C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

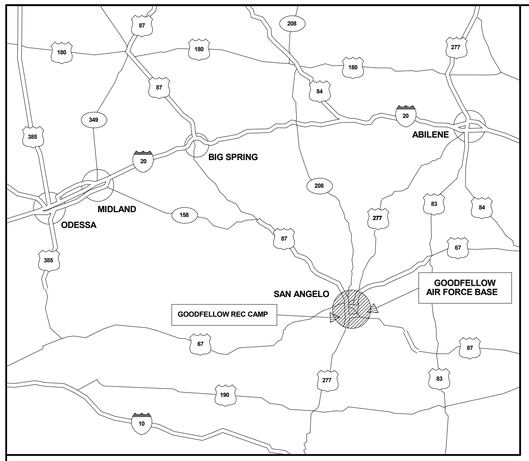
PROJECT NAME:

CRESSMAN DINING FACILITY EXPANSION
BUILDING 3220
SAN ANGELO, TEXAS

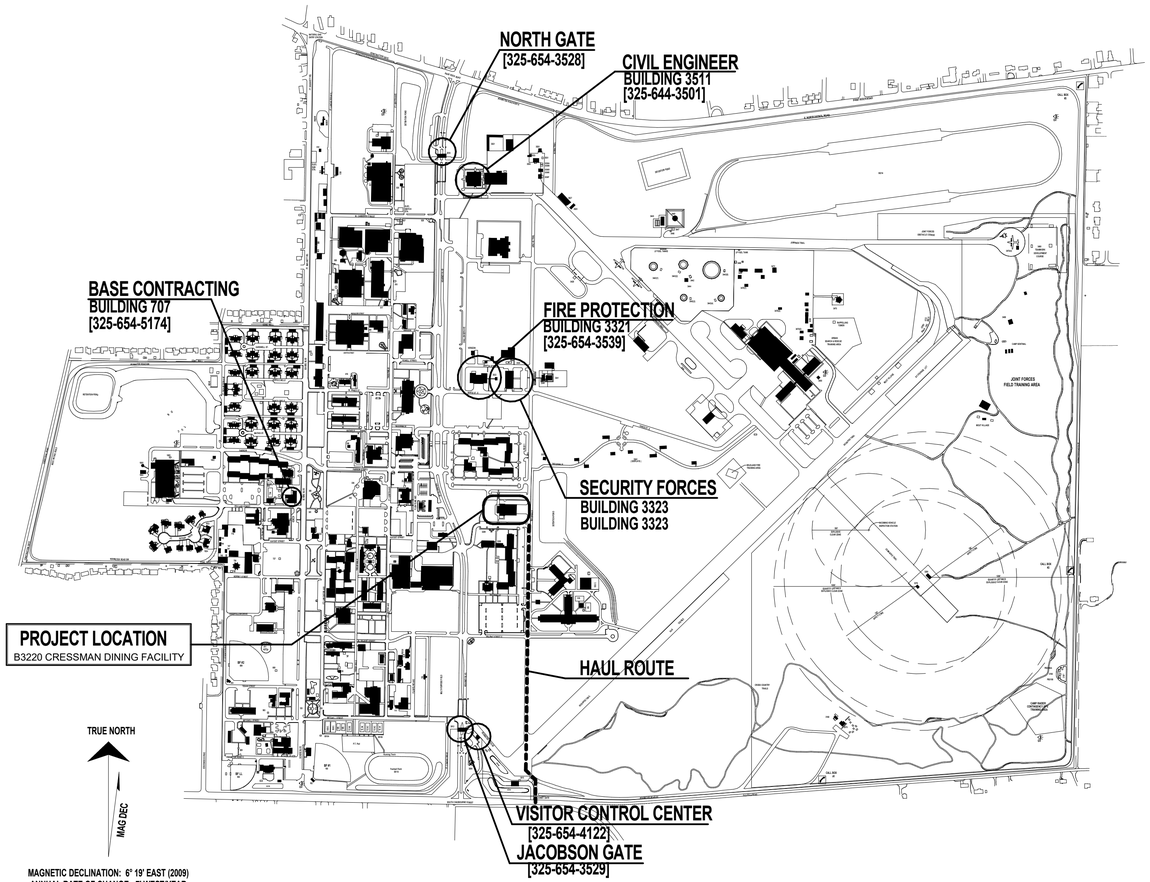
PROJECT NUMBER:

GAFB Project #: 1030643

guernsey

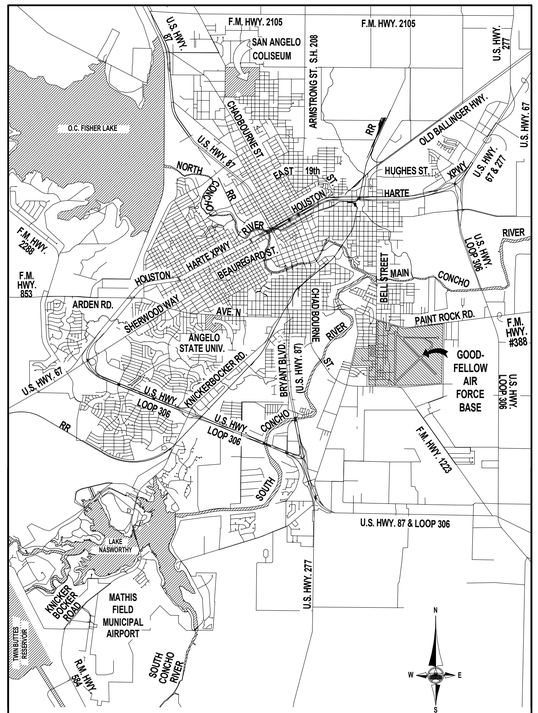


PARTIAL TEXAS STATE MAP



GOODFELLOW AIR FORCE BASE

SAN ANGELO, TEXAS



THE CITY OF SAN ANGELO, TEXAS

DATE	SIGNATURE
	RECOMMENDED (BCE)
	SUBMITTED (CHIEF ENGINEER)
	FIRE CHIEF
	SAFETY
	ENVIRONMENTAL
	BIO-ENVIRONMENTAL OFFICER
	SECURITY FORCES
	COMMUNICATIONS
	CHIEF OF OPERATIONS
	BASE DEVELOPMENT
	CHIEF OF DESIGN
	PROJECT MANAGER
	USING AGENCY
	USING AGENCY

GENERAL NOTES:

1. THE CONTRACTOR SHALL INITIATE AND PROCESS FOR APPROVAL AF FORM #103 "WORK CLEARANCE REQUEST" FOR THE CONTRACTING OFFICER PRIOR TO PERFORMANCE OF ON-SITE WORK.
2. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO EXCAVATION OR TRENCHING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE SERVICE LINES AS REQUIRED FOR CONSTRUCTION FOR THIS PROJECT.
3. THE CONTRACTOR SHALL HAND DIG WITHIN (2) FEET EITHER SIDE OF UTILITY CROSSING UNTIL THE UTILITY IS PHYSICALLY EXPOSED, PRIOR TO PERFORMING MECHANICAL TRENCHING OR EXCAVATING. PROVIDE NEW TOPSOIL AND HYDROMULCHING IN ALL AREAS WHERE DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES.
4. THE CONTRACTOR SHALL COORDINATE ALL COMMUNICATIONS WORK WITH THE ENGINEERING SECTION MANAGER AT FRONTIER AT 325-944-5511; WITH THE INSTALLATION OFFICE, SUDDEN-LINK CABLE AT 325-486-4155 AND THE GOODFELLOW AFB COMMUNICATIONS SQUADRON AT 325-654-3010.

PROJECT NOTES:

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

ASBESTOS CONTAINING MATERIAL (ACM) AND LEAD BASED PAINT (LBP) STATEMENT
[Circle the appropriate ACM/LBP and place an "X" in the appropriate boxes]

This facility contains ACM/LBP materials:	X
This facility does not contain ACM/LBP materials:	
This facility contains ACM/LBP materials that will be removed. The ACM/LBP materials will be left in place for this project.	
This facility contains ACM/LBP materials that will be removed. The ACM/LBP materials will be disposed of by the contractor.	
This facility contains ACM/LBP materials that will be removed. The ACM/LBP materials will be disposed of by the contractor.	

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: COVER SHEET

Date: 12 JUL 2018

REGISTERED ARCHITECT
STEVEN TODD SPRAGUE
18662
7/12/18
STATE OF TEXAS

SEQ.	SHEET	OF
	G-001	

7/12/2018 11:11:49 AM C:\Work\Projects\R18_70374-000_A_SSnyderOKC.rvt

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

A. **GENERAL NOTES**

1. CONSTRUCTION ACCESS TO THE SITE SHALL BE THROUGH THE EXISTING GATE LOCATED ON SOUTH CHADBOURNE STREET. ALL CONSTRUCTION TRAFFIC ENTERING THE BASE IS REQUIRED TO PASS THROUGH THE COMMERCIAL VEHICLE SEARCH AREA LOCATED TO THE EAST OF KEARNEY BOULEVARD. HOURS OF OPERATION ARE FROM 6:00 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY.
2. CONTRACTORS SHALL KEEP ALL PUBLIC ROADS AND STREETS CLEAN OF CONSTRUCTION DEBRIS, MUD, ETC. AT ALL TIMES. CONTRACTOR SHALL PROVIDE EQUIPMENT AND PERSONNEL TO CLEAN ANY STREETS AS REQUESTED BY 17CES. CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS TO STREETS, PARKING AREAS AND BASE OR GOVERNMENT PROPERTY DAMAGED FROM THEIR CONSTRUCTION ACTIVITIES.
3. CONTRACTORS SHALL MAINTAIN A CONSTRUCTION SITE NEAT AND CLEAN OF DEBRIS AS DIRECTED BY CONTRACTING OFFICER. CONTRACTOR WASTE DUMPSTERS SHALL BE EMPTIED ON A REGULAR BASIS.

B. **STAGING NOTES**

1. CONTRACTOR SHALL INSTALL AND MAINTAIN A TEMPORARY CONSTRUCTION CHAIN LINK FENCE, 6 FEET HIGH, AROUND THE LIMITS OF WORK NOT INCLUDING THE CONSTRUCTION ACCESS ROAD. COORDINATE CHAIN AND PADLOCKS ON GATES WITH GOODFELLOW FIRE DEPARTMENT. EACH GATE SHALL BE NUMBERED FOR EMERGENCY ACCESS, SHALL HAVE ENTRY/EGRESS SIGNAGE AND AREA LIGHTING. CONTRACTORS SHALL MAINTAIN FIRE ACCESS THROUGH EACH INDIVIDUAL CONSTRUCTION SITE AT ALL TIMES.
2. TRUCK WASHOUT AREA SHALL BE CONSTRUCTED, MAINTAINED AND CLEANED IN ACCORDANCE WITH TCEQ REGULATIONS. PROVIDE DETAILS AND MAINTENANCE PLAN AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN. STORMWATER PERMITS ARE REQUIRED PRIOR TO THE START OF CONSTRUCTION.
3. ALL CONTRACTORS SHALL STOCKPILE REQUIRED MATERIALS AND EQUIPMENT WITHIN LIMITS OF RESPECTIVE PROJECT AREAS OR STAGING AREA AS INDICATED ON THE DRAWINGS.
4. CONTRACTOR SHALL CONNECT TO EXISTING OR NEW FIRE HYDRANTS FOR TEMPORARY CONSTRUCTION WATER. INSTALL QUICK DISCONNECT, BACK FLOW PREVENTER AND SHUT-OFF VALVE ON 2 1/2" HOSE CONNECTION ONLY. PRIOR TO MAKING ANY CONNECTIONS TO BASE WATER SYSTEMS, THE CONTRACTOR MUST NOTIFY AND COORDINATE WITH 17CES. A FIRE PLUG USAGE PERMIT IS REQUIRED AND USAGE SHALL BE METERED AT ALL TIMES.
5. ALL TEMPORARY ELECTRIC POWER FACILITIES SHALL MEET OR EXCEED NESC AND NEC REQUIREMENTS AS APPLICABLE FOR PRIMARY AND SECONDARY FACILITIES.

C. **ACCESS AND VEHICLE PARKING**

1. ACCESS TO THE PROJECT FOR ALL CONSTRUCTION PERSONNEL, VEHICLES AND EQUIPMENT IS ILLUSTRATED ON THE STAGING/LAYDOWN AND ACCESS PLAN. ACCESS ROUTES MAY BE SUBJECT TO CHANGE BASED ON OPERATIONAL REQUIREMENTS. POTENTIAL SCHEDULE IMPACTS SHALL BE COORDINATED WITH 17CES.
2. LOCATION OF ACCESS/ HAUL ROADS ARE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN.
3. ALL HAUL ROADS SHALL BE MAINTAINED SUCH THAT UNOBSTRUCTED ACCESS WILL BE PROVIDED AT ALL TIMES FROM THE ROAD TO THE STAGING AREA AND FROM THE STAGING AREA TO THE WORK SITE AND FACILITATE GOVERNMENT ACCESS TO THE BASE AT ALL TIMES. THE MAINTENANCE OF HAUL ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT. THE HAUL ROAD LOCATIONS SHALL BE AS INDICATED ON THE STAGING/LAYDOWN AND ACCESS PLAN OR BY 17CES.
4. CONTRACTOR SHALL COORDINATE ACTIVITIES THROUGHOUT THE PROJECT IN A MANNER THAT ALLOWS EMERGENCY ACCESS TO ALL EXISTING ROADWAYS AT ALL TIMES WITHOUT DELAYS TO EMERGENCY VEHICLES RESPONSE TIME.
5. ALL CONTRACTOR VEHICLES AND PERSONNEL MAY BE SEARCHED BY SECURITY FORCES WHEN ENTERING THE BASE AND MAY EXPERIENCE DELAYS. ALL PERSONNEL ENTERING GOODFELLOW A.F.B. MUST HAVE A VALID PHOTO ID PER BASE SECURITY REQUIREMENTS. ALL VEHICLES ENTERING THE BASE MUST HAVE CURRENT/ VALID REGISTRATION, CURRENT/ VALID INSURANCE AND CURRENT/ VALID DRIVERS LICENSE FOR THE OPERATOR. ALL DRIVERS MUST COMPLY WITH ALL GOODFELLOW AFB DRIVING REQUIREMENTS (SPEED LIMITS, SEATBELTS, ETC.)
6. WHEN NOT ENGAGED IN CONSTRUCTION ACTIVITIES, THE CONTRACTOR'S CONSTRUCTION EQUIPMENT AND VEHICLES SHALL BE PARKED WITHIN THE WORK AREA OR STAGING AREA.

D. **COORDINATION AND COMMUNICATION DURING CONSTRUCTION**

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CORDON OFF THE WORK AREAS AND STREET CROSSINGS BY USING APPROVED BARRICADES.

E. **TRAFFIC CONTROL**

1. ONLY RUBBER-TIRED VEHICLES SHALL BE ALLOWED ON EXISTING PAVEMENT THAT IS TO REMAIN.
2. ANY DAMAGE TO ROADS AND PAVEMENT DUE TO CONSTRUCTION EQUIPMENT, CONSTRUCTION TRAFFIC OR CONSTRUCTION ACTIVITY SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT HIS/ HER OWN EXPENSE .

F. **EQUIPMENT AND STOCKPILE HEIGHT**

1. STOCKPILE ALL CONSTRUCTION MATERIALS WITHIN STAGING AREA. MAXIMUM HEIGHT 15.00' WITH 5:1 SIDE SLOPES. PROVIDE EROSION CONTROL PROTECTION AROUND THE STOCKPILE LIMITS. ANY MATERIALS THAT ARE TO BE STOCKPILED FOR USE FOR OTHER PROJECTS ON THE BASE SHALL BE COORDINATED WITH 17CES. ALL MATERIAL NOT REQUIRED SHALL BE HAULED OFF GOVERNMENT PROPERTY.

G. **EXCAVATION AND TRENCHES**

1. OPEN TRENCHES AND EXCAVATIONS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH ORANGE AND WHITE TYPE III BARRICADES AND WITH FLASHING TYPE A-LOW INTENSITY WARNING LIGHTS FROM DUSK TILL DAWN.

H. **OTHER SAFETY REQUIREMENTS**

1. CONTRACTOR SHALL MAINTAIN SAFETY PRACTICES THAT CONFORM TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
2. CONTRACTOR SHALL MAINTAIN AT ALL TIMES ONE FIRE LANE FREE FROM OBSTRUCTION AND MAINTAIN ACCESS TO THE SITE AND ALL SURROUNDING ROADS AND STREETS.

I. **CONTRACTOR SAFETY PLAN SUBMITTALS**

1. CONTRACTOR SHALL FURNISH A CONSTRUCTION SAFETY PLAN IN ACCORDANCE WITH THE SPECIFICATIONS WITH HIS/HER PROJECT SCHEDULE. THE SAFETY PLAN SHALL IDENTIFY THE FOLLOWING ITEMS:
   A. PROPOSED ACCESS POINTS, STAGING AREA AND HAUL ROUTES.
   B. TEMPORARY MARKINGS TO BE USED, IF ANY.
   C. LOCATIONS AND TYPE OF BARRICADES OR OTHER TRAFFIC CONTROL DEVICES.
   D. METHODS BY WHICH THE CONTRACTOR WILL COMMUNICATE WITH 17CES.

J. **MAINTENANCE OF STORAGE AREA**

1. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE CONSTRUCTION SITE, CONSTRUCTION TRAILER(S)/BUILDING(S), AND STORAGE AREA(S) IN A CLEAN, NEAT, WORKMAN LIKE CONDITION, FREE FROM ACCUMULATION OF WASTE, RUBBISH, WEEDS, OVERGROWN GRASS, OR CONSTRUCTION DEBRIS, TO THE SATISFACTION OF THE CONTRACTING OFFICER. ALL LOOSE OR LIGHT WEIGHT MATERIALS SHALL BE SECURED TO PREVENT BLOWING OR SCATTERING. THE BURNING OF TRASH OR CONSTRUCTION DEBRIS IS STRICTLY PROHIBITED ON GOODFELLOW AFB. PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS, TOOLS, EQUIPMENT, AND MATERIALS NOT THE PROPERTY OF THE GOVERNMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL LEAVE THE WORK SITE AND STORAGE AREA(S) IN A CLEAN, NEAT, AND WORKMANLIKE CONDITION SATISFACTORY TO THE CONTRACTING OFFICER. REFER TO SECTION 01400 - ENVIRONMENTAL PROTECTION FOR GOODFELLOW AFB, PARAGRAPH 2.4.6, POST-CONSTRUCTION CLEANUP.
2. THE CONTRACTOR SHALL KEEP FENCING IN A STATE OF GOOD REPAIR AND PROPER ALIGNMENT. GRASSED OR UNPAVED AREAS, WHICH ARE NOT ESTABLISHED ROADWAYS, WILL BE COVERED WITH A LAYER OF GRAVEL AS NECESSARY TO PREVENT RUTTING AND THE TRACKING OF MUD ONTO PAVED OR ESTABLISHED ROADWAYS, SHOULD THE CONTRACTOR ELECT TO TRAVERSE THEM WITH CONSTRUCTION EQUIPMENT OR OTHER VEHICLES; GRAVEL GRADATION WILL BE AT THE CONTRACTOR'S DISCRETION. MOW AND MAINTAIN GRASS LOCATED WITHIN THE BOUNDARIES OF THE CONSTRUCTION SITE FOR THE DURATION OF THE PROJECT. GRASS AND VEGETATION ALONG FENCES, BUILDINGS, UNDER TRAILERS, AND IN AREAS NOT ACCESSIBLE TO MOWERS WILL BE EDGED OR TRIMMED NEATLY.
3. GRASS AND WEEDY VEGETATION WITHIN THE AREAS UTILIZED BY THE CONTRACTOR, INCLUDING WORK AREAS, ADMINISTRATIVE AREAS, AND STORAGE AREAS, SHALL BE KEPT MOWED TO CONTROL VEGETATIVE GROWTH. VEGETATION SHALL BE MOWED WHEN IT REACHES A HEIGHT OF 6 INCHES. MOWING SHALL BE TO A HEIGHT OF 3 INCHES. MOWING SHALL BE ACCOMPLISHED WITH A ROTARY MOWER THAT LEAVES THE CLIPPINGS EVENLY DISTRIBUTED ON THE SOIL SURFACE. MOWING SHALL BE ACCOMPLISHED DURING PERIODS AND IN SUCH MANNER THAT THE SOIL AND GRASS WILL NOT BE DAMAGED. TOWED OR SELF-PROPELLED RIDING MOWERS SHALL NOT BE OPERATED WITHIN 3 FEET OF TREES OR SHRUBS. AREAS ADJACENT TO TREES AND SHRUBS SHALL BE MOWED WITH HAND-PROPELLED MOWERS.
4. EROSION CONTROL DEVICES SHALL BE USED FOR THE STAGING AREA AND ANY MATERIAL STOCK PILES WHEN NECESSARY TO CONTROL EROSION AND STORM WATER RUNOFF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
5. AREAS NOT MOWED: GOVERNMENT MAY IMMEDIATELY AFTER NOTICE TO THE CONTRACTOR AND AT THE DISCRETION OF THE CONTRACTING OFFICER MOW THE CONTRACTOR'S AREAS AT ANY TIME THE VEGETATION HEIGHT EXCEEDS 6 INCHES.

PRIVATIZED ELECTRICAL UTILITY SYSTEMS:

AEP TEXAS NORTH COMPANY IS THE UTILITY OWNER AND SOLE PROVIDER OF THE ELECTRICAL DISTRIBUTION UTILITY SYSTEM AT GOODFELLOW AIR FORCE BASE, TEXAS.

NEWLY PROVIDED SYSTEM INFRASTRUCTURE AND/OR MODIFICATIONS OF OR CONNECTIONS TO THE EXISTING SYSTEM INFRASTRUCTURE IDENTIFIED IN THE SPECIFICATIONS AND/OR DRAWINGS MUST BE COORDINATED WITH THE UTILITY OWNER PRIOR TO THE CONTRACT START DATE. TO CONNECT FACILITIES, THE CONSTRUCTION CONTRACTOR SHALL REQUEST THAT THE UTILITY OWNER PROVIDE THE REQUIRED CONNECTING FACILITIES, UP TO A POINT OF DEMARCATION WHICH INCLUDES ALL TERMINATIONS AT THE TRANSFORMER.

ALL WORK ON THE SYSTEM OR FACILITIES EXPECTED TO CONNECT TO THE SYSTEM SHALL COMPLY WITH THE UTILITY OWNER'S SPECIFICATIONS AND CONSTRUCTION STANDARDS. IN NO EVENT SHALL THE CONSTRUCTION CONTRACTOR CONNECT TO, OR OTHERWISE TOUCH THE UTILITY OWNER'S INFRASTRUCTURE WITHOUT THE UTILITY OWNER'S EXPRESS WRITTEN PERMISSION.

THE UTILITY OWNER: CONTACT VIA:
AEP TEXAS NORTH COMPANY
930 West 19th Street
San Angelo, Texas 76903
PHONE: 325-657-2800

ARCHITECT / ENGINEER RESPONSIBILITIES:

1. SITE PLAN WITH ADJACENT STREETS OR LANDMARKS IDENTIFIED.
2. BUILDING PLAN SHEETS WITH THE FOLLOWING INFORMATION:
   A. LOCATION OF SERVICE ENTRANCE
   B. REQUESTED TRANSFORMER LOCATION, IF A PREFERENCE IS KNOWN.
   C. SQUARE FOOTAGE OF BUILDING SPACE WITH THE TYPE OF LOAD TO BE SERVED.
   D. ELECTRICAL PANEL SCHEDULE
   E. NUMBER AND SIZE OF SECONDARY CONDUCTORS TO BE TERMINATED AT THE TRANSFORMER
   F. PROPOSED LOCATION OF OTHER UTILITY ROUTES AND ENTRANCES.
3. LOAD DEMAND INFORMATION FROM EXISTING SIMILAR BUILDINGS.
4. SCHEDULE OF WORK.

CONTRACTOR / BUILDER RESPONSIBILITIES:

1. CONTACT NAMES AND NUMBERS UPON ARRIVAL AT THE SITE.
2. LOCATION OF TRANSFORMER PAD.
3. INSTALL SECONDARY CONDUITS INTO THE APPROPRIATE WELL LOCATION BEFORE PAD INSTALLATION. THIS INCLUDES ANY REQUIRED METERING CABLE CONDUITS.
4. PROVIDE FINAL GRADE IN TRANSFORMER PAD AREA PRIOR TO PAD CONSTRUCTION.
5. INSTALLATION OF ANY REQUIRED INSTRUMENT RATED METERING EQUIPMENT.
6. PROVIDE SECONDARY CABLE TERMINALS.
7. PRIMARY CONDUIT DITCH COMPACTION IF REQUIRED.
8. ASPHALT AND/OR CONCRETE CUT AND REPAIR IF REQUIRED.
9. LOCATION OF OTHER UTILITY LINES INSTALLED DURING THIS CONSTRUCTION.
10. TEMPORARY POWER POLE (SEE ATTACHED SKETCHES). LOCATION TO BE APPROVED BY AEP TEXAS. NOTE: ANY LINE EXTENSION REQUIRED FOR THE PURPOSE OF TEMPORARY SERVICE WILL REQUIRE A CIAC TO COVER THE COST OF INSTALLATION AND REMOVAL OF TEMPORARY FACILITIES AND ANY MATERIAL WHICH CANNOT BE REUSED.

AEP TEXAS RESPONSIBILITIES:

1. SIZING AND INSTALLATION OF ALL PRIMARY CONDUCTORS INCLUDING DITCH AND CONDUIT.
2. SIZING AND INSTALLATION OF DISTRIBUTION TRANSFORMERS.
3. CONSTRUCTION OF TRANSFORMER PAD. SEE ATTACHED SKETCH
4. INSTALLATION OF SECONDARY CABLE TERMINALS.

CONSTRUCTION NOTES:

1. THE EDGE OF THE TRANSFORMER PAD SHALL NOT BE CLOSER THAN TWO FEET FROM A WALL, OR FIVE FEET FROM A DOOR OR WINDOW, OR TWENTY FEET FROM A STAIRWELL OR FIRE ESCAPE.
2. TRANSFORMERS SHALL NOT BE COMPLETELY ENCLOSED BY WALLS, FENCES, OR LANDSCAPING WITHOUT VENTILATION WHICH IS APPROVED BY AEP TEXAS. THE ENTIRE WIDTH OF THE FRONT OF THE TRANSFORMER AND SECONDARY CABINET SHALL BE ACCESSIBLE. IF A FENCE IS INSTALLED, IT WILL HAVE SUFFICIENT GATES NECESSARY TO PROVIDE THIS ACCESS.
3. TRANSFORMERS WILL BE LOCATED IN THE AREAS WITH ALL WEATHER ACCESS BY SERVICE TRUCKS. IN ADDITION, THERE WILL BE NO STRUCTURES CONSTRUCTED ABOVE TRANSFORMERS WHICH WOULD INHIBIT CRANE OPERATIONS.
4. NO OTHER UTILITY LINES WILL BE INSTALLED WITHIN TWO FEET OF THE TRANSFORMER PAD.
5. NO CUSTOMER EQUIPMENT, EXCEPT INSTRUMENT RATED METERING EQUIPMENT WHICH IS PLACED ON THE SECONDARY BUSHINGS, SHALL BE ATTACHED TO AEP TEXAS TRANSFORMERS; NOR WILL THERE BE ANY HOLES DRILLED INTO THE TRANSFORMER CABINET FOR CONDUITS, CONDUCTORS OR METERS.
6. THE NUMBER AND SIZE OF THE SECONDARY CONDUCTORS WHICH ARE ALLOWED TO BE ATTACHED TO THE TRANSFORMER SECONDARY BUSHINGS WILL BE CONTROLLED BY AEP TEXAS. IF THE DESIGN REQUIRES MORE OR LARGER CONDUCTORS THAN ALLOWED FOR A PARTICULAR TRANSFORMER SIZE, AEP TEXAS WILL INSTALL A SECONDARY CABINET WITH BUS BARS (SEE ATTACHED SKETCH) ADJACENT TO THE TRANSFORMER. AEP TEXAS WILL SUPPLY AND INSTALL THE SECONDARY CONDUCTORS FROM THE TRANSFORMER TO THE SECONDARY CABINET. THE POINT OF INTERCONNECTION WILL BE THE BUS BARS WITHIN THE SECONDARY CABINET. THIS CABINET WILL REQUIRE A LARGER TRANSFORMER PAD AS SHOWN ON THE ATTACHED SKETCH.
7. TRANSFORMERS LARGER THAN 1000 kVA WILL REQUIRE A LARGER PAD. THIS PAD IS SHOWN ON THE SKETCH LABELED 1500 AND 2500 kVA.
8. TEMPORARY CONSTRUCTION POWER WILL BE SUPPLIED TO CUSTOMER SUPPLIED POWER POLES LOCATED WITHIN FIVE FEET OF AN EXISTING PAD MOUNTED TRANSFORMER OR WITHIN FIFTY FEET OF A PRIMARY POWER POLE (SEE ATTACHED SKETCHES).

OCCUPANT LOAD CALCULATIONS (2015 IBC SECTION 1004)
PLUMBING FIXTURE CALCULATIONS (2015 IPC; TABLE 403.1)

OCCUPANT LOAD AND TOILET COUNT REQUIREMENTS

Name	SF per OCC	OCC. LOAD	%OCC. MEN	%OCC. WOMEN	W.C. per OCC.	Mens W.C. Req.	Womens W.C. Req.	Lav. per OCC.	Mens Lav. Req.	Womens Lav. Req.	Service Sink
EXISTING ASSEMBLY	15	278	0.5	0.5	75	1.85	1.85	200	0.70	0.70	
EXISTING BUSSINESS	100	10	0.5	0.5	25	0.20	0.20	40	0.13	0.13	
EXISTING KITCHEN	100	45	0.5	0.5	75	0.30	0.30	200	0.11	0.11	
EXISTING MECHANICAL	500	2	0.5	0.5	100	0.01	0.01	100	0.01	0.01	
EXISTING STORAGE	500	5	0.5	0.5	100	0.03	0.03	100	0.03	0.03	
NEW ASSEMBLY	15	287	0.5	0.5	75	1.91	1.91	200	0.72	0.72	1
NEW BUSSINESS	100	19	0.5	0.5	25	0.38	0.38	40	0.24	0.24	
NEW KITCHEN	100	2	0.5	0.5	75	0.01	0.01	200	0.01	0.01	
NEW MECHANICAL	500	2	0.5	0.5	25	0.04	0.04	100	0.01	0.01	
NEW STORAGE	500	3	0.5	0.5	75	0.02	0.02	100	0.02	0.02	
TOTAL REQUIRED						5	5		2	2	1
TOTAL PROVIDED						5	5		2	3	1

MATERIAL SYMBOLS

- EARTH
- AGGREGATE FILL
- CONCRETE
- PRECAST CONCRETE
- BRICK
- CONCRETE MASONRY UNITS
- CUT/ CAST STONE
- STEEL
- RIGID INSULATION
- BLANKET INSULATION
- FIRE SAFING INSULATION
- INSULATED METAL PANEL
- GROUT
- LATH & PLASTER
- MARBLE/ GRANITE
- SPRAY FOAM INSULATION
- MORTAR NET
- DISCONTINUOUS ROUGH LUMBER
- CONTINUOUS LUMBER
- WOOD GRAIN
- PLYWOOD
- FINISH LUMBER

SHEET INDEX

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G-002	SHEET INDEX & CONVENTIONS
G-003	LIFE SAFETY CODE NARRATIVE
G-004	LIFE SAFETY CODE NARRATIVE
G-005	LIFE SAFETY FLOOR PLAN
5000 - CIVIL	
C-001	CIVIL LEGEND
C-100	EXISTING CONDITIONS AND DEMOLITION PLAN
C-110	SITE PLAN
C-111	ENLARGED DETAIL
C-130	OVERALL GRADING DRAINAGE AND EROSION CONTROL PLAN
C-150	UTILITY PLAN
C-501	DETAILS
C-502	DETAILS
C-503	DETAILS
C-504	DETAILS
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L-100	LANDSCAPE – HARDSCAPE PLAN (ALT. 4)
L-101	LANDSCAPE – HARDSCAPE DIMENSIONS (ALT. 4)
L-102	LANDSCAPE – HARDSCAPE PLAN (NORTH MEDIANS)
L-103	LANDSCAPE – HARDSCAPE PLAN (SOUTH MEDIANS)
L-104	LANDSCAPE – HARDSCAPE PLAN (TROOPWALK) (BASE BID)
L-110	LANDSCAPE - PLANTING PLAN (ALT. 4)
L-111	LANDSCAPE - PLANTING PLAN (MEDIANS) (ALT. 4)
L-120	LANDSCAPE – DETAILS & NOTES
L-121	LANDSCAPE – DETAILS & NOTES
7000 - STRUCTURAL	
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S-002	GENERAL STRUCTURAL NOTES
S-003	GENERAL STRUCTURAL NOTES
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S-011	TYPICAL DETAILS
S-012	TYPICAL DETAILS
S-101	COMPOSITE FOUNDATION PLAN
S-102	COMPOSITE ROOF FRAMING PLAN
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S-122	FRAMING PLAN - HIGH ROOF
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A-221	INTERIOR ELEVATIONS
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A-731	FURNITURE AND EQUIPMENT PLAN
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FA-001	FIRE ALARM GENERAL NOTES
FA-101	FIRE ALARM FLOOR PLAN
10000 - FIRE SUPPRESSION	
FX-001	FIRE SUPPRESSION GENERAL NOTES
FX-101	FIRE SUPPRESSION FLOOR PLAN
12000 - PLUMBING	
P-001	PLUMBING LEGEND
P-101	UNDERFLOOR PLUMBING PLAN - AREA A
P-102	UNDERFLOOR PLUMBING PLAN - AREA B
P-103	PLUMBING FLOOR PLAN - AREA A
P-104	PLUMBING FLOOR PLAN - AREA B
P-501	PLUMBING SCHEDULE AND DETAILS
14000 - MECHANICAL	
M-001	HVAC LEGEND
M-101	HVAC FLOOR PLAN - AREA A
M-102	HVAC FLOOR PLAN - AREA B
M-103	ROOF PLAN
M-401	ENLARGED PLANS
M-501	HVAC DETAILS
M-502	HVAC DETAILS
M-601	HVAC SCHEDULES
M-801	HVAC CONTROLS
M-802	HVAC CONTROLS
15000 - ELECTRICAL	
E-001	ELECTRICAL LEGEND AND NOTES
ES101	SITE PLAN
EL101	LIGHTING PLAN
EP101	POWER PLAN
EP102	MECHANICAL POWER PLAN
E-501	ELECTRICAL DETAILS
E-601	ONE-LINE AND SCHEDULES

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DRAFTING CONVENTIONS

CENTERLINE SYMBOL = ℄

KEYNOTE SYMBOL = (1)

DOOR SYMBOL
101 — NUMBER DESIGNATION

ELEVATION SYMBOL
LEVEL 30 — NAME DESIGNATION
24'-0" — HEIGHT DESIGNATION

EQUIPMENT/FURNITURE SYMBOL
1234 — NUMBER DESIGNATION

GRID SYMBOL
0 EXISTING / 0 NEW — LETTER/NUMBER DESIGNATION

MATCHLINE SYMBOL
1 / A-121
1 / A-122
LETTER/NUMBER DESIGNATION OF FLOOR PLAN(S)

PARTITION TYPE SYMBOL
G012 — LETTER/NUMBER DESIGNATION

ROOM NAME/NUMBER SYMBOL
Room name
101
150 SF
NUMBER DESIGNATION

SPOT/CEILING ELEVATION SYMBOL
10'-0" — HEIGHT DESIGNATION

TOILET ACCESSORY SYMBOL
A — LETTER DESIGNATION

WINDOW/STOREFRONT SYMBOL
A — LETTER DESIGNATION

REVISIONS SYMBOL
1 — REVISION NUMBER
AREA / ITEM(S) TO BE REVISED

DETAIL MARKER
1 / A-101
SIM — SIMILAR (IF APPLICABLE)
DETAIL VIEW NUMBER
SHEET ON WHICH DETAIL APPEARS

EXTERIOR ELEVATION MARKER
1 / A101
SIM — SIMILAR (IF APPLICABLE)
DIRECTION OF ELEVATION VIEW
ELEVATION VIEW NUMBER
SHEET ON WHICH ELEVATION APPEARS

INTERIOR ELEVATION MARKER
1 / A-101
ELEVATION VIEW NUMBER
DIRECTION OF VIEW FOR ELEVATION
SHEET ON WHICH ELEVATION APPEARS

BUILDING / WALL SECTION MARKER
1 / A101
SIM — SIMILAR (IF APPLICABLE)
DIRECTION OF SECTION VIEW
SECTION VIEW NUMBER
SHEET ON WHICH SECTION APPEARS

MILLWORK ELEVATION MARKER
1 / A-101
DIRECTION OF ELEVATION VIEW
ELEVATION VIEW NUMBER / SHEET NUMBER

GRAPHIC SCALE SYMBOL
8' 4' 0 8'
SCALE: 1/8" = 1'-0"

NORTH ARROW
PLAN NORTH
PLAN NORTH ARROW DIRECTION
TRUE NORTH ARROW DIRECTION

VIEW TITLE
1 View Name
SCALE: 1/8" = 1'-0"
VIEW NUMBER

REGISTERED ARCHITECT — JAMES TODD SMITH — 7/12/18 — 18662 — STATE OF TEXAS

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: S. SNYDER
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: SHEET INDEX & CONVENTIONS
Date: 12 JUL 2018

SEQ. | SHEET G-002 | OF.

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POOLE FIRE PROTECTION
19910 W. 161ST STREET
OLATHE, KS 66062 913.829.8650
C.R. ENGINEERING: #F-6671 EXPIRES JUNE 30, 2019

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GENERAL INFORMATION:

PROPERTY NAME & PHYSICAL ADDRESS:	CRESSMAN DINING FACILITY GOODFELLOW AIR FORCE BASE, TEXAS
PROJECT CONSTRUCTION PURPOSE:	ADDITION TO EXISTING FACILITY PER UFC 3-600-01, SECTION 2-1.1
REASON FOR SUBMITTAL:	CODE COMPLIANCE OF ADDITION TO EXISTING FACILITY
CRITERIA USED:	UNIFIED FACILITIES CRITERIA (UFC) 1-200-01: GENERAL BUILDING REQUIREMENTS, 20 JUNE 2016; CHANGE 1, 1 FEBRUARY 2018 UNIFIED FACILITIES CRITERIA (UFC) 3-600-01: FIRE PROTECTION ENGINEERING FOR FACILITIES, 8 AUGUST 2016; CHANGE 2, 25 MARCH 2018 UNIFIED FACILITIES CRITERIA (UFC) 4-010-01: DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS, 9 FEBRUARY 2012; CHANGE 1, OCTOBER 2013 UNIFIED FACILITIES CRITERIA (UFC) 4-021-01: DESIGN AND O & M: MASS NOTIFICATION SYSTEMS, 9 APRIL 2008; CHANGE 1, JANUARY 2010 INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION NFPA 1: FIRE CODE, 2018 EDITION NFPA 13: STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2016 EDITION NFPA 70: NATIONAL ELECTRICAL CODE, 2017 EDITION NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE, 2016 EDITION NFPA 90A: STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS, 2018 EDITION NFPA 101: LIFE SAFETY CODE, 2018 EDITION NFPA 291: RECOMMENDED PRACTICES FOR FIRE FLOW TESTING AND MARKING OF HYDRANTS, 2016 EDITION NFPA 780: STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS, 2017 EDITION GOODFELLOW AIR FORCE BASE DESIGN STANDARD
ANTICIPATED ADDITIONS:	NONE
DATE DEVELOPED:	JULY 12, 2018
DATE REVISED:	NOT APPLICABLE
OWNER INFORMATION:	UNITED STATES AIR FORCE
CODE CONSULTANT INFORMATION:	POOLE FIRE PROTECTION, INC. 19910 WEST 161ST STREET OLATHE, KS 66062 913.829.8650 (TELEPHONE) 913.829.8690 (TELEFAX)
DESIGNER'S SEAL:	SEE TITLE BLOCK
FIRE SERVICE:	GOODFELLOW AIR FORCE BASE FIRE DEPARTMENT
LOCAL BUILDING INSPECTOR:	GOODFELLOW AIR FORCE BASE FIRE DEPARTMENT
AUTHORITY HAVING JURISDICTION:	17 CES GOODFELLOW AIR FORCE BASE TOM GREEN COUNTY
OCCUPANCY GROUP AND TYPE:	ASSEMBLY (GROUP A-2) (IBC, SECTION 303.3) ASSEMBLY (NFPA 101, SECTION 6.1.2.1) MECHANICAL, ELECTRICAL, RESTROOM, AND CORRIDOR SPACES WILL BE CONSIDERED AS A PART OF THE PREDOMINANT OCCUPANCY FOR THE BUILDING REQUIRED (NFPA 101, SECTION 3.3.22.2) - PROVIDED
TYPE OF CONSTRUCTION:	TYPE II-B (IBC, TABLE 601)
STRUCTURAL CODE REQUIREMENTS:	HEIGHT LIMITATION BASE ALLOWABLE HEIGHT 3 STORIES, 75 FT. (IBC, TABLES 504.3 AND 504.4) ACTUAL HEIGHT 1 STORY, 31 FT. - COMPLIANT AREA LIMITATION BASE ALLOWABLE AREA 38,000 SQ.FT. (IBC, SECTION 506.2) ACTUAL AREA 20,441 SQ.FT. - COMPLIANT FIRE RESISTIVE REQUIREMENTS (IBC, TABLES 601 AND 602) PRIMARY STRUCTURAL FRAME 0-HOUR - REQUIRED (IBC, TABLE 601) - PROVIDED BEARING WALLS - EXTERIOR 0-HOUR - REQUIRED (IBC, TABLE 601) - PROVIDED BEARING WALLS - INTERIOR 0-HOUR - REQUIRED (IBC, TABLE 601) - PROVIDED NON BEARING WALLS - EXTERIOR 0-HOUR - REQUIRED (IBC, TABLE 602) - PROVIDED NON BEARING WALLS - INTERIOR 0-HOUR - REQUIRED (IBC, TABLE 601) - PROVIDED FLOOR CONSTRUCTION AND SECONDARY MEMBERS 0-HOUR - REQUIRED (IBC, TABLE 601) - PROVIDED ROOF CONSTRUCTION AND SECONDARY MEMBERS 0-HOUR - REQUIRED (IBC, TABLE 601) - PROVIDED
OCCUPANCY SEPARATION:	NOT REQUIRED (IBC, SECTION 508.1) - NOT PROVIDED

PASSIVE FIRE SAFETY FEATURES:

INTERIOR FINISH:	INTERIOR WALL AND CEILING FINISHES IN EXIT ENCLOSURES, CLASS A OR B REQUIRED (NFPA 101, SECTION 7.1.4) - PROVIDED INTERIOR WALL AND CEILING FINISHES IN GENERAL ASSEMBLY AREAS WITH MORE THAN 300 OCCUPANTS, CLASS A OR B REQUIRED (NFPA 101, SECTION 12.3.3.3) - PROVIDED INTERIOR WALL AND CEILING FINISHES IN GENERAL ASSEMBLY AREAS WITH LESS THAN 300 OCCUPANTS, CLASS A, B, OR C REQUIRED (NFPA 101, SECTION 12.3.3.3) - PROVIDED INTERIOR FLOOR FINISHES IN EXIT ENCLOSURES, EXIT ACCESS CORRIDORS, AND IN SPACES NOT SEPARATED FROM THEM BY WALLS, MIMIMUM OF CLASS II REQUIRED (NFPA 101, SECTION 12.3.3.5) - PROVIDED INTERIOR FLOOR FINISHES IN ALL OTHER AREAS, NO CLASSIFICATION REQUIRED (NFPA 101, SECTION 12.3.3.5) - PROVIDED
ROOM SEPARATION:	SMOKE PARTITION FOR BOILER AND FURNACE ROOMS IN ASSEMBLY OCCUPANCIES WITH AN AGGREGATE INPUT RATING THAT EXCEEDS 200,000 BTU REQUIRED (NFPA 101, SECTIONS 12.3.2.1.2(1)(A)(I.) AND 8.7.1.2) - PROVIDED
CORRIDORS:	NO FIRE RESISTANCE RATING REQUIRED (NFPA 101, SECTION 12.3.6) - NONE PROVIDED
HORIZONTAL EXITS:	NOT APPLICABLE
STAIRWAYS:	NOT APPLICABLE
VERTICAL SHAFTS:	NOT APPLICABLE
OPENINGS AND PENETRATIONS:	THROUGH PENETRATIONS OF FIRE RESISTANCE RATED CONSTRUCTION PROTECTED BY AN APPROVED FIRE STOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479 REQUIRED (IBC, SECTION 714.4.1.2 AND NFPA 101, SECTION 8.3.4.2) - PROVIDED
ELECTRICAL CLASSIFICATION:	NOT REQUIRED (NFPA 70) - NOT PROVIDED

ACTIVE FIRE SAFETY FEATURES

AUTOMATIC SPRINKLER PROTECTION:	REQUIRED (UFC 3-600-01, SECTION 9-7.2.1.1) - WET PIPE SPRINKLER TO BE PROVIDED IN THE ADDITION BY EXPANDING THE EXISTING WET-PIPE SPRINKLER SYSTEM THAT SERVES THE EXISTING FACILITY
SEISMIC PROTECTION FOR SPRINKLER SYSTEM:	NOT REQUIRED FOR SEISMIC DESIGN CATEGORY A (ASCE 7, SECTION 11.7) - NOT PROVIDED
STANDPIPES:	NOT REQUIRED (UFC 3-600-01, SECTION 9-10.2) - NOT PROVIDED
AUTOMATIC FIRE PUMPS:	NOT REQUIRED (HYDRAULLIC CALCULATION) - NOT PROVIDED
SPECIAL FIRE SUPPRESSION SYSTEM:	WET-CHEMICAL FIRE EXTINGUISHING SYSTEM FOR COOKING EQUIPMENT THAT PRODUCES SMOKE OR GREASE-LADEN VAPORS NOT REQUIRED FOR ADDITION (UFC 3-600-01, SECTION 4-15.1.1, NFPA 101, SECTIONS 9.2.3 AND 12.3.2.2, AND NFPA 96, SECTION 10.2.3) - NOT PROVIDED FOR THE ADDITION AS A KITCHEN IS NOT TO BE INCLUDED IN THE ADDITION
KITCHEN HOOD VENTILATION SYSTEMS:	HOOD AND DUCT SYSTEMS IN ACCORDANCE WITH NFPA 96 NOT REQUIRED FOR ADDITION (UFC 3-600-01, SECTION 4-15.1.1, AND NFPA 101, SECTIONS 9.2.3 AND 12.3.2.2) - NOT PROVIDED FOR ADDITION AS A KITCHEN IS NOT TO BE INCLUDED IN THE ADDITION
PORTABLE FIRE EXTINGUISHERS:	NOT REQUIRED (UFC 3-600-01, SECTION 9-17.1) - NOT PROVIDED PER DIRECTION FROM RFI 002
SMOKE CONTROL SYSTEM:	NOT REQUIRED (UFC 3-600-01 AND NFPA 101) - NOT PROVIDED
HVAC SYSTEM:	INTERLOCKED WITH FIRE ALARM ACTIVATION FOR AIR HANDLER SHUT DOWN REQUIRED (UFC 3-600-01, SECTION 9-18.1.2.2 AND NFPA 90A, SECTION 6.4.4.2) - PROVIDED FIRE DAMPERS AND SMOKE DAMPERS INSTALLED IN ALL TRANSFER OPENINGS OF EACH FIRE BARRIER AND SMOKE PARTITION REQUIRED (UFC 3-600-01, SECTION 28-1.1 AND NFPA 90A, SECTION 5.3.1.2) - NOT APPLICABLE
EXIT SIGNS:	INTERNALLY OR EXTERNALLY ILLUMINATED EXIT SIGNS ALONG THE PATH OF EGRESS TRAVEL REQUIRED (NFPA 101, SECTIONS 12.2.10, 7.10.1.2, AND 7.10.5.1) - INTERNALLY ILLUMINATED LED TYPE PROVIDED IN ADDITION TACTILE EXIT SIGNS AT EACH EXIT DOOR REQUIRING AN EXIT SIGN REQUIRED (NFPA 101, SECTION 7.10.1.3) - PROVIDED
EMERGENCY LIGHTING:	EMERGENCY LIGHTING IN ALL MEANS OF EGRESS REQUIRED (NFPA 101, SECTIONS 12.2.9 AND 7.9) - PROVIDED IN ADDITION
FIRE ALARM REPORTING SYSTEM:	REQUIRED (UFC 3-600-01, SECTION 9-18.1.2.1) - PROVIDED VIA MONACO MAAP-X PANEL THAT IS COMPATABLE WITH EXISTING BASE FIRE DEPARTMENT MONACO D21 SYSTEM
SMOKE DETECTION:	FULL AREA DETECTION NOT REQUIRED (UFC 3-600-01, SECTION 9-18.5) - NOT PROVIDED SMOKE DETECTOR ABOVE FIRE ALARM / MASS NOTIFICATION CONTROL UNIT, NOTIFICATION APPLIANCE CIRCUIT POWER EXTENDERS, AND SUERVISING STATION TRANSMITTING EQUIPMENT REQUIRED (NFPA 72, SECTION 10.4.4) - PROVIDED DUCT SMOKE DETECTION ON AIR HANDLING UNITS GREATER THAN 2,000 CFM SUPPLY AIR CAPACITY REQUIRED (NFPA 90A, SECTION 6.4.2.1(1)) - PROVIDED
CARBON MONOXIDE DETECTION:	CARBON MONOXIDE DETECTORS IN EACH ROOM WHERE FOSSIL FUEL BURNING EQUIPMENT IS LOCATED REQUIRED (UFC 3-600-01, SECTION 9-19) - PROVIDED FOR AREAS THAT HVAC EQUIPMENT USES FOSSIL FUEL EQUIPMENT IN THE ADDITION AS WELL AS WHERE FOSSIL FUEL EQUIPMENT IS BEING USED FOR COOKING IN THE EXISTING FACILITY.
FIRE ALARM SYSTEM:	MANUALLY ACTIVATED, EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM WITH VISIBLE ALARM NOTIFICATION APPLIANCES IN ALL COMMON USE AREAS, EMPLOYEE WORK AREAS, AND PUBLIC USE AREAS REQUIRED (UFC 3-600-01, SECTIONS 9-18) - PROVIDED
MASS NOTIFICATION SYSTEM:	REQUIRED (UFC 4-010-01, SECTION 1-8) - PROVIDED IN ADDITION AS WELL AS EXISTING FACILITY AS UFC REQUIRES THAT MNS BE PROVIDED FOR INHABITED BUILDINGS
LIGHTNING PROTECTION:	ANALYSIS WAS NOT PERFORMED (NFPA 780 ANALYSIS) - NOT PROVIDED

WATER SUPPLY REQUIREMENTS:

FIRE HYDRANT FLOW TEST:	STATIC: 68 PSI RESIDUAL: 63 PSI FLOW: 1,271 GPM LOCATION: HYDRANTS 32-7 AND 32-6 DATE: APRIL 10, 2018 SOURCE: POOLE FIRE PROTECTION, INC. AVAILABLE: 4,311 GPM AT 20 PSI
FIRE FLOW:	1,000 GPM AT 20 PSI REQUIRED (UFC 3-600-01, SECTION 9-2.1) - PROVIDED
FIRE WATER DEMAND:	430 GPM AT 63.3 PSI REQUIRED (PRELIMINARY HYDRAULIC CALCULATIONS) - PROVIDED

STATE OF TEXAS
DAVID L. POOLE, III
91563
LICENSED PROFESSIONAL ENGINEER
7/12/2018

POOLE FIRE PROTECTION
www.poolefire.com

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Symbol	Description	Date	Appr

Symbol	Description	Date	Appr

REVISIONS

Designed by: JMW
Drawn by: SAB
Reviewed by: DBN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE
LIFE SAFETY CODE NARRATIVE

Date: 12 JUL 2018

SEQ. | SHEET G-003 | OF

POOLE FIRE PROTECTION
19910 W. 161ST STREET
OLATHE, KS 66062 913.829.8650
C.R. ENGINEERING: #F-6671 EXPIRES JUNE 30, 2019

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MEANS OF EGRESS:

OCCUPANT LOAD: CALCULATED OCCUPANT LOAD PER OCCUPANCY CLASSIFICATION AND USE (NFPA 101, TABLE 7.3.1.2 AND UFC 3-600-01, TABLE 10-1)

USE	OCCUPANT LOAD FACTOR	GROSS OR NET AREA
ASSEMBLY - LESS CONCENTRATED	15 SQ.FT. PER PERSON	NET
STORAGE	500 SQ.FT. PER PERSON	GROSS
KITCHEN	100 SQ.FT. PER PERSON	GROSS
IT EQUIPMENT	100 SQ.FT. PER PERSON	GROSS
MECHANICAL, ELECTRICAL AND OTHER BUILDING EQUIPMENT SPACES	500 SQ.FT. PER PERSON	GROSS
BUSINESS	150 SQ.FT. PER PERSON	GROSS

BUILDING OCCUPANT LOAD SERVING THE ADDITION: 306*

* INDICATES CAPACITY OF EGRESS COMPONENTS ASSOCIATED WITH THE ADDITION TAKES INTO CONSIDERATION THE ESTIMATED OCCUPANT LOAD ASSOCIATED WITH THE EXISTING FACILITY

NUMBER OF EXITS: TWO BUILDING EXITS REQUIRED (NFPA 101, SECTIONS 12.2.4.1 AND 7.4.1.2(1)) - EIGHT BUILDING EXITS PROVIDED. THREE NEW EXITS WILL BE ADDED TO THE FIVE EXISTING EXITS.

ARRANGEMENT OF EXITS: WHERE TWO EXITS OR EXIT ACCESS DOORWAYS ARE REQUIRED, EXITS OR EXIT ACCESS DOORWAYS SEPARATED BY NOT LESS THAN ONE-THIRD THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED REQUIRED (NFPA 101, SECTION 7.5.1.3.3) - PROVIDED

MAIN ENTRANCE/EXIT SIZED TO ACCOMMODATE AT LEAST ONE-HALF OF THE CALCULATED OCCUPANT LOAD OF THE SPACE REQUIRED (NFPA 101, SECTION 12.2.3.6.2(2)) - PROVIDED

MEANS OF EGRESS SIZING: CALCULATED MEANS OF EGRESS COMPONENTS SIZING REQUIREMENTS PER COMPONENT REQUIRED (NFPA 101, SECTION 12.2.3.8 AND TABLES 7.3.3.1 AND 7.3.4.1) - PROVIDED

COMPONENT	SIZING FACTOR - LOW/ORDINARY HAZARD	MINIMUM SIZE
STAIRWAYS	0.3 INCHES PER PERSON	36 INCHES
RAMPS	0.2 INCHES PER PERSON	36 INCHES
CORRIDORS (< 50 PEOPLE)	0.2 INCHES PER PERSON	36 INCHES
CORRIDORS (≥ 50 PEOPLE)	0.2 INCHES PER PERSON	44 INCHES
PASSAGEWAYS	0.2 INCHES PER PERSON	36 INCHES
DOORS	0.2 INCHES PER PERSON	32 INCHES

STAIRWAY DIMENSIONAL REQUIREMENTS:
- WIDTH: 44 INCHES REQUIRED (NFPA 101, TABLE 7.2.2.2.1.2(B)) - PROVIDED
- HEADROOM: 80 INCHES REQUIRED (NFPA 101, TABLE 7.2.2.2.1.1(A)) - PROVIDED
- STAIR TREADS AND RISERS: 44 INCH MINIMUM TREAD WIDTH REQUIRED (NFPA 101, TABLE 7.2.2.2.1.2(B)) - PROVIDED
  11 INCH MINIMUM TREAD DEPTH REQUIRED (NFPA 101, TABLE 7.2.2.2.1.1(A)) - PROVIDED
  7 INCH MAXIMUM RISER HEIGHT REQUIRED (NFPA 101, TABLE 7.2.2.2.1.1(A)) - PROVIDED
- STAIRWAY LANDINGS: LANDING DIMENSION, MEASURED IN THE DIRECTION OF TRAVEL, NOT LESS THAN THE WIDTH OF THE STAIR REQUIRED (NFPA 101, SECTION 7.2.2.3.2.3) - PROVIDED
- VERTICAL RISE: LESS THAN OR EQUAL TO 12 FT. PER LANDING REQUIRED (NFPA 101, TABLE 7.2.2.2.1.1(A)) - PROVIDED
- HANDRAILS: ON EACH SIDE REQUIRED (NFPA 101, SECTION 7.2.2.4.1.1) - PROVIDED

RAMP DIMENSIONAL REQUIREMENTS:
- WIDTH: SEE TABLE ABOVE
- HEADROOM: 80 INCHES REQUIRED (NFPA 101, SECTION 7.1.5) - PROVIDED
- REDUCTIONS IN WIDTH: RAMPS AND INTERMEDIATE LANDINGS CONTINUE WITH NO DECREASE IN WIDTH ALONG THE DIRECTION OF EGRESS TRAVEL REQUIRED (NFPA 101, SECTION 7.2.5.4.2(7)) - PROVIDED
- RAMP LANDINGS: LANDINGS AT THE TOP, AT THE BOTTOM, AND AT DOOR LEAVES OPENING ONTO THE RAMP REQUIRED (NFPA 101, SECTION 7.2.5.4.2(1)) - PROVIDED FOR ADDITION
  LANDINGS SLOPE NO STEEPER THAN 1 IN 48 REQUIRED (NFPA 101, SECTION 7.2.5.4.2(2)) - PROVIDED FOR ADDITION
  EVERY LANDING WIDTH NO LESS THAN THE WIDTH OF THE RAMP REQUIRED (NFPA 101, SECTION 7.2.5.4.2(3)) - PROVIDED FOR ADDITION
  EVERY LANDING LESS THAN 60 IN. LONG IN THE DIRECTION OF TRAVEL REQUIRED (NFPA 101, SECTION 7.2.5.4.2(4)) - PROVIDED FOR ADDITION
  WHERE THE RAMP IS NOT PART OF AN ACCESSIBLE ROUTE, RAMP LANDING NOT TO EXCEED 48 IN. IN THE DIRECTION OF TRAVEL, PROVIDED THAT THE RAMP HAS A STRAIGHT RUN PERMITTED (NFPA 101, SECTION 7.2.5.4.2(5)) - NOT APPLICABLE
- HANDRAILS: HANDRAILS PROVIDED ALONG SIDES OF A RAMP RUN WITH A RISE GREATER THAN 6 IN. REQUIRED (NFPA 101, SECTION 7.2.5.5.2) - PROVIDED FOR ADDITION
- EDGE PROTECTION: CURBS, WALLS, RAILINGS, OR PROJECTION SURFACES NOT LESS THAN 4 IN. IN HEIGHT THAT PREVENT PEOPLE FROM TRAVELING OFF THE EDGE OF THE RAMP OR LANDING REQUIRED (NFPA 101, SECTION 7.2.5.4.3) - PROVIDED FOR ADDITION

HANDRAIL REQUIREMENTS:
- HEIGHT: 34 INCHES TO 38 INCHES REQUIRED (NFPA 101, SECTION 7.2.2.4.5.1) - PROVIDED FOR ADDITION
- GRASPABILITY: OUTSIDE DIAMETER OF 1.25-2 INCHES OR PERIMETER OF 4-6.25 INCHES WITH A MAXIMUM CROSS-SECTIONAL DIMENSION OF 2.25 INCHES, EDGE RADIUS GREATER THAN OR EQUAL TO 0.125 INCH, REQUIRED (NFPA 101, SECTION 7.2.2.4.5.6) - PROVIDED FOR ADDITION
- CONTINUITY: HANDRAILS CONTINUE FOR THE FULL LENGTH OF EACH FLIGHT OF STAIRS AND AT TURNS OF NEW STAIRS. INSIDE HANDRAILS SHALL BE CONTINUOUS BETWEEN FLIGHTS AT LANDINGS REQUIRED (NFPA 101, SECTION 7.2.2.4.2) - PROVIDED FOR ADDITION
- CLEARANCE: HANDRAILS INSTALLED TO PROVIDE A CLEARANCE OF NOT LESS THAN 2.25 IN. BETWEEN THE HANDRAIL AND THE WALL TO WHICH IT IS FASTENED REQUIRED (NFPA 101, SECTION 7.2.2.4.5.5) - PROVIDED FOR ADDITION
- INTERMEDIATE HANDRAILS: 20 IN. MINIMUM CLEAR WIDTH BETWEEN HANDRAILS AND INTERMEDIATE HANDRAILS REQUIRED (NFPA 101, SECTION 7.2.2.4.1.3) - PROVIDED FOR ADDITION

GUARD REQUIREMENTS:
- LOCATION: GUARDS PROVIDED AT THE OPEN SIDES OF MEANS OF EGRESS THAT EXCEED 30 IN. ABOVE THE FLOOR OR THE FINISHED GROUND LEVEL BELOW REQUIRED (NFPA 101, SECTION 7.1.8) - NOT PROVIDED FOR ADDITION AS THERE IS NOT A 30 IN. ELEVATION CHANGE
- HEIGHT: GREATER THAN OR EQUAL TO 42 INCHES REQUIRED (NFPA 101, SECTION 7.2.2.4.6.2) - PROVIDED FOR ADDITION
- OPENING LIMITATIONS: LESS THAN OR EQUAL TO 21 INCHES REQUIRED (NFPA 101, SECTION 7.2.2.4.6.3(2)) - PROVIDED FOR ADDITION

DOOR REQUIREMENTS:
ALL EXIT DOOR ASSEMBLIES, AND DOORS WITHIN THE EGRESS PATHS, EQUIPPED WITH APPROPRIATE HARDWARE REQUIRED (NFPA 101, SECTIONS 7.2.1.5, 7.2.1.6, AND 7.2.1.7) - PROVIDED IN ADDITION

ALL DOORS SERVING MORE THAN 50 PEOPLE OR HIGH HAZARD SPACES SWING IN THE DIRECTION OF EGRESS TRAVEL REQUIRED (NFPA 101, SECTION 7.2.1.4.2) - PROVIDED IN ADDITION

ALL DOORS IN A REQUIRED MEANS OF EGRESS SERVING 100 PEOPLE OR MORE EQUIPPED WITH PANIC HARDWARE REQUIRED (NFPA 101, SECTION 12.2.2.2.3) - PROVIDED IN ADDITION

DELAYED EGRESS LOCKS PROHIBITED ON MAIN ENTRANCE/EXIT DOORS REQUIRED (NFPA 101, SECTION 12.2.2.2.5) - PROVIDED IN ADDITION

MAXIMUM TRAVEL DISTANCE:
ALLOWABLE TRAVEL DISTANCE
- ASSEMBLY: 250 FT. (NFPA 101, SECTION 12.2.6.2)

ACTUAL
- ASSEMBLY: SEE LIFE SAFETY PLANS

COMMON PATH OF TRAVEL:
ALLOWABLE COMMON PATH OF TRAVEL
- ASSEMBLY GREATER THAN 50 OCCUPANTS: 20 FT. (NFPA 101, SECTION 12.2.5.1.2)
- ASSEMBLY NO MORE THAN 50 OCCUPANTS: 75 FT. (NFPA 101, SECTION 12.2.5.1.2)

ACTUAL
- ASSEMBLY GREATER THAN 50 OCCUPANTS: SEE LIFE SAFETY PLANS
- ASSEMBLY NO MORE THAN 50 OCCUPANTS: SEE LIFE SAFETY PLANS

DEAD-END CORRIDORS:
ALLOWABLE DEAD-END CORRIDORS
- ASSEMBLY: 20 FT. (NFPA 101, SECTION 12.2.5.1.3)

ACTUAL
- ASSEMBLY: SEE LIFE SAFETY PLANS

FIRE DEPARTMENT NEEDS:

PREMISES IDENTIFICATION:
APPROVED ADDRESS NUMBERS PLACED IN A POSITION TO BE PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY REQUIRED (NFPA 1, SECTION 10.11.1) - PROVIDED

ADDRESS NUMBERS CONTRAST WITH THEIR BACKGROUND REQUIRED (NFPA 1, SECTION 10.11.1.2) - PROVIDED

ADDRESS NUMBERS SHALL BE ARABIC NUMERALS OR ALPHABET LETTERS REQUIRED (NFPA 1, SECTION 10.11.1.3) - PROVIDED

FIRE DEPARTMENT ACCESS:
AT LEAST ONE MEANS OF ALL-WEATHER GROUND ACCESS NO FARTHER THAN 33 FT. FROM THE BUILDING REQUIRED (UFC 3-600-01, SECTION 9-1.1) - PROVIDED

AT LEAST ONE MEANS OF ALL-WEATHER GROUND ACCESS NO FARTHER THAN 150 FT. FROM FIRE DEPARTMENT CONNECTION REQUIRED (UFC 3-600-01, SECTION 9-1.4) - PROVIDED

FIRE DEPARTMENT ACCESS ROADS SUCH THAT ANY PORTION OF THE FACILITY OR ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY OF THE BUILDING IS LOCATED NOT MORE THAN 450 FT. FROM FIRE DEPARTMENT ACCESS ROADS REQUIRED (NFPA 1, SECTION 18.2.3.2.2.1) - PROVIDED

FIRE APPARATUS ACCESS ROADS UNOBSTRUCTED WIDTH NOT LESS THAN 20 FT. AND UNOBSTRUCTED VERTICAL CLEARANCE NOT LESS THAN 13.5 FT. REQUIRED (NFPA 1, SECTIONS 18.2.3.4.1.1 AND 18.2.3.4.1.2) - PROVIDED

FORCE PROTECTION EQUIPMENT ARRANGED TO NOT REQUIRE MORE THAN ONE PERSON TO REMOVE OR OPEN REQUIRED (UFC 3-600-01, SECTION 9-1.3) - PROVIDED

LOCKING DEVICES CONTROLLING VEHICLE ACCESS UNDER CONTROL OF FIRE DEPARTMENT REQUIRED (UFC 3-600-01, SECTION 9-1.3) - PROVIDED

KEY BOX: REQUIRED (NFPA 1, SECTION 18.2.2.1) - PROVIDE PER THE DIRECTION OF GOODFELLOW AIR FORCE BASE FIRE DEPARTMENT

FIRE HYDRANTS:
FIRE HYDRANTS INSTALLED SO THAT ALL PARTS OF THE FACILITY EXTERIOR IS WITHIN 350 FEET OF A HYDRANT WITH CONSIDERATION GIVEN TO ACCESSIBILITY AND OBSTRUCTIONS REQUIRED (UFC 3-600-01, SECTION 9-3.5.8.2) - PROVIDED

FIRE HYDRANT SPACING SUCH THAT ALL FIRE DEPARTMENT CONNECTIONS ARE WITHIN 150 FT. OF A FIRE HYDRANT REQUIRED (UFC 3-600-01, SECTION 9-3.5.8.4(A)) - PROVIDED

3 FT. CLEAR SPACE AROUND CIRCUMFERENCE OF FIRE HYDRANTS REQUIRED (UFC 3-600-01, SECTION 9-3.5.7(G)) - PROVIDED

HEIGHT TO THE CENTER OF A HOSE OUTLET GREATER THAN OR EQUAL TO 18 IN. ABOVE FINAL GRADE REQUIRED (UFC 3-600-01, SECTION 3-7.3.2 AND NFPA 24, SECTION 7.3.3) - PROVIDED

PHYSICAL PROTECTION FOR FIRE HYDRANTS THAT ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE REQUIRED (UFC 3-600-01, SECTION 9-3.5.9) - PROVIDED

FIRE SAFETY AND EVACUATION PLANS: REQUIRED (NFPA 101, SECTION 12.2.10.3) - PROVIDED

FIRE COMMAND CENTER: NOT REQUIRED (UFC 3-600-01 AND NFPA 101) - NOT PROVIDED

STATE OF KANSAS
RALPH W. POOLE, III
91563
LICENSED PROFESSIONAL ENGINEER
7-12-2018

POOLE FIRE PROTECTION
www.poolefire.com

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Designed by: JMW
Drawn by: SAB
Reviewed by: DBN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: LIFE SAFETY CODE NARRATIVE
Date: 12 JUL 2018

SEQ. | SHEET G-004 | OF

POOLE FIRE PROTECTION
19910 W. 161ST STREET
OLATHE, KS 66062 913.829.8650
C.R. ENGINEERING: #F-6671 EXPIRES JUNE 30, 2019

7/12/2018 11:28:26 AM C:\Users\sbrinkmeyer.pcs\Documents\R18_70374-000_F_sbrinkmeyer8U4LS.rvt

EGRESS PATH SCHEDULE

TAG ABBREVIATIONS:
CPT = COMMON PATH OF TRAVEL
MTD = MAXIMUM TRAVEL DISTANCE
DEC = DEAD-END COORIDOR

PATH INFORMATION

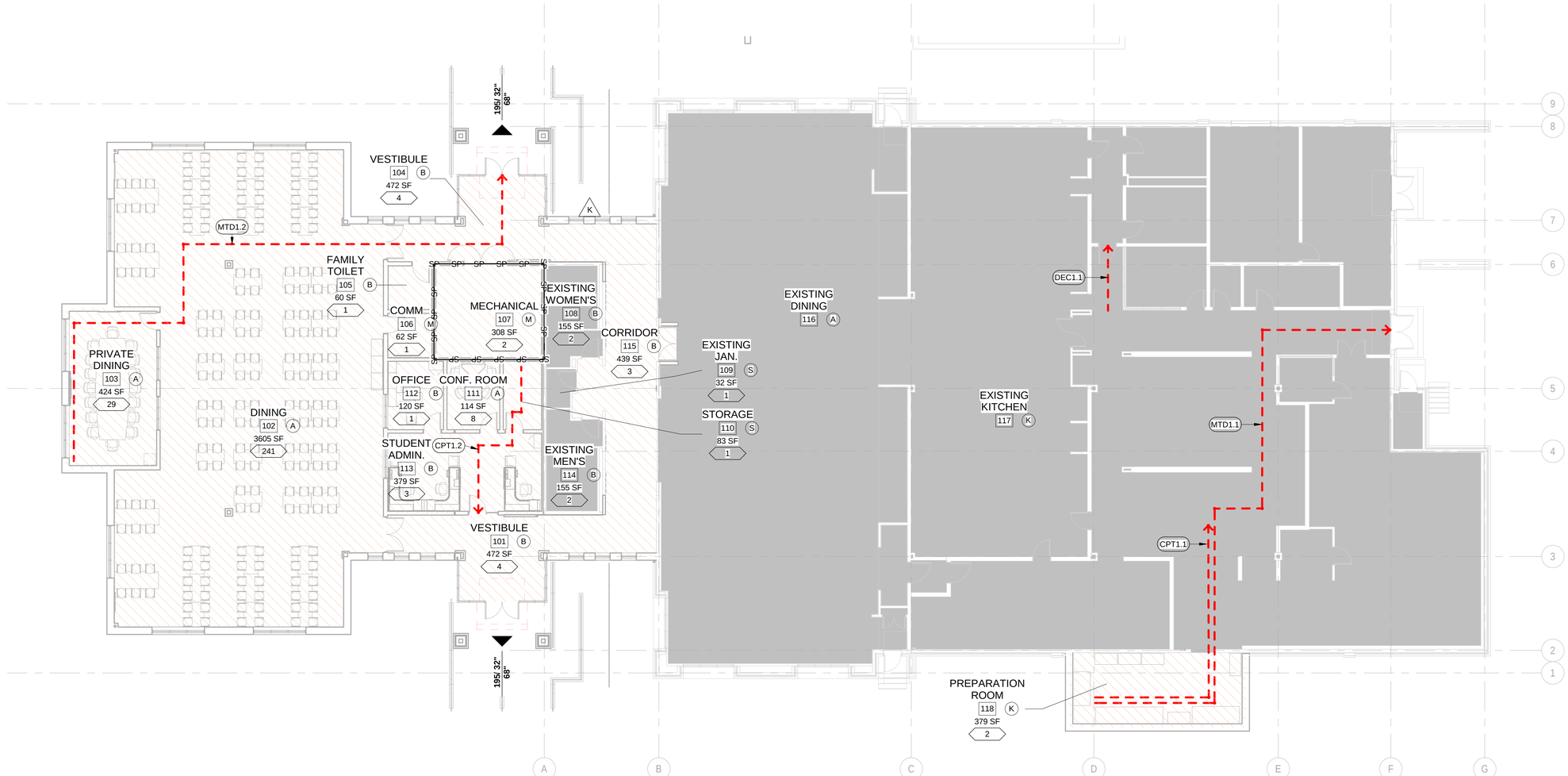
TAG	TOTAL LENGTH	MAX. ALLOWABLE LENGTH	Space: Number	Space: Name
CPT1.1	50' - 8"	75' - 0"	118	PREPARATION ROOM
CPT1.2	33' - 5"	75' - 0"	110	STORAGE
DEC1.1	11' - 5"	20' - 0"	117	EXISTING KITCHEN
MTD1.1	118' - 5"	250' - 0"	118	PREPARATION ROOM
MTD1.2	126' - 7"	250' - 0"	103	PRIVATE DINING

OVERALL OCCUPANCY CLASSIFICATION

	ASSEMBLY
	OUT OF SCOPE OF WORK

LIFE SAFETY LEGEND

SYMBOL	DESCRIPTION
	EXTERIOR EXIT
0 / 0" 0"	OCCUPANTS / REQUIRED WIDTH PROVIDED WIDTH
SP	SMOKE PARTITION
K	KEY BOX
	EGRESS PATH
XX#.#	EGRESS PATH TAG
###	OCCUPANT LOAD TAG
X	OCCUPANT USE FACTOR A ASSEMBLY (LESS CONCENTRATED) (15 FT²/PERSON) B BUSINESS (UNCONCENTRATED) (150 FT²/PERSON) S STORAGE (500 FT²/PERSON) M MECHANICAL/ELECTRICAL (500 FT²/PERSON) K KITCHEN (200 FT²/PERSON)



1 LIFE SAFETY FLOOR PLAN
3/32" = 1'-0"

PLAN NORTH

12' 6' 0 12'
SCALE: 3/32" = 1'-0"

POOLE FIRE PROTECTION
www.poolefire.com

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Symbol	Description	Date	Appr.

Designed by:	Drawn by:	Reviewed by:	Submitted by:
JMW	SAB	DBN	B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:
OK70374-000

SHEET TITLE
LIFE SAFETY FLOOR PLAN

Date:
12 JUL 2018

SEQ.	SHEET	OF
	G-005	

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

EXISTING (LEGEND FROM SURVEYOR)

- FIRE HYDRANT
- WATER VALVE
- WATER METER
- _ICV
- GAS VALVE
- STORM MANHOLE
- SANITARY SEWER MANHOLE
- SEWER CLEANOUT
- LIGHT POLE
- ELEC. MANHOLE
- TELE. MANHOLE
- TREE
- CONTROL POINT

- W_x — WATER LINE
- G_x — GAS LINE
- SD_x — STORM SEWER
- SS_x — SANITARY SEWER
- E_x — PRIMARY UNDERGROUND ELECTRIC
- C_x — UNDERGROUND COMM.
- E-CATV — UNDERGROUND TV CABLE

REMOVE / DEMO

NOTE: ITEMS TO BE DEMOLISHED/REMOVED WILL BE BOLD AND HATCHED: EXAMPLES BELOW

- DOMESTIC WATER LINE (W_x)
- ASPHALT PAVING

NEW

- FIRE HYDRANT — FH
- FIRE DEPT. CONNECTION — FDC
- POST INDICATOR VALVE
- WATER VALVE
- WATER METER — W
- GAS VALVE
- GAS METER — G
- SANITARY SEWER MANHOLE — S
- CLEANOUT — CO
- LIFT STATION — L
- STORM SEWER MANHOLE
- CATCH BASIN/AREA INLET
- CURB INLET
- PIPE END SECTION
- HEADWALL
- DIRECTION OF FLOW — FLOW FLOW
- INDUSTRIAL WASTE MANHOLE — I
- INDUSTRIAL WASTE METER — I
- SIGN
- HANDICAP SYMBOLS
- WHEELSTOP
- BOLLARD/GUARD POST
- FLAG POLE

- DOMESTIC WATER LINE — W
- FIRE PROTECTION LINE — F
- NATURAL GAS LINE — G
- SANITARY SEWER LINE — SS
- FORCEMAIN — FM
- STORM SEWER LINE — SD
- ROOF DRAIN — RD
- INDUSTRIAL WASTE LINE — INW
- IRRIGATION LINE — LS
- UNDERGROUND ELECTRIC — E
- UNDERGROUND COMM. LINE — CU
- FENCE
- FENCELINE1
- FENCELINE2
- GUARDRAIL
- PROPERTY LINE
- LIMITS OF CONSTRUCTION
- FLOW LINE
- RIGHT OF WAY / EASEMENT
- BUILDING SET BACK LINE
- RAILROAD TRACKS
- SILT FENCE — SF
- CONTOUR — 1200
- SPOT ELEVATION — TC (TOP OF CURB) G (GUTTER)
- TREE LINE

HATCH PATTERNS LEGEND

- HEAVY DUTY ASPHALT PAVING
- ASPHALT PAVING
- HEAVY DUTY CONCRETE PAVING
- CONCRETE PAVING
- REINFORCED CONCRETE PAVING
- CONCRETE SIDEWALK
- GRAVEL PAVING
- SOD / GRASS
- INLAID TRUNCATED DOMES
- RIP-RAP

REF. DETAIL NUMBER
X / C-50_ — DETAIL REFERENCE
REF. SHEET NUMBER OF DETAIL

X / C-50_ — REF. SECTION NUMBER
X / C-50_ — SECTION REFERENCES
REF. SHEET NUMBER OF SECTION

JOINTING LEGEND

- LONGITUDINAL / TRANSVERSE CONSTRUCTION / CONTRACTION JOINTS
- EXPANSION JOINTS
- THICKENED EDGE JOINTS — E
- DOWELED JOINTS
- REINFORCED CONCRETE PANEL — R

ABBREVIATIONS

AI	AREA INLET
BOC	BACK OF CURB
CB	CATCH BASIN
CI	CURB INLET
C	COMMUNICATIONS
CMH	COMM. MANHOLE
C.O.	CLEAN OUT
CP	CULVERT PIPE
CU	UNDERGROUND COMMUNICATIONS
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
CY	CUBIC YARD
E	ELECTRIC LINE
EMH	ELECTRIC MANHOLE
F	FIRE LINE
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
FOC	FACE OF CURB
FO	FIBER OPTIC
G	GAS LINE
GR	GAS REGULATOR
GM	GAS METER
GV	GAS VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HH	HAND HOLE
HW	HEADWALL
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HAG	HORIZONTAL AT GRADE
HUG	HORIZONTAL UNDERGROUND
HYD	HYDRANT
JBOX	JUNCTION BOX
INV	INVERT
I.P.	IRON PIN
IW	INDUSTRIAL WASTE
IRR	IRRIGATION LINE
LF	LINEAR FEET
LP	LIGHT POLE
L.S.	LIFT STATION
MH	MANHOLE
M.W.	MONITORING WELL
OHE	OVERHEAD ELECTRIC
RCP	REINFORCED CONCRETE PIPE
PB	PULL BOX
PE	POLYETHYLENE
PED	PEDESTAL/RISER
P.I.V.	POST INDICATOR VALVE
PP	POWER POLE
PSI	POUND PER SQUARE INCH
PVC	POLYVINYL CHLORIDE PIPE
SD	STORM DRAIN
SF	SILT FENCE
SF	SQUARE FEET
SS	SANITARY SEWER
TC	TOP OF CURB
TELE	TELEPHONE LINE
TMH	TELEPHONE MANHOLE
TR	TELEPHONE RISER
UE	UNDERGROUND ELECTRIC
VAG	VERTICAL AT GRADE
W	WATER LINE
WMH	WATER MANHOLE
WM	WATER METER
WV	WATER VALVE

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Symbol	Description	Date	Appr.

Designed by: R. FARSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

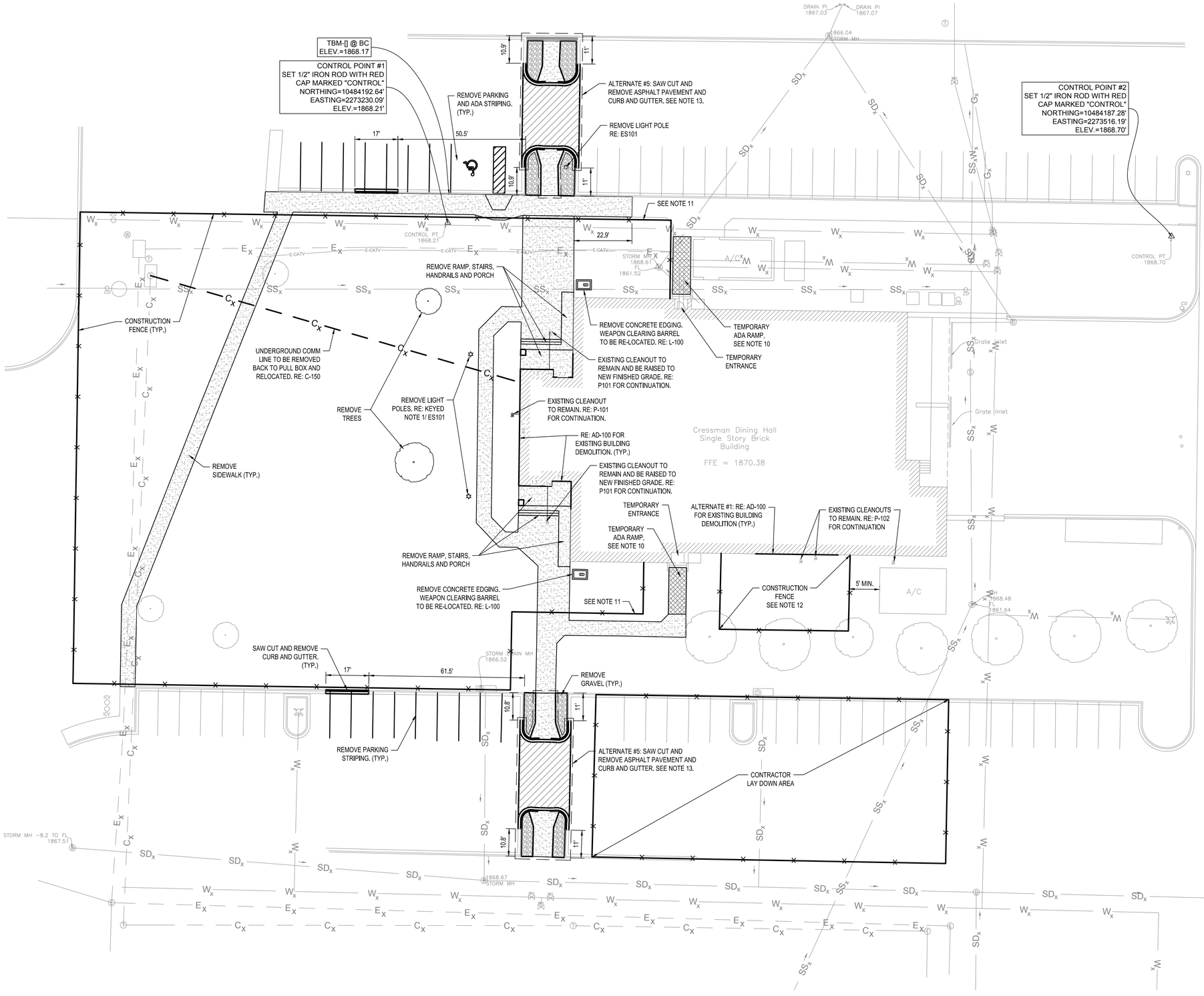
PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: CIVIL LEGEND
Date: 12 JUL 2018

SEQ.	SHEET	OF
	C-001	

4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 EXISTING CONDITIONS AND DEMOLITION PLAN

guernsey

DEMOLITION NOTES:

1. ALL UNDERGROUND UTILITIES SHOWN WERE LOCATED FROM INFORMATION OBTAINED ON SITE, PREVIOUS SURVEY AND RECORDED DOCUMENTS. NO EXCAVATION WAS PERFORMED TO DETERMINE THE SIZE OR LOCATION. NOT NECESSARILY ALL UNDERGROUND UTILITIES ARE SHOWN AND THOSE SHOWN ARE IN APPROXIMATE LOCATION ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES AND THE LOCATIONS THEREOF PRIOR TO BEGINNING CONSTRUCTION. NO RESPONSIBILITY IS HEREBY EXTENDED FOR THE LOCATION OF UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL CONTACT UTILITY LOCATE SERVICE TO LOCATE EXISTING UTILITIES PRIOR TO WORK BEGINNING.
3. EXISTING PAVEMENT, SIDEWALK OR CURB TO BE REMOVED SHALL BE SAW CUT TO FULL DEPTH AND EDGES SHALL BE STRAIGHT AND UNIFORM.
4. CONTRACTOR SHALL VERIFY THE PROJECT BENCHMARKS AND LIMITS OF CONSTRUCTION BEFORE CONSTRUCTION BEGINS.
5. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING BUILDING FINISHED FLOOR ELEVATIONS AND RELEVANT STRUCTURES BEFORE CONSTRUCTION BEGINS.
6. CONTRACTOR SHALL CLEAN OUT EXISTING STORM STRUCTURES PRIOR TO BEGINNING CONSTRUCTION.
7. CONTRACTOR SHALL COORDINATE ALL EXISTING UTILITIES, TO BE REMOVED AND/OR RELOCATED, WITH CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING PLAN DRAWINGS.
8. ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF BUILDING, CENTER OF FENCE, CENTER OF PAINT STRIPE, AND TO CENTER OF PIPE, UNLESS OTHERWISE NOTED.
9. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
10. CONTRACTOR TO PROVIDE TEMPORARY ADA RAMP WITH HANDRAILS. SLOPE OF RAMP IS NOT TO EXCEED 8.33%.
11. CONTRACTOR IS TO PROVIDE SIGNAGE INDICATING LOCATION OF TEMPORARY ENTRANCES.
12. IF ALTERNATE #1, FOOD PREP ADDITION, IS SELECTED, ADD CONSTRUCTION FENCE, AS SHOWN. IF NOT SELECTED, OMIT.
13. IF ALTERNATE #5, SPEED TABLE, IS SELECTED, ADD PAVEMENT REMOVAL, CURB AND GUTTER DEMOLITION, AND RAMP/SIDEWALK REMOVAL. IF NOT SELECTED, OMIT ABOVE ITEMS. GRAVEL IN CURB ISLANDS ON BUILDING SIDES IS TO BE REMOVED AND REPLACED, PER LANDSCAPE PLANS, REGARDLESS OF SELECTION OF ALTERNATES.

SURVEY PROVIDED BY:
SKG ENGINEERING, LLC SURVEYING, ENVIRONMENTAL, LAB/CMT
706 SOUTH ABE STREET
SAN ANGELO, TEXAS 76903
PH: 325.655.1288 FAX: 325.657.8189

FLOOD ZONE

THIS PROPERTY LIES ENTIRELY WITHIN FLOOD ZONE(S) 'X'
ACCORDING TO FEMA MAP NUMBER 48451C0495E, JUNE 19, 2012.

BASIS OF BEARING

COORDINATES SHOWN HEREIN ARE BASED ON TEXAS STATE PLANES, CENTRAL ZONE, US FOOT (TX83-CF)
DISTANCES SHOWN ARE SURFACE HORIZONTAL.

Symbol	Description	Date	Appr

REVISIONS

Designed by: R. FARSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GCERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE
EXISTING CONDITIONS AND DEMOLITION PLAN

Date: 12 JUL 2018

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

SEQ.	SHEET	OF
	C-100	

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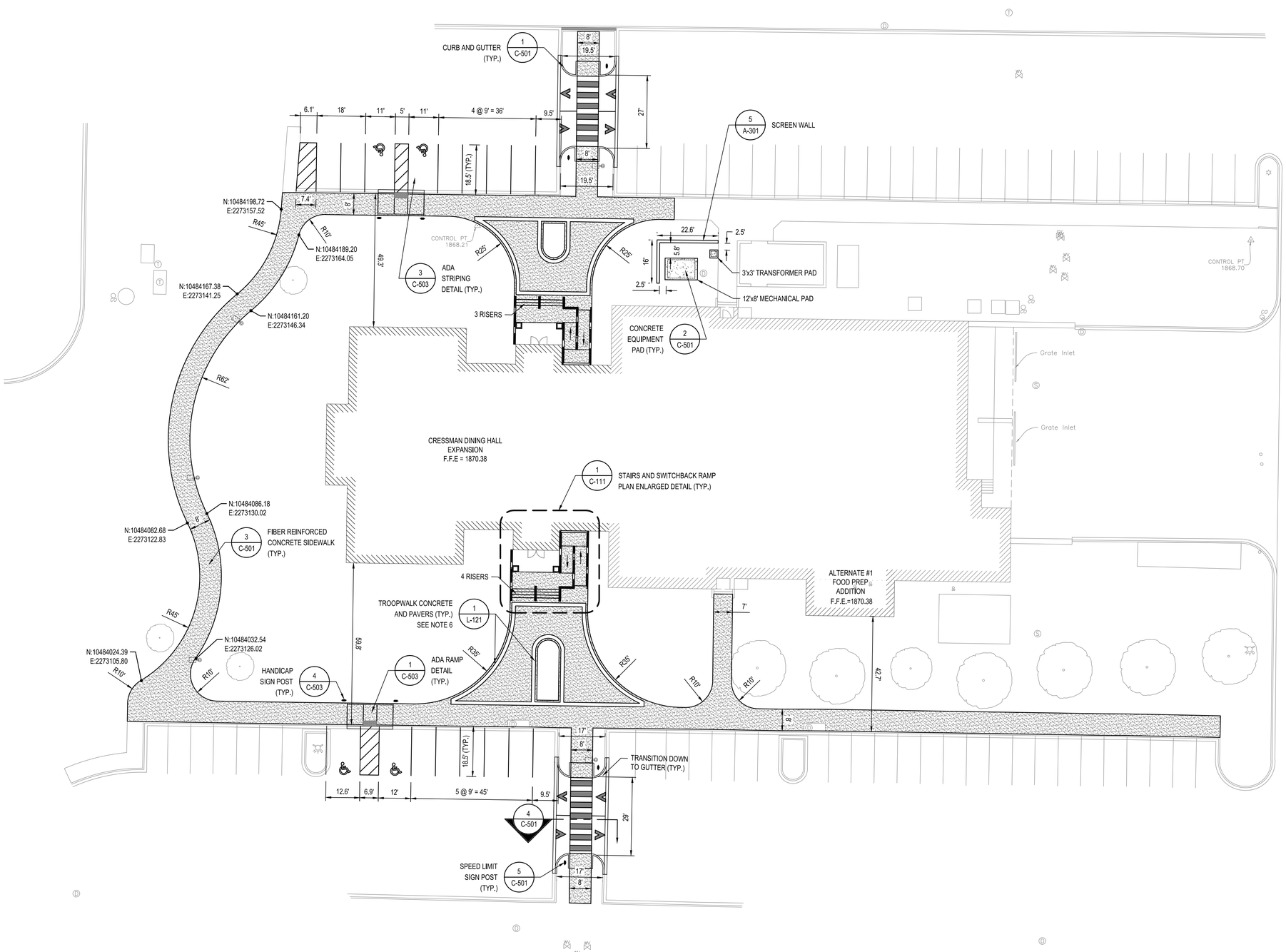
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 SITE PLAN

SITE NOTES:

1. ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF BUILDING, CENTER OF FENCE, CENTER OF PAINT STRIPE, AND TO CENTER OF PIPE, UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL RADII ARE 5 FT., UNLESS OTHERWISE NOTED.
4. ALL PARKING STRIPING SHALL BE 4 IN. WIDE WHITE PAINTED STRIPE.
5. TYPICAL SIDEWALK, PROVIDE CONTROL JOINTS AT 5 FT. ON CENTER AND EXPANSION JOINTS AT 25 FT. ON CENTER, REFER TO DETAIL 2 / C-501.
6. CONCRETE SURROUNDING TROOPWALK PAVERS IS TO BE THICKENED TO 8 INCHES AND REINFORCED. RE: 1/L-121.

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Designed by: R. FAIRSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: SITE PLAN
Date: 12 JUL 2018

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

SEQ. | SHEET C-110 | OF

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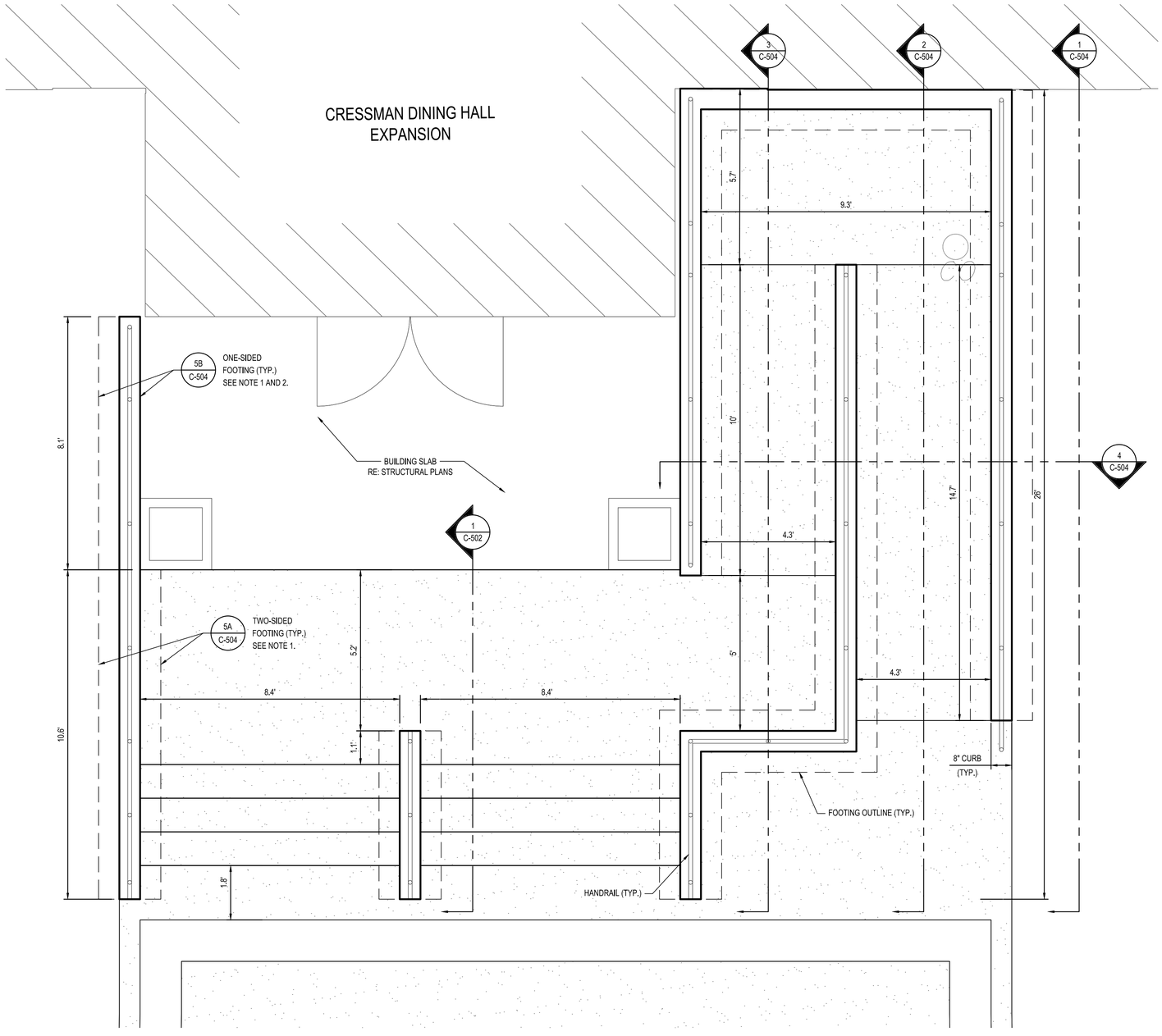
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 STAIRS AND SWITCHBACK RAMP PLAN ENLARGED DETAIL

NOTES:

1. ALL RETAINING WALL FOOTINGS ADJACENT TO BUILDING GRADE BEAMS SHALL BE ONE-SIDED FOOTING, AND SHALL BE CONSTRUCTED ACCORDING TO DETAIL 5B ON C-504. ALL OTHER RETAINING WALL FOOTINGS SHALL BE TWO-SIDED FOOTINGS, AND SHALL BE CONSTRUCTED ACCORDING TO DETAIL 5A ON C-504.
2. PROVIDE EXPANSION JOINTS BETWEEN ALL RETAINING WALLS AND GRADE BEAMS.

N

0 2 4
SCALE OF FEET

Symbol	Description	Date	Appr

REVISIONS

Designed by:	R. FAIRSHEETS
Drawn by:	K. HANES
Reviewed by:	C. MORRIS
Submitted by:	GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: ENLARGED PLAN DETAILS

Date: 12 JUL 2018

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

SEQ.	SHEET	OF
	C-111	

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C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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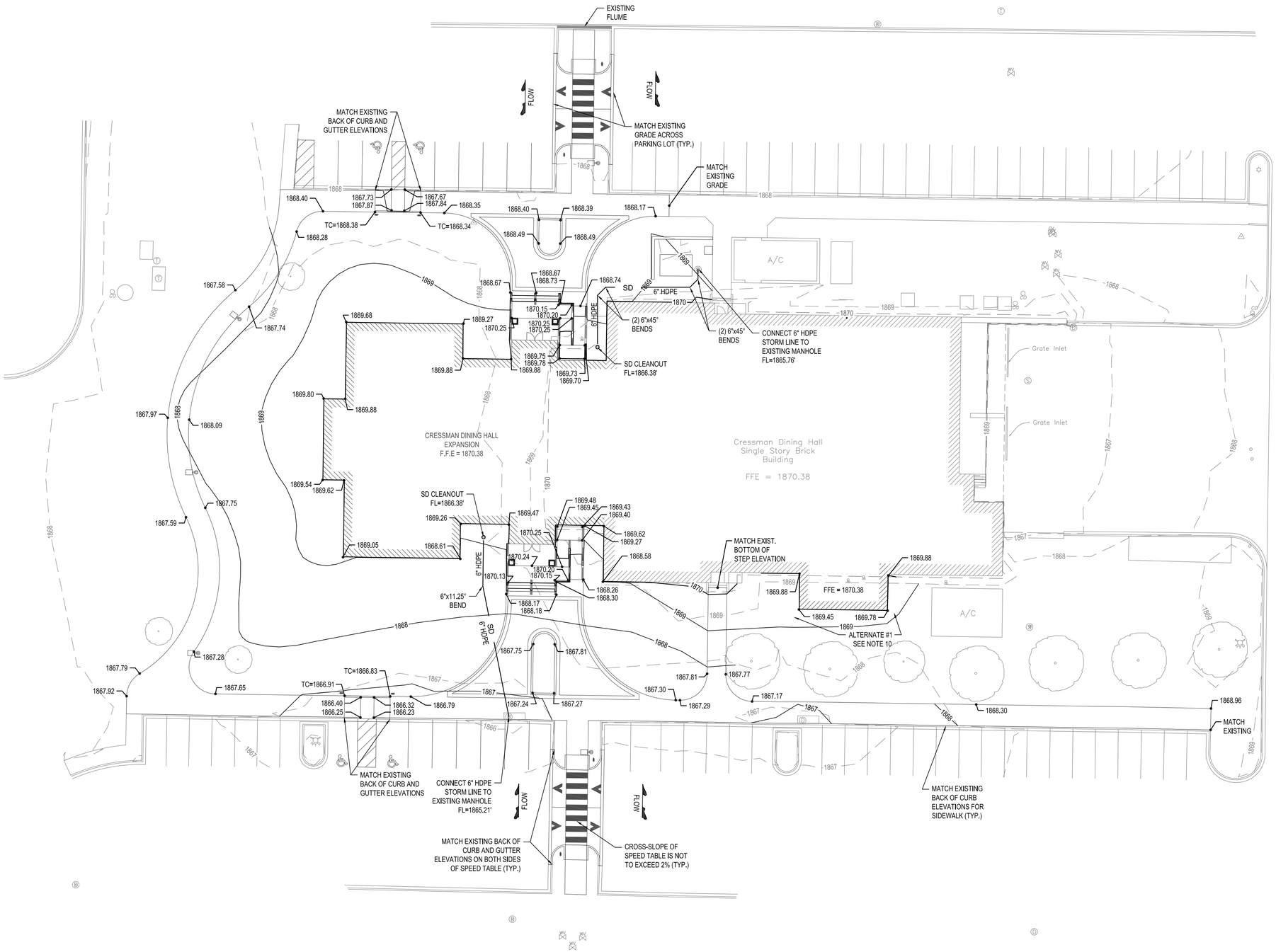

1 OVERALL GRADING AND DRAINAGE PLAN

guernsey

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO VERIFY LOCATIONS OF ALL EXISTING STORM SEWER PIPES AND STRUCTURES AS WELL AS LOCATIONS OF CROSSING UTILITIES PRIOR TO CONSTRUCTION BEGINNING.
2. ALL PROPOSED FINISHED ELEVATIONS ARE TO THE FINAL IMPROVED ELEVATIONS. THIS IS TO THE TOP OF PAVEMENTS, TOP OF LANDSCAPING GRAVEL OR VEGETATED GROUND COVER.
3. CONTRACTOR TO PLACE A MINIMUM REQUIRED COVER OVER ALL PIPES DURING CONSTRUCTION TO PREVENT DAMAGE FROM CONSTRUCTION VEHICLES.
4. EXPOSED TRENCHES WILL REQUIRE DE-WATERING AFTER STORM EVENTS.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING DRAINAGE FACILITIES, INCLUDING, BUT NOT LIMITED TO, MANHOLES, HEADWALLS, PIPES, CHANNELS AND BASINS WITHIN AND ADJACENT TO THE WORKING LIMITS THAT ARE NOT SHOWN TO BE DISTURBED PER THESE IMPROVEMENT PLANS. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY DAMAGED FACILITIES IN KIND AT THEIR OWN COST.
6. PROPOSED SPOT ELEVATIONS ARE BACK OF CURB, TOP OF PAVEMENT OR FINISHED GRADE.
7. ALL EXISTING STRUCTURES AND FACILITIES TO REMAIN SHALL BE ADJUSTED TO FINISHED GRADE.
8. MAXIMUM SLOPE IN TURFED AREAS SHALL BE 3H:1V.
9. A MINIMUM SLOPE IN TURFED AREAS IS 1%.
10. IF ALTERNATE #1, FOOD PREP ADDITION, IS SELECTED, GRADE AREA AROUND ADDITION, AS SHOWN. IF NOT SELECTED, OMIT GRADING IN THIS AREA.

Symbol	Description	Date	Appr.

REVISIONS

Designed by: R. FAIRSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: OVERALL GRADING AND DRAINAGE PLAN

Date: 12 JUL 2018

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

SEQ.	SHEET	OF
	C-130	

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C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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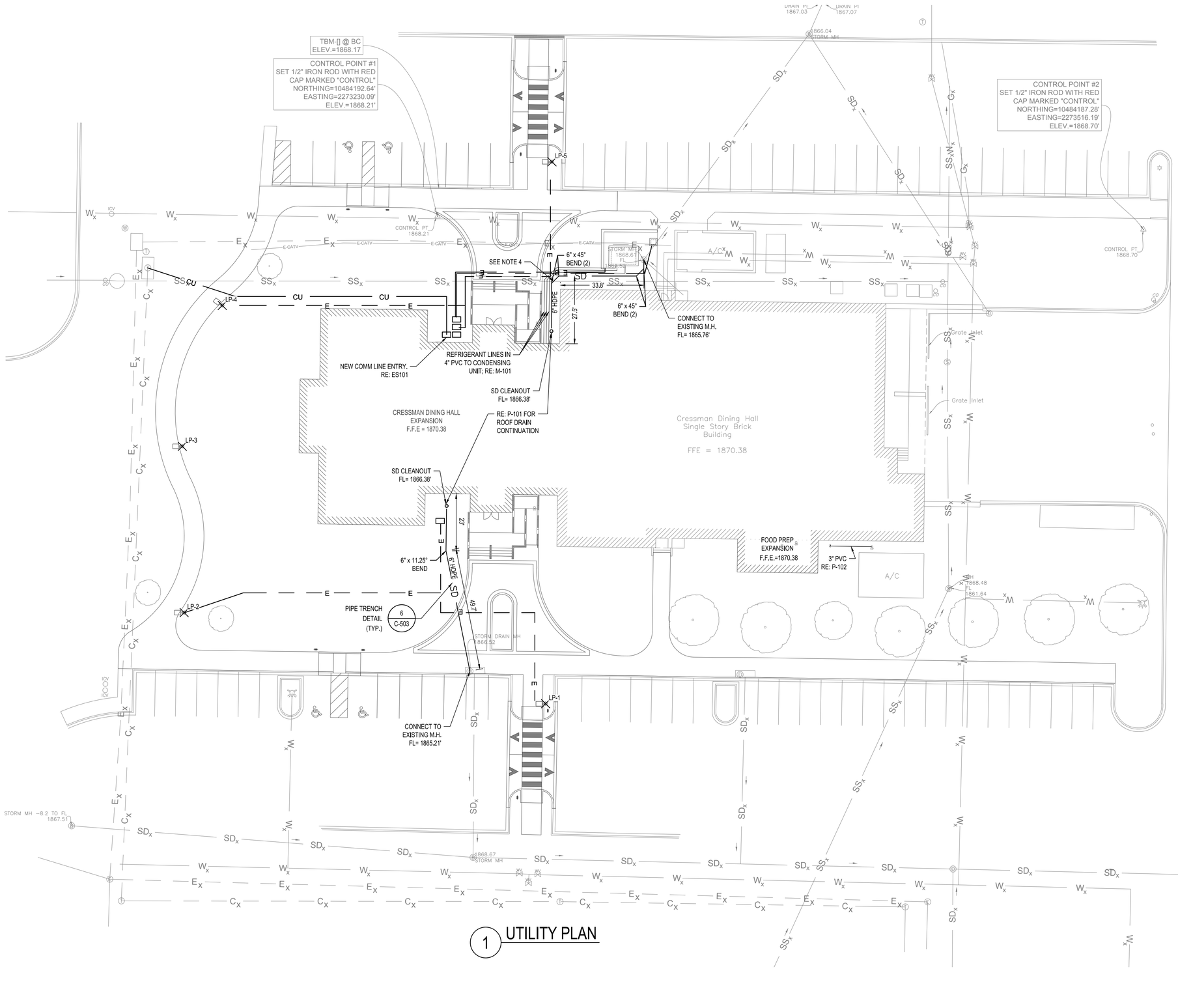


1 UTILITY PLAN

UTILITY NOTES:

1. ALL UNDERGROUND UTILITIES SHOWN WERE LOCATED FROM INFORMATION OBTAINED ON SITE, PREVIOUS SURVEY AND RECORDED DOCUMENTS. NO EXCAVATION WAS PERFORMED TO DETERMINE THE SIZE OR LOCATION. NOT NECESSARILY ALL UNDERGROUND UTILITIES ARE SHOWN AND THOSE SHOWN ARE IN APPROXIMATE LOCATION ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES AND THE LOCATION THEREOF PRIOR TO BEGINNING CONSTRUCTION. NO RESPONSIBILITY IS HEREBY EXTENDED FOR LOCATION OF UNDERGROUND UTILITIES.
2. THE CONTRACTOR IS TO EXPOSE ALL EXISTING UTILITY CONNECTIONS AND UTILITY CROSSINGS PRIOR TO THE START OF ANY CONSTRUCTION TO VERIFY LOCATIONS OF CONNECTIONS. CONTRACTOR WILL NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES OR CONFLICTS.
3. CONTRACTOR SHALL PLACE A MINIMUM REQUIRED COVER OVER ALL PIPE DURING CONSTRUCTION TO PREVENT DAMAGE FROM CONSTRUCTION VEHICLES.
4. MAINTAIN MINIMUM 2 FOOT VERTICAL SEPARATION BETWEEN STORM SEWER AND SANITARY SEWER. CONTRACTOR SHALL EXPOSE SANITARY SEWER LINE TO DETERMINE DEPTH AND ADJUST STORM PIPE, AS NECESSARY.
5. EXPOSED TRENCHES WILL REQUIRE DE-WATERING AFTER STORM EVENTS.
6. ALL PIPE APPURTENANCES SUCH AS TEES, HORIZONTAL AND VERTICAL BENDS WATER AND/OR ANY OTHER PRESSURIZED PIPE SHALL HAVE THRUST BLOCKS OR MECHANICAL JOINTS.
7. MINIMUM SLOPE OF STORM SEWER LINES IS 1%.

LIGHT POLE POINT TABLE

POINT NO.	NORTHING	EASTING	DESCRIPTION
1	10483995.1	2273273.9	LP-1
2	10484032.0	2273127.4	LP-2
3	10484099.4	2273126.6	LP-3
4	10484156.5	2273142.8	LP-4
5	10484214.7	2273276.5	LP-5

guernsey

Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by: R. FAIRSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: UTILITY PLAN

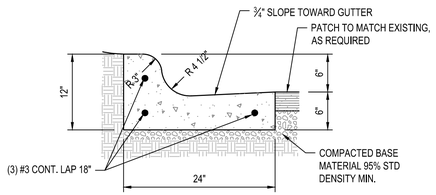
Date: 12 JUL 2018

SEQ.	SHEET	OF
	C-150	

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

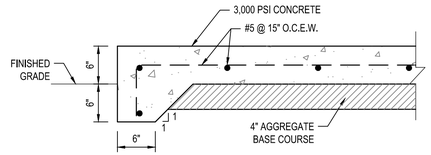


BRUSH FINISHED CONCRETE CURB WITH 1/2" EXPANSION JOINT AT 40'-0", CONTROL JOINTS AT 8'-0" O.C., EXPANSION JOINTS REQUIRED AT BEGINNING AND END OF CURVES

1 CURB AND GUTTER

N.T.S.

NOTE:
CONTRACTOR TO VERIFY CURB PROFILE TO MATCH EXISTING.

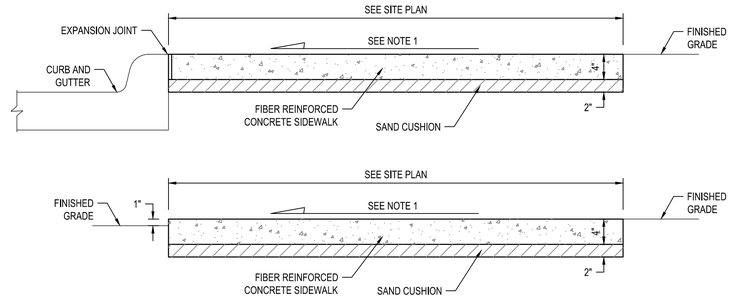


2 EQUIPMENT PAD SECTION

N.T.S.

NOTES:

1. SECTION SHOWN SHALL BE CONSIDERED A MINIMUM REQUIREMENT. CONTRACTOR SHALL VERIFY SECTION WITH EQUIPMENT MANUFACTURER.
2. PAD LAYOUT SHALL BE AT LEAST 6-INCHES LARGER THAN FOOTPRINT OF EQUIPMENT. CENTER EQUIPMENT ON PAD UNLESS RECOMMENDED OTHERWISE BY EQUIPMENT MANUFACTURER.
3. REFER TO ELECTRICAL DESIGN FOR TRANSFORMER AND GENERATOR EQUIPMENT REQUIREMENTS.
4. REFER TO MECHANICAL DESIGN FOR HVAC EQUIPMENT REQUIREMENTS.

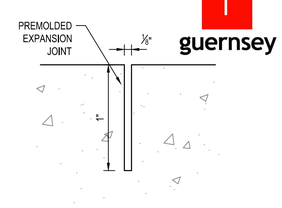


3 FIBER REINFORCED CONCRETE SIDEWALK DETAILS

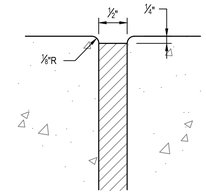
N.T.S.

SIDEWALK NOTES:

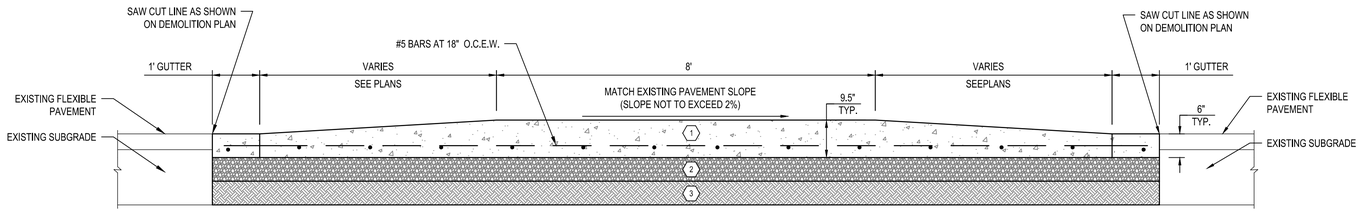
1. A CROSS SLOPE OF 1/4" PER FOOT SHALL BE PROVIDED (UNLESS NOTED OTHERWISE ON THE GRADING PLAN) AND SHALL SLOPE TOWARDS THE DIRECTION OF POSITIVE DRAINAGE IN THE AREA.
2. CONCRETE WALKS SHALL BE GROOVED TRANS- VERSELY AT INTERVALS MATCHING SIDE- WALK WIDTH (UNLESS OTHERWISE SHOWN) TO A DEPTH OF 1-INCH. WALKS OVER 10-FEET WIDE SHALL BE GROOVED LONGITUDINALLY TO A DEPTH OF 1-INCH. ALL ODD-SHAPED PANELS AND ANY PANELS WHERE THE LENGTH EXCEEDS THE WIDTH BY MORE THAN 25% SHALL BE REINFORCED WITH 6 INCH x 6 INCH – W2.9 x W2.9 WIRE MESH. EXPANSION JOINTS SHALL BE INSTALLED AT 30 FEET MAXIMUM SPACING.
3. 1/2" EXPANSION JOINTS SHALL BE SPACED NOT LESS THAN 30-FEET NOR MORE THAN 50-FEET AND ON ONE SIDE WHEN WALK IS BETWEEN TWO CURBS.
4. 1/2" EXPANSION JOINTS SHALL BE INSTALLED AT INTERSECTIONS OF SIDEWALKS, CURBS AND TO SURROUND OR TO SEPARATE ALL STRUCTURES OR FEATURES WHICH PROJECT THROUGH OR AGAINST THE SIDEWALK SLAB (ie, FIRE HYDRANTS, SIGN POSTS, ETC).



CONTRACTION JOINT



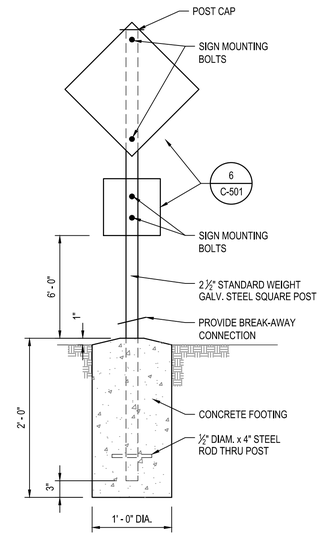
EXPANSION JOINT



4 CONCRETE SPEED TABLE

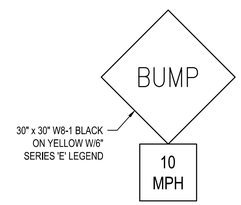
N.T.S.

1. PORTLAND CEMENT CONCRETE
   3,000 PSI MINIMUM @ 28 DAYS
2. 6" CRUSHED LIMESTONE
   PER TxDOT ITEM 247, TYPE A, GRADE 2
3. 6" COMPACTED SUBGRADE
   95% COMPACTION PER A.S.T.M. D-698
   6% TO 12% LIME ADDED AT CONTRACTORS OPTION



5 SPEED BUMP SIGN POST DETAIL

N.T.S.



6 W8-1 SIGN DETAIL

N.T.S.

4/24/2018 11:16:09 AM

Symbol	Description	Date	Appr

REVISIONS

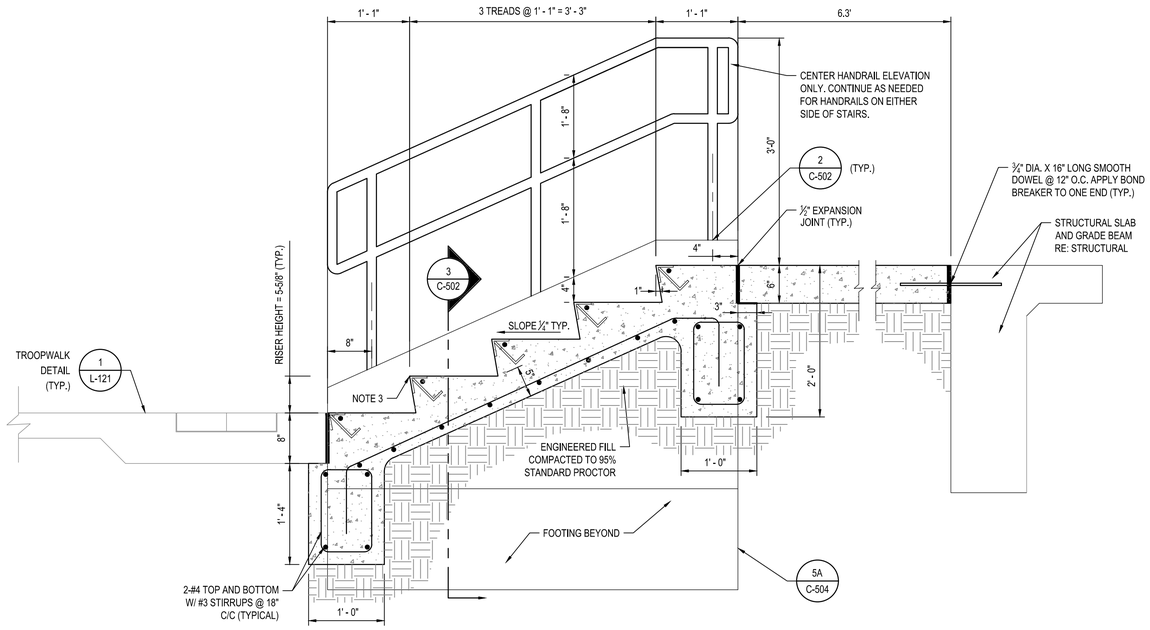
Designed by: R. FAIRSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: DETAILS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	C-501	

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

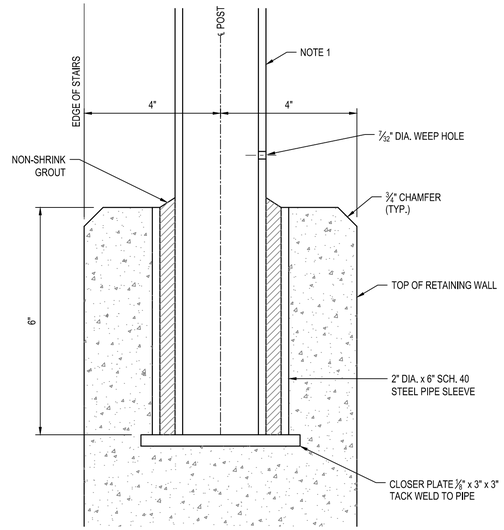


1 STAIRS LONGITUDINAL SECTION

N.T.S.

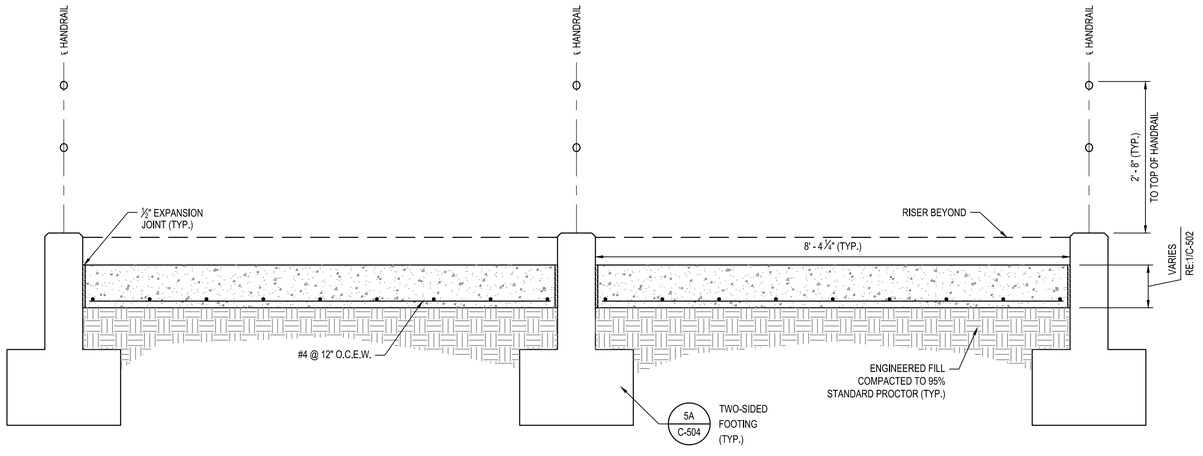
NOTES:

1. 1½" STANDARD SCHEDULE 40 STEEL PIPE POSTS AND RAILING. WELD AND GRIND JOINTS SMOOTH, HOT DIPPED GALVANIZED AFTER FABRICATION.
2. STAIR WIDTH (BETWEEN RETAINING WALLS) = 8'-4½".
3. ALUMINUM NON-SLIP TREAD NOSING WITH ANCHORS AND #4 NOSING REBAR.



2 HANDRAIL POST SLEEVE

N.T.S.



3 STAIRS TRANSVERSE SECTION

N.T.S.

guernsey

REVISIONS

Symbol	Description	Date	Appr.

Designed by: R. FAIRSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: DETAILS

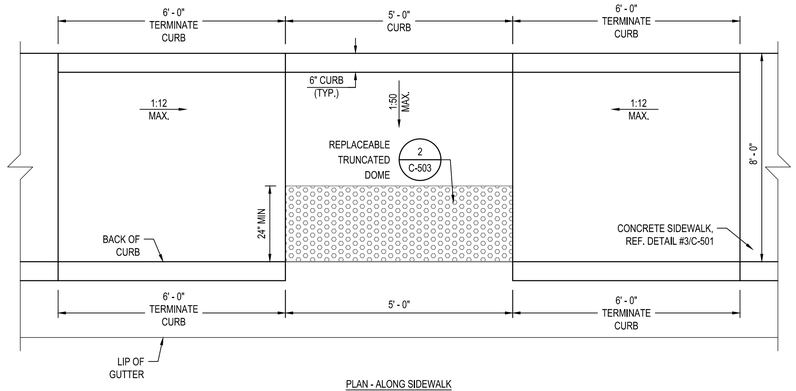
Date: 12 JUL 2018

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

SEQ.	SHEET	OF
	C-502	

4/24/2018 11:16:09 AM

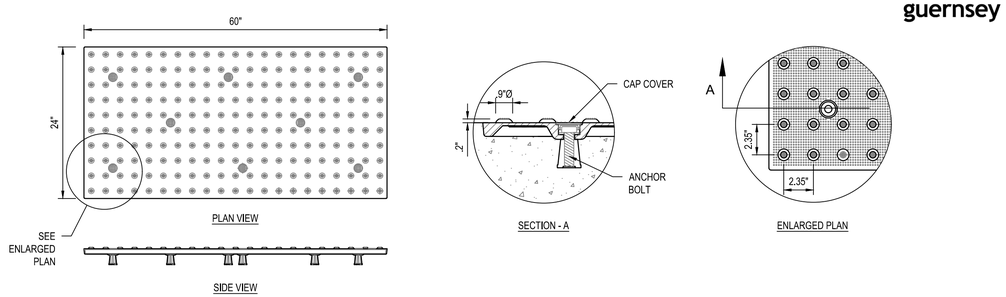
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



PLAN - ALONG SIDEWALK

1 HANDICAP RAMP DETAIL

N.T.S.

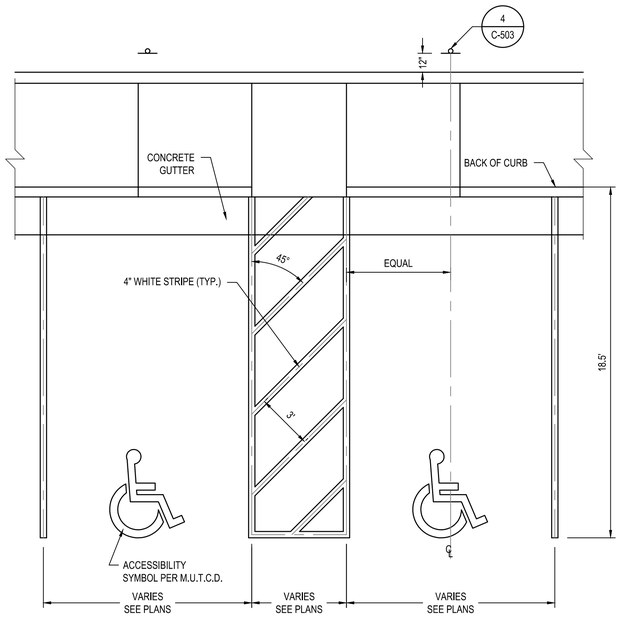


2 REPLACEABLE TRUNCATED DOME INSERT

N.T.S.

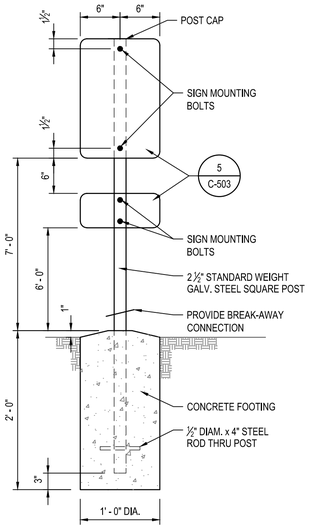
NOTES:

1. INSERTS SHALL EXTENDED FROM EDGE TO EDGE OF WALKWAY ENTERING THE CROSSWALK AT STREET LEVEL.
2. INSERTS SHALL BE ADA COMPLIANT AND CONSIST OF TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9", A NOMINAL HEIGHT 0.2" AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35" AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.
3. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. MATERIAL COLOR SHALL BE BRICK RED UNLESS INDICATED OTHERWISE.



3 ADA STRIPING DETAIL

N.T.S.

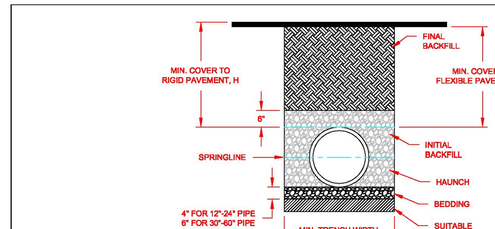


4 HANDICAP SIGN POST DETAIL

N.T.S.

5 HANDICAP SIGN DETAIL

N.T.S.



RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS

PIPE DIAM.	COOPER E-80**
UP TO 24"	24"
30"-36"	36"
42"-60"	48"

** COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.
*** E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE. AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

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ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
2	ADDED E-80 INFORMATION	TJR	09/20/07	

TYPICAL TRENCH DETAIL
DRAWING NUMBER: STD-101

ADS. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026 ADVANCED DRAINAGE SYSTEMS, INC.

DESIGN BY: CK3 | DATE: 10/18/06 | SER. NO. | SCALE: NTS | SHEET: 1 OF 1

6 PIPE TRENCH DETAIL

N.T.S.

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

4/24/2018 11:16:09 AM

guernsey

REVISIONS

Symbol	Description	Date	Appr.

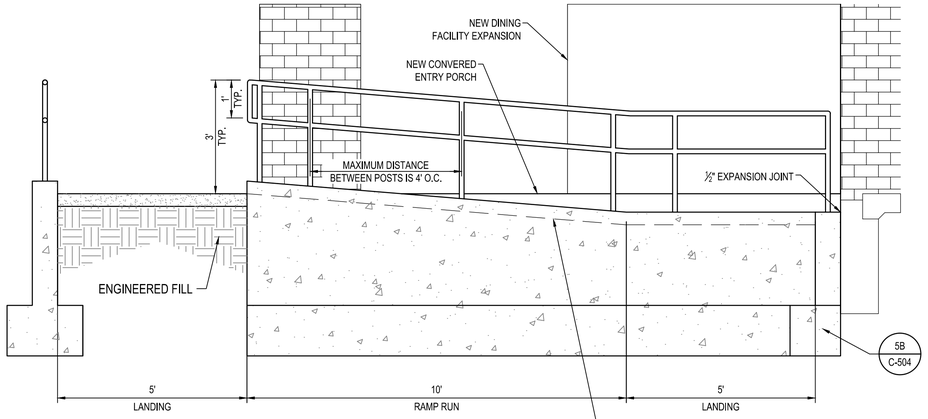
Designed by: R. FAIRSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: DETAILS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	C-503	

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



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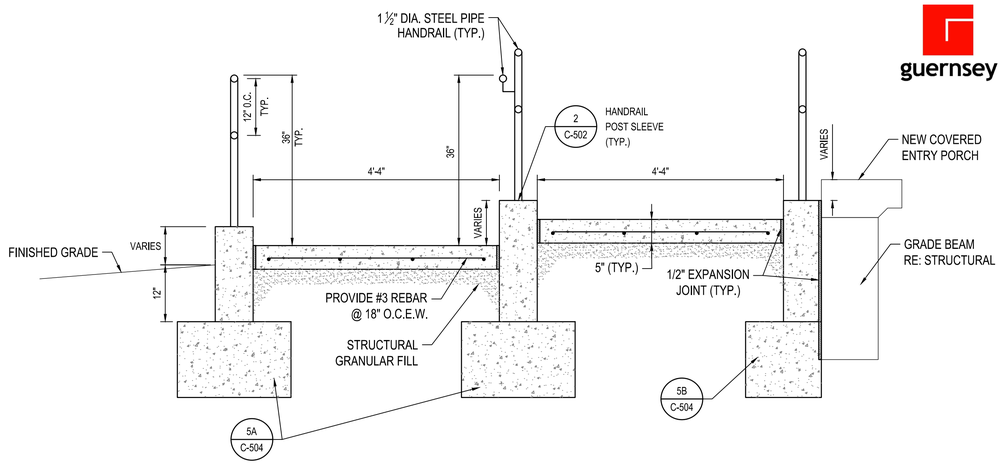
N.T.S.



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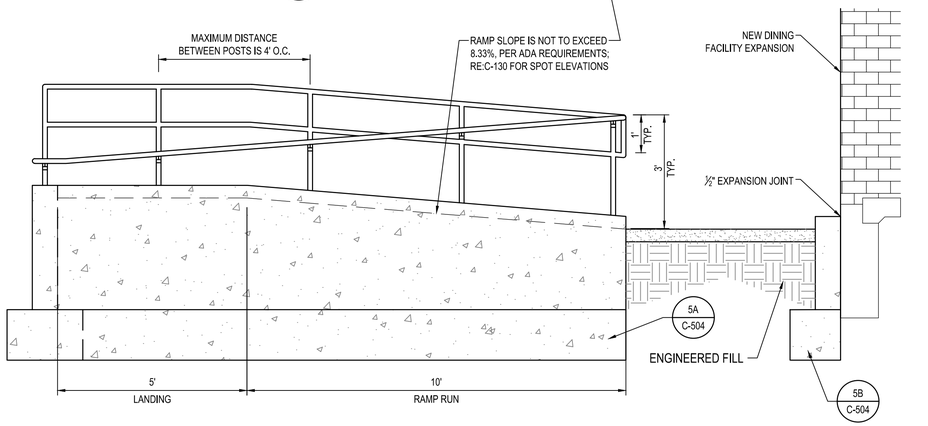
N.T.S.



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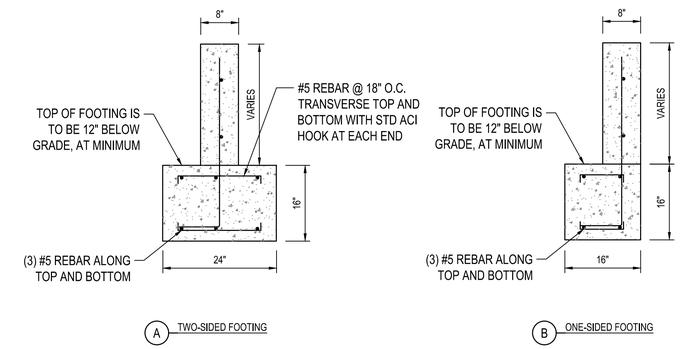
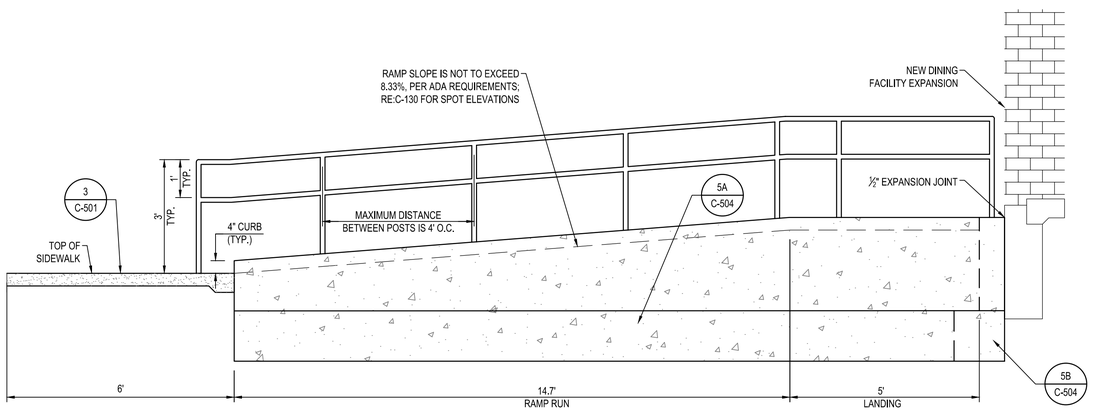
N.T.S.



5 RETAINING WALL DETAILS
N.T.S.



3 RAMP SECTION
N.T.S.

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Designed by: R. FARSHEETS
Drawn by: K. HANES
Reviewed by: C. MORRIS
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: SWITCHBACK RAMP DETAILS
Date: 12 JUL 2018

STATE OF TEXAS
CLINT MORRIS
121356
LICENSED
PROFESSIONAL ENGINEER
7-12-18

SEQ.	SHEET	OF
	C-504	

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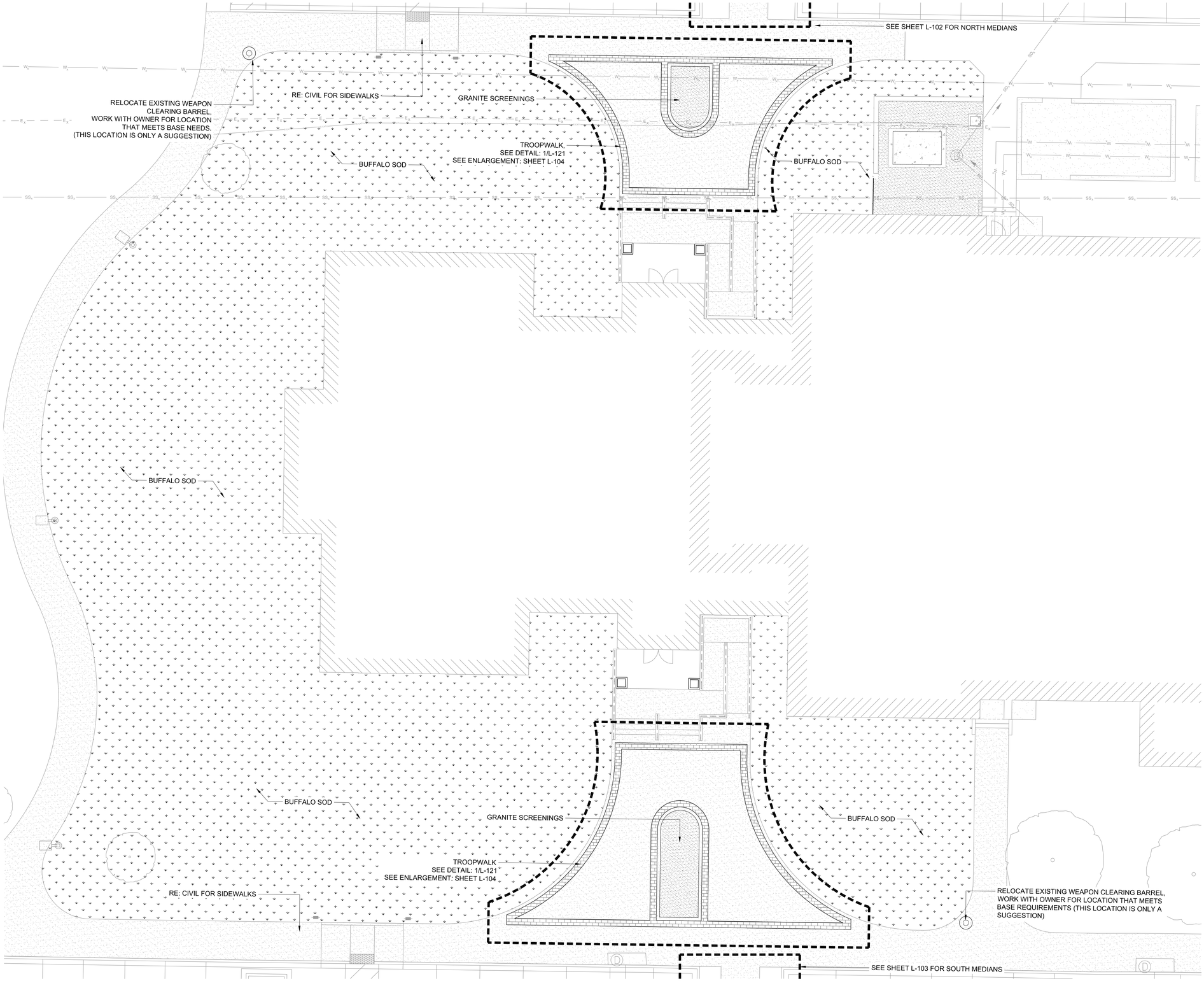
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 LANDSCAPE PLAN (BASE BID)

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Designed by: K. COPELAND
Drawn by: K. COPELAND
Reviewed by: D. SCOTT
Submitted by: GUERNSEY

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE
LANDSCAPE PLAN (BASE BID)

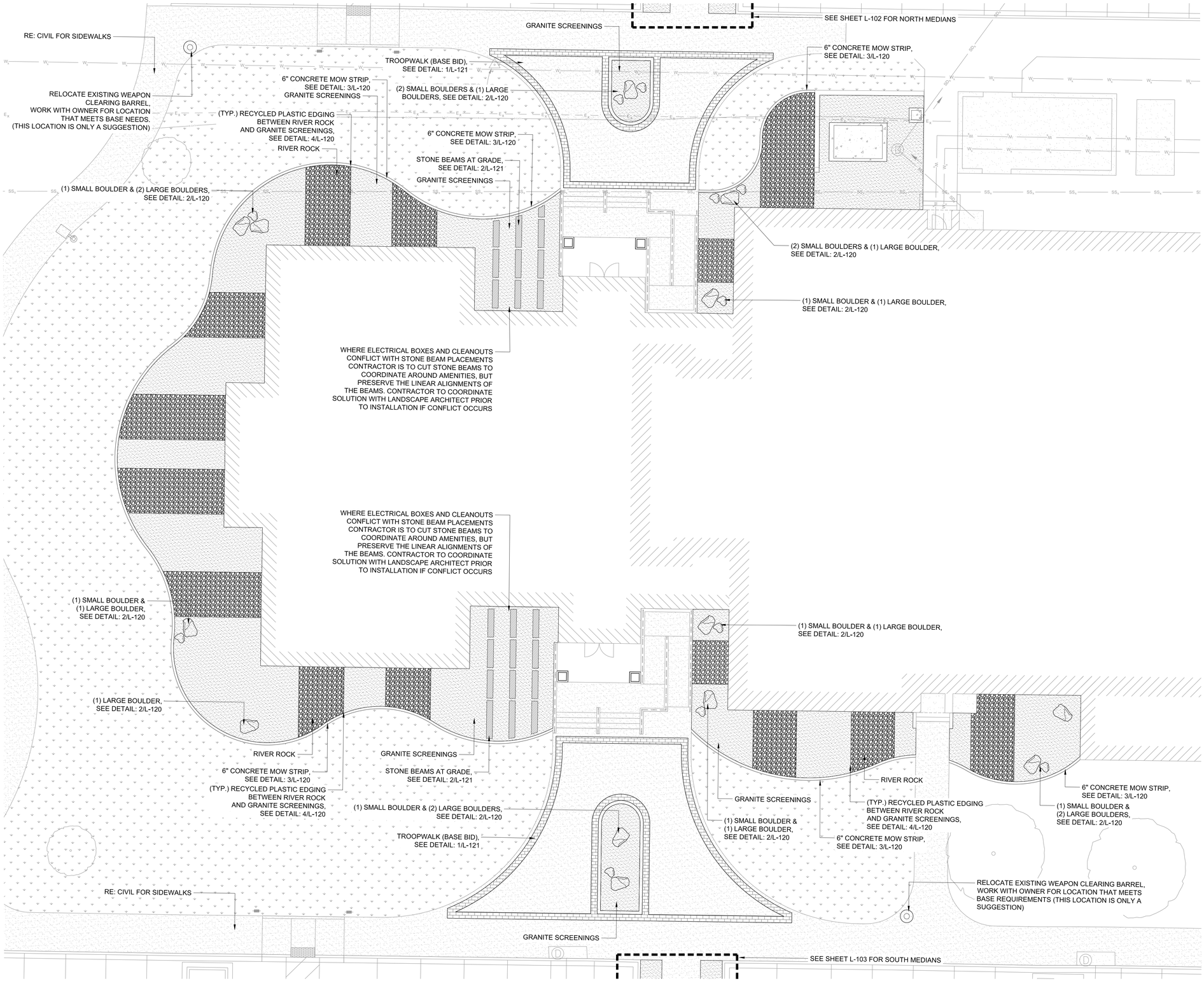
Date: 12 JUL 2018

REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
2935
STATE OF TEXAS
7-12-18

SEQ.	SHEET	OF
	L-010	

4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 LANDSCAPE - HARDSCAPE PLAN (ALT. 4)

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
K. COPELAND	K. COPELAND	D. SCOTT	GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: LANDSCAPE - HARDSCAPE PLAN (ALT. 4)

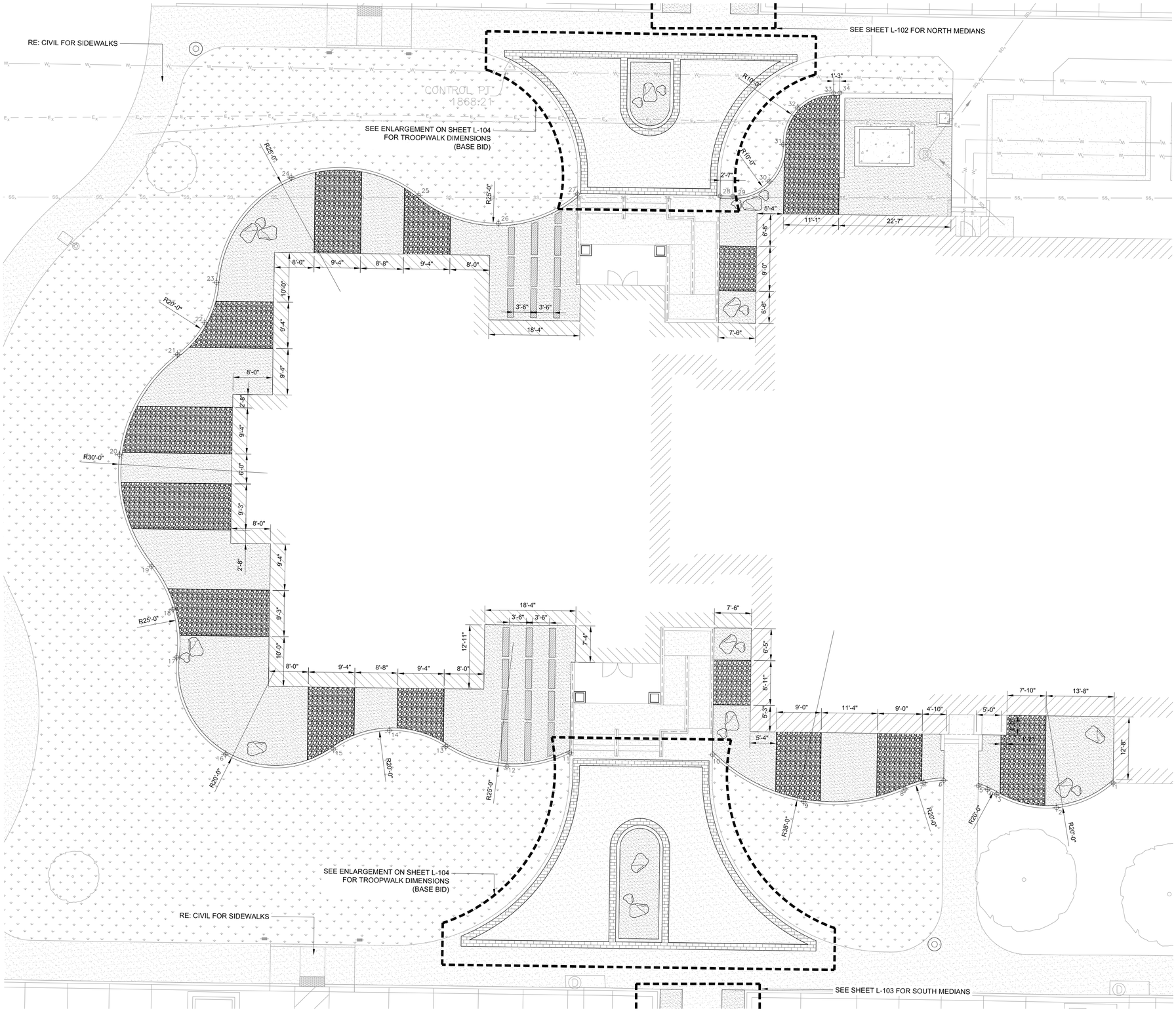
Date: 12 JUL 2018

REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
2935
STATE OF TEXAS
7-12-18

SEQ.	SHEET	OF
	L-100	

4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 LANDSCAPE - HARDSCAPE DIMENSIONS (ALT. 4)

guernsey

N/E POINT SCHEDULE

POINT	NORTHING	EASTING
1	N 10484048.4791	E 2273351.5217
2	N 10484043.5045	E 2273340.1421
3	N 10484046.2061	E 2273328.0201
4	N 10484047.1455	E 2273326.2358
5	N 10484047.9003	E 2273324.3659
6	N 10484048.9969	E 2273317.4330
7	N 10484048.5177	E 2273313.4547
8	N 10484047.2551	E 2273309.6517
9	N 10484044.7426	E 2273289.2131
10	N 10484054.1452	E 2273270.8991
11	N 10484054.5480	E 2273242.1936
12	N 10484051.8513	E 2273229.5384
13	N 10484055.8426	E 2273217.2301
14	N 10484059.0565	E 2273205.8576
15	N 10484055.2894	E 2273194.6562
16	N 10484054.2709	E 2273172.8499
17	N 10484073.8037	E 2273163.1018
18	N 10484083.4535	E 2273162.3238
19	N 10484092.0844	E 2273157.9376
20	N 10484114.5418	E 2273151.5643
21	N 10484134.7693	E 2273163.2178
22	N 10484141.1549	E 2273168.7084
23	N 10484149.2345	E 2273171.0837
24	N 10484170.3530	E 2273186.1290
25	N 10484166.7698	E 2273211.8100
26	N 10484161.1495	E 2273227.8141
27	N 10484167.0376	E 2273243.7217
28	N 10484166.6477	E 2273272.4274
29	N 10484166.6126	E 2273275.0115
30	N 10484169.6282	E 2273282.2936
31	N 10484176.9934	E 2273285.1289
32	N 10484184.3586	E 2273287.9642
33	N 10484187.3741	E 2273295.2575
34	N 10484187.3645	E 2273296.5334

NOTE: COORDINATES ARE INDICATED AT THE OUTSIDE EDGE OF CONCRETE MOW STRIP.

N

0 10 20
SCALE OF FEET

REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
2935
STATE OF TEXAS
7-12-18

4/24/2018 11:16:09 AM

Symbol	Description	Date	Appr.

REVISIONS

Designed by: K. COPELAND
Drawn by: K. COPELAND
Reviewed by: D. SCOTT
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

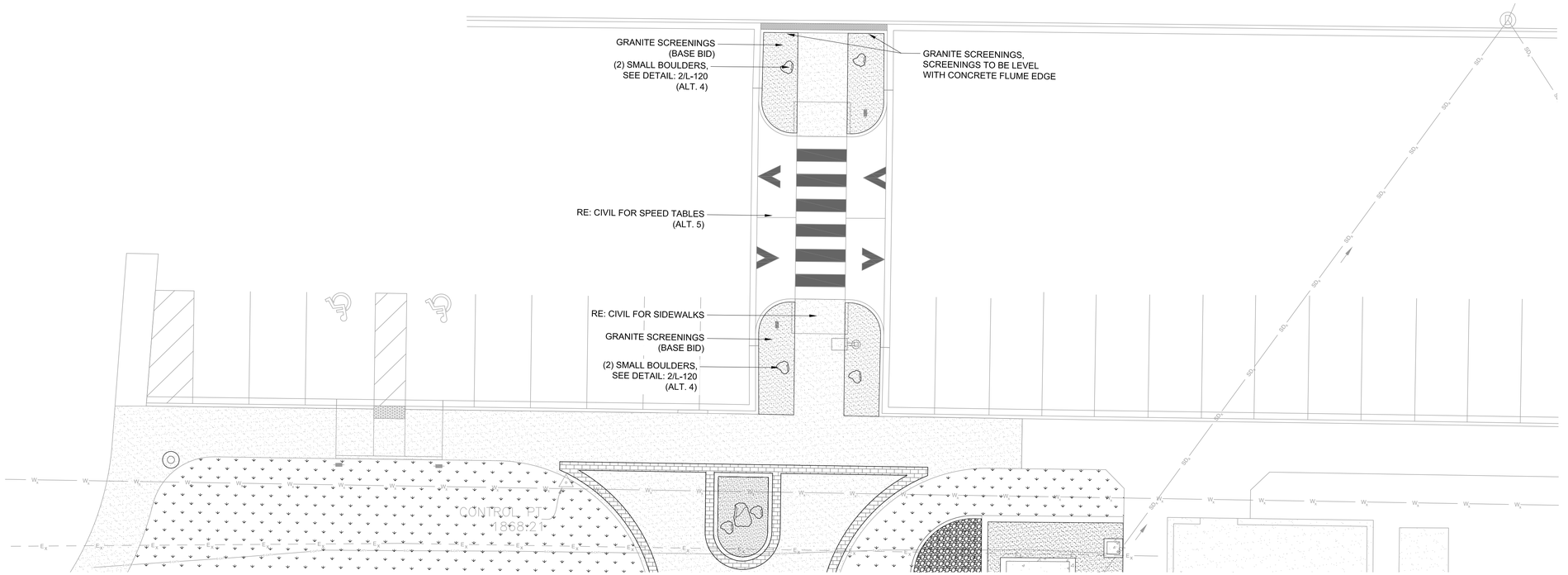
Project Number: OK70374-000

SHEET TITLE
LANDSCAPE - HARDSCAPE DIMENSIONS (ALT. 4)

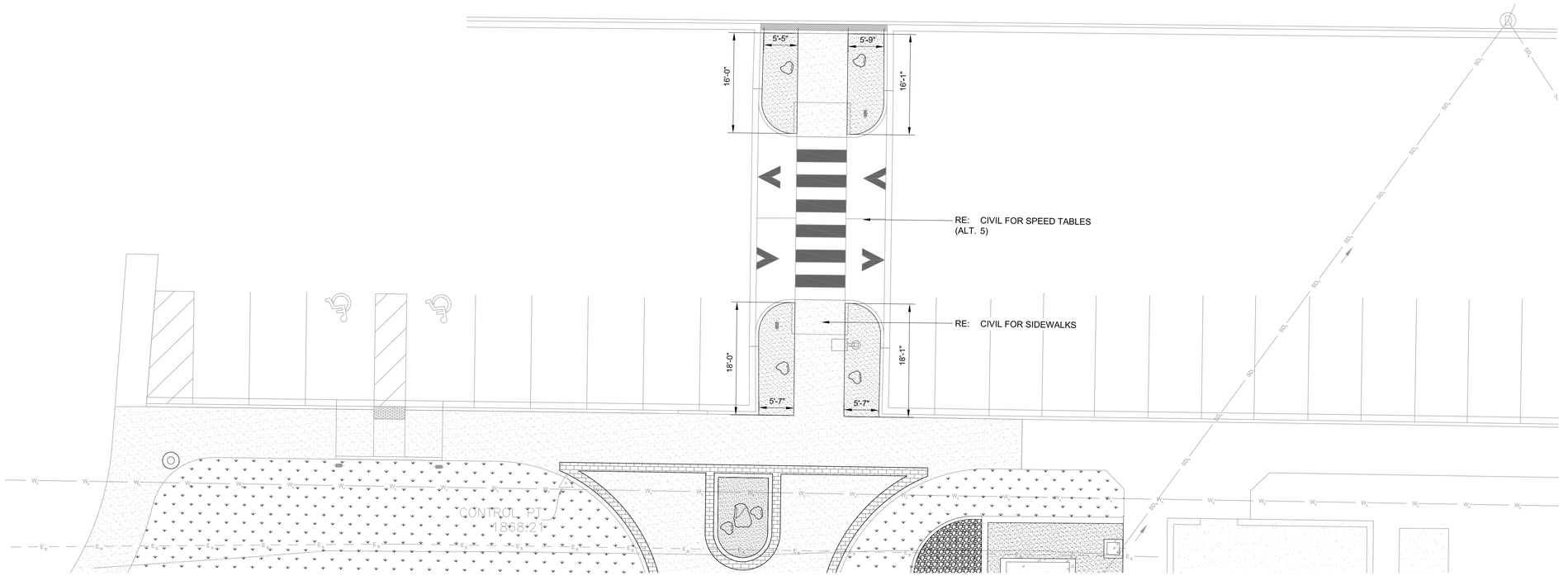
Date: 12 JUL 2018

SEQ.	SHEET	OF
	L-101	

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 LANDSCAPE - HARDSCAPE PLAN (NORTH MEDIANS)



2 LANDSCAPE - DIMENSION PLAN (NORTH MEDIANS)

0 10 20
SCALE OF FEET

REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
2935
STATE OF TEXAS
7-12-18

guernsey

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REVISIONS

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Drawn by: K. COPELAND
Reviewed by: D. SCOTT
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

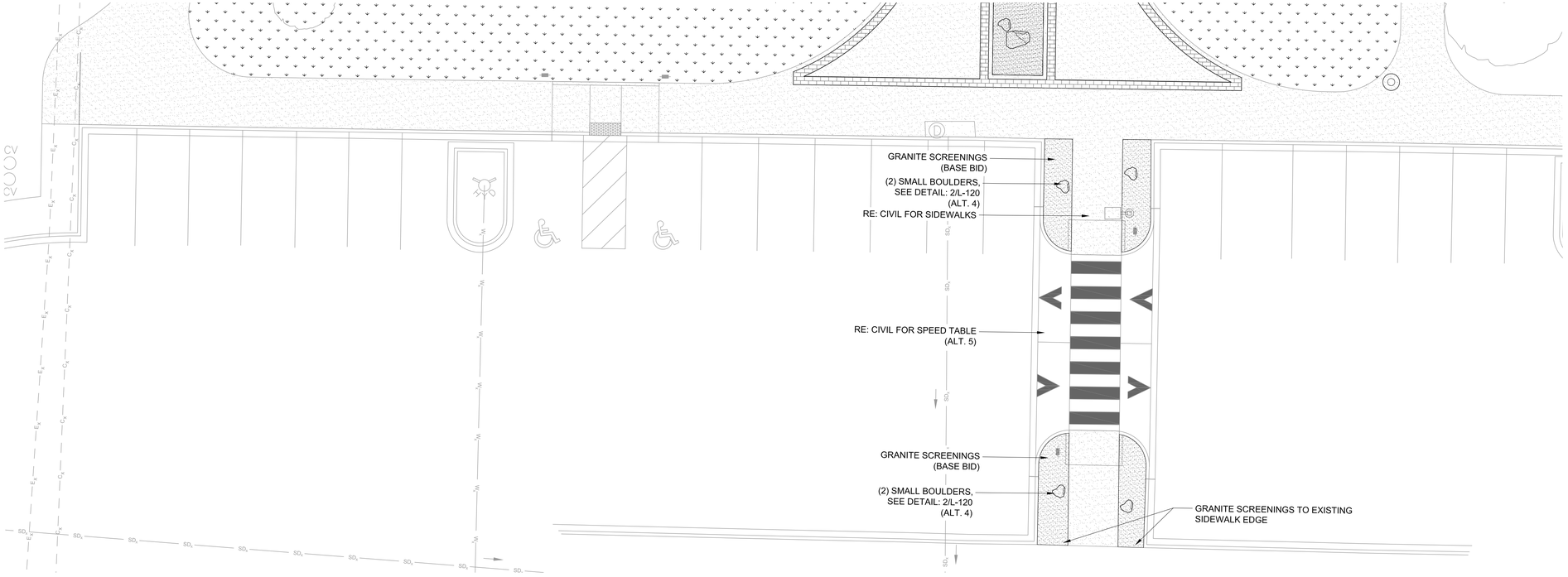
SHEET TITLE
LANDSCAPE - HARDSCAPE PLAN (NORTH MEDIANS)

Date: 12 JUL 2018

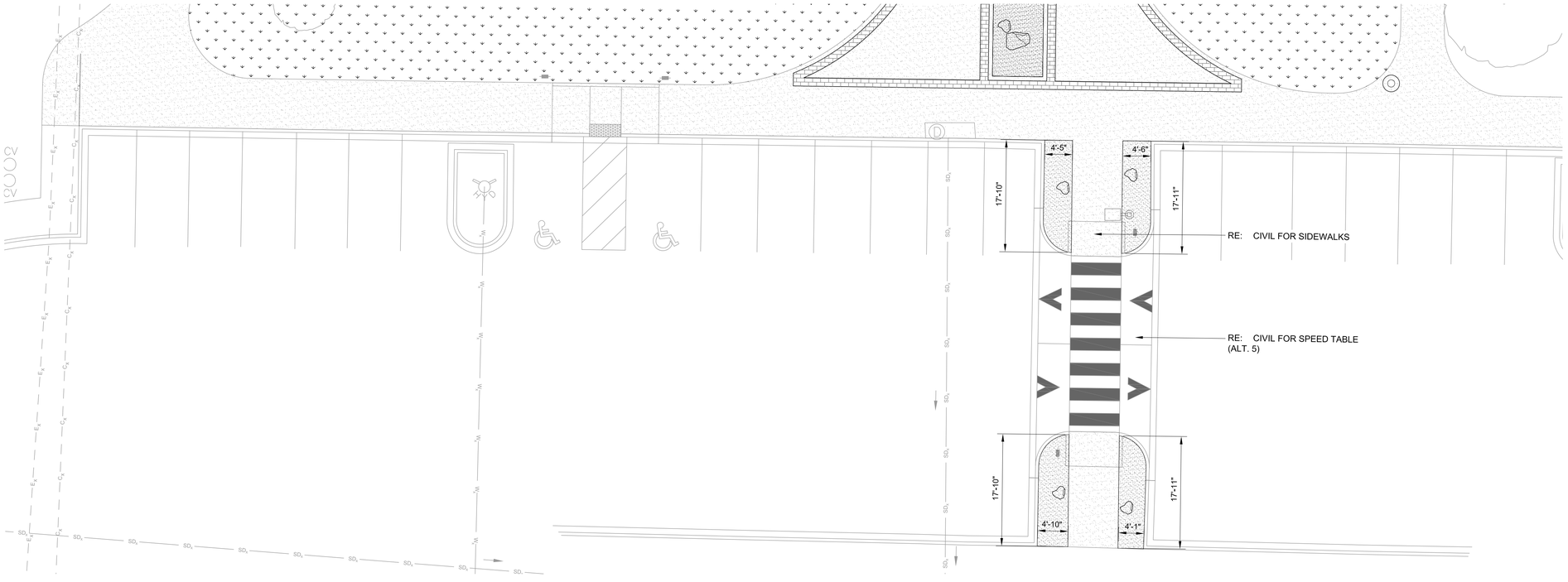
SEQ.	SHEET	OF
	L-102	

4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 LANDSCAPE - HARDSCAPE PLAN (SOUTH MEDIANS)



2 LANDSCAPE - DIMENSION PLAN (SOUTH MEDIANS)

0 10 20
SCALE OF FEET

REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
2935
STATE OF TEXAS
7-12-18

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Designed by: K. COPELAND
Drawn by: K. COPELAND
Reviewed by: D. SCOTT
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: LANDSCAPE - HARDSCAPE PLAN (SOUTH MEDIANS)

Date: 12 JUL 2018

SEQ. | SHEET L-103 | OF

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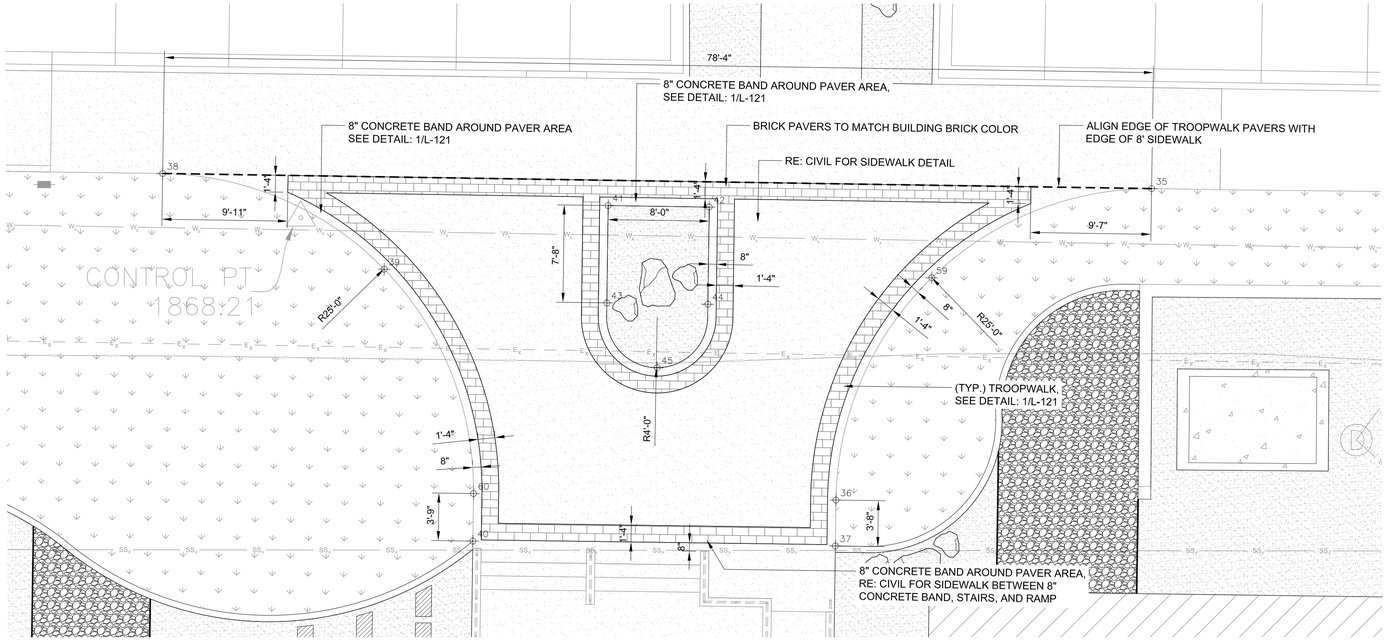
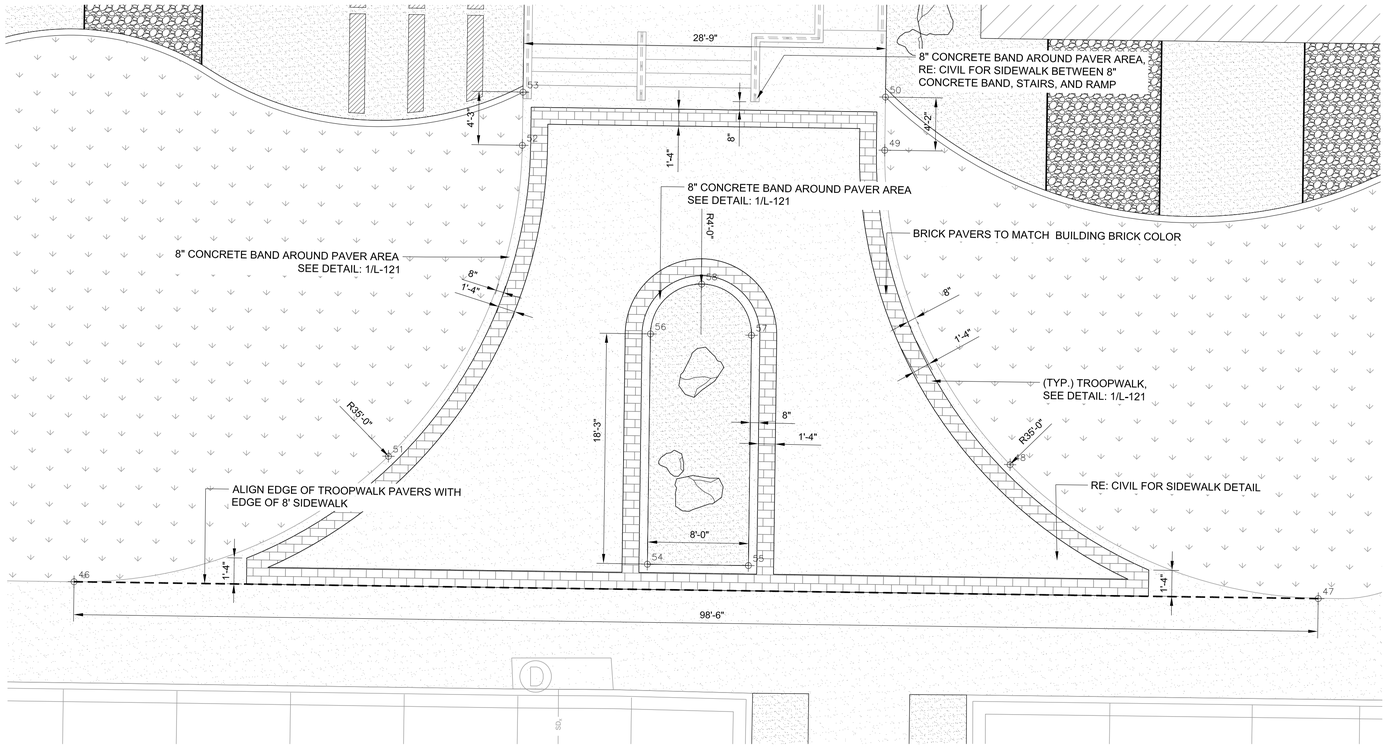
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



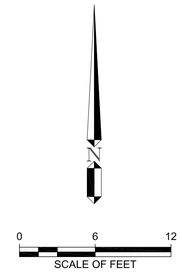
1 LANDSCAPE - HARDSCAPE PLAN (NORTH TROOPWALK) (BASE BID)



2 LANDSCAPE - HARDSCAPE PLAN (SOUTH TROOPWALK) (BASE BID)

TROOPWALK N/E POINT SCHEDULE		
POINT	NORTHING	EASTING
35	N 10484194.9409	E 2273297.4744
36	N 10484170.2805	E 2273272.4767
37	N 10484166.6477	E 2273272.4274
38	N 10484196.1376	E 2273219.1580
39	N 10484188.5610	E 2273236.7064
40	N 10484167.0376	E 2273243.7217
41	N 10484193.5996	E 2273254.4376
42	N 10484193.4777	E 2273262.4367
43	N 10484185.8952	E 2273254.3330
44	N 10484185.7866	E 2273262.3322
45	N 10484181.8413	E 2273258.2783
46	N 10484015.7845	E 2273206.6384
47	N 10484014.4510	E 2273305.1652
48	N 10484025.0553	E 2273280.7661
49	N 10484049.9511	E 2273270.8422
50	N 10484054.1580	E 2273270.8993
51	N 10484025.7199	E 2273231.5356
52	N 10484050.3411	E 2273242.1365
53	N 10484054.5480	E 2273242.1936
54	N 10484017.1746	E 2273252.0411
55	N 10484017.0660	E 2273260.0403
56	N 10484035.4091	E 2273252.2888
57	N 10484035.3004	E 2273260.2880
58	N 10484039.3544	E 2273256.3427
59	N 10484187.8845	E 2273280.0668
60	N 10484170.8010	E 2273243.7728

NOTE: COORDINATES ARE LOCATED ON THE OUTSIDE EDGE OF CONCRETE BANDING.



REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
2935
STATE OF TEXAS
7-12-18

guernsey

REVISIONS			
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Drawn by: K. COPELAND
Reviewed by: D. SCOTT
Submitted by: GUERNSEY

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

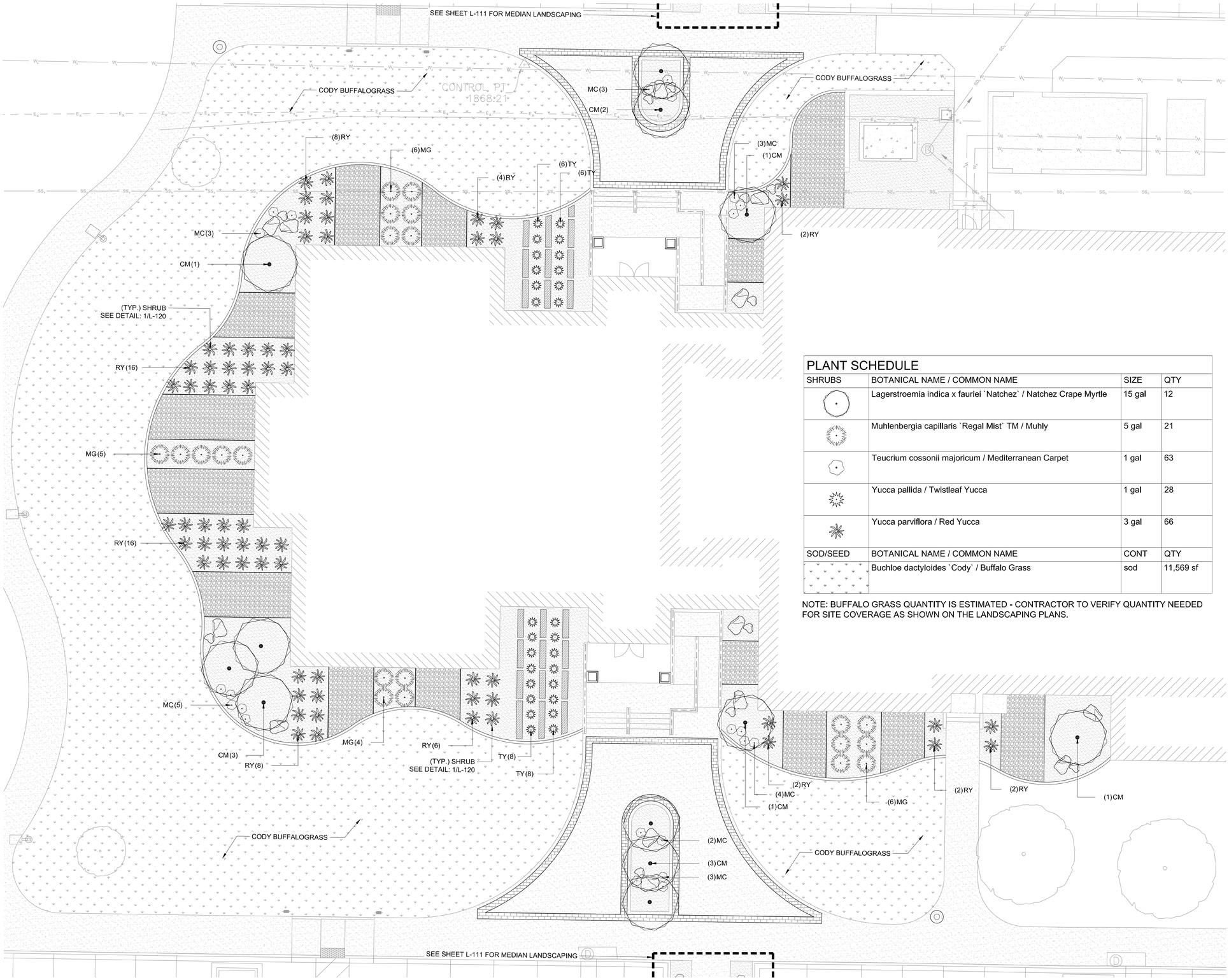
SHEET TITLE
LANDSCAPE - HARDSCAPE PLAN (TROOPWALK) (BASE BID)

Date: 12 JUL 2018

SEQ.	SHEET	OF
	L-104	

4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



PLANT SCHEDULE

SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	QTY
	Lagerstroemia indica x fauriei `Natchez` / Natchez Crape Myrtle	15 gal	12
	Muhlenbergia capillaris `Regal Mist` TM / Muhly	5 gal	21
	Teucrium cossonii majoricum / Mediterranean Carpet	1 gal	63
	Yucca pallida / Twistleaf Yucca	1 gal	28
	Yucca parviflora / Red Yucca	3 gal	66
SOD/SEED	BOTANICAL NAME / COMMON NAME	CONT	QTY
	Buchloe dactyloides `Cody` / Buffalo Grass	sod	11,569 sf

NOTE: BUFFALO GRASS QUANTITY IS ESTIMATED - CONTRACTOR TO VERIFY QUANTITY NEEDED FOR SITE COVERAGE AS SHOWN ON THE LANDSCAPING PLANS.

0 10 20
SCALE OF FEET

1 LANDSCAPE - PLANTING PLAN (ALT. 4)

4/24/2018 11:16:09 AM

guernsey

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PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
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SHEET TITLE
LANDSCAPE - PLANTING PLAN (ALT. 4)

Date: 12 JUL 2018

REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
2935
STATE OF TEXAS
7-12-18

SEQ. | SHEET | OF
L-110

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
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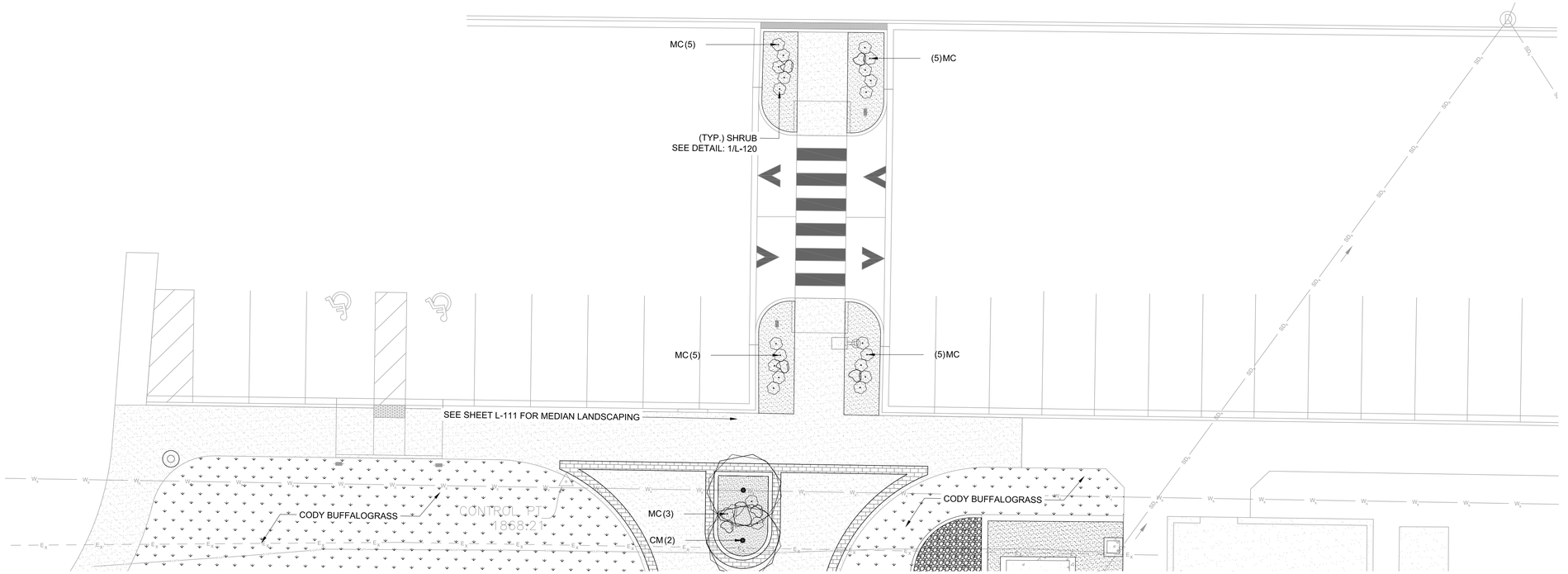
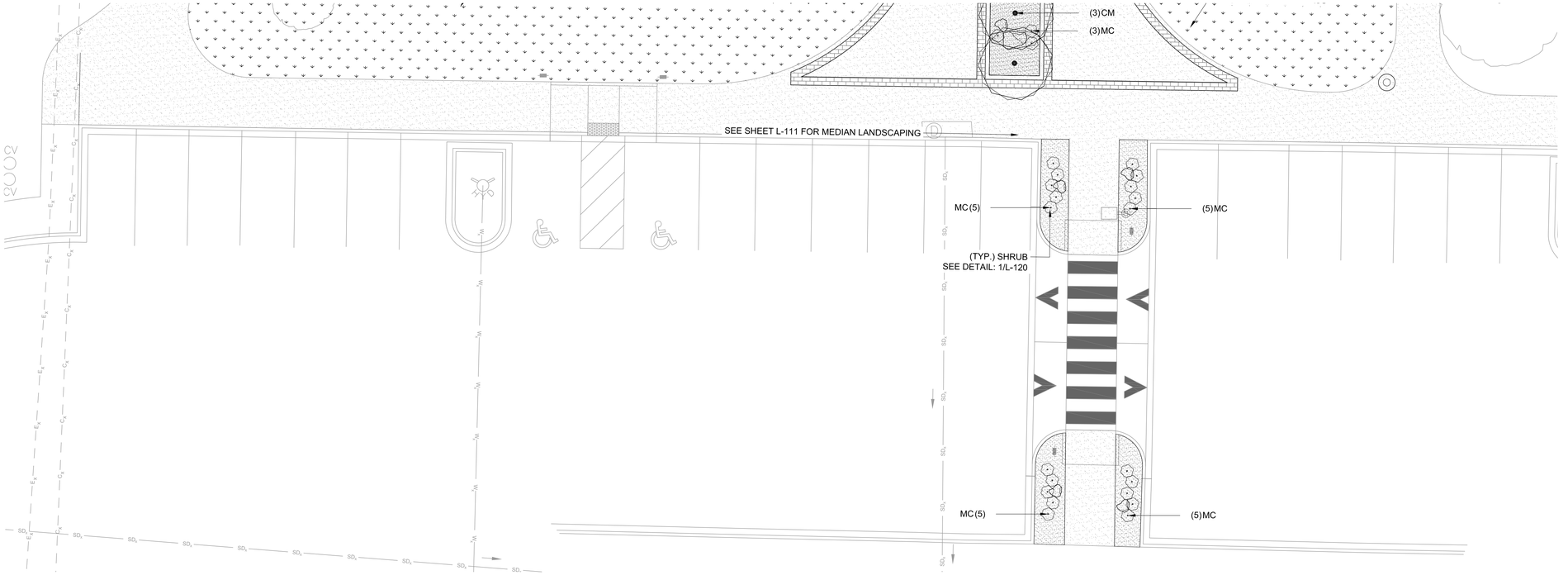


1 LANDSCAPE - PLANTING PLAN (NORTH MEDIANS) (ALT. 4)



2 LANDSCAPE - PLANTING PLAN (SOUTH MEDIANS) (ALT. 4)

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SCALE OF FEET

REGISTERED LANDSCAPE ARCHITECT
DARRAN A. SCOTT
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STATE OF TEXAS
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NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: LANDSCAPE - PLANTING PLAN (MEDIANS) (ALT. 4)

Date: 12 JUL 2018

SEQ. | SHEET L-111 | OF

4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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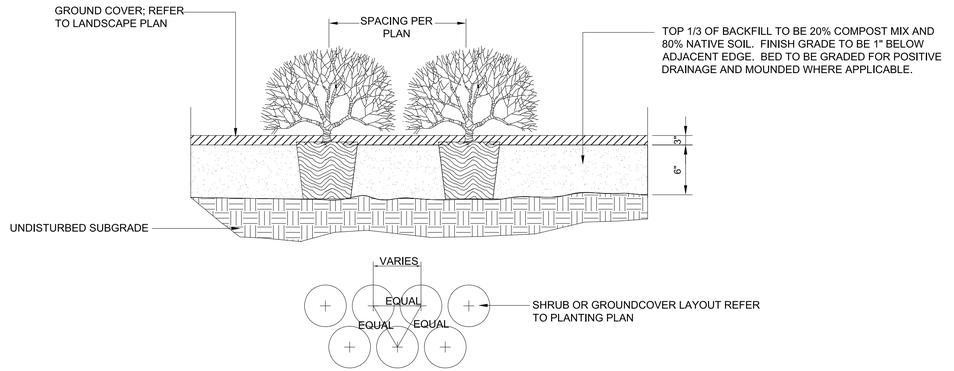
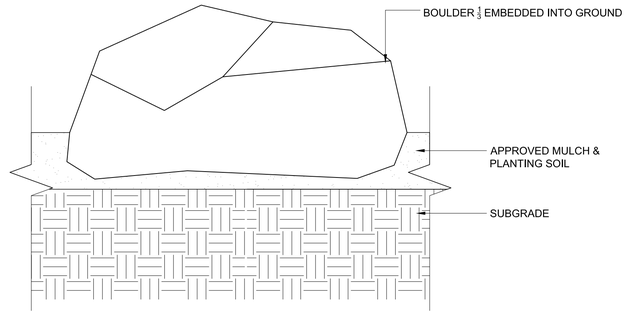


1 SHRUB DETAIL

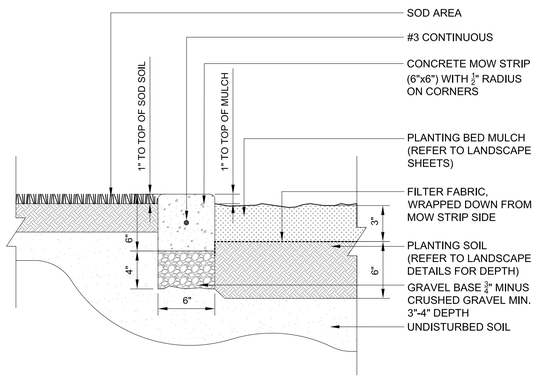
NTS 329333.13-10



2 BOULDER

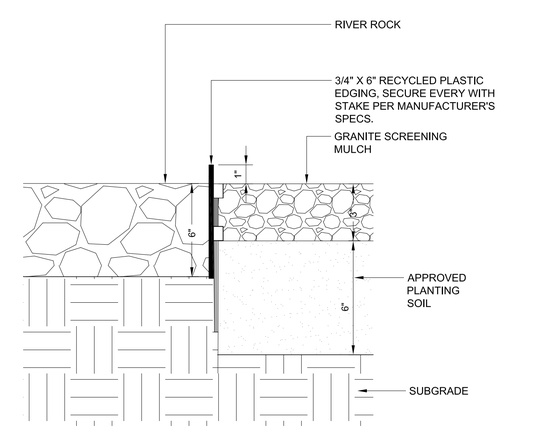
1 1/2" = 1'-0" 329402-02

BOULDER SCHEDULE		
TYPE	**SIZE**	**QTY**
LARGE	2'X4'	13
SMALL	2'X2'	18



3 CONCRETE MOW STRIP

1 1/2" = 1'-0" 329413.23-11



4 EDGING - GENERAL MULCH

3" = 1'-0" 329413.23-12

LANDSCAPE NOTES

PLANT MATERIAL INSTALLATION NOTES:

1. LANDSCAPE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLANT MATERIAL WITH OTHER TRADES.
2. ALL UNDERGROUND UTILITIES SHOWN WERE LOCATED FROM INFORMATION OBTAINED ON SITE, SURVEY AND RECORDED DOCUMENTS. NO EXCAVATION WAS PERFORMED TO DETERMINE THE SIZE OR LOCATION. NOT NECESSARILY ALL UNDERGROUND UTILITIES ARE SHOWN AND THOSE SHOWN ARE IN APPROXIMATE LOCATION ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES AND THE LOCATION THEREOF PRIOR TO BEGINNING CONSTRUCTION. NO RESPONSIBILITY IS HEREBY EXTENDED FOR LOCATION OF UNDERGROUND UTILITIES.
3. FIELD ADJUST PLANT LOCATION IF NECESSARY TO AVOID UTILITIES.
4. INSTALL ANY SUBSURFACE DRAINS (IF APPLICABLE) PRIOR TO THE INSTALLATION OR MODIFICATION OF TOPSOIL OR PLANTING MIX.
5. DO NOT PROCEED WITH THE INSTALLATION OF TOPSOIL OR PLANTING MIX UNTIL ALL UTILITY WORK IN THE AREA HAS BEEN INSTALLED.
6. PROTECT ADJACENT WALLS, EXISTING SITE TREES, WALKS, CURBS, AND UTILITIES FROM DAMAGE OR STRAINING BY THE SOIL. CLEAN UP ANY SOIL OR DIRT SPILLED ON ANY PAVED SURFACE AT THE END OF EACH WORKING DAY. ANY DAMAGE TO THE PAVING OR ARCHITECTURAL WORK CAUSED BY THE SOIL INSTALLATION CONTRACTOR SHALL BE REPAIRED AT THE SOILS INSTALLATION CONTRACTOR'S EXPENSE.
7. REMOVE EXISTING SOIL IN PROPOSED BED AREAS TO A MINIMUM DEPTH OF 6". REPLACE WITH APPROVED EXISTING SOIL BLEND, TOPSOIL BLEND OR PLANTING MIX.
8. CROWN SOIL IN BED AREAS TO ENSURE PROPER DRAINAGE.
9. GRADE SOD AREAS TO A SMOOTH, EVEN SURFACE WITH LOOSE UNIFORM TEXTURE. HAND RAKE ALL AREAS TO BE TURFED, REMOVING ALL STONES AND DEBRIS LARGER THAN ONE (1) INCH.
10. RECESS SOIL LEVELS IN BED AREAS 2" BELOW PAVING EDGE TO ALLOW FOR 3" DEPTH OF MULCH.
11. THE PLANT SCHEDULE IS FOR THE CONTRACTOR'S INFORMATION ONLY, AND NO GUARANTEE IS EXPRESSED OR IMPLIED THAT QUANTITIES THEREIN ARE CORRECT OR THE SCHEDULE IS COMPLETE. THE CONTRACTOR SHALL ENSURE PLANT MATERIAL COUNT IN PLAN DRAWINGS.
12. CONTRACTOR SHALL PROTECT PLANT MATERIAL DURING TRANSPORTATION TO PREVENT INJURY AND DRYING OUT OF THE PLANT MATERIAL.
13. PLANT MATERIAL THAT CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE PROTECTED AT ALL TIMES FROM SUN AND DRYING WINDS. PLANT MATERIAL SHALL NOT REMAIN UNPLANTED ANY LONGER THAN THREE (3) DAYS AFTER DELIVERY. PLANTS SHALL BE LIFTED AND HANDLED WITH SUITABLE SUPPORT OF THE SOIL BALL TO AVOID DAMAGE.
14. SOD SHALL BE LAID WITHIN 24 HOURS FROM TIME OF STRIPPING. SOD JOINTS SHALL BE TIGHTLY FITTED. BUTT ENDS AND SIDES OF SOD STRIPS, DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. ROLL SOD TO ENSURE CONTACT WITH SOIL.
15. LOCATIONS FOR PLANT MATERIAL AND OUTLINES FOR PLANTING AREAS SHALL BE FIELD STAKED FOR APPROVAL PRIOR TO EXCAVATION AND INSTALLATION. LOCATE AND MARK ALL SUBSURFACE UTILITY LINES FOR OBSERVATION.
16. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY-GROWN IN ACCORDANCE WITH AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.0 UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS. PLANT MATERIAL SHALL HAVE BEEN FRESHLY DUG DURING THE MOST RECENT FAVORABLE HARVEST SEASON.
17. ALL PLANT MATERIAL SHALL BE OF SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, SYMMETRICAL, AND SO TRAINED OR FAVORED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY AND OUTSTANDINGLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. PLANT MATERIAL SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF; FREE OF DISEASE AND INSECT, EGGS, OR LARVAE; AND SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEM. ALL PLANT MATERIAL SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT VIGOROUS GROWTH.
18. REMOVE ALL PLASTIC, PAPER, OR FIBER POTS FROM CONTAINERIZED PLANT MATERIAL. PULL ROOTS OUT OF THE ROOT MAT, AND CUT CIRCLING ROOTS WITH A SHARP KNIFE. LOOSEN THE POTTING MEDIUM. INSTALL PLANT MATERIAL IMMEDIATELY AFTER REMOVING THE CONTAINER TO PREVENT DRYING OUT ROOT BALL. PACK SOIL AROUND THE EXPOSED ROOTS DURING INSTALLATION.
19. CUT ROPES OR STRINGS FROM THE TOP OF SHRUB ROOT BALLS AND TREES SMALLER THAN THREE (3) INCH CALIPER AFTER PLANT HAS BEEN SET. REMOVE BURLAP OR CLOTH WRAPPING AND ANY WIRE BASKETS FROM AROUND TOP HALF OF BALLS. DO NOT TURN UNDER AND BURY PORTIONS OF BURLAP AT TOP OF BALL. CUT ROPES AROUND THE BASE OF THE CENTRAL LEADER AND TOPS OF THE ROOT BALLS FROM TREES LARGER THAN THREE (3) INCH CALIPER AFTER THREE (3)THREE MONTHS AFTER PLANTING OR SIX (6) MONTHS FOR FALL-PLANTED MATERIAL.
20. REMOVE ALL TAGS, LABELS, AND STRINGS FROM ALL PLANT MATERIAL.
21. ALL PLANT MATERIAL WILL BE PLANTED AT PROPER PLANTING DEPTH TO ENSURE FOOT FLARE TO BE AT OR SLIGHTLY ABOVE FINISH GRADE. PLANT MATERIAL MUST BE SET PLUMB AND BRACED IN POSITION UNTIL TOPSOIL OR PLANTING MIX HAS BEEN PLACED AND TAMPED AROUND THE BASE OF THE ROOT BALL. PERFORM PROPER COMPACTION TO PREVENT SHIFTING OR LATERAL MOVEMENT ONE YEAR LATER.
22. ADD REQUIRED SOIL AMENDMENTS TO BACKFILL SOIL FOR PLANT MATERIAL PLANTED IN INDIVIDUAL HOLES IN EXISTING SOIL. ENSURE AMENDMENTS ARE THOROUGHLY MIXED IN THE BACKFILL SOIL.
23. WATER ALL PLANT MATERIAL THOROUGHLY TO FOUR (4) INCHES IMMEDIATELY AFTER PLANTING. APPLY WATER BY HOSE DIRECTLY TO THE ROOT BALL AND THE ADJACENT SOIL. WATER SODDED AREAS WITH A FINE SPRAY.
24. REMOVE ANY EXCESS SOIL, DEBRIS, AND PLANTING MATERIAL FROM SITE AT THE END OF EACH WORKDAY.
25. PLANT MATERIAL SHALL NOT BE HEAVILY PRUNED AT THE TIME OF INSTALLATION. PRUNING IS ONLY ALLOWED TO CORRECT DEFECTS IN PLANT STRUCTURE, INCLUDING THE REMOVAL OF INJURED BRANCHES, DOUBLE LEADERS, WATERSPOUTS, SUCKERS, AND INTERFERING BRANCHES. NO MORE THAN ONE-QUARTER OF THE BRANCHING STRUCTURE SHALL BE REMOVED. RETAIN THE NORMAL OR NATURAL SHAPE OF THE PLANT. ALL PRUNING SHALL BE COMPLETED WITH CLEAN, SHARP TOOLS, AND ALL CUTS SHALL BE CLEAN AND SMOOTH, WITH THE BARK INTACT WITH NO ROUGH EDGES OR TEARS. TREE PAINT SHALL NOT BE USED AT PRUNED AREAS.
26. APPLY PRE-EMERGENT HERBICIDE (PREEN OR APPROVED EQUAL) TO BED AREAS AFTER PLANTING AND APPLY MULCH UNLESS SPECIFIED OTHERWISE.
27. ALL SHRUBS AND OTHER PLANT MATERIAL WILL BE MULCHED WITH APPROVED MULCHING PRODUCTS. REFER TO CONSTRUCTION DOCUMENTS FOR THE DEPTHS OF MULCH AROUND SHRUBS. MULCH SHALL NOT BE PLACED WITHIN THREE (3) INCHES OF THE BASE OF THE CENTRAL LEADER OR THE BASE OF THE PLANT MATERIAL.
28. SODDED LAWN AREAS WILL BE ACCEPTABLE PROVIDED REQUIREMENTS, INCLUDING MAINTENANCE, HAVE BEEN COMPLIED WITH, AND ESTABLISHED, FREE OF WEEDS, OPEN JOINTS, BARE AREAS AND SURFACE IRREGULARITIES.

SHRUBS:

1. ALL SHRUBS TO BE TOP DRESSED WITH TWO (2) INCH LAYER OF ORGANIC COMPOST IN EARLY SPRING (LATE FEBRUARY TO MARCH).
2. SHRUBS SHOULD BE PRUNED TO CORRECT DEFECTS IN PLANT STRUCTURE, INCLUDING THE REMOVAL OF INJURED OR DEAD BRANCHES, SUCKERS, AND INTERFERING BRANCHES. NO MORE THAN ONE-THIRD OF THE BRANCHING STRUCTURE SHOULD BE REMOVED.

TURF:

1. ALL AREAS DISTURBED BY CONSTRUCTION ARE TO BE SODDED TO MATCH EXISTING CONDITIONS.
2. FERTILIZE TURF ONCE A YEAR IN ACCORDANCE WITH SOIL SAMPLE INFORMATION.
3. MOW AND TRIM TURF TO MAINTAINED RECOMMENDED HEIGHT FOR GRASS SPECIES.
4. SOD QUANTITY IS AN ESTIMATED AMOUNT. THE CONTRACTOR IS RESPONSIBLE FOR SODDING ALL DISTURBED AREA.
5. ALL SOD MUST BE ESTABLISHED PRIOR TO SUBSTANTIAL COMPLETION.

BOULDERS:

1. BOULDERS SHALL NOT HAVE AN EXPOSED SHARP EDGES.
2. BOULDERS SHALL BE FROM LOCAL QUARRY AND COLOR SHALL BE CONTRACTING TO THE GRANITE SCREENINGS. LANDSCAPE ARCHITECT TO APPROVE COLOR.
3. BOULDER SCHEDULE IS PROVIDED FOR SIZES.

REVISIONS			
Symbol	Description	Date	Appr.

Designed by: K. COPELAND
Drawn by: K. COPELAND
Reviewed by: D. SCOTT
Submitted by: GUERNSEY

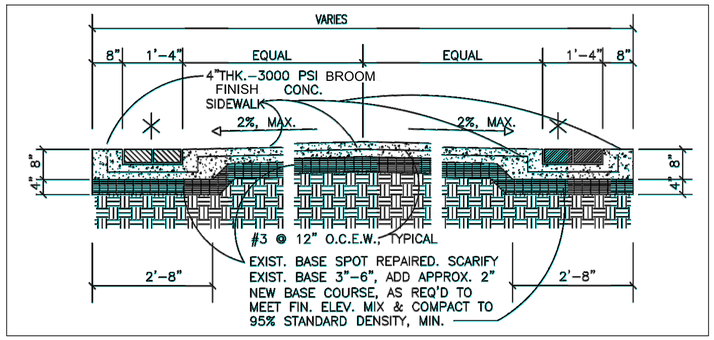
PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: LANDSCAPE - DETAILS & NOTES
Date: 12 JUL 2018

SEQ. | SHEET L-120 | OF

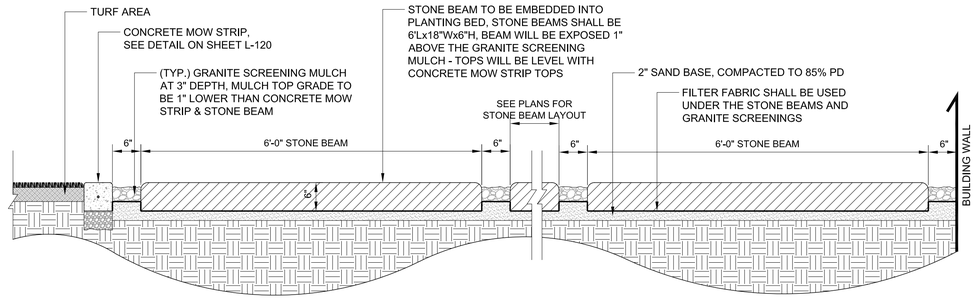
4/24/2018 11:16:09 AM

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 TROOPWALK - BASE STANDARD

NTS



2 EMBEDDED STONE BEAMS

3/4" = 1'-0"

321440-02

guernsey

Symbol	Description	Date	Appr.

REVISIONS

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ABBREVIATIONS

SYMBOL	
#	NUMBER
( )"	INCH OR INCHES
( )'	FOOT OR FEET
( )°	DEGREE
=	EQUAL
C( )	CHANNEL
CL	CENTERLINE
HSS( )	HOLLOW STRUCTURAL SECTION
K( )	OPEN WEB STEEL JOIST
L( )	ANGLE
LL( )	DOUBLE ANGLE
MC( )	MISCELLANEOUS CHANNEL
S( )	AMERICAN STANDARD SHAPE
W( )	WIDE FLANGE
WT( )	STRUCTURAL TEE

A	
A/E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT OR ARCHITECTURAL(S)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AT/FP	ANTI-TERRORISM/FORCE PROTECTION

B	
B/	BOTTOM OF
BF	BOTH FACES
BLDG	BUILDING
BLK	BLOCK
BM	BEAM
BOT	BOTTOM
BP	BASE PLATE OR BEARING PLATE
BRG	BEARING
BS	BOTH SIDES
BT	BENT
BTR	BETTER
BTWN	BETWEEN

C	
C-C	CENTER TO CENTER
CF	CUBIC FOOT OR CUBIC FEET
CFS	COLD FORMED STEEL
CHAM	CHAMFER
CIP	CAST IN PLATE
CJ	CONTROL JOINT/CONSTRUCTION JOINT
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPOSITE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE

D	
d	DISTANCE
DB	DECK BEARING
db	BAR DIAMETER
DBE	DECK BEARING ELEVATION
DBL	DOUBLE
DEV	DEVELOP
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DT	DOUBLE TEE
DTL	DETAIL
DWG(S)	DRAWING(S)
DWL	DOWEL

E	
(E)	EXISTING
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRICAL
EMBED	EMBEDMENT
ENGR	ENGINEER
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE(D)
ETC	ET CETERA
EW	EACH WAY
EXC	EXCAVATE OR EXCAVATION
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

F	
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FAR FACE
FIN	FINISHED
FL	FLOOR
FS	FAR SIDE
FT	FOOT OR FEET
FTG	FOOTING
FULL PEN	FULL PENETRATION WELD
Fy	STEEL YIELD STRENGTH

G	
GA	GAGE OR GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GR	GRADE
GSN	GENERAL STRUCTURAL NOTES

H	
Hef	EFFECTIVE EMBEDMENT
HORIZ	HORIZONTAL
HP	HIGH POINT
HSA	HEADED STUD ANCHOR
HT	HEIGHT

I	
I.E.	IN OTHER WORDS
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IN	INCH(ES)
INCL	INCLUDE(D)(ING), INCLUSIVE
INFO	INFORMATION
INT	INTERIOR
ISO JT	ISOLATION JOINT

J	
JB	JOIST BEARING
JST	JOIST
JT	JOINT

K	
K	KIP(S)
KB	KNEE BRACE
KCF	KIPS PER CUBIC FOOT
KLF	KIPS PER LINEAR FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH

L	
L	LENGTH
LB	POUND
LG	LONG
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUTSTANDING
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
ld	DEVELOPMENT LENGTH

M	
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL(S)
MEP	MECHANICAL, ELECTRICAL, AND PLUMBING
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS

N	
N	NORTH
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE

O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OHNG	OVERHANG
OPNG	OPENING
OPP (HAND)	OPPOSITE HAND

P	
PC	PIER CAP
PCF	POUNDS PER CUBIC FOOT
PCI	POUNDS PER CUBIC INCH
PEN	PENETRATION
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PROJ	PROJECTION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVMT	PAVEMENT

Q	
QTY	QUANTITY

R	
RAD	RADIUS OR RADII
RE:	REFER TO
REF	REFERENCE
REINF	REINFORCEMENT/REINFORCING
REQD	REQUIRED
REV	REVISION OR REVISE
ROT	ROTATE
RTU	ROOF TOP UNIT

S	
SC	SLIP CRITICAL
SCHED	SCHEDULE
SDI	STEEL DECK INSTITUTE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SJ	SLAB CONTROL JOINT
SL	SLOPE(D) OR SLOPING
SLO	SHORT LEG OUTSTANDING
SLV	SLEEVE
SOG	SLAB-ON-GRADE
SP	SPACE(S)
SPEC	SPECIFICATIONS
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SUB	SUBSTITUTE

T	
T	THICKNESS
T&B	TOP AND BOTTOM
T&S	TEMPERATURE AND SHRINKAGE
T/	TOP OF
THD	THREAD(ED)
THK	THICKNESS
THRU	THROUGH
TMS	THE MASONRY SOCIETY
TRANS	TRANSVERSE
TYP	TYPICAL

U	
UNO	UNLESS NOTED OTHERWISE

V	
VERT	VERTICAL
VIF	VERIFY IN FIELD

W	
W	WIDTH
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE
WL	WIND LOAD
WP	WORKING POINT
WT	WEIGHT

DESIGN CRITERIA

1. GOVERNING BUILDING CODES
   - A. IBC 2015 INTERNATIONAL BUILDING CODE
   - B. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   - C. UFC 1-200-01 GENERAL BUILDING REQUIREMENTS
   - D. UFC 3-301-01 STRUCTURAL LOAD DATA
   - E. UFC 3-310-04 SEISMIC DESIGN FOR BUILDINGS
   - F. UFC 4-010-01 DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS
2. WIND DESIGN CRITERIA
   - A. ULTIMATE WIND SPEED (V_{ult}) — 115 MPH
   - B. NOMINAL DESIGN WIND SPEED (V_{asd}) — 89 MPH
   - C. EXPOSURE CATEGORY — C
   - D. INTERNAL PRESSURE COEFFICIENT — +/- 0.18
3. SEISMIC DESIGN CATEGORY
   - A. RISK CATEGORY — II
   - B. SEISMIC IMPORTANCE FACTOR (I_E) — 1.0
   - C. SITE CLASS — D
   - D. SEISMIC DESIGN CATEGORY — A
   - E. SHORT PERIOD SPECTRAL ACCELERATION (S_s) — 0.06
   - F. ONE SECOND SPECTRAL ACCELERATION (S_1) — 0.03
   - G. SHORT PERIOD RESPONSE ACCELERATION (S_{ds}) — 0.064
   - H. ONE SECOND RESPONSE ACCELERATION (S_{d1}) — 0.048
   - I. ANALYSIS METHOD — ASCE 7-10 CHAPTER 11, SECTION 11.7
4. DEAD LOADS
   - A. ROOF
     - a. HIPPED ROOF — 23 PSF
     - b. FLAT ROOF — 25 PSF
   - B. MINIMUM (FOR UPLIFT) — 6 PSF
5. LIVE LOADS
   - A. ROOF — 20 PSF (NON-REDUCIBLE)
   - B. DINING — 100 PSF
   - C. OFFICE — 50 PSF
   - D. PARITIONS — 15 PSF (APPLIED IN OFFICES ONLY)
   - E. VESTIBULE/CORRIDOR — 100 PSF
   - F. MECHANICAL/ELECTRICAL/STORAGE — 125 PSF
6. SNOW LOADS
   - A. GROUND SNOW LOAD (P_g) — 5 PSF
   - B. FLAT ROOF SNOW LOAD (P_f) — 3.5 PSF
   - C. SLOPED ROOF SNOW LOAD (P_s) — 3.5 PSF
   - D. SNOW IMPORTANCE FACTOR (I_s) — 1.0
   - E. SNOW EXPOSURE FACTOR (C_e) — 1.0
   - F. SNOW THERMAL FACTOR (C_t) — 1.0
   - G. ADDITIONAL SNOW DRIFT AS PER APPLICABLE BUILDING CODE(S). NOT TO EXCEED THE DESIGN LIVE LOADS OR CONSTRUCTION LOADS.
7. FOUNDATION DESIGN CRITERIA
   - A. ALLOWABLE SKIN FRICTION FOR DRILLED PIERS — 0.350 KSF (10 FEET AND BELOW)
   - B. ALLOWABLE END BEARING PRESSURE FOR DRILLED PIERS — 12.2 KSF
   - C. SOIL DENSITY (ASSUMED) — 120 PCF
   - D. MINIMUM GRADE BEAM DEPTH BELOW FINISHED GRADE — 30 INCHES
8. AT/FP DESIGN CRITERIA
   - A. MINIMUM STANDOFF DISTANCE — 13 FT
   - B. CONVENTIONAL CONSTRUCTION STANDOFF DISTANCE — 82 FT
   - C. STANDOFF DISTANCE TO CONTROLLED PERIMETER — GREATER THAN 200 FT
   - D. ACTUAL STANDOFF DISTANCES — RE: C-110
   - E. BUILDING CLASSIFICATION — PRIMARY GATHERING
   - F. APPLICABLE LEVEL OF PROTECTION — LOW
   - G. APPLICABLE EXPLOSIVE WEIGHT — II
   - H. EXTERIOR WALL CONSTRUCTION — NON-LOADBEARING METAL STUDS WITH BRICK VENEER
   - I. LOCATION — PARKING AND ROADWAYS WITHIN A CONTROLLED PERIMETER

GENERAL

1. THE CONSTRUCTION DOCUMENTS CONSIST OF THE DRAWINGS, PROJECT SPECIFICATIONS, ADDENDA ISSUED PRIOR TO EXECUTION OF THE CONTRACT, OTHER DOCUMENTS LISTED IN THE AGREEMENT AND MODIFICATIONS ISSUED VIA SUPPLEMENT INSTRUCTION.
2. THE CONSTRUCTION DOCUMENTS ARE COMPLIMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IF CONFLICTING REQUIREMENTS ARE FOUND BETWEEN THE DRAWINGS, SPECIFICATIONS AND/OR THESE GENERAL STRUCTURAL NOTES, THE MORE STRINGENT PROVISION SHALL CONTROL UNLESS DIRECTED OTHERWISE IN WRITING BY THE STRUCTURAL ENGINEER.
3. THE STRUCTURAL GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND IMPLEMENTING THE NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
5. TEMPORARY BRACING, SHEETING, SHORING, ETC, REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY/STABILITY OF EXISTING BUILDINGS, SIDEWALKS, UTILITIES, ETC, DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR.
6. IMPLEMENTATION OF JOB SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. SLEEVES OR BLOCK-OUTS REQUIRED FOR PASSAGE OF DUCTWORK, PIPING, DRAINS, CONDUIT, ETC, IN ADDITION TO ANCHORS AND HANGERS REQUIRED FOR EQUIPMENT AND PIPING AND UNDER-SLAB UTILITIES ARE NOT SPECIFICALLY, NOR GENERALLY, INDICATED ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING SUCH REQUIREMENTS PRIOR TO FABRICATION OR ERECTION OF THE STRUCTURE. PENETRATIONS OF STRUCTURAL MEMBERS ARE SUBJECT TO APPROVAL BY THE ENGINEER.
8. DIMENSIONS AND INSTALLATION DETAILS OF PURCHASED EQUIPMENT MUST BE VERIFIED AND COORDINATED WITH THE SUPPORTING STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING SUCH REQUIREMENTS FROM SUBCONTRACTORS AND EQUIPMENT SUPPLIERS ALONG WITH COORDINATING THE LOCATIONS AND DETAILS FOR THESE ITEMS PRIOR TO FABRICATION OR ERECTION OF THE SUPPORTING STRUCTURE. ADDITIONAL FRAMING MAY BE REQUIRED FOR THE PROPER SUPPORT OF SUCH UNITS AND/OR EQUIPMENT. LATERAL SUPPORT FOR THE EQUIPMENT SHALL BE PROVIDED BY THE EQUIPMENT INSTALLER. ANY CONFLICTS BETWEEN THESE ITEMS AND THE BUILDING STRUCTURE IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
9. THE STRUCTURAL DRAWINGS GOVERN THE WORK FOR STRUCTURAL FEATURES, UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ON PLANS AND DETAILS ARE TO GOVERN THE STRUCTURAL WORK. THE CONTRACTOR IS TO REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND DETAILS NOT PROVIDED. DIMENSIONAL CONFLICTS IN THE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
10. WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATIONS, IS TO BE REPEATED.
11. EXISTING BUILDING INFORMATION SHOWN IS BASED UPON EXISTING BUILDING DOCUMENTS AND/OR FROM FIELD OBSERVATION. THE INFORMATION CONTAINED HEREIN MAY REQUIRE ADJUSTMENTS AND/OR MODIFICATIONS TO CONFORM TO EXISTING CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT.
12. DETAILS DESIGNATED AS "TYPICAL DETAILS," APPLY GENERALLY TO THE DRAWINGS IN AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS.
13. SHOP DRAWINGS:
    - A. SHOP DRAWINGS FOR ALL MATERIALS ARE TO BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE START OF FABRICATION OR COMMENCEMENT OF WORK PER THE PROJECT SPECIFICATIONS.
    - B. SHOP DRAWINGS MUST BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION. THE CONTRACTOR'S STAMP OF APPROVAL WILL CONSTITUTE CERTIFICATION THAT HE HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. SHOP DRAWINGS SHALL BE ORIGINAL DRAWINGS, PREPARED BY CONTRACTOR, SUBCONTRACTOR, SUPPLIER OR DISTRIBUTOR. REPRODUCTION OF STRUCTURAL CONSTRUCTION DOCUMENTS AS ERECTION PLANS OR DETAILS WILL NOT BE PERMITTED AND WILL BE REJECTED WITHOUT REVIEW.
    - C. CHANGES TO SHOP DRAWINGS THAT ARE RE-SUBMITTED MUST BE CLOUDED OR SOMEHOW INDICATE THAT A CHANGE HAS BEEN MADE TO PREVIOUSLY ISSUED AND REVIEWED DRAWING.
    - D. THE CONTRACTOR IS TO PROVIDE THE ENGINEER WITH WRITTEN NOTICE OF DEVIATIONS OF ANY TYPE FROM THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE NOTICE MUST BE RECEIVED PRIOR TO SHOP DRAWING SUBMITTAL. THE CONTRACTOR REMAINS LIABLE FOR ANY DEVIATION UNLESS REVIEWED BY THE ENGINEER AND ACKNOWLEDGED IN WRITING, PRIOR TO THE RECEIPT OF THE SHOP DRAWINGS.
14. THE GENERAL CONTRACTOR SHALL REPORT PROGRESS OF WORK TO ENGINEER OF RECORD.
15. THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER SHOP DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.
16. INSPECTION, TESTING, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING BUILDING CODES AND REFERENCED STANDARDS. ASTM, ASCE, IBC, UFC AND OTHER STANDARDS SHALL BE PER THE EDITIONS INDICATED IN THE IBC, OR AS AMENDED TO LATEST DATE IF NOT SO INDICATED.
17. COORDINATE ANY CONSTRUCTION SITUATION NOT COVERED BY THESE PLANS, GENERAL NOTES, OR SPECIFICATIONS WITH THE ENGINEER OF RECORD.
18. NON-BEARING INTERIOR WALLS SHALL BE ADEQUATELY BRACED TO THE STRUCTURE ABOVE WITH ALLOWANCE FOR DEFLECTION OF THE STRUCTURE ABOVE AND/OR BELOW.
19. OBSERVATION VISITS TO THE SITE BY REPRESENTATIVES OF THE ENGINEER OF RECORD SHALL NOT BE CONSTRUED AS INSPECTION OR APPROVAL OF CONSTRUCTION.

FOUNDATION

1. GEOTECHNICAL REPORT: A SUBSURFACE ENGINEERING SERVICES REPORT FOR THE CRESSMAN DINING FACILITY EXPANSION, GOODFELLOW AIR FORCE BASE, TEXAS, WAS PERFORMED BY SKG ENGINEERING, LLC IN THEIR GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT DATED APRIL 23, 2018, FILE NUMBER 18-E-0427.
2. SITE SUB-GRADE PREPARATION:
   - A. STRIPPING: SITE PREPARATION FOR THE BUILDING PAD SHALL INCLUDE REMOVING ANY SOFT OR UNSUITABLE MATERIALS ENCOUNTERED DURING CONSTRUCTION. VEGETATION ROOTS, PAVEMENT, UTILITIES GRAVEL, FOOTINGS, SLABS, AND ANY TOPSOIL WILL REQUIRE REMOVAL DURING INITIAL SITE STRIPPING. REMOVAL DEPTHS SHALL BE DETERMINED BY A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE.
   - B. PROOF-ROLLING: AFTER MAKING ANY REQUIRED CUTS, THE BUILDING PAD SHALL BE PROOF-ROLLED (UNDER OBSERVATION OF A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE) WITH A TWENTY-FIVE (25) TON LOADED, TANDEM AXLE DUMP TRUCK TO LOCATE ANY SOFT OVERLAPPING PASSES IN MUTUALLY PERPENDICULAR DIRECTIONS. SOILS IN AREAS WHERE RUTTING (DEFLECTION GREATER THAN 1 INCH) OR PUMPING OCCURS DURING PROOF-ROLLING SHALL BE OVER EXCAVATED, MOISTURE CONDITIONED AND REPLACED WITH PROPERLY COMPACTED LOW VOLUME CHANGE SOILS.
   - C. SCARIFICATION: AFTER STRIPPING, EXCAVATING AND PROOF-ROLLING, THE EXPOSED SOILS SHALL BE SCARIFIED TO A DEPTH OF 6 INCHES AND THEN ADJUSTED TO WITHIN 2% POINTS OF ITS OPTIMUM VALUE PRIOR TO BEING COMPACTED TO AT LEAST 95 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST METHOD (ASTM D698).
   - D. ACCEPTABLE FILL: THE IN-SITU SOILS ARE NOT SUITABLE FOR USE AS STRUCTURAL FILL. STRUCTURAL FILL MATERIALS SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATTER AND BE A LOW VOLUME CHANGE SOIL OF COHESIVE MATERIALS HAVING A LIQUID LIMIT OF LESS THAN 40 AND A PLASTICITY INDEX BETWEEN 6 AND 14 WITH GRADATION AS SPECIFIED IN THE GEOTECHNICAL REPORT. BASE CONSISTING OF TxDOT TYPE A, GRADE 2 LIMESTONE IS AN ACCEPTABLE ENGINEERED FILL. BLENDED MATERIALS UTILIZED FOR ENGINEERED FILL WILL HAVE TO MEET GEOTECHNICAL SPECIFICATIONS AND APPROVAL.
   - E. FILL PLACEMENT: AFTER IN-SITU SOIL PREPARATION AND INSPECTION IS COMPLETE, FILL PLACEMENT MAY BEGIN. THE ZONE OF FILL COMPACTED TO MEET THESE CRITERIA SHALL EXTEND BEYOND THE BUILDING FOOTPRINT AT LEAST 1 FOOT LATERALLY FOR EACH FOOT OF FILL REQUIRED TO DEVELOP DESIGN GRADE, BUT UNDER NO CIRCUMSTANCE SHALL IT BE LESS THAN 5 FEET. THE FILL SHALL BE PLACED IN MAXIMUM LOOSE LIFTS OF 8 INCHES, ADJUSTED TO 1% POINT BELOW TO 2% POINTS ABOVE OF ITS OPTIMUM MOISTURE CONTENT AND COMPACTED TO 95 PERCENT STANDARD DENSITY PER ASTM D698.
   - F. DEPTH OF FILL: THE FLOOR SLAB SHALL BE CONSTRUCTED ON A MINIMUM DEPTH OF 1'-0" OF MOISTURE CONDITIONED LOW-PLASTICITY STRUCTURAL FILL.
   - G. FILL PLACEMENT TESTING: EACH LIFT OF COMPACTED FILL SHALL BE TESTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS. FIELD DENSITY TESTS SHALL BE TAKEN AT A MINIMUM OF ONE PER EVERY 2000 SQUARE FEET, BUT AT LEAST THREE SETS OF DENSITY TESTS SHALL BE TAKEN FOR EACH LIFT.
   - H. SITE DRAINAGE: THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE AREAS OF EXCAVATION DURING CONSTRUCTION TO PREVENT PONDING UNDER FUTURE FLOOR SLABS AND FOOTINGS. THE CONTRACTOR SHALL PROVIDE POSITIVE CUTOFF IN UTILITY TRENCHES AS REQUIRED PREVENTING WATER MIGRATION INTO THE AREAS OF EXCAVATION AND FUTURE FLOOR SLABS AND FOOTINGS.
   - I. MAINTENANCE OF SOIL MOISTURE: SOIL MOISTURE SHALL BE MAINTAINED UP UNTIL CONCRETE PLACEMENT TO PREVENT SHRINKAGE AND SUBSEQUENT POST-CONSTRUCTION SWELL OF SUBGRADE SOILS.
3. BUILDING FOUNDATIONS
   - A. DRILLED PIERS:
     - a. PIER DESIGN PARAMETERS: DRILLED PIERS HAVE BEEN DESIGNED FOR A MAXIMUM ALLOWABLE END BEARING PRESSURE PER THE DESIGN CRITERIA AT A MINIMUM PENETRATION INTO BEARING STRATUM OF TWO FEET OR ONE (1) PIER DIAMETER, WHICH EVER IS DEEPER. MAXIMUM ALLOWABLE SKIN FRICTION CAPACITY IS PER THE DESIGN CRITERIA FOR THE PART OF THE PIER THAT PENETRATES THE CLAYEY SAND. ALLOWABLE SKIN FRICTION WAS NOT USED. DESIGN UPLIFT FORCES ARE RESISTED BY AN ALLOWANCE FOR PIER WEIGHT AND THE DEAD LOAD OF THE STRUCTURE.
     - b. PIER DIMENSIONS: DRILLED SHAFT DIAMETERS SHALL BE A MINIMUM OF 24 INCHES, WITH AN ASPECT RATIO (LENGTH/DIAMETER) OF THREE OR MORE, AND SPACED NO CLOSER THAN THREE PIER DIAMETERS CENTER-TO-CENTER.
     - c. IMPROVEMENT OF BEARING CONDITIONS: SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BEARING LEVEL SHALL BE REMOVED FROM THE FOUNDAITON EXCAVATIONS. THE PIER FOUNDATION SHALL BE EXCAVATED AND CLEANED AS QUICKLY AS POSSIBLE TO REDUCE THE POTENTIAL FOR WETTING/DRYING OF THE SUBSURFACE SOIL. IF EXPOSED SOILS BECOME SIGNIFICANTLY WET OR DRY, THE SOILS SHALL BE REMOVED AND THE PIER ENLARGED UNTIL MORE UNIFORM MOISTURE CONDITIONS ARE ACHIEVED (AS DIRECTED BY GEOTECHNICAL ENGINEERING REPRESENTATIVE).
     - d. TEMPORARY CASING: TEMPORARY CASING MAY BE REQUIRED AS DETERMINED BY THE GEOTECHNICAL ENGINEER AT TIME OF EXCAVATION TO SEAL OUT GROUNDWATER OR SLOUGHING SOILS. CASING SHALL EXTEND FROM TOP OF PIER ELEVATION, AND SEAL INTO TOP OF BEARING STRATUM ELEVATION.
     - e. PLACEMENT: CONCRETE FOR PIERS SHALL BE CAST AS SOON AS PRACTICAL AFTER DRILLING. NO PIER HOLE SHALL BE LEFT OPEN OVERNIGHT. SUFFICIENT CONCRETE HEAD SHALL BE MAINTAINED INSIDE THE SHAFT TO OFFSET HYDROSTATIC HEAD OUTSIDE THE SHAFT AND TO PREVENT THE INTRUSION OF SOIL AND GROUNDWATER INTO THE PIER CONCRETE. CONCRETE SHALL HAVE A PLACEMENT SLUMP OF SIX (6) INCHES.
   - B. GRADE BEAMS:
     - a. CONSTRUCTION: GRADE BEAMS SHALL BE STRUCTURALLY CONNECTED TO THE TOP OF THE PIERS. GRADE BEAMS SHALL EXTEND AT LEAST TWO AND ONE HALF (2.5) FEET BELOW THE FINAL EXTERIOR ADJACENT GRADE. A MINIMUM VOID SPACE OF SIX (6) INCHES BENEATH THE GRADE BEAMS SHALL BE MAINTAINED USING VOID FORMS. EXCAVATIONS FOR GRADE BEAMS SHALL BE FREE OF LOOSE MATERIAL.
     - b. VOID FORMS: VOID FORMS SHALL BE CONSTRUCTED OF BIODEGRADABLE PAPER SURFACE, TREATED FOR MOISTURE RESISTANCE, AND STRUCTURALLY SUFFICIENT TO SUPPORT WEIGHT OF PLASTIC CONCRETE AND OTHER SUPER IMPOSED LOADS.
     - c. EARTH FORMING: GRADE BEAMS ARE DETAILED IN THE DRAWINGS AS BEING EARTH-FORMED.
4. STRUCTURAL SLAB CONSTRUCTION:
   - A. SLAB THICKNESS AND REINFORCING: STRUCTURAL SLABS SHALL BE OF THICKNESS AND REINFORCED AS INDICATED ON DRAWINGS. REINFORCING BARS SHALL BE PLACED AS INDICATED IN THE CONCRETE COVER SCHEDULE USING CHAIRS OR SLAB BOLSTERS COMPLYING WITH CRSI'S "MANUAL OF STANDARD PRACTICE".
   - B. CONSTRUCTION MONITORING: CONSTRUCTION ACTIVITY MAY CAUSE DAMAGE AND DETERIORATION TO THE PREPARED SUBGRADE. A FIELD REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL OBSERVE THE FINAL SUBGRADE PRIOR TO PLACEMENT OF THE SLAB-ON-GRADE, PERFORM FURTHER TESTING AS NECESSARY, AND DETERMINE IF ANY REMEDIAL MEASURES ARE NECESSARY PRIOR TO SLAB PLACEMENT.
   - C. VAPOR RETARDER: A VAPOR RETARDER SHALL BE PLACED IMMEDIATELY BELOW THE CONCRETE SLAB. VAPOR RETARDER SHALL BE SEALED TO PREVIOUSLY PLACED CONCRETE AS RECOMMEND BY VAPOR RETARDER MANUFACTURER. BEFORE PLACING CONCRETE, PATCH AND SEAL ANY RIPS, TEARS, OR HOLES IN VAPOR RETARDER INCURRED DURING CONSTRUCTION.
   - D. VOID FORMS: VOID FORMS SHALL BE CONSTRUCTED OF BIODEGRADABLE PAPER SURFACE, TREATED FOR MOISTURE RESISTANCE, AND STRUCTURALLY SUFFICIENT TO SUPPORT WEIGHT OF PLASTIC CONCRETE AND OTHER SUPER IMPOSED LOADS.
   - E. CURING OF SLAB: CONCRETE SLABS SHALL BE CURED BY METHOD COMPATIBLE WITH SPECIFIED FLOOR FINISH. WHERE ACCEPTABLE USE A LIQUID MEMBRANE-CURING COMPOUND AT THE MANUFACTURER'S RECOMMEND COVERAGE. STRUCTURAL SLABS SHALL BE WATER CURED FOR A MINIMUM OF 7 DAYS OF PONDING, SPRAYING, SPRINKLING OR BY USE OF SATURATED COVERINGS.
   - F. ISOLATION JOINTS: PROVIDE SLAB ISOLATION AROUND COLUMNS PENETRATING THE SLAB-ON-GRADE. PROVIDE 30# FELT AROUND PERIMETER OF ISOLATION JOINTS. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
   - G. SLAB CONSTRUCTION JOINTS: PLACE SLAB CONSTRUCTION JOINT AT ONE-THIRD OF SLAB SPAN AND PARALLEL TO SLAB SPAN AS REQUIRED FOR MEANS AND METHODS OF CONSTRUCTION. CONFORM TO ACI REQUIREMENTS. SUBMIT CONSTRUCTION JOINT PLAN TO EOR FOR REVIEW PRIOR TO PLACING CONCRETE.
   - H. SEE ARCHITECTURAL AND/OR CIVIL FOR EXTERIOR SLABS-ON-GRADE, TYPICAL UNLESS NOTED OTHERWISE.
5. MISCELLANEOUS:
   - A. GROUNDWATER CONDITIONS: GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS AT THE TIME OF DRILLING. HOWEVER, IT IS POSSIBLE THAT TRANSIENT OVER-SATURATED GROUND CONDITIONS COULD DEVELOP AT SHALLOWER DEPTHS AT A LATER TIME DUE TO PERIODS OF HEAVY PRECIPITATION, LANDSCAPE WATERING, LEAKING WATER LINES, OR OTHER UNFORSEEN CAUSES. THE CONTRACTOR SHALL DETERMINE THE ACTUAL GROUNDWATER LEVELS AT TIME OF CONSTRUCTION. IF GROUNDWATER ISSUES ARE ENCOUNTERED DURING CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED.
   - B. DRAINAGE CONSIDERATIONS: DUE TO ADVERSE EFFECT ON STRUCTURES, WATER SHALL NOT BE ALLOWED TO COLLECT IN THE FOUNDATION EXCAVATION OR ON PREPARED SUBGRADE OF THE CONSTRUCTION AREA EITHER DURING OR AFTER CONSTRUCTION. UNDERCUT OR EXCAVATED AREAS SHALL BE SLOPED TOWARD ONE CORNER TO FACILITATE REMOVAL OF ANY COLLECTED RAINWATER, OR POSITIVE RUNOFF SHALL BE PROVIDED. THE CONTRACTOR SHALL EXERCISE CARE IN CREATING DRAINAGE PATHS FOR WATER DURING THE CONSTRUCTION PHASE OF THE PROJECT. TO REDUCE INFILTRATION OF SURFACE WATER AROUND THE PERIMETER OF THE BUILDING AND BENEATH THE FLOOR SLABS, POSITIVE DRAINAGE SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION.
   - C. EXCAVATION AND TEMPORARY SLOPES: THE CONTRACTOR, DESIGNATED AS "RESPONSIBLE PERSON" IN OSHA CONSTRUCTION STANDARDS FOR EXCAVATI

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C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

REINFORCED CONCRETE

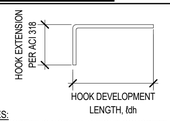
1. REINFORCED CONCRETE WORK IS TO BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) EDITIONS OF:
   A. ACI 301 (LATEST EDITION), "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
   B. ACI 318 (2014), "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", EXCEPT AS MODIFIED BY THE IBC.
   C. ACI 347 (LATEST EDITION), "GUIDE TO FORMWORK FOR CONCRETE".
2. MIXING, TRANSPORTING, PLACING AND TESTING OF CONCRETE IS TO BE DONE IN ACCORDANCE WITH ACI 301.
3. PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR MUST SUBMIT CONCRETE MIX DESIGNS FOR EACH TYPE OF CONCRETE TO BE USED, PREPARED IN ACCORDANCE WITH THE SPECIFICATIONS TO THE ENGINEER FOR REVIEW.
4. CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c) AS INDICATED ON THE CONCRETE MATERIALS SCHEDULE ON DRAWING S-002.
5. THE SLUMP AT POINT OF PLACEMENT IS NOT TO EXCEED 4"+/-1" AND THE WATER/CEMENT RATIO IS NOT TO EXCEED 0.45. IF ADDITIONAL SLUMP (UP TO 8") IS DESIRED FOR PUMPING, A SUPER-PLASTICIZER ADMIXTURE MAY BE ADDED.
6. CONCRETE EXPOSED TO WEATHER AND FREEZE/THAW SHALL HAVE AN AIR CONTENT FROM 5% TO 7% IN ACCORDANCE WITH ACI RECOMMENDATIONS. AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260.
7. CONCRETE TO BE NORMAL WEIGHT CONCRETE (150 PCF) WITH CEMENT CONFORMING TO ASTM C150 TYPE I, II, OR I/II.
8. CONTINUOUS REINFORCING BARS TO BE TURNED AND LAPPED AT CORNERS AND INTERSECTIONS OF WALLS AND FOOTINGS. HOOKED BARS TO HAVE STANDARD ACI HOOKS UNLESS NOTED OTHERWISE.
9. CONCRETE SHALL BE PROPERLY VIBRATED DURING PLACEMENT.
10. PRIOR TO PLACING CONCRETE, CHECK WITH ALL TRADES TO INSURE SLEEVES, INSERTS, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES. DEPRESSIONS, CURBS AND OTHER EMBEDDED ITEMS TO BE PROVIDED AS SHOWN ON THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND AS REQUIRED BY EQUIPMENT MANUFACTURERS ARE INSTALLED, COORDINATED, AND PROVIDED FOR.
    A. ANCHOR RODS AND DOWELS SHALL BE PLACED PRIOR TO CASTING CONCRETE.
11. ALL CONTACT SURFACES, NEW OR EXISTING, AT CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED TO 1/4" AMPLITUDE PRIOR TO CASTING ADJACENT POUR.
12. OPENINGS IN FLOORS AND/OR WALLS SHALL HAVE ADDITIONAL REINFORCING AROUND ALL SIDES AS SHOWN IN TYPICAL DETAILS.
13. NO PENETRATION SHALL BE ALLOWED THROUGH ANY CONCRETE BEAM, PIER CAP, OR PIER WITHOUT THE ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.
14. LEVELING GROUT TO BE NON-SHRINK, FACTORY PREMIXED GROUT IN ACCORDANCE WITH ASTM C1107, HAVING A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 5000 PSI.
15. ANCHOR RODS TO BE ASTM F1554 Fy=36 KSI MINIMUM, UNLESS NOTED OTHERWISE. ANCHOR ROD EMBEDMENT SHALL BE AS INDICATED ON THESE STRUCTURAL DRAWINGS.
    A. ALL BOLT HOLES TO BE FILLED WITH EPOXY SHALL BE WIRE BRUSHED AND CLEANED WITH COMPRESSED AIR PER MANUFACTURER'S RECOMMENDATIONS.
16. SUSPENDED FLOOR SLABS:
    A. CONSTRUCTION JOINTS IN SUSPENDED SLABS AND/OR BEAMS SHALL OCCUR AT THIRD POINTS OF SLAB SPAN. COORDINATE PLACEMENT WITH THE ENGINEER.

CONCRETE MATERIALS SCHEDULE

STRUCTURAL ELEMENT	MIN f'c 28 DAYS (PSI)	MAX WATER/CEMENT RATIO	AGGREGATE	AIR CONTENT	REMARKS
PIERS	3500	0.45	#57	5-7%	
GRADE BEAMS & PIER CAPS	4000	0.45	#57	EXT 5-7% INT 2%	
INTERIOR SLABS	4000	0.45	#57	2%	
EXTERIOR SLABS	4000	0.45	#57	5-7%	

STANDARD CONCRETE HOOK SCHEDULE

STANDARD HOOKS IN TENSION PER ACI 318		
HOOK DEVELOPMENT LENGTH ℓdh (INCHES)		
BAR SIZE	f'c=3000 PSI	f'c=4000 PSI
#3	9	8
#4	11	10
#5	14	12
#6	17	15
#7	20	17
#8	22	19
#9	25	22



NOTES:
1. CONCRETE IS NORMAL WEIGHT CONCRETE FOR LIGHTWEIGHT CONC MULTIPLY VALUES BY 1.33.
2. BAR YIELD STRENGTH, Fy = 60 KSI.
3. SIDE COVER REQUIREMENTS OF ACI 318 ARE ASSUMED TO NOT BE MET.
4. TIE OR STIRRUP REQUIREMENTS OF ACI 318 ARE ASSUMED TO NOT BE MET.
5. REDUCTION FOR EXCESS REINFORCEMENT IS NOT TAKEN.
6. HOOK DEVELOPMENT LENGTH IS VALID FOR 180° HOOKS ALSO.

CONCRETE COVER SCHEDULE

MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (RE: ACI 318 LATEST EDITION FOR CONDITIONS NOT NOTED). DIMENSIONS FOR BAR PLACEMENT GIVEN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM COVER REQUIREMENTS GIVEN HERE.

FOOTINGS (EARTH FORMED)	3 INCHES
SLAB ON GRADE:	
BOTTOM	3 INCHES
SIDES (EARTH FORMED)	3 INCHES
SIDES (BOARD FORMED):	
#5 BAR & SMALLER	1 1/2 INCHES
#6 THROUGH #11 BAR	2 INCHES
SLAB ON GRADE (NO EXPOSURE TO WEATHER) FROM TOP	1 1/2 INCHES
SLAB ON GRADE (EXPOSURE TO WEATHER) FROM TOP	1 1/2 INCHES
RETAINING WALLS (NO SURFACES SHALL BE EARTH FORMED) EARTH SIDE AND FRONT SIDE (EXPOSED TO WEATHER):	
#5 BAR & SMALLER	1 1/2 INCHES
#6 THROUGH #11 BAR	2 INCHES
WALLS & SLABS	3/4 INCHES
CONCRETE BEAMS	1 1/2 INCHES

PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED

REINFORCING STEEL - CONCRETE

1. REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO ASTM A615 GRADE 60, WITH A DESIGN YIELD STRENGTH OF 60,000 PSI, EXCEPT AS NOTED BELOW.
   A. DOWELS TO BE BENT IN THE FIELD DURING CONSTRUCTION SHALL BE ASTM A706 GRADE 60, "LOW-ALLOY STEEL".
   B. REINFORCING TO BE WELDED SHALL BE ASTM A706 GRADE 60, "LOW-ALLOY STEEL".
2. MECHANICAL SPLICE COUPLERS SHALL BE CAPABLE OF DEVELOPING 125% OF THE SPECIFIED STRENGTH OF THE BAR.
3. REINFORCING STEEL SHALL BE FREE OF LOOSE FLAKY RUST, SCALE, GREASE, OIL, DIRT, AND OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.
4. BENDS SHALL BE MADE COLD. DO NOT USE HEAT. BENDS SHALL BE DONE IN THE FABRICATOR'S SHOP UNLESS SPECIFICALLY NOTED FOR THE FIELD. DO NOT UN-BEND OR RE-BEND A PREVIOUSLY BENT BAR.
5. NO REINFORCING SHALL BE WELDED UNLESS SPECIFICALLY NOTED AS SUCH. USE E90XX ELECTRODES AND ASTM A706 REINFORCING. COMPLY WITH AWS D1.4 REQUIREMENTS.
6. CODES AND STANDARDS:
   A. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE".
   B. AMERICAN CONCRETE INSTITUTE, ACI 315 (OR SP-66) "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT".
7. REINFORCING SHALL BE DETAILED, FABRICATED, BOLSTERED, AND SUPPORTED PER ACI 315.
8. SPLICES IN CONTINUOUS REINFORCING IN CONCRETE SHALL BE PER THE CONCRETE REINFORCING LAP SPLICE SCHEDULE.
   A. SPLICES SHALL BE MADE IN AREAS OF COMPRESSION AND/OR AT POINTS OF MINIMUM STRESS, TYPICAL UNLESS NOTED OTHERWISE. TENSION SPLICES SHALL BE USED IN CONCRETE; USE CLASS B SPLICE UNLESS NOTED OTHERWISE. SPLICES IN TOP BARS IN SUSPENDED CONCRETE SLABS AND BEAMS SHALL BE MADE AT MID SPAN. SPLICES IN BOTTOM BARS IN SUSPENDED CONCRETE SLABS AND BEAMS SHALL BE MADE AT SUPPORTS.
9. REINFORCING STEEL IN CONCRETE SHALL HAVE COVER PER THE CONCRETE COVER SCHEDULE.
10. REINFORCING STEEL IN CONCRETE SHALL BE SECURELY ANCHORED AND TIED IN PLACE PRIOR TO PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS, STIRRUPS, OR CHAIRS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS WHERE NECESSARY DURING CONSTRUCTION.

STRUCTURAL STEEL

1. STRUCTURAL STEEL WORK IS TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH:
   A. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" (FOURTEENTH EDITION)
   B. THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
   C. RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS".
2. STRUCTURAL STEEL, UNLESS NOTED OTHERWISE, TO BE NEW STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A 6/A 6M AND AS INDICATED ON THE STEEL MATERIAL SCHEDULE ON DRAWING S-002.
3. PRIOR TO FABRICATION, THE STEEL FABRICATOR IS TO SUBMIT TO THE ENGINEER FOR REVIEW THE FOLLOWING:
   A. SHOP DRAWINGS SHOWING ERECTION PLANS, PIECE DRAWINGS, AND CONNECTION DETAILS.
4. THE STRUCTURAL STEEL FABRICATOR, AND/OR GENERAL CONTRACTOR, MUST VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AT THE SITE. ALL DISCREPANCIES FOUND ARE TO BE REPORTED TO THE ENGINEER PRIOR TO PREPARATION OF SHOP DRAWINGS. SHOP DRAWINGS ARE TO INCLUDE ALL FIELD MEASUREMENTS AND CONDITIONS.
5. STRUCTURAL STEEL FABRICATOR IS TO PROVIDE FOR VERTICAL AND HORIZONTAL FIELD ADJUSTMENT OF ALL SUPPORT ASSEMBLIES.
6. CUTS, HOLES, COPING, ETC REQUIRED FOR OTHER TRADES MUST BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN THE FIELD WILL NOT BE PERMITTED.
7. STEEL BEAMS ARE TO BE EQUALLY SPACED IN BAYS UNLESS OTHERWISE NOTED.
8. FABRICATE AND INSTALL BEAMS WITH NATURAL CAMBER UP UNLESS CAMBER IS NOTED ON THE DRAWINGS.
9. PROVIDE CAMBER IN BEAMS WHERE INDICATED ON THE DRAWINGS. CAMBER INDICATED ON PLANS AFTER BEAM SIZE AS: C=##.
10. ALL STRUCTURAL STEEL FRAMES ARE TO BE SECURELY BRACED UNTIL ALL ROOF DECKS HAVE BEEN INSTALLED AND BECOME CAPABLE OF STABILIZING THE FRAMES.
11. BOLTED CONNECTIONS:
    A. STEEL-TO-STEEL BOLTED CONNECTIONS: 3/4" DIAMETER ASTM A325 UNO WITH MATCHING WASHERS AND HEAVY HEX NUTS. USE TENSION CONTROL BOLT ASSEMBLIES CONFORMING TO ASTM F1852 AT CONTRACTOR'S OPTION. NUTS AND WASHERS SHALL CONFORM TO ASTM A563 AND ASTM F436 RESPECTIVELY.
    B. ALL OTHER BOLTED CONNECTIONS SHALL BE MADE WITH BOLTS AND NUTS CONFORMING TO ASTM A307 UNLESS NOTED OTHERWISE.
    C. STANDARD SPACING SHALL BE 3" OC AND STANDARD EDGE DISTANCE SHALL BE 1 1/2" TYPICAL, UNLESS NOTED OTHERWISE.

CONCRETE REINFORCING LAP SPLICE SCHEDULE (IN)

BAR SIZE	f'_c= 3000 PSI		f'_c= 4000 PSI		f'_c= 5000 PSI		f'_c= 6000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	28	22	24	19	22	17	20	15
#4	37	29	32	25	29	22	26	20
#5	47	36	40	31	36	28	33	25
#6	56	43	48	37	43	33	40	31
#7	81	63	70	54	63	49	58	44
#8	93	72	80	62	72	55	66	51
#9	105	81	91	70	81	63	74	57
#10	118	91	102	79	91	70	83	64
#11	131	101	113	87	101	78	93	71

NOTES:
1. TABULATED VALUES ARE BASED ON A MINIMUM YIELD STRENGTH OF 60,000 PSI. LENGTHS ARE IN INCHES.
2. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER ACI 318.
3. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
4. LAP SPLICE LENGTHS (MINIMUM OF 12 INCHES) ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS; CLASS B = 1.3 ℓd. WHEN DETERMINING THE LAP SPLICE LENGTH, ℓd IS CALCULATED WITHOUT THE 12-INCH MINIMUM OF ACI.
5. ACI 318 DOES NOT ALLOW TENSION LAP SPLICES OF #14 OR #18 BARS. THE TABULATED VALUES FOR THOSE BAR SIZES ARE THE TENSION DEVELOPMENT LENGTHS.
6. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
7. FOR EPOXY-COATED BARS, IF THE C-C SPACING IS AT LEAST 7.0 db AND THE CONCRETE COVER IS AT LEAST 3.0 db, THEN CASE 1 LENGTHS MAY BE MULTIPLIED BY 0.918 (FOR TOP BARS) OR 0.8 (FOR OTHER BARS).
8. FOR GRADE 75 (MINIMUM YIELD STRENGTH OF 75,000 PSI) REINFORCING BARS, LENGTHS MUST BE MULTIPLIED BY 1.25.
9. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.33.
10. TABULATED VALUES ARE BASED ON CLASS B LAP SPLICES AND CASE 1 PER ACI 318.
11. CASE 1, WHICH DEPENDS ON THE TYPE OF STRUCTURAL MEMBER, CONCRETE COVER, AND CENTER-TO-CENTER SPACING OF THE BARS, IS DEFINED AS:

BEAMS, COLUMNS	CONCRETE COVER AT LEAST 1.0 db AND C-C SPACING AT LEAST 2.0 db
ALL OTHERS	CONCRETE COVER AT LEAST 1.0 db AND C-C SPACING AT LEAST 3.0 db

STRUCTURAL STEEL

   D. BOLT SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE.
   E. BOLTED CONNECTIONS SHALL HAVE WASHERS AND SHALL BE TIGHTENED TO SNUG TIGHT CONDITION.
   F. ENLARGING OF HOLES SHALL BE ACCOMPLISHED BY MEANS OF REAMING. DO NOT USE A TORCH ON ANY BOLT HOLES.
12. WELDED CONNECTIONS:
   A. WELDING AND GAS CUTTING SHALL BE DONE PER AWS.
   B. WELDING TO BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE-ANSI/AWS D1.1/D1.1M" (LATEST EDITION). USE E70XX ELECTRODES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
   C. WELDERS SHALL BE CURRENTLY CERTIFIED ACCORDING TO AWS WITHIN THE LAST 12 MONTHS. ALL WELDING PROCEDURES SHALL BE PRE-QUALIFIED. WELDERS SHALL FOLLOW WELDING PROCEDURES.
   D. WELDS SHALL HAVE THE SLAG REMOVED.
   E. FULL PENETRATION WELDS, SHOP OR FIELD, SHALL HAVE BACKER BARS REMOVED, BE BACK GOUGED, AND WELDED PER AWS TO HAVE FULL PENETRATION WELD.
13. POST INSTALLED ANCHORS HAVE BEEN DESIGNED WITH HILTI ANCHORS (NOTED BELOW) AS THE BASIS OF DESIGN. PROVIDE ANY APPROPRIATE ANCHOR WITH SIZE AND FINISH AS NOTED AND EQUIVALENT SHEAR AND TENSION CAPACITIES AFTER MODIFICATION DUE TO EMBEDMENT, SPACING AND EDGE DISTANCES. OTHER AVAILABLE MANUFACTURERS INCLUDE SIMPSON, ITW RED HEAD AND POWERS FASTENERS. INSTALL ANCHORS PER THE MANUFACTURER'S INSTRUCTIONS/RECOMMENDATIONS.
   A. EXPANSION ANCHORS: KWIK BOLT TZ EXPANSION ANCHOR
   B. ADHESIVE ANCHORS: HIT-HY 200
   C. SCREEN TUBE ANCHORS: HIT-HY 70
   D. SCREW ANCHORS: KWIK HUS-EZ SCREW ANCHOR
14. SUBSTITUTION OF EXPANSION ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED.
15. PAINT AND PROTECTION:
   A. STRUCTURAL STEEL, UNLESS INDICATED OTHERWISE, TO BE SHOP CLEANED PER SSPC SP3 AND PAINTED ONE SHOP COAT OF FABRICATOR'S STANDARD RUST INHIBITING PRIMER. TOUCH UP AFTER ERECTION.
   B. DO NOT PAINT STEEL WHERE ENCASED WITH CONCRETE, OR AT FIELD WELD AREAS.
   C. DO NOT PAINT STRUCTURAL STEEL TO BE FIREPROOFED. SHOP CLEAN PER SSPC SP3.
   D. EXPOSED STRUCTURAL STEEL TO RECEIVE PAINTED FINISH TO BE SHOP CLEANED AND PRIME PAINTED PER THE SPECIFICATIONS. REFERENCE ARCHITECTURE FOR FINISH PAINT SYSTEMS.
   E. EXPOSED STRUCTURAL STEEL FOR SCREEN WALLS, EQUIPMENT PLATFORMS, LOOSE ANGLE LINTELS ETC, TO BE HOT DIPPED GALVANIZED PER ASTM A123.
   F. GALVANIZED FASTENERS AND ACCESSORIES TO BE HOT DIPPED GALVANIZED PER ASTM A153/A153M.
   G. REPAIR DAMAGE TO GALVANIZED COATINGS USING ASTM A780 ZINC RICH PAINT.
   H. PROVIDE MINIMUM 3" CONCRETE COVER FOR ALL STEEL BELOW GRADE.
16. DEFORMED BAR ANCHORS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
17. CONSTRUCTION:
   A. FABRICATION SHALL BE DONE IN AN APPROVED FABRICATOR'S SHOP.
   B. USE HIGH STRENGTH (5000 PSI MINIMUM AT 28 DAY), NON-SHRINK, FACTORY PRE-MIXED GROUT IN ACCORDANCE WITH ASTM C1107 BENEATH ALL STEEL BASE PLATES AND BEARING PLATES. MIX GROUT WITH SAND OR PEA GRAVEL AS RECOMMENDED BY THE MANUFACTURER. PLACE GROUT AS SOON AS STEEL MEMBER HAS BEEN PROPERLY POSITIONED AND ALIGNED.

STEEL MATERIALS SCHEDULE

STRUCTURAL ELEMENT	Fy YIELD STRENGTH (KSI)	REMARKS
WIDE FLANGE BEAMS & COLUMNS (UNO)	50	ASTM A992
ROUND TUBE STEEL	46	ASTM A500 GRADE C
CONNECTIONS, PLATES, & ALL OTHERS	36	ASTM A36
ANCHOR RODS	36 UNO	F1554 UNO
LIGHT GAGE METAL STUDS	50	ASTM A1003

OPEN WEB STEEL JOISTS

1. DESIGN, FABRICATION AND ERECTION OF OPEN WEB STEEL JOISTS MUST CONFORM TO THE STEEL JOIST INSTITUTE (SJI) "STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS"(LATEST EDITION).
2. THE JOIST MANUFACTURER IS TO PROVIDE ALL ANCHORS AND FASTENERS REQUIRED FOR INSTALLATION OF JOISTS, BRIDGING AND BOTTOM CHORD EXTENSIONS.
3. PROVIDE BRIDGING AND ANCHORAGE IN ACCORDANCE WITH SJI REQUIREMENTS. WHERE ERECTION BRIDGING IS REQUIRED, HAVE IN PLACE A ROW OF BOLTED BRIDGING BEFORE RELEASING HOIST LINES. BRIDGING IN LAST BAY SHALL BE ATTACHED TO A STRUCTURAL WALL OR STEEL BEAM.
4. NO LOADS MAY BE APPLIED TO THE JOISTS UNTIL BRIDGING HAS BEEN COMPLETELY INSTALLED AND THE JOIST ENDS HAVE BEEN SECURED TO THEIR SUPPORTS.
5. STEEL JOISTS ARE TO BE EQUALLY SPACED IN BAYS UNO. DO NOT EXCEED JOIST SPACING INDICATED ON THE DRAWINGS.
6. STEEL JOIST MANUFACTURER IS TO PROVIDE ADDITIONAL BOTTOM CHORD BRIDGING AS REQUIRED FOR UPLIFT LOADS.
7. HANGERS SUPPORTING MECHANICAL, ELECTRICAL OR OTHER EQUIPMENT ARE TO BE PLACED AT JOIST PANEL POINTS (WELDING NOT PERMITTED) AND APPLIED LOADS ARE TO BE COORDINATED WITH STEEL JOIST MANUFACTURER. DO NOT SUSPEND ANY EQUIPMENT FROM BRIDGING OR METAL DECK.
8. STEEL JOIST MANUFACTURER TO VERIFY SIZE, LOCATION AND WEIGHT OF ALL SUPPORTED MECHANICAL UNITS AND ASSOCIATED OPENINGS PRIOR TO FABRICATION.

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OPEN WEB STEEL JOISTS

10. THE STEEL JOIST/GIRDER MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL STEEL JOISTS AND THEIR ASSOCIATED HARDWARE.
    A. ALL STEEL JOISTS AND SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WHICH THE PROJECT IS CONSTRUCTED AND BEARING THE SEAL OF THE PROFESSIONAL ENGINEER. DESIGN CALCULATIONS AND SHOP DRAWINGS BEARING THE ENGINEER'S STAMP SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.
    B. JOISTS SHALL BE DESIGNED TO SAFELY SUPPORT ALL LOADS TO WHICH THEY ARE SUBJECTED, INCLUDING THE LOADS INDICATED IN THE DESIGN CRITERIA SECTION OF THESE GENERAL NOTES, OTHER LOADS SHOWN OR INDICATED ON THE DRAWINGS, AND ANY ADDITIONAL LOADS FROM MECHANICAL OR OTHER EQUIPMENT OR ELEMENTS. THEY SHALL ALSO BE DESIGNED IN ACCORDANCE WITH SNOW DRIFT REQUIREMENTS OF THE IBC AND ASCE 7, FOR UNBALANCED LOADS, LOWER ROOFS, OVERHANGS, VALLEYS, RIDGES, GABLES, ETC. REFERENCE MECHANICAL AND/OR OTHER DRAWINGS FOR LOCATIONS AND WEIGHTS OF EQUIPMENT OR ELEMENTS TO BE SUPPORTED. COORDINATE AS REQUIRED.
    C. IN ADDITION, JOISTS SHALL BE DESIGNED TO SUPPORT THE UPLIFT LOADS INDICATED IN THE C&C DIAGRAM AND SCHEDULE. FOR NET UPLIFT, USE 8 PSF FOR DEAD LOAD.
    D. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO L/240 FOR ROOF JOISTS.
11. PROVIDE ADEQUATE BEARING LENGTH AT ALL SUPPORTS. EXTEND BEARING TO AT LEAST 1 INCH PAST CENTERLINE OF STEEL BEAM SUPPORTS WHERE EVER POSSIBLE.
12. NO LOADS SHALL BE APPLIED TO THE JOISTS UNTIL BRIDGING HAS BEEN COMPLETELY INSTALLED AND THE JOIST ENDS HAVE BEEN SECURED TO THEIR SUPPORTS.
13. DO NOT CUT, DRILL, MODIFY, OR OMIT ANY PART OF ANY JOIST WITHOUT PRIOR WRITTEN CONSENT AND DIRECTION FROM THE MANUFACTURER.
14. DO NOT WELD THE BOTTOM CHORD OF THE JOISTS TO THE STABILIZER PLATES.

METAL DECK

1. METAL DECK MUST BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS" (LATEST EDITION).
2. STEEL DECK SHALL BE SIZE AND GAUGE AS SPECIFIED ON PLANS.
3. ROOF DECK TO BE FASTENED TO THE SUPPORTING STEEL PER PLAN AND DETAILS. ANY SPLIT OR PARTIAL PANELS TO BE FASTENED TO THE SUPPORTING STRUCTURE IN EVERY VALLEY REGARDLESS OF ADJACENT FASTENER PATTERNS.
4. DECK UNITS TO BE A MINIMUM OF THREE (3) SPANS CONTINUOUS WITH LAPS PLACED OVER SUPPORTS.
5. STEEL DECK AND ACCESSORIES SHALL BE MANUFACTURED FROM COLD ROLLED STEEL CONFORMING TO ASTM A653, (GALVANIZED G-60), AND SHALL CONFORM TO THE STEEL DECK INSTITUTE (SDI) AND AISC STANDARDS.
6. WELDING SHALL BE DONE WITH E60XX OR E70XX ELECTRODES.
7. END LAPS SHALL OVERLAP AT LEAST 2" AND SHALL OCCUR OVER A SINGLE MEMBER STEEL SUPPORT.
8. DO NOT STRETCH DECK PERPENDICULAR TO FLUTES.
9. DO NOT BEND OR MAR DECK.
10. STORE DECKING OFF THE GROUND WITH ONE END ELEVATED. COVER DECK WITH WATERPROOF MATERIAL AND VENTILATE TO AVOID CONDENSATION.

COLD FORMED STEEL FRAMING

1. STRUCTURAL MEMBERS MUST BE DESIGNED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) S100 "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" (LATEST EDITION).
2. STRUCTURAL MEMBERS TO BE FORMED FROM CORROSION RESISTANT STEEL CONFORMING TO ASTM A1003 WITH MINIMUM YIELD STRESS (Fy) AS REQUIRED BY STRUCTURAL PERFORMANCE. ALL COLD FORMED METAL COMPONENTS TO HAVE A MINIMUM GALVANIZING RATING OF G-60.
3. INTERIOR STUD WALLS SHALL BE DESIGNED FOR A MINIMUM OUT OF PLANE UNIFORM LIVE LOAD PRESSURE OF 5 PSF UNLESS NOTED OTHERWISE, WITH A MAXIMUM DEFLECTION OF L/240.
4. MAXIMUM STUD SPACING TO BE 16" ON CENTER WITH DOUBLED STUDS (MINIMUM) AT EACH SIDE OF OPENINGS.
5. FRAMING COMPONENTS ARE TO BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
6. FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING, TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.
7. INSTALLATION OF ALL COLD FORMED FRAMING SHALL BE BY AN EXPERIENCED INSTALLER APPROVED BY THE MANUFACTURER. INSTALLATION SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
8. ALL LATERAL BRACING SHALL CONFORM TO SECTION D3 OF AISI S100 SPECIFICATIONS.
9. FASTENING OF COMPONENTS IS TO BE WITH SELF-DRILLING SCREWS OR WELDING. WELDING OF STUDS MUST COMPLY WITH AWS D1.1/D1.1M AND AWS D1.3/D1.3M. 16 GAGE OR HEAVIER MATERIAL IS REQUIRED FOR WELDING. ALL WELDS TO BE TOUCHED-UP WITH ZINC-RICH PAINT. SCREWS AND WELDS TO BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. WIRE TYING OF COMPONENTS IS NOT PERMITTED.
10. COLD FORMED STEEL FRAMING MEMBERS ARE TO BE SECURELY ATTACHED TO THE STRUCTURE WHERE INDICATED ON THE DRAWINGS, OR APPROVED SHOP DRAWINGS. FASTENERS TO BE COMPATIBLE TO THE STRUCTURAL MEMBERS.
11. PROVIDE VERTICAL SLIDE TRACKS, OR SLIDE CLIPS, WHERE INDICATED ON THE DRAWINGS OR OTHERWISE REQUIRED TO ALLOW FOR VERTICAL STRUCTURAL MOVEMENTS. MAXIMUM EXPECTED STRUCTURE LIVE LOAD DEFLECTION IS L/240 AT ROOFS.
12. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION, INCLUDING SHEATHING TYPE, FINISHES, OPENINGS, LOCATIONS, ETC.

STATE OF TEXAS — WESTON McCANN — 115262 — LICENSED PROFESSIONAL ENGINEER

433rd CIVIL ENGINEER SQUADRON
"READY • WILLING • ABLE"

Symbol	Description	Date	Appr

REVISIONS

Designed by: M.MAURICIO	Drawn by: M.MAURICIO	Reviewed by: W. McCANN	Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: GENERAL STRUCTURAL NOTES

Date: 12 JUL 2018

SEQ.	SHEET	OF
	S-002	

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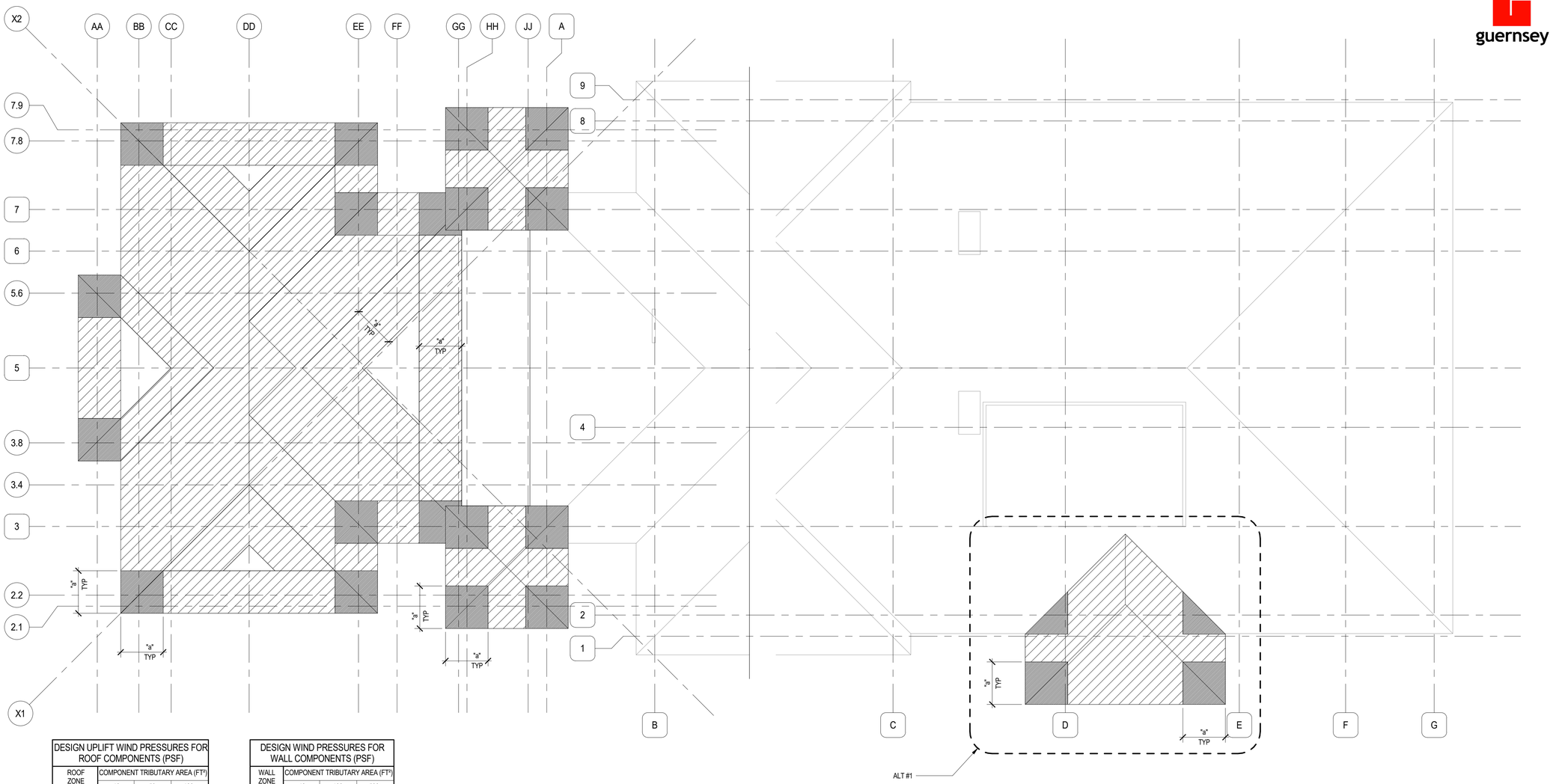
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



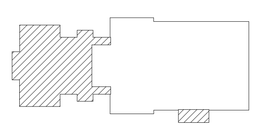
DESIGN UPLIFT WIND PRESSURES FOR ROOF COMPONENTS (PSF)				
ROOF ZONE θ≤7°		COMPONENT TRIBUTARY AREA (FT²)		
		10	50	100+
	1	-31	-29	-28
	2	-51	-39	-33
	3	-77	-46	-33
ROOF ZONE 7°<θ≤27°		COMPONENT TRIBUTARY AREA (FT²)		
		10	50	100+
	1	-28	-26	-25
	2	-49	-40	-36
	3	-49	-40	-36
OHNG		-57	-57	-57

1. LOADS SHOWN ARE ULTIMATE (LRFD) WIND UPLIFT PRESSURES.
2. (-) SIGN INDICATES PRESSURE ACTING AWAY FROM SURFACE.
3. WIND LOADS & BUILDING ZONES WERE DETERMINED USING ASCE 7-10.
4. BUILDING ZONES ARE DEFINED IN ASCE 7-10 WITH a=8'-0".

DESIGN WIND PRESSURES FOR WALL COMPONENTS (PSF)						
WALL ZONE θ≤7°	COMPONENT TRIBUTARY AREA (FT²)					
	10		100		500+	
4	+28	-30	+24	-26	+21	-23
5	+28	-37	+24	-29	+21	-23
PARAPET	-	-	-	-	-	-
WALL ZONE 7°<θ≤27°	COMPONENT TRIBUTARY AREA (FT²)					
	10		100		500+	
4	+31	-33	+26	-29	+23	-25
5	+31	-41	+26	-32	+23	-25

1. LOADS SHOWN ARE ULTIMATE (LRFD) WIND PRESSURES
2. (+) AND (-) INDICATE PRESSURES ACTING TOWARDS AND AWAY FROM THE BUILDING SURFACES RESPECTIVELY.
3. LINEAR INTERPOLATION BETWEEN TRIBUTARY AREAS SHOWN IS PERMITTED.
4. BUILDING ZONES ARE DEFINED IN ASCE 7-10 WITH a = 8'-0".

1 C&C WIND PRESSURE SCHEDULES AND DIAGRAMS
NOT TO SCALE



KEY PLAN

PLAN NORTH

STATE OF TEXAS
WESTON McCANN
115262
LICENSED PROFESSIONAL ENGINEER

Symbol	Description	Date	Appr

REVISIONS

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Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

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NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: GENERAL STRUCTURAL NOTES
Date: 12 JUL 2018

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	S-003	

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OKLAHOMA CITY, OK 73112 405.416.8100
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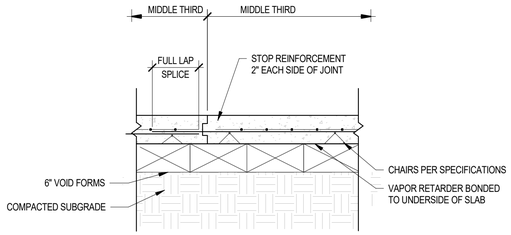
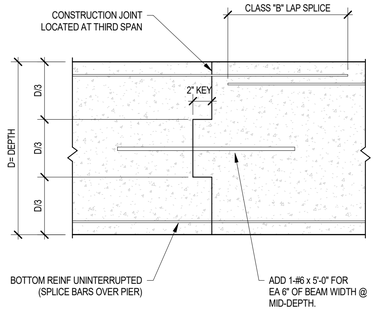
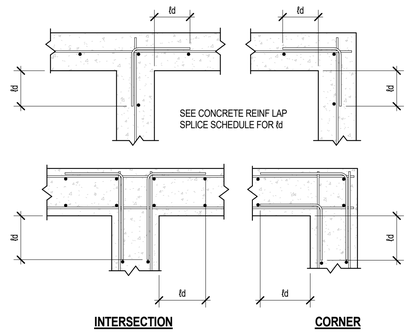


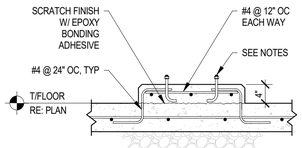
1 TYPICAL SLAB-ON-GRADE CONSTRUCTION JOINT DETAIL
NOT TO SCALE



2 TYPICAL GRADE BEAM CONSTRUCTION JOINT
SCALE: NONE

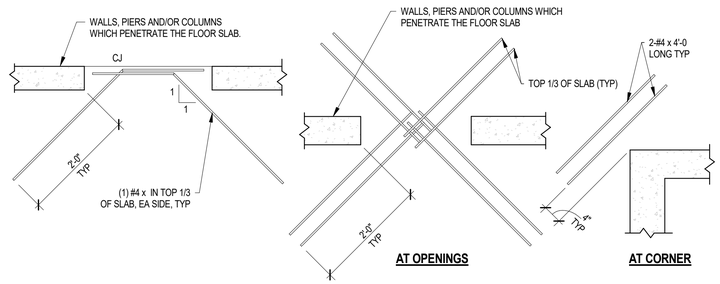


3 TYPICAL CORNER BAR DETAIL
NOT TO SCALE

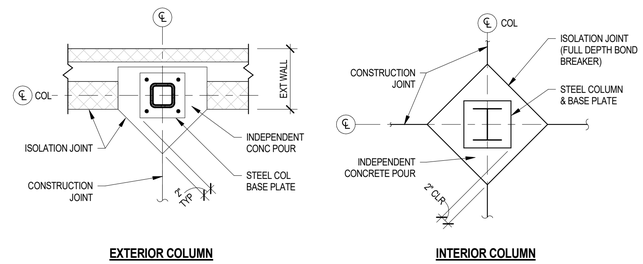


NOTES:
1. SIZE OF EQUIPMENT BASE TO SUIT EQUIPMENT 12" MIN BEYOND EDGE OF EQUIPMENT.
2. PROVIDE ANCHOR BOLTS AS REQUIRED BY EQUIPMENT MANUFACTURER.
3. FINISH T/EQUIPMENT BASE TO DRAIN.

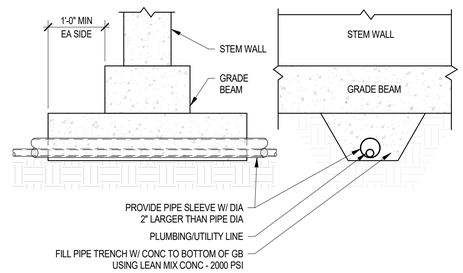
4 TYPICAL INTERIOR EQUIPMENT PAD
NOT TO SCALE



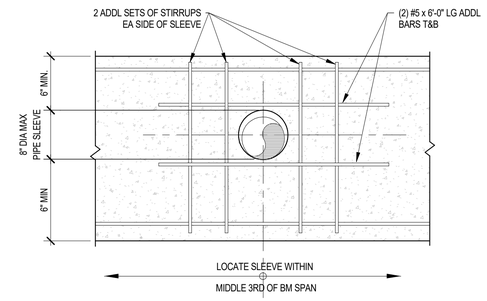
5 TYPICAL RE-ENTRANT CORNER REINFORCING
NOT TO SCALE



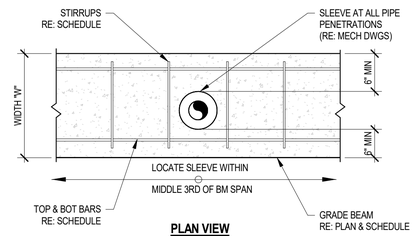
6 TYPICAL ISOLATION JOINT DETAIL
NOT TO SCALE



7 UTILITY PIPE UNDER GRADE BEAM
NOT TO SCALE



8 UTILITY PIPE THROUGH GRADE BEAM
NOT TO SCALE



VERTICAL PIPE PENETRATION THROUGH GRADE BEAM
NOT TO SCALE

STATE OF TEXAS
WESTON McCANN
115262
LICENSED PROFESSIONAL ENGINEER

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Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: TYPICAL DETAILS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	S-010	

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C.H. GUERNSEY & COMPANY
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C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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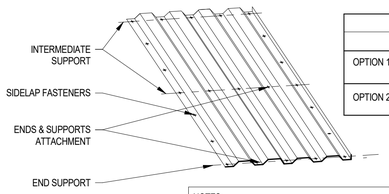
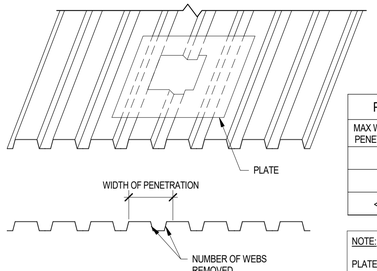


	ATTACHMENT @ ENDS AND SUPPORTS		SIDELAP FASTENERS	
	ZONE 1	ZONE 2 & 3	ZONE 1	ZONE 2 & 3
OPTION 1	5/8" DIA PUDDLE WELDS 36/4 PATTERN	5/8" DIA PUDDLE WELDS 36/7 PATTERN	(2) #10 TEK SCREWS PER SPAN	(3) #10 TEK SCREWS PER SPAN
OPTION 2	HILTI X-HSN 24 36/4 PATTERN	HILTI X-HSN 24 36/7 PATTERN	(3) #10 TEK SCREWS PER SPAN	(3) #10 TEK SCREWS PER SPAN

NOTES:
1. IT IS THE CONTRACTOR'S CHOICE AS TO WHICH OPTION TO USE.
2. WHEN ARC SPOT WELDS (PUDDLE WELDS) ARE USED, CONTRACTOR IS TO TAKE EXTRA CARE NOT TO PROVIDE BURN THROUGH HOLES IN THE DECK. REFER TO SPECIFICATIONS FOR SPECIAL INSPECTION REQUIREMENTS.
3. ZONES INDICATE WIND ZONES AS DEPICTED IN "ROOF C&C WIND PRESSURE PLAN" ON SHEET S-003

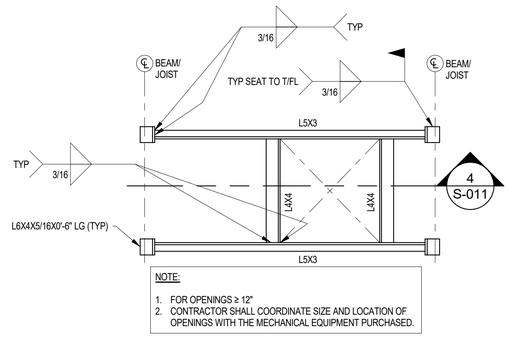
1 ROOF DECK ATTACHMENT DETAIL
NOT TO SCALE



PENETRATION REINFORCEMENT		
MAX WIDTH OF PENETRATION	MAX WEBS REMOVED	REINFORCEMENT NEEDED
6"	2	NONE
8"	3	0.045" PLATE
< 12"	> 3	0.057" PLATE

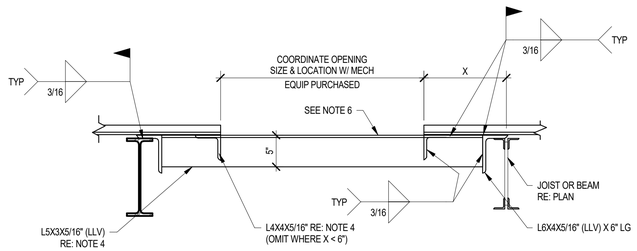
NOTE:
PLATES SHOULD EXTEND PAST THE OPENING 12" MINIMUM ON EACH SIDE

2 ROOF DECK PENETRATION
NOT TO SCALE



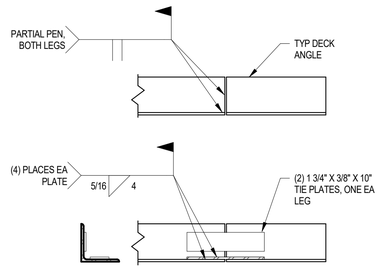
NOTE:
1. FOR OPENINGS ≥ 12"
2. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF OPENINGS WITH THE MECHANICAL EQUIPMENT PURCHASED.

3 FRAMING AT ROOF OPENING
NOT TO SCALE

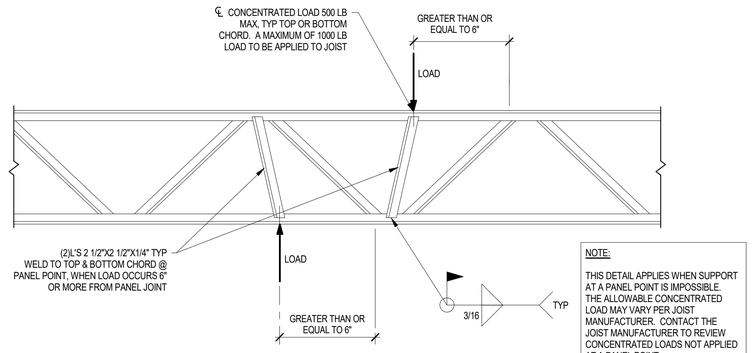


NOTES:
1. PROVIDE FRAME AT OPENING WHERE ANY DIMENSION EXCEEDS 1'-0".
2. WHEN JOIST SPACING EXCEEDS 5'-0". VERIFY ALL ANGLE SIZES W/ ENGINEER.
3. COORDINATE OPENING DIMENSIONS, LOCATIONS AND CURB CONSTRUCTION W/ ARCH & MECH DWGS.
4. PROVIDE L6X4X3/8 (LLV) UNDER MECH UNIT CURBS NOT SUPPORTED BY ROOF STRUCTURE.
5. RE: TYPICAL JOIST REINFORCING DETAIL FOR ADDITIONAL INFORMATION.
6. PROVIDE 1-1/2" - 20 GA REINF CHANNELS AT SIDE OF DECK FLUTES WHICH DO NOT ALIGN W/ ANGLE

4 FRAMING AT ROOF OPENING (CONTINUED)
NOT TO SCALE



5 TYPICAL ROOF DECK EDGE ANGLE SPLICE
NOT TO SCALE



NOTE:
THIS DETAIL APPLIES WHEN SUPPORT AT A PANEL POINT IS IMPOSSIBLE. THE ALLOWABLE CONCENTRATED LOAD MAY VARY PER JOIST MANUFACTURER. CONTACT THE JOIST MANUFACTURER TO REVIEW CONCENTRATED LOADS NOT APPLIED AT A PANEL POINT.

6 JOIST BRACING DETAIL
NOT TO SCALE

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REVISIONS

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Drawn by: M.MAURICIO
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Submitted by: B. McCOMBS

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17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
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Date: 12 JUL 2018

SEQ. | SHEET | OF
S-011

STATE OF TEXAS
WESTON McCANN
115262
LICENSED PROFESSIONAL ENGINEER

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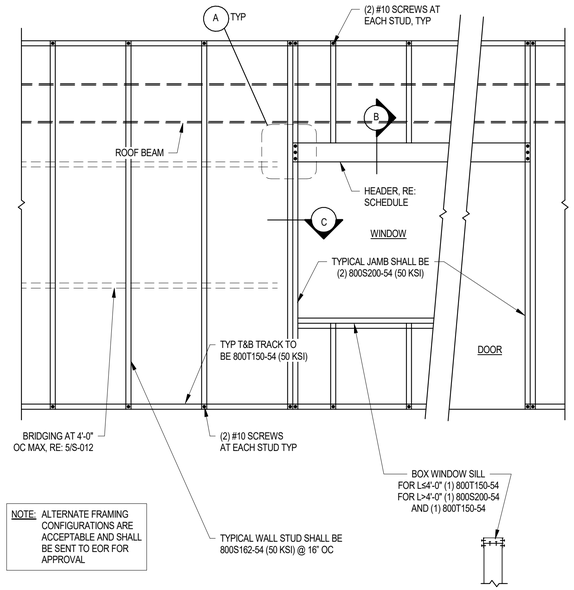
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

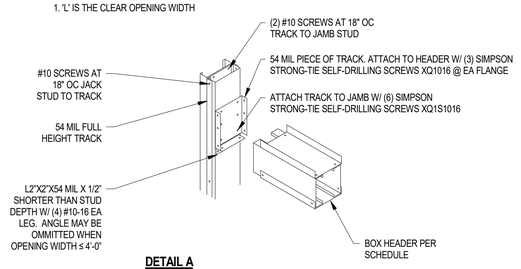


NOTE: ALTERNATE FRAMING CONFIGURATIONS ARE ACCEPTABLE AND SHALL BE SENT TO EOR FOR APPROVAL

1 TYPICAL COLD FORMED STEEL WALL FRAMING
NOT TO SCALE

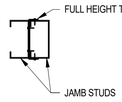
CFS HEADER SCHEDULE	
OPENING WIDTH	HEADER
UP TO 9'-4"	(2) - 800S200-54 AND (2) - 800T150-54

NOTES:
1. 'L' IS THE CLEAR OPENING WIDTH

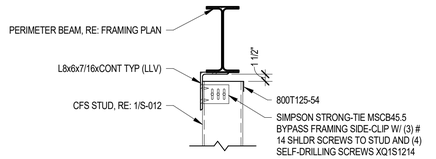


DETAIL A

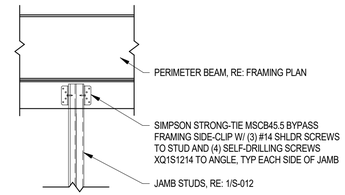
DETAIL B



DETAIL C

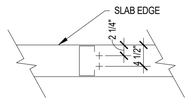


TYP EXT WALL STUD

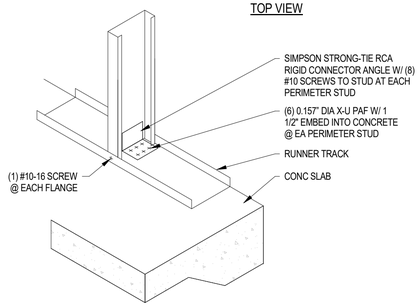


JAMB STUD

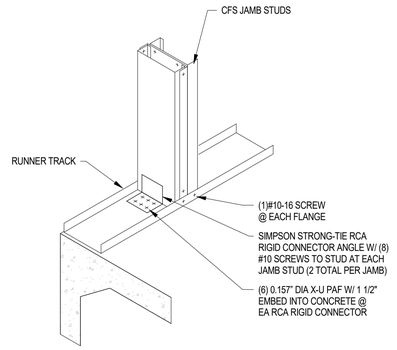
2 TYPICAL CFS STUD AT ROOF
SCALE: 3/4" = 1'-0"



TOP VIEW

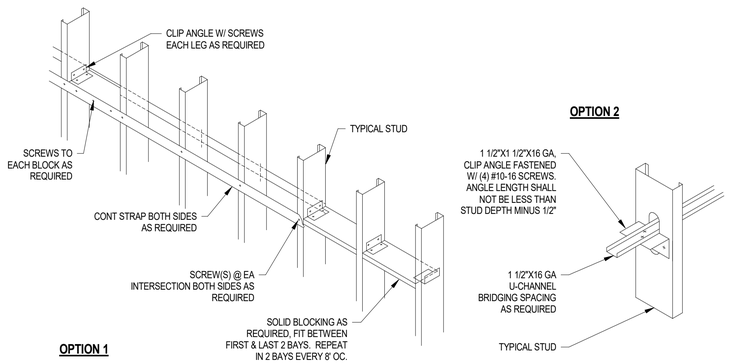


3 TYPICAL TRACK ATTACHMENT
NOT TO SCALE



JAMB ATTACHMENT FOR 54 MIL JAMB STUDS

4 TRACK ATTACHMENT AT JAMB
NOT TO SCALE



5 TYPICAL COLD FORMED STEEL BRIDGING DETAIL
NOT TO SCALE

STATE OF TEXAS
WESTON McCANN
115262
LICENSED PROFESSIONAL ENGINEER

guernsey

REVISIONS			
Symbol	Description	Date	Appr

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: TYPICAL DETAILS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	S-012	

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C.H. GUERNSEY & COMPANY
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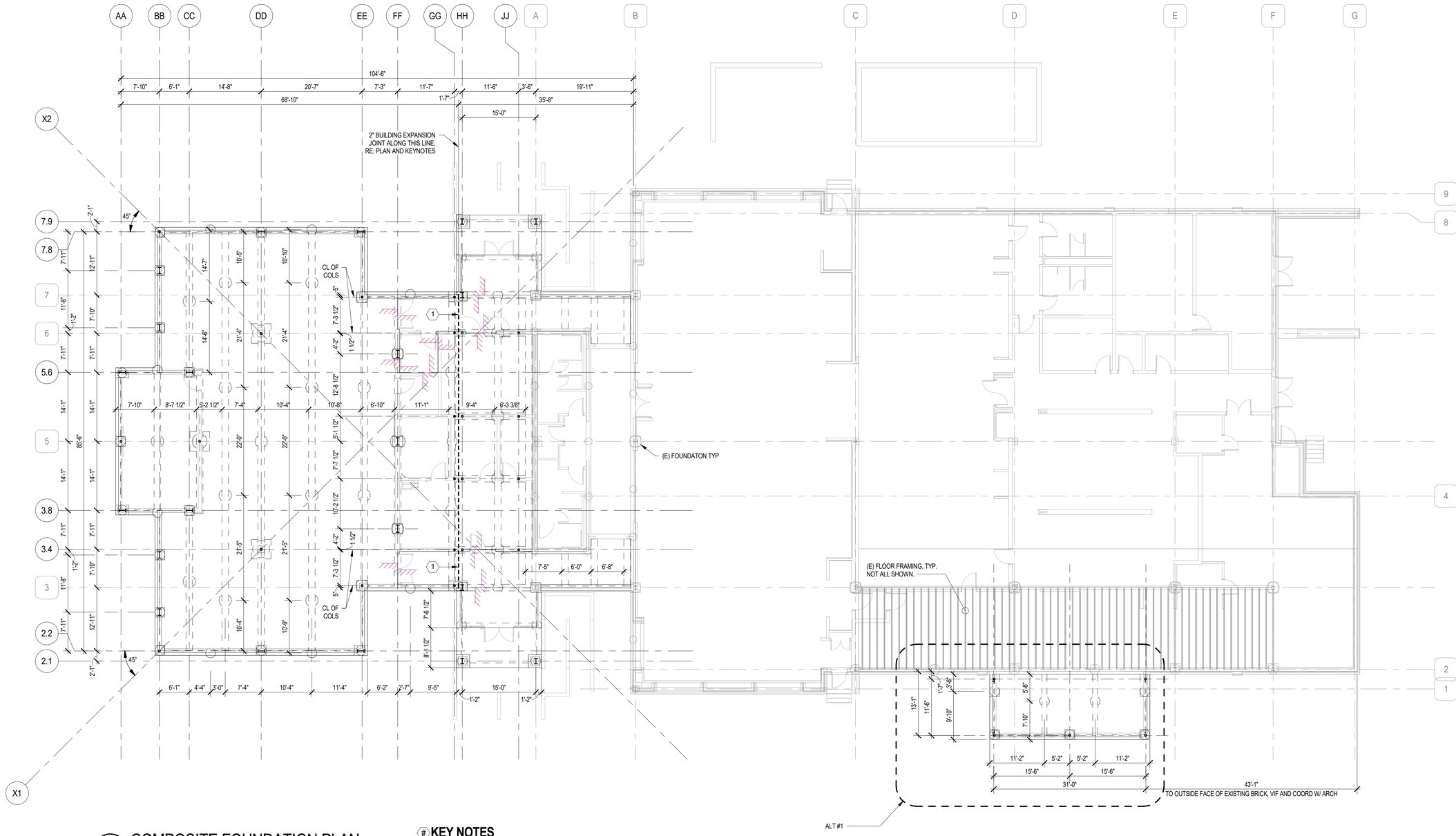
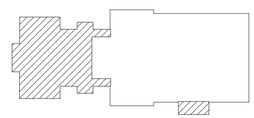
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 COMPOSITE FOUNDATION PLAN
SCALE: 3/32" = 1'-0"

KEY NOTES
1. BUILDING EXPANSION JOINT PER THE FOLLOWING:
   A. NOMINAL DIMENSION: 2"
   B. MINIMUM DIMENSION: 1"
   C. MAXIMUM DIMENSION: 3"

LEGEND
SLAB STEP RE: FOUNDATION PLAN AND DETAILS



KEY PLAN

PLAN NORTH

12' 6' 0 12'
SCALE: 3/32" = 1'-0"

guernsey

Symbol	Description	Date	Appr

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: COMPOSITE FOUNDATION PLAN

Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
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SEQ.	SHEET	OF
	S-101	

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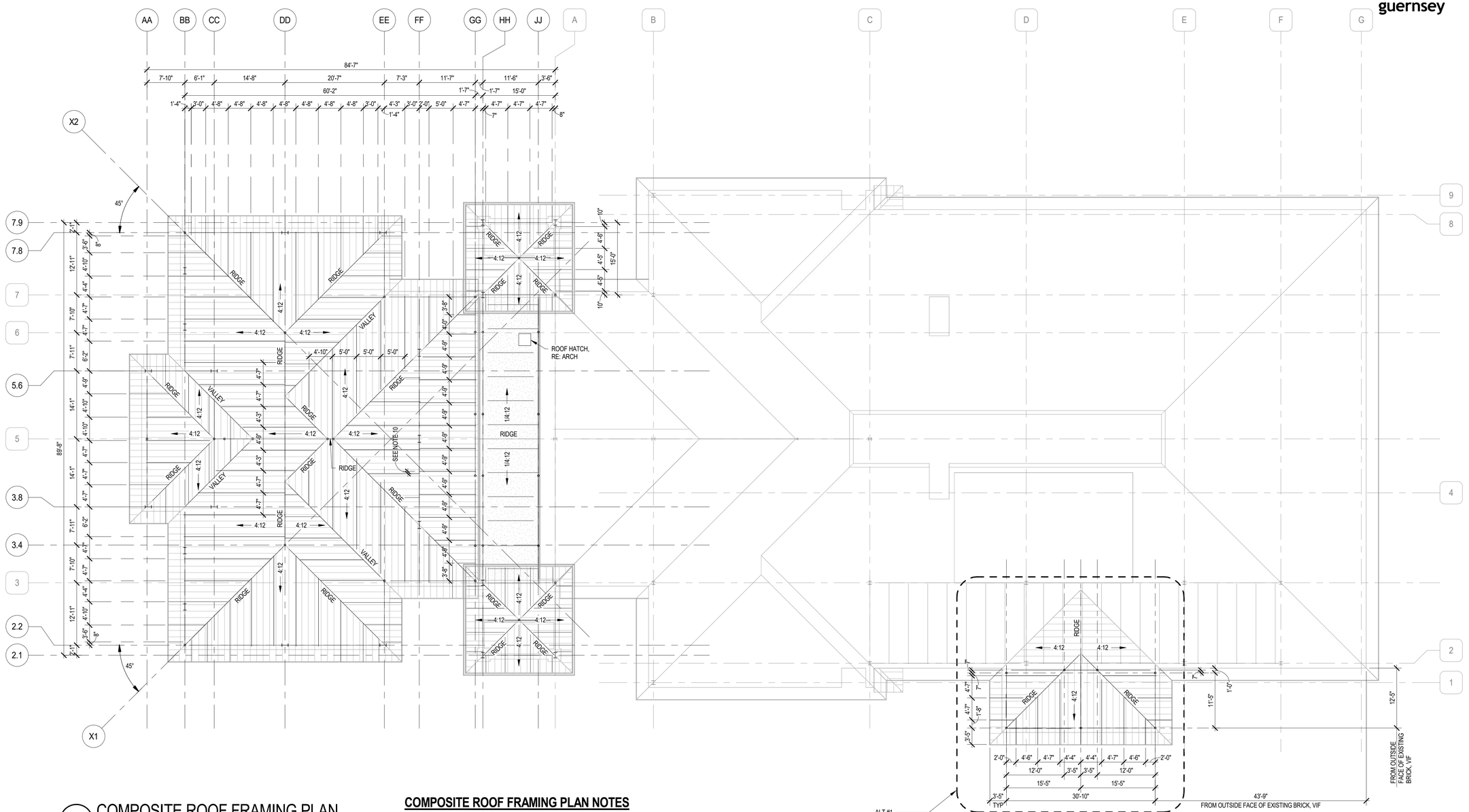
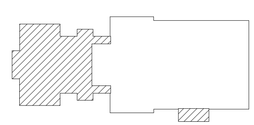


1 COMPOSITE ROOF FRAMING PLAN

SCALE: 3/32" = 1'-0"

COMPOSITE ROOF FRAMING PLAN NOTES

1. RE: DRAWINGS S-001 THROUGH S-003 FOR GENERAL NOTES, DESIGN CRITERIA, AND ABBREVATIONS.
2. COORDINATE DIMENSIONS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL DWGS.
3. JOISTS, JOIST SUBSTITUTES, AND BEAMS SHALL BE SPACED AT 5'-0" OC MAX.
4. JOIST SEATS SHALL BE 6" DEEP TYPICAL.
5. RE: DRAWING S-201 AND S-202 FOR FRAME ELEVATIONS.
6. RE: FOUNDATION PLAN FOR COLUMN SIZES.
7. REFER TO TYPICAL ROOF OPENING DETAIL ON 3/S-011 & 4/S-011 FOR ROOF OPENING FRAMING. COORDINATE SIZE, LOCATION, AND QUANTITY OF OPENINGS WITH MEP DRAWINGS AND MECHANICAL CONTRACTOR.
8. RE: DRAWING S-603 FOR CONNECTION SCHEDULE.
9. RE: DRAWINGS S-011 THROUGH S-012 FOR TYPICAL FRAMING DETAILS.
10. ADJACENT JOISTS SHALL BE OFFSET 6" TYPICAL FOR JOIST SEAT ATTACHMENT TO SUPPORTING STRUCTURE.



KEY PLAN

PLAN NORTH

12' 6' 0 12'

SCALE: 3/32" = 1'-0"

guernsey

Symbol | Description | Date | Appr

REVISIONS

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: COMPOSITE ROOF FRAMING PLAN

Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
LICENSED PROFESSIONAL ENGINEER

SEQ.	SHEET	OF
	S-102	

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OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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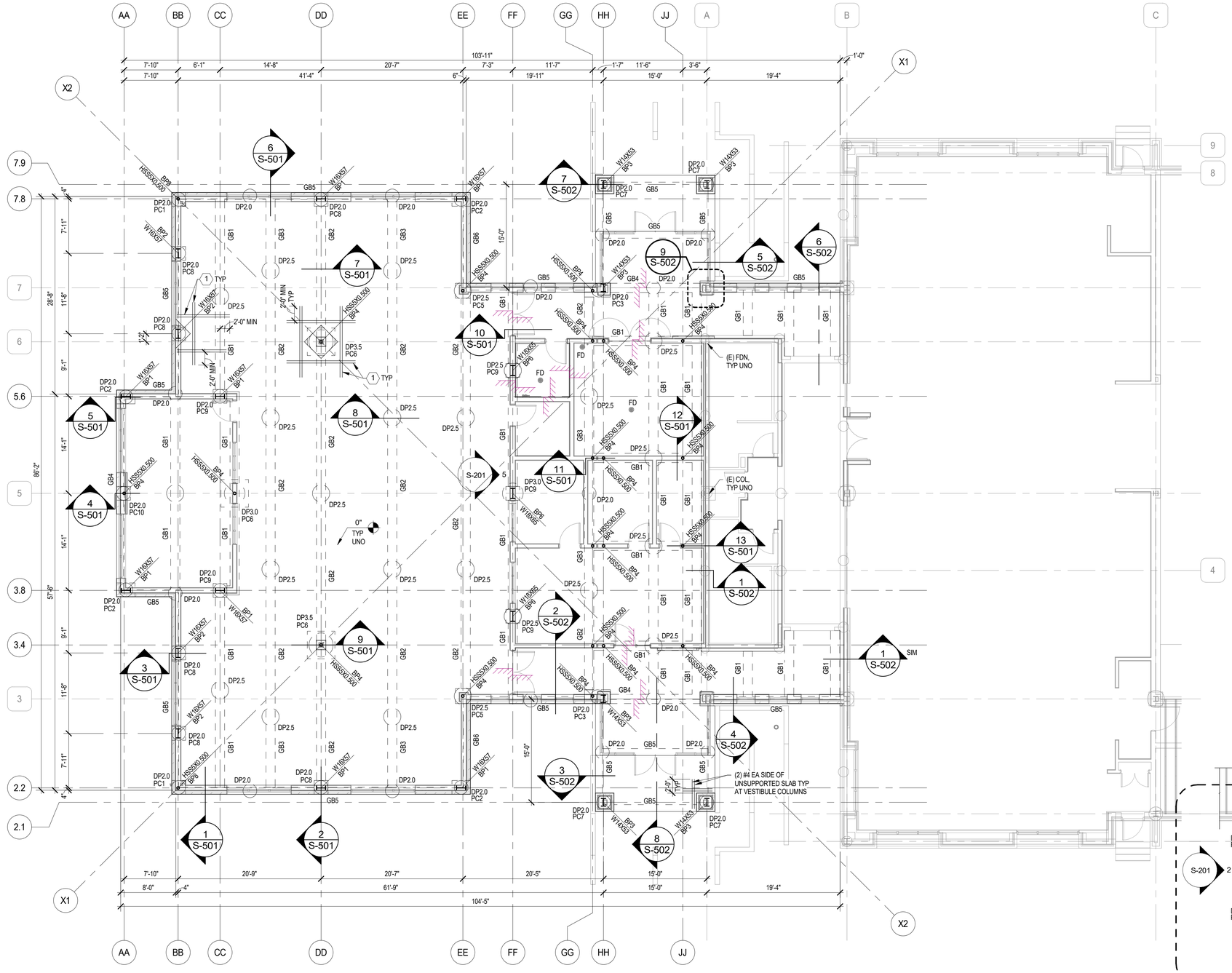


1 FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES

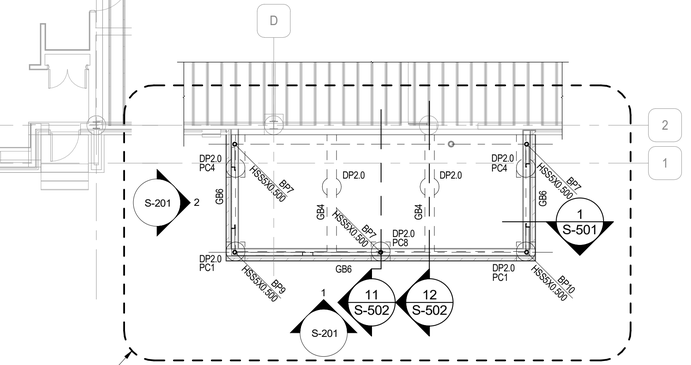
1. RE: DRAWINGS S-001 THROUGH S-003 FOR GENERAL NOTES, DESIGN CRITERIA, AND ABBREVATIONS.
2. COORDINATE DIMENSIONS, WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL DWGS.
3. TOP OF SLAB ELEVATION = 1870.38 FT TO MATCH EXISTING, RE: C-110. THIS IS THE DATUM ELEVATION = 0'-0". ALL ELEVATIONS ARE REFERENCED FROM THIS ELEVATION.
4. TOP OF CONCRETE PIER CAP ELEVATIONS = -0'-8" (TYP UNO).
5. TOP OF CONCRETE PIER ELEVATIONS = -3'-2" (TYP UNO).
6. TOP OF CONCRETE GRADE BEAM ELEVATIONS VARY. RE: PLAN AND DETAILS.
7. STRUCTURAL SLAB: 6" CONCRETE SLAB REINFORCED WITH #4 AT 8" OC EACH WAY, CENTERED IN SLAB TYP. PLACE SLAB OVER 15 MIL VAPOR RETARDER AND 6" CARTON VOID FORMS. VAPOR RETARDER SHALL BOND TO SLAB AND MEET ADHESION TESTS PER SPECS.
8. PROVIDE SLAB ISOLATION JOINT AT ALL COLUMNS. RE: 6/S-010.
9. PROVIDE ADDITIONAL SLAB REINFORCEMENT AT ALL RE-ENTRANT CORNERS. RE: 5/S-010.
10. COORDINATE LOCATIONS AND EXTENTS OF ALL DEPRESSED SLAB AREAS WITH THE ARCHITECTURAL DWGS. RE: 8/S-010.
11. RE: DRAWING S-010 FOR TYPICAL FOUNDATION AND SLAB DETAILS.
12. RE: DRAWING S-601 AND S-602 FOR FOUNDATION SCHEDULES.

KEY NOTES

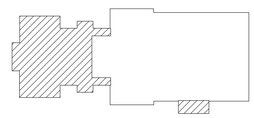
1. PROVIDE TYPICAL ISOLATION JOINT PER DETAIL 6/S-010 AT EACH COLUMN TYPICAL. ALSO PROVIDE ADDITIONAL REINFORCING AS SHOWN ON PLAN FOR UNSUPPORTED SLAB. ADDITIONAL REINFORCING SHALL BE (2) #4 BARS EACH SIDE OF SLAB OPENING TYPICAL. NOT SHOWN AT ALL LOCATIONS FOR CLARITY.

LEGEND

GBx	CONTINUOUS GRADE BEAM, RE: PLAN AND SCHEDULE
PCx	PIER CAP, RE: PLAN AND SCHEDULE
DPx	DRILLED PIER, RE: PLAN AND SCHEDULE
BPx	COLUMN BASE PLATE, RE: PLAN AND SCHEDULE
W#x#	WIDE FLANGE COLUMN, RE: PLAN AND SCHEDULE
HSS#x#	HSS ROUND COLUMN, RE: PLAN AND SCHEDULE
	SLAB STEP, RE: FOUNDATION DETAILS
FD	APPROXIMATE LOCATION OF FLOOR DRAIN. COORDINATE W/ MEP DRAWINGS.



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



KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

guernsey

337th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: FOUNDATION PLAN
Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
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PROFESSIONAL ENGINEER

SEQ.	SHEET	OF
	S-111	

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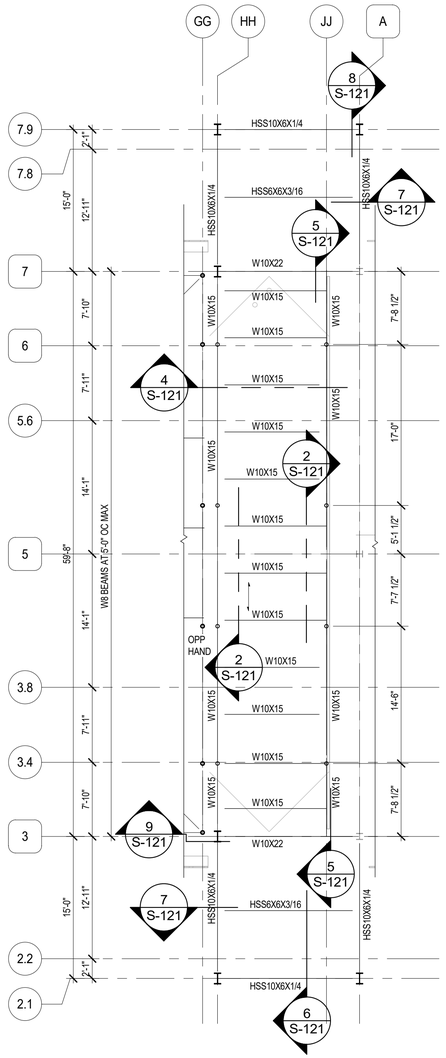
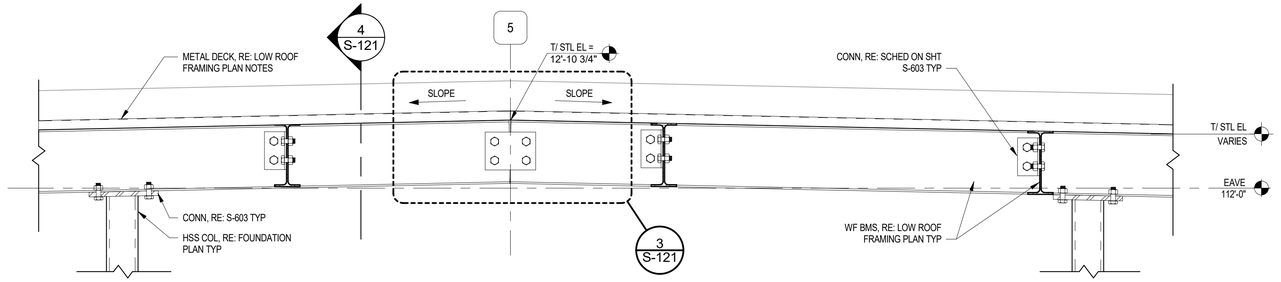
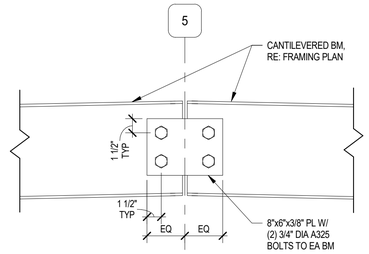


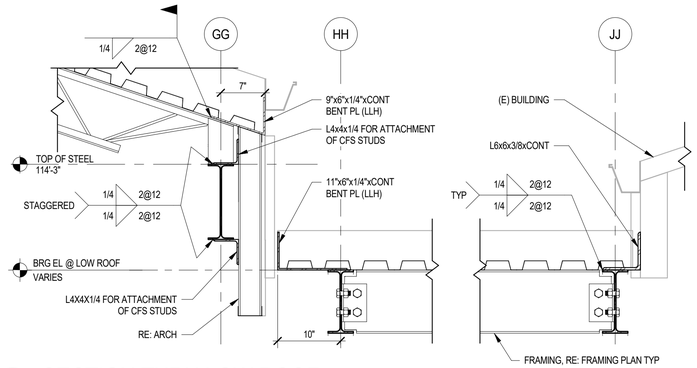
1 LOW ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



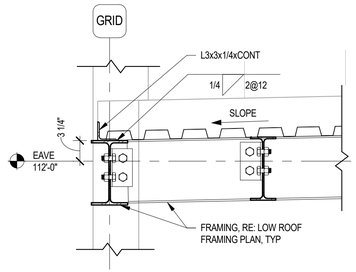
2 BEAM SPLICE AT LOW ROOF
SCALE: 1" = 1'-0"



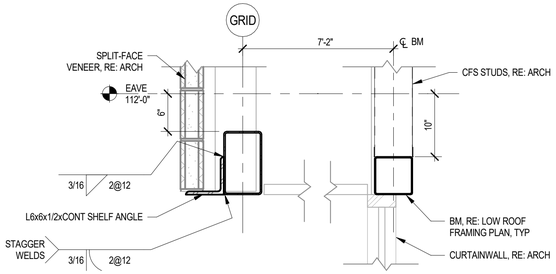
3 BEAM SPLICE
SCALE: 1 1/2" = 1'-0"



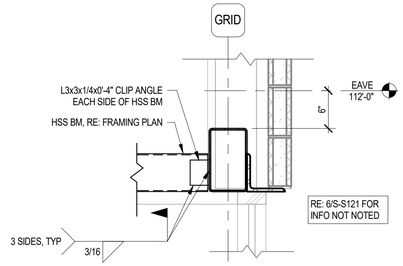
4 SECTION THRU LOW ROOF
SCALE: 1" = 1'-0"



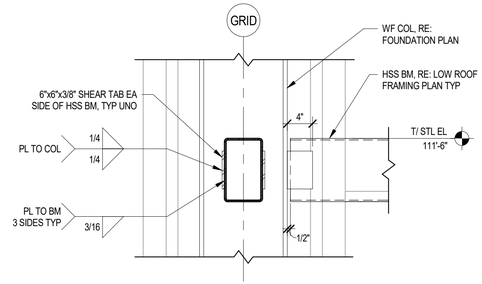
5 SECTION AT ENTRY TOWER
SCALE: 1" = 1'-0"



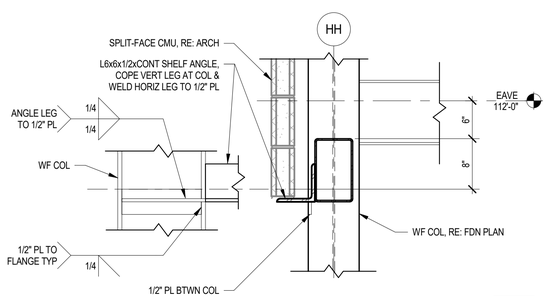
6 ENTRY FRAMING SECTION
SCALE: 1" = 1'-0"



7 ENTRY FRAMING SECTION
SCALE: 1" = 1'-0"



8 ENTRY FRAMING SECTION
SCALE: 1" = 1'-0"



9 CMU SUPPORT AT COLUMN
SCALE: 1" = 1'-0"

ROOF FRAMING PLAN NOTES

1. RE: DRAWINGS S-001 THROUGH S-003 FOR GENERAL NOTES, DESIGN CRITERIA, AND ABBREVIATIONS.
2. COORDINATE DIMENSIONS, WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL DWGS.
3. ROOF STEEL SLOPES. JOIST BEARING/TOP OF STEEL ELEVATION AROUND THE PERIMETER = +14'-3" FROM THE DATUM ELEVATION UNLESS NOTED OTHERWISE. (+/- X'-X") DENOTES STEEL ELEVATION VARIATIONS FROM THE SLOPING STEEL PLANE.
4. RE: DRAWING S-102 FOR JOIST SPACING TYPICAL.
5. ROOF DECK: 1 1/2" - 20 GAGE, TYPE B, GALVANIZED METAL DECK. DECK ATTACHMENT PER 1/S-011.
6. ALL CONTINUOUS DECK ANGLES TO BE FULL DEVELOPMENT BUTT WELDED AT SPLICES, SEE DETAIL 5/S-011.
7. RE: DRAWING S-201 AND S-202 FOR FRAME ELEVATIONS.
8. RE: FOUNDATION PLAN FOR COLUMN SIZES.
9. REFER TO TYPICAL ROOF OPENING DETAIL ON 3/S-011 & 4/S-011 FOR ROOF OPENING FRAMING. COORDINATE SIZE, LOCATION, AND QUANTITY OF OPENINGS WITH MEP DRAWINGS AND MECHANICAL CONTRACTOR.
10. RE: DRAWING S-603 FOR CONNECTION SCHEDULE.
11. RE: DRAWINGS S-011 THROUGH S-012 FOR TYPICAL FRAMING DETAILS.
12. LOCATIONS AND WEIGHTS OF THE EQUIPMENT SHOWN ON THE PLAN HAVE BEEN ASSUMED FOR BIDDING PURPOSES ONLY. CONTRACTOR TO COORDINATE FINAL UNIT LOCATIONS AND WEIGHTS (AND ADDITIONAL UNITS) AND SUBMIT TO CONTRACTING OFFICER FOR REVIEW PRIOR TO PROCEEDING WITH ANY FABRICATION.

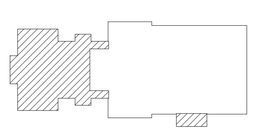
KEY NOTES

1. HSS5x0.500 POST
2. HSS5x0.500 POST CONNECTED TO TOP OF EXISTING WF COLUMN, RE: 10/S-521
3. PROVIDE JOIST EXTENDED ENDS THIS END ONLY FOR SUPPORT OF ROOF DECK

LEGEND

FULLY RESTRAINED MOMENT CONNECTION

SPAN DIRECTION



KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

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

STATE OF TEXAS
WESTON McCANN
115262
LICENSED
PROFESSIONAL ENGINEER

guernsey

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: Designer
Drawn by: Author
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: FRAMING PLAN - LOW ROOF
Date: 12 JUL 2018

SEQ.	SHEET	OF
	S-121	

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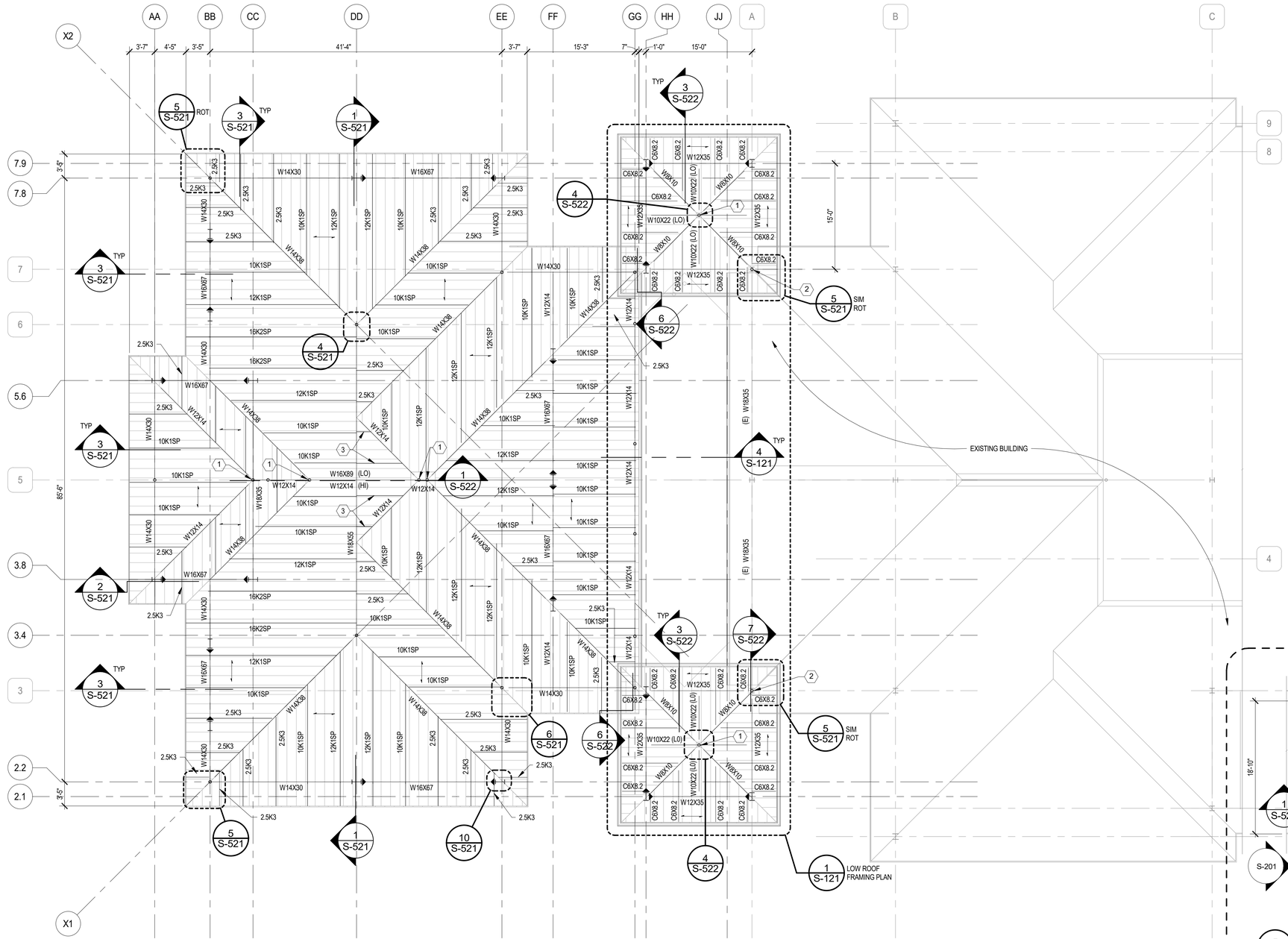


1 HIGH ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

1. RE: DRAWINGS S-001 THROUGH S-003 FOR GENERAL NOTES, DESIGN CRITERIA, AND ABBREVATIONS.
2. COORDINATE DIMENSIONS, WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL DWGS.
3. ROOF STEEL SLOPES. JOIST BEARING/TOP OF STEEL ELEVATION AROUND THE PERIMETER = +14'-3" FROM THE DATUM ELEVATION UNLESS NOTED OTHERWISE. (+/- X'-X") DENOTES STEEL ELEVATION VARIATIONS FROM THE SLOPING STEEL PLANE.
4. RE: DRAWING S-102 FOR JOIST SPACING TYPICAL.
5. ROOF DECK: 1 1/2" - 20 GAGE, TYPE B, GALVANIZED METAL DECK. DECK ATTACHMENT PER 1/S-011.
6. ALL CONTINUOUS DECK ANGLES TO BE FULL DEVELOPMENT BUTT WELDED AT SPLICES, SEE DETAIL 5/S-011.
7. RE: DRAWING S-201 AND S-202 FOR FRAME ELEVATIONS.
8. RE: FOUNDATION PLAN FOR COLUMN SIZES.
9. REFER TO TYPICAL ROOF OPENING DETAIL ON 3/S-011 & 4/S-011 FOR ROOF OPENING FRAMING. COORDINATE SIZE, LOCATION, AND QUANTITY OF OPENINGS WITH MEP DRAWINGS AND MECHANICAL CONTRACTOR.
10. RE: DRAWING S-603 FOR CONNECTION SCHEDULE.
11. RE: DRAWINGS S-011 THROUGH S-012 FOR TYPICAL FRAMING DETAILS.
12. LOCATIONS AND WEIGHTS OF THE EQUIPMENT SHOWN ON THE PLAN HAVE BEEN ASSUMED FOR BIDDING PURPOSES ONLY. CONTRACTOR TO COORDINATE FINAL UNIT LOCATIONS AND WEIGHTS (AND ADDITIONAL UNITS) AND SUBMIT TO CONTRACTING OFFICER FOR REVIEW PRIOR TO PROCEEDING WITH ANY FABRICATION.

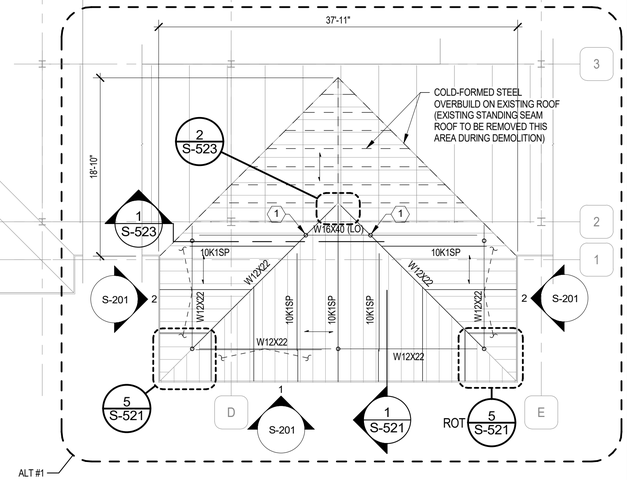
KEY NOTES

1. HSS5x0.500 POST
2. HSS5x0.500 POST CONNECTED TO TOP OF EXISTING WF COLUMN, RE: 10/S-521
3. PROVIDE JOIST EXTENDED ENDS THIS END ONLY FOR SUPPORT OF ROOF DECK

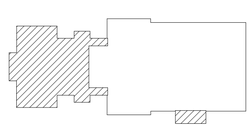
LEGEND

FULLY RESTRAINED MOMENT CONNECTION

SPAN DIRECTION



2 ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: FRAMING PLAN - HIGH ROOF

Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
LICENSED
PROFESSIONAL ENGINEER

SEQ.	SHEET	OF
	S-122	

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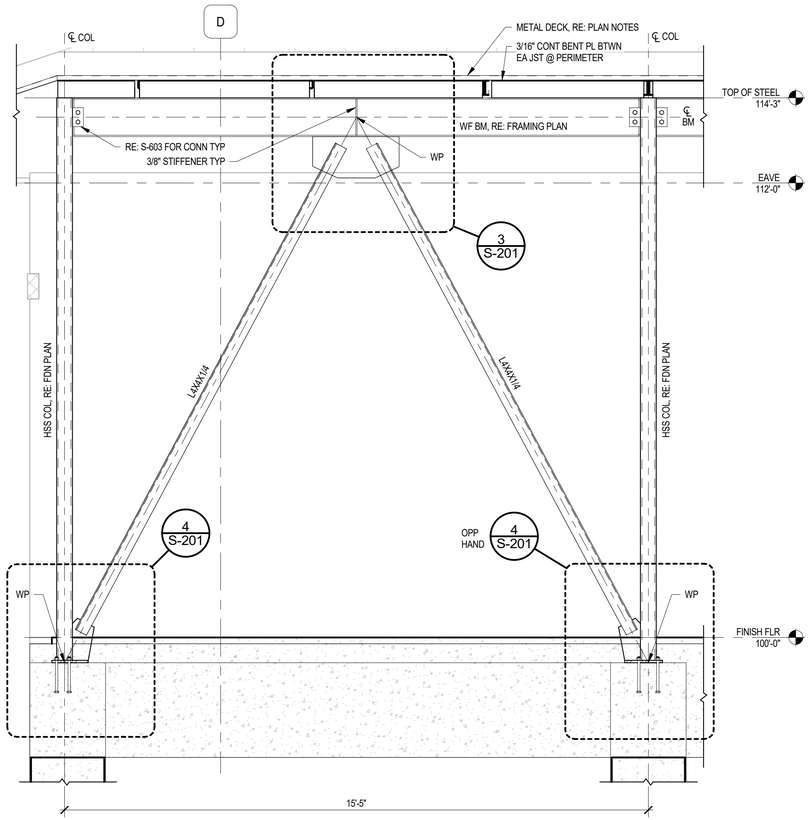
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 E-W BRACED FRAME
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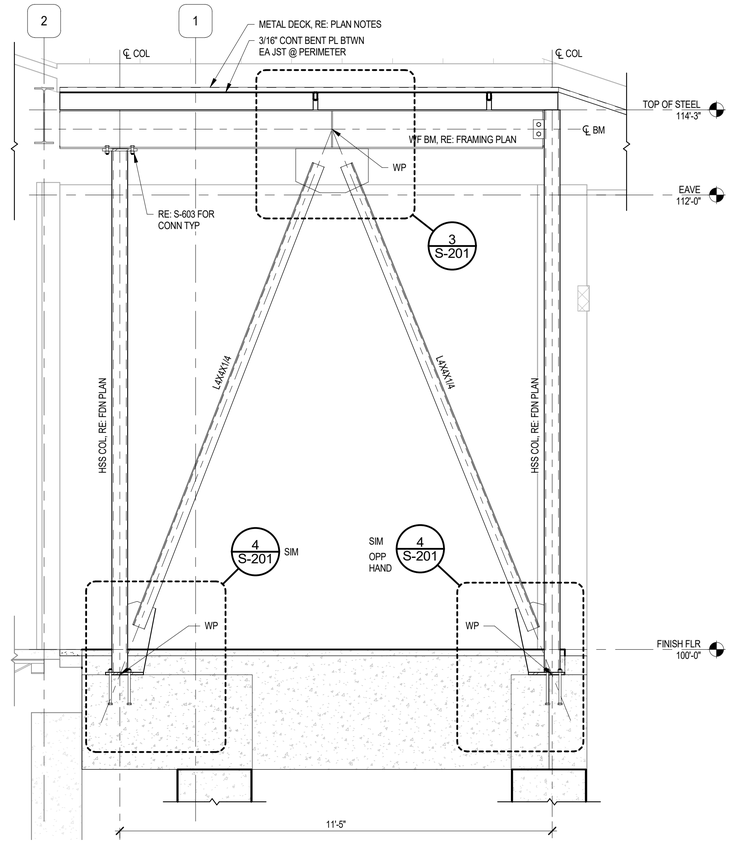

2 N-S BRACED FRAME
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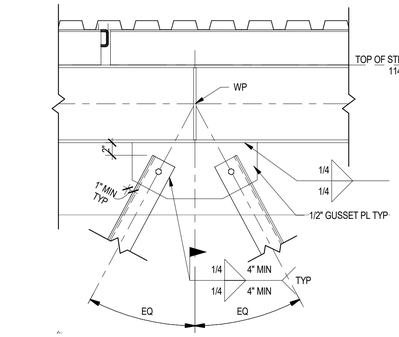
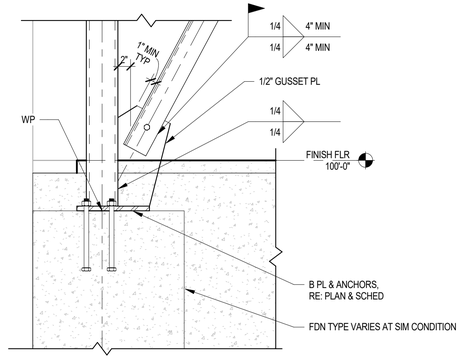


3 BRACED FRAME AT ROOF
SCALE: 1" = 1'-0"



4 BRACED FRAME AT FLOOR
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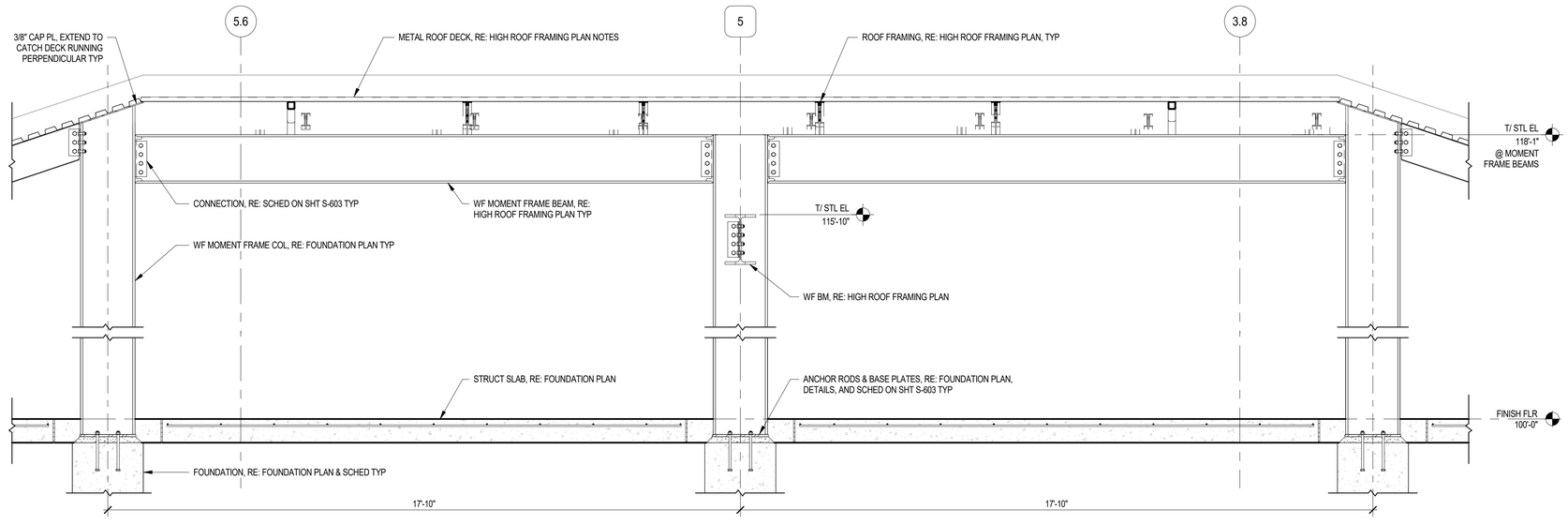

5 INTERIOR MOMENT FRAME ALONG GRID FF
SCALE: 1/2" = 1'-0"

guernsey

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	REVISIONS		

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ELEVATIONS
Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
LICENSED PROFESSIONAL ENGINEER

SEQ.	SHEET	OF
	S-201	

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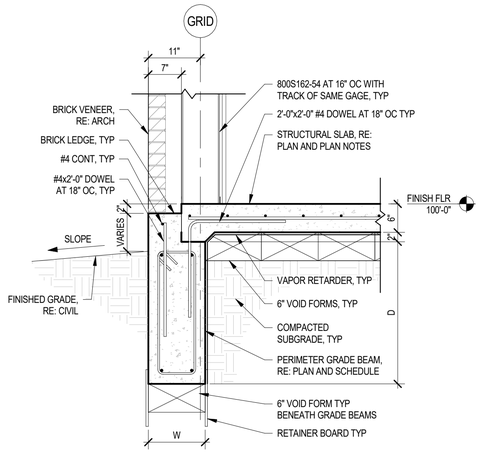
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 TYP EXT GRADE BEAM
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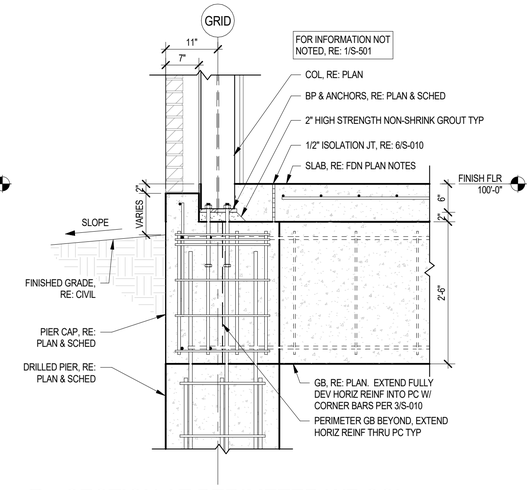

2 SECTION AT PERIMETER WF COL
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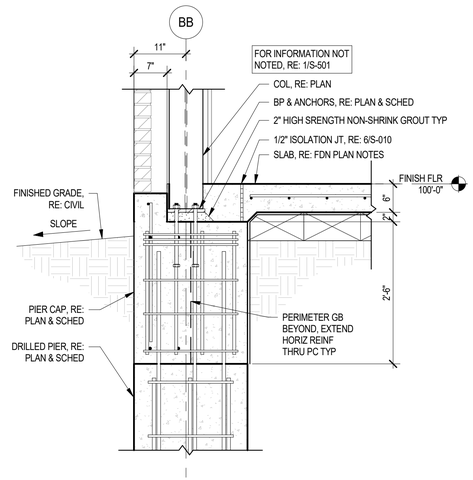

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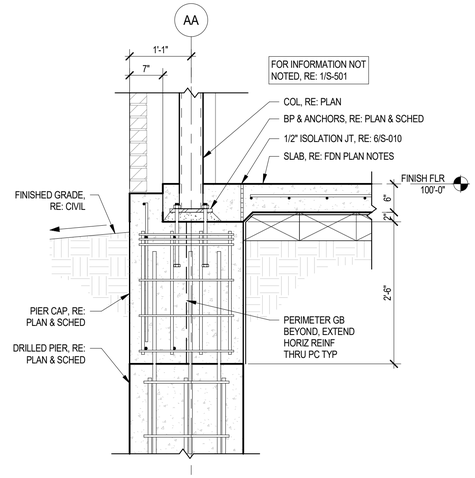

4 SECTION AT PERIMETER HSS COL
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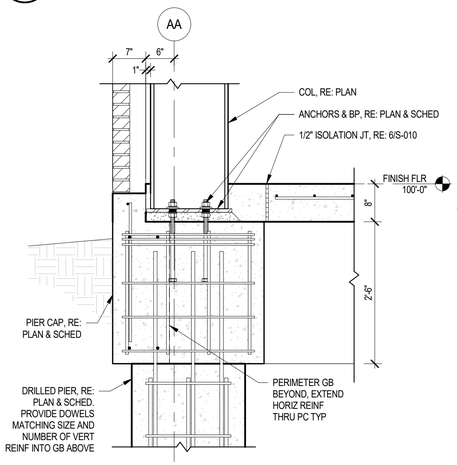

5 SECTION AT MOMENT FRAME
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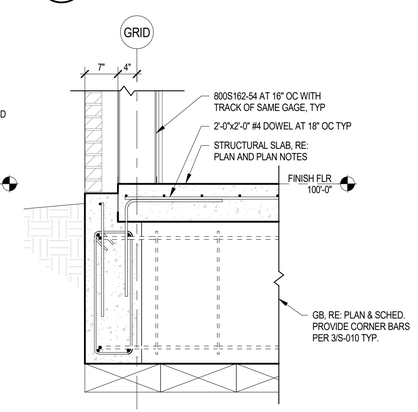

6 GRADE BEAM INTERSECTION
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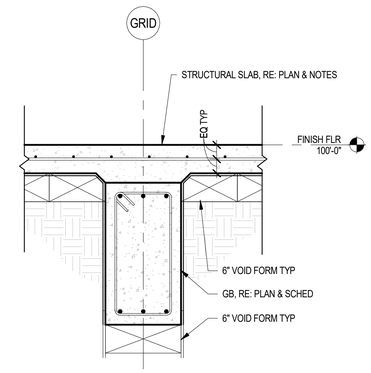
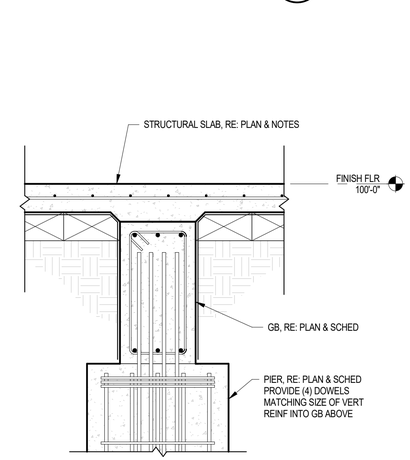


7 TYP INTERIOR GRADE BEAM
SCALE: 3/4" = 1'-0"



8 TYPICAL INTERIOR PIER
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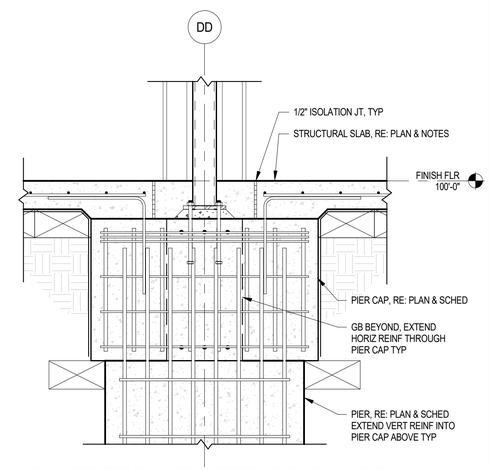

9 SECTION AT INTERIOR COLUMN
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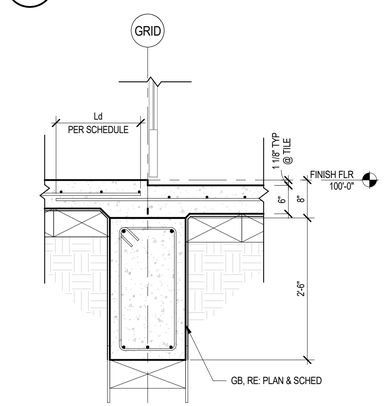

10 SLAB RECESS AT TILE
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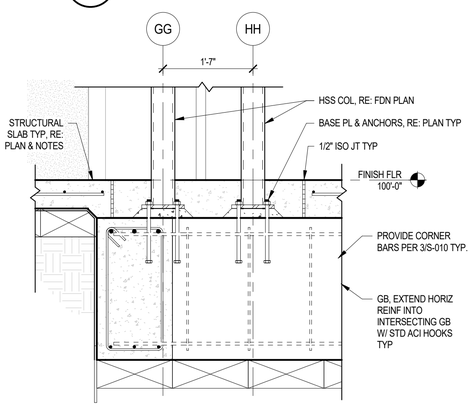
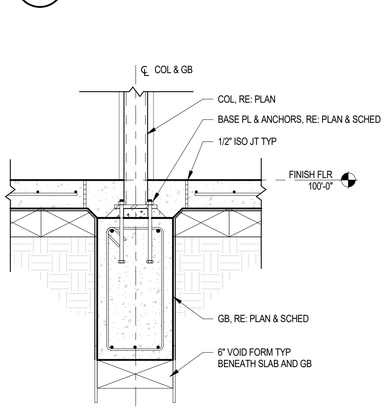


11 COLUMN TO GRADE BEAM
SCALE: 3/4" = 1'-0"



12 COLUMN TO GRADE BEAM
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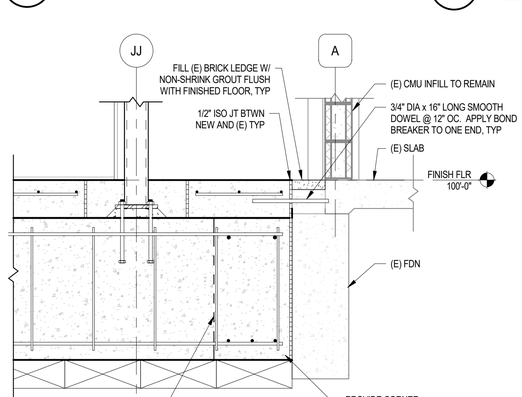

13 SECTION AT EXISTING
SCALE: 3/4" = 1'-0"

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
M.MAURICIO	M.MAURICIO	W. McCANN	B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: FOUNDATION SECTIONS

Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
LICENSED
PROFESSIONAL ENGINEER

2' 1' 0 2'
SCALE: 3/4" = 1'-0"

SEQ.	SHEET	OF
	S-501	

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5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
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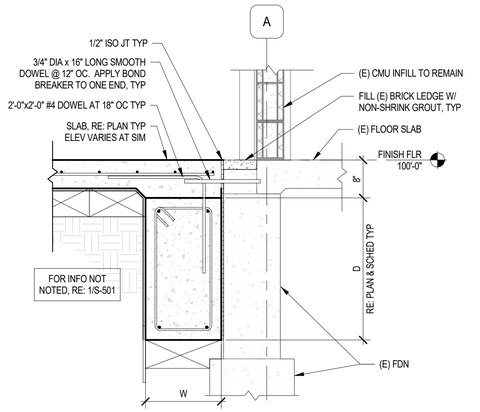

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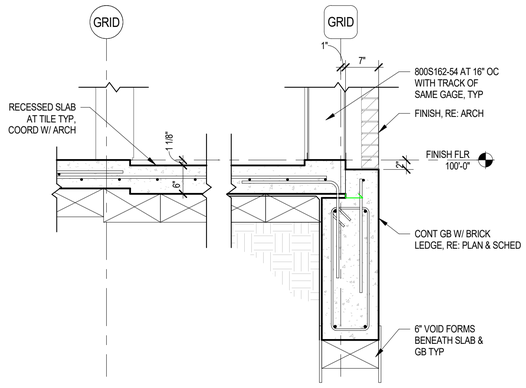

2 SLAB AT TILE
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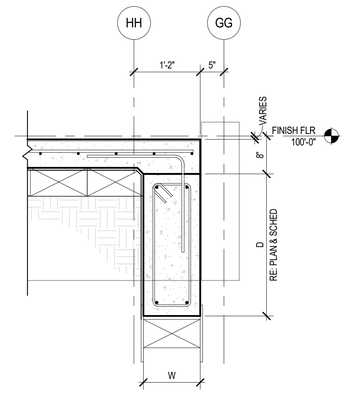
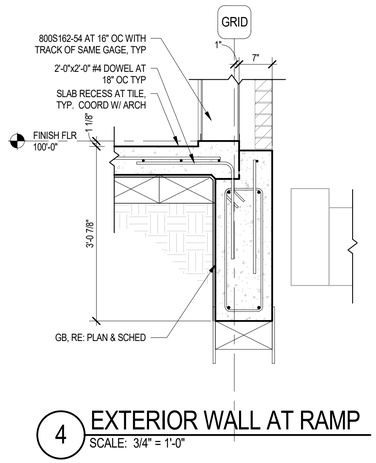


3 ENTRY SECTION AT RAMP
SCALE: 3/4" = 1'-0"



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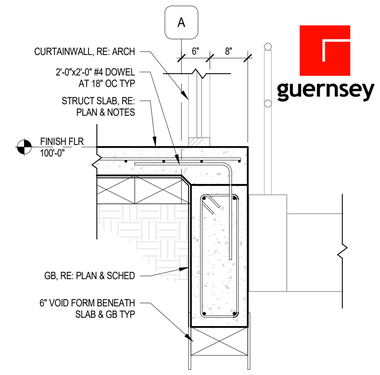
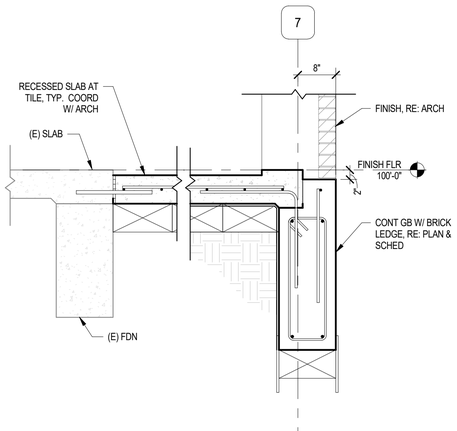


5 SECTION AT ENTRY
SCALE: 3/4" = 1'-0"

guernsey



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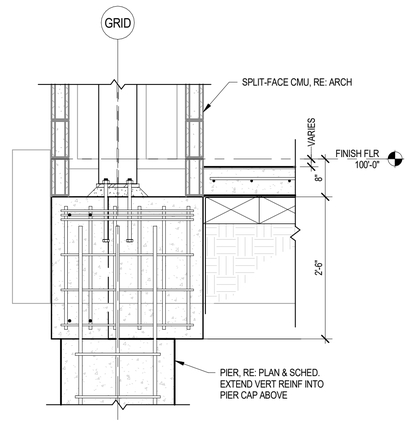

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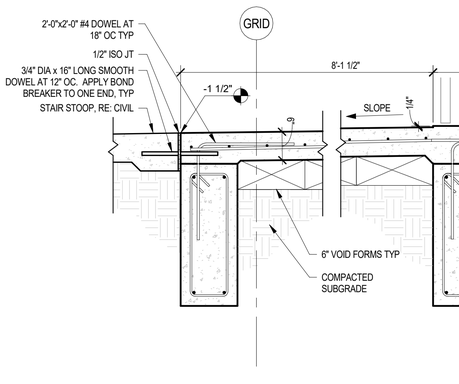
SCALE: 3/4" = 1'-0"



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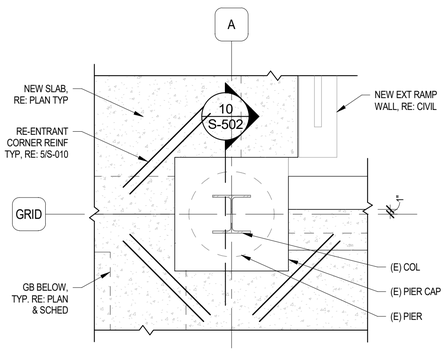
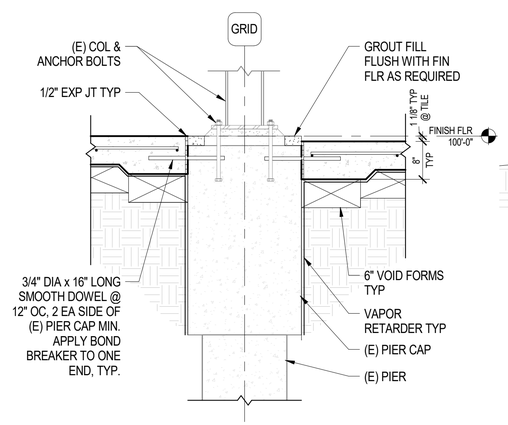


9 PLAN AT EXIST COL
SCALE: 3/4" = 1'-0"



10 EXISTING COLUMN
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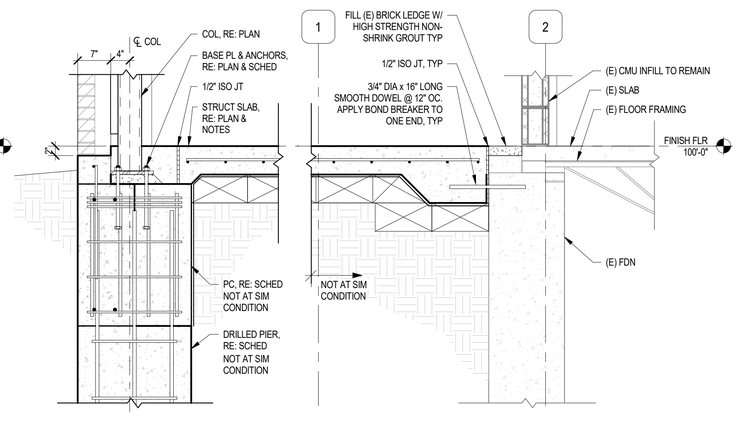
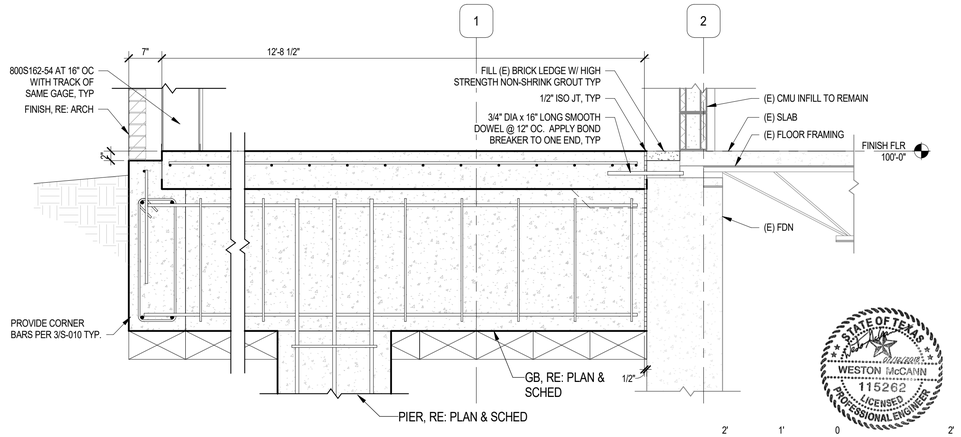


11 SECTION AT PREP AREA
SCALE: 3/4" = 1'-0"



12 SECTION AT PREP AREA
SCALE: 3/4" = 1'-0"

STATE OF TEXAS
WESTON McCANN
115262
LICENSED
PROFESSIONAL ENGINEER

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
M.MAURICIO	M.MAURICIO	W. McCANN	B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE
FOUNDATION SECTIONS

Date: 12 JUL 2018

SEQ.	SHEET	OF
	S-502	

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OKLAHOMA CITY, OK 73112 405.416.8100
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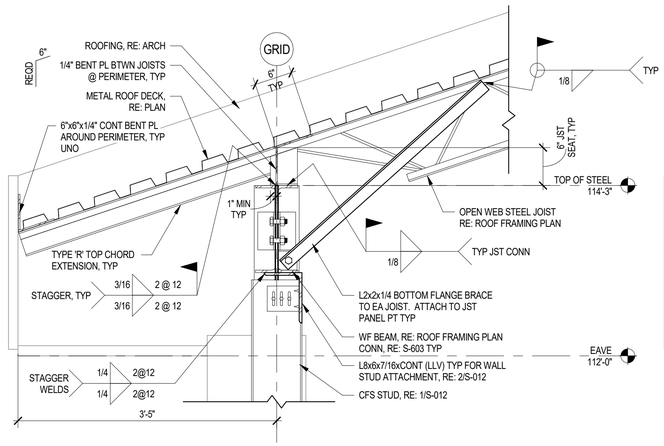

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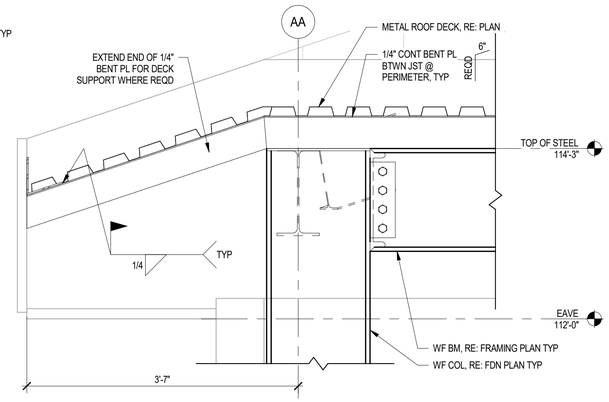
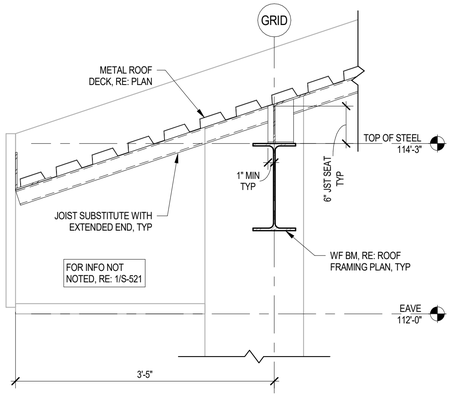


2 SECTION AT MOMENT FRAME
SCALE: 1" = 1'-0"



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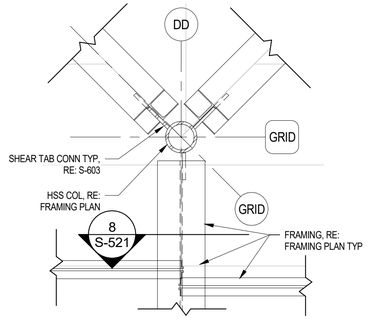

4 PLAN AT HIP APEX
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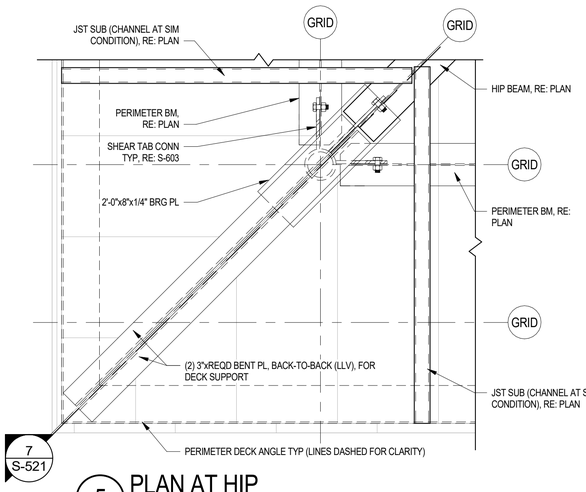
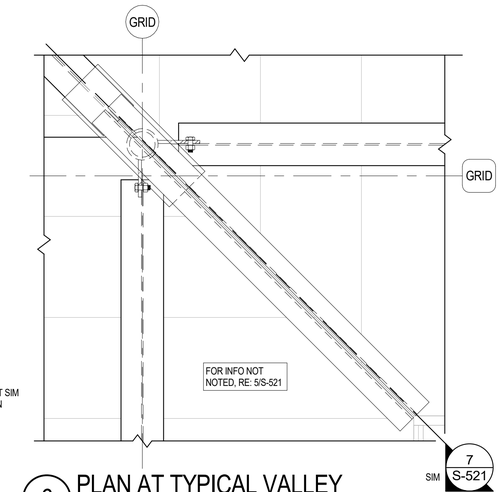
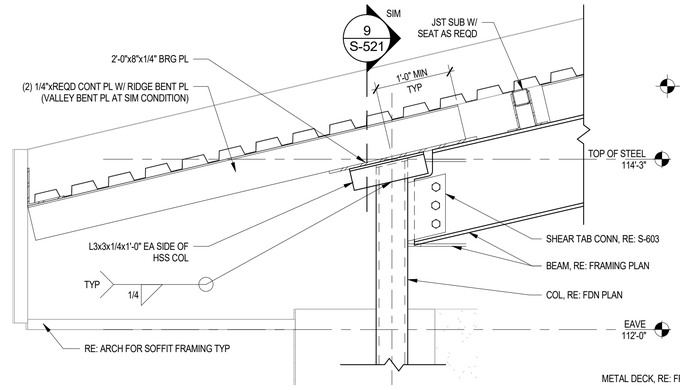


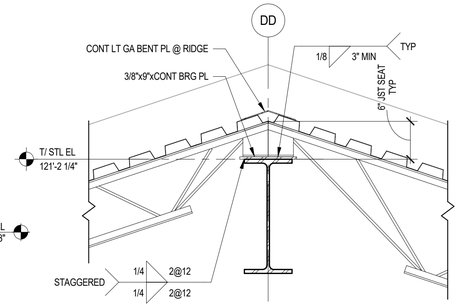
5 PLAN AT HIP
SCALE: 1" = 1'-0"



6 PLAN AT TYPICAL VALLEY
SCALE: 1" = 1'-0"



7 SECTION AT HIP
SCALE: 1" = 1'-0"



8 RIDGE SECTION
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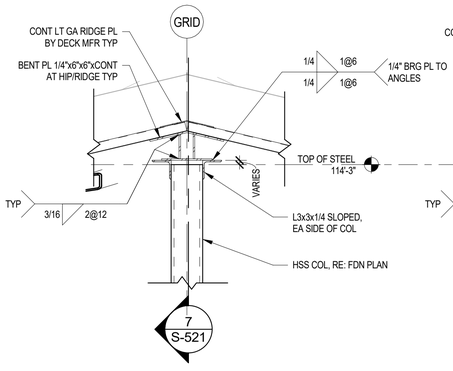
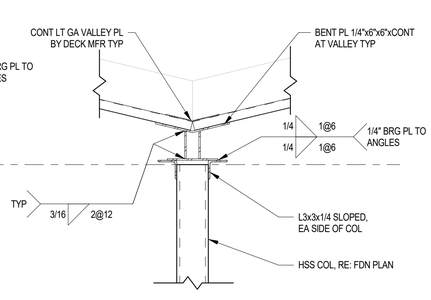
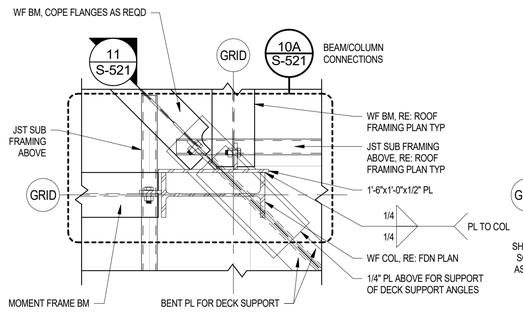


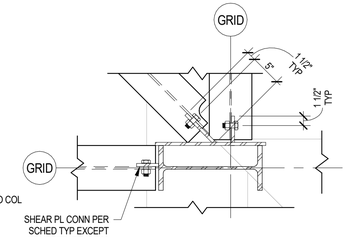


SIM CONDITION @ VALLEY

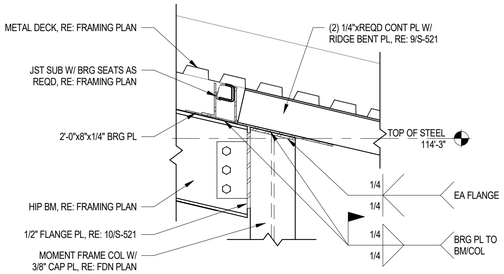
9 HIP/RIDGE SECTION
SCALE: 1" = 1'-0"



10 HIP PLAN AT MOMENT FRAME
SCALE: 1" = 1'-0"



10A CONNECTION



11 HIP SECTION AT MOMENT FRAME
SCALE: 1" = 1'-0"

guernsey

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: ROOF FRAMING DETAILS

Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
LICENSED PROFESSIONAL ENGINEER

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

SEQ.	SHEET	OF
	S-521	

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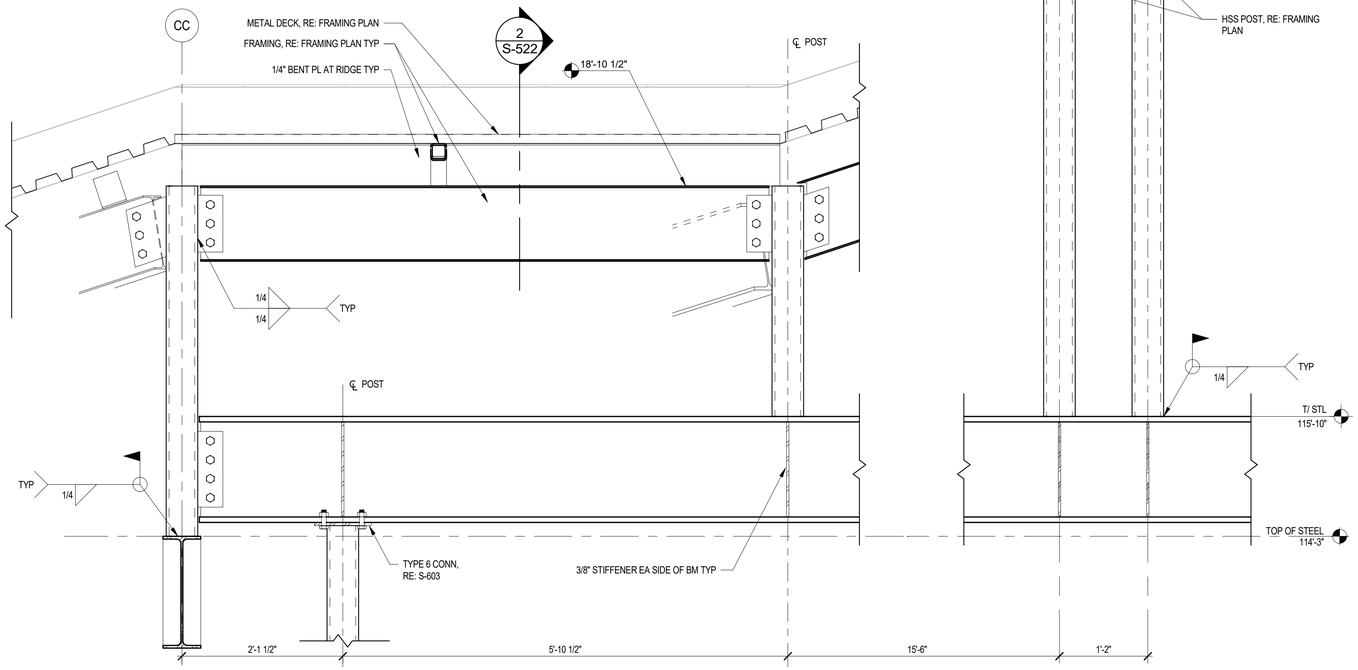
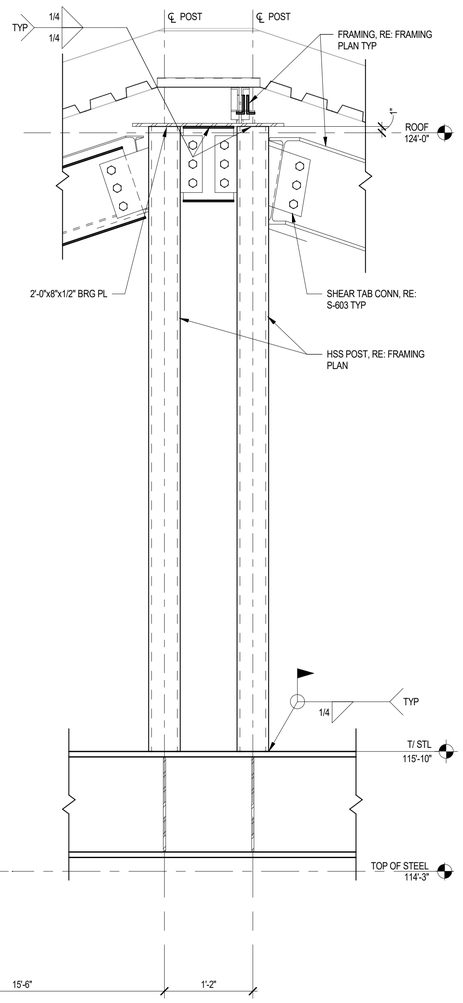
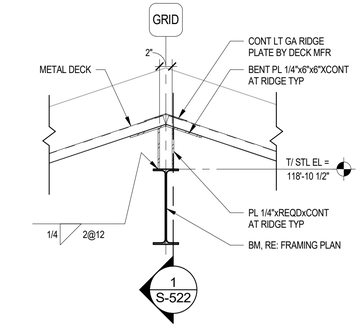
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

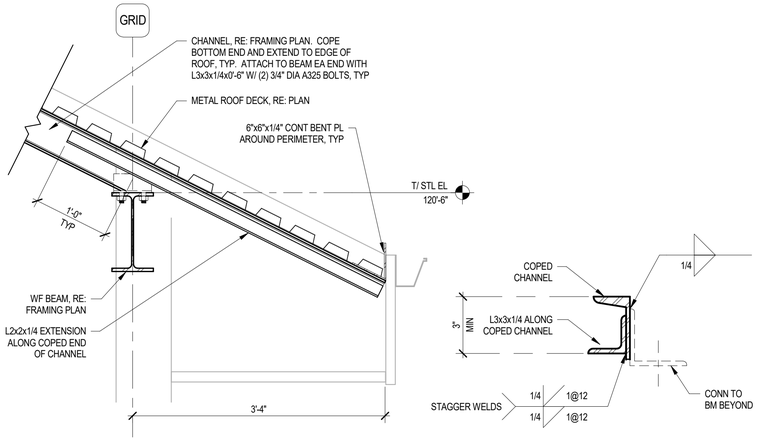


1 UPPER RIDGE SECTION
SCALE: 1" = 1'-0"



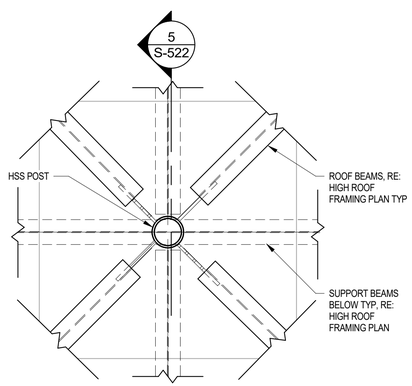


2 TYP DECK SUPPORT AT RIDGE
SCALE: 1" = 1'-0"

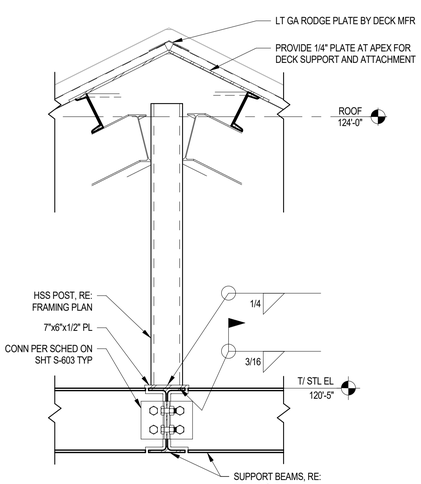


3 TOWER ROOF FRAMING
SCALE: 1" = 1'-0"

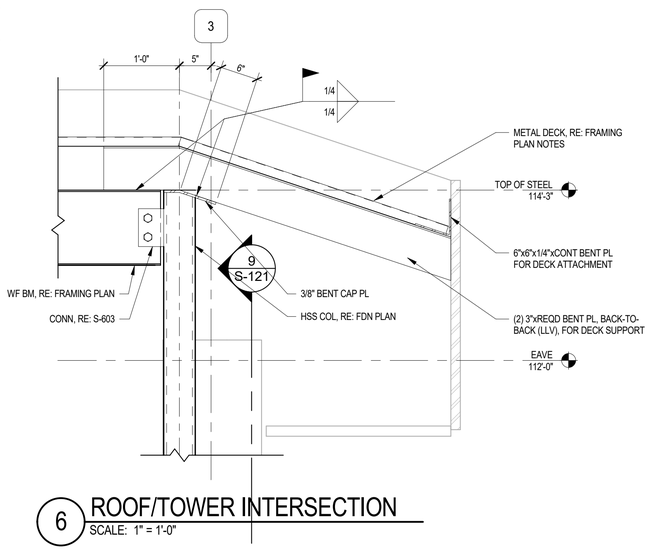
3A COPED CHANNEL
SCALE: 3" = 1'-0"



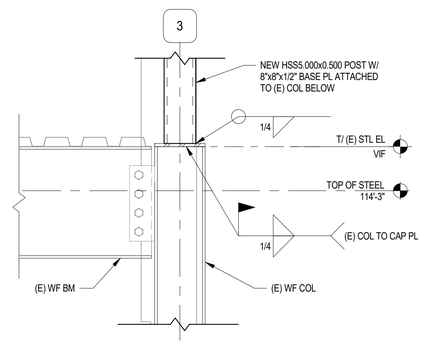
4 TOWER APEX CONNECTION
SCALE: 1" = 1'-0"



5 TOWER ROOF SUPPORT
SCALE: 1" = 1'-0"



6 ROOF/TOWER INTERSECTION
SCALE: 1" = 1'-0"



7 EXIST COLUMN MODIFICATION
SCALE: 1" = 1'-0"

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: Designer
Drawn by: Author
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ROOF FRAMING DETAILS
Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
LICENSED
PROFESSIONAL ENGINEER

SEQ.	SHEET	OF
	S-522	

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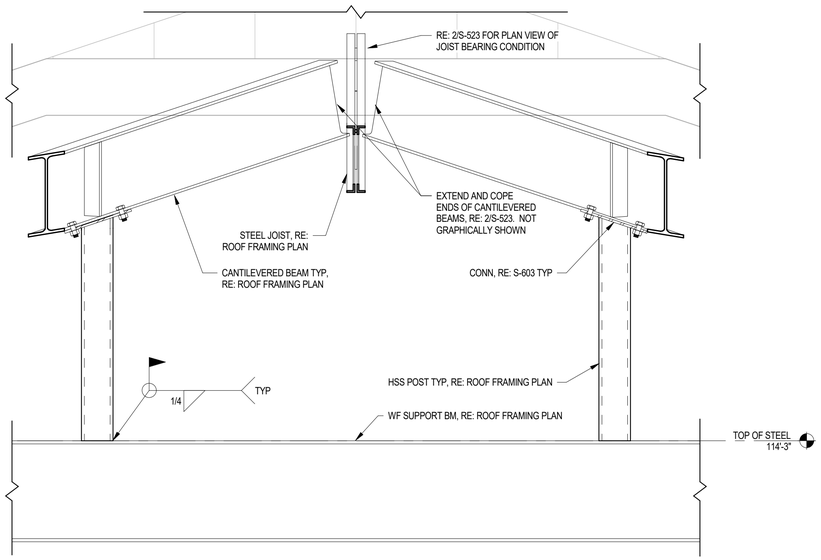
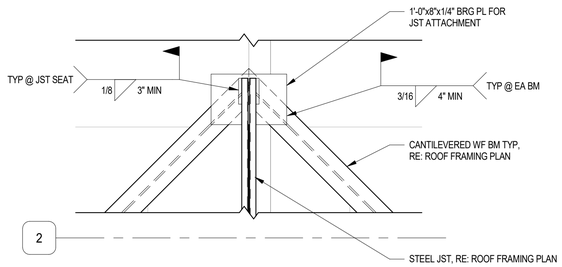
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 ROOF FRAMING AT PREP AREA
SCALE: 1" = 1'-0"



2 JOIST BEARING AT CANTILEVERED BEAMS
SCALE: 1" = 1'-0"

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

guernsey

Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by: Designer
Drawn by: Author
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ROOF FRAMING DETAILS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	S-523	

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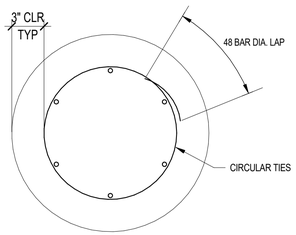
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

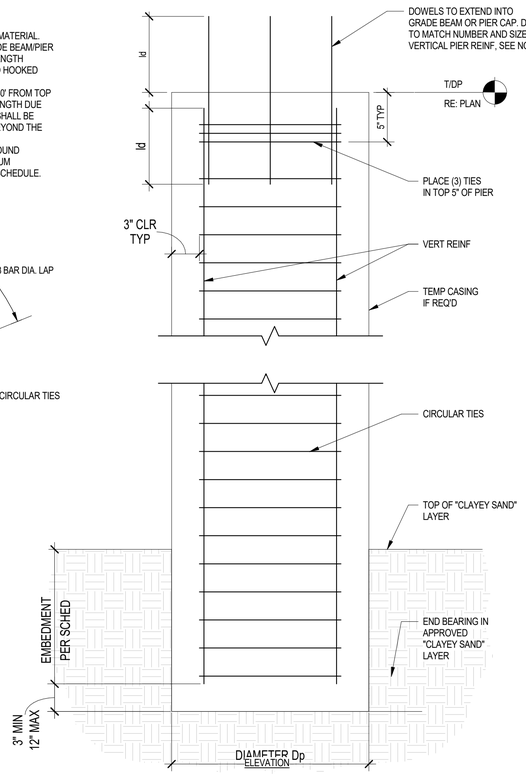
DRILLED PIER SCHEDULE

MARK	Dp (IN)	VERT REINF	TIES	MINIMUM EMBEDMENT	NOTES
DP2.0	24	(6) #6	#4 @ 12" OC	2'-0"	-
DP2.5	30	(9) #6	#4 @ 12" OC	2'-0"	-
DP3.0	36	(12) #6	#4 @ 12" OC	2'-0"	-
DP3.5	42	(16) #6	#4 @ 12" OC	2'-0"	-

NOTES:
1. RE: PLANS FOR PIER MARK.
2. SEE SPECIFICATIONS FOR CONSTRUCTION TOLERANCES.
3. BEARING SURFACE SHALL BE LEVEL AND FREE OF LOOSE MATERIAL.
4. EXTEND STRAIGHT DOWELS TO WITHIN 3" OF TOP OF GRADE BEAM/PIER CAP. DOWELS THAT CANNOT MEET THE DEVELOPMENT LENGTH NOTED IN THE LAP SPLICE SCHEDULE SHALL HAVE ACI STD HOOKED ENDS.
5. PIER VERT REINFORCING SHALL EXTEND DOWN A MIN OF 30' FROM TOP OF PIER, UNLESS PIER LENGTH IS SHORTER THAN THAT LENGTH DUE TO REQUIRED BEARING DEPTH, IN WHICH CASE THE PIER SHALL BE REINFORCED FULL DEPTH. REINFORCING IS NOT REQ'D BEYOND THE 30' DEPTH FROM TOP OF PIER.
6. ALL PIERS SHALL BEAR INTO THE "CLAYEY SAND" LAYER FOUND APPROXIMATELY 20 FEET BELOW EXISTING GRADE. MINIMUM EMBEDMENT INTO "CLAYEY SAND" LAYER IS AS NOTED IN SCHEDULE.



PLAN

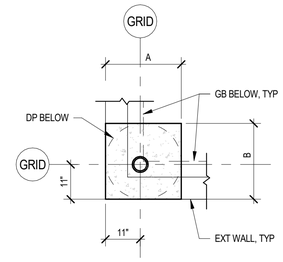


ELEVATION

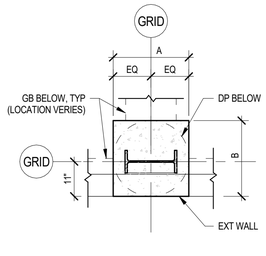
PIER CAP SCHEDULE

MARK	TYPE	A	B	TIES	VERT REINF	BOT BARS		TOP BARS		REINF LAYOUT	REMARKS
						LW	TR	LW	TR		
PC1	1	2'-0"	2'-0"	#3 @ 10" OC	(12) #5	-	-	-	-		-
PC2	4	2'-8"	2'-0"	#3 @ 10" OC	(14) #5	-	-	-	-		-
PC3	5	3'-9"	2'-0"	#3 @ 10" OC	(18) #5	-	-	-	-		-
PC4	6	2'-0"	4'-6"	-	-	(3) #5	#3 TIES	(3) #5	#3 TIES	-	#3 TIES SPACED AT 10" OC
PC5	3	2'-2"	2'-2"	#3 @ 10" OC	(12) #5	-	-	-	-		-
PC6	3	4'-0"	4'-0"	#3 @ 10" OC	(28) #6	-	-	-	-		-
PC7	7	2'-8"	2'-8"	#3 @ 10" OC	(18) #5	-	-	-	-		-
PC8	2	2'-0"	2'-0"	#3 @ 10" OC	(12) #5	-	-	-	-		-
PC9	3	4'-0"	4'-0"	#3 @ 10" OC	(28) #6	-	-	-	-		-
PC10	8	2'-0"	2'-0"	#3 @ 10" OC	(12) #5	-	-	-	-		-

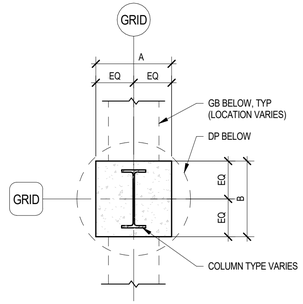
NOTES:
1. LW = LENGTHWISE, TR = TRANSVERSE.
2. WHERE PIER IS INTEGRAL WITH A GRADE BEAM(S), RUN HORIZONTAL GRADE BEAM REINFORCING CONTINOUS THROUGH PIER.
3. DEPTH OF PIER CAP SHALL BE THE DIFFERENCE BETWEEN THE T/ PC ELEVATION AND T/ PIER ELEVATION.
4. PROVIDE 3 SETS OF TIES IN TOP 5" OF PIERS, TYP.
5. CHAMFER EXPOSED EXTERIOR CORNERS, TYP.
6. MAINTAIN 2 INCH CONCRETE CLEAR COVER ON ALL SIDES OF PIER CAPS.



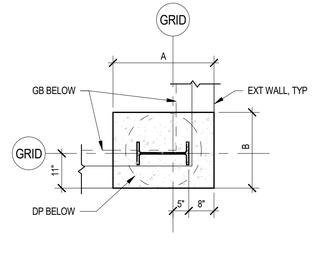
1 PIER CAP TYPE 1
NOT TO SCALE



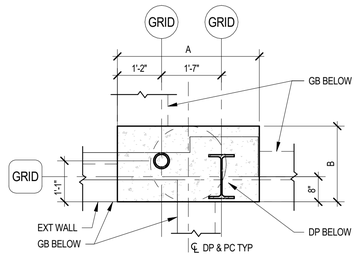
2 PIER CAP TYPE 2
NOT TO SCALE



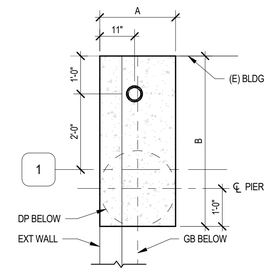
3 PIER CAP TYPE 3
NOT TO SCALE



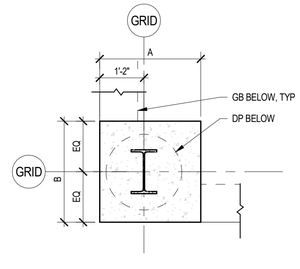
4 PIER CAP TYPE 4
NOT TO SCALE



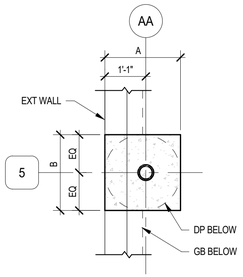
5 PIER CAP TYPE 5
NOT TO SCALE



6 PIER CAP TYPE 6
NOT TO SCALE



7 PIER CAP TYPE 7
NOT TO SCALE



8 PIER CAP TYPE 8
NOT TO SCALE

guernsey

REVISIONS

Symbol	Description	Date	Appr

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: SCHEDULES
Date: 12 JUL 2018

STATE OF TEXAS
WESTON McCANN
115262
LICENSED
PROFESSIONAL ENGINEER

SEQ. | SHEET | OF
S-601

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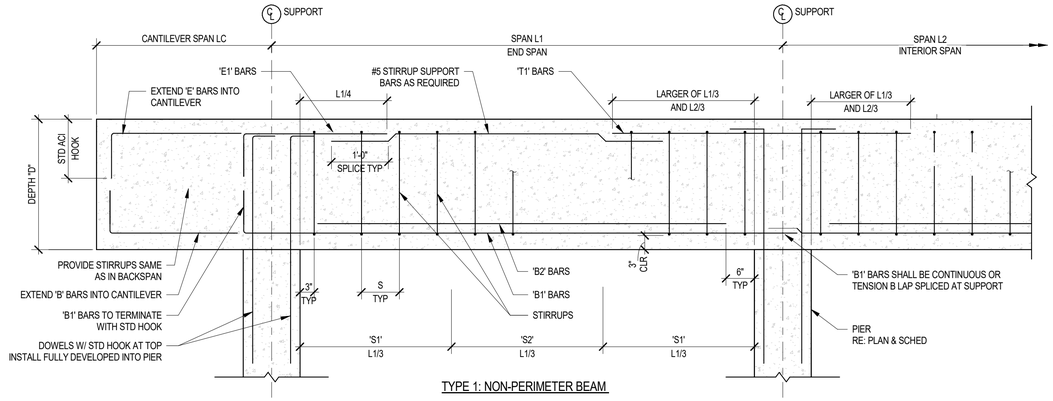
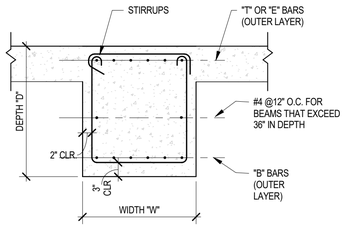
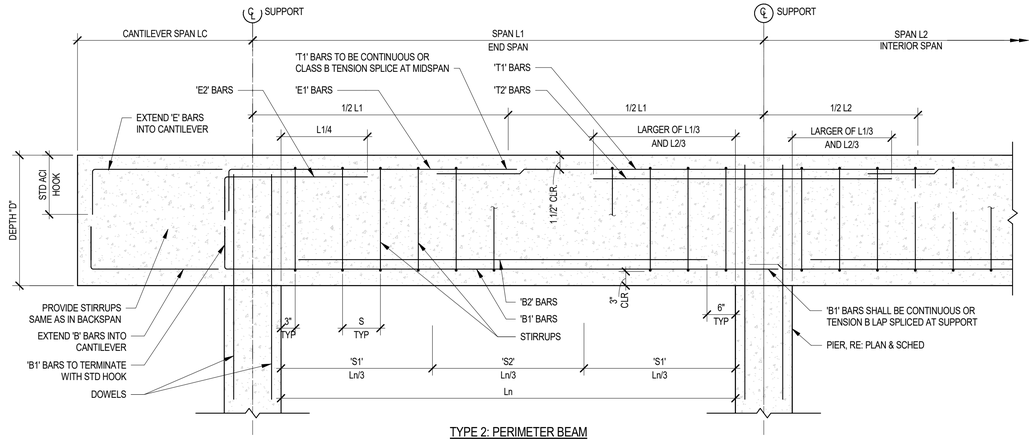
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

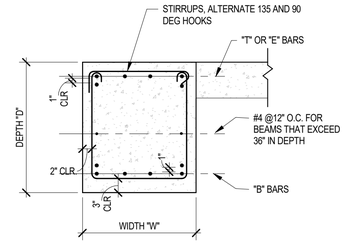


TYPE 1: NON-PERIMETER BEAM





TYPE 2: PERIMETER BEAM



1 CONCRETE BEAM SCHEDULE

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

MARK	TYPE	WIDTH "W" (IN)	DEPTH "D" (IN)	END BARS		TOP BARS		BOT BARS		STIRRUPS				REMARKS
				E1	E2	T1	T2	B1	B2	SIZE	S1 (IN)	S2 (IN)	TYPE	
GB1	1	16	30	(2) #6		(2) #6		(3) #5		#3	13	18		
GB2	1	16	30	(3) #7		(3) #7		(3) #7		#3	13	18		
GB3	1	16	30	(3) #7		(3) #7		(3) #5		#3	13	18		
GB4	1	16	30	(2) #6		(2) #6		(2) #5		#3	13	18		
GB5	2	12	30	(2) #5		(2) #5		(2) #5		#3	13	18		
GB6	2	12	30	(2) #6		(2) #6		(2) #6		#3	13	18		

NOTES:

1. PLACE "T" BARS AT INTERIOR SUPPORTS OF GRADE BEAM. PLACE 'E' BARS @ END SUPPORT OF END SPAN, OR BOTH ENDS OF SINGLE SPAN GRADE BEAMS.
2. SPLICE BOTTOM REINF AT SUPPORT AND TOP REINF AT MIDSPAN AS SHOWN.
3. WHERE TWO LAYERS OF REINFORCING ARE INDICATED, PROVIDE A CLEAR DISTANCE EQUAL TO THE BAR DIAMETER BETWEEN LAYERS, HOWEVER CLEAR DISTANCE SHALL NOT BE LESS THAN 1".
4. ALL GRADE BEAMS SHALL BE PLACED ON 6" VOID FORMS W/ RETAINER BOARDS ON BOTH SIDES.
5. DRILLED PIER REINF NOT SHOWN FOR CLARITY. RE SCHEDULE ON S-601.

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: SCHEDULES

Date: 12 JUL 2018

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S-602

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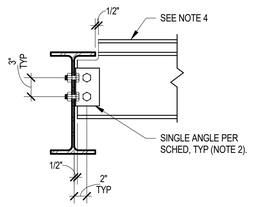
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

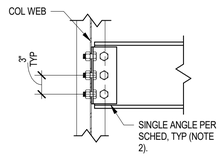
TYPICAL SIMPLE STEEL CONNECTION SCHEDULE

BEAM SIZE	TYPE 1, 2 CONNECTOR	TYPE 3 CONNECTOR	TYPE 4, 5 CONNECTOR	N (# ROWS OF BOLTS)	BOLT TYPE	WELD SIZE	WEB STIFFENER
W8	L4X4X7/16 SLO	LL4X4X7/16 SLO	SHEAR PLATE 3/8"	2	3/4" DIA A325	1/4"	3/8"
W10	L4X3 1/2X5/16 SLO	LL4X3 1/2X5/16 SLO	SHEAR PLATE 3/8"	2	3/4" DIA A325	1/4"	3/8"
W12, W14	L4X3 1/2X5/16 SLO	LL4X3 1/2X5/16 SLO	SHEAR PLATE 3/8"	3	3/4" DIA A325	1/4"	3/8"
W16, W18	L4X3 1/2X5/16 SLO	LL4X3 1/2X5/16 SLO	SHEAR PLATE 3/8"	4	3/4" DIA A325	1/4"	3/8"

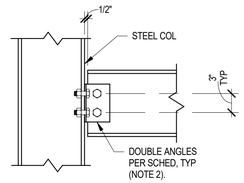
NOTES:
1. SEE FRAMING PLANS FOR BEAM AND/OR POST SIZES AND FOUNDATION PLAN FOR COLUMNS SIZES.
2. ALL BOLTS SHALL BE HEAVY HEX BOLTS AND SHALL ONLY BE TIGHTENED TO THE SNUG TIGHT UNO.
3. DECK AND JOIST NOT SHOWN.
4. BEAM MAY OCCUR HIGHER FOR DECK BEARING, COORD W/ PLAN.
5. FOR SHEAR TABS WELDED TO HSS COLUMNS W/ 3/16" WALLS, USE 5/16" SHEAR PLATES.
6. SHEAR PLATE CAN BE PROVIDED W/ HORIZONTAL SHORT SLOTTED HOLES AT CONTRACTOR'S OPTION, UNO.
7. CONNECTOR TYPE 6 IS AS NOTED IN DETAIL BELOW.



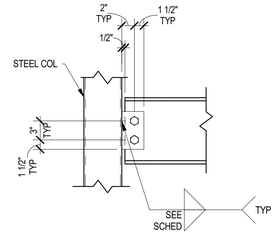
1 BEAM TO GIRDER



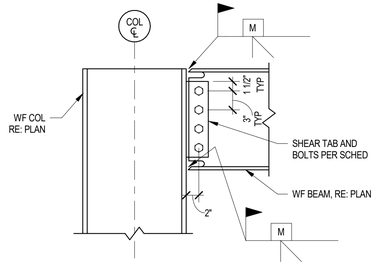
2 BEAM TO COLUMN WEAK AXIS



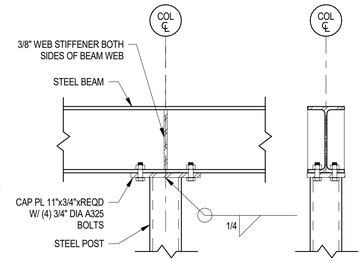
3 BEAM TO COLUMN STRONG AXIS



4 BEAM TO HSS COLUMN



5 MOMENT CONNECTION

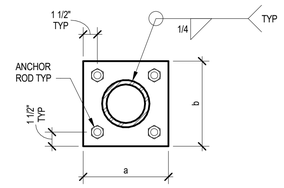


6 HSS POST UP TO CANTILEVERED BEAM

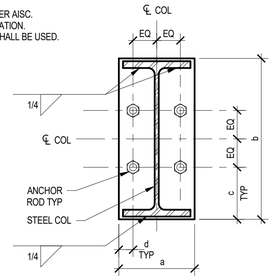
STEEL COLUMN BASE PLATE SCHEDULE

MARK	COLUMN SIZE	TYPE	BASE PLATE DIMENSIONS T	a	b	c	d	ANCHOR RODS DIA	Hef	REMARKS
BP1	W16x57	2	3/4"	8"	1'-6"	5 1/2"	1 1/2"	7/8"	12"	
BP2	W16x57	2	3/4"	8"	1'-6"	5 1/2"	1 1/2"	3/4"	9"	
BP3	W14x53	2	3/4"	9"	1'-3"	4"	2"	3/4"	9"	
BP4	HSS6x0.500	1	3/4"	9"	9"	-	-	3/4"	9"	
BP5	HSS6x0.500	1	3/4"	9"	9"	-	-	3/4"	9"	
BP6	W18x65	2	3/4"	8"	1'-7"	6"	1 1/2"	3/4"	9"	
BP7	HSS5x0.500	3	3/4"	9"	1'-0"	4"	3"	3/4"	9"	
BP8	HSS5x0.500	4	3/4"	9 1/2"	9 1/2"	4"	4"	3/4"	9"	
BP9	HSS5x0.500	5	3/4"	11 1/2"	11 1/2"	4"	4"	3/4"	9"	
BP10	HSS5x0.500	6	3/4"	9 1/2"	11 1/2"	4"	4"	3/4"	9"	

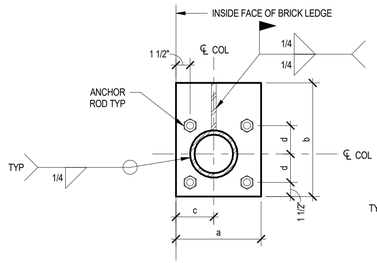
NOTES:
1. ALL BASE PLATES SHALL BE A36 STEEL, TYP, UNO.
2. ALL BASE PLATES SHALL BEAR ON 2" THICK 5000 PSI NON-SHRINK GROUT AND SHALL HAVE LEVELING NUTS, TYP, UNO.
3. ALL BASE PLATES SHALL BE WELDED TO THE COLUMN WITH A 1/4" FILLET WELD ALL AROUND, TYP, UNO.
4. ALL ANCHOR RODS SHALL BE DIAMETER NOTED IN SCHEDULE. ASTM F1554 GR 36. THEY SHALL BE HEADED ANCHOR RODS OR SHALL HAVE A HEAVY HEX NUT AT THE BASE, TYP, UNO. ALL ANCHOR RODS SHALL HAVE HARDENED WASHERS AND NUTS, WITH FULL HEIGHT OF EXTENSIONS THREADED. WASHERS SHALL CONFORM TO AISC STEEL CONSTRUCTION MANUAL TABLE 14-2.
5. ALL ANCHOR RODS SHALL BE SET IN PLACE WITH A TEMPLATE. THEY SHALL BE PLACED PLUMB AND AT THE CORRECT DEPTH AND EXTENSION.
6. ALL ANCHOR ROD HOLES IN BASE PLATES SHALL BE OVERSIZED PER AISC.
7. SEE THE STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION.
8. FOR BASE PLATES ON BRACE FRAME COLUMNS, NO GROUT PAD SHALL BE USED.



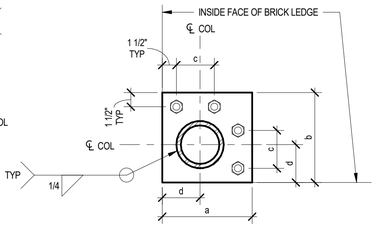
1 BASE PLATE DETAIL



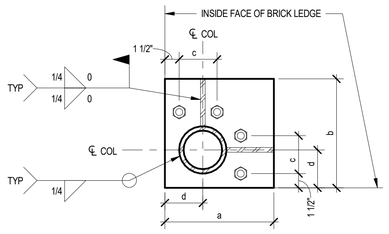
2 BASE PLATE DETAIL



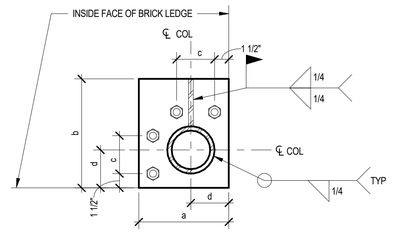
3 BASE PLATE DETAIL



4 BASE PLATE DETAIL



5 BASE PLATE DETAIL



6 BASE PLATE DETAIL

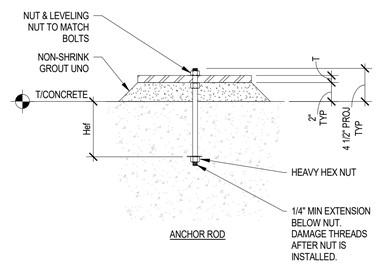
MISCELLANEOUS LOOSE LINTEL SCHEDULE FOR NON-LOAD BEARING MASONRY VENEERS

MO SIZE \ VENEER THK	4" VENEER	6" VENEER	8" VENEER	10" VENEER	12" VENEER
UP TO 4'-0	L4x3 1/2 x 5/16	WT4x10.5	LL4x4x5/16	L5x3 1/2x5/16 + L4x3 1/2x5/16	-
4'-0 TO 6'-0	L5x3 1/2 x 5/16	WT7x11	LL5x5x5/16	L5x5x5/16 + L4x4x5/16	-
6'-0 TO 8'-0	L6x3 1/2 x 5/16		LL6x6x5/16	L5x5x5/16 + L6x4x5/16	-
8'-0 TO 12'-0	L6 x 6x 1/2				
12'-0 TO 16'-0	L8 x 6 x 5/8				

NOTES:
1. RE: ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR OPENING SIZE AND LOCATION.
2. CONNECT 2 ANGLES TO ALL 2 AND 3 ANGLE LINTELS BACK TO BACK AT 24" OC MAX.
3. ALL ANGLES LONG LEG VERTICAL, UNO.
4. BEARING END OF STEEL LINTEL AT CONTROL JOINT SHALL BE WRAPPED WITH BUILDING PAPER.
5. PROVIDE MINIMUM 6" BEARING ON BRICK OR SOLID CONCRETE BLOCK.
6. PROVIDE MINIMUM 8" X WALL THICKNESS X 8" HIGH GROUTED CMU OR BRICK BEARING PAD UNDER ALL LINTELS, UNO. GROUT JAMBS OF MASONRY OPENINGS 6'-0" AND LARGER FULL HEIGHT FOR 8" MINIMUM WIDTH.
7. CONNECT LINTEL TO COLUMN IF MASONRY OPENING IS ADJACENT TO COLUMN AND LINTEL HAS LESS THAN 8" BEARING ON CMU BEYOND COLUMN FLANGES.
8. ANGLES IN EXTERIOR WALLS ARE TO BE GALVANIZED.

AISC TABLE 14-2 MAXIMUM SIZES FOR ANCHOR-ROD HOLES AND WASHER REQUIREMENTS			
ANCHOR ROD DIAMETER, in.	MAX. HOLE DIAMETER, in.	MIN. WASHER SIZE, in.	MIN. WASHER THICKNESS
3/4	1 5/16	2	1/4
7/8	1 9/16	2 1/2	5/16
1	1 13/16	3	3/8
1 1/4	2 1/16	3	1/2
1 1/2	2 5/16	3 1/2	1/2
1 3/4	2 3/4	4	5/8
2	3 1/4	5	3/4
2 1/2	3 3/4	5 1/2	7/8

NOTES:
1. WHEN BASE PLATES ARE LESS THAN 1 1/4" THICK, PUNCHING OF HOLES MAY BE AN ECONOMICAL OPTION. IN THIS CASE, 3/4" ANCHOR RODS AND 1 1/16" DIAMETER PUNCHED HOLES MAY BE USED WITH ASTM F844 (USS STANDARD) WASHERS IN PLACE OF FABRICATED PLATE WASHERS.



guernsey

STATE OF TEXAS
WESTON McCANN
115262
LICENSED
PROFESSIONAL ENGINEER

Symbol	Description	Date	Appr

REVISIONS

Designed by: M.MAURICIO
Drawn by: M.MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: SCHEDULES
Date: 12 JUL 2018

SEQ. | SHEET | OF
S-603

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C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

ABBREVIATIONS

A		
	@	AT
	A/C	AIR CONDITIONING
	AB	ANCHOR BOLT
	ABI	ADDITIVE BID ITEM
	ACT	ACOUSTICAL CEILING TILE
	ADJ	ADJACENT, ADJUSTABLE
	AFF	ABOVE FINISH FLOOR
	AFL	ATHLETIC FLOORING
	AGGR	AGGREGATE
	ALT	ALTERNATE
	ALUM, AL	ALUMINUM
	AP	ACRYLIC PANEL
	APPROX	APPROXIMATE
	APVD	APPROVED
	ARCH	ARCHITECT, ARCHITECTURAL
	ATFP	ANTI-TERRORISM FORCE PROTECTION
	ATTEN	ATTENUATOR, ATTENUATION
	AWP	ACOUSTIC WALL PANEL
B		
	BB	BASE BID
	BD	BOARD
	BITUM	BITUMINOUS
	BLDG	BUILDING
	BLKG	BLOCKING
	BM	BEAM, BENCH MARK
	BOT, BTM	BOTTOM
	BRG	BEARING
	BRK	BRICK
	BSMT	BASEMENT
C		
	C TO C	CENTER TO CENTER
	CAB	CABINET
	CBB	CEMENTITIOUS BACKER BOARD
	CC	CONTRACTOR CONNECT
	CF	CONTRACTOR FURNISHED
	CFMF	COLD-FORMED METAL FRAMING
	CG	CORNER GUARD
	CI	CONTRACTOR INSTALLED
	CJ	CONSTRUCTION CONTROL JOINT
	CL	CENTER LINE
	CLG	CEILING
	CLR	CLEAR
	CMU	CONCRETE MASONRY UNIT
	CO	CLEANOUT
	COL	COLUMN
	CONC	CONCRETE
	CONT	CONTINUOUS
	CPT	CARPET
	CR	CONTRACTOR ROUGH-IN
	CT	CERAMIC TILE
D		
	DB	DOUBLE
	DEMO	DEMOLITION, DEMOLISH
	DF	DRINKING FOUNTAIN
	DIA	DIAMETER
	DIAG	DIAGONAL
	DIM	DIMENSION
	DN, DWN	DOWN
	DP	DAMPPROOFING
	DR	DOOR
	DS	DOWNSPOUT
	DTL	DETAIL
	DWG	DRAWING
	DWP	DECORATIVE WALL PANEL
	DWR	DRAWER
E		
	EA	EACH
	EF	EXHAUST FAN
	EIFS	EXTERIOR INSULATION & FINISH SYSTEM
	ELEC	ELECTRICAL
	ELEV	ELEVATION
	EPC	EPOXY COATING
	EQ	EQUAL
	EQPT	EQUIPMENT
	ES	EMERGENCY SHOWER
	EW	EYE WASH
	EWC	ELECTRIC WATER COOLER
	EXIST	EXISTING
	EXP	EXPANSION, EXPOSED
	EXP JT, EJ	EXPANSION JOINT
	EXT	EXTERIOR
F		
	FD	FLOOR DRAIN
	FDN	FOUNDATION
	FE	FIRE EXTINGUISHER
	FEC	FIRE EXTINGUISHER CABINET
	FF	FINISH FLOOR
	FH	FIRE HYDRANT
	FHC	FIRE HOSE CABINET
	FHS	FIRE HOSE STATION
	FIN	FINISHED
	FLR	FLOOR
	FPRF	FIREPROOF
	FRP	FIBER-REINFORCED PLASTIC
	FT	FOOT, FEET
	FTG	FOOTING
	FURR	FURRED, FURRING
	FWC	FABRIC WALL COVERING
G		
	GA	GAUGE
	GALV	GALVANIZED
	GB	GRAB BAR
	GL	GLASS, GLAZING
	GRT	GROUT
	GT	GLASS TILE
	GWB	GYPSUM WALLBOARD
	GYP	GYPSUM
H		
	HB	HOSE BIB
	HC	HANDICAPPED
	HC	HOLLOW CORE
	HDW	HARDWARE
	HDWD	HARDWOOD
	HM	HOLLOW METAL
	HMB	HORIZONTAL METAL BLINDS
	HORIZ	HORIZONTAL
	HPL	HIGH PRESURE LAMINATE
	HT	HEIGHT
	HTR	HEATER
	HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
I		
	ID	INSIDE DIAMETER
	IN	INCH
	INSUL	INSULATION
	INT	INTERIOR
J		
	JST	JOIST
	JT	JOINT
L		
	LAM	LAMINATE
	LAV	LAVATORY
	LB	POUND
	LBL	LABEL
	LF	LINEAL FEET
	LN	LINOLEUM
	LVR	LOUVER
	LVT	LUXURY VINYL TILE
	LWT	LIGHTWEIGHT
M		
	MACH	MACHINE
	MAINT	MAINTENANCE
	MATL	MATERIAL
	MAX	MAXIMUM
	MB	MARKER BOARD
	MBR	MEMBER
	MC	MEDICINE CABINET
	MECH	MECHANICAL
	MEZZ	MEZZANINE
	MFR	MANUFACTURE, MANUFACTURER
	MH	MANHOLE
	MIN	MINIMUM
	MISC	MISCELLANEOUS
	MK	MARK
	ML	METAL LOCKER
	MLDG	MOLDING
	MO	MASONRY OPENING
	MSNRY	MASONRY
	MSP	METAL SPLASH PAN
	MT	METAL THRESHOLD
	MTD	MOUNTED
	MTL	METAL
	MVBL	MOVABLE
	MWP	MEMBRANE WEATHERPROOFING
N		
	NIC	NOT IN CONTRACT
	NO	NUMBER
	NOM	NOMINAL
	NPRN	NEOPRENE
	NTS	NOT TO SCALE
O		
	OA	OVERALL, OUTSIDE AIR
	OC	ON CENTER
	OD	OUTSIDE DIAMETER
	OPNG	OPENING
	OPP	OPPOSITE
	OVHD	OVERHEAD
	OZ	OUNCE
P		
	PART	PARTIAL
	PEMB	PRE-ENGINEERED METAL BUILDING
	PL	PLATE, PLASTIC
	PLAS	PLASTIC
	PLBG	PLUMBING
	PLYWD	PLYWOOD
	PNL	PANEL, PANELBOARD
	PREFAB	PREFABRICATED
	PREFIN	PREFINISHED
	PRJ	PROJECTION
	PROP	PROPERTY
	PSI	POUNDS PER SQ IN
	PT	PAINT
	PTD	PAINTED
	PTDD	PAPER TOWEL DISPENSER / DISPOSAL
	PTN	PARTITION
	PVC	POLYVINYL CHLORIDE
Q		
	QT	QUARRY TILE
	QZ	QUARTZ MATERIAL
R		
	RA	RETURN AIR
	RAF	RAISED ACCESS FLOORING
	RB	RUBBER BASE
	RD	ROAD, ROOF DRAIN
	RECT	RECTANGULAR
	REF, RE	REFER, REFERENCE
	REINF	REINFORCE, REINFORCED
	REP	REPRESENTATIVE
	REQD	REQUIRED
	RFG	ROOFING
	RFL	RUBBER FLOORING
	RH	ROBE HOOK
	RM	ROOM
	RND	ROUND
	RS	ROLLER SHADES
	RST	RUBBER STAIR TREADS
S		
	S	SIGNAGE
	SB	SPLASH BLOCK
	SC	SEALED CONCRETE
	SCHED	SCHEDULE
	SCN	STAINED CONCRETE
	SD	SOAP DISPENSER
	SECT	SECTION
	SEQ	SEQUENCE
	SHT	SHEET
	SIM	SIMILAR
	SJ	STUCCO JOINT, SAWN JOINT
	SMC	SUSPENDED METAL CEILING
	SND	SANITARY NAPKIN DISPENSER
	SPECS	CONTRACT SPECIFICATIONS
	SQ	SQUARE
	SS	STAINLESS STEEL
	SSM	SOLID SURFACE MATERIAL
	ST	STAIN
	STD	STANDARD
	STL	STEEL
	STN	NATURAL STONE
	STOR	STORAGE
	STRUCT	STRUCTURAL
	SUSP	SUSPENDED
	SWC	SUSPENDED WOOD CEILING
T		
	T	TREAD
	TC	TOWEL DISPENSER
	TFMR	TRANSFORMER
	THK	THICK
	THRU	THROUGH
	TOC	TOP OF CONCRETE
	TOM	TOP OF MASONRY
	TOS	TOP OF STEEL
	TOW	TOP OF WALL
	TP	TOILET PARTITION
	TS	FLOORING TRANSITION
	TT	TILE TRIM
	TTD	TOILET TISSUE DISPENSER
	TYP	TYPICAL
	TZ	TERRAZZO
U		
	UGND	UNDERGROUND
	UL	UNDERWRITERS LABORATORIES
	UNO	UNLESS NOTED OTHERWISE
	UR	URINAL
V		
	VB	VINYL BASE, VAPOR BARRIER
	VCT	VINYL COMPOSITION TILE
	VERT	VERTICAL
	VF	VINYL FLOORING
	VP	VENT PIPE
	VTR	VENT THROUGH ROOF
	VWC	VINYL WALL COVERING
W		
	W/	WITH (COMB. FORM)
	W/O	WITHOUT
	WB	WOOD BASE
	WC	WATER CLOSET
	WD	WIDTH, WINDOW DIMENSION, WOOD
	WDW	WINDOW
	WF	WOOD FLOORING
	WH	WATER HEATER
	WM	WALK-OFF MAT
	WP	WATERPROOF
	WR	WASTE RECEPTACLE
	WS	WEATHERSTRIPPING
	WT	WINDOW TILE

GENERAL ARCHITECTURAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY OF DISCREPANCIES IN THE DRAWINGS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, AND/OR BETWEEN THE CONSTRUCTION DOCUMENTS AND ACTUAL JOB CONDITIONS WHICH AFFECT THE EXECUTION OF THE WORK AS INDICATED.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL CONSTRUCTION WORK PERFORMED BY SUBCONTRACTORS UNLESS NOTED OR INDICATED OTHERWISE.
3. CONTRACTOR SHALL LOCATE AND LAYOUT WALLS AND PARTITIONS AS THEY RELATE TO THE STRUCTURE AND OTHER BUILDING ELEMENTS AS SHOWN IN THE CONSTRUCTION DOCUMENTS. CONFLICTS OR AREAS OF INTERPRETATION SHALL BE RESOLVED BY THE CONTRACTING OFFICER.
4. THE CONTRACTOR SHALL PROVIDE CONCEALED FIRE-TREATED WOOD BLOCKING WHERE REQUIRED IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF WALL ATTACHED ITEMS SUCH AS GRAB BARS, TOILET ACCESSORIES, TACKBOARDS, MARKERBOARDS, SHELF BRACKETS AND SHELVING, MILLWORK, AND ALL OTHER WALL ATTACHED MATERIALS UNLESS NOTED OR OTHERWISE INDICATED.
5. THE CONTRACTOR SHALL MAKE ALL EXTERIOR WALL/ROOF OR WALL/WALL TRANSITIONS WATERTIGHT AND AIRTIGHT WITH SEALANT, FLASHING, EXPANDABLE FOAM, AIR INFILTRATION BARRIER, ETC. TO MAINTAIN REQUIRED INSULATION VALUES AND MECHANICAL SYSTEM PERFORMANCE IN THE FACILITY UNLESS NOTED OR INDICATED OTHERWISE. NO GAPS, OPENINGS, OR PENETRATIONS IN THE EXTERIOR WALL OR ROOF ASSEMBLIES SHALL BE LEFT EXPOSED TO THE ELEMENTS.
6. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS DURING THE CONSTRUCTION LAYOUT OF THE WORK. THE FOLLOWING GUIDANCE APPLIES TO DIMENSIONS USED ON THE ARCHITECTURAL DRAWINGS:
   - A. THE CONTRACTOR SHALL USE DIMENSIONS INDICATED ON THE DRAWINGS.
   - B. THE CONTRACTOR SHALL NOT SCALE FROM THE DRAWINGS.
   - C. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER OF DISCREPANCIES IN DIMENSIONS SHOWN ON THE DRAWINGS IMMEDIATELY.
   - D. ALL PLAN DIMENSIONS ARE TO THE STRUCTURAL GRID LINES OR TO THE CENTERLINE OF COLUMNS AND BEAMS, TO THE CENTER OF METAL STUD WALLS, OR TO THE NOMINAL FACE OF MASONRY UNITS UNLESS NOTED OR INDICATED OTHERWISE.
   - E. ALL PLAN DIMENSIONS ON EXTERIOR WALL ASSEMBLIES ARE FROM THE ACTUAL OUTSIDE FACE OF WALL TO THE ACTUAL INSIDE FACE OF METAL STUD UNLESS NOTED OR INDICATED OTHERWISE.
   - F. ALL MASONRY OPENING DIMENSIONS ARE INDICATED AS NOMINAL DIMENSIONS WHICH INCLUDE AN ALLOWANCE FOR + OR - 3/8" MORTAR JOINT UNLESS NOTED OR INDICATED OTHERWISE.

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Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
S. SPRAGUE	S. SNYDER	J. MORGAN	B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: ABBREVIATIONS & NOTES

Date: 12 JUL 2018

SEQ.	SHEET	OF
	A-001	

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C.H. GUERNSEY & COMPANY
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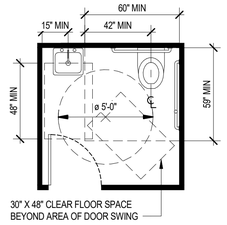
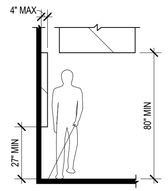
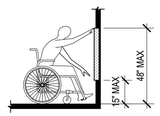
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



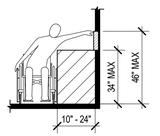
WHEELCHAIR ACCESSIBLE RESTROOM PLAN



PROTRUDING OBJECTS ELEVATION



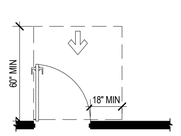
UNOBSTRUCTED FORWARD REACH ELEVATION



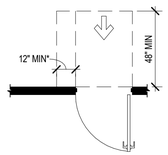
UNOBSTRUCTED HIGH-SIDE REACH ELEVATION

ACCESSIBILITY NOTES

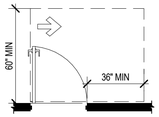
1. FLOOR SURFACE OPENINGS SHALL BE A SIZE THAT DOES NOT PERMIT THE PASSAGE OF A 1/2 INCH DIAMETER SPHERE. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
2. WALKS AND SIDEWALKS SHALL HAVE A CONTINUOUS COMMON SURFACE NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2 INCH AND SHALL BE A MINIMUM OF 48 INCHES IN WIDTH.
3. CHANGES IN LEVEL OF 1/4 INCH MAXIMUM IN HEIGHT SHALL BE PERMITTED VERTICALLY. CHANGES IN LEVEL GREATER THAN 1/4 INCH IN HEIGHT AND NOT MORE THAN 1/2 INCH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2. CHANGES IN LEVEL GREATER THAN 1/2 INCH IN HEIGHT SHALL BE RAMPED WITH A RUNNING SLOPE NOT TO EXCEED 1:12.
4. SURFACES WITH A SLOPE OF LESS THAN 6 PERCENT GRADIENT SHALL BE AT LEAST AS SLIP-RESISTANT AS THAT DESCRIBED AS A MEDIUM-SALTED FINISH. SURFACES WITH A SLOPE OF 6 PERCENT OR GREATER SHALL ALSO BE SLIP-RESISTANT.
5. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. OPERABLE DOOR PARTS SHALL BE 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE FINISHED FLOOR.
6. DOOR HARDWARE SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT.
7. THRESHOLDS AT DOORWAYS SHALL BE 1/2 INCH MAXIMUM IN HEIGHT. RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH THE REQUIREMENTS FOR CURB RAMPS.
8. SURFACE CROSS SLOPES SHALL NOT EXCEED 1/4 INCH PER FOOT.
9. THE TOP OF ACCESSIBLE WATER CLOSET SEATS SHALL BE WITHIN 17 TO 19 INCHES ABOVE FINISHED FLOOR. FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREA AND WITHIN 40 INCHES OF THE FLOOR. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL NOT EXCEED 5 POUNDS.
10. HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. NO SHARP OR ABRASIVE SURFACES OR EDGES ARE PERMITTED.
11. FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL NOT EXCEED 5 POUNDS. LEVERS ARE ACCEPTABLE.



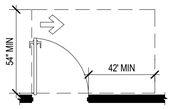
(a) FRONT APPROACH, PULL SIDE



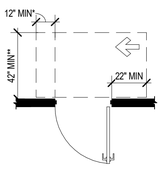
(b) FRONT APPROACH, PUSH SIDE
*IF BOTH CLOSER AND LATCH ARE PROVIDED



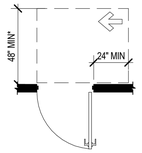
(c) HINGE APPROACH, PULL SIDE



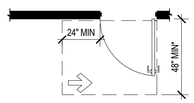
(d) HINGE APPROACH, PULL SIDE



(e) HINGE APPROACH, PUSH SIDE
*IF BOTH CLOSER AND LATCH ARE PROVIDED
**48" MINIMUM IF BOTH CLOSER AND LATCH PROVIDED



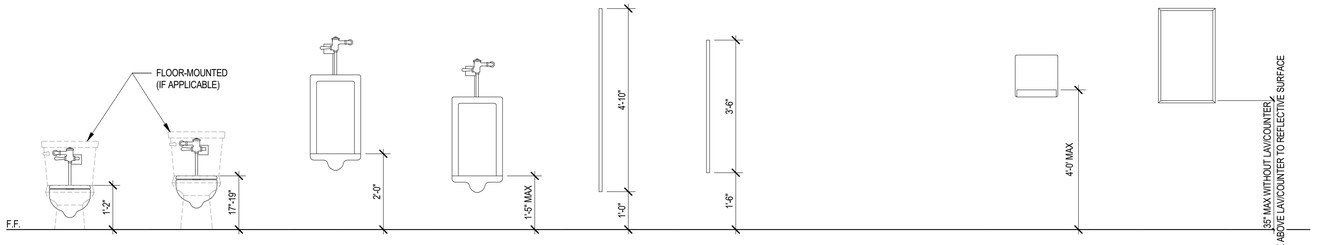
(f) LATCH APPROACH, PUSH SIDE
*54" MINIMUM IF CLOSER PROVIDED



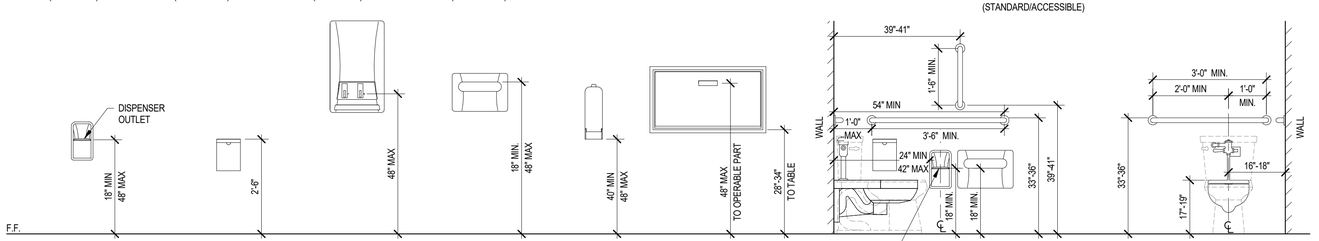
(g) LATCH APPROACH, PULL SIDE
*54" MINIMUM IF CLOSER IS PROVIDED

CLEARANCE AT MANUAL SWINGING DOORS

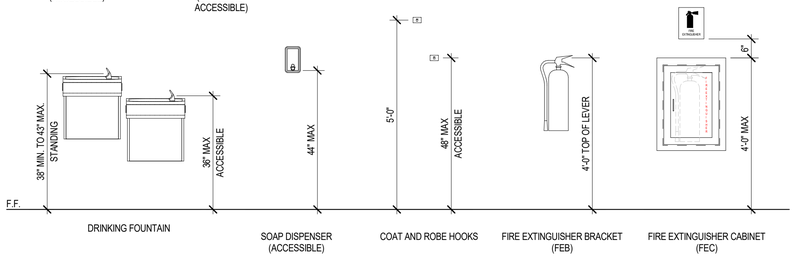
SCALE: 1/4" = 1'-0"



WALL-MOUNTED WATER CLOSET (STANDARD) | WALL-MOUNTED WATER CLOSET (ACCESSIBLE) | WALL-MOUNTED URINAL (STANDARD) | WALL-MOUNTED URINAL (ACCESSIBLE) | PARTITION AT TOILET | PARTITION AT URINAL | RECESSED-MOUNTED PAPER TOWEL DISPENSER OR HAND DRYER (STANDARD/ACCESSIBLE) | MIRROR (ACCESSIBLE)



RECESSED/PARTITION MOUNTED TOILET TISSUE DISPENSER (ACCESSIBLE) | RECESSED/PARTITION MOUNTED SANITARY NAPKIN DISPOSAL (STANDARD/ ACCESSIBLE) | SANITARY NAPKIN DISPENSER (ACCESSIBLE) | SEAT COVER DISPENSER (ACCESSIBLE) | FOLDING SHELF (ACCESSIBLE) | BABY CHANGING STATION (ACCESSIBLE) | INSTALLATION (ACCESSIBLE) | INSTALLATION (ACCESSIBLE)



DRINKING FOUNTAIN | SOAP DISPENSER (ACCESSIBLE) | COAT AND ROBE HOOKS | FIRE EXTINGUISHER BRACKET (FEB) | FIRE EXTINGUISHER CABINET (FEC)

TOILET ACCESSORIES TYPICAL MOUNTING HEIGHTS

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

NOTE: ALL MOUNTING DIMENSIONS ARE TO BE FROM A FINISHED SURFACE.

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

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

REGISTERED ARCHITECT
TODD SCHNEIDER
7/12/18
18662
STATE OF TEXAS

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: S. SNYDER
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ADA STANDARDS
Date: 12 JUL 2018

SEQ. | SHEET: A-002 | OF.

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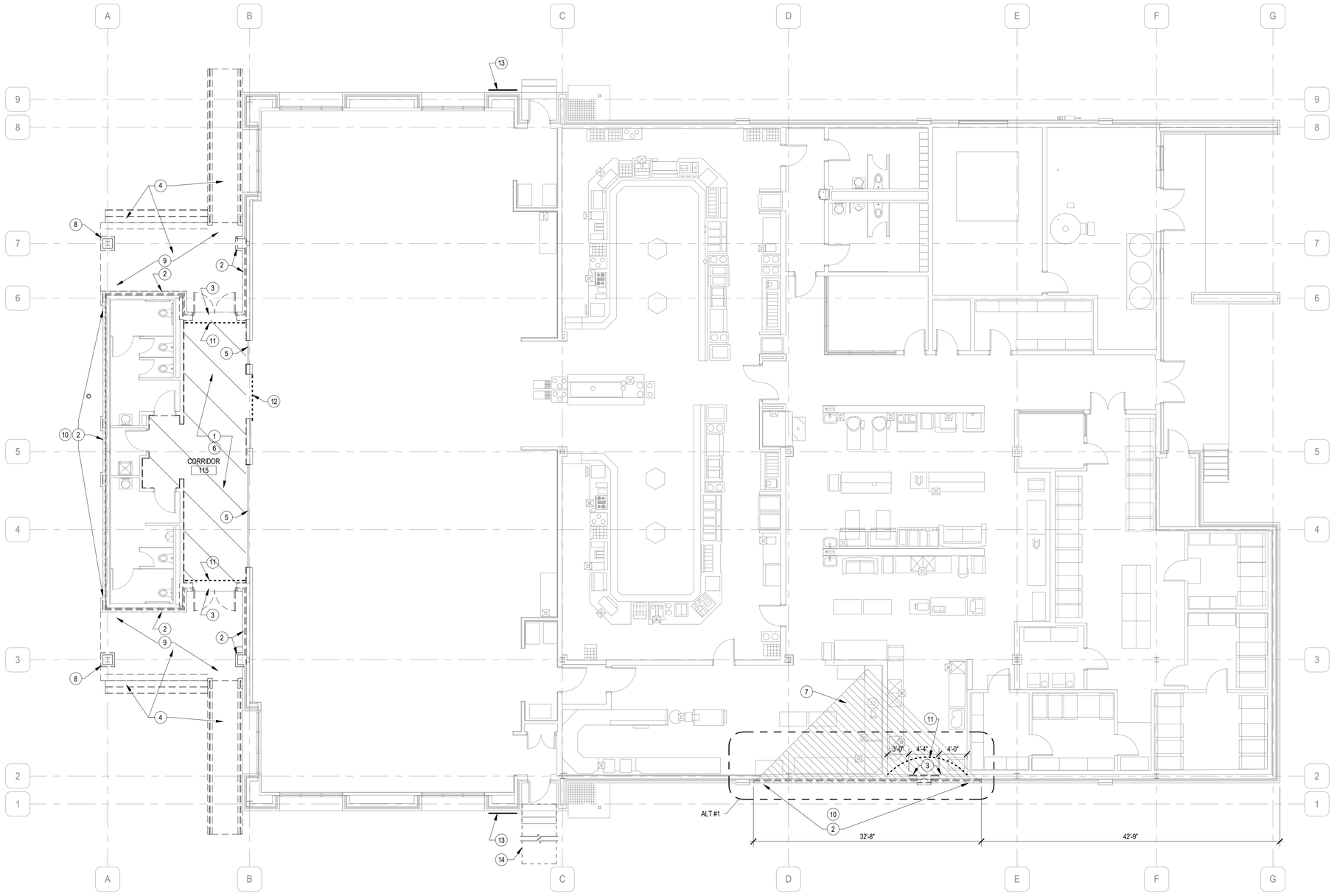
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



KEY NOTES

1. WITHIN THIS HATCHED AREA REMOVE ALL FINISHES INCLUDING BUT NOT LIMITED TO FLOORING, CEILINGS, WALL BASE, AND WALL TILE. REMOVE WALL GYPSUM BOARD. WALL STUDS TO REMAIN. REMOVE ALL LIGHT FIXTURES AND AIR TERMINALS. HVAC DUCTWORK SHALL REMAIN.
2. REMOVE ALL ITEMS BACK TO THE EXTERIOR SHEATHING INCLUDING BUT NOT LIMITED TO BRICK VENEER, INSULATION CAVITY BOARD, BRICK TIES, EXCESS CAVITY MOTOR, AND ELECTRICAL ITEMS.
3. REMOVE ENTIRE WALL FULL HEIGHT.
4. REMOVE STAIRS, RAILINGS, RAMPS, AND EXTERIOR CONCRETE. REFER DRAWING C-100 FOR ADDITIONAL SITE DEMOLITION.
5. PROTECT EXISTING GLASS BLOCK WALL DURING CONSTRUCTION.
6. EXISTING TILE AND MUD BED SHALL BE REMOVED. EXISTING SLAB IS 1 1/8" RECESSED BELOW FINISH FLOOR. PREP FLOOR AS REQUIRED FOR NEW TILE FINISH.
7. REMOVE ROOF AS REQUIRED FOR NEW ROOF OVERBUILD. HANG DUSTPROOF BARRIER BELOW EXISTING CEILING OVER FOOD PREPARATION AREAS.
8. REMOVE MASONRY VENEER. STEEL COLUMN TO REMAIN.
9. REMOVE SOFFIT, LIGHTS, ETC. IN COVERED AREA WHICH WILL BE FUTURE INTERIOR OF THE NEW ADDITION.
10. REMOVE ROOF FASCIA AND SOFFIT FOR NEW ADDITION.
11. INSTALL TEMPORARY DUSTPROOF BARRIER.
12. INSTALL TEMPORARY DUSTPROOF BARRIER WHEN DEMOLITION WORK OR NEW FINISH INSTALLATION IS BEING DONE FOR CORRIDOR 115.
13. PROVIDE TEMPORARY 2'-0" H X 4'-0" L EXTERIOR SIGN STATING "TEMPORARY ENTRANCE".
14. PROVIDE TEMPORARY ADA-COMPLIANT RAMP AND HANDRAILS COMPLYING WITH CURRENT TEXAS ACCESSIBILITY STANDARDS.

GENERAL NOTES

1. EXISTING BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. ALL UTILITIES, FIRE ALARM, AND FIRE SUPPRESSION SYSTEM MUST REMAIN OPERATIONAL DURING CONSTRUCTION. ANY TEMPORARY UTILITY SHUT OFF MUST BE DONE AFTER HOURS AND SCHEDULED WITH THE BASE.
2. MAINTAIN ACCESS TO RESTROOMS. ALL DEMOLITION OR NEW FINISH MATERIAL INSTALLATION IN CORRIDOR 115 SHALL OCCUR AFTER HOURS. IF ACCESS CANNOT BE MAINTAINED TO THE RESTROOMS THEN THE CONTRACTOR SHALL PROVIDE FIVE EXTERIOR PORTABLE RESTROOMS WITH HANDWASHING CAPABILITY.

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

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
TODD SPRAGUE
18662
STATE OF TEXAS
7/12/18

Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
S. SPRAGUE	J. LOPEZ	J. MORGAN	B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: DEMOLITION PLAN

Date: 12 JUL 2018

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AD-100

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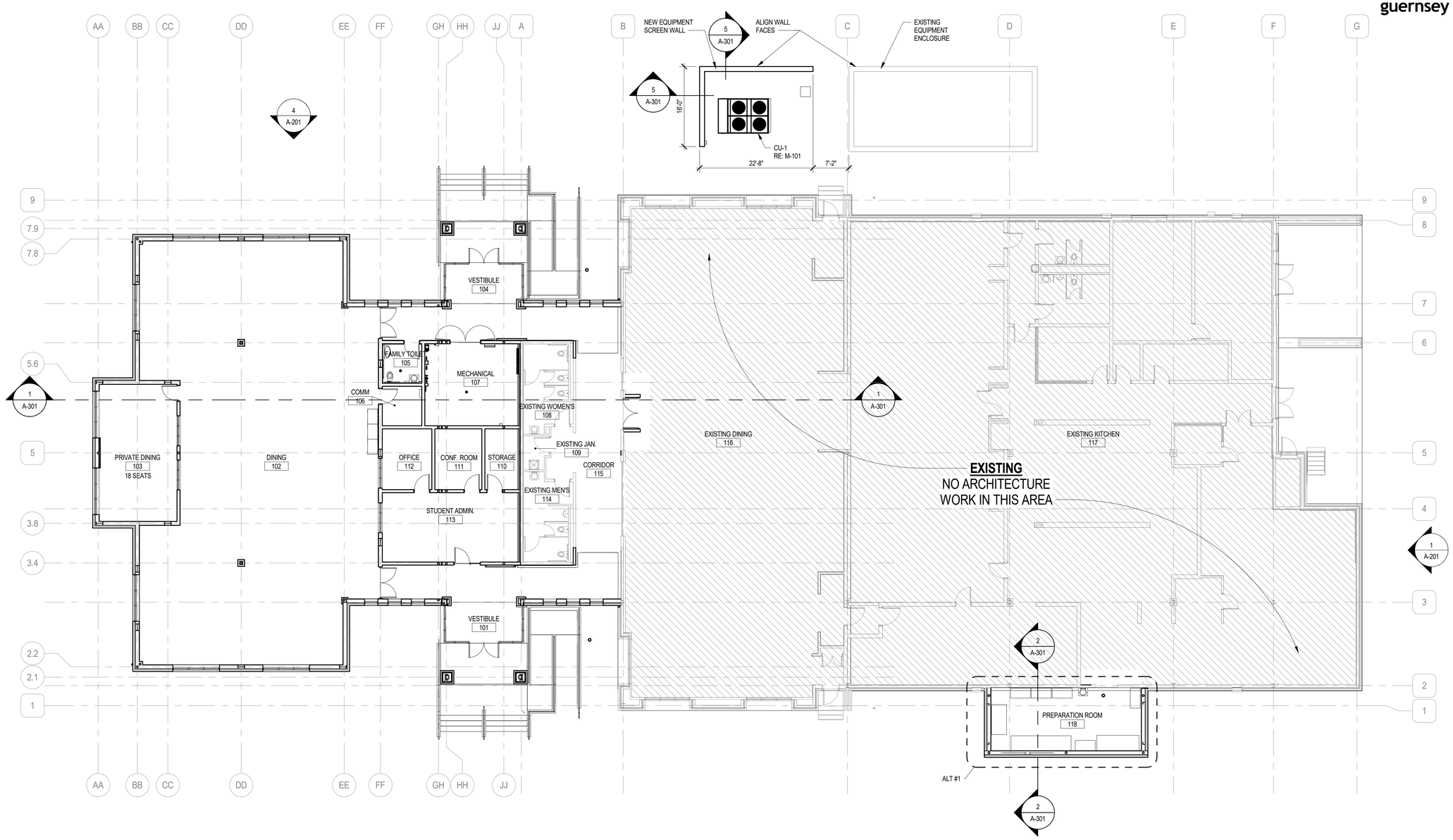
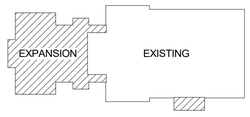
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 COMPOSITE FLOOR PLAN
SCALE: 3/32" = 1'-0"



KEY PLAN

PLAN NORTH

12' 6' 0 12'
SCALE: 3/32" = 1'-0"

REGISTERED ARCHITECT KEVIN TODD SNYDER 9662 STATE OF TEXAS
7/12/18

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
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Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: COMPOSITE FLOOR PLAN
Date: 12 JUL 2018

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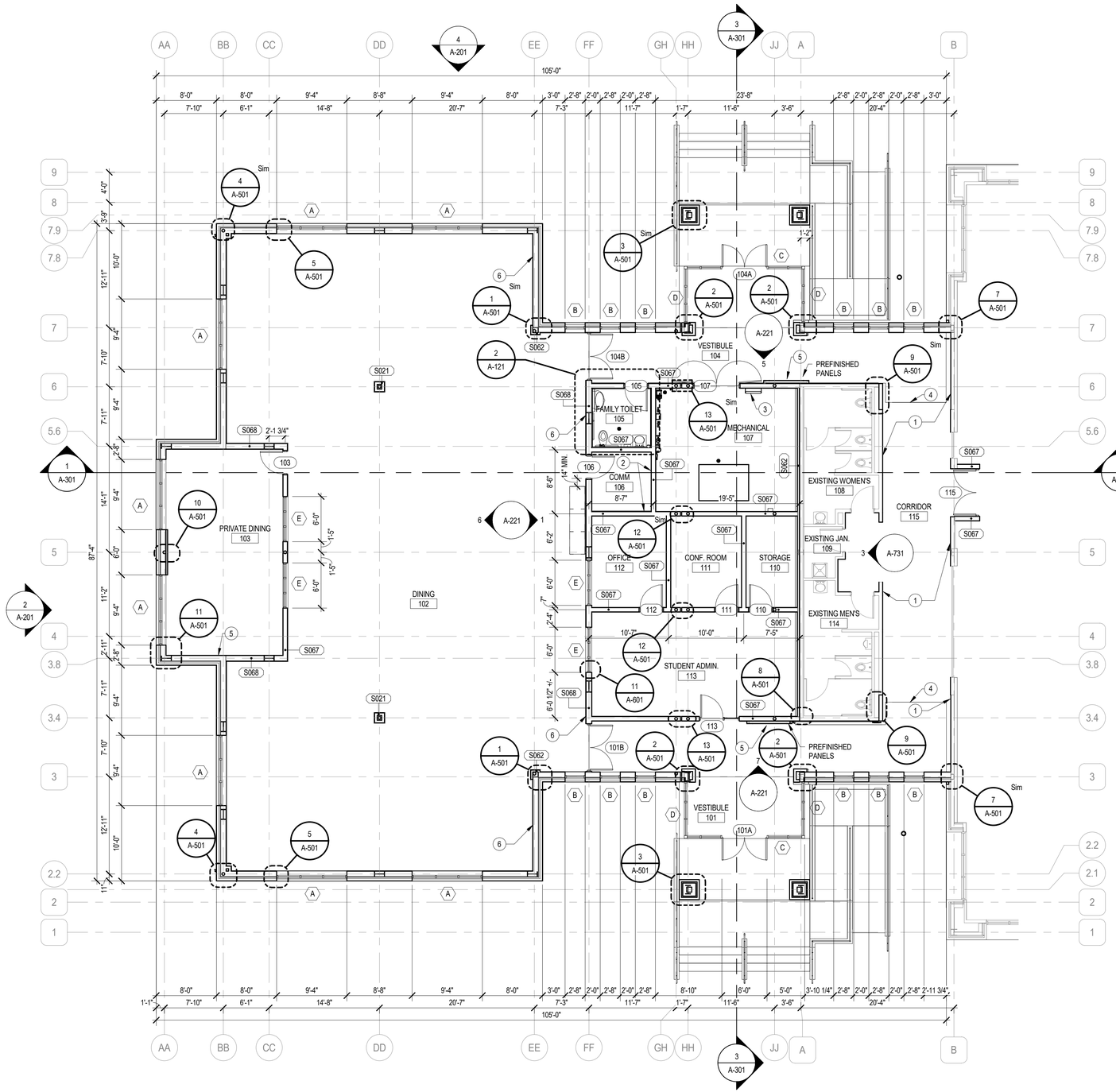
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



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

GENERAL NOTES:

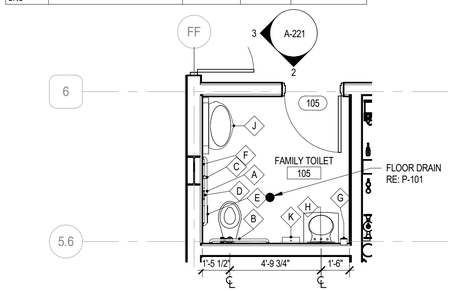
1. ALL MASONRY DIMENSIONS ARE SHOWN AS NOMINAL DIMENSIONS. CONTRACTOR SHALL COORDINATE ACTUAL BUILDING LAYOUT WITH NOMINAL DIMENSIONS AND REFERENCED DETAILS.
2. REFER 1/P-501 FOR NEW TOILET ROOM FLOOR DRAINS.
3. REFER SHEET A-341 FOR PARTITION TYPES AND GENERAL NOTES.
4. REFER TO SHEET A-341 FOR ADDITIONAL CONTROL JOINTS (CJ) NOT SHOWN ON FLOOR PLAN.
5. WALL CONTROL JOINTS (CJ) TO MATCH WALL FIRE RATING.
6. ALL EXISTING WALLS IN CORRIDOR 115 SHALL HAVE NEW 5/8" GYPSUM BOARD INSTALLED ON CORRIDOR SIDE OF WALL.
7. REFER TO DRAWING SHEET A-301 FOR ADDITIONAL EXTERIOR BUILDING WORK TO THE EXISTING MASONRY VENEER.
8. INTERIOR DIMENSIONS ARE TO CENTERLINE OF STUD.

PLAN NOTES

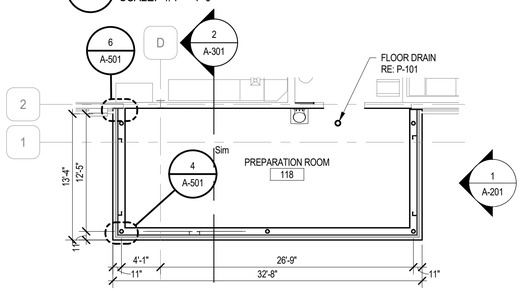
1. NEW 5/8" GYPSUM BOARD ON EXISTING METAL STUDS
2. CONTINUOUS EXPOSED AND PAINTED 1/2" FIRE TREATED PLYWOOD FROM 12" AFF UP TO 9'-0" AFF
3. ROOF ACCESS LADDER
4. EDGE OF EXISTING FLOOR SLAB
5. PROVIDE IN-WALL TV MOUNTING BRACKET: CHIEF MANUFACTURING MODEL PNRIWUB 22" MOUNT WITH PAC501B IN-WALL BOX, USING PACHFK1 HEADER AND FOOTER AND PAC138 PADLOCK
6. PROVIDE CONCEALED, FIRE-TREATED WOOD BLOCKING (PLYWOOD PANELS) AT LOCATIONS OF OWNER-PROVIDED MONITORS IN DINING 104. COORDINATE WITH OWNER EXACT LOCATIONS AND INSTALL WITH BOTTOM OF TV AT 6'-8" AFF. IF STUD DOES NOT FALL AT CENTER OF MOUNTING LOCATION, BLOCK 5 BAYS AS REQUIRED TO PROVIDE A MINIMUM BACKING WIDTH OF 32" ON EACH SIDE OF THE CENTER OF MOUNTING LOCATION. OVERALL HEIGHT OF PLYWOOD PANELS IS TO BE 24" AND IS TO BE CENTERED ON MOUNTING LOCATION. BLOCKING IS TO SUPPORT 150 LBS.

TOILET ACCESSORIES SCHEDULE

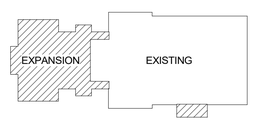
MARK	ACCESSORY	CFCI	GFCI	COMMENTS
A	18" VERTICAL GRAB BAR	YES		
B	36" GRAB BAR	YES		
C	42" GRAB BAR	YES		
D	TOILET TISSUE DISPENSER		YES	
E	FEMININE HYGIENE DISPOSAL	YES		
F	SEAT COVER DISPENSER	YES		
G	SOAP DISPENSER		YES	
H	36" X 48" MIRROR	YES		
J	BABY CHANGING STATION	YES		
K	PAPER TOWEL DISPENSER		YES	
SN5				



2 ENLARGED PLAN - FAMILY TOILET
SCALE: 1/4" = 1'-0"



3 FLOOR PLAN AREA-B (ALT #1)
SCALE: 1/8" = 1'-0"



KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT KEVIN TODD SNYDER 19662 STATE OF TEXAS 7/12/18

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. MCCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: FLOOR PLAN

Date: 12 JUL 2018

SEQ.	SHEET	OF
	A-121	

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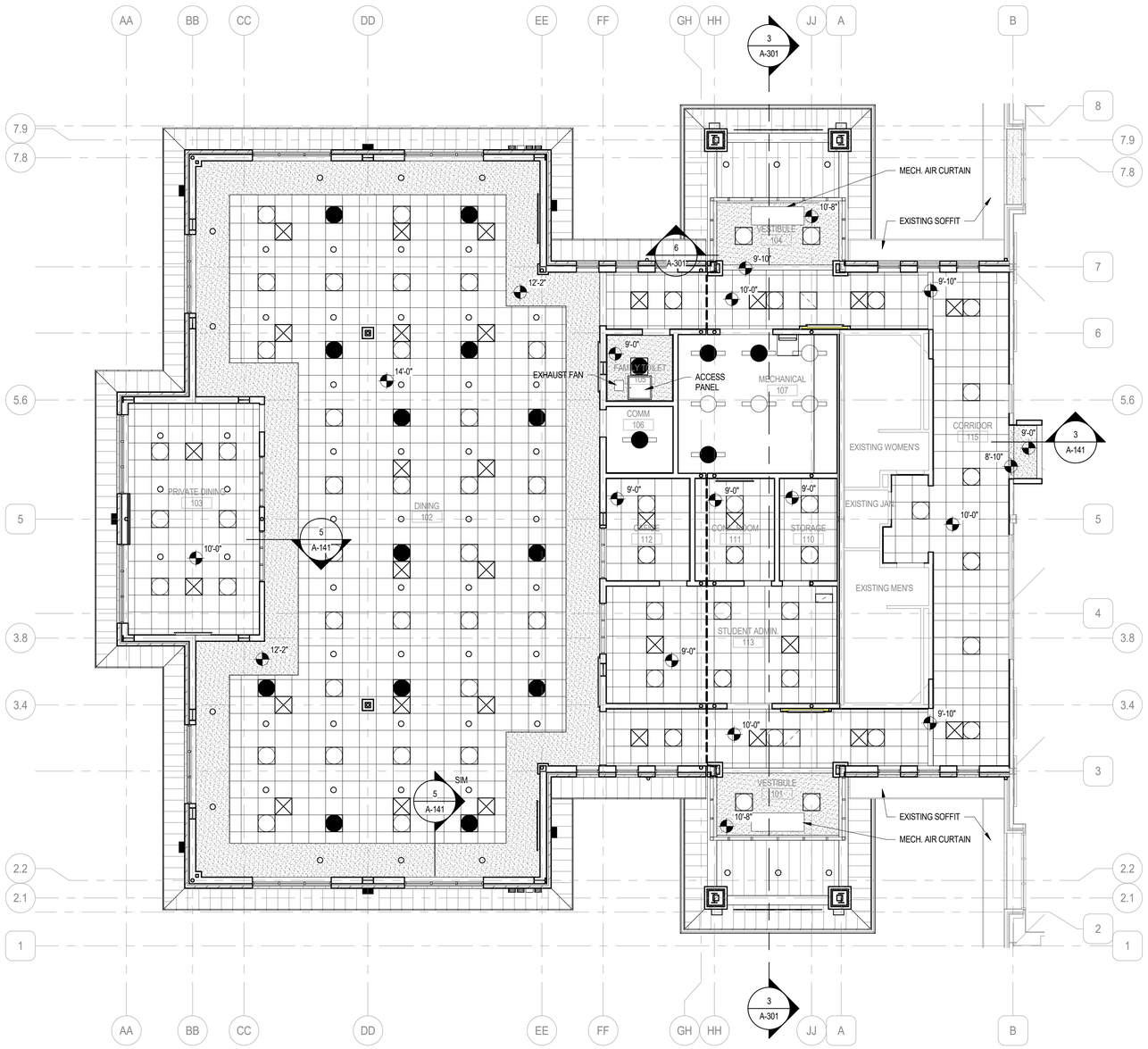
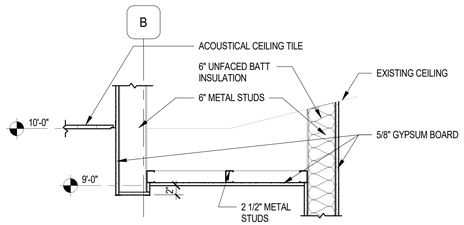


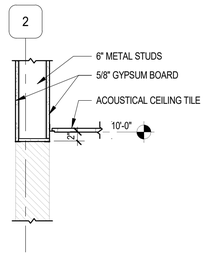
1 FIRST FLOOR - REFLECTED CEILING PLAN AREA-A
SCALE: 1/8" = 1'-0"

LEGEND:

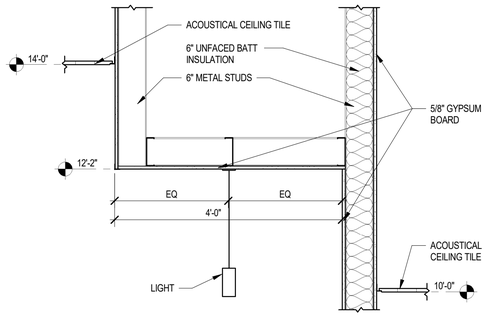
- ACOUSTICAL CEILING TILE
- PREFINISHED METAL SOFFIT PANELS
- GYPSUM BOARD CEILING
- DOWNLIGHT
- SUPPLY DIFFUSER
- RETURN GRILL
- 2' x 2' CEILING MOUNTED FIXTURE
- 1' x 4' STRIP FIXTURE
- ACT CEILING EXPANSION JOINT REFER DETAIL 6/A341



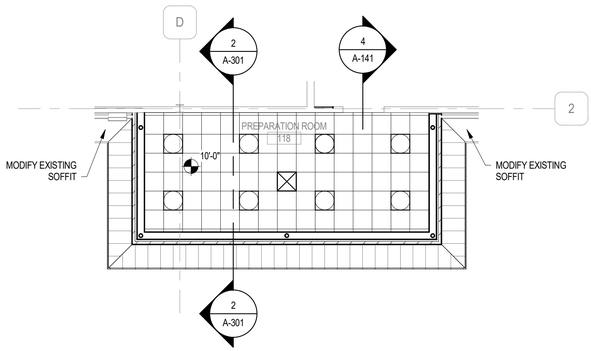
3 CEILING DETAIL
SCALE: 3/4" = 1'-0"



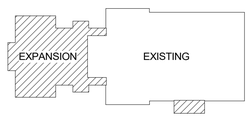
4 CEILING DETAIL
SCALE: 3/4" = 1'-0"



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



2 FIRST FLOOR - REFLECTED CEILING PLAN AREA-B (ALT #1)
SCALE: 1/8" = 1'-0"



KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

2' 1' 0 2'
SCALE: 3/4" = 1'-0"

REGISTERED ARCHITECT
KEVIN TODD SPRAGUE
7/13/18
8662
STATE OF TEXAS

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

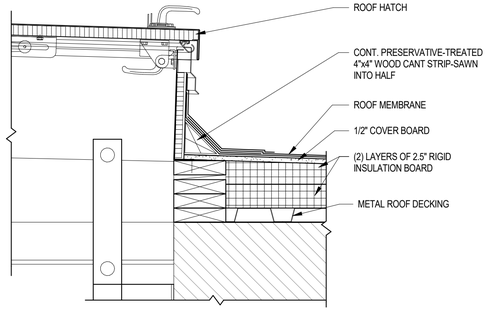
SHEET TITLE: REFLECTED CEILING PLAN

Date: 12 JUL 2018

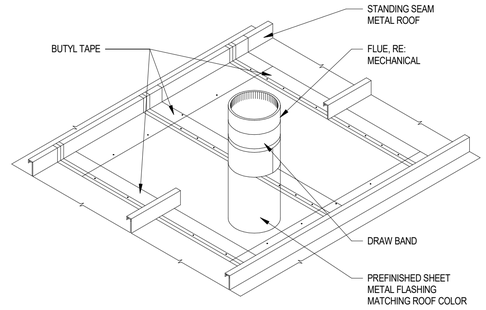
SEQ.	SHEET	OF
	A-141	

7/12/2018 11:28:14 AM C:\Work\Projects\R18_70374-000_A_SSnyderOKC.rvt

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



2 ROOF HATCH DETAIL
SCALE: 1 1/2" = 1'-0"



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

LEGEND:

	EXISTING STANDING SEAM ROOF
	STANDING SEAM METAL ROOF
	TPO ROOFING MEMBRANE WITH SLOPED STRUCTURE 1/4" PER FOOT
RD	ROOF DRAIN
ORD	OVERFLOW ROOF DRAIN
DS	DOWNSPOUT - PROVIDE SPLASH PANS ON SACRIFICE PADS @ EA DOWNSPOUT.

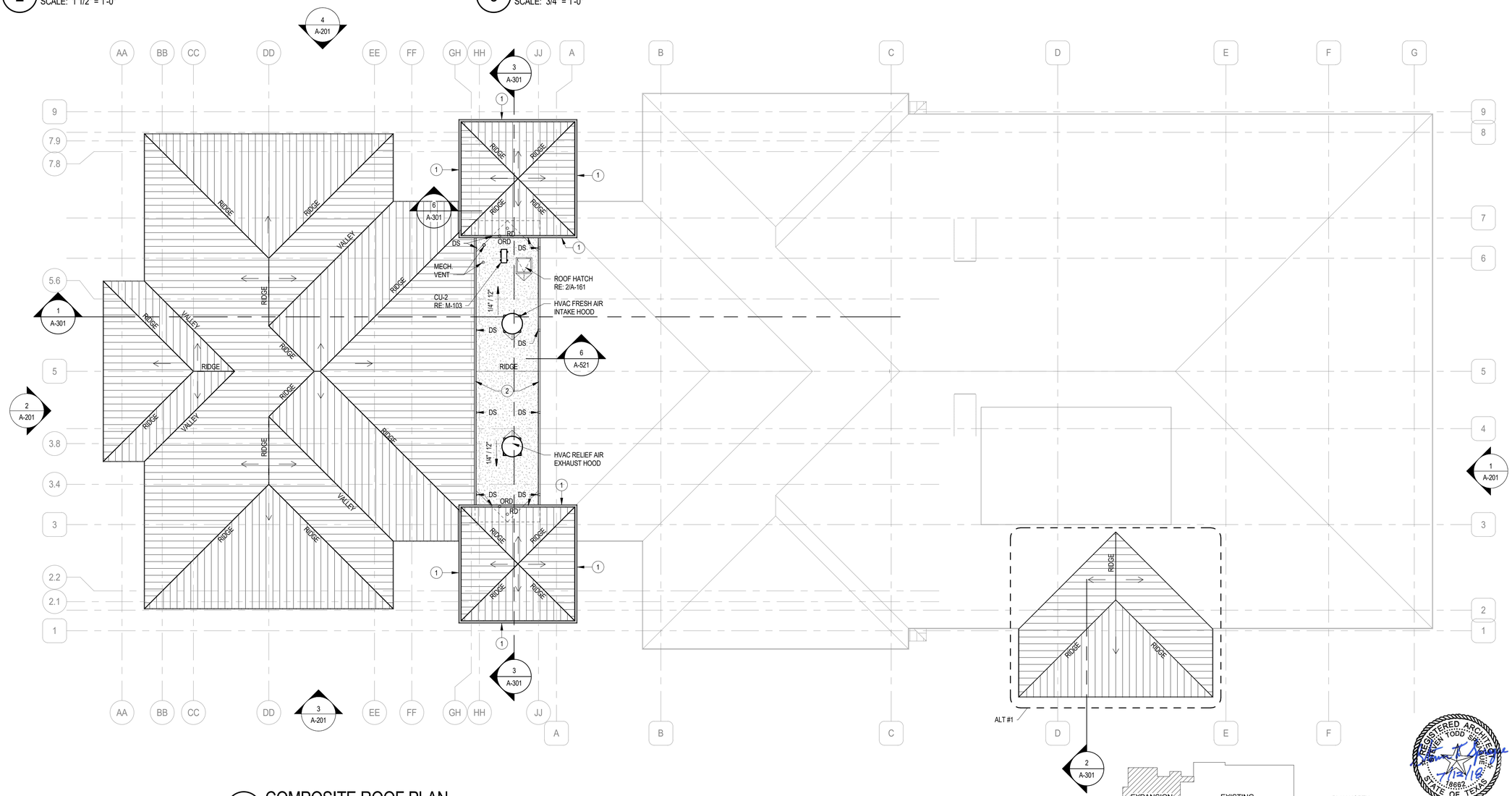
GENERAL NOTES:

1. REFER TO MECHANICAL (SHEET M-103) FOR EXACT LOCATIONS OF ROOF PENETRATIONS AND SIZES.
2. PROVIDE ICE & WATER SHIELD FLASHING 3'-0" BACK FROM EAVES AND RAKES. PROVIDE FLEXIBLE ICE & WATER SHIELD 3'-0" EACH DIRECTION FROM CENTER LINE OF VALLEYS AND EXPANSION JOINTS.
3. THE WARRANTY ON THE EXISTING STANDING SEAM METAL ROOF IS IN FORCE. ALL MODIFICATIONS TO EXISTING ROOF SHALL NOT VOID THE EXISTING ROOF WARRANTY.

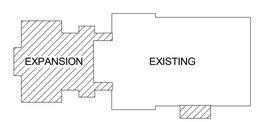
guernsey

PLAN NOTES

1. GUTTERING ON FOUR SIDES OF ENTRANCE ELEMENT. DOWNSPOUTS WILL BE ON BACKSIDE ONLY DRAINING ONTO THE TPO ROOF AREA.
2. 4"x4" ROOF GUTTER.

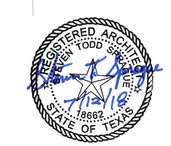


1 COMPOSITE ROOF PLAN
SCALE: 3/32" = 1'-0"



KEY PLAN

PLAN NORTH



16' 8' 0 16'
SCALE: 1/16" = 1'-0"

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. MACOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ROOF PLAN
Date: 12 JUL 2018

SEQ. | SHEET | OF
A-161

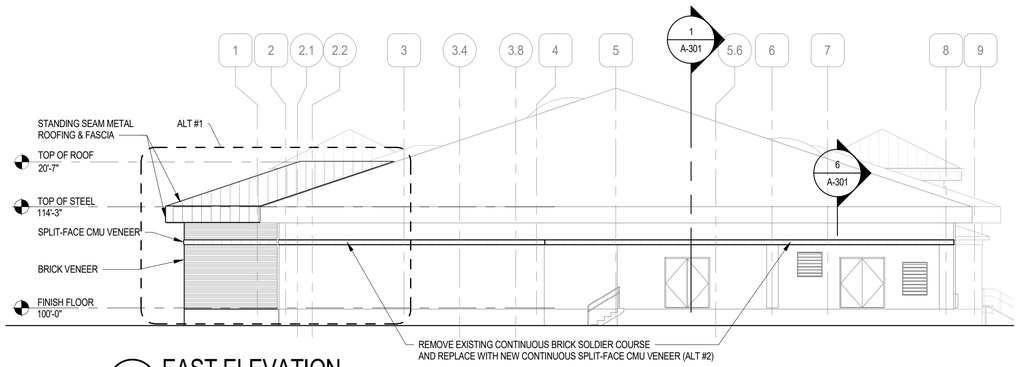
7/12/2018 11:28:16 AM C:\Work\Projects\R18_70374-000_A_SSnyderOKC.rvt

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

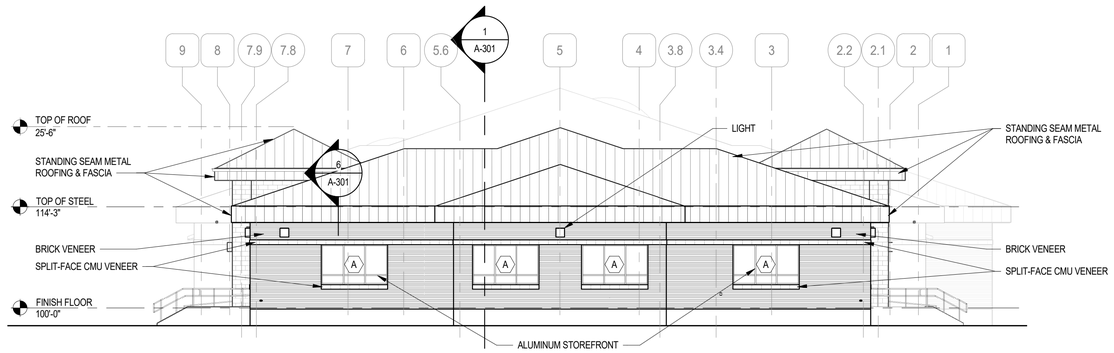
GENERAL NOTES:

1. ALL MECHANICAL EQUIPMENT, LOUVERS, ETC. LOCATED IN MASONRY WALLS, METAL WALL PANELS, OR ON ROOF SHALL BE PAINTED TO MATCH ADJACENT COLOR.

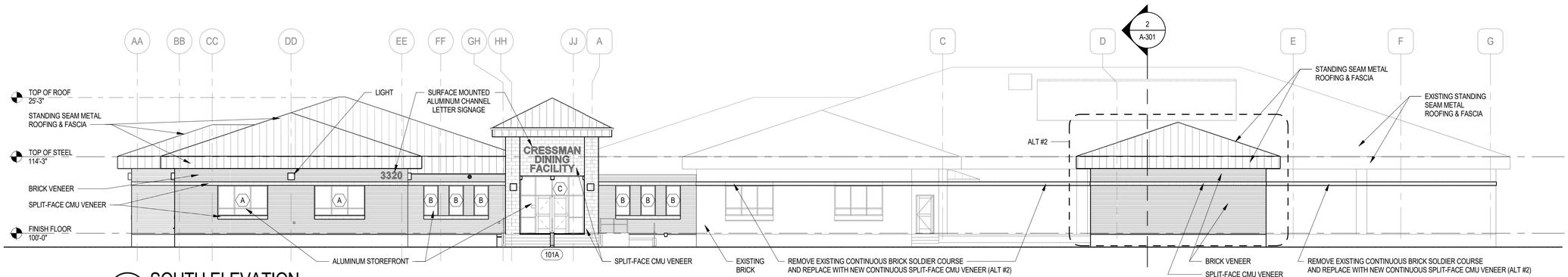
guernsey



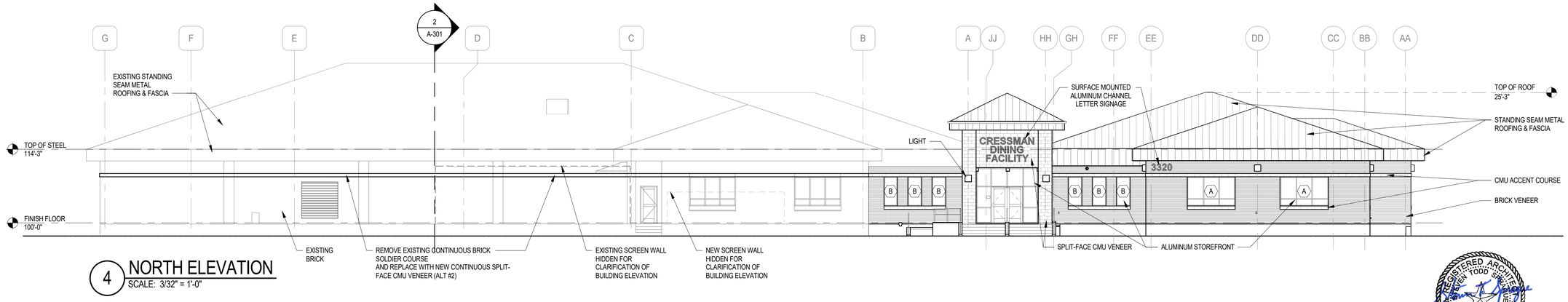
1 EAST ELEVATION
SCALE: 3/32" = 1'-0"



2 WEST ELEVATION
SCALE: 3/32" = 1'-0"



3 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



4 NORTH ELEVATION
SCALE: 3/32" = 1'-0"

REGISTERED ARCHITECT TODD SNYDER 7/12/18 8667 STATE OF TEXAS

12' 6' 0 12'
SCALE: 3/32" = 1'-0"

Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
S. SPRAGUE	J. LOPEZ	J. MORGAN	B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: EXTERIOR ELEVATIONS

Date: 12 JUL 2018

SEQ.	SHEET	OF
	A-201	

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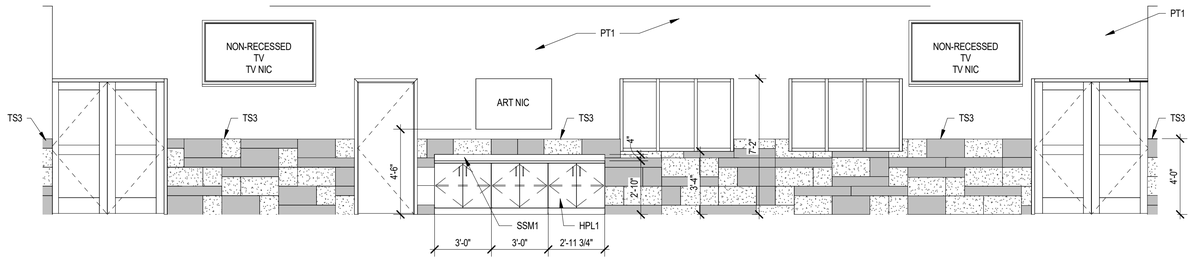
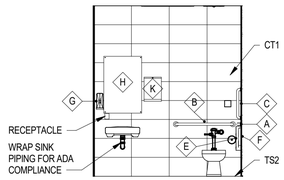
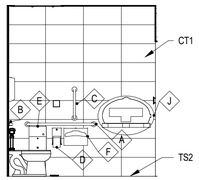
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



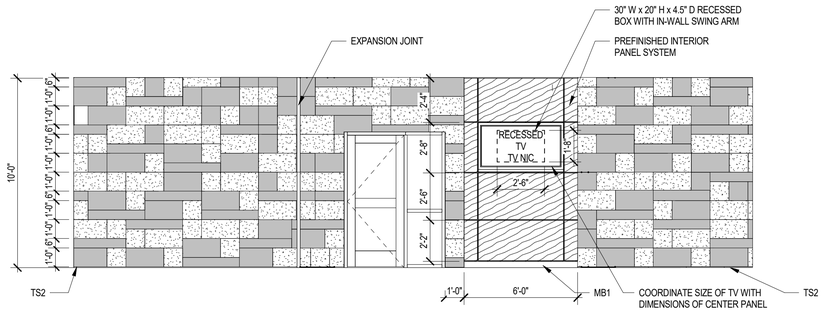
1 INTERIOR ELEVATION - DINING ROOM
SCALE: 1/4" = 1'-0"



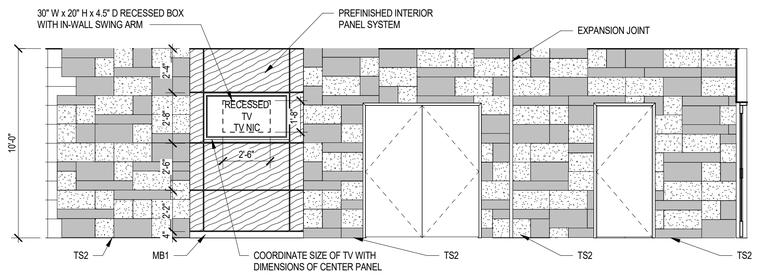
2 INTERIOR ELEVATION - FAMILY TOILET
SCALE: 1/4" = 1'-0"



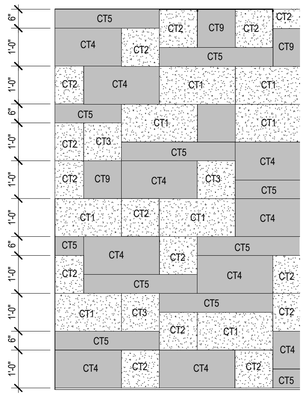
3 INTERIOR ELEVATION - FAMILY TOILET
SCALE: 1/4" = 1'-0"



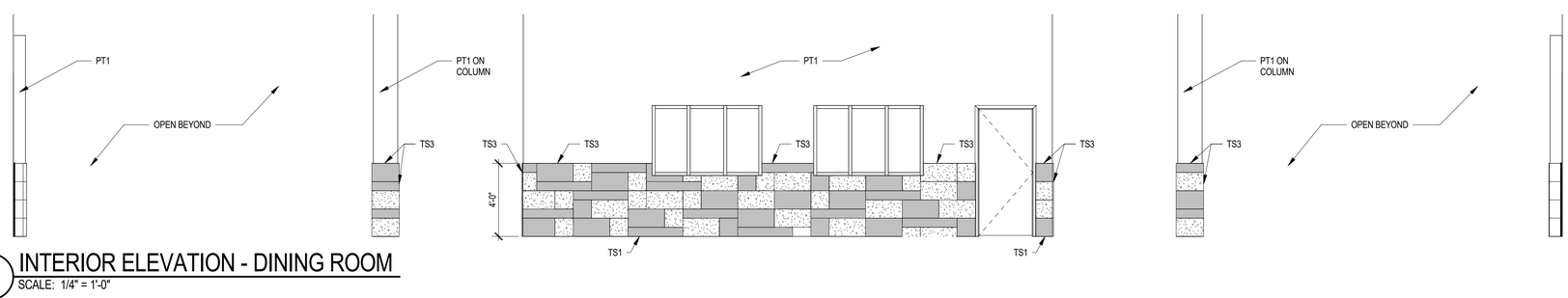
4 INTERIOR ELEVATION - VESTIBULE 101
SCALE: 1/4" = 1'-0"



5 INTERIOR ELEVATION - VESTIBULE 104
SCALE: 1/4" = 1'-0"



7 INTERIOR ELEVATION - WALL TILE PATTERN TYP.
SCALE: 1/2" = 1'-0"



6 INTERIOR ELEVATION - DINING ROOM
SCALE: 1/4" = 1'-0"

WALL TILE LEGEND
CT1, CT2, CT3
CT4, CT5, CT9

Symbol	Description	Date	Appr

REVISIONS

Designed by: Designer
Drawn by: Author
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

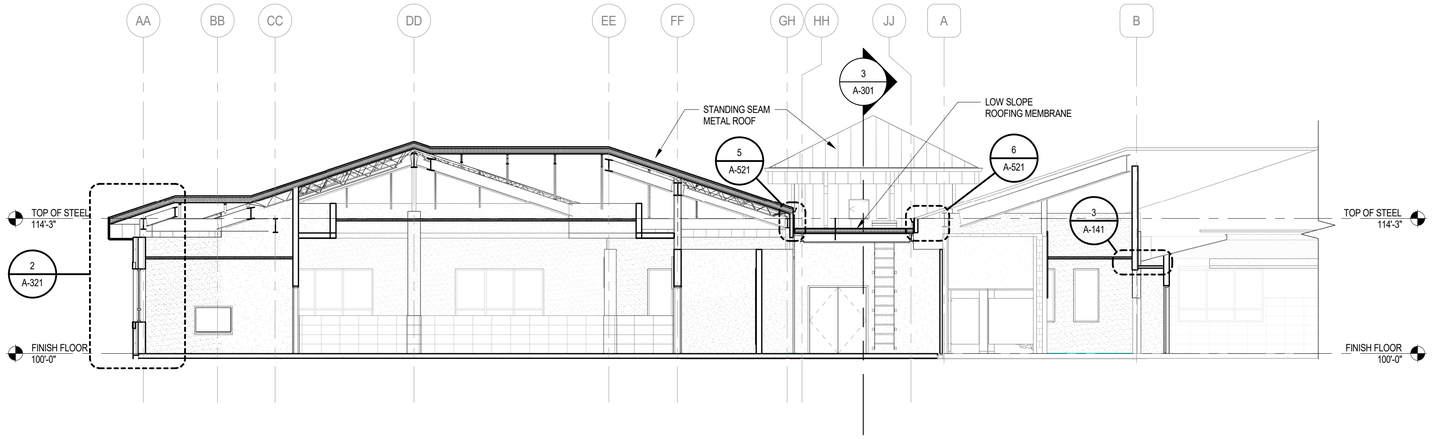
Project Number: OK70374-000
SHEET TITLE: INTERIOR ELEVATIONS
Date: 12 JUL 2018

SEQ. | SHEET | OF
A-221

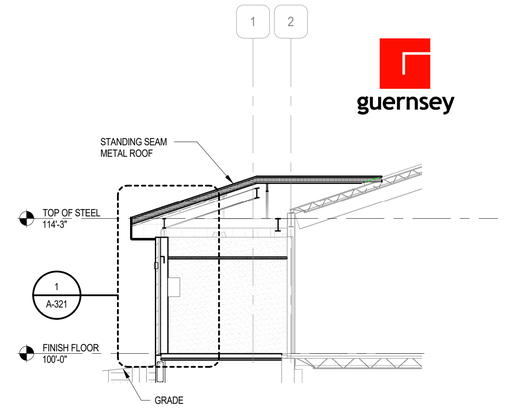
4' 2' 0 4'
SCALE: 1/4" = 1'-0"

7/12/2018 11:28:29 AM C:\Work\Projects\R18_70374-000_A_SSnyderOKC.rvt

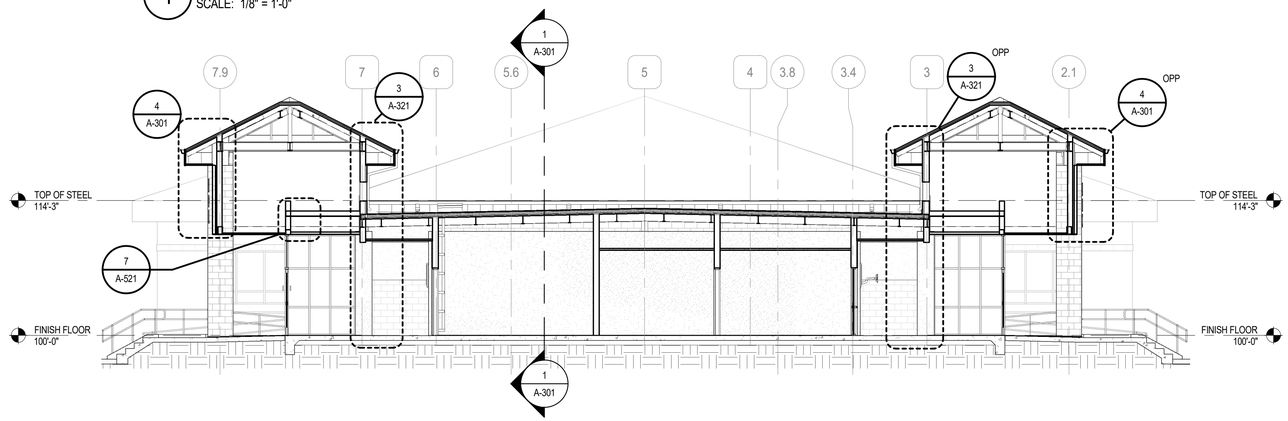
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



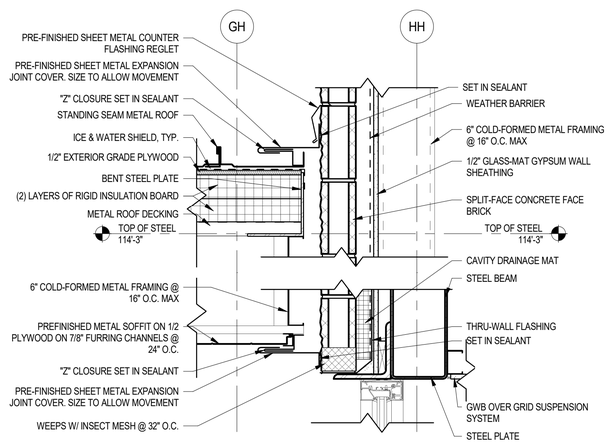
1 BUILDING SECTION
SCALE: 1/8" = 1'-0"



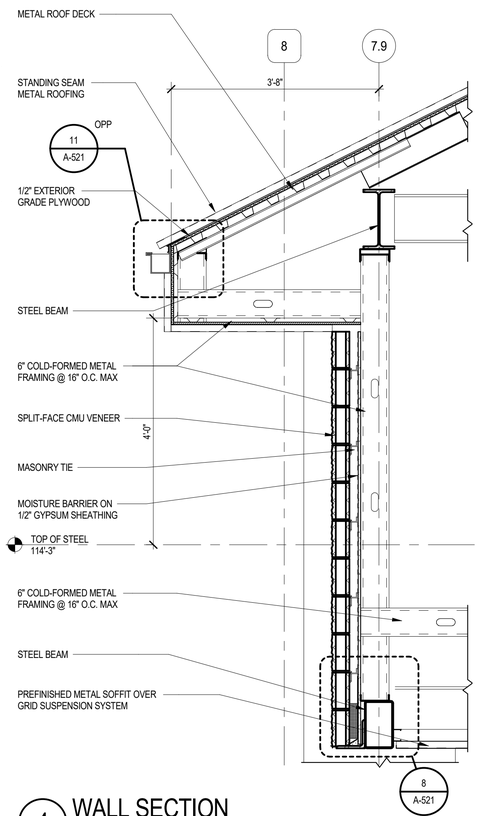
2 BUILDING SECTION (ALT #1)
SCALE: 1/8" = 1'-0"



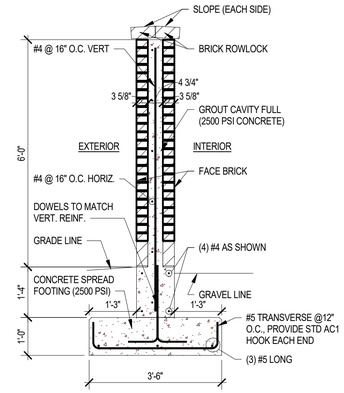
3 BUILDING SECTION
SCALE: 1/8" = 1'-0"



6 VERTICAL DETAIL
SCALE: 1 1/2" = 1'-0"



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



5 SCREEN WALL SECTION
SCALE: 1/2" = 1'-0"

2' 1' 0 2'
SCALE: 3/4" = 1'-0"

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: BUILDING SECTIONS
Date: 12 JUL 2018

SEQ. | SHEET | OF
A-301

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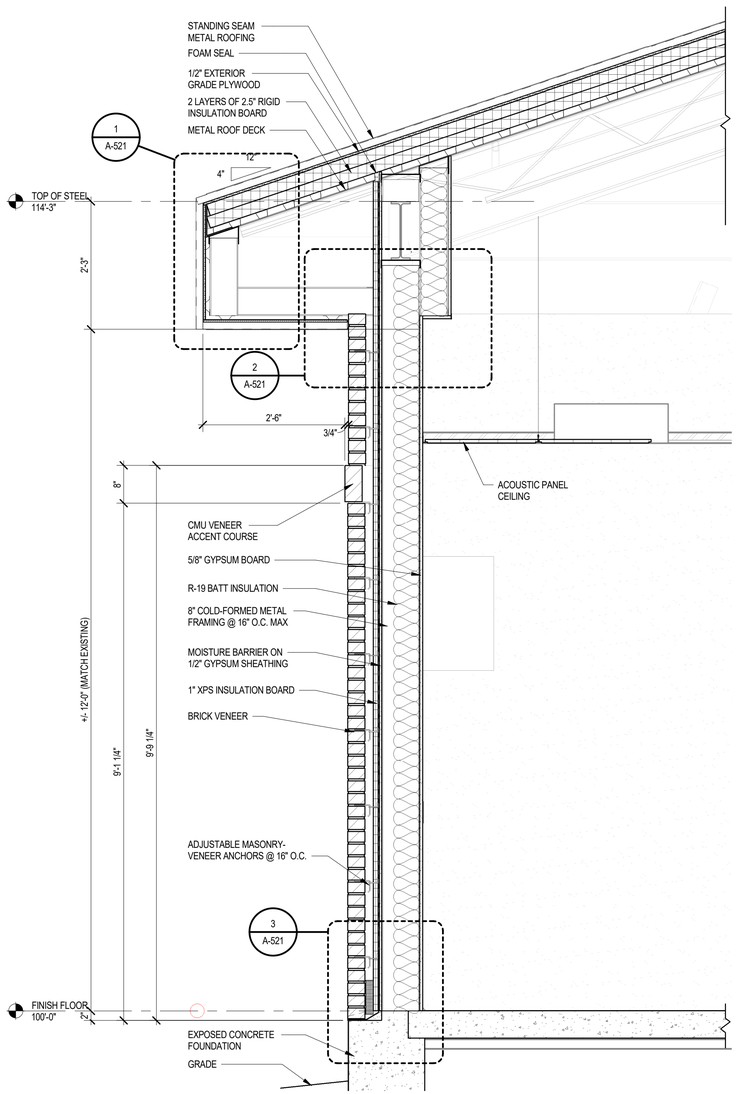
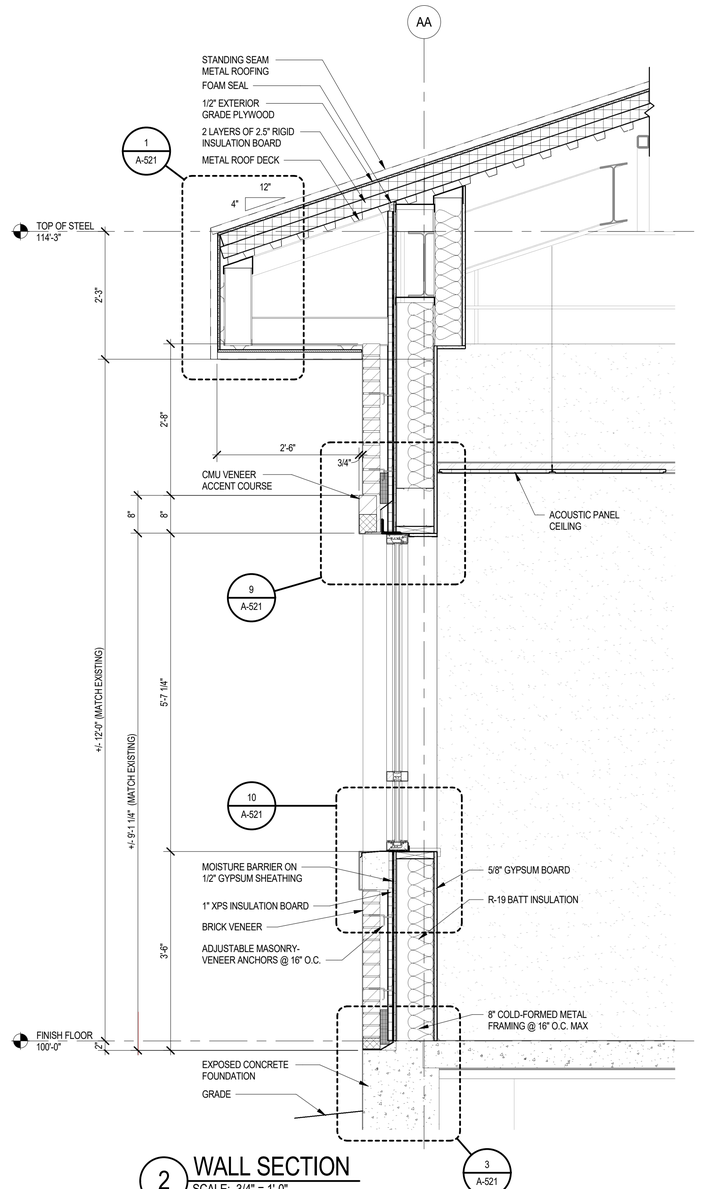
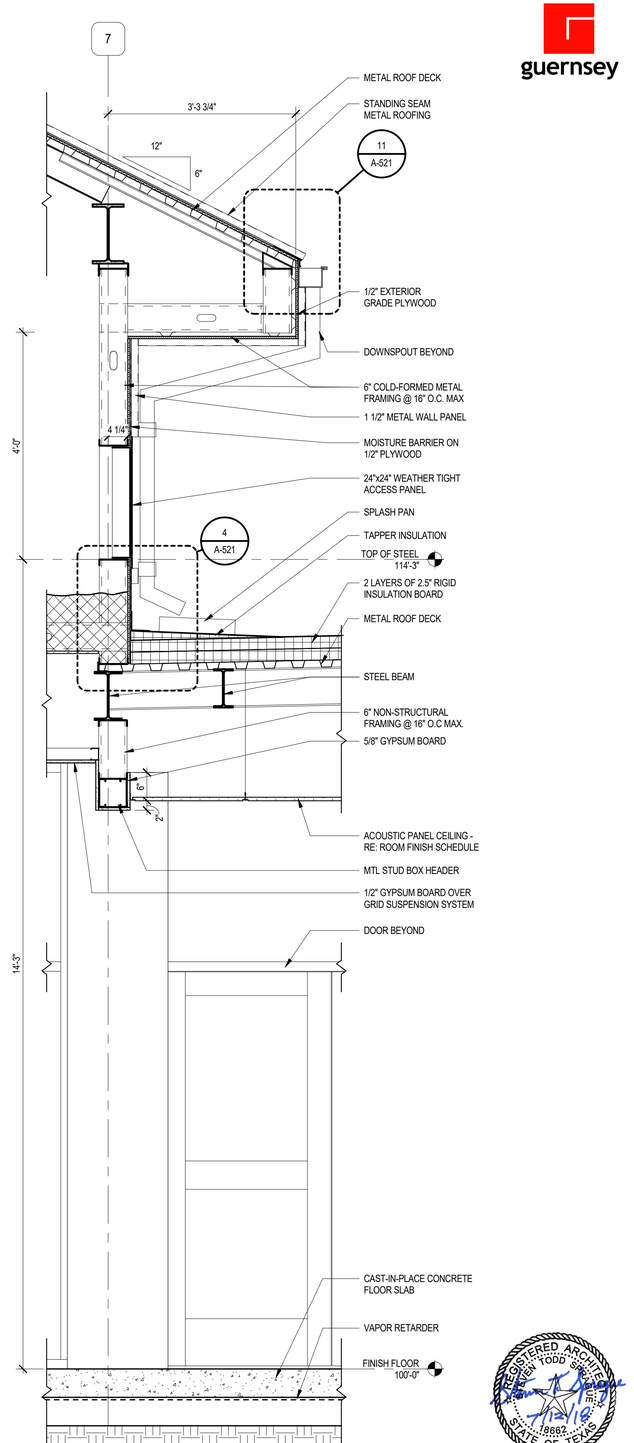
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



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



2 WALL SECTION
SCALE: 3/4" = 1'-0"



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

2' 1' 0 2'
SCALE: 3/4" = 1'-0"

REGISTERED ARCHITECT BRIAN TODD SNYDER 18662 STATE OF TEXAS 7/12/18

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

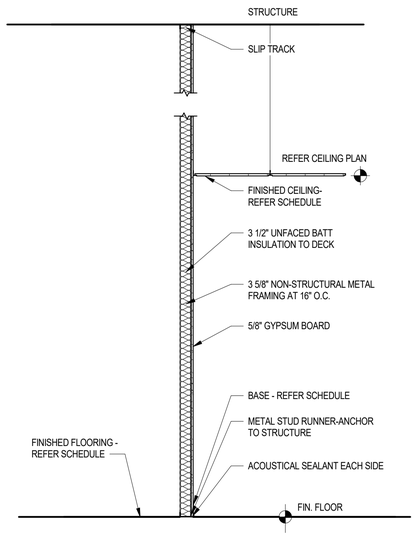
PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: EXTERIOR WALL SECTIONS
Date: 12 JUL 2018

SEQ. | SHEET | OF
A-321

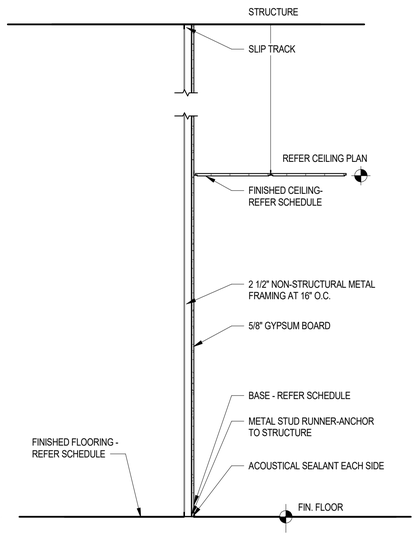
7/12/2018 11:28:36 AM C:\Work\Projects\R18_70374-000_A_SSnyderOKC.rvt

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



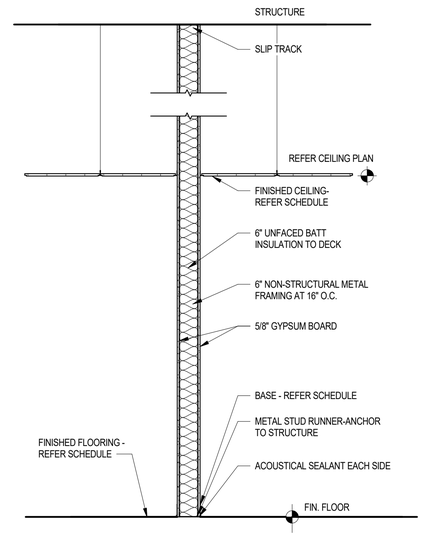
S021 NON-RATED 3 5/8" NON STRUCTURAL METAL FRAMING AND GYPSUM BOARD ONE SIDE

1 PARTITION S021
SCALE: 1/2" = 1'-0"



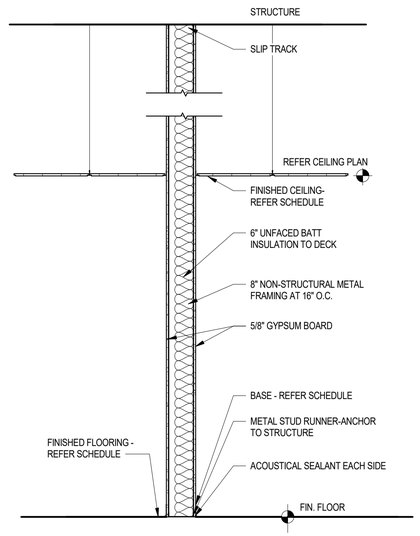
S062 NON-RATED 2 1/2" NON STRUCTURAL METAL FRAMING AND GYPSUM BOARD ONE SIDE

2 PARTITION S062
SCALE: 1/2" = 1'-0"



S067 NON-RATED 6" NON STRUCTURAL METAL FRAMING AND GYPSUM BOARD EACH SIDE

3 PARTITION S067
SCALE: 1/2" = 1'-0"



S068 NON-RATED 8" NON STRUCTURAL METAL FRAMING AND GYPSUM BOARD EACH SIDE

4 PARTITION S068
SCALE: 1/2" = 1'-0"

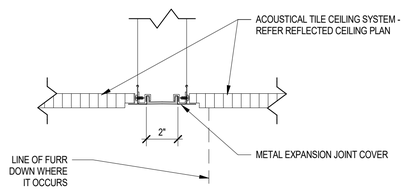
GENERAL NOTES:

1. REFER TO FLOOR PLANS FOR LOCATIONS OF PARTITION TYPES.
2. "LINE OF STRUCTURE" INDICATED AT HEAD CONDITIONS FOR EACH PARTITION TYPE IS DIAGRAMMATIC ONLY AND DOES NOT INDICATE EXACT CONSTRUCTION CONDITIONS.
3. TERMINATE FIRE RESISTANCE RATED PARTITIONS AT STRUCTURAL MEMBER WITH A RATING GREATER THAN OR EQUAL TO THE PARTITION.
4. INSTALL BRACING AND FIRE RETARDANT TREATED WOOD BLOCKING FOR CASEWORK, EQUIPMENT, ETC. AT PARTITIONS AS REQUIRED.
5. ALL INTERIOR PARTITION STUDS SHALL BE 33 MIL. MINIMUM, L/240, 16" O.C.
6. THE MATERIALS AND DETAILS SHOWN ARE FOR TYPICAL INSTALLATIONS WHERE THE STUD MANUFACTURER'S RECOMMENDATIONS OR LOCAL ORDINANCES ARE MORE RESTRICTIVE, THEY SHALL APPLY.
7. PARTITIONS SHALL BE CONTINUOUS OVER DOORS SAME AS ADJACENT WALLS (UNLESS NOTED OTHERWISE) WHERE DRYWALL CONTINUES ABOVE CEILING LEVEL AND ABOVE THE CEILING LEVEL UP TO THE STRUCTURE ABOVE.
8. ALL PENETRATIONS IN DRYWALL CONSTRUCTION ABOVE FINISHED CEILING AND AS NOTED ELSEWHERE SHALL BE EFFECTIVELY SEALED TO ACHIEVE STATED STC RATING AND FIRE STOP CAULKED AT FIRE RATED PARTITIONS.
9. ALL MECHANICAL CHASES AND OTHER NOTED CHASES ARE TO EXTEND UP TO THE UNDERSIDE OF THE DECK STRUCTURE ABOVE. ALL PLUMBING CHASES UNLESS OTHERWISE NOTED SHALL EXTEND ABOVE THE HIGHEST ADJOINING CEILING AND BE BRACED TO STRUCTURE.
10. ACOUSTICAL NOTES:

    A. PARTITION TO BE INSTALLED WITH SOUND ATTENUATION BLANKETS (SAB) - EXTEND S.A.B. FOR FULL-HEIGHT OF PARTITION.

guernsey

DETAIL 5 NOT USED



6 EXPANSION JOINT - CEILING AT ACT
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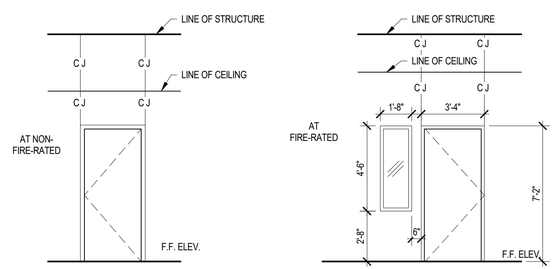


7 TYPICAL CONTROL JOINT ELEVATION
SCALE: 1/4" = 1'-0"

6" 3" 0 6"
SCALE: 3" = 1'-0"

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

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

REGISTERED ARCHITECT
STEVEN TODD SNYDER
7/13/18
8662
STATE OF TEXAS

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

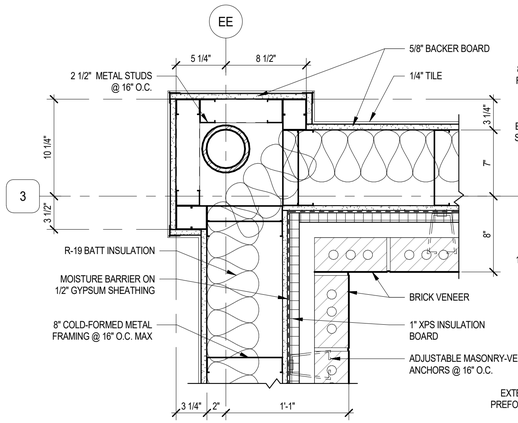
PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: PARTITION TYPES
Date: 12 JUL 2018

SEQ. | SHEET | OF
A-341

7/12/2018 11:28:37 AM C:\Work\Projects\R18_70374-000_A_SSnyderOKC.rvt

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



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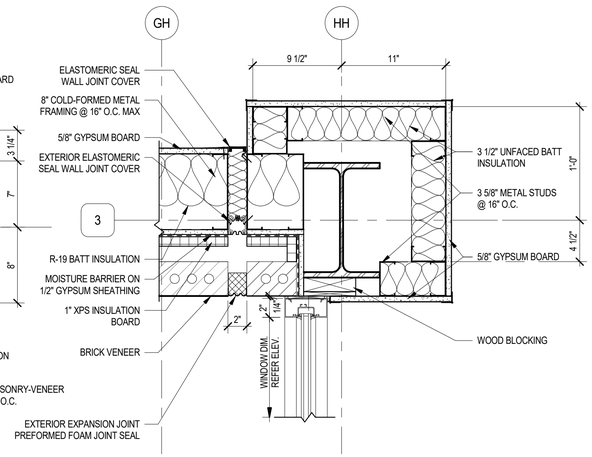

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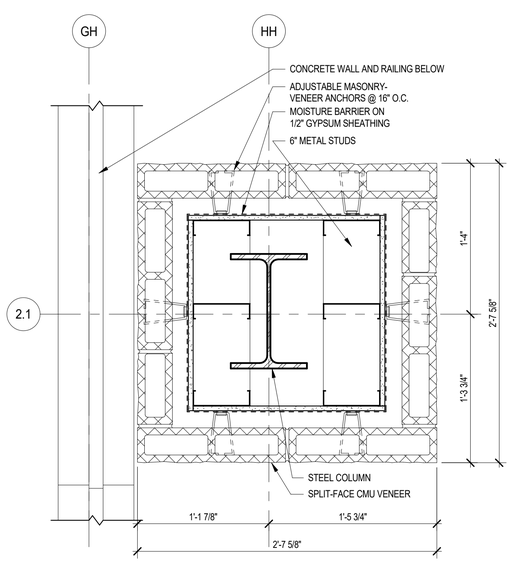

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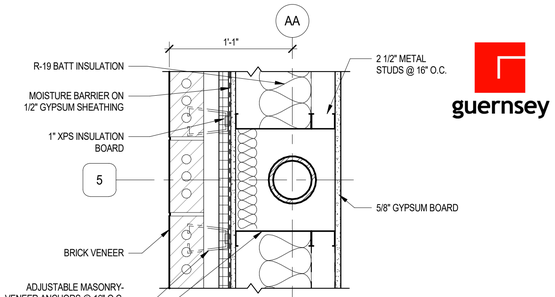

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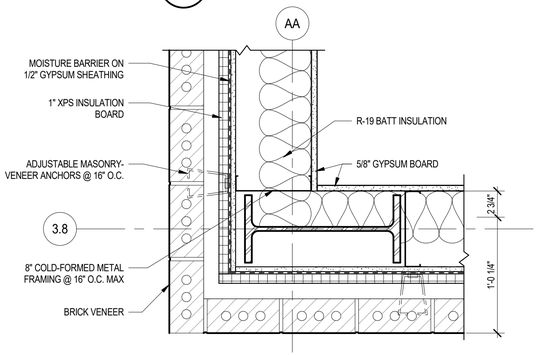

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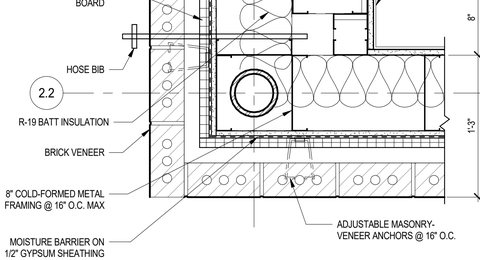

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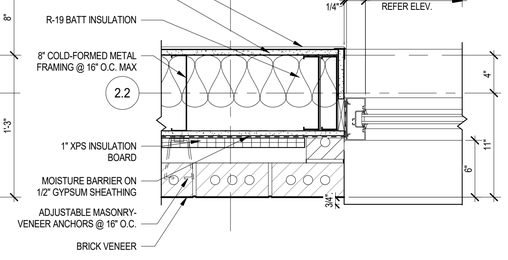

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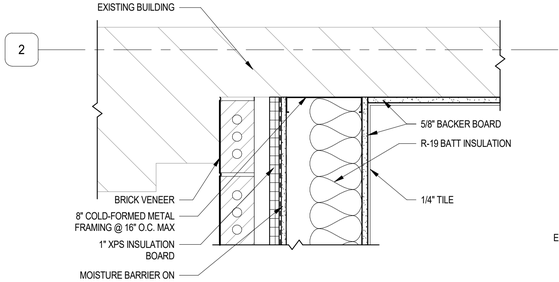

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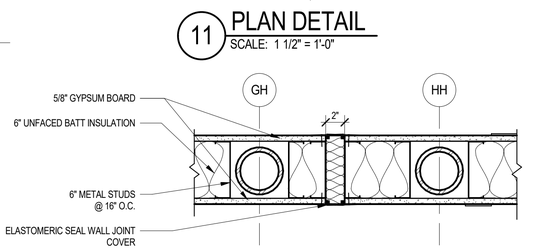

12 PLAN DETAIL
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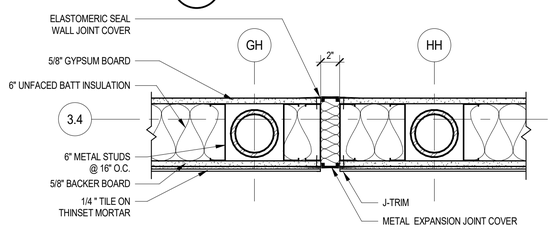

13 PLAN DETAIL
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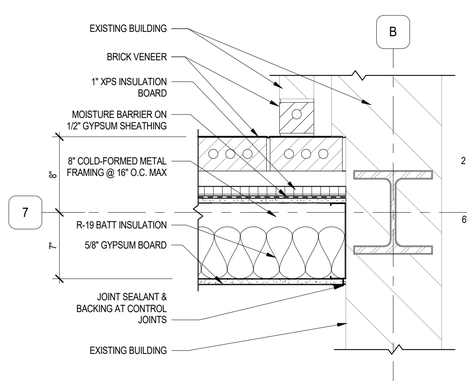

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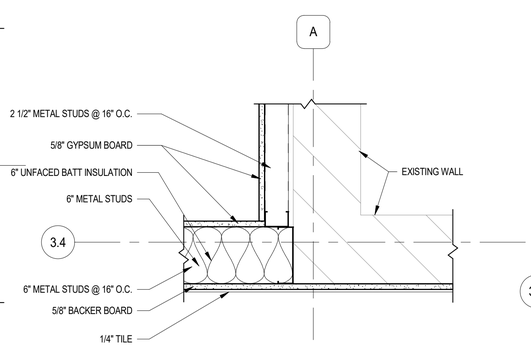

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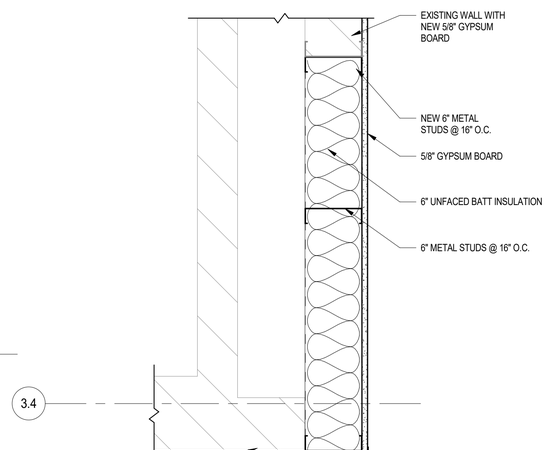

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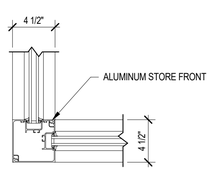

14 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

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

guernsey

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: PLAN DETAILS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	A-501	

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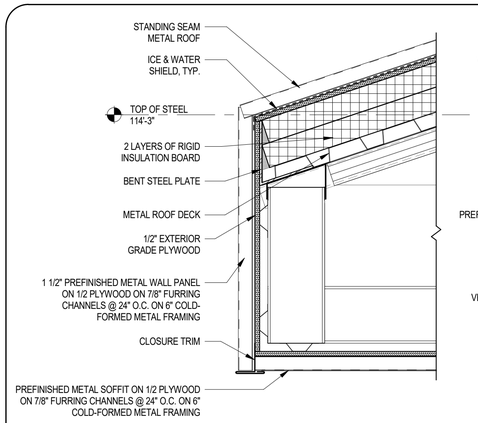
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



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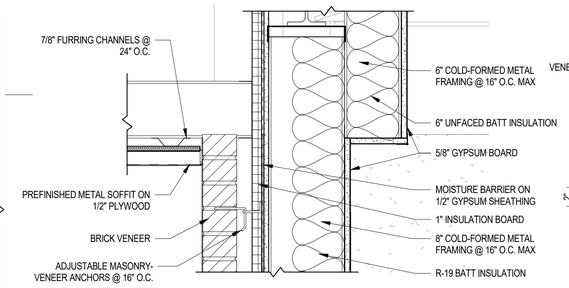

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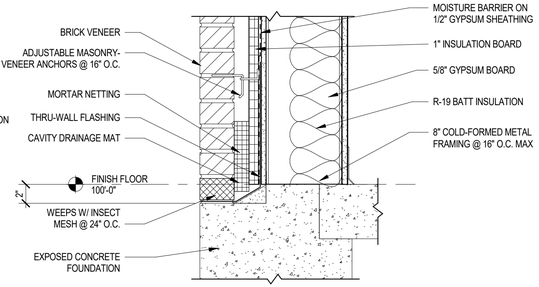

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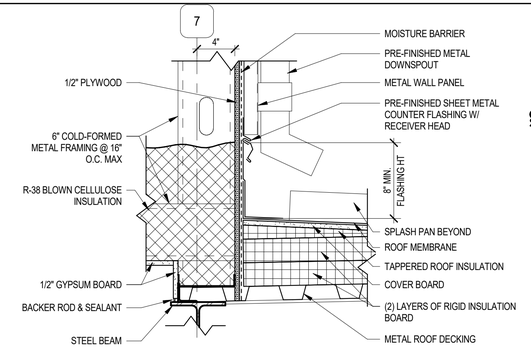

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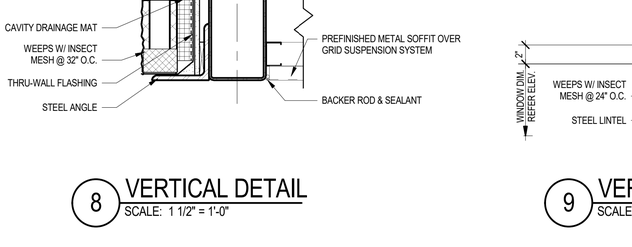

5 VERTICAL DETAIL
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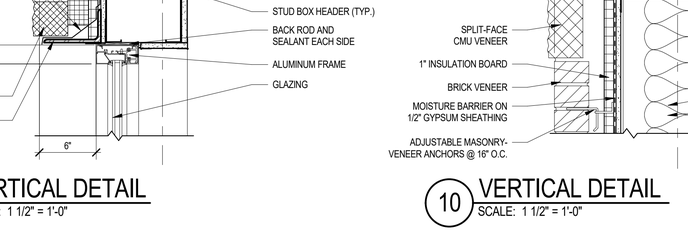

6 VERTICAL DETAIL
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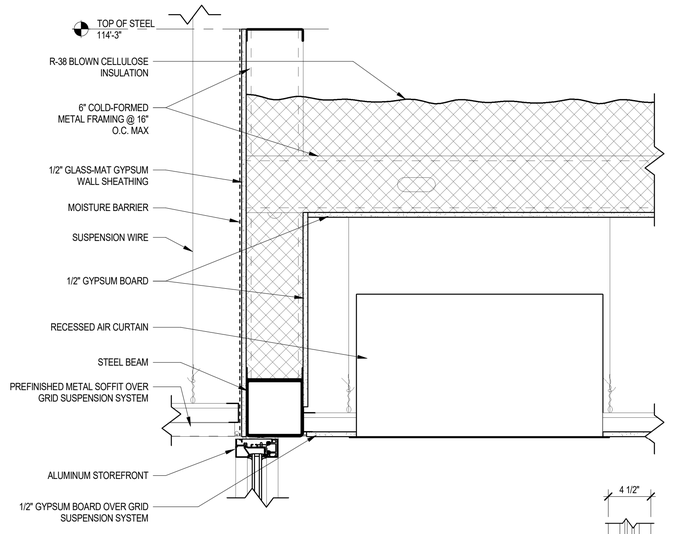

7 VERTICAL DETAIL
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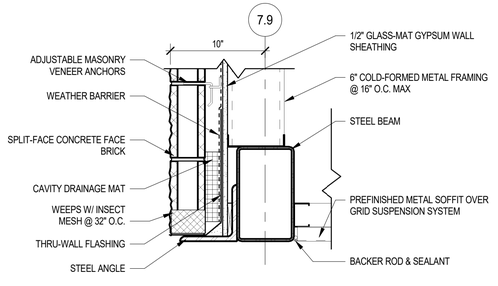

8 VERTICAL DETAIL
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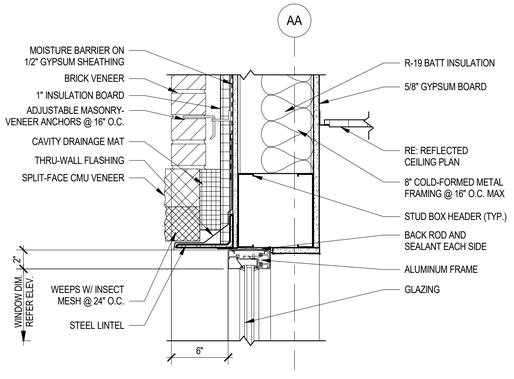
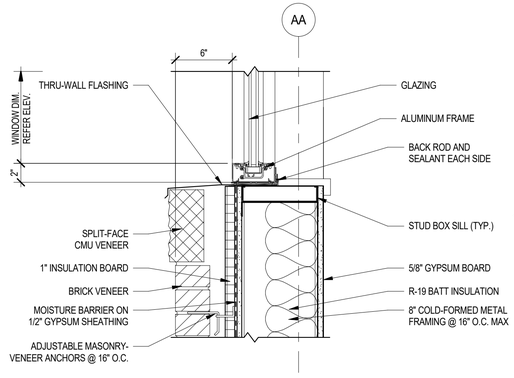


9 VERTICAL DETAIL
SCALE: 1 1/2" = 1'-0"



10 VERTICAL DETAIL
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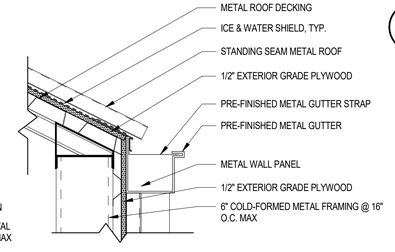

11 VERTICAL DETAIL
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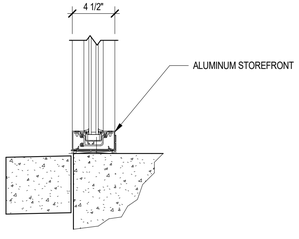

12 VERTICAL DETAIL
SCALE: 1 1/2" = 1'-0"

guernsey

Symbol	Description	Date	Appr
	REVISIONS		

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: VERTICAL DETAILS
Date: 12 JUL 2018

REGISTERED ARCHITECT TODD SNYDER 8687 STATE OF TEXAS 7/12/18

SEQ.	SHEET	OF
	A-521	

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

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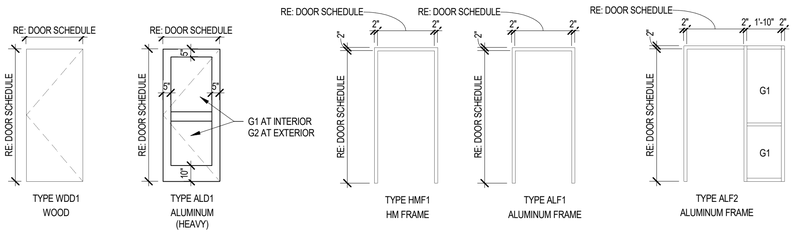
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

DOOR SCHEDULE

MARK	DOOR PANEL SIZE PANEL 1 WIDTH	DOOR PANEL SIZE PANEL 2 WIDTH	DOOR HEIGHT	DOOR MATERIAL	DOOR TYPE	FRAME WIDTH HEAD	FRAME WIDTH JAMB	FRAME MATERIAL	FRAME TYPE	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	FIRE RATING	HW SET	COMMENTS
101A	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	5/A-601	6/A-601	7/A-601	0	1	DOOR AND DOOR GLAZING SHALL MEET AT/FP REQUIREMENTS
101B	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	8/A-601	9/A-601	N/A	0	2	
103	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	7	
104A	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	5/A-601	6/A-601	7/A-601	0	1	DOOR AND DOOR GLAZING SHALL MEET AT/FP REQUIREMENTS
104B	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	8/A-601	9/A-601	N/A	0	2	
105	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	8	
106	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	6	
107	3'-0"	3'-0"	7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	11	
110	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	9	
111	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	10	
112	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	5	
113	3'-0"		7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF2	2/A-601	3/A-601	N/A	0	4	
115	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	8/A-601	9/A-601	N/A	0	2	

GLAZING TYPES

MARK	COMMENTS
G1	1/4" CLEAR TEMPERED GLASS
G2	1" INSULATED, LOW-E, LAMINATED, TEMPERED, TINTED TO MATCH EXISTING GLASS. ALL NEW EXTERIOR GLAZING SHALL MEET ATFP REQUIREMENTS

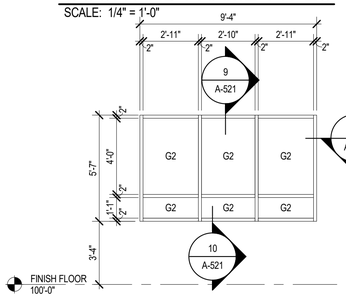


DOOR TYPES

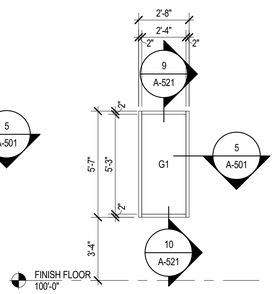
FRAME TYPES

DOOR AND FRAME TYPES

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



TYPE A
ALUMINUM FRAME STOREFRONT



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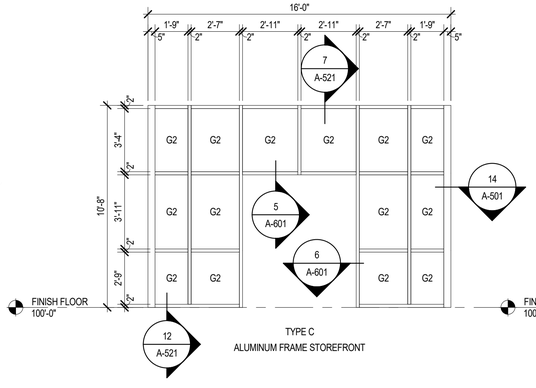

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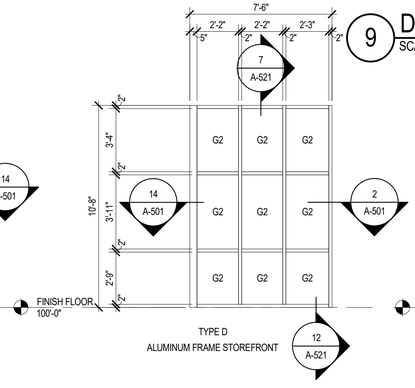
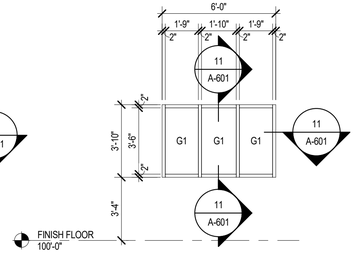


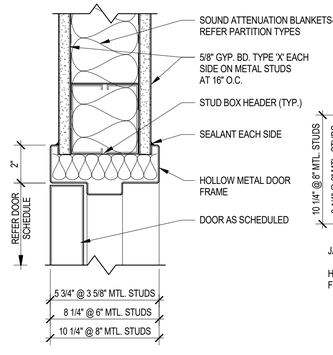
TYPE D
ALUMINUM FRAME STOREFRONT



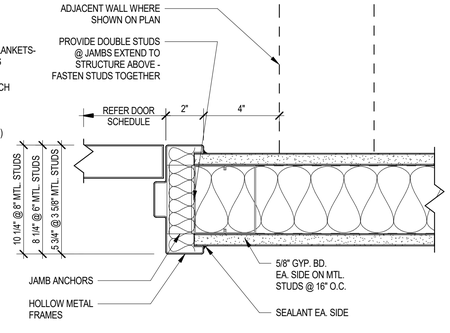
TYPE E
ALUMINUM FRAME STOREFRONT

WINDOW ELEVATIONS

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

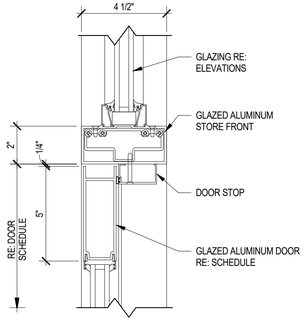


2 DOOR HEAD
SCALE: 3" = 1'-0"

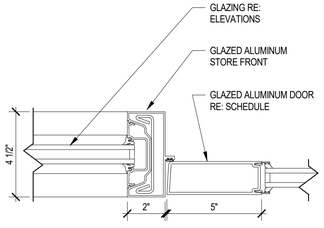


3 DOOR JAMB
SCALE: 3" = 1'-0"

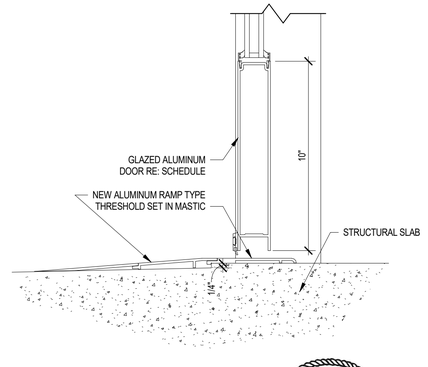
NOTE: DETAIL 4
NOT USED



5 DOOR HEAD
SCALE: 3" = 1'-0"



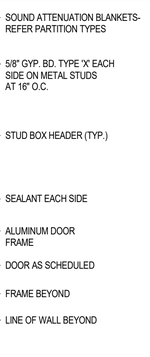
6 DOOR JAMB
SCALE: 3" = 1'-0"



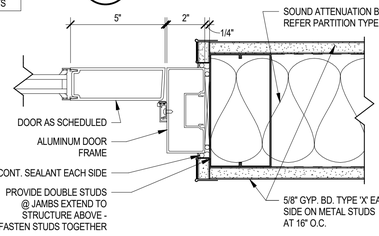
7 DOOR SILL
SCALE: 3" = 1'-0"

6" 3" 0 6"
SCALE: 3" = 1'-0"

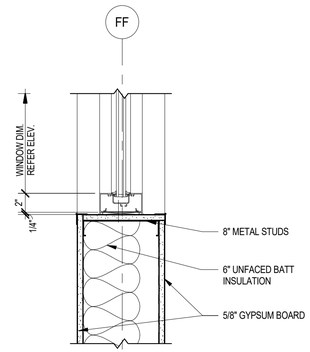
4' 2' 0 4'
SCALE: 1/4" = 1'-0"



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



NOTE: DETAIL 10
NOT USED



11 WINDOW JAMB/SILL
SCALE: 1 1/2" = 1'-0"

REGISTERED ARCHITECT
KEVIN TODD SNYDER
STATE OF TEXAS
8662
7/12/18

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: J. LOPEZ
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: DOOR SCHEDULE
Date: 12 JUL 2018

SEQ. | SHEET | OF
A-601

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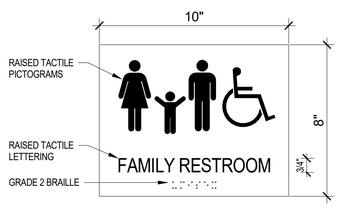
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

ROOM FINISH SCHEDULE

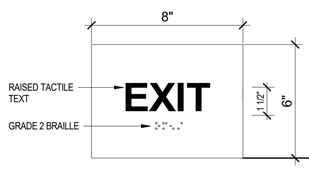
ROOM NUMBER	ROOM NAME	FLOOR FIELD	BASE	NORTH WALL FINISH	SOUTH WALL FINISH	EAST WALL FINISH	WEST WALL FINISH	WALL ACCENTS	CEILING FIELD	CEILING ACCENTS	REMARKS
101	VESTIBULE	CPT3	RB1/TS2	CT1/CT2/CT3/CT4/CT6	EXISTING/PT1	EXISTING/PT1	EXISTING/PT1	-	ACT1	PT2	-
102	DINING	LVT1/CPT1	RB1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	-	ACT1	ACT2	CERAMIC TILE (CT) WAINSCOT IS ALT #3. BASE BID SHALL BE PAINTED GYPSUM BOARD WITH A CHAIR RAIL (CR) MOUNTED AT 32" AFF TO BOTTOM OF CR.
103	PRIVATE DINING	CPT2	RB1	PT1/CR	PT1/CR	PT1/CR	PT1/CR	-	ACT1	-	
104	VESTIBULE	CPT3	RB1	CT1/CT2/CT3/CT4/CT/PT1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	-	ACT1	PT2	
105	FAMILY TOILET	CT7	TS2	CT1	CT1	CT1	CT1	-	PT2	-	
106	COMM	SC1	RB1	PT1	PT1	PT1	PT1	-	OPEN TO STRUCTURE	-	
107	MECHANICAL	SC1	RB1	PT1	PT1	PT1	PT1	-	OPEN TO STRUCTURE		
108	EXISTING WOMEN'S	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	
109	EXISTING JAN.	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	
110	STORAGE	CPT2	RB1	PT1	PT1	PT1	PT1	-	ACT1	-	-
111	CONF. ROOM	CPT2	RB1	PT1	PT1	PT1	PT1	-	ACT1	-	
112	OFFICE	CPT2	RB1	PT1	PT1	PT1	PT1	-	ACT1	-	
113	STUDENT ADMIN.	CPT2	RB1	PT1	PT1	PT1	PT1	-	ACT1		
114	EXISTING MEN'S	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	
115	CORRIDOR	CT8	TS2/RB1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	CT1/CT2/CT3/CT4/CT5/PT1	-	ACT1		
116	EXISTING DINING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	
117	EXISTING KITCHEN	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	
118	PREPARATION ROOM	EF1	CT7	CT6	CT6	CT6	CT6	-	ACT3	-	ALT #1. BASE BID, NO WORK.

INTERIOR MATERIALS SCHEDULE

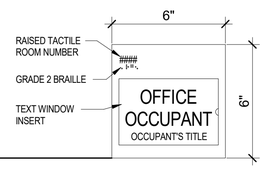
CODE	PRODUCT	SPECIFICATION	MANUFACTURER	STYLE	COLOR	SIZE	NOTES	CONTACT
TS5	TRANSITION	09 65 13	JOHNSONITE	RESILIENT T-MOLDING CE-XXX-A	PEPPERCORN	1 1/16" WIDE		
1. CEILING								
ACT1	ACOUSTICAL CEILING TILE	09 51 13	ARMSTRONG	CIRRUS #577, FIRE RESISTIVE, BEVELED TEGULAR EDGE WITH SUPRAFINE 9/16" SUSPENSION SYSTEM	WH WHITE	24" X 24" X 3/4"		
ACT2	WOOD GRID CEILING	09 54 26	ARMSTRONG	WOODWORKS OPEN CELL VECTOR LINEAR PANELS #6624 WITH WOOD PERIMETER TRIM	NATURAL VARIATIONS LINEAR WALNUT	24" X 24" X 2 1/4"	DINING ROOM	
ACT3	ACOUSTICAL CEILING TILE	09 51 13	ARMSTRONG	KITCHEN ZONE #673, SQUARE LAY-IN 15/16" SUSPENSION SYSTEM	WHITE			
PT1	PAINT	09 91 23	BENJAMIN MOORE	INTERIOR ACRYLIC PAINT: REGAL INTERIOR PAINT - SEMIGLOSS	OC-25 CLOUD COVER	-	GENERAL CEILING PAINT	
2. WALL								
CR	CHAIR RAIL	10 26 00	CS ACROVYN	WOOD CRASH RAIL	451 WALNUT	5 1/2" HGH	INSTALL AT 32" AFF TO BOTTOM OF CHAIR RAIL ALONG PERIMETER OF PRIVATE DINING ROOM	
CT1	WALL TILE	09 30 13	CROSSVILLE STUDIOS IMOLA	COLORBODY PORCELAIN TILE; UPDATE	WHITE	12"X24"		
CT2	WALL TILE	09 30 13	CROSSVILLE STUDIOS IMOLA	COLORBODY PORCELAIN TILE; UPDATE	WHITE	12"X12"		
CT3	WALL TILE	09 30 13	CROSSVILLE STUDIOS IMOLA	COLORBODY PORCELAIN TILE; UPDATE	WHITE	2"X2" MOSAIC		
CT4	WALL TILE	09 30 13	CROSSVILLE	BUENOS AIRES MOOD, POLISHED	POLO, POLISHED	12"X24"		
CT5	WALL TILE	09 30 13	CROSSVILLE	BUENOS AIRES MOOD, POLISHED	POLO, POLISHED	6"X36"		
CT6	WALL TILE	09 30 13	DAL TILE	SEMIGLOSS WALL TILE	K101 WHITE	6" X 6"	TO MATCH EXISTING KITCHEN WALL TILE, FULL HEIGHT.	
CT9	WALL TILE	03 30 00	CROSSVILLE	BUENOS AIRES MOOD, UNPOLISHED	POLO, UNPOLISHED	12"X12"		
GRT1	GROUT	09 30 13	CUSTOM BUILDING PRODUCTS	FUSION PRO SINGLE COMPONENT TILE GROUT	#386 OYSTER GRAY	-	FOR USE WITH WALL TILE	
GRT3	GROUT	09 30 13	CUSTOM BUILDING PRODUCTS	FUSION PRO SINGLE COMPONENT TILE GROUT	#381 BRIGHT WHITE	-	FOR USE WITH PREP AREA SEMIGLOSS WALL TILE AND WALL BASE	
HPL2	METAL LAMINATE	09 77 00	CHEMETAL	INTERIOR METAL LAMINATE	#614 BEOWULF	AR	FOR USE WITH FRY REGLET PREFINISHED INTERIOR PANEL SYSTEM, REFER 4/A-221	
PT1	PAINT	09 91 23	BENJAMIN MOORE	INTERIOR ACRYLIC PAINT; REGAL INTERIOR PAINT -SEMI-GLOSS	OC-25 CLOUD COVER	-	GENERAL FIELD PAINT	
PT2	PAINT	09 91 23	SHERWIN WILLIAMS	DTM ACRYLIC COATING, PRO INDUSTRAIL DTM ACRYLIC - SEMI-GLOSS	SW7505 MANOR HOUSE	-	HM DOOR FRAMES	
S1	SIGNAGE	101423.16	INPRO CORP.	ROOM IDENTIFICATION SIGNAGE	TBD	AS INDICATED	REFER SHEET A-701.	
TS3	TRANSITION EDGE PROTECTION	09 30 13	SCHLUTER	QUADEC	TSOB BRONZE (TRENDLINE)	-	FOR TOP CAP AT TILE WAINSCOT AND OUTSIDE CORNERS	
3. BASE								
CT7	CERAMIC WALL BASE	09 30 13	AMERICAN OLEAN	SANITARY COVE BASE S-3419T	0090 WHITE	6" X 6"	PREP AREA WALL BASE	
MB1	METAL WALL BASE	09 77 00	FRY REGLET	FLAT STOCK ALUMINUM	ANODIZED ALUMINUM TO MATCH REVEALS IN PREFINISHED PANEL SYSTEM	4" HIGH	FEATURE WALLS: PREFINISHED INTERIOR PANEL SYSTEM REFER 4/A-221 AND 5/A-221.	
RB1	RUBBER BASE	09 65 13	JOHNSONITE	RESILIENT WALL BASE; 4" HIGH STRAIGHT TOE	PEPPERCORN	4" HIGH		
TS1	TRANSITION COVE	09 30 13	SCHLUTER	DILEX AHK COVE SHAPED PROFILE	TSOB BRONZE (TRENDLINE)	-	FOR TRANSITION AT WALL, WALL TILE TO RESILIENT	
TS2	TRANSITION COVE	09 30 13	SCHLUTER	DILEX AHKA COVE SHAPED PROFILE	TSOB BRONZE (TRENDLINE)	-	FOR TRANSITION AT WALL, WALL TILE TO FLOOR TILE	
4. FLOOR								
CPT1	CARPET TILE	09 68 13	J&J INVISION	KINETEX, TIMBER WITH PREFIX ADHESIVE	1926 BUCKTHORN	12"X48"		
CPT2	CARPET TILE	09 68 13	J&J INVISION	CRAFTWORK MODULAR	2205 QUILTER	24"X24"		
CPT3	CARPET TILE	09 68 13	J&J INVISION	INCOGNITO WALK-OFF MODULAR	1843 WIRETAP	24" X 24" APPROX.		
CT8	FLOOR TILE	09 30 13	CROSSVILLE	PORCELAIN STONE TILE; SPEAK EASY	AV281 SIDECAR	8" X 36"		
EF1	EPOXY QUARTZ FLOOR SYSTEM	09 67 20	EVERLAST EPOXY SYSTEMS INC.	EVERLAST FLOOR	NORTHWOOD	AR	COLOR TO MATCH EXISTING FLOORING IN KITCHEN	
GRT2	GROUT	09 30 13	CUSTOM BUILDING PRODUCTS	GROUT, REFER SPECIFICATION 093000	#540 TRUFFLE		FOR USE WITH FLOOR TILE	
LVT1	LUXURY VINYL TILE	09 65 19	MOHAWK	ENHANCED RESILIENT TILE; MOLVENO RIGID CORE ERT	CARAIBE	8" X 60" PLANKS		
SC1	CONCRETE SEALER	03 30 00	TBD	SEALED CONCRETE	CLEAR			
TS4	TRANSITION	09 30 13	SCHLUTER	RENO-TK REDUCER ATK125ABGB	BRUSHED ANTIQUE BRONZE ANODIZED	1/2"	TRANSITION FROM CERAMIC TILE TO LVT OR CARPET	
5. MILLWORK								
HPL1	HIGH PRESSURE LAMINATE	06 41 16	WILSONART	HIGH PRESSURE LAMINATE, AEON SCRATCH RESISTANCE, HD LAMINATE, ALIGNED TEXTURE	MORRIS OAK 17005K-57	-	MILLWORK CABINETS AND DOORS	
SSM1	SOLID SURFACE	12 36 61.16	WILSONART	SOLID SURFACE	KIMBERLITE 9215CE	-		
6. WINDOWS								
RS1	WINDOW ROLLER SHADES	12 24 13	HUNTER DOUGLAS CONTRACT	DUAL ROLLER WINDOW SHADES, MANUAL	BLACKOUT FABRIC: SHEERWEAVE 7000, 0% OPENNESS, WHITE / PRIMARY FABRIC: GREENSCREEN SPECTRA, 10% OPENNESS, CREAM	AS REQUIRED	ALL WINDOWS	
7. DOORS								
WD	WOOD DOORS	08 14 16	TBD	DOOR WOOD STAIN TO MATCH APPROVED HIGH PRESSURE LAMINATE ON CABINETS	MATCH APPROVED HIGH PRESSURE LAMINATE ON CABINETS	-		



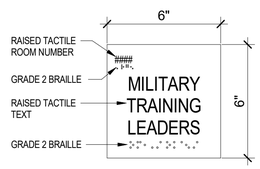
FAMILY RESTROOM PICTOGRAM (SN1)



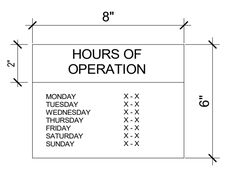
EXIT (SN2)



EMPLOYEE IDENTIFICATION (SN3)



ROOM IDENTIFICATION (SN4)

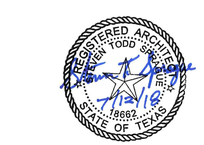


HOURS OF OPERATION (SN5)

SIGNAGE SCHEDULE

DOOR NUMBER	SIGN TYPE	SIGN TEXT
101A	SN2	EXIT
101A	SN5	EXIT
104A	SN2	EXIT
104A	SN5	EXIT
105	SN1	FAMILY TOILET
112	SN3	COORDINATE WITH OWNER
113	SN4	MILITARY TRAINING LEADERS

1 SIGNAGE PICTOGRAMS
SCALE: 3" = 1'-0"



6" 3" 0 6"
SCALE: 3" = 1'-0"

GENERAL NOTES:

1. REFER SHEET A-141 REFLECTED CEILING PLANS FOR CEILING HEIGHTS AND MATERIAL LOCATIONS.
2. INTERIOR HOLLOW METAL DOOR FRAMES TO BE PAINTED PT2 UNLESS NOTED OTHERWISE.
3. LVT1 TO BE INSTALLED IN BRICK PATTERN.
4. REFER SHEET A-701 FOR LOCATION OF SIGNS.
5. REFER SHEET A-701 FOR LOCATION OF FLOOR TRANSITIONS.
6. VERIFY WITH OWNER ALL SIGNAGE TEXT PRIOR TO MANUFACTURING SIGNS.
7. INSTALL SIGNS SN2 AND SN5 BACK-TO-BACK ON GLASS.

guernsey

REVISIONS

Symbol	Description	Date	Appr

Designed by: Designer
Drawn by: Author
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ROOM FINISH SCHEDULE
Date: 12 JUL 2018

SEQ. | SHEET A-641 | OF

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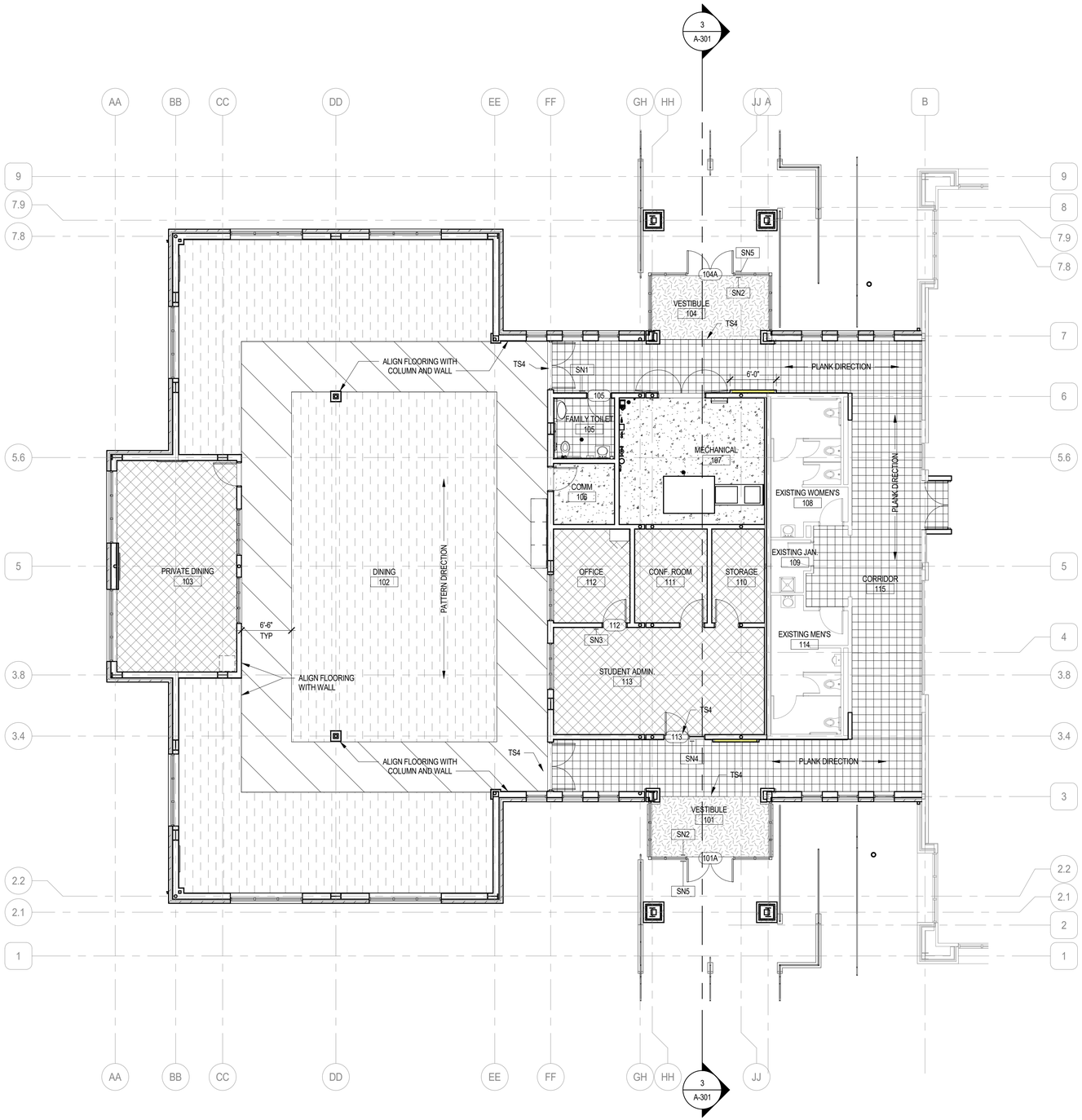
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



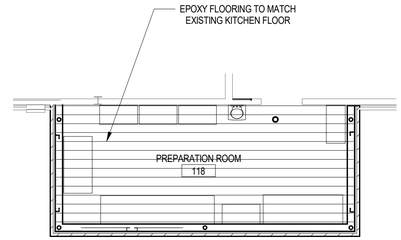
1 FINISH PLAN AREA-A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. INSTALL FLOORING MATERIAL UNDER APPLIANCES AND KNEESPACE AREAS UNLESS NOTED OTHERWISE.
2. REFER TO 1/A-641 FOR SIGNAGE DETAILS.

FLOOR FINISH LEGEND:

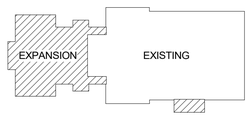
- CPT-1
- CPT-2
- CPT-3
- CT-1
- LVT-1
- SC-1
- EXISTING



FLOOR FINISH LEGEND

- EF1
- EXIST

2 FINISH PLAN AREA-B (ALT #1)
SCALE: 1/8" = 1'-0"



KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT STEVEN TODD SNYDER 18662 STATE OF TEXAS
7/12/18

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: S. SNYDER
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: FINISH AND SPECIALTIES PLAN
Date: 12 JUL 2018

SEQ.	SHEET	OF
	A-701	

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C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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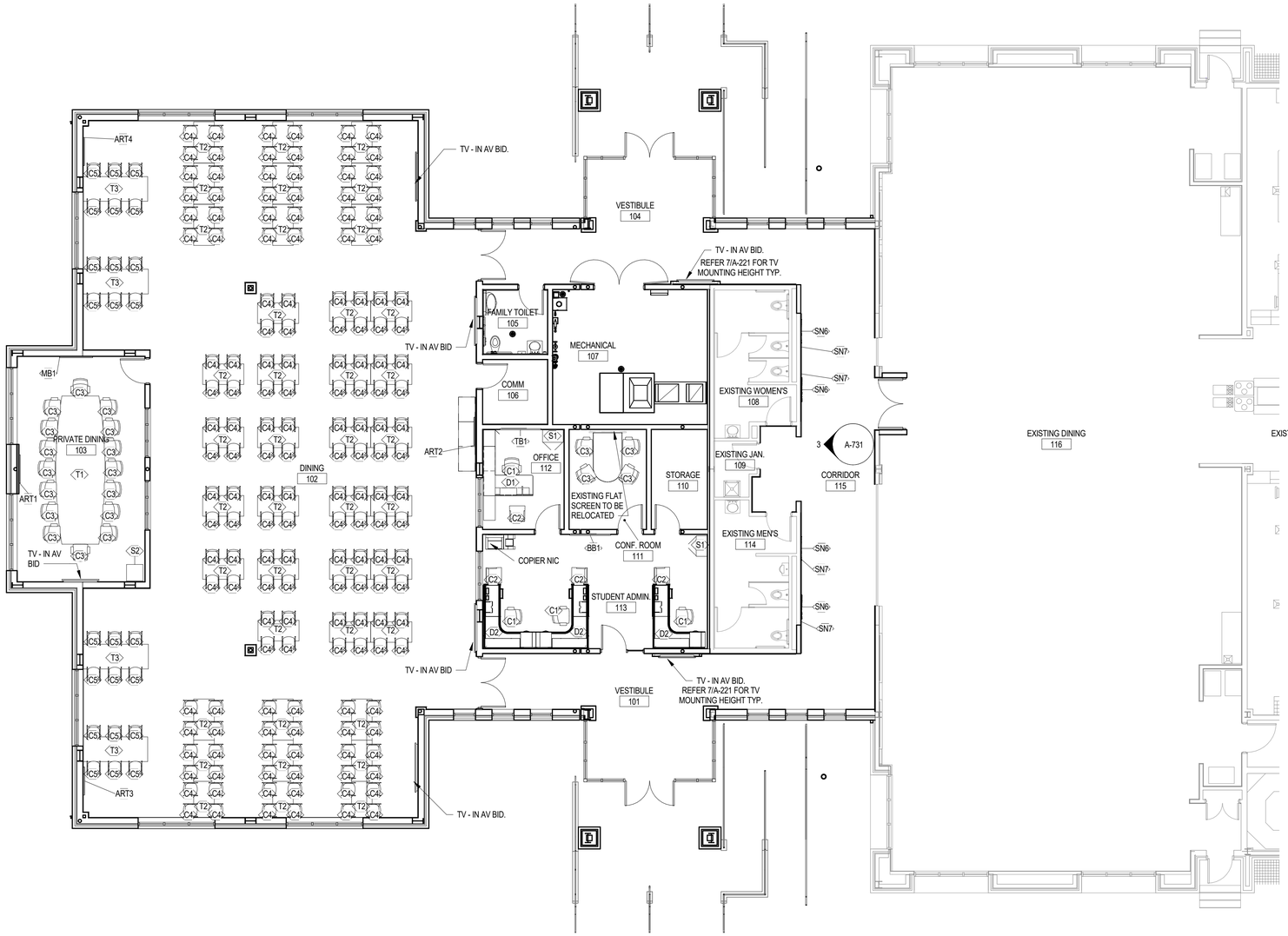


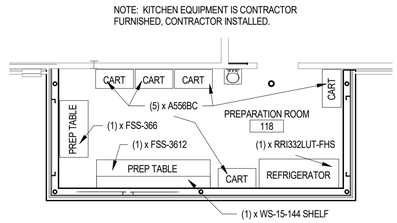
1 FURNITURE PLAN AREA-A
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

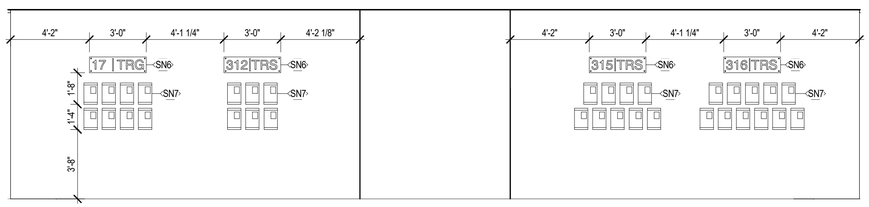
1. FURNITURE, FIXTURES AND EQUIPMENT ARE SHOWN FOR COORDINATION PURPOSES ONLY.
2. FURNITURE & A/V ARE NOT PART OF THE CONSTRUCTION CONTRACT.
3. FOOD SERVICE EQUIPMENT SHALL BE PROCURED AND INSTALLED BY THE GENERAL CONTRACTOR.
4. A SCHEDULE FOR AUDIO-VISUAL EQUIPMENT IS AVAILABLE ON SHEET AV101.
5. PROVIDE CONCEALED, FIRE-TREATED WOOD BLOCKING (PLYWOOD PANELS) AT LOCATIONS OF OWNER-PROVIDED MONITORS IN DINING 104. COORDINATE WITH OWNER EXACT LOCATIONS AND INSTALL WITH BOTTOM OF TV AT 6'-8" AFF. IF STUD DOES NOT FALL AT CENTER OF MOUNTING LOCATION, BLOCK 5 BAYS AS REQUIRED TO PROVIDE A MINIMUM BACKING WIDTH OF 32" ON EACH SIDE OF THE CENTER OF MOUNTING LOCATION. OVERALL HEIGHT OF PLYWOOD PANELS IS TO BE 24" AND IS TO BE CENTERED ON MOUNTING LOCATION. BLOCKING IS TO SUPPORT 150 LBS.
6. ALL OTHER TVS SHALL BE MOUNTED WITH PRE-MANUFACTURED IN-WALL HEADER, FOOTER AND WALL BOX PROVIDED BY OWNER.

FURNITURE SCHEDULE

MARK	DESCRIPTION	COMMENTS	CFCI	OFOI
	Teem			
ART1	40" FRAMED ART	INSTALL 57" AFF TO CENTERLINE		YES
ART2	40" FRAMED ART	INSTALL 57" AFF TO CENTERLINE		YES
ART3	40" FRAMED ART	INSTALL 57" AFF TO CENTERLINE		YES
ART4	40" FRAMED ART	INSTALL 57" AFF TO CENTERLINE		YES
BB1	TACK BOARD	PRIVATE OFFICE	YES	
C1	TASK/CONFERENCE CHAIR			YES
C2	GUEST CHAIR			YES
C3	TASK/CONFERENCE CHAIR			YES
C4	METAL DINING CHAIR			YES
C5	METAL DINING CHAIR			YES
D1	PRIVATE OFFICE SUITE			YES
D2	OPEN OFFICE WORKSTATION			YES
FS	FOOD SERVICE EQUIPMENT	CONTRACTOR TO PROVIDE FOOD SERVICE EQUIPMENT	YES	
MB1	MARKER BOARD	PRIVATE DINING	YES	
S1	LATERAL FILE 3 DRAWER, 30" WIDE			YES
S2	AV CABINET	COORDINATE INSTALLATION OF AV RACK WITH AV INTEGRATOR		YES
SN6	10"H X 36"W ACRYLIC SIGN WITH APPLIED ACRYLIC LETTERS MOUNTED WITH STANDOFFS	SIGNS FOR BIOGRAPHIES PURCHASED AS PART OF ART BUDGET		
SN7	8-1/2" X 11" CHANGABLE GRAPHIC INSERT WITH ALUMINUM FRAME SIGN	SIGNS FOR BIOGRAPHIES PURCHASED AS PART OF ART BUDGET		YES
T1	CONFERENCE TABLE, BOAT SHAPE, 192" X 55"			YES
T2	DINING TABLE 30" X 60"			YES
T3	DINING TABLE 30" X 96"			YES
TB1	TACK BOARD	PRIVATE OFFICE	YES	



2 EQUIPMENT PLAN AREA-B (ALT #1)
SCALE: 1/8" = 1'-0"



3 INTERIOR ELEVATION - CORRIDOR 115
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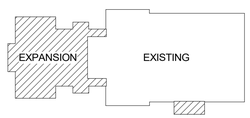


KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
TODD SNYDER
7/12/18
18662
STATE OF TEXAS

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. SPRAGUE
Drawn by: S. SNYDER
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

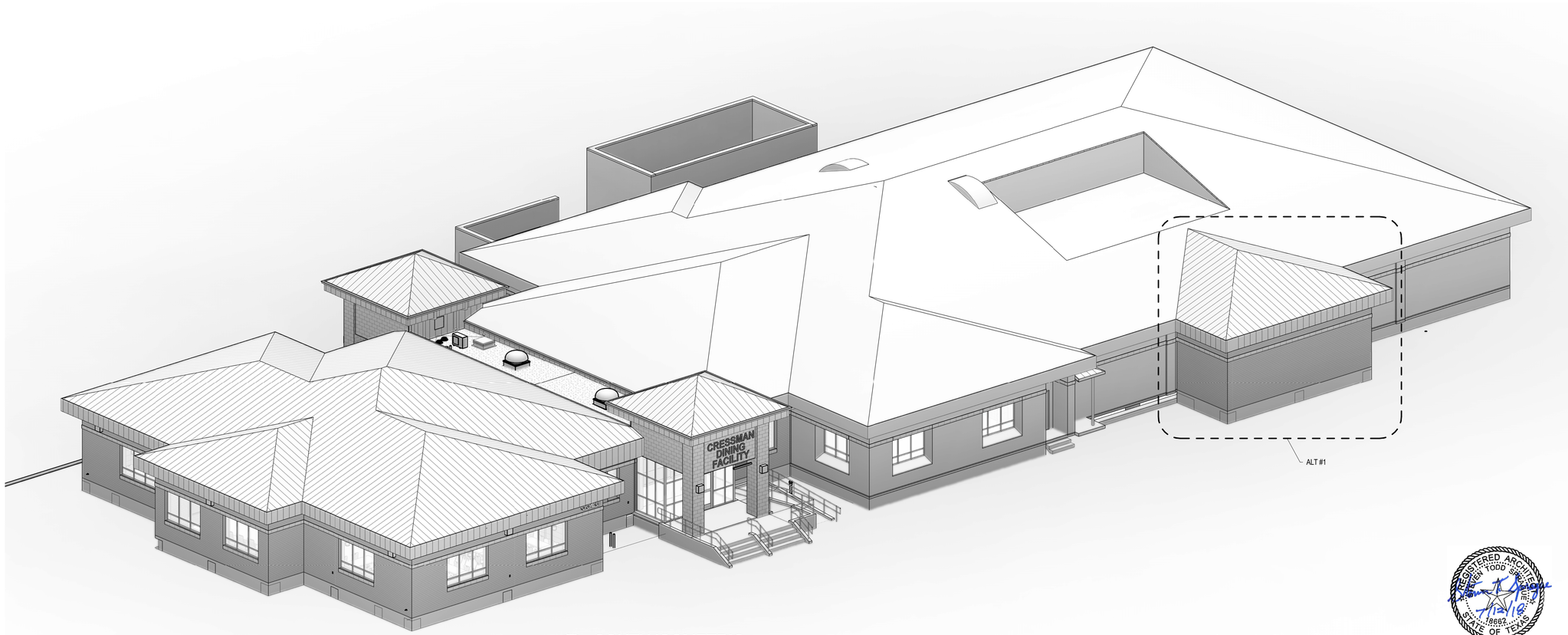
PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: FURNITURE AND EQUIPMENT PLAN
Date: 12 JUL 2018

SEQ.	SHEET	OF
	A-731	

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

1 NORTH ENTRANCE PERSPECTIVE
SCALE:



2 SOUTH ISOMETRIC
SCALE:

REGISTERED ARCHITECT
STEVEN TODD SNYDER
7/12/18
8662
STATE OF TEXAS

guernsey

Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by: S. SPRAGUE
Drawn by: S. SNYDER
Reviewed by: J. MORGAN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: PERSPECTIVE VIEWS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	A-801	

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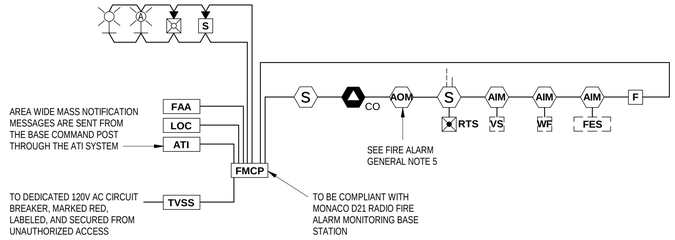
POOLE FIRE PROTECTION
19910 W. 161ST STREET
OLATHE, KS 66062 913.829.8650

C.R. ENGINEERING: #F-6671 EXPIRES JUNE 30, 2019



1 FA RISER DIAGRAM

N.T.S.

	INPUTS	OUTPUTS: ACTUATE COMMON ALARM SIGNAL INDICATOR (A)	ACTUATE AUDIBLE ALARM SIGNAL (B)	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR (C)	ACTUATE AUDIBLE SUPERVISORY SIGNAL (D)	ACTUATE COMMON TROUBLE SIGNAL INDICATOR (E)	ACTUATE AUDIBLE TROUBLE SIGNAL (F)	ACTUATE CLEAR FIRE ALARM VISIBLE NOTIFICATION APPLIANCES (G)	ACTUATE AMBER MASS NOTIFICATION VISIBLE NOTIFICATION APPLIANCES (H)	ACTIVATE TEMPORAL 3 (T-3) ALERT TONE AND UNIQUE FIRE EVACUATION MESSAGE (I)	ACTUATE SEVERE WEATHER MESSAGE (J)	ACTUATE ANTITERRORISM THREAT MESSAGE (K)	ACTUATE NATURAL DISASTER MESSAGE (L)	ACTUATE HAZARDOUS MATERIAL MESSAGE (M)	ACTIVATE TEMPORAL 4 (T-4) ALERT TONE AND UNIQUE CARBON MONOXIDE MESSAGE (N)	ACTUATE SYSTEM TEST MESSAGE (O)	ACTUATE ALL CLEAR MESSAGE (P)	ACTUATE ALL SPEAKER CIRCUITS FOR MANUAL ANNOUNCEMENT (Q)	TRANSMIT CONTACT ID TO SUPERVISING STATION (R)	TRANSMIT UNIQUE SUPERVISORY SIGNAL TO SUPERVISING STATION (S)	DE-ACTIVATE FIRE ALARM EVACUATION MESSAGE IF ACTIVE (T)	DEACTIVATE SPEAKERS WITHIN 15 FEET OF MICROPHONE (U)	SHUT DOWN ASSOCIATED AIR HANDLING UNIT (V)	DISPLAY/PRINT CHANGE OF STATUS (W)	DE-ACTIVATE MASS NOTIFICATION SIGNAL AFTER 10 MINUTES (X)	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	
1	MANUAL PULL STATION	X	X					X		X									X					X		1
2	SMOKE DETECTOR - SPOT TYPE	X	X					X		X									X					X		2
3	WATERFLOW SWITCH (NOTIFICATION APPLIANCES NON-SILENCABLE WHILE IN ALARM)	X	X					X		X									X					X		3
4	VALVE SUPERVISORY (NOTIFICATION APPLIANCES NON-SILENCABLE WHILE IN ALARM)			X	X														X					X		4
5	SMOKE DETECTOR - DUCT TYPE			X	X														X				X	X		5
6	CARBON MONOXIDE DETECTOR	X	X						X						X				X					X		6
7	KITCHEN HOOD FIRE EXTINGUISHING SYSTEM ALARM	X	X					X		X									X					X		7
8	AC POWER FAILURE					X	X												X					X		8
9	LOW BATTERY					X	X												X					X		9
10	ANY OPEN CIRCUIT					X	X												X					X		10
11	ANY GROUND FAULT					X	X												X					X		11
12	ANY NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X												X					X		12
13	ANY OTHER TROUBLES					X	X												X					X		13
14	MASS NOTIFICATION SIGNAL INITIATED WHILE SYSTEM CONTAINS ACTIVE FIRE ALARM			X	X				X											X	X		X	X		14
15	MICROPHONE KEYED-ALL CALL								X									X				X				15
16	MNS PRE-RECORDED MESSAGE ACTIVATED - FIRE								X	X																16
17	MNS PRE-RECORDED MESSAGE ACTIVATED - SEVERE WEATHER								X		X															17
18	MNS PRE-RECORDED MESSAGE ACTIVATED - ANTITERRORISM THREAT								X			X														18
19	MNS PRE-RECORDED MESSAGE ACTIVATED - NATURAL DISASTER								X				X													19
20	MNS PRE-RECORDED MESSAGE ACTIVATED - HAZARDOUS MATERIAL								X					X												20
21	MNS PRE-RECORDED MESSAGE ACTIVATED - GAS ALARM								X						X											21
22	MNS PRE-RECORDED MESSAGE ACTIVATED - SYSTEM TEST								X							X										22
23	MNS PRE-RECORDED MESSAGE ACTIVATED - ALL CLEAR																X									23
24	MESSAGE FROM WIDE AREA CENTRAL CONTROL UNIT								X									X								24
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	

NOTE: THIS MATRIX IS ONLY INTENDED TO SHOW THE MAJOR SYSTEM FUNCTIONS, SYSTEM SHALL ALSO PERFORM INPUTS/OUTPUTS REQUIRED BY NFPA 72 AND THE PRODUCTS' LISTING.

X PERFORM OPERATION/REPORT DEVICE STATUS

2 FIRE ALARM INPUT/OUTPUT MATRIX

N.T.S.

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
FMCP	FIRE ALARM/MASS NOTIFICATION CONTROL PANEL (MONACO MAAP-X PANEL)
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
ATI	ACOUSTIC TECHNOLOGY, INC. PANEL USED TO COMMUNICATE WITH THE BASE AREA WIDE MASS NOTIFICATION SYSTEM
FAA	FIRE ALARM ANNUNCIATOR
LOC	LOCAL OPERATING CONSOLE
FES	EXISTING WET CHEMICAL FIRE EXTINGUISHING SYSTEM
F	FIRE ALARM PULL STATION
AIM	ADDRESSABLE INPUT MODULE
AOM	ADDRESSABLE OUTPUT MODULE
WF	EXISTING WATERFLOW SWITCH
VS	EXISTING VALVE SUPERVISORY SWITCH
RTS	REMOTE TEST SWITCH
S	SMOKE DETECTOR - DUCT TYPE
S	SMOKE DETECTOR - SPOT TYPE
CO	GAS DETECTOR - CARBON MONOXIDE
	COMBINATION SPEAKER AND FIRE ALARM STROBE WITH CLEAR LENS MARKED "FIRE"
	FIRE ALARM STROBE WITH AMBER LENS MARKED "ALERT"
	FIRE ALARM STROBE WITH CLEAR LENS MARKED "FIRE"
S	SPEAKER
	SYMBOL MODIFIERS
C	CEILING MOUNTED
ncd	CANDELA RATING
*n*W	WATT TAP
WP	WEATHER PROOF

GENERAL FIRE ALARM NOTES

GENERAL
1. THE CONTRACTOR SHALL CAREFULLY REVIEW ALL APPLICABLE DESIGN CRITERIA, THESE DRAWINGS, AND THE PROJECT SPECIFICATIONS FOR IMPORTANT QUALIFICATION, DEFINITION, SUBMITTAL, PRODUCT, INSTALLATION, AND TESTING REQUIREMENTS.
2. ALL SUBMITTALS, INSTALLATION, AND TESTING SHALL BE COMPLETED IN A NEAT, WORKMAN-LIKE MANNER.
3. PRODUCT, DESIGN, INSTALLATION, AND TESTING ALTERNATE APPROACHES AND/OR SUBSTITUTIONS WILL BE CONSIDERED BY THE ENGINEER IF THE CONTRACTOR PROVIDES WRITTEN, WELL-DOCUMENTED, ENGINEERING-BASED SUBSTANTIATION FOR PROPOSED ALTERNATIVE.
4. FINAL MASS NOTIFICATION SYSTEM PRE-RECORDED MESSAGES TO BE PROGRAMMED PER THE DIRECTION OF THE GOODFELLOW AIR FORCE BASE FIRE DEPARTMENT. SEE UFC 4-021-01 APPENDIX B FOR SAMPLE PRE-RECORDED MESSAGES.
5. NEW FIRE ALARM/MASS NOTIFICATION SYSTEM SHALL INCORPORATE MONITORING OF EXISTING GAS AND ELECTRIC UTILITY SHUT-OFF VALVES. NEW SYSTEM SHALL MAINTAIN IDENTICAL FUNCTIONS AS EXISTING SYSTEM AS IT PERTAINS TO SHUNT TRIP BREAKERS OF THE ELECTRICAL SYSTEM UNDER THE KITCHEN HOODS, AS WELL AS GAS SHUT-OFF UPON ACTIVATION OF THE EXISTING AUTOMATIC WET-CHEMICAL FIRE EXTINGUISHING SYSTEM.

APPLICABLE CODES AND STANDARDS
1. UFC 3-600-01 FIRE PROTECTION ENGINEERING FOR FACILITIES (8 AUGUST 2016; CHANGE 2, 25 MARCH 2018)
2. UFC 4-021-01 DESIGN AND O&M: MASS NOTIFICATION SYSTEMS (9 APRIL 2008 WITH CHANGE 1, JANUARY 2010)
3. INTERNATIONAL BUILDING CODE (2015)
4. NFPA 70 NATIONAL ELECTRIC CODE (2017)
5. NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (2016)

AUDIBILITY DESIGN
1. BECAUSE OF UNPREDICTABLE BACKGROUND NOISES AND PROJECT CONDITIONS, THE AUDIBILITY DESIGN GOALS SHALL BE CONFIRMED BY MEASUREMENT WITH CALIBRATED TEST EQUIPMENT. IF RESULTS INDICATE THAT ADDITIONAL NOTIFICATION APPLIANCES, THE CONTRACTOR SHALL ADD THEM AT NO ADDITIONAL COST.
2. THE EXPECTED AMBIENT SOUND PRESSURE LEVELS ARE AS FOLLOWS:
3. OFFICES, RESTROOMS, CIRCULATION AREAS: 55 dBA
4. PLACES OF ASSEMBLY: 55 dBA
5. MECHANICAL EQUIPMENT AREAS: 85 dBA
6. THE DESIGN GOAL IS FOR THE ALERT TONE PRECEDING THE VOICE MESSAGE TO REACH THE FOLLOWING SOUND PRESSURE LEVELS (PUBLIC MODE):
7. OFFICES, RESTROOMS, CIRCULATION AREAS: 70 dBA
8. LOCKER ROOMS: 70 dBA
9. MECHANICAL EQUIPMENT AREAS: 100 dBA
10. SPEAKERS MAY BE FIELD-LOCATED WITHIN 6 FT OF THE LOCATION INDICATED ON THE APPROVED DESIGN WITHOUT CONSULTING THE ENGINEER.
11. THE ALERT SIGNAL PORTION OF THE VOICE ALARM MESSAGE FOR CARBON MONOXIDE MUST BE A 520 Hz TEMPORAL 4 (T-4) SIGNAL. THE ALERT SIGNAL MUST REPEAT TWICE BEFORE THE VOICE ANNOUNCEMENT.

INTELLIGIBILITY DESIGN
1. BECAUSE OF UNPREDICTABLE BACKGROUND NOISES AND PROJECT CONDITIONS, THE INTELLIGIBILITY DESIGN GOALS SHALL BE CONFIRMED BY MEASUREMENT WITH CALIBRATED TEST EQUIPMENT. IF RESULTS INDICATE THAT ADDITIONAL NOTIFICATION APPLIANCES, THE CONTRACTOR SHALL ADD THEM AT NO ADDITIONAL COST.
2. SPEAKERS ARE LOCATED AND TAPPED TO ACHIEVE THE FOLLOWING INTELLIGIBILITY GOALS
3. 0.8 CIS THROUGHOUT THE BUILDING UNLESS NOTED OTHERWISE.
4. FOR CARBON MONOXIDE ALARM/NOTIFICATION, A SIMPLE MESSAGE SHALL BE PROVIDED AS FOLLOWS: (TEMPORAL 4 ALERT TONE)...(TEMPORAL 4 ALERT TONE)..."ATTENTION...ATTENTION...CARBON MONOXIDE HAS BEEN DETECTED IN THE BUILDING. PLEASE LEAVE THE BUILDING BY THE NEAREST EXIT." (TEMPORAL 4 ALERT TONE).
5. AREAS OF THE BUILDING WHERE OCCUPANTS ARE NOT EXPECTED TO BE NORMALLY PRESENT ARE PERMITTED TO HAVE A CIS SCORE OF LESS THAN THE MINIMUM REQUIRED VALUE IF PERSONNEL CAN DETERMINE THAT A VOICE SIGNAL IS BEING BROADCAST AND THEY MUST NOT WALK MORE THAN 50 FEET TO A LOCATION WITH AT LEAST WITH THE MINIMUM REQUIRED CIS VALUE WITHIN IN THE SAME AREA PER UFC 4-021-01, SECTION 5-7.1.2. THIS IS REPRESENTED AS KEYNOTE 2 ON DRAWINGS.

VISUAL NOTIFICATION DESIGN
1. CLEAR STROBES MARKED "FIRE" SHALL BE PROVIDED WHERE INDICATED ON THE APPROVED DESIGN DRAWINGS FOR FIRE ALARM SYSTEM VISUAL NOTIFICATION.
2. AMBER STROBES MARKED "ALERT" SHALL BE PROVIDED WHERE INDICATED ON THE APPROVED DESIGN FOR FIRE ALARM SYSTEMS VISUAL NOTIFICATION.
3. STROBES MAY BE FIELD-LOCATED WITHIN 3 FT OF THE LOCATION INDICATED ON THE APPROVED DESIGN WITHOUT CONSULTING THE ENGINEER. CONSULT WITH ENGINEER PRIOR TO RELOCATING STROBES MORE THAN 3 FT.

INITIATING DEVICES
1. INITIATING DEVICES MAY BE FIELD-LOCATED WITHIN 3 FT OF THE LOCATION INDICATED ON THE APPROVED DESIGN WITHOUT CONSULTING THE ENGINEER. CONSULT WITH ENGINEER PRIOR TO RELOCATING INITIATING DEVICES MORE THAN 3 FT.
2. IF DUCT SMOKE DETECTORS IS PROVIDED IN AN INACCESSIBLE LOCATION, PROVIDE A REMOTE TEST SWITCH IN ACCORDANCE WITH NFPA 72 SECTION 23.8.5.4.6.4. DUCT DETECTORS SHALL EITHER BE RESETTABLE FROM THE PROTECTED PREMISES FIRE ALARM SYSTEM, OR A LISTED SUPERVISORY INDICATOR WITH INTEGRAL RESET SWITCH SHALL BE PROVIDED.

CIRCUITS AND CONDUIT
1. ALL CIRCUITS SHALL BE PROVIDED IN CONDUIT IN ACCORDANCE WITH NFPA 70 AND THE CONDUIT LISTING.
2. NEW SIGNALING LINE CIRCUITS SHALL BE ARRANGED SO THAT A SINGLE FAULT DOES NOT CAUSE THE LOSS OF ADDRESSABLE DEVICES ON MORE THAN ONE FLOOR.

INSTALLATION
1. ALL EQUIPMENT SHALL BE INSTALLED TIGHT TO THE BUILDING STRUCTURE AND SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR SHALL NOT APPRECIABLY DEVIATE FROM THE APPROVED DESIGN WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

TESTING
1. UNLESS SPECIFICALLY NOTED OTHERWISE, THE CONTRACTOR SHALL PERFORM ALL ACCEPTANCE TESTING IN ACCORDANCE WITH THE APPLICABLE DESIGN CRITERIA AND THE EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
2. UNLESS SPECIFICALLY NOTED OTHERWISE, THE CONTRACTOR SHALL PERFORM TESTING AND PROVIDE DOCUMENTATION PRIOR TO REQUESTING ENGINEER'S PRESENCE TO WITNESS TESTING.

STATE OF KANSAS — Edward W. POOLE, III — 91563 LICENSED PROFESSIONAL ENGINEER — 7/12/2018

POOLE FIRE PROTECTION
www.poolefire.com

guernsey

REVISIONS

Symbol	Description	Date	Appr

Designed by: JMW
Drawn by: SAB
Reviewed by: DBN
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: FIRE ALARM GENERAL NOTES

Date: 12 JUL 2018

SEQ. | SHEET: FA001 | OF

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POOLE FIRE PROTECTION
19910 W. 161ST STREET
OLATHE, KS 66062 913.829.8650

C.R. ENGINEERING: #F-6671 EXPIRES JUNE 30, 2019

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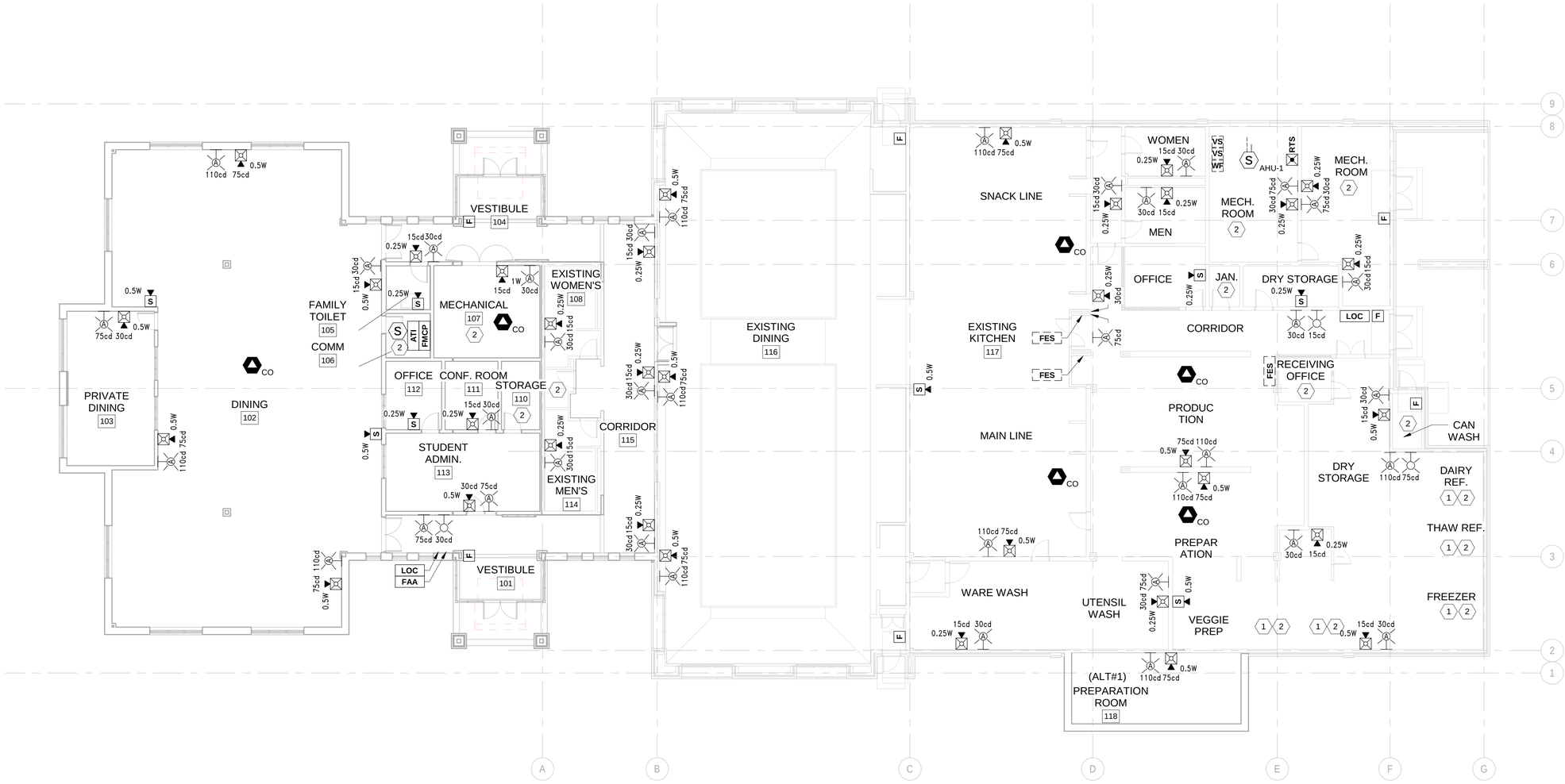
SHEET KEYNOTES

1	FIRE ALARM APPLIANCES IN COOLERS AND FREEZERS SHALL BE SURFACE MOUNTED IN SURFACE MOUNTED CONDUIT. APPLIANCES SHALL BE WEATHERPROOF. POINT OF PENETRATION FOR CONDUIT INTO COOLER/FREEZER SHALL BE PACKED WITH INSULATION AND SEALED AS DIRECTED BY THE MANUFACTURER OR VENDOR. THE INSIDE OF THE CONDUIT SHALL BE SEALED WITHIN 6 INCHES OF THE POINT OF PENETRATION. INTERNAL CONDUIT SEAL SHALL BE INSTALLED ON THE WARM SIDE OF THE COOLER/FREEZER ENCLOSURE. CLOSE COORDINATION WITH THE KITCHEN EQUIPMENT CONTRACTOR IS REQUIRED.
2	AREAS OF THE BUILDING WHERE OCCUPANTS ARE NOT EXPECTED TO BE NORMALLY PRESENT ARE PERMITTED TO HAVE A CIS SCORE OF LESS THAN THE MINIMUM REQUIRED VALUE IF PERSONNEL CAN DETERMINE THAT A VOICE SIGNAL IS BEING BROADCAST AND THEY MUST NOT WALK MORE THAN 50 FEET TO A LOCATION WITH AT LEAST WITH THE MINIMUM REQUIRED CIS VALUE WITHIN IN THE SAME AREA PER UFC 4-021-01, SECTION 5-7.1.2.



1 FIRE ALARM FLOOR PLAN
3/32" = 1'-0"

PLAN NORTH

12' 6' 0 12'
SCALE: 3/32" = 1'-0"

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Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by:	Drawn by:	Reviewed by:	Submitted by:
JMW	SAB	DBN	B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:
OK70374-000

SHEET TITLE
FIRE ALARM FLOOR PLAN

Date:
12 JUL 2018

SEQ.	SHEET	OF
	FA101	

POOLE FIRE PROTECTION
19910 W. 161ST STREET
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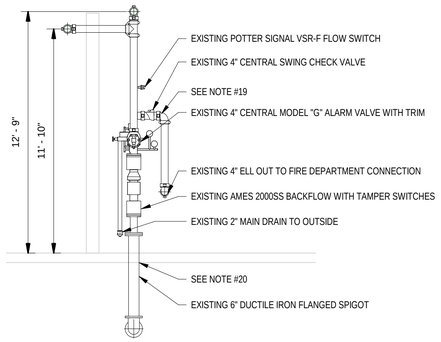
C.R. ENGINEERING: #F-6671 EXPIRES JUNE 30, 2019



1 EXISTING SPRINKLER RISER SECTION

1/4" = 1'-0"

FIRE SUPPRESSION NOTES

1. THE DESIGN AND INSTALLATION OF THE FIRE SUPPRESSION SYSTEM MUST BE IN ACCORDANCE WITH UFC 3-600-01 (8 AUGUST 2016; CHANGE 2, 25 MARCH 2018), NFPA 13 (2016 EDITION), NFPA 24 (2016 EDITION), AND THE DESIGN SPECIFICATIONS.
2. ALL HANGERS MUST BE PROVIDED AND INSTALLED IN ACCORDANCE WITH NFPA 13.
3. THE INSPECTOR'S TEST VALVES MUST BE LOCATED NO MORE THAN 7 FEET AFF.
4. WHERE PIPES PASS THROUGH FIRE RESISTANCE RATED CONSTRUCTION, THE PENETRATION MUST BE PROTECTED WITH A LISTED OR APPROVED FIRESTOPPING ASSEMBLY.
5. ALL VALVES (DRAINS, INSPECTOR'S TEST, CONTROL) MUST BE IDENTIFIED AS REQUIRED BY NFPA 13.
6. PIPING MUST BE ARRANGED FOR FLUSHING IN ACCORDANCE WITH NFPA 13. READILY REMOVABLE FITTINGS MUST BE PROVIDED AT THE END OF ALL CROSS MAINS.
7. ALL PENDENT SPRINKLERS MUST BE INSTALLED IN THE CENTER OF THE CEILING TILES.
8. DRAINS MUST BE LOCATED TO PROVIDE DRAINAGE IN ACCORDANCE WITH NFPA 13. ALL DRAINS AND TEST CONNECTIONS MUST DISCHARGE TO THE EXTERIOR OF THE BUILDING ON TO A SPLASH BLOCK OR PAVEMENT, AND SHALL NOT DISCHARGE ACROSS ANY MEANS OF EGRESS.
9. ALL SPRINKLER SYSTEM ALARM INITIATING DEVICES MUST BE CONNECTED TO THE FIRE ALARM SYSTEM.
10. ALL NORMALLY OPEN VALVES MUST BE ELECTRICALLY SUPERVISED (i.e. TAMPER SWITCH) AND ALL NORMALLY CLOSED VALVES MUST BE SUPERVISED BY SECURING THEM WITH A LOCK AND CHAIN OR SEALED.
11. DRAWINGS ARE DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND GENERAL ARRANGEMENTS OF THE SYSTEM. COORDINATE THE SYSTEM LAYOUT WITH ALL OTHER DISCIPLINES. EXISTING SYSTEM IS UNDERSTOOD TO HAVE MET CODE REQUIREMENTS WHEN INSTALLED. AS SUCH, EXISTING SYSTEM WAS NOT EVALUATED FOR COMPLIANCE WITH CURRENT CODE AS IT IS NOT TO BE MODIFIED.
12. PROVIDE CLEARANCE AROUND ALL PIPING EXTENDING THROUGH WALLS AND FLOORS IN ACCORDANCE WITH NFPA 13, SECTION 9.3.4. EXISTING RISER DOES NOT MEET CLEARANCE REQUIREMENTS OF CURRENT NFPA 13.
13. PROVIDE AIR VENTING IN ACCORDANCE WITH NFPA 13, SECTION 7.1.5.
14. THIS BUILDING WILL HAVE A WET PIPE AUTOMATIC SPRINKLER SYSTEM WHICH WILL REQUIRE ALL AREAS OF THE BUILDING TO BE MAINTAINED ABOVE 40 DEGREES F.
15. PROVIDE OVERSIZED ESCUTCHEONS FOR HARD PIPED DROPS IN DROP CEILINGS.
16. PROVIDE SPRINKLER PROTECTION WITHIN ALL COMBUSTIBLE CONCEALED SPACES.
17. THE SEISMIC DESIGN CATEGORY FOR THE FACILITY IS A. SEISMIC BRACING WILL NOT BE REQUIRED IN ACCORDANCE WITH ASCE 7, SECTION 11.7 AND NFPA 13.
18. THE EXISTING WET PIPE SPRINKLER SYSTEM IS TO BE MAINTAINED IN SERVICE THROUGHOUT CONSTRUCTION. CLOSELY COORDINATE CONSTRUCTION ACTIVITIES WITH OTHER TRADES AND THE BASE REPRESENTATIVE.
19. CURRENT WET PIPE SYSTEM RISER DOES NOT HAVE A FORWARD FLOW TEST CONNECTION PROVIDED. THE REQUIREMENT TO PROVIDE A FORWARD FLOW TEST CONNECTION COMES FROM NFPA 13, SECTION 8.17.4.5.1. CONTRACTOR TO MODIFY EXISTING SYSTEM TO CREATE CODE COMPLIANCE.
20. CURRENT WET PIPE SPRINKLE SYSTEM IS NOT PROVIDED WITH ADEQUATE CLEARANCE REQUIREMENTS OF NFPA 13, SECTION 9.3.4. CONTRACTOR TO MODIFY EXISTING SYSTEM TO CREATE CODE COMPLIANCE.
21. PERFORM SYSTEM TESTING IN ACCORDANCE WITH NFPA 25 AND NFPA 13 TO ENSURE EXISTING SYSTEM FUNCTIONS PROPERLY PRIOR TO ALTERATION/MODIFICATION OF THE EXISTING SYSTEM.

POOLE FIRE PROTECTION
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Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by: DRF
Drawn by: DRF
Reviewed by: DBN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: FIRE SUPPRESSION GENERAL NOTES

Date: 12 JUL 2018

SEQ.	SHEET	OF
	FX001	

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POOLE FIRE PROTECTION
19910 W. 161ST STREET
OLATHE, KS 66062 913.829.8650
C.R. ENGINEERING: #F-6671 EXPIRES JUNE 30, 2019

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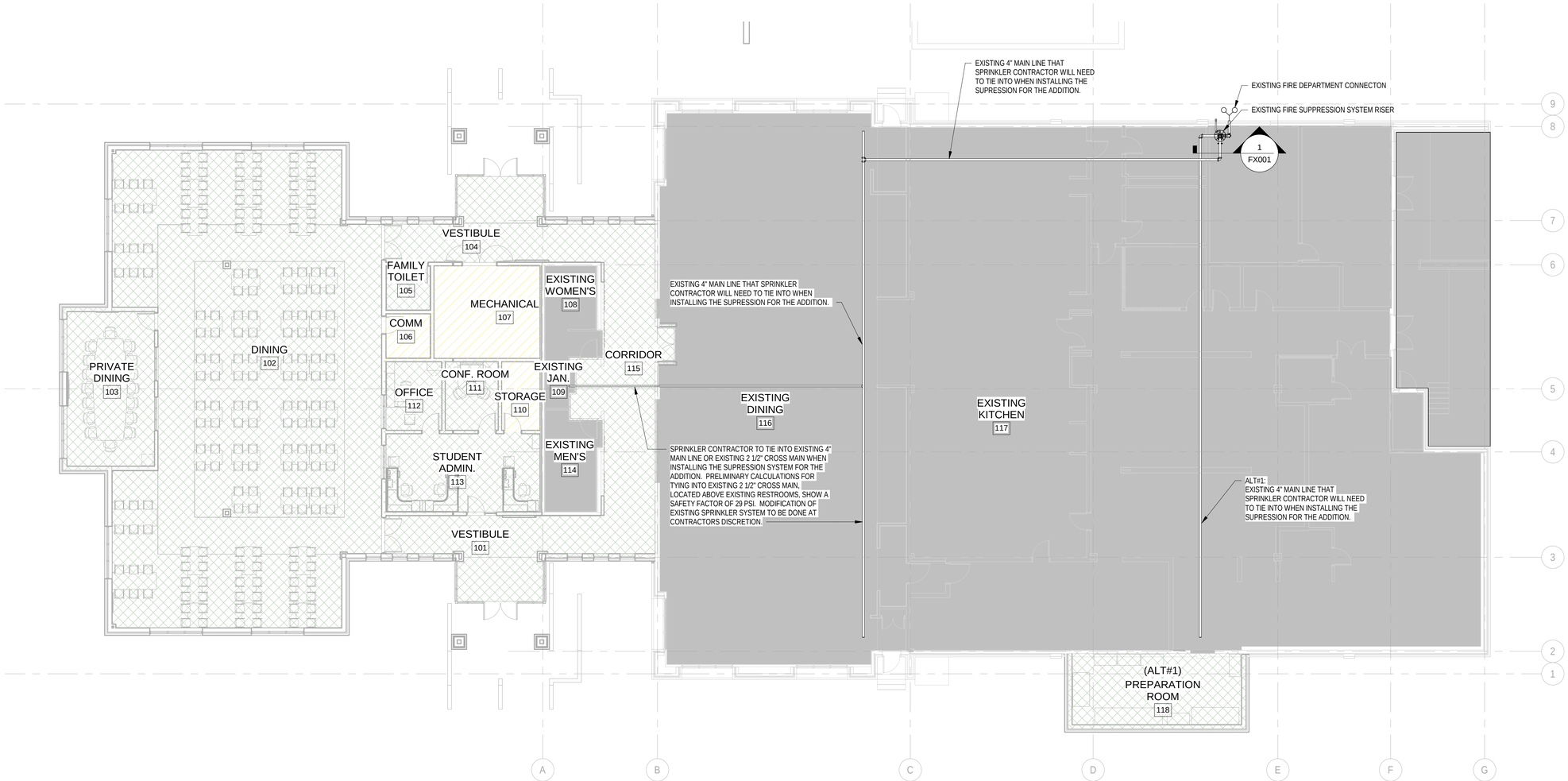
HAZARD CLASSIFICATION SCHEDULE

ROOM NUMBER	ROOM NAME	HAZARD CLASSIFICATION
101	VESTIBULE	LIGHT HAZARD
102	DINING	LIGHT HAZARD
103	PRIVATE DINING	LIGHT HAZARD
104	VESTIBULE	LIGHT HAZARD
105	FAMILY TOILET	LIGHT HAZARD
106	COMM	ORDINARY HAZARD
107	MECHANICAL	ORDINARY HAZARD
108	EXISTING WOMEN'S	OUT OF SCOPE
109	EXISTING JAN.	OUT OF SCOPE
110	STORAGE	ORDINARY HAZARD
111	CONF. ROOM	LIGHT HAZARD
112	OFFICE	LIGHT HAZARD
113	STUDENT ADMIN.	LIGHT HAZARD
114	EXISTING MEN'S	OUT OF SCOPE
115	CORRIDOR	LIGHT HAZARD
116	EXISTING DINING	OUT OF SCOPE
117	EXISTING KITCHEN	OUT OF SCOPE
118	PREPARATION ROOM	LIGHT HAZARD

HAZARD CLASSIFICATION LEGEND

	LIGHT HAZARD (0.10 GPM/FT² OVER 1,500 FT² WITH 250 GPM EXTERIOR HOSE DEMAND)
	ORDINARY HAZARD (0.20 GPM/FT² OVER 2,500 FT² WITH 250 GPM EXTERIOR HOSE DEMAND)
	OUT OF SCOPE



1 FIRE SUPPRESSION FLOOR PLAN

3/32" = 1'-0"

PLAN NORTH

12' 6' 0 12'

SCALE: 3/32" = 1'-0"

STATE OF KANSAS
JEFFREY V. POOLE, III
91563
REGISTERED PROFESSIONAL ENGINEER
7/12/2018

POOLE FIRE PROTECTION
www.poolefire.com

guernsey

Symbol	Description	Date	Appr.

REVISIONS

Designed by: DRF
Drawn by: DRF
Reviewed by: DBN
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: FIRE SUPPRESSION FLOOR PLAN

Date: 12 JUL 2018

SEQ. | SHEET | OF

FX101

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

PLUMBING ABBREVIATIONS

ABV	ABOVE
AC	ABOVE CEILING
ACC	ACCESS
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BV	BALL VALVE
BWV	BACK WATER VALVE
CD	CONDENSATE DRAIN
CI	CAST IRON
CLG	CEILING
CO	CLEAN OUT
COND	CONDENSATE
CV	CHECK VALVE
DCW	DOMESTIC COLD WATER
DFU	DRAINAGE FIXTURE UNITS
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DN	DOWN
DS	DOWN SPOUT
ECC	ECCENTRIC
ELEC	ELECTRIC
ERD	EMERGENCY ROOF DRAIN
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXT	EXTERNAL
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FL	FLOW LINE
FLR	FLOOR
FR	FROM
FS	FLOOR SINK
FT	FEET
G	GAS
GC	GENERAL CONTRACTOR
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIBB
HP	HORSEPOWER
IN	INCHES
LAV	LAVATORY
MAX	MAXIMUM
MIN	MINIMUM
MSB	MOP SERVICE BASIN
MTD	MOUNTED
NIC	NOT IN CONTRACT
NPW	NON-POTABLE WATER
OC	ON CENTER
OD	OVERFLOW DRAIN
OR	ON ROOF
OS&Y	OUTSIDE, SCREW AND YOKE
PD	PRESSURE DROP
PRES	PRESSURE
PRV	PRESSURE RELIEF VALVE
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
SD	SHOWER DRAIN
SF	SUPPLY FAN
SH	SHOWER
SK	SINK
SO	SHUT OFF
SS	SANITARY SEWER
TMV	THERMOSTATIC MIXING VALVE
TYP	TYPICAL
UF	UNDERFLOOR
UG	UNDER GROUND
UH	UNIT HEATER
UR	URINAL
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WM	WATER METER
YH	YARD HYDRANT

PLUMBING SYMBOLS

SS — SANITARY SEWER
RD — ROOF DRAIN
OD — OVERFLOW DRAIN
PLUMBING VENT
COLD WATER
DOMESTIC HOT WATER SUPPLY
DOMESTIC HOT WATER RETURN
120 — DOMESTIC 120 H.W. SUPPLY
120 — DOMESTIC 120 H.W. RETURN
140 — DOMESTIC 140 H.W. SUPPLY
140 — DOMESTIC 140 H.W. RETURN
G — GAS
A — COMPRESSED AIR
CD — CONDENSATE DRAIN LINE
GW — GREASE WASTE
ACID — ACID WASTE
NPW — NON-POTABLE WATER (GREY WATER)
F — FIRE WATER
CHECK VALVE
PLUG COCK
BUTTERFLY VALVE
BALL VALVE
BALANCING VALVE
STRAINER
UNION
GAS COCK
SHUT OFF VALVE IN DROP
A — AIR OUTLET
C — COLD WATER OUTLET
G — GAS OUTLET
H — HOT WATER OUTLET
O — OXYGEN OUTLET
V — VACUUM INLET
B — BREATHING AIR OUTLET
ECCENTRIC REDUCER, WATER
CONCENTRIC REDUCER
DIRECTION OF FLOW
SLOPE DOWN
PRESSURE REDUCING VALVE
ANCHOR
EXPANSION JOINT
PIPE GUIDE
CONNECT TO EXISTING
M — WATER METER
GAS PRESSURE REGULATOR
FLOOR SINK
FLOOR DRAIN
P-TRAP

GENERAL NOTES

1. THE PLUMBING INSTALLATION SHALL COMPLY WITH CURRENT LOCAL PLUMBING CODES.
2. PIPE ROUTING SHOWN IS SCHEMATIC AND IS NOT INTENDED TO INDICATE EXACT ROUTING. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES. COORDINATE WITH OTHER DISCIPLINES TO AVOID WHEN ROUTING PIPING.
3. PROVIDE ALL FITTINGS AND OFFSETS REQUIRED TO MAKE CONNECTION TO SITE UTILITIES.
4. CONCEAL PIPING ABOVE CEILING AND WITHIN WALLS OR CHASES, EXCEPT IN MECHANICAL SPACES OR WHEN OTHERWISE NOTED.
5. PROVIDE ACCESS PANELS FOR ALL VALVES CONCEALED IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS.
6. SLEEVE AND/OR FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS, CEILINGS, AND FLOORS WITH UL LISTED ASSEMBLIES. FIRESTOP ASSEMBLIES SHALL BE EQUAL TO OR EXCEED THE RATING OF THE WALL, CEILING OR FLOOR. SEE ARCHITECTURAL DRAWINGS FOR FINAL FINISHES. ALL FIRESTOP MATERIAL TO BE PROVIDED BY A SINGLE MANUFACTURER.
7. SEE ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
8. PROVIDE TRAP PROTECTION FOR ALL FLOOR DRAINS.
9. PROVIDE AN AIR GAP, WHEN REQUIRED BY CODE, SERVING INDIVIDUAL FIXTURES, DEVICES, APPLIANCES AND APPARATUS.
10. ALL EXPOSED PIPE AND FITTINGS IN FINISHED AREAS SHALL BE CHROME PLATED, UNLESS OTHERWISE NOTED.
11. MOUNT HOSE BIBBS 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED.
12. MOUNT WALL HYDRANTS 18" ABOVE GRADE, UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECTURAL DRAWINGS.
13. PROVIDE CLEANOUTS IN ACCORDANCE WITH THE PLUMBING CODE. INSTALL CLEANOUT WITH COVER FLUSH TO FINISHED SURFACE.
14. COORDINATE EXACT FLOOR DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS. INSTALL FLOOR DRAINS WITH GRATE FLUSH WITH FINISHED FLOOR.
15. COORDINATE PIPING WITH ELECTRICAL EQUIPMENT (PANELS , TRANFORMERS, ETC) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. ANY PIPING ROUTED OVER PANELS SHALL BE RE-ROUTED AT NO ADDITIONAL COST.
16. ALL WALL MOUNTED LAVATORIES SHALL BE ATTACHED TO A FLOOR MOUNTED CARRIER.
17. CONTRACTOR SHALL INSULATE ALL DOMESTIC WATER PIPING. INSULATION SHALL COMPLY WITH THE SPECIFICATIONS.
18. INSTALL SHOCK ARRESTORS PER PDI WH-201.
19. INSTALL ALL CONDENSATE DRAIN PIPING WITH INSULATION PER SPECIFICATIONS.
20. INSULATE ALL HORIZONTAL FLOOR DRAIN PIPING FOR FLOOR DRAINS RECEIVING CONDENSATE ABOVE GRADE WITH INSULATION PER SPECIFICATIONS.
21. ANY DEVIATIONS IN ELECTRICAL REQUIREMENTS FROM THE BASIS OF DESIGN FOR PLUMBING EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO ENSURE COORDINATION WITH THE ELECTRICAL CONTRACTOR FOR PROPER WIRE SIZE, CONDUITS, DISCONNECTS, FUSES, STARTERS, VFD'S, ETC. AT NO ADDITIONAL COST.
22. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.
23. THESE CONTRACT DOCUMENTS HAVE BEEN SUBMITTED FOR CONTRACTOR DEVELOPMENT OF THE CONSTRUCTION WORK PLAN. COORDINATION BETWEEN THE CONTRACTOR AND SUBCONTRACTORS IS THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES TO THESE DRAWINGS AS A RESULT OF THE CONSTRUCTION COORDINATION AND THE DEVELOPMENT OF THE CONSTRUCTION WORK PLAN ARE THE RESPONSIBILITY OF THE CONTRACTOR.
24. THESE CONTRACT DOCUMENTS DETAIL THE CONCEPT OF THE WORK. COORDINATION OF CONCEPTUALLY EQUAL BUT NOMINALLY DIFFERENT SYSTEMS OR PRODUCTS SELECTED BY CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR.
25. MOUNT ALL EQUIPMENT ACCORDING TO REQUIREMENTS OF UFC 4-010-1.

STATE OF TEXAS — ALLEN DALE JONES — 84988 — REGISTERED PROFESSIONAL ENGINEER
7-12-18

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. MCCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: PLUMBING LEGEND
Date: 12 JUL 2018

SEQ. | SHEET P-001 | OF

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C.H. GUERNSEY & COMPANY
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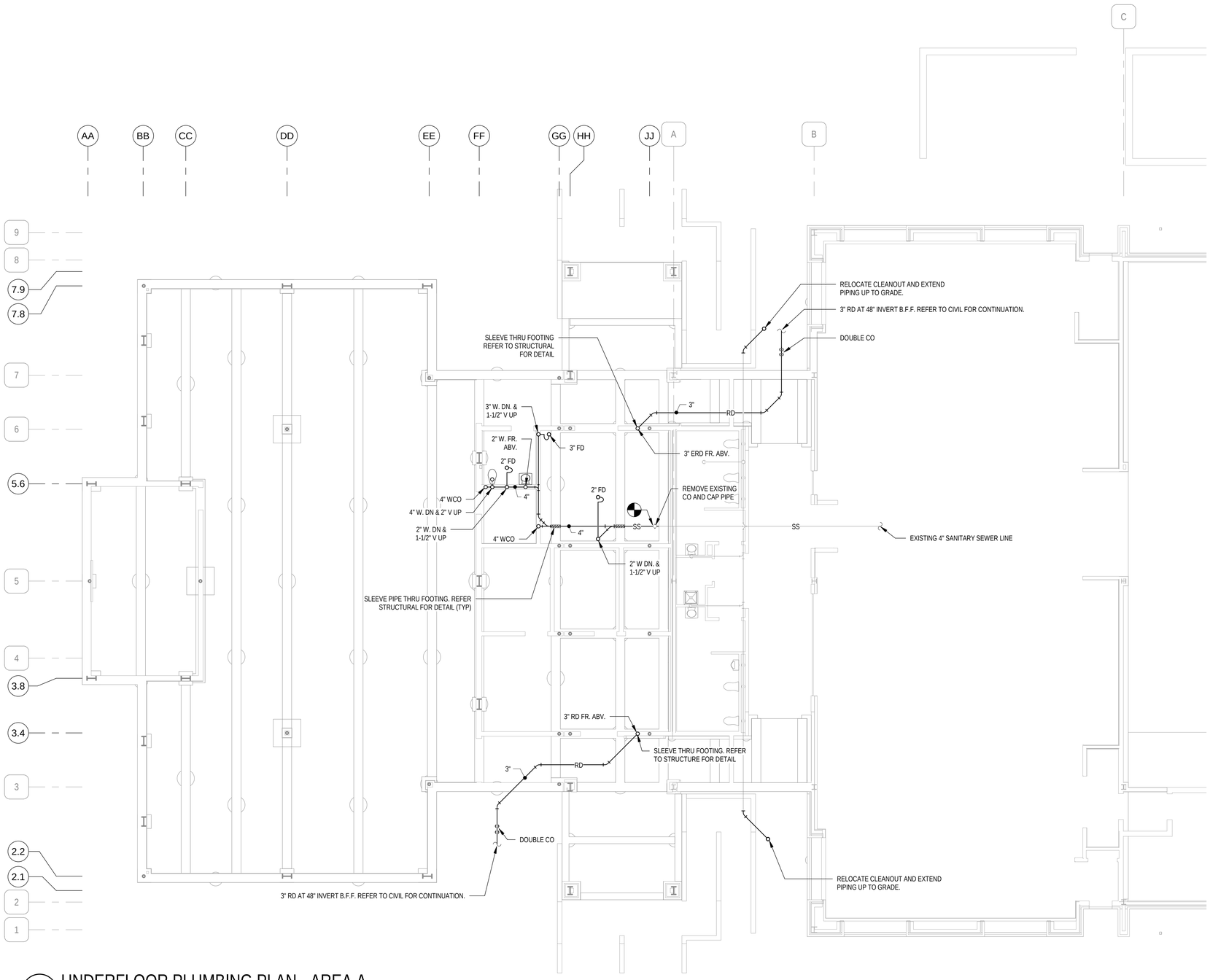
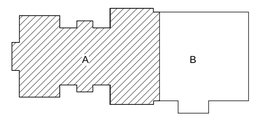
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 UNDERFLOOR PLUMBING PLAN - AREA A

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

PLAN NORTH



KEY PLAN

8' 4' 0 8'

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

STATE OF TEXAS
ALLEN DALE JONES
84988
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PROFESSIONAL ENGINEER
7-12-18

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372d CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

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REVISIONS

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Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: UNDERFLOOR PLUMBING PLAN - AREA A

Date: 12 JUL 2018

SEQ.	SHEET	OF
	P-101	

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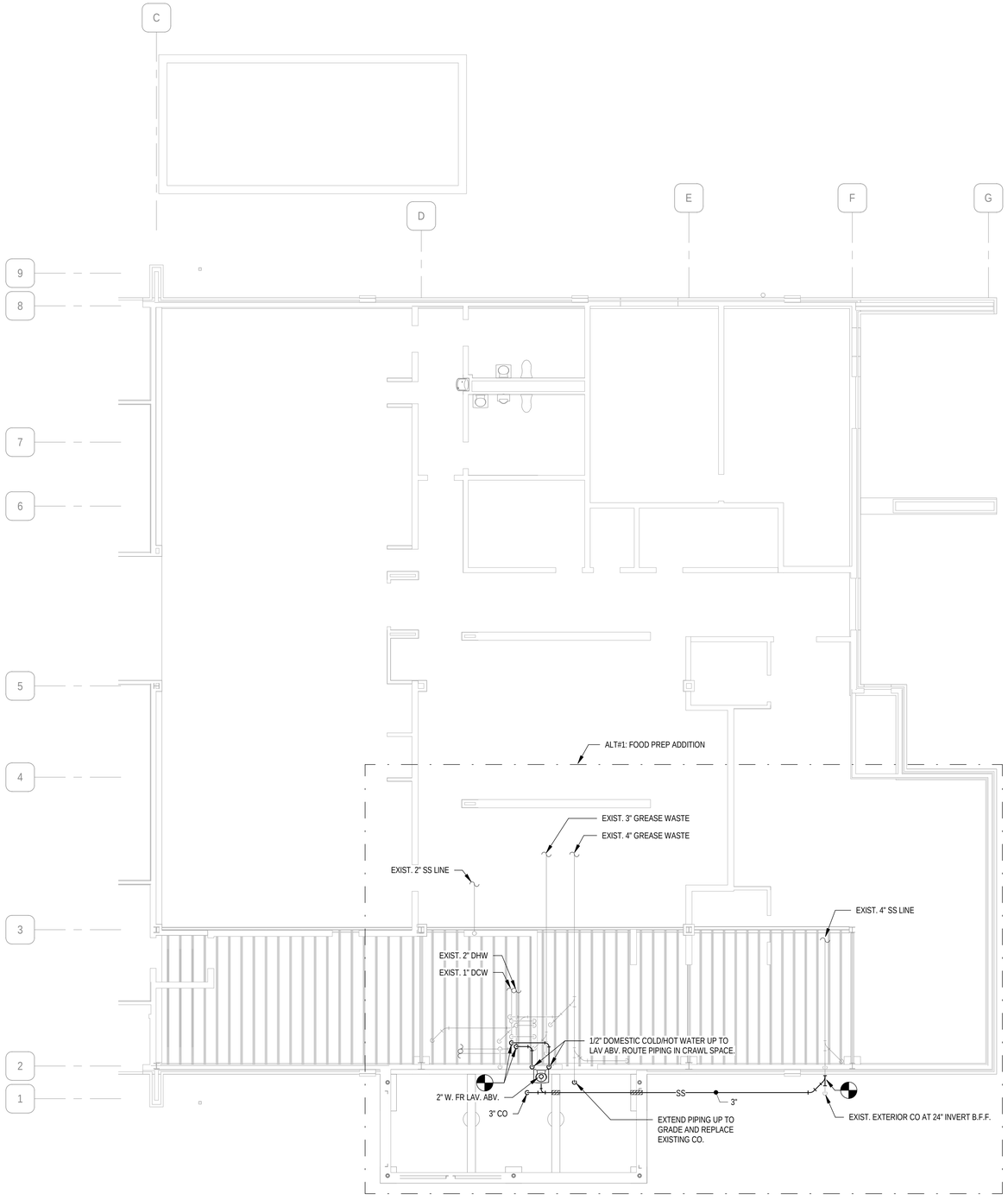
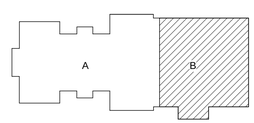


1 UNDERFLOOR PLUMBING PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH



KEY PLAN

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

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Symbol	Description	Date	Appr

Symbol	Description	Date	Appr

REVISIONS

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: UNDERFLOOR PLUMBING PLAN - AREA B
Date: 12 JUL 2018

SEQ. | SHEET P-102 | OF

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C.H. GUERNSEY & COMPANY
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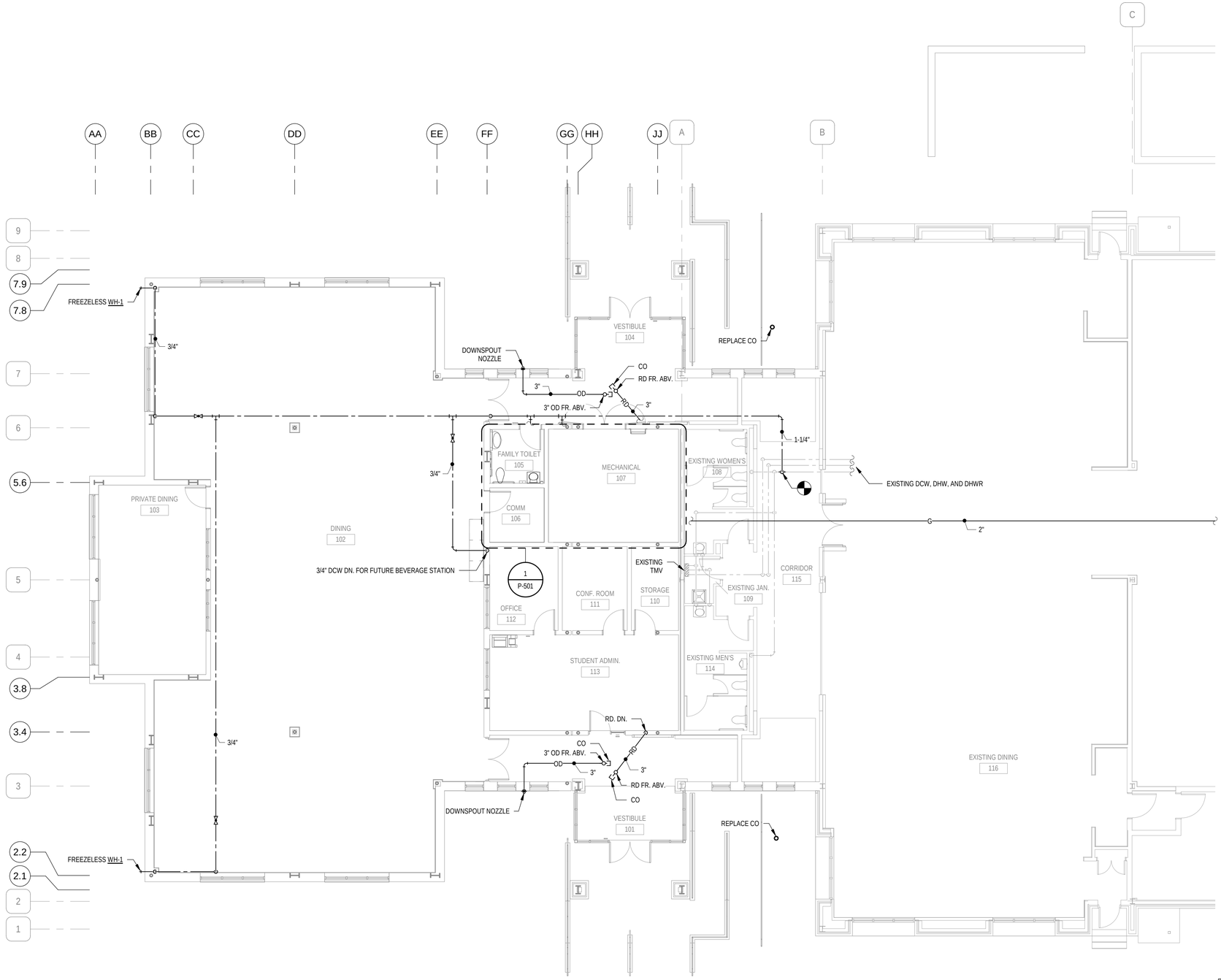
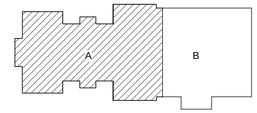
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 PLUMBING FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH



KEY PLAN

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

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Symbol	Description	Date	Appr

REVISIONS

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: PLUMBING FLOOR PLAN - AREA A
Date: 12 JUL 2018

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C.H. GUERNSEY & COMPANY
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OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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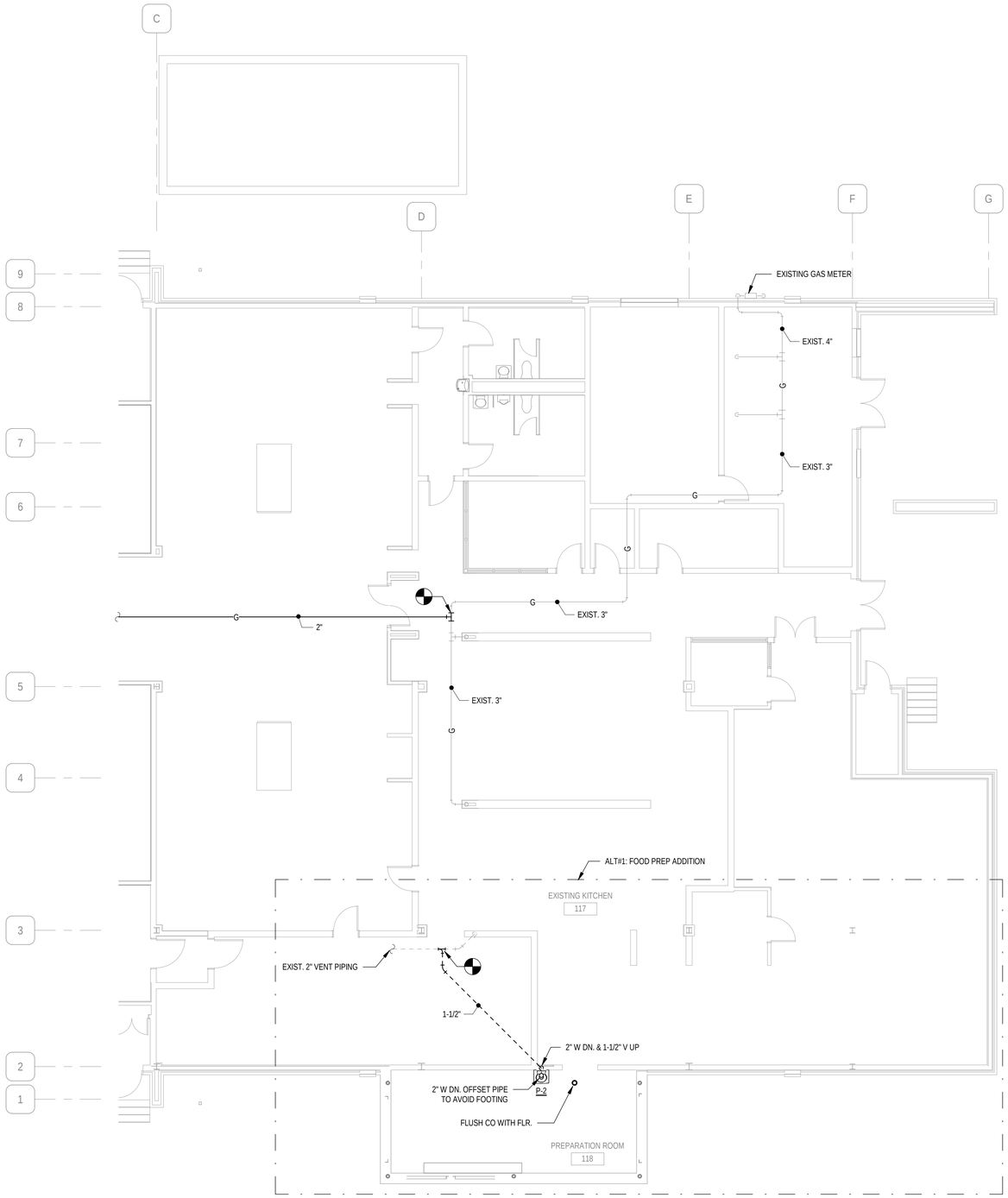
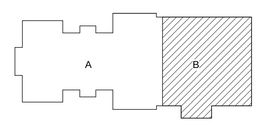


1 PLUMBING FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH



KEY PLAN

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

guernsey

Symbol	Description	Date	Appr

REVISIONS

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Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

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CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE
PLUMBING FLOOR PLAN - AREA B

Date: 12 JUL 2018

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	P-104	

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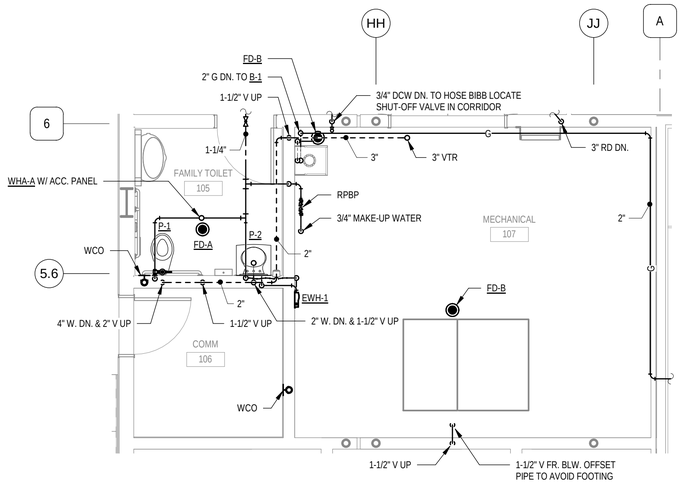


1 ENLARGED PLUMBING PLAN
SCALE: 1/4" = 1'-0"

SYSTEMS MATERIALS SCHEDULE - PLUMBING

SYSTEM	MATERIAL	INSULATION		
		THICKNESS	TYPE	JACKET
DOMESTIC CW	TYPE "L" HARD COPPER	REFER SPECS	FIBERGLASS	VAPOR BARRIER
DOMESTIC HW/HWR	TYPE "L" HARD COPPER	REFER SPECS	FIBERGLASS	VAPOR BARRIER
SANITARY WASTE - BELOW GRADE	SCHEDULE 40 PVC	--	--	--
SANITARY VENT	SWCI HUBLESS	--	--	--
SANITARY WASTE	SWCI HUBLESS	--	--	--
ROOF DRAIN	SWCI HUBLESS	1"	FIBERGLASS	VAPOR BARRIER
CONDENSATE DRAIN, INSIDE BUILDING	TYPE "M" COPPER	1/2"	FLEX. UNICELLULAR	--
NATURAL GAS	SCHEDULE 40 BLACK STEEL	--	--	--

WATER HAMMER ARRESTOR SCHEDULE

MARK	FIXTURE UNIT CAPACITY	PIPE SIZE
WHA-A	1 - 11	3/4"
WHA-B	12 - 32	1"
WHA-C	33 - 60	1"
WHA-D	61 - 113	1"

FLOOR DRAIN SCHEDULE

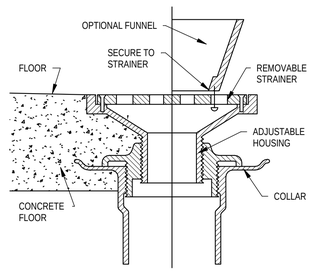
MARK	DESCRIPTION
FD-A	5" ROUND, NICKEL BRONZE
FD-B	5" ROUND, NICKEL BRONZE WITH RIM

PLUMBING FIXTURE SCHEDULE

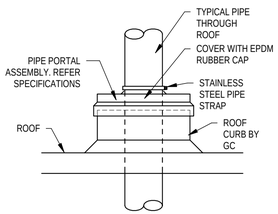
MARK	DESCRIPTION	CW	HW	WASTE	VENT	BASIS OF DESIGN		REMARK
						FIXTURE BOD	VALVE BOD	
P-1	FLOOR MOUNTED WATER CLOSET	1-1/4"	-	4"	2"	KOHLER HIGHLINE K-4405	SLOAN ROYAL 111-1.28	
P-2	WALL-HUNG LAVATORY	1/2"	1/2"	2"	1-1/2"	AMERICAN STANDARD DECLYN	KOHLER CORALAIS K-15182-F	

ELECTRIC WATER HEATER SCHEDULE

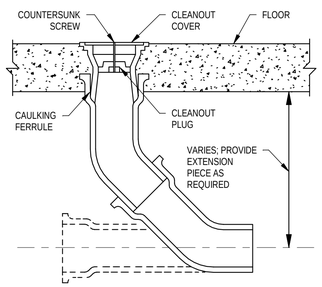
MARK	DESCRIPTION	GPM RECOVERY @ 57°F RISE	W	CONNECTION SIZE		VOLT/PHASE	BASIS OF DESIGN	REMARKS
				CW	HW			
EWH-1	POINT OF USE ELECTRIC TANKLESS WATER HEATER	0.5	4160	1/2"	1/2"	208/1	CHRONOMITE SR-20L	



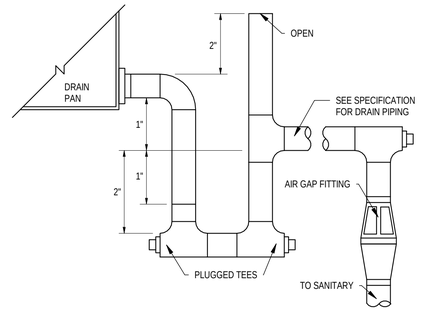
2 FLOOR DRAIN DETAIL
NOT TO SCALE



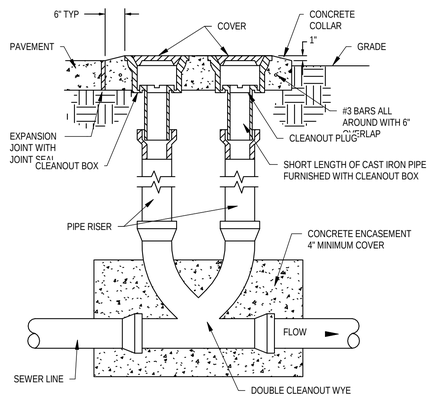
3 TYPICAL PIPE PENETRATION THROUGH ROOF
NOT TO SCALE



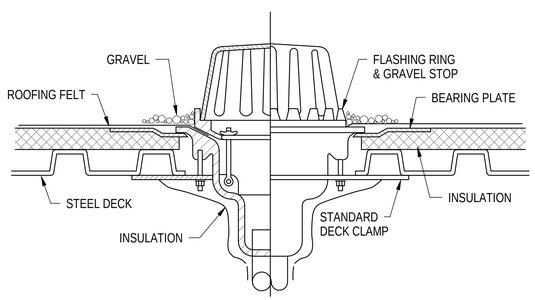
4 FLOOR CLEANOUT DETAIL
NOT TO SCALE



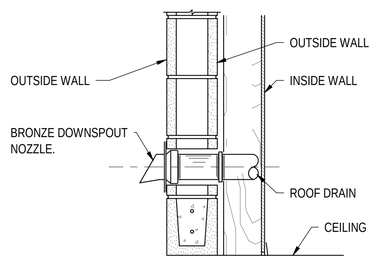
5 TYPICAL CONDENSATE DRAIN TRAP
NOT TO SCALE



6 TYPICAL TWO-WAY DOUBLE CLEANOUT
NOT TO SCALE



7 TYPICAL ROOF DRAIN DETAIL
NOT TO SCALE



8 ROOF DRAIN TERMINATION DETAIL
NOT TO SCALE

PLAN NORTH

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

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

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Symbol	Description	Date	Appr

REVISIONS

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: C. NICEK
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: PLUMBING SCHEDULE AND DETAILS
Date: 12 JUL 2018

SEQ. | SHEET | OF.
P-501

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C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

ABBREVIATIONS

	A
AC	ABOVE CEILING
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
ACC	ACCESS
ACU	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
AV	AIR VENT
	B
BDD	BACKDRAFT DAMPER
BV	BALL VALVE
BFF	BELOW FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
	C
CLG	CEILING
CV	CHECK VALVE
CHWP	CHILLED WATER PUMP
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
CRAC	COMPUTER ROOM AIR CONDITIONER
CONC	CONCENTRIC
COND	CONDENSATE
CD	CONDENSATE DRAIN
CWP	CONDENSER WATER PUMP
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CU	CONDENSING UNIT
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
	D
DPR	DAMPER
DR	DEW POINT
DIFF	DIFFUSER
DN	DOWN
DT	DRAW THROUGH
DB	DRY BULB
	E
ECC	ECCENTRIC
ELEC	ELECTRIC
EAT	ENTERING AIR TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
ES	EQUAL SPLIT
EXH	EXHAUST
EF	EXHAUST FAN
EAG	EXHAUST GRILLE
EXIST	EXISTING
EXT	EXTERNAL
	F
FCU	FAN COIL
FT	FEET
FPM	FEET PER MINUTE
FDPR	FIRE DAMPER
F/SDPR	FIRE/SMOKE DAMPER
F&T	FLOAT & THERMOSTATIC
FTR	FLUE THRU ROOF
FR	FROM
	G
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
G	GAS
GC	GENERAL CONTRACTOR
GR	GRILLE
	H
HVU	HEATING AND VENTILATING UNIT
HHWP	HEATING HOT WATER PUMP
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HP	HORSEPOWER
	I
IN	INCHES
	K
KW	KILOWATTS
	L
LAT	LEAVING AIR TEMPERATUE
LWT	LEAVING WATER TEMPERATURE
LD	LINEAR DIFFUSER
	M
MBH	1000 BTU PER HOUR
MAU	MAKE-UP AIR UNIT
MBD	MANUAL BALANCING DAMPER
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MTZ	MOTORIZED
MTD	MOUNTED
	N
ND	NECK DIAMETER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
	O
OC	ON CENTER
OR	ON ROOF
OSD	OPEN SIGHT DRAIN
OV	OUTLET VELOCITY
OA	OUTSIDE AIR
OS&Y	OUTSIDE, SCREW & YOKE
	P
PSI	POUNDS PER SQUARE INCH
PRESS	PRESSURE
PD	PRESSURE DROP
	R
REC	RECOVERY
REG	REGISTER
RH	RELATIVE HUMIDITY
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RAO	RETURN AIR OPENING
RAR	RETURN AIR REGISTER
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
	S
SO	SHUT OFF
SDPR	SMOKE DAMPER
SF	SQUARE FEET
SS	STAINLESS STEEL
ST	STATIC PRESSURE
STM	STEAM
SA	SUPPLY AIR
SAG	SUPPLY AIR GRILLE
SAR	SUPPLY AIR REGISTER
SF	SUPPLY FAN
	T
TD	TEMPERATURE DIFFERENCE
THERM	THERMOMETER
TG	TRANSFER GRILLE
TYP	TYPICAL
UV	ULTRA VOILET
UF	UNDER FLOOR
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
	V
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VEL	VELOCITY
VF	VENTILATION FAN
	W
WG	WATER GAUGE
W	WATTS
WB	WET BULB

SYMBOLS

- HPS — STEAM, HIGH PRESSURE
- MPS — STEAM, MEDIUM PRESSURE
- LPS — STEAM, LOW PRESSURE
- HPC — CONDENSATE RETURN HIGH PRESSURE
- MPC — CONDENSATE RETURN MEDIUM PRESSURE
- LPC — CONDENSATE RETURN LOW PRESSURE
- HWS — HEATING HOT WATER SUPPLY
- HWR — HEATING HOT WATER RETURN
- BOILER FEED WATER
- \+ — BOILER BLOW OFF
- RS — REFRIGERANT SUCTION LINE
- RL — REFRIGERANT LIQUID LINE
- RH — REFRIGERANT HOT GAS LINE
- CWS — CHILLED WATER SUPPLY
- CWR — CHILLED WATER RETURN
- CS — CONDENSER WATER SUPPLY
- CR — CONDENSER WATER RETURN
- CD — CONDENSATE DRAIN LINE

AIR DEVICE DESIGNATION → B / 230 ← CFM

- D — DROP IN DUCTWORK
- R — RISE IN DUCTWORK
- MANUAL BALANCING DAMPER IN DUCT
- AIR FLOW MEASUREMENT STATION
- P — STATIC PRESSURE SENSOR
- FIRE DAMPER
- FIRE/SMOKE DAMPER

- P — 3-WAY VALVE (PNEUMATIC)
- M — 3-WAY VALVE (ELECTRIC)
- ASME RELIEF VALVE
- GATE VALVE
- GATE VALVE W/OUTSIDE SCREW & YOKE
- CHECK VALVE
- BUTTERFLY VALVE
- GLOBE VALVE
- BALL VALVE
- BALANCING VALVE
- STRAINER
- UNION
- T N — NIGHT SETBACK THERMOSTAT
- T — THERMOSTAT
- T S — TEMPERATURE SENSOR
- H — HUMIDISTAT
- H S — HUMIDITY SENSOR
- P — PRESSURE SENSOR
- S — EMERGENCY SHUTDOWN SWITCH
- C — CO2 SENSOR
- ECCENTRIC REDUCER, WATER
- CONCENTRIC REDUCER
- DIRECTION OF FLOW
- SLOPE DOWN
- PRESSURE REDUCING VALVE
- ANCHOR
- EXPANSION JOINT
- PIPE GUIDE
- CONNECT TO EXISTING
- PRESSURE GAUGE
- THERMOMETER
- STEAM TRAP
- THERMOMETER WELL

GENERAL NOTES

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1. THE MECHANICAL INSTALLATION SHALL COMPLY WITH THE CURRENT LOCAL MECHANICAL CODE.
2. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.
3. DIMENSIONS SHALL BE VERIFIED AND COORDINATED PRIOR TO PROCUREMENT OR FABRICATION. COORDINATE THE WORK WITH OTHER TRADES INVOLVED. FIELD MODIFICATIONS SUCH AS OFFSETS IN PIPING OR DUCTWORK NEEDED DUE TO OBSTRUCTIONS OR INTERFERENCES SHALL BE PROVIDED AT NO ADDITIONAL COST.
4. SEE SPECIFICATIONS FOR DUCT PRESSURE CLASS.
5. PROVIDE AIR TURNING VANES IN ALL 90 DEGREE RECTANGULAR DUCT ELBOWS.
6. COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, EQUIPMENT, FURNITURE AND DOOR SWINGS.
7. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARD.
8. LOCATE THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, CO2 SENSORS AND HUMIDITY SENSORS AT 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH OTHER EQUIPMENT, FURNITURE, DOOR SWINGS AND LIGHT SWITCHES.
9. ALL DUCT SIZES ARE SHOWN ARE INSIDE CLEAR DIMENSIONS.
10. DAMPERS AND INTERIOR OF DUCT VISIBLE THOUGH AIR DEVICES SHALL BE PAINTED FLAT BLACK.
11. PROVIDE TRAPPED CONDENSATE DRAINS WITH APPROPRIATE DEPTH FOR ALL COOLING COILS.
12. ACCESS PANELS IN DUCT WORK AND CEILINGS SHALL BE PROVIDED WHERE REQUIRED FOR OPERATION, BALANCING, OR MAINTENANCE OF ALL MECHANICAL EQUIPMENT.
13. ALL DUCTWORK AND PIPING IS SHOWN SCHEMATICALLY. PROVIDE ALL TRANSITIONS, TURNING VANES, ELBOWS, FITTINGS, ETC. TO ALLOW SMOOTH FLOWS. ALL DUCT SPLITS SHALL TRANSITION TO FULL SIZE OF THE SUM OF BOTH BRANCHES, UPSTREAM OF SPLIT.
14. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.
15. VERIFY FINISHES WITH ARCHITECT PRIOR TO PURCHASING GRILLES, REGISTERS, DIFFUSERS, LOUVERS AND OTHER AIR DISTRIBUTION DEVICES.
16. PROVIDE DUCT FLEX CONNECTIONS ON ALL DUCTWORK CONNECTING TO EACH FAN, AIR HANDLING UNIT, AND FAN COIL UNIT.
17. PROVIDE TRANSITIONS AT DIFFUSER NECKS AS REQUIRED TO MATCH SIZES OF FLEX DUCTS TO BE CONNECTED.
18. SLEEVE AND/OR FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS, CEILINGS, AND FLOORS WITH UL LISTED ASSEMBLIES. FIRESTOP ASSEMBLIES SHALL BE EQUAL TO OR EXCEED THE RATING OF THE WALL, CEILING OR FLOOR. SEE ARCHITECTURAL DRAWINGS FOR FINAL FINISHES. ALL FIRESTOP MATERIAL TO BE PROVIDED BY A SINGLE MANUFACTURER.
19. INTERRUPTIONS TO EXISTING SERVICES SHALL BE SCHEDULED FOR TIMES OTHER THAN NORMAL OPERATING HOURS. SUCH INTERRUPTIONS TO SERVICES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE AND PROPER COORDINATION WITH OTHER TRADES. PRE-WORK SHALL BE PERFORMED TO MAKE THE SHUTDOWN PERIOD AS BRIEF AS POSSIBLE.
20. MAINTAIN A MINIMUM CLEARANCE OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC. AND ALL FIRE RATED AND FIRE/SMOKE RATED ASSEMBLIES TO ALLOW FOR INSPECTION OF ASSEMBLY.
21. WATER PRESSURE DROPS THROUGH COIL CONTROL VALVES SHALL NOT EXCEED 12 FEET OF WATER.
22. SLEEVE AND SEAL ALL PIPING PENETRATIONS THROUGH BUILDING PARTITIONS AND MAINTAIN STC RATINGS. SEE ARCHITECTURAL DRAWINGS FOR PARTITION RATINGS.
23. ANY DEVIATIONS IN ELECTRICAL REQUIREMENTS FROM THE BASIS OF DESIGN FOR MECHANICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE COORDINATION WITH THE ELECTRICAL CONTRACTOR FOR PROPER WIRE SIZE, CONDUITS, DISCONNECTS, FUSES, STARTERS, VFD'S, ETC. AT NO ADDITIONAL COST.
24. PROVIDE AUTOMATIC AIR VENTS WITH ISOLATION VALVES IN ALL FINISHED AREAS AT ALL HIGH POINTS IN HYDRONIC PIPING SYSTEMS.
25. PROVIDE UP-STREAM AND DOWN-STREAM TEST PLUGS FOR ALL COILS, BOILERS, CHILLERS, AND PUMPS.
26. THESE CONTRACT DOCUMENTS HAVE BEEN SUBMITTED FOR CONTRACTOR DEVELOPMENT OF THE CONSTRUCTION WORK PLAN. COORDINATION BETWEEN THE CONTRACTOR AND SUBCONTRACTORS IS THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES TO THESE DRAWINGS AS A RESULT OF THE CONSTRUCTION COORDINATION AND THE DEVELOPMENT OF THE CONSTRUCTION WORK PLAN ARE THE RESPONSIBILITY OF THE CONTRACTOR.
27. THESE CONTRACT DOCUMENTS DETAIL THE CONCEPT OF THE WORK. COORDINATION OF CONCEPTUALLY EQUAL BUT NOMINALLY DIFFERENT SYSTEMS OR PRODUCTS SELECTED BY CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR.
28. MOUNT ALL EQUIPMENT ACCORDING TO REQUIREMENTS OF UFC 4-010-1.

REVISIONS			
Symbol	Description	Date	Appr

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: HVAC LEGEND
Date: 12 JUL 2018

SEQ. | SHEET: M-001 | OF

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C.H. GUERNSEY & COMPANY
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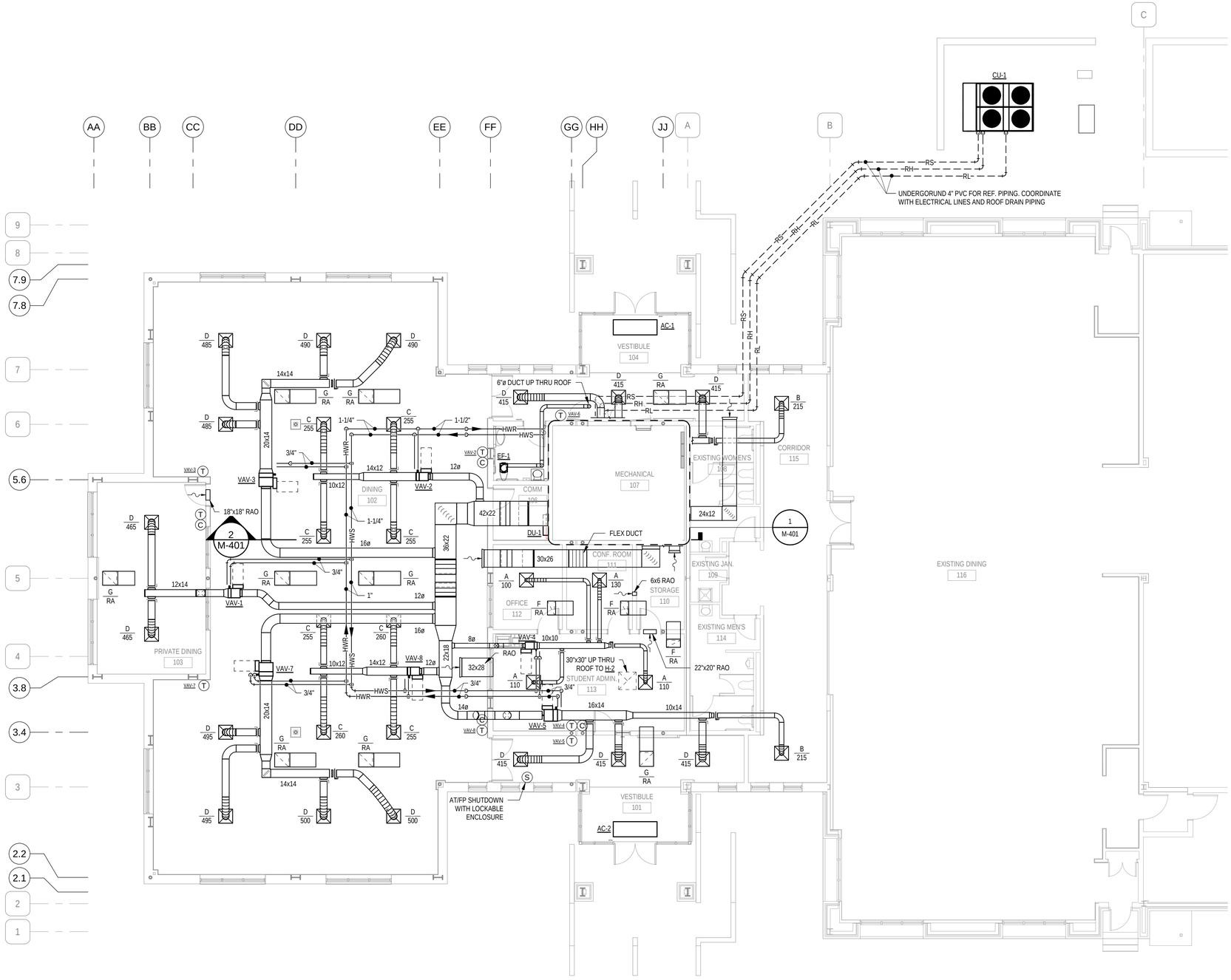
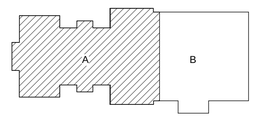
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 HVAC FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH



KEY PLAN

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

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Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
M. WILSON	R. PRADO	Checker	B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: HVAC FLOOR PLAN - AREA A

Date: 12 JUL 2018

SEQ.	SHEET	OF
	M-101	

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OKLAHOMA CITY, OK 73112 405.416.8100
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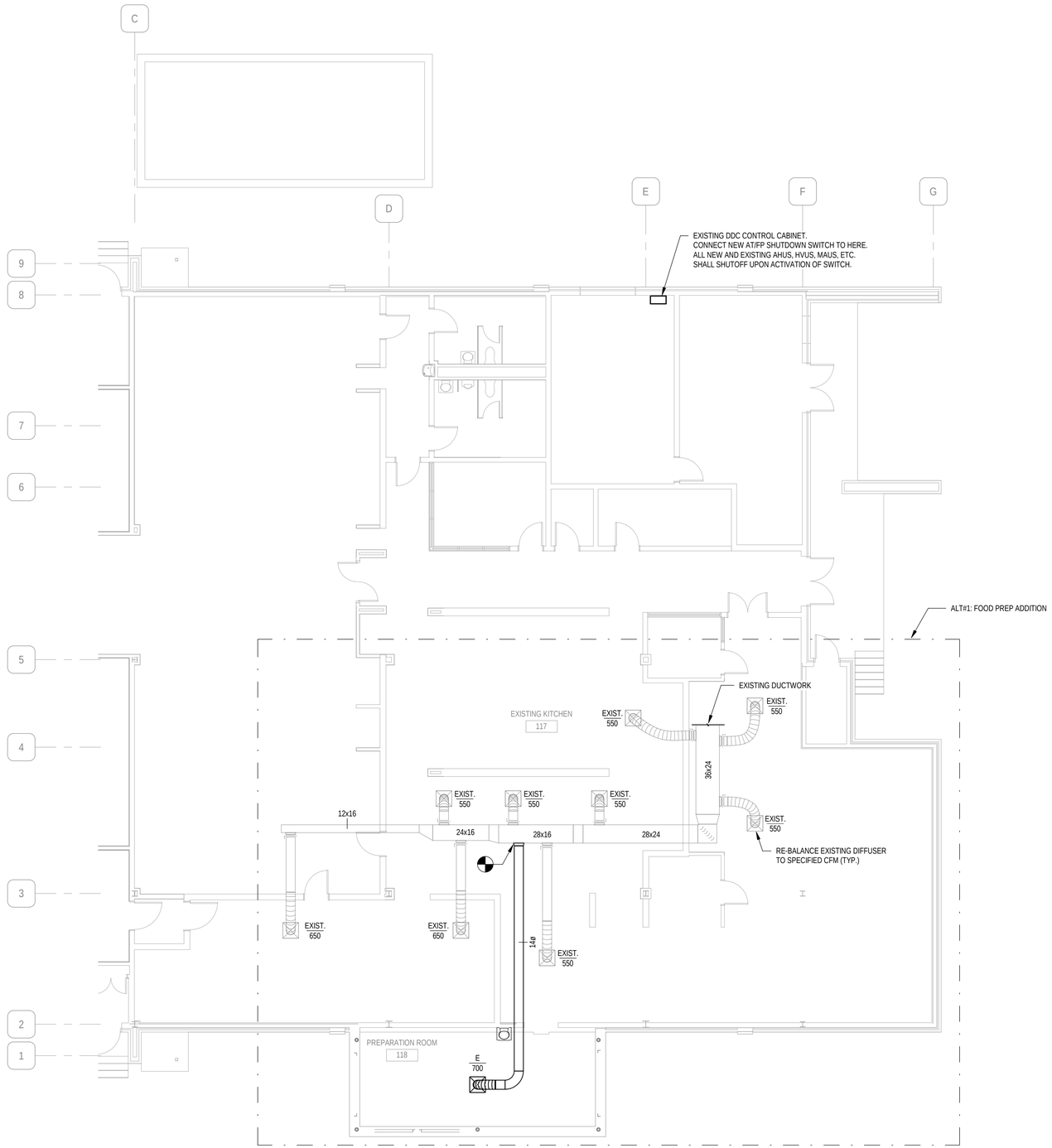
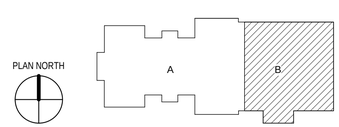
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 HVAC FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"



KEY PLAN

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

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Symbol	Description	Date	Appr

REVISIONS

Designed by: M. WILSON	Drawn by: R. PRADO	Reviewed by: Checker	Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: HVAC FLOOR PLAN - AREA B
Date: 12 JUL 2018

SEQ.	SHEET	OF
	M-102	

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OKLAHOMA CITY, OK 73112 405.416.8100
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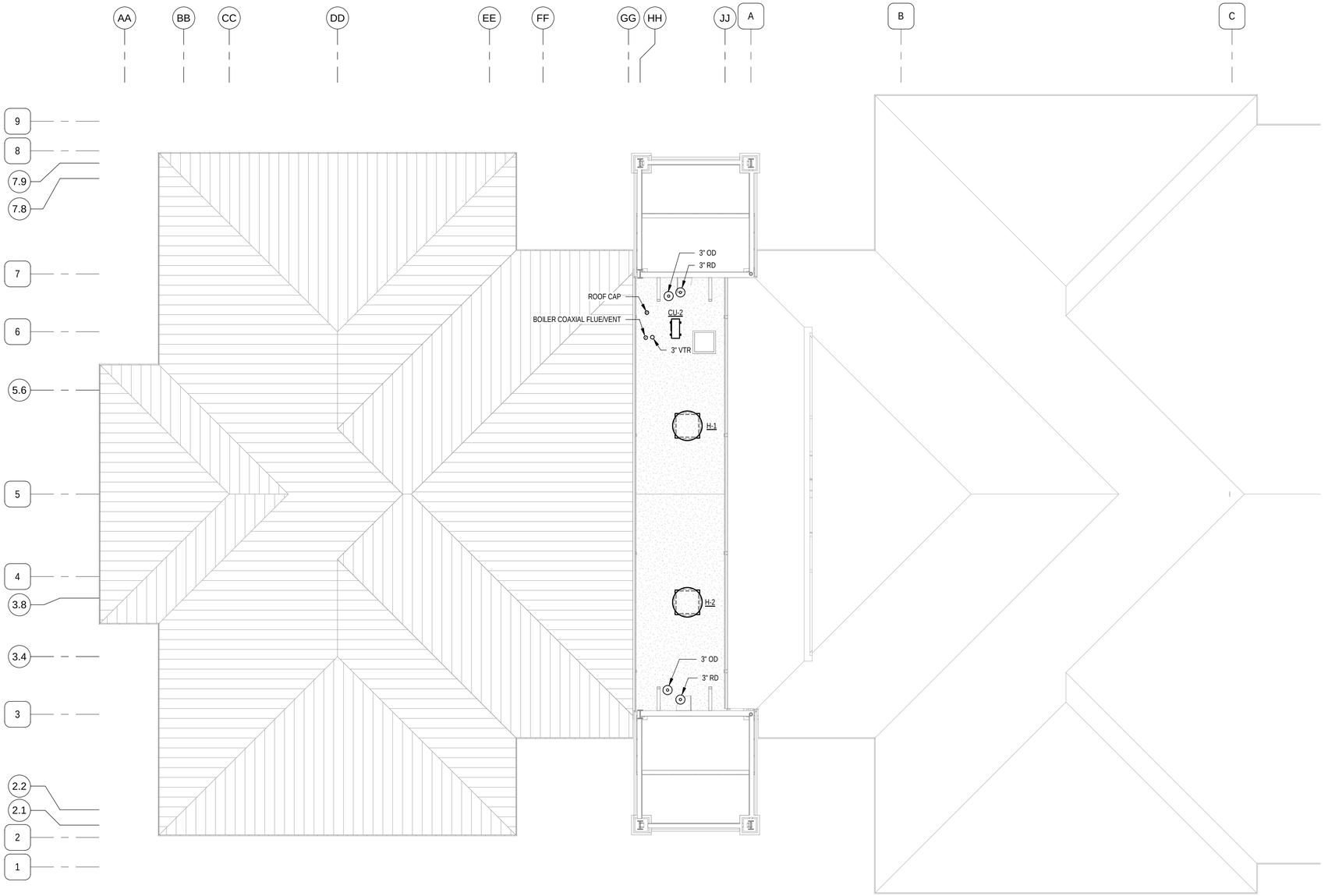
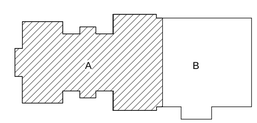


1 MECHANICAL ROOF PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH



KEY PLAN

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

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ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

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Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ROOF PLAN
Date: 12 JUL 2018

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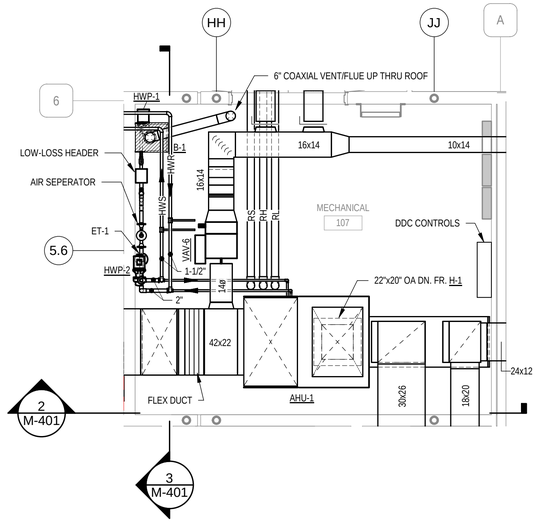
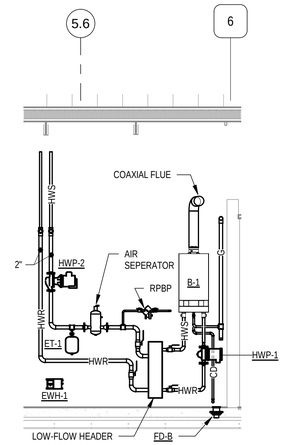
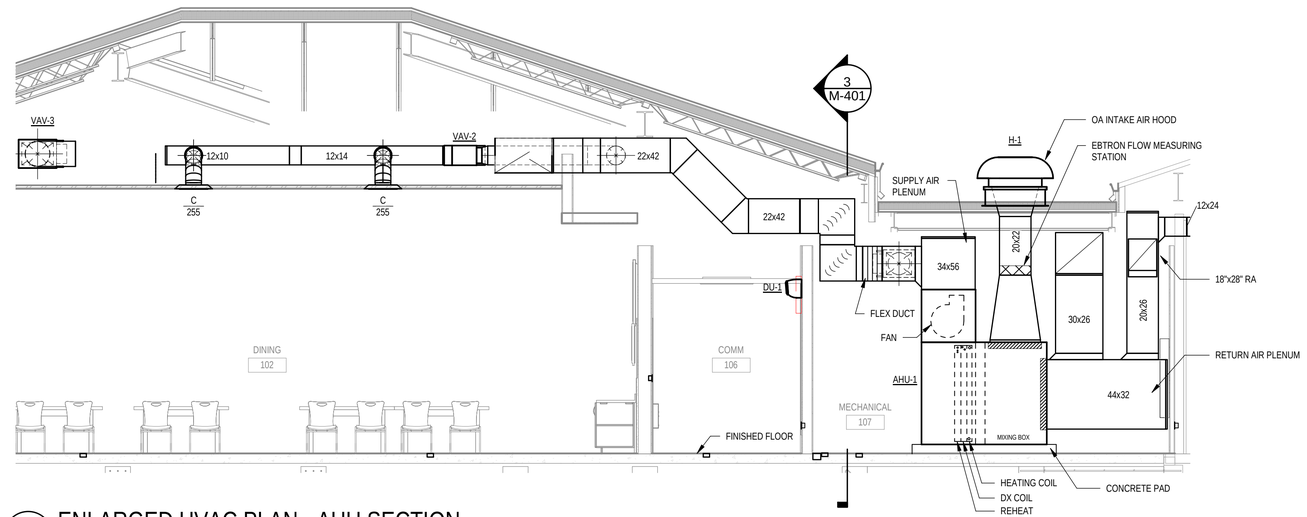
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 HVAC ENLARGED PLAN - MECHANICAL ROOM
SCALE: 1/4" = 1'-0"



3 CONDENSING BOILER DETAIL
SCALE: 1/4" = 1'-0"



2 ENLARGED HVAC PLAN - AHU SECTION
SCALE: 1/4" = 1'-0"

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

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7-12-18

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REVISIONS

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Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ENLARGED PLANS
Date: 12 JUL 2018

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C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
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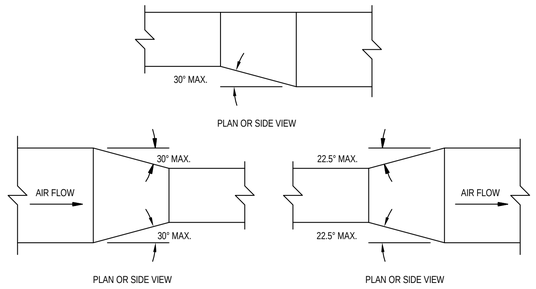
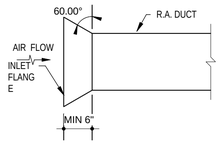
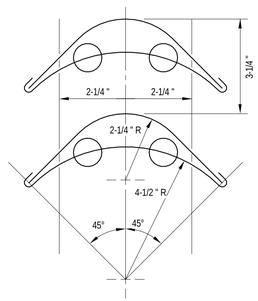


1 TYPICAL DUCT TRANSITIONS
NOT TO SCALE

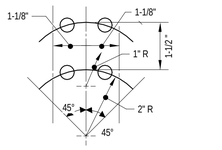


NOTE: TYPICAL FOR ALL RETURN AIR INLETS NOT EQUIPPED WITH RETURN AIR GRILLES OR REGISTERS

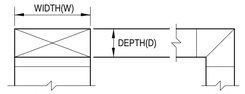
2 TYPICAL RETURN AIR INLET
NOT TO SCALE



LARGE DOUBLE VANE ELBOW USE FOR ELBOWS 32" OR WIDER AND ANY DEPTH



SMALL SINGLE VANE ELBOW USE FOR ELBOWS UP TO 31" IN WIDTH AND/OR DEPTH

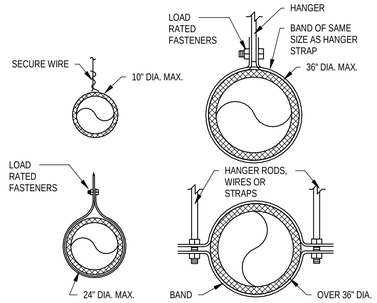


TYPICAL ELBOW

NOTES:

1. ALL SQUARE OR RECTANGULAR ELBOWS SHALL HAVE ONE OF THE TWO TYPES OF TURNIG VANES SHOWN ABOVE.
2. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.
3. ALL SQUARE AND RECTANGULAR ELBOWS SHOWN ON PLANS FOR SUPPLY DUCT MAY BE MADE WITH RADIUSED ELBOWS PROVIDED SPACE PERMITS RADIUS INSTALLATION AND/OR THERE ARE NO OUTLETS OR TAKE-OFFS WITHIN 5 DIAMETERS ON THE DOWNSTREAM SIDE OF THE ELBOW.
4. FOR VELOCITES OVER 1500 FPM, WELD EVERY 6TH VANE TO RUNNER.

3 SQUARE OR RECTANGULAR ELBOWS
NOT TO SCALE



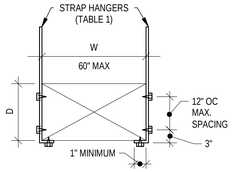
MINIMUM HANGER SIZES FOR ROUND DUCT				
DIA.	MAX. SPACING	WIRE DIAMETER	ROD DIA.	STRAP
10" DN	12'	(1) 12 GA.	1/4"	1"x22 GA.
11-18"	12'	(2)12 GA. OR (1)8 GA.	1/4"	1"x22 GA.
19-24"	12'	(2) 10 GA.	1/4"	1"x22 GA.
25-36"	12'	(2) 8 GA.	3/8"	1"x20 GA.
37-50"	12'	---	(2)3/8"	(2)1"x20 GA.
51-60"	12'	---	(2)3/8"	(2)1"x18 GA.
61-84"	12'	---	(2)3/8"	(2)1"x16 GA.

NOTES:

1. STRAPS ARE GALVANIZED STEEL; RODS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL; ALL ARE ALTERNATIVES.
2. TABULATED DATA FROM 1995 SMACNA STANDARDS ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.
3. HANGERS MUST NOT DEFORM DUCT SHAPE.

4 ROUND DUCT HANGARS
NOT TO SCALE

TABLE 1 STRAP HANGERS (PAIR) SPACED			
W + D MAX.	10' - 0" MAX.	8' - 0" MAX.	5' - 0" MAX.
72"	1" X 18 GA.	1" X 20 GA.	1" X 22 GA.
96"	1" X 16 GA.	1" X 18 GA.	1" X 20 GA.
120"	1-1/2" X 16 GA.	1" X 16 GA.	1" X 18 GA.
168"	1-1/2" X 16 GA.	1-1/2" X 16 GA.	1" X 16 GA.
192"	-	1-1/2" X 16 GA.	1" X 16 GA.
193"	SPECIAL ANALYSIS REQUIRED		



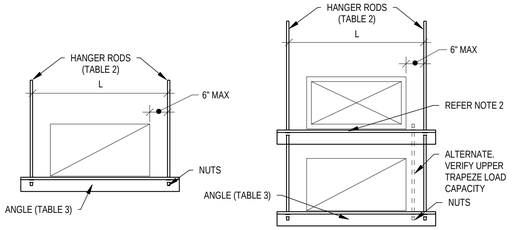


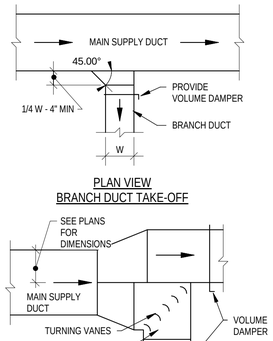
TABLE 2 ALLOWABLE HANGER LOAD, MAX.			
STRAPS	LBS.	RODS	LBS.
2 - 1" X 22 GA.	520	2 - 1/4" DIA.	540
2 - 1" X 20 GA.	640	2 - 3/8" DIA.	1360
2 - 1" X 18 GA.	840	2 - 1/2" DIA.	2500
2 - 1" X 16 GA.	1400	2 - 5/8" DIA.	4000
		2 - 3/4" DIA.	6000

TABLE 3 TRAPEZE ANGLE LOAD, MAX.		
L	2" X 2" X 1/4"	2 1/2" X 2 1/2" X 1/4"
36"	1200 LBS	1940 LBS
48"	1160 LBS	1900 LBS
60"	1060 LBS	1800 LBS
72"	900 LBS	1640 LBS
84"	660 LBS	1400 LBS
96"	320 LBS	1060 LBS

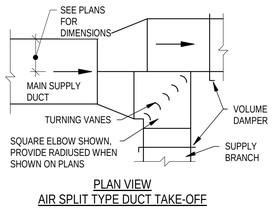
NOTES:

1. TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.
2. PROVIDE HIGH DENSITY INSERT AT TRAPEZE FOR INSULATED DUCTS.

5 RECTANGULAR DUCT HANGARS
NOT TO SCALE

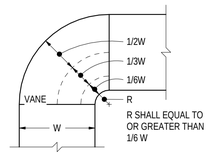


PLAN VIEW
BRANCH DUCT TAKE-OFF

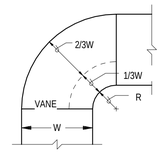


PLAN VIEW
AIR SPLIT TYPE DUCT TAKE-OFF

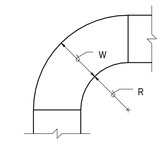
6 TYPICAL SUPPLY DUCT TAKEOFFS
NOT TO SCALE



SHORT RADIUS ELBOW WITH TWO VANES



SHORT RADIUS ELBOW WITH ONE VANE

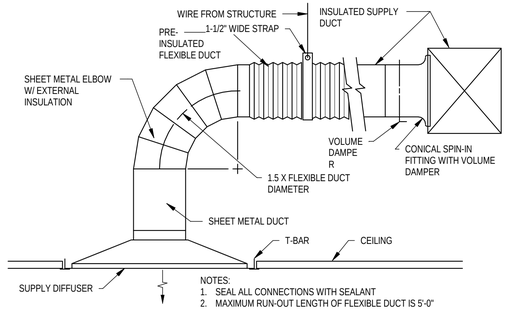


STANDARD RADIUS ELBOW

NOTES:

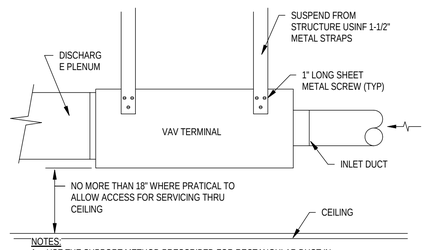
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND
2. ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOES. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES WHICH SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA

7 RADIUS ELBOWS
NOT TO SCALE



NOTES:
1. SEAL ALL CONNECTIONS WITH SEALANT
2. MAXIMUM RUN-OUT LENGTH OF FLEXIBLE DUCT IS 5'-0"

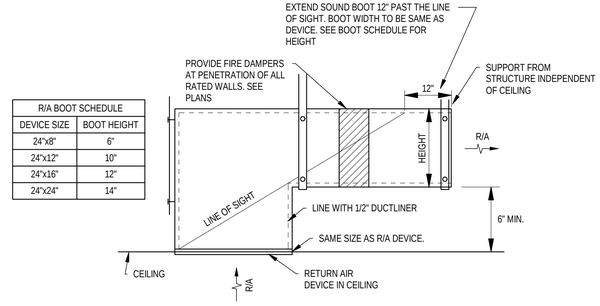
8 DIFFUSER INSTALLATION
NOT TO SCALE



NOTES:
1. USE THE SUPPORT METHOD PRESCRIBED FOR RECTANGULAR DUCT IN SPECIFICATIONS
2. DO NOR OBSTRUCT THE ACCESS PANELS WITH SUPPORT STRAPS.
3. TYPICAL FOR FAN POWERED AND NON-FAN POWERED UNITS.

9 VAV TERMINAL MOUNTING DETAIL
NOT TO SCALE

R/A BOOT SCHEDULE	
DEVICE SIZE	BOOT HEIGHT
24"x8"	6"
24"x12"	10"
24"x16"	12"
24"x24"	14"



10 TYPICAL R.A. SOUND BOOT DETAIL
NOT TO SCALE

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

guernsey

REVISIONS			
Symbol	Description	Date	Appr

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: HVAC DETAILS
Date: 12 JUL 2018

SEQ.	SHEET	OF
	M-501	

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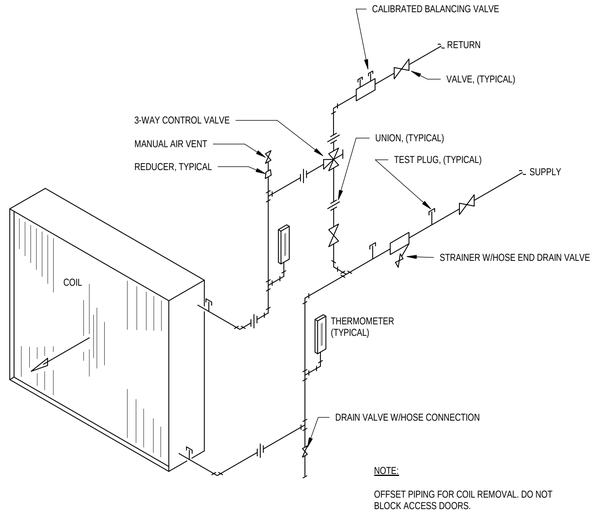
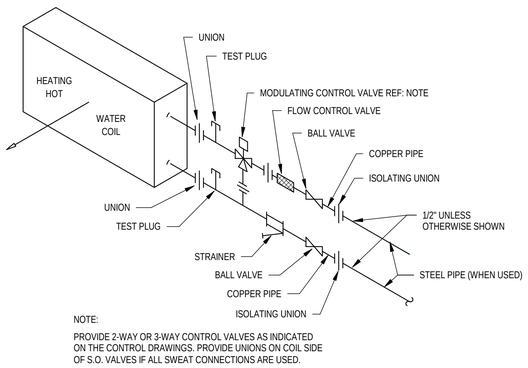
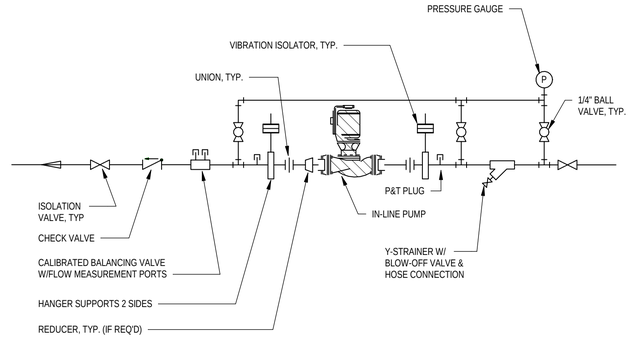
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



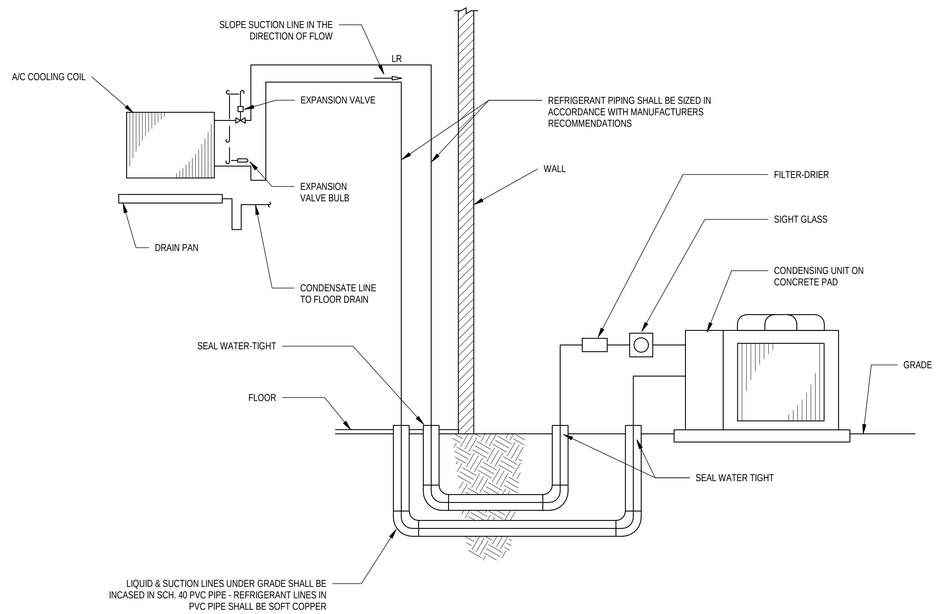
1 PIPING AT AHU HEATING COILS
NOT TO SCALE



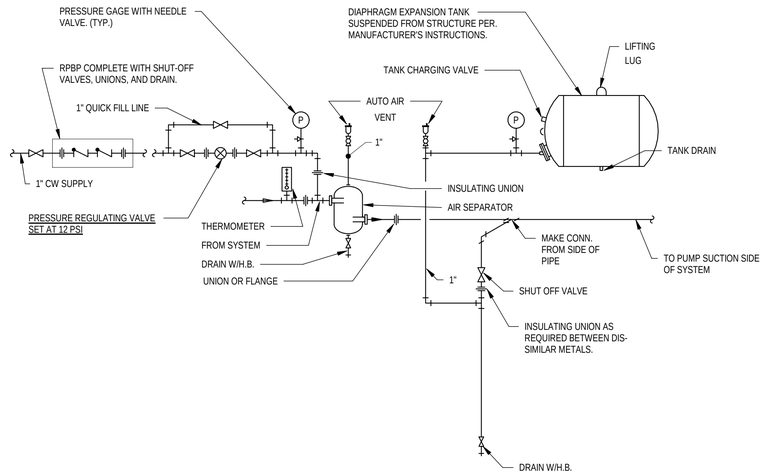
2 H.H.WW. PIPING AT VAV UNIT
NOT TO SCALE



3 IN-LINE PUMP PIPING DETAIL
NOT TO SCALE



4 REFRIGERANT PIPING DIAGRAM
NOT TO SCALE



5 DIAPHRAGM EXPANSION TANK, AIR SEPARATION AND WATER MAKEUP SYSTEM
NOT TO SCALE

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

guernsey

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REVISIONS

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M-502

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C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018

AIR DISTRIBUTION DEVICE SCHEDULE

MARK	SYSTEM TYPE	BASIS OF DESIGN (MFR & MODEL NO.)	DESCRIPTION	NECK SIZE (IN)	RANGE (MIN/MAX) AIRFLOW (CFM)	RANGE (MIN/MAX) THROW (FT.)	NC	MAX A.P.D. (IN. WC)	NOTES
A	SUPPLY	TITUS OMNI	24"x24" SQUARE PLAQUE DIFFUSER	6	90/140	4/9	<21	0.08	
B	SUPPLY	TITUS OMNI	24" x24" SQUARE PLAQUE DIFFUSER	8	170	6/12	<21	0.08	
C	SUPPLY	TITUS OMNI	24"x24" SQUARE PLAQUE DIFFUSER	10	325/410	8/14	<21	0.08	
D	SUPPLY	TITUS OMNI	24"x24" SQUARE PLAQUE DIFFUSER	12	325/510	12/16	<21	0.08	
E	SUPPLY	TITUS OMNI	24" x24" SQUARE PLAQUE DIFFUSER	14	428/748	13/19	<21	0.08	
F	RETURN	TITUS 355RL	24"x12" RETURN GRILLE	-	0/830	-	<21	0.05	WITH SOUND BOOT, REFER PLANS FOR TYPE
G	RETURN	TITUS 355RL	24"x24" RETURN GRILLE	-	0/1800	-	<21	0.05	WITH SOUND BOOT, REFER PLANS FOR TYPE

SYSTEMS MATERIAL SCHEDULE - HVAC

SYSTEM	MATERIAL	INSULATION THICKNESS	INSULATION TYPE	INSULATION JACKET
REFRIGERANT RS/RL	TYPE "ACR" COPPER	1/2"	FLEX. UNICELLULAR	--
L.P. S/A DUCTWORK	G.I.S.M.	1"	--	--
L.P. S/A RUNOUTS	G.I.S.M.	1"	--	--
L.P. S/A FLEX DUCT	1" INSULATED FLEX	--	--	--
L.P. R/A DUCTWORK	G.I.S.M.	1"	--	--
L.P. EXHAUST DUCTWORK	G.I.S.M.	--	--	--

VAV UNIT SCHEDULE

MARK	DESCRIPTION	CFM	MIN CFM	TERMINAL INLET MAX SP	DOWNSTREAM SP	HEATING DATA MBH	HEATING CFM	GPM @ 140°F	MAX WTR PD	BASIS OF DESIGN
VAV-1	PRESSURE INDEPENDENT	930	465	1.0	0.3	30.1	465	2.2	5	TITUS DESV
VAV-2	PRESSURE INDEPENDENT	1020	545	1.0	0.3	14.7	545	1.3	5	TITUS DESV
VAV-3	PRESSURE INDEPENDENT	1950	975	1.0	0.3	56.5	975	4.2	5	TITUS DESV
VAV-4	PRESSURE INDEPENDENT	450	225	1.0	0.3	6.2	225	0.7	5	TITUS DESV
VAV-5	PRESSURE INDEPENDENT	1460	730	1.0	0.3	47.1	730	3.6	5	TITUS DESV
VAV-6	PRESSURE INDEPENDENT	1460	730	1.0	0.3	47.1	730	3.6	5	TITUS DESV
VAV-7	PRESSURE INDEPENDENT	1990	995	1.0	0.3	56.9	995	4.2	5	TITUS DESV
VAV-8	PRESSURE INDEPENDENT	1030	545	1.0	0.3	14.7	545	1.3	5	TITUS DESV

1. MAX TERMINAL STATIC PRESSURE IS THE MAXIMUM ALLOWABLE STATIC PRESSURE LOSS IN INCHES OF WATER THRU THE VAV TERMINAL, INCLUDING THE HEATING COIL AT MAX CFM SHOWN.
2. PROVIDE 1, 2, 3, OR 4 ROW COIL AS NECESSARY TO ACHIEVE THE HEATING CAPACITY AT THE CONDITIONS SHOWN.
3. PROVIDE ALL UNITS W/ 1" LINER.
4. ENSURE UNITS HAVE MINIMUM 10-BIT A/D CONVERTER & FLOW SENSOR W/ A MIN. VELOCITY PRESSURE SIGNAL OF 0.004 IN. W.G. TO MEASURE LOW MINIMUM AIRFLOWS.

AIR HANDLING UNIT SCHEDULE1

MARK	DESCRIPTION	ELECTRICAL VOLTS/PHASE	ELECTRICAL FLA	SUPPLY FANWALL DATA # FANS	TOTAL CFM	O.A. CFM	E.S.P. (IN. WG.)	T.S.P. (IN. WG.)	RPM	H.P. EACH FAN	B.H.P. EACH FAN	DX COOLING COIL TOTAL MBH	SENSIBLE MBH	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	OA DB/WB (°F)	PREHEATING HOT WATER COIL HEATING CFM	CAPACITY (MBH)	EAT/LAT DB (°F)	GPM	EWT/LWT (°F)	MAX. WTR. P.D. FT.	HOT GAS REHEAT COIL CAPACITY (MBH)	LAT DB/WB (°F)	FILTER DATA EFF/MERV	BASIS OF DESIGN
AHU-1	AIR HANDLING UNIT	203/3	37	2	9,500	2,710	2.0	3.21	2750	8	3.98	276.6	235.9	85.4	65.0	53.1	51.3	100/70	9,500	83.8	38.1/55.0	5.6	140/110	10	158	70/58.37	8	AAON V3-ER

1. E.S.P. DOES NOT INCLUDE ALLOWANCE FOR FILTERS.

COOLING ONLY DUCTLESS MINI-SPLIT SCHEDULE

MARK - INDOOR UNIT	MARK - OUTDOOR UNIT	DESCRIPTION	MOUNTING	FAN DATA TOTAL CFM	FAN DATA FAN SPEED	FAN DATA FAN WATTS	COOLING DATA TOTAL BTU/H	COOLING DATA ENT. AIR D.B. DEG F	COOLING DATA ENT. AIR W.B. DEG F	COOLING DATA AMBIENT DEG F	MINIMUM SEER	BASIS OF DESIGN
DU-1	CU-2	DUCTLESS MINI-SPLIT	WALL	425	HIGH	30	12,000	80	67	105	15.2	MITSUBISHI PKA-A12HA6

1. PROVIDE ACU'S W/ ACCESSORY WIND BAFFLE FOR LOW AMBIENT OPERATION DOWN TO 0° F.
2. PROVIDE R410a REFRIGERANT.
3 DC INVERTER DRIVEN COMPRESSOR.
4 PROVIDE EACH ACU W/ CONDENSATE PUMP.

CONDENSING UNIT SCHEDULE

MARK	DESCRIPTION	AIRFLOW RATE (CFM)	ELECTRICAL DATA VOLT/PHASE	ELECTRICAL DATA MCA (A)	ELECTRICAL DATA MOCP (A)	BASIS OF DESIGN
CU-1	AIR-COOLED CONDESNING UNIT	9,500	208/3	134	150	AAON CFA
CU-2	CONDENSING UNIT	1,200	208/1	13	15	MITSUBISHI PUY

DIAPHRAGM EXPANSION TANK SCHEDULE

MARK	DESCRIPTION	SIZE DIA.	SIZE LENGTH	CHARGE PSI	FULL CAP. GALLONS	ACCEPTANCE VOLUME (GAL)	BASIS OF DESIGN	REMARKS
ET-1	PRE-CHARGED DIAPHRAGM EXPANSION TANK	8"	12-5/8"	12	2.0	0.6	B&G HFT	

EXHAUST FAN SCHEDULE

MARK	BASIS OF DESIGN (MFR & MODEL NO.)	DESCRIPTION	AIRFLOW (CFM)	E.S.P. (IN. WC)	W	FAN SPEED (RPM)	VOLTAGE (V/ø/HZ)	NOTES
EF-1	COOK GEMINI	CEILING EXHAUST FAN	70	0.20	58	900	115/1/60	

HOOD SCHEDULE

MARK	BASIS OF DESIGN (MFR & MODEL NO.)	DESCRIPTION	AIRFLOW (CFM)	E.S.P. (IN. WC)	SIZE (IN.)	NOTES
H-1	GREENHECK GRSI-30	INTAKE AIR HOOD	2,710	0.05	30	PROVIDE WITH MOTORIZED DAMPER
H-2	GREENHECK GRSI-30	RELIEF AIR HOOD	2,710	0.05	30	PROVIDE WITH MOTORIZED DAMPER

PUMP SCHEDULE

MARK	DESCRIPTION	GPM	HEAD FT. WTR.	POWER	RPM	BASIS OF DESIGN	REMARKS
HWP-1	HEATING HOT WATER PRIMARY PUMP	22	15	625 W	1800	GRUNDFOS UPS 32-160	COORDINATE WITH BOILER PRESSURE DROP
HWP-2	HEATING HOT WATER SECONDARY PUMP	27	40	1.5 HP	1800	B&G E-90	

HHW BOILER SCHEDULE

Mark	DESCRIPTION	INPUT MBH	OUTPUT MBH	OPERATING PRESSURE	LEAVING TEMP. DEG. F	BASIS OF DESIGN	REMARKS
B-1	WALL MOUNTED CONDENSING BOILER	352	333	30	140	VIESSMANN VITODENS 200-W	

AIR CURTAIN SCHEDULE

MARK	DESCRIPTION	CFM	NOZZLE WIDTH (IN)	HP	MAX. VELOCITY AT NOZZLE (FPM)	VOLT/PHASE	BASIS OF DESIGN	REMARKS
AC-1	AMBIENT AIR CURTAIN	3,014	72	2 @ 1/2	5444	208/1	BERNER ARD12	
AC-2	AMBIENT AIR CURTAIN	3,014	72	2 @ 1/2	5444	208/1	BERNER ARD12	

GENERAL NOTES:

1. FURNISH APPROPRIATE MOTOR STARTER FOR ALL MOTORS.
2. FOR ALL MOTORS - MOTOR BRAKE HORSEPOWER SHALL NOT EXCEED 85% 0F NORMAL NAMEPLATE HORSEPOWER (WITHOUT CONSIDERATION OF THE SERVICE FACTOR).
3. FAN RPM AT DESIGN CONDITIONS SHALL NOT EXCEED 85% OF MANUFACTURER'S MAXIMUM FOR THE CLASS OF CONSTRUCTION.
4. PUMP IMPELLER DIAMETER SHALL NOT EXCEED 10/11THS OF THE MAXIMUM IMPELLER DIAMETER.
5. EQUIPMENT CAPACITIES SHALL BE BASED ON AN ELEVATION OF 1900 ABOVE SEA LEVEL.

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

guernsey

REVISIONS

Symbol	Description	Date	Appr

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: HVAC SCHEDULES
Date: 12 JUL 2018

SEQ. | SHEET M-601 | OF

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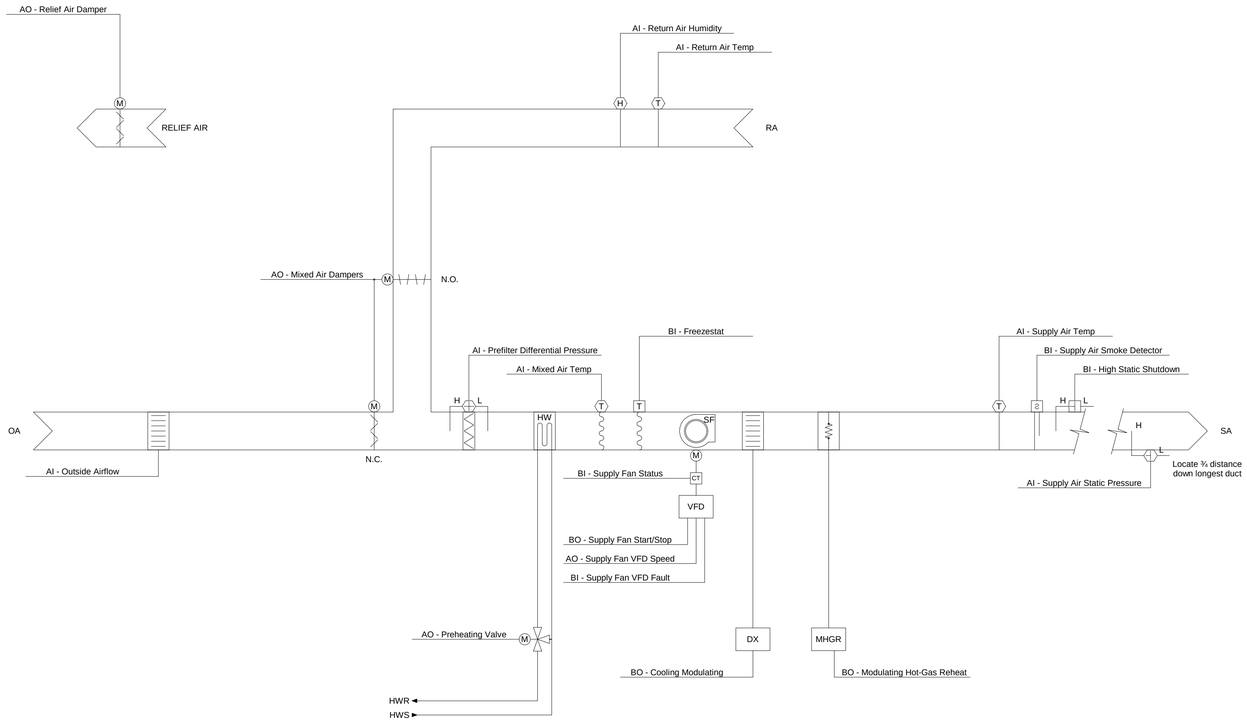
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR2258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 AHU-1 CONTROLS
NOT TO SCALE

Variable Air Volume - AHU

Run Conditions - Scheduled:
The unit shall run based upon an operator adjustable schedule.

Emergency Shutdown:
The unit shall shut down and generate an alarm upon receiving an emergency shutdown signal either internally or from AT/FP shutdown button.

Freeze Protection:
The unit shall shut down and generate an alarm upon receiving a freezestat status.

High Static Shutdown:
The unit shall shut down and generate an alarm upon receiving an high static shutdown signal.

Supply Air Smoke Detection:
The unit shall shut down and generate an alarm upon receiving a supply air smoke detector status.

Supply Fan:
The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime.

Alarms shall be provided as follows:
- Supply Fan Failure: Commanded on, but the status is off.
- Supply Fan in Hand: Commanded off, but the status is on.
- Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

Supply Air Duct Static Pressure Control:
The controller shall measure duct static pressure and shall modulate the supply fan VFD speed to maintain a duct static pressure setpoint of 1.5in H2O (adj.). The supply fan VFD speed shall not drop below 20% (adj.).

Alarms shall be provided as follows:
- High Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) greater than setpoint.
- Low Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) less than setpoint.
- Supply Fan VFD Fault.

Preheating Coil Valve:
The controller shall measure the mixed air temperature and modulate the preheating coil valve to maintain its setpoint 5°F (adj.) less than the supply air temperature setpoint.

The preheating shall be enabled whenever:
- Outside air temperature is less than 60°F (adj.).
- AND the economizer (if present) is disabled.
- AND the supply fan status is on.

The preheating coil valve shall open for freeze protection whenever:
- Mixed air temperature drops from 40°F to 35°F (adj.).
- OR the freezestat (if present) is on.

Supply Air Temperature Setpoint - Fixed:
The controller shall monitor the supply air temperature and shall maintain fixed supply air temperature setpoints as follows:
- Cooling: The setpoint shall be 55°F (adj.).
- Heating: The setpoint shall be 95°F (adj.) whenever the return air temperature drops below 68°F (adj.).

Cooling Stage:
The controller shall measure the supply air temperature and stage the cooling to maintain its cooling setpoint. To prevent short cycling, the stage shall have a user definable (adj.) minimum runtime.

The cooling shall be enabled whenever:
- Outside air temperature is greater than 60°F (adj.).
- AND the economizer (if present) is disabled or fully open.
- AND the supply fan status is on.
- AND the heating (if present) is not active.

Alarms shall be provided as follows:
- High Supply Air Temp: If the supply air temperature is 5°F (adj.) greater than setpoint.

Minimum Outside Air Ventilation - Carbon Dioxide (CO2) Control:
When in the occupied mode, the controller shall monitor zone CO2 concentrations served by this air handling unit and outside airflow from AFMS. The controller shall take the highest zone CO2 concentration and modulate the outside air dampers open on rising CO2 concentrations, overriding normal damper operation to maintain a CO2 setpoint of 750 ppm (adj.).

Alarms shall be provided as follows:
- High Zone Carbon Dioxide Concentration: If the highest zone CO2 concentration is greater than 1000 ppm (adj.).

Dehumidification:
The controller shall measure the return air humidity and override the cooling sequence using modulating hot gas reheat to maintain return air humidity at or below 55% rh (adj.). Dehumidification shall be enabled whenever the supply fan status is on.

Prefilter Differential Pressure Monitor:
The controller shall monitor the differential pressure across the prefilter.

Alarms shall be provided as follows:
- Prefilter Change Required: Prefilter differential pressure exceeds a user definable limit (adj.).

Mixed Air Temperature:
The controller shall monitor the mixed air temperature and use as required for economizer control (if present) or preheating control (if present).

Alarms shall be provided as follows:
- High Mixed Air Temp: If the mixed air temperature is greater than 90°F (adj.).
- Low Mixed Air Temp: If the mixed air temperature is less than 45°F (adj.).

Return Air Humidity:
The controller shall monitor the return air humidity and use as required for economizer control (if present) or humidity control (if present).

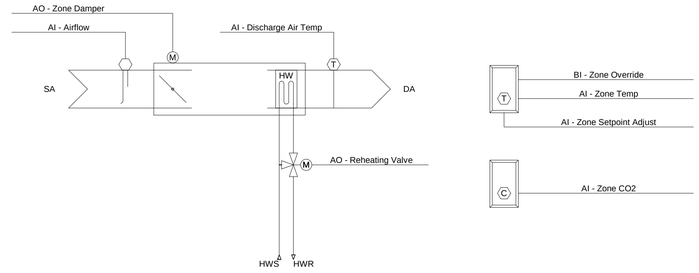
Alarms shall be provided as follows:
- High Return Air Humidity: If the return air humidity is greater than 70% (adj.).
- Low Return Air Humidity: If the return air humidity is less than 35% (adj.).

Return Air Temperature:
The controller shall monitor the return air temperature and use as required for setpoint control or economizer control (if present).

Alarms shall be provided as follows:
- High Return Air Temp: If the return air temperature is greater than 90°F (adj.).
- Low Return Air Temp: If the return air temperature is less than 45°F (adj.).

Supply Air Temperature:
The controller shall monitor the supply air temperature.

Alarms shall be provided as follows:
- High Supply Air Temp: If the supply air temperature is greater than 120°F (adj.).
- Low Supply Air Temp: If the supply air temperature is less than 45°F (adj.).



2 VAV CONTROLS
NOT TO SCALE

Variable Air Volume - Terminal Unit

Run Conditions - Scheduled:
The unit shall run according to a user definable time schedule in the following modes:
- Occupied Mode: The unit shall maintain
  - A 75°F (adj.) cooling setpoint
  - A 70°F (adj.) heating setpoint.
- Unoccupied Mode (night setback): The unit shall maintain
  - A 85°F (adj.) cooling setpoint.
  - A 55°F (adj.) heating setpoint.

Alarms shall be provided as follows:
- High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).
- Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

Zone Setpoint Adjust:
The occupant shall be able to adjust the zone temperature heating and cooling setpoints at the zone sensor.

Zone Optimal Start:
The unit shall use an optimal start algorithm for morning start-up. This algorithm shall minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.

Zone Unoccupied Override:
A timed local override control shall allow an occupant to override the schedule and place the unit into an occupied mode for an adjustable period of time. At the expiration of this time, control of the unit shall automatically return to the schedule.

Dual Maximum Variable Volume Terminal Unit - Flow Control:
The terminal unit direct digital controller shall modulate the primary air damper, reheat valve to maintain the room temperature at the heating or cooling setpoint. As the room temperature rises above the cooling setpoint the primary air damper will modulate open until the box maximum cfm setpoint is reached or the cooling space temperature setpoint is satisfied. As the room temperature falls below the cooling setpoint the primary air damper will modulate closed to its minimum cfm setpoint.

When the room temperature is in the deadband between the heating and cooling setpoints, the primary air damper shall modulate, as necessary, to maintain the minimum cfm setpoint.
When the room temperature falls below the heating setpoint the controller will maintain the space temperature as follows:

- 0 – 50% Heating Demand: The controller shall reset the discharge air setpoint from 55 deg F to the maximum supply air temperature setpoint (95 deg F, adj) and will modulate the HHW valve to maintain the discharge air temperature at setpoint.
- 50 – 100% Heating Demand: The controller shall reset the air flow cfm setpoint from the minimum air flow setpoint to the maximum heating air flow setpoint (50% of cooling maximum, adj). The controller will continue to maintain the discharge air at setpoint.

Note: All HHW valves shall be analog modulating valves (4-20ma or 2-10vac), 3-pt floating are not acceptable

Discharge Air Temperature:
The controller shall monitor the discharge air temperature.

Alarms shall be provided as follows:
- High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.).
- Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

STATE OF TEXAS
ALLEN DALE JONES
84988
REGISTERED PROFESSIONAL ENGINEER
7-12-18

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: M. WILSON
Drawn by: R. PRADO
Reviewed by: Checker
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: HVAC CONTROLS

Date: 12 JUL 2018

SEQ. | SHEET: M-801 | OF

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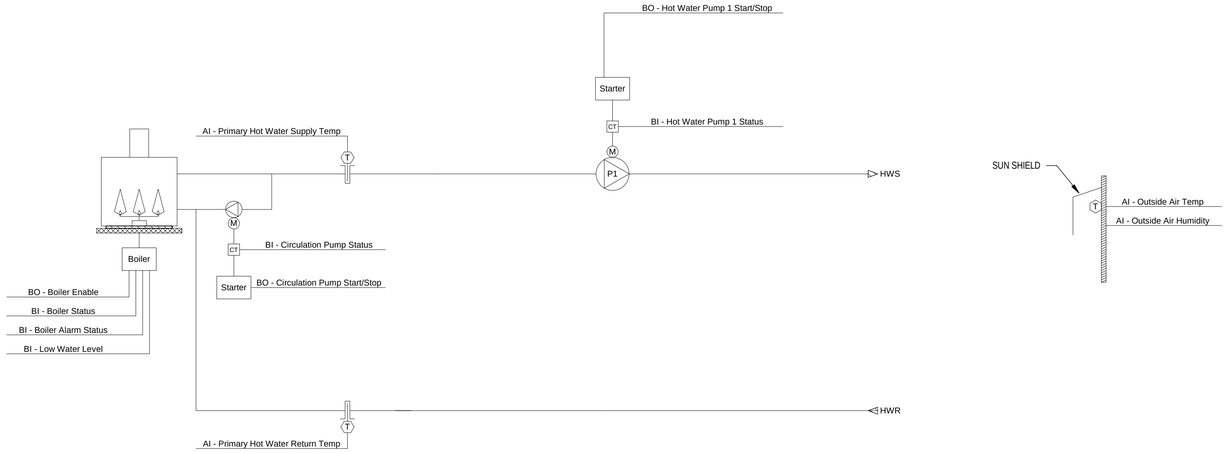
C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 BOILER CONTROLS
NOT TO SCALE

Single Boiler System

Boiler System - Run Conditions:
The boiler system shall be enabled to run whenever outside air temperature is less than 65°F (adj.).

To prevent short cycling, the boiler system shall run for and be off for minimum adjustable times (both user definable), unless shutdown on safeties or outside air conditions.

The boiler shall run subject to its own internal safeties and controls.

The boiler system shall also run for freeze protection whenever outside air temperature is less than 38°F (adj.)

Boiler Safeties:
The following safeties shall be monitored:
- Boiler alarm.
- Low Water Level.

Alarms shall be provided as follows:
- Boiler alarm.
- Low Water Level alarm.

Heating Water Primary Pump:
The hot water pump shall run anytime the boiler is called to run and shall have a user definable delay (adj.) on stop.

Alarms shall be provided as follows:

- Hot Water Pump Failure: Commanded on, but the status is off.
- Hot Water Pump Running in Hand: Commanded off, but the status is on.
- Hot Water Pump Runtime Exceeded: Status runtime exceeds a user definable limit.

Heating Water Secondary Pump:
The circulation pump shall run anytime the boiler is called to run and shall have a user definable (adj.) delay on stop.

Alarms shall be provided as follows:
- Circulation Pump Failure: Commanded on, but the status is off.
- Circulation Pump Running in Hand: Commanded off, but the status is on.
- Circulation Pump Runtime Exceeded: Status runtime exceeds a user definable limit.

Boiler Enable:
The boiler shall be enabled when the boiler system is commanded on. The boiler shall be enabled after pump status is proven on and shall run subject to its own internal safeties and controls.

Alarms shall be provided as follows:
- Boiler Failure: Commanded on, but the status is off.
- Boiler Running in Hand: Commanded off, but the status is on.
- Boiler Runtime Exceeded: Status runtime exceeds a user definable limit.

Hot Water Supply Temperature Setpoint Reset:
The hot water supply temperature setpoint shall reset based on outside air temperature.

As outside air temperature rises from 0°F (adj.) to 70°F (adj.) the hot water supply temperature setpoint shall reset downwards by subtracting from 0°F (adj.) up to 20°F (adj.) from the current boiler setpoint.

Primary Hot Water Temperature Monitoring:
The following temperatures shall be monitored:
- Primary hot water supply.
- Primary hot water return.

Alarms shall be provided as follows:
- High Primary Hot Water Supply Temp: If greater than 200°F (adj.).
- Low Primary Hot Water Supply Temp: If less than 100°F (adj.).

GENERAL CONTROLS NOTES:
1. CONTROLS SYSTEM TO BE AN EXTENSION OF THE EXISTING BUILDING CONTROLS.
2. BASIS OF DESIGN IS AUTOMATD LOGIC. CONTACT JOHN SAULT AT 254-842-7675.

STATE OF TEXAS
ALLEN DALE JONES
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REGISTERED PROFESSIONAL ENGINEER
7-12-18

guernsey

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REVISIONS

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NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: HVAC CONTROLS
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SEQ. | SHEET M-802 | OF

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PLAN LEGEND

SYMBOL	DESCRIPTION
J	JUNCTION BOX, WALL MOUNTED
J	JUNCTION BOX, CEILING MOUNTED
J	JUNCTION BOX, FLOOR MOUNTED
	PUSH BUTTON
	SWITCH, SAFETY, 30A , NON-FUSED, NEMA 3R (EXTERIOR) / NEMA 1 (INTERIOR), UON.
	MOTOR STARTER OR LIGHTING CONTACTOR, SURFACE MOUNTED
M 60	OVERHEAD DOOR MOTOR AND CONTROLS
	PANELBOARD, SURFACE MOUNTED WITH COPPER BUS
	PANELBOARD, RECESSED WITH COPPER BUS
	CONDUIT STUB OFF BELOW GROUND, CAPPED, UON
M	MOTOR CONNECTION
X	POWER WIRING AND CONDUIT RUN, LONG HASH MARK INDICATES QUANTITY OF PHASE CONDUCTORS AND SWITCH LEG CONDUCTORS. SHORT HASH MARKS INDICATE NUMBER OF NEUTRAL CONDUCTORS. ALL CIRCUITS SHALL HAVE EQUIPMENT GROUND CONDUCTOR. NO HASH MARKS INDICATE TWO CONDUCTORS PLUS GROUND. CONDUCTOR SIZES GREATER THAN No. 12 AWG ARE NOTED AT POSITION "X"
T"X"	TRANSFORMER, DRY-TYPE, DESIGNATOR SHOWN IN POSITION "X" INDICATES EQUIPMENT IDENTIFIER
W-X,Y,Z	CIRCUIT HOMERUN TO PANEL OR CABINET NOTED; W=PANEL NAME; X,Y,Z,=CIRCUIT NUMBERS; SYMBOL CAN BE USED WITH LONE CONDUIT OR WIRING SYMBOLS
	RECEPTACLE, DUPLEX, NEMA 5-20R, 18" AFF, UON
(S)	RECEPTACLE, DUPLEX, NEMA 5-20R, 18" AFF, UON. "S" INDICATES THE RECEPTACLE IS SWITCHED BY THE OCCUPANCY SENSOR IN THE ROOM.
(TR)	RECEPTACLE, DUPLEX, NEMA 5-20R, 18" AFF, UON. "TR" INDICATES THE RECEPTACLE IS TAMPER RESISTANT.
	RECEPTACLE, GFCI, NEMA 5-20R, 18" AFF, UON
	RECEPTACLE, QUADRUPLEX, NEMA 5-20R, 18" AFF, UON
	RECEPTACLE, DUPLEX, MOUNTED IN FLOOR
	RECEPTACLE, QUADRUPLEX, MOUNTED IN FLOOR
	RECEPTACLE, DUPLEX, MOUNTED IN CEILING
	RECEPTACLE, QUADRUPLEX, MOUNTED IN CEILING
X	RECEPTACLE , SINGLE SPECIAL PURPOSE, MOUNTED 48" AFF, UON NUMBER IN POSITION "X" INDICATES TYPE (SEE SCHEDULE)
	RECEPTACLE , RECESSED, FLOOR MOUNTED QUADRUPLEX OUTLET, NEMA 5-20R, AND VOICE/DATA OUTLET
PP	SWITCHED POWER PACK ABOVE CEILING, UON
S	WALL MOUNTED SWITCH
S_M	SWITCH, MOTOR RATED, WITH THERMAL OVERLOADS
S_D	DIMMER SWITCH
S_{OS}	OCCUPANCY SENSOR, WALL MOUNTED
OS	OCCUPANCY SENSOR, CEILING MOUNTED
TV	RECESSED SPLIT BOX MOUNTED 72" AFF, UON, WITH 1.25" RACEWAY STUBOUT FOR CATV TO ACCESSIBLE CEILING SPACE. BOX SHALL INCLUDE POWER (SIMPLEX 5-20R), COAX CABLE WITH F CONNECTOR, DATA, VGA, AND HDMI. ROUTE BACK TO MAIN SERVER ROOM.
	ROUND, RECESSED, SURFACE, OR PENDANT LIGHT FIXTURE
	2'X4' LIGHTING FIXTURE
	1'X4' LIGHTING FIXTURE
	LIGHTING FIXTURE WITH EMERGENCY LIGHTING CAPABILITY
	EXIT SIGN, LIGHTED, WALL MOUNTED; FACES ARE SOLID CHEVRON'S INDICATED EGRESS PATH
	EXIT SIGN, LIGHTED, CEILING MOUNTED; FACES ARE SOLID CHEVRON'S INDICATED EGRESS PATH
	EMERGENCY LIGHTING UNIT
PC	PHOTO-CONTROLLER, INTEGRAL PHOTOELECTRIC CELL AND RELAY

SYMBOL	DESCRIPTION
(X)	DATA OUTLET, RECESSED, MOUNTED 18"AFF, UON, "X" INDICATES NUMBER OF OUTLETS. A BLANK IN "X" LOCATION INDICATES 2 PORT
	TELEPHONE TERMINAL BOARD (4' x 8' x 3/4", UON)
(X)	DATA OUTLET, INSTALLED IN FLOOR, "X" INDICATES NUMBER OF OUTLETS
	ANTENNA
SP	SPEAKER, CEILING MOUNTED
SP	SPEAKER, WALL MOUNTED
CR	CARD READER
MS	MOTION SENSOR
RX	REQUEST TO EXIT
	GROUND ROD LOCATION
	LIGHTNING PROTECTION SYSTEM AIR TERMINAL
	GROUND BAR WITH PHENOLIC STAND-OFFS; SIZE AS SPECIFIED
	POWER TRANSFORMER, RATINGS ARE SHOWN IN TRANSFORMER SCHEDULE
	GROUNDING CONNECTION; WHEN USED WITH TRANSFORMER WINDING SYMBOL IT INDICATES A NEUTRAL GROUNDING CONNECTION (ON SECONDARY SIDE ONLY)
	DELTA WINDING CONNECTION
	CONDUCTOR CONNECTION
	CIRCUIT BREAKER, MOLDED CASE, TRIP CURRENT [A] AND QUANTITY OF POLES [P] SHOWN NEXT TO THE SYMBOL
	SWITCH, DISCONNECT, NON-FUSED, LOAD BREAK; CONTINUOUS CURRENT RATING [A] AND QUANTITY OF POLES [P] SHOWN NEXT TO SYMBOL
	SWITCH, DISCONNECT, FUSED, LOAD BREAK; FUSE AMPERE RATING [A] AND FUSE TYPE SHOWN NEXT TO SYMBOL
	FUSE, AMPERE RATING [A] AND FUSE TYPE SHOWN NEXT TO SYMBOL
	INTEGRAL PHOTOELECTRIC CELL AND RELAY (PHOTOCONTROL)
WH	WATT-HOUR METER
X	FEEDER NUMBER; SEE FEEDER SCHEDULE
VSD	VARIABLE SPEED DRIVE
	EQUIPMENT ENCLOSURE
	MOTORIZED GENERATOR
ATS	AUTOMATIC TRANSFER SWITCH
	POTENTIAL TRANSFORMER, PRIMARY TO SECONDARY RATIO SHOWN NEXT TO SYMBOL
	CURRENT TRANSFORMER, TURNS RATIO SHOWN NEXT TO SYMBOL
	SEPARABLE CONNECTOR OR CONNECTION FOR DRAWOUT ASSEMBLIES
	MOTOR THERMAL OVERLOAD PROTECTOR
H O O A	SWITCH, SELECTOR, HAND-OFF AUTOMATIC
C	CONTACTOR OR RELAY COIL, LETTER(S) INSIDE OF SYMBOL MATCH CONTACTS CONTROLLED
	RELAY OR CONTACTOR CONTACTS
1	KEYED NOTE, NUMBER IN POSITION "1" INDICATES NOTE NUMBER
XXX	ROOM NUMBER IDENTIFIER; ROOM NUMBER SHOWN IN POSITION "X"
X	DETAIL, SECTION, PLAN, OR VIEW REFERENCE SYMBOL; IN POSITION "X" IS THE DETAIL IDENTIFIER NUMBER
X / Y	ENLARGED PLAN REFERENCE; IN POSITION "X" IS THE PLAN IDENTIFIER NUMBER; IN POSITION "Y" IS THE SHEET NUMBER WHERE THE PLAN IS REFERENCED

	INDICATES NEW OVERHEAD POLE
	INDICATES EXISTING OVERHEAD POLE
PB-X	PULL BOX , NEW, "X" INDICATES PULL BOX NUMBER
PB-X	PULL BOX , EXISTING, "X" INDICATES PULL BOX NUMBER
MH-X	MANHOLE , NEW, "X" INDICATES PULL BOX NUMBER
MH-X	MANHOLE , EXISTING, "X" INDICATES PULL BOX NUMBER
HH-X	HAND HOLE , NEW, "X" INDICATES PULL BOX NUMBER
HH-X	HAND HOLE , EXISTING, "X" INDICATES PULL BOX NUMBER
	CONDUIT, CONCRETE ENCASED (DUCT) SYSTEM; QUANTITY OF CIRCLES IN SYMBOL DENOTES QUANTITY AND ARRANGEMENT OF CONDUIT; DARKENED CIRCLE INDICATES CONDUIT WITH CONDUCTORS
2'-3"	CONDUIT AND WIRING RUN, UNDERGROUND; QUANTITY AND SIZE AS NOTED
	POLE MOUNTED SITE LIGHT FIXTURE
	NEW RISER (PRIMARY OR SECONDARY)
	EXISTING RISER (PRIMARY OR SECONDARY)
OHE	ELECTRICAL OVERHEAD
UE	UNDERGROUND ELECTRICAL
UC	UNDERGROUND COMMUNICATIONS

ABBREVIATIONS

ABV.	DESCRIPTION	ABV.	DESCRIPTION
A	AMPERES OR TRIP AMPERES	KWH	KILOWATT HOURS
AC	ABOVE COUNTER	MH	MANHOLE
AFF	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRIC CODE
AFG	ABOVE FINISHED GRADE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AIC	SYMMETRICAL AMPS INTERRUPTING CAPACITY	N	NEUTRAL
AV	AUDIBLE AND VISUAL	NIC	NOT IN THIS CONTRACT
C	CONDUIT	OH	OVERHEAD
CKT	CIRCUIT	PH	PHASE
CP	COMPUTER	PNL	PANELBOARD
EMCS	EMERGENCY MONITORING AND CONTROL SYSTEM	PVC	POLYVINYL CHLORIDE
EMT	ELECTRICAL METALIC TUBING	REA	RURAL ELECTRIFICATION ADMINISTRATION
EP	EXPLOSION PROOF	REQ'D	REQUIRED
EWC	ELECTRIC WATER COOLER	RM	ROOM
F	FIXED TEMPERATURE	SPARE	SPARE BREAKER OR DEVICE
FACP	FIRE ALARM CONTROL PANEL	SPECS	CONTRACT SPECIFICATIONS
EX	EXISTING	SWBD	SWITCHBOARD
FT	FEET	TB	TELEPHONE BACKBOARD
GFI	GROUND FAULT INTERRUPTER	UL	UNDERWRITERS LABORATORIES
GND	GROUND	UON	UNLESS OTHERWISE NOTED
GRC	GALVANIZED RIGID STEEL CONDUIT	V	VOLTS
HPS	HIGH PRESSURE SODIUM	VA	VOLTS-AMPERES
HD	HEAVY DUTY	W	WATTS
K	KEYED	WP	WEATHERPROOF
KV	KILOVOLTS	+	USED WITH A NUMERAL, WHICH INDICATES HEIGHT OF ITEM IN INCHES AFF LEVEL
KVA	KILOVOLT AMPERES	1/C	SINGLE CONDUCTOR CABLE
KVAR	KILOVOLT AMPS REACTIVE	3/C	THREE CONDUCTOR CABLE

NOTES

LEGEND NOTES

1. BRANCH CIRCUIT NUMBERS MAY BE SHOWN NEXT TO SYMBOLS IN MULTIWIRE CIRCUITS.
2. SYMBOL ORIENTATION DOES NOT IMPLY DEVICE OR EQUIPMENT ORIENTATION UNLESS NOTED AS SUCH. SEE REFLECTED CEILING PLANS FOR LIGHT FIXTURE POSITIONS AND ORIENTATIONS.
3. SYMBOL SIZE DOES NOT IMPLY EQUIPMENT SIZE, UON
4. LOWER CASE LETTER IN POSITION "X" INDICATES FIXTURES CONTROLLED BY SAME LETTERED SWITCH.

GENERAL NOTES (APPLICABLE TO ALL SHEETS)

1. ALL WORK SHALL BE COORDINATED WITH THE OTHER TRADES BEFORE INSTALLATION. MATERIALS INSTALLED IN AN ARBITRARY MANNER OR CREATES AN UNFAIR CONDITION OR HARDSHIP FOR ANOTHER TRADE WILL NOT BE ACCEPTED. CONTRACTOR SHALL VERIFY PHYSICAL CHARACTERISTICS, VOLTAGE, LOAD, AND WIRING REQUIREMENTS FOR ALL EQUIPMENT PRIOR TO ROUGH-IN.
2. ALL MATERIALS PROVIDED FOR CONSTRUCTION SHALL BE UL LISTED AND NEW, UNLESS OTHERWISE NOTED (UON).
3. ALL WORK PERFORMED SHALL BE BY A LICENSED ELECTRICIAN.
4. ALL PENETRATIONS THROUGH WALL, FLOOR, OR CEILING ASSEMBLIES SHALL BE SEALED WITH SEALANT APPROVED FOR THE APPLICATION FOR WHICH IT IS BEING USED. FIRE STOP SHALL BE PROVIDED AT ALL LOCATIONS WHERE ELECTRICAL EQUIPMENT OR SYSTEMS PENETRATE FIRE RATED WALLS. SEE ARCHITECTURAL PLANS FOR RATED WALL LOCATIONS.
5. EQUIPMENT INTERRUPTING CAPACITIES SPECIFIED IN THE CONTRACT DOCUMENTS ARE BASED UPON EQUIPMENT CHARACTERISTICS AND IMPEDANCES. THE CONTRACTOR SHALL INCREASE THE INTERRUPTING CAPACITIES OF ALL ITEMS ON THE LOAD SIDE OF THE DEVIANT EQUIPMENT IN DIRECT PROPORTION TO THE CHANGED CHARACTERISTICS. INTERRUPTING CAPACITIES SHALL NOT BE REDUCED TO VALUES LESS THAN THOSE REQUIRED BY THE CONTRACT DOCUMENTS.
6. CONTROL WIRING FOR MECHANICAL EQUIPMENT IS NOT SHOWN ON THESE SHEETS (RE: MECHANICAL).
7. RISER AND ONE-LINE DIAGRAMS ARE MEANT TO SHOW ONLY ELECTRICAL RELATIONSHIPS, AND THEREFORE MAY NOT INCLUDE ALL REQUIRED EQUIPMENT, DEVICES, AND ACCESSORIES.
8. ALL CONDUCTOR SIZES ARE BASED ON THE USE OF COPPER CONDUCTORS, UNLESS OTHERWISE NOTED.
9. ALL BUSES SHALL BE COPPER, UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND AVOIDING ALL EXISTING OR NEW UNDERGROUND UTILITIES, EVEN IF NOT SHOWN, AT NO ADDITIONAL COST TO THE OWNER. COORDINATE UTILITY "SPOTTING" WITH CONTRACT OFFICER.
11. NOT ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE USED ON THIS PROJECT.
12. CONTRACTOR TO INSTALL PULL WIRE IN EMPTY RACEWAY AND INNER-DUCTS. USE #14 ZINC-COATED STEEL OR MONOFILAMENT PLASTIC LINE WITH NO LESS THAN 200LBS TENSILE STRENGTH. LEAVE AT LEAST 24-INCHES OF SLACK AT THE END OF PULL WIRE AND PROVIDE IDENTIFICATION FOR THE LOCATION OF OTHER END.
13. MULTIPLE LIGHTING SWITCHES INDICATED IN A ROOM WITH FLUORESCENT FIXTURES INDICATES MULTIPLE LEVEL SWITCHING. FIXTURES SHALL HAVE TWO BALLAST FOR INNER AND OUTER LAMP SWITCHING, UNLESS OTHERWISE NOTED.
14. MULTIPLE LIGHTING SWITCHES INDICATED IN A ROOM WITH LED FIXTURES INDICATES MULTIPLE LEVEL SWITCHING. UNLESS OTHERWISE NOTED.
15. IF DIMMER SWITCHES ARE INDICATED IN THE ROOM WITH FLUORESCENT FIXTURES, THE FLUORESCENT FIXTURES SHALL HAVE DIMMING BALLAST.
16. IF DIMMER SWITCHES ARE INDICATED IN THE ROOM WITH LED FIXTURES, THE LED FIXTURES SHALL HAVE DIMMING DRIVERS.
17. ALL EXISTING ELECTRICAL ITEMS SHALL REMAIN AND BE MAINTAINED IN SERVICE, UNLESS OTHERWISE NOTED.
18. VERIFY THAT THE WIRING BEING REMOVED SERVES ONLY THE ITEM SHOWN TO BE REMOVED ON THESE DRAWINGS. PROVIDE ALL MATERIALS AND LABOR REQUIRED TO RESTORE CONTINUITY TO CIRCUITS DISRUPTED BY DEMOLITION.
19. REMOVE EXISTING CEILING TILE AS REQUIRED FOR INSTALLATION OF ELECTRICAL WORK. REINSTALL TILES AS WORK IS COMPLETED. NOTIFY OWNER OF ANY BROKEN OR DAMAGED CEILING TILE BEFORE PERFORMING WORK. ALL DAMAGED AND BROKEN CEILING TILES CAUSED BY CONTRACTOR'S PERSONNEL SHALL BE REPLACED AT NOT ADDITIONAL COST TO OWNER.
20. REMOVE ALL EXISTING UNUSED WIRING, CONDUIT, BOXES, DEVICES, ETC. UNCOVERED DURING DEMOLITION.

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STATE OF TEXAS
ZACHARY MARK KORENAK
124063
LICENSED
PROFESSIONAL ENGINEER
12-July-18

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433RD CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

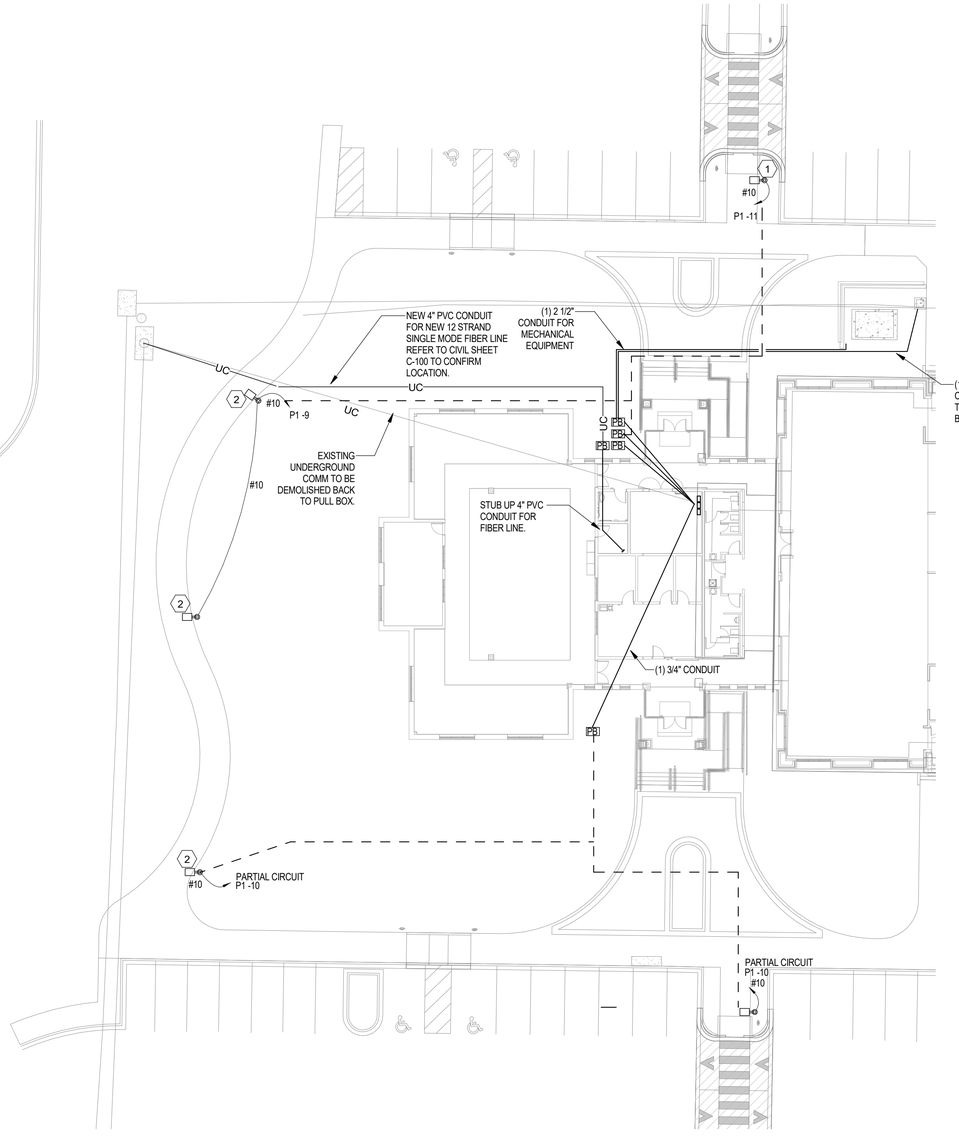
Designed by: S. HUDSON
Drawn by: S. HUDSON
Reviewed by: Z. KORENAK
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ELECTRICAL LEGEND AND NOTES
Date: 12 JUL 2018

SEQ.	SHEET	OF
	E-001	

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



GENERAL NOTES:

1. TWO EXISTING LIGHT POLES IN NEW BUILDING FOOT PRINT. REFER TO CIVIL SHEET C-100 FOR LOCATION. DEMOLISH COMPLETELY BACK TO SOURCE. RETURN MATERIALS TO GOVERNMENT.

(X) KEYED NOTES:

1. FOR EXISTING LIGHT POLE. DEMOLISH COMPLETELY BACK TO SOURCE. RETURN MATERIALS TO GOVERNMENT. NEW POLE WILL BE IN SAME LOCATION.
2. INCLUDE IN ALT #4.

1 SITE PLAN
1" = 20'-0"

PLAN NORTH

40' 20' 0 40'
SCALE: 1" = 20'

STATE OF TEXAS
ZACHARY MARK KORENAK
124063
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PROFESSIONAL ENGINEER
12-July-18

Symbol	Description	Date	Appr

REVISIONS

Designed by:	Drawn by:	Reviewed by:	Submitted by:
S. HUDSON	S. HUDSON	Z. KORENAK	B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: SITE PLAN
Date: 12 JUL 2018

SEQ.	SHEET	OF
	ES101	

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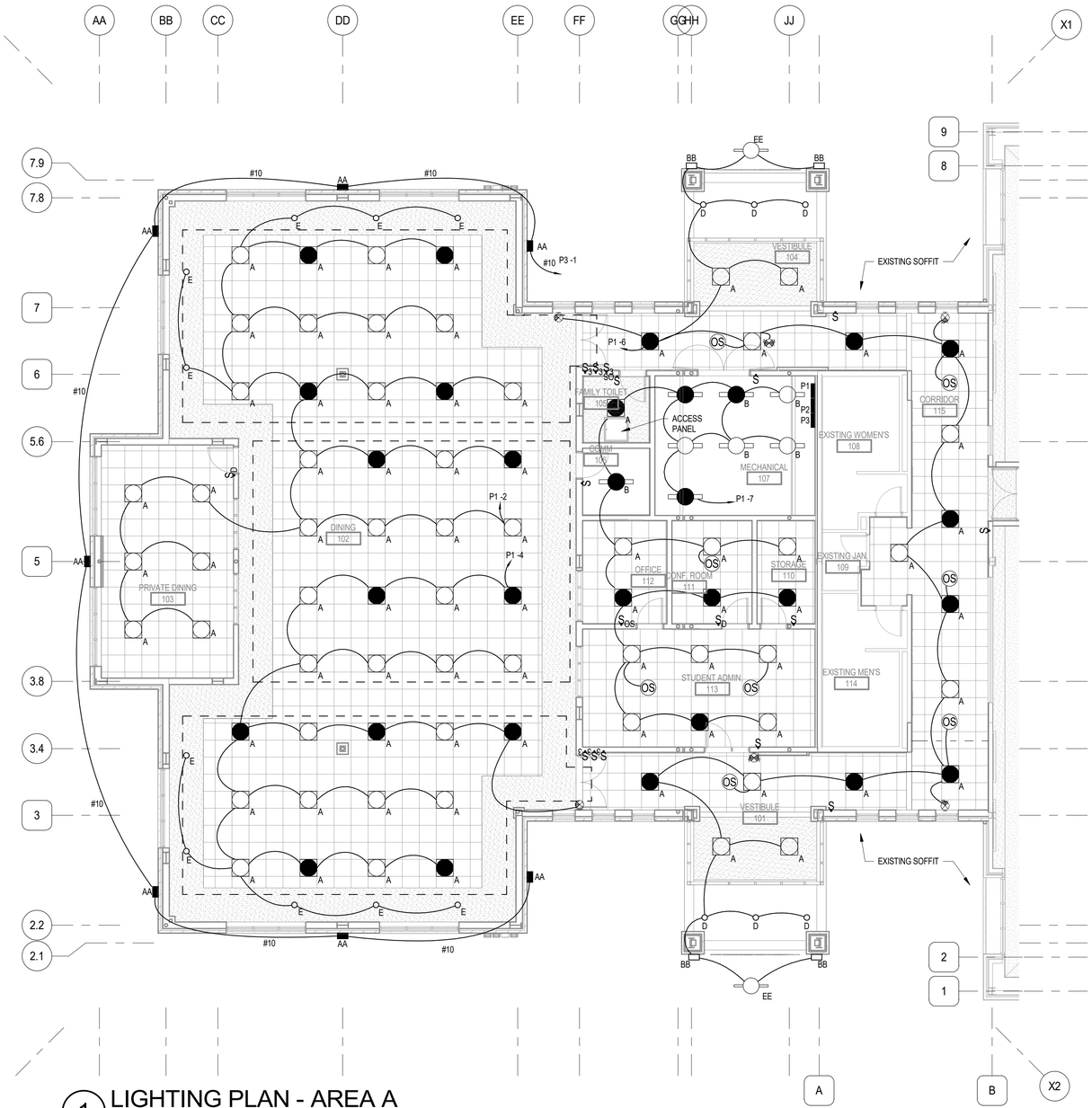
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



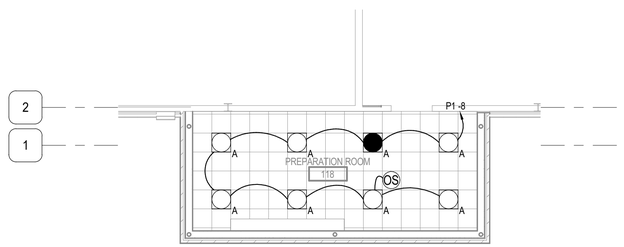
1 LIGHTING PLAN - AREA A
1/8" = 1'-0"

GENERAL NOTES:

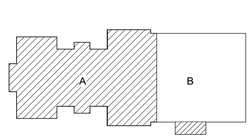
1. DASHED LINES INDICATE SWITCHING.

LIGHTING FIXTURE SCHEDULE

Type Mark	Manufacturer	Model	Lamp	Mounting
A	LITHONIA	EPANL-22-34L-40K-PS1055CP (E10WCP) FMC BRKT	LED	RECESSED
AA	LITHONIA	DSXW1 LED-10C-530-40K-T2M-MVOLT-(ELCW)	LED	WALL @ 10' TO BOTTOM OF FIXTURE
B	LITHONIA	Z1LD-L48-SMR-5000LM-FST-MVOLT-40K-80CRI-(E10WLCP)	LED	SURFACE
BB	U.S. ARCHITECTUAL LIGHTING	LAS5562/16LED-FF-NW-RAL-9005-T-277V	LED	WALL @ 8' TO BOTTOM OF FIXTURE
D	LITHONIA	LDN6-40/-15-L06-AR-LD-MVOLT-EL-WL	LED	RECESSED
E	USAI LIGHTING	LNRP3-9014-M2-10-10-G2-10-40KS-277V-DIML2	LED	SUSPENDED AT 7' TO BOTTOM OF FIXTURE
EE	MODA	MGE-HO-S1-S-DC-4-TBD-40	LED	SOFIT
LP	LITHONIA	DSX2 LED-P4-40K-T5W-MVOLT-RPA-DDBXD-DLL127F 1.5 JU-	LED	RSA-30'-6G-PT-DDBXD POLE
X	LITHONIA	EDG-1-R-(EL)	LED	WALL



2 LIGHTING PLAN - ALT #1
1/8" = 1'-0"



KEY PLAN

PLAN NORTH

8' 4' 0 8'

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

ZACHARY MARK KORENAK
124063
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
12-July-18

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Symbol	Description	Date	Appr.

REVISIONS

Designed by: S. HUDSON
Drawn by: S. HUDSON
Reviewed by: Z. KORENAK
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: LIGHTING PLAN

Date: 12 JUL 2018

SEQ.	SHEET	OF
	EL101	

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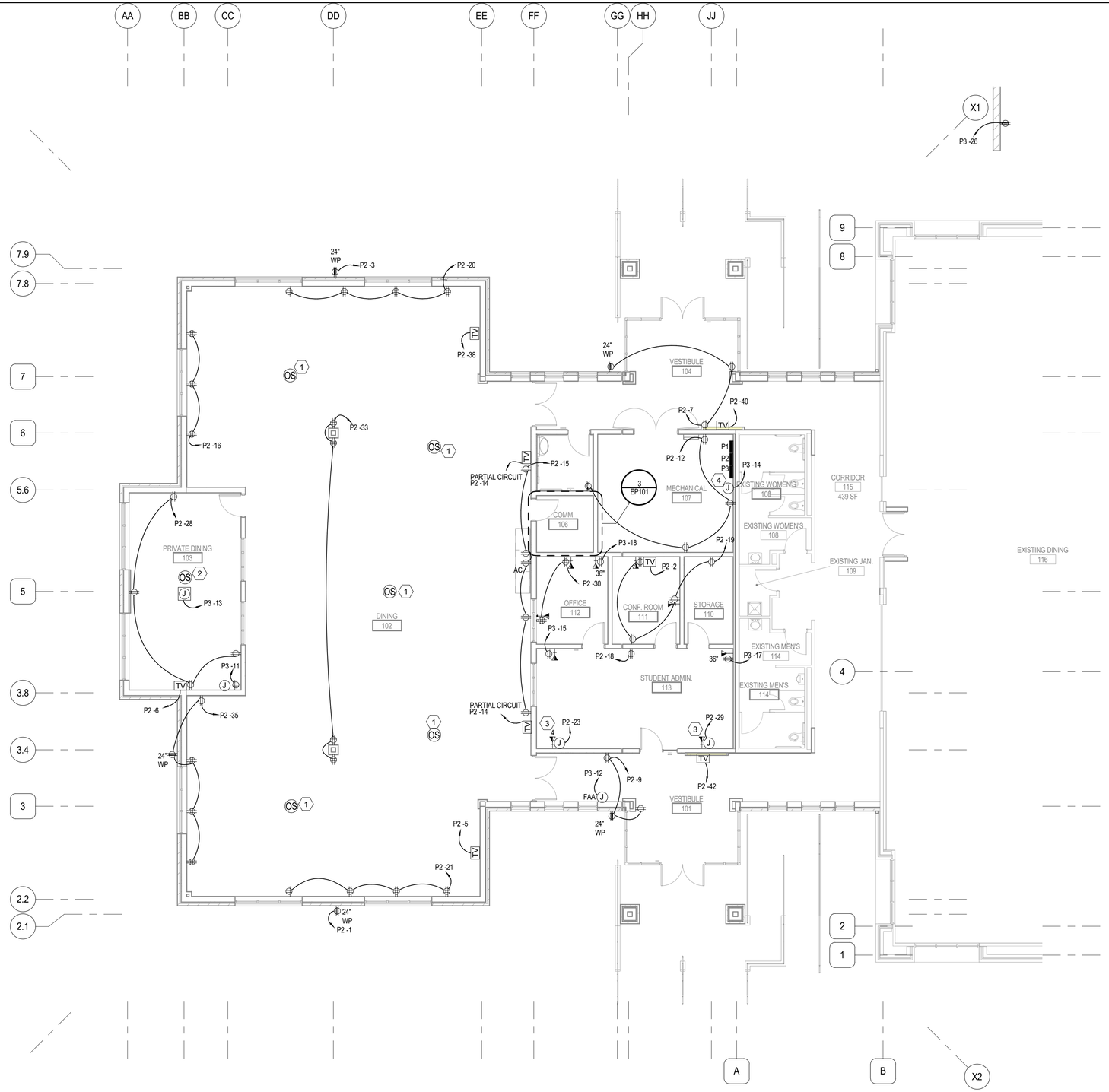
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



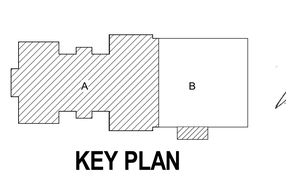
1 POWER/COMM PLAN - AREA A
1/8" = 1'-0"

X KEYED NOTES:

1. 100% OF RECEPTACLES IN THIS ROOM TO BE SWITCHED BY OCCUPANCY SENSORS.
2. ALL RECEPTACLES EXCEPT FOR AV CABINET TO BE SWITCHED BY OCCUPANCY SENSOR.
3. PROVIDE JUNCTION BOX COMM TP PASS THROUGH TO FURNITURE.
4. COORDINATE JUNCTION BOX WITH DDC CONTROLS. REFER TO MECHANICAL SHEET M-401 DETAIL 1.

2 POWER PLAN - ALT #1
1/8" = 1'-0"

3 ENLARGED PLAN - COMM ROOM
1/4" = 1'-0"



KEY PLAN

PLAN NORTH

8' 4' 0 8'
SCALE: 1/8" = 1'-0"

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

STATE OF TEXAS
ZACHARY MARK KORENAK
124063
LICENSED
PROFESSIONAL ENGINEER
12-July-18

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Symbol	Description	Date	Appr

REVISIONS

Designed by: S. HUDSON
Drawn by: S. HUDSON
Reviewed by: Z. KORENAK
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: POWER PLAN

Date: 12 JUL 2018

SEQ.	SHEET	OF
	EP101	

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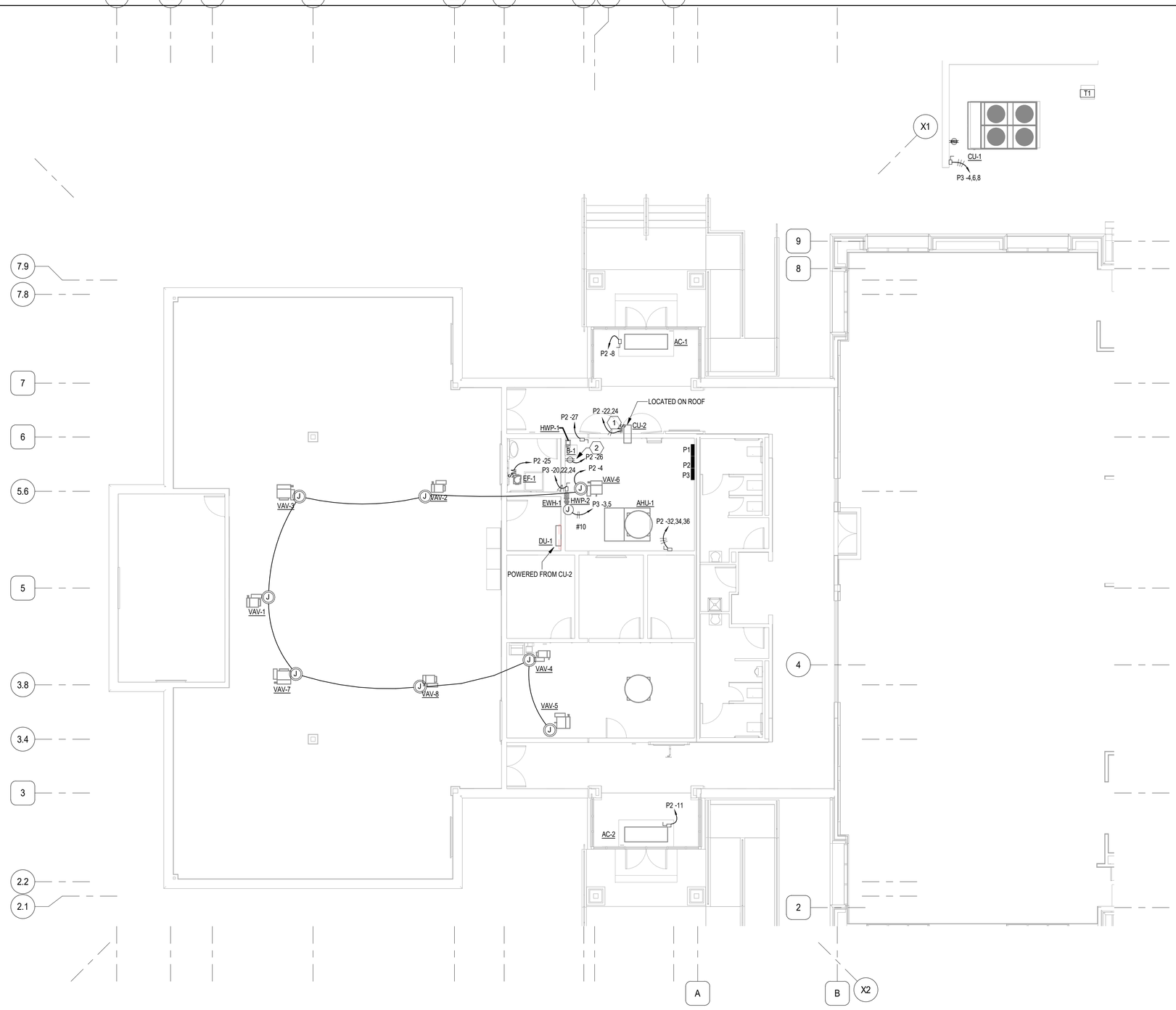
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 MECHANICAL POWER PLAN - FIRST FLOOR

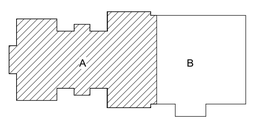
1/8" = 1'-0"

(X) KEYED NOTES:

1. SWITCH SHALL BE LOCATED WITHIN SIGHT OF CU-2.
2. COORDINATE RECEPTACLE TO BE ADJACENT OF BOILER B-1. REFER TO DETAIL 1 OF MECHANICAL SHEET M-401

MECHANICAL POWER SCHEDULE

Type	Electrical Data	Wire Size	Conduit Size	Disconnect Size	Panel	Circuit Number	Notes
AC-1	120 V/1-2520 VA	#10, #10G	3/4"	30 A	P2	8	
AC-2	120 V/1-2520 VA	#10, #10G	3/4"	30 A	P2	11	
AHU-1	208 V/3-13329 VA	#8, #8G	3/4"	60 A	P2	32,34,36	
CU-1	208 V/3-43231 VA	#1/0, #6G	1 1/2"	200 A	P3	4,6,8	
CU-2	208 V/2-245 VA	#10, #10G	3/4"		P2	22,24	
EF-1	120 V/1-600 VA	#10, #10G	3/4"		P2	25	
HWP-1	120 V/1-1392 VA	#12, #12G	3/4"	30 A	P2	27	
HWP-2	208 V/3-5944 VA	#12, #12G	3/4"	30 A	P3	20,22,24	



KEY PLAN

PLAN NORTH

8' 4' 0 8'

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

STATE OF TEXAS
ZACHARY MARK KORENAK
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12-July-18

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17th CIVIL ENGINEER SQUADRON
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Symbol	Description	Date	Appr

REVISIONS

Symbol	Description	Date	Appr

Designed by: S. HUDSON
Drawn by: S. HUDSON
Reviewed by: Z. KORENAK
Submitted by: B. McCOMBS

PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000

SHEET TITLE: MECHANICAL POWER PLAN

Date: 12 JUL 2018

SEQ.	SHEET	OF
	EP102	

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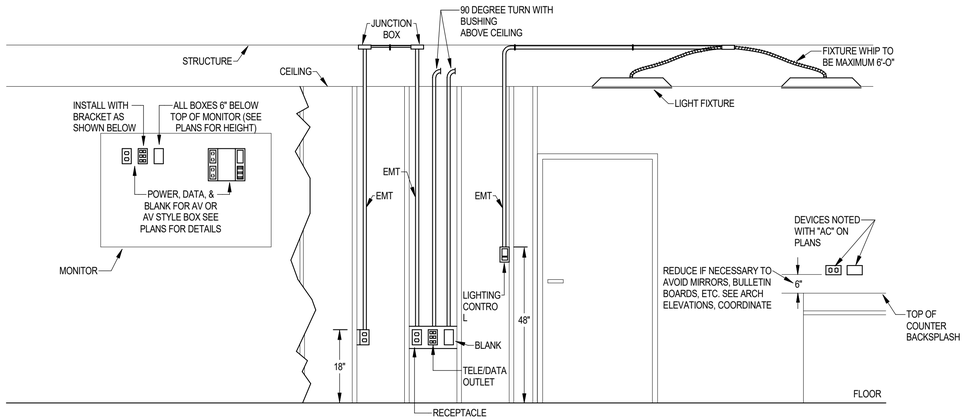
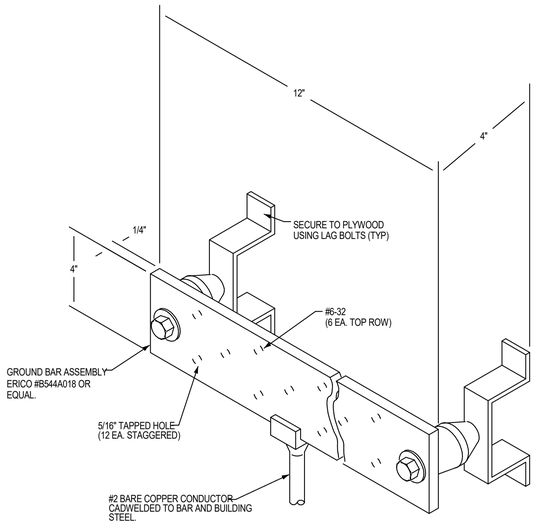
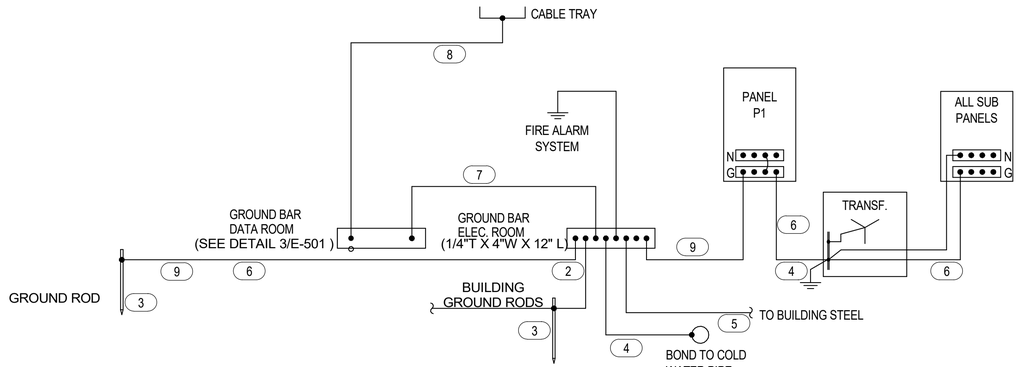
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE: #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING: #F-2268 EXPIRES DECEMBER 31, 2018



1 TYPICAL INSTALLATION/ADA DETAIL
NOT TO SCALE

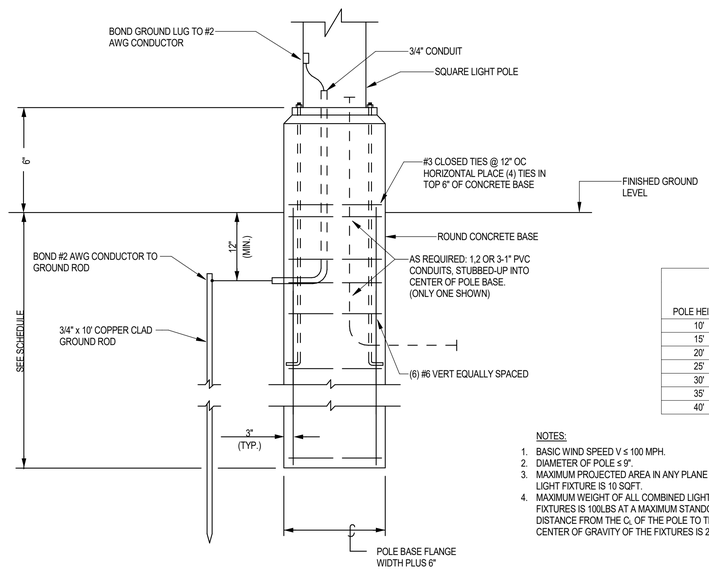


3 GROUND BAR DETAIL
NOT TO SCALE



1. GROUNDING SYSTEM SHALL BE INSTALLED IAW WITH NEC 250.50 REQUIREMENTS.
2. SIZE GROUNDING ELECTRODE IAW NEC 250.66.
3. PROVIDE 3/4" x 10' GROUND ROD(S).
4. SIZE GROUNDING ELECTRODE IAW NEC 250.66(A).
5. SIZE GROUNDING ELECTRODE IAW NEC 250.66(B).
6. SIZE GROUNDING ELECTRODE IAW NEW 250.122.
7. TELECOMMUNICATIONS GROUNDING ELECTRODE SIZE SHALL BE MINIMUM #6 AWG. CU. & SHOULD BE SIZED AT 2KCMIL PER LINEAR FOOT OF CONDUCTOR UP TO A MAXIMUM SIZE OF #3/0 AWG CU.
8. WHERE GROUNDING ELECTRODE LENGTH DOES NOT EXCEED 100-FEET, A MINIMUM OF #6 AWG CU IS SUFFICIENT FOR ALL METAL SURFACES WITHIN THE TELECOMMUNICATIONS ENVIRONMENT. SIZE PROVIDED SHALL RESULT IN NO MORE THAN 40-VOLTS CAN BE PRESENT ALONG THE ENTIRE LENGTH OF THE SYSTEM.

2 GROUNDING SCHEMATIC
NOT TO SCALE



POLE HEIGHT	POLE EMBEDMENT BELOW GRADE	
	FOR TOP OF BASE FLUSH TO 6" ABOVE FINISH GRADE	FOR TOP OF BASE 6" TO 36" ABOVE FINISH GRADE
10'	5'	5'-6"
15'	6'	6'-6"
20'	7'	7'
25'	7'-6"	8'
30'	8'	8'-6"
35'	8'-6"	9'
40'	9'	9-6"

NOTES:
1. BASIC WIND SPEED V ≤ 100 MPH.
2. DIAMETER OF POLE ≤ 9".
3. MAXIMUM PROJECTED AREA IN ANY PLANE OF THE LIGHT FIXTURE IS 10 SQFT.
4. MAXIMUM WEIGHT OF ALL COMBINED LIGHT FIXTURES IS 100LBS AT A MAXIMUM STANDOFF DISTANCE FROM THE C_L OF THE POLE TO THE CENTER OF GRAVITY OF THE FIXTURES IS 24".

4 LIGHT POLE BASE DETAIL
NOT TO SCALE

STATE OF TEXAS
ZACHARY MARK KORENAK
124063
LICENSED
PROFESSIONAL ENGINEER
12-July-18

guernsey

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. HUDSON
Drawn by: S. HUDSON
Reviewed by: Z. KORENAK
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ELECTRICAL DETAILS
Date: 12 JUL 2018

SEQ. | SHEET | OF
E-501

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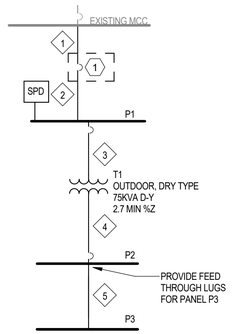

1 ONE-LINE
NOT TO SCALE

FEEDER SCHEDULE			
FEEDER	CONDUCTORS	CONDUIT	SERVING/REMARKS
1	3-#250, #2G	2 1/2"	
2	3-#250, #2G	2 1/2"	
3	3-#2/0, #6G	2"	
4	3-#500, #1/0G	4"	
5	3-#500, #1/0G	3"	

KEYED NOTES:

1. EXISTING MCC BUS TAP AND 250A ENCLOSED BREAKER MOUNTED WITHIN 10' OF MCC.

Branch Panel: P1

Location:
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 20000
Mains Type: COPPER
Mains Rating: 250 A
MCB Rating: 250 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	T1	175 A	3	33103	961					1	20 A	NORTH DINNING/PRIVATE DINNING LIGHTS	2
3	--	--	--			33509	768			1	20 A	SOUTH DINNING LIGHTS	4
5	--	--	--					35437	773	1	20 A	CORRIDOR/ENTRY LIGHTING	6
7	MECHANICAL/STUDENT ADMIN LIGHTING	20 A	1	693	264					1	20 A	PREPERATION ROOM LIGHTS	8
9	EXTERIOR LIGHT POLE	20 A	1			642	642			1	20 A	EXTERIOR LIGHT POLE	10
11	EXTERIOR LIGHT POLE	20 A	1					321	0	1	20 A	SPARE	12
13	SPARE	20 A	1	0	0					1	20 A	SPARE	14
15	SPARE	20 A	1			0	0			1	20 A	SPARE	16
17	SPARE	20 A	1					0	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					--	--	SPACE	20
21	SPACE	--	--			0	0			--	--	SPACE	22
23	SPACE	--	--					0	0	--	--	SPACE	24
25	SPACE	--	--	0	0					--	--	SPACE	26
27	SPACE	--	--			0	0			--	--	SPACE	28
29	SPACE	--	--					0	0	--	--	SPACE	30
31	SPACE	--	--	0	0					--	--	SPACE	32
33	SPACE	--	--			0	0			--	--	SPACE	34
35	SPACE	--	--					0	0	--	--	SPACE	36
37	SPACE	--	--	0	0					--	--	SPACE	38
39	SPACE	--	--			0	0			--	--	SPACE	40
41	SPACE	--	--					0	0	--	--	SPACE	42
		Total Load:		35021 VA		35561 VA		36531 VA					
		Total Amps:		126 A		129 A		132 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	8860 VA	100.00%	8860 VA		
LIGHTING 100%	5232 VA	100.00%	5232 VA	**Total Conn. Load:**	107113 VA
RECEPTACLES	23240 VA	71.51%	16620 VA	**Total Est. Demand:**	86537 VA
MOTOR 80%	69781 VA	80.00%	55825 VA	**Total Conn. Current:**	129 A
				Total Est. Demand Current:	104 A
				Future Est. Demand:	103845 VA

Notes:

Branch Panel: P2

Location:
Supply From: T1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10000
Mains Type: COPPER
Mains Rating: 400 A
MCB Rating: 400 A

Notes:
PROVIDE FEED THROUGH LUGS FOR PANEL P3

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	SOUTH EXT RECEPTACLE	20 A	1	180	250					1	20 A	CONF. ROOM TV	2
3	NORTH EXT RECEPTACLE	20 A	1			180	120			1	20 A	VAV	4
5	DINNING ROOM TV SOUTH	20 A	1					250	250	1	20 A	PRIVATE DINNING TV	6
7	NORTH ENTRY RECEPTACLES	20 A	1	540	2520					1	30 A	AC-1	8
9	SOUTH ENTRY/EXTERIOR RECEPTACLES	20 A	1			540	150			1	20 A	FAA	10
11	AC-2	30 A	1					2520	720	1	20 A	MECHANICAL ROOM RECEPTACLES	12
13	SINK/WEST WALL PREP ROOM RECEPTACLES	20 A	1	360	500					1	20 A	TV BOXES EAST DINNING	14
15	EAST DINNING RECEPTACLES	20 A	1			900	1080			1	20 A	NW QUAD RECEPTACLE DINNING	16
17	SOUTH WALL PREP ROOM RECEPTACLES	20 A	1					720	180	1	20 A	RECEPTACLE STUDENT ADMIN	18
19	CONF. ROOM/STORAGE RECEPTACLES	20 A	1	720	1440					1	20 A	NORTH DINNING QUAD RECEPTACLES	20
21	SOUTH DINING RECEPTACLES	20 A	1			1440	123			2	15 A	CU-2	22
23	SYSTEMS FURNITURE STUDENT ADMIN	20 A	1					1800	123	--	--	--	24
25	EF-1	20 A	1	600	180					1	20 A	B-1 RECEPTACLE	26
27	HWP-1	20 A	1			1392	720			1	20 A	PRIVATE DINNING RECEPTACLES	28
29	SYSTEMS FURNITURE STUDENT ADMIN	20 A	1					1800	720	1	20 A	OFFICE 112 RECEPTACLES	30
31	3 DOOR FRIDGE	20 A	1	1500	4443					3	50 A	AH-1	32
33	QUAD RECEPTACLES DINNING	20 A	1			1440	4443			--	--	--	34
35	SW DINNING RECEPTACLES	20 A	1					1440	4443	--	--	--	36
37	SPARE	20 A	1	0	250					1	20 A	NORTH DINNING TV	38
39	SPARE	20 A	1			0	250			1	20 A	NORTH CORRIDOR TV	40
41	SPARE	20 A	1					0	250	1	20 A	SOUTH CORRIDOR TV	42
43	P3	400 A	3	19620	0					--	--	NA	44
45	--	--	--			20732	0			--	--	NA	46
47	--	--	--					20222	0	--	--	NA	48
		Total Load:		33103 VA		33509 VA		35437 VA					
		Total Amps:		276 A		280 A		296 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	8860 VA	100.00%	8860 VA		
LIGHTING 100%	168 VA	100.00%	168 VA	**Total Conn. Load:**	102049 VA
RECEPTACLES	23240 VA	71.51%	16620 VA	**Total Est. Demand:**	81473 VA
MOTOR 80%	69781 VA	80.00%	55825 VA	**Total Conn. Current:**	283 A
				Total Est. Demand Current:	226 A
				Future Est. Demand:	97768 VA

Notes:

Branch Panel: P3

Location:
Supply From: P2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10000
Mains Type: COPPER
Mains Rating: 400 A
MCB Rating: MLO

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EXTERIOR BUILDING LIGHTS	20 A	1	168	1800					1	20 A	DEDICATED PREP AREA RECEPTACLE	2
3	EWH-1	30 A	2			2080	14410			3	150 A	CU-1	4
5	--	--	--					2080	14410	--	--	--	6
7	COMM AV RECEPTACLE	20 A	1	400	14410					--	--	--	8
9	COMM RACK RECEPTACLE	20 A	1			400	180			1	20 A	COMM EAST WALL RECEPTACLE	10
11	AV PRIVITE DINNING QUAD RECEPTACLE	20 A	1					400	150	1	20 A	FAA	12
13	POWERED CONF. TABLE	20 A	1	500	180					1	20 A	DDC CONTROLS	14
15	STUDENT ADMIN LARGE PRINTER	20 A	1			1500	180			1	20 A	DEDICATED PREP AREA RECEPTACLE	16
17	STUDENT ADMIN EAST PRINTER	20 A	1					600	600	1	20 A	OFFICE PRINTER	18
19	SPARE	30 A	2	0	1981					3	30 A	HWP-2	20
21	--	--	--			0	1981			--	--	--	22
23	SPARE	20 A	1					0	1981	--	--	--	24
25	SPARE	20 A	1	0	180					1	20 A	RECEPTACLES	26
27	SPACE	--	--			0	0			3	30 A	SPARE	28
29	SPACE	--	--					0	0	--	--	--	30
31	SPACE	--	--	0	0					--	--	--	32
33	SPACE	--	--			0	0			--	--	SPACE	34
35	SPACE	--	--					0	0	--	--	SPACE	36
37	SPACE	--	--	0	0					--	--	SPACE	38
39	SPACE	--	--			0	0			--	--	SPACE	40
41	SPACE	--	--					0	0	--	--	SPACE	42
		Total Load:		19620 VA		20732 VA		20222 VA					
		Total Amps:		163 A		174 A		169 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	4990 VA	100.00%	4990 VA		
LIGHTING 100%	168 VA	100.00%	168 VA	**Total Conn. Load:**	60573 VA
RECEPTACLES	6240 VA	100.00%	6240 VA	**Total Est. Demand:**	50738 VA
MOTOR 80%	49175 VA	80.00%	39340 VA	**Total Conn. Current:**	168 A
				Total Est. Demand Current:	141 A

Notes:

guernsey

17th CIVIL ENGINEER SQUADRON
READY • WILLING • ABLE

Symbol	Description	Date	Appr

REVISIONS

Designed by: S. HUDSON
Drawn by: S. HUDSON
Reviewed by: Z. KORENAK
Submitted by: B. McCOMBS

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE: ONE-LINE AND SCHEDULES
Date: 12 JUL 2018

SEQ. | SHEET | OF
E-601

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