE-154 DUTY RATING	GAYLORD TOTAL AIRFLOW	LENGTH OF HOOD IN FEET	GAYLORD CFM/LF	TABLE 140.9-A MAX ALLOWABLE CFM/LF	COMPLIES WITH SECTION 140.9 CA TITLE 24 (YES/NO)
109	RANGE	MEDIUM	3060	8.75	350	350	YES

H HOOD EXHAUST INFORMATION CHART N.T.S.

J TYPE 1 EXHAUST HOOD NOTES N.T.S.

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
HOOD DETAILS ITEM 109

LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

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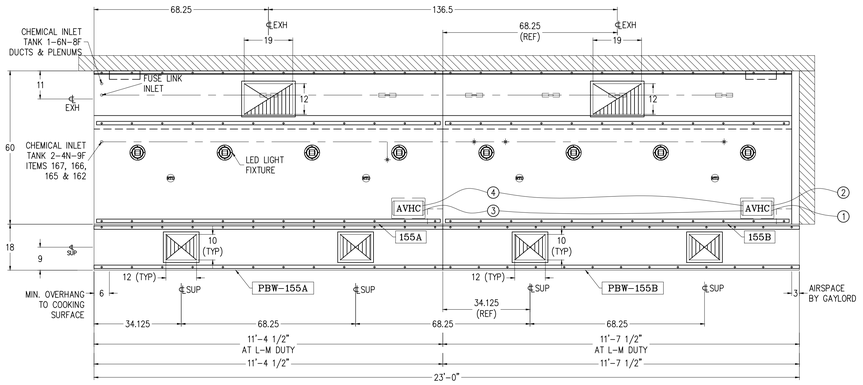
Date Last Revised	Sheet Number
-	FS.10.5

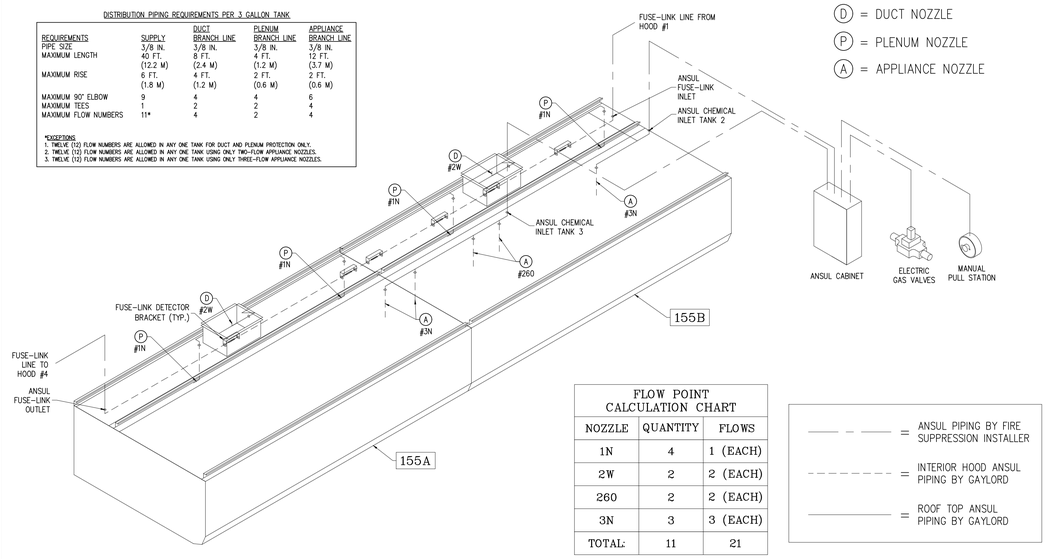


A **PLAN VIEW OF EXHAUST HOOD #6 (Item #155) - MODEL #ELX-GBD-A-AV-60** 1/2"=1'-0"

DISTRIBUTION PIPING REQUIREMENTS PER 3 GALLON TANK

REQUIREMENTS	SUPPLY	DUCT BRANCH LINE	PLENUM BRANCH LINE	APPLIANCE BRANCH LINE
PIPE SIZE	3/8 IN.	3/8 IN.	3/8 IN.	3/8 IN.
MAXIMUM LENGTH	40 FT. (12.2 M)	8 FT. (2.4 M)	4 FT. (1.2 M)	12 FT. (3.7 M)
MAXIMUM RISE	6 FT. (1.8 M)	4 FT. (1.2 M)	2 FT. (0.6 M)	2 FT. (0.6 M)
MAXIMUM 90° ELBOW	9	4	4	6
MAXIMUM TEES	1	2	2	4
MAXIMUM FLOW NUMBERS	11*	4	2	4

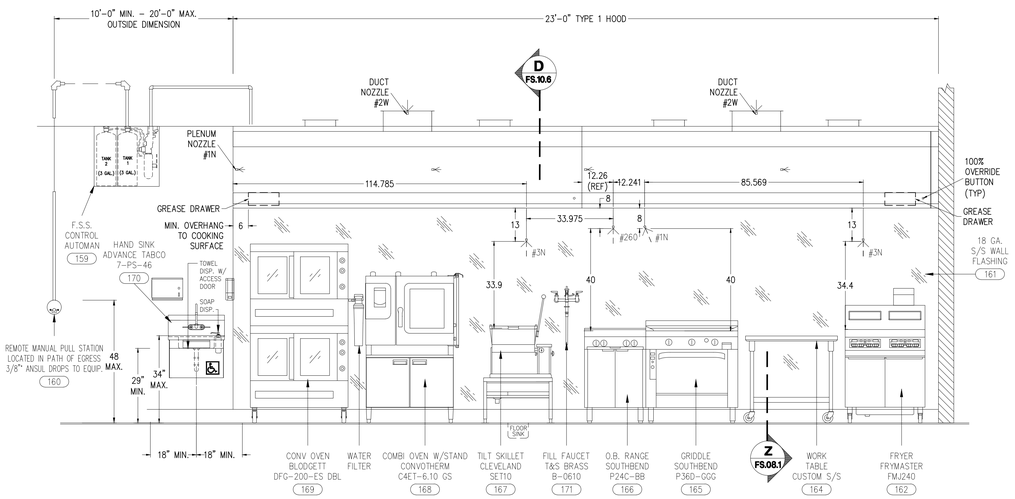
*EXCEPTIONS
1. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK FOR DUCT AND PLENUM PROTECTION ONLY.
2. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY TWO-FLOW APPLIANCE NOZZLES.
3. TWELVE (12) FLOW NUMBERS ARE ALLOWED IN ANY ONE TANK USING ONLY THREE-FLOW APPLIANCE NOZZLES.



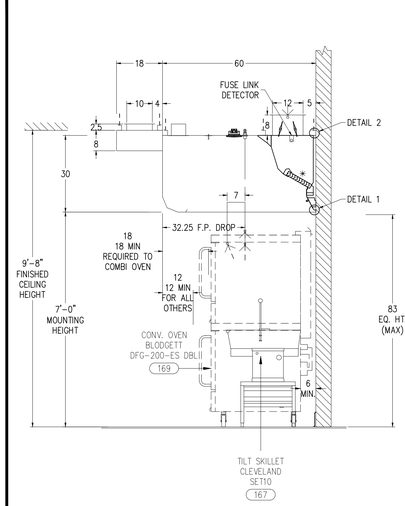
FLOW POINT CALCULATION CHART		
NOZZLE	QUANTITY	FLOWS
1N	4	1 (EACH)
2W	2	2 (EACH)
260	2	2 (EACH)
3N	3	3 (EACH)
TOTAL:	11	21

= ANSUL PIPING BY FIRE SUPPRESSION INSTALLER
= INTERIOR HOOD ANSUL PIPING BY GAYLORD
= ROOF TOP ANSUL PIPING BY GAYLORD

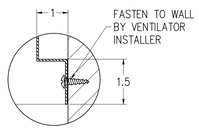
B **FIRE SUPPRESSION SYSTEM OF HOOD #6 (Items #158, 159 & 160) - (Isometric View)** N.T.S.



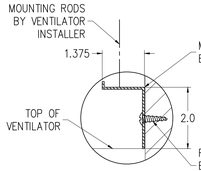
C **ELEVATION OF EXHAUST HOOD #6 (Item #155) & FIRE SUPPRESSION SYSTEM (Items #158, 159 & 160)** 1/2"=1'-0"



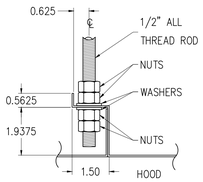
D **SECTION OF EXHAUST HOOD #6** 1/2"=1'-0"



DETAIL 1



DETAIL 2



MOUNTING BRACKET DETAIL

NOTE: REFER TO SHEET FS.09.0 DETAIL A-13 & DETAIL A-14 FOR ATTACHMENT DETAILS

E **HOOD MOUNTING DETAILS** N.T.S.

HOOD EXHAUST INFORMATION CHART					
ITEM #	DUCT COLLAR	CFM/LF	TOTAL CFM	STATIC PRESSURE	VELOCITY
155A	12" X 19"	204	2323	0.75" W.G.	1467 FPM
155B	12" X 19"	200	2323	0.75" W.G.	1467 FPM

HOOD SUPPLY INFORMATION CHART				
ITEM #	DUCT COLLAR	TOTAL CFM	STATIC PRESSURE	VELOCITY
155A	(2) 10" X 12"	1394	0.10" W.G.	836 FPM
155B	(2) 10" X 12"	1394	0.10" W.G.	836 FPM

HOOD CARTRIDGES				
ITEM #	QTY.	CARTRIDGE	CARTRIDGE SIZE	MAX. RATING
155A	8	XGS	11" X 15.5"	280 CFM/LF
155B	8	XGS	11" X 15.5"	280 CFM/LF

F **HOOD EXHAUST INFORMATION CHART** N.T.S.

HOOD INFORMATION

ITEM NO.	MODEL	SIZE L (in)	SIZE D (in)	SIZE H (in)	AIR FLOW REQUIREMENTS S.P. TEST PORT ("W.G.)	DUCT TYPE	QTY	DUCT COLLAR S.P. ("W.G.)	DUCT COLLAR CFM (EACH)	DUCT COLLAR SIZE L (in)	DUCT COLLAR SIZE D (in)	WEIGHT (LBS)
155A	ELX	136.5	60	30	0.36	EXHAUST	1	0.75	2323	19	12	920
155B	ELX	139.5	60	30	0.36	EXHAUST	1	0.75	2323	19	12	920
PBW-155A	PBW	136.5	18	8		SUPPLY	2	0.10	697	12	10	171
PBW-155B	PBW	139.5	18	8		SUPPLY	2	0.10	697	12	10	175

TOTAL HOOD S.P.: 0.75" W.G. TOTAL EXHAUST: 4646 CFM TOTAL SUPPLY: 2788 CFM
TOTAL WEIGHT: 2185 LBS

HOOD NUMBER	APPLIANCE WITH HIGHEST DUTY RATING	ASHRAE-154 DUTY RATING	GAYLORD TOTAL AIRFLOW	LENGTH OF HOOD IN FEET	GAYLORD CFM/LF	TABLE 140.9-A MAX ALLOWABLE CFM/LF	COMPLIES WITH SECTION 140.9 CA TITLE 24 (YES/NO)
155	RANGE	MEDIUM	4646	23	202	210	YES

VENTILATOR NOTES (NON-WATER WASH)

A) VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT AND LOCATION IN RELATION TO VENTILATOR PRIOR TO FABRICATION.

B) FRONT AND REAR MOUNTING BRACKETS HAVE ø0.625" HOLES. BRACKETS TO BE SUPPORTED WITHIN 12" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

C) INTERIOR MOUNTING BRACKET(S) TO BE SUPPORTED WITHIN 36" OF EACH END OF EACH SECTION, WITH A MAXIMUM SPAN OF 72" BETWEEN SUPPORTS.

VERIFY EXHAUST & SUPPLY FANS

A) VERIFY IF THIS HOOD IS EXHAUSTED ON ITS OWN EXHAUST FAN OR IS IT EXHAUSTED ON A COMMON EXHAUST FAN SHARED WITH OTHER HOODS.

B) VERIFY NUMBER OF SUPPLY (MAKE-UP AIR) FANS.

PBW PLENUM FEATURES

* REMOVABLE S/S PERFORATED PANEL(S)
* ALL EXPOSED SURFACES ARE STAINLESS STEEL

LIGHTING NOTE

THIS LIGHTING IN THIS VENTILATOR IS DESIGNED TO PROVIDE 50 FOOT CANDLES OF LIGHT AT THE COOKING SURFACE, IF 50 FOOT CANDLES OF LIGHTING IS PROVIDED IN THE SURROUNDING SPACE.

THESE LED FIXTURES ARE PROVIDED WITH LED SMD CHIPS INTEGRATED INTO THE FIXTURE ASSEMBLY, THEREFORE NO SEPARATE BULBS ARE REQUIRED.

ELECTRICAL NOTES (DCV-AV)

① (1) CAT 5 CABLE, FOR CONTROL(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO DCV CONTROL CABINET OR NEXT HOOD (IF APPLICABLE) BY ELECTRICAL CONTRACTOR.

* LIGHT FIXTURES, VAPOR PROOF, U.L. LISTED, FURNISHED, INSTALLED AND WIRED BY GAYLORD. *

② (2) WIRES AND GROUND, FOR CONTROL(S) AND LIGHT(S), IN FLEXIBLE CONDUIT, EXTENDING 6' BEYOND END OF VENTILATOR BY GAYLORD. WIRED TO SUPPLY VOLTAGE BY ELECTRICAL CONTRACTOR.

③ (1) CAT 5 CABLE, FOR CONTROLS, IN FLEXIBLE CONDUIT FOR INTERCONNECTING SECTIONS. DISCONNECTED FOR SHIPPING. JOB SITE RECONNECTION BY ELECTRICAL CONTRACTOR.

④ (2) WIRES AND GROUND, FOR CONTROLS AND LIGHT(S), IN FLEXIBLE CONDUIT FOR INTERCONNECTING VENTILATOR SECTIONS BY GAYLORD. DISCONNECTED FOR SHIPPING. JOB SITE RECONNECTION BY ELECTRICAL CONTRACTOR.

WARNING: ANY CHANGES IN THE HOOD DESIGN OR MAKES/MODELS OF COOKING EQUIPMENT MAY AFFECT THE SIZE OF AND/OR REQUIRED AIRFLOWS FOR THE HOOD. NOTE: COOKING EQUIPMENT MODEL MANUFACTURER & LOCATION MUST BE VERIFIED FOR FIRE SUPPRESSION PRIOR TO FABRICATION.

G **TYPE 1 EXHAUST HOOD NOTES** N.T.S.

FIRE SUPPRESSION SYSTEM NOTES ANSUL R-102-ASEF

FP-1) LOCATION OF FIRE SUPPRESSION NOZZLES MUST BE VERIFIED IN RELATION TO THE COOKING EQUIPMENT, PRIOR TO VENTILATOR FABRICATION.

COMPLETE SYSTEM INCLUDING APPLIANCE DROPS AND SURFACE MOUNTED DETECTION BRACKETS, WITH FIELD INSTALLATION BY GAYLORD.

ANSUL FIRE SYSTEM (LISTED TO A U.L. 300) FACTORY PRE-PIPED CHEMICAL LINES INCLUDING DUCT, PLENUM AND APPLIANCE DROPS WITH ALL NOZZLES INSTALLED PER COOKING EQUIPMENT ARRANGEMENT ON GAYLORD APPROVED DRAWINGS. ALL EXPOSED CHEMICAL PIPING CHROME PLATED OR CHROME SLEEVED. INCLUDES FACTORY PRE-PIPED DETECTION LINES WITH SURFACE MOUNTED DETECTOR BRACKETS. INSTALLATION BY CERTIFIED FACTORY INSTALLERS.

INCLUDES:
* TANK(S) AND RELEASE ASSEMBLY(S)
* CHEMICAL
* DETECTOR CABLE
* FUSIBLE LINKS WITH LINKAGE
* EXPELLANT GAS CARTRIDGE(S) (PROVIDED BY FIRE SUPPRESSION INSTALLER)
* (1) REMOTE MANUAL PULL STATION
* (1) GAS VALVE PER FIRE SYSTEM WITH A MAXIMUM SIZE OF 2-1/2"
* (1) MANUAL RESET RELAY PER FIRE SYSTEM, IF REQUIRED
* PLANS AND PERMITS (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)
* PARTS AND INSTALLATION OF CHEMICAL AND DETECTION LINES FROM TANK(S) TO CONNECTION POINTS ON HOOD
* INSTALLATION OF TANKS AND RELATED COMPONENTS
* INSTALLATION OF DETECTOR CABLE AND FUSIBLE LINKS
* INSTALLATION OF REMOTE MANUAL PULL STATION
* JOB SITE REPOSITIONING OF NOZZLES AS PER GAYLORD APPROVED DRAWINGS, IF REQUIRED TO MEET SYSTEM DESIGN REQUIREMENTS
* TRIP TEST AND CERTIFICATION (ON JOBS INSIDE OF THE UNITED STATES AND NON-MARINE JOBS)

EXCLUDES:
* UNION LABOR AND PREVAILING WAGE
* INSTALLATION OF GAS VALVE(S)
* ELECTRICAL DISCONNECTS
* PARTS AND LABOR FOR ANY ELECTRICAL INTERCONNECTIONS
* JOB SITE REPOSITIONING OF NOZZLES IF COOKING EQUIPMENT IS NOT INSTALLED PER GAYLORD APPROVED DRAWINGS
* PLANS AND PERMITS ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* TRIP TEST AND CERTIFICATION ON JOBS OUTSIDE OF THE UNITED STATES AND ON MARINE JOBS
* HAND HELD FIRE EXTINGUISHER(S)
* INSPECTION AND SERVICING
* RECESSED ANSUL CABINET(S)

NOTE: REFER TO SHEET FS.05.9 FOR ADDITIONAL INFORMATION FOR THE DCV CONTROL CABINET & WIRING DETAILS

Intertek
E.T.L. LISTING #3192993CRT-002

GAYLORD DWG. #18-1014
HOOD #155 MODEL #ELX-GBD-A-AV-60
TOTAL HOOD HANGING WEIGHT: 1840 LBS
PLENUM BOX #PBW-155 MODEL #PBW-18
TOTAL PLENUM BOX WEIGHT: 346 LBS

DIELI MURAWKA HOWE
Food Service Design Consultants
10393 San Diego Mission Road, Suite 209
San Diego, CA 92108
Phone: 619.285.1189
Design By: RICHARD DIELI

APPROVALS

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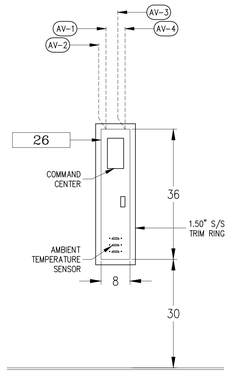
1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
HOOD DETAILS ITEM 155

LICENSED ARCHITECT JIMMIE L. SANDERS 17644 RENEWAL 08-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-250X
Date Last Revised	Sheet Number
-	FS.10.6



DCV CONTROL CABINET ELEVATION

DEPTH OF CABINET: 7"

DCV CONTROL CABINET WIRING NOTES

(AV-1) (2) WIRES AND GROUND FROM DCV CONTROL CABINET TO NON-INTERRUPTIBLE SUPPLY VOLTAGE SERVICE BY ELECTRICAL CONTRACTOR

(AV-2) (1) CAT 5 CABLE FROM DCV CONTROL CABINET TO 1ST HOOD AVHC BY ELECTRICAL CONTRACTOR.

(AV-3) (2) WIRES FROM DCV CONTROL CABINET TO FIRE SUPPRESSION SYSTEM MICRO SWITCHES BY ELECTRICAL CONTRACTOR.

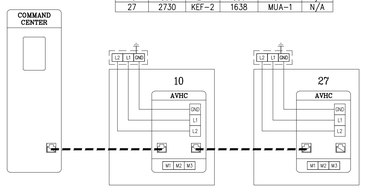
(AV-4) (6) WIRE LOW VOLTAGE CABLE FROM DCV CONTROL CABINET TO EACH VFD BY ELECTRICAL CONTRACTOR.

DCV CONTROL CABINET INSTALLATION NOTES

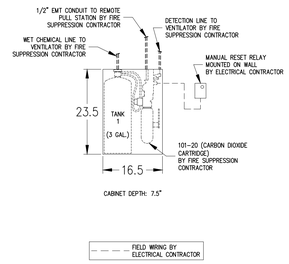
DCV CONTROL CABINET MUST BE LOCATED WITHIN 50 FEET OF AND IN THE SAME KITCHEN AS THE HOODS IT WILL CONTROL.

DCV CONTROL CABINET MUST BE LOCATED AT LEAST 2 FEET HORIZONTALLY FROM COOKING EQUIPMENT AND HEAT GENERATING APPLIANCES.

26					
HOOD SECTION	EXHAUST CFM	EXHAUST FAN	SUPPLY CFM	MAKEUP AIR FAN	VAV
10	560	KEF-1	336	MUA-1	N/A
27	2730	KEF-2	1638	MUA-1	N/A



TYPICAL ANSUL TANK SCHEMATIC, ITEMS 14 & 31
(FOR NON-WATER WASH VENTILATORS)
Method 1
FOR ELECTRICAL GAS VALVE



A DCV CONTROL CABINET WIRING NOTES & INSTALLATION NOTES (Item #26)

N.T.S.

DCV CONTROL CABINET

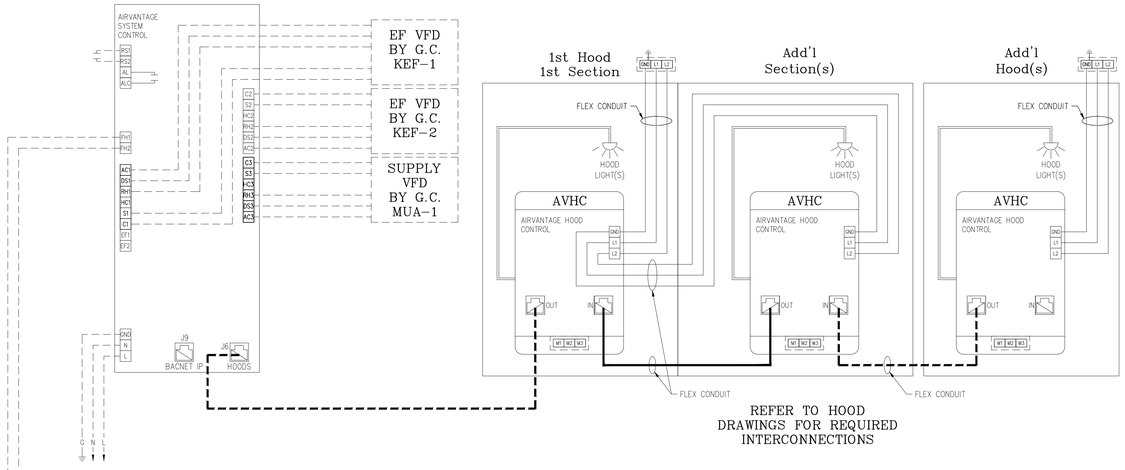
-- SUPPLY VOLTAGE -- 120 VAC, 60Hz. 1 AMP MAXIMUM - CONNECTED LOAD		
TRM	TERMINATION SCHEDULE	TYPE
L	MAIN POWER CONNECTION HOT	120 VAC
N	MAIN POWER CONNECTION NEUTRAL	0 VAC
FH1	FIRE SYSTEM INPUT HOT	120 VAC
FH2	FIRE SYSTEM NEUTRAL	0 VAC
RS1	REMOTE START +24V	24 VDC
RS2	REMOTE START COMMON	24 VDC
AL	ALARM CONTACT NO	VARIES
ALC	ALARM CONTACT COMMON	VARIES
J9	BACNET IP	CAT5
J6	HOOD COMMUNICATION	CAT5
EF1	COMMON FROM EXTERNAL CONTROLLER	24 VDC
EF2	EF RUN STATUS (NO)	24 VDC
C1	BINARY COMMON INPUT	VARIES
S1	BINARY OUTPUT (RUN)	VARIES
HC1	OPTIONAL COMMON FOR RH1	24 VDC
RH1	RUN HIGH (USES C1 COMMON)	VARIES
DS1	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC1	ANALOG COMMON	VARIES
C2	BINARY COMMON (INPUT)	24 VDC
S2	BINARY OUTPUT (RUN)	24 VDC
HC2	OPTIONAL COMMON FOR RH2	24 VDC
RH2	RUN HIGH (USES C2 COMMON)	24 VDC
DS2	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC2	ANALOG COMMON	VDC
C3	BINARY COMMON (INPUT)	24 VDC
S3	BINARY OUTPUT (RUN)	24 VDC
HC3	OPTIONAL COMMON FOR RH3	24 VDC
RH3	RUN HIGH (USES C3 COMMON)	24 VDC
DS3	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC3	ANALOG COMMON	VDC
C4	BINARY COMMON (RUN)	24 VDC
S4	BINARY OUTPUT (RUN)	24 VDC
HC4	OPTIONAL COMMON FOR RH4	24 VDC
RH4	RUN HIGH (USES C4 COMMON)	24 VDC
DS4	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC4	ANALOG COMMON	VDC
PA1	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA1	ANALOG COMMON FOR ECM ONLY	VDC
PA2	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA2	ANALOG COMMON FOR ECM ONLY	VDC
PA3	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA3	ANALOG COMMON FOR ECM ONLY	VDC
PA4	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA4	ANALOG COMMON FOR ECM ONLY	VDC

AVHC

-- CONTROLLER TERMINATION SCHEDULE -- VOLTAGE TO VARY		
TRM	TERMINATION SCHEDULE	TYPE
L1	MAIN POWER CONNECTION HOT	120 VAC
L2	MAIN POWER CONNECTION NEUTRAL	0 VAC
IN	COMM FROM UPSTREAM CONTROLLER	24 VDC
OUT	COMM TO DOWNSTREAM CONTROLLER	24 VDC
M1	AIR VOLUME NEUTRAL	24 VAC
M2	AIR VOLUME HOT	24 VAC
M.3	AIR VOLUME SIGNAL 2-10V	VARIES

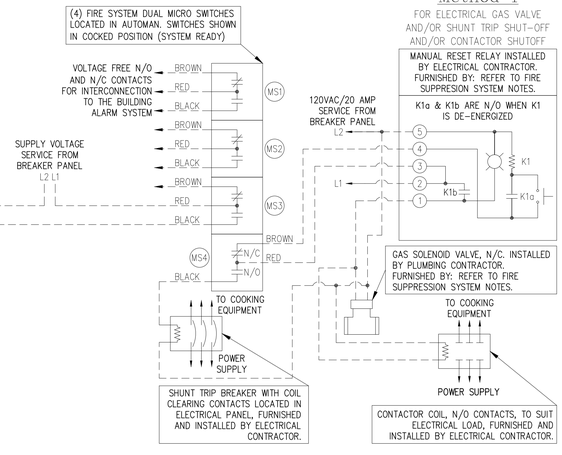
FIELD WIRING BY ELECTRICAL CONTRACTOR
WIRING BY GAYLORD
CAT 5 FIELD WIRING BY ELECTRICAL CONTRACTOR
CAT 5 WIRING BY GAYLORD

DCV 26			
OUTPUT NUMBER	OUTPUT LABEL	OUTPUT TYPE	MIRROR (1, 2, 3, OR 4 SUPPLY (% OF EXHAUST)
1	KEF-1	EXHAUST	N/A
2	KEF-2	EXHAUST	N/A
3	MUA-1	SUPPLY	60%
4	N/A	DISABLED	N/A



REFER TO HOOD DRAWINGS FOR REQUIRED INTERCONNECTIONS

TYPICAL FIRE SYSTEM WIRING DIAGRAM
(ANSUL SHOWN)
Method 1
FOR ELECTRICAL GAS VALVE AND/OR SHUNT TRIP SHUT-OFF AND/OR CONTACTOR SHUTOFF



VFD BY G.C. SPECIFICATION

HARDWARE (MINIMUM VFD REQUIREMENTS)

1. WORKS WITH A 4-20 MA OR 2-10 V ANALOG INPUT.
2. PRODUCES A 24 VDC OR EQUIVALENT COMMON TO BE USED FOR REMOTE DRY CONTACT SWITCHING OF THE VFD(S). INDEPENDENT POWER SUPPLY ALSO ACCEPTED.
3. DRIVE TO MOTOR DISTANCE IS LESS THAN THE MAXIMUM SPECIFIED BY THE DRIVE MANUFACTURER.
4. DRIVE IS TO BE SIZED APPROPRIATELY FOR MOTOR RATED FLA, AND VOLTAGE INPUTS.

DRIVE INPUTS FROM GAYLORD DCV COMMAND CENTER

AS NOTED ON GAYLORD SUBMITTAL DRAWINGS UP TO FOUR VFDS MAY BE CONTROLLED THROUGH TERMINALS LABELED WITH AN ALPHANUMERIC, WHERE THE NUMBER CORRESPONDS TO A DISTINCT VFD (SEE TABLE 1). THE SYMBOL '#' IS SUBSTITUTED FOR THE NUMBER IN THE FOLLOWING.

1. TERMINAL C# ACCEPTS A NOMINAL +24 VDC COMMON SIGNAL FROM AN EXHAUST FAN VFD.
2. TERMINAL S# OUTPUTS SIGNAL PROVIDED BY THE COMMON VOLTAGE (AT C#) TO COMMAND THE EXHAUST FAN VFD TO RUN.
3. TERMINAL RH# OUTPUTS SIGNAL PROVIDED BY THE COMMON VOLTAGE.
   a. C# IS THE DEFAULT COMMON FOR RH#.
   b. HC# IS AN ALTERNATE COMMON FOR RH#. IT IS TO BE USED WHEN THE VFD COMMAND POINTS FOR RUN AND RUN HIGH DO NOT SHARE A COMMON. THE TERMINAL JUMPER BETWEEN C# AND HC# MUST BE REMOVED TO SEPARATE THE VOLTAGE SOURCES.
4. TERMINALS DS# AND AC# PROVIDE THE SPEED SIGNAL TO THE EXHAUST FAN VFD
   a. DS# IS A 4-20 MA SIGNAL (OPTIONAL 2-10 V)
   b. AC# IS THE ANALOG COMMON

PROGRAM SPECIFICATION

1. VFDS TO OPERATE WITH ANALOG 4-20MA INPUT. 4 MA REPRESENTS 0 HZ AND 20 MA REPRESENTS THE MAXIMUM MOTOR SPEED, TYPICALLY 60 HZ (2-10V IS OPTIONAL).
2. VFDS TO START (RECEIVE RUN COMMAND) BY EXTERNAL CONTACT CLOSURE PROVIDED BY GAYLORD ON C# AND S#. CONTACT CLOSURE WILL TAKE THE UNLOADED SYSTEM TO MINIMUM FAN SPEED (DEFAULT 30 HZ).
3. VFD CONSTANTS FOR THE MOTOR CONTROLLED TO BE DETERMINED AND ADDED, EX: THERMAL OVERLOAD, RATE VOLTAGE, ETC.
4. SET ACCELERATION TIME TO 8 SECONDS OR 7.5 HZ/SECOND.
5. SET DECELERATION TIME TO 48 SECONDS OR 1.25 HZ/SECOND. - SLOW DECELERATION PREVENTS INSTABILITY IN THE SYSTEM.
6. SETUP EACH VFD FOR A 'RUN HIGH' COMMAND FROM RH# THAT WILL RAMP THE DRIVE TO 100% OR 60 HZ. THIS FUNCTION IS ESSENTIAL FOR PROPER RESPONSE TO A FIRE PROTECTION SYSTEM DISCHARGE.
7. SET THE MODULATION RANGE FOR EACH VFD. THE AIRVANTAGE SYSTEM WILL MANAGE THE TURNDOWN OVER A 0-60 HZ RANGE.
   a. SET THE VFD BIAS 4 MA = 0 HZ.
   b. SET THE VFD GAIN 20 MA = 60 HZ

B TYPICAL FIRE SYSTEM WIRING DIAGRAM (ANSUL SHOWN) & DCV CONTROL CABINET (Item #26)

N.T.S.

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
DCV DETAILS ITEM 26

LICENSED ARCHITECT JIMMIE SANDERS C-17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

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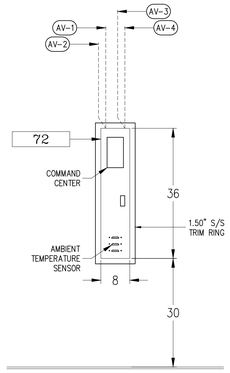
Date Last Revised	Sheet Number
-	FS.10.7



DCV CONTROL CABINET ELEVATION

DEPTH OF CABINET: 7"

DCV CONTROL CABINET WIRING NOTES

(AV-1) (2) WIRES AND GROUND FROM DCV CONTROL CABINET TO NON-INTERRUPTIBLE SUPPLY VOLTAGE SERVICE BY ELECTRICAL CONTRACTOR

(AV-2) (1) CAT 5 CABLE FROM DCV CONTROL CABINET TO 1ST HOOD AVHC BY ELECTRICAL CONTRACTOR.

(AV-3) (2) WIRES FROM DCV CONTROL CABINET TO FIRE SUPPRESSION SYSTEM MICRO SWITCHES BY ELECTRICAL CONTRACTOR.

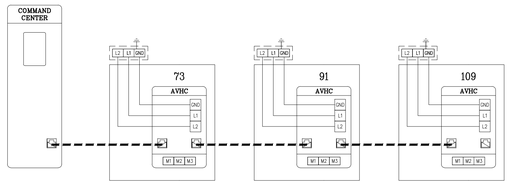
(AV-4) (6) WIRE LOW VOLTAGE CABLE FROM DCV CONTROL CABINET TO EACH VFD BY ELECTRICAL CONTRACTOR.

DCV CONTROL CABINET INSTALLATION NOTES

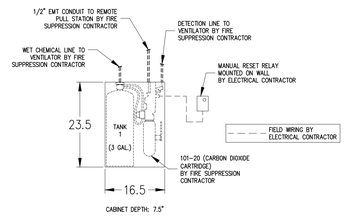
DCV CONTROL CABINET MUST BE LOCATED WITHIN 50 FEET OF AND IN THE SAME KITCHEN AS THE HOODS IT WILL CONTROL.

DCV CONTROL CABINET MUST BE LOCATED AT LEAST 2 FEET HORIZONTALLY FROM COOKING EQUIPMENT AND HEAT GENERATING APPLIANCES.

72					
HOOD SECTION	EXHAUST CFM	EXHAUST FAN	SUPPLY CFM	MAKEUP AIR FAN	VAV
73	3060	KEF-3	1836	MUA-2	N/A
91	3060	KEF-4	1836	MUA-2	N/A
109	3060	KEF-5	1836	MUA-2	N/A



TYPICAL ANSUL TANK SCHEMATIC, ITEMS 77, 95 & 113
(FOR NON-WATER WASH VENTILATORS)
Method 1
FOR ELECTRICAL GAS VALVE



A DCV CONTROL CABINET WIRING NOTES & INSTALLATION NOTES (Item #72)

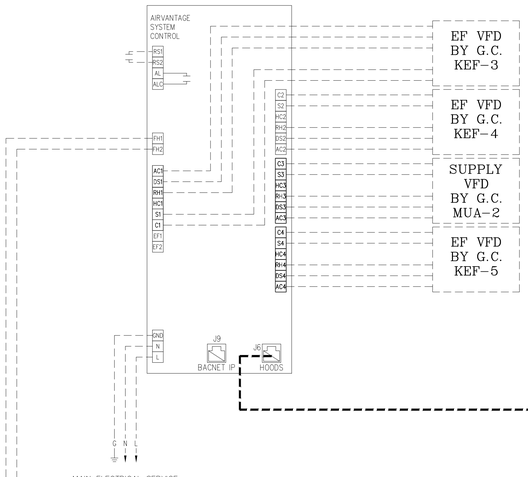
N.T.S.

DCV CONTROL CABINET

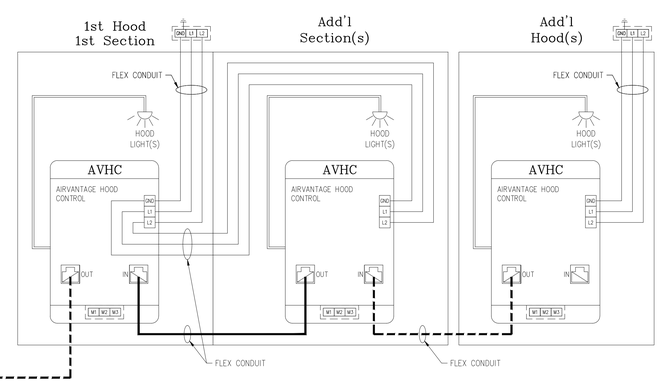
-- SUPPLY VOLTAGE -- 120 VAC, 60Hz. 1 AMP MAXIMUM - CONNECTED LOAD		
TRM	TERMINATION SCHEDULE	TYPE
L	MAIN POWER CONNECTION HOT	120 VAC
N	MAIN POWER CONNECTION NEUTRAL	0 VAC
FH1	FIRE SYSTEM INPUT HOT	120 VAC
FH2	FIRE SYSTEM NEUTRAL	0 VAC
RS1	REMOTE START +24V	24 VDC
RS2	REMOTE START COMMON	24 VDC
AL	ALARM CONTACT NO	VARIES
ALC	ALARM CONTACT COMMON	VARIES
J9	BACNET IP	CAT5
J6	HOOD COMMUNICATION	CAT5
EF1	COMMON FROM EXTERNAL CONTROLLER	24 VDC
EF2	EF RUN STATUS (NO)	24 VDC
C1	BINARY COMMON INPUT	VARIES
S1	BINARY OUTPUT (RUN)	VARIES
HC1	OPTIONAL COMMON FOR RH1	24 VDC
RH1	RUN HIGH (USES C1 COMMON)	VARIES
DS1	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC1	ANALOG COMMON	VARIES
C2	BINARY COMMON (INPUT)	24 VDC
S2	BINARY OUTPUT (RUN)	24 VDC
HC2	OPTIONAL COMMON FOR RH2	24 VDC
RH2	RUN HIGH (USES C2 COMMON)	24 VDC
DS2	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC2	ANALOG COMMON	VDC
C3	BINARY COMMON (INPUT)	24 VDC
S3	BINARY OUTPUT (RUN)	24 VDC
HC3	OPTIONAL COMMON FOR RH3	24 VDC
RH3	RUN HIGH (USES C3 COMMON)	24 VDC
DS3	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC3	ANALOG COMMON	VDC
C4	BINARY COMMON (RUN)	24 VDC
S4	BINARY OUTPUT (RUN)	24 VDC
HC4	OPTIONAL COMMON FOR RH4	24 VDC
RH4	RUN HIGH (USES C4 COMMON)	24 VDC
DS4	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC4	ANALOG COMMON	VDC
PA1	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA1	ANALOG COMMON FOR ECM ONLY	VDC
PA2	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA2	ANALOG COMMON FOR ECM ONLY	VDC
PA3	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA3	ANALOG COMMON FOR ECM ONLY	VDC
PA4	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA4	ANALOG COMMON FOR ECM ONLY	VDC

AVHC

-- CONTROLLER TERMINATION SCHEDULE -- VOLTAGE TO VARY		
TRM	TERMINATION SCHEDULE	TYPE
L1	MAIN POWER CONNECTION HOT	120 VAC
L2	MAIN POWER CONNECTION NEUTRAL	0 VAC
IN	COMM FROM UPSTREAM CONTROLLER	24 VDC
OUT	COMM TO DOWNSTREAM CONTROLLER	24 VDC
M1	AIR VOLUME NEUTRAL	24 VAC
M2	AIR VOLUME HOT	24 VAC
M3	AIR VOLUME SIGNAL 2-10V	VARIES

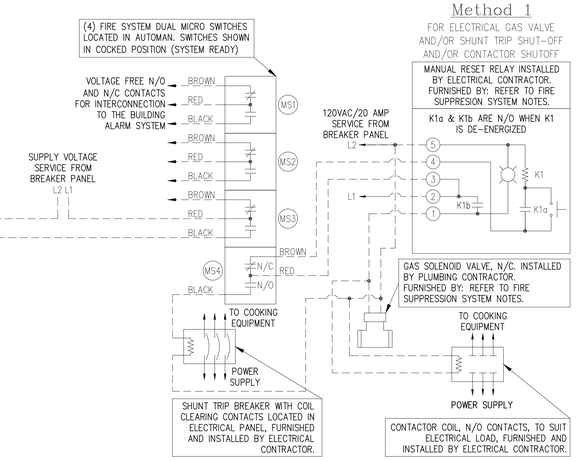


DCV 72			
OUTPUT NUMBER	OUTPUT LABEL	OUTPUT TYPE	MIRROR (1, 2, 3, OR 4 SUPPLY (% OF EXHAUST)
1	KEF-3	EXHAUST	N/A
2	KEF-4	EXHAUST	N/A
3	MUA-2	SUPPLY	60%
4	KEF-5	EXHAUST	N/A



REFER TO HOOD DRAWINGS FOR REQUIRED INTERCONNECTIONS

TYPICAL FIRE SYSTEM WIRING DIAGRAM
(ANSUL SHOWN)
Method 1
FOR ELECTRICAL GAS VALVE AND/OR SHUNT TRIP SHUT-OFF AND/OR CONTACTOR SHUTOFF



- - - FIELD WIRING BY ELECTRICAL CONTRACTOR
——— WIRING BY GAYLORD
- - - CAT 5 FIELD WIRING BY ELECTRICAL CONTRACTOR
——— CAT 5 WIRING BY GAYLORD

VFD BY G.C. SPECIFICATION

HARDWARE (MINIMUM VFD REQUIREMENTS)

1. WORKS WITH A 4-20 MA OR 2-10 V ANALOG INPUT.
2. PRODUCES A 24 VDC OR EQUIVALENT COMMON TO BE USED FOR REMOTE DRY CONTACT SWITCHING OF THE VFD(S). INDEPENDENT POWER SUPPLY ALSO ACCEPTED.
3. DRIVE TO MOTOR DISTANCE IS LESS THAN THE MAXIMUM SPECIFIED BY THE DRIVE MANUFACTURER.
4. DRIVE IS TO BE SIZED APPROPRIATELY FOR MOTOR RATED FLA, AND VOLTAGE INPUTS.

DRIVE INPUTS FROM GAYLORD DCV COMMAND CENTER

AS NOTED ON GAYLORD SUBMITTAL DRAWINGS UP TO FOUR VFDS MAY BE CONTROLLED THROUGH TERMINALS LABELED WITH AN ALPHANUMERIC, WHERE THE NUMBER CORRESPONDS TO A DISTINCT VFD (SEE TABLE 1). THE SYMBOL '#'IS SUBSTITUTED FOR THE NUMBER IN THE FOLLOWING.

1. TERMINAL C# ACCEPTS A NOMINAL +24 VDC COMMON SIGNAL FROM AN EXHAUST FAN VFD.
2. TERMINAL S# OUTPUTS SIGNAL PROVIDED BY THE COMMON VOLTAGE (AT C#) TO COMMAND THE EXHAUST FAN VFD TO RUN.
3. TERMINAL RH# OUTPUTS SIGNAL PROVIDED BY THE COMMON VOLTAGE.
   a. C# IS THE DEFAULT COMMON FOR RH#.
   b. HC# IS AN ALTERNATE COMMON FOR RH#. IT IS TO BE USED WHEN THE VFD COMMAND POINTS FOR RUN AND RUN HIGH DO NOT SHARE A COMMON. THE TERMINAL JUMPER BETWEEN C# AND HC# MUST BE REMOVED TO SEPARATE THE VOLTAGE SOURCES.
4. TERMINALS DS# AND AC# PROVIDE THE SPEED SIGNAL TO THE EXHAUST FAN VFD
   a. DS# IS A 4-20 MA SIGNAL (OPTIONAL 2-10 V)
   b. AC# IS THE ANALOG COMMON

PROGRAM SPECIFICATION

1. VFDS TO OPERATE WITH ANALOG 4-20MA INPUT. 4 MA REPRESENTS 0 HZ AND 20 MA REPRESENTS THE MAXIMUM MOTOR SPEED, TYPICALLY 60 HZ (2-10V IS OPTIONAL).
2. VFDS TO START (RECEIVE RUN COMMAND) BY EXTERNAL CONTACT CLOSURE PROVIDED BY GAYLORD ON C# AND S#. CONTACT CLOSURE WILL TAKE THE UNLOADED SYSTEM TO MINIMUM FAN SPEED (DEFAULT 30 HZ).
3. VFD CONSTANTS FOR THE MOTOR CONTROLLED TO BE DETERMINED AND ADDED, EX: THERMAL OVERLOAD, RATE VOLTAGE, ETC.
4. SET ACCELERATION TIME TO 8 SECONDS OR 7.5 HZ/SECOND.
5. SET DECELERATION TIME TO 48 SECONDS OR 1.25 HZ/SECOND. – SLOW DECELERATION PREVENTS INSTABILITY IN THE SYSTEM.
6. SETUP EACH VFD FOR A 'RUN HIGH' COMMAND FROM RH# THAT WILL RAMP THE DRIVE TO 100% OF 60 HZ. THIS FUNCTION IS ESSENTIAL FOR PROPER RESPONSE TO A FIRE PROTECTION SYSTEM DISCHARGE.
7. SET THE MODULATION RANGE FOR EACH VFD. THE AIRVANTAGE SYSTEM WILL MANAGE THE TURNDOWN OVER A 0-60 HZ RANGE.
   a. SET THE VFD BIAS 4 MA = 0 HZ.
   b. SET THE VFD GAIN 20 MA = 60 HZ

B TYPICAL FIRE SYSTEM WIRING DIAGRAM (ANSUL SHOWN) & DCV CONTROL CABINET (Item #72)

N.T.S.

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
DCV DETAILS ITEM 72

LICENSED ARCHITECT JIMMIE SANDERS C-17647 RENEWAL DATE 08-31-19 STATE OF CALIFORNIA

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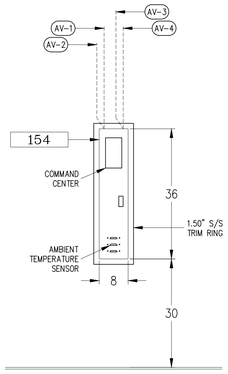


DCV CONTROL CABINET ELEVATION

DEPTH OF CABINET: 7"

DCV CONTROL CABINET WIRING NOTES

(AV-1) (2) WIRES AND GROUND FROM DCV CONTROL CABINET TO NON-INTERRUPTIBLE SUPPLY VOLTAGE SERVICE BY ELECTRICAL CONTRACTOR

(AV-2) (1) CAT 5 CABLE FROM DCV CONTROL CABINET TO 1ST HOOD AVHC BY ELECTRICAL CONTRACTOR.

(AV-3) (2) WIRES FROM DCV CONTROL CABINET TO FIRE SUPPRESSION SYSTEM MICRO SWITCHES BY ELECTRICAL CONTRACTOR.

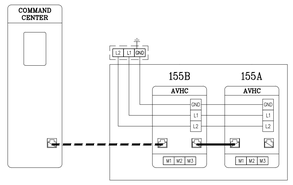
(AV-4) (6) WIRE LOW VOLTAGE CABLE FROM DCV CONTROL CABINET TO EACH VFD BY ELECTRICAL CONTRACTOR.

DCV CONTROL CABINET INSTALLATION NOTES

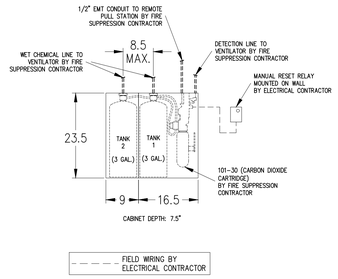
DCV CONTROL CABINET MUST BE LOCATED WITHIN 50 FEET OF AND IN THE SAME KITCHEN AS THE HOODS IT WILL CONTROL.

DCV CONTROL CABINET MUST BE LOCATED AT LEAST 2 FEET HORIZONTALLY FROM COOKING EQUIPMENT AND HEAT GENERATING APPLIANCES.

154					
HOOD SECTION	EXHAUST CFM	EXHAUST FAN	SUPPLY CFM	MAKEUP AIR FAN	VAV
155A	2323	KEF-6	1394	MUA-3	N/A
155B	2323	KEF-7	1394	MUA-3	N/A



TYPICAL ANSUL TANK SCHEMATIC, ITEM 159
(FOR NON-WATER WASH VENTILATORS)
Method 1
FOR ELECTRICAL GAS VALVE



FIELD WIRING BY ELECTRICAL CONTRACTOR

A DCV CONTROL CABINET WIRING NOTES & INSTALLATION NOTES (Item #154)

N.T.S.

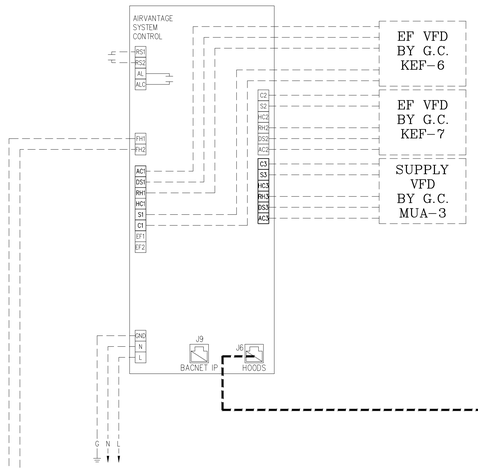
DCV CONTROL CABINET

-- SUPPLY VOLTAGE -- 120 VAC, 60Hz 1 AMP MAXIMUM – CONNECTED LOAD		
TRM	TERMINATION SCHEDULE	TYPE
L	MAIN POWER CONNECTION HOT	120 VAC
N	MAIN POWER CONNECTION NEUTRAL	0 VAC
FH1	FIRE SYSTEM INPUT HOT	120 VAC
FH2	FIRE SYSTEM NEUTRAL	0 VAC
RS1	REMOTE START +24V	24 VDC
RS2	REMOTE START COMMON	24 VDC
AL	ALARM CONTACT NO	VARIES
ALC	ALARM CONTACT COMMON	VARIES
J9	BACNET IP	CAT5
J6	HOOD COMMUNICATION	CAT5
EF1	COMMON FROM EXTERNAL CONTROLLER	24 VDC
EF2	EF RUN STATUS (NO)	24 VDC
C1	BINARY COMMON INPUT	VARIES
S1	BINARY OUTPUT (RUN)	VARIES
HC1	OPTIONAL COMMON FOR RH1	24 VDC
RH1	RUN HIGH (USES C1 COMMON)	VARIES
DS1	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC1	ANALOG COMMON	VARIES
C2	BINARY COMMON (INPUT)	24 VDC
S2	BINARY OUTPUT (RUN)	24 VDC
HC2	OPTIONAL COMMON FOR RH2	24 VDC
RH2	RUN HIGH (USES C2 COMMON)	24 VDC
DS2	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC2	ANALOG COMMON	VDC
C3	BINARY COMMON (INPUT)	24 VDC
S3	BINARY OUTPUT (RUN)	24 VDC
HC3	OPTIONAL COMMON FOR RH3	24 VDC
RH3	RUN HIGH (USES C3 COMMON)	24 VDC
DS3	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC3	ANALOG COMMON	VDC
C4	BINARY COMMON (RUN)	24 VDC
S4	BINARY OUTPUT (RUN)	24 VDC
HC4	OPTIONAL COMMON FOR RH4	24 VDC
RH4	RUN HIGH (USES C4 COMMON)	24 VDC
DS4	OUTPUT 2-10V (4-20mA FOR VFD ONLY)	VARIES
AC4	ANALOG COMMON	VDC
PA1	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA1	ANALOG COMMON FOR ECM ONLY	VDC
PA2	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA2	ANALOG COMMON FOR ECM ONLY	VDC
PA3	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA3	ANALOG COMMON FOR ECM ONLY	VDC
PA4	OUTPUT 2-10V FOR ECM ONLY	VARIES
NA4	ANALOG COMMON FOR ECM ONLY	VDC

AVHC

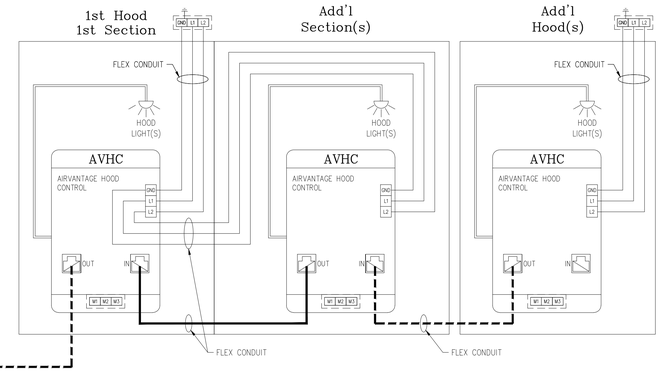
-- CONTROLLER TERMINATION SCHEDULE -- VOLTAGE TO VARY		
TRM	TERMINATION SCHEDULE	TYPE
L1	MAIN POWER CONNECTION HOT	120 VAC
L2	MAIN POWER CONNECTION NEUTRAL	0 VAC
IN	COMM FROM UPSTREAM CONTROLLER	24 VDC
OUT	COMM TO DOWNSTREAM CONTROLLER	24 VDC
M1	AIR VOLUME NEUTRAL	24 VAC
M2	AIR VOLUME HOT	24 VAC
M3	AIR VOLUME SIGNAL 2-10V	VARIES

FIELD WIRING BY ELECTRICAL CONTRACTOR
WIRING BY GAYLORD
CAT 5 FIELD WIRING BY ELECTRICAL CONTRACTOR
CAT 5 WIRING BY GAYLORD



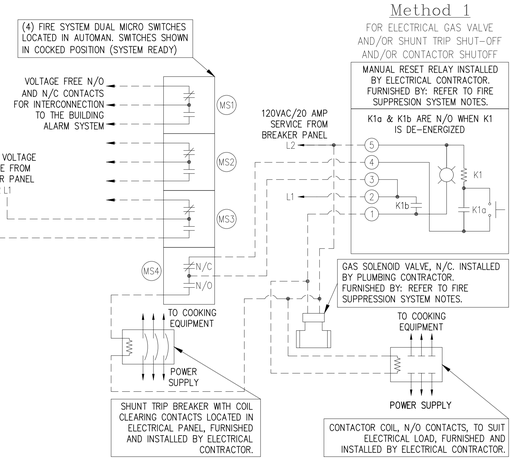
MAIN ELECTRICAL SERVICE (NON-INTERRUPTIBLE) BY ELECTRICAL CONTRACTOR. MUST BE FUSED SEPARATELY.

DCV 154			
OUTPUT NUMBER	OUTPUT LABEL	OUTPUT TYPE	MIRROR (1, 2, 3, OR 4 SUPPLY (% OF EXHAUST)
1	KEF-6	EXHAUST	N/A
2	KEF-7	EXHAUST	N/A
3	MUA-3	SUPPLY	60%
4	N/A	DISABLED	N/A



REFER TO HOOD DRAWINGS FOR REQUIRED INTERCONNECTIONS

TYPICAL FIRE SYSTEM WIRING DIAGRAM
(ANSUL SHOWN)
Method 1
FOR ELECTRICAL GAS VALVE AND/OR SHUNT TRIP SHUT-OFF AND/OR CONTACTOR SHUTOFF



VFD BY G.C. SPECIFICATION

HARDWARE (MINIMUM VFD REQUIREMENTS)

1. WORKS WITH A 4-20 MA OR 2-10 V ANALOG INPUT.
2. PRODUCES A 24 VDC OR EQUIVALENT COMMON TO BE USED FOR REMOTE DRY CONTACT SWITCHING OF THE VFD(S). INDEPENDENT POWER SUPPLY ALSO ACCEPTED.
3. DRIVE TO MOTOR DISTANCE IS LESS THAN THE MAXIMUM SPECIFIED BY THE DRIVE MANUFACTURER.
4. DRIVE IS TO BE SIZED APPROPRIATELY FOR MOTOR RATED FLA, AND VOLTAGE INPUTS.

DRIVE INPUTS FROM GAYLORD DCV COMMAND CENTER

AS NOTED ON GAYLORD SUBMITTAL DRAWINGS UP TO FOUR VFDS MAY BE CONTROLLED THROUGH TERMINALS LABELED WITH AN ALPHANUMERIC, WHERE THE NUMBER CORRESPONDS TO A DISTINCT VFD (SEE TABLE 1). THE SYMBOL '#'IS SUBSTITUTED FOR THE NUMBER IN THE FOLLOWING.

1. TERMINAL C# ACCEPTS A NOMINAL +24 VDC COMMON SIGNAL FROM AN EXHAUST FAN VFD.
2. TERMINAL S# OUTPUTS SIGNAL PROVIDED BY THE COMMON VOLTAGE (AT C#) TO COMMAND THE EXHAUST FAN VFD TO RUN.
3. TERMINAL RH# OUTPUTS SIGNAL PROVIDED BY THE COMMON VOLTAGE.
   a. C# IS THE DEFAULT COMMON FOR RH#.
   b. HC# IS AN ALTERNATE COMMON FOR RH#. IT IS TO BE USED WHEN THE VFD COMMAND POINTS FOR RUN AND RUN HIGH DO NOT SHARE A COMMON. THE TERMINAL JUMPER BETWEEN C# AND HC# MUST BE REMOVED TO SEPARATE THE VOLTAGE SOURCES.
4. TERMINALS DS# AND AC# PROVIDE THE SPEED SIGNAL TO THE EXHAUST FAN VFD
   a. DS# IS A 4-20 MA SIGNAL (OPTIONAL 2-10 V)
   b. AC# IS THE ANALOG COMMON

PROGRAM SPECIFICATION

1. VFDS TO OPERATE WITH ANALOG 4-20MA INPUT. 4 MA REPRESENTS 0 HZ AND 20 MA REPRESENTS THE MAXIMUM MOTOR SPEED, TYPICALLY 60 HZ (2-10V IS OPTIONAL).
2. VFDS TO START (RECEIVE RUN COMMAND) BY EXTERNAL CONTACT CLOSURE PROVIDED BY GAYLORD ON C# AND S#. CONTACT CLOSURE WILL TAKE THE UNLOADED SYSTEM TO MINIMUM FAN SPEED (DEFAULT 30 HZ).
3. VFD CONSTANTS FOR THE MOTOR CONTROLLED TO BE DETERMINED AND ADDED, EX: THERMAL OVERLOAD, RATE VOLTAGE, ETC.
4. SET ACCELERATION TIME TO 8 SECONDS OR 7.5 HZ/SECOND.
5. SET DECELERATION TIME TO 48 SECONDS OR 1.25 HZ/SECOND. – SLOW DECELERATION PREVENTS INSTABILITY IN THE SYSTEM.
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B TYPICAL FIRE SYSTEM WIRING DIAGRAM (ANSUL SHOWN) & DCV CONTROL CABINET (Item #154)

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
FOODSERVICE EQUIPMENT
DCV DETAILS ITEM 154

LICENSED ARCHITECT JIMMIE SANDERS C-17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

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Date Last Revised	Sheet Number
-	FS.10.9

PIPE SCHEDULE

SERVICE	LOCATION	TYPE K / COPPER	TYPE L / COPPER	TYPE M / COPPER	DWV / COPPER	NO-HUB / CAST IRON	ABS / DWV	SCH 40 PVC	SCH 40, ASTM BLACK STEEL	SCH 40, ASTM GALV. STEEL	CHLORINATED CPVC, SCH 80	SCH 80, RECYCLED POLYPRO	PE, SCH40, IPS/ 11/15	FITTINGS	NOTES
WATER	ABV GRADE	●												WROT COPPER SOLDER	1-4
	BEL GRADE						●							SOLVENT CEMENT PVC	4
WASTE & VENT	ABV GRADE					●								Z BAND NO - HUB COUPLINGS	
	BEL GRADE						●							SOLVENT CEMENT - ABS	4-5
RAINWATER	ABV GRADE													Z BAND NO - HUB COUPLINGS	5
	BEL GRADE													SOLVENT CEMENT - ABS	5
FUEL GAS	ABV GR-INT								●					MALLEABLE THREADED	
	ABV GR-EXT								●					MALLEABLE THREADED GALV	
	BEL GRADE												●	HEAT FUSION	
AC COND DRAIN	INTERIOR													WROT COPPER SOLDER	5
	EXTERIOR		●											WROT COPPER SOLDER	7
INDIRECT DRAIN	INTERIOR		●											WROT COPPER SOLDER	
	EXTERIOR		●											WROT COPPER SOLDER	

NOTES:

1. INSULATE HOT WATER W/ 1" FIBERGLASS PIPE INSUL W/ ASJ AND FITTING COVERS.
2. LEAD FREE SOLDER.
3. PIPING BELOW FLOOR TO BE SOFT TEMPER W/ NO JOINTS BELOW FLOOR.
4. WRAP SLAB PENETRATIONS.
5. SLOPE PIPING AT 1/4" (2%) PER FOOT; OBTAIN BUILDING OFFICIAL PERMISSION FOR 1/8" (1%) SLOPE.
6. INSULATE W/ 3/8" WALL FOAMED PLASTIC PIPE INSULATION @ REFRIGERATED EQUIPMENT DRAINS.
7. SLOPE PIPING AT 1/8" (1%) PER FOOT MIN.
8. NOT APPLICABLE (N.A.)

WATER USE SCHEDULE

BUILDING	FIXTURE TYPE	MAX FLOW RATE	
		BASELINE	PROPOSED DESIGN
CULINARY ARTS	LAVATORY (HAND SINK) FAUCET	0.5 GPM	0.5 GPM
	KITCHEN FAUCET	1.8 GPM	N/A

NOTES:

1. PLUMBING FIXUTRES SHALL MEET THE MAXIMUM FLOW RATE VALUES PER 2016 CGC CHAPTER 5 DIVISION 3.

LEGEND:

ABBR	SYMBOL	DESCRIPTION
CW	——·——	COLD WATER PIPING
HW	——··——	HOT WATER PIPING
HWR	——···——	HOT WATER RETURN PIPING
G	——G——	NATURAL GAS PIPING
V	– – – – – –	SANITARY VENT PIPING
S or W	— — — —	WASTE/SEWER PIPING BELOW GRADE
S or W	————	SOIL or WASTE ABOVE GRADE
CD	——CD——	CONDENSATE DRAIN PIPING
D	——D——	INDIRECT DRAIN PIPING
SD	——SD——	STORM DRAIN PIPING
OD	——OD——	OVERFLOW STORM DRAIN PIPING
FS		FLOOR SINK
FD		FLOOR DRAIN
RD / OD		ROOF DRAIN / OVER FLOW DRAIN
WCO		WALL CLEAN-OUT
FCO		FLOOR CLEAN-OUT
GOTG		CLEAN-OUT TO GRADE
P & TRV		PRESS & TEMP RELIEF VALVE
SOV		SHUT OFF (BALL) VALVE (IN RISER)
SOV		SHUT OFF (BALL) VALVE (IN-LINE)
CV		CHECK VALVE
STR		STRAINER
BFP		RED PRESSURE BACKFLOW PREVENTER
		UNION
		CAP
HB		HOSE BIBB
POC		POINT OF CONNECTION
VTR		VENT THRU ROOF
U/G		UNDER GROUND
B/F		BELOW FLOOR
A/C		ABOVE CEILING
UTR		UP THROUGH ROOF
YB		YARD BOX
WHA		WATER HAMMER ARRESTOR
AP		ACCESS PANEL
UNO		UNLESS NOTED OTHERWISE
GW	— —GW— —	GREASE WASTE
AW	— —AW— —	ACID WASTE
AV	— — —AV— — —	ACID VENT

GENERAL NOTES:

1. THESE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF THE PLUMBING WORK TO BE ACCOMPLISHED AND AS SUCH ARE NOT INTENDED TO SHOW ALL REQUIRED OFFSETS OF PIPING. THE PLUMBING CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT SO AS TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, AND MAINTAIN HEADROOM AND PASSAGEWAYS.
2. ALL LOCATIONS, POINTS-OF-CONNECTION, INVERTS, SIZES, AND AVAILABILITY OF ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE PLUMBING CONTRACTOR PRIOR TO THE COMMENCEMENT OF THE INSTALLATION.
3. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES PRIOR TO COMMENCEMENT OF THE PLUMBING INSTALLATION.
4. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE CODES, INCLUDING TITLE 24 CCR.
5. WHERE PLUMBING PENETRATES AREA SEPARATION WALL SURFACES, THE SECTION PASSING THROUGH THE WALL SURFACE AND CONNECTED TO THE ATTACHED FIXTURE SHALL BE ONLY OF METAL.
6. FOR MINIMUM PLUMBING FIXTURE CLEARANCES AND ELEVATIONS SEE ARCHITECTURAL DRAWINGS.
7. WATER HEATER/BOILER WILL COMPLY WITH SECTION 608.3, 2016 CPC FOR THERMAL EXPANSION REQUIREMENTS AND WITH SECTION 510.5, 2016 CPC FOR SEISMIC RESTRAINT REQUIREMENTS.
8. STATE HEALTH AND SAFETY CODE SECTION 17921.8 BANS THE USE OF CHLORINATED POLYVINYL CHLORIDE (CPVC) FOR INTERIOR WATER-SUPPLY PIPING.
9. FLAME SPREAD / SMOKE SPREAD FOR ALL PIPE INSULATION SHALL BE 25/50 MAX.

DESIGN CRITERIA:

MEP COMPONENT ANCHORAGE NOTE:

1. 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 OF DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 & 30.
   A. ALL PERMANENT EQUIPMENT AND COMPONENTS.
   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
   C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
2. THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.
3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

1. PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8 AND 2016 CBC, SECTIONS 1616A.1.24, 1616A.1.25 AND 1616A.1.26.
2. THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

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

   MP☐ MD☐ PP☒ E☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #.0210 .

   MP☐ MD☐ PP☐ E☐ - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2004), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL ____ AND CONNECTION LEVEL ____ FOR THE PROJECT AND CONDITIONS.

PLASTIC PIPE IN PLUMBING SYSTEMS:

1. APPROPRIATE PLASTIC PIPE MAY BE USED FOR VENT PIPING IN BUILDINGS. IT MAY BE USED FOR WASTE LINES IN PORTABLE BUILDINGS ONLY. IT MAY BE USED FOR DRAINS CARRYING ACID WASTE LABORATORIES. IT SHALL NOT BE USED FOR WATER DISTRIBUTION LINES WITHIN A DISTANCE OF 5 FEET OUTSIDE OF BUILDINGS.
2. PLASTIC PIPE OF THE APPROPRIATE CLASS MAY BE USED UNDERGROUND OUTSIDE OF BUILDINGS FOR CARRYING GAS AND DRAINAGE WASTE.
3. PLASTIC CONDUIT AND INSULATION MAY BE USED WHERE PERMITTED IN TITLE 24.

PLUMBING FIXTURE SCHEDULE:

P-1 FOODSERVICE SINK, ACCESSIBLE
SEE FOODSERVICE DRAWINGS AND SPECIFICATIONS

P-2 FOODSERVICE SINK
SEE FOODSERVICE DRAWINGS AND SPECIFICATIONS

P-3 HAND SINK (LAV)
SEE FOODSERVICE DRAWINGS AND SPECIFICATIONS

P-4 MOP BASIN
BASIN - FIAT #2424MSB, 3" OUTLET
FAUCET - FIAT #830-AA w/ VACUUM BREAKER
STRAINER - FIAT w/ BASIN
ACCESSORY - #852-AA HOSE AND BRACKET; BUMPER GUARDS

P-5 FLOOR DRAIN
DRAIN - ZURN #Z-415 w/ 1/4" MAX STRAINER OPENINGS IN ALL DIRECTIONS
ACCESSORY - TRAP PRIMER INLET

P-6 FLOOR SINK
SINK - ZURN #Z-1901, 12" x 12" x 8" DEEP w/ FLANGE AND COLLAR
ACCESSORIES - GRATE AS NOTED IN FOODSERVICE DRAWINGS

P-7 WATER HEATER, GAS-FIRED (KITCHEN)
HEATER - A.O. SMITH #BTH250, 250,000 BTUH INPUT, 100 GAL. TANK
RECOVERY CAPACITY/EFFICIENCY - 360 GPH @ 80 DEGREE RISE/80% EFF
ACCESSORIES - CONCENTRIC CENT KIT; AMTROL #ST-12 EXPANSION TANK; VICTAULIC DIELECTRIC WATERWAYS AT ALL WATER PIPING CONNECTIONS; 125 PSIG ASME P&TRV; THERMOMETER
WARRANTY: PROVIDE WITH MANUFACTURER'S EXTENDED WARRANTY

P-8 CIRCULATING PUMP, IN-LINE
PUMP- GRUNDFOS #UPI15-42B5
CAPACITY - 5 GPM @ 10.10'TDH
ELEC - 1/12 H.P. @ 120-1-60
CONTROL - HONEYWELL IMMERSIONSTAT

P-9 GREASE INTERCEPTOR
INTERCEPTOR - SCHIER #GB-250, HPDE, 4" INLET/OUTLET W/SAMPLE BOX
ACCESS - 24" CASTIGHT FRAME & COVER (2) W/RISERS AS REQUIRED TO FINISH GRADE
CAPACITY - 100 GPM, 1,076 LBS GREASE, 250 GAL
INSTALLATION - PER MFG'R INSTALLATION INSTRUCTIONS
LOAD RATING - TRAFFIC RATED FOR HS-20 LOADING W/1' TO 6' OF COVER

P-10 FLOOR TROUGH DRAIN W/ GRATE
SEE FOODSERVICE DRAWINGS AND SPECIFICATIONS

REGISTERED PROFESSIONAL ENGINEER
VICTOR NEWMAN
No. 23110
Exp. 9/30/2020
MECHANICAL
STATE OF CALIFORNIA

APPROVALS

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Project Title
CALEXICO UNION HIGH SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
LEGEND AND NOTES

LICENSED ARCHITECT
JIMMIE LEE SANDERS
No. C-17644
RENEWAL DATE
07-31-19
STATE OF CALIFORNIA

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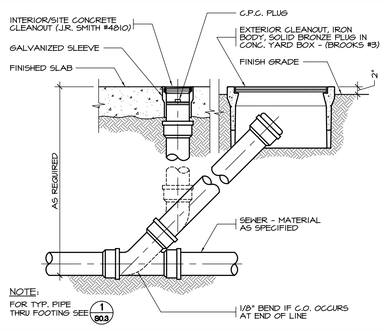
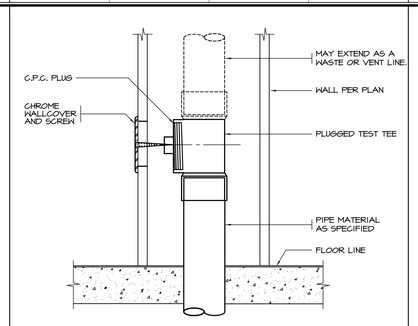


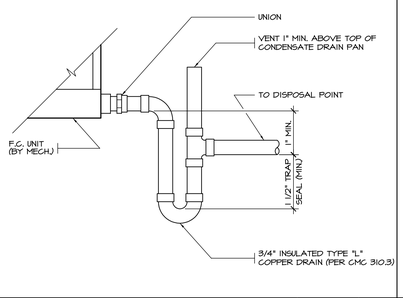
CLEANOUT TO GRADE

SCALE: NTS | 1



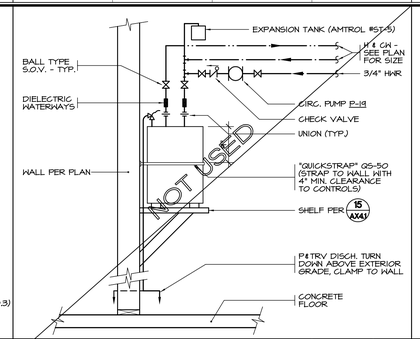
WALL CLEANOUT

SCALE: NTS | 2



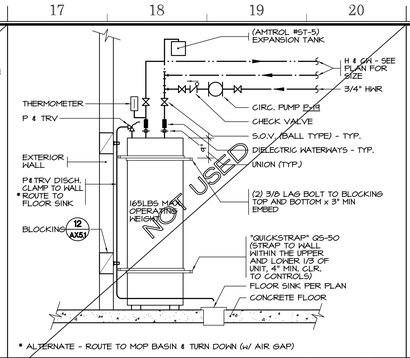
CONDENSATE DRAIN TRAP

SCALE: NTS | 3



WATER HEATER ON SHELF

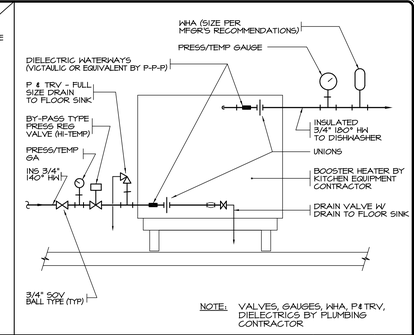
SCALE: NTS | 4



* ALTERNATE - ROUTE TO MOP BASIN & TURN DOWN (w/ AIR GAP)

WATER HEATER PIPING DIAGRAM

SCALE: NTS | 5



NOTE: VALVES, GAUGES, WHA, P&TRV, DIELECTRICS BY PLUMBING CONTRACTOR

WARE WASHING BOOSTER HEATER

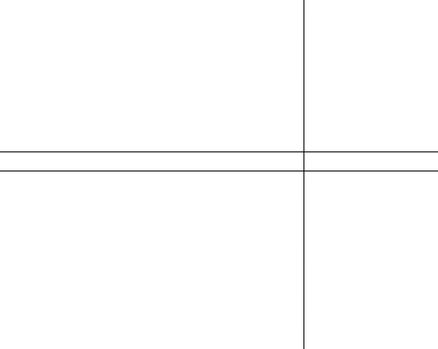
SCALE: NTS | 6

INDIRECT DRAIN DETAIL

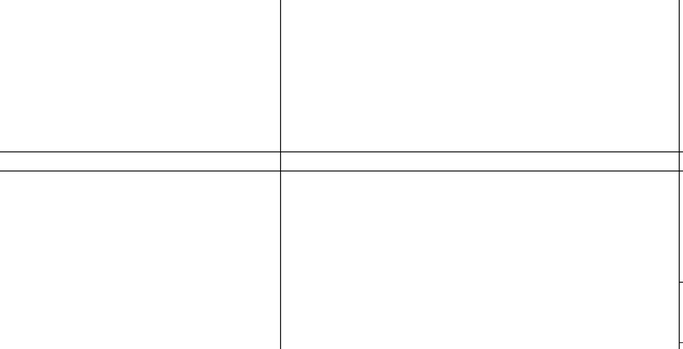
SCALE: NTS | 7

GAS RISER DETAIL

SCALE: NTS | 8



ROOF FITTINGS



WALL FITTINGS

NOTE:
1) SEE P0.2 FOR H, CW & GAS PIPING
2) MAINTAIN MFR'S LISTED CLEARANCES TO COMBUSTIBLES

(P-7) CONCENTRIC VENT

SCALE: NTS | 9

(P-7) PIPING DIAGRAM

SCALE: NTS | 10

REGISTERED PROFESSIONAL ENGINEER VICTOR NEWMAN NO. 23110 EXP. 9/30/2020 MECHANICAL STATE OF CALIFORNIA

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
PLUMBING DETAILS

LICENSED ARCHITECT JIMMIE SANDERS No. 17644 RENEWAL DATE 08-31-19 STATE OF CALIFORNIA

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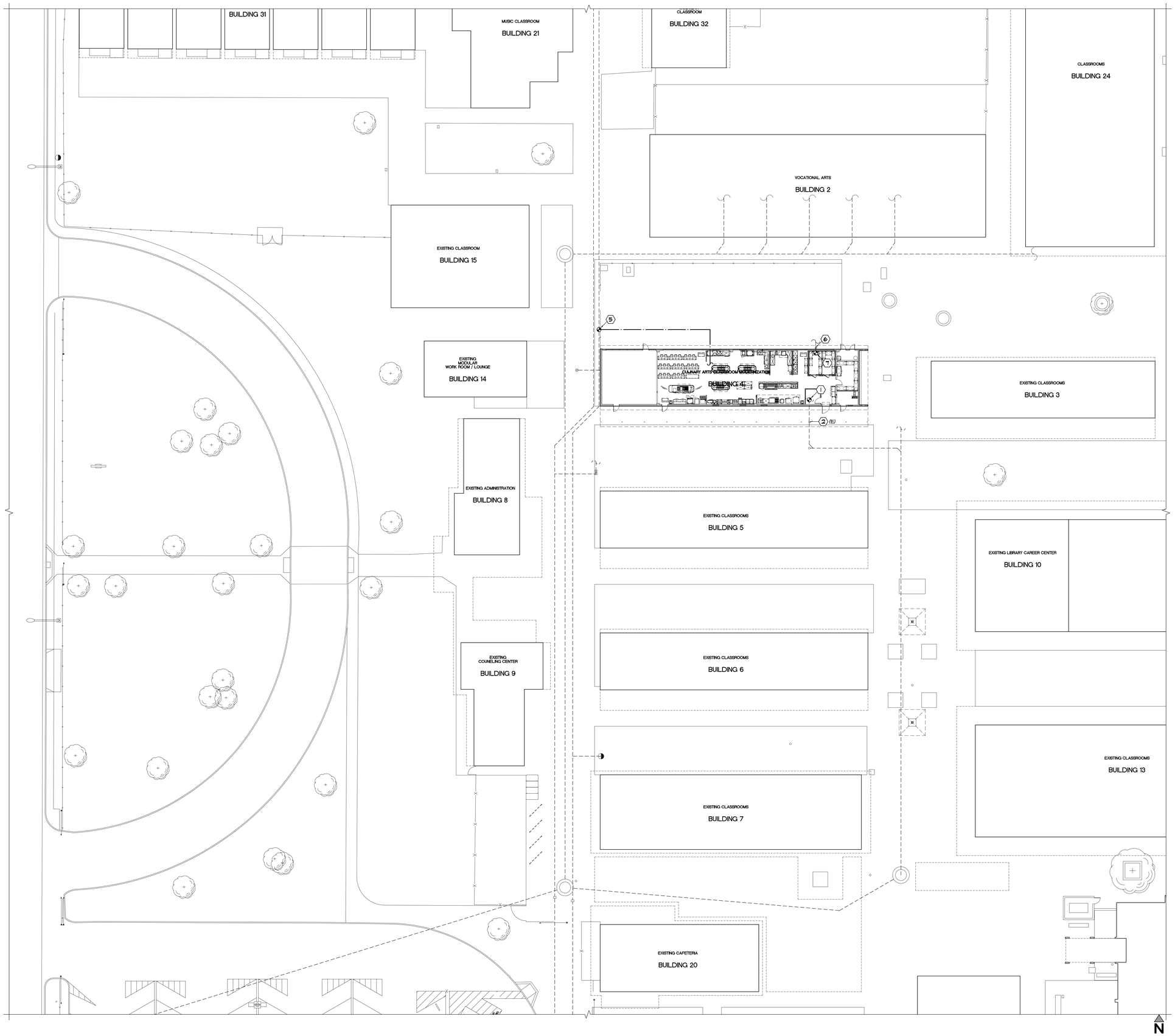

KEYNOTES:

1. POINT OF CONNECTION TO EXISTING SEWER SYSTEM, (FIELD VERIFY EXACT LOCATION & DEPTH)
2. SEWER - SIZE NOTED - SEE FLOOR PLANS FOR CONTINUATION
3. CLEAN OUT TO GRADE ON SEWER LINE - 100'-0" OC MAX SPACING
4. PROVIDE GREASE INTERCEPTOR (P-19) w/ 4" GREASE WASTE & 3" VENT U/G
5. POINT-OF-CONNECTION FOR DOMESTIC WATER SERVICE - PROVIDE 2" LINE w/ SERVICE SADDLE - INSTALL PER CITY OF CALEXICO STANDARD B-1B
6. 3" U/G GAS LINE
7. POC TO EXISTING GAS MAIN - VERIFY EXACT LOCATION / DEPTH

GENERAL NOTES:

1. INSTALL WATER AND SEWER PIPING IN COMMON TRENCH PER 2016 CPC, SECTION 609.2.
2. SITE SEWER TO BE SLOPED AT 1% MINIMUM.
3. PROVIDE CONCRETE YARD BOX WITH IDENTIFICATION LID AT ALL COTG IN LANDSCAPED AREAS. PROVIDE J.R. SMITH #4810 BRONZE ACCESS HOUSING AT ALL COTG LOCATED IN SITE CONCRETE PER 1/P0.2
4. PIPING / TRENCHING AT BUILDING FOUNDATIONS TYPICAL PER 5/A0
5. ALL WATER LINES SHALL HAVE 24" MINIMUM COVER.
6. COORDINATE LOCATION OF ALL U/G PIPING NEAR MECHANICAL EQUIPMENT AND ENCLOSURES w/ U/G/ MECHANICAL PIPING - SEE MECHANICAL DRAWINGS
7. PROVIDE TRENCHING PER 11/A0.1 12/A0.1

REGISTERED PROFESSIONAL ENGINEER
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EXP. 9/30/2020
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CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
PLUMBING SITE PLAN

LICENSED ARCHITECT
JIMMIE L. SANDERS
No. C-17644
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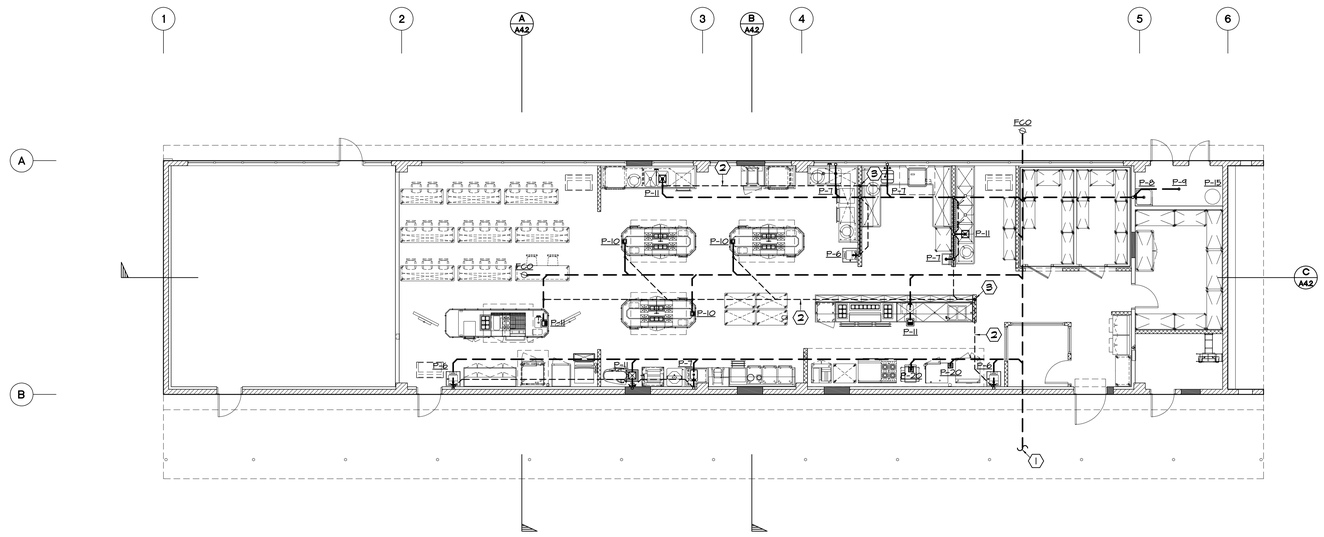
PLUMBING SITE PLAN
SCALE: 1" = 20'-0"
A

KEYNOTES:

1. 5 OR W UG (SIZE NOTED) - SEE PLUMBING SITE PLAN FOR CONTINUATION
2. 2" VENT A/C
3. 2" VENT THROUGH ROOF - MAINTAIN MIN 10'-0" CLEAR TO HVAC UNIT OSA INTAKE

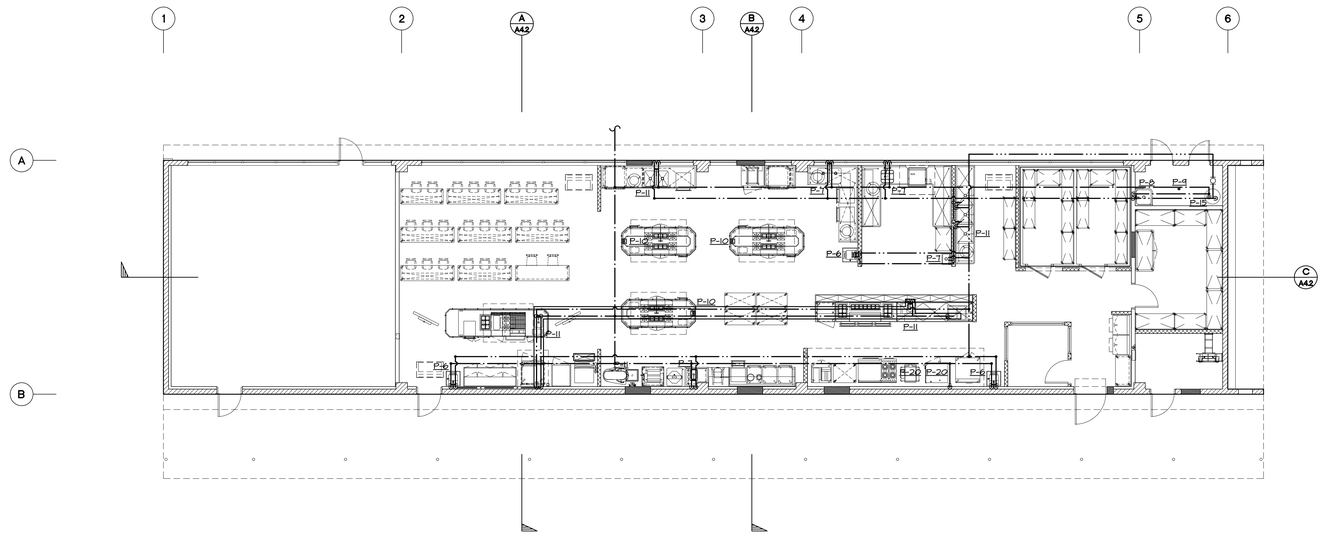
NOTES:

1. ALL SEWER AND WASTE PIPING SHALL SLOPE @ 1/4" PER FOOT MIN.



WASTE AND VENT — SCALE: 1/8" = 1'-0" — A

N



HOT AND COLD WATER — SCALE: 1/8" = 1'-0" — B

N

REGISTERED PROFESSIONAL ENGINEER VICTOR NEWMAN No. 23110 Exp. 9/30/2020 MECHANICAL STATE OF CALIFORNIA

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CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
WASTE AND VENT, HOT AND COLD WATER

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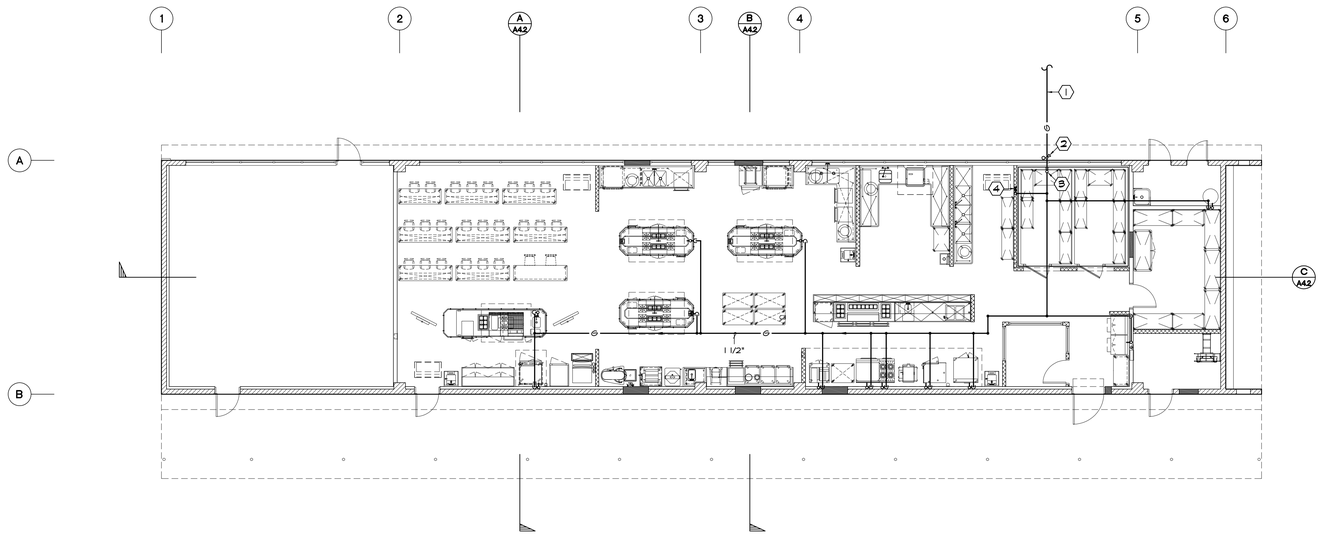

KEYNOTES:

1. (E) 5PSIG GAS LINE (SIZE NOTED) - SEE PLUMBING SITE PLAN FOR CONTINUATION
2. 5PSIG TO 8" WC REGULATOR (8/P02)
3. NEW SLEEVE 2" GAS THRU WALL ABOVE GRADE & RISE ON WALL TO A/C
4. 1" (U.N.O.) GAS UP AND DOWN IN WALL TO EMERGENCY SHUT-OFF VALVE IN WALL BOX @ +48" A.F.F., SEE ARCHITECTURAL DRAWINGS FOR WALL BOX LOCATION - PROVIDE RED "BAKELITE" SIGN LABELED "EMERGENCY GAS SHUT-OFF" SECURED TO WALL BELOW VALVE BOX

N

GAS PLAN

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

A

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GAS PLAN

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KITCHEN EXHAUST FAN - UPBLAST

MARK	LOCATION	SERVES	FAN MOTOR HP	FAN MOTOR WATTS	CFM	EXT SP (IN WG)	RPM	SONES	ELECTRICAL V/PH/HZ	OPER WEIGHT (LBS)	MANUFACTURER / MODEL NO (GREENHECK)	NOTES
KEF 1	ROOF	KITCHEN (GREASE)	0.25	N/A	560	0.75	1,816	10.1	208-3-60	107	CUBE-101HP-4	1, 4, 6
KEF 2	ROOF	KITCHEN (GREASE)	1.5	N/A	2,720	1.25	1,309	16.1	208-3-60	175	CUBE-180HP-VSD-15	1, 4, 6
KEF 3	ROOF	KITCHEN (GREASE)	1.5	N/A	3,060	1.0	1,079	15.5	208-3-60	177	CUBE-200HP-VSD-15	1, 4, 6
KEF 4	ROOF	KITCHEN (GREASE)	1.5	N/A	3,060	1.0	1,079	15.5	208-3-60	177	CUBE-200HP-VSD-15	1, 4, 6
KEF 5	ROOF	KITCHEN (GREASE)	1.5	N/A	3,060	1.0	1,079	15.5	208-3-60	177	CUBE-200HP-VSD-15	1, 4, 6
KEF 6	ROOF	KITCHEN (GREASE)	1.5	N/A	2,323	1.25	1,526	15.7	208-3-60	205	CUBE-240XP-VSD-15	1, 4, 6
KEF 7	ROOF	KITCHEN (GREASE)	1.5	N/A	2,323	1.25	1,526	15.7	208-3-60	205	CUBE-240XP-VSD-15	1, 4, 6
KEF 8	ROOF	KITCHEN (VAPOR)	0.25	N/A	475	0.5	1,300	11.2	120-1-60	60	CUBE018-4	1, 2, 5

EXHAUST FAN NOTES:

1. V.F.D.
2. PROVIDE MANUFACTURER'S SOUND ABSORBING ROOF CURB.
3. PROVIDE MANUFACTURER'S VENTED CURB EXTENSION.
4. JUNCTION BOX MOUNTED & WIRED DISC. SWITCH PROVIDED BY MFR.
5. CONTROL WITH WALL SWITCH (BY ELEC CONTRACTOR).
6. ROUTE GREASE DRAIN TO NEAREST KITCHEN FLOOR SINK.

CONTROL NOTES:

CONTROL FOR KEF'S IN HOOD VENT PANEL (BY HOOD MFR) AS FOLLOWS:

A. KEF-1&2 w/MUA-1
B. KEF-3,4&5 w/MUA-2
C. KEF-6&7 w/MUA-3

MAKE-UP AIR UNIT - HORIZONTAL DISCHARGE

MARK	MANUFACTURER / MODEL NO (GREENHECK)	NOM TONS	CFM	EXTERNAL S P (IN W G)	ELECTRICAL MIN CKT AMPS	ELECTRICAL MOCP	ELECTRICAL V/PH/HZ	FAN BHP	EVAP COOLING	GAS INPUT (MBH)	OPER WEIGHT (LBS) (WET)	NOTES
MUA 1	#MSX-115-H22	N/A	3,290	0.5	10.2	15	208/3/60	1.5	115°/74° O.A.T. 77.8°/74° L.A.T.	N/A	1,100	1-4
MUA 2	#MSX-125-H32	N/A	4,180	0.5	24.3	40	208/3/60	5.0	115°/74° O.A.T. 77.9°/74° L.A.T.	N/A	1,740	1-4
MUA 3	#MSX-115-H22	N/A	4,646	0.5	22.8	35	208/3/60	5.0	115°/74° O.A.T. 78.4°/74° L.A.T.	N/A	1,150	1-4

MAKE-UP AIR UNIT NOTES:

1. V.F.D., EVAPORATIVE COOLING MODULE, COOLING MODULE INLET AIR SENSOR.
2. FILTER RACK FOR 2" 30/30 FILTERS, 100% OA, AIRFLOW SWITCH, MICRO-MTL OR CANFAB CURB @EXTERIOR GRADE CONCRETE SLAB
3. PROVIDE S.A. DUCT DETECTOR.
4. ELECTRICALLY INTERLOCK MUA-1 w/HP-2 S.A. FAN AND MUA-3 w/HP-3 S.A. FAN

CONTROL NOTES:

CONTROL FOR KEF'S & MUA'S IN HOOD VENT PANEL (BY HOOD MFR) AS FOLLOWS:

A. MUA-1 w/KEF-1&2
B. MUA-2 w/KEF-3,4&5
C. MUA-3 w/KEF-6&7

PACKAGE HP UNIT - HORIZONTAL DISCHARGE

MARK	MANUFACTURER / MODEL NO	NOM TONS	CFM	EXTERNAL S P (IN W G)	ELECTRICAL MIN CKT AMPS	ELECTRICAL MOCP	ELECTRICAL V/PH/HZ	EVAP FAN BHP	COOLING (MBH) TOT	COOLING (MBH) SENS	(EER) SEER	HEAT CAP (MBH)	COP OR (HSPF)	OPER WEIGHT (LBS)	NOTES
HP 1	CARRIER #50HCQ-A04	4	1,600	0.6	23	30	208/3/60	0.77	42.5	34.9	15.8	46.1	(8.1)	750	1-5, 9
HP 2	CARRIER #50HCQ-A05	4	1,600	0.6	23	30	208/3/60	0.77	42.5	34.9	15.8	46.1	(8.1)	750	1-5, 8, 9
HP 3	CARRIER #50HCQ-D07	6	2,400	0.6	36	50	208/3/60	1.05	65.9	53.3	15.6 (IEER)	68.9	3.4	850	1-5, 7-9

PACKAGE HP UNIT NOTES:

1. PROVIDE "STERIL-AIRE" UV-C LAMP (NO SUBSTITUTIONS).
2. PROVIDE CARRIER 33 CONNECTSTAT PROGRAMMABLE T-STAT w/ REMOTE SENSOR WHERE INDICATED.
3. 2" MERV 8 T.A. FILTERS & S.A. DUCT SMOKE DETECTOR.
4. MICRO-MTL SEISMIC LEVEL MICRO-MTL OR CANFAB 12" HIGH SEISMIC CURB AT GRADE.
5. LOW AMBIENT OPERATION.
6. NOT USED
7. 2-SPEED INDOOR S.A. FAN-MOTOR CONTROLLED BY V.F.D.
8. MEDIUM STATIC OPTION BELT DRIVE.
9. UNIT ANCHORAGE TO CONCRETE SLAB @EXTERIOR GRADE PER 10/M0.2

HVAC LEGEND

ABBR.	SYMBOL	DESCRIPTION
A/C		ABOVE CEILING
U.T.R.		UP THROUGH ROOF
S.A.		SUPPLY DUCT. SECTION
R.A.		RETURN DUCT. SECTION
E.A.		EXHAUST DUCT. SECTION
		FLEXIBLE DUCT
S.A./R.A.		SINGLE LINE DUCT WORK
M.V.D.		MANUAL VOLUME DAMPER
C.D.		CEILING DIFFUSER - SUPPLY
R.A.G.		RETURN AIR GRILLE - CEILING
E.G. E.R.		EXHAUST REGISTER - CEILING
F.C.		FLEX CONNECTION
D.L.		DOOR LOUVER
U.C.		UNDER-CUT DOOR
STAT	T	THERMOSTAT - SEE 11/M0.3
C.D.	C.D.	CONDENSATE DRAIN (BY PLUMBING)
SENSOR	S	ROOM TEMPERATURE SENSOR
F.S.D.	FSD	FIRE/ SMOKE DAMPER
M.O.D.	M	MOTOR OPERATED DAMPER
HWS/R	HWS/R	HEATING HOT WATER SUPPLY/RETURN
CHWS/R	CHWS/R	CHILLED WATER SUPPLY/RETURN
U.O.N.		UNLESS OTHERWISE NOTED
		FIRE RATED WALL - SEE ARCH

DESIGN CRITERIA:

MEP COMPONENT ANCHORAGE NOTE:

1. 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 OF DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 & 30.
   A. ALL PERMANENT EQUIPMENT AND COMPONENTS.
   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
   C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
2. THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.
3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

1. PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8 AND 2016 CBC, SECTIONS 1616A.1.24, 1616A.1.25 AND 1616A.1.26.
2. THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

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

   MP☒ MD☒ PP☐ E☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #_0010_____ -

   MP☐ MD☐ PP☐ E☐ - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.

ENERGY CONSERVATION NOTES:

1. ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 118, 123, 124 E.E.S. AND TABLE 6-4 OF THE C.M.C.
2. ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTION 112 & 122 E.E.S.
3. ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS OF SECTION 111-113, 115, 120-124 E.E.S.

GENERAL HVAC NOTES:

1. THESE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF WORK TO BE ACCOMPLISHED AND AS SUCH ARE NOT INTENDED TO SHOW ALL REQUIRED OFFSETS OF PIPING AND DUCT WORK. THE MECHANICAL CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT SO AS TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS AND MAINTAIN HEADROOM AND PASSAGEWAYS.
2. EQUIPMENT INDICATED ON THESE DRAWINGS IS SHOWN IN APPROXIMATE LOCATIONS. THE MECHANICAL CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND EQUIPMENT LOCATIONS.
3. THE MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES PRIOR TO INSTALLATION.
4. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING TITLE 24 CCR
5. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LINE AND LOW VOLTAGE CONDUIT, LINE VOLTAGE WIRING, OVERLOAD PROTECTION, DISCONNECTS (EXCEPT ROOF EXHAUST FANS AS NOTED), STARTERS, FINAL CONNECTIONS TO EQUIPMENT. LOW VOLTAGE WIRING BY MECHANICAL CONTRACTOR.
6. GENERAL CONTRACTOR SHALL PROVIDE ALL CUTTING, PATCHING, FURRING, BRACING OF STRUCTURE, ROOF OPENINGS WITH CANTS, FLASHING, ROOFING.
7. MECHANICAL CONTRACTOR TO FURNISH AND INSTALL FIRE AND SMOKE DAMPERS AT ALL DUCT PENETRATIONS OF FIRE RATED SURFACES. FIRE DAMPERS INCLUDING SLEEVES AND INSTALLATION PROCEDURES SHALL BE APPROVED BY D.S.A. PRIOR TO INSTALLATION.
8. AIR FILTERS SHALL BE A STATE FIRE MARSHALL APPROVED & LISTED TYPE. PRE FORMED FILTERS HAVING A COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES SHALL BE CLASS 2 OR BETTER (AS SHOWN THE STATE FIRE MARSHALL LISTING). AIR FILTERS SHALL BE ACCESSIBLE FOR CLEANING OR REPLACEMENT.
9. FLAME SPREAD / SMOKE RATINGS FOR ALL DUCT MATERIALS SHALL BE 25/50 MAX.

AIR DISTRIBUTION SCHEDULE:

ALL ITEMS SHALL BE TITUS MODEL #'S UNLESS OTHERWISE NOTED OR EQUIVALENT BY KRUEGER, ALL METAL CONSTRUCTION WITH STANDARD FINISH.

MARK	DESCRIPTION
A	#MCD 4-WAY ADJUSTABLE , LAY-IN CEILING DIFFUSER
B	#PCS 24" x 24" LAY-IN, PERFORATED FACE, STEEL CEILING DIFFUSER w/ LINED SHEET METAL TOP PLENUM WHERE SHOWN
C	#AIR, STEEL, SURFACE MOUNTED PERFORATED FACE CEILING RETURN/RELIEF GRILLE (w/ LINED SHEET METAL TOP PLENUM WHERE SHOWN)

DIFFUSER THROW: 4W | 3W | 2W (OPPOSITE) | 2W (CORNER)

EQUIPMENT SCHEDULE NOTES:

NOTES:
1. BOTTOM OF ALL EQUIPMENT ROOF CURBS SHALL MATCH SLOPE OF ROOF, TYP.
2. "UV-C" GERMICIDAL LAMPS SHALL BE FACTORY INSTALLED AND WIRED. LAMPS SHALL BE "STERIL-AIRE" (NO SUBSTITUTIONS).
3. ALL FC UNITS AND SINGLE SPACES OVER 2,000 CFM SHALL BE PROVIDED WITH DUCT SMOKE DETECTORS. SEE FIRE ALARM DRAWINGS.

REGISTERED PROFESSIONAL ENGINEER VICTOR NEWMAN NO. 23110 EXP. 9/30/2020 MECHANICAL STATE OF CALIFORNIA

APPROVALS

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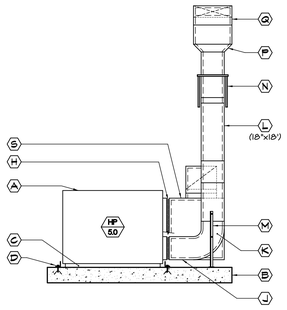
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
HVAC GENERAL NOTES, SCHEDULES

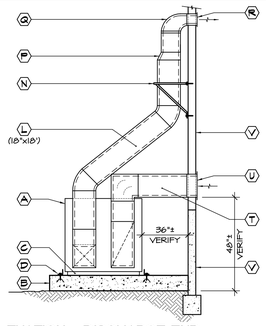
LICENSED ARCHITECT JIMMIE SANDERS 17644 RENEWAL 08/31/19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-250X
Date Last Revised	Sheet Number
	M0.1

SCHEDULES — SCALE: N.T.S. — A

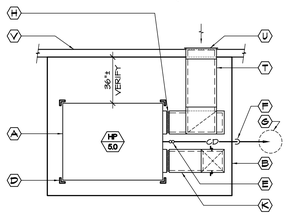


FRONT ELEVATION



ELEVATION - DISCHARGE END

NOTE:
VERIFY LOCATION AND LAYOUT OF EACH UNIT AND DUCT WORK.



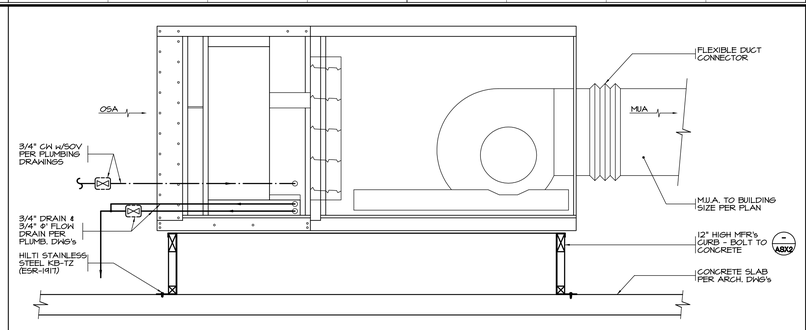
PLAN VIEW

KEYNOTES:

- (A) NEW HEAT PUMP UNIT- 5.0 TONS U.O.N.
- (B) CONCRETE EQUIPMENT PAD BY GENERAL CONTRACTOR, SLOPE AWAY FROM BUILDING FOR DRAINAGE
- (C) SET UNIT RAILS ON WAFFLE PAD (6 MIN.)
- (D) L2x2x1/4 ANGLE SEISMIC SNUBBERS, BOLT TO CONCRETE SLAB WITH HILTI STAINLESS STEEL KB-TZ (ESR-1917)
- (E) 3/4" TRAPPED AND VENTED C.D. CONNECTION TO UNIT (BY PLUMBING)
- (F) 3/4" C.D. DOWN TO I/G (BY PLUMBING)
- (G) DISCHARGE 3/4" C.D. DOWN TO DRY WELL (BY PLUMBING)
- (H) FLEXIBLE CONNECTOR - TYP. @ S.A. & R.A.
- (J) UNIT S.A. DUCT SIZE APPROXIMATELY 17" x 11"
- (K) RADIUS TRANSITION ELBOW, 17" x 11" TO 18" x 18"
- (L) LINED DUCT- SIZE NOTED
- (M) SHEET METAL ANGLE DUCT SUPPORT WITH FOOT PLATE, NO WEIGHT ON FLEX CONNECTOR (TYP. 2)
- (N) DUCT SUPPORT PER S.M.A.C.N.A. MANUAL DETAIL FIG. 4-7, VIEW B, LAG TO EXISTING WALL
- (P) TRANSITION TO S.A. GRILLE SIZE
- (Q) RADIUS ELBOW
- (R) NEW S.A. GRILLE (MARK "1") SIZE TO MATCH EXISTING
- (S) LINED R.A. PLENUM, FULL SIZE OF UNIT CONNECTION
- (T) LINED R.A. DUCT
- (U) NEW R.A. GRILLE (MARK "N") SIZE TO MATCH EXISTING
- (V) EXISTING WALL

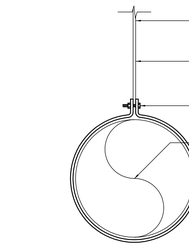
A/C UNIT ON GROUND (SIDE DISCHARGE)

SCALE: NTS | 1



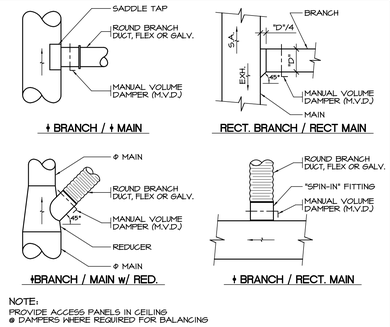
DETAIL AT M.U.A. UNIT (SIM.)

SCALE: NTS | 2



DUCT HANGER

SCALE: N.T.S. | 3



T BRANCH / T MAIN

RECT. BRANCH / RECT MAIN

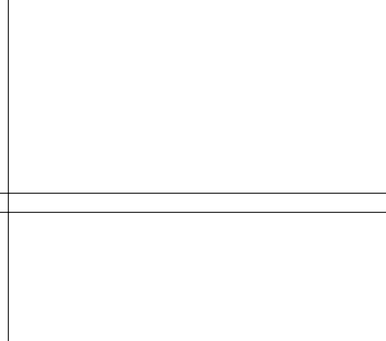
T BRANCH / MAIN w/ RED.

T BRANCH / RECT. MAIN

NOTE:
PROVIDE ACCESS PANELS IN CEILING @ DAMPERS WHERE REQUIRED FOR BALANCING

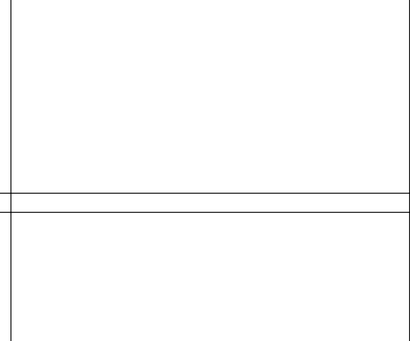
TYPICAL DUCT DETAILS

SCALE: N.T.S. | 4



TYPICAL MOUNTING HEIGHTS

SCALE: N.T.S. | 5



KEYNOTES:

(1A) FIRST LAYER DUCT WRAP
(1B) SECOND LAYER DUCT WRAP (WHERE OCCURS FOR 2-HR)
(2) STEEL BANDING 1/2" WIDE MIN. TYP
(3) TAPE LONGITUDINAL OVERLAP
(4) TAPE CIRCUMFERENTIAL
(5) 6" MIN WIDE COLLAR
(6) 3/4" WIDE FILAMENT TAPE
(7) LONGITUDINAL JOINT BUTT OR MIN 3" OVERLAP ON INNER LAYER, MIN 3" OVERLAP ON OUTER LAYER
(8) PERIMETER (LATERAL) JOINT BUTT OR MIN 3" OVERLAP ON INNER LAYER, MIN 3" OVERLAP ON OUTER LAYER
(9) METALLIC COMMERCIAL COOKING EXHAUST DUCT

NOTES:

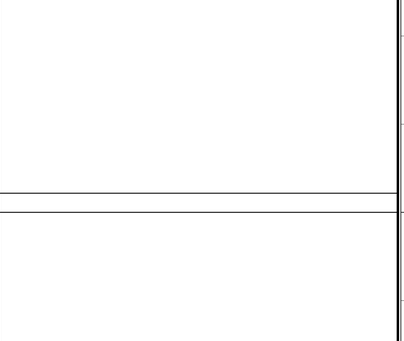
1. SYSTEM SHALL BE "3H" FIRE BARRIER DUCT WRAP 615+ COMMERCIAL KITCHEN GREASE DUCT SYSTEM (ESR-1255, CSFM 2440-0461:1122).
2. 1-HR OR 2-HR ZERO CLEARANCE TO COMBUSTIBLES FOR DUCTS 24" OR LESS.

GREASE DUCT

SCALE: N.T.S. | 6

VENTED ROOF EXHAUSTER DETAIL

SCALE: N.T.S. | 7



NOTE:
SEAL EXTERIOR EXPOSED SUCTION LINE INSULATION WEATHERTIGHT WHITE ELASTOMETRIC COATING.

S.H.P. UNIT DETAIL

SCALE: NTS | 8

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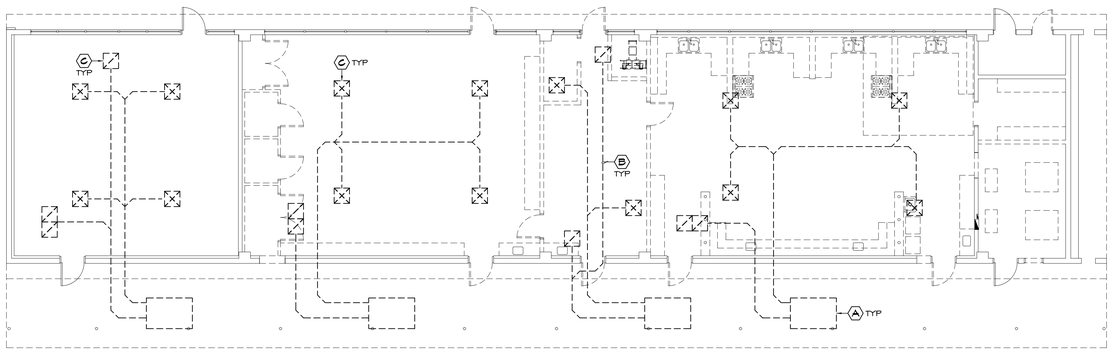
Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
HVAC DETAILS

Document Date	Project Number
09-12-18	18-23CX
Date Last Revised	Sheet Number
	M0.2



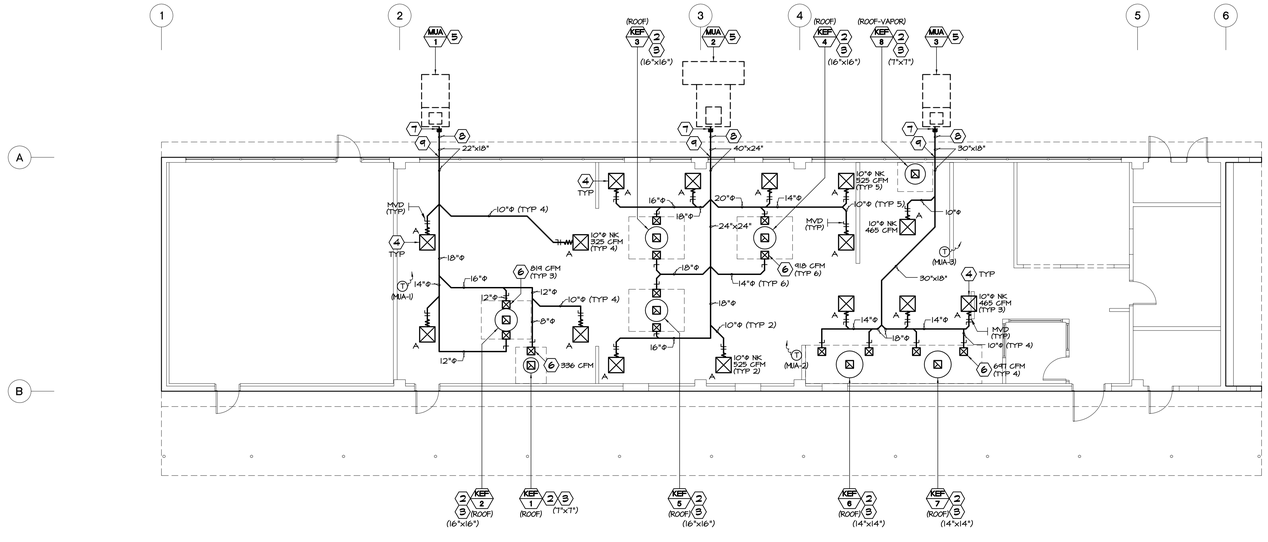
HVAC PLAN DEMOLITION

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

N

DEMOLITION KEYNOTES:

- (A) REMOVE EXISTING HVAC UNIT ON ROOF
- (B) REMOVE EXISTING HOOD EXHAUST AND MAKE-UP AIR DUCTS
- (C) REMOVE AND REPLACE EXISTING RETURN AIR GRILLE / EXHAUST GRILLE



HVAC PLAN - KITCHEN EXHAUST FANS / MAKE-UP AIR UNITS

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

N

KEYNOTES:

1. GREASE HOOD EXHAUST AIR DUCTS UTR (-/M0.2)
2. GREASE HOOD (OR VAPOR HOOD) EXHAUST FAN ON ROOF
3. CONNECT TO GREASE HOOD (OR VAPOR HOOD) EXHAUST OUTLET (SIZE PER FOOD SERVICE KITCHEN DRAWINGS). ROUTE EXHAUST DUCT UTR TO KEF TRANSITION TO SIZE NOTED IN RISER
4. CEILING DIFFUSER - SEE AIR DISTRIBUTION SCHEDULE & DETAILS
5. MUA UNIT @ GRADE. MFR's ROOF CURBS BOLTED TO CONCRETE SLAB. (-/M0.2) SET CURB ON MASTIC SEALANT
6. CONNECT TO HOOD MUA DUCT CONNECTION - CFM SHOWN
7. FLEXIBLE DUCT CONNECTOR @ UNIT DISCHARGE
8. EXTERIOR DUCT TO BE LINED 1" (SIZE SHOWN IS NET, ADD FOR LINER)
9. DUCT PENETRATION OF EXTERIOR WALL TO BE FLASHED, COUNTERFLASHED & SEALED WATERTIGHT w/NON-HARDENING SEALANT

NOTES:

1. SEE SHEET (5/M0.2) FOR TYPICAL DUCT DETAILS.
2. SEE SHEET (-/M0.1) FOR HANGER AND BRACING NOTES.
3. UNIT LOCATIONS ARE APPROXIMATE SEE ARCHITECTURAL SHEET (B/A9) FOR EXACT MECH. EQUIPMENT LOCATIONS.
4. PROVIDE SMOKE DETECTOR(S) WIRED TO SHUT DOWN A.C. UNIT INDOOR AIR FANS UPON DETECTION - TYPICAL ON ALL UNITS.
5. SEE FOOD SERVICE DRAWINGS FOR GREASE & VAPOR HOOD DETAILS, MANTAIN HOOD MFR CLEARANCES TO CEILING DIFFUSERS

REGISTERED PROFESSIONAL ENGINEER VICTOR NEWMAN NO. 23110 Exp. 9/30/2020 MECHANICAL STATE OF CALIFORNIA

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Project Title

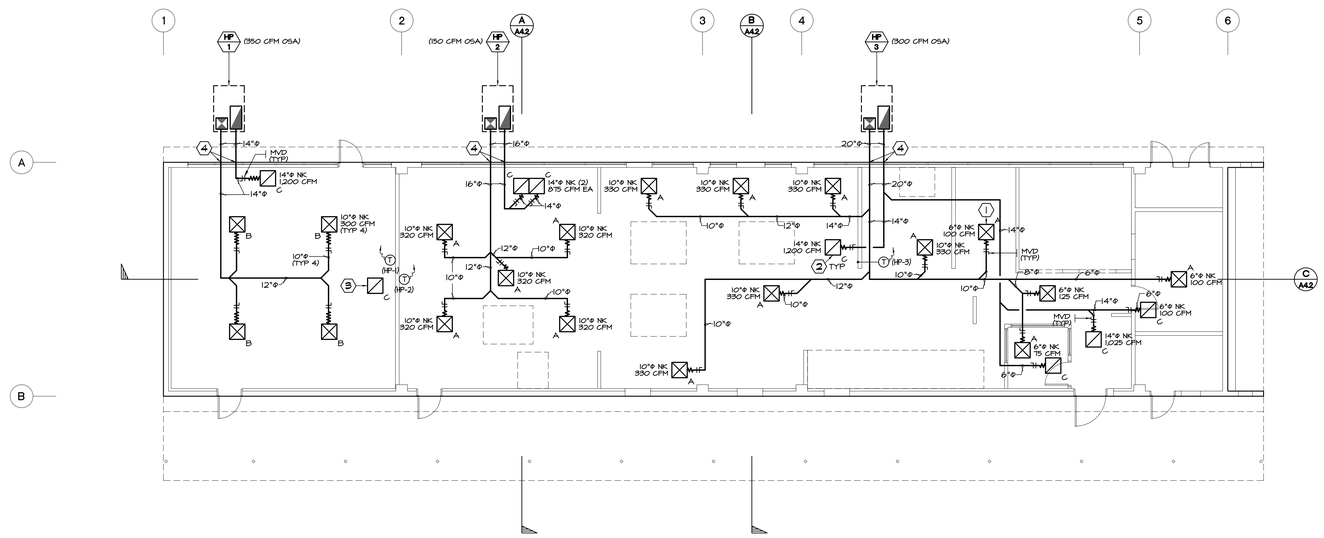
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title

HVAC PLAN - EXHAUST FANS / MAKE-UP AIR

LICENSED ARCHITECT JIMMIE T. SANDERS No. C-17644 RENEWAL DATE 08-31-19 STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-230X
Date Last Revised	Sheet Number
	M1



KEYNOTES:

1. CEILING DIFFUSER - SEE AIR DISTRIBUTION SCHEDULE & DETAILS
2. RETURN AIR GRILLE / EXHAUST GRILLE - SEE DETAILS
3. 10"ø RELIEF DUCT UP THRU CEILING TO VENTILATED ATTIC. PROVIDE MVD IN RISER
4. DUCT PENETRATION OF EXTERIOR WALL TO BE FLASHED, COUNTERFLASHED & SEALED WATERTIGHT W/NON-HARDENING SEALANT

NOTES:

1. SEE SHEET M2.1 FOR TYPICAL DUCT DETAILS.
2. SEE SHEET M0.1 FOR HANGER AND BRACING NOTES.
3. UNIT LOCATIONS ARE APPROXIMATE SEE ARCHITECTURAL SHEET A9 FOR EXACT MECH. EQUIPMENT LOCATIONS.
4. PROVIDE SMOKE DETECTOR(S) WIRED TO SHUT DOWN A.C. UNIT INDOOR AIR FANS UPON DETECTION - TYPICAL ON ALL UNITS.
5. COORDINATE LOCATION OF S.A. & R.A. DUCTS WITH M1A DUCTS SHOWN ON M1

REGISTERED PROFESSIONAL ENGINEER
Victor Manno
NO. 23110
EXP. 9/30/2020
MECHANICAL
STATE OF CALIFORNIA

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760 353 5440 FAX 760 353 5442

Project Title

CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title

HVAC PLAN - HEAT PUMP SYSTEM

LICENSED ARCHITECT
JIMMIE L. SANDERS
No. C-17644
RENEWAL DATE
7-31-19
STATE OF CALIFORNIA

Document Date	Project Number
09-12-18	18-25CX
Date Last Revised	Sheet Number
	M1.1

HVAC PLAN - HEAT PUMP SYSTEM

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

A

STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 1 of 4)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

A. MECHANICAL COMPLIANCE DOCUMENTS & WORKSHEETS (check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

YES	NO	Comp. Doc./Worksheet #	Title
☑	☐	NRCC-MCH-01-E (Part 1 of 3)	Certificate of Compliance, Declaration. Required on plans for all submittals.
☑	☐	NRCC-MCH-01-E (Part 2 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-02-A to 11-A). Required on plans for all submittals.
☑	☐	NRCC-MCH-01-E (Part 3 of 3)	Certificate of Compliance, Required Acceptance Tests (MCH-12-A to 18-A). Required on plans where applicable.
☑	☐	NRCC-MCH-02-E (Part 1 of 2)	Mechanical Dry Equipment Summary is required for all submittals with Central Air Systems. It is optional on plans.
☑	☐	NRCC-MCH-02-E (Part 2 of 2)	Mechanical Wet Equipment Summary is required for all submittals with chilled water, hot water or condenser water systems. It is optional on plans.
☑	☐	NRCC-MCH-03-E	Mechanical Ventilation and Reheat is required for all submittals with multiple zone heating and cooling systems. It is optional on plans.
☑	☐	NRCC-MCH-07-E (Part 1 of 2)	Power Consumption of Fans. Required on plans where applicable
☑	☐	NRCC-MCH-07-E (Part 2 of 2)	Power Consumption of Fans, Declaration. Required on plans where applicable

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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 2 of 4)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

B. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required compliance documents)

Test Performed By:

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of systems.

Installing Contractor:
The contractor who installed the equipment is responsible to either conduct the acceptance test themselves or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible.

Enforcement Agency:
Plancheck – The NRCC-MCH-01-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked.
Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-09-A	MCH-10-A	MCH-11-A
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
CARRIER HP-1	1	☑	☑	☐	☐	☐	☑	☐	☐	☐	☐
CARRIER HP-2	1	☑	☑	☐	☐	☐	☑	☐	☐	☐	☐
CARRIER HP-3	1	☑	☑	☐	☑	☐	☑	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 3 of 4)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

C. MECHANICAL HVAC ACCEPTANCE FORMS (check box for required compliance documents)

Test Performed By:

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of systems.

Installing Contractor:
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Enforcement Agency:
Plancheck – The NRCC-MCH-01-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked.
Inspector - Before occupancy permit is granted all newly installed process systems must be tested to ensure proper operations.

Test Description		MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A
Equipment Requiring Testing or Verification	# of Units	Fault Detection & Diagnostics for DX Units	Automatic Fault Detection & Diagnostics for Air & Zone	Distributed Energy Storage DX AC Systems	Thermal Energy Storage (TES) Systems	Supply Air Temperature Reset Controls	Condenser Water Reset Controls	ECMS
CARRIER HP-1	1	☐	☐	☐	☐	☐	☐	☐
CARRIER HP-2	1	☐	☐	☐	☐	☐	☐	☐
CARRIER HP-3	1	☑	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐
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STATE OF CALIFORNIA
MECHANICAL SYSTEMS
CEC-NRCC-MCH-01-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-01-E
Mechanical Systems	(Page 4 of 4)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: **Brandon Harinton**	Documentation Author Signature: Br Har
Company:	Signature Date: 11/26/2018
Address: **4467 35th St. Unit A**	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: **San Diego, CA, 92116**	Phone: **858.602.6731**

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Jimmy Sanders	Responsible Designer Signature:
Company : Sanders, Inc.	Date Signed: 11/26/16
Address: 1102 Industry Way, Suite A	License: C-7644
City/State/Zip: El Centro, CA 92243	Phone: 760-353-5440

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 1 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

A. Mechanical Ventilation and Reheat

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)						AREA BASIS			OCCUPANCY BASIS			ROOM BASIS	MINIMUM		VAV Reheated Primary Air CFM			VAV Deadband Primary Air CFM		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
ZONE/ SYSTEM/ VAV BOX TAG	DESIGN PRIMARY COOLING AIRFLOW (CFM)	DESIGN PRIMARY DEADBAND AIRFLOW (CFM)	DESIGN PRIMARY HEATING AIRFLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDITIONED AREA (ft^2)	MIN CFM PER AREA	MIN CFM BY AREA	NUM. OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCUPANT	MIN CFM BY ROOM	REQ'D VENT AIRFLOW (CFM)	COMPLIES?	PERCENTAGE BASED DESIGN PRIMARY COOLING AIR (CFM)	MAXIMUM REHEAT (CFM)	COMPLIES?	% BASED DESIGN PRMY COOLING AIR (CFM)	MAX DEAD-BAND AIRFLOW (CFM)	COMPLIES?
HP-1						849	0.38	318	21.2	15.0	318		318	☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		318	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
HP-2						758	0.15	114	21.7	15.0	325		325	☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		325	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
HP-3						2,183	0.15	327	24.3	15.0	364		364	☒ Pass ☐ Fail			☐ Pass ☐ Fail ☒ N/A			☐ Pass ☐ Fail ☒ N/A
											Total		364	☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A
														☐ Pass ☐ Fail			☐ Pass ☐ Fail ☐ N/A			☐ Pass ☐ Fail ☐ N/A

STATE OF CALIFORNIA
MECHANICAL VENTILATION AND REHEAT
CEC-NRCC-MCH-03-E (Revised 05/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-03-E
Mechanical Ventilation & Reheat	(Page 2 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: **Brandon Harinton**	Documentation Author Signature: Br Har
Company:	Signature Date: 11/26/2018
Address: **4467 35th St. Unit A**	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: **San Diego, CA, 92116**	Phone: **858.602.6731**

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Jimmy Sanders	Responsible Designer Signature:
Company : Sanders, Inc.	Date Signed: 11/26/16
Address: 1102 Industry Way, Suite A	License: C-7644
City/State/Zip: El Centro, CA 92243	Phone: 760-353-5440

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 1 of 3)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

A. MECHANICAL COMPLIANCE FORMS & WORKSHEETS
(indicate if worksheet is included)

For detailed instructions on the use of this and all Energy Standards compliance documents, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all compliance documents to be incorporated onto the building plans. The NRCC-MCH-04-E and NRCC-MECH-05-E are alternative compliance documents to NRCC-MCH-01-E, NRCC-MCH-02-E and NRCC-MCH-03-E for projects using only single zone packaged HVAC systems.

YES	NO	Form	Title
✓		NRCC-MCH-04-E (1 of 2)	Certificate of Compliance. Required on plans when used.
✓		NRCC-MCH-04-E (2 of 2)	Mechanical Acceptance Tests. Required on plans when used.
✓		NRCC-MCH-05-E (1 of 2)	HVAC Prescriptive Requirements. It is required on plans when used.
✓		NRCC-MCH-05-E (2 of 2)	Mechanical SWH Equipment Summary is required for all submittals with service water heating, pools or spas. It is required on plans where applicable.

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 2 of 3)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

Designer:
This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and list all equipment that require an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this compliance document will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Enforcement Agency:
Systems Acceptance. Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Systems Acceptance. Before occupancy permit is granted. All newly installed HVAC equipment must be tested using the Acceptance Requirements.
The NRCC-MCH-04-E compliance document is not considered a completed document and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for ALL newly installed and replaced equipment. In addition a Certificate of Acceptance documents shall be submitted to the building department that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of Section 10-103(b) and Title 24 Part 6. The building inspector must receive the properly filled out and signed compliance documents before the building can receive final occupancy.

Test Description		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-11-A	MCH-12-A	MCH-14-A	MCH-18-A	Test Performed By:
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Automatic Demand Shed Control	FDD for Packaged DX Units	Distributed Energy Storage DX AC Systems	Energy Management Control System	
CARRIER H	1	✓	✓				✓					
CARRIER H	1	✓	✓				✓					
CARRIER H	1	✓	✓		✓		✓		✓			

STATE OF CALIFORNIA
REQUIRED ACCEPTANCE TESTS
CEC-NRCC-MCH-04-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 3 of 3)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: **Brandon Harinton**	Documentation Author Signature: Br Har
Company:	Signature Date: 11/26/2018
Address: **4467 35th St. Unit A**	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: **San Diego, CA, 92116**	Phone: **858.602.6731**

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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Responsible Designer Name: Jimmy Sanders	Responsible Designer Signature:
Company : Sanders, Inc.	Date Signed: 11/26/16
Address: 1102 Industry Way, Suite A	License: C-7644
City/State/Zip: El Centro, CA 92243	Phone: 760-353-5440

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 1 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

Equipment Tag(s)[1]		HP-1		HP-2		HP-3	
MANDATORY MEASURES	*T-24 Sections*	*Requirement*[3]	*As Scheduled*[3]	*Requirement*[3]	*As Scheduled*[3]	*Requirement*[3]	*As Scheduled*[3]
Heating Equipment Efficiency[4]	110.1 or 110.2(a)	7.70 HSPF	8.10 HSPF	7.70 HSPF	8.10 HSPF	3.30 HSPF	8.10 HSPF
Cooling Equipment Efficiency[4]	110.1 or 110.2(a)	13 SEER	15.8 SEER / 1	13 SEER	15.8 SEER / 12	13 SEER	15.6 SEER / 12.
Thermostats[5]	110.2(b), 110.2(c)	Setback	Setback	Setback	Setback	Setback	Setback
Furnace Standby Loss Control[6]	110.2(d)	n/a		n/a		n/a	
Low Leakage AHU	110.2(f)	NR	none	NR	none	NR	none
Ventilation[7]	120.1(b)	318	318	325	325	364	364
Demand Control Ventilation[8]	120.1(c)4	NR	No	NR	No	NR	No
Occupant Sensor Ventilation Control[8]	120.1(c)5, 120.2(e)3						
Shutoff and Reset Controls[9]	120.2(e)	Req	Programmable	Req	Programmable	Req	Programmable S
Outdoor Air and Exhaust Damper Control	120.2(f)	Req	Auto	Req	Auto	Req	Auto
Automatic Demand Shed Controls	120.2(h)	NR	none	NR	none	NR	none
Economizer FDD	120.2(i)	NR	No	NR	No	Req	Yes
Duct Insulation	120.4	R-8	R-8.0	R-8	R-8.0	R-8	R-8.0
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4 (a & b)	140.4(a & b)	41,797 Btu/hr 62,271 Btu/hr	28,793 Btu/hr 37,588 Btu/hr	33,671 Btu/hr 47,177 Btu/hr	28,793 Btu/hr 37,245 Btu/hr	60,804 Btu/hr 101,312 Btu/h	43,033 Btu/hr 57,281 Btu/hr
Economizer	140.4(e)	NR	No Economize	NR	No Economizer	Req	Fixed Temp (Inte
Electric Resistance Heating[10]	140.4(g)	No	No	No	No	No	No
Duct Leakage Sealing and Testing.[11]	140.4(l)	NR	No	NR	No	NR	No

Notes:
1. *Provide equipment tags (e.g. AC1 or AC1 to 10). Multiple units of the same make and model with the same application and accessories can be grouped together.*
2. *Enter the following information as appropriate: Unit Manufacturer; Unit Model Number (including all accessories); Description of the unit (e.g. gas-pack or heat pump; rated heating capacity (enter "N/A" if no heating); and, rated cooling capacity (enter "N/A" if no cooling). For unit capacities include the units (e.g. kBtuh or tons).*
3. *For each requirement, enter the minimum requirement from the Standard In the left column (under "Standard Requirement"). In the right column (under "As Scheduled") enter the value for the units as specified.*
4. *Where there is more than one requirement (e.g. full and part load efficiency) enter both with the appropriate labels (e.g. COP and IEER).*
5. *In the left column identify the thermostatic requirements from the standard (e.g. programmable setback thermostat or heat pump with electric heat), . In the right column indicate the capabilities of the thermostat as scheduled.*
6. *If the unit has a furnace which is rated at ≥225,000 Btuh of capacity, indicate the rated standby loss and ignition source (e.g. IID). If there is no furnace or the unit is rated for <225,000 Btuh indicate "N/A".*
7. *In the left column, enter both the required ventilation value from Table 120.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A" in the left column and "the space is naturally ventilated" in the right column.*
8. *If the space is required to have either DCV or Occupant Sensor Ventilation Control indicate "required" in the left column (otherwise indicate "N/A" in the left column). If either DCV or Occupant Sensor Ventilation Control is provided indicate "provided" in the right column (otherwise indicate "N/A" in the right column)*
9. *In the left column indicate the required time controls from the standard. In the right column identify the device that provides this functionality (e.g. EMCS or programmable timeclock).*
10. *Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.*
11. *If duct leakage sealing and testing is required, a **MCH-04-A** compliance document must be submitted.*

STATE OF CALIFORNIA
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS
CEC-NRCC-MCH-05-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-05-E
Requirements for Packaged Single-Zone Units	(Page 2 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: **Brandon Harinton**	Documentation Author Signature: Br Har
Company:	Signature Date: 11/26/2018
Address: **4467 35th St. Unit A**	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: **San Diego, CA, 92116**	Phone: **858.602.6731**

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Responsible Designer Name: Jimmy Sanders	Responsible Designer Signature:
Company: Sanders, Inc.	Date Signed: 11/26/16
Address: 1102 Industry Way, Suite A	License: C-7644
City/State/Zip: El Centro, CA 92243	Phone: 760-353-5440

DIVISION 15
CONSULTING SERVICES, INC.
11180 Turquoise Circle
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VICTOR NEWMAN
Victor Newman
NO. 23110
Exp. 9/30/2020

APPROVALS

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1102 INDUSTRY WAY, SUITE A
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Project Title
CALEXICOUNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
ENERGY CALCULATIONS

JIMMIE A. SANDERS
No. C-7644
RENEWAL DATE
7-31-19

Document Date	11-26-18
Date Last Revised	
Project Number	18-25CX
Sheet Number	M2.1

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/18) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Dry & Wet System Requirements	(Page 1 of 3)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

A. Equipment Tags and System Description[1] – Dry Systems		HP-1		HP-2		HP-3	
MANDATORY MEASURES	*T-24 Sections*	*Reference to the Requirements in the Contract Documents[2]*					
Heating Equipment Efficiency[3]	110.1 or 110.2(a)						
Cooling Equipment Efficiency[3]	110.1 or 110.2(a)						
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)						
Furnace Standby Loss Control	110.2(d)						
Low Leakage AHUs	120.2(f)						
Ventilation[4]	120.1(c)						
Demand Control Ventilation[5]	120.1(c)4						
Occupant Sensor Ventilation Control[6]	120.1(c)5, 120.2(p)3						
Shutoff and Reset Controls[7]	120.2(e)						
Outdoor Air and Exhaust Damper Control	120.2(f)						
Isolation Zones	120.2(g)						
Automatic Demand Shed Controls	120.2(h)						
Economizer FDD	120.2(i)						
Duct Insulation	120.4						
PRESCRIPTIVE MEASURES							
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y Y/N		Y Y/N		Y Y/N	
Supply Fan Pressure Control	140.4(c)						
Simultaneous Heat/Cool[8]	140.4(d)						
Economizer	140.4(e)						
Heat and Cool Air Supply Reset	140.4(f)						
Electric Resistance Heating[9]	140.4(g)						
Duct Leakage Sealing and Testing[10]	140.4(i)						

Notes:
1. Provide equipment tags (e.g. AHU 1 to 10) and system description (e.g. Single Duct VAV reheat) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Tit le 20 1601 et seq.
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.
5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.
6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications and the sequence of operation
7. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required). For all systems identify the specification for the thermostats and time clocks (if applicable).
8. Identify where the heating, cooling and deadband airflows are scheduled for this system. include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

STATE OF CALIFORNIA
HVAC DRY & WET SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 01/18) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Wet System Requirements	(Page 2 of 3)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

B. Equipment Tags and System Description[1] – Wet Systems					
MANDATORY MEASURES	*T-24 Sections*	*Reference to the Requirements in the Contract Documents[2]*			
Heating Hot Water Equipment Efficiency[3]	110.1				
Cooling Chilled and Condenser Water Equipment Efficiency[3]	110.1, 140.4(l)				
Open and Closed Circuit Cooling Towers conductivity or flow-based controls	110.2(e) 1				
Open and Closed Circuit Cooling Towers Maximum achievable Cycles of Concentration (LSI)[4]	110.2(e) 2				
Open and Closed Circuit Cooling Towers Flow Meter with analog output	110.2(e) 3				
Open and Closed Circuit Cooling Towers Overflow Alarm	110.2(e) 4				
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators	110.2(e) 5				
Pipe Insulation	120.3				
PRESCRIPTIVE MEASURES					
Cooling Tower Fan Controls	140.4(h)2, 140.4(h)5	Y/N	Y/N	Y/N	
Cooling Tower Flow Controls	140.4(h)3				
Centrifugal Fan Cooling Towers[5]	140.4(h)4				
Air-Cooled Chiller Limitation[6]	140.4(j)				
Variable Flow System Design	140.4(k)				
Chiller and Boiler Isolation	140.4(k)				
CHW and HHW Reset Controls	140.4(k)				
W,HP Isolation Valves	140.4(k)				
VSD on CHW, CW & WSHP Pumps >5HP	140.4(k)				
DP Sensor Location	140.4(k)				

Notes:
1. Provide equipment tags (e.g. CH 1 to 3) or system description (e.g. CHW loop) as appropriate. Multiple units with common requirements can be grouped together.
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. For chillers operating at non-standard efficiencies provide the Kadj values. For chillers also note whether the efficiencies are Path A or Path B.
4. Identify if cooling towers have propeller fans. If towers use centrifugal fans document which exception is used.
5. If air-cooled chillers are used, document which exceptions have been used to comply with 140.4(j) and the total installed design capacity of the air-cooled chillers in the chilled water plant.
6. Identify the existence of a completed MCH-06-E when open or closed circuit cooling towers are specified to be installed, otherwise enter "N/A".

STATE OF CALIFORNIA
HVAC SYSTEM REQUIREMENTS
CEC-NRCC-MCH-02-E (Revised 08/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-02-E
HVAC Wet System Requirements	(Page 3 of 3)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Brandon Harinton	Documentation Author Signature:	
Company:		Signature Date:	11/26/2018
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City/State/Zip:	San Diego, CA, 92116	Phone:	858.602.6731

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Responsible Designer Name:	Jimmy Sanders	Responsible Designer Signature:	
Company:	Sanders, Inc.	Date Signed:	11/26/18
Address:	1102 Industry Way, Suite A	License:	C-7644
City/State/Zip:	El Centro, CA 92243	Phone:	760-353-5440

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/18) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
HP-3 - Supply Fan	0.770	85.5 %	97.0 %	*1.0*	693

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01 TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	693	W
	02 SUPPLY DESIGN AIRFLOW	2,400	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP) on line 5.	03 TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	0.289	W/CFM
	04 SP_x		in W.C or Pa
	05 SP_T		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06 Fan Adjustment = $1-(SP_x - 1)/SP_T$		
C) Calculate Adjusted Fan Power Index and enter on row 7	07 ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	0.289	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/18) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
HP-1 - Supply Fan	0.770	85.5 %	97.0 %	*1.0*	693

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01 TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	693	W
	02 SUPPLY DESIGN AIRFLOW	1,600	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP) on line 5.	03 TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	0.433	W/CFM
	04 SP_x		in W.C or Pa
	05 SP_T		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06 Fan Adjustment = $1-(SP_x - 1)/SP_T$		
C) Calculate Adjusted Fan Power Index and enter on row 7	07 ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	0.433	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised MM/YY) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 2 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Brandon Harinton	Documentation Author Signature:	
Company:		Signature Date:	11/26/2018
Address:	4467 35th St. Unit A	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	San Diego, CA, 92116	Phone:	858.602.6731

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Jimmy Sanders	Responsible Designer Signature:	
Company:	Sanders, Inc.	Date Signed:	11/26/18
Address:	1102 Industry Way, Suite A	License:	C-7644
City/State/Zip:	El Centro, CA 92243	Phone:	760-353-5440

STATE OF CALIFORNIA
FAN POWER CONSUMPTION
CEC-NRCC-MCH-07-E (Revised 01/18) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-07-E
Power Consumption of Fans Requirements	(Page 1 of 2)
Project Name: Calexico HS CTE Mod	Date Prepared: 11/26/2018

A. Constant Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Constant Volume Fan Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS A02 x A04 x 746 / (A03a x A03b)
HP-2 - Supply Fan	0.770	85.5 %	97.0 %	*1.0*	693

B. Variable Air Volume Fan Systems

NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp of Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See Power Consumption of fans §140.4(c).

01 FAN DESCRIPTION	02 DESIGN BRAKE HP	03 EFFICIENCY MOTOR	03 EFFICIENCY DRIVE	04 NUMBER OF FANS	05 PEAK WATTS B02 x B04 x 746 / (B03a x B03b)

C. Totals and Adjustments

FILTER PRESSURE ADJUSTMENT Equation 140.4-A in §140.4(c) of the Building Energy Efficiency Standards.	01 TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)	693	W
	02 SUPPLY DESIGN AIRFLOW	1,600	CFM
A) If filter pressure drop (SP_x) is greater than 1 inch W. C. or 245 Pascal then enter SP_x on line 4. Enter Total Fan pressure drop across the fan (SP) on line 5.	03 TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)[1]	0.433	W/CFM
	04 SP_x		in W.C or Pa
	05 SP_T		in W.C or Pa
B) Calculate Fan Adjustment and enter on line 6.	06 Fan Adjustment = $1-(SP_x - 1)/SP_T$		
C) Calculate Adjusted Fan Power Index and enter on row 7	07 ADJUSTED FAN POWER INDEX (Line 3 x Line 6)[1]	0.433	W/CFM

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 W/cfm for Constant Volume systems or 1.25 W/cfm for VAV systems.

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REGISTERED PROFESSIONAL ENGINEER — VICTOR NEWMAN — No. 23110 — Exp. 9/30/2020 — MECHANICAL — STATE OF CALIFORNIA

APPROVALS

Sanders, INC.
Architecture/Engineering
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EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
ENERGY CALCULATIONS

LICENSED ARCHITECT — JIMMIE L. SANDERS — No. C-7644 — RENEWAL DATE 7-31-19 — STATE OF CALIFORNIA

Document Date	Project Number
11-26-18	18-25CX
Date Last Revised	Sheet Number
	M2.2

LIGHTING/SWITCHING SYMBOLS

- LIGHTING CONTROL PANEL, SEE CONTROL DETAIL AND SCHEDULES FOR MORE INFORMATION.
- PUSH BUTTON LOW VOLTAGE OVERRIDE CONTROL SWITCH
- ZONE CONTROLLED (UPPER CASE LETTER DENOTES ZONE CONTROLLED)
- SWITCH LEG CONTROLLED (LOWER CASE LETTER DENOTES SWITCH LEG CONTROLLED)
- S3S0 — SWITCH, SINGLE POLE 20A, MTD. 48" AFF TO TOP. DESIGNATION TO CONTROL LIGHTING IN CIRCUIT LEGS. DEVICE: WHITE COVERPLATE: WHITE
  2- DOUBLE POLE — K - KEYED SWITCH
  3- THREE WAY — T - MANUAL MOTOR STARTER WITH THERMAL OVERLOADS
  4- FOUR WAY — D - LOAD RATED DIMMER
  PL - PILOT LIGHT — PB - PUSHBUTTON
- WALL MOUNTED MOTION CONTROLLED LIGHTING SWITCH WITH INTEGRAL BI-LEVEL SWITCHING. DEVICE - WHITE MTD. 48" AFF TO TOP.
- WALL MOUNTED MOTION SENSOR/MANUAL SWITCH-RAISE/LOWER/ON/OFF DEVICE - WHITE MTD. 48" AFF TO TOP.
- CEILING MOUNTED ULTRASONIC MOTION SENSOR. DEVICE: WHITE
- WALL MOUNTED DUAL-TECHNOLOGY MOTION SENSOR. DEVICE: WHITE
- 1-100-A — FIXTURE CALLOUT:
  TYPE (SEE LIGHT FIXTURE SCHEDULE)
  WATTAGE
  QUANTITY
- RELAY
- TIME CLOCK
- MOTION SENSOR POWER PACK
- EPO — EMERGENCY POWER OFF PUSHBUTTON, MOUNTED AT +48" U.O.N.
- PHOTOCELL

TEL/DATA SYMBOLS

- DATA OUTLET WITH TRIM RING, PULLSTRING TO ACCESSIBLE CEILING SPACE. +18" A.F.F. TO CENTER.
- TELEPHONE OUTLET WITH TRIM RING, PULLSTRING TO ACCESSIBLE CEILING SPACE. +18" A.F.F. TO CENTER.
- TELECOMMUNICATIONS OUTLET WITH TRIM RING, PULLSTRING TO ACCESSIBLE CEILING SPACE +18" A.F.F. TO CENTER.
- TELECOMMUNICATION OUTLET FLUSH FLOOR MOUNTED ON FIRE RATED POKE-THRU.
- SPEAKER BACK BOX LOCATION
- INTERCOM J-BOX LOCATION
- ELECTROMAGNETIC DOOR HOLDER
- INTERCOM LOCATION
- CARD READER
- ELECTRIC DOOR STRIKE
- 3/4" FIRE RATED PLYWOOD BACKBOARD WITH #6AWG GROUND TO BUILDING SYSTEM GROUND.
- CABLE TRAY PER PLANS. COORDINATE ROUTING WITH OTHER DISIPLINES.

GENERAL NOTES

1. ALL ELECTRICAL DEVICES AND UTILIZATION EQUIPMENT SHALL BE LISTED BY AN APPROVED TESTING AGENCY
2. ALL WORK TO COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE.
3. USE COPPER CONDUCTORS ONLY.
4. THERMOSTATS, SWITCHES AND/OR RECEPTACLES INSTALLED IN RESTROOMS OR OTHER AREAS EQUIPPED FOR THE DISABLED, SHALL BE LOCATED AT NOT TO EXCEED 48" TO CENTER OF DEVICE FROM THE FLOOR.
5. CONTRACTOR IS TO VERIFY MOUNTING HEIGHTS OF ALL DEVICES PRIOR TO MOUNTING
6. VERIFY ROUTING OF ANY SURFACE MOUNTED CONDUITS PRIOR TO INSTALLATION
7. REVIEW ALL PLANS BY OTHER TRADES AND PROVIDE ADDITIONAL WORK AS REQUIRED NOT OUTLINED IN THESE DOCUMENTS
8. COORDINATE ALL DIMMING FLUORESCENT BALLASTS WITH DIMMING SYSTEM, PROVIDE WIRE COUNT AS REQUIRED. USE ADVANCE MARK X BALLASTS.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE MULTI-POLE CIRCUIT BREAKERS WITH COMMON TRIP OR U.L. LISTED HANDLE TIES FOR ALL MULTI-POLE CIRCUITS WITH SHARED NEUTRAL

POWER SYMBOLS

- JUNCTION BOX
- WALL MOUNTED JUNCTION BOX.
- DUPLEX RECEPTACLE MTD 18" AFF TO CENTER COVERPLATE COLOR: WHITE

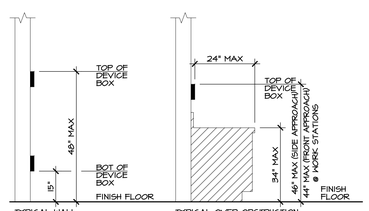
DEVICE TYPE		DEVICE COLOR
STANDARD		WHITE
IG	ISOLATED GROUND	ORANGE
D	DEDICATED 20A RATED	GRAY
UPS	15A OR 20A UPS	GRAY
EM	EMERGENCY	RED
T	TAMPER RESISTANT	WHITE

- GFI DUPLEX RECEPTACLE MTD 18" AFF TO CENTER COVERPLATE COLOR: WHITE
- WP — GFI DUPLEX WEATHERPROOF RECEPTACLE MTD 18" AFF TO CENTER, USE "IN USE" TYPE COVER PLATES
- DOUBLE DUPLEX RECEPTACLE MTD 18" AFF TO CENTER, SCHEDULE AS NOTED ABOVE.
- SPLIT WIRED 15A 1/2 HOT, 1/2 SWITCHED OUTLET COLOR: WHITE
- DUPLEX RECEPTACLE CONTROLLED BY OCCUPANCY SENSOR, MTD 18" AFF TO CENTER, SCHEDULE AS NOTED ABOVE
- DOUBLE DUPLEX RECEPTACLE WITH ONE DUPLEX CONTROLLED BY OCCUPANCY SENSOR, MTD 18" AFF TO CENTER, SCHEDULE AS NOTED ABOVE.
- 208V/1Ø RECEPTACLE, NEMA CONFIGURATION AS NOTED.
- 208V/3Ø RECEPTACLE, NEMA CONFIGURATION AS NOTED.
- FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE.
- FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE AND SINGLE GANG TEL/DATA RECEPTACLE.
- FLOOR BOX WITH DUPLEX RECEPTACLE AND SINGLE GANG TEL/DATA RECEPTACLE.
- SPECIALTY FLOOR BOX PER PLANS MULTIPLE GANG BOX, SEE SPECS.
- P — PEDESTAL MOUNTED DOUBLE DUPLEX RECEPTACLE MANUF: HUBBELL SA6668 W/STAINLESS STEEL COVERPLATES
- P — PEDESTAL MOUNTED DUPLEX RECEPTACLE MANUF: HUBBELL#SA6686 W/STAINLESS STEEL COVERPLATES
- WP — WEATHERPROOF GFI WORK OUTLET. PROVIDE CAST BOX W/STAINLESS STEEL WP COVER.
- EXTERNALLY OPERATED FUSED DISCONNECT SWITCH. PROVIDE PER NEMA RATING REQUIRED.
- COMBINATION FVNR MAGNETIC MOTOR STARTER AND DISCONNECT RATING AND POLES AS INDICATED. PROVIDE WITH OVERLOAD PER HORSEPOWER REQUIREMENTS, CPT, H.O.A. WITH PILOT LIGHTS, PROVIDE WITH (1) EACH N.O. AND N.C. AUX CONTACTS.
- FVNR MAGNETIC STARTER WITH OVERLOAD PER HORSEPOWER REQUIREMENTS, CPT, H.O.A. WITH PILOT LIGHTS, PROVIDE WITH (1) EACH N.O. AND N.C. AUX CONTACTS.
- MOTOR PROVIDED BY OTHERS.
- FLUSH MOUNTED PANELBOARD
- SURFACE MOUNTED PANELBOARD
- SURFACE MOUNTED LIGHTING CONTROL PANEL, U.O.N.
- FLUSH MOUNTED LIGHTING DIMMING PANEL, U.O.N.
- FIRE RATED DOUBLE DUPLEX POKE THROUGH, SEE DETAILS FOR MORE INFORMATION.
- FIRE RATED SYSTEMS FURNITURE FEED POKE THROUGH, SEE DETAILS FOR MORE INFORMATION.
- CLOCK HANGER OUTLET ONLY, MOUNTED AT +__" U.O.N.
- TV — TELEVISION SYSTEM OUTLET WITH JACK, WALL MOUNTED AT +12" U.O.N.
- MULTI-OUTLET ASSEMBLY, LENGTH AS INDICATED ON PLANS.
- FLEXIBLE CONDUIT
- WIRING OR CONDUIT CONCEALED IN WALL OR CEILING
- WIRING OR CONDUIT EXPOSED
- WIRING OR CONDUIT CONCEALED UNDERGROUND OR IN FLOOR
- RACEWAY OR WIREWAY ASSEMBLY DOWN
- RACEWAY OR WIREWAY ASSEMBLY UP
- HOMERUN TO PANEL, CIRCUITS AS INDICATED.
- UNDERGROUND HOMERUN TO PANEL, CIRCUITS AS INDICATED.
- CONCEALED EMT CONDUIT WITH THHN WIRE 2#12 AWG 3/4" C. MINIMUM
- CONCEALED EMT CONDUIT WITH THHN WIRE 3#12 AWG 3/4" MINIMUM. CHEVRONS INDICATE #10 CONDUCTORS
- FUSED SWITCH, SEE SINGLE LINE DIAGRAM FOR MORE INFORMATION.
- CIRCUIT BREAKER, SEE SINGLE LINE DIAGRAM FOR MORE INFORMATION.
- TRANSFORMER, SEE SINGLE LINE DIAGRAM FOR MORE INFORMATION.
- CURRENT TRANSFORMER
- AUTOMATIC TRANSFER SWITCH
- GROUNDING ELECTRODE
- SD — SMOKE DETECTOR

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AIC	AMPERES INTERRUPTING CAPACITY
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AF	AMP FRAME/AMP FUSE
AL	ALUMINUM
ARCH	ARCHITECT OR ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
C	CONDUIT WITH WIRE
CATV	CABLE TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CB	CIRCUIT BREAKER
CLF	CURRENT LIMITING FUSE
C.O.	CONDUIT ONLY WITH NYLON PULL CORD
CONTR	CONTRACTOR
CU	COPPER
CT	CURRENT TRANSFORMER
CW	COLD WATER
D	DEDICATED OUTLET
DC	DIRECT CURRENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DWGS	DRAWINGS
EA	EACH
EB	90-MINUTE BATTERY CONNECTED TO UNIT
EC	ELECTRICAL CONTRACTOR
EG	EMERGENCY GENERATOR CONNECTION
EF	EXHAUST FAN
ELECT	ELECTRICAL
ELEV	ELEVATION/ELEVATOR
EMT	ELECTRO-METALLIC TUBING
EXIST	EXISTING
FA	FIRE ALARM
FC	FOOT CANDLE
FIXT	FIXTURE
FLUOR	FLUORESCENT
FT.	FEET OR FOOT
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
GRD	GROUND
H	HORIZONTAL
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HR	HOUR
HT	HEIGHT
HZ	HERTZ
IG	ISOLATED GROUND BUS OR WIRE
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
J-BOX	JUNCTION BOX
KVA	KILO-VOLTAMPERE
KW	KILO-WATT
KWH	KILOWATT-HOUR
LF	LINEAL FEET
LTG	LIGHTING
LV	LOW VOLTAGE
MANUF	MANUFACTURER
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MIN	MINIMUM
MH	METAL HALIDE
MLO	MAIN LUGS ONLY
MTG	MOUNTING
MV	MERCURY VAPOR
N	NEUTRAL
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
P	PEDESTAL MOUNT
PB	PULL BOX
PC	PHOTOCELL CONTROL
PCTC	PHOTOCELL/TIMECLOCK CONTROL
PH	PHASE
PIV	POST INDICATING VALVE
PL	PILOT LIGHT
PVC	POLYVINYL CHLORIDE
PWR	POWER
PP	POWER POLE
QR	FIXTURE WITH QUARTZ RESTRIKE
QTY	QUANTITY
RECEPT	RECEPTACLE
REF	REFRIGERATOR
RGS	RIGID GALVANIZED STEEL
SD	SMOKE DETECTOR
SPEC	SPECIFICATION
SQ FT	SQUARE FEET OR SQUARE FOOT
SW	SWITCH
SWBD	SWITCHBOARD
TEMP	TEMPERATURE OR TEMPORARY
TV	TELEVISION
TEL, TELE	TELEPHONE
TC	TIME CLOCK
TRANSF	TRANSFORMER
TYP	TYPICAL
USPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT-AMPERE
WH	WATER HEATER
WP	WEATHER PROOF
XFMR	TRANSFORMER

TYPICAL MOUNTING HEIGHTS NO SCALE



FORWARD OR FRONT APPROACH FOR DEVICES MOUNTED ABOVE COUNTERS ASSUMES THAT DIRECTLY BELOW THE DEVICE, THE COUNTER HAS 30" MIN WIDTH x 27" MIN HIGH x 19" MIN DEEP CLEAR OPENING.

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 7-10. Chapter 13, 26, and 30.

1. All permanent equipment and components.
2. Temporary or movable equipment that is permanently attached (e.g. hard wired) to the building utility services such as electricity, gas or water.
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 plans. These components shall have flexible connections provided between the component and associated ductwork, piping, and conduit.

A. Components weighing less than 400 pounds and have a center of mass located 4 feet or less above the adjacent floor or roof level that directly support the component.
B. Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

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 forces and displacements prescribed in ASCE 7-10 Section 13.3 as defined in ASCE 7-10 Section 13.6.7, 13.6.8, 13.6.5.6 and CBC, Sections 1616A.1.23, 1616A.1.24, 1616A.1.25, and 1616A.1.26.

The method of showing bracing and attachments to the structure for the identified distribution system are as noted below. When bracing and attachments are based on a pre approved installation guide (e.g., SMACNA or OSHPD OPM), copies of the bracing system installation guide or manual shall be available on the jobsite prior to the start of and during the hanging and bracing of the distribution systems. The Structural Engineer of Record shall verify the adequacy of the structure to support the hanger and brace loads.

Mechanical Piping, Mechanical Ducts, Plumbing Piping and Electrical Distribution Sustems shall comply with applicable OSHPD preapproved OPM# OPM-0043-13.

KRUSE & ASSOCIATES
LIGHTING AND ELECTRICAL DESIGN
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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 04-116815
AC ____ FLS ____ SS ____
DATE ____

REGISTERED PROFESSIONAL ENGINEER
GERALD L. KRUSE
No. E015691
Exp. 08-30-20
ELECTRICAL
STATE OF CALIFORNIA

APPROVALS

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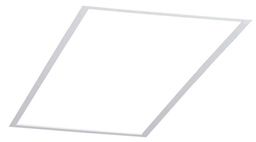
Project Title
CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title
SYMBOLS LIST

LICENSED ARCHITECT — JIMMIE SANDERS — 17644 — CALIFORNIA

Document Date	Project Number
16-36CU	16-36CU
Date Last Revised	**Sheet Number**
11/12/18	E0.1



FIXTURE TYPE "A"

FIXTURE TYPE "B"

FIXTURE TYPE "C"

FIXTURE TYPE "D"

FIXTURE TYPE "E"

LIGHT FIXTURE SCHEDULE

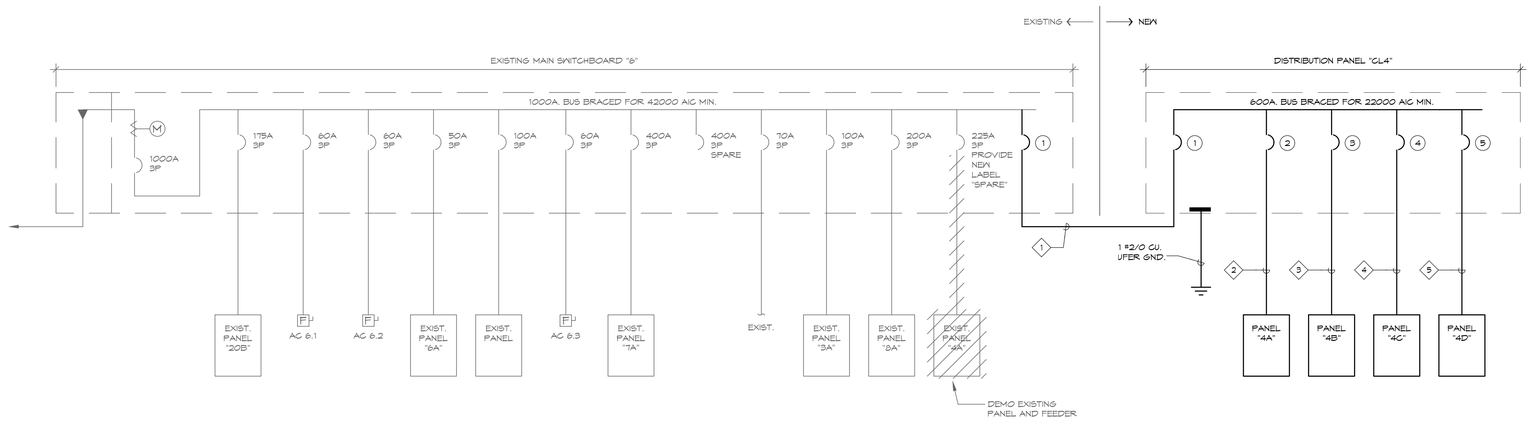
FIXTURE TYPE	FIXTURE SYMBOL	MANUFACTURER	CATALOG NUMBER	WATTS	VOLTS	MTG	LAMP TYPE	BUG	REMARKS
A		COLUMBIA	CFP24-5540	50	120	CR	50W LED	-	
B		KENALL	MLHA8-48-R-MW-PP-48L35K-DCC-120	45	120	CS	45W LED	-	
C		COLUMBIA	LCAT24-35VNG-EU	28	120	CR	28W LED	-	
D		COLUMBIA	LCAT24-40LNG-EU	36	120	CR	36W LED	-	
E	⊗	DUAL LITE	LEGSGWE	5	120	CR	FURNISHED WITH FIXTURE	-	(1)

MOUNTING TYPES:

WS-WALL SURFACE, WR-WALL RECESSED, CS-CEILING SURFACE, CR-CEILING RECESSED, CH-CHAIN, PN-PENDANT, U-UNIVERSAL, G-GROUND, P-POLE, UC-UNDER CABINET, T-TRACK, CB-CABLE, TR-TRELLIS, C-COVE

NOTES:

(1) EXIT SIGN PROVIDED WITH EMERGENCY BATTERY PACK.



POWER SINGLE LINE DIAGRAM

NO SCALE

DEVICE NUMBER	C.B. OR S.W. SIZE	FUSE SIZE	FUSE TYPE	FEEDER NUMBER	CONDUITS & CONDUCTORS							
					CONDUIT TYPE	CONDUIT SIZE	CNDCTR. QUANTITY	CNDCTR. SIZE	CNDCTR. TYPE	GND. CU.	LENGTH	0/0 V.D.
(1)	600A 3P	-	-	(1)	PVC	(2) 4"	(4) EACH	350 MCM	CU	2/0	170'	-
(2)	225A 3P	-	-	(2)	EMT	2 1/2"	4	4/0	CU	4	-	-
(3)	150A 3P	-	-	(3)	EMT	2"	4	1/0	CU	6	-	-
(4)	150A 3P	-	-	(4)	EMT	2"	4	1/0	CU	6	-	-
(5)	200A 3P	-	-	(5)	EMT	2"	4	3/0	CU	4	-	-

LOAD RECAP

EXISTING HIGH DEMAND PER ID = 156800 W

1.25 X 156800 W = 196000 W

NEW DISTRIBUTION PANEL "CL4" = 190556 W

TOTAL 386556 W = 1074 A @ 120/208V, 3Φ

DEMAND CALC

EXISTING LOAD = 196000 W

KITCHEN EQUIPMENT AT 15% = 67378 W

MISC. AT 100% = 86848 W

TOTAL 350276 W = 973 A @ 120/208V, 3Φ

KRUSE & ASSOCIATES
LIGHTING AND ELECTRICAL DESIGN
10045 WORLD TRADE DRIVE, SUITE A SAN DIEGO, CA 92126
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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 04-116815
AC ____ FLS ____ SS ____
DATE ____

REGISTERED PROFESSIONAL ENGINEER
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Exp. 06-30-20
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Project Title

CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title

FIXTURE SCHEDULE + SINGLE LINE

LICENSED ARCHITECT
JAMES SANDERS
No. C-7647
STATE OF CALIFORNIA

Document Date	Project Number
16-36CU	16-36CU
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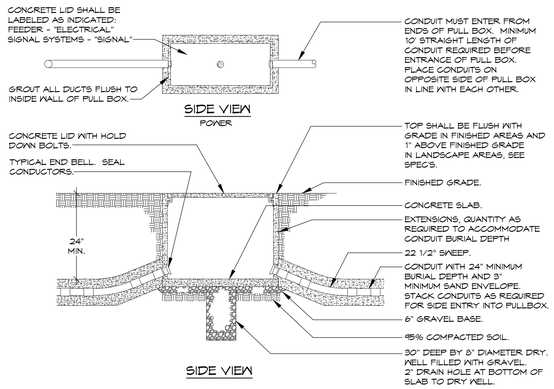
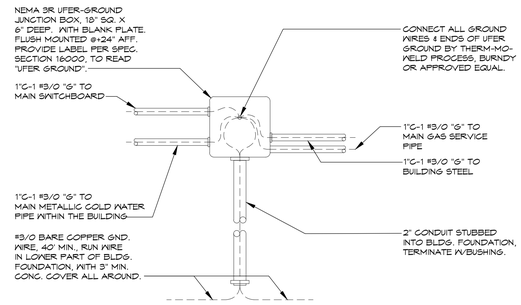
11/12/18	E0.2



GROUND MOUTED PULL BOX MOUNTING DETAIL

NO SCALE

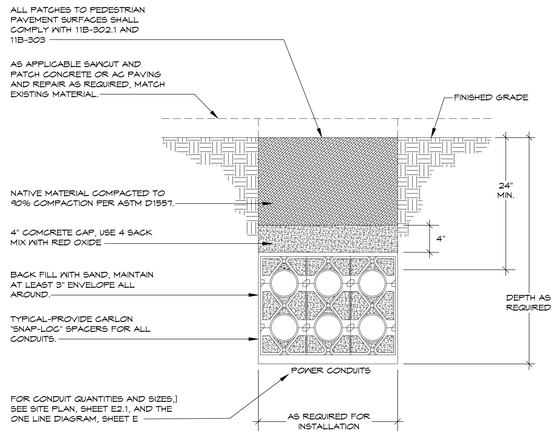
C / E0.3



"UFER GROUND" JUNCTION BOX DETAIL

NO SCALE

A / E0.3



TYPICAL TRENCH SECTION

NO SCALE

B / E0.3

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CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title

DETAILS

LICENSED ARCHITECT
JAMES SANDERS
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REGISTERED
STATE OF CALIFORNIA

Document Date	Project Number
16-36CU	16-36CU
Date Last Revised	**Sheet Number**
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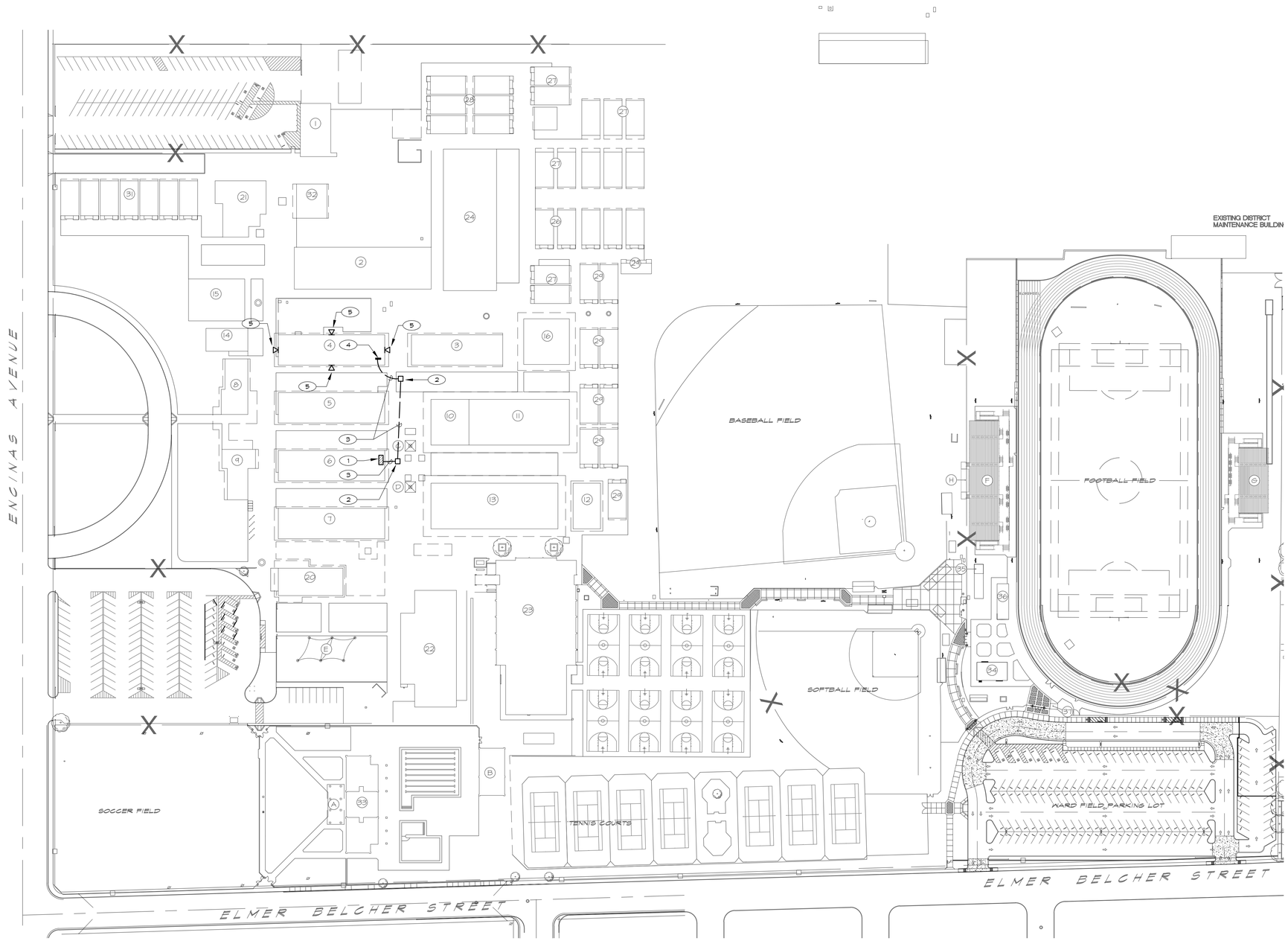

LIGHTING NOTES

1. EXISTING MAIN SWITCHBOARD "S"
2. FLUSH GRADE CONCRETE PULLBOX 36"x40"x34"D
3. SEE SINGLE LINE FOR FEEDER
4. NEW PANEL "4A"
5. ADDRESSABLE WEATHERPROOF SPEAKER, WALL MOUNT. SEE FIRE ALARM PLANS FOR SPECIFICATIONS AND EXACT LOCATIONS.

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Project Title
CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title
SITE ELECTRICAL PLAN

LICENSED ARCHITECT
JAMES M. SANDERS
No. C-7648
STATE OF CALIFORNIA

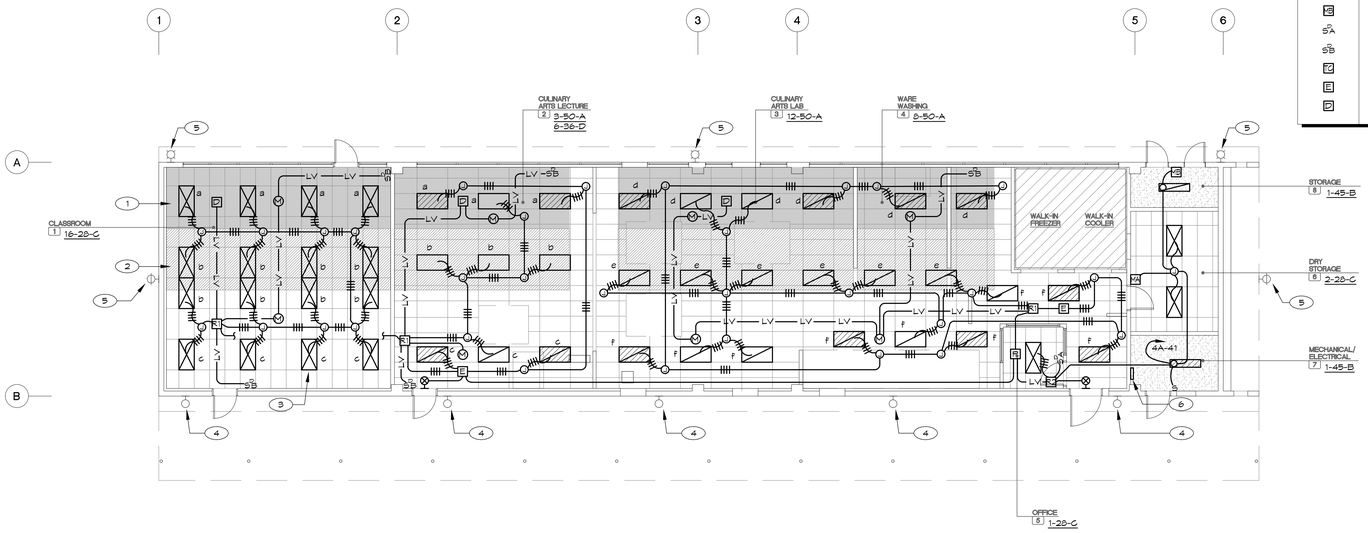
Document Date	Project Number
16-36CU	16-36CU
Date Last Revised	Sheet Number
11/12/18	E1.1

SITE ELECTRICAL PLAN

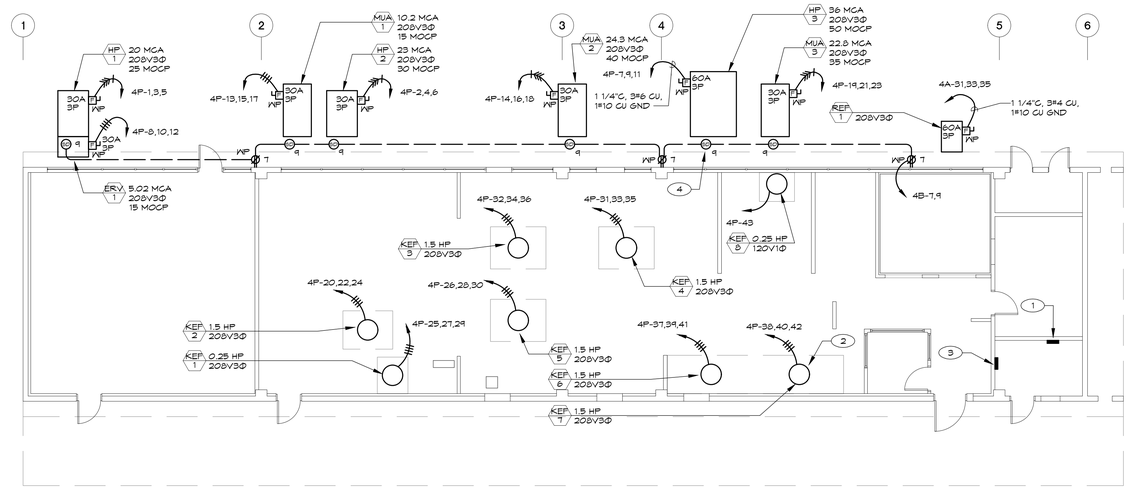
SCALE: 1" = 60'-0"

WATTSTOPPER CONTROL DEVICES

SYMBOL	DESIGNATION
R	LOAD CONTROLLER #LMRC-213
RS	LOAD CONTROLLER #LMRC-111
P	PLUG LOAD CONTROLLER #LMPL-101
M	CEILING MOUNT OCCUPANCY SENSOR #LMDC-100
WA	WALL MOUNTED MOTION SENSOR #DW100
WB	WALL MOUNT MOTION SENSOR #PW100
SA	DIMMING SWITCH #LMDW-102
SB	DIMMING SWITCH #LMSW-105
TC	TIME CLOCK #LMZC-301
E	EMERGENCY TRANSFER #ELCU200
D	DAYLIGHT SENSOR #LMLS-300



LIGHTING PLAN — SCALE: 1/8" = 1'-0"



ROOF ELECTRICAL PLAN — SCALE: 1/8" = 1'-0"

LIGHTING NOTES

1. SHADING INDICATES PRIMARY SIDELIT AREA, TYPICAL
2. SHADING INDICATES SECONDARY SIDELIT AREA, TYPICAL
3. RE-CONNECT EXISTING POWER CIRCUIT IN CLASSROOM
4. EXISTING EXTERIOR LIGHTING, CONNECT TO NEW EMERGENCY INVERTER
5. EXISTING FIXTURES TO REMAIN
6. NEW LIGHTING INVERTER FOR EXISTING EXTERIOR FIXTURES, DUAL LITE #LG2505

GENERAL NOTES

1. VERIFY ALL CONTROL WIRING. PROVIDE SEPARATE CONDUIT FOR 0-10V CONTROL WIRING AS REQUIRED
2. CONNECT ALL LMBC-300'S VIA WATTSTOPPER LM-MSTP NETWORK CABLE (STRICT DAISY CHAIN, TERMINATE TO LMSM-3E SEGMENT 1 REQUIRED FOR DEMAND RESPONSE

ROOF NOTES

1. EXISTING PANEL "4P" TO BE REMOVED, PROVIDE NEW PANEL PER SCHEDULE
2. DISCONNECT IS PROVIDED WITH FAN, TYPICAL
3. PANEL "4B"
4. DUCT SMOKE DETECTOR BY MECHANICAL, CONNECTED BY ELECTRICAL CONTRACTOR, TYPICAL

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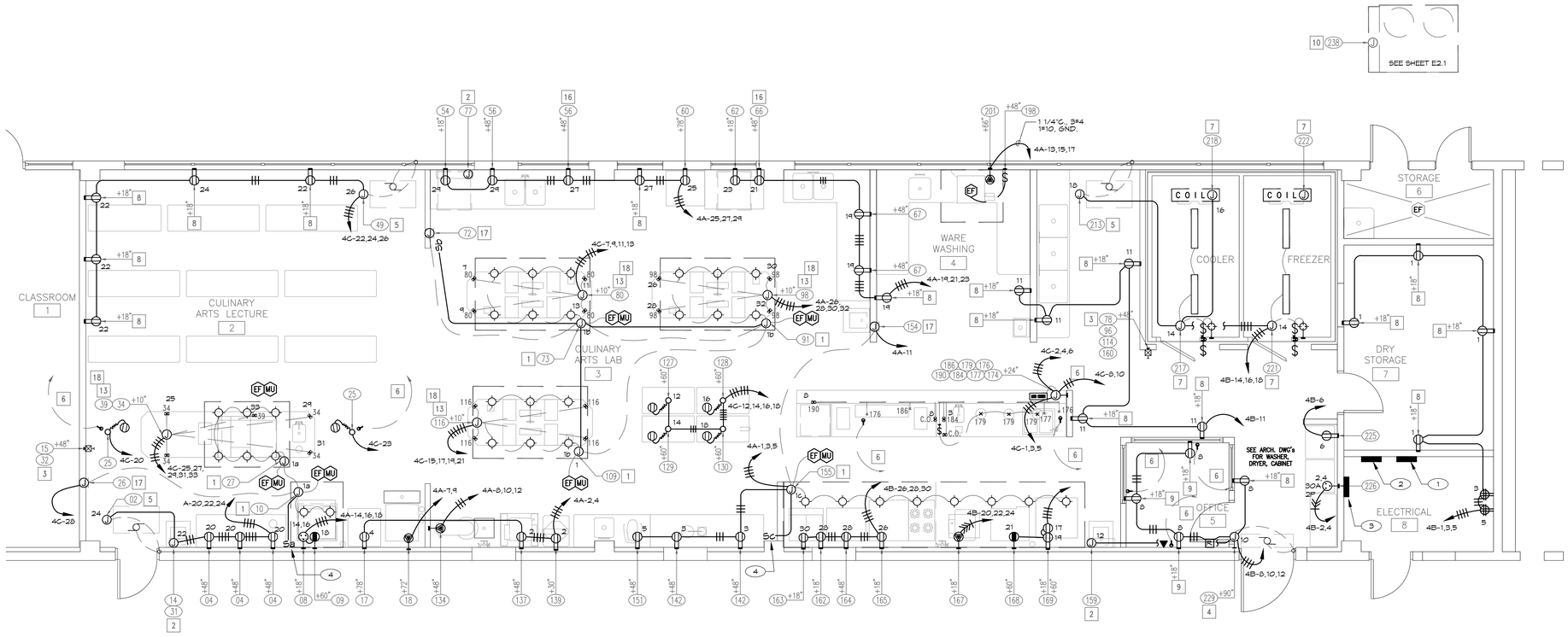
Project Title
CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title
LIGHTING + ROOF ELECTRICAL PLAN

LICENSED ARCHITECT JAMES GERALD SANDERS 17644 STATE OF CALIFORNIA

Document Date	Project Number
16-36CU	16-36CU
Date Last Revised	Sheet Number
11/12/18	E2.1



NOTES

1. PANEL "4A"
2. PANEL "4B"
3. PANEL "4C"
4. SWITCH FOR HOOD LIGHTS

GENERAL NOTE

PROVIDE ALL ADDITIONAL CONTROLS AND WIRING AS REQUIRED ON FOOD SERVICE DRAWINGS

ELECTRICAL KEYNOTES

1. J-BOX STUB-DOWN FROM ABOVE AND CONNECT TO TO HOOD LIGHTS
2. J-BOX LOCATED 12" ABOVE CEILING LINE FOR FIRE SUPPRESSION SYSTEM AUTOMAN (SEE DETAIL J/FS.08.0)
3. OCTAGON PULL BOX FOR FIRE SUPPRESSION SYSTEM – SEE DETAIL J/FS.08.0
4. WALL MOUNTED AIR CURTAIN'S MICRO SWITCH – SEE DETAIL G/FS.08.0
5. J-BOX STUB-DOWN FROM ABOVE AND CONNECT TO RECESSED CEILING MOUNTED AIR CURTAIN
6. DATA LINE TO SERVER VERIFY LOCATION WITH ELECTRICAL ENGINEER
7. TYPICAL WALK-IN BOX WIRING – SEE DETAIL K/FS.08.0
8. CONVENIENCE OUTLETS – 120 VOLTS 1ø = 15 AMPS; 208 VOLTS 1ø = 30 AMPS; VERIFY W/ELECT ENGINEER)
9. ADDITIONAL CONVENIENCE OUTLETS, DATA & TELEPHONE LINES (IF APPLICABLE) TO BE VERIFIED W/ELECT ENGINEER
10. REFRIGERATION RACK LOCATED ON ROOF SEE SHEET A3 FOR EXACT LOCATION
11. NOT USED
12. J-BOX LOCATED ABOVE CEILING LINE; STUB-DOWN THRU UTILITY CHASE, CONNECT TO ISLAND EQUIPMENT
13. J-BOX STUB-UP +10" AND CONNECT TO EQUIPMENT – SEE DETAIL F/FS.08.0
14. NOT USED
15. NOT USED
16. CONVENIENCE OUTLETS MOUNT HORIZONTALLY IN FIXTURE BACK SPLASH AT HEIGHT INDICATED
17. STUB DOWN +66" A.F.F. FOR EXHAUST HOOD CONTROL CABINET – SEE DETAIL –/FS.10.x
18. CONDUIT WITH ELECTRICAL WIRING TO STUB-UP A.F.F., FLEX AND CONNECT TO EQUIPMENT AND/OR CO'S AS REQUIRED (MOUNT CO'S IN FIXTURE). ELECTRICAL WIRING TO BE SIZED FOR ALL INCOMING SERVICE BY THE ELECTRICAL ENGINEER. E.C. TO MAKE FINAL HOOK-UPS TO ALL APPLICABLE EQUIPMENT AND TO PROVIDE AND INSTALL CONTRACTOR TO MAKE FINAL HOOK-UPS TO ALL SWITCHES BREAKERS, STARTERS, CONDUIT, JUNCTION BOXES AND OUTLETS IN FIXTURE. FIXTURE FABRICATOR TO LOCATE ALL OUTLETS AND SWITCHES WHEN PART OF FIXTURE. INTERNAL WIRING TO BE PROVIDED AND INSTALLED BY THE E.C. IN ACCORDANCE WITH ALL LOCAL CODES. E.C. SHALL SEAL ALL ELECTRICAL PENETRATIONS THROUGH FLOORS, WATER-TIGHT AND VERMIN-PROOF. A MINIMUM OF 3 WIRES REQUIRED ON ALL 208 VOLT OR LARGER CIRCUITS. SEE FOOD SERVICE EQUIPMENT SCHEDULE FOR LOADED SCHEDULE; ELEVATIONS FOR CO'S LOCATIONS; AND ELECTRICAL NOTES FOR ADDITIONAL REQUIREMENTS. (DETAIL F/FS.08.0)

ELECTRICAL LEGEND

- 120 VOLT 1ø CONVENIENCE OUTLET (C.O.)
- 120 VOLT 1ø DIRECT FLEXIBLE CONNECTION
- 120 VOLT 1ø 8W LED LIGHT FIXTURE
- 120 V/1ø DROP CORD DOWN FROM CEILING
- 208 V/1ø DROP CORD DOWN FROM CEILING
- 208 VOLT 1ø OR 3ø CONVENIENCE OUTLET (C.O.)
- 120/208 VOLT 1ø CONVENIENCE OUTLET (C.O.)
- 208 VOLT 1ø OR 3ø DIRECT FLEXIBLE CONNECTION
- 120/208 VOLT 1ø DIRECT FLEXIBLE CONNECTION
- 480 VOLT 3ø DIRECT FLEXIBLE CONNECTION
- JUNCTION BOX
- FIRE PULL-BOX (+48" MAX. A.F.F.)
- 208 VOLT 1ø FLOOR FLUSH OUTLET
- 120 VOLT 1ø FLOOR FLUSH OUTLET
- SWITCH
- SWITCH FOR HOOD LIGHTS
- INTERLOCK EXHAUST & M.U.A. FANS
- EXHAUST FAN
- MAKE-UP AIR FAN
- 120 VOLT 1ø 36W LED HOOD OR W.I. LIGHT FIXTURE
- DATA LINE (VERIFY W/ELECTRICAL ENGINEER)
- (1) ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- 123 ITEM NUMBER (SEE EQUIPMENT SCHEDULE)
- +48" UTILITY MOUNTING HEIGHT ABOVE FINISHED FLOOR
- FIXTURE MOUNTED OUTLET
- [1] KEYNOTE SYMBOL (SEE KEYNOTES BELOW)

NOTE:
REFERENCE TO ELECTRICAL ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION

NOTE:
ALL CONDUIT TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND COORDINATED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR

NOTE: SEE SHEET FS.00.0 FOR ELECTRICAL NOTES AND OTHER APPLICABLE NOTES

NOTE: SEE SHEET FS.06.0 FOR S/S PULL BOXES AND UNDER-GROUND CONDUIT

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Project Title
CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title
POWER PLAN

LICENSED ARCHITECT
JAMES D. SANDERS
No. C-17647
REGISTERED
STATE OF CALIFORNIA

Document Date	Project Number
16-36CU	16-36CU
Date Last Revised: 11/12/18	Sheet Number: E3.1

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

VOLTAGE 120/208 | AIC | PANEL "4A" (NEW) | MOUNTING | MAINS LUGS ONLY
PHASE 3 | 22,000 | LOCATION ELECTRICAL ROOM | SURFACE | BUSSING 225A
WIRE 4 | | FEEDER SEE SIGNLE LINE | | FEED BOTTOM

	LOCATION	WATTAGE ΦA	ΦB	ΦC	LTG	REC	MS	BKR	CIR	Φ	CIR	BKR	MS	REC	LTG	WATTAGE ΦA	ΦB	ΦC	LOCATION	
	HOOD LIGHTS	400					6	15	1	A	2	20		2		1512			ROUNDER, SHEETER	✳
✳	BAKER'S TABLE		1500			2		20	3	B	4	15		1			1200		REFRIGERATOR	✳
✳	MIXER			960		1		15	5	C	6	15						900	COMBI OVEN	✳
	ICE MACHINE	1040					1	15/7	7	A	8	15/	1			1200			MIXER	
	- - -		1040				-	/2	9	B	10	/	-				1200		- - -	
	HOOD CONT. CABT			500			1	15	11	C	12	/3	-					1200	- - -	
	WASHER	5448					1	60/	13	A	14	20/	1			1404			CHILLER	
	- - -		5448				-	/	15	B	16	/	-				1404		- - -	
	- - -			5448			-	/3	17	C	18	/3	-					144	- - -	
✳	MISC. RECEPT.	1500				3		20	19	A	20	20		3		1500			SERVICE COUNTER	✳
✳	WORK TABLE		1000			1		15	21	B	22	15	1				500		FIRE SUPPRESSION	○
✳	PROFFING CABT			1440		1		20	23	C	24	15	1					900	AIR CURTAIN	
✳	REFRIGERATOR	1308				1		15	25	A	26	15		1		1200			COOKING ISLAND	✳
✳	MISC. RECEPT.		1500			3		20	27	B	28	15		1			1200		COOKING ISLAND	✳
✳	PROFFING CABT			1440				15	29	C	30	15		1				1200	COOKING ISLAND	✳
	REF-RACK	4560					1	30/	31	A	32	15		1		1200			COOKING ISLAND	✳
	- - -		4500				-	/	33	B	34	0					-		SPACE ONLY	
	- - -			4560			-	/3	35	C	36	0						-	SPACE ONLY	
	SPACE ONLY	-						0	37	A	38	0				-			SPACE ONLY	
□	EXTERIOR		700					20	39	B	40	20					-		CLASSROOM	△
	LIGHTING			1485				20	41	C	42	20						-	CLASSROOM	△
	SUBTOTAL	14256	15688	16333												8016	5504	4944		
	TOTAL	ΦA 22272						ΦB 21192								ΦC 20677				
	TOTAL LOAD	64141			WATTS AT 120/208			V.,3Φ, 4W= 178.0			A.									
	HIGH PHASE	22272			WATTS AT 120			V.,1Φ, 4W= 185.6			A.								DATE 11/12/2018	

✳ = GFI TYPE BREAKER
○ = PROVIDE LOCK-ON TYPE BREAKER
□ = RE-CONNECT EXISTING EXTERIOR FIXTURES, PROVIDE NEW IP TIME CLOCK
△ = RE-CONNECT EXISTING POWER CIRCUITS IN CLASSROOM

VOLTAGE 120/208 | AIC | PANEL "4B" (NEW) | MOUNTING | MAINS LUGS ONLY
PHASE 3 | 22,000 | LOCATION ELECTRICAL ROOM | FLUSH | BUSSING 100A
WIRE 4 | | FEEDER 1 1/2"C., 4#2, CU. | | FEED TOP

	LOCATION	WATTAGE ΦA	ΦB	ΦC	LTG	REC	MS	BKR	CIR	Φ	CIR	BKR	MS	REC	LTG	WATTAGE ΦA	ΦB	ΦC	LOCATION	
	DRY STORAGE	720				4		20	1	A	2	30/		1		2500			DRYER	✳
	DATA		1000			1		20	3	B	4	/2		-			2500		- - -	✳
	DATA			1000		1		20	5	C	6	20		1				1500	WASHER	
	EXTERIOR RECEPT.	540				3	1	20	7	A	8	20		7		1260			OFFICE	
○	DUCT DETECTORS		300			6	-	15	9	B	10	15	1				750		AIR CURTAIN	
✳	MISC. RECEPT.			900		5	1	20	11	C	12	20	1					1560	FIRE SUPPRESSION	
	FREEZER	104					1	15/13	13	A	14	20	2			400			WALK-INS	
	- - -		104				-	/2	15	B	16	20	1				1600		COOLER	
✳	CONV. OVEN			960		1		15	17	C	18	15	1					900	AIR CURTAIN	✳
✳	CONV. OVEN	960				1		15	19	A	20	30/	1			2460			BRAISING PAN	✳
✳	COMBI OVEN		750				1	15	21	B	22	/	-				2460		- - -	✳
	SPACE ONLY			-				0	23	C	24	/3	-					2460	- - -	✳
	SPACE ONLY	-						0	25	A	26	15	2			600			OVEN RANGE	✳
	SPACE ONLY		-					0	27	B	28	15	2				1000		WORK TABLE	✳
	SPACE ONLY			-				0	29	C	30	15	1					780	FRENCH FRY	✳
	SPACE ONLY	-						0	31	A	32	0				-			SPACE ONLY	
	SPACE ONLY		-					0	33	B	34	0					-		SPACE ONLY	
	SPACE ONLY			-				0	35	C	36	0						-	SPACE ONLY	
	SPACE ONLY	-						0	37	A	38	0				-			SPACE ONLY	
	SPACE ONLY		-					0	39	B	40	0					-		SPACE ONLY	
	SPACE ONLY			-				0	41	C	42	0						-	SPACE ONLY	
	SUBTOTAL	2324	2154	2860												7220	8310	7200		
	TOTAL	ΦA 9544						ΦB 10464								ΦC 10060				
	TOTAL LOAD	30068			WATTS AT 120/208			V.,3Φ, 4W= 83.5			A.									
	HIGH PHASE	10464			WATTS AT 120			V.,1Φ, 4W= 87.2			A.								DATE 11/12/2018	

✳ = GFI TYPE BREAKER
○ = PROVIDE LOCK-ON TYPE BREAKER

VOLTAGE 120/208 | AIC | PANEL "4C" (NEW) | MOUNTING | MAINS LUGS ONLY
PHASE 3 | 22,000 | LOCATION ELECTRICAL ROOM | FLUSH | BUSSING 225A
WIRE 4 | | FEEDER SEE SINGLE LINE | | FEED BOTTOM

	LOCATION	WATTAGE ΦA	ΦB	ΦC	LTG	REC	MS	BKR	CIR	Φ	CIR	BKR	MS	REC	LTG	WATTAGE ΦA	ΦB	ΦC	LOCATION	
✳	PLATE STORAGE	1800				1		20	1	A	2	15/		1		624			HOT FOOD	
✳	PRINTERS		600			1		15	3	B	4	/2	-				624		- - -	
✳	PEND. LTS			375		1		15	5	C	6	15		1				1608	MICROWAVE	✳
✳	COOKING ISLAND	1200				1	1	20	7	A	8	20		2		1080			REF. BASE, FREEZER	✳
✳	COOKING ISLAND		1200			1	-	20	9	B	10	15		3			540		MISC. RECEPT.	✳
✳	COOKING ISLAND			1200		1	1	20	11	C	12	20		1				1800	WORK TABLE	✳
✳	COOKING ISLAND	1200				1	1	20	13	A	14	20		1		1800			WORK TABLE	✳
✳	COOKING ISLAND		1200			1	-	20	15	B	16	20		1			1800		WORK TABLE	✳
✳	COOKING ISLAND			1200		1		20	17	C	18	20		1				1800	WORK TABLE	✳
✳	COOKING ISLAND	1200				1		20	19	A	20	20		1		1800			MONITORS	
✳	COOKING ISLAND		1200			1	1	20	21	B	22	20		3			500		MISC. RECEPT.	✳
	MONITORS			1800		1		20	23	C	24	20		2				300	MISC. RECEPT.	✳
✳	COOKING ISLAND	1800				1		20	25	A	26	15	1			900			AIR CURTAIN	
✳	COOKING ISLAND		1800			1		20	27	B	28	0					-		SPACE ONLY	
✳	COOKING ISLAND			1800		1		20	29	C	30	0						-	SPACE ONLY	
✳	COOKING ISLAND	1800				1		20	31	A	32	0				-			SPACE ONLY	
✳	COOKING ISLAND		948			1		15	33	B	34	0					-		SPACE ONLY	
	SPACE ONLY			-				0	35	C	36	0						-	SPACE ONLY	
	SPACE ONLY	-						0	37	A	38	0				-			SPACE ONLY	
	SPACE ONLY		-					0	39	B	40	0					-		SPACE ONLY	
	SPACE ONLY			-				0	41	C	42	0						-	SPACE ONLY	
	SUBTOTAL	9000	6448	6375												6204	3464	5508		
	TOTAL	ΦA 15204						ΦB 10412								ΦC 11883				
	TOTAL LOAD	37499			WATTS AT 120/208			V.,3Φ, 4W= 104.1			A.									
	HIGH PHASE	15204			WATTS AT 120			V.,1Φ, 4W= 126.7			A.								DATE 11/12/2018	

✳ = GFI TYPE BREAKER

VOLTAGE 120/208 | AIC | PANEL "4P" (NEW) | MOUNTING | MAINS LUGS ONLY
PHASE 3 | 22,000 | LOCATION ELECTRIC ROOM | SURFACE | BUSSING 225A
WIRE 4 | | FEEDER SEE SINGLE LINE | | FEED BOTTOM

	LOCATION	WATTAGE ΦA	ΦB	ΦC	LTG	REC	MS	BKR	CIR	Φ	CIR	BKR	MS	REC	LTG	WATTAGE ΦA	ΦB	ΦC	LOCATION	
	HP-1	1920					1	25/	1	A	2	30/	1			2208			HP-2	
	- - -		1920				-	/	3	B	4	/	-				2208		- - -	
	- - -			1920			-	/3	5	C	6	3	-					2208	- - -	
	HP-3	3456					1	50/	7	A	8	15/	1			482			ERV-1	
	- - -		3456				-	/	9	B	10	/	-				482		- - -	
	- - -			3456			-	/3	11	C	12	3	-					482	- - -	
	MAU-1	979					1	15/13	13	A	14	40/	1			2333			MAU-2	
	- - -		979				-	/	15	B	16	/	-				2333		- - -	
	- - -			979			-	/3	17	C	18	3	-					2333	- - -	
	MAU-3	2184					1	35/19	A		20	15/	1			828			KEF-2	
	- - -		2184				-	/	21	B	22	/	-				828		- - -	
	- - -			2184			-	/3	23	C	24	3	-					828	- - -	
	KEF-1	100					1	15/25	A		26	15/	1			828			KEF-5	
	- - -		100				-	/	27	B	28	/	-				828		- - -	
	- - -			100			-	/3	29	C	30	3	-					828	- - -	
	KEF-4	828					1	15/31	A		32	15/	1			828			KEF-3	
	- - -		828				-	/	33	B	34	/	-				828		- - -	
	- - -			828			-	/3	35	C	36	3	-					828	- -	
	KEF-6	828					1	15/37	A		38	15/	1			828			KEF-7	
	- - -		828				-	/	39	B	40	/	-				828		- - -	
	- - -			828			-	/3	41	C	42	3	-					828	- - -	
	KEF-8	700					1	15	43	A	44	0				-			SPACE ONLY	
	SPACE ONLY		-					0	45	B	46	0					-		SPACE ONLY	
	SPACE ONLY			-				0	47	C	48	0						-	SPACE ONLY	
	SUBTOTAL	11000	10300	10300												8335	8335	8335		
	TOTAL	ΦA 14335						ΦB 18635								ΦC 18635				
	TOTAL LOAD	56605			WATTS AT 120/208			V.,3Φ, 4W= 157.1			A.									
	HIGH PHASE	14335			WATTS AT 120			V.,1Φ, 4W= 161.1			A.								DATE 1/14/2019	

KRUSE & ASSOCIATES
ENGINEERING CONSULTANTS
LIGHTING AND ELECTRICAL DESIGN
10045 WORLD TRADE DRIVE, SUITE A SAN DIEGO, CA 92128
P: 858.676.9776 F: 858.676.9744 WWW.KRUSEASSOC.NET

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 04-116815
AC____ FLS____ SS____
DATE____

REGISTERED PROFESSIONAL ENGINEER
GERALD L. KRUSE
No. E045691
Exp. 08-30-20
ELECTRICAL
STATE OF CALIFORNIA

APPROVALS

Sanders, INC.
Architecture/Engineering
1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title
PANEL SCHEDULES

LICENSED ARCHITECT
JAMES R. SANDERS
No. C-17643
RENEWAL 08/31/2019
STATE OF CALIFORNIA

Document Date	Project Number
16-36CU	16-36CU
Date Last Revised	
11/12/18	
	Sheet Number
	E4.1

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 1 of 6)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

A. General Information

Climate Zone: 15	Conditioned Floor Area: 4,234					
	Unconditioned Floor Area: 0					
Building Type:	☑	Nonresidential	☐	High-Rise Residential	☐	Hotel/Motel
☐ Schools	☐	Relocatable Public Schools	☑	Conditioned Spaces	☐	Unconditioned Spaces
Phase of Construction:	☑	New Construction	☐	Addition	☐	Alteration
Method of Compliance:	☑	Complete Building	☐	Area Category	☐	Tailored
Project Address:						

B. Lighting Compliance Documents (select yes for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

YES	NO	COMP. DOC.	TITLE
☑	☐	NRCC-LTI-01-E	Certificate of Compliance. All Pages required on plans for all submittals.
☑	☐	NRCC-LTI-02-E	Lighting Controls, Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.
☑	☐	NRCC-LTI-03-E	Indoor Lighting Power Allowance
☐	☑	NRCC-LTI-04-E	Tailored Method Worksheets
☐	☑	NRCC-LTI-05-E	Line Voltage Track Lighting Worksheets
☐	☐	NRCC-LTI-06-E	Indoor Lighting Existing Conditions

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 2 of 6)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

C. Summary of Allowed Lighting Power

Conditioned and Unconditioned space Lighting must not be combined for compliance

	Indoor Lighting Power for Conditioned Spaces		Watts	Indoor Lighting Power for Unconditioned Spaces		Watts
01	**Installed** Lighting NRCC-LTI-01-E, Table H, page 5	+	1,988	**Installed** Lighting NRCC-LTI-01-E, Table H, page 5	+	0
02	Portable Only for Offices NRCC-LTI-01-E, Table G, page 4	+				
03	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0
04	Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3)	=	1,988	Adjusted **Installed** Lighting Power (row 1 minus row 3)	=	0
	Complies ONLY if **Installed** ≤ **Allowed** (Box 04 < Box 05)			Complies ONLY if **Installed** ≤ **Allowed** (Box 04 < Box 05)		
05	**Allowed** Lighting Power Conditioned NRCC-LTI-03-E, page 1 Alterations with replacement luminaires that have at least 50/35% lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-06, page 2		4,657	**Allowed** Lighting Power Unconditioned NRCC-LTI-03-E, page 1 Alterations with replacement luminaires that have at least 50/35% lower power compared to the original existing luminaires, may instead use the allowed wattage from NRCC-LTI-06, page 2		0

D. Declaration of Required Certificates of Installation

Declare by selecting yes for all of the Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Compliance Document/Title	
☑	☐	NRCI-LTI-01-E - Must be submitted for all buildings	☐ Field Inspector
☑	☐	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐ Field Inspector
☐	☑	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐ Field Inspector

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 3 of 6)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

E. Declaration of Required Certificates of Acceptance

Declare by selecting yes for all of the Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Compliance Document/Title	
☑	☐	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐ Field Inspector
☑	☐	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐ Field Inspector
☐	☑	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐ Field Inspector
☐	☑	NRCA-LTI-05-A – Must be submitted for institutional tuning power adjustment factor (PAF).	☐ Field Inspector

A Separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☐ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

F. Indoor Lighting Schedule and Field Inspection Energy Checklist

- ☐ The actual indoor lighting power listed on the next 2 pages includes all installed permanent and planned portable lighting systems.
- ☐ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.
- ☐ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines
- ☐ Also include track lighting in schedule, and submit the track lighting compliance document (NRCC-LTI-05-E) when line-voltage track lighting is installed.

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 4 of 6)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

G. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)

- ☐ This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance document.
- ☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office
- ☐ Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.

Office Portable Luminaire Schedule	Office Installed Portable Luminaire W/ft²							Office Location	Field Inspector	
1	2	3	4	5	6	7	8	9	10	
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (G02 x G03)	Square feet of this office	Watts per square foot (G04 / G05)	If G06 ≤ 0.3, enter zero; if G06 > 0.3, (G06-0.3)	(G05 x G07)	Identify Office area in which these portable luminaires are installed	Pass	Fail
									☐	☐
									☐	☐
									☐	☐
									☐	☐
									☐	☐
Total installed portable luminaire watts that are greater than 0.3 W/ft² per office:								Enter sum total of all pages into NRCC-LTI-01-E; Page 1		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 5 of 6)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

A Separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

H. Indoor Lighting Schedule and Field Inspection Energy Checklist

Luminaire Schedule		Installed Watts					Location	Field Inspector [1]	
01	02	03	04		05	06	07	08	
Name or Item Tag	Complete Luminaire Description (i.e, 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per Luminaire	How wattage was determined: CEC Default from NA8	According to §130.0(c)	Number Luminaires	Total Installed Watts in this area (H03 x H05)	Primary Function area in which these luminaires are installed	Pass	Fail
A	50w LED	50.0	☐	☑	23	1,150	Classroom, Lecture, Training	☐	☐
B	45w LED	45.0	☐	☑	2	90	Classroom, Lecture, Training	☐	☐
C	28w LED	28.0	☐	☑	19	532	Classroom, Lecture, Training	☐	☐
D	36w LED	36.0	☐	☑	6	216	Classroom, Lecture, Training	☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
INSTALLED WATTS PAGE TOTAL:						1,988	Enter sum total of all pages into NRCC-LTI-01-E; Page 2		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-01-E
Indoor Lighting	(Page 6 of 6)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Gerry Green	Documentation Author Signature:
Company: Kruse & Associates	Signature Date: 11/12/2018
Address: 12245 World Trade Dr., Suite A	CEA Certification Identification (if applicable):
City/State/Zip: San Diego, CA 92128	Phone: (858) 676-9776

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Gerry Green	Responsible Designer Signature:
Company: Kruse & Associates	Date Signed:
Address: 12245 World Trade Drive	License: E015691
City/State/Zip: San Diego, CA 92128	Phone: (858) 676-9776

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 1 of 3)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

A. Mandatory Lighting Control Declaration Statements (Indicate if the measure applies by checking yes or no below.)

YES	NO	Control Requirements
☑	☐	Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9.
☑	☐	Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
☐	☑	One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.0. Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b).
☐	☑	A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.0. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).
☑	☐	All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.
☑	☐	All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).
☑	☐	General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.1(a)4.
☑	☐	The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b).
☑	☐	All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c).
☑	☐	Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.
☐	☐	Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).
☑	☐	Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4.(a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 2 of 3)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES

B. Mandatory and Prescriptive Indoor Lighting Control Schedule, PAF Calculation, and Field Inspection Checklist

Lighting Control Schedule			Standards Complying With [1] (✓ all that apply, or enter 'E' if Exempted)							PAF Credit Calculation [2]			✓ if Acceptance Test Required	Field Inspector	
										Watts of Controlled Lighting	PAF	Control Credit (K x L)			
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
Location in Building	Type/Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc...)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)					Pass	Fail
Entire		1	☑	☑	☑	☑	☐	☐	☑				✓	☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
			☐	☐	☐	☐	☐	☐	☐					☐	☐
Control Credit PAGE TOTAL (Sum of Column 13):												0			
IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column 13):												0			
												Enter Control Credit total into NRCC-LTI-01-E; Page 1.			

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.
2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 01/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 3 of 3)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Gerry Green	Documentation Author Signature:
Company: Kruse & Associates	Signature Date: 11/12/2018
Address: 12245 World Trade Dr., Suite A	CEA Certification Identification (if applicable):
City/State/Zip: San Diego, CA 92128	Phone: (858) 676-9776

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Gerry Green	Responsible Designer Signature:
Company: Kruse & Associates	Date Signed: 11/12/18
Address: 12245 World Trade Drive	License: E015691
City/State/Zip: San Diego, CA 92128	Phone: (858) 676-9776

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance	(Page 1 of 4)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES

- ☐ If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.
- ☐ If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

	(a)		(b)
01 Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page)	4,657		
02 Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page)			
03 Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E			
TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1	4,657		

☐ Check here if building contains both conditioned and unconditioned areas.

B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE

01	02		03		04
TYPE OF BUILDING (From §140.6 Table 140.6-B)	WATTS PER ft²	X	COMPLETE BLDG. AREA	=	ALLOWED WATTS
Classroom Building	1.10		4,234		4,657
Total Area:					
Total Watts. Enter Total Watts into section A, row 1 (Above on this page)					

C -1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES	Watts
Total from section C-2.	
Total from section C-3.	
Total Watts. Enter Total Watts into section A, row 2 (Above on this page).	
For Alterations Only – Reduced lighting power option (Total Allowed Watts x 0.85). Enter this value into section A, row 2 if using this option.	

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance	(Page 2 of 4)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

C -2 AREA CATEGORY METHOD GENERAL LIGHTING POWER ALLOWANCE

- ☐ Do not include portable lighting for offices. Portable lighting for offices shall be documented only in Section G of NRCC-LTI-01-E.
- ☐ Separately list lighting for each primary function area as defined in §100.1 of the Standards.

01		02		03		04
AREA CATEGORY (From §140.6 Table 140.6-C): Location in Building	Primary Function Area per Table 140.6-C	WATTS PER ft²	X	AREA (ft²)	=	ALLOWED WATTS
				TOTALS 0		
Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance document)						0
						WATTS

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance	(Page 3 of 4)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

C-3 AREA CATEGORY METHOD ADDITIONAL LIGHTING WATTAGE ALLOWANCE (from Table 140.6-C Footnotes)

01	02	03 [2]	04	05	06	07
Primary Function	Sq Ft or Linear ft [1]	Additional Watts Allowed	Wattage Allowance (02 x 03)	Description(s) and Quantity of Special Luminaire Types in each Primary Function Area	Total Design Watts [3]	ALLOWED WATTS Smaller of 04 or 06
TOTALS – Enter into TOTAL AREA CATEGORY METHOD ADDITIONAL ALLOWANCES – Section C-1						0

1. Use linear feet only for additional allowance for white board or chalk board. All other additional Area Category allowances shall use watts per square foot.
2 . Additional watts are available only when allowed according to the footnotes on bottom of Table 140.6-C, which include: Specialized task work; Ornamental lighting; Precision commercial and industrial work; Per linear foot of white board or chalk board; Accent, display and feature lighting; and Videoconferencing studio lighting..
3. Luminaire classification and wattage shall be determined in accordance with §130.0(c) of the Standards.

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 04/16) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance	(Page 4 of 4)
Project Name: Calexico High School Culinary	Date Prepared: 11/12/2018

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Gerry Green	Documentation Author Signature:
Company: Kruse & Associates	Signature Date: 11/12/2018
Address: 12245 World Trade Dr., Suite A	CEA Certification Identification (if applicable):
City/State/Zip: San Diego, CA 92128	Phone: (858) 676-9776

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Gerry Green	Responsible Designer Signature:
Company: Kruse & Associates	Date Signed: 11/12/18
Address: 12245 World Trade Drive	License: E015691
City/State/Zip: San Diego, CA 92128	Phone: (858) 676-9776

KRUSE & ASSOCIATES
LIGHTING AND ELECTRICAL DESIGN
12245 WORLD TRADE DRIVE, SUITE A SAND DIEGO, CA 92128
P. 858.676.9776 F. 858.676.9744 WWW.KRUSEASSOC.NET

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 04-116815
AC____ FLS____ SS____
DATE____

REGISTERED PROFESSIONAL ENGINEER
GERALD L. GREEN
No. E015691
Exp. 06-30-20
ELECTRICAL
STATE OF CALIFORNIA

APPROVALS

Sanders, INC.
Architecture/Engineering
1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CENTRAL UNION HIGH SCHOOL DISTRICT
CALEXICO HIGH SCHOOL - CULINARY

Sheet Title
TITLE 24

LICENSED ARCHITECT
JIMMIE SANDERS
7644
STATE OF CALIFORNIA

Document Date	Project Number
16-36CU	16-36CU
Date Last Revised	Sheet Number
11/12/18	E5.1

Johnson Controls

CALEXICO HIGH SCHOOL
CULINARY ARTS CLASSROOM MODERNIZATION
FIRE ALARM SYSTEM

DRAWING INDEX

Sheet List Table

Sheet Number	Sheet Title
FA-001	COVER SHEET
FA-002	INFO SHEET
FA-101	DEVICE PLACEMENT PLAN
FA-201	RISER DIAGRAM
FA-501	PANEL DETAILS
FA-601	Calculations
FA-701	DEVICE DETAILS

INSTALLATION NOTES

THIS DRAWING IS A WIRING DIAGRAM ONLY AND DOES NOT SPECIFY CONDUIT RUNS OR SIZES.

THE INSTALLING ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND SHALL FAMILIARIZE HIMSELF WITH ALL FEATURES OF THE BUILDING WHICH MAY EFFECT THE EXECUTION OF THIS PROJECT.

ACTUAL WIRING, CONDUIT ROUTING AND SIZING SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR BASED UPON CURRENT CONDITIONS AT THE TIME OF INSTALLATION.

ANY MAJOR DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER OF RECORD.

RECORD DRAWINGS WILL BE UPDATED TO REFLECT ACTUAL CONDITIONS AFTER INSTALLATION.

ALL WIRE SHALL BE IN COUDUIT AND SUPPORTED AS PER CEC.

ALL SIGNAL LINE CIRCUIT (SLC) RUNS ARE TO BE CLASS B.

ALL INITIATION OR CONTROL CIRCUIT RUNS ARE TO BE CLASS B.

ALL NOTIFICATION APPLIANCE CIRCUITS (NAC) ARE CLASS B. ALL DEVICES SHALL BE MOUNTED AS REQUIRED BY APPLICABLE CODES AND ADA REQUIREMENTS.

AUDIBLE DEVICES WILL SOUND A VOICE MESSAGE, VISUAL DEVICES WILL FLASH UNTIL SHUTDOWN AT PANEL.

WIRING NOTE: DO NOT PASS ADDITIONAL WIRES (USED FOR OTHER THAN THE SIGNALING APPLIANCE) THROUGH THE BACKBOX. SUCH ADDITIONAL WIRES COULD RESULT IN INSUFFICIENT WIRING SPACE FOR THE SIGNALING APPLIANCE. IF THESE LIMITS ARE EXCEEDED, THERE MAY BE INSUFFICIENT SPACE IN THE BACKBOX TO ACCOMMODATE FIELD WIRES AND STRESSES FROM THE WIRES COULD DAMAGE THE PRODUCT. REFER TO POINT-TO-POINT DETAILS FOR MAXIMUM CONDUCTORS.

FIRE ALARM AND MECHANICAL CONTRACTOR TO COORDINATE WITH THE MECHANICAL ENGINEER THE EXACT PLACEMENT OF THE DUCT DETECTOR TO ENSURE THAT ITS LOCATION AND SAMPLING TUBE LOCATION DO NOT CONFLICT WITH ANY OTHER EQUIPMENT ON OR WITHIN THE AIR HANDING UNIT. CONNECT NOTIFICATION DEVICES TO I/O POINTS ON FACP OR 4009 NAC PANEL AS INDICATED ON POINT-TO-POINT FIELD WIRING DIAGRAMS LOCATED ON SHEET FA- 101.

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF IN-DUCT / TUBE TYPE DUCT SMOKE DETECTORS AND WILL ENSURE DETECTORS ARE PLACED IN A SERVICEABLE LOCATION THAT WILL MEET THE REQUIREMENTS OF NFPA 72, C.M.C AND THE MANUFACTURERS DOCUMENTATION.

GENERAL NOTES

1. THESE DRAWINGS DEPICT GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS IS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
2. SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS WHICH CAUSE MAJOR DEVIATIONS IN THE WORK SHOWN, THE CONTRACTOR SHALL CONTACT JOHNSON CONTROLS IN A TIMELY MANNER SO AS NOT TO IMPAIR THE CONSTRUCTION SCHEDULE.
3. CONTRACTOR IS RESPONSIBLE FOR MAKING AND OBTAINING APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATION OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
4. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION.
5. THE POWER CIRCUIT TO THE FACP AND TO THE FIRE ALARM POWER SUPPLIES SHALL BE ON A DEDICATED 120V, 20A BRANCH CIRCUIT BREAKER, AND SHALL HAVE A RED MARKING, LOCK-ON PROVISION AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL." THE LOCATION OF THE CIRCUIT DISCONNECT MEANS (CIRCUIT BREAKER) SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
6. UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO JOHNSON CONTROLS NO LATER THAN 7 DAYS AFTER FINAL TEST.
7. THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMANLIKE MANNER.
8. DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED JOHNSON CONTROLS TECHNICAL REPRESENTATIVE.
9. ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY FALSE ALARMS DUE TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM INSTALLER.
10. THE FIRE ALARM INSTALLER WILL MAINTAIN THE FIRE RESISTANCE INTEGRITY OF ALL WALL, CEILING, AND ROOF ASSEMBLIES ANY TIME THAT WORK IS NOT ACTIVELY BEING PERFORMED.
11. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE ELECTRICAL CODES. REFER TO 'APPLICABLE CODES & STANDARDS' FOR SPECIFIC CODE REFERENCES.
12. ALL WIRING SHALL BE INSTALLED ACCORDING TO APPLICABLE ELECTRICAL CODES.
13. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODE SECTIONS FOR POWER LIMITED AND NON-POWER LIMITED WIRE.
14. FIRE ALARM CABLE INSTALLED IN DUCTS, PLENUM, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP.
15. FIRE ALARM CABLE INSTALLED IN THE VERTICAL RUNS AND PENETRATING MORE THAN ONE FLOOR OR CABLES INSTALLED IN VERTICAL RUNS IN SHAFTS SHALL BE TYPE FPLR.
16. FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
17. FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOORS SHALL BE INSTALLED IN ACCORDANCE APPLICABLE ELECTRICAL CODES, WHERE APPLICABLE.
18. ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
19. ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE.
20. ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
21. 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
22. MAINTAIN MAXIMUM CONDUIT FILL RATIO AS PER APPLICABLE ELECTRICAL CODES REQUIREMENTS (MAINTAIN 40 PERCENT CONDUIT FILL RATIO AS PER CEC REQUIREMENTS).
23. EXISTING CONDUITS MAY BE USED BY THE INSTALLATION CONTRACTOR AS DEEMED NECESSARY; HOWEVER, ANY EXISTING CONDUIT WILL BE USED ONLY IF CONDUITS MEET CURRENT STANDARDS AND CODES. JOHNSON CONTROLS MAKES NO STATEMENTS WRITTEN OR VERBAL AS TO THE CONDITION OF EXISTING CONDUITS.

PROJECT DESCRIPTION

ADD NEW FIRE ALARM DEVICES AND CONNECT TO EXISTING SIMPLEX FIRE ALARM SYSTEM AS DETAILED BELOW AND ON THE FOLLOWING FLOOR PLAN.

THIS IS AN UPGRADE TO AN EXISTING FIRE ALARM SYSTEM LOCATED IN THE CALEXICO UNIFIED SCHOOL DISTRICT AND IDENTIFIED AS CALEXICO HIGH SCHOOL LOCATED AT 1030 ENCINAS AVE, CALEXICO, CALIFORNIA 92231.

THESE PLANS PROVIDE FOR A CULINARY ARTS CLASSROOM MODERNIZATION AND WILL REPLACE THE HOME ECONOMIC CLASSROOM. A NEW SIMPLEX 4100ES FIRE ALARM CONTROL PANEL WITH VOICE EVACUATION SHALL BE INSTALLED, AND NETWORKED TO THE EXISTING FACP LOCATED IN THE ADMINISTRATION BUILDING #8. THE NEW FACP SHALL BE LOCATED IN THE ELECTRICAL ROOM OF BUILDING #4.

FIRE ALARM SYSTEM DESIGN:

EXISTING FIRE ALARM SYSTEM IS A MANUAL AND AUTOMATIC FIRE ALARM SYSTEM. (MANUAL PULL STATIONS SHALL NOT BE REQUIRED IN THE CULINARY ARTS CLASSROOM, BECAUSE AREA COVERAGE SHALL BE PROVIDED WITH SMOKE AND HEAT DETECTION).

IT IS THE RESPONSIBILITY OF THE ARCHITECT TO PROVIDE CURRENT AND ACCURATE INFORMATION TO THE FIRE ALARM CONTRACTOR, INCLUDING: CURRENT REFLECTED CEILING PLANS, FLOOR PLANS, FIRE RATED WALL LEGEND, ROOM IDENTIFICATION, ROOM NUMBER, USE OF ROOM, COMPLETED MECHANICAL PLANS, WITH SMOKE FIRE DAMPER LOCATIONS, AHU UNITS, DUCT SIZES AND AIR VELOCITIES BASED UPON THE DATE OF THIS FIRE ALARM SUBMITTAL.

ROOM NAMES, ROOM NUMBERS AND USE OF ROOM ARE SUBJECT TO CHANGE AND MAY REQUIRE ADDITIONAL FIRE ALARM DEVICES. ANY ADDITIONAL DEVICES WILL REQUIRE A WRITTEN CHANGE ORDER FROM THE ARCHITECT OF RECORD, INCLUDING CHANGES TO THE MECHANICAL OR ELECTRICAL PLANS.

FIRE ALARM DEVICES HAVE BEEN DIAGRAMMATICALLY PLACED BASED UPON INFORMATION SUPPLIED BY THE ARCHITECT, AS OF 9/12/2018.

JOHNSON CONTROLS IS SUBMITTING TO YOU DRAWINGS AND/OR PRODUCT DATA BASED UPON THE INFORMATION PROVIDED BY THE ARCHITECT AND ELECTRICAL OR MECHANICAL ENGINEERS OF RECORD. BECAUSE PROJECT INFORMATION IS CONTINUALLY CHANGING, JOHNSON CONTROLS DOES NOT ASSUME ANY RESPONSIBILITY FOR THE DESIGN HEREIN.

NOTIFICATION APPLIANCE CIRCUITS:

INSTALL NEW SPEAKER-STROBE DEVICES AS SHOWN ON SHEET FA-101.

INSTALL NEW SPEAKER ONLY WEATHER PROOF DEVICES AS SHOWN ON SHEET FA-101.

INSTALL NEW VISIBLE ONLY DEVICES AS SHOWN ON SHEET FA-101.

ALL NOTIFICATION CIRCUITS, (NAC), DEVICE CIRCUITS ARE CURRENT AS OF DATE OF THE DIAGRAMMATIC LAYOUT. ALL DEVICE CIRCUITING IS SUBJECT TO CHANGE DUE TO TIMING OF OTHER PROJECTS AT THIS SITE OR UNFORESEEN FIELD CONDITIONS.

INITIATION DEVICE CIRCUITS:

INSTALL NEW SIMPLEX ADDRESSABLE TRUEALARM SMOKE SENSORS AS SHOWN ON SHEET FA-101.

INSTALL NEW SIMPLEX ADDRESSABLE TRUEALARM HEAT SENSORS AS SHOWN ON SHEET FA-101.

INSTALL NEW SIMPLEX ADDRESSABLE TRUEALARM CO SENSORS AS SHOWN ON SHEET FA-101.

INSTALL NEW SIMPLEX ADDRESSABLE TRUEALARM DUCT DETECTORS AS SHOWN ON SHEET FA-101.

INSTALL REMOTE INDICATING LAMP AS INDICATED ON SHEET FA-101 FOR ALL HEAT DETECTORS LOCATED ABOVE CEILING.

INSTALL ADDRESSABLE INDIVIDUAL ADDRESSABLE MODULE(S) (IAM) AS INDICATED ON SHEET FA-101.

ALL SIGNAL LINE CIRCUIT (SLC) DEVICE ADDRESSES ARE CURRENT AS OF DATE OF THE DIAGRAMMATIC LAYOUT. ALL DEVICE ADDRESSES ARE SUBJECT TO CHANGE DUE TO TIMING OF OTHER PROJECTS AT THIS SITE. CHANGES TO (SLC) MAY REQUIRE ADDITIONAL FIRE ALARM PANEL COMPONENTS SUCH AS EXPANSION MODULES, OR NAC CIRCUITS. ANY DEVICE ADDRESS OR IDENTIFIED ZONE WILL BE UPDATED ON THE (AS-BUILT) RECORD DRAWINGS AT THE END OF THE PROJECT.

AIR HANDLING UNITS:

MECHANICAL SCOPE OF WORK IS BASED UPON INFORMATION RECEIVED BY THE ARCHITECT OF RECORD AND MECHANICAL ENGINEER OF RECORD'S DRAWINGS DATED: 9/12/2018. ANY DISCREPANCIES MAY REQUIRE ADDITIONAL DEVICES AND A WRITTEN CHANGE ORDER FROM THE ARCHITECT.

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF IN-DUCT / TUBE TYPE DUCT SMOKE DETECTORS AND WILL ENSURE ALL DETECTORS ARE PLACED IN A SERVICEABLE LOCATION WITHOUT INTERFERENCE THAT WILL MEET THE REQUIREMENTS OF NFPA 72, C.M.C AND THE MANUFACTURERS DOCUMENTATION.

ALL IN-DUCT AND TUBE TYPE DUCT DETECTOR DEVICE LOCATIONS AND MOUNTING REQUIREMENTS ARE DETERMINED BY THE MECHANICAL ENGINEER OF RECORD AND ARCHITECT OF RECORD.

ALL AHU CONTROL & EQUIPMENT SHUT DOWNS SHALL OCCUR AS REQUIRED BY C.M.C. 609 AND AS DESCRIBED BY THE MECHANICAL ENGINEER OF RECORD'S DRAWINGS.

AHU CONTROL & EQUIPMENT SHUT DOWN SHALL OCCUR AS REQUIRED AND SHALL BE DETERMINED BY THE MECHANICAL ENGINEER AND MECHANICAL INSTALLATION CONTRACTOR PER *CALIFORNIA FIRE CODE*.

INSTALL DUCT DETECTORS WITH PAM-SD RELAYS, MOUNTED IN WEATHERPROOF BOXES, AS SHOWN ON FLOOR PLANS AS SUPPLIED BY THE MECHANICAL ENGINEER OF RECORD'S MECHANICAL DRAWINGS. RELAY WILL PROVIDE SIGNAL WHEN DUCT DETECTOR IS ACTIVATED BY SMOKE DETECTION FOR CONTROL OF MECHANICAL EQUIPMENT AS REQUIRED BY CALIFORNIA FIRE CODE, C.M.C. AND AS OUTLINED BY THE MECHANICAL ENGINEER OF RECORD'S DRAWINGS.

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF IN-DUCT / TUBE TYPE DUCT SMOKE DETECTORS AND WILL ENSURE ALL DETECTORS ARE PLACED IN A SERVICEABLE LOCATION WITHOUT INTERFERENCE THAT WILL MEET THE REQUIREMENTS OF NFPA 72, C.M.C 609 AND THE MANUFACTURERS DOCUMENTATION.

NOTE: WHERE HUMIDIFIERS ARE PRESENT ON AN AIR HANDLING UNIT, IT IS RECOMMENDED DUCT DETECTORS BE PLACED UPSTREAM OF THE HUMIDIFIER AND DOWNSTREAM OF THE FILTER TO AVOID NUISANCE ALARMS.

APPLICABLE CODES & STANDARDS

JURISDICTIONS WITHIN THE STATE MAY HAVE AMENDMENTS TO THE STATE ADOPTED CODE. CHECK WITH THE LOCAL JURISDICTION AUTHORITY FOR MORE DETAILS.

California Building Code, 2016 Edition, Title 24, Part 2

California Fire Code, 2016 Edition, Title 24, Part 9

California Electric Code, 2016 Edition, Title 24, Part 3

California Elevator Safety Construction Code, 2016 Edition

NFPA 72, 2016 Edition with California Amendments

ABBREVIATIONS:
CSFM = CALIFORNIA STATE FIRE MARSHAL

OCCUPANCY TYPE(S):
E Educational Group

SPRINKLER PROTECTION:
BUILDING IS NOT SPRINKLED

BUILDING DATA:

BUILDING 4 - CLASSROOMS

OCCUPANCY	E
CONSTRUCTION TYPE	TYPE V-B
FIRE SPRINKLER SYSTEM	NONE
NUMBER OF STORIES	1
CONSTRUCTION AREA	
BUILDING AREA	4,860 SQ FT
ALLOWABLE AREA	NONE SQ FT (TABLE 506.2)
AREA INCREASE	NONE

4,860 ≤ 9,000 = OK

SCOPE OF WORK

MODIFY EXISTING FIRE ALARM SYSTEM: PROVIDE NEW DEVICES, DEMO EXISTING DEVICES AS SHOWN ON SHEET FA-101. SEE PRODUCT DESCRIPTION FOR MORE INFORMATION.

ALL NEW WIRING TO BE CLASS B.

THE EXISTING FIRE ALARM SYSTEM SHALL NOT BE DISCONNECTED OR TAKEN OUT OF SERVICE WITHOUT WRITTEN PERMISSION FROM THE OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER THE TIMING OF ANY EXISTING FIRE ALARM SYSTEM DEMOLITION WORK.

DESIGN STATEMENT

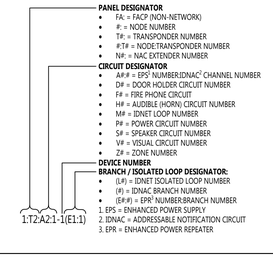
THIS PROJECT'S DESIGN IS BASED ON THE ENGINEERED PLANS AND SPECIFICATIONS PREPARED BY:
ARCHITECT OR ENGINEER NAME

ARCHITECTURAL PLANS DATED:	9/12/2018
MECHANICAL PLANS DATED:	9/12/2018
ELECTRICAL PLANS DATED:	N/A
SPECIFICATIONS DATED:	9/2018
ADDENDUM DATED:	N/A

ABBREVIATIONS LEGEND

AC = ABOVE CEILING
AFF = ABOVE FINISHED FLOOR
AHJ = AUTHORITY HAVING JURISDICTION
ALM = ALARM
ANN = ANNUNCIATOR
BMS = BUILDING MANAGEMENT SYSTEM
C = CEILING MOUNTED
CD = CANDELA RATING
DET = DETECTOR
DGP = DATA GATHERING PANEL
E = EXISTING TO REMAIN
EOL = END OF LINE
EPO = EMERGENCY POWER OFF
FAA = FIRE ALARM ANNUNCIATOR
FACP = FIRE ALARM CONTROL PANEL
FATC = FIRE ALARM TERMINAL CABINET
FBO = FURNISHED BY OTHERS
FCC = FIRE COMMAND CENTER
FSD = FIRE SMOKE DAMPER
FTR = FIRE ALARM TRANSPONDER
H = HIGH HUMIDITY
HT = HEIGHT
HVAC = HEATING VENTILATION & AIR CONDITIONING
IMS = INFORMATION MANAGEMENT SYSTEM
MAX = MAXIMUM
MIN = MINIMUM
N/A = NOT APPLICABLE
NAC = NOTIFICATION APPLIANCE CIRCUIT
NDU = NETWORK DISPLAY UNIT
CEC = CALIFORNIA ELECTRIC CODE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
NIC = NOT IN CONTRACT
NPU = NETWORK PROCESSING UNIT
NTS = NOT TO SCALE
PAP = PRE-ACTION PANEL
RC = EXISTING TO REMOVE AND COVER
RD = EXISTING DEVICE TO BE RELOCATED
RL = RELOCATED DEVICE
RR = REMOVE EXISTING & REPLACE WITH NEW
SCC = STATUS COMMAND CENTER
SLC = SIGNALING LINE CIRCUIT
SMK = SMOKE
SUPV = SUPERVISORY
TAC = TRUEALERT ADDRESSABLE CONTROLLER
TRBL = TROUBLE
TS = TAMPER SWITCH
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
VCC = VOICE COMMAND CENTER
VT = VALVE TAMPER
W = WATTAGE
W/ = WITH
W/O = WITHOUT
WF = WATERFLOW
WG = WIRE GUARD
WP = WEATHERPROOF
XP = EXPLOSION PROOF

DEVICE TAG LEGEND



PANEL DESIGNATOR
- FA: = FACP (NON-NETWORK)
- #: = NODE NUMBER
- T#: = TRANSPONDER NUMBER
- #:T# = NODE:TRANSPONDER NUMBER
- N#: = NAC EXTENDER NUMBER

CIRCUIT DESIGNATOR
- A#:# = EPS[1] NUMBER:IDNAC[2] CHANNEL NUMBER
- D# = DOOR HOLDER CIRCUIT NUMBER
- F# = FIRE PHONE CIRCUIT
- H# = AUDIBLE (HORN) CIRCUIT NUMBER
- M# = ISONET LOOP NUMBER
- P# = POWER CIRCUIT NUMBER
- S# = SPEAKER CIRCUIT NUMBER
- V# = VISUAL CIRCUIT NUMBER
- Z# = ZONE NUMBER

DEVICE NUMBER

BRANCH / ISOLATED LOOP DESIGNATOR:
- (L#) = ISONET ISOLATED LOOP NUMBER
- (#) = IDNAC BRANCH NUMBER
- (E#:#) = EPS[1] NUMBER:BRANCH NUMBER

1. EPS = ENHANCED POWER SUPPLY
2. IDNAC = ADDRESSABLE NOTIFICATION CIRCUIT
3. EPR = ENHANCED POWER REPEATER

SYSTEM SEQUENCE OF OPERATIONS

	SYSTEM INPUTS	CTRL. UNIT ANNUNCIATION: ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTUATE APPROPRIATE LOCATION INDICATOR	NOTIFICATION: ACTUATE ALL AUDIBLE EVACUATION SIGNALS	ACTUATE ALL VISUBLE EVACUATION SIGNALS	DISPLAY CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPV. SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	FIRE SAFETY CONTROL: ACTIVATE TEMPT CODED AUDIBLES AND VISUALS	FAN SHUT DOWN	DAMPER SHUT DOWN	REMOTELY DISPLAY ACTIVE STATUS	REMARKS
1	SMOKE SENSOR/DETECTOR	●	●					●	●	●		●	●					●	1
2	MANUAL PULL STATION	●	●					●	●	●		●	●					●	2
3	HEAT SENSOR/DETECTOR	●	●					●	●	●		●	●					●	3
4	CO SENSOR/BASE			●	●			●			●			●					4
5	DUCT SENSOR/DETECTOR			●	●			●			●	●					●	●	5
6	MONITORING OF SPECIAL EXTINGUISHING SYSTEMS	●	●					●	●	●		●	●					●	6
7	FIRE ALARM AC POWER FAILURE				●	●				●			●					●	7
8	OPEN CIRCUIT OR GROUND FAULT				●	●				●			●					●	8
9	FIRE ALARM SYSTEM LOW BATTERY				●	●				●			●					●	9
10	CLASS B NOTIFICATION CIRCUIT (NAC) - SHORT				●	●				●			●					●	10
11																			11
12																			12
13																			13
14																			14
15																			15
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31																			31
32																			32

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
COVER SHEET

LICENSED ARCHITECT
JIMMIE A. SANDERS
No. C-7644
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Johnson Controls

CALEXICO HIGH SCHOOL
CULINARY ARTS CLASSROOM MODERNIZATION
FIRE ALARM SYSTEM

LEGENDS

FIRE ALARM SYMBOL LEGEND

QTY	SYMBOL	DESCRIPTION	BRAND	MODEL	BOX CODE	WIRE TYPE	CSFM #
		PANELS & ANNUNCIATORS					
E	FACP	4100ES FIRE ALARM CONTROL PANEL, 120 VAC (NODE-1) 2-33 AMP/HR BATTERIES	SIMPLEX	4100-9111 2081-9276	MFG		7165-0026:0251 N/A
1	FACP	4100ES FIRE ALARM CONTROL PANEL, 120 VAC (NODE-4) 2-33 AMP/HR BATTERIES	SIMPLEX	4100-9311 2081-9276	MFG		7165-0026:0251 N/A
6	KHSS	KITCHEN HOOD	BY OTHERS	BY OTHERS			
		INITIATING DEVICES					
5	S	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR WITH STANDARD BASE	SIMPLEX	4098-9714 HEAD 4098-9792 BASE	4K 1C	M	7272-0026:0218 7300-0026:0217
5	T S	HI-TEMP HEAT SENSOR WITH WITH BASE W/REMOTE LED OUTPUT	SIMPLEX	4098-9734 HEAD 4098-9789 BASE	4K 1C	M L	7270-0026:0216 7300-0026:0217
4	T CO	HEAT SENSOR WITH CO SENSOR BASE	SIMPLEX	4098-9733 HEAD 4098-9770 BASE	4K 1C	M	7270-0026:0216 7300-0026:0330
5	S WP R	ADDRESSABLE DUCT SMOKE DETECTOR WITH RELAY OUTPUT	SIMPLEX	4098-9756	MDW	M P	3240-0026:0241 7272-0026:0218
		MODULES & RELAYS					
6	AIM	INDIVIDUAL ADDRESSABLE MODULE	SIMPLEX	4090-9001	1F	M Z	7300-0026:0223
5	R	ENCAPSULATED RELAY	AIR PRODUCTS	PAM-SD	1D	R	7300-1004:0101
		NOTIFICATION APPLIANCES		** TAP ALL SPEAKERS AT 70.7 VOLTS **			
2	# C	ADDRESSABLE STROBE, CEILING MOUNT, WHITE, FIRE, CLEAR LENS	SIMPLEX	49VO-APPLC	H	A	7125-0026:0371
4	#W S WP	ADDRESSABLE WEATHERPROOF SPEAKER ONLY, WALL MOUNT	SIMPLEX	49SO-APPLW-O	MFG	A S	7320-0026:0501
4	#W # S C	ADDRESSABLE SPEAKER/STROBE, CEILING MOUNT, APPLIANCE ONLY, CLEAR LENS	SIMPLEX	49SV-APPLC	4D	A S	7125-0026:0384
		MISCELLANEOUS DEVICES					
5		REMOTE ALARM INDICATOR	SIMPLEX	2098-9808	1E		7300-0026:0150
	JB	JUNCTION BOX	BY OTHERS	BY OTHERS	FBO		
1	SS P	PARALLEL CONNECTED SURGE PROTECTIVE DEVICE	DITEK	DITK-120HW	NR		7300-2105:0102

BACKBOX CODES

CODE	BOX SPECIFICATIONS	CODE	BOX SPECIFICATIONS
4A	4" SQ. BOX 1 1/2" DEEP	**1E**	SINGLE GANG BOX 2 1/2" DEEP
4B	4" SQ. BOX 1 1/2" DEEP W/ COVER	**1F**	SINGLE GANG BOX 2 1/2" DEEP W/COVER
4C	4" SQ. BOX 1 1/2" DEEP W/ 1 1/2" EXT. RING	**1G**	SINGLE GANG BOX 2 3/4" DEEP
4D	4" SQ. BOX 2 1/8" DEEP	**1H**	SINGLE GANG BOX 3 1/2" DEEP
4E	4" SQ. BOX 2 1/8" DEEP W/ COVER	**2A**	DOUBLE GANG BOX 2" DEEP
4F	4" SQ. BOX 2 1/8" DEEP W/ 1 1/2" EXT. RING	**2B**	TWO GANG BOX 2 1/2" DEEP
4G	4" SQ. BOX 2 1/8" DEEP W/ SINGLE GANG COVER	**2C**	TWO GANG BOX 2 3/4" DEEP
4H	4" SQ. BOX 2 1/8" DEEP W/ TWO GANG COVER	**5A**	5 GANG BOX 2 1/2" DEEP
4J	4" SQ. BOX 2 1/2" DEEP	**6A**	6 SINGLE GANG BOXES 3 1/2" DEEP
4K	4" OCT. BOX 1 1/2" DEEP	**6B**	6 GANG BOX
4L	4" OCT. BOX 1 1/2" DEEP W/ 1 1/2" EXT. RING	**6C**	6 GANG BOX 2 1/2" DEEP
4M	4 11/16" SQ. BOX 2 1/8" DEEP	**6D**	6 GANG BOX 3 1/2" DEEP
4N	4 11/16" SQ. BOX 1 1/2" DEEP W/ 1 1/2" EXT. RING	**FBO**	FURNISHED BY OTHERS
4P	4 11/16" SQ. BOX 2 1/8" DEEP W/ 1 1/2" EXT. RING	**MFG**	SUPPLIED BY MANUFACTURER
4Q	4" SQ. BOX 1 1/2" DEEP W/4098-9832 ADAPTER	**MDW**	MOUNTS TO DUCTWORK
4R	4" SQ. BOX 1 1/2" DEEP W/RACO 787 OR EQUIV.	**MBD**	MOUNTS IN BOX BEHIND DETECTOR
4S	4" SQ. BOX 1 1/2" DEEP W/4098-9863 ADAPTER	**WM**	WALL MOUNT
1A	SINGLE GANG BOX 1 1/2" DEEP	**DT**	DESK TOP MOUNT
1B	SINGLE GANG BOX 2" DEEP	**DS**	REFER TO PRODUCT DATASHEET
1C	SINGLE GANG BOX 2 1/8" DEEP	**NR**	NO BACKBOX REQUIRED
1D	SINGLE GANG BOX 2 1/8" DEEP W/COVER	**TRM**	3.5" WIDE SNAP TRACK W/MOUNTING SCREWS

FOR ADDITIONAL BACK BOX OPTIONS, REFER TO THE XX-700 SERIES DRAWINGS OR PRODUCT DATA SHEETS AND INSTALLATION INSTRUCTIONS.

FIRE ALARM WIRE LIST

	CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES: FPLR	FPLP	THHN	TFFN	OUTDOOR	CL
A	ADDRESSABLE NOTIFICATION	UTP SOLID	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. RECOMMENDED	X	X				
B	RUI+ COMMUNICATION	UTP SOLID	18 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. RECOMMENDED	X	X				
K	REMOTE TEST SWITCH/LED	(2) 2 COND. SOLID	14 AWG		X	X	X			
M	IDNET	UTP SOLID	18 AWG		X	X				
N	RS-485 COMMUNICATION	TSP SOLID	18 AWG	58pf/ft. MAX CAPACITANCE	X	X				
P	POWER	2 COND. SOLID	14 AWG		X	X	X			
R	RELAY	2 COND. SOLID	14 AWG		X	X	X			
S	AUDIO	UTP SOLID	18 AWG	30pf/ft. MAX CAPACITANCE RECOMMENDED	X	X				
Mo	IDNET/MAPNET CIRCUIT - OUTDOOR	TSP SOLID	18 AWG	DIRECT BURIAL/UNDERGROUND IN CONDUIT/AERIAL**			X		X	
No	RS-485 COMMUNICATION - OUTDOOR	TSP SOLID	18 AWG	DIRECT BURIAL/UNDERGROUND IN CONDUIT/AERIAL**			X		X	
Po	VISUAL SIGNAL - OUTDOOR	TSP SOLID	14 AWG	DIRECT BURIAL/UNDERGROUND IN CONDUIT/AERIAL**			X		X	
So	AUDIO CIRCUIT - OUTDOOR	TSP SOLID	18 AWG	DIRECT BURIAL/UNDERGROUND IN CONDUIT/AERIAL**					X	

CONDUIT SIZE	MAX CONDUCTOR AREA	CONDUIT SIZE	MAX CONDUCTOR AREA	NOTES
1/2"	0.12 SQ INCH *	1-1/4"	0.65 SQ INCH *	*40% FILL PER N.E.C.
3/4"	0.21 SQ INCH *	1-1/2"	0.82 SQ INCH *	SUBSCRIPT "u": UNSHIELDED CABLES MIXED WITH
1"	0.34 SQ INCH *	2"	1.34 SQ INCH *	SHIELDED CABLES OF SAME CIRCUIT DESIGNATION.

**OUTDOOR AERIAL CABLE REQUIRES MESSENGER

ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRUCIAL TO THE CIRCUIT DESIGN OF THIS SYSTEM INSTALLATION. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR SELECTING AND INSTALLING CABLE MANUFACTURER AND MODEL THAT MEETS OR EXCEEDS THE ABOVE REQUIREMENTS. RECOMMENDED CABLE MANUFACTURERS AND MODEL NUMBERS ARE AVAILABLE UPON REQUEST.

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Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title
INFO SHEET

LICENSED ARCHITECT
JIMMIE A. SANDERS
No. C-7644
RENEWAL DATE
7-31-19
STATE OF CALIFORNIA

Document Date	Project Number
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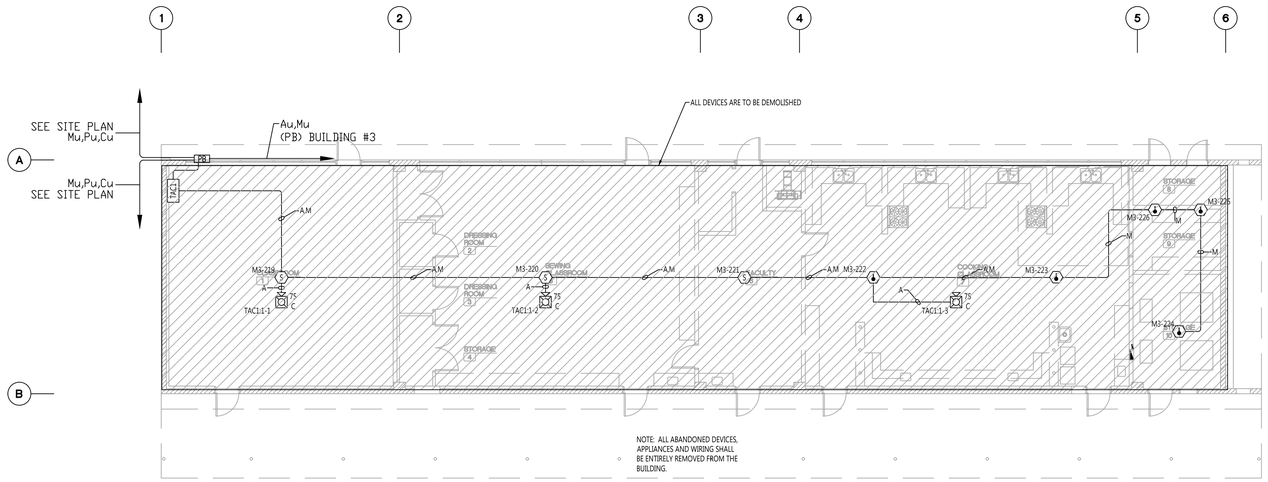
DEMOLITION FLOOR PLAN

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



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GENERAL NOTES:

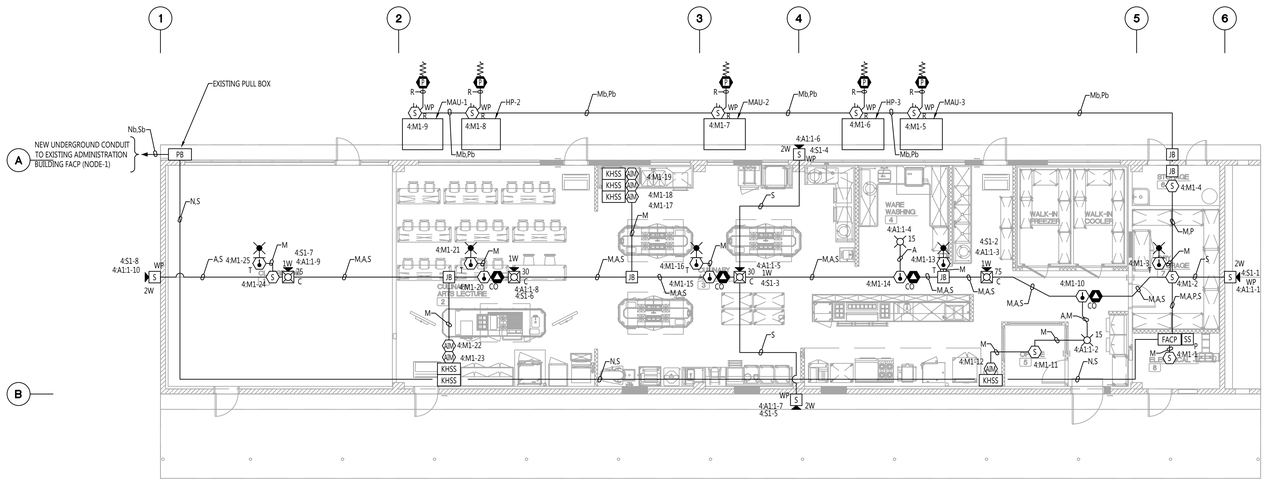
1. ALL CEILINGS ARE ASSUMED TO BE 10' A.F.F., SMOOTH CONSTRUCTION UNLESS NOTED OTHERWISE.
2. TAP ALL SPEAKERS AT 0.5W UNLESS NOTED OTHERWISE.
3. SET ALL SPEAKER VOLTAGE JUMPERS TO THE 70.7V SETTING.
4. THE DEVICE ADDRESSES INDICATED ON THESE DRAWINGS ARE AN ALPHANUMERIC DESCRIPTION OF WHICH CIRCUIT THE DEVICE IS LOCATED ON. DEVICES MAY BE ASSIGNED A DIFFERENT NUMBER WITHIN THE PANEL PROGRAM. CONSULT WITH A JOHNSON CONTROLS TECHNICIAN BEFORE APPLYING A PHYSICAL LABEL TO ANY DEVICES.

KEYNOTES:

TYPE KEYNOTE TEXT HERE..

FIRE ALARM PLAN

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



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WALL TYPES

- (E) 8" GUNITE WALL
- (E) 4" WOOD STUD WALL
- NEW 6" METAL STUD (NON BEARING)
- NEW 4" METAL STUD (NON BEARING)

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CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title

DEVICE PLACEMENT PLAN

LICENSED ARCHITECT
JIMMIE A. SANDERS
No. C-7644
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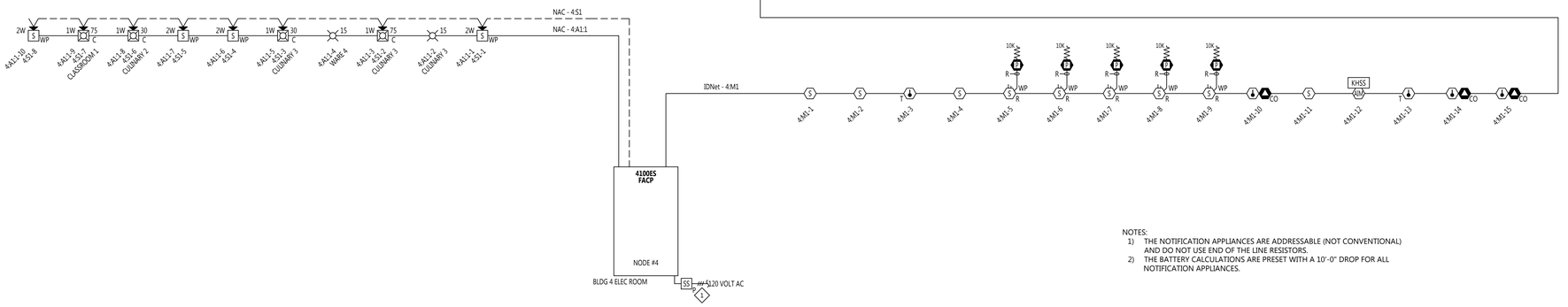

FA-101 DEVICE PLACEMENT PLAN

FA-101 DEVICE PLACEMENT PLAN

NOTES:
1) THE NOTIFICATION APPLIANCES ARE ADDRESSABLE (NOT CONVENTIONAL) AND DO NOT USE END OF THE LINE RESISTORS.
2) THE BATTERY CALCULATIONS ARE PRESET WITH A 10'-0" DROP FOR ALL NOTIFICATION APPLIANCES.

RISER NOTES:

1. RISER IS A DIAGRAMMATICAL REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR CIRCUIT ROUTING AND CONFIGURATION INFORMATION.
2. ALL WIRING SHALL COMPLY WITH APPLICABLE ELECTRICAL CODES. REFER TO 'APPLICABLE CODES & STANDARDS' ON SHEET FA-001 FOR SPECIFIC CODE REFERENCES.
3. DEVICES ARE TYPICAL. SEE FLOOR PLAN FOR QUANTITY & LOCATIONS.

KEYED NOTES:

1. 120VAC PRIMARY POWER SOURCE SHALL BE A MECHANICALLY PROTECTED BRANCH CIRCUIT. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, AND BE IDENTIFIED AS "FIRE ALARM CIRCUIT"

FIRE ALARM RISER DIAGRAM

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RISER DIAGRAM

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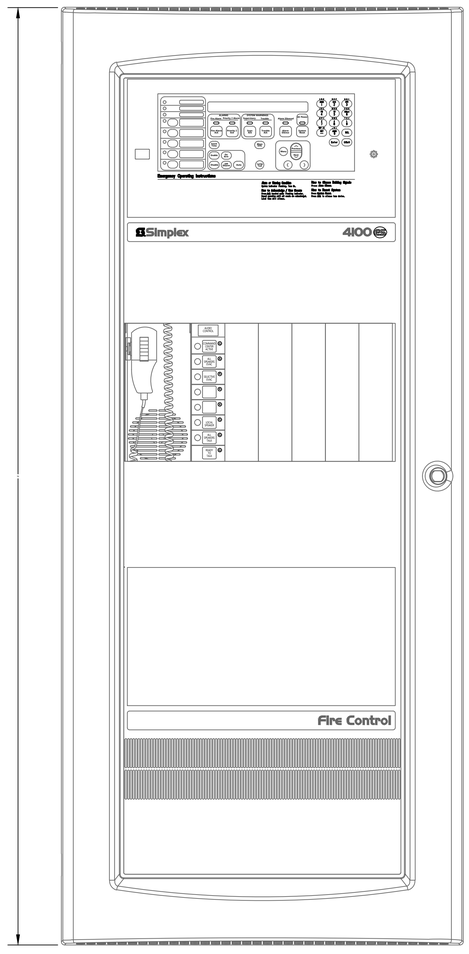

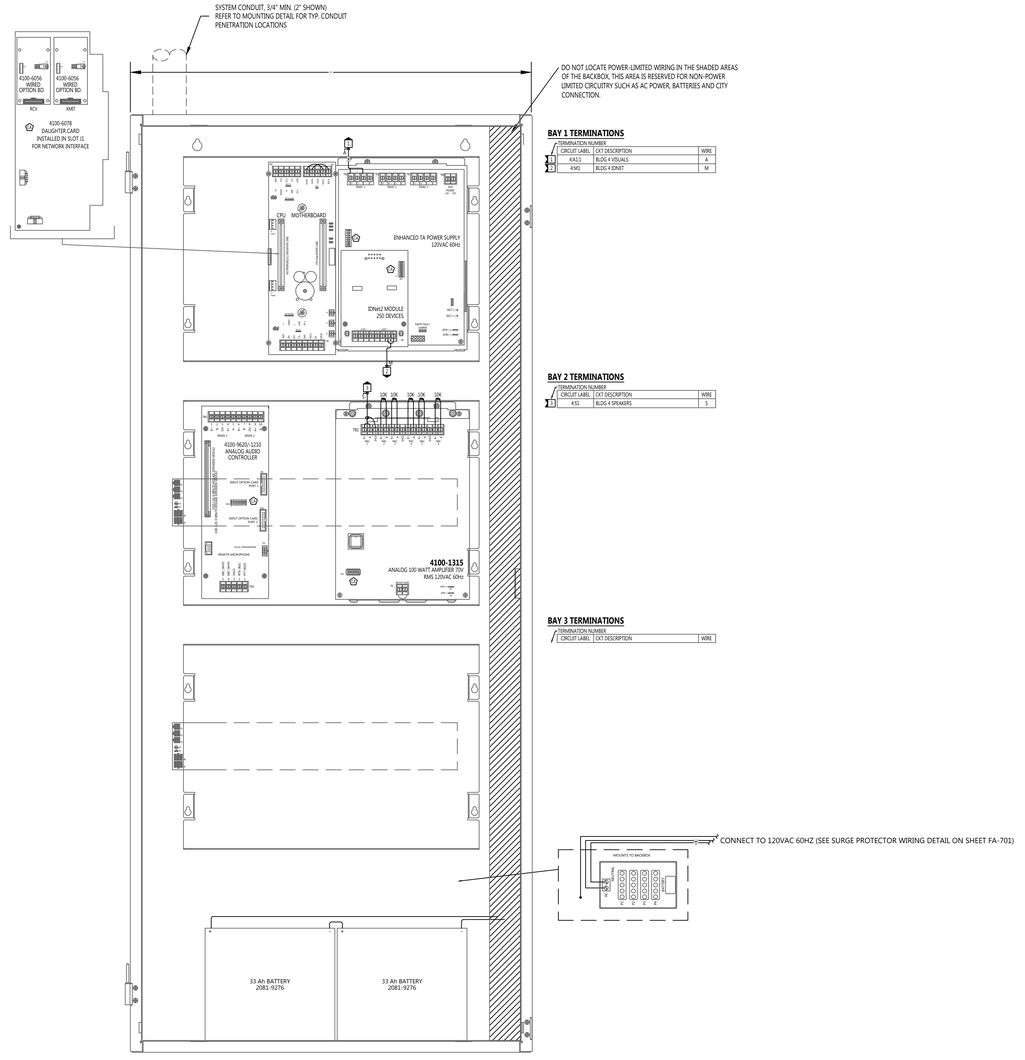

BAY 1 TERMINATIONS

TERMINATION NUMBER	CIRCUIT LABEL	CKT DESCRIPTION	WIRE
1	4:A13	BLDG 4 VISUALS	A
2	4:M1	BLDG 4 IDNET	M

BAY 2 TERMINATIONS

TERMINATION NUMBER	CIRCUIT LABEL	CKT DESCRIPTION	WIRE
1	4:S1	BLDG 4 SPEAKERS	S

BAY 3 TERMINATIONS

TERMINATION NUMBER	CIRCUIT LABEL	CKT DESCRIPTION	WIRE

FIRE ALARM CONTROL PANEL

CABINET # 1 - FIRST FLOOR
ELECTRICAL #8

SCALE: NTS

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PANEL DETAILS

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POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

4:A1: ENHANCED POWER SUPPLY - CHANNEL 1					SWITCH SETTINGS								
IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	1	2	3	4	5	6	7	8	
4:A1:1-1	0	49SO-APPLW-O	HIGH		X								ON
4:A1:1-2	VO	49VO-APPLC	15cd	CULINARY 3		X							ON
4:A1:1-3	SV	49SV-APPLC	75cd	CULINARY 3	X	X							ON
4:A1:1-4	VO	49VO-APPLC	15cd	WARE 4			X						ON
4:A1:1-5	SV	49SV-APPLC	30cd	CULINARY 3	X		X						ON
4:A1:1-6	0	49SO-APPLW-O	HIGH			X	X						ON
4:A1:1-7	0	49SO-APPLW-O	HIGH		X	X	X						ON
4:A1:1-8	SV	49SV-APPLC	30cd	CULINARY 2				X					ON
4:A1:1-9	SV	49SV-APPLC	75cd	CLASSROOM 1	X			X					ON
4:A1:1-10	0	49SO-APPLW-O	HIGH			X		X					ON
4:A1:1-11					X	X		X					ON
4:A1:1-12							X	X					ON

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

4:A1: ENHANCED POWER SUPPLY - CHANNEL 2					SWITCH SETTINGS								
IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	1	2	3	4	5	6	7	8	
4:A1:2-1					X								ON
4:A1:2-2						X							ON
4:A1:2-3					X	X							ON
4:A1:2-4							X						ON
4:A1:2-5					X		X						ON

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

4:A1: ENHANCED POWER SUPPLY - CHANNEL 3					SWITCH SETTINGS								
IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	1	2	3	4	5	6	7	8	
4:A1:3-1					X								ON
4:A1:3-2						X							ON
4:A1:3-3					X	X							ON
4:A1:3-4							X						ON
4:A1:3-5					X		X						ON

CULINARY ARTS 4100es FACP						
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4100-9311	1	4100 CONFIG. DOMESTIC 120V *	0.4250	0.4250	0.7350	0.7350
4100-1315	1	ANALOG 100W AMP W/6 B NACS 120VAC 70V	0.0850	0.0850	3.8000	3.8000
4100-1241	1	MESSAGE EXPANSION BOARD - 8 MINUTES	0.0020	0.0020	0.0170	0.0170
4100-9620	1	BASIC AUDIO WITH MICROPHONE - ANALOG	0.2250	0.2250	0.2250	0.2250
4100-1252	1	1 CHANNEL AUDIO OPERATOR INTERFACE	0.0000	0.0000	0.0240	0.0240
4100-1288	1	64/64 LED/SWITCH CONTROLLER	0.0200	0.0200	0.0200	0.0200
4100-6078	1	NETWORK IF CARD, MODULAR	0.0460	0.0460	0.0460	0.0460
4100-6056	2	NETWORK MEDIA CARD WIRED	0.0550	0.1100	0.0550	0.1100
4100-1279	5	2" BLANK DISPLAY MODULE	0.0000	0.0000	0.0000	0.0000
4100-0634	1	POWER DISTRIBUTION MODULE 120V	0.0000	0.0000	0.0000	0.0000
4100-2302	1	8 SLOT EXP BAY FILLER PANEL	0.0000	0.0000	0.0000	0.0000
		Panel Totals		0.9130		4.9770
IDNet Addressable Devices (SLC)						
4090-9001	6	IDNET SUPERVISED IAM *				
4098-9714	5	TRUEALARM PHOTO SMOKE SENSOR				
4098-9734	9	HIGH TEMP HEAT SENSOR 0				
4098-9756	5	TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT *				
4098-9792	10	TRUEALARM SENSOR BASE *				
4098-9770	4	TRUEALARM SENSOR BASE WITH CO MODULE *				
Miscellaneous Peripheral Devices That Require (Additional) System Power						
4098-9843	5	ENCAPSULATED RELAY PAM-SD	0.0000	0.0000	0.0150	0.0750
4098-9756	5	TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT	0.0030	0.0150	0.0150	0.0750
2098-9808	5	REMOTE ALARM INDICATOR	0.0000	0.0000	0.0000	0.0000
Notification Appliances		Setting				
49SO-APPLW-O	4	WP SPEAKER HIGH	0.0100	0.0400	0.0100	0.0400
49SV-APPLC	2	S/V APPLIANCE ONLY, CEILING MT 30	0.0008	0.0016	0.0820	0.1640
49SV-APPLC	2	S/V APPLIANCE ONLY, CEILING MT 75	0.0008	0.0016	0.1450	0.2900
49VO-APPLC	2	STROBE, APPLIANCE ONLY, CEILING MOUNT 15	0.0008	0.0016	0.0550	0.1100
		Peripheral Totals		0.0598		0.7540
		Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices		0.0000		0.3444
		RUI Totals 0		0.0000		0.0000
		Address Totals 25 Addresses		0.0200		0.0250
		System Totals*:	Standby	0.9928	Alarm	6.1004

* Device Address current draw included below (See Additional Current Draws):

2. Backup Amplifier assumes Main Amplifier alarm current on failure.

Battery Set #1 (Cabinet/Charger #1)			Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:						
EPS-1				0.8878		1.9310
Amp-1				0.0850		3.8000
			Sub Total	0.9728		5.7310
Additional Current Draws:						
IDNac Current Boost for 29vdc Regulated Output **				0.0000		0.3444
MAPNET/IDNet Device Address Communication Current		25	x 0.000800	= 0.0200	x 0.001000	= 0.0250
			Sub Total	0.9928		6.1004
Spare addressable point capacity	0%	0	x 0.0008	= 0.0000	x 0.001	= 0.0000
			Total	0.9928		6.1004
Standby Time =	24	Hrs	x 0.9928	= 23.8272	Standby Ah	
Alarm Time =	15	Min	0.25 x 6.1004	= 1.5251	Alarm Ah	
				25.3523		
Additional Spare Battery Capacity =	0%		+	0.0000		
				25.3523		
Battery Discharge Factor =	20%		+	5.0705		
Minimum Battery Required	2081-9276 33AH (2x)			30.4227		
Battery Supplied	2081-9276 33AH (2x)					

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

** IDNac Current Boost formula: ((29.5 * IDNac Alarm Current) / .92) / 20.4 = Adjusted Current
DC-DC Converter Output = 29.5vdc. Terminal Output is 29vdc due to 0.5vdc internal loss.
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state

CULINARY ARTS - EPS-1 CIRCUIT SUMMARY & VOLTAGE DROP								
	Channel	Description	Alarm Current	% Drop	Unit Load*	Wire Length	Spare Current	Spare VoltageDrop
	4:A1:1	BUILDING 4 NOTIFICATION	0.604A	2.48%	10	361	80%	88%
	4:A1:2		0.000A	0.00%	0	0	100%	100%
	4:A1:3		0.000A	0.00%	0	0	100%	100%
EPRs FOR 4:A1:1			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
EPRs FOR 4:A1:2			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
EPRs FOR 4:A1:3			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%
			0.000A	0.00%	0	0	100%	100%

* 139 Unit Load Limit

4:A1:1 — Notification SLC Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%

Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga

Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations: Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
						0.0000	0.000	0.000	0.000	
1	4:A1:1-1	PANEL	26	49SO-APPLW-O	HIGH	0.0100	0.604	0.096	28.904	Branch 1: 2.48%
1	4:A1:1-2	4:A1:1-1	37	49VO-APPLC	15cd	0.0550	0.594	0.135	28.769	Length: 361
1	4:A1:1-3	4:A1:1-2	31	49SV-APPLC	75cd	0.1450	0.539	0.103	28.666	
1	4:A1:1-4	4:A1:1-3	26	49VO-APPLC	15cd	0.0550	0.394	0.063	28.603	
1	4:A1:1-5	4:A1:1-4	36	49SV-APPLC	30cd	0.0820	0.339	0.075	28.528	
1	4:A1:1-6	4:A1:1-5	34	49SO-APPLW-O	HIGH	0.0100	0.257	0.054	28.475	
1	4:A1:1-7	4:A1:1-6	42	49SO-APPLW-O	HIGH	0.0100	0.247	0.064	28.411	
1	4:A1:1-8	4:A1:1-7	63	49SV-APPLC	30cd	0.0820	0.237	0.092	28.319	
1	4:A1:1-9	4:A1:1-8	39	49SV-APPLC	75cd	0.1450	0.155	0.037	28.282	
1	4:A1:1-10	4:A1:1-9	27	49SO-APPLW-O	HIGH	0.0100	0.010	0.002	28.280	
						0.0000	0.000	0.000	0.000	

4:A1:2 — Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%

Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga

Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations: Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	

4:A1:3 — Distributed Load Voltage Drop

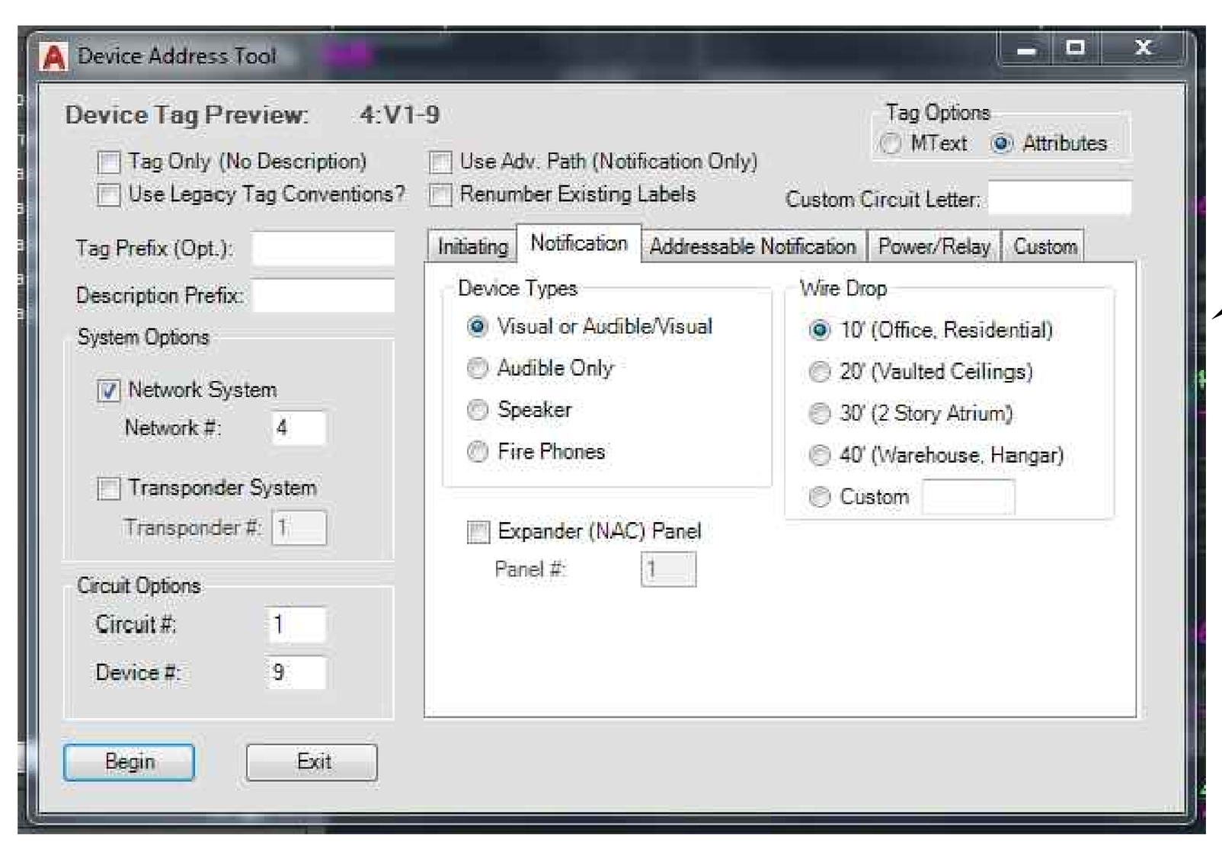
Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%

Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga

Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations: Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	
						0.0000	0.000	0.000	0.000	

THE BATTERY AND VOLTAGE DROP CALCULATIONS DO NOT NEED REVISING, BECAUSE A 10'-0' WIRE DROP HAS BEEN INCLUDED FOR EACH NOTIFICATION APPLIANCE.



10'-0" WIRE DROP INCLUDED FOR EACH NOTIFICATION APPLIANCE (AUTOMATICALLY ADDED TO DISTANCE IN CALCULATOR)

IDNET CHANNEL 4:M1		ADDRESSES IN USE: 25 (10%) | SPARE ADDRESSES: 225 (90%)			SWITCH SETTINGS									
Address	Device Type	Point Type	Location Description		1	2	3	4	5	6	7	8		9
4:M1-1	PHOTO	SMOKE	ELEC 8	4:1-1	X								ON	
4:M1-2	PHOTO	SMOKE	DRY 7	4:1-2		X							ON	
4:M1-3	HEAT	HEAT	DRY 7	4:1-3	X	X							ON	
4:M1-4	PHOTO	SMOKE	STRG 6	4:1-4			X						ON	
4:M1-5	RPHOTO	LSDUCT	MAU-3	4:1-5	X		X						ON	
4:M1-6	RPHOTO	LSDUCT	HP-3	4:1-6		X	X						ON	
4:M1-7	RPHOTO	LSDUCT	MAU-2	4:1-7	X	X	X						ON	
4:M1-8	RPHOTO	LSDUCT	HP-2	4:1-8				X					ON	
4:M1-9	RPHOTO	LSDUCT	MAU-1	4:1-9	X			X					ON	
4:M1-10	MCOH	UTILITY	CULINARY 3	4:1-10		X		X					ON	
4:M1-11	PHOTO	SMOKE	OFFICE	4:1-11	X	X		X					ON	
4:M1-12	IAM	FIRE					X	X					ON	
4:M1-13	HEAT	HEAT	WARE 4	4:1-13	X		X	X					ON	
4:M1-14	MCOH	UTILITY	WARE 4	4:1-14		X	X	X					ON	
4:M1-15	MCOH	UTILITY	CULINARY 3	4:1-15	X	X	X	X					ON	
4:M1-16	HEAT	HEAT	CULINARY 3	4:1-16					X				ON	
4:M1-17	IAM	FIRE			X				X				ON	
4:M1-18	IAM	FIRE				X			X				ON	
4:M1-19	IAM	FIRE			X	X			X				ON	
4:M1-20	MCOH	UTILITY	CULINARY ARTS LECTURE 2	4:1-20			X		X				ON	
4:M1-21	HEAT	HEAT	CULINARY 2	4:1-21	X		X		X				ON	
4:M1-22	IAM	FIRE				X	X		X				ON	
4:M1-23	IAM	FIRE			X	X	X		X				ON	
4:M1-24	PHOTO	SMOKE	CLASSRM 1	4:1-24				X	X				ON	
4:M1-25	HEAT	HEAT	CLASSRM 1	4:1-25	X			X	X				ON	
4:M1-26						X		X	X				ON	
4:M1-27					X	X		X	X				ON	
4:M1-28							X	X	X				ON	
4:M1-29					X		X	X	X				ON	
4:M1-30						X	X	X	X				ON	
4:M1-31					X	X	X	X	X				ON	
4:M1-32										X			ON	
4:M1-33					X					X			ON	
4:M1-34						X				X			ON	
4:M1-35					X	X				X			ON	
4:M1-36							X			X			ON	
4:M1-37					X		X			X			ON	
4:M1-38						X	X			X			ON	
4:M1-39					X	X	X			X			ON	
4:M1-40								X		X			ON	
4:M1-41					X			X		X			ON	
4:M1-42						X		X		X			ON	
4:M1-43					X	X		X		X			ON	
4:M1-44							X	X		X			ON	
4:M1-45					X		X	X		X			ON	
4:M1-46						X	X	X		X			ON	
4:M1-47					X	X	X	X		X			ON	
4:M1-48									X	X			ON	
4:M1-49					X				X	X			ON	
4:M1-50						X			X	X			ON	
4:M1-51					X	X			X	X			ON	
4:M1-52							X		X	X			ON	
4:M1-53					X		X		X	X			ON	
4:M1-54						X	X		X	X			ON	
4:M1-55					X	X	X		X	X			ON	
4:M1-56								X	X	X			ON	
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4:M1-63					X	X	X	X	X	X			ON	
4:M1-64											X		ON	
4:M1-65					X						X		ON	
4:M1-66						X					X		ON	
4:M1-67					X	X					X		ON	
4:M1-68							X				X		ON	
4:M1-69					X		X				X		ON	
4:M1-70						X	X				X		ON	
4:M1-71					X	X	X				X		ON	
4:M1-72								X			X		ON	
4:M1-73					X			X			X		ON	
4:M1-74						X		X			X		ON	
4:M1-75					X	X		X			X		ON	
4:M1-76							X	X			X		ON	
4:M1-77					X		X	X			X		ON	
4:M1-78						X	X	X			X		ON	
4:M1-79					X	X	X	X			X		ON	
4:M1-80									X		X		ON	
4:M1-81					X				X		X		ON	
4:M1-82						X			X		X		ON	
4:M1-83					X	X			X		X		ON	
4:M1-84							X		X		X		ON	
4:M1-85					X		X		X		X		ON	
4:M1-86						X	X		X		X		ON	
4:M1-87					X	X	X		X		X		ON	
4:M1-88								X	X		X		ON	
4:M1-89					X			X	X		X		ON	
4:M1-90						X		X	X		X		ON	
4:M1-91					X	X		X	X		X		ON	
4:M1-92							X	X	X		X		ON	
4:M1-93					X		X	X	X		X		ON	
4:M1-94						X	X	X	X		X		ON	
4:M1-95					X	X	X	X	X		X		ON	
4:M1-96										X	X		ON	
4:M1-97					X					X	X		ON	
4:M1-98						X				X	X		ON	
4:M1-99					X	X				X	X		ON	
4:M1-100							X			X	X		ON	
4:M1-101					X		X			X	X		ON	
4:M1-102						X	X			X	X		ON	
4:M1-103					X	X	X			X	X		ON	
4:M1-104								X		X	X		ON	
4:M1-105					X			X		X	X		ON	
4:M1-106						X		X		X	X		ON	
4:M1-107					X	X		X		X	X		ON	
4:M1-108							X	X		X	X		ON	
4:M1-109					X		X	X		X	X		ON	
4:M1-110						X	X	X		X	X		ON	
4:M1-111					X	X	X	X		X	X		ON	
4:M1-112									X	X	X		ON	
4:M1-113					X				X	X	X		ON	
4:M1-114						X			X	X	X		ON	
4:M1-115					X	X			X	X	X		ON	
4:M1-116							X		X	X	X		ON	
4:M1-117					X		X		X	X	X		ON	
4:M1-118						X	X		X	X	X		ON	
4:M1-119					X	X	X		X	X	X		ON	
4:M1-120								X	X	X	X		ON	
4:M1-121					X			X	X	X	X		ON	
4:M1-122						X		X	X	X	X		ON	
4:M1-123					X	X		X	X	X	X		ON	
4:M1-124							X	X	X	X	X		ON	
4:M1-125					X		X	X	X	X	X		ON	

NOTE: THE LABELS SHOWN ABOVE WILL BE USED FOR PROGRAMMING PURPOSES.
THE LABELS ARE BASED UPON INFORMATION SHOWN ON THE ARCHITECTURAL DRAWINGS.
ANY CHANGES TO THESE LABELS MUST BE NOTED ON THE SUBMITTAL REVIEW, PRIOR TO PROGRAMMING.
POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

Amp Qty	Circuit Prefix	Starting Circuit #
1	N4:S	1

Expansion Card Qty	Spkr Qty
0	8

Circuit Qty	
3	3 more speaker circuits available

	Amplifier Wattage	Watts Used	Alarm	Expansion Card?	Avail. Ckts.	Used Ckts.	% Used
Amp-1	100	12.W	3.800A	No	6	3	12.00%

CULINARY ARTS 4100es FACP Speaker Db Loss Calculations																								
*Circuit Voltage = 70vrms [Et]																							MAXIMUM -3 dB DROP	
SPEAKER CIRCUIT DESCRIPTION	Amp #	Plan Circuit Number	Speaker Tap ######	Speaker Tap #####	Speaker Tap .5 Watt	Speaker Tap 1. Watt	Speaker Tap 2. Watt	Speaker Tap 4. Watt	Speaker Tap #####	Speaker Tap #####	Total Spkrs per Circuit	Total Watts [P]	Wire Gauge	Est. Ckt. Length [D] in Feet	Wire Res. Per Foot [Rw]	Circuit Resistance [Rl=2D*Rw]	Speaker Current [I=P/Et]	Speaker Resistance [Rs=Et/I]	Voltage At End [Es=(Et*Rs)/(Rs+Rl)]	Watts At End [Pe=(Es)^2/Rs]	Actual dB Loss [dB=Log10 (Pe/P)*10]	Max Allowable Ckt. Length [ML=(0.414*Rs)/(2*Rw)]		
CULINARY ARTS	Amp-1	N4:S1				4	4				8	12. Watts	18ga	250	0.0078	3.885	0.171	408.333	69.340	11.775	-.08 db	10878 Ft.		
SPARE	Amp-1	N4:S2										. Watts	18ga		0.0078	0.000	0.000	0.000	0.000	0.000	. db	0 Ft.		
SPARE	Amp-1	N4:S3										. Watts	18ga		0.0078	0.000	0.000	0.000	0.000	0.000	. db	0 Ft.		

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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APPL 04-117794
AC ____ FLS ____ SS ____
DATE ____

APPROVALS

Sanders, INC.
Architecture/Engineering
1102 INDUSTRY WAY, SUITE A
EL CENTRO, CA 92243
760 353 5440 FAX 760 353 5442

Project Title
CALEXICO UNIFIED SCHOOL DISTRICT
CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

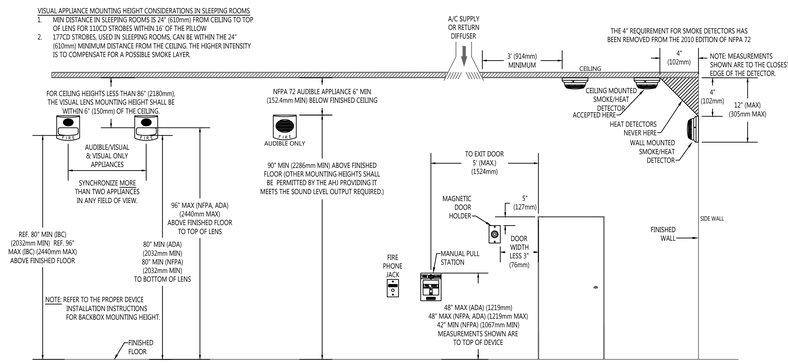
Sheet Title
Calculations

LICENSED ARCHITECT
JIMMIE A. SANDERS
No. C-7644
RENEWAL DATE 7-31-19
STATE OF CALIFORNIA

Document Date: 09-12-18
Date Last Revised:
Project Number: 18-25CX
Sheet Number: FA-601

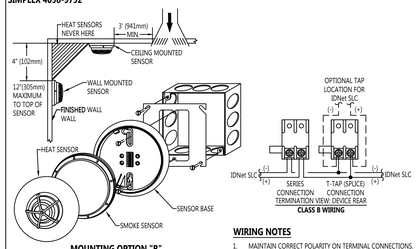
DEVICE MOUNTING HEIGHT REFERENCE

PER NFPA 72



STANDARD SENSOR BASE

SIMPLEX 4098-9792



MOUNTING OPTION "B"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

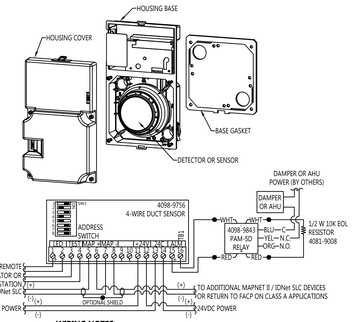
MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG BOX, 2-1/8" (54mm) DEEP	BY OTHERS
B	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SINGLE GANG COVER PLATE 3/4" (19mm) EXTENSION	BY OTHERS
C	4" (102mm) OCTAGONAL BOX, 1-1/2" (38mm) DEEP, MINIMUM	BY OTHERS
D	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SIMPLEX 4098-9832 ADAPTER KIT	BOX BY OTHER, 4098-9832 ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4098-0019 FROM HTTP://WWW.SIMPLEX-FIRE.COM

DUCT SMOKE DETECTOR

SIMPLEX 4098-9756 ANALOG 4-WIRE DUCT SENSOR WITH 24VDC RELAY

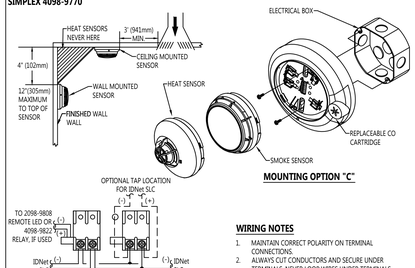


WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS. CLASS B APPLICATIONS ONLY.

CARBON MONOXIDE SENSOR BASE

SIMPLEX 4098-9770



MOUNTING OPTION "C"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

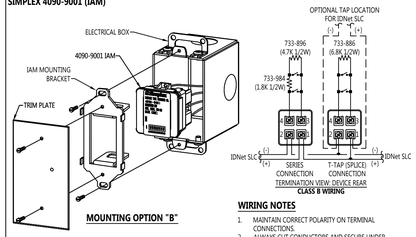
MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG BOX, 2-1/8" (54mm) DEEP	BY OTHERS
B	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SINGLE GANG COVER PLATE 3/4" (19mm) EXTENSION	BY OTHERS
C	4" (102mm) OCTAGONAL BOX, 1-1/2" (38mm) DEEP, MINIMUM	BY OTHERS
D	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SIMPLEX 4098-9863ADAPTER KIT	BOX BY OTHERS, 4098-9863 ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4098-0052 FROM HTTP://WWW.SIMPLEX-FIRE.COM

ADDRESSABLE INPUT MODULE

SIMPLEX 4090-9001 (IAM)



MOUNTING OPTION "B"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

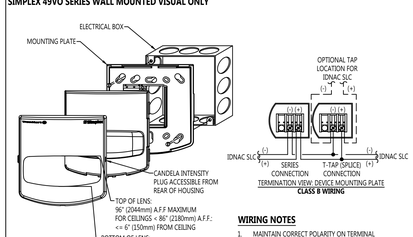
MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG BOX, 2-1/2" (64mm) DEEP WITH SINGLE GANG COVER PLATE	BY OTHERS
B	SINGLE GANG BOX, 2-1/2" (64mm) DEEP WITH SIMPLEX 4090-9810 IAM MOUNTING BRACKET AND SIMPLEX 4090-9806 TRIM PLATE FOR SEMI-FLUSH MOUNTED BOX	BOX BY OTHERS, PLATES ORDERED SEPARATELY
C	SINGLE GANG BOX, 2-1/2" (64mm) DEEP WITH SIMPLEX 4090-9810 IAM MOUNTING BRACKET AND SIMPLEX 4090-9807 TRIM PLATE FOR SURFACE MOUNTED BOX	BOX BY OTHERS, PLATES ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4090-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49VO SERIES WALL MOUNTED VISUAL ONLY



MOUNTING OPTION "B"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING OPTIONS

OPTION [2]	DESCRIPTION	NOTE
A	SINGLE GANG OR DOUBLE-GANG BOX, 1-1/2" (38mm) DEEP (MIN)	BY OTHERS
B	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN)	BY OTHERS
C	SIMPLEX 2975-9145, 7-7/8"H x 5-1/8"W x 2-3/4"D (127mm x 98mm x 56mm) REQUIRES 4905-9931 PLATE	ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 549VO-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

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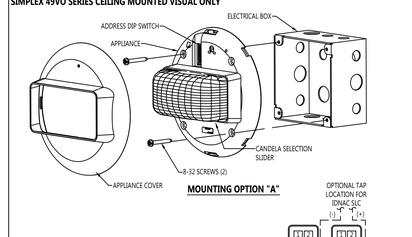
SIMPLEX 49VO SERIES CEILING MOUNTED VISUAL ONLY



MOUNTING OPTION "A"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING OPTIONS

OPTION [2]	DESCRIPTION	NOTE
A	4" SQUARE ELECTRICAL BOX, 1-1/2" (39mm) MINIMUM DEPTH	BY OTHERS
B	SINGLE GANG ELECTRICAL BOX, 1-1/2" (39mm) MINIMUM DEPTH, WITH 49VO-APCS ADAPTER PLATE	BOX BY OTHERS, SIMPLEX ADAPTER PLATE

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 549VOC-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

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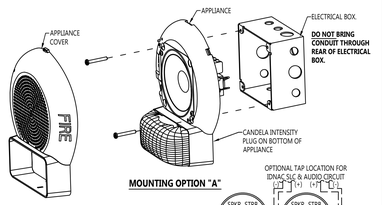
SIMPLEX 495V SERIES CEILING MOUNTED SPEAKER / VISUAL



MOUNTING OPTION "A"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	4" (102mm) SQUARE BOX, 2-1/8" (54mm) DEEP (MIN)	BOX BY OTHERS

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 5495VC-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

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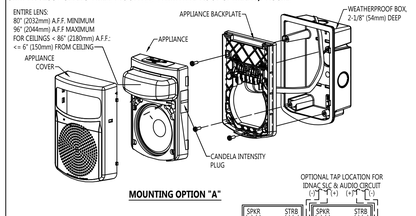
SIMPLEX 495V SERIES WALL MOUNTED WEATHERPROOF SPEAKER / VISUAL



MOUNTING OPTION "A"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	WEATHERPROOF BOX, 2-1/8" (54mm) DEEP	SIMPLEX 49WPBB-SVWR/W

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 5495VW-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

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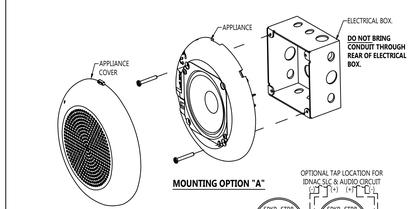
SIMPLEX 495O SERIES CEILING MOUNTED SPEAKER



MOUNTING OPTION "A"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

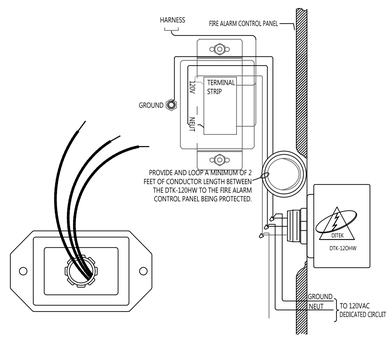
MOUNTING OPTIONS

OPTION [2]	DESCRIPTION	NOTE
A	4" (102mm) SQUARE BOX, 2-1/8" (54mm) DEEP (MIN)	BOX BY OTHERS

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 5495OC-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

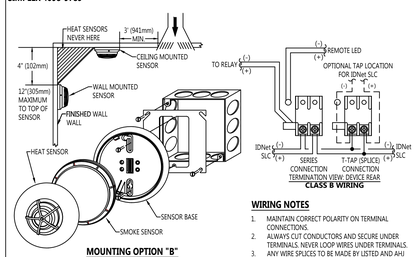
PARALLEL CONNECTED SURGE PROTECTOR

DITEK DTK-120HW



SENSOR BASE WITH REMOTE LED CONNECTION

SIMPLEX 4098-9789



MOUNTING OPTION "B"

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.
4. 100 FT. MAXIMUM WIRE DISTANCE FROM THE 4098-9780 BASE TO THE RELAY.

MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG BOX, 2-1/8" (54mm) DEEP	BY OTHERS
B	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SINGLE GANG COVER PLATE 3/4" (19mm) EXTENSION	BY OTHERS
C	4" (102mm) OCTAGONAL BOX, 1-1/2" (38mm) DEEP, MINIMUM	BY OTHERS
D	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SIMPLEX 4098-9832 ADAPTER KIT	BOX BY OTHER, 4098-9832 ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4098-0019 FROM HTTP://WWW.SIMPLEX-FIRE.COM

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APPROVALS

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Project Title

CALEXICO UNIFIED SCHOOL DISTRICT

CALEXICO HS CULINARY ARTS CLASSROOM MODERNIZATION

Sheet Title

DEVICE DETAILS

LICENSED ARCHITECT
JIMMIE A. SANDERS
No. C-7644
RENEWAL DATE 7-31-19
STATE OF CALIFORNIA

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