CHAFFEY COLLEGE

INTECH WELDING FACILITY

DSA A#: 04-124464
FILE #: 36-C1
9400 CHERRY AVENUE, FONTANA, CA 92335

CODE AND STANDARDS

APPLICABLE CODES

- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
- 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
- 2022 CALIFORNIA ELECTRICAL CODE (CEC) , PART 3, TITLE 24 CCR
- 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
- 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
- 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
- 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
- 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
- TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS

FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80

PROJECT SCOPE OF WORK

SCOPE OF WORK INCLUDES:

1. CONSTRUCTION OF A 4,200 SF ENGINEERED METAL WELDING SHOP BUILDING WITH A FACULTY OFFICE AND TWO (2) TOILET ROOMS
2. CONSTRUCTION OF AN OUTDOOR WELDING YARD AND COVERED/SCREENED SERVICE YARD & TRASH ENCLOSURE
3. CONSTRUCTION OF SITEWORK TO INCLUDE REVISIONS TO EXISTING PARKING AREA, SECURITY SCREEN WALLS, GARDEN SCREEN WALLS, GATES AND A PATH TO AN ENTRANCE AT THE RIGHT OF WAY.
4. ELECTRICAL UTILITY, WATER UTILITY, SEWER, AND GAS UTILITY TO SERVICE THE SHOP BUILDING

STATEMENT OF GENERAL CONFORMANCE

APPLICATION No.: 04-124464

FILE No. : 36-C1

THE DRAWINGS IDENTIFIED AS FOLLOWS:

[X] ALL DRAWING SHEETS INCLUDED IN THIS SET NOT BEARING MY STAMP AND SIGNATURE

[X] DRAWING SHEETS DENOTED IN THE SHEET INDEX AS FOLLOWS:

[X] DRAWING SHEETS INCLUDED UNDER THE FOLLOWING PC APPROVAL(S):

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND AUTHORIZED TO PREPARE SUCH DRAWINGS (PLANS) IN THIS STATE. THEY HAVE BEEN EXAMINED BY ME FOR:

1. DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATORS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
2. COORDINATION WITH MY DRAWINGS (PLANS) AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

PER TITLE 24, PART 1, SECTION 4-316(B): THIS STATEMENT OF GENERAL CONFORMANCE SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344 OF TITLE 24, PART 1.

SIGNATURE — DATE: 08/28/2025

MICHAEL STEPHENS | C 26450 | 05/ 31 /2027

PRINT NAME | LICENSE NUMBER | EXPIRATION DATE

PROJECT DIRECTORY

CLIENT:
NAME: CHAFFEY COMUNITY COLLEGE DISTRICT
ADDRESS: 16855 MERRILL AVE. FONTANA, CA 92335
PHONE: 909-652-6735
CONTACT: TROY AMENT
EMAIL: TROY.AMENT@CHAFFEY.EDU

CIVIL:
NAME: EPIC ENGINEERS
ADDRESS: 101 E REDLANDS BLVD, STE 146 REDLANDS, CA, 92373
PHONE: 951-692-5051
CONTACT: TROY MOLAUG
EMAIL: TROY@EPICRCE.COM

LANDSCAPE:
NAME: SILVER BAR STUDIO
ADDRESS: P.O BOX 5008-373, MARIPOSA, CA 95338
PHONE: 714-928-5107
CONTACT: CRAIG DUNCAN
EMAIL: CRAIG@SILVERBARDTUDIO.COM

ARCHITECT:
NAME: SGH ARCHITECTS
ADDRESS: 707 BROOKSIDE AVE REDLANDS, CA, 92373
PHONE: 909-578-6208
CONTACT: MICHAEL STEPHENS
EMAIL: MSTEPHENS@SGHARCH.COM

STRUCTURAL:
NAME: MIYAMOTO
ADDRESS: 1047 WEST SIXTH STREET, SUITE A ONTARIO, CA, 91762
PHONE: 626-664-0092
CONTACT: RICK BYRD
EMAIL: RBYRD@MIYAMOTOINTERNATIONAL.COM

MECHANICAL:
NAME: DCGA ENGINEERS
ADDRESS: 4750 EAST ONTARIO MILLS PARKWAY, ONTARIO, CA 91764
PHONE: 909-987-0017
CONTACT: TONY RAMIREZ
EMAIL: TONY.RAMIREZ@DCGAENGINEERS.COM

PLUMBING:
NAME: DCGA ENGINEERS
ADDRESS: 4750 EAST ONTARIO MILLS PARKWAY, ONTARIO, CA 91764
PHONE: 909-987-0017
CONTACT: TONY RAMIREZ
EMAIL: TONY.RAMIREZ@DCGAENGINEERS.COM

ELECTRICAL:
NAME: DCGA ENGINEERS
ADDRESS: 4750 EAST ONTARIO MILLS PARKWAY, ONTARIO, CA 91764
PHONE: 909-987-0017
CONTACT: TONY RAMIREZ
EMAIL: TONY.RAMIREZ@DCGAENGINEERS.COM

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TOTAL

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* FOR ALL DRAWINGS MARKED WITH AN ASTERISK, REFER TO "STATEMENT OF GENERAL CONFORMANCE" ON COVER SHEET G0.00

WELDING BOOTH DESIGN CRITERIA

WELDING BOOTH SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH ASCE 7 CHAPETER 15 AND WIND FORCES IN ACCORDANCE WITH ASCE 7. SEISMIC FORCE RESISTANCE IN ACCORDANCE WITH CHAPETR 15 IS DICTATED BY ASCE 7 SECTION 13.1.5 REGARDLESS OF WHETHER THE BOOTH FALLS BELOW THE 25% MASS THRESHOLD DEFINED IN ASCE7 SECTIONS 13.1.1 AND 15.3.1. IN THE ABSENCE OF A DEIFNED LATERAL FORCE RESISTING SYSTEM, THE BOOTH IS PERMITTED TO BE DESIGNED IN ACCORDANCE WITH THE DESIGNATION OF "ALL OTHER SELF-SUPPORT STRUCTURES" IN ASCE 7 TABLE 15.4-2(R=1.25).

CFC SECTION 3503 GENERAL REQUIREMENTS SHALL BE FOLLOWED FOR THIS BUILDING.

3503.1 GENERAL
HOT WORK CONDITIONS AND OPERATIONS SHALL COMPLY WITH THIS CHAPTER
3503.2 TEMPORARY AND FIXED HOT WORK AREAS.
TEMPORARY AND FIXED HOT WORK AREAS SHALL COMPLY WITH THIS SECTION.
3503.3 HOT WORK PROGRAM PERMIT.
HOT WORK PERMITS, ISSUED BY AN APPROVED RESPONSIBLE PERSON UNDER A HOT WORK PROJCRAM, SHALL BE AVAILABLE FOR REVIEW BY THE FIRE CODE FFICIAL AT THE TIME THE WORK IS CONDUCTED AND FOR 48 HOURS AFTER WORK IS COMPLETE.
3503.3 QUALIFICATIONS OF OPERATORS.
A PERMIT FOR HOT WORK OPERATIOSN SHALL NOT BE ISSUED UNLESS THE INDIVIDULAS IN CHARGE OF PERFORMING SUCH OPERATIONS ARE CAPABLE OF PERFORMING SUCH OPERATIONS SAFELY. DEMOSTRATION OF A WORKING KNOWLEDGE OF THE PROVISIONS OF THIS CHAPTER SHALL CONSTITUTE ACCEPTABLE EVIDENCE OF COMPLICANE WITH THIS REQUIREMENT.
3503.5 RECORDS
THE INDIVIDUAL RESPONSIBLE FOR THE HOT WORK AREA SHALL MAINTAIN "PREWORK CHECK" REPORTS IN ACCORDANCE WITH SECTION 3504.3.1 . SUCH REPORTS SHALL BE MAINTAINED ON THE PREMISES FOR NOT LESS THAN 48 HOURS AFTER WORK IS COMPLETE.
3503.6 SIGNAGE.
VISIBLE HAZARD IDENTIFICATIONS SIGNS SHALL BE PROVEDED WHERE REQUIRED BY CHAPTER 50. WHERE THE HOT WORK AREA IS OPEN TO PERSONS OTHER THAN THE OPERATOR OF THE HOT WORK EQUIPMENT, CONSPICUOUS SIGNS SHALL BE POSTED TO WARM OTHERS BEFORE THEY ENTER THE HOT WORK AREA. SUCH SIGNS SHALL BE DISPLAY THE FOLLWOING WARNING:
CAUTION
HOT WORK IN PROGRESS
STAY CLEAR

DSA REGULATIONS NOTES

1. ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR) PARTS 1 TO 6, 9, 11 AND 12.
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
3. ALL SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT (CCD) OR ADDENDA, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION SECTION 4-338, PART 1, TITLE 24, CCR. SUBSTITUTIONS SHALL BE FOR ANY MATERIAL, SYSTEM OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA.
4. A "DSA CERTIFIED" CLASS __1_ PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
5. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
6. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR).
7. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
8. A COPY OF CCR TITLE 24, PARTS 1-6, 9, 11 AND 12 SHALL BE KEPT ON SITE DURING CONSTRUCTION.
9. A COPY OF THE APPROVED DRAWINGS, SPECIFICATIONS, ADDENDUMS AND CONSTRUCTION CHANGE DOCUMENTS SHALL BE KEPT ON SITE DURING CONSTRUCTION.
10. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH CBC CHAPTER 33 AND CFC CHAPTER 33
11. THE CONTRACTOR SHALL PROVIDE CLEAN, SANITARY, TEMPORARY TOILET FACILITIES FOR THE CONSTRUCTION PERSONNEL. UNDER NO CIRCUMSTANCES SHALL CONSTRUCTION PERSONNEL BE ALLOWED TO UTILIZE THE PERMANENT SITE FACILITIES. ALL TEMPORARY FACILITIES SHALL BE REMOVED FROM THE SITE AT THE CONCLUSION OF CONSTRUCTION.

DEFERRED APPROVAL

THE FOLLOWING COMPONENTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR DEFERRED DSA APPROVAL:

1. WELDING BOOTH (SEE WELDING DESIGN CRITERIA)

NOTE: FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.

SITE SAFETY PLAN

A WRITTEN SITE SAFETY PLAN IN COMPLIANCE WITH CFC 3303.1.1 MUST BE PREPARED AND AVAILABLE ON SITE PRIOR TO COMMENCEMENT OF ANY MOBILIZATION, DEMOLITION AND/OR CONSTRUCTION.

A COMPLETED SITE SAFETY PLAN IS TO BE SUBMITTED TO DSA IN CONJUNCTION WITH THE INITIAL FILING OF FORM DSA 102-IC; CONSTRUCTION START NOTICE/INSPECTION CARD REQUEST, INCLUSIVE OF COMPLETING SECTION 3 OF THE FORM. FAILURE TO INCLUDE THE SSP WILL RESULT IN REJECTION OF THE DSA FORM 102-IC.

REFER TO DSA BULLITIN 24-05 FOR FURTHER INFORMATION.

CALIFORNIA ENERGY CODE

THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.

LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.

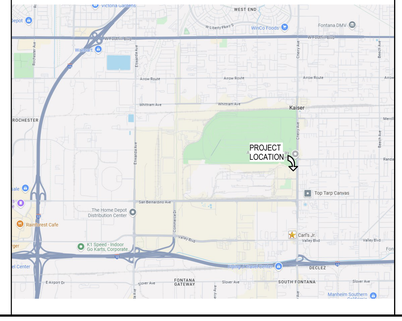
ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OF RECORD OR THE OWNER'S AGENT.

A LISTING OF CERTIFIED ATT CAN BE FOUND AT: HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE.

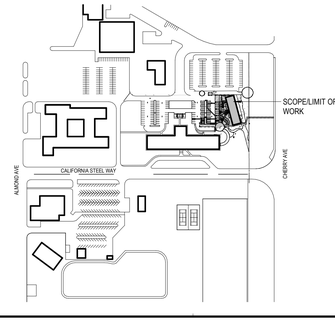
THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.

PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

VICINITY MAP



KEY PLAN



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

TITLE SHEET

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. C26450
REN. 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

G0.00

100% CD

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ABBREVIATIONS

A	
AB	ANCHOR BOLT
AC	ACOUSTICAL CEILING
AC	ASPHALT CONCRETE
ACC	ACCESSIBLE
ACCB	ACCESSIBLE BENCH
ACST	ACOUSTIC
ACT	ACOUSTIC CEILING TILE
AD	ACCESS DOOR
AD	AREA DRAIN
ADDN	ADDITION OR ADDITIONAL
ADJ	ADJUSTABLE
ADJT	ADJACENT
ADMIN	ADMINISTRATION
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
ANCH	ANCHOR
AP	ACCESS PANEL
APC	ACOUSTICAL PANEL CEILING
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
AV	AVERAGE
AWP	ACOUSTICAL WALL PANEL
B	
BCMU	BURNISHED CONCRETE MASONRY UNIT
BD	BOARD
BET	BETWEEN
BFP	BACKFLOW PREVENTER
BFR	BELOW FLOOR
BL	BUILDING LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BM	BENCH MARK
BOF	BOTTOM OF FOOTING
BOTT	BOTTOM
BRKT	BRACKET
BSMT	BASEMENT
BUR	BUILT UP ROOFING
C	
CBD	CHALKBOARD
CBC	CALIFORNIA BUILDING CODE
CD	CONDENSATE DRAIN
CER	CERAMIC
CG	CORNER GUARD
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLOS	CLOSET
CLR	CLEAR
CM	CEILING MOUNTED
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPOSITE
COMPR	COMPRESSIBLE
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR OR CONTRACT
CORR	CORRIDOR
CP	COVER PLATE
CPT	CARPET
CR	CORROSION RESISTANT
CS	COUNTERSINK
CSK	COUNTERSUNK
CSTJ	CONSTRUCTION JOINT
CSWK	CASEWORK
CT	CERAMIC TILE
CTR	CENTER
CW	COLD WATER
CY	CUBIC YARD
D	
D	DEPTH
DBL	DOUBLE
d	PENNY (AS NAIL 10D)
DEG	DEGREE
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DN	DOWN
DN	DOWNSPOUT NOZZLE
DO OR "	DITTO
DPFG	DAMPPROOFING
DR	DOOR
DR	DRAIN
DS	DOWNSPOUT
DSA	DEPARTMENT OF STATE ARCHITECT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	
E	EAST
EA	EACH
EB	EXPANSION BOLT
EE	EACH END
EEW	EMERGENCY EYEWASH
EEWS	EMERGENCY EYEWASH/SHOWER
EF	EACH FACE
EF	EXHAUST FAN
EH	ELECTRICAL HEATER
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAS	ELASTOMERIC
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENTR	ENTRANCE
ERF	EPOXY RESIN FLOORING
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ES	EXTRA STRONG
EST	ESTIMATE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXP	EXPOSED
EXT	EXTERIOR
F	
F	FIRECLINE
FA	FIRE ALARM
FAB	FABRICATED
FB	FACE BRICK
FC	FOOT CANDLE
FCMU	FLUTED CONCRETE MASONRY UNIT
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIG	FIGURE
FIN	FINISH
FIX	FIXTURE
FL	FLOOR
FLASH	FLASHING
FLEX	FLEXIBLE
FLG	FLOORING
FLM	FULL LENGTH MIRROR
FM	FIRE MAIN
FO	FACE OF
FO	FINISH OPENING
FOC	FACE OF CONCRETE / CMU
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOR	FUEL OIL RETURN
FOS	FACE OF STUD
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FOW	FACE OF WALL
FP	FIREPROOFING
F CONTINUED	
FR	FIRE RESISTIVE
FR	FRAME
FRP	FIBERGLASS REINFORCED PANEL
FS	FLOOR SINK
FSD	FIRE/SMOKE DAMPER
FSS	FOLDING SHOWER SEAT
FT	FEET (FOOT)
FTG	FOOTING
FUT	FUTURE
FVC	FIRE VALVE CABINET
FWC	FABRIC WALL COVERING
G	
G	GRILLE
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GCMU	GLAZED CONCRETE MASONRY UNIT
GD	GARBAGE DISPOSAL
GEN	GENERAL
GEN	GENERATOR
GFA	GROSS FLOOR AREA
GFI	GROUND FAULT INTERRUPTER
GFRC	GLASS FIBER REINFORCED CONCRETE
GI	GALVANIZED IRON
GL	GLUE LAMINATED
GL	GLASS
GMU	GLASS MASONRY UNIT
GOVT	GOVERNMENT
GR	GUARD RAIL
GR	GRADE
GR	GRILLE
GRC	GLASS REINFORCED CONCRETE
GRGP	GLASS REINFORCED GYPSUM PLASTER
GRS	GALVANIZED RIGID STEEL
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	
H	HEIGHT
HB	HOSE BIB
HC	HOLLOW CORE
HD	HAND DRYER OR HAIR DRYER
HDBD	HARDBOARD
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HANDRAIL
HR	HOUR
HS	HEADSTUD
HSS	HOLLOW STRUCTURAL SECTION
HSTR	HIGH STRENGTH
HT	HEIGHT
HTR	HEATER
HW	DOMESTIC HOT WATER
I	
IAW	IN ACCORDANCE WITH
IC	INTERCOM
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IJ	ISOLATION JOINT
IN	INCH
INC	INCLUDE (ING)
INSUL	INSULATION
INT	INTERIOR
J	
JAN	JANITOR
JST	JOIST
JFB	JOINT FILLER BOARD
JT	JOINT
K	
KCJ	KEYED CONSTRUCTION JOINT
KCP	KEENE'S CEMENT PLASTER
KD	KNOCKDOWN
KH	KITCHEN HOOD
L	
L	ANGLE
LAM	LAMINATE(D)
LAV	LAVATORY
LB	POUND
LBR	LUMBER
LBS	POUNDS
LDG	LOADING
LF	LINEAR FOOT (FEET)
LG	LENGTH (LONG)
LIN	LINEAR
LINO	LINOLEUM
LKR	LOCKER
LH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONG	LONGITUDINAL
LOX	LIQUID OXYGEN
LS	LAWN SPRINKLER
LSC	LIFE SAFETY CODE
LT	LIGHT
LTG	LIGHTING
LV	LOUVER
LW	LONG WAY
M	
MAC	MACHINE
MAINT	MAINTENANCE
MAN	MANUAL
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MB	MOP BASIN
MBD	MARKER BOARD
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MFRG	MANUFACTURING
MH	MANHOLE
MH	MOP HOLDER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLDG	MOLDING
MLWK	MILLWORK
MO	MASONRY OPENING
MR	MIRROR
MR/S	MIRROR WITH SHELF
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUL	MULLION
MW	MARKER WALL
N	
N	NORTH
N/A	NOT APPLICABLE
NC	NURSE CALL
NEUT	NEUTRAL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O	
O to O	OUT TO OUT
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OD	OVERFLOW DRAIN
OF	OUTSIDE FACE
OVFL	OVERFLOW
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OPG	OPENING
OPP	OPPOSITE
OTCS	OPEN TO CEILING SPACE
OVHD	OVERHEAD
P	
P	PAINT
PA	PUBLIC ADDRESS
PAR	PARALLEL
PB	PARTICLE BOARD
PB	PULL BOX
PB	PUSH BUTTON
PC	PRECAST
PCD	PAPER CUP DISPENSER
PCF	POUNDS PER CUBIC FOOT
PCT	PORCELAIN CERAMIC TILE
PERF	PERFORATED
PERP	PERPENDICULAR
PIV	POST INDICATOR VALVE
PL	PLATE
PLAM	PLASTIC LAMINATE
P CONTINUED	
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POC	POINT OF CONNECTION
PORC	PORCELAIN
PR	PAIR
PREFAB	PREFABRICATED
PROJ	PROJECTION
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PLASTER TRAP
PT	POINT
PTD	PAPER TOWEL DISPENSER
PTD/R	COMBINATION TOWEL DISPENSER/RECEPTACLE
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PWR	POWER
Q	
QT	QUARRY TILE
QTR RND	QUARTER ROUND
R	
R	RADIUS
RA	RETURN AIR
RAD	RADIUS
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REG	REGISTER
REM	REMOVABLE
REQ(D)	REQUIRE(D)
RESIL	RESILIENT
RET	RETAINING (WALL)
REV	REVISIONS
RF	RUBBER FLOOR
RFM	RECESSED FLOOR MAT
RH	ROBE HOOK
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
S	
S	SINK
S	SANITARY SEWER
S	SOAP DISH
S	SOUTH
S	SPRINKLER LINE
SA	SUPPLY AIR
SAN	SANITARY WASTE
SC	SECURITY
SC	SOLID CORE
SC	SHOWER CURTAIN
SC	SPECIAL COATING
SCD	SEAT COVER DISPENSER
SCH	SHOWER CURTAIN HOOKS
SCHED	SCHEDULE
SCR	SHOWER CURTAIN ROD
SCT	STRUCTURAL CLAY TILE
SD	SOAP DISPENSER
SD	SMOKE DAMPER
SD	SMOKE DETECTOR
SD	STORM DRAIN
SEC	SECONDARY
SECT	SECTION
SECY	SECRETARY
SF	SQUARE FOOT
SF/CMU	SPLIT-FACED CONCRETE MASONRY UNIT
SGL	SINGLE
SH	SHOWER
SHEATH	SHEATHING
SHM	SECURITY HOLLOW METAL
SHT	SHEET
SIM	SIMILAR
SL	SHORT LEG
SLNT	SEALANT
SM	SHEET METAL
SM	SPRINKLER MAIN
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SPEC	SPECIFICATIONS
SPL	SPECIAL
SPL BLK	SPLASH BLOCK
SQ	SQUARE
SS	SERVICE SINK
SS	SOLID SURFACE
SST	STAINLESS STEEL
ST	STAIR
STAGD	STAGGERED
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL - STRUCTURE
SUBFL	SUBFLOOR
SURF	SURFACE
SUSP	SUSPENDED
SV	SHEET VINYL
SYM	SYMMETRICAL
T	
T	TEMPERED
T	THERMOSTAT
T & B	TOP & BOTTOM
T& G	TONGUE & GROOVE
T	TREAD
TA	TRANSFER AIR
TAN	TANGENT
TB	TOWEL BAR
TBD	TACK BOARD
TC	TEMPERATURE CONTROL
TC	TIME CLOCK
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPERED - TEMPORARY
TERR	TERRAZZO
TEXT	TEXTURED
TH	THRESHOLD
TH	TOWEL HOOK
THK	THICK(NESS)
TMR	TILT MIRROR UNIT
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOIL	TOILET
TOP	TOP OF PAVING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPV	TRAP PRIMER
TR	TRIP
TRANS	TRANSVERSE
TRD	TREAD
TT	TERRAZZO TILE
TTD	TOILET TISSUE DISPENSER
TV	TELEVISION / MONITOR
TW	TACK WALL
TYP	TYPICAL
U	
U	URINAL
UL	UNDERWRITERS LABORATORIES
UNEX	UNEXCAVATED
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
US	UTILITY SHELF
UTIL	UTILITY
V	
V	VENT
VAV	VARIABLE AIR VOLUME
VB	VAPOR BARRIER
VB	VINYL BASE
VCB	VENTED COVE BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VF	VINYL FLOOR
VP	VENEER PLASTER
VT	VINYL TILE
VTR	VENT THROUGH ROOF
VWC	VINYL WALLCOVERING
W	
W	WATER SERVICE
W	WIDE; WIDTH
W	WEST
W	WIDE FLANGE
W	WITH
W/O	WITHOUT
WC	WALL COVERING
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WD	WOOD
WDW	WINDOW
WF	WASH FOUNTAIN
WH	WALL HYDRANT
WH	WATER HEATER
WI	WROUGHT IRON
WNSCT	WAINSCOT
W CONTINUED	
WNSCT	WAINSCOT
WP	WEATHERPROOF
WR	WATER RESISTANT
WR	WASTE RECEPTACLE
WSP	WET STAND PIPE
WT	WEIGHT
WWF	WELDED WIRE FABRIC
X	
XFMR	TRANSFORMER
Y	
YD	YARD
YH	YARD HYDRANT
#	
&	AND
@	AT
i.e.	THAT IS
#	NUMBER

GLAZING ABBREVIATIONS:

CG	CLEAR FLOAT GLASS
CIG	CLEAR INSULATING GLASS
CTG	CLEAR TEMPERED FLOAT GLASS
CTIG	CLEAR TEMPERED INSULATING GLASS
FG	FIRE-RATED GLASS
LG	LAMINATED GLASS
LIG	LAMINATED INSULATING GLASS
PG	PATTERN GLASS
PIG	PATTERN INSULATING GLASS
SG	SPANDREL GLASS
SIG	SPANDREL INSULATING GLASS
TG	TINTED FLOAT GLASS
TIG	TINTED INSULATING GLASS
TTG	TINTED TEMPERED FLOAT GLASS
TTIG	TINTED TEMPERED INSULATING GLASS

GENERAL NOTES

CONSTRUCTION DOCUMENT NOTES:

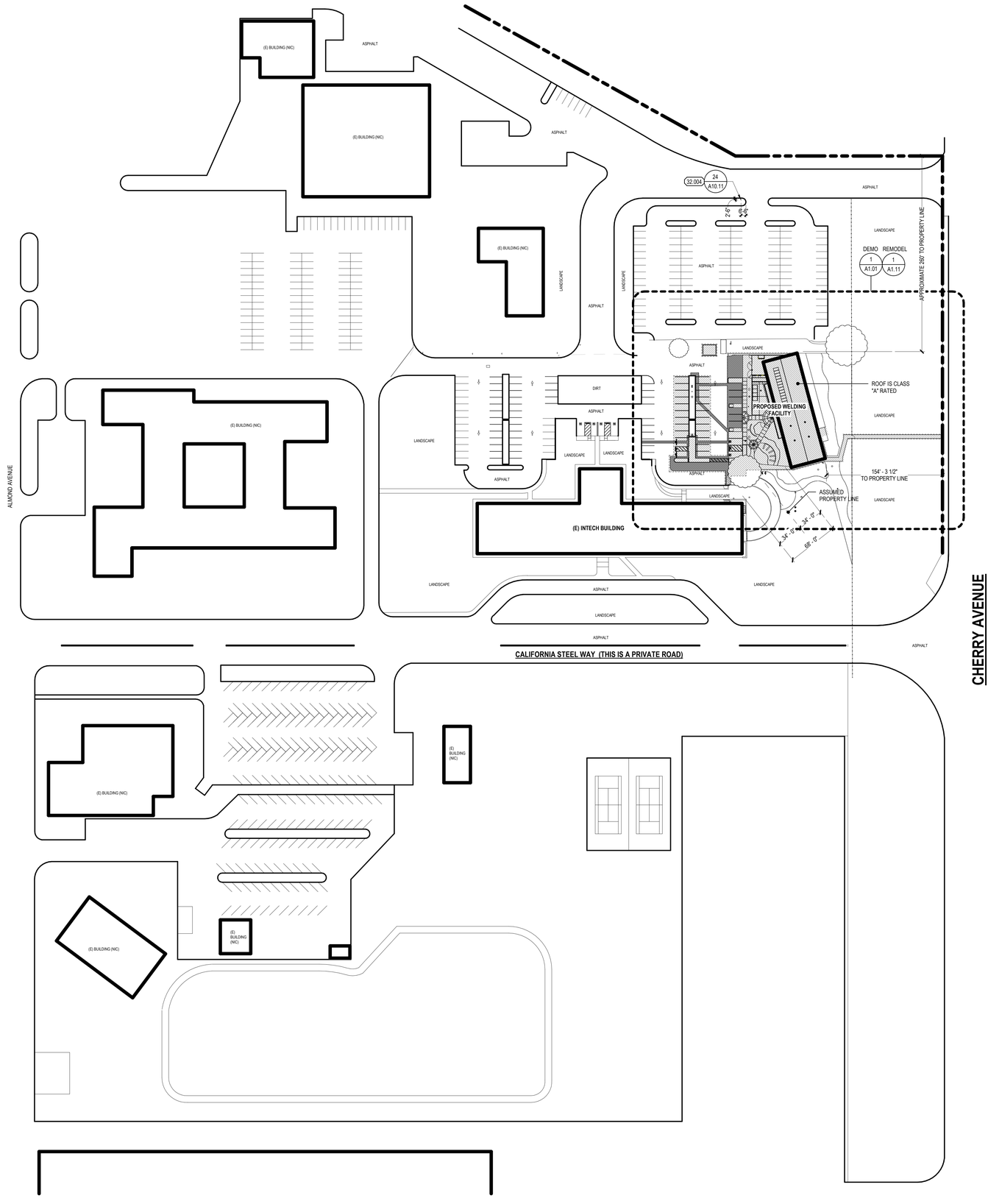
1. THE GENERAL CONTRACTOR SHALL CAREFULLY REVIEW AND COMPARE THE CONTRACT DOCUMENTS PRIOR TO CONSTRUCTION AND SHALL AT ONCE REPORT TO THE ARCHITECT ANY ERROR, INCONSISTENCY, OR OMISSION THE CONTRACTOR MAY DISCOVER. IF THE CONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WITHOUT PRIOR NOTICE TO THE ARCHITECT, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY, AND SHALL BEAR ALL COSTS ATTRIBUTABLE THERETO FOR CORRECTION OF THE WORK.
2. CONTRACTOR SHALL REVIEW CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS FOR ACCURACY AND CONSTRUCTABILITY.
3. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE SITE BEFORE STARTING ANY WORK AND REPORT FOR CLARIFICATION ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
4. THE CONSULTING ENGINEERS' DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. SHOULD THERE BE A DISCREPANCY BETWEEN THE ARCHITECTURAL DRAWINGS AND THE CONSULTING ENGINEERS' DRAWINGS, SUCH DISCREPANCY IS TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT CONTRACTORS EXPENSE.
5. NOTWITHSTANDING ANY OMISSIONS, IT SHALL BE THE SOLE DUTY AND RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL CONSTRUCTION DETAILS AND FABRICATE AND INSTALL SAID DESIGN IN ACCORDANCE WITH ACCEPTED BEST PRACTICES AND PROCEDURES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND COORDINATION WITH OTHER TRADES AND THEIR WORK FOR COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS.
7. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE ALL WORK WITH THE SUBCONTRACTORS. IF A PORTION OF WORK FOR A SPECIFIC TRADE APPEARS IN A SECTION OF THESE DOCUMENTS OTHER THAN THAT WHICH IS SPECIFIC TO THAT TRADE, IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE SAID TRADE OF SUCH WORK.
8. CONTRACTOR TO COORDINATE WITH N.I.C. EQUIPMENT CONTRACTOR(S) BEFORE STARTING WORK ADJACENT TO N.I.C. EQUIPMENT SHOWN ON DRAWINGS. VERIFY THAT ALL ITEMS (SUCH AS BELOW FLOOR PIPING AND ELECTRICAL CONDUITS, INSERTS, PIT AND PLATFORM, SIZES AND LOCATIONS, ETC.) HAVE BEEN PROVIDED AND INSTALLED AS REQUIRED FOR OPERATION OF THIS EQUIPMENT. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
9. VERIFY LOCATION AND SIZE OF OPENINGS, BLOCKING, INSERTS, AND EMBEDDED ITEMS ON APPLICABLE SHOP DRAWINGS BEFORE STARTING WORK.
10. CONTRACTOR SHALL COORDINATE WITH ALL EQUIPMENT MANUFACTURERS FOR EQUIPMENT ROUGH-IN REQUIREMENTS.
11. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF ALL OPENINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT WITH RESPECTIVE SUBCONTRACTORS.
12. THE GENERAL CONTRACTOR SHALL COORDINATE CUTOUTS FOR CASEWORK, MILLWORK, OR OTHER EQUIPMENT AS REQUIRED.
13. ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED, AND INDICATED IN THE CONTRACTORS BID.
14. THE USE OF THE WORD "PROVIDE" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN THAT SUCH SHALL BE FURNISHED, INSTALLED COMPLETE, CONNECTED AND TESTED FOR PROPER OPERATION WHERE SO REQUIRED.
15. PROVIDE ALL PERTINENT SHOP DRAWINGS FOR APPROVAL IN ADVANCE OF FABRICATION AND INSTALLATION ALLOWING SUFFICIENT TIME FOR REVIEW AND CORRECTIVE ACTIONS SHOULD IT BE REQUIRED. SUBMIT CUT SHEETS OF ALL FIXTURES, EQUIPMENT AND SAMPLES OF ALL FINISHES SPECIFIED FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
16. PRIOR TO SUBMITTAL OF BID, NOTIFY ARCHITECT IN WRITING, IF ANY SPECIFIED MATERIALS OR EQUIPMENT ARE EITHER UNAVAILABLE OR WILL CAUSE A DELAY IN THE CONSTRUCTION COMPLETION SCHEDULE.
17. ARCHITECT IS NOT RESPONSIBLE FOR THE ACCURACY OF INFORMATION CONTAINED IN OWNER SUPPLIED DOCUMENTS.
18. DO NOT SCALE DRAWINGS. IN CASE OF DISCREPANCIES, OBTAIN CLARIFICATION FROM THE ARCHITECT.
19. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS, CONTRACTOR TO NOTIFY ARCHITECT OF DISCREPANCIES.
20. DETAILS ARE NOT INTENDED TO SHOW METHOD AND MANNER OF ACCOMPLISHING WORK.
21. WHEN +/- SIGN OR V.I.F. ABBREVIATION IS ADJACENT TO A GIVEN DIMENSION, IT INDICATES THAT THE ACTUAL DIMENSION MIGHT VARY DUE TO EXISTING CONDITIONS. VERIFY DIMENSIONS BEFORE PROCEEDING WITH THE WORK; DISCREPANCIES BETWEEN THE NOTED DIMENSIONS AND ACTUAL DIMENSIONS ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

HAZARDOUS MATERIAL NOTES:

22. THE ARCHITECT ASSUMES NO RESPONSIBILITY RELATING TO ANY HAZARDOUS OR TOXIC MATERIALS, INCLUDING ASBESTOS, AND ASSUMES NO RESPONSIBILITY FOR VERIFYING ITS EXISTENCE OR REMOVAL. THE OWNER/TENANT SHALL TAKE ACTION FOR DIRECTLY CONTRACTING WITH A CONSULTANT OR SPECIALIST FOR SUCH, LICENSED BY THE STATE OF CALIFORNIA, SHOULD THOSE SERVICES BE REQUIRED ON THE PROJECT.
23. NO PRODUCTS CONTAINING ASBESTOS OR LEAD IN ANY FORM SHALL BE USED ON ANY PART OF THE WORK.

CONSTRUCTION NOTES:

24. MAKE NECESSARY PROVISIONS TO PROTECT EXISTING CONSTRUCTION AND BUILDING IMPROVEMENTS, CONCRETE SIDEWALKS CURBS, ETC., AND UPON COMPLETION OF WORK REPAIR ANY DAMAGE THAT MAY OCCUR DURING CONSTRUCTION. MAKE NECESSARY PROVISIONS TO INCLUDE TEMPORARY DUST TIGHT PARTITIONS TO PREVENT SPREAD OF DUST AND DIRT TO INHABITED AREAS OF THE EXISTING BUILDINGS AND PROTECT EXISTING FACILITIES ON AND ADJACENT TO THE SITE. VERIFY EQUIPMENT LOCATIONS AND REQUIREMENTS WITH CONSULTANT'S DRAWINGS AND COORDINATE WITH CONTRACT DOCUMENTS. REMOVE AND LEGALLY DISPOSE OF DEBRIS, RUBBISH, ETC., LEAVING AREA CLEAR AND BROOM CLEAN READY FOR WORK. ROUTE FOR RUBBISH DISPOSAL SHALL BE APPROVED BY OWNER.
25. NEITHER THE OWNER NOR THE ARCHITECT SHALL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES DURING SHORING AND BRACING, AND SHALL SOLELY BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH REGULATIONS, STANDARDS AND LAWS.
26. THE GENERAL CONTRACTOR AND SUBCONTRACTORS PERFORMING WORK ON THE PREMISES SHALL BE RESPONSIBLE FOR MAINTAINING AND SUPERVISING THEIR SAFETY PROGRAM, INCLUDING, BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF DEBRIS AND TOOLS WHICH MIGHT ENDANGER VISITORS, PATIENTS OR EMPLOYEES OF THE FACILITY. ALL ROADS AND WALKWAYS SHALL REMAIN UNOBSTRUCTED. WHEN NECESSARY, ALTERNATE ROUTES OF TRAFFIC CONTROL MUST BE MAINTAINED, SHOULD UNSAFE CONDITIONS OCCUR.
27. CONTRACTOR SHALL PROVIDE BARRICADES AROUND ALL NEW AND EXISTING OPENINGS WHERE REQUIRED OR NECESSARY FOR SAFETY.
28. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC., AS REQUIRED TO PROTECT THE PUBLIC DURING THE PERIOD OF CONSTRUCTION. CONSTRUCTION BARRICADE WALLS TO BE EQUAL TO RATING OF THE WALL REPLACED.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS CLEAN UP OF THE SITE OF ALL DEBRIS WHETHER CREATED BY HIS WORK OR THE FAILURE OF HIS SUB-CONTRACTORS TO CLEAN UP AFTER THEIR WORK.
30. THE CONTRACTOR SHALL MAINTAIN EQUIPMENT, MATERIALS AND WORK IN A NEAT, CLEAN, ORDERLY AND SAFE CONDITION AT ALL TIMES
31. CONTRACTOR SHALL KEEP SITE AND BUILDING CLEAN, HAZARD FREE AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH, ETC. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE
32. CONTRACTOR SHALL LEAVE WORK / PROJECT AREA IN A SECURE CONDITION DURING PERIOD OF THIS WORK WHEN WORKERS ARE NOT ON THE PROJECT SITE.
33. CONTRACTOR TO SCHEDULE CONSTRUCTION ACTIVITIES TO HAVE THE LEAST IMPACT ON EXISTING BUILDING FUNCTIONS. THIS INCLUDES RESTRICTING TYPICAL DEMOLITION AND CONSTRUCTION ACTIVITIES TO THE HOURS DESIGNATED BY THE OWNER. CERTAIN ACTIVITIES SUCH AS THE USE OF JACKHAMMERS ON EXISTING BUILDINGS WILL NEED TO BE SCHEDULED AT SPECIAL TIMES. CONTACT THE OWNER FOR SCHEDULING OF ALL ACTIVITIES.
34. THE GENERAL CONTRACTOR SHALL MAKE SPECIAL PROVISIONS FOR NOISE AND DUST CONTROL SO AS NOT DISRUPT EXISTING ADJACENT OCCUPIED AREA.
35. THE CONTRACTOR SHALL COOPERATE WITH OWNER AS REQUIRED TO MINIMIZE INTERFERENCE WITH AND DISRUPTION OF OWNER ACTIVITIES.
36. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING SITE ACCESS, STAGING AREAS, USE OF SITE, USE OF UTILITY SERVICES AND FACILITIES.
37. CONTRACTOR SHALL MAINTAIN FIRE LANES, PEDESTRIAN AND VEHICULAR ACCESS, FIRE PROTECTIVE DEVICES AND ALARMS DURING CONSTRUCTION.
38. DO NOT STORE MATERIALS ON ANY FLOOR OR ROOF IN EXCESS OF ALLOWABLE LOAD.
39. ALL EXITS MUST BE CONTINUOUS AND TERMINATE IN A PUBLIC WAY OR EXIT COURT LEADING TO A PUBLIC WAY OR AN APPROVED AREA OF REFUGE.
40. WHENEVER THE BUILDING IS OCCUPIED, EXIT SIGNS SHALL BE ILLUMINATED SO THAT THEY ARE CLEARLY VISIBLE.
41. PROVIDE PORTABLE FIRE EXTINGUISHERS AT EACH FIRE EXTINGUISHER CABINET AS SHOWN ON DRAWINGS. ADDITIONAL FIRE EXTINGUISHERS AS REQUIRED BY FIRE DEPARTMENT OR STATE FIRE MARSHALL FIELD INSPECTORS ARE N.I.C.
42. GENERAL CONTRACTOR IS TO MAKE EXACT DETERMINATIONS AS TO THE LOCATION OF ALL EXISTING UTILITIES. DO NOT BEGIN WORK UNTIL THIS DETERMINATION HAS BEEN MADE. CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGE CAUSE BY FAILURE TO LOCATE AND PROTECT UTILITIES.
43. PROVIDE RE-ROUTING OF EXISTING UTILITIES SERVING OCCUPIED AREAS AS REQUIRED TO MAINTAIN OPERATIONS.
44. SUPPLY TEMPORARY ELECTRICAL POWER TO THE JOB SITE FOR USE BY ALL CONSTRUCTION TRADES PRIOR TO CONNECTION OF THE SPECIFIED ELECTRICAL WORK.
45. NOTIFY OWNER AT LEAST SEVENTY-TWO HOURS PRIOR TO DISRUPTION OF UTILITIES.
46. PATCH SURFACES WHERE AFFECTED BY INSTALLATION OF NEW MECHANICAL, ELECTRICAL AND STRUCTURAL ITEMS. MATCH EXISTING ADJACENT SURFACES AND FINISHES EXCEPT WHERE OTHERWISE NOTED OR INDICATED.
47. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING AS REQUIRED TO COMPLETE THE WORK OR TO MAKE ITS PARTS FIT TOGETHER PROPERLY. PATCHING OF FINISHED WORK ALREADY INSTALLED AS A RESULT BY ERRORS, CHANGES OR OTHER REASONS IS ALSO THE CONTRACTOR'S RESPONSIBILITY. THE REFINISHED SURFACES SHALL MATCH THE ADJACENT SURFACES FOR COLOR, TEXTURE AND MATERIAL.
48. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER-DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE OR POST-TENSIONED) LOCATE THE PRESTRESSED TENDON BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.
49. PATCH AND REPAIR EXISTING FIRE-RATED ASSEMBLIES DAMAGED DURING DEMOLITION TO MAINTAIN RATED ASSEMBLY.
50. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND SHAFTS SHALL BE EQUIPPED WITH DAMPERS, SEALANTS, OR OTHER APPROPRIATE AND APPROVED UL LISTED ASSEMBLIES, MATERIALS AND METHODS SO AS TO MAINTAIN THAT RATING.
51. ALL OPENINGS AT WINDOWS, OPENINGS FOR UTILITY PIPING AND WIRING, ETC., WITHIN THE AREA OF WORK SHALL BE CAULKED AND SEALED.
52. PROVIDE BACKING FOR CASEWORK, TOILET ACCESSORIES, LOCKERS, ELECTRICAL PANELS, AND OTHER ANY WALL MOUNTED ITEMS AS INDICATED IN THE DRAWINGS.
53. PROVIDE ALL NECESSAR



ARCHITECTURAL SITE PLAN - OVERALL
1" = 60'-0" :SCALE (1)

KEYNOTES

	DESCRIPTION
32.004	DIRECTIONAL ACCESSIBLE PARKING SIGN

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SITE PLAN - CAMPUS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPENS
NO. 26450
REN: 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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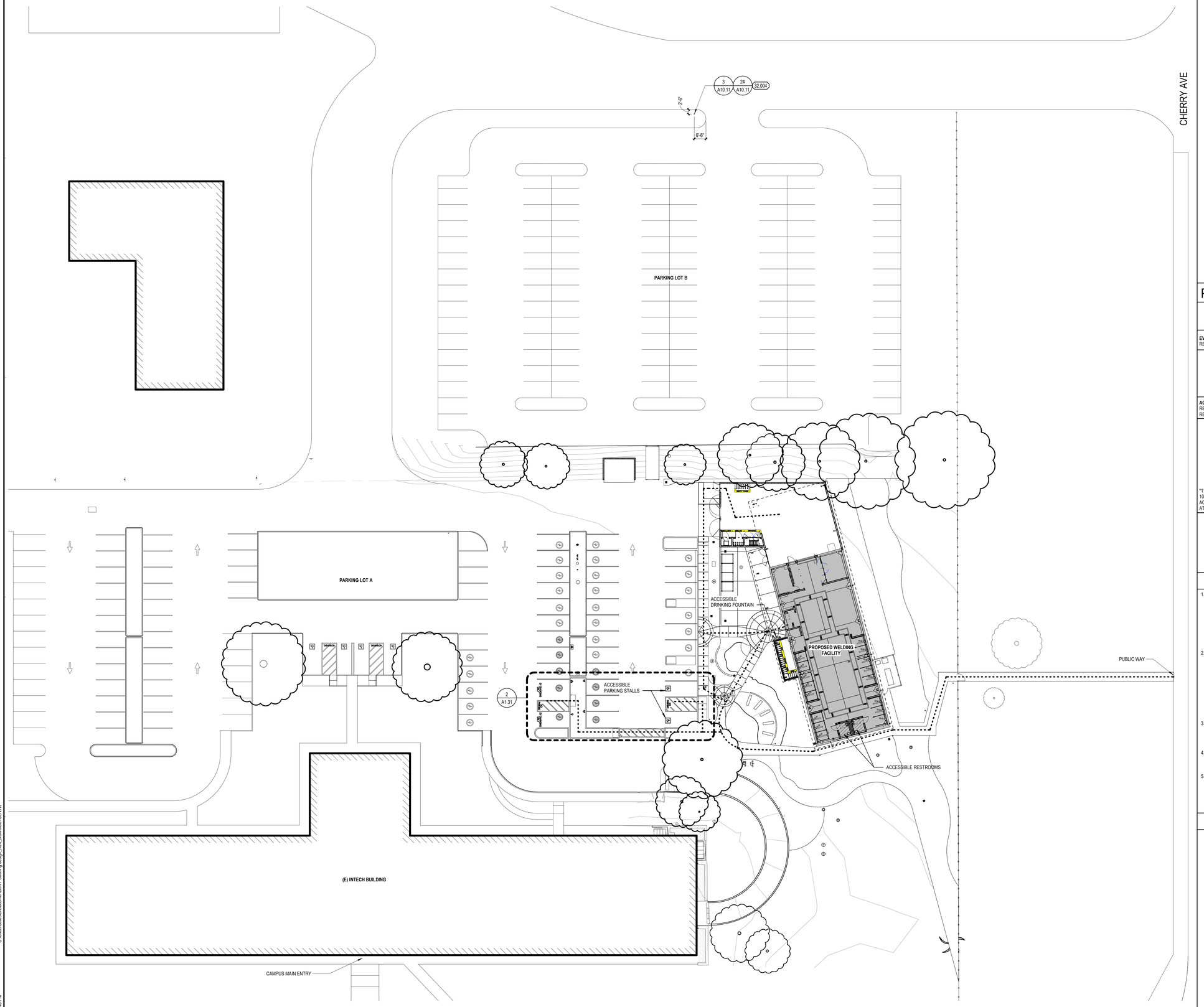
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

G1.10
100% CD

8/29/2025 1:10:42 PM C:\Users\kcarlet\Documents\WF Building design_B24_DCarlet.IVWEN.rvt



ACCESSIBILITY SITE PLAN
3/64" = 1'-0" SCALE
1

KEYNOTES

	DESCRIPTION
32.004	DIRECTIONAL ACCESSIBLE PARKING SIGN

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

PARKING/CHARGING SPACE TABULATION

TOTAL # OF PARKING SPACES PROVIDED (LOT A + LOT B): 200
- INCLUDES EV CAPABLE SPACES

TOTAL # OF EV CHARGING STATIONS (EVCS) PROVIDED: 9

EVCS AND EV CAPABLE SPACES REF: 2022 CAL GREEN CODE SECTION 5.106.5.6 (EV CHARGING AT COMMUNITY COLLEGES)	REQUIRED	PROVIDED
TOTAL # OF EV CHARGING STATIONS (EVCS) AND EV CAPABLE SPACES:	35	35
# OF EV CAPABLE SPACES:	26 (OF 35)	26 (OF 35)
# OF EV CHARGING STATIONS (EVCS):	9 (OF 35)	9 (OF 35)

ACCESSIBLE PARKING AND ACCESSIBLE EV CHARGING SPACES REF: 2022 CBC SECTION 11B-208.2 (MIN. # OF ACCESSIBLE PARKING SPACES REQUIRED) REF: 2022 CBC SECTION 11B-228.3.2.1 (MIN. # OF ACCESSIBLE EVCS REQUIRED)	REQUIRED	PROVIDED
# OF ACCESSIBLE PARKING SPACES: • CBC TABLE 11B-208.2	6	6
# OF VAN ACCESSIBLE PARKING SPACES: • CBC 11B-208.2.4 - FOR EVERY 6 OR FRACTION OF 6	1 (OF 6)	1* (OF 6)
# OF STD. ACCESSIBLE EV CHARGING STATIONS (EVCS): • CBC TABLE 11B-228.3.2.1	1	1
# OF VAN ACCESSIBLE EV CHARGING STATIONS (EVCS): • CBC TABLE 11B-208.3.2.1	1	1

*11B-502.2 EXCEPTION: VAN PARKING SPACES SHALL BE PERMITTED TO BE 108 INCHES WIDE WHERE THE ACCESS AISLE IS 96 INCHES WIDE MINIMUM. ACCESS AISLE WITH A MINIMUM WIDTH OF 96 INCHES HAS BEEN PROVIDED AT EACH ACCESSIBLE PARKING SPACE

EV CHARGING LEGEND:
- EV CHARGING STATION
- EV CAPABLE SPACE
- DUAL PORT PEDASTAL CHARGER
- SINGLE PORT PEDASTAL CHARGER

PATH OF TRAVEL NOTES:

1. ACCESSIBLE PATH OF TRAVEL:
   ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS ROUTE WITHOUT AN ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL ABOVE 27" AND LESS THAN 80". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.
2. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
   THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NON COMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS, AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.
3. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS PART OF THIS PROJECT BY MEANS OF A "CONSTRUCTION CHANGE DOCUMENT"
4. GATES IN THE ACCESSIBLE PATH OF TRAVEL SHALL COMPLY WITH ALL DOOR REQUIREMENTS STATED IN CBC SECTION 1010 AND 118-404 FOR DOOR WIDTH, CLEARANCE, LANDINGS, DOOR HARDWARE, EXIT DEVICE, DOOR OPERATING FORCE AND SURFACES.
5. SEE SHEET C-3.1 FOR PRECISE GRADING PLAN

PATH OF TRAVEL LEGEND:

ACCESSIBLE PATH OF TRAVEL

PROPOSED

SITE PLAN - ACCESSIBILITY SITE PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. C-26450
REN 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/30/2025
DELTA DATE: DESCRIPTION:

G1.11
100% CD

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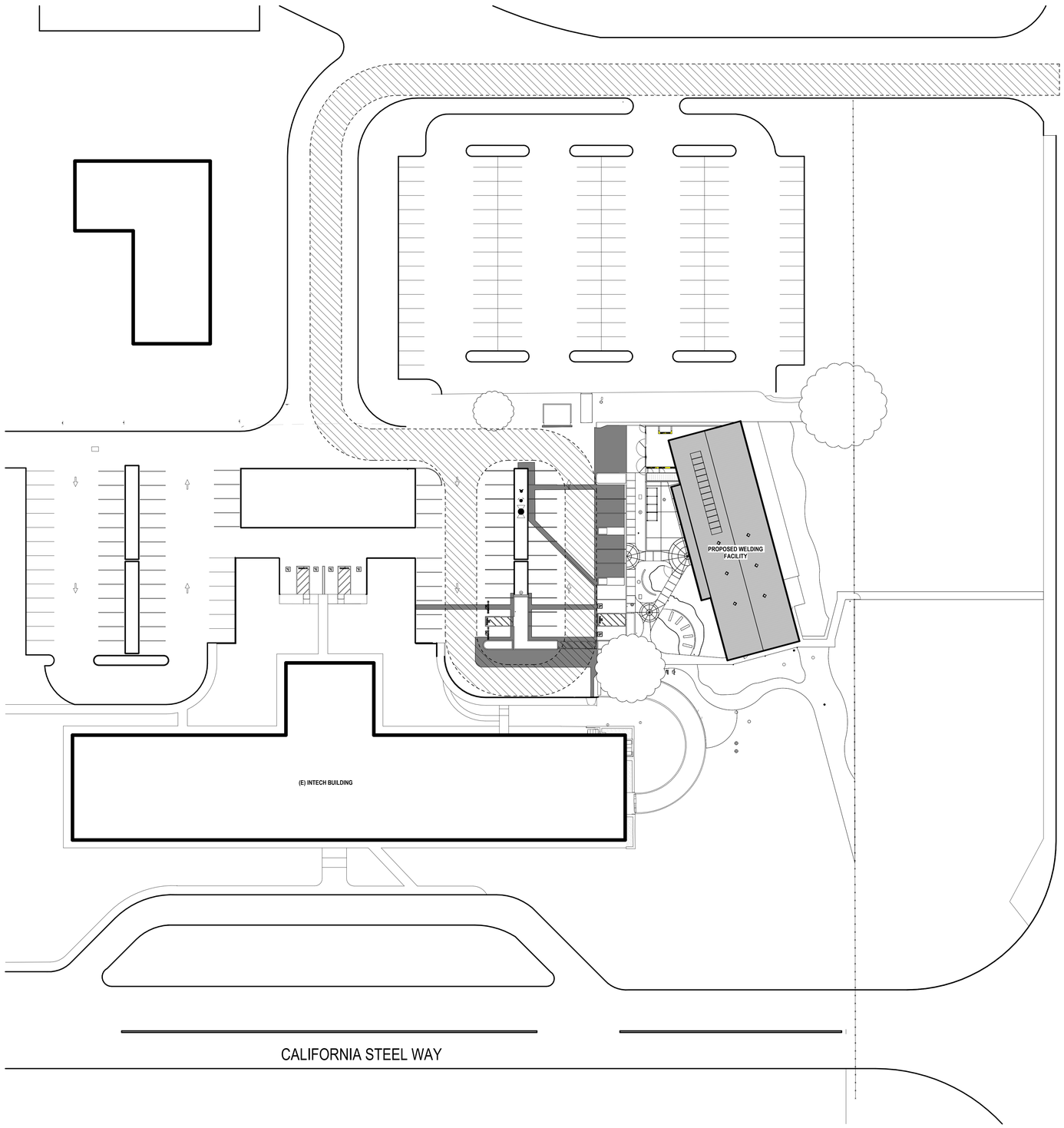

FIRE AUTHORITY SITE PLAN (1)
1" = 30'-0" :SCALE

DSA 810 FIRE & LIFE SAFETY

DSA **810**

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy *PI, 09-01: Fire Flow for Buildings*.

PROJECT INFORMATION	
School District/Owner:	CHAFFEY COLLEGE DISTRICT
Project Name/School:	INTECH WELDING FACILITY
Project Address:	9500 CHERRY AVENUE, FONTANA CA. 92335

FIRE & LIFE SAFETY INFORMATION				
1.	Has a fire hydrant flow test been performed within the past 12 months? *(If yes, provide a copy of the test data.)*	Yes ☑		No ☐
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ☑		No ☐
3.	Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? *(If yes, indicate FHSZ classification below.)*	Yes ☐		No ☑
	Refer to the following website for FHSZ locations: Fire Hazard Severity Zones in State Responsibility Area	Moderate ☐	High ☐	Very High ☐
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☐

DSA 810
FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

CONDITION MEANS AND METHODS RESOLUTION		ALTERNATE ACCEPTED			
		Yes	No	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements.			✓	
4a.	**Acceptable Alternate:** Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.			✓	
5.	**Fire Hydrants:** Number and spacing does not meet CFC requirements.			✓	
5a.	**Acceptable Alternate:** Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.			✓	
6.	**Fire Hydrants:** Water flow and pressure are less than CFC minimum.			✓	
6a.	**Acceptable Alternate:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property.				✓
7.	Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.				✓
7a.	**Acceptable Alternate:** The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.				✓

School District Acceptance of Acceptable Design Alternates

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: _____ Title: _____

Signature: _____ Date: _____

LOCAL FIRE AUTHORITY (LFA) INFORMATION	
LFA Agency Name:	
LFA Review Official:	
Title:	Work Phone:
Work Email:	

LFA Reviewer's Signature: _____ Date: _____

NAME OF YOUR BUILDING / PROJECT

OCCUPANCY CLASSIFICATION: **MIXED, NON-SEPARATED - MOST RESTRICTIVE OCCUPANCY: A-3***

* **NON-SEPARATED OCCUPANCIES PER CBC SECTION 508.3:** THE ALLOWABLE BUILDING AREA, HEIGHT AND NUMBER OF STORIES OF THE BUILDING OR PORTION THEREOF SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR THE OCCUPANCY GROUPS UNDER CONSIDERATION FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN ACCORDANCE WITH SECTION 503.1.

CONSTRUCTION TYPE: **III-B, SPRINKLERED**

PROPOSED BUILDING HEIGHT: **54 FT, 5 IN (TOP OF ROOF SCREEN)**

ALLOWABLE BUILDING HEIGHT (A-3): **WITHOUT AREA INCREASE 75 FT**

STORIES ABOVE GRADE:	**ALLOWABLE**	**PROPOSED**
A-3	**3 STORY**	**3 STORY**
B	**4 STORY**	**3 STORY**
F-1	**3 STORY**	**3 STORY**
S-1	**4 STORY**	**3 STORY**

PROPOSED GROSS BUILDING AREA: **32,468 SF**

ALLOWABLE GROSS BUILDING AREA (A-3): **85,500 SF (28,500 SF PER FLOOR - CBC TABLE 506.2)**

HYDRANT FIRE FLOW TEST

FIRE FLOW REPORT

CSI-NUCOR-JFE
1 California Steel Way
Fontana, CA 92335
909.350.6300

Slade Johnson
Senior Project Manager
SGH Architects
707 Brookside Avenue
Redlands, CA 92373

Subject: Fire Hydrant Flow Test Results – InTech Building

Dear Mr. Slade,

I am providing the results of the fire hydrant flow tests conducted on the Southeast corner at the InTech building on Tuesday, March 25, 2025, at 1:30 pm. This test was performed to assess the available fire flow and pressure conditions for potential fire hydrant installations.

The following measurements were recorded during the test:

- **Static Pressure:** 75 psi
- **Residual Pressure:** 20 psi

Flow Hydrant Outlet #1:

- Gallons Per Minute: 750 GPM
- Flow Pressure: 20 psi
- Outlet Size: 2.5 inches
- Outlet Coefficient: 0.9

Flow Hydrant Outlet #2:

- Gallons Per Minute: 750 GPM
- Flow Pressure: 20 psi
- Outlet Size: 2.5 inches
- Outlet Coefficient: 0.9

Based on these measurements, the projected flow rate at 20 psi is calculated to be **1,501 gallons per minute (GPM)**.

If any adjustments or additional flow tests are needed, I would be happy to coordinate accordingly.

Sincerely,
Adam Stilmer
Fire Safety Coordinator
California Steel Industries

www.nucor.com

FIRE AND ACCESS NOTES

1. WHEN FIRE APPARATUS ACCESS ROADS OR A WATER SUPPLY FOR FIRE PROTECTION IS REQUIRED TO BE INSTALLED, SUCH PROTECTION SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION EXCEPT WHEN APPROVED ALTERNATIVE METHODS OF PROTECTION ARE PROVIDED. CFC 501.4
2. FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED FOR EVERY FACILITY, BUILDING OR PORTION OF A BUILDING HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION WHEN ANY PORTION OF THE FACILITY OR ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY OF THE BUILDING IS LOCATED MORE THAN 150'-0" FROM FIRE APPARATUS AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING OR FACILITY. CFC 503.1.1
3. REQUIRED ACCESS ROADS FROM EVERY BUILDING TO A PUBLIC STREET SHALL BE ALL-WEATHER HARD-SURFACED (SUITABLE FOR USE BY FIRE APPARATUS) RIGHT-OF-WAY NOT LESS THAN 20 FEET IN WIDTH. SUCH RIGHT-OF-WAY SHALL BE UNOBSTRUCTED AND MAINTAINED ONLY AS ACCESS TO THE PUBLIC STREET. CFC 503.2(A)
4. FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET EXCLUSIVE OF SHOULDERS, EXCEPT FOR APPROVED SECURITY GATES IN ACCORDANCE WITH SECTION 503.6, AND AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES. CFC 503.2.1
5. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES. CFC 503.2.3
6. TURNING RADIUS CFC 503.2.4
7. DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL PROVIDED WITH AN APPROVED AREA FOR TURNING AROUND FIRE APPARATUS. CFC 503.2.5
8. "NO PARKING—FIRE LANE" SIGNS SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS. CFC 503.3
9. THE INSTALLATION OF SECURITY GATES ACROSS A FIRE APPARATUS ACCESS ROAD SHALL BE APPROVED BY THE FIRE CHIEF. WHERE SECURITY GATES ARE INSTALLED, THEY SHALL HAVE AN APPROVED MEANS OF EMERGENCY OPERATION. THE SECURITY GATES AND THE EMERGENCY OPERATION SHALL BE MAINTAINED OPERATIONAL AT ALL TIMES. ELECTRIC GATE OPERATORS, WHERE PROVIDED, SHALL BE LISTED IN ACCORDANCE WITH UL 325. GATES INTENDED FOR AUTOMATIC OPERATION SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ASTM F2200. CFC 503.6
10. NEW AND EXISTING BUILDINGS SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 4 INCHES HIGH WITH A MINIMUM STROKE WIDTH OF 1/2 INCH. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED. CFC 505.1
11. WHERE ACCESS TO OR WITHIN A STRUCTURE OR AN AREA IS RESTRICTED BECAUSE OF SECURED OPENINGS OR WHERE IMMEDIATE ACCESS IS NECESSARY FOR LIFE-SAVING OR FIRE-FIGHTING PURPOSES, THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE A KEY BOX TO BE INSTALLED IN AN APPROVED LOCATION. THE KEY BOX SHALL BE OF AN APPROVED TYPE LISTED IN ACCORDANCE WITH UL 1037, AND SHALL CONTAIN KEYS TO GAIN NECESSARY ACCESS AS REQUIRED BY THE FIRE CODE OFFICIAL. CFC 506.1
12. THE OPERATOR OF THE BUILDING SHALL IMMEDIATELY NOTIFY THE FIRE CODE OFFICIAL AND PROVIDE THE NEW KEY WHERE A LOCK IS CHANGED OR REKEYED. THE KEY TO SUCH LOCK SHALL BE SECURED IN THE KEY BOX. CFC 506.2
13. AN APPROVED WATER SUPPLY CAPABLE OF SUPPLYING THE REQUIRED FIRE FLOW FOR FIRE PROTECTION SHALL BE PROVIDED TO PREMISES UPON WHICH FACILITIES, BUILDINGS OR PORTIONS OF BUILDINGS ARE HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION. CFC 507.1
14. FIRE FLOW. FIRE FLOW REQUIREMENTS FOR BUILDINGS OR PORTIONS OF BUILDINGS AND FACILITIES SHALL BE DETERMINED BY AN APPROVED METHOD OR APPENDIX B OR BB. CFC 507.3
15. THE FIRE CODE OFFICIAL SHALL BE NOTIFIED PRIOR TO THE WATER SUPPLY TEST. WATER SUPPLY TESTS SHALL BE WITNESSED BY THE FIRE CODE OFFICIAL OR APPROVED DOCUMENTATION OF THE TEST SHALL BE PROVIDED TO THE FIRE CODE OFFICIAL PRIOR TO FINAL APPROVAL OF THE WATER SUPPLY SYSTEM. CFC 507.4
16. WHERE A PORTION OF THE FACILITY OR BUILDING HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION IS MORE THAN 400 FEET FROM A HYDRANT ON A FIRE APPARATUS ACCESS ROAD, AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE FACILITY OR BUILDING, ON-SITE FIRE HYDRANTS AND MAINS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL. CFC 507.5.1
17. BUILDINGS EQUIPPED WITH A STANDPIPE SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 905 SHALL HAVE A FIRE HYDRANT WITHIN 100 FEET OF THE FIRE DEPARTMENT CONNECTIONS. CFC 507.5.1.1
18. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS, EXCEPT AS OTHERWISE REQUIRED OR APPROVED. CFC 507.5.5

WHERE FIRE HYDRANTS ARE SUBJECT TO IMPACT BY A MOTOR VEHICLE, GUARD POSTS OR OTHER APPROVED MEANS SHALL COMPLY WITH SECTION 312. CFC 507.5.6

FIRE SITE PLAN LEGEND

- NEW BUILDING
- 20' WIDE, ONE WAY FIRE APPARATUS ACCESS PATH, TYP.
- FIRE LAY HOSE & PULL HOSE PATH
- FIRE HYDRANT
- PIV (POST INDICATOR VALVE)
- FDC (FIRE DEPT. CONNECTION)

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SITE PLAN - FIRE AUTHORITY

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

LICENSED ARCHITECT
MICHAEL J. STEVENS
NO. 26450
REN. 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/08/2025
DEL'T'A DATE: DESCRIPTION:

G1.12

100% CD

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PROPOSED PROPANE STORAGE CABINET

PROPOSED ACETYLENE STORAGE CABINET IN A FIRE RATED ROOM

CHEMICAL STORAGE QUANTIITES AND REQUIREMENTS

CHEMICAL	PROPOSED STORAGE	PROPOSED STORAGE QUANTITIES	MAXIMUM ALLOWABLE QUANTITIES (MAQ)[A]	PROPOSED METHOD FOR INCREASE IN MAQ.	MAQ. W/ IMPROVEMENTS	MEETS REQUIREMENTS
CO_2	(10) 280CF BOTTLES	2,800 CF	6,000 CF	N/A	6,000 CF	6,000 ALLOWABLE > 2,800 ACTUAL = YES
ARGON	(10) 280CF BOTTLES	2,800 CF	6,000 CF	N/A	6,000 CF	6,000 ALLOWABLE > 2,800 ACTUAL = YES
75/25	(15) 280CF BOTTLES	4,200 CF	6,000 CF	N/A	6,000 CF	6,000 ALLOWABLE > 4,200 ACTUAL = YES
ACETYLENE	(5) 140CF BOTTLES	700 CF	200 CF	1-HR RATED ENCLOSURE & STORAGE CABINET[1]	800 CF	800 ALLOWABLE > 700 ACTUAL = YES
OXYGEN	(10) 280CF BOTTLES	2,800 CF	1,500 CF	1-HR RATED ENCLOSURE[2]	3,000 CF	3,000 ALLOWABLE > 2,800 ACTUAL = YES
PROPANE	(10) 33LBS TANKS	330 LBS	300 LBS	VENTED STORAGE CABINET	600 LBS	600 ALLOWABLE > 330 ACTUAL = YES

A. PER TABLE 307.1(1) AND CFC TABLE 5003.1.1(1) OF THE CBC
1. RATED WALL GIVES A 100% INCREASE BRINGING US TO 4000CF ALLOWABLE, THEN VENTED STORAGE CABINET INCREASE ANOTHER 100% = 800CF ALLOWABLE.
2. RATED WALL GIVES A 100% INCREASE BRINGING US TO 3,000CF ALLOWABLE.

EXITS AND EXIT ACCESS DOORWAYS

1006.2 EGRESS FROM SPACES
TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR THE COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1. THE CUMULATIVE OCCUPANT LOAD FROM ADJACENT ROOMS, AREAS OR SPACES SHALL BE DETERMINED IN ACCORDANCE WITH SECTION 1004.2.

OCCUPANCY	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (FT)		
		WITHOUT SPRINKLER SYSTEM (FT)		NO SPRINKLER SYSTEM (FT)
		OCCUPANT LOAD		
		OL ≤ 30	OL > 30	
F-2	49	75	75	

EXITS ACCESS TRAVEL DISTANCE

1017.2 LIMITATIONS
EXIT ACCESS TRAVEL SHALL NOT EXCEED THE VALUES GIVEN IN TABLE 1017.2.

TABLE 1017.2

OCCUPANCY	WITH SPRINKLER SYSTEM (FT)
F-2	300

KEYNOTES

	DESCRIPTION
22.005	EMERGENCY EYE WASH STATION

BUILDING CODE ANALYSIS

OCCUPANCY CLASSIFICATION: MIXED, SEPARATED - MOST RESTRICTIVE OCCUPANCY: F-2

CONSTRUCTION TYPE: V-B, NON-SPRINKLERED

	ALLOWABLE	PROPOSED
MAX. BUILDING HEIGHT: F-2 OCCUPANCY CBC TABLE 504.3	40'-0"	21'-6"
MAX. STORIES ABOVE GRADE: F-2 OCCUPANCY CBC TABLE 504.4	2 STORY	1 STORY
MAX. BUILDING AREA: F-2 OCCUPANCY CBC TABLE 506.2	21,000 SF	7,050 SF

* **NON-SEPARATED OCCUPANCIES PER CBC SECTION 508.3:** THE ALLOWABLE BUILDING AREA, HEIGHT AND NUMBER OF STORIES OF THE BUILDING OR PORTION THEREOF SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR THE OCCUPANCY GROUPS UNDER CONSIDERATION FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN ACCORDANCE WITH SECTION 503.1.

** REFERENCE TABLES BELOW FOR TOTAL BUILDING AREA BY OCCUPANCY TYPE:

FIRE-RESISTANCE RATING REQUIREMENTS
FOR BUILDING ELEMENTS (HOURS) (CBC TABLE 601)

PRIMARY STRUCTURE:	NON-RATED (0 HOURS)
BEARING WALLS EXT:	NON-RATED (0 HOURS)
BEARING WALLS INT:	NON-RATED (0 HOURS)
NON-BEARING WALLS EXT:	**PER CBC TABLE 705.5**
NON-BEARING WALLS INT:	NON-RATED (0 HOURS)
FLOOR CONSTRUCTION:	NON-RATED (0 HOURS)
ROOF CONSTRUCTION:	NON-RATED (0 HOURS)

FIRE-RESISTANCE RATING REQUIREMENTS
FOR EXTERIOR WALLS (CBC TABLE 705.5)

FIRE SEPARATION DISTANCE (FEET):	TYPE **V-B** F-2 OCCUPANCY
X<5	1 HOUR
5 ≤ X < 10	1 HOUR
10 ≤ X < 30	0 (NON-RATED)
X≥ 30	0 (NON-RATED)

OCCUPANT LOAD

OCCUPANCY TYPES

ROOM NUMBER	NAME	OCCUPANCY TYPE	AREA	OCCUPANCY LOAD FACTOR	GROSS/NET	ROOM OCCUPANT LOAD
101	OFFICE / STORAGE	F-2	146 SF	150	GROSS	1
102	WELDING FACILTY	F-2	3591 SF	50	GROSS	72
103	RESTROOM		51 SF			
104	RESTROOM		51 SF			
105	STORAGE	S-1	Not Placed	300		
106	EXTERIOR TANK STORAGE	S-1	157 SF	300	GROSS	1
107	EXTERIOR SERVICE YARD	F-2	Not Enclosed	300	GROSS	
108	STORAGE	H-2	24 SF	300		1
109	STORAGE	H-2	24 SF	300		1
110	SUPPLIES	F-2	196 SF	300		1
111	STORAGE	S-1	40 SF	300		1

***NOTE:**
DSA IR A-26.CC, 1.9: VOCATIONAL SHOPS FOR WOODWORKING, AUTO, METAL, AND WELDING SHALL BE INDIVIDUALLY ASSESSED BASED ON THE ACTIVITIES WITHIN THE SHOPS AND THE QUANTITIES OF HAZARDOUS MATERIALS USED AND STORED. THE OCCUPANT LOAD FACTOR SHALL BE **50** (NET)

SIGNAGE LEGEND

- E — EXIT - SEE 15 / A10.91
- RID — ROOM ID - SEE 4 / A10.91
- RDSU — RESTROOM DOOR SIGNAGE - SEE 1 / A10.91
- OCC — OCCUPANT LOAD SIGNAGE - SEE 9 / A10.91
- RR — RESTROOM WALL SIGNAGE - SEE 10 / A10.91
- NSS — NO SMOKING SIGNAGE - SEE 8 / A10.91
- FES — FIRE EXTINGUISHER SIGNAGE - SEE 2 / A10.91
- ER — EXIT ROUTE - SEE 14 / A10.91
- EO — EXIT ONLY - SEE 13 / A10.91
- NE — NOT AN EXIT - SEE 13 / A10.91
- HF — HIGHLY FLAMMABLE - SEE 27 / A10.91
- HID-C3H3 — HAZARD ID - PROPANE - SEE 2 / A10.92
- HID-O — HAZARD ID - OXYGEN - SEE 3 / A10.92
- HID-C2H2 — HAZARD ID - ACETYLENE - SEE 4 / A10.92
- HID-CO2 — HAZARD ID - CARBON DIOXIDE - SEE 5 / A10.92
- HID-AR — HAZARD ID - ARGON - SEE 6 / A10.92
- HWP — HOT WORK SIGNAGE - SEE 10 / A10.92

CODE LEGEND

OCCUPANCY TAG
ROOM NAME
101
150 SF
OCC | OLF
Occ Load
ROOM NAME
ROOM NUMBER
ROOM AREA SQUARE FOOTAGE
OCCUPANY LOAD FACTOR
NUMBER OF OCCUPANTS
ROOM OCCUPANCY TYPE

BUILDING EGRESS PATH OF TRAVEL

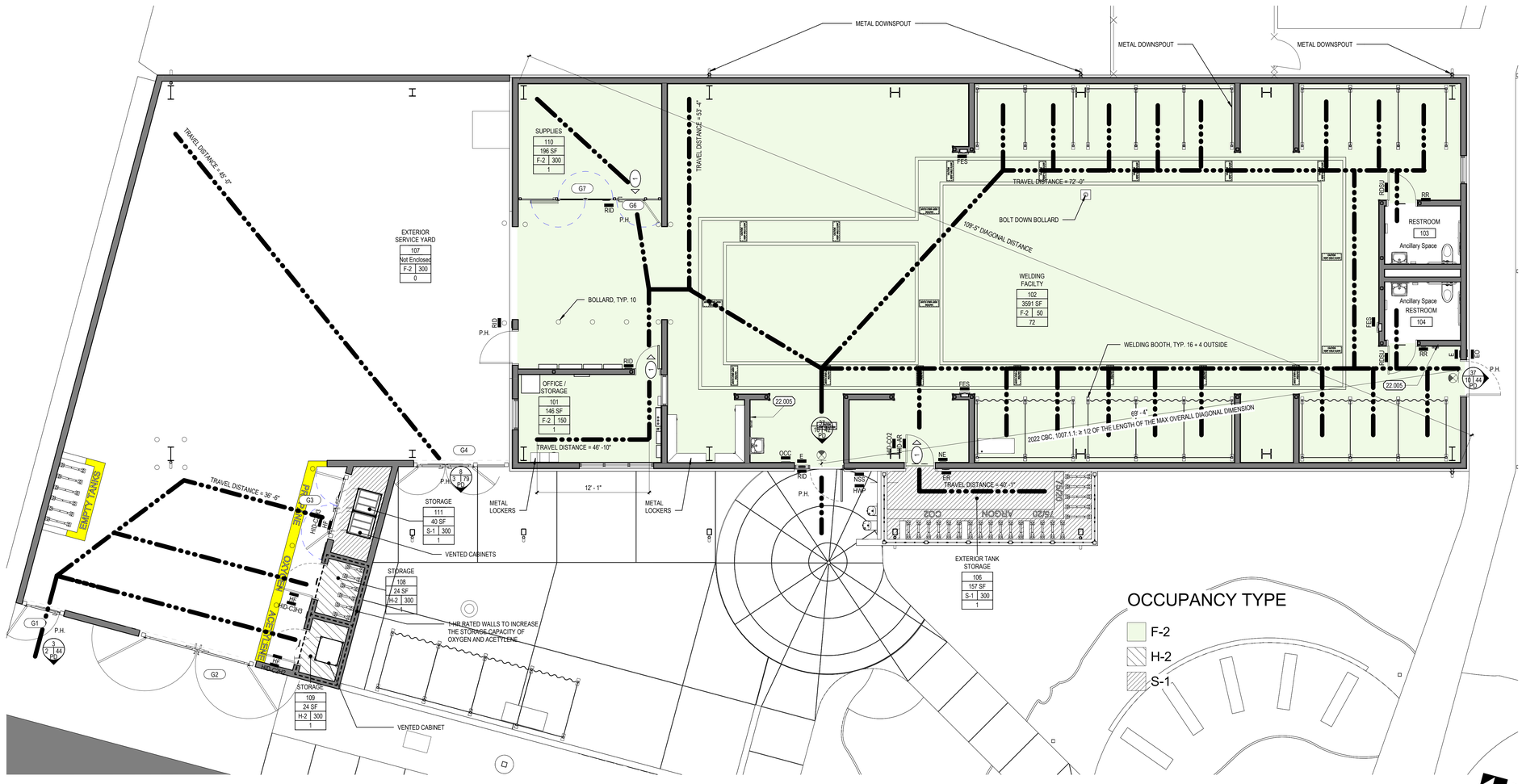
2'-6" CLR. / 4'-0" CLR. FEC
FIRE EXTINGUISHER CABINET TYPE ABC EXTINGUISHER, CMU SURFACE MOUNT SEE DETAIL 21 / A10.91 RECESSED/SEMI RECESSED SEE DETAIL

EXIT / EGREES LOAD TAG
0 | 0 | 0 | P.H.
TOTAL OCCUPANTS AT DOOR / STAIR
PROVIDED EXIT WIDTH (INCH)
PANIC / EXIT DEVICE AT DOORS
REQ'D EXIT WIDTH (INCH)
(OCCUPANT x 0.4) AT DOORS 32" MIN.* **(1005.3.2, EX. 4)**
(OCCUPANT x 0.15) AT EXTERIOR GATES 32" MIN.

EGRESS PATH COUNT
0
OCCUPANT COUNT AND DIRECTION OF EGRESS

PANIC HARDWARE INDICATOR
P.H. — PANIC / EXIT DEVICE AT DOORS

ILLUMINATED EXIT SIGN SYMBOL
DENOTES WALL MOUNTED EXIT SIGN



FLOOR PLAN - OCCUPANCY TYPE
3/16" = 1'-0" :SCALE
1

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

CODE ANALYSIS - ALLOWABLE HEIGHT, AREA AND PLUMBING FIXTURE COUNTS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. SEPPERS
NO. 26450
RENEW 8-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DES'R: DATE: DESCRIPTION:

G2.11
100% CD

GRADING GENERAL NOTES

1. *ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE CALIFORNIA BUILDING CODE, AND THE GEOTECHNICAL INVESTIGATION PREPARED BY GEOCON WEST, INC. PROJECT NUMBER W1145-99-10, DATED DECEMBER 23, 2024. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (APWA GREEN BOOK), LATEST EDITION AND AMENDMENTS. WHENEVER SPECIAL REQUIREMENTS CONFLICT ON ANY SUBJECT MATTER, THE ENGINEER OF RECORD AND/OR THEIR REPRESENTATIVE WILL DETERMINE WHICH SPECIAL REQUIREMENT AND/OR CODE WILL GOVERN.*
2. *THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEARING AND DISPOSAL OF THE PROPOSED WORK AREA.*
3. *DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS IN ACCORDANCE WITH CITY, COUNTY, AND STATE ORDINANCES AND STATUTES.*
4. *NO FILL SHALL BE PLACED ON THE EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL, DELETERIOUS MATERIAL AND PREPARED PER THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT.*
5. *CUT AND FILL SLOPES SHALL BE NO STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL. ANY CUT SLOPE THAT IS NOT STABLE SHALL BE OVEREXCAVATED AND RECOMPACTED AS INDICATED BY PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT.*
6. *FILLS SHALL BE COMPACTED THROUGHOUT TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D1557-12 AND CERTIFIED BY THE GEOTECHNICAL ENGINEER.*
7. *AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE PRIOR TO PLACING OF FILL.*
8. *ALL EXISTING FILLS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER AND STATE INSPECTOR OR THEIR REPRESENTATIVE BEFORE ANY ADDITIONAL FILLS ARE ADDED.*
9. *THE EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED, BACKFILLED, AND APPROVED BY THE GRADING INSPECTOR AND GEOTECHNICAL ENGINEER.*
10. *SLOPES EXCEEDING FIVE FEET IN HEIGHT MUST BE PLANTED WITH AN APPROVED IRRIGATION SYSTEM UNLESS OTHERWISE NOTED ON LANDSCAPE ARCHITECTS PLANS.*
11. *THE STOCKPILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE OWNER IF IT IS TO BE ONSITE AND THE AGENCY WITH JURISDICTION IF IT IS TO BE OFFSITE.*
12. *ALL TRENCH BACKFILLS SHALL BE TESTED AND APPROVED BY THE SITE GEOTECHNICAL ENGINEER AND PER THE APWA.*
13. *ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY AN ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL RECOMMEND NECESSARY TREATMENT TO THE PROJECT ARCHITECT FOR APPROVAL.*
14. *WHEN CUT PADS ARE BROUGHT TO NEAR GRADE, THE ENGINEERING GEOLOGIST SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE ENGINEERING GEOLOGIST AND GEOTECHNICAL ENGINEER, A COMPACTED FILL BLANKET WILL BE PLACED.*
15. *THE FINAL COMPACTION REPORT PREPARED BY THE GEOTECHNICAL ENGINEER SHALL CONTAIN THE TYPE OF FIELD TESTING PERFORMED, THE METHOD OF OBTAINING THE IN-PLACE DENSITY, WHETHER SAND CONE, NUCLEAR GAGE, OR DRIVE RING SHALL BE SO NOTED FOR EACH TEST, SUFFICIENT MAXIMUM DENSITY DETERMINATIONS SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES USED BY THE FIELD TECHNICIAN.*
16. *SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.*
17. *THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.*
18. *ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST CONTINUE TO FUNCTION, ESPECIALLY DURING STORM CONDITIONS AND APPROVED PERMANENT DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING PROJECT. IN ALL CASES, THE CONTRACTOR AND/OR DEVELOPER SHALL BE HELD LIABLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.*
19. *ANY WATER WELLS SHALL BE ABANDONED IN COMPLIANCE WITH THE COUNTY STANDARDS AND IN ACCORDANCE WITH THE STATE DEPARTMENT OF WATER RESOURCES.*
20. *ANY EXISTING SEWERS, CESSPOOLS, AND SEPTIC TANKS OR OTHER SEWAGE DISPOSAL FACILITIES SHALL BE ABANDONED IN COMPLIANCE WITH THE CALIFORNIA PLUMBING CODE AND TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER AND GRADING INSPECTOR.*
21. *EXPORT SOILS MUST GO TO A LEGAL DUMP SITE OR TO A PERMITTED SITE APPROVED BY THE LOCAL AGENCY HAVING JURISDICTION.*
22. *PERMISSION IS REQUIRED FROM THE ADJACENT PROPERTY OWNER WHENEVER WORK IS PROPOSED ACROSS THE PROPERTY LINE.*
23. *ANY DIRT, ROCK OR CONSTRUCTION MATERIAL THAT MAY BE TRACKED OR DROPPED WITHIN THE PUBLIC RIGHT-OF-WAY DURING THE TRANSPORTATION OF SAID MATERIAL OR EQUIPMENT ASSOCIATED WITH THE PROJECT SHALL BE CLEANED OR REMOVED DAILY.*
24. *DIRT ACCESS RAMPS OVER CURB AND GUTTER TO CONSTRUCTION SITE ARE NOT ALLOWED. WHEN NECESSARY FOR ENTRANCE TO SUCH CONSTRUCTION SITES, ASPHALT RAMPS WITH A MINIMUM 3" DIAMETER PIPE WILL BE CONSTRUCTED TO CONVEY GUTTER DRAINAGE. ALL BASE, GRAVEL, SOIL OR OTHER MATERIAL CARRIED INTO THE ROADWAY BY CONTRACTORS PERSONNEL OR EQUIPMENT SHALL BE CLEANED AS NECESSARY AND NO LESS THAN ONCE A DAY. TRUCKS HAULING BASE, GRAVEL, FILL OR EXPORT MATERIALS WITHIN CITY LIMITS WILL BE TARPED AS NECESSARY TO PREVENT MATERIAL FROM SPILLING INTO THE ROADWAY.*
25. *PRIOR TO ANY CONSTRUCTION WHICH INVOLVES HAZARDOUS CONDITIONS, THE CONTRACTOR SHALL FIRST OBTAIN A PERMIT FROM THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (DOSH).*
26. *PROPOSED REVISIONS TO THE GRADING PLAN SHALL BE DRAWN IN RED PENCIL ON BLUELINES OF THE APPROVED PLAN. THESE BLUELINES ARE THEN TO BE SUBMITTED TO THE OWNERS REPRESENTATIVES FOR REVIEW AND APPROVAL ONLY AFTER THE BLUELINE APPROVAL IS GIVEN SHOULD THE ORIGINALS BE AS-BUILT BY THE CONTRACTOR/CM.*
27. *RULE 403, AIR QUALITY CONTROL MANAGEMENT DISTRICT, MUST BE IMPLEMENTED BY CONTRACTORS DURING CONSTRUCTION.*
28. *CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY BETWEEN THE HOURS OF 7:00 A.M. AND 7:00 P.M. MONDAY THROUGH FRIDAY, AND BETWEEN THE HOURS OF 9:00 A.M. AND 6:00 P.M. ON SATURDAYS. NO CONSTRUCTION ACTIVITIES SHALL BE PERMITTED OUTSIDE OF THESE PERMITTED HOURS OR ON SUNDAY AND FEDERAL HOLIDAYS.*
29. *CONSTRUCTION PARKING SHALL BE ONSITE. TRAFFIC CONTROL AND ACCESS SHALL BE IN ACCORDANCE WITH THE GENERAL CONDITION REQUIREMENTS.*
30. *TRUCKS AND LARGE CONSTRUCTION VEHICLES WILL OBTAIN APPROVED TRUCK ROUTES FROM THE CITY AND/OR THE COUNTY.*
31. *THE CONTRACTOR SHALL CONTROL DUST IN AREAS USED FOR OFF-ROAD PARKING, MATERIALS LAYDOWN OR THOSE AWAITING FUTURE CONSTRUCTION. FREQUENTLY ACCESSED AREAS SHALL BE PAVED AS EARLY AS POSSIBLE TO MINIMIZE DIRT TRACKOUT TO THE PUBLIC RIGHT OF WAY.*
32. *THE CONTRACTOR SHALL UTILIZE MEASURES TO PREVENT DIRT FROM BEING TRACKED, WASHED BLOWN OR OTHERWISE CONVEYED ONTO PAVED ROADWAYS, AND WILL WASH OR SWEEP CONSTRUCTION ACCESS POINTS ON A ROUTINE BASIS AS SPECIFIED BY THE COUNTY AT A PREGRADE MEETING AS WELL AS WHENEVER DIRT IS VISIBLE MORE THAN 50 FEET FROM THE ACCESS POINT INDEPENDENT OF THE ROUTINE CLEAN-UP SCHEDULE.*
33. *TRUCKS USED IN HAULING DIRT TO OR FROM THE SITE ON PUBLIC ROADS WILL BE COVERED OR WILL MAINTAIN A SIX INCH DIFFERENTIAL BETWEEN THE MAXIMUM HEIGHT OF ANY HAULED MATERIAL AND THE TOP OF THE TRAILER. HAUL TRUCK DRIVERS WILL LOAD PRIOR TO LEAVING THE SITE TO PREVENT SOIL LOSS DURING TRANSPORTATION.*
34. *POST CONSTRUCTION LID PRINCIPLES, TREATMENT CONTROL AND/OR LID BMPS, ONCE PLACED INTO OPERATION FOR POST-CONSTRUCTION WATER QUALITY CONTROL, SHALL NOT BE USED TO TREAT RUNOFF FROM CONSTRUCTION SITES OR UN-STABILIZED AREAS OF THE SITE.*

ASPHALT PAVING GENERAL NOTES

1. *A PRE-PAVING MEETING IS REQUIRED 48 HOURS PRIOR TO PAVING. THE PROJECT INSPECTOR SHALL BE IN ATTENDANCE.*
2. *THE AGGREGATE BASE SECTION SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY. MAXIMUM AND FIELD DENSITY TO BE DETERMINED IN ACCORDANCE WITH ASTM D1557-12 MODIFIED.*
3. *A "TACK COAT" (PAINT BINDER) SHALL BE APPLIED BETWEEN PAVEMENT LAYERS, AND ON EXISTING PAVEMENT TO BE RESURFACED AT A RATE OF 0.10 GAL./SQ YD. THE TACK COAT SHALL BE A TYPE SS1 ASPHALT EMULSION.*
4. *THE ASPHALT CONCRETE FOR PARKING LOTS SHALL BE CLASS C2 AS SPECIFIED IN SECTION 203-6, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST APPROVED EDITION. THE PAVING ASPHALT TO BE MIXED WITH AGGREGATE SHALL CONFORM TO THE PROVISIONS OF SECTION 203-1 AND SHALL BE STEAMED REFINED ASPHALT WITH A PERFORMANCE GRADE OF PG-64-10 TO THE SATISFACTION OF THE ENGINEER.*
5. *ASPHALT CONCRETE PAVEMENT SHALL BE DISTRIBUTED AND SPREAD IN ACCORDANCE WITH SECTION 302-5.5 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. THE MAXIMUM LIFT DURING SPREADING SHALL BE 3" COMPACTED THICKNESS.*
6. *A QUALIFIED PAVING INSPECTOR IS REQUIRED DURING PAVING OPERATIONS AT THE JOB SITE AND AT THE ASPHALT PLANT. ASPHALT TICKETS SHALL BE PROVIDED TO THE INSPECTOR FOR ALL LOADS.*
7. *ALL ASPHALT AREAS SHALL BE PAVED AT A MINIMUM GRADIENT OF 1.25%.*

DEMOLITION GENERAL NOTES

1. *THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION OF THE SITE AND SHALL REMOVE AND DISPOSE OF ALL STRUCTURES ABOVE AND OR BELOW GROUND. ANY HAZARDOUS MATERIALS ENCOUNTERED SHALL BE HANDLED AND REMOVED AS REQUIRED BY LOCAL AND OR STATE LAWS.*
2. *EXISTING WATER LATERALS AND IRRIGATION LINES SHALL BE CUT AND CAPPED AT THE LIMIT OF THE DEMO AREA SHOWN. ALL WATER SERVICES SHALL BE TERMINATED IN A FLUSH UTILITY BOX FOR FUTURE ACCESS.*
3. *EXISTING SEWER LATERALS SHALL BE CUT AND PLUGGED AT THE LIMIT OF THE DEMO AREA SHOWN. ALL PLUGGED ENDS FOR LATERALS WILL BE BROUGHT TO GRADE WITH A STANDARD SEWER CLEAN OUT.*
4. *EXISTING ELECTRICAL LINES SHALL BE TEMPORARILY REROUTED AROUND THE LIMITS OF THE DEMO AREA. ALL TEMPORARY WIRING CONNECTIONS SHALL BE TERMINATED IN AN ABOVE GROUND RISER.*
5. *THE CONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DAMAGE TO EXISTING HARDSCAPE IMPROVEMENTS, UTILITY FACILITIES, AND LANDSCAPING FEATURES THAT ARE NOT TO BE REMOVED.*
6. *ALL JOIN LINES SHALL BE SAW CUT ON A NEAT, STRAIGHT LINE PARALLEL WITH THE JOIN. THE CUT EDGE SHALL BE PROTECTED FROM CRUSHING, AND ALL BROKEN EDGES SHALL BE RE CUT PRIOR TO JOINING.*
7. *ALL EXISTING OBJECTIONABLE MATERIALS THAT CONFLICT WITH PROPOSED IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, BUILDING FOUNDATIONS, UTILITIES AND APPURTENANCES, TREES, SIGNS, AND STRUCTURES, ETC. SHALL BE REMOVED AND DISPOSED BY THE CONTRACTOR, UNLESS OTHERWISE INDICATED HEREIN, OR AS DIRECTED BY THE ARCHITECT OR ENGINEER.*
8. *THE CONTRACTOR SHALL PROTECT ALL EXISTING CONCRETE FROM DAMAGE CAUSED BY THEIR OPERATIONS. ANY CONCRETE DAMAGED DURING THEIR OPERATIONS SHALL BE SAWCUT AND REPLACED AT NO COST TO THE OWNER ANY EXISTING CONCRETE IDENTIFIED AS POTENTIALLY NEEDING TO BE REPLACED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OR THE OWNERS REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF WORK.*
9. *THE CONTRACTOR SHALL PERFORM AND BE RESPONSIBLE FOR ALL CLEARING AND GRUBBING OPERATIONS AS NECESSARY TO COMPLETE THE WORK, INCLUDING TRANSPORTATION AND DISPOSAL OF ALL REMOVED MATERIALS, AND ALL ASSOCIATED COSTS.*
10. *REMOVE OR RELOCATE ALL EXISTING ITEMS WITHIN LIMITS OF REMOVAL THAT ARE NOT WITHIN CIVIL SCOPE PER APPROPRIATE CONSULTANTS PLANS AND SPECIFICATIONS.*
11. *IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND DETERMINE THE EXTENT OF DEMOLITION BASED ON THE PROPOSED IMPROVEMENTS SHOWN IN THIS SET OF PLANS.*

ACCESSIBILITY NOTES

1. *ALL SLOPES IN THE DIRECTION OF TRAVEL SHOWN ON THIS PLAN WERE DESIGNED BELOW THE MAXIMUM ALLOWED GRADES BY THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (2010 ADAS OR CBC) IN ORDER TO ALLOW FOR CONSTRUCTION TOLERANCES. IT IS THE RESPONSIBILITY OF THE CONTRACTORS TO FAMILIARIZE THEMSELVES WITH THE ADAS AND CBC AND IN THE EVENT THAT A DESIGN QUESTION SHOULD ARISE, OR A FIELD CONDITION PRESENT ITSELF THAT IS DIFFERENT THAN SHOWN ON THESE PLANS, WORK SHOULD CEASE AND THE DESIGN ENGINEER SHALL BE NOTIFIED SO THAT AN ACCEPTABLE SOLUTION CAN BE DETERMINED.*
2. *THE CONTRACTOR IS ADVISED TO CAREFULLY CHECK ALL PHASES OF WORK RELATING TO ACCESSIBILITY FOR THIS PROJECT. SINCE THE CODE DOES NOT ALLOW FOR A CONSTRUCTION TOLERANCE, ANY CONSTRUCTION THAT EXCEEDS MAXIMUM OR MINIMUM DIMENSIONS AND SLOPES AS CALLED OUT BY CBC OR ADAS ARE SUBJECT TO REJECTION BY THE INSPECTOR AND SHALL BE REMOVED AND REPLACED.*
3. *SINCE THE CIVIL ENGINEER OR SURVEYOR CANNOT CONTROL THE EXACT METHODS OR MEANS USED BY THE GENERAL CONTRACTOR OR THEIR SUB-CONTRACTORS DURING THE GRADING AND CONSTRUCTION OF THE PROJECT, THE CIVIL ENGINEER OR SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE FINAL ACCEPTANCE OF ADAS RELATED ITEMS OF THIS PROJECT BY THE INSPECTING AUTHORITY OR OTHER AFFECTED PARTIES.*
4. *COMPLIANCE WITH THE CONSTRUCTION REQUIREMENTS FOR ACCESSIBILITY WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THEIR SUB-CONTRACTORS.*

FIRE SYSTEM GENERAL NOTE

1. *PRIOR TO INSTALLATION, ALL PLANS AND SPECIFICATION SHALL BE APPROVED BY DSA. REFER TO DSA IR A-25 FOR DESIGN, INSTALLATION AND MAINTENANCE GENERAL REQUIREMENTS.*
2. *INSPECTIONS ARE REQUIRED: 1) PRIOR TO POURING THRUST BLOCKS, 2) FOR HYDROSTATIC TESTING, AND 3) FOR FLUSH.*
3. *INSTALLATION, INSPECTION, AND TESTING SHALL CONFORM TO 2022 NFPA 13 AND 2022 NFPA 24 & 2022 CFC.*
4. *PRIVATE FIRE HYDRANTS SHALL BE APPROVED WET BARREL STYLE WITH A MINIMUM OF TWO 2-1/2" AND ONE 4" OUTLET. THE 4" OUTLET SHALL FACE THE FIRE DEPARTMENT ACCESS ROAD. ALL OUTLETS SHALL BE PROVIDED WITH NATIONAL STANDARD THREADS (NST). NFPA 24, 7.1.2.*
5. *FIRE HYDRANT SUPPLY PIPING SHALL BE MINIMUM 6" IN DIAMETER. LATERALS SHALL BE MINIMUM 6" IN DIAMETER. THE LOWEST OPERATING HOSE OUTLET SHALL BE A MINIMUM OF 18" ABOVE GRADE AND THE HYDRANT FLANGE SHALL BE A MINIMUM OF 2" ABOVE GRADE. NFPA 24, 5.2.1, 7.1.1.1 & 7.3.3.*
6. *FIRE HYDRANTS SHALL BE A MINIMUM OF 40 FEET FROM ALL STRUCTURES. NFPA 24, 7.2.3.*
7. *A KEYED GATE VALVE SHALL BE PROVIDED FOR EACH HYDRANT IN AN ACCESSIBLE LOCATION. VALVES SHALL NOT BE LOCATED IN PARKING STALLS. NFPA 24, 7.1.1.2.*
8. *ALL PIPING SHALL BE LISTED FOR USE IN FIRE PROTECTION SERVICE AND COMPLY WITH AWWA STANDARDS (CLASS 235 DR-18 MINIMUM) CLASS 305 DR-14 C900 PIPE SHALL BE USED WHERE THE PRESSURE MAY EXCEED 150 PSI. NFPA 24, 10.1.1 & 10.1.2.*
9. *ALL BOLTED JOINTS SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION RETARDING MATERIAL AFTER INSTALLATION. NFPA 24, 10.4. ALL FERROUS PIPE AND FITTING SHALL BE PROTECTED WITH LOOSE 8 MIL POLYETHYLENE TUBE. THE ENDS OF THE TUBE AND ANY SPLICES MADE FOR "T'S OR OTHER PIPING COMPONENTS SHALL BE SEALED WITH 2" TAPE, APPROVED FOR UNDERGROUND USE.*
10. *BACKFILL SHALL BE WELL TAMPED LAYERS TO CONSIST OF 6" MINIMUM BED OF CLEAN FILL SAND OR PEA GRAVEL BELOW AND 12" ABOVE THE PIPE (TOTAL OF 18" MINIMUM). NFPA 24, 10.9.*
11. *FITTINGS SHALL BE AN APPROVED TYPE. NFPA 24, 10.2.*
12. *MINIMUM FIRE LINE COVER FROM FINISH GRADE TO THE TOP OF PIPE SHALL BE 48", WHERE REQUIRED, FIRE LINES MAY HAVE A MINIMUM COVER OF 30" IN NON TRAFFIC AREAS AND A MINIMUM COVER OF 36" IN TRAFFIC AREAS. NFPA 24, 10.4.2.2.3 & 10.4.2.2.3.1.*
13. *THRUST BLOCKS, SHALL BE PROVIDED WHEREVER PIPE CHANGES DIRECTION EITHER HORIZONTAL OR VERTICALLY. BACK-FILL BETWEEN THE JOINTS TO PREVENT MOVEMENT OF THE PIPE. PROVIDE DETAILS AND CALCULATIONS FOR SIZING THRUST BLOCKS BASE ON ACTUAL SOIL CONDITIONS. NFPA 24, 10.6.1.*
14. *A HYDROSTATIC TEST (200 PSI FOR TWO HOURS OR 50 PSI OVER MAXIMUM STATIC PRESSURE, WHICHEVER IS GREATER) SHALL BE PERFORMED. NFPA 24. 10.10.2.2.1.*
15. *THE SYSTEM SHALL BE THOROUGHLY FLUSHED BEFORE CONNECTION IS MADE TO OVERHEAD PIPING. FLOW SHALL BE THROUGH A MINIMUM OF A 4" HOSE OF PIPE UNLESS OTHERWISE APPROVED BY THE DEPUTY STATE FIRE MARSHAL. A DEPUTY STATE FIRE MARSHAL SHALL WITNESS THE TEST. NFPA 24, 10.10.2.1.*
16. *ALL CONTROL VALVES SHALL BE LOCKED IN THE OPEN POSITION. VALVES SHALL BE MONITORED IF THEY SERVE 6 OR MORE SPRINKLER HEADS. CFC 903.4*
17. *ALL CONTROL VALVES SHALL BE LISTED INDICATING TYPE UNLESS A NON - INDICATING VALVE, SUCH AS AN UNDERGROUND GATE VALVE WITH APPROVED ROADWAY BOX COMPLETE WITH T-WRENCH, IS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. (AHJ). NFPA 24, 6.1.1.*
18. *THE POST INDICATOR VALVES (PIV) SHALL BE TESTED TO INSURE THAT THE "TARGETS" (OPEN, CLOSED) ARE CLEARLY IDENTIFIED WHEN VALVE IS OPENED OR CLOSED NFPA 24,5.5.1, 10.10.2.4.3 & 14.1.*
19. *TESTS SHALL BE MADE BY THE INSTALLING CONTRACTOR IN THE PRESENCE OF THE (AHJ). PROVIDE A COMPLETED CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING TP DSA. NFPA 24, 10.10.1 & 14.1, CFC 901.5 & 6.*
20. *ALL FIRE HYDRANTS SHALL HAVE A 3-FOOT CIRCUMFERENCE OF CLEAR SPACE AND AN 18 INCH CLEARANCE FROM THE CENTER OF THE 4 1/2" DISCHARGE TO FINISHED GRADE LEVEL. CFC 507.5.5.*
21. *ALL FIRE HYDRANTS SHALL BE INSTALLED WITH BREAK-OFF BOLTS AND/OR BREAK-OFF SPOOLS.*
22. *ALL MECHANICAL JOINTS ON FIRE SERVICE LINES AND FIRE SPRINKLER LATERALS SHALL BE CLEANED AND THOROUGHLY COATED WITH CORROSION RETARDING MATERIAL. NFPA 24, 10.6.2.5.*
23. *BOLTS USED FOR UNDERGROUND CONNECTIONS SHALL BE STAINLESS STEEL.*
24. *THE POST INDICATOR VALVES (PIV) SHALL BE SET SO THAT THE TOP OF THE POST WILL BE 32" TO 40" ABOVE FINISHED GRADE. NFPA 24, 6.3.1.*

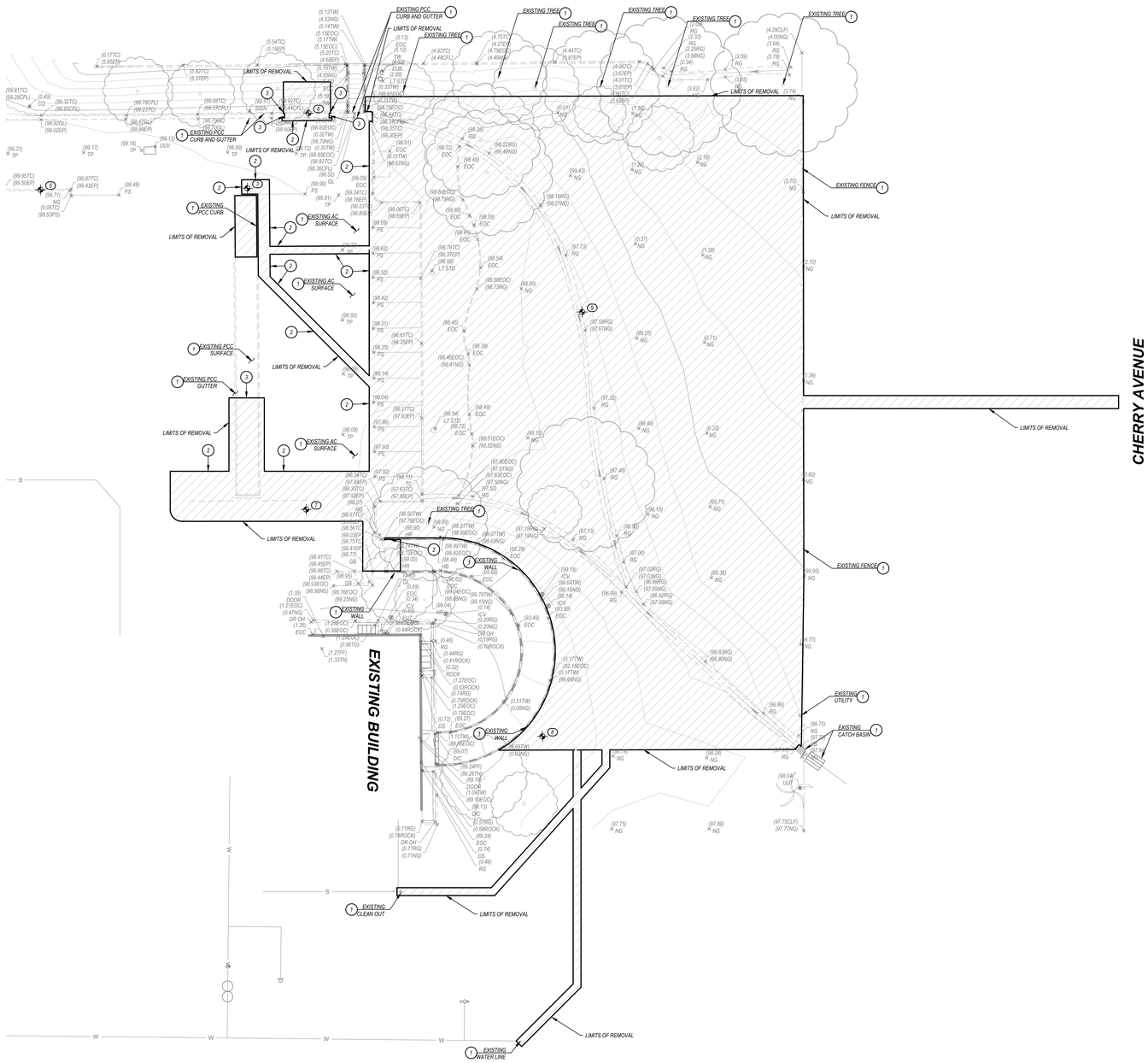
UTILITY GENERAL NOTES

1. *ALL WATER LINES 3" AND SMALLER SHALL BE SCHEDULE 80 PVC, PER ASTM D-1784 WITH SOLVENT WELD FITTINGS. ALL WATER LINES 4" AND GREATER SHALL BE CLASS 235 C900 PVC.*
2. *WATER MAIN AND SEWER MAIN CROSSINGS SHALL COMPLY WITH STATE AND COUNTY HEALTH DEPARTMENT REGULATIONS. WATER SERVICE LINES AND SEWER LATERALS SHALL NOT BE IN THE SAME TRENCH. WATER AND SEWER LINES ONSITE SHALL HAVE A TEN FOOT MINIMUM HORIZONTAL CLEARANCE WHENEVER POSSIBLE. WATER MAINS SHALL CLEAR ABOVE ALL SEWER LATERALS BY A MINIMUM OF ONE FOOT VERTICAL CLEARANCE OR UNDER BY 3' MINIMUM. WHEN WATER LINE CROSSES UNDER SEWER, OR MINIMUM CLEARANCE OVER SEWER IS NOT ACHIEVED, SEWER SHALL BE ENCASED IN CONCRETE 10' EACH SIDE OF CROSSING.*
3. *MINIMUM WATER LINE COVER FROM FINISH GRADE TO THE TOP OF PIPE SHALL BE 36" OF COVER. MINIMUM FIRE LINE COVER FROM FINISH GRADE TO THE TOP OF PIPE SHALL BE 48" COVER. WHERE REQUIRED. FIRE LINES MAY HAVE A MINIMUM COVER OF 30" IN NON TRAFFIC AREAS AND A MINIMUM COVER OF 36" IN TRAFFIC AREAS PER NFPA 24.*
4. *THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING COMPACTION TESTS OF ALL TRENCH BACKFILL AND SUBMIT THEM TO THE CONSTRUCTION MANAGER FOR APPROVAL. ALL BEDDING SHALL HAVE A SAND EQUIVALENT OF 30 OR BETTER.*
5. *WATER SERVICE CONNECTION TO THE BUILDINGS SHALL BE INSTALLED BY THE BUILDING PLUMBING CONTRACTOR.*
6. *MINIMUM BEARING AREA FOR THRUST BLOCKS SHALL BE ACCORDING TO THE THRUST BLOCK SCHEDULE SHOWN ON THESE PLANS.*
7. *A PIPE "DEFLECTOR" OR "REROUNDER" SHALL NOT BE USED TO REROUND OVERDEFLECTED PIPES.*
8. *ALL VALVE AND CLEAN OUT COVERS TO HAVE TRAFFIC RATED VANDAL PROOF COVERS AND ADJUSTED BY CONTRACTOR TO FINISH GRADE AFTER PAVING. ALL COVERS SHALL INDICATE "S" FOR SEWER, "W" FOR WATER, AND "SD" FOR STORM DRAIN.*
9. *ALL UNDERGROUND FERROUS METALS ARE TO BE PROTECTED FROM CORROSION WITH 40 MIL EXTRUDED POLYETHYLENE, 20 MIL PLASTIC TAPE OVER PRIMER PER AWWA STANDARD C209, OR HOT APPLIED COAL TAR ENAMEL OR TAPE PER AWWA STANDARD C203.*
10. *BARE STEEL APPURTENANCES SUCH AS BOLTS, JOINT HARNESSES OR FLEXIBLE COUPLINGS SHOULD BE COATED WITH A COAL TAR OR RUBBER-BASED MASTIC AFTER ASSEMBLY.*
11. *CONTRACTOR SHALL EXPOSE ALL EXISTING WATER & SEWER PIPELINES AT PROPOSED CONNECTION POINTS TO CONFIRM MATERIAL TYPES LOCATION, AND ELEVATION PRIOR TO BEGINNING CONSTRUCTION.*
12. *ALL UNDERGROUND PIPELINES SHALL HAVE UNDERGROUND WARNING TAPE PLACED 12" ABOVE THE LINES IN THE TRENCH. NON-METALLIC LINES SHALL HAVE METALLIC LINED TAPE.*
13. *IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ARRANGE FOR AND COORDINATE THE RELOCATION OF ANY EXISTING UTILITIES DEEMED NECESSARY BY THE PROPOSED IMPROVEMENT.*
14. *WHENEVER IT BECOMES NECESSARY TO TUNNEL UNDER EXISTING IMPROVEMENTS, THE CONTRACTOR SHALL SUPPORT THOSE IMPROVEMENTS IN A MANNER APPROVED BY THE PROJECT ENGINEER OR THE CONTRACTOR SHALL SAWCUT, REMOVE AND REPLACE THOSE IMPROVEMENTS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.*
15. *IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES (BY POTHOLING OR OTHER MEANS). CONTRACTORS SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) 800/227-2600 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO LOCATE EXISTING UTILITIES.*
16. *CONTRACTOR SHALL OBTAIN ANY REQUIRED O.S.H.A. PERMITS PRIOR TO ANY EXCAVATIONS.*
17. *CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING WORK. SHOULD CONDITIONS EXIST WHICH ARE CONTRARY TO THOSE SHOWN ON PLANS, THE ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK.*
18. *PURSUANT TO SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE. EXISTING SURVEY MONUMENTS SHALL BE NOTED AND DOCUMENTED BEFORE CONSTRUCTION. IF MONUMENTS ARE DISTURBED DURING CONSTRUCTION, THE CONTRACTOR SHALL PAY A REGISTERED LICENSED LAND SURVEYOR OR ENGINEER TO RESET SUCH MONUMENTS, UNLESS OTHERWISE SPECIFIED OR DESIGNATED.*
19. *ALL SEWER PIPES SHALL BE INSTALLED AT STRAIGHT GRADES BETWEEN INVERT ELEVATIONS INDICATED. ALL SEWER AND STORM DRAIN CONNECTIONS SHALL BE MADE WITH WYE'S, TEES SHALL NOT BE USED. ALL PIPES SHALL BE LAID WITH BELL END OF PIPE FACING UPSTREAM.*
20. *ALL CHANGES IN HORIZONTAL ALIGNMENT OF SEWER PIPE SHALL BE ACCOMPLISHED BY USE OF MANUFACTURED FITTINGS AND ELBOWS, AND WHERE ADDITIONALLY NECESSARY, PIPE JOINT DEFLECTIONS WITHIN ALLOWABLE LIMITS PER THE PRODUCT SPECIFICATIONS.*
21. *ALL WET UTILITY TRENCHES, BEDDING AND BACKFILL SHALL CONFORM TO SECTION 306-1.2.1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. SUBSTITUTION OF BEDDING MATERIAL SHALL BE APPROVED BY THE PROJECT CIVIL ENGINEER.*
22. *THE CONTRACTOR SHALL PERFORM TESTING, FLUSHING AND DISINFECTING OF SYSTEMS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.*
23. *THE CONTRACTOR SHALL PREPARE A COMPLETE SET OF "AS-BUILT" DRAWINGS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.*
24. *ALL PIPE SIZE REFERENCES ARE MINIMUM INSIDE DIAMETER SIZE. HORIZONTAL DIMENSIONS SHOWN ON THESE PLANS ARE TO CENTERLINE OF PIPES.*
25. *NATURAL GAS SERVICE LINES MAY BE INSTALLED IN A COMMON TRENCH WITH WATERLINES IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.*
26. *DRINKING FOUNTAIN AND IRRIGATION APPURTENANCES SHOWN HEREON ARE APPROXIMATE AND THE CONTRACTOR SHALL REFER TO THE ARCHITECTS AND LANDSCAPE ARCHITECTS PLANS FOR THE EXACT LOCATION.*
27. *CLEANOUTS FOR SEWER AND STORM DRAIN UTILITIES SHALL BE INSTALLED PER THE UPC, LATEST EDITION, WHETHER GRAPHICALLY INDICATED OR NOT. AT INTERVALS OF 100 FEET IN STRAIGHT RUNS, OTHERWISE AT EVERY HORIZONTAL AND VERTICAL ANGLE POINT AND AT ALL CHANGES IN PIPE SIZE. ALL OTHER CLEANOUTS SHOWN ON PLAN ARE AS DEEMED NECESSARY BY THE DESIGN ENGINEER AND ARE NOT TO BE OMITTED.*

PRIVATE ENGINEER'S NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS "CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER'S PLANS SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

*CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. AND THAT THE CONTRAC



GRADING DEMOLITION NOTES

1. PROTECT IN PLACE SPECIFIED ITEM
2. SAWCUT, REMOVE AND DISPOSE OF EXISTING ASPHALT
3. SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE CURB, GUTTER, AND/OR SIDEWALK

GENERAL NOTES:

THE FIELD TOPOGRAPHY SHOWN HEREON WAS COMPILED BY FIELD SURVEY PERFORMED ON 11/25/2024 BY EPIC ENGINEERS.

IN PREPARING THESE PLANS, EPIC ENGINEERS, INC. DID A THOROUGH SEARCH FOR ALL EXISTING PLANS AND COMPILED A FIELD SURVEY OF ALL ABOVE GROUND APPURTENANCES. EPIC ENGINEERS, INC. PROVIDES NO WARRANTY AND ACCEPTS NO RESPONSIBILITY AS TO THE ACTUAL LOCATION OF ANY UNDERGROUND OR ABOVE GROUND UTILITY EITHER INSTALLED BEFORE OR AFTER THE DATE OF PREPARATION OF THESE PLANS. CONTRACTOR TO CONTACT UNDERGROUND SERVICE ALERT @ 811 TO VERIFY LOCATION OF EXISTING UTILITY LOCATIONS AND SHALL CONTACT THE ENGINEER OF RECORD IF THERE IS ANY MATERIAL DISCREPANCY.
BEFORE USING THIS MAP FOR DESIGN PURPOSES, ALL EASEMENT OF RECORD AND SETBACK LINES DEFINED IN COVENANTS, CONDITIONS, AND RESTRICTIONS OF RECORD AFFECTING THIS PROPERTY SHOULD BE PLOTTED ON THIS MAP FROM A CURRENT TITLE REPORT SO THAT THESE EASEMENTS AND SETBACK LINES OF RECORD CAN BE PLOTTED ON THIS MAP.
THIS MAP SHOULD BE EXPANDED TO MEET ALTA REQUIREMENTS IF FINANCING IS TO BE OBTAINED FOR THE PROJECT, REQUIRING AN EXTENDED COVERAGE POLICY OF TITLE INSURANCE.
THIS SURVEY DOES NOT INCLUDE EASEMENTS EXCEPT THOSE SPECIFICALLY DELINEATED HEREON.

BENCHMARK:

VERTICAL CONTROL FOR THIS SURVEY IS: NAVD88 GEOID18
AS ESTABLISHED BY STATIC GPS BASED ON THE CORS STATIONS LISTED UNDER THE BASIS OF BEARINGS SHOWN HEREON.

A TEMPORARY BENCHMARK WAS ESTABLISHED AT THE BASE CONTROL POINT NO. 5 REFERENCED ABOVE

DESCRIPTION: SCOREDX

ELEVATION: 1099.90' (NAVD88)

NORTHING: 1852653.67' EASTING: 6715967.92'

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM: SPC 0405, ZONE V
BASED LOCALLY ON CONTINUOUS OPERATING REFERENCE STATIONS (CORS):
"MLFP AND "EWPP" NAD 83 (2011) EPOCH 2010.00
ALL BEARINGS SHOWN ON THIS MAP ARE GRID. ALL DISTANCES ARE GROUND DISTANCES UNLESS SPECIFIED OTHERWISE. GRID DISTANCES MAY BE OBTAINED BY MULTIPLYING THE GROUND DISTANCE BY A COMBINATION FACTOR OF: 0.99994234

TOPOGRAPHIC LEGEND:

AC	ASPHALTIC CONCRETE		IRRIGATION CONTROL VALVE
ACB	ASPHALT CONCRETE BERM		
ADA	AMERICAN DISABILITY ACT		CONTROL POINT
BOLL	BOLLARD		
BSG	BACKSIDE GROOVE		TREE
CB	CATCH BASIN		
CFL	CURB FLOWLINE		
CLF	CHAIN LINK FENCE		DRAIN
CLFG	CHAIN LINK FENCE GATE		
CLFH	CHAIN LINK FENCE HINGE		DOUBLE DETECTOR CHECK ASSEMBLY
CO	CLEANOUT		
COL	COLUMN		POST INDICATOR VALVE
COMM	COMMUNICATION		
CONC	CONCRETE		HOSE BIBB
COR	CORNER		
DF	DRINKING FOUNTAIN		
DH	DOOR HINGE		HANDICAP
DI	DRAIN INLET		
DIC	DRAIN INLET CORNER		
DR	DIRECT REFLECTION		DOOR
DS	DOWNSPOUT		
EOB	EDGE OF BRICK		
EOC	EDGE OF CONCRETE		FIRE DEPARTMENT CONNECTION
EP	EDGE OF PAVEMENT		
ETP	EDGE OF TRAVELED PATH		SIGN
FA	FIRE ACCESS		
FDC	FIRE DEPARTMENT CONNECTION		MANHOLE
FF	FINISHED FLOOR		
FH	FIRE HYDRANT		LIGHT
FL	FLOWLINE		
FP	FLAG POLE		FIRE HYDRANT
FSC	FINISHED SURFACE CONCRETE		
GB	GRADE BREAK		POWER POLE
GL	GUTTER LIP		
ICV	IRRIGATION CONTROL VALVE		CURB & GUTTER
IE	INVERT STORM DRAIN		
INV	INVERT SEWER		FLOWLINE
LT STD	LIGHT STAND		
MB	MAILBOX		EDGE OF CONCRETE / BRICK
MN	MAGNAIL		
NG	NATURAL GROUND		EDGE OF PAVEMENT
PIV	POST INDICATOR VALVE		
PP	POWER POLE		GRADE BREAK
PS	PAINT STRIPE		
RG	RIBBON GUTTER		WALL
STF	STEEL TUBE FENCE		
TC	TOP OF CURB		DEMO UTILITY LINE
TD	TRUNCATED DOMES		
TH	THRESHOLD		CONTOUR
TL	TRAFFIC LIGHT		
TOP	TOP OF PIPE		LIMITS OF REMOVAL
TP	TOP OF PAVEMENT		
TW	TOP OF WALL		
UB	UTILITY BOX		
UCO	UNKNOWN CLEANOUT		
USWD	UNDER SIDEWALK DRAIN		
UT/UTIL	UTILITY		
UV	UTILITY VAULT		
VLT	VAULT		
WC	WOODCHIPS		
WIF	WROUGHT IRON FENCE		
WS	WHEEL STOP		
V	VALVE		

UTILITIES

UTILITY INITIAL + COM/HUB/UT/UV/V	
F	FIRE
G	GAS
S	SEWER
SD	STORM DRAIN
SL	STREET LIGHT
U	UNKNOWN
W	WATER

SCALE: 1"=20'
0 20 40 60 80

DIGALERT
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811

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
EPIC ENGINEERS
111 E REDLANDS BLVD, STE 146
REDLANDS, CA 92373
909.792.5949 www.EpicRDZ.com

TOPOGRAPHIC MAP

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL/S:

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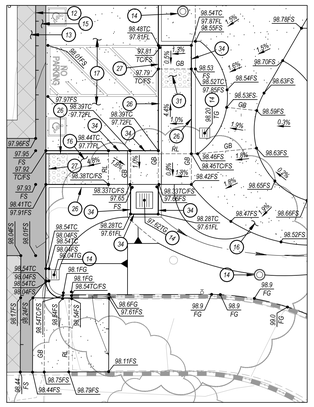
PROJECT NUMBER: 23-462102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/30/2025
DELTA: DATE: DESCRIPTION:

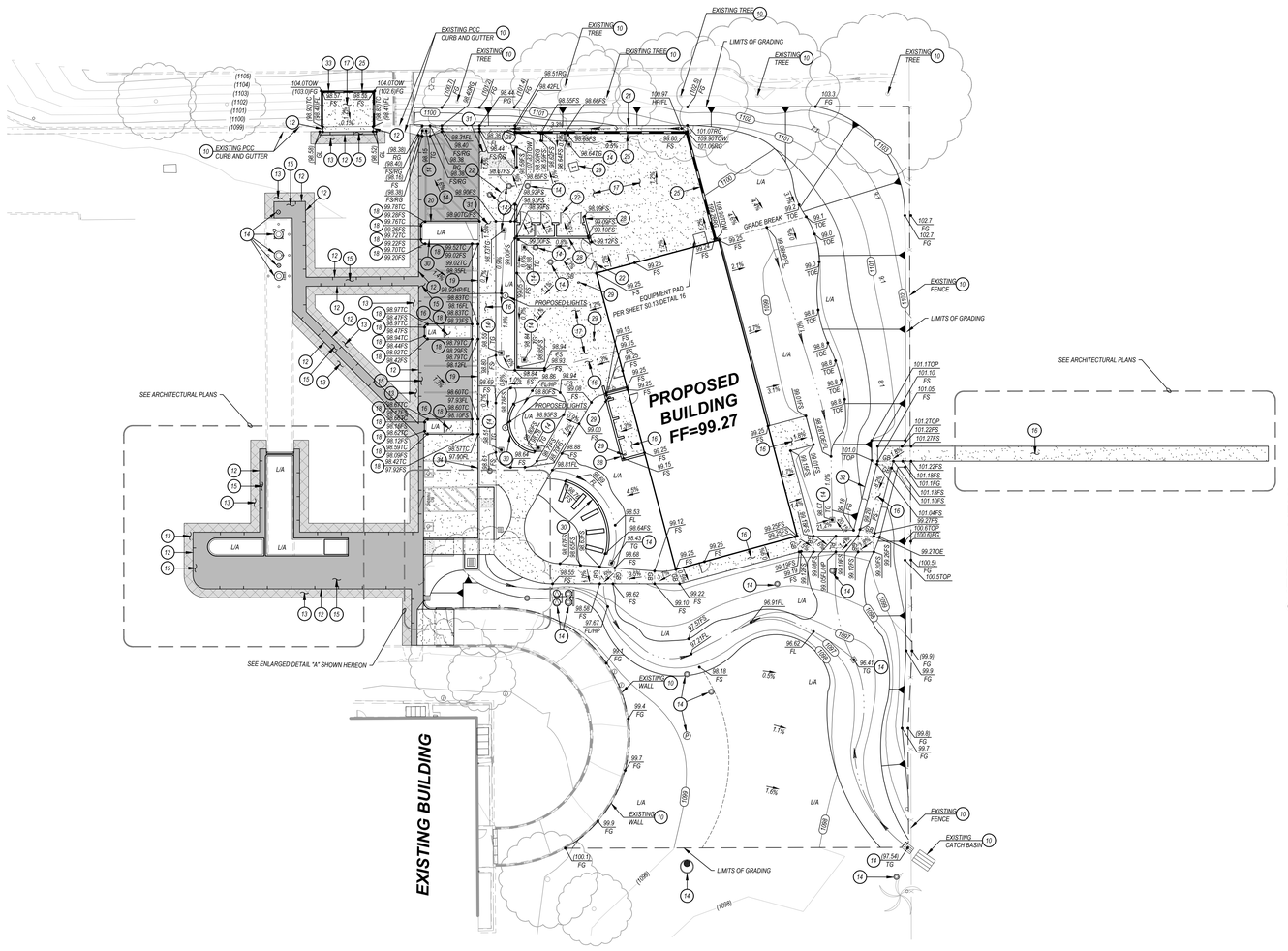
C-2.1
100% CD

J:\160.18 CHAFFEY COLLEGE IN TECH WELDING FACILITY_CIVIL 3D\PLAN - ONSITE\T160_18-C-02.DWG
PLOTTED ON: August 27, 2025 at 1:29 PM BY BRYAN VU (LA\PW00)
LAST SAVED: August 27, 2025 at 1:29 PM BY BRYAN VU



ENLARGED DETAIL "A"

SCALE: 1" = 10'



GRADING CONSTRUCTION NOTES

10. *PROTECT IN PLACE EXISTING ITEM*
11. *ADJUST EXISTING ITEM TO PROPOSED FINISHED GRADE*
12. *JOIN PROPOSED SURFACE TO EXISTING SURFACE PER DETAIL "A" ON SHEET C-6.1 WITH FLUSH TRANSITION, MATCH GRADE. DOWELING FOR PCC ONLY*
13. *GRIND AND OVERLAY EXISTING ASPHALT SURFACE 0.12' MINIMUM PER DETAIL "A" ON SHEET C-6.1, WITH FLUSH TRANSITION, MATCH GRADE*
14. *SEE SITE UTILITY PLAN FOR IDENTIFICATION OF OBJECT*
15. *CONSTRUCT 4" AC OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, AND 12" SUBGRADE COMPACTED TO 90% RELATIVE COMPACTION. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED.*
16. *CONSTRUCT 4" PCC (520-C-2500) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION. WITH #3 BARS 18" O.C. BOTH WAYS. OVER 12" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION. WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED. SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS.*
17. *CONSTRUCT 6" PCC (560-C-3250) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION. WITH #3 BARS 18" O.C. BOTH WAYS. OVER 18" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION. WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1. SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS. STRUCTURAL SECTION IS TENTATIVE. SOIL TESTING SHALL BE PERFORMED PRIOR TO GRADING TO DETERMINE STRUCTURAL SECTION REQUIREMENTS.*
18. *CONSTRUCT CURB TYPE A1-6 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*
19. *CONSTRUCT CURB TYPE A2-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*
20. *CONSTRUCT 0"- 6" PCC (520-C-2500) CURB TRANSITION PER DETAIL "C" ON SHEET C-6.1*
21. *CONSTRUCT V-DITCH PER DETAIL "D" ON SHEET C-6.1*
22. *FURNISH AND INSTALL SITE FENCING & GATES PER ARCHITECT'S PLANS AND SPECIFICATIONS*
23. *PAINT / APPLY ACCESSIBLE SIGNING / STRIPING / PAVEMENT MARKINGS PER ARCHITECT'S PLANS AND SPECIFICATIONS*
24. *CONSTRUCT PCC CURB EXTENSION PER DETAIL "E" ON SHEET C-6.1*
25. *CONSTRUCT CMU RETAINING WALL PER STRUCTURAL ENGINEER'S DETAILS*
26. *CONSTRUCT 0"- 9" PCC (520-C-2500) CURB TRANSITION PER DETAIL "F" ON SHEET C-6.1*
27. *CONSTRUCT 0" PCC (520-C-2500) CURB ONLY PER DETAIL "G" ON SHEET C-6.1*
28. *CONSTRUCT FREE STANDING WALL PER ARCHITECT'S DETAILS AND SPECIFICATIONS*
29. *CONSTRUCT COLUMN PER ARCHITECT'S DETAILS AND SPECIFICATIONS.*
30. *CONSTRUCT MOW CURB PER ARCHITECT'S DETAILS AND SPECIFICATIONS*
31. *CONSTRUCT TRUNCATED DOME PER ARCHITECT'S DETAIL*
32. *FURNISH AND INSTALL HANDRAILS PER ARCHITECT'S DETAILS ON SHEET A1.32 AND SPECIFICATIONS*
33. *CONSTRUCT WEEP HOLES PER STRUCTURAL ENGINEER'S PLANS, DETAILS, AND SPECIFICATIONS*
34. *CONSTRUCT CURB TYPE A1-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
EPIC ENGINEERS
181 E REDLANDS BLVD, STE. 144
REDLANDS, CA 92373
909.792.5949 www.EpicRE.com

PRECISE GRADING PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL'S:

REGISTERED PROFESSIONAL ENGINEER
TROY DAVID MOLANO
No. C 69
Exp. 6-30-2026
CIVIL
STATE OF CALIFORNIA

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/30/2025
DELTA: DATE: DESCRIPTION:

C-3.1

100% CD

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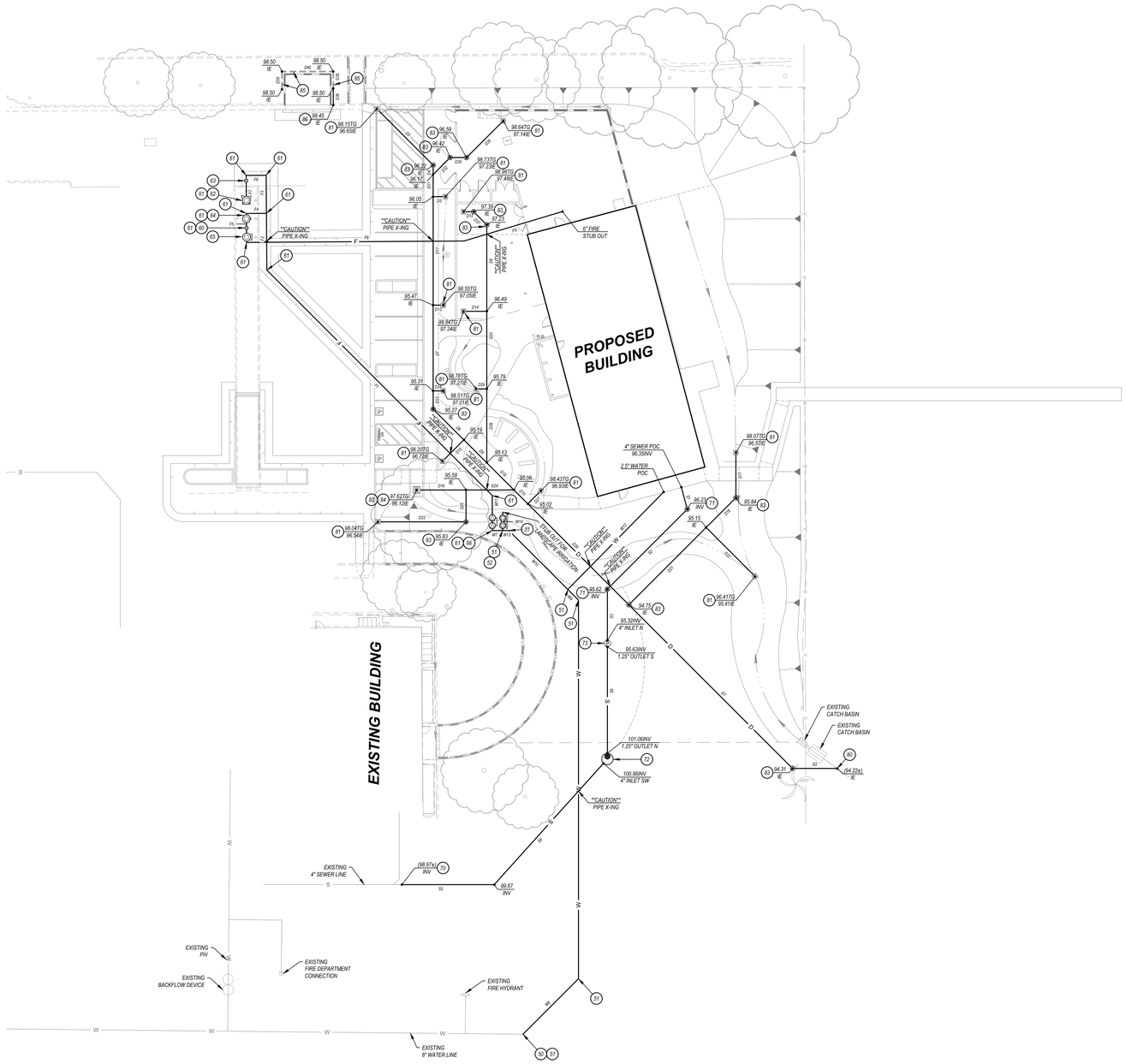
SCALE: 1"=20'
0 20 40 60 80

PLOTTED ON: August 27, 2025 at 7:33:09PM BY DAVID VILLALPANDO
XR: 00-00-00 ON: Xref C:\...\00-00-00.dwg
J:\160.18 CHAFFEY COLLEGE IN TECH WELDING FACILITY_CIVIL 3D\PLAN - ONSITE\160_18-C-03.DWG



UTILITY CONSTRUCTION NOTES

FURNISH & INSTALL ALL PIPING PER UTILITY TABLES ON SHEET C-4.1

DOMESTIC WATER AND LANDSCAPE WATER

(50) CONNECT TO EXISTING WATER LINE
(51) CONSTRUCT THRUST BLOCK PER DETAIL "H" ON SHEET C-6.1
(52) FURNISH & INSTALL 2" LANDSCAPE REDUCED PRESSURE PRINCIPLE ASSEMBLY (ZURN MODEL 375XL OR APPROVED EQUAL) PER CUTSHEET ON C-6.2

FIRE

(60) FURNISH & INSTALL SILENT WAFER CHECK VALVE (CLA-VAL SERIES 590 OR APPROVED EQUAL) PER DETAIL "L" AND CUTSHEET ON SHEET C-6.2
(61) CONSTRUCT THRUST BLOCK PER DETAIL "H" ON SHEET C-6.1
(62) FURNISH & INSTALL FIRE HYDRANT ASSEMBLY (JONES 4060 SR, C9 OR DR) PER MANUFACTURER'S DETAILS ON SHEET C-6.2 FIRE HYDRANT BREAK AWAY SPOOL & BURY TO HAVE MATCHING BOLTS PATTERNS
(63) FURNISH & INSTALL 6" GATE VALVE (MUELLER RESILIENT WEDGE 6FP OR APPROVED EQUAL) IN RSGV CAN PER DETAIL "I" ON SHEET C-6.1 AND CUTSHEET ON C-6.2
(64) FURNISH & INSTALL 6" PIV (MUELLER A-20806 OR APPROVED EQUAL) WITH FIRE GATE VALVE PER DETAIL "L" ON SHEET C-6.2 AND CUTSHEET ON C-6.3
(65) FURNISH & INSTALL FIRE DEPARTMENT CONNECTION (CROKER 6510 OR CIVIL ENGINEER APPROVED EQUAL) PER DETAIL "L" ON SHEET C-6.2 AND PER CUTSHEET ON C-6.3
(66) FURNISH & INSTALL 8" DETECTOR CHECK ASSEMBLY (ZURN WILKINS MODEL 350AST) PER CUTSHEET ON C-6.3

SEWER

(70) CONNECT TO EXISTING SEWER LINE. CONTRACTOR TO EXPOSE AND CLEAN OUT EXISTING SEWER PIPES AND FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATION AND CONTACT EPIC ENGINEERS WITH RESULTS FOR VERIFICATION TO PROCEED PRIOR TO ANY CONSTRUCTION
(71) CONSTRUCT PVC SEWER CLEANOUT PER DETAIL "K" ON SHEET C-6.2
(72) CONSTRUCT SEWER MANHOLE PER SPPWC 2009 ED. STD. PLAN 200-3 PER CUTSHEET ON SHEET C-6.3
(73) FURNISH & INSTALL SEWER GRINDER PUMP ("E ONE SEWER SYSTEMS" MODELDH071 OR APPROVED EQUAL) PER CUTSHEET ON SHEET C-6.3

STORM DRAIN

(80) CONNECT TO EXISTING STORM DRAIN LINE. CONTRACTOR TO EXPOSE AND CLEAN OUT EXISTING STORM DRAIN PIPES AND FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATION AND CONTACT EPIC ENGINEERS WITH RESULTS FOR VERIFICATION TO PROCEED PRIOR TO ANY CONSTRUCTION
(81) FURNISH & INSTALL 12" X 12" PREFABRICATED CATCH BASIN (J&R CB1212 OR APPROVED EQUAL) PER DETAIL "J" ON SHEET C-6.1
(82) FURNISH & INSTALL 24" X 24" PREFABRICATED CATCH BASIN (J&R CB1212 OR APPROVED EQUAL) PER DETAIL "J" ON SHEET C-6.1
(83) CONSTRUCT PVC STORM DRAIN CLEANOUT PER DETAIL "K" ON SHEET C-6.2
(84) CONSTRUCT CURB OUTLET STRUCTURE PER CUTSHEET ON C-6.3
(85) FURNISH AND INSTALL RETAINING WALL SUB-DRAINAGE PERFORATED PIPE PER DETAIL "M" ON SHEET C-6.2
(86) CORE THROUGH EXISTING CURB 0.041' ABOVE EXISTING FLOWLINE

SEWER LINE DATA TABLE

NAME	BEARING	LENGTH	SLOPE	DESCRIPTION
S1	S15° 00' 00"E	8.68	S=0.0142	4 " SDR 35 PVC SEWER PIPE
S2	S45° 00' 00"W	43.02	S=0.0142	4 " SDR 35 PVC SEWER PIPE
S3	S0° 00' 00"E	20.72	S=0.0142	4 " SDR 35 PVC SEWER PIPE
S4	S42° 00' 20"W	64.40	S=0.0200	4 " SDR 35 PVC SEWER PIPE
S5	N90° 00' 00"W	35.13	S=0.0200	4 " SDR 35 PVC SEWER PIPE
S6	S0° 00' 00"E	44.01	S=0.1234	1.25 " SCHEDULE 80 PVC SEWER PIPE

FIRE LINE DATA TABLE

NAME	BEARING	LENGTH	DESCRIPTION
F1	N45° 00' 00"W	121.39	8 " CLASS 305 DR-14 C900 PVC WATER LINE
F2	N00° 26' 02"W	21.66	8 " CLASS 305 DR-14 C900 PVC WATER LINE
F3	N00° 26' 02"W	14.50	6 " CLASS 305 DR-14 C900 PVC WATER LINE
F4	S89° 33' 58"W	7.63	6 " CLASS 305 DR-14 C900 PVC WATER LINE
F5	S00° 26' 02"E	11.00	6 " CLASS 305 DR-14 C900 PVC WATER LINE
F6	N89° 33' 58"E	7.63	6 " CLASS 305 DR-14 C900 PVC WATER LINE
F7	S00° 26' 02"E	9.50	6 " CLASS 305 DR-14 C900 PVC WATER LINE
F8	N89° 38' 42"E	82.78	6 " CLASS 305 DR-14 C900 PVC WATER LINE
F9	N73° 18' 59"E	39.16	6 " CLASS 305 DR-14 C900 PVC WATER LINE

WATER LINE DATA TABLE

NAME	BEARING	LENGTH	DESCRIPTION
W6	N45° 00' 00"E	29.89	8" CLASS 305 DR-14 C900 PVC WATER LINE
W7	N90° 00' 00"W	3.94	8" CLASS 305 DR-14 C900 PVC WATER LINE
W8	N00° 00' 00"E	144.22	8" CLASS 305 DR-14 C900 PVC WATER LINE
W9	N45° 00' 00"W	5.77	8" CLASS 305 DR-14 C900 PVC WATER LINE
W10	N45° 00' 00"W	31.74	8" CLASS 305 DR-14 C900 PVC WATER LINE
W11	N00° 00' 00"E	13.34	8" CLASS 305 DR-14 C900 PVC WATER LINE
W12	N44° 31' 35"E	52.08	2.5" SCHEDULE 80 WATER LINE
W13	N90° 00' 00"E	2.37	2" SCHEDULE 80 WATER LINE
W14	N00° 18' 50"E	7.00	2" SCHEDULE 80 WATER LINE

STORM DRAIN LINE DATA TABLE

NAME	BEARING	LENGTH	SLOPE	DESCRIPTION
D1	S45° 00' 00"E	88.17	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D2	N90° 00' 00"E	17.01	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D3	S45° 00' 00"E	30.34	S=0.0141	6.0 " SDR 35 PVC STORM DRAIN PIPE
D4	S0° 00' 00"E	3.57	S=0.0141	6.0 " SDR 35 PVC STORM DRAIN PIPE
D5	N90° 00' 00"W	4.67	S=0.2529	6.0 " SDR 35 PVC STORM DRAIN PIPE
D6	S0° 00' 00"E	32.94	S=0.0226	6.0 " SDR 35 PVC STORM DRAIN PIPE
D7	S0° 00' 00"E	32.67	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D8	S45° 00' 00"E	16.53	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D9	S45° 00' 00"E	12.34	S=0.0049	8.0 " SDR 35 PVC STORM DRAIN PIPE
D10	S45° 00' 00"E	7.44	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D11	S0° 00' 00"E	41.33	S=0.0141	6.0 " SDR 35 PVC STORM DRAIN PIPE
D12	N90° 00' 00"E	3.83	S=0.0226	6.0 " SDR 35 PVC STORM DRAIN PIPE
D13	N90° 00' 00"W	3.83	S=0.4122	6.0 " SDR 35 PVC STORM DRAIN PIPE
D14	N90° 00' 00"E	8.83	S=0.0962	6.0 " SDR 35 PVC STORM DRAIN PIPE
D15	N45° 00' 00"E	11.51	S=0.1329	6.0 " SDR 35 PVC STORM DRAIN PIPE
D16	N90° 00' 00"E	18.79	S=0.0286	8.0 " SDR 35 PVC STORM DRAIN PIPE
D17	S0° 00' 00"E	17.17	S=0.0428	8.0 " SDR 35 PVC STORM DRAIN PIPE
D18	S45° 00' 00"W	16.01	S=0.0428	8.0 " SDR 35 PVC STORM DRAIN PIPE
D19	S45° 00' 00"E	14.65	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D20	S0° 00' 00"E	29.57	S=0.0237	6.0 " SDR 35 PVC STORM DRAIN PIPE

STORM DRAIN LINE DATA TABLE

NAME	BEARING	LENGTH	SLOPE	DESCRIPTION
D21	S45° 00' 00"W	41.64	S=0.0097	8.0 " SDR 35 PVC STORM DRAIN PIPE
D22	N45° 00' 00"W	26.30	S=0.0097	8.0 " SDR 35 PVC STORM DRAIN PIPE
D23	N90° 00' 00"E	33.52	S=0.0212	6.0 " SDR 35 PVC STORM DRAIN PIPE
D24	N90° 00' 00"E	18.26	S=0.0286	8.0 " SDR 35 PVC STORM DRAIN PIPE
D25	N0° 00' 00"E	12.16	S=0.0207	6.0 " SDR 35 PVC STORM DRAIN PIPE
D26	S45° 00' 00"E	54.41	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D27	S45° 00' 00"W	7.00	S=0.2729	6.0 " SDR 35 PVC STORM DRAIN PIPE
D28	S0° 00' 00"E	28.13	S=0.0234	6.0 " SDR 35 PVC STORM DRAIN PIPE
D29	N90° 00' 00"E	4.00	S=0.3696	6.0 " SDR 35 PVC STORM DRAIN PIPE
D30	N90° 00' 00"W	6.25	S=0.0276	6.0 " SDR 35 PVC STORM DRAIN PIPE
D31	S0° 00' 00"E	8.43	S=0.0141	6.0 " SDR 35 PVC STORM DRAIN PIPE
D32	S45° 00' 00"W	9.14	S=0.0276	6.0 " SDR 35 PVC STORM DRAIN PIPE
D33	S0° 00' 00"E	6.97	S=0.0050	8.0 " SDR 35 PVC STORM DRAIN PIPE
D34	N90° 00' 00"W	3.83	S=0.4435	6.0 " SDR 35 PVC STORM DRAIN PIPE
D35	S45° 00' 00"W	19.75	S=0.0276	6.0 " SDR 35 PVC STORM DRAIN PIPE
D36	S0° 00' 00"E	6.38	S=0.0078	4" SDR 35 PVC STORM DRAIN PIPE
D37	S45° 00' 00"E	7.07	S=0.0226	6" SDR 35 PVC STORM DRAIN PIPE
D38	S0° 00' 00"E	6.38	S=0.0000	4" PERFORATED SCH 23.5 PVC PIPE
D39	N0° 00' 00"E	6.75	S=0.0000	4" PERFORATED SCH 23.5 PVC PIPE
D40	N90° 00' 00"E	19.50	S=0.0000	4" PERFORATED SCH 23.5 PVC PIPE

SCALE: 1"=20'
0 20 40 60 80

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PLOTTED ON: August 27, 2025 at 1:43:39 PM BY MIKE VILLALPANDO
PLOTTED ON: August 27, 2025 at 1:39:08 PM (GMT)
J:\160.18 CHAFFEY COLLEGE IN TECH WELDING FACILITY_CIVIL 3D\PLAN - ONSITE\E160_18-C-04.DWG

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
EPIC ENGINEERS
181 E REDLANDS BLVD, STE 144
REDLANDS, CA 92373
909.792.5949 www.EpicRCE.com

COMPOSITE UTILITIES PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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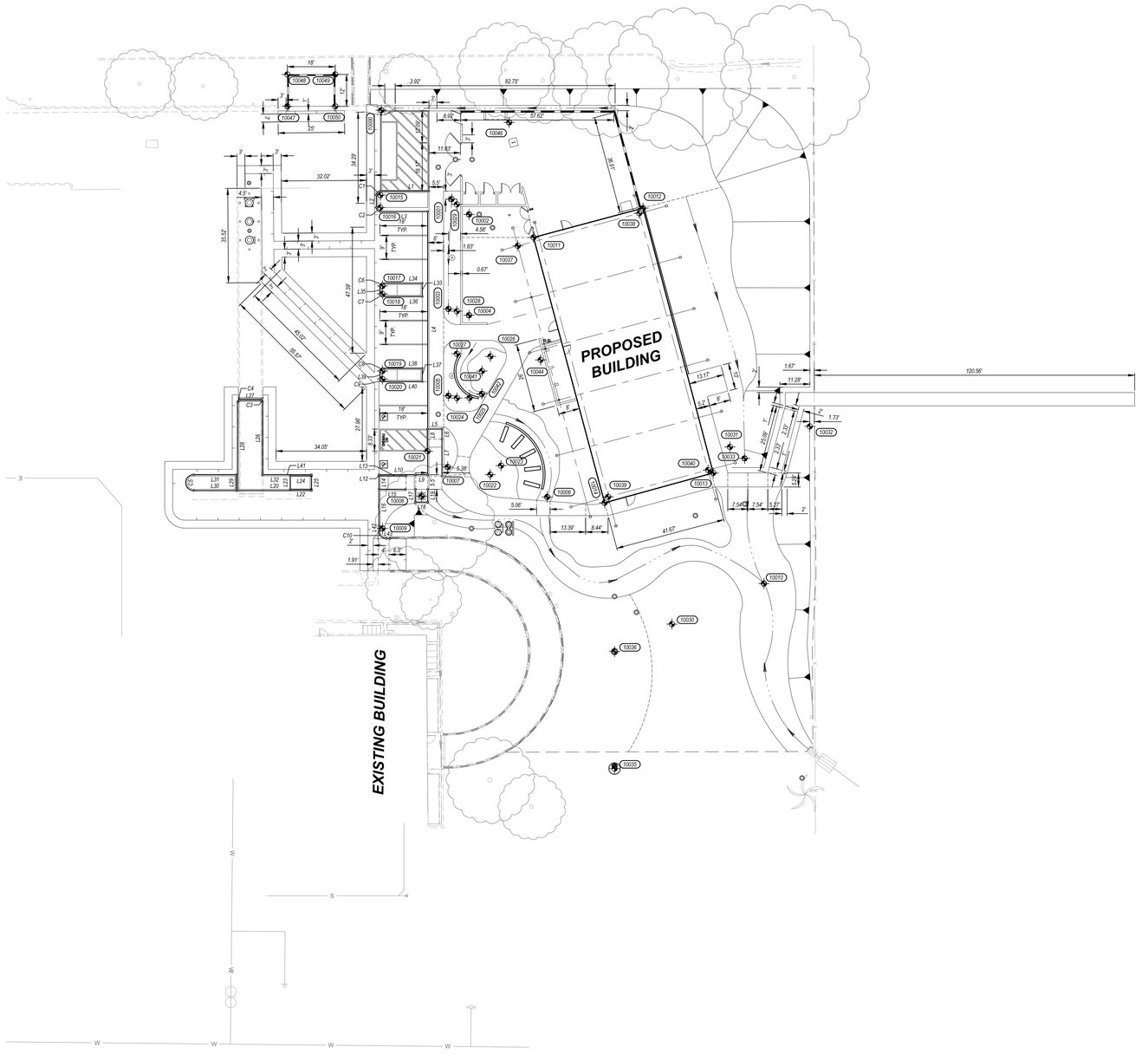
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA: DATE: DESCRIPTION:

C-4.1
100% CD



HORIZONTAL CONTROL TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
10000	1852681.37	6716095.94	CENTER OF CATCH BASIN
10001	1852647.92	6716122.40	CENTER OF CATCH BASIN
10002	1852642.19	6716128.98	CENTER OF CATCH BASIN
10003	1852606.59	6716121.23	CENTER OF CATCH BASIN
10004	1852604.25	6716128.98	CENTER OF CATCH BASIN
10005	1852573.93	6716121.23	CENTER OF CATCH BASIN
10006	1852535.87	6716158.38	CENTER OF CATCH BASIN
10007	1852547.13	6716120.94	CENTER OF CATCH BASIN
10008	1852536.18	6716111.12	CENTER OF CATCH BASIN
10009	1852524.03	6716096.40	CENTER OF CATCH BASIN
10010	1852503.29	6716239.95	CENTER OF CATCH BASIN
10011	1852633.49	6716153.25	CORNER OF PROPOSED BUILDING
10012	1852644.53	6716194.46	CORNER OF PROPOSED BUILDING
10013	1852544.91	6716220.87	CORNER OF PROPOSED BUILDING
10014	1852533.68	6716179.99	CORNER OF PROPOSED BUILDING
10015	1852649.43	6716095.61	CENTER OF CURVE RADIUS
10016	1852644.76	6716095.61	CENTER OF CURVE RADIUS
10017	1852615.26	6716096.40	CENTER OF CURVE RADIUS
10018	1852612.26	6716096.40	CENTER OF CURVE RADIUS
10019	1852583.26	6716096.40	CENTER OF CURVE RADIUS
10020	1852580.26	6716096.40	CENTER OF CURVE RADIUS
10021	1852553.06	6716113.33	CENTER OF CURVE RADIUS
10022	1852544.28	6716136.96	CENTER OF CURVE RADIUS
10023	1852547.66	6716141.02	CENTER OF CURVE RADIUS
10024	1852573.09	6716124.40	CENTER OF CURVE RADIUS
10025	1852573.15	6716129.14	CENTER OF CURVE RADIUS
10026	1852588.76	6716137.03	CENTER OF CURVE RADIUS
10027	1852589.76	6716124.40	CENTER OF CURVE RADIUS
10028	1852605.76	6716124.40	CENTER OF CURVE RADIUS
10029	1852645.93	6716124.40	CENTER OF CURVE RADIUS
10030	1852488.04	6716205.33	CENTER OF CURVE RADIUS
10031	1852554.69	6716227.19	CENTER OF CURVE RADIUS
10032	1852562.43	6716257.21	CENTER OF CURVE RADIUS
10033	1852550.38	6716232.67	CENTER OF CATCH BASIN
10035	1852433.69	6716183.74	CENTER OF MANHOLE
10036	1852477.70	6716183.74	CENTER OF GRINDER PUMP
10037	1852630.34	6716147.32	INTERSECTION OF BLDG GRID C & 2
10038	1852642.59	6716193.04	INTERSECTION OF BLDG GRID A & 2
10039	1852535.93	6716181.33	INTERSECTION OF BLDG GRID B & 7
10040	1852546.00	6716218.92	INTERSECTION OF BLDG GRID A & 7
10041	1852583.24	6716133.87	CENTER OF CURVE RADIUS
10042	1852574.67	6716133.81	CENTER OF CATCH BASIN
10044	1852587.43	6716155.90	CENTER OF CURVE RADIUS
10045	25.63	17.50	CENTER OF CATCH BASIN
10046	1852676.77	6716144.06	CENTER OF CATCH BASIN
10047	1852682.82	6716060.61	CMU WALL END
10048	1852694.82	6716060.61	CMU WALL CORNER
10049	1852694.82	6716078.61	CMU WALL CORNER
10050	1852682.82	6716078.61	CMU WALL END

LINE DATA TABLE

LINE	BEARING	DISTANCE
L1	N90° 00' 00.00"E	18.29'
L2	N00° 00' 00.00"E	4.67'
L3	N90° 00' 00.00"W	17.79'
L5	N90° 00' 00.00"E	5.38'
L6	S00° 00' 00.00"E	3.83'
L7	S00° 00' 00.00"E	13.83'
L8	N00° 00' 00.00"E	99.00'
L9	N90° 00' 00.00"W	4.50'
L10	N90° 00' 00.00"W	13.83'
L11	S89° 58' 27.28"E	10.21'
L12	S00° 00' 00.00"E	0.50'
L13	S89° 58' 27.28"E	10.21'
L14	S00° 00' 00.00"E	5.00'
L15	N90° 00' 00.00"W	10.00'
L16	S00° 00' 00.00"E	13.73'
L17	S00° 09' 21.41"W	4.83'
L18	S89° 55' 23.59"E	4.50'
L19	N00° 09' 21.41"E	4.83'
L20	N90° 00' 00.00"E	27.83'
L21	N90° 00' 00.00"E	27.83'
L22	N90° 00' 00.00"W	8.00'
L23	S00° 00' 00.00"E	5.00'
L24	N90° 00' 00.00"E	8.00'
L25	S00° 00' 00.00"E	5.00'
L26	N00° 00' 00.00"E	27.46'
L27	N90° 00' 00.00"W	8.24'
L28	S00° 00' 00.95"W	33.37'
L29	N00° 00' 00.00"E	6.00'
L30	N90° 00' 00.00"E	16.00'
L31	N90° 00' 00.00"W	16.00'
L32	N90° 00' 00.00"W	18.33'
L33	N00° 00' 00.00"E	5.00'
L34	N90° 00' 00.00"W	15.00'
L35	S00° 00' 00.00"E	3.00'
L36	N90° 00' 00.00"E	15.00'
L37	N00° 00' 00.00"E	5.00'
L38	N90° 00' 00.00"W	15.00'
L39	S00° 00' 00.00"E	3.00'
L40	N90° 00' 00.00"E	15.00'
L41	N90° 00' 00.00"W	18.33'

CURVE DATA TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT
C1	2.36'	1.50'	90° 00' 00.00"	1.50'
C2	2.36'	1.50'	90° 00' 00.00"	1.50'
C3	0.94'	0.55'	98° 07' 48.91"	0.63'
C4	0.99'	0.63'	90° 00' 00.00"	0.63'
C5	9.42'	3.00'	180° 00' 00.00"	INFINITY'
C6	1.57'	1.00'	90° 00' 00.00"	1.00'
C7	1.57'	1.00'	90° 00' 00.00"	1.00'
C8	1.57'	1.00'	90° 00' 00.00"	1.00'
C9	1.57'	1.00'	90° 00' 00.00"	1.00'

SCALE: 1"=20'
0 20 40 60 80

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
EPIC ENGINEERS
181 E REDLANDS BLVD, STE. 146
REDLANDS, CA 92373
909.792.5949 www.EpicRCE.com

HORIZONTAL CONTROL

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL'S:
REGISTERED PROFESSIONAL ENGINEER
TROY DAVID MOLANO
No. C87
Exp. 6-30-2026
CIVIL
STATE OF CALIFORNIA

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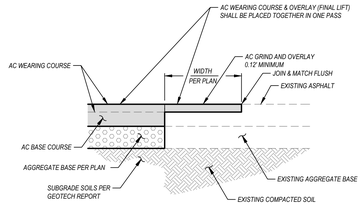
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/03/2025
DELTA: DATE: DESCRIPTION:

C-5.1
100% CD

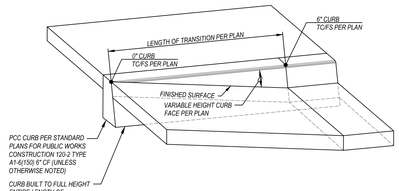
PLOTTED ON: August 27, 2025 7:31:19 PM BY DAVID VILLALPANDO
LAST SAVED ON: August 27, 2025 7:31:14 PM BY DAVID
J:\160.18 CHAFFEY COLLEGE IN TECH WELDING FACILITY_CIVIL 3D\PLAN - ONSITE\160_18-C-05.DWG



GRIND AND OVERLAY

JOIN & MATCH ASPHALT

NOT TO SCALE

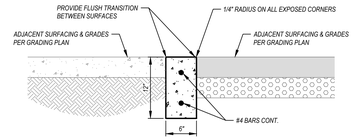


DETAIL "C"

20 0"-6" CURB TRANSITION

NOT TO SCALE

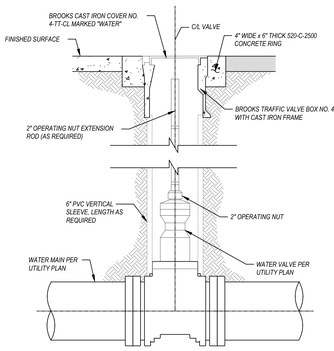
NOTES:
1. *CURB SHALL BE CONSTRUCTED OF 520-C-2500 PCC, MINIMUM (UNLESS OTHERWISE NOTED ON PLAN)*
2. *TC AND FS ELEVATIONS PER GRADING PLAN*



DETAIL "G"

27 0" PCC CURB

NOT TO SCALE



DETAIL "I"

63 RSGV IN CAN

NOT TO SCALE

GRADING CONSTRUCTION NOTES

10 *PROTECT IN PLACE EXISTING ITEM*

11 *ADJUST EXISTING ITEM TO PROPOSED FINISHED GRADE*

12 *JOIN PROPOSED SURFACE TO EXISTING SURFACE PER DETAIL "A" ON SHEET C-6.1 WITH FLUSH TRANSITION. MATCH GRADE. DOWELING FOR PCC ONLY*

13 *GRIND AND OVERLAY EXISTING ASPHALT SURFACE 0.12' MINIMUM PER DETAIL "A" ON SHEET C-6.1, WITH FLUSH TRANSITION. MATCH GRADE*

14 *SEE SITE UTILITY PLAN FOR IDENTIFICATION OF OBJECT*

15 *CONSTRUCT 4" AC OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, AND 12" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED.*

16 *CONSTRUCT 4" PCC (520-C-2500) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, WITH #3 BARS 18" O.C. BOTH WAYS, OVER 12" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION. WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED. SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS.*

17 *CONSTRUCT 6" PCC (560-C-3250) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, WITH #3 BARS 18" O.C. BOTH WAYS, OVER 18" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION. WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1. SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS. STRUCTURAL SECTION IS TENTATIVE. SOIL TESTING SHALL BE PERFORMED PRIOR TO GRADING TO DETERMINE STRUCTURAL SECTION REQUIREMENTS.*

18 *CONSTRUCT CURB TYPE A1-6 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*

19 *CONSTRUCT CURB TYPE A2-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*

20 *CONSTRUCT 0"- 6" PCC (520-C-2500) CURB TRANSITION PER DETAIL "C" ON SHEET C-6.1*

21 *CONSTRUCT V-DITCH PER DETAIL "D" ON SHEET C-6.1*

22 *FURNISH AND INSTALL SITE FENCING & GATES PER ARCHITECT'S PLANS AND SPECIFICATIONS*

23 *PAINT / APPLY ACCESSIBLE SIGNING / STRIPING / PAVEMENT MARKINGS PER ARCHITECT'S PLANS AND SPECIFICATIONS*

24 *CONSTRUCT PCC CURB EXTENSION PER DETAIL "E" ON SHEET C-6.1*

25 *CONSTRUCT CMU RETAINING WALL PER STRUCTURAL ENGINEER'S DETAILS*

26 *CONSTRUCT 0"- 8" PCC (520-C-2500) CURB TRANSITION PER DETAIL "F" ON SHEET C-6.1*

27 *CONSTRUCT 0" PCC (520-C-2500) CURB ONLY PER DETAIL "G" ON SHEET C-6.1*

28 *CONSTRUCT FREE STANDING WALL PER ARCHITECT'S DETAILS AND SPECIFICATIONS*

29 *CONSTRUCT COLUMN PER ARCHITECT'S DETAILS AND SPECIFICATIONS.*

30 *CONSTRUCT MOW CURB PER ARCHITECT'S DETAILS AND SPECIFICATIONS*

31 *CONSTRUCT TRUNCATED DOME PER ARCHITECT'S DETAIL*

32 *FURNISH AND INSTALL HANDRAILS PER ARCHITECT'S DETAILS ON SHEET A1.32 AND SPECIFICATIONS*

33 *CONSTRUCT WEEP HOLES PER STRUCTURAL ENGINEER'S PLANS, DETAILS, AND SPECIFICATIONS*

34 *CONSTRUCT CURB TYPE A1-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*

UTILITY CONSTRUCTION NOTES

FURNISH & INSTALL ALL PIPING PER UTILITY TABLES ON SHEET C-4.1

DOMESTIC WATER AND LANDSCAPE WATER

50 *CONNECT TO EXISTING WATER LINE*

51 *CONSTRUCT THRUST BLOCK PER DETAIL "H" ON SHEET C-6.1*

52 *FURNISH & INSTALL 2" LANDSCAPE REDUCED PRESSURE PRINCIPLE ASSEMBLY (ZURN MODEL 375XL OR APPROVED EQUAL) PER CUTSHEET ON C-6.2*

FIRE

60 *FURNISH & INSTALL SILENT WAFER CHECK VALVE (CLA-VAL SERIES 590 OR APPROVED EQUAL) PER DETAIL "L" AND CUTSHEET ON SHEET C-6.2*

61 *CONSTRUCT THRUST BLOCK PER DETAIL "H" ON SHEET C-6.1*

62 *FURNISH & INSTALL FIRE HYDRANT ASSEMBLY (JONES 4060 BR, CR OR DR) PER MANUFACTURER'S DETAILS ON SHEET C-6.2 FIRE HYDRANT BREAK AWAY SPOOL & BURY TO HAVE MATCHING BOLTS PATTERNS*

63 *FURNISH & INSTALL 6" GATE VALVE (MUELLER RESILIENT WEDGE (FP OR APPROVED EQUAL) IN RSGV CAN PER DETAIL "I" ON SHEET C-6.1 AND CUTSHEET ON C-6.2*

64 *FURNISH & INSTALL 6" FIV (MUELLER A-20606 OR APPROVED EQUAL) WITH FIRE GATE VALVE PER DETAIL "L" ON SHEET C-6.2 AND CUTSHEET ON C-6.3*

65 *FURNISH & INSTALL FIRE DEPARTMENT CONNECTION (CROKER 6510 OR CIVIL ENGINEER APPROVED EQUAL) PER DETAIL "L" ON SHEET C-6.2 AND PER CUTSHEET ON C-6.3*

66 *FURNISH & INSTALL 6" DETECTOR CHECK ASSEMBLY (ZURN WILKINS MODEL 350AST) PER CUTSHEET ON C-6.3*

SEWER

70 *CONNECT TO EXISTING SEWER LINE. CONTRACTOR TO EXPOSE AND CLEAN OUT EXISTING SEWER PIPES AND FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATION AND CONTACT EPIC ENGINEERS WITH RESULTS FOR VERIFICATION TO PROCEED PRIOR TO ANY CONSTRUCTION*

71 *CONSTRUCT PVC SEWER CLEANOUT PER DETAIL "K" ON SHEET C-6.2*

72 *CONSTRUCT SEWER MANHOLE PER SPPWC 2009 ED. STD. PLAN 200-3 PER CUTSHEET ON SHEET C-6.3*

73 *FURNISH & INSTALL SEWER GRINDER PUMP ("E ONE SEWER SYSTEMS" MODELDH071 OR APPROVED EQUAL) PER CUTSHEET ON SHEET C-6.3*

STORM DRAIN

80 *CONNECT TO EXISTING STORM DRAIN LINE. CONTRACTOR TO EXPOSE AND CLEAN OUT EXISTING STORM DRAIN PIPES AND FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATION AND CONTACT EPIC ENGINEERS WITH RESULTS FOR VERIFICATION TO PROCEED PRIOR TO ANY CONSTRUCTION*

81 *FURNISH & INSTALL 12" X 12" PREFABRICATED CATCH BASIN (J&R CB1212 OR APPROVED EQUAL) PER DETAIL "J" ON SHEET C-6.1*

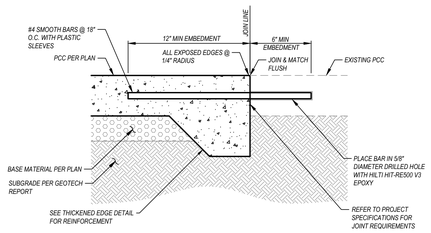
82 *FURNISH & INSTALL 24" X 24" PREFABRICATED CATCH BASIN (J&R CB1212 OR APPROVED EQUAL) PER DETAIL "J" ON SHEET C-6.1*

83 *CONSTRUCT PVC STORM DRAIN CLEANOUT PER DETAIL "K" ON SHEET C-6.2*

84 *CONSTRUCT CURB OUTLET STRUCTURE PER CUTSHEET ON C-6.3*

85 *FURNISH AND INSTALL RETAINING WALL SUB-DRAINAGE PERFORATED PIPE PER DETAIL "M" ON SHEET C-6.2*

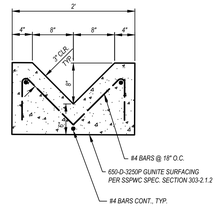
86 *CORE THROUGH EXISTING CURB 0.041' ABOVE EXISTING FLOWLINE*



DOWELING DETAIL AT EXISTING PCC

JOIN & MATCH CONCRETE

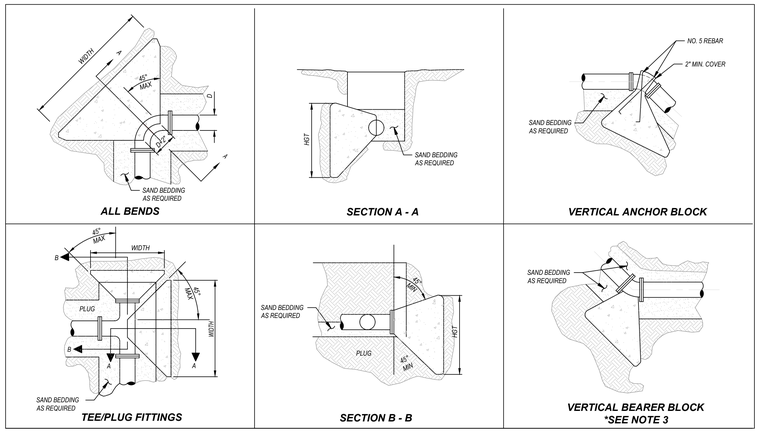
NOT TO SCALE



DETAIL"D"

21 2' GUNITE V-DITCH

NOT TO SCALE



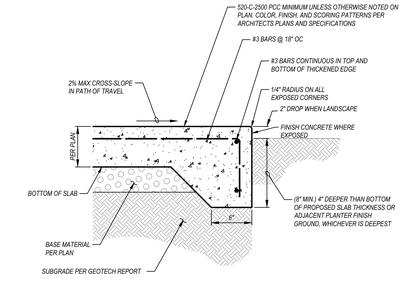
THRUST BLOCK TABLE						
PIPE SIZE (INCH)	TYPE OF FITTING	SAFE SOIL BEARING PRESSURE (PSF)	BEARING AREA WORKING PRESSURE (150 PSI) HGT x WIDTH			VERT. ANCHOR BLOCK MIN. VOLUME (CUBIC FEET)
10	TEE/PLUG	1500	5.00'	x	5.00'	
10	90° BEND	1500	4.00'	x	4.50'	
10	45° BEND	1500	3.50'	x	3.50'	91
10	22.5° BEND	1500	2.50'	x	2.50'	46
10	11.25° BEND	1500	1.50'	x	2.00'	23
8	TEE/PLUG	1500	4.00'	x	4.00'	
8	90° BEND	1500	3.50'	x	3.50'	
8	45° BEND	1500	2.50'	x	2.50'	58
8	22.5° BEND	1500	1.50'	x	2.00'	30
8	11.25° BEND	1500	1.50'	x	1.50'	15
6	TEE/PLUG	1500	3.00'	x	3.00'	
6	90° BEND	1500	2.50'	x	2.50'	
6	45° BEND	1500	2.00'	x	2.00'	33
6	22.5° BEND	1500	1.50'	x	1.50'	17
6	11.25° BEND	1500	1.00'	x	1.00'	9
3 & 4	TEE/PLUG	1500	2.00'	x	2.00'	
3 & 4	90° BEND	1500	1.50'	x	2.00'	
3 & 4	45° BEND	1500	1.50'	x	1.50'	15
3 & 4	22.5° BEND	1500	1.00'	x	1.00'	8
3 & 4	11.25° BEND	1500	1.00'	x	1.00'	4

NOTES:
1. *PROVIDE CONCRETE THRUST BLOCK AT ALL PRESSURE PIPE*
2. *USE CLASS 450-C-2000 CONCRETE PER SSPWC LATEST EDITION.*
3. *VERTICAL BEARER BLOCK SIZE MAY BE 1/2 THE AREA SHOWN FOR HORIZONTAL BEARER BLOCKS.*
4. *FULLY RESTRAINED JOINTS PER PIPE MANUFACTURER'S RECOMMENDATIONS MAY BE USED IN LIEU OF THRUST BLOCKS ON DUCTILE IRON PIPE ONLY.*
5. *NO CONCRETE SHALL BE POURED ON ANY PART OF THE JOINT.*
6. *WIDEN TRENCH TO ACCOMMODATE BLOCKS AS NECESSARY.*
7. *THRUST BLOCKS SHOWN HEREON ARE NOT TO SCALE.*
8. *BLOCK SIZES BASED UPON 1500 psf ALLOWABLE HORIZONTAL AND VERTICAL BEARING RESPECTIVELY.*

DETAIL "H"

31 61 THRUST BLOCK SCHEDULE

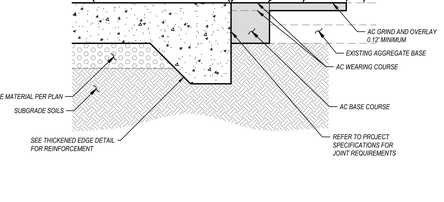
NOT TO SCALE

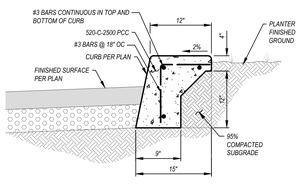


DETAIL"B"

16 17 PCC WITH THICKENED EDGE

NOT TO SCALE



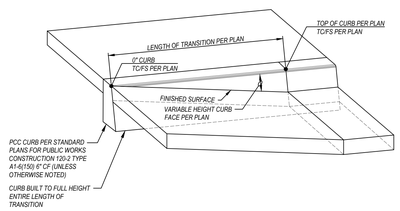


*****NOTE TO CONTRACTOR:***
REINFORCEMENT AT CURB EXTENSION ONLY

DETAIL "E"

24 PCC CURB EXTENSION

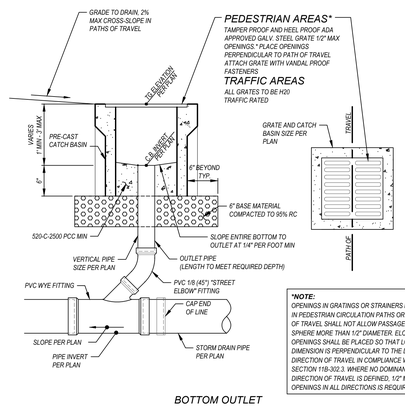
NOT TO SCALE



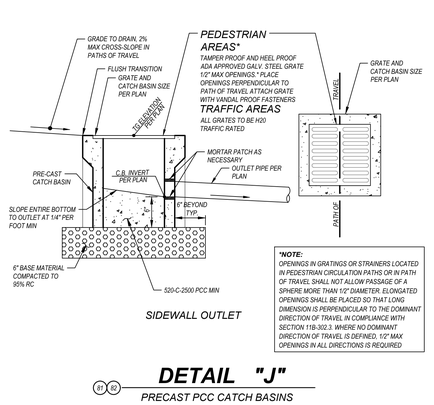
DETAIL "F"

26 0"-8" CURB TRANSITION

NOT TO SCALE



BOTTOM OUTLET



SIDEWALL OUTLET

DETAIL "J"

81 82 PRECAST PCC CATCH BASINS

NOT TO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
EPIC ENGINEERS
181 E. REDLANDS BLVD., STE. 144
REDLANDS, CA 92373
909.792.9949 www.EpicHCE.com

DETAIL SHEET

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL'S:

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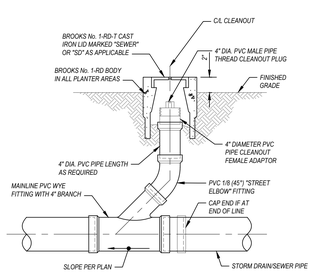
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/02/2025
DELTA: DATE: DESCRIPTION:

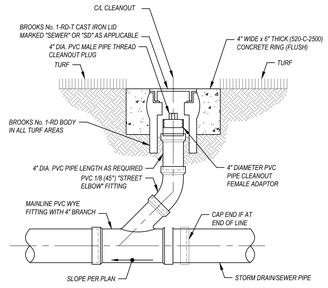
C-6.1

100% CD

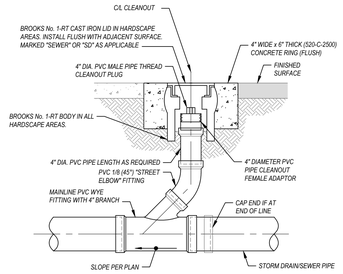
J:\160.18 CHAFFEY COLLEGE IN TECH WELDING FACILITY_CIVIL 3D\PLAN - ONSITE\160_18-C-06.DWG
PLOTTED ON August 27, 2025 AT 3:51 PM BY DANIEL ULLA-PADDO
XREFS: 160_18-C-XREF.DWG, 160_18-XREF.DWG, 160_18-XREF-SSH.DWG



CLEANOUT IN PLANTER AREA



CLEANOUT IN GRASSY AREAS

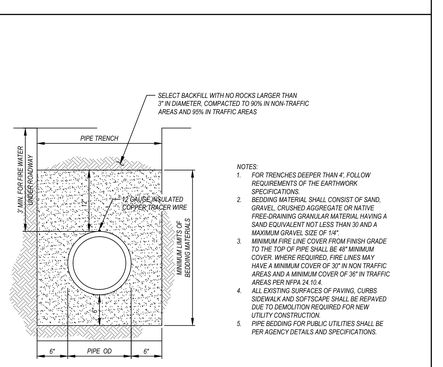


CLEANOUT IN HARDSCAPE

DETAIL"K"

(71) (83) PVC PIPE CLEANOUT

NOT TO SCALE

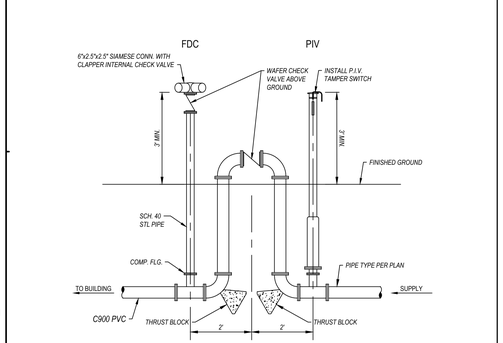


NOTES:

1. FOR TRENCHES DEEPER THAN 4'. FOLLOW REQUIREMENTS OF THE EARTHWORK SPECIFICATIONS.
2. BEDDING MATERIAL SHALL CONSIST OF SAND, GRAVEL, CRUSHED AGGREGATE OR NATIVE FREE-DRAINING GRANULAR MATERIAL HAVING A SAND EQUIVALENT NOT LESS THAN 30 AND A MAXIMUM GRAVEL SIZE OF 1/4".
3. MINIMUM FIRE LINE COVER FROM FINISH GRADE TO THE TOP OF PIPE SHALL BE 48" MINIMUM COVER. WHERE REQUIRED, FIRE LINES MAY HAVE A MINIMUM COVER OF 30" IN NON TRAFFIC AREAS AND A MINIMUM COVER OF 36" IN TRAFFIC AREAS PER NFPA 24.10.4.
4. ALL EXISTING SURFACES OF PAVING, CURBS SIDEWALK AND SOFTSCAPE SHALL BE REPAVED DUE TO DEMOLITION REQUIRED FOR NEW UTILITY CONSTRUCTION.
5. PIPE BEDDING FOR PUBLIC UTILITIES SHALL BE PER AGENCY DETAILS AND SPECIFICATIONS.

TYPICAL UTILITY TRENCH

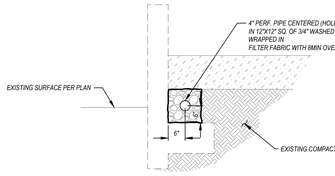
NOT TO SCALE



DETAIL "L"

(65) (84) (85) POST INDICATOR/FIRE DEPARTMENT CONNECTION DETAIL

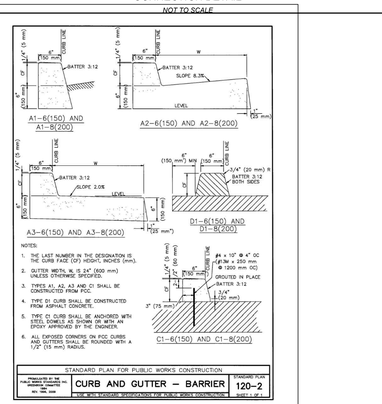
NOT TO SCALE



DETAIL "M"

(65) RETAINING WALL SUBDRAIN

NOT TO SCALE



NOTES:

1. THE LAST NUMBER IN THE DESIGNATION IS THE CURB FACE (CF) HEIGHT, INCHES (mm).
2. GUTTER WIDTH, W, IS 24" (600 mm) UNLESS OTHERWISE SPECIFIED.
3. TYPES A1, A2, A3 AND D1 SHALL BE CONSTRUCTED FROM PCC.
4. TYPE C1 CURB SHALL BE ANCHORED WITH STEEL DOWELS 12" ALONG OR WITH AN EPOXY APPROVED BY THE ENGINEER.
5. ALL EXPOSED CORNERS ON PCC CURBS AND GUTTERS SHALL BE ROUNDED WITH A 1/2" (15 mm) RADIUS.

STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION

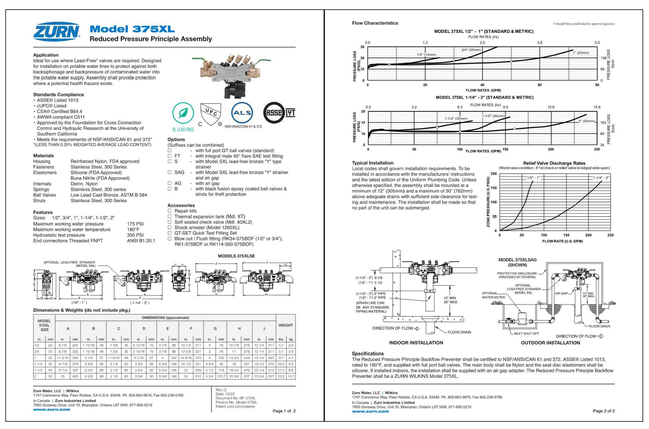
CURB AND GUTTER – BARRIER — STANDARD PLAN 120-2

THE APWA STANDARDS ARE FOR PUBLIC WORKS CONSTRUCTION

SPPWC STD PLAN 120-2

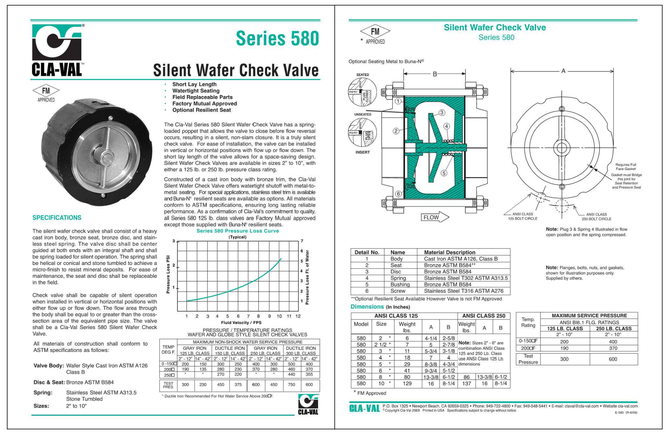
(18) (19)

NOT TO SCALE



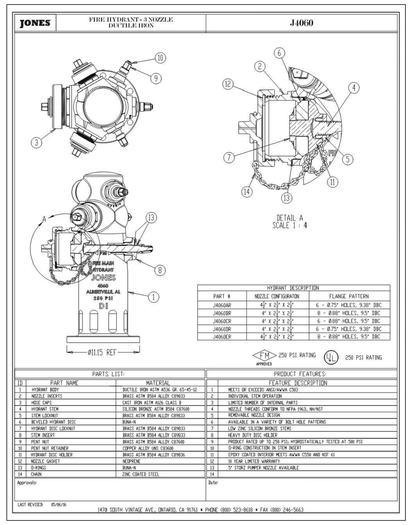
LANDSCAPE RP DEVICE

NOT TO SCALE



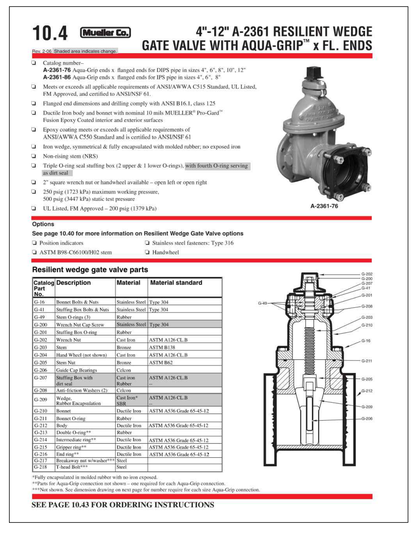
SILENT WAFER CHECK

NOT TO SCALE



FIRE HYDRANT ASSEMBLY

NOT TO SCALE



MUELLER GATE VALVE

NOT TO SCALE

GRADING CONSTRUCTION NOTES

(10) PROTECT IN PLACE EXISTING ITEM
(11) ADJUST EXISTING ITEM TO PROPOSED FINISHED GRADE
(12) JOIN PROPOSED SURFACE TO EXISTING SURFACE PER DETAIL "A" ON SHEET C-6.1 WITH FLUSH TRANSITION. MATCH GRADE. DOWELING FOR PCC ONLY
(13) GRIND AND OVERLAY EXISTING ASPHALT SURFACE 0.12' MINIMUM PER DETAIL "A" ON SHEET C-6.1, WITH FLUSH TRANSITION. MATCH GRADE
(14) SEE SITE UTILITY PLAN FOR IDENTIFICATION OF OBJECT
(15) CONSTRUCT 4" AC OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, AND 12" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED.
(16) CONSTRUCT 4" PCC (520-C-2500) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, WITH #3 BARS 18" O.C. BOTH WAYS, OVER 12" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION, WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED. SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS.
(17) CONSTRUCT 6" PCC (560-C-3250) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, WITH #3 BARS 18" O.C. BOTH WAYS, OVER 18" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION, WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1. SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS. STRUCTURAL SECTION IS TENTATIVE. SOIL TESTING SHALL BE PERFORMED PRIOR TO GRADING TO DETERMINE STRUCTURAL SECTION REQUIREMENTS.
(18) CONSTRUCT CURB TYPE A1-6 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2
(19) CONSTRUCT CURB TYPE A2-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2
(20) CONSTRUCT 9"- 6" PCC (520-C-2500) CURB TRANSITION PER DETAIL "C" ON SHEET C-6.1
(21) CONSTRUCT V-DITCH PER DETAIL "D" ON SHEET C-6.1
(22) FURNISH AND INSTALL SITE FENCING & GATES PER ARCHITECT'S PLANS AND SPECIFICATIONS
(23) PAINT / APPLY ACCESSIBLE SIGNING / STRIPING / PAVEMENT MARKINGS PER ARCHITECT'S PLANS AND SPECIFICATIONS
(24) CONSTRUCT PCC CURB EXTENSION PER DETAIL "E" ON SHEET C-6.1
(25) CONSTRUCT CMU RETAINING WALL PER STRUCTURAL ENGINEER'S DETAILS
(26) CONSTRUCT 9"- 8" PCC (520-C-2500) CURB TRANSITION PER DETAIL "F" ON SHEET C-6.1
(27) CONSTRUCT 9" PCC (520-C-2500) CURB ONLY PER DETAIL "G" ON SHEET C-6.1
(28) CONSTRUCT FREE STANDING WALL PER ARCHITECT'S DETAILS AND SPECIFICATIONS
(29) CONSTRUCT COLUMN PER ARCHITECT'S DETAILS AND SPECIFICATIONS.
(30) CONSTRUCT MOW CURB PER ARCHITECT'S DETAILS AND SPECIFICATIONS
(31) CONSTRUCT TRUNCATED DOME PER ARCHITECT'S DETAIL
(32) FURNISH AND INSTALL HANDRAILS PER ARCHITECT'S DETAILS ON SHEET A1.32 AND SPECIFICATIONS
(33) CONSTRUCT WEEP HOLES PER STRUCTURAL ENGINEER'S PLANS, DETAILS, AND SPECIFICATIONS
(34) CONSTRUCT CURB TYPE A1-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2

UTILITY CONSTRUCTION NOTES

FURNISH & INSTALL ALL PIPING PER UTILITY TABLES ON SHEET C-4.1

DOMESTIC WATER AND LANDSCAPE WATER

(50) CONNECT TO EXISTING WATER LINE
(51) CONSTRUCT THRUST BLOCK PER DETAIL "H" ON SHEET C-6.1
(52) FURNISH & INSTALL 2" LANDSCAPE REDUCED PRESSURE PRINCIPLE ASSEMBLY (ZURN MODEL 375XL OR APPROVED EQUAL) PER CUTSHEET ON C-6.2

FIRE

(60) FURNISH & INSTALL SILENT WAFER CHECK VALVE (CLA-VAL SERIES 580 OR APPROVED EQUAL) PER DETAIL "L" AND CUTSHEET ON SHEET C-6.2
(61) CONSTRUCT THRUST BLOCK PER DETAIL "H" ON SHEET C-6.1
(62) FURNISH & INSTALL FIRE HYDRANT ASSEMBLY (JONES 4060 BR, CR OR DR) PER MANUFACTURER'S DETAILS ON SHEET C-6.2 FIRE HYDRANT BREAK AWAY SPOOL & BURY TO HAVE MATCHING BOLTS PATTERNS
(63) FURNISH & INSTALL 6" GATE VALVE (MUELLER RESILIENT WEDGE (FP OR APPROVED EQUAL) IN RSGV CAN PER DETAIL "I" ON SHEET C-6.1 AND CUTSHEET ON C-6.2
(64) FURNISH & INSTALL 6" PIV (MUELLER A-20606 OR APPROVED EQUAL) WITH FIRE GATE VALVE PER DETAIL "L" ON SHEET C-6.2 AND CUTSHEET ON C-6.3
(65) FURNISH & INSTALL FIRE DEPARTMENT CONNECTION (CROKER 6510 OR CIVIL ENGINEER APPROVED EQUAL) PER DETAIL "L" ON SHEET C-6.2 AND PER CUTSHEET ON C-6.3
(66) FURNISH & INSTALL 8" DETECTOR CHECK ASSEMBLY (ZURN WILKINS MODEL 350AST) PER CUTSHEET ON C-6.3

SEWER

(70) CONNECT TO EXISTING SEWER LINE. CONTRACTOR TO EXPOSE AND CLEAN OUT EXISTING SEWER PIPES AND FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATION AND CONTACT EPIC ENGINEERS WITH RESULTS FOR VERIFICATION TO PROCEED PRIOR TO ANY CONSTRUCTION
(71) CONSTRUCT PVC SEWER CLEANOUT PER DETAIL "K" ON SHEET C-6.2
(72) CONSTRUCT SEWER MANHOLE PER SPPWC 2009 ED. STD. PLAN 200-3 PER CUTSHEET ON SHEET C-6.3
(73) FURNISH & INSTALL SEWER GRINDER PUMP ("E ONE SEWER SYSTEMS" MODELDH071 OR APPROVED EQUAL) PER CUTSHEET ON SHEET C-6.3

STORM DRAIN

(80) CONNECT TO EXISTING STORM DRAIN LINE. CONTRACTOR TO EXPOSE AND CLEAN OUT EXISTING STORM DRAIN PIPES AND FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATION AND CONTACT EPIC ENGINEERS WITH RESULTS FOR VERIFICATION TO PROCEED PRIOR TO ANY CONSTRUCTION
(81) FURNISH & INSTALL 12" X 12" PREFABRICATED CATCH BASIN (J&R CB1212 OR APPROVED EQUAL) PER DETAIL "J" ON SHEET C-6.1
(82) FURNISH & INSTALL 24" X 24" PREFABRICATED CATCH BASIN (J&R CB2124 OR APPROVED EQUAL) PER DETAIL "J" ON SHEET C-6.1
(83) CONSTRUCT PVC STORM DRAIN CLEANOUT PER DETAIL "K" ON SHEET C-6.2
(84) CONSTRUCT CURB OUTLET STRUCTURE PER CUTSHEET ON C-6.3
(85) FURNISH AND INSTALL RETAINING WALL SUB-DRAINAGE PERFORATED PIPE PER DETAIL "M" ON SHEET C-6.2
(86) CORE THROUGH EXISTING CURB 0.041' ABOVE EXISTING FLOWLINE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
EPIC ENGINEERS
181 E REDLANDS BLVD, STE 144
REDLANDS, CA 92373
909.792.9949 www.EpicRLE.com

DETAIL SHEET

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

ISFALS:

REGISTERED PROFESSIONAL ENGINEER
TROY DAVID MOLARO
No. Exp. 6-30-2027
CIV IL
STATE OF CALIFORNIA

PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA: DATE: DESCRIPTION:

C-6.2

100% CD

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PLOTTED ON: August 27, 2025 at 1:49 PM BY RAMON VILLALPANDO
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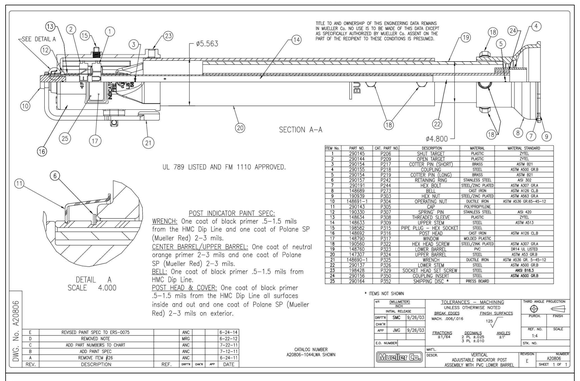
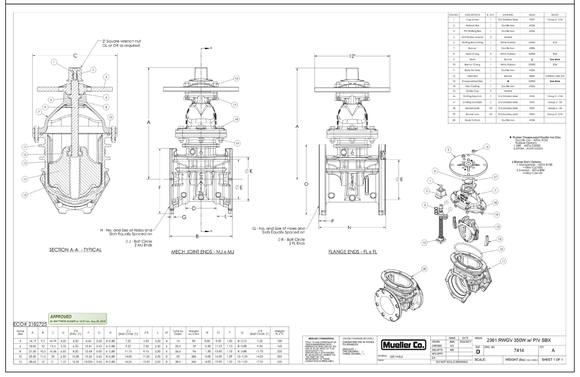


MUELLER A-20806 POST INDICATOR VALVE & GATE VALVE

NOT TO SCALE



FIRE DEPT. INLET CONN. FREESTANDING TYPE — 6510-6532 SERIES

DOUBLE CLAPPER TWO-WAY INLET

Brass Body * Overall Height: 24"

500 G.P.M. minimum inlet capacity
auxiliary inlet connection.

STANDARD EQUIPMENT: Cast brass bottom outlet body with double clappers, outlet and inlet sizes as selected by figure number, 18" high brass seamless tubing; brass branded plate; cast brass plugs and chains. Branding as selected.

SPECIFY THREAD AND BRANDING.

BRANDING: "Standpipe", "Auto Spkr."

Special lettering available.

OPTIONAL FINISHES:
PB - Polished Brass
RC - Rough Chrome Plated
PC - Polished Chrome Plated

*U/L LISTED

Figure No.	Size
*6510	4 X 2 1/2 X 2 1/2
6512	6 X 2 1/2 X 2 1/2
6513	4 X 3 X 3
6514	5 X 3 X 3
6515	6 X 3 X 3

OVERALL HEIGHT: 24"
BODY SWING RADIUS: 7 1/4"

Figure No. 6510

TRIPLE CLAPPER THREE-WAY INLET

Brass Body * Overall Height: 24"

750 G.P.M. minimum inlet capacity
auxiliary inlet connection.

STANDARD EQUIPMENT: Cast Brass bottom outlet body with triple clappers, outlet size as selected by figure number; 18" high brass seamless tubing brass branded plate; cast brass plugs and chains. Branded as selected. **SPECIFY THREAD AND BRANDING.**

PLATE BRANDING: "Standpipe", "Auto Spkr", "Standpipe-Sprinkler". Special lettering available.

OPTIONAL FINISHES:
PB - Polished Brass
RC - Rough Chrome Plated
PC - Polished Chrome Plated

Figure No.	Size
6526	4 X 2 1/2 X 2 1/2 X 2 1/2
6527	6 X 2 1/2 X 2 1/2 X 2 1/2

OVERALL HEIGHT: 24"
BODY SWING RADIUS: 8"

Figure No. 6527

FOUR-WAY CLAPPER SNOOT STYLE INLET

Brass Body* Overall Height: 24"

A free standing auxiliary inlet connection with 1,000 G.P.M., minimum inlet capacity to supplement fire protection water water supply.

6 X 2 1/2 X 2 1/2 X 2 1/2 X 2 1/2

STANDARD EQUIPMENT: Cast Brass bottom outlet body with clapper snoots on each inlet; 18" high brass seamless: brass branded plate; cast brass plugs and chains. Branding as selected. **SPECIFY THREAD AND BRANDING.**

PLATE BRANDING: "Standpipe", "Auto Spkr", "Standpipe-Sprinkler". Special lettering available.

FINISH: Cast Brass Body, Polished Brass Trim

OPTIONAL FINISH: PC- Polished Chrome Plated trim, Rough Chrome Body

Figure No. 6530 Figure No. 6532

FIRE DEPARTMENT CONNECTION

NOT TO SCALE

ZURN Model 350ASTDA
Double Check Detector Assembly

(SHOWN WITH OPTIONAL FLANGED END BUTTERFLY VALVES)

Application
Designed for installation on water lines in fire protection systems to protect against both backsiphonage and back-pressure of polluted water into the potable water supply. Model 350ASTDA shall provide protection where a potential health hazard does not exist. Incorporates metered by-pass to detect leaks and unauthorized water use.

Standards Compliance (Horizontal & Vertical)
- ASSE® Listed 1048
- AWWA Compliant C510 (with gates only) and C550
- UL® Classified
- C-ULus Classified
- FM® Approved
- CSA® Certified B64.5
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- Meets the requirements of NSF/ANSICAN 61* *0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

By-Pass Backflow Assembly 3/4" Model 950XLD

Materials

Main valve body	304L Stainless steel
Access covers	304L Stainless steel
Internals	Stainless steel, 300 Series NORYL™
Fasteners & springs	Stainless Steel, 300 Series
Elastomers	EPDM (FDA approved) Buna Nitrile (FDA approved) NORYL™
Polymers	

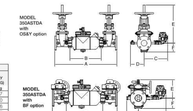
Features
Sizes: 2 1/2", 3", 4", 6", 8", 10"

Maximum working water pressure	175 PSI
Maximum working water temperature	140°F
Hydrostatic test pressure	350 PSI
End connections (Grooved for steel pipe) (Flanged)	AWWA C606 ANSI B16.42 Class 150

Dimensions & Weights (do not include pkg.)

MODEL 350ASTDA SIZE	WEIGHT: WITH OS&Y GATES (GRP)		WITH OS&Y GATES (GWS)		WITH BUTTERFLY VALVES (GWS)		WITH BUTTERFLY VALVES (FXG)	
in.	lbs.	kg.	lbs.	kg.	lbs.	kg.	lbs.	kg.
2 1/2	70	32	70	32	70	32	70	32
3	80	143	65	133	60	97	45	112
4	100	215	95	198	90	101	45	133
6	150	352	150	322	147	164	74	184
8	200	667	300	615	278	262	119	373
10	1,650	895	491	827	375	483	219	531

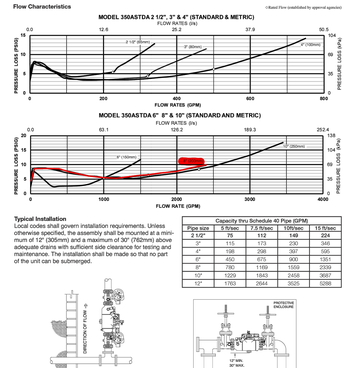
MODEL 350ASTDA SIZE	DIMENSION (approximate): A	A WITH BUTTERFLY VALVES	B LESS GATE VALVES	C	D	E OS&Y OPEN	E OS&Y CLOSED	E WITH BUTTERFLY VALVES	F
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
2 1/2	65	317/8	810	28 3/4	730	n/a	n/a	12	305	7 1/4	184	17 3/4	451	15 3/8	391	8 1/4	210	5	127
3	80	32 7/8	835	29 3/8	746	n/a	n/a	12	305	7 1/4	184	20 1/4	514	17	432	8 1/4	210	5	127
4	100	34 7/8	886	30 1/4	768	n/a	n/a	12	305	8	203	22 1/2	572	18 1/4	464	9	229	5	127
6	150	43 1/2	1105	36 1/2	927	n/a	n/a	16 1/2	267	10	254	30 1/2	775	24 1/4	616	12 1/4	311	6	152
8	200	52 3/4	1340	45 3/4	1162	n/a	n/a	15 1/8	384	11	279	37	940	28 1/2	724	18 1/2	470	8 3/8	213
10	250	59 3/4	1518	49 3/4	1264	n/a	n/a	15 1/8	384	12	305	45 5/8	1159	34 3/4	883	18 1/2	470	8 3/8	213



Zurn Industries, LLC | Wilkins
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766
In Canada | **Zurn Industries Limited**
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-5216
www.zurn.com

Rev. G
Date: 05/20
Document No. SF.350ASTDA
Model No. 350ASTDA
Patent zurn.com/patents

Flow Characteristics (+Rated Flow (established by approval agencies))



Options (Suffixes can be combined)

☐	-	with flanged end OS & Y gate valves (standard)
☐ LM	-	less water meter
☐	-	with gallon meter (standard)
☐ CFM	-	with cu ft meter
☐ CMM	-	with cu meter meter
☐ G	-	with grooved end OS&Y gate valves
☐ FG	-	with flanged inlet gate connection and grooved outlet gate connection
☐ PI	-	with Post Indicator Gate Valves
☐ BG	-	with grooved end butterfly valves with integral supervisory switches
☐ BF	-	with flanged end butterfly valves with integral supervisory switches
☐ RV	-	with By-pass on right hand side

Accessories
- ☐ Repair kit (rubber only)
- ☐ Thermal-expansion tank (Model XT)
- ☐ OS & Y Gate valve tamper switch (OSY-40)

Typical Installation
Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe (GPM)				
Pipe size	5 ft/sec	7.5 ft/sec	10ft/sec	15 ft/sec
2 1/2"	75	112	149	224
3"	115	173	230	346
4"	198	298	397	595
6"	450	675	900	1351
8"	780	1169	1559	2339
10"	1229	1843	2458	3687
12"	1763	2644	3525	5288

Specifications
The Double Check Detector Backflow Prevention Assembly shall be certified to NSF/ANSI/CAN 61, ASSE® Listed 1048, and supplied with full port gate valves. The main body and access cover shall be 304L Stainless Steel, the seat ring and check valve shall be Noryl™, the stem shall be stainless steel (ASTM A 276) and the seat disc elastomers shall be EPDM. The first and second check valves shall be accessible for maintenance without removing the device from the line. The Double Check Detector Backflow Prevention Assembly shall be a ZURN WILKINS Model 350ASTDA.

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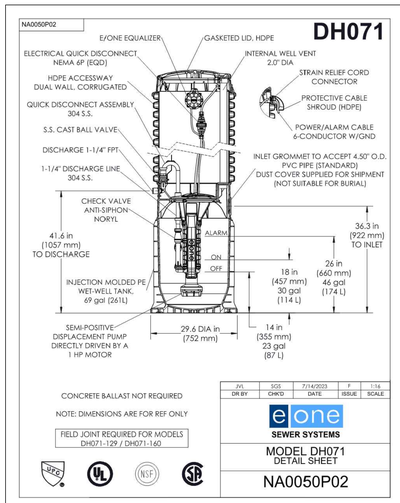
www.zurn.com

DOUBLE DETECTOR CHECK ASSEMBLY

NOT TO SCALE

NA0050P02

DH071



CONCRETE BALLAST NOT REQUIRED

NOTE: DIMENSIONS ARE FOR REF ONLY

FIELD JOINT REQUIRED FOR MODELS DH071-129 / DH071-160

JVL	SGS	7/14/2023	F	1:16
DR BY	CHK'D	DATE	ISSUE	SCALE

SEWER SYSTEMS

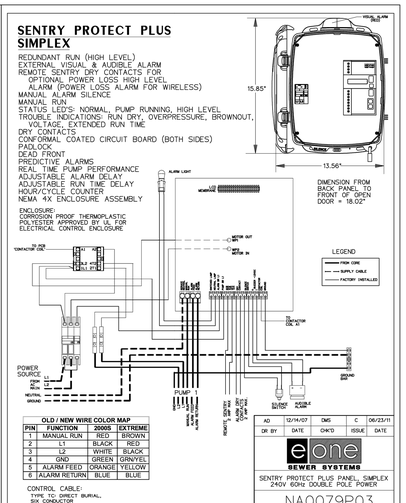
MODEL DH071
DETAIL SHEET

NA0050P02

SENTRY PROTECT PLUS SIMPLEX

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
REMOTE SENTRY DRY CONTACTS FOR
OPTIONAL POWER LOSS HIGH LEVEL ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LEDS: NORMAL, PUMP RUNNING, HIGH LEVEL
TROUBLE INDICATIONS: RUN DRY, OVERPRESSURE, BROWNOUT, LOW VOLTAGE, EXTENDED RUN TIME
DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
PREDICTIVE ALARMS
REAL TIME PUMP PERFORMANCE
ADJUSTABLE ALARM DELAY
ADJUSTABLE RUN TIME DELAY
HOUR/CYCLE COUNTER
NEMA 4X ENCLOSURE ASSEMBLY

ENCLOSURE
CORROSION PROOF THERMOPLASTIC POLYESTER APPROVED BY UL FOR ELECTRICAL CONTROL ENCLOSURE



OLD / NEW WIRE COLOR MAP			
PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRNYEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TC, DIRECT BURIAL, SIX CONDUCTOR

AD	12/14/07	CMS	C	06/23/11
DR BY	DATE	CHK'D	ISSUE	DATE

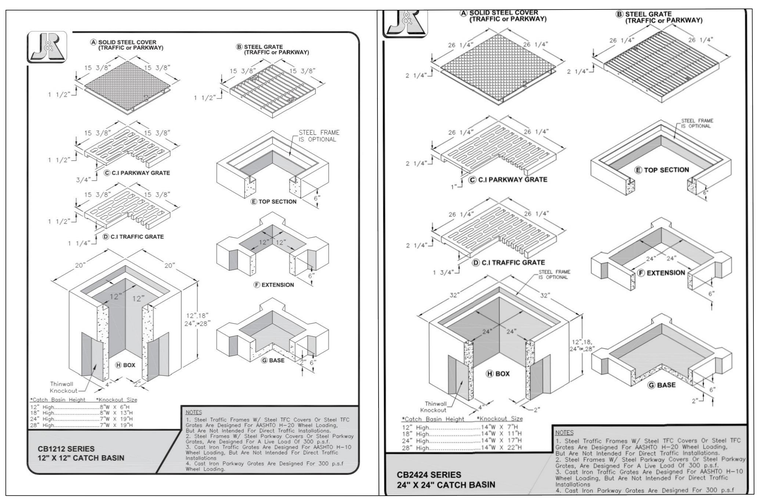
SEWER SYSTEMS

SENTRY PROTECT PLUS PANEL SIMPLEX 240V 60Hz DOUBLE POLE POWER

NA0079P03

SEWER GRINDER PUMP

NOT TO SCALE



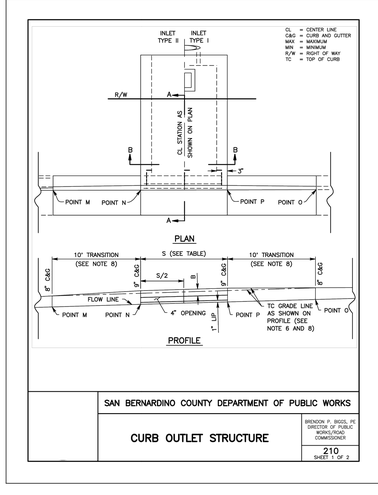
J&R 12X12 CATCH BASIN

NOT TO SCALE

J&R 24X24 CATCH BASIN

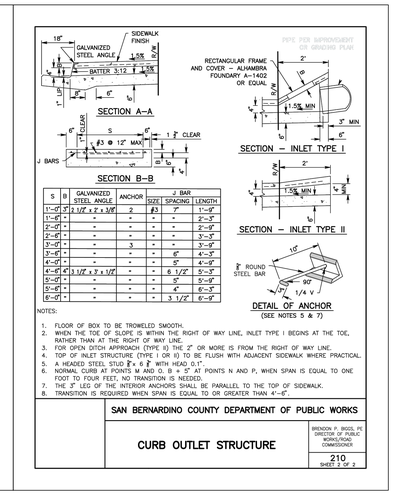
NOT TO SCALE

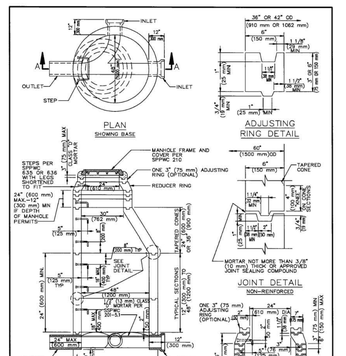
NOTE: SEE J/C6.1 FOR ACCESSIBLE GRATE OPENING REQUIREMENT



CURB OUTLET STRUCTURE

NOT TO SCALE





STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION	
PRECAST CONCRETE SEWER MANHOLE	STANDARD PLAN 200–3
PREPARED BY THE STANDARD SPECIFICATIONS COMMITTEE OF SPPWC WILL TAKE, 2006	FOR METRIC SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
	SHEET 1 OF 2

NOTES:

1. EXCEPT AS NOTED HEREON, THE PRECAST UNITS SHALL BE MANUFACTURED AND TESTED IN ACCORDANCE WITH ASTM C 478. AS AN ALTERNATE CURING METHOD, THE UNITS MAY BE CURED USING SATURATED STEAM FOR A MINIMUM OF 12 HOURS FOLLOWED BY 6 DAYS OF WATER CURING OR MEMBRANE CURING. IF THE UNITS ARE CURED BY THE ALTERNATE METHOD, THEY SHALL NOT BE SHIPPED PRIOR TO 8 DAYS AFTER CASTING NOR UNTIL THE CONCRETE HAS ATTAINED A STRENGTH OF 3500 PSI (25 MPa).
2. MANHOLE STEPS SHALL CONFORM TO SPPWC 635 TYPE 1 OR 3 OR SPPWC 636. THE MANHOLE STEPS SHALL BE UNIFORMLY SPACED AT A MAXIMUM OF 16" (400 mm). THE LOWEST STEP SHALL BE PLACED NOT LESS THAN 8" (200 mm) NOR MORE THAN 18" (450 mm) ABOVE THE SHELF. THE STEPS SHALL PROJECT 5" (125 mm) INSIDE THE MANHOLE.
3. RISER SECTIONS MAY BE REINFORCED OR UNREINFORCED. REINFORCED SECTIONS SHALL BE REINFORCED IN ACCORDANCE WITH ASTM C 478 AND SHALL HAVE A MINIMUM WALL THICKNESS OF 5" (125 mm). UNREINFORCED RISER SECTIONS SHALL HAVE A MINIMUM WALL THICKNESS OF 6" (150 mm).
4. THE 24"x48" (600 mm x 1200 mm) ECCENTRIC CONES MAY BE REINFORCED OR UNREINFORCED. IF REINFORCED, THE WALL THICKNESS SHALL BE NOT LESS THAN 5" (125 mm). IF UNREINFORCED, THE WALL THICKNESS SHALL NOT BE LESS THAN 6" (150 mm).
5. JOINTS SHALL BE TONGUE AND GROOVE. JOINTS FOR REINFORCED STRUCTURES SHALL CONFORM WITH ASTM C 478 SECTION 14.
6. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.
7. IF 30" (762 mm) DIAMETER MANHOLE FRAME AND COVER IS REQUIRED, IT SHALL BE INSTALLED WHERE THE REDUCER RING IS SHOWN IN THE SECTION.
8. FOR REINFORCED PRECAST STRUCTURES, ALL REINFORCEMENT SHALL HAVE A MINIMUM OF 2" (50 mm) OF COVER OVER THE STEEL ON THE INSIDE FACE.
9. THE TOP OPENING OF THE MANHOLE AND THE STEPS SHALL BE PLACED DIRECTLY OVER THE OUTLET OF THE STRUCTURE EXCEPT AS OTHERWISE NOTED ON PLANS.
10. CONCRETE BASE AND STUB WALLS SHALL BE POURED IN ONE OPERATION TO A POINT 3" (50 mm) ABOVE THE INLET AND OUTLET PIPES. ALL PIPES SHALL BE RIGIDLY SUPPORTED BY TEMPORARY PIERS OR OTHER METHODS DURING THE OPERATION. CONCRETE SHALL SET FOR 24 HOURS BEFORE PLACING PRECAST UNITS.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION	
PRECAST CONCRETE SEWER MANHOLE	STANDARD PLAN 200–3
	SHEET 2 OF 2

SPPWC SEWER MANHOLE

NOT TO SCALE

GRADING CONSTRUCTION NOTES

10. *PROTECT IN PLACE EXISTING ITEM*
11. *ADJUST EXISTING ITEM TO PROPOSED FINISHED GRADE*
12. *JOIN PROPOSED SURFACE TO EXISTING SURFACE PER DETAIL "A" ON SHEET C-6.1 WITH FLUSH TRANSITION, MATCH GRADE, DOWELING FOR PCC ONLY*
13. *GRIND AND OVERLAY EXISTING ASPHALT SURFACE 0.12' MINIMUM PER DETAIL "A" ON SHEET C-6.1, WITH FLUSH TRANSITION, MATCH GRADE*
14. *SEE SITE UTILITY PLAN FOR IDENTIFICATION OF OBJECT*
15. *CONSTRUCT 4" AC OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, AND 12" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED.*
16. *CONSTRUCT 4" PCC (560-C-3250) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, WITH #3 BARS 18" O.C. BOTH WAYS, OVER 12" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION; WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1. FINAL PAVEMENT SECTION SHALL BE BASED UPON R-VALUE TESTING PERFORMED ON A REPRESENTATIVE SOIL SAMPLE COLLECTED WHEN SUB-GRADE ELEVATION IS REACHED. SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS.*
17. *CONSTRUCT 8" PCC (560-C-3250) OVER 4" CLASS II AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, WITH #3 BARS 18" O.C. BOTH WAYS, OVER 15" SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION; WITH THICKENED EDGE PER DETAIL "B" ON SHEET C-6.1, SCORING PATTERNS, COLOR AND FINISH PER ARCHITECT'S PLANS AND SPECIFICATIONS. STRUCTURAL SECTION IS TENTATIVE. SOIL TESTING SHALL BE PERFORMED PRIOR TO GRADING TO DETERMINE STRUCTURAL SECTION REQUIREMENTS.*
18. *CONSTRUCT CURB TYPE A1-6 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*
19. *CONSTRUCT CURB TYPE A2-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*
20. *CONSTRUCT 0'- 6" PCC (520-C-2500) CURB TRANSITION PER DETAIL "C" ON SHEET C-6.1*
21. *CONSTRUCT V-DITCH PER DETAIL "D" ON SHEET C-6.1*
22. *FURNISH AND INSTALL SITE FENCING & GATES PER ARCHITECT'S PLANS AND SPECIFICATIONS*
23. *PAINT / APPLY ACCESSIBLE SIGNING / STRIPING / PAVEMENT MARKINGS PER ARCHITECT'S PLANS AND SPECIFICATIONS*
24. *CONSTRUCT PCC CURB EXTENSION PER DETAIL "E" ON SHEET C-6.1*
25. *CONSTRUCT CMU RETAINING WALL PER STRUCTURAL ENGINEER'S DETAILS*
26. *CONSTRUCT 0'- 8" PCC (520-C-2500) CURB TRANSITION PER DETAIL "F" ON SHEET C-6.1*
27. *CONSTRUCT 0' PCC (520-C-2500) CURB ONLY PER DETAIL "G" ON SHEET C-6.1*
28. *CONSTRUCT FREE STANDING WALL PER ARCHITECTS DETAILS AND SPECIFICATIONS*
29. *CONSTRUCT COLUMN PER ARCHITECT'S DETAILS AND SPECIFICATIONS.*
30. *CONSTRUCT MOW CURB PER ARCHITECT'S DETAILS AND SPECIFICATIONS*
31. *CONSTRUCT TRUNCATED DOME PER ARCHITECT'S DETAIL*
32. *FURNISH AND INSTALL HANDRAILS PER ARCHITECT'S DETAILS ON SHEET A1.32 AND SPECIFICATIONS*
33. *CONSTRUCT WEEP HOLES PER STRUCTURAL ENGINEER'S PLANS, DETAILS, AND SPECIFICATIONS*
34. *CONSTRUCT CURB TYPE A1-8 PER SPPWC STANDARD PLAN 120-2 ON SHEET C-6.2*

UTILITY CONSTRUCTION NOTES

FURNISH & INSTALL ALL PIPING PER UTILITY TABLES ON SHEET C-4.1

DOMESTIC WATER AND LANDSCAPE WATER

- (50) *CONNECT TO EXISTING WATER LINE*
- (51) *CONSTRUCT THRUST BLOCK PER DETAIL "H" ON SHEET C-6.1*
- (

CHAFFEY COLLEGE
INTECH WELDING FACILITY

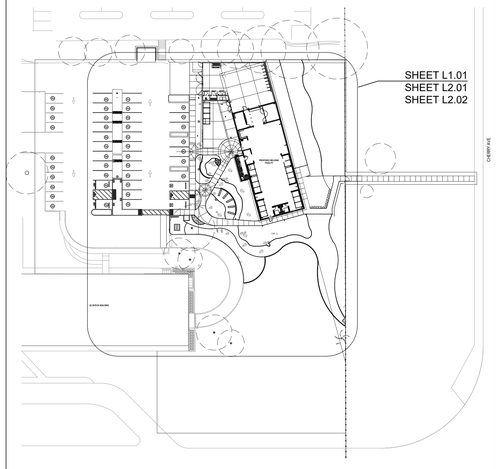
9400 CHERRY AVENUE,
FONTANA, CA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
silver bar studio
landscape architecture
environmental design
mariposa, ca.

INDEX OF SHEETS

SHEET	DESCRIPTION
L1.00	COVER SHEET
L1.01	IRRIGATION PLAN
L1.02	IRRIGATION DETAILS
L2.01	PLANTING PLAN, PLANTING DETAILS
L2.02	GRAVEL LAYOUT/TREE SHADING PLAN



LANDSCAPE PLANTING NOTES
1. SOURCE OF BASE SHEETS IS SGH ARCHITECTS.
2. VERIFY LOCATIONS OF PERTINENT SITE IMPROVEMENTS INSTALLED UNDER OTHER SECTIONS. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO COMMENCING WORK.
3. EXACT LOCATIONS OF PLANT MATERIALS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO INSTALLATION.
LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN FIELD.
4. VERIFY PLANT COUNTS AND SQUARE FOOTAGES: QUANTITIES ARE PROVIDED AS PLAN INFORMATION ONLY. IF QUANTITIES ON PLANT LIST DIFFER FROM GRAPHIC INDICATIONS, THEN GRAPHICS SHALL PREVAIL.
5. CONTACT THE LOCAL UNDERGROUND UTILITY SERVICES FOR UTILITY LOCATION AND IDENTIFICATION.
6. PERFORM EXCAVATION IN THE VICINITY OF UNDERGROUND UTILITIES WITH CARE AND IF NECESSARY, BY HAND. THE CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK AND DISRUPTION OR DAMAGE TO UTILITIES SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER.
7. TREES SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING.
8. TREES TO BE PLANTED A MINIMUM OF 4-FEET FROM FACE OF BUILDING, OR PAVEMENT, EXCEPT AS APPROVED BY LANDSCAPE ARCHITECT.
9. PROVIDE MATCHING FORMS AND SIZES FOR PLANT MATERIALS WITHIN EACH SPECIES AND SIZE DESIGNATED ON THE DRAWINGS.
10. PRUNE NEWLY PLANTED TREES ONLY AS DIRECTED BY LANDSCAPE ARCHITECT.
11. ALIGN AND EQUALLY SPACE IN ALL DIRECTIONS TREES AND SHRUBS SO DESIGNATED PER THESE NOTES AND DRAWINGS.
12. FINISH GRADES OF PLANTER AREAS SHALL BE 2-INCHES BELOW ADJACENT PAVING OR TOP OF WALL UNLESS OTHERWISE NOTED.
13. PROVIDE SPECIFIED EDGING AS DIVIDER BETWEEN PLANTING BEDS.
14. REMOVE ENTIRE CONTAINER FROM ROOTBALL.
15. LANDSCAPE ARCHITECT TO REVIEW PLANT MATERIALS AT SOURCE OR BY PHOTOGRAPHS PRIOR TO DIGGING OR SHIPPING OF PLANT MATERIALS.

SOIL PREPARATION
1. WHERE INDICATED, REMOVE EXISTING TOPSOIL AND STOCKPILE ON SITE. TOPSOIL TO BE INCORPORATED BACK INTO THE SOIL AT A LATER DATE. CONTRACTOR TO CONDUCT A AGRONOMIC SOIL SUITABILITY TO DETERMINE THE SOIL'S COMPOSITION, COMPACTION RATE, NUTRIENT QUALITIES, ORGANIC CONTENT, PH LEVELS, AND WATER HOLDING CAPABILITIES.
2. PRIOR TO THE INSTALLATION OF THE PLANTING AND IRRIGATION SYSTEM, CONTRACTOR TO PREPARE SOIL TO ENSURE A PROPER ENVIRONMENT FOR PLANT ROOT DEVELOPMENT.
3. CONTRACTOR TO DE-COMPACT SOILS IN PLANTING AREAS BY ROTO-TILLING, DISKING OR RIPPING TO A DEPTH OF 4"- 8". ALWAYS REMOVE MATERIAL OVER 2" IN SIZE FROM THE SOIL.
4. WHEN PERFORMING SOIL DE-COMPACTION, MULTIPLE PASSES ACROSS THE AREA WILL BE REQUIRED AND, WHEN POSSIBLE, SHOULD BE AT VARYING ANGLES TO ENSURE ADEQUATE COVERAGE. WHEN USING DISC OR RIPPING EQUIPMENT, IT IS REQUIRED THAT THE FINAL PASSES OVER THE AREA BE MADE WITH A ROTO-TILLER TO BREAK UP ANY LARGE CLUMPS TO MAKE FINAL GRADING EASIER.
5. AFTER INITIAL SOIL DE-COMPACTION PROCEDURES ARE PERFORMED, SOIL AMENDMENTS SHOULD BE ADDED. THE ADDITION OF SOIL AMENDMENTS IS DETERMINED FROM SOIL TESTS CONDUCTED PRIOR TO WORK COMMENCING. REFER TO SPECIFICATIONS FOR STANDARD SOIL PREPARATION REQUIREMENTS. AGRICULTURAL GYPSUM SHALL BE INCORPORATED AT THE RATE OF 50-POUNDS PER 1,000 SQUARE FEET.
6. ALL AMENDMENTS SHOULD BE MIXED THOROUGHLY WITH EXISTING SOIL PRIOR TO PLANTING.
7. DURING THE REMAINDER OF THE LANDSCAPE INSTALLATION, VARIOUS AREAS OF THE SITE MAY BE RE-COMPACTED DUE TO THE USE OF EQUIPMENT AND VEHICLES. PRIOR TO THE INSTALLATION OF PLANT MATERIAL IN THESE AREAS, THE COMPACTION SHALL BE REDUCED TO 85% OR LESS USING PREVIOUSLY DESCRIBED METHODS.

IRRIGATION NOTES
1. SEE GENERAL CONDITIONS NOTES.
2. LOCATIONS OF IRRIGATION LINES, VALVES, HEADS, AND ALL OTHER RELATED IRRIGATION APPURTENANCES SHOWN ON THESE DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION OF THE ABOVE NEED TO BE APPROVED BY THE LANDSCAPE ARCHITECT.
3. REFER TO IRRIGATION PLANS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SEEDING
AT A MINIMUM, ALL ATHLETIC FIELD TURF GRASS AREAS DISTURBED BY IRRIGATION TRENCHING AND AN AREA 3-FEET BEYOND DISTURBED AREA SHALL BE RE-SEEDED WITH STOVER PRO-SPORTS TURF ELITE SEED BLEND.

THE CONTRACTOR MAY ELECT TO SCALP ALL EXISTING PLAY FIELD GRASS AREAS TO THE TOP OF EXISTING SOIL. ANY AND ALL GRASS AREAS EXCAVATED FOR INSTALLATION OF DECOMPOSED GRANITE TRACK MAY BE SPREAD ON-SITE IN LOCALIZED AREAS TO BRING GRADES TO A LEVEL PLAYING SURFACE. NO SOIL MOUNDS ARE ACCEPTABLE.

APPLY SEED MIX AT 7-LBS/1000 SQUARE FEET. RAKE SEED INTO PRE-DAMPENED SOIL AND COVER W/ A 1/2-INCH LAYER OF A FINE ORGANIC COMPOST MULCH.

THE SOIL LEVEL PRIOR TO SEEDING SHALL BE EVEN WITH THE ADJACENT SOIL LINE OF UNDISTURBED TURF GRASS.

WATER IMMEDIATELY AFTER SEEDING TO 1 / 2" DEPTH. MAINTAIN EVEN MOISTURE FOR TWO WEEKS OR UNTIL THE GRASS HAS GERMINATED AND GROWN TO A 2" HEIGHT. ADJUST WATERING TO ALLOW THE UPPER SOIL TO DRY BETWEEN WATERINGS.

REPLACEMENT OF EXISTING TURF SOD REMOVED PRIOR TO TRENCHING IS ACCEPTABLE. CONTRACTOR SHALL RE-SOD ANY DEAD OR DYING TURF AREAS GREATER THAN 2-SQUARE FEET.

REFER TO IRRIGATION SPECIFICATIONS FOR TRENCHING AND BACKFILLING.

UNDERGROUND SERVICE ALERT
Call: TOLL FREE
1-800
422-4133
AT LEAST TWO DAYS BEFORE YOU DIG

APPROVED: _____ DATE

APPROVED: _____ DATE

ACCEPTED: _____ DATE

PREPARED BY

silver bar studio
landscape architecture
environmental design
mariposa, ca.

SEALS:
LICENSED LANDSCAPE ARCHITECT
PERRY THOMAS DEVLIN
2903
STATE OF CALIFORNIA
SIGNED: MAY 2026

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/30/2025
DELTA: DATE: DESCRIPTION:

COVER SHEET

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

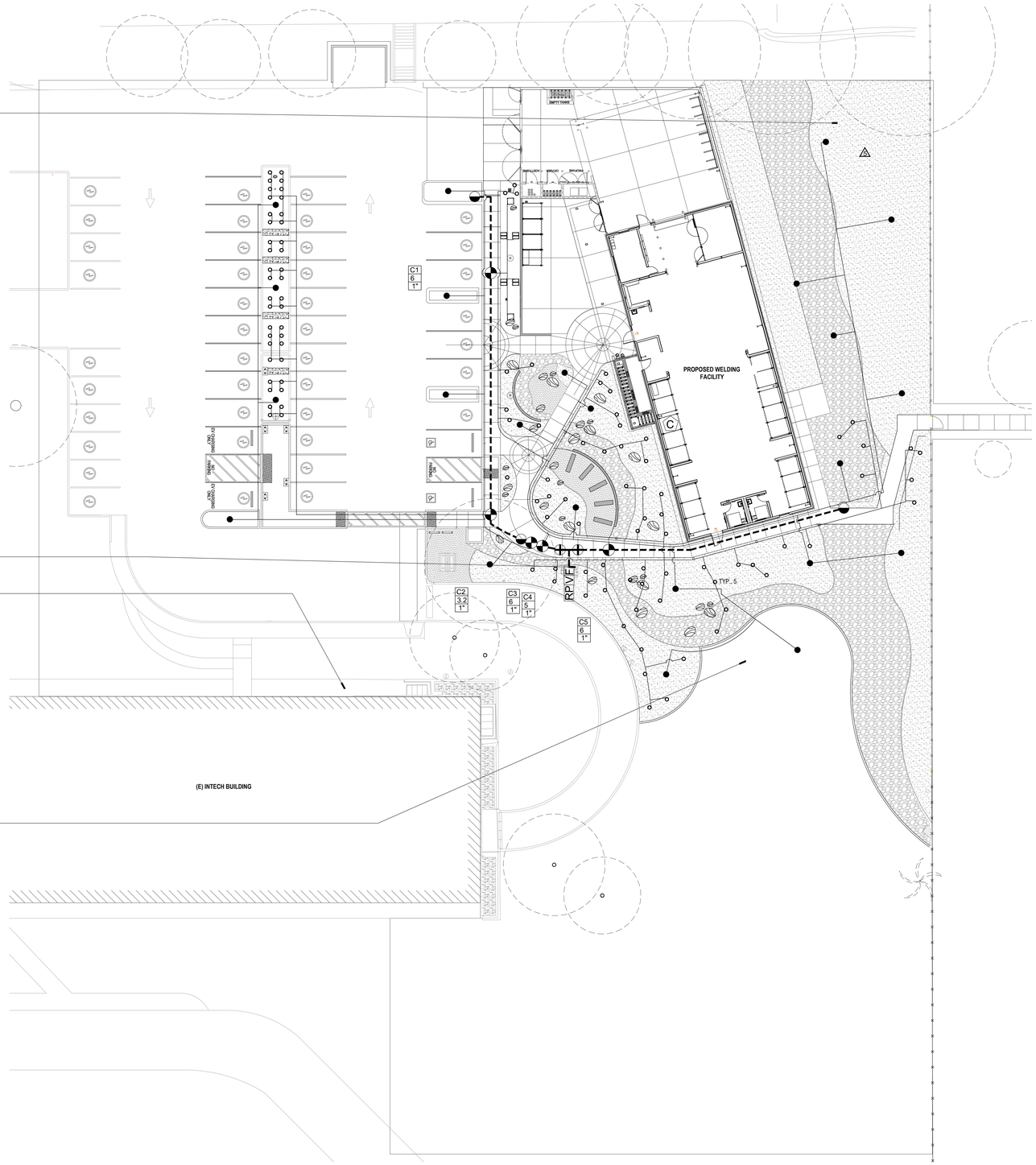
L1.00
100% CD

IRRIGATION MODIFICATIONS
LOCATE EXISTING IRRIGATION IN THIS AREA THAT SERVES EXISTING LANDSCAPE WITHIN THE LIMIT OF WORK FOR THIS PROJECT. REMOVE OR ABANDON/CAP EXISTING MAINLINE WHERE NECESSARY UNTIL RECONNECTION IS POSSIBLE. PROVIDE TEMPORARY MAINLINE THROUGH, OR AROUND THE PROJECT AREA IN THE EVENT EXISTING IRRIGATION WILL NOT BE SERVED BEYOND THE LIMIT OF WORK FOR THIS PROJECT DURING CONSTRUCTION.

POINT OF NEW IRRIGATION CONNECTION
CONNECT NEW 1-1/2" MAINLINE TO NEW IRRIGATION BACKFLOW DEVICE.

EXISTING IRRIGAITION CONTROLLER.
PROTECT IN PLACE.

EXISTING LAWN IRRIGATION REPAIR
DURING SITE DEMOLITION, THE LANDSCAPE CONTRACTOR SHALL BE PRESENT ON-SITE TO COORDINATE MODIFICATION TO THE EXISTING IRRIGATION SYSTEM. MAINTAIN OPERATION OF ALL IRRIGATION ZONES BEYOND THE LIMIT OF WORK FOR THIS PROJECT.
REPAIR ANY EXISTING IRRIGATION DAMAGED BY NEW CONSTRUCTION TO PRE-EXISTING CONDITIONS. PROVIDE PART-CIRLCE SPRINKLERS ALONGS EDGES, AND FULL-CIRCLE SPRINKLERS WHERE NECESSARY TO COMPLETE HEAD-TO-HEAD COVERAGE. ANY REPLACED/RELOCATED SPRINKLER SHALL MATCH EXISTING MANUFACTURER TYPE AND NOZZLE. DO NOT WET NEW PAVED SURFACES.



IRRIGATION DISTRIBUTION DEVICE LEGEND

SYM	MANUFACTURER - MODEL - DESCRIPTION	GPM	PSI	RAD	PR
●	RAINBIRD RWS-MINI W/-PCT-10. TWO AT EACH TREE 180-DEGREE SEPARATION, WITHIN WATER BASIN/BACKFILLED SOIL. SYCAMORES TO RECEIVE FOUR TOTAL RWS-MINI	0.16	20	---	0.61
○	RAINBIRD 1802-PCT-05-PA8	0.08	20	---	0.61
⊟	RAINBIRD 1806-PRS-15SST. INSTALL SPRINKLERS 12" OFF EDGE OF PAVING AND/OR WALL-TYP.	1.21	30	4'X15'	---
□	RAINBIRD 1806-PRS-15EST. INSTALL SPRINKLERS 12" OFF EDGE OF PAVING AND/OR WALL-TYP.	0.61	30	4'X15'	---
	SCH 40 3/4" PVC LATERAL PIPE				
1"	SCH 40 1" PVC LATERAL PIPE				
1.25"	SCH 40 1-1/4" PVC LATERAL PIPE				
1.5"	SCH 40 1-1/2" PVC LATERAL PIPE				
	EXISTING 3" PVC MAINLINE. CONNECT WHERE NOTED.				
	1.5" SCH 40 PVC MAINLINE, UNLESS NOTED OTHERWISE ON PLAN.				
	APPROVED SCH. 40 SLEEVE. PIPE AND WIRE SLEEVING UNDER ALL PAVING AS INDICATED ON PLAN. 2" MINIMUM SIZE - TWICE THE SIZE OF THE PIPE TO BE SLEEVED.				
◒	RAINBIRD 44-LRC QUICK COUPLER 1" INSTALLED IN ROUND VALVE BOX				
◔	SUPERIOR 950-100-PRS REMOTE CONTROL VALVE W/RAINBIRD QUICK-CHECK BASKET FILTER. SIZE NOTED ON PLAN				
⊕	NIBCO T-113-LF GATE VALVE. MATCH MAINLINE SIZE.				
◉	2" NIBCO T-113-LF GATE VALVE				
RP	EXISTING PRESSURE BACKFLOW DEVICE. CONNECT TO STUB AFTER BACKFLOW				
V	SUPERIOR 3200100NXT N.C. MASTER VALVE				
F	CST FSI-T20-001				
C	RAINBIRD ESP-ME3 W/LNK2 WiFi MODULE AND WR2 RAIN SENSOR. INSTALL IN RAINBIRD LXMM, OR APPROVED EQUAL.				

C22
12
1"
CONTROLLER DESIGNATION
GPM / VALVE SIZE
IRRIGATED AREA

ADJUST COVERAGE. DO NOT WET PAVED SURFACES.

ALL IRRIGATION BOXES TO BE AN APPROVED MANUFACTURER.

ROUTE ALL MAINLINE AND LATERAL LINES IN PLANTER AREAS. MAINLINE AND LATERAL LINES ARE SHOWN OUTSIDE OF PLANTERS FOR PLAN CLARITY ONLY.

INSTALL GRASS ROTARY SPRINKLERS 12" FROM EDGE OF PAVEMENT TO CENTER OF SPRINKLER-TYP.

THIS IS A POTABLE IRRIGATION SYSTEM.

ALL MAINLINE AND LATERAL LINE THREADED AND NON-THREADED FITTINGS SHALL BE SCHEDULE 80 PVC, UNLESS INDICATED OTHERWISE.

THIS IS A POTABLE WATER IRRIGATION SYSTEM.

ABANDON ALL IRRIGATION WITHIN THE LIMIT OF WORK FOR THIS PROJECT. CAP EXISTING IRRIGATION LATERAL LINES AS NECESSARY TO MAINTAIN ONGOING OPERATION OF SPRINKLERS BEYOND THE LIMIT OF WORK FOR THIS PROJECT.

THE IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES BY A CONTRACTOR AND EXPERIENCED WORKERS, AND SHALL OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED.

IRRIGATION DESIGN IS SCHEMATIC, ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS ON DISTRICT PROPERTY. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING, AND ARCHITECTURAL FEATURES.

CONTRACTOR SHALL CONTACT LOCAL UNDERGROUND SERVICE PRIOR TO BEGIN CONSTRUCTION, IF NECESSARY

CONTRACTOR INSTALL IRRIGATION SYSTEM AS DESIGNED, AND SHALL ENSURE COMPLETE SPRINKLER COVERAGE FOR ALL PLANTED AREAS. CONTRACTOR SHALL ADJUST IRRIGATION HEADS TO ALLOW FULL AND COMPLETE COVERAGE, FLUSH, AND ADJUST HEADS TO ENSURE NO OVERFLOW ONTO STREETS, SIDEWALKS, OR WALLS.

COVERAGE OVER PIPES SHALL BE AS FOLLOWS:
LATERAL LINES SHALL HAVE 12" MIN. COVER
MAIN LINES SHALL HAVE 18" MIN. COVER
LINE UNDER PAVED AREAS SHALL HAVE A MIN. 18" COVER AND 2" MIN. PVC SCHEDULE 40 PIPE.

CONTROL WIRES SHALL FOLLOW THE MAIN LINE IN THE SAME TRENCHES. TAPE AND BUNDLE 2 FEET OF WIRE EVERY 100 FEET AND AT EACH TURN IN THE MAINLINE AND AT EACH VALVE.

THE AUTOMATIC CONTROLLER SHALL BE SOLAR POST MOUNTED AS PER THE DETAIL. USE GALVANIZED SLEEVE FOR ELECTRICAL WIRING FORM THE CONTROLLER TO 18" BELOW GRADE.

USE #14 WIRE UL APPROVER DIRECT BURIAL FOR COMMON AND GROUND AT THE SAME DEPTH AS THE MAINLINE TAPE AND BUNDLE WIRE EVERY 20 FEET.

INSTALL ALL HEADS ON A SCHEDULE 80/ MARLEX TRIPLE SWING JOINT. WRAP ALL PIPE THREADS WITH TEFLON TAPE.

ALL HEADS ON RISER SHALL BE LOCATED 18" FROM ADJACENT WALL OR BUILDINGS
.
ALL HEADS AT GRADE SHALL BE LOCATED 18" FROM PAVING OR CURBS OR AS INDICATED.

SPLICING OF 24 VOLT WIRES WILL NOT BE PERMITTED EXCEPT AT VALVES. LEAVE A 12" COIL OF EXCESS WIRE AT EACH SPLICE.

INSTALL A SPARE CONTROL WIRE OF A DIFFERENT COLOR ALONG THE ENTIRE MAIN LINE. LOOP 24" EXCESS WIRE AT EACH GROUP OF VALVES.

AS-BUILT IRRIGATION PLANS HAVE NOT BEEN PROVIDED. LANDSCAPE CONTRACTOR SHALL COORDINATE WITH GROUNDS STAFF PRIOR TO IRRIGATION INSTALLATION REGARDING EXISTING IRRIGATION CONDITIONS.

0' 8' 16' 32'

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
silver studio
landscape architecture + design
riverside, ca.

IRRIGATION PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
LICENSED LANDSCAPE ARCHITECT
CHRISTOPHER J. TOMAS
2983
Exp. 30-JULY-2026
STATE OF CALIFORNIA

sgh ARCHITECTS

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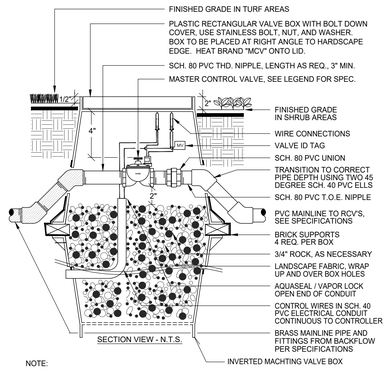
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

L1.01

100% CD

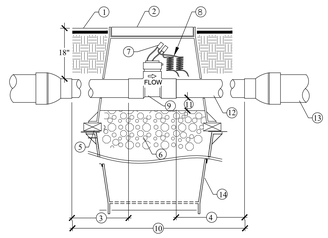


NOTE:
PVC ELLS AND ALL PRESSURE/NON-PRESSURE SIDE NIPPLES SHALL BE SIZED TO MATCH OUTLET LATERAL LINE SIZE INDICATED ON PLAN-EXCEPT AT RCV INLET. UNIONS SHALL BE SIZED TO MATCH RCV.

EQUIPMENT SHALL BE INSTALLED SUCH THAT THERE IS NO LEVERAGE OR STRESS ON THE VALVE ASSEMBLY. PIPE SHALL NOT COME INTO CONTACT WITH VALVE BOX.

USE A NON-HARDENING TEFLON PIPE SEALANT ON ALL THREADED CONNECTIONS.

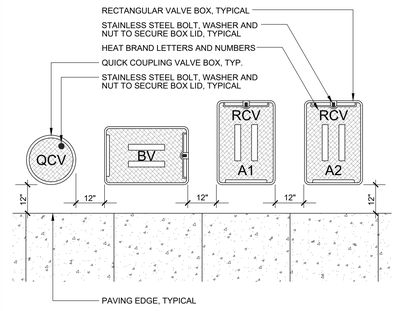
MASTER CONTROL VALVE



1. FINISHED GRADE
2. PLASTIC VALVE BOX (8", AMETEK OR EQUAL)
3. 10 PIPE DIAMETERS DIMENSION 'A'
4. 5 PIPE DIAMETERS DIMENSION 'B'
5. BRICK SUPPORTS
6. 1/2 C.F. 3/4" CRUSHED GRAVEL
7. WATER PROOF CONNECTORS
8. WIRES TO CONTROLLER
9. FLOW SENSOR
10. NO VALVES, REDUCERS, OR ELBOWS SHOULD BE USED HERE
11. 1" CLEARANCE
12. PVC MAINLINE - SIZE TO MATCH FLOW SENSOR
13. PVC MAINLINE - SIZE PER PLAN
14. INVERTED VALVE BOX. FILL PER #6

FLOW SENSOR

SCALE: N.T.S.



NOTE:
CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE VALVE MAINTENANCE.

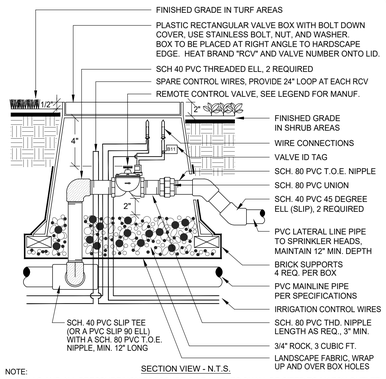
INSTALL VALVE BOXES IN SHRUB AND GROUND-COVER AREAS WHERE POSSIBLE.

INSTALL VALVE BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO PAVING EDGES.

AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOXES.

DRIP RCV AND WYE STRAINER BOXES IN THE SAME ORIENTATION AS THE BALL VALVE BOX.

VALVE BOX PLACEMENT



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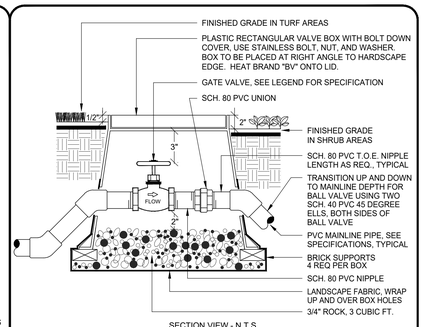
EQUIPMENT SHALL BE INSTALLED SUCH THAT THERE IS NO LEVERAGE OR STRESS ON THE VALVE ASSEMBLY. PIPE SHALL NOT COME INTO CONTACT WITH VALVE BOX.

USE A NON-HARDENING TEFLON PIPE SEALANT ON ALL THREADED CONNECTIONS.

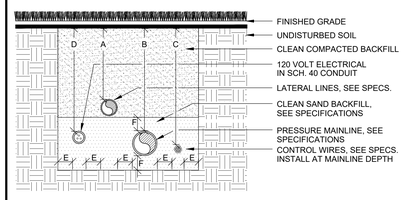
REMOTE CONTROL VALVE



NOTE:
BOX TO BE INSTALLED AS TO ALLOW FOR PROPER OPERATION OF BALL VALVE, INSTALL VALVE AND BOX PARALLEL TO HARDSCAPE EDGE, INSTALL BOX OFF-CENTER OF VALVE.

INSTALL VALVE BOX EXTENSIONS AS REQ. TO ACHIEVE PROPER VALVE AND PIPE DEPTH

GATE VALVE 3" AND SMALLER



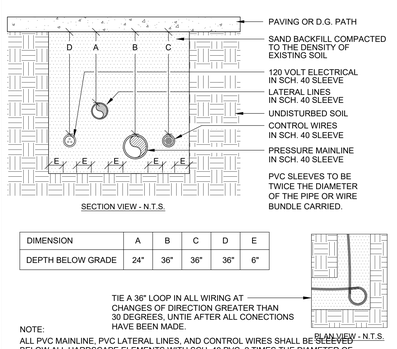
DIMENSION	A	B	C	D	E	F
1/2" TO 1 1/2" SIZE	12"	18"	18"	30"	6"	6"
2" TO 2 1/2" IN SIZE	12"	24"	24"	30"	6"	6"
3" AND LARGER	18"	24"	24"		6"	6"

NOTE:
ALL PLASTIC PIPING SHALL BE SNAKED WITHIN TRENCH.

BUNDLE WIRING AND WRAP WITH TAPE AT TEN FOOT INTERVALS.

ALL MAINLINE PIPING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION SPECIFICATIONS.

PIPE AND WIRE TRENCHING



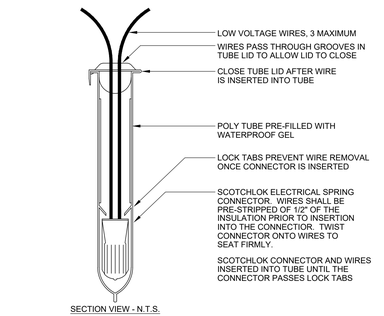
DIMENSION	A	B	C	D	E
DEPTH BELOW GRADE	24"	36"	36"	36"	6"

NOTE:
ALL PVC MAINLINE, PVC LATERAL LINES, AND CONTROL WIRES SHALL BE SLEEVED BELOW ALL HARDSCAPE ELEMENTS WITH SCH. 40 PVC, 2 TIMES THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.

ALL CURBS SHALL BE MARKED WITH A "SCORE" MARK TO DESIGNATE SLEEVE LOCATION.

SLEEVE DETAIL SHALL ALSO BE USED FOR INSTALLATION OF PIPE IN ROCK SOIL.

SLEEVE TRENCHING

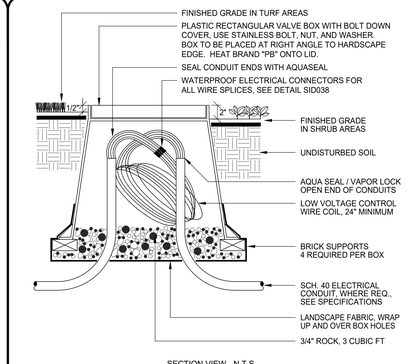


NOTE:
WIRE CONNECTOR SHALL BE A 3M DBY DIRECT BURY SPLICE KIT.

KIT SHALL INCLUDE A SCOTCHLOK SPRING CONNECTOR, A POLYPROPYLENE TUBE AND A WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PREFILLED WITH GEL.

DIRECT BURY SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2 - 3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

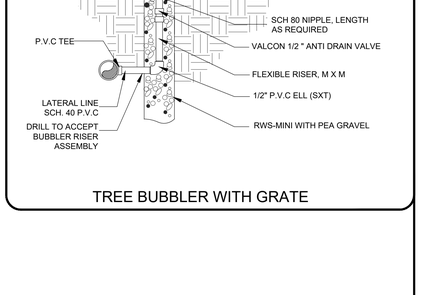
WIRE CONNECTOR



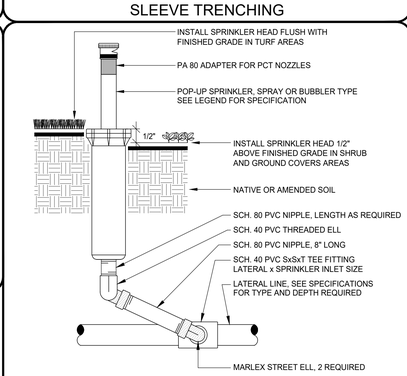
NOTE:
ALL CONTROL WIRE SPLICES SHALL BE INSTALLED INSIDE PULL BOXES.

ALL SPLICES SHALL BE MADE USING WATERPROOF ELECTRICAL CONNECTORS.

CONTROL WIRE PULL/SPLICE BOX



TREE BUBBLER WITH GRATE



NOTE:
CONTRACTOR ASSEMBLED SWING JOINT SHALL BE SIZED TO MATCH THE SPRINKLER INLET.

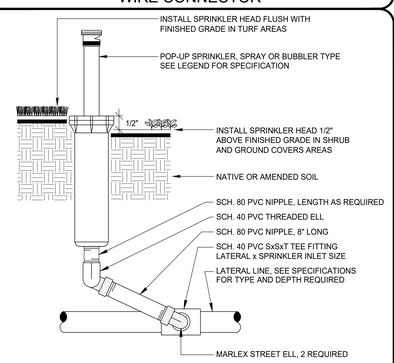
INSTALL SPRINKLER HEADS 6" FROM PAVING EDGE IN GROUND COVER AREAS.

INSTALL SPRINKLER HEADS 4" FROM PAVING EDGE IN TURF AREAS.

INSTALL SPRINKLER HEADS PLUMB. ADJUST NOZZLE STREAM TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS OR BUILDINGS.

USE A NON-HARDENING TEFLON PIPE SEALANT ON ALL THREADED CONNECTIONS.

2"-6" POP-UP BUBBLER SPRINKLER



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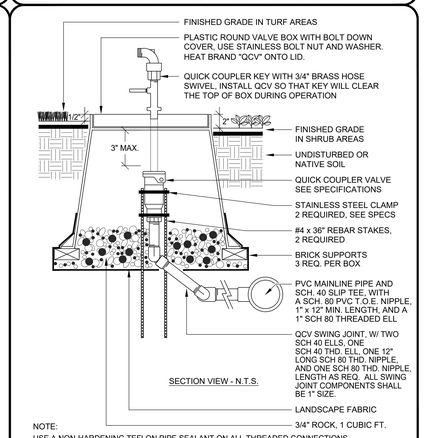
2"-6" POP-UP SPRINKLER



NOTE:
USE A NON-HARDENING TEFLON PIPE SEALANT ON ALL THREADED CONNECTIONS.

QUICK COUPLER VALVE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
silver studio
landscape architecture + design
riverside, ca

IRRIGATION DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
LICENSED LANDSCAPE ARCHITECT
GREGG THOMAS DOWNEY
No. 6062
Renewal 08/31/2026
STATE OF CALIFORNIA

sgh ARCHITECTS

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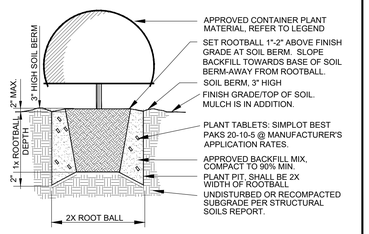
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025

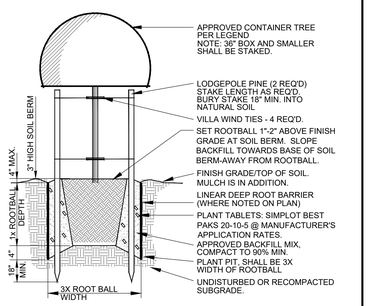
DELTA	DATE:	DESCRIPTION:

L1.02

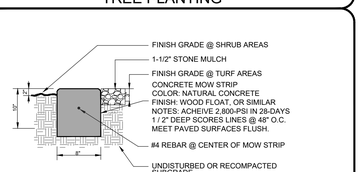
100% CD



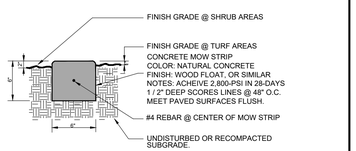
SHRUB PLANTING



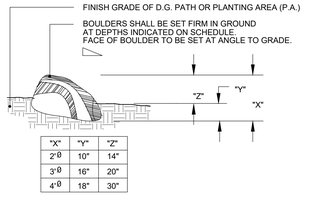
TREE PLANTING



8" CONCRETE BORDER



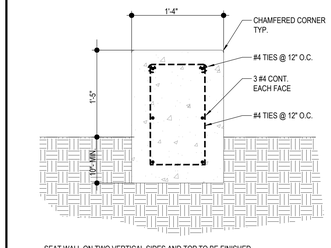
1 CONCRETE BORDER



"X"	"Y"	"Z"
2'-0	10"	14"
3'-0	16"	20"
4'-0	18"	30"

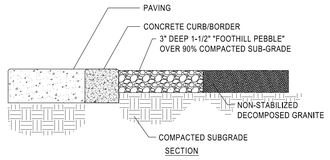
NOTES:
BOULDERS SHALL BE LOCAL SOURCE BOULDERS; SMOOTH, WATERWASHED, WITH NO MAJOR FRACTURES OR EQUIPMENT SCARS.
ALL BOULDERS SUBJECT TO APPROVAL OF THE LANDSCAPE ARCHITECT VIA PHOTOGRAPHS.

BOULDER INSTALLATION

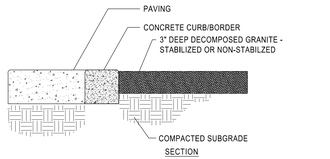


SEAT WALL ON TWO VERTICAL SIDES AND TOP TO BE FINISHED WITH A 1/2" THICK LAYER OF RAPID SET CONCRETE PATCH TROWELED TO A CONSISTENTLY SMOOTH FINISH WITH NO STREAKS, BUMPS, OR BLEMISHES.

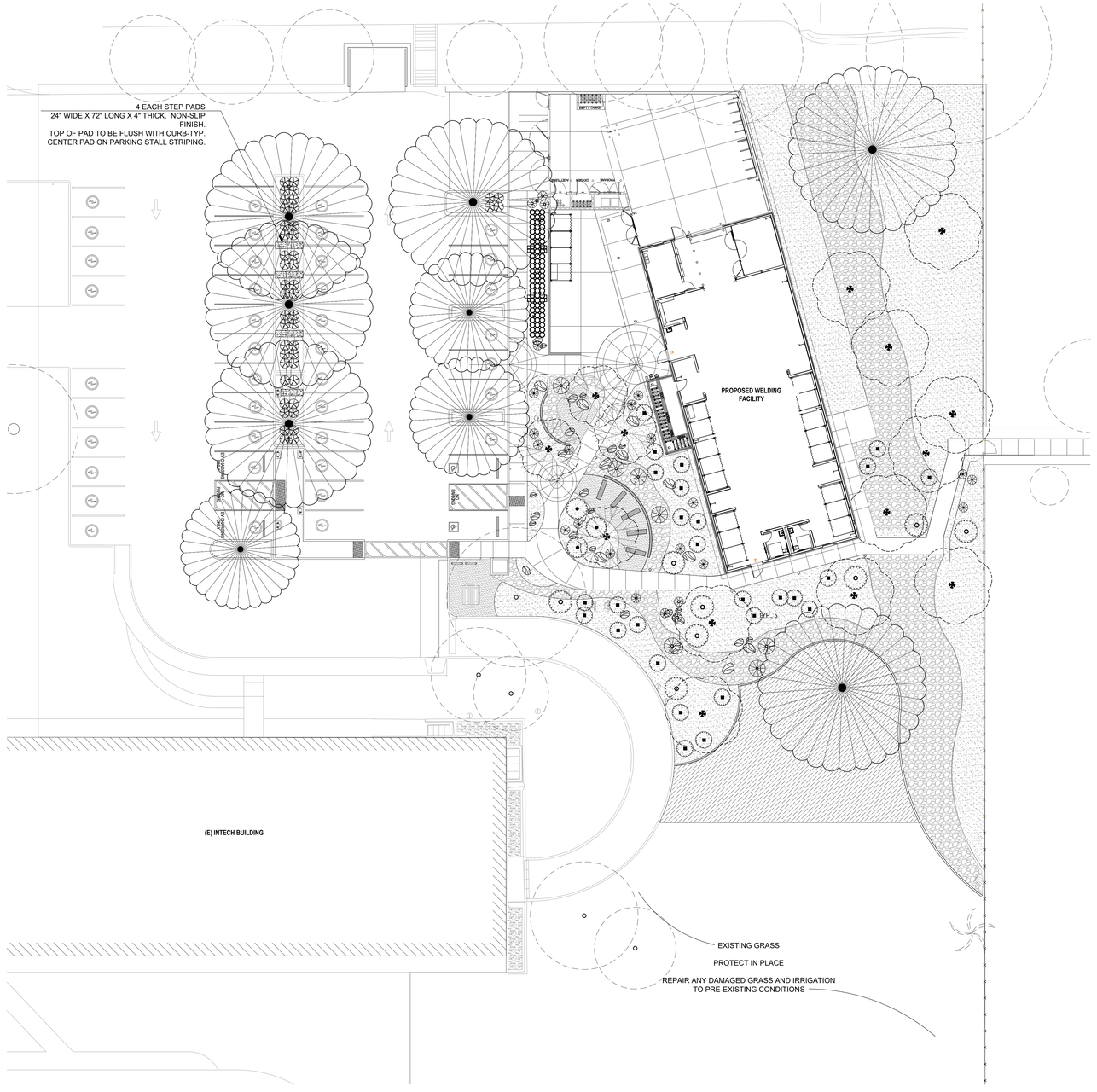
SEAT WALL



STONE MULCH SECTION



DECOMPOSED GRANITE MULCH



PLANTING LEGEND
WUCOLS CLASSIFICATION

	PLATANUS RACEMOSA SYCAMORE 24" BOX	WUCOLS 3: MED 50' TALL/40' WIDE SUN
	AGONIS FLEXUOSA 'PEPPERMINT WILLOW 24" BOX	WUCOLS 3: MED 30' TALL/25' WIDE SUN
	PISTACIA CHININSIS 'RED PUSH' 24" BOX	WUCOLS 3: MED 35' TALL/35' WIDE SUN
	ACACIA WILLARDIANA PALO BLANCO 24" BOX LOW BRANCH	WUCOLS 3: LOW 20' TALL/15' WIDE SUN
	LOMANDRA LONGIFOLIA 'BREEZE' 5-GAL.	WUCOLS 3: LOW 36" TALL/36" WIDE SUN/PART SUN
	ROSMARINUS O. HUNTINGTON CARPET' 5-GAL.	WUCOLS 3: LOW 16" TALL/72" WIDE SUN
	CALLIANDRA CALIFORNICA 'MEXICALI ROSE' 15-GAL.	WUCOLS 3: LOW 48" TALL/54" WIDE SUN
	AGAVE VILMORIANA OCTOPUS AGAVE 15-GAL.	WUCOLS 3: LOW 48" TALL/54" WIDE SUN
	AGAVE 'BLUE GLOW' 15-GAL.	WUCOLS 3: LOW 30" TALL/32" WIDE SUN
	AGAVE GEMNIFLORA TWIN FLOWERED AGAVE 15-GAL.	WUCOLS 3: LOW 32" TALL/36" WIDE SUN
	SENNA ARTEMISIDIOIDES FEATHERY CASSIA 15-GAL.	WUCOLS 3: LOW 60" TALL/72" WIDE SUN
	SENECIO SERPENS BLUE CHALKS 1-GAL. @ 18" O.C.	WUCOLS 3: LOW 12" TALL/2' WIDE SUN/PART SHADE
	AG SOD BALLPARK SOD	WUCOLS 3: MED LAWN SUN

3" LAYER OF ORGANIC LOCK, OR APPROVED EQUAL, STABILIZED DECOMPOSED GRANITE BY GAIL MATERIALS OVER 90% COMPACTED SUB-GRADE. REFER TO DETAIL/NOTES. INSTALL PER SUPPLIERS SPECIFICATIONS.

3" DEEP STONE MULCH OVER 90% RELATIVELY COMPACTED SUB-GRADE. STONE TO BE: FOOTHILL PEBBLE 1-1/2-INCH BY DECORATIVE STONE SOLUTIONS, OR AN APPROVED EQUAL.

3" LAYER OF DESERT GOLD NON-STABILIZED D.G. BY DECORATIVE STONE SOLUTIONS, OR APPROVED EQUAL, OVER 90% COMPACTED SUB-GRADE. REFER TO DETAIL/NOTES.

16" WIDE BY 72" LONG CONCRETE SEAT WALLS. TOP OF PADS FLUSH WITH TOP OF CURB-TYP.

ALL SHRUB PLANTER AREAS NOT TO RECEIVE DECOMPOSED GRANITE SHALL BE MULCHED WITH AN APPROVED 2-1/2" DEEP LAYER OF A REDWOOD OR CEDAR BARK MULCH OR SHREDDED REDWOOD MULCH. TOP OF MULCH TO BE FLUSH WITH TOP OF ADJACENT PAVING.

LOCAL SOURCE GRANITE BOULDERS
A 60"
B 48"
C 30"
ALL BOULDERS TO BE SMOOTH W/NO SCARS, CHIPS, AND SHARP EDGES.

1. SOURCE OF BASE SHEETS IS SGH ARCHITECTS.
2. REFER TO CIVIL ENGINEER'S UTILITY PLANS FOR UTILITY LOCATION AND DRAINAGE INFORMATION.
3. REFER TO CIVIL ENGINEER'S GRADING PLANS FOR GRADING INFORMATION. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE PLANS OR IF THERE ARE DISCREPANCIES BETWEEN THE PLANS, CONTACT THE LANDSCAPE ARCHITECT FOR DIRECTION AS TO HOW TO PROCEED.
4. VERIFY LOCATIONS OF PERTINENT SITE IMPROVEMENTS INSTALLED UNDER OTHER SECTIONS. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO COMMENCING WORK.
5. EXACT LOCATIONS OF PLANT MATERIALS TO BE PER PLANS NOTES AND DIMENSIONS. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN FIELD.
6. VERIFY PLANT COUNTS AND SQUARE FOOTAGES: QUANTITIES IF PROVIDED ARE FOR OWNER INFORMATION ONLY. IF QUANTITIES ON PLANT LIST DIFFER FROM GRAPHIC INDICATIONS, THEN GRAPHICS SHALL PREVAIL.
7. CONTACT THE LOCAL UNDERGROUND UTILITY SERVICES, OR SITE FACILITIES STAFF, FOR UTILITY LOCATION AND IDENTIFICATION.
8. PERFORM EXCAVATION IN THE VICINITY OF UNDERGROUND UTILITIES WITH CARE AND IF NECESSARY, BY HAND. THE CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK AND DISRUPTION OR DAMAGE TO UTILITIES SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER.
9. TREES SHALL BEAR SAME RELATION TO FINISHED GRADE PLUS 1".
10. PROVIDE MATCHING FORMS AND SIZES FOR PLANT MATERIALS WITHIN EACH SPECIES AND SIZE DESIGNATED ON THE DRAWINGS.
11. PRUNE NEWLY PLANTED TREES ONLY AS DIRECTED BY LANDSCAPE ARCHITECT.
12. ALIGN AND EQUALLY SPACE IN ALL DIRECTIONS TREES AND SHRUBS SO DESIGNATED PER THESE NOTES AND DRAWINGS.
13. FINISH GRADES OF PLANTER AREAS SHALL BE 2-INCHES BELOW ADJACENT PAVING OR TOP OF WALL UNLESS OTHERWISE NOTED, PRIOR TO MULCH APPLICATION.
14. PROVIDE SPECIFIED EDGING AS DIVIDER BETWEEN PLANTING BEDS.
15. REMOVE ENTIRE CONTAINER/BOX FROM ROOTBALL.
16. LANDSCAPE ARCHITECT TO REVIEW PLANT MATERIALS BY PHOTOGRAPHS PRIOR TO DIGGING OR SHIPPING OF PLANT MATERIALS.

0' 8' 16' 32'

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
silver studio
landscape architecture + urban design
ontario, ca

PLANTING PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED LANDSCAPE ARCHITECT
CHRISTOPHER THOMAS SILVER
2955
RENEWAL 08/31/2026
REN. JULY 2026
STATE OF CALIFORNIA

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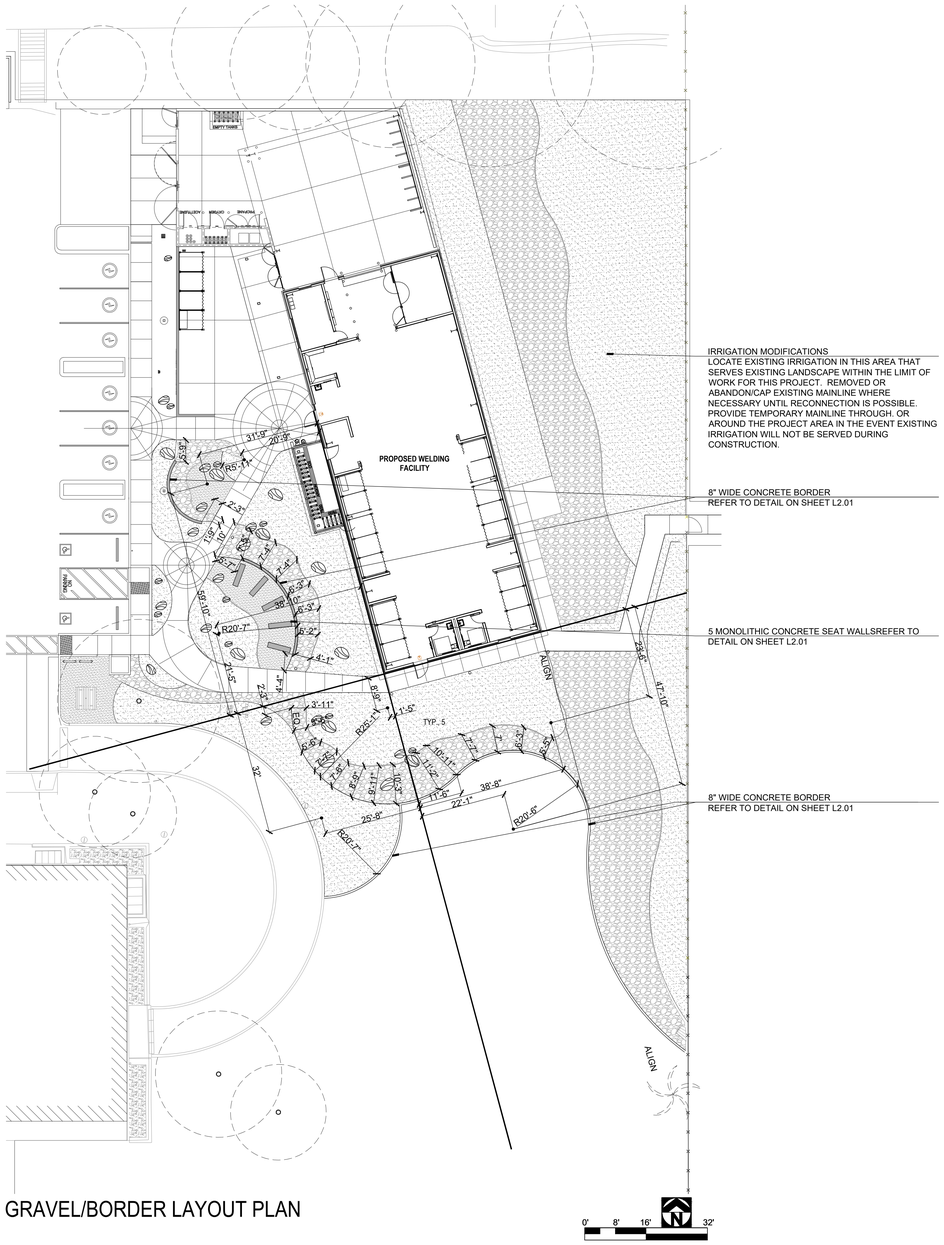
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/08/2025

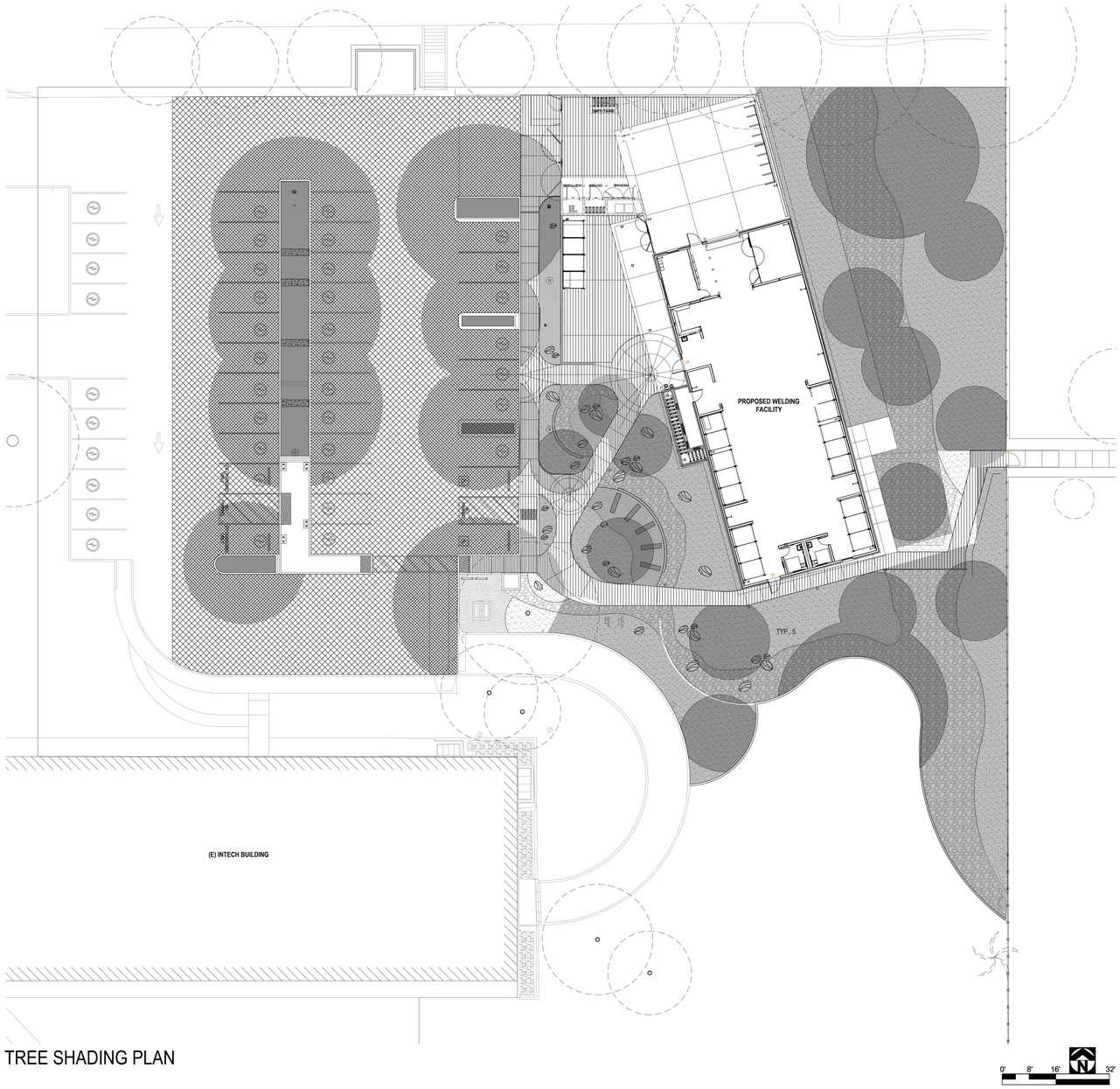
DELTA	DATE	DESCRIPTION

L2.01

100% CD



GRAVEL/BORDER LAYOUT PLAN



TREE SHADING PLAN

TREE SHADING SCHEDULE *

BOTANICAL/COMMON NAME	CONTAINER SIZE	MEASUREMENT @ INSTALLATION	GROWTH RATE	MEASUREMENT @ YEAR 15
PISTACIA CHINENSIS 'RED PUSH'	24" BOX	8' TALL 3' WIDE	HEIGHT +/-24"/YEAR SPREAD +/-18"/YEAR	38' TALL 25' WIDE 80% MATURE SIZE
PRUNUS CERASIFERA 'KRAUTER VESUVIUS' LOW-BRANCHING	24" BOX	7' TALL 2' WIDE	HEIGHT +/-18"/YEAR SPREAD +/-16"/YEAR	18' TALL 16' WIDE MATURE SIZE
QUERCUS AGRIFOLIA LIVE OAK	36" BOX.	9' TALL 4' WIDE	HEIGHT 12"/YEAR SPREAD 12"/YEAR	29' TALL 20' WIDE 60% MATURE SIZE

* GROWTH RATE BASED ON CAL POLY SELECTREE DATA

	TREE SHADING CALCULATIONS PAVING AREAS	
	PAVING AREA	4,083 SF
	20% SHADING RQMT.	816 SF
	SHADING PROVIDED	1,062 SF

	TREE SHADING CALCULATIONS LANDSCAPE AREAS	
	LANDSCAPE AREA	15,791 SF
	20% SHADING RQMT.	3,158 SF
	SHADING PROVIDED	8,029 SF

	TREE SHADING CALCULATIONS PARKING STALL AREAS	
	PARKING STALL AREA	15,580 SF
	50% SHADING RQMT.	7,790 SF
	SHADING PROVIDED	8,399 SF

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APP. 04-124464 INC:
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DATE: 09/02/25

CONSULTANT:
silver studio
landscape architecture + design
anaheim, ca.

TREE SHADING PLAN
CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
LICENSED LANDSCAPE ARCHITECT
CHRISTOPHER J. THOMAS
2983
REGISTERED
EXP. JULY 2026
STATE OF CALIFORNIA

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
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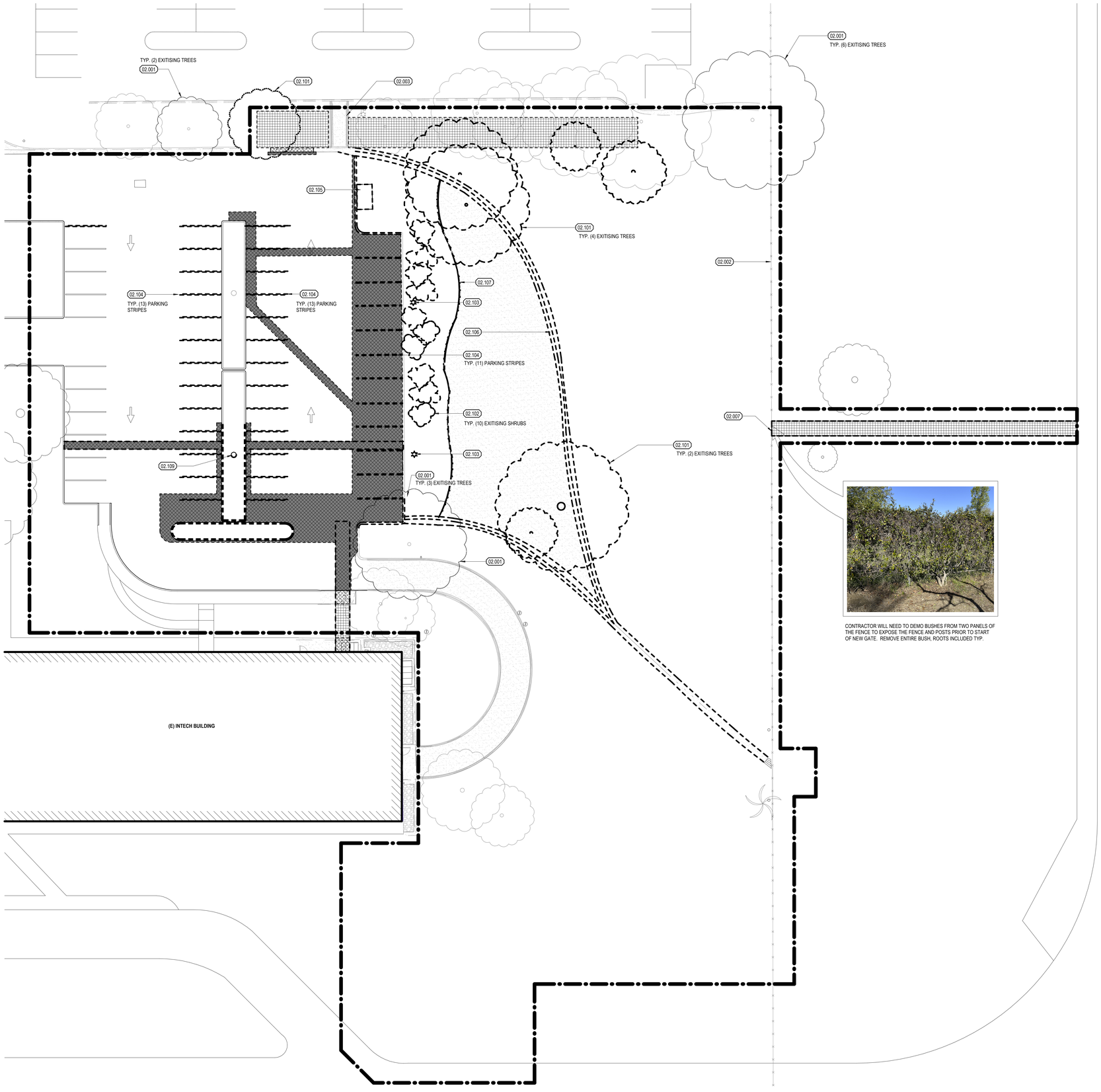

CONTRACTOR WILL NEED TO DEMO BUSHES FROM TWO PANELS OF THE FENCE TO EXPOSE THE FENCE AND POSTS PRIOR TO START OF NEW GATE. REMOVE ENTIRE BUSH, ROOTS INCLUDED TYP.

CHERRY AVE

NORTH

ARCHITECTURAL SITE PLAN - DEMOLITION
1/16" = 1'-0" :SCALE (1)

KEYNOTES

	DESCRIPTION
02.001	(E) TREE. PROTECT IN PLACE
02.002	(E) FENCE. PROTECT IN PLACE
02.003	(E) STAIR RUN. PROTECT IN PLACE
02.007	REMOVE SECTION OF CHAINLINK FENCE
02.101	REMOVE (E) TREE
02.102	REMOVE (E) SHRUB
02.103	REMOVE (E) LIGHT POST AND FOOTING
02.104	(E) ASPHALT STRIPING TO BE SANDBLASTED AND REMOVED
02.105	REMOVE (E) ENCLOSURE IN ITS ENTIRETY
02.106	REMOVE (E) PORTION OF RIBBON GUTTER
02.107	REMOVE (E) CONCRETE HEADER
02.109	REMOVE (E) FLOOD LIGHT & BASE. SALVAGE FLOOD LIGHT AND REINSTALL

DEMOLITION NOTES

DEMOLITION NOTES

A. DEMOLITION GENERAL NOTES APPLY TO ALL DEMOLITION SHEETS.
B. COORDINATE DEMOLITION AND PHASING EFFORTS WITH ARCHITECT AND OWNER'S REPRESENTATIVES. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS AND TO PROVIDE BUILDING USER'S SAFETY. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH OWNER'S REPRESENTATIVE.
C. COORDINATE DISRUPTION OF UTILITY SERVICES WITH OWNER AND AS SPECIFIED.
D. VERIFY EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS AND NOTIFY ARCHITECT OF DISCREPANCIES.
E. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
F. PROVIDE PROTECTION FOR EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
G. REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND /OR CONDITION.
H. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
I. VERIFY AND MAINTAIN LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF SERVICE.
J. CAP DISCONNECTED UTILITIES LINES
K. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
L. AVOID DISTURBING OF SOILS WITHIN ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
M. REFER TO CIVIL, LANDSCAPE, MECHANICAL, PLUMBING, ELECTRICAL AND TECHNOLOGY SHEETS FOR WORK NOT SHOWN ON THESE PLANS
N. FOR NEW SIDEWALK TO THE PUBLIC WAY, COMPACT THE EXISTING SOIL TO 90% RELATIVE COMPACTION AND FORM NEW SIDEWALK ON THE SURFACE. REMOVE TURF WHERE OCCURS. OKAY TO POUR OVER EXISTING MOW CURB IF ELEVATION WORKS.

DO NOT START DEMOLITION WITHOUT OBTAINING DSA APPROVAL.
COORDINATE DEMOLITION WITH OWNER TO MINIMIZE DISTURBANCE..
COMPLETE DEMOLITION OF SPACES AS INDICATED AND TO THE EXTENT REQUIRED TO ENABLE NEW CONSTRUCTION WORK TO BE PERFORMED.

DEMOLITION SITE LEGEND

- LIMITS OF WORK
- OBJECTS DESTINED FOR DISMANTLING
- ASPHALT PAVEMENT TO BE REMOVED REFER TO CIVIL PLANS FOR EXTENTS OF REMOVAL AND GRIND/OVERLAY — C-2.1 / C-3.1
- CONCRETE PAVEMENT TO BE DEMOLISHED AND REMOVED
- PLANTER AREA TO BE CLEARED AND GRUBBED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SITE PLAN - DEMOLITION

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. C-26450
REN 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/02/2025
DELTA DATE: DESCRIPTION:

A1.01
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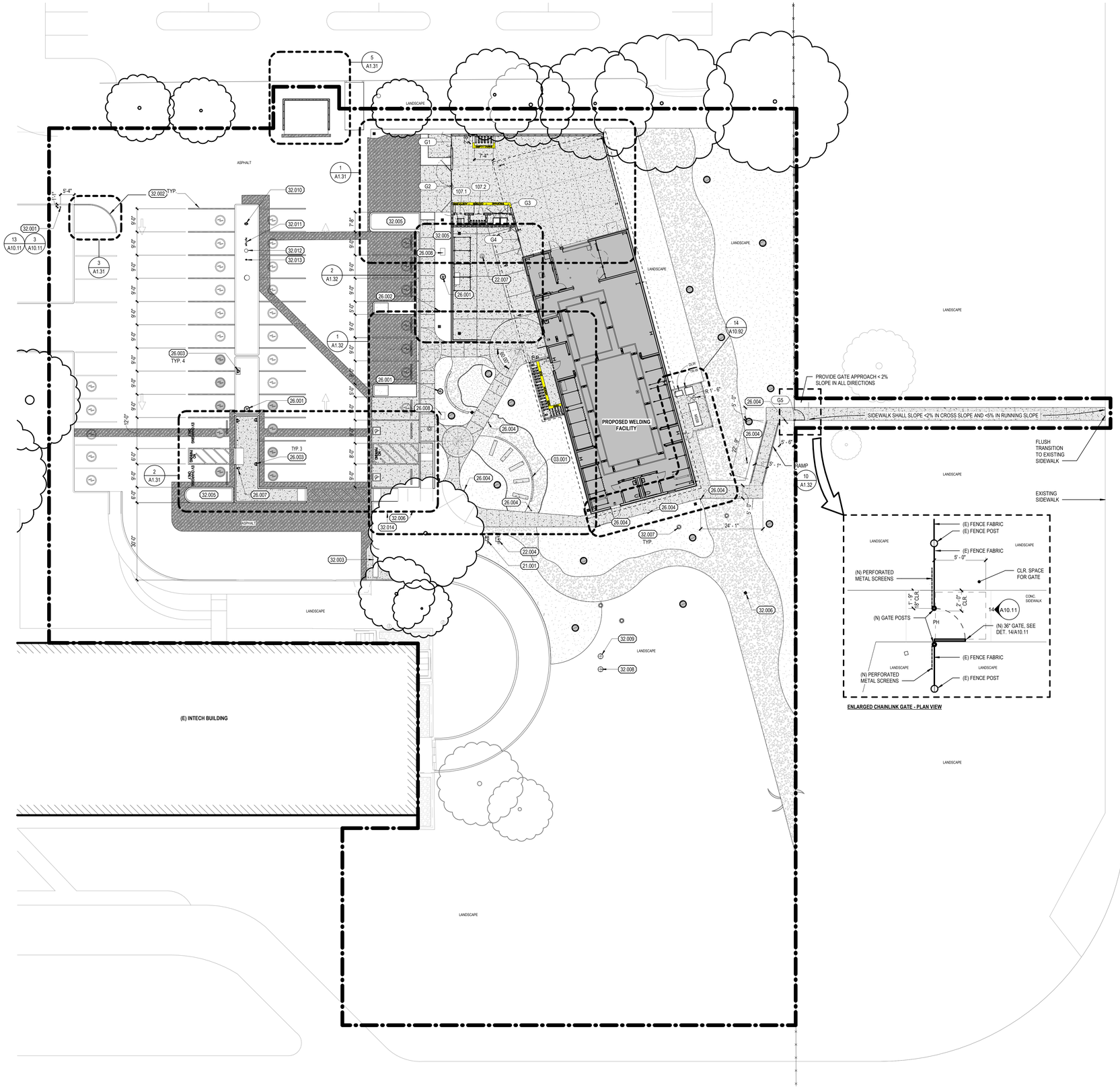

NORTH

ARCHITECTURAL SITE PLAN (1)
1/16" = 1'-0" :SCALE

KEYNOTES

	DESCRIPTION
03.001	CONCRETE BORDER
21.001	DETECTOR CHECK ASSEMBLY, SEE CIVIL
22.004	LANDSCAPE REDUCED PRESSURE PRINCIPLE ASSEMBLY. SEE CIVIL
22.007	STORM DRAIN CLEAN OUT. SEE CIVIL
26.001	POLE-MOUNTED LUMINAIRES
26.002	SIGN ILLUINATING LED FLOODLIGHT
26.003	ELECTRIC VEHICLE CHARGING STATION - DUAL PORT
26.004	LIGHT BOLLARD
26.007	ELECTRIC VEHICLE CHARGING STATION - SINGLE PORT
26.008	PULL BOX - SEE ELECTRICAL SITE PLAN
32.001	UNAUTHORIZED PARKING SIGN
32.002	WHITE PARKING STRIPES
32.003	(E) SPEED BUMP
32.005	PLANTER AREA, SEE LANDSCAPE
32.006	CATCH BASIN PER CIVIL DWGS
32.007	CLEANOUT PER CIVIL DWGS
32.008	SEWER MANHOLE PER CIVIL DWGS
32.009	SEWER GRINDER PUMP PER CIVIL DWGS
32.010	FIRE HYDRANT, SEE CIVIL DWGS
32.011	FIRE DEPARTMENT CONNECTION, SEE CIVIL DWGS
32.012	SILENT WAFER CHECK VALVE, SEE CIVIL DWGS
32.013	POST INDICATOR VALVE, SEE CIVIL
32.014	BIKE RACK - SEE 22/A10.11

SITE PLAN LEGEND

- LIMIT/SCOPE OF WORK
- NEW BUILDING
- PCC PAVING - SEE A1.32 FOR ADDITIONAL CONCRETE REQUIREMENTS
- ACC PAVING
- GRANITE BOULDERS SEE LANDSCAPE L2.01
- DECOMPOSED GRANITE SEE LANDSCAPE L2.01
- TREE TRUNKS. SEE LANDSCAPE L2.01
- XXX DOOR/GATE TAG, SEE SHEET A9.11
- EV CAPABLE SPACE
- EV CHARGING STATION
- SINGLE PORT PEDASTAL CHARGER
- DUAL PORT PEDASTAL CHARGER

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DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SITE PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. C-26450
REN 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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A1.11

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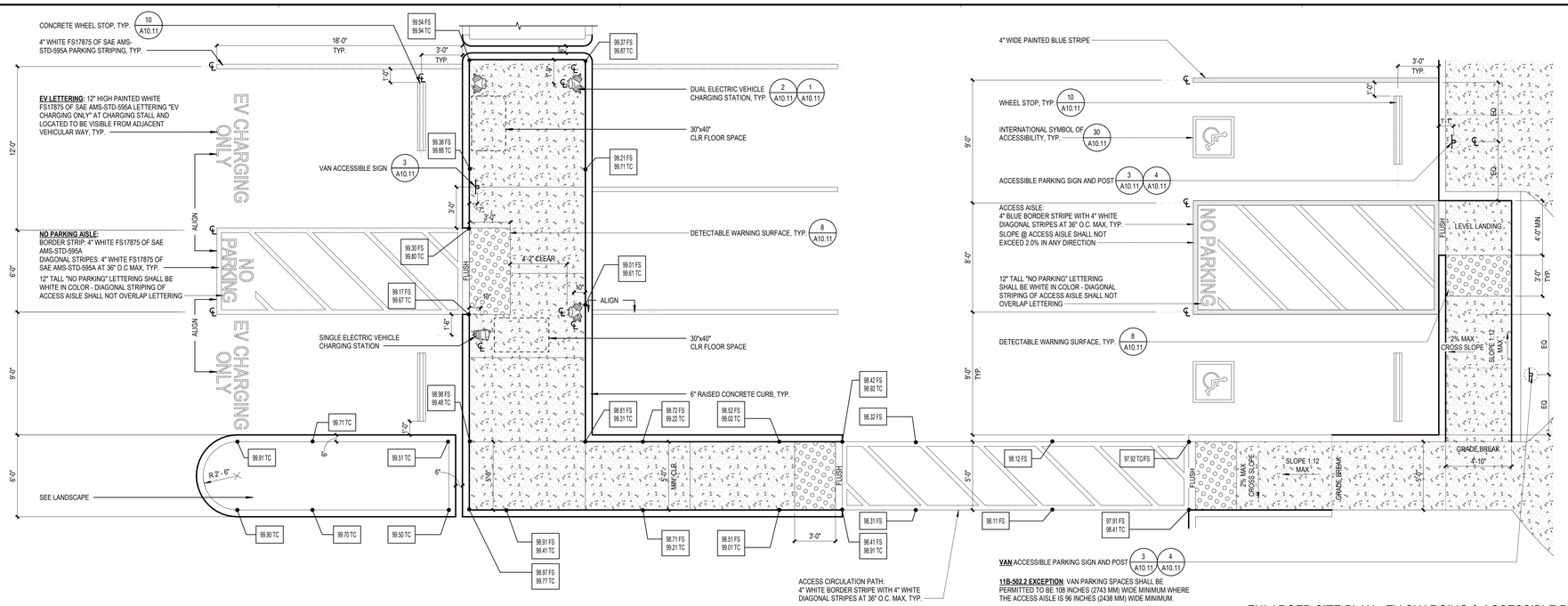
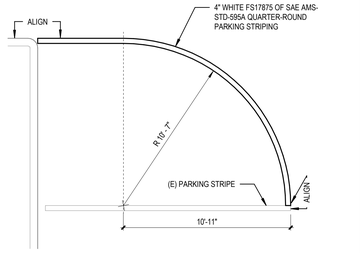


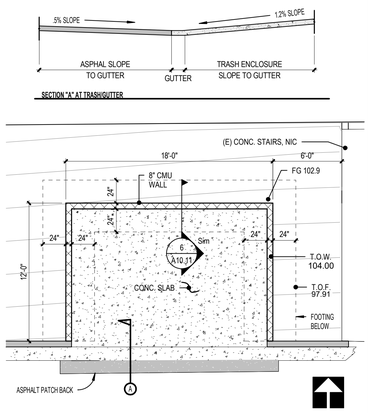
ENLARGED SITE PLAN - EV CHARGING & ACCESSIBLE PARKING 2

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



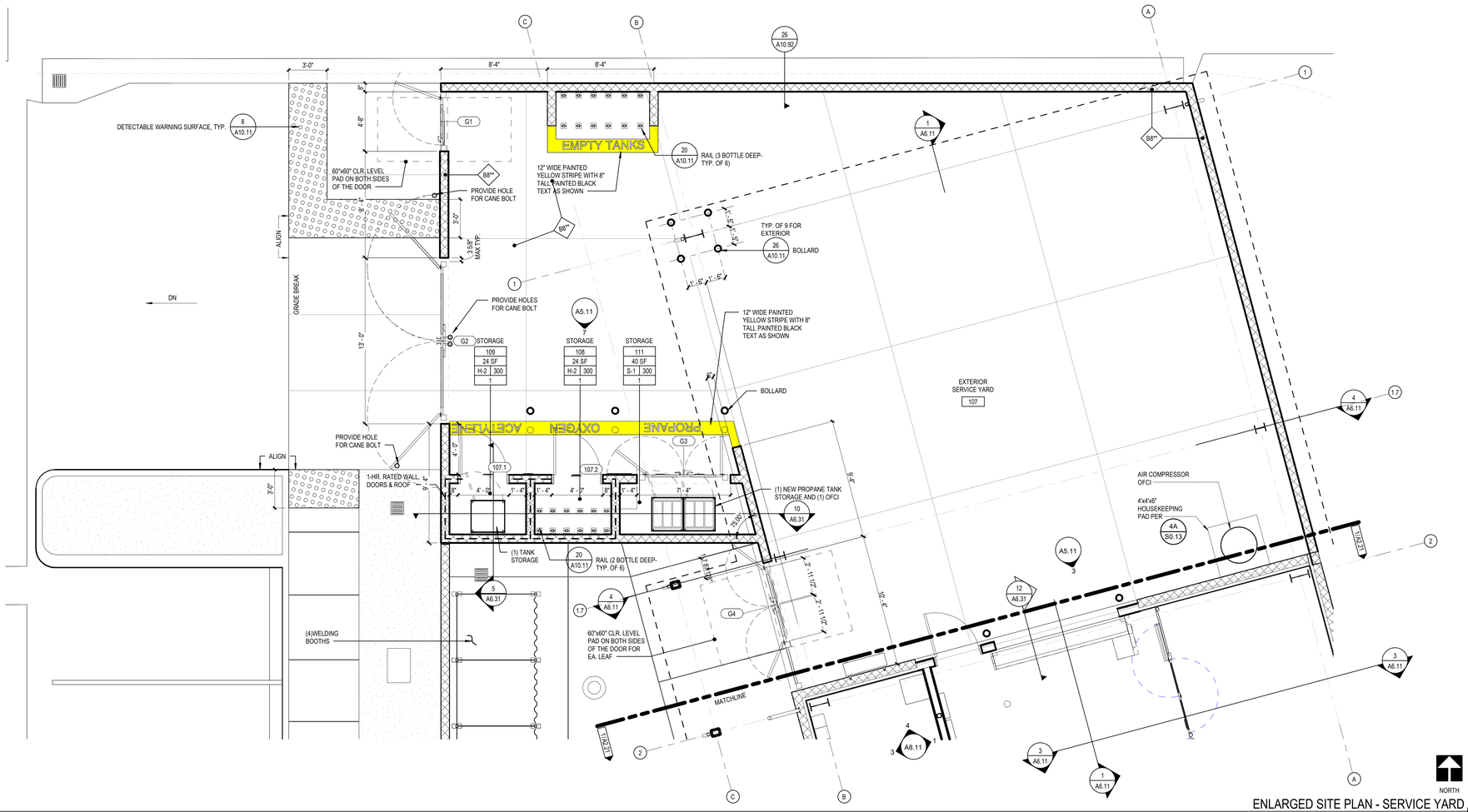
ENLARGED SITE PLAN - PARKING STRIPE 3

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



ENLARGED TRASH ENCLOSURE 5

3/16" = 1'-0" :SCALE



ENLARGED SITE PLAN - SERVICE YARD 1

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

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APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SITE PLAN - ENLARGED PLANS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT MICHAEL J. SPEPERS NO. 26450 REN: 8-31-27 STATE OF CALIFORNIA

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A1.31

100% CD

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KEYNOTES

	DESCRIPTION
03.001	CONCRETE BORDER
05.002	METAL DOWN SPOUTS
05.012	STRUCTURAL STEEL FRAMING - HSS COLUMN
22.007	STORM DRAIN CLEAN OUT. SEE CIVIL
26.001	POLE-MOUNTED LUMINAIRES
26.004	LIGHT BOLLARD
26.008	PULL BOX - SEE ELECTRICAL SITE PLAN
32.005	PLANTER AREA, SEE LANDSCAPE
32.006	CATCH BASIN PER CIVIL DWGS
32.014	BIKE RACK - SEE 22/A10.11

LEGEND

- PCC PAVING
- COLORED CONCRETE - FULL INTEGRATED COLOR BY DAVIS COLORS - COLOR TBD
- ACC PAVING
- GRANITE BOULDERS. SEE LANDSCAPE
- DECOMPOSED GRANITE. SEE LANDSCAPE
- MULCH. SEE LANDSCAPE
- CMU WALL
- TREE TRUNK. SEE LANDSCAPE

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APP. 04-124464 INC:
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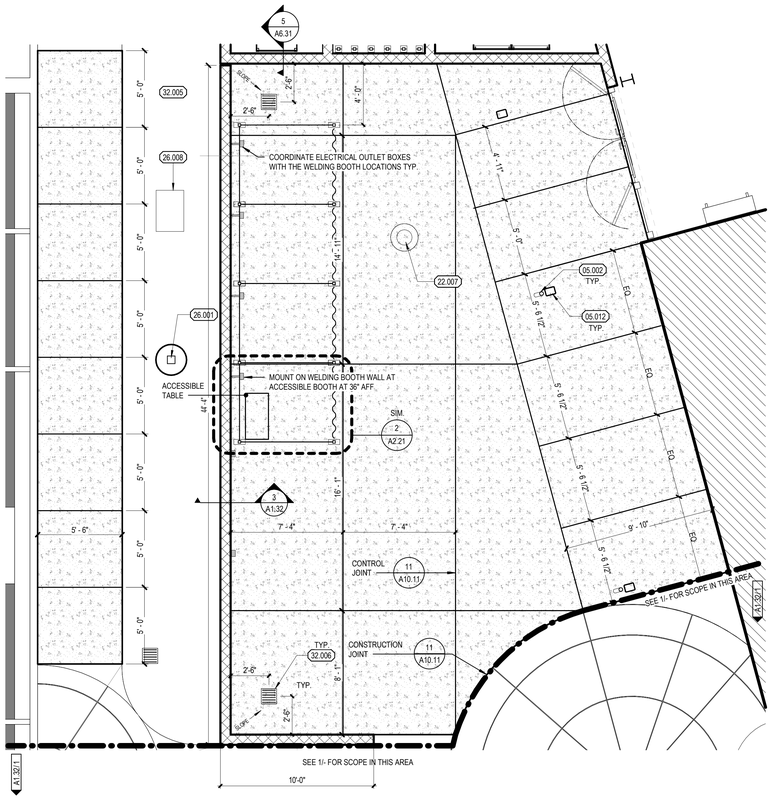
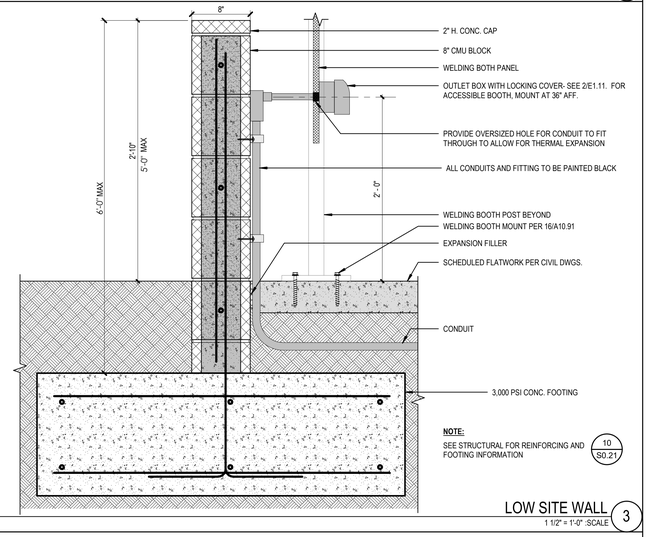
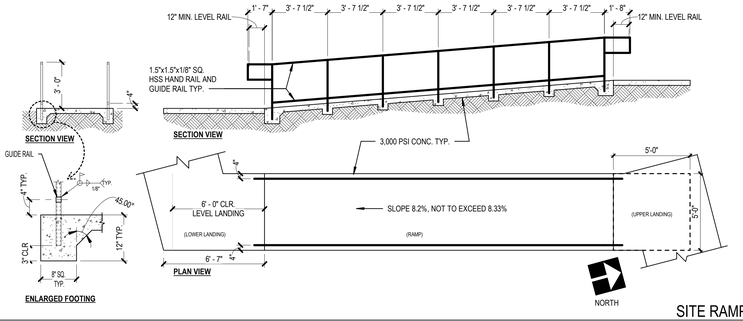
CONSULTANT:



ENLARGED CONC. SCORE JOINTS-NORTH 2
1/4" = 1'-0" :SCALE



LOW SITE WALL 3
1 1/2" = 1'-0" :SCALE



SITE RAMP 10
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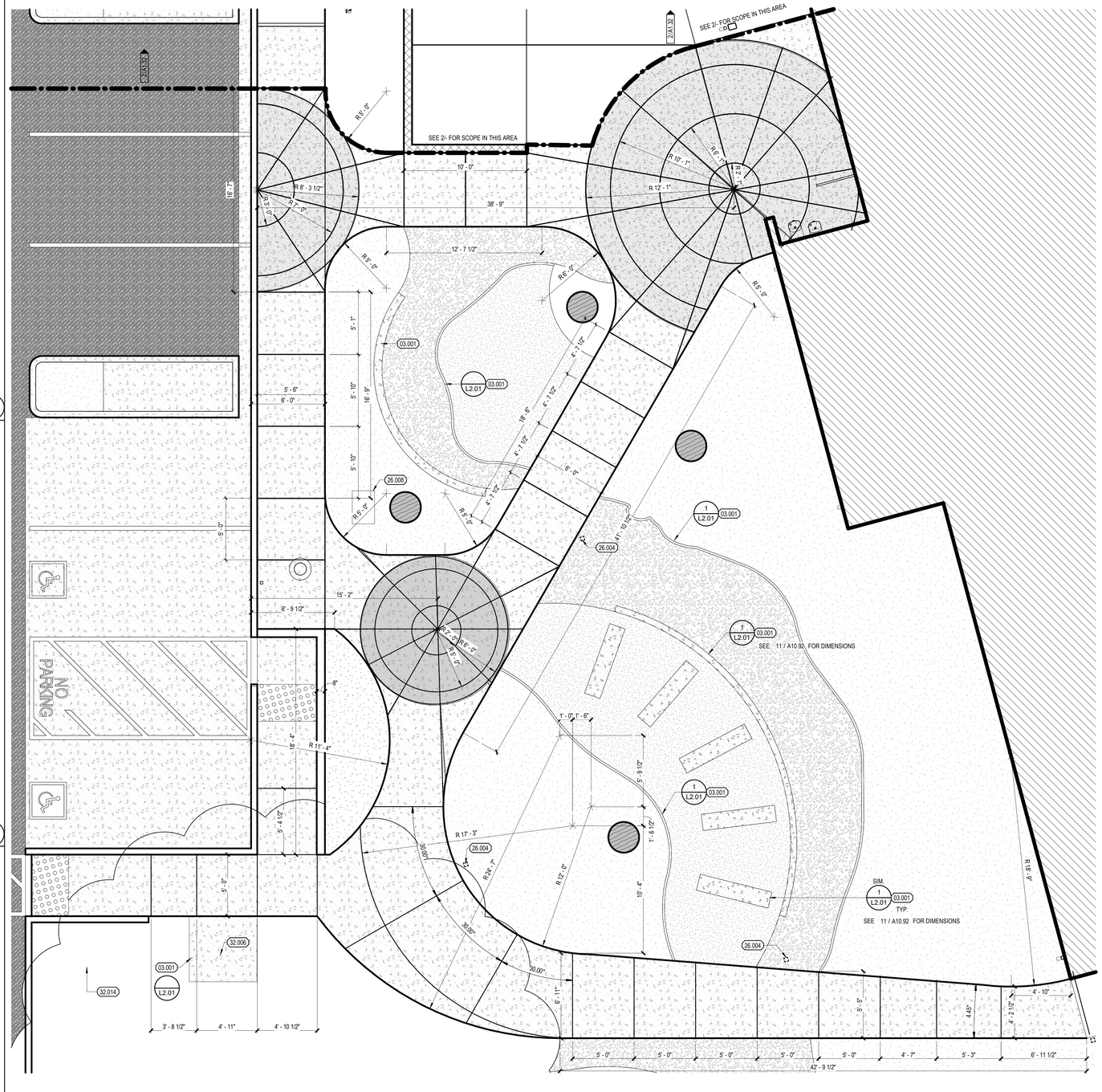

ENLARGED CONC. SCORE JOINTS 1
1/4" = 1'-0" :SCALE

SITE PLAN - ENLARGED PLANS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. S. SPERNS
NO. C-28450
REN. 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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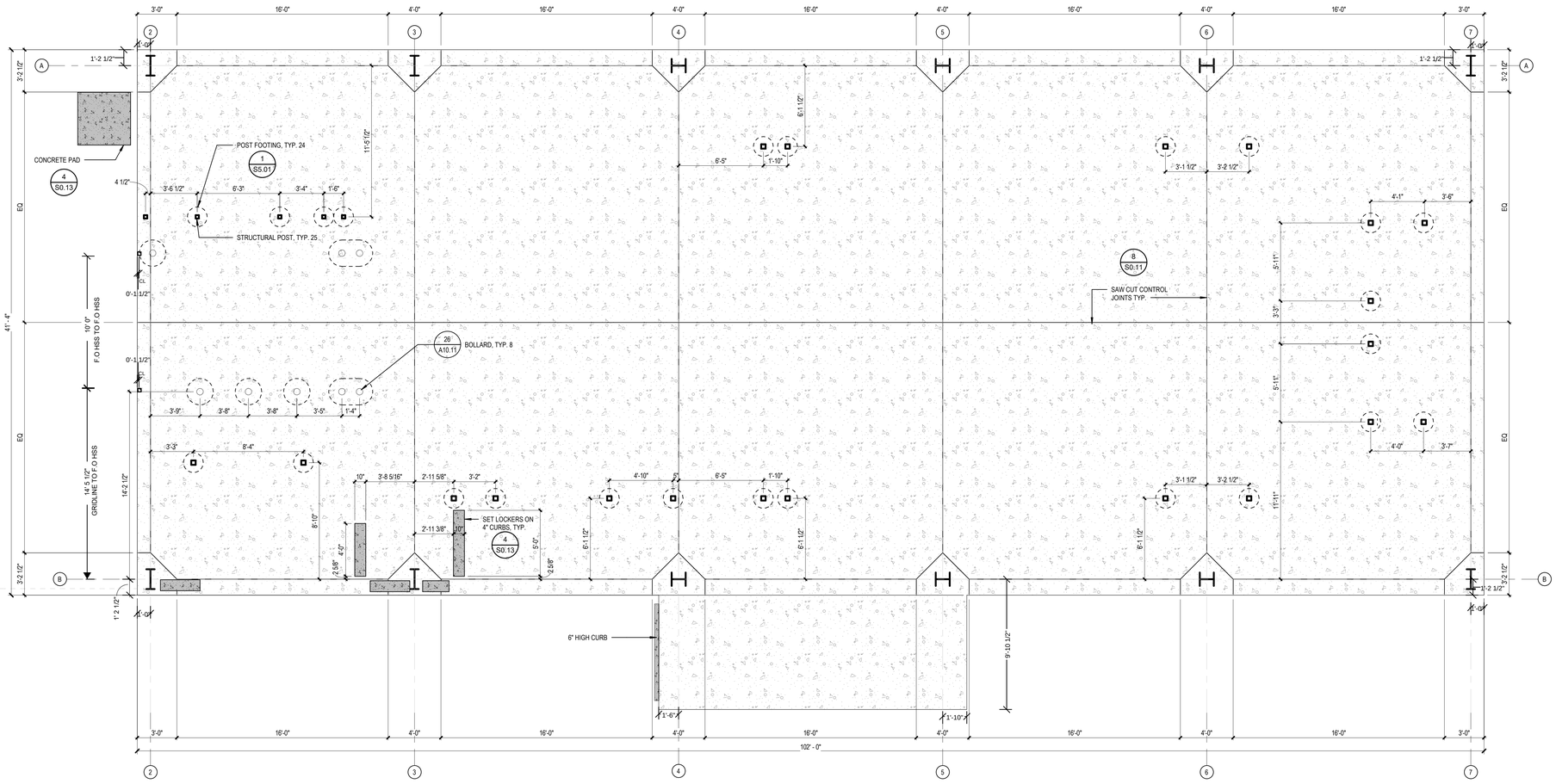

PROJECT NORTH

NORTH

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

KEYNOTES

	DESCRIPTION

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

GENERAL NOTES

1. THIS BUILDING REQUIRES THE USE OF A FORKLIFT, THEREFORE, WE NEED A FLOOR FLATNESS F_F IS 45 AND LEVELNESS F_L NEEDS TO BE 35
2. GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS THAT APPLY TO THIS DRAWING, SEE G0.02
3. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF MASONRY, CENTERLINE OF DOORS OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
4. ALL CLEARANCE DIMENSIONS ARE ACTUAL AND ARE TO FINIDH FACE, CENTERLINE OF PLUMBING FIXTURES, AND DOOR OPENINGS, UNLESS NOTED OTHERWISE.
5. SEE REFLECTED CEILING PLAN FOR ADDITIONAL WINDOW TAGS.

LEGEND

CONCRETE SLAB ON GRADE

CONCRETE CURB

SLAB PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
REN 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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A2.11

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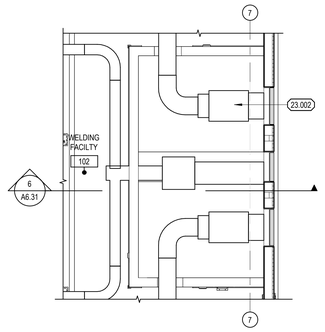
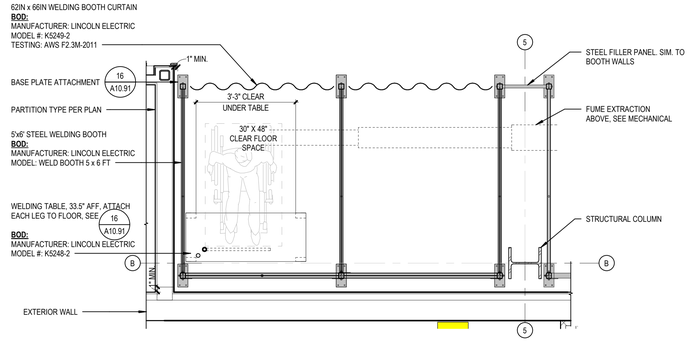
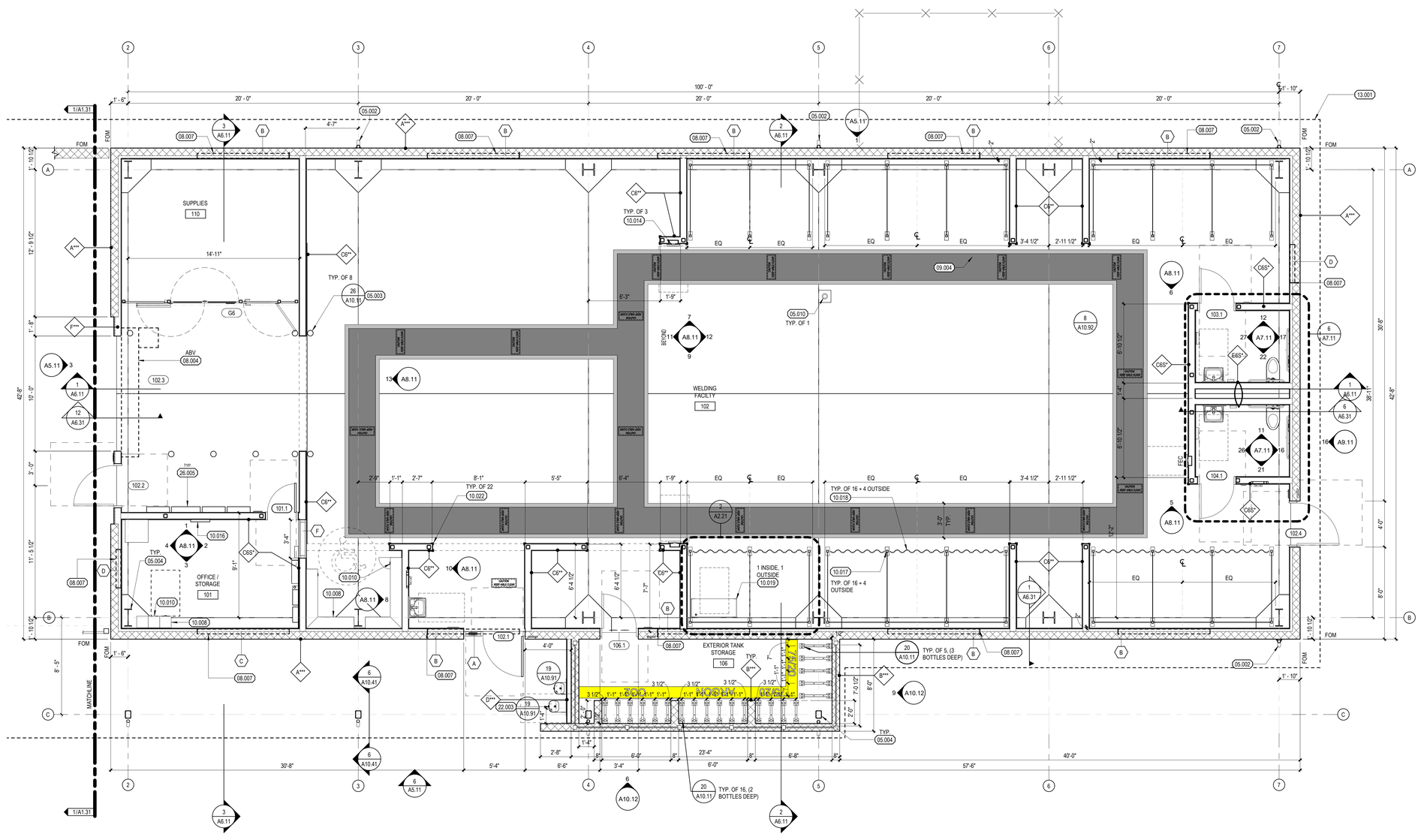


FLOOR PLAN - PLATFORM 3
1/4" = 1'-0" :SCALE



ENLARGED FLOOR PLAN - WELDING BOOTHS 2
1/2" = 1'-0" :SCALE



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

KEYNOTES

	DESCRIPTION
05.002	METAL DOWN SPOUTS
05.003	STEEL BOLLARD PER 16/A10.11
05.004	STRUCTURAL STEEL MEMEBER PER STURCT. DWG.
05.010	BOLT DOWN BOLLARD PER 22/A10.91
08.004	STEEL COILING DOOR
08.007	WINDOW SYSTEM ABOVE - SEE WINDOW TAG
09.004	PAINTED CLEAR ACCESS AISLE
10.008	METAL LOCKERS
10.010	ACCESSIBLE METAL LOCKER
10.014	FIRE PROTECTION CABIENT
10.016	TV BRACKET
10.017	WELDING BOOTH
10.018	WELDING CURTAIN. SEE 2/A2.21 FOR BASIS OF DESIGN
10.019	ACCESSIBLE WELDING WORK STATION
10.022	CORNER GUARDS - SEE 25/A10.25
13.001	EDGE OF ROOF ABOVE - SEE ROOF PLANS A4.11 & A4.12
22.003	PLUMBING FIXTURE - DRINKING FOUNTAIN
23.002	MECHANICAL DUCTWORK - SEE MECHANICAL
26.005	ELECTRICAL PANELS PER ELECTRICAL DRAWINGS

GENERAL NOTES

1. THIS BUILDING REQUIRES THE USE OF A FORKLIFT, THEREFORE, WE NEED A FLOOR FLATNESS F_F IS 45 AND LEVELNESS F_L NEEDS TO BE 35
2. GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS THAT APPLY TO THIS DRAWING, SEE G0.02
3. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF MASONRY, CENTERLINE OF DOORS OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
4. ALL CLEARANCE DIMENSIONS ARE ACTUAL AND ARE TO FINIDH FACE, CENTERLINE OF PLUMBING FIXTURES, AND DOOR OPENINGS, UNLESS NOTED OTHERWISE.
5. SEE REFLECTED CEILING PLAN FOR ADDITIONAL WINDOW TAGS.

LEGEND

WALLS: SEE INTERIOR PARTITIONS SHEET A10.51

- C6S* — WALL TYPE TAG - SEE SHEET A10.51
- STUD WALL
- CORNER GUARDS - SEE 25/A10.25
- 8" CMU WALL
- XXX — DOOR/GATE TAG, SEE SHEET A9.11
- XX — CURTAIN WALL / WINDOW TAG, SEE SHEET A9.11
- 30" CLR. / 48" CLR. / FEC — FIRE EXTINGUISHER CABINET TYPE ABC EXTINGUISHER, CONC. SEE DETAIL SEMI-RECESSED SEE DETAIL 21 A10.91

ACCESSIBILITY CLEARANCES

- 60" DIA. ACCESSIBLE TURN AROUND
- 4'-0" MIN. / 2'-6" MIN. — 48"x30" ACCESSIBLE CLEAR FLOOR SPACE
- 5'-0" / 4'-0" / 2'-0" EXT. 1'-6" INT. / 1'-0" — DOOR ACCESSIBLE CLEAR FLOOR SPACE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SEALS:

LICENSED ARCHITECT MICHAEL J. SGHERZI NO. 26450 REN: 8-31-27 STATE OF CALIFORNIA

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FLOOR PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025
DELTA: DATE: DESCRIPTION:

A2.21
100% CD

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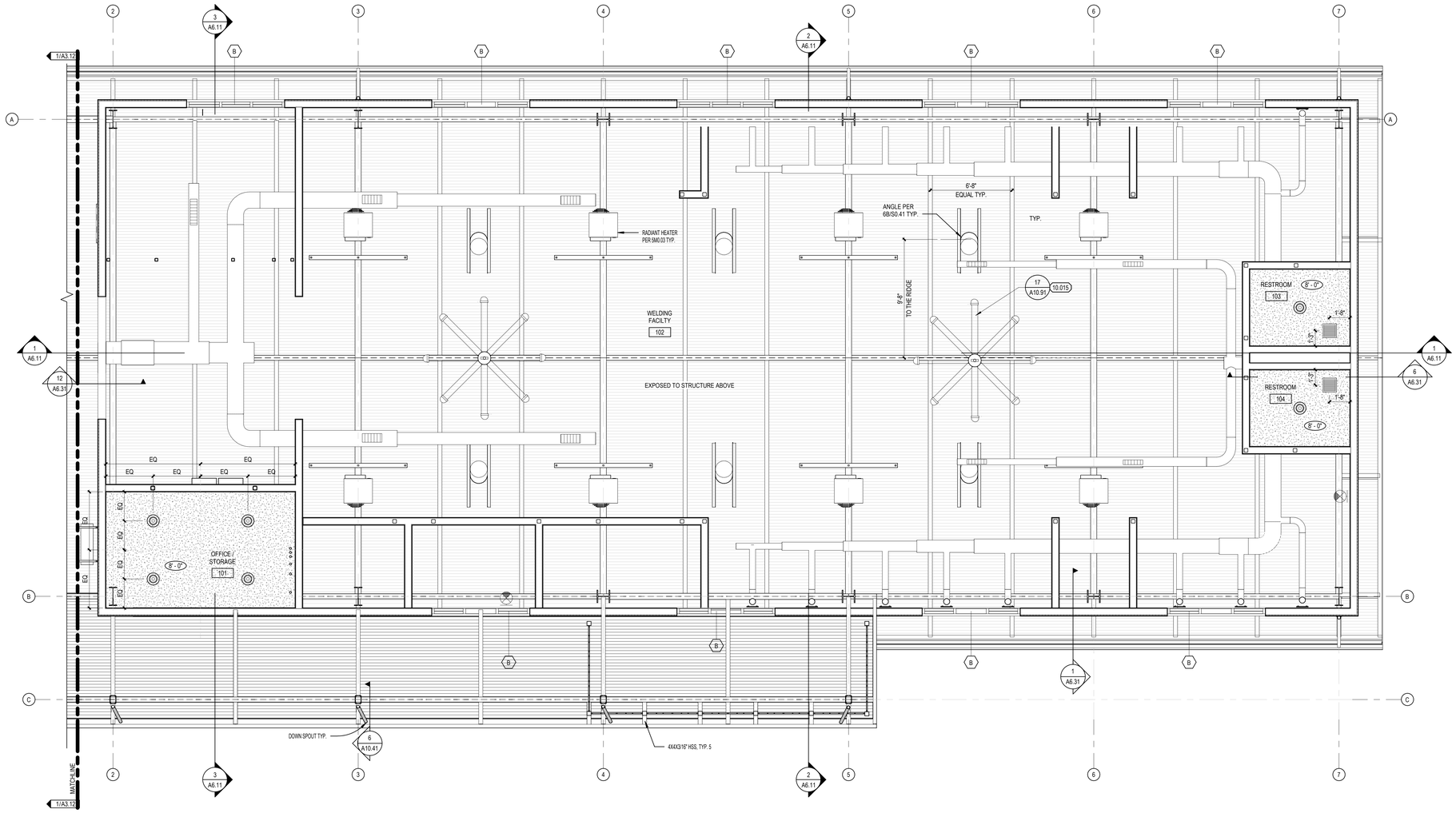

REFLECTED CEILING PLAN 1
1/4" = 1'-0" :SCALE

KEYNOTES

	DESCRIPTION
10.015	HIGH VELOCITY CEILING FAN

REFLECTED CEILING PLAN NOTES:

A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
B. CEILING HEIGHTS ARE AS NOTED ON THE REFLECTED CEILING PLAN UNLESS NOTED OTHERWISE.
C. ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, SPRINKLER HEADS, ETC., SHALL BE CENTERED BETWEEN CEILING GRIDS UNLESS NOTED OTHERWISE. SPRINKLER HEADS SHALL BE WITHIN A 3" RADIUS CENTERED BETWEEN CEILING GRIDS.
D. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
   1. FACE OF FINISHED WALL
   2. FACE OF FINISHED BULKHEADS
   3. CENTERLINE OF COLUMNS
   4. CENTERLINE OF TEES
F. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK, AND ELECTRICAL FIXTURES WITH EACH RESPECTIVE SUBCONTRACTOR.
G. NOT ALL WALLS GO FULL HEIGHT. REVIEW SECTIONS TO SEE WHICH ONES DO.
H. CONTRACTOR SHALL RUN ALL PIPES, CONDUITS, TUBES, AND DUCTS PARALLEL TO THE LONG SIDE OF THE BUILDING AND PERPENDICULAR TO THE LONG SIDE OF THE BUILDING. NO DIAGONAL INSTALLATIONS OF THE ABOVE ITEMS SHALL BE PERMITTED IN PLAN VIEW. ALL CONDUITS AND PIPES SHALL BE PARALLEL TO ONE ANOTHER. THIS REQUIREMENT ALSO APPLIES TO THE VERTICAL DIRECTION OF THE BUILDING; NO DIAGONAL CONDUITS OR PIPES SHALL BE INSTALLED ON THE WALLS, UNLESS OTHERWISE SPECIFIED. ANY DIAGONALLY INSTALLED ITEMS SHALL BE REPLACED AT NO COST TO THE OWNER. KICKERS TO BRACE ITEMS ARE OKAY TO ANGLE.

RCP LEGEND

GYPSUM BOARD CEILING — 4/S2.02, 5/S2.02

METAL DECK, SEE "METAL DECK SCHEDULE", SHEET S0.41

ROUND DOWNLIGHT — 26/A10.91

HVAC EXHAUST — 1/A10.90

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CONSULTANT:

REFLECTED CEILING PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
REN 5-31-27
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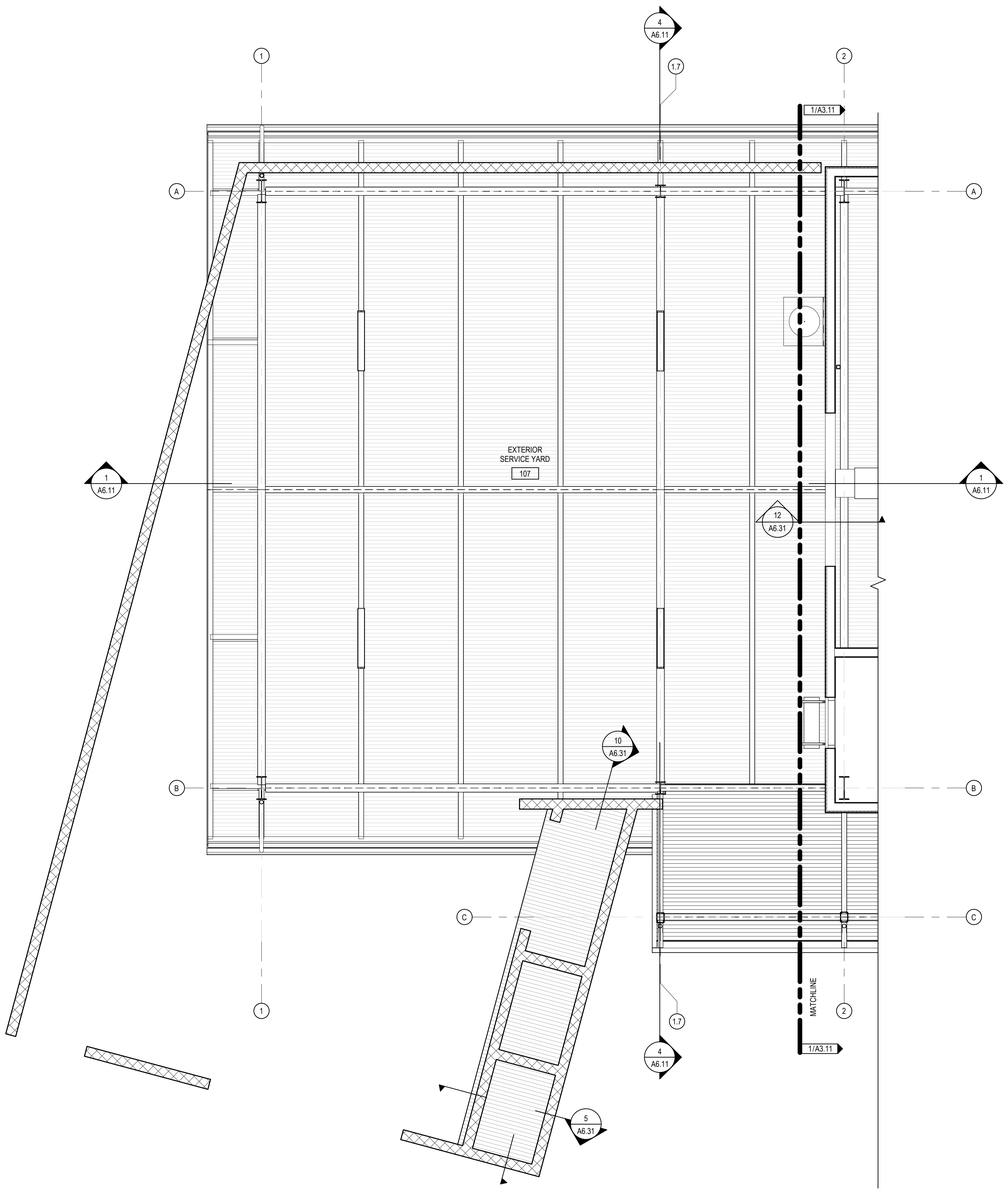

REFLECTED CEILING PLAN - SERVICE YARD
1/4" = 1'-0" :SCALE 1

NORTH

KEYNOTES

RCP LEGEND

GYPSUM BOARD CEILING 4/S2.02 5/S2.02

METAL DECK, SEE "METAL DECK SCHEDULE", SHEET S0.41

ROUND DOWNLIGHT 26/A10.91

HVAC EXHAUST 1/A10.92

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CONSULTANT:

REFLECTED CEILING PLAN -NORTH

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
REN: 8-31-27
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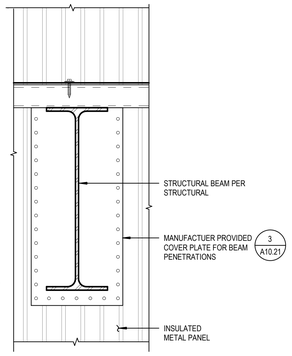
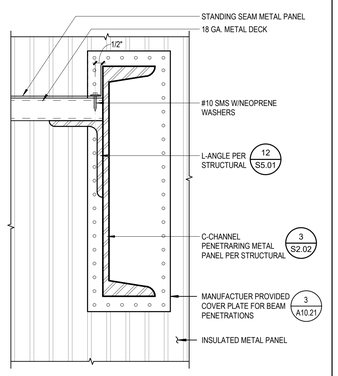
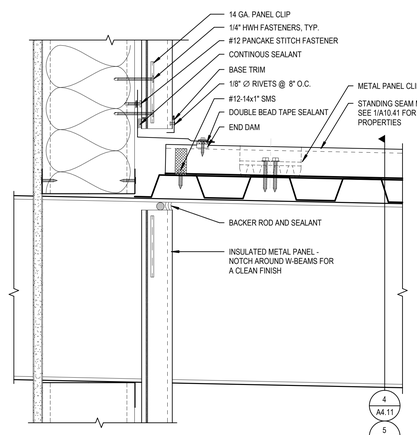


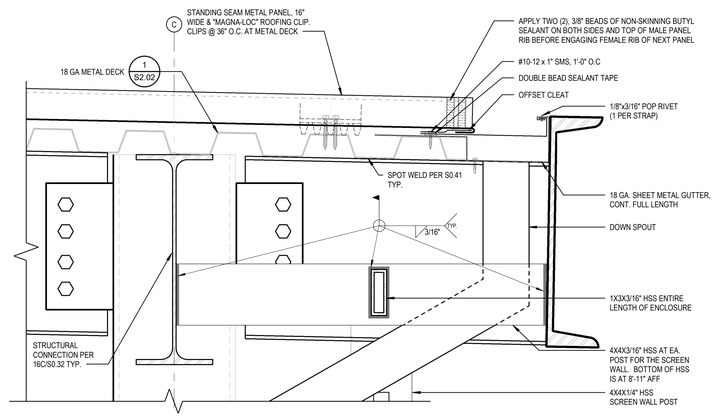
ELEV. OF BEAM MTL. PANEL 5
3" = 1'-0" :SCALE



ELEV. @ END COND. 4
3" = 1'-0" :SCALE



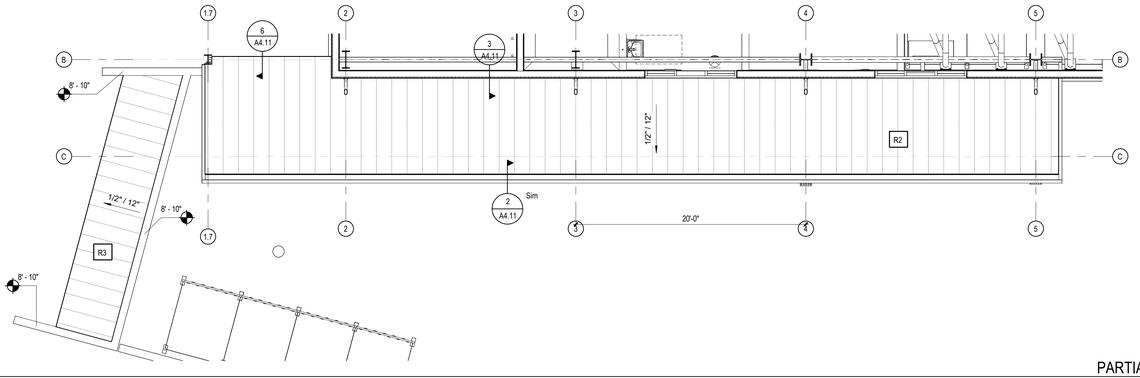
CANOPY @ BUILDING 3
3" = 1'-0" :SCALE



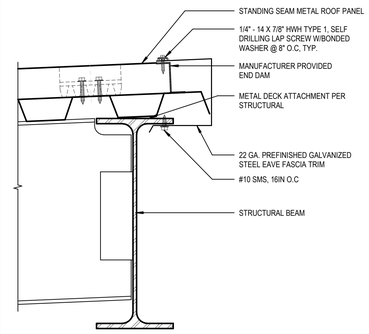
CANOPY END CONDITION 2
3" = 1'-0" :SCALE

KEYNOTES

	DESCRIPTION
08.003	TUBULAR DAYLIGHTING DEVICE - SEE 2/A10.41
22.008	VENT THROUGH ROOF - SEE PLUMBING



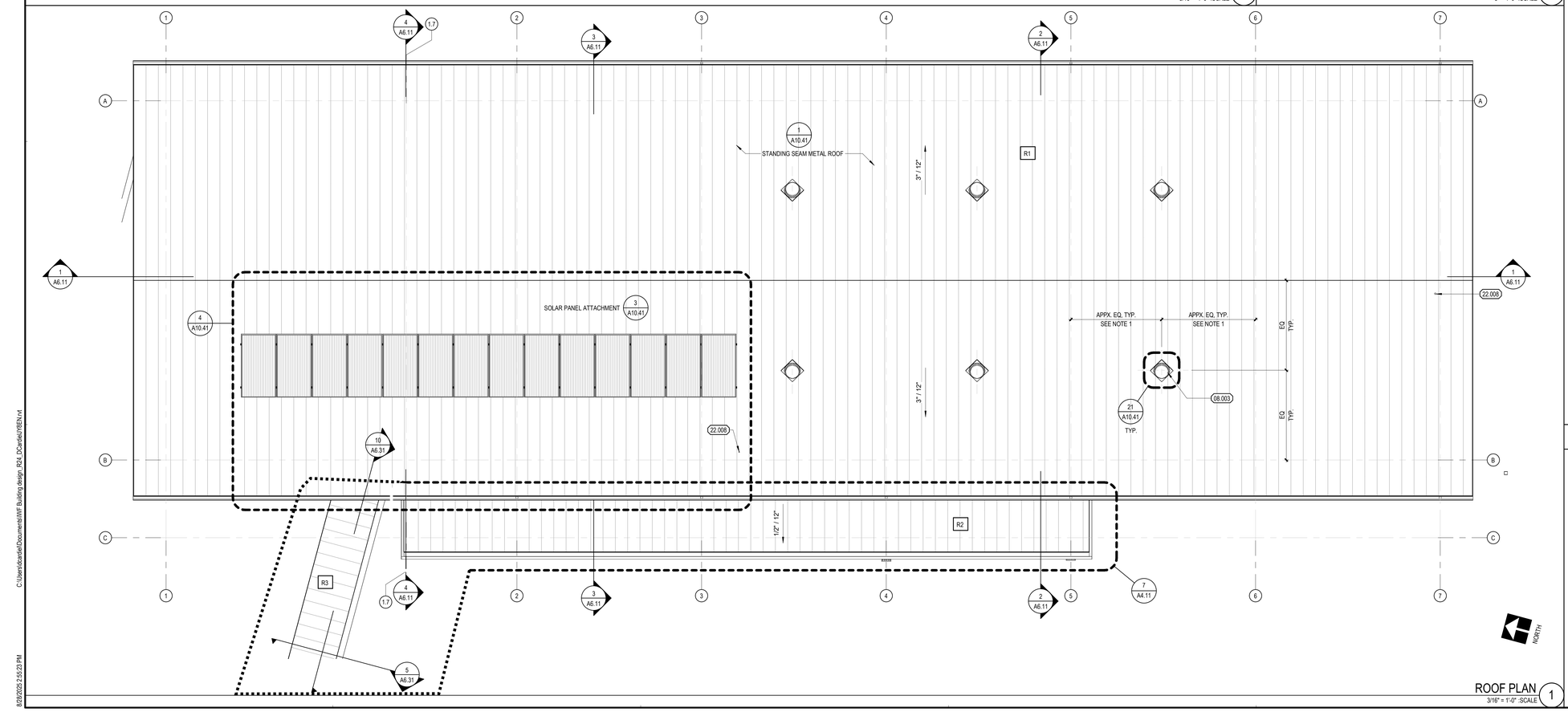
PARTIAL ROOF PLAN 7
3/16" = 1'-0" :SCALE



CANOPY AT EXTERIOR BEAM 6
3" = 1'-0" :SCALE

ROOF PLAN NOTES

1. CENTER TUBULAR SKYLIGHT BETWEEN GRID LINES AS SHOWN. AFTER CENTERING, CENTER BETWEEN NEAREST ADJACENT ROOF SEAMS. SEE 21 / A10.41



ROOF PLAN 1
3/16" = 1'-0" :SCALE

ROOF PLAN LEGEND

PHOTOVOLTAIC PANEL

STANDING SEAM METAL ROOF
BASIS OF DESIGN: METAL SALES "MAGNA-LOC 180" 22 GAUGE PANELS, 16" WIDE W/ MAGNA-LOC CLIPS @ 36" O.C, ICC-ESR-2385

ROOF ASSEMBLY TAGS

- R1 — ROOF ASSEMBLY - MAIN BUILDING — 1 A10.41
- R2 — ROOF ASSEMBLY - CANOPY — 3 A4.11, 2 A4.11
- R3 — ROOF ASSEMBLY - STORAGE — 15 A6.31, 30 A6.31

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CONSULTANT:

ROOF PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEVENS
NO. 26450
REN. 8-31-27
STATE OF CALIFORNIA

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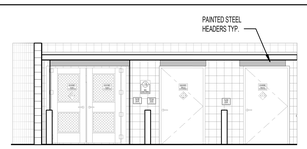
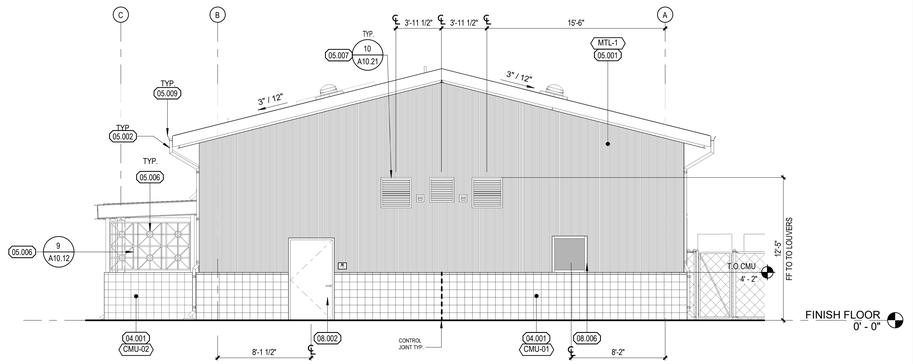
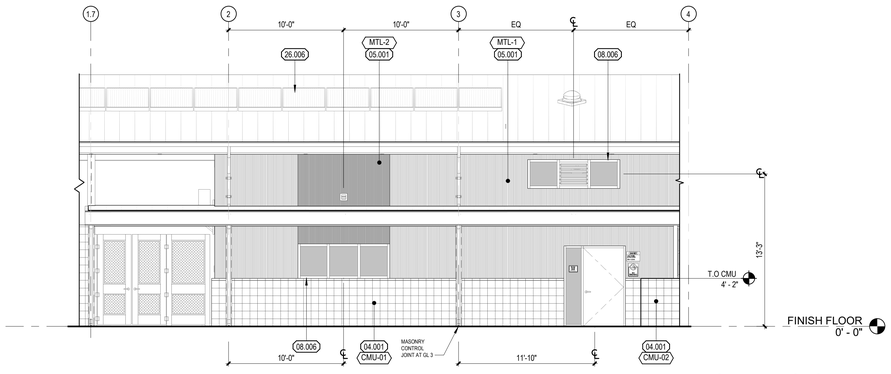


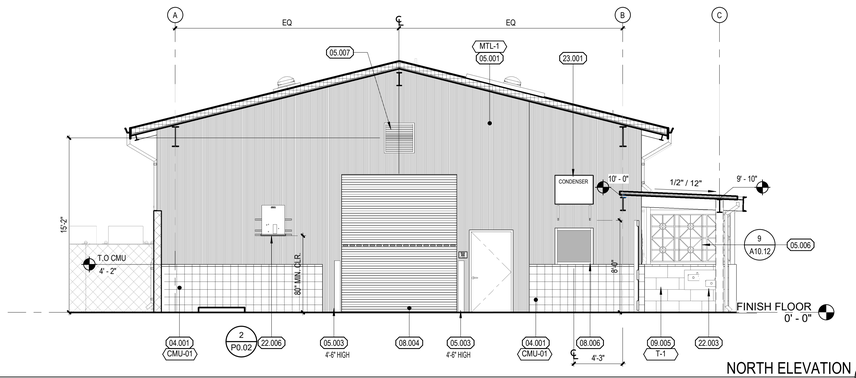
EXTERIOR STORAGE - NORTH ELEVATION 7
3/16" = 1'-0" :SCALE



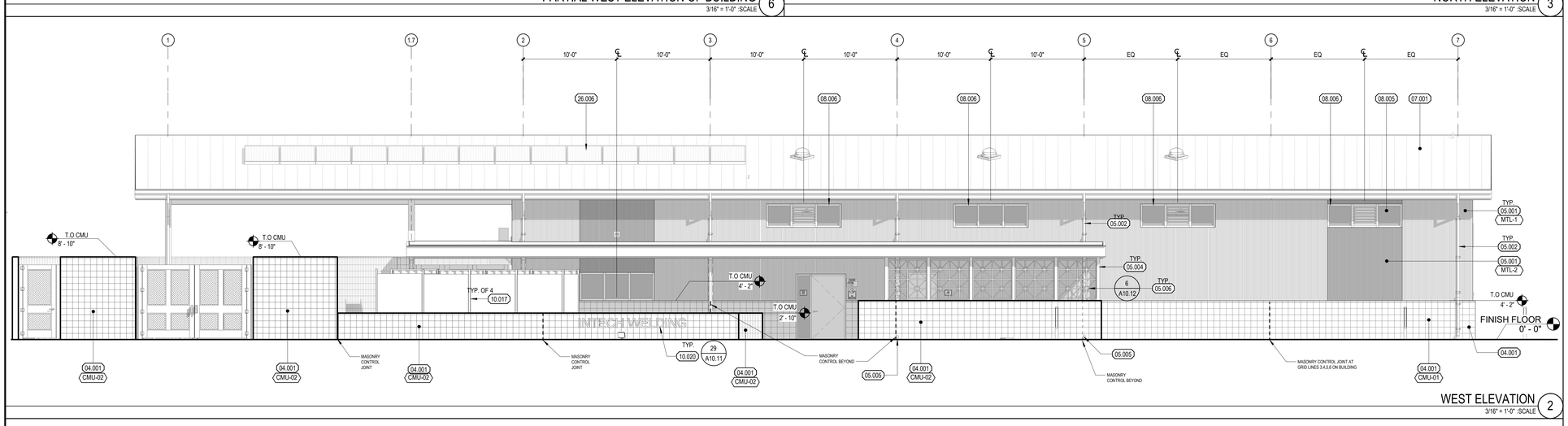
SOUTH ELEVATION 4
3/16" = 1'-0" :SCALE



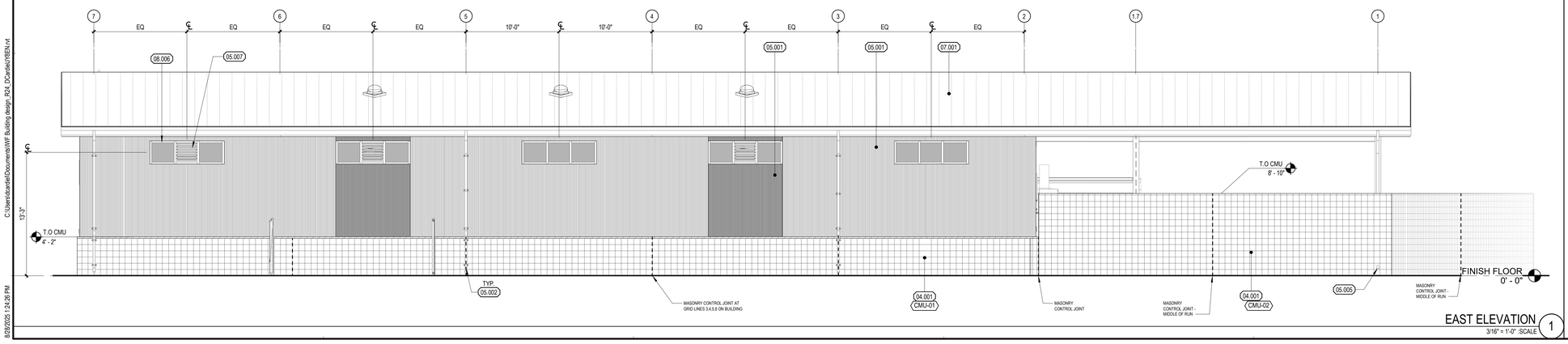
PARTIAL WEST ELEVATION OF BUILDING 6
3/16" = 1'-0" :SCALE



NORTH ELEVATION 3
3/16" = 1'-0" :SCALE



WEST ELEVATION 2
3/16" = 1'-0" :SCALE



EAST ELEVATION 1
3/16" = 1'-0" :SCALE

KEYNOTES

	DESCRIPTION
04.001	CONCRETE UNIT MASONRY - PRECISION FACE
05.001	INSULATED METAL WALL PANEL
05.002	METAL DOWN SPOUTS
05.003	STEEL BOLLARD PER 16/A10.11
05.004	STRUCTURAL STEEL MEMEBER PER STURCT. DWG.
05.005	DOWNSPOUT OUTLET THROUGH CMU WALL
05.006	CUSTOM METAL SCREEN
05.007	METAL LOUVERS
05.009	RAIN GUTTER
07.001	STANDING SEAM METAL ROOF
08.002	DOOR AND DOOR FRAME - SEE DOOR SCHEDULE
08.004	STEEL COILING DOOR
08.005	GLAZING
08.006	HOLLOW METAL FRAME WINDOW SYSTEM
09.005	PORCELAIN WALL TILE
10.017	WELDING BOOTH
10.020	12" METAL LETTER, 3/8" D.
22.003	PLUMBING FIXTURE - DRINKING FOUNTAIN
22.006	ELECTRIC WATER HEATER
23.001	MINI-SPLIT SYSTEM CONDENSER PER 9/M0.03
26.006	PHOTOVOLTAIC PANELS

BASIS OF DESIGN
EXTERIOR MATERIAL SPECIFICATIONS
(COLOR AND FINISH)

04 MASONRY

CMU-01 — **CONCRETE UNIT MASONRY**
- FINISH: PRECISION - VERTICAL SCORE, EXTERIOR SIDE (VS1)
- BOND PATTERN: RUNNING BOND
- COLOR: ANGELUS BLOCKING CO. "SHOTBLAST - SILVER"
- NOTES: USED FOR **BUILDING EXTERIOR WALLS**, TYPICAL

CMU-02 — **CONCRETE UNIT MASONRY**
- FINISH: PRECISION - VERTICAL SCORE, EACH SIDE (VS2)
- BOND PATTERN: RUNNING BOND
- COLOR: ANGELUS BLOCKING CO. "SHOTBLAST - SILVER"
- NOTES: USED FOR **EXTERIOR SITE WALLS**, TYPICAL

05 METALS

MTL-1 TO MATCH: — **INSULATED METAL PANEL**
- MANUFACTURER: METL SPAN
- PROFILE: "CF MESA"
- COLOR: "SMOKE GRAY"

MTL-2 TO MATCH: — **INSULATED METAL PANEL**
- MANUFACTURER: METL SPAN
- PROFILE: "CF MESA"
- COLOR: "TERRACOTTA"

09 FINISHES

T-1 TO MATCH: — **PORCELAIN WALL TILE**
- MANUFACTURER: TILEBAR
- COLOR: "PORTRAIT OCEAN BLUE"
- SIZE: 12 x 24

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APP. 04-124464 INC:
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CONSULTANT:

EXTERIOR ELEVATIONS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
REN: 5-31-27
STATE OF CALIFORNIA

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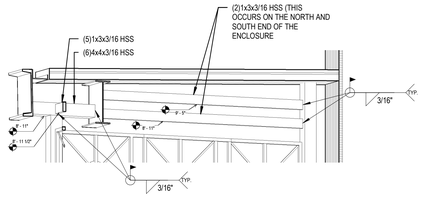
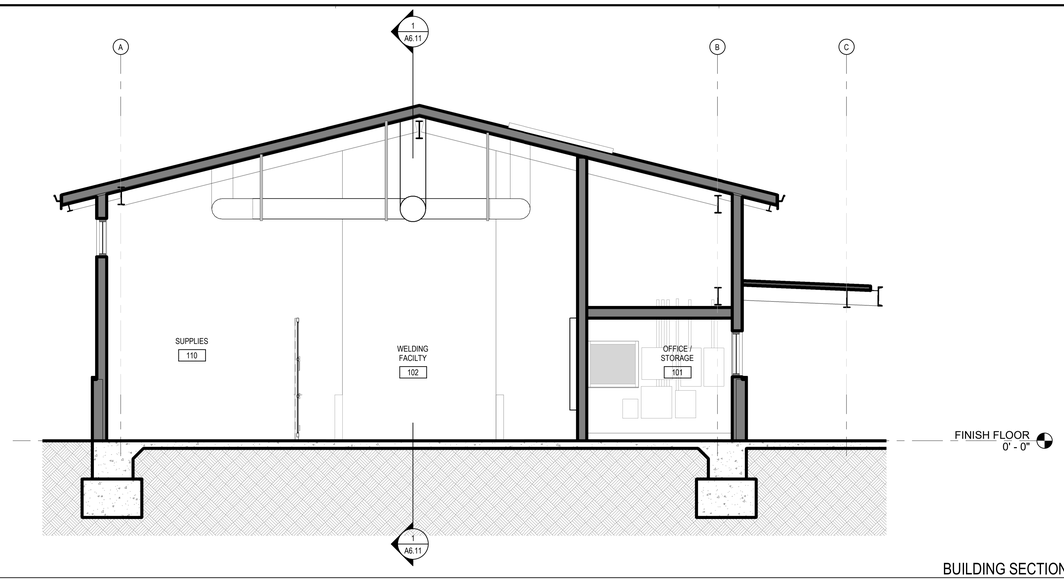
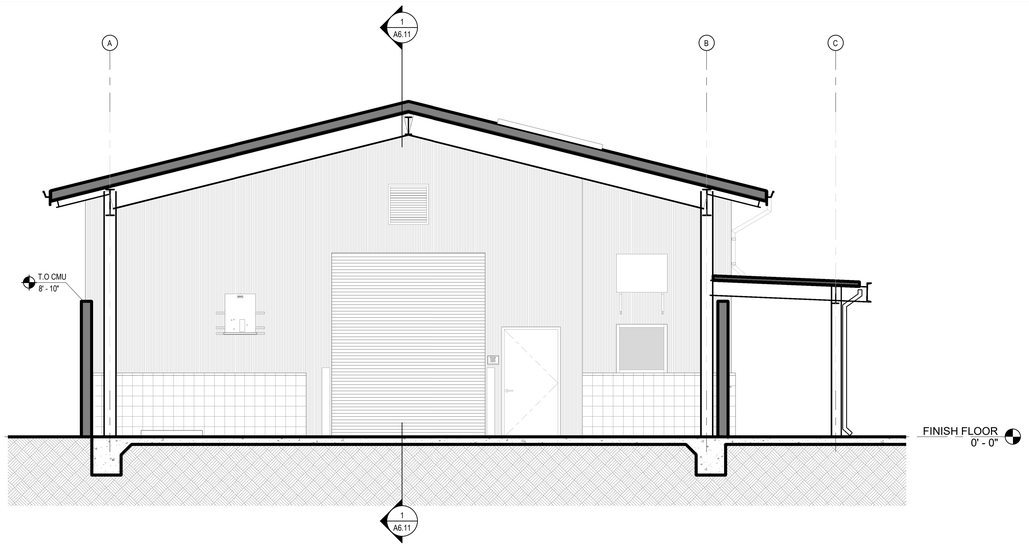


NOTE:
1. THIS VIEW IS STANDING IN ROOM 106 LOOKING NORTH, (MIRROR FOR SOUTH ELEVATION), TO SHOW THE HEIGHT OF THESE IDENTIFIED MEMEBERS. THEY ARE NOT VISIBLE IN ELEVATION VIEWS.

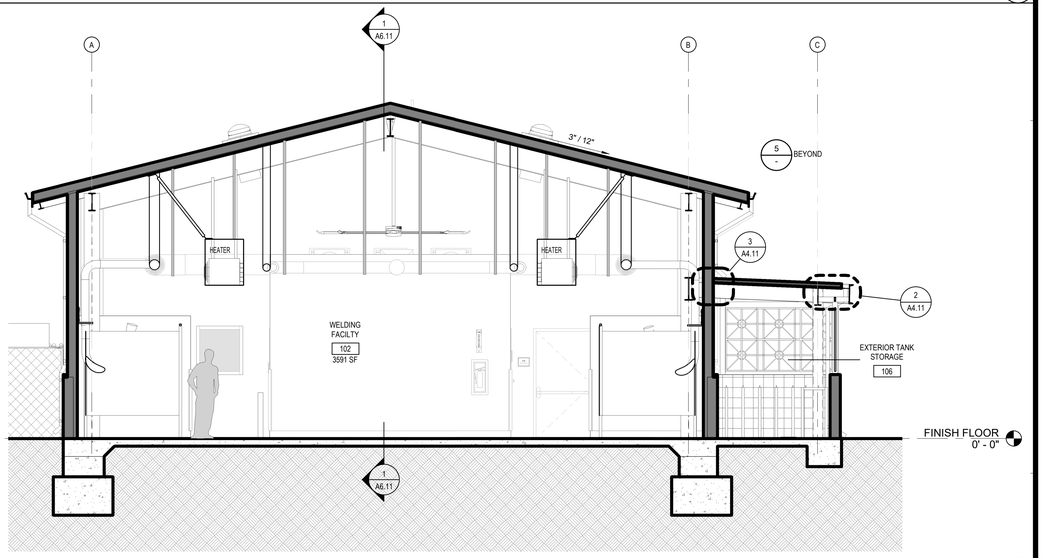
AXO ABOVE SCREEN 5
NTS :SCALE



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



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



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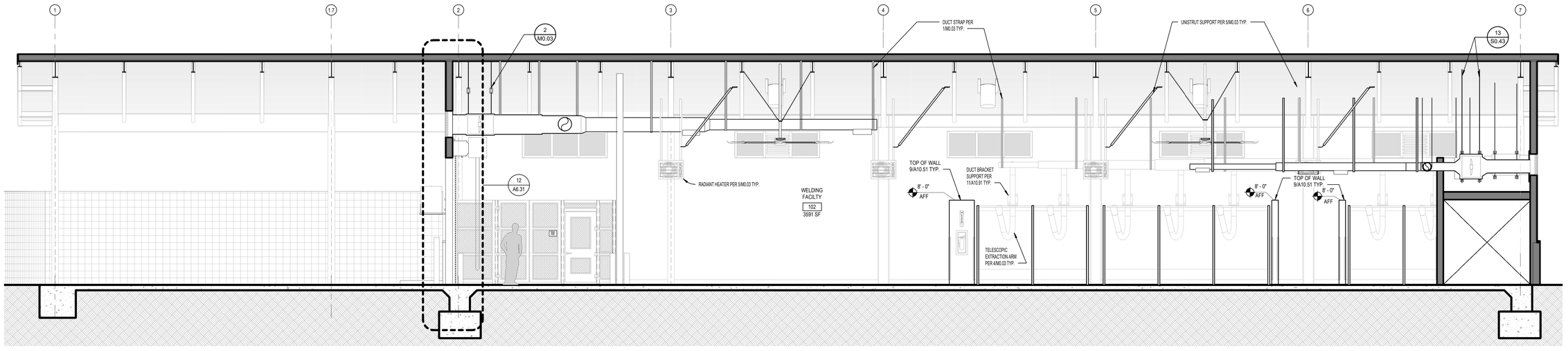

BUILDING SECTION 1
1/4" = 1'-0" :SCALE

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DATE: 09/02/25

CONSULTANT:

SECTIONS - OVERALL BUILDING

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
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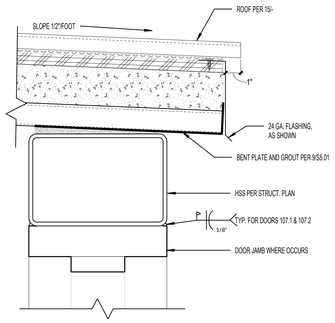
PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

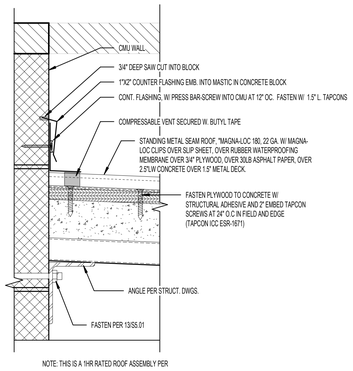
A6.11

100% CD

C:\Users\kzankel\Documents\WF Building design_R24_DCzankelJVSEN.rvt
8/28/2025 3:01:47 PM

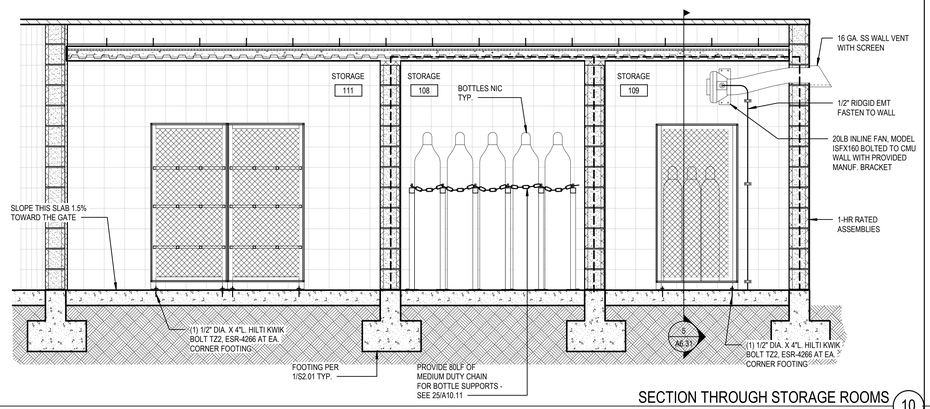


METAL DECK END CODITION 30
3" = 1'-0" :SCALE

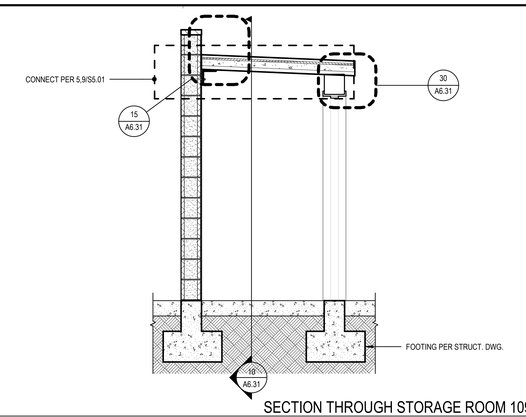


NOTE: THIS IS A 1HR RATED ROOF ASSEMBLY PER

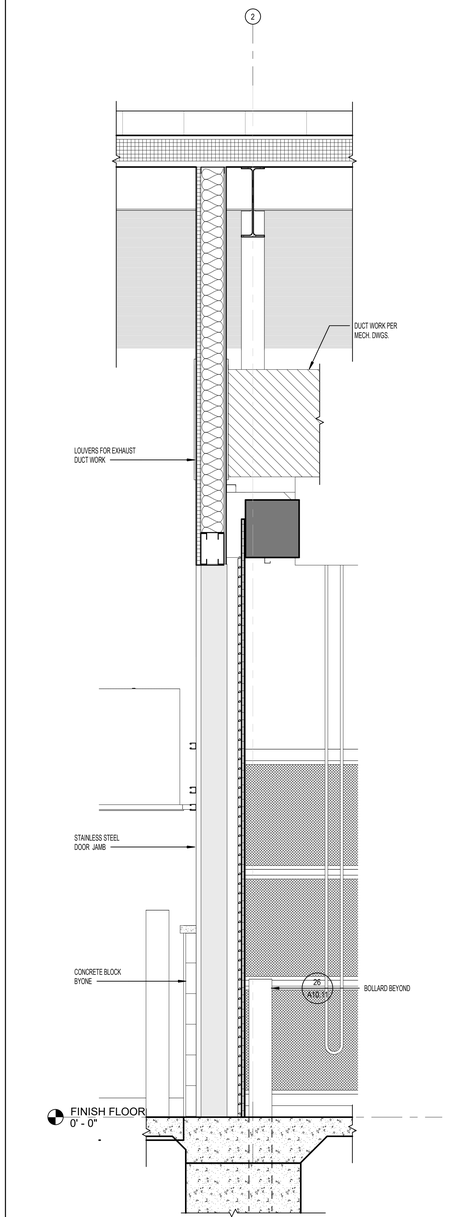
FLASHING DETAIL AT METAL DECK 15
3" = 1'-0" :SCALE



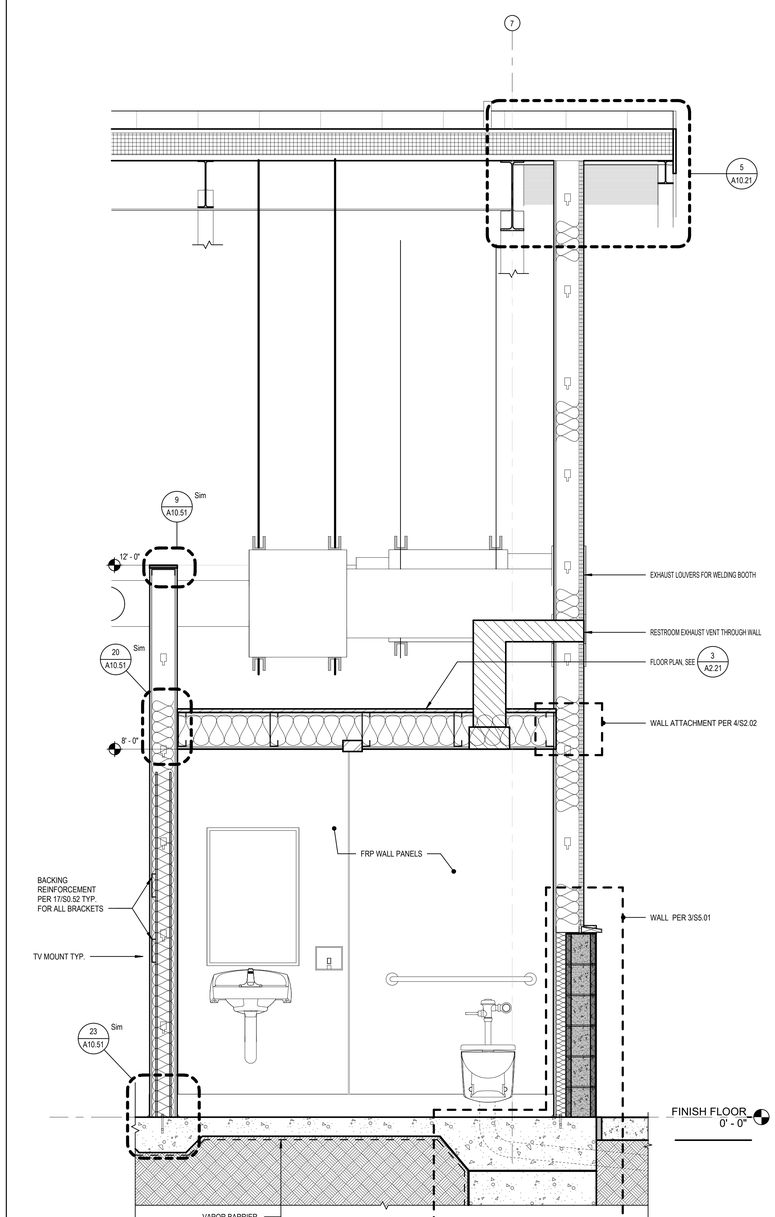
SECTION THROUGH STORAGE ROOMS 10
1/2" = 1'-0" :SCALE



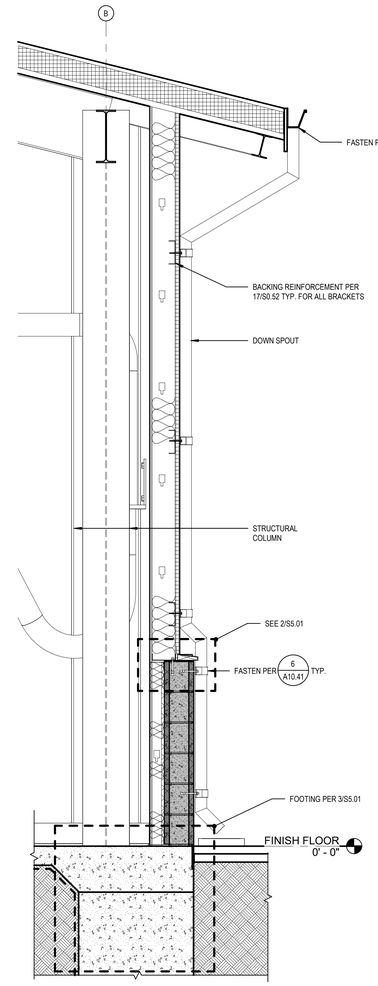
SECTION THROUGH STORAGE ROOM 109 5
1/2" = 1'-0" :SCALE



ENLARGED NORTH WALL SECTION 12
3/4" = 1'-0" :SCALE



ENLARGED SOUTH WALL SECTION 6
3/4" = 1'-0" :SCALE



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

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SECTIONS - WALL

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEVENS
NO. 26450
RENEW 8-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025
DELTA: DATE: DESCRIPTION:

A6.31
100% CD

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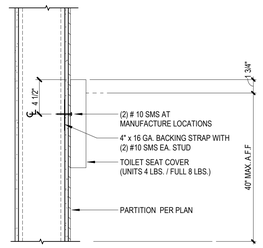
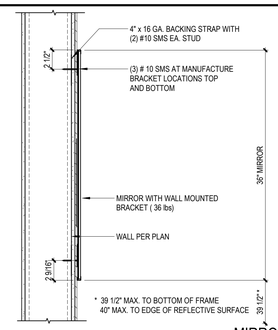


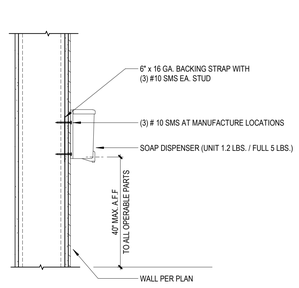
TOILET SEAT COVER DISPENSER 15
1 1/2" = 1'-0" :SCALE



MIRROR 10
1 1/2" = 1'-0" :SCALE

KEYNOTES

	DESCRIPTION
08.002	DOOR AND DOOR FRAME - SEE DOOR SCHEDULE
09.001	FIBER-REINFORCED PLASTIC
09.003	RESILIENT BASE
10.001	TOILET ACCESSORIES - GRAB BAR
10.002	TOILET ACCESSORIES - SURFACE MOUNTED TOILET SEAT COVER DISPENSER
10.003	TOILET ACCESSORIES - SURFACE MOUNTED NAPKIN DISPOSAL
10.004	TOILET ACCESSORIES - SURFACE MOUNTED TOILET TISSUE DISPENSER
10.005	TOILET ACCESSORIES - RECESSED ACCESSIBLE PAPER TOWEL DISPENSER AND TRASH DISPOSAL
10.006	TOILET ACCESSORIES - WALL MOUNTED SOAP DISPENSER
10.007	TOILET ACCESSORIES - FRAMED GLASS MIRROR
22.001	PLUMBING FIXTURE - LAVATORY - SEE PLUMBING
22.002	PLUMBING FIXTURE - WATER CLOSET - SEE PLUMBING



SOAP DISPENSER 14
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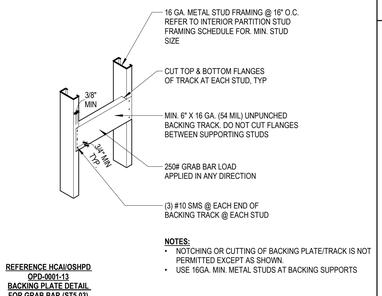


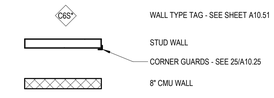
REFERENCE HCAI/OSHPD OPD-0001-13 BACKING PLATE DETAIL FOR GRAB BAR (ST5.03)

NOTES:
- NOTCHING OR CUTTING OF BACKING PLATE/TRACK IS NOT PERMITTED EXCEPT AS SHOWN.
- USE 16GA. MIN. METAL STUDS AT BACKING SUPPORTS

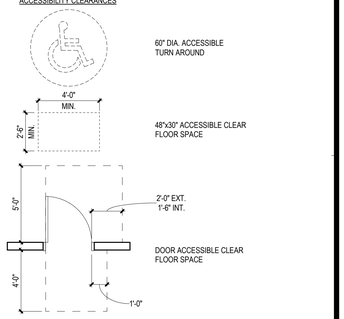
BACKING PLATE DETAIL 9
3/4" = 1'-0" :SCALE

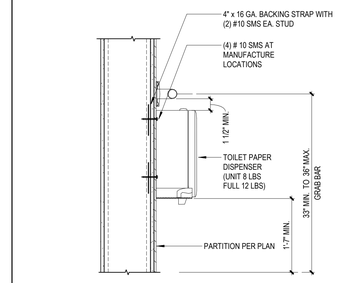
LEGEND

WALLS: SEE INTERIOR PARTITIONS SHEET A10.51

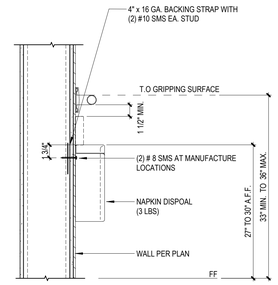


ACCESSIBILITY CLEARANCES

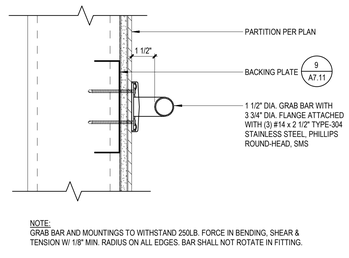




TOILET PAPER DISPENSER 18
1 1/2" = 1'-0" :SCALE

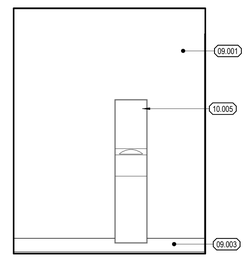


SANITARY NAPKIN DISPOSAL 13
1 1/2" = 1'-0" :SCALE

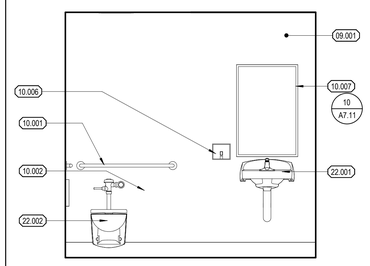


NOTE:
GRAB BAR AND MOUNTINGS TO WITHSTAND 250LB. FORCE IN BENDING, SHEAR & TENSION W/ 1/8" MIN. RADIUS ON ALL EDGES. BAR SHALL NOT ROTATE IN FITTING.

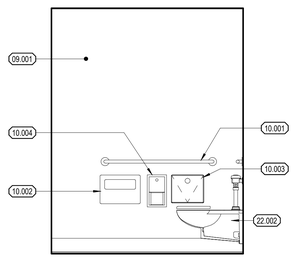
GRAB BAR AT RESTROOM 8
3" = 1'-0" :SCALE



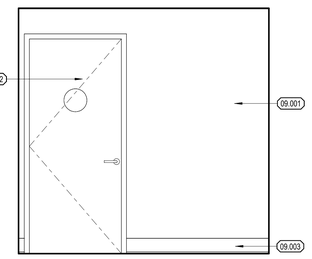
RESTROOM 103 - NORTH 27
1/2" = 1'-0" :SCALE



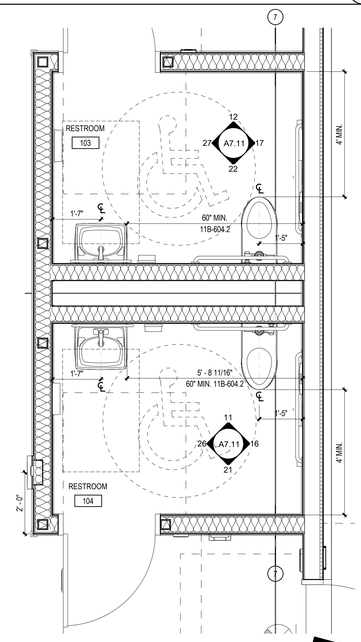
RESTROOM 103 - WEST 22
1/2" = 1'-0" :SCALE



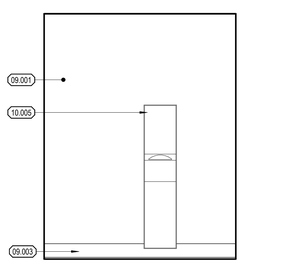
RESTROOM 103 - SOUTH 17
1/2" = 1'-0" :SCALE



RESTROOM 103 - EAST 12
1/2" = 1'-0" :SCALE



ENLARGED PLAN - RESTROOMS 6
1/2" = 1'-0" :SCALE



RESTROOM 104 - NORTH 26
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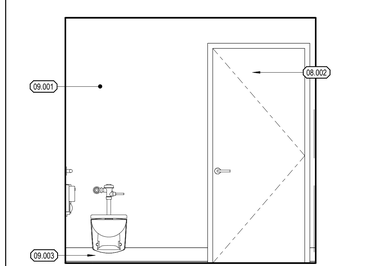
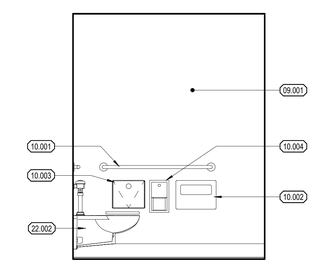
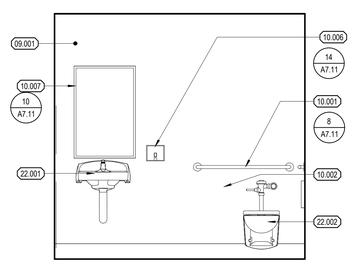


RESTROOM 104 - WEST 21
1/2" = 1'-0" :SCALE



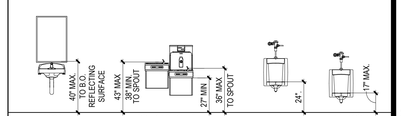
RESTROOM 104 - SOUTH 16
1/2" = 1'-0" :SCALE



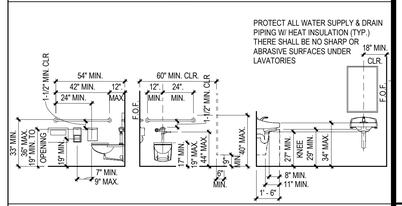
RESTROOM 104 - EAST 11
1/2" = 1'-0" :SCALE

ADULT MOUNTING HEIGHTS

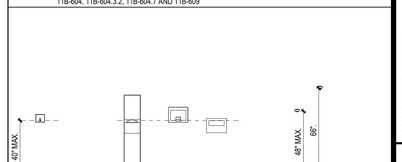
NOTE: PICTORIAL IMAGES FOR REFERENCING CODE CLEARANCES ONLY. SEE DETAILS FOR ACTUAL FIXTURES AND ACCESSORIES INSTALLATION. **CBC 2022 11B**



MIRROR 11B-603.3 | **DRINKING FOUNTIAN** 11B-602, 11B- 602.4, AND 602.7 | **URINAL** 11B-605 AND 11B- 605.2 | **URINAL (ACC)**



TOILET - GRAB BARS - DISPENSER - SANITARY NAPKIN DISPOSAL UNIT 11B-604, 11B-604.3.2, 11B-604.7 AND 11B-609 | **LAVATORY** 11B-606, 11B-606.3, 11B-306, 11B-309



SOAP DISPENSER 11B-603.5 | **PAPER TOWEL WASTE RECEPTICLE** 11B-603.5 | **ELECTRIC HAND DRYER** 11B-603.5 | **SEAT COVER DISPENSER** 11B-603.5 | **CLOTHES HOOK** 11B-604.8.3

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SEALS:

LICENSED ARCHITECT
MICHAEL J. SPERRY
NO. 26450
REN: 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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ENLARGED PLAN & INTERIOR ELEVATIONS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/26/2025
DELTA: DATE: DESCRIPTION:

A7.11

100% CD

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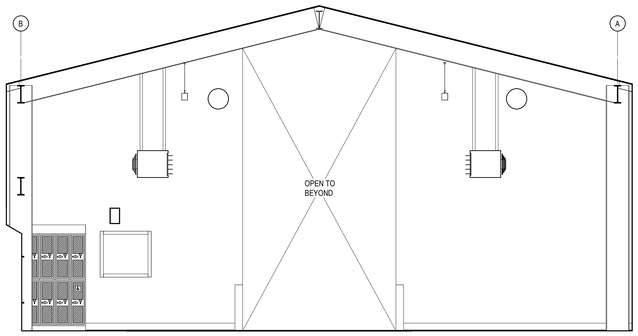
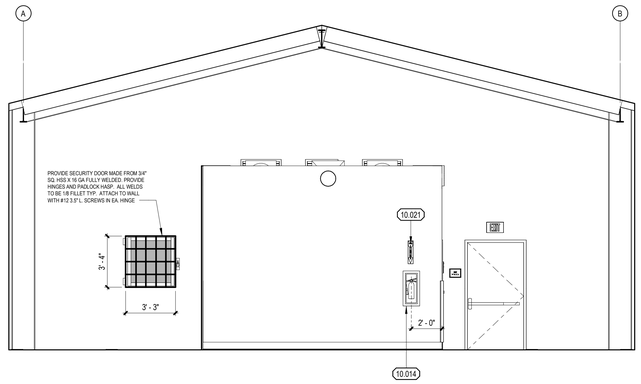
8/29/2025 1:24:33 PM



WELDING FACILITY 102 - NORTH 13
1/4" = 1'-0" :SCALE



WELDING FACILITY 102 - SOUTH 12
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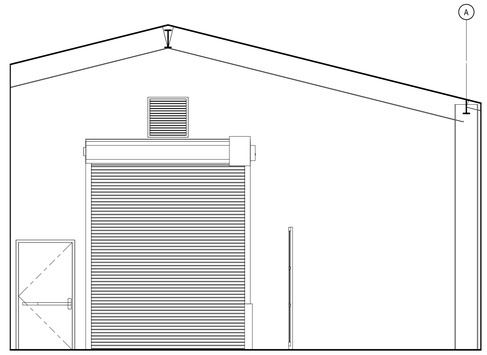


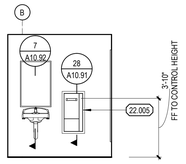
WELDING FACILITY 102 - NORTH 11
1/4" = 1'-0" :SCALE

KEYNOTES

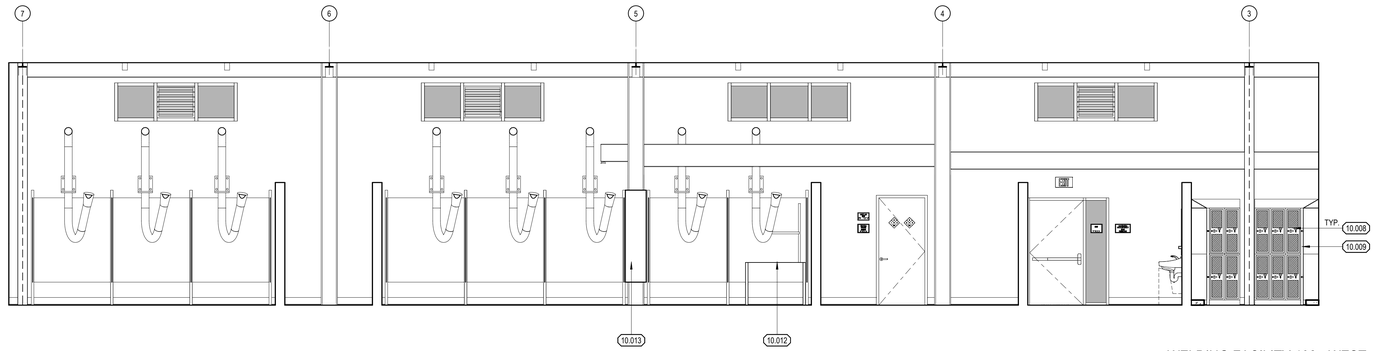
	DESCRIPTION
08.002	DOOR AND DOOR FRAME - SEE DOOR SCHEDULE
09.002	GYPSUM BOARD
10.008	METAL LOCKERS
10.009	MANUFACTURER PROVIDED FILLER PANELS AT CORNERS
10.010	ACCESSIBLE METAL LOCKER
10.012	STEEL WELDING TABLE
10.013	STEEL WELDING BOOTH - FILLER PANEL
10.014	FIRE PROTECTION CABIENT
10.021	FIRE EXTINGUISHER SIGN
22.005	EMERGENCY EYE WASH STATION
28.001	CLOSED CIRCUIT TELEVISION

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:



EMERGENCY EYE WASH - NORTH 10
1/4" = 1'-0" :SCALE



WELDING FACILITY 102 - WEST 9
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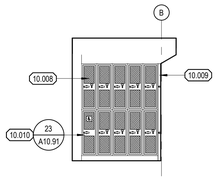

STORAGE LOCKERS - SOUTH 8
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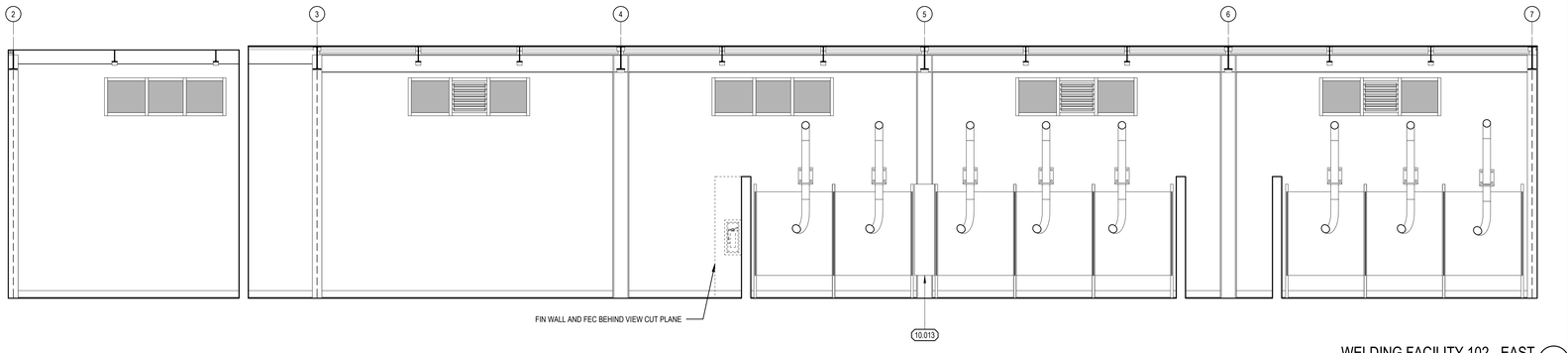

WELDING FACILITY 102 - EAST 7
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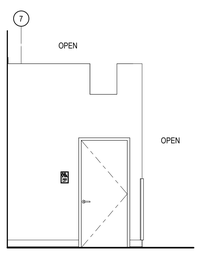

WELDING FACILITY 102 - WEST 6
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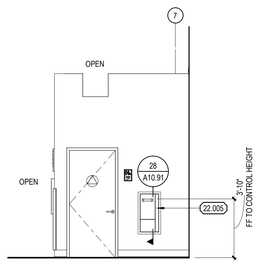
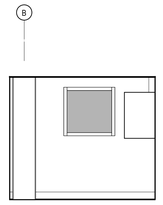
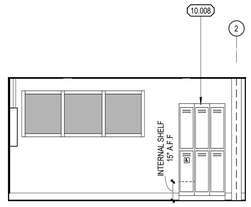


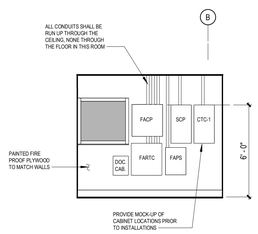
WELDING FACILITY 102 - EAST 5
1/4" = 1'-0" :SCALE



OFFICE / STORAGE 101 -NORTH 4
1/4" = 1'-0" :SCALE



OFFICE / STORAGE 101 -WEST 3
1/4" = 1'-0" :SCALE



OFFICE / STORAGE 101 - SOUTH 2
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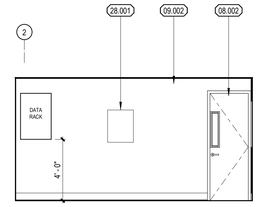

OFFICE / STORAGE 101 - EAST 1
1/4" = 1'-0" :SCALE

INTERIOR ELEVATIONS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
RENT 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/30/2025
DELTA DATE: DESCRIPTION:

A8.11

100% CD

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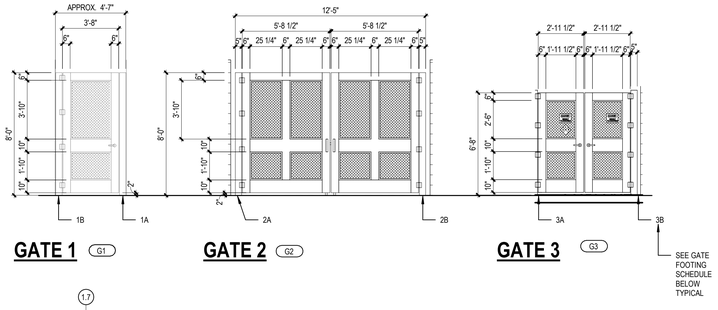
GATE SCHEDULE

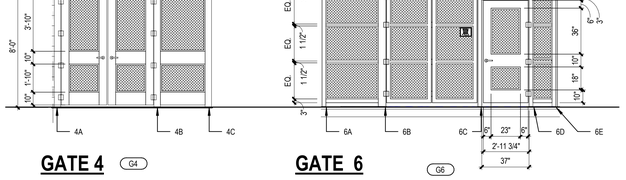
MARK	HEIGHT	ROUGH WIDTH	DOOR EXIT DEVICE	HARDWARE SET	COMMENTS
G1	8' - 0"	4' - 8"		G01	
G2	8' - 0"	12' - 6"		G02	
G3	6' - 8"	7' - 0"		G02	
G4	8' - 0"	7' - 0"		G03	
G5			No	G04	SINGLE, CHAINLINK
G6	6' - 8"	3' - 0"		G06	
G7	10' - 0"	6' - 0"		G05	

NOTE: FOR GATE ELEVATIONS, SEE "GATE ELEVATIONS" ON SHEET A9.11

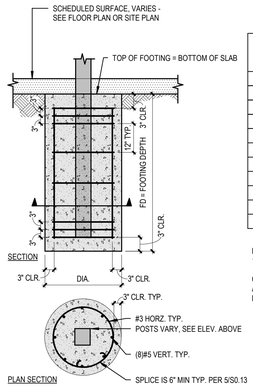
GATE ELEVATION



GATE 1 G1 **GATE 2** G2 **GATE 3** G3



GATE 4 G4 **GATE 6**



GATE POST LOCATION PER GATE ELEVATION	FD	DIA.	REBAR REQUIREMENTS - ALL BARS #5 TYP. (SEE NOTE BELOW)	COMMENTS (SEE NOTE BELOW)
1A	36"	18"	1.	A.
1B	36"	24"	1.	A.
2A&2B	36"	18"	1.	A.
3A&3B	36"	18"	1.	A.
4A	36"	18"	1.	A.
4B	36"	18"	1.	-
4C	36"	18"	1.	B.
6A	36"	18"	1.	B.
6B	60"	48"	1.	-
6C&6D	36"	18"	1.	-
6E	36"	18"	1.	B.

REBAR REQUIREMENTS:
1. (3) #3 BARS TOP AND BOTTOM, AND EVERY 12" ON CENTER

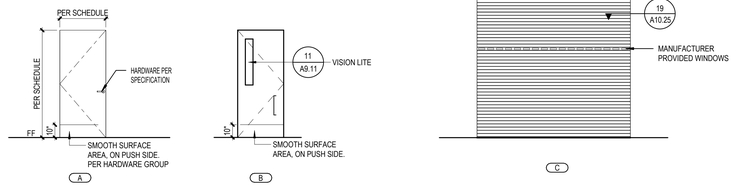
COMMENTS:
A. = COORDINATE WITH WALL FOOTING
B. = COORDINATE WITH BUILDING FOOTING

GATE FOOTINGS 20
1/2" = 1'-0" SCALE

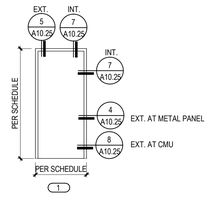
DOOR SCHEDULE

MARK	FROM:	TO:	DOOR PANELS WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	CARD READER	FRAME TYPE	FRAME MATERIAL	DOOR FIRE RATING	DOOR EXIT DEVICE	HARDWARE SET	COMMENTS
101.1	WELDING FACILITY	OFFICE / STORAGE	2' - 6"	7' - 0"	0' - 1 3/4"	B	HM	No	1	HM		No	01	
102.1	WELDING FACILITY	EXTERIOR	3' - 6"	6' - 10"	0' - 1 3/4"	A	HM	No	1	HM		Yes	02	
102.2	WELDING FACILITY		3' - 6"	7' - 0"	0' - 1 3/4"	A	HM	No	1	HM		Yes	03	
102.3		WELDING FACILITY	10' - 0"	12' - 0"	0' - 1 11/16"	C	18GA . GALV	No	-	HM		No	06	
102.4	WELDING FACILITY	EXTERIOR	3' - 8"	7' - 0"	0' - 1 3/4"	A	HM	No	1	HM		Yes	03	
103.1	WELDING FACILITY	RESTROOM	3' - 0"	7' - 0"	0' - 1 3/4"	A	Default New Material	No	1	HM		No	04	
104.1	WELDING FACILITY	RESTROOM	3' - 0"	7' - 0"	0' - 1 3/4"	A	HM	No	1	HM		No	04	
106.1	WELDING FACILITY	EXTERIOR TANK STORAGE	3' - 0"	7' - 0"	0' - 1 3/4"	A	HM	No	1	HM		Yes	05	
107.1		STORAGE	3' - 8"	6' - 8"	0' - 1 3/4"	A	HM	No	1	HM	60 min	No	07	FIELD VERIFY HEIGHT
107.2		STORAGE	3' - 8"	6' - 8"	0' - 1 3/4"	A	HM	No	1	HM	60 min	No	07	FIELD VERIFY HEIGHT

DOOR PANEL TYPES



DOOR FRAME TYPES



SAFETY GLAZING

PROVIDE SAFETY GLAZING AT THE FOLLOWING LOCATIONS PER 2022 CBC 2406.4

1. GLAZING WITHIN ALL DOOR PANELS (VISION LITES)
2. GLAZING ADJACENT TO ALL DOORS WHERE:
   A. THE VERTICAL EDGE OF GLAZING IS WITHIN A 24" ARC OF THE VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION, AND
   B. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE
3. GLAZING IN WINDOWS MEETING **ALL** OF THE FOLLOWING CONDITIONS:
   A. EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SF.
   B. THE BOTTOM EDGE OF GLAZING IS LESS THAN 18" A.F.F.
   C. THE TOP EDGE OF GLAZING IS GRETAER THAN 36" A.F.F.
   D. THE PLANE OF GLAZING IS WITHIN 36" HORIZONTALLY OF ANY WALKING SURFACE
4. GLAZING IN ALL GUARDRAILS OR HANDRAILS
5. GLAZING AT ALL WET LOCATIONS LESS THAN 60" ABOVE ANY STANDING OR WALKING SURFACE (HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, SHOWES AND INDOOR/OUTDOOR SWIMMING POOLS)
6. GLAZING ADJACENT TO STAIRWAYS AND RAMPS WHERE:
   A. THE BOTTOM EDGE OF GLAZING IS LESS THAN 60" ABOVE THE PLANE OF THE WALKING SURFACE
   B. THE BOTTOM OF GLAZING IS LESS THAN 60" ABOVE THE BOTTOM OF A STAIRWAY LANDING AND WITHIN A 60" HORIZONTAL ARC THAT IS LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING

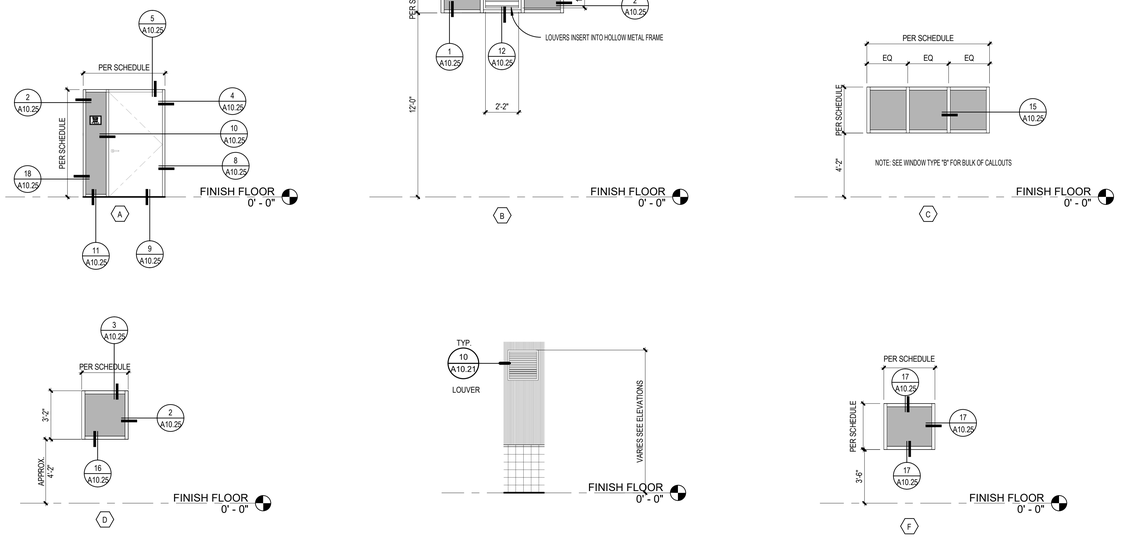
ALL SAFETY GLAZING SHALL BE FULLY TEMPERED AND PASS IMPACT TEST REQUIREMENTS OF CBC SECTION 2406.2

EACH PANE OF SAFETY GLAZING SHALL BE PERMANENTLY IDENTIFIED PER CBC 2403.1 AND 2406.3.

WINDOW SCHEDULE

TYPE	MATERIAL	OPENING HEIGHT	OPENING WIDTH	BASE OFFSET	Fire Rating	Count	EXTERIOR	INTERIOR	Comments
A	HM	7' - 0"	5' - 4"	0' - 0"		1	Yes	No	
B	HM	2' - 6"	8' - 0"	12' - 0"		9	<varies>	<varies>	
C	HM	3' - 0"	8' - 0"	4' - 2"		1	Yes	No	
D	HM	3' - 2"	3' - 4"	4' - 0"		2	Yes	No	
F	HM	3' - 0"	3' - 4"	3' - 6"		1	No	Yes	

WINDOW TYPES



DOOR GENERAL NOTES

DOOR GENERAL NOTES

A. INSTALL STOREFRONT MULLIONS AND HOLLOW METAL FRAMES WITH 1/4 INCH MIN. AND 3/8" MAX. SHIM AND JOINT SEALANT AROUND PERIMETER OF FRAME.

B. GLASS TYPES FOR DOORS ARE INDICATED IN DOOR AND FRAME SCHEDULE OR IN SPECIFICATIONS. GLASS TYPES FOR FRAMES ARE INDICATED ON FRAME ELEVATIONS OR IN SPECIFICATIONS.

C. COORDINATE LOCATIONS OF CONCEALED CONDUIT AND J-BOXES REQUIRED FOR SECURITY SYSTEM HARDWARE PRIOR TO MANUFACTURING OF HOLLOW METAL FRAMES AND COORDINATE WITH SECURITY HARDWARE AND DEVICES.

D. PROVIDE HEAD RECEIVERS AT ALUMINUM STOREFRONTS AND CURTAINWALLS AS REQUIRED FOR FRAME AND STRUCTURAL DEFLECTION.

E. ALL DOOR HARDWARE TO BE PROVIDED BY HARDWARE CONSULTANT WITH SUBSEQUENT SUBMITTAL/BULLETIN.

F. DOOR HARDWARE:
   a. MOUNTING HEIGHT OF LATCHING HARDWARE SHALL BE 34" TO 44" A.F.F. PER CBC SEC. 11B-404.2.7. AND 11B-309.4.
   b. PRESSURE TO OPERATE THE DOOR SHALL NOT EXCEED THE FOLLOWING, PER CBC SEC. 11B-404.2.9:
      - EXTERIOR DOORS: 5 POUNDS
      - INTERIOR DOORS: 5 POUNDS
   c. DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM. 11B-404.2.8.1.
   d. ALL HARDWARE SHALL MEET THE REQUIREMENTS OF CBC SECTION 11B-404.2.7, 1008.1.9, AND 11B-309.4
   e. THRESHOLDS SHALL COMPLY WITH CBC SECTION 11B-404.2.5.
   f. FLOOR STOPS SHALL NOT BE LOCATED IN THE PATH OF TRAVEL AND 4" MAXIMUM FROM WALLS.
   g. * THE MAXIMUM EFFORT TO OPERATE A FIRE RATED DOOR MAY BE INCREASED TO THE MAXIMUM * ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS. 11B-404.2.9.

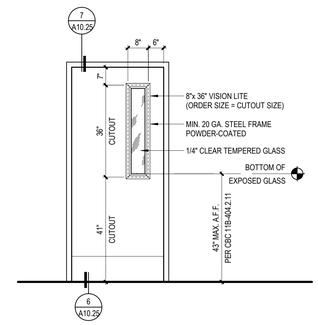
G. FOR GLAZING SPECIFICATIONS SEE EXTERIOR ELEVATIONS

H. STOREFRONT DOORS WIDTH AND HEIGHT DIMENSIONS INDICATED IN DOOR SCHEDULE REPRESENT FURNISHED OPENING SIZE. CONTRACTOR TO COORDINATE EXACT SIZE OF DOORS WITH MANUFACTURER.

J. SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY MUST HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. 11B-404.2.10

K. ALL DOOR HARDWARE LOCKS SHALL HAVE A MASTER KEY ACCESSIBLE TO LOCAL FIRE AUTHORITY PROVIDED IN KNOX BOX LOCATIONS SHOWN ON SHEET G1.12

NOTE:
CONTRACTOR TO VERIFY ALL OPENINGS PRIOR TO FABRICATING OF STOREFRONT SYSTEMS.



DOOR VISION LITE DETAIL 11
1/2" = 1'-0" SCALE

DOOR SCHEDULE LEGEND

AL	ALUMINUM	MG	MIRROR GLASS
AO	AUTOMATIC DOOR OPERATOR	MM	METAL MESH
AS	AS SPECIFIED	N/A	NOT APPLICABLE
CG	CLEAR GLASS	NR	NOT RATED
CT	CLEAR TEMPERED	PH	PANIC HARDWARE
CR	CARD READER	PL	PLASTIC LAMINATE
CW	CURTAIN WALL	PP	PUSH PLATE (# OF PLATE)
D	DOUBLE	PR	PAIR OF DOOR (LEAF SIZE)
DE	DELAYED EGRESS	PT	PAINT (FIELD PAINT H.M. DOOR & FRAME
DP	DOOR POSITION SWITCH	RF	REFER TO RADIO FREQUENCY
EL	ELECTRICAL LOCK	S	SINGLE
ET	ENTRY TELEPHONE	SG	STAIN GRADE WOOD VENEER
FA	FIRE ALARM INTERFACE RELAY	SC	SOLID CORE
FF	FACTORY FURNISHED	SF	STORE FRONT
FRG	FIRE RATED GLASS	*SG	SAFETY GLASS
FRG/	FIRE RATED GLASS & FRAMING	SPG	SPANDREL GLASS
FS	SYSTEM	STL	STEEL
GL	GLASS	SM	SMOKE BARRIER SEAL
HB	HELP BUTTON	T	TEMPERED
HM	HOLLOW METAL	TG	TINTED GLASS
I	INTERCOM	UC	UNDERCUT
IG	INSULATED GLASS	VA	VINYL ACRYLIC CLAD FINISH
IP	INFILL PANEL	WF	WELDED STEEL FINISH
K	SCRAMBLED KEYPAD	WG	WIRED GLASS
WF	WELDED STEEL FRAME	WD	WOOD (SOLID CORE)
LA	LOCAL ALARM	WW	WINDOW WALL
LE	LOW-E INSULATED GLASS)		

***NOTE:** REFER TO 'SAFETY GLAZING' NOTES FOR REQUIRED LOCATIONS FOR SAFETY GLAZING.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SCHEDULE - DOORS, FRAMES, AND WINDOW SCHEDULES

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT MICHAEL J. STEPHENS NO. 26450 REN 5-31-27 STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

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100% CD

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ROOM FINISH LEGEND

ROOM FINISH SCHEDULE

ROOM NUMBER	NAME	FLOOR FINISH	BASE FINISH	WALL TYPE	WALLS				CEILING MATERIAL	CEILING FINISH	ROOM CEILING HEIGHT	COMMENTS
					NORTH	EAST	SOUTH	WEST				
103	RESTROOM	CF-1	RWB-1									
104	RESTROOM	CF-1	RWB-1									
102	WELDING FACILTY	CF-1	RWB-1									
106	EXTERIOR TANK STORAGE	CF-2	-									
107	EXTERIOR SERVICE YARD	CF-2	-									
101	OFFICE / STORAGE	CF-1	RWB-1									
105	STORAGE	CF-2	-									
108	STORAGE	CF-2	-									
109	STORAGE	CF-2	-									
110	SUPPLIES	CF-1	RWB-1									
111	STORAGE	CF-2	-									

FINISH SPECIFICATION LEGEND

CSI SPEC DIVISION	FINISH TAG	PRODUCT TYPE	TYPICAL USE / LOCATION	MANUFACTURER	PRODUCT / STYLE NUMBER	COLOR / FINISH	SIZE / PATTERN	NOTES
CONCRETE								
CONCRETE	CMU-1	CONCRETE MASONRY UNITS	EXTERIOR WALLS	ANGELUS BLOCKING CO. INC.	1 SCORE PRECISION	SILVER/SHOTBLAST	10X 8X16	
DIVISION 03 - CONCRETE FINISHING								
DIVISION 03 - CONCRETE FINISHING	CF-1	EXTERIOR CONCRETE FLOOR	EXTERIOR CONCRETE FLOORING	ANGELUS	SPEC MIX PREBLENDED COLORS	NATURAL GRAY		FIELD CONCRETE
DIVISION 03 - CONCRETE FINISHING	CF-2	EXTERIOR CONCRETE FLOOR	EXTERIOR CONCRETE FLOORING	ANGELUS	SPEC MIX PREBLENDED COLORS	506		ACCENT CONCRETE
DIVISION 06 - CASEWORK								
DIVISION 06 - CASEWORK	PL-1	PLASTIC LAMINATE	STORAGE ROOM, CASEWORK	WILSONART	D315-60	PLATINUM /MATTE FINISH		
DIVISION 06 - CASEWORK	PL-2	PLASTIC LAMINATE	FACULTY SPACE AND STORAGE ROOM, COUNTERTOPS	WILSONART	TRACELESS, TYPE 138	CHARCOAL VELVET 15504 / ULTA MATTE FINISH	4'X10'	
DIVISION 07 - THERMAL & MOISTURE PROECTION								
DIVISION 07 - THERMAL & MOISTURE PROECTION	CFR-1	CFR STANDING SEAM ROOF SYSTEM	ROOF	METAL SALES	MAGNA-LOC 180	OLD ZINC GREY		
DIVISION 07 - THERMAL & MOISTURE PROECTION	MTL-1	INSULATED METAL WALL PANELS	FIELD INSULATED METAL PANELS	METL SPAN	CF MESA	SMOKE GRAY		
DIVISION 07 - THERMAL & MOISTURE PROECTION	MTL-2	INSULATED METAL WALL PANELS	ACCENT INSULATED METAL PANELS	METL SPAN	CF MESA	RUSTIC RED		
DIVISION 09 - GYPSUM BOARD								
DIVISION 09 - GYPSUM BOARD	GWB-1	GYPSUM WALL BOARD	STANDARD GYPSUM BOARD	PER SPECIFICATION	STANDARD GYPSUM BOARD	LEVEL 05 FINISH FOR PAINTING		
DIVISION 09 - GYPSUM BOARD	GWB-2	GYPSUM WALL BOARD	UTILITY AND GYPSUM BOARD	PER SPECIFICATION	STORAGE ROOM GYPSUM BOARD	LEVEL 04 FINISH		
DIVISION 09 - PAINTING								
DIVISION 09 - PAINTING	P-1	PAINT TO GYB	GENERAL WALL PAINT	DUNN EDWARDS	DEW379	IGLOO/SEMIGLOSS	N/A	INTERIOR FIELD PAINT COLOR
DIVISION 09 - PAINTING	P-2	PAINT TO GYB	ACCENT WALL PAINT COLOR	DUNN EDWARDS	DEA149	SPICED BERRY	N/A	INTERIOR ACCENT PAINT COLOR
DIVISION 09 - PAINTING	P-3	PAINT TO METAL	METAL PAINT COLOR	DUNN EDWARDS	DE6378	JET	N/A	STRUCTURAL BEAMS/COLOUMNS/DOORFRAMES/WINDOW FRAMES/DOWN SPOUT/
DIVISION 09 - PAINTING	P-4	PAINT TO GYB	ACCENT WALL PAINT COLOR	DUNN EDWARDS	DET612	STIEGLITZ SILVER	N/A	INTERIOR ACCENT PAINT COLOR
DIVISION 09 - PAINTING	P-5	PAINT TO METAL	METAL PAINT COLOR	DUNN EDWARDS	DEA149	SPICED BERRY	N/A	CANOPY FASCIA/DECORATIVE METAL/EXTERIOR&INTERIOR METAL DOORS
DIVISION 09 - PAINTING	P-6	PAINT TO METAL	METAL PAINT COLOR	DUNN EDWARDS	DET612	STIEGLITZ SILVER	N/A	EXTERIOR ROOF FASCIA
DIVISION 09 - TILE								
DIVISION 09 - TILE	T-1	WALL TILE	EXTERIOR WATER FOUNTAIN ACCENT WALL	TILEBAR	PORTRIATE OCEAN BLUE	OCEAN - MATTE PORCELAIN TILE	12" X 24"	
DIVISION 09 - FLOOR, WALL AND TILE TRANSITIONS								
DIVISION 09 - FLOOR, WALL AND TILE TRANSITIONS	TR-1	TRANSITIONS	VCT TO CONCRETE TRANSITION	ROPPE	#22 REDUCER STRIP 1/8"	123 CHARCOAL	1/8" X 1" X 6'	
DIVISION 09 - RESILIENT FLOORING AND BASE								
DIVISION 09 - RESILIENT FLOORING AND BASE	RWB-1	RESILIENT WALL BASE	FACULTY OFFICE	ROPPE	700 SERIES	123 CHARCOAL	6" STANDARD	
DIVISION 09 - RESILIENT FLOORING AND BASE	VCT-1	VINYL COMPOSITE TILE	FACULTY OFFICE	DIVINE FLOORING	THE WILD ONE - VP3007	AMERICAN WALNUT	8.5"X60.5"	
DIVISION 10 - SPECIALTIES								
DIVISION 10 - SPECIALTIES	L-1	LOCKER	LOCKER STORAGE	DE BOURGH	APEX ATHLETIC/SINGLE POINT RECESSED	URBAN DUSK / DOOR-BOND SHEARED MESH/SIDE VENTILATION	12 X 12	DOOR HEIGHTS 36"
DIVISION 10 - SPECIALTIES	WB-1	WELDING BOOTHS	FUME EXTRACTION/CURTAINS/TABLES	LINCOLN ELECTRIC	DUCT-FREE DESIGN	BLACK	5' X 6'	BASES OF DESIGN-STANDARD RED CURTAINS -WELD TABLE W/ADJUSTABLE PLAFORM 47" WIDE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

SCHEDULE - FINISHES

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
REN: 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/08/2025
DELTA DATE: DESCRIPTION:

A9.31

100% CD

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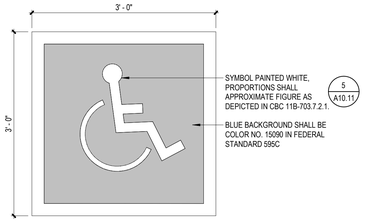
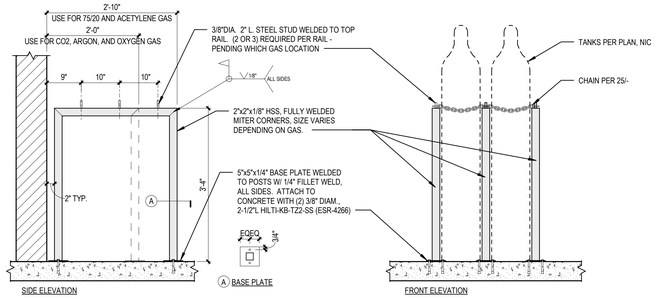
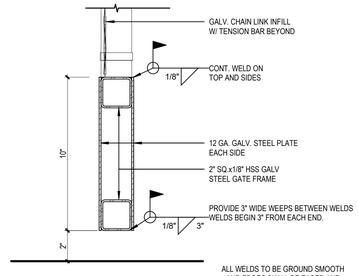


PAINTED ISA FOR ACCESSIBLE STALLS 30
1" = 1'-0" :SCALE

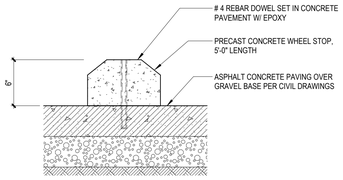


NOTE: ALL METAL ITEMS POWERED COATED BLACK TYP.

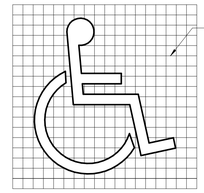
GAS BOTTLE RAILS 20
3/4" = 1'-0" :SCALE



GATE KICK PLATE - EGRESS 15
3" = 1'-0" :SCALE



WHEEL STOP 10
1 1/2" = 1'-0" :SCALE



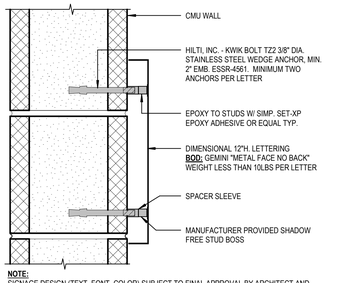
CBC EXCERPT: INTERNATIONAL SYMBOL OF ACCESSIBILITY. THE SYMBOL SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE COLOR NO. 15090 IN FEDERAL STANDARD 595C. SYMBOL PROPORTIONS SHALL APPROXIMATE FIGURE AS DEPICTED IN CBC 11B-703.7.2.1.

EXCEPTION: THE APPROPRIATE ENFORCEMENT AGENCY MAY APPROVE OTHER COLORS TO COMPLEMENT DECOR OR UNIQUE DESIGN. THE SYMBOL CONTRAST SHALL BE LIGHT ON DARK OR DARK ON LIGHT.

INTERNATIONAL SYMBOL FOR ACCESSIBILITY 5
1" = 1'-0" :SCALE

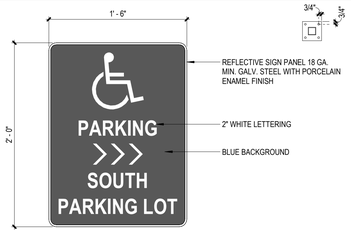
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:



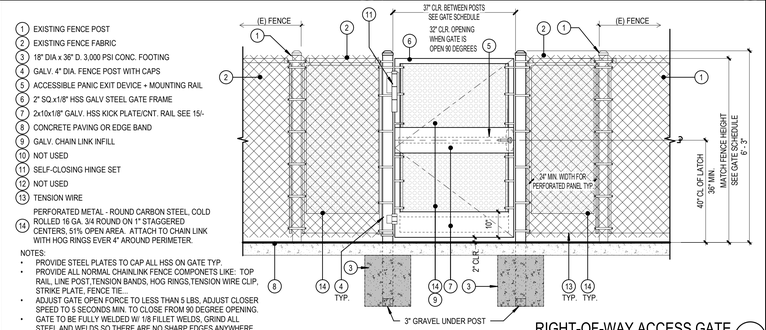
NOTE:
SIGNAGE DESIGN (TEXT, FONT, COLOR) SUBJECT TO FINAL APPROVAL BY ARCHITECT AND DISTRICT PRIOR TO FABRICATION

WALL MOUNTED SIGNAGE 29
3" = 1'-0" :SCALE



NOTES:
1. SIGN TO BE MOUNTED 80" A.F.F. TO BOTTOM OF SIGN AT POLE MOUNTED LOCATIONS
2. SEE 3 / A10.11 FOR SIGN POST MOUNTING

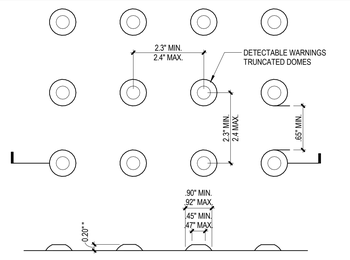
SOUTH ACCESSIBLE PARKING SIGN 24
1 1/2" = 1'-0" :SCALE



1. EXISTING FENCE POST
2. EXISTING FENCE FABRIC
3. 18" DIA x 36" D. 3,000 PSI CONC. FOOTING
4. GALV. 4" DIA. FENCE POST WITH CAPS
5. ACCESSIBLE PANIC EXIT DEVICE + MOUNTING RAIL
6. 2" SQ.x1/8" HSS GALV STEEL GATE FRAME
7. 2x10x1/8" GALV. HSS KICK PLATE/CNT. RAIL SEE 15/-
8. CONCRETE PAVING OR EDGE BAND
9. GALV. CHAIN LINK INFILL
10. NOT USED
11. SELF-CLOSING HINGE SET
12. NOT USED
13. TENSION WIRE
14. PERFORATED METAL - ROUND CARBON STEEL, COLD ROLLED 16 GA. 3/4 ROUND ON 1" STAGGERED CENTERS, 51% OPEN AREA. ATTACH TO CHAIN LINK WITH HOG RINGS EVER 4" AROUND PERIMETER.

NOTES:
- PROVIDE STEEL PLATES TO CAP ALL HSS ON GATE TYP.
- PROVIDE ALL NORMAL CHAINLINK FENCE COMPONETS LIKE: TOP RAIL, LINE POST, TENSION BANDS, HOG RINGS,TENSION WIRE CLIP, STRIKE PLATE, FENCE TIE...
- ADJUST GATE OPEN FORCE TO LESS THAN 5 LBS, ADJUST CLOSER SPEED TO 5 SECONDS MIN. TO CLOSE FROM 90 DEGREE OPENING.
- GATE TO BE FULLY WELDED W/ 1/8 FILLET WELDS, GRIND ALL STEEL AND WELDS SO THERE ARE NO SHARP EDGES ANYWHERE.

RIGHT-OF-WAY ACCESS GATE 14
1/2" = 1'-0" :SCALE



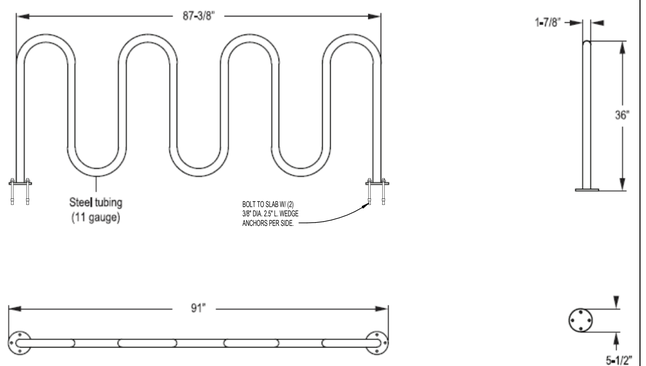
DETECTABLE WARNINGS - TRUNCATED DOMES

TRUNCATED DOMES - SIZE AND SPACING 9
6" = 1'-0" :SCALE

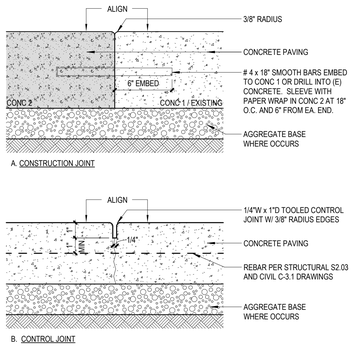
NOTES:
1. SIGN TO BE MOUNTED 80" A.F.F. TO BOTTOM OF SIGN AT POLE MOUNTED LOCATIONS.
2. SIGN TO BE 70 SQ. IN. MIN.
3. SEE 3 / A10.11 FOR SIGN POST MOUNTING

ACCESSIBLE PARKING SIGN 4
1 1/2" = 1'-0" :SCALE

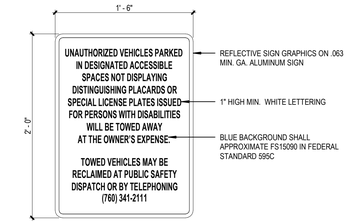
9 Bike Wave Rack - Stainless Steel (1-7/8" O.D.) 593-3003



BIKE RACK 22
1" = 1'-0" :SCALE

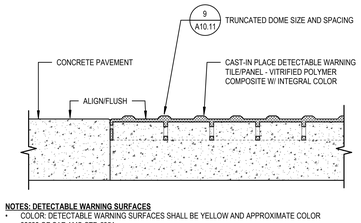


SITE PAVING JOINTS 11
3" = 1'-0" :SCALE



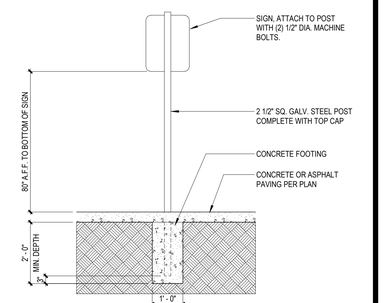
NOTES:
1. SIGN TO BE INSTALLED AT ALL SCHOOL PARKING ENTRANCES AND ADJACENT TO ACCESSIBLE STALLS
2. SIGN TO BE MOUNTED 80" A.F.F TO BOTTOM OF SIGN AT POST MOUNTED LOCATIONS.
3. INFORMATION ON SIGN TO BE CONFIRMED BY CONTRACTOR PRIOR TO FABRICATION.
4. SEE DETAIL 3 / A10.11 FOR SIGN MOUNTING.

UNAUTHORIZED PARKING SIGN 13
1 1/2" = 1'-0" :SCALE

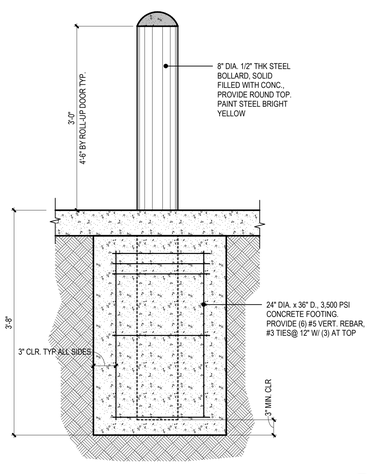


NOTES: DETECTABLE WARNING SURFACES
- COLOR: DETECTABLE WARNING SURFACES SHALL BE YELLOW AND APPROXIMATE COLOR 33538 OF SAE AMS-STD-595A
- THE MATERIAL USED TO COMPLY WITH REQUIRED COLOR SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE
- ONLY APPROVED DSA-AC DETECTABLE WARNING PRODUCTS COMPLIANT WITH CALIFORNIA CODE OF REGULATIONS, TITLE 24 SHALL BE INSTALLED (CALIFORNIA REFERENCED STANDARDS CODE, TITLE 24, PART 12)

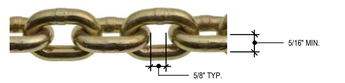
CAST-IN DETECTABLE WARNING PANEL 8
3" = 1'-0" :SCALE



TYPICAL SIGN POST 3
1/2" = 1'-0" :SCALE

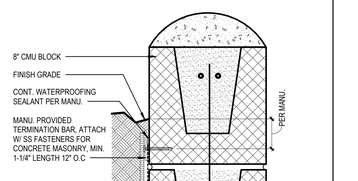


BOLLARD 26
1" = 1'-0" :SCALE

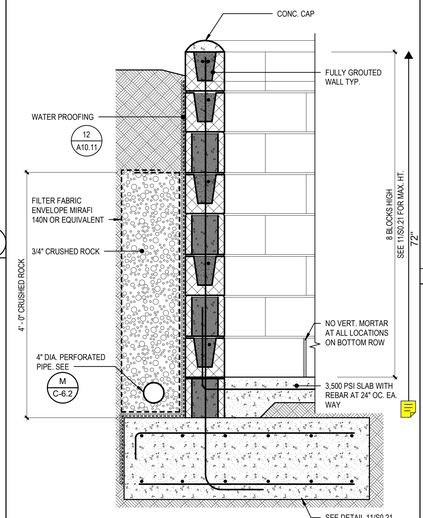


TYPE: MEDIUM DUTY CHAIN - WELDED TYPE
MATERIAL: CARBON STEEL
GRADE: GRADE 43
SIZE: 5/16" MIN THICK LINKS, GAP SHALL BE LARGE ENOUGH TO SECURE TO STUD POSTS AS SHOWN IN DETAIL 20/- ABOVE.
WORKING LOAD LIMIT: 2,000LBS
LENGTH: 80 L.F. CUT SEVERAL TIMES TO FIT AT MULTIPLE LOCATIONS - TBD
FINISH/COATING: GALVANIZED OR ZINC COATED
LINK CONFIGURATION: STANDARD
STANDARDS: ASTM A413/A413M
APPLICATION: SECURING
SUBMITTAL REQUIRED: YES

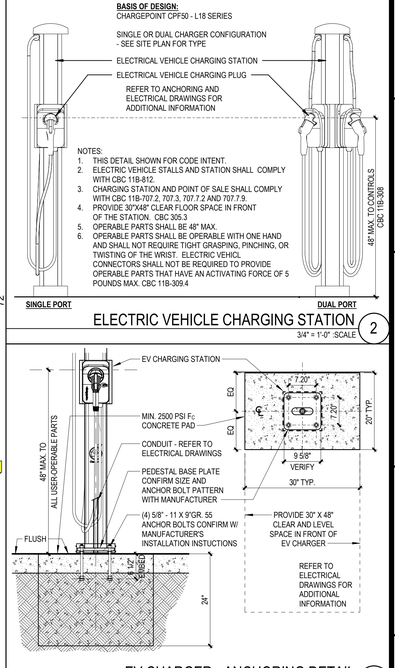
CHAIN 25
1 1/2" = 1'-0" :SCALE



CMU TRASH WALL - WATERPROOFING 12
3" = 1'-0" :SCALE



CMU TRASH ENCLOSURE WALL 6
1" = 1'-0" :SCALE



NOTES:
1. THIS DETAIL SHOWN FOR CODE INTENT.
2. ELECTRIC VEHICLE STALLS AND STATION SHALL COMPLY WITH CBC 11B-812.
3. CHARGING STATION AND POINT OF SALE SHALL COMPLY WITH CBC 11B-707.2, 707.3, 707.7.2 AND 707.7.9.
4. PROVIDE 30"X48" CLEAR FLOOR SPACE IN FRONT OF THE STATION. CBC 305.3
5. OPERABLE PARTS SHALL BE 48" MAX.
6. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. ELECTRIC VEHICL CONNECTORS SHALL NOT BE REQUIRED TO PROVIDE OPERABLE PARTS THAT HAVE AN ACTIVATING FORCE OF 5 POUNDS MAX. CBC 11B-309.4

ELECTRIC VEHICLE CHARGING STATION 2
3/4" = 1'-0" :SCALE

DETAILS - SITE

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
REN. 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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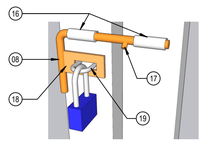
PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/26/2025
DELTA DATE: DESCRIPTION:

A10.11
100% CD

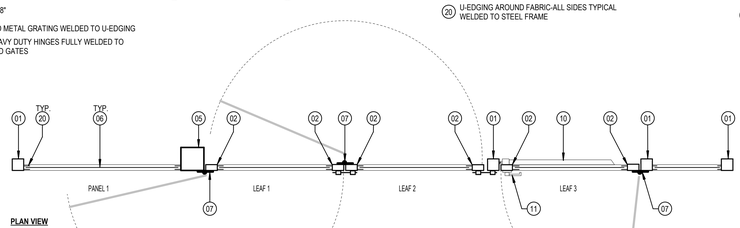
C:\Users\dcarter\Documents\MY Building design_R24_DCarter_WREN.rvt
8/28/2025 2:44:03 PM

NOTES:

01 HSS 3x3x1/4"
02 HSS 1.5x3x1/8"
03 HSS 1.5x1.5x1/8"
04 HSS 2x10x1/8"
05 HSS 6x6x5/8"
06 EXPANDED METAL GRATING WELDED TO U-EDGING
07 EXTRA HEAVY DUTY HINGES FULLY WELDED TO POSTS AND GATES
08 SOLID 3/4" STL. ROD
09 PADLOCK
10 PANIC HARDWARE
11 LOCKSET
12 LATCH AND KEEPER
13 HSS 2x6x1/8"
14 FOOTING PER 20/A9.11
15 CONTINOUS VAPOR BARRIER
16 STL. TUBE WELDED TO GATES/POST TO SECURE ROD
17 1/4" DIA. STL STUD WELDED TO 1" ROD TO KEEP ROD FROM PULLING OUT
18 1/4" THICK STL. PLATE WELDED TO ROD
19 1/4" DIA. STL. ROD WELDED TO GATE. USED FOR SECURING PAD LOCK
20 U-EDGING AROUND FABRIC-ALL SIDES TYPICAL WELDED TO STEEL FRAME

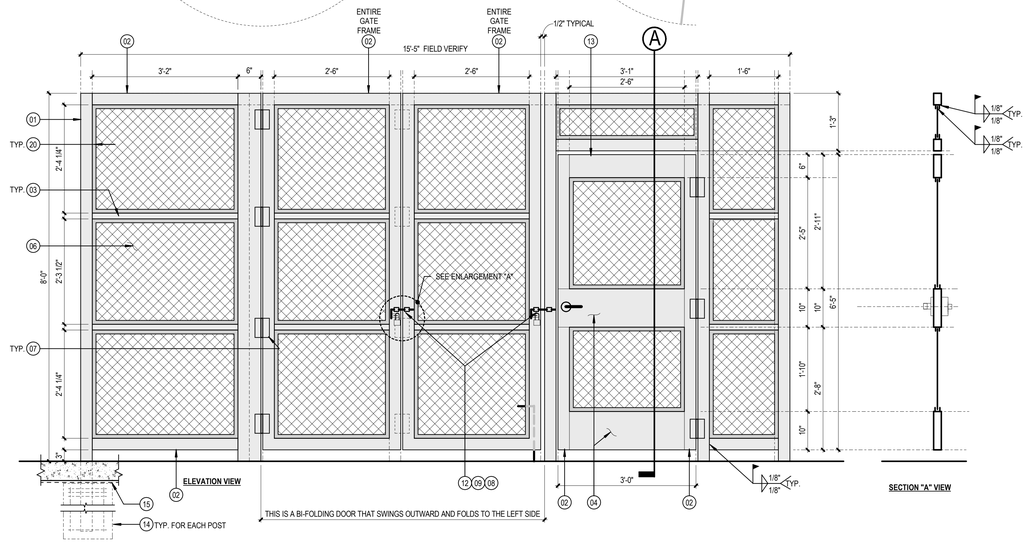


ENLARGEMENT "A"



PLAN VIEW

NOTES
1. LEVER HANDLE SHALL HAVE 1-1/2" CLEARANCE FROM ESCHUSHION TYPICAL.
2. LEAF 2 SHALL OPEN FLAT TO LEAF 1 AND THEN LEAF 1 SHALL OPEN FLAT AGAINST PANEL 1

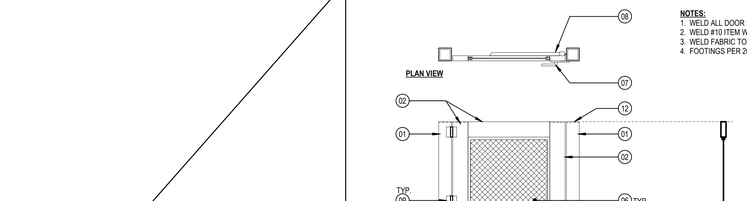


ELEVATION VIEW

SECTION "A" VIEW

TYP. FOR EACH POST

INTERIOR GATE 6
3/4" = 1'-0" :SCALE 5



PLAN VIEW

ELEV. VIEW

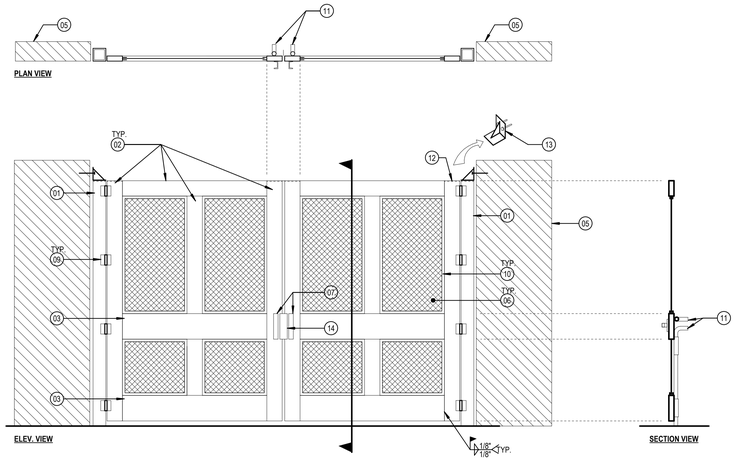
SECTION VIEW

NOTES:
1. WELD ALL DOOR FRAMES WITH A 3/16" FILLET WELD TYP.
2. WELD #10 ITEM WITH A 1/8" FILLET WELD, 2" STITCH WELDS EVERY 6"
3. WELD FABRIC TO U-EDGE AT EACH POINT OF CONTACT
4. FOOTINGS PER 20/A9.11

NOTES:
01 HSS 5x5x1/2"
02 HSS 6x2x1/8"
03 HSS 10x2x1/8"
04 SPARE
05 SPARE
06 EXPANDED METAL GRATING WELDED TO U-EDGING
07 LOCKSET
08 PANIC HARDWARE
09 HEAVY DUTY HINGES WELDED TO FRAMES
10 U-EDGING AROUND FABRIC-ALL SIDES TYPICAL WELDED TO STEEL FRAME
11 STRIKE PLATE 1/4" THICK WELDED TO GATE
12 PROVIDE FILLER PLATES ON ALL OPEN HSS TYPICAL

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

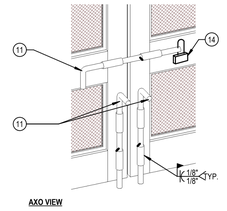
NOTES:
1. WELD ALL DOOR FRAMES WITH A 3/16" FILLET WELD TYP.
2. WELD #10 ITEM WITH A 1/8" FILLET WELD, 2" STITCH WELDS EVERY 6"
3. WELD FABRIC TO U-EDGE AT EACH POINT OF CONTACT
4. FOOTINGS PER 20/A9.11



PLAN VIEW

ELEV. VIEW

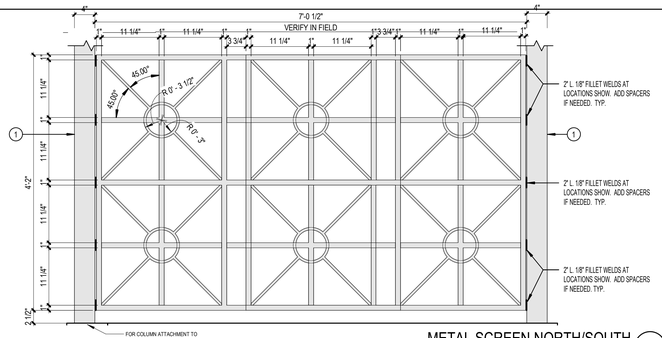
SECTION VIEW



AXO VIEW

NOTES:
01 HSS 5x5x1/2"
02 HSS 6x2x1/8"
03 HSS 10x2x1/8"
04 SPARE
05 CMU WALL TYPICAL
06 EXPANDED METAL GRATING WELDED TO U-EDGING
07 10" LONG 3x5 C-CHANNEL WELDED TO GATE FOR HANDLES
08 PANIC HARDWARE
09 HEAVY DUTY HINGES WELDED TO FRAMES
10 U-EDGING AROUND FABRIC-ALL SIDES TYPICAL WELDED TO STEEL FRAME
11 1 1/2" DIA. STEEL CANE BOLTS WELDED TO GATE
12 PROVIDE FILLER PLATES ON ALL OPEN HSS TYPICAL
13 5x5x1/2" STEEL BRACKET WITH CENTER SUPPORT. WELD TO GATE POST ON ALL SIDES. BOLT INTO TOP CORSE OF CMU WALL WITH (2) 6" L. HILTI KWIK BOLT TZ2 INTO FULLY GROUTED WALL. (ESR-4561)
14 STEEL STRIKE PLATE 1/4" THICK WELD TO ONE LEAF

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

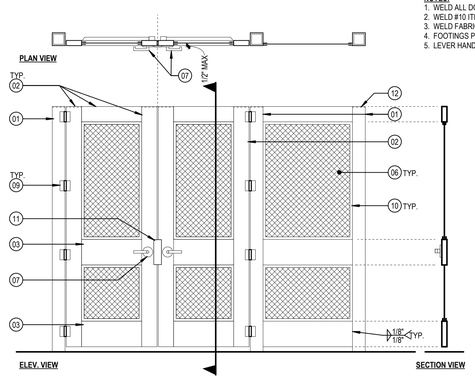


2" L 1/8" FILLET WELDS AT LOCATIONS SHOW. ADD SPACERS IF NEEDED. TYP.

FOR COLUMN ATTACHMENT TO CMU, USE 3/S2.01 TYPICAL

METAL SCREEN NORTH/SOUTH
1" = 1'-0" :SCALE 9

NOTES:
1. WELD ALL DOOR FRAMES WITH A 3/16" FILLET WELD TYP.
2. WELD #10 ITEM WITH A 1/8" FILLET WELD, 2" STITCH WELDS EVERY 6"
3. WELD FABRIC TO U-EDGE AT EACH POINT OF CONTACT
4. FOOTINGS PER 20/A9.11
5. LEVER HANDLE SHALL HAVE 1-1/2" CLEARANCE FROM ESCHUSHION TYPICAL



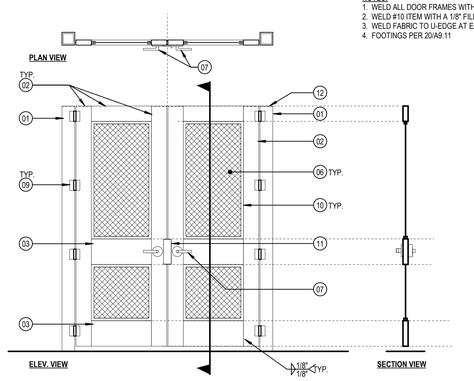
ELEV. VIEW

SECTION VIEW

NOTES:
01 HSS 5x5x1/2"
02 HSS 6x2x1/8"
03 HSS 10x2x1/8"
04 NOT USED
05 NOT USED
06 EXPANDED METAL GRATING WELDED TO U-EDGING
07 LOCKSET
08 NOT USED
09 HEAVY DUTY HINGES WELDED TO FRAMES
10 U-EDGING AROUND FABRIC-ALL SIDES TYPICAL WELDED TO STEEL FRAME
11 STRIKE PLATE 1/4" THICK WELDED TO GATE
12 PROVIDE FILLER PLATES ON ALL OPEN HSS TYPICAL

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

NOTES:
1. WELD ALL DOOR FRAMES WITH A 3/16" FILLET WELD TYP.
2. WELD #10 ITEM WITH A 1/8" FILLET WELD, 2" STITCH WELDS EVERY 6"
3. WELD FABRIC TO U-EDGE AT EACH POINT OF CONTACT
4. FOOTINGS PER 20/A9.11



ELEV. VIEW

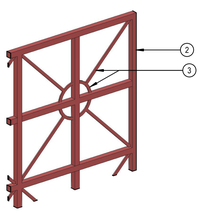
SECTION VIEW

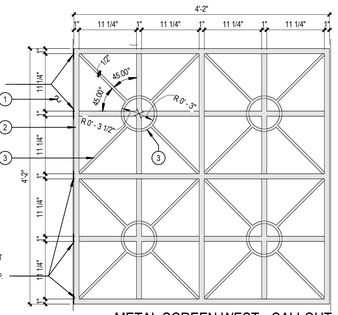
NOTES:
01 HSS 5x5x1/2"
02 HSS 6x2x1/8"
03 HSS 10x2x1/8"
04 NOT USED
05 NOT USED
06 EXPANDED METAL GRATING WELDED TO U-EDGING
07 LOCKSET
08 NOT USED
09 HEAVY DUTY HINGES WELDED TO FRAMES
10 U-EDGING AROUND FABRIC-ALL SIDES TYPICAL WELDED TO STEEL FRAME
11 STRIKE PLATE 1/4" THICK WELDED TO GATE
12 PROVIDE FILLER PLATES ON ALL OPEN HSS TYPICAL

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

1 4X4X1/8" HSS COLUMN. FASTEN TO CMU PER 10/-. WELD TO BEAM ABOVE WITH 3/16" FILLET WELD ALL SIDES TYP.
2 1X1X.083" CARBON SQUARE TUBE FRAME- 1/8" FILLET WELD ALL CONNECTIONS TYPICAL
3 1/2"x1/2"x SOLID STEEL SQUARE RODS. WELD ALL CONNECTIONS WITH 1/8" FILLET WELD AT ALL SIDES AND LOCATIONS TYPICAL.

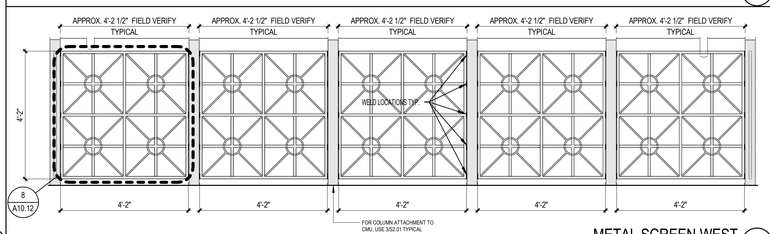
NOTES:
1. PRIME AND PAINT ALL STEEL TYPICAL
2. CENTER IS HALF-INCH STEEL WITH 1" HSS TYPICAL





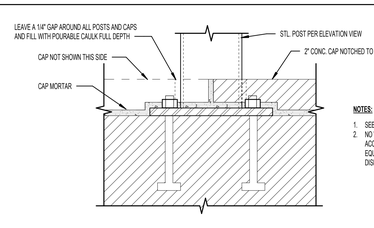
2" L 1/8" FILLET WELDS AT LOCATIONS SHOW. ADD SPACERS IF NEEDED. TYP.

METAL SCREEN WEST - CALLOUT
1" = 1'-0" :SCALE 8



FOR COLUMN ATTACHMENT TO CMU, USE 3/S2.01 TYPICAL

METAL SCREEN WEST
1/2" = 1'-0" :SCALE 6



NOTES:
1. SEE 3/S2.01 FOR ANCHORAGE INFORMATION
2. NO WET SETTING OF ANCHOR BOLTS. BOLTS SHALL BE ACCURATELY SET WITH TEMPLATES OR BY APPROVED EQUIVALENT MEANS AND HELD IN PLACE TO PREVENT DISLOCATION DURING GROUTING

SCREEN COLUMN TO CMU
3" = 1'-0" :SCALE 10

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DETAILS - GATES

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. SEPPS
NO. 26450
REN. 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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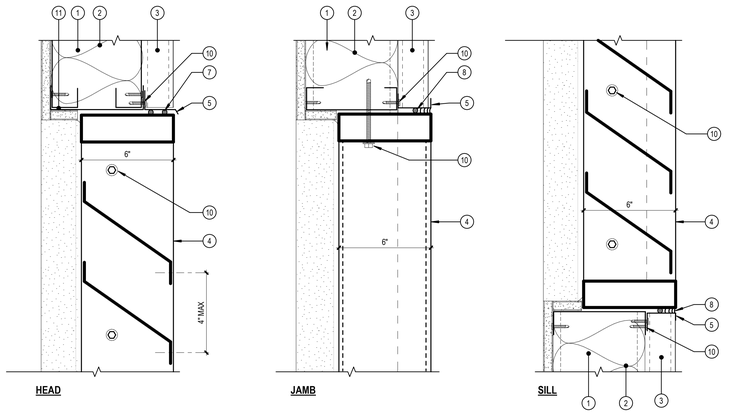
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/26/2025
DELTA DATE: DESCRIPTION:

A10.12
100% CD

8/29/2025 2:11:32 PM C:\Users\kdaniel\Documents\WF Building design_R24_DCentral.rvt

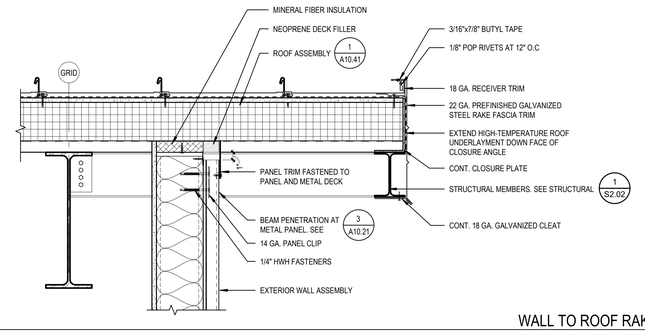


HEAD **JAMB** **SILL**

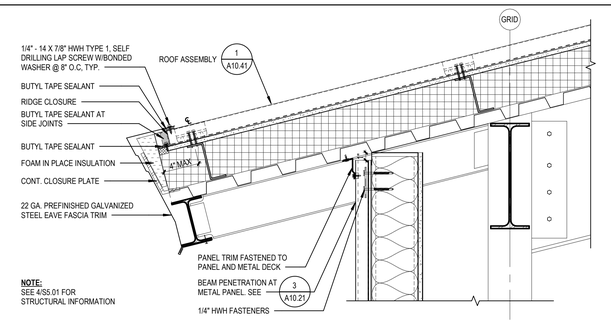
NOTES:
1. PROVIDE FULL ICE AND WATER MEMBRANE AROUND OPENING ON ALL SIDES.
2. ALL LOUVER BLADES SHALL BE FULLY WELDED
3. FULL CAULK AROUND THE LOUVER ON THE INTERIOR SIDE.

1. 6" METAL STUDS
2. BATT INSULATION
3. INSULATED METAL PANELS
4. 6" D. METAL LOUVERS - PRE-FINISH WITH KYNAR FINISH
5. 24 GA. FLASHING/CLOSER PANEL FOR METAL PANELS
6. NOT USED
7. 2 BEADS OF SEALANT
8. BACKER ROD AND SEALANT
9. #10 SMS 1" L. AT 12" O.C.
10. #14 SMS 4"L AT 6" AND ONE EACH END
11. MTL. STUD HEADER PER STRUCTURAL DWGS.
12. NOT USED

LOUVERS - HEAD/JAMB/SILL 10
3" = 1'-0" .SCALE

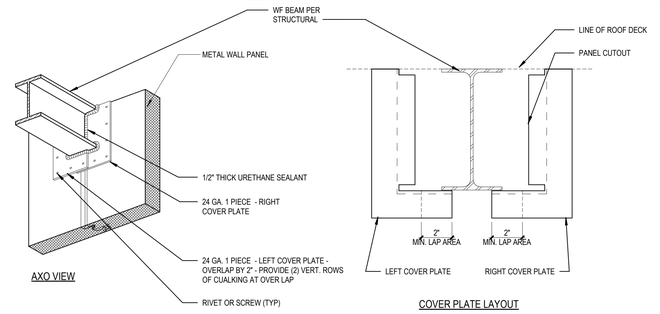


WALL TO ROOF RAKE 5
1 1/2" = 1'-0" .SCALE

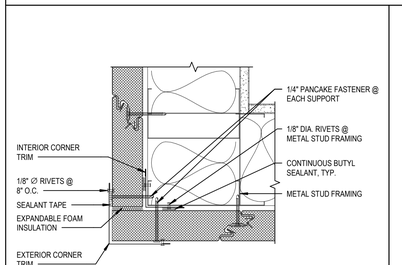


NOTE:
SEE 4/S5.01 FOR STRUCTURAL INFORMATION

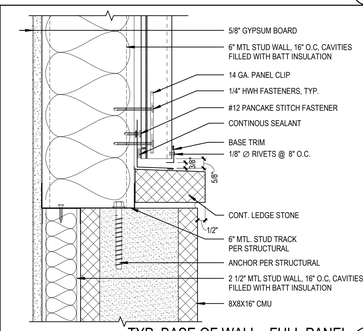
WALL TO ROOF EAVE 4
1 1/2" = 1'-0" .SCALE



BEAM PENETRATION AT METAL WALL PANEL 3
3" = 1'-0" .SCALE

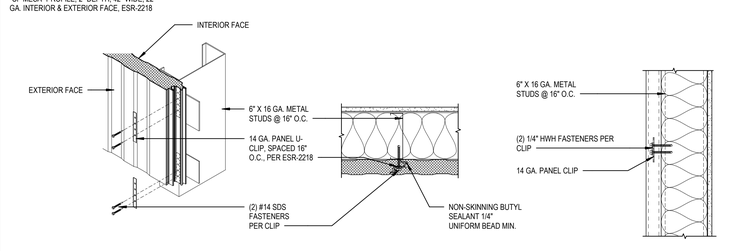


METAL PANEL WALL OUTSIDE CORNER TRIM 7
3" = 1'-0" .SCALE



TYP. BASE OF WALL - FULL PANEL 2
3" = 1'-0" .SCALE

METAL PANELS - BASIS OF DESIGN:
MANUFACTURER: METL SPAN
MODEL: COMPOSITE FORAM WALL PANELS, "CF MESA" PROFILE, 2" DEPTH, 42" WIDE, 22 GA. INTERIOR & EXTERIOR FACE, ESR-2218



ISOMETRIC VIEW (N.T.S.) PLAN VIEW SECTION VIEW

TYP. METAL WALL PANEL - ATTACHMENT 1
1 1/2" = 1'-0" .SCALE

IDENTIFICATION STAMP
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CONSULTANT:

DETAILS - EXTERIOR WALL

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
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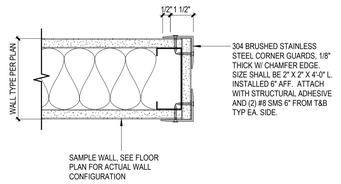
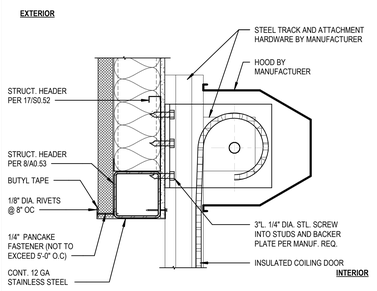
PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/30/2025
DELTA DATE: DESCRIPTION:

A10.21
100% CD

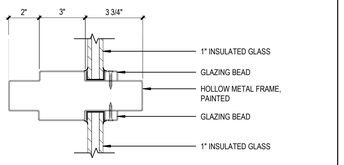
8/29/2025 12:45 PM C:\Users\dcarrillo\Documents\WF Building design_R24_DCarrillo1.rvt



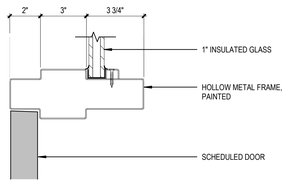
CORNER GUARDS 25
3" = 1'-0" :SCALE



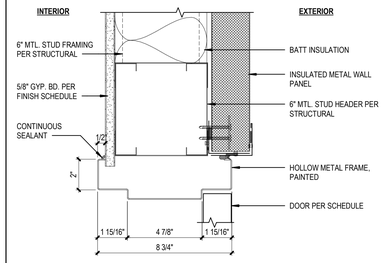
COILING DOOR HEAD 20
1 1/2" = 1'-0" :SCALE



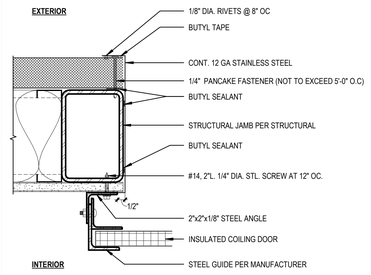
HM WINDOW MULLION 15
3" = 1'-0" :SCALE



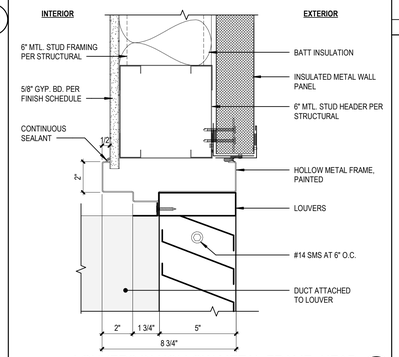
HM DR/WINDOW MULLION 10
3" = 1'-0" :SCALE



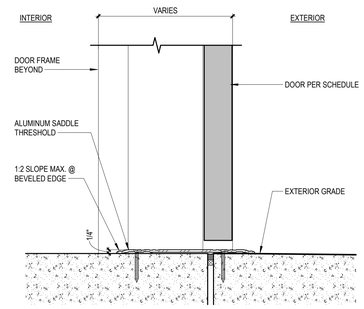
EXT. HOLLOW METAL DOOR HEAD 5
3" = 1'-0" :SCALE



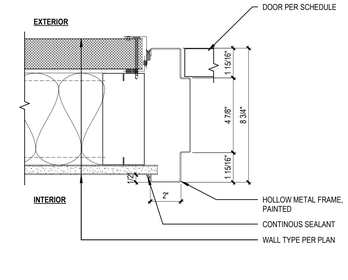
COILING DOOR JAMB 19
3" = 1'-0" :SCALE



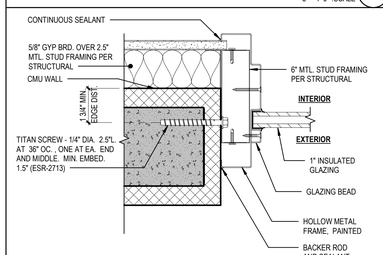
LOUVERS IN HOLLOW METAL FRAME -HEAD 14
3" = 1'-0" :SCALE



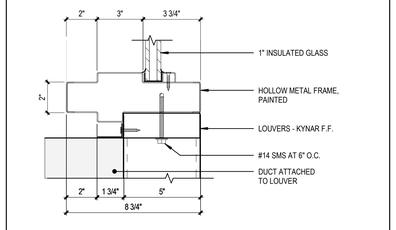
EXT. DOOR THRESHOLD 9
3" = 1'-0" :SCALE



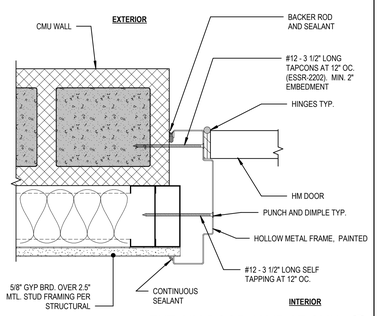
EXT. HOLLOW METAL DOOR JAMB 4
3" = 1'-0" :SCALE



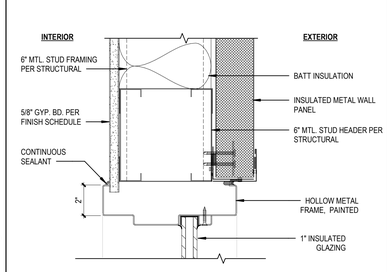
HM - GLAZED JAMB AT CMU 18
3" = 1'-0" :SCALE



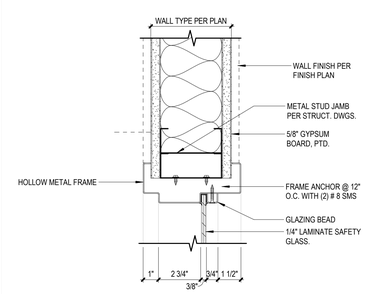
LOUVERS IN HOLLOW METAL MULLION 13
3" = 1'-0" :SCALE



EXT. HM DOOR JAMB AT CMU 8
3" = 1'-0" :SCALE

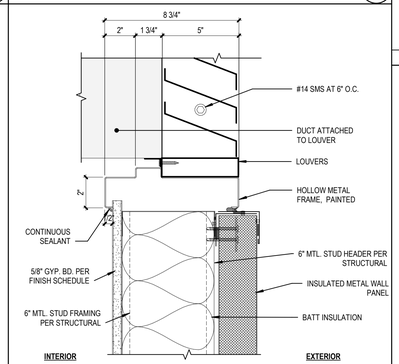


HM - GLAZED HEAD 3
3" = 1'-0" :SCALE

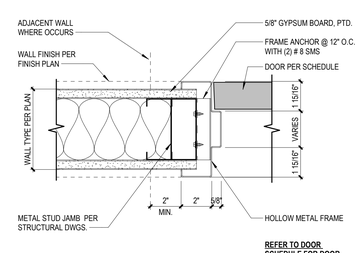


FRAME HEADER PER STRUCTURAL DRAWINGS, JAMB AND SILL SIMILARE

INT. HM. WINDOW HD/JMB/SILL 17
3" = 1'-0" :SCALE

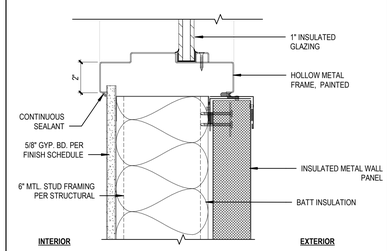


LOUVERS IN HOLLOW METAL FRAME - SILL 12
3" = 1'-0" :SCALE

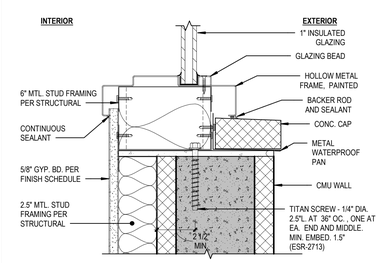


REFER TO DOOR SCHEDULE FOR DOOR AND FRAME FIRE-RATINGS

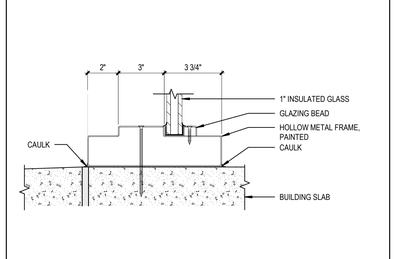
INT. HM. MS DR HEAD/JAMB 7
3" = 1'-0" :SCALE



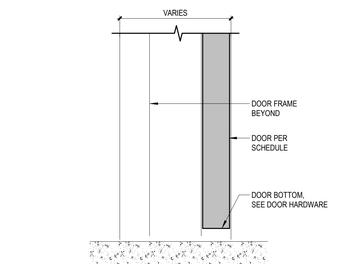
HM - GLAZED JAMB 2
3" = 1'-0" :SCALE



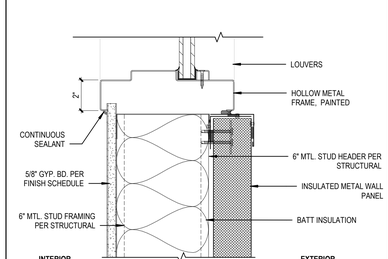
HM - GLAZED SILL AT CMU 16
3" = 1'-0" :SCALE



HM WINDOW AT GRADE 11
3" = 1'-0" :SCALE



INT. / EXT. DOOR THRESHOLD 6
3" = 1'-0" :SCALE



HM - GLAZED SILL 1
3" = 1'-0" :SCALE

IDENTIFICATION STAMP
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CONSULTANT:

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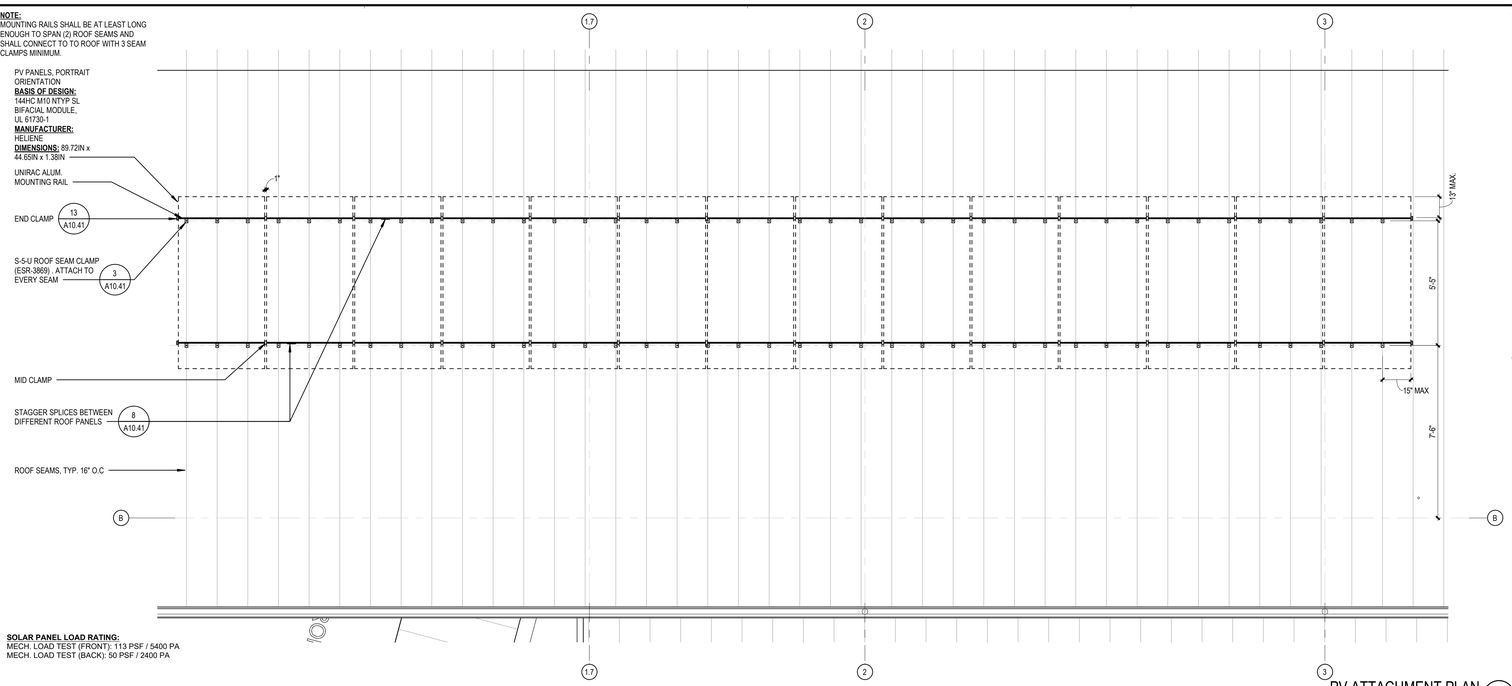
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025
DELTA: DATE: DESCRIPTION:

A10.25
100% CD

8/29/2025 1:24:46 PM C:\Users\fcastle\Documents\WF Building design_B24_DCastle\10REN.rvt

NOTE:
MOUNTING RAILS SHALL BE AT LEAST LONG ENOUGH TO SPAN (2) ROOF SEAMS AND SHALL CONNECT TO TO ROOF WITH 3 SEAM CLAMPS MINIMUM.



SOLAR PANEL LOAD RATING:
MECH. LOAD TEST (FRONT): 113 PSF / 5400 PA
MECH. LOAD TEST (BACK): 50 PSF / 2400 PA

PV ATTACHMENT PLAN 4
3/8" = 1'-0" :SCALE

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SS ☑ FLS ☑ ACS ☑
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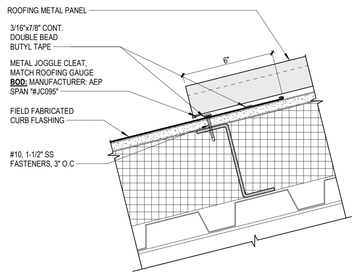
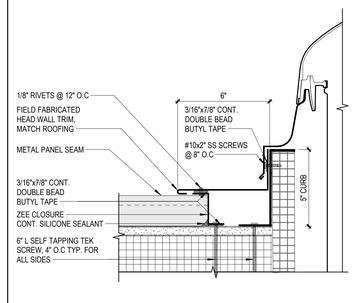
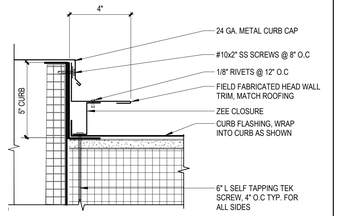
CONSULTANT:



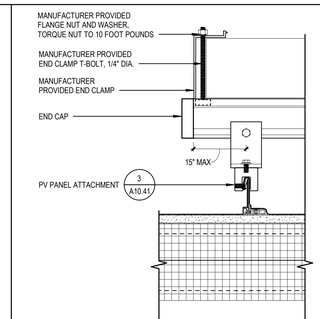
TUBULAR SKYLIGHT- UPPER OVERLAP 28
3" = 1'-0" :SCALE



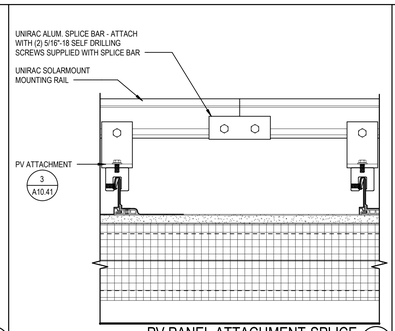
TUBULAR SKYLIGHT- LOWER FLASHING 23
3" = 1'-0" :SCALE



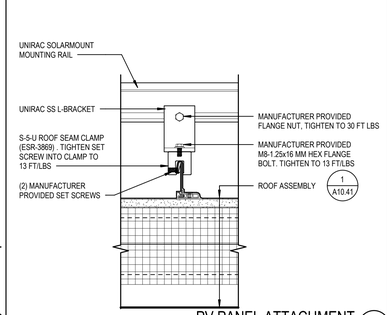
TUBULAR SKYLIGHT - UPPER FLASHING 18
3" = 1'-0" :SCALE



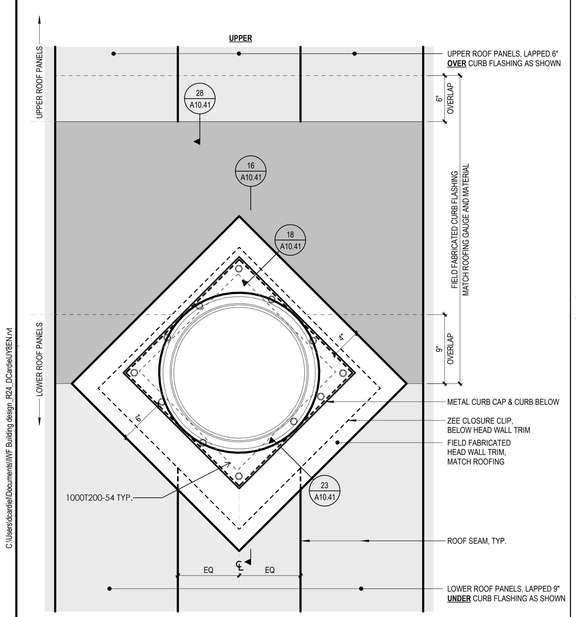
PV PANEL ATTACHMENT-EDGE CONDITION 13
3" = 1'-0" :SCALE



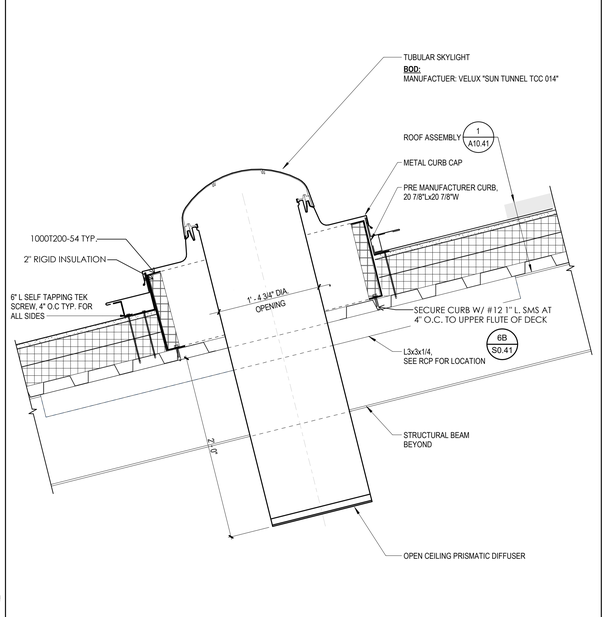
PV PANEL ATTACHMENT-SPLICE 8
3" = 1'-0" :SCALE



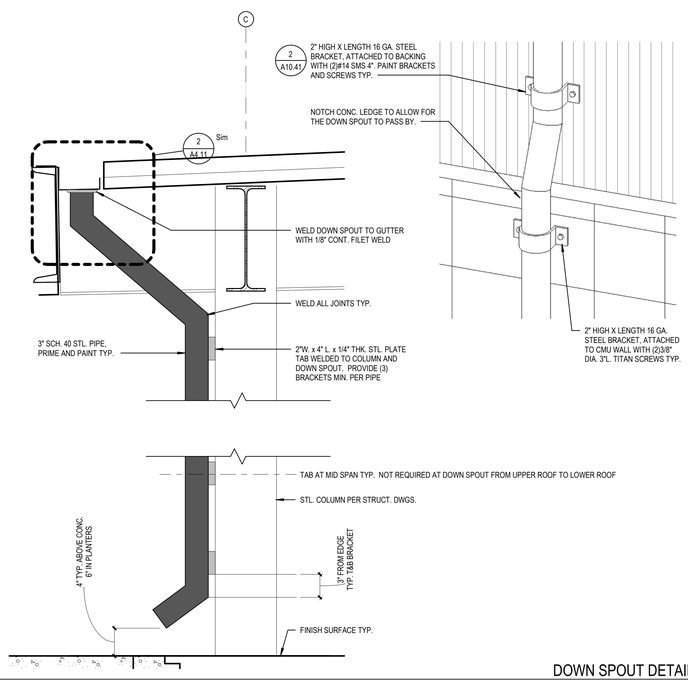
PV PANEL ATTACHMENT 3
3" = 1'-0" :SCALE



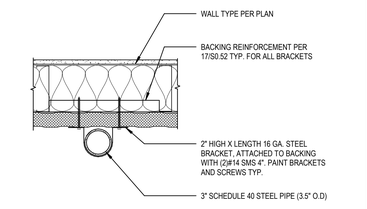
TUBULAR SKYLIGHT - PLAN 21
1 1/2" = 1'-0" :SCALE



TUBULAR SKYLIGHT - SECTION 16
1 1/2" = 1'-0" :SCALE

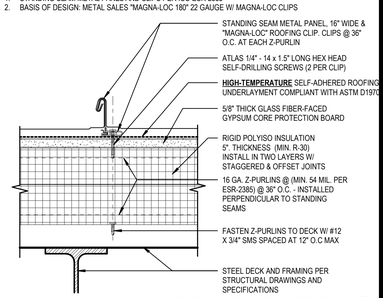


DOWN SPOUT DETAIL 6
1 1/2" = 1'-0" :SCALE



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

NOTES:
1. STANDING SEAM METAL PANEL AND CLIPS PER ICC-ESR-2385
2. BASIS OF DESIGN: METAL SALES "MAGNA-LOC 180" 22 GAUGE W/ MAGNA-LOC CLIPS



TYPICAL ROOF ASSEMBLY 1
3" = 1'-0" :SCALE

DETAILS - ROOF RELATED

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEVENS
NO. 26450
REN: 8-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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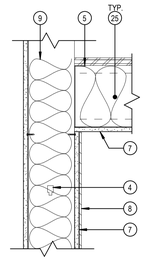
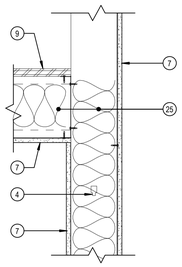
PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/08/2025
DELTA: DATE: DESCRIPTION:

A10.41
100% CD

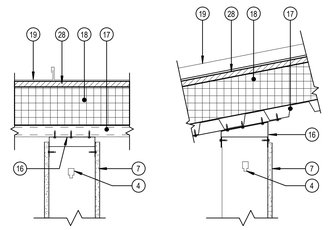
C:\Users\brandie\Desktop\Documents\WIP Building design_R24_DCme\6a10\REN.rvt
8/29/2025 1:24:46 PM



T.O.W. - RESTROOM 20
1 1/2" = 1'-0" :SCALE



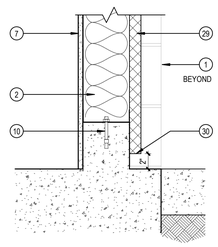
T.O.W. ABOVE OFFICE 15
1 1/2" = 1'-0" :SCALE



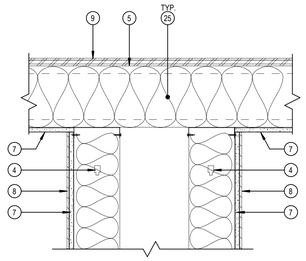
T.O.W. SLIP TRACK 10
1 1/2" = 1'-0" :SCALE

NOTES FOR DETAILS

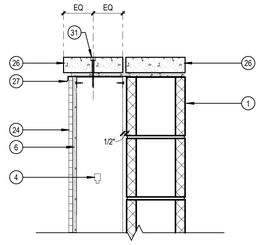
1. CMU BLOCK - PER SPECIFICATION
2. 2 1/2" METAL STUDS PER S0.52
3. 4" METAL STUDS PER S0.52
4. 6" METAL STUDS PER S0.52
5. 8" METAL STUD PER S0.52
6. CONCRETE BACKER BOARD
7. GYP. BRD. 5/8" TYPE "X" TYPICAL
8. FRP FINISH
9. 1" PLYWOOD ATTACHED WITH #10 SMS AT 6" ALONG EDGE AND 12" OC. IN FIELD
10. EXPANSION ANCHOR PER 4/S0.53
11. SCREW ANCHOR PER 9D/S0.52
12. FASTENERS PER STRUCTURAL SHEET S0.52
13. FRYREGLET J-MOLD PRODUCT - JDM 165
14. RESILIENT WALL BASE
15. NOT USED
16. SLIP TRACK PER S0.52
17. METAL DECK PER S2.02
18. 5" RIGID INSULATION
19. STANDING METAL SEAM ROOF
20. CONCRETE SLAB PER S2.01
21. CONCRETE CURB/FOOTING PER 4/S0.53
22. EXTERIOR SLAB PER CIVIL PLANS
23. NOT USED
24. METAL WALL TILES PER FINISH SCHEDULE
25. BATT INSULATION
26. CONCRETE WALL CAP OVER 3/8" MORTAR BED
27. 24 GA. FLASHING
28. RIGID NAIL BOARD
29. INSULATED METAL PANELS
30. METAL PANEL FLASHING. SEE DETAIL 2/A10.21
31. PRE-DRILL HOLE FOR #12, 3.5"L. SELF-TAPPING STL. SCREW. PROVIDE (2) PER CAP EVENLY SPACED IN BOTH DIRECTIONS, MIN. 3" FROM EDGE TYP. GROUT FILL SCREW HOLES TYP. COUNTER SCREW 1/2" BELOW SURFACE.



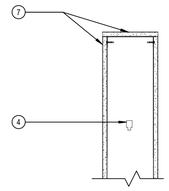
BASE - EXT. MTL STD 24
1 1/2" = 1'-0" :SCALE



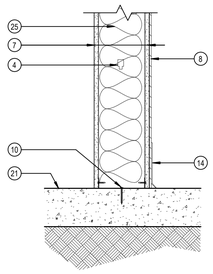
T.O.W. BETWEEN RR 19
1 1/2" = 1'-0" :SCALE



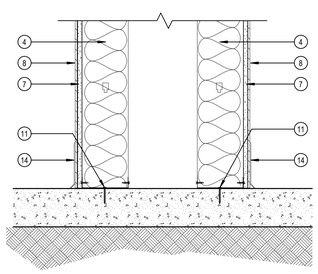
T.O.W. - AT DRINKING FOUNTAIN 14
1 1/2" = 1'-0" :SCALE



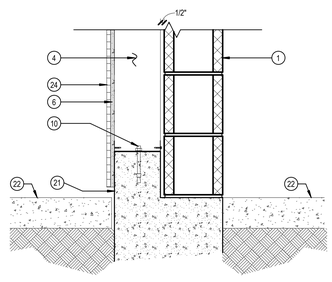
T.O.W. - GYP.CAP 9
1 1/2" = 1'-0" :SCALE



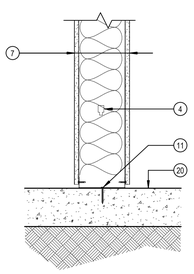
BASE - MTL STUD ON CURB @ RR 23
1 1/2" = 1'-0" :SCALE



BASE-DBL. STUD 18
1 1/2" = 1'-0" :SCALE

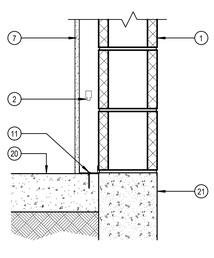


BASE - MTL STUD ON CURB 13
1 1/2" = 1'-0" :SCALE

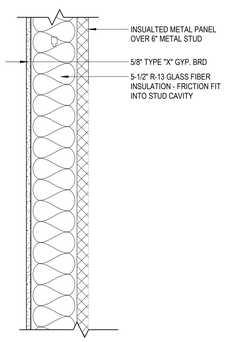


BASE - MTL STUD ON SLAB 8
1 1/2" = 1'-0" :SCALE

NOTE: CURB IS REQUIRED AT RESTROOM LOCATIONS. FOLLOW METAL STUD WALL WITH GYP. BRD. AND FRP FROM DETAIL 18- FOR RESTROOM LOCATIONS



BASE - CMU/MTL STD 2
1 1/2" = 1'-0" :SCALE

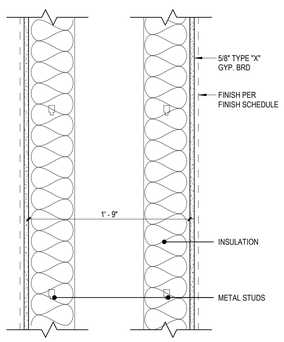


WALL TYPE F

NOTES:
THERE ARE NO VARIATIONS TO THIS WALL TYPE.

BASE:
SEE DETAIL 24/-

HEAD:
SEE DETAIL 5/A10.21



WALL TYPE E

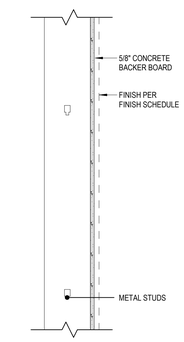
NOTES:
FRAMING:
4 = 4" METAL STUD
6 = 6" METAL STUD

INSULATION:
* = NONE
A = R13
B = R19
S = SOUND BATT

RATING:
*=NON RATED

BASE:
SEE DETAIL 18/-

HEAD:
SEE DETAIL 19/-



WALL TYPE D

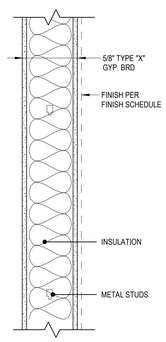
NOTES:
FRAMING:
4 = 4" METAL STUD
6 = 6" METAL STUD

INSULATION:
* = NONE
A = R13
B = R19
S = SOUND BATT

RATING:
*=NON RATED

BASE:
SEE DETAIL 13/-

HEAD:
SEE DETAIL 14/-



WALL TYPE C

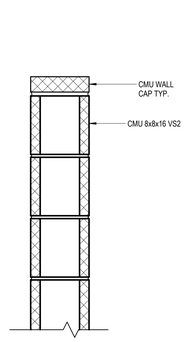
NOTES:
FRAMING:
4 = 4" METAL STUD
6 = 6" METAL STUD

INSULATION:
* = NONE
A = R13
B = R19
S = SOUND BATT

RATING:
*=NON RATED

BASE:
SEE DETAILS 8/- FOR PARTITION WALLS AND 23/- FOR RESTROOMS WALLS

HEAD:
SEE DETAILS 9, 10, 15, 20/- FOR TYPES. SEE REFLECTED CEILING PLAN AND SECTIONS FOR LOCATIONS.



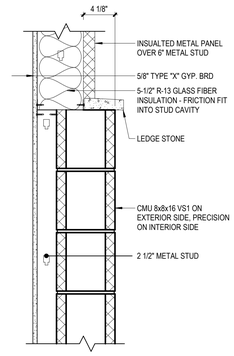
WALL TYPE B

NOTES:
ALL WALLS 8"x8"x16"

RATING:
1=1-HR RATED

BASE: SEE 2/- FOR SIM. CONDITIONS

SAMPLE TAG



WALL TYPE A

NOTES:
THERE ARE NO VARIATIONS TO THIS WALL TYPE.

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

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DETAILS - INTERIOR PARTITIONS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
REN 5-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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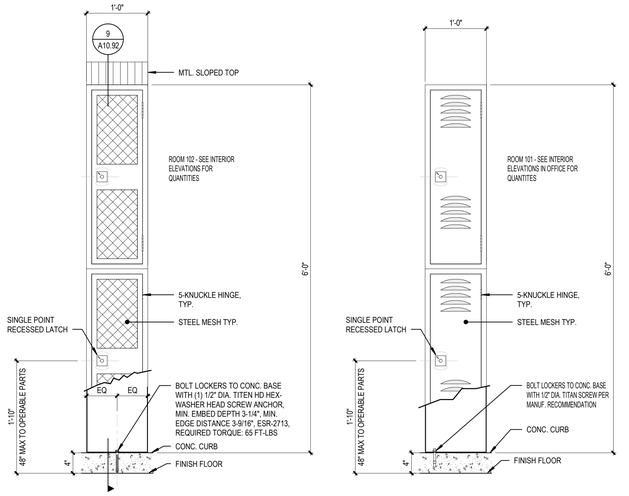
PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

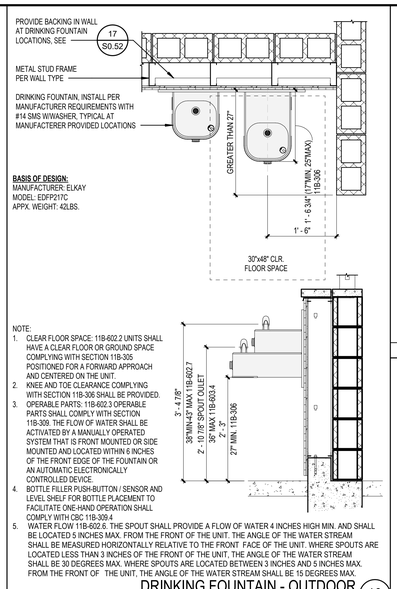
A10.51

100% CD

8/28/2025 1:24:48 PM C:\Users\kcarlet\Documents\WF Building design_R24_DCarlet.IVSEN.rvt

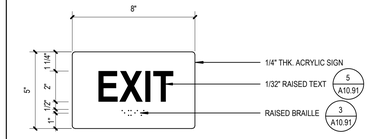


STANDARD LOCKERS 24
1" = 1'-0" :SCALE



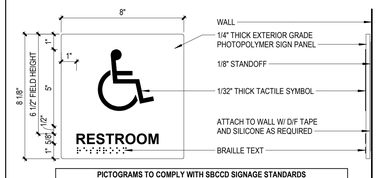
NOTE:
1. CLEAR FLOOR SPACE: 11B-602.2 UNITS SHALL HAVE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH SECTION 11B-305 POSITIONED FOR A FORWARD APPROACH AND CENTERED ON THE UNIT.
2. KNEE AND TOE CLEARANCE COMPLYING WITH SECTION 11B-306 SHALL BE PROVIDED.
3. OPERABLE PARTS: 11B-602.3 OPERABLE PARTS SHALL COMPLY WITH SECTION 11B-309. THE FLOW OF WATER SHALL BE ACTIVATED BY A MANUALLY OPERATED SYSTEM THAT IS FRONT MOUNTED OR SIDE MOUNTED AND LOCATED WITHIN 6 INCHES OF THE FRONT EDGE OF THE FOUNTAIN OR AN AUTOMATIC ELECTRONICALLY CONTROLLED DEVICE.
4. BOTTLE FILLER PUSH-BUTTON / SENSOR AND LEVEL SHELF FOR BOTTLE PLACEMENT TO FACILITATE ONE-HAND OPERATION SHALL COMPLY WITH CBC 11B-309.4
5. WATER FLOW 11B-602.6. THE SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES HIGH MIN. AND SHALL BE LOCATED 5 INCHES MAX. FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3 INCHES OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAX. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES AND 5 INCHES MAX. FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAX.

DRINKING FOUNTAIN - OUTDOOR 19
3/4" = 1'-0" :SCALE



NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT. CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.
2. PICTORIAL SYMBOL AND TEXT SHALL BE CONTRASTING IN COLOR TO BACKGROUND

EXIT SIGNAGE 15
3" = 1'-0" :SCALE



PICTOGRAMS TO COMPLY WITH SBCCD SIGNAGE STANDARDS

2022 CALIFORNIA ACCESS COMPLIANCE ADVISORY REFERENCE MANUAL: ADVISORY 11B-703.7.2.6 TOILET AND BATHING FACILITIES GEOMETRIC SYMBOLS. THERE IS NO REQUIREMENT FOR PROVIDING GENDER PICTOGRAMS IN COMBINATION WITH THE GEOMETRIC IDENTIFICATION SYMBOLS REQUIRED AT DOORWAYS LEADING TO MEN'S, WOMEN'S AND UNISEX TOILET AND BATHING FACILITIES.

NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.
2. PICTORIAL SYMBOL AND TEXT SHALL BE CONTRASTING IN COLOR TO BACKGROUND

RESTROOM SIGNAGE - GENDER NEUTRAL 10
3" = 1'-0" :SCALE

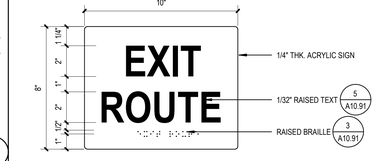
CHARACTER PROPORTIONS: CBC 2022 - 11B-703.2 & TABLE 11B-703.3.1

1. STYLE / CASE: CHARACTERS SHALL BE UPPER CASE SAN SERIF.
2. PROPORTIONS: CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE CASE LETTER "O" IS 60% MIN. AND 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I"
3. HEIGHT: CHARACTER HEIGHT TO 5/8" MIN. TO 2" MAX. BASED ON THE UPPERCASE LETTER "I"
4. STROKE: STROKE TO BE 15% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I"
5. SPACING: BETWEEN THE CLOSET TWO POINTS:
   1/8" MIN. TO 4 TIMES MAX. THE STROKE WHEN HAVING A RECTANGULAR CROSS SECTION
   1/16" MIN. TO 4 TIMES MAX. THE STROKE AT THE BASE WHEN HAVING OTHER CROSS SECTIONS
   1/8" MIN. TO 4 TIMES MAX. THE STROKE AT THE TOP WHEN HAVING OTHER CROSS SECTIONS
   3/8" MIN. TO RAISED BORDERS AND DECORATIVE ELEMENTS.
6. LINE SPACING: 135% MIN. TO 170% MAX. OF THE CHARACTER HEIGHT.
7. FORMAT: TEXT SHALL BE IN A HORIZONTAL FORMAT

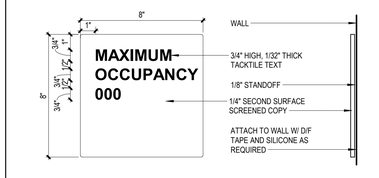
TEMPLATE FOR CHECKING CHARACTER PROPORTIONS AND STROKE THICKNESS:

CHARACTER WIDTH (USE UPPERCASE "O") STROKE WIDTH (USE UPPERCASE "I")

CHARACTER PROPORTIONS 5
6" = 1'-0" :SCALE

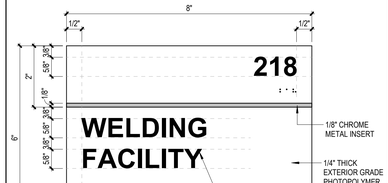


ROOM SIGNAGE - EXIT ROUTE-EXIT 14
3" = 1'-0" :SCALE



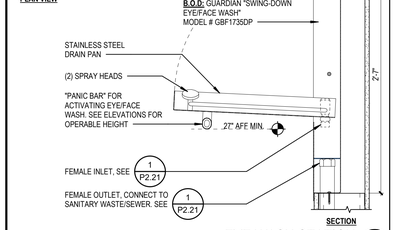
NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.
2. SIGNS THAT PROVIDE DIRECTION TO OR INFORMATION ABOUT INTERIOR AND EXTERIOR SPACES AND FACILITIES OF THE SITE SHALL COMPLY WITH CBC REQUIREMENTS FOR VISUAL SIGNAGE (SECTIONS 11B-216.3 AND 11B-703.5)

MAXIMUM OCCUPANCY SIGNAGE 9
3" = 1'-0" :SCALE

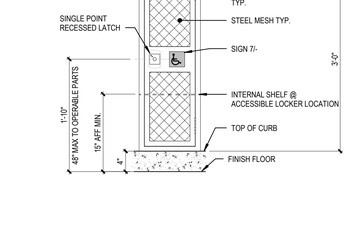


NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.

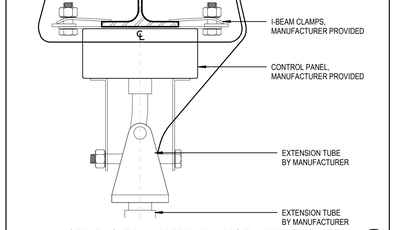
ROOM IDENTIFICATION SIGNAGE 4
6" = 1'-0" :SCALE



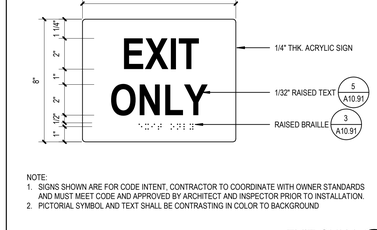
EYE WASH STATION 28
1 1/2" = 1'-0" :SCALE



ACCESSIBLE LOCKER 23
1" = 1'-0" :SCALE

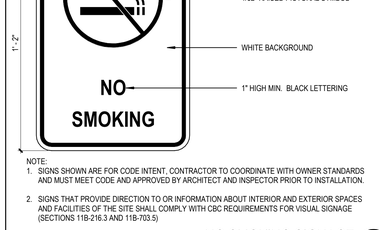


CEILING FAN - WIDE FLANGE ATTACHEMENT 18
3" = 1'-0" :SCALE



NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.
2. PICTORIAL SYMBOL AND TEXT SHALL BE CONTRASTING IN COLOR TO BACKGROUND

EXIT ONLY 13
3" = 1'-0" :SCALE

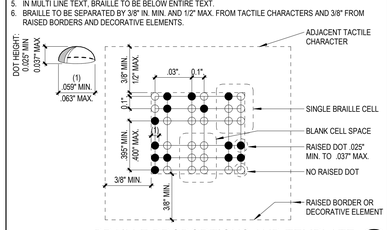


NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.
2. SIGNS THAT PROVIDE DIRECTION TO OR INFORMATION ABOUT INTERIOR AND EXTERIOR SPACES AND FACILITIES OF THE SITE SHALL COMPLY WITH CBC REQUIREMENTS FOR VISUAL SIGNAGE (SECTIONS 11B-216.3 AND 11B-703.5)

NO SMOKING SIGNAGE 8
3" = 1'-0" :SCALE

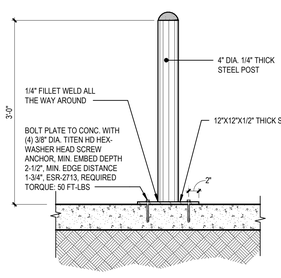
BRAILLE CBC 2022 11B-703.3

1. BRAILLE SHALL BE CONTRACTED (GRADE 2)
2. BRAILLE DOTS SHALL BE DOMED OR ROUNDED SHAPE.
3. INDICATION OF AN UPPERCASE LETTER OR LETTER SHALL ONLY BE USED FOR THE FIRST WORD OF SENTENCES, PROPER NOUNS AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS AND ACRONYMS.
4. BRAILLE SHALL BE BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT, FLUSH LEFT OR CENTERED.
5. IN MULTI LINE TEXT, BRAILLE TO BE BELOW ENTIRE TEXT.
6. BRAILLE TO BE SEPARATED BY 3/8" IN. MIN. AND 1/2" MAX. FROM TACTILE CHARACTERS AND 3/8" FROM RAISED BORDERS AND DECORATIVE ELEMENTS.

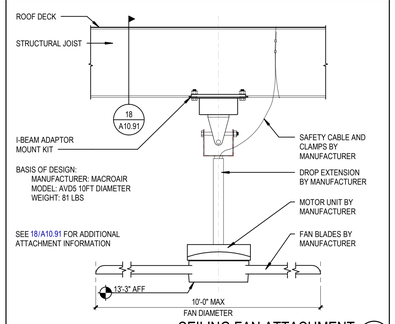


BRAILLE PROPORTIONS AND TEMPLATE 3
12" = 1'-0" :SCALE

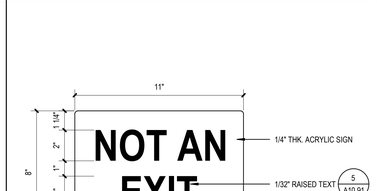
SIGN - HIGHLY FLAMABLE 27
3" = 1'-0" :SCALE



BOLT DOWN BOLLARD 22
1" = 1'-0" :SCALE

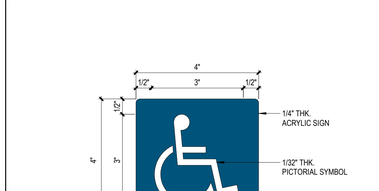


CEILING FAN ATTACHMENT 17
1" = 1'-0" :SCALE



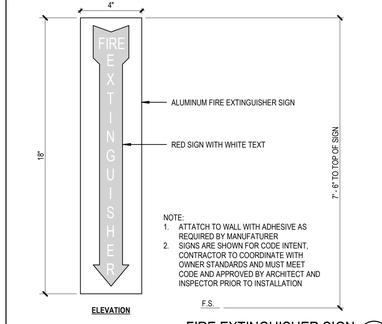
NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.
2. PICTORIAL SYMBOL AND TEXT SHALL BE CONTRASTING IN COLOR TO BACKGROUND

NOT AN EXIT 12
3" = 1'-0" :SCALE



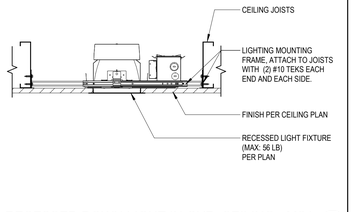
NOTES:
1. SYMBOLS SHALL COMPLY WITH CBC 2022 11B-703.7.2.1
2. THE SYMBOL SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE COLOR BLUE SHALL APPROXIMATE FS 15090 IN FEDERAL STANDARD 595C.

ISA SIGN FOR LOCKERS 7
6" = 1'-0" :SCALE

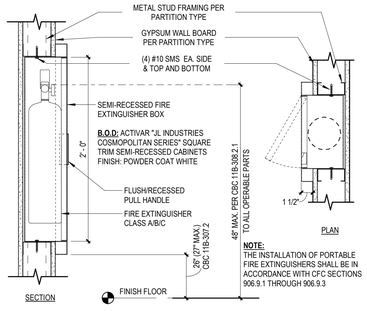


NOTE:
1. ATTATCH TO WALL WITH ADHESIVE AS REQUIRED BY MANUFATURER
2. SIGNS ARE SHOWN FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION

FIRE EXTINGUISHER SIGN 2
3" = 1'-0" :SCALE



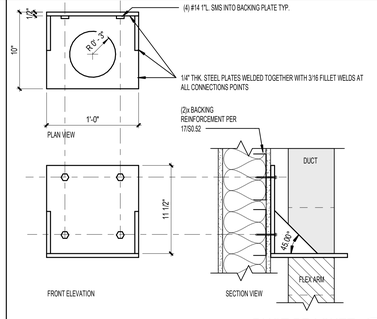
RECESSED DOWN LIGHT IN GYP. CEILING - MS1 26
1 1/2" = 1'-0" :SCALE



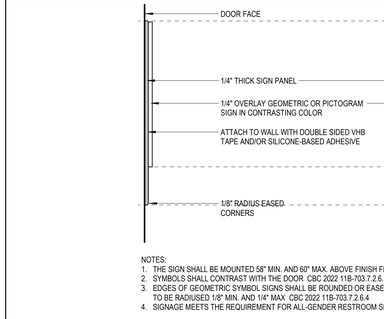
FE CABINET, SEMI-RECESSED 21
1 1/2" = 1'-0" :SCALE

SEE DEFERRED APPROVAL

WELDING TABLE/BOOTH MOUNT 16
3" = 1'-0" :SCALE



DUCT BRACKET 11
1 1/2" = 1'-0" :SCALE



NOTES:
1. THE SIGN SHALL BE MOUNTED 58" MIN. AND 60" MAX. ABOVE FINISH FLOOR TO CENTERLINE OF SYMBOL
2. SYMBOLS SHALL CONTRAST WITH THE DOOR CBC 2022 11B-703.7.2.6.1 AND 11B-703.7.2.6.2
3. EDGES OF GEOMETRIC SYMBOL SIGNS SHALL BE ROUNDED OR EASED AT 1/16" MIN. OR CHAMFERED AT 1/8" MAX. CORNERS OF THE SIGNS TO BE RADIUSED 1/8" MIN. AND 1/4" MAX. CBC 2022 11B-703.7.2.6.4
4. SIGNAGE MEETS THE REQUIREMENT FOR ALL-GENDER RESTROOM SIGN (AB-1732 / DSA-BU 17-01)

RESTROOM GEOMETRIC SYMBOL 1
3" = 1'-0" :SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DETAILS - MISCELLANEOUS

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL/S:

LICENSED ARCHITECT
MICHAEL J. STEPHENS
NO. 26450
RENT 3-31-27
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/26/2025
DELTA: DATE: DESCRIPTION:

A10.91
100% CD

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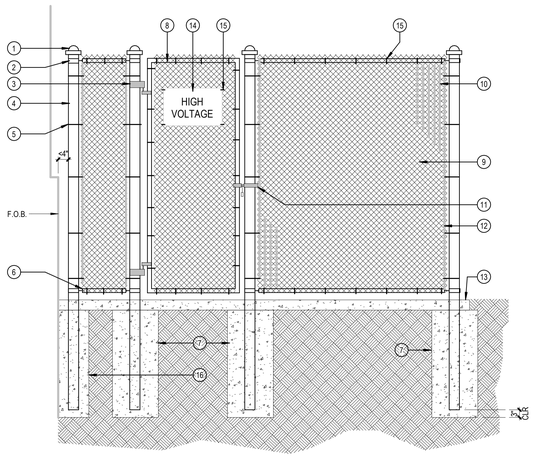
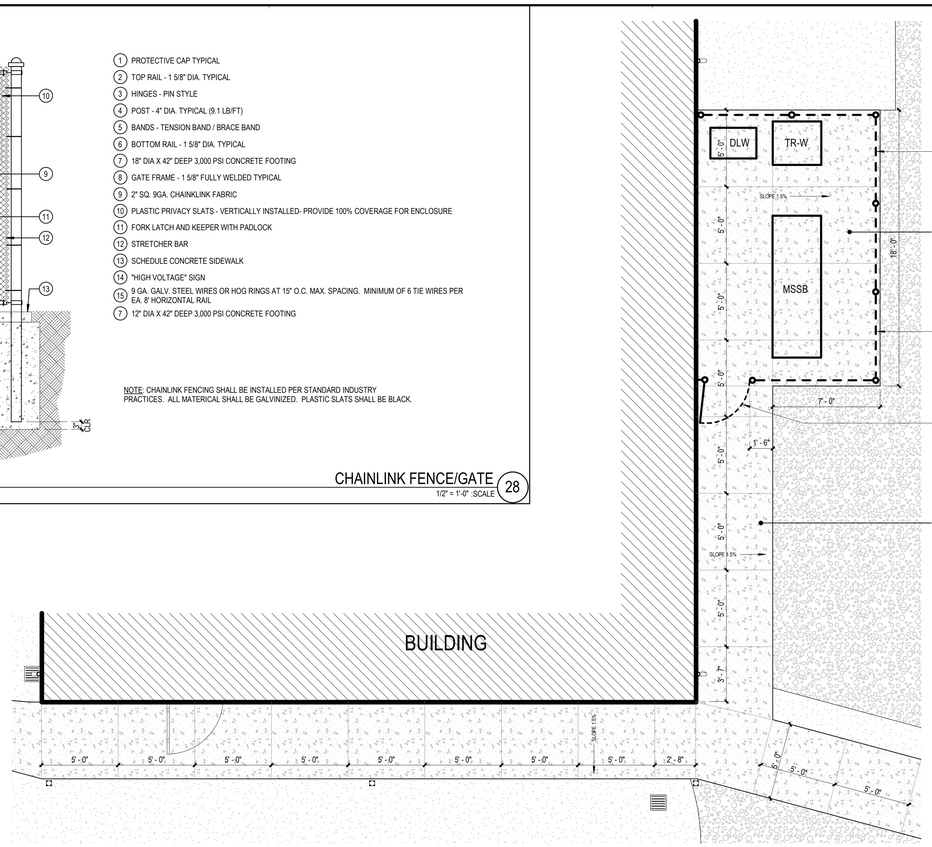
8/28/2025 1:24:48 PM



1. PROTECTIVE CAP TYPICAL
2. TOP RAIL - 1 5/8" DIA. TYPICAL
3. HINGES - PIN STYLE
4. POST - 4" DIA. TYPICAL (9.1 LB/FT)
5. BANDS - TENSION BAND / BRACE BAND
6. BOTTOM RAIL - 1 5/8" DIA. TYPICAL
7. 18" DIA X 42" DEEP 3,000 PSI CONCRETE FOOTING
8. GATE FRAME - 1 5/8" FULLY WELDED TYPICAL
9. 2" SQ. 9GA. CHAINLINK FABRIC
10. PLASTIC PRIVACY SLATS - VERTICALLY INSTALLED- PROVIDE 100% COVERAGE FOR ENCLOSURE
11. FORK LATCH AND KEEPER WITH PADLOCK
12. STRETCHER BAR
13. SCHEDULE CONCRETE SIDEWALK
14. "HIGH VOLTAGE" SIGN
15. 9 GA. GALV. STEEL WIRES OR HOG RINGS AT 15" O.C. MAX. SPACING. MINIMUM OF 6 TIE WIRES PER EA. 8' HORIZONTAL RAIL
7. 12" DIA X 42" DEEP 3,000 PSI CONCRETE FOOTING

NOTE: CHAINLINK FENCING SHALL BE INSTALLED PER STANDARD INDUSTRY PRACTICES. ALL MATERICAL SHALL BE GALVINIZED. PLASTIC SLATS SHALL BE BLACK.

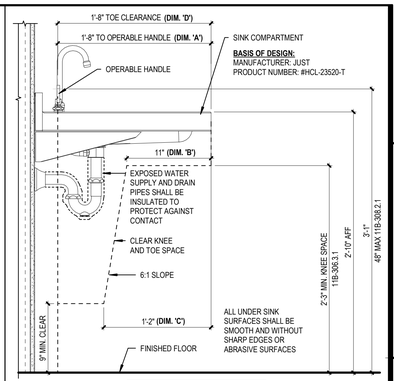
CHAINLINK FENCE/GATE 28
1/2" = 1'-0" :SCALE



ENLARGED SITE PLAN - ELECTRICAL ENCLOSURE 14
1/4" = 1'-0" :SCALE

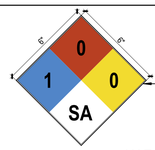
NOTE:
1. SIGNS SHOWN ARE FOR CODE INTENT, CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.

HOT WORK IN PROGRESS 10
3" = 1'-0" :SCALE



DIM. 'A'	DIM. 'B'	DIM. 'C'	DIM. 'D'
17"	8"	11"	17"
18"	9"	12"	18"
19"	10"	13"	19"
20"	11"	14"	20"
21"	12"	15"	21"
22"	13"	16"	22"
23"	14"	17"	23"
24"	15"	18"	24"
25"	16"	19"	25"

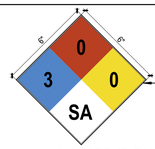
SINK MOUNT 7
1 1/2" = 1'-0" :SCALE



HAZARD ID DIAMOND, VINYL LABEL

NOTE:
MOUNT TO SURFACE USING MANUFACURER REQUIREMENTS

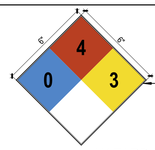
HAZARD ID DIAMOND - ARGON 6
3" = 1'-0" :SCALE



HAZARD ID DIAMOND, VINYL LABEL

NOTE:
MOUNT TO SURFACE USING MANUFACURER REQUIREMENTS

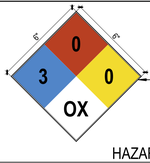
HAZARD ID DIAMOND - CARBON DIOXIDE 5
3" = 1'-0" :SCALE



HAZARD ID DIAMOND, VINYL LABEL

NOTE:
MOUNT TO SURFACE USING MANUFACURER REQUIREMENTS

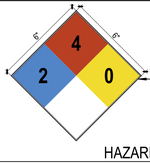
HAZARD ID DIAMOND - ACETYLENE 4
3" = 1'-0" :SCALE



HAZARD ID DIAMOND, VINYL LABEL

NOTE:
MOUNT TO SURFACE USING MANUFACURER REQUIREMENTS

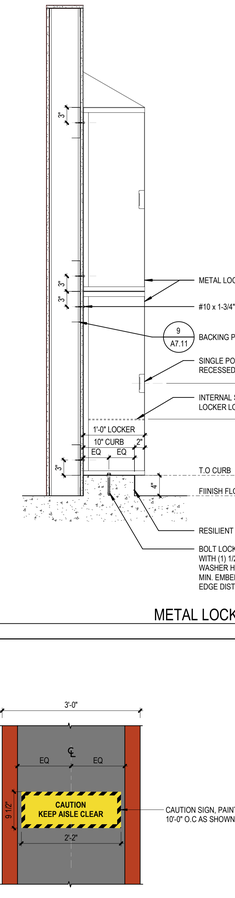
HAZARD ID DIAMOND - OXYGEN 3
3" = 1'-0" :SCALE



HAZARD ID DIAMOND, VINYL LABEL

NOTE:
MOUNT TO SURFACE USING MANUFACURER REQUIREMENTS

HAZARD ID DIAMOND - PROPANE 2
3" = 1'-0" :SCALE

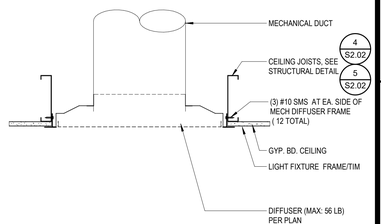


METAL LOCKER SECTION 9
1" = 1'-0" :SCALE

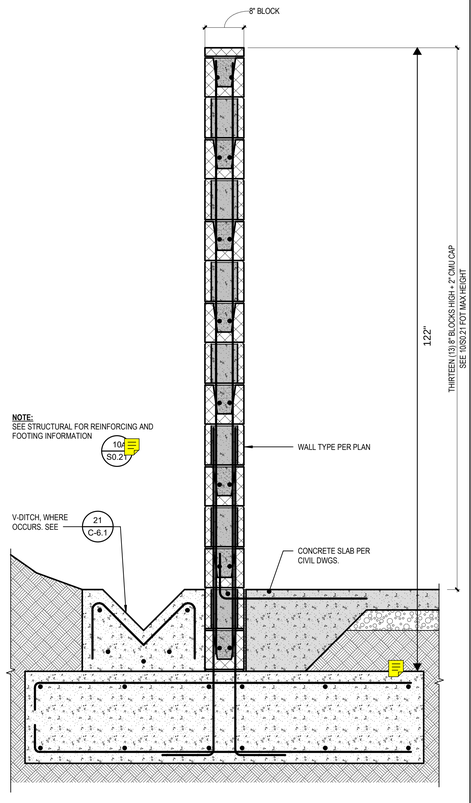
CAUTION SIGN, PAINTED APPX. EVERY 10'-0" O.C AS SHOWN ON FLOOR PLAN

NOTE:
1. CONTRACTOR TO COORDINATE WITH OWNER STANDARDS AND MUST MEET CODE AND APPROVED BY ARCHITECT AND INSPECTOR PRIOR TO INSTALLATION.

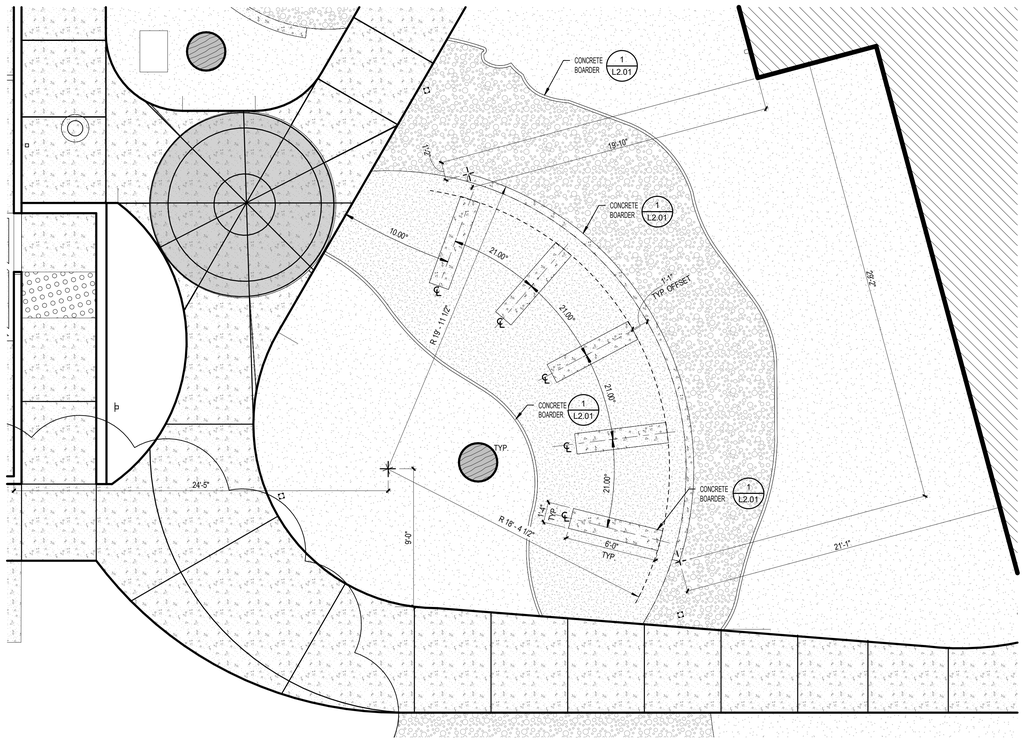
CLEAR ACCESS AISLE 8
3/4" = 1'-0" :SCALE



MECHANICAL DIFFUSER IN GYP. CEILING - MS1 1
1 1/2" = 1'-0" :SCALE



SITE WALL 26
1" = 1'-0" :SCALE



ENLARGED SITE PLAN - CONCRETE DIMENSIONS 11
1/4" = 1'-0" :SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DETAILS - MISCELLANEOUS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025
DET.N. DATE: DESCRIPTION:

A10.92
100% CD

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ABBREVIATIONS AND LEGEND

010000-0002

AB	ANCHOR BOLT	IN	INCH
ABV	ABOVE	INT	INTERIOR
ADDL	ADDITIONAL	IOR	INSPECTOR OF RECORD
ADJ	ADJACENT	JST	JOIST
AFF	ABOVE FINISH FLOOR	JT	JOINT
ALT	ALTERNATE	KLF	KIPS PER LINEAR FOOT
ARCH	ARCHITECT(URAL)	KSF	KIPS PER SQUARE FOOT
BLDG	BUILDING	KSI	KIPS PER SQUARE INCH
BLK	BLOCK	L	ANGLE
BLKG	BLOCKING	LD	DEVELOPMENT LENGTH
BLW	BELOW	LDH	HOOK DEVELOPMENT LENGTH
BM	BEAM	LFRS	LATERAL FORCE RESISTING SYSTEM
BN	BOUNDARY NAILING		
B.O.	BOTTOM OF	LLH	LONG LEG HORIZONTAL
BOTT	BOTTOM	LLV	LONG LEG VERTICAL
BRB	BUCKLING-RESTRAINED BRACE	LONG	LONGITUDINAL
BRG	BEARING	LP	LOW POINT
BS	BOTH SIDES	LS	LAP SPLICE
BTWN	BETWEEN	LWC	LIGHTWEIGHT CONCRETE
C	CAMBER	MAX	MAXIMUM
CG	CENTER OF GRAVITY	MB	MACHINE BOLT
CIP	CAST IN PLACE	MECH	MECHANICAL
CJ	CONTROL/CONSTRUCTION JOINT	MFR	MANUFACTURER
CJP	COMPLETE JOINT PENETRATION	MIN	MINIMUM
CL	CENTERLINE	MTL	METAL
CLG	CEILING	(N)	NEW
CLR	CLEAR	NA	NEUTRAL AXIS
CMU	CONCRETE MASONRY UNIT	NS	NEAR SIDE OR NON-SHRINK
COL	COLUMN	NTS	NOT TO SCALE
CONC	CONCRETE	NWC	NORMALWEIGHT CONCRETE
CONN	CONNECTION	OC	ON CENTER
CONT	CONTINUOUS	OD	OUTSIDE DIAMETER
CSK	COUNTERSINK, COUNTERSUNK	O.F.	OUTSIDE FACE
CTR(D)	CENTER(ED)	OH	OPPOSITE HAND
D_b, DB	BAR DIAMETER OR BOLT DIAMETER	OPNG	OPENING
DBL	DOUBLE	PDF	POWDER/POWER DRIVEN FASTENER
DEMO	DEMOLITION		
DET	DETAIL	PJ	PANEL JOINT
DF	DOUGLAS FIR-LARCH	PJP	PARTIAL JOINT PENETRATION
DIA , Ø	DIAMETER	PL	PLATE
DIAG	DIAGONAL	PL(S)	PLACE(S)
DIM	DIMENSION	PLF	POUNDS PER LINEAR FOOT
DIR	DIRECTION	PLYWD	PLYWOOD
DO	DITTO	PREFAB	PREFABRICATED
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
(E)	EXISTING	PSI	POUNDS PER SQUARE INCH
EA	EACH	PT	PRESSURE TREATED OR POST TENSION
EF	EACH FACE		
EJ	EXPANSION JOINT	QTY	QUANTITY
EMBED	EMBEDMENT	RAD, R	RADIUS
ELEC	ELECTRICAL	REF	REFERENCE
ELEV	ELEVATION OR ELEVATOR	REINF	REINFORCING
EN	EDGE NAILING	REQD	REQUIRED
E.O.	EDGE OF	(S)	"SIMPSON" STRONG TIE CO. OR "USP" W/ EQUIVALENT THIRD PARTY EVALUATION VALUES
EOD	EDGE OF DECK		
EQ	EQUAL		
EQUIP	EQUIPMENT	SB	SILL BOLT
ES	EACH SIDE OR EDGE SCREW	SC	SAW CUT OR SLIP-CRITICAL
EW	EACH WAY	SCHED	SCHEDULE
EXP	EXPANSION	SEOR	STRUCTURAL ENGINEER OF RECORD
EXT	EXTERIOR		
FIN	FINISH	SHTG	SHEATHING
FLG	FLANGE	SIM	SIMILAR
FLR	FLOOR	SMS	SHEET METAL SCREW
FN	FIELD NAILING	SN	SILL NAIL
FND	FOUNDATION	SOG	SLAB ON GRADE
F.O.	FACE OF	SQ	SQUARE
FS	FAR SIDE OR FIELD SCREW	SS	STAINLESS STEEL
FRMG	FRAMING	STD	STANDARD
FRP	FIBER REINFORCED POLYMER	STGRD	STAGGERED
FT	FOOT OR FEET	STIFF	STIFFENER
FTG	FOOTING	STL	STEEL
Fy	YIELD STRESS	STRUCT	STRUCTURAL
GA	GAGE	T&B	TOP & BOTTOM
GALV	GALVANIZED	T&G	TONGUE AND GROOVE
GB	GRADE BEAM	THK	THICK
GC	GENERAL CONTRACTOR	THRD	THREADED
GLB	GLUED-LAMINATED BEAM	T.O.	TOP OF
HAB	HEADED ANCHOR BOLT	TRANS	TRANSVERSE
HD	HOLDOWN	TYP	TYPICAL
HDG	HOT-DIPPED GALVANIZED	UNO	UNLESS NOTED OTHERWISE
HDR	HEADER	VERT	VERTICAL
HGR	HANGER	VIF	VERIFY IN FIELD
HK	HOOK	W/	WITH
HORIZ	HORIZONTAL	W/O	WITHOUT
HP	HIGH POINT	WF, W	WIDE FLANGE
HS	HIGH-STRENGTH	WHS	WELDED HEADED STUD
HSB	HIGH-STRENGTH BOLT	WLD	WELDED
HSS	HOLLOW STRUCTURAL SECTION	WO	WHERE OCCURS
HT	HEIGHT	WP	WORK POINT
ID	INSIDE DIAMETER	WT	WEIGHT
I.F.	INSIDE FACE	WWF	WELDED WIRE FABRIC

REFERENCE ELEVATION OR WORK POINT

(LFRS) INDICATES THAT A DETAIL OR PORTION OF FRAMING IS A PART OF THE LATERAL FORCE RESISTING SYSTEM AND IS SUBJECT TO ADDITIONAL REQUIREMENTS OUTLINED IN THE GENERAL NOTES AND SPECIFICATIONS

TYPICAL HATCH PATTERNS USED (UNLESS NOTED OTHERWISE):

CONCRETE · STEEL · SOIL/EARTH · MASONRY · GROUT/SAND · PLYWOOD/SHEATHING

EXISTING ELEMENTS ARE SHOWN AS HALFTONE, NEW ELEMENTS ARE SHOWN AS FULL TONE UNO; EXAMPLE:

INDICATES A NEW ELEMENT · INDICATES AN EXISTING ELEMENT

REFERENCE OF SECTIONS, DETAILS & SYMBOLS

010000-0004

DETAIL REFERENCE SHOWN THUS *:

DETAIL NOTED IS SHOWN ON SHEET S5.01, DETAIL 2

BUILDING SECTION INDICATION SHOWN THUS:

CUT IS SHOWN ON SHEET S5.01, DETAIL 2

ELEVATION INDICATION SHOWN THUS:

ELEVATION IS SHOWN ON SHEET S5.01, DETAIL 2

* (ADDITIONAL INDICATORS MAY BE USED TO SHOW LOCATION OF DETAIL CUTS)
** (SHEET NUMBER MAY BE REPLACED BY A HYPHEN (-) WHEN THE REFERENCED DETAIL APPEARS ON THE SAME SHEET AS THE CALL-OUT)

DETAIL TITLE SHOWN THUS:

INDICATES THE TITLE, SCALE, AND DETAIL NUMBER ON SHEET

STRUCTURAL SUBMITTALS

010000-0006

1. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.

2. REQUIRED STRUCTURAL SUBMITTALS FOR THIS PROJECT:

GENERAL
- QUALIFICATION DATA FOR APPROVED INSTALLERS AND FABRICATORS
- CERTIFICATES OF CONFORMANCE FOR PREFABRICATED MEMBERS
- SEISMIC JOINT AND EXPANSION JOINT COVER PRODUCT DATA

CONCRETE REINFORCEMENT
- MANUFACTURER'S PRODUCT DATA, SPECIFICATIONS AND INSTALLATION PROCEDURES FOR PROPRIETARY MATERIALS AND REINFORCEMENT
- STEEL PRODUCER'S CERTIFICATES OF MILL ANALYSIS, TENSILE AND BEND TESTS
- SHOP DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT

CAST-IN-PLACE CONCRETE
- DESIGN MIX FOR EACH CONCRETE MIX
- MATERIAL TEST REPORTS
- MATERIAL CERTIFICATES FOR CEMENT, AGGREGATES AND ADMIXTURES
- SHOP DRAWINGS FOR PROPOSED LOCATIONS OF ADDITIONAL CONSTRUCTION OR CONTROL JOINTS NOT SHOWN ON THE STRUCTURAL PLANS
- MINUTES FROM PREINSTALLATION CONFERENCE

UNIT MASONRY
- DESIGN MIX FOR GROUT
- MATERIAL TEST REPORTS

STRUCTURAL STEEL
- MANUFACTURER'S MILL CERTIFICATES
- MILL TEST REPORTS
- SHOP DRAWINGS FOR FABRICATION AND ASSEMBLY OF MEMBERS
- ERECTION PLAN SEQUENCE AND PROCEDURES
- WELDING PROCEDURE SPECIFICATIONS (WPS)
- CERTIFICATES FOR ALL WELDERS VERIFYING CURRENT AWS QUALIFICATIONS
- TEST REPORTS FOR SHOP AND FIELD WELDED AND BOLTED CONNECTIONS

STEEL DECK
- SHOP DRAWINGS INDICATING TYPE, LAYOUT, DETAILS, AND OPENINGS LARGER THAN 1'-0"

STRUCTURAL TESTS AND SPECIAL INSPECTIONS

010000-0003-0004

1. THE OWNER SHALL EMPLOY ONE OR MORE DSA APPROVED SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF DSA, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
2. SEE DSA FORM DSA 103 FOR ALL REQUIRED STRUCTURAL TESTS AND SPECIAL INSPECTIONS.
3. ALL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT SPECIAL INSPECTORS. JOB SITE VISITS BY THE STRUCTURAL ENGINEER OR DSA DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR INSPECTIONS BY A SPECIAL INSPECTOR.
4. ALL INSPECTION REPORTS SHALL BE SUBMITTED TO DSA AND SEOR, AOR, CONTRACTOR AND SCHOOL DISTRICT. THE FINAL REPORT BY THE SPECIAL INSPECTOR(S) MUST CERTIFY THAT THE ENTIRE STRUCTURAL SYSTEM COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.
5. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THESE INSPECTIONS ARE PERFORMED.
6. WORK REQUIRING SPECIAL INSPECTION SHALL BE OBSERVED BY THE SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS PERFORMED AND AT THE COMPLETION OF WORK. CONTINUOUS INSPECTION CONSISTS OF FULL-TIME INSPECTION, PERIODIC INSPECTION CONSISTS OF PART-TIME OR INTERMITTENT INSPECTION.

STRUCTURAL OBSERVATIONS

010000-0007

1. VISUAL OBSERVATIONS WILL BE PERFORMED AT THE DISCRETION OF THE OWNER, ARCHITECT, SEOR, AND AS REQUIRED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE BUILDING CODE. VISUAL OBSERVATIONS SHALL NOT BE CONSIDERED AS A SUBSTITUTE FOR THE SPECIAL INSPECTION REQUIREMENTS.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE SEOR AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION IS READY FOR OBSERVATION A MINIMUM OF FIVE BUSINESS DAYS IN ADVANCE.
3. THE FOLLOWING MAJOR PHASES OF CONSTRUCTION REQUIRE A SITE VISIT AND STRUCTURAL OBSERVATION REPORT FROM THE SEOR:
   a. FOUNDATION REBAR AND ANCHORS - PRIOR TO FIRST POUR OF CONCRETE
   b. STRUCTURAL FRAMING - AFTER ERECTION AND PRIOR TO CLOSING IN
   c. ROOF NAILING - PRIOR TO INSTALLATION OF ROOFING AND CRICKETS
   d. COMPLETION OF THE STRUCTURAL SYSTEM
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT NAILING, REINFORCEMENT, WELDS, CONNECTIONS, ETC. ARE VISIBLE FOR OBSERVATION WHEN THE SEOR IS ONSITE AND FOR ANY SCHEDULING DELAYS DUE TO NONCOMPLIANT ITEMS FOUND DURING THE OBSERVATION.
5. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVERS' KNOWLEDGE, HAVE NOT BEEN RESOLVED.

PRODUCT REPORTS

010000-0008

1. FOR ALL ITEMS IN THE CONSTRUCTION DOCUMENTS NOT NOTED WITH A SPECIFIC PRODUCT NAME OR MANUFACTURER, THE CONTRACTOR SHALL PROVIDE A PRODUCT SPECIFIED IN THE TABLE BELOW.
2. THE FOLLOWING PRODUCTS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE REFERENCED PRODUCT REPORTS, UNO.
3. A PRODUCT MAY BE SUBSTITUTED FOR AN EQUIVALENT PRODUCT PER THE SCHEDULE BELOW IF APPROVED BY THE SEOR AND THE BUILDING OFFICIAL.
4. PRODUCTS SPECIFIED BY TYPE ONLY MAY USE ANY PRODUCT FROM THE SCHEDULE BELOW.

TYPE	PRODUCT	ICC#	IAPMO#	LARR#
EXPANSION ANCHOR TO CONCRETE	HILTI KWIK BOLT TZ2	ESR-4266	-	-
	SIMPSON STRONG-BOLT 2	ESR-3037	-	25891
	DEWALT POWER STUD+ SD1	ESR-2818	-	25787
	DEWALT POWER STUD+ SD2/SD4/SD6	ESR-2502	-	25831
ADHESIVE ANCHOR TO CONCRETE	HILTI HIT-HY 200 V3	ESR-4868	-	-
	HILTI HIT-RE 500 V3	ESR-3814	-	26026
	HILTI HIT-RE 100	ESR-3829	-	26027
	HILTI HIT-HY-100	ESR-3572	-	-
	SIMPSON SET-3G	ESR-4057	-	-
	SIMPSON ET-3G	ESR-5334	-	-
	SIMPSON AT-3G	ESR-5026	-	-
	DEWALT AC200+	ESR-4027	-	-
	DEWALT PURE 110+	ESR-3298	-	26035
SCREW ANCHOR TO CONCRETE	HILTI KWIK HUS-EZ	ESR-3027	-	25897
	SIMPSON TITEN HD	ESR-2713	-	-
	SIMPSON SS TITEN SCREW	-	493	26125
	DEWALT SCREWBOLT+	ESR-3889	-	-
DROP-IN ANCHOR TO CONCRETE	DEWALT SNAKE+	ESR-2272	-	25810
UNDERCUT ANCHORS TO CONCRETE	HILTI HDA	ESR-1546	-	25939
	DEWALT MINI-UNDERCUT+	ESR-3912	-	-
CAST-IN INTERNALLY THREADED	ISAT BLUE BANGER HANGER	ESR-3599	-	26030
	DEWALT BANG-IT / WOOD KNOCKER	ESR-3657	-	-
CONCRETE SCREW	ITW BUILDEX TAPCON	ESR-2202	-	-
	DEWALT ULTRACON+	ESR-3068	-	-
	SIMPSON TITEN TURBO (TNT)	-	712	-
SHOTPIN (POWER DRIVEN FASTENER)	HILTI LOW-VELOCITY	ESR-2269	-	25675
	ITW / RAMSET POWER-DRIVEN	ESR-1799	-	22668
	SIMPSON POWER-ACTUATED PDPA	ESR-2138	-	25469
	DEWALT TRACK-IT C5	ESR-3275	-	25920
	DEWALT POWER-DRIVEN	ESR-2024	-	25304
CONCRETE REINFORCING HEADED END	HRC 555 HEADED BARS	ESR-2935	177	25815
	LENTON TERMINATOR D14	-	188	25893
	BAR SPLICE BUTTON HEAD	-	331	25996
CONCRETE REINFORCING MECHANICAL SPLICES	HRC 500 COUPLERS	ESR-2764	-	25347
	LENTON THREADED COUPLERS	-	129	24507
FORM MOUNTED REINF COUPLER	LENTON THREADED FORM SAVERS	-	129	24507
EXPANSION ANCHOR TO GROUTED MASONRY	HILTI KWIK BOLT TZ2	ESR-4561	-	-
	SIMPSON STRONG-BOLT 2	-	240	25936
	DEWALT POWER STUD+ SD1	ESR-2966	-	25864
SCREW ANCHOR TO GROUTED MASONRY	HILTI KWIK HUS-EZ	ESR-3056	-	25979
	SIMPSON TITEN HD	ESR-1056	-	25560
	SIMPSON TITEN TURBO (TNT)	-	712	-
	DEWALT SCREWBOLT+	ESR-4042	-	-
MASONRY SCREW	DEWALT ULTRACON+	ESR-3196	-	-
WELDED STUDS	NELSON STUDS	ESR-2856	-	02725
	TRU-WELD HEADED STUD ANCHORS	ESR-2577	-	24330
WELDED BAR ANCHORS	NELSON DEFORMED BAR ANCHORS	ESR-2907	-	25860
	TRU-WELD DEFORMED BAR ANCHORS	ESR-2823	-	25887
METAL DECK	VERCO DECK	-	217	23789
	ASC STEEL ROOF DECK	-	161	23783
	ASC STEEL FLOOR DECK	-	329	23783
	EPIC METALS EPICORE	ESR-2047	-	25487
	CONSOLIDATED SYSTEMS ROOF DECK	ESR-2657	-	25758
	CONSOLIDATED SYSTEMS FLOOR DECK	ESR-2839	-	-
CONCRETE SLAB STUD RAILS	DECON STUD RAILS	ESR-2494	-	25395
	NELSON PUNCHING SHEAR RESISTORS	ESR-1170	-	25499
SHEET METAL SCREWS	HILTI KWIK-PRO	ESR-2196	-	25678
	SIMPSON X METAL SCREWS	ESR-3006	326	25917
	PRIMESOURCE DARTS	ESR-1408	-	25904
	ITW BUILDEX TEKS	ESR-1976	-	25915
	DEWALT DRIL-FLEX	ESR-3332	-	25095
BLIND FASTENERS TO STEEL	LNA BOXBOLT TYPE C	ESR-3217	-	-
	HOLLO-BOLT 3 PART / 5 PART	ESR-3330	-	26037
WOOD FRAMING CLIPS	SIMPSON STRONG-TIE CLIPS	ESR-2523	-	-
	MITEK STRUCTURAL CONNECTORS	ESR-2685	-	-
WOOD SCREWS	SIMPSON STRONG DRIVE SCREWS (SDS)	ESR-2236	-	25711
	SIMPSON SD TIMBER SCREWS (SDWS/SDWH)	-	192	25906
	FASTENMASTER TIMBERLOK / HEADLOK / LEDGERLOK	ESR-1078	-	-

GENERAL

010000-0000

1. REFER TO THE TYPICAL DETAIL SHEETS FOR TYPICAL DETAILS OF CONSTRUCTION. TYPICAL DETAILS APPLY TO ALL CONSTRUCTION UNLESS SPECIFICALLY NOTED OR SHOWN OTHERWISE. WHERE CONDITIONS REQUIRE MODIFICATIONS OF A TYPICAL DETAIL, THE CONTRACTOR SHALL SUBMIT MODIFIED DETAIL FOR APPROVAL BY THE SEOR PRIOR TO FABRICATION AND INSTALLATION. DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE OF SAME NATURE AS THOSE SHOWN FOR SIMILAR CONSTRUCTION.
2. CONTRACTOR SHALL CONSIDER THE PROJECT SPECIFICATIONS AS PART OF THE CONTRACT DOCUMENTS. WHERE INFORMATION IS CONFLICTING, SPECIFIC DETAILS SHALL GOVERN OVER TYPICAL DETAILS WHICH SHALL GOVERN OVER GENERAL NOTES WHICH SHALL GOVERN OVER SPECIFICATIONS.
3. ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL DIMENSIONS. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE OMITTED OR NOT CLEAR, CONTACT THE ARCHITECT OF RECORD OR SEOR. ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. DIMENSIONS ARE TO THE FACE OF STUDS, AND TO THE CENTERLINE OF COLUMNS UNO.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE SEOR OF ANY CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND OTHER DRAWINGS, OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON DRAWINGS, PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOT ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE SCOPE THAT IS IN CONFLICT UNTIL THE CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.
5. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE CONSTRUCTION AND ALL ADJACENT PROPERTIES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR SEOR SHALL NOT INCLUDE OBSERVATION OF THE ABOVE ITEMS.
6. SUBSTITUTION REQUESTS FOR MATERIALS AND PRODUCTS SPECIFIED ON THE STRUCTURAL DRAWINGS MAY BE CONSIDERED WITH MATERIALS AND PRODUCTS HAVING EQUIVALENT OR GREATER CAPACITY AND PERFORMANCE. CURRENT EVALUATION REPORTS AND PRODUCT INFORMATION SHALL BE PROVIDED TO THE SEOR DEMONSTRATING THE REQUIRED CAPACITY AND PERFORMANCE OF THE MATERIAL TO BE SUBSTITUTED. WRITTEN APPROVAL FROM THE SEOR SHALL BE OBTAINED PRIOR TO THE SUBSTITUTION OF ANY MATERIAL OR PRODUCT SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL OSHA REQUIREMENTS AND JURISDICTIONAL REQUIREMENTS AS THEY APPLY TO THIS PROJECT. THE ARCHITECT, SEOR, AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
8. ALL WORK IS NEW (N) UNLESS INDICATED AS EXISTING (E).
9. CONSTRUCTION MATERIALS SHALL BE DISTRIBUTED WHEN PLACED ON THE STRUCTURE SUCH THAT LOADS DO NOT EXCEED DESIGN LIVE LOADS OR RESULT IN AN UNBALANCED CONDITION.
10. SHOP DRAWINGS AND SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY TO THE SEOR FOR REVIEW PRIOR TO FABRICATION (ALLOW FOR A REVIEW DURATION OF 10 BUSINESS DAYS). REFER TO THE PROJECT SPECIFICATIONS FOR MORE INFORMATION. REVIEW OF SHOP DRAWINGS AND SUBMITTALS BY THE SEOR IS FOR GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS. REPRODUCTION OF STRUCTURAL PLANS AND DETAILS FOR SHOP DRAWINGS IS PROHIBITED. SUBCONTRACTOR/FABRICATOR IS TO PROVIDE INDEPENDENTLY CREATED DRAWINGS BASED ON THE STRUCTURAL PLANS AND DETAILS. SHOP DRAWINGS THAT ARE REPRODUCTIONS OF STRUCTURAL DRAWINGS WILL NOT BE REVIEWED. THE CONTRACTOR WILL REMAIN RESPONSIBLE FOR ALL ERRORS OF DETAILING AND FABRICATION, AND FOR CORRECT FITTING OF ALL STRUCTURAL MEMBERS, INCLUDING COORDINATION WITH OTHER TRADES. SHOP DRAWINGS AND SUBMITTALS DO NOT CONSTITUTE CHANGE ORDERS. ANY PROPOSED CHANGES TO THE STRUCTURAL DOCUMENTS MUST BE SUBMITTED IN WRITING AS A REQUEST FOR SUBSTITUTION TO THE ARCHITECT AND SEOR FOR APPROVAL.
11. CORE DRILLS SHALL NOT CUT ANY REINFORCING. THE CONTRACTOR IS TO COORDINATE WORK OF ALL TRADES TO ENSURE COMPLIANCE. ALL CORE DRILLS ARE TO BE PRESENTED TO THE INSPECTOR OF RECORD (IOR) FOR VERIFICATION. THE IOR IS TO DOCUMENT CORES EXAMINED INDICATING AN ABSENCE OF REINFORCING.
12. STRUCTURAL JOINT DIMENSIONS SHOWN ON PLANS (EXPANSION, SEISMIC, SEPARATION, ETC) (WHERE OCCURS) INDICATE THE MINIMUM CLEAR DISTANCE REQUIRED. SEE PLANS, DETAILS, AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

STRUCTURAL DESIGN CRITERIA

010000-0001

1. CODES:
   ALL NEW WORK SHALL BE IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE (CBC) 2022 EDITION (TITLE 24, PART 2), INCLUDING ALL AMENDMENTS. ALL STANDARDS USED SHALL BE THE LATEST VERSION APPROVED BY THE CODE ENFORCEMENT AGENCY ON THE DATE OF THE PERMIT ISSUANCE UNLESS SPECIFICALLY NOTED OTHERWISE. THE PURPOSE OF THIS CODE IS TO, IN PART, ESTABLISH THE MINIMUM REQUIREMENTS TO SAFEGUARD THE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE THROUGH STRUCTURAL STRENGTH AND STABILITY. STRUCTURES DESIGNED IN ACCORDANCE WITH THE CODE ARE LIKELY TO HAVE A LOW PROBABILITY OF COLLAPSE BUT MAY SUFFER SERIOUS STRUCTURAL AND NON-STRUCTURAL DAMAGE IF SUBJECTED TO THE DESIGN EARTHQUAKE.

2. GRAVITY	
LIVE LOADS (REDUCIBLE, UNO)	
ROOF, UNIFORM	20 PSF
FLOOR(S)	
UNIFORM + PARTITIONS	80 PSF + 20 PSF = 100 PSF
OR, CONCENTRATED IN 2.5 FT x 2.5 FT	2000 LBS
3. RISK CATEGORY	II
4. SEISMIC	
IMPORTANCE FACTOR I_e	1.0
SITE CLASS	D
SITE SPECIFIC SEISMIC DESIGN PARAMETERS	SITE SPECIFIC GROUND MOTION HAZARD ANALYSIS SEE GEOTECHNICAL REPORT
SEISMIC DESIGN CATEGORY	D
S_{MS}	2.303
S_{M1}	1.386
S_{DS}	1.535
S_{D1}	0.924
LATERAL FORCE RESISTING SYSTEM	ORDINARY MOMENT FRAMES
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
RESPONSE MODIFICATION COEFFICIENT, R	3.5
BASE SHEAR COEFFICIENT, C_s	0.439
SEISMIC BASE SHEAR	73.33 KIPS
MAXIMUM STORY DRIFT	0.02 x STORY HEIGHT
HORIZONTAL STRUCTURAL IRREGULARITIES	NONE
VERTICAL STRUCTURAL IRREGULARITIES	NONE
LOCATION OF SEISMIC BASE	AT GRADE
5. WIND	
EXPOSURE CATEGORY	C
BASIC WIND SPEED (3 SECOND GUST)	Vult = 96 MPH Vasd = 75 MPH
INTERNAL PRESSURE COEFFICIENT, GCpi	+/-0.18
6. SPECIAL LOADS	
AT SOLAR READY ROOF AREAS AS HATCHED IN ROOF PLANS THE ALLOWABLE MAX WEIGHT OF PHOTOVOLTAIC PANELS (PV PANELS)	10 PSF

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

miyamoto.
1047 West Sixth Street, Suite A T: (833) 270-8848
Ontario, CA 91762 miyamotointernational.com
MI2228096.00_R24

CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSSER S 3525 STRUCTURAL STATE OF CALIFORNIA

GENERAL NOTES

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

sgh ARCHITECTS

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PROJECT NUMBER: 23-6102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/30/2025

DELTA	DATE	DESCRIPTION:
1	07/25/25	100% CD SET

S0.01

100% CD

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COLD-FORMED STEEL FRAMING

054000-0000

1. DESIGN, FABRICATION AND ERECTION OF COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE SPECIFICATIONS AND STANDARD OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI), AS CONTAINED IN THE "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", INCLUDING ALL APPLICABLE AMENDMENTS.
2. ALL COLD-FORMED STEEL FRAMING SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE. ALL COLD-FORMED STEEL FRAMING SHALL BE BRACED AS REQUIRED BY SECTION D3 OF THE AISI SPECIFICATION.
3. COLD-FORMED STEEL GRADES:

18GA (43 MILS) OR THINNER	ASTM A1003 GRADE 33 (FY = 33 KSI)
16GA (54 MILS) AND THICKER	ASTM A1003 GRADE 50 (FY = 50 KSI)

4. THE THICKNESS OF TRACKS SHALL NOT BE LESS THAN THE THICKNESS OF THE MEMBER CONNECTING TO IT, UNLESS NOTED OTHERWISE.
5. STUD ENDS SHALL ACHIEVE FULL BEARING AGAINST TRACK WEB, UNLESS NOTED OTHERWISE.
6. COLD-FORMED STEEL MEMBERS ARE TO BE ATTACHED WITH SHEET METAL SCREWS (SMS). PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN 3 EXPOSED THREADS. SCREWS ARE TO BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH SCREW MANUFACTURER'S RECOMMENDATIONS. SHEET METAL SCREWS SHALL COMPLY WITH ASTM C1513, SELF-DRILLING AND TAPPING TYPE, WITH PANCAKE FRAMER HEAD TYPE FOR #10 SMS AND HEX WASHER HEAD TYPE FOR #12 AND #14 (1/4"Ø) SMS UNLESS NOTED OTHERWISE.
7. COLD-FORMED MEMBERS SHALL BE UNPUNCHED WHERE USED FOR THE FOLLOWING: HEADERS AND SILLS OF OPENINGS WIDER THAN 3'-0", AND BUILT-UP SECTIONS. PUNCH-OUTS SHALL BE LOCATED IN THE CENTER OF THE WEB WITH A MINIMUM SPACING OF 24"OC, HAVE A MAXIMUM WIDTH OF HALF THE MEMBER DEPTH OR 2 1/2", WHICHEVER IS LESS, AND A MAXIMUM LENGTH OF 4 1/2". THE MINIMUM DISTANCE BETWEEN THE END OF THE MEMBER OR A SUPPORT AND THE NEAR EDGE OF THE PUNCH-OUT SHALL BE 10".
8. WELDING OF LIGHT GAGE STEEL SHALL BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.3.
9. COLD-FORMED MEMBER DESIGNATIONS ARE AS FOLLOWS:

600 S 250 - 54

- 600 — MATERIAL THICKNESS (E.G. 54 MILS = 0.054 IN)
- S — FLANGE WIDTH (E.G. 250 x 1/100 = 2.5 IN)
- 250 — SECTION TYPE (S = STUD, T = TRACK, U = CHANNEL, F = FURRING CHANNEL)
- 54 — MEMBER DEPTH (E.G. 600 x 1/100 = 6.00 IN)

STUD TYPE	DESIGNATION THICKNESS (MILS)	GAGE (FOR REFERENCE ONLY)
NON-STRUCTURAL	18	25
	27	22
	30	20
STRUCTURAL STUDS	33	20
	43	18
	54	16
	68	14
	97	12
	118	10

10. PROVIDE SECTIONS WITH PROPERTIES MEETING OR EXCEEDING THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA) TABULATED GROSS SECTION PROPERTIES AND A CURRENT THIRD PARTY EVALUATION REPORT. THE SUBMITTAL SHALL DEMONSTRATE THAT THE VALUES MEET/EXCEED SSMA'S TABULATED VALUES FOR THE PROJECT-SPECIFIC SECTIONS.
11. AT HARDWARE (CLIPS, HANGERS, ETC.), PROVIDE FASTENER IN ALL MANUFACTURER-PROVIDED HOLES, UNO.

POST-INSTALLED ANCHOR TESTING

1. ALL ANCHOR BOLTS OF THE EXPANSION TYPE INSTALLED IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
   a. HILTI, INC. - KWIK BOLT TZ2:
      STAINLESS STEEL WEDGE ANCHOR - ICC-ESR ESR-4266
   b. SIMPSON - STRONG BOLT 2:
      STAINLESS STEEL WEDGE ANCHOR - ICC-ESR ESR-3037

   REQUIRE INSTALLATION TORQUE NORMAL WEIGHT OR LIGHTWEIGHT CONCRETE

	DIA (IN)	TORQUE (FT-LBBS)	EMBEDMENT (IN)
KWIK BOLT TZ2 ESR-4266	3/8"	30	2"
	1/2"	40	2" ; 3 1/4"
	5/8"	60	3 1/4" ; 4"
	3/4"	125	3 3/4" ; 4 3/4"
STRONG BOLT 2 ESR-3037	1/4"	4	1 1/2"
	3/8"	30	1 1/2" ; 2 1/2"
	1/2"	65	2 1/4" ; 3 3/8"
	5/8"	80	2 3/4" ; 4 1/2"
	3/4"	150	3 3/8" ; 5"

2. ALL ANCHOR BOLTS OF THE EXPANSION TYPE INSTALLED IN GROUT-FILLED MASONRY SHALL BE ONE OF THE FOLLOWING:
   a. HILTI, INC. - KWIK BOLT TZ2:
      MASONRY ANCHORS - ICC-ESR ESR-4561
   b. SIMPSON - STRONG BOLT 2:
      MASONRY ANCHORS - IAPMO UES ER-240

   REQUIRED INSTALLATION TORQUE GROUTED CONCRETE MASONRY UNITS

	DIA (IN)	TORQUE (FT-LBBS)	EMBEDMENT (IN)
KWIK BOLT 3 ESR-1385	1/4"	4	1 1/2"
	3/8"	15	2"
	1/2"	25	2" ; 3 1/4"
	5/8"	65	3 1/8" ; 4"
	3/4"	120	3 3/4" ; 5"
STRONG BOLT 2 ER-240	1/4"	4	1 3/4"
	3/8"	20	2 5/8"
	1/2"	35	3 1/2"
	5/8"	55	4 3/8"
	3/4"	100	5 1/4"

3. ADHESIVE ANCHORS

   REQUIRED TENSION TEST

NORMAL OR LIGHTWEIGHT CONCRETE (TEST TO 80% OF STEEL YIELD STRENGTH)		
THREADED ROD ASTM A1554 GR 50		
DIA (IN)	TENSION (KIPS)	MIN EMBEDMENT (IN)
3/8"	3.87	3 1/2
1/2"	7.03	4 1/2
5/8"	13.5	6
3/4"	19.43	7
7/8"	26.46	8
1"	34.56	9

NORMAL OR LIGHTWEIGHT CONCRETE (TEST TO 80% OF STEEL YIELD STRENGTH)		
ASTM A615 OR 706 GR 60 REBAR		
DIA	TENSION (KIPS)	MIN EMBEDMENT (IN)
#3	5.28	3 1/2
#4	9.6	4 1/2
#5	14.88	6
#6	19.2	7
#7	28.8	8
#8	37.92	9

HIGH-STRENGTH BOLTS

051200-0000

1. JOINT ASSEMBLIES USING HIGH-STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "AISC (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
2. ALL HIGH-STRENGTH BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325 OR A490, OR GRADE F1852, TYPE 1, W/ THREADS INCLUDED (N).
3. NUTS SHALL CONFORM TO ASTM A563 AND WASHERS SHALL CONFORM TO ASTM F436.
4. PAINT IS PROHIBITED ON CONTACT SURFACES UNLESS NOTED OTHERWISE. CONTACT SURFACES OF BOLTED PARTS SHALL BE DESCALED AND FREE OF DIRT, OIL, BURRS, PITS, AND OTHER DEFECTS WHICH PREVENT SOLID SEATING OF PARTS.
5. ALL HIGH-STRENGTH BOLTS SHALL BE TIGHTENED TO THE AISC SNUG TIGHT CONDITION UNLESS SPECIFIED AS SLIP-CRITICAL.
6. BOLTS IN "X" CONNECTIONS SHALL HAVE THE THREADS EXCLUDED FROM THE SHEAR PLANE. BOLTS IN "N" CONNECTIONS MAY HAVE THE THREADS INCLUDED IN THE SHEAR PLANE. CONNECTION TYPES ARE INDICATED AFTER THE BOLT GRADE (A325X FOR EXAMPLE). HIGH-STRENGTH BOLTS ARE "N" BEARING CONNECTIONS, UNLESS NOTED OTHERWISE.
7. SLIP-CRITICAL BOLTS SHALL HAVE CLASS "A" FAYING SURFACES. SLIP-CRITICAL JOINT ASSEMBLIES SHALL BE FULLY PRE-TENSIONED BY TURN-OF-NUT TIGHTENING, TENSION CONTROL CALIBRATED WRENCH TIGHTENING, TWIST-OFF BOLTS CONFORMING TO ASTM F3125 GRADE F1852, OR BY DIRECT TENSION INDICATOR TIGHTENING CONFORMING TO ASTM F959.

WELDING

051200-0000

1. WELDING PROCEDURES, ELECTRODES AND WELDER QUALIFICATIONS SHALL CONFORM TO AWS AND AISC REQUIREMENTS.
2. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS, AND SHALL BE CERTIFIED FOR THE WORK THEY ARE PERFORMING.
3. PROJECT WELDING SHALL BE PERFORMED ONLY IN ACCORDANCE WITH WELDING PROCEDURE SPECIFICATIONS (WPS) SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE SEOR AND PROJECT WELDING INSPECTOR. THE WPS SHALL BE IN ACCORDANCE WITH THE APPLICABLE AWS.
4. WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED PER AWS D1.1 USING E70XX ELECTRODES UNLESS OTHERWISE NOTED.
5. ALL FULL PENETRATION WELDS SHALL BE ULTRA-SONIC TESTED PER AWS D1.1 AND D1.8 REQUIREMENTS AS APPLICABLE.
6. ALL GROOVE OR BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS, UNO. ALL EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.
7. ALL EXPOSED WELDS ON ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
8. FIELD WELDS HAVE BEEN INDICATED WHERE THEY ARE EXPECTED TO OCCUR. THE CONTRACTOR SHALL DETERMINE THE ACTUAL FIELD WELDING NECESSARY TO COMPLETE THE PROJECT AND INCLUDE ALL ASSOCIATED COSTS WITHIN THE BASE BID.
9. ALL SPECIFIED FILLET WELD SIZES ARE MINIMUM SIZES. INCREASE WELDS TO AISC MINIMUM SIZES BASED ON THICKNESSES OF MATERIALS JOINED.

STEEL LATERAL FORCE RESISTING SYSTEM

051200-0001

1. HIGH-STRENGTH SLIP-CRITICAL BOLTS SHALL BE USED FOR ALL "LATERAL FORCE RESISTING SYSTEM" (LFRS) MEMBER STEEL TO STEEL CONNECTIONS, UNO.
2. ALL WELDS WITHIN MEMBERS DESIGNATED AS PART OF THE LATERAL FORCE RESISTING SYSTEM (LFRS) SHALL CONFORM TO THE DETAILING, MATERIALS, WORKMANSHIP, TESTING, AND INSPECTION REQUIREMENTS OF AWS D1.8 AND AISC 341, AND SHALL USE A FILLER METAL WITH A CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LB AT 0°F.
3. WHERE WELDS ARE DESIGNATED AS DEMAND CRITICAL, THEY SHALL BE MADE WITH A FILLER METAL CAPABLE OF PROVIDING A MINIMUM CVN TOUGHNESS OF 20 FT-LB AT -20°F AND 40 FT-LB AT 70°F. SEE AWS D1.8 FOR CVN TEST CRITERIA. "DC" INDICATES A DEMAND CRITICAL WELD.
4. WELDERS PERFORMING WELDING WITHIN THE "LFRS" SHALL BE QUALIFIED IN ACCORDANCE WITH AWS D1.8 CHAPTER 5.

METAL DECK

053000-0000

1. SEE TYPICAL DETAILS FOR REINFORCING OF DECK AROUND OPENINGS. CONTRACTOR SHALL COORDINATE SIZE AND LOCATIONS OF OPENINGS WITH THE VARIOUS TRADES. NO LOADS SHALL BE HUNG FROM DECK WITHOUT APPROVAL OF SEOR.
2. FLOOR AND ROOF DECK IS DESIGNED FOR UNSHORED CONSTRUCTION, UNO. MAINTAIN 3 SPAN CONDITION WHEREVER POSSIBLE (2 SPAN MIN) EXCEPT AT STAIR LANDING AND WHERE NOTED OTHERWISE ON PLANS.
3. PROVIDE 2" MINIMUM BEARING AT ALL SUPPORTS. END LAPS OF METAL DECK SHALL BE A MINIMUM OF 2" AND SHALL OCCUR ONLY OVER SUPPORTS. DECK SHALL BE LAID OUT SO THAT A LOW FLUTE FALLS ON EACH PARALLEL SUPPORT.
4. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW TYPE OF DECK, LAYOUT OF DECK, THE SIZE AND LOCATION OF ANY OPENINGS OF WIDTH GREATER THAN 1'-0", AND ATTACHMENT METHOD.
5. ALTERNATES TO TYPE OF DECK AND FASTENING MAY BE USED WITH THE APPROVAL OF THE SEOR. DECK PROPERTIES SHALL BE EQUAL TO OR GREATER THAN THOSE SHOWN ON THE PLANS. ANY DECK OR METHOD OF FASTENING SHALL HAVE AN EVALUATION REPORT APPROVING THE DECK FOR THE APPLICATION.
6. METAL DECK WITH CONCRETE FILL SHALL HAVE POSITIVE VENTING. DO NOT EMBED PIPES, SLEEVES, CONDUIT, ETC IN CONCRETE TOPPING, UNO.
7. WELDING OF METAL DECK SHALL BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.3.
8. PLACE CONCRETE FIRST OVER BEAMS AND GIRDERS RATHER THAN AT MIDSPAN OF DECK. DO NOT PILE CONCRETE HIGHER THAN THE FINISHED DEPTH OF THE SLAB.

CONCRETE MASONRY

042200-0000

1. CONCRETE MASONRY UNITS (CMU) SHALL DEVELOP THE FOLLOWING MINIMUM 28 DAY PRISM COMPRESSIVE STRENGTHS:

LOCATION	f'm	CONCRETE MASONRY UNITS	GROUT
ALL CMU, UNO	2000 PSI	2000 PSI	2000 PSI

2. CONCRETE BLOCK SHALL CONFORM TO ASTM C90 MEDIUM WEIGHT. USE OF LIGHTWEIGHT BLOCK REQUIRES PRIOR WRITTEN APPROVAL BY THE SEOR.
3. MORTAR SHALL BE TYPE S MORTAR.
4. REINFORCING SHALL BE BRACED TO PREVENT MOVEMENT WHILE GROUTING.
5. HORIZONTAL REINFORCING SHALL BE IN BOND BEAM UNITS AND TIED SECURELY TO VERTICAL REINFORCING.
6. DOWELS, ANCHORS, AND OTHER EMBEDDED ITEMS SHALL BE TIED SECURELY IN PLACE TO PREVENT MOVEMENT WHILE GROUTING. WET SETTING OR STABBING IS NOT ALLOWED.
7. LAYOUT OF MASONRY BLOCK UNITS SHALL BE PER ARCHITECTURAL DRAWINGS. BLOCK MODULES / MORTAR JOINTS SHOWN ON THESE DRAWINGS ARE FOR PRESENTATION PURPOSES ONLY, AND NOT INTENDED TO SUPERCEDE ARCHITECTURAL DESIGN REQUIREMENTS. BLOCK SHALL BE PLACED IN RUNNING BOND AND SHALL BE 8x8x16 NOMINAL UNITS, UNO. WHERE BLOCK IS REQUIRED TO BE PLACED IN STACK BOND (SEE ARCH), OPEN-ENDED UNITS SHALL BE USED.
8. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SAFETY OF LIFT HEIGHT FOR OPEN-ENDED OR FIELD MODIFIED BLOCKS.
9. TYPICAL REINFORCING, UNO:

	8" CMU	12" CMU
TYPICAL VERTICAL REINFORCING	#5 @ 16"OC, CENTERED	#5 @ 16"OC, EA FACE
TYPICAL HORIZONTAL REINFORCING	#4 @ 24"OC, CENTERED	#4 @ 24"OC, EA FACE

10. PROVIDE VERTICAL CONTROL JOINTS IN CMU WALLS AS SHOWN ON PLAN. UNLESS NOTED OTHERWISE, VERTICAL CONTROL JOINTS SHALL OCCUR AT:
    a. 25'-0"OC MAXIMUM ALONG LENGTH OF WALL
11. FILL ALL CELLS WITH GROUT. LIFTS SHALL BE 4'-0" MAX UNLESS HIGH-LIFT GROUTING IS USED. GROUT FOR EACH POUR SHALL BE STOPPED 1 1/2" BELOW TOP OF BLOCK EXCEPT AT THE FINAL COURSE. ALL GROUT SHALL BE THOROUGHLY CONSOLIDATED BY VIBRATING IMMEDIATELY AFTER PLACING. HORIZONTAL REINFORCING SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR. DSA APPROVAL IS REQUIRED FOR HIGH-LIFT GROUTING. ALL HIGH-LIFT GROUTING SHALL CONFORM TO DSA IR 21-2.

STRUCTURAL STEEL

051200-0000

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS AND STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), AS CONTAINED IN THE "AISC MANUAL OF STEEL CONSTRUCTION". ALL WORK SHALL BE IN CONFORMANCE WITH THE TESTING, INSPECTION, QUALIFICATION, AND QUALITY ASSURANCE PROVISIONS AS REQUIRED BY THE BUILDING CODE AND ANY APPLICABLE STANDARDS. THESE STANDARDS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AISC 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", AWS D1.1 "STRUCTURAL WELDING CODE - STEEL", AWS D1.8 "STRUCTURAL WELDING CODE - SEISMIC SUPPLEMENT", AND RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". CONFORMANCE TO SUPPLEMENTS TO THESE STANDARDS, IF PUBLISHED ON OR BEFORE THE DATE OF PERMIT ISSUANCE, IS ALSO REQUIRED. ALTHOUGH THESE CONTRACT DOCUMENTS INCLUDE GENERAL REFERENCES TO CODES AND STANDARDS, AND REFERENCES TO OR INCLUSIONS OF SPECIFIED PROVISIONS, OMISSIONS OF ANY APPLICABLE CODE, STANDARD, OR PROVISION DOES NOT RELIEVE THE GENERAL CONTRACTOR FROM COMPLIANCE TO THE APPLICABLE REQUIREMENTS. COORDINATION OF QUALITY CONTROL AND QUALITY ASSURANCE IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
2. STRUCTURAL STEEL MATERIALS/GRADES, UNO:

SHAPE	MATERIAL / GRADE
WIDE FLANGE & TEES	ASTM A992
PLATES, ANGLES, CHANNELS, THREADED RODS (UNO)	ASTM A36
HIGH-STRENGTH PLATE (UNO)	ASTM A572, GRADE 50
HIGH-STRENGTH PLATE 4 1/4" AND THICKER	ASTM A572, GRADE 42
SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C (Fy = 50 KSI) OR ASTM A1085
ROUND HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C (Fy = 46 KSI) OR ASTM A1085
PIPES	ASTM A53 TYPE E OR S, GRADE B (Fy = 35 KSI)
MACHINE BOLTS (MB)	ASTM A307
WELDED HEADED STUDS	ASTM A29
THREADED RODS FOR ANCHOR BOLTS	ASTM F1554, GRADE 55-S1

   a. EXCEPT AS OTHERWISE NOTED, ALL BOLTS SHALL BE HIGH-STRENGTH BOLTS.
3. ALL CONNECTIONS NOT SHOWN SHALL CONFORM TO THE "AISC MANUAL OF STEEL CONSTRUCTION" AND SHALL BE SUBMITTED ON SHOP DRAWINGS FOR REVIEW BY SEOR PRIOR TO FABRICATION.
4. ALL WELDED HEADED STUDS, THREADED STUDS, AND DEFORMED BARS SHALL BE NELSON, OR EQUIVALENT, AND WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS BY CERTIFIED WELDERS SO AS TO FULLY DEVELOP THE TENSILE CAPACITY OF THE CONNECTOR.
5. BOLTS WITH UPSET THREADS ARE NOT ALLOWED. USE THE APPROPRIATE NUT AND WASHER TYPE FOR THE SPECIFIED BOLT.
6. ALL STEEL FABRICATION SHALL BE PERFORMED BY A LICENSED FABRICATOR.
7. BEAMS NOT SPECIFIED WITH CAMBER SHALL HAVE MILL CAMBER PLACED IN UPWARD POSITION.
8. ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL PERMANENTLY EXPOSED TO THE ELEMENTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION UNLESS A WEATHERPROOF COATING IS SPECIFIED BY THE ARCHITECT, UNO. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT. GALVANIZED SURFACES SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE REPAIRED AS NECESSARY. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.
9. SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, WELDED STUDS OR OTHER ITEMS NOT SHOWN IN THESE DRAWINGS.
10. WHERE STEEL IS EMBEDDED IN CONCRETE OR MASONRY, PROVIDE HOLES AS REQUIRED FOR PASSAGE OF CONTINUOUS REINFORCING BARS WHERE INDICATED ON DRAWINGS.
11. DO NOT CUT HOLES IN STRUCTURAL STEEL WITHOUT APPROVAL OF THE SEOR.
12. PLACE NON-SHRINK OR DRYPACK GROUT UNDER ALL BASEPLATES AND ALLOW TO CURE UNTIL SPECIFIED STRENGTH IS REACHED BEFORE APPLYING LOADS.
13. WHERE AN HSS OR PIPE SECTION IS INSTALLED IN AN EXTERIOR CONDITION, PROVIDE CAP PLATE EACH END WITH SEAL WELD ALL AROUND.
14. PROVIDE 3" MIN CONCRETE COVER AT ALL SUBGRADE STEEL ELEMENTS.

STRUCTURAL CONCRETE

033100-0000

1. CONCRETE SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH ACI 318 AND ACI 301 AND PROJECT SPECIFICATIONS.
2. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS AND VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT FREE UNCONFINED FALL OF CONCRETE DOES NOT EXCEED SIX FEET. A SUFFICIENT NUMBER OF CHUTES OR TRUNKS SHALL BE USED TO ENSURE THE CONCRETE IS KEPT LEVEL AT ALL TIMES.
3. CONSTRUCTION JOINTS SHALL BE CLEANED AND ROUGHENED BY REMOVING THE ENTIRE SURFACE TO EXPOSE CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX. LOCATIONS OF CONSTRUCTION JOINTS NOT SHOWN ON THESE PLANS SHALL BE SUBMITTED FOR APPROVAL TO THE SEOR PRIOR TO PLACING ANY CONCRETE.
4. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING DESIGN CRITERIA:

LOCATION	MIN 28-DAY COMP STRENGTH	CONC TYPE	MAX AGGREGATE SIZE	MAX W/C RATIO
FOUNDATION	3000 PSI	NWC	1 1/2"	0.55
INTERIOR SLAB ON GRADE	4000 PSI	NWC	1"	0.45
ALL OTHER STRUCTURAL CONCRETE NOT NOTED ABOVE	3000 PSI	NWC	1"	0.50
GRADE BEAM	4000 PSI	NWC	1 1/2"	0.55
FILL OVER METAL DECK	3500 PSI	LWC	1"	0.45

   a. MAXIMUM AIR DRY UNIT WEIGHT OF LIGHTWEIGHT CONCRETE SHALL NOT EXCEED 115 PCF, UNLESS APPROVED BY SEOR.
   b. WHEN THE USE OF PLASTICIZER (ASTM C1017, TYPE I OR II) OR WATER REDUCER (ASTM C494, TYPE F OR G) IS USED, MAXIMUM SLUMP SHALL BE 4" PRIOR TO ADMIXTURE AND 8" INCLUDING ADMIXTURE AT THE POINT OF DELIVERY. IN THE ABSENCE OF PLASTICIZER AND WATER REDUCER, SLUMP AT THE POINT OF DELIVERY SHALL NOT EXCEED 4".
   c. W/C RATIO INDICATES WATER TO CEMENTITIOUS MATERIALS RATIO.
   d. SLABS ON GRADE, TOPPING SLABS, AND ELEVATED CONCRETE FLOORS SHALL HAVE A MAXIMUM SHRINKAGE RATE OF 0.04% AT 28 DAYS PER ASTM C157 (CURING TEST SPECIMENS TO BE CONSISTENT WITH FIELD CONDITIONS), OR USING EMBEDDED VIBRATING WIRE STRAIN GAUGES. RESULTS OF TESTING SHALL BE SUBMITTED TO ENGINEER.
   e. SEE ACI 318 FOR ADDITIONAL REQUIREMENTS REGARDING MAXIMUM AGGREGATE SIZE. AGGREGATE GRADATION OF 3/8" MAXIMUM (PEA GRAVEL) SHALL NOT BE USED WHERE FINISHED CONCRETE SURFACE IS EXPOSED TO VIEW.
5. CONCRETE MIX DESIGN AND TESTING SHALL MEET THE REQUIREMENTS OF THE BUILDING CODE AND SPECIFICATIONS. ALL CONCRETE MIXES SHALL BE DESIGNED PER ACI 318 BY A RECOGNIZED TESTING LAB STAMPED AND SIGNED BY A LICENSED ENGINEER AND SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO CONCRETE PLACEMENT.
6. AGGREGATES IN NORMALWEIGHT CONCRETE SHALL CONFORM TO ASTM C33 (HARDROCK). AGGREGATES IN LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330.
7. COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND THE SEOR.
8. PORTLAND CEMENT SHALL BE TYPE II AND SHALL CONFORM TO ASTM C150, LOW ALKALI. MILL TESTS WITH CERTIFICATES OF COMPLIANCE SHALL BE SUBMITTED.
9. FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 CLASS F MAY BE USED AS A PARTIAL SUBSTITUTION FOR PORTLAND CEMENT UP TO A MAXIMUM OF 25% TOTAL CEMENTITIOUS MATERIALS BY WEIGHT IF THE MIX DESIGN IS PROPORTIONED BY FIELD EXPERIENCE OR TRIAL MIXTURES.
10. CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C94.
11. LEAN CONCRETE, WHERE SPECIFICALLY INDICATED, SHALL CONTAIN 2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
12. DRYPACK OR NONSHRINK GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI, AND CONSIST OF MASTERFLOW 713, EUCON NS GROUT, SIKA GROUT 212, OR APPROVED EQUAL. CONTRACTOR SHALL FOLLOW MANUFACTURER'S GUIDELINES TO ATTAIN THE REQUIRED STRENGTH, WHICH MAY INCLUDE THE ADDITION OF PEA GRAVEL FOR BASE PLATES LARGER THAN 6 SQUARE FEET, USE HI-FLOW GROUT OR MASTERFLOW 928.
13. DO NOT USE ANY CONCRETE OR GROUT CONTAINING CHLORIDES.
14. WATER USED IN MIX SHALL BE CLEAN AND POTABLE.
15. PRIOR TO ERECTING ANY ELEMENTS THAT LOAD THE FOUNDATION, CONCRETE MUST REACH AN UNCONFINED COMPRESSIVE STRENGTH OF 2000 PSI MINIMUM AS DETERMINED BY TESTING OR PREVIOUSLY DOCUMENTED DATA FOR THE MIX DESIGN USED UNDER SIMILAR CONDITIONS, AND MUST CURE FOR A MINIMUM OF 3 DAYS.
16. MAINTAIN CONCRETE ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY SEOR.
17. SEE ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, WALL OFFSETS, CHAMFERS, KERFS, DRIPS AND FOR EXTENT OF DEPRESSIONS, RAMPS, ETC.
18. PROVIDE SLEEVES FOR ALL PIPES THROUGH CONCRETE WALLS AND FOOTINGS SHOWN ON THESE DRAWINGS. CORING IS NOT PERMITTED WITHOUT PRIOR APPROVAL BY THE SEOR.
19. EXPOSED CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4" CHAMFER OR 1/2" RADIUS TOOLED EDGE, UNO.
20. BEAM LONGITUDINAL BARS SHALL BE ON INSIDE FACE OF COLUMN VERTICAL BARS.

POST-INSTALLED ANCHORS AND DOWELS

030000-0000

UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORS INTO HARDENED CONCRETE OR MASONRY, WHICH INCLUDES TYPES SUCH AS EXPANSION, WEDGE, SLEEVE, ADHESIVE/EPOXY, SHOT-PIN, SCREW AND UNDERCUT.

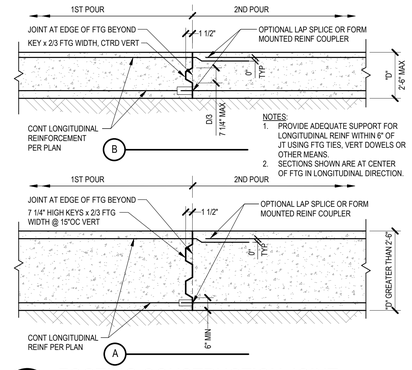
1. INSTALL PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) EXCEPT AS OTHERWISE STATED IN THE SPECIFIED PRODUCT REPORTS. USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT USE CORE DRILL BITS FOR ANCHOR HOLES WITHOUT PRIOR SEOR APPROVAL. COPIES OF INSTALLATION INSTRUCTIONS SHALL BE MAINTAINED ON SITE.
2. CLEAN OUT ANCHOR HOLES AND SET ANCHORS PER THE PRODUCT'S THIRD PARTY EVALUATION REPORT FOR THE APPROPRIATE CONDITIONS. INSTALL UNDER SUPERVISION OF THE SPECIAL INSPECTOR WHERE REQUIRED.
3. PROVIDE CARBON STEEL ANCHORS AT DRY INTERIOR LOCATIONS AND STAINLESS STEEL TYPE 304 OR 316 AT EXTERIOR LOCATIONS AND DAMP INTERIOR LOCATIONS.
4. REINFORCING BARS TO RECEIVE CONCRETE COVER MAY BE UNCOATED.
5. ANCHORS SHALL BE CLEAN AND FREE OF DEBONDING SUBSTANCES.
6. EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "hef" AS DEFINED IN THE PRODUCT REPORT. REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER.
7. EXISTING REINFORCING SHALL BE AVOIDED WHERE DRILLING FOR POST-INSTALLED ANCHORS OR CONCRETE DOWELS.
8. MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING CONDUIT AND POST-TENSIONING (WHERE OCCURS) PRIOR TO DRILLING, CORING, OR SHOOTING PINS INTO EXISTING CONCRETE OR MASONRY. USE NONDESTRUCTIVE TESTING TO LOCATE SUCH ITEMS.
9. WHERE THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE ACHIEVED, NOTIFY THE SEOR AND IOR.
10. FILL ABANDONED HOLES WITH NON-SHRINK GROUT OR EPOXY. CLEAR DISTANCE BETWEEN NEW HOLES AND ABANDONED HOLES SHALL BE 2" OR TWO ANCHOR DIAMETERS, WHICHEVER IS GREATER, UNLESS OTHERWISE SPECIFIED BY SEOR. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.
11. INSTALL IN DRY CONCRETE OR MASONRY HAVING A MINIMUM AGE OF 21 DAYS.
12. RE-USE OF SCREW ANCHORS AND SCREW ANCHOR HOLES IS NOT PERMITTED.
13. AN ACI-CRSI CERTIFIED ADHESIVE ANCHOR INSTALLER IS REQUIRED FOR THE INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL AND OVERHEAD CONDITIONS.

FOUNDATIONS AND SLABS ON GRADE

033100-0001

1. GEOTECHNICAL REPORT INFORMATION AND DESIGN CRITERIA:

GEOTECHNICAL REPORT	
A



17 FOOTING CONSTRUCTION JOINT

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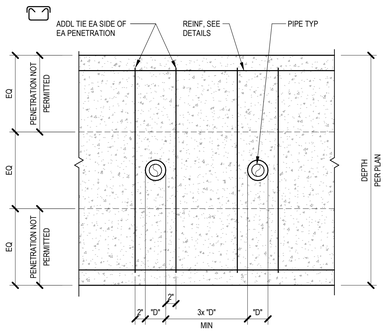

9 PIPING & CONDUIT THRU GRADE BEAM

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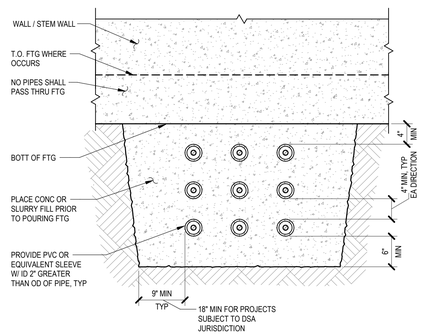

5 PIPE/CONDUIT BUNDLE BELOW FOOTING

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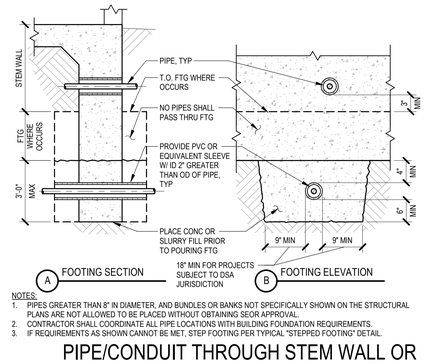

NOTES:
1. PIPES GREATER THAN 8" IN DIAMETER, AND BUNDLES OR BANKS NOT SPECIFICALLY SHOWN ON THE STRUCTURAL PLANS ARE NOT ALLOWED TO BE PLACED WITHOUT OBTAINING SEOR APPROVAL.
2. CONTRACTOR SHALL COORDINATE ALL PIPE LOCATIONS WITH BUILDING FOUNDATION REQUIREMENTS.
3. IF REQUIREMENTS AS SHOWN CANNOT BE MET, STEP FOOTING PER TYPICAL "STEPPED FOOTING" DETAIL.

1 PIPE/CONDUIT THROUGH STEM WALL OR BELOW FOOTING

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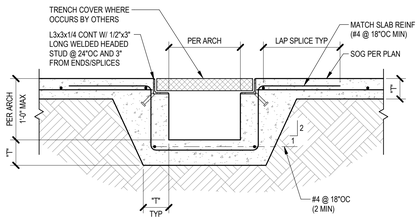
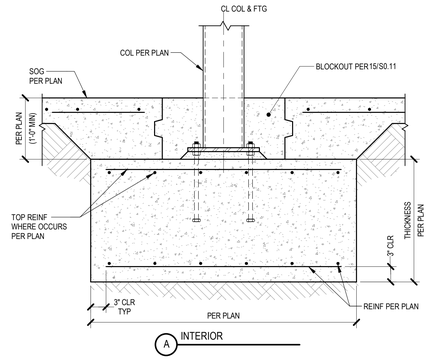
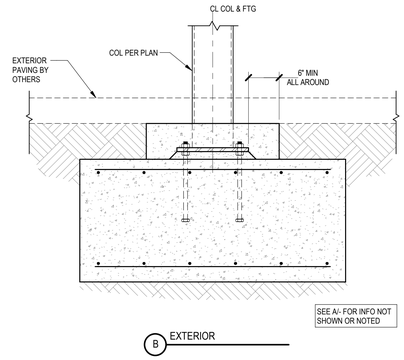


18 TRENCH DRAIN

NTS 033100_09-0100

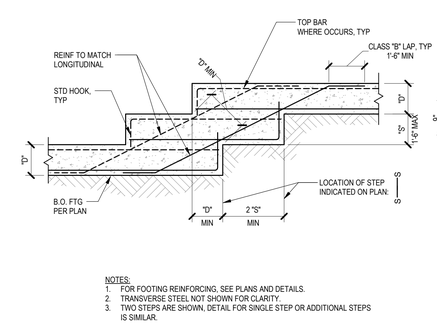




SEE A/- FOR INFO NOT SHOWN OR NOTED

14 STEEL COLUMN TO PAD FOOTING

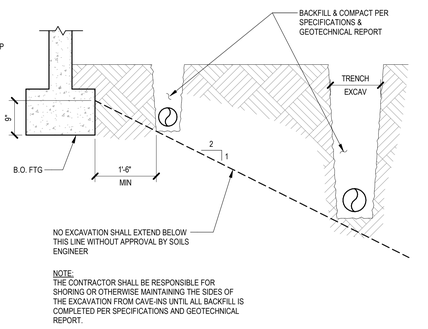
NTS 033100_01-0103



NOTES:
1. FOR FOOTING REINFORCING, SEE PLANS AND DETAILS.
2. TRANSVERSE STEEL NOT SHOWN FOR CLARITY.
3. TWO STEPS ARE SHOWN, DETAIL FOR SINGLE STEP OR ADDITIONAL STEPS IS SIMILAR.

6 STEPPED FOOTING

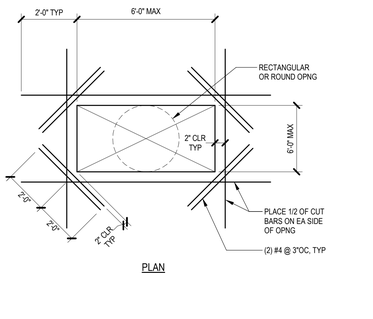
NTS 033100_01-0100



NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING OR OTHERWISE MAINTAINING THE SIDES OF THE EXCAVATION FROM CAVE-INS UNTIL ALL BACKFILL IS COMPLETED PER SPECIFICATIONS AND GEOTECHNICAL REPORT.

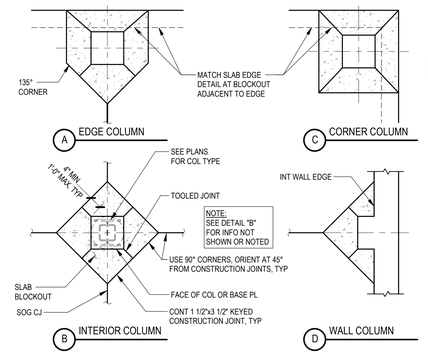
2 EXCAVATION PARALLEL TO FOOTINGS

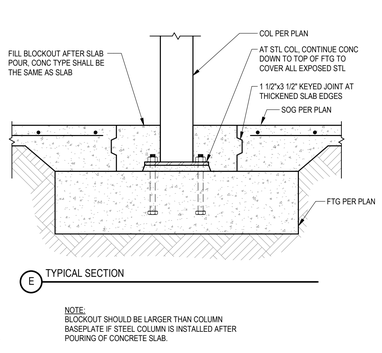
NTS 033100_00-0102 (DSA)



19 OPENING IN SLAB ON GRADE

NTS 033100_03-0103

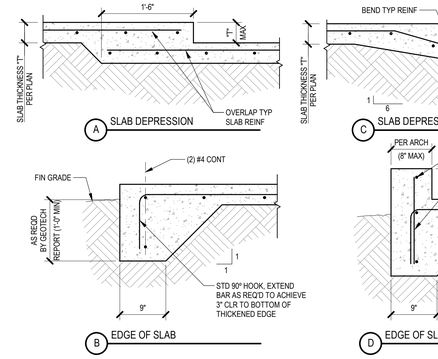




NOTE:
BLOCKOUT SHOULD BE LARGER THAN COLUMN BASEPLATE IF STEEL COLUMN IS INSTALLED AFTER POURING OF CONCRETE SLAB.

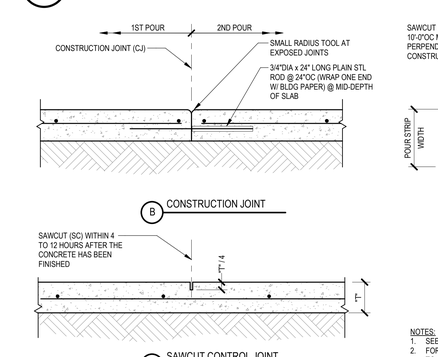
15 SLAB BLOCKOUT AT COLUMNS

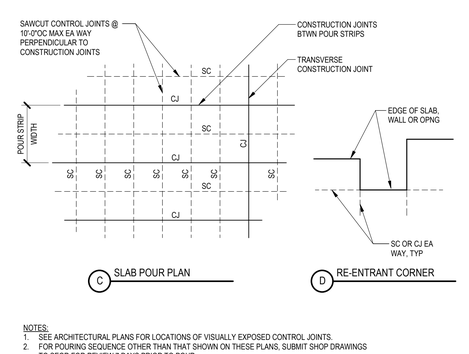
NTS 033100_03-0101



7 SLAB ON GRADE DETAILS

NTS 033100_03-0100





NOTES:
1. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF VISUALLY EXPOSED CONTROL JOINTS.
2. FOR POURING SEQUENCE OTHER THAN THAT SHOWN ON THESE PLANS, SUBMIT SHOP DRAWINGS TO SEOR FOR REVIEW 7 DAYS PRIOR TO POUR.

8 SLAB ON GRADE CONTROL JOINTS

NTS 033100_03-0102

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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSSMEYER S 3525 STRUCTURAL STATE OF CALIFORNIA

TYPICAL FOUNDATION & SOG DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

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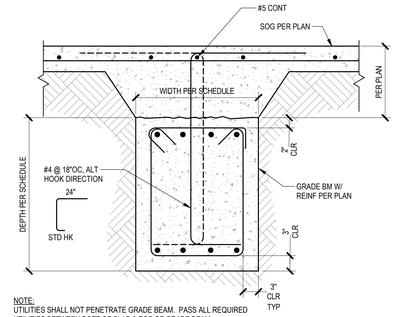
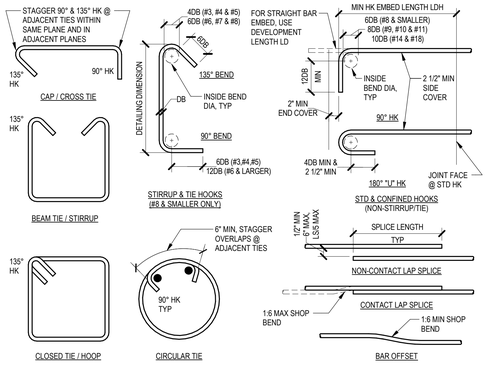


NOTE:
UTILITIES SHALL NOT PENETRATE GRADE BEAM. PASS ALL REQUIRED UTILITIES BETWEEN BOTT OF SLAB & TOP OF GRADE BEAM.
SEE GRADE BEAM SCHEDULE ON S2.01 FOR MORE INFORMATION

9 GRADE BEAM TO SLAB

NTS 033100.02-0101

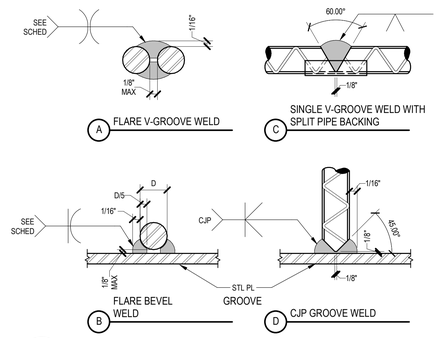


BAR SIZE	STD HOOK DEVELOPMENT LENGTH 'LDH' (IN)	CLASS B LAP SPLICE 'LS' (IN)		DEVELOPMENT LENGTH 'LD' (IN)	
		BOTT	TOP	BOTT	TOP
3000 PSI NWC					
#3 #4	6 8	22 29	28 37	17 22	22 29
#5 #6	10 12	36 43	47 56	28 33	36 43
#7 #8	14 16	63 72	81 93	48 55	63 72
#9 #10 #11	18 20 22	81 91 101	105 118 131	62 70 78	81 91 101
4000 PSI NWC					
#3 #4	6 7	19 25	24 32	15 19	19 25
#5 #6	9 10	31 37	40 48	24 29	31 37
#7 #8	12 14	54 62	70 80	42 48	54 62
#9 #10 #11	15 17 19	70 79 87	91 102 113	54 61 67	70 79 87
5000 PSI NWC					
#3 #4	6 6	17 22	22 29	13 17	17 22
#5 #6	8 9	28 33	36 43	22 26	28 33
#7 #8	11 12	49 55	63 72	37 43	49 55
#9 #10 #11	14 15 17	63 70 78	81 91 101	48 54 60	63 70 78

NOTES:
1. ACCEPTABLE TO USE LENGTHS CORRESPONDING TO LOWER CONCRETE STRENGTH THAN SPECIFIED.
2. SEE BUILDING CODE AND ACI FOR ALL REQUIREMENTS NOT NOTED.
3. FOR LIGHTWEIGHT CONCRETE, MULTIPLY LDH, LS AND LD VALUES BY 1.33.
4. "TOP" BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS. ALL OTHER BARS ARE "BOTT" BARS.
5. WHERE REQUIRED LS CANNOT BE OBTAINED WITH STRAIGHT BARS, EXTEND REINFORCING AS FAR AS POSSIBLE (LDH MINIMUM) AND PROVIDE STANDARD HOOK, WHERE LDH CANNOT BE OBTAINED, CONTACT THE SEOR.
6. VALUES ARE FOR GRADE 60 (FY=60 KSI) REINFORCEMENT.
7. SPLICE LENGTHS ARE FOR CLEAR SPACING NOT LESS THAN 2DB AND CONCRETE COVER NOT LESS THAN DB.
8. FOR EPOXY-COATED AND/OR BUNDLED REINFORCEMENT, CONTACT THE SEOR.
9. WHERE BARS OF DIFFERENT SIZES ARE LAP SPLICED IN TENSION, SPLICE LENGTH SHALL BE THE LARGER OF LD OF THE LARGER BAR AND LS OF THE SMALLER BAR.
10. WHERE CLASS "A" LAP SPLICES ARE SPECIFICALLY INDICATED, USE 'LD'.

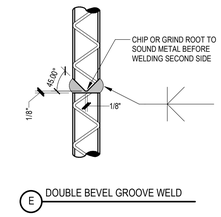
5 CONCRETE REINFORCEMENT DETAILS & DEVELOPMENT LENGTHS

NTS 032000-0100



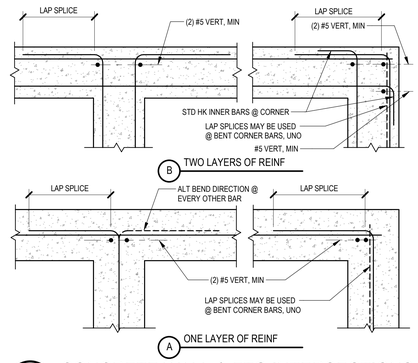
6 REINFORCING BAR WELDING

NTS 032000-0101



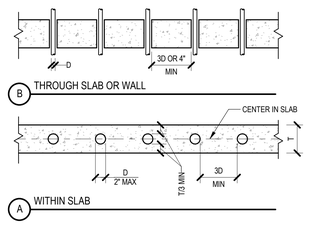
WELD SCHEDULE	
BAR SIZE	MIN WELD LENGTH
#3	3"
#4	3"
#5	3"
#6	4"
#7	5"
#8	5"
#9	6"
#10	6"

NOTES:
1. REINFORCING BARS TO BE WELDED SHALL MEET THE REQUIREMENTS OF ASTM A706.
2. WELDING SHALL BE WITH LOW HYDROGEN ELECTRODES E80XX AND SHALL CONFORM TO AWS D1.4.



3 CONCRETE WALL & FTG INTERSECTIONS

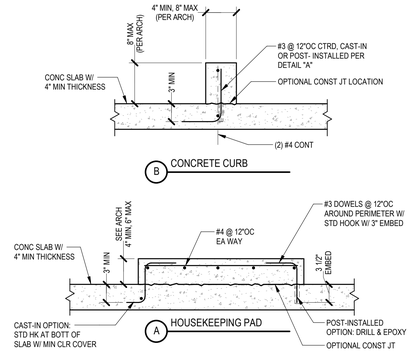
NTS 032000-0102



NOTES:
1. NO CONDUIT/PIPES SHALL BE ALLOWED IN SLABS UNLESS "T" IS A MINIMUM OF 5".
2. WHERE CLEAR DISTANCE CANNOT BE ACHIEVED, THIS AREA SHALL BE TREATED AS A SLAB OPENING.
3. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION.
4. CONDUIT SHALL BE 2'-0" MIN FROM PT TENDONS AND TENDON ANCHORAGE.
5. MAINTAIN A MINIMUM HORIZONTAL CLEARANCE FROM PARALLEL PT TENDONS OF 1'-0" AND A MINIMUM VERTICAL CLEARANCE OF 1" FROM PT TENDONS BEING CROSSED.
6. CONDUITS/PIPES SHALL BE ADEQUATELY SUPPORTED AND SECURED AGAINST DISPLACEMENT PRIOR TO CONCRETE PLACEMENT.
7. MAINTAIN ONE REBAR DIAMETER CLEAR BETWEEN CONDUIT/PIPES AND REBARS. DO NOT SET CONDUIT/PIPES DIRECTLY ON REBAR.
8. NO MORE THAN 5 PARALLEL CONDUITS MAY BE PLACED IN ANY 5'-0" WIDE STRIP OF CONCRETE.
9. DO NOT CUT/RELOCATE REBAR TO INSTALL CONDUIT OR PIPING.

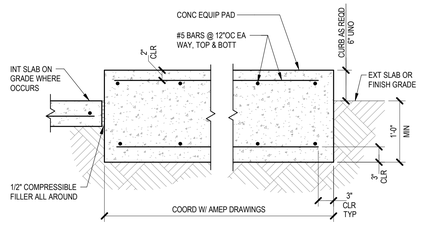
8 PIPES/CONDUITS IN/THRU SLAB & WALL

NTS 033100_00-0100



4 CONCRETE PAD & CURB

NTS 033053_01-0100



16 ISOLATED EQUIPMENT PAD

NTS 033053_01-0101

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Ontario, CA 91762 miyamotointernational.com
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REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSVENOR S 3525 STRUCTURAL STATE OF CALIFORNIA

TYPICAL CONCRETE DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

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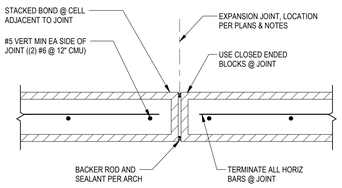
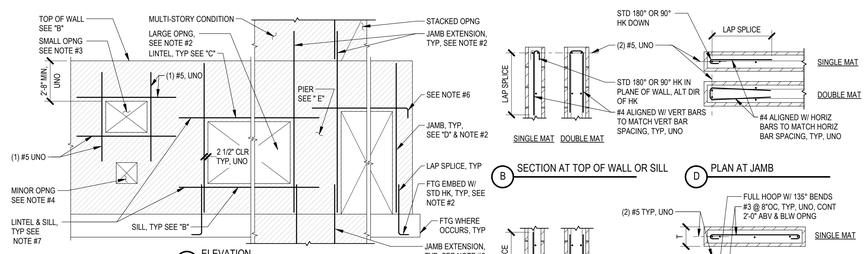


NOTE:
DO NOT SUBSTITUTE EXPANSION JOINTS FOR CONTROL JOINTS. USE ONLY WHERE SPECIFICALLY NOTED.

9 CMU WALL EXPANSION JOINT

NTS 042200-0104

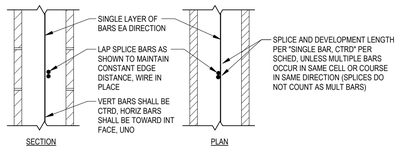


A ELEVATION
B SECTION AT TOP OF WALL OR SILL
C SECTION AT LINTEL
D PLAN AT JAMB
E PLAN AT PIER

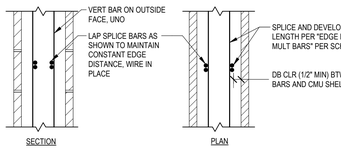
NOTES:
1. SEE PLANS FOR TYPICAL AND ADDITIONAL REINFORCEMENT.
2. FOR OPENINGS 36" OR LARGER IN WIDTH, USE FULL HEIGHT JAMB BARS. EXTEND TO TOP OF WALL AT UPPER OR SINGLE STORY, AND 48DB BELOW TOP OF FLOOR AND INTO FOOTING.
3. AT OPENINGS LESS THAN 36" IN WIDTH, EXTEND JAMB BARS 48DB PAST EDGE OF OPENING.
4. FOR MINOR OPENINGS THAT DO NOT INTERRUPT TYPICAL REINF, ARE NO LARGER THAN 16" SQ, AND ARE AT LEAST 24" FROM ADJACENT OPENINGS AND WALL ENDS, NO ADDITIONAL REINF IS REQUIRED UNO.
5. WHERE FULL EXTENSION IS NOT POSSIBLE, EXTEND BARS AS FAR AS POSSIBLE AND USE A STD HOOK.
6. EXTEND LINTEL AND SILL BARS 48DB MINIMUM PAST EDGE OF OPENING.
7. THE WEB AND SHELL MAY BE REMOVED TO FACILITATE INSTALLATION, IF REQUIRED, PROVIDED THAT GROUTING AND BLOCK INTEGRITY ARE NOT COMPROMISED.

5 REINFORCEMENT FOR CMU WALL OPENINGS

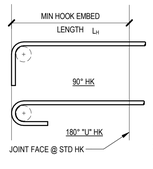
NTS 042200-0100



A REINFORCEMENT CENTERED IN CMU BLOCK



B REINFORCEMENT AT EDGE OF CMU BLOCK / MULTIPLE BARS



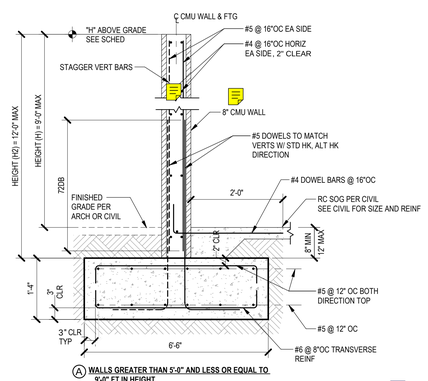
C STD HOOKS

	BAR SIZE	STD HOOK L_{dh} (IN)	LAP SPLICE (IN) UNO	DEVELOPMENT LENGTH L_D (IN) UNO	
			72DB (IN)	EDGE BAR/ MULT BARS	SINGLE BAR, CTRD
ALL CMU	#3	11	27	16	15
	#4	14	36	25	20
	#5	17	45	39	25
	#6	30	54	54	39
	#7	39	63	63	50
	#8	59	72	72	72
	#9	66	81	81	81

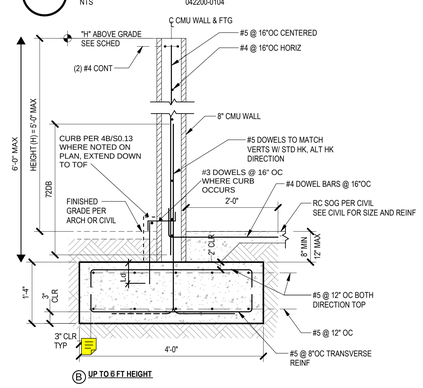
NOTES:
1. VALUES ARE FOR GRADE 60 REINF DEVELOPED IN CMU (f'm = 2000 PSI).
2. VALUES MAY NOT BE USED FOR DEVELOPMENT INTO CONCRETE.

6 CMU REINFORCEMENT DETAILS & DEVELOPMENT LENGTHS

NTS 042200-0101



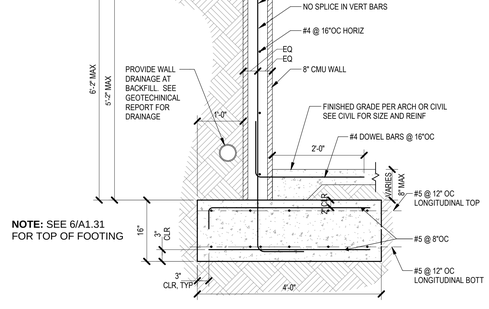
A WALLS GREATER THAN 5'-0" AND LESS OR EQUAL TO 9'-0" FT IN HEIGHT



B UP TO 8 FT HEIGHT

10 CMU SCREEN WALL

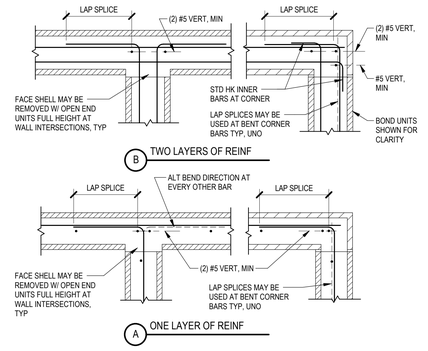
3/4" = 1'-0"



NOTE: SEE 6/A1.31 FOR TOP OF FOOTING

11 TRASH ENCLOSURE RETAINING WALL

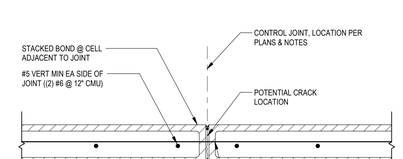
3/4" = 1'-0"



B TWO LAYERS OF REINF
A ONE LAYER OF REINF

3 CMU WALL INTERSECTIONS

NTS 042200-0107

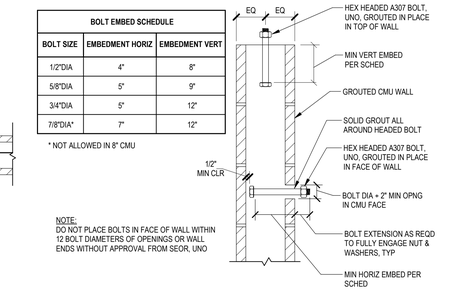


8 CMU WALL CONTROL JOINT

NTS 042200-0103

BOLT EMBED SCHEDULE		
BOLT SIZE	EMBEDMENT HORIZ	EMBEDMENT VERT
1/2"DIA	4"	8"
5/8"DIA	5"	9"
3/4"DIA	5"	12"
7/8"DIA*	7"	12"

* NOT ALLOWED IN 8" CMU



NOTE:
DO NOT PLACE BOLTS IN FACE OF WALL WITHIN 12 BOLT DIAMETERS OF OPENINGS OR WALL ENDS WITHOUT APPROVAL FROM SEOR, UNO

4 HEADED BOLT IN CMU WALL

NTS 042200-0105

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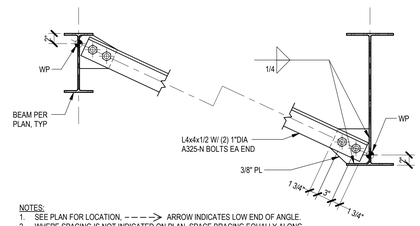
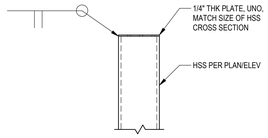
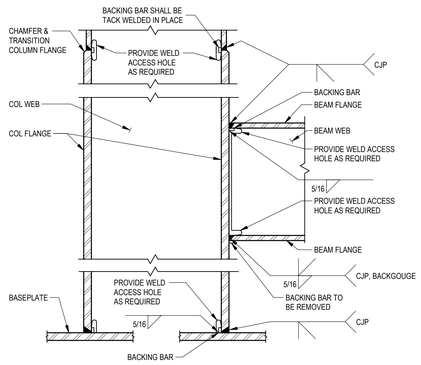


NOTES:
1. SEE PLAN FOR LOCATION. – – – –> ARROW INDICATES LOW END OF ANGLE.
2. WHERE SPACING IS NOT INDICATED ON PLAN, SPACE BRACING EQUALLY ALONG BEAM SPAN.

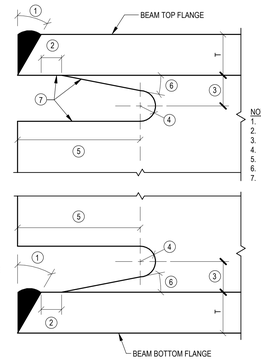
13 BOTTOM FLANGE KICKER
NTS 051200_02-0105



9 HSS CAP PLATE
NTS 051200_00-0105

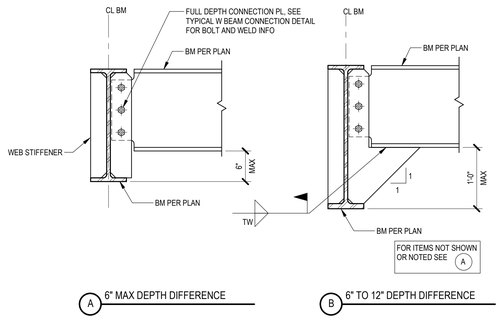


5 BACKING BAR WELDING
NTS 051200_00-0100



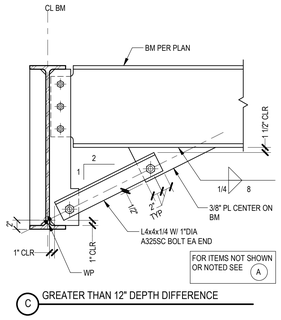
NOTES:
1. BEVEL AS REQD BY AWS D1.1
2. LARGER OF T OR 1/2" (+ 1/2T, - 1/4T)
3. 3/4T TO T, 3/4" MIN (+/- 1/4")
4. 3/8" MIN RADIUS
5. 3T (+/- 1/2")
6. AS REQD (25° MAX)
7. SURFACE QUALITY SHALL BE IN ACCORDANCE WITH AWS D1.8 SECTION 6.11.2

1 WELD ACCESS HOLE
NTS 051200_00-0101



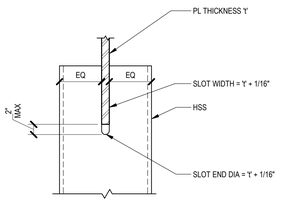
A 6" MAX DEPTH DIFFERENCE

B 6" TO 12" DEPTH DIFFERENCE

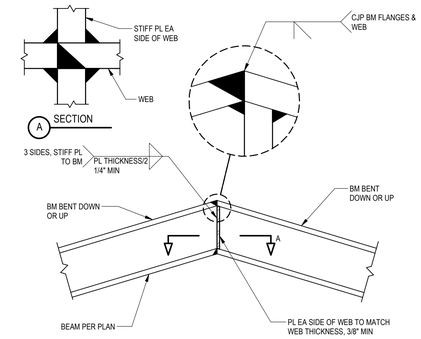


C GREATER THAN 12" DEPTH DIFFERENCE

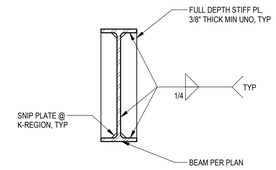
18 BOTTOM FLANGE BRACING
NTS 051200_02-0108



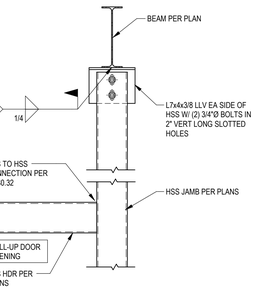
10 HSS SLOT
NTS 051200_00-0104



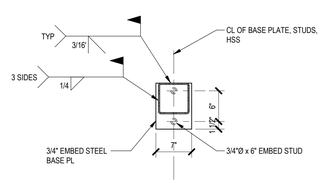
6 BENT BEAM
NTS 051200_02-0107



2 WEB STIFFENER
NTS 051200_00-0103

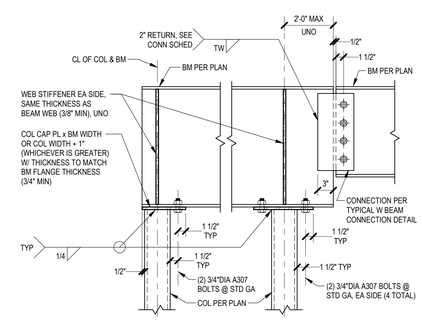


11 ROLL-UP DOOR JAMB TOP CONNECTION
1" = 1'-0"



PLAN VIEW

12 ROLL-UP DOOR JAMB BASE ANCHORAGE
1" = 1'-0"



A END CONDITION B INTERIOR CONDITION

NOTES:
1. SLOPE COLUMN CAP PLATE AS REQUIRED TO MATCH BEAM SLOPE.
2. USE STIFF PLATE AS CONNECTION PLATE WHERE REQUIRED.
3. OFFSET STIFF PLATE AS REQUIRED AT BEAM CONNECTION.

4 BEAM TO TOP OF COLUMN
NTS 051200_02-0104

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DATE: 09/02/25

miyamoto.
1047 West Sixth Street, Suite A T: (833) 270-8848
Ontario, CA 91762 miyamotointernational.com
MI2228096.00_R24

CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSVENOR S 3525 STRUCTURAL STATE OF CALIFORNIA

SEALS:

TYPICAL STRUCTURAL STEEL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

sgh ARCHITECTS

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SHEET ISSUED: 09/08/2025

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1	07/25/25	100% CD SET

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100% CD

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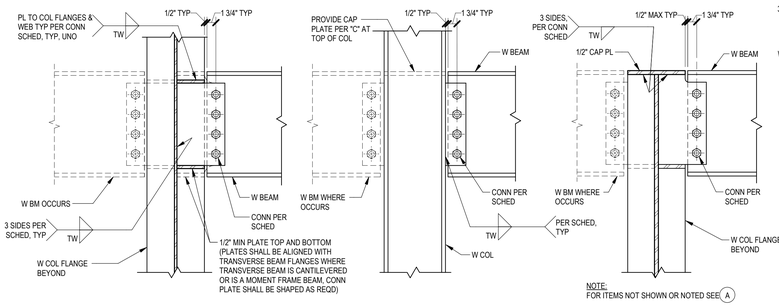


A BEAM TO COL WEB

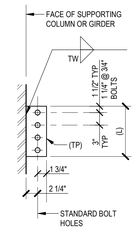
B BEAM TO COL FLANGE

C BEAM TO COL WEB AT TOP OF COL

D BEAM TO GIRDER ONE SIDE

E BEAM TO GIRDER EACH SIDE

CONNECTION SCHEDULE				
BEAM/GIRDER SIZE	QTY OF A325N BOLTS, UNO	(L) MIN PL AND WELD LENGTH	(TP) MIN PL THICKNESS	(TW) MIN WELD THICKNESS
W8	(2) 3/4"DIA	5 1/2"	3/8"	1/4"
W10	(2) 3/4"DIA	6"	3/8"	1/4"
W12	(3) 7/8"DIA	9"	3/8"	1/4"
W14	(3) 7/8"DIA	9"	3/8"	1/4"
W16	(4) 7/8"DIA	12"	3/8"	1/4"
W18	(5) 7/8"DIA	15"	3/8"	1/4"
W21	(6) 7/8"DIA	18"	3/8"	1/4"
W24	(6) 7/8"DIA	18"	1/2"	5/16"
W27	(7) 7/8"DIA	21"	1/2"	5/16"
W30	(8) 7/8"DIA	24"	1/2"	5/16"
W33	(9) 7/8"DIA	27"	1/2"	5/16"
W36	(10) 7/8"DIA	30"	1/2"	5/16"
W40	(11) 7/8"DIA	33"	1/2"	5/16"
W44	(12) 7/8"DIA	36"	1/2"	5/16"

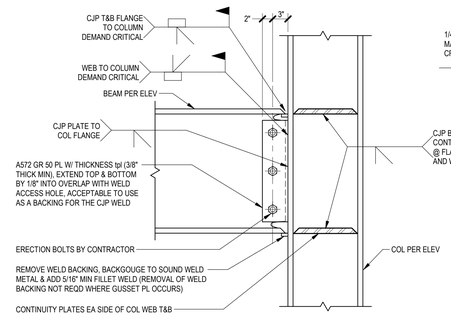


F TYPICAL SHEAR TAB UNO

NOTE:
SEE STEEL LATERAL FORCE RESISTING SYSTEM NOTES FOR BOLT TYPE AT LFRS MEMBER CONNECTIONS, WHERE OCCURS.

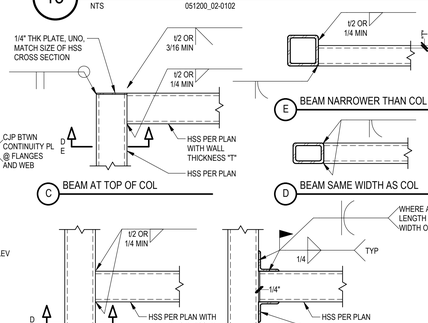
13 W BEAM TO W COL & GIRDER CONNECTIONS

NTS 051200_02-0102



TYPICAL GIRDER TO COLUMN FLANGE (MOMENT CONNECTION) (▶———)

18 1" = 1'-0"

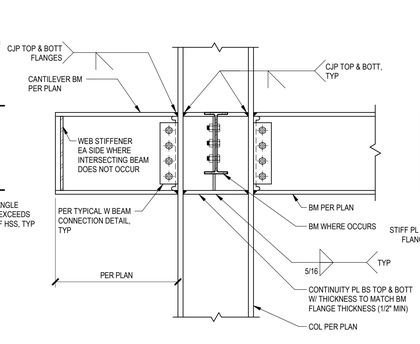


C BEAM AT TOP OF COL

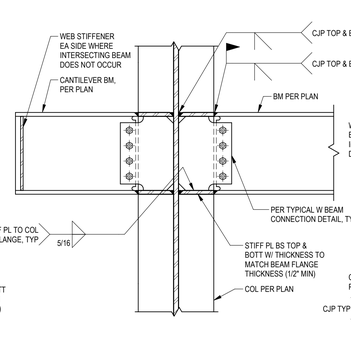
D BEAM SAME WIDTH AS COL

A BEAM LOWER THAN TOP OF COL, DIRECT WELDED OPTION

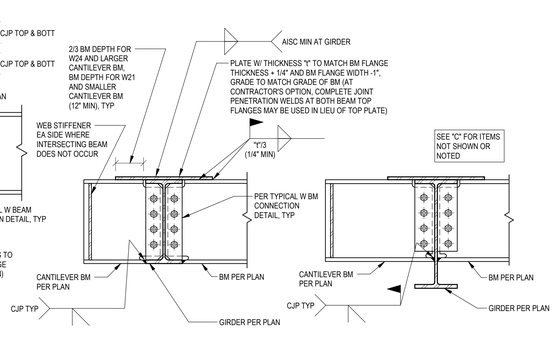
B BEAM LOWER THAN TOP OF COL, ANGLE AND GAP OPTION



A CANTILEVER BEAM TO COLUMN FLANGE



B CANTILEVER BEAM TO COLUMN WEB

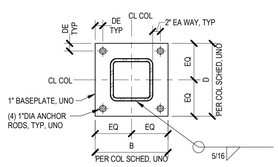


C CANTILEVER BEAM TO EQUAL DEPTH GIRDER

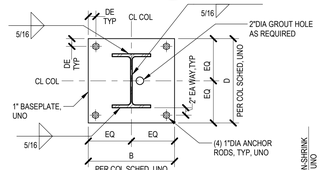
D CANTILEVER BEAM TO UNEQUAL DEPTH GIRDER

14 HSS TO HSS CONNECTIONS

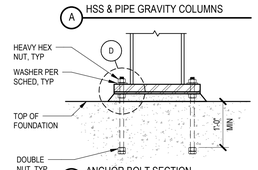
NTS 051200_01-0108



A HSS & PIPE GRAVITY COLUMNS

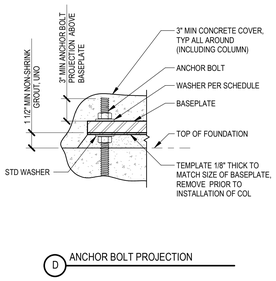


B W GRAVITY COLUMNS



C ANCHOR BOLT SECTION

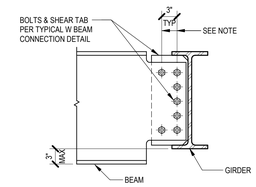
HOLE, EDGE DISTANCE & WASHER SCHEDULE				
BOLT DIAMETER	DE	HOLE DIAMETER	MIN WASHER SIZE	MIN WASHER THICKNESS
3/4"	1 1/4"	1 5/16"	2"	1/4"
7/8"	1 7/16"	1 9/16"	2 1/2"	5/16"
1"	1 5/8"	1 7/8"	3"	3/8"
1 1/4"	2"	2 1/8"	3 1/2"	1/2"



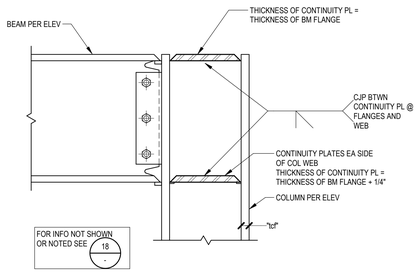
D ANCHOR BOLT PROJECTION

10 CANTILEVER CONNECTIONS

NTS 051200_02-0109



NOTE:
WHERE NUMBER OF REQUIRED BOLTS PER PLAN OR SCHEDULE IS MORE THAN NUMBER OF BOLTS THAT FIT IN ONE ROW, USE MAXIMUM BOLTS IN FIRST ROW & BALANCE IN SECOND ROW (2 BOLTS MIN IN SECOND ROW)

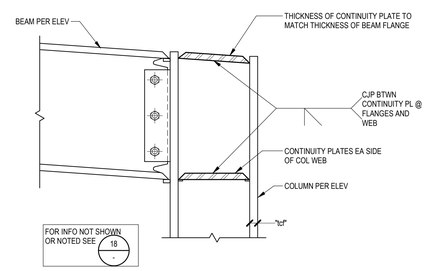


TYPICAL GIRDER TO COLUMN FLANGE (MOMENT CONNECTION) (▶———)

19 1" = 1'-0"

15 COLUMN BASEPLATE

NTS 051200_01-0101

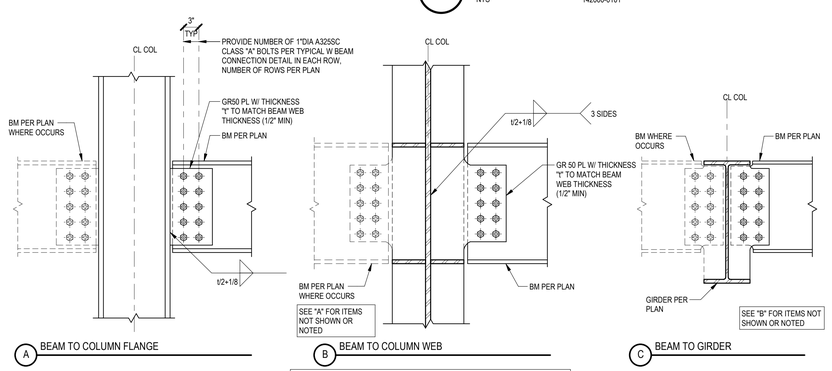


TYPICAL GIRDER TO COLUMN FLANGE (MOMENT CONNECTION) AT SLOPED CONDITION (▶———)

16 1" = 1'-0"

3 GIRDER SHALLOWER THAN BEAM

NTS 142000-0101



A BEAM TO COLUMN FLANGE

B BEAM TO COLUMN WEB

C BEAM TO GIRDER

SEE TYPICAL W BEAM CONNECTION DETAIL 13/- FOR INFO NOT SHOWN OR NOTED

8 BEAM CONNECTION WITH SLIP CRITICAL BOLTS (●●)

NTS 051200_06-0100

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Ontario, CA 91762 miyamotointernational.com
MI2228096.00_R24

CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSKREUTZ S 3525 STRUCTURAL STATE OF CALIFORNIA

TYPICAL STRUCTURAL STEEL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

sgh ARCHITECTS

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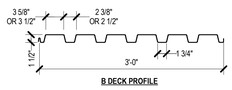
METAL DECK SCHEDULE

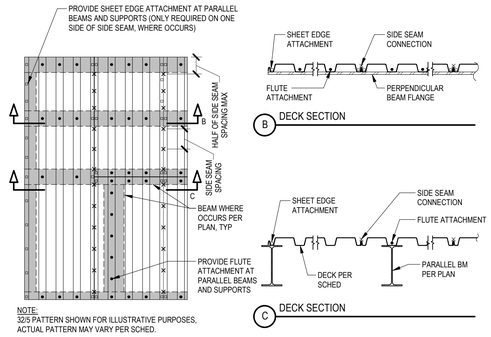
METAL DECK					CONC FILL OVER DECK			TOTAL DEPTH	CONNECTIONS		
MARK	DEPTH (IN)	TYPE	GAGE	MIN YIELD STRENGTH (KSI)	FULL DEPTH ABOVE FLUTE	CONC TYPE	REINFORCING		ATTACHMENT PATTERN	END AND INTERMEDIATE CONNECTION TYPE	SIDE SEAMS
D-1	1 1/2"	B	18	50	UNFILLED			1 1/2"	36/7	▫ 1 1/2" ARC SEAM WELD • 3/4"∅ ARC SPOT WELD	× PNEUMATIC CRIMP @ 24"OC
D-2	1 1/2"	B	18	50	2 1/2"	LWC	6x6/W2.9xW2.9 WWF	4"	36/7	▫ 1 1/2" ARC SEAM WELD • 3/4"∅ ARC SPOT WELD	× PNEUMATIC CRIMP @ 24"OC

NOTES:
1. METAL DECK SHALL CONFORM TO ASTM A653-SS WITH GALVANIZED G60 COATING COMPLYING WITH ASTM A525, UNO.
2. PLACE REINFORCEMENT 1" CLEAR FROM TOP OF CONCRETE. PLACE WELDED WIRE FABRIC AT MID-DEPTH OF CONCRETE.
3. HEADED STUDS MAY BE USED IN LIEU OF OTHER ATTACHMENTS. SEE TYPICAL WELDED HEADED STUDS DETAIL FOR SIZE AND SPACING.
4. WHERE TWO DECK PANELS ABUT, EACH PANEL SHALL BE ATTACHED AS SPECIFIED.
5. SEE THIRD PARTY EVALUATION REPORT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
6. CONNECTIONS FOR LONGITUDINAL SUPPORTS AND MEMBERS PARALLEL TO FLUTES SHALL BE @ 12"OC MAX AND SHALL MATCH "END AND INTERMEDIATE SUPPORTS" TYPE.
7. EFFECTIVE DIAMETER OF 3/4"∅ ARC SPOT WELDS SHALL BE 1/2". EFFECTIVE SIZE OF 1 1/2" ARC SEAM WELDS SHALL BE 3/8"x1".
8. PNEUMATIC CRIMPS SHALL BE EITHER DELTAGRIP BY ASC, (PER ICC ESR 1414,) OR PUNCHLOK II (VSC2) BY VERCO, (PER IAAPMO US 2018).

LEGEND:
- ▫ INDICATES SHEET EDGE ATTACHMENT
- • INDICATES FLUTE ATTACHMENT
- × INDICATES SIDE SEAM CONNECTION
- Y/Z → INDICATES ATTACHMENTS PER SHEET
- INDICATES SHEET WIDTH (INCHES)

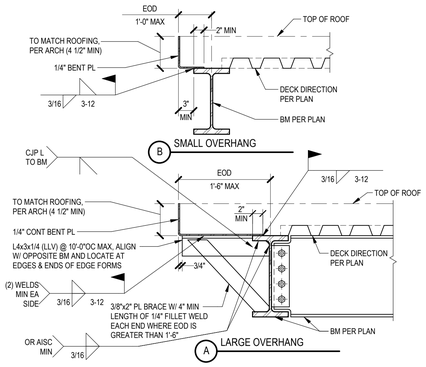


B DECK PROFILE

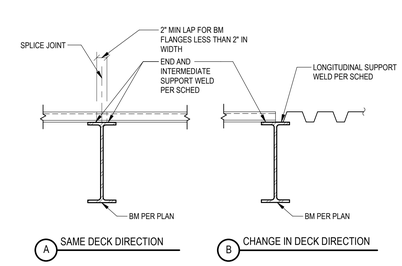


B DECK SECTION
C DECK SECTION

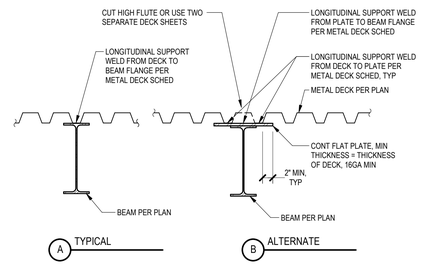
NOTE:
3205 PATTERN SHOWN FOR ILLUSTRATIVE PURPOSES, ACTUAL PATTERN MAY VARY PER SCHED.



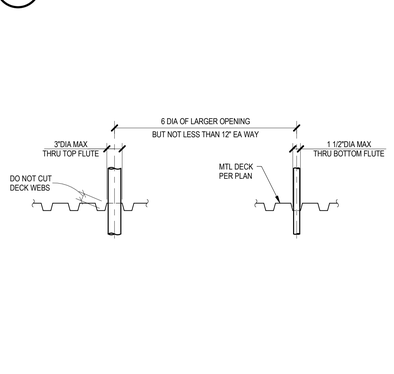
9 EDGE OF UNFILLED METAL DECK
NTS 053123-0102



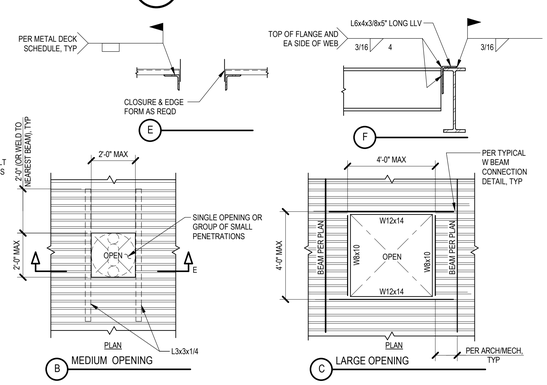
5 METAL DECK SPLICE
NTS 053000-0100



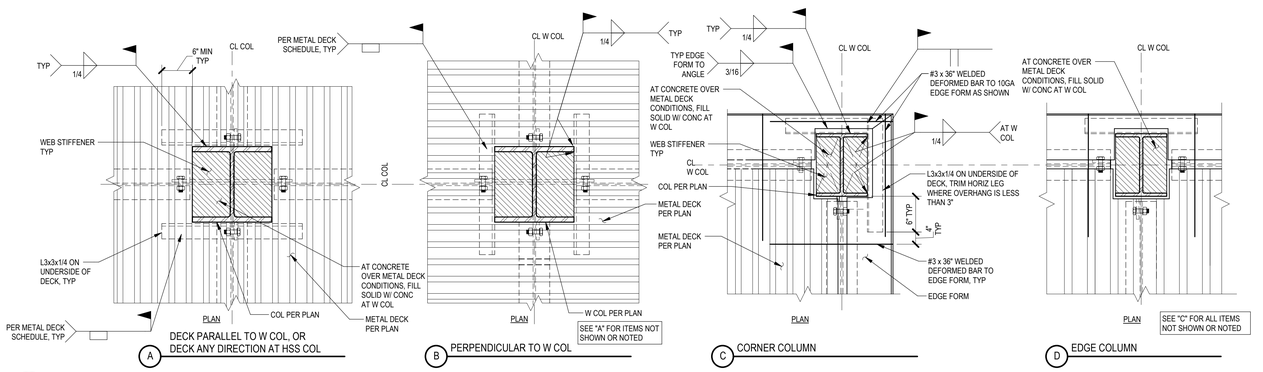
1 DECK PARALLEL TO BEAM
NTS 053123-0101



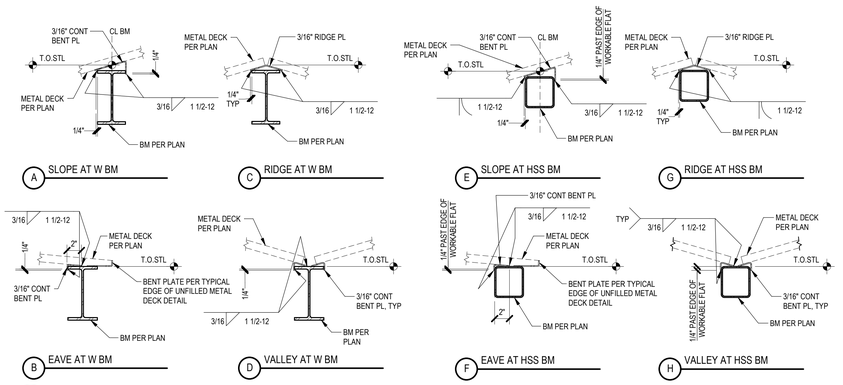
10 PENETRATIONS IN METAL DECK
NTS 053000-0101



6 OPENINGS IN METAL DECK
NTS 053123-0100



11 FRAMED OPENING AT COLUMN
NTS 053113-0105



8 SLOPED DECK TO BEAM
NTS 053123-0103

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miyamoto.
1047 West Sixth Street, Suite A T: (833) 270-8848
Ontario, CA 91762 miyamotointernational.com
MI2228096.00_R24

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSKREUTZ S 3525 STRUCTURAL STATE OF CALIFORNIA

TYPICAL METAL DECK DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

sgh ARCHITECTS

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PROJECT NUMBER: 23-6102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/08/2025

DELTA	DATE:	DESCRIPTION:
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S0.41
100% CD

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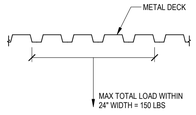
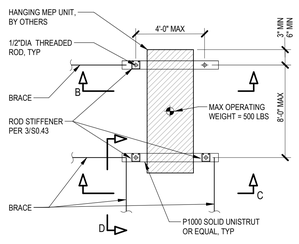


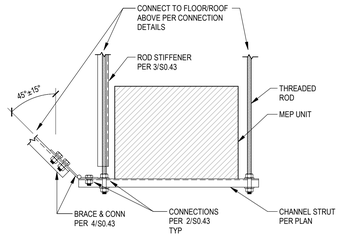
NOTES:
1. HANGER SPACING IN SINGLE FLUTE SHALL BE 18"OC MINMUM. TOTAL NUMBER OF HANGERS SHALL NOT EXCEED 4 PER FLUTE PER BAY.
2. MIN SPACING BETWEEN ANCHORS SUPPORTING GREATER THAN 20 POUNDS = 1-0".

17 ALLOWABLE LOADS AT METAL DECK

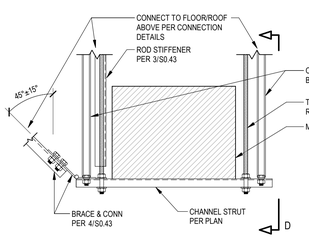
NTS



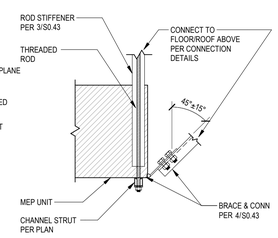
A PLAN



B SECTION



C SECTION

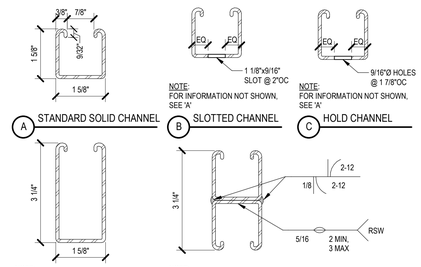


D SECTION

NOTES:
1. THIS DETAIL MAY BE USED FOR SIMILAR HANGING EQUIPMENT.
2. SEE MEP PLANS FOR ALL HANGING EQUIPMENT LOCATIONS.
3. PROVIDE POSITIVE ATTACHMENT FROM UNIT TO STRUT PER MANUFACTURER'S RECOMMENDATION.

13 HANGING MEP UNIT SUPPORT

NTS 054300-0201



A STANDARD SOLID CHANNEL

NOTE: FOR INFORMATION NOT SHOWN, SEE 'A'

B SLOTTED CHANNEL

NOTE: FOR INFORMATION NOT SHOWN, SEE 'A'

C HOLD CHANNEL

NOTE: FOR INFORMATION NOT SHOWN, SEE 'A'

D DEEP SOLID CHANNEL

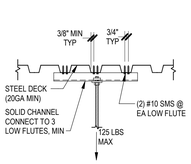
NOTE: FOR INFORMATION NOT SHOWN, SEE 'A'

E DOUBLE SOLID CHANNEL

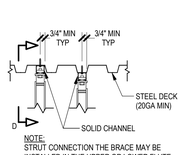
NOTE:
1. THICKNESS SHALL BE 12GA (0.105").
2. USE SLOTTED CHANNEL OR CHANNEL W/ HOLES ONLY WHERE INDICATED.
3. SLOTS AND HOLES ARE APPLICABLE FOR ALL CHANNEL TYPES.

1 STANDARD CHANNEL STRUT SECTIONS

NTS 054300-0001

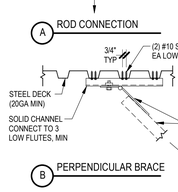


A ROD CONNECTION

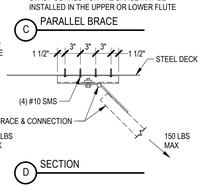


NOTE: STRUT CONNECTION THE BRACE MAY BE INSTALLED IN THE UPPER OR LOWER FLUTE

C PARALLEL BRACE



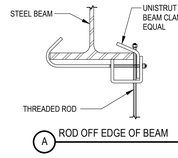
B PERPENDICULAR BRACE



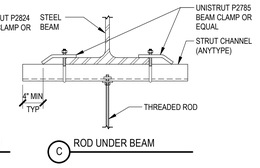
D SECTION

10 CONNECTION TO METAL DECK

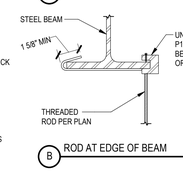
NTS 054300-0103



A ROD OFF EDGE OF BEAM



C ROD UNDER BEAM

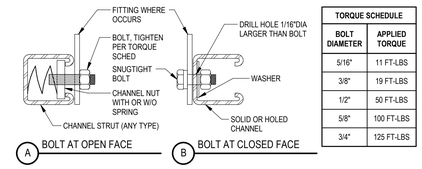


B ROD AT EDGE OF BEAM

NOTES:
1. ALSO APPLIES TO OPEN-WEB STEEL JOISTS
2. MAXIMUM LOAD = 250 LBS

6 HANGER CONNECTION TO STEEL BEAM

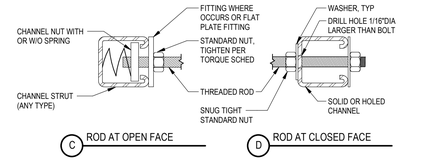
NTS 054300-0101



TORQUE SCHEDULE	
BOLT DIAMETER	APPLIED TORQUE
5/16"	11 FT-LBS
3/8"	19 FT-LBS
1/2"	50 FT-LBS
5/8"	100 FT-LBS
3/4"	125 FT-LBS

A BOLT AT OPEN FACE

B BOLT AT CLOSED FACE

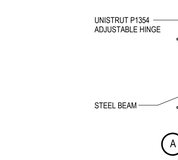


C ROD AT OPEN FACE

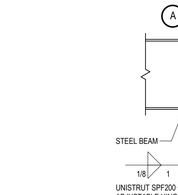
D ROD AT CLOSED FACE

2 BOLT / THREADED ROD CONNECTIONS

NTS 054300-0002



A BRACE PERPENDICULAR

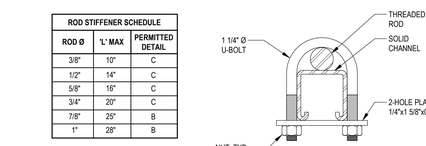


B BRACE PARALLEL

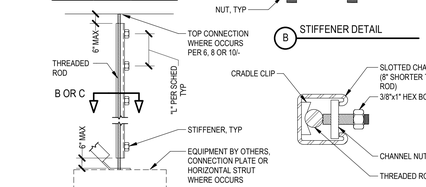
7 BRACE CONNECTION TO STEEL BEAM

NTS

ROD STIFFENER SCHEDULE		
ROD Ø	'L' MAX	PERMITTED DETAIL
3/8"	10"	C
1/2"	14"	C
5/8"	16"	C
3/4"	20"	C
7/8"	25"	B
1"	28"	B



B STIFFENER DETAIL



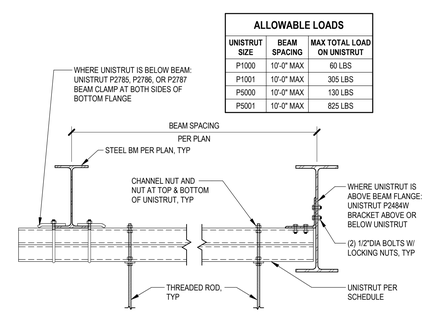
A ROD STIFFENER

C STIFFENER DETAIL

3 ROD STIFFENER

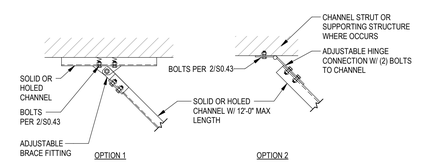
NTS 054300-0003

ALLOWABLE LOADS		
UNISTRUT SIZE	BEAM SPACING	MAX TOTAL LOAD ON UNISTRUT
P1000	10'-0" MAX	60 LBS
P1001	10'-0" MAX	305 LBS
P5000	10'-0" MAX	130 LBS
P5001	10'-0" MAX	825 LBS



8 TRAPEZE AT STEEL BEAMS

NTS



4 BRACE AND BRACE END HARDWARE

NTS 054300-0004

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Ontario, CA 91762 miyamotointernational.com
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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSKREUTZ S 3525 STRUCTURAL STATE OF CALIFORNIA

TYPICAL HANGER AND BRACING DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

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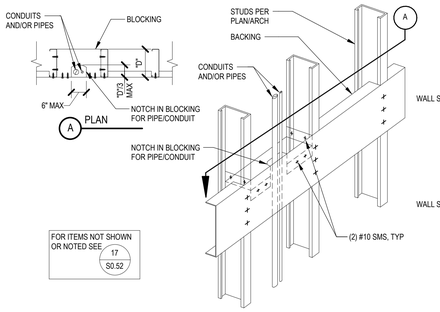
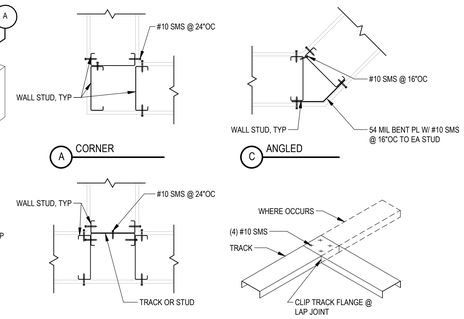


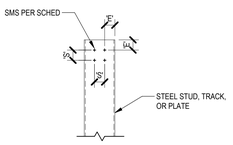
9 NOTCHED BACKING REINFORCEMENT

NTS 054000-02-0103



5 WALL INTERSECTIONS

NTS 054000-01-0106

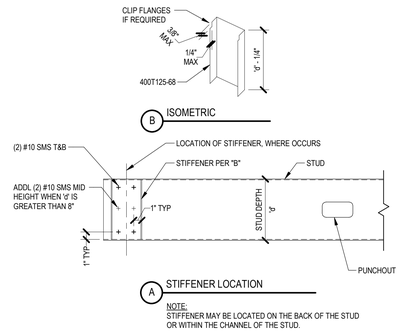


SHEET METAL SCREW SCHEDULE			
SCREW DESIGNATION	SCREW DIAMETER	MIN EDGE DISTANCE 'E'	MIN SPACING 'S'
#8	0.164"	1/4"	1/2"
#10	0.190"	3/8"	5/8"
#12	0.216"	3/8"	3/4"
#14 OR 1/4"	0.250"	1/2"	1"

NOTE:
USE THE LARGER OF THE DIMENSIONS IN THIS TABLE AND THE DIMENSIONS IN THE SCREW'S THIRD PARTY EVALUATION REPORT.

1 SCREW EDGE DISTANCE & SPACING

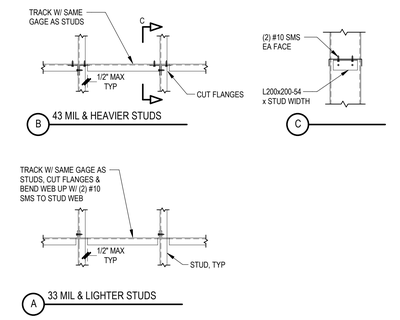
NTS 054000-02-0100



NOTE:
STIFFENER MAY BE LOCATED ON THE BACK OF THE STUD OR WITHIN THE CHANNEL OF THE STUD.

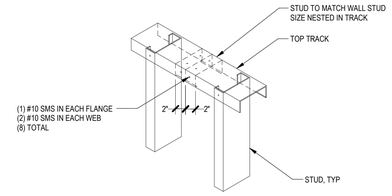
14 WEB STIFFENER

NTS 054000-02-0107



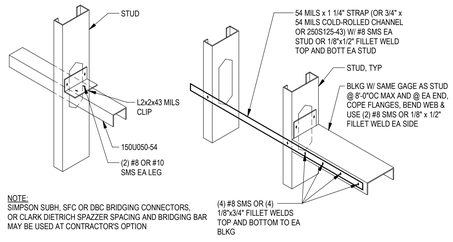
6 METAL STUD BLOCKING

NTS 054000-02-0101



2 TOP TRACK SPLICE

NTS 054000-02-0102



NOTE:
SIMPSON SUBH, SFC OR DBC BRIDGING CONNECTORS, OR CLARK DIETRICH SPAZZER SPACING AND BRIDGING BAR MAY BE USED AT CONTRACTOR'S OPTION

A BRIDGING CHANNEL OPTION

B STRAP & BLOCKING OPTION

NOTE:
PROVIDE BRIDGING ON SIDE WITH NO FINISH MATERIAL (BOTH SIDES IF NO FINISH EITHER SIDE) @ 48"OC MAX.

7 STEEL STUD FLANGE BRIDGING

NTS 054000-01-0108

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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER
JEFFREY ALAN GROSKREUTZ
S 3525
STRUCTURAL
STATE OF CALIFORNIA

TYPICAL COLD-FORMED STEEL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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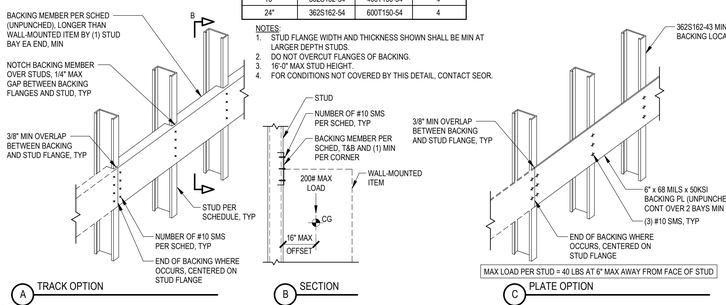
STUD SPACING	MIN STUD SIZE	BACKING MEMBER	NO OF SMS
12"	362S162-43	362T150-54	4
16"	362S162-54	400T150-54	4
24"	362S162-54	600T150-54	4

NOTES:
1. STUD FLANGE WIDTH AND THICKNESS SHOWN SHALL BE MIN AT LARGER DEPTH STUDS.
2. DO NOT OVERCUT FLANGES OF BACKING.
3. 16'-0" MAX STUD HEIGHT.
4. FOR CONDITIONS NOT COVERED BY THIS DETAIL, CONTACT SEOR.

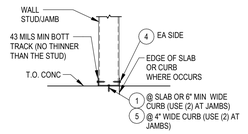


MAX LOAD PER STUD = 40 LBS AT 6" MAX AWAY FROM FACE OF STUD

A TRACK OPTION B SECTION C PLATE OPTION

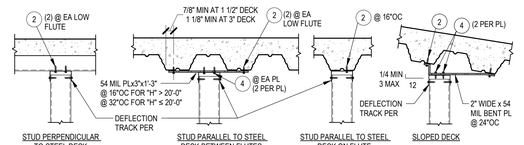
17 WALL-HUNG ITEM BACKING

NTS 054000-01-0107



D BOTTOM OF WALL TO CONC

METAL STUD FASTENER SCHEDULE	
MARK	FASTENER SIZE & SPACING
1	PDF @ 16"OC W/ 1 1/4" MIN PENETRATION
2	PDF W/ 1 1/4" MIN PENETRATION @ DECK W/ CONC OR #10 SMS @ MTL DECK
3	NOT USED
4	#10 SHEET METAL SCREW (SMS)
5	3/8"DIA x 2" EMBED SCREW ANCHOR @ 16"OC

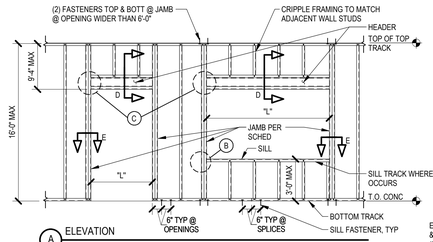


NOTE: COMPOSITE DECK SHOWN, BUT ALSO APPLICABLE TO BARE METAL DECK

B TOP OF STUD TO METAL DECK

9 INTERIOR NON-BEARING STUD WALL CONNECTIONS

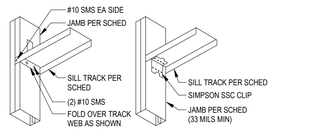
NTS 054000-01-0102



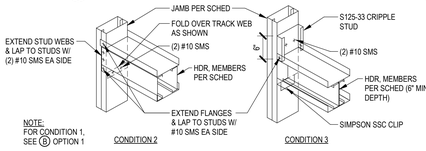
A ELEVATION

NOTE:
1. THIS DETAIL IS APPLICABLE FOR (2) LAYERS OF GYPBOARD PER ARCH (10 PSF MAX).
2. USE SIMPSON SSC4.25 CLIPS TYPICAL, UNO. USE SSC2.25 CLIPS AT 3-5/8" SIZE STUDS AND SMALLER.

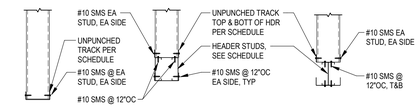
SCHEDULE							
MAX OPENING WIDTH "L"	CONDITION	MIN SILL TRACK SIZE	MIN HEADER TRACK SIZE	MIN HEADER STUD SIZE	MIN JAMB SIZE		
					SINGLE STUD	WELDED DOUBLE	BUILT-UP
4'-0"	1	T125-27	T250-68	-	S250-54	(2) S125-33	S125-33 & T125-33
8'-0"	2 OR 3	T125-27	T125-33	400S162-43	S350-54	(2) S137-43	S137-43 & T125-43
12'-0"	2 OR 3	T125-43	T125-43	600S162-43	S350-97	(2) S137-54	S137-54 & T125-54



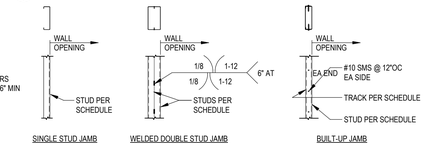
B SILL TRACK CONNECTION



C HEADER CONNECTION



D HEADER

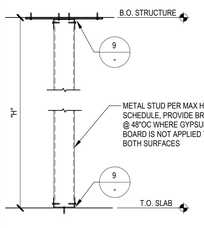


E JAMB

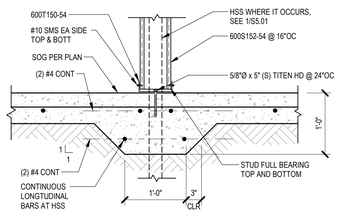
1 INTERIOR NON-BEARING STUD WALLS

NTS 054000-01-0101

MAX HEIGHT "H" STUD SCHEDULE					
12" SPACING					
STUD THK	STUD SIZE				
	250S125	362S125	400S125	600S125	800S125
68 MILS	16'-4"	21'-11"	23'-9"	33'-0"	42'-0"
54 MILS	15'-4"	20'-6"	22'-2"	30'-9"	38'-9"
43 MILS	14'-4"	19'-2"	20'-8"	28'-9"	36'-1"
33 MILS	13'-2"	17'-7"	19'-0"	26'-2"	32'-8"
30 MILS	12'-9"	17'-0"	18'-5"	25'-2"	-
27 MILS	12'-4"	16'-5"	17'-9"	-	-
18 MILS	10'-6"	14'-1"	-	-	-
16" SPACING					
STUD THK	STUD SIZE				
	250S125	362S125	400S125	600S125	800S125
68 MILS	14'-10"	19'-11"	21'-7"	30'-0"	38'-2"
54 MILS	13'-11"	18'-7"	20'-1"	27'-11"	35'-2"
43 MILS	13'-0"	17'-7"	18'-10"	26'-1"	32'-9"
33 MILS	12'-0"	16'-0"	17'-3"	23'-9"	28'-8"
30 MILS	11'-7"	15'-5"	16'-8"	22'-11"	-
27 MILS	11'-3"	14'-11"	-	-	-
18 MILS	9'-7"	-	-	-	-
24" SPACING					
STUD THK	STUD SIZE				
	250S125	362S125	400S125	600S125	800S125
68 MILS	13'-0"	17'-5"	18'-10"	26'-2"	33'-4"
54 MILS	12'-2"	16'-3"	17'-7"	24'-5"	30'-9"
43 MILS	11'-5"	15'-2"	16'-5"	22'-10"	28'-8"
33 MILS	10'-6"	13'-11"	15'-1"	20'-6"	23'-5"
30 MILS	10'-2"	13'-6"	14'-7"	19'-0"	-
27 MILS	9'-10"	-	-	-	-
18 MILS	-	-	-	-	-



NOTES:
1. THIS SCHEDULE IS APPLICABLE FOR (2) LAYERS OF GYPBOARD PER ARCH (10 PSF MAX) AND L/240 MAX DEFLECTION CRITERIA.
2. STUDS SUPPORTING EQUIPMENT OR CASEWORK WEIGHING 40 LBS OR MORE SHALL BE 362S125 MIN & 54 MILS THICK MIN, UNO.

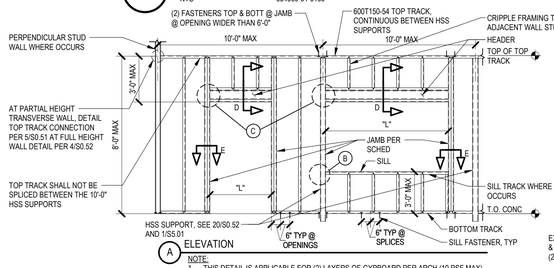


14 METAL STUD BEARING WALL FOOTING

1" = 1'-0"

10 INTERIOR NON-BEARING WALL OPENING FRAMING

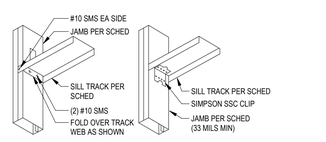
NTS 054000-01-0100



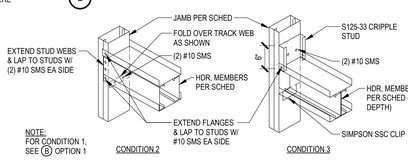
A ELEVATION

NOTE:
1. THIS DETAIL IS APPLICABLE FOR (2) LAYERS OF GYPBOARD PER ARCH (10 PSF MAX).
2. USE SIMPSON SSC4.25 CLIPS TYPICAL, UNO. USE SSC2.25 CLIPS AT 3-5/8" SIZE STUDS AND SMALLER.

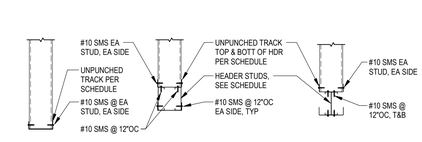
SCHEDULE							
MAX OPENING WIDTH "L"	CONDITION	MIN SILL TRACK SIZE	MIN HEADER TRACK SIZE	MIN HEADER STUD SIZE	MIN JAMB SIZE		
					SINGLE STUD	WELDED DOUBLE	BUILT-UP
4'-0"	1	T125-27	T250-68	-	S250-54	(2) S125-33	S125-33 & T125-33
8'-0"	2 OR 3	T125-27	T125-33	400S162-43	S350-54	(2) S137-43	S137-43 & T125-43
12'-0"	2 OR 3	T125-43	T125-43	600S162-43	S350-97	(2) S137-54	S137-54 & T125-54



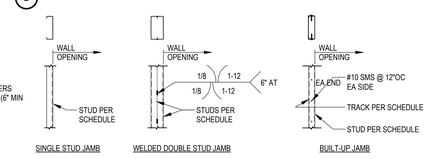
B SILL TRACK CONNECTION



C HEADER CONNECTION



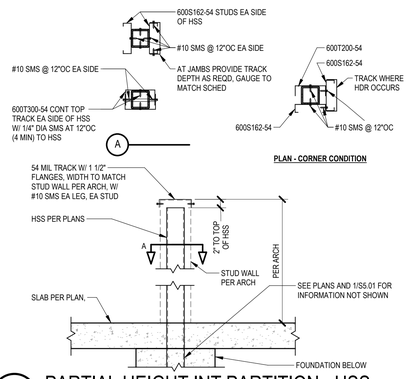
D HEADER



E JAMB

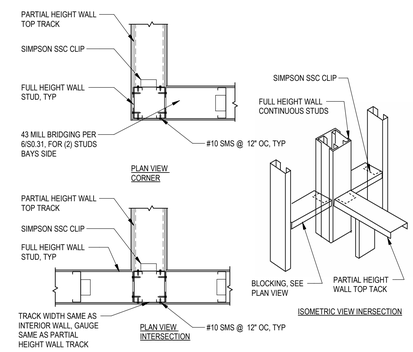
11 INTERIOR PARTIAL HEIGHT NON-BEARING WALL OPENING FRAMING

3/4" = 1'-0"



20 PARTIAL HEIGHT INT PARTITION - HSS

NTS 054000-02-0124



4 PARTIAL HEIGHT TO FULL HEIGHT WALL

1" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

miyamoto.
1047 West Sixth Street, Suite A T: (833) 270-8848
Ontario, CA 91762 miyamotointernational.com
MI2228096.00_R24

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSSER S 3525 STRUCTURAL STATE OF CALIFORNIA

CONSULTANT:

TYPICAL INTERIOR COLD-FORMED STEEL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

sgh ARCHITECTS

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025

DELTA	DATE:	DESCRIPTION:
1	07/25/25	100% CD SET

S0.52

100% CD

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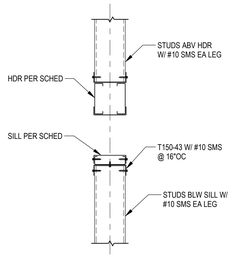
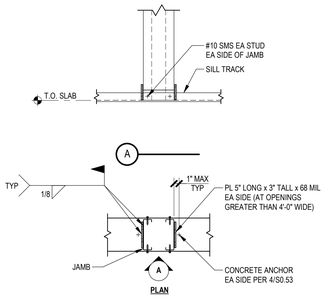


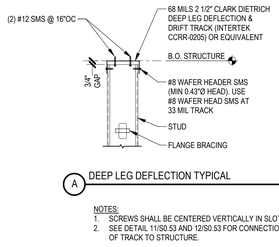
9 WALL STUD CONN TO HEADER/SILL

NTS 054000-01-0115



10 JAMB CONN AT CONCRETE FLOOR

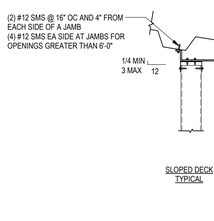
NTS 054000-01-0116



NOTES:
1. SCREWS SHALL BE CENTERED VERTICALLY IN SLOTS.
2. SEE DETAIL 11/S0.53 AND 12/S0.53 FOR CONNECTION TO TOP OF TRACK TO STRUCTURE.

6 EXTERIOR DEFLECTION & DRIFT TRACK ASSEMBLY

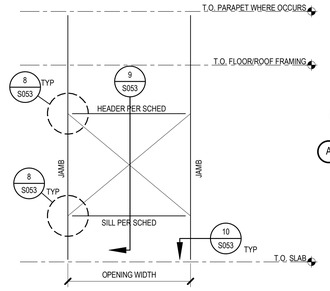
1" = 1'-0"

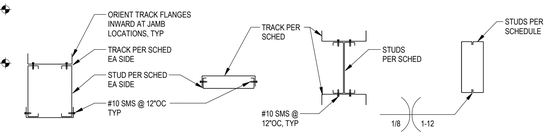


NOTES:
1. SCREWS SHALL BE CENTERED VERTICALLY IN SLOTS.
2. SEE 6/S0.53 FOR STUD TO TRACK CONNECTION TO PLATE.

11 TOP OF STUD TO DECK

1" = 1'-0"

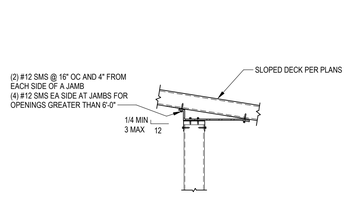




FRAMING MEMBER SCHEDULE (UNO)					
OPENING WIDTH	JAMB	HEADER	SILL	L CONNECTOR	PL CONNECTOR
4'-0" MAX	(2) 600S200-54 (SEE DTL D)	(2) 400S162-54 (H1) (2) 600T150-54 (SEE DTL A OR C)	600T150-54	SIMPSON SSC4.25 (T&B) MIN PATTERN	NONE
8'-0" MAX	(2) 600S200-54 (2) 600T150-54 (SEE DTL A)	(2) 600S162-54 (H2) (2) 600T150-54 (SEE DTL A OR C)	600T150-54	SIMPSON SSC4.25 (T&B) MAX PATTERN	NONE
10'-0" MAX	(2) 600S300-68 (2) 600T150-54 (SEE DTL A OR D. TRACK NOT REQUIRED @ DTL D)	(2) 600S300-54 (H3) (2) 600T200-54 (SEE DTL A)	(1) 600S162-54 (1) 600T150-54 (SEE DTL B OR D)	2" x 2" x 4" LONG x 97 MIL BENT PL W/ (3) #10 SMS EA LEG (T&B)	97 MIL PLATE

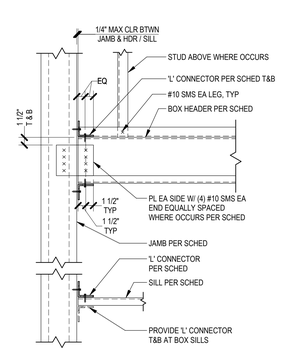
7 EXTERIOR WALL OPENING FRAMING (UNO)

NTS 054000-01-0112



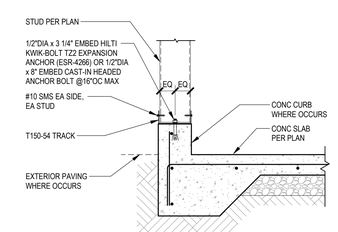
12 DETAIL

1" = 1'-0"



8 HEADER CONN TO JAMB

NTS 054000-01-0114



4 EXTERIOR STEEL STUD TO CURB/SOG

NTS 054000-01-0113

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

miyamoto.
1047 West Sixth Street, Suite A T: (833) 270-8848
Ontario, CA 91762 miyamotointernational.com
MI2228096.00_R24

CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER
JEFFREY ALAN GROSKREUTZ
S 3525
STRUCTURAL
STATE OF CALIFORNIA

TYPICAL EXTERIOR COLD-FORMED STEEL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

sgh ARCHITECTS

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PROJECT NUMBER: 23-6102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/08/2025

DELTA	DATE	DESCRIPTION
1	07/25/25	100% CD SET

S0.53

100% CD

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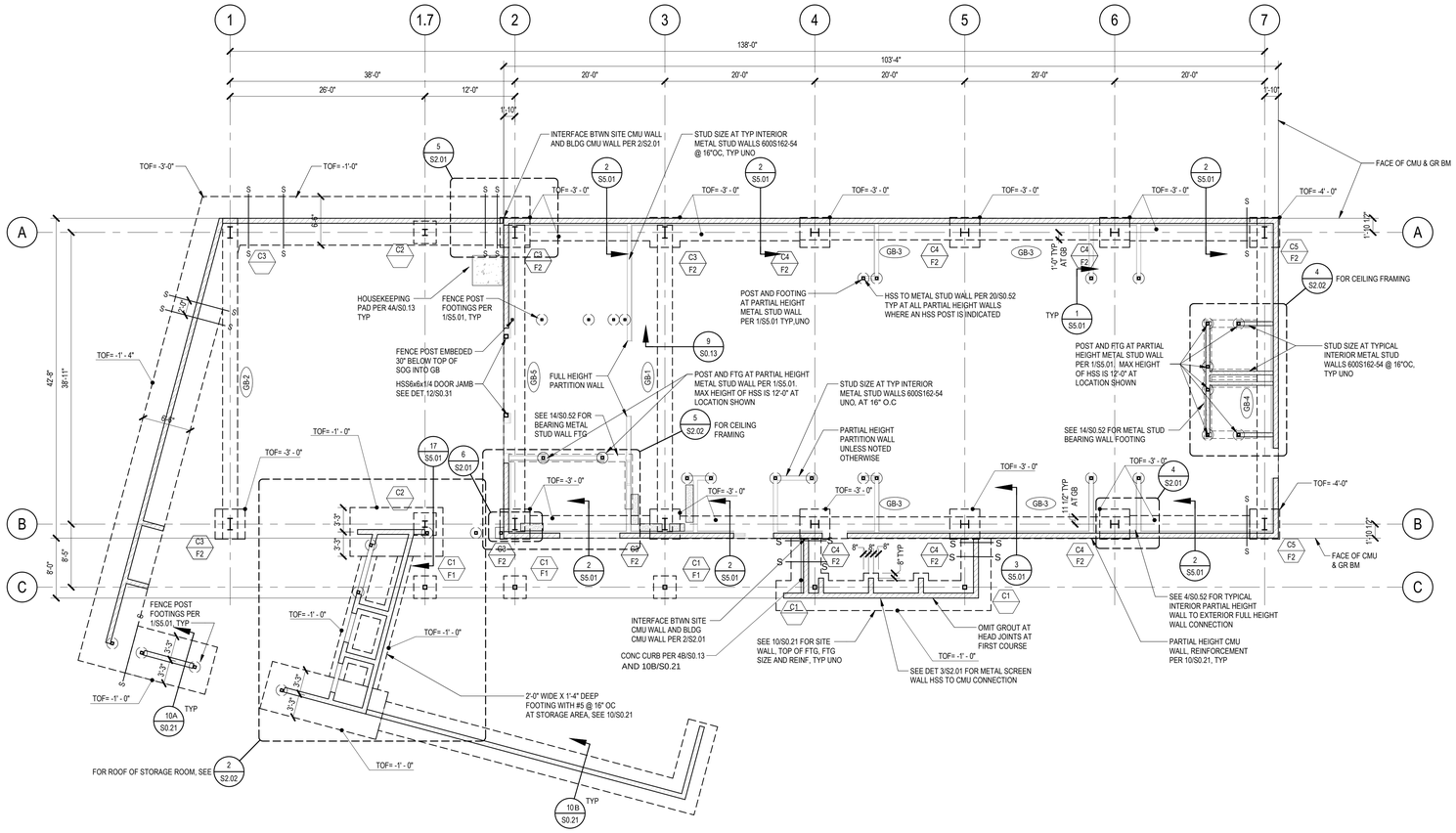


1 FOUNDATION PLAN
1/8" = 1'-0"

NOTES:
1. ELEVATION OF LEVEL 1 FINISH FLOOR = +0'-0", TYP, UNO
2. TOP OF FOOTING = -1'-0", TYP UNO.
3. UNO ON PLAN, ALL INTERIOR SLABS SHALL BE 6" THICK (UNO) W/ #3 @ 18"OC EA WAY AT MID-DEPTH OF SLAB, OVER 15 MIL (MIN) VAPOR BARRIER, OVER 4" CRUSHED ROCK FILL, OVER PREPARED BUILDING SUBGRADE PER GEOTECH REPORT.
4. SEE ARCHITECTURAL AND CIVIL FOR ALL EXTERIOR CONCRETE PAVING, SLABS, BASES, CURBS, SITE WALLS, ETC.
5. SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLAB.
6. SEE TYPICAL PAD AND CURB DETAILS FOR CONCRETE PADS AND CURBS ABOVE SLAB UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL FOR LOCATION, SIZE AND HEIGHT OF PADS AND CURBS.
7. WHERE CONCRETE BEAMS OVERLAP/INTERSECT, THE TOP AND BOTTOM REINFORCEMENT OF THE WIDER BEAM SHALL BE PLACED IN THE OUTER LAYER.
8. SEE ARCHITECTURAL FOR ALL TOP OF CMU WALL ELEVATIONS, TYP.

NOTE:
SEE 15/S0.32 FOR TYPICAL COLUMN BASE PLATE DETAIL.

COLUMN SCHEDULE AT BASE PLATE

MARK	SIZE	BASEPLATE SEE 15/S0.32 UNO	REMARKS
C1	HSS6x6x1/4	3/4"x11" SQ	3/4"Ø ANCHOR BOLTS
C2	W10x33	1"x15"x17"	1"Ø ANCHOR BOLTS
C3	W18x50	SEE 10/SS.01	1"Ø ANCHOR BOLTS
C4	W12x96	SEE 10/SS.01	1"Ø ANCHOR BOLTS
C5	W16x77	SEE 10/SS.01	1"Ø ANCHOR BOLTS

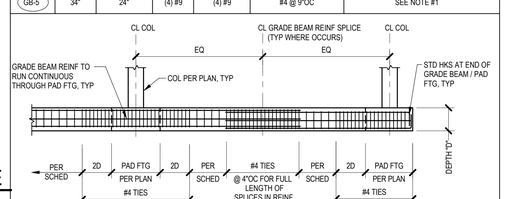
PAD FOOTING SCHEDULE

MARK	LENGTH / WIDTH	THICKNESS	REINFORCING
F1	3'-0" SQ	18"	(4) #5 EA WAY BOTT
F2	4'-0" SQ	24"	(5) #5 EA WAY TOP & BOTT

NOTE:
COMBINE REINFORCEMENT AT ADJACENT FOOTINGS AS REQUIRED.

GRADE BEAM SCHEDULE

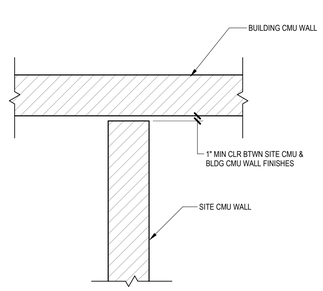
MARK	WIDTH	DEPTH	REINFORCING			REMARKS
			HORIZONTAL		TIES / STIRRUPS	
			TOP	BOTTOM		
GB-1	24"	24"	(4) #9	(4) #9	#4 @ 9"OC	SEE NOTE #1
GB-2	30"	24"	(4) #9	(4) #9	#4 @ 9"OC	SEE NOTE #1
GB-3	34 1/2"	24"	(4) #9	(4) #9	#4 @ 9"OC	SEE NOTE #1
GB-4	34"	36"	(4) #9	(4) #9	#4 @ 9"OC	SEE NOTE #1
GB-5	34"	24"	(4) #9	(4) #9	#4 @ 9"OC	SEE NOTE #1



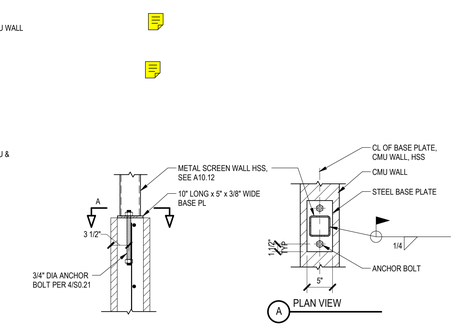
NOTE:
1. #4 TIES PER SCHEDULE. SEE ELEVATION ABOVE WHERE 4" SPACING IS REQUIRED. SEE 9/S0.13 AND SEE S5.01 FOR INFORMATION NOT SHOWN.

LEGEND:

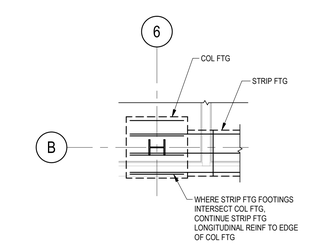
- INDICATES CONCRETE CURB, SEE ARCH SLAB PLAN AND 4/S0.13
- C# / F# — INDICATES COLUMN/POST TYPE PER SCHEDULE; INDICATES PAD FOOTING TYPE PER SCHEDULE
- INDICATES CHANGE IN ELEVATION
- TOF -X'-X" — INDICATES TOP OF FOOTING (TOF) ELEVATION
- GB-# — INDICATES GRADE BEAM TYPE PER SCHEDULE
- INDICATES CMU WALL
- D-# — INDICATES SPAN DIRECTION AND TYPE OF METAL DECK PER SCHEDULE
- S ——— S — INDICATES STEP IN FOUNDATION PER TYPICAL STEPPED FOOTING DETAIL, CONTRACTOR TO VERIFY LOCATION & EXTENT OF STEPPED FOUNDATIONS SEE 6/S0.11 FOR MORE INFO



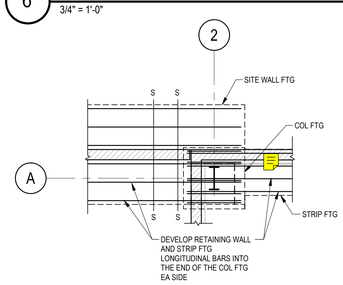
2 PARTIAL PLAN AT CMU SITE WALL WITH BUILDING CMU INTERSECTION
1" = 1'-0"



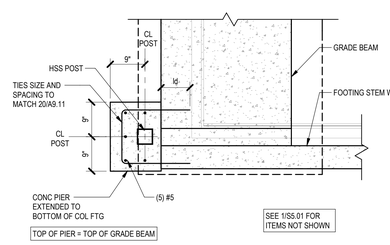
3 SCREENWALL BASE PLATE ANCHORAGE
1" = 1'-0"



4 FOOTING INTERSECTION
1/4" = 1'-0"



5 FOOTING INTERSECTION
1/4" = 1'-0"



6 STL POST PIER CONNECTION AT BLDG CORNER
3/4" = 1'-0"

PROJECT NORTH
NORTH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

miyamoto.
1047 West Sixth Street, Suite A T: (833) 270-8848
Ontario, CA 91762 miyamotointernational.com
MI2228096.00_R24

CONSULTANT:
REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSHEK S 3525 STRUCTURAL STATE OF CALIFORNIA

FOUNDATION PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS

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PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/08/2025
DELTA: DATE: DESCRIPTION:
07/25/25 100% CD SET

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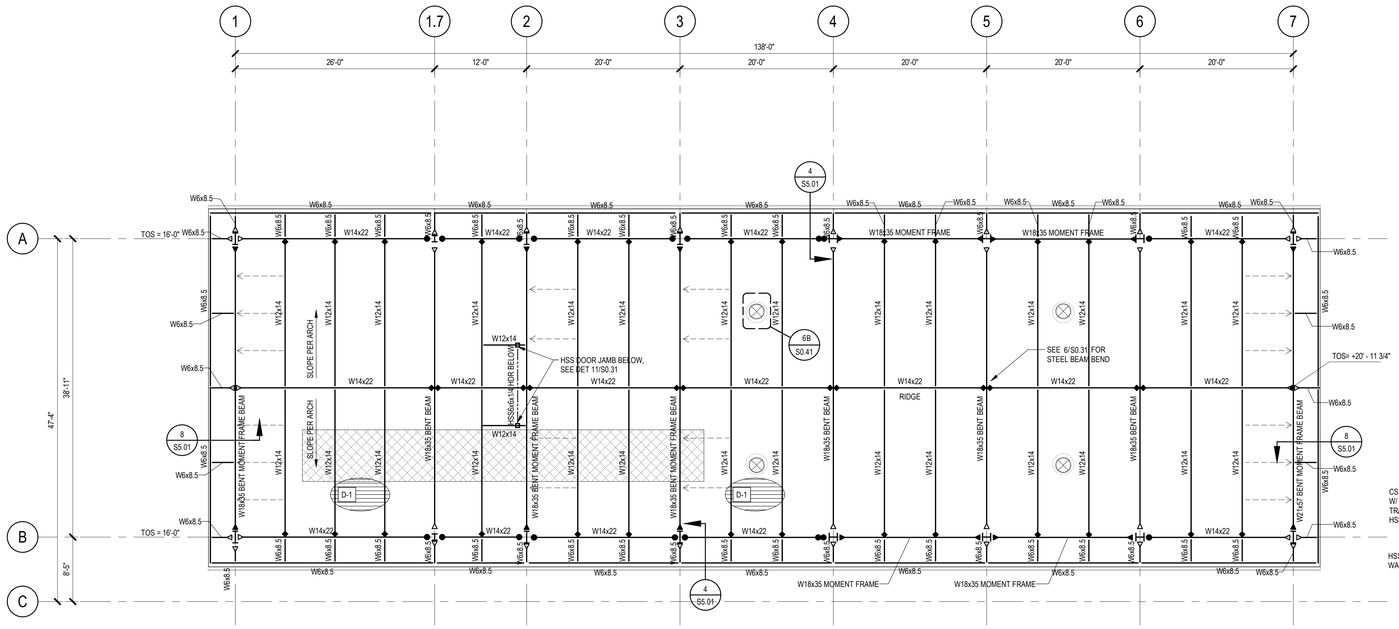
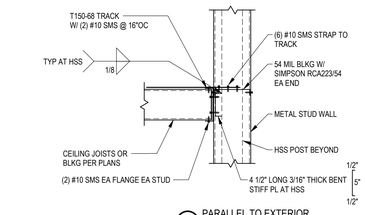
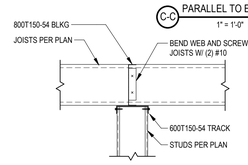


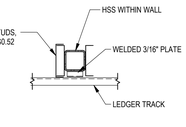
1 ROOF - FRAMING PLAN
1/8" = 1'-0"



C-C PARALLEL TO EXTERIOR
1" = 1'-0"

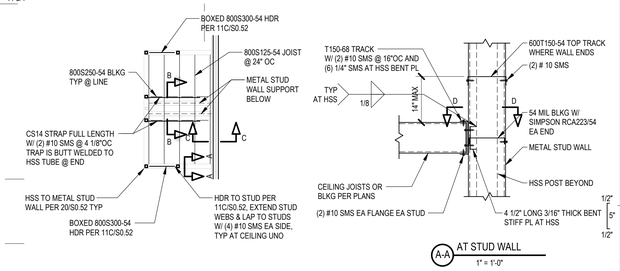


B-B
1" = 1'-0"



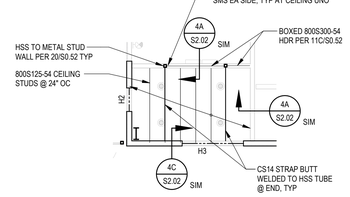
D-D
1" = 1'-0"

7



A-A AT STUD WALL
1" = 1'-0"

4 RESTROOM CEILING PARTIAL PLAN
1/8" = 1'-0"



5 INTERIOR OFFICE/STORAGE CEILING PARTIAL PLAN
1/8" = 1'-0"

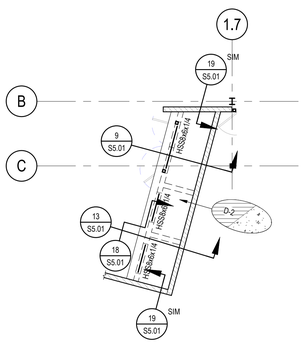
PROJECT NORTH

NORTH

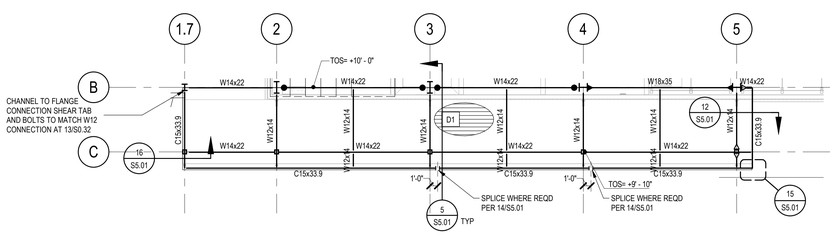
NOTES:
1. SEE PLANS FOR TOP OF STEEL FRAMING ELEVATION, WHERE TOP OF STEEL NOT SHOWN SEE ARCHITECTURAL FOR FINISH FLOOR ELEVATION.
2. SEE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL FOR LOCAITON OF EQUIPMENT. CONTRACTOR TO VERIFY ALL UNIT LOCATIONS, SIZES AND OPENINGS.
3. ALL BEAMS SHALL BE EQUIALLY SPACED BETWEEN COLUMNS/GIRDERS UNLESS NOTED OTHERWISE.
4. SEE ARCHITECTURAL FOR SLOPING AND ELEVATION OF SLABS, DEPRESSIONS, OPENINGS, RAMPS, ETC.
5. SEE SCHEDULE SHEET 7/S0.53 FOR HEADER LABELS DEFINITIONS (H1, H2, H3)

LEGEND:

- INDICATES WF COL
- INDICATES HSS COL
- [9"] INDICATES DEVIATION FROM TYPICAL T.O.S. ELEVATION
- INDICATES MOMENT CONNECTION PER 10 S0.32
- INDICATES BEAM STIFFENER PLATES WITH SLIP CRITICAL (SC) BOLTS PER 18 S0.31
- INDICATES BOTTOM FLANGE BRACING PER 13 S0.31
- INDICATES BEAM CONNECTION WITH (1) ROW OF SLIP CRITICAL (SC) BOLTS
  INDICATES BEAM CONNECTION WITH (2) ROWS OF SLIP CRITICAL (SC) BOLTS PER 8/S0.32
- D# INDICATES SPAN DIRECTION AND TYPE OF METAL DECK PER SCHEDULE ON SHEET S0.41
- INDICATES SOLAR-READY ROOF AREA, SEE DESIGN CRITERIA S0.01 FOR LOADING INFORMATION
- INDICATES MOMENT FRAME COLUMN TO BEAM CONNECTION PER 19 S0.32 OR 18 S0.32 OR 16 S0.32



2 STORAGE ROOM ROOF PLAN
1/8" = 1'-0"



3 CANOPY FRAMING PARTIAL PLAN
1/8" = 1'-0"

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DATE: 09/02/25

miyamoto.
1047 West Sixth Street, Suite A T: (833) 270-8848
Ontario, CA 91762 miyamotointernational.com
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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN GROSKREUTZ S 3525 STRUCTURAL STATE OF CALIFORNIA

ROOF FRAMING PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

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◁◁	07/25/25	100% CD SET

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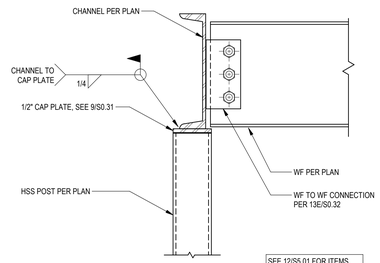
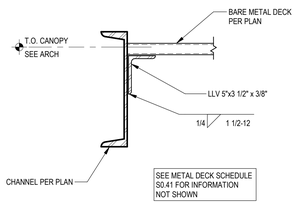
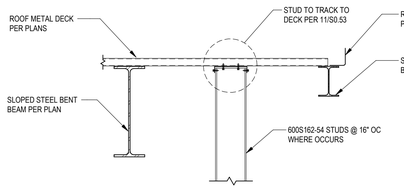
8/26/2025 11:32:21 AM Autodesk Docs://MI2228096.00 - Chaffey College Intech Welding/MI2228096.00 -Chaffey College In-Tech Welding Center_24.rvt



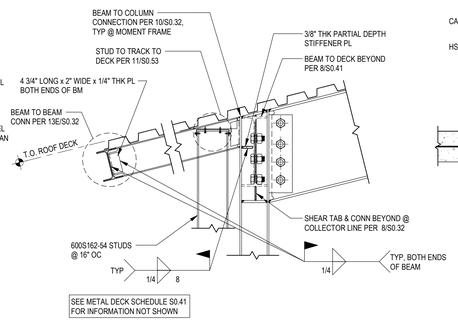
16 DETAIL
1 1/2" = 1'-0"



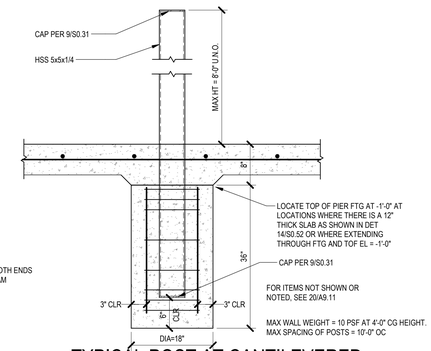
12 DETAIL
1 1/2" = 1'-0"



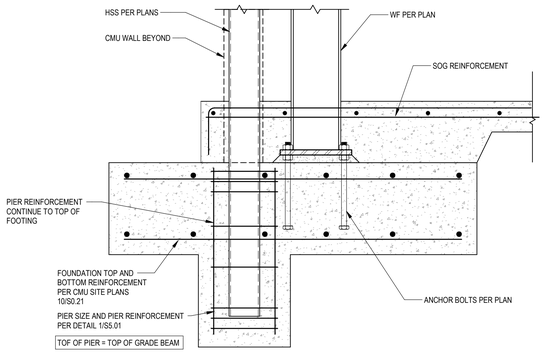
8 DETAIL
1" = 1'-0"



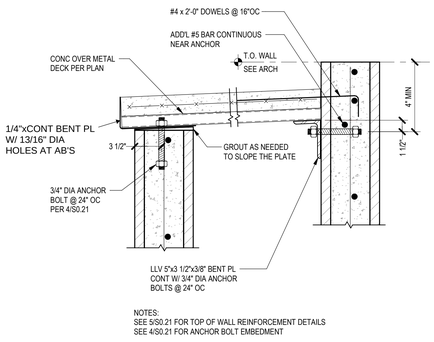
4 DETAIL
1" = 1'-0"



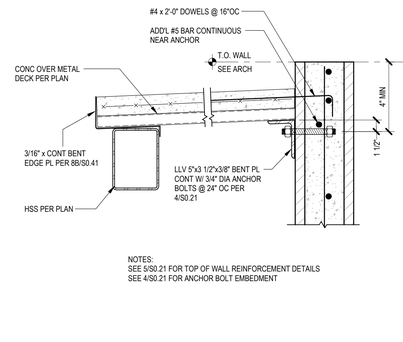
TYPICAL POST AT CANTILEVERED METAL STUD WALL
1 1/2" = 1'-0"



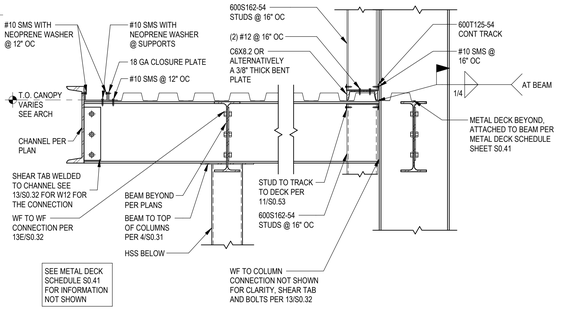
17 DETAIL
1" = 1'-0"



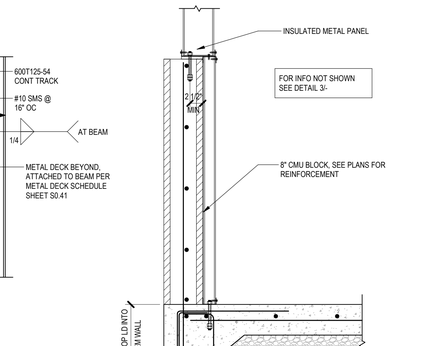
13 DETAIL
1 1/2" = 1'-0"

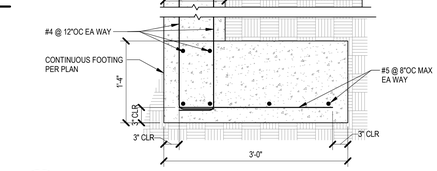


9 DETAIL
1 1/2" = 1'-0"

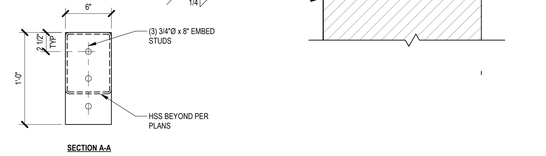


5 LOW CANOPY DETAIL
1" = 1'-0"

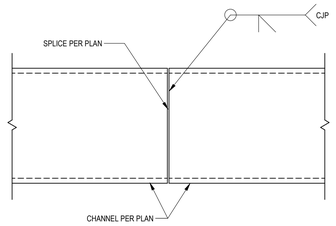




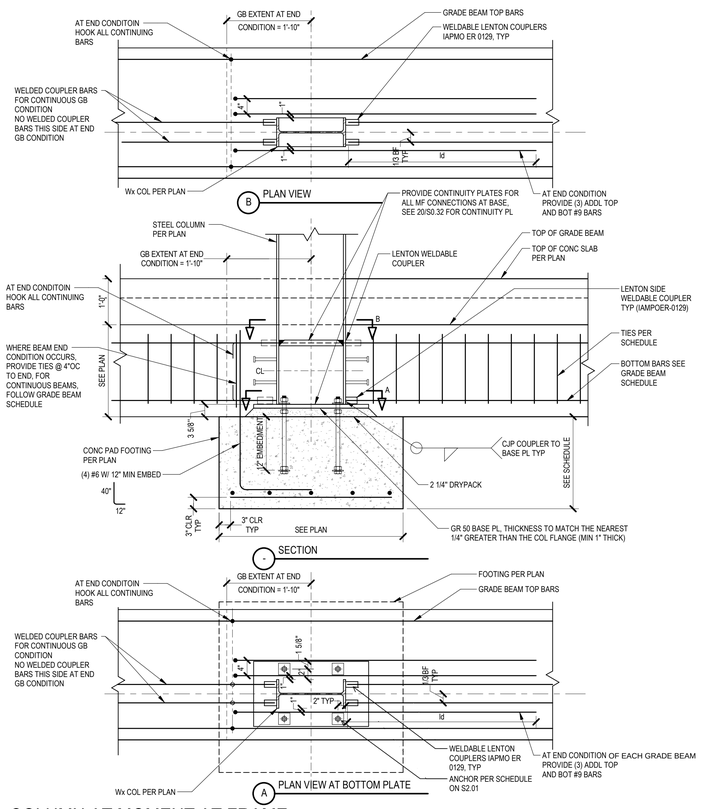
2 TYPICAL CONDITION AT INTERIOR EDGE
1" = 1'-0"



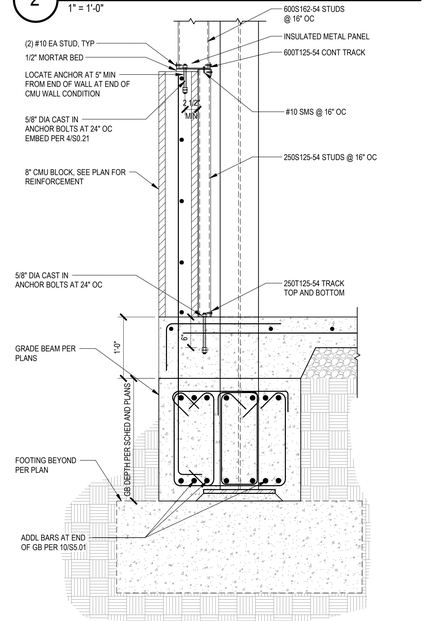
18 DETAIL
1 1/2" = 1'-0"



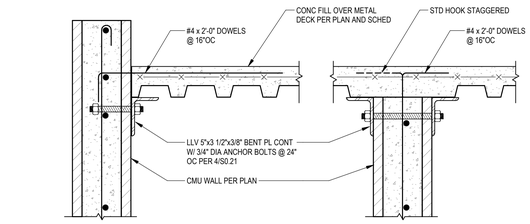
14 DETAIL
1 1/2" = 1'-0"



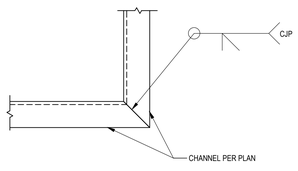
10 COLUMN AT MOMENT AT FRAME
3/4" = 1'-0"



3 TYPICAL CONDITION AT GRADE BEAM
1" = 1'-0"



19 DETAIL
1 1/2" = 1'-0"



15 DETAIL
1 1/2" = 1'-0"

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STRUCTURAL
STATE OF CALIFORNIA

CONSULTANT:

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MECHANICAL SYMBOLS

CD	CEILING DIFFUSER - SUPPLY	
SAD	SUPPLY AIR DUCT - RISER	
SAD	SUPPLY AIR DUCT - DROP	
RAG	RETURN AIR GRILLE	
RAD	RETURN AIR DUCT - RISER	
RAD	RETURN AIR DUCT - DROP	
EAG	EXHAUST AIR GRILLE	
EAD	EXHAUST AIR DUCT - RISER	
EAD	EXHAUST AIR DUCT - DROP	
SWS	SIDE WALL SUPPLY GRILLE	
SWR	SIDE WALL RETURN/EXHAUST GRILLE	
UP	DUCT OFFSET UP	
	DOUBLE WALL DUCT	
	DUCT OR EQUIPMENT TO BE REMOVED	
	DUCT	
	DUCT TRANSITION	
MVD	MANUAL VOLUME DAMPER	
BDD	BACKDRAFT DAMPER	
AFD	AUTOMATIC FIRE DAMPER	
CSFD	COMBINATION SMOKE/FIRE DAMPER	
CHWS	CHILLED WATER SUPPLY PIPE	
CHWR	CHILLED WATER RETURN PIPE	
HWS	HOT WATER SUPPLY PIPE	
HWR	HOT WATER RETURN PIPE	
CWS	CONDENSER WATER SUPPLY PIPE	
CWR	CONDENSER WATER RETURN PIPE	

	PRESSURE REDUCING VALVE	
	Y TYPE STRAINER WITH DRAIN VALVE	
	ISOLATION VALVE (BALL)	
	ISOLATION VALVE (BUTTERFLY)	
	MOTORIZED CONTROL VALVE	
	CHECK VALVE	
	THERMOMETER	
	PRESSURE GAUGE	
	SMACNA DUCT STATIC PRESSURE CLASS	
POD	POINT OF DEMOLITION	
POC	POINT OF CONNECTION	
M	MOTORIZED DAMPER	
T / TS	THERMOSTAT / SENSOR. MOUNT @ +48" AFF (IF MOUNTED OVER CASEWORK OR OTHER OBSTRUCTION 46" TO TOP OF DEVICE).	
TC	TIME CLOCK	
DD	DUCT SMOKE DETECTOR (MOUNT BELOW ROOF)	
CO_2	CARBON DIOXIDE SENSOR FOR OUTSIDE AIR MODULATION	
D/L 1.0	DL DOOR LOUVER W/ MINIMUM FREE AREA (SQ. FT.)	
U/C	UC UNDER CUT DOOR	
X	DETAIL NUMBER	
M-X	DETAIL DESIGNATION	
X	DRAWING NUMBER	
	EQUIPMENT DESCRIPTION	
	EQUIPMENT DESIGNATION	
	EQUIPMENT NUMBER	

MECHANICAL ABBREVIATIONS

- A -	
ABV	ABOVE
A/C	AIR CONDITIONER
AFF	ABOVE FINISH FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AP	ACCESS PANEL
- B -	
BDD	BACKDRAFT DAMPER
BEL	BELOW
BFP	BACK FLOW PREVENTOR
BLDG	BUILDING
BTUH	BRITISH THERMAL UNITS PER HOUR
- C -	
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CO	CARBON MONOXIDE
COMP	COMPRESSOR
CONT	CONTINUATION
- D -	
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DI	DIGITAL INPUT
DIA	DIAMETER
DN	DOWN
DO	DIGITAL OUTPUT
DTR	DOWN THRU ROOF
DWD	DOUBLE WALL DUCT
DWG	DRAWING
DX	DIRECT EXPANSION
- E -	
(E)	EXISTING
EA	EXHAUST AIR
EAD	EXHAUST AIR DUCT
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EG	EXHAUST GRILLE
EMS	ENERGY MANAGEMENT SYSTEM
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
- F -	
FAI	FRESH AIR INTAKE
FLR	FLOOR
FPI	FINS PER INCH
FT	FOOT, FEET
- G -	
GA	GAUGE
GI	GALVANIZED IRON
GPM	GALLONS PER MINUTE
- H -	
HP	HORSEPOWER
HR	HOUR
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HZ	HERTZ
- I -	
IN.	INCHES
- K -	
KW	KILOWATT
- L -	
(L)	LINED DUCT
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LWT	LEAVING WATER TEMPERATURE
LDR	LINEAR DIFFUSER REGISTER

- M -	
MA	MIXED AIR
MAX	MAXIMUM
MB	MACHINE BOLT
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MS	MOTOR STARTER
MTD	MOUNTED
- N -	
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE
- O -	
OA	OUTSIDE AIR
OC	ON CENTER
ODP	OUTDOOR DRIP PROOF
OPER	OPERATING
OSA	OUTSIDE AIR
- P -	
P.D.	PRESSURE DROP
PH	PHASE
PSI	POUNDS PER SQUARE INCH
- Q -	
QTY	QUANTITY
- R -	
RA	RETURN AIR
RAD	RETURN AIR DUCT
RG	RETURN GRILLE
RL	REFRIGERATION LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERATION SUCTION
- S -	
SA	SUPPLY AIR
SAD	SUPPLY AIR DUCT
SENS	SENSIBLE
SF	SUPPLY FAN
SMS	SHEET METAL SCREW
SOV	SHUT OFF VALVE
S.P.	STATIC PRESSURE
SQ	SQUARE
S/S	STAINLESS STEEL
SWR	SIDEWALL RETURN GRILLE
SWS	SIDEWALL SUPPLY GRILLE
SYM	SYMBOL
- T -	
TDH	TOTAL DYNAMIC HEAD
TG	TRANSFER GRILLE
TSTAT	THERMOSTAT
TYP	TYPICAL
- U -	
UNO	UNLESS NOTED OTHERWISE
UTR	UP THRU ROOF
- V -	
VAC	VOLTS ALTERNATING CURRENT
VFD	VARIABLE FREQUENCY DRIVE
- W -	
WT	WEIGHT
W/	WITH

EQUIPMENT ANCHORAGE NOTE

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.

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

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

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

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

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

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

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

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #0043-13.

MECHANICAL MANDATORY MEASURES

EQUIPMENT AND SYSTEMS EFFICIENCY

ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS SHALL COMPLY WITH THAT STANDARD.

PIPING, EXCEPT THOSE CONVEYING FLUIDS WITH A DESIGN OPERATING TEMPERATURE BETWEEN 60° F AND 105°F, OR WITHIN SPACE-CONDITIONING EQUIPMENT CERTIFIED UNDER, §110.1 OR §110.2, SHALL BE INSULATED IN ACCORDANCE WITH §120.3

ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS ARE REQUIRED TO BE INSTALLED, SEALED, AND INSULATED IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE (CMC) SECTIONS 601, 602, 603, 604, 605 AND ANSI/SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE 3RD EDITION.

VENTILATION

CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS.

ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE.

AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS.

GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.

FANS USED FOR VENTILATION SHALL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.

THE MINIMUM OUTDOOR AIR LISTED OR THREE COMPLETE AIR CHANGES SHALL BE SUPPLIED TO THE ENTIRE BLDG. DURING THE ONE HOUR PERIOD IMMEDIATELY BEFORE THE BLDG. IS NORMALLY OCCUPIED.

CONTROLS

EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO THE SUPPLY OF HEATING AND COOLING ENERGY WITHIN THAT ZONE §120.2(a). WHEN USED TO CONTROL HEATING, THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE DOWN TO 55°F OR LOWER. FOR COOLING, THE THERMOSTATIC CONTROL MUST BE ADJUSTABLE UP TO 85°F OR HIGHER. WHEN USED TO CONTROL BOTH HEATING AND COOLING, THE THERMOSTATIC THE CONTROL MUST BE ADJUSTABLE FROM 55°F TO 85°F AND ALSO PROVIDE A DEAD BAND OF AT LEAST 5° F WITHIN WHICH THE SUPPLY OF HEATING AND COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.

EACH SPACE CONDITIONING SYSTEM SERVING BUILDING TYPES SUCH AS OFFICES AND MANUFACTURING FACILITIES (AND ALL OTHERS NOT EXPLICITLY EXEMPT FROM THE REQUIREMENTS OF SECTION 112 (D)) SHALL BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CAPABLE OF PROGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS OR WEEKENDS; INCORPORATE AN AUTOMATIC HOLIDAY "SHUTOFF" FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES THE NORMALLY SCHEDULED OPERATION; AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF THE DEVICES PROGRAM AND TIME SETTING FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED.

SYSTEM WITH DDC TO THE §110.2(c) ARE ALSO REQUIRED TO HAVE AUTOMATIC DEMAND SHED CONTROLS.

EACH SPACE CONDITIONING SYSTEM MUST BE PROVIDED WITH CONTROLS THAT CAN AUTOMATICALLY SHUT OFF THE EQUIPMENT DURING UNOCCUPIED HOURS. WHEN SHUT DOWN, THE CONTROLS SHALL AUTOMATICALLY RESTART THE SYSTEM TO MAINTAIN A SETBACK HEATING THERMOSTAT SETPOINT, IF THE SYSTEM PROVIDES MECHANICAL HEATING AND SETUP COOLING THERMOSTAT SETPOINT, IF THE SYSTEM PROVIDES MECHANICAL COOLING.

THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN DEGREES FAHRENHEIT (F) AND ADJUSTABLE STOPS ACCESSIBLE ONLY BY AUTHORIZED PERSONNEL.

MECHANICAL GENERAL NOTES

1. ALL DUCT INSULATION TO HAVE MINIMUM 8.0 INSTALLED R-VALUE. INSULATION SHALL HAVE FLAME SPREAD RATING NOT EXCEEDING 25, AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84, NFPA 255 AND U.L. 723.
2. DUCT CONSTRUCTION SHALL BE GALVANIZED STEEL IN ACCORDANCE W/ CHAPTER 6 OF THE C.M.C., SUSPENSION SHALL CONFORM TO 006-2006 SMACNA STANDARDS. SEAL ALL SEAMS AND JOINTS AIR AND WATERTIGHT. FLEXIBLE ALUMINUM DUCT WORK IS NOT ALLOWED, DUCT TAPE IS NOT ALLOWED.
3. FLEXIBLE DUCTWORK AND DUCTLINER SHALL HAVE FLAME SPREAD RATING NOT EXCEEDING 25, AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84, NFPA 255 AND U.L. 723.
4. FLEXIBLE DUCTS SHALL CONSIST OF AN EXTERIOR REINFORCED LAMINATED VAPOR BARRIER, 3" FIBERGLASS INSULATION (R-8.0), ENCAPSULATED SPRING STEEL WIRE HELIX AND IMPERVIOUS, SMOOTH, NON-PERFORATED INTERIOR VINYL LINER. INDIVIDUAL LENGTHS OF FLEXIBLE DUCTS SHALL CONTAIN FACTORY FABRICATED STEEL CONNECTION COLLARS.
5. FLEXIBLE DUCTS SHALL BE SUPPORTED AT OR NEAR MID-LENGTH WITH 2" WIDE 28 GA. STEEL HANGER COLLAR ATTACHED TO THE STRUCTURE WITH AN APPROVED DUCT HANGER. INSTALLATION SHALL MINIMIZE SHARP RADIUS TURNS OR OFFSETS. 5' MAXIMUM LENGTH CONNECTING TO TERMINAL OUTLETS.
6. PROVIDE BACKDRAFT DAMPERS AT ALL EXHAUST AND FRESH AIR INTAKES.
7. THERMOSTATS SHALL BE AUTOMATIC CHANGEOVER TYPE TO SEQUENCE HEATING AND COOLING. SET POINT RANGE SHALL BE 10 DEG. F BETWEEN FULL HEATING AND FULL COOLING. ADJUSTABLE TEMPERATURE DIFFERENTIAL SHALL BE 1-1/2 DEG. F. THERMOSTAT CONTROL RANGE SHALL BE 55 DEG. F TO 85 DEG. F. CONTROLS SHALL HAVE CAPABILITY OF TERMINATING HEATING AT NO HIGHER THAN 78 DEG. F. AND COOLING AT NO LOWER THAN 70 DEG. F. FANS SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS.
8. LINE VOLTAGE WIRING, LINE VOLTAGE CONDUIT, UNDERGROUND LOW VOLTAGE CONDUIT, DISCONNECT SWITCHES AND FINAL CONNECTION BY ELECTRICAL CONTRACTOR. LOW VOLTAGE WIRING, ABOVE GROUND LOW VOLTAGE CONDUIT AND FINAL CONNECTION BY CONTROLS CONTRACTOR.
9. PROVIDE PERMANENT LABEL ON EACH A/C UNIT IDENTIFYING AREA/SPACE SERVED PER CMC 303.6. COORDINATE ROOM NUMBERS WITH OWNER. SEE 230553 FOR ADDITIONAL REQUIREMENTS.
10. SYSTEM AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AGENCY CERTIFIED BY THE AABC. THIS WORK SHALL CONFORM TO CURRENT AABC SPECIFICATIONS AND STANDARDS.
11. PROVIDE WRITTEN WARRANTY TO REPLACE ALL FAULTY MATERIALS AND/OR LABOR, AT NO COST TO OWNER, FOR A PERIOD OF ONE YEAR FROM DATE OF OWNER ACCEPTANCE. PROVIDE 5 YEAR COMPRESSOR WARRANTY AND 10 YEAR HEAT EXCHANGER WARRANTY FOR ALL A/C EQUIPMENT.
12. FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACTOR DOCUMENTS AND VERIFY THIS INFORMATION BEFORE ORDERING, FABRICATING OR INSTALLING OF ANY MATERIALS.
13. UNLESS SPECIFICALLY SHOWN ON THESE PLANS, NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
14. ALL DUCT SIZES SHOWN ARE NET INSIDE DIMENSIONS AND DO NOT ACCOUNT FOR DUCT LINER THICKNESS WHERE APPLICABLE. ALL PIPE DIMENSIONS SHOWN ARE NOMINAL SIZES.
15. ALL BRANCH DUCTS SHALL BE PROVIDED WITH ACCESSIBLE MANUAL VOLUME DAMPERS.
16. PROVIDE FLEXIBLE CONNECTIONS TO ALL HVAC EQUIPMENT (A/C UNIT, FANS, ETC.)
17. INSTALLATION & MATERIALS SHALL CONFORM TO THE 2022 EDITION OF THE CALIFORNIA MECHANICAL CODE (CMC) AND TITLE 24 PARTS 4 & 6.
18. CONTRACTOR SHALL PROVIDE AS-BUILTS, CAD GENERATED AND DRAWN TO 1/8" = 1'-0" SCALE. 1 ELECTRONIC COPY. CAD DRAWINGS SHALL BE AUTOCAD, LATEST VERSION. COORDINATE REQUIREMENTS WITH OWNER.
19. VERIFY EXACT LOCATION OF THERMOSTATS AND SENSORS WITH FURNITURE PLANS AND OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SHALL BE AS FOLLOWS:

AN AABC AGENCY SHALL ACT AS THE ACCEPTANCE AGENT AND PERFORM WORK REQUIRED IN THE FOLLOWING ACCEPTANCE TESTS AS DESCRIBED IN CHAPTER 13 OF THE 2022 NONRESIDENTIAL COMPLIANCE MANUAL. THIS SHALL INCLUDE FILLING OUT, SIGNING, AND SUBMITTING APPLICABLE FORMS LISTED HEREIN.

NRCA-MCH-02-A - OUTDOOR AIR ACCEPTANCE
NRCA-MCH-03-A - CONSTANT VOLUME, SINGLE ZONE, UNITARY AIR CONDITIONER AND HEAT PUMP SYSTEMS.
NRCA-MCH-04-A - AIR DISTRIBUTION SYSTEMS ACCEPTANCE
NRCA-MCH-05-A - AIR ECONOMIZER CONTROLS ACCEPTANCE
NRCA-MCH-06-A - DEMAND CONTROL VENTILATION SYSTEMS ACCEPTANCE
NRCA-MCH-07-A - SUPPLY FAN VFD ACCEPTANCE
NRCA-MCH-08-A - VALVE LEAKAGE TEST
NRCA-MCH-09-A - SUPPLY WATER TEMPERATURE RESET CONTROLS ACCEPTANCE
NRCA-MCH-10-A - HYDRONIC SYSTEM VARIABLE FLOW CONTROL ACCEPTANCE
NRCA-MCH-11-A - AUTOMATIC DEMAND SHED CONTROL ACCEPTANCE
NRCA-MCH-12-A - FAULT DETECTION & DIAGNOSTICS (FDD) FOR PACKAGED DIRECT EXPANSION UNITS
NRCA-MCH-13-A - AUTOMATIC FAULT DETECTION & DIAGNOSTICS (FDD) FOR AIR HANDLING UNITS & ZONE TERMINAL UNITS ACCEPTANCE
NRCA-MCH-14-A - DISTRIBUTED ENERGY STORAGE DX AC SYSTEMS ACCEPTANCE
NRCA-MCH-15-A - THERMAL ENERGY STORAGE (TES) SYSTEM ACCEPTANCE
NRCA-MCH-16-A - SUPPLY AIR TEMPERATURE RESET CONTROLS ACCEPTANCE
NRCA-MCH-17-A - CONDENSER WATER SUPPLY TEMPERATURE RESET CONTROLS ACCEPTANCE
NRCA-MCH-18-A - ENERGY MANAGEMENT CONTROL SYSTEM ACCEPTANCE

SPECIFIC REQUIREMENTS AND ACCEPTANCE TESTING FORMS ARE AVAILABLE IN THE 2022 NONRESIDENTIAL COMPLIANCE MANUAL WHICH CAN BE DOWNLOADED FROM www.energy.ca.gov/title24/2022standards/.

MECHANICAL SHEET INDEX

SHEET NO.	DESCRIPTION
M0.01	MECHANICAL GENERAL NOTES, ABBREVIATIONS & SYMBOLS
M0.02	MECHANICAL SCHEDULES
M0.03	MECHANICAL DETAILS
M2.21	MECHANICAL FLOOR PLAN
M3.21	MECHANICAL ROOF PLAN
M4.01	TITLE 24
M4.02	TITLE 24
M4.03	TITLE 24
M4.04	TITLE 24

TOTAL SHEETS = 4

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2150 E. Orange Way, Suite A
Ontario, California 91762
Phone (909) 923-5222
Fax (909) 923-5223

MECHANICAL GENERAL NOTES
CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
PROFESSIONAL ENGINEER * CALIFORNIA * MECHANICAL * No. M38752 * REGISTERED * STATE OF CALIFORNIA

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PROJECT NUMBER: 23-M012-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/29/2025
DELTA DATE: DESCRIPTION:

M0.01
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\M\22052M001.dwg 8-27-25-8:40 AM

MULTI-SPLIT SYSTEM SCHEDULE

SYM.	MFR./MODEL	AREA SERVED	COOLING		HEATING		ELECTRICAL		OPER. WT. (LBS.)	SYM.	MFR./MODEL	CFM	OSA CFM	ELECTRICAL		OPER. WT. (LBS.)	REMARKS	ANCHOR DETAIL REF
			MBH	SEER	MBH	HSPF	MCA	VOLTAGE/PHASE						MCA	VOLTAGE/PHASE			
SCU 1	CARRIER RAV-BP121	OFFICE/STORAGE 101	12	26	14	12	14	208 / 1	85	SFC 1	CARRIER RAV-HB121	480	25	-	- / -	50	INDOOR UNIT SHALL BE POWERED BY OUTDOOR UNIT WITH UNIT POWERED CONDENSATE PUMP, WALL MOUNTED THERMOSTAT. 24V INTERFACE KIT. PROVIDE WALL CAP FOR OSA HOOD.	9 M0.03

DUST COLLECTOR UNIT SCHEDULE

SYMBOL	MFR./MODEL	AREA SERVED	CFM	ESP (INCHES W.G.)	FAN HP	ELECTRICAL			OPER. WT. (LBS.)	REMARKS
						MCA	MOCP	VOLTAGE/PHASE		
DC 1	**LAGUNA U-15**	**WELDING** 102	500	2.95	1.5	10.7	-	120 / 1	165	START/STOP BUTTON. PROVIDE W/ DUCT COLLECTOR & MACHINERY INTERLOCK SWITCH. NON-PORTABLE.

AIR DISTRIBUTION SCHEDULE

SYM.	CFM	MAX. P.D. INCHES	MAX. NC	NECK SIZE	MFR./MODEL	REMARKS
SDGER-1	675	0.10	30	18"x10"	PRICE #SDGER	SPIRAL DUCT EXHAUST GRILLE, ALUMINUM FINISH

NOTE:
- CEILING DIFFUSER THROWS SHALL BE 4-WAY UNLESS OTHERWISE NOTED.
- PROVIDE REMOTE MOTOR OPERATED DAMPER AT HARD CEILINGS
- ALL AIR DISTRIBUTION DEVICES TO HAVE CONCEALED MOUNTING OPTION.
- FOR 1, 2, OR 3-WAY PATTERN, INSTALL QUADRANT BLANKS.
- PROVIDE FILLER PANEL FOR AIR DISTRIBUTION INSTALLED IN LAY-IN CEILINGS.

UNIT HEATER SCHEDULE

SYM	MFR/MODEL	AREA SERVED	CFM	ESP	HP	ELECTRICAL		CAPACITY		OPER. WT. LBS	REMARKS	ANCHOR DETAIL REF
						MCA	VOLT	KW	MBH			
UH 1	**EUH-7**	SHOP AREA	740	0.1	0.07	9.2	480 / 3	7	23.9	55	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03
UH 2	**EUH-7**	SHOP AREA	740	0.1	0.07	9.2	480 / 3	7	23.9	55	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03
UH 3	**EUH-7**	SHOP AREA	740	0.1	0.07	9.2	480 / 3	7	23.9	55	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03
UH 4	**EUH-7**	SHOP AREA	740	0.1	0.07	9.2	480 / 3	7	23.9	55	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03
UH 5	**EUH-20**	WELDING AREA	1290	0.1	0.17	24.1	480 / 3	20	68.2	95	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03
UH 6	**EUH-20**	WELDING AREA	1290	0.1	0.17	24.1	480 / 3	20	68.2	95	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03
UH 7	**EUH-20**	WELDING AREA	1290	0.1	0.17	24.1	480 / 3	20	68.2	95	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03
UH 8	**EUH-20**	WELDING AREA	1290	0.1	0.17	24.1	480 / 3	20	68.2	95	COMPLETE WITH PROGRAMMABLE THERMOSTAT AND MOUNTING KIT.	5 M0.03

EXHAUST FAN SCHEDULE

SYM.	MFR./MODEL	TYPE	CFM	(ESP) INCHES W.G.	RPM	SONES	ELECTRICAL			OPER. WT. (LBS.)	REMARKS	SERVICE	BUILDING LOCATION	DETAILS
							WATT	HP	VOLTAGE/PHASE					
EF 1	GREENHECK SP-A90	CEILING MOUNTED	80	0.187	900	0.3	16	-	115 / 1	12	COMPLETE WITH WALL CAP, BACK DRAFT DAMPER & BIRD SCREEN. INTERLOCK W/ LIGHT SWITCH.	103 - -	RESTROOM BUILDING	
EF 2	GREENHECK SP-A90	CEILING MOUNTED	80	0.187	900	0.3	16	-	115 / 1	12	COMPLETE WITH WALL CAP, BACK DRAFT DAMPER & BIRD SCREEN. INTERLOCK W/ LIGHT SWITCH.	104 - -	RESTROOM BUILDING	
EF 3	GREENHECK BSQ-160HP	INLINE	2000	1.5	1725	14.4	-	1.5	460 / 3	180	COMPLETE WITH VFD, HANGER KIT & BACKDRAFT DAMPER	102 - -	SHOP AREA (WELDING TABLES)	2 M0.03
EF 4	GREENHECK BSQ-180HP	INLINE	3200	2	1725	18.3	-	3	460 / 3	230	COMPLETE WITH VFD, HANGER KIT & BACKDRAFT DAMPER.	102 - -	SHOP AREA (WELDING BOOTHS)	2 M0.03
EF 5	GREENHECK BSQ-180HP	INLINE	3200	2	1725	18.3	-	3	460 / 3	230	COMPLETE WITH VFD, HANGER KIT & BACKDRAFT DAMPER.	102 - -	SHOP AREA (WELDING BOOTHS)	2 M0.03
EF 6	GREENHECK BSQ-160HP	INLINE	3000	0.5	1725	13.4	-	1	460 / 3	175	COMPLETE WITH HANGER KIT & BACKDRAFT DAMPER.	102 -	SHOP AREA	2 M0.03
EF 7	MARC ISFX 160	INLINE	100	1.0	900	5.5	129	-	120 / 1	20	COMPLETE SPARK B CONSTRUCTION & EXPLOSION PROOF MOTOR. INTERLOCK WITH LINE VOLTAGE THERMOSTAT.	109 -	SERVICE YARD	10 M0.31

DESIGN CONDITIONS

LOCATION	ELEVATION (FEET)	INDOOR			OUTDOOR		
		HEATING	COOLING		HEATING	COOLING	
		DB °F	DB °F	RELATIVE HUMIDITY	DB °F	DB °F	WB °F
FONTANA,CA	1090	70	75	50%	38	101	69

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2151 E. Dyer Rd. Ste. F
Santa Ana, CA 92705
P.714.557.3222
Fx.714.540.1923

MECHANICAL SCHEDULES AND DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY #22052

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA: DATE: DESCRIPTION:
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M0.02
100% CD

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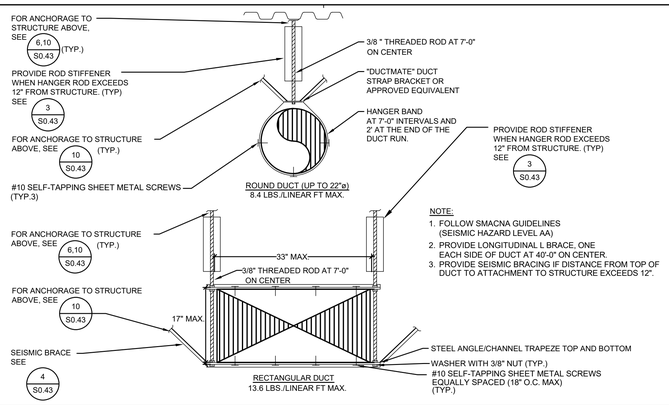

EXPOSED DUCT MOUNTING DETAIL

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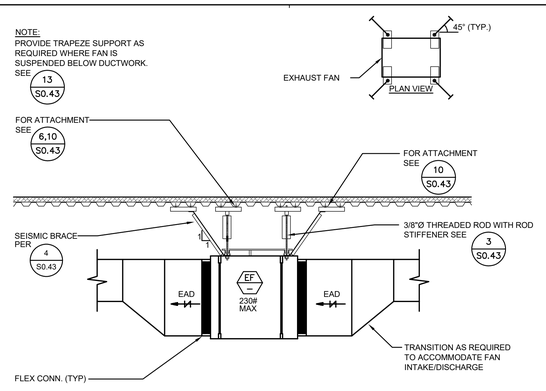

INLINE EXHAUST FAN DETAIL

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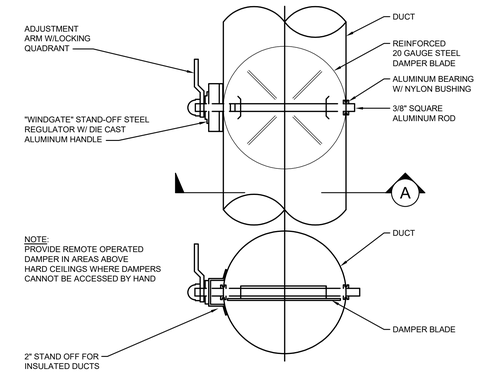

VOLUME DAMPER DETAIL

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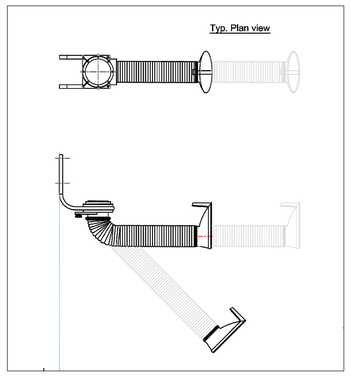

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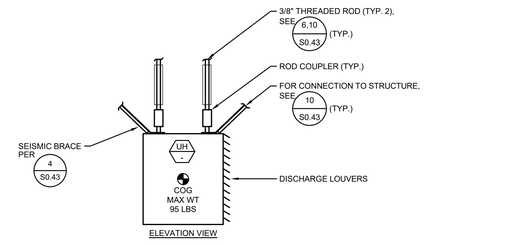

UNIT HEATER MOUNTING DETAIL

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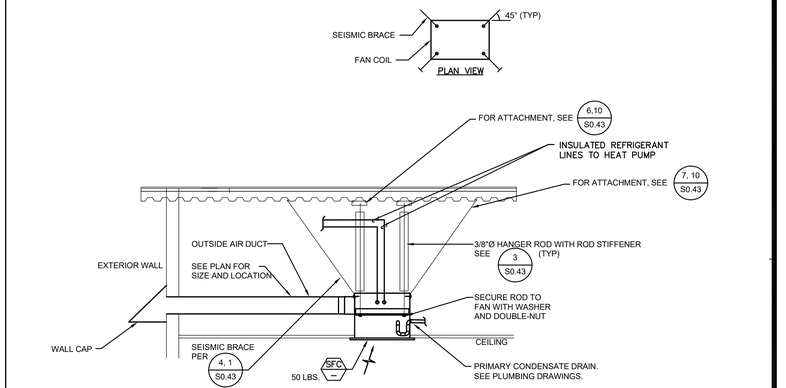
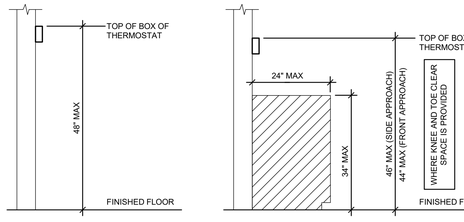


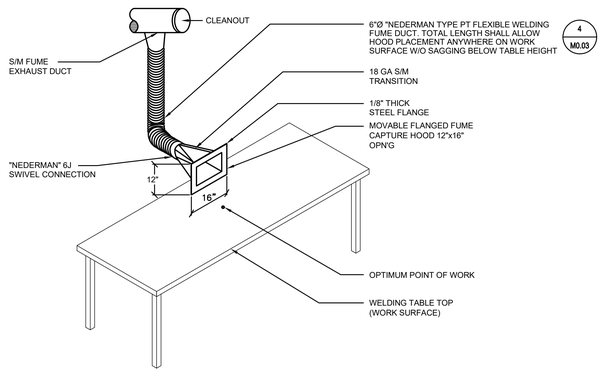
FAN COIL MOUNTING DETAIL

SCALE: NONE | 6



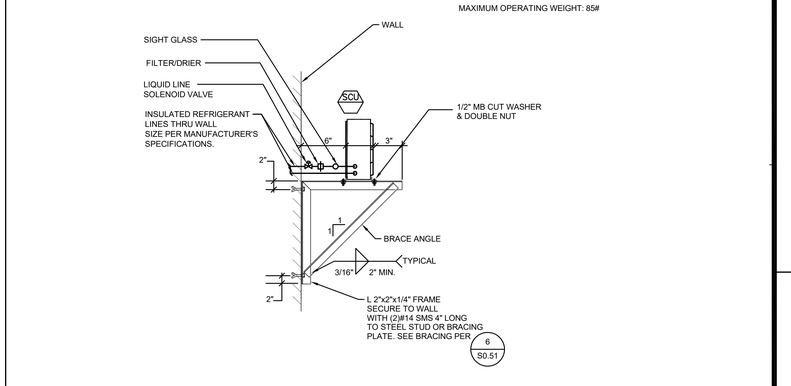
THERMOSTAT MOUNTING DETAIL

SCALE: NONE | 7



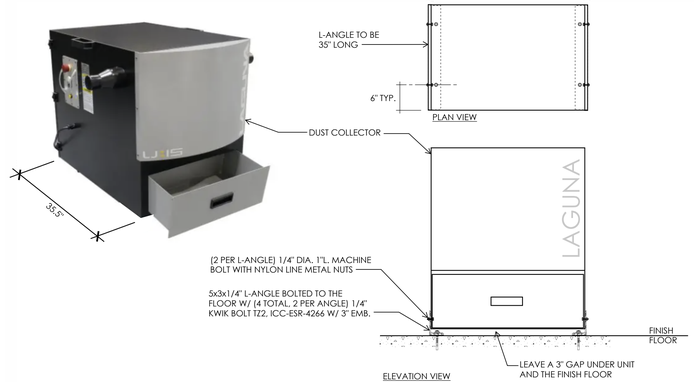
TABLETOP WELDING DUCT AND CAPTURE HOOD DETAIL

SCALE: NONE | 8



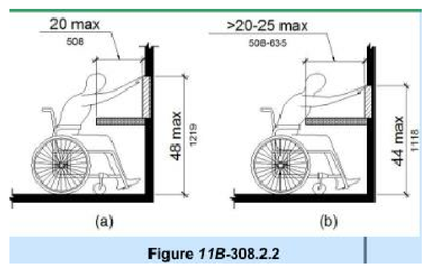
WALL MOUNTED CONDENSER DETAIL

SCALE: NONE | 9



DUST COLLECTION SYSTEM MOUNT

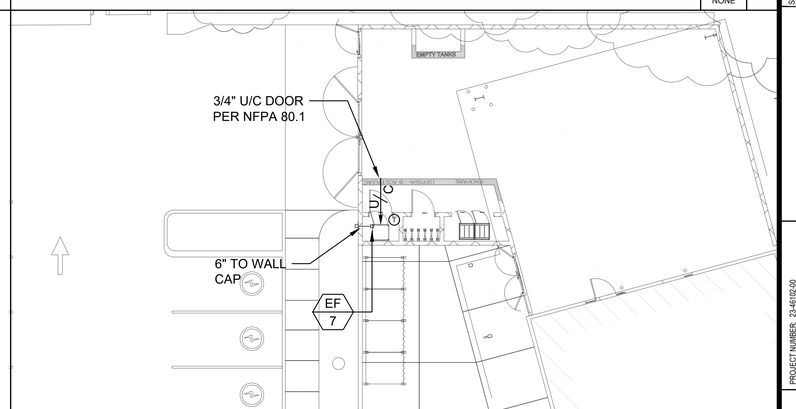
SCALE: NONE | 11



FORWARD OR FRONT APPROACH FOR DEVICES MOUNTED ABOVE COUNTER ASSUMES THAT DIRECTLY BELOW THE DEVICE THE COUNTER HAS A 30" MINIMUM WIDTH x 27" MINIMUM HIGH x 19" MINIMUM DEEP CLEAR OPENING. CBC SECTIONS 11B-306 & 11B-308.

OBSTRUCTED HIGH FORWARD REACH

SCALE: NONE | 10



PARTIAL PLAN

SCALE: NONE | 12

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2150 E. Orange Way, Suite 100, Ontario, CA 91762
Ph 909.980.1933 Fx 909.980.1933

MECHANICAL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

PROFESSIONAL ENGINEER ★ MECHANICAL ★ No. M38752 ★ STATE OF CALIFORNIA ★ REGISTERED

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PROJECT NUMBER: 23-48/10/2-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

M0.03
100% CD

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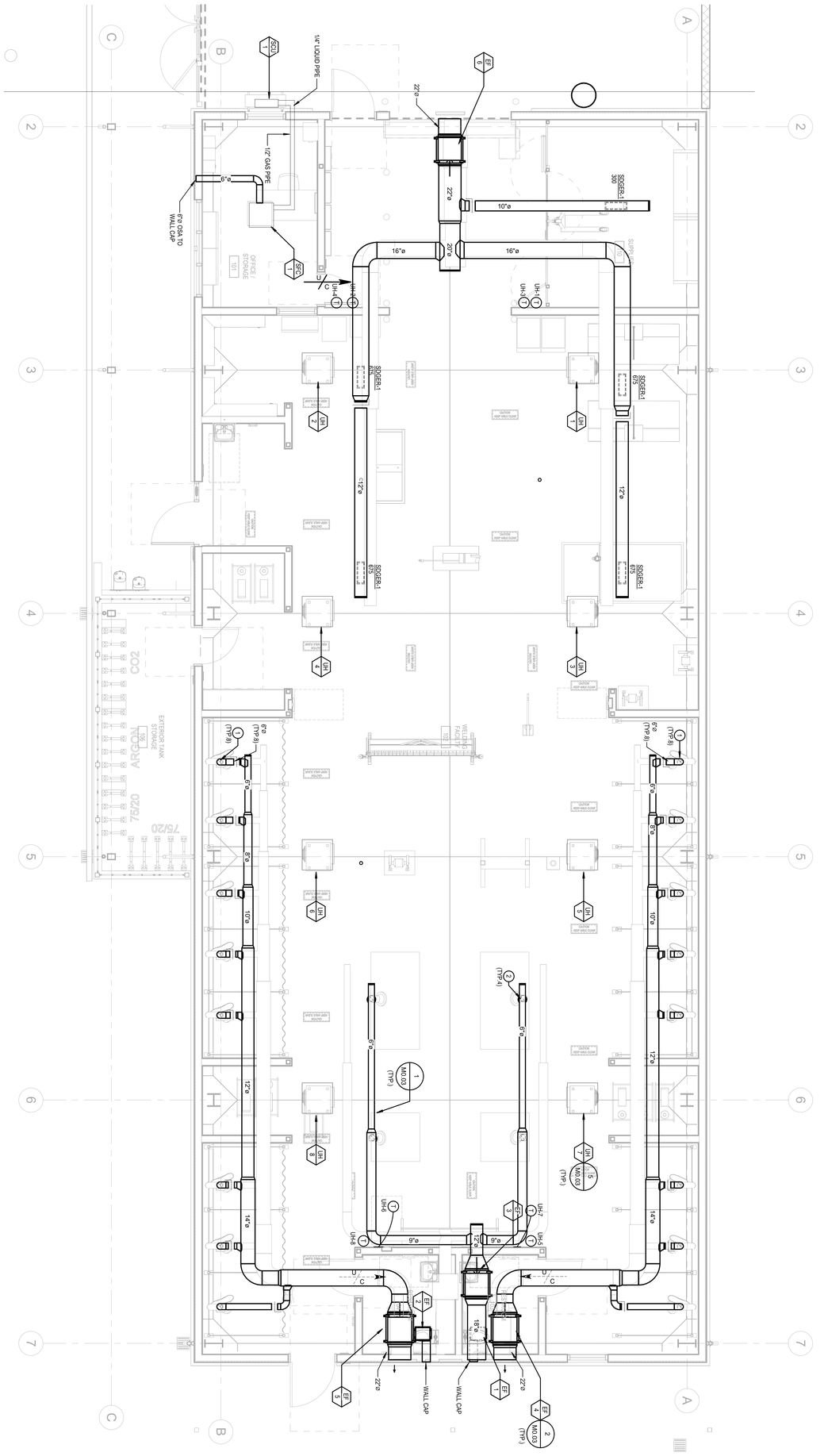

MECHANICAL PLAN

1/4" = 1'-0" SCALE

1

NORTH

SHEET NOTES

1. COMPLETE WITH 6"Ø NEDERMAN TELESCOPIC ARM AT 400 CFM. SEE M0.02 4/M0.02
2. COMPLETE WITH 6"Ø NEDERMAN TELESCOPIC ARM AT 500 CFM. SEE M0.02 4/M0.02

M2.21

100% CD

PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA: DATE: DESCRIPTION:
△
△

sgh ARCHITECTS

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SEALS:

REGISTERED PROFESSIONAL ENGINEER
HEATHER GAMA
No. M38752
MECHANICAL
STATE OF CALIFORNIA

MECHANICAL PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

CONSULTANT:

DCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
4750 E. Ontario Mills Pkwy
Ontario, Ca. 91764
Ph 909.987.0017
Fax 909.980.7025

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DATE 09/02/25 ACS ☐

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DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC.:
SS ☑ REVIEWED FOR ACS ☑
FLS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
4700 E. Chino Hills Pkwy
Chino, CA 91708
Ph 909 597 5577
Fax 909 591 7023

9400 CHERRY AVENUE, FONTANA, CA 92335

CHAFFEY COLLEGE
INTECH WELDING FACILITY

MECHANICAL ROOF PLAN

SEALS:

sgh ARCHITECTS

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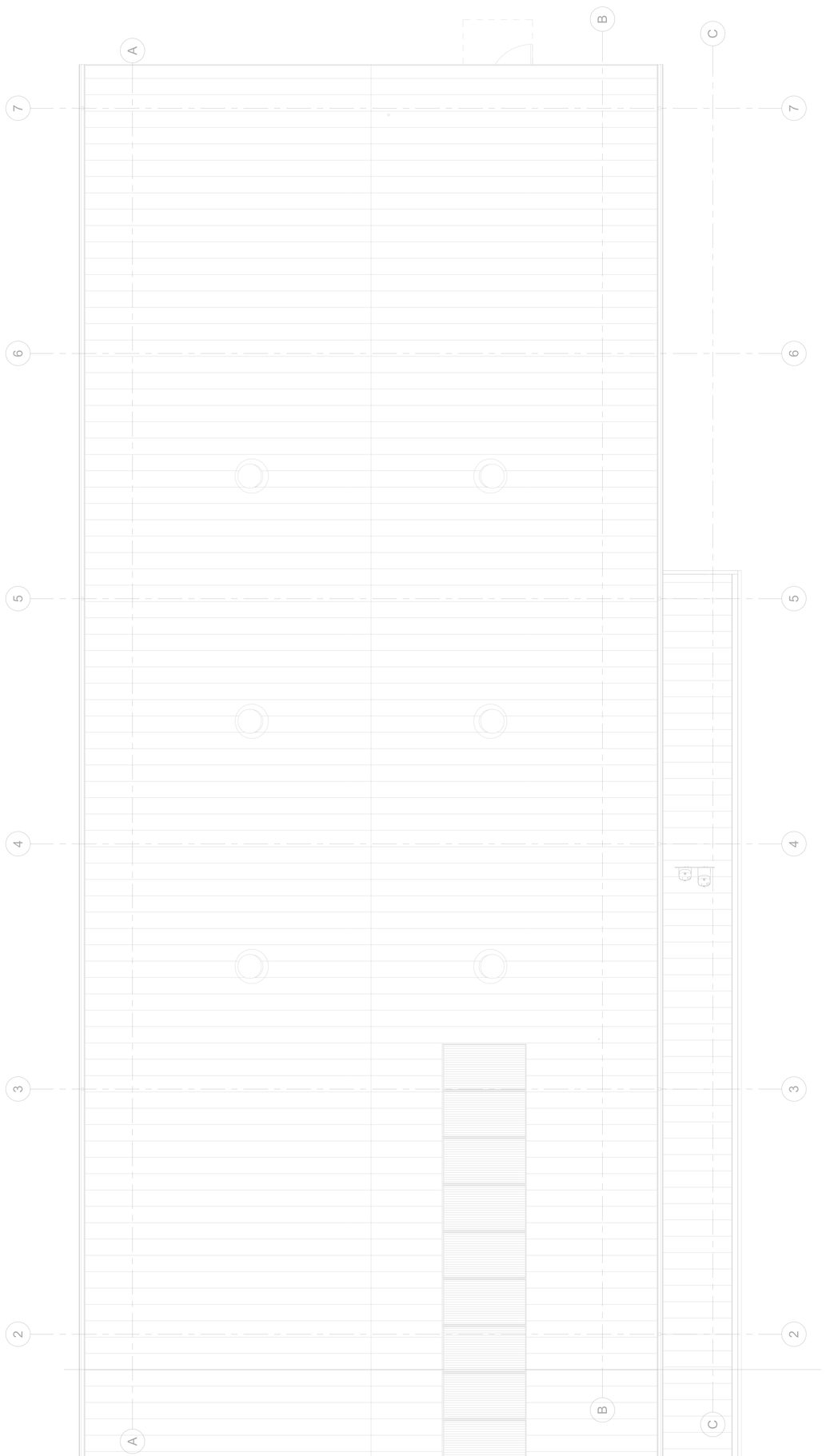
PROJECT NUMBER: 23-6102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA: DATE: DESCRIPTION:

M3.21
100% CD

SHEET NOTES



MECHANICAL ROOF PLAN 1
1/4" = 1'-0" SCALE

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.	
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 1 of 34)
Project Address: 9400 Cherry Avenue	**Date Prepared:** 4/25/2025

A. GENERAL INFORMATION

01	Project Location (city)	Fontana	04	Total Conditioned Floor Area	3324
02	Climate Zone	10	05	Total Unconditioned Floor Area	100
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Office ● Support Areas ● All Other Occupancies

B. PROJECT SCOPE

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01 Air System(s)	02 Wet System Components	03 Dry System Components
☒ Heating Air System	☐ Water Economizer	☐ Air Economizer
☒ Cooling Air System	☐ Pumps	☒ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☒ Fan Systems
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☒ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 2 of 34)
	Date Prepared: 4/25/2025

C. COMPLIANCE RESULTS

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

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)										COMPLIES					

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat
SCU-1	1	Single zone	New/ Addition		☐
UH-1	1	Single zone	New/ Addition		☐
UH-2	1	Single zone	New/ Addition		☐
UH-3	1	Single zone	New/ Addition		☐

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 3 of 34)
	Date Prepared: 4/25/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat
UH-4	1	Single zone	New/ Addition		☐
UH-5	1	Single zone	New/ Addition		☐
UH-6	1	Single zone	New/ Addition		☐
UH-7	1	Single zone	New/ Addition		☐
UH-8	1	Single zone	New/ Addition		☐

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

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
SCU-1	Unitary Heat Pumps	Air-cooled, split (1phase)	NA: Load Controls	8.77	12.64	0	9.26	10.15	3.71	9.32
UH-1	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	23.9	23.9	0	0	0	12.5	15.28
UH-2	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	23.9	23.9	0	0	0	9.97	14.46
UH-3	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	23.9	23.9	0	0	0	6.96	10.55
UH-4	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	23.9	23.9	0	0	0	6.96	11.21
UH-5	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	68.2	68.2	0	0	0	7.29	11.39

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 4 of 34)
	Date Prepared: 4/25/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

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

01	02	03	04	05	06	07	08	09	10	11
UH-6	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	68.2	68.2	0	0	0	7.29	12.36
UH-7	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	68.2	68.2	0	0	0	9.39	12.98
UH-8	Furnace/ Unit Heater	Warm-air central furnace, gas-fired	NA: Load Controls	68.2	68.2	0	0	0	9.28	13.63

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
SCU-1	<65,000		HSPF2	7.5	12	SEER2	14.3	26
UH-1	<65,000					SEER2	14.3	13
UH-2	<65,000					SEER2	14.3	13
UH-3	<65,000					SEER2	14.3	13
UH-4	<65,000					SEER2	14.3	13
UH-5	<65,000					SEER2	14.3	13
UH-6	<65,000					SEER2	14.3	13
UH-7	<65,000					SEER2	14.3	13

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 5 of 34)
	Date Prepared: 4/25/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
UH-8	<65,000					SEER2	14.3	13

Electric Resistance Heating

01 Name or Item Tag	02 Equipment Description	03 Output Capacity (kW)	04 Applicable Exception to 140.4(g) Allowing Electric Resistance Heating
UH-1	Other	7	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building
UH-2	Other	7	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building
UH-3	Other	7	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building
UH-4	Other	7	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building
UH-5	Other	20	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building
UH-6	Other	20	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building
UH-7	Other	20	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building
UH-8	Other	20	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 6 of 34)
	Date Prepared: 4/25/2025

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	SCU-1	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	550	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method		Design: Motor Nameplate Horsepower		Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			550			128		Manufacturer provided				0.06
			MERV 13-16 Filter upstream of thermal conditioning equipment			550			76						
			Hydronic/DX cooling coil or heat pump coil			550			76						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1		Fan System Electrical Output (kW)		0.06

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 7 of 34)
	Date Prepared: 4/25/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-1	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	740	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method		Design: Motor Nameplate Horsepower		Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			740			172		Manufacturer provided				0.06
			MERV 13-16 Filter upstream of thermal conditioning equipment			740			103						
			Electric heat			740			34						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1		Fan System Electrical Output (kW)		0.06

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 8 of 34)
	Date Prepared: 4/25/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-2	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	740	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method		Design: Motor Nameplate Horsepower		Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			740			172		Manufacturer provided				0.06
			MERV 13-16 Filter upstream of thermal conditioning equipment			740			103						
			Electric heat			740			34						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1		Fan System Electrical Output (kW)		0.06

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** (Page 9 of 34)
	Date Prepared: 4/25/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-3	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	740	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method		Design: Motor Nameplate Horsepower		Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			740			172		Manufacturer provided				0.06
			MERV 13-16 Filter upstream of thermal conditioning equipment			740			103						
			Electric heat			740			34						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1		Fan System Electrical Output (kW)		0.06

IDENTIFICATION STAMP
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APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2156 E. Orange Way, Ste. 2
Ontario, CA 91762
Ph 909.390.1933
Fx 909.390.1933

MECHANICAL TITLE 24
CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
PROFESSIONAL ENGINEER CALIFORNIA MECHANICAL No. M38752 REGISTERED STATE OF CALIFORNIA

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PROJECT NUMBER: 22-46112-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/29/2025
DELTA DATE: DESCRIPTION:

M4.01
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\M\22052M401.dwg 8-27-25-8:40 AM

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-4	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	740	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11

Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method	Design: Motor Nameplate Horsepower	Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	740		172		Manufacturer provided		0.06
			MERV 13-16 Filter upstream of thermal conditioning equipment	740		103				
			Electric heat	740		34				
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)			Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)	0.06

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	(Page 11 of 34)
	Date Prepared:	4/25/2025

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-5	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,290	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11

Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method	Design: Motor Nameplate Horsepower	Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	1,290		299		Manufacturer provided		0.15
			MERV 13-16 Filter upstream of thermal conditioning equipment	1,290		179				
			Electric heat	1,290		59				
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)			Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)	0.15

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-6	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,290	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11

Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method	Design: Motor Nameplate Horsepower	Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	1,290		299		Manufacturer provided		0.15
			MERV 13-16 Filter upstream of thermal conditioning equipment	1,290		179				
			Electric heat	1,290		59				
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)			Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)	0.15

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-7	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,290	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11

Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method	Design: Motor Nameplate Horsepower	Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	1,290		299		Manufacturer provided		0.15
			MERV 13-16 Filter upstream of thermal conditioning equipment	1,290		179				
			Electric heat	1,290		59				
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)			Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)	0.15

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	UH-8	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,290	Site Elevation	1,090	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11

Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Allowance: Component Allowance	Allowance: Fan Allowance (watt/cfm)[3]	Design: Design Electrical Input Power Method	Design: Motor Nameplate Horsepower	Design: Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	1,290		299		Manufacturer provided		0.15
			MERV 13-16 Filter upstream of thermal conditioning equipment	1,290		179				
			Electric heat	1,290		59				
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)			Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)	0.15

[1] *FOOTNOTES: Fans serving spaces with design background noise goals below NC35*

[2] *Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.*

[3] *Fan system allowance includes fan system base allowance.*

[4] *Filter pressure loss can only be counted once per fan system.*

[5] *Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.*

[6] *Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document..*

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11

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H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01 System Name	02 System Zoning	03 Conditioned Floor Area Being Served (ft²)	04 Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	05 Shut-Off Controls 120.2(e) & 160.3(a)2D	06 Isolation Zone Controls 120.2(g) & 160.3(a)2F	07 Demand Response 110.12 120.2(b) & 160.3(a)2B	08 Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	09 Window Interlocks per 140.4(n) & 170.2(c)4D
SCU-1	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
UH-1	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
UH-2	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
UH-3	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided

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I. SYSTEM CONTROLS

UH-4	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
UH-5	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
UH-6	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
UH-7	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided
UH-8	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided

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

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and d:\24refnolink\160.2, 160.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.
Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems		

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J. VENTILATION AND INDOOR AIR QUALITY

04		05			06			07	
System Name	SCU-1	System Design OA CFM Airflow[1]		15	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Office/Storage 101	Office space	147			22	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				22	18	Ventilation for this System Complies?		Yes

04		05			06			07	
System Name	UH-1	System Design OA CFM Airflow[1]		62	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Supplies 110	All others	197			29.6	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type

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J. VENTILATION AND INDOOR AIR QUALITY

Welding Facility 102 North East	General Manufacturing- non chemical	380			57	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				87	18	Ventilation for this System Complies?		Yes

04		05			06			07	
System Name	UH-2	System Design OA CFM Airflow[1]		75	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Welding Facility 102 North West	General Manufacturing- non chemical	500			75	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				75	18	Ventilation for this System Complies?		Yes

04		05			06			07	
System Name	UH-3	System Design OA CFM Airflow[1]		52	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		

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DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
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DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2151 E. Dyer Rd. Ste. F
Santa Ana, CA 92705
714.966.9033
Fx 949.966.9033

MECHANICAL TITLE 24
CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:
PROFESSIONAL ENGINEER ★ MECHANICAL ★ No. M38752 ★ REGISTERED ★ STATE OF CALIFORNIA

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J. VENTILATION AND INDOOR AIR QUALITY

Welding Facility 102 North East-2	General Manufacturing- non chemical	350			52.5	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				52	18	Ventilation for this System Complies?		Yes
04		05			06		07		
System Name	UH-4	System Design OA CFM Airflow[1]		52	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Welding Facility 102 North West-2	General Manufacturing- non chemical	350			52.5	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				52	18	Ventilation for this System Complies?		Yes
04		05			06		07		
System Name	UH-5	System Design OA CFM Airflow[1]		52	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		

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J. VENTILATION AND INDOOR AIR QUALITY

Welding Facility 102 South East	General Manufacturing- non chemical	350			52.5	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				52	18	Ventilation for this System Complies?		Yes
04		05			06		07		
System Name	UH-6	System Design OA CFM Airflow[1]		52	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Welding Facility 102 South West	General Manufacturing- non chemical	350			52.5	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				52	18	Ventilation for this System Complies?		Yes
04		05			06		07		
System Name	UH-7	System Design OA CFM Airflow[1]		52	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		

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J. VENTILATION AND INDOOR AIR QUALITY

Welding Facility 102 South East -2	General Manufacturing- non chemical	350			52.5	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				52	18	Ventilation for this System Complies?		Yes
04		05			06		07		
System Name	UH-8	System Design OA CFM Airflow[1]		52	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Welding Facility 102 South West-2	General Manufacturing- non chemical	350			52.5	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				52	18	Ventilation for this System Complies?		Yes

[1] FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system

[2] Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.

[3] Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

[4] See Standards Tables 120.1-A and 120.1-B.

[5] For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.

[6] 120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 22 of 34)
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K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	UH-1	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?		No

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Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 23 of 34)
	Date Prepared:	4/25/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		UH-2	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		UH-3	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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	Date Prepared:	4/25/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		UH-4	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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Mechanical Systems
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	Date Prepared:	4/25/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		UH-5	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		UH-6	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2151 E. Dilano Ave, Ste 204
Carlsbad, CA 92008
P 619.795.7010
Fx 858.999.1933

MECHANICAL TITLE 24
CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
PROFESSIONAL ENGINEER ★ MECHANICAL ★ No. M38792 ★ STATE OF CALIFORNIA

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PROJECT NUMBER: 22-446102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

M4.03
100% CD

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L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		UH-7	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		UH-8	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

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L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-8	Duct Insulation R-value		
22				
23				

M. COOLING TOWERS

This section does not apply to this project.

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CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
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N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Compliance ID: EnergyPro-3040-0425-0349 Report Generated: 2025-04-25 11:29:12

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

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Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 32 of 34)**
	Date Prepared:	4/25/2025

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	CARRIER RAV-BP121; EUH-7; EUH-7; EUH-7; EUH-20; EUH-20; EUH-20; EUH-20;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	CARRIER RAV-BP121; EUH-7; EUH-7; EUH-7; EUH-20; EUH-20; EUH-20; EUH-20;
NRCA-MCH-11-A Automatic Demand Shed Controls	CARRIER RAV-BP121; EUH-7; EUH-7; EUH-7; EUH-20; EUH-20; EUH-20; EUH-20;
NRCA-MCH-16-A Supply Air Temperature Reset Controls	CARRIER RAV-BP121; EUH-7; EUH-7; EUH-7; EUH-20; EUH-20; EUH-20; EUH-20;
NRCA-MCH-18-A Energy Management Control Systems	CARRIER RAV-BP121; EUH-7; EUH-7; EUH-7; EUH-20; EUH-20; EUH-20; EUH-20;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

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CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
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	Date Prepared:	4/25/2025

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

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

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Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 34 of 34)**
Project Address: 9400 Cherry Avenue	**Date Prepared:**	4/25/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Tony Ramirez	Documentation Author Signature:
Company: DCGA Engineers	Signature Date: 2025-04-25
Address: 4750 E. Ontario Mills Parkway	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: Ontario CA 91764	Phone: 909-987-0017

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Wblesther Gama	Responsible Designer Signature:
Company: DCGA Engineers	Date Signed: 2025-04-25
Address: 4750 E. Ontario Mills Pkwy	License: M38752
City/State/Zip: Ontario CA 91764	Phone: 9099870017

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DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
4750 E. Ontario Mills Pkwy
Ontario, CA 91764
P 909.987.0017
Fx 909.987.5923

MECHANICAL TITLE 24

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

M4.04
100% CD

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EQUIPMENT ANCHORAGE NOTE

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

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

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

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

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

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

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

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #0043-13.

PLUMBING SYMBOLS

- RPBFP — REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
- FLOOR DRAIN, AREA DRAIN
- ROOF DRAIN, OVERFLOW DRAIN
- FLOOR SINK
- REDUCER
- UNION
- FLEXIBLE CONNECTOR
- STRAINER
- WATER HAMMER ARRESTER BEHIND ACCESS PANEL
- TRAP PRIMER BEHIND ACCESS PANEL
- PRESSURE GAUGE WITH PET COCK
- THERMOMETER
- TEMPERATURE/PRESSURE RELIEF VALVE & PRESSURE RELIEF VALVE
- AIR RELIEF VALVE
- CHECK VALVE
- SHUT-OFF VALVE
- VALVE ON RISER
- BALANCING VALVE
- VALVE IN YARD BOX
- SOLENOID VALVE (ELECTRIC)
- GAS COCK
- GAS PRESSURE REGULATOR
- HOSE BIBB
- DIRECTION OF FLOW
- PLUGGED OUTLET
- PIPING BREAK

- SQUARE FEET (SQ FT)
- FLOOR CLEANOUT
- FLOOR CLEANOUT IN YARDBOX
- CLEANOUT (CO)
- PIPING RISE OR DROP
- PIPING DOWN
- PIPING UP
- BRANCH CONNECTION
- BRANCH-BOTTOM CONNECTION
- F — FIRE LINE
- SANITARY DRAINAGE ABOVE GROUND
- SANITARY DRAINAGE BELOW GROUND
- SANITARY VENT
- CA — COMPRESSED AIR
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RETURN

DETAIL NUMBER (X) / DRAWING NUMBER (M-X) — DETAIL DESIGNATION

EQUIPMENT DESCRIPTION / EQUIPMENT NUMBER — EQUIPMENT DESIGNATION

PLUMBING SHEET INDEX

SHEET NO.	DESCRIPTION
P0.01	PLUMBING GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND DETAILS
P0.02	PLUMBING SCHEDULES AND DETAILS
P2.21	PLUMBING PLAN
P3.21	PLUMBING ROOF PLAN

TOTAL SHEETS = 4

PLUMBING ABBREVIATIONS

- A -	
ABV	ABOVE
AC	AIR CONDITIONING (HVAC)
ACC	ACCESSIBLE
AFF	ABOVE FINISH FLOOR
AFSR	AUTOMATIC FIRE SPRINKLER RISER
AP	ACCESS PANEL
AV	ACID VENT
AW	ACID WASTE
- B -	
BEH	BEHIND
BEL	BELOW
BTUH	BRITISH THERMAL UNITS PER HOUR
- C -	
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEANOUT
CONT	CONTINUATION
COTG	CLEANOUT TO GRADE
CU FT	CUBIC FEET
CW	COLD WATER (DOMESTIC)
- D -	
DN	DOWN
DF	DRINKING FOUNTAIN
DR	DROP
DS	DOWN SPOUT
DWG	DRAWING
- E -	
(E)	EXISTING
EL	ELEVATION
EQUIP	EQUIPMENT
ESEW	EMERGENCY SHOWER EYE WASH
EWC	ELECTRIC WATER COOLER
- F -	
F	FIRE LINE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FLR	FLOOR
FS	FLOOR SINK
FT	FOOT, FEET
FU	FIXTURE UNIT
FV	FLUSH VALVE
- G -	
G	GAS (LOW PRESSURE)
GAL	GALLON
GC	GAS COCK
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GWH	GAS WATER HEATER
GW	GREASE WASTE
- H -	
HB	HOSE BIBB
HP	HORSEPOWER
HW	HOT WATER (DOMESTIC)
HWR	HOT WATER RETURN (DOMESTIC)
- I -	
ICW	INDUSTRIAL COLD WATER
IW	INDIRECT WASTE
IE	INVERT ELEVATION
INT	INTEGRAL
- K -	
KW	KILOWATT
- L -	
LAV	LAVATORY
- M -	
MPG	MEDIUM PRESSURE GAS
MTD	MOUNTED
- N -	
NTS	NOT TO SCALE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
- O -	
OC	ON CENTER
OD	OVERFLOW DRAIN
- P -	
PH	PHASE
PO	PLUGGED OUTLET
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
- Q -	
QTY	QUANTITY
- R -	
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
- S -	
SAN	SANITARY SEWER
SD	STORM DRAIN
SK	SINK
SOV	SHUT-OFF VALVE
SQ	SQUARE
SS	SERVICE SINK
- T -	
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TPL	TRAP PRIMER LINE
TYP	TYPICAL
TW	TEMPERED WATER
TWR	TEMPERED WATER RETURN
- U -	
UR	URINAL
- V -	
V	VENT
VERT	VERTICAL
VTR	VENT THROUGH ROOF
VB	VACUUM BREAKER
- W -	
W	SANITARY WASTE/SEWER
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
- Y -	
YB	YARD BOX

ADA COMPLIANCE NOTES

1. COVER EXPOSED HOT & COLD WATER PIPING AND WASTE PIPING AT ALL LAVATORIES WITH NEATLY PRE-FORMED PIPE INSULATION, PLUMBEREX "PRO-EXTREME MODEL X4333 OR X4444 OR APPROVED EQUIVALENT.
2. ALL PIPING UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
3. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
4. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THE 5 lbf. LEVER-OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.
5. ACCESSIBLE PLUMBING FIXTURES SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF CBC 2022 CHAPTER 11B-DIVISION 6. HEIGHTS AND LOCATION OF ALL FIXTURES SHALL BE ACCORDING TO CBC TABLE 11B-604.9. FIXTURE CONTROLS SHALL COMPLY WITH CHAPTER SECTION 11B-309.4.

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2022 CALIFORNIA PLUMBING CODES, CALIFORNIA STATE FIRE MARSHAL, CALIFORNIA DIVISION OF THE STATE ARCHITECT, AND CALIFORNIA ADMINISTRATIVE CODES, TITLES 17, 24 AND AUTHORITIES HAVING JURISDICTIONS.
2. CONTRACTOR SHALL VERIFY ALL UTILITIES LOCATION, SIZE AND ELEVATIONS WITH CIVIL ENGINEER'S DRAWINGS PRIOR TO START OF WORK.
3. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES FOR CLEARANCES AND WORK INCLUDED PRIOR TO START OF WORK.
4. KEEP ALL PIPING CLEAR FROM LOAD BEARING FOOTINGS.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, MOUNTING HEIGHTS AND COLORS OF ALL PLUMBING FIXTURES.
6. ALL VENTS SHALL TERMINATE NOT LESS THAN 10 FEET FROM, OR NOT LESS THAN 3 FEET ABOVE, FRESH AIR INTAKES, WINDOWS, DOORS OR OTHER OPENINGS.
7. PROVIDE AND INSTALL ACCESS PANELS AT ALL LOCATION OF WATER HAMMER ARRESTORS. - PANELS TO 12 X 12 OR AS REQUIRED. FINISH SELECTED BY ARCHITECT.
8. CLEANOUTS SHALL BE INSTALLED PER CALIFORNIA PLUMBING CODE SECTION 707, 719 AND 803.
9. SLOPE OF BUILDING SEWERS SHALL NOT BE LESS THAN 2% UNLESS NOTED OTHERWISE.
10. ALL DOMESTIC HOT WATER PIPING SHALL BE INSULATED AS REQUIRED BY CALIFORNIA ENERGY COMMISSION TABLE 120.3-A OF THE BUILDING ENERGY EFFICIENCY STANDARDS. INSULATION SHALL HAVE A FIRE HAZARD CLASSIFICATION 25/50 COMPOSITE RATING.

PIPE SIZE	INSULATION THICKNESS	INSULATION VALUE
< 1"	1"	K FACTOR = 0.25
1" <	1-1/2"	K FACTOR = 0.25

11. CIRCULATING HOT WATER SYSTEMS SHALL BE EQUIPPED WITH A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMPS WHEN HOT WATER IS NOT REQUIRED (TIME CLOCK).
12. ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE CALIFORNIA ENERGY COMMISSION (CEC) REQUIREMENTS AND BE SO LABELED.
13. COORDINATE WITH ELECTRICAL TRADE PRIOR TO ORDERING EQUIPMENT FOR AVAILABLE VOLTAGES AT EQUIPMENT LOCATIONS.
14. ALL HOSE BIBBS, WALL HYDRANTS AND JANITORIAL SERVICE SINKS SHALL BE EQUIPPED WITH APPROVED, PROPERLY INSTALLED ATMOSPHERIC TYPE VACUUM BREAKER.
15. ALL WATER CONNECTIONS TO HVAC EQUIPMENT SHALL BE PROTECTED BY APPROVED, REDUCED PRESSURE BACKFLOW PREVENTION DEVICES. DEVICES SHALL BE ACCESSIBLE FOR TEST AND AND MAINTENANCE. PROVIDE FUNNEL DRAIN AND INDIRECT WASTE PIPING FOR BACKFLOW DEVICES DISTANT FROM FLOOR SINKS.
16. NATURAL GAS LINES SHALL NOT BE LOCATED UNDER ANY STRUCTURE. 2022 CPC SECTION 1210.1.6
17. DO NOT USE METALLIC GAS LINES TO GROUND ELECTRICAL SYSTEM.
18. PROVIDE COATED 12 GAUGE COPPER WIRE ATTACHED TO POLYETHYLENE GAS YARD PIPING FOR TRACING PURPOSE. TERMINAL WIRES SHALL BE IDENTIFIED IN LABELED ACCESS BOXES.
19. FOR LOCATION OF PIPING SLEEVES AND FLOOR OPENINGS THROUGH STRUCTURAL FLOOR SLABS, REFER TO DETAILS INDICATED IN STRUCTURAL DRAWINGS.
20. CONTRACTOR SHALL PATCH AND REPAIR ALL SURFACE AREAS DAMAGED BY HIS OPERATION.
21. ALL VALVES, UNIONS, ETC. TO BE LINE SIZE UNLESS OTHERWISE INDICATED ON DRAWINGS.
22. UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH THREADED TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.
23. ANY DEVIATION FROM THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
24. UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL PLANS NO STRUCTURAL MEMBER SHALL BE CUT. NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.
25. FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACTOR DOCUMENTS AND VERIFY THIS INFORMATION BEFORE ORDERING, FABRICATING OR INSTALLING OF ANY MATERIALS.
26. ALL INTERIOR CONDENSATE PIPING SHALL BE INSULATED WITH CLOSED CELL FOAM INSULATION WITH FIRE HAZARD CLASSIFICATION 25/50 COMPOSITE RATING.
27. CONTRACTOR SHALL PROVIDE AS-BUILTS, CAD GENERATED AND DRAWN TO THE SAME SCALE THAT CONSTRUCTION DRAWINGS INDICATE (I.E. ENLARGED PLANS @ 1/4"=1'-0") SUBMIT 1 ELECTRONIC COPY. CAD DRAWINGS SHALL BE AUTOCAD LATEST VERSION. COORDINATE REQUIREMENTS WITH OWNER.
28. PROVIDE WRITTEN WARRANTY TO REPLACE ALL FAULTY MATERIALS AND/OR LABOR, AT NO COST TO OWNER, FOR A PERIOD OF ONE YEAR FROM DATE OF OWNERS ACCEPTANCE.
29. ALL PLUMBING LINES THAT ARE EXPOSED OP OPEN TO THE ROOMS, SHALL BE RAN PARALLEL AND PERPENDICULAR TO THE WALLS. NO HORIZONTAL PIPING WILL BE ALLOWED/ACCEPTED.

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DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
2104 E. Dakota Ste. Fresno, CA 93726-5113
Tel 559.490.1210 Fax 559.490.1213

PLUMBING GENERAL NOTES

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

PROFESSIONAL ENGINEER * CALIFORNIA * No. M38752 * MECHANICAL * REGISTERED * STATE OF CALIFORNIA

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PROJECT NUMBER: 22-8112-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025
DELTA DATE: DESCRIPTION:

P0.01
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\P\22052P001.dwg 8-27-25-9:00 AM

DRAINAGE FIXTURE UNITS

QUANTITY	FIXTURE	F.U.	TOTAL F.U.
2	WATER CLOSET	4	8
0	URINAL	2	0
2	LAVATORY	1	2
1	SINK	2	2
2	DRINKING FOUNTAIN	0.5	1
0	SERVICE SINK	3	0
0	HOSE BIBB	-	0
	TOTAL		13

DOMESTIC WATER LOADS

QUANTITY	FIXTURE	F.U.	TOTAL F.U.
2	WATER CLOSET	5	10
0	URINAL	4	0
2	LAVATORY	1	2
1	SINK	2	2
2	DRINKING FOUNTAIN	0.5	1
0	SERVICE SINK	3	0
2	HOSE BIBB	2.5/1	3.5
	TOTAL		18.5

WATER PIPE SIZING SCHEDULE

PIPE SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
GPM	2	4.5	10	17.5	27	57	88	150	230
FLUSH TANK FU	1	5	13	25	47	160	312	638	1173
FLUSH VALVE FV	-	-	-	-	10	74	265	559	1173
FT/SEC	-	-	-	-	6.0	6.0	6.0	6.0	6.0

PIPE SIZING BASED ON 3.0 PSI/100' AND MAX. VELOCITY OF 8 FEET PER SECOND

ELECTRIC WATER HEATER SCHEDULE

SYMBOL	LOCATION	MFR/ MODEL No.	STOR. (GAL.)	RECOV. @ 60°F RISE (GPH.)	TANK SIZE DIA (IN)	TANK SIZE HT (IN)	TEMP IN (F°)	TEMP OUT (F°)	ELECTRICAL DATA KW	VOLT	PH	OPER. WEIGHT (LBS)	REMARKS
EWH 1	OUTDOOR YARD	AO SMITH #DEL-30	30	-	24	32	60	120	4	208	3	304	WALL MOUNTED WATER HEATER WITH STAND, SEE DETAIL 2/P0.02

EXPANSION TANK SCHEDULE

SYM.	LOCATION	MFR/MODEL	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME GALLONS	CHARGING PRESSURE (PSIG)	SYSTEM CONNECTION SIZE (NPT)	OPER. WT. (LBS.)	REMARKS
ET 1	OUTDOOR YARD	AMTROL THERM-X-TROL ST-8-C	3.2	1.9	50	3/4"	33.7	175 PSI ASME CONSTRUCTION SIZED FOR UP TO 60 GALLON STORAGE TANK. REFER TO DETAIL 2/P0.02

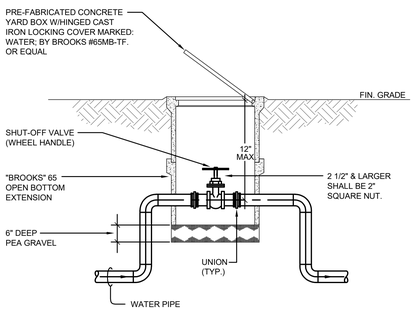
CIRCULATING PUMP SCHEDULE

SYMBOL	LOCATION	MFR/ MODEL No.	TYPE	GPM	HEAD (FT.)	RPM	ELECTRICAL DATA WATTS	VOLT	PHASE	HERTZ	OPER. WEIGHT (LBS)	REMARKS
CP 1	OUTDOOR YARD	BELL & GOSSET NBF-10S/LW	INLINE	3	10	2800	52	120	1	60	9	ALL BRONZE CONSTRUCTION, COMPLETE W/ AQUASTAT AND TIME CLOCK. SEE DETAIL 2/P0.02

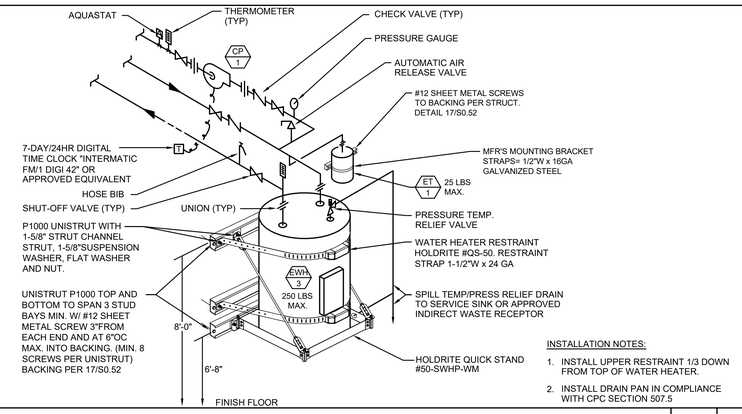
PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	ROUGH-IN-SIZE TRAP	S/W	V	CW	HW	FIXTURE UNIT WASTE	FIXTURE UNIT WATER	DESCRIPTION/REMARKS
WC-1	WATER CLOSET	INT	4"	2"	1 1/2"	-	4	.5	AMERICAN STANDARD #3461.001 FLOOR MNTD., VITREOUS CHINA, ELONGATED BOWL, SYPHON JET. PROVIDE WITH OLSONITE #955SCT OPEN FRONT SEAT, COMPLETE WITH SLOAN ROYAL #111-1.28, 1.28 GPF MANUAL FLUSH VALVE. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
L-1	LAVATORY (ACC)	1 1/2"	2"	1 1/2"	3/4"	-	1	1	AMERICAN STANDARD #0355.012, WALL HUNG VITREOUS CHINA BOWL WITH CHICAGO #3400-ABCP METERING FAUCET, VANDAL-PROOF NON FAUCET WITH BRADLEY #S59-4200 TMV, VANDAL-PROOF NON-AERATING, WITH 0.35 GPM FLOW CONTROL. PROVIDE FIXTURE CARRIER WITH STEEL UPRIGHTS.
S-1	SINK (ACC)	1 1/2"	2"	1 1/2"	3/4"	3/4"	2	2	JUST #HCL-23520-T, SINGLE COMPARTMENT, 18 GAUGE TYPE 304 STAINLESS STEEL, INTEGRAL BACKSPLASH AND APRON, #J-1174-KS (1.5 GPM) FAUCET, #J-ADA-115-FS DRAIN, CHICAGO #1006 LOOSE KEY STOPS WITH BRAIDED STAINLESS STEEL SUPPLIES AND 17 GAUGE P-TRAP.
EEW-1	EMERGENCY EYE/FACE WASH (ACC)	-	2"	-	3/4"	3/4"	-	-	GUARDIAN #GBF1738DP, RECESSED BARRIER-FREE SWING DOWN EYE-FACE WASH UNIT WITH DRAIN PAN, COMPLETE WITH THERMOSTATIC MIXING VALVE. FURNISH CHICAGO #1006 LOOSE KEY STOPS WITH RIGID SUPPLY STOP.
DF-1	DRINKING FOUNTAIN (ACC)	1 1/2"	2"	1 1/2"	3/4"	-	.5	.5	ELKAY #EDFPVR217C, BI-LEVEL VANDAL-RESISTANT FOUNTAIN, NON-FILTERED NON REFRIGERATED STAINLESS STEEL UNIT, WALL MOUNTED WITH FRONT BUBBLER BUTTON ACTIVATION. PROVIDE WITH MOUNTING BRACKET AND/OR IN WALL FIXTURE SUPPORT.
FS-1	FLOOR SINK	2"	2"	1 1/2"	1/2"	-	2	-	JR SMITH #3150Y-C-12, 12.5"x12.5"x8", HUBLESS ACID RESISTANT ENAMELED CAST IRON RECEPTOR WITH REMOVABLE BOTTOM STRAINER, HALF GRATE, TRAP PRIMER CONNECTION AND P-TRAP.
HB-1	HOSE BIBB	-	-	-	3/4"	-	-	-	ACORN #8104 WALL HYDRANT, RECESSED ALUMINUM BOX WITH BUILT IN DRIP LIP, WALL FLANGE, DOOR WITH RECESSED CAM LOCK, COMPLETE WITH REMOVABLE WHEEL HANDLE AND VACUUM BREAKER.
TP-1	TRAP PRIMER	-	-	-	-	-	-	-	JR SMITH, BRONZE CONSTRUCTION WITH SHUT-OFF VALVE AND BEHIND ACCESS PANEL, 125 PSIG MINIMUM. AUTOMATICALLY OPERATES WITH 3 PSI PRESSURE DROP. (SIZE PER MANUFACTURERS RECOMMENDATIONS)
WHA-1	WATER HAMMER ARRESTOR	-	-	-	1/2"	-	-	-	JR SMITH "HYDROTROL" 5000 SERIES, BEHIND ACCESS PANEL. (SIZE IN ACCORDANCE WITH PDI STANDARDS)

NOTE: HAND OPERATED METERING FAUCETS SHALL REMAIN OPEN FOR 10 SECOND MINIMUM.



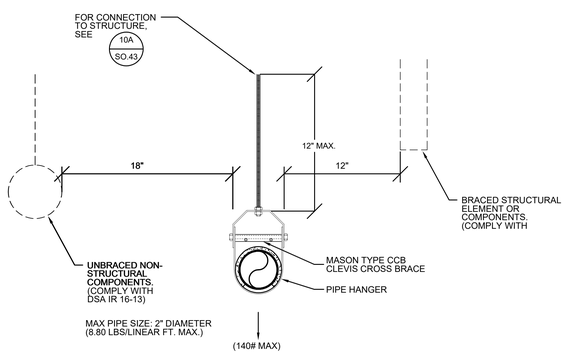
WATER SERVICE SOV IN YARDBOX DETAIL | SCALE NONE | 1



ELECTRIC WATER HEATER PIPING/MOUNTING DETAIL | SCALE NONE | 2

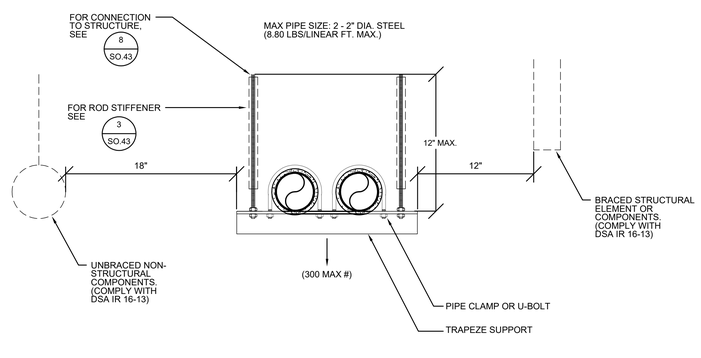
-

SCALE NONE | 3



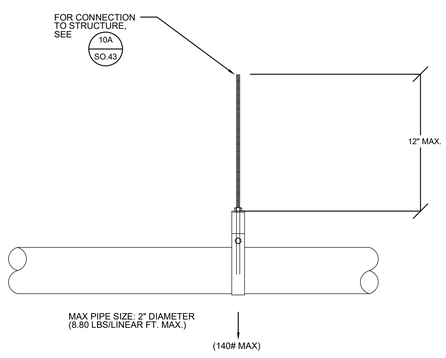
VERTICAL HANGER SPACING = 16'-0" O.C. MAX.

TRAVERSE SOLID BRACE SINGLE PIPE HANGER DETAIL | SCALE NONE | 4



VERTICAL HANGER SPACING = 16'-0" O.C. MAX.

TRAVERSE TRAPEZE SOLID BRACE PIPE HANGER DETAIL | SCALE NONE | 5



1" - 2" PIPES = 16' O.C. MAX.

LONGITUDINAL SOLID BRACE FOR CLEVIS PIPE HANGER DETAIL | SCALE NONE | 6

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DATE: 09/02/25

CONSULTANT:
DCCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
3743 E. Chapman Ave, Ste. 2
Orange, CA 92869-1533
714.637.0480 FAX 714.637.0483

PLUMBING SCHEDULES AND DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

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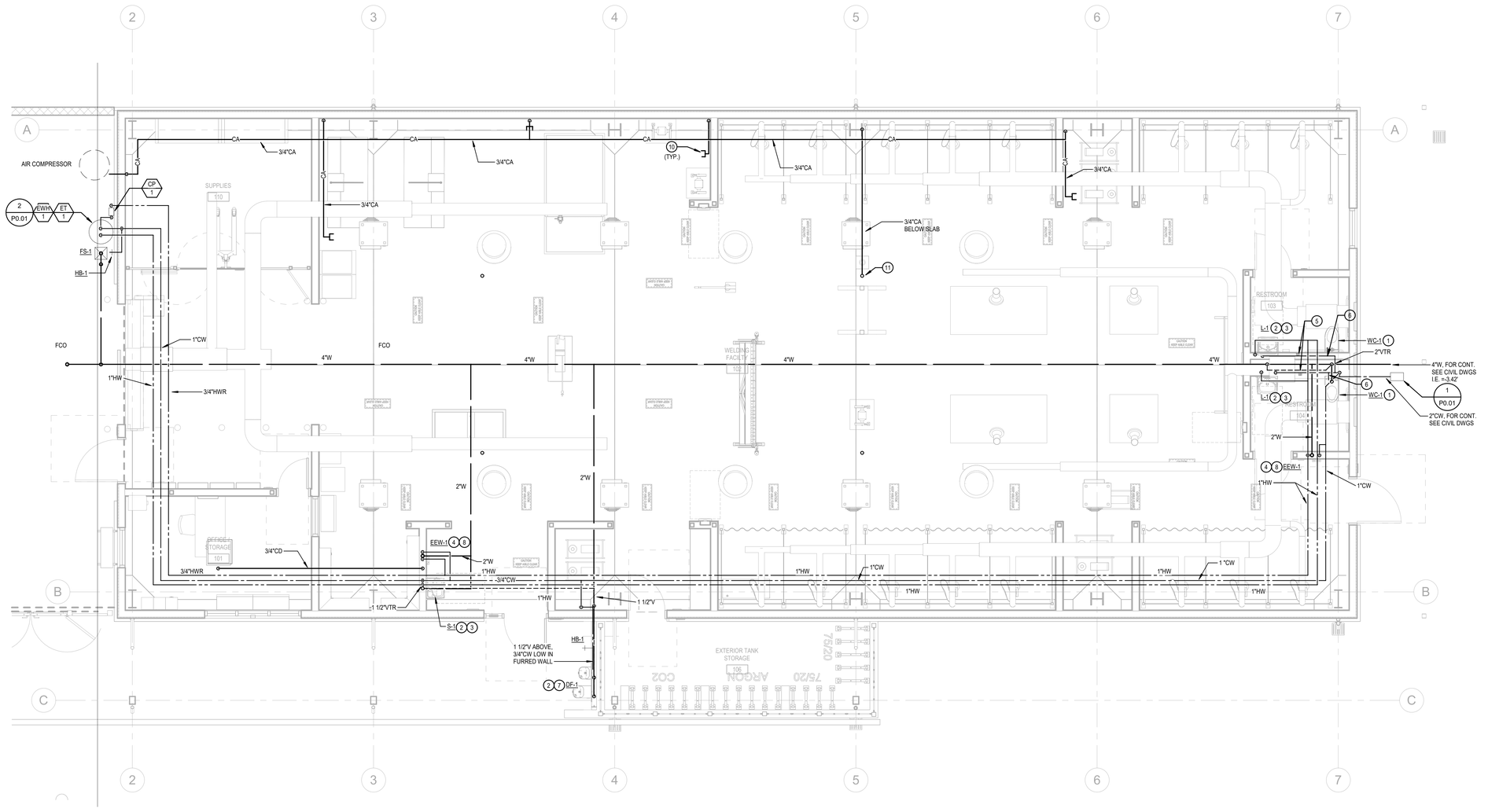
PROJECT NUMBER: 22-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

P0.02
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\P\22052P002.dwg 8-27-25-9:00 AM



PLUMBING FLOOR PLAN
1/4" = 1'-0" SCALE 1

SHEET NOTES

1. 4"W DOWN AND 2"V UP.
2. 2"W DOWN AND 1 1/2"V UP.
3. 3/4" H&CW DOWN TO FIXTURE.
4. 3/4" H&CW DOWN TO FIXTURE/MIXING VALVE.
5. WHA-1 IN WALL BEHIND ACCESS PANEL.
6. 1 1/2"CW DOWN IN WALL WITH SOV BEHIND ACCESS PANEL TO 1 1/2"CW HEADER.
7. 3/4" CW DOWN TO FIXTURE.
8. CONNECT WASTE TO EYEWASH DRAIN PAN.
9. 3/4"CD DOWN IN WALL, CONNECT TO SINK TAILPIECE.
10. 3/4"CA WITH COUPLING CONNECTION.
11. 3/4"CA WITH COUPLING CONNECTION TO HYDRALIC PRESS.

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APP: 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
MCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
Corporate Mtn Pkwy
Irvine, CA 92614
714.665.1000
Fax 949.660.1001

PLUMBING PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
REGISTERED PROFESSIONAL ENGINEER
HEATHER SAMA
No. M36912
MECHANICAL
STATE OF CALIFORNIA

sgh ARCHITECTS

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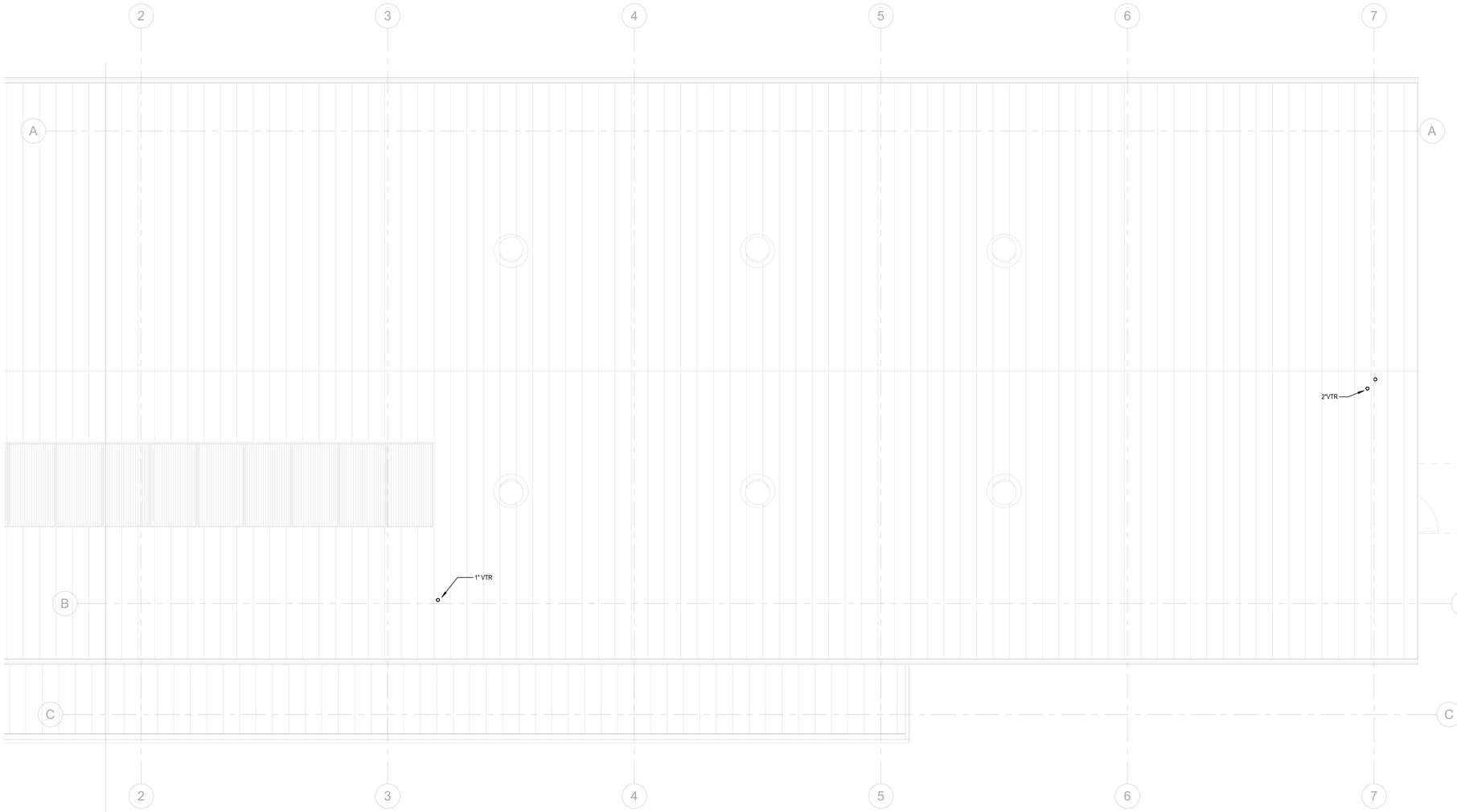
PROJECT NUMBER: 23-46102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/26/2025
DELTA: DATE: DESCRIPTION:

P2.21
100% CD

8/27/2025 9:07:50 AM C:\Users\CChaffe\Desktop\2023 Revit Local Files\Chaffey College Intech Welding Facility #22052\MF Building design_MEP24_Central_cvdy.dax.rvt



PLUMBING ROOF PLAN
1/4" = 1'-0" SCALE 1

NORTH

SHEET NOTES

IDENTIFICATION STAMP
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DATE: 09/02/25

CONSULTANT:
MCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
Gabriel A. Mc Grey
Principal
No. M 24514
Exp. 12/31/2026

SEALS:

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025
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PLUMBING ROOF PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

P3.21
100% CD

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GENERAL NOTES

1. PROJECT RECORD DOCUMENTS. USE A COMPUTER AIDED DRAFTING (CAD) SYSTEM IN THE PREPARATION OF RECORD DRAWINGS FOR THIS PROJECT. ACCEPTABLE CAD SYSTEMS SHALL BE CAPABLE OF PRODUCING FILES COMPATIBLE WITH THE LATEST VERSION OF AUTOCAD IN DWG OR DXF FORMAT. OWNER'S CONSULTANT WILL FURNISH CAD BACKGROUNDS FOR USE BY THE CONTRACTOR AFTER CONSTRUCTION IS 90% COMPLETE EXCEPT WHERE PROHIBITED BY CONTRACT.

2. ALL ELECTRICAL PREFABRICATED EQUIPMENT SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER THAT ALL PORTIONS, ELEMENTS, SUB-ASSEMBLIES AND/OR PARTS OF SAID EQUIPMENT, AND THE EQUIPMENT AS A WHOLE INCLUDING ITS ATTACHMENTS, WILL RESIST A LOAD WHICH EXCEEDS THE FORCE LEVEL USED TO RESTRAIN AND ANCHOR THE EQUIPMENT TO THE SUPPORTING STRUCTURE.

3. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATORIES (UL) AND BEAR THEIR LABEL, OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY, WHERE UL DOES NOT HAVE A LISTING. CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER ATTESTING TO ITS SAFETY. IN ADDITION, THE MATERIALS, EQUIPMENT, AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:

   AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
   INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
   NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
   AMERICAN STANDARD ASSOCIATION (ASA)
   NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
   AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
   CALIFORNIA ELECTRICAL CODE (CEC) - LATEST EDITION CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)
   INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE) ALL LOCAL CODES HAVING JURISDICTION.

   WHERE THE CODES HAVE DIFFERENT LEVELS OF REQUIREMENTS, THE MOST STRINGENT RULE SHALL APPLY.

4. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.

5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS AND ADDENDA (DRAWINGS AND SPECIFICATIONS.) HE SHALL CHECK THE CONTRACT DOCUMENTS OF THE OTHER TRADES AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM COMPLETING ALL RESPONSIBLE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.

7. ALL ELECTRICAL WORK REFERENCED HEREIN SHALL BE COORDINATED WITH OTHER TRADES AND SITE CONDITIONS. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE CONTRACT DOCUMENTS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

8. PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS, BRANCH CIRCUITS, OR SIGNAL AND COMMUNICATIONS SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION.

9. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER, WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ENGINEER 14 DAYS PRIOR TO THE OUTAGE. ANY OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANELBOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.

10. AFTER ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNERS WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.

11. FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF SUBSTANTIAL COMPLETION.

12. REVIEW AND COORDINATE WITH THE MECHANICAL, FIRE PROTECTION AND PLUMBING CONTRACT DOCUMENTS FOR DUCTS, LINES AND EQUIPMENT.

13. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.

14. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT. DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS SHALL BE PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.

15. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE OR MASONRY WALLS, GRADEBEAMS, FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.

16. CONNECTIONS TO MECHANICAL, PLUMBING AND VIBRATING EQUIPMENT AND SEISMIC SEPARATIONS:

   LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS.

   LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES, AND FINAL CONNECTIONS TO MOTORS.

17. EQUIPMENT OUTLETS, LIGHTING FIXTURES, CONDUIT, WIRE, AND CONNECTION METHODS IN HVAC AIR-PLENUMS SHALL BE APPROVED FOR USE IN PLENUMS AND SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE.

18. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.

19. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED IN WALLS, OR 24" MINIMUM BELOW SLAB ON GRADE UNLESS NOTED OTHERWISE.

20. LOCATE ELECTRICAL EQUIPMENT AND BOXES, IN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS. ACCESS DOORS SHALL BE A MINIMUM DIMENSION OF 24"x24". ACCESS DOOR LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.

21. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILINGS TO SUIT FIELD CONDITIONS. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.

22. PROVIDE ALL SAWCUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE, ASPHALT AND LANDSCAPING AS REQUIRED TO PERFORM THIS WORK. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK AND SHALL BE RESPONSIBLE FOR DETERMINING AND/OR VERIFYING ALL EXISTING UNDERGRND AND SYSTEMS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.

23. WHENEVER A DISCREPANCY OF ANY SYSTEM AND/OR EQUIPMENT ARISES ON THE CONTRACT DOCUMENTS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.

24. VERIFY TYPE OF CEILING SYSTEMS AND FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN THE SPECIFIC CEILING. WHERE FIXTURES ARE RECESSED IN PLASTER OR DRYWALL CEILINGS, THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMES.

25. ALL EQUIPMENT/DEVICES INSTALLED RECESSED IN FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED UL LISTED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL.

26. UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES, SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED UL LISTED SYSTEM OR MATERIAL.

    STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILINGS, OR AREA SEPARATION UNLESS THEY:

    OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER. IN THIS CASE, ONLY ONE OUTLET BOX NEED TO PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO CORRECT THIS CONDITION.

    OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA. IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL.

    STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.

    FIRESTOPPING MATERIAL: MPP-1 MOLDABLE PUTTY PADS

    3M CONTRACTOR PRODUCTS
    MINNEAPOLIS, MN
    3M TEST REPORT NO. 1167
    DATED AUGUST 21, 1987

    FSP FIRESTOP PUTTY PADS
    HEVI-DUTY NELSON PRODUCTS
    TULSA, OK

    FLAMESAFE FSP 1077 FIRESTOP PADS
    INTERNATIONAL PROTECTIVE COATINGS
    OAKHURST, NJ

    STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT.

    UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD FRAMING OF THE WALL, PARTITION OR CEILING ASSEMBLY. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8 INCH. IN SMOKE WALLS OR PARTITIONS, THE 1/8 INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED SEALANT.

27. ARCHITECTURAL REFLECTED CEILING PLANS INDICATING THE LOCATION OF LIGHTING FIXTURES SHALL TAKE PRECEDENCE OVER THE LOCATIONS OF SAME SHOWN ON THE ELECTRICAL DRAWINGS. INSTALL THE LIGHTING FIXTURES IN ANY GIVEN AREA PER THE ARCHITECTURAL REFLECTED CEILING PLANS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

28. THE LOCATIONS AND MOUNTING HEIGHTS OF LIGHTING FIXTURES LOCATED IN MECHANICAL EQUIPMENT SPACES AND PENTHOUSES SHALL BE COORDINATED IN THE FIELD PRIOR TO INSTALLATION TO AVOID INTERFERENCE WITH DUCTS, PIPING, AND OTHER MECHANICAL EQUIPMENT. WHEN LOCATIONS AND MOUNTING HEIGHTS ARE DETERMINED, OBTAIN APPROVAL FROM THE ARCHITECT PRIOR TO INSTALLATION.

29. REFER TO SINGLE LINE DIAGRAM AND FEEDER SCHEDULES FOR CONDUIT AND CONDUCTOR SIZE TO PANELS, TRANSFORMERS, MECHANICAL AND PLUMBING EQUIPMENT, ETC. CONDUIT RUNS MAY NOT BE SHOWN ON DRAWINGS, BUT SHALL BE INCLUDED AS PART OF THIS CONTRACT.

30. STRAIGHT FEEDER, BRANCH CIRCUIT, AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.

31. MAXIMUM QUANTITY OF CONDUCTORS IN AN OUTLET OR JUNCTION BOX SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, ARTICLE 314.16. IN NO CASE SHALL OUTLET OR JUNCTION BOXES CONTAIN MORE THAN THE FOLLOWING QUANTITY OF #12 AWG CONDUCTORS FOR THE SIZE OF BOX INDICATED. THE MINIMUM SIZE OUTLET OR JUNCTION BOX PERMITTED IN A WALL IS FOUR INCHES SQUARE BY 1-1/2 INCHES DEEP.

4" SQ. BY 1-1/2" D =	9 CONDUCTORS
4" SQ. BY 2-1/8" D =	13 CONDUCTORS
4-11/16" SQ. BY 1-1/2" D =	11 CONDUCTORS
4-11/16" SQ. BY 2-1/8" D =	18 CONDUCTORS

    ALL OUTLET BOXES CONTAINING MORE THAN ONE DEVICE SHALL BE GANGED. TWO DEVICES DOUBLE GANGED, MINIMUM.

32. WHERE MULTIPLE HOMERUNS ARE INDICATED ON DRAWINGS REFERENCING THE SAME PANELBOARD CIRCUIT NUMBER, PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING AND ROUTE ONE SET OF WIRES TO CIRCUIT BREAKERS.

33. RECESSED PANELS AND CABINETS SHALL HAVE FIVE SPARE 3/4" INCH CONDUITS STUBBED UP INTO AN ACCESSIBLE CEILING SPACE AND CAPPED UNLESS NOTED OTHERWISE.

34. THE LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN. UNLESS OTHERWISE NOTED, ELECTRICAL DEVICES SHALL BE MOUNTED PER "ACCESSIBLE DEVICE MOUNTING HEIGHT" DETAIL.

    REVIEW ARCHITECTURAL ELEVATIONS OF CASEWORK-OUTLETS MOUNTED ABOVE OR BELOW, OR ADJACENT TO CASEWORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS, PRIOR TO FINAL ROUGH-IN. ELECTRICAL DRAWINGS SHALL GOVERN NUMBER AND TYPE OF OUTLETS; HOWEVER, LOCATIONS SHALL BE AS INDICATED ON ARCHITECTURAL ELEVATIONS. PROVIDE CONDUIT, WIRES, AND OUTLETS FOR WORK REQUIRED IN CASEWORK INSTALLATIONS. REFERENCE ARCHITECTURAL DETAILS FOR METHOD OF ROUTING CONDUIT WITHIN CASEWORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT-OUTS IN TILE OR COUNTER SPLASHES WHERE RECEPTACLES, OUTLETS, ETC., OCCUR. PROVIDE BOX EXTENSIONS THROUGH ALL CASEWORK TO ENSURE FINISHED INSTALLATION IS FLUSH WITH FACE OF SPLASH, CABINET, ETC.

    MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO CENTER OF DEVICES AND EQUIPMENT UNLESS OTHERWISE NOTED. BOXES INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

35. DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE DETAILED CONDUIT ROUTING OR LENGTHS REQUIRED FOR COMPLETE INSTALLATION. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR BUT SHALL BE IN STRICT COMPLIANCE WITH STRUCTURAL REQUIREMENTS, CONTRACT DOCUMENTS AND SPECS UNLESS OTHERWISE NOTED. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL AND/OR MECHANICAL ITEMS OR FEATURES. REFER TO ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS FOR DIMENSIONS.

36. A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR, ALTHOUGH NOT SHOWN ON CONDUIT RUNS, SHALL BE INSTALLED AND RUN CONTINUOUS FROM PANEL TO THE LAST DEVICE. THIS WIRE SHALL BE PIGTAILED IN EACH OUTLET FOR CONNECTION TO BOX AND DEVICE SUCH THAT IF DEVICE IS REMOVED THE CONTINUITY OF THE GROUND WILL NOT BE COMPROMISED/INTERRUPTED. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSULATED GREEN CONDUCTORS - ALTERNATE METHODS OF IDENTIFICATION SHALL NOT BE USED. CONTRACTOR SHALL NOTIFY ELECTRICAL ENGINEER TO EXAMINE CONDUCTOR INSTALLATION PRIOR TO INSTALLATION OF DEVICES.

37. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR HOUSEKEEPING PADS AND EQUIPMENT FOUNDATIONS. PROVIDE SIZES REQUIRED FOR EQUIPMENT TO BE INSTALLED.

38. ALL CONDUCTORS SHALL BE UL LISTED COPPER #12 AWG MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY AND UL LISTED UNLESS NOTED OTHERWISE. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED.

39. REVIEW STRUCTURAL DRAWINGS FOR LOCATIONS AND SIZES OF FOOTINGS AND GRADE BEAMS. REFERENCE STRUCTURAL DRAWINGS FOR REQUIREMENTS FOR INSTALLATION OF CONDUIT THROUGH GRADE BEAMS AND FOOTINGS.

40. PANEL SCHEDULES SHALL BE REVISED TO REFLECT FINAL ROOM NAMES AND NUMBERS USING OWNERS ROOM NAMES AND NUMBERS DESIGNATIONS.

41. WHERE OUTLETS OCCUR AT TACKABLE WALL PANELS OR OTHER WALL FINISHES, PROVIDE EXTENSION RINGS AS REQUIRED SO THAT NO SPACE WILL EXIST BETWEEN DEVICE PLATE AND BACKBOX, PER CALIFORNIA ELECTRICAL CODE 314.20. SEE ARCHITECTURAL ELEVATIONS FOR WALL FINISHES AND LOCATIONS.

42. COORDINATE LOCATIONS OF ALL SEISMIC SEPARATIONS.

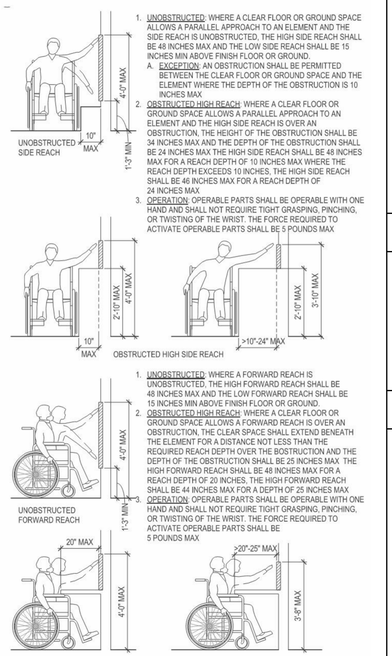
43. REFER TO FIRE ALARM PLANS FOR ADDITIONAL POWER REQUIREMENTS REQUIRED FOR FIRE/SMOKE DAMPERS AND POWER SUPPLIES.

44. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR EXTERIOR WALL MOUNTED LIGHTS, SPEAKERS AND FIRE ALARM HORNS.

45. WHERE FIXTURES ARE SHOWN TO BE DUAL SWITCHED, SWITCH Sa SHALL CONTROL THE TWO OUTSIDE LAMPS IN EACH FIXTURE, Sb SHALL CONTROL THE REMAINING LAMPS IN EACH FIXTURE.

46. A DEDICATED NEUTRAL SHALL BE RUN FOR EACH BRANCH CIRCUIT WHERE A NEUTRAL IS REQUIRED TO COMPLY WITH CEC 210.4(B).

OBSTRUCTED HIGH FORWARD REACH | 2



1. UNOBSTRUCTED: WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48 INCHES MAX AND THE LOW SIDE REACH SHALL BE 15 INCHES MIN ABOVE FINISH FLOOR OR GROUND.
   A. EXCEPTION: AN OBSTRUCTION SHALL BE PERMITTED BETWEEN THE CLEAR FLOOR OR GROUND SPACE AND THE ELEMENT WHERE THE DEPTH OF THE OBSTRUCTION IS 10 INCHES MAX
2. OBSTRUCTED HIGH REACH: WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34 INCHES MAX AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24 INCHES MAX THE HIGH SIDE REACH SHALL BE 48 INCHES MAX FOR A REACH DEPTH OF 10 INCHES MAX WHERE THE REACH DEPTH EXCEEDS 10 INCHES, THE HIGH SIDE REACH SHALL BE 46 INCHES MAX FOR A REACH DEPTH OF 24 INCHES MAX
3. OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAX

1. UNOBSTRUCTED: WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48 INCHES MAX AND THE LOW FORWARD REACH SHALL BE 15 INCHES MIN ABOVE FINISH FLOOR OR GROUND.
2. OBSTRUCTED HIGH REACH: WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEAR SPACE SHALL EXTEND BENEATH THE ELEMENT FOR A DISTANCE NOT LESS THAN THE REQUIRED REACH DEPTH OVER THE BOSTRUCTION AND THE DEPTH OF THE OBSTRUCTION SHALL BE 25 INCHES MAX THE HIGH FORWARD REACH SHALL BE 48 INCHES MAX FOR A REACH DEPTH OF 20 INCHES. THE HIGH FORWARD REACH SHALL BE 44 INCHES MAX FOR A DEPTH OF 25 INCHES MAX
3. OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAX

FORWARD OR FRONT APPROACH FOR DEVICES MOUNTED ABOVE COUNTER ASSUMES THAT DIRECTLY BELOW THE DEVICE THE COUNTER HAS A 30" MINIMUM WIDTH x 27" MINIMUM HIGH x 19" MINIMUM DEEP CLEAR OPENING. CBC SECTIONS 11B-306 & 11B-308.

DEMOLITION NOTES

1. IN GENERAL, THE DEMOLITION PLAN INDICATES ALL EXISTING EQUIPMENT TO BE REMOVED; HOWEVER, ELECTRICAL EQUIPMENT, WHETHER SHOWN ON THIS DRAWING OR NOT, THAT IS LOCATED IN REMOVED WALLS, FLOORS OR CEILINGS, SHALL BE REMOVED/RELOCATED UNLESS OTHERWISE NOTED.

2. THE CONTRACTOR SHALL VISIT THE SITE AND ALL AREAS INCLUDED IN THE DRAWINGS. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THESE EXISTING CONDITIONS, AND BY SUBMITTING A BID ACCEPTS CONDITIONS UNDER WHICH THE CONTRACTOR WILL BE REQUIRED TO PERFORM HIS WORK.

3. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES, RECEPTACLES, ELECTRICAL EQUIPMENT, ETC., AFFECTED BY THE REMODELED AREA. THIS WILL INCLUDE REROUTING, OR THE EXTENSION OF EXISTING CONDUIT AND FEEDERS WHERE NECESSARY TO MAINTAIN THE CONTINUITY OF EQUIPMENT TO REMAIN.

4. ALL CIRCUIT NUMBERS AND EXISTING CONDUIT HOMERUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF HOMERUNS, AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS AS REQUIRED.

5. EXISTING CONDUIT FEEDS UP THROUGH FLOOR SHALL BE CUT OFF AND PLUGGED FLUSH WITH FLOOR WHERE EXISTING WALLS, ETC., ARE REMOVED. REMOVE CONDUCTORS FROM THIS POINT BACK TO LAST OUTLET REMAINING IN SERVICE.

6. WHERE EXISTING WALLS HAVE BEEN REMOVED, AND THERE ARE EXISTING CONDUIT FEEDS WHICH HAVE BEEN CUT-OFF AND CAPPED FLUSH WITH FLOOR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND DIMENSION ALL SUCH CONDUITS ON THE "AS-BUILT" DRAWINGS UNLESS OTHERWISE NOTED.

7. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS, EQUIPMENT, ETC., REMAINING IN OPERATION WHICH ARE BEING FED BY AN ABANDONED OUTLET. MAINTAINING CONTINUITY SHALL CONSIST OF REROUTING CONDUIT, WIRING, ETC., AS REQUIRED.

8. ALL ELECTRICAL FIXTURES, OUTLETS, DEVICES, ETC., THAT ARE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING CONDUIT AND WIRING BACK TO THE LAST FIXTURE, OUTLET, DEVICE, ETC., REMAINING IN SERVICE.

9. EXISTING CIRCUITS WHICH ARE REMOVED AND NOT REUSED SHALL BE IDENTIFIED ON THE PANEL SCHEDULE AS "SPARE".

10. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AND CONDUCTORS. CONTRACTOR SHALL TURN OVER REMOVED EQUIPMENT THAT THE OWNER REQUESTS IN AN "AS-FOUND" CONDITION. EQUIPMENT THAT IS TO BE TURNED OVER SHALL BE BOXED AND TAGGED TO IDENTIFY THE SPECIFIC EQUIPMENT.

11. WHERE NEW CIRCUITS ARE SHOWN TO EXISTING PANELS, INSTALL NEW BREAKERS (MINIMUM 20 AMP, SINGLE POLE) AS REFERENCED ON DRAWINGS. IDENTIFY EACH NEW CIRCUIT ON THE ASSOCIATED PANEL SCHEDULE DIRECTORY.

12. EXISTING CONDUIT MAY BE REUSED IF ADEQUATELY SIZED, BUT IN NO CASE SHALL ANY EXISTING CONDUCTORS BE REUSED.

13. IN SOME INSTANCES, IT MAY BE NECESSARY FOR THE ELECTRICAL CONTRACTOR TO TEMPORARILY RELOCATE, REROUTE, ETC., EXISTING ELECTRICAL EQUIPMENT. THIS SHALL BE DONE SO THAT THE SYSTEMS IN ALL PHASES (THOSE COMPLETED AND THOSE YET TO BEGIN), ARE IN COMPLETE, OPERABLE, CONDITION AS CONSTRUCTION PROCEEDS THROUGH EACH PHASE.

14. WHERE NEW CIRCUITS ARE SHOWN CROSSING PHASING BOUNDARIES (I.E. CORRIDOR LIGHTING, ETC.) THE CONTRACTOR SHALL CONNECT ALL EQUIPMENT, FIXTURES, ETC., IN THE PHASE WHICH IS THEN UNDER CONSTRUCTION. CONTRACTOR SHALL STUB-OUT ALL REQUIRED CONDUIT AND WIRING ACROSS PHASE BOUNDARIES, THEN PICK UP AND EXTEND THESE CONDUIT RUNS WHEN CONSTRUCTION BEGINS IN THE ADJACENT PHASE.

15. DURING EACH PHASE OF DEMOLITION, ALL CIRCUITS FROM EXISTING PANELS WHICH FEED AREAS OUTSIDE THE BOUNDARIES OF THAT PHASE, SHALL BE MAINTAINED.

16. PANELS OR TERMINAL CABINETS WHICH ARE LOCATED IN A WALL THAT IS TO BE DEMOLISHED, SHALL REMAIN IN AN OPERATIVE CONDITION UNTIL ALL AREAS FED BY THE RELATED PANELS HAVE BEEN DEMOLISHED. THIS CONTRACTOR SHALL PROVIDE AND INSTALL ALL EQUIPMENT REQUIRED TO TEMPORARILY SUPPORT PANELS. PANELS MAY BE TEMPORARILY FREESTANDING, MOUNTED IN TEMPORARY PORTION OF WALLS TO BE DEMOLISHED LATER, ETC., CHECK WITH ARCHITECT AND ENGINEER FOR APPROVAL OF SUPPORTS. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO RELOC

ELECTRICAL ABBREVIATIONS

AF	AMPERE FUSE RATING
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTED CAPACITY RATING (RMS SYMMETRICAL MINIMUM)
AM	AMMETER
AMP, A	AMPERES
APPR	APPROVED
AS	AMPERE SWITCH RATING
AT	AMPERE TRIP RATING OR BREAKER
AUTO	AUTOMATIC
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BRD, BD	BOARD
BFC	BELOW FINISHED CEILING
BKR	BREAKER
C.	CONDUIT
CAB	CABINET
CAT	CATEGORY
CC	CENTER TO CENTER
cd	CANDELA
CHLOR	CHLORINE, CHLORINATION
CKT	CIRCUIT
CMH	COMMUNICATION MANHOLE
C.O.	CONDUIT ONLY
COMPT	COMPARTMENT
COMPR	COMPRESSOR
CPB	COMMUNICATION PULLBOX
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY (MAGNETICALLY HELD U.N.O.)
CSFM	CALIFORNIA STATE FIRE MARSHALL
CT	CURRENT TRANSFORMER
CU	COPPER
DDCA	DOUBLE DETECTOR CHECK ASSEMBLY
DISC.	DISCONNECT
DISTR	DISTRIBUTION
DWG	DRAWING
ELEV	ELEVATION
EMERG, EM	EMERGENCY
ENCL	ENCLOSURE
EQPT	EQUIPMENT
EXH	EXHAUST
E	EXISTING
FAA	FIRE ALARM ANNUNCIATOR
FDR	FEEDER
FF	FINISHED FLOOR
FG	FINISHED GRADE
FS	FLOW SWITCH
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FOC	FIBER OPTIC CABLE
FUT	FUTURE
FUP	FUSE, CPT PRIMARY
FUS	FUSE, CPT SECONDARY
GND, GRD	GROUND
HH	HAND HOLE
HOA	HAND-OFF-AUTOMATIC
HTR	HEATER
HZ	HERTZ
IDF	INTERMEDIATE DISTRIBUTION FRAME
ICPB	INTERCEPT COMMUNICATION PULLBOX
IID	IMPERIAL VALLEY IRRIGATION DISTRICT
INC	INCANDESCENT
IND	INDICATION
INSTR	INSTRUMENT
IPPB	INTERCEPT POWER PULLBOX
ISC	SHORT CIRCUIT CURRENT
J.B.	JUNCTION BOX
K	THOUSAND (KILO)
KV	KILOVOLTS
KW	KILOWATTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KWH	KILOWATT HOURS
KWHD	KILOWATT HOUR DEMAND METER
LCP	LIGHTING CONTROL PANEL
LOS	PUSH BUTTON WITH "LOCK-OUT-STOP"
LS	LIMIT SWITCH
LT, LTS	LIGHT, LIGHTS
LTG	LIGHTING
MA	MILLIAMPS
MAN	MANUAL
MAG	MAGNETIC
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME
MH	MANHOLE
MS	MANUAL MOTOR STARTER
MIN	MINUTES, MINIMUM
MOV	MOTOR OPERATED VALVE, METAL OXIDE VARISTER
MT, MTD, MTG	MOUNT, MOUNTED, MOUNTING
N.A.P.	NEUTRALIZATION ALARM PANEL
NO, NOS	NUMBER, NUMBERS
NP	NAMEPLATE
NTS	NOT TO SCALE
OC	ON CENTER
OFOI	OWNER FURNISHED OWNER INSTALLED
OL	OVERLOAD
PB	PULLBOX
PIV	POST INDICATOR VALVE
PMH	POWER MANHOLE
PNL	PANEL
PNLBD	PANELBOARD
POS	POSITION
PPB	POWER PULLBOX
PRI	PRIMARY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PW	PART WINDING
PWR	POWER
REC	RECEPTACLE
RECPTS	RECEPTACLES
REQD	REQUIRED
SA	STATUS ANNUNCIATOR
SCH	SCHEDULE
SEC	SECONDS, SECONDARY
SECT	SECTION
SEL SW	SELECTOR SWITCH
SEQ	SEQUENCE
SHLD	SHIELDED
SHT	SHEET
SIG	SIGNAL
SM	START CONTACTOR COIL
SPECS	SPECIFICATIONS
SP HTR	SPACE HEATER
ST	SHUNT TRIP
STA	STATION
STD	STANDARD
STL	STEEL
STR	STARTER
SV	SOLENOID VALVE
SW	SWITCH
SYS	SYSTEM
TACH	TACHOMETER
TDOD	TIME DELAY ON DE-ENERGIZATION
TDOE	TIME DELAY ON ENERGIZATION
TEMP	TEMPERATURE
TERM	TERMINAL
THERM	THERMOSTAT
TR	TIME DELAY RELAY
TS	TAMPER SWITCH
TSP	TWISTED SHIELDED PAIR
TSTAT	THERMOSTAT
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UGPS	UNDERGROUND PULL SECTION
UTP	UNSHIELDED TWISTED PAIR
VFD	VARIABLE FREQUENCY DRIVE
V	VOLTS
VM	VOLTMETER
VS	VOLTMETER SWITCH
W	WATTS
WHM	WATT HOUR METER
WP	WEATHERPROOF
WPL	WEATHERPROOF LOCKING
XFMR	TRANSFORMER
XMTR	TRANSMITTER

ELECTRICAL SYMBOLS LIST

(E) — EQUIPMENT WITH "E" ADJACENT IS EXISTING TO REMAIN.

(R) — EXISTING EQUIPMENT WITH "R" ADJACENT IS TO BE COMPLETELY DISCONNECTED AND REMOVED.

(RR) — EXISTING EQUIPMENT WITH "RR" ADJACENT IS TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED.

(ER) — RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.

—E— EXISTING CONDUIT RUN TO REMAIN. EXISTING CONDUCTORS TO REMAIN UNLESS NOTED OTHERWISE ON DRAWINGS.

—EA— EXISTING CONDUIT RUN TO BE ABANDONED. REMOVE CONDUCTORS AND CAP ENDS OF CONDUIT.

—EX— EXISTING CONDUIT RUN TO BE REWIRED. REFER TO PLANS FOR WIRING REQUIREMENTS.

—R— EXISTING CONDUIT AND WIRE RUN TO BE COMPLETELY DISCONNECTED AND REMOVED BACK TO LAST REMAINING OUTLET OR DEVICE.

—R—E— "X" INDICATES APPROXIMATE POINT OF INTERCEPTION OF EXISTING CONDUIT RUN. CONDUIT TO BE REMOVED AT "R" SIDE OF "X". REMOVE ALL CONDUCTORS PRIOR TO CUTTING CONDUIT. EXACT LOCATION OF ALL CONDUITS SHALL BE FIELD VERIFIED.

CONDUIT RUN CONCEALED IN WALLS OR UNDER FLOORS.

CONDUIT RUN EXPOSED.

CONDUIT RUN UNDERGROUND.

CONDUIT STUBBED OUT AND CAPPED. PULL LINE IN PLACE.

CROSS LINES ON CONDUIT RUNS INDICATE NUMBER OF #12 CURRENT CARRYING CONDUCTORS CONTAINED THEREIN. TWO #12 AND MINIMUM OF ONE #12 GROUND WIRE ARE INDICATED WHEN CROSS LINES ARE NOT SHOWN. NUMERALS ADJACENT TO CROSS LINES ON CONDUIT RUNS INDICATE SIZE OF CONDUCTORS IN LIEU OF #12. ALL CONDUITS SHALL CONTAIN ONE GROUND WIRE SIZED PER C.E.C. TABLE 250.122, BUT NOT SMALLER THAN #12, WHERE ISOLATED GROUND RECEPTACLES ARE INDICATED, PROVIDE ADDITIONAL #12 GROUND WIRE IN CONDUIT RUNS, CONNECTED FROM ISOLATED GROUND BUS IN PANEL TO DEVICE.

B-1,3 — CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER.

SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD.

RECESSED BRANCH CIRCUIT PANELBOARD.

PNL — PANEL DESIGNATION.

SURFACE MOUNTED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.

RECESSED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.

J — JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR FLUSH IN WALL WITH BLANK COVER PLATE TO MATCH DEVICE PLATES.

J — JUNCTION BOX FLUSH FLOOR MOUNTED.

J — JUNCTION BOX PEDESTAL TYPE FLOOR MOUNTED.

M — THREE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER MOTOR. NUMERAL IN PLACE OF "M" INDICATES HORSEPOWER. (SINGLE LINE DIAGRAM ONLY).

100A 3P — MOLDED CASE CIRCUIT BREAKER AND NUMBER OF POLES AS INDICATED. "A" INDICATES TRIP RATING. SUBSCRIPT INDICATES TYPE.

NO SUBSCRIPT	THERMAL MAGNETIC
NA	NON-AUTOMATIC
MO	MAGNETIC ONLY
CL	CURRENT LIMITING
SS	SOLID STATE

100AS 90AF 3P — FUSED SWITCH. "AS" INDICATES AMPERE SWITCH RATING, "AF" INDICATES AMPERE FUSE RATING, NUMBER OF POLES AS INDICATED.

ENCLOSED VOLTAGE TRANSFORMER PER SPEC'S. COPPER WOUND, DRY TYPE, U.N.O.

M — UTILITY METER SOCKET, WITH C.T.'S, CLIPS, ETC., PER SERVING UTILITY COMPANY.

GROUND, "GRD", "GND".

GF — BREAKER EQUIPPED WITH THE GROUND FAULT PROTECTION

GFI — "GROUND FAULT INTERRUPTER"

EM H1-1 a — CEILING LIGHT FIXTURE AND OUTLET. LED. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL AND PANEL ID INDICATES CIRCUIT. "EM" ADJACENT INDICATES FIXTURE WITH EMERGENCY POWER PROVISIONS.

EM H1-1 1a — LED LIGHT FIXTURE AND OUTLET. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL AND PANEL ID INDICATES CIRCUIT. "EM" ADJACENT INDICATES FIXTURE WITH EMERGENCY POWER PROVISIONS.

EM H1-1 1a

EM H1-1 a — BRACKET OR WALL MOUNTED SURFACE OR RECESSED LIGHT FIXTURE AND OUTLET, LED. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL AND PANEL ID INDICATES CIRCUIT. "EM" ADJACENT INDICATES FIXTURE WITH EMERGENCY POWER PROVISIONS.

ILLUMINATED EXIT LIGHT FIXTURE. SIDE, BACK, CEILING, OR PENDANT MOUNTED, SINGLE OR DOUBLE FACED AS NOTED BY SHADED ARC, WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. EXIT SIGN SHALL NOT BE USED AS JUNCTION BOX OR "THROUGH-WIRE"

L — LOW LEVEL EXIT LIGHT FIXTURE, WALL MOUNTED WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. BOTTOM OF FIXTURE AT +10" ABOVE FINISHED FLOOR AND WITHIN FOUR INCHES OF DOOR FRAME WHERE APPLICABLE.

O 16 72 +12'-0" — LIGHTING FIXTURE IDENTIFICATION SYMBOL. LETTER INDICATES FIXTURE TYPE. NUMERALS IN LOWER HALF OF HEXAGON INDICATE FIXTURE WATTAGE (INCLUDING BALLAST WHERE APPLICABLE). NUMERAL OUTSIDE TOP OF HEXAGON INDICATES NUMBER OF FIXTURES USED FOR LOAD CALCULATIONS. NUMERAL OUTSIDE BOTTOM OF HEXAGON INDICATES MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF FIXTURE. OMISSION OF MOUNTING HEIGHT INDICATES CEILING MOUNTING.

WALL MOUNTED DUAL HEAD EMERGENCY LIGHTING FIXTURE UNIT.

K D a — LOW VOLTAGE WALL SWITCH WITH "ON/OFF" AND DIMMING CAPABILITY. REFER TO DETAIL #1/E4.03 FOR MANUFACTURERS AND MODEL NUMBERS. NUMERAL ADJACENT INDICATES QUANTITY OF BUTTONS. LOWER CASE LETTER AT BOTTOM INDICATES FIXTURES CONTROLLED. MOUNT AT +48" PER DETAIL #1/E0.01. "K" ADJACENT INDICATES "KEY TYPE" WITH "ON/OFF" FUNCTION.

S — WALL MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR. MOUNT AT +48". SENSOR SWITCH #WSX-PDT-D OR APPROVED EQUAL.

OS — INFRARED/ULTRASONIC DUAL TECHNOLOGY TYPE OCCUPANCY SENSOR COMPLETE WITH ALL POWER SUPPLIES, RELAY PACKS AND CONNECTIONS. REFER TO DETAIL #1/E4.03 FOR MANUFACTURER AND MODEL NUMBER.

RL a — DIGITAL ROOM CONTROLLER/POWER PACK WITH 0-10V DIMMING AND LOW VOLTAGE CABLE CONNECTIONS. REFER TO DETAIL #1/E4.03 FOR MANUFACTURE AND MODEL NUMBERS. LOWER CASE LETTER ADJACENT INDICATES LIGHT FIXTURES CONTROLLED.

PC a1 — LOW VOLTAGE PHOTOCELL. REFER TO DETAIL #1/E4.03 FOR MANUFACTURER AND MODEL NUMBER. LOWER CASE LETTER ADJACENT INDICATES LIGHT FIXTURES CONTROLLED. NUMERAL ADJACENT INDICATES DAYLITE ZONE CONTROL.

PL A-1 — LOW VOLTAGE PLUG LOAD CONTROLLER POWER PACK WITH 20 AMP RATED RELAY AND LOW VOLTAGE CONNECTIONS CONNECTIONS. REFER TO DETAIL #1/E4.03 FOR MANUFACTURER AND MODEL NUMBERS. CIRCUIT ADJACENT SYMBOL INDICATES CIRCUIT TO BE CONTROLLED.

Sa Sa — SWITCH. LOWER CASE LETTER AT BOTTOM INDICATES OUTLETS CONTROLLED. CAPITAL SUPERSCRIPT INDICATES SWITCH TYPE. MOUNT PER DETAIL #1 ON E0.01 U.N.O.

NO SUPERSCRIPT	-	SINGLE POLE SWITCH
2	-	DOUBLE POLE
3	-	THREE WAY
4	-	FOUR WAY
I	-	ILLUMINATED HANDLE
K	-	KEYED SWITCH
LC	-	LOCKABLE COVER
M	-	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION
MC	-	MOMENTARY CONTACT
P	-	PILOT LIGHT
PR	-	PRESS TYPE
TP	-	THREE POSITION
T	-	TIMER-0-4 HR ROTARY WITH HOLD-ON FEATURE
L	-	LOCKABLE POSITION TOGGLE SWITCH

POLE MOUNTED PARKING LOT LIGHTING FIXTURE, SINGLE

POLE MOUNTED PARKING LOT LIGHTING FIXTURE, DOUBLE

SPORTS LIGHTING POLE WITH SPORTS LIGHT FIXTURES, MOUNTING BRACKETS, AN BALLAST BOXES.

COLUMN LIGHT FIXTURE WITH ILLUMINATED TOP

MS—1 — FEEDER DESIGNATION. SEE SINGLE LINE DIAGRAM, FEEDER SCHEDULES AND ELECTRICAL SITE PLAN.

DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT PER DETAIL #1 ON E0.01 U.N.O. "C" ADJACENT SYMBOL INDICATES DEVICE MOUNTED ON CEILING TYPICAL UNLESS NOTED OTHERWISE. "IG" ADJACENT INDICATES ISOLATED GROUND TYPE RECEPTACLE.

DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT PER DETAIL #1 ON E0.01 U.N.O. "WP" ADJACENT INDICATES METAL COVERED PAD-LOCKABLE WEATHERPROOF COVER. "WPL" ADJACENT INDICATES RECESSED METAL HINGED WEATHERPROOF LOCKING COVER EQUAL TO LEGRAND-PASS & SEYMOUR #4600 SERIES & ALL MOUNTING HARDWARE.

DUPLEX GROUNDING TYPE CONTROLLED RECEPTACLE, 20AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT PER DETAIL #1 ON E0.01 U.N.O. RECEPTACLE SHALL HAVE PERMANENT IDENTIFICATION.

FLUSH FLOOR MOUNTED DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE IN SPECIAL FLOOR BOX.

PEDESTAL TYPE FLOOR MOUNTED DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.

DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT 2 POLE, 3 WIRE. MOUNT ABOVE COUNTER PER DETAIL #1 ON E0.01 U.N.O.

DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT ABOVE COUNTER PER DETAIL #1 ON E0.01 U.N.O.

TWO DUBLEX GROUNDING TYPE RECEPTACLES IN 4S BOX, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT ABOVE COUNTER PER DETAIL #1 ON E0.01 U.N.O.

TWO DUPLEX GROUNDING TYPE RECEPTACLES IN 4S BOX, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT PER DETAIL #1 ON E0.01 U.N.O.

TWO DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLES IN 3-GANG BOX WITH 2-GANG RING AND PLATE. 20A., 125 VOLT 2 POLE, 3 WIRE. MOUNT PER DETAIL #1 ON E0.01 U.N.O.

TWO 20 AMP DUPLEX RECEPTACLES IN SPECIAL FLOOR BOX.

DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE, SPLIT WIRED WITH LOWER OUTLET SWITCHED. MOUNT PER DETAIL #1 ON E0.01 U.N.O.

DUPLEX GROUNDING TYPE USB CHARGING RECEPTACLE, 20 AMP 125 VOLT, 2 POLE, 3 WIRE. EQUIPPED WITH (2) TYPE-A USB PORTS. MOUNT PER DETAIL #1 ON E0.01 U.N.O.

RECESSED MOUNTED COMBINATION POWER/DATA FLOOR BOX. PROVIDE WITH (2) DUPLEX GROUNDING TYPE RECEPTACLES, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. REFER TO AV/IT DRAWINGS FOR ADDITIONAL REQUIREMENTS. FLOOR BOX SHALL BE EQUAL TO LEGRAD #RFB4 SERIES. COORDINATE COVER TYPE WITH THE ARCHITECT PRIOR TO ORDERING.

A L — SPECIAL PURPOSE OUTLET MOUNTED IN FLUSH WALL BOX. LETTER INDICATES TYPE. "L" ADJACENT INDICATES TWIST LOCK TYPE

A	-	NEMA TYPE 5-30R (125 VOLT, 1 PHASE, 30 AMP)
B	-	NEMA TYPE 5-50R (125 VOLT, 1 PHASE, 50 AMP)
C	-	NEMA TYPE 6-20R (250 VOLT, 1 PHASE, 20 AMP)
D	-	NEMA TYPE 6-30R (250 VOLT, 1 PHASE, 30 AMP)
E	-	NEMA TYPE 6-50R (250 VOLT, 1 PHASE, 50 AMP)
F	-	NEMA TYPE 11-20R (250 VOLT, 3 PHASE, 20 AMP)
G	-	NEMA TYPE 11-30R (250 VOLT, 3 PHASE, 30 AMP)
H	-	NEMA TYPE 11-50R (250 VOLT, 3 PHASE, 50 AMP)
J	-	NEMA TYPE 14-20R (125/250 VOLT, 1 PHASE, 20 AMP)
K	-	NEMA TYPE 14-30R (125/250 VOLT, 1 PHASE, 30 AMP)
M	-	NEMA TYPE 14-50R (125/250 VOLT, 1 PHASE, 50 AMP)
N	-	NEMA TYPE 6-40R (250 VOLT, 1 PHASE, 40 AMP)

100AS — NON-FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING UNLESS NOTED OTHERWISE ON DRAWINGS.

FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING. "AF" INDICATES FUSE AMPERE RATING.

VFD II — MAGNETIC MOTOR STARTER. ROMAN NUMERAL INDICATES NEMA STARTER SIZE. ADDITIONAL SUBSCRIPTS INDICATE STARTER TYPE AND SIZE. (TYPICAL FOR ALL MAGNETIC STARTER SYMBOLS.)

NO SUBSCRIPT	-	FULL VOLTAGE, NON REVERSING
PR	-	PRIMARY RESISTOR REDUCED VOLTAGE
AT	-	AUTOTRANSFORMER REDUCED VOLTAGE
WD	-	WYE-DELTA REDUCED VOLTAGE
PW	-	PART WINDING REDUCED VOLTAGE
SS	-	SOLID STATE REDUCED VOLTAGE
REV	-	REVERSING TYPE
2S	-	TWO SPEED
2W	-	TWO WINDINGS
CH	-	CONSTANT HORSEPOWER
CT	-	CONSTANT TORQUE
VT	-	VARIABLE TORQUE
VFD	-	VARIABLE FREQUENCY DRIVE

COMBINATION MAGNETIC MOTOR STARTER AND NON-FUSED DISCONNECT SWITCH. TYPE AS INDICATED ABOVE.

COMBINATION MAGNETIC MOTOR STARTER AND FUSED DISCONNECT SWITCH. TYPE AS INDICATED ABOVE.

COMBINATION MAGNETIC MOTOR STARTER AND CIRCUIT BREAKER. TYPE AS INDICATED ABOVE.

COMBINATION MAGNETIC MOTOR STARTER AND MOTOR CIRCUIT PROTECTOR. TYPE AS INDICATED ABOVE.

SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER

WM — SURFACE NON-METAL RACEWAY FOR COMMUNICATIONS (AND POWER WHERE CALLED FOR ON DRAWINGS). WIREMOLD 5400 SERIES, WITH ALL OFFSETS, ANCHORING ATTACHMENTS, ENDCAPS, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION. SOLID SQUARE INDICATES WIREMOLD DROP FROM CEILING.

PM — SURFACE MOUNTED NON-METAL PLUGMOLD RACEWAY WITH 20 AMP GROUNDING DUPLEX ISOLATED GROUND RECEPTACLES AT 12" ON CENTER. (2 CKT. TYPE - HUBBELL #PT206212)

DOOR CONTACT SWITCH FOR SECURITY SYSTEM ACCESS POINT. FLUSH MOUNTED IN DOOR JAMB.

SECURITY SYSTEM MOTION SENSOR MOUNTED AT +96".

K — DIGITAL KEY PAD ARM/DISARM FOR SECURITY SYSTEM. MOUNT PER DETAIL #1 ON E0.01 U.N.O.

SI — SECURITY SYSTEM CONDUIT. 3/4" CONDUIT MINIMUM WITH WIRING.

MC — MICROPHONE JACK. MOUNT PER DETAIL #1 ON E0.01 U.N.O. PROVIDE A 4S DEEP BOX WITH SINGLE GANG RING.

M — MICROPHONE JACK MOUNTED IN SPECIAL FLUSH FLOOR BOX

SS — MULTI-USE SOUND SYSTEM CONDUIT RUN. 3/4" CONDUIT MINIMUM WITH CABLING.

HATCH INDICATES PRIMARY SIDELIT DAYLIT ZONE.

HATCH INDICATES SECONDARY SIDELIT DAYLIT ZONE.

CRI — ACCESS CARD READER INTERFACE PER ARCHITECTURAL. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO CONSTRUCTION. REFER TO DETAIL #1/E4.04 FOR CONTROL WIRING DIAGRAM.

APW — ACCESS CARD READER POWER SUPPLY PER ARCHITECTURAL. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO CONSTRUCTION. REFER TO DETAIL #1/E4.04 FOR CONTROL WIRING DIAGRAM.

S — PUBLIC ADDRESS SPEAKER, BACKBOX, AND GRILL RECESSED MOUNT FLUSH WITH SURFACE.

S — PUBLIC ADDRESS SPEAKER, BACKBOX, AND GRILL WALL MOUNTED TYPE. MOUNT AT +8'-0" U.N.O.

S — PUBLIC ADDRESS SYSTEM CONDUIT. 3/4" CONDUIT MINIMUM WITH WIRING.

WALL MOUNTED BATTERY POWERED ATOMIC RADIO CONTROLLED CLOCK (PRIMEX#14155). MOUNT AT +96" U.N.O. PROVIDE 4S BOX AND 3/4"C. STUBBED UP INTO CEILING SPACE.

C — CLOCK SYSTEM CONDUIT. 3/4" CONDUIT MINIMUM WITH WIRING.

W — TELEPHONE OUTLET AND HANDSET WITH RJ-45 JACK. MOUNT PER DETAIL #1 ON E0-0.1 U.N.O. "W" ADJACENT INDICATES WALL MOUNTED AT SWITCH HEIGHT PER DETAIL #1 ON E0.01 U.N.O. PROVIDE 1"CONDUIT MINIMUM STUBBED UP INTO CEILING SPACE.

TELEPHONE OUTLET AND HANDSET WITH RJ-45 JACK. MOUNT ABOVE COUNTER PER DETAIL #1 ON E0.01 U.N.O.

T1 — VOICE SYSTEM CONDUIT RUN. NUMERAL ADJACENT TO "T" INDICATES QUANTITY OF 4 PAIR UTP CAT.6 CABLES IN RUN. PROVIDE 1" CONDUIT FOR 1-8 PAIRS OF CABLE AND 1 1/2" CONDUIT FOR 9-16 PAIRS OF CABLE.

DATA OUTLET WITH CAT 6 RATED RJ-45 JACK. MOUNT PER DETAIL #1 ON E0.01 U.N.O. NUMERAL ADJACENT TO OUTLET INDICATES QUANTITY OF RJ-45 JACKS. "C" ADJACENT SYMBOL INDICATES DEVICE MOUNTED ON CEILING TYPICAL UNLESS NOTED OTHERWISE. PROVIDE 1"CONDUIT MINIMUM STUBBED UP INTO CEILING SPACE.

DATA OUTLET WITH CAT 6 RATED RJ-45 JACK. MOUNT ABOVE COUNTER PER DETAIL #1 ON E0.01 U.N.O.

DATA OUTLET WITH CAT 6 RATED RJ-45 JACK. MOUNT IN SPECIAL FLUSH FLOOR BOX. NUMERAL ADJACENT TO OUTLET INDICATES OF RJ-45 JACKS.

D1 — DATA SYSTEM CONDUIT RUN. NUMERAL ADJACENT TO "D" INDICATES QUANTITY OF 4 PAIR UTP CAT.6 CABLES IN RUN. PROVIDE 1" CONDUIT FOR 1-8 PAIRS OF CABLE AND 1 1/2" CONDUIT FOR 9-16 PAIRS OF CABLE.

C — OFOI CCTV CAMER LOCATION. PROVIDE WEATHER PROOF 4S BOX WITH STAINLESS STEEL COVER PLATE. ROUTE 3/4" CONDUIT FROM BOX TO BUILDING IDF AND STUB OUT ABOVE RACK. "C" ADJACENT INDICATES CEILING MOUNTED BOX. COORDINATE ALL LOCATIONS WITH ARCHITECT/DISTRICT PRIOR TO INSTALLATION.

CS — AV SYSTEM CONTROLLER. MOUNT AT +48".

FOR FIRE ALARM LEGEND SEE SHEETS E3.01

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
2104 E. Dakan Ave, Ste
Ontario, CA 91761
P 909.923.4027
F 909.923.1533

SEALS:

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ELECTRICAL SYMBOLS LIST AND ABBREVIATIONS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

E0.02

100% CD

R:\Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E002.dwg 8-27-25-8:22 AM

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	FINISH	LAMP(S)	REMARKS	MANUFACTURER & NO.
A 66	PENDANT MOUNTED 4' LONG LED FIXTURE WITH HEAVY GAUGE COLD ROLLED STEEL HOUSING AND ACRYLIC LENS.	BAKED WHITE ENAMEL	LED 4000K 9000 LUMEN MINIMUM	PROVIDE EMERGENCY BATTERY PACK WHERE NOTED ON DRAWINGS.	LITHONIA LIGHTING #CLXLED-L48-9000LM-SEF-WDL-MVOLT-GZ10-40K-80CRI-WH-ZACFPD120 EQUAL BY HE WILLIAMS, DAYBRITE, LIGHTOLIER
B 3	EMERGENCY EXIT LIGHT, LED TYPE, GREEN LETTERS, SINGLE FACE, WALL, CEILING OR END MOUNT, WITH DIRECTIONAL ARROWS SHOWN.	**WHITE BODY WITH BRUSHED ALUMINUM FACE**	LED	TYPE "B": VERIFY MOUNTING CONFIGURATION AND ARROWS PRIOR TO ORDERING FIXTURES	EMERGI-LITE #WA-PXN-*-G OR APPROVED EQUAL
C 20	SURFACE MOUNTED 4' LONG LED FIXTURE WITH HEAVY GAUGE COLD ROLLED STEEL HOUSING AND ACRYLIC LENS.	BAKED WHITE ENAMEL	LED 4000K 3000 LUMEN MINIMUM		LITHONIA LIGHTING #CLXLED-L48-3000LM-SEF-FDL-MVOLT-GZ10-40K-80CRI EQUAL BY HE WILLIAMS, DAYBRITE, LIGHTOLIER
D 22	RECESSED MOUNTED 6" ROUND LED DOWNLIGHT WITH WHITE TRIM GYP MOUNTING. 60 DEGREE BEAM SPREAD. 120/277 VOLT. MINIMUM 2000 LUMEN OUTPUT.	WHITE	LED 4000K	PROVIDE EMERGENCY BATTERY PACK WHERE NOTED ON DRAWINGS.	LITHONIA LIGHTING #LDN6-40-20-LO6-AR-LSS-TRW-MVOLT-GZ10
E2 204	DOUBLE HEAD POLE MOUNTED LED PARKING LOT FIXTURE WITH DIE-CAST ALUMINUM "PADDLE SHAPE" HOUSING WITH PRECISION OPTICS. UL LISTED FOR WET LOCATION. TYPE 2 MEDIUM DISTRIBUTION. 277/480 VOLT. PROVIDE COMPLETE WITH 25'-0" ALUMINUM SQUARE POLE.	COLOR BY ARCHITECT	LED 4000K	TYPE "E2": B.U.G RATING SHALL BE B2 U0 G3 MAXIMUM.	LITHONIA LIGHTING (2)#DSX1-LED-P3-40K-80CRI-T2M-XVOLT-SPA-DNAXD EQUAL BY COOPER MCGRAW-EDISON #GALN SERIES OR LSI VALM SERIES
F 14	4"x4" SQUARE BOLLARD WITH SQUARE ALUMINUM HOUSING AND BARS. 42" HEIGHT MAX. UL LISTED FOR WET LOCATION.	COLOR BY ARCHITECT	LED 4000K		LUMINIS #LQ622-L1L20-R5-120 EQUAL BY EVERGREEN "ARG", LUMINIS

ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER TITLE 24, PART 6 SECTION 130.4 SHALL BE AS FOLLOWS:

THE CONTRACTOR SHALL PROVIDE THE ACCEPTANCE TESTING AGENT. THE ACCEPTANCE TESTING AGENT SHALL BE A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (CLCATT). THE CLCATT SHALL PERFORM ALL LIGHTING CONTROL INSTALLATION CERTIFICATION AS REQUIRED BY TITLE 24, PART 6 SECTION 130.4 (a) AND 130.4 (b). THIS SHALL INCLUDE, BUT NOT LIMITED TO, FILLING OUT, SIGNING AND SUBMITTING ALL REQUIRED DOCUMENTATION.

THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE LIGHTING CONTROL SYSTEMS WITH THE CLCATT PRIOR TO INSTALLATION.

LIGHTING CONTROL SYSTEM SEQUENCE OF OPERATIONS

REFER TO LIGHTING PLANS FOR QUANTITY AND LOCATION OF ALL LIGHTING CONTROL COMPONENTS AND LIGHT FIXTURES; IDENTIFICATION OF LIGHT FIXTURE AND DEVICE SWITCH LEG IDENTIFICATION. REFER TO THE LIGHTING CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. LIGHTING CONTROLS SHALL BE INSTALLED IN COMPLIANCE WITH 2022 CALIFORNIA ENERGY CODE (CEC) SECTION 130.1 MINIMUM.

OFFICE/WORKROOMS/RECEPTION AREAS - ROOM OCCUPANCY SENSOR(S) SHALL TURN LIGHT FIXTURES OFF WHEN ROOM HAS BEEN UNOCCUPIED FOR 20 MINUTES. LIGHT FIXTURES SHALL BE TURNED ON TO 50 PERCENT WHEN ROOM BECOMES OCCUPIED. WHEN LIGHT FIXTURES ARE TURNED ON AT WALL SWITCH, THEY SHALL BE SET OR COME ON TO FULL BRIGHTNESS OR PRESET FOOT CANDLE LEVELS.

WALL DIMMERS SHALL BE USED FOR MANUAL CONTROL OF LIGHT FIXTURES AND SHALL BE EQUIPPED WITH AN ON/OFF SWITCH.

LIGHT FIXTURES WHICH ARE REQUIRED TO HAVE AUTOMATIC "DAYLIGHTING" CONTROLS SHALL ALSO BE CONTROLLED WITH A PHOTOCELL IN ADDITION TO OCCUPANCY SENSORS AND WALL DIMMERS. THE PHOTOCELL SHALL MEASURE THE AMOUNT OF DAYLIGHT ENTERING THE SPACE AND REDUCE THE LIGHT OUTPUT OF THE LIGHT FIXTURES TO MAINTAIN THE DESIGNED FOOT CANDLE LEVELS IN THE ROOM. WALL DIMMERS SHALL ALLOW THE LIGHT FIXTURES TO DIM LOWER THAN THE LIGHT BEING MEASURED IN THE ROOM, BUT NOT HIGHER.

WHERE CONTROLLED RECEPTACLES ARE SHOWN, THEY SHALL BE CONTROLLED BY THE ROOM OCCUPANCY SENSOR AND LIGHTING CONTROL SYSTEM. OCCUPANCY SENSOR SETTINGS USED FOR CONTROLLING LIGHT FIXTURES SHALL BE USED FOR CONTROLLING THE RECEPTACLES.

CLASSROOMS/CONCESSIONS/TEAM ROOM - ROOM OCCUPANCY SENSOR(S) SHALL TURN LIGHT FIXTURES OFF WHEN ROOM HAS BEEN UNOCCUPIED FOR 20 MINUTES. LIGHT FIXTURES SHALL BE TURNED ON TO 50 PERCENT WHEN ROOM BECOMES OCCUPIED. WHEN LIGHT FIXTURES ARE TURNED ON AT WALL SWITCH, THEY SHALL BE SET OR COME ON TO FULL BRIGHTNESS OR PRESET FOOT CANDLE LEVELS.

WALL DIMMERS SHALL BE USED FOR MANUAL CONTROL OF LIGHT FIXTURES AND SHALL BE EQUIPPED WITH AN ON/OFF SWITCH. WHERE MULTI-BUTTON SWITCH(S)/DIMMER(S) ARE USED, EACH BUTTON SHALL BE PROGRAMMED FOR A SPECIFIC LIGHTING SCENE. ACTIVATION OF A SPECIFIC BUTTON SHALL AUTOMATICALLY RECALL THE LIGHTING SCENE. "ON/OFF" AND MANUAL DIMMING CONTROL FUNCTIONS SHALL OVERRIDE PRESET SCENES. REFER TO LIGHTING CONTROL WIRING DIAGRAMS FOR SCENE SETTINGS AND SWITCH BUTTON IDENTIFICATION WHERE REQUIRED.

LIGHT FIXTURES WHICH ARE REQUIRED TO HAVE AUTOMATIC "DAYLIGHTING" CONTROLS SHALL ALSO BE CONTROLLED WITH A PHOTOCELL IN ADDITION TO OCCUPANCY SENSORS AND WALL DIMMERS. THE PHOTOCELL SHALL MEASURE THE AMOUNT OF DAYLIGHT ENTERING THE SPACE AND REDUCE THE LIGHT OUTPUT OF THE LIGHT FIXTURES TO MAINTAIN THE DESIGNED FOOT CANDLE LEVELS IN THE ROOM. WALL DIMMERS SHALL ALLOW THE LIGHT FIXTURES TO DIM LOWER THAN THE LIGHT BEING MEASURED IN THE ROOM, BUT NOT HIGHER.

CORRIDORS - CORRIDOR OCCUPANCY SENSORS SHALL REDUCE THE LIGHTING POWER BY 50% WHEN CORRIDOR HAS BEEN UNOCCUPIED FOR 5 MINUTES. LIGHT FIXTURES SHALL BE COMPLETELY TURNED OFF WHEN SPACE HAS BEEN UNOCCUPIED FOR 20 MINUTES. LIGHT FIXTURES SHALL BE AUTOMATICALLY TURNED ON WHEN SPACE IS OCCUPIED. WHEN LIGHT FIXTURES ARE TURNED ON, THEY SHALL BE SET TO FULL BRIGHTNESS OR PRESET FOOT CANDLE LEVELS.

WALL SWITCHES SHALL BE USED FOR MANUAL "ON/OFF" CONTROL OF LIGHT FIXTURES.

RESTROOMS - ROOM OCCUPANCY SENSOR(S) SHALL TURN LIGHT FIXTURES OFF WHEN ROOM HAS BEEN UNOCCUPIED FOR 15 MINUTES. LIGHT FIXTURES SHALL BE AUTOMATICALLY TURNED ON WHEN ROOM BECOMES OCCUPIED. WHEN LIGHT FIXTURES ARE TURNED ON, THEY SHALL BE SET TO FULL BRIGHTNESS OR PRESET FOOT CANDLE LEVELS.

WALL SWITCHES SHALL BE USED FOR MANUAL "ON/OFF" CONTROL OF LIGHT FIXTURES.

WHERE SHOWN ON PLANS, WALL DIMMERS SHALL BE USED FOR MANUAL CONTROL OF LIGHT FIXTURES AND SHALL BE EQUIPPED WITH AN "ON/OFF" SWITCH.

STORAGE ROOMS - ROOM OCCUPANCY WALL SENSOR(S) SHALL TURN LIGHT FIXTURES OFF WHEN ROOM HAS BEEN UNOCCUPIED FOR 15 MINUTES. LIGHT FIXTURES SHALL BE MANUALLY TURNED ON WHEN ROOM IS OCCUPIED. WHEN LIGHT FIXTURES ARE TURNED ON, THEY SHALL BE SET TO FULL BRIGHTNESS OR PRESET FOOT CANDLE LEVELS.

WALL SWITCHES SHALL BE USED FOR MANUAL "ON/OFF" CONTROL OF LIGHT FIXTURES.

WHERE SHOWN ON PLANS, WALL DIMMERS SHALL BE USED FOR MANUAL CONTROL OF LIGHT FIXTURES AND SHALL BE EQUIPPED WITH AN "ON/OFF" SWITCH.

DEMAND RESPONSE:
LIGHT FIXTURES, RECEPTACLES AND LIGHTING CONTROLS SUBJECTED TO DEMAND RESPONSE REQUIREMENTS SHALL BE INSTALLED IN ACCORDANCE WITH CEC SECTION 110.12. LIGHTING CONTROLS SHALL COMPLY WITH THE REQUIREMENTS OF CEC 110.12(a). LIGHT FIXTURES SUBJECTED TO DEMAND RESPONSE SHALL HAVE THEIR LIGHTING POWER REDUCED BY A MINIMUM OF 15 PERCENT. CONTROLLED RECEPTACLES SHALL BE AUTOMATICALLY TURNED OFF.

OUTDOOR LIGHTING:
ASTRONOMICAL TIMECLOCK PROGRAMMING SHALL BE PROVIDE BY THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL RECEIVE OUTDOOR LIGHTING SCHEDULE FROM THE OWNER AND PROGRAM SYSTEM ACCORDINGLY.

LIGHT FIXTURES WITH MOTION SENSOR CONTROL SHALL HAVE THEIR POWER REDUCED BY 50 PERCENT 15 MINUTES AFTER THE AREA HAS BEEN VACATED. FIXTURES SHALL BE RETURNED TO FULL BRITE WHEN THE AREA BECOMES OCCUPIED.

LIGHT LEVELS:
LIGHTING LEVELS (FOOTCANDLES) WILL BE DESIGNED IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY (IES) GUIDELINES. THE FOLLOWING LIGHTING LEVELS WILL BE PROVIDED:

AREA	MAINTAINED LIGHTING LEVEL AT THE WORK PLANE
OFFICES	30-40
LOBBY	20-30
CORRIDORS	10-20
STORAGE/JANITOR'S ROOM	10-20
TOILETS	20-30
ELECTRICAL/MECHANICAL ROOMS	20-30
CONCESSIONS ROOMS	40-60

LIGHTING FIXTURE NOTES

1. EXIT SIGNS WITH THROUGH WIRING SHALL BE EQUIPPED WITH A SEPARATE JUNCTION BOX FOR TERMINATION OF CONDUITS. FURNISH A SEPARATE BOX FOR EACH CIRCUIT.
2. CONTRACTOR SHALL VERIFY ALL MOUNTING REQUIREMENTS FOR ALL RECESSED LIGHTING FIXTURES, PRIOR TO SHOP DRAWINGS SUBMITTALS. IT IS THE CONTRACTORS RESPONSIBILITY TO SECURE THE MOUNTING HARDWARE THAT IS COMPATIBLE WITH THE CEILING AND THE CONFIGURATION OF THE LIGHTING LAYOUT.
3. FOR LIGHTING FIXTURE VOLTAGE RATINGS, THE CONTRACTOR IS RESPONSIBLE TO VERIFY FIXTURE AND DRIVER VOLTAGES WITH BRANCH CIRCUIT WIRING.
4. LAMP COLOR FOR LED FIXTURES SHALL BE 4000°K U.N.O.
5. LENSES OF ALL LED LIGHTING FIXTURES SHALL NOT BE LESS THAN 0.125" THICK, EQUAL TO KSH-K12 WHERE APPLICABLE.
6. FOR FIXTURES RECESSED INTO NON-COMBUSTIBLE CEILINGS, PROVIDE YOKE MOUNTED OUTLET BOXES, ACCESSIBLE FROM INSIDE FIXTURE.
7. FIXTURES SHALL BE U.L. LISTED FOR INTENDED LOCATION.
8. FINISH OF FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
9. LIGHTING FIXTURES IN MECHANICAL SPACES ARE SHOWN IN THEIR APPROXIMATE LOCATION ONLY. DO NOT INSTALL LIGHT OUTLETS FOR FIXTURES UNTIL MECHANICAL PIPING AND DUCTWORK ARE INSTALLED; THEN LIGHTING FIXTURES SHALL BE INSTALLED IN LOCATIONS BEST SUITED FOR EQUIPMENT ARRANGEMENT AND AS APPROVED BY THE PROJECT MANAGER.
10. THE CONTRACTOR SHALL VERIFY ALL WINDOW HEIGHTS AND DAYLIT ZONES PRIOR TO INSTALLATION OF LIGHTING CONTROLS.
11. ALL LED LIGHT FIXTURES SHALL BE TESTED TO LM-79 AND LM-80 IES STANDARDS.
12. DMX LIGHT FIXTURES - THE CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS (CONNECTORS, CABLES, HEAD-END, ETC.) REQUIRED FOR PROGRAMMING AND CONTROL OF DMX ENABLE LIGHT FIXTURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL PROGRAMMING, FIXTURE ID, COLOR SCHEME, SCHEDULING, ETC. REQUIRED FOR ALL DMX LIGHT FIXTURES. ALL PROGRAMMING SHALL BE COORDINATED WITH THE OWNER PRIOR TO START UP.

    SUSPENDED ACOUSTICAL CEILINGS:

    HEAVY DUTY GRID SYSTEM:
    FLUSH OR RECESSED LIGHT FIXTURES WEIGHING LESS THAN 56 POUNDS MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM. IN ADDITION, THEY SHALL HAVE A MINIMUM OF TWO 12 GAUGE SLACK SAFETY WIRES ATTACHED TO THE FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. ALL 4 FOOT BY 4 FOOT LIGHT FIXTURES SHALL HAVE SLACK SAFETY WIRES AT EACH CORNER. ALL FLUSH OR RECESSED LIGHT FIXTURES WEIGHING 56 POUNDS OR MORE SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN 4 TAUT 12 GAUGE WIRES EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE. REGARDLESS OF THE TYPE OF CEILING GRID SYSTEM USED. THE 4 TAUT 12 GAUGE WIRES INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE SHALL BE CAPABLE OF SUPPORTING 4 TIMES THE WEIGHT OF THE UNIT.

    SURFACE MOUNTED FIXTURES:
    SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICES WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A 12 GAUGE WIRE. SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT FEET OR LONGER.

    SUSPENDED DRYWALL CEILINGS:
    ALL RECESSED OR DROP-IN LIGHT FIXTURES SHALL BE SUPPORTED DIRECTLY BY MAIN RUNNERS OR BY SUPPLEMENTAL FRAMING WHICH IS SUPPORTED BY MAIN RUNNERS. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE CEILING CONTRACTOR TO PROVIDE APPROPRIATE FRAMING AND LOCATION FOR FIXTURES. SURFACE MOUNTED FIXTURES SHALL BE ATTACHED TO A MAIN RUNNER WITH A POSITIVE CLAMPING DEVICE MADE OF MATERIAL WITH A MINIMUM OF 14 GAUGE. ROTATIONAL SPRING CATCHES SHALL NOT BE ALLOWED.

    PENDANT MOUNTED FIXTURES:
    PENDANT MOUNTED FIXTURES SHALL BE SUPPORTED BY A WIRE OR (SAFETY) CABLE PASSING THROUGH EACH PENDANT HANGER AND CAPABLE OF SUPPORTING 4 TIMES THE WEIGHT OF THE FIXTURE. WHERE PENDANT MOUNTED FIXTURES ARE INSTALLED ON A GRID CEILING OR WHERE THE FIXTURE WEIGHS 50 POUNDS OR MORE, THE WIRE OR CABLE PASSING THROUGH THE PENDANT HANGER SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE.

    PENDANT MOUNTED FIXTURES SHALL BE SUPPLIED WITH SWIVEL HANGERS AND SHALL BE CAPABLE OF SWINGING 45 DEGREES IN ANY DIRECTION FROM PLUMB WITHOUT OBSTRUCTION. FIXTURES SHALL HAVE STEMS WHICH ARE ONE PIECE WITHOUT COUPLING AND ARE TO HAVE THE SAME FINISH AS THE FIXTURE AND SWIVEL HANGER CANOPY. INDUSTRIAL TYPE FLUORESCENT FIXTURES INSTALLED IN AREAS OR ROOMS WITH EXPOSED STRUCTURE (NO CEILING) MAY BE CHAIN HUNG IN LIEU OF PROVIDING A STEM AND CANOPY. WHERE FIXTURES CAN NOT SWING UNOBSTRUCTED 45 DEGREES IN ANY DIRECTION, ADDITIONAL GUY WIRES OR SOLID BRACING IS REQUIRED. THE CONTRACTOR SHALL SUBMIT THE METHOD OF BRACING TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

13. LIGHT FIXTURE SUBSTITUTIONS:

    LIGHT FIXTURES SUBMITTED WHICH ARE NOT THE SPECIFIED PRODUCT OR LISTED EQUAL MUST BE SUBMITTED WITH SUBSTATION REQUEST FORM AS LISTED IN THE SPECIFICATIONS. NON-SPECIFIED OR EQUAL LISTED LIGHT FIXTURES WHICH ARE SUBMITTED AND DO NOT HAVE THE REQUIRED SUBSTATION REQUEST FORMS AND/OR DO NOT FOLLOW THE SUBSTATION REQUIREMENTS LISTED IN THE SPECIFICATIONS WILL BE REJECTED AND RETURNED WITHOUT REVIEW.

LIGHTING FIXTURE SUBSTITUTIONS

LIGHT FIXTURES SUBMITTED WHICH ARE NOT THE SPECIFIED PRODUCT OR LISTED EQUAL MUST BE SUBMITTED WITH SUBSTATION REQUEST FORMS AS LISTED IN THE SPECIFICATIONS. NON-SPECIFIED OR EQUAL LISTED LIGHT FIXTURES WHICH ARE SUBMITTED AND DO NOT HAVE THE REQUIRED SUBSTATION REQUEST FORMS AND/OR DO NOT FOLLOW THE SUBSTATION REQUIREMENTS LISTED IN THE SPECIFICATIONS WILL BE REJECTED AND RETURNED WITHOUT REVIEW.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
210 E. Citrus Ave, Ste. Red
Redlands, CA 92373
P.909.890.1933
F.909.890.1933

LIGHTING FIXTURE SCHEDULE AND NOTES

CHAFFEY COLLEGE
INTECH WELDING FACILITY #22052

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER J. FANG
No. E 14992
CIVIL
STATE OF CALIFORNIA

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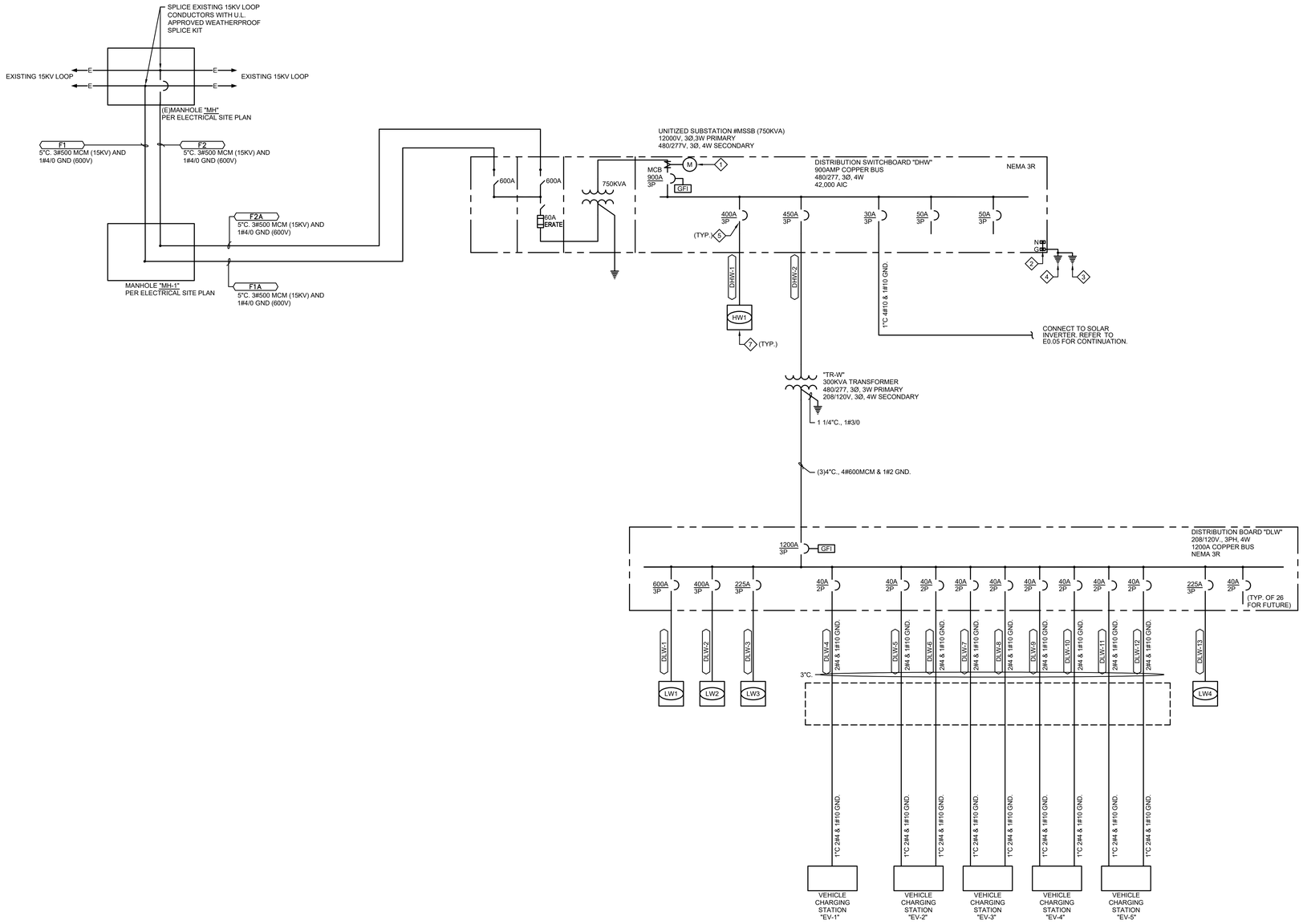
PROJECT NUMBER: 22-40102-00
PROJECT STATUS: **100% CD**
SHEET ISSUED: 08/29/2025
DELTA DATE: DESCRIPTION:

E0.03
100% CD



SHEET NOTES

1. PROVIDE DIGITAL "OWNER METER" WITH ALL SENSORS & HARDWARE TO COMPLY WITH THE MINIMUM 2016 CALIFORNIA ENERGY CODE REQUIREMENTS PER 130.5(a) AND TABLE 130.5-A FOR KW AND KWH TRACKING.
2. CONTINUOUS COPPER GROUND BUS, CENTRAL GROUND POINT FOR PROJECT. NO OTHER GROUND POINTS MAY BE USED.
3. INSTALL 1" CONDUIT & 1#4/0 TO ACCESSIBLE COLD WATER & GAS LINES WITHIN 5' OF LINES ENTERING BUILDING. BOND TO BUILDING STEEL USING EXOTHERMIC WELD PROCESS & APPROVED GROUNDING CLAMPS TO BUILDING WATER & GAS LINES.
4. INSTALL 1*C. WITH 1#250 MCM GROUNDING ELECTRODE CONDUCTOR TO "UFER" GROUND SYSTEM CABLE. UFER GROUND SYSTEM SHALL BE A MINIMUM OF 40' OF 250 MCM BARE COPPER GROUND IN BUILDING FOOTINGS.
5. ALL CIRCUIT BREAKERS SHALL BE FULLY RATED; NO SERIES RATED CIRCUIT BREAKER SHALL BE USED, TYPICAL.
6. PROVIDE AND INSTALL TRANSIENT VOLTAGE SURGE SUPPRESSION FILTER EQUAL TO CURRENT TECHNOLOGY #TG3-200-480-3Y-SN-T/B-MI-F23.
7. FURNISH GROUND BUS IN EACH BRANCH CIRCUIT PANEL. ALL PANELS 480/277 VOLT AND 208/120 VOLT, SHALL HAVE THE FEEDER EQUIPMENT GROUNDING CONDUCTOR CONNECTED TO GROUND BUS. FURNISH EQUIPMENT GROUNDING CONDUCTORS IN EVERY FEEDER AND BRANCH CIRCUIT, RUN TO LAST OUTLET AND CONNECT TO BUS. CONDUIT GROUND IS NOT ACCEPTABLE AS A SUBSTITUTE. TYPICAL ALL PANELS, SWITCHBOARDS, DISTRIBUTION PANELBOARDS, AND SWITCHGEAR.

DIST. BOARD: DHW LOAD SUMMARY & FEEDER SCHEDULE VOLTAGE: 480/277V,3P,4W
BRANCH: NORMAL MIN. BUS: 1,200 AMPS
ENCLOSURE: NEMA-3R ** MCB TRIP: 1,000 AMPS
AIC RATING: 42,000 AIC SYM, MINIMUM

FEEDER NUMBER	FEEDER FROM	FEEDER TO	NO. OF SETS	CONDUIT (INCHES)	CONDUCTORS (AWG)	GROUND (AWG)	DEMAND LOAD AMPS	DEMAND LOAD KVA	CONNECTED LOAD AMPS	CONNECTED LOAD KVA	FEEDER LENGTH*	VOLTAGE DROP	REMARKS
DHW-1	DHW	HW1	1	4"	4 # 600MCM	1/0	152.40	126.70	151.48	125.94	175	0.33%	
DHW-2	DHW	TR-W	2	2 1/2"	3 # 250MCM	2	240.79	200.19	387.60	322.25	245	1.09%	
DHW-3	DHW												
DHW-4	DHW												
DHW-5	DHW												
DHW-6	DHW												
DHW-7	DHW												
DHW-8	DHW												
DHW-9	DHW												
DHW-10	DHW												
DHW-11	DHW												
DHW-12	DHW												
DHW-13	DHW												
DHW-14	DHW												
DHW-15	DHW												
									539.08	448.19	SUBTOTAL		
											25% OF LARGEST MOTOR		
									539.08	448.19	TOTAL LOAD		

* FEEDER LENGTH IN FEET IS INDICATED FOR VOLTAGE DROP CALCULATION ONLY AND SHALL NOT BE USED FOR QUANTITY TAKEOFFS.
** MCB = MAIN CIRCUIT BREAKER ** MLO = MAIN LUGS ONLY

DIST. BOARD: DLW LOAD SUMMARY & FEEDER SCHEDULE VOLTAGE: 208/120V,3P,4W
BRANCH: NORMAL MIN. BUS: 1,200 AMPS
ENCLOSURE: NEMA-3R ** MCB TRIP: 1,200 AMPS
AIC RATING: 25,000 AIC SYM, MINIMUM

FEEDER NUMBER	FEEDER FROM	FEEDER TO	NO. OF SETS	CONDUIT (INCHES)	CONDUCTORS (AWG)	GROUND (AWG)	DEMAND LOAD AMPS	DEMAND LOAD KVA	CONNECTED LOAD AMPS	CONNECTED LOAD KVA	FEEDER LENGTH*	VOLTAGE DROP	REMARKS
DLW-1	DLW	LW!	2	4"	4 # 350MCM	1	329.18	118.59	630.60	227.18	175	1.18%	
DLW-2	DLW	LW2	1	4"	4 # 600MCM	1/0	48.59	17.51	61.08	22.01	175	0.30%	
DLW-3	DLW	LW3	1	2 1/2"	4 # 4/0	4	56.10	20.21	58.40	21.04	175	0.54%	
DLW-4	DLW	EV-1	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	260	1.92%	
DLW-5	DLW	EV-2	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	270	2.00%	
DLW-6	DLW	EV-2	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	270	2.00%	
DLW-7	DLW	EV-3	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	290	2.15%	
DLW-8	DLW	EV-3	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	290	2.15%	
DLW-9	DLW	EV-4	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	290	2.15%	
DLW-10	DLW	EV-4	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	290	2.15%	
DLW-11	DLW	EV-5	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	310	2.29%	
DLW-12	DLW	EV-5	1	1"	2 # 4	10	30.19	6.28	30.19	6.28	310	2.29%	
DLW-13	DLW	LW4	1	2 1/2"	4 # 4/0	4	94.93	34.20	162.10	58.40	250	2.14%	
DLW-14	DLW												
DLW-15	DLW												
									1069.07	385.15	SUBTOTAL		
											25% OF LARGEST MOTOR		
									1069.07	385.15	TOTAL LOAD		

* FEEDER LENGTH IN FEET IS INDICATED FOR VOLTAGE DROP CALCULATION ONLY AND SHALL NOT BE USED FOR QUANTITY TAKEOFFS.
** MCB = MAIN CIRCUIT BREAKER ** MLO = MAIN LUGS ONLY

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Consulting Mechanical and Electrical Engineers
2151 E. Dyer Rd. Ste. F
Santa Ana, CA 92705
714.966.1033

SINGLE LINE DIAGRAM

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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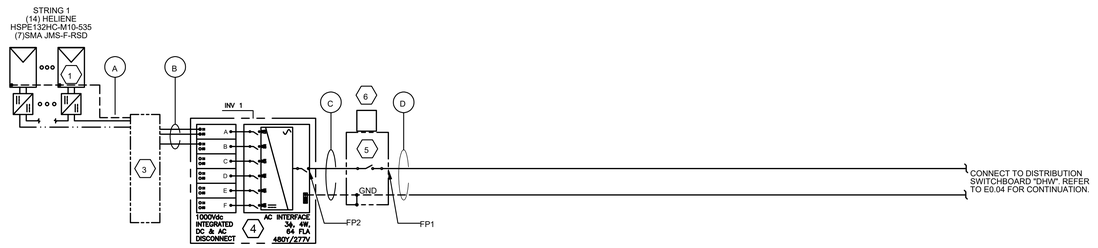
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/26/2025
DELTA DATE: DESCRIPTION:

E0.04
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E004.dwg 8-27-25-8:22 AM



EQUIPMENT SCHEDULE		
	EQUIPMENT MANUFACTURER/MODEL	EQUIPMENT DESCRIPTION
1	HELIENE HSPE132HC-M10-535 MONOFACIAL	HELIENE SOLAR 535W MONOFACIAL PV MODULE
2	SMA JMS-F RSD	SMA RAPID SHUTDOWN DEVICE
3	JUNCTION BOX	NEMA 3R JUNCTION BOX
4	SMA STP X 20-US	SMA 20KW INVERTER W/ DC & AC DISCONNECTS
5	AC DISCONNECT SWITCH	30A, NONFUSED, 600V, 3φ, 4W, VISIBLE, LOCKABLE, 65KAIC
6	PV SYSTEM MONITORING	SMA DATA MANAGER M WITH SUNNY PORTAL ACCESS AND ALL REQUIRED COMPONENTS

EQUIPMENT NOTES

1. PHOTOVOLTAIC MODULES INCLUDE #12 AWG OUTDOOR RATED MC4 CONNECTORS FOR MODULE INTERCONNECTION. DO NOT REMOVE THE QUICK CONNECTS, OTHERWISE THE MODULE WARRANTY AND THE UL LISTING WILL BE INVALIDATED.
2. #6 AWG BARE COPPER GROUND WILL BE USED AS EQUIPMENT GROUND FOR THE RACKING. USE MODULE GROUNDING METHODS PER MANUFACTURERS INSTALLATION REQUIREMENTS. THE MODULE EQUIPMENT GROUND SHALL TERMINATE AT THE INVERTER CABINET.
3. INVERTERS NEMA 3R RATED WITH UL 1741-SA LISTING INCLUDING INTERNAL ANTI-ISLANDING PROTECTION FEATURES WITH CA RULE 21 COMPLIANCE. UL1741 LISTING INCLUDES COMPLIANCE WITH IEEE1547 FOR INTERCONNECTION SYSTEM AND TEST REQUIREMENTS AND THE NATIONAL ELECTRIC CODE. TIED TO EXISTING FACILITY GROUND. INVERTER HAS INTERNAL DC DISCONNECTION MEANS, FUSED AT 20A PER POLE. INVERTER IS U.L. LISTED AS A UNIT. UNIT IS EQUIPPED WITH UL1741 APPROVED GROUND FAULT DETECTION DEVICE THAT MEETS NEC 250.122 REQUIREMENTS FOR EQUIPMENT GROUNDING.
4. PER NEC 250.53(A)(2), A SINGLE ROD, PIPE OR PLATE ELECTRODE SHALL BE SUPPLEMENTED BY AN ADDITIONAL ELECTRODE OF TYPE SPECIFIED IN 250.52(A)(2) THROUGH (A)(8) SPACED NO LESS THAN 6FT APART. EXCEPTION, IF A SINGLE ROD, PIPE OR PLATE GROUNDING ELECTRODE HAS A RESISTANCE TO EARTH OF 25 OHMS OR LESS, THE SUPPLEMENTAL ELECTRODE SHALL NOT BE REQUIRED.
5. MODULES ARE TO BE EQUIPED WITH SMA RAPID SHUTDOWN OPTIMIZERS. WHICH WILL SHUTDOWN PRODUCTION OF THE MODULES IN THE EVENT OF AC GRID LOSS. SEE PV 10.
6. SMA INVERTERS ONLY USE NEUTRAL FOR INSTRUMENTATION, AND THEREFORE CAN BE SIZED THE SAME AS THE GROUNDING CONDUCTOR.
7. ALL NEW BREAKERS INSTALLED ARE TO MATCH THE KIAC RATING OF THE EQUIPMENT THEY ARE INSTALLED IN.
8. ALL CONDUCTOR TERMINALS ARE RATED AT 75°C.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
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DATE: 09/02/25

CONSULTANT:

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers

Chris E. Chaon, Mike Peng
Corona, California 92879
P.951.808.1933
F.951.808.1933

SINGLE LINE DIAGRAM

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL(S):

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER YANG
No. E 14592
ELECTRICAL
STATE OF CALIFORNIA

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PROJECT NUMBER: 23-48/102-00
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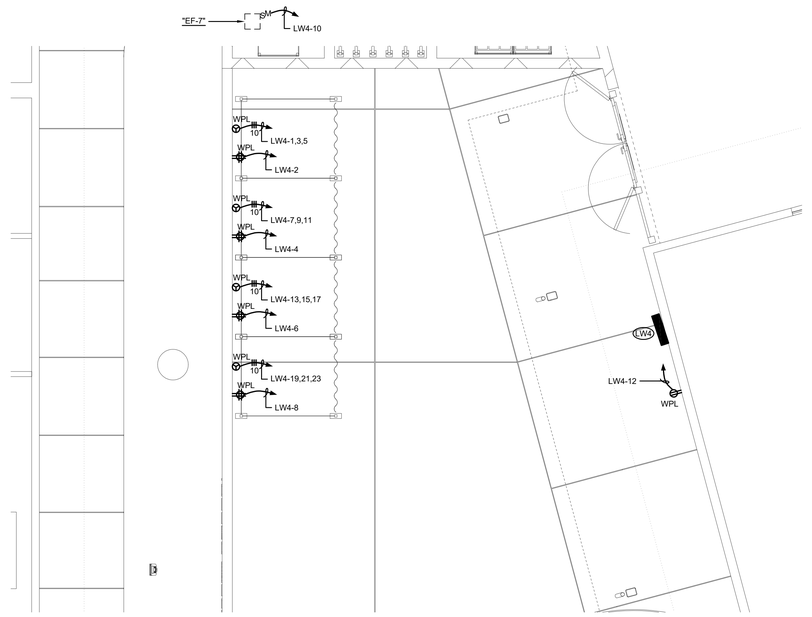
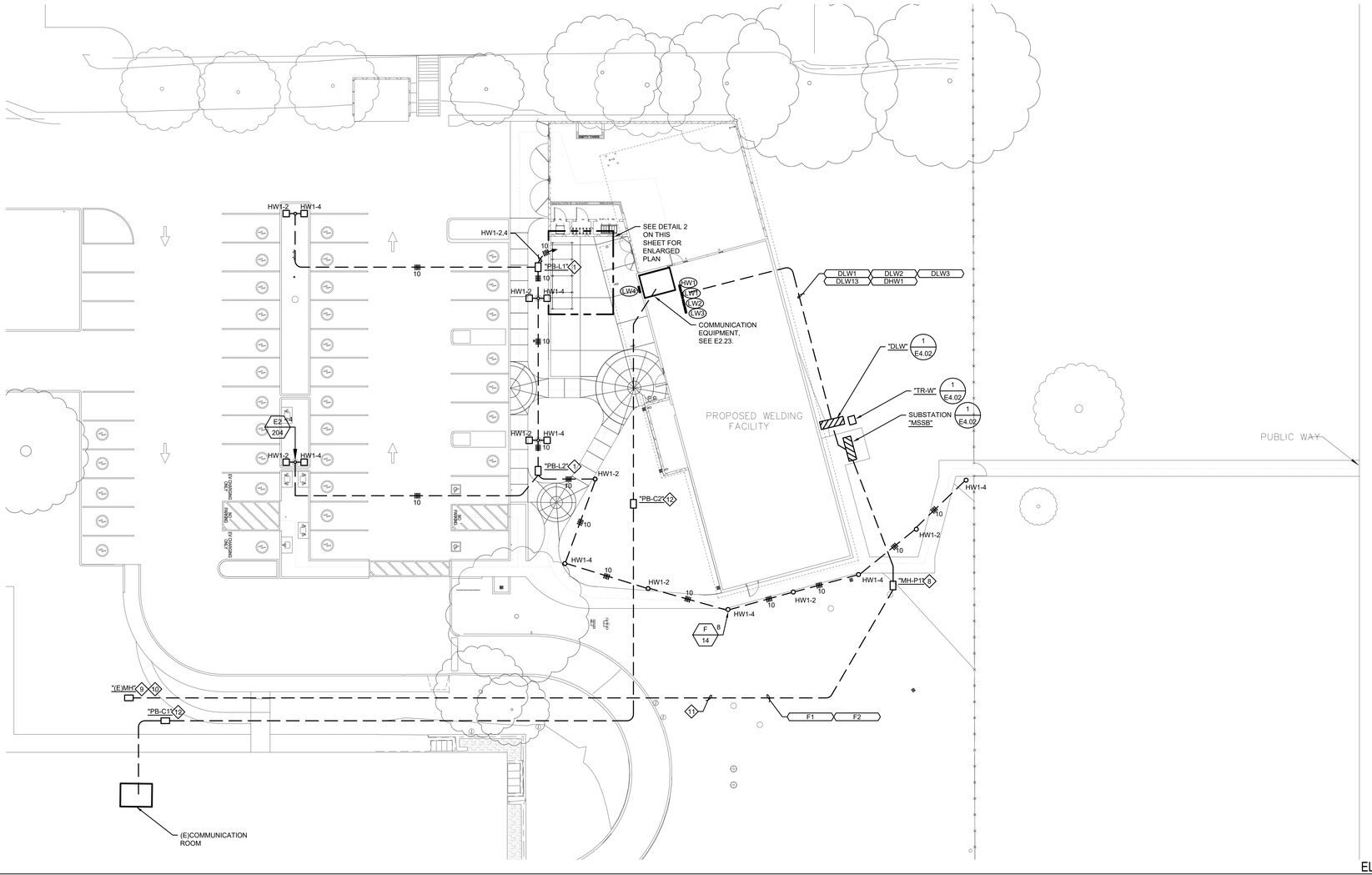


NORTH

ENLARGED ELECTRICAL SITE PLAN 2

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



NORTH

ELECTRICAL SITE PLAN 1

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

SHEET NOTES

1. PROVIDE AND INSTALL 1'x2'xDEPTH REQUIRED PRECAST CONCRETE PULL BOX WITH TRAFFIC RATED METAL COVER ENGRAVED "LIGHTING". SET FLUSH WITH GRADE ON 6" COMPACTED CRUSHED ROCK.
2. MAKE CONNECTION TO ELECTRIC VEHICLE CHARGING STATION PER THE MANUFACTURES REQUIREMENTS. VERIFY EXACT LOCATION WITH THE ARCHITECT PRIOR TO INSTALLATION.
3. 1"C.O. FOR FUTURE VEHICLE CHARGING STATION FROM STUB OUT TO INDICATED PULLBOX.
4. 2"C.O. FOR FUTURE VEHICLE CHARGING STATION BETWEEN PULLBOXES AND/OR SWITCHGEAR.
5. 2'x3'xDEPTH REQUIRED PRECAST CONCRETE PULLBOX WITH TRAFFIC RATED METAL COVER ENGRAVED "EV POWER". SET FLUSH WITH GRADE ON 6" COMPACTED CRUSHED ROCK.
6. (2) 2"C.O. FOR FUTURE VEHICLE CHARGING STATION BETWEEN PULLBOXES AND/OR SWITCHGEAR.
7. (2) 2"C.O. FOR FUTURE VEHICLE CHARGING STATION. BETWEEN PULLBOXES AND/OR SWITCHGEAR.
8. 4'x4'xDEPTH REQUIRED PRECAST CONCRETE MANHOLE WITH TRAFFIC RATED METAL COVER ENGRAVED "HIGH VOLTAGE". SET FLUSH WITH GRADE ON 6" COMPACTED CRUSHED ROCK.
9. SPLICE EXISTING 15KV LINES INSIDE EXISTING MANHOLE WITH UL APPROVED SPLICE KIT.
10. CORE DRILL INTO EXISTNG MANHOLE FOR INSTALLATION OF NEW CONDUITS. SEAL ALL PENETRATIONS.
11. REFER TO THE SINGLE LINE DIAGRAM FOR FEEDER SIZES.
12. PROVIDE AND INSTALL 2'x3'xDEPTH REQUIRED PRECAST CONCRETE PULL BOX WITH TRAFFIC RATED METAL COVER ENGRAVED "COMMUNICATIONS". SET FLUSH WITH GRADE ON 6" COMPACTED CRUSHED ROCK.
13. REFER TO THE COMMUNICATION RISER DIAGRAMS FOR CABLE REQUIREMENTS AND CONDUIT SIZES AND QUANTITIES.

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CONSULTANT:

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
1742 E. Dyer Rd. Ste
Santa Ana, CA 92705
P:949.660.1933

ELECTRICAL SITE PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER J. DIAZ
No. E 18592
STATE OF CALIFORNIA

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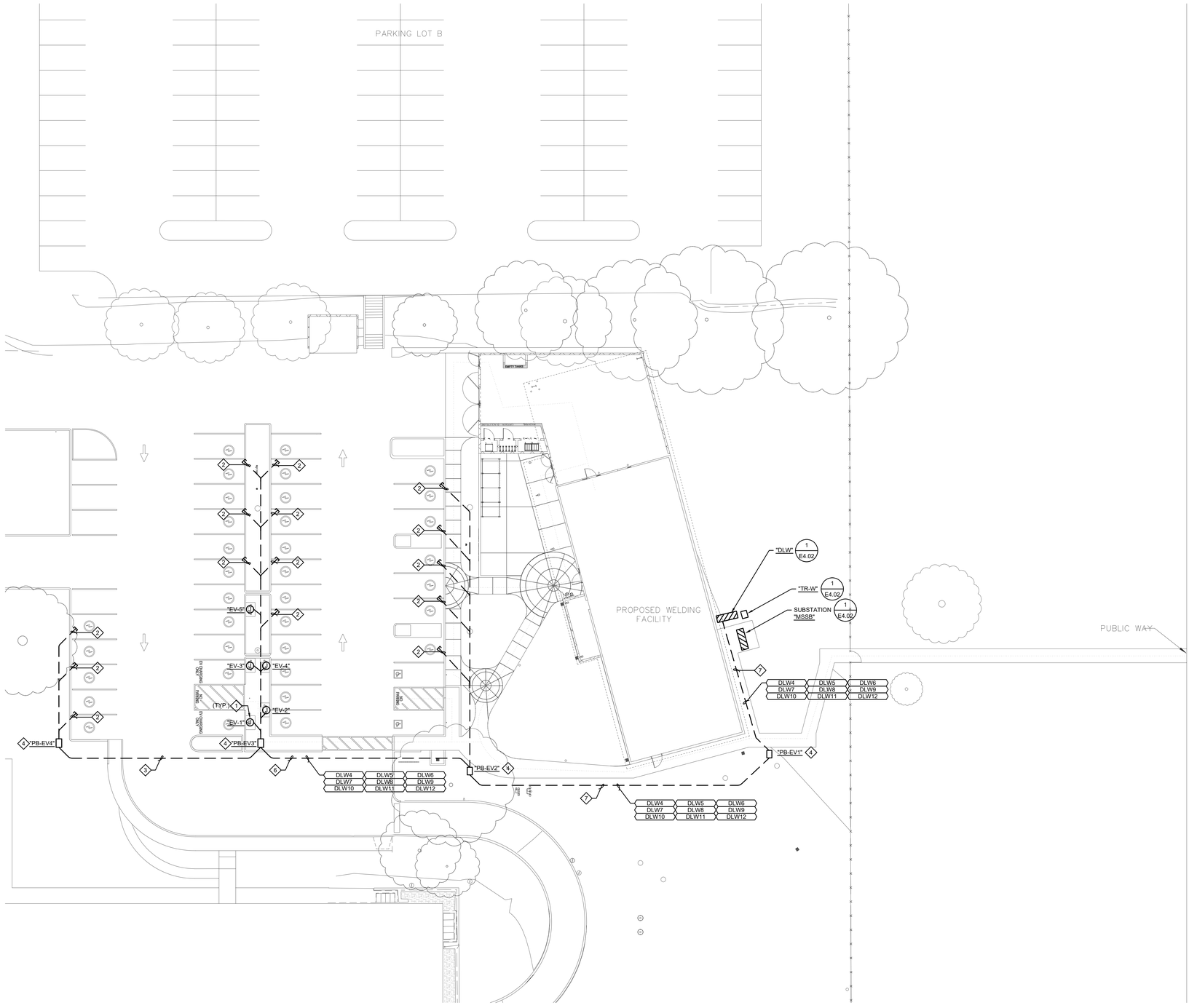

NORTH

ELECTRICAL SITE PLAN - EV CHARGING 1

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

SHEET NOTES

1. MAKE CONNECTION TO ELECTRIC VEHICLE CHARGING STATION PER THE MANUFACTURES REQUIREMENTS. VERIFY EXACT LOCATION WITH THE ARCHITECT PRIOR TO INSTALLATION.
2. 1"C.O. FOR FUTURE VEHICLE CHARGING STATION FROM STUB OUT TO INDICATED PULLBOX.
3. 2"C.O. FOR FUTURE VEHICLE CHARGING STATION BETWEEN PULLBOXES AND/OR SWITCHGEAR.
4. 2'x3'xDEPTH REQUIRED PRECAST CONCRETE PULLBOX WITH TRAFFIC RATED METAL COVER ENGRAVED "EV POWER". SET FLUSH WITH GRADE ON 6" COMPACTED CRUSHED ROCK.
5. (2) 2"C.O. FOR FUTURE VEHICLE CHARGING STATION BETWEEN PULLBOXES AND/OR SWITCHGEAR.
6. (3) 2"C.O. FOR FUTURE VEHICLE CHARGING STATION. BETWEEN PULLBOXES AND/OR SWITCHGEAR.
7. (4) 2"C.O. FOR FUTURE VEHICLE CHARGING STATION. BETWEEN PULLBOXES AND/OR SWITCHGEAR.

IDENTIFICATION STAMP
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APP. 04-124464 INC:
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CONSULTANT:

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2151 E. Dyer Rd. Ste. F
Santa Ana, CA 92705
714.966.1933

ELECTRICAL SITE PLAN - EV CHARGING

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER HSING FANG No. E 18992 ELECTRICAL STATE OF CALIFORNIA

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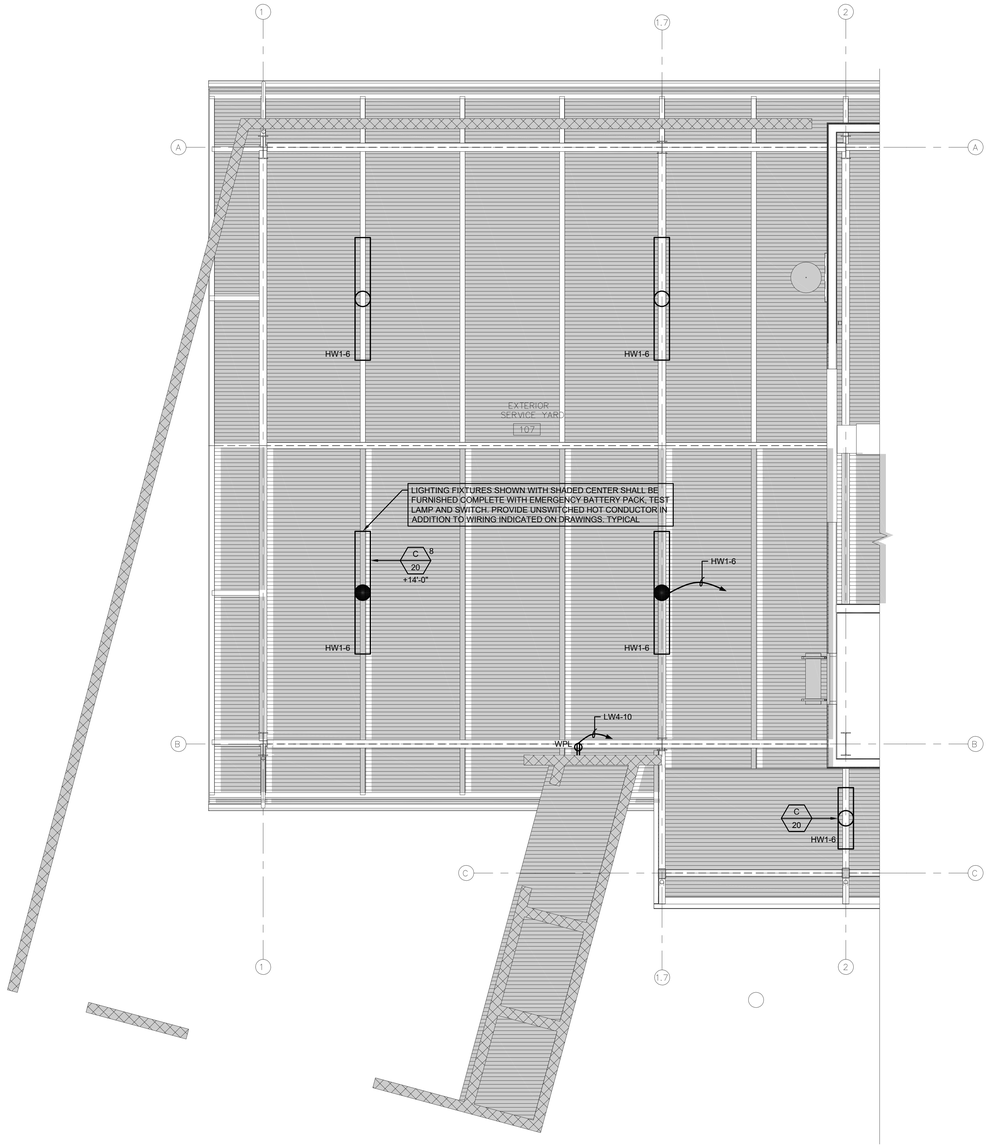

SERVICE YARD - ELECTRICAL PLAN

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

1

NORTH

SHEET NOTES

1 .

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CONSULTANT:

DCCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
John E. Dolan Bld. Rear
Chico, CA 95973
Ph 530.895.1933

SERVICE YARD - ELECTRICAL PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

PROFESSIONAL ENGINEER
CHRISTOPHER E. CHATHAM
No. E 18992
REGISTERED
STATE OF CALIFORNIA

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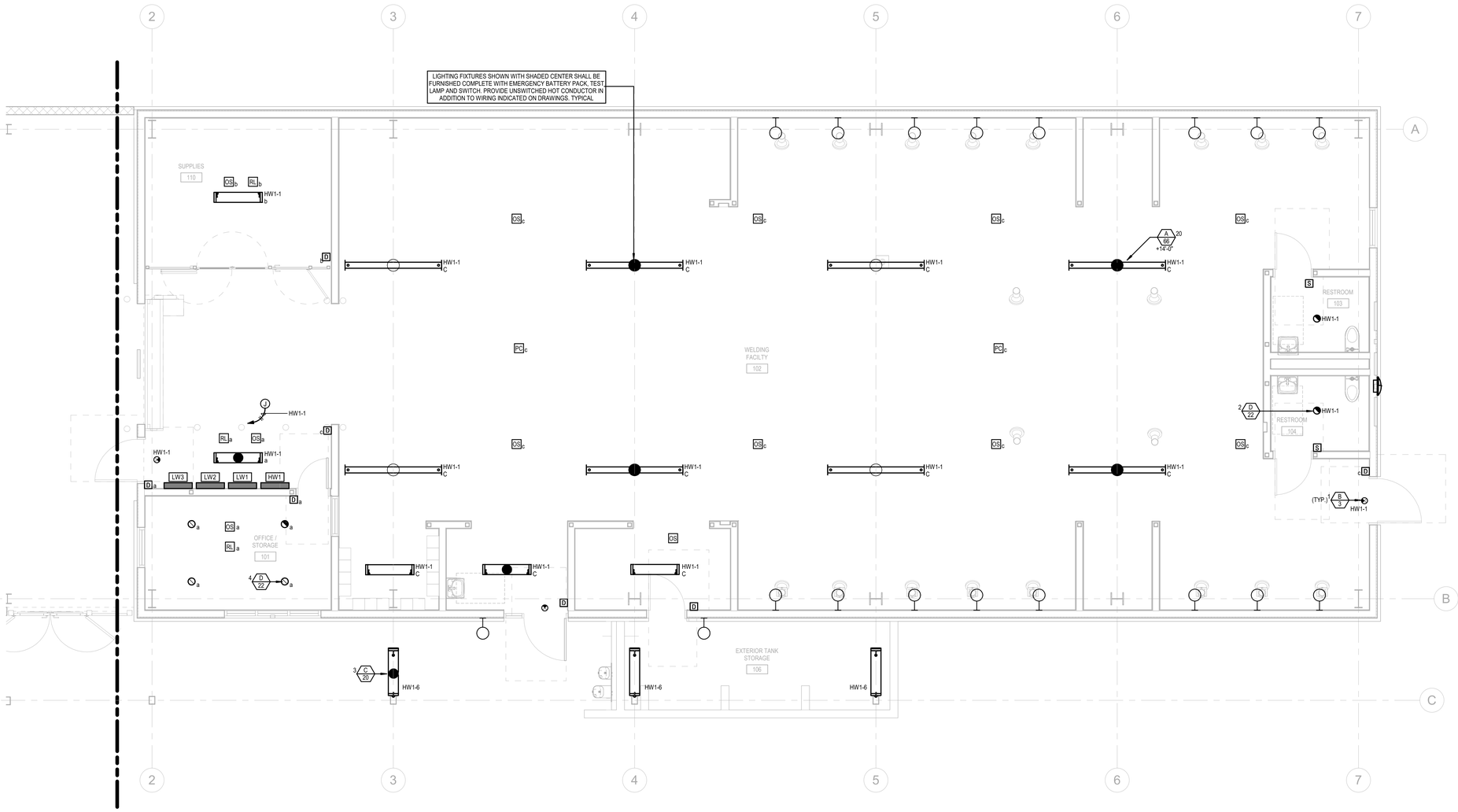
SHEET NOTES

LIGHTING FIXTURES SHOWN WITH SHADED CENTER SHALL BE FURNISHED COMPLETE WITH EMERGENCY BATTERY PACK, TEST LAMP AND SWITCH. PROVIDE UNSWITCHED HOT CONDUCTOR IN ADDITION TO WIRING INDICATED ON DRAWINGS. TYPICAL



CIRCUITING NOTE:

CIRCUITS SHOWN ON HOMERUNS SHALL BE EXTENDED TO LIGHT FIXTURES WHERE CIRCUITS ARE IDENTIFIED. PROVIDE SWITCHING AS SHOWN ON THE DRAWINGS. ALL CONDUCTORS SHALL BE ROUTED IN CONDUIT. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDUIT, BOXES, CONDUCTORS, SUPPORTS, ETC. REQUIRED FOR A COMPLETE INSTALLATION. REFER TO THE SPECIFICATIONS FOR MINIMUM CONDUIT AND CONDUCTOR REQUIREMENTS.

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

1

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APP: 04-124464 INC:
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DATE: 09/02/25

CONSULTANT:
NCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
Gabriel Ma Peng
Chino, CA 91710
Ph: (909) 606-5353
Fax (909) 606-7920
John E. Gonzalez

LIGHTING PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
PROFESSIONAL ENGINEER
CHRISTOPHER J. KING
No. E 16592
REGISTERED
STATE OF CALIFORNIA

sgh ARCHITECTS

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SHEET NOTES

1. MAKE CONNECTION TO CEILING FAN PER MANUFACTURES REQUIREMENTS. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
2. REFER TO CORD REEL DETAIL #3 ON SHEET E4.02. VERIFY EXACT LOCATION OF CORD REELS WITH ARCHITECTURAL PLANS.
3. TO OUTDOOR UNIT FOR POWER.

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APP. 04-124464 INC:
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DATE: 09/02/25

CONSULTANT:
NCCR ENGINEERS
Consulting Mechanical and Electrical Engineers
Clarence Wu Peng
Chief Executive Officer
Phone: 626.967.6701
Fax: 626.967.6702
John E. Nelson
Vice President

POWER PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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POWER PLAN
1/4" = 1'-0" SCALE 1

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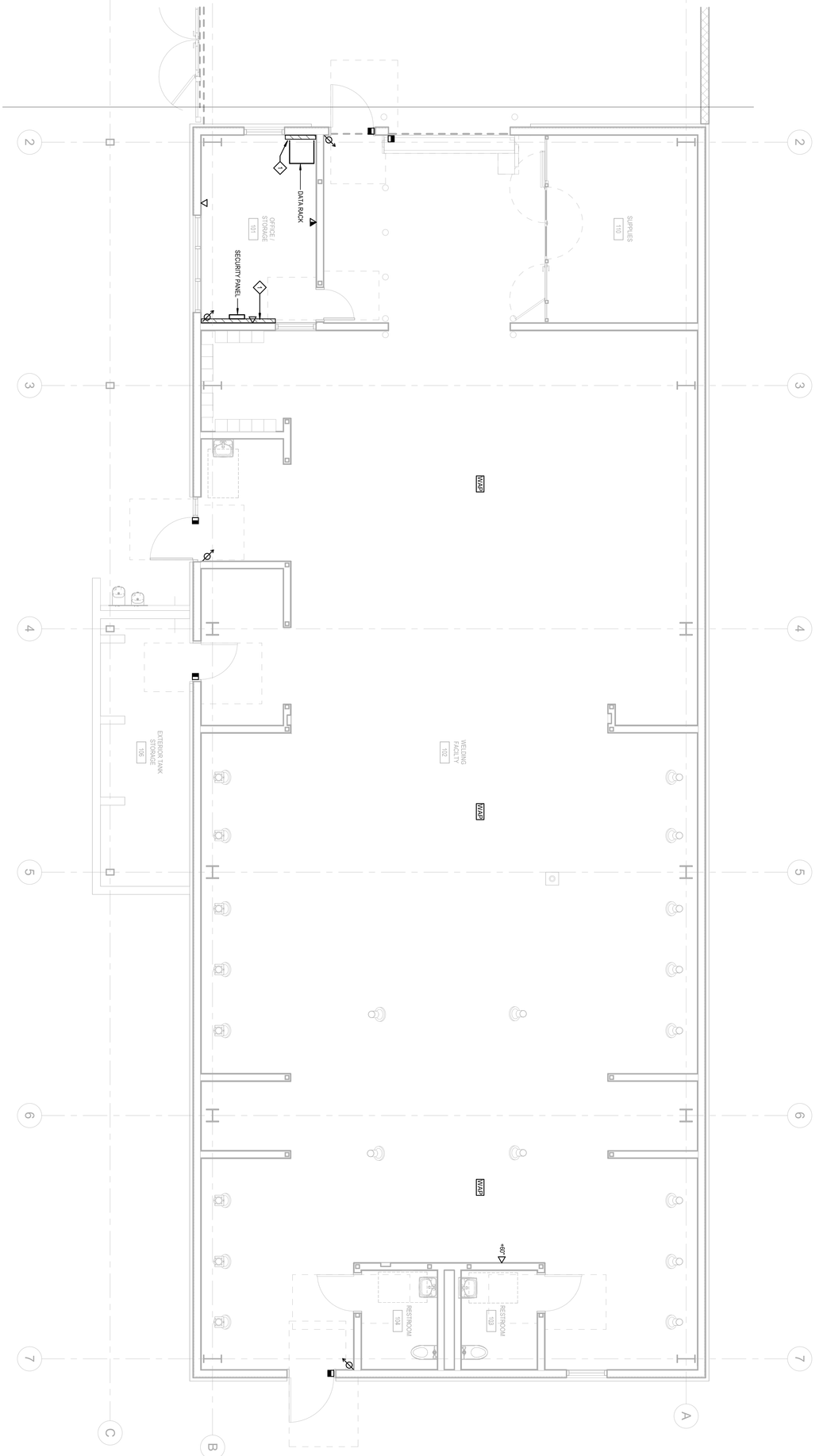

COMMUNICATION PLAN
1/4" = 1'-0" SCALE
1

NORTH

SHEET NOTES

1. PROVIDE A 3/4" THICK X 8'-0" X LENGTH INDICATED FIRE TREATED PLYWOOD BACKBOARD SANDED AND PAINTED WHITE.

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SEALS:

REGISTERED PROFESSIONAL ENGINEER CHEN HSING TANG No. E 16590 ELECTRICAL STATE OF CALIFORNIA

COMMUNICATION PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

CONSULTANT:

DCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
4750 E. Ontario Mills Pkwy
Ontario, CA 91764
Ph 909.987.0017
Fax 909.980.7025

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DATE: 09/02/25

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
4700 E. Chino Ave Pkwy
Chino, CA 91708
Ph. 909.987.0017
Fax 909.591.1523

CONSULTANT:

FIRE ALARM PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

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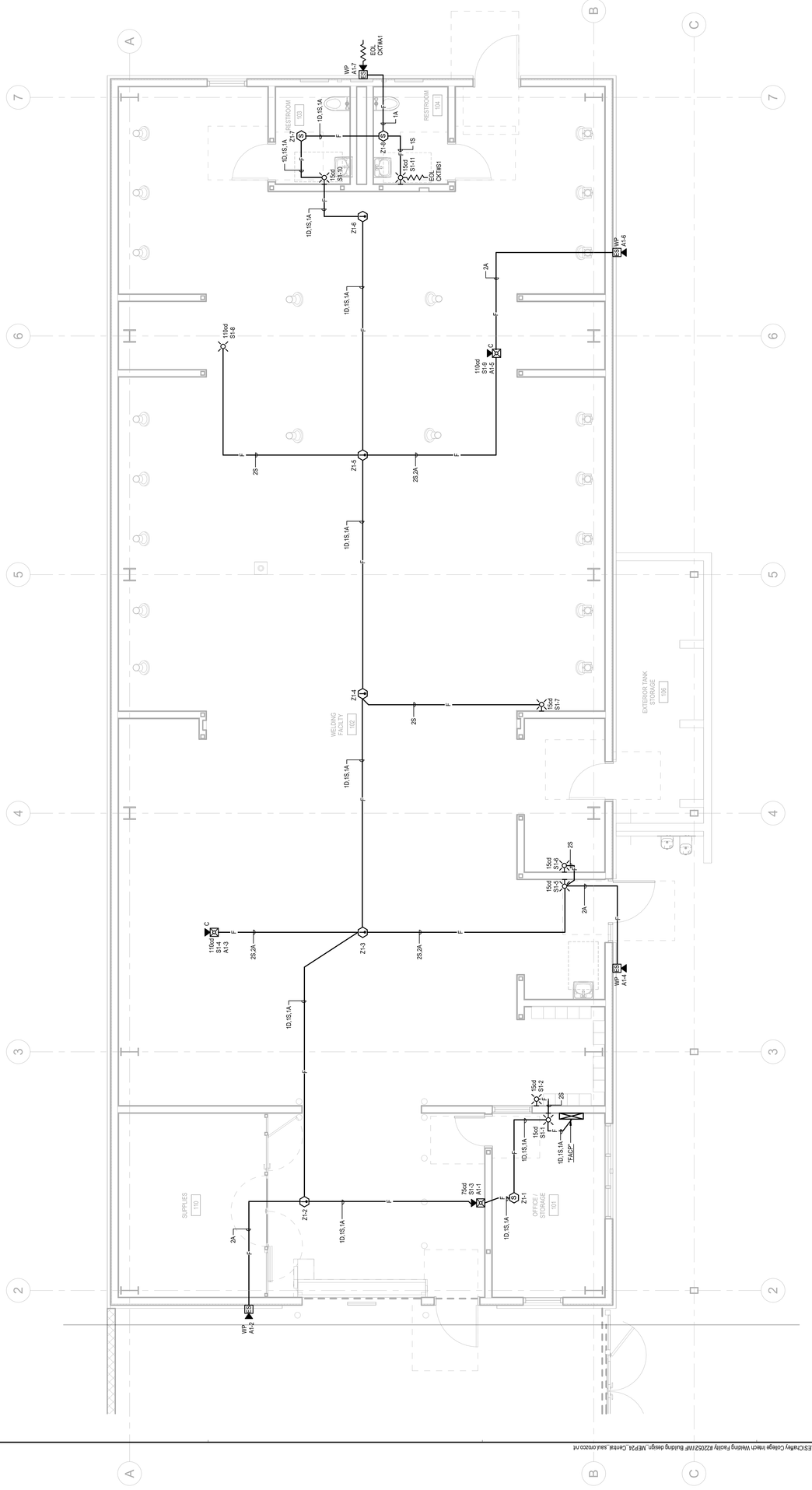
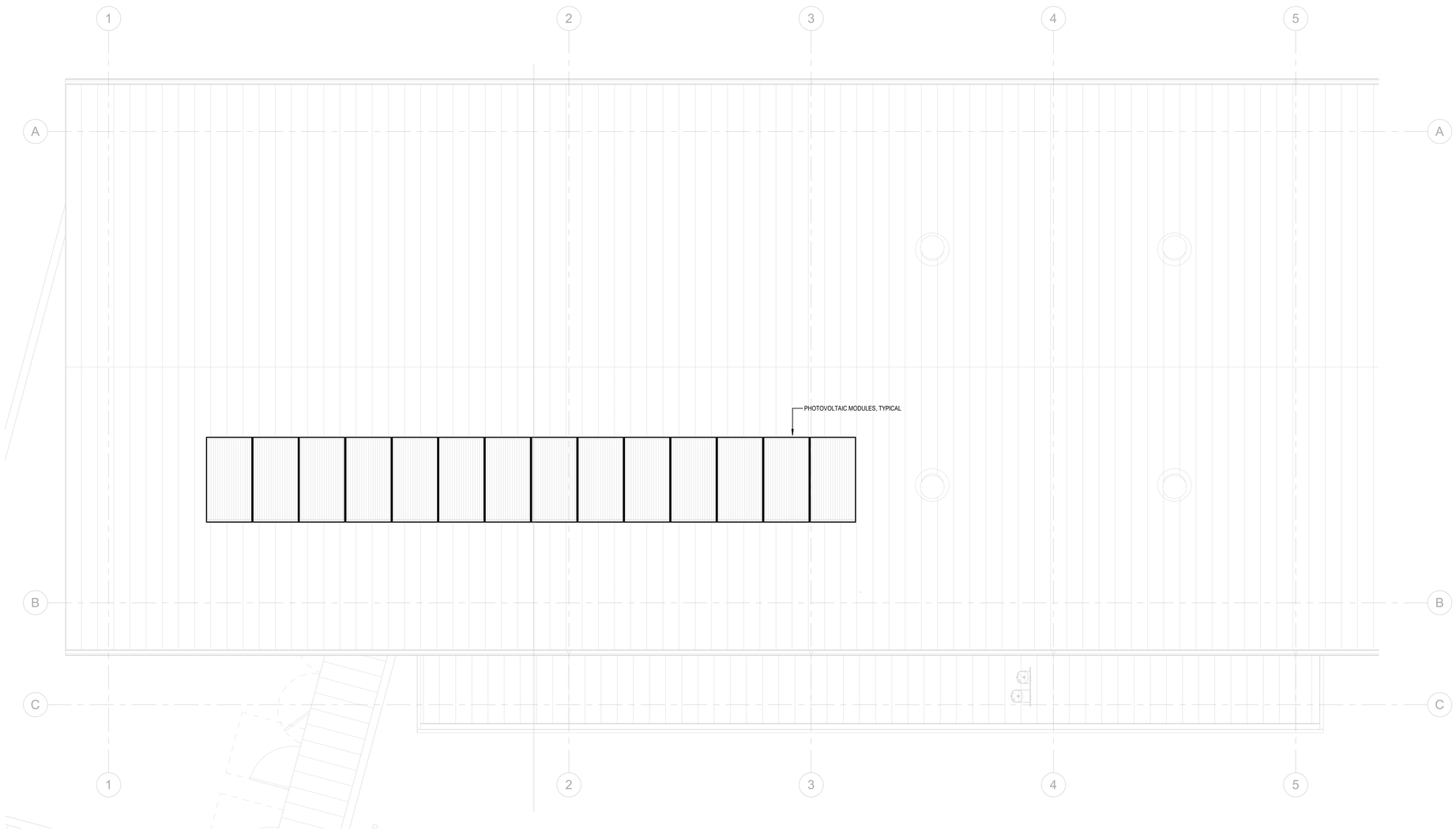
SHEET NOTES





ELECTRICAL ROOF PLAN
1/4" = 1'-0" SCALE (1)

NORTH

SHEET NOTES

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CONSULTANT:

KCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
Corporate Way, Parkway
Irvine, CA 92614
Fax (949) 660-1911

ELECTRICAL ROOF PLAN

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

REGISTERED PROFESSIONAL ENGINEER
CHENG-MING FANG
No. E 16592
ELECTRICAL
STATE OF CALIFORNIA

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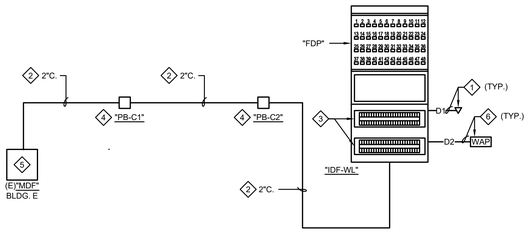
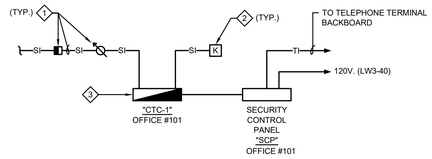


NOTES:

1. ROUTE MINIMUM OF (1) CATEGORY 6 RATED 24 GA. 4 PAIR UTP CABLE TO EACH DATA JACK/TELEPHONE JACK AND TERMINATE ON CATEGORY 6 RATED JACK. SEE DRAWINGS FOR QUANTITIES AND LOCATIONS AND SPECIFICATIONS FOR REQUIREMENTS ALL CABLE SHALL BE RUN CONTINUOUS FROM JACK TO IDF WITH NO SPLICES VIA CONDUITS AND J-HOOKS.
2. ROUTE (1) 6 STRAND SINGLE-MODE (6SM) FIBER OPTIC CABLE (F.O.C.) FROM "MDF" TO EACH "IDF" INDICATED F.O.C. SHALL BE TERMINATED ON FIBER DISTRIBUTION PANELS "FDP". PROVIDE 6'-0" F.O.C. PATCH CORDS FOR QUANTITY OF TERMINATED F.O.C.
3. CATEGORY 6 RATED PATCH PANELS WITH NUMBERS OF PORTS AND 6'-0" PATCH CORDS REQUIRED TO TERMINATE ALL CABLES INDICATED ON DRAWINGS PLUS 25% SPARE CAPACITY.
4. PULLBOXES PER SITE PLAN.
5. PROVIDE ALL REQUIRED MODIFICATIONS AT EXISTING "MDF" RACK(S) REQUIRED TO INSTALL ALL NEW CABLING INDICATED. PROVIDE ALL REQUIRED COMPONENTS, PROGRAMMING, ETC. FOR A COMPLETE SYSTEM.
6. ROUTE MINIMUM OF (2) CATEGORY 6 RATED 24 GA. 4 PAIR UTP CABLE TO EACH WIRELESS ACCESS POINT. SEE DRAWINGS FOR QUANTITIES AND LOCATIONS.

VOICE/DATA SYSTEM RISER DIAGRAM — NOT TO SCALE — 1

NOT USED — NOT TO SCALE — 2



NOTES:

1. INTRUSION DETECTION DEVICES AND FEEDER. SEE DRAWINGS FOR EXACT LOCATIONS AND QUANTITIES. ROUTE CABLES VIA CONDUIT. PROVIDE MANUFACTURES RECOMMENDED CABLING.
2. INTRUSION SYSTEM KEYPAD PER SPECIFICATIONS. COORDINATE EXACT KEYPAD LOCATION AND QUANTITIES WITH THE COLLEGE IN THE FIELD PRIOR TO ROUGH-IN.
3. PROVIDE ALL POWER SUPPLIES ZONE CONTROLLERS, TERMINAL STRIPS AS REQUIRED FOR INSTALLATION.

SECURITY INTRUSION DETECTION SYSTEM RISER DIAGRAM — NOT TO SCALE — 3

NOT USED — NOT TO SCALE — 4

NOT USED — NOT TO SCALE — 5

NOT USED — NOT TO SCALE — 6

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CONSULTANT:

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
1742 E. Dyer Rd. Ste. F
Santa Ana, CA 92705
714.966.1033
Fax 949.966.1933

COMMUNICATION RISER DIAGRAM

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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SEQUENCE OF OPERATION

DEVICE / ACTION	MANUAL PULL STATION	SMOKE DETECTOR	HEAT DETECTOR	120VAC POWER FAILURE	FLOW SWITCH	TAMPER SWITCH
SOUND CONTROL PANEL TROUBLE BUZZER - -	ON WIRING FAULT	ON WIRING FAULT	YES	YES	YES	YES
ANNUNCIATE AT ADMINISTRATION BUILDING -	YES	YES	YES	YES	YES	YES
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM OR TROUBLE) -	YES	YES	YES	YES	YES	YES
ACTIVATE AUDIBLE/ VISUAL ALARM SIGNAL THROUGH - OUT BUILDINGS	YES	YES	YES	NO	YES	NO
ALERT OFF-SITE MONITORING COMPANY - -	YES	YES	YES	NO	YES	NO

FIRE ALARM WIRE LEGEND

SYMBOL	DESCRIPTION	TYPE
D	DATA LINE - INITIATING DEVICE	16/2 UNSHIELDED TWISTED PR (UTSP) DATA LOOP
P	POWER CIRCUIT	2#12 THWN
S	SIGNAL (STROBE) CIRCUIT	2#12 THWN
A	AUDIBLE (SPEAKER) CIRCUIT	2#16 THWN SHIELDED

* ALL WIRING USED IN CONDUIT ON THE EXTERIOR OF THE BUILDING SHALL BE U.L. LISTED FOR WET LOCATION.

FIRE ALARM LEGEND

FACP	FIRE ALARM CONTROL PANEL WITH VOICE EVACUATION	FCI: E3 SERIES CSFM #7165-1703:0125
S	PHOTOELECTRIC SMOKE DETECTOR & BASE	FCI: ASD-PL2F CSFM #7272-1703:0121
I	HEAT DETECTOR MOUNTED ON CEILING	FCI: ATD-RL2F CSFM #7270-1703:0115
15cd 30cd 75cd 110cd	FIRE ALARM MULTI-CANDELA STROBE LIGHT, MOUNT AT +80"A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER.	SYSTEM SENSOR: SR CSFM #7125-1653:0186
15cd 30cd 75cd 110cd	MULTI-CANDELA COMBINATION SPEAKER/STROBE LIGHT, MOUNT AT +80"A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER. SPEAKER SHALL HAVE THE POWER TAP SET AT 1/2W U.N.O.	SYSTEM SENSOR: SPSR CSFM #7320-1653:0201
SS WP	FIRE ALARM SPEAKER WEATHERPROOF, MOUNT AT +90"A.F.F. SPEAKER SHALL HAVE THE POWER TAP SET AT 2W U.N.O.	SYSTEM SENSOR: SPRK CSFM #7320-1653:0201
FAPS	FIRE ALARM REMOTE POWER SUPPLY	FCI: GFPS-6 CSFM #7300-1703:0167
TS	TAMPER SWITCH (VIA MONITOR MODULE)	
FS	FLOW SWITCH (VIA MONITOR MODULE)	
B	FIRE ALARM BELL (VIA RELAY MODULE)	
MM	MONITOR MODULE	FCI: AMM-4F CSFM #7300-1703:0102
RM	RELAY MODULE	FCI: AOM-2SF CSFM #7300-1703:0102
SA1	INDICATES SIGNAL CIRCUIT #1 INDICATES BUILDING DESIGNATION "S" INDICATES STROBE CIRCUIT. "A" INDICATES SPEAKER CIRCUIT.	
Z1-XX	INDICATES ADDRESS NUMBER	
F	FIRE ALARM SYSTEM CONDUIT RUN (3/4" CONDUIT MINIMUM UNLESS INDICATED OTHERWISE ON DRAWINGS) AND REQUIRED WIRING.	BELDEN: FPLR CSFM #7161-0060:0103
FATC	24"L x 24"W x 6"D FIRE ALARM TERMINAL CABINET	
EOL	END OF LINE RESISTOR (10 OHMS)	

FIRE ALARM REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE AND SUBMIT THE FIRE ALARM SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE FIRE ALARM SYSTEM. THE SUBMITTAL SHALL CONTAIN THE FOLLOWING:
   - A. SHOP DRAWINGS: COMPLETE 1/8" SCALE FLOOR PLANS SHOWING ALL DEVICES, COMPONENTS, CONDUIT AND WIRING INDICATING A COMPLETE AND OPERABLE SYSTEM AS DESIGNED AND SPECIFIED. REPRODUCED COPIES OF BID SET FIRE ALARM PLANS ARE NOT ACCEPTABLE AS SHOP DRAWINGS. SHOP DRAWINGS MUST ALSO INDICATE DEVICE MOUNTING HEIGHTS, ROOM NAMES AND NUMBERS AND THE LOCATION OF ALL FIRE RATED WALLS.
   - B. ELECTRICAL CONTRACTOR'S AND FIRE ALARM SYSTEM INSTALLER'S NAME, ADDRESS, PHONE NUMBER AND C-10 LICENSE NUMBER.
   - C. LIST OF SYSTEM COMPONENTS, EQUIPMENT AND DEVICES, INCLUDING MANUFACTURERS' MODEL NUMBER(S) AND CALIFORNIA STATE FIRE MARSHALL LISTING NUMBERS.
   - D. ORIGINAL COPIES OF MANUFACTURERS' SPECIFICATION SHEETS FOR ALL EQUIPMENT AND DEVICES INDICATED.
   - E. VOLTAGE DROP CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION FOR THE WORST CASE:
     1. POINT-TO-POINT OR OHMS LAW CALCULATIONS.
     2. IDENTIFICATION OF ZONE USED IN CALCULATIONS.
     3. VOLTAGE DROP PERCENT (NOT TO EXCEED MANUFACTURERS' REQUIREMENTS).

        NOTE: IF VOLTAGE DROP EXCEEDS 10% INDICATE MANUFACTURERS' LISTED OPERATING VOLTAGE RANGE(S) OR EQUIPMENT AND DEVICES.
     4. NOTE CIRCUIT NUMBER FOR WORST CASE CALCULATION.
   - F. BATTERY TYPE(S), AMP HOURS AND LOAD CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION:
     1. NORMAL OPERATION: 100% OF APPLICABLE DEVICES FOR 24 HOURS = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER CONDITION -- I.E.:
        - A. ZONE MODULES
        - B. DETECTORS
        - C. OTHER DEVICES (IDENTIFY)
     2. ALARM CONDITION: 100% OF APPLICABLE DEVICES FOR 15 MINUTES = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING ALARM CONDITION -- I.E.:
        - A. ZONE MODULES
        - B. SIGNAL MODULES
        - C. DETECTORS
        - D. SIGNAL DEVICES
        - E. ANNUNCIATOR
        - F. OTHER DEVICES (IDENTIFY)
     3. NORMAL OPERATION + ALARM OPERATION
        - A. TOTAL AMP HOURS REQUIRED.
        - B. TOTAL AMP HOURS PROVIDED.

FIRE ALARM NOTES

1. SCOPE OF WORK: PROVIDE A COMPLETE AUTOMATIC FIRE ALARM SYSTEM WITH VOICE EVACUATION IN ACCORDANCE TO 2022 NFPA-72 AND CCR TITLE 24, PART 2, SECTION 907.2.3; 907.5.2.2.
2. A FIRE ALARM SYSTEM IS BEING INSTALLED IN OCCUPANCIES LISTED. PROVIDE NEW EDWARDS FIRE ALARM CONTROL PANEL AS INDICATED.
3. PLANS AND SPECIFICATIONS FOR THE SYSTEM SHALL BE APPROVED BY DSA-FIRE AND LIFE SAFETY PRIOR TO SYSTEM INSTALLATION.
4. UPON RECEIPT OF THE CERTIFICATE OF COMPLIANCE, THE MANUFACTURER AND OR INSTALLER SHALL SUPPLY THE OWNER WITH WRITTEN OPERATING, TESTING AND MAINTENANCE INSTRUCTIONS, POINT-TO-POINT AS-BUILT DRAWINGS, AND EQUIPMENT SPECIFICATIONS.
5. THE SYSTEM SHALL CONFORM TO TITLE 19 AND TITLE 24 AS APPLICABLE TO THIS PROJECT.
6. ALL THE DEVICES OF THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL.
7. A STAMPED SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM APPROVED PLANS, SHALL BE APPROVED AND SIGNED BY THE DSA INSPECTOR OF RECORD.
8. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OR ARCHITECT/ENGINEER OF RECORD.
9. CONDUIT SYSTEM TO BE FURNISHED AND INSTALLED PER PLANS AND SPECIFICATIONS.
10. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO THE ENFORCING AGENCY.
11. PENETRATIONS OF FIRE-RATED WALLS SHALL BE PROTECTED IN ACCORDANCE WITH 2022 EDITION CALIFORNIA BUILDING CODE, CHAPTER 7.
12. ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
13. ALL WIRING SHALL BE IN ACCORDANCE WITH THE C.E.C. AND AUTHORITIES HAVING JURISDICTION.
14. ALL FIRE ALARM CONDUIT SHALL BE 3/4"C. MIN., U.N.O. ALL FIRE ALARM CONDUIT INSTALLED UNDERGROUND SHALL BE 1"C. MIN. U.N.O. ALL FIRE ALARM CONDUCTORS SHALL BE INSTALLED IN AN APPROVED RACEWAY.
15. ALL AUDIBLE DEVICES SHALL BE IN SYNCHRONOUS.
16. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
17. UNDERGROUND AND EXTERIOR CONDUITS SHALL HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
18. AUDIBLE DEVICES SHALL BE AT LEAST 15dBA ABOVE THE EQUIVALENT SOUND LEVEL BUT NOT LESS THAN 75dBA AT 10' OR MORE THAN 110dBA AT THE MINIMUM HEARING DISTANCE. SOUND LEVEL SHALL BE MAINTAINED FOR DURATION OF AT LEAST 60 SECONDS. 5dBA MUST BE MAINTAINED.
19. AUDIBLE DEVICES SHALL SOUND A PRERECORDED MESSAGE AS DIRECTED BY THE OWNER.
20. COORDINATE EXACT LOCATION OF ALL CEILING FIRE ALARM DEVICES IN FIELD.
21. CIRCUIT LENGTH INDICATED ON DRAWINGS IS FOR PLAN CHECK PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY EXACT LENGTH.
22. ALL JUNCTION BOXES SHALL BE SIZED IN ACCORDANCE WITH THE C.E.C.
23. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE SERVICING, TROUBLE SHOOTING, ETC., AS REQUIRED. COORDINATE WITH ARCHITECT FOR ACCESS PANELS.
24. ALL 120VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
25. ALL WIRING, ANNUNCIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPLE POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
26. AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY CFC 907.6.6.1. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER.
27. ALL FIRE ALARM WIRING IN PULLBOXES SHALL BE ROUTED WITHIN INNERDUCT AND IDENTIFIED AS FIRE ALARM.
28. PROVIDE ACCESSIBLE OPERATING HARDWARE AT INITIATIVE DEVICE (e.g., NOT REQUIRING TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST AND FORCE LESS THAN 5 LBS.)
29. SEE SHEET E3.02 FOR TYPICAL DEVICE MOUNTING HEIGHT DETAIL.
30. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
31. DSA ARCHITECT AND OWNER SHALL BE NOTIFIED MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
32. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
33. ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
34. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE, DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6' OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC.
35. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
36. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT OR SURFACE RACEWAY, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
37. FIRE ALARM PANELS, REMOTES AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20lbs WITHOUT SPECIAL MOUNTING DETAILS.
38. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
39. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURES 7.8.2(a) - 7.8.2(f).
40. FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATIONS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.
41. MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
42. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.3.
43. THE INSTALLING CONTRACTOR SHALL PERFORM A VOICE MESSAGE INTELLIGIBILITY TEST USING INTELLIGIBILITY MEASUREMENT METHODS 1 AND/OR 2 TO COMPLY WITH NFPA-72 24.3.1 AND 18.4.10. INTELLIGIBILITY TEST SHALL BE WITNESSED BY THE INSPECTOR OF RECORD.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2150 E. Orange Way, Suite
Ontario, CA 91762
Ph 909.390.1933
Fx 909.390.1933

FIRE ALARM SYMBOLS AND NOTES

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

REGISTERED PROFESSIONAL ENGINEER * CHRISTOPHER J. FANG * No. E 18992 * STATE OF CALIFORNIA

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

E3.01
100% CD

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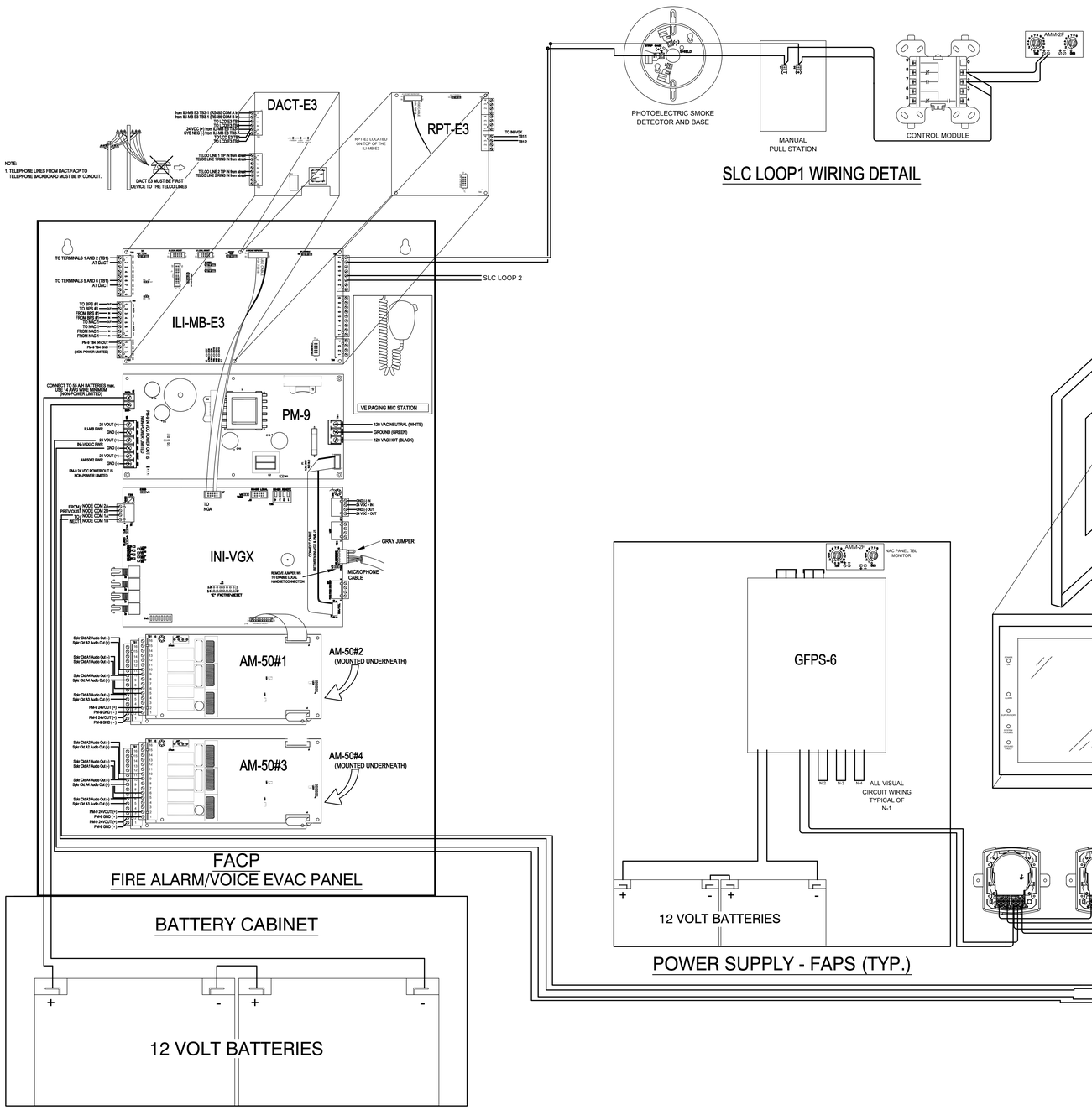

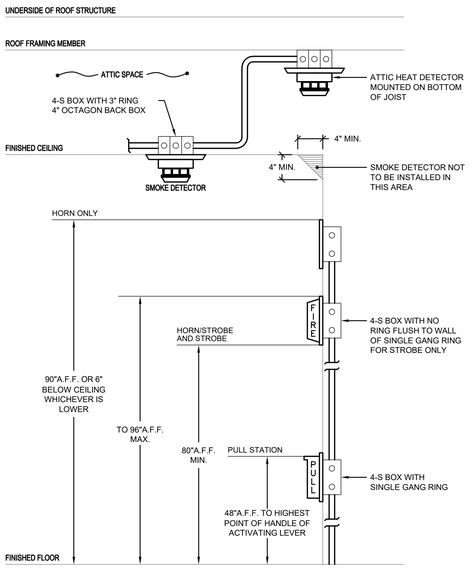

TYPICAL DEVICE MOUNTING HEIGHT DETAIL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
2151 E. Dyer Rd. Ste. F
Santa Ana, CA 92705
714.966.1033
Fx 714.966.1033

FIRE ALARM WIRING DIAGRAM DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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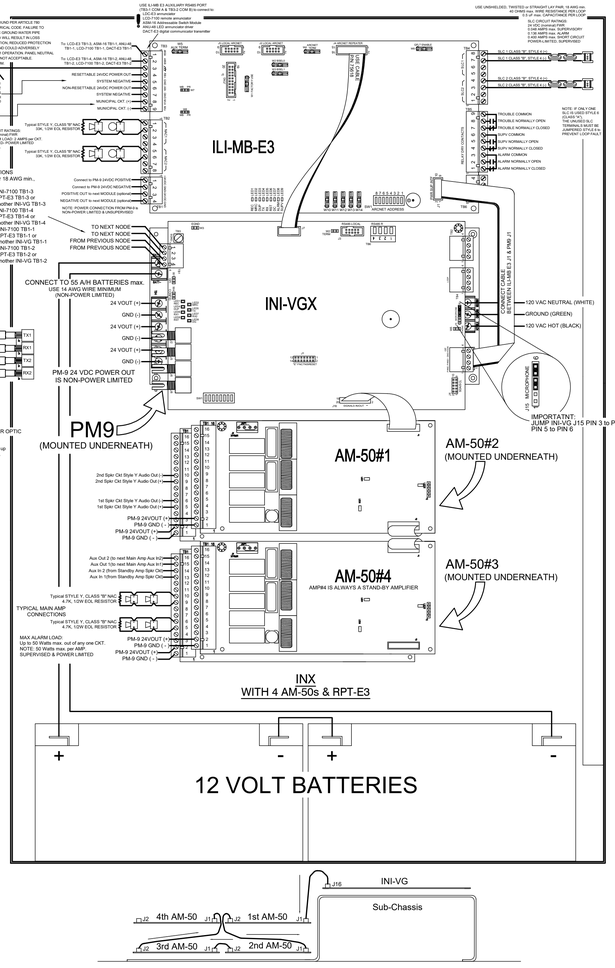
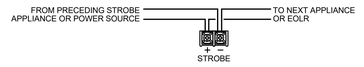
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/28/2025
DELTA DATE: DESCRIPTION:

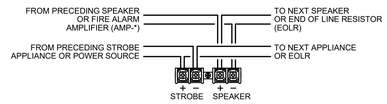
E3.02
100% CD





TYPICAL 2-WIRE STROBE WIRING DIAGRAM

NO SCALE



TYPICAL 4-WIRE SPEAKER/STROBE WIRING DIAGRAM

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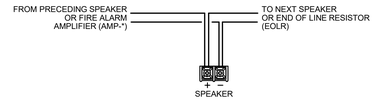

TYPICAL 2-WIRE SPEAKER WIRING DIAGRAM

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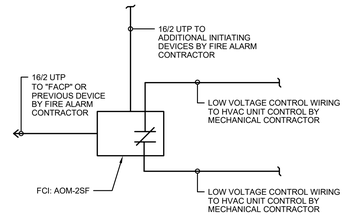
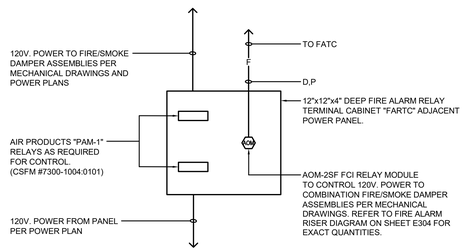


HVAC UNIT SHUT-DOWN



"FARTC" INSTALLATION DETAIL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
2150 E. Orangewood Ave. Suite 100
Anaheim, CA 92806
714.978.1933
Fax 800.985.1933

FIRE ALARM WIRING DIAGRAM DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 04/25/2025
DELTA DATE: DESCRIPTION:

E3.03
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E303.dwg 8-27-25-8:24 AM

FCI E3 SERIES Battery Calculations
INTECH WELDING FACILITY
FACP Data Loops Z1 Signal Circuit S1

Description	Quantity		Standby (Amps)		Total Standby (Amps)	Alarm (Amps)	Total Alarm (Amps)
ILI-MB-E3	1	x	0.081000		0.081000	0.150000	0.150000
ILI-S-E3	1	x	0.118000		0.118000	0.119000	0.119000
RPT-E3-FO	1	x	0.013000		0.013000	0.013000	0.013000
DACT-E3	1	x	0.018000		0.018000	0.018000	0.018000
PM-9	1	x	0.050000		0.050000	0.050000	0.050000
LCD-E3	1	x	0.024000		0.024000	0.028000	0.028000
LOC	1	x	0.001000		0.001000	0.001000	0.001000
INI-YGX	1	x	0.150000		0.150000	0.150000	0.150000
AM-50-70	1	x	0.049000		0.049000	2.300000	2.300000
WATTS @ 70.7Vrms	9.5	x	0.000000		0.000000	0.014000	0.133000
ASD-PL2F	3	x	0.000300		0.000900	0.006500	0.019500
ABD-RT2F	0	x	0.002000		0.000000	0.008500	0.000000
MCS-COF	0	x	0.000300		0.000000	0.007200	0.000000
B200S	0	x	0.000300		0.000000	0.000300	0.000000
B200S (AUX POWER)	0	x	0.000500		0.000000	0.035000	0.000000
ATD-RL2F	5	x	0.000300		0.001500	0.006500	0.032500
ATD-HL2F	0	x	0.000300		0.000000	0.006500	0.000000
AMM-4F	0	x	0.000375		0.000000	0.005000	0.000000
AOM-25F	0	x	0.000375		0.000000	0.006500	0.000000
MS-7AF	0	x	0.000300		0.000000	0.003000	0.000000
SR/SCW 15cd Strobe	7	x	0.000000		0.000000	0.066000	0.462000
SR/SCW 30cd Strobe	0	x	0.000000		0.000000	0.094000	0.000000
SR/SCW 75cd Strobe	0	x	0.000000		0.000000	0.158000	0.000000
SR/SCW 110cd Strobe	1	x	0.000000		0.000000	0.202000	0.202000
SPSR/SPSCW 15cd Spkr St.	0	x	0.000000		0.000000	0.066000	0.000000
SPSR/SPSCW 30cd Spkr St.	0	x	0.000000		0.000000	0.094000	0.000000
SPSR/SPSCW 75cd Spkr St.	1	x	0.000000		0.000000	0.158000	0.158000
SPSR/SPSCW 110cd Spkr St.	2	x	0.000000		0.000000	0.202000	0.404000
Total:					0.506400		4.240000

Battery Calculation	Time Multiplier				Amp Hours
Supervisory Hours	24	x	0.506400	=	12.153600
Alarm Minutes	0.250	x	4.240000	=	1.06
Total Amp Hours				=	13.213600
Demand Factor	1.25	x	13.213600	=	16.517000
Battery Used (AH)				=	36.000000
Battery Spare (AH)				=	19.483000

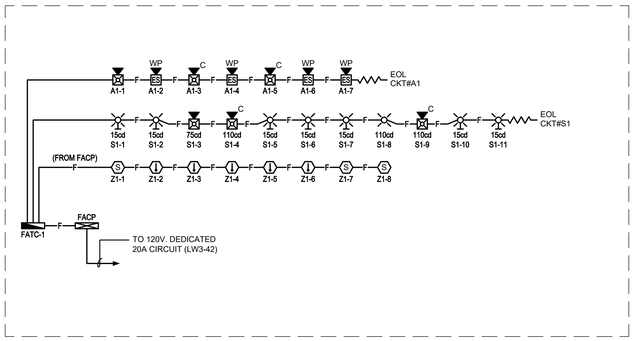
Voltage Drop Calculations
INTECH WELDING FACILITY
FACP Signal Circuit S1

Description	Quantity		Alarm (Amps)		Total Alarm (Amps)
SR/SCW 15cd Strobe	7	x	0.066000		0.462000
SR/SCW 30cd Strobe	0	x	0.094000		0.000000
SR/SCW 75cd Strobe	0	x	0.158000		0.000000
SR/SCW 110cd Strobe	1	x	0.202000		0.202000
SPSR/SPSCW 15cd Spkr St.	0	x	0.066000		0.000000
SPSR/SPSCW 30cd Spkr St.	0	x	0.094000		0.000000
SPSR/SPSCW 75cd Spkr St.	1	x	0.158000		0.158000
SPSR/SPSCW 110cd Spkr St.	2	x	0.202000		0.404000
Total Current Draw:				=	1.226000
Wire Size 14	0	x	4110	=	0
Wire Size 12	1	x	6530	=	6530
Wire Used Circular Mills				=	6530
Distance to End of Circuit:				=	378
Multiplier				=	21.6
Voltage				=	24
Multiplier				=	4.166
Percentage Voltage Drop				=	6.386

INTECH WELDING FACILITY - SPEAKER CIRCUIT LOAD CALCULATION

SPEAKER CIRCUIT DESCRIPTION	PANEL CIRCUIT NUMBER	WIRE GAUGE (18, 16, 14, 12)	CIRCUIT VOLTAGE (25 OR 70 VRMS)	APPLIANCES QUANTITIES / TAP VALUES					TOTAL CIRCUIT LOAD (WATTS)	ESTIMATED CIRCUIT LENGTH (FEET)	MAXIMUM -3 dB DROP PER CIRCUIT		
				SPSR / CW TAP .25 Watt	SPSR / CW TAP .5 Watt	SPSR / CW TAP 1. Watt	SPSR / CW TAP 2. Watt	SPRK TAP 2. Watt			ACTUAL WIRE/LOSS (dB)	MAXIMUM ALLOWABLE CKT. LENGTH (FEET)	TOTAL CIRCUIT RESISTANCE (OHMS)
Intech Welding Facility Speakers (FACP)	A1	16	70 vrms	0	3	0	0	4	9.5 Watts	350 ft.	-.05 db	23752 ft.	3.147 Ohms
		16	70 vrms	0	0	0	0	0	Watts	ft.	db	ft.	Ohms
				Appliance Summary					Total Load (Watts)				
				0	3	0	0	4	9.50				

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE MAXIMUM ALLOWABLE CIRCUIT LENGTH. THIS METHOD ALLOWS FOR A SMALL MARGIN OF SAFETY, TAKING INTO CONSIDERATION THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS SHOWN ON THE SHOP DRAWINGS.



INTECH WELDING FACILITY

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2151 E. Dalton Ave, Ste. 1
Glendora, CA 91741
P 626.963.1933
F 626.963.1933

FIRE ALARM RISER DIAGRAM AND BATTERY CALCULATIONS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

REGISTERED PROFESSIONAL ENGINEER * CHRISTOPHER FANG * No. E 18992 * STATE OF CALIFORNIA * ELECTRICAL

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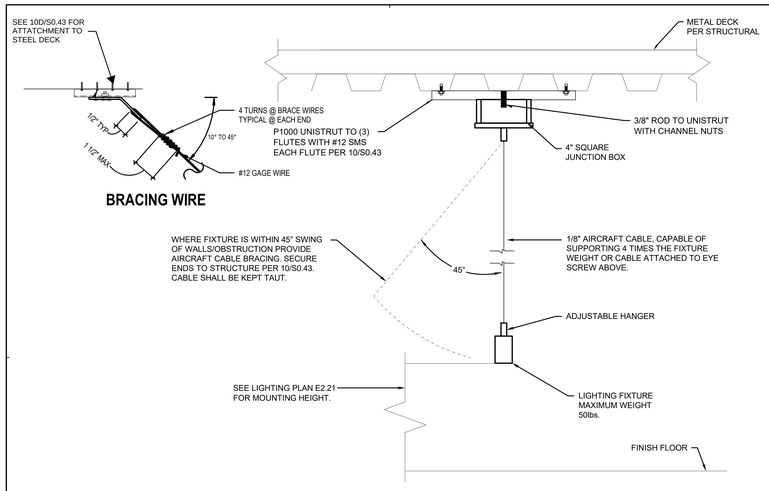
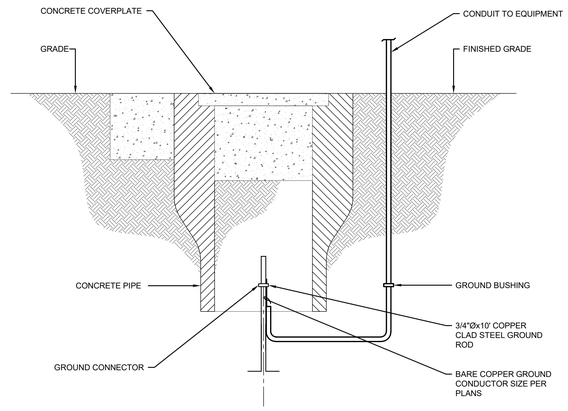
PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/28/2025
DELTA: DATE: DESCRIPTION:

E3.04
100% CD

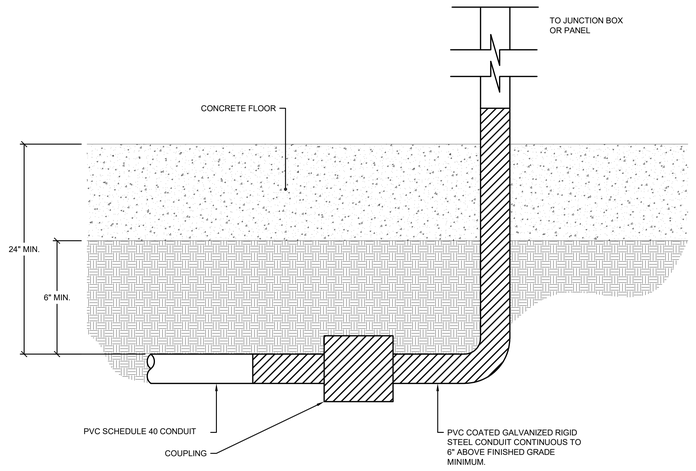
R:\Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E304.dwg 8-27-25-8:24 AM



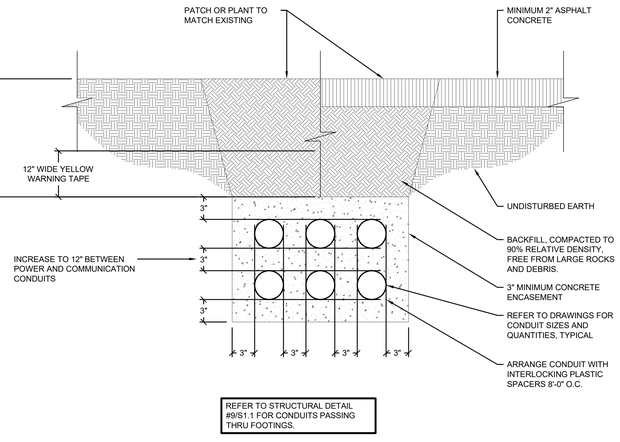
AIRCRAFT CABLE PENDANT MOUNTED FIXTURE DETAIL | NOT TO SCALE | 1



GROUND ROD DETAIL | NOT TO SCALE | 2



CONDUIT RISER INSTALLATION DETAIL | NOT TO SCALE | 3

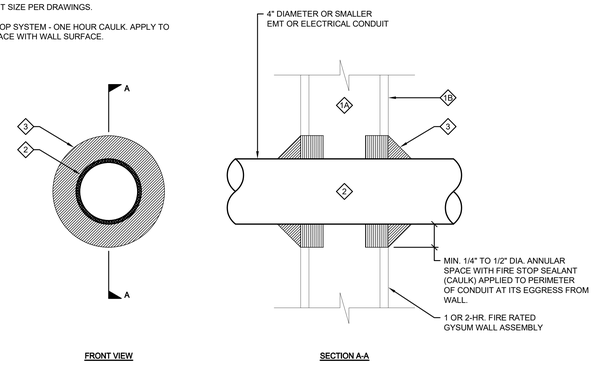


REFER TO STRUCTURAL DETAIL #9/S1.1 FOR CONDUITS PASSING THRU FOOTINGS.

TYPICAL MULTI-CONDUIT PLACEMENT DETAIL | NOT TO SCALE | 4

DETAIL NOTES:

1. WALL CONSTRUCTION:
   A. STEEL STUDS PER ARCHITECTURAL/STRUCTURAL.
   B. 5/8" TYPE x GYPSUM BOARD PER ARCHITECTURAL.
2. CONDUIT SIZE PER DRAWINGS.
3. FIRE STOP SYSTEM - ONE HOUR CAULK. APPLY TO INTERFACE WITH WALL SURFACE.



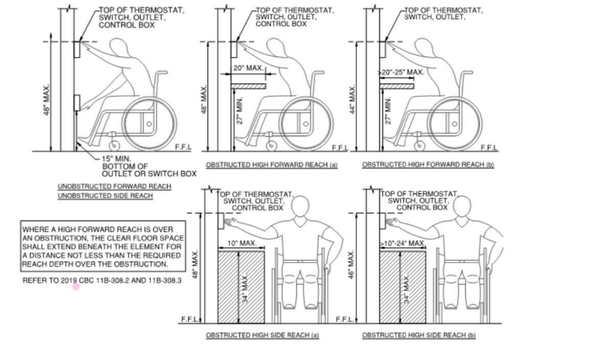
FRONT VIEW

SECTION A-A

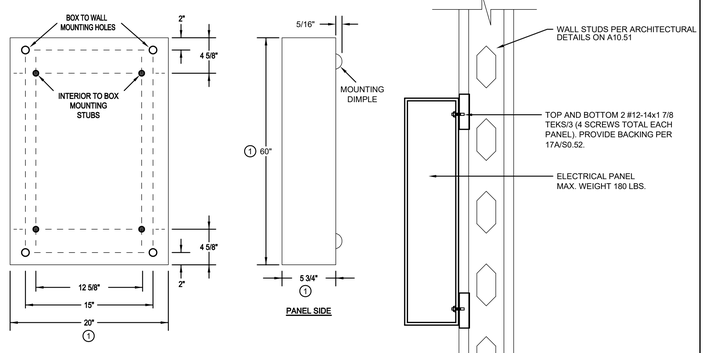
U.L. SYSTEM NO. W-L-1001

NOTE: MAX. DIA. OF OPENING IS 13 1/2" ANNULAR SPACE OF MIN. 1/4" DIA. BEAD IS REQUIRED.

CONDUIT PENETRATION AT 1-HR FIRE RATED WALL | NOT TO SCALE | 5



ACCESSIBLE DEVICE MOUNTING HEIGHTS FOR WHEELCHAIR APPROACH DETAIL | NOT TO SCALE | 6

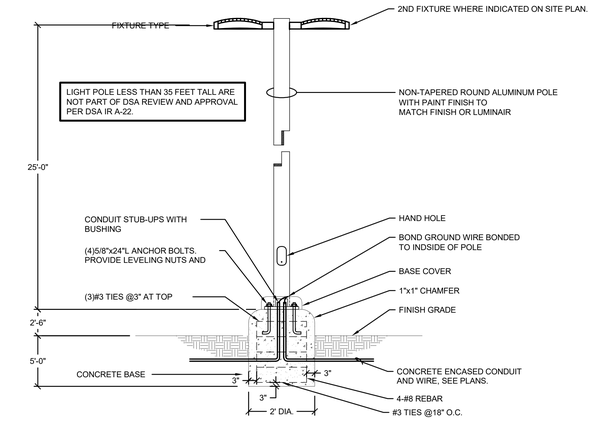


KEY NOTE

1. DIMENSIONS ARE INTERIOR OF THE BOX. ADD 5/8" TO WIDTH FOR ABSOLUTE DIMENSION. ADD 1/8" TO HEIGHT FOR ABSOLUTE DIMENSIONS.

SURFACE MOUNTED PANEL/CABINET STEEL FRAMING | NOT TO SCALE | 7

NOT USED | NOT TO SCALE | 8



POLE MOUNTED LIGHTING FIXTURE BASE MOUNTING DETAIL | NOT TO SCALE | 9

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
2151 E. Dyer Rd. Ste. F
Santa Ana, CA 92705
P 714.557.7333
F 714.557.7337

ELECTRICAL DETAILS
CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

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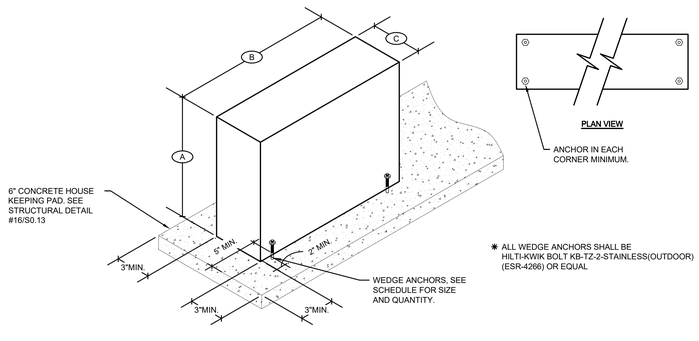
PROJECT NUMBER: 22-65102.00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/29/2025
DELTA DATE: DESCRIPTION:

E4.01
100% CD

R:\Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E401.dwg 8-27-25-8:24 AM



✱ ALL WEDGE ANCHORS SHALL BE HILTI-KWIK BOLT KB-TZ-2-STAINLESS(OUTDOOR) (ESR-4266) OR EQUAL

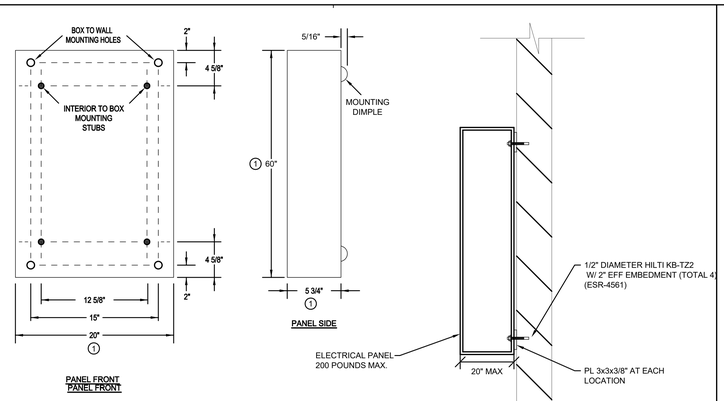
UNITIZED SUBSTATION #MSSB

SYMBOL	A	B	C	WEIGHT	MIN. NO ANCHORS	SIZE OF ANCHORS	MINIMUM EMBEDMENT
DLW	90"	36"	24"	1200 lbs	4	5/8" ⌀	4 1/4"
TR-W	60"	38"	34"	2080 lbs	4	5/8" ⌀	4 1/4"

SYMBOL	A	B	C	WEIGHT	MIN. NO ANCHORS	SIZE OF ANCHORS	MINIMUM EMBEDMENT
HV SWITCH (EACH)	80"	36"	36"	2000 lbs	4	5/8" ⌀	4 1/4"
TRANSFORMER	85"	37"	37"	7680 lbs	*SEE BELOW	5/8" ⌀	4 3/4"
DISTRIBUTION	90"	36"	36"	761 lbs	4	5/8" ⌀	4 1/4"

*(4) EA SIDE ON LONG SIDE. (2) EA SIDE ON THE SHORT SIDE, (12) ANCHORS TOTAL

SWITCHBOARD & TRANSFORMER MOUNTING DETAIL — NOT TO SCALE — 1

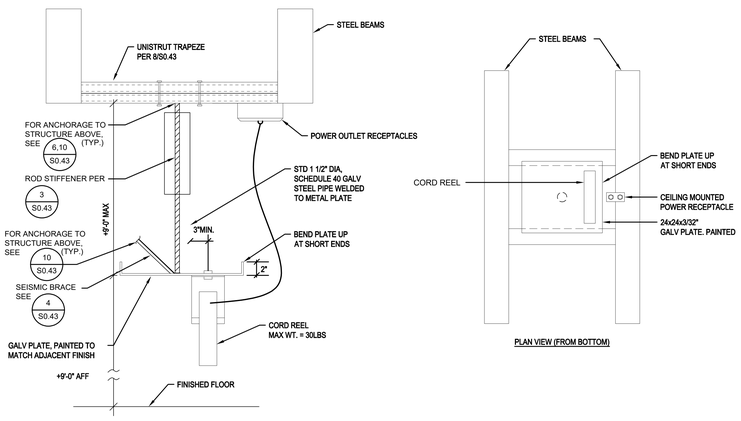


KEY NOTE

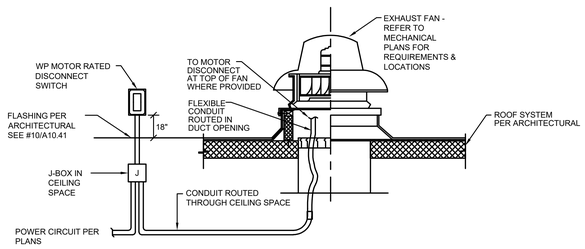
1. DIMENSIONS ARE INTERIOR OF THE BOX. ADD 5/8" TO WIDTH FOR ABSOLUTE DIMENSION. ADD 1/8" TO HEIGHT FOR ABSOLUTE DIMENSIONS.

SURFACE MOUNTED PANEL @ MASONRY WALL — NOT TO SCALE — 2

1. CEILING MOUNTED HEAVY DUTY CORD REEL. ALERT STAMPING #5020TF-4C WITH 20' CORD AND (4)OUTLETS. PROVIDE CEILING MOUNTED RECEPTACLES ADJACENT TO REEL. MOUNTING PLATE TO BE LEVEL WITH BOTTOM OF ADJACENT LIGHT FIXTURE.



ELECTRICAL CORD REEL WITH RECEPTACLE — NOT TO SCALE — 3



ROOF MOUNTED EXHAUST FAN CONNECTION DETAIL (WHERE OCCURS) — NOT TO SCALE — 4

NOT USED — NOT TO SCALE — 5

NOT USED — NOT TO SCALE — 6

NOT USED — NOT TO SCALE — 7

NOT USED — NOT TO SCALE — 8

NOT USED — NOT TO SCALE — 9

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCCA ENGINEERS
Consulting Mechanical and Electrical Engineers
2150 E. Orange Way, Ste. 1
Ontario, CA 91762-3933
P: 909.390.1933

ELECTRICAL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

REGISTERED PROFESSIONAL ENGINEER ★ CHRISTOPHER JIANG ★ No. E 14592 ★ STATE OF CALIFORNIA

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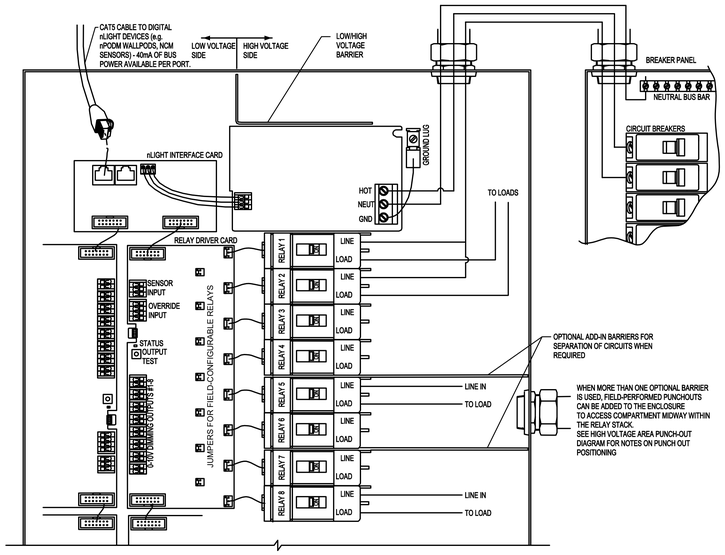
PROJECT NUMBER 23-46102-00
PROJECT STATUS 100% CD
SHEET ISSUED: 08/29/2025
DELTA: DATE: DESCRIPTION:

E4.02
100% CD

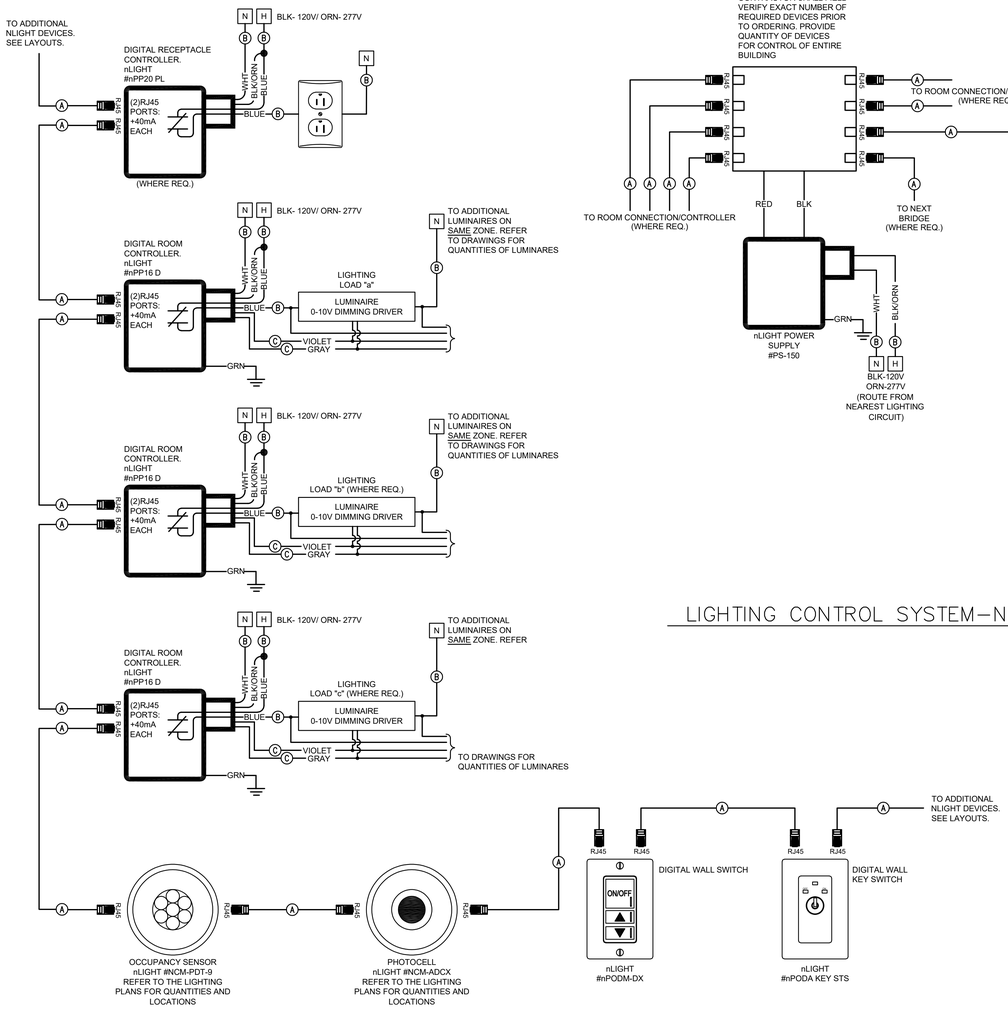
R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E402.dwg 8-27-25-8:24 AM

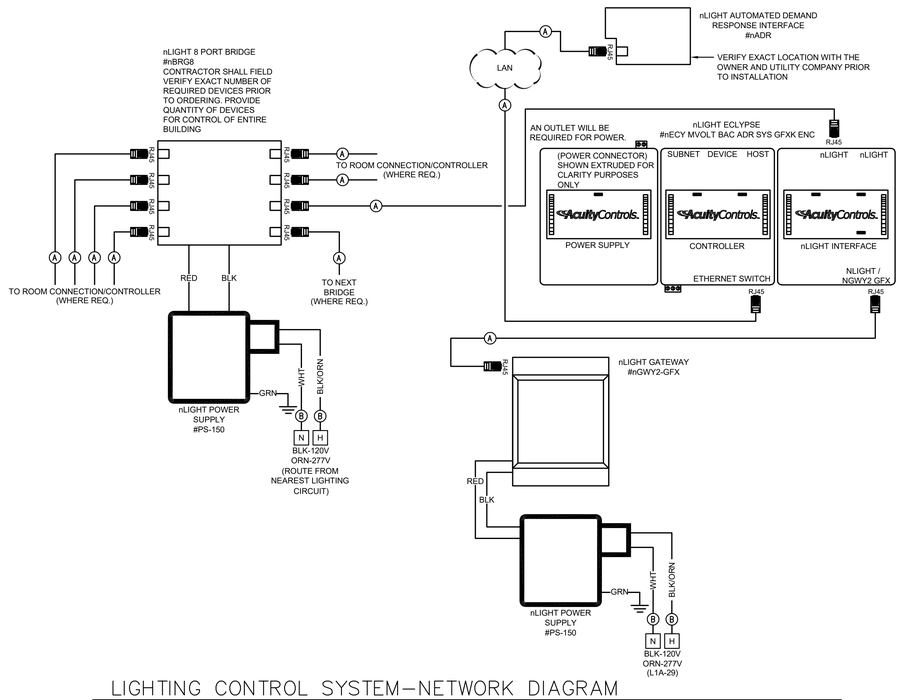
LIGHTING CONTROL PANEL "LCP-1"
nLIGHT #ARP SERIES LIGHTING RELAY PANEL
MODEL #ARP INTENC16 NLT 16SPR MVOLT HLK SM

LIGHTING CONTROL PANEL "LCP-2"
nLIGHT #ARP SERIES LIGHTING RELAY PANEL
MODEL #ARP INTENC08 NLT 8SPR MVOLT HLK SM



ALL EXTERIOR LIGHTING ROUTED VIA LIGHTING CONTROL PANELS SHALL BE CONTROLLED BY THE EMS SYSTEM. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR ALL INTEGRATION REQUIREMENTS FOR A COMPLETE SYSTEM.





LIGHTING CONTROL SYSTEM—NETWORK DIAGRAM

WALL SWITCH BUTTON ASSIGNMENTS (3 BUTTON SWITCH)		
BUTTON	ENGRAVING	ASSIGNMENTS
1	"ON/OFF"	ALL LIGHTS "ON" OR "OFF"
2	▲	RAISE LIGHT LEVELS INCREMENTALLY
3	▼	LOWER LIGHT LEVELS INCREMENTALLY

WALL SWITCH BUTTON ASSIGNMENTS (1 BUTTON SWITCH)		
BUTTON	ENGRAVING	ASSIGNMENTS
1	"ON/OFF"	ALL LIGHTS "ON" OR "OFF"

WIRE LEGEND
(A) CAT 5-E (CLASS 2)
(B) LINE VOLTAGE
(C) 0-10 VDC
H UNSWITCHED HOT CONDUCTOR
N NEUTRAL CONDUCTOR

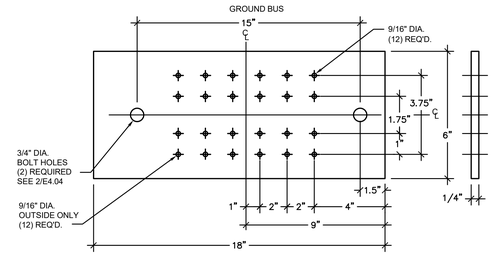
ALL LIGHTING CONTROL COMPONENTS SHALL BE "nLIGHT" OR EQUAL BY LEVITON OR WATTSTOPPER

ALL LINE VOLTAGE AND 0-10 VOLT CONDUCTORS SHALL BE ROUTED IN 3/4" CONDUIT, MINIMUM

REFER TO THE LIGHTING PLANS FOR QUANTITES AND LOCATIONS OF ALL LIGHTING CONTROL DEVICES UNLESS NOTED OTHERWISE.

LIGHTING CONTROL WIRING DIAGRAMS

NOT TO SCALE	1



NOTES
1. REMOVE ALL BURR. BREAKS, SHARP EDGES AND CORNERS.
2. TOLERANCES SHALL NOT BE CUMULATIVE.
3. LABEL "COMMUNICATION GROUND POINT".

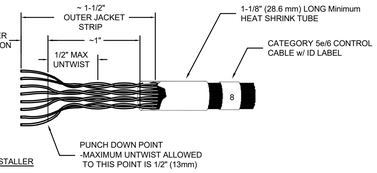
*REFER TO DETAIL #3/E4.04 FOR MOUNTING

COMMUNICATION GROUND BUS DETAIL

NOT TO SCALE	2

TIA / EIA-568-B CABLING STANDARD TERMINATION

Function	PAIR #	PIN OUT (T568B)	Wire Color
(T1) (R1)	1	5 4	WHITE w/ BLUE BLUE
Tx + (T2) Tx - (R2)	2	1 2	WHITE w/ ORANGE ORANGE
Rx + (T3) Rx - (R3)	3	3 6	WHITE w/ GREEN GREEN
(T4) (R4)	4	7 8	WHITE w/ BROWN BROWN

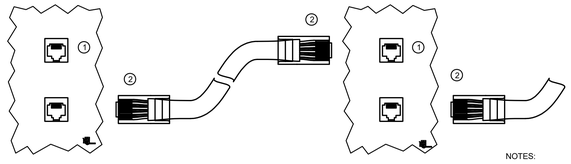


TERMINATION & TESTING OF CAT5 CABLES MUST BE DONE BY A QUALIFIED NETWORK INSTALLER

CABLE TERMINATION REQUIREMENTS :

1. STRIP OFF OUTER JACKET - APPROXIMATELY 1-1/2" (37.6 MM)
2. FIT A PIECE OF 1-1/8" (28.6 MM) LONG HEAT SHRINK TUBE OVER THE CABLE EXTENDING OUT 1/4" (6.25 MM) FROM OUTER JACKET
3. TERMINATE APPROXIMATELY 1/2" (12.2 MM) FROM END OF CONDUCTORS ON TYPE 110 PUNCH DOWN BLOCK OR CONNECTOR PER SCHEDULE (T568B) - MAXIMUM UNTWIST OF CONDUCTORS TO TERMINATIONS IS 1/2" (12.2 MM) - TRIM EXCESS LEADS
4. SHRINK TUBING AND ADD APPROPRIATE ID LABEL TO THE CABLE AT THE END OF THE HEAT SHRINK TUBE

SEE SYSTEM SPECIFIC NOTES ON SHEET LC0.1 FOR MAXIMUM CABLE LENGTHS.



(1) RJ45 FEMALE CONNECTOR

(2) RJ45 MALE CONNECTORS. ALL CABLES SUPPLIED BY CONTRACTOR.

NOTES:

DAISY-CHAIN CAT5 PATCH CABLE WITH RJ45 CONNECTORS FROM DIGITAL DEVICE TO DIGITAL DEVICE.

REFER TO MANUFACTURERS INSTRUCTIONS FOR LONG DISTANCE RUNS BETWEEN DIGITAL DEVICES.

CRIMP AND TEST EACH CABLE WITH A LAN CIRCUIT TESTER PRIOR TO INSTALLATION.

CAT5e/6 CABLE TERMINATION

N.T.S.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
2150 E. Orange Way, Suite 100, Ontario, CA 91762
Phone 909.937.0033
Fax 909.980.1933

ELECTRICAL DETAILS

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 09/29/2025
DELTA: DATE: DESCRIPTION:

E4.03
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E403.dwg 8-27-25-8:24 AM

PANEL: "HW1" | BRANCH: NORMAL
LOCATION: | VOLTAGE: 480/277V | CKT CODE: 1=(CONTINUOUS LOAD)
FED FROM: MSDP | PHASE & WIRE: 3PH,4W | 2=(NON-CONTINUOUS)
MOUNTING: SURFACE NEMA-3R | MIN. BUS: 400 AMPS | 3=(RECEPTACLES)
AIC RATING: 42000 | MCB: 400 AMPS | 4=(KITCHEN) | NO. OF EQUIP=

CIRCUIT		CKT BKR		LOAD TYPE & DESIGNATION				LOAD		PHASES		LOAD	LOAD TYPE & DESIGNATION				CKT BKR		CIRCUIT	
NO	CODE	TRIP	POLE	DESCRIPTION	MISC	REC	LTG	VA	A	B	C	VA	LTG	REC	MISC	DESCRIPTION	POLE	TRIP	CODE	NO
1	1	20	1	INTERIOR LIGHTING			27	1518	1982	----	----	464				EXTERIOR LIGHTING	1	20	1	2
3		20	1	SPARE					----	464	----	464				EXTERIOR LIGHTING	1	20	1	4
5		20	1	SPARE					----	----	608	608				CANOPY LIGHTING	1	20	1	6
7	2	20	3	"UH-1"		1		2548	9223	----	----	6675				"UH-5"	3	40	2	8
9	2	-	-	-				2548	----	9223	----	6675				-	-	-	2	10
11	2	-	-	-				2548	----	----	9223	6675				-	-	-	2	12
13	2	20	3	"UH-2"				2548	9223	----	----	6675				"UH-6"	3	40	2	14
15	2	-	-	-				2548	----	9223	----	6675				-	-	-	2	16
17	2	-	-	-				2548	----	----	9223	6675				-	-	-	2	18
19	2	20	3	"UH-3"				2548	9223	----	----	6675				"UH-7"	3	40	2	20
21	2	-	-	-				2548	----	9223	----	6675				-	-	-	2	22
23	2	-	-	-				2548	----	----	9223	6675				-	-	-	2	24
25	2	20	3	"UH-4"				2548	9223	----	----	6675				"UH-8"	3	40	2	26
27	2	-	-	-				2548	----	9223	----	6675				-	-	-	2	28
29	2	-	-	-				2548	----	----	9223	6675				-	-	-	2	30
31	2	20	3	"EF-3"				831	2160	----	----	1329				"EF-5"	3	20	2	32
33	2	-	-	-				831	----	2160	----	1329				-	-	-	2	34
35	2	-	-	-				831	----	----	2160	1329				-	-	-	2	36
37	2	20	3	"EF-4"				1329	1910	----	----	581				"EF-6"	3	20	2	38
39	2	-	-	-				1329	----	1910	----	581				-	-	-	2	40
41	2	-	-	-				1329	----	----	1910	581				-	-	-	2	42
43		20	1	SPARE					0	----	----					SPARE	1	20		44
45		20	1	SPARE					----	0	----					SPARE	1	20		46
47		20	1	SPARE					----	----	0					SPARE	1	20		48
49				SPACE					0	----	----					SPACE				50
51				SPACE					----	0	----					SPACE				52
53				SPACE					----	----	0					SPACE				54
NOTES:								TOTAL	42944	41426	41570									

CONN.KVA (CODE 1)	3.1
CONN.KVA (CODE 2)	122.9
CONN.KVA (CODE 3)	0.0
CONN.KVA (CODE 4)	0.0
CONNECTED KVA	125.9
CONNECTED AMPS	151.5
FEEDER DEMAND KVA	126.7
FEEDER DEMAND AMPS	152.4
MCB = MAIN CIRCUIT BREAKER	MLO = MAIN LUGS ONLY

PANEL: "LW1" | BRANCH: NORMAL
LOCATION: | VOLTAGE: 208/120V | CKT CODE: 1=(CONTINUOUS LOAD)
FED FROM: "DBLW" | PHASE & WIRE: 3PH,4W | 2=(NON-CONTINUOUS)
MOUNTING: SURFACE NEMA-1 | MIN. BUS: 600 AMPS | 3=(RECEPTACLES)
AIC RATING: 30000 | MLO | 600 AMPS | 4=(KITCHEN) | NO. OF EQUIP=

CIRCUIT		CKT BKR		LOAD TYPE & DESIGNATION				LOAD		PHASES		LOAD	LOAD TYPE & DESIGNATION				CKT BKR		CIRCUIT	
NO	CODE	TRIP	POLE	DESCRIPTION	MISC	REC	LTG	VA	A	B	C	VA	LTG	REC	MISC	DESCRIPTION	POLE	TRIP	CODE	NO
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3	3	-	-	-				4733	----	9466	----	4733				-	-	-	3	4
5	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	6
7	3	30	3	WELDING BOOTH #4		1		4733	9466	----	----	4733		1		WELDING BOOTH #9	3	30	3	8
9	3	-	-	-				4733	----	9466	----	4733				-	-	-	3	10
11	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	12
13	3	30	3	WELDING BOOTH #5		1		4733	9466	----	----	4733		1		WELDING BOOTH #7	3	30	3	14
15	3	-	-	-				4733	----	9466	----	4733				-	-	-	3	16
17	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	18
19	3	30	3	WELDING BOOTH #2		1		4733	9466	----	----	4733		1		WELDING BOOTH #6	3	30	3	20
21	3	-	-	-				4733	----	9466	----	4733				-	-	-	3	22
23	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	24
25	3	30	3	WELDING BOOTH #1		1		4733	9466	----	----	4733		1		WELDING BOOTH #11	3	30	3	26
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29	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	30
31	3	30	3	WELDING BOOTH #12		1		4733	9466	----	----	4733		1		WELDING BOOTH #10	3	30	3	32
33	3	-	-	-				4733	----	9466	----	4733				-	-	-	3	34
35	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	36
37	3	30	3	WELING BOOTH #13		1		4733	9466	----	----	4733		1		WELDING BOOTH #14	3	30	3	38
39	3	-	-	-				4733	----	9466	----	4733				-	-	-	3	40
41	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	42
43	3	30	3	WELDING BOOTH #15		1		4733	9466	----	----	4733		1		WELDING BOOTH #16	3	30	3	44
45	3	-	-	-				4733	----	9466	----	4733				-	-	-	3	46
47	3	-	-	-				4733	----	----	9466	4733				-	-	-	3	48
49				SPACE					0	----	----					SPACE				50
51				SPACE					----	0	----					SPACE				52
53				SPACE					----	----	0					SPACE				54
NOTES:								TOTAL	75728	75728	75728									

CONN.KVA (CODE 1)	0.0
CONN.KVA (CODE 2)	0.0
CONN.KVA (CODE 3)	227.2
CONN.KVA (CODE 4)	0.0
CONNECTED KVA	227.2
CONNECTED AMPS	630.6
FEEDER DEMAND KVA	118.6
FEEDER DEMAND AMPS	329.2
MCB = MAIN CIRCUIT BREAKER	MLO = MAIN LUGS ONLY

PANEL: "LW2" | BRANCH: NORMAL
LOCATION: | VOLTAGE: 208/120V | CKT CODE: 1=(CONTINUOUS LOAD)
FED FROM: "DBLW" | PHASE & WIRE: 3PH,4W | 2=(NON-CONTINUOUS)
MOUNTING: SURFACE NEMA-1 | MIN. BUS: 400 AMPS | 3=(RECEPTACLES)
AIC RATING: 30000 | MCB: 400 AMPS | 4=(KITCHEN) | NO. OF EQUIP=

CIRCUIT		CKT BKR		LOAD TYPE & DESIGNATION				LOAD		PHASES		LOAD	LOAD TYPE & DESIGNATION				CKT BKR		CIRCUIT	
NO	CODE	TRIP	POLE	DESCRIPTION	MISC	REC	LTG	VA	A	B	C	VA	LTG	REC	MISC	DESCRIPTION	POLE	TRIP	CODE	NO
1	3	1	20	WELDING BOOTH #1		2		1000	2000	----	----	1000		2		WELDING BOOTH #9	1	20	3	2
3	3	1	20	WELDING BOOTH #2		2		1000	----	2000	----	1000		2		WELDING BOOTH #10	1	20	3	4
5	3	1	20	WELDING BOOTH #3		2		1000	----	----	2000	1000		2		WELDING BOOTH #11	1	20	3	6
7	3	1	20	WELDING BOOTH #4		2		1000	2000	----	----	1000		2		WELDING BOOTH #12	1	20	3	8
9	3	1	20	WELDING BOOTH #5		2		1000	----	2000	----	1000		2		WELDING BOOTH #13	1	20	3	10
11	3	1	20	WELDING BOOTH #6		2		1000	----	----	2000	1000		2		WELDING BOOTH #14	1	20	3	12
13	3	1	20	WELDING BOOTH #7		2		1000	2000	----	----	1000		2		WELDING BOOTH #15	1	20	3	14
15	3	1	20	WELDING BOOTH #8		2		1000	----	2000	----	1000		2		WELDING BOOTH #16	1	20	3	16
17	3	1	20	WELDING BOOTH #7		2		1000	----	----	1000									18
19	3	1	20	WELDING BOOTH #7		2		1000	1000	----	----					SPACE				20
21	3	1	20	WELDING BOOTH #8		2		1000	----	1000	----					SPACE				22
23				SPACE					----	----	0					SPACE				24
25				SPACE					0	----	----					SPACE				26
27				SPACE					----	0	----					SPACE				28
29				SPACE					----	----	0					SPACE				30
31				SPACE					0	----	----					SPACE				32
33				SPACE					----	0	----					SPACE				34
35				SPACE					----	----	0					SPACE				36
37	2	1	20	OVERHEAD COILING DOOR	1			1176	1176	----	----					SPACE				38
39	2	2	20	OVERHEAD FANS	2			915	----	915	----					SPACE				40
41	2	-	-	-				915	----	----	915					SPACE				42
NOTES:								TOTAL	8176	7915	5915									

CONN.KVA (CODE 1)	0.0
CONN.KVA (CODE 2)	3.0
CONN.KVA (CODE 3)	19.0
CONN.KVA (CODE 4)	0.0
CONNECTED KVA	22.0
CONNECTED AMPS	61.1
FEEDER DEMAND KVA	17.5
FEEDER DEMAND AMPS	48.6
MCB = MAIN CIRCUIT BREAKER	MLO = MAIN LUGS ONLY

PANEL: "LW3" | BRANCH: NORMAL
LOCATION: | VOLTAGE: 208/120V | CKT CODE: 1=(CONTINUOUS LOAD)
FED FROM: "DBLW" | PHASE & WIRE: 3PH,4W | 2=(NON-CONTINUOUS)
MOUNTING: SURFACE NEMA-1 | MIN. BUS: 225 AMPS | 3=(RECEPTACLES)
AIC RATING: 30000 | MLO | 225 AMPS | 4=(KITCHEN) | NO. OF EQUIP=

CIRCUIT		CKT BKR		LOAD TYPE & DESIGNATION				LOAD		PHASES		LOAD	LOAD TYPE & DESIGNATION				CKT BKR		CIRCUIT	
NO	CODE	TRIP	POLE	DESCRIPTION	MISC	REC	LTG	VA	A	B	C	VA	LTG	REC	MISC	DESCRIPTION	POLE	TRIP	CODE	NO
1	3	20	1	OFFICE/STORAGE-REC		3		540	1260	----	----	720		4		SUPPLIES-REC	1	20	3	2
3	3	20	1	OFFICE/STORAGE-REC		3		540	----	1260	----	720		4		SUPPLIES/WELDING FACILITY-REC	1	20	3	4
5	3	20	1	OFFICE/STORAGE-REC		2		360	----	----	1080	720		4		SUPPLIES/WELDING FACILITY-REC	1	20	3	6
7	3	20	1	WELDING FACILITY-REC		3		540	1080	----	----	540		3		WELDING FACILITY-REC	1	20	3	8
9	3	20	1	WELDING FACILITY-REC		3		540	----	1080	----	540		3		WELDING FACILITY-REC	1	20	3	10
11	3	20	1	WELDING FACILITY-REC		2		360	----	----	900	540		3		WELDING FACILITY-REC	1	20	3	12
13	3	20	1	WELDING FACILITY-REC		3		540	1080	----	----	540		3		WELDING FACILITY CORD REEL	1	20	3	14
15	3	20	1	WELDING FACILITY/RESTROOM		3		540	----	1080	----	540		3		WELDING FACILITY CORD REEL	1	20	3	16
17	3	20	1	WELDING FACILITY-REC		3		540	----	----	900	360		2		WELDING FACILITY CORD REEL	1	20	3	18
19	3	20	1	WELDING FACILITY CORD REEL		3		540	540	----	----					SPARE	1	20		20
21	3	20	1	WELDING FACILITY CORD REEL		3		540	----	540	----					SPACE				22
23	3	20	1	WELDING FACILITY CORD REEL		2		360	----	----	360					SPACE				24
25	2	30	2	"SCU-1"/SFC-1"	2			1664	1664	----	----					SPACE				26
27	2	-	-	-				1664	----	1664	----					SPACE				28
29	2	20	3	"EWH-1"	1			1667	----	----	1667					SPACE				30
31	2	-	-	-				1667	1667	----	----					SPACE				32
33	2	-	-	-				1667	----	1667	----					SPACE				34
35	2	20	1	"CP-1"	1			52	----	----	52					SPACE				36
37				SPACE					0	----	----					SPACE				38
39				SPACE					----	500	----	500			1	SECURITY PANEL	1	20	2	40
41				SPACE					----	----	500	500			1	FACP	1	20	2	42
NOTES:								TOTAL	7291	7791	5459									

CONN.KVA (CODE 1)	0.0
CONN.KVA (CODE 2)	9.4
CONN.KVA (CODE 3)	11.2
CONN.KVA (CODE 4)	0.0
CONNECTED KVA	20.5
CONNECTED AMPS	57.0
FEEDER DEMAND KVA	20.0
FEEDER DEMAND AMPS	55.4
MCB = MAIN CIRCUIT BREAKER	MLO = MAIN LUGS ONLY

PANEL: "LW4" | BRANCH: NORMAL
LOCATION: EXTERIOR | VOLTAGE: 208/120V | CKT CODE: 1=(CONTINUOUS LOAD)
FED FROM: "DBLW" | PHASE & WIRE: 3PH,4W | 2=(NON-CONTINUOUS)
MOUNTING: SURFACE NEMA-3R | MIN. BUS: 225 AMPS | 3=(RECEPTACLES)
AIC RATING: 30000 | MLO | 225 AMPS | 4=(KITCHEN) | NO. OF EQUIP=

CIRCUIT		CKT BKR		LOAD TYPE & DESIGNATION				LOAD		PHASES		LOAD	LOAD TYPE & DESIGNATION				CKT BKR		CIRCUIT	
NO	CODE	TRIP	POLE	DESCRIPTION	MISC	REC	LTG	VA	A	B	C	VA	LTG	REC	MISC	DESCRIPTION	POLE	TRIP	CODE	NO
1	3	30	3	EXTERIOR WELDING BOOTH #1		1		4733	5093	----	----	360		2		EXTERIOR WELDING BOOTH #1	1	20	3	2
3	3	-	-	-				4733	----	5093	----	360		2		EXTERIOR WELDING BOOTH #2	1	20	3	4
5	3	-	-	-				4733	----	----	5093	360		2		EXTERIOR WELDING BOOTH #3	1	20	3	6
7	3	30	3	EXTERIOR WELDING BOOTH #2		1		4733	5093	----	----	360		2		EXTERIOR WELDING BOOTH #4	1	20	3	8
9	3	-	-	-				4733	----	4862	----	129			1	"EF-7"	1	20	2	10
11	3	-	-	-				4733	----	----	4733					SPARE	1	20	2	12
13	3	30	3	EXTERIOR WELDING BOOTH #3		1		4733	4733	----	----					SPARE	1	20	2	14
15	3	-	-	-				4733	----	4733	----					SPARE	1	20	2	16
17	3	-	-	-				4733	----	----	4733					SPARE	1	20	2	18
19	3	30	3	EXTERIOR WELDING BOOTH #4		1		4733	4733	----	----					SPARE	1	20		20
21	3	-	-	-				4733	----	4733	----					SPACE				22
23	3	-	-	-				4733	----	----	4733					SPACE				24
25				SPACE					0	----	----					SPACE				26
27				SPACE					----	0	----					SPACE				28
29				SPACE					----	----	0					SPACE				30
31				SPACE					0	----	----					SPACE				32
33				SPACE					----	0	----					SPACE				34
35				SPACE					----	----	0					SPACE				36
37				SPACE					0	----	----					SPACE				38
39				SPACE					----	0	----					SPACE				40
41				SPACE					----	----	0					SPACE				42
NOTES:								TOTAL	19652	19421	19292									

CONN.KVA (CODE 1)	0.0
CONN.KVA (CODE 2)	0.1
CONN.KVA (CODE 3)	58.2
CONN.KVA (CODE 4)	0.0
CONNECTED KVA	58.4
CONNECTED AMPS	162.0
FEEDER DEMAND KVA	34.2
FEEDER DEMAND AMPS	95.1
MCB = MAIN CIRCUIT BREAKER	MLO = MAIN LUGS ONLY

PANEL SCHEDULE NOTES: (WHERE NOTED)

1. CIRCUITS WITH * ◯ * ADJACENT SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE.
2. CIRCUITS WITH * L * ADJACENT SHALL BE LOCKED "ON" WITH APPROVED LOCKING DEVICE.
3. CIRCUITS WITH * ✳ * ADJACENT SHALL BE MARKED RED AND LABELED AS "FIRE ALARM CONTROL CIRCUIT".
4. CIRCUITS WITH * S * ADJACENT SHALL BE SHUNT TRIP CONTROLLED CIRCUIT BREAKERS. CONTROLS AS INDICATED ON DRAWINGS.
5. CIRCUITS WITH * Ⓐ * ADJACENT SHALL BE CONTROLLED BY PHOTOCELL AND TIMECLOCK. FURNISH AND INSTALL CONTACTORS ABOVE PANEL IN SEPARATE ENCLOSURE.
6. CIRCUITS WITH * △ * ADJACENT SHALL BE EMS CONTROLLED.
7. CIRCUITS WITH * ◯ * ADJACENT SHALL BE SHUNT TRIP CONTROLLED CIRCUIT BREAKERS. ACTIVATION OF HOOD SUPPRESSION SYSTEM SHALL DISCONNECT RELATED CIRCUITS INDICATED. PROVIDE N.C. CONTACTS IN SEPARATE ENCLOSURE ABOVE PANEL FOR CONTROL.

"HW1"	"LW1"	"LW2"
"LW3"	"LW4"	----
----	----	----
----	----	----

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:

DCBA ENGINEERS
Consulting Mechanical and Electrical Engineers
3190 E. Chapman Ave, Ste. 210, Orange, CA 92869
714.921.0100
Fax 800.985.1933

PANEL SCHEDULE

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:

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PROJECT NUMBER: 23-46102-00
PROJECT STATUS: 100% CD
SHEET ISSUED: 08/29/2025
DELTA: DATE: DESCRIPTION:

E5.01
100% CD

R: \Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E501.dwg 8-27-25-8:24 AM

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.4(b)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii	
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 1 of 6)**
Project Address: 9400 Cherry Avenue	**Date Prepared:** 5/7/2025

A. GENERAL INFORMATION

01	Project Location (city)	Fontana	02	Climate Zone	10
			03	Occupancy Types Within Project:	All Other Occupancies,ClassroomOfficeSupport Areas

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work[1]	Rating[2] (kVA)	Utility Provided Metering System Exception to 130.5(a)/ 160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to 130.5(a)and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
MSDP	New electrical service equipment and meter	750	☐	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/ 160.3, 130.1/ 150.5, and 130.3/ 160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	☐

[1] *FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.*
[2] *If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.*
[3] *Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.*

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 4 of 6)**
	Date Prepared: 5/7/2025

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail

** NOTES: If "Other"* is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

[1] *FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.*
[2] *Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type.*
Method 2: switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type.
Method 3: Branch circuits serve load types individually and provisions for adding future branch circuit monitoring.
Method 4: Complete metering system measures and reports loads by type.
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/ 160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)2Piii/ 180.2(b)4Bviii.

01	02			03	04	05	
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method			Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
						Pass	Fail
MSDP	☒	Voltage drop less than 5%	☐ Permitted by CA Elec Code (Exception to 130.5(c))*	In construction documents	E0.4	☐	☐

** NOTES: If "Permitted by CA Elec Code *" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

MSDP	E0.4

[1] *FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".*

J. ELECTRIC READY BUILDINGS

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 1 of 8)**
Project Address: 9400 Cherry Avenue	**Date Prepared:** 5/7/2025

A. GENERAL INFORMATION

01	Project Location (city)	Fontana	04	Total Conditioned Floor Area (ft²)	3,324
02	Climate Zone	10	05	Total Unconditioned Floor Area (ft²)	100
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Office ● Support Areas ● All Other Occupancies

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Area Category Method	3324	Area Category Method	100
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	3324		100	

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 2 of 6)**
	Date Prepared: 5/7/2025

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01		02		03		04	05	06
Service Electrical Metering 130.5(a)/ 160.6(a) (See Table F)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d) (See Table I)	Electric Ready 160.9 (See Table J)	**Compliance Results**
Yes	AND	Yes	AND	Yes	AND			COMPLIES

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. SERVICE ELECTRICAL METERING

This table includes new or replacement electrical service systems OR equipment to demonstrate compliance with 130.5(a) / 160.6(a). For multifamily occupancies, submetered systems that provide power to common use areas must meet the following metering requirements. Submetered systems providing power to dwelling units do not.

01	02	03				04	05	
Electrical Service Designation/ Description	Rating[1] (kVA)	Required Metering Capabilities per Table 130.5-A				Location of Requirements in Construction Documents	Field Inspector	
		Instantaneous Demand (kW)	Historical Peak Demand (kW)	Tracking kWh for user-defined period	kWh per rate period		Pass	Fail
MSDP	750	☒	☒	☒	☐	E0.4	☐	☐

[1] *FOOTNOTES: If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.*

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 5 of 6)**
	Date Prepared: 5/7/2025

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ELC-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 2 of 8)**
	Date Prepared: 5/7/2025

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)						Compliance Results
	01	02	03	04		05	06	07		08			09
	Complete Building 140.6(c)1:	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)		**Total Allowed** (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)		**Total Adjusted** (Watts) *Includes Adjustments			**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)					
Conditioned		1,962.4	0		=	1,962	1,474	0	=	1474			COMPLIES
Unconditioned		65	0		=	65	44	0	=	44			COMPLIES
								Controls Compliance (See Table H for Details)					COMPLIES
								Rated Power Reduction Compliance (See Table Q for Details)					

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 3 of 6)**
	Date Prepared: 5/7/2025

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
MSDP					
Lighting including exit, egress and exterior	All lighting disaggregated by floor, type or area	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E-Sheets	☐	☐
HVAC systems and components	All HVAC in aggregate and each HVAC load rated at least 50 kVA	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E-Sheets	☐	☐
Plug Loads and appliances less than 25kVA	All plug loads separated by floor, type or area Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E-Sheets	☐	☐
Charging stations for electrical vehicle	All loads in aggregate	Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring	E-Sheets	☐	☐

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:** **(Page 6 of 6)**
Project Address: 9400 Cherry Avenue	**Date Prepared:** 5/7/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Chris Villalobos	Documentation Author Signature:
Company: DCGA Engineers	Signature Date:
Address: 4750 E. Ontario Mills Parkway	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Ontario CA 91764	Phone: 909-987-0017

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system designs identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Chen Fang	Responsible Designer Signature:
Company: DCGA Engineers	Date Signed: 2025-05-07
Address: 4750 E. Ontario Mills Parkway	License: E16592
City/State/Zip: Ontario CA 91764	Phone: 909-987-0017

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
A	A/66 LED Strip	No	NA	66	Mfr. Spec	21	No	1,386	☐	☐
D	D/22 LED Downlight	No	NA	22	Mfr. Spec	4	No	88	☐	☐
							Total Designed Watts: CONDITIONED SPACES	1,474		

Designed Wattage: Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
D	D/22 LED Downlight	No	NA	22	Mfr. Spec	2	No	44	☐	☐
							Total Designed Watts: UNCONDITIONED SPACES	44		

[1] *FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*
[2] *Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
2150 E. Orange Way Ste
Ontario, CA 91762
P # 909.987.0017

TITLE 24

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:
CHRISTOPHER JAMES FANG No. E 16592 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

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PROJECT NUMBER: 22-40102-00
PROJECT STATUS: **100% CD**
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

E6.01
100% CD

R:\Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E601.dwg 8-27-25-8:25 AM

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 4 of 8)**
	Date Prepared:	5/7/2025

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response 110.12(c)	Shut off controls 130.1(c) / 160.5(b)4C	Pass	Fail
NA < 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) / 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
Restrooms	Restroom	Readily Accessible	NA: Restrooms	Occupancy Sensor	NA: General Ltg < 120W	NA: General Ltg < 120W	No	☐	☐
Shop	General Commercial Industrial Work Area\Low Bay	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
Office	Office (<=250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	NA: General Ltg < 120W	NA: General Ltg < 120W	No	☐	☐
							13		
							Plan Sheet Showing Daylit Zones:		

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b), are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 5 of 8)**
	Date Prepared:	5/7/2025

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Office/Storage 101	Office (<=250 square feet)	0.65	147	95.6	No	No
Supplies 110	All Other Space Types	0.4	197	78.8	No	No
Welding Facility 102 North East	Classroom, Lecture, or Training Vocational	0.6	380	228	No	No
Welding Facility 102 North West	Classroom, Lecture, or Training Vocational	0.6	500	300	No	No
Welding Facility 102 North East-2	Classroom, Lecture, or Training Vocational	0.6	350	210	No	No
Welding Facility 101 North West-2	Classroom, Lecture, or Training Vocational	0.6	350	210	No	No
Welding Facility 102 South East	Classroom, Lecture, or Training Vocational	0.6	350	210	No	No
Welding Facility 102 South West	Classroom, Lecture, or Training Vocational	0.6	350	210	No	No
Welding Facility 102 South East -2	Classroom, Lecture, or Training Vocational	0.6	350	210	No	No
Welding Facility 102 South West-2	Classroom, Lecture, or Training Vocational	0.6	350	210	No	No
		TOTALS:	3,324	1,962.4	See Tables J, or P for detail	

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
RR 103	Restroom	0.65	50	32.5	No	No
RR 104	Restroom	0.65	50	32.5	No	No
		TOTALS:	100	65	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 6 of 8)**
	Date Prepared:	5/7/2025

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 7 of 8)**
	Date Prepared:	5/7/2025

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Restrooms; Shop; Office;
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	Shop;

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 8 of 8)**
Project Address: 9400 Cherry Avenue	**Date Prepared:**	5/7/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Chris Villalobos	Documentation Author Signature:
Company: DCGA Engineers	Signature Date: 2025-05-07
Address: 4750 E. Ontario Mills Parkway	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Ontario CA 91764	Phone: 909-987-0017

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Chen Fang	Responsible Designer Signature:
Company: DCGA Engineers	Date Signed: 2025-05-07
Address: 4750 E. Ontario Mills Parkway	License: E16592
City/State/Zip: Ontario CA 91764	Phone: 909-987-0017

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2I, for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.		
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 1 of 7)**
Project Address: 9400 Cherry Avenue	**Date Prepared:**	5/7/2025

A. GENERAL INFORMATION

01	Project Location (city)	Fontana	04	Total Illuminated Hardscape Area (ft²)	39233
02	Climate Zone	10			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒	LZ-2: Moderate - Urban Clusters	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐	LZ-1: Low - Rural Areas	☐	LZ-3: Moderately High - Urban Areas		
05	Occupancy Types within Project				

● Classroom ● Office ● Support Areas ● All Other Occupancies

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2I / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02	
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6	
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes ○ No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 2 of 7)**
	Date Prepared:	5/7/2025

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2I. / 180.2(b)4Bv											Compliance Results		
01		02		03		04		05		06	07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)1 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2I. / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
945	+	----	+	----	+	----	+	----	OR	----	=	945	≥	928	COMPLIES
Shielding Compliance (See Table G for Details)															COMPLIES
Controls Compliance (See Table H for Details)															Not applicable

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	5/7/2025

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2I, only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
E2	E2/204 LED Pole	☐ Linear	204	Mfr. Spec	4	New	☐	816	Provided	☐	☐
F	F/14 LED Bollard	☐ Linear	14	Mfr. Spec	8	New	☐	112	NA: < 6200 lumens	☐	☐
							Total Design Watts:	928			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)

[2] For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.

[3] Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.

[4] Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Chaffey College Intech Welding Facility	**Report Page:**	**(Page 4 of 7)**
	Date Prepared:	5/7/2025

G. SHIELDING REQUIREMENTS (BUG)

This table includes fixtures of >=6,200 initial lumens indicated on Table F as needing to comply with Shielding Requirements. Maximum lumens can be found in Title 24, Part 11, Section 5.106.8.

01	02	03			04			05			06			07	08	09	10		11	12	
Name or Item Tag	Complete Luminaire Description	Backlight Rating[2]			Uplight Rating[2]			Glare Rating (Lumens)[2]			Field Inspector										
		Mounting Height[1]	Max Allowable Backlight Rating[2]	Backlight Rating Per Design	Lighting type	Max Allowable Uplight Rating[2]	Uplight Rating Per Design	Mounting Height[1]	Max Allowable Glare Rating[2]	Glare Rating Per Design	Pass	Fail									
E2	E2/204 LED Pole	2 MH from property line	No Limit	B2	Area Lighting	U0	U0	> 2 MH from property line	G2	G3	☐	☐									

[1] FOOTNOTES: Mounting Height is labeled MH in this table.

[2] Authority Having Jurisdiction may ask for Luminaire cut sheets or other documentation to confirm luminaire type, uplight ratings and glare ratings used for compliance per 130.2(b)/ 160.5(c)

[3] BUG ratings with a lower number than the 'Max Allowable' are compliant. Ex. If Max Allowable is Bug Rating B4, then B0, B1, B2 and B3 are all compliant.

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail

[1] FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.

[2] Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.

[3] Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
4750 E. Ontario Mills Pkwy
Ontario, CA 91764
P 909.987.0017
P 909.987.0017

TITLE 24

CHAFFEY COLLEGE
INTECH WELDING FACILITY
9400 CHERRY AVENUE, FONTANA, CA 92335

SEAL:
REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER J. FANG No. E 16592 CIVIL STATE OF CALIFORNIA

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PROJECT NUMBER: 22-45102-00
PROJECT STATUS: **100% CD**
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

E6.02
100% CD

R:\Chaffey College Intech Welding Facility #22052\CAD Dwgs\E\22052E602.dwg 8-27-25-8:25 AM

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 5 of 7)
	Date Prepared:	5/7/2025

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance. Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

01					
	"Use it or lose it" Allowance (select all that apply) (select all that apply)				
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M	

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft^2)	Allowed Density (W/ft^2)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Hardscape	39233	0.019	745.4	0	0.2	0	745
					Initial Wattage Allowance for Entire Site (Watts):		200
					Instances of Initial Wattage Allowance (LZ 0 only)[1]		
					Total General Hardscape Allowance (Watts):		945

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

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STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 1 of 5)
Project Address: 9400 Cherry Avenue	Date Prepared:	5/7/2025

This document is used to demonstrate compliance with prescriptive PV and battery requirements in 140.10/ 170.2 for nonresidential, multifamily and mixed-use buildings and prescriptive solar thermal requirements in 170.2(d)3C for multifamily and hotel/ motel occupancies. When PV/battery/solar thermal requirements don't apply or are traded using the performance approach, this document demonstrates compliance with mandatory solar readiness requirements in 110.10/ 160.8 for newly constructed buildings which are either multifamily ten stories or fewer, hotel/motel ten stories or fewer or all other nonresidential buildings three stories or fewer. It is also used to demonstrate compliance with solar readiness in 110.10/ 160.8 for additions to nonresidential, multifamily or hotel/motel building types which add more than 2,000 ft^2 of roof area. Alterations, or additions of less than 2,000 ft^2 of roof area, are not required to comply with solar readiness, solar PV and battery requirements and do not need to complete this document.

A. GENERAL INFORMATION

01	Project Location (city)	Fontana	04	Building Occupancies	All Other OccupanciesOfficeSupport Areas
02	Climate Zone	10	05	Construction Type	New construction
03	Conditioned Floor Area (ft^2)	3324	06	Number of Stories	Bldg <= 3 stories

B. PROJECT SCOPE

The compliance path the project is using to comply per 110.10(b)1B/ 140.10/ 170.2(g and h) is indicated below.

Compliance with Solar Photovoltaic (PV) and Battery Requirements in 140.10/ 170.2(g and h)

01		
☒	Provided PV system and battery storage sized per 140.10/ 170.2 (g and h)	The project has included an installed PV system and battery storage system per requirements in 140.10/ 170.2(g and h) as documented in Table J.
☐	Exception to PV and Battery: Not enough Solar Access Roof Area	The total of all available Solar Access Roof Area(s) of the project site is less than three percent of the conditioned floor area as documented in Table J.
☐	Exception to PV and Battery: Required PV < 4kW	The required PV system size is less than 4 kW dc as documented in Table J..
☐	Exception to PV and Battery: No contiguous Solar Access Roof Area	The Solar Access Roof Area(s) of the project site contains less than 80 contiguous square feet as documented in Table J.
☐	Exception to PV and Battery: Can't meet snow load	The project has a roof design where the enforcement authority has verified it is not possible for the PV system, including panels, modules, components, supports, and attachments to the roof structure, to meet ASCE 7-16 Chapter 7, Snow Loads.
☐	Exception to PV and Battery: Multi-tenant without VNEM or Community Solar	The project is a multi-tenant building in an area where a load serving entity does not provide either a Virtual Net Metering (VNEM) or community solar program.
☐	The prescriptive PV/battery requirement has been traded off using the performance compliance approach as documented on the PRF Certificate of Compliance form.	

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STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 4 of 5)
	Date Prepared:	5/7/2025

J. PHOTOVOLTAIC (PV) AND BATTERY SYSTEMS

This table documents compliance with prescriptive photovoltaic and battery system requirements in 140.10/ 170.2(g and h). Unless the project meets one of the listed exceptions, or trades-off PV in an energy model using performance path, 140.10/ 170.2(g and h) requires installed photovoltaic and battery systems for newly constructed buildings. The installed PV systems must meet the minimum requirements in Joint Appendix 11.

Photovoltaic (PV) System

01	02	03	04	05	06	07	08
Occupancy	Conditioned Floor Area (ft^2)	Area of New Roof[1] (ft^2)	Roof Area < 70% Solar Access[2] (ft^2)	Plansheet or Document showing Solar Access Calculations	Occupied Roof Area[3] (ft^2)	Solar Access Roof Area (SARA) (ft^2)	Min Size of PV System Required (kWdc)
School or Classroom	4,036	4,036	0	G2.11	0	4,036	6.58
					Total Min Size PV System Required for all Spaces (kWdc):		6.58
						Total Size PV System in Design (kWdc):	7

[1]FOOTNOTES: Includes the area of the building's roof space capable of structurally supporting a PV system and the area of all roof space on covered parking areas, carports, and all other newly constructed structures on the site that are compatible with supporting a PV system per Title 24, Part 2 Section 1511.2.
[2]Solar access must be determined using CEC approved solar access calculation tools found at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/solar-assessment-tools.
[3]As specified by CBC Section 503.1.4.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included Table E. Additional Remarks and ExceptionalConditionMessageCCSABE += UserChangedSelectionInC). These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-SAB-01-E - Must be submitted for all buildings that must comply with solar readiness or PV/Battery requirements.

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

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STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 6 of 7)
	Date Prepared:	5/7/2025

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

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STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 2 of 5)
	Date Prepared:	5/7/2025

Compliance with Solar Thermal Water Heating Requirements in 170.2(d)3C (Multifamily and hotel/ motel occupancies only)

01	
☐	The project includes a hotel/motel or multifamily occupancy with a gas or propane central water-heating system (serves 2+ dwelling units) and includes a permanently installed domestic solar water-heating system to comply with 170.2(d)3C and Reference Residential Appendix RA4, as documented in Table H.
	Compliance meets Exception 2 to solar ready requirements in 110.10(b).

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance or see the applicable Table referenced below.

Allocated Solar Zone				Installed PV System				Installed SWH System				Smart Tstat and Alternative EE Measure		Compliance Results
01		02		03		04		05		06		07	08	
Required Minimum Area (ft^2)	<=	Designated Area (ft^2)	OR	Required Minimum DC Power Rating (Watts)	<=	Designed DC Power Rating (Watts)	OR	Required Minimum Solar Savings Fraction	<=	Designed/Rated Solar Savings Fraction	OR	JA5 Compliant Thermostat Specified?	Alternative Energy Efficiency Measure	
(See Table F)				(See Tables G or J)				(See Table H)				(See Table I)		
	<=		OR	6,579	<=	7,000	OR		<=		OR			
Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).														
Battery storage system design meets the minimum requirements in Joint Appendix JA12 and the minimum energy (kWh)/ power (kW) capacity per Table J.														COMPLIES

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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Project Name: Chaffey College Intech Welding Facility	Report Page:	(Page 5 of 5)
Project Address: 9400 Cherry Avenue	Date Prepared:	5/7/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Chris Villalobos	Documentation Author Signature:
Company: DCGA Engineers	Signature Date: 2025-05-07
Address: 4750 E. Ontario Mills Parkway	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Ontario CA 91764	Phone: 909-987-0017

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Chen Fang	Responsible Designer Signature:
Company: DCGA Engineers	Date Signed: 2025-05-07
Address: 4750 E. Ontario Mills Parkway	License: E16592
City/State/Zip: Ontario CA 91764	Phone: 909-987-0017

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STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

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Documentation Author Name: Chris Villalobos	Documentation Author Signature:
Company: DCGA Engineers	Signature Date: 2025-05-07
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F. ALLOCATED SOLAR ZONE

This section does not apply to this project.

G. PERMANENTLY INSTALLED SOLAR PV FOR SOLAR READY EXCEPTION

This section does not apply to this project.

H. PERMANENTLY INSTALLED SOLAR HOT WATER SYSTEMS

This section does not apply to this project.

I. SMART THERMOSTATS AND ALTERNATIVE EFFICIENCY MEASURE FOR SOLAR READY EXCEPTION

This section does not apply to this project.

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-124464 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/02/25

CONSULTANT:
DCGA ENGINEERS
Consulting Mechanical and Electrical Engineers
2742 E. Chapman Ave, Fmt
Fullerton, CA 92831
714.961.1933
Fx 714.961.1933

TITLE 24

CHAFFEY COLLEGE
INTECH WELDING FACILITY

9400 CHERRY AVENUE, FONTANA, CA 92335

SEALS:

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PROJECT NUMBER: 22-40102-00
PROJECT STATUS: **100% CD**
SHEET ISSUED: 08/28/2025
DELTA DATE: DESCRIPTION:

E6.03
100% CD

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